

AWG 25

Tail leng

0.25
.010



Miniature high performance twist pin connectors

Micro-D & Nano-D,
Rectangular & Circular



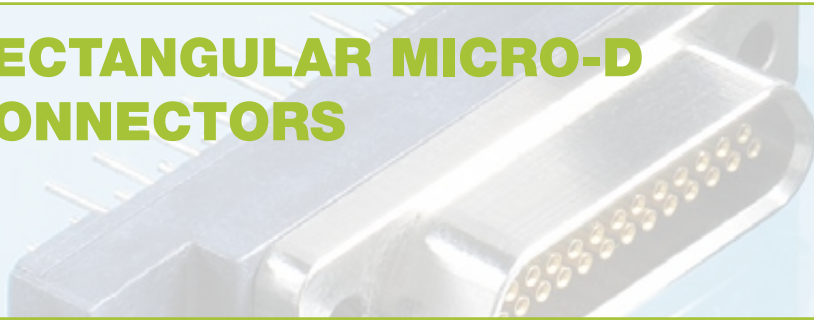
INTRODUCTION TO MICRO-D CONNECTORS



page
7

Introduction to
Micro-D connectors

RECTANGULAR MICRO-D CONNECTORS



page
17

Rectangular
Micro-D connectors

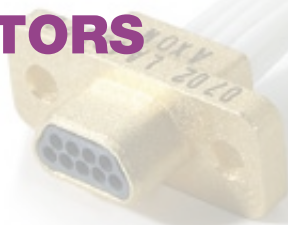
NANO-D CONNECTORS



page
203

Nano-D
connectors

SPACE MICRO-D & NANO-D CONNECTORS



page
291

Space Micro-D &
Nano-D connectors

CIRCULAR MICRO-D CONNECTORS



page
325

Circular
Micro-D connectors

TABLE OF

Introduction to Micro-D connectors page 7

D-line® connectors & assemblies 8

Rectangular Micro-D connectors page 17

GENERAL INFORMATION 21

**MIL-DTL-83513
CONNECTORS 37**

**PIGTAIL, SOLDER CUP, PCB,
SAVERS & MICROSTRIP
CONNECTORS 63**

Rectangular connectors 64
PCB rectangular connectors 76
Connector savers 126
Microstrip connectors 130

COMBO-D CONNECTORS 141

Combo-D general information 142
PCB Combo-D connectors 148
Pigtail Combo-D connectors 157
Special Combo-D connectors 160

HERMETIC CONNECTORS 163

**NON-MAGNETIC
CONNECTORS 169**

Pigtail connectors 172
PCB connectors 175

**120 WAY MICRO-D
CONNECTORS 177**

MICRO-D ACCESSORIES 185

Backshell 186
Hardware 190
Micro-D & Nano-D assembly kit 201

Nano-D connectors page 203

GENERAL INFORMATION 205

**DUAL ROW NANO-D
CONNECTORS 219**

Rectangular connectors for cables 220
PCB rectangular connectors 224

**SINGLE ROW NANO-D
CONNECTORS 253**

Rectangular connectors for cables 254
PCB rectangular connectors 256

**HIGH DENSITY
CONNECTORS 281**

CONTENTS

Space Micro-D connectors page 291

MICRO-D FOR SPACE APPLICATIONS 293

120 WAY MICRO-D CONNECTORS 299

NANO-D FOR SPACE APPLICATIONS 307

Circular Micro-D connectors page 325

GENERAL INFORMATION 327
Panel cut-outs & accessories 348

PIGTAIL CONNECTORS 355
Metric thread connectors – MCAT 356
Three lug bayonet connectors – MCA3B 364
Triple start connectors (anti-decoupling) – MCAC 372
Breakaway circular connectors – MCABK 380

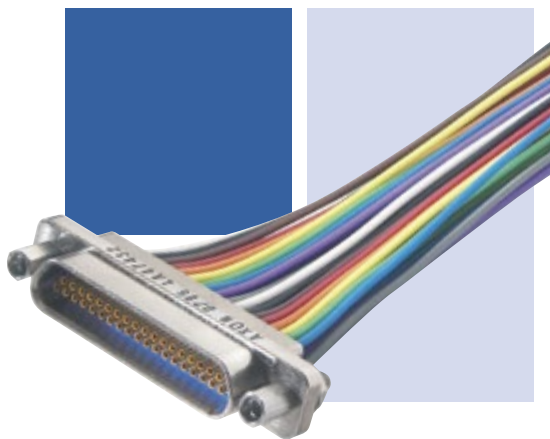
PCB CONNECTORS 389
PCB circular connector range 390

PLASTIC CONNECTORS 409
Solder cup & pigtail connector – MCA 410

**Military cross reference chart
page 415**

INTRODUCTION TO MICRO-D CONNECTORS

D-LINE® CONNECTORS & ASSEMBLIES	8
● D-Line® Twist Pin contact technology	11
● Micro-D test & inspection	14



▲ ENGINEERING DEPARTMENT

D-Line® Connectors

ABOUT AXON'

Headquartered in the beautiful Champagne region of France, AXON' is a worldwide leader in specialist interconnect. The company excels in the design and manufacture of wires, cables, terminated harnesses and interconnect solutions for high technology applications.

With numerous manufacturing sites across Europe, North America and Asia and a comprehensive range of quality approvals, AXON' is able to locally design and build a world beating range of microminiature interconnect solutions tailored to your specific needs.



As a specialist in advanced interconnect solutions, AXON' CABLE has extensive experience in micro-miniature solutions based on the highly reliable Twist Pin contact technology, including:

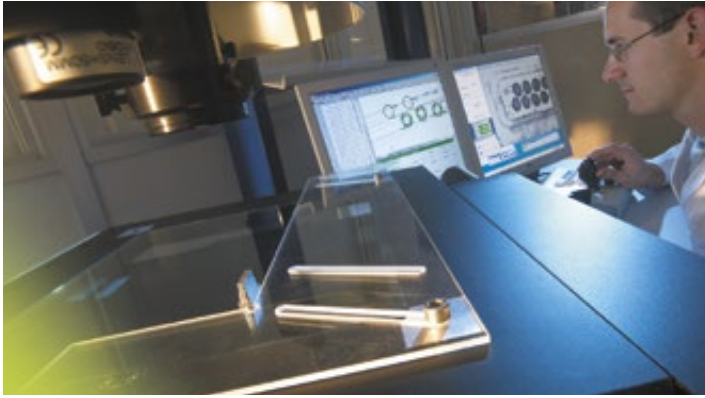
- Pigtail and PCB connectors, metal or plastic bodies, regular or low profile versions.
- Solder cup connectors: metal or plastic bodies, regular or low profile.
- QPL qualified Micro-D to MIL-DTL-83513
- Micro-strip and saver connectors
- Combo Micro-D connectors: making it possible to put higher power or RF signals through Micro-D connectors.
- Hermetic connectors, typically used in the oil and gas industry, defence and scientific research.
- Non-magnetic connectors for oil and gas, scientific research, space and medical electronics.
- Nano-D connectors (0.635 mm contact spacing) for extreme miniaturization.
- Micro-D and Nano-D connectors specifically designed for space applications.
- Micro-D circular connectors.

MICRO-D: WEIGHT SAVING & ROBUSTNESS

By its very design, the **Micro-D** connector system meets all the requirements of robustness, durability, low contact resistance, high current, dielectric strength, shock and vibration. With **1.27 mm (.050") contact spacing**, Micro-D connectors, half the size of D-sub connectors, represent an excellent solution for saving both space and weight. In addition to a complete range of **QPL** qualified Micro-D connectors to **MIL-DTL-83513**, AXON' also offers Micro-D PCB connectors and cable assemblies in both metal and plastic bodied versions.



With its many possible configurations, Micro-D technology is perfectly suited to a multitude of systems where weight, miniaturization or signal transmission integrity is paramount: applications benefiting from this technology include everything from missiles and their guidance systems, through oil well drilling tools to medical devices, satellites and scientific research. For very specific applications such as medical MRI scanners or low magnetic field detection systems, AXON' has developed a range of **non-magnetic** connectors using new materials and surface treatments, avoiding ferromagnetic materials. **Hermetic** connectors are also offered for applications where an enclosure needs to be fully sealed from the outside world.



▲ METROLOGY LABORATORY



▲ CLEAN ROOM

& assemblies

NANO-D: EXTREME MINIATURIZATION

In addition to circular and rectangular Micro-D connectors and assemblies, AXON' CABLE offers **Nano-D** connectors and jumpers based on the highly reliable Twist Pin contact technology. This is the connector of choice for any application requiring extreme miniaturization combined with high reliability, and is used in a variety of fields from military and medical devices to oil and gas exploration. Nanominiature connectors are based on the Nano-D technology with **0.635 mm (.025") contact spacing** and nanominiature shells. The performance of AXON's Nano-D is fully compliant to the MIL-DTL-32139 specification, giving a guarantee of interchangeability and intermateability between suppliers.



MINIATURE CONNECTORS FOR SPACE

AXON' CABLE has developed a range of Micro-D connectors suitable for the challenging requirements of on-board electronics in Space. The **Space Micro-D** range benefits from the expertise in the AXON' MIL-DTL-83513 D-shape connectors. Small, lightweight and reliable, AXON's Space Micro-D connectors are approved to **ESCC 3401/029 EPPL2**. In order to meet the necessarily high levels of quality and reliability they are produced with increased plating protection and manufactured in class 100 000 clean rooms. For extreme miniaturization in Space, AXON' also offers ESCC3401/086 EPPL2 approved **Space Nano-D** connectors.



QUALITY ASSURANCE

ISO 9001

EN 9100

ISO 14001

TS 16949

OHSAS 18001

CIRCULAR MICRO-D: SMALL AND EASY TO USE

The **Circular Micro-D Connector** range benefits from the expertise in the AXON' D-Line® **MIL-DTL-83513** D-shape connectors and features **easy-to-use** connect and disconnect functionality. The MIL-DTL-83513 standard dictates the design and performance for Micro-D connectors. These small connectors meet the requirements of the most demanding applications and harsh environments. Military equipment, research centres and on-board electronics are just a few examples. Despite their high pin density, small size and lightweight bodies, the AXON' miniature circular connectors offer similar performances to their rectangular Micro-D cousins.

The standard range of Circular Micro-D connectors consists of 5 basic types:

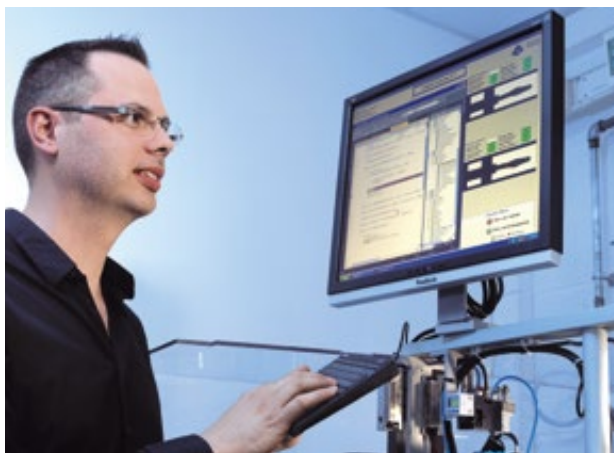
- Metric thread connectors - MCA.T.
- Three lug bayonet connectors - MCA3B.
- Triple start connectors (with anti-decoupling) - MCAC.
- Breakaway connectors - MCABK.
- Plastic shells - MCA.

AXON' also offers PCB connectors designed for out 4 types of metal shell connectors.



TWIST PIN CONTACT

At the heart of the AXON' Micro-D connector is the **Twist Pin contact** which by its design and performance enables the system to meet the most severe requirements - often significantly more so than stipulated in the MIL-DTL-83513 standard. It must be stated that even if meeting the standard, not all Micro-D contacts will behave in the same way when subjected to certain specific requirements. This is not the case for AXON's 100% vision inspected Twist Pin contact.



EXPERTISE IN CABLING AND ASSEMBLIES

AXON' CABLE specializes in the design and manufacture of custom designed **assemblies, interconnect systems** and complex **harnesses** often integrating several branches. The company has brought its expertise in the manufacture of precision conductors, wires, cables, cable assemblies and connectors together with its knowledge of overmoulding techniques and EMI protection to be able to offer optimally engineered solutions for the most challenging requirements.

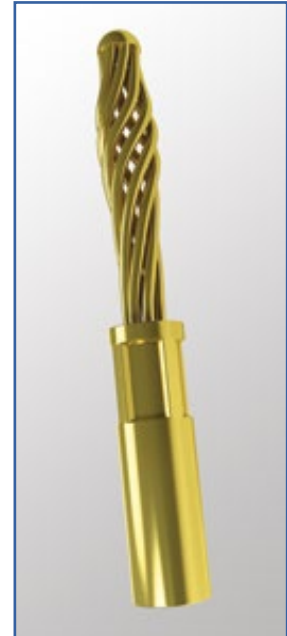


TWIST PIN CONTACT TECHNOLOGY

The male Micro-D contact is made up of 10 strands of beryllium-copper and copper alloy twisted together, welded then bumped. These sprung strands are in fact compressed during insertion into the turned female contact and therefore a high number of electrical contact points is permanently assured, while retaining flexibility and ease of insertion/ extraction.

The plating of these contacts is a minimum of 1.27 microns of gold in accordance with MIL-G-45204 type 2, class 1, and this gives additional operational security. Furthermore, the Twist Pin contact is auto-guided into its female contact, even if it is not centred in its recess.

As with all contacts conforming to MIL-DTL-83513, the AXON' Micro-D contacts accept as standard 24, 26, 28 and 30 AWG wires. In order to meet specific customer requests, AXON' can also offer solutions for large section wires up to 22 AWG and for miniature wires as small as 36 AWG.



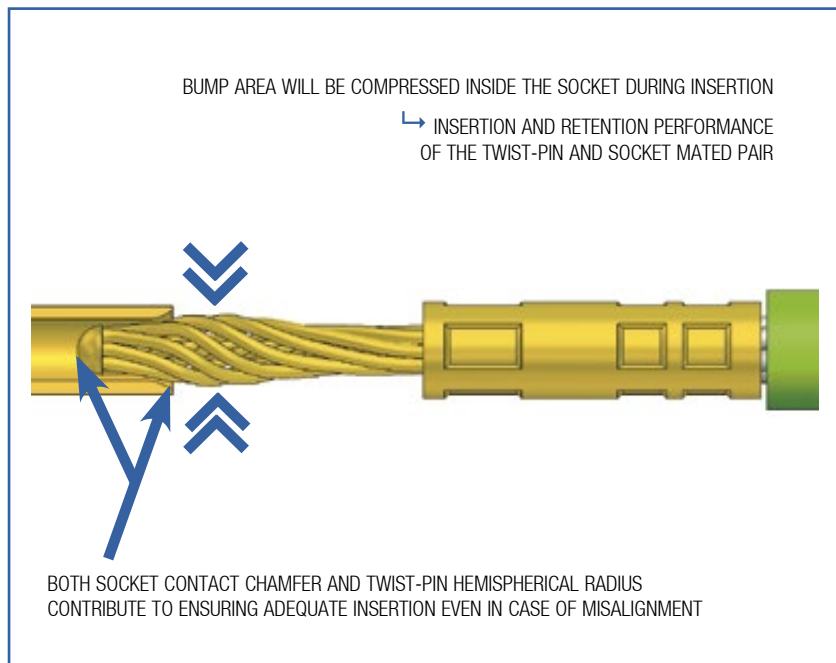
▲ TWIST PIN CONTACTS

► Twist pin performance versus MIL-DTL-83513 specification

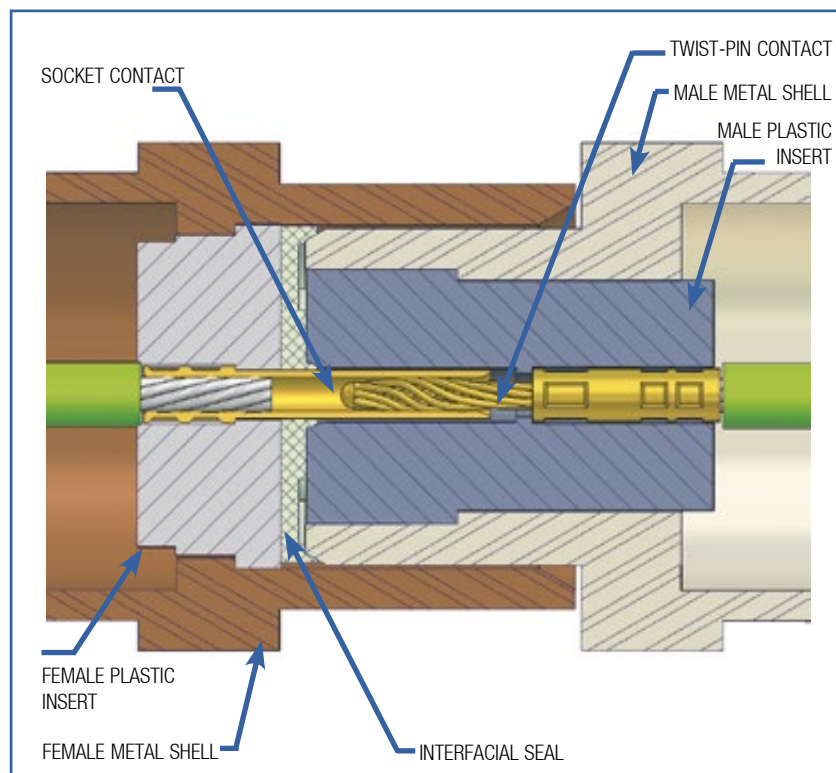
CHARACTERISTIC	AXON' TWIST PIN	MIL REQUIREMENT
NUMBER OF CONTACT POINTS WITH FEMALE CONTACT	7	No requirement
CONTACT RESISTANCE (FOLLOWING TEST §3.5.6)	Max 3 mΩ (under 3 A)	8 mΩ (under 2.5 A)
VIBRATION (NO DISCONTINUITY > 1 μs)	200 g*	20 g*
SHOCK (NO DISCONTINUITY > 1 μs)	500 g*	50 g*
CRIMPING	22 to 36 AWG	24 to 26 AWG

*: Vibration & shock values depending on test profiles.

► Before insertion

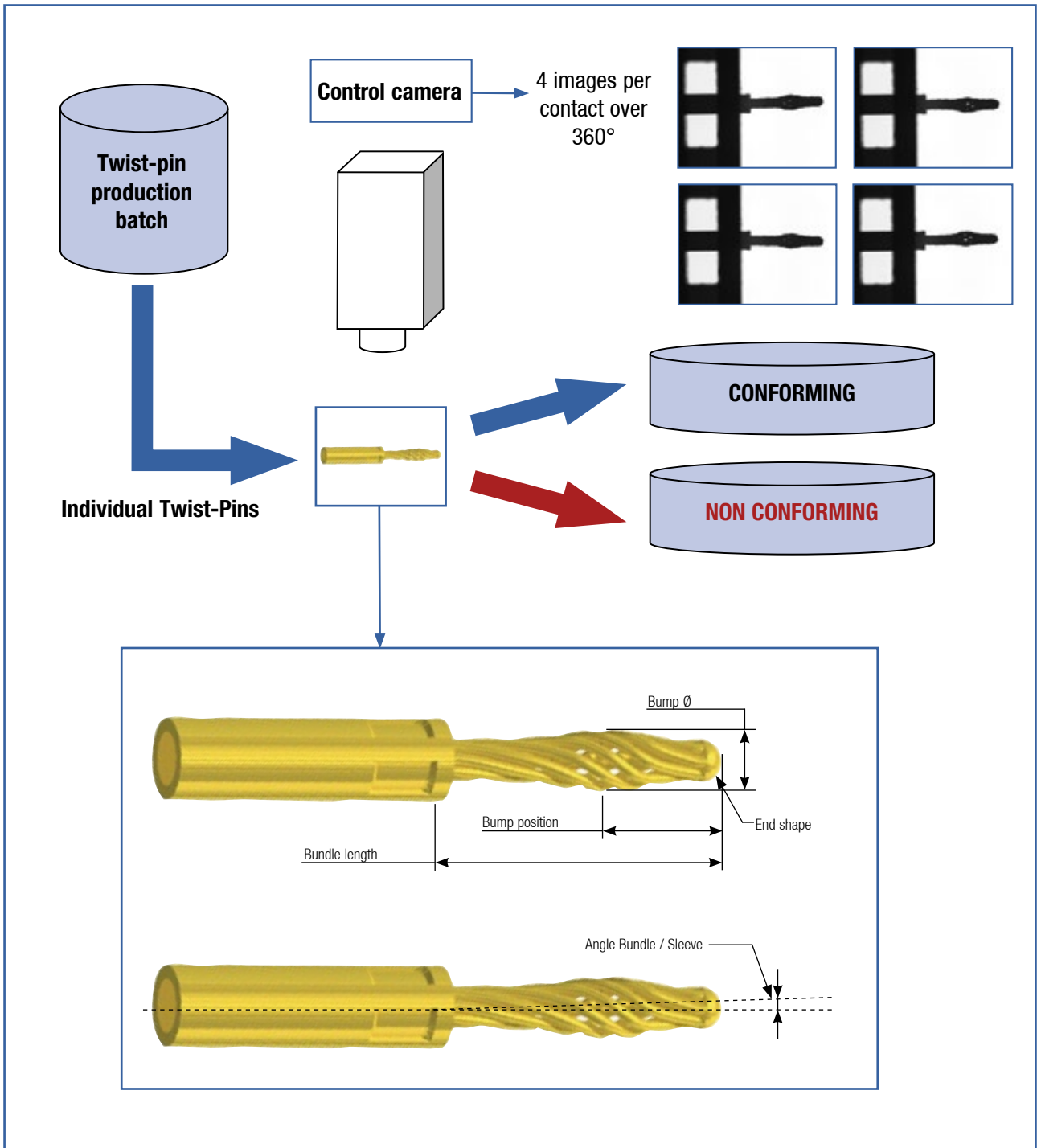


► After insertion



► Quality innovation:
100% vision inspection of twist-pin contacts.

To ensure consistently high quality levels, AXON' carry out 100% automatic vision inspection of the shape and dimensions of every twist-pin produced.



TEST & INSPECTION

▶ Micro-D components

▶ METAL SHELLS

- Dimensions measured with non-contact optical equipment.
- Plating thickness measured with X-ray spectrometer.

▶ PLASTIC COMPONENTS

(shells, inserts, trays for PCB connectors,...).

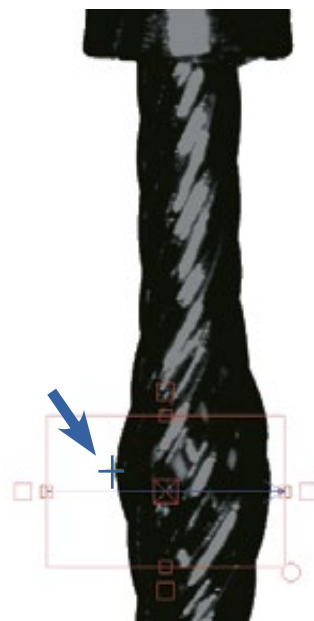
- Dimensions measured with non-contact optical equipment.

▶ CONTACTS

- Dimensions 100% controlled by precision automated vision inspection, see page 13.
- Plating thickness measured with X-ray spectrometer.
- Insertion and retention forces.
- Electrical resistance of mated contacts.



▲ PRECISION AUTOMATED VISION INSPECTION



▲ EXAMPLE OF
CONTACT INSPECTION

▶ Micro-D assemblies

AXON' carries out electrical tests on all the manufactured Micro-D harnesses and connectors.

▶ TYPICAL TESTS

FOR MICRO-D HARNESSSES

- continuity.
- insulation resistance.

FOR MICRO-D PCB CONNECTORS

- contact resistance.
- insulation resistance.
- dielectric strength.

If requested by the customer for special products, AXON' can carry out other tests such as:

- Transfer impedance Z_T for shielded harnesses.
- Insertion and return loss for Micro-D with coaxial contacts.
- Attenuation plots for filtered products.
- Waterproofness tests.
- X-ray inspection.
- Mating and de-mating tests.
- And other specific tests as required.

AXON' carries out sample inspection for visual and dimensional criteria. The goods are delivered with:

- a Certificate Of Compliance.
- a test report (on request).

AXON' maintains batch traceability records for 10 years (or more if required). In order to guarantee a high quality level for each product, AXON' uses a wide variety of production tools, systems, machines and jigs. These include optimized line design, poka yoke, standardized operations and TPM (Total Productive Maintenance).



▲ STIRRED MODE CHAMBER



▲ AUTOMATIC CONTINUITY &
INSULATION RESISTANCE TEST



▲ X-RAY INSPECTION

NANO-D CONNECTORS

NANO-D GENERAL INFORMATION

- Nano-D connectors introduction 206
- REACH & RoHS compliance 207
- Nano-D glossary of terms 208
- Nano-D general characteristics 209
- Nano-D contact arrangements
 - Contact arrangements for dual row Nano-D connectors* 210
 - Contact arrangements for single row Nano-D connectors* 212
- Nano-D wire codes 214
- Nano-D colour codes 215
- Nano-D jumper wiring
 - Jumper wiring for dual row Nano-D connectors* 216
 - Jumper wiring for single row Nano-D connectors* 217
- Nano-D panel cutouts 218

DUAL ROW NANO-D CONNECTORS

RECTANGULAR CONNECTORS FOR CABLES

- Dual row pigtail & jumper 220
- EMI range: Dual row pigtail & jumper 222

PCB RECTANGULAR CONNECTORS

- BS (Board Straight) type - 0.050" pitch receptacles 224
- BS (Board Straight) type - 0.050" pitch plugs 226
- CBR (Condensed Board Right Angle) type - 0.050" pitch receptacles . 228
- CBR (Condensed Board Right Angle) type - 0.050" pitch plugs 230
- SMV (Surface Mount Vertical) type - 0.025" pitch receptacles 232
- SMV (Surface Mount Vertical) type - 0.025" pitch plugs 234
- SMH (Surface Mount Horizontal) type - 0.025" pitch receptacles 236
- SMH (Surface Mount Horizontal) type - 0.025" pitch plugs 238
 - PCB layout for BS type* 240
 - PCB layout for CBR type* 242
 - PCB layout for SMV type* 244
 - PCB layout for SMH type* 248

SINGLE ROW NANO-D CONNECTORS

RECTANGULAR CONNECTORS FOR CABLES

- Single row pigtail & jumper 254

PCB RECTANGULAR CONNECTORS

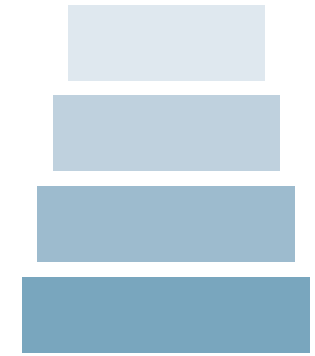
- BS (Board Straight) type - 0.050" pitch receptacles 256
- BS (Board Straight) type - 0.050" pitch plugs 258
- CBR (Condensed Board Right Angle) type - 0.050" pitch receptacles. 260
- CBR (Condensed Board Right Angle) type - 0.050" pitch plugs 262
- SMV (Surface Mount Vertical) type - 0.025" pitch receptacles. 264
- SMV (Surface Mount Vertical) type - 0.025" pitch plugs 266
- SMH (Surface Mount Horizontal) type - 0.025" pitch receptacles. 268
- SMH (Surface Mount Horizontal) type - 0.025" pitch plugs 270
- PCB layout for BS type* 272
- PCB layout for CBR type* 274
- PCB layout for SMV type* 276
- PCB layout for SMH type* 278

HIGH DENSITY CONNECTORS

- High density connectors 282
- General characteristics 283
- Pigtail connectors 284
- PCB connectors 286
- Board straight type (BS) 0.050" pitch dimensions.* 287
- PCB layout for BS type* 288
- Condensed board right (CBR) 0.050" pitch dimensions.* 289
- PCB layout for CBR type* 290

GENERAL INFORMATION

- Nano-D connectors introduction 206
- REACH & RoHS compliance 207
- Nano-D glossary of terms 208
- Nano-D general characteristics 209
- Nano-D contact arrangements
 - Contact arrangements for dual row Nano-D connectors* 210
 - Contact arrangements for single row Nano-D connectors* 212
- Nano-D wire codes 214
- Nano-D colour codes 215
- Nano-D jumper wiring
 - Jumper wiring for dual row Nano-D connectors* 216
 - Jumper wiring for single row Nano-D connectors* 217
- Nano-D panel cutouts 218



NANO-D CONNECTORS

0.635 mm (.025") CONTACT SPACING

In addition to the standard range of Micro-D connectors and assemblies, AXON' is able to offer Nano-D connectors and assemblies based on the highly reliable Twist Pin contact technology. Such solutions are ideal for applications including aerospace, military, industrial, medical or off-shore which require extreme miniaturisation, space or weight saving and reliability. AXON' Nano-D connectors meet the requirements of MIL-DTL-32139.

► Different configurations

AXON's range of Nano-D connectors is available in several different configurations:

- Nano-D rectangular connectors for cables.
- Nano-D rectangular connectors for PCBs.
- EMI versions.
- High density Micro-D connectors.

► Characteristics

- 0.635 mm (.025") contact spacing (double the density of a Micro-D).
- Number of ways: 9, 15, 21, 25, 31, 37 and 51.
- Single or double row.
- High reliability twist pin contacts.
- Metal shell construction with captivated hardware.

AXON' has also developed custom designed Nano-D connectors:

- High density circular Nano-D connectors.
- Single row Nano-D strip connectors.

Special Nano-D connectors available on request.

REACH & RoHS COMPLIANCE

▶ RoHS compliance

AXON' CABLE has been pro-actively implementing measures for many years to ensure compliance with the European Directive 2011/65/EU which came into force on 21st July 2011. The Directive prohibits the use of Hazardous Substances such as lead, mercury, hexavalent chromium, cadmium, bromine compounds (PBB and PBDE) and various phthalates. It relates to all components of products which are used in the manufacture of electrical and electronic equipment.

As a cable and connector manufacturer, AXON' has taken actions to ensure compliance with directive 2000/53/EC applicable since 21st October 2000.

COMPONENT SPECIFIC RoHS COMPLIANCE

COMPONENT	MATERIAL	FINISH	RoHS STATUS
PIN CONTACT (TWIST PIN)	PRECIOUS GOLD ALLOY	N/A	RoHS Compliant
	PRECIOUS GOLD ALLOY	N/A	
SOCKET CONTACT	BRASS	GOLD	RoHS Compliant
	COMERCIAL BRONZE	GOLD	
PLASTIC SHELL	LIQUID CRYSTAL POLYMER	N/A	RoHS Compliant
METAL SHELL	ALUMINIUM ALLOY TYPE 6061	ELECTROLESS NICKEL	RoHS Compliant
	STAINLESS STEEL 300 SERIES	PASSIVATION	RoHS Compliant
	TITANIUM	N/A	RoHS Compliant
PLASTIC INSERT / PCB TRAY	LIQUID CRYSTAL POLYMER	N/A	RoHS Compliant
HARDWARE	STAINLESS STEEL 300 SERIES	PASSIVATION	RoHS Compliant
PCB TERMINATION	COPPER BASE ALLOY	GOLD	RoHS Compliant
ENCAPSULANT	EPOXY RESIN 150°C VERSION	N/A	RoHS Compliant
	EPOXY RESIN 200°C VERSION	N/A	RoHS Compliant

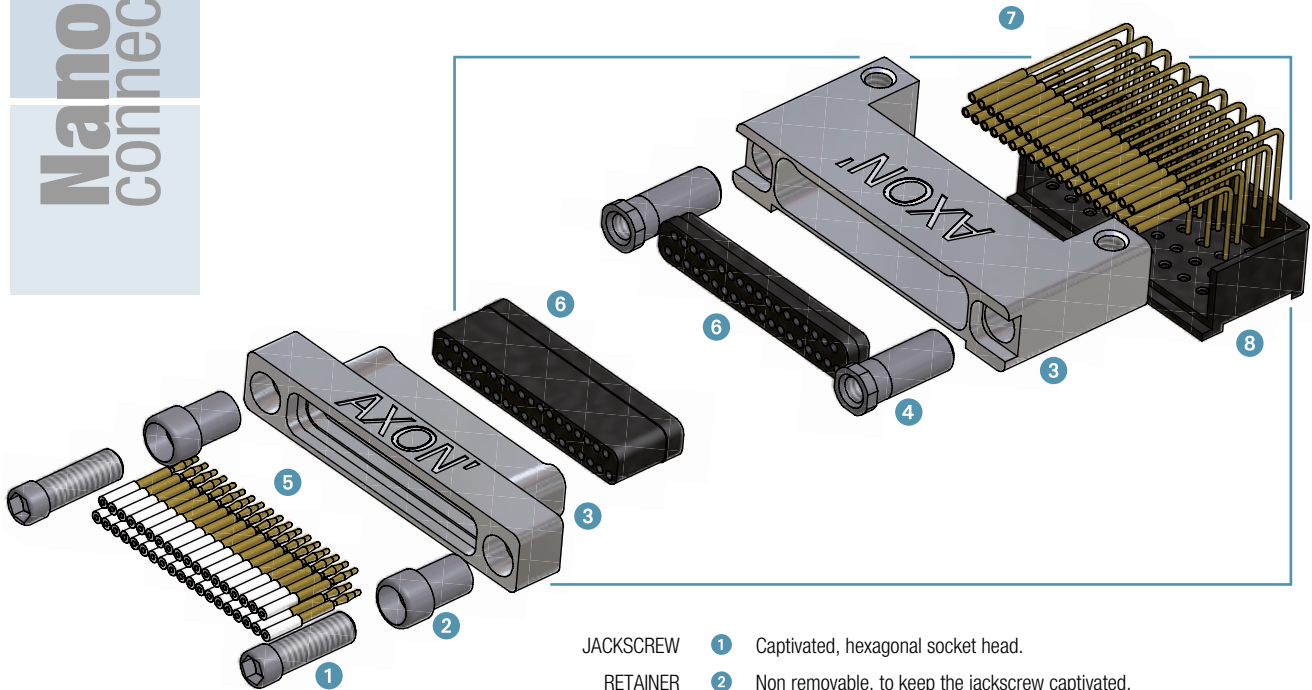
▶ Application of REACH

The new EU regulation on the Registration, Evaluation, Authorisation and restriction of Chemicals (REACH) came into force in June 2007. The regulation concerns the authorised use of chemicals. It requires manufacturers and importers to register substances and their use with the European Chemical Agency (ECHA).

AXON' CABLE is known as a "downstream user" with respect to the REACH regulation, and a manufacturer of "Articles". AXON' CABLE products are not intended to release any undesired substance under normal and reasonable operations of use.

To this day AXON' CABLE have not identified any component containing any SVHC in their product range.

GLOSSARY OF TERMS



- JACKSCREW 1 Captivated, hexagonal socket head.
- RETAINER 2 Non removable, to keep the jackscrew captivated.
- SHELL 3 Metal connector body.
- THREADED INSERT 4 Non removable, mates with jackscrew.
- TWIST PIN 5 Male contact, fitted to plug connector.
- INSERT 6 Moulded insulation housing, separating each connection.
- SOCKET 7 Female contact, fitted to socket connector (also known as socket).
- TRAY 8 Junction box used for PCB connectors only.

- Standard connector ● Manufactured to the standard dimensions and specifications.
- Special connector ● A standard connector modified to meet specific requirements.
- Custom made connector ● Designed to meet specific customer requirements.
- Connector saver ● Used to reduce wear and tear on equipment and systems while testing.
- CBR connector ● Condensed Board Right Angle connector.
- BS connector ● Board Straight connector.
- SMV connector ● Surface Mount Vertical connector.
- SMH connector ● Surface Mount Horizontal connector.
- Pigtail connector ● Connector with insulated or uninsulated wires.
- Cord ● Cable harness with 2 connectors only.
- Jumper/ Extension cord ● Cord with 1 plug and 1 receptacle connector of the same number of ways.
- Harness ● Multi-branched cable assembly.
- LCP ● Liquid Crystal Polymer.
- Potting ● Epoxy compound used as an encapsulant.

GENERAL CHARACTERISTICS

per MIL-DTL-32139*

AXON's range of Nano-D connectors which is covered by the MIL-DTL-32139* standard, is ideally suited to equipment and applications where weight, miniaturisation and long term performance are required. It is available in 7 contact arrangements (9 to 51 contacts) for rectangular Nano-D connectors.

Electrical & mechanical characteristics

CHARACTERISTIC	SPECIFICATION	TEST METHOD
CURRENT RATING	1 A max.	EIA-364-70
CONTACT RESISTANCE	71 mΩ max.	EIA-364-06
INSULATION RESISTANCE	5000 MΩ min. @ 100 Vdc	EIA-364-21
DIELECTRIC WITHSTANDING VOLTAGE - SEA LEVEL 0 m - ALTITUDE 21 km (70,000 ft)	250 Vac 100 Vac	EIA-364-20
CONTACT ENGAGING AND SEPARATION FORCE	141 g max. (5 oz) 11 g min. (0.4 oz)	EIA-364-37
CONNECTOR MATING AND DE-MATING FORCE	198 g (7 oz) x number of contacts max.	EIA-364-13
CONTACT RETENTION	0.9 kg (2 lbs) for 5 seconds min.	EIA-364-29
DURABILITY	200 mating cycles min.	EIA-364-09
TEMPERATURE RANGES - STANDARD - HIGH TEMP	-55°C / +150°C -55°C / +200°C	
VIBRATION	20 g's - No discontinuity >1μs	EIA-364-28 - TEST CONDITION IV
SHOCK	100 g's - No discontinuity >1μs	EIA-364-27 - TEST CONDITION G
SALT SPRAY	48 hours	EIA-364-26 - TEST CONDITION B
HUMIDITY	Insulation resistance > 1MΩ	EIA-364-31 - TEST CONDITION B (EXCLUDING STEPS 7A & 7B)**

Material & Finish

COMPONENT	MATERIAL	FINISH
MALE CONTACT (TWIST PIN)	PRECIOUS GOLD ALLOY IN ACCORDANCE WITH ASTM-B-477 OR 541 OR 562	NONE
FEMALE CONTACT	PRECIOUS GOLD ALLOY IN ACCORDANCE WITH ASTM-B-477 OR 541 OR 562	NONE
	COMMERCIAL BRONZE IN ACCORDANCE WITH ASTM-B-135, B-140/140M, B-372 OR B-587 BRASS IN ACCORDANCE WITH ASTM-B-453 OR 453M OR 16 OR 16M	GOLD PLATING IN ACCORDANCE WITH ASTM-B488, TYPE II, CLASS 1 (1.27μm MIN. (0.00005")), CODE C OVER NICKEL UNDERPLATE IN ACCORDANCE WITH SAE-AMS-QQ-N-290, CLASS 2 (1.27μm (0.00005")) TO 3.81μm (0.00015"))
METAL SHELL	ALUMINIUM ALLOY, TYPE 6061 IN ACCORDANCE WITH SAE-AMS-QQ-A-200/8 OR ASTM-B-209	ELECTROLESS NICKEL PLATING IN ACCORDANCE WITH SAE-AMS-2404, CLASS 4.
	TITANIUM IN ACCORDANCE WITH SAE-AMS-T-9046	NONE
	STAINLESS STEEL IN ACCORDANCE WITH SAE-A-276 OR 581 OR 581M OR 582 OR 582M	PASSIVATION IN ACCORDANCE WITH SAE-AMS2700
INSERT/ PCB TRAY	LIQUID CRYSTAL POLYMER, 30% LOADED GLASS FIBRE POLYESTER 94V0, IN ACCORDANCE WITH MIL-M-24519 (200°C)	
HARDWARE	STAINLESS STEEL, 300 SERIES	PASSIVATION IN ACCORDANCE WITH SAE-AMS2700
ENCAPSULANT	EPOXY RESIN	
INSULATED WIRE	PTFE INSULATED SILVER PLATED COPPER IN ACCORDANCE WITH NEMA-HP3	
UNINSULATED WIRE	GOLD PLATED SOLID COPPER WIRE IN ACCORDANCE WITH A-A-59551 OR GOLD PLATED SOLID COPPER BASED ALLOY IN ACCORDANCE WITH ASTM-B-194	GOLD PLATING IN ACCORDANCE WITH ASTM-B488, TYPE II, CLASS 1 (1.27μm MIN. (0.00005")), CODE C OVER NICKEL UNDERPLATE IN ACCORDANCE WITH SAE-AMS-QQ-N-290, CLASS 2 (1.27μm (0.00005")) TO 3.81μm (0.00015"))

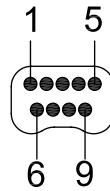
*: ISSUE A AMENDMENT 4 AT THE TIME OF GOING TO PRESS

** : ACCORDING TO MIL-DTL-32139

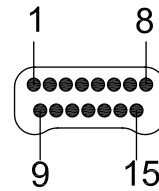
CONTACT ARRANGEMENTS (DUAL ROW)

▶ Mating face of male rectangular connector

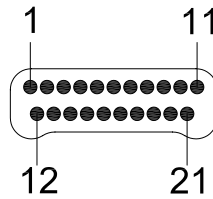
- 0.635 mm (.025") contact spacing.
- 1.016 mm (.040") spacing between rows.



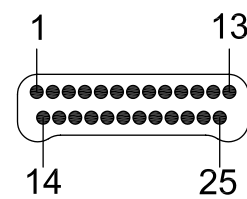
9 CONTACTS



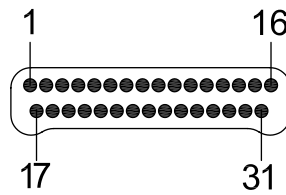
15 CONTACTS



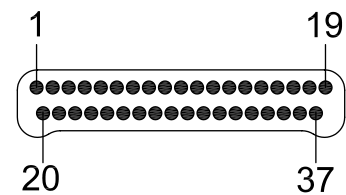
21 CONTACTS



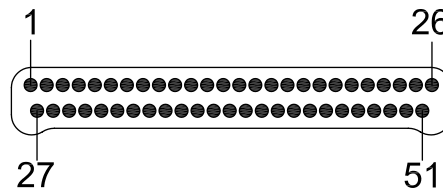
25 CONTACTS



31 CONTACTS



37 CONTACTS



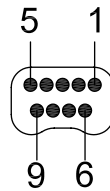
51 CONTACTS

OTHER CONTACT ARRANGEMENTS AVAILABLE ON REQUEST

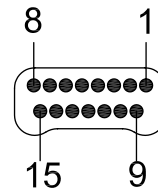
CONTACT ARRANGEMENTS (DUAL ROW)

► Mating face of female rectangular connector

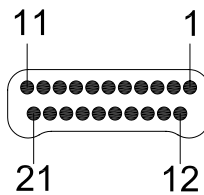
- 0.635 mm (.025") contact spacing.
- 1.016 mm (.040") spacing between rows.



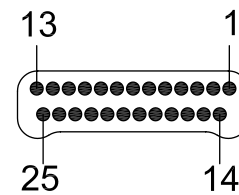
9 CONTACTS



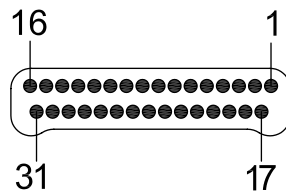
15 CONTACTS



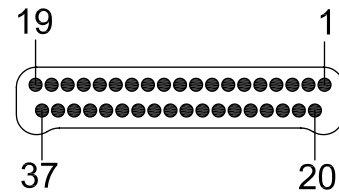
21 CONTACTS



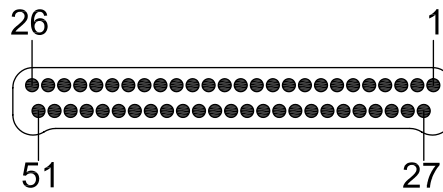
25 CONTACTS



31 CONTACTS



37 CONTACTS

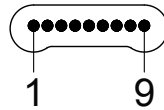


51 CONTACTS

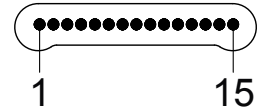
CONTACT ARRANGEMENTS (SINGLE ROW)

▶ Mating face of male rectangular connector

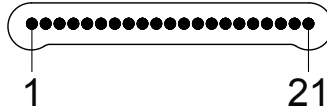
0.635 mm (.025") contact spacing.



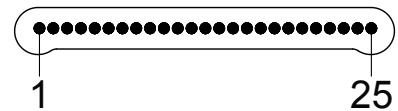
9 CONTACTS



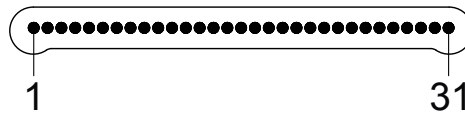
15 CONTACTS



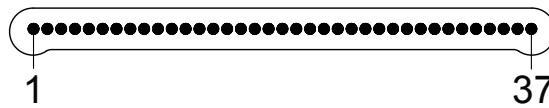
21 CONTACTS



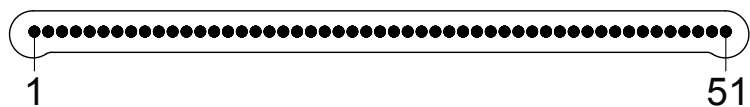
25 CONTACTS



31 CONTACTS



37 CONTACTS



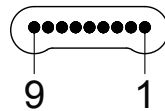
51 CONTACTS

OTHER CONTACT ARRANGEMENTS AVAILABLE ON REQUEST

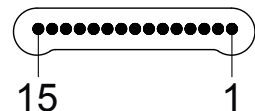
CONTACT ARRANGEMENTS (SINGLE ROW)

▶ Mating face of female rectangular connector

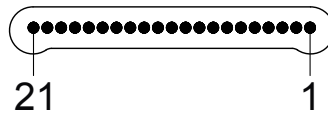
0.635 mm (.025") contact spacing.



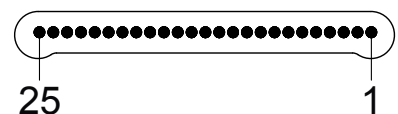
9 CONTACTS



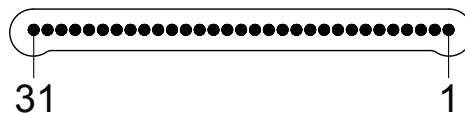
15 CONTACTS



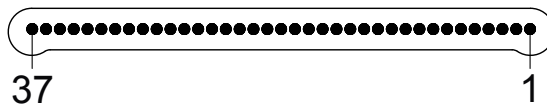
21 CONTACTS



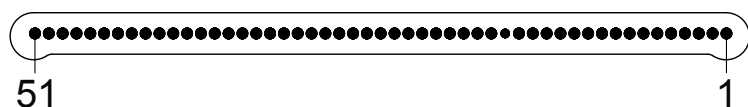
25 CONTACTS



31 CONTACTS



37 CONTACTS



51 CONTACTS

WIRE CODES

Nominal dimensions are used throughout this chapter.

► Solid uninsulated wires

WIRE CODE	WEIGHT (g/m)	MATERIAL	AWG	CONSTRUCTION mm (inch)	Ø mm (inch)	AREA mm ² (sq in)	RESISTANCE Ω/100m (Ω/1000ft)
G	0.45	GOLD PLATED COPPER	30	1x0.254 1x0.010	0.254 .010	0.051 .00008	34.1 103.8
D	0.45	FLASH GOLD PLATED COPPER	30	1x0.254 1x0.010	0.254 .010	0.051 .00008	34.1 103.8

► Insulated wires

WIRE CODE	WIRE DESIGNATION	WEIGHT (g/m)	CONDUCTOR						INSULATION		TEMPERATURE RATING	VOLTAGE RATING
			MATERIAL	AWG	CONSTRUCTION mm (inch)	Ø mm (inch)	AREA mm ² (sq in)	RESISTANCE Ω/100m (Ω/1000ft)	MATERIAL	Ø mm (inch)		
1	ET 3007 (ONLY FOR ND1A & ND2A SERIES)	1.50	SPC*	30	7x0.102 7x.0040	0.304 .012	0.057 .000882	31 94.5	EXTRUDED PTFE	0.62 .024	-90°C/+200°C	250 V _{Ac}
1	UT 3007 (ONLY FOR MDHDA SERIES)	0.85	SPC*	30	7x0.102 7x.0040	0.304 .012	0.057 .000882	31 94.5	EXTRUDED PTFE	0.50 .020	-90°C/+200°C	160 V _{Ac}
2	ET 3207	1.20	SPC*	32	7x0.079 7x.0031	0.237 .009	0.034 .00005	52 158.5	EXTRUDED PTFE	0.57 .022	-90°C/+200°C	250 V _{Ac}
3	ET 3407	1.00	SPC*	34	7x0.063 7x.0025	0.189 .007	0.022 .00003	95 289.6	EXTRUDED PTFE	0.50 .020	-90°C/+200°C	250 V _{Ac}
4	ET 3607	0.80	SPC*	36	7x0.050 7x.0020	0.150 .006	0.014 .00006	150 457	EXTRUDED PTFE	0.48 .019	-90°C/+200°C	250 V _{Ac}

*: SILVER PLATED COPPER

COLOUR CODES

► Colour codes F and L

All the wires have the same colour.
Available with all wire types.

COLOUR CODE	COLOUR
F	YELLOW
L	WHITE

Other colours available on request.

► Colour code W

Also called 10 colour repeat (10 colours repeated in sequence)
as per MIL-DTL-32139. Available with all wire types.

PIN NUMBER	MIL-STD-681 NUMBER	COLOUR
1	0	BLACK
2	1	BROWN
3	2	RED
4	3	ORANGE
5	4	YELLOW
6	5	GREEN
7	6	BLUE
8	7	VIOLET
9	8	GREY
10	9	WHITE
11	0	BLACK
12	1	BROWN
13	2	RED
14	3	ORANGE
15	4	YELLOW
16	5	GREEN
17	6	BLUE
18	7	VIOLET
19	8	GREY
20	9	WHITE
21	0	BLACK

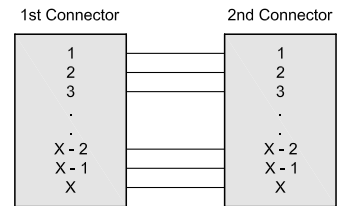
Nano-D connectors

JUMPER WIRING (DUAL ROW)



▲ NANO-D - JUMPER

DIRECT WIRING



X : Number of contacts

DIRECT WIRING

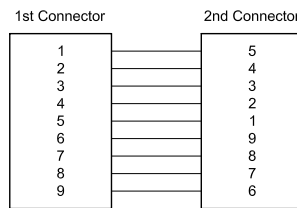
Direct Wiring is where every pin number is connected to the same pin number at the other end, e.g. pin 1 to pin 1, pin 2 to pin 2, and so on. If the two connectors are not of the same gender (i.e. one male, one female) this will result in physically straight or flat wiring with no crossovers. This is therefore the normal convention with opposing gender connectors.

INDIRECT WIRING

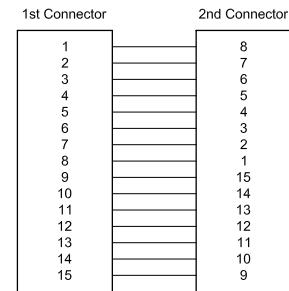
Indirect Wiring is usually requested where both connectors on the jumper are of the same gender (i.e. both male or both female).

In this case, if Direct Wiring was chosen it would result in many physical cross-overs of the wires (crossing from the leftmost pin on the top row to the rightmost, and the same on the bottom row). Indirect Wiring ensures that the physical position of the wires remains straight or flat, i.e. the leftmost pin on the top row of connector 1 will go to the leftmost pin on the top row of connector 2, and so on.

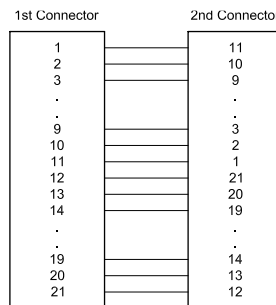
9 WAY INDIRECT WIRING



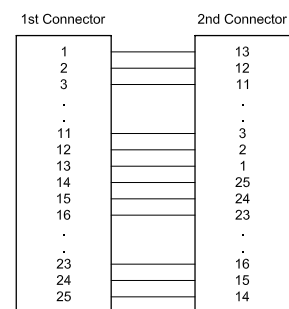
15 WAY INDIRECT WIRING



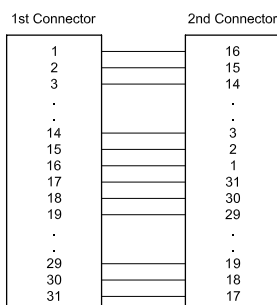
21 WAY INDIRECT WIRING



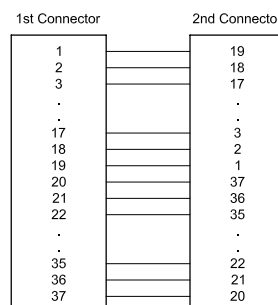
25 WAY INDIRECT WIRING



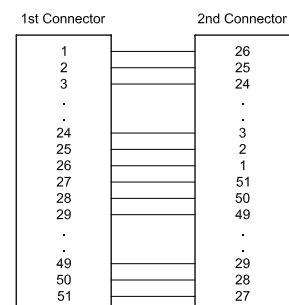
31 WAY INDIRECT WIRING



37 WAY INDIRECT WIRING

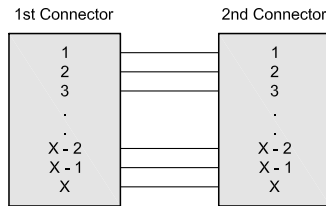


51 WAY INDIRECT WIRING



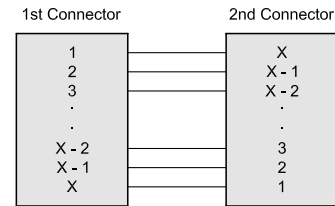
JUMPER WIRING (SINGLE ROW)

DIRECT WIRING



X : Number of contacts

INDIRECT WIRING



X : Number of contacts

Direct Wiring is where every pin number is connected to the same pin number at the other end, e.g. pin 1 to pin 1, pin 2 to pin 2, and so on. If the two connectors are not of the same gender (i.e. one male, one female) this will result in physically straight or flat wiring with no cross-overs. This is therefore the normal convention with opposing gender connectors.

Indirect Wiring is usually requested where both connectors on the jumper are of the same gender (i.e. both male or both female). Indirect Wiring ensures that the physical position of the wires remains straight or flat, i.e. the leftmost pin of connector 1 will go to the leftmost pin of connector 2, and so on.

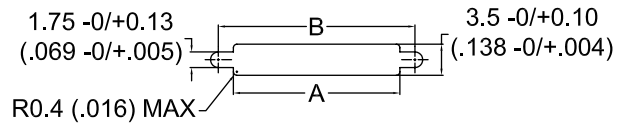
PANEL CUTOOUTS

► Dual row Rear Mount Nano-D connectors

Panel mount receptacle connector only (type M).

9 TO 51 CONTACTS

FIGURE 1
REAR MOUNT



► Dimensions

Dimensions are in millimetres (inches).

LAYOUTS	A -0/ +0.1 (-0 /+.004)	B -0/ +0.1 (-0 /+.004)
9	9.90 .390	13.30 .523
15	11.80 .465	15.20 .598
21	13.71 .540	17.11 .673
25	14.98 .590	18.38 .723
31	16.88 .665	20.28 .800
37	18.79 .740	22.19 .873
51	23.23 .915	26.63 1.048

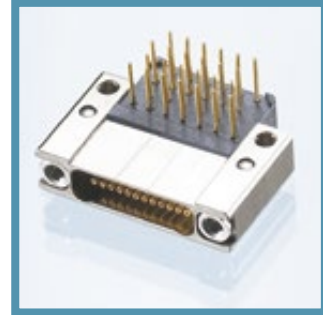
DUAL ROW NANO-D CONNECTORS

RECTANGULAR CONNECTORS FOR CABLES

- Dual row pigtail & jumper 220
- EMI range: Dual row pigtail & jumper 222

PCB RECTANGULAR CONNECTORS

- BS (Board Straight) type - 0.050" pitch receptacles 224
- BS (Board Straight) type - 0.050" pitch plugs 226
- CBR (Condensed Board Right Angle) type - 0.050" pitch receptacles. 228
- CBR (Condensed Board Right Angle) type - 0.050" pitch plugs 230
- SMV (Surface Mount Vertical) type - 0.025" pitch receptacles. 232
- SMV (Surface Mount Vertical) type - 0.025" pitch plugs 234
- SMH (Surface Mount Horizontal) type - 0.025" pitch receptacles. 236
- SMH (Surface Mount Horizontal) type - 0.025" pitch plugs 238
- *PCB layout for BS type* 240
- *PCB layout for CBR type* 242
- *PCB layout for SMV type* 244
- *PCB layout for SMH type* 248



DUAL ROW
NANO-D CONNECTORS

Nano-D
connectors

RECTANGULAR CONNECTORS FOR CABLES

DUAL ROW PIGTAIL & JUMPER



- Reliability for micro-miniature operating systems.
- High performance metal connector and PTFE wire.
- Panel mount available for receptacle connector.
 - Operating temperature: 150°C or 200°C.
 - 7 contact arrangements (9 to 51 contacts).

IDENTIFICATION CODE

ND2A	2	15	P	S	D	1	L	50	R	P
------	---	----	---	---	---	---	---	----	---	---

SERIES

ND2A: Nano-D 2-row AXON'.

CONNECTOR TYPE

2: Aluminium with electroless nickel plating and epoxy 150°C.
3: Aluminium with electroless nickel plating and epoxy 200°C.
 Other materials available on request (eg Titanium, Stainless Steel).

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51. Other versions available on request.

1st CONNECTOR TYPE

P: Plug connector.
S: Receptacle connector.
M: Panel mount receptacle connector.

2nd CONNECTOR TYPE

P: Plug connector.
M: Panel mount receptacle connector.
S: Receptacle connector.
W: No second connector - free wires.

CONNECTIONS (see jumper wiring on page 216)

D: Direct pin 1 to pin 1.
I: Indirect (usual for plug-plug jumper).
X: Pigtail.

WIRE CODE

1: ET 3007, AWG 30, 7 strands, 250 V.
2: ET 3207, AWG 32, 7 strands, 250 V.
3: ET 3407, AWG 34, 7 strands, 250 V.
4: ET 3607, AWG 36, 7 strands, 250 V.
 Other versions available on request.

COLOUR CODE

L: White.
F: Yellow.
W: 10 colour repeat.
 See page 215 for colour code

WIRE LENGTH (in cm)

Attention! Wire length in centimetres - (1cm = 10 mm = .394").

L	2 ≤ L ≤ 10	10 < L ≤ 100	L > 100
in cm (inches)	0.79 ≤ L ≤ 3.940	3.940 < L ≤ 39.40	39.40
TOLERANCE	-0 / +0.5	-0 / +3	-0 / +5
in cm (inches)	-0 / +0.200	-0 / +1.180	-0 / +1.970

HARDWARE 1st CONNECTOR

P: Threaded hole #0-80 UNF (non removable jackposts, recommended for receptacles).
R: Retractable short hex socket head jackscrews #0-80 UNF (semi-captivated, recommended for plugs).
L: Short hex socket head jackscrews #0-80 UNF (captivated).
B: No hardware.

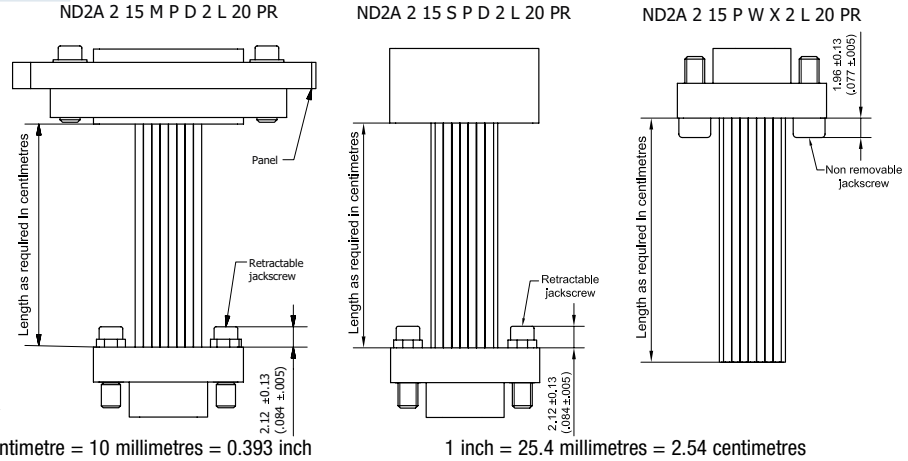
HARDWARE 2nd CONNECTOR

See above.
X: Pigtail.

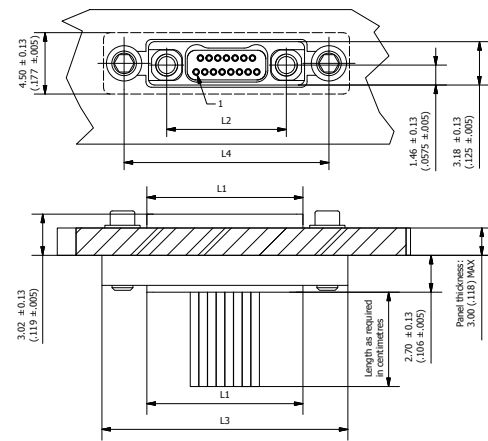
IN BOLD: FACTORY STANDARD

DIMENSIONS

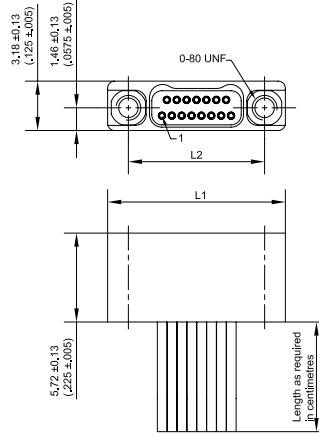
Dimensions are in millimetres (inches).



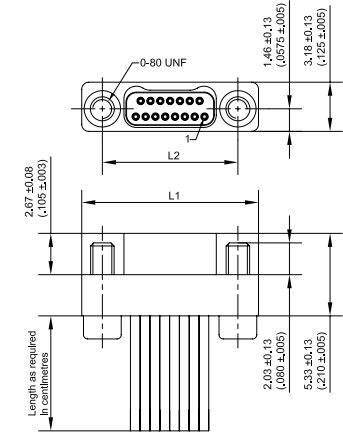
PANEL MOUNT RECEPTACLE



RECEPTACLE

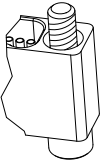
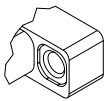


PLUG



SPECIFIC HARDWARE CONFIGURATION

Treaded holes #0-80 UNF for plug shell (code: P)



Jack screw #0-80 UNF for socket shell (code: R/L)

SHELL SIZE	L1 ±0.13 (±.005)	L2 ±0.13 (±.005)	L3 ±0.13 (±.005)	L4 ±0.13 (±.005)
9 P / 9 S	9.53 .375	6.86 .270	16.10 .634	13.10 .516
15 P / 15 S	11.43 .450	8.76 .345	18.00 .709	15.00 .591
21 P / 21 S	13.34 .525	10.67 .420	19.91 .784	16.91 .666
25 P / 25 S	14.61 .575	11.94 .470	21.18 .834	18.18 .716
31 P / 31 S	16.51 .650	13.84 .545	23.09 .909	20.08 .791
37 P / 37 S	18.42 .725	15.75 .620	24.99 .984	21.99 .866
51 P / 51 S	22.86 .900	20.19 .795	29.43 1.159	26.43 1.041

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE		MATERIAL & FINISH	
CURRENT RATING	1 A max.	SHELL	Aluminium Alloy 6061 or 300 series stainless steel or titanium alloy, see page 209 for finish
CONTACT RESISTANCE	71 mΩ max.	MOULDED INSULATOR	Liquid Crystal Polymer (LCP)
INSULATION RESISTANCE	5000 MΩ min. @ 100 Vdc	PIN CONTACT	Precious gold alloy
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 250 V _{AC} Altitude 21 km (70,000 ft): 100 V _{AC}	SOCKET CONTACT	Precious gold alloy
CONTACT ENGAGING FORCE	141 g max. (5 oz)	ENCAPSULANT	Epoxy resin
CONTACT SEPARATING FORCE	11 g min. (0.4 oz)	HARDWARE	300 series stainless steel, passivated
CONTACT RETENTION	0.9 kg (2 lbs)		
DURABILITY	200 mating cycles min.		
VIBRATION	20g's - No discontinuity > 1 μs		
SHOCK	100g's - No discontinuity > 1 μs		

RECTANGULAR CONNECTORS FOR CABLES

EMI RANGE SHIELDED DUAL ROW PIGTAIL & JUMPER



- Reliability for micro-miniature operating systems.
- High performance metal connector and PTFE wire.
 - Panel mount available for receptacle connector.
 - For ultra miniature EMI requirements.
 - 360° screen termination.
 - Operating temperature: 150°C or 200°C.
 - 7 contact arrangements (9 to 51 contacts).

IDENTIFICATION CODE

ND2A 2 15 P S EMI1 D 1 L 50 R P

SERIES

ND2A: Nano-D 2-row AXON®.

CONNECTOR TYPE

2: Aluminium with electroless nickel plating and epoxy 150°C.

3: Aluminium with electroless nickel plating and epoxy 200°C.

Other materials available on request (eg Titanium, Stainless Steel).

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51. Other versions available on request.

1st CONNECTOR TYPE

P: Plug connector.

S: Receptacle connector.

M: Panel mount receptacle connector.

2nd CONNECTOR TYPE

P: Plug connector.

M: Panel mount receptacle connector.

S: Receptacle connector.

W: No second connector - free wires.

EMI FAMILY

EMI1: Shielded pigtail or harness, shield soldered to the backshell

CONNECTIONS (see jumper wiring on page 216)

D: Direct pin 1 to pin 1.

I: Indirect (usual for plug-plug jumper).

X: Pigtail.

WIRE CODE

1: ET 3007, AWG 30, 7 strands, 250 V.

2: ET 3207, AWG 32, 7 strands, 250 V.

3: ET 3407, AWG 34, 7 strands, 250 V.

4: ET 3607, AWG 36, 7 strands, 250 V.

Other versions available on request.

COLOUR CODE

L: White.

F: Yellow.

W: 10 colour repeat.

See page 215 for colour code.

WIRE LENGTH (in cm)

Attention! Wire length in centimetres - (1cm = 10 mm = .394").

HARDWARE 1st CONNECTOR

P: Threaded hole #0-80 UNF (non removable jackposts).

R: Retractable short hex socket head jackscrews #0-80 UNF (semi-captivated).

HARDWARE 2nd CONNECTOR

See above.

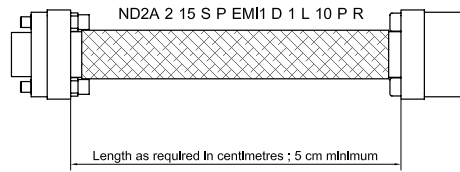
X: Pigtail.

L	5 ≤ L ≤ 10	10 < L ≤ 100	L > 100
in cm (inches)	1.97 ≤ L ≤ 3.940	3.940 < L ≤ 39.40	39.40
TOLERANCE	-0 / +0.5	-0 / +3	-0 / +5
in cm (inches)	-0 / +0.200	-0 / +1.180	-0 / +1.970

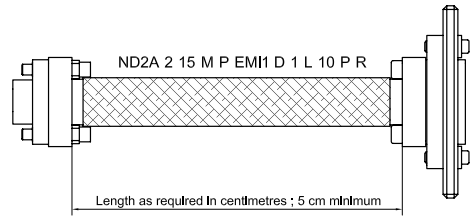
IN BOLD: FACTORY STANDARD

DIMENSIONS

Dimensions are in millimetres (inches).



1 centimetre = 10 millimetres = 0,393 inch

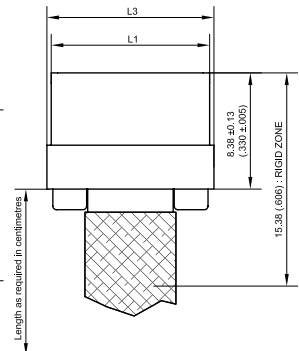
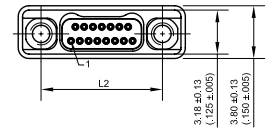
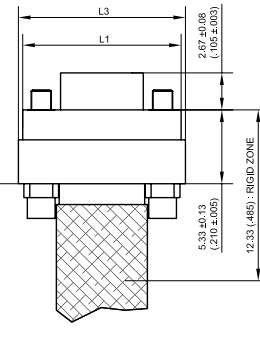
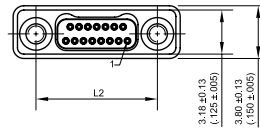
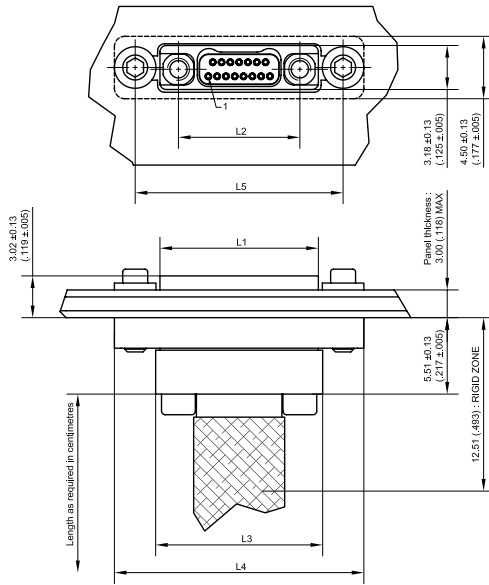


1 inch = 25,4 millimetres = 2,54 centimetres

PANEL MOUNT RECEPTACLE

PLUG

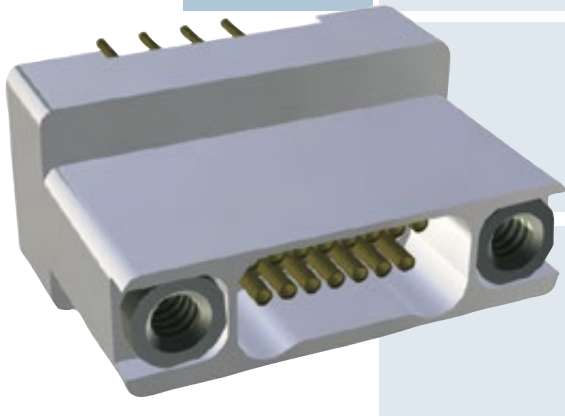
RECEPTACLE



SHELL SIZE	L1 ±0.13 (±.005)	L2 ±0.13 (±.005)	L3 ±0.13 (±.005)	L4 ±0.13 (±.005)	L5 ±0.13 (±.005)
9 P / 9 S	9.53 .375	6.86 .270	10.16 .400	16.10 .634	13.10 .516
15 P / 15 S	11.43 .450	8.76 .345	12.06 .475	18.00 .709	15.00 .591
21 P / 21 S	13.34 .525	10.67 .420	13.97 .550	19.91 .784	16.91 .666
25 P / 25 S	14.61 .575	11.94 .470	15.24 .600	21.18 .834	18.18 .716
31 P / 31 S	16.51 .650	13.84 .545	17.14 .675	23.09 .909	20.08 .791
37 P / 37 S	18.42 .725	15.75 .620	19.05 .750	24.99 .984	21.99 .866
51 P / 51 S	22.86 .900	20.19 .795	23.49 .925	29.43 1.159	26.43 1.041

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE		MATERIAL & FINISH	
CURRENT RATING	1 A max.	SHELL	Aluminium alloy 6061 or 300 series stainless steel or titanium alloy, see page 209 for finish
CONTACT RESISTANCE	71 mΩ max.	BACKSHELL	Aluminium alloy 6061 with nickel plating
INSULATION RESISTANCE	5000 MΩ min. @ 100 Vdc	MOULDED INSULATOR	Liquid Crystal Polymer (LCP)
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 250 V _{AC} Altitude 21 km (70,000 ft): 100 V _{AC}	PIN CONTACT	Precious gold alloy
CONTACT ENGAGING FORCE	141 g max. (5 oz)	SOCKET CONTACT	Precious gold alloy
CONTACT SEPARATING FORCE	11 g min. (0.4 oz)	ENCAPSULANT	Epoxy resin
CONTACT RETENTION	0.9 kg (2 lbs)	HARDWARE	300 series stainless steel, passivated
DURABILITY	200 mating cycles min.		
VIBRATION	20g's – No discontinuity > 1 μs		
SHOCK	100g's – No discontinuity > 1 μs		



PCB RECTANGULAR CONNECTORS

BS TYPE

DUAL ROW VERTICAL PCB RECEPTACLE

0.050" PITCH

- Reliability for micro-miniature operating systems.
- Several tail lengths available.
- Operating temperature: 150°C or 200°C.
- 7 contact arrangements (9 to 51 contacts).

IDENTIFICATION CODE



SERIES

ND2A: Nano-D 2-row AXON'.

CONNECTOR TYPE

2: Aluminium with electroless nickel plating and epoxy 150°C.
3: Aluminium with electroless nickel plating and epoxy 200°C.
Other materials available on request (eg Titanium, Stainless Steel).

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51.
Other versions available on request.

CONNECTOR TYPE

S: Receptacle connector.

FAMILY

BS: AXON' Vertical PCB connector.

HARDWARE

P: Threaded hole #0-80 UNF (non removable jackposts).
Other versions available on request.

TAIL PLATING

G: Gold, AWG30.
D: Flash gold plated solid conductor AWG30.
Other tail plating available on request.

TAIL LENGTH

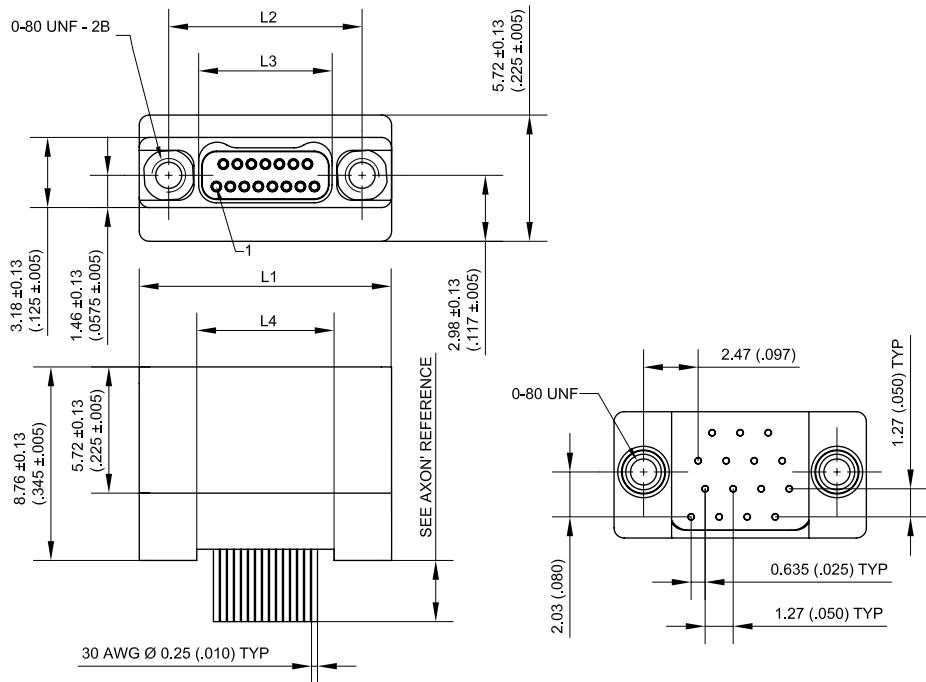
1: 2.77 mm (0.109").
2: 3.56 mm (0.140").
3: 4.37 mm (0.172").
4: 2.29 mm (0.090").
Tolerance: ± 0.25 mm (0.010").

Connectors are supplied with #0-80 UNF screws 1/4" long (for PCB mounting).

IN BOLD: FACTORY STANDARD

DIMENSIONS

Dimensions are in millimetres (inches).



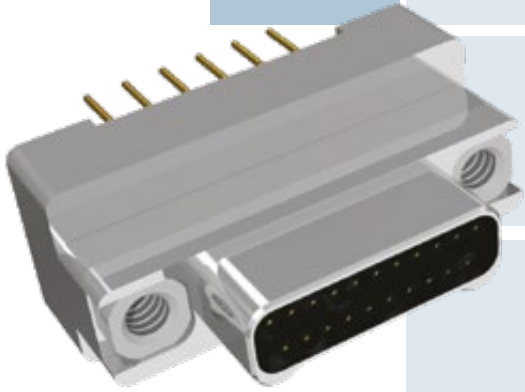
SEE CONTACT LAYOUT ON PCB PAGES 240

SHELL SIZE	L1 ±0.13 (±.005)	L2 ±0.13 (±.005)	L3 ±0.13 (±.005)	L4 ±0.13 (±.005)
9 S	9.53 .375	6.86 .270	4.14 .163	4.32 .170
15 S	11.43 .450	8.76 .345	6.05 .238	6.22 .245
21 S	13.34 .525	10.67 .420	7.95 .313	8.13 .320
25 S	14.61 .575	11.94 .470	9.22 .363	9.40 .370
31 S	16.51 .650	13.84 .545	11.12 .438	11.30 .445
37 S	18.42 .725	15.75 .620	13.03 .513	13.21 .520
51 S	22.86 .900	20.19 .795	17.48 .688	17.65 .695

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE		MATERIAL & FINISH	
CURRENT RATING	1 A max.	SHELL	Aluminium alloy 6061 or 300 series stainless steel or titanium alloy, see ordering for plating options
CONTACT RESISTANCE	71 mΩ max.	MOULDED INSULATOR	Liquid Crystal Polymer (LCP)
INSULATION RESISTANCE	5000 MΩ min. @ 100 Vdc	CONTACT	Copper alloy, gold over nickel plating
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 250 V _{AC} Altitude 21 km (70,000 ft): 100 V _{AC}	ENCAPSULANT	Epoxy Resin
CONTACT ENGAGING FORCE	141 g max. (5 oz)	PCB TERMINALS	Gold plated solid copper alloy wire
CONTACT SEPARATING FORCE	11 g min. (0.4 oz)	HARDWARE	300 series stainless steel, passivated
CONTACT RETENTION	0.9 kg (2 lbs)		
DURABILITY	200 mating cycles min.		
VIBRATION	20g's – No discontinuity > 1 μs		
SHOCK	100g's – No discontinuity > 1 μs		

SEE PAGE 209 FOR MORE INFORMATION



PCB RECTANGULAR CONNECTORS

BS TYPE

DUAL ROW VERTICAL PCB PLUG

0.050" PITCH

- Reliability for micro-miniature operating systems.
- Several tail lengths available.
- Operating temperature: 150°C or 200°C.
- 7 contact arrangements (9 to 51 contacts).

IDENTIFICATION CODE

ND2A	2	15	P	BS	P	G	1
------	---	----	---	----	---	---	---

SERIES

ND2A: Nano-D 2-row AXON'.

CONNECTOR TYPE

2: Aluminium with electroless nickel plating and epoxy 150°C.
3: Aluminium with electroless nickel plating and epoxy 200°C.
Other materials available on request (eg Titanium, Stainless Steel).

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51.
Other versions available on request.

CONNECTOR TYPE

P: Plug connector.

FAMILY

BS: AXON' Vertical PCB connector.

HARDWARE

P: Threaded hole #0-80 UNF (non removable jackposts).
Other versions available on request.

TAIL PLATING

G: Gold, AWG30.
D: Flash gold plated solid conductor AWG30.
Other tail plating available on request.

TAIL LENGTH

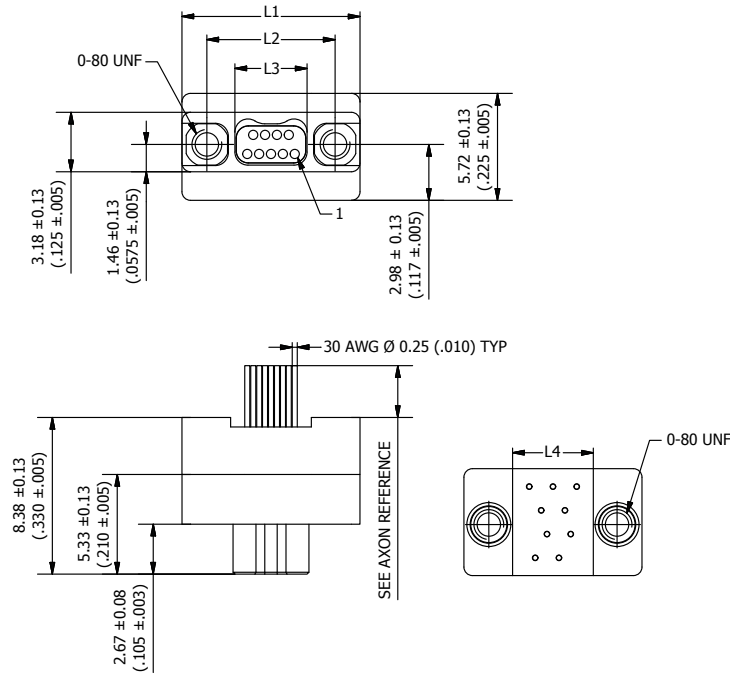
1: 2.77 mm (0.109").
2: 3.56 mm (0.140").
3: 4.37 mm (0.172").
4: 2.29 mm (0.090").
Tolerance: ± 0.25 mm (0.010").

Connectors are supplied with #0-80 UNF screws 1/4" long (for PCB mounting).

IN BOLD: FACTORY STANDARD

DIMENSIONS

Dimensions are in millimetres (inches).



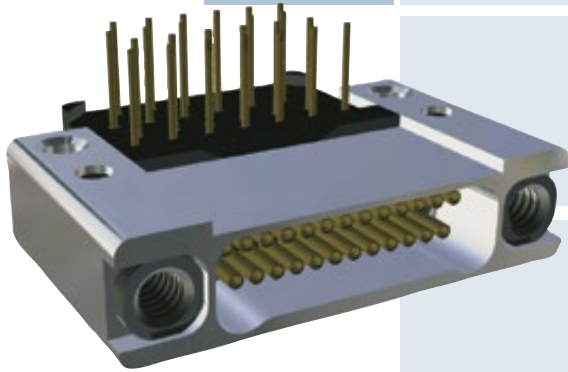
SEE CONTACT LAYOUT ON PCB PAGE 241

SHELL SIZE	L1 ±0.13 (±.005)	L2 ±0.13 (±.005)	L3 ±0.13 (±.005)	L4 ±0.13 (±.005)
9 P	9.53 .375	6.86 .270	4.06 .160	4.32 .170
15 P	11.43 .450	8.76 .345	5.97 .235	6.22 .245
21 P	13.34 .525	10.67 .420	7.87 .310	8.13 .320
25 P	14.61 .575	11.94 .470	9.14 .360	9.40 .370
31 P	16.51 .650	13.84 .545	11.05 .435	11.30 .445
37 P	18.42 .725	15.75 .620	12.95 .510	13.21 .520
51 P	22.86 .900	20.19 .795	17.40 .685	17.65 .695

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE		MATERIAL & FINISH	
CURRENT RATING	1 A max.	SHELL	Aluminium alloy 6061 or 300 series stainless steel or titanium alloy, see ordering for plating options
CONTACT RESISTANCE	71 mΩ max.	MOULDED INSULATOR	Liquid Crystal Polymer (LCP)
INSULATION RESISTANCE	5000 MΩ min. @ 100 Vdc	CONTACT	Precious gold alloy
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 250 VAc Altitude 21 km (70,000 ft): 100 VAc	ENCAPSULANT	Epoxy Resin
CONTACT ENGAGING FORCE	141 g max. (5 oz)	PCB TERMINALS	Gold plated solid copper alloy wire
CONTACT SEPARATING FORCE	11 g min. (0.4 oz)	HARDWARE	300 series stainless steel, passivated
CONTACT RETENTION	0.9 kg (2 lbs)		
DURABILITY	200 mating cycles min.		
VIBRATION	20g's – No discontinuity > 1 μs		
SHOCK	100g's – No discontinuity > 1 μs		

SEE PAGE 209 FOR MORE INFORMATION



PCB RECTANGULAR CONNECTORS

CBR TYPE DUAL ROW RIGHT ANGLE PCB RECEPTACLE

0.050" PITCH

- Reliability for micro-miniature operating systems.
- Several tail lengths available.
- Operating temperature: 150°C or 200°C.
- 7 contact arrangements (9 to 51 contacts).

IDENTIFICATION CODE

ND2A	2	15	S	CBR	P	G	1
------	---	----	---	-----	---	---	---

SERIES

ND2A: Nano-D 2-row AXON'.

CONNECTOR TYPE

2: Aluminium with electroless nickel plating and epoxy 150°C.
3: Aluminium with electroless nickel plating and epoxy 200°C.
 Other materials available on request (eg Titanium, Stainless Steel).

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51.
 Other versions available on request.

CONNECTOR TYPE

S: Receptacle connector.

FAMILY

CBR: AXON' Right Angle PCB connector.

HARDWARE

P: Threaded hole #0-80 UNF (non removable jackposts).
B: None.
 Other versions available on request.

TAIL PLATING

G: Gold, AWG30.
D: Flash gold plated solid conductor AWG30.
 Other tail plating available on request.

TAIL LENGTH

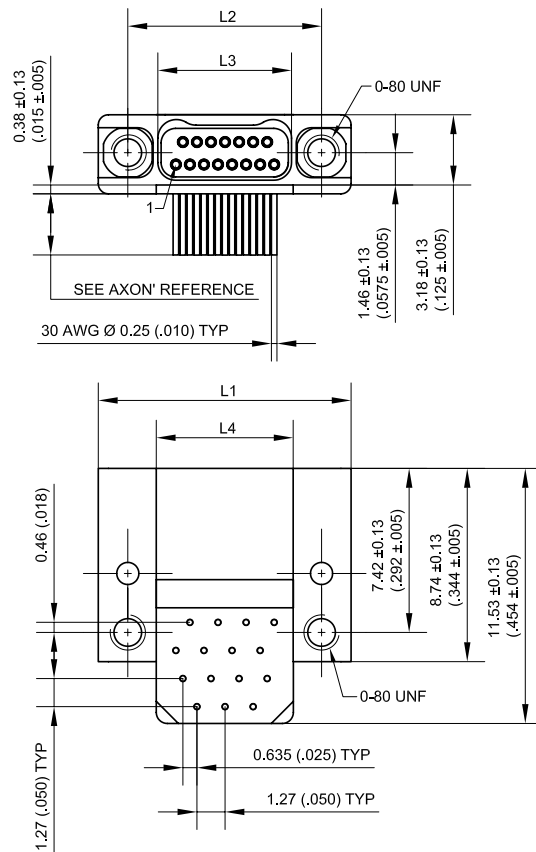
1: 2.77 mm (0.109").
2: 3.56 mm (0.140").
3: 4.37 mm (0.172").
4: 2.29 mm (0.090").
 Tolerance: ± 0.25 mm (0.010").

Connectors are supplied with #0-80 UNF screws 1/4" long (for PCB mounting).

IN BOLD: FACTORY STANDARD

DIMENSIONS

Dimensions are in millimetres (inches).



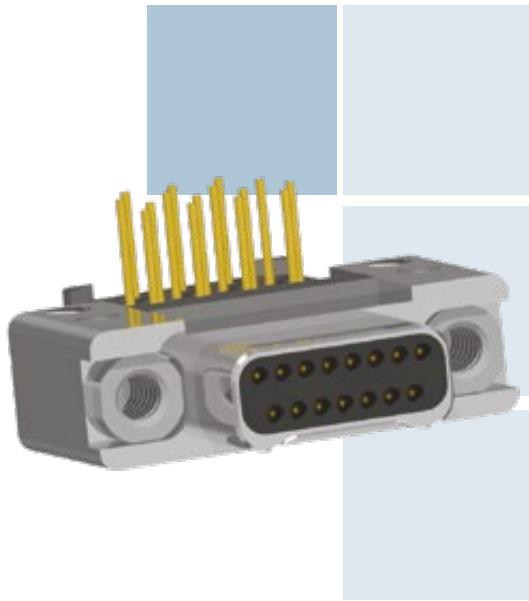
SEE CONTACT LAYOUT ON PCB PAGE 242

SHELL SIZE	L1 ±0.13 (±.005)	L2 ±0.13 (±.005)	L3 ±0.13 (±.005)	L4 ±0.13 (±.005)
9 S	9.53 .375	6.86 .270	4.14 .163	4.32 .170
15 S	11.43 .450	8.76 .345	6.05 .238	6.22 .245
21 S	13.34 .525	10.67 .420	7.95 .313	8.13 .320
25 S	14.61 .575	11.94 .470	9.22 .363	9.40 .370
31 S	16.51 .650	13.84 .545	11.12 .438	11.30 .445
37 S	18.42 .725	15.75 .620	13.03 .513	13.21 .520
51 S	22.86 .900	20.19 .795	17.48 .688	17.65 .695

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE		MATERIAL & FINISH	
CURRENT RATING	1 A max.	SHELL	Aluminium alloy 6061 or 300 series stainless steel or titanium alloy, see ordering for plating options
CONTACT RESISTANCE	71 mΩ max.	MOULDED INSULATOR	Liquid Crystal Polymer (LCP)
INSULATION RESISTANCE	5000 MΩ min. @ 100 Vdc	CONTACT	Copper alloy, gold over nickel plating
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 250 V _{AC} Altitude 21 km (70,000 ft): 100 V _{AC}	ENCAPSULANT	Epoxy Resin
CONTACT ENGAGING FORCE	141 g max. (5 oz)	PCB TERMINALS	Gold plated solid copper alloy wire
CONTACT SEPARATING FORCE	11 g min. (0.4 oz)	HARDWARE	300 series stainless steel, passivated
CONTACT RETENTION	0.9 kg (2 lbs)		
DURABILITY	200 mating cycles min.		
VIBRATION	20g's – No discontinuity > 1 μs		
SHOCK	100g's – No discontinuity > 1 μs		

SEE PAGE 209 FOR MORE INFORMATION



PCB RECTANGULAR CONNECTORS

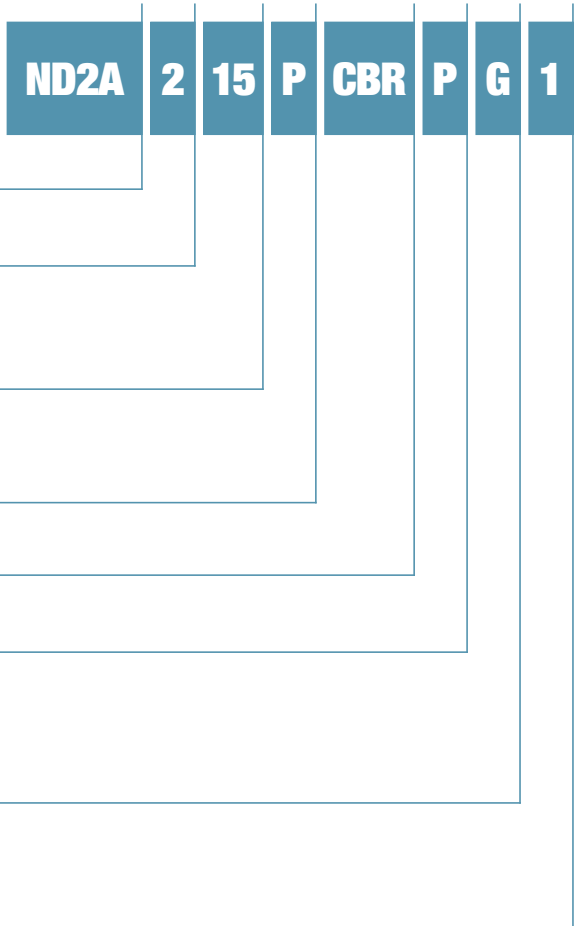
CBR TYPE

DUAL ROW RIGHT ANGLE PCB PLUG

0.050" PITCH

- Reliability for micro-miniature operating systems.
- Several tail lengths available.
- Operating temperature: 150°C or 200°C.
- 7 contact arrangements (9 to 51 contacts).

IDENTIFICATION CODE



SERIES

ND2A: Nano-D 2-row AXON'.

CONNECTOR TYPE

2: Aluminium with electroless nickel plating and epoxy 150°C.
3: Aluminium with electroless nickel plating and epoxy 200°C.
 Other materials available on request (eg Titanium, Stainless Steel).

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51.
 Other versions available on request.

CONNECTOR TYPE

P: Plug connector.

FAMILY

CBR: AXON' Right Angle PCB connector.

HARDWARE

P: Threaded hole #0-80 UNF (non removable jackposts).
B: None.
 Other versions available on request.

TAIL PLATING

G: Gold, AWG30.
D: Flash gold plated solid conductor AWG30.
 Other tail plating available on request.

TAIL LENGTH

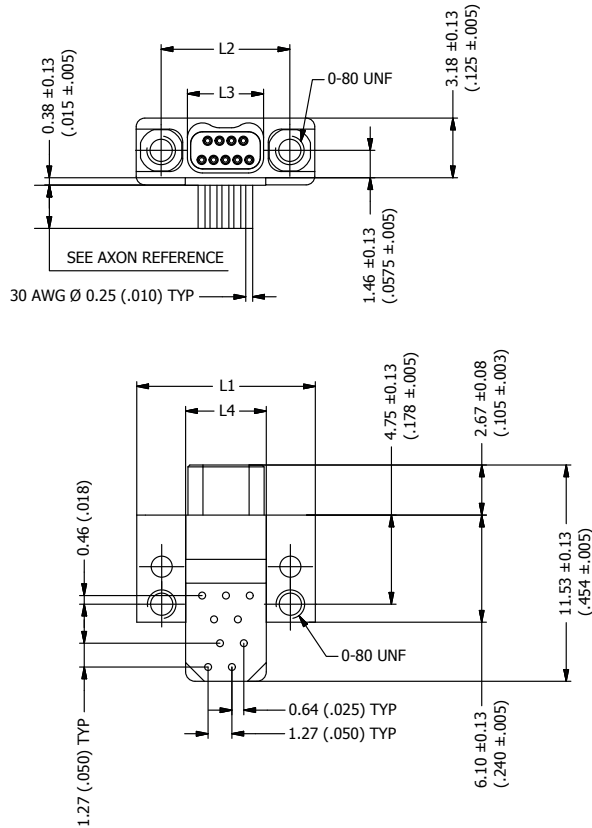
1: 2.77 mm (0.109").
2: 3.56 mm (0.140").
3: 4.37 mm (0.172").
4: 2.29 mm (0.090").
 Tolerance: ± 0.25 mm (0.010").

Connectors are supplied with #0-80 UNF screws 1/4" long (for PCB mounting).

IN BOLD: FACTORY STANDARD

DIMENSIONS

Dimensions are in millimetres (inches).



SEE CONTACT LAYOUT ON PCB PAGE 243

SHELL SIZE	L1 ±0.13 (±.005)	L2 ±0.13 (±.005)	L3 ±0.13 (±.005)	L4 ±0.13 (±.005)
9 P	9.53 .375	6.86 .270	4.06 .160	4.32 .170
15 P	11.43 .450	8.76 .345	5.97 .235	6.22 .245
21 P	13.34 .525	10.67 .420	7.87 .310	8.13 .320
25 P	14.61 .575	11.94 .470	9.14 .360	9.40 .370
31 P	16.51 .650	13.84 .545	11.05 .435	11.30 .445
37 P	18.42 .725	15.75 .620	12.95 .510	13.21 .520
51 P	22.86 .900	20.19 .795	17.40 .685	17.65 .695

SUMMARY OF CHARACTERISTICS

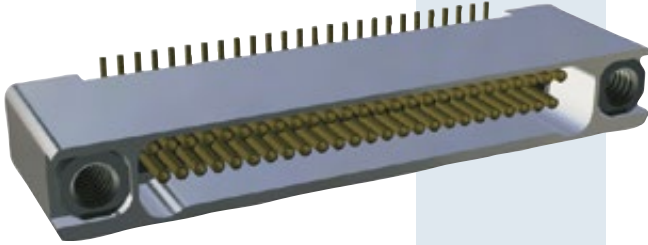
ELECTRICAL & MECHANICAL PERFORMANCE		MATERIAL & FINISH	
CURRENT RATING	1 A max.	SHELL	Aluminium alloy 6061 or 300 series stainless steel or titanium alloy, see ordering for plating options
CONTACT RESISTANCE	71 mΩ max.	MOULDED INSULATOR	Liquid Crystal Polymer (LCP)
INSULATION RESISTANCE	5000 MΩ min. @ 100 Vdc	CONTACT	Precious gold alloy
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 250 V _{AC} Altitude 21 km (70,000 ft): 100 V _{AC}	ENCAPSULANT	Epoxy Resin
CONTACT ENGAGING FORCE	141 g max. (5 oz)	PCB TERMINALS	Gold plated solid copper alloy wire
CONTACT SEPARATING FORCE	11 g min. (0.4 oz)	HARDWARE	300 series stainless steel, passivated
CONTACT RETENTION	0.9 kg (2 lbs)		
DURABILITY	200 mating cycles min.		
VIBRATION	20g's – No discontinuity > 1 μs		
SHOCK	100g's – No discontinuity > 1 μs		

SEE PAGE 209 FOR MORE INFORMATION

SMV TYPE

DUAL ROW VERTICAL SURFACE MOUNT PCB RECEPTACLE

0.025" PITCH



- Reliability for micro-miniature operating systems.
 - Surface Mount.
 - Several tail lengths available.
- Operating temperature: 150°C or 200°C.
- 7 contact arrangements (9 to 51 contacts).

IDENTIFICATION CODE

ND2A 2 15 S SMV P G 1

SERIES

ND2A: Nano-D 2-row AXON'.

CONNECTOR TYPE

2: Aluminium with electroless nickel plating and epoxy 150°C.
3: Aluminium with electroless nickel plating and epoxy 200°C.
 Other materials available on request (eg Titanium, Stainless Steel).

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51.
 Other versions available on request.

CONNECTOR TYPE

S: Receptacle connector.

FAMILY

SMV: AXON' Vertical surface mount PCB connector.

HARDWARE

P: Threaded holes #0-80 UNF (non removable jackposts).
 Other versions available on request.
B: None.

TAIL PLATING

G: Gold, AWG30.
D: Flash gold plated solid conductor AWG30.
 Other tail plating available on request.

TAIL LENGTH

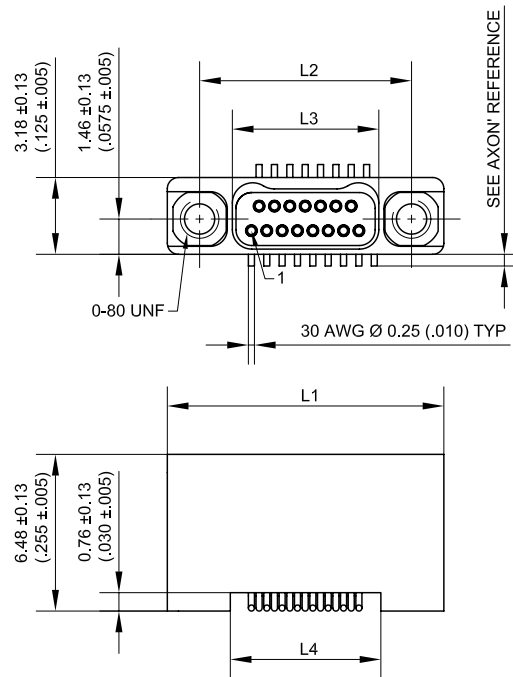
1: 0.51 mm (0.020").
2: 1.02 mm (0.040").
 Tolerance: ± 0.25 mm (0.010").

Connectors are supplied with #0-80 UNF screws 1/4" long (for PCB mounting).

IN BOLD: FACTORY STANDARD

DIMENSIONS

Dimensions are in millimetres (inches).



SEE CONTACT LAYOUT ON PCB PAGES 244 & 245

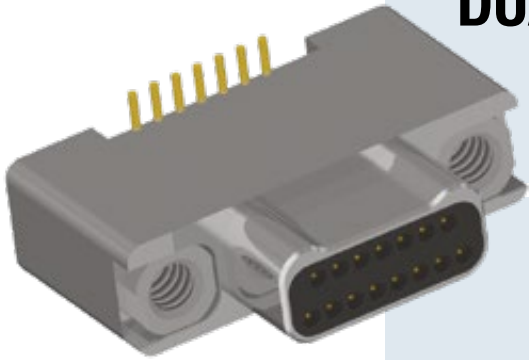
SHELL SIZE	L1 ±0.13 (±.005)	L2 ±0.13 (±.005)	L3 ±0.13 (±.005)	L4 ±0.13 (±.005)
9 S	9.53 .375	6.86 .270	4.14 .163	4.32 .170
15 S	11.43 .450	8.76 .345	6.05 .238	6.22 .245
21 S	13.34 .525	10.67 .420	7.95 .313	8.13 .320
25 S	14.61 .575	11.94 .470	9.22 .363	9.40 .370
31 S	16.51 .650	13.84 .545	11.12 .438	11.30 .445
37 S	18.42 .725	15.75 .620	13.03 .513	13.21 .520
51 S	22.86 .900	20.19 .795	17.48 .688	17.65 .695

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE	
CURRENT RATING	1 A max.
CONTACT RESISTANCE	71 mΩ max.
INSULATION RESISTANCE	5000 MΩ min. @ 100 Vdc
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 250 VAc Altitude 21 km (70,000 ft): 100 VAc
CONTACT ENGAGING FORCE	141 g max. (5 oz)
CONTACT SEPARATING FORCE	11 g min. (0.4 oz)
CONTACT RETENTION	0.9 kg (2 lbs)
DURABILITY	200 mating cycles min.
VIBRATION	20g's – No discontinuity > 1 μs
SHOCK	100g's – No discontinuity > 1 μs

MATERIAL & FINISH	
SHELL	Aluminium alloy 6061 or 300 series stainless steel or titanium alloy, see ordering for plating options
MOULDED INSULATOR	Liquid Crystal Polymer (LCP)
CONTACT	Copper alloy, gold over nickel plating
ENCAPSULANT	Epoxy Resin
PCB TERMINALS	Gold plated solid copper alloy wire
HARDWARE	300 series stainless steel, passivated

SEE PAGE 209 FOR MORE INFORMATION



SMV TYPE DUAL ROW VERTICAL SURFACE MOUNT PCB PLUG

0.025" PITCH

- Reliability for micro-miniature operating systems.
 - Surface Mount.
 - Several tail lengths available.
- Operating temperature: 150°C or 200°C.
- 7 contact arrangements (9 to 51 contacts).

IDENTIFICATION CODE

ND2A	2	15	P	SMV	P	G	1
------	---	----	---	-----	---	---	---

SERIES

ND2A: Nano-D 2-row AXON'.

CONNECTOR TYPE

2: Aluminium with electroless nickel plating and epoxy 150°C.
3: Aluminium with electroless nickel plating and epoxy 200°C.
 Other materials available on request (eg Titanium, Stainless Steel).

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51.
 Other versions available on request.

CONNECTOR TYPE

P: Plug connector.

FAMILY

SMV: AXON' Vertical surface mount PCB connector.

HARDWARE

P: Threaded holes #0-80 UNF (non removable jackposts).
 Other versions available on request.
B: None.

TAIL PLATING

G: Gold, AWG30.
D: Flash gold plated solid conductor AWG30.
 Other tail plating available on request.

TAIL LENGTH

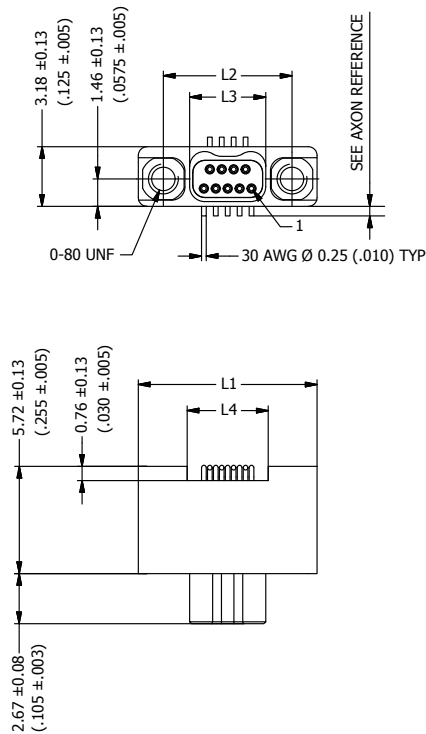
1: 0.51 mm (0.020").
2: 1.02 mm (0.040").
 Tolerance: ± 0.25 mm (0.010").

Connectors are supplied with #0-80 UNF screws 1/4" long (for PCB mounting).

IN BOLD: FACTORY STANDARD

DIMENSIONS

Dimensions are in millimetres (inches).



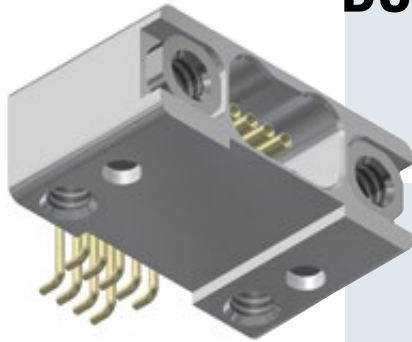
SEE CONTACT LAYOUT ON PCB PAGES 246 & 247

SHELL SIZE	L1 ±0.13 (±.005)	L2 ±0.13 (±.005)	L3 ±0.13 (±.005)	L4 ±0.13 (±.005)
9 P	9.53 .375	6.86 .270	4.06 .160	4.32 .170
15 P	11.43 .450	8.76 .345	5.97 .235	6.22 .245
21 P	13.34 .525	10.67 .420	7.87 .310	8.13 .320
25 P	14.61 .575	11.94 .470	9.14 .360	9.40 .370
31 P	16.51 .650	13.84 .545	11.05 .435	11.30 .445
37 P	18.42 .725	15.75 .620	12.95 .510	13.21 .520
51 P	22.86 .900	20.19 .795	17.40 .685	17.65 .695

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE		MATERIAL & FINISH	
CURRENT RATING	1 A max.	SHELL	Aluminium alloy 6061 or 300 series stainless steel or titanium alloy, see ordering for plating options
CONTACT RESISTANCE	71 mΩ max.	MOULDED INSULATOR	Liquid Crystal Polymer (LCP)
INSULATION RESISTANCE	5000 MΩ min. @ 100 Vdc	CONTACT	Precious gold alloy
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 250 VAc Altitude 21 km (70,000 ft): 100 VAc	ENCAPSULANT	Epoxy Resin
CONTACT ENGAGING FORCE	141 g max. (5 oz)	PCB TERMINALS	Gold plated solid copper alloy wire
CONTACT SEPARATING FORCE	11 g min. (0.4 oz)	HARDWARE	300 series stainless steel, passivated
CONTACT RETENTION	0.9 kg (2 lbs)		
DURABILITY	200 mating cycles min.		
VIBRATION	20g's – No discontinuity > 1 μs		
SHOCK	100g's – No discontinuity > 1 μs		

SEE PAGE 209 FOR MORE INFORMATION



SMH TYPE

DUAL ROW HORIZONTAL SURFACE MOUNT PCB RECEPTACLE

0.025" PITCH

- Reliability for micro-miniature operating systems.
- Surface Mount.
- Operating temperature: 150°C or 200°C.
- 7 contact arrangements (9 to 51 contacts).

IDENTIFICATION CODE

ND2A	2	15	S	SMH	P	G	1
------	---	----	---	-----	---	---	---

SERIES

ND2A: Nano-D 2-row AXON'.

CONNECTOR TYPE

2: Aluminium with electroless nickel plating and epoxy 150°C.
3: Aluminium with electroless nickel plating and epoxy 200°C.
 Other materials available on request (eg Titanium, Stainless Steel).

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51.
 Other versions available on request.

CONNECTOR TYPE

S: Receptacle connector.

FAMILY

SMH: AXON' Horizontal surface mount PCB connector.

HARDWARE

P: Threaded holes #0-80 UNF (non removable jackposts).
 Other versions available on request.
B: None.

TAIL PLATING

G: Gold, AWG30.
D: Flash gold plated solid conductor AWG30.
 Other tail plating available on request.

TAIL LENGTH

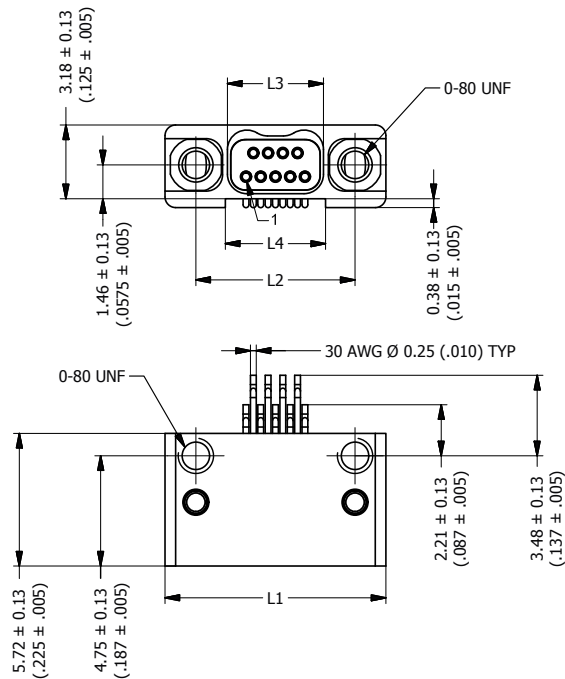
1: Standard (see page 237 for dimensions).

Connectors are supplied with #0-80 UNF screws 1/4" long (for PCB mounting).

IN BOLD: FACTORY STANDARD

DIMENSIONS

Dimensions are in millimetres (inches).



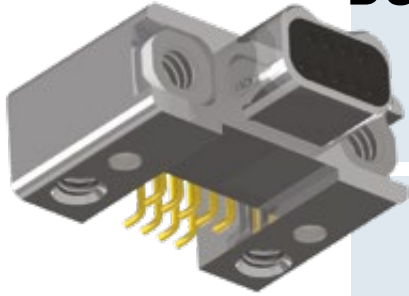
SEE CONTACT LAYOUT ON PCB PAGES 248 & 249

SHELL SIZE	L1 ± 0.13 ($\pm .005$)	L2 ± 0.13 ($\pm .005$)	L3 ± 0.13 ($\pm .005$)	L4 ± 0.13 ($\pm .005$)
9 S	9.53 .375	6.86 .270	4.14 .163	4.32 .170
15 S	11.43 .450	8.76 .345	6.05 .238	6.22 .245
21 S	13.34 .525	10.67 .420	7.95 .313	8.13 .320
25 S	14.61 .575	11.94 .470	9.22 .363	9.40 .370
31 S	16.51 .650	13.84 .545	11.12 .438	11.30 .445
37 S	18.42 .725	15.75 .620	13.03 .513	13.21 .520
51 S	22.86 .900	20.19 .795	17.48 .688	17.65 .695

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE		MATERIAL & FINISH	
CURRENT RATING	1 A max.	SHELL	Aluminium alloy 6061 or 300 series stainless steel or titanium alloy, see ordering for plating options
CONTACT RESISTANCE	71 m Ω max.	MOULDED INSULATOR	Liquid Crystal Polymer (LCP)
INSULATION RESISTANCE	5000 M Ω min. @ 100 Vdc	CONTACT	Precious gold alloy
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 250 V _{AC} Altitude 21 km (70,000 ft): 100 V _{AC}	ENCAPSULANT	Epoxy resin
CONTACT ENGAGING FORCE	141 g max. (5 oz)	PCB TERMINALS	Gold plated solid copper alloy wire
CONTACT SEPARATING FORCE	11 g min. (0.4 oz)	HARDWARE	300 series stainless steel, passivated
CONTACT RETENTION	0.9 kg (2 lbs)		
DURABILITY	200 mating cycles min.		
VIBRATION	20g's – No discontinuity > 1 μ s		
SHOCK	100g's – No discontinuity > 1 μ s		

SEE PAGE 209 FOR MORE INFORMATION



SMH TYPE

DUAL ROW HORIZONTAL SURFACE MOUNT PCB PLUG

0.025" PITCH

- Reliability for micro-miniature operating systems.
 - Surface Mount.
- Operating temperature: 150°C or 200°C.
- 7 contact arrangements (9 to 51 contacts).

IDENTIFICATION CODE

ND2A	2	15	P	SMH	P	G	1
------	---	----	---	-----	---	---	---

SERIES

ND2A: Nano-D 2-row AXON'.

CONNECTOR TYPE

2: Aluminium with electroless nickel plating and epoxy 150°C.
3: Aluminium with electroless nickel plating and epoxy 200°C.
 Other materials available on request (eg Titanium, Stainless Steel).

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51.
 Other versions available on request.

CONNECTOR TYPE

P: Plug connector.

FAMILY

SMH: AXON' Horizontal surface mount PCB connector.

HARDWARE

P: Threaded holes #0-80 UNF (non removable jackposts).
 Other versions available on request.
B: None.

TAIL PLATING

G: Gold, AWG30.
D: Flash gold plated solid conductor AWG30.
 Other tail plating available on request.

TAIL LENGTH

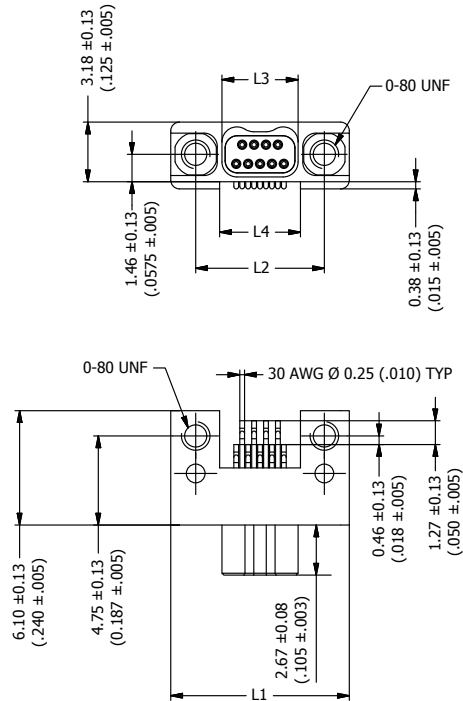
1: Standard (see page 239 for dimensions).

Connectors are supplied with #0-80 UNF screws 1/4" long (for PCB mounting).

IN BOLD: FACTORY STANDARD

DIMENSIONS

Dimensions are in millimetres (inches).



SEE CONTACT LAYOUT ON PCB PAGE 250 & 251

SHELL SIZE	L1 ±0.13 (±.005)	L2 ±0.13 (±.005)	L3 ±0.13 (±.005)	L4 ±0.13 (±.005)
9 P	9.53 .375	6.86 .270	4.06 .160	4.32 .170
15 P	11.43 .450	8.76 .345	5.97 .235	6.22 .245
21 P	13.34 .525	10.67 .420	7.87 .310	8.13 .320
25 P	14.61 .575	11.94 .470	9.14 .360	9.40 .370
31 P	16.51 .650	13.84 .545	11.05 .435	11.30 .445
37 P	18.42 .725	15.75 .620	12.95 .510	13.21 .520
51 P	22.86 .900	20.19 .795	17.40 .685	17.65 .695

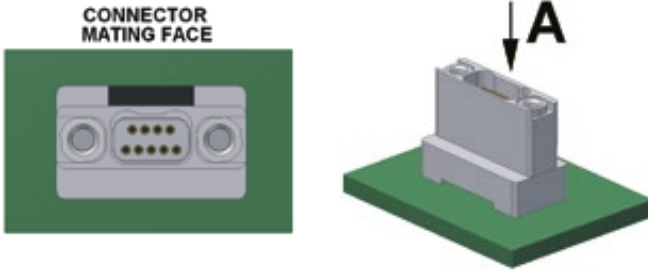
SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE		MATERIAL & FINISH	
CURRENT RATING	1 A max.	SHELL	Aluminium alloy 6061 or 300 series stainless steel or titanium alloy, see ordering for plating options
CONTACT RESISTANCE	71 mΩ max.	MOULDED INSULATOR	Liquid Crystal Polymer (LCP)
INSULATION RESISTANCE	5000 MΩ min. @ 100 Vdc	CONTACT	Precious gold alloy
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 250 V _{AC} Altitude 21 km (70,000 ft): 100 V _{AC}	ENCAPSULANT	Epoxy resin
CONTACT ENGAGING FORCE	141 g max. (5 oz)	PCB TERMINALS	Gold plated solid copper alloy wire
CONTACT SEPARATING FORCE	11 g min. (0.4 oz)	HARDWARE	300 series stainless steel, passivated
CONTACT RETENTION	0.9 kg (2 lbs)		
DURABILITY	200 mating cycles min.		
VIBRATION	20g's – No discontinuity > 1 μs		
SHOCK	100g's – No discontinuity > 1 μs		

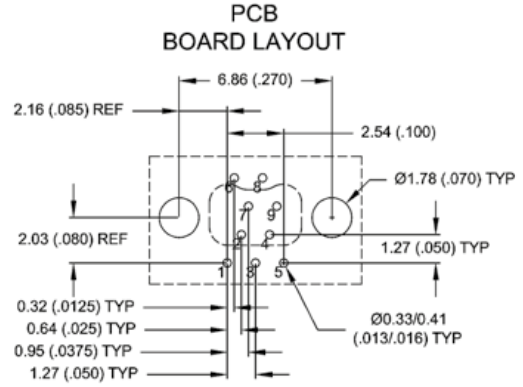
SEE PAGE 209 FOR MORE INFORMATION

PCB LAYOUT FOR BS TYPE 0.050" PITCH - FEMALE CONNECTORS

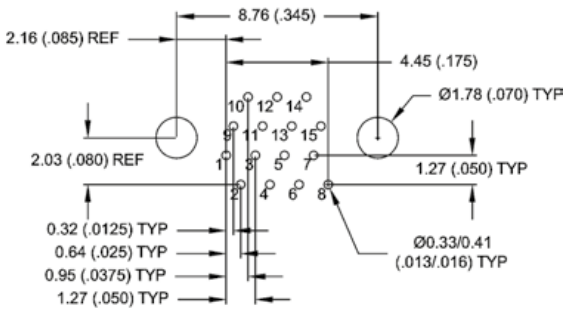
VIEW A



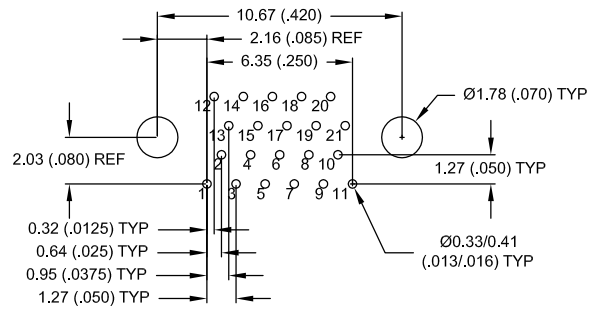
9 CONTACTS - VIEW A



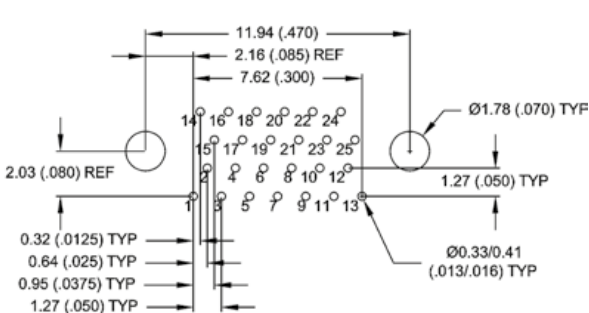
15 CONTACTS - VIEW A



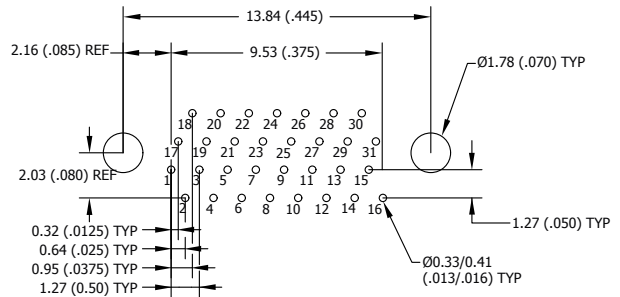
21 CONTACTS - VIEW A



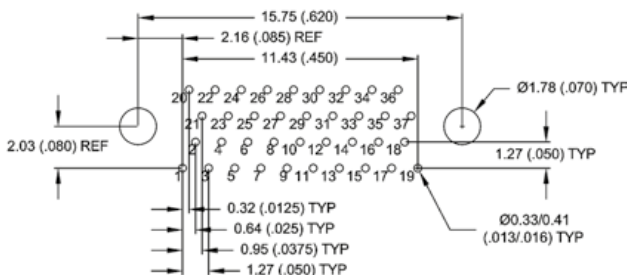
25 CONTACTS - VIEW A



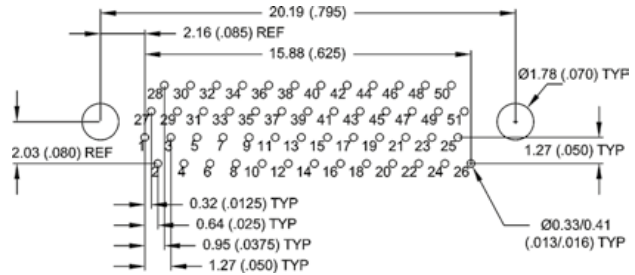
31 CONTACTS - VIEW A



37 CONTACTS - VIEW A



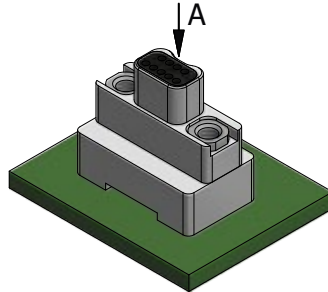
51 CONTACTS - VIEW A



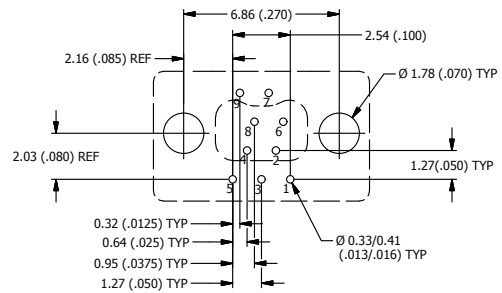
1.27 mm (0.05") contact spacing - 1.27 mm (0.05") spacing between rows - contact diameter: AWG 30

PCB LAYOUT FOR BS TYPE 0.050" PITCH - MALE CONNECTORS

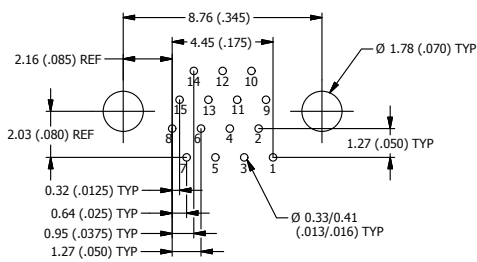
VIEW A



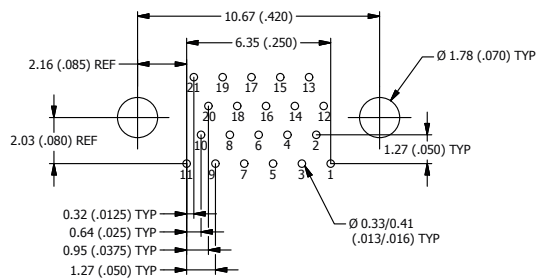
9 CONTACTS - VIEW A



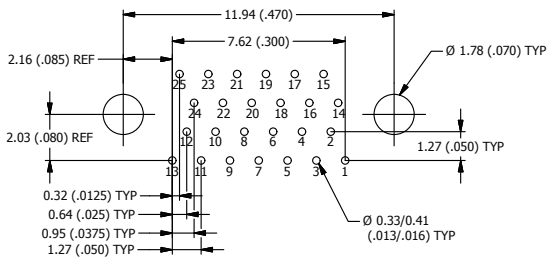
15 CONTACTS - VIEW A



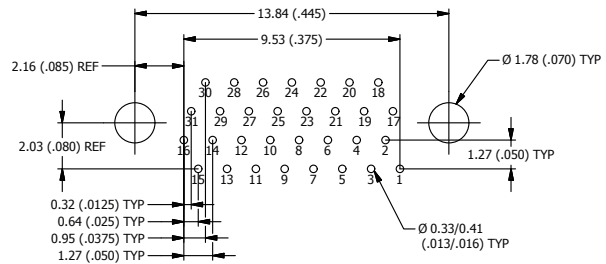
21 CONTACTS - VIEW A



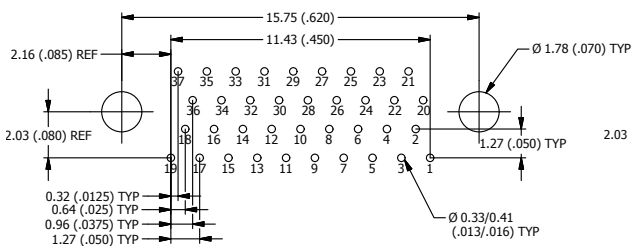
25 CONTACTS - VIEW A



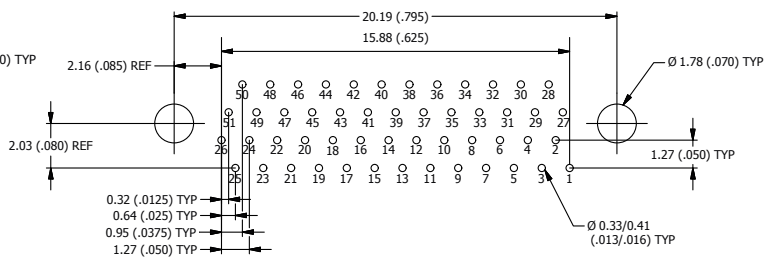
31 CONTACTS - VIEW A



37 CONTACTS - VIEW A



51 CONTACTS - VIEW A

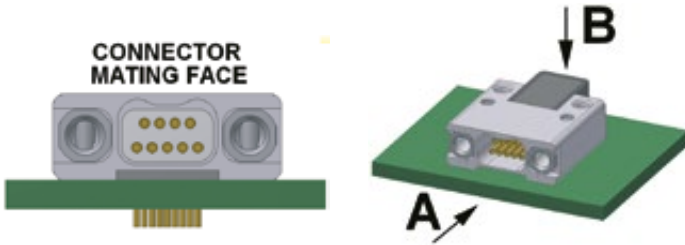


DUAL ROW
NANO-D CONNECTORS

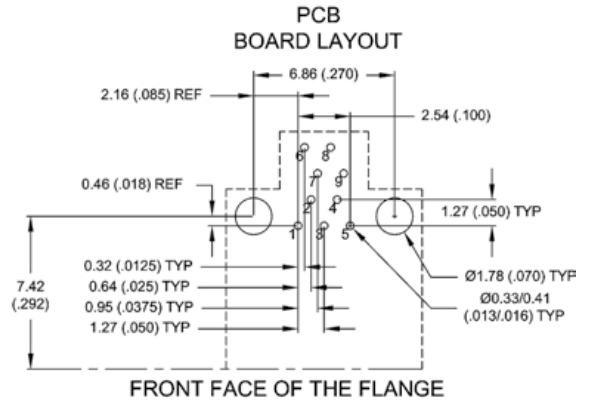
Nano-D
connectors

PCB LAYOUT FOR CBR TYPE 0.050" PITCH - FEMALE CONNECTORS

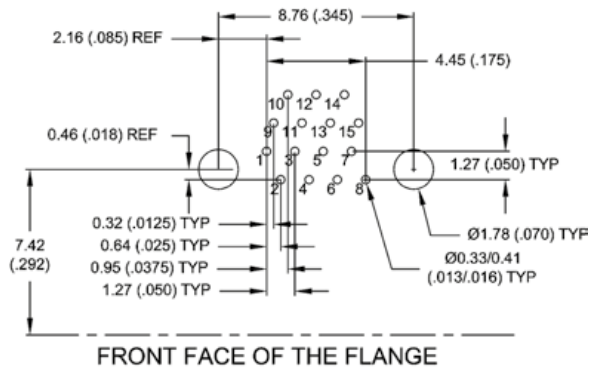
VIEW A



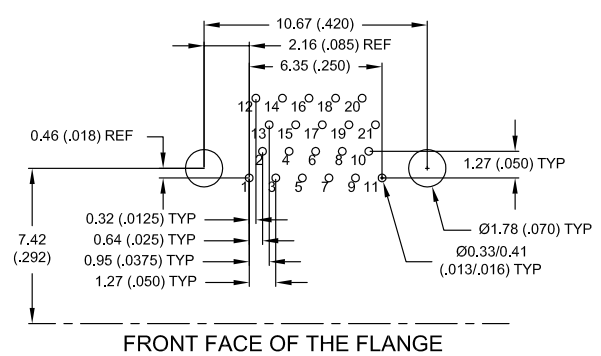
9 CONTACTS - VIEW B



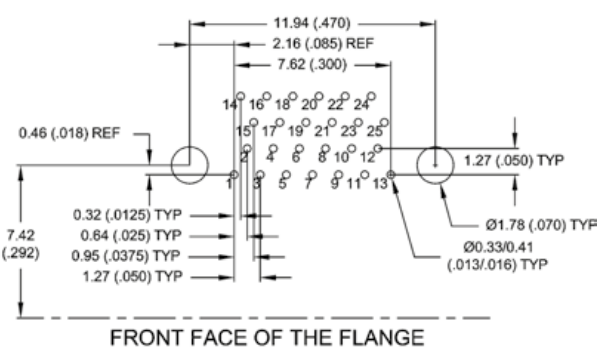
15 CONTACTS - VIEW B



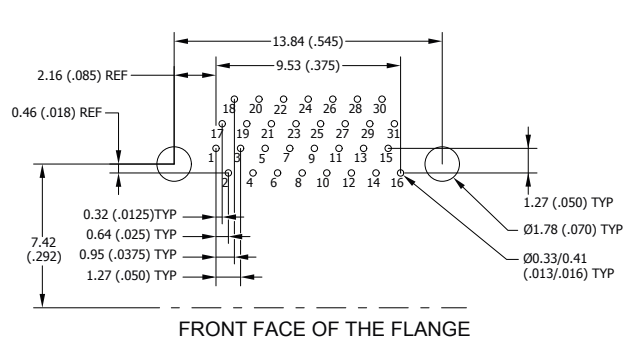
21 CONTACTS - VIEW B



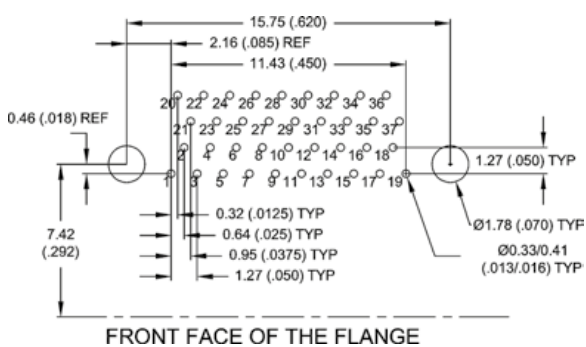
25 CONTACTS - VIEW B



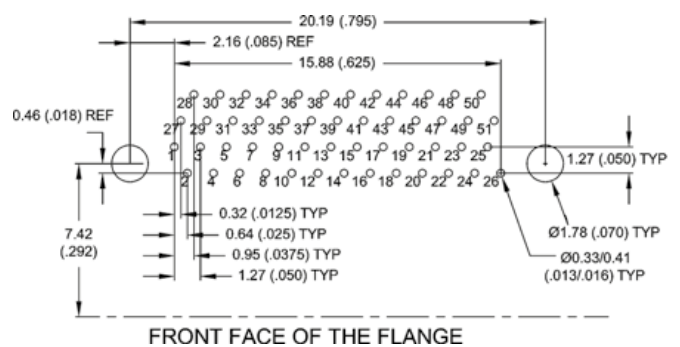
31 CONTACTS - VIEW B



37 CONTACTS - VIEW B



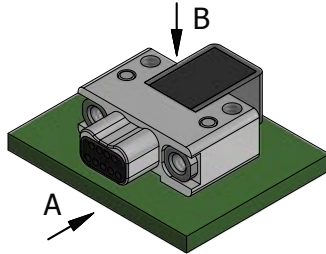
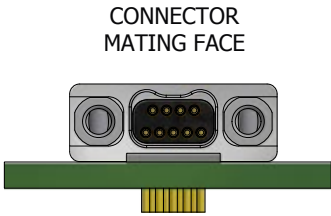
51 CONTACTS - VIEW B



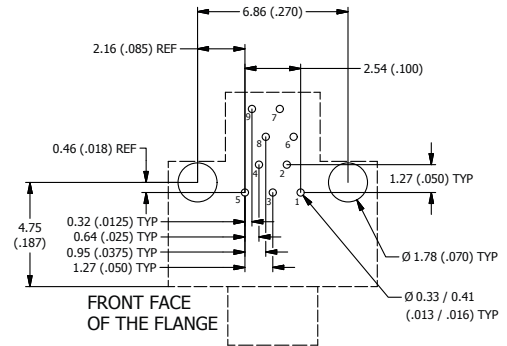
1.27 mm (0.05") contact spacing - 1.27 mm (0.05") spacing between rows - contact diameter: AWG 30

PCB LAYOUT FOR CBR TYPE 0.050" PITCH - MALE CONNECTORS

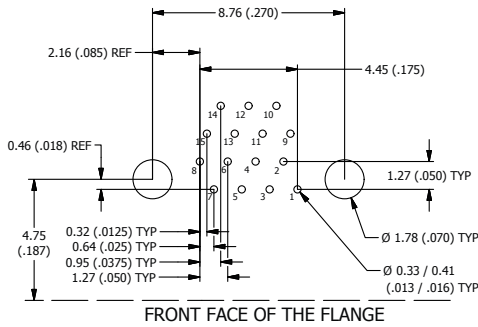
VIEW A



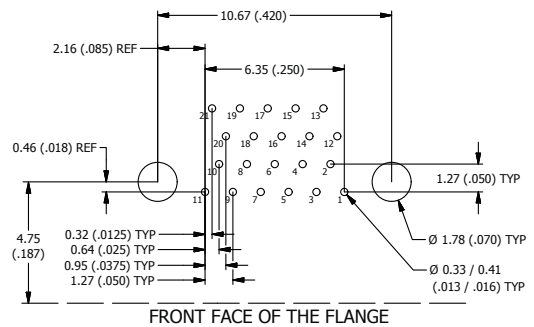
9 CONTACTS - VIEW B



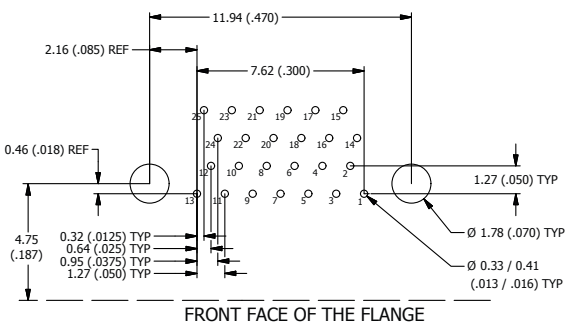
15 CONTACTS - VIEW B



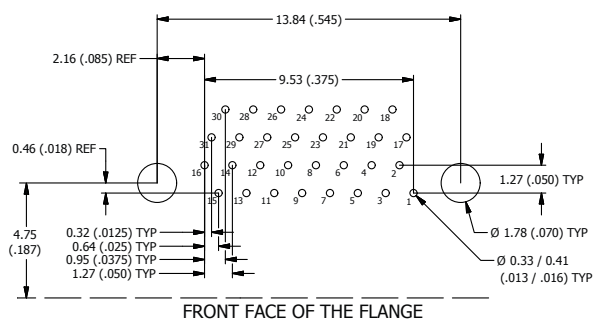
21 CONTACTS - VIEW B



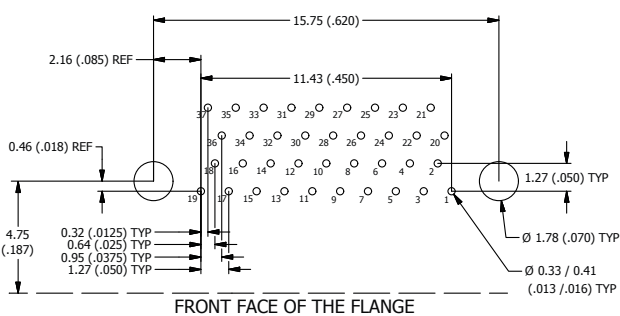
25 CONTACTS - VIEW B



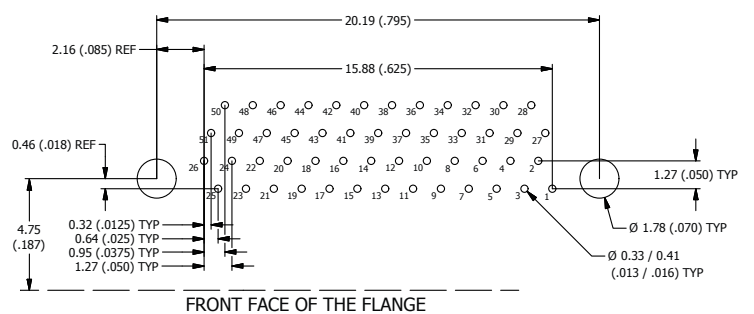
31 CONTACTS - VIEW B



37 CONTACTS - VIEW B



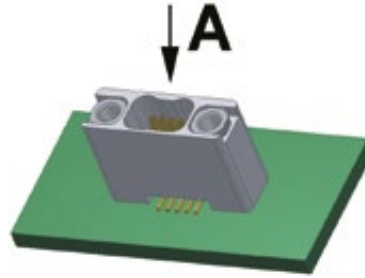
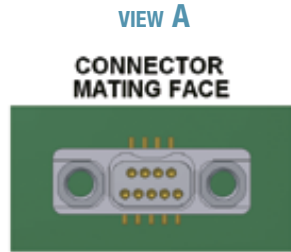
51 CONTACTS - VIEW B



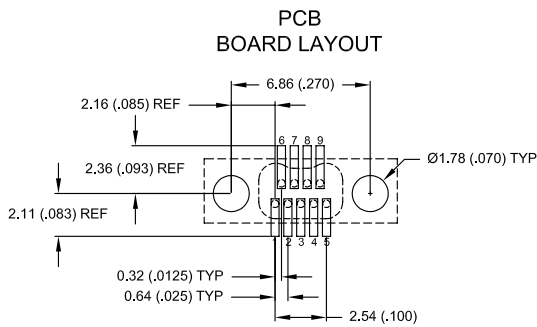
DUAL ROW
NANO-D CONNECTORS

Nano-D
connectors

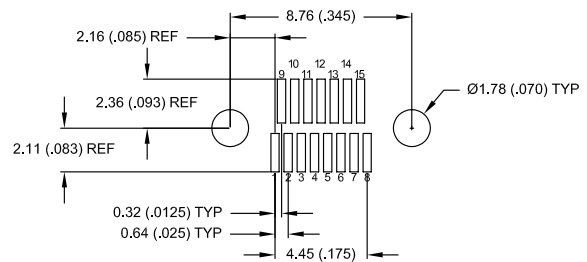
PCB LAYOUT FOR SMV TYPE 0.025" PITCH - FEMALE CONNECTORS



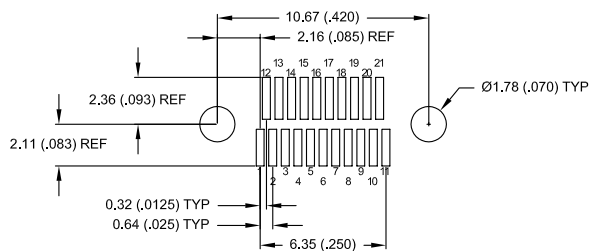
9 CONTACTS - VIEW A



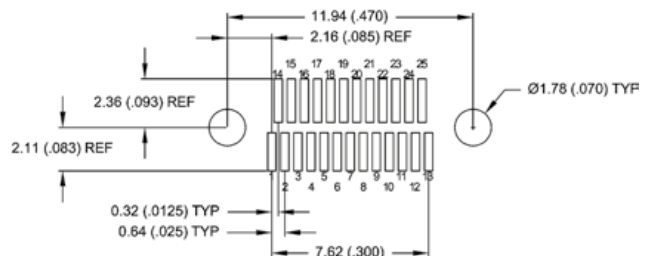
15 CONTACTS - VIEW A



21 CONTACTS - VIEW A



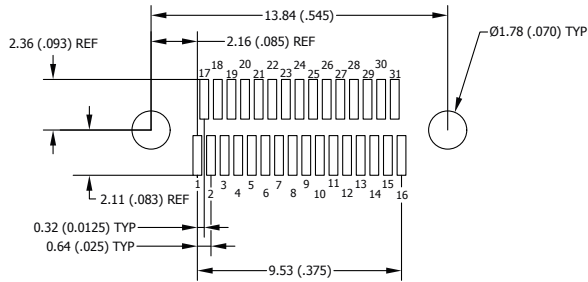
25 CONTACTS - VIEW A



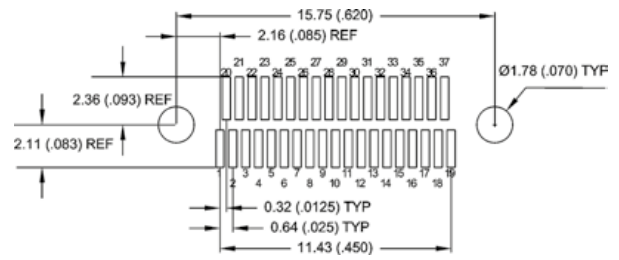
0.635 mm (0.25") pad - contact diameter: AWG 30

PCB LAYOUT FOR SMV TYPE 0.025" PITCH - FEMALE CONNECTORS

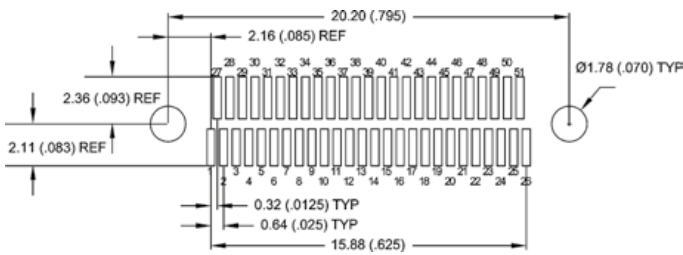
31 CONTACTS - VIEW A



37 CONTACTS - VIEW A

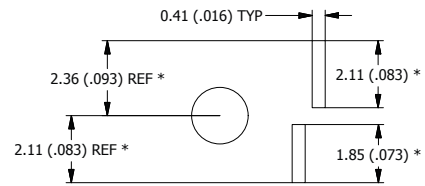


51 CONTACTS - VIEW A



LAYOUT

Suggested PAD configuration



*: For .040" tail length, add .020" to noted dimensions

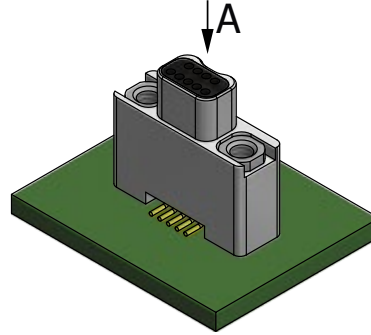
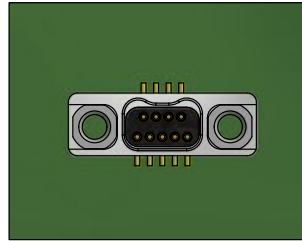
DUAL ROW
NANO-D CONNECTORS

Nano-D
connectors

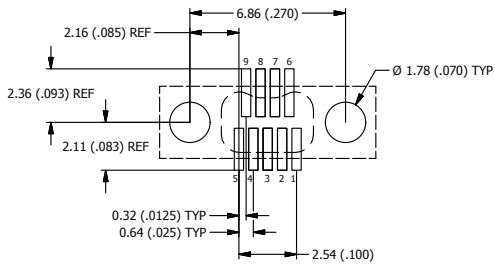
PCB LAYOUT FOR SMV TYPE 0.025" PITCH - MALE CONNECTORS

VIEW A

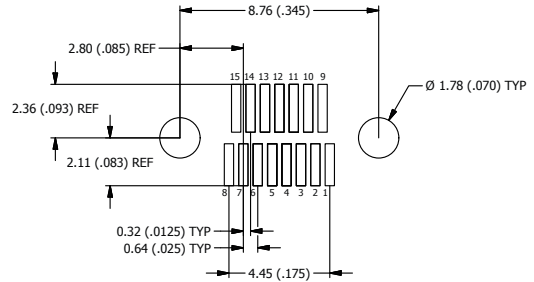
CONNECTOR
MATING FACE



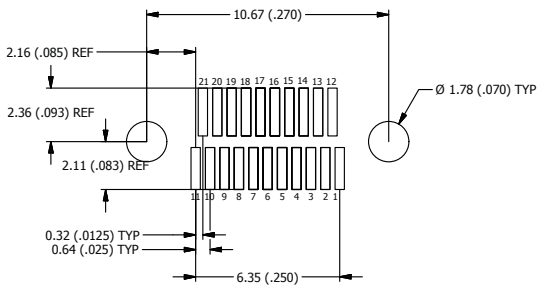
9 CONTACTS - VIEW A



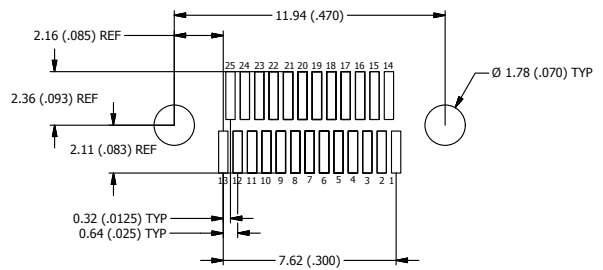
15 CONTACTS - VIEW A



21 CONTACTS - VIEW A



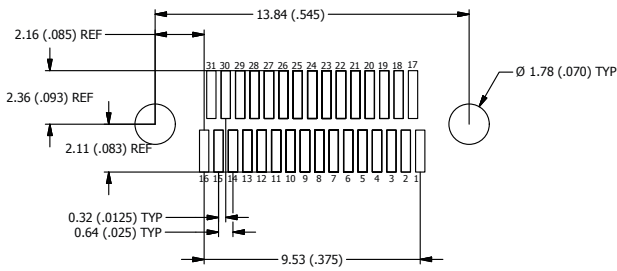
25 CONTACTS - VIEW A



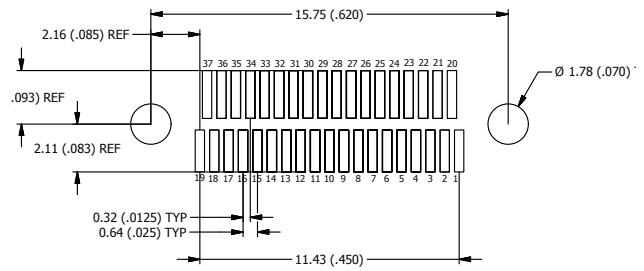
0.635 mm (0.025") pad - contact diameter: AWG 30

PCB LAYOUT FOR SMV TYPE 0.025" PITCH - MALE CONNECTORS

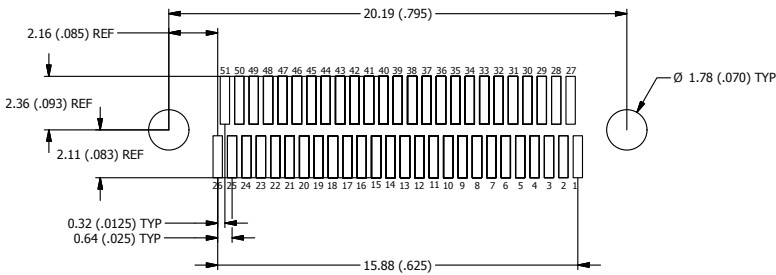
31 CONTACTS - VIEW A



37 CONTACTS - VIEW A

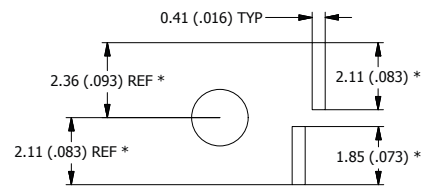


51 CONTACTS - VIEW A



LAYOUT

Suggested PAD configuration

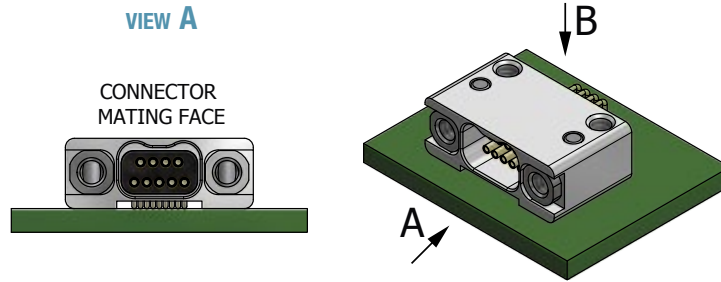


*: For .040" tail length, add .020" to noted dimensions

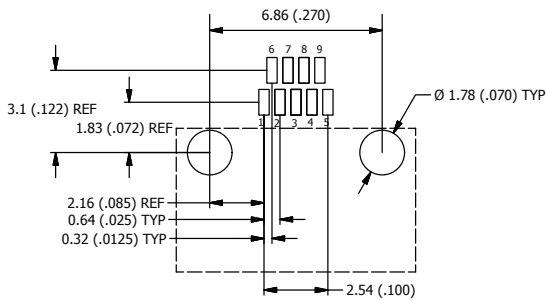
DUAL ROW
NANO-D CONNECTORS

Nano-D
connectors

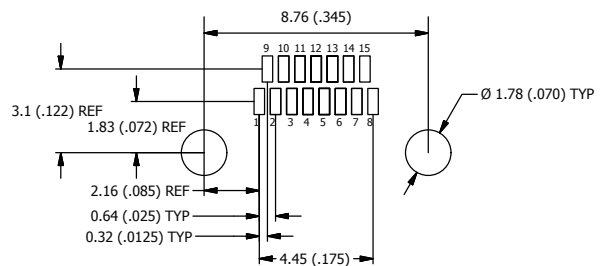
PCB LAYOUT FOR SMH TYPE 0.025" PITCH - FEMALE CONNECTORS



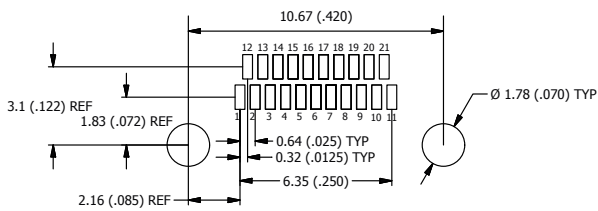
9 CONTACTS - VIEW A



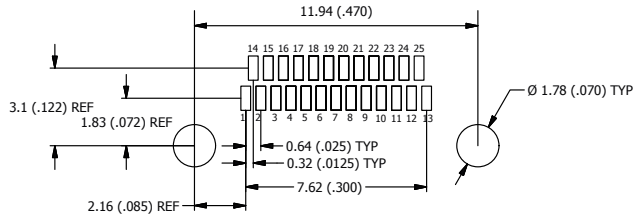
15 CONTACTS - VIEW A



21 CONTACTS - VIEW A



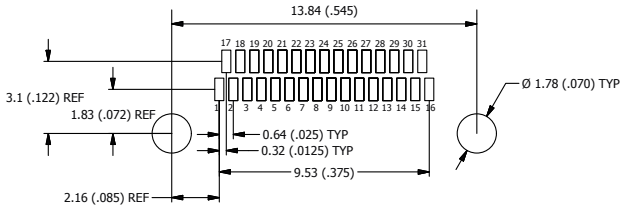
25 CONTACTS - VIEW A



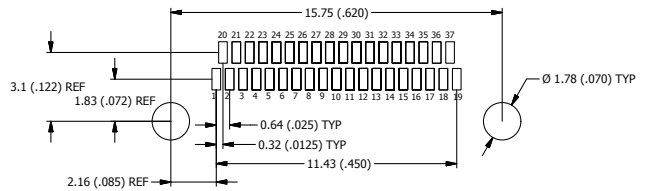
0.635 mm (0.025") pad - contact diameter: AWG 30

PCB LAYOUT FOR SMH TYPE 0.025" PITCH - FEMALE CONNECTORS

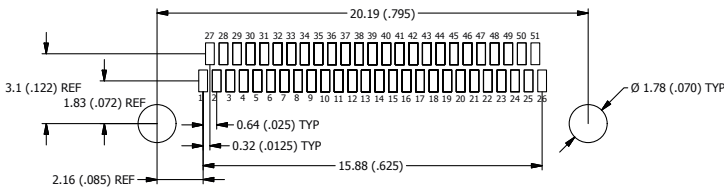
31 CONTACTS - VIEW A



37 CONTACTS - VIEW A

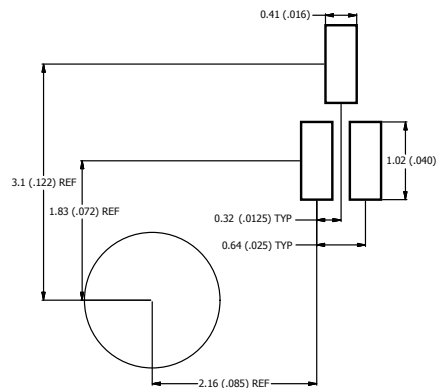


51 CONTACTS - VIEW A



LAYOUT

Suggested PAD configuration



DUAL ROW
NANO-D CONNECTORS

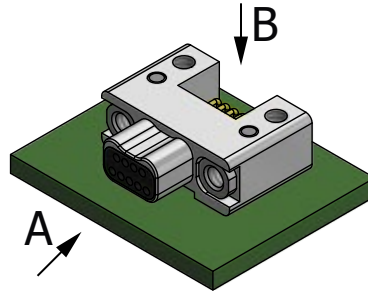
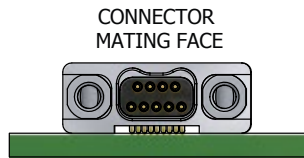
Nano-D
connectors

PCB LAYOUT FOR SMH TYPE 0.025" PITCH - MALE CONNECTORS

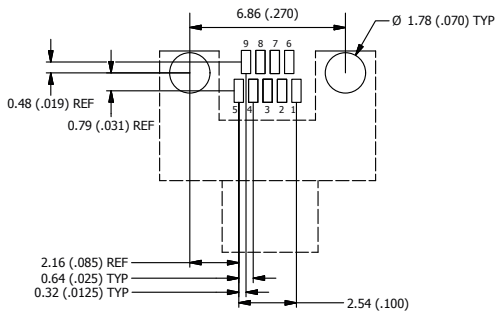
DUAL ROW
NANO-D CONNECTORS

Nano-D
connectors

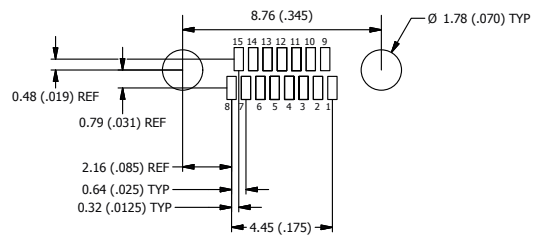
VIEW A



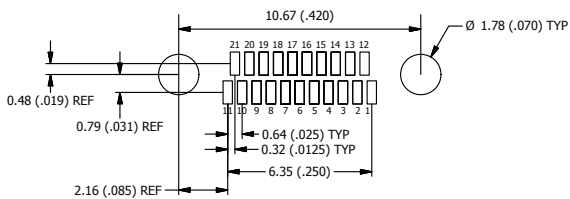
9 CONTACTS - VIEW A



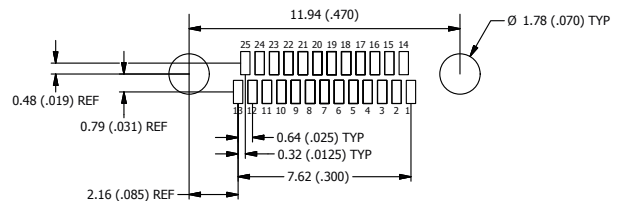
15 CONTACTS - VIEW A



21 CONTACTS - VIEW A



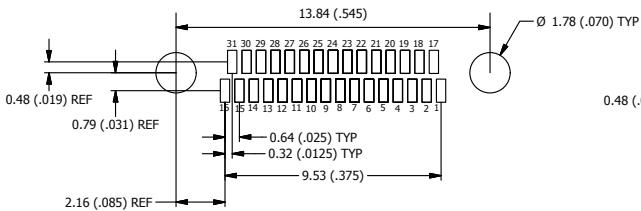
25 CONTACTS - VIEW A



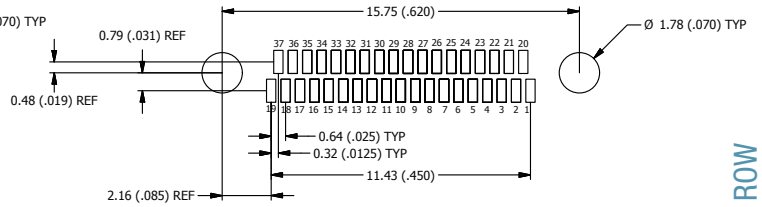
0.635 mm (0.025") pad - contact diameter: AWG 30

PCB LAYOUT FOR SMH TYPE 0.025" PITCH - MALE CONNECTORS

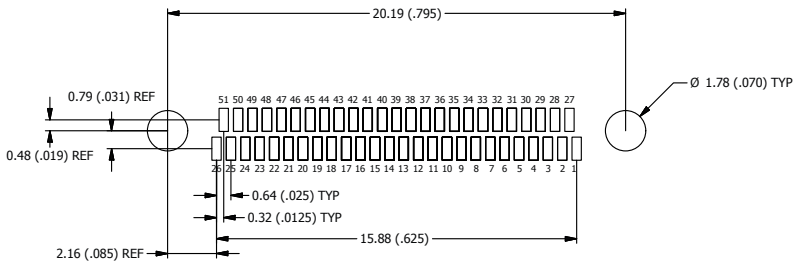
31 CONTACTS - VIEW A



37 CONTACTS - VIEW A

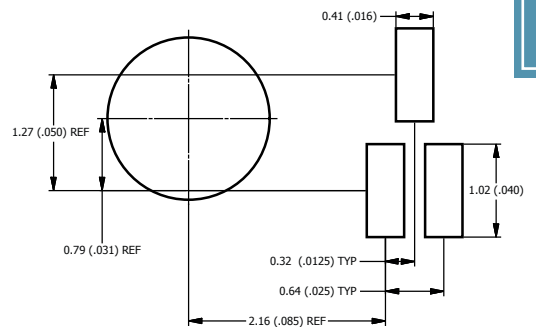


51 CONTACTS - VIEW A



LAYOUT

Suggested PAD configuration



DUAL ROW
NANO-D CONNECTORS

Nano-D
connectors

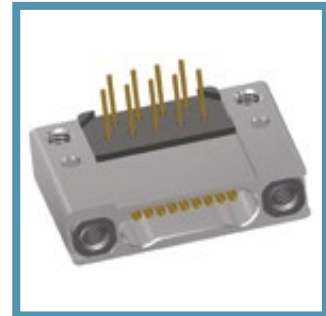
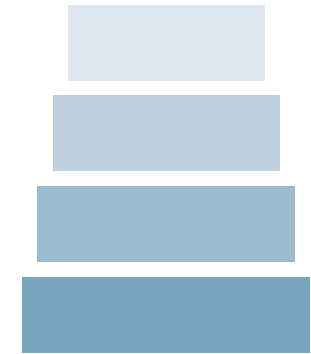
SINGLE ROW NANO-D CONNECTORS

RECTANGULAR CONNECTORS FOR CABLES

- Single row pigtail & jumper 254

PCB RECTANGULAR CONNECTORS

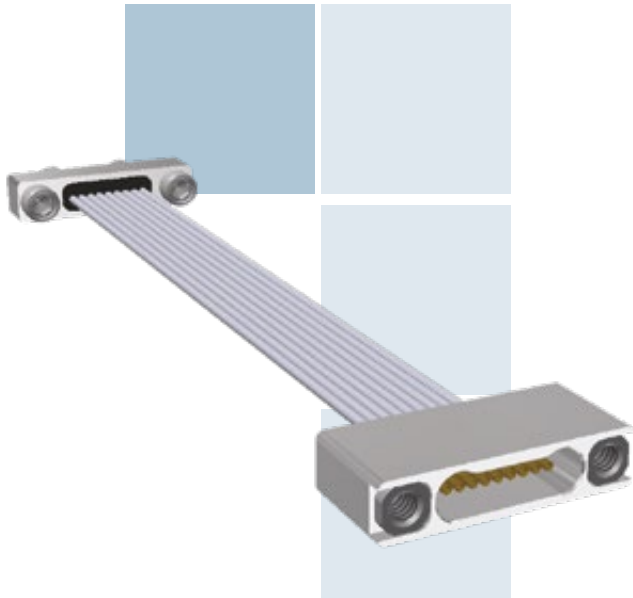
- BS (Board Straight) type - 0.050" pitch receptacles 256
- BS (Board Straight) type - 0.050" pitch plugs 258
- CBR (Condensed Board Right Angle) type - 0.050" pitch receptacles. 260
- CBR (Condensed Board Right Angle) type - 0.050" pitch plugs 262
- SMV (Surface Mount Vertical) type - 0.025" pitch receptacles. 264
- SMV (Surface Mount Vertical) type - 0.025" pitch plugs 266
- SMH (Surface Mount Horizontal) type - 0.025" pitch receptacles. 268
- SMH (Surface Mount Horizontal) type - 0.025" pitch plugs 270
- *PCB layout for BS type* 272
- *PCB layout for CBR type* 274
- *PCB layout for SMV type* 276
- *PCB layout for SMH type* 278



SINGLE ROW
NANO-D CONNECTORS

Nano-D
connectors

SINGLE ROW PIGTAIL & JUMPER



- Reliability for micro-miniature operating systems.
- High performance metal connector and PTFE wire.
 - Operating temperature: 150°C or 200°C.
 - 7 contact arrangements (9 to 51 contacts).

SINGLE ROW
NANO-D CONNECTORS

Nano-D
connectors

IDENTIFICATION CODE

ND1A 2 15 P S D 1 L 50 R P

SERIES

ND1A: Nano-D 1-row AXON'.

CONNECTOR TYPE

2: Aluminium with electroless nickel plating and epoxy 150°C.
3: Aluminium with electroless nickel plating and epoxy 200°C.
 Other materials available on request. (eg Titanium, Stainless Steel).

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51. Other versions available on request.

1st CONNECTOR TYPE

P: Plug connector.
S: Receptacle connector.

2nd CONNECTOR TYPE

P: Plug connector.
S: Receptacle connector.
W: No second connector - free wires.

CONNECTIONS (see jumper wiring on page 217)

D: Direct pin 1 to pin 1.
I: Indirect (usual for plug-plug jumper).
X: Pigtail.

WIRE CODE

1: ET 3007, AWG 30, 7 strands, 250 V.
2: ET 3207, AWG 32, 7 strands, 250 V.
3: ET 3407, AWG 34, 7 strands, 250 V.
4: ET 3607, AWG 36, 7 strands, 250 V.
 Other versions available on request.

COLOUR CODE

L: White
F: Yellow.
W: 10 colour repeat.
 See page 215 for colour code.

WIRE LENGTH (cm)

Attention! Wire length in centimetres - (1cm = 10 mm = .394").

L	2 ≤ L ≤ 10	10 < L ≤ 100	L > 100
in cm (inches)	0.79 ≤ L ≤ 3.940	3.940 < L ≤ 39.40	39.40
TOLERANCE	-0 / +0.5	-0 / +3	-0 / +5
in cm (inches)	-0 / +0.200	-0 / +1.180	-0 / +1.970

HARDWARE 1st CONNECTOR

P: Threaded hole #0-80 UNF (non removable jackposts, recommended for receptacles).
R: Retractable short hex socket head jackscrews #0-80 UNF (recommended for plugs).
L: Short hex socket head jackscrews #0-80 UNF (captivated).
B: No hardware.

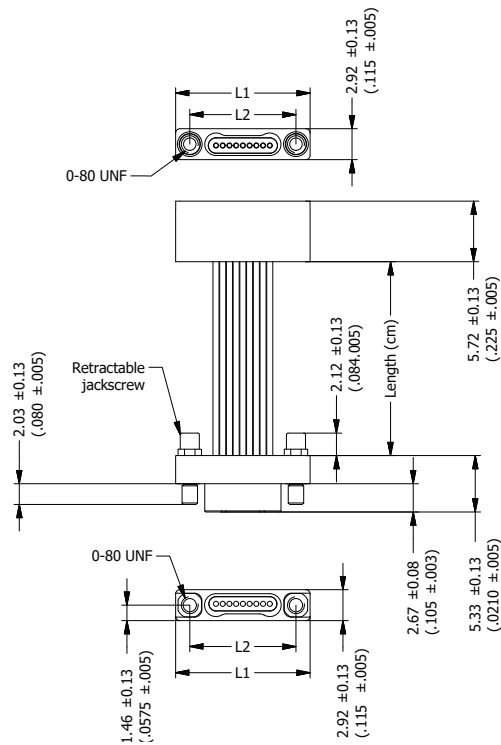
HARDWARE 2nd CONNECTOR

See above.
X: Pigtail.

IN BOLD: FACTORY STANDARD

DIMENSIONS

Dimensions are in millimetres (inches).

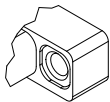


SINGLE ROW
NANO-D CONNECTORS

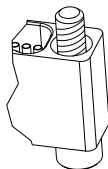
Nano-D
connectors

SPECIFIC HARDWARE CONFIGURATION

Treaded holes
#0-80 UNF
for plug shell
(code: P)



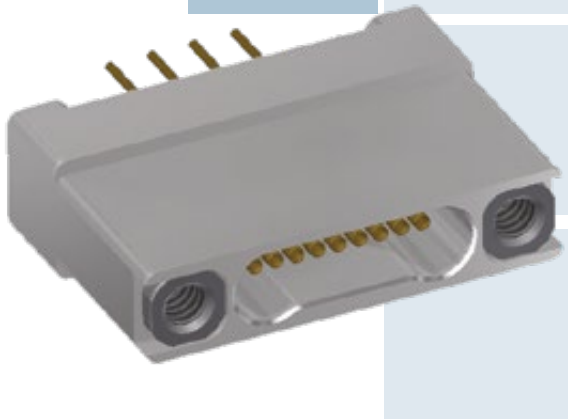
Jackscrew
#0-80 UNF
for socket shell
(code: R/L)



SHELL SIZE	L1 ±0.13 (±.005)	L2 ±0.13 (±.005)
9 S / 9 P	12.70 .500	10.03 .395
15 S / 15 P	16.51 .650	13.84 .545
21 S / 21 P	20.32 .800	17.65 .695
25 S / 25 P	22.86 .900	20.19 .795
31 S / 31 P	26.67 1.050	24.00 .945
37 S / 37 P	30.48 1.200	27.81 1.095
51 S / 51 P	39.37 1.550	36.70 1.445

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE		MATERIAL & FINISH	
CURRENT RATING	1 A max.	SHELL	Aluminium alloy 6061 or 300 series stainless steel or titanium alloy, see ordering for plating options
CONTACT RESISTANCE	71 mΩ max.	INSULATOR	Liquid Crystal Polymer (LCP) or PEEK
INSULATION RESISTANCE	5000 MΩ min. @ 100 Vdc	CONTACT	Precious gold alloy
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 250 VAc Altitude 21 km (70,000 ft): 100 VAc	ENCAPSULANT	Epoxy Resin
CONTACT ENGAGING FORCE	141 g max. (5 oz)	HARDWARE	300 series stainless steel, passivated
CONTACT SEPARATING FORCE	11 g min. (0.4 oz)		
CONTACT RETENTION	0.9 kg (2 lbs)		
DURABILITY	200 mating cycles min.		
VIBRATION	20g's - No discontinuity > 1 μs		
SHOCK	100g's - No discontinuity > 1 μs		



PCB RECTANGULAR CONNECTORS

BS TYPE

SINGLE ROW VERTICAL PCB RECEPTACLE

0.050" PITCH

- Reliability for micro-miniature operating systems.
- Several tail lengths available.
- Operating temperature: 150°C or 200°C.
- 7 contact arrangements (9 to 51 contacts).

IDENTIFICATION CODE

ND1A	2	09	S	BS	P	G	1
------	---	----	---	----	---	---	---

SERIES

ND1A: Nano-D 1-row AXON'.

CONNECTOR TYPE

2: Aluminium with electroless nickel plating and epoxy 150°C.
3: Aluminium with electroless nickel plating and epoxy 200°C.
 Other materials available on request. (eg Titanium, Stainless Steel).

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51.
 Other versions available on request.

CONNECTOR TYPE

S: Receptacle connector.

FAMILY

BS: AXON' Vertical PCB connector.

HARDWARE

P: Threaded hole #0-80 UNF (non removable jackposts).
 Other versions available on request.

TAIL PLATING

G: Gold, AWG30.
D: Flash gold plated solid conductor AWG30.
 Other tail plating available on request.

TAIL LENGTH

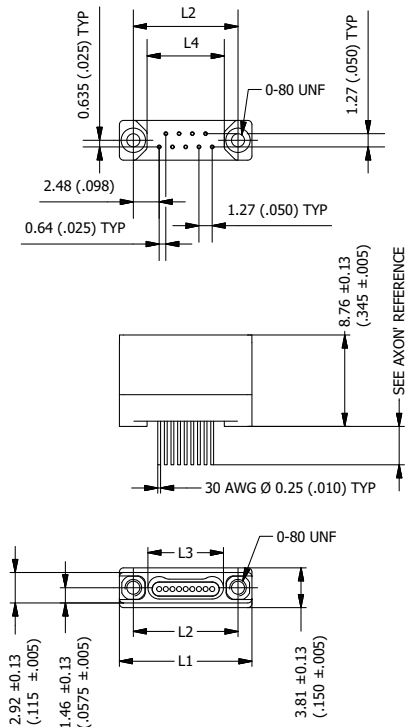
1: 2.77 mm (0.109").
2: 3.56 mm (0.140").
3: 4.37 mm (0.172").
4: 2.29 mm (0.090").
 Tolerance: ± 0.25 mm (0.010").

Connectors are supplied with #0-80 UNF screws 1/4" long (for PCB mounting).

IN BOLD: FACTORY STANDARD

DIMENSIONS

Dimensions are in millimetres (inches).



SEE CONTACT LAYOUT ON PCB PAGE 272

SHELL SIZE	L1 ±0.13 (±.005)	L2 ±0.13 (±.005)	L3 ±0.13 (±.005)	L4 ±0.13 (±.005)
9 S	12.70 .500	10.03 .395	7.24 .285	7.37 .290
15 S	16.51 .650	13.84 .545	11.05 .435	11.18 .440
21 S	20.32 .800	17.65 .695	14.86 .585	14.99 .590
25 S	22.86 .900	20.19 .795	17.40 .685	17.53 .690
31 S	26.67 1.050	24.00 .945	21.21 .835	21.34 .840
37 S	30.48 1.200	27.81 1.095	25.02 .985	25.15 .990
51 S	39.37 1.550	36.70 1.445	33.91 1.335	34.04 1.340

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE		MATERIAL & FINISH	
CURRENT RATING	1 A max.	SHELL	Aluminium alloy 6061 or 300 series stainless steel or titanium alloy, see ordering for plating options
CONTACT RESISTANCE	71 mΩ max.	INSULATOR	Liquid Crystal Polymer (LCP) or PEEK
INSULATION RESISTANCE	5000 MΩ min. @ 100 Vdc	CONTACT	Copper alloy, gold over nickel plating
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 250 V _{AC} Altitude 21 km (70,000 ft): 100 V _{AC}	ENCAPSULANT	Epoxy Resin
CONTACT ENGAGING FORCE	141 g max. (5 oz)	PCB TERMINALS	Gold plated solid copper alloy wire
CONTACT SEPARATING FORCE	11 g min. (0.4 oz)	HARDWARE	300 series stainless steel, passivated
CONTACT RETENTION	0.9 kg (2 lbs)		
DURABILITY	200 mating cycles min.		
VIBRATION	20g's – No discontinuity > 1 μs		
SHOCK	100g's – No discontinuity > 1 μs		



PCB RECTANGULAR CONNECTORS

BS TYPE

SINGLE ROW VERTICAL PCB PLUG

0.050" PITCH

- Reliability for micro-miniature operating systems.
- Several tail lengths available.
- Operating temperature: 150°C or 200°C.
- 7 contact arrangements (9 to 51 contacts).

IDENTIFICATION CODE



SERIES

ND1A: Nano-D 1-row AXON'.

CONNECTOR TYPE

2: Aluminium with electroless nickel plating and epoxy 150°C.
3: Aluminium with electroless nickel plating and epoxy 200°C.
 Other materials available on request. (eg Titanium, Stainless Steel).

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51.
 Other versions available on request.

CONNECTOR TYPE

P: Plug connector.

FAMILY

BS: AXON' Vertical PCB connector.

HARDWARE

P: Threaded hole #0-80 UNF (non removable jackposts).
 Other versions available on request.

TAIL PLATING

G: Gold, AWG30.
D: Flash gold plated solid conductor AWG30.
 Other tail plating available on request.

TAIL LENGTH

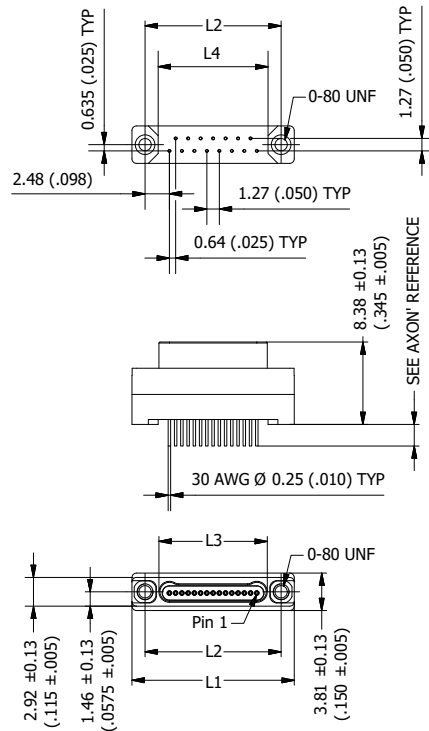
1: 2.77 mm (0.109").
2: 3.56 mm (0.140").
3: 4.37 mm (0.172").
4: 2.29 mm (0.090").
 Tolerance: ± 0.25 mm (0.010").

Connectors are supplied with #0-80 UNF screws 1/4" long (for PCB mounting).

IN BOLD: FACTORY STANDARD

DIMENSIONS

Dimensions are in millimetres (inches).



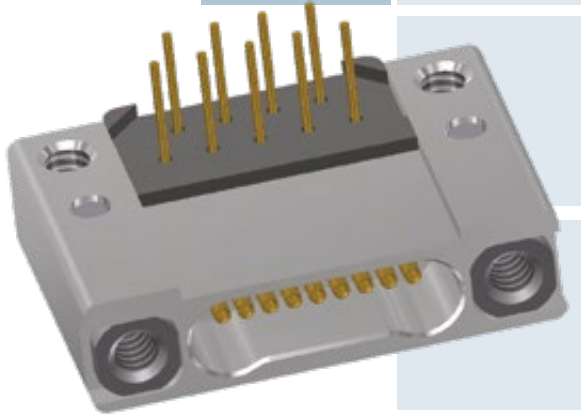
SEE CONTACT LAYOUT ON PCB PAGE 273

SHELL SIZE	L1 ±0.13 (±.005)	L2 ±0.13 (±.005)	L3 ±0.13 (±.005)	L4 ±0.13 (±.005)
9 P	12.70 .500	10.03 .395	7.21 .284	7.37 .290
15 P	16.51 .650	13.84 .545	11.02 .434	11.18 .440
21 P	20.32 .800	17.65 .695	14.83 .584	14.99 .590
25 P	22.86 .900	20.19 .795	17.37 .684	17.53 .690
31 P	26.67 1.050	24.00 .945	21.18 .834	21.34 .840
37 P	30.48 1.200	27.81 1.095	24.99 .984	25.15 .990
51 P	39.37 1.550	36.70 1.445	33.88 1.334	34.04 1.340

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE	
CURRENT RATING	1 A max.
CONTACT RESISTANCE	71 mΩ max.
INSULATION RESISTANCE	5000 MΩ min. @ 100 Vdc
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 250 VAc Altitude 21 km (70,000 ft): 100 VAc
CONTACT ENGAGING FORCE	141 g max. (5 oz)
CONTACT SEPARATING FORCE	11 g min. (0.4 oz)
CONTACT RETENTION	0.9 kg (2 lbs)
DURABILITY	200 mating cycles min.
VIBRATION	20g's – No discontinuity > 1 μs
SHOCK	100g's – No discontinuity > 1 μs

MATERIAL & FINISH	
SHELL	Aluminium alloy 6061 or 300 series stainless steel or titanium alloy, see ordering for plating options
INSULATOR	Liquid Crystal Polymer (LCP) or PEEK
CONTACT	Precious gold alloy
ENCAPSULANT	Epoxy Resin
PCB TERMINALS	Gold plated solid copper alloy wire
HARDWARE	300 series stainless steel, passivated



PCB RECTANGULAR CONNECTORS

CBR TYPE

SINGLE ROW RIGHT ANGLE PCB RECEPTACLE

0.050" PITCH

- Reliability for micro-miniature operating systems.
- Several tail lengths available.
- Operating temperature: 150°C or 200°C.
- 7 contact arrangements (9 to 51 contacts).

IDENTIFICATION CODE

ND1A	2	09	S	CBR	P	G	1
------	---	----	---	-----	---	---	---

SERIES

ND1A: Nano-D 1-row AXON'.

CONNECTOR TYPE

2: Aluminium with electroless nickel plating and epoxy 150°C.
3: Aluminium with electroless nickel plating and epoxy 200°C.
 Other materials available on request. (eg Titanium, Stainless Steel).

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51.
 Other versions available on request.

CONNECTOR TYPE

S: Receptacle connector.

FAMILY

CBR: AXON' Right Angle PCB connector.

HARDWARE

P: Threaded hole #0-80 UNF (non removable jackposts).
B: None.
 Other versions available on request.

TAIL PLATING

G: Gold, AWG30.
D: Flash gold plated solid conductor AWG30.
 Other tail plating available on request.

TAIL LENGTH

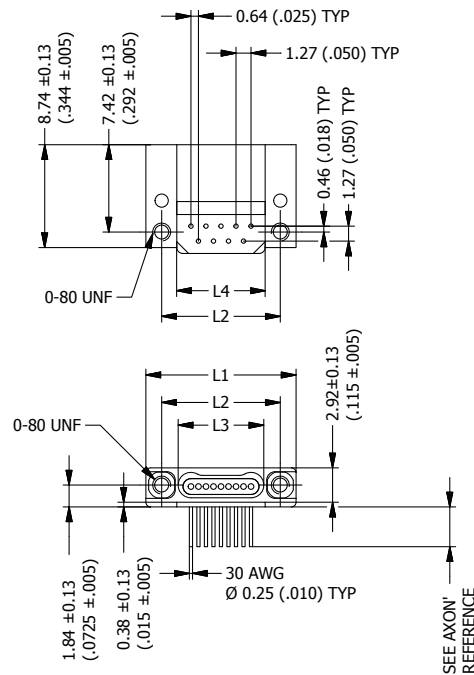
1: 2.77 mm (0.109").
2: 3.56 mm (0.140").
3: 4.37 mm (0.172").
4: 2.29 mm (0.090").
 Tolerance: ± 0.25 mm (0.010").

Connectors are supplied with #0-80 UNF screws 1/4" long (for PCB mounting).

IN BOLD: FACTORY STANDARD

DIMENSIONS

Dimensions are in millimetres (inches).

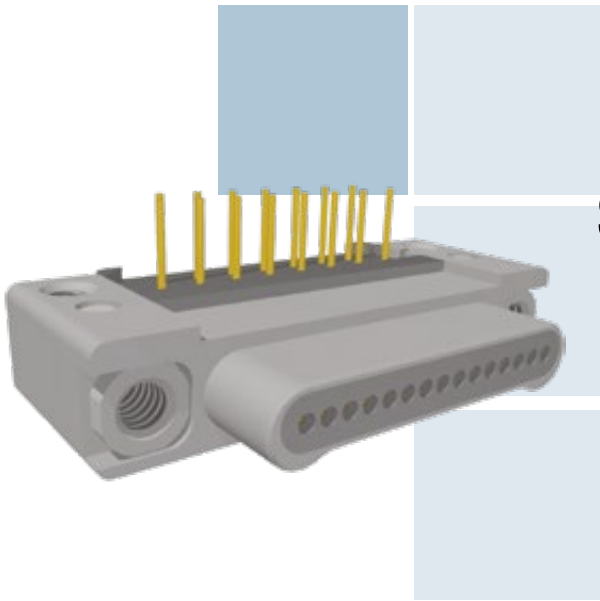


SEE CONTACT LAYOUT ON PCB PAGE 274

SHELL SIZE	L1 ±0.13 (±.005)	L2 ±0.13 (±.005)	L3 ±0.13 (±.005)	L4 ±0.13 (±.005)
9 S	12.70 .500	10.03 .395	7.24 .285	7.37 .290
15 S	16.51 .650	13.84 .545	11.05 .435	11.18 .440
21 S	20.32 .800	17.65 .695	14.86 .585	14.99 .590
25 S	22.86 .900	20.19 .795	17.40 .685	17.53 .690
31 S	26.67 1.050	24.00 .945	21.21 .835	21.34 .840
37 S	30.48 1.200	27.81 1.095	25.02 .985	25.15 .990
51 S	39.37 1.550	36.70 1.445	33.91 1.335	34.04 1.340

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE		MATERIAL & FINISH	
CURRENT RATING	1 A max.	SHELL	Aluminium alloy 6061 or 300 series stainless steel or titanium alloy, see ordering for plating options
CONTACT RESISTANCE	71 mΩ max.	INSULATOR	Liquid Crystal Polymer (LCP) or PEEK
INSULATION RESISTANCE	5000 MΩ min. @ 100 Vdc	CONTACT	Copper alloy, gold over nickel plating
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 250 V _{AC} Altitude 21 km (70,000 ft): 100 V _{AC}	ENCAPSULANT	Epoxy Resin
CONTACT ENGAGING FORCE	141 g max. (5 oz)	PCB TERMINALS	Gold plated solid copper alloy wire
CONTACT SEPARATING FORCE	11 g min. (0.4 oz)	HARDWARE	300 series stainless steel, passivated
CONTACT RETENTION	0.9 kg (2 lbs)		
DURABILITY	200 mating cycles min.		
VIBRATION	20g's – No discontinuity > 1 μs		
SHOCK	100g's – No discontinuity > 1 μs		



PCB RECTANGULAR CONNECTORS

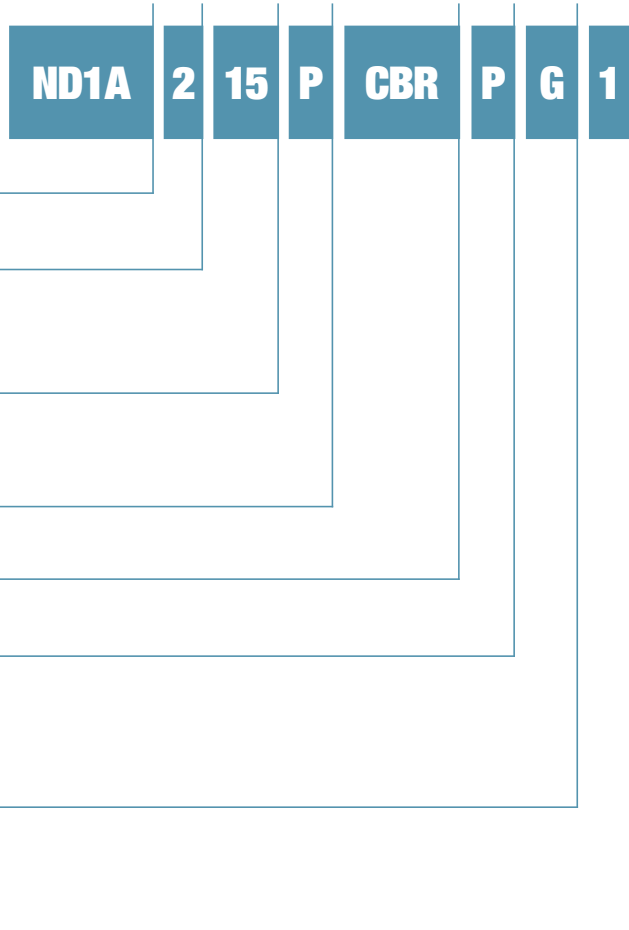
CBR TYPE

SINGLE ROW RIGHT ANGLE PCB PLUG

0.050" PITCH

- Reliability for micro-miniature operating systems.
- Several tail lengths available.
- Operating temperature: 150°C or 200°C.
- 7 contact arrangements (9 to 51 contacts).

IDENTIFICATION CODE



SERIES

ND1A: Nano-D 1-row AXON'.

CONNECTOR TYPE

2: Aluminium with electroless nickel plating and epoxy 150°C.
3: Aluminium with electroless nickel plating and epoxy 200°C.
 Other materials available on request. (eg Titanium, Stainless Steel).

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51.
 Other versions available on request.

CONNECTOR TYPE

P: Plug connector.

FAMILY

CBR: AXON' Right Angle PCB connector.

HARDWARE

P: Threaded hole #0-80 UNF (non removable jackposts).
B: None.
 Other versions available on request.

TAIL PLATING

G: Gold, AWG30.
D: Flash gold plated solid conductor AWG30.
 Other tail plating available on request.

TAIL LENGTH

1: 2.77 mm (0.109").
2: 3.56 mm (0.140").
3: 4.37 mm (0.172").
4: 2.29 mm (0.090").
 Tolerance: ± 0.25 mm (0.010").

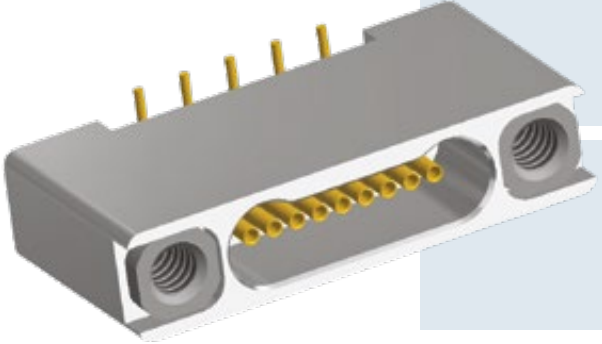
Connectors are supplied with #0-80 UNF screws 1/4" long (for PCB mounting).

IN BOLD: FACTORY STANDARD

SMV TYPE

SINGLE ROW VERTICAL SURFACE MOUNT PCB RECEPTACLE

0.025" PITCH



- Reliability for micro-miniature operating systems.
 - Surface Mount.
 - Several tail lengths available.
- Operating temperature: 150°C or 200°C.
- 7 contact arrangements (9 to 51 contacts).

IDENTIFICATION CODE

ND1A	2	09	S	SMV	P	G	1
------	---	----	---	-----	---	---	---

SERIES

ND1A: Nano-D 1-row AXON'.

CONNECTOR TYPE

2: Aluminium with electroless nickel plating and epoxy 150°C.
3: Aluminium with electroless nickel plating and epoxy 200°C.
 Other materials available on request. (eg Titanium, Stainless Steel).

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51.
 Other versions available on request.

CONNECTOR TYPE

S: Receptacle connector.

FAMILY

SMV: AXON' Vertical surface mount PCB connector.

HARDWARE

P: Threaded holes #0-80 UNF (non removable jackposts).
 Other versions available on request.
B: None.

TAIL PLATING

G: Gold, AWG30.
D: Flash gold plated solid conductor AWG30.
 Other tail plating available on request.

TAIL LENGTH

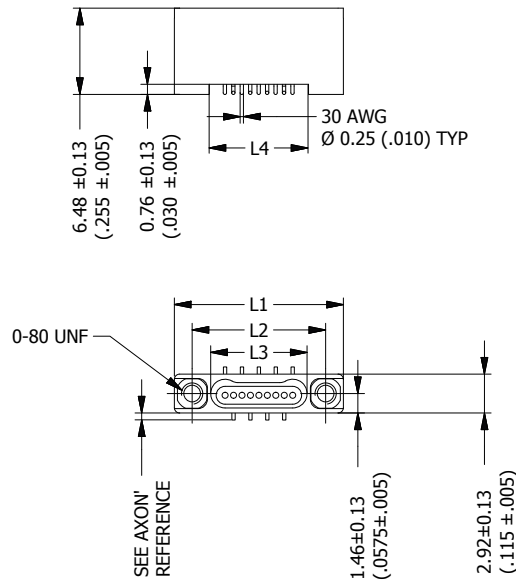
1: 0.51 mm (0.020").
2: 1.02 mm (0.040").
 Tolerance: ± 0.25 mm (0.010").

Connectors are supplied with #0-80 UNF screws 1/4" long (for PCB mounting).

IN BOLD: FACTORY STANDARD

DIMENSIONS

Dimensions are in millimetres (inches).



SEE CONTACT LAYOUT ON PCB PAGE 276

SHELL SIZE	L1 ± 0.13 ($\pm .005$)	L2 ± 0.13 ($\pm .005$)	L3 ± 0.13 ($\pm .005$)	L4 ± 0.13 ($\pm .005$)
9 S	12.70 .500	10.03 .395	7.24 .285	7.37 .290
15 S	16.51 .650	13.84 .545	11.05 .435	11.18 .440
21 S	20.32 .800	17.65 .695	14.86 .585	14.99 .590
25 S	22.86 .900	20.19 .795	17.40 .685	17.53 .690
31 S	26.67 1.050	24.00 .945	21.21 .835	21.34 .840
37 S	30.48 1.200	27.81 1.095	25.02 .985	25.15 .990
51 S	39.37 1.550	36.70 1.445	33.91 1.335	34.04 1.340

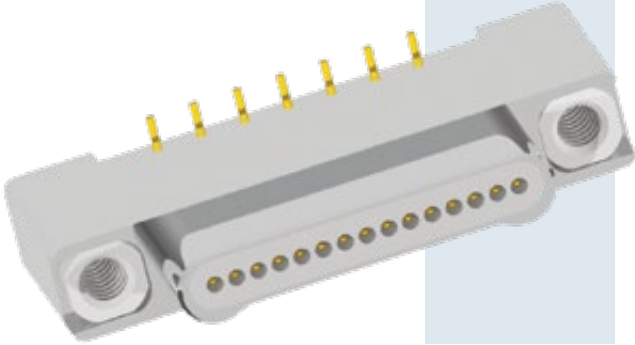
SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE		MATERIAL & FINISH	
CURRENT RATING	1 A max.	SHELL	Aluminium alloy 6061 or 300 series stainless steel or titanium alloy, see ordering for plating options
CONTACT RESISTANCE	71 m Ω max.	INSULATOR	Liquid Crystal Polymer (LCP) or PEEK
INSULATION RESISTANCE	5000 M Ω min. @ 100 Vdc	CONTACT	Copper alloy, gold over nickel plating
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 250 V _{AC} Altitude 21 km (70,000 ft): 100 V _{AC}	ENCAPSULANT	Epoxy Resin
CONTACT ENGAGING FORCE	141 g max. (5 oz)	PCB TERMINALS	Gold plated solid copper alloy wire
CONTACT SEPARATING FORCE	11 g min. (0.4 oz)	HARDWARE	300 series stainless steel, passivated
CONTACT RETENTION	0.9 kg (2 lbs)		
DURABILITY	200 mating cycles min.		
VIBRATION	20g's – No discontinuity > 1 μ s		
SHOCK	100g's – No discontinuity > 1 μ s		

SMV TYPE

SINGLE ROW VERTICAL SURFACE MOUNT PCB PLUG

0.025" PITCH



- Reliability for micro-miniature operating systems.
 - Surface Mount.
 - Several tail lengths available.
- Operating temperature: 150°C or 200°C.
- 7 contact arrangements (9 to 51 contacts).

IDENTIFICATION CODE

ND1A	2	15	P	SMV	P	G	1
------	---	----	---	-----	---	---	---

SERIES

ND1A: Nano-D 1-row AXON'.

CONNECTOR TYPE

2: Aluminium with electroless nickel plating and epoxy 150°C.
3: Aluminium with electroless nickel plating and epoxy 200°C.
 Other materials available on request. (eg Titanium, Stainless Steel).

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51.
 Other versions available on request.

CONNECTOR TYPE

P: Plug connector.

FAMILY

SMV: AXON' Vertical surface mount PCB connector.

HARDWARE

P: Threaded holes #0-80 UNF (non removable jackposts).
 Other versions available on request.
B: None.

TAIL PLATING

G: Gold, AWG30.
D: Flash gold plated solid conductor AWG30.
 Other tail plating available on request.

TAIL LENGTH

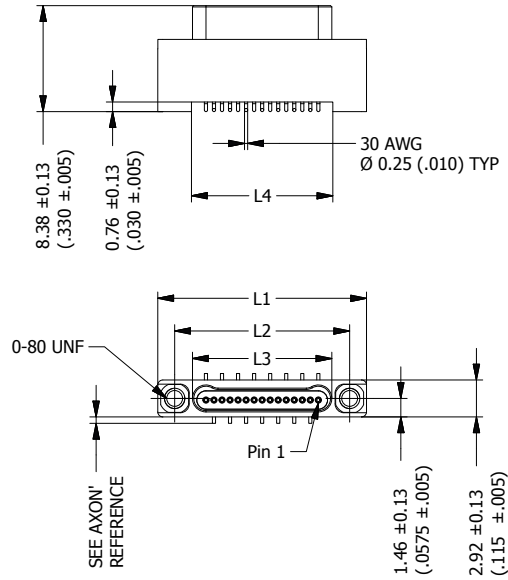
1: 0.51 mm (0.020").
2: 1.02 mm (0.040").
 Tolerance: ± 0.25 mm (0.010").

Connectors are supplied with #0-80 UNF screws 1/4" long (for PCB mounting).

IN BOLD: FACTORY STANDARD

DIMENSIONS

Dimensions are in millimetres (inches).



SEE CONTACT LAYOUT ON PCB PAGE 277

SHELL SIZE	L1 ±0.13 (±.005)	L2 ±0.13 (±.005)	L3 ±0.13 (±.005)	L4 ±0.13 (±.005)
9 P	12.70 .500	10.03 .395	7.21 .284	7.37 .290
15 P	16.51 .650	13.84 .545	11.02 .434	11.18 .440
21 P	20.32 .800	17.65 .695	14.83 .584	14.99 .590
25 P	22.86 .900	20.19 .795	17.37 .684	17.53 .690
31 P	26.67 1.050	24.00 .945	21.18 .834	21.34 .840
37 P	30.48 1.200	27.81 1.095	24.99 .984	25.15 .990
51 P	39.37 1.550	36.70 1.445	33.88 1.334	34.04 1.340

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE		MATERIAL & FINISH	
CURRENT RATING	1 A max.	SHELL	Aluminium alloy 6061 or 300 series stainless steel or titanium alloy, see ordering for plating options
CONTACT RESISTANCE	71 mΩ max.	INSULATOR	Liquid Crystal Polymer (LCP) or PEEK
INSULATION RESISTANCE	5000 MΩ min. @ 100 Vdc	CONTACT	Precious gold alloy
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 250 VAc Altitude 21 km (70,000 ft): 100 VAc	ENCAPSULANT	Epoxy Resin
CONTACT ENGAGING FORCE	141 g max. (5 oz)	PCB TERMINALS	Gold plated solid copper alloy wire
CONTACT SEPARATING FORCE	11 g min. (0.4 oz)	HARDWARE	300 series stainless steel, passivated
CONTACT RETENTION	0.9 kg (2 lbs)		
DURABILITY	200 mating cycles min.		
VIBRATION	20g's – No discontinuity > 1 μs		
SHOCK	100g's – No discontinuity > 1 μs		

SMH TYPE

SINGLE ROW HORIZONTAL SURFACE MOUNT PCB RECEPTACLE

0.025" PITCH



- Reliability for micro-miniature operating systems.
- Surface Mount.
- Operating temperature: 150°C or 200°C.
- 7 contact arrangements (9 to 51 contacts).

IDENTIFICATION CODE

ND1A

2

09

S

SMH

P

G

1

SERIES

ND1A: Nano-D 1-row AXON'.

CONNECTOR TYPE

2: Aluminium with electroless nickel plating and epoxy 150°C.

3: Aluminium with electroless nickel plating and epoxy 200°C.

Other materials available on request. (eg Titanium, Stainless Steel).

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51.

Other versions available on request.

CONNECTOR TYPE

S: Receptacle connector.

FAMILY

SMH: AXON' Horizontal surface mount PCB connector.

HARDWARE

P: Threaded holes #0-80 UNF (non removable jackposts).

Other versions available on request.

B: None.

TAIL PLATING

G: Gold, AWG30.

D: Flash gold plated solid conductor AWG30.

Other tail plating available on request.

TAIL LENGTH

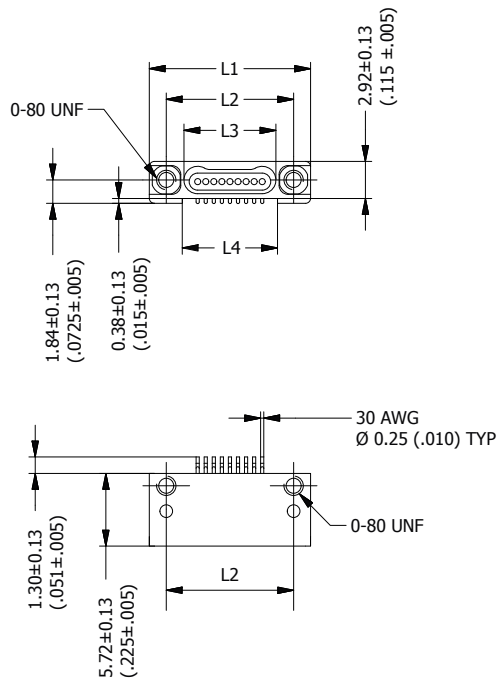
1: Standard.

Connectors are supplied with #0-80 UNF screws 1/4" long (for PCB mounting).

IN BOLD: FACTORY STANDARD

DIMENSIONS

Dimensions are in millimetres (inches).

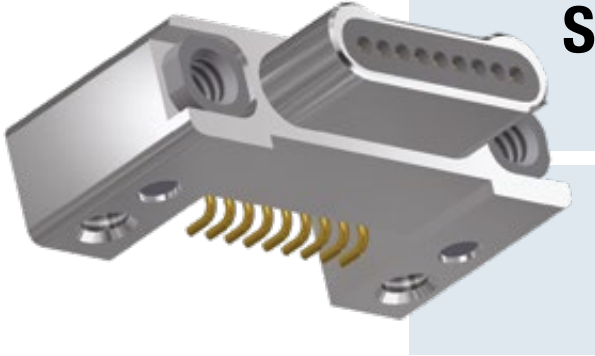


SEE CONTACT LAYOUT ON PCB PAGE 278

SHELL SIZE	L1 ±0.13 (±.005)	L2 ±0.13 (±.005)	L3 ±0.13 (±.005)	L4 ±0.13 (±.005)
9 S	12.70 .500	10.03 .395	7.24 .285	7.37 .290
15 S	16.51 .650	13.84 .545	11.05 .435	11.18 .440
21 S	20.32 .800	17.65 .695	14.86 .585	14.99 .590
25 S	22.86 .900	20.19 .795	17.40 .685	17.53 .690
31 S	26.67 1.050	24.00 .945	21.21 .835	21.34 .840
37 S	30.48 1.200	27.81 1.095	25.02 .985	25.15 .990
51 S	39.37 1.550	36.70 1.445	33.91 1.335	34.04 1.340

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE		MATERIAL & FINISH	
CURRENT RATING	1 A max.	SHELL	Aluminium alloy 6061 or 300 series stainless steel or titanium alloy, see ordering for plating options
CONTACT RESISTANCE	71 mΩ max.	INSULATOR	Liquid Crystal Polymer (LCP) or PEEK
INSULATION RESISTANCE	5000 MΩ min. @ 100 V _{DC}	CONTACT	Precious gold alloy
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 250 V _{AC} Altitude 21 km (70,000 ft): 100 V _{AC}	ENCAPSULANT	Epoxy Resin
CONTACT ENGAGING FORCE	141 g max. (5 oz)	PCB TERMINALS	Gold plated solid copper alloy wire
CONTACT SEPARATING FORCE	11 g min. (0.4 oz)	HARDWARE	300 series stainless steel, passivated
CONTACT RETENTION	0.9 kg (2 lbs)		
DURABILITY	200 mating cycles min.		
VIBRATION	20g's – No discontinuity > 1 μs		
SHOCK	100g's – No discontinuity > 1 μs		



SMH TYPE

SINGLE ROW HORIZONTAL SURFACE MOUNT PCB PLUG

0.025" PITCH

- Reliability for micro-miniature operating systems.
- Surface Mount.
- Operating temperature: 150°C or 200°C.
- 7 contact arrangements (9 to 51 contacts).

IDENTIFICATION CODE

ND1A

2

09

P

SMH

P

G

1

SERIES

ND1A: Nano-D 1-row AXON'.

CONNECTOR TYPE

2: Aluminium with electroless nickel plating and epoxy 150°C.
3: Aluminium with electroless nickel plating and epoxy 200°C.
 Other materials available on request. (eg Titanium, Stainless Steel).

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51.
 Other versions available on request.

CONNECTOR TYPE

P: Plug connector.

FAMILY

SMH: AXON' Horizontal surface mount PCB connector.

HARDWARE

P: Threaded holes #0-80 UNF (non removable jackposts).
 Other versions available on request.
B: None.

TAIL PLATING

G: Gold, AWG30.
D: Flash gold plated solid conductor AWG30.
 Other tail plating available on request.

TAIL LENGTH

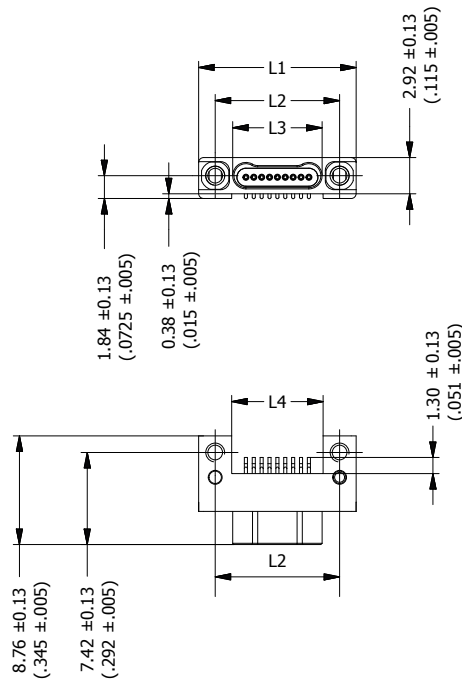
1: Standard.

Connectors are supplied with #0-80 UNF screws 1/4" long (for PCB mounting).

IN BOLD: FACTORY STANDARD

DIMENSIONS

Dimensions are in millimetres (inches).



SEE CONTACT LAYOUT ON PCB PAGE 279

SHELL SIZE	L1 ±0.13 (±.005)	L2 ±0.13 (±.005)	L3 ±0.13 (±.005)	L4 ±0.13 (±.005)
9 P	12.70 .500	10.03 .395	7.21 .284	7.37 .290
15 P	16.51 .650	13.84 .545	11.02 .434	11.18 .440
21 P	20.32 .800	17.65 .695	14.83 .584	14.99 .590
25 P	22.86 .900	20.19 .795	17.37 .684	17.53 .690
31 P	26.67 1.050	24.00 .945	21.18 .834	21.34 .840
37 P	30.48 1.200	27.81 1.095	24.99 .984	25.15 .990
51 P	39.37 1.550	36.70 1.445	33.88 1.334	34.04 1.340

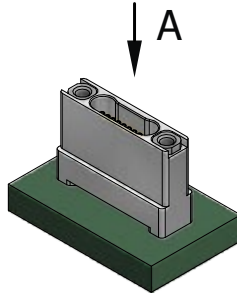
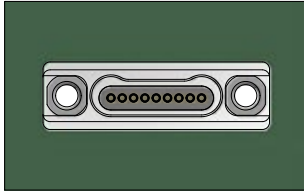
SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE		MATERIAL & FINISH	
CURRENT RATING	1 A max.	SHELL	Aluminium alloy 6061 or 300 series stainless steel or titanium alloy, see ordering for plating options
CONTACT RESISTANCE	71 mΩ max.	INSULATOR	Liquid Crystal Polymer (LCP) or PEEK
INSULATION RESISTANCE	5000 MΩ min. @ 100 Vdc	CONTACT	Precious gold alloy
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 250 V _{AC} Altitude 21 km (70,000 ft): 100 V _{AC}	ENCAPSULANT	Epoxy Resin
CONTACT ENGAGING FORCE	141 g max. (5 oz)	PCB TERMINALS	Gold plated solid copper alloy wire
CONTACT SEPARATING FORCE	11 g min. (0.4 oz)	HARDWARE	300 series stainless steel, passivated
CONTACT RETENTION	0.9 kg (2 lbs)		
DURABILITY	200 mating cycles min.		
VIBRATION	20g's – No discontinuity > 1 μs		
SHOCK	100g's – No discontinuity > 1 μs		

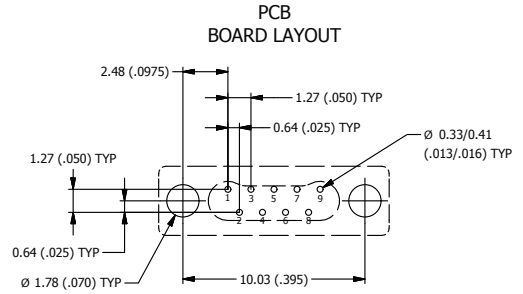
PCB LAYOUT FOR BS TYPE 0.050" PITCH - FEMALE CONNECTORS

VIEW A

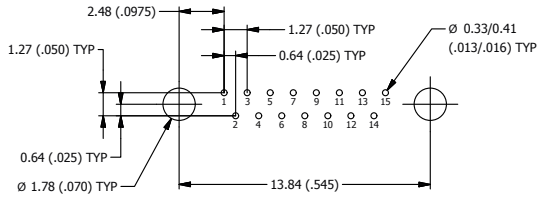
CONNECTOR
MATING FACE



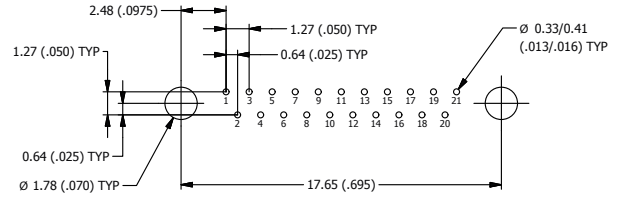
9 CONTACTS - VIEW A



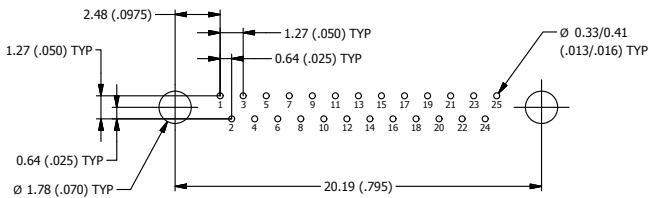
15 CONTACTS - VIEW A



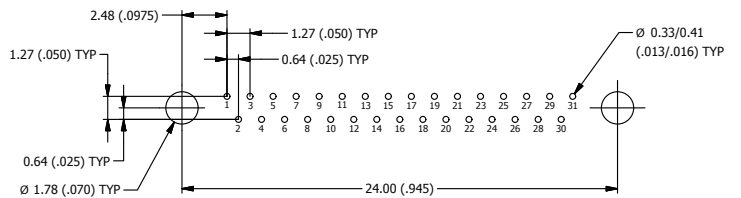
21 CONTACTS - VIEW A



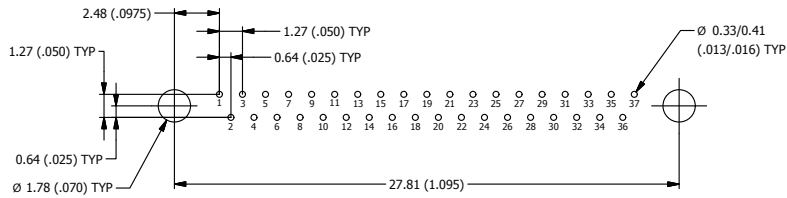
25 CONTACTS - VIEW A



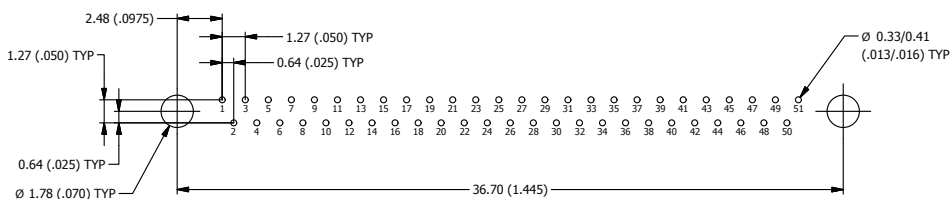
31 CONTACTS - VIEW A



37 CONTACTS - VIEW A



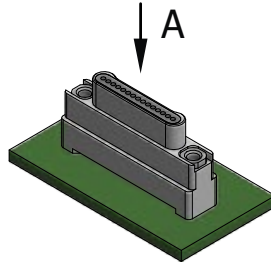
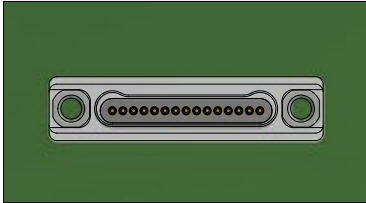
51 CONTACTS - VIEW A



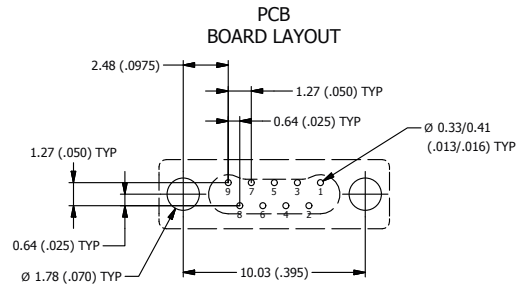
PCB LAYOUT FOR BS TYPE 0.050" PITCH - MALE CONNECTORS

VIEW A

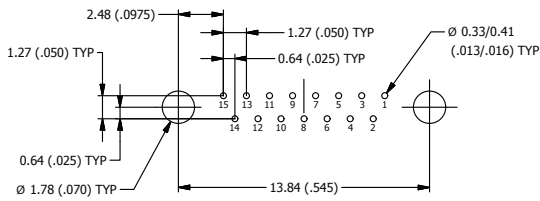
CONNECTOR
MATING FACE



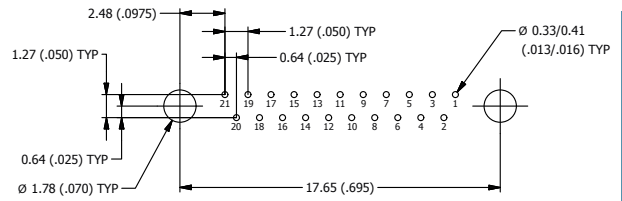
9 CONTACTS - VIEW A



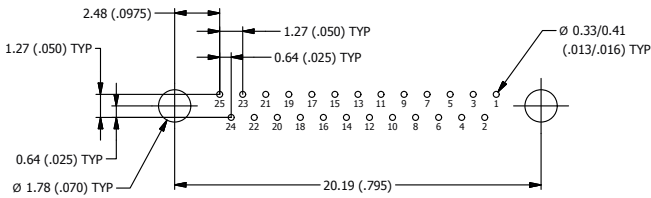
15 CONTACTS - VIEW A



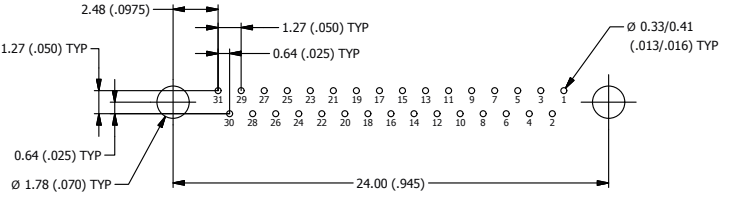
21 CONTACTS - VIEW A



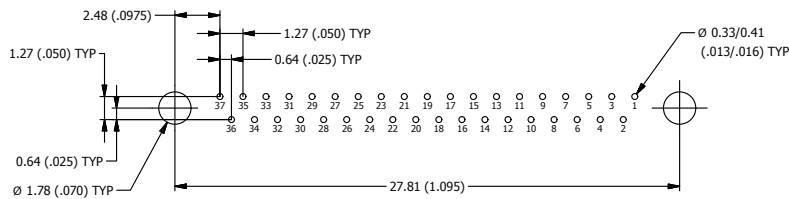
25 CONTACTS - VIEW A



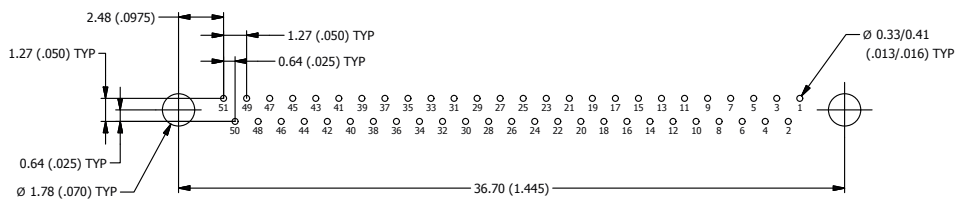
31 CONTACTS - VIEW A



37 CONTACTS - VIEW A



51 CONTACTS - VIEW A

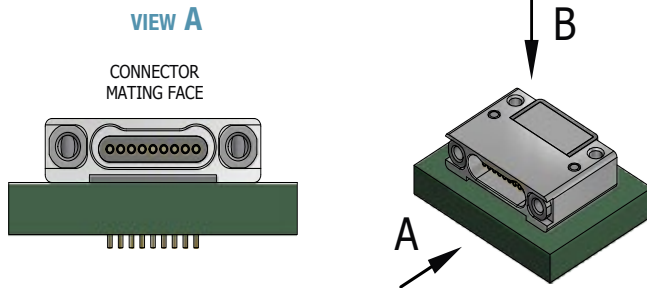


SINGLE ROW
NANO-D CONNECTORS

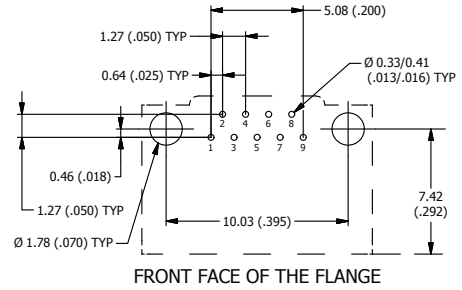
Nano-D
connectors

PCB LAYOUT FOR CBR TYPE 0.050" PITCH - FEMALE CONNECTORS

9 CONTACTS - VIEW A

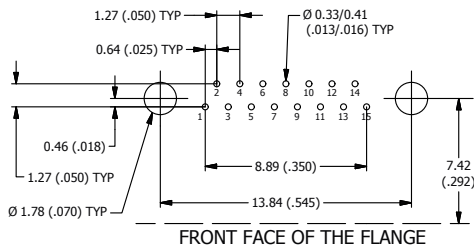


PCB BOARD LAYOUT



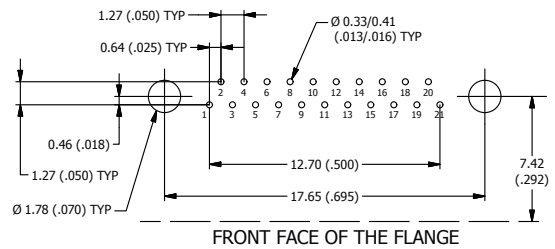
FRONT FACE OF THE FLANGE

15 CONTACTS - VIEW A



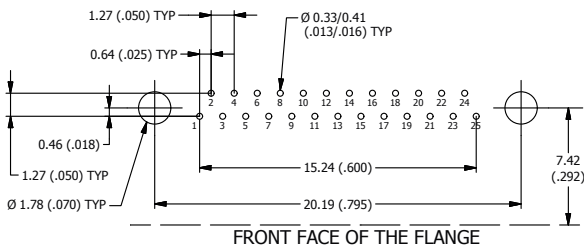
FRONT FACE OF THE FLANGE

21 CONTACTS - VIEW A



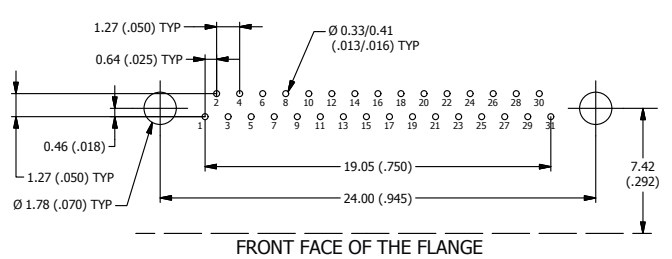
FRONT FACE OF THE FLANGE

25 CONTACTS - VIEW A



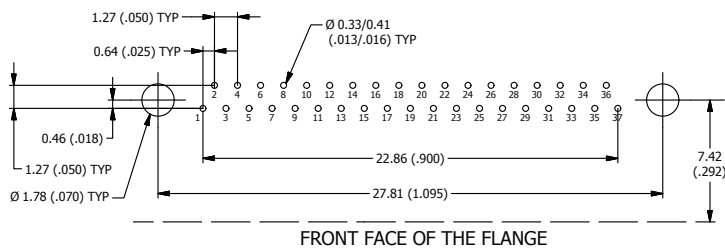
FRONT FACE OF THE FLANGE

31 CONTACTS - VIEW A



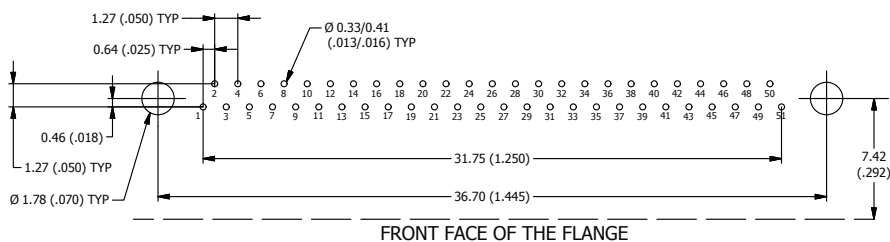
FRONT FACE OF THE FLANGE

37 CONTACTS - VIEW A



FRONT FACE OF THE FLANGE

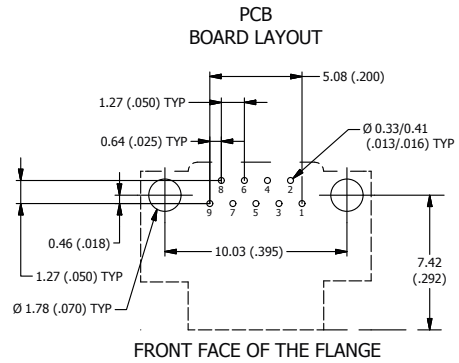
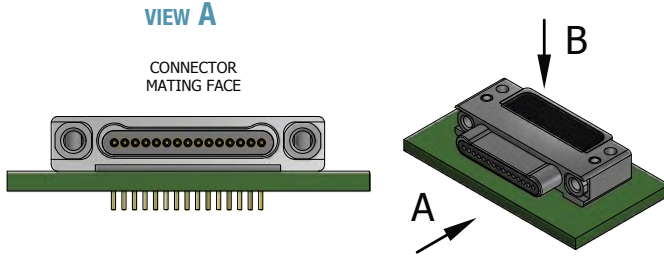
51 CONTACTS - VIEW A



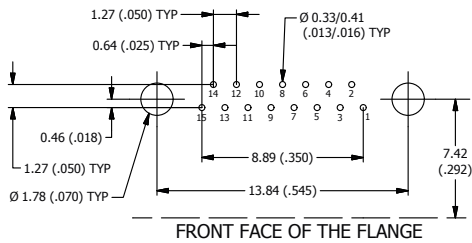
FRONT FACE OF THE FLANGE

PCB LAYOUT FOR CBR TYPE 0.050" PITCH - MALE CONNECTORS

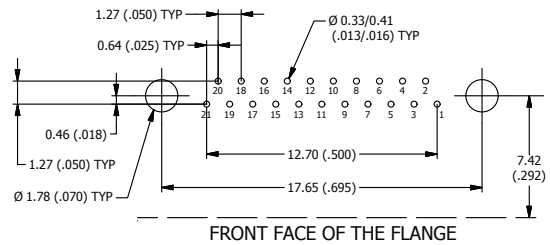
9 CONTACTS - VIEW A



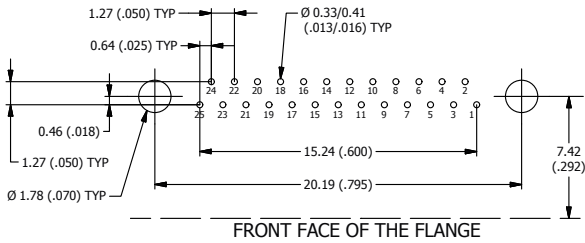
15 CONTACTS - VIEW A



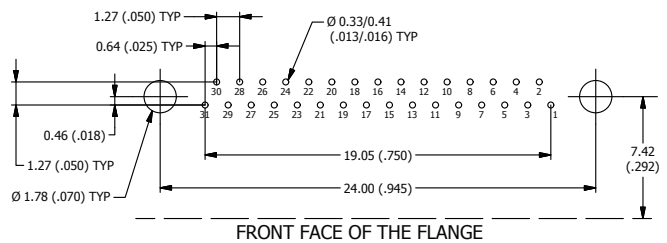
21 CONTACTS - VIEW A



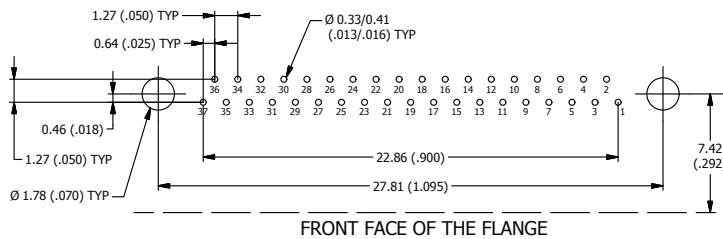
25 CONTACTS - VIEW A



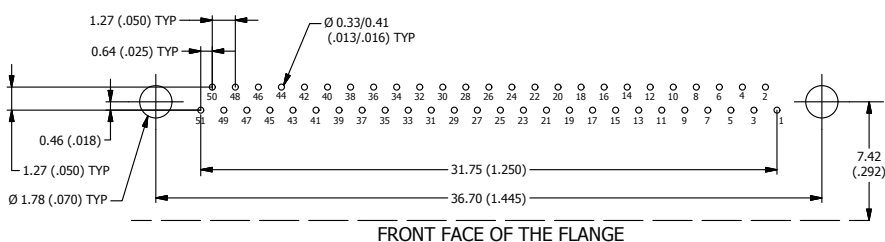
31 CONTACTS - VIEW A



37 CONTACTS - VIEW A



51 CONTACTS - VIEW A



SINGLE ROW
NANO-D CONNECTORS

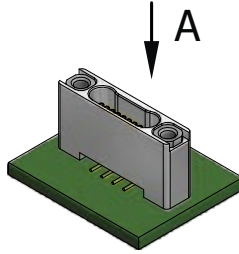
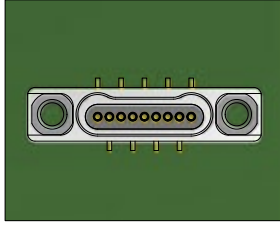
Nano-D
connectors

PCB LAYOUT FOR SMV TYPE 0.025" PITCH - FEMALE CONNECTORS

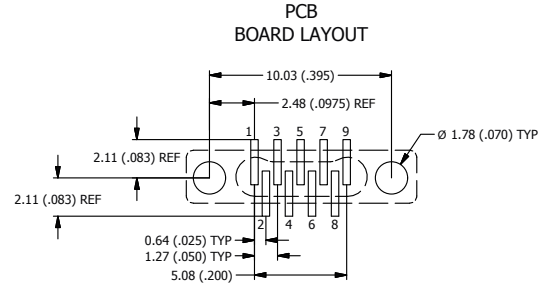
SINGLE ROW
NANO-D CONNECTORS

Nano-D
connectors

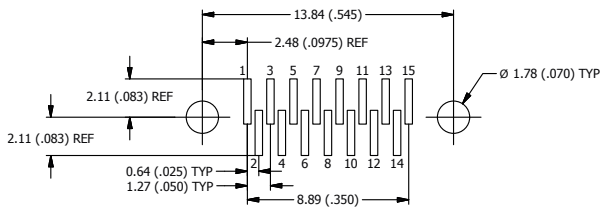
VIEW A



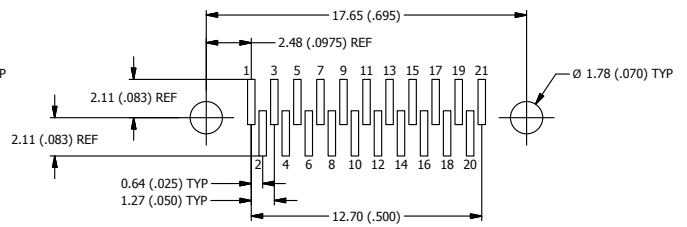
9 CONTACTS - VIEW A



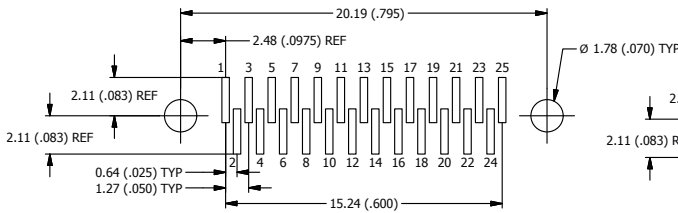
15 CONTACTS - VIEW A



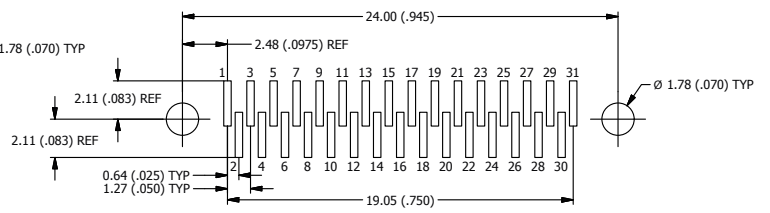
21 CONTACTS - VIEW A



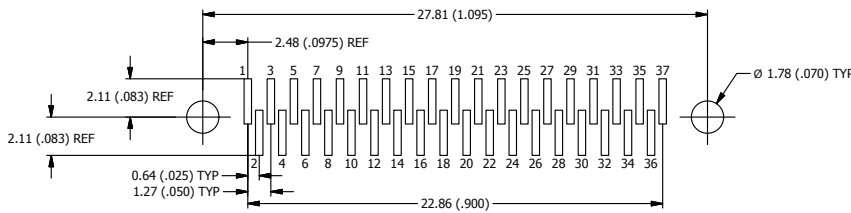
25 CONTACTS - VIEW A



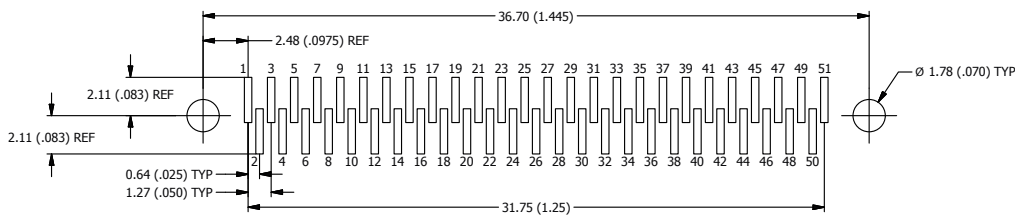
31 CONTACTS - VIEW A



37 CONTACTS - VIEW A

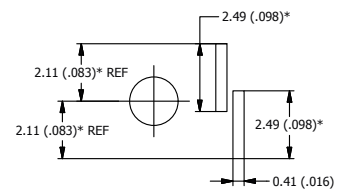


51 CONTACTS - VIEW A



LAYOUT

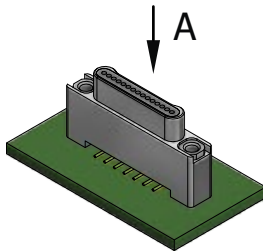
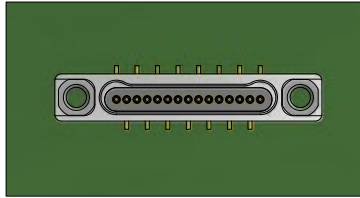
FOOTPRINT/PAD configuration



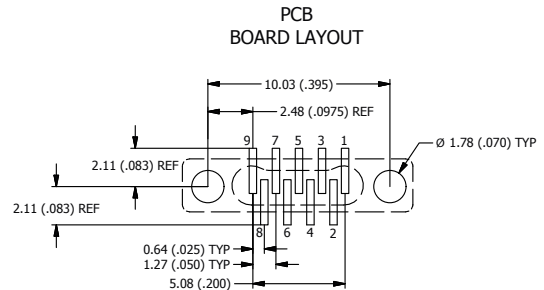
*: For .040" tail length, add .020" to noted dimensions

PCB LAYOUT FOR SMV TYPE 0.025" PITCH - MALE CONNECTORS

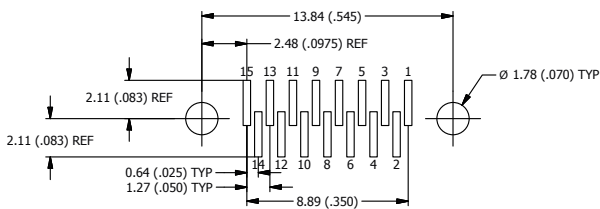
VIEW A



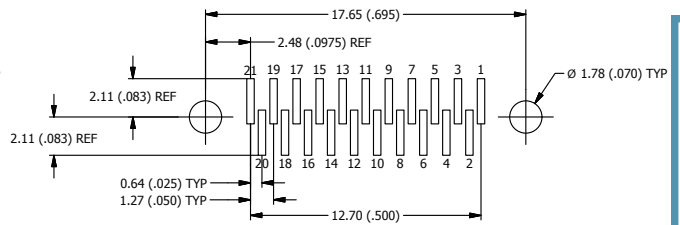
9 CONTACTS - VIEW A



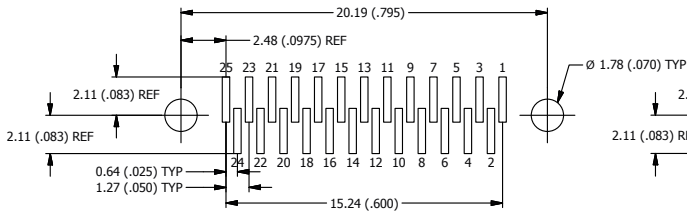
15 CONTACTS - VIEW A



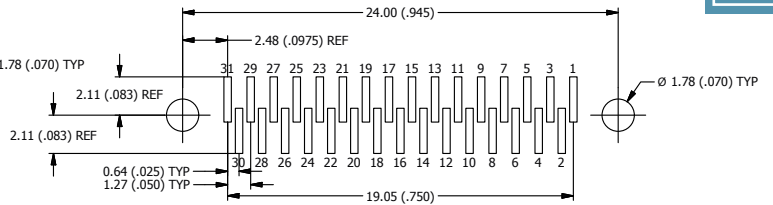
21 CONTACTS - VIEW A



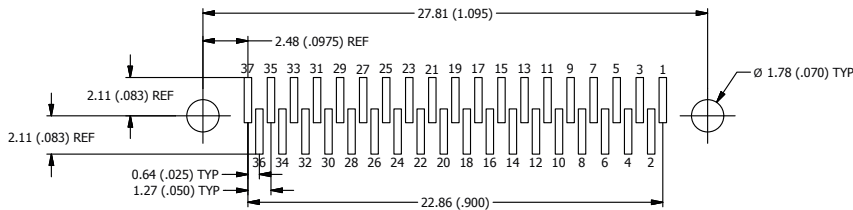
25 CONTACTS - VIEW A



31 CONTACTS - VIEW A

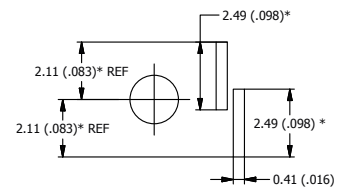


37 CONTACTS - VIEW A



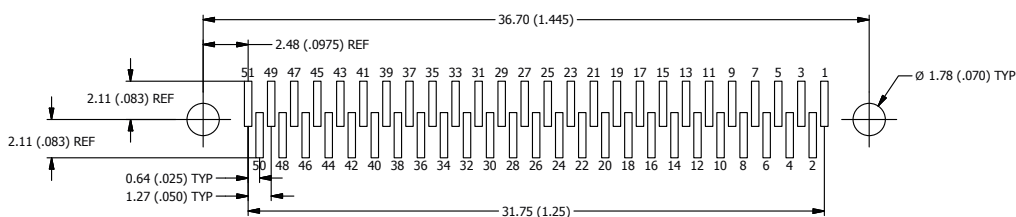
LAYOUT

FOOTPRINT/PAD configuration



*: For .040" tail length, add .020" to noted dimensions

51 CONTACTS - VIEW A



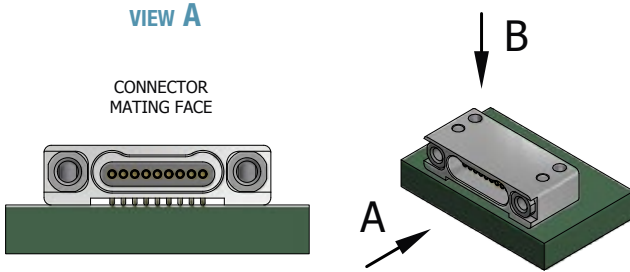
SINGLE ROW
NANO-D CONNECTORS

Nano-D
connectors

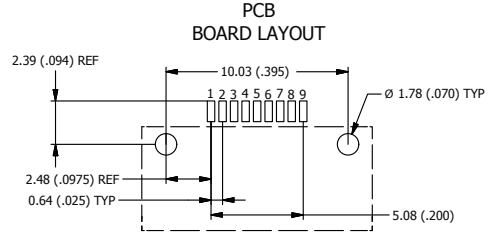
PCB LAYOUT FOR SMH TYPE 0.025" PITCH - FEMALE CONNECTORS

SINGLE ROW
NANO-D CONNECTORS

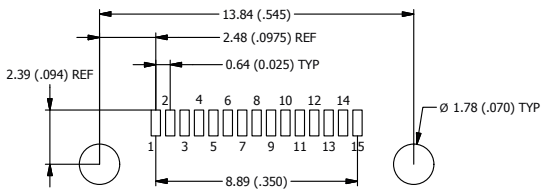
Nano-D
connectors



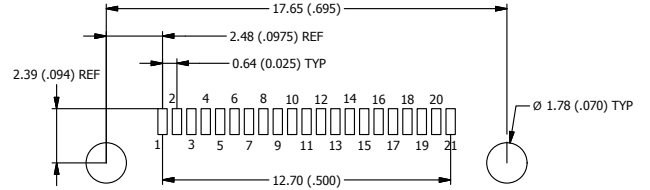
9 CONTACTS - VIEW A



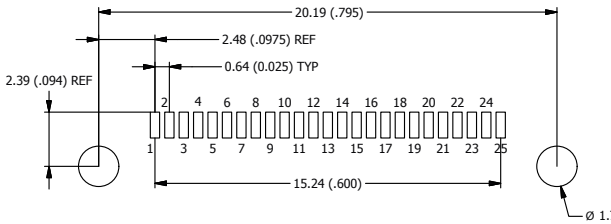
15 CONTACTS - VIEW A



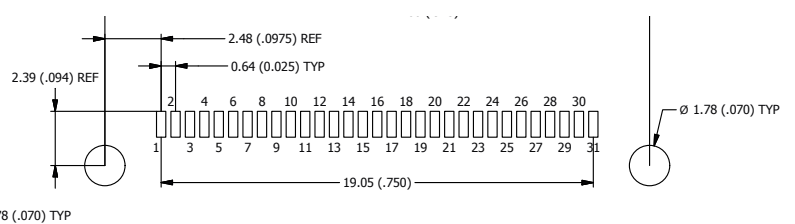
21 CONTACTS - VIEW A



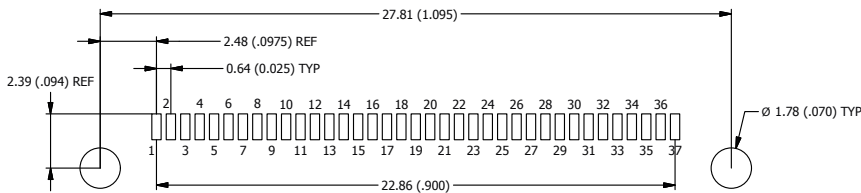
25 CONTACTS - VIEW A



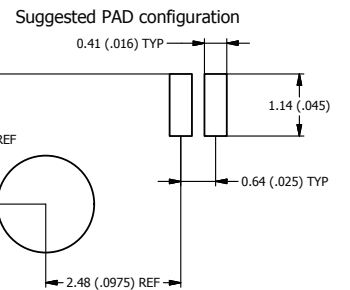
31 CONTACTS - VIEW A



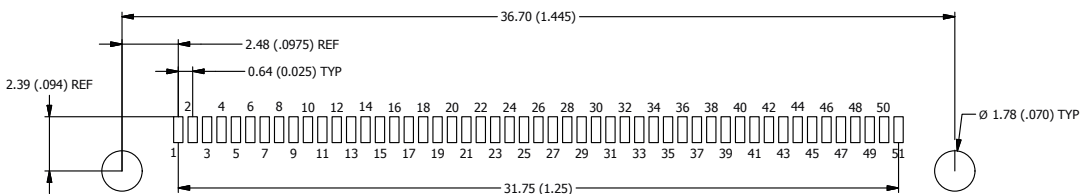
37 CONTACTS - VIEW A



LAYOUT

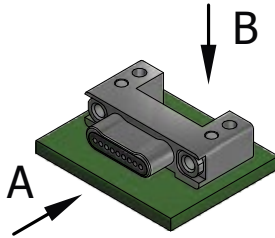
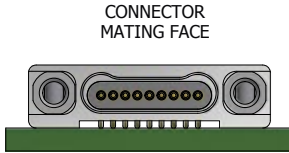


51 CONTACTS - VIEW A

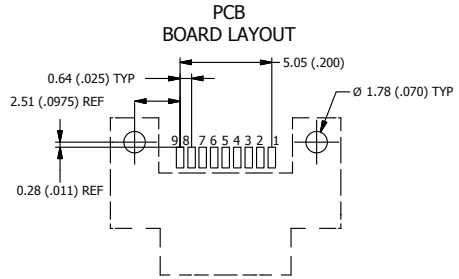


PCB LAYOUT FOR SMH TYPE 0.025" PITCH - MALE CONNECTORS

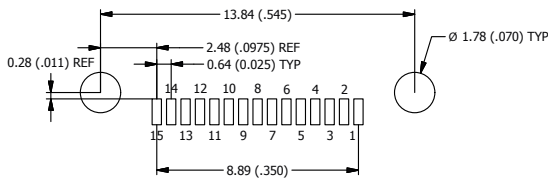
VIEW A



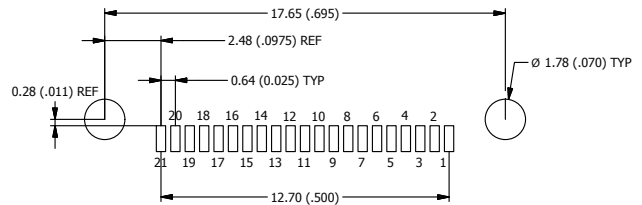
9 CONTACTS - VIEW A



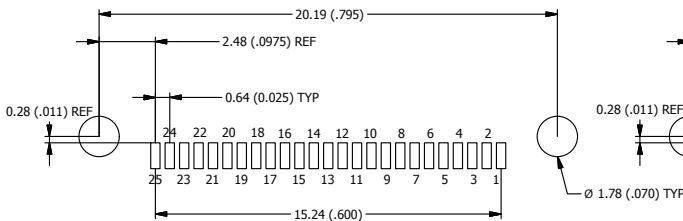
15 CONTACTS - VIEW A



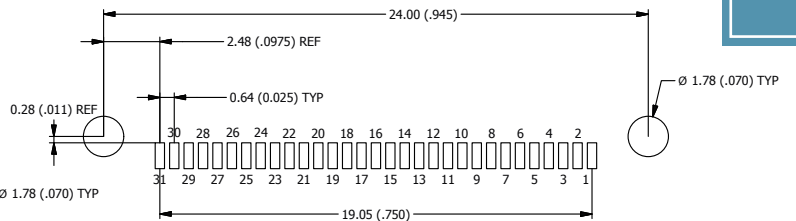
21 CONTACTS - VIEW A



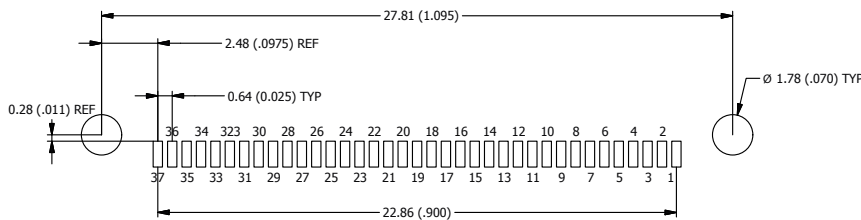
25 CONTACTS - VIEW A



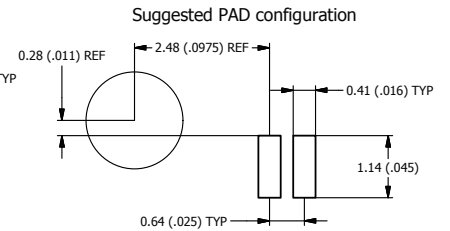
31 CONTACTS - VIEW A



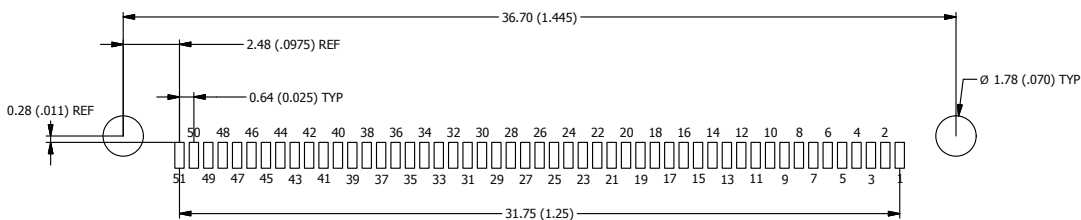
37 CONTACTS - VIEW A



LAYOUT



51 CONTACTS - VIEW A

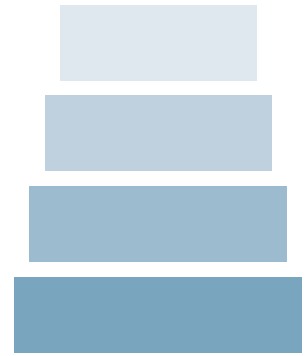


SINGLE ROW
NANO-D CONNECTORS

Nano-D
connectors

HIGH DENSITY CONNECTORS

- High density connectors 282
- General characteristics 283
- Pigtail connectors 284
- PCB connectors 286
 - Board straight type (BS) 0.050" pitch dimensions* 287
 - PCB layout for BS type* 288
 - Condensed board right (CBR) 0.050" pitch dimensions* 289
 - PCB layout for CBR type* 290



HIGH DENSITY
MICRO-D CONNECTORS

Nano-D
connectors

High density
connectors

HIGH DENSITY CONNECTORS

NANO-D PITCH

As the need for increased miniaturisation is becoming even greater, AXON[®] has developed an ultra-high density solution within the existing micro connector size. By putting nano contacts and nano pitch spacing into an existing micro shell, extremely compact connectors with very high pin counts can be produced in circular, rectangular, plastic and metal forms.

Optimal cabling density is achieved in a rectangular ultra high density connector made with Nano-D contacts and spacing inside a standard Micro-D shell size. Such a connector can accommodate a very large amount of pins while retaining excellent Micro-D reliability.

Most electrical and environmental performances are comparable to those of standard Nano-D connectors (250 V_{AC}, 200°C), combined with the robustness and shielding efficiency of the Micro-D metal shell which is compatible with all the hardware types available for Micro-D pigtailed.

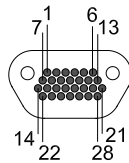
This same process can be applied to most of the standard and special Micro-D range, making it possible to have ultra high density versions of PCB connectors, wide flange versions, circular, rectangular and combo style versions with a mix of Micro-D and Nano-D contacts.



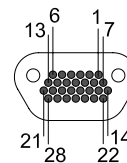
▲ RECTANGULAR HIGH DENSITY MICRO-D CONNECTORS

► Contact arrangements

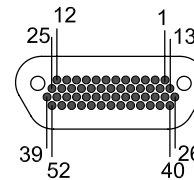
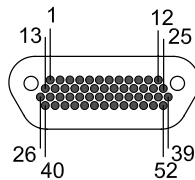
MATING FACE OF MALE CONNECTOR



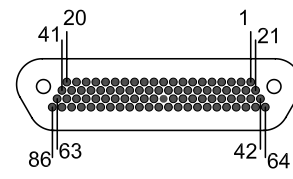
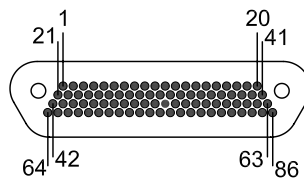
MATING FACE OF FEMALE CONNECTOR



28 NANO WAYS IN A 9 WAY MICRO INSERT



52 NANO WAYS IN A 15 WAY MICRO INSERT



86 NANO WAYS IN A 25 WAY MICRO INSERT

GENERAL CHARACTERISTICS

▶ Electrical & mechanical characteristics

CHARACTERISTIC	SPECIFICATION	TEST METHOD
CURRENT RATING	1 A max.	EIA-364-70
SIGNAL CONTACT RESISTANCE	71 mΩ max.	EIA-364-06
INSULATION RESISTANCE	5000 MΩ min. @ 100 V _{dc}	EIA-364-21
DIELECTRIC WITHSTANDING VOLTAGE - SEA LEVEL 0 m - ALTITUDE 21 km (70,000 ft)	250 V _{ac} 100 V _{ac}	EIA-364-20
CONTACT ENGAGING AND SEPARATION FORCE	141 g max. (5 oz) 11 g min. (0.4 oz)	EIA-364-37
CONNECTOR MATING AND DE-MATING FORCE	198 g (7 oz) x number of contacts max.	EIA-364-13
CONTACT RETENTION	0.9 kg (2 lbs) for 5 seconds min.	EIA-364-29
DURABILITY	200 mating cycles min.	EIA-364-09
TEMPERATURE RANGES - STANDARD - HIGH TEMP	-55°C / +150°C -55°C / +200°C	
VIBRATION	20 g's - No discontinuity >1μs	EIA-364-28 - TEST CONDITION IV
SHOCK	100 g's - No discontinuity >1μs	EIA-364-27 - TEST CONDITION G
SALT SPRAY	48 hours	EIA-364-26 - TEST CONDITION B
HUMIDITY	Insulation resistance > 1MΩ	EIA-364-31 - TEST CONDITION B (EXCLUDING STEPS 7A & 7B)*

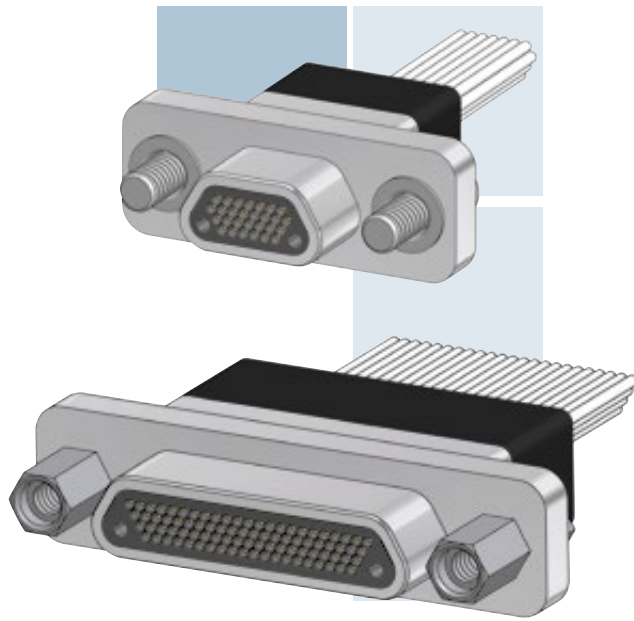
HIGH DENSITY
MICRO-D CONNECTORS

Nano-D
connectors

▶ Material & Finish

COMPONENT	MATERIAL	FINISH
MALE CONTACT (TWIST PIN)	PRECIOUS GOLD ALLOY IN ACCORDANCE WITH ASTM-B-477 OR 541 OR 562	NONE
FEMALE CONTACT	PRECIOUS GOLD ALLOY IN ACCORDANCE WITH ASTM-B-477 OR 541 OR 562	NONE
	COMMERCIAL BRONZE IN ACCORDANCE WITH ASTM-B-135, B-140/140M, B-372 OR B-587 BRASS IN ACCORDANCE WITH ASTM-B-453 OR 453M OR 16 OR 16M	GOLD PLATING IN ACCORDANCE WITH ASTM-B488, TYPE II, CLASS 1 (1.27μm MIN. (0.00005")), CODE C OVER NICKEL UNDERPLATE IN ACCORDANCE WITH SAE-AMS-QQ-N-290, CLASS 2 (1.27μm (0.00005") TO 3.81μm (0.00015"))
METAL SHELL	ALUMINIUM ALLOY, TYPE 6061	ELECTROLESS NICKEL PLATING IN ACCORDANCE WITH SAE-AMS-2404, CLASS 4. BLACK ZINC NICKEL OVER NICKEL UNDERPLATE
	STAINLESS STEEL 300 SERIES	PASSIVATION IN ACCORDANCE WITH SAE-AMS2700
INSERT/ PCB TRAY	LIQUID CRYSTAL POLYMER, 30% LOADED GLASS FIBRE POLYESTER 94V0, IN ACCORDANCE WITH MIL-M-24519 (200°C) OR PEEK	
HARDWARE	STAINLESS STEEL, 300 SERIES	PASSIVATION IN ACCORDANCE WITH SAE-AMS2700
ENCAPSULANT	EPOXY RESIN	
INSULATED WIRE	PTFE INSULATED SILVER PLATED COPPER IN ACCORDANCE WITH NEMA-HP3	
UNINSULATED WIRE	GOLD PLATED SOLID COPPER WIRE IN ACCORDANCE WITH A-A-59551 OR GOLD PLATED SOLID COPPER BASED ALLOY IN ACCORDANCE WITH ASTM-B-194	GOLD PLATING IN ACCORDANCE WITH ASTM-B488, TYPE II, CLASS 1 (1.27μm MIN. (0.00005")), CODE C OVER NICKEL UNDERPLATE IN ACCORDANCE WITH SAE-AMS-QQ-N-290, CLASS 2 (1.27μm (0.00005") TO 3.81μm (0.00015"))

** ACCORDING TO MIL-DTL-32139



PIGTAIL CONNECTOR

METAL SHELL

- High performance metal connector and PTFE wires
- Operating temperature: 150°C or 200°C
- 28 to 86 contacts

IDENTIFICATION CODE

MDHDA 2 52 P 1 L 050 L

SERIES

MDHDA: Micro-D High Density AXON'.

CONNECTOR TYPE

- 1:** Cadmium al. shell / **Z:** Black zinc nickel aluminium shell + potting 150°C.
2: Nickel aluminum shell + potting 150°C.
3: Nickel aluminum shell + potting 200°C.
S: Passivated stainless steel shell + potting 200°C.

NUMBER OF CONTACTS

28, 52, 86.

See page 282 for contact arrangements.

CONNECTOR GENDER

- P:** Male (pin contacts).
S: Female (socket contacts).

WIRE TYPE

- 1:** UT3007, AWG 30, 7 strands, 160V.
2: ET3207, AWG 32, 7 strands, 250V.
3: ET3407, AWG 34, 7 strands, 250V.
4: ET3607, AWG 36, 7 strands, 250V.

COLOUR CODE

- L:** All white.
F: All yellow.
W: 10 colour repeat.
 See page 215 for colour code.

WIRE LENGTH (in cm)

Attention! Wire length in centimetres - (1cm = 10mm = 0.394").

L	L ≤ 10	10 < L ≤ 100	L > 100
in cm (inches)	L ≤ 3.940	3.940 < L ≤ 39.40	L > 39.40
TOLERANCE	-0 / +0.5	-0 / +3	-0 / +5
in cm (inches)	-0 / +0.200	-0 / +1.180	-0 / +1.970

HARDWARE

- B:** No hardware.
C: U-clips with low profile hex socket head jackscrews (removable).
D: U-clips with low profile slot head jackscrews (removable).
M: Low profile socket hex head jackscrews (removable).
N: High profile socket hex head jackscrews (removable).
S: Low profile slot head jackscrews (removable).
T: High profile slot head jackscrews (removable).
P: Jackposts (removable).
Px (x: 1 to 5): Panel mount jackposts.
K: High profile slot head jackscrews (non removable).
L: Low profile socket hex head jackscrews (non removable).
F: Float mount (non removable).
FR: Float mount, rear panel mount (non removable).
 See pages 190 to 200 for hardware description.

DIMENSIONS

Dimensions are in millimetres (inches).



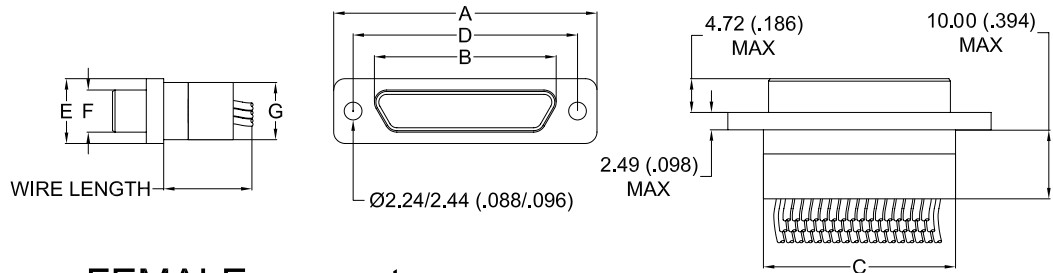
▲ PIGTAIL 28 WAY PLUG



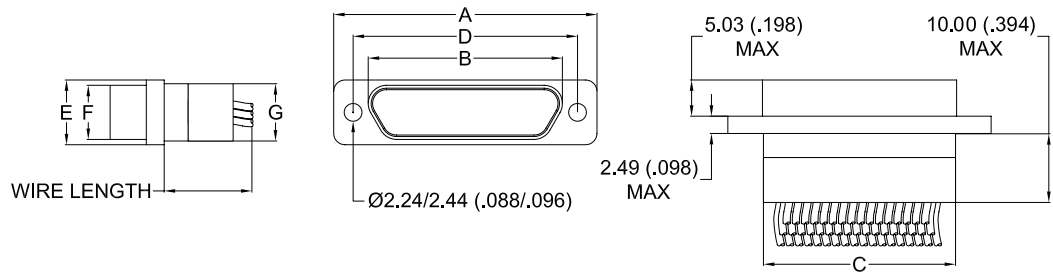
▲ PIGTAIL 52 WAY RECEPTACLE

HIGH DENSITY
MICRO-D CONNECTORS

MALE connector

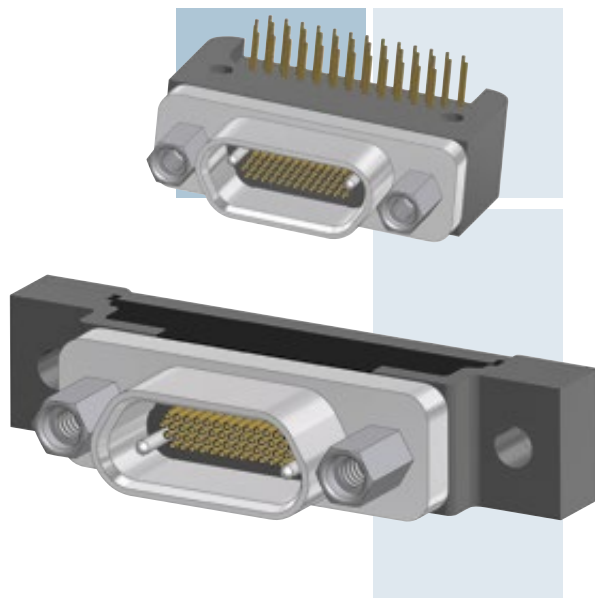


FEMALE connector



Nano-D
connectors

	A ±0.25 (±.010)	B max.		C - 0.46/+0.25 (-.018/+ .010)	D ±0.13 (±.005)	E ±0.25 (±.010)	F max.		G max.
		Male	Female				Male	Female	
28 P / 28 S	19.69 .775	8.48 .334	10.16 .400	9.91 .390	14.35 .565	7.57 .298	4.69 .185	6.35 .250	6.86 .270
52 P / 52 S	23.50 .925	12.29 .484	14.00 .551	13.72 .540	18.16 .715	7.57 .298	4.69 .185	6.35 .250	6.86 .270
86 P / 86 S	29.85 1.175	18.64 .734	20.35 .801	20.07 .790	24.51 .965	7.57 .298	4.69 .185	6.35 .250	6.86 .270



PCB CONNECTOR

0.050" PITCH

METAL SHELL

- Board Straight connector and Board Right angle connector for flexible and rigid printed circuit board
- Operating temperature: 150°C or 200°C
- Several tail lengths available

IDENTIFICATION CODE

MDHDA	2	52	S	BS	W	G	1
--------------	----------	-----------	----------	-----------	----------	----------	----------

SERIES

MDHDA: Micro-D High Density AXON'.

CONNECTOR TYPE

- 1:** Cadmium aluminum shell / **Z:** Black zinc nickel shell + potting 150°C.
2: Nickel aluminum shell + potting 150°C.
3: Nickel aluminum shell + potting 200°C.

NUMBER OF CONTACTS

28, 52, 86.

See page 282 for contact arrangements.

CONNECTOR GENDER

- P:** Male (pin contacts).
S: Female (socket contacts).

PCB VERSION

- BS:** Board Straight connector 0.050" pitch.
CBR: Condensed Board Right Angle connector 0.050" pitch.

HARDWARE

- B:** M2 threaded holes for hardware.
P: Jackposts (non removable).
Px (x: 1 to 5): Panel mount jackposts.
T: Threaded inserts installed.
W: Jackpost and threaded inserts installed.
Wx (x: 1 to 5): Panel mount jackposts and threaded inserts installed.
See pages 190 to 200 for hardware description.

CONDUCTOR TYPE

- G:** Gold plated solid conductor AWG30.
D: Flash gold plated solid conductor AWG30.

TAIL LENGTH

- 1:** 2.80mm (0.110").
2: 3.80mm (0.150").
3: 4.80mm (0.190").
Tolerance: ± 0.25 mm (0.010").

BOARD STRAIGHT TYPE (BS) 0.050" PITCH



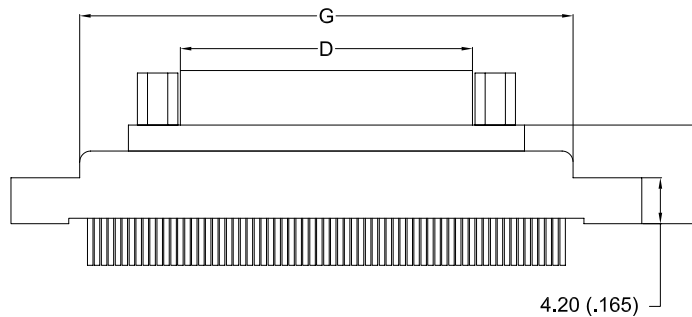
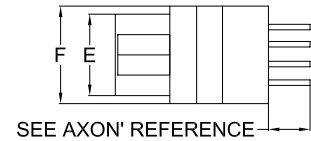
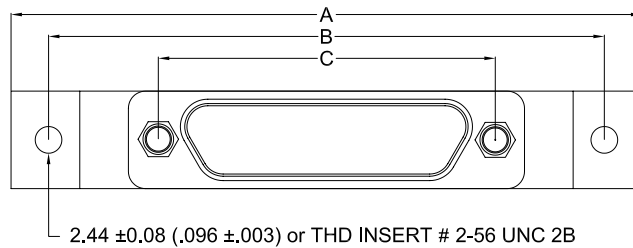
▲ BS 0.050" 28 WAY RECEPTACLE



▲ BS 0.050" 86 WAY RECEPTACLE

DIMENSIONS

Dimensions are in millimetres (inches).



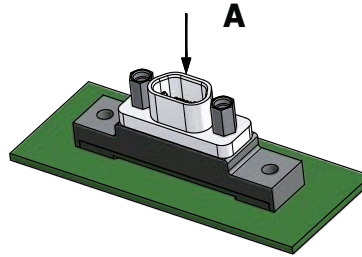
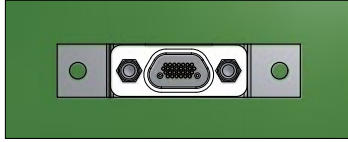
	A max.	B ±0.18 (±.007)	C ±0.13 (±.005)	D max.		E max.		F max.	G max.	H max.
				Male	Female	Male	Female			
28 P / 28 S	35.31 1.390	29.21 1.150	14.35 .565	8.48 .334	10.16 .400	4.69 .185	6.35 .250	7.82 .308	19.94 .785	9.02 .355
52 P / 52 S	35.31 1.390	29.21 1.150	18.16 .715	12.29 .484	14.00 .551	4.69 .185	6.35 .250	7.82 .308	24.00 .945	9.02 .355
86 P / 86 S	44.20 1.740	38.10 1.500	24.51 .965	18.64 .734	20.35 .801	4.69 .185	6.35 .250	7.82 .308	32.39 1.275	9.02 .355

PCB LAYOUT FOR HIGH DENSITY BS TYPE 0.050" PITCH CONNECTORS

HIGH DENSITY MICRO-D CONNECTORS

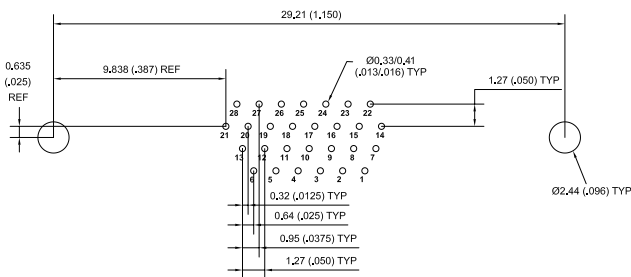
Nano-D connectors

CONNECTOR MATING FACE

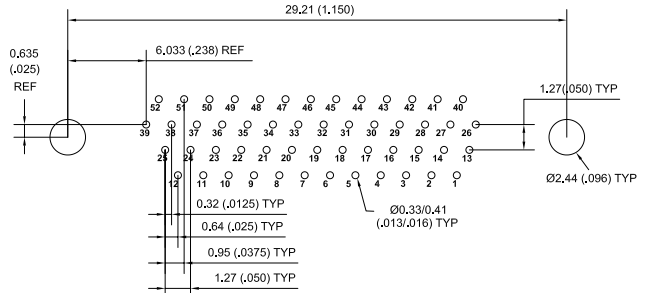


MALE CONNECTORS

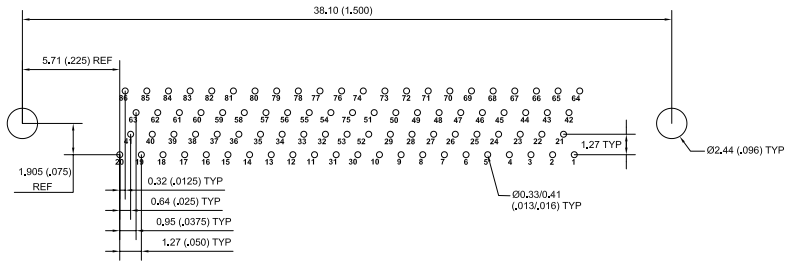
28 CONTACTS - VIEW A



52 CONTACTS - VIEW A

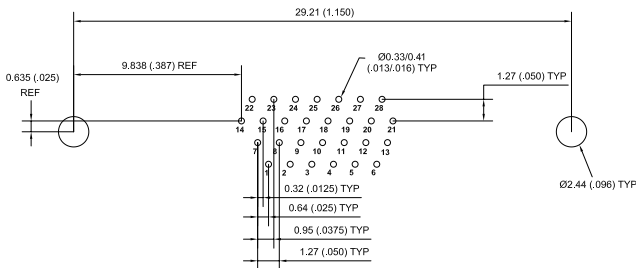


86 CONTACTS - VIEW A

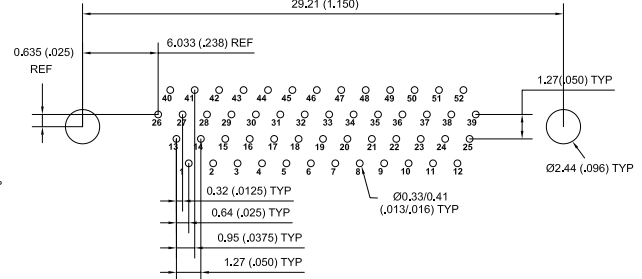


FEMALE CONNECTORS

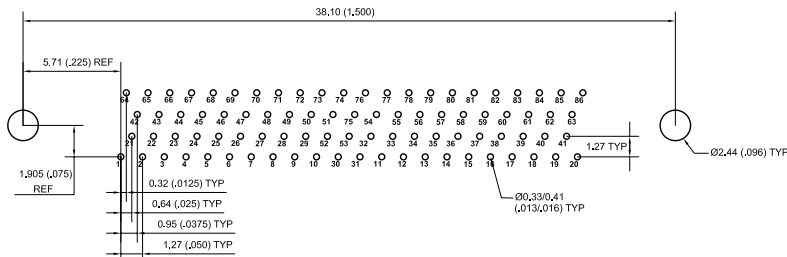
28 CONTACTS - VIEW A



52 CONTACTS - VIEW A



86 CONTACTS - VIEW A



CONDENSED BOARD RIGHT (CBR) 0.050" PITCH



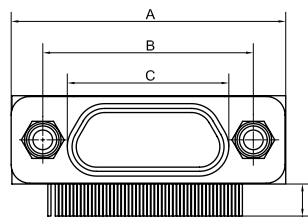
▲ CBR 0.050" 52 WAY RECEPTACLE



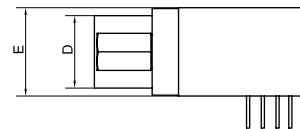
▲ CBR 0.050" 86 WAY RECEPTACLE

DIMENSIONS

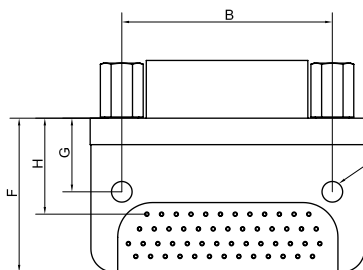
Dimensions are in millimetres (inches).



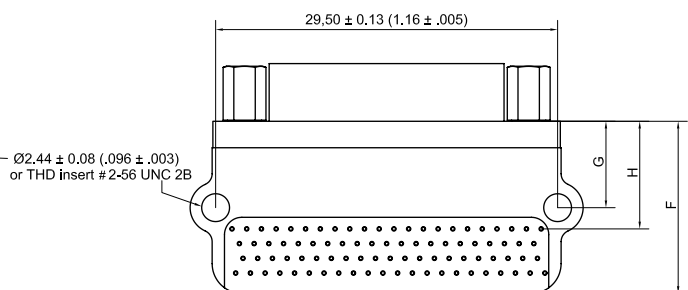
SEE AXON REFERENCE



28 - 52 way connectors

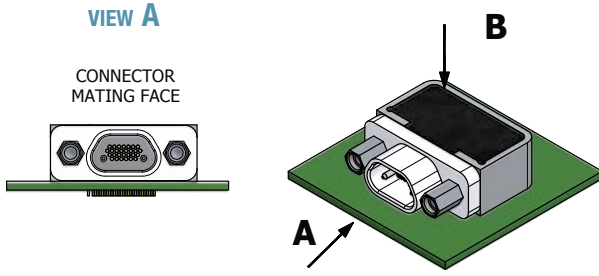


86 way connector



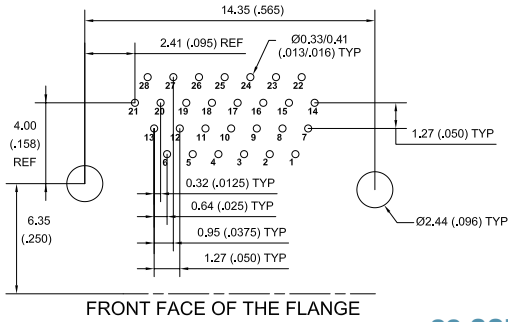
	A max.	B ±0.13 (±.005)	C max.		D max.		E max.	F max.	G ±0.25 (±.010)	H ±0.25 (±.010)
			Male	Female	Male	Female				
28 P / 28 S	19.94 .785	14.35 .565	8.48 .334	10.16 .400	4.69 .185	6.35 .250	7.82 .308	13.50 .532	6.35 .250	7.81 .308
52 P / 52 S	23.75 .935	18.16 .715	12.29 .484	14.00 .551	4.69 .185	6.35 .250	7.82 .308	13.50 .532	6.35 .250	8.28 .326
86 P / 86 S	30.10 1.185	24.51 .965	18.64 .734	20.35 .801	4.69 .185	6.35 .250	7.82 .308	15.00 .590	7.45 .293	9.28 .365

PCB LAYOUT FOR HIGH DENSITY CBR TYPE 0.050" PITCH CONNECTORS

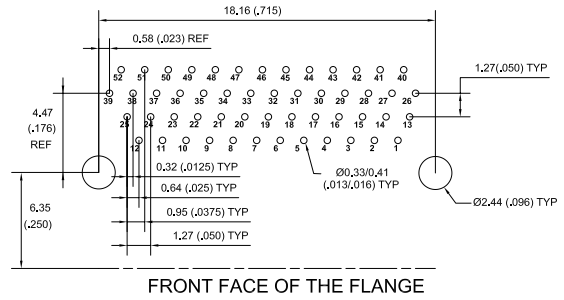


MALE CONNECTORS

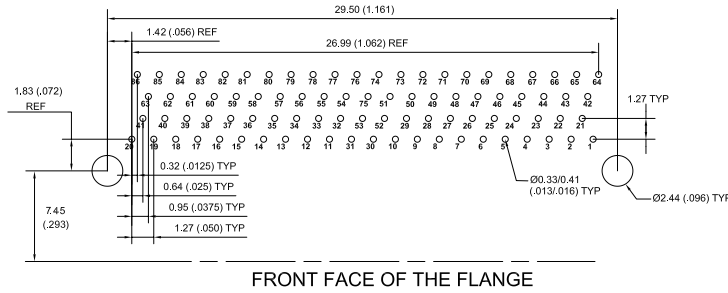
28 CONTACTS - VIEW B



52 CONTACTS - VIEW B

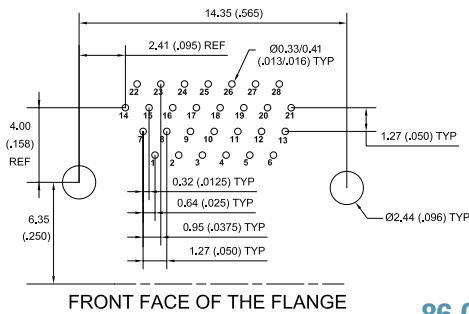


86 CONTACTS - VIEW B

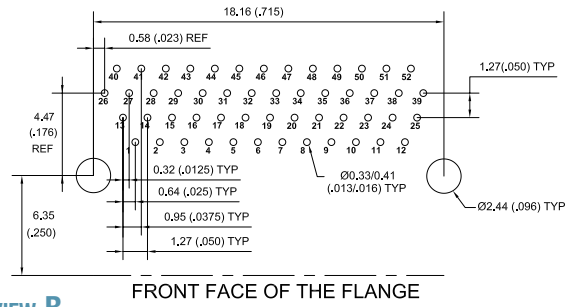


FEMALE CONNECTORS

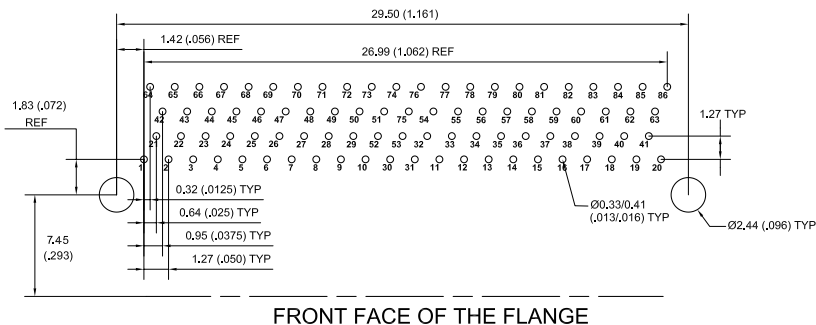
28 CONTACTS - VIEW B



52 CONTACTS - VIEW B

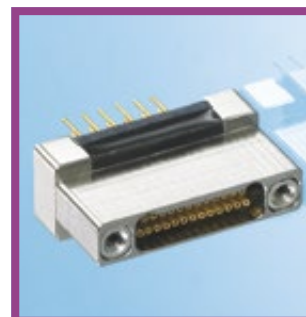
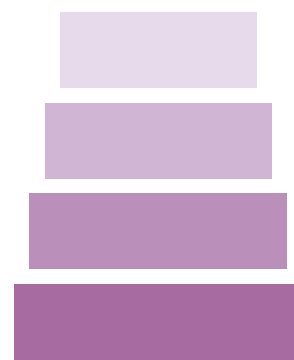


86 CONTACTS - VIEW B



NANO-D FOR SPACE APPLICATIONS

- Nano-D connectors and assemblies for space applications 308
- General characteristics 309
- Dual row pigtail & jumper 310
- BS (Board Straight) type 314
- CBR (Condensed Board Right Angle) type 316
- SMV (Surface Mount Vertical) type 318
 - PCB layout for BS 0.050" type.* 320
 - PCB layout for CBR 0.050" type.* 321
 - PCB layout for SMV 0.025" type* 322



NANO-D FOR SPACE
APPLICATIONS

Space Micro-D &
Nano-D connectors

ND2SA RANGE

▶ Nano-D connectors and assemblies for space applications

0.635 MM (.025") CONTACT SPACING

AXON' has drawn upon long experience in the highly challenging environment of space electronics to develop Nano-D connectors and assemblies suitable for this demanding area. Marrying the Nano-D design with the need to be able to reliably transmit signals, AXON' has developed custom solutions for a wide variety of application in space.

AXON' space products are assembled to the highest standards, meeting the ECSS-Q-ST-70-08C and the ECSS-Q-ST-70-26C requirements, and all such products are built in one of our humidity controlled, class 100.000 (ISO 8) clean rooms.

AXON' has been approved to ESCC 3401/086 EPPL2 since 2014.

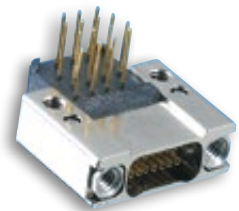
▶ Different configurations

AXON's range of space Nano-D connectors is available in several different configurations:

- Nano-D rectangular connectors for cables.
- Nano-D rectangular connectors for PCBs.

▶ Characteristics

- 0.635 mm (.025") contact spacing (double the density of a space Micro-D).
- Number of ways: 9, 15, 21, 25, 31, 37 and 51.
- High reliability twist pin contacts.
- Metal shell construction with captivated hardware.



▲ SPACE NANO-D CONNECTOR

GENERAL CHARACTERISTICS

per ESCC 3401/086*

AXON's range of space Nano-D connectors which is covered by the ESCC 3401/086* standard, is ideally suited to equipment and applications where weight, miniaturisation and long term performance are required. It is available in 7 contact arrangements (9 to 51 contacts) for rectangular Nano-D connectors.

► Electrical & mechanical characteristics

CHARACTERISTIC	SPECIFICATION	TEST METHOD
CURRENT RATING	1 A max.	
CONTACT RESISTANCE	71 mΩ max.	Para 9.1.1.3 OF ESCC 3401
INSULATION RESISTANCE	1000 MΩ min. @ 100 V _{RMS}	Para 9.1.1.1 OF ESCC 3401
DIELECTRIC WITHSTANDING VOLTAGE - SEA LEVEL 0 m - ALTITUDE 21 km (70,000 ft)	250 V _{RMS} 100 V _{RMS}	Para 9.1.1.2 OF ESCC 3401
CONTACT ENGAGING AND SEPARATION FORCE	1.39 N max. 0.11 N min.	Para 4.3.9 OF ESCC 3401/086
CONNECTOR MATING AND DE-MATING FORCE	198 g (7 oz) x number of contacts max.	Para 9.20 OF ESCC 3401
CONTACT RETENTION	2.2 N min.	Para 9.17 OF ESCC 3401
DURABILITY	200 mating cycles min.	Para 9.18 OF ESCC 3401
TEMPERATURE RANGES	-55°C / +150°C	
VIBRATION	20 g's - No discontinuity >1μs	Para 9.11 OF ESCC 3401
SHOCK	50 g's - No discontinuity >1μs	Para 9.12 OF ESCC 3401
SALT SPRAY	48 hours	Para 9.22 OF ESCC 3401

► Material & Finish

COMPONENT	MATERIAL	FINISH
MALE CONTACT (TWIST PIN)	PRECIOUS GOLD ALLOY IN ACCORDANCE WITH ASTM-B-477 OR 541 OR 562	NONE
FEMALE CONTACT	PRECIOUS GOLD ALLOY IN ACCORDANCE WITH ASTM-B-477 OR 541 OR 562	NONE
	LEADED BRASS ALLOY CuZn9Pb2	GOLD PLATING IN ACCORDANCE WITH ASTM-B488, TYPE II, CLASS 1 (1.27 μm MIN. (.050")), CODE C OVER NICKEL UNDERPLATE IN ACCORDANCE WITH SAE-AMS-QQ-N-290, CLASS 2 (1.27 μm (.050") TO 3.81 μm (0.150"))
METAL SHELL	ALUMINIUM ALLOY, TYPE 6061 IN ACCORDANCE WITH SAE-AMS-QQ-A-200/8 OR ASTM-B-209	ELECTROLESS NICKEL PLATING IN ACCORDANCE WITH SAE-AMS-2404, CLASS 4.
INSERT/ PCB TRAY	LIQUID CRYSTAL POLYMER, 30% LOADED GLASS FIBRE POLYESTER 94VO, IN ACCORDANCE WITH MIL-M-24519 (200°C)	
HARDWARE	STAINLESS STEEL, 300 SERIES	PASSIVATION IN ACCORDANCE WITH SAE-AMS2700
ENCAPSULANT	SPACE GRADE EPOXY RESIN	
INSULATED WIRE	CROSSLINKED ETFE INSULATED SILVER PLATED COPPER ALLOY IN ACCORDANCE WITH PARA 4.4 OF ESCC 3901/012	
INTEGRAL TAIL	GOLD PLATED SOLID COPPER BASE ALLOY IN ACCORDANCE WITH ASTM-B-194	

*: ISSUE 1 AT THE TIME OF GOING TO PRESS

RECTANGULAR CONNECTORS FOR CABLES

DUAL ROW PIGTAIL & JUMPER



- Reliability for micro-miniature operating systems.
- High performance metal connector and ETFE crosslinked wire.
- Panel mount available for receptacle connector.
- Operating temperature: -55 / +150°C.
- 7 contact arrangements (9 to 51 contacts).

IDENTIFICATION CODE

ND2SA 25 P P I E W1 9 50 L L

SERIES

ND2SA: Nano-D Space application 2 row AXON*. See below variants included in the ESCC3401/086 specification.

NUMBER OF CONTACTS

09, 15, 21, 25, 31*, 37, 51.

1st CONNECTOR TYPE

P: Plug connector.
S: Receptacle connector*.
M: Panel mount receptacle connector*.

2nd CONNECTOR TYPE

P: Plug connector.
S: Receptacle connector.
M: Panel mount receptacle connector*.
W: No second connector - free wires*.

CONNECTIONS (see jumper wiring on page 216)

D: Direct pin 1 to pin 1.
I: Indirect (usual for plug-plug jumper).
X: Pigtail*.

EMI FAMILY

E: Shielded pigtails or harnesses, shield soldered to the backshell (see page 312).
X: No shield.

WIRE CODE

W1: Single wire ESCC 3901/012 - Variant 01 (AWG30).
W2: 2 shielded jacketed twisted pairs ESCC 3901/012 - Variant 51 with the remaining wiring being single wire per ESCC 3901/012 - Variant 01.

COLOUR CODE

0: Black. **1:** Brown. **2:** Red. **3:** Orange*. **4:** Yellow*. **5:** Green*.
6: Blue*. **7:** Violet*. **8:** Grey*. **9:** White. **W:** 10 colour repeat*.

For colour code "W" see page 30

WIRE LENGTH (in cm)

Attention! Wire length in centimetres - (1cm = 10 mm = .394").

L	5 ≤ L ≤ 10	10 < L ≤ 100	L > 100
in cm (inches)	1.97 ≤ L ≤ 3.940	3.940 < L ≤ 39.40	39.40
TOLERANCE	-0 / +0.5	-0 / +3	-0 / +5
in cm (inches)	-0 / +0.200	-0 / +1.180	-0 / +1.970

HARDWARE 1st CONNECTOR

P: Threaded hole #0-80 UNF (non removable jackposts, receptacle only).
R: Retractable short hex socket head jackscrews #0-80 UNF (semi-captivated, plug only).
L: Short hex socket head jackscrews #0-80 UNF (captivated, plug only).
V: Retractable short hex socket head jackscrews #0-80 UNF (semi captivated, plug with backshell only).
B: No hardware*.

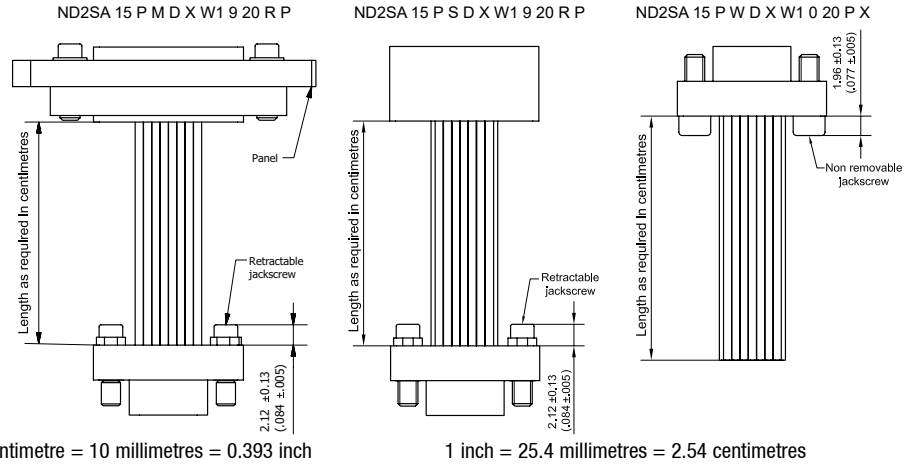
HARDWARE 2nd CONNECTOR

P: Threaded hole #0-80 UNF (non removable jackposts, receptacle only).
R: Retractable short hex socket head jackscrews #0-80 UNF (semi-captivated, plug only).
L: Short hex socket head jackscrews #0-80 UNF (captivated, plug only).
V: Retractable short hex socket head jackscrews #0-80 UNF (semi captivated, plug with backshell only).
X: Pigtail*.
B: No hardware*.

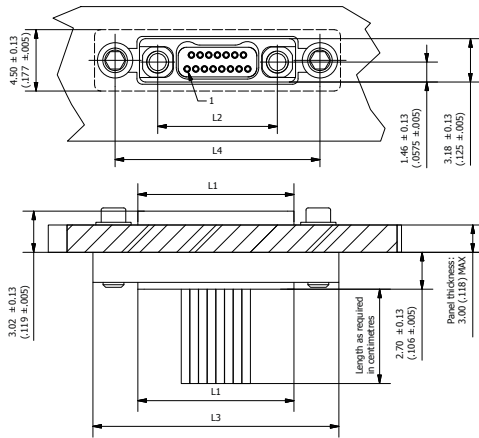
*: not included in ESCC specification

DIMENSIONS

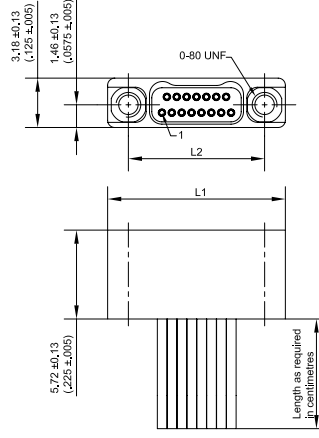
Dimensions are in millimetres (inches).



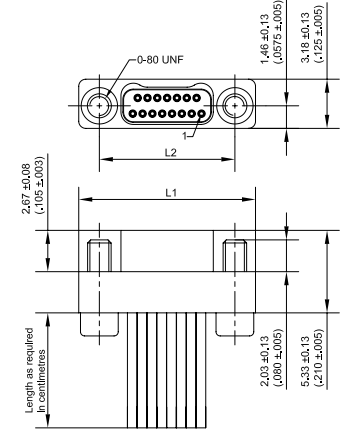
PANEL MOUNT RECEPTACLE



RECEPTACLE



PLUG



SHELL SIZE	L1 ±0.13 (±.005)	L2 ±0.13 (±.005)	L3 ±0.13 (±.005)	L4 ±0.13 (±.005)
9 P / 9 S	9.53 .375	6.86 .270	16.10 .634	13.10 .516
15 P / 15 S	11.43 .450	8.76 .345	18.00 .709	15.00 .591
21 P / 21 S	13.34 .525	10.67 .420	19.91 .784	16.91 .666
25 P / 25 S	14.61 .575	11.94 .470	21.18 .834	18.18 .716
31 P / 31 S*	16.51 .650	13.84 .545	23.09 .909	20.08 .791
37 P / 37 S	18.42 .725	15.75 .620	24.99 .984	21.99 .866
51 P / 51 S	22.86 .900	20.19 .795	29.43 1.159	26.43 1.041

*: not included in ESCC specification

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE		MATERIAL & FINISH	
CURRENT RATING	1 A max.	SHELL	Aluminium Alloy 6061 with nickel plating
CONTACT RESISTANCE	71 mΩ max.	MOULDED INSULATOR	Liquid Crystal Polymer (LCP)
INSULATION RESISTANCE	1000 MΩ min. @ 250 V _{RMS}	PIN CONTACT	Precious gold alloy
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 250 V _{RMS} Altitude 21 km (70,000 ft): 100 V _{AC}	SOCKET CONTACT	Precious gold alloy
CONTACT ENGAGING FORCE	1.39 N max.	ENCAPSULANT	Epoxy resin
CONTACT SEPARATING FORCE	0.11 N min.	HARDWARE	300 series stainless steel, passivated
CONTACT RETENTION	2.2 N min.		
DURABILITY	200 mating cycles min.		
VIBRATION	20g's – No discontinuity > 1 μs		
SHOCK	50g's – No discontinuity > 1 μs		



RECTANGULAR CONNECTORS FOR CABLES

EMI RANGE

SHIELDED DUAL ROW PIGTAIL & JUMPER

- Reliability for micro-miniature operating systems.
- High performance metal connector and ETFE crosslinked wire.
- Panel mount available for receptacle connector.
 - 360° screen termination.
- Operating temperature: -55°C / +200°C.
- 7 contact arrangements (9 to 51 contacts).

IDENTIFICATION CODE

ND2SA 25 P P I E W1 9 50 L L

SERIES

ND2SA: Nano-D Space application 2 row AXON*.
See below variants included in the ESCC3401/086 specification.

NUMBER OF CONTACTS

09, 15, 21, 25, 31*, 37, 51.

1st CONNECTOR TYPE

P: Plug connector.
S: Receptacle connector*.
M: Panel mount receptacle connector*.

2nd CONNECTOR TYPE

P: Plug connector.
S: Receptacle connector.
W: No second connector - free wires*.

CONNECTIONS (see jumper wiring on page 216)

D: Direct pin 1 to pin 1.
I: Indirect (usual for plug-plug jumper).
X: Pigtail*.

EMI FAMILY

E: Shielded pigtails or harnesses, shield soldered to the backshell.
X: No shield (see page 310).

WIRE CODE

W1: Single wire ESCC 3901/012 - Variant 01 (AWG30).
W2: 2 shielded jacketed twisted pairs ESCC 3901/012 - Variant 51 with the remaining wiring being single wire per ESCC 3901/012 - Variant 01.

COLOUR CODE

0: Black. **1:** Brown. **2:** Red. **3:** Orange*. **4:** Yellow*. **5:** Green*.
6: Blue*. **7:** Violet*. **8:** Grey*. **9:** White. **W:** 10 colour repeat*.

For colour code "W" see page 30

WIRE LENGTH (in cm)

Attention! Wire length in centimetres - (1cm = 10 mm = .394").

L	5 ≤ L ≤ 10	10 < L ≤ 100	L > 100
in cm (inches)	1.97 ≤ L ≤ 3.940	3.940 < L ≤ 39.40	39.40
TOLERANCE	-0 / +0.5	-0 / +3	-0 / +5
in cm (inches)	-0 / +0.200	-0 / +1.180	-0 / +1.970

HARDWARE 1st CONNECTOR

P: Threaded hole #0-80 UNF (non removable jackposts, receptacle only).
R: Retractable short hex socket head jackscrews #0-80 UNF (semi-captivated, plug only).
L: Short hex socket head jackscrews #0-80 UNF (captivated, plug only).
V: Retractable short hex socket head jackscrews #0-80 UNF (semi captivated, plug with backshell only).
B: No hardware*.

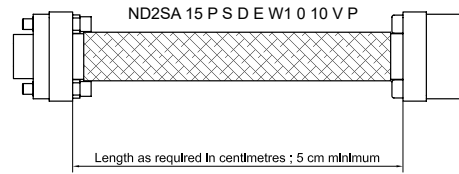
HARDWARE 2nd CONNECTOR

P: Threaded hole #0-80 UNF (non removable jackposts, receptacle only).
R: Retractable short hex socket head jackscrews #0-80 UNF (semi-captivated, plug only).
L: Short hex socket head jackscrews #0-80 UNF (captivated, plug only).
V: Retractable short hex socket head jackscrews #0-80 UNF (semi captivated, plug with backshell only).
X: Pigtail*.
B: No hardware*.

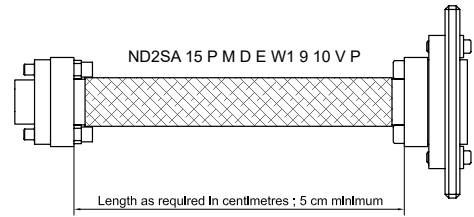
*: not included in ESCC specification

DIMENSIONS

Dimensions are in millimetres (inches).



1 centimetre = 10 millimetres = 0,393 inch

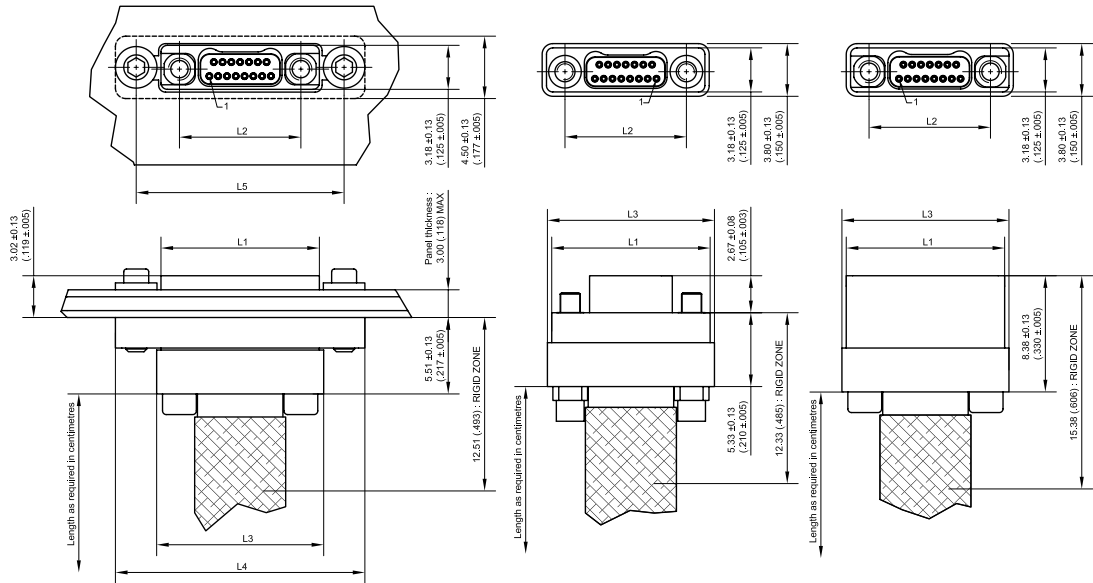


1 inch = 25,4 millimetres = 2,54 centimetres

PANEL MOUNT RECEPTACLE

PLUG

RECEPTACLE



SHELL SIZE	L1 ±0.13 (±.005)	L2 ±0.13 (±.005)	L3 ±0.13 (±.005)	L4 ±0.13 (±.005)	L5 ±0.13 (±.005)
9 P / 9 S	9.53 .375	6.86 .270	10.16 .400	16.10 .634	13.10 .516
15 P / 15 S	11.43 .450	8.76 .345	12.06 .475	18.00 .709	15.00 .591
21 P / 21 S	13.34 .525	10.67 .420	13.97 .550	19.91 .784	16.91 .666
25 P / 25 S	14.61 .575	11.94 .470	15.24 .600	21.18 .834	18.18 .716
31 P / 31 S*	16.51 .650	13.84 .545	17.14 .675	23.09 .909	20.08 .791
37 P / 37 S	18.42 .725	15.75 .620	19.05 .750	24.99 .984	21.99 .866
51 P / 51 S	22.86 .900	20.19 .795	23.49 .925	29.43 1.159	26.43 1.041

*: not included in ESCC specification

NANO-D FOR SPACE APPLICATIONS

Space Micro-D & Nano-D connectors

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE		MATERIAL & FINISH	
CURRENT RATING	1 A max.	SHELL	Aluminium Alloy 6061 with nickel plating
CONTACT RESISTANCE	71 mΩ max.	BACKSHELL	Aluminium alloy 6061 with nickel plating
INSULATION RESISTANCE	1000 MΩ min. @ 250 V _{RMS}	MOULDED INSULATOR	Liquid Crystal Polymer (LCP)
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 250 V _{RMS} Altitude 21 km (70,000 ft): 100 V _{AC}	PIN CONTACT	Precious gold alloy
CONTACT ENGAGING FORCE	1.39 N max.	SOCKET CONTACT	Precious gold alloy
CONTACT SEPARATING FORCE	0.11 N min.	ENCAPSULANT	Epoxy resin
CONTACT RETENTION	2.2 N min.	HARDWARE	300 series stainless steel, passivated
DURABILITY	200 mating cycles min.		
VIBRATION	20g's - No discontinuity > 1 μs		
SHOCK	50g's - No discontinuity > 1 μs		



PCB RECTANGULAR CONNECTORS

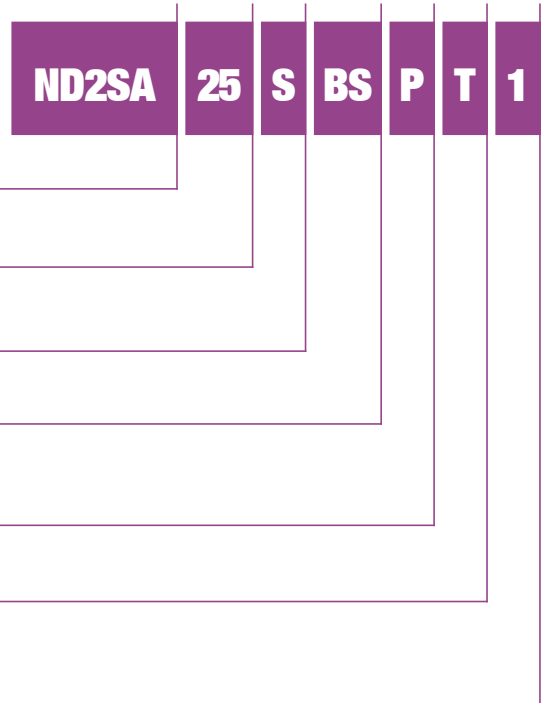
BS TYPE

2 ROW VERTICAL PCB RECEPTACLE

0.050" PITCH

- Reliability for micro-miniature operating systems.
- Several tail lengths available.
- Operating temperature: -55 / +150°C.
- 7 contact arrangements (9 to 51 contacts).

IDENTIFICATION CODE



SERIES

ND2SA: Nano-D Space application 2 row AXON'.

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51.

CONNECTOR TYPE

S: Receptacle connector.

FAMILY

BS: AXON' Vertical PCB connector.
Not included in the ESCC 3401/086 specification.

HARDWARE

P: Threaded hole #0-80 UNF (non removable jackposts).

TAIL PLATING

T: Tin lead plated 1µm minimum (63-37 alloy).
G: Gold (not included in the ESCC specification).

TAIL LENGTH

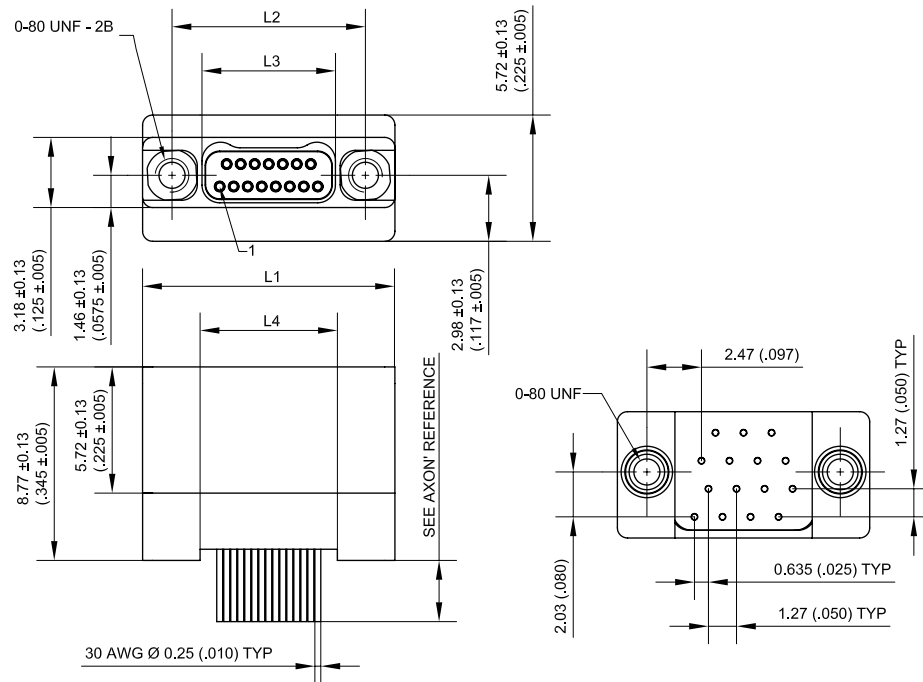
- 1:** 2.77 mm (0.109").
- 2:** 3.56 mm (0.140").
- 3:** 4.37 mm (0.172").
- 4:** 2.29 mm (0.090").

Tolerance ± 0.38 mm (0.015").

Connectors are supplied with #0-80 UNF screws 1/4" ±0.004" long (for PCB mounting).

DIMENSIONS

Dimensions are in millimetres (inches).

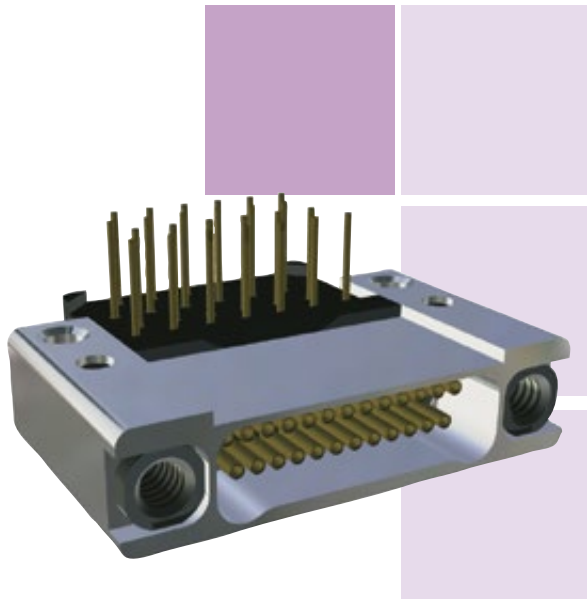


SEE CONTACT LAYOUT ON PCB PAGE 320

SHELL SIZE	L1 ±0.13 (±.005)	L2 ±0.13 (±.005)	L3 ±0.13 (±.005)	L4 ±0.13 (±.005)
9 S	9.53 .375	6.86 .270	4.14 .163	4.32 .170
15 S	11.43 .450	8.76 .345	6.05 .238	6.22 .245
21 S	13.34 .525	10.67 .420	7.95 .313	8.13 .320
25 S	14.61 .575	11.94 .470	9.22 .363	9.40 .370
31 S	16.51 .650	13.84 .545	11.12 .438	11.30 .445
37 S	18.42 .725	15.75 .620	13.03 .513	13.21 .520
51 S	22.86 .900	20.19 .795	17.48 .688	17.65 .695

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE		MATERIAL & FINISH	
CURRENT RATING	1 A max.	SHELL	Aluminium alloy 6061 with nickel plating
CONTACT RESISTANCE	71 mΩ max.	MOULDED INSULATOR	Liquid Crystal Polymer (LCP)
INSULATION RESISTANCE	1000 MΩ min. @ 250 VRMS	CONTACT	Copper alloy, gold over nickel plating
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 250 VRMS Altitude 21 km (70,000 ft): 100 VAC	ENCAPSULANT	Epoxy Resin
CONTACT ENGAGING FORCE	1.39 N max.	PCB TERMINALS	Gold plated solid copper alloy wire
CONTACT SEPARATING FORCE	0.11 N min.	HARDWARE	300 series stainless steel, passivated
CONTACT RETENTION	2.2 N min.		
DURABILITY	200 mating cycles min.		
VIBRATION	20g's – No discontinuity > 1 μs		
SHOCK	50g's – No discontinuity > 1 μs		



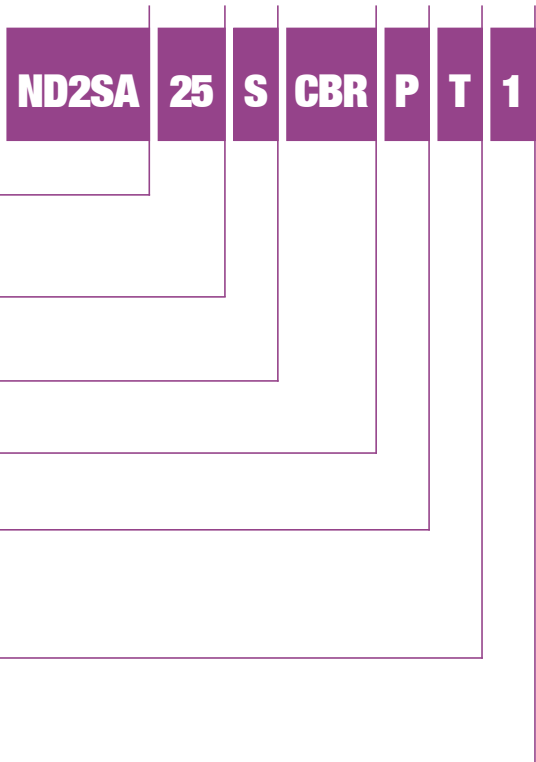
PCB RECTANGULAR CONNECTORS

CBR TYPE 2 ROW RIGHT ANGLE PCB RECEPTACLE

0.050" PITCH

- Reliability for micro-miniature operating systems.
- Several tail lengths available.
- Operating temperature: -55 / +150°C.
- 7 contact arrangements (9 to 51 contacts).

IDENTIFICATION CODE



SERIES

ND2SA: Nano-D Space application 2 row AXON[®].
ESCC 3401/086 EPPL2.

NUMBER OF CONTACTS

09, 15, 21, 25, 31*, 37, 51.

CONNECTOR TYPE

S: Receptacle connector.

FAMILY

CBR: AXON[®] Right Angle PCB connector.

HARDWARE

P: Threaded hole #0-80 UNF (non removable jackposts).

B: None.

Other versions available on request.

TAIL PLATING

T: Tin lead plated 1µm minimum (63-37 alloy).

G*: Gold (not included in the ESCC specification).

TAIL LENGTH

1: 2.77 mm (0.109").

2: 3.56 mm (0.140").

3: 4.37 mm (0.172").

4: 2.29 mm (0.090").

Tolerance ± 0.38 mm (0.015").

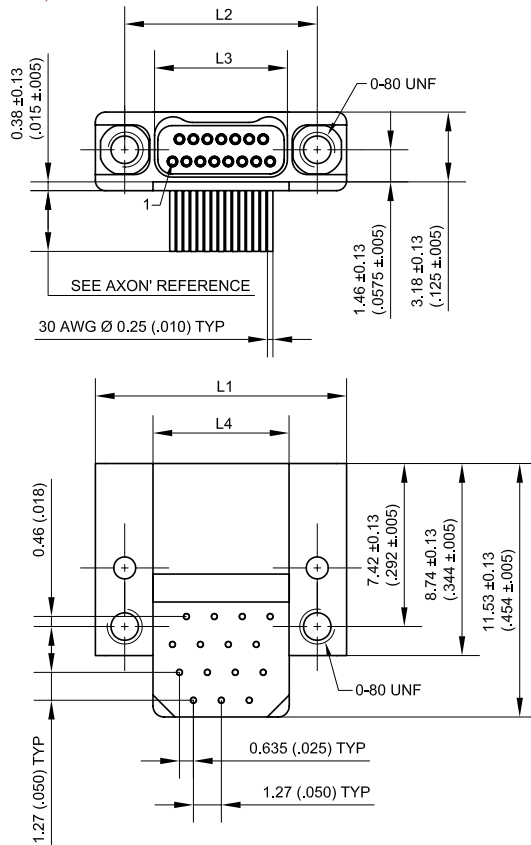
*: not included in ESCC specification

Connectors are supplied with #0-80 UNF screws 1/4" ±0.004" long (for PCB mounting).

IN BOLD: FACTORY STANDARD

DIMENSIONS

Dimensions are in millimetres (inches).



SEE CONTACT LAYOUT ON PCB PAGE 321

SHELL SIZE	L1 ±0.13 (±.005)	L2 ±0.13 (±.005)	L3 ±0.13 (±.005)	L4 ±0.13 (±.005)
9 S	9.53 .375	6.86 .270	4.14 .163	4.32 .170
15 S	11.43 .450	8.76 .345	6.05 .238	6.22 .245
21 S	13.34 .525	10.67 .420	7.95 .313	8.13 .320
25 S	14.61 .575	11.94 .470	9.22 .363	9.40 .370
31 S*	16.51 .650	13.84 .545	11.12 .438	11.30 .445
37 S	18.42 .725	15.75 .620	13.03 .513	13.21 .520
51 S	22.86 .900	20.19 .795	17.48 .688	17.65 .695

*: not included in ESCC specification

SUMMARY OF CHARACTERISTICS

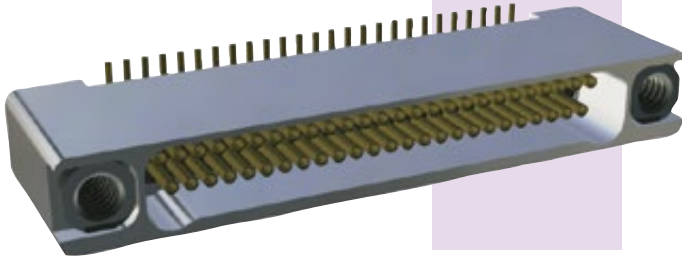
ELECTRICAL & MECHANICAL PERFORMANCE		MATERIAL & FINISH	
CURRENT RATING	1 A max.	SHELL	Aluminium alloy 6061 with nickel plating
CONTACT RESISTANCE	71 mΩ max.	MOULDED INSULATOR	Liquid Crystal Polymer (LCP)
INSULATION RESISTANCE	1000 MΩ min. @ 250 V _{RMS}	CONTACT	Copper alloy, gold over nickel plating
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 250 V _{RMS} Altitude 21 km (70,000 ft): 100 V _{AC}	ENCAPSULANT	Epoxy Resin
CONTACT ENGAGING FORCE	1.39 N max.	PCB TERMINALS	Gold plated solid copper alloy wire
CONTACT SEPARATING FORCE	0.11 N min.	HARDWARE	300 series stainless steel, passivated
CONTACT RETENTION	2.2 N min.		
DURABILITY	200 mating cycles min.		
VIBRATION	20g's – No discontinuity > 1 μs		
SHOCK	50g's – No discontinuity > 1 μs		

PCB RECTANGULAR CONNECTORS

SMV TYPE

2 ROW VERTICAL SURFACE MOUNT PCB RECEPTACLE

0.025" PITCH



- Reliability for micro-miniature operating systems.
 - Surface Mount.
 - Several tail lengths available.
- Operating temperature: -55°C or +150°C.
- 7 contact arrangements (9 to 51 contacts).

IDENTIFICATION CODE



SERIES

ND2SA: Nano-D Space application 2 row AXON®. ESCC 3401/086 EPPL2.

NUMBER OF CONTACTS

09, 15, 21, 25, 31*, 37, 51.

CONNECTOR TYPE

S: Receptacle connector.

FAMILY

SMV: AXON® Vertical surface mount PCB connector.

HARDWARE

P: Threaded hole #0-80 UNF (non removable jackposts).

TAIL PLATING

T: Tin lead plated 1µm minimum (63-37 alloy).
G*: Gold (not included in the ESCC specification).

TAIL LENGTH

1: 0.51 mm (0.020").
2: 1.02 mm (0.040").
Tolerance ± 0.25 mm (0.010").

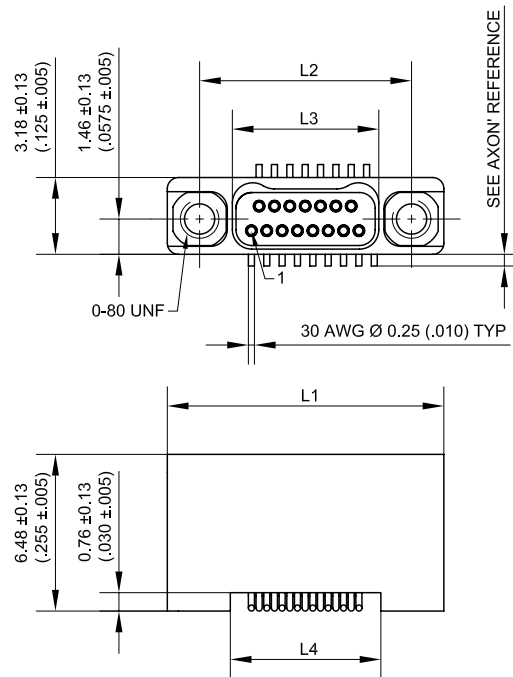
*** not included in ESCC specification**

Connectors are supplied with #0-80 UNF screws 1/4" ±0.004" long (for PCB mounting).

IN BOLD: FACTORY STANDARD

DIMENSIONS

Dimensions are in millimetres (inches).



SEE CONTACT LAYOUT ON PCB PAGE 322 & 323

SHELL SIZE	L1 ±0.13 (±.005)	L2 ±0.13 (±.005)	L3 ±0.13 (±.005)	L4 ±0.13 (±.005)
9 S	9.53 .375	6.86 .270	4.14 .163	4.32 .170
15 S	11.43 .450	8.76 .345	6.05 .238	6.22 .245
21 S	13.34 .525	10.67 .420	7.95 .313	8.13 .320
25 S	14.61 .575	11.94 .470	9.22 .363	9.40 .370
31 S*	16.51 .650	13.84 .545	11.12 .438	11.30 .445
37 S	18.42 .725	15.75 .620	13.03 .513	13.21 .520
51 S	22.86 .900	20.19 .795	17.48 .688	17.65 .695

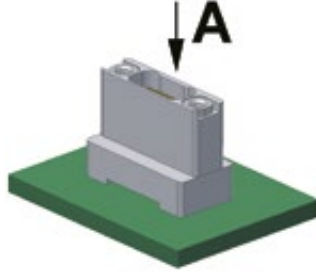
*: not included in ESCC specification

SUMMARY OF CHARACTERISTICS

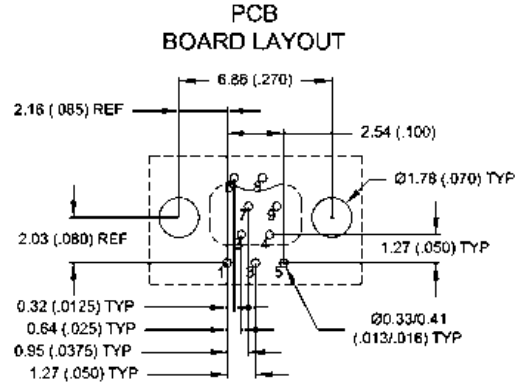
ELECTRICAL & MECHANICAL PERFORMANCE		MATERIAL & FINISH	
CURRENT RATING	1 A max.	SHELL	Aluminium alloy 6061 with nickel plating
CONTACT RESISTANCE	71 mΩ max.	MOULDED INSULATOR	Liquid Crystal Polymer (LCP)
INSULATION RESISTANCE	1000 MΩ min. @ 250 VRMS	CONTACT	Copper alloy, gold over nickel plating
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 250 VRMS Altitude 21 km (70,000 ft): 100 VAC	ENCAPSULANT	Epoxy Resin
CONTACT ENGAGING FORCE	1.39 N max.	PCB TERMINALS	Gold plated solid copper alloy wire
CONTACT SEPARATING FORCE	0.11 N min.	HARDWARE	300 series stainless steel, passivated
CONTACT RETENTION	2.2 N min.		
DURABILITY	200 mating cycles min.		
VIBRATION	20g's – No discontinuity > 1 μs		
SHOCK	50g's – No discontinuity > 1 μs		

PCB LAYOUT FOR BS TYPE 0.050" PITCH - FEMALE CONNECTORS

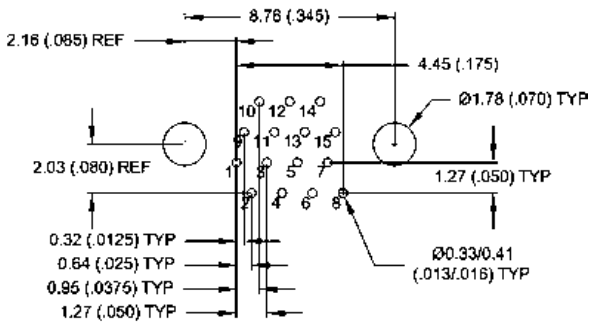
VIEW A



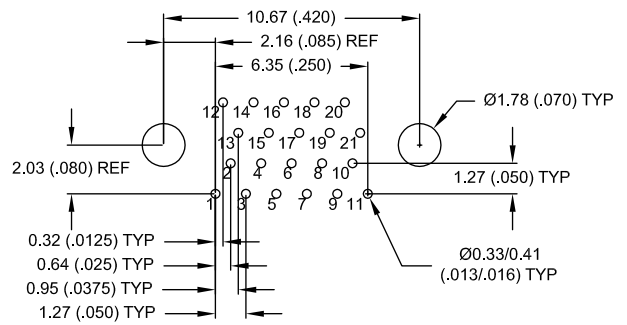
9 CONTACTS - VIEW A



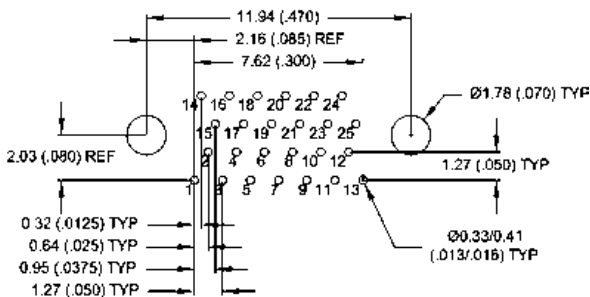
15 CONTACTS - VIEW A



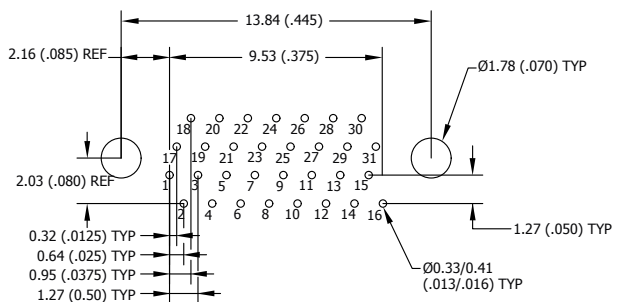
21 CONTACTS - VIEW A



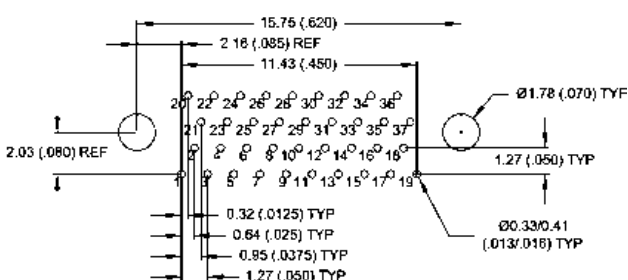
25 CONTACTS - VIEW A



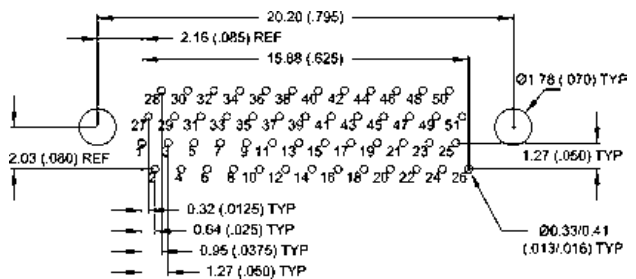
31 CONTACTS - VIEW A



37 CONTACTS - VIEW A



51 CONTACTS - VIEW A

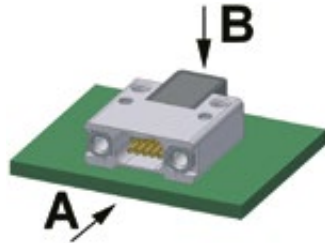


NANO-D FOR SPACE APPLICATIONS
Space Micro-D & Nano-D connectors

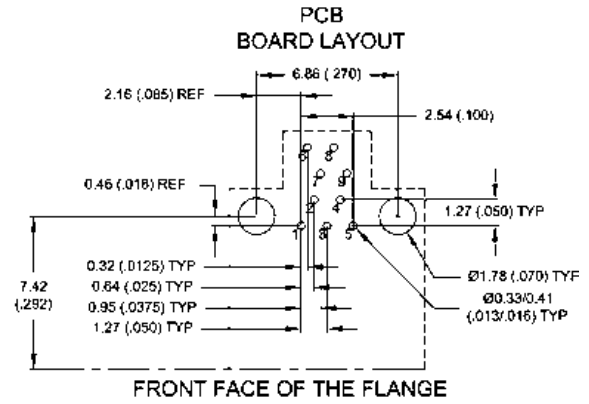
1.27 mm (0.05") contact spacing - 1.27 mm (0.05") spacing between rows - contact diameter: AWG 30

PCB LAYOUT FOR CBR TYPE 0.050" PITCH - FEMALE CONNECTORS

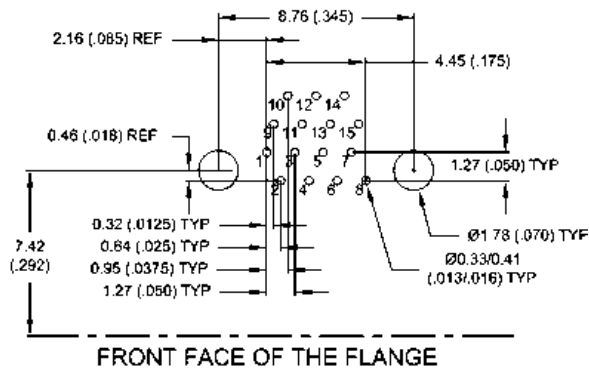
VIEW A



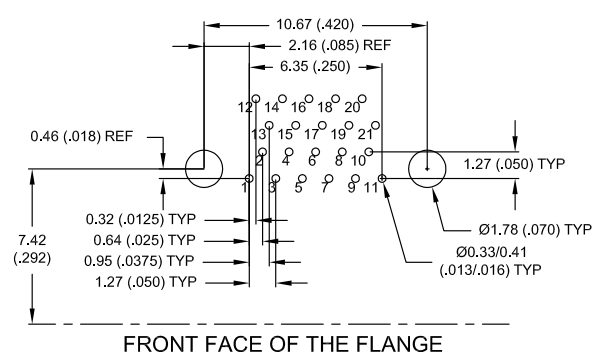
9 CONTACTS - VIEW B



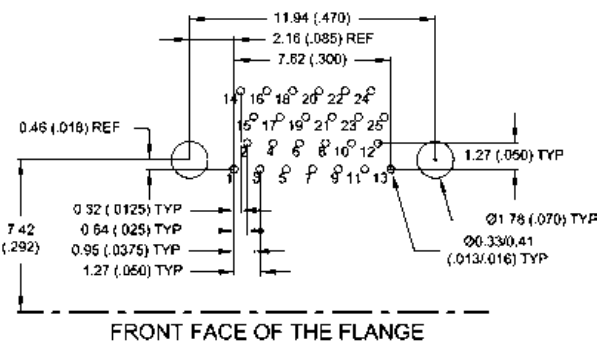
15 CONTACTS - VIEW B



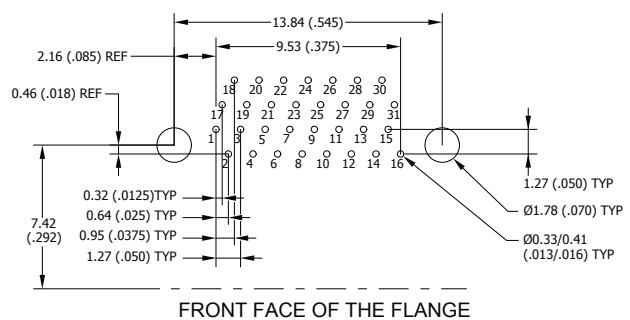
21 CONTACTS - VIEW B



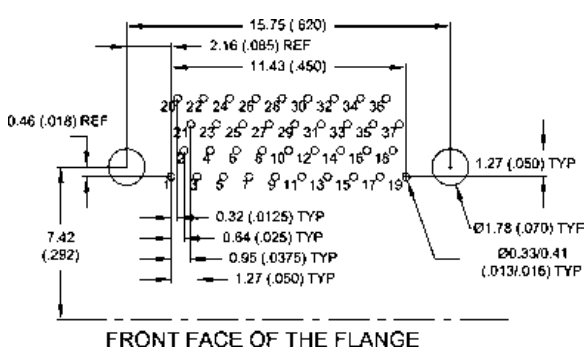
25 CONTACTS - VIEW B



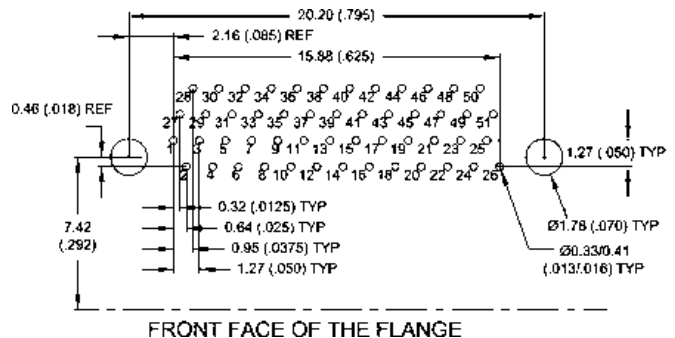
31 CONTACTS - VIEW B



37 CONTACTS - VIEW B



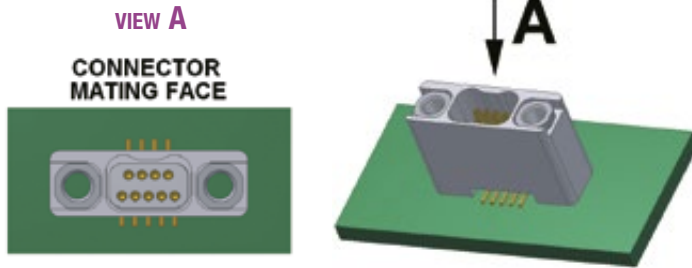
51 CONTACTS - VIEW B



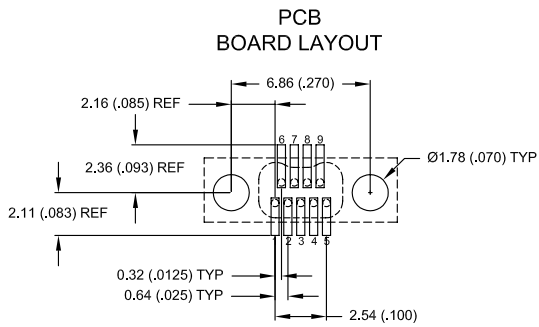
NANO-D FOR SPACE
APPLICATIONS

Space Micro-D &
Nano-D connectors

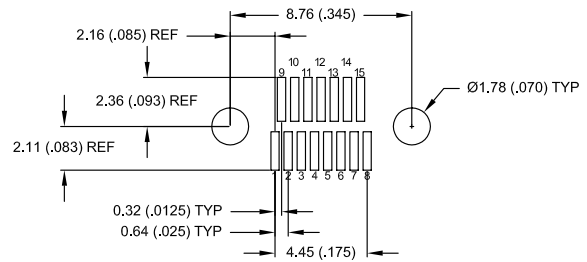
PCB LAYOUT FOR SMV TYPE 0.025" PITCH - FEMALE CONNECTORS



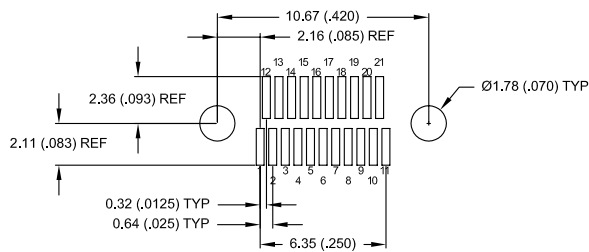
9 CONTACTS - VIEW A



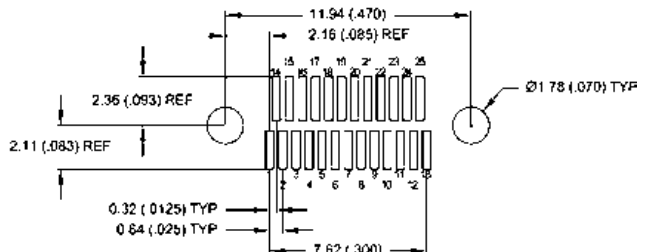
15 CONTACTS - VIEW A



21 CONTACTS - VIEW A



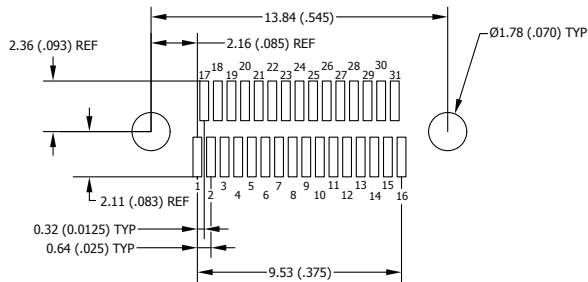
25 CONTACTS - VIEW A



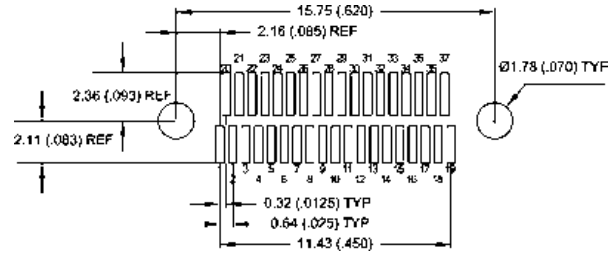
0.635 mm (0.25") pad spacing - contact diameter: AWG 30

PCB LAYOUT FOR SMV TYPE 0.025" PITCH - FEMALE CONNECTORS

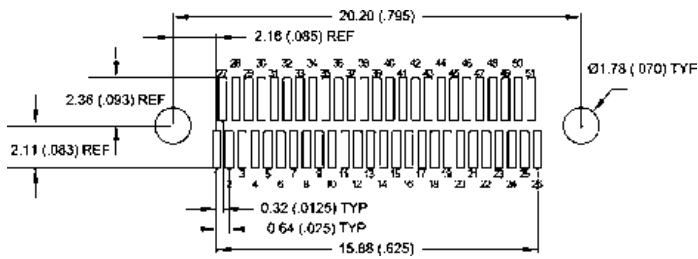
31 CONTACTS - VIEW A



37 CONTACTS - VIEW A

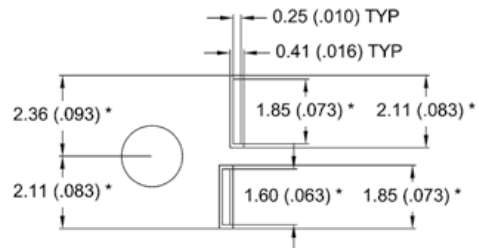


51 CONTACTS - VIEW A



LAYOUT

Suggested PAD configuration



* : For .040" tail length, add .020" to noted dimensions

NANO-D FOR SPACE
APPLICATIONS

Space Micro-D &
Nano-D connectors

MILITARY CROSS REFERENCE CHART

MIL-DTL-88513
CONNECTORS

Rectangular
Micro-D connectors

M83513/01

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/01-AC	MDA109PFSB	M83513/01-DC	MDA125PFSB	M83513/01-GC	MDA151PFSB
M83513/01-AN	MDA209PFSB	M83513/01-DN	MDA225PFSB	M83513/01-GN	MDA251PFSB
M83513/01-AP	MDAS09PFSB	M83513/01-DP	MDAS25PFSB	M83513/01-GP	MDAS51PFSB
M83513/01-BC	MDA115PFSB	M83513/01-EC	MDA131PFSB	M83513/01-HC	MDA1100PFSB
M83513/01-BN	MDA215PFSB	M83513/01-EN	MDA231PFSB	M83513/01-HN	MDA2100PFSB
M83513/01-BP	MDAS15PFSB	M83513/01-EP	MDAS31PFSB	M83513/01-HP	MDAS100PFSB
M83513/01-CC	MDA121PFSB	M83513/01-FC	MDA137PFSB		
M83513/01-CN	MDA221PFSB	M83513/01-FN	MDA237PFSB		
M83513/01-CP	MDAS21PFSB	M83513/01-FP	MDAS37PFSB		

M83513/02

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/02-AC	MDA109SFSB	M83513/02-CP	MDAS21SFSB	M83513/02-FN	MDA237SFSB
M83513/02-AN	MDA209SFSB	M83513/02-DC	MDA125SFSB	M83513/02-FP	MDAS37SFSB
M83513/02-AP	MDAS09SFSB	M83513/02-DN	MDA225SFSB	M83513/02-GC	MDA151SFSB
M83513/02-BC	MDA115SFSB	M83513/02-DP	MDAS25SFSB	M83513/02-GN	MDA251SFSB
M83513/02-BN	MDA215SFSB	M83513/02-EC	MDA131SFSB	M83513/02-GP	MDAS51SFSB
M83513/02-BP	MDAS15SFSB	M83513/02-EN	MDA231SFSB	M83513/02-HC	MDA1100SFSB
M83513/02-CC	MDA121SFSB	M83513/02-EP	MDAS31SFSB	M83513/02-HN	MDA2100SFSB
M83513/02-CN	MDA221SFSB	M83513/02-FC	MDA137SFSB	M83513/02-HP	MDAS100SFSB

M83513/03

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/03-A01C	MDA109P4L046B	M83513/03-A09N	MDA209PEL046B	M83513/03-B01C	MDA115P4L046B
M83513/03-A01N	MDA209P4L046B	M83513/03-A09P	MDAS09PEL046B	M83513/03-B01N	MDA215P4L046B
M83513/03-A01P	MDAS09P4L046B	M83513/03-A10C	MDA109PEL092B	M83513/03-B01P	MDAS15P4L046B
M83513/03-A02C	MDA109P4L092B	M83513/03-A10N	MDA209PEL092B	M83513/03-B02C	MDA115P4L092B
M83513/03-A02N	MDA209P4L092B	M83513/03-A10P	MDAS09PEL092B	M83513/03-B02N	MDA215P4L092B
M83513/03-A02P	MDAS09P4L092B	M83513/03-A11C	MDA109PEW046B	M83513/03-B02P	MDAS15P4L092B
M83513/03-A03C	MDA109P4W046B	M83513/03-A11N	MDA209PEW046B	M83513/03-B03C	MDA115P4W046B
M83513/03-A03N	MDA209P4W046B	M83513/03-A11P	MDAS09PEW046B	M83513/03-B03N	MDA215P4W046B
M83513/03-A03P	MDAS09P4W046B	M83513/03-A12C	MDA109PEW092B	M83513/03-B03P	MDAS15P4W046B
M83513/03-A04C	MDA109P4W092B	M83513/03-A12N	MDA209PEW092B	M83513/03-B04C	MDA115P4W092B
M83513/03-A04N	MDA209P4W092B	M83513/03-A12P	MDAS09PEW092B	M83513/03-B04N	MDA215P4W092B
M83513/03-A04P	MDAS09P4W092B	M83513/03-A13C	MDA109P4L183B	M83513/03-B04P	MDAS15P4W092B
M83513/03-A05C	MDA109PG002B	M83513/03-A13N	MDA209P4L183B	M83513/03-B05C	MDA115PG002B
M83513/03-A05N	MDA209PG002B	M83513/03-A13P	MDAS09P4L183B	M83513/03-B05N	MDA215PG002B
M83513/03-A05P	MDAS09PG002B	M83513/03-A14C	MDA109P4W183B	M83513/03-B05P	MDAS15PG002B
M83513/03-A06C	MDA109PG003B	M83513/03-A14N	MDA209P4W183B	M83513/03-B06C	MDA115PG003B
M83513/03-A06N	MDA209PG003B	M83513/03-A14P	MDAS09P4W183B	M83513/03-B06N	MDA215PG003B
M83513/03-A06P	MDAS09PG003B	M83513/03-A15C	MDA109PEL183B	M83513/03-B06P	MDAS15PG003B
M83513/03-A07C	MDA109PT002B	M83513/03-A15N	MDA209PEL183B	M83513/03-B07C	MDA115PT002B
M83513/03-A07N	MDA209PT002B	M83513/03-A15P	MDAS09PEL183B	M83513/03-B07N	MDA215PT002B
M83513/03-A07P	MDAS09PT002B	M83513/03-A16C	MDA109PEW183B	M83513/03-B07P	MDAS15PT002B
M83513/03-A08C	MDA109PT003B	M83513/03-A16N	MDA209PEW183B	M83513/03-B08C	MDA115PT003B
M83513/03-A08N	MDA209PT003B	M83513/03-A16P	MDAS09PEW183B	M83513/03-B08N	MDA215PT003B
M83513/03-A08P	MDAS09PT003B			M83513/03-B08P	MDAS15PT003B
M83513/03-A09C	MDA109PEL046B			M83513/03-B09C	MDA115PEL046B

M83513/03 (continued)

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/03-B09N	MDA215PEL046B	M83513/03-C12N	MDA221PEW092B	M83513/03-D15N	MDA225PEL183B
M83513/03-B09P	MDAS15PEL046B	M83513/03-C12P	MDAS21PEW092B	M83513/03-D15P	MDAS25PEL183B
M83513/03-B10C	MDA115PEL092B	M83513/03-C13C	MDA121P4L183B	M83513/03-D16C	MDA125PEW183B
M83513/03-B10N	MDA215PEL092B	M83513/03-C13N	MDA221P4L183B	M83513/03-D16N	MDA225PEW183B
M83513/03-B10P	MDAS15PEL092B	M83513/03-C13P	MDAS21P4L183B	M83513/03-D16P	MDAS25PEW183B
M83513/03-B11C	MDA115PEW046B	M83513/03-C14C	MDA121P4W183B	M83513/03-E01C	MDA131P4L046B
M83513/03-B11N	MDA215PEW046B	M83513/03-C14N	MDA221P4W183B	M83513/03-E01N	MDA231P4L046B
M83513/03-B11P	MDAS15PEW046B	M83513/03-C14P	MDAS21P4W183B	M83513/03-E01P	MDAS31P4L046B
M83513/03-B12C	MDA115PEW092B	M83513/03-C15C	MDA121PEL183B	M83513/03-E02C	MDA131P4L092B
M83513/03-B12N	MDA215PEW092B	M83513/03-C15N	MDA221PEL183B	M83513/03-E02N	MDA231P4L092B
M83513/03-B12P	MDAS15PEW092B	M83513/03-C15P	MDAS21PEL183B	M83513/03-E02P	MDAS31P4L092B
M83513/03-B13C	MDA115P4L183B	M83513/03-C16C	MDA121PEW183B	M83513/03-E03C	MDA131P4W046B
M83513/03-B13N	MDA215P4L183B	M83513/03-C16N	MDA221PEW183B	M83513/03-E03N	MDA231P4W046B
M83513/03-B13P	MDAS15P4L183B	M83513/03-C16P	MDAS21PEW183B	M83513/03-E03P	MDAS31P4W046B
M83513/03-B14C	MDA115P4W183B	M83513/03-D01C	MDA125P4L046B	M83513/03-E04C	MDA131P4W092B
M83513/03-B14N	MDA215P4W183B	M83513/03-D01N	MDA225P4L046B	M83513/03-E04N	MDA231P4W092B
M83513/03-B14P	MDAS15P4W183B	M83513/03-D01P	MDAS25P4L046B	M83513/03-E04P	MDAS31P4W092B
M83513/03-B15C	MDA115PEL183B	M83513/03-D02C	MDA125P4L092B	M83513/03-E05C	MDA131PG002B
M83513/03-B15N	MDA215PEL183B	M83513/03-D02N	MDA225P4L092B	M83513/03-E05N	MDA231PG002B
M83513/03-B15P	MDAS15PEL183B	M83513/03-D02P	MDAS25P4L092B	M83513/03-E05P	MDAS31PG002B
M83513/03-B16C	MDA115PEW183B	M83513/03-D03C	MDA125P4W046B	M83513/03-E06C	MDA131PG003B
M83513/03-B16N	MDA215PEW183B	M83513/03-D03N	MDA225P4W046B	M83513/03-E06N	MDA231PG003B
M83513/03-B16P	MDAS15PEW183B	M83513/03-D03P	MDAS25P4W046B	M83513/03-E06P	MDAS31PG003B
M83513/03-C01C	MDA121P4L046B	M83513/03-D04C	MDA125P4W092B	M83513/03-E07C	MDA131PT002B
M83513/03-C01N	MDA221P4L046B	M83513/03-D04N	MDA225P4W092B	M83513/03-E07N	MDA231PT002B
M83513/03-C01P	MDAS21P4L046B	M83513/03-D04P	MDAS25P4W092B	M83513/03-E07P	MDAS31PT002B
M83513/03-C02C	MDA121P4L092B	M83513/03-D05C	MDA125PG002B	M83513/03-E08C	MDA131PT003B
M83513/03-C02N	MDA221P4L092B	M83513/03-D05N	MDA225PG002B	M83513/03-E08N	MDA231PT003B
M83513/03-C02P	MDAS21P4L092B	M83513/03-D05P	MDAS25PG002B	M83513/03-E08P	MDAS31PT003B
M83513/03-C03C	MDA121P4W046B	M83513/03-D06C	MDA125PG003B	M83513/03-E09C	MDA131PEL046B
M83513/03-C03N	MDA221P4W046B	M83513/03-D06N	MDA225PG003B	M83513/03-E09N	MDA231PEL046B
M83513/03-C03P	MDAS21P4W046B	M83513/03-D06P	MDAS25PG003B	M83513/03-E09P	MDAS31PEL046B
M83513/03-C04C	MDA121P4W092B	M83513/03-D07C	MDA125PT002B	M83513/03-E10C	MDA131PEL092B
M83513/03-C04N	MDA221P4W092B	M83513/03-D07N	MDA225PT002B	M83513/03-E10N	MDA231PEL092B
M83513/03-C04P	MDAS21P4W092B	M83513/03-D07P	MDAS25PT002B	M83513/03-E10P	MDAS31PEL092B
M83513/03-C05C	MDA121PG002B	M83513/03-D08C	MDA125PT003B	M83513/03-E11C	MDA131PEW046B
M83513/03-C05N	MDA221PG002B	M83513/03-D08N	MDA225PT003B	M83513/03-E11N	MDA231PEW046B
M83513/03-C05P	MDAS21PG002B	M83513/03-D08P	MDAS25PT003B	M83513/03-E11P	MDAS31PEW046B
M83513/03-C06C	MDA121PG003B	M83513/03-D09C	MDA125PEL046B	M83513/03-E12C	MDA131PEW092B
M83513/03-C06N	MDA221PG003B	M83513/03-D09N	MDA225PEL046B	M83513/03-E12N	MDA231PEW092B
M83513/03-C06P	MDAS21PG003B	M83513/03-D09P	MDAS25PEL046B	M83513/03-E12P	MDAS31PEW092B
M83513/03-C07C	MDA121PT002B	M83513/03-D10C	MDA125PEL092B	M83513/03-E13C	MDA131P4L183B
M83513/03-C07N	MDA221PT002B	M83513/03-D10N	MDA225PEL092B	M83513/03-E13N	MDA231P4L183B
M83513/03-C07P	MDAS21PT002B	M83513/03-D10P	MDAS25PEL092B	M83513/03-E13P	MDAS31P4L183B
M83513/03-C08C	MDA121PT003B	M83513/03-D11C	MDA125PEW046B	M83513/03-E14C	MDA131P4W183B
M83513/03-C08N	MDA221PT003B	M83513/03-D11N	MDA225PEW046B	M83513/03-E14N	MDA231P4W183B
M83513/03-C08P	MDAS21PT003B	M83513/03-D11P	MDAS25PEW046B	M83513/03-E14P	MDAS31P4W183B
M83513/03-C09C	MDA121PEL046B	M83513/03-D12C	MDA125PEW092B	M83513/03-E15C	MDA131PEL183B
M83513/03-C09N	MDA221PEL046B	M83513/03-D12N	MDA225PEW092B	M83513/03-E15N	MDA231PEL183B
M83513/03-C09P	MDAS21PEL046B	M83513/03-D12P	MDAS25PEW092B	M83513/03-E15P	MDAS31PEL183B
M83513/03-C10C	MDA121PEL092B	M83513/03-D13C	MDA125P4L183B	M83513/03-E16C	MDA131PEW183B
M83513/03-C10N	MDA221PEL092B	M83513/03-D13N	MDA225P4L183B	M83513/03-E16N	MDA231PEW183B
M83513/03-C10P	MDAS21PEL092B	M83513/03-D13P	MDAS25P4L183B	M83513/03-E16P	MDAS31PEW183B
M83513/03-C11C	MDA121PEW046B	M83513/03-D14C	MDA125P4W183B	M83513/03-F01C	MDA137P4L046B
M83513/03-C11N	MDA221PEW046B	M83513/03-D14N	MDA225P4W183B	M83513/03-F01N	MDA237P4L046B
M83513/03-C11P	MDAS21PEW046B	M83513/03-D14P	MDAS25P4W183B	M83513/03-F01P	MDAS37P4L046B
M83513/03-C12C	MDA121PEW092B	M83513/03-D15C	MDA125PEL183B	M83513/03-F02C	MDA137P4L092B

M83513/03 (continued)

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/03-F02N	MDA237P4L092B	M83513/03-G04P	MDAS51P4W092B	M83513/03-H07C	MDA1100PT002B
M83513/03-F02P	MDAS37P4L092B	M83513/03-G05C	MDA151PG002B	M83513/03-H07N	MDA2100PT002B
M83513/03-F03C	MDA137P4W046B	M83513/03-G05N	MDA251PG002B	M83513/03-H07P	MDAS100PT002B
M83513/03-F03N	MDA237P4W046B	M83513/03-G05P	MDAS51PG002B	M83513/03-H08C	MDA1100PT003B
M83513/03-F03P	MDAS37P4W046B	M83513/03-G06C	MDA151PG003B	M83513/03-H08N	MDA2100PT003B
M83513/03-F04C	MDA137P4W092B	M83513/03-G06N	MDA251PG003B	M83513/03-H08P	MDAS100PT003B
M83513/03-F04N	MDA237P4W092B	M83513/03-G06P	MDAS51PG003B	M83513/03-H09C	MDA1100PEL046B
M83513/03-F04P	MDAS37P4W092B	M83513/03-G07C	MDA151PT002B	M83513/03-H09N	MDA2100PEL046B
M83513/03-F05C	MDA137PG002B	M83513/03-G07N	MDA251PT002B	M83513/03-H09P	MDAS100PEL046B
M83513/03-F05N	MDA237PG002B	M83513/03-G07P	MDAS51PT002B	M83513/03-H10C	MDA1100PEL092B
M83513/03-F05P	MDAS37PG002B	M83513/03-G08C	MDA151PT003B	M83513/03-H10N	MDA2100PEL092B
M83513/03-F06C	MDA137PG003B	M83513/03-G08N	MDA251PT003B	M83513/03-H10P	MDAS100PEL092B
M83513/03-F06N	MDA237PG003B	M83513/03-G08P	MDAS51PT003B	M83513/03-H11C	MDA1100PEW046B
M83513/03-F06P	MDAS37PG003B	M83513/03-G09C	MDA151PEL046B	M83513/03-H11N	MDA2100PEW046B
M83513/03-F07C	MDA137PT002B	M83513/03-G09N	MDA251PEL046B	M83513/03-H11P	MDAS100PEW046B
M83513/03-F07N	MDA237PT002B	M83513/03-G09P	MDAS51PEL046B	M83513/03-H12C	MDA1100PEW092B
M83513/03-F07P	MDAS37PT002B	M83513/03-G10C	MDA151PEL092B	M83513/03-H12N	MDA2100PEW092B
M83513/03-F08C	MDA137PT003B	M83513/03-G10N	MDA251PEL092B	M83513/03-H12P	MDAS100PEW092B
M83513/03-F08N	MDA237PT003B	M83513/03-G10P	MDAS51PEL092B	M83513/03-H13C	MDA1100P4L183B
M83513/03-F08P	MDAS37PT003B	M83513/03-G11C	MDA151PEW046B	M83513/03-H13N	MDA2100P4L183B
M83513/03-F09C	MDA137PEL046B	M83513/03-G11N	MDA251PEW046B	M83513/03-H13P	MDAS100P4L183B
M83513/03-F09N	MDA237PEL046B	M83513/03-G11P	MDAS51PEW046B	M83513/03-H14C	MDA1100P4W183B
M83513/03-F09P	MDAS37PEL046B	M83513/03-G12C	MDA151PEW092B	M83513/03-H14N	MDA2100P4W183B
M83513/03-F10C	MDA137PEL092B	M83513/03-G12N	MDA251PEW092B	M83513/03-H14P	MDAS100P4W183B
M83513/03-F10N	MDA237PEL092B	M83513/03-G12P	MDAS51PEW092B	M83513/03-H15C	MDA1100PEL183B
M83513/03-F10P	MDAS37PEL092B	M83513/03-G13C	MDA151P4L183B	M83513/03-H15N	MDA2100PEL183B
M83513/03-F11C	MDA137PEW046B	M83513/03-G13N	MDA251P4L183B	M83513/03-H15P	MDAS100PEL183B
M83513/03-F11N	MDA237PEW046B	M83513/03-G13P	MDAS51P4L183B	M83513/03-H16C	MDA1100PEW183B
M83513/03-F11P	MDAS37PEW046B	M83513/03-G14C	MDA151P4W183B	M83513/03-H16N	MDA2100PEW183B
M83513/03-F12C	MDA137PEW092B	M83513/03-G14N	MDA251P4W183B	M83513/03-H16P	MDAS100PEW183B
M83513/03-F12N	MDA237PEW092B	M83513/03-G14P	MDAS51P4W183B		
M83513/03-F12P	MDAS37PEW092B	M83513/03-G15C	MDA151PEL183B		
M83513/03-F13C	MDA137P4L183B	M83513/03-G15N	MDA251PEL183B		
M83513/03-F13N	MDA237P4L183B	M83513/03-G15P	MDAS51PEL183B		
M83513/03-F13P	MDAS37P4L183B	M83513/03-G16C	MDA151PEW183B		
M83513/03-F14C	MDA137P4W183B	M83513/03-G16N	MDA251PEW183B		
M83513/03-F14N	MDA237P4W183B	M83513/03-G16P	MDAS51PEW183B		
M83513/03-F14P	MDAS37P4W183B				
M83513/03-F15C	MDA137PEL183B	M83513/03-H01C	MDA1100P4L046B		
M83513/03-F15N	MDA237PEL183B	M83513/03-H01N	MDA2100P4L046B		
M83513/03-F15P	MDAS37PEL183B	M83513/03-H01P	MDAS100P4L046B		
M83513/03-F16C	MDA137PEW183B	M83513/03-H02C	MDA1100P4L092B		
M83513/03-F16N	MDA237PEW183B	M83513/03-H02N	MDA2100P4L092B		
M83513/03-F16P	MDAS37PEW183B	M83513/03-H02P	MDAS100P4L092B		
M83513/03-G01C	MDA151P4L046B	M83513/03-H03C	MDA1100P4W046B		
M83513/03-G01N	MDA251P4L046B	M83513/03-H03N	MDA2100P4W046B		
M83513/03-G01P	MDAS51P4L046B	M83513/03-H03P	MDAS100P4W046B		
M83513/03-G02C	MDA151P4L092B	M83513/03-H04C	MDA1100P4W092B		
M83513/03-G02N	MDA251P4L092B	M83513/03-H04N	MDA2100P4W092B		
M83513/03-G02P	MDAS51P4L092B	M83513/03-H04P	MDAS100P4W092B		
M83513/03-G03C	MDA151P4W046B	M83513/03-H05C	MDA1100PG002B		
M83513/03-G03N	MDA251P4W046B	M83513/03-H05N	MDA2100PG002B		
M83513/03-G03P	MDAS51P4W046B	M83513/03-H05P	MDAS100PG002B		
M83513/03-G04C	MDA151P4W092B	M83513/03-H06C	MDA1100PG003B		
M83513/03-G04N	MDA251P4W092B	M83513/03-H06N	MDA2100PG003B		
		M83513/03-H06P	MDAS100PG003B		

MIL-DTL-88513
CONNECTORS

Rectangular
Micro-D connectors

M83513/04

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/04-A01C	MDA109S4L046B	M83513/04-B04C	MDA115S4W092B	M83513/04-C07C	MDA121ST002B
M83513/04-A01N	MDA209S4L046B	M83513/04-B04N	MDA215S4W092B	M83513/04-C07N	MDA221ST002B
M83513/04-A01P	MDAS09S4L046B	M83513/04-B04P	MDAS15S4W092B	M83513/04-C07P	MDAS21ST002B
M83513/04-A02C	MDA109S4L092B	M83513/04-B05C	MDA115SG002B	M83513/04-C08C	MDA121ST003B
M83513/04-A02N	MDA209S4L092B	M83513/04-B05N	MDA215SG002B	M83513/04-C08N	MDA221ST003B
M83513/04-A02P	MDAS09S4L092B	M83513/04-B05P	MDAS15SG002B	M83513/04-C08P	MDAS21ST003B
M83513/04-A03C	MDA109S4W046B	M83513/04-B06C	MDA115SG003B	M83513/04-C09C	MDA121SEL046B
M83513/04-A03N	MDA209S4W046B	M83513/04-B06N	MDA215SG003B	M83513/04-C09N	MDA221SEL046B
M83513/04-A03P	MDAS09S4W046B	M83513/04-B06P	MDAS15SG003B	M83513/04-C09P	MDAS21SEL046B
M83513/04-A04C	MDA109S4W092B	M83513/04-B07C	MDA115ST002B	M83513/04-C10C	MDA121SEL092B
M83513/04-A04N	MDA209S4W092B	M83513/04-B07N	MDA215ST002B	M83513/04-C10N	MDA221SEL092B
M83513/04-A04P	MDAS09S4W092B	M83513/04-B07P	MDAS15ST002B	M83513/04-C10P	MDAS21SEL092B
M83513/04-A05C	MDA109SG002B	M83513/04-B08C	MDA115ST003B	M83513/04-C11C	MDA121SEW046B
M83513/04-A05N	MDA209SG002B	M83513/04-B08N	MDA215ST003B	M83513/04-C11N	MDA221SEW046B
M83513/04-A05P	MDAS09SG002B	M83513/04-B08P	MDAS15ST003B	M83513/04-C11P	MDAS21SEW046B
M83513/04-A06C	MDA109SG003B	M83513/04-B09C	MDA115SEL046B	M83513/04-C12C	MDA121SEW092B
M83513/04-A06N	MDA209SG003B	M83513/04-B09N	MDA215SEL046B	M83513/04-C12N	MDA221SEW092B
M83513/04-A06P	MDAS09SG003B	M83513/04-B09P	MDAS15SEL046B	M83513/04-C12P	MDAS21SEW092B
M83513/04-A07C	MDA109ST002B	M83513/04-B10C	MDA115SEL092B	M83513/04-C13C	MDA121S4L183B
M83513/04-A07N	MDA209ST002B	M83513/04-B10N	MDA215SEL092B	M83513/04-C13N	MDA221S4L183B
M83513/04-A07P	MDAS09ST002B	M83513/04-B10P	MDAS15SEL092B	M83513/04-C13P	MDAS21S4L183B
M83513/04-A08C	MDA109ST003B	M83513/04-B11C	MDA115SEW046B	M83513/04-C14C	MDA121S4W183B
M83513/04-A08N	MDA209ST003B	M83513/04-B11N	MDA215SEW046B	M83513/04-C14N	MDA221S4W183B
M83513/04-A08P	MDAS09ST003B	M83513/04-B11P	MDAS15SEW046B	M83513/04-C14P	MDAS21S4W183B
M83513/04-A09C	MDA109SEL046B	M83513/04-B12C	MDA115SEW092B	M83513/04-C15C	MDA121SEL183B
M83513/04-A09N	MDA209SEL046B	M83513/04-B12N	MDA215SEW092B	M83513/04-C15N	MDA221SEL183B
M83513/04-A09P	MDAS09SEL046B	M83513/04-B12P	MDAS15SEW092B	M83513/04-C15P	MDAS21SEL183B
M83513/04-A10C	MDA109SEL092B	M83513/04-B13C	MDA115S4L183B	M83513/04-C16C	MDA121SEW183B
M83513/04-A10N	MDA209SEL092B	M83513/04-B13N	MDA215S4L183B	M83513/04-C16N	MDA221SEW183B
M83513/04-A10P	MDAS09SEL092B	M83513/04-B13P	MDAS15S4L183B	M83513/04-C16P	MDAS21SEW183B
M83513/04-A11C	MDA109SEW046B	M83513/04-B14C	MDA115S4W183B	M83513/04-D01C	MDA125S4L046B
M83513/04-A11N	MDA209SEW046B	M83513/04-B14N	MDA215S4W183B	M83513/04-D01N	MDA225S4L046B
M83513/04-A11P	MDAS09SEW046B	M83513/04-B14P	MDAS15S4W183B	M83513/04-D01P	MDAS25S4L046B
M83513/04-A12C	MDA109SEW092B	M83513/04-B15C	MDA115SEL183B	M83513/04-D02C	MDA125S4L092B
M83513/04-A12N	MDA209SEW092B	M83513/04-B15N	MDA215SEL183B	M83513/04-D02N	MDA225S4L092B
M83513/04-A12P	MDAS09SEW092B	M83513/04-B15P	MDAS15SEL183B	M83513/04-D02P	MDAS25S4L092B
M83513/04-A13C	MDA109S4L183B	M83513/04-B16C	MDA115SEW183B	M83513/04-D03C	MDA125S4W046B
M83513/04-A13N	MDA209S4L183B	M83513/04-B16N	MDA215SEW183B	M83513/04-D03N	MDA225S4W046B
M83513/04-A13P	MDAS09S4L183B	M83513/04-B16P	MDAS15SEW183B	M83513/04-D03P	MDAS25S4W046B
M83513/04-A14C	MDA109S4W183B	M83513/04-C01C	MDA121S4L046B	M83513/04-D04C	MDA125S4W092B
M83513/04-A14N	MDA209S4W183B	M83513/04-C01N	MDA221S4L046B	M83513/04-D04N	MDA225S4W092B
M83513/04-A14P	MDAS09S4W183B	M83513/04-C01P	MDAS21S4L046B	M83513/04-D04P	MDAS25S4W092B
M83513/04-A15C	MDA109SEL183B	M83513/04-C02C	MDA121S4L092B	M83513/04-D05C	MDA125SG002B
M83513/04-A15N	MDA209SEL183B	M83513/04-C02N	MDA221S4L092B	M83513/04-D05N	MDA225SG002B
M83513/04-A15P	MDAS09SEL183B	M83513/04-C02P	MDAS21S4L092B	M83513/04-D05P	MDAS25SG002B
M83513/04-A16C	MDA109SEW183B	M83513/04-C03C	MDA121S4W046B	M83513/04-D06C	MDA125SG003B
M83513/04-A16N	MDA209SEW183B	M83513/04-C03N	MDA221S4W046B	M83513/04-D06N	MDA225SG003B
M83513/04-A16P	MDAS09SEW183B	M83513/04-C03P	MDAS21S4W046B	M83513/04-D06P	MDAS25SG003B
M83513/04-B01C	MDA115S4L046B	M83513/04-C04C	MDA121S4W092B	M83513/04-D07C	MDA125ST002B
M83513/04-B01N	MDA215S4L046B	M83513/04-C04N	MDA221S4W092B	M83513/04-D07N	MDA225ST002B
M83513/04-B01P	MDAS15S4L046B	M83513/04-C04P	MDAS21S4W092B	M83513/04-D07P	MDAS25ST002B
M83513/04-B02C	MDA115S4L092B	M83513/04-C05C	MDA121SG002B	M83513/04-D08C	MDA125ST003B
M83513/04-B02N	MDA215S4L092B	M83513/04-C05N	MDA221SG002B	M83513/04-D08N	MDA225ST003B
M83513/04-B02P	MDAS15S4L092B	M83513/04-C05P	MDAS21SG002B	M83513/04-D08P	MDAS25ST003B
M83513/04-B03C	MDA115S4W046B	M83513/04-C06C	MDA121SG003B	M83513/04-D09C	MDA125SEL046B
M83513/04-B03N	MDA215S4W046B	M83513/04-C06N	MDA221SG003B	M83513/04-D09N	MDA225SEL046B
M83513/04-B03P	MDAS15S4W046B	M83513/04-C06P	MDAS21SG003B	M83513/04-D09P	MDAS25SEL046B

M83513/04 (continued)

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/04-D10C	MDA125SEL092B	M83513/04-E13C	MDA131S4L183B	M83513/04-F16C	MDA137SEW183B
M83513/04-D10N	MDA225SEL092B	M83513/04-E13N	MDA231S4L183B	M83513/04-F16N	MDA237SEW183B
M83513/04-D10P	MDAS25SEL092B	M83513/04-E13P	MDAS31S4L183B	M83513/04-F16P	MDAS37SEW183B
M83513/04-D11C	MDA125SEW046B	M83513/04-E14C	MDA131S4W183B	M83513/04-G01C	MDA151S4L046B
M83513/04-D11N	MDA225SEW046B	M83513/04-E14N	MDA231S4W183B	M83513/04-G01N	MDA251S4L046B
M83513/04-D11P	MDAS25SEW046B	M83513/04-E14P	MDAS31S4W183B	M83513/04-G01P	MDAS51S4L046B
M83513/04-D12C	MDA125SEW092B	M83513/04-E15C	MDA131SEL183B	M83513/04-G02C	MDA151S4L092B
M83513/04-D12N	MDA225SEW092B	M83513/04-E15N	MDA231SEL183B	M83513/04-G02N	MDA251S4L092B
M83513/04-D12P	MDAS25SEW092B	M83513/04-E15P	MDAS31SEL183B	M83513/04-G02P	MDAS51S4L092B
M83513/04-D13C	MDA125S4L183B	M83513/04-E16C	MDA131SEW183B	M83513/04-G03C	MDA151S4W046B
M83513/04-D13N	MDA225S4L183B	M83513/04-E16N	MDA231SEW183B	M83513/04-G03N	MDA251S4W046B
M83513/04-D13P	MDAS25S4L183B	M83513/04-E16P	MDAS31SEW183B	M83513/04-G03P	MDAS51S4W046B
M83513/04-D14C	MDA125S4W183B	M83513/04-F01C	MDA137S4L046B	M83513/04-G04C	MDA151S4W092B
M83513/04-D14N	MDA225S4W183B	M83513/04-F01N	MDA237S4L046B	M83513/04-G04N	MDA251S4W092B
M83513/04-D14P	MDAS25S4W183B	M83513/04-F01P	MDAS37S4L046B	M83513/04-G04P	MDAS51S4W092B
M83513/04-D15C	MDA125SEL183B	M83513/04-F02C	MDA137S4L092B	M83513/04-G05C	MDA151SG002B
M83513/04-D15N	MDA225SEL183B	M83513/04-F02N	MDA237S4L092B	M83513/04-G05N	MDA251SG002B
M83513/04-D15P	MDAS25SEL183B	M83513/04-F02P	MDAS37S4L092B	M83513/04-G05P	MDAS51SG002B
M83513/04-D16C	MDA125SEW183B	M83513/04-F03C	MDA137S4W046B	M83513/04-G06C	MDA151SG003B
M83513/04-D16N	MDA225SEW183B	M83513/04-F03N	MDA237S4W046B	M83513/04-G06N	MDA251SG003B
M83513/04-D16P	MDAS25SEW183B	M83513/04-F03P	MDAS37S4W046B	M83513/04-G06P	MDAS51SG003B
M83513/04-E01C	MDA131S4L046B	M83513/04-F04C	MDA137S4W092B	M83513/04-G07C	MDA151ST002B
M83513/04-E01N	MDA231S4L046B	M83513/04-F04N	MDA237S4W092B	M83513/04-G07N	MDA251ST002B
M83513/04-E01P	MDAS31S4L046B	M83513/04-F04P	MDAS37S4W092B	M83513/04-G07P	MDAS51ST002B
M83513/04-E02C	MDA131S4L092B	M83513/04-F05C	MDA137SG002B	M83513/04-G08C	MDA151ST003B
M83513/04-E02N	MDA231S4L092B	M83513/04-F05N	MDA237SG002B	M83513/04-G08N	MDA251ST003B
M83513/04-E02P	MDAS31S4L092B	M83513/04-F05P	MDAS37SG002B	M83513/04-G08P	MDAS51ST003B
M83513/04-E03C	MDA131S4W046B	M83513/04-F06C	MDA137SG003B	M83513/04-G09C	MDA151SEL046B
M83513/04-E03N	MDA231S4W046B	M83513/04-F06N	MDA237SG003B	M83513/04-G09N	MDA251SEL046B
M83513/04-E03P	MDAS31S4W046B	M83513/04-F06P	MDAS37SG003B	M83513/04-G09P	MDAS51SEL046B
M83513/04-E04C	MDA131S4W092B	M83513/04-F07C	MDA137ST002B	M83513/04-G10C	MDA151SEL092B
M83513/04-E04N	MDA231S4W092B	M83513/04-F07N	MDA237ST002B	M83513/04-G10N	MDA251SEL092B
M83513/04-E04P	MDAS31S4W092B	M83513/04-F07P	MDAS37ST002B	M83513/04-G10P	MDAS51SEL092B
M83513/04-E05C	MDA131SG002B	M83513/04-F08C	MDA137ST003B	M83513/04-G11C	MDA151SEW046B
M83513/04-E05N	MDA231SG002B	M83513/04-F08N	MDA237ST003B	M83513/04-G11N	MDA251SEW046B
M83513/04-E05P	MDAS31SG002B	M83513/04-F08P	MDAS37ST003B	M83513/04-G11P	MDAS51SEW046B
M83513/04-E06C	MDA131SG003B	M83513/04-F09C	MDA137SEL046B	M83513/04-G12C	MDA151SEW092B
M83513/04-E06N	MDA231SG003B	M83513/04-F09N	MDA237SEL046B	M83513/04-G12N	MDA251SEW092B
M83513/04-E06P	MDAS31SG003B	M83513/04-F09P	MDAS37SEL046B	M83513/04-G12P	MDAS51SEW092B
M83513/04-E07C	MDA131ST002B	M83513/04-F10C	MDA137SEL092B	M83513/04-G13C	MDA151S4L183B
M83513/04-E07N	MDA231ST002B	M83513/04-F10N	MDA237SEL092B	M83513/04-G13N	MDA251S4L183B
M83513/04-E07P	MDAS31ST002B	M83513/04-F10P	MDAS37SEL092B	M83513/04-G13P	MDAS51S4L183B
M83513/04-E08C	MDA131ST003B	M83513/04-F11C	MDA137SEW046B	M83513/04-G14C	MDA151S4W183B
M83513/04-E08N	MDA231ST003B	M83513/04-F11N	MDA237SEW046B	M83513/04-G14N	MDA251S4W183B
M83513/04-E08P	MDAS31ST003B	M83513/04-F11P	MDAS37SEW046B	M83513/04-G14P	MDAS51S4W183B
M83513/04-E09C	MDA131SEL046B	M83513/04-F12C	MDA137SEW092B	M83513/04-G15C	MDA151SEL183B
M83513/04-E09N	MDA231SEL046B	M83513/04-F12N	MDA237SEW092B	M83513/04-G15N	MDA251SEL183B
M83513/04-E09P	MDAS31SEL046B	M83513/04-F12P	MDAS37SEW092B	M83513/04-G15P	MDAS51SEL183B
M83513/04-E10C	MDA131SEL092B	M83513/04-F13C	MDA137S4L183B	M83513/04-G16C	MDA151SEW183B
M83513/04-E10N	MDA231SEL092B	M83513/04-F13N	MDA237S4L183B	M83513/04-G16N	MDA251SEW183B
M83513/04-E10P	MDAS31SEL092B	M83513/04-F13P	MDAS37S4L183B	M83513/04-G16P	MDAS51SEW183B
M83513/04-E11C	MDA131SEW046B	M83513/04-F14C	MDA137S4W183B	M83513/04-H01C	MDA1100S4L046B
M83513/04-E11N	MDA231SEW046B	M83513/04-F14N	MDA237S4W183B	M83513/04-H01N	MDA2100S4L046B
M83513/04-E11P	MDAS31SEW046B	M83513/04-F14P	MDAS37S4W183B	M83513/04-H01P	MDAS100S4L046B
M83513/04-E12C	MDA131SEW092B	M83513/04-F15C	MDA137SEL183B	M83513/04-H02C	MDA1100S4L092B
M83513/04-E12N	MDA231SEW092B	M83513/04-F15N	MDA237SEL183B	M83513/04-H02N	MDA2100S4L092B
M83513/04-E12P	MDAS31SEW092B	M83513/04-F15P	MDAS37SEL183B	M83513/04-H02P	MDAS100S4L092B

MIL-DTL-88513
CONNECTORS

Rectangular
Micro-D connectors

M83513/04 (continued)

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/04-H03C	MDA1100S4W046B	M83513/04-H08C	MDA1100ST003B	M83513/04-H13C	MDA1100S4L183B
M83513/04-H03N	MDA2100S4W046B	M83513/04-H08N	MDA2100ST003B	M83513/04-H13N	MDA2100S4L183B
M83513/04-H03P	MDAS100S4W046B	M83513/04-H08P	MDAS100ST003B	M83513/04-H13P	MDAS100S4L183B
M83513/04-H04C	MDA1100S4W092B	M83513/04-H09C	MDA1100SELO46B	M83513/04-H14C	MDA1100S4W183B
M83513/04-H04N	MDA2100S4W092B	M83513/04-H09N	MDA2100SELO46B	M83513/04-H14N	MDA2100S4W183B
M83513/04-H04P	MDAS100S4W092B	M83513/04-H09P	MDAS100SELO46B	M83513/04-H14P	MDAS100S4W183B
M83513/04-H05C	MDA1100SG002B	M83513/04-H10C	MDA1100SELO92B	M83513/04-H15C	MDA1100SEL183B
M83513/04-H05N	MDA2100SG002B	M83513/04-H10N	MDA2100SELO92B	M83513/04-H15N	MDA2100SEL183B
M83513/04-H05P	MDAS100SG002B	M83513/04-H10P	MDAS100SELO92B	M83513/04-H15P	MDAS100SEL183B
M83513/04-H06C	MDA1100SG003B	M83513/04-H11C	MDA1100SEW046B	M83513/04-H16C	MDA1100SEW183B
M83513/04-H06N	MDA2100SG003B	M83513/04-H11N	MDA2100SEW046B	M83513/04-H16N	MDA2100SEW183B
M83513/04-H06P	MDAS100SG003B	M83513/04-H11P	MDAS100SEW046B	M83513/04-H16P	MDAS100SEW183B
M83513/04-H07C	MDA1100ST002B	M83513/04-H12C	MDA1100SEW092B		
M83513/04-H07N	MDA2100ST002B	M83513/04-H12N	MDA2100SEW092B		
M83513/04-H07P	MDAS100ST002B	M83513/04-H12P	MDAS100SEW092B		

M83513/06

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/06-A	MDAP09PFBSB	M83513/06-D	MDAP25PFBSB	M83513/06-G	MDAP51PFBSB
M83513/06-B	MDAP15PFBSB	M83513/06-E	MDAP31PFBSB		
M83513/06-C	MDAP21PFBSB	M83513/06-F	MDAP37PFBSB		

M83513/07

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/07-A	MDAP09SFBSB	M83513/07-D	MDAP25SFBSB	M83513/07-G	MDAP51SFBSB
M83513/07-B	MDAP15SFBSB	M83513/07-E	MDAP31SFBSB		
M83513/07-C	MDAP21SFBSB	M83513/07-F	MDAP37SFBSB		

M83513/08

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/08-A01	MDAP09P4L046B	M83513/08-B08	MDAP15PT003B	M83513/08-C15	MDAP21PEL183B
M83513/08-A02	MDAP09P4L092B	M83513/08-B09	MDAP15PELO46B	M83513/08-C16	MDAP21PEW183B
M83513/08-A03	MDAP09P4W046B	M83513/08-B10	MDAP15PELO92B	M83513/08-D01	MDAP25P4L046B
M83513/08-A04	MDAP09P4W092B	M83513/08-B11	MDAP15PEW046B	M83513/08-D02	MDAP25P4L092B
M83513/08-A05	MDAP09PG002B	M83513/08-B12	MDAP15PEW092B	M83513/08-D03	MDAP25P4W046B
M83513/08-A06	MDAP09PG003B	M83513/08-B13	MDAP15P4L183B	M83513/08-D04	MDAP25P4W092B
M83513/08-A07	MDAP09PT002B	M83513/08-B14	MDAP15P4W183B	M83513/08-D05	MDAP25PG002B
M83513/08-A08	MDAP09PT003B	M83513/08-B15	MDAP15PEL183B	M83513/08-D06	MDAP25PG003B
M83513/08-A09	MDAP09PELO46B	M83513/08-B16	MDAP15PEW183B	M83513/08-D07	MDAP25PT002B
M83513/08-A10	MDAP09PELO92B	M83513/08-C01	MDAP21P4L046B	M83513/08-D08	MDAP25PT003B
M83513/08-A11	MDAP09PEW046B	M83513/08-C02	MDAP21P4L092B	M83513/08-D09	MDAP25PELO46B
M83513/08-A12	MDAP09PEW092B	M83513/08-C03	MDAP21P4W046B	M83513/08-D10	MDAP25PELO92B
M83513/08-A13	MDAP09P4L183B	M83513/08-C04	MDAP21P4W092B	M83513/08-D11	MDAP25PEW046B
M83513/08-A14	MDAP09P4W183B	M83513/08-C05	MDAP21PG002B	M83513/08-D12	MDAP25PEW092B
M83513/08-A15	MDAP09PEL183B	M83513/08-C06	MDAP21PG003B	M83513/08-D13	MDAP25P4L183B
M83513/08-A16	MDAP09PEW183B	M83513/08-C07	MDAP21PT002B	M83513/08-D14	MDAP25P4W183B
M83513/08-B01	MDAP15P4L046B	M83513/08-C08	MDAP21PT003B	M83513/08-D15	MDAP25PEL183B
M83513/08-B02	MDAP15P4L092B	M83513/08-C09	MDAP21PELO46B	M83513/08-D16	MDAP25PEW183B
M83513/08-B03	MDAP15P4W046B	M83513/08-C10	MDAP21PELO92B	M83513/08-E01	MDAP31P4L046B
M83513/08-B04	MDAP15P4W092B	M83513/08-C11	MDAP21PEW046B	M83513/08-E02	MDAP31P4L092B
M83513/08-B05	MDAP15PG002B	M83513/08-C12	MDAP21PEW092B	M83513/08-E03	MDAP31P4W046B
M83513/08-B06	MDAP15PG003B	M83513/08-C13	MDAP21P4L183B	M83513/08-E04	MDAP31P4W092B
M83513/08-B07	MDAP15PT002B	M83513/08-C14	MDAP21P4W183B		

M83513/08 (continued)

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/08-E05	MDAP31PG002B	M83513/08-F04	MDAP37P4W092B	M83513/08-G03	MDAP51P4W046B
M83513/08-E06	MDAP31PG003B	M83513/08-F05	MDAP37PG002B	M83513/08-G04	MDAP51P4W092B
M83513/08-E07	MDAP31PT002B	M83513/08-F06	MDAP37PG003B	M83513/08-G05	MDAP51PG002B
M83513/08-E08	MDAP31PT003B	M83513/08-F07	MDAP37PT002B	M83513/08-G06	MDAP51PG003B
M83513/08-E09	MDAP31PEL046B	M83513/08-F08	MDAP37PT003B	M83513/08-G07	MDAP51PT002B
M83513/08-E10	MDAP31PEL092B	M83513/08-F09	MDAP37PEL046B	M83513/08-G08	MDAP51PT003B
M83513/08-E11	MDAP31PEW046B	M83513/08-F10	MDAP37PEL092B	M83513/08-G09	MDAP51PEL046B
M83513/08-E12	MDAP31PEW092B	M83513/08-F11	MDAP37PEW046B	M83513/08-G10	MDAP51PEL092B
M83513/08-E13	MDAP31P4L183B	M83513/08-F12	MDAP37PEW092B	M83513/08-G11	MDAP51PEW046B
M83513/08-E14	MDAP31P4W183B	M83513/08-F13	MDAP37P4L183B	M83513/08-G12	MDAP51PEW092B
M83513/08-E15	MDAP31PEL183B	M83513/08-F14	MDAP37P4W183B	M83513/08-G13	MDAP51P4L183B
M83513/08-E16	MDAP31PEW183B	M83513/08-F15	MDAP37PEL183B	M83513/08-G14	MDAP51P4W183B
M83513/08-F01	MDAP37P4L046B	M83513/08-F16	MDAP37PEW183B	M83513/08-G15	MDAP51PEL183B
M83513/08-F02	MDAP37P4L092B	M83513/08-G01	MDAP51P4L046B	M83513/08-G16	MDAP51PEW183B
M83513/08-F03	MDAP37P4W046B	M83513/08-G02	MDAP51P4L092B		

M83513/09

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/09-A01	MDAP09S4L046B	M83513/09-C07	MDAP21ST002B	M83513/09-E13	MDAP31S4L183B
M83513/09-A02	MDAP09S4L092B	M83513/09-C08	MDAP21ST003B	M83513/09-E14	MDAP31S4W183B
M83513/09-A03	MDAP09S4W046B	M83513/09-C09	MDAP21SEL046B	M83513/09-E15	MDAP31SEL183B
M83513/09-A04	MDAP09S4W092B	M83513/09-C10	MDAP21SEL092B	M83513/09-E16	MDAP31SEW183B
M83513/09-A05	MDAP09SG002B	M83513/09-C11	MDAP21SEW046B	M83513/09-F01	MDAP37S4L046B
M83513/09-A06	MDAP09SG003B	M83513/09-C12	MDAP21SEW092B	M83513/09-F02	MDAP37S4L092B
M83513/09-A07	MDAP09ST002B	M83513/09-C13	MDAP21S4L183B	M83513/09-F03	MDAP37S4W046B
M83513/09-A08	MDAP09ST003B	M83513/09-C14	MDAP21S4W183B	M83513/09-F04	MDAP37S4W092B
M83513/09-A09	MDAP09SEL046B	M83513/09-C15	MDAP21SEL183B	M83513/09-F05	MDAP37SG002B
M83513/09-A10	MDAP09SEL092B	M83513/09-C16	MDAP21SEW183B	M83513/09-F06	MDAP37SG003B
M83513/09-A11	MDAP09SEW046B	M83513/09-D01	MDAP25S4L046B	M83513/09-F07	MDAP37ST002B
M83513/09-A12	MDAP09SEW092B	M83513/09-D02	MDAP25S4L092B	M83513/09-F08	MDAP37ST003B
M83513/09-A13	MDAP09S4L183B	M83513/09-D03	MDAP25S4W046B	M83513/09-F09	MDAP37SELO46B
M83513/09-A14	MDAP09S4W183B	M83513/09-D04	MDAP25S4W092B	M83513/09-F10	MDAP37SELO92B
M83513/09-A15	MDAP09SEL183B	M83513/09-D05	MDAP25SG002B	M83513/09-F11	MDAP37SEW046B
M83513/09-A16	MDAP09SEW183B	M83513/09-D06	MDAP25SG003B	M83513/09-F12	MDAP37SEW092B
M83513/09-B01	MDAP15S4L046B	M83513/09-D07	MDAP25ST002B	M83513/09-F13	MDAP37S4L183B
M83513/09-B02	MDAP15S4L092B	M83513/09-D08	MDAP25ST003B	M83513/09-F14	MDAP37S4W183B
M83513/09-B03	MDAP15S4W046B	M83513/09-D09	MDAP25SELO46B	M83513/09-F15	MDAP37SEL183B
M83513/09-B04	MDAP15S4W092B	M83513/09-D10	MDAP25SELO92B	M83513/09-F16	MDAP37SEW183B
M83513/09-B05	MDAP15SG002B	M83513/09-D11	MDAP25SEW046B	M83513/09-G01	MDAP51S4L046B
M83513/09-B06	MDAP15SG003B	M83513/09-D12	MDAP25SEW092B	M83513/09-G02	MDAP51S4L092B
M83513/09-B07	MDAP15ST002B	M83513/09-D13	MDAP25S4L183B	M83513/09-G03	MDAP51S4W046B
M83513/09-B08	MDAP15ST003B	M83513/09-D14	MDAP25S4W183B	M83513/09-G04	MDAP51S4W092B
M83513/09-B09	MDAP15SEL046B	M83513/09-D15	MDAP25SEL183B	M83513/09-G05	MDAP51SG002B
M83513/09-B10	MDAP15SEL092B	M83513/09-D16	MDAP25SEW183B	M83513/09-G06	MDAP51SG003B
M83513/09-B11	MDAP15SEW046B	M83513/09-E01	MDAP31S4L046B	M83513/09-G07	MDAP51ST002B
M83513/09-B12	MDAP15SEW092B	M83513/09-E02	MDAP31S4L092B	M83513/09-G08	MDAP51ST003B
M83513/09-B13	MDAP15S4L183B	M83513/09-E03	MDAP31S4W046B	M83513/09-G09	MDAP51SELO46B
M83513/09-B14	MDAP15S4W183B	M83513/09-E04	MDAP31S4W092B	M83513/09-G10	MDAP51SELO92B
M83513/09-B15	MDAP15SEL183B	M83513/09-E05	MDAP31SG002B	M83513/09-G11	MDAP51SEW046B
M83513/09-B16	MDAP15SEW183B	M83513/09-E06	MDAP31SG003B	M83513/09-G12	MDAP51SEW092B
M83513/09-C01	MDAP21S4L046B	M83513/09-E07	MDAP31ST002B	M83513/09-G13	MDAP51S4L183B
M83513/09-C02	MDAP21S4L092B	M83513/09-E08	MDAP31ST003B	M83513/09-G14	MDAP51S4W183B
M83513/09-C03	MDAP21S4W046B	M83513/09-E09	MDAP31SELO46B	M83513/09-G15	MDAP51SEL183B
M83513/09-C04	MDAP21S4W092B	M83513/09-E10	MDAP31SELO92B	M83513/09-G16	MDAP51SEW183B
M83513/09-C05	MDAP21SG002B	M83513/09-E11	MDAP31SEW046B		
M83513/09-C06	MDAP21SG003B	M83513/09-E12	MDAP31SEW092B		

MIL-DTL-88513
CONNECTORS

Rectangular
Micro-D connectors

M83513/10

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/10-A01CN	MDA109PCBRBG1	M83513/10-B02PP	MDAS15PCBRPG2	M83513/10-D01NT	MDA225PCBRTG1
M83513/10-A01CP	MDA109PCBRPG1	M83513/10-B02PT	MDAS15PCBRTG2	M83513/10-D01NW	MDA225PCBRWG1
M83513/10-A01CT	MDA109PCBRTG1	M83513/10-B02PW	MDAS15PCBRWG2	M83513/10-D01PN	MDAS25PCBRBG1
M83513/10-A01CW	MDA109PCBRWG1	M83513/10-B03CN	MDA115PCBRBG3	M83513/10-D01PP	MDAS25PCBRPG1
M83513/10-A01NN	MDA209PCBRBG1	M83513/10-B03CP	MDA115PCBRPG3	M83513/10-D01PT	MDAS25PCBRTG1
M83513/10-A01NP	MDA209PCBRPG1	M83513/10-B03CT	MDA115PCBRTG3	M83513/10-D01PW	MDAS25PCBRWG1
M83513/10-A01NT	MDA209PCBRTG1	M83513/10-B03CW	MDA115PCBRWG3	M83513/10-D02CN	MDA125PCBRBG2
M83513/10-A01NW	MDA209PCBRWG1	M83513/10-B03NN	MDA215PCBRBG3	M83513/10-D02CP	MDA125PCBRPG2
M83513/10-A01PN	MDAS09PCBRBG1	M83513/10-B03NP	MDA215PCBRPG3	M83513/10-D02CT	MDA125PCBRTG2
M83513/10-A01PP	MDAS09PCBRPG1	M83513/10-B03NT	MDA215PCBRTG3	M83513/10-D02CW	MDA125PCBRWG2
M83513/10-A01PT	MDAS09PCBRTG1	M83513/10-B03NW	MDA215PCBRWG3	M83513/10-D02NN	MDA225PCBRBG2
M83513/10-A01PW	MDAS09PCBRWG1	M83513/10-B03PN	MDAS15PCBRBG3	M83513/10-D02NP	MDA225PCBRPG2
M83513/10-A02CN	MDA109PCBRBG2	M83513/10-B03PP	MDAS15PCBRPG3	M83513/10-D02NT	MDA225PCBRTG2
M83513/10-A02CP	MDA109PCBRPG2	M83513/10-B03PT	MDAS15PCBRTG3	M83513/10-D02NW	MDA225PCBRWG2
M83513/10-A02CT	MDA109PCBRTG2	M83513/10-B03PW	MDAS15PCBRWG3	M83513/10-D02PN	MDAS25PCBRBG2
M83513/10-A02CW	MDA109PCBRWG2	M83513/10-C01CN	MDA121PCBRBG1	M83513/10-D02PP	MDAS25PCBRPG2
M83513/10-A02NN	MDA209PCBRBG2	M83513/10-C01CP	MDA121PCBRPG1	M83513/10-D02PT	MDAS25PCBRTG2
M83513/10-A02NP	MDA209PCBRPG2	M83513/10-C01CT	MDA121PCBRTG1	M83513/10-D02PW	MDAS25PCBRWG2
M83513/10-A02NT	MDA209PCBRTG2	M83513/10-C01CW	MDA121PCBRWG1	M83513/10-D03CN	MDA125PCBRBG3
M83513/10-A02NW	MDA209PCBRWG2	M83513/10-C01NN	MDA221PCBRBG1	M83513/10-D03CP	MDA125PCBRPG3
M83513/10-A02PN	MDAS09PCBRBG2	M83513/10-C01NP	MDA221PCBRPG1	M83513/10-D03CT	MDA125PCBRTG3
M83513/10-A02PP	MDAS09PCBRPG2	M83513/10-C01NT	MDA221PCBRTG1	M83513/10-D03CW	MDA125PCBRWG3
M83513/10-A02PT	MDAS09PCBRTG2	M83513/10-C01NW	MDA221PCBRWG1	M83513/10-D03NN	MDA225PCBRBG3
M83513/10-A02PW	MDAS09PCBRWG2	M83513/10-C01PN	MDAS21PCBRBG1	M83513/10-D03NP	MDA225PCBRPG3
M83513/10-A03CN	MDA109PCBRBG3	M83513/10-C01PP	MDAS21PCBRPG1	M83513/10-D03NT	MDA225PCBRTG3
M83513/10-A03CP	MDA109PCBRPG3	M83513/10-C01PT	MDAS21PCBRTG1	M83513/10-D03NW	MDA225PCBRWG3
M83513/10-A03CT	MDA109PCBRTG3	M83513/10-C01PW	MDAS21PCBRWG1	M83513/10-D03PN	MDAS25PCBRBG3
M83513/10-A03CW	MDA109PCBRWG3	M83513/10-C02CN	MDA121PCBRBG2	M83513/10-D03PP	MDAS25PCBRPG3
M83513/10-A03NN	MDA209PCBRBG3	M83513/10-C02CP	MDA121PCBRPG2	M83513/10-D03PT	MDAS25PCBRTG3
M83513/10-A03NP	MDA209PCBRPG3	M83513/10-C02CT	MDA121PCBRTG2	M83513/10-D03PW	MDAS25PCBRWG3
M83513/10-A03NT	MDA209PCBRTG3	M83513/10-C02CW	MDA121PCBRWG2	M83513/10-E01CN	MDA131PCBRBG1
M83513/10-A03NW	MDA209PCBRWG3	M83513/10-C02NN	MDA221PCBRBG2	M83513/10-E01CP	MDA131PCBRPG1
M83513/10-A03PN	MDAS09PCBRBG3	M83513/10-C02NP	MDA221PCBRPG2	M83513/10-E01CT	MDA131PCBRTG1
M83513/10-A03PP	MDAS09PCBRPG3	M83513/10-C02NT	MDA221PCBRTG2	M83513/10-E01CW	MDA131PCBRWG1
M83513/10-A03PT	MDAS09PCBRTG3	M83513/10-C02NW	MDA221PCBRWG2	M83513/10-E01NN	MDA231PCBRBG1
M83513/10-A03PW	MDAS09PCBRWG3	M83513/10-C02PN	MDAS21PCBRBG2	M83513/10-E01NP	MDA231PCBRPG1
M83513/10-B01CN	MDA115PCBRBG1	M83513/10-C02PP	MDAS21PCBRPG2	M83513/10-E01NT	MDA231PCBRTG1
M83513/10-B01CP	MDA115PCBRPG1	M83513/10-C02PT	MDAS21PCBRTG2	M83513/10-E01NW	MDA231PCBRWG1
M83513/10-B01CT	MDA115PCBRTG1	M83513/10-C02PW	MDAS21PCBRWG2	M83513/10-E01PN	MDAS31PCBRBG1
M83513/10-B01CW	MDA115PCBRWG1	M83513/10-C03CN	MDA121PCBRBG3	M83513/10-E01PP	MDAS31PCBRPG1
M83513/10-B01NN	MDA215PCBRBG1	M83513/10-C03CP	MDA121PCBRPG3	M83513/10-E01PT	MDAS31PCBRTG1
M83513/10-B01NP	MDA215PCBRPG1	M83513/10-C03CT	MDA121PCBRTG3	M83513/10-E01PW	MDAS31PCBRWG1
M83513/10-B01NT	MDA215PCBRTG1	M83513/10-C03CW	MDA121PCBRWG3	M83513/10-E02CN	MDA131PCBRBG2
M83513/10-B01NW	MDA215PCBRWG1	M83513/10-C03NN	MDA221PCBRBG3	M83513/10-E02CP	MDA131PCBRPG2
M83513/10-B01PN	MDAS15PCBRBG1	M83513/10-C03NP	MDA221PCBRPG3	M83513/10-E02CT	MDA131PCBRTG2
M83513/10-B01PP	MDAS15PCBRPG1	M83513/10-C03NT	MDA221PCBRTG3	M83513/10-E02CW	MDA131PCBRWG2
M83513/10-B01PT	MDAS15PCBRTG1	M83513/10-C03NW	MDA221PCBRWG3	M83513/10-E02NN	MDA231PCBRBG2
M83513/10-B01PW	MDAS15PCBRWG1	M83513/10-C03PN	MDAS21PCBRBG3	M83513/10-E02NP	MDA231PCBRPG2
M83513/10-B02CN	MDA115PCBRBG2	M83513/10-C03PP	MDAS21PCBRPG3	M83513/10-E02NT	MDA231PCBRTG2
M83513/10-B02CP	MDA115PCBRPG2	M83513/10-C03PT	MDAS21PCBRTG3	M83513/10-E02NW	MDA231PCBRWG2
M83513/10-B02CT	MDA115PCBRTG2	M83513/10-C03PW	MDAS21PCBRWG3	M83513/10-E02PN	MDAS31PCBRBG2
M83513/10-B02CW	MDA115PCBRWG2	M83513/10-D01CN	MDA125PCBRBG1	M83513/10-E02PP	MDAS31PCBRPG2
M83513/10-B02NN	MDA215PCBRBG2	M83513/10-D01CP	MDA125PCBRPG1	M83513/10-E02PT	MDAS31PCBRTG2
M83513/10-B02NP	MDA215PCBRPG2	M83513/10-D01CT	MDA125PCBRTG1	M83513/10-E02PW	MDAS31PCBRWG2
M83513/10-B02NT	MDA215PCBRTG2	M83513/10-D01CW	MDA125PCBRWG1	M83513/10-E03CN	MDA131PCBRBG3
M83513/10-B02NW	MDA215PCBRWG2	M83513/10-D01NN	MDA225PCBRBG1	M83513/10-E03CP	MDA131PCBRPG3
M83513/10-B02PN	MDAS15PCBRBG2	M83513/10-D01NP	MDA225PCBRPG1	M83513/10-E03CT	MDA131PCBRTG3

M83513/10 (continued)

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/10-E03CW	MDA131PCBRWG3	M83513/10-F01NW	MDA237PCBRWG1	M83513/10-F02PW	MDAS37PCBRWG2
M83513/10-E03NN	MDA231PCBRBG3	M83513/10-F01PN	MDAS37PCBRBG1	M83513/10-F03CN	MDA137PCBRBG3
M83513/10-E03NP	MDA231PCBRPG3	M83513/10-F01PP	MDAS37PCBRPG1	M83513/10-F03CP	MDA137PCBRPG3
M83513/10-E03NT	MDA231PCBRTG3	M83513/10-F01PT	MDAS37PCBRTG1	M83513/10-F03CT	MDA137PCBRTG3
M83513/10-E03NW	MDA231PCBRWG3	M83513/10-F01PW	MDAS37PCBRWG1	M83513/10-F03CW	MDA137PCBRWG3
M83513/10-E03PN	MDAS31PCBRBG3	M83513/10-F02CN	MDA137PCBRBG2	M83513/10-F03NN	MDA237PCBRBG3
M83513/10-E03PP	MDAS31PCBRPG3	M83513/10-F02CP	MDA137PCBRPG2	M83513/10-F03NP	MDA237PCBRPG3
M83513/10-E03PT	MDAS31PCBRTG3	M83513/10-F02CT	MDA137PCBRTG2	M83513/10-F03NT	MDA237PCBRTG3
M83513/10-E03PW	MDAS31PCBRWG3	M83513/10-F02CW	MDA137PCBRWG2	M83513/10-F03NW	MDA237PCBRWG3
M83513/10-F01CN	MDA137PCBRBG1	M83513/10-F02NN	MDA237PCBRBG2	M83513/10-F03PN	MDAS37PCBRBG3
M83513/10-F01CP	MDA137PCBRPG1	M83513/10-F02NP	MDA237PCBRPG2	M83513/10-F03PP	MDAS37PCBRPG3
M83513/10-F01CT	MDA137PCBRTG1	M83513/10-F02NT	MDA237PCBRTG2	M83513/10-F03PT	MDAS37PCBRTG3
M83513/10-F01CW	MDA137PCBRWG1	M83513/10-F02NW	MDA237PCBRWG2	M83513/10-F03PW	MDAS37PCBRWG3
M83513/10-F01NN	MDA237PCBRBG1	M83513/10-F02PN	MDAS37PCBRBG2		
M83513/10-F01NP	MDA237PCBRPG1	M83513/10-F02PP	MDAS37PCBRPG2		
M83513/10-F01NT	MDA237PCBRTG1	M83513/10-F02PT	MDAS37PCBRTG2		

MIL-DTL-88513
CONNECTORS

Rectangular
Micro-D connectors

M83513/11

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/11-G01CN	MDA151PCBRBG1	M83513/11-G02CN	MDA151PCBRBG2	M83513/11-G03CN	MDA151PCBRBG3
M83513/11-G01CP	MDA151PCBRPG1	M83513/11-G02CP	MDA151PCBRPG2	M83513/11-G03CP	MDA151PCBRPG3
M83513/11-G01CT	MDA151PCBRTG1	M83513/11-G02CT	MDA151PCBRTG2	M83513/11-G03CT	MDA151PCBRTG3
M83513/11-G01CW	MDA151PCBRWG1	M83513/11-G02CW	MDA151PCBRWG2	M83513/11-G03CW	MDA151PCBRWG3
M83513/11-G01NN	MDA251PCBRBG1	M83513/11-G02NN	MDA251PCBRBG2	M83513/11-G03NN	MDA251PCBRBG3
M83513/11-G01NP	MDA251PCBRPG1	M83513/11-G02NP	MDA251PCBRPG2	M83513/11-G03NP	MDA251PCBRPG3
M83513/11-G01NT	MDA251PCBRTG1	M83513/11-G02NT	MDA251PCBRTG2	M83513/11-G03NT	MDA251PCBRTG3
M83513/11-G01NW	MDA251PCBRWG1	M83513/11-G02NW	MDA251PCBRWG2	M83513/11-G03NW	MDA251PCBRWG3
M83513/11-G01PN	MDAS51PCBRBG1	M83513/11-G02PN	MDAS51PCBRBG2	M83513/11-G03PN	MDAS51PCBRBG3
M83513/11-G01PP	MDAS51PCBRPG1	M83513/11-G02PP	MDAS51PCBRPG2	M83513/11-G03PP	MDAS51PCBRPG3
M83513/11-G01PT	MDAS51PCBRTG1	M83513/11-G02PT	MDAS51PCBRTG2	M83513/11-G03PT	MDAS51PCBRTG3
M83513/11-G01PW	MDAS51PCBRWG1	M83513/11-G02PW	MDAS51PCBRWG2	M83513/11-G03PW	MDAS51PCBRWG3

M83513/12

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/12-H01CN	MDA1100PCBRBG1	M83513/12-H02CN	MDA1100PCBRBG2	M83513/12-H03CN	MDA1100PCBRBG3
M83513/12-H01CP	MDA1100PCBRPG1	M83513/12-H02CP	MDA1100PCBRPG2	M83513/12-H03CP	MDA1100PCBRPG3
M83513/12-H01CU	MDA1100PCBRTG1	M83513/12-H02CU	MDA1100PCBRTG2	M83513/12-H03CU	MDA1100PCBRTG3
M83513/12-H01CY	MDA1100PCBRWG1	M83513/12-H02CY	MDA1100PCBRWG2	M83513/12-H03CY	MDA1100PCBRWG3
M83513/12-H01NN	MDA2100PCBRBG1	M83513/12-H02NN	MDA2100PCBRBG2	M83513/12-H03NN	MDA2100PCBRBG3
M83513/12-H01NP	MDA2100PCBRPG1	M83513/12-H02NP	MDA2100PCBRPG2	M83513/12-H03NP	MDA2100PCBRPG3
M83513/12-H01NU	MDA2100PCBRTG1	M83513/12-H02NU	MDA2100PCBRTG2	M83513/12-H03NU	MDA2100PCBRTG3
M83513/12-H01NY	MDA2100PCBRWG1	M83513/12-H02NY	MDA2100PCBRWG2	M83513/12-H03NY	MDA2100PCBRWG3
M83513/12-H01PN	MDAS100PCBRBG1	M83513/12-H02PN	MDAS100PCBRBG2	M83513/12-H03PN	MDAS100PCBRBG3
M83513/12-H01PP	MDAS100PCBRPG1	M83513/12-H02PP	MDAS100PCBRPG2	M83513/12-H03PP	MDAS100PCBRPG3
M83513/12-H01PU	MDAS100PCBRTG1	M83513/12-H02PU	MDAS100PCBRTG2	M83513/12-H03PU	MDAS100PCBRTG3
M83513/12-H01PY	MDAS100PCBRWG1	M83513/12-H02PY	MDAS100PCBRWG2	M83513/12-H03PY	MDAS100PCBRWG3

M83513/13

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/13-A01CN	MDA109SCBRBG1	M83513/13-B02PP	MDAS15SCBRPG2	M83513/13-D01NT	MDA225SCBRTG1
M83513/13-A01CP	MDA109SCBRPG1	M83513/13-B02PT	MDAS15SCBRTG2	M83513/13-D01NW	MDA225SCBRWG1
M83513/13-A01CT	MDA109SCBRTG1	M83513/13-B02PW	MDAS15SCBRWG2	M83513/13-D01PN	MDAS25SCBRBG1
M83513/13-A01CW	MDA109SCBRWG1	M83513/13-B03CN	MDA115SCBRBG3	M83513/13-D01PP	MDAS25SCBRPG1
M83513/13-A01NN	MDA209SCBRBG1	M83513/13-B03CP	MDA115SCBRPG3	M83513/13-D01PT	MDAS25SCBRTG1
M83513/13-A01NP	MDA209SCBRPG1	M83513/13-B03CT	MDA115SCBRTG3	M83513/13-D01PW	MDAS25SCBRWG1
M83513/13-A01NT	MDA209SCBRTG1	M83513/13-B03CW	MDA115SCBRWG3	M83513/13-D02CN	MDA125SCBRBG2
M83513/13-A01NW	MDA209SCBRWG1	M83513/13-B03NN	MDA215SCBRBG3	M83513/13-D02CP	MDA125SCBRPG2
M83513/13-A01PN	MDAS09SCBRBG1	M83513/13-B03NP	MDA215SCBRPG3	M83513/13-D02CT	MDA125SCBRTG2
M83513/13-A01PP	MDAS09SCBRPG1	M83513/13-B03NT	MDA215SCBRTG3	M83513/13-D02CW	MDA125SCBRWG2
M83513/13-A01PT	MDAS09SCBRTG1	M83513/13-B03NW	MDA215SCBRWG3	M83513/13-D02NN	MDA225SCBRBG2
M83513/13-A01PW	MDAS09SCBRWG1	M83513/13-B03PN	MDAS15SCBRBG3	M83513/13-D02NP	MDA225SCBRPG2
M83513/13-A02CN	MDA109SCBRBG2	M83513/13-B03PP	MDAS15SCBRPG3	M83513/13-D02NT	MDA225SCBRTG2
M83513/13-A02CP	MDA109SCBRPG2	M83513/13-B03PT	MDAS15SCBRTG3	M83513/13-D02NW	MDA225SCBRWG2
M83513/13-A02CT	MDA109SCBRTG2	M83513/13-B03PW	MDAS15SCBRWG3	M83513/13-D02PN	MDAS25SCBRBG2
M83513/13-A02CW	MDA109SCBRWG2	M83513/13-C01CN	MDA121SCBRBG1	M83513/13-D02PP	MDAS25SCBRPG2
M83513/13-A02NN	MDA209SCBRBG2	M83513/13-C01CP	MDA121SCBRPG1	M83513/13-D02PT	MDAS25SCBRTG2
M83513/13-A02NP	MDA209SCBRPG2	M83513/13-C01CT	MDA121SCBRTG1	M83513/13-D02PW	MDAS25SCBRWG2
M83513/13-A02NT	MDA209SCBRTG2	M83513/13-C01CW	MDA121SCBRWG1	M83513/13-D03CN	MDA125SCBRBG3
M83513/13-A02NW	MDA209SCBRWG2	M83513/13-C01NN	MDA221SCBRBG1	M83513/13-D03CP	MDA125SCBRPG3
M83513/13-A02PN	MDAS09SCBRBG2	M83513/13-C01NP	MDA221SCBRPG1	M83513/13-D03CT	MDA125SCBRTG3
M83513/13-A02PP	MDAS09SCBRPG2	M83513/13-C01NT	MDA221SCBRTG1	M83513/13-D03CW	MDA125SCBRWG3
M83513/13-A02PT	MDAS09SCBRTG2	M83513/13-C01NW	MDA221SCBRWG1	M83513/13-D03NN	MDA225SCBRBG3
M83513/13-A02PW	MDAS09SCBRWG2	M83513/13-C01PN	MDAS21SCBRBG1	M83513/13-D03NP	MDA225SCBRPG3
M83513/13-A03CN	MDA109SCBRBG3	M83513/13-C01PP	MDAS21SCBRPG1	M83513/13-D03NT	MDA225SCBRTG3
M83513/13-A03CP	MDA109SCBRPG3	M83513/13-C01PT	MDAS21SCBRTG1	M83513/13-D03NW	MDA225SCBRWG3
M83513/13-A03CT	MDA109SCBRTG3	M83513/13-C01PW	MDAS21SCBRWG1	M83513/13-D03PN	MDAS25SCBRBG3
M83513/13-A03CW	MDA109SCBRWG3	M83513/13-C02CN	MDA121SCBRBG2	M83513/13-D03PP	MDAS25SCBRPG3
M83513/13-A03NN	MDA209SCBRBG3	M83513/13-C02CP	MDA121SCBRPG2	M83513/13-D03PT	MDAS25SCBRTG3
M83513/13-A03NP	MDA209SCBRPG3	M83513/13-C02CT	MDA121SCBRTG2	M83513/13-D03PW	MDAS25SCBRWG3
M83513/13-A03NT	MDA209SCBRTG3	M83513/13-C02CW	MDA121SCBRWG2	M83513/13-E01CN	MDA131SCBRBG1
M83513/13-A03NW	MDA209SCBRWG3	M83513/13-C02NN	MDA221SCBRBG2	M83513/13-E01CP	MDA131SCBRPG1
M83513/13-A03PN	MDAS09SCBRBG3	M83513/13-C02NP	MDA221SCBRPG2	M83513/13-E01CT	MDA131SCBRTG1
M83513/13-A03PP	MDAS09SCBRPG3	M83513/13-C02NT	MDA221SCBRTG2	M83513/13-E01CW	MDA131SCBRWG1
M83513/13-A03PT	MDAS09SCBRTG3	M83513/13-C02NW	MDA221SCBRWG2	M83513/13-E01NN	MDA231SCBRBG1
M83513/13-A03PW	MDAS09SCBRWG3	M83513/13-C02PN	MDAS21SCBRBG2	M83513/13-E01NP	MDA231SCBRPG1
M83513/13-B01CN	MDA115SCBRBG1	M83513/13-C02PP	MDAS21SCBRPG2	M83513/13-E01NT	MDA231SCBRTG1
M83513/13-B01CP	MDA115SCBRPG1	M83513/13-C02PT	MDAS21SCBRTG2	M83513/13-E01NW	MDA231SCBRWG1
M83513/13-B01CT	MDA115SCBRTG1	M83513/13-C02PW	MDAS21SCBRWG2	M83513/13-E01PN	MDAS31SCBRBG1
M83513/13-B01CW	MDA115SCBRWG1	M83513/13-C03CN	MDA121SCBRBG3	M83513/13-E01PP	MDAS31SCBRPG1
M83513/13-B01NN	MDA215SCBRBG1	M83513/13-C03CP	MDA121SCBRPG3	M83513/13-E01PT	MDAS31SCBRTG1
M83513/13-B01NP	MDA215SCBRPG1	M83513/13-C03CT	MDA121SCBRTG3	M83513/13-E01PW	MDAS31SCBRWG1
M83513/13-B01NT	MDA215SCBRTG1	M83513/13-C03CW	MDA121SCBRWG3	M83513/13-E02CN	MDA131SCBRBG2
M83513/13-B01NW	MDA215SCBRWG1	M83513/13-C03NN	MDA221SCBRBG3	M83513/13-E02CP	MDA131SCBRPG2
M83513/13-B01PN	MDAS15SCBRBG1	M83513/13-C03NP	MDA221SCBRPG3	M83513/13-E02CT	MDA131SCBRTG2
M83513/13-B01PP	MDAS15SCBRPG1	M83513/13-C03NT	MDA221SCBRTG3	M83513/13-E02CW	MDA131SCBRWG2
M83513/13-B01PT	MDAS15SCBRTG1	M83513/13-C03NW	MDA221SCBRWG3	M83513/13-E02NN	MDA231SCBRBG2
M83513/13-B01PW	MDAS15SCBRWG1	M83513/13-C03PN	MDAS21SCBRBG3	M83513/13-E02NP	MDA231SCBRPG2
M83513/13-B02CN	MDA115SCBRBG2	M83513/13-C03PP	MDAS21SCBRPG3	M83513/13-E02NT	MDA231SCBRTG2
M83513/13-B02CP	MDA115SCBRPG2	M83513/13-C03PT	MDAS21SCBRTG3	M83513/13-E02NW	MDA231SCBRWG2
M83513/13-B02CT	MDA115SCBRTG2	M83513/13-C03PW	MDAS21SCBRWG3	M83513/13-E02PN	MDAS31SCBRBG2
M83513/13-B02CW	MDA115SCBRWG2	M83513/13-D01CN	MDA125SCBRBG1	M83513/13-E02PP	MDAS31SCBRPG2
M83513/13-B02NN	MDA215SCBRBG2	M83513/13-D01CP	MDA125SCBRPG1	M83513/13-E02PT	MDAS31SCBRTG2
M83513/13-B02NP	MDA215SCBRPG2	M83513/13-D01CT	MDA125SCBRTG1	M83513/13-E02PW	MDAS31SCBRWG2
M83513/13-B02NT	MDA215SCBRTG2	M83513/13-D01CW	MDA125SCBRWG1	M83513/13-E03CN	MDA131SCBRBG3
M83513/13-B02NW	MDA215SCBRWG2	M83513/13-D01NN	MDA225SCBRBG1	M83513/13-E03CP	MDA131SCBRPG3
M83513/13-B02PN	MDAS15SCBRBG2	M83513/13-D01NP	MDA225SCBRPG1	M83513/13-E03CT	MDA131SCBRTG3

M83513/13 (continued)

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/13-E03CW	MDA131SCBRWG3	M83513/13-F01NW	MDA237SCBRWG1	M83513/13-F02PW	MDAS37SCBRWG2
M83513/13-E03NN	MDA231SCBRBG3	M83513/13-F01PN	MDAS37SCBRBG1	M83513/13-F03CN	MDA137SCBRBG3
M83513/13-E03NP	MDA231SCBRPG3	M83513/13-F01PP	MDAS37SCBRPG1	M83513/13-F03CP	MDA137SCBRPG3
M83513/13-E03NT	MDA231SCBRTG3	M83513/13-F01PT	MDAS37SCBRTG1	M83513/13-F03CT	MDA137SCBRTG3
M83513/13-E03NW	MDA231SCBRWG3	M83513/13-F01PW	MDAS37SCBRWG1	M83513/13-F03CW	MDA137SCBRWG3
M83513/13-E03PN	MDAS31SCBRBG3	M83513/13-F02CN	MDA137SCBRBG2	M83513/13-F03NN	MDA237SCBRBG3
M83513/13-E03PP	MDAS31SCBRPG3	M83513/13-F02CP	MDA137SCBRPG2	M83513/13-F03NP	MDA237SCBRPG3
M83513/13-E03PT	MDAS31SCBRTG3	M83513/13-F02CT	MDA137SCBRTG2	M83513/13-F03NT	MDA237SCBRTG3
M83513/13-E03PW	MDAS31SCBRWG3	M83513/13-F02CW	MDA137SCBRWG2	M83513/13-F03NW	MDA237SCBRWG3
M83513/13-F01CN	MDA137SCBRBG1	M83513/13-F02NN	MDA237SCBRBG2	M83513/13-F03PN	MDAS37SCBRBG3
M83513/13-F01CP	MDA137SCBRPG1	M83513/13-F02NP	MDA237SCBRPG2	M83513/13-F03PP	MDAS37SCBRPG3
M83513/13-F01CT	MDA137SCBRTG1	M83513/13-F02NT	MDA237SCBRTG2	M83513/13-F03PT	MDAS37SCBRTG3
M83513/13-F01CW	MDA137SCBRWG1	M83513/13-F02NW	MDA237SCBRWG2	M83513/13-F03PW	MDAS37SCBRWG3
M83513/13-F01NN	MDA237SCBRBG1	M83513/13-F02PN	MDAS37SCBRBG2		
M83513/13-F01NP	MDA237SCBRPG1	M83513/13-F02PP	MDAS37SCBRPG2		
M83513/13-F01NT	MDA237SCBRTG1	M83513/13-F02PT	MDAS37SCBRTG2		

MIL-DTL-88513
CONNECTORS

Rectangular
Micro-D connectors

M83513/14

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/14-G01CN	MDA151SCBRBG1	M83513/14-G02CN	MDA151SCBRBG2	M83513/14-G03CN	MDA151SCBRBG3
M83513/14-G01CP	MDA151SCBRPG1	M83513/14-G02CP	MDA151SCBRPG2	M83513/14-G03CP	MDA151SCBRPG3
M83513/14-G01CT	MDA151SCBRTG1	M83513/14-G02CT	MDA151SCBRTG2	M83513/14-G03CT	MDA151SCBRTG3
M83513/14-G01CW	MDA151SCBRWG1	M83513/14-G02CW	MDA151SCBRWG2	M83513/14-G03CW	MDA151SCBRWG3
M83513/14-G01NN	MDA251SCBRBG1	M83513/14-G02NN	MDA251SCBRBG2	M83513/14-G03NN	MDA251SCBRBG3
M83513/14-G01NP	MDA251SCBRPG1	M83513/14-G02NP	MDA251SCBRPG2	M83513/14-G03NP	MDA251SCBRPG3
M83513/14-G01NT	MDA251SCBRTG1	M83513/14-G02NT	MDA251SCBRTG2	M83513/14-G03NT	MDA251SCBRTG3
M83513/14-G01NW	MDA251SCBRWG1	M83513/14-G02NW	MDA251SCBRWG2	M83513/14-G03NW	MDA251SCBRWG3
M83513/14-G01PN	MDAS51SCBRBG1	M83513/14-G02PN	MDAS51SCBRBG2	M83513/14-G03PN	MDAS51SCBRBG3
M83513/14-G01PP	MDAS51SCBRPG1	M83513/14-G02PP	MDAS51SCBRPG2	M83513/14-G03PP	MDAS51SCBRPG3
M83513/14-G01PT	MDAS51SCBRTG1	M83513/14-G02PT	MDAS51SCBRTG2	M83513/14-G03PT	MDAS51SCBRTG3
M83513/14-G01PW	MDAS51SCBRWG1	M83513/14-G02PW	MDAS51SCBRWG2	M83513/14-G03PW	MDAS51SCBRWG3

M83513/15

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/15-H01CN	MDA1100SCBRBG1	M83513/15-H02CN	MDA1100SCBRBG2	M83513/15-H03CN	MDA1100SCBRBG3
M83513/15-H01CP	MDA1100SCBRPG1	M83513/15-H02CP	MDA1100SCBRPG2	M83513/15-H03CP	MDA1100SCBRPG3
M83513/15-H01CU	MDA1100SCBRTG1	M83513/15-H02CU	MDA1100SCBRTG2	M83513/15-H03CU	MDA1100SCBRTG3
M83513/15-H01CY	MDA1100SCBRWG1	M83513/15-H02CY	MDA1100SCBRWG2	M83513/15-H03CY	MDA1100SCBRWG3
M83513/15-H01NN	MDA2100SCBRBG1	M83513/15-H02NN	MDA2100SCBRBG2	M83513/15-H03NN	MDA2100SCBRBG3
M83513/15-H01NP	MDA2100SCBRPG1	M83513/15-H02NP	MDA2100SCBRPG2	M83513/15-H03NP	MDA2100SCBRPG3
M83513/15-H01NU	MDA2100SCBRTG1	M83513/15-H02NU	MDA2100SCBRTG2	M83513/15-H03NU	MDA2100SCBRTG3
M83513/15-H01NY	MDA2100SCBRWG1	M83513/15-H02NY	MDA2100SCBRWG2	M83513/15-H03NY	MDA2100SCBRWG3
M83513/15-H01PN	MDAS100SCBRBG1	M83513/15-H02PN	MDAS100SCBRBG2	M83513/15-H03PN	MDAS100SCBRBG3
M83513/15-H01PP	MDAS100SCBRPG1	M83513/15-H02PP	MDAS100SCBRPG2	M83513/15-H03PP	MDAS100SCBRPG3
M83513/15-H01PU	MDAS100SCBRTG1	M83513/15-H02PU	MDAS100SCBRTG2	M83513/15-H03PU	MDAS100SCBRTG3
M83513/15-H01PY	MDAS100SCBRWG1	M83513/15-H02PY	MDAS100SCBRWG2	M83513/15-H03PY	MDAS100SCBRWG3

M83513/16

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/16-A01CN	MDA109PBRBG1	M83513/16-B02PP	MDAS15PBRPG2	M83513/16-D01NT	MDA225PBRTG1
M83513/16-A01CP	MDA109PBRPG1	M83513/16-B02PT	MDAS15PBRTG2	M83513/16-D01NW	MDA225PBRWG1
M83513/16-A01CT	MDA109PBRTG1	M83513/16-B02PW	MDAS15PBRWG2	M83513/16-D01PN	MDAS25PBRBG1
M83513/16-A01CW	MDA109PBRWG1	M83513/16-B03CN	MDA115PBRBG3	M83513/16-D01PP	MDAS25PBRPG1
M83513/16-A01NN	MDA209PBRBG1	M83513/16-B03CP	MDA115PBRPG3	M83513/16-D01PT	MDAS25PBRTG1
M83513/16-A01NP	MDA209PBRPG1	M83513/16-B03CT	MDA115PBRTG3	M83513/16-D01PW	MDAS25PBRWG1
M83513/16-A01NT	MDA209PBRTG1	M83513/16-B03CW	MDA115PBRWG3	M83513/16-D02CN	MDA125PBRBG2
M83513/16-A01NW	MDA209PBRWG1	M83513/16-B03NN	MDA215PBRBG3	M83513/16-D02CP	MDA125PBRPG2
M83513/16-A01PN	MDAS09PBRBG1	M83513/16-B03NP	MDA215PBRPG3	M83513/16-D02CT	MDA125PBRTG2
M83513/16-A01PP	MDAS09PBRPG1	M83513/16-B03NT	MDA215PBRTG3	M83513/16-D02CW	MDA125PBRWG2
M83513/16-A01PT	MDAS09PBRTG1	M83513/16-B03NW	MDA215PBRWG3	M83513/16-D02NN	MDA225PBRBG2
M83513/16-A01PW	MDAS09PBRWG1	M83513/16-B03PN	MDAS15PBRBG3	M83513/16-D02NP	MDAS25PBRPG2
M83513/16-A02CN	MDA109PBRBG2	M83513/16-B03PP	MDAS15PBRPG3	M83513/16-D02NT	MDA225PBRTG2
M83513/16-A02CP	MDA109PBRPG2	M83513/16-B03PT	MDAS15PBRTG3	M83513/16-D02NW	MDA225PBRWG2
M83513/16-A02CT	MDA109PBRTG2	M83513/16-B03PW	MDAS15PBRWG3	M83513/16-D02PN	MDAS25PBRBG2
M83513/16-A02CW	MDA109PBRWG2	M83513/16-C01CN	MDA121PBRBG1	M83513/16-D02PP	MDAS25PBRPG2
M83513/16-A02NN	MDA209PBRBG2	M83513/16-C01CP	MDA121PBRPG1	M83513/16-D02PT	MDAS25PBRTG2
M83513/16-A02NP	MDA209PBRPG2	M83513/16-C01CT	MDA121PBRTG1	M83513/16-D02PW	MDAS25PBRWG2
M83513/16-A02NT	MDA209PBRTG2	M83513/16-C01CW	MDA121PBRWG1	M83513/16-D03CN	MDA125PBRBG3
M83513/16-A02NW	MDA209PBRWG2	M83513/16-C01NN	MDA221PBRBG1	M83513/16-D03CP	MDA125PBRPG3
M83513/16-A02PN	MDAS09PBRBG2	M83513/16-C01NP	MDA221PBRPG1	M83513/16-D03CT	MDA125PBRTG3
M83513/16-A02PP	MDAS09PBRPG2	M83513/16-C01NT	MDA221PBRTG1	M83513/16-D03CW	MDA125PBRWG3
M83513/16-A02PT	MDAS09PBRTG2	M83513/16-C01NW	MDA221PBRWG1	M83513/16-D03NN	MDA225PBRBG3
M83513/16-A02PW	MDAS09PBRWG2	M83513/16-C01PN	MDAS21PBRBG1	M83513/16-D03NP	MDA225PBRPG3
M83513/16-A03CN	MDA109PBRBG3	M83513/16-C01PP	MDAS21PBRPG1	M83513/16-D03NT	MDA225PBRTG3
M83513/16-A03CP	MDA109PBRPG3	M83513/16-C01PT	MDAS21PBRTG1	M83513/16-D03NW	MDA225PBRWG3
M83513/16-A03CT	MDA109PBRTG3	M83513/16-C01PW	MDAS21PBRWG1	M83513/16-D03PN	MDAS25PBRBG3
M83513/16-A03CW	MDA109PBRWG3	M83513/16-C02CN	MDA121PBRBG2	M83513/16-D03PP	MDAS25PBRPG3
M83513/16-A03NN	MDA209PBRBG3	M83513/16-C02CP	MDA121PBRPG2	M83513/16-D03PT	MDAS25PBRTG3
M83513/16-A03NP	MDA209PBRPG3	M83513/16-C02CT	MDA121PBRTG2	M83513/16-D03PW	MDAS25PBRWG3
M83513/16-A03NT	MDA209PBRTG3	M83513/16-C02CW	MDA121PBRWG2	M83513/16-E01CN	MDA131PBRBG1
M83513/16-A03NW	MDA209PBRWG3	M83513/16-C02NN	MDA221PBRBG2	M83513/16-E01CP	MDA131PBRPG1
M83513/16-A03PN	MDAS09PBRBG3	M83513/16-C02NP	MDA221PBRPG2	M83513/16-E01CT	MDA131PBRTG1
M83513/16-A03PP	MDAS09PBRPG3	M83513/16-C02NT	MDA221PBRTG2	M83513/16-E01CW	MDA131PBRWG1
M83513/16-A03PT	MDAS09PBRTG3	M83513/16-C02NW	MDA221PBRWG2	M83513/16-E01NN	MDA231PBRBG1
M83513/16-A03PW	MDAS09PBRWG3	M83513/16-C02PN	MDAS21PBRBG2	M83513/16-E01NP	MDA231PBRPG1
M83513/16-B01CN	MDA115PBRBG1	M83513/16-C02PP	MDAS21PBRPG2	M83513/16-E01NT	MDA231PBRTG1
M83513/16-B01CP	MDA115PBRPG1	M83513/16-C02PT	MDAS21PBRTG2	M83513/16-E01NW	MDA231PBRWG1
M83513/16-B01CT	MDA115PBRTG1	M83513/16-C02PW	MDAS21PBRWG2	M83513/16-E01PN	MDAS31PBRBG1
M83513/16-B01CW	MDA115PBRWG1	M83513/16-C03CN	MDA121PBRBG3	M83513/16-E01PP	MDAS31PBRPG1
M83513/16-B01NN	MDA215PBRBG1	M83513/16-C03CP	MDA121PBRPG3	M83513/16-E01PT	MDAS31PBRTG1
M83513/16-B01NP	MDA215PBRPG1	M83513/16-C03CT	MDA121PBRTG3	M83513/16-E01PW	MDAS31PBRWG1
M83513/16-B01NT	MDA215PBRTG1	M83513/16-C03CW	MDA121PBRWG3	M83513/16-E02CN	MDA131PBRBG2
M83513/16-B01NW	MDA215PBRWG1	M83513/16-C03NN	MDA221PBRBG3	M83513/16-E02CP	MDA131PBRPG2
M83513/16-B01PN	MDAS15PBRBG1	M83513/16-C03NP	MDA221PBRPG3	M83513/16-E02CT	MDA131PBRTG2
M83513/16-B01PP	MDAS15PBRPG1	M83513/16-C03NT	MDA221PBRTG3	M83513/16-E02CW	MDA131PBRWG2
M83513/16-B01PT	MDAS15PBRTG1	M83513/16-C03NW	MDA221PBRWG3	M83513/16-E02NN	MDA231PBRBG2
M83513/16-B01PW	MDAS15PBRWG1	M83513/16-C03PN	MDAS21PBRBG3	M83513/16-E02NP	MDA231PBRPG2
M83513/16-B02CN	MDA115PBRBG2	M83513/16-C03PP	MDAS21PBRPG3	M83513/16-E02NT	MDA231PBRTG2
M83513/16-B02CP	MDA115PBRPG2	M83513/16-C03PT	MDAS21PBRTG3	M83513/16-E02NW	MDA231PBRWG2
M83513/16-B02CT	MDA115PBRTG2	M83513/16-C03PW	MDAS21PBRWG3	M83513/16-E02PN	MDAS31PBRBG2
M83513/16-B02CW	MDA115PBRWG2	M83513/16-D01CN	MDA125PBRBG1	M83513/16-E02PP	MDAS31PBRPG2
M83513/16-B02NN	MDA215PBRBG2	M83513/16-D01CP	MDA125PBRPG1	M83513/16-E02PT	MDAS31PBRTG2
M83513/16-B02NP	MDA215PBRPG2	M83513/16-D01CT	MDA125PBRTG1	M83513/16-E02PW	MDAS31PBRWG2
M83513/16-B02NT	MDA215PBRTG2	M83513/16-D01CW	MDA125PBRWG1	M83513/16-E03CN	MDA131PBRBG3
M83513/16-B02NW	MDA215PBRWG2	M83513/16-D01NN	MDA225PBRBG1	M83513/16-E03CP	MDA131PBRPG3
M83513/16-B02PN	MDAS15PBRBG2	M83513/16-D01NP	MDA225PBRPG1	M83513/16-E03CT	MDA131PBRTG3

M83513/16 (continued)

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/16-E03CW	MDA131PBRWG3	M83513/16-F01NT	MDA237PBRGTG1	M83513/16-F02PP	MDAS37PBRPG2
M83513/16-E03NN	MDA231PBRBG3	M83513/16-F01NW	MDA237PBRWG1	M83513/16-F02PT	MDAS37PBRGTG2
M83513/16-E03NP	MDA231PBRPG3	M83513/16-F01PN	MDAS37PBRBG1	M83513/16-F02PW	MDAS37PBRWG2
M83513/16-E03NT	MDA231PBRTG3	M83513/16-F01PP	MDAS37PBRPG1	M83513/16-F03CN	MDA137PBRBG3
M83513/16-E03NW	MDA231PBRWG3	M83513/16-F01PT	MDAS37PBRGTG1	M83513/16-F03CP	MDA137PBRPG3
M83513/16-E03PN	MDAS31PBRBG3	M83513/16-F01PW	MDAS37PBRWG1	M83513/16-F03CT	MDA137PBRTG3
M83513/16-E03PP	MDAS31PBRPG3	M83513/16-F02CN	MDA137PBRBG2	M83513/16-F03CW	MDA137PBRWG3
M83513/16-E03PT	MDAS31PBRTG3	M83513/16-F02CP	MDA137PBRPG2	M83513/16-F03NN	MDA237PBRBG3
M83513/16-E03PW	MDAS31PBRWG3	M83513/16-F02CT	MDA137PBRTG2	M83513/16-F03NP	MDA237PBRPG3
M83513/16-F01CN	MDA137PBRBG1	M83513/16-F02CW	MDA137PBRWG2	M83513/16-F03NT	MDA237PBRTG3
M83513/16-F01CP	MDA137PBRPG1	M83513/16-F02NN	MDA237PBRBG2	M83513/16-F03NW	MDA237PBRWG3
M83513/16-F01CT	MDA137PBRTG1	M83513/16-F02NP	MDA237PBRPG2	M83513/16-F03PN	MDAS37PBRBG3
M83513/16-F01CW	MDA137PBRWG1	M83513/16-F02NT	MDA237PBRTG2	M83513/16-F03PP	MDAS37PBRPG3
M83513/16-F01NN	MDA237PBRBG1	M83513/16-F02NW	MDA237PBRWG2	M83513/16-F03PT	MDAS37PBRTG3
M83513/16-F01NP	MDA237PBRPG1	M83513/16-F02PN	MDAS37PBRBG2	M83513/16-F03PW	MDAS37PBRWG3

MIL-DTL-88513
CONNECTORS

Rectangular
Micro-D connectors

M83513/17

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/17-G01CN	MDA151PBRBG1	M83513/17-G02CN	MDA151PBRBG2	M83513/17-G03CN	MDA151PBRBG3
M83513/17-G01CP	MDA151PBRPG1	M83513/17-G02CP	MDA151PBRPG2	M83513/17-G03CP	MDA151PBRPG3
M83513/17-G01CT	MDA151PBRTG1	M83513/17-G02CT	MDA151PBRTG2	M83513/17-G03CT	MDA151PBRTG3
M83513/17-G01CW	MDA151PBRWG1	M83513/17-G02CW	MDA151PBRWG2	M83513/17-G03CW	MDA151PBRWG3
M83513/17-G01NN	MDA251PBRBG1	M83513/17-G02NN	MDA251PBRBG2	M83513/17-G03NN	MDA251PBRBG3
M83513/17-G01NP	MDA251PBRPG1	M83513/17-G02NP	MDA251PBRPG2	M83513/17-G03NP	MDA251PBRPG3
M83513/17-G01NT	MDA251PBRTG1	M83513/17-G02NT	MDA251PBRTG2	M83513/17-G03NT	MDA251PBRTG3
M83513/17-G01NW	MDA251PBRWG1	M83513/17-G02NW	MDA251PBRWG2	M83513/17-G03NW	MDA251PBRWG3
M83513/17-G01PN	MDAS51PBRBG1	M83513/17-G02PN	MDAS51PBRBG2	M83513/17-G03PN	MDAS51PBRBG3
M83513/17-G01PP	MDAS51PBRPG1	M83513/17-G02PP	MDAS51PBRPG2	M83513/17-G03PP	MDAS51PBRPG3
M83513/17-G01PT	MDAS51PBRTG1	M83513/17-G02PT	MDAS51PBRTG2	M83513/17-G03PT	MDAS51PBRTG3
M83513/17-G01PW	MDAS51PBRWG1	M83513/17-G02PW	MDAS51PBRWG2	M83513/17-G03PW	MDAS51PBRWG3

M83513/18

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/18-H01CN	MDA1100PBRBG1	M83513/18-H02CN	MDA1100PBRBG2	M83513/18-H03CN	MDA1100PBRBG3
M83513/18-H01CP	MDA1100PBRPG1	M83513/18-H02CP	MDA1100PBRPG2	M83513/18-H03CP	MDA1100PBRPG3
M83513/18-H01CU	MDA1100PBRTG1	M83513/18-H02CU	MDA1100PBRTG2	M83513/18-H03CU	MDA1100PBRTG3
M83513/18-H01CY	MDA1100PBRWG1	M83513/18-H02CY	MDA1100PBRWG2	M83513/18-H03CY	MDA1100PBRWG3
M83513/18-H01NN	MDA2100PBRBG1	M83513/18-H02NN	MDA2100PBRBG2	M83513/18-H03NN	MDA2100PBRBG3
M83513/18-H01NP	MDA2100PBRPG1	M83513/18-H02NP	MDA2100PBRPG2	M83513/18-H03NP	MDA2100PBRPG3
M83513/18-H01NU	MDA2100PBRTG1	M83513/18-H02NU	MDA2100PBRTG2	M83513/18-H03NU	MDA2100PBRTG3
M83513/18-H01NY	MDA2100PBRWG1	M83513/18-H02NY	MDA2100PBRWG2	M83513/18-H03NY	MDA2100PBRWG3
M83513/18-H01PN	MDAS100PBRBG1	M83513/18-H02PN	MDAS100PBRBG2	M83513/18-H03PN	MDAS100PBRBG3
M83513/18-H01PP	MDAS100PBRPG1	M83513/18-H02PP	MDAS100PBRPG2	M83513/18-H03PP	MDAS100PBRPG3
M83513/18-H01PU	MDAS100PBRTG1	M83513/18-H02PU	MDAS100PBRTG2	M83513/18-H03PU	MDAS100PBRTG3
M83513/18-H01PY	MDAS100PBRWG1	M83513/18-H02PY	MDAS100PBRWG2	M83513/18-H03PY	MDAS100PBRWG3

M83513/19

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/19-A01CN	MDA109SBRBG1	M83513/19-B02PP	MDAS15SBRPG2	M83513/19-D01NT	MDA225SBRBG1
M83513/19-A01CP	MDA109SBRPG1	M83513/19-B02PT	MDAS15SBRBG2	M83513/19-D01NW	MDA225SBRWG1
M83513/19-A01CT	MDA109SBRTG1	M83513/19-B02PW	MDAS15SBRWG2	M83513/19-D01PN	MDAS25SBRBG1
M83513/19-A01CW	MDA109SBRWG1	M83513/19-B03CN	MDA115SBRBG3	M83513/19-D01PP	MDAS25SBRPG1
M83513/19-A01NN	MDA209SBRBG1	M83513/19-B03CP	MDA115SBRPG3	M83513/19-D01PT	MDAS25SBRBG1
M83513/19-A01NP	MDA209SBRPG1	M83513/19-B03CT	MDA115SBRTG3	M83513/19-D01PW	MDAS25SBRWG1
M83513/19-A01NT	MDA209SBRTG1	M83513/19-B03CW	MDA115SBRWG3	M83513/19-D02CN	MDA125SBRBG2
M83513/19-A01NW	MDA209SBRWG1	M83513/19-B03NN	MDA215SBRBG3	M83513/19-D02CP	MDA125SBRPG2
M83513/19-A01PN	MDAS09SBRBG1	M83513/19-B03NP	MDA215SBRPG3	M83513/19-D02CT	MDA125SBRTG2
M83513/19-A01PP	MDAS09SBRPG1	M83513/19-B03NT	MDA215SBRTG3	M83513/19-D02CW	MDA125SBRWG2
M83513/19-A01PT	MDAS09SBRTG1	M83513/19-B03NW	MDA215SBRWG3	M83513/19-D02NN	MDA225SBRBG2
M83513/19-A01PW	MDAS09SBRWG1	M83513/19-B03PN	MDAS15SBRBG3	M83513/19-D02NP	MDA225SBRPG2
M83513/19-A02CN	MDA109SBRBG2	M83513/19-B03PP	MDAS15SBRPG3	M83513/19-D02NT	MDA225SBRBG2
M83513/19-A02CP	MDA109SBRPG2	M83513/19-B03PT	MDAS15SBRTG3	M83513/19-D02NW	MDA225SBRWG2
M83513/19-A02CT	MDA109SBRTG2	M83513/19-B03PW	MDAS15SBRWG3	M83513/19-D02PN	MDAS25SBRBG2
M83513/19-A02CW	MDA109SBRWG2	M83513/19-C01CN	MDA121SBRBG1	M83513/19-D02PP	MDAS25SBRPG2
M83513/19-A02NN	MDA209SBRBG2	M83513/19-C01CP	MDA121SBRPG1	M83513/19-D02PT	MDAS25SBRTG2
M83513/19-A02NP	MDA209SBRPG2	M83513/19-C01CT	MDA121SBRTG1	M83513/19-D02PW	MDAS25SBRWG2
M83513/19-A02NT	MDA209SBRTG2	M83513/19-C01CW	MDA121SBRWG1	M83513/19-D03CN	MDA125SBRBG3
M83513/19-A02NW	MDA209SBRWG2	M83513/19-C01NN	MDA221SBRBG1	M83513/19-D03CP	MDA125SBRPG3
M83513/19-A02PN	MDAS09SBRBG2	M83513/19-C01NP	MDA221SBRPG1	M83513/19-D03CT	MDA125SBRTG3
M83513/19-A02PP	MDAS09SBRPG2	M83513/19-C01NT	MDA221SBRTG1	M83513/19-D03CW	MDA125SBRWG3
M83513/19-A02PT	MDAS09SBRTG2	M83513/19-C01NW	MDA221SBRWG1	M83513/19-D03NN	MDA225SBRBG3
M83513/19-A02PW	MDAS09SBRWG2	M83513/19-C01PN	MDAS21SBRBG1	M83513/19-D03NP	MDA225SBRPG3
M83513/19-A03CN	MDA109SBRBG3	M83513/19-C01PP	MDAS21SBRPG1	M83513/19-D03NT	MDA225SBRBG3
M83513/19-A03CP	MDA109SBRPG3	M83513/19-C01PT	MDAS21SBRTG1	M83513/19-D03NW	MDA225SBRWG3
M83513/19-A03CT	MDA109SBRTG3	M83513/19-C01PW	MDAS21SBRWG1	M83513/19-D03PN	MDAS25SBRBG3
M83513/19-A03CW	MDA109SBRWG3	M83513/19-C02CN	MDA121SBRBG2	M83513/19-D03PP	MDAS25SBRPG3
M83513/19-A03NN	MDA209SBRBG3	M83513/19-C02CP	MDA121SBRPG2	M83513/19-D03PT	MDAS25SBRTG3
M83513/19-A03NP	MDA209SBRPG3	M83513/19-C02CT	MDA121SBRTG2	M83513/19-D03PW	MDAS25SBRWG3
M83513/19-A03NT	MDA209SBRTG3	M83513/19-C02CW	MDA121SBRWG2	M83513/19-E01CN	MDA131SBRBG1
M83513/19-A03NW	MDA209SBRWG3	M83513/19-C02NN	MDA221SBRBG2	M83513/19-E01CP	MDA131SBRPG1
M83513/19-A03PN	MDAS09SBRBG3	M83513/19-C02NP	MDA221SBRPG2	M83513/19-E01CT	MDA131SBRTG1
M83513/19-A03PP	MDAS09SBRPG3	M83513/19-C02NT	MDA221SBRTG2	M83513/19-E01CW	MDA131SBRWG1
M83513/19-A03PT	MDAS09SBRTG3	M83513/19-C02NW	MDA221SBRWG2	M83513/19-E01NN	MDA231SBRBG1
M83513/19-A03PW	MDAS09SBRWG3	M83513/19-C02PN	MDAS21SBRBG2	M83513/19-E01NP	MDA231SBRPG1
M83513/19-B01CN	MDA115SBRBG1	M83513/19-C02PP	MDAS21SBRPG2	M83513/19-E01NT	MDA231SBRTG1
M83513/19-B01CP	MDA115SBRPG1	M83513/19-C02PT	MDAS21SBRTG2	M83513/19-E01NW	MDA231SBRWG1
M83513/19-B01CT	MDA115SBRTG1	M83513/19-C02PW	MDAS21SBRWG2	M83513/19-E01PN	MDAS31SBRBG1
M83513/19-B01CW	MDA115SBRWG1	M83513/19-C03CN	MDA121SBRBG3	M83513/19-E01PP	MDAS31SBRPG1
M83513/19-B01NN	MDA215SBRBG1	M83513/19-C03CP	MDA121SBRPG3	M83513/19-E01PT	MDAS31SBRTG1
M83513/19-B01NP	MDA215SBRPG1	M83513/19-C03CT	MDA121SBRTG3	M83513/19-E01PW	MDAS31SBRWG1
M83513/19-B01NT	MDA215SBRTG1	M83513/19-C03CW	MDA121SBRWG3	M83513/19-E02CN	MDA131SBRBG2
M83513/19-B01NW	MDA215SBRWG1	M83513/19-C03NN	MDA221SBRBG3	M83513/19-E02CP	MDA131SBRPG2
M83513/19-B01PN	MDAS15SBRBG1	M83513/19-C03NP	MDA221SBRPG3	M83513/19-E02CT	MDA131SBRTG2
M83513/19-B01PP	MDAS15SBRPG1	M83513/19-C03NT	MDA221SBRTG3	M83513/19-E02CW	MDA131SBRWG2
M83513/19-B01PT	MDAS15SBRTG1	M83513/19-C03NW	MDA221SBRWG3	M83513/19-E02NN	MDA231SBRBG2
M83513/19-B01PW	MDAS15SBRWG1	M83513/19-C03PN	MDAS21SBRBG3	M83513/19-E02NP	MDA231SBRPG2
M83513/19-B02CN	MDA115SBRBG2	M83513/19-C03PP	MDAS21SBRPG3	M83513/19-E02NT	MDA231SBRTG2
M83513/19-B02CP	MDA115SBRPG2	M83513/19-C03PT	MDAS21SBRTG3	M83513/19-E02NW	MDA231SBRWG2
M83513/19-B02CT	MDA115SBRTG2	M83513/19-C03PW	MDAS21SBRWG3	M83513/19-E02PN	MDAS31SBRBG2
M83513/19-B02CW	MDA115SBRWG2	M83513/19-D01CN	MDA125SBRBG1	M83513/19-E02PP	MDAS31SBRPG2
M83513/19-B02NN	MDA215SBRBG2	M83513/19-D01CP	MDA125SBRPG1	M83513/19-E02PT	MDAS31SBRTG2
M83513/19-B02NP	MDA215SBRPG2	M83513/19-D01CT	MDA125SBRTG1	M83513/19-E02PW	MDAS31SBRWG2
M83513/19-B02NT	MDA215SBRTG2	M83513/19-D01CW	MDA125SBRWG1	M83513/19-E03CN	MDA131SBRBG3
M83513/19-B02NW	MDA215SBRWG2	M83513/19-D01NN	MDA225SBRBG1	M83513/19-E03CP	MDA131SBRPG3
M83513/19-B02PN	MDAS15SBRBG2	M83513/19-D01NP	MDA225SBRPG1	M83513/19-E03CT	MDA131SBRTG3

M83513/19 (continued)

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/19-E03CW	MDA131SBRWG3	M83513/19-F01NW	MDA237SBRWG1	M83513/19-F02PW	MDAS37SBRWG2
M83513/19-E03NN	MDA231SBRBG3	M83513/19-F01PN	MDAS37SBRBG1	M83513/19-F03CN	MDA137SBRBG3
M83513/19-E03NP	MDA231SBRPG3	M83513/19-F01PP	MDAS37SBRPG1	M83513/19-F03CP	MDA137SBRPG3
M83513/19-E03NT	MDA231SBRTG3	M83513/19-F01PT	MDAS37SBRTG1	M83513/19-F03CT	MDA137SBRTG3
M83513/19-E03NW	MDA231SBRWG3	M83513/19-F01PW	MDAS37SBRWG1	M83513/19-F03CW	MDA137SBRWG3
M83513/19-E03PN	MDAS31SBRBG3	M83513/19-F02CN	MDA137SBRBG2	M83513/19-F03NN	MDA237SBRBG3
M83513/19-E03PP	MDAS31SBRPG3	M83513/19-F02CP	MDA137SBRPG2	M83513/19-F03NP	MDA237SBRPG3
M83513/19-E03PT	MDAS31SBRTG3	M83513/19-F02CT	MDA137SBRTG2	M83513/19-F03NT	MDA237SBRTG3
M83513/19-E03PW	MDAS31SBRWG3	M83513/19-F02CW	MDA137SBRWG2	M83513/19-F03NW	MDA237SBRWG3
M83513/19-F01CN	MDA137SBRBG1	M83513/19-F02NN	MDA237SBRBG2	M83513/19-F03PN	MDAS37SBRBG3
M83513/19-F01CP	MDA137SBRPG1	M83513/19-F02NP	MDA237SBRPG2	M83513/19-F03PP	MDAS37SBRPG3
M83513/19-F01CT	MDA137SBRTG1	M83513/19-F02NT	MDA237SBRTG2	M83513/19-F03PT	MDAS37SBRTG3
M83513/19-F01CW	MDA137SBRWG1	M83513/19-F02NW	MDA237SBRWG2	M83513/19-F03PW	MDAS37SBRWG3
M83513/19-F01NN	MDA237SBRBG1	M83513/19-F02PN	MDAS37SBRBG2		
M83513/19-F01NP	MDA237SBRPG1	M83513/19-F02PP	MDAS37SBRPG2		
M83513/19-F01NT	MDA237SBRTG1	M83513/19-F02PT	MDAS37SBRTG2		

MIL-DTL-88513
CONNECTORS

Rectangular
Micro-D connectors

M83513/20

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/20-G01CN	MDA151SBRBG1	M83513/20-G02CN	MDA151SBRBG2	M83513/20-G03CN	MDA151SBRBG3
M83513/20-G01CP	MDA151SBRPG1	M83513/20-G02CP	MDA151SBRPG2	M83513/20-G03CP	MDA151SBRPG3
M83513/20-G01CT	MDA151SBRTG1	M83513/20-G02CT	MDA151SBRTG2	M83513/20-G03CT	MDA151SBRTG3
M83513/20-G01CW	MDA151SBRWG1	M83513/20-G02CW	MDA151SBRWG2	M83513/20-G03CW	MDA151SBRWG3
M83513/20-G01NN	MDA251SBRBG1	M83513/20-G02NN	MDA251SBRBG2	M83513/20-G03NN	MDA251SBRBG3
M83513/20-G01NP	MDA251SBRPG1	M83513/20-G02NP	MDA251SBRPG2	M83513/20-G03NP	MDA251SBRPG3
M83513/20-G01NT	MDA251SBRTG1	M83513/20-G02NT	MDA251SBRTG2	M83513/20-G03NT	MDA251SBRTG3
M83513/20-G01NW	MDA251SBRWG1	M83513/20-G02NW	MDA251SBRWG2	M83513/20-G03NW	MDA251SBRWG3
M83513/20-G01PN	MDAS51SBRBG1	M83513/20-G02PN	MDAS51SBRBG2	M83513/20-G03PN	MDAS51SBRBG3
M83513/20-G01PP	MDAS51SBRPG1	M83513/20-G02PP	MDAS51SBRPG2	M83513/20-G03PP	MDAS51SBRPG3
M83513/20-G01PT	MDAS51SBRTG1	M83513/20-G02PT	MDAS51SBRTG2	M83513/20-G03PT	MDAS51SBRTG3
M83513/20-G01PW	MDAS51SBRWG1	M83513/20-G02PW	MDAS51SBRWG2	M83513/20-G03PW	MDAS51SBRWG3

M83513/21

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/21-H01CN	MDA1100SBRBG1	M83513/21-H02CN	MDA1100SBRBG2	M83513/21-H03CN	MDA1100SBRBG3
M83513/21-H01CP	MDA1100SBRPG1	M83513/21-H02CP	MDA1100SBRPG2	M83513/21-H03CP	MDA1100SBRPG3
M83513/21-H01CU	MDA1100SBRTG1	M83513/21-H02CU	MDA1100SBRTG2	M83513/21-H03CU	MDA1100SBRTG3
M83513/21-H01CY	MDA1100SBRWG1	M83513/21-H02CY	MDA1100SBRWG2	M83513/21-H03CY	MDA1100SBRWG3
M83513/21-H01NN	MDA2100SBRBG1	M83513/21-H02NN	MDA2100SBRBG2	M83513/21-H03NN	MDA2100SBRBG3
M83513/21-H01NP	MDA2100SBRPG1	M83513/21-H02NP	MDA2100SBRPG2	M83513/21-H03NP	MDA2100SBRPG3
M83513/21-H01NU	MDA2100SBRTG1	M83513/21-H02NU	MDA2100SBRTG2	M83513/21-H03NU	MDA2100SBRTG3
M83513/21-H01NY	MDA2100SBRWG1	M83513/21-H02NY	MDA2100SBRWG2	M83513/21-H03NY	MDA2100SBRWG3
M83513/21-H01PN	MDAS100SBRBG1	M83513/21-H02PN	MDAS100SBRBG2	M83513/21-H03PN	MDAS100SBRBG3
M83513/21-H01PP	MDAS100SBRPG1	M83513/21-H02PP	MDAS100SBRPG2	M83513/21-H03PP	MDAS100SBRPG3
M83513/21-H01PU	MDAS100SBRTG1	M83513/21-H02PU	MDAS100SBRTG2	M83513/21-H03PU	MDAS100SBRTG3
M83513/21-H01PY	MDAS100SBRWG1	M83513/21-H02PY	MDAS100SBRWG2	M83513/21-H03PY	MDAS100SBRWG3

M83513/22

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/22-A01CN	MDA109PBSBG1	M83513/22-B02PP	MDAS15PBSBG2	M83513/22-D01NT	MDA225PBSTG1
M83513/22-A01CP	MDA109PBSPG1	M83513/22-B02PT	MDAS15PBSTG2	M83513/22-D01NW	MDA225PBSWG1
M83513/22-A01CT	MDA109PBSTG1	M83513/22-B02PW	MDAS15PBSWG2	M83513/22-D01PN	MDAS25PBSBG1
M83513/22-A01CW	MDA109PBSWG1	M83513/22-B03CN	MDA115PBSBG3	M83513/22-D01PP	MDAS25PBSPG1
M83513/22-A01NN	MDA209PBSBG1	M83513/22-B03CP	MDA115PBSPG3	M83513/22-D01PT	MDAS25PBSTG1
M83513/22-A01NP	MDA209PBSPG1	M83513/22-B03CT	MDA115PBSTG3	M83513/22-D01PW	MDAS25PBSWG1
M83513/22-A01NT	MDA209PBSTG1	M83513/22-B03CW	MDA115PBSWG3	M83513/22-D02CN	MDA125PBSBG2
M83513/22-A01NW	MDA209PBSWG1	M83513/22-B03NN	MDA215PBSBG3	M83513/22-D02CP	MDA125PBSPG2
M83513/22-A01PN	MDAS09PBSBG1	M83513/22-B03NP	MDA215PBSPG3	M83513/22-D02CT	MDA125PBSTG2
M83513/22-A01PP	MDAS09PBSPG1	M83513/22-B03NT	MDA215PBSTG3	M83513/22-D02CW	MDA125PBSWG2
M83513/22-A01PT	MDAS09PBSTG1	M83513/22-B03NW	MDA215PBSWG3	M83513/22-D02NN	MDA225PBSBG2
M83513/22-A01PW	MDAS09PBSWG1	M83513/22-B03PN	MDAS15PBSBG3	M83513/22-D02NP	MDA225PBSPG2
M83513/22-A02CN	MDA109PBSBG2	M83513/22-B03PP	MDAS15PBSPG3	M83513/22-D02NT	MDA225PBSTG2
M83513/22-A02CP	MDA109PBSPG2	M83513/22-B03PT	MDAS15PBSTG3	M83513/22-D02NW	MDA225PBSWG2
M83513/22-A02CT	MDA109PBSTG2	M83513/22-B03PW	MDAS15PBSWG3	M83513/22-D02PN	MDAS25PBSBG2
M83513/22-A02CW	MDA109PBSWG2	M83513/22-C01CN	MDA121PBSBG1	M83513/22-D02PP	MDAS25PBSPG2
M83513/22-A02NN	MDA209PBSBG2	M83513/22-C01CP	MDA121PBSPG1	M83513/22-D02PT	MDAS25PBSTG2
M83513/22-A02NP	MDA209PBSPG2	M83513/22-C01CT	MDA121PBSTG1	M83513/22-D02PW	MDAS25PBSWG2
M83513/22-A02NT	MDA209PBSTG2	M83513/22-C01CW	MDA121PBSWG1	M83513/22-D03CN	MDA125PBSBG3
M83513/22-A02NW	MDA209PBSWG2	M83513/22-C01NN	MDA221PBSBG1	M83513/22-D03CP	MDA125PBSPG3
M83513/22-A02PN	MDAS09PBSBG2	M83513/22-C01NP	MDA221PBSPG1	M83513/22-D03CT	MDA125PBSTG3
M83513/22-A02PP	MDAS09PBSPG2	M83513/22-C01NT	MDA221PBSWG1	M83513/22-D03CW	MDA125PBSWG3
M83513/22-A02PT	MDAS09PBSTG2	M83513/22-C01NW	MDA221PBSWG1	M83513/22-D03NN	MDA225PBSBG3
M83513/22-A02PW	MDAS09PBSWG2	M83513/22-C01PN	MDAS21PBSBG1	M83513/22-D03NP	MDA225PBSPG3
M83513/22-A03CN	MDA109PBSBG3	M83513/22-C01PP	MDAS21PBSPG1	M83513/22-D03NT	MDA225PBSTG3
M83513/22-A03CP	MDA109PBSPG3	M83513/22-C01PT	MDAS21PBSTG1	M83513/22-D03NW	MDA225PBSWG3
M83513/22-A03CT	MDA109PBSTG3	M83513/22-C01PW	MDAS21PBSWG1	M83513/22-D03PN	MDAS25PBSBG3
M83513/22-A03CW	MDA109PBSWG3	M83513/22-C02CN	MDA121PBSBG2	M83513/22-D03PP	MDAS25PBSPG3
M83513/22-A03NN	MDA209PBSBG3	M83513/22-C02CP	MDA121PBSPG2	M83513/22-D03PT	MDAS25PBSTG3
M83513/22-A03NP	MDA209PBSPG3	M83513/22-C02CT	MDA121PBSTG2	M83513/22-D03PW	MDAS25PBSWG3
M83513/22-A03NT	MDA209PBSTG3	M83513/22-C02CW	MDA121PBSWG2	M83513/22-E01CN	MDA131PBSBG1
M83513/22-A03NW	MDA209PBSWG3	M83513/22-C02NN	MDA221PBSBG2	M83513/22-E01CP	MDA131PBSPG1
M83513/22-A03PN	MDAS09PBSBG3	M83513/22-C02NP	MDA221PBSPG2	M83513/22-E01CT	MDA131PBSTG1
M83513/22-A03PP	MDAS09PBSPG3	M83513/22-C02NT	MDA221PBSTG2	M83513/22-E01CW	MDA131PBSWG1
M83513/22-A03PT	MDAS09PBSTG3	M83513/22-C02NW	MDA221PBSWG2	M83513/22-E01NN	MDA231PBSBG1
M83513/22-A03PW	MDAS09PBSWG3	M83513/22-C02PN	MDAS21PBSBG2	M83513/22-E01NP	MDA231PBSPG1
M83513/22-B01CN	MDA115PBSBG1	M83513/22-C02PP	MDAS21PBSPG2	M83513/22-E01NT	MDA231PBSTG1
M83513/22-B01CP	MDA115PBSPG1	M83513/22-C02PT	MDAS21PBSTG2	M83513/22-E01NW	MDA231PBSWG1
M83513/22-B01CT	MDA115PBSTG1	M83513/22-C02PW	MDAS21PBSWG2	M83513/22-E01PN	MDAS31PBSBG1
M83513/22-B01CW	MDA115PBSWG1	M83513/22-C03CN	MDA121PBSBG3	M83513/22-E01PP	MDAS31PBSPG1
M83513/22-B01NN	MDA215PBSBG1	M83513/22-C03CP	MDA121PBSPG3	M83513/22-E01PT	MDAS31PBSTG1
M83513/22-B01NP	MDA215PBSPG1	M83513/22-C03CT	MDA121PBSTG3	M83513/22-E01PW	MDAS31PBSWG1
M83513/22-B01NT	MDA215PBSTG1	M83513/22-C03CW	MDA121PBSWG3	M83513/22-E02CN	MDA131PBSBG2
M83513/22-B01NW	MDA215PBSWG1	M83513/22-C03NN	MDA221PBSBG3	M83513/22-E02CP	MDA131PBSPG2
M83513/22-B01PN	MDAS15PBSBG1	M83513/22-C03NP	MDA221PBSPG3	M83513/22-E02CT	MDA131PBSTG2
M83513/22-B01PP	MDAS15PBSPG1	M83513/22-C03NT	MDA221PBSTG3	M83513/22-E02CW	MDA131PBSWG2
M83513/22-B01PT	MDAS15PBSTG1	M83513/22-C03NW	MDA221PBSWG3	M83513/22-E02NN	MDA231PBSBG2
M83513/22-B01PW	MDAS15PBSWG1	M83513/22-C03PN	MDAS21PBSBG3	M83513/22-E02NP	MDA231PBSPG2
M83513/22-B02CN	MDA115PBSBG2	M83513/22-C03PP	MDAS21PBSPG3	M83513/22-E02NT	MDA231PBSTG2
M83513/22-B02CP	MDA115PBSPG2	M83513/22-C03PT	MDAS21PBSTG3	M83513/22-E02NW	MDA231PBSWG2
M83513/22-B02CT	MDA115PBSTG2	M83513/22-C03PW	MDAS21PBSWG3	M83513/22-E02PN	MDAS31PBSBG2
M83513/22-B02CW	MDA115PBSWG2	M83513/22-D01CN	MDA125PBSBG1	M83513/22-E02PP	MDAS31PBSPG2
M83513/22-B02NN	MDA215PBSBG2	M83513/22-D01CP	MDA125PBSPG1	M83513/22-E02PT	MDAS31PBSTG2
M83513/22-B02NP	MDA215PBSPG2	M83513/22-D01CT	MDA125PBSTG1	M83513/22-E02PW	MDAS31PBSWG2
M83513/22-B02NT	MDA215PBSTG2	M83513/22-D01CW	MDA125PBSWG1	M83513/22-E03CN	MDA131PBSBG3
M83513/22-B02NW	MDA215PBSWG2	M83513/22-D01NN	MDA225PBSBG1	M83513/22-E03CP	MDA131PBSPG3
M83513/22-B02PN	MDAS15PBSBG2	M83513/22-D01NP	MDA225PBSPG1	M83513/22-E03CT	MDA131PBSTG3

M83513/22 (continued)

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/22-E03CW	MDA131PBSWG3	M83513/22-F01NW	MDA237PBSWG1	M83513/22-F02PW	MDAS37PBSWG2
M83513/22-E03NN	MDA231PBSBG3	M83513/22-F01PN	MDAS37PBSBG1	M83513/22-F03CN	MDA137PBSBG3
M83513/22-E03NP	MDA231PBSPG3	M83513/22-F01PP	MDAS37PBSPG1	M83513/22-F03CP	MDA137PBSPG3
M83513/22-E03NT	MDA231PBSTG3	M83513/22-F01PT	MDAS37PBSTG1	M83513/22-F03CT	MDA137PBSTG3
M83513/22-E03NW	MDA231PBSWG3	M83513/22-F01PW	MDAS37PBSWG1	M83513/22-F03CW	MDA137PBSWG3
M83513/22-E03PN	MDAS31PBSBG3	M83513/22-F02CN	MDA137PBSBG2	M83513/22-F03NN	MDA237PBSBG3
M83513/22-E03PP	MDAS31PBSPG3	M83513/22-F02CP	MDA137PBSPG2	M83513/22-F03NP	MDA237PBSPG3
M83513/22-E03PT	MDAS31PBSTG3	M83513/22-F02CT	MDA137PBSTG2	M83513/22-F03NT	MDA237PBSTG3
M83513/22-E03PW	MDAS31PBSWG3	M83513/22-F02CW	MDA137PBSWG2	M83513/22-F03NW	MDA237PBSWG3
M83513/22-F01CN	MDA137PBSBG1	M83513/22-F02NN	MDA237PBSBG2	M83513/22-F03PN	MDAS37PBSBG3
M83513/22-F01CP	MDA137PBSPG1	M83513/22-F02NP	MDA237PBSPG2	M83513/22-F03PP	MDAS37PBSPG3
M83513/22-F01CT	MDA137PBSTG1	M83513/22-F02NT	MDA237PBSTG2	M83513/22-F03PT	MDAS37PBSTG3
M83513/22-F01CW	MDA137PBSWG1	M83513/22-F02NW	MDA237PBSWG2	M83513/22-F03PW	MDAS37PBSWG3
M83513/22-F01NN	MDA237PBSBG1	M83513/22-F02PN	MDAS37PBSBG2		
M83513/22-F01NP	MDA237PBSPG1	M83513/22-F02PP	MDAS37PBSPG2		
M83513/22-F01NT	MDA237PBSTG1	M83513/22-F02PT	MDAS37PBSTG2		

MIL-DTL-88513
CONNECTORS

Rectangular
Micro-D connectors

M83513/23

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/23-G01CN	MDA151PBSBG1	M83513/23-G02CN	MDA151PBSBG2	M83513/23-G03CN	MDA151PBSBG3
M83513/23-G01CP	MDA151PBSPG1	M83513/23-G02CP	MDA151PBSPG2	M83513/23-G03CP	MDA151PBSPG3
M83513/23-G01CT	MDA151PBSTG1	M83513/23-G02CT	MDA151PBSTG2	M83513/23-G03CT	MDA151PBSTG3
M83513/23-G01CW	MDA151PBSWG1	M83513/23-G02CW	MDA151PBSWG2	M83513/23-G03CW	MDA151PBSWG3
M83513/23-G01NN	MDA251PBSBG1	M83513/23-G02NN	MDA251PBSBG2	M83513/23-G03NN	MDA251PBSBG3
M83513/23-G01NP	MDA251PBSPG1	M83513/23-G02NP	MDA251PBSPG2	M83513/23-G03NP	MDA251PBSPG3
M83513/23-G01NT	MDA251PBSTG1	M83513/23-G02NT	MDA251PBSTG2	M83513/23-G03NT	MDA251PBSTG3
M83513/23-G01NW	MDA251PBSWG1	M83513/23-G02NW	MDA251PBSWG2	M83513/23-G03NW	MDA251PBSWG3
M83513/23-G01PN	MDAS51PBSBG1	M83513/23-G02PN	MDAS51PBSBG2	M83513/23-G03PN	MDAS51PBSBG3
M83513/23-G01PP	MDAS51PBSPG1	M83513/23-G02PP	MDAS51PBSPG2	M83513/23-G03PP	MDAS51PBSPG3
M83513/23-G01PT	MDAS51PBSTG1	M83513/23-G02PT	MDAS51PBSTG2	M83513/23-G03PT	MDAS51PBSTG3
M83513/23-G01PW	MDAS51PBSWG1	M83513/23-G02PW	MDAS51PBSWG2	M83513/23-G03PW	MDAS51PBSWG3

M83513/24

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/24-H01CN	MDA1100PBSBG1	M83513/24-H02CN	MDA1100PBSBG2	M83513/24-H03CN	MDA1100PBSBG3
M83513/24-H01CP	MDA1100PBSPG1	M83513/24-H02CP	MDA1100PBSPG2	M83513/24-H03CP	MDA1100PBSPG3
M83513/24-H01CU	MDA1100PBSTG1	M83513/24-H02CU	MDA1100PBSTG2	M83513/24-H03CU	MDA1100PBSTG3
M83513/24-H01CY	MDA1100PBSWG1	M83513/24-H02CY	MDA1100PBSWG2	M83513/24-H03CY	MDA1100PBSWG3
M83513/24-H01NN	MDA2100PBSBG1	M83513/24-H02NN	MDA2100PBSBG2	M83513/24-H03NN	MDA2100PBSBG3
M83513/24-H01NP	MDA2100PBSPG1	M83513/24-H02NP	MDA2100PBSPG2	M83513/24-H03NP	MDA2100PBSPG3
M83513/24-H01NU	MDA2100PBSTG1	M83513/24-H02NU	MDA2100PBSTG2	M83513/24-H03NU	MDA2100PBSTG3
M83513/24-H01NY	MDA2100PBSWG1	M83513/24-H02NY	MDA2100PBSWG2	M83513/24-H03NY	MDA2100PBSWG3
M83513/24-H01PN	MDAS100PBSBG1	M83513/24-H02PN	MDAS100PBSBG2	M83513/24-H03PN	MDAS100PBSBG3
M83513/24-H01PP	MDAS100PBSPG1	M83513/24-H02PP	MDAS100PBSPG2	M83513/24-H03PP	MDAS100PBSPG3
M83513/24-H01PU	MDAS100PBSTG1	M83513/24-H02PU	MDAS100PBSTG2	M83513/24-H03PU	MDAS100PBSTG3
M83513/24-H01PY	MDAS100PBSWG1	M83513/24-H02PY	MDAS100PBSWG2	M83513/24-H03PY	MDAS100PBSWG3

M83513/25

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/25-A01CN	MDA109SBSBG1	M83513/25-B02PP	MDAS15SBSBG2	M83513/25-D01NT	MDA225SBSTG1
M83513/25-A01CP	MDA109SBSPG1	M83513/25-B02PT	MDAS15SBSTG2	M83513/25-D01NW	MDA225SBSWG1
M83513/25-A01CT	MDA109SBSTG1	M83513/25-B02PW	MDAS15SBSWG2	M83513/25-D01PN	MDAS25SBSBG1
M83513/25-A01CW	MDA109SBSWG1	M83513/25-B03CN	MDA115SBSBG3	M83513/25-D01PP	MDAS25SBSPG1
M83513/25-A01NN	MDA209SBSBG1	M83513/25-B03CP	MDA115SBSPG3	M83513/25-D01PT	MDAS25SBSTG1
M83513/25-A01NP	MDA209SBSPG1	M83513/25-B03CT	MDA115SBSTG3	M83513/25-D01PW	MDAS25SBSWG1
M83513/25-A01NT	MDA209SBSTG1	M83513/25-B03CW	MDA115SBSWG3	M83513/25-D02CN	MDA125SBSBG2
M83513/25-A01NW	MDA209SBSWG1	M83513/25-B03NN	MDA215SBSBG3	M83513/25-D02CP	MDA125SBSPG2
M83513/25-A01PN	MDAS09SBSBG1	M83513/25-B03NP	MDA215SBSPG3	M83513/25-D02CT	MDA125SBSTG2
M83513/25-A01PP	MDAS09SBSPG1	M83513/25-B03NT	MDA215SBSTG3	M83513/25-D02CW	MDA125SBSWG2
M83513/25-A01PT	MDAS09SBSTG1	M83513/25-B03NW	MDA215SBSWG3	M83513/25-D02NN	MDA225SBSBG2
M83513/25-A01PW	MDAS09SBSWG1	M83513/25-B03PN	MDAS15SBSBG3	M83513/25-D02NP	MDA225SBSPG2
M83513/25-A02CN	MDA109SBSBG2	M83513/25-B03PP	MDAS15SBSPG3	M83513/25-D02NT	MDA225SBSTG2
M83513/25-A02CP	MDA109SBSPG2	M83513/25-B03PT	MDAS15SBSTG3	M83513/25-D02NW	MDA225SBSWG2
M83513/25-A02CT	MDA109SBSTG2	M83513/25-B03PW	MDAS15SBSWG3	M83513/25-D02PN	MDAS25SBSBG2
M83513/25-A02CW	MDA109SBSWG2	M83513/25-C01CN	MDA121SBSBG1	M83513/25-D02PP	MDAS25SBSPG2
M83513/25-A02NN	MDA209SBSBG2	M83513/25-C01CP	MDA121SBSPG1	M83513/25-D02PT	MDAS25SBSTG2
M83513/25-A02NP	MDA209SBSPG2	M83513/25-C01CT	MDA121SBSTG1	M83513/25-D02PW	MDAS25SBSWG2
M83513/25-A02NT	MDA209SBSTG2	M83513/25-C01CW	MDA121SBSWG1	M83513/25-D03CN	MDA125SBSBG3
M83513/25-A02NW	MDA209SBSWG2	M83513/25-C01NN	MDA221SBSBG1	M83513/25-D03CP	MDA125SBSPG3
M83513/25-A02PN	MDAS09SBSBG2	M83513/25-C01NP	MDA221SBSPG1	M83513/25-D03CT	MDA125SBSTG3
M83513/25-A02PP	MDAS09SBSPG2	M83513/25-C01NT	MDA221SBSTG1	M83513/25-D03CW	MDA125SBSWG3
M83513/25-A02PT	MDAS09SBSTG2	M83513/25-C01NW	MDA221SBSWG1	M83513/25-D03NN	MDA225SBSBG3
M83513/25-A02PW	MDAS09SBSWG2	M83513/25-C01PN	MDAS21SBSBG1	M83513/25-D03NP	MDA225SBSPG3
M83513/25-A03CN	MDA109SBSBG3	M83513/25-C01PP	MDAS21SBSPG1	M83513/25-D03NT	MDA225SBSTG3
M83513/25-A03CP	MDA109SBSPG3	M83513/25-C01PT	MDAS21SBSTG1	M83513/25-D03NW	MDA225SBSWG3
M83513/25-A03CT	MDA109SBSTG3	M83513/25-C01PW	MDAS21SBSWG1	M83513/25-D03PN	MDAS25SBSBG3
M83513/25-A03CW	MDA109SBSWG3	M83513/25-C02CN	MDA121SBSBG2	M83513/25-D03PP	MDAS25SBSPG3
M83513/25-A03NN	MDA209SBSBG3	M83513/25-C02CP	MDA121SBSPG2	M83513/25-D03PT	MDAS25SBSTG3
M83513/25-A03NP	MDA209SBSPG3	M83513/25-C02CT	MDA121SBSTG2	M83513/25-D03PW	MDAS25SBSWG3
M83513/25-A03NT	MDA209SBSTG3	M83513/25-C02CW	MDA121SBSWG2	M83513/25-E01CN	MDA131SBSBG1
M83513/25-A03NW	MDA209SBSWG3	M83513/25-C02NN	MDA221SBSBG2	M83513/25-E01CP	MDA131SBSPG1
M83513/25-A03PN	MDAS09SBSBG3	M83513/25-C02NP	MDA221SBSPG2	M83513/25-E01CT	MDA131SBSTG1
M83513/25-A03PP	MDAS09SBSPG3	M83513/25-C02NT	MDA221SBSTG2	M83513/25-E01CW	MDA131SBSWG1
M83513/25-A03PT	MDAS09SBSTG3	M83513/25-C02NW	MDA221SBSWG2	M83513/25-E01NN	MDA231SBSBG1
M83513/25-A03PW	MDAS09SBSWG3	M83513/25-C02PN	MDAS21SBSBG2	M83513/25-E01NP	MDA231SBSPG1
M83513/25-B01CN	MDA115SBSBG1	M83513/25-C02PP	MDAS21SBSPG2	M83513/25-E01NT	MDA231SBSTG1
M83513/25-B01CP	MDA115SBSPG1	M83513/25-C02PT	MDAS21SBSTG2	M83513/25-E01NW	MDA231SBSWG1
M83513/25-B01CT	MDA115SBSTG1	M83513/25-C02PW	MDAS21SBSWG2	M83513/25-E01PN	MDAS31SBSBG1
M83513/25-B01CW	MDA115SBSWG1	M83513/25-C03CN	MDA121SBSBG3	M83513/25-E01PP	MDAS31SBSPG1
M83513/25-B01NN	MDA215SBSBG1	M83513/25-C03CP	MDA121SBSPG3	M83513/25-E01PT	MDAS31SBSTG1
M83513/25-B01NP	MDA215SBSPG1	M83513/25-C03CT	MDA121SBSTG3	M83513/25-E01PW	MDAS31SBSWG1
M83513/25-B01NT	MDA215SBSTG1	M83513/25-C03CW	MDA121SBSWG3	M83513/25-E02CN	MDA131SBSBG2
M83513/25-B01NW	MDA215SBSWG1	M83513/25-C03NN	MDA221SBSBG3	M83513/25-E02CP	MDA131SBSPG2
M83513/25-B01PN	MDAS15SBSBG1	M83513/25-C03NP	MDA221SBSPG3	M83513/25-E02CT	MDA131SBSTG2
M83513/25-B01PP	MDAS15SBSPG1	M83513/25-C03NT	MDA221SBSTG3	M83513/25-E02CW	MDA131SBSWG2
M83513/25-B01PT	MDAS15SBSTG1	M83513/25-C03NW	MDA221SBSWG3	M83513/25-E02NN	MDA231SBSBG2
M83513/25-B01PW	MDAS15SBSWG1	M83513/25-C03PN	MDAS21SBSBG3	M83513/25-E02NP	MDA231SBSPG2
M83513/25-B02CN	MDA115SBSBG2	M83513/25-C03PP	MDAS21SBSPG3	M83513/25-E02NT	MDA231SBSTG2
M83513/25-B02CP	MDA115SBSPG2	M83513/25-C03PT	MDAS21SBSTG3	M83513/25-E02NW	MDA231SBSWG2
M83513/25-B02CT	MDA115SBSTG2	M83513/25-C03PW	MDAS21SBSWG3	M83513/25-E02PN	MDAS31SBSBG2
M83513/25-B02CW	MDA115SBSWG2	M83513/25-D01CN	MDA125SBSBG1	M83513/25-E02PP	MDAS31SBSPG2
M83513/25-B02NN	MDA215SBSBG2	M83513/25-D01CP	MDA125SBSPG1	M83513/25-E02PT	MDAS31SBSTG2
M83513/25-B02NP	MDA215SBSPG2	M83513/25-D01CT	MDA125SBSTG1	M83513/25-E02PW	MDAS31SBSWG2
M83513/25-B02NT	MDA215SBSTG2	M83513/25-D01CW	MDA125SBSWG1	M83513/25-E03CN	MDA131SBSBG3
M83513/25-B02NW	MDA215SBSWG2	M83513/25-D01NN	MDA225SBSBG1	M83513/25-E03CP	MDA131SBSPG3
M83513/25-B02PN	MDAS15SBSBG2	M83513/25-D01NP	MDA225SBSPG1	M83513/25-E03CT	MDA131SBSTG3

M83513/25 (continued)

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/25-E03CW	MDA131SBSWG3	M83513/25-F01NT	MDA237SBSTG1	M83513/25-F02PP	MDAS37SBSPG2
M83513/25-E03NN	MDA231SBSBG3	M83513/25-F01NW	MDA237SBSWG1	M83513/25-F02PT	MDAS37SBSTG2
M83513/25-E03NP	MDA231SBSBG3	M83513/25-F01PN	MDAS37SBSBG1	M83513/25-F02PW	MDAS37SBSWG2
M83513/25-E03NT	MDA231SBSTG3	M83513/25-F01PP	MDAS37SBSBG1	M83513/25-F03CN	MDA137SBSBG3
M83513/25-E03NW	MDA231SBSWG3	M83513/25-F01PT	MDAS37SBSTG1	M83513/25-F03CP	MDA137SBSBG3
M83513/25-E03PN	MDAS31SBSBG3	M83513/25-F01PW	MDAS37SBSWG1	M83513/25-F03CT	MDA137SBSTG3
M83513/25-E03PP	MDAS31SBSBG3	M83513/25-F02CN	MDA137SBSBG2	M83513/25-F03CW	MDA137SBSWG3
M83513/25-E03PT	MDAS31SBSTG3	M83513/25-F02CP	MDA137SBSBG2	M83513/25-F03NN	MDA237SBSBG3
M83513/25-E03PW	MDAS31SBSWG3	M83513/25-F02CT	MDA137SBSTG2	M83513/25-F03NP	MDA237SBSBG3
M83513/25-F01CN	MDA137SBSBG1	M83513/25-F02CW	MDA137SBSWG2	M83513/25-F03NT	MDA237SBSTG3
M83513/25-F01CP	MDA137SBSBG1	M83513/25-F02NN	MDA237SBSBG2	M83513/25-F03NW	MDA237SBSWG3
M83513/25-F01CT	MDA137SBSTG1	M83513/25-F02NP	MDA237SBSBG2	M83513/25-F03PN	MDAS37SBSBG3
M83513/25-F01CW	MDA137SBSWG1	M83513/25-F02NT	MDA237SBSTG2	M83513/25-F03PP	MDAS37SBSBG3
M83513/25-F01NN	MDA237SBSBG1	M83513/25-F02NW	MDA237SBSWG2	M83513/25-F03PT	MDAS37SBSTG3
M83513/25-F01NP	MDA237SBSBG1	M83513/25-F02PN	MDAS37SBSBG2	M83513/25-F03PW	MDAS37SBSWG3

MIL-DTL-88513
CONNECTORS

Rectangular
Micro-D connectors

M83513/26

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/26-G01CN	MDA151SBSBG1	M83513/26-G02CN	MDA151SBSBG2	M83513/26-G03CN	MDA151SBSBG3
M83513/26-G01CP	MDA151SBSBG1	M83513/26-G02CP	MDA151SBSBG2	M83513/26-G03CP	MDA151SBSBG3
M83513/26-G01CT	MDA151SBSTG1	M83513/26-G02CT	MDA151SBSTG2	M83513/26-G03CT	MDA151SBSTG3
M83513/26-G01CW	MDA151SBSWG1	M83513/26-G02CW	MDA151SBSWG2	M83513/26-G03CW	MDA151SBSWG3
M83513/26-G01NN	MDA251SBSBG1	M83513/26-G02NN	MDA251SBSBG2	M83513/26-G03NN	MDA251SBSBG3
M83513/26-G01NP	MDA251SBSBG1	M83513/26-G02NP	MDA251SBSBG2	M83513/26-G03NP	MDA251SBSBG3
M83513/26-G01NT	MDA251SBSTG1	M83513/26-G02NT	MDA251SBSTG2	M83513/26-G03NT	MDA251SBSTG3
M83513/26-G01NW	MDA251SBSWG1	M83513/26-G02NW	MDA251SBSWG2	M83513/26-G03NW	MDA251SBSWG3
M83513/26-G01PN	MDAS51SBSBG1	M83513/26-G02PN	MDAS51SBSBG2	M83513/26-G03PN	MDAS51SBSBG3
M83513/26-G01PP	MDAS51SBSBG1	M83513/26-G02PP	MDAS51SBSBG2	M83513/26-G03PP	MDAS51SBSBG3
M83513/26-G01PT	MDAS51SBSTG1	M83513/26-G02PT	MDAS51SBSTG2	M83513/26-G03PT	MDAS51SBSTG3
M83513/26-G01PW	MDAS51SBSWG1	M83513/26-G02PW	MDAS51SBSWG2	M83513/26-G03PW	MDAS51SBSWG3

M83513/27

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/27-H01CN	MDA1100SBSBG1	M83513/27-H02CN	MDA1100SBSBG2	M83513/27-H03CN	MDA1100SBSBG3
M83513/27-H01CP	MDA1100SBSBG1	M83513/27-H02CP	MDA1100SBSBG2	M83513/27-H03CP	MDA1100SBSBG3
M83513/27-H01CU	MDA1100SBSTG1	M83513/27-H02CU	MDA1100SBSTG2	M83513/27-H03CU	MDA1100SBSTG3
M83513/27-H01CY	MDA1100SBSWG1	M83513/27-H02CY	MDA1100SBSWG2	M83513/27-H03CY	MDA1100SBSWG3
M83513/27-H01NN	MDA2100SBSBG1	M83513/27-H02NN	MDA2100SBSBG2	M83513/27-H03NN	MDA2100SBSBG3
M83513/27-H01NP	MDA2100SBSBG1	M83513/27-H02NP	MDA2100SBSBG2	M83513/27-H03NP	MDA2100SBSBG3
M83513/27-H01NU	MDA2100SBSTG1	M83513/27-H02NU	MDA2100SBSTG2	M83513/27-H03NU	MDA2100SBSTG3
M83513/27-H01NY	MDA2100SBSWG1	M83513/27-H02NY	MDA2100SBSWG2	M83513/27-H03NY	MDA2100SBSWG3
M83513/27-H01PN	MDAS100SBSBG1	M83513/27-H02PN	MDAS100SBSBG2	M83513/27-H03PN	MDAS100SBSBG3
M83513/27-H01PP	MDAS100SBSBG1	M83513/27-H02PP	MDAS100SBSBG2	M83513/27-H03PP	MDAS100SBSBG3
M83513/27-H01PU	MDAS100SBSTG1	M83513/27-H02PU	MDAS100SBSTG2	M83513/27-H03PU	MDAS100SBSTG3
M83513/27-H01PY	MDAS100SBSWG1	M83513/27-H02PY	MDAS100SBSWG2	M83513/27-H03PY	MDAS100SBSWG3

M83513/28

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/28-A01CN	MDA109P75SABG1	M83513/28-B02PP	MDAS15P75SAPG2	M83513/28-D01NT	MDA225P75SATG1
M83513/28-A01CP	MDA109P75SAPG1	M83513/28-B02PT	MDAS15P75SATG2	M83513/28-D01NW	MDA225P75SAWG1
M83513/28-A01CT	MDA109P75SATG1	M83513/28-B02PW	MDAS15P75SAWG2	M83513/28-D01PN	MDAS25P75SABG1
M83513/28-A01CW	MDA109P75SAWG1	M83513/28-B03CN	MDA115P75SABG3	M83513/28-D01PP	MDAS25P75SAPG1
M83513/28-A01NN	MDA209P75SABG1	M83513/28-B03CP	MDA115P75SAPG3	M83513/28-D01PT	MDAS25P75SATG1
M83513/28-A01NP	MDA209P75SAPG1	M83513/28-B03CT	MDA115P75SATG3	M83513/28-D01PW	MDAS25P75SAWG1
M83513/28-A01NT	MDA209P75SATG1	M83513/28-B03CW	MDA115P75SAWG3	M83513/28-D02CN	MDA125P75SABG2
M83513/28-A01NW	MDA209P75SAWG1	M83513/28-B03NN	MDA215P75SABG3	M83513/28-D02CP	MDA125P75SAPG2
M83513/28-A01PN	MDAS09P75SABG1	M83513/28-B03NP	MDA215P75SAPG3	M83513/28-D02CT	MDA125P75SATG2
M83513/28-A01PP	MDAS09P75SAPG1	M83513/28-B03NT	MDA215P75SATG3	M83513/28-D02CW	MDA125P75SAWG2
M83513/28-A01PT	MDAS09P75SATG1	M83513/28-B03NW	MDA215P75SAWG3	M83513/28-D02NN	MDA225P75SABG2
M83513/28-A01PW	MDAS09P75SAWG1	M83513/28-B03PN	MDAS15P75SABG3	M83513/28-D02NP	MDA225P75SAPG2
M83513/28-A02CN	MDA109P75SABG2	M83513/28-B03PP	MDAS15P75SAPG3	M83513/28-D02NT	MDA225P75SATG2
M83513/28-A02CP	MDA109P75SAPG2	M83513/28-B03PT	MDAS15P75SATG3	M83513/28-D02NW	MDA225P75SAWG2
M83513/28-A02CT	MDA109P75SATG2	M83513/28-B03PW	MDAS15P75SAWG3	M83513/28-D02PN	MDAS25P75SABG2
M83513/28-A02CW	MDA109P75SAWG2	M83513/28-C01CN	MDA121P75SABG1	M83513/28-D02PP	MDAS25P75SAPG2
M83513/28-A02NN	MDA209P75SABG2	M83513/28-C01CP	MDA121P75SAPG1	M83513/28-D02PT	MDAS25P75SATG2
M83513/28-A02NP	MDA209P75SAPG2	M83513/28-C01CT	MDA121P75SATG1	M83513/28-D02PW	MDAS25P75SAWG2
M83513/28-A02NT	MDA209P75SATG2	M83513/28-C01CW	MDA121P75SAWG1	M83513/28-D03CN	MDA125P75SABG3
M83513/28-A02NW	MDA209P75SAWG2	M83513/28-C01NN	MDA221P75SABG1	M83513/28-D03CP	MDA125P75SAPG3
M83513/28-A02PN	MDAS09P75SABG2	M83513/28-C01NP	MDA221P75SAPG1	M83513/28-D03CT	MDA125P75SATG3
M83513/28-A02PP	MDAS09P75SAPG2	M83513/28-C01NT	MDA221P75SATG1	M83513/28-D03CW	MDA125P75SAWG3
M83513/28-A02PT	MDAS09P75SATG2	M83513/28-C01NW	MDA221P75SAWG1	M83513/28-D03NN	MDA225P75SABG3
M83513/28-A02PW	MDAS09P75SAWG2	M83513/28-C01PN	MDAS21P75SABG1	M83513/28-D03NP	MDA225P75SAPG3
M83513/28-A03CN	MDA109P75SABG3	M83513/28-C01PP	MDAS21P75SAPG1	M83513/28-D03NT	MDA225P75SATG3
M83513/28-A03CP	MDA109P75SAPG3	M83513/28-C01PT	MDAS21P75SATG1	M83513/28-D03NW	MDA225P75SAWG3
M83513/28-A03CT	MDA109P75SATG3	M83513/28-C01PW	MDAS21P75SAWG1	M83513/28-D03PN	MDAS25P75SABG3
M83513/28-A03CW	MDA109P75SAWG3	M83513/28-C02CN	MDA121P75SABG2	M83513/28-D03PP	MDAS25P75SAPG3
M83513/28-A03NN	MDA209P75SABG3	M83513/28-C02CP	MDA121P75SAPG2	M83513/28-D03PT	MDAS25P75SATG3
M83513/28-A03NP	MDA209P75SAPG3	M83513/28-C02CT	MDA121P75SATG2	M83513/28-D03PW	MDAS25P75SAWG3
M83513/28-A03NT	MDA209P75SATG3	M83513/28-C02CW	MDA121P75SAWG2	M83513/28-E01CN	MDA131P75SABG1
M83513/28-A03NW	MDA209P75SAWG3	M83513/28-C02NN	MDA221P75SABG2	M83513/28-E01CP	MDA131P75SAPG1
M83513/28-A03PN	MDAS09P75SABG3	M83513/28-C02NP	MDA221P75SAPG2	M83513/28-E01CT	MDA131P75SATG1
M83513/28-A03PP	MDAS09P75SAPG3	M83513/28-C02NT	MDA221P75SATG2	M83513/28-E01CW	MDA131P75SAWG1
M83513/28-A03PT	MDAS09P75SATG3	M83513/28-C02NW	MDA221P75SAWG2	M83513/28-E01NN	MDA231P75SABG1
M83513/28-A03PW	MDAS09P75SAWG3	M83513/28-C02PN	MDAS21P75SABG2	M83513/28-E01NP	MDA231P75SAPG1
M83513/28-B01CN	MDA115P75SABG1	M83513/28-C02PP	MDAS21P75SAPG2	M83513/28-E01NT	MDA231P75SATG1
M83513/28-B01CP	MDA115P75SAPG1	M83513/28-C02PT	MDAS21P75SATG2	M83513/28-E01NW	MDA231P75SAWG1
M83513/28-B01CT	MDA115P75SATG1	M83513/28-C02PW	MDAS21P75SAWG2	M83513/28-E01PN	MDAS31P75SABG1
M83513/28-B01CW	MDA115P75SAWG1	M83513/28-C03CN	MDA121P75SABG3	M83513/28-E01PP	MDAS31P75SAPG1
M83513/28-B01NN	MDA215P75SABG1	M83513/28-C03CP	MDA121P75SAPG3	M83513/28-E01PT	MDAS31P75SATG1
M83513/28-B01NP	MDA215P75SAPG1	M83513/28-C03CT	MDA121P75SATG3	M83513/28-E01PW	MDAS31P75SAWG1
M83513/28-B01NT	MDA215P75SATG1	M83513/28-C03CW	MDA121P75SAWG3	M83513/28-E02CN	MDA131P75SABG2
M83513/28-B01NW	MDA215P75SAWG1	M83513/28-C03NN	MDA221P75SABG3	M83513/28-E02CP	MDA131P75SAPG2
M83513/28-B01PN	MDAS15P75SABG1	M83513/28-C03NP	MDA221P75SAPG3	M83513/28-E02CT	MDA131P75SATG2
M83513/28-B01PP	MDAS15P75SAPG1	M83513/28-C03NT	MDA221P75SATG3	M83513/28-E02CW	MDA131P75SAWG2
M83513/28-B01PT	MDAS15P75SATG1	M83513/28-C03NW	MDA221P75SAWG3	M83513/28-E02NN	MDA231P75SABG2
M83513/28-B01PW	MDAS15P75SAWG1	M83513/28-C03PN	MDAS21P75SABG3	M83513/28-E02NP	MDA231P75SAPG2
M83513/28-B02CN	MDA115P75SABG2	M83513/28-C03PP	MDAS21P75SAPG3	M83513/28-E02NT	MDA231P75SATG2
M83513/28-B02CP	MDA115P75SAPG2	M83513/28-C03PT	MDAS21P75SATG3	M83513/28-E02NW	MDA231P75SAWG2
M83513/28-B02CT	MDA115P75SATG2	M83513/28-C03PW	MDAS21P75SAWG3	M83513/28-E02PN	MDAS31P75SABG2
M83513/28-B02CW	MDA115P75SAWG2	M83513/28-D01CN	MDA125P75SABG1	M83513/28-E02PP	MDAS31P75SAPG2
M83513/28-B02NN	MDA215P75SABG2	M83513/28-D01CP	MDA125P75SAPG1	M83513/28-E02PT	MDAS31P75SATG2
M83513/28-B02NP	MDA215P75SAPG2	M83513/28-D01CT	MDA125P75SATG1	M83513/28-E02PW	MDAS31P75SAWG2
M83513/28-B02NT	MDA215P75SATG2	M83513/28-D01CW	MDA125P75SAWG1	M83513/28-E03CN	MDA131P75SABG3
M83513/28-B02NW	MDA215P75SAWG2	M83513/28-D01NN	MDA225P75SABG1	M83513/28-E03CP	MDA131P75SAPG3
M83513/28-B02PN	MDAS15P75SABG2	M83513/28-D01NP	MDA225P75SAPG1	M83513/28-E03CT	MDA131P75SATG3

M83513/28 (continued)

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/28-E03CW	MDA131P75SAWG3	M83513/28-F01NW	MDA237P75SAWG1	M83513/28-F02PW	MDAS37P75SAWG2
M83513/28-E03NN	MDA231P75SABG3	M83513/28-F01PN	MDAS37P75SABG1	M83513/28-F03CN	MDA137P75SABG3
M83513/28-E03NP	MDA231P75SAPG3	M83513/28-F01PP	MDAS37P75SAPG1	M83513/28-F03CP	MDA137P75SAPG3
M83513/28-E03NT	MDA231P75SATG3	M83513/28-F01PT	MDAS37P75SATG1	M83513/28-F03CT	MDA137P75SATG3
M83513/28-E03NW	MDA231P75SAWG3	M83513/28-F01PW	MDAS37P75SAWG1	M83513/28-F03CW	MDA137P75SAWG3
M83513/28-E03PN	MDAS31P75SABG3	M83513/28-F02CN	MDA137P75SABG2	M83513/28-F03NN	MDA237P75SABG3
M83513/28-E03PP	MDAS31P75SAPG3	M83513/28-F02CP	MDA137P75SAPG2	M83513/28-F03NP	MDA237P75SAPG3
M83513/28-E03PT	MDAS31P75SATG3	M83513/28-F02CT	MDA137P75SATG2	M83513/28-F03NT	MDA237P75SATG3
M83513/28-E03PW	MDAS31P75SAWG3	M83513/28-F02CW	MDA137P75SAWG2	M83513/28-F03NW	MDA237P75SAWG3
M83513/28-F01CN	MDA137P75SABG1	M83513/28-F02NN	MDA237P75SABG2	M83513/28-F03PN	MDAS37P75SABG3
M83513/28-F01CP	MDA137P75SAPG1	M83513/28-F02NP	MDA237P75SAPG2	M83513/28-F03PP	MDAS37P75SAPG3
M83513/28-F01CT	MDA137P75SATG1	M83513/28-F02NT	MDA237P75SATG2	M83513/28-F03PT	MDAS37P75SATG3
M83513/28-F01CW	MDA137P75SAWG1	M83513/28-F02NW	MDA237P75SAWG2	M83513/28-F03PW	MDAS37P75SAWG3
M83513/28-F01NN	MDA237P75SABG1	M83513/28-F02PN	MDAS37P75SABG2		
M83513/28-F01NP	MDA237P75SAPG1	M83513/28-F02PP	MDAS37P75SAPG2		
M83513/28-F01NT	MDA237P75SATG1	M83513/28-F02PT	MDAS37P75SATG2		

MIL-DTL-88513
CONNECTORS

Rectangular
Micro-D connectors

M83513/29

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/29-G01CN	MDA151P75SABG1	M83513/29-G02CN	MDA151P75SABG2	M83513/29-G03CN	MDA151P75SABG3
M83513/29-G01CP	MDA151P75SAPG1	M83513/29-G02CP	MDA151P75SAPG2	M83513/29-G03CP	MDA151P75SAPG3
M83513/29-G01CT	MDA151P75SATG1	M83513/29-G02CT	MDA151P75SATG2	M83513/29-G03CT	MDA151P75SATG3
M83513/29-G01CW	MDA151P75SAWG1	M83513/29-G02CW	MDA151P75SAWG2	M83513/29-G03CW	MDA151P75SAWG3
M83513/29-G01NN	MDA251P75SABG1	M83513/29-G02NN	MDA251P75SABG2	M83513/29-G03NN	MDA251P75SABG3
M83513/29-G01NP	MDA251P75SAPG1	M83513/29-G02NP	MDA251P75SAPG2	M83513/29-G03NP	MDA251P75SAPG3
M83513/29-G01NT	MDA251P75SATG1	M83513/29-G02NT	MDA251P75SATG2	M83513/29-G03NT	MDA251P75SATG3
M83513/29-G01NW	MDA251P75SAWG1	M83513/29-G02NW	MDA251P75SAWG2	M83513/29-G03NW	MDA251P75SAWG3
M83513/29-G01PN	MDAS51P75SABG1	M83513/29-G02PN	MDAS51P75SABG2	M83513/29-G03PN	MDAS51P75SABG3
M83513/29-G01PP	MDAS51P75SAPG1	M83513/29-G02PP	MDAS51P75SAPG2	M83513/29-G03PP	MDAS51P75SAPG3
M83513/29-G01PT	MDAS51P75SATG1	M83513/29-G02PT	MDAS51P75SATG2	M83513/29-G03PT	MDAS51P75SATG3
M83513/29-G01PW	MDAS51P75SAWG1	M83513/29-G02PW	MDAS51P75SAWG2	M83513/29-G03PW	MDAS51P75SAWG3

M83513/30

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/30-H01CN	MDA1100P75SABG1	M83513/30-H02CN	MDA1100P75SABG2	M83513/30-H03CN	MDA1100P75SABG3
M83513/30-H01CP	MDA1100P75SAPG1	M83513/30-H02CP	MDA1100P75SAPG2	M83513/30-H03CP	MDA1100P75SAPG3
M83513/30-H01CU	MDA1100P75SATG1	M83513/30-H02CU	MDA1100P75SATG2	M83513/30-H03CU	MDA1100P75SATG3
M83513/30-H01CY	MDA1100P75SAWG1	M83513/30-H02CY	MDA1100P75SAWG2	M83513/30-H03CY	MDA1100P75SAWG3
M83513/30-H01NN	MDA2100P75SABG1	M83513/30-H02NN	MDA2100P75SABG2	M83513/30-H03NN	MDA2100P75SABG3
M83513/30-H01NP	MDA2100P75SAPG1	M83513/30-H02NP	MDA2100P75SAPG2	M83513/30-H03NP	MDA2100P75SAPG3
M83513/30-H01NU	MDA2100P75SATG1	M83513/30-H02NU	MDA2100P75SATG2	M83513/30-H03NU	MDA2100P75SATG3
M83513/30-H01NY	MDA2100P75SAWG1	M83513/30-H02NY	MDA2100P75SAWG2	M83513/30-H03NY	MDA2100P75SAWG3
M83513/30-H01PN	MDAS100P75SABG1	M83513/30-H02PN	MDAS100P75SABG2	M83513/30-H03PN	MDAS100P75SABG3
M83513/30-H01PP	MDAS100P75SAPG1	M83513/30-H02PP	MDAS100P75SAPG2	M83513/30-H03PP	MDAS100P75SAPG3
M83513/30-H01PU	MDAS100P75SATG1	M83513/30-H02PU	MDAS100P75SATG2	M83513/30-H03PU	MDAS100P75SATG3
M83513/30-H01PY	MDAS100P75SAWG1	M83513/30-H02PY	MDAS100P75SAWG2	M83513/30-H03PY	MDAS100P75SAWG3

M83513/31

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/31-A01CN	MDA109S75SABG1	M83513/31-B02PP	MDAS15S75SAPG2	M83513/31-D01NT	MDA225S75SATG1
M83513/31-A01CP	MDA109S75SAPG1	M83513/31-B02PT	MDAS15S75SATG2	M83513/31-D01NW	MDA225S75SAWG1
M83513/31-A01CT	MDA109S75SATG1	M83513/31-B02PW	MDAS15S75SAWG2	M83513/31-D01PN	MDAS25S75SABG1
M83513/31-A01CW	MDA109S75SAWG1	M83513/31-B03CN	MDA115S75SABG3	M83513/31-D01PP	MDAS25S75SAPG1
M83513/31-A01NN	MDA209S75SABG1	M83513/31-B03CP	MDA115S75SAPG3	M83513/31-D01PT	MDAS25S75SATG1
M83513/31-A01NP	MDA209S75SAPG1	M83513/31-B03CT	MDA115S75SATG3	M83513/31-D01PW	MDAS25S75SAWG1
M83513/31-A01NT	MDA209S75SATG1	M83513/31-B03CW	MDA115S75SAWG3	M83513/31-D02CN	MDA125S75SABG2
M83513/31-A01NW	MDA209S75SAWG1	M83513/31-B03NN	MDA215S75SABG3	M83513/31-D02CP	MDA125S75SAPG2
M83513/31-A01PN	MDAS09S75SABG1	M83513/31-B03NP	MDA215S75SAPG3	M83513/31-D02CT	MDA125S75SATG2
M83513/31-A01PP	MDAS09S75SAPG1	M83513/31-B03NT	MDA215S75SATG3	M83513/31-D02CW	MDA125S75SAWG2
M83513/31-A01PT	MDAS09S75SATG1	M83513/31-B03NW	MDA215S75SAWG3	M83513/31-D02NN	MDA225S75SABG2
M83513/31-A01PW	MDAS09S75SAWG1	M83513/31-B03PN	MDAS21S75SABG3	M83513/31-D02NP	MDA225S75SAPG2
M83513/31-A02CN	MDA109S75SABG2	M83513/31-B03PP	MDAS15S75SAPG3	M83513/31-D02NT	MDA225S75SATG2
M83513/31-A02CP	MDA109S75SAPG2	M83513/31-B03PT	MDAS15S75SATG3	M83513/31-D02NW	MDA225S75SAWG2
M83513/31-A02CT	MDA109S75SATG2	M83513/31-B03PW	MDAS15S75SAWG3	M83513/31-D02PN	MDAS25S75SABG2
M83513/31-A02CW	MDA109S75SAWG2	M83513/31-C01CN	MDA121S75SABG1	M83513/31-D02PP	MDAS25S75SAPG2
M83513/31-A02NN	MDA209S75SABG2	M83513/31-C01CP	MDA121S75SAPG1	M83513/31-D02PT	MDAS25S75SATG2
M83513/31-A02NP	MDA209S75SAPG2	M83513/31-C01CT	MDA121S75SATG1	M83513/31-D02PW	MDAS25S75SAWG2
M83513/31-A02NT	MDA209S75SATG2	M83513/31-C01CW	MDA121S75SAWG1	M83513/31-D03CN	MDA125S75SABG3
M83513/31-A02NW	MDA209S75SAWG2	M83513/31-C01NN	MDA221S75SABG1	M83513/31-D03CP	MDA125S75SAPG3
M83513/31-A02PN	MDAS09S75SABG2	M83513/31-C01NP	MDA221S75SAPG1	M83513/31-D03CT	MDA125S75SATG3
M83513/31-A02PP	MDAS09S75SAPG2	M83513/31-C01NT	MDA221S75SATG1	M83513/31-D03CW	MDA125S75SAWG3
M83513/31-A02PT	MDAS09S75SATG2	M83513/31-C01NW	MDA221S75SAWG1	M83513/31-D03NN	MDA225S75SABG3
M83513/31-A02PW	MDAS09S75SAWG2	M83513/31-C01PN	MDAS21S75SABG1	M83513/31-D03NP	MDA225S75SAPG3
M83513/31-A03CN	MDA109S75SABG3	M83513/31-C01PP	MDAS21S75SAPG1	M83513/31-D03NT	MDA225S75SATG3
M83513/31-A03CP	MDA109S75SAPG3	M83513/31-C01PT	MDAS21S75SATG1	M83513/31-D03NW	MDA225S75SAWG3
M83513/31-A03CT	MDA109S75SATG3	M83513/31-C01PW	MDAS21S75SAWG1	M83513/31-D03PN	MDAS25S75SABG3
M83513/31-A03CW	MDA109S75SAWG3	M83513/31-C02CN	MDA121S75SABG2	M83513/31-D03PP	MDAS25S75SAPG3
M83513/31-A03NN	MDA209S75SABG3	M83513/31-C02CP	MDA121S75SAPG2	M83513/31-D03PT	MDAS25S75SATG3
M83513/31-A03NP	MDA209S75SAPG3	M83513/31-C02CT	MDA121S75SATG2	M83513/31-D03PW	MDAS25S75SAWG3
M83513/31-A03NT	MDA209S75SATG3	M83513/31-C02CW	MDA121S75SAWG2	M83513/31-E01CN	MDA131S75SABG1
M83513/31-A03NW	MDA209S75SAWG3	M83513/31-C02NN	MDA221S75SABG2	M83513/31-E01CP	MDA131S75SAPG1
M83513/31-A03PN	MDAS09S75SABG3	M83513/31-C02NP	MDA221S75SAPG2	M83513/31-E01CT	MDA131S75SATG1
M83513/31-A03PP	MDAS09S75SAPG3	M83513/31-C02NT	MDA221S75SATG2	M83513/31-E01CW	MDA131S75SAWG1
M83513/31-A03PT	MDAS09S75SATG3	M83513/31-C02NW	MDA221S75SAWG2	M83513/31-E01NN	MDA231S75SABG1
M83513/31-A03PW	MDAS09S75SAWG3	M83513/31-C02PN	MDAS21S75SABG2	M83513/31-E01NP	MDA231S75SAPG1
M83513/31-B01CN	MDA115S75SABG1	M83513/31-C02PP	MDAS21S75SAPG2	M83513/31-E01NT	MDA231S75SATG1
M83513/31-B01CP	MDA115S75SAPG1	M83513/31-C02PT	MDAS21S75SATG2	M83513/31-E01NW	MDA231S75SAWG1
M83513/31-B01CT	MDA115S75SATG1	M83513/31-C02PW	MDAS21S75SAWG2	M83513/31-E01PN	MDAS31S75SABG1
M83513/31-B01CW	MDA115S75SAWG1	M83513/31-C03CN	MDA121S75SABG3	M83513/31-E01PP	MDAS31S75SAPG1
M83513/31-B01NN	MDA215S75SABG1	M83513/31-C03CP	MDA121S75SAPG3	M83513/31-E01PT	MDAS31S75SATG1
M83513/31-B01NP	MDA215S75SAPG1	M83513/31-C03CT	MDA121S75SATG3	M83513/31-E01PW	MDAS31S75SAWG1
M83513/31-B01NT	MDA215S75SATG1	M83513/31-C03CW	MDA121S75SAWG3	M83513/31-E02CN	MDA131S75SABG2
M83513/31-B01NW	MDA215S75SAWG1	M83513/31-C03NN	MDA221S75SABG3	M83513/31-E02CP	MDA131S75SAPG2
M83513/31-B01PN	MDAS15S75SABG1	M83513/31-C03NP	MDA221S75SAPG3	M83513/31-E02CT	MDA131S75SATG2
M83513/31-B01PP	MDAS15S75SAPG1	M83513/31-C03NT	MDA221S75SATG3	M83513/31-E02CW	MDA131S75SAWG2
M83513/31-B01PT	MDAS15S75SATG1	M83513/31-C03NW	MDA221S75SAWG3	M83513/31-E02NN	MDA231S75SABG2
M83513/31-B01PW	MDAS15S75SAWG1	M83513/31-C03PN	MDAS21S75SABG3	M83513/31-E02NP	MDA231S75SAPG2
M83513/31-B02CN	MDA115S75SABG2	M83513/31-C03PP	MDAS21S75SAPG3	M83513/31-E02NT	MDA231S75SATG2
M83513/31-B02CP	MDA115S75SAPG2	M83513/31-C03PT	MDAS21S75SATG3	M83513/31-E02NW	MDA231S75SAWG2
M83513/31-B02CT	MDA115S75SATG2	M83513/31-C03PW	MDAS21S75SAWG3	M83513/31-E02PN	MDAS31S75SABG2
M83513/31-B02CW	MDA115S75SAWG2	M83513/31-D01CN	MDA125S75SABG1	M83513/31-E02PP	MDAS31S75SAPG2
M83513/31-B02NN	MDA215S75SABG2	M83513/31-D01CP	MDA125S75SAPG1	M83513/31-E02PT	MDAS31S75SATG2
M83513/31-B02NP	MDA215S75SAPG2	M83513/31-D01CT	MDA125S75SATG1	M83513/31-E02PW	MDAS31S75SAWG2
M83513/31-B02NT	MDA215S75SATG2	M83513/31-D01CW	MDA125S75SAWG1	M83513/31-E03CN	MDA131S75SABG3
M83513/31-B02NW	MDA215S75SAWG2	M83513/31-D01NN	MDA225S75SABG1	M83513/31-E03CP	MDA131S75SAPG3
M83513/31-B02PN	MDAS15S75SABG2	M83513/31-D01NP	MDA225S75SAPG1	M83513/31-E03CT	MDA131S75SATG3

M83513/31 (continued)

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/31-E03CW	MDA131S75SAWG3	M83513/31-F01NW	MDA237S75SAWG1	M83513/31-F02PW	MDAS37S75SAWG2
M83513/31-E03NN	MDA231S75SABG3	M83513/31-F01PN	MDAS37S75SABG1	M83513/31-F03CN	MDA137S75SABG3
M83513/31-E03NP	MDA231S75SAPG3	M83513/31-F01PP	MDAS37S75SAPG1	M83513/31-F03CP	MDA137S75SAPG3
M83513/31-E03NT	MDA231S75SATG3	M83513/31-F01PT	MDAS37S75SATG1	M83513/31-F03CT	MDA137S75SATG3
M83513/31-E03NW	MDA231S75SAWG3	M83513/31-F01PW	MDAS37S75SAWG1	M83513/31-F03CW	MDA137S75SAWG3
M83513/31-E03PN	MDAS31S75SABG3	M83513/31-F02CN	MDA137S75SABG2	M83513/31-F03NN	MDA237S75SABG3
M83513/31-E03PP	MDAS31S75SAPG3	M83513/31-F02CP	MDA137S75SAPG2	M83513/31-F03NP	MDA237S75SAPG3
M83513/31-E03PT	MDAS31S75SATG3	M83513/31-F02CT	MDA137S75SATG2	M83513/31-F03NT	MDA237S75SATG3
M83513/31-E03PW	MDAS31S75SAWG3	M83513/31-F02CW	MDA137S75SAWG2	M83513/31-F03NW	MDA237S75SAWG3
M83513/31-F01CN	MDA137S75SABG1	M83513/31-F02NN	MDA237S75SABG2	M83513/31-F03PN	MDAS37S75SABG3
M83513/31-F01CP	MDA137S75SAPG1	M83513/31-F02NP	MDA237S75SAPG2	M83513/31-F03PP	MDAS37S75SAPG3
M83513/31-F01CT	MDA137S75SATG1	M83513/31-F02NT	MDA237S75SATG2	M83513/31-F03PT	MDAS37S75SATG3
M83513/31-F01CW	MDA137S75SAWG1	M83513/31-F02NW	MDA237S75SAWG2	M83513/31-F03PW	MDAS37S75SAWG3
M83513/31-F01NN	MDA237S75SABG1	M83513/31-F02PN	MDAS37S75SABG2		
M83513/31-F01NP	MDA237S75SAPG1	M83513/31-F02PP	MDAS37S75SAPG2		
M83513/31-F01NT	MDA237S75SATG1	M83513/31-F02PT	MDAS37S75SATG2		

MIL-DTL-88513
CONNECTORS

Rectangular
Micro-D connectors

M83513/32

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/32-G01CN	MDA151S75SABG1	M83513/32-G02CN	MDA151S75SABG2	M83513/32-G03CN	MDA151S75SABG3
M83513/32-G01CP	MDA151S75SAPG1	M83513/32-G02CP	MDA151S75SAPG2	M83513/32-G03CP	MDA151S75SAPG3
M83513/32-G01CT	MDA151S75SATG1	M83513/32-G02CT	MDA151S75SATG2	M83513/32-G03CT	MDA151S75SATG3
M83513/32-G01CW	MDA151S75SAWG1	M83513/32-G02CW	MDA151S75SAWG2	M83513/32-G03CW	MDA151S75SAWG3
M83513/32-G01NN	MDA251S75SABG1	M83513/32-G02NN	MDA251S75SABG2	M83513/32-G03NN	MDA251S75SABG3
M83513/32-G01NP	MDA251S75SAPG1	M83513/32-G02NP	MDA251S75SAPG2	M83513/32-G03NP	MDA251S75SAPG3
M83513/32-G01NT	MDA251S75SATG1	M83513/32-G02NT	MDA251S75SATG2	M83513/32-G03NT	MDA251S75SATG3
M83513/32-G01NW	MDA251S75SAWG1	M83513/32-G02NW	MDA251S75SAWG2	M83513/32-G03NW	MDA251S75SAWG3
M83513/32-G01PN	MDAS51S75SABG1	M83513/32-G02PN	MDAS51S75SABG2	M83513/32-G03PN	MDAS51S75SABG3
M83513/32-G01PP	MDAS51S75SAPG1	M83513/32-G02PP	MDAS51S75SAPG2	M83513/32-G03PP	MDAS51S75SAPG3
M83513/32-G01PT	MDAS51S75SATG1	M83513/32-G02PT	MDAS51S75SATG2	M83513/32-G03PT	MDAS51S75SATG3
M83513/32-G01PW	MDAS51S75SAWG1	M83513/32-G02PW	MDAS51S75SAWG2	M83513/32-G03PW	MDAS51S75SAWG3

M83513/33

MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT	MIL STANDARD	AXON' EQUIVALENT
M83513/33-H01CN	MDA1100S75SABG1	M83513/33-H02CN	MDA1100S75SABG2	M83513/33-H03CN	MDA1100S75SABG3
M83513/33-H01CP	MDA1100S75SAPG1	M83513/33-H02CP	MDA1100S75SAPG2	M83513/33-H03CP	MDA1100S75SAPG3
M83513/33-H01CU	MDA1100S75SATG1	M83513/33-H02CU	MDA1100S75SATG2	M83513/33-H03CU	MDA1100S75SATG3
M83513/33-H01CY	MDA1100S75SAWG1	M83513/33-H02CY	MDA1100S75SAWG2	M83513/33-H03CY	MDA1100S75SAWG3
M83513/33-H01NN	MDA2100S75SABG1	M83513/33-H02NN	MDA2100S75SABG2	M83513/33-H03NN	MDA2100S75SABG3
M83513/33-H01NP	MDA2100S75SAPG1	M83513/33-H02NP	MDA2100S75SAPG2	M83513/33-H03NP	MDA2100S75SAPG3
M83513/33-H01NU	MDA2100S75SATG1	M83513/33-H02NU	MDA2100S75SATG2	M83513/33-H03NU	MDA2100S75SATG3
M83513/33-H01NY	MDA2100S75SAWG1	M83513/33-H02NY	MDA2100S75SAWG2	M83513/33-H03NY	MDA2100S75SAWG3
M83513/33-H01PN	MDAS100S75SABG1	M83513/33-H02PN	MDAS100S75SABG2	M83513/33-H03PN	MDAS100S75SABG3
M83513/33-H01PP	MDAS100S75SAPG1	M83513/33-H02PP	MDAS100S75SAPG2	M83513/33-H03PP	MDAS100S75SAPG3
M83513/33-H01PU	MDAS100S75SATG1	M83513/33-H02PU	MDAS100S75SATG2	M83513/33-H03PU	MDAS100S75SATG3
M83513/33-H01PY	MDAS100S75SAWG1	M83513/33-H02PY	MDAS100S75SAWG2	M83513/33-H03PY	MDAS100S75SAWG3



© 2002 AXON' CABLE – RELEASED FEBRUARY 2023/E – ALL RIGHTS RESERVED

D-LINE®, AXOCLAMP®: REGISTERED TRADEMARKS of AXON' CABLE SAS
Photos: Nickelkrome, Bruno d'Eaubonne

All information contained in this brochure can be changed without prior notice.

>> BRAZIL

AXON' CABLE INDUSTRIA E COMÉRCIO LTDA
TEL.: +55 21 3596-8002
e-mail: salesbrazil@axon-cable.com

>> CANADA

AXON' CABLE INC. CANADIAN OFFICE
TEL.: +1 514 898 2044
e-mail: sales@axoncable.com

>> CHINA

AXON' INTERCONNECT LTD
TEL.: +86 757 2838 7200
FAX: +86 757 2838 7212
e-mail: sales@axon-interconnect.com

>> GERMANY

AXON' KABEL GMBH
TEL.: +49 7152-97992-0
e-mail: sales@axon-cable.de

>> HUNGARY

AXON' KÁBELGYÁRTÓ KFT.
TEL.: +36 76 508 195
e-mail: axon@axon-cable.hu

>> INDIA

AXON' INTERCONNECTORS AND WIRES PVT LTD
TEL.: +91 806 816 2966
FAX: +91 806 816 2999
e-mail: sales@axon-cable.in

>> JAPAN

AXON' CABLE JAPAN OFFICE
TEL./FAX: +81 26 217 6728
e-mail: axon-japan@axon-cable.com

>> LATVIA

AXON' CABLE SIA
TEL.: +371 6540 78 91
e-mail: axon@axoncable.lv

>> MEXICO

AXON' INTERCONEX, S.A. DE C.V.
TEL.: +52 442 215 2713
e-mail: axon-mexico@axoncable.com.mx

>> SINGAPORE

AXON' CONNECT PTE LTD
TEL.: +65 62 50 31 69
e-mail: sales.singapore@axon-cable.com

>> SPAIN

AXON' CABLE SPANISH OFFICE
TEL.: +34 911 309 123
e-mail: axon-spain@axon-cable.com

>> UNITED KINGDOM

AXON' CABLE LTD
TEL.: +44 1383 421500
e-mail: sales@axon-cable.co.uk

>> USA

AXON' CABLE INC.
TEL.: +1 847 230 7800
e-mail: sales@axoncable.com



VISIT OUR WEBSITE
www.axon-cable.com



HEADQUARTERS
>> France

>> AXON' CABLE S.A.S.

2 ROUTE DE CHALONS EN CHAMPAGNE - 51210 MONTMIRAIL
TEL.: +33 3 26 81 70 00 - FAX: +33 3 26 81 28 83
e-mail : sales@axon-cable.com - www.axon-cable.com

