



**CONNECTORS, ELECTRICAL, RECTANGULAR,
MICROMINIATURE, HIGH DATA RATE
(FEMALE CONTACTS)**

BASED ON TYPE MICROMACH

ESCC Detail Specification No. 3401/095

Issue 1	February 2020
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DCR No.	CHANGE DESCRIPTION

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1 GENERAL

1.1 SCOPE

This specification details the ratings, physical and electrical characteristics, test and inspection data for Electrical, Rectangular, Microminiature, High Data Rate, Connectors (with Female Contacts), based on type MicroMach.

It shall be read in conjunction with:

- ESCC Generic Specification No. [3401](#), Connectors, Electrical, Rectangular and Circular.
- ESCC Detail Specification No. [3409/002](#), High Data Rate Cable Assemblies with Microminiature, Rectangular, Connectors, based on type MicroMach.

the requirements of which are supplemented herein.

1.2 COMPONENT TYPE VARIANTS AND RANGE OF COMPONENTS

The different physical configurations of the basic type connectors specified herein are scheduled in Table 1(a).

1.3 MAXIMUM RATINGS

The maximum ratings, which shall not be exceeded at any time during use or storage, applicable to the connectors specified herein, are given in Table 1(b).

1.4 PARAMETER DERATING INFORMATION

The derating information applicable to the connectors specified herein is shown in Figure 1.

1.5 PHYSICAL DIMENSIONS

The physical dimensions and characteristics of the connectors specified herein are shown in Figure 2.

TABLE 1(a) – COMPONENT TYPE VARIANTS AND RANGE OF COMPONENTS

Variant Number	Description	Physical Configuration	Weight Max (g)
01	MicroMach HDR, Female, Panel Mount Receptacle with Surface Mount, Edge PCB Terminations	See Figure 2(a)	4.5 (Note 1)
02	MicroMach HDR, Female, Panel Mount Receptacle with Wired, Twisted-Pair, PCB Terminations	See Figure 2(b)	5 (Note 1)
03	MicroMach HDR, Female, Panel Mount Receptacle with Flat Flexible, PCB Terminations	See Figure 2(c)	5.5 (Note 1)

NOTES:

1. Includes the weight of the connector plus the terminations.

TABLE 1(b) - MAXIMUM RATINGS

Characteristics	Symbols	Maximum Ratings	Units	Remarks
Maximum Operating Data Rate	DR_{max}	3	Gb/s	
Operating Frequency Range	f_R	≤ 4.5	GHz	Note 1
Working Voltage	U_R	150	Vrms	At sea level. Note 2. See Figure 1(a).
Rated Current	I_R	1	A	Each contact
Operating Temperature Range	T_{op}	-55 to +125	°C	T_{amb}
Storage Temperature Range	T_{stg}	-55 to +125	°C	
Soldering Temperature	T_{sol}	350	°C	

NOTES:

- Bandwidth used for electrical measurement (insertion loss, crosstalk...) based on $f_R = 3 \cdot f_0$ (with $f_0 = DR_{max} / 2$).
- Between contacts, and contacts and shell.

FIGURE 1 - PARAMETER DERATING INFORMATION

FIGURE 1(a) – WORKING VOLTAGE VERSUS ALTITUDE

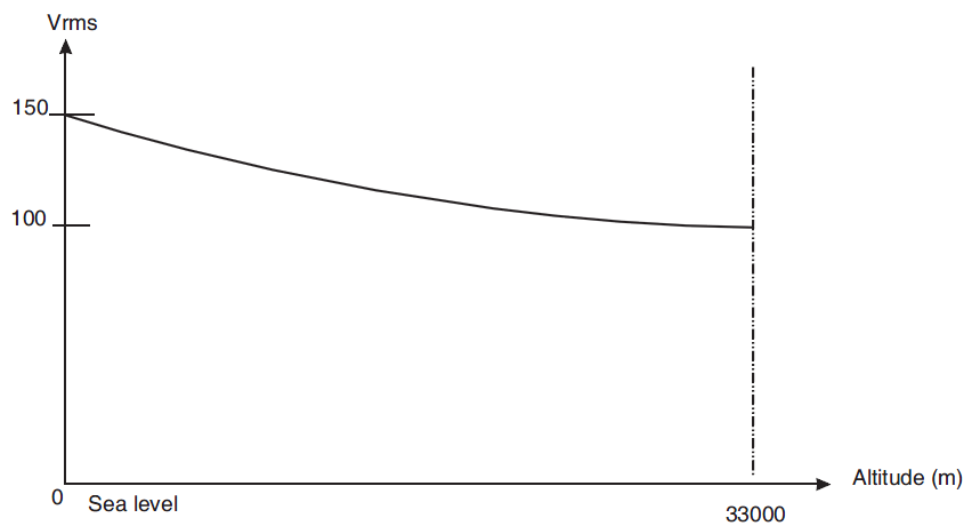
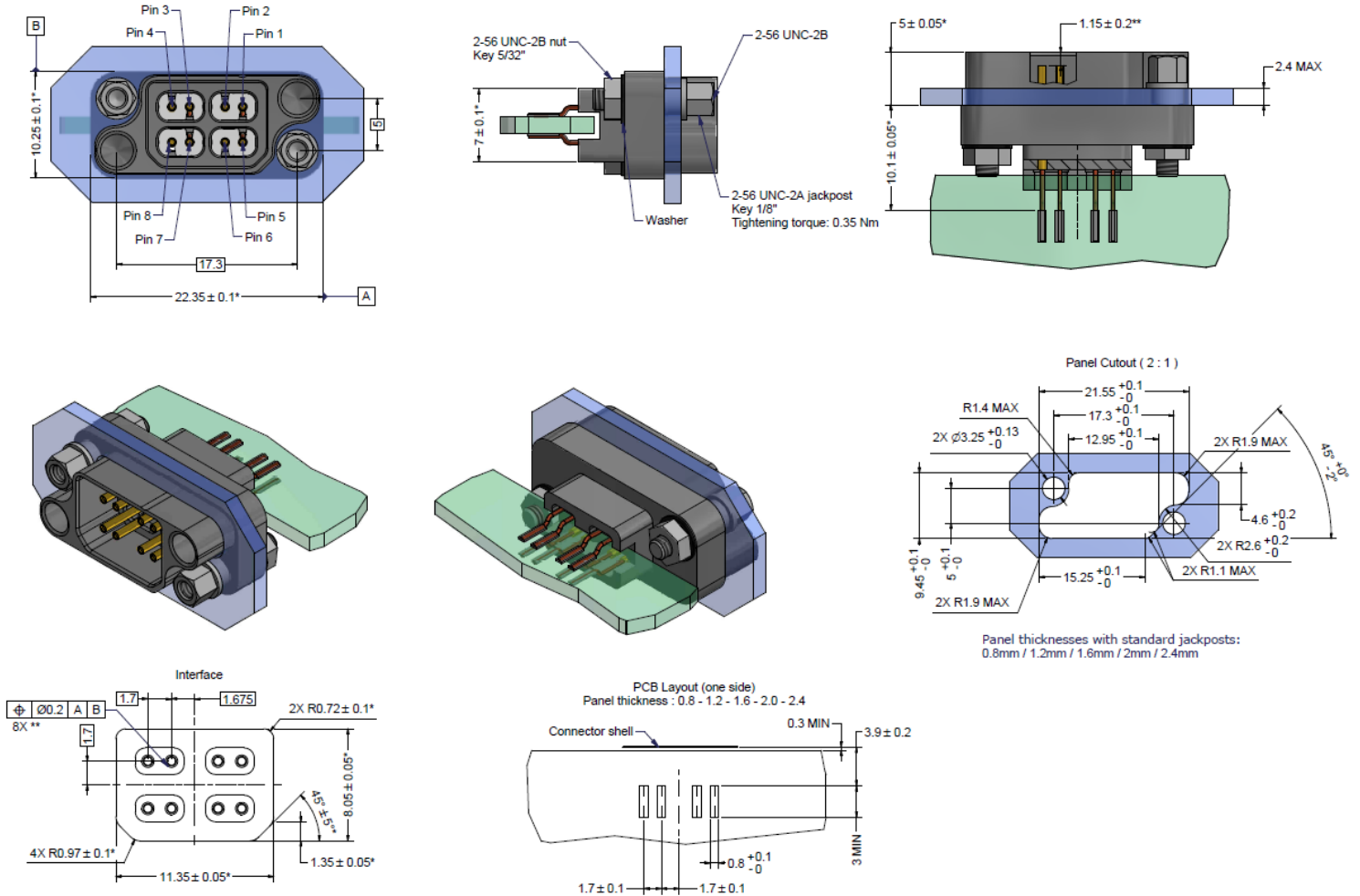


FIGURE 2 - PHYSICAL DIMENSIONS

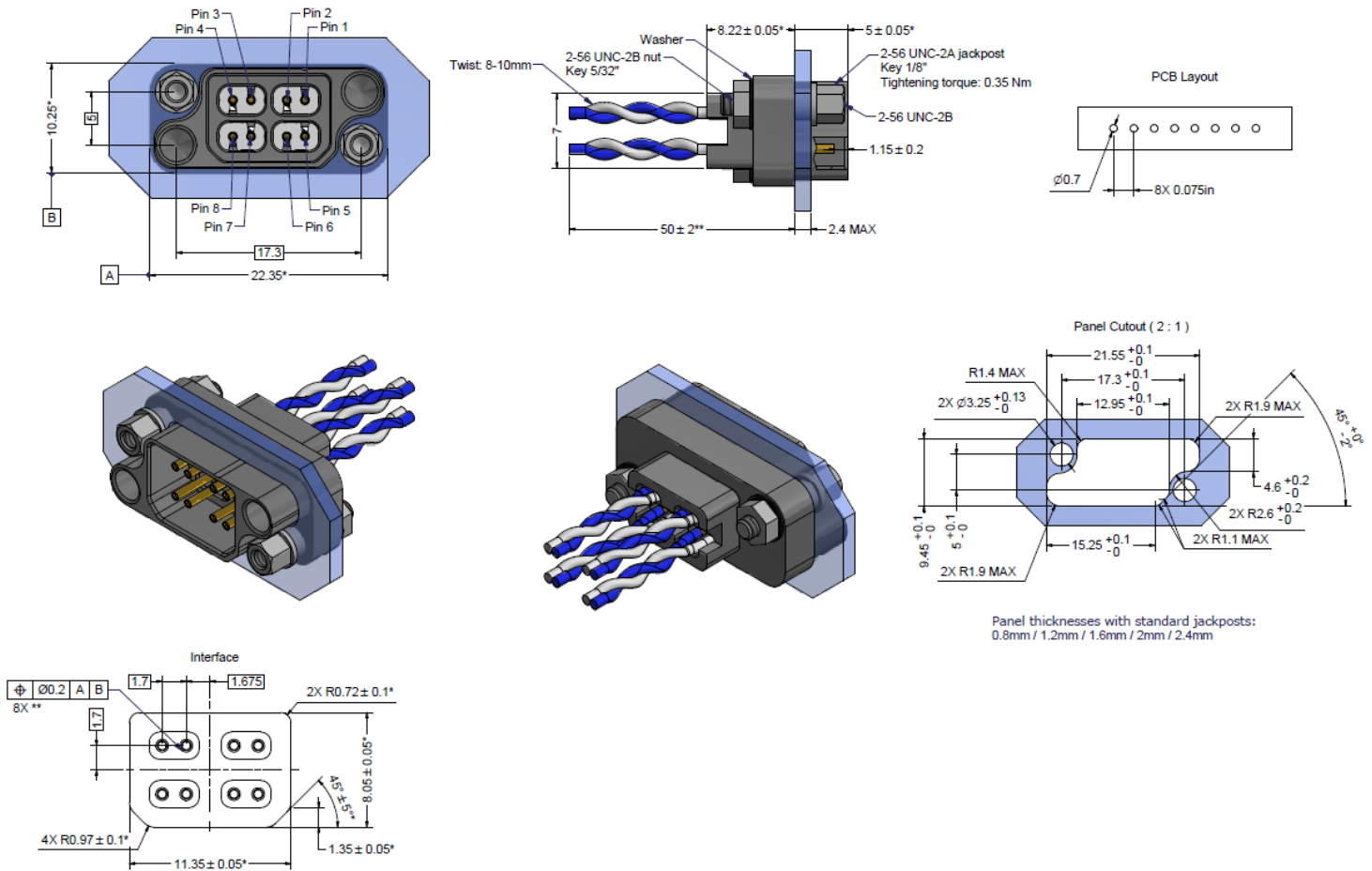
FIGURE 2(a) – VARIANT 01 - MICROMACH HDR, FEMALE, PANEL MOUNT RECEPTACLE WITH SURFACE MOUNT, EDGE PCB TERMINATIONS



NOTES:

1. All dimensions are in mm.
2. Dimensions with a single asterisk (*) may be checked during the Manufacturer's internal processing. Dimensions with a double asterisk (**) shall be checked after assembly of the connector.
3. For connector interface dimensions, see also Figure 2(e).
4. Mounting jackpost nut torque: 0.35N.m (+10, -0)%.
5. Contact identification: contact (socket) Nos. 1 to 8 are indicated by the physical configuration (as shown above). In addition, contact No. 1 is indicated by an index mark on the shell above pin 1 (as shown above).
6. For panel thickness, see also Figure 2(f).
7. Panel cut-out details and PCB layout are shown for information purposes only.
8. For PCB thickness, see Para. 4.5.2.1(b).
9. For pin-out arrangement, see Figure 2(g).

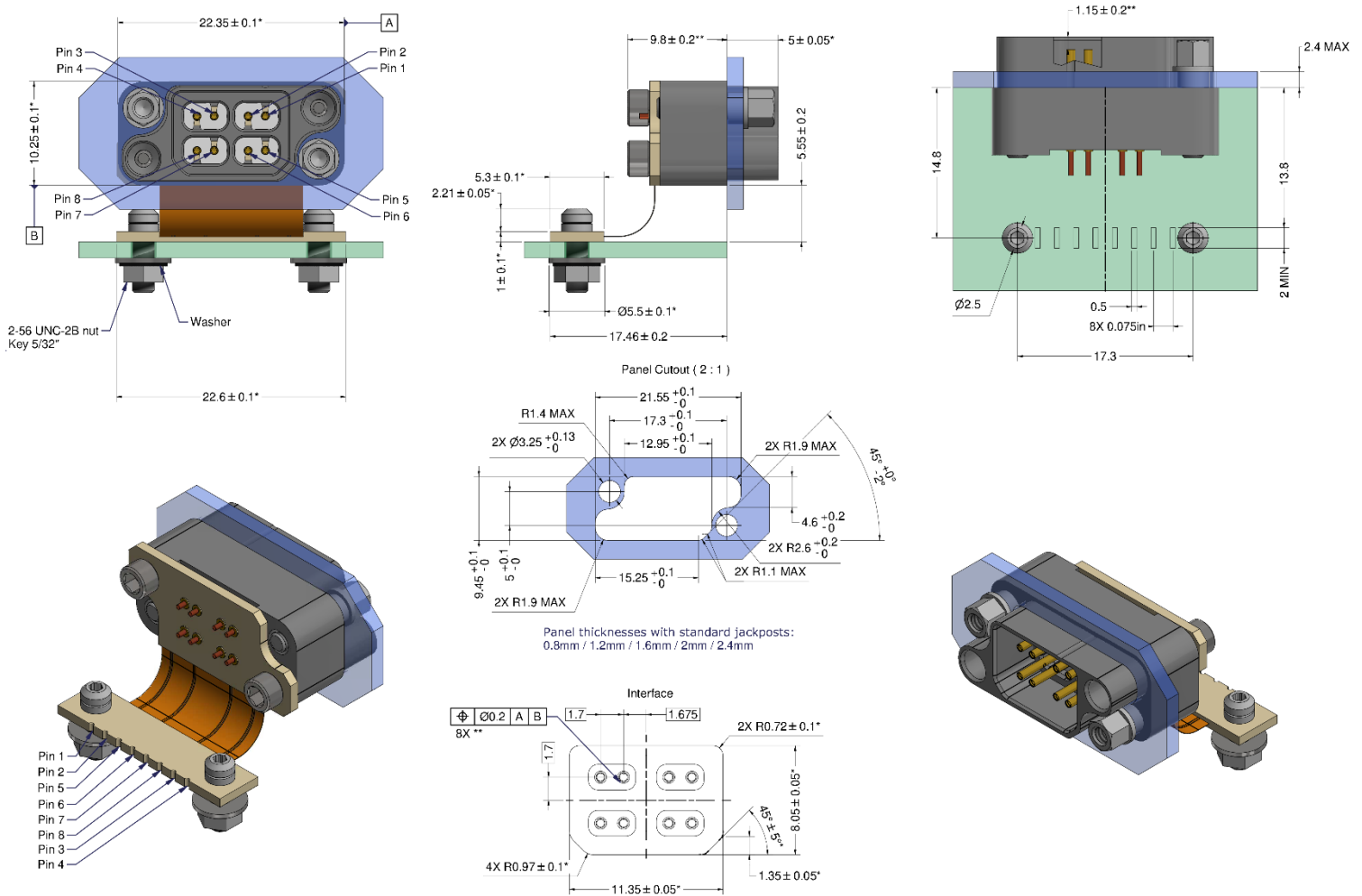
FIGURE 2(b) – VARIANT O2 - MICROMACH HDR, FEMALE, PANEL MOUNT RECEPTACLE WITH WIRED, TWISTED-PAIR, PCB TERMINATIONS



NOTES:

1. All dimensions are in mm.
2. Dimensions with a single asterisk (*) may be checked during the Manufacturer's internal processing. Dimensions with a double asterisk (**) shall be checked after assembly of the connector.
3. For connector interface dimensions, see also Figure 2(e).
4. Mounting jackpost nut torque: 0.35N.m (+10, -0)%.
5. Contact identification: contacts (socket) Nos. 1 to 8 are indicated by the physical configuration (as shown above). In addition, contact No. 1 is indicated by an index mark on the shell above pin 1 (as shown above).
6. For panel thickness, see also Figure 2(f).
7. Panel cut-out details and PCB layout are shown for information purposes only.
8. For pin-out arrangement, see Figure 2(g).

FIGURE 2(c) – VARIANT 03 - MICROMACH HDR, FEMALE, PANEL MOUNT RECEPTACLE WITH FLAT FLEXIBLE, PCB TERMINATIONS

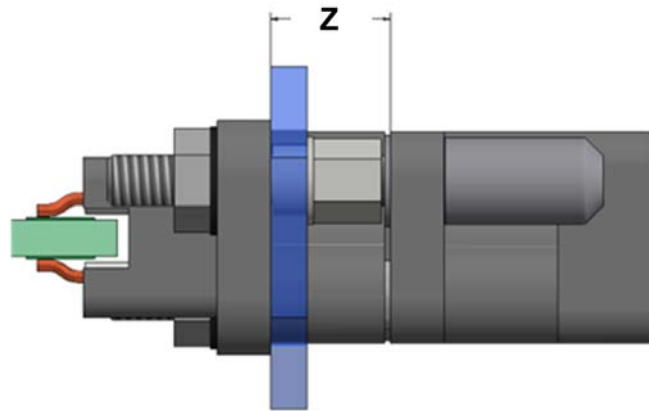


NOTES:

1. All dimensions are in mm.
2. Dimensions with a single asterisk (*) may be checked during the Manufacturer's internal processing. Dimensions with a double asterisk (**) shall be checked after assembly of the connector.
3. For connector interface dimensions, see also Figure 2(e).
4. Mounting jackpost nut torque: 0.35N.m (+10, -0)%.
5. Contact identification: contacts (socket) Nos. 1 to 8 are indicated by the physical configuration (as shown above). In addition, contact No. 1 is indicated by an index mark on the shell above pin 1 (as shown above).
6. For panel thickness, see also Figure 2(f).
7. Panel cut-out details and PCB layout are shown for information purposes only.
8. For PCB thickness, see Para. 4.5.2.1(b).
9. For pin-out arrangement, see Figure 2(g).

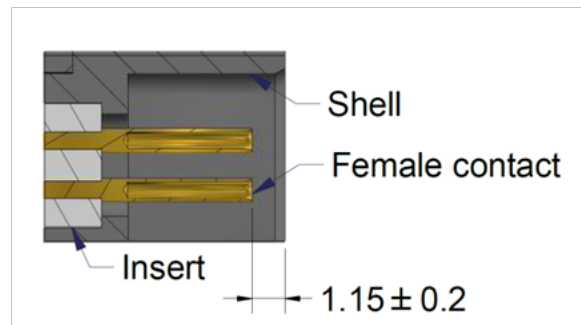
FIGURE 2(d) - MATED CONNECTOR DIMENSIONS

EXAMPLE



Symbols	Dimensions mm	
	Min	Max
Z	5.1	5.4

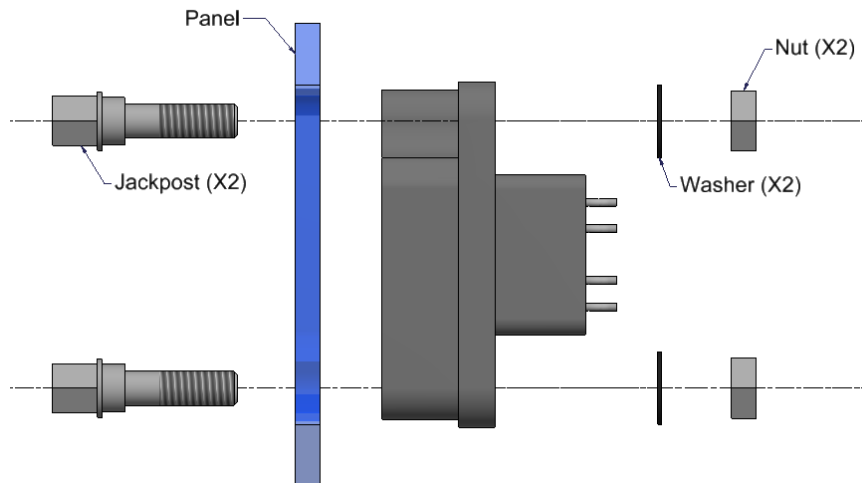
FIGURE 2(e) - INTERFACE DIMENSIONS, RECEPTACLE, FEMALE CONTACT



NOTES:

1. All dimensions are in mm.

**FIGURE 2(f) – PANEL MOUNTING DIMENSIONS
(PANEL THICKNESS AND HARDWARE CODE)**

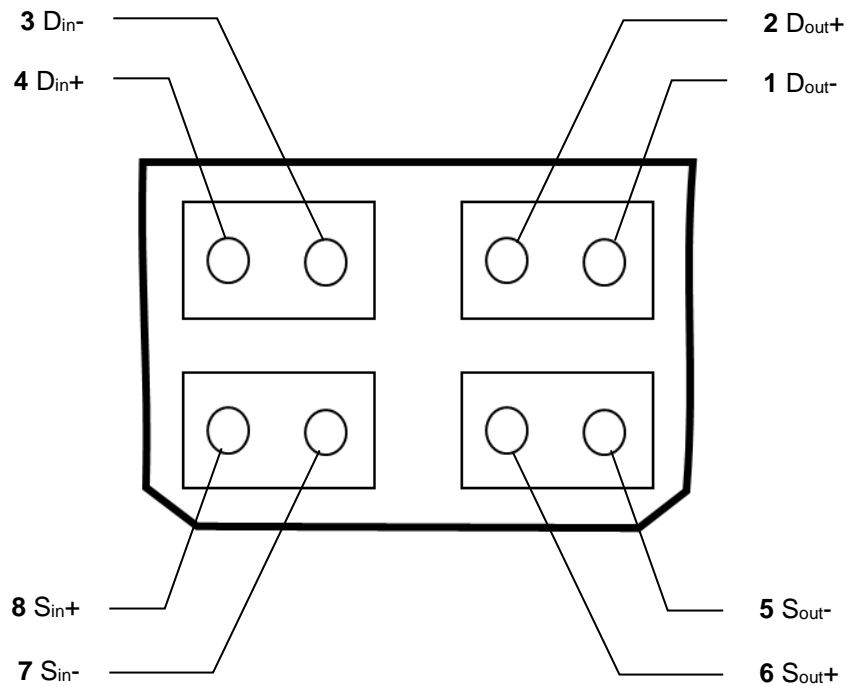


NOTES:

1. Jackpost diameter: 2-56-UNC-2B
2. Mounting jackpost nut torque: 0.35N.m (+10, -0)%.
3. Panel thickness and hardware code:

Panel thickness (mm) (Tolerance: (-0.0, +0.2) mm)	0.8	1.2	1.6	2	2.4
Jackpost Code (see Para. 4.5.2.1(a))	P1	P2	P3	P4	P5

FIGURE 2(g) – PIN-OUT ARRANGEMENT



2 **APPLICABLE DOCUMENTS**

The following documents form part of this specification and shall be read in conjunction with it:

- (a) ESCC Generic Specification No. [3401](#), Connectors, Electrical, Circular and Rectangular.
- (b) ESCC Detail Specification No. [3409/002](#), High Data Rate Cable Assemblies with Microminiature, Rectangular, Connectors, based on type MicroMach.

3 **TERMS, DEFINITIONS, ABBREVIATIONS, SYMBOLS AND UNITS**

For the purpose of this specification, the terms, definitions, abbreviations, symbols and units specified in ESCC Basic Specification No. [21300](#) shall apply.

4 **REQUIREMENTS**

4.1 **GENERAL**

The complete requirements for procurement of the connectors specified herein are stated in this specification and ESCC Generic Specification No. [3401](#). Deviations from the Generic Specification, applicable to this specification only, are listed in Para. 4.2.

Deviations from the applicable Generic Specification and this Detail Specification, formally agreed with specific Manufacturers on the basis that the alternative requirements are equivalent to the ESCC requirements and do not affect the components' reliability, are listed in the appendices attached to this specification.

4.2 **DEVIATIONS FROM THE GENERIC SPECIFICATION**

4.2.1 **Deviations from Special In-Process Controls**

- (a) Crimping Capability: The minimum tensile strength shall be as follows:
 - Variant 01: 20N, using the solid conductor termination that is crimped to the contact.
 - Variant 02: 45N, using the centre conductor of the cable termination that is crimped to the contact.
 - Variant 03: Not applicable.
- (b) Solderability: Not applicable.

4.2.2 **Deviations from Final Production Tests - Chart II(b)**

- (a) Para. 9.4, Contact Capability: Not applicable.
- (b) Para. 9.9, Seal Test: Not applicable
- (c) Para. 9.5, Magnetism Level: Not applicable.

4.2.3 **Deviations from Burn-in and Electrical Measurements - Chart III**

None (Chart III is not applicable).

4.2.4 **Deviations from Qualification Tests – Chart IV**

- (a) Para. 9.9, Seal Test: Not applicable.
- (b) Para. 9.10, Wiring: Not applicable.
- (c) Para. 9.11, Vibration: Measurements and inspections shall be performed in accordance with Table 6 herein.
- (d) Para. 9.12, Shock or Bump: Measurements and inspections shall be performed in accordance with Table 6 herein.
- (e) Para. 9.13, Climatic Sequence: Measurements and inspections shall be performed in accordance with Table 6 herein.

- (f) Para. 9.15, Joint Strength: Not applicable.
- (g) Para. 9.16, Rapid Change of Temperature: Measurements and inspections shall be performed in accordance with Table 6 herein.
- (h) Para. 9.21, High Temperature Storage: Measurements and inspections shall be performed in accordance with Table 6 herein.
- (i) Para. 9.24, Jackscrew Retention: Not applicable.
- (j) Para. 9.25, High Temperature Measurements: Measurements and inspections shall be performed in accordance with Table 6 herein.
- (k) Para. 9.26, Overload Test: Not applicable.
- (l) Para. 9.27, Maintenance Aging: Not applicable.
- (m) Para. 9.28, Engagement and Separation Forces: Not applicable.
- (n) Para. 9.29, Oversize Pin Exclusion: Not applicable.
- (o) Para. 9.30, Probe Damage: Not applicable.
- (p) Para. 9.31, Solderability:
 - Variant 01: between the solid conductor termination and PCB pad.
 - Variant 02: between the centre conductor of the cable termination and PCB metalized hole.
 - Variant 03: between the solid conductor termination and flexible PCB metalized hole, and between flexible PCB metalized half hole and PCB pad.

4.2.5 Deviations from Lot Acceptance Tests – Chart V

- (a) Para. 9.9, Seal Test: Not applicable.
- (b) Para. 9.10, Wiring: Not applicable.
- (c) Para. 9.13, Climatic Sequence: Measurements and inspections shall be performed in accordance with Table 6 herein.
- (d) Para. 9.15, Joint Strength: Not applicable.
- (e) Para. 9.16, Rapid Change of Temperature: Measurements and inspections shall be performed in accordance with Table 6 herein.
- (f) Para. 9.27, Maintenance Aging: Not applicable.
- (g) Para. 9.28, Engagement and Separation Forces: Not applicable.
- (h) Para. 9.29, Oversize Pin Exclusion: Not applicable.
- (i) Para. 9.30, Probe Damage: Not applicable.

4.3 MECHANICAL REQUIREMENTS

4.3.1 Dimension Check

See Figure 2.

4.3.2 Weight

See Table 1(a).

4.3.3 Contact Retention (in Insert)

Applied force: 14.8N.

4.3.4 Mating and Unmating Forces

Variant Number	Mating Force (N)	Unmating Force (N)	
	Max	Min	Max
01, 02, 03	25	3	25

4.3.5 Insert Retention (in Shell)
Maximum load: 30N.

4.3.6 Solderability
Solderability shall be performed on the connector PCB terminations. A size B soldering iron shall be used.

4.4 MATERIALS AND FINISHES

The materials and finishes shall be as specified herein. Where a definite material is not specified, a material which will enable the components specified herein to meet the performance requirements of this specification shall be used. Acceptance or approval of any constituent material does not guarantee acceptance of the finished product.

- (a) Body Shell: Aluminium alloy, high phosphorus (10 to 13%) nickel plated, thickness 25.4µm minimum.
- (b) Centre Contact: Copper alloy, gold plated 1.27µm minimum over nickel underplate 1.27µm minimum.
Note: measurements of plating thickness shall be made at 1.5mm from the engagement end.
- (c) PCB terminations: Only applicable for variants 01, 03: Copper alloy, silver plated 2µm minimum
- (d) Flexible PCB terminations: Only applicable for variant 03: 2 layers, Copper / Polyimide including:
 - Superior rigid part with metalized holes
 - Flexible part with Polyimide overlays
 - Inferior rigid part with metalized half-holes
- (e) Wire terminations: Only applicable for variant 02: Unshielded twisted pair, 100 Ω, as follows:
 - Centre conductor: Annealed Copper, silver plated 1.01µm minimum.
 - Dielectric core: PTFE
- (f) Connector to backshell interface EMI seals: Conductive silicone-base rubber.
- (g) Insert (insulator): PEEK.
- (h) Locking devices: Passivated stainless steel.

4.5 MARKING

4.5.1 General

The marking shall be in accordance with the requirements of ESCC Basic Specification No. [21700](#) and as follows.

The information to be marked on the component or its primary package shall be:

- (a) The ESCC qualified components symbol (for ESCC qualified components only).
- (b) The ESCC Component Number.
- (c) Traceability Information.

4.5.2 The ESCC Component Number

The ESCC Component Number shall be constituted as follows:

Example: 340109501BP1C2

- Detail Specification Reference: 3401095
- Component Type Variant Number (see Table 1(a)): 01 (as required)
- Testing Level: B
- Characteristic code: Panel Mount Hardware (P1): Jackposts for panel mounting with nominal panel thickness: 0.8mm (as required)
- Characteristic code: PCB Thickness (C2): 1.2mm nominal (as required)

4.5.2.1 *Characteristic Codes*

Characteristics to be codified as part of the ESCC Component Number shall be as follows:

(a) **Panel Mount Hardware**

The panel mount hardware options shall be indicated by the following codes (see Figure 2(f)):

Code	Variant	Description
P1	All	Jackposts for panel mounting with nominal panel thickness: 0.8mm
P2	All	Jackposts for panel mounting with nominal panel thickness: 1.2mm
P3	All	Jackposts for panel mounting with nominal panel thickness: 1.6mm
P4	All	Jackposts for panel mounting with nominal panel thickness: 2mm
P5	All	Jackposts for panel mounting with nominal panel thickness: 2.4mm

(b) **PCB thickness**

For Variant 01 only, the thickness of the PCB shall be indicated by the following codes:

Code	Description
C1	PCB thickness: 0.8mm \pm 10%
C2	PCB thickness: 1.2mm \pm 10%
C3	PCB thickness: 1.6mm \pm 10%
C4	PCB thickness: 2mm \pm 10%

4.6 ELECTRICAL MEASUREMENTS AT ROOM TEMPERATURE

The parameters to be measured in respect of electrical characteristics are scheduled in Table 2. Unless otherwise specified, the measurements shall be performed at $T_{amb} = +22 \pm 3^{\circ}C$.

TABLE 2 - ELECTRICAL MEASUREMENTS AT ROOM TEMPERATURE

Characteristics	Symbols	Test Method and Conditions	Limits		Units
			Min	Max	
Insulation Resistance	R_I	ESCC No. 3401 $V = 500Vdc$	1	-	$G\Omega$
Voltage Proof Leakage Current	I_{VPL}	$V = 600Vrms$	-	1	mA
Contact Resistance (Low Level Current)	R_{CL}	ESCC No. 3401	-	5	$m\Omega$
Contact Resistance (Rated Current)	R_{CR}	ESCC No. 3401	-	10	$m\Omega$
Mated Shell Conductivity	R_M	ESCC No. 3401	-	5	$m\Omega$

TABLES 3, 4, 5

Not applicable

4.7 ENVIRONMENTAL AND ENDURANCE TESTS (CHARTS IV AND V OF ESCC GENERIC SPECIFICATION No. 3401)

The parameters to be measured and inspections to be performed on completion of environmental and endurance testing shall be those specified in Table 6.

Unless otherwise specified, the measurements shall be performed at $T_{amb} = +22 \pm 3^{\circ}C$

Unless otherwise specified, test methods and test conditions shall be as per the corresponding test defined in Table 2.

TABLE 6 - MEASUREMENTS AND INSPECTIONS ON COMPLETION OF ENVIRONMENTAL AND ENDURANCE TESTING

ESCC Generic Spec. No. 3401		Measurements and Inspections		Symbol	Limits		Unit
Environmental and Endurance Tests (1)	Test Method and Conditions	Identification	Conditions		Min	Max	
Vibration	Para. 9.11	Initial Measurements					
		Coupling Screws Unlocking Torque	ESCC 3401	Tqe	Record Values		
		Insulation Resistance	Table 2	R _I	Table 2		
		Voltage Proof Leakage Current	Table 2	I _{VPL}	Table 2		
		Low Level Contact Resistance	Table 2	R _{CL}	Table 2		
		Mated Shell Conductivity	Table 2	R _M	Table 2		
		Measurements during Vibration					
		Monitor Contact Disturbance	ESCC 3401	-	-	1	μs
		Final Measurements					
		Coupling Screws Unlocking Torque Drift	ESCC 3401	ΔTqe/Tqe	-25	+25	% (2)
		Insulation Resistance	Table 2	R _I	Table 2		
		Voltage Proof Leakage Current	Table 2	I _{VPL}	Table 2		
		Voltage Proof Leakage Current Drift	Table 2	ΔI _{VPL}	-	+25	% (2)
		Low Level Contact Resistance	Table 2	R _{CL}	Table 2		
Low Level Contact Resistance Drift	Table 2	ΔR _{CL}	-	+25	% (2)		
Mated Shell Conductivity	Table 2	R _M	Table 2				
Mated Shell Conductivity Drift	Table 2	ΔR _M	-	+25	% (2)		
Visual Examination	ESCC 3401	-	-	-			
Shock or Bump	Para. 9.12	Initial Measurements (3)					
		Coupling Screws Unlocking Torque	ESCC 3401	Tqe	Record Values		
		Insulation Resistance	Table 2	R _I	Table 2		
		Voltage Proof Leakage Current	Table 2	I _{VPL}	Table 2		
		Low Level Contact Resistance	Table 2	R _{CL}	Table 2		
		Mated Shell Conductivity	Table 2	R _M	Table 2		
		Measurements during Vibration					
		Monitor Contact Disturbance	ESCC 3401	-	-	1	μs
		Final Measurements					
		Coupling Screws Unlocking Torque Drift	ESCC 3401	ΔTqe/Tqe	-25	+25	% (2)
		Insulation Resistance	Table 2	R _I	Table 2		
		Voltage Proof Leakage Current	Table 2	I _{VPL}	Table 2		
		Voltage Proof Leakage Current Drift	Table 2	ΔI _{VPL}	-	+25	% (2)
		Low Level Contact Resistance	Table 2	R _{CL}	Table 2		
Low Level Contact Resistance Drift	Table 2	ΔR _{CL}	-	+25	% (2)		
Mated Shell Conductivity	Table 2	R _M	Table 2				
Mated Shell Conductivity Drift	Table 2	ΔR _M	-	+25	% (2)		
Visual Examination	ESCC 3401	-	-	-			

ESCC Generic Spec. No. 3401		Measurements and Inspections		Symbol	Limits		Unit	
Environmental and Endurance Tests (1)	Test Method and Conditions	Identification	Conditions		Min	Max		
Climatic Sequence	Para. 9.13	Initial Measurements (3)						
		Insulation Resistance	Table 2	R _i	Table 2			
		Voltage Proof Leakage Current	Table 2	I _{VPL}	Table 2			
		Low Level Contact Resistance	Table 2	R _{CL}	Table 2			
		Mated Shell Conductivity	Table 2	R _M	Table 2			
		Dry Heat						
		Insulation Resistance	Table 2 (at T _{amb} = +125°C)	R _i	1	-	GΩ	
		Low Air Pressure						
		Voltage Proof Leakage Current	100Vrms	I _{VPL}	-	1	mA	
		Damp Heat						
Insulation Resistance	Table 2	R _i	20	-	MΩ			
Final Measurements								
External Visual Inspection	ESCC 3401	-	-					
Insulation Resistance	Table 2	R _i	Table 2					
Voltage Proof Leakage Current	Table 2	I _{VPL}	Table 2					
Plating Thickness	Para. 9.14	Plating Thickness	-	-	Para. 4.4			
Rapid Change of Temperature	Para. 9.16	Initial Measurements						
		Visual Examination	ESCC 3401	-	-			
		Insulation Resistance	Table 2	R _i	Table 2			
		Voltage Proof Leakage Current	Table 2	I _{VPL}	Table 2			
		Low Level Contact Resistance	Table 2	R _{CL}	Table 2			
		Rated Current Contact Resistance	Table 2	R _{CR}	Table 2			
		Mated Shell Conductivity	Table 2	R _M	Table 2			
		Final Measurements						
		Visual Examination	ESCC 3401	-	-			
		Insulation Resistance	Table 2	R _i	Table 2			
		Voltage Proof Leakage Current	Table 2	I _{VPL}	Table 2			
		Low Level Contact Resistance	Table 2	R _{CL}	Table 2			
		Rated Current Contact Resistance	Table 2	R _{CR}	Table 2			
Mated Shell Conductivity	Table 2	R _M	Table 2					
Mated Shell Conductivity Drift	Table 2	ΔR _M	-	+25	% (2)			
Contact Retention (in Insert)	Para. 9.17, and Para. 4.3.3 herein	Contact axial displacement	ESCC 3401	-	ESCC 3401			

ESCC Generic Spec. No. 3401		Measurements and Inspections		Symbol	Limits		Unit
Environmental and Endurance Tests (1)	Test Method and Conditions	Identification	Conditions		Min	Max	
Endurance	Para. 9.18	Initial Measurements Mating and Unmating Forces Low Level Contact Resistance Mated Shell Conductivity Final Measurements Visual Examination Mating and Unmating Forces Low Level Contact Resistance Low Level Contact Resistance Drift Insulation Resistance Voltage Proof Leakage Current Mated Shell Conductivity	ESCC 3401 Table 2 Table 2 ESCC 3401 - Table 2 Table 2 Table 2 Table 2 Table 2	- R_{CL} R_M - - R_{CL} ΔR_{CL} R_I I_{VPL} R_M	Para. 4.3.4 Table 2 Table 2 - - Para. 4.3.4 Table 2 - 3 Table 2 Table 2 Table 2 Table 2	mΩ (2)	
Permanence of Marking	Para. 9.19	-	-	-	-	-	
Mating and Unmating Forces	Para. 9.20	Mating and Unmating Forces	ESCC 3401	-	Para. 4.3.4		
High Temperature Storage	Para. 9.21	Initial Measurements Visual Examination Insulation Resistance Voltage Proof Leakage Current Low Level Contact Resistance Rated Current Contact Resistance Mated Shell Conductivity Final Measurements Visual Examination Mating and Unmating Forces Low Level Contact Resistance Low Level Contact Resistance Drift Rated Current Contact Resistance Insulation Resistance Voltage Proof Leakage Current Mated Shell Conductivity Mated Shell Conductivity Drift Contact Retention (in insert)	ESCC 3401 Table 2 Table 2 Table 2 Table 2 Table 2 ESCC 3401 - Table 2 Table 2 Table 2 Table 2 Table 2 Table 2 Table 2 Table 2 ESCC 3401	- R_I I_{VPL} R_{CL} R_{CR} R_M - - R_{CL} ΔR_{CL} R_{CR} R_I I_{VPL} R_M ΔR_M -	- Table 2 Table 2 Table 2 Table 2 - Para. 4.3.4 Table 2 - 3 Table 2 Table 2 Table 2 Table 2 Table 2 - +25 Para. 4.3.3	mΩ (2)	
Corrosion	Para. 9.22	Visual Examination	ESCC 3401	-	-	-	
Insert Retention (in Shell)	Para. 9.23, and Para. 4.3.5 herein	Visual Examination	ESCC 3401	-	ESCC 3401		

ESCC Generic Spec. No. 3401		Measurements and Inspections		Symbol	Limits		Unit
Environmental and Endurance Tests (1)	Test Method and Conditions	Identification	Conditions		Min	Max	
High Temperature Measurements	Para. 9.25	Initial Measurements	ESCC 3401 Table 2	-	-		GΩ
		Visual Examination			R _i	Table 2	
		Insulation Resistance	Table 2	I _{VPL}	Table 2		
		Voltage Proof Leakage Current	Table 2	R _{CL}	Table 2		
		Low Level Contact Resistance	Table 2	R _M	Table 2		
		Mated Shell Conductivity	Table 2				
		Measurement at High Temperature	Table 2 (at T _{amb} = +125°C)	R _i	1	-	GΩ
		Insulation Resistance					
Solderability	Para. 9.31, and Para. 4.3.6 herein	-	-	-	-	-	

NOTES:

1. The tests in this Table refer to either Chart IV or V and shall be used as applicable.
2. Parameter Drift referred to the initial measurement prior to the test in question.
3. The final measurements from the previous test may be used as initial values.

APPENDIX A
AGREED DEVIATIONS FOR AXON' CABLE (F)

Items Affected	Description of Deviations
<p>Para. 4.2.4, Deviations from Qualification Tests – Chart IV</p>	<p>Qualification testing in accordance with ESCC No. 3401 Para. 8.1 and Chart IV may be replaced by Qualification Testing in accordance with ESCC Generic Specification No. 3409 Para. 7.1 and Chart F4A.</p> <p>In this case, the test vehicles contained in the Qualification Test Lot shall include connectors in accordance with this specification that are mated with applicable HDR cable assemblies in accordance with ESCC Detail Specification No. 3409/002. The selected test vehicles shall be agreed with the ESCC Executive.</p> <p>The following deviations shall apply to the testing requirements of ESCC No. 3409 Chart F4A that shall apply to the connectors specified herein:</p> <ul style="list-style-type: none"> • Para. 8.25, Shielding Effectiveness: is not applicable to the components specified herein. • Para. 8.27, Ageing: the requirements of Table 6 herein (i.e. High Temperature Storage) shall apply. • Para. 8.28, Mating Endurance: the requirements of Table 6 herein (i.e. Endurance) shall apply. • Para. 8.31 Vibration (Random and Sine): the requirements of Table 6 herein (i.e. Vibration) shall apply. • Para. 8.18.2, Temperature Cycling (200 cycles): the requirements of Table 6 herein (i.e. Rapid Change of Temperature) shall apply. • Para. 8.32, Thermal Stability and Skew: the requirements of ESCC 3409/002 shall apply. • Para. 8.21.4, Electrical Measurements at Room, High and Low Temperatures: the requirements of ESCC 3409/002 shall apply. • Para. 8.33, Destructive Physical Analysis: a solderability test shall be included, to be performed on all PCB terminations: the requirements of Table 6 herein (i.e. Solderability) shall apply. • Para. 8.34, Radiation: is not applicable to the components specified herein.
<p>Para. 4.2.5, Deviations from Lot Acceptance Tests – Chart V</p>	<p>Lot Acceptance Testing in accordance with ESCC No. 3401 Para. 8.2 and Chart V may be replaced by Periodic Testing in accordance with ESCC Generic Specification No. 3409 Para. 7.2 and Chart F4B.</p> <p>In this case, the test vehicles used for testing shall include connectors in accordance with this specification that are mated with applicable HDR cable assemblies in accordance with ESCC Detail Specification No. 3409/002.</p> <p>The following deviations shall apply to the testing requirements of ESCC No. 3409 Chart F4B that shall apply to the connectors specified herein:</p> <ul style="list-style-type: none"> • Para. 8.25, Shielding Effectiveness: is not applicable to the components specified herein. • Para. 8.31 Vibration (Random and Sine): the requirements of Table 6 herein (i.e. Vibration) shall apply. • Para. 8.18.2, Temperature Cycling (100 cycles): the requirements of Table 6 herein (i.e. Rapid Change of Temperature) shall apply. • Para. 8.32, Thermal Stability and Skew: the requirements of ESCC 3409/002 shall apply. • Para. 8.21.4, Electrical Measurements at Room, High and Low Temperatures: the requirements of ESCC 3409/002 shall apply.