

# Customer Information Sheet

DRAWING No.: M80-400000F2-XX-XXX-00-000

SHEET 4 OF 6

IF IN DOUBT - ASK

©

NOT TO SCALE

THIRD ANGLE PROJECTION

ALL DIMENSIONS IN mm

**SPECIFICATIONS:**

**MATERIAL:**  
 MOULDING: GLASS FILLED PPS, UL94V-0, BLACK  
 POWER & COAX CONTACT:  
 BODY = COPPER ALLOY  
 INNER CONTACT, LATCHING COLLAR = BERYLLIUM COPPER  
 INSULATOR = PTFE

JACKSCREW, CIRCLIP: STAINLESS STEEL

**FINISH:**  
 POWER & COAX CONTACT  
 BODY, SLEEVE, INNER CONTACT = GOLD  
 LATCHING COLLAR: = NICKEL

**ELECTRICAL:**  
 WORKING VOLTAGE = 120V AC/DC  
 VOLTAGE PROOF = 360V AC/DC  
 INSULATION RESISTANCE = 100MΩ MIN

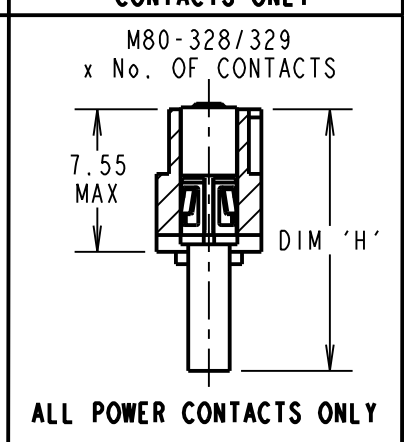
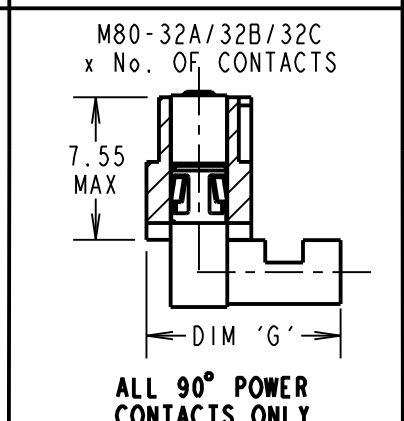
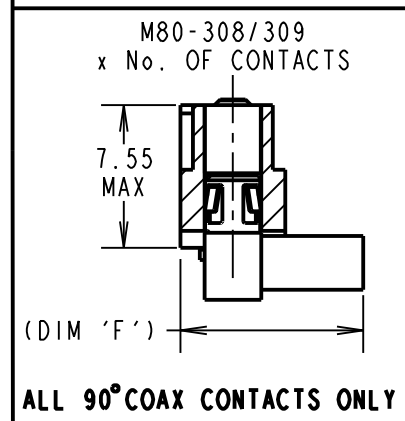
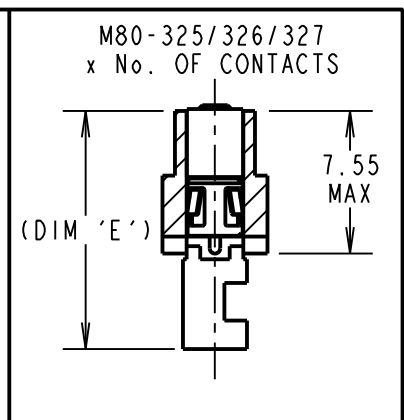
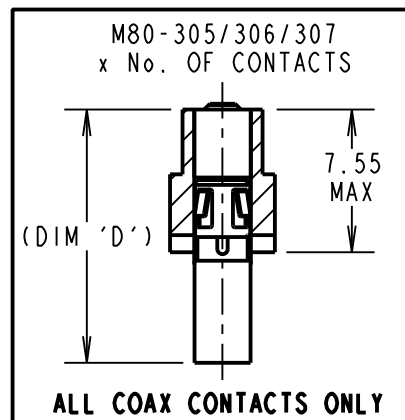
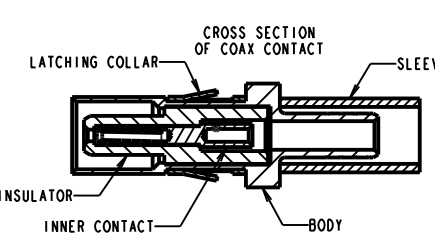
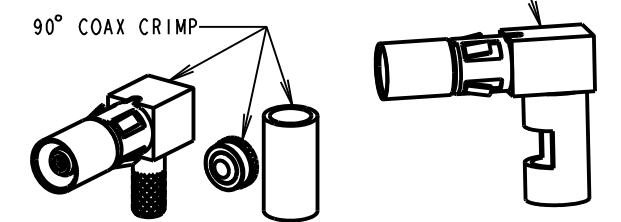
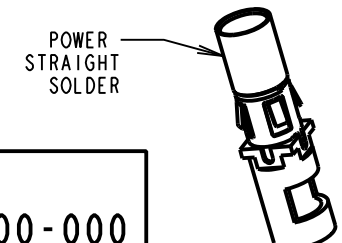
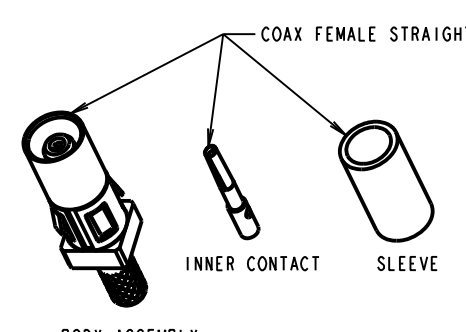
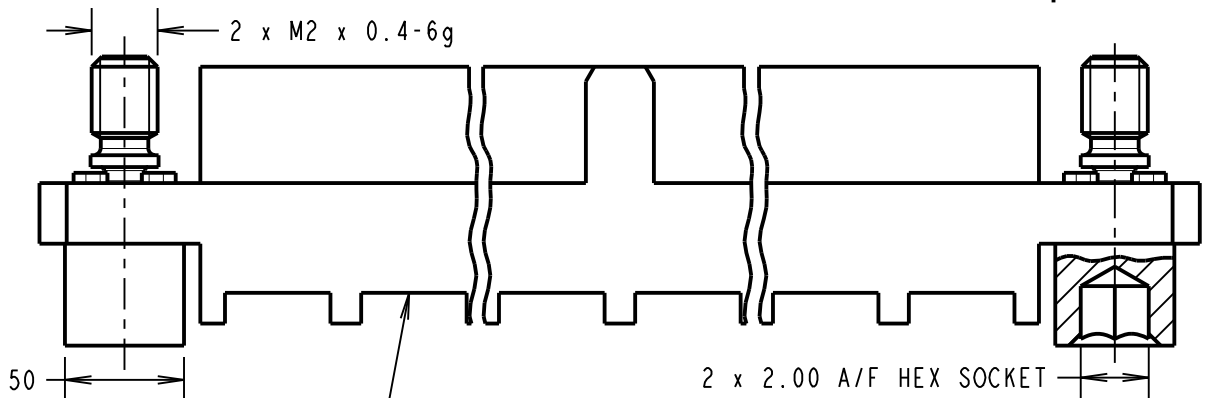
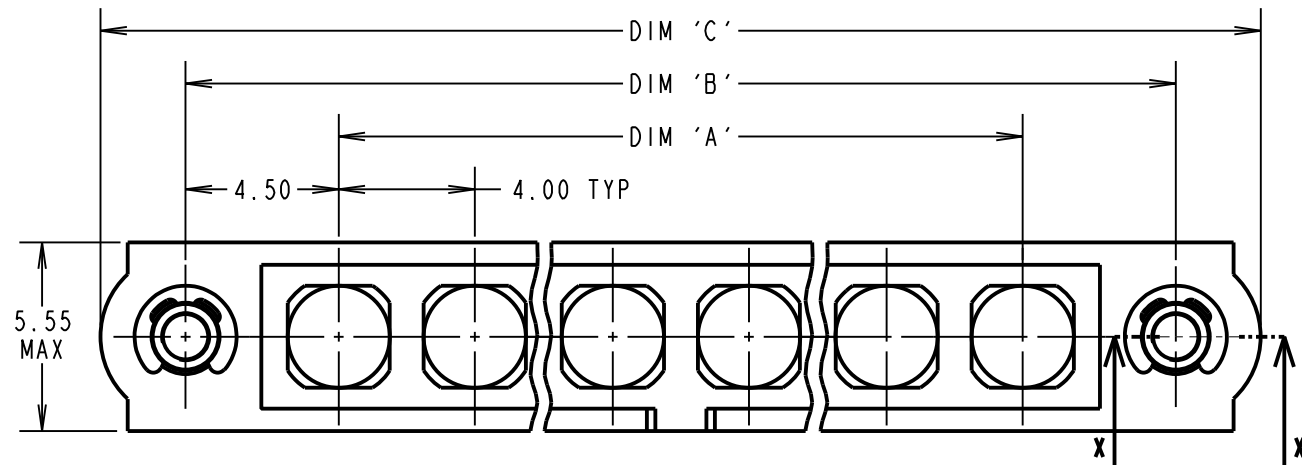
**POWER CONTACT:**  
 CONTACT RESISTANCE = 6mΩ MAX  
 CURRENT RATING = M80-325 20A MAX 12AWG  
 M80-326 15A MAX 14AWG  
 M80-327 10A MAX 16AWG  
 M80-32D 10A MAX 16AWG  
 M80-32A 20A MAX 12AWG  
 M80-32B 15A MAX 14AWG  
 M80-32C 10A MAX 16AWG  
 M80-328 8A MAX 18AWG  
 M80-329 5A MAX 20AWG  
 CONTACT AS SPECIFIED

**COAX CONTACT:**  
 FREQUENCY RANGE = 6GHz  
 IMPEDANCE = 50 Ω  
 V.S.W.R = 1.05 + (0.04 x FREQUENCY) GHz MAX  
 CONTACT RESISTANCE 6 mΩ MAX  
 INSULATION RESISTANCE = 10<sup>6</sup>MΩ @250V AC  
 OPERATING VOLTAGE = 180V AC @ 500mA  
 MAXIMUM VOLTAGE = 1000V AC

**MECHANICAL:**  
 DURABILITY = 500 OPERATIONS  
 POWER & COAX CONTACT:  
 INSERTION FORCE = 5N MAX  
 WITHDRAWAL FORCE = 0.5N MIN

**ENVIRONMENTAL:**  
 TEMPERATURE RANGE = -55°C TO +125°C

**PACKING:**  
 BAG  
 FOR COMPLETE SPECIFICATION SEE COMPONENT SPECIFICATION C005XX (LATEST ISSUE)



**CRIMP/SOLDER CONTACTS ONLY**

DIMENSION	CALCULATION
DIM 'A'	4 x No. OF CONTACTS - 4.00
DIM 'B'	4 x No. OF CONTACTS + 5.00
DIM 'C'	4 x No. OF CONTACTS + 10.00
DIM 'D'	M80-305/306/307=13.4mm
DIM 'E'	M80-325/326/327/32D=12.7mm
DIM 'F'	M80-308/309 = 9.7mm
DIM 'G'	M80-32A/32B/32C = 10.3mm
DIM 'H'	M80-328/329 = 13.9mm

ORDER CODE: (CRIMP/SOLDER)  
**M80-400000F2-XX-XXX-00-000**

TOTAL No. OF CONTACTS  
 02 TO 12

SPECIAL CONTACTS

- 305 = COAX CONTACT CRIMP 2.0mm M80-305
- 306 = COAX CONTACT CRIMP 2.4mm M80-306
- 307 = COAX CONTACT CRIMP 2.7mm M80-307
- 308 = 90° COAX CONTACT CRIMP 2.0mm M80-308
- 309 = 90° COAX CONTACT CRIMP 2.7mm M80-309
- 325 = POWER CONTACT SOLDER 12AWG M80-325
- 326 = POWER CONTACT SOLDER 14AWG M80-326
- 327 = POWER CONTACT SOLDER 16AWG M80-327
- 328 = POWER CONTACT CRIMP/SOLDER 18AWG M80-328
- 329 = POWER CONTACT CRIMP/SOLDER 20AWG M80-329
- 32A = 90° POWER CONTACT SOLDER 12AWG M80-32A
- 32B = 90° POWER CONTACT SOLDER 14AWG M80-32B
- 32C = 90° POWER CONTACT SOLDER 16AWG M80-32C

- NOTES:**
- CONNECTORS ARE SUPPLIED WITH CONTACTS LOOSE.
  - FOR EXTRA COAX CONTACTS, USE PART NUMBER M80-305/306/307/308/309. FOR EXTRA POWER CONTACTS, USE PART NUMBER M80-325/326/327/328/329/32D/32A/32B/32C.
  - COAX CONTACT IS SUPPLIED AS A KIT OF PARTS: BODY, INSULATOR AND LATCHING COLLAR ARE PRE-ASSEMBLED AND SLEEVE AND INNER CONTACT ARE SEPARATE.
  - RECOMMENDED HAND CRIMP TOOL FOR COAX INNER CONTACT = Z80-292 WITH POSITIONER Z80-291 AND RECOMMENDED HAND CRIMP TOOL AND DIE SET FOR COAX SLEEVE = Z80-293.
  - RECOMMENDED HAND CRIMP TOOL FOR CONTACTS M80-328/329 = Z80-294 WITH POSITIONER Z80-295.
  - POWER AND COAX CONTACT EXTRACTION TOOL = Z80-290
  - POWER CONTACT WIRE, STRIP BY 5.00mm MINIMUM
  - INSTRUCTION SHEETS ARE AVAILABLE.
  - FOR EXAMPLE OF ALL COAX SPECIAL CONTACTS ORDER CODE SEE EXAMPLE 1 IN TABLE
  - FOR EXAMPLE OF ALL POWER SPECIAL CONTACTS ORDER CODE SEE EXAMPLE 2 IN TABLE.

SM	3	07.04.11	11222
NAME	ISS.	DATE	C/NOTE
APPROVED: S. MCCULLAGH			
CHECKED: M. G. PLESTED			
DRAWN: C. PENROSE			
CUSTOMER REF.:			
ASSEMBLY DRG:			

EXAMPLE 1: CONNECTOR WITH 08 COAX CONTACTS,  
 M80-400000F2-08-305-00-000  
 DIM 'A' = 28.00mm, DIM 'B' = 37.00mm,  
 DIM 'C' = 42.00mm, DIM 'D' = 13.4mm

EXAMPLE 2: CONNECTOR WITH 10 POWER CONTACTS,  
 M80-400000F2-10-325-00-000  
 DIM 'A' = 36.00mm, DIM 'B' = 45.00mm,  
 DIM 'C' = 50.00mm, DIM 'E' = 12.7mm

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HARWIN USA TEL: 603 893 5376 FAX: 603 893 5396 mis@harwin.com	HARWIN Europe (UK) TEL: 023 9231 4545 FAX: 023 9231 4590 mis@harwin.co.uk	HARWIN Asia TEL: +65 6 779 4909 FAX: +65 6 779 3868 mis@harwin.com.sg					

# Customer Information Sheet

DRAWING No.: M80-400000F2-XX-XXX-00-000

SHEET 5 OF 6

IF IN DOUBT - ASK

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NOT TO SCALE

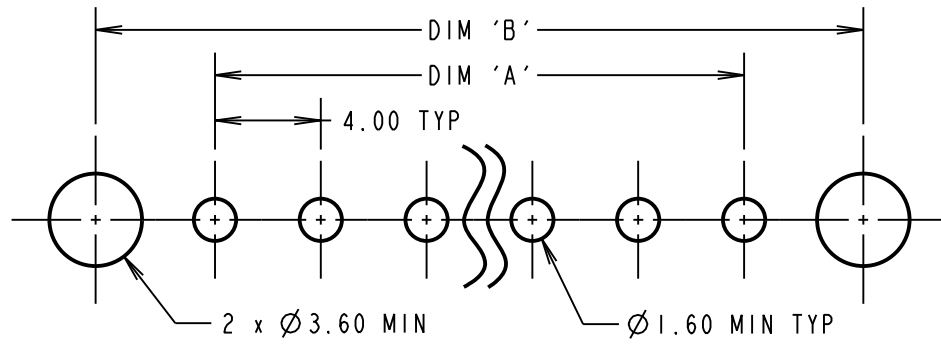
THIRD ANGLE PROJECTION

ALL DIMENSIONS IN mm

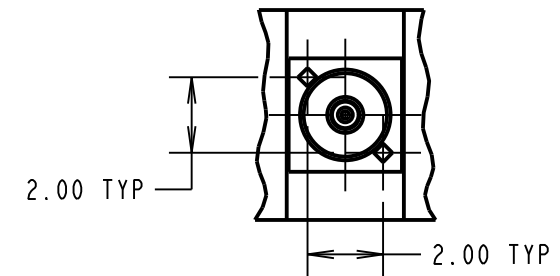
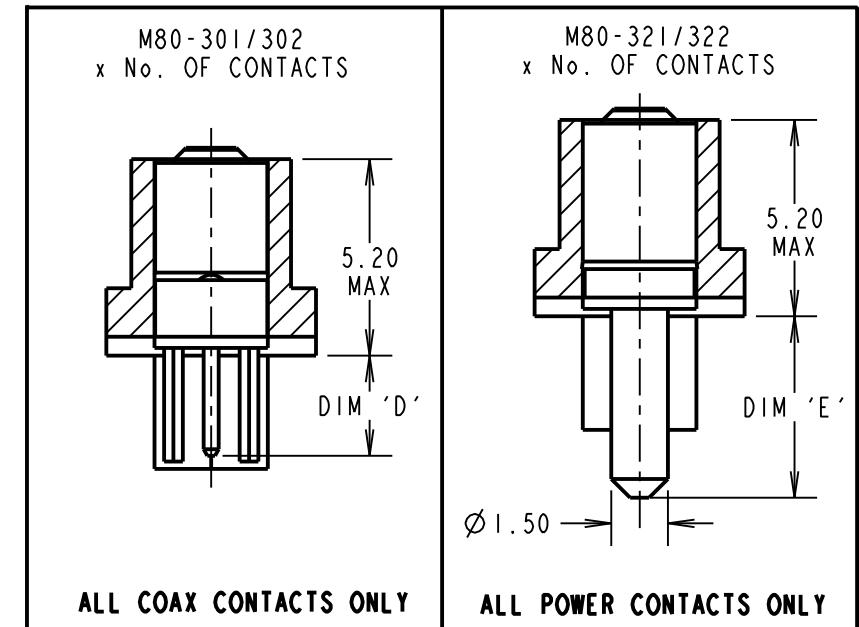
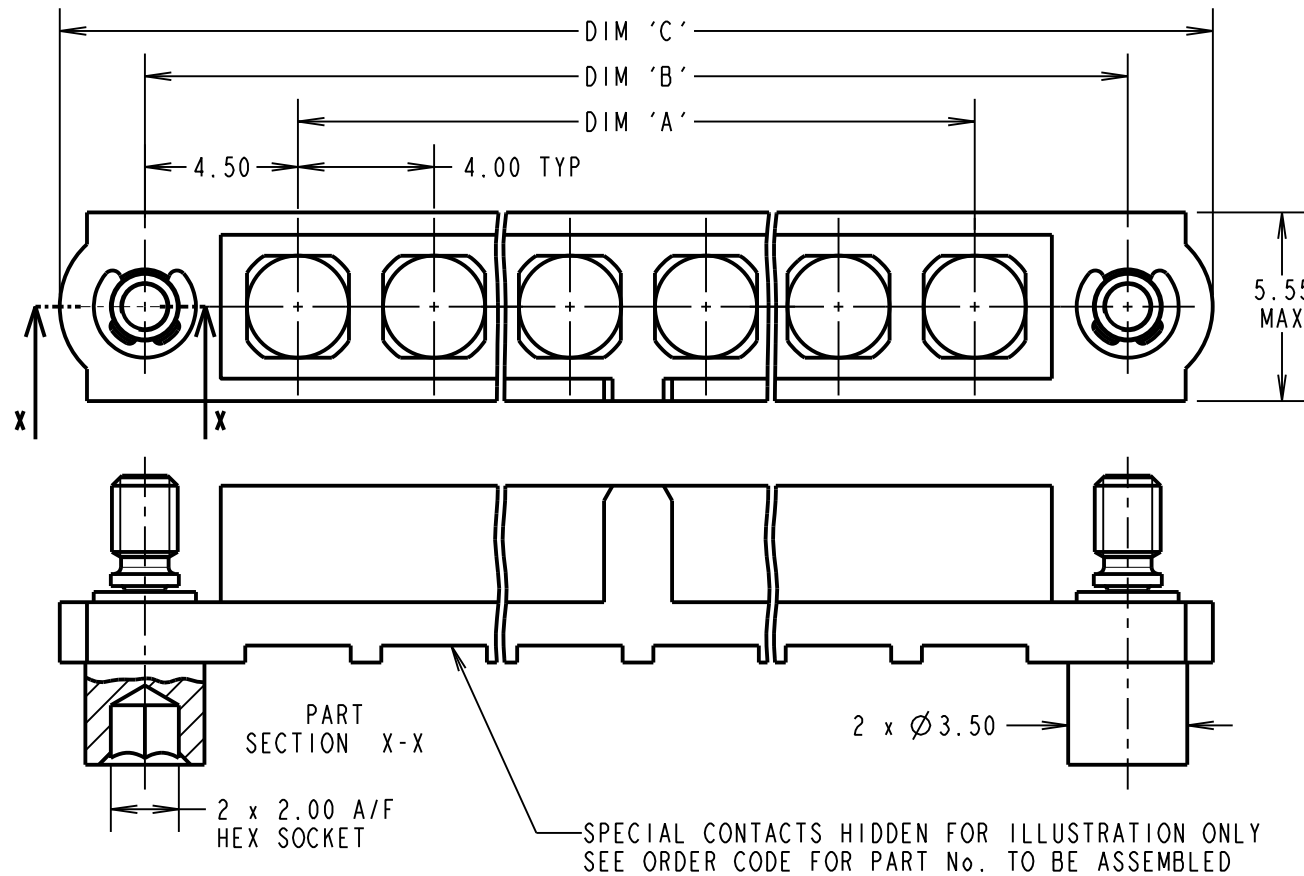
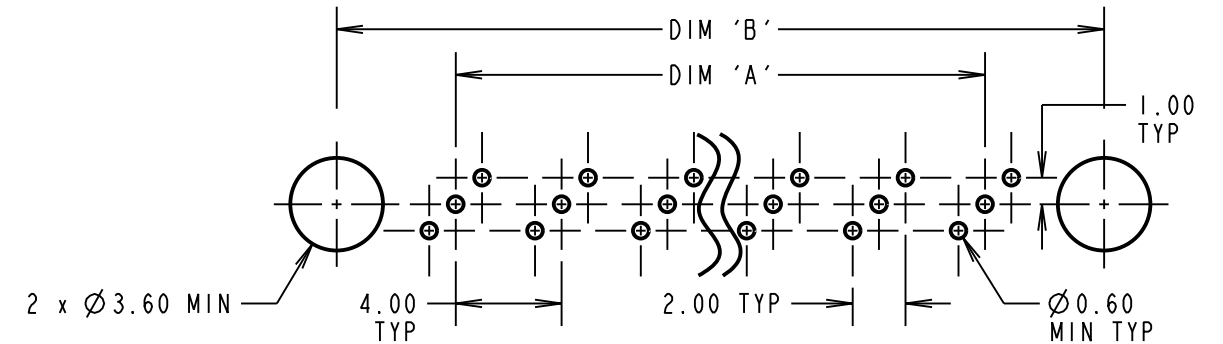
**SPECIFICATIONS:**  
**MATERIAL:**  
 MOULDING: GLASS FILLED PPS, UL94V-0, BLACK  
**POWER & COAX CONTACT:**  
 BODY = COPPER ALLOY  
 INNER CONTACT = BERYLLIUM COPPER  
 INSULATOR = PTFE  
 JACKSCREW, CIRCLIP: STAINLESS STEEL  
**FINISH:**  
 POWER & COAX CONTACT  
 BODY, SLEEVE, INNER CONTACT = GOLD  
**ELECTRICAL:**  
 WORKING VOLTAGE = 120V AC/DC  
 VOLTAGE PROOF = 360V AC/DC  
 INSULATION RESISTANCE = 100MΩ MIN  
**POWER CONTACT:**  
 CONTACT RESISTANCE = 6mΩ MAX  
 CURRENT RATING = 20A MAX  
**COAX CONTACT:**  
 FREQUENCY RANGE = 6GHz  
 IMPEDANCE = 50 Ω  
 V.S.W.R = 1.05 + (0.04 x FREQUENCY) GHz MAX  
 CONTACT RESISTANCE 6 mΩ MAX  
 INSULATION RESISTANCE = 10<sup>6</sup>MΩ @250V AC  
 OPERATING VOLTAGE = 180V AC @ 500mA  
 MAXIMUM VOLTAGE = 1000V AC  
**MECHANICAL:**  
 DURABILITY = 500 OPERATIONS  
 POWER & COAX CONTACT:  
 INSERTION FORCE = 5N MAX  
 WITHDRAWAL FORCE = 0.5N MIN  
**ENVIRONMENTAL:**  
 TEMPERATURE RANGE = -55°C TO +125°C  
**PACKING:**  
 TUBE  
 FOR COMPLETE SPECIFICATION SEE COMPONENT SPECIFICATION C005XX (LATEST ISSUE)

- NOTES:**  
 1. FOR EXAMPLE OF ALL COAX SPECIAL CONTACTS ORDER CODE SEE EXAMPLE 1 IN TABLE  
 2. FOR EXAMPLE OF ALL POWER SPECIAL CONTACTS ORDER CODE SEE EXAMPLE 2 IN TABLE.

RECOMMENDED PCB LAYOUT FOR ALL POWER CONTACTS ONLY



RECOMMENDED PCB LAYOUT FOR ALL COAX CONTACTS ONLY



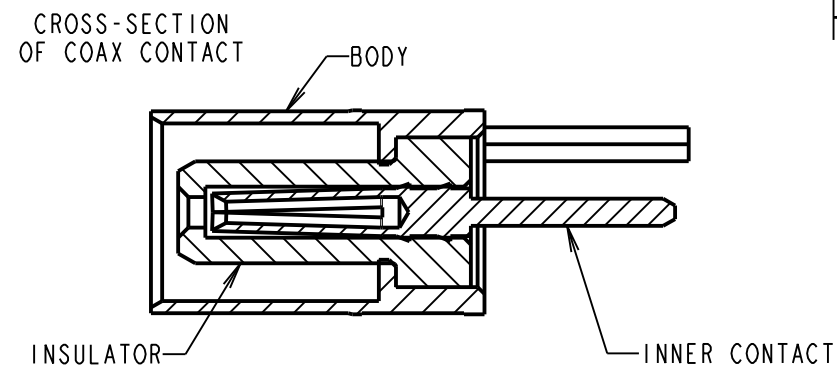
## PC TAIL VERTICAL CONTACTS ONLY

DIMENSION	CALCULATION
DIM 'A'	4 x No. OF CONTACTS - 4.00
DIM 'B'	4 x No. OF CONTACTS + 5.00
DIM 'C'	4 x No. OF CONTACTS + 10.00
DIM 'D'	M80-301 = 3.00mm, M80-302 = 4.50mm
DIM 'E'	M80-321 = 3.50mm, M80-322 = 5.00mm

EXAMPLE 1: CONNECTOR WITH 08 COAX CONTACTS,  
 M80-400000F2-08-301-00-000  
 DIM 'A' = 28.00mm, DIM 'B' = 37.00mm, DIM 'C' = 42.00mm  
 DIM 'D' = 3.00mm

EXAMPLE 2: CONNECTOR WITH 10 POWER CONTACTS,  
 M80-400000F2-10-321-00-000  
 DIM 'A' = 36.00mm, DIM 'B' = 45.00mm, DIM 'C' = 50.00mm  
 DIM 'E' = 3.50mm

ORDER CODE:(PC TAIL CONTACTS ONLY)  
**M80-400000F2-XX-XXX-00-000**  
 TOTAL No. OF CONTACTS \_\_\_\_\_  
 02 TO 12  
 SPECIAL CONTACTS \_\_\_\_\_  
 301 = COAX CONTACT PC TAIL 3.0mm M80-301  
 302 = COAX CONTACT PC TAIL 4.5mm M80-302  
 321 = POWER CONTACT PC TAIL 3.5mm M80-321  
 322 = POWER CONTACT PC TAIL 5.0mm M80-322



**HARWIN**

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**TOLERANCES**  
 X. = ±1mm  
 X.X = ±0.25mm  
 X.XX = ±0.10mm  
 X.XXX = ±0.01mm  
 ANGLES = ±5°  
 UNLESS STATED

**MATERIAL:**  
 SEE ABOVE  
**FINISH:**  
 SEE ABOVE  
**S/AREA:**  
 mm<sup>2</sup>

**TITLE:** JACKSCREW DATAMATE MIXED TECHNOLOGY FEMALE ASSY WITH HEX SOCKET J/S  
**DRAWING NUMBER:**  
**M80-400000F2-XX-XXX-00-000**  
 SHT 5 OF 6

SM	3	07.04.11	11222
NAME	ISS.	DATE	C/NOTE
APPROVED: S. MCCULLAGH			
CHECKED: M. G. PLESTED			
DRAWN: C. PENROSE			
CUSTOMER REF.:			
ASSEMBLY DRG:			

# Customer Information Sheet

DRAWING No.: M80-400000F2-XX-XXX-00-000

SHEET 6 OF 6

IF IN DOUBT - ASK

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NOT TO SCALE

THIRD ANGLE PROJECTION

ALL DIMENSIONS IN mm

**SPECIFICATIONS:**

**MATERIAL:**  
 MOULDING: GLASS FILLED PPS, UL94V-0, BLACK  
 POWER CONTACT: COPPER ALLOY  
 JACKSCREW, CIRCLIP: STAINLESS STEEL

**FINISH:**  
 POWER CONTACT: GOLD

**ELECTRICAL:**  
 WORKING VOLTAGE = 120V AC/DC  
 VOLTAGE PROOF = 360V AC/DC  
 INSULATION RESISTANCE = 100MΩ MIN

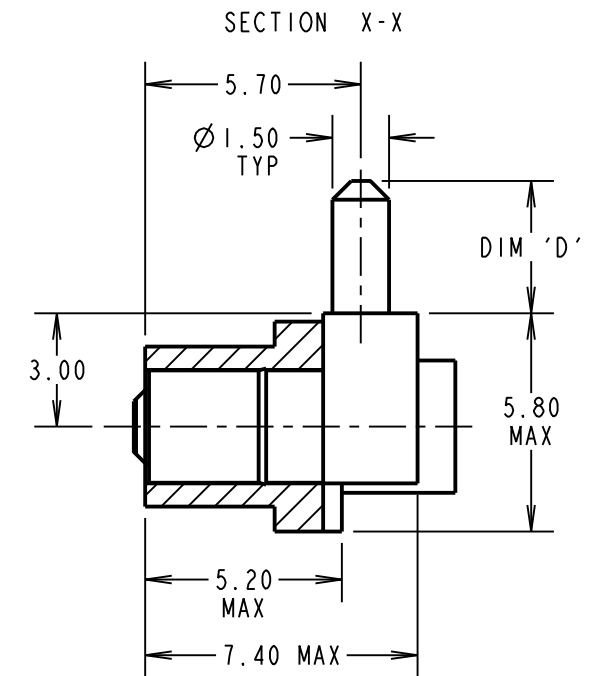
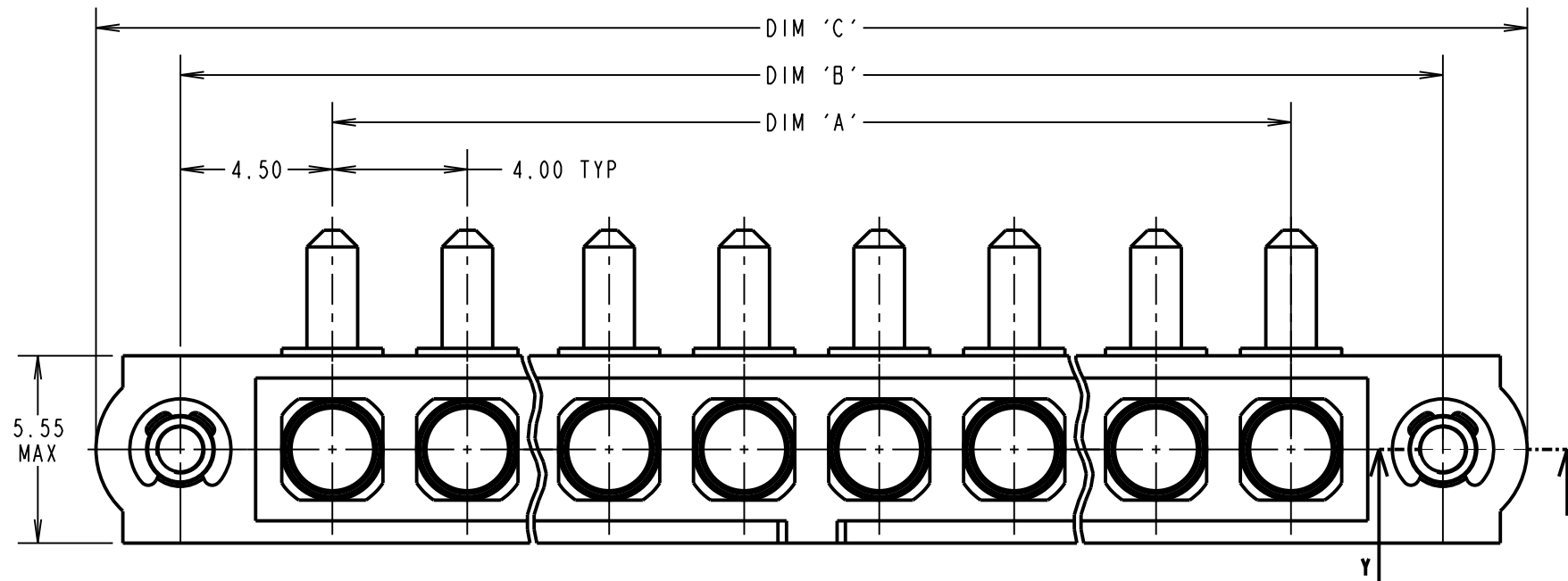
**POWER CONTACT:**  
 CONTACT RESISTANCE = 6 mΩ MAX  
 CURRENT RATING = 20A MAX

**MECHANICAL:**  
 DURABILITY = 500 OPERATIONS  
 POWER CONTACT:  
 INSERTION FORCE = 5N MAX  
 WITHDRAWAL FORCE = 0.5N MIN

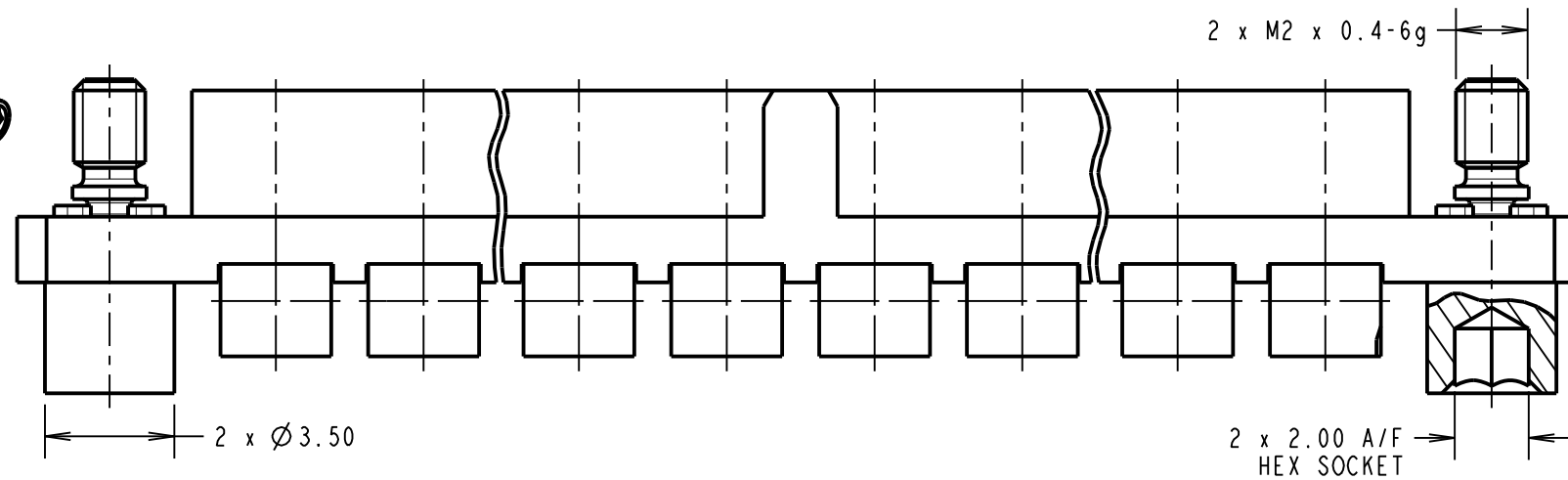
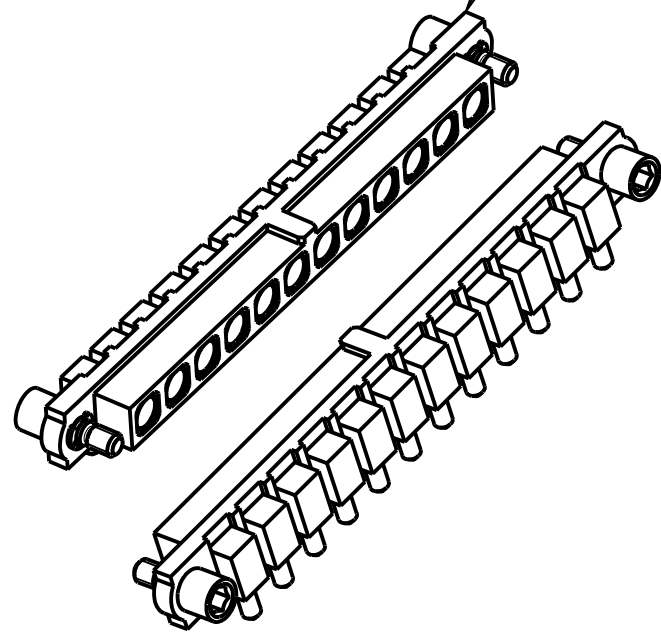
**ENVIRONMENTAL:**  
 TEMPERATURE RANGE = -55°C TO +125°C

**PACKING:**  
 TUBE  
 FOR COMPLETE SPECIFICATION SEE COMPONENT SPECIFICATION C005XX (LATEST ISSUE)

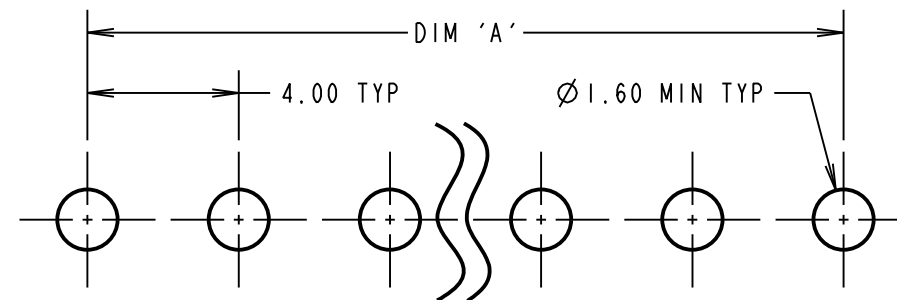
## PC TAIL HORIZONTAL CONTACTS ONLY



M80-400000F2-12-323-00-00  
 SHOWN FOR ILLUSTRATION PURPOSES



**RECOMMENDED PCB LAYOUT**



DIMENSION	CALCULATION
DIM 'A'	4 x No. OF CONTACTS - 4.00
DIM 'B'	4 x No. OF CONTACTS + 5.00
DIM 'C'	4 x No. OF CONTACTS + 10.00
DIM 'D'	M80-323 = 3.50mm, M80-324 = 5.00mm

EXAMPLE 1: CONNECTOR WITH 10 POWER CONTACTS 3.5mm,  
 M80-400000F2-10-323-00-000  
 DIM 'A' = 36.00mm, DIM 'B' = 45.00mm, DIM 'C' = 50.00mm  
 DIM 'D' = 3.50mm

EXAMPLE 2: CONNECTOR WITH 10 POWER CONTACTS 5.0mm,  
 M80-400000F2-10-324-00-000  
 DIM 'A' = 36.00mm, DIM 'B' = 45.00mm, DIM 'C' = 50.00mm  
 DIM 'D' = 5.00mm

ORDER CODE:  
 (FEMALE HORIZONTAL POWER CONTACTS ONLY)  
**M80-400000F2-XX-XXX-00-000**

TOTAL No. OF CONTACTS  
 02 TO 12

FEMALE HORIZONTAL POWER CONTACTS  
 323 = POWER CONTACT PC TAIL 3.5mm M80-323  
 324 = POWER CONTACT PC TAIL 5.0mm M80-324

**HARWIN**

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 mis@harwin.com.sg

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**TOLERANCES**  
 X. = ±1mm  
 X.X = ±0.25mm  
 X.XX = ±0.10mm  
 X.XXX = ±0.01mm  
 ANGLES = ±5°  
 UNLESS STATED

**MATERIAL:**  
 SEE ABOVE

**FINISH:**  
 SEE ABOVE

**S/AREA:**  
 mm<sup>2</sup>

**TITLE:** JACKSCREW DATAMATE  
 MIXED TECHNOLOGY FEMALE  
 ASSY WITH HEX SOCKET J/S

**DRAWING NUMBER:**  
**M80-400000F2-XX-XXX-00-000**

SM	3	07.04.11	11222
NAME	ISS.	DATE	C/NOTE
APPROVED: S. MCCULLAGH			
CHECKED: M. G. PLESTED			
DRAWN: C. PENROSE			
CUSTOMER REF.:			
ASSEMBLY DRG:			