

# Customer Information Sheet

DRAWING No.: M80-500000MD-XX-XXX-00-000

IF IN DOUBT - ASK

©

NOT TO SCALE

THIRD ANGLE PROJECTION

ALL DIMENSIONS IN mm

## SPECIFICATIONS:

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

**FINISH:**  
 COAX CONTACT:  
 BODY, SLEEVE, INNER CONTACT, END PLUG = GOLD  
 LATCHING COLLAR = NICKEL

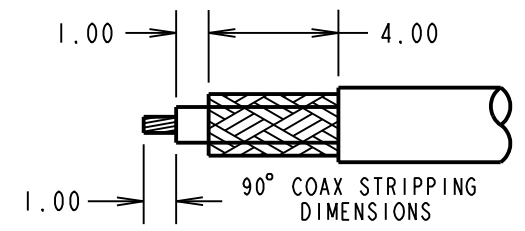
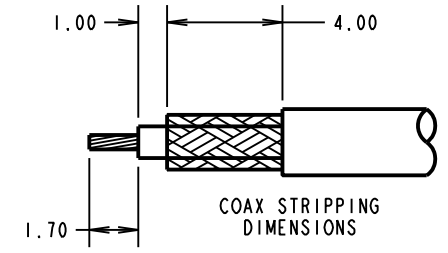
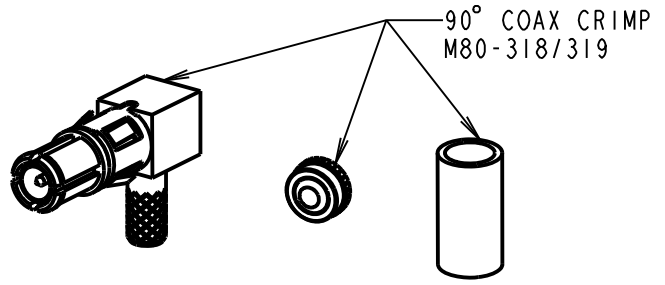
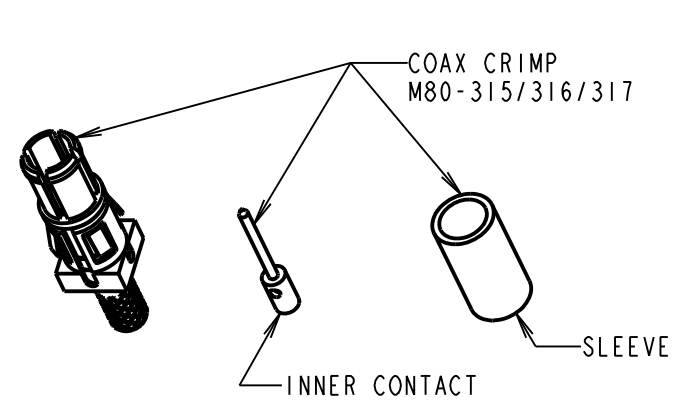
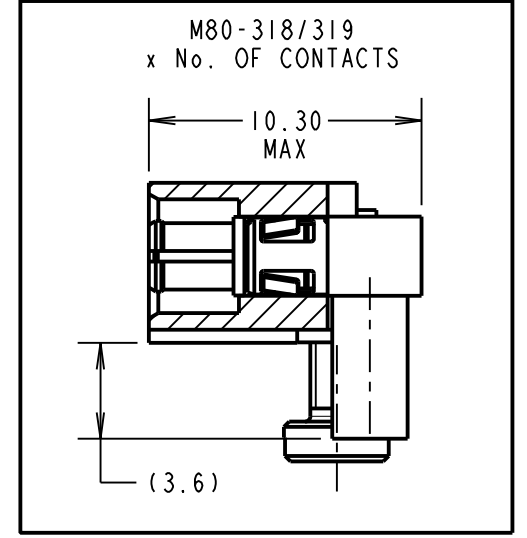
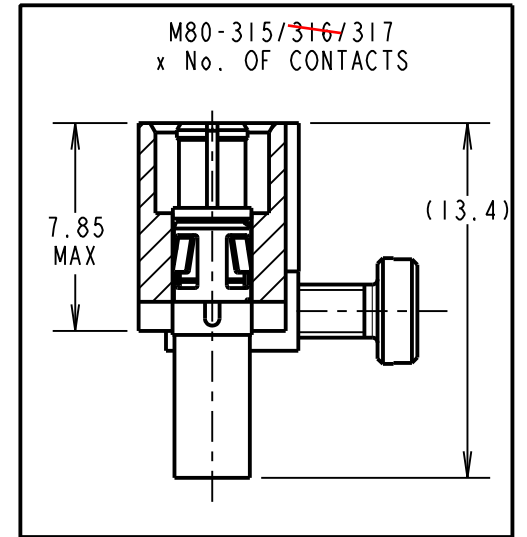
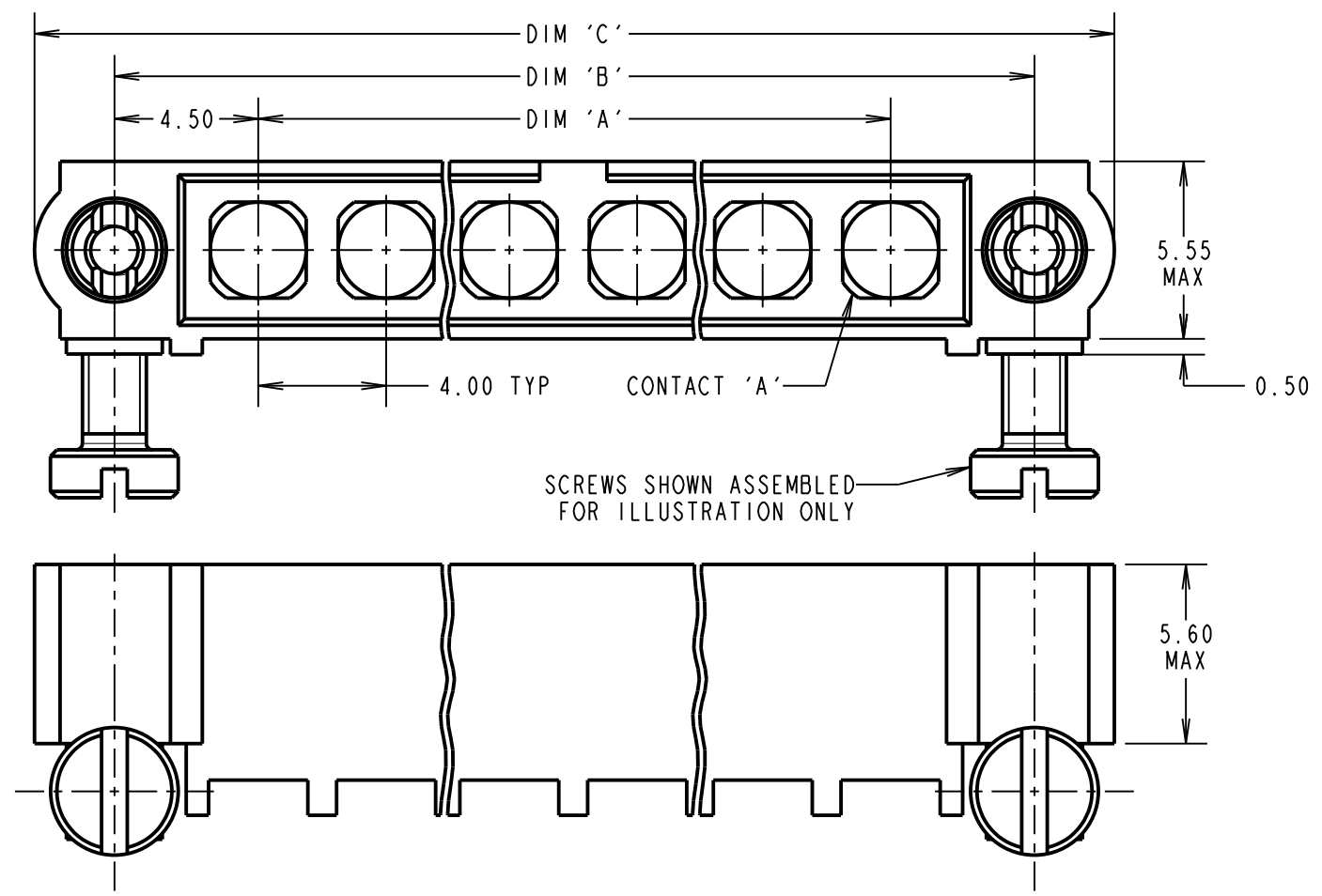
**ELECTRICAL:**  
 FREQUENCY RANGE = 6GHz  
 IMPEDANCE = 50Ω  
 V.S.W.R = 1.05 + (0.04 x FREQUENCY) GHz MAX  
 CONTACT RESISTANCE = 6mΩ MAX  
 INSULATION RESISTANCE = 10<sup>6</sup>MΩ @250V AC  
 OPERATING VOLTAGE = 180V AC @ 500mA  
 MAXIMUM VOLTAGE = 1000V AC

**MECHANICAL:**  
 DURABILITY = 500 OPERATIONS  
 COAX CONTACT:  
 INSERTION FORCE = 8N 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)

## COAX CRIMP CONTACTS ONLY



- CRIMP/SOLDER NOTES:**
- CONNECTORS ARE SUPPLIED WITH CONTACTS LOOSE.
  - COAX CONTACT IS SUPPLIED AS A KIT OF PARTS: BODY, MAIN INSULATOR, INNER CONTACT AND LATCHING COLLAR ARE PRE-ASSEMBLED AND SLEEVE AND INSULATED END PLUG ASSEMBLY ARE SEPARATE.
  - FOR EXTRA COAX CONTACTS, USE PART NUMBERS M80-315/~~316~~/317/318/319.
  - COAX CONTACT EXTRACTION TOOL = Z80-290.
  - RECOMMENDED HAND CRIMP TOOL FOR INNER COAX CONTACT = Z80-292 WITH POSITIONER Z80-291. RECOMMENDED HAND CRIMP TOOL AND DIE SET FOR SLEEVE = Z80-293.
  - INSTRUCTION SHEETS ARE AVAILABLE.

ORDER CODE: (COAX CRIMP CONTACTS)  
**M80-500000MD-XX-XXX-00-000**

TOTAL No. OF CONTACTS \_\_\_\_\_  
 02 TO 12

SPECIAL CONTACTS \_\_\_\_\_

315 = COAX CONTACT 2.00mm CRIMP M80-315  
~~316 = COAX CONTACT 2.40mm CRIMP M80-316~~  
 317 = COAX CONTACT 2.70mm CRIMP M80-317  
 318 = COAX CONTACT 2.00mm HORIZ' CRIMP M80-318  
 319 = COAX CONTACT 2.70mm HORIZ' CRIMP M80-319

SB	1	12.07.17	-----
NAME	ISS.	DATE	C/NOTE
APPROVED:		S.BENNETT	
CHECKED:		M.PLESTED	
DRAWN:		S.BENNETT	
CUSTOMER REF.:			
ASSEMBLY DRG:			

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

EXAMPLE 1: CONNECTOR WITH 08 COAX CONTACTS,  
 M80-500000MD-08-315-00-000  
 DIM 'A' = 28.00mm, DIM 'B' = 37.00mm, DIM 'C' = 42.00mm

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 technical@harwin.com

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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:**  
 DATAMATE MIX-TEK MALE ASSEMBLY  
**DRAWING NUMBER:**  
 M80-500000MD-XX-XXX-00-000  
 SHT 4 OF 6

# Customer Information Sheet

DRAWING No.: M80-500000MD-XX-XXX-00-000

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:**  
 BODY, SLEEVE, INNER CONTACT, END PLUG = COPPER ALLOY  
 LATCHING COLLAR = BERYLLIUM COPPER  
 INSULATOR = PTFE

**FINISH:**  
**POWER CONTACT:**  
 BODY, SLEEVE, INNER CONTACT, END PLUG = GOLD  
 LATCHING COLLAR = NICKEL

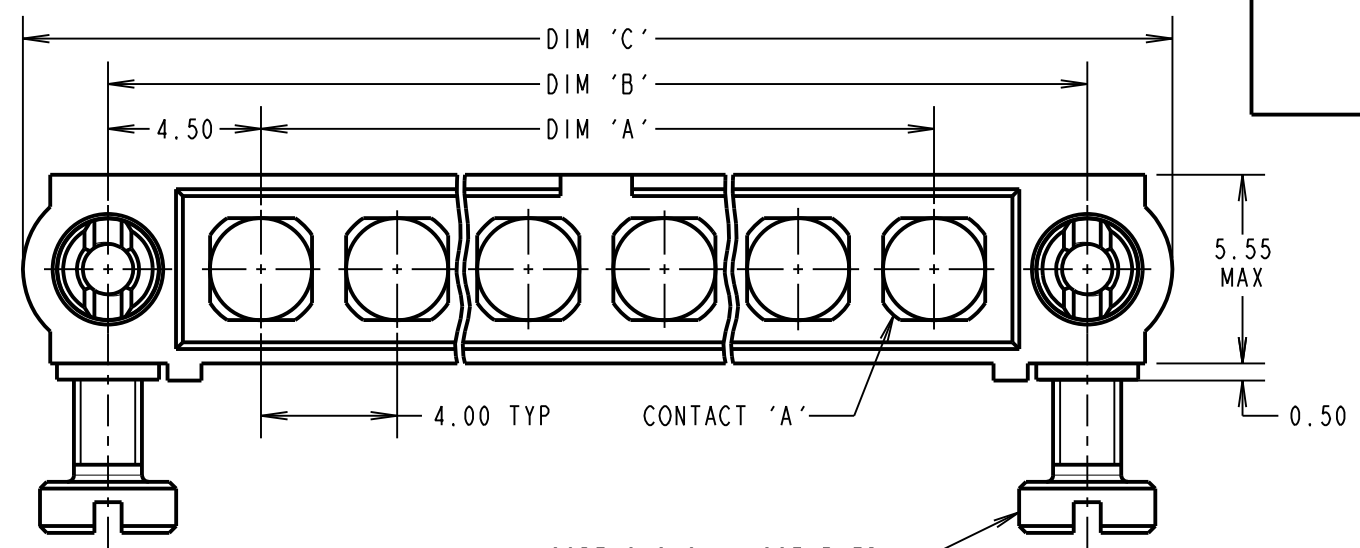
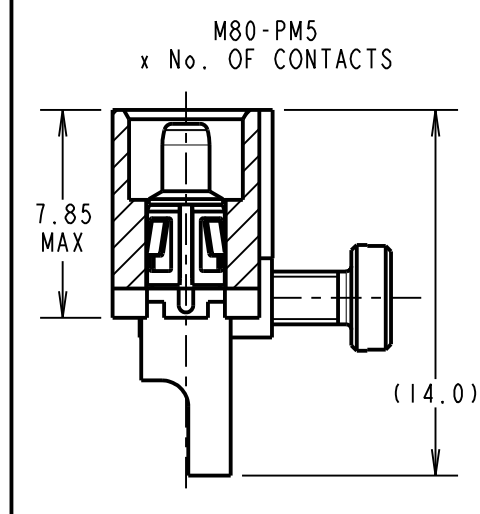
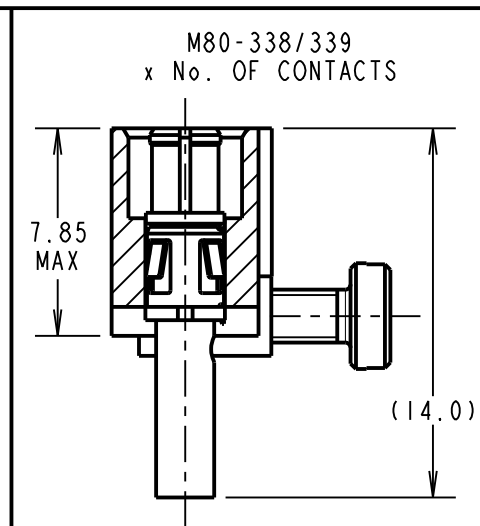
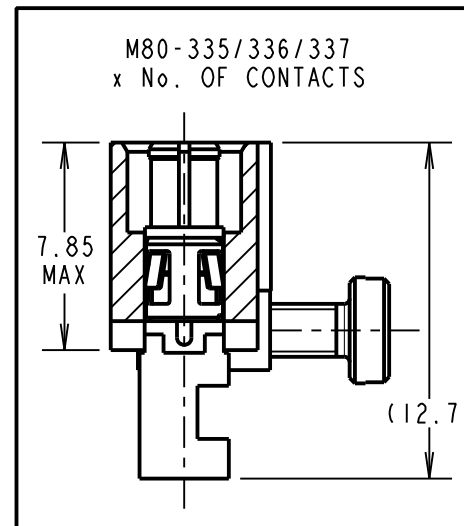
**ELECTRICAL:**  
 WORKING VOLTAGE = 800V AC/DC  
 VOLTAGE PROOF = 1200V AC/DC  
 INSULATION RESISTANCE = 100MΩ MIN  
 CONTACT RESISTANCE = 6mΩ MAX  
 CURRENT RATING = M80-335 = 20A MAX WITH 12AWG  
 M80-336 = 15A MAX WITH 14AWG  
 M80-337 = 10A MAX WITH 16AWG  
 M80-338 = 8A MAX WITH 18AWG  
 M80-339 = 5A MAX WITH 20AWG  
 M80-PM5 = 40A MAX WITH 10AWG  
 CONTACT AS SPECIFIED

**MECHANICAL:**  
 DURABILITY = 500 OPERATIONS  
 INSERTION FORCE:  
 M80-335/336/337/338/339 = 8N MAX  
 M80-PM5 = 15N MAX  
 WITHDRAWAL FORCE = 0.5N MIN

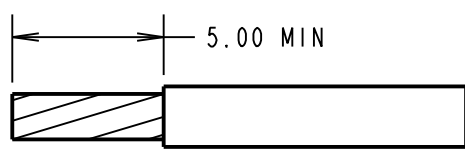
**ENVIRONMENTAL:**  
 TEMPERATURE RANGE:  
 M80-335/336/337/338/339 = -55°C TO +125°C  
 M80-PM5 = -55°C TO +150°C

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

## POWER CRIMP & SOLDER CONTACTS ONLY



SCREWS SHOWN ASSEMBLED FOR ILLUSTRATION ONLY



POWER CABLE STRIPPING DIMENSIONS

- CRIMP/SOLDER NOTES:**
- CONNECTORS ARE SUPPLIED WITH CONTACTS LOOSE.
  - FOR EXTRA POWER CONTACTS USE PART NUMBERS M80-335/336/337/338/339/PM5.
  - POWER CONTACT EXTRACTION TOOL = Z80-290.
  - RECOMMENDED HAND CRIMP TOOL FOR CONTACTS 338/339 = Z80-294 AND POSITIONER Z80-295.
  - INSTRUCTION SHEETS ARE AVAILABLE.

ORDER CODE: (POWER CRIMP/SOLDER CONTACTS)  
**M80-500000MD-XX-XXX-00-000**

TOTAL No. OF CONTACTS \_\_\_\_\_  
 02 TO 12

SPECIAL CONTACTS \_\_\_\_\_  
 335 = POWER CONTACT 12AWG SOLDER M80-335  
 336 = POWER CONTACT 14AWG SOLDER M80-336  
 337 = POWER CONTACT 16AWG SOLDER M80-337  
 338 = POWER CONTACT 18AWG SOLDER/CRIMP M80-338  
 339 = POWER CONTACT 20AWG SOLDER/CRIMP M80-339  
 PM5 = POWER CONTACT 10AWG SOLDER M80-PM5

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

EXAMPLE 2: CONNECTOR WITH 10 POWER CONTACTS,  
 M80-500000MD-10-335-00-000  
 DIM 'A' = 36.00mm, DIM 'B' = 45.00mm, DIM 'C' = 50.00mm

SB	1	12.07.17	----
NAME	ISS.	DATE	C/NOTE
APPROVED:		S.BENNETT	
CHECKED:		M.PLESTED	
DRAWN:		S.BENNETT	
CUSTOMER REF.:			
ASSEMBLY DRG:			

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			FINISH: SEE ABOVE	DRAWING NUMBER: <b>M80-500000MD-XX-XXX-00-000</b>

# Customer Information Sheet

DRAWING No.: M80-500000MD-XX-XXX-00-000

IF IN DOUBT - ASK

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NOT TO SCALE

THIRD ANGLE PROJECTION

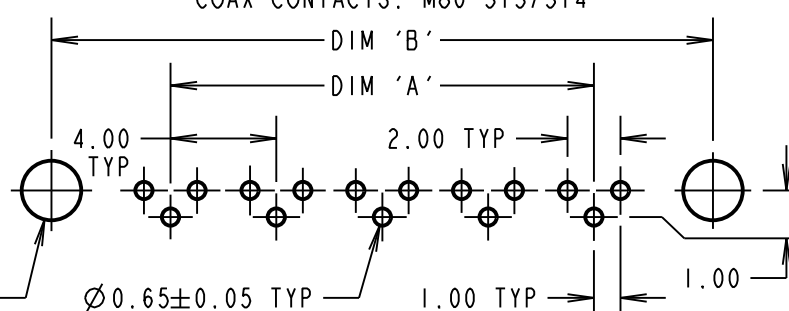
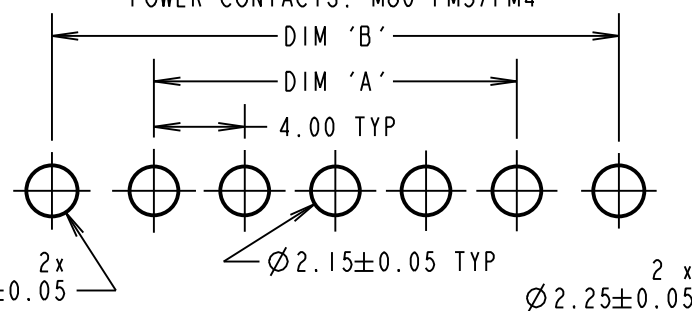
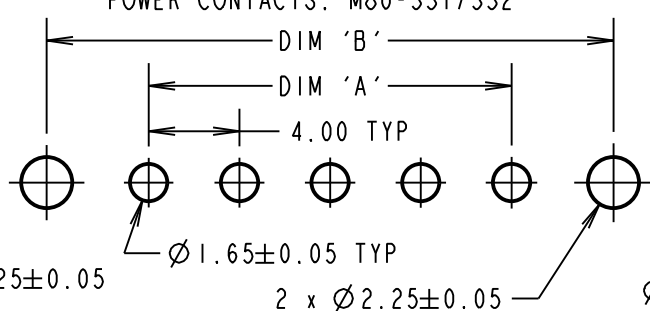
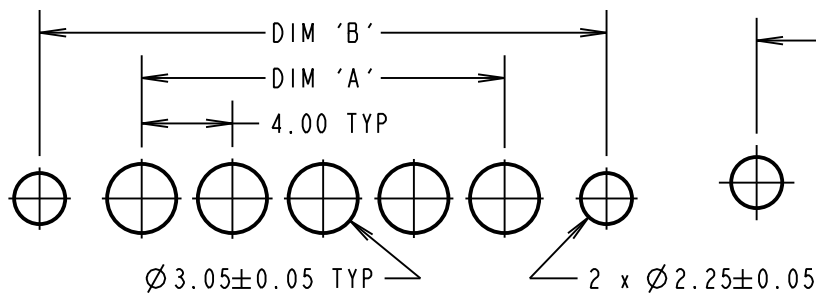
ALL DIMENSIONS IN mm

RECOMMENDED PCB LAYOUT FOR POWER SMT: M80-33A

RECOMMENDED PCB LAYOUT FOR POWER CONTACTS: M80-331/332

RECOMMENDED PCB LAYOUT FOR POWER CONTACTS: M80-PM3/PM4

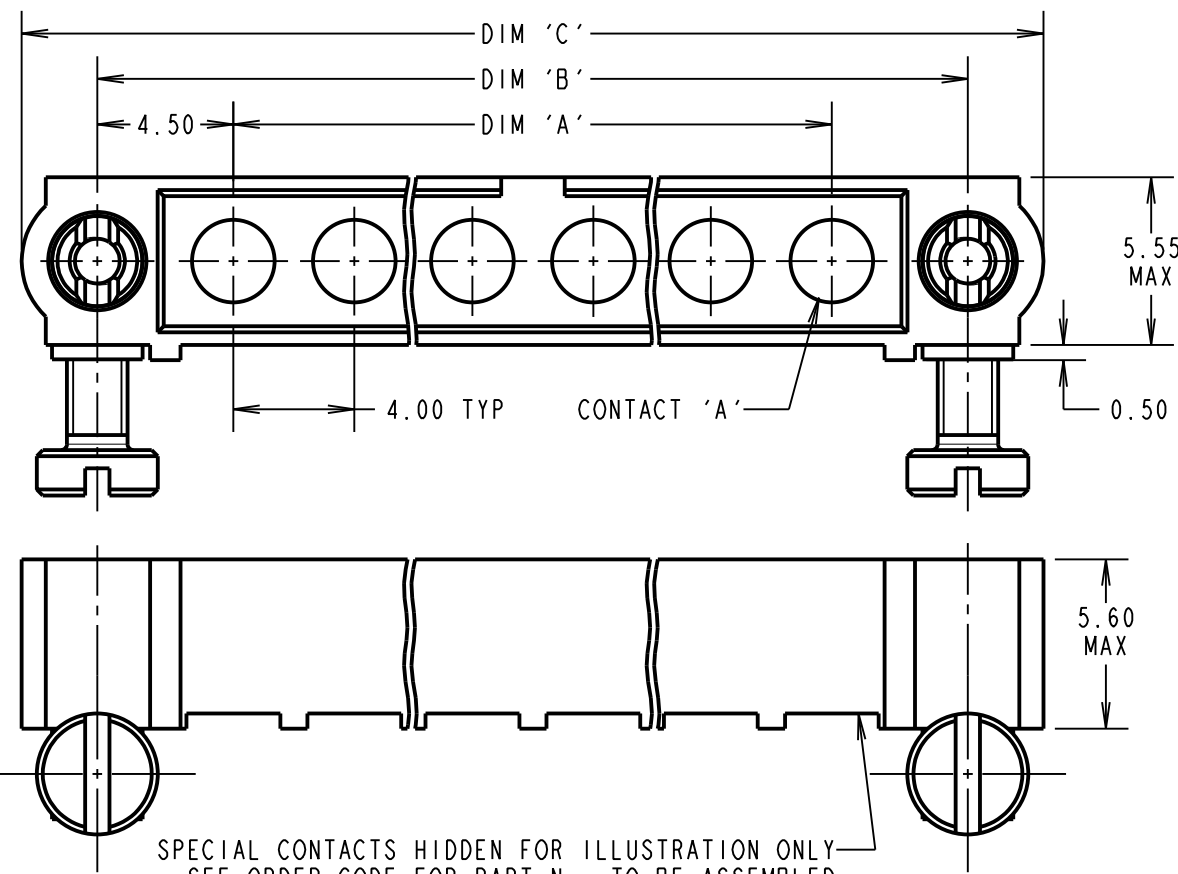
RECOMMENDED PCB LAYOUT FOR COAX CONTACTS: M80-313/314



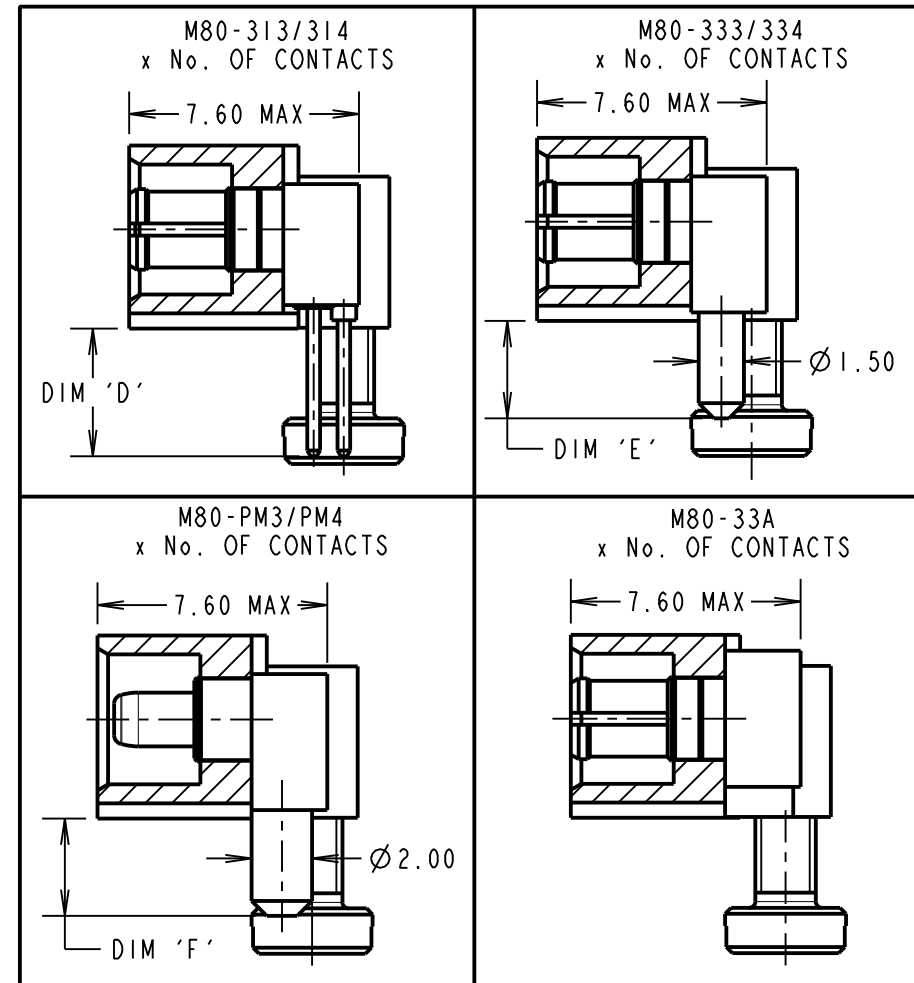
**SPECIFICATIONS:**

- MATERIAL:**  
 MOULDING: GLASS FILLED PPS, UL94V-0, BLACK  
 POWER CONTACT: COPPER ALLOY  
 COAX CONTACT:  
 BODY = COPPER ALLOY  
 INNER CONTACT = COPPER ALLOY  
 INSULATOR = PTFE
- FINISH:**  
 POWER CONTACT: GOLD  
 COAX CONTACT: BODY, INNER CONTACT = GOLD
- ELECTRICAL:**  
 POWER CONTACT:  
 WORKING VOLTAGE = 800V AC/DC  
 VOLTAGE PROOF = 1200V AC/DC  
 INSULATION RESISTANCE = 100M $\Omega$  MIN  
 CONTACT RESISTANCE = 6m $\Omega$  MAX  
 CURRENT RATING:  
 M80-333/334/33A = 20A MAX  
 M80-PM3/PM4 = 40A MAX  
 COAX CONTACT:  
 FREQUENCY RANGE = 6GHz  
 IMPEDANCE = 50 $\Omega$   
 V.S.W.R = 1.05 + (0.04 x FREQUENCY) GHz MAX  
 CONTACT RESISTANCE = 6m $\Omega$  MAX  
 INSULATION RESISTANCE = 10<sup>6</sup>M $\Omega$  @250V AC  
 OPERATING VOLTAGE = 180V AC @ 500ma  
 MAXIMUM VOLTAGE = 1000V AC
- MECHANICAL:**  
 DURABILITY = 500 OPERATIONS  
 POWER CONTACT:  
 INSERTION FORCE:  
 M80-333/334/33A = 8N MAX  
 M80-PM3/PM4 = 15N MAX  
 WITHDRAWAL FORCE = 0.5N MIN  
 COAX CONTACT:  
 INSERTION FORCE = 8N MAX  
 WITHDRAWAL FORCE = 0.5N MIN
- ENVIRONMENTAL:**  
 TEMPERATURE RANGE:  
 M80-313/314/333/334/33A = -55°C TO +125°C  
 M80-PM3/PM4 = -55°C TO +150°C
- PACKING:**  
 TUBE  
 FOR COMPLETE SPECIFICATION SEE COMPONENT SPECIFICATION C005XX (LATEST ISSUE)

## HORIZONTAL PC TAIL & SMT CONTACTS ONLY



SPECIAL CONTACTS HIDDEN FOR ILLUSTRATION ONLY  
 SEE ORDER CODE FOR PART No. TO BE ASSEMBLED



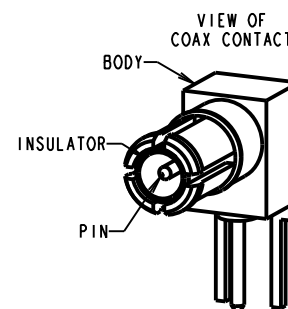
ORDER CODE: (PC TAIL CONTACTS ONLY)

**M80-500000MD-XX-XXX-00-000**

TOTAL No. OF CONTACTS  
 02 TO 12

SPECIAL CONTACTS

- 313 = COAX CONTACT 3.0mm PC TAIL M80-313
- 314 = COAX CONTACT 4.5mm PC TAIL M80-314
- 333 = 20A POWER CONTACT 3.5mm HORZ' PC TAIL M80-333
- 334 = 20A POWER CONTACT 5.0mm HORZ' PC TAIL M80-334
- PM3 = 40A POWER CONTACT 3.5mm HORZ' PC TAIL M80-PM3
- PM4 = 40A POWER CONTACT 5.0mm HORZ' PC TAIL M80-PM4
- 33A = POWER CONTACT HORZ' SMT M80-33A



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'	M80-313 = 3.0mm, M80-314 = 4.5mm
DIM 'E'	M80-333 = 3.5mm, M80-334 = 5.0mm
DIM 'F'	M80-PM3 = 3.5mm, M80-PM4 = 5.0mm

EXAMPLE 2: CONNECTOR WITH 10 POWER CONTACTS,  
 M80-500000MD-10-333-00-000  
 DIM 'A' = 36.00mm, DIM 'B' = 45.00mm, DIM 'C' = 50.00mm  
 DIM 'E' = 3.0mm

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TOLERANCES  
 X. =  $\pm 1$ mm  
 X.X =  $\pm 0.25$ mm  
 X.XX =  $\pm 0.10$ mm  
 X.XXX =  $\pm 0.01$ mm  
 ANGLES =  $\pm 5^\circ$   
 UNLESS STATED

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

TITLE: DATAMATE MIX-TEK MALE ASSEMBLY  
 DRAWING NUMBER: M80-500000MD-XX-XXX-00-000  
 SHT 6 OF 6

SB	1	12.07.17	----
NAME	ISS.	DATE	C/NOTE
APPROVED:		S.BENNETT	
CHECKED:		M.PLESTED	
DRAWN:		S.BENNETT	
CUSTOMER REF.:			
ASSEMBLY DRG:			