

# Customer Information Sheet

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

IF IN DOUBT - ASK

(C)

NOT TO SCALE

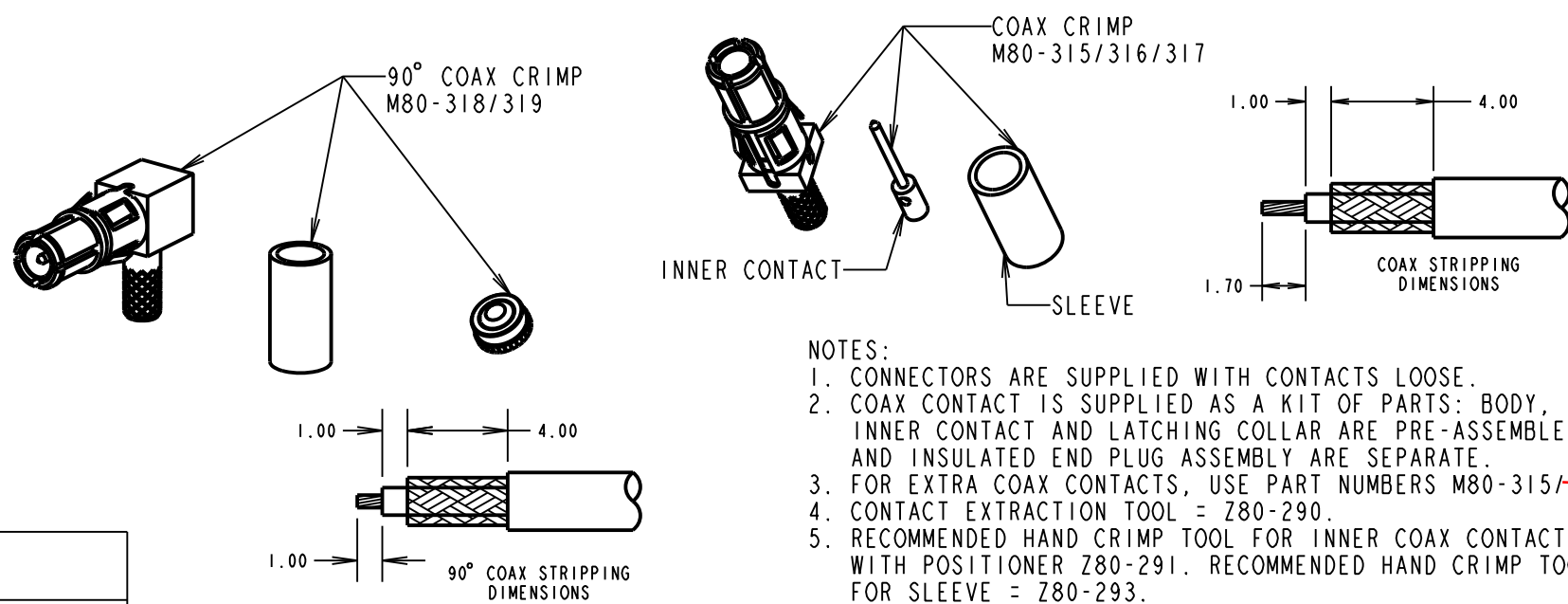
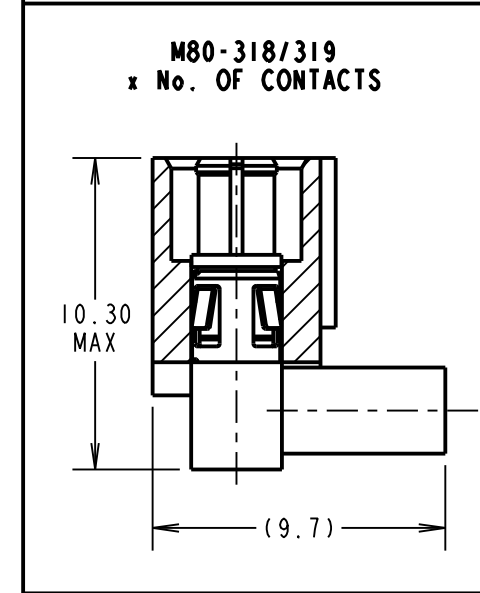
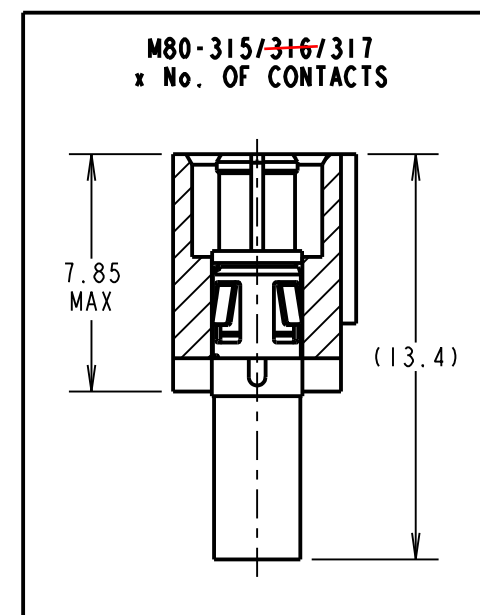
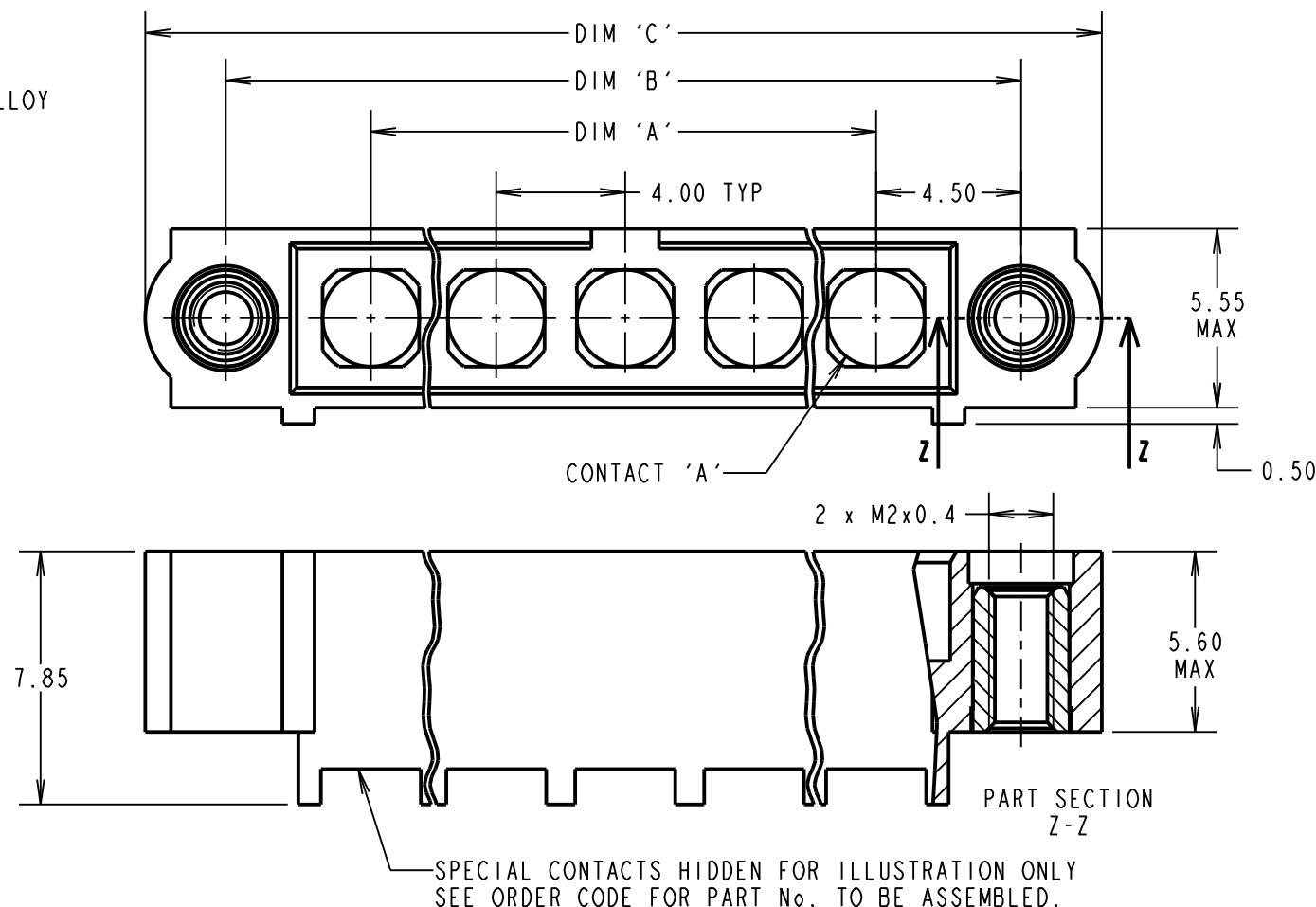
THIRD ANGLE PROJECTION

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  
 JACKSCREW = STAINLESS STEEL  
**FINISH:**  
**COAX CONTACT**  
 BODY, SLEEVE, INNER CONTACT, END PLUG = GOLD  
 LATCHING COLLAR: = NICKEL  
**ELECTRICAL:**  
 INSULATION RESISTANCE = 100MΩ MIN  
**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  
**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/SOLDER CONTACTS ONLY



ORDER CODE: (COAX CRIMP/SOLDER CONTACTS)  
**M80-500000MI-XX-XXX-00-000**  
 TOTAL No. OF CONTACTS \_\_\_\_\_  
 02 TO 12  
 SPECIAL CONTACTS (CRIMP)  
 315 = COAX CONTACT 2.0mm CRIMP M80-315  
~~316 = COAX CONTACT 2.4mm CRIMP M80-316~~  
 317 = COAX CONTACT 2.7mm CRIMP M80-317  
 318 = COAX CONTACT 2.0mm HORZ' CRIMP M80-318  
 319 = COAX CONTACT 2.7mm HORZ' CRIMP M80-319

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

- 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.
  - 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.

MGP	6	20.03.14	12429
NAME	ISS.	DATE	C/NOTE
APPROVED: MGP			
CHECKED: SB			
DRAWN: R.ADDE			
CUSTOMER REF.:			
ASSEMBLY DRG:			

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# Customer Information Sheet

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

IF IN DOUBT - ASK

(C)

NOT TO SCALE

THIRD ANGLE PROJECTION

ALL DIMENSIONS IN mm

**SPECIFICATIONS:**

**MATERIAL:**  
 MOULDING: GLASS FILLED PPS, UL94V-0, BLACK  
 POWER CONTACT:  
 BODY = COPPER ALLOY  
 LATCHING COLLAR = BERYLLIUM COPPER  
 JACKSCREW: STAINLESS STEEL

**FINISH:**  
 POWER CONTACT:  
 8 TO 20A = 0.25µ MIN GOLD OVER NICKEL  
 40A = 0.76µ MIN GOLD OVER NICKEL  
 LATCHING COLLAR: = NICKEL

**ELECTRICAL:**  
 WORKING VOLTAGE = 800V AC/DC  
 VOLTAGE PROOF = 1200V AC/DC  
 INSULATION RESISTANCE = 100MΩ MIN  
 POWER CONTACT:

CONTACT RESISTANCE = 6mΩ MAX

**CURRENT RATING:**

M80-PM5 = 40A MAX WITH 10AWG,  
 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,  
 CONTACT AS SPECIFIED.

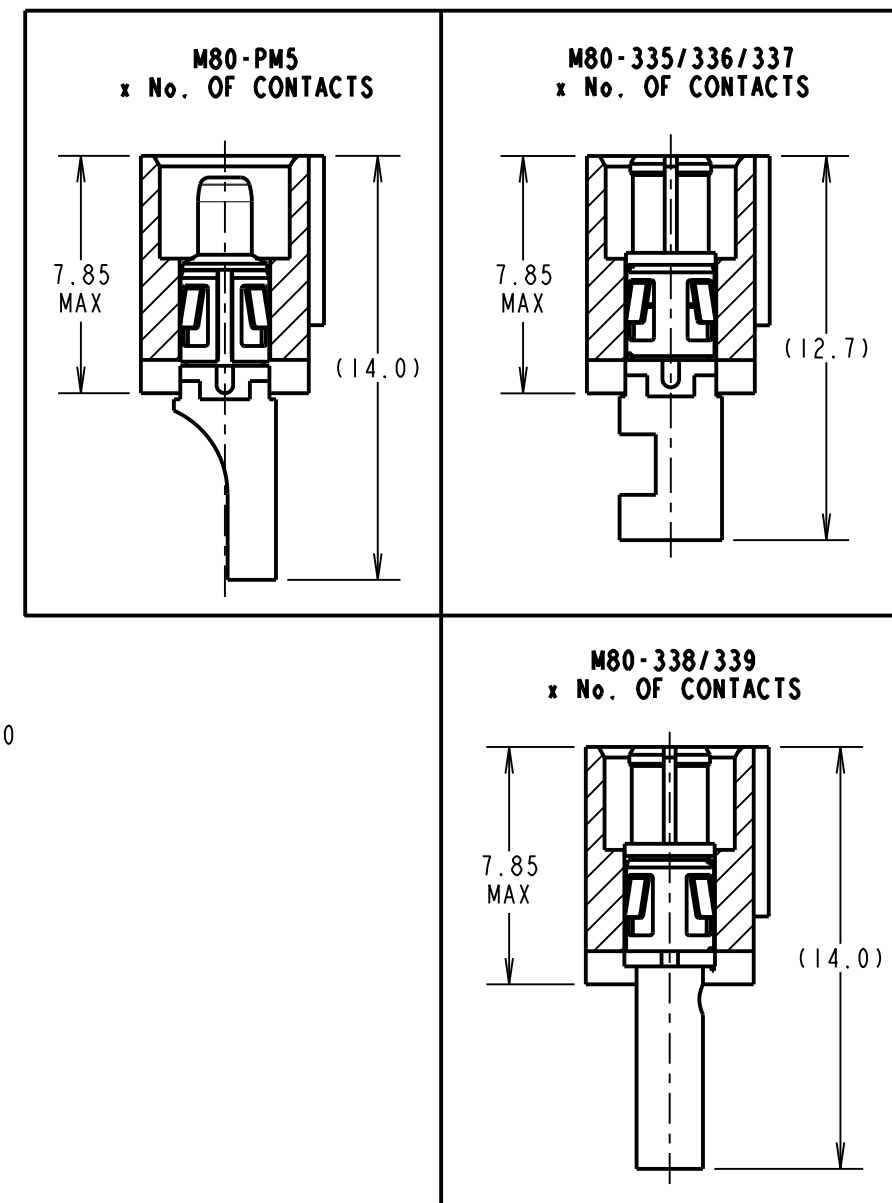
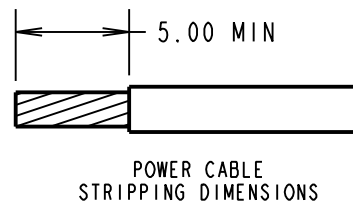
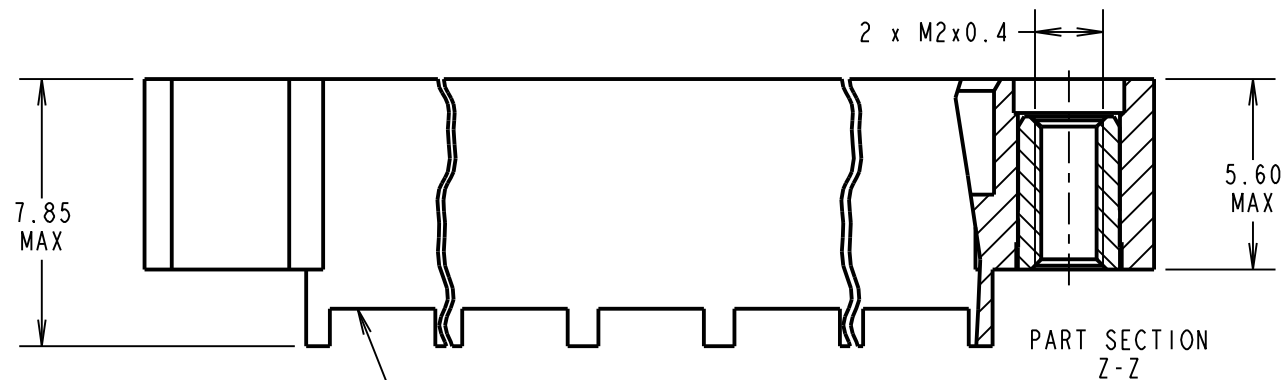
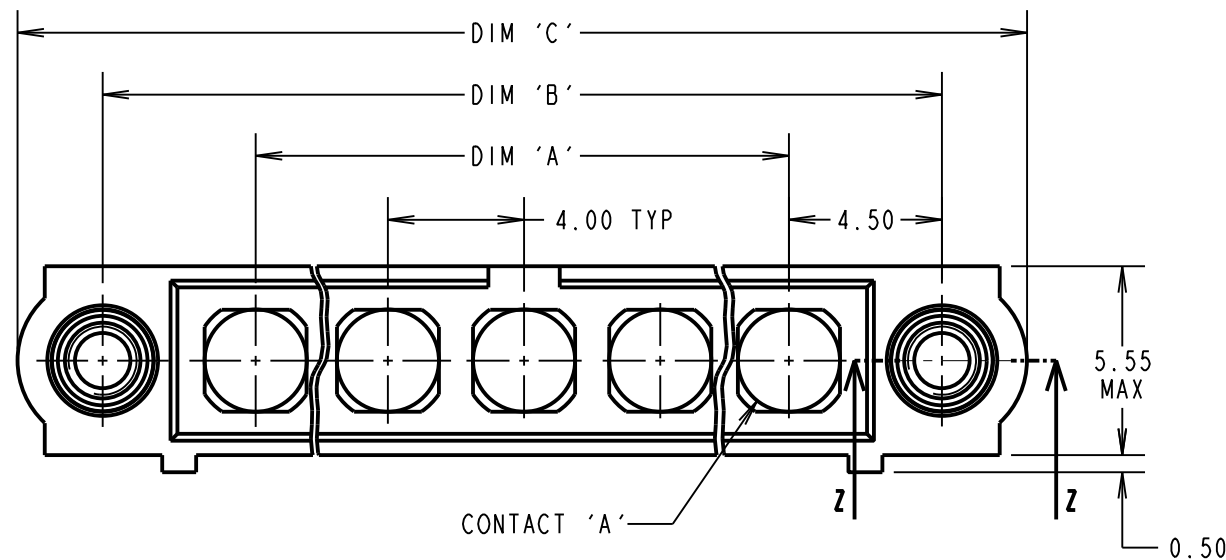
**MECHANICAL:**  
 DURABILITY = 500 OPERATIONS  
 POWER CONTACT:

INSERTION FORCE:  
 8 TO 20A = 8N MAX  
 40A = 15N MAX  
 WITHDRAWAL FORCE = 0.5N MIN

**ENVIRONMENTAL:**  
 TEMPERATURE RANGE = -55°C TO +150°C

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

## POWER CRIMP/SOLDER CONTACTS ONLY



ORDER CODE: (POWER CRIMP/SOLDER CONTACTS)

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

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

**SPECIAL CONTACTS (CRIMP)**

PM5 = POWER CONTACT 10AWG SOLDER M80-PM5  
 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

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

**NOTES:**

- CONNECTORS ARE SUPPLIED WITH CONTACTS LOOSE.
- FOR EXTRA POWER CONTACTS USE PART NUMBERS:  
 M80-PF5/335/336/337/338/339.
- CONTACT EXTRACTION TOOL = Z80-290.
- RECOMMENDED HAND CRIMP TOOL FOR CONTACTS 338/339 = Z80-294 AND POSITIONER Z80-295.
- INSTRUCTION SHEETS ARE AVAILABLE.

MGP	6	20.03.14	12429
NAME	ISS.	DATE	C/NOTE
APPROVED: MGP			
CHECKED: SB			
DRAWN: R.ADDE			
CUSTOMER REF.:			
ASSEMBLY DRG:			

**HARWIN**  
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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 WITH JACKSCREW  
**DRAWING NUMBER:** M80-500000MI-XX-XXX-00-000  
 SHT 6 OF 8

# Customer Information Sheet

DRAWING No.: M80-5000000MI-XX-XXX-00-000

IF IN DOUBT - ASK

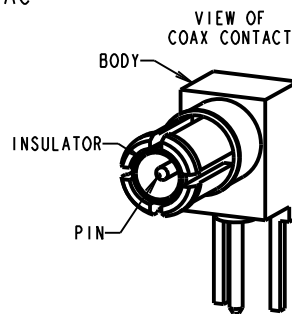
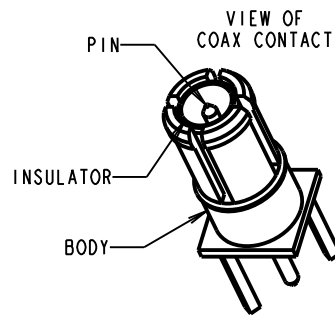
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NOT TO SCALE

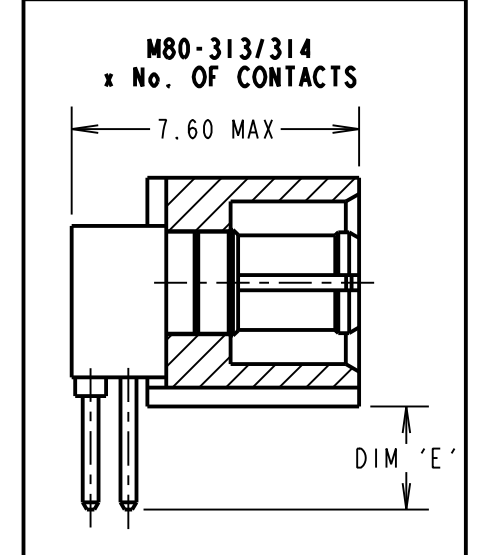
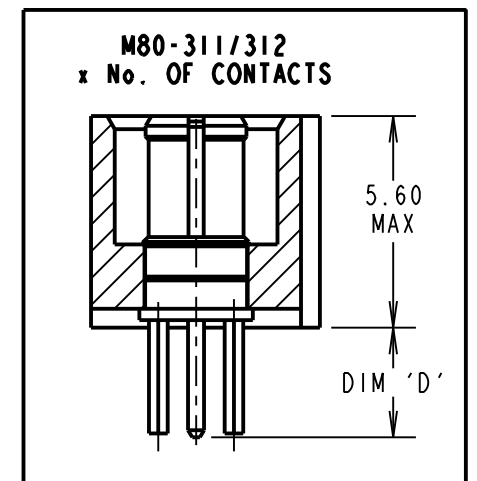
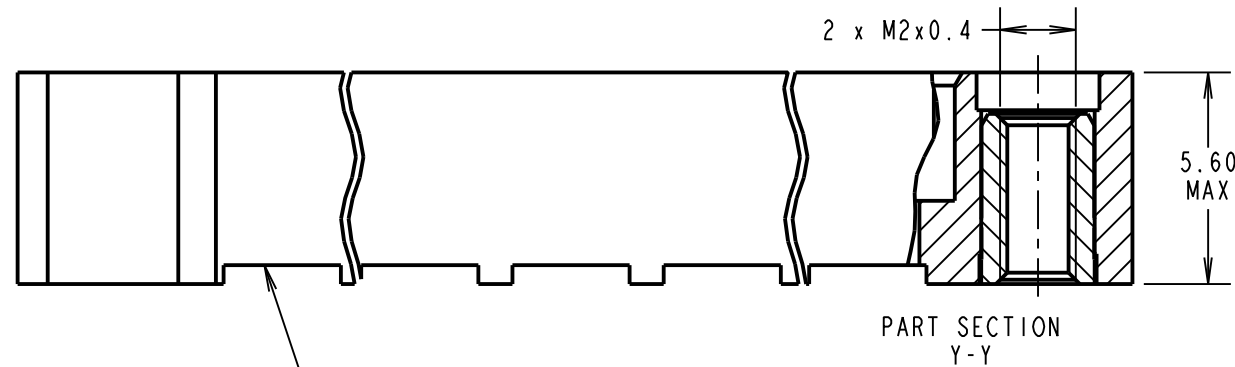
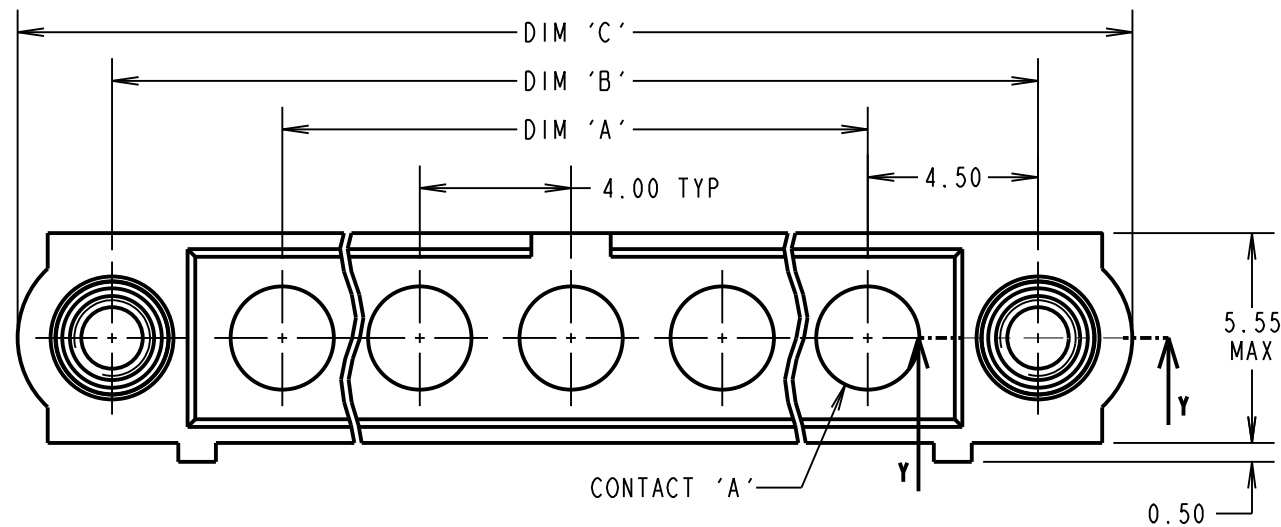
THIRD ANGLE PROJECTION

ALL DIMENSIONS IN mm

- SPECIFICATIONS:**  
**MATERIAL:**  
 MOULDING: GLASS FILLED PPS, UL94V-0, BLACK  
**COAX CONTACT:**  
 BODY, INNER CONTACT, = COPPER ALLOY  
 INSULATOR = PTFE  
 JACKSCREW: STAINLESS STEEL  
**FINISH:**  
**COAX CONTACT:**  
 BODY, INNER CONTACT, = GOLD  
**ELECTRICAL:**  
 INSULATION RESISTANCE = 100MΩ MIN  
**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  
**COAX CONTACT:**  
 INSERTION FORCE = 8N 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)



## COAX PC TAIL CONTACTS ONLY



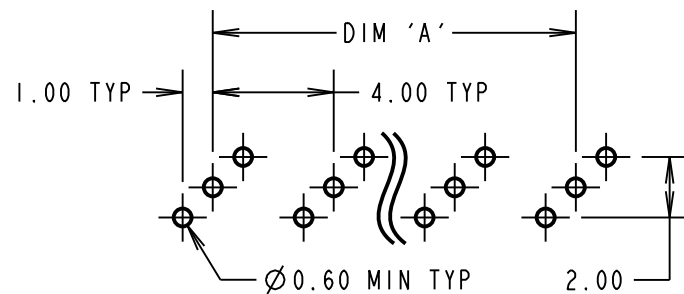
SPECIAL CONTACTS HIDDEN FOR ILLUSTRATION ONLY  
 SEE ORDER CODE FOR PART No. TO BE ASSEMBLED

**ORDER CODE:**  
 (COAX PC TAIL CONTACTS ONLY)  
**M80-5000000MI-XX-XXX-00-000**

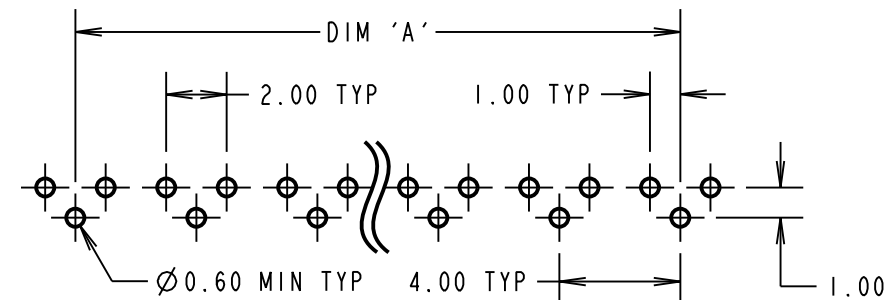
TOTAL No. OF CONTACTS \_\_\_\_\_  
 02 TO 12

SPECIAL CONTACTS (PC TAIL) \_\_\_\_\_  
 311 = COAX CONTACT 3.0mm PC TAIL M80-311  
 312 = COAX CONTACT 4.5mm PC TAIL M80-312  
 313 = COAX CONTACT 3.0mm HORZ' PC TAIL M80-313  
 314 = COAX CONTACT 4.5mm HORZ' PC TAIL M80-314

RECOMMENDED PCB LAYOUTS FOR COAX CONTACTS: M80-311/312



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



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'	M80-311 = 3.0mm, M80-312 = 4.5mm
DIM 'E'	M80-313 = 3.0mm, M80-314 = 4.5mm

EXAMPLE: CONNECTOR WITH 08 COAX CONTACTS,  
 M80-5000000MI-08-313-00-000  
 DIM 'A' = 28.00mm, DIM 'B' = 37.00mm, DIM 'C' = 42.00mm  
 DIM 'E' = 3.0mm

MGP	6	20.03.14	12429
NAME	ISS.	DATE	C/NOTE
APPROVED: MGP			
CHECKED: SB			
DRAWN: R. ADDE			
CUSTOMER REF.:			
ASSEMBLY DRG:			

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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  
 WITH JACKSCREW

**DRAWING NUMBER:**  
**M80-5000000MI-XX-XXX-00-000**

SHT  
 7 OF 8

# Customer Information Sheet

DRAWING No.: M80-5000000MI-XX-XXX-00-000

IF IN DOUBT - ASK

(C)

NOT TO SCALE

THIRD ANGLE PROJECTION

ALL DIMENSIONS IN mm

**SPECIFICATIONS:**

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

**FINISH:**  
 POWER CONTACT:  
 20A = 0.25µ MIN GOLD OVER NICKEL  
 40A = 0.76µ MIN GOLD OVER NICKEL

**ELECTRICAL:**  
 WORKING VOLTAGE = 800V AC/DC  
 VOLTAGE PROOF = 1200V AC/DC  
 INSULATION RESISTANCE = 100MΩ MIN

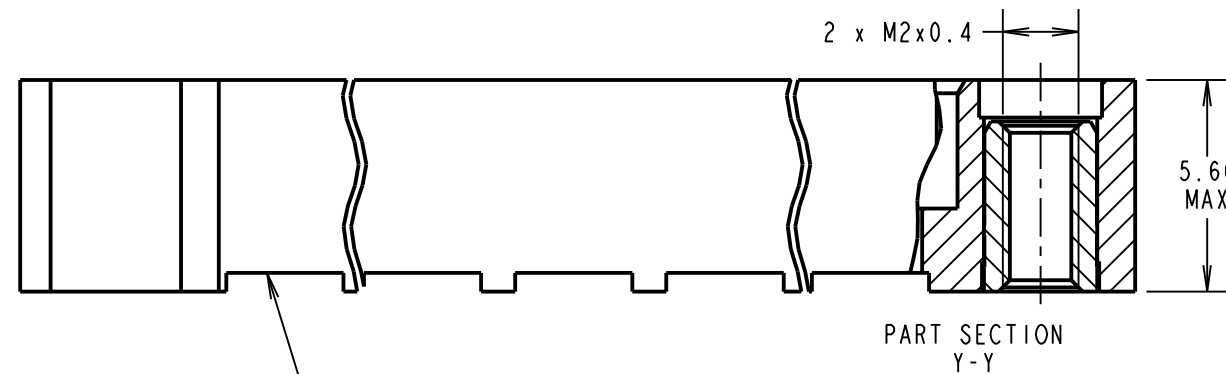
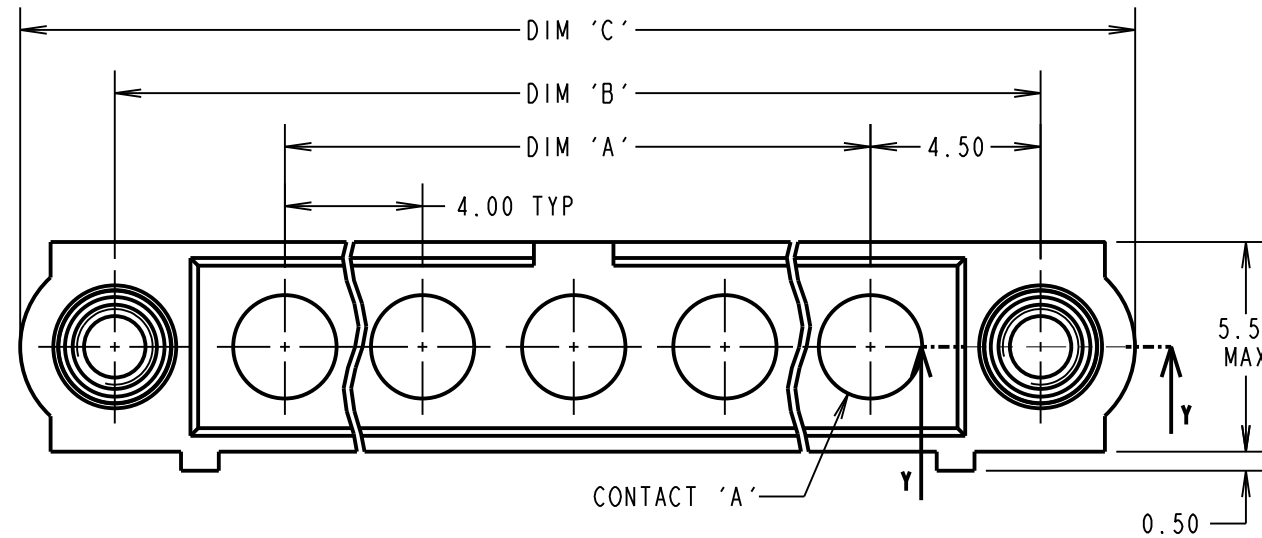
**POWER CONTACT:**  
 CONTACT RESISTANCE 6mΩ MAX  
**CURRENT RATING:**  
 M80-331/332/333/334/33A = 20A MAX  
 M80-PM1/PM2/PM3/PM4 = 40A MAX

**MECHANICAL:**  
 DURABILITY = 500 OPERATIONS  
**POWER CONTACT:**  
 INSERTION FORCE:  
 M80-331/332/323/324/33A = 8N MAX  
 M80-PM1/PM2/PM3/PM4 = 15N MAX  
 WITHDRAWAL FORCE = 0.5N MIN

**ENVIRONMENTAL:**  
 TEMPERATURE RANGE = -55°C TO +150°C

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

## POWER PC TAIL AND SMT CONTACTS ONLY



**ORDER CODE:**  
 (POWER PC TAIL AND SMT CONTACTS ONLY)  
**M80-5000000MI-XX-XXX-00-000**

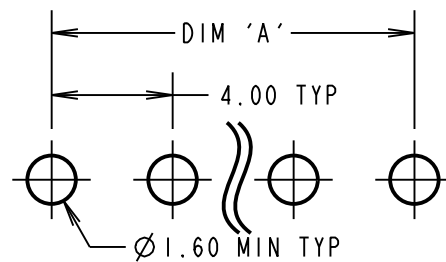
TOTAL No. OF CONTACTS  
 02 TO 12

**SPECIAL CONTACTS (PC TAIL)**  
 331 = 20A POWER CONTACT 3.0mm VERT' PC TAIL M80-331  
 332 = 20A POWER CONTACT 4.5mm VERT' PC TAIL M80-332  
 333 = 20A POWER CONTACT 3.0mm HORZ' PC TAIL M80-333  
 334 = 20A POWER CONTACT 4.5mm HORZ' PC TAIL M80-334  
 33A = 20A POWER CONTACT HORIZONTAL SMT M80-33A  
 PM1 = 40A POWER CONTACT 3.0mm VERT' PC TAIL M80-PM1  
 PM2 = 40A POWER CONTACT 4.5mm VERT' PC TAIL M80-PM2  
 PM3 = 40A POWER CONTACT 3.0mm HORZ' PC TAIL M80-PM3  
 PM4 = 40A POWER CONTACT 4.5mm HORZ' PC TAIL M80-PM4

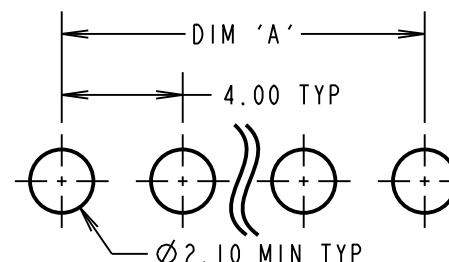
DIMENSION	CALCULATION
DIM 'A'	4 x No. OF CONTACTS - 4.00
DIM 'B'	4 x No. OF CONTACTS + 5.00
DIM 'C'	4 x No. OF CONTACTS + 10.00
DIM 'D'	M80-331 = 3.5mm, M80-332 = 5.0mm
DIM 'E'	M80-333 = 3.5mm, M80-334 = 5.0mm
DIM 'F'	M80-PM1 = 3.5mm, M80-PM2 = 5.0mm
DIM 'G'	M80-PM3 = 3.5mm, M80-PM4 = 5.0mm

EXAMPLE: CONNECTOR WITH 10 POWER CONTACTS,  
 M80-5000000MI-10-334-00-000  
 DIM 'A' = 36.00mm, DIM 'B' = 45.00mm, DIM 'C' = 50.00mm  
 DIM 'E' = 4.5mm

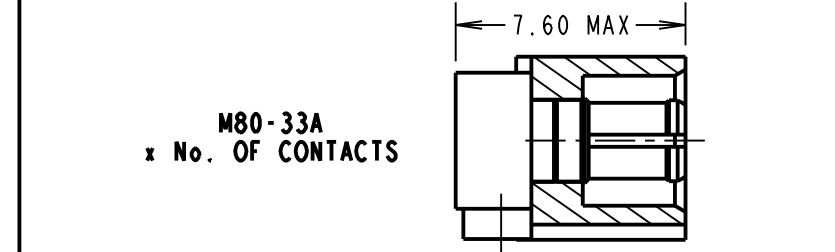
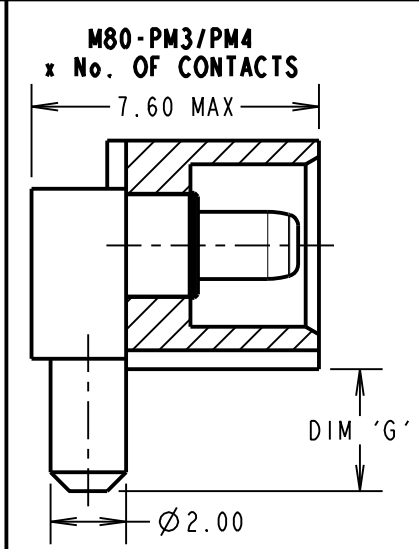
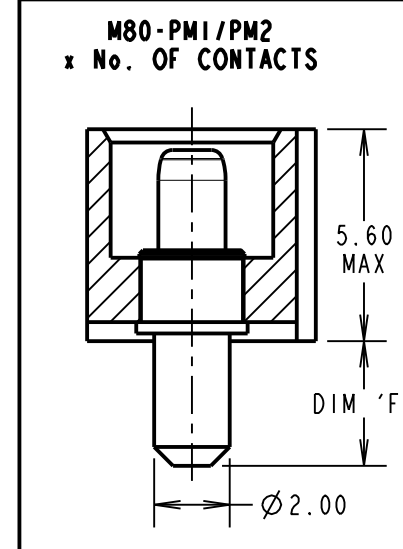
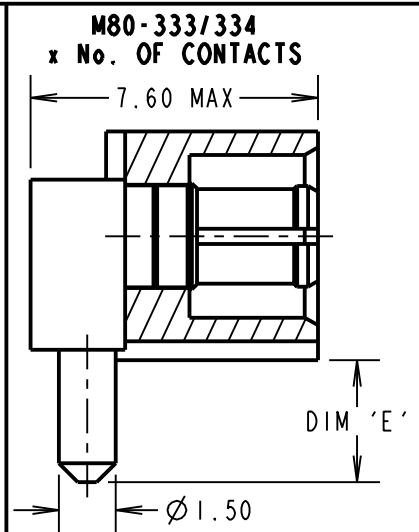
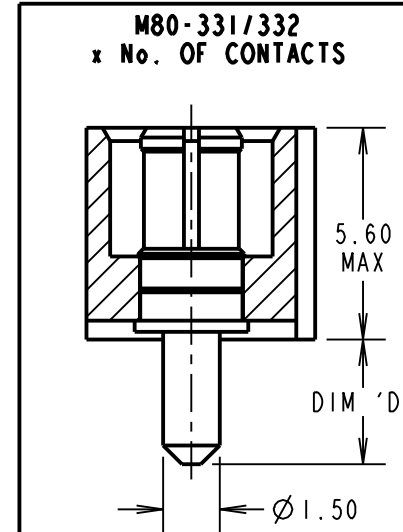
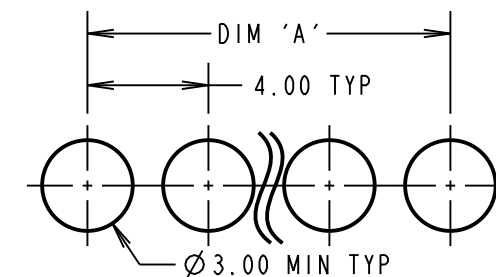
RECOMMENDED PCB LAYOUT FOR  
 M80-331/332/333/334  
 PC TAIL POWER CONTACTS



RECOMMENDED PCB LAYOUT FOR  
 M80-PM1/PM2/PM3/PM4  
 PC TAIL POWER CONTACTS



RECOMMENDED PCB LAYOUT FOR  
 M80-33A SMT POWER CONTACTS



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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 WITH JACKSCREW  
**DRAWING NUMBER:** M80-5000000MI-XX-XXX-00-000  
 SHT 8 OF 8

MGP	6	20.03.14	12429
NAME	ISS.	DATE	C/NOTE
APPROVED: MGP			
CHECKED: SB			
DRAWN: R.ADDE			
CUSTOMER REF.:			
ASSEMBLY DRG:			