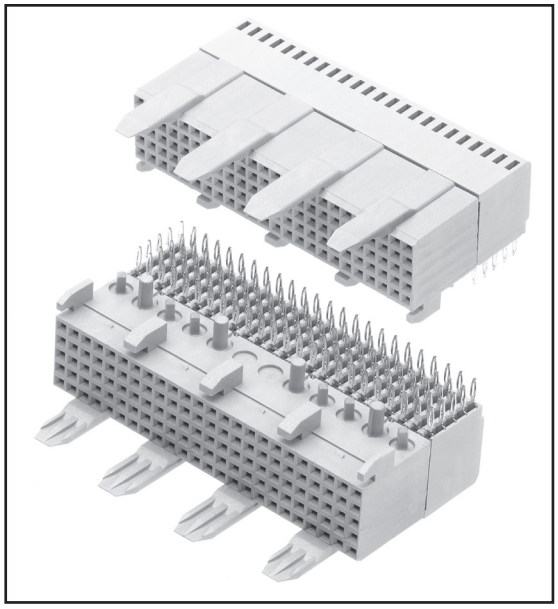
# 3M™ MetPak™ 2-FB Socket

2 mm 5-Row, Right Angle, Solder or Press-Fit Tail, Guide Fingers MP2 Series



- End-to-end stackable
- Offset dual-beam contact minimizes insertion force
- Molded guide fingers provide integrated alignment
- Alignment wafer for true position
- Mates with MP2-P inverse headers and elevated inverse headers, MP2-PXXXE, for extended card applications
- Protective Push-Cap on Press-Fit Only
- Meets IEC 61076-4-104 Futurebus+® global standard
- See the Regulatory Information Appendix (RIA) in the "RoHS compliance" section of www.3Mconnector.com for compliance information (RIA E1 & C1 apply)

Date Modified: May 13, 2010



## Physical

**Insulation:**
Material: High Temp LCP
Flammability: UL 94V-0
Color: Beige

**Contact:**
Material: Copper Alloy

**Plating:**
Underplating: 50 $\mu$" [1.27 $\mu$m) Nickel
Wiping Area: See Ordering Information
Solder Tails: See Ordering Information

## Electrical

**Current Rating:** Signal: 1.5 A – All contacts simultaneously
**Insulation Resistance:** $10^3$ MΩ
**Withstanding Voltage:** 1000 $V_{AC}$

## Environmental

**Temperature Rating:** -55°C to +125°C
**Process Temperature Rating:** 260°C (Profile per J-STD-020C)
**Moisture Sensitivity Level:** 1 (per J-STD-020C)

UL File No.: E68080

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Electronic Solutions Division
Interconnect Solutions
http://www.3Mconnector.com

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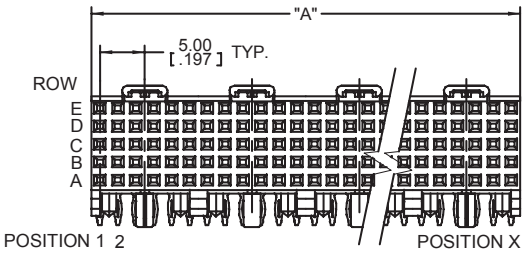
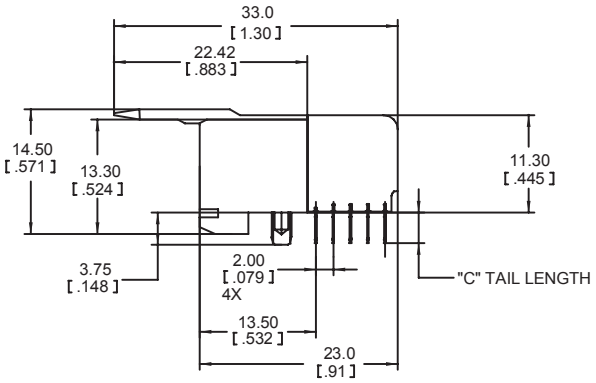
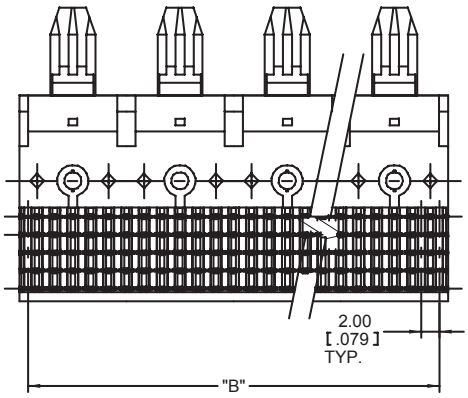
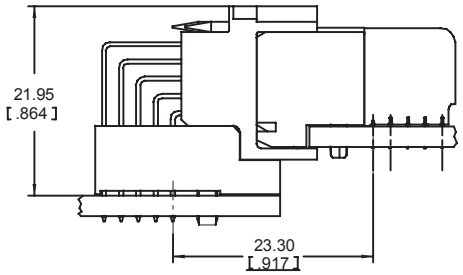


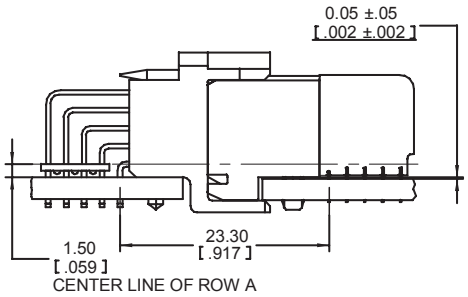




**PRESS-FIT AND SOLDER TAIL PRODUCT (CAPPED)**




**MATED WITH MP2-PXXXE-5XXX-XXXX**




**ASSEMBLED TO PCB AND MATED WITH MP2-PXXX-5XXX-XXXX**

**mm**
[inch]

| Tolerance Unless Noted | | | |
|---|---|---|---|
| | 0 | 0.0 | 0.00 |
| **mm** | ±3 | ±0.3 | ±0.13 |

[ ] Dimensions for Reference Only

Notes:

1. Refer to IEC 61076-4-104 Futurebus+® global standard.
2. "Press Fit" describes a contact tail having a compliant section designed to make a reliable electrical connection with a plated through-hole (PTH) in a printed circuit board, typically a "back plane."

## Ordering Information

**MP2 - SXXXG - 5XXX - C - XXXXX**

- S = Socket
- Contact Count (See Table 1)
- Guide Finger
- Rows: 5 = 5 Rows
- Contact Arrangement: 1 = All rows filled*
- Termination Style: M = Solder Tail (Press Peg); P = Press-Fit (with Tail Cover)
- Tail Length (See Table 2)
- C = Capped Solder Tail; Blank = Press-Fit
- Plating Options (See Table 3)

*Contact 3M Sales Representative for information on special fill patterns and mono blocked pairs

TS-1117-B
Sheet 2 of 4

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| Table 1 - Connector & Row Lengths | | | | |
|---|---|---|---|---|
| Pin Count | Dim. "A" mm [inch] | Dim "B" mm [inch] | Rows | Block Count |
| 030 | 11.95 [0.471] | 10.00 [0.394] | 5 | 1 |
| 060 | 23.95 [0.943] | 22.00 [0.866] | 5 | 2 |
| 090 | 35.95 [1.415] | 34.00 [1.339] | 5 | 3 |
| 120 | 47.95 [1.888] | 46.00 [1.811] | 5 | 4 |
| 150 | 59.95 [2.361] | 58.00 [2.283] | 5 | 5 |
| 180 | 71.95 [2.833] | 70.00 [2.756] | 5 | 6 |
| 210 | 83.95 [3.305] | 82.00 [3.228] | 5 | 7 |
| 240 | 95.95 [3.778] | 94.00 [3.701] | 5 | 8 |

| Table 2 - Tail Length | | |
|---|---|---|
| Contact-to-PC Board Tail Termination Option No. | | Dim. "C" |
| Solder | Press-Fit* | |
| 1 | | 4.35 [0.171] |
| | 1 | 3.53 [0.139] |

*Compliant-Pin Tail

| Table 3 - Plating & Regulatory | | | |
|---|---|---|---|
| Plating Suffix | Press-Fit Tails* | Solder Tails | Plating Composition |
| TG30 | RIA E2 & C2 apply | RIA E3 & C2 apply | 0.76 µm [30 µ"] Min. Au Contact Area<br>2.54 µm [100 µ"] Min. SnPb Tail Area<br>1.27 µm [50 µ"] Min. Ni all over |
| TR30 | RIA E2 & C2 apply | RIA E3 & C2 apply | 0.08 µm [3 µ"] Min. Au Contact Area<br>0.67 µm [27 µ"] Min. PdNi Contact Area<br>2.54 µm [100 µ"] Min. SnPb Tail Area<br>1.27 µm [50 µ"] Min. Ni all over |
| KR | RIA E1 & C1 apply | RIA E1 & C1 apply | 0.76 µm [30 µ"] Min. Au Contact Area<br>2.54 µm [100 µ"] Min. Matt Whisker Mitigating Sn Tail Area<br>1.27 µm [50 µ"] Min. Ni all over |
| LR | RIA E1 & C1 apply | RIA E1 & C1 apply | 0.08 µm [3 µ"] Min. Au Contact Area<br>0.67 µm [27 µ"] Min. PdNi Contact Area<br>2.54 µm [100 µ"] Min. Matt Whisker Mitigating Sn Tail Area<br>1.27 µm [50 µ"] Min. Ni all over |

*Compliant-Pin Tail




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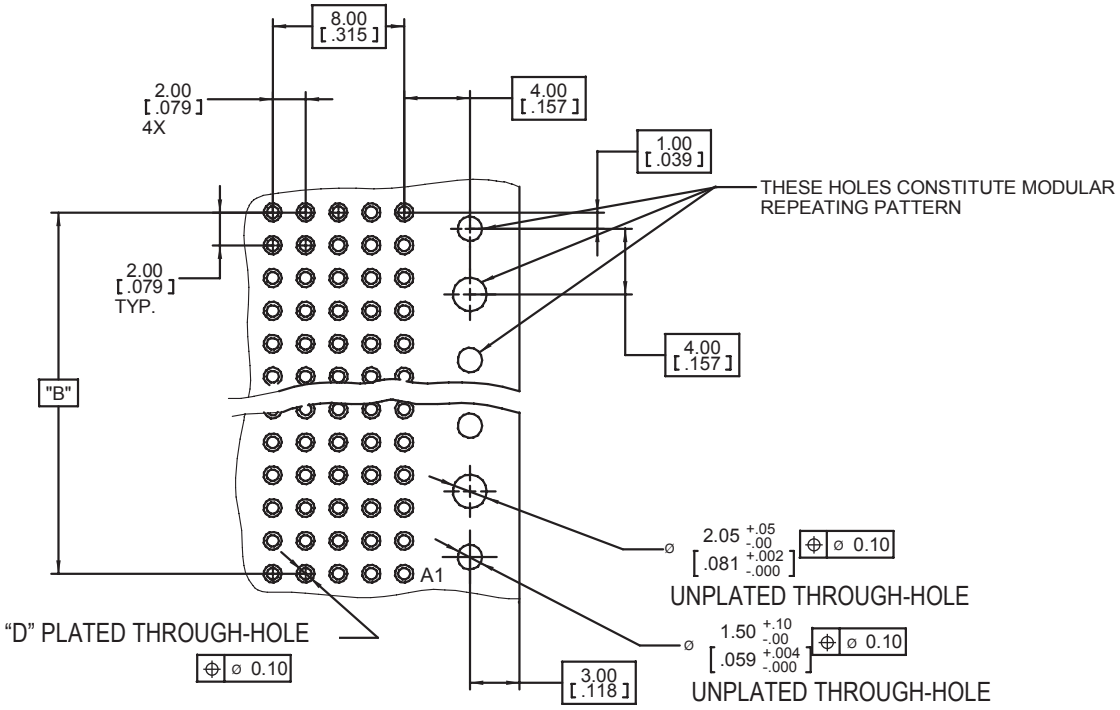


**RECOMMENDED PCB HOLE MOUNTING PATTERN**

| Table 4 – HOLE PLATING For TG30 and TR30 FINISHES ONLY | | | | |
|---|---|---|---|---|
| **HOLE** | **Finished Dia. MM [in]** | **Cu Thickness [mm [in]** | **SnPb Thickness microns [µ"]** | **Drilled Hole Dia. mm [in]** |
| "D" | 0.65-0.80 [.0256-.0315] | 0.025 [.001] min. | 15 [600] max. | 0.81-0.86 [.0319-.0339] |

| Table 5 – HOLE PLATING For KR and LR FINISHES ONLY | | | | | | |
|---|---|---|---|---|---|---|
| **HOLE** | **Finished Dia. MM [in]** | **Cu Thickness [mm [in]** | **Immersion Matte Sn Thickness microns [µ"]** | **Electrolytic Au Thickness microns [µ"]** | **OSP ENTEK Thickness microns [µ"]** | **Drilled Hole Dia. mm [in]** |
| "D" | 0.700-0.800 [.0276-.0315] | 0.025-0.045 [0.001-0.002] | 0.5 - 2.5 [20 - 100] | 0.1 - 0.5 [4 - 20] | 0.2 - 0.5 [8 - 20] | 0.830-0.860 [.0330-.0340] or 0.85 mm [#66] TWIST DRILL |

TS-1117-B
Sheet 4 of 4




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