

# 3M™ MetPak™ 2-FB Stacking Socket

2 mm 4/5-Row, Vertical, Solder or Press-Fit Tail

MP2 Series



- End-to-end stackable
- Offset dual-beam contact minimizes insertion force
- High-profile/high pin count
- Ideal for parallel stacking applications
- Vertical receptacle
- Eliminates internal cabling
- Meets IEC 61076-4-104 Futurebus+® global standard
- See the Regulatory Information Appendix (RIA) in the “RoHS compliance” section of [www.3Mconnector.com](http://www.3Mconnector.com) for compliance information (RIA E1 & C1 apply)

Date Modified: May 13, 2010

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## Physical

### Insulation:

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

### Contact:

Material: Phosphor Bronze

### 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<sup>3</sup> M $\Omega$

**Withstanding Voltage:** 1000 V<sub>AC</sub>

## 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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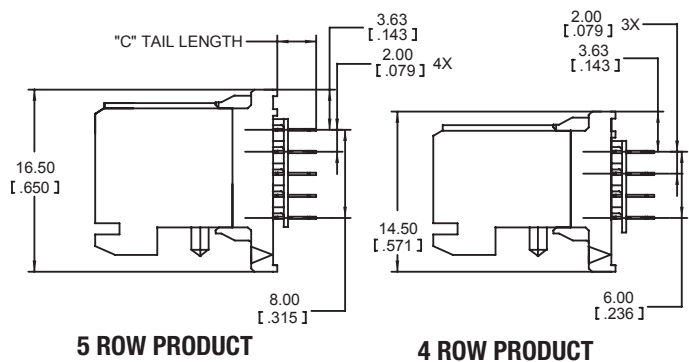
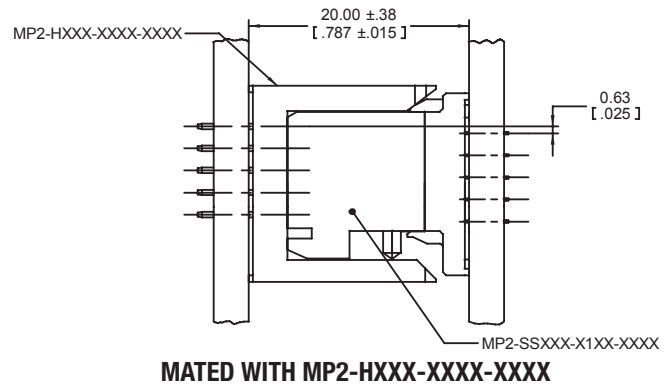
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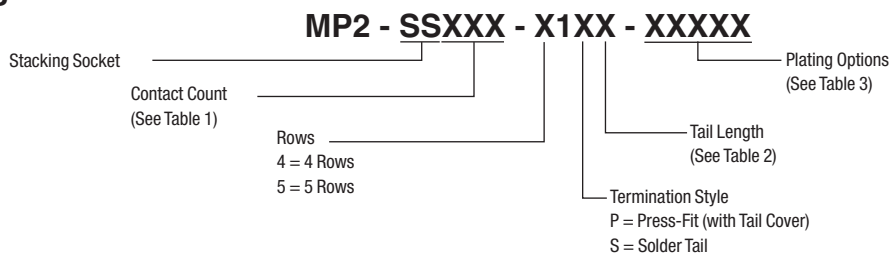
| Tolerance Unless Noted |      |        |
|------------------------|------|--------|
|                        | mm   | [inch] |
|                        | 0    | 0.00   |
| <b>mm</b>              | ±3   | ±0.3   |
|                        | ±0.3 | ±0.13  |

[ ] 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



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# 3M™ MetPak™ 2-FB Stacking Socket

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| Pin Count | Dim. "A"<br>mm [inch] | Dim "B"<br>mm [inch] | Rows | Block<br>Count |
|-----------|-----------------------|----------------------|------|----------------|
| 024       | 11.95 [0.471]         | 10.00 [0.394]        | 4    | 1              |
| 048       | 23.95 [0.943]         | 22.00 [0.866]        | 4    | 2              |
| 072       | 35.95 [1.415]         | 34.00 [1.339]        | 4    | 3              |
| 096       | 47.95 [1.889]         | 46.00 [1.811]        | 4    | 4              |
| 120       | 59.95 [2.36]          | 58.00 [2.283]        | 4    | 5              |
| 144       | 71.95 [2.833]         | 70.00 [2.756]        | 4    | 6              |
| 168       | 83.95 [3.305]         | 82.00 [3.228]        | 4    | 7              |
| 192       | 95.95 [3.778]         | 94.00 [3.701]        | 4    | 8              |
| 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              |

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

\*Compliant-Pin Tail

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

\*Compliant-Pin Tail

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# 3M™ MetPak™ 2-FB Stacking Socket

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**RECOMMENDED 4 ROW SOLDER  
TAIL PCB HOLE MOUNTING PATTERN**



**RECOMMENDED 4 ROW PRESS-FIT  
PCB HOLE MOUNTING PATTERN**

**Table 4 – HOLE PLATING For TG30 and TR30 FINISHES ONLY**

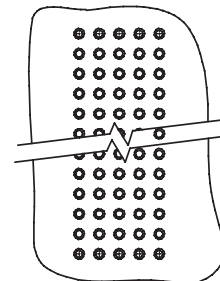
| HOLE | Finished Dia. MM [in]   | Cu Thickness [mm [in]] | SnPb Thickness microns [μ"] | Drilled Hole Dia. mm [in] |
|------|-------------------------|------------------------|-----------------------------|---------------------------|
| "D"  | 0.65-0.80 [.0256-.0315] | 0.025 [.001] min.      | 15 [600] 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 |



**RECOMMENDED 5 ROW SOLDER  
TAIL PCB HOLE MOUNTING PATTERN**



**RECOMMENDED 5 ROW PRESS-FIT  
PCB HOLE MOUNTING PATTERN**

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