

# 3M™ MetPak™ 2-FB Socket

2 mm 4/5-Row, Solder Tail or Press-Fit With Tail Cover, Right Angle

MP2 Series



- End-to-end stackable
- Offset dual-beam contact minimizes insertion force
- Expanded pin counts
- Protective Push-Cap
- Monoblockable
- Press or heat stake peg
- 12 mm modular units
- Meets global IEC 61076-4-104 Futurebus+® 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: May12, 2010

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## Physical

### Insulation:

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

### Contact:

Material: Copper Alloy

### Plating:

Underplating: 50 μ” (1.27 μm) 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> MΩ

**Withstanding Voltage:** 1,000 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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**3M**  
Electronic Solutions Division  
Interconnect Solutions  
<http://www.3Mconnector.com>

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**4 ROW PRODUCT**

**5 ROW PRODUCT**

FOR SPECIAL MONOBLOCKS  
CONTACT 3M SALES  
REPRESENTATIVE

Tolerance Unless Noted		
	0	0.00
mm	±3	±0.13

( ) Dimensions used for Reference Only

**Note:**

- Refer to IEC 61076-4-104 Futurebus+® global standard.
- "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 - SXXX - X1XX - X - XXXX**

Contact Count (See Table 1) → SXXX

Rows → X1XX  
4 = 4 Rows  
5 = 5 Rows

Termination Style → X  
M = Solder Tail (Press Peg)  
(press peg requiring arbor press for PCB assembly)  
(Contact 3M Sales Rep)  
P = Press Fit (w/ Tail Cover)

Tail Length (See Table 2) → XXXX

Plating Options: (See Table 3)  
C = Capped Solder Tail  
Blank = Press-Fit

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Table 1 - Connector & Row Lengths						
Pin Count	Dim "A" mm (Inch)		Dim "B" mm (Inch)		Rows	Block 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

Table 2 - Tail & Post Lengths			
Contact-to-PC Board Tail Termination Option No.		Dim "C"	Dim. "D"
Solder	Press-Fit*		
M1		2.72 [0.107]	3.57 [0.141]
M2	P1	3.53 [0.139]	3.57 [0.141]

\*Compliant-Pin Tail

Table 3 - Plating			
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 2.54 μm [100 μ"] Min. SnPb Tail Area 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 0.67 μm [27 μ"] Min. PdNi Contact Area 2.54 μm [100 μ"] Min. SnPb Tail Area 1.27 μm [50 μ"] Min. Ni all over
FJ	(RIA E1 & C1 apply)	(RIA E1 & C1 apply)	0.25 μm [10 μ"] Min. Au Contact Area 2.54 μm [100 μ"] Min. Matt Whisker Mitigating Sn Tail Area 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 2.54 μm [100 μ"] Min. Matt Whisker Mitigating Sn Tail Area 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 0.67 μm [27 μ"] Min. PdNi Contact Area 2.54 μm [100 μ"] Min. Matt Whisker Mitigating Sn Tail Area 1.27 μm [50 μ"] Min. Ni all over

\*Compliant-Pin Tail

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

HOLE	Finished Dia. mm [in]	Cu Thickness mm [in]	SnPb Thickness microns [ $\mu$ "]	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 [ $\mu$ "]	Electrolytic Au Thickness microns [ $\mu$ "]	OSP ENTEK Thickness microns [ $\mu$ "]	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 0.85mm [ #66 ] TWIST DRILL

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RIA-2217B-E

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