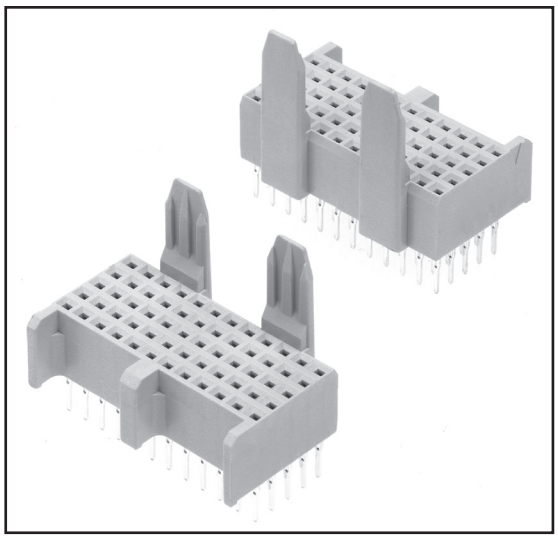
3M™ MetPak™ 2-FB Inverse Socket

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

MP2 Series



- Guiding alignment feature eliminates bent pins on backplane
- Footprint compatible with standard Futurebus+®
- Ideal for hot swapping
- End-to-end stackable
- Vertical socket on backplane
- Offset dual-beam contact minimizes insertion force
- Mates with MP2-P and MP2-PS Series
- Rear plug-up tails for midplane applications
- 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 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:	10^3 MΩ
Withstanding Voltage:	1000 V_{AC}

Environmental

Temperature Rating:	-55°C to +125°C

UL File No.: E68080

MetPak is a trademark of 3M Company.
Futurebus+ is a registered trademark of the Institute of Electrical and Electronic Engineers, Inc. (IEEE)

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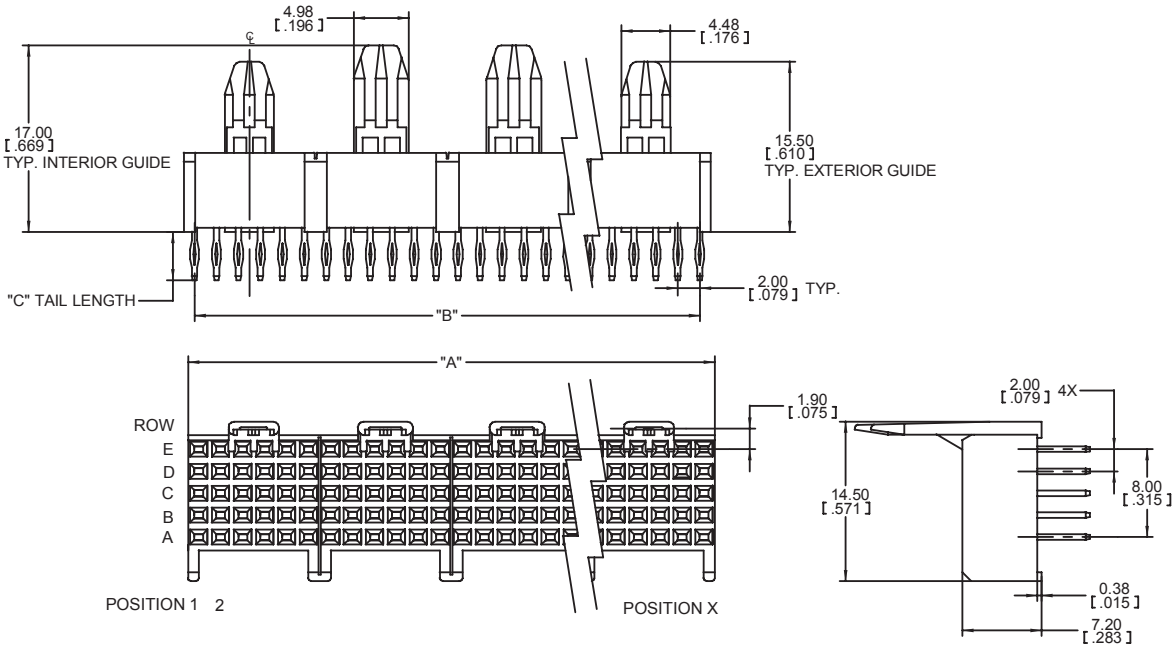

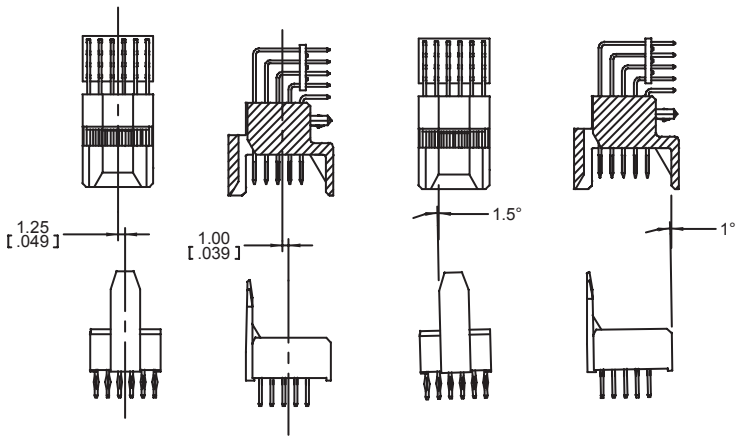

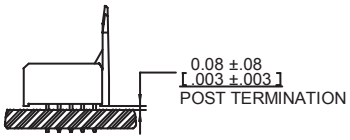

mm
[inch]

Tolerance Unless Noted			
	0	0.0	0.00
mm	±3	±0.3	±0.13

[ ] Dimensions for Reference Only

Notes:

1. For special contact loading pattern, contact 3M.
2. Refer to IEC 61076-4-104 Futurebus+® global standard.
3. "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 - RXXX - 5XXX - XXXXX

- R = Inverse Socket
- Contact Count (See Table 1)
- Rows
  5 = 5 Rows
- Loading Pattern
  1 = All rows filled
  2 = Rows A, B, C and D filled, Row E omitted
- Termination Style
  P = Press-Fit
  S = Solder Tail
- Tail Length (See Table 2)
- Plating Options (See Table 3)

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MP2 Series

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 [1.889]	46.00 [1.811]	5	4
150	59.95 [2.36]	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
270	107.95 [4.251]	106.00 [4.173]	5	9
300	119.95 [4.722]	118.00 [4.646	5	10

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

*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 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
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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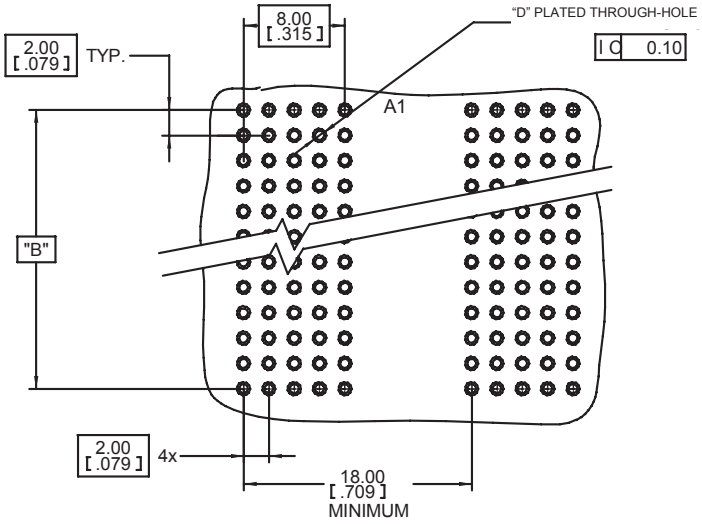

RECOMMENDED PRESS-FIT AND SOLDER TAIL PCB HOLE MOUNTING PATTERN

mm
[inch]

Tolerance Unless Noted		
	0.0	0.00
mm	±0.3	±0.25

[ ] Dimensions for Reference Only

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

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