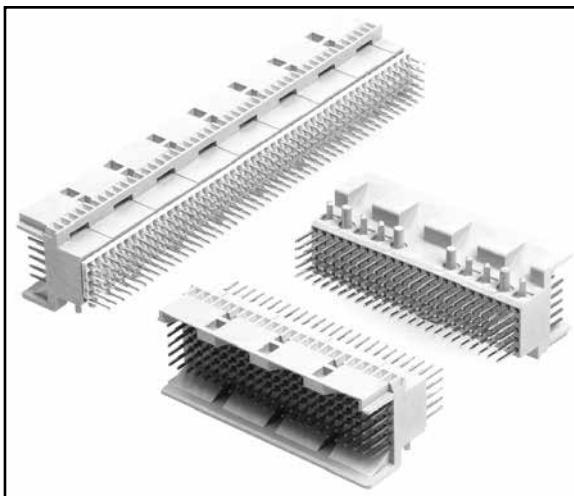


# 3M™ MetPak™ 2-FB Inverse Header

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

MP2 Series



- 16 mm to 18.5 mm high-profile stacking
- Pin counts up to 300
- Footprint compatible with standard Futurebus+®
- Ideal for hot swapping applications
- End-to-end stackable
- Mates with MP2-R Series for parallel stacking applications
- See the Regulatory Information Appendix (RIA) in the “RoHS compliance” section of [www.3Mconnectors.com](http://www.3Mconnectors.com) for compliance information (RIA E1 & C1 apply)

Date Modified: September 17, 2013

TS-1123-C  
Sheet 1 of 4

## 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:**  $10^3$  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

MetPak is a trademark of 3M Company.

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

**3M**

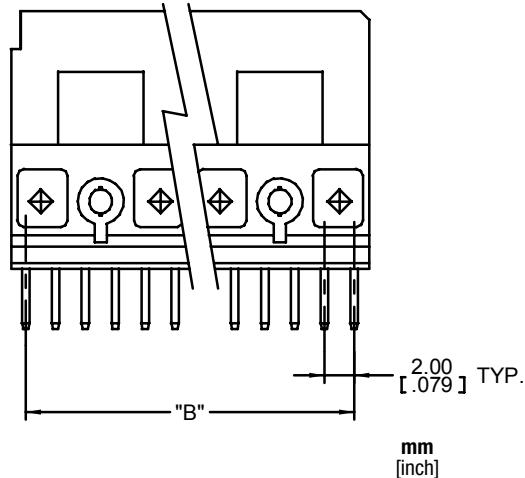
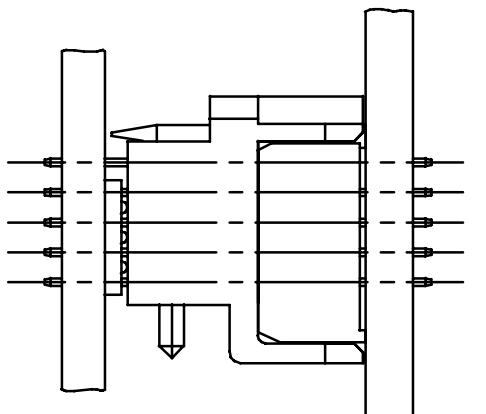
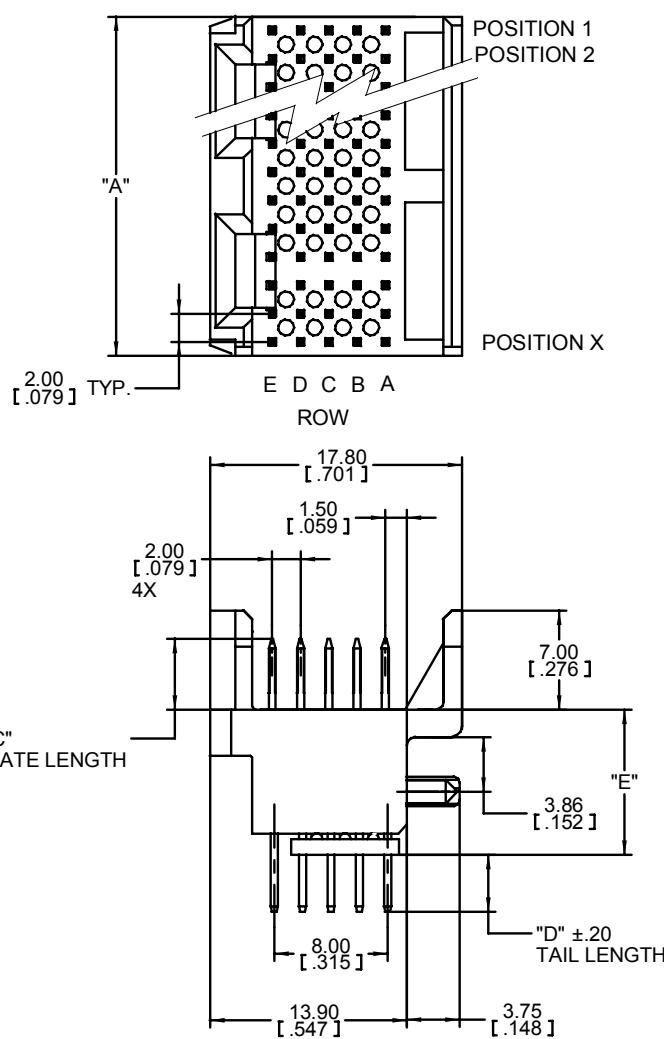
**Electronic Solutions Division**  
**Interconnect Solutions**  
<http://www.3Mconnectors.com>

3M is a trademark of 3M Company.  
For technical, sales or ordering information call  
**800-225-5373**

# 3M™ MetPak™ 2-FB Inverse Header

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

MP2 Series



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."
3. For special stack heights, tail lengths or pin arrangements, contact 3M.

## Ordering Information

MP2 - PSXXX - 51X1 - XXXXX

PS = Header, Inversed Stacking

Pin Count  
(See Table 1)

Rows  
5 = 5 Rows

Contact Loading  
(See Table 2)

Plating Options  
(See Table 3)

Tail Length  
(See Table 2)

Termination Style  
S = Solder Tail  
P = Press-Fit

TS-1123-C  
Sheet 2 of 4



Electronic Solutions Division  
Interconnect Solutions  
<http://www.3Mconnectors.com>

3M is a trademark of 3M Company.  
For technical, sales or ordering information call  
**800-225-5373**

# 3M™ MetPak™ 2-FB Inverse Header

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

MP2 Series

Table 1 - Connector & Row Lengths

Pin Count	Dim. "A" mm [inch]	Dim "B" mm [inch]	Rows
030	11.95 [0.471]	10.00 [0.394]	5
060	23.95 [0.943]	22.00 [0.866]	5
090	35.95 [1.415]	34.00 [1.339]	5
120	47.95 [1.889]	46.00 [1.811]	5
150	59.95 [2.36]	58.00 [2.283]	5
180	71.95 [2.833]	70.00 [2.756]	5
210	83.95 [3.305]	82.00 [3.228]	5
240	95.95 [3.778]	94.00 [3.701]	5
270	107.95 [4.251]	106.00 [4.173]	5
300	119.95 [4.722]	118.00 [4.646]	5

Table 2

Contact-to-PC Board Tail Termination Option No.		Dim. "C"	Dim. "D"	Dim. "E"
Solder Tail	Press-Fit* Tail			
1		4.65 [0.183]	4.15 [0.163]	10.25 [0.404]
	1	5.00 [0.197]	3.95 [0.156]	10.25 [0.404]

Table 3 - Plating

Plating Suffix	Press-Fit Tails*	Solder Tails	Plating Composition
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

TS-1123-C  
Sheet 3 of 4

**3M**

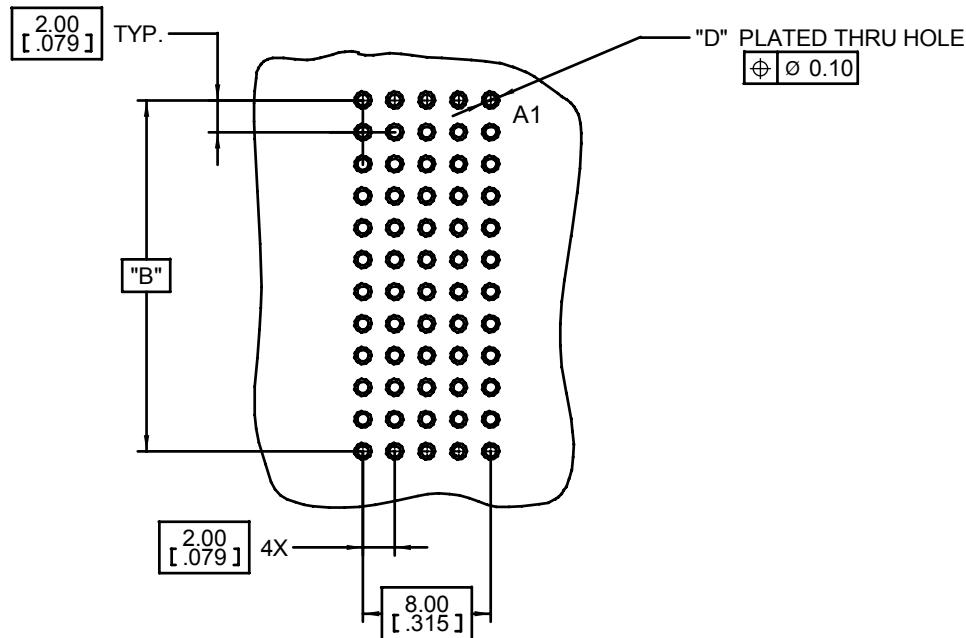
**Electronic Solutions Division**  
**Interconnect Solutions**  
<http://www.3Mconnectors.com>

3M is a trademark of 3M Company.  
For technical, sales or ordering information call  
**800-225-5373**

# 3M™ MetPak™ 2-FB Inverse Header

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

MP2 Series



RECOMMENDED PCB HOLE MOUNTING PATTERN

Table 4 - HOLE PLATING FINISHES

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 0.85 mm [#66] TWIST DRILL

3M is a trademark of 3M Company.

### **Important Notice**

All statements, technical information, and recommendations related to 3M's products are based on information believed to be reliable, but the accuracy or completeness is not guaranteed. Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use. Any statements related to the product which are not contained in 3M's current publications, or any contrary statements contained on your purchase order shall have no force or effect unless expressly agreed upon, in writing, by an authorized officer of 3M.

### **Warranty; Limited Remedy; Limited Liability.**

This product will be free from defects in material and manufacture for a period of one (1) year from the time of purchase. **3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product. **Except where prohibited by law, 3M will not be liable for any indirect, special, incidental or consequential loss or damage arising from this 3M product, regardless of the legal theory asserted.**



### **3M Electronics Solutions Division**

6801 River Place Blvd.  
Austin, TX 78726-9000  
U.S.A.  
1-800-225-5373  
[www.3Mconnectors.com](http://www.3Mconnectors.com)

Please recycle. Printed in USA.  
© 3M 2013. All rights reserved.  
RIA-2217B-E

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[3M](#):

[MP2-PS060-51S1-TG30](#) [MP2-PS090-51S1-KR](#) [MP2-PS180-51S1-KR](#) [MP2-PS300-51P1-KR](#) [MP2-PS030-51S1-TR30](#) [MP2-PS090-51P1-TR30](#) [MP2-PS030-51P1-TR30](#) [MP2-PS030-51S1-LR](#) [MP2-PS090-51S1-TR30](#) [MP2-PS240-51P1-TR30](#) [MP2-PS240-51P1-KR](#) [MP2-PS300-51P1-LR](#) [MP2-PS300-51S1-LR](#) [MP2-PS300-51S1-KR](#)