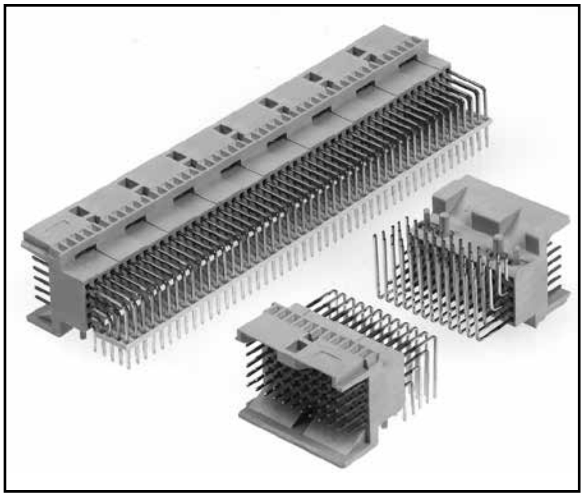
3M™ MetPak™ 2-FB Inverse Header

2 mm 5-Row, Right Angle, Solder Tail

MP2 Series



- Three levels of early mate, late break (EMLB)
- sequencing or selective loading options
- Footprint compatible with standard Futurebus+®
- Solder tail with true-position wafer
- Ideal for hot swapping applications
- End-to-end stackable
- Right angle male for daughter card
- Mates with MP2-R for backplane applications and MP2-SXXXG for coplanar applications
- RoHS Compliant. See the Regulatory Information Appendix (RIA) in the “RoHS compliance” section of www.3Mconnectors.com for compliance information (RIA E1 & C1 apply)

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

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

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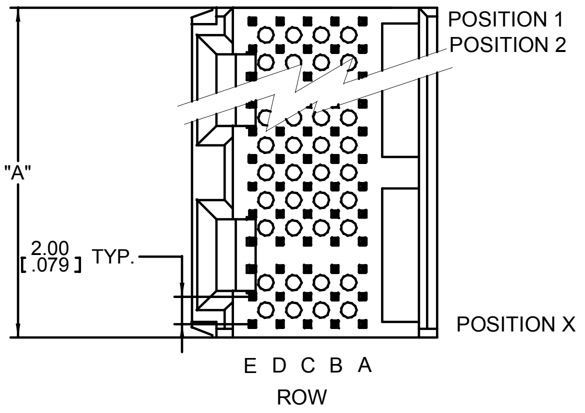
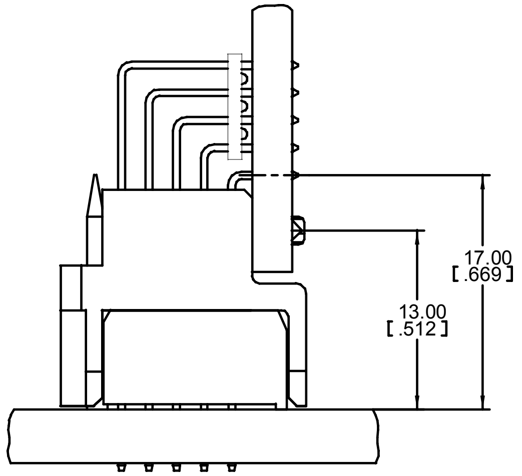
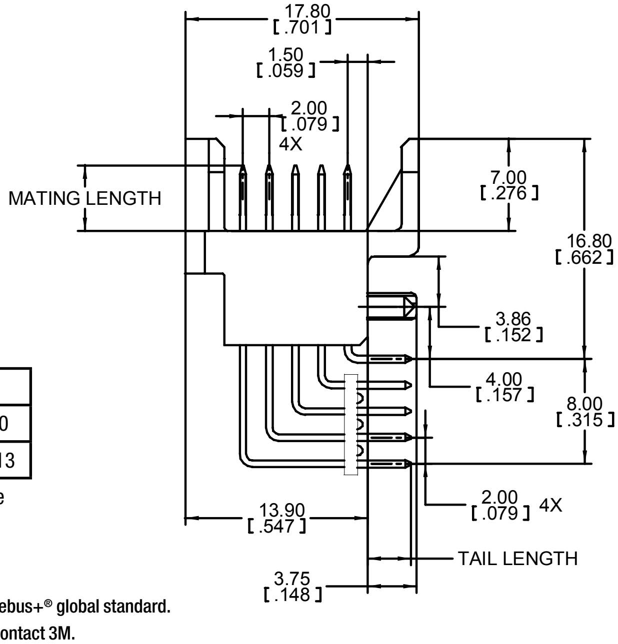
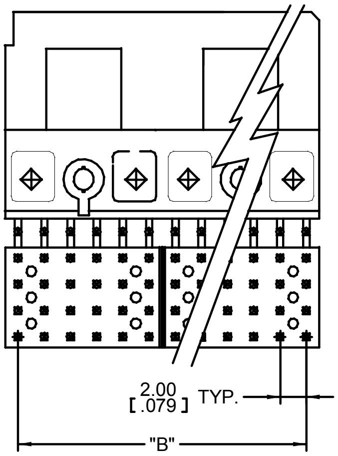




MATED WITH MP2-RXXX-5XXX-XXXX





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. For special pin arrangements, contact 3M.

Ordering Information

MP2 - PXXX - 5XM1 - XXXXX

P = Right Angle Header Inversed
Pin Count (See Table 1)
Rows 5 = 5 Rows
Loading Pattern and Tail Length (See Table 2)
Termination Style M = Solder Tail
Plating Options (See Table 3)

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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
420	167.95 [6.612]	166.00 [6.535]	5

Table 2 - Mate & Tail Lengths, mm vs. Loading Pattern

Loading Pattern Code	Description	Mate Length Row A	Mate Length Row B	Mate Length Row C	Mate Length Row D	Mate Length Row E	Tail Length Row A	Tail Length Row B	Tail Length Row C	Tail Length Row D	Tail Length Row E
1	All Positions Filled	5.00	5.00	5.00	5.00	5.00	3.30	3.30	3.30	3.30	3.30
2	All Positions Filled	4.25	5.00	5.00	5.00	5.00	4.05	3.30	3.30	3.30	3.30
3	All Positions Filled	3.50	4.25	4.25	5.00	5.00	4.80	4.05	4.05	3.30	3.30
4	All Positions Filled	4.25	5.00	4.25	4.25	4.25	4.05	3.30	4.05	4.05	4.05
5	Rows A, B, C and D Filled	5.00	5.00	5.00	5.00	NA	3.30	3.30	3.30	3.30	NA
6	Rows A, B, C and D Filled	5.00	4.25	4.25	5.00	NA	3.30	4.05	4.05	3.30	NA
7	All Positions Filled	4.25	5.00	4.25	5.00	4.25	4.05	3.30	4.05	3.30	4.05
8	All Positions Filled	4.25	4.25	4.25	4.25	4.25	4.05	4.05	4.05	4.05	4.05
9	All Positions Filled	5.00	3.50	3.50	3.50	4.25	3.30	4.80	4.80	4.80	4.05
A	All Positions Filled	3.75	4.50	5.25	4.50	3.75	4.55	3.80	3.05	3.80	4.55
B	All Positions Filled	3.75	4.50	3.75	4.50	3.75	4.55	3.80	4.55	3.80	4.55
C	All Positions Filled	5.75	5.75	5.75	5.75	5.75	2.55	2.55	2.55	2.55	2.55
D	All Positions Filled	4.25	5.00	5.75	5.00	4.25	4.05.	3.30	2.55	3.30	4.05
E	All Positions Filled	5.00	5.75	5.75	5.75	5.00	4.05	4.05	4.05	4.05	4.05
G	Rows A, B, C and D Filled	5.00	4.25	4.25	5.00	NA	3.30	4.05	4.05	3.30	NA

Table 3 - Plating

Plating Suffix	Plating Composition
KR (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)	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

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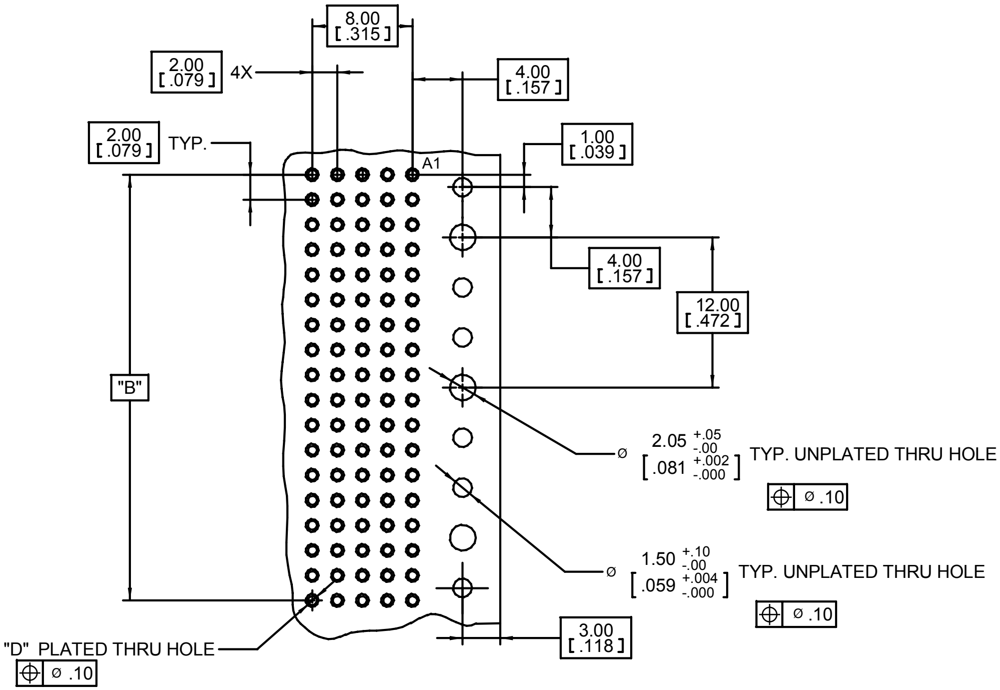
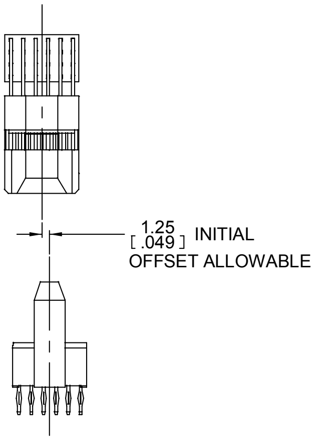
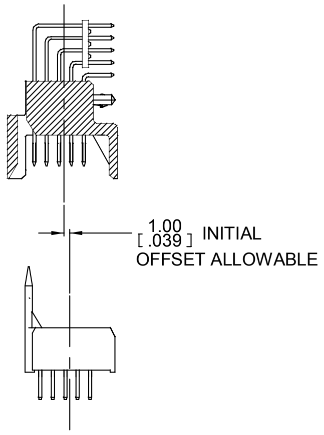
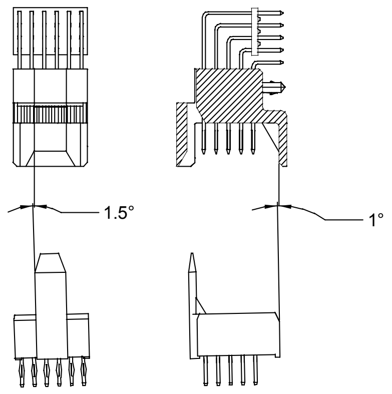


RECOMMENDED PCB HOLE MOUNTING PATTERN

Table 4 - HOLE PLATING FINISHES						
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







INCLINATION TOLERANCES

TS-1122-C
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