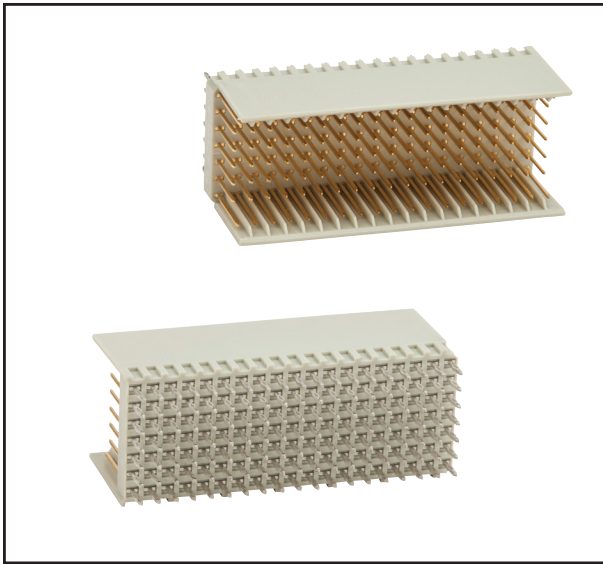


3M™ CP2 Press-Fit Header

2 mm Type B, 95, 110 and 125 Signal Contacts

CP2 Series



- 25 mm basic system unit
- 38, 44 and 50 mm module
- 2 mm grid spacing allows for high signal density at low cost
- “Eye of the Needle” compliant pin press-fit design helps reduce manufacturing time and cost
- Three contact mating levels for Early Mate Late Break or “Hot Swap” applications help reduce manufacturing time and cost
- Feed through termination available for midplane applications
- Additional grounding rows available for improved ground bounce and EMI immunity
- Mates with 5 row 3M™ HSHM, UHM and CP2 Sockets
- End to end stackable with 5 row 3M™ HSHM, HSM, HM, and CP2 Headers
- See the Regulatory Information Appendix (RIA) in the “RoHS compliance” section of www.3Mconnectors.com for compliance information. (RIA E1 & C1 apply)

Date Modified: July 16, 2015

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Sheet 1 of 7

Physical

Insulation:

Material: Glass Filled Polyester (PBT)

Flammability: UL94V-0

Contact:

Material: Copper Alloy

Plating: See Ordering Information

Mechanical

Mating Force: $\leq 0.75\text{N/PIN}$

Withdrawl Force: $\geq 0.15\text{N/PIN}$

Mating and Un-mating Operations: 200 for KR plating

Application: This module is not suitable for stand-alone use. (Refer to IEC-61076-4-101)

Electrical

Current Rating: 1.0 Amperes at 70°C with all contacts powered

Contact Resistance: $\leq 20\text{ m}\Omega$

Insulation Resistance: $\geq 10,000\text{ M}\Omega$

Test Voltage: 750 VAC_{RMS}

Environmental

Temperature Ratings: -55°C to +125°C

PCB Data

Recommended PCB Plated Through Hole: $\varnothing 0.6\pm 0.05\text{ mm}$

Drill Hole Diameter: $\varnothing 0.7\pm 0.02\text{ mm}$

Hole platings: Cu 25~50 μm , Sn<10 μm

PCB thickness: 2.4 - 5.6 mm for 3.7 mm tails, 1.4 - 5.6 mm for 2.3 mm tails

Press-In Force: $\leq 204\text{N/pin}$ on nominal hole diameter

Retention Force: $\geq 13.5\text{N/pin}$ on nominal hole diameter



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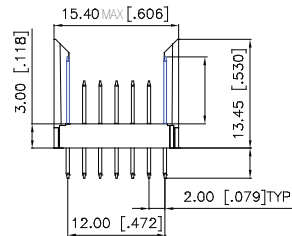
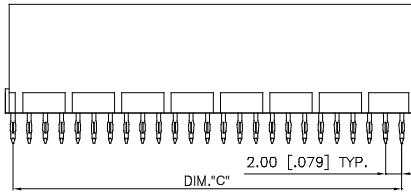
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3M™ CP2 Press-Fit Header

2 mm Type B, 95, 110 and 125 Signal Contacts

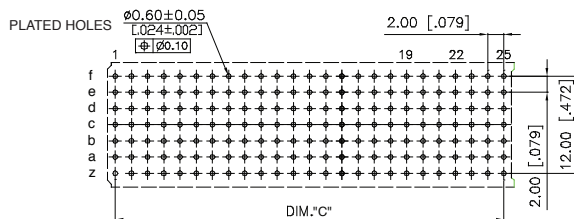
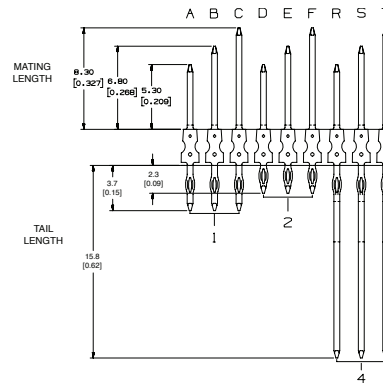
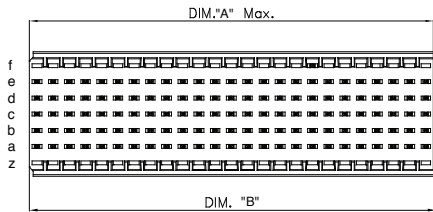
CP2 Series

Signal Contact Quantity	Dimension A	Dimension B	Dimension C
95	38.00	38.30	36.00
110	44.00	44.30	42.00
125	50.00	50.30	48.00



mm [Inch]			
Tolerance Unless Noted			
	±0.	±.0	±.00
mm	±1	±0.3	±0.13

[] Dimensions for Reference only



Recommended PCB Layout

Ordering Information

CP2-HBXXX-XXX-XXXX

Number of Signal Contacts
095, 110, 125

Grounding Options:
G= with ground pins
Blank= without ground pins

Loading Configurations and EMLB Patterns
(see diagrams on following pages)

Primary Tail Length
1= 3.7 mm
2= 2.3 mm
4= 15.8 mm

Plating Options

FJ= 10~20 μ" Gold Contact Area
100~200 μ" Matte Tin
50~80 μ" Nickel Underplate
(RIA E1 & C1 apply)

KR= 30~40 μ" Gold Contact Area
100~200 μ" Matte Tin
50~80 μ" Nickel Underplate
(RIA E1 & C1 apply)

KV = 30-40 u" Mate End Gold Contact area
Gold Flash Tail Contact area
50-80 u" Nickel Underplate
(RIA E1 & C1 apply)
For Primary Tail Length Option 4 only

- This diagram serves only for Part Number descriptive definitions.
- For standard product configuration please see following pages.

PLEASE CONTACT YOUR LOCAL SALES REPRESENTATIVE FOR CUSTOMER SPECIFIC PRODUCT CONFIGURATIONS.

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Sheet 2 of 7

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3M™ CP2 Press-Fit Header

2 mm Type B, 95, 110 and 125 Signal Contacts

CP2 Series

CP2-HB095-E1-TG30																			Connector Type B19
F																			
E	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
D	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
C	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
B	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
Z																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

CP2-HB095-GE1-TG30																			Connector Type B19
F	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	
E	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
D	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
C	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
B	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
Z	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

CP2-HB095-A1-TG30																			Connector Type B19
F																			
E	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
D	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
C	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
Z																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

CP2-HB095-GA1-TG30																			Connector Type B19
F	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	
E	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
D	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
C	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
Z	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

3M™ CP2 Press-Fit Header

2 mm Type B, 95, 110 and 125 Signal Contacts

CP2 Series

CP2-HB095-GA4-KV																			Connector Type B19	
F	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
E	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	
D	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	
C	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	
B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	
A	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	
Z	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	

Signal Contact Configuration Worksheet																			Connector Type B19	
F																				
E																				
D																				
C																				
B																				
A																				
Z																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	

CP2-HB110-E1-TG30																						Connector Type B22	
F																							
E	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
D	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
C	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
B	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
Z																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	

CP2-HB110-GE1-TG30																						Connector Type B22	
F	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C		
E	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
D	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
C	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
B	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
Z	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	

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Sheet 4 of 7

3M™ CP2 Press-Fit Header

2 mm Type B, 95, 110 and 125 Signal Contacts

CP2 Series

CP2-HB110-GE1-TG30

Connector Type B22

F	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
E	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
D	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
C	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
B	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Z	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22

CP2-HB110-GA1-TG30

Connector Type B22

F	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
E	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
D	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
C	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Z	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22

CP2-HB110-GA4-KV

Connector Type B22

F	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
E	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
D	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
C	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
A	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Z	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22

Signal Contact Configuration Worksheet

Connector Type B22

F																						
E																						
D																						
C																						
B																						
A																						
Z																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22

3M™ CP2 Press-Fit Header

2 mm Type B, 95, 110 and 125 Signal Contacts

CP2 Series

CP2-HB125-E1-TG30																									Connector Type B25
F																									
E	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
D	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
C	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
B	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Z																									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25

CP2-HB125-GE1-TG30																									Connector Type B25
F	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
E	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
D	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
C	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
B	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Z	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25

CP2-HB125-A1-TG30																									Connector Type B25
F																									
E	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
D	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
C	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Z																									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25

CP2-HB125-GA1-TG30																									Connector Type B25
F	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
E	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
D	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
C	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Z	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25

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