

3M™ CP2 Press-Fit Header

2 mm Type A 110 Signal Contacts

CP2 Series



- 25 mm basic system unit
- 50 mm module
- 2 mm grid spacing allows for high signal density at low cost
- “Eye of the Needle” compliant pin press-fit design reduces manufacturing time and cost
- Three contact mating levels for Early Mate Late Break or “Hot Swap” applications reduces 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, 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: August 5, 2015

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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

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: $\text{Ø } 0.6 \pm 0.05\text{ mm}$

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

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

3M

Electronics Materials Solutions Division

Interconnect Solutions

<http://www.3Mconnectors.com>

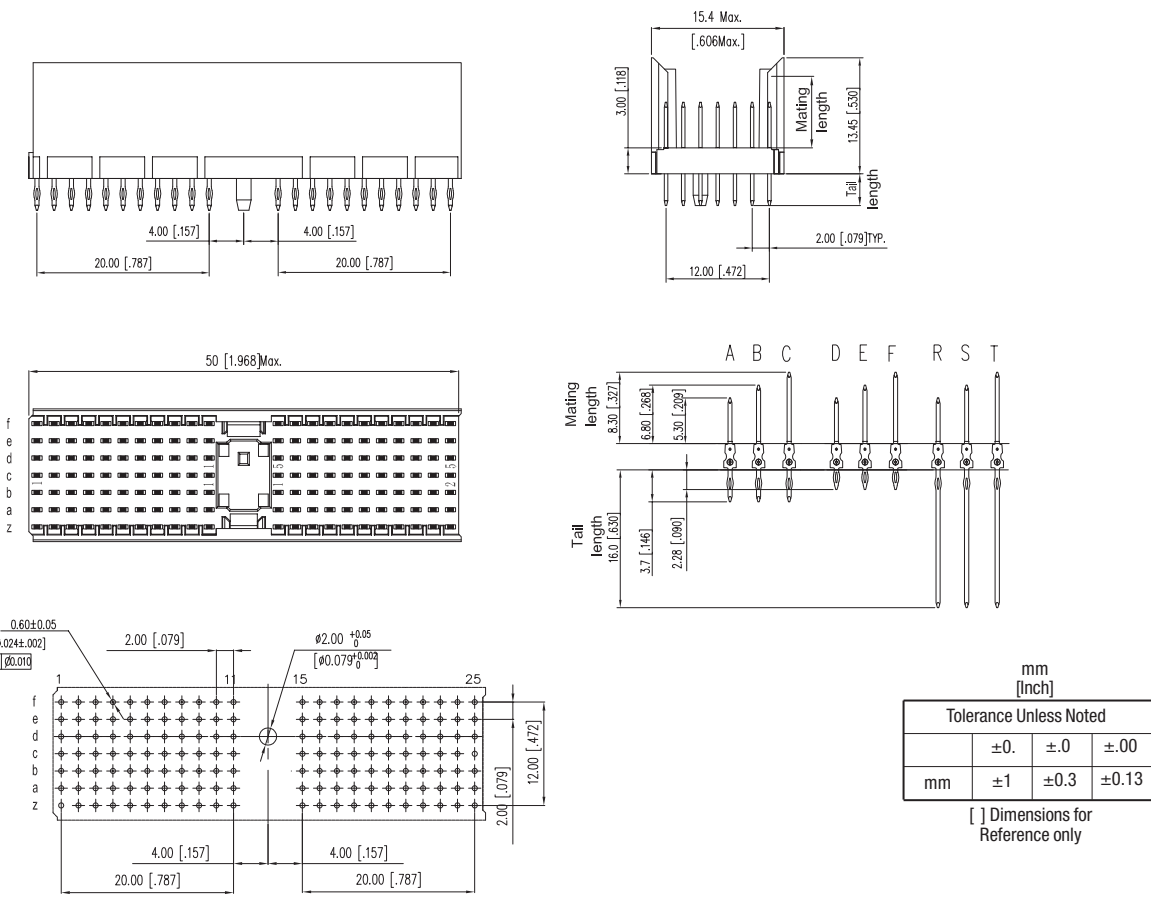
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For technical, sales or ordering information call

800-225-5373

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Tolerance Unless Noted			
	±0.	±.0	±.00
mm	±1	±0.3	±0.13

[] Dimensions for Reference only

Recommended PCB Layout

Ordering Information

CP2-HA110-XXX-XXXX

Loading Configurations
 (See diagrams on following pages)
Grounding Options:
 G= with ground pins
 Blank= without ground pins
EMLB Patterns
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 μ" Mate End Gold Contact area
 Gold Flash Tail Contact area
 50~80 μ" 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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CP2-HA110-E1-TG30											Connector Type A22																	
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				15	16	17	18	19	20	21	22	23	24	25			

CP2-HA110-GE1-TG30											Connector Type A22																	
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	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	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				15	16	17	18	19	20	21	22	23	24	25			

CP2-HA110-A1-TG30											Connector Type A22																	
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				15	16	17	18	19	20	21	22	23	24	25			

CP2-HA110-GA1-TG30											Connector Type A22																	
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				15	16	17	18	19	20	21	22	23	24	25			

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CP2-HA110-D1-TG30											Connector Type A22										
F																					
E	A	A	A	A	A	A	A	A	A	A					A	A	A	A	A	A	A
D	B	B	A	A	A	A	A	A	A	A					A	A	A	A	A	A	A
C	C	C	A	A	A	A	A	A	A	A					A	A	A	A	A	A	A
B	B	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
Z																					
	1	2	3	4	5	6	7	8	9	10					15	16	17	18	19	20	21

CP2-HA110-GB1-TG30											Connector Type A22										
F	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
D	B	B	B	B	B	B	B	B	B	A					B	B	B	B	B	B	B
C	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
A	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
	1	2	3	4	5	6	7	8	9	10					15	16	17	18	19	20	21

CP2-HA110-GC1-TG30											Connector Type A22										
F	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
D	B	B	C	B	B	B	C	B	C	B					C	B	C	B	C	B	C
C	B	C	B	C	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	A	B	B	B	B
A	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
	1	2	3	4	5	6	7	8	9	10					15	16	17	18	19	20	21

CP2-HA110-GA4-GG30											Connector Type A22										
F	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
D	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
B	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
Z	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					15	16	17	18	19	20	21

Signal Contact Configuration Worksheet											Connector Type A22										
F																					
E																					
D																					
C																					
B																					
A																					
Z																					
	1	2	3	4	5	6	7	8	9	10					15	16	17	18	19	20	21

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CP2-HA110-F1-KR											Connector Type A22																			
F																														
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	B	B	B	B	B	B	B	B	B	B	B									B	B	B	B	B	B	B	B	B	B	B
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																														
	1	2	3	4	5	6	7	8	9	10	11									15	16	17	18	19	20	21	22	23	24	25

CP2-HA110-GF1-KR											Connector Type A22																			
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	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	B	B	B	B	B	B	B	B	B	B	B									B	B	B	B	B	B	B	B	B	B	B
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									15	16	17	18	19	20	21	22	23	24	25

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