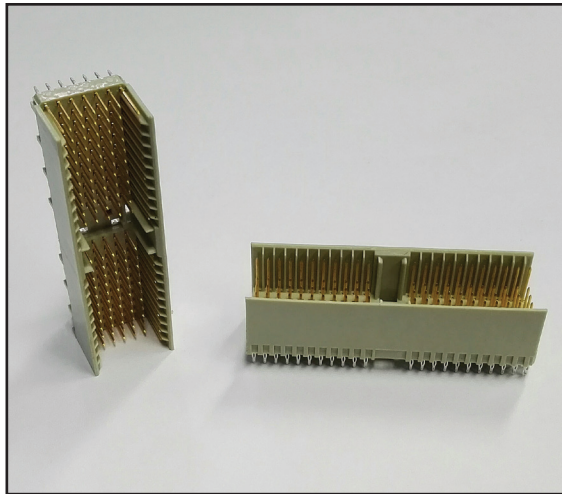


3M™ CP2 Press-Fit Header

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

Withdrawal 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: $\varnothing 0.6 \pm 0.05\text{ mm}$

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



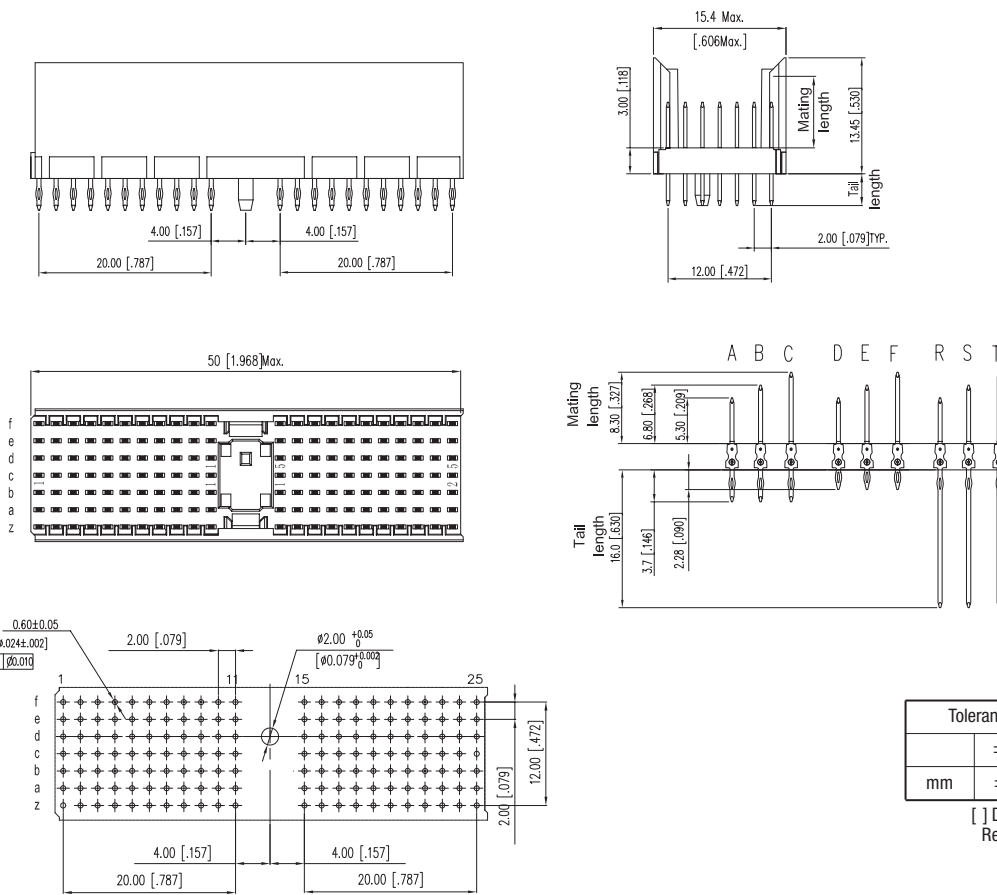
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3M™ CP2 Press-Fit Header

2 mm Type A 110 Signal Contacts

CP2 Series



Recommended PCB Layout

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

[] Dimensions for Reference only

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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Sheet 2 of 5

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3M™ CP2 Press-Fit Header

2 mm Type A 110 Signal Contacts

CP2 Series

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
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				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	
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				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
D	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
A	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	
E	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	
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	
A	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	
	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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3M™ CP2 Press-Fit Header

2 mm Type A 110 Signal Contacts

CP2 Series

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	A	A	A	A	
D	B	B	A	A	A	A	A	A	A	A	A				A	A	A	A	A	A	A	A	B	B	
C	C	C	A	A	A	A	A	A	A	A	A				A	A	A	A	A	A	A	A	C	C	
B	B	B	A	A	A	A	A	A	A	A	A				A	A	A	A	A	A	A	A	B	B	
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-GB1-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	
E	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	A			B	B	B	B	B	B	B	B	B	B	B	
C	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	
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				15	16	17	18	19	20	21	22	23	24	25

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	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	
D	B	B	C	B	B	B	C	B	C	B	A			C	B	C	B	C	B	C	B	C	B	B	
C	B	C	B	C	B	B	B	B	B	B	B			B	B	B	B	B	C	B	C	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	
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				15	16	17	18	19	20	21	22	23	24	25

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	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	
D	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	
B	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	
Z	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				15	16	17	18	19	20	21	22	23	24	25

Signal Contact Configuration Worksheet														Connector Type A22											
F																									
E																									
D																									
C																									
B																									
A																									
Z																									
	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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3M™ CP2 Press-Fit Header

2 mm Type A 110 Signal Contacts

CP2 Series

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	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
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	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-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	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
D	A	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
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
Z	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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