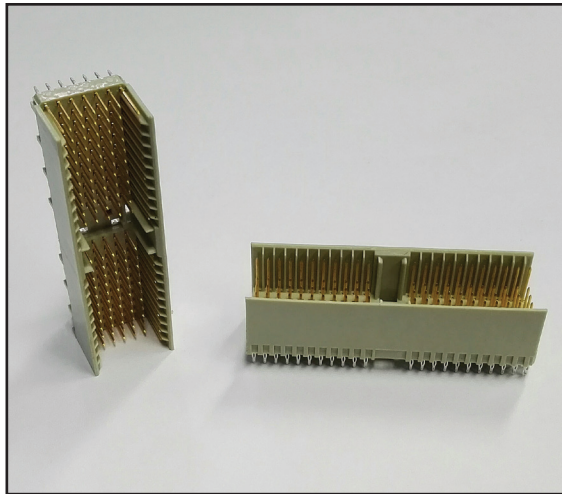


3M™ CP2 Press-Fit Header

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

TS-2265-C
Sheet 1 of 5

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



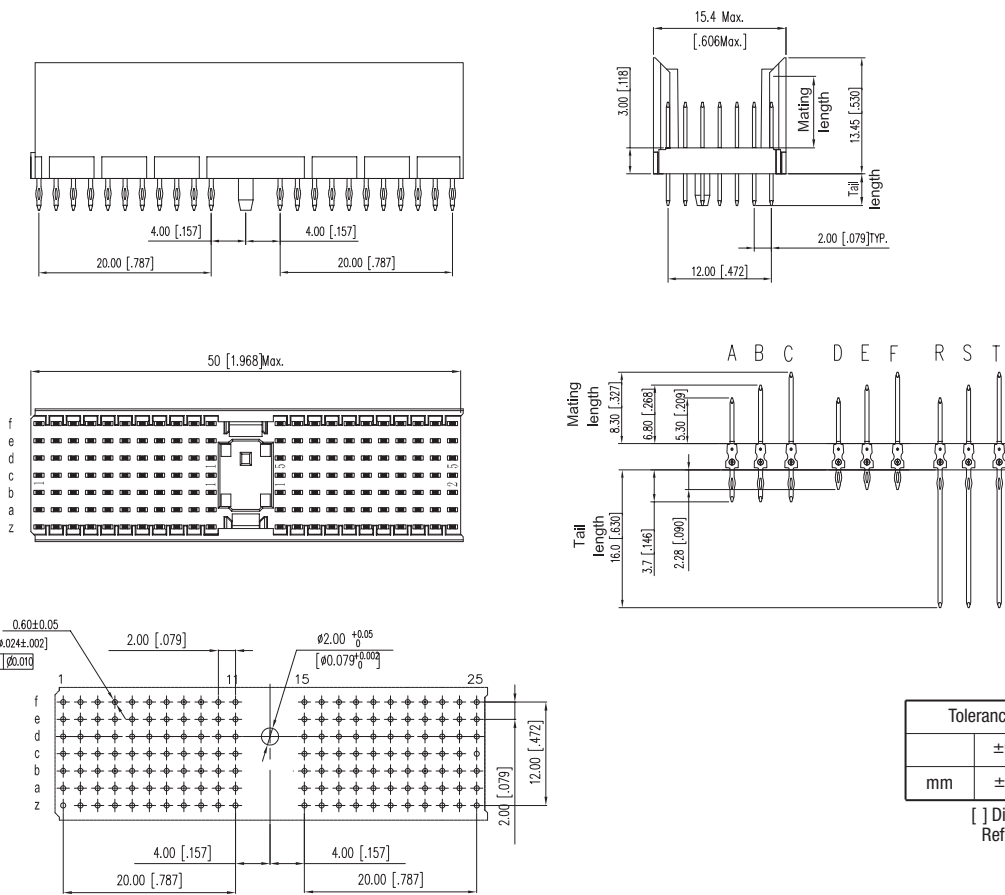
Electronics Materials Solutions Division
Interconnect Solutions
<http://www.3Mconnectors.com>

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

3M™ CP2 Press-Fit Header

2 mm Type A 110 Signal Contacts

CP2 Series



mm [Inch]			
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.

TS-2265-C
Sheet 2 of 5

3M

Electronics Materials 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™ 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		
D	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		
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		
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	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																									
	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

TS-2265-C
Sheet 3 of 5



Electronics Materials 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™ 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

TS-2265-C
Sheet 4 of 5



Electronics Materials 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™ 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	
D	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	A	A	A	A	A	A	A	A	A	A	A				A	A	A	A	A	A	A	A	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	
D	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	A	A	A	A	A	A	A	A	A	A				A	A	A	A	A	A	A	A	A	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

TS-2265-C
Sheet 5 of 5



Electronics Materials 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 is a trademark of 3M Company.

Unless otherwise noted, references to industry specifications are intended to indicate substantial compliance to the material elements of the specification. Such references should not be construed as a guarantee of compliance to all requirements in a given specification.

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 direct, indirect, special, incidental or consequential loss or damage arising from this 3M product, regardless of the legal theory asserted.**



Electronics Materials Solutions Division

6801 River Place Blvd.
Austin, TX 78726-9000
U.S.A.
1-800-225-5373
www.3Mconnectors.com

Please recycle. Printed in USA.
© 3M 2015. All rights reserved.
RIA-2217A-E

Mouser Electronics

Authorized Distributor

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

3M:

[CP2-HA110-E1-TG30](#) [CP2-HA110-GB1-TG30](#) [CP2-HA110-GC1-TG30](#) [CP2-HA110-GA1-TG30](#) [CP2-HA110-GE1-TG30](#) [CP2-HA110-D1-TG30](#) [CP2-HA110-A1-TG30](#) [CP2-HA110-A1-FJ](#) [CP2-HA110-D1-FJ](#) [CP2-HA110-E1-FJ](#) [CP2-HA110-GA1-FJ](#) [CP2-HA110-GB1-FJ](#) [CP2-HA110-GC1-FJ](#) [CP2-HA110-GE1-FJ](#) [CP2-HA110-A1-KR](#) [CP2-HA110-D1-KR](#) [CP2-HA110-E1-KR](#) [CP2-HA110-GA1-KR](#) [CP2-HA110-GB1-KR](#) [CP2-HA110-GC1-KR](#) [CP2-HA110-GE1-KR](#)