

# 3M™ HDC Header

.100" Vertical Mount, PCB/Backplane, Solder Tail or Press-Fit

HDC Series



- High density, up to 240 contacts single bay
- Early Mate Late Break (EMLB) grounding contacts for hot swapping
- Mates with three-row and four-row sockets
- RoHS\* compliant. See the Regulatory Information Appendix (RIA) in the "RoHS compliance" section of [www.3Mconnector.com](http://www.3Mconnector.com) for compliance information (RIA E1 & C1 apply)

Date Modified: April 14, 2010

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## Physical

**Insulation:**

Material: Glass Filled Thermoplastic (LCP)

Flammability: UL 94V-0

Color: Black

**Contact:**

Material: Copper Alloy

**Plating:**

Underplating: 50  $\mu$ " [ 1.27  $\mu$ m ] min. Nickel

Wiping Area: See Ordering Information

Termination Area: See Ordering Information

**Marking:** Part Number and Date Code

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## Electrical

**Current Rating:** 3.0 A

**Insulation Resistance:**  $1 \times 10^3$  M  $\Omega$  min. at 500 V<sub>DC</sub>

**Withstanding Voltage:** 900 V<sub>AC</sub> for 1 minute

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## Environmental

**Temperature Rating:** -55°C to +105°C

**Process Rating:** Maximum 260°C (per J-STD-020C)

**Moisture Sensitivity Level:** 1 (per J-STD-020C)

UL File No.: E68080

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## 3-Row Single Bay



Inch  
[mm]

| Tolerance Unless Noted |     |      |       |
|------------------------|-----|------|-------|
|                        | .0  | .00  | .000  |
| inch                   | ±.1 | ±.01 | ±.005 |

[ ] Dimensions for Reference Only



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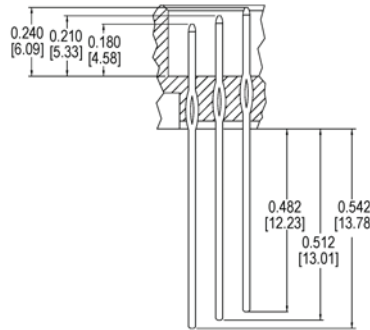
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| Product Table/Dimensions for 3 Row, Single Bay |              |                   |                   |                   |                   |
|--|--------------|-------------------|-------------------|-------------------|-------------------|
| Description                                    | Pin Quantity | A                 | B                 | C                 | D                 |
| HDC-H045-31XX-XXXX                             | 45           | 2.250<br>[57.15]  | 1.950<br>[49.53]  | 1.400<br>[35.56]  | 1.550<br>[39.37]  |
| HDC-H072-31XX-XXXX                             | 72           | 3.150<br>[80.01]  | 2.850<br>[72.39]  | 2.300<br>[58.42]  | 2.300<br>[62.23]  |
| HDC-H075-31XX-XXXX                             | 75           | 3.250<br>[82.55]  | 2.950<br>[74.93]  | 2.400<br>[60.96]  | 2.550<br>[64.77]  |
| HDC-H090-31XX-XXXX                             | 90           | 3.750<br>[95.25]  | 3.450<br>[87.63]  | 2.900<br>[73.66]  | 3.050<br>[77.47]  |
| HDC-H096-31XX-XXXX                             | 96           | 3.950<br>[100.33] | 3.650<br>[92.71]  | 3.100<br>[78.74]  | 3.250<br>[82.55]  |
| HDC-H102-31XX-XXXX                             | 102          | 4.150<br>[105.41] | 3.850<br>[97.79]  | 3.300<br>[83.82]  | 3.450<br>[87.63]  |
| HDC-H120-31XX-XXXX                             | 120          | 4.750<br>[120.65] | 4.450<br>[113.03] | 3.900<br>[113.03] | 4.050<br>[102.87] |
| HDC-H135-31XX-XXXX                             | 135          | 5.250<br>[133.35] | 4.950<br>[125.73] | 4.400<br>[111.76] | 4.550<br>[115.57] |

| Description        | Pin Quantity | A                 | B                 | C                 | D                 |
|--------------------|--------------|-------------------|-------------------|-------------------|-------------------|
| HDC-H150-31XX-XXXX | 150          | 5.750<br>[146.05] | 5.450<br>[138.43] | 4.900<br>[124.46] | 5.050<br>[128.27] |
| HDC-H165-31XX-XXXX | 165          | 6.250<br>[158.75] | 5.950<br>[151.13] | 5.400<br>[137.16] | 5.550<br>[140.97] |
| HDC-H180-31XX-XXXX | 180          | 6.750<br>[171.45] | 6.450<br>[163.83] | 5.900<br>[149.86] | 6.050<br>[153.67] |
| HDC-H195-31XX-XXXX | 195          | 7.250<br>[184.15] | 6.950<br>[176.53] | 6.400<br>[162.56] | 6.550<br>[166.37] |
| HDC-H210-31XX-XXXX | 210          | 7.750<br>[196.85] | 7.450<br>[189.23] | 6.900<br>[175.26] | 7.050<br>[179.07] |
| HDC-H225-31XX-XXXX | 225          | 8.250<br>[209.55] | 7.950<br>[201.93] | 7.400<br>[187.96] | 7.550<br>[191.77] |
| HDC-H228-31XX-XXXX | 228          | 8.350<br>[212.09] | 8.050<br>[204.47] | 7.500<br>[190.50] | 7.650<br>[194.31] |
| HDC-H240-31XX-XXXX | 240          | 8.750<br>[222.25] | 8.450<br>[214.63] | 7.900<br>[200.66] | 8.050<br>[204.47] |



PCB HOLE SPECIFICATION FOR COMPLIANT PIN INSTALLATION



EXAMPLE "EMLB"



Plating Description

## Ordering Information

### HDC - HXXX - X1XX - XXXX

Pin Quantity:  
See Table

Row Options  
3 = 3 Rows  
4 = 4 Rows

Insulator Options  
1 = Single bay  
insulator

Termination Style / Lead length - Dim. F  
P1 - Press-fit / 0.200" (5.08)  
P2 - Press-fit / 0.533" (13.54)  
S1 - Solder Tail / 0.190" (4.83)

Plating Options:  
(See Plating Chart)

| Plating Chart (S1 & P1 Termination Styles ONLY) |                        |                          |   |
|---|------------------------|--------------------------|---|
| Plating Suffix                                  | Press-Fit Terminations | Solder Tail Terminations | Plating composition   |
| TG30  | (RIA E2 & C2 apply)    | (RIA E3 & C2 apply)      | 30 μ" [0.76 μm] Min. Au Area 1<br>100 μ" [2.54 μm] Min. Tin Lead Tail Area 4<br>50 μ" [1.27 μm] Min. Ni all over                      |
| KR  | (RIA E1 & C1 apply)    | (RIA E1 & C1 apply)      | 30 μ" [0.76 μm] Min. Au on Area 1<br>100 μ" [2.54 μm] Min. Whisker Mitigating Matte Tin on Area 4<br>50 μ" [1.27 μm] Min. Ni all over |

| Plating Chart (P2 Termination Styles ONLY) |                        |                          |  |
|--|------------------------|--------------------------|--|
| Plating Suffix                             | Press-Fit Terminations | Solder Tail Terminations | Plating composition  |
| KV   | (RIA E1 & C1 apply)    | (RIA E1 & C1 apply)      | 30 μ" [0.76 μm] Min. Au on area 1<br>30 μ" [0.76 μm] Min. Au on area 2<br>3 μ" [0.08 μm] Min. Au on area 3<br>50 μ" [1.27 μm] Min. Ni all over |

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## 4-Row Single Bay



RECOMMENDED P.C.B. HOLE PATTERN

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# 3M™ HDC Header

.100" Vertical Mount, PCB/Backplane, Solder Tail or Press-Fit

HDC Series

| Product Table/Dimensions for 4-Row, Single Bay |              |                   |                   |                   |                   |
|--|--------------|-------------------|-------------------|-------------------|-------------------|
| Description                                    | Pin Quantity | A                 | B                 | C                 | D                 |
| HDC-H060-41XX-XXXX                             | 60           | 2.250<br>[57.15]  | 1.950<br>[49.53]  | 1.400<br>[49.53]  | 1.550<br>[39.37]  |
| HDC-H076-41XX-XXXX                             | 76           | 2.650<br>[67.31]  | 2.350<br>[59.69]  | 1.800<br>[45.72]  | 1.950<br>[49.53]  |
| HDC-H080-41XX-XXXX                             | 80           | 2.750<br>[69.85]  | 2.450<br>[62.23]  | 1.900<br>[48.26]  | 1.900<br>[52.07]  |
| HDC-H100-41XX-XXXX                             | 100          | 3.250<br>[82.55]  | 2.950<br>[74.93]  | 2.400<br>[60.96]  | 2.550<br>[60.96]  |
| HDC-H120-41XX-XXXX                             | 120          | 3.750<br>[95.25]  | 3.450<br>[87.63]  | 2.900<br>[73.66]  | 3.050<br>[87.63]  |
| HDC-H128-41XX-XXXX                             | 128          | 3.950<br>[100.33] | 3.650<br>[92.71]  | 3.100<br>[78.74]  | 3.250<br>[82.55]  |
| HDC-H140-41XX-XXXX                             | 140          | 4.250<br>[107.95] | 3.950<br>[100.33] | 3.400<br>[86.36]  | 3.550<br>[90.17]  |
| HDC-H160-41XX-XXXX                             | 160          | 4.750<br>[120.65] | 4.450<br>[113.03] | 3.900<br>[99.06]  | 4.050<br>[102.87] |
| HDC-H168-41XX-XXXX                             | 168          | 4.950<br>[125.73] | 4.650<br>[118.11] | 4.100<br>[104.14] | 4.250<br>[107.95] |
| HDC-H180-41XX-XXXX                             | 180          | 5.250<br>[133.35] | 4.950<br>[125.73] | 4.400<br>[111.76] | 4.550<br>[115.57] |
| HDC-H200-41XX-XXXX                             | 200          | 5.750<br>[146.05] | 5.450<br>[138.43] | 4.900<br>[124.46] | 5.050<br>[128.27] |
| HDC-H216-41XX-XXXX                             | 216          | 6.150<br>[156.21] | 5.850<br>[148.59] | 5.300<br>[134.62] | 5.450<br>[138.43] |
| HDC-H220-41XX-XXXX                             | 220          | 6.250<br>[158.75] | 5.950<br>[151.13] | 5.400<br>[137.16] | 5.550<br>[140.97] |
| HDC-H240-41XX-XXXX                             | 240          | 6.750<br>[171.45] | 6.450<br>[163.83] | 5.900<br>[149.86] | 6.050<br>[149.86] |
| HDC-H260-41XX-XXXX                             | 260          | 7.250<br>[184.15] | 6.950<br>[176.53] | 6.400<br>[162.56] | 6.550<br>[166.37] |
| HDC-H280-41XX-XXXX                             | 280          | 7.750<br>[196.85] | 7.450<br>[189.23] | 6.900<br>[175.26] | 7.050<br>[179.07] |
| HDC-H300-41XX-XXXX                             | 300          | 8.250<br>[209.55] | 7.950<br>[209.55] | 7.400<br>[187.96] | 7.550<br>[191.77] |
| HDC-H320-41XX-XXXX                             | 320          | 8.750<br>[222.25] | 8.450<br>[214.63] | 7.900<br>[200.66] | 8.050<br>[204.47] |

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