

3M™ Pak 50 Boardmount Plug

.050" Straight and Right Angle Maxi-Mate

P50 Series



- High density connectors with up to 200 contacts
- Horizontal, parallel and vertical mating availability
- Insulator designed to prevent mating misalignment

Date Modified: March 10, 2003

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Physical

Insulation
Material: Glass Filled Nylon
Flammability: UL 94V-0
Color: Black

Contact
Material: Phosphor Bronze

Plating
Underplating: Nickel
Wiping Area: See Ordering Information
Solder Tails: Tin Alloy over Nickel

Electrical

Current Rating: 0.5 A
Insulation Resistance: 10^3 M Ω min. at 500 VDC
Withstanding Voltage: 650 VAC for 1 minute

Environmental

Temperature Rating: -55°C to +85°C

UL File No.: E68080

3M
Interconnect Solutions
<http://www.3M.com/interconnects/>

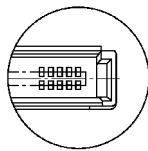
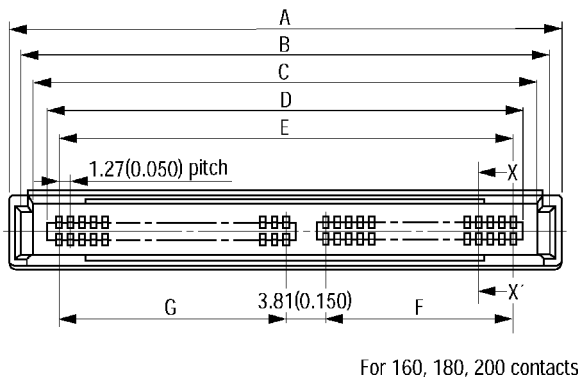
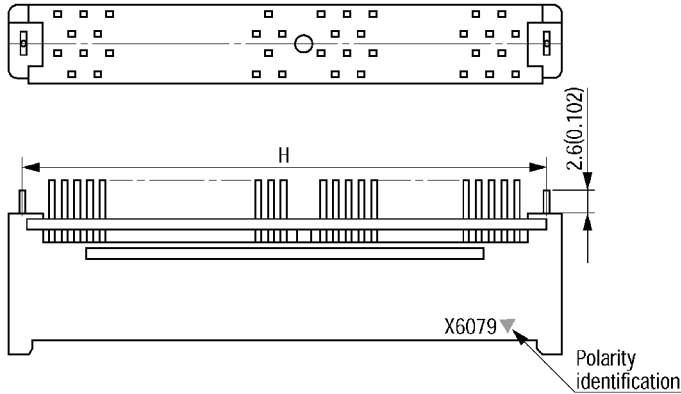
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For technical, sales or ordering information call
800-225-5373

3M™ Pak 50 Boardmount Plug

.050" Straight and Right Angle Maxi-Mate

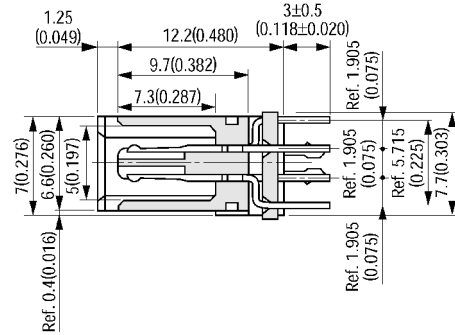
P50 Series

Straight without Flanges and with Retention Clips

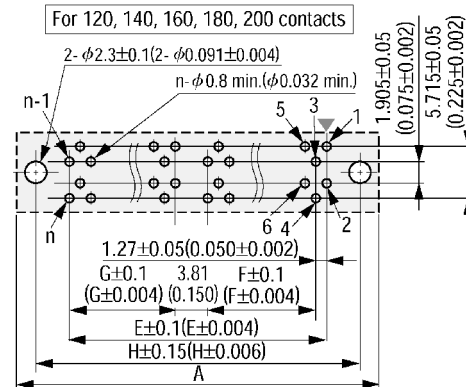


For 120, 140 contacts

X-X' Cross Section



Printed Circuit Board Layout (Component Side View)



▼ = Polarity identification
 Recommended PCB Thickness $t = 1.6 \pm 0.19 (0.063 \pm 0.007)$
 "n" is number of contacts.

Ordering Information

P50 - XXXP - XXX - XXXX

Contact Quantity
See Table

Solder Tail, Flange and Clip Options:
 S1 = Straight, with Flanges, without Retention Clips
 SR1 = Right Angle, with Flanges, without Retention Clips
 R1 = Straight, without Flanges, with Retention Clips
 RR1 = Right Angle, without Flanges, with Retention Clips

Plating Options:
 TGF = 2 μ" [0.05 μm] min. Gold
 TG = 10 μ" [0.25 μm] min. Gold
 TG30 = 30 μ" [0.75 μm] min. Gold

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3M™ Pak 50 Boardmount Plug

.050" Straight and Right Angle Maxi-Mate

P50 Series

Product Table / Dimensions for Straight and Right Angle without Flanges and with Retention Clips

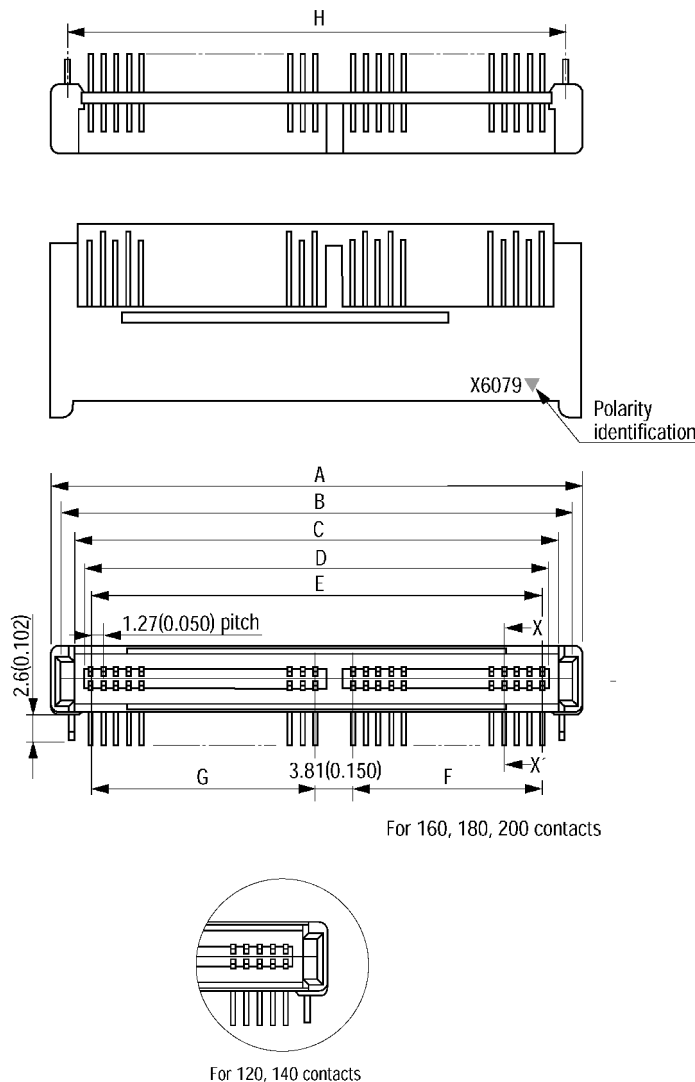
| Contact Quantity | A | B | C | D | E | F | G | H |
|------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| 120 | 86.50 | 84.50 | 81.87 | 79.17 | 77.47 | 24.13 | 49.53 | 83.82 |
| | [3.406] | [3.327] | [3.223] | [3.117] | [3.050] | [0.950] | [1.950] | [3.300] |
| 140 | 99.20 | 97.20 | 94.57 | 91.87 | 90.17 | 24.13 | 62.23 | 96.52 |
| | [3.906] | [3.827] | [3.723] | [3.617] | [3.550] | [0.950] | [2.450] | [3.800] |
| 160 | 111.90 | 109.90 | 107.27 | 104.57 | 102.87 | 36.83 | 62.23 | 109.22 |
| | [4.406] | [4.327] | [4.223] | [4.117] | [4.050] | [1.450] | [2.450] | [4.300] |
| 180 | 124.60 | 122.60 | 119.97 | 117.27 | 115.57 | 49.53 | 62.23 | 121.92 |
| | [4.906] | [4.827] | [4.723] | [4.617] | [4.550] | [1.950] | [2.450] | [4.800] |
| 200 | 137.30 | 135.30 | 132.67 | 129.97 | 128.27 | 62.23 | 62.23 | 134.62 |
| | [5.406] | [5.327] | [5.223] | [5.117] | [5.050] | [2.450] | [2.450] | [5.300] |



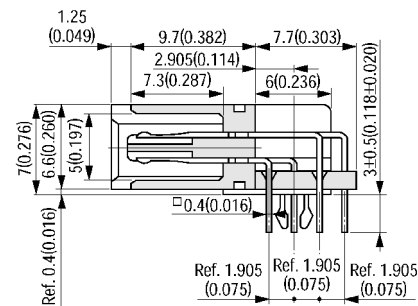
Note:

These connectors do not have a symmetrical board layout pattern. The 120 pin connectors have 80 pins on one side and 40 pins on the other. All other pin counts have 100 pins on one side and the balance on the other side.

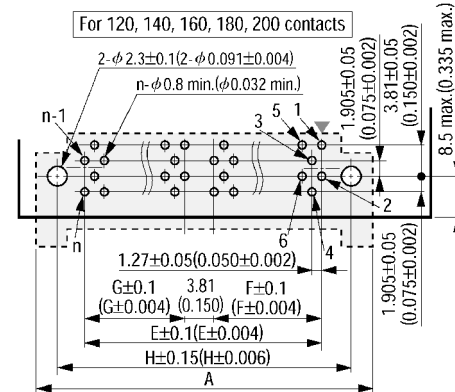
Right Angle without Flanges and with Retention Clips



X-X' Cross Section



Printed Circuit Board Layout (Component Side View)



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3M™ Pak 50 Boardmount Plug

.050" Straight and Right Angle Maxi-Mate

P50 Series

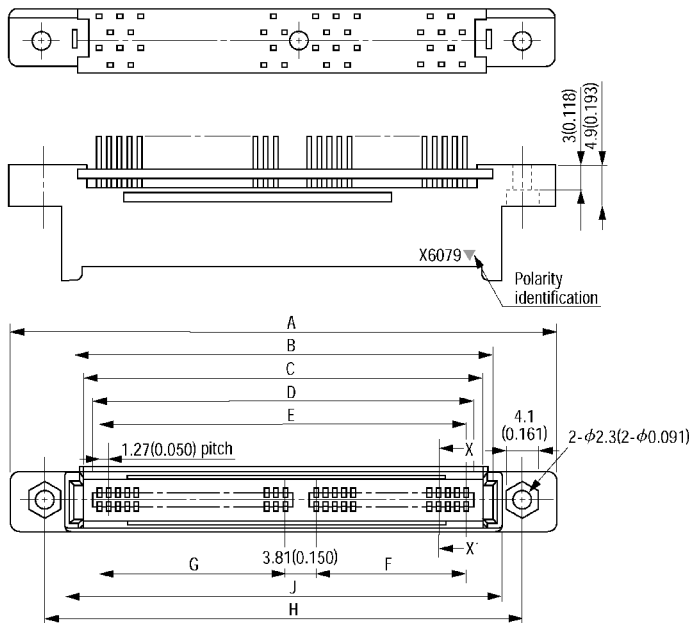
Product Table / Dimensions for Straight and Right Angle with Flanges and without Retention Clips

| Contact Quantity | A | B | C | D | E | F | G | H | J |
|------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 120 | 99.20 | 84.50 | 81.87 | 79.17 | 77.47 | 24.13 | 49.53 | 91.44 | 86.50 |
| | [3.906] | [3.327] | [3.223] | [3.117] | [3.050] | [0.950] | [1.950] | [3.600] | [3.406] |
| 140 | 111.90 | 97.20 | 94.57 | 91.87 | 90.17 | 24.13 | 62.23 | 104.14 | 99.20 |
| | [4.406] | [3.827] | [3.723] | [3.617] | [3.550] | [0.950] | [2.450] | [4.100] | [3.906] |
| 160 | 124.60 | 109.90 | 107.27 | 104.57 | 102.87 | 36.83 | 62.23 | 116.84 | 111.90 |
| | [4.906] | [4.327] | [4.223] | [4.117] | [4.050] | [1.450] | [2.450] | [4.600] | [4.406] |
| 180 | 137.30 | 122.60 | 119.97 | 117.27 | 115.57 | 49.53 | 62.23 | 129.54 | 124.60 |
| | [5.406] | [4.827] | [4.723] | [4.617] | [4.550] | [1.950] | [2.450] | [5.100] | [4.906] |
| 200 | 150.00 | 135.30 | 132.67 | 129.97 | 128.27 | 62.23 | 62.23 | 142.24 | 137.30 |
| | [5.906] | [5.327] | [5.223] | [5.117] | [5.050] | [2.450] | [2.450] | [5.600] | [5.406] |

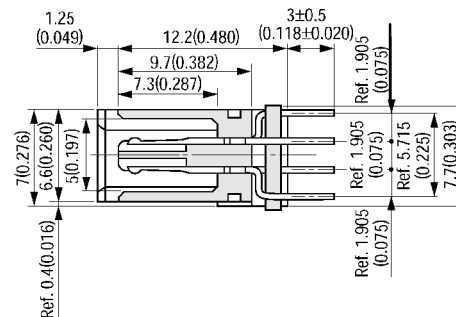
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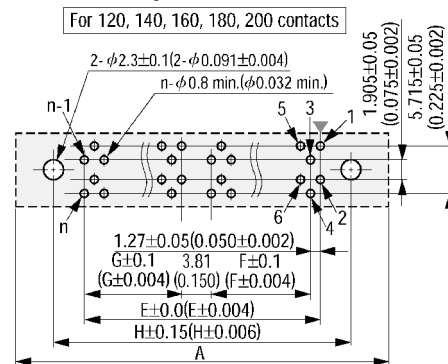
Straight with Flanges and without Retention Clips



X-X Cross Section



Printed Circuit Board Layout (Component Side View)



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 *n is number of contacts.

X-X Cross Section Straight

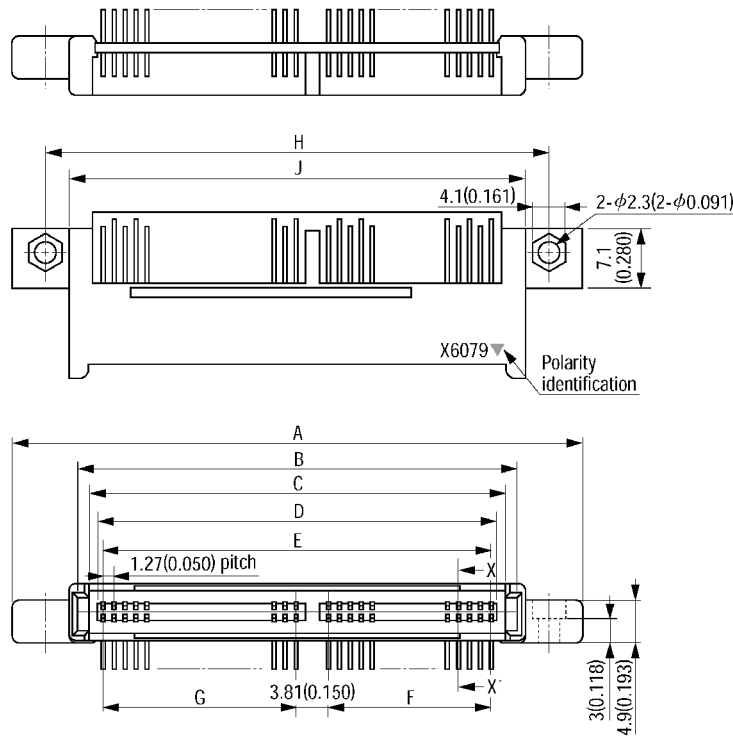
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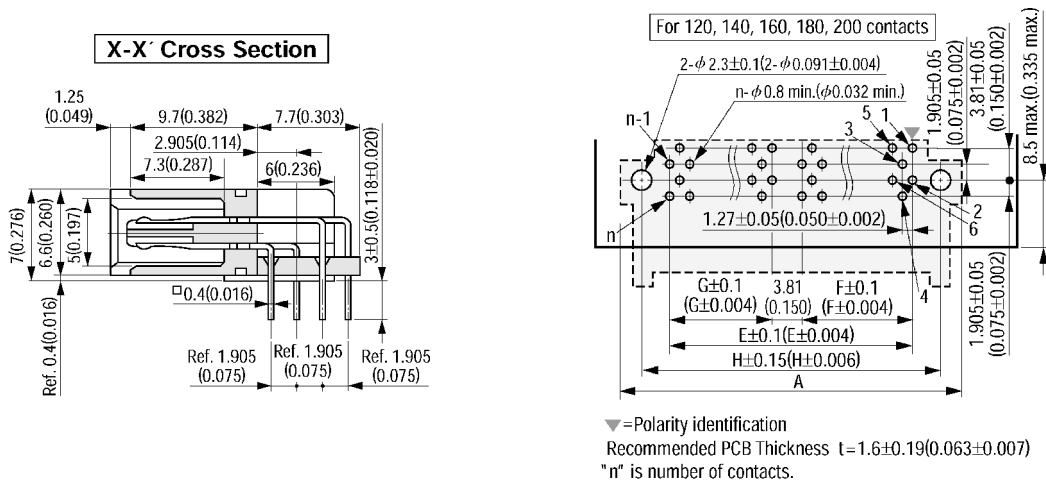
.050" Straight and Right Angle Maxi-Mate

P50 Series

Right Angle with Flanges and without Retention Clips



Printed Circuit Board Layout (Component Side View)



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6801 River Place Blvd.
Austin, TX 78726-9000
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