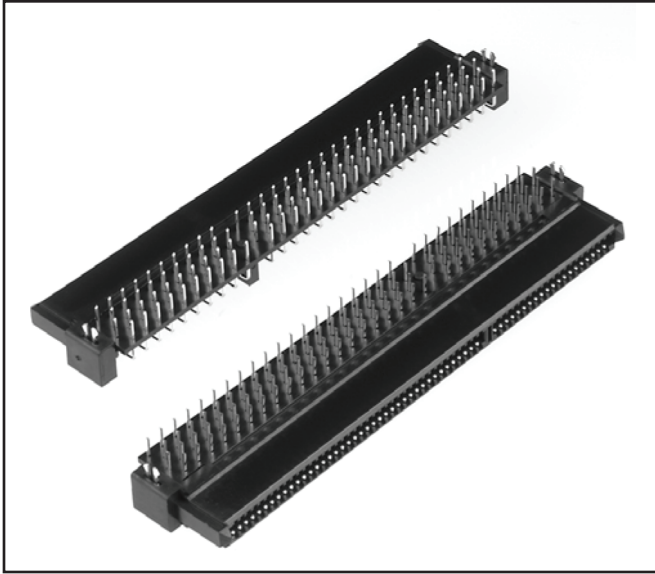


3M™ Pak 50 Boardmount Socket

.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
- RoHS Compliant. See the Regulatory Information Appendix (RIA) in the "RoHS Compliance" section of www.3Mconnector.com for compliance information (RIA E1 and C1 apply)

Date Modified: February 3, 2010

TS-2050-B
Sheet 1 of 6

Physical

Insulator:

Material: Glass Filled Nylon

Flammability: UL 94V-0

Color: Black

Contact Material: Phosphor Bronze

Plating:

Underplating: Nickel

Wiping Area: 10 μ " [0.25 μ m] Gold

Solder Tails: Gold Flash

Retaining Clips: Tin-Copper

Mating Compatibility: TS-2049

Electrical

Current Rating: 0.5 A

Insulation Resistance: $> 1 \times 10^9 \Omega$ at 500 V_{DC}

Withstanding Voltage: 650 V_{AC} for 1 minute

Environmental

Temperature Rating: -55°C to +85°C

Process Rating: 260°C Wave Solder Compatible

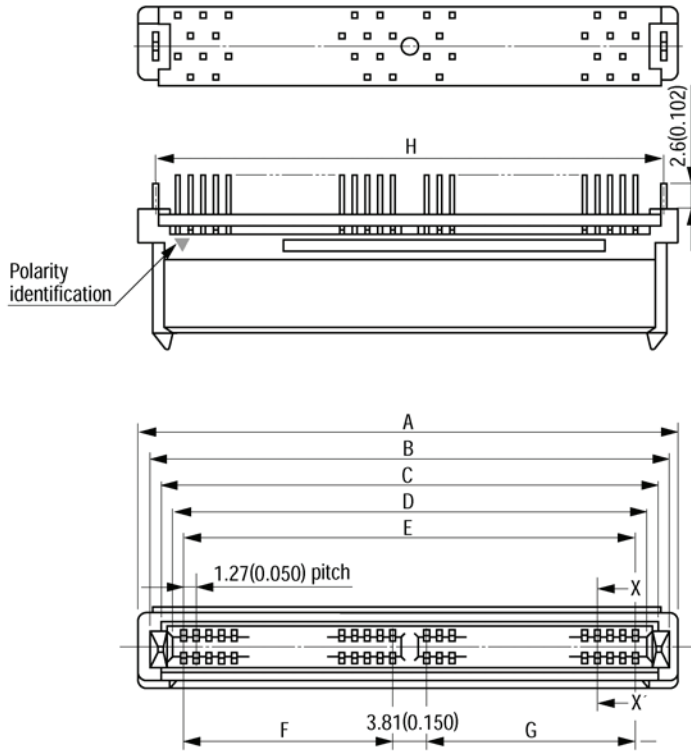
UL File No.: E68080

3M™ Pak 50 Boardmount Socket

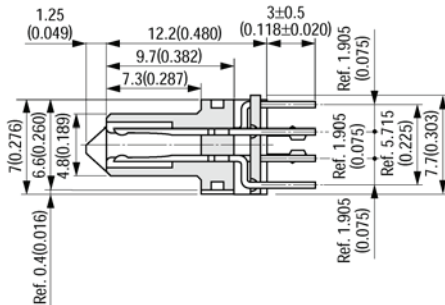
.050" Straight and Right Angle Maxi-Mate

P50 Series

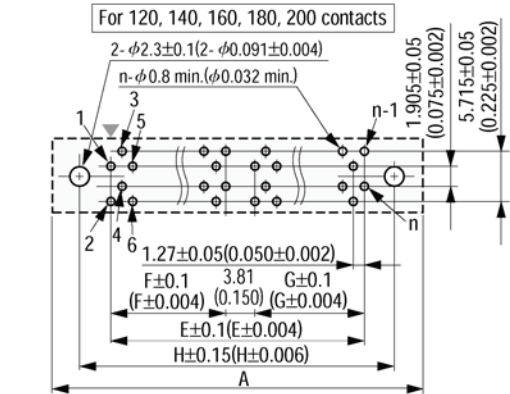
Straight without Flanges and with Retention Clips



X-X' Cross Section



Printed Circuit Board Layout (Component Side View)



▽=Polarity identification
Recommended PCB Thickness $t=1.6\pm0.19(0.063\pm0.007)$
"n" is number of contacts.

Ordering Information

P50 - XXXS - XXXX - EA

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

TS-2050-B
Sheet 2 of 5

3M™ Pak 50 Boardmount Socket

.050" Straight and Right Angle Maxi-Mate

P50 Series

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

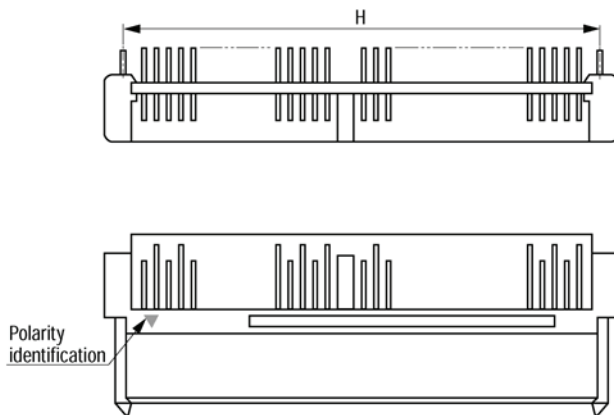
| Contact Quantity | A | B | C | D | E | F | G | H |
|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------------|------------------|-------------------|
| 120 | 86.50 [3.406] | 84.10 [3.311] | 81.47 [3.207] | 79.47 [3.129] | 77.47 [3.050] | 24.13 [0.950] | 49.53 [1.950] | 83.82 [3.300] |
| 140 | 99.20 [3.906] | 96.80 [3.811] | 94.17 [3.707] | 92.17 [3.629] | 90.17 [3.550] | 24.13 [0.950] | 62.23 [2.450] | 96.52 [3.800] |
| 160 | 111.90 [4.406] | 109.50 [4.311] | 106.87 [4.207] | 104.87 [4.129] | 102.87 [4.050] | 36.83 [1.450] | 62.23 [2.450] | 109.22 [4.300] |
| 180 | 124.60 [4.906] | 122.20 [4.811] | 119.57 [4.707] | 117.57 [4.629] | 115.57 [4.550] | 49.53 [1.950] | 62.23 [2.450] | 121.92 [4.800] |
| 200 | 137.30 [5.406] | 134.90 [5.311] | 132.27 [5.207] | 130.27 [5.129] | 128.27 [5.050] | 62.23 [2.450] | 62.23 [2.450] | 134.62 [5.300] |

Notes:

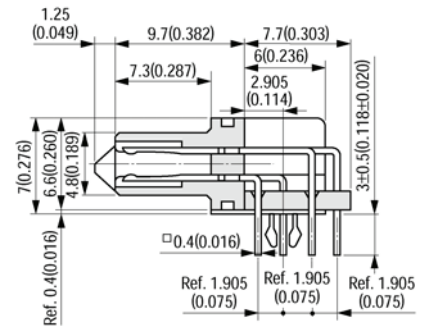
These connectors do not have a symmetrical board layout pattern. The 120 pin connectors have 80 pins on one side and 40 pins on the other. All other pin counts have 100 pins on one side and the balance on the other side.



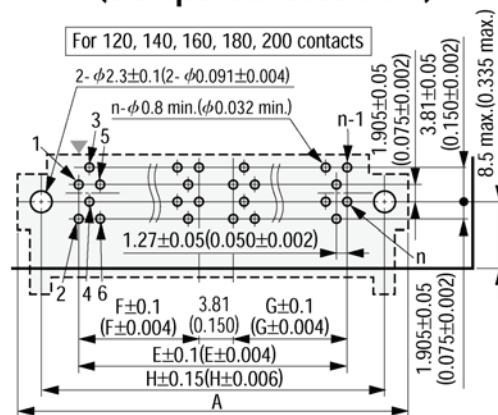
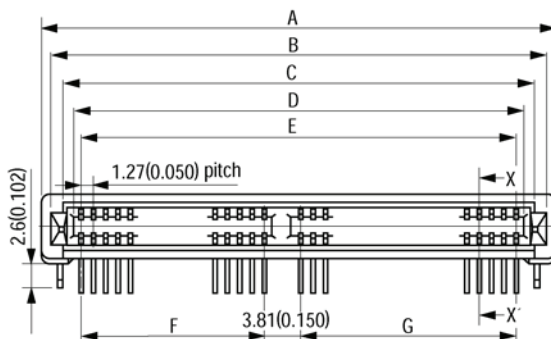
Right Angle without Flanges and with Retention Clips



X-X' Cross Section



Printed Circuit Board Layout (Component Side View)



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

TS-2050-B
 Sheet 3 of 5

3M™ Pak 50 Boardmount Socket

.050" Straight and Right Angle Maxi-Mate

P50 Series

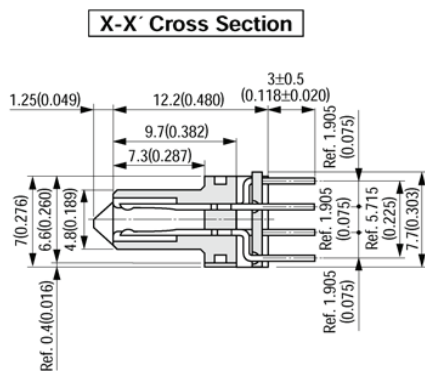
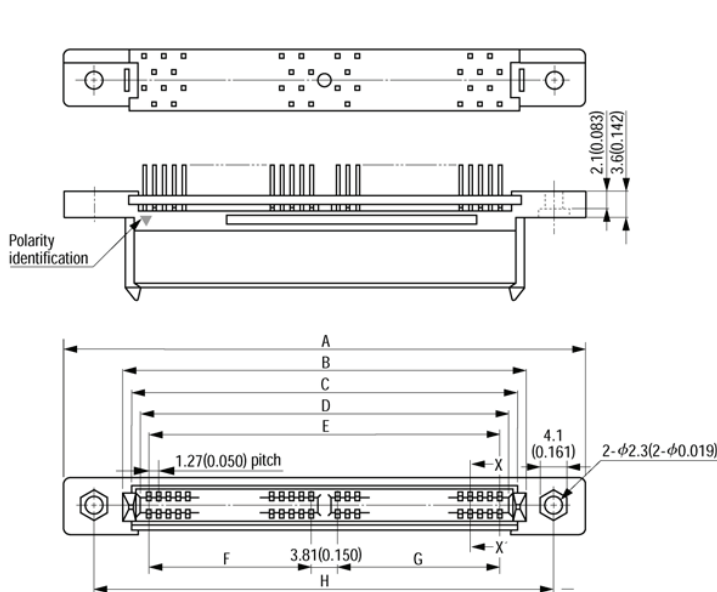
Product Table / Dimensions for Straight with Flanges and without Retention Clips

| Contact Quantity | A | B | C | D | E | F | G | H |
|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------------|------------------|-------------------|
| 120 | 99.20 [3.906] | 84.10 [3.311] | 81.47 [3.207] | 79.47 [3.129] | 77.47 [3.050] | 24.13 [0.950] | 49.53 [1.950] | 91.44 [3.600] |
| 140 | 111.90 [4.406] | 96.80 [3.811] | 94.17 [3.707] | 92.17 [3.629] | 90.17 [3.550] | 24.13 [0.950] | 62.23 [2.450] | 104.14 [4.100] |
| 160 | 124.60 [4.906] | 109.50 [4.311] | 106.87 [4.207] | 104.87 [4.129] | 102.87 [4.050] | 36.83 [1.450] | 62.23 [2.450] | 116.84 [4.600] |
| 180 | 137.30 [5.406] | 122.20 [4.811] | 119.57 [4.707] | 117.57 [4.629] | 115.57 [4.550] | 49.53 [1.950] | 62.23 [2.450] | 129.54 [5.100] |
| 200 | 150.00 [5.906] | 134.90 [5.311] | 132.27 [5.207] | 130.27 [5.129] | 128.27 [5.050] | 62.23 [2.450] | 62.23 [2.450] | 142.24 [5.600] |

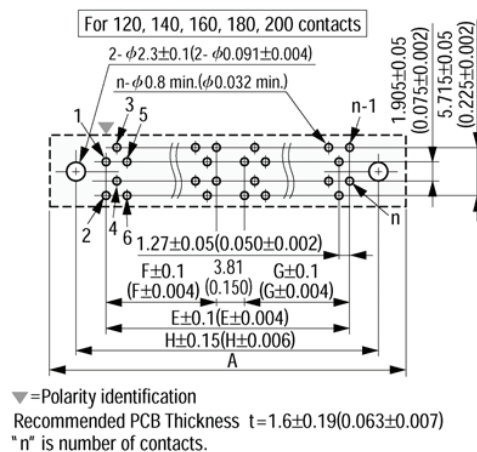
Notes:

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.

Straight with Flanges and without Retention Clips



Printed Circuit Board Layout (Component Side View)



3M™ Pak 50 Boardmount Socket

.050" Straight and Right Angle Maxi-Mate

P50 Series

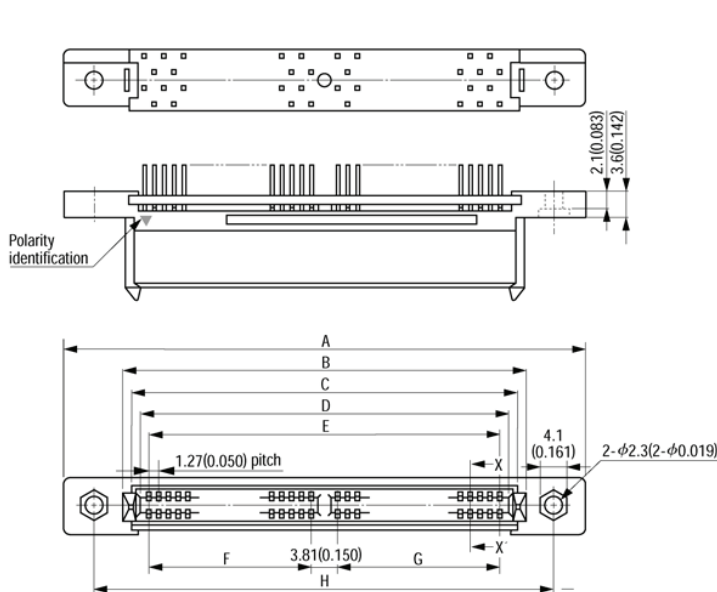
Product Table / Dimensions for Right Angle with Flanges and without Retention Clips

| Contact Quantity | A | B | C | D | E | F | G | H | J |
|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------------|------------------|-------------------|-------------------|
| 120 | 99.20 [3.906] | 84.10 [3.311] | 81.47 [3.207] | 79.47 [3.129] | 77.47 [3.050] | 24.13 [0.950] | 49.53 [1.950] | 91.44 [3.600] | 86.50 [3.406] |
| 140 | 111.90 [4.406] | 96.80 [3.811] | 94.17 [3.707] | 92.17 [3.629] | 90.17 [3.550] | 24.13 [0.950] | 62.23 [2.450] | 104.14 [4.100] | 99.20 [3.906] |
| 160 | 124.60 [4.906] | 109.50 [4.311] | 106.87 [4.207] | 104.87 [4.129] | 102.87 [4.050] | 36.83 [1.450] | 62.23 [2.450] | 116.84 [4.600] | 111.90 [4.406] |
| 180 | 137.30 [5.406] | 122.20 [4.811] | 119.57 [4.707] | 117.57 [4.629] | 115.57 [4.550] | 49.53 [1.950] | 62.23 [2.450] | 129.54 [5.100] | 124.60 [4.906] |
| 200 | 150.00 [5.906] | 134.90 [5.311] | 132.27 [5.207] | 130.27 [5.129] | 128.27 [5.050] | 62.23 [2.450] | 62.23 [2.450] | 142.24 [5.600] | 137.30 [5.406] |

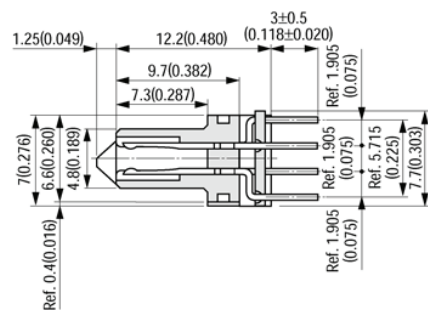
Notes:

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.

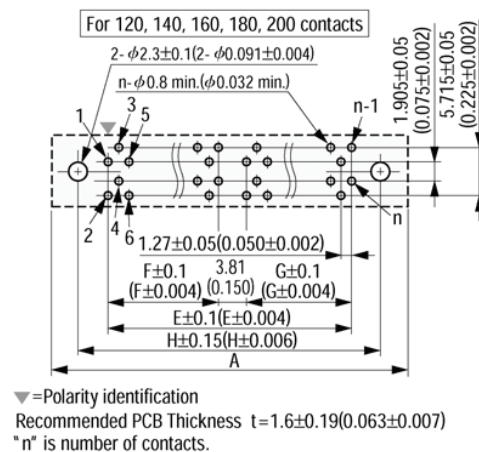
Straight with Flanges and without Retention Clips



X-X' Cross Section



Printed Circuit Board Layout (Component Side View)



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