

3M™ Pak 50 Boardmount Plug

.050" Through-Hole, Straight and Right Angle, with Ret. Clips, Flng. Option

P50 Series



- Contact design features two contact points and straight beam construction for connector reliability and low insertion force
- Retention clip secures connector for wave soldering eliminating additional hardware expenses
- Horizontal, parallel or vertical mating available
- Insulator design prevents mis-insertion errors and contact damage
- Available with and without flanges
- 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 10, 2010

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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 μm] Gold

Solder Tails: Gold Flash

Retaining Clips: Tin-Copper

Mating Compatibility: TS-2047

Electrical

Current Rating: 0.5 A

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

Withstanding Voltage: 500 V_{rms} at Sea Level

Environmental

Temperature Rating: -55°C to +85°C

Process Rating: 260°C Wave Solder Compatible

UL File No.: E68080

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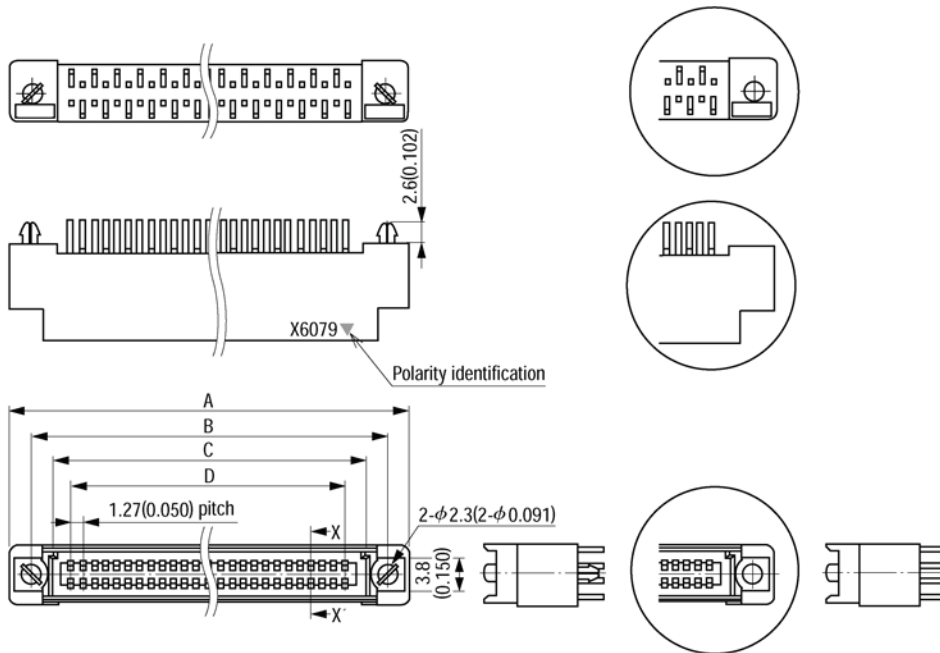
Product Table / Dimensions for Straight with Flanges, with or without Retention Clips

| Contact Quantity | A | B | C | D |
|------------------|------------------|------------------|------------------|------------------|
| 20 | 25.43 [1.001] | 20.32 [0.800] | 15.83 [0.623] | 11.43 [0.450] |
| 26 | 29.24 [1.151] | 24.13 [0.950] | 19.64 [0.773] | 15.24 [0.600] |
| 30 | 31.78 [1.251] | 26.67 [1.050] | 22.18 [0.873] | 17.78 [0.700] |
| 32 | 33.05 [1.301] | 27.94 [1.100] | 23.45 [0.923] | 19.05 [0.750] |
| 34 | 34.32 [1.351] | 29.21 [1.150] | 24.72 [0.973] | 20.32 [0.800] |
| 40 | 38.13 [1.501] | 33.02 [1.300] | 28.53 [1.123] | 24.13 [0.950] |

| Contact Quantity | A | B | C | D |
|------------------|------------------|------------------|------------------|------------------|
| 50 | 44.48 [1.751] | 39.37 [1.550] | 34.88 [1.373] | 30.48 [1.200] |
| 52 | 45.75 [1.801] | 40.64 [1.600] | 36.15 [1.423] | 31.75 [1.250] |
| 60 | 50.83 [2.001] | 45.72 [1.800] | 41.23 [1.623] | 36.83 [1.450] |
| 68 | 55.91 [2.201] | 50.80 [2.000] | 46.31 [1.823] | 41.91 [1.650] |
| 80 | 63.53 [2.501] | 58.42 [2.300] | 53.93 [2.123] | 49.53 [1.950] |
| 100 | 76.23 [3.001] | 71.12 [2.800] | 66.63 [2.623] | 62.23 [2.450] |

With Retention Clips

Without Retention Clips



X-X' Cross Section



Shown with Retention Clips

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P50 Series

Product Table / Dimensions for Straight without Flanges

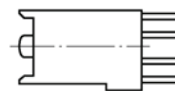
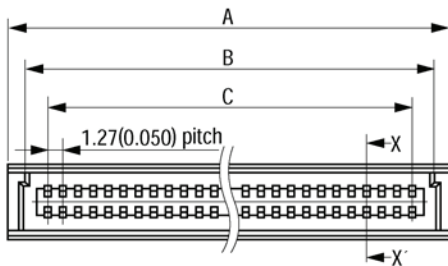
| Contact Quantity | A | B | C |
|------------------|------------------|------------------|------------------|
| 20 | 17.83 [0.702] | 15.83 [0.623] | 11.43 [0.450] |
| 26 | 21.64 [0.852] | 19.64 [0.773] | 15.24 [0.600] |
| 30 | 24.18 [0.952] | 22.18 [0.873] | 17.78 [0.700] |
| 32 | 25.45 [1.002] | 23.45 [0.923] | 19.05 [0.750] |
| 34 | 26.72 [1.052] | 24.72 [0.973] | 20.32 [0.800] |
| 40 | 30.53 [1.202] | 28.53 [1.123] | 24.13 [0.950] |

| Contact Quantity | A | B | C |
|------------------|------------------|------------------|------------------|
| 50 | 36.88 [1.452] | 34.88 [1.373] | 30.48 [1.200] |
| 52 | 38.15 [1.502] | 36.15 [1.423] | 31.75 [1.250] |
| 60 | 43.23 [1.702] | 41.23 [1.623] | 36.83 [1.450] |
| 68 | 48.31 [1.902] | 46.31 [1.823] | 41.91 [1.650] |
| 80 | 55.93 [2.202] | 53.93 [2.123] | 49.53 [1.950] |
| 100 | 68.63 [2.702] | 66.63 [2.623] | 62.23 [2.450] |

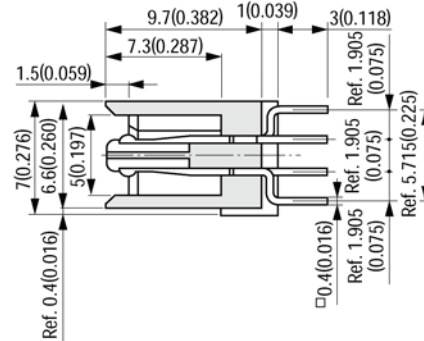


X6079

Polarity identification



X-X' Cross Section



Ordering Information

P5X - XXXP - XXX - EA

Mounting Options:

- 0 = With Flanges
- 1 = Without Flanges, offered without retention clips only

Contact Quantity:
See Table

Solder Tail and Clip Options:

- S1 = Straight without Retention Clips
- SR1 = Right Angle without Retention Clips
- R1 = Straight with Retention Clips
- RR1 = Right Angle with Retention Clips

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3M™ Pak 50 Boardmount Plug

.050" Through-Hole, Straight and Right Angle, with Ret. Clips, Flng. Option

P50 Series

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

| Contact Quantity | A | B | C | D |
|------------------|------------------|------------------|------------------|------------------|
| 20 | 25.43 [1.001] | 20.32 [0.800] | 15.83 [0.623] | 11.43 [0.450] |
| 26 | 29.24 [1.151] | 24.13 [0.950] | 19.64 [0.773] | 15.24 [0.600] |
| 30 | 31.78 [1.251] | 26.67 [1.050] | 22.18 [0.873] | 17.78 [0.700] |
| 32 | 33.05 [1.301] | 27.94 [1.100] | 23.45 [0.923] | 19.05 [0.750] |
| 34 | 34.32 [1.351] | 29.21 [1.150] | 24.72 [0.973] | 20.32 [0.800] |
| 40 | 38.13 [1.501] | 33.02 [1.300] | 28.53 [1.123] | 24.13 [0.950] |

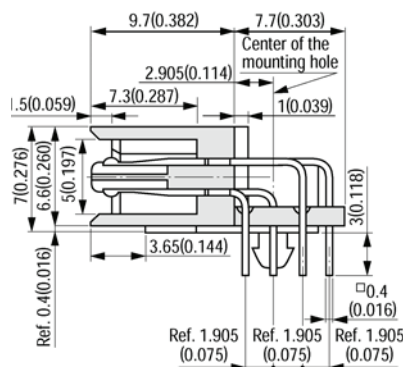
| Contact Quantity | A | B | C | D |
|------------------|------------------|------------------|------------------|------------------|
| 50 | 44.48 [1.751] | 39.37 [1.550] | 34.88 [1.373] | 30.48 [1.200] |
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| 68 | 55.91 [2.201] | 50.80 [2.000] | 46.31 [1.823] | 41.91 [1.650] |
| 80 | 63.53 [2.501] | 58.42 [2.300] | 53.93 [2.123] | 49.53 [1.950] |
| 100 | 76.23 [3.001] | 71.12 [2.800] | 66.63 [2.623] | 62.23 [2.450] |

With Retention Clips

Without Retention Clips



X-X' Cross Section



Shown with Retention Clips

3M™ Pak 50 Boardmount Plug

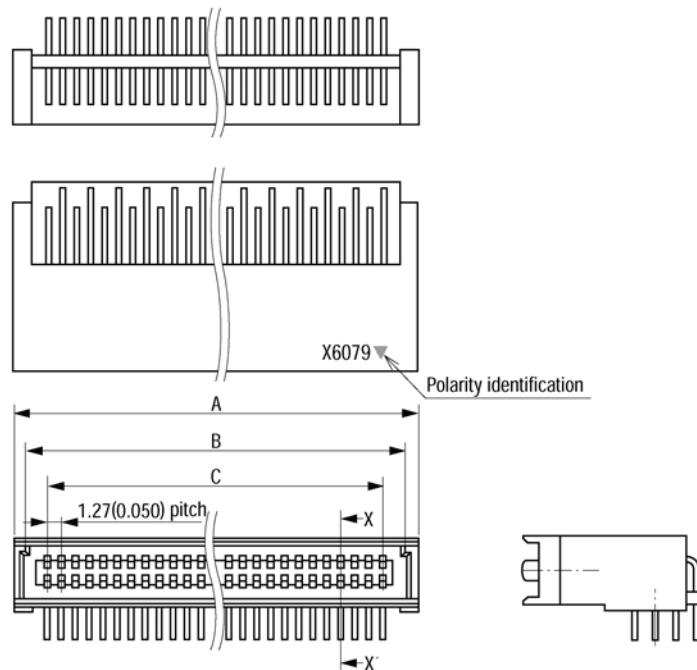
.050" Through-Hole, Straight and Right Angle, with Ret. Clips, Flng. Option

P50 Series

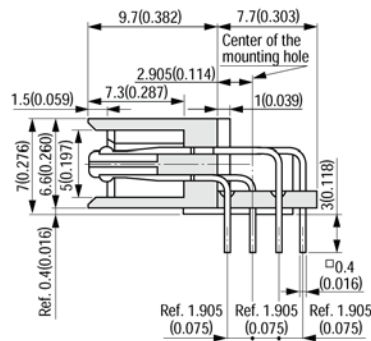
Product Table / Dimensions for Right Angle without Flanges

| Contact Quantity | A | B | C |
|------------------|------------------|------------------|------------------|
| 20 | 17.83 [0.702] | 15.83 [0.623] | 11.43 [0.450] |
| 26 | 21.64 [0.852] | 19.64 [0.773] | 15.24 [0.600] |
| 30 | 24.18 [0.952] | 22.18 [0.873] | 17.78 [0.700] |
| 32 | 25.45 [1.002] | 23.45 [0.923] | 19.05 [0.750] |
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X-X' Cross Section



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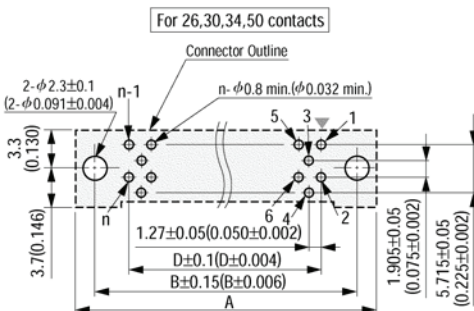
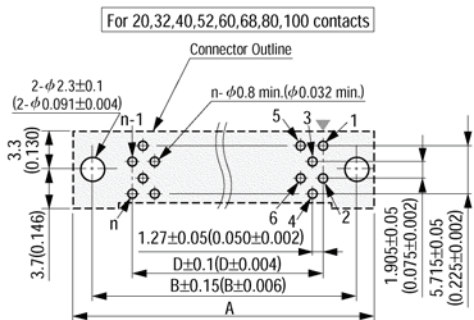
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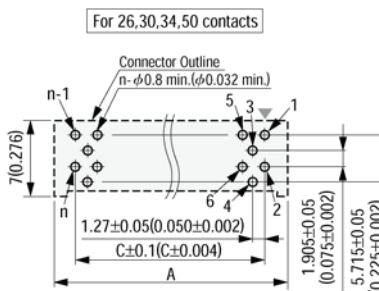
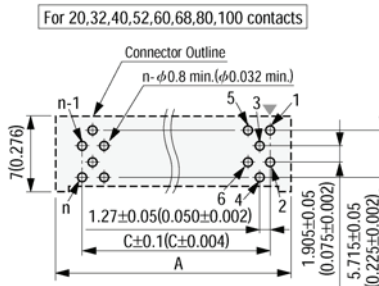
P50 Series

Printed Circuit Board Layout (Component Side View)

STRAIGHT WITH FLANGES (with and without Retention Clips)

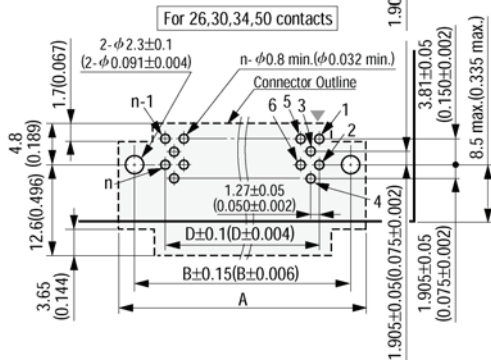
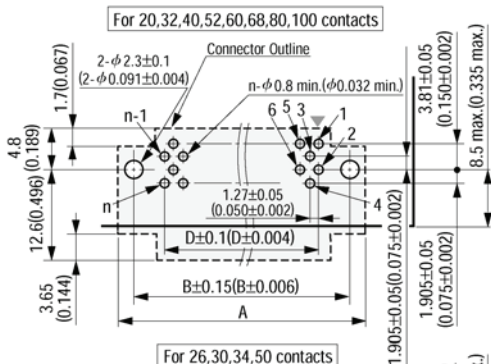


STRAIGHT WITHOUT FLANGES

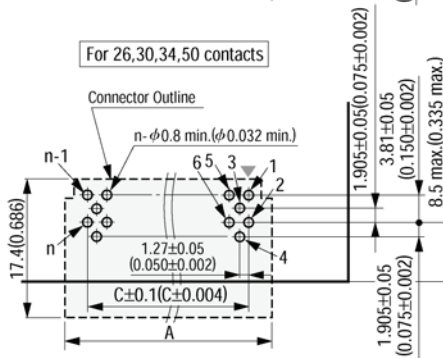
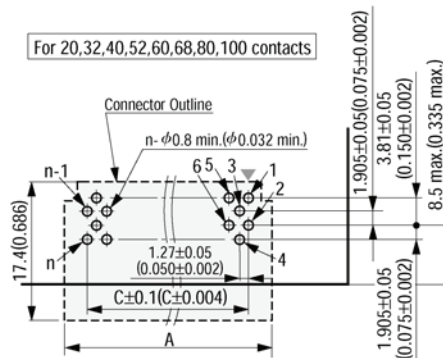


▼=Polarity identification
Recommended PCB Thickness $t = 1.6 \pm 0.19 (0.063 \pm 0.007)$
"n" is number of contacts.

RIGHT ANGLE WITH FLANGES (with and without Retention Clips)



RIGHT ANGLE WITHOUT FLANGES



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