

3M™ Pak 50 Socket

.050" Straight and Right Angle Socket, with Ret. Clips, Flng. Option

P50 Series



- Contact design features two contact points and straight beam construction for connector reliability and low insertion force
- Available 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 μ m] Gold

Solder Tails: Gold Flash

Retaining Clips: Tin-Copper

Mating Compatibility: TS-1144, TS-1162, TS-2046, TS-2048

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
Electronic Solutions Division
Interconnect Solutions
<http://www.3Mconnector.com>

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800-225-5373

3M™ Pak 50 Socket

.050" Straight and Right Angle Socket, with Ret. Clips, Flng. Option

P50 Series

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

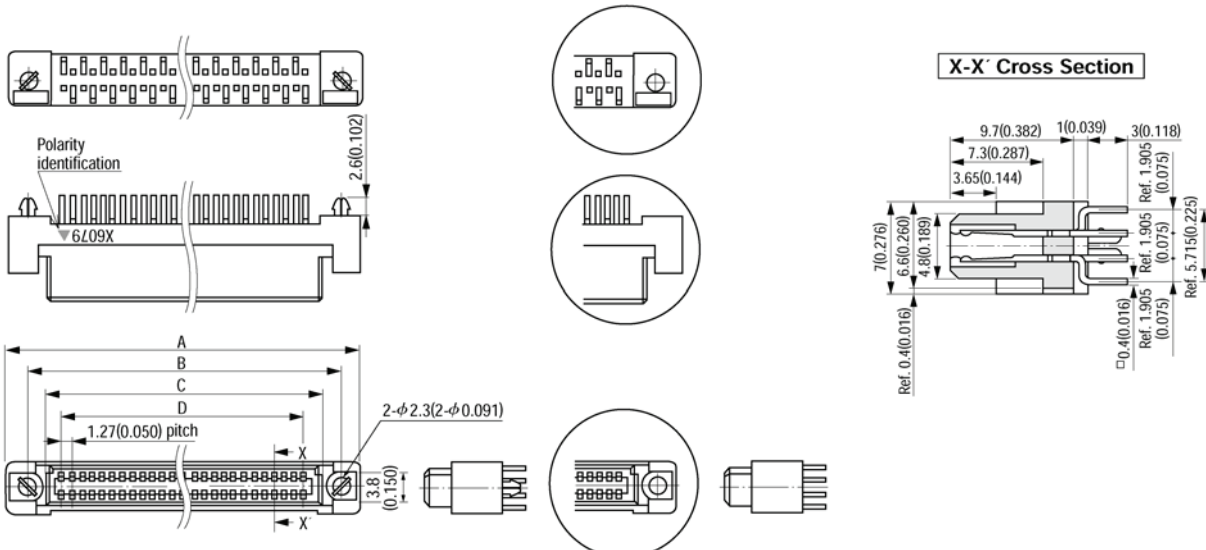


| Contact Quantity | A | B | C | D |
|------------------|------------------|------------------|------------------|------------------|
| 20 | 25.43 [1.001] | 20.32 [0.800] | 15.43 [0.608] | 11.43 [0.450] |
| 26 | 29.24 [1.151] | 24.13 [0.950] | 19.24 [0.758] | 15.24 [0.600] |
| 30 | 31.78 [1.251] | 26.67 [1.050] | 21.78 [0.858] | 17.78 [0.700] |
| 32 | 33.05 [1.301] | 27.94 [1.100] | 23.05 [0.908] | 19.05 [0.750] |
| 34 | 34.32 [1.351] | 29.21 [1.150] | 24.32 [0.958] | 20.32 [0.800] |
| 40 | 38.13 [1.501] | 33.02 [1.300] | 28.13 [1.108] | 24.13 [0.950] |

| Contact Quantity | A | B | C | D |
|------------------|------------------|------------------|------------------|------------------|
| 50 | 44.48 [1.751] | 39.37 [1.550] | 34.48 [1.358] | 30.48 [1.200] |
| 52 | 45.75 [1.801] | 40.64 [1.600] | 35.75 [1.408] | 31.75 [1.250] |
| 60 | 50.83 [2.001] | 45.72 [1.800] | 40.83 [1.608] | 36.83 [1.450] |
| 68 | 55.91 [2.201] | 50.80 [2.000] | 45.91 [1.808] | 41.91 [1.650] |
| 80 | 63.53 [2.501] | 58.42 [2.300] | 53.53 [2.108] | 49.53 [1.950] |
| 100 | 76.23 [3.001] | 71.12 [2.800] | 66.23 [2.608] | 62.23 [2.450] |

With Retention Clips

Without Retention Clips



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.

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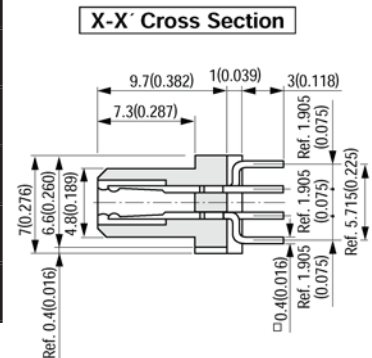
3M™ Pak 50 Socket

.050" Straight and Right Angle Socket, with Ret. Clips, Flng. Option

P50 Series

Product Table / Dimensions for Straight Plug without Flanges

| Contact Quantity | A | B | C | Contact Quantity | A | B | C |
|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| 20 | 17.83 [0.702] | 15.43 [0.608] | 11.43 [0.450] | 50 | 36.88 [1.452] | 34.48 [1.358] | 30.48 [1.200] |
| 26 | 21.64 [0.852] | 19.24 [0.758] | 15.24 [0.600] | 52 | 38.15 [1.502] | 35.75 [1.408] | 31.75 [1.250] |
| 30 | 24.18 [0.952] | 21.78 [0.858] | 17.78 [0.700] | 60 | 43.23 [1.702] | 40.83 [1.608] | 36.83 [1.450] |
| 32 | 25.45 [1.002] | 23.05 [0.908] | 19.05 [0.750] | 68 | 48.31 [1.902] | 45.91 [1.808] | 41.91 [1.650] |
| 34 | 26.72 [1.052] | 24.32 [0.958] | 20.32 [0.800] | 80 | 55.93 [2.202] | 53.53 [2.108] | 49.53 [1.950] |
| 40 | 30.53 [1.202] | 28.13 [1.108] | 24.13 [0.950] | 100 | 68.63 [2.702] | 66.23 [2.608] | 62.23 [2.450] |

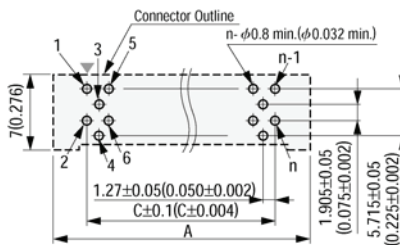


Printed Circuit Board Layout (Component Side View) Printed Circuit Board Layout (Component Side View)

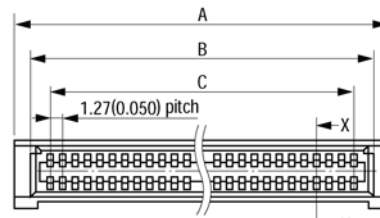
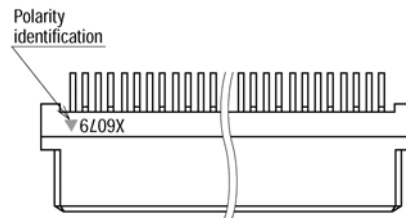
For 20,32,40,52,60,68,80,100 contacts



For 26,30,34,50 contacts



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



Ordering Information

P5X - XXXS - 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

*Note: R1 and RR1 do not apply to P51

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3M™ Pak 50 Socket

.050" Straight and Right Angle Socket, with Ret. Clips, Flng. Option

P50 Series

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

| Contact Quantity | A | B | C | D |
|------------------|------------------|------------------|------------------|------------------|
| 20 | 25.43 [1.001] | 20.32 [0.800] | 15.43 [0.608] | 11.43 [0.450] |
| 26 | 29.24 [1.151] | 24.13 [0.950] | 19.24 [0.758] | 15.24 [0.600] |
| 30 | 31.78 [1.251] | 26.67 [1.050] | 21.78 [0.858] | 17.78 [0.700] |
| 32 | 33.05 [1.301] | 27.94 [1.100] | 23.05 [0.908] | 19.05 [0.750] |
| 34 | 34.32 [1.351] | 29.21 [1.150] | 24.32 [0.958] | 20.32 [0.800] |
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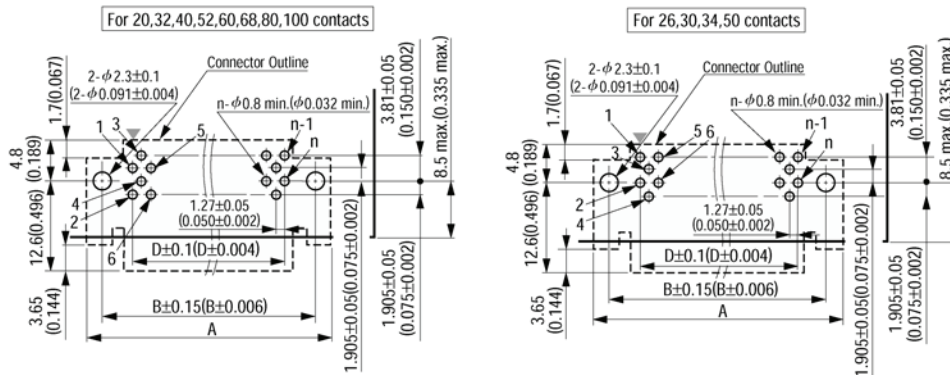
| Contact Quantity | A | B | C | D |
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With Retention Clips

Without Retention Clips



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.

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3M™ Pak 50 Socket

.050" Straight and Right Angle Socket, with Ret. Clips, Flng. Option

P50 Series

Product Table / Dimensions for Right Angle Plug without Flanges

| Contact Quantity | A | B | C |
|------------------|------------------|------------------|------------------|
| 20 | 17.83 [0.702] | 15.43 [0.608] | 11.43 [0.450] |
| 26 | 21.64 [0.852] | 19.24 [0.758] | 15.24 [0.600] |
| 30 | 24.18 [0.952] | 21.78 [0.858] | 17.78 [0.700] |
| 32 | 25.45 [1.002] | 23.05 [0.908] | 19.05 [0.750] |
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| 40 | 30.53 [1.202] | 28.13 [1.108] | 24.13 [0.950] |

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| 80 | 55.93 [2.202] | 53.53 [2.108] | 49.53 [1.950] |
| 100 | 68.63 [2.702] | 66.23 [2.608] | 62.23 [2.450] |



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.

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