

# 3M™ Pak 50 Plug

.050" Straight and Right Angle Plug, with Power Ground Pin

P50 Series



- Power/ground contacts enable separation of power and signals
- EMLB power/ground contacts control static discharge and allow "hot board" replacement
- 2 amp power/ground contact rating for high current applications maximizes signal contact utilization
- 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 and C1 apply)

Date Modified: February 18, 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  $\mu$ " [.25  $\mu$ m] Gold

Solder Tails: Gold Flash

Retainer Clips: Tin-Copper

Mating Compatibility: TS-2052

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## Electrical

**Current Rating:** 0.5 A per Signal Contact, 2 A per Power Contact

**Insulation Resistance:**  $> 1 \times 10^9 \Omega$  at 500 V<sub>DC</sub>

**Withstanding Voltage:** 650 V<sub>AC</sub> for 1 minute

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## Environmental

**Temperature Rating:** -55°C to +85°C

**Process Rating:** 260°C Wave Solder Compatible

UL File No.: E68080

# 3M™ Pak 50 Plug

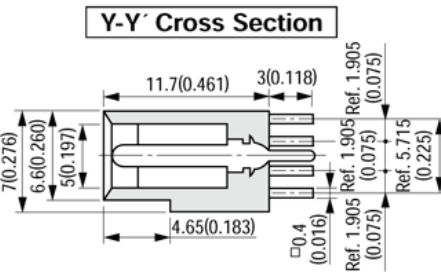
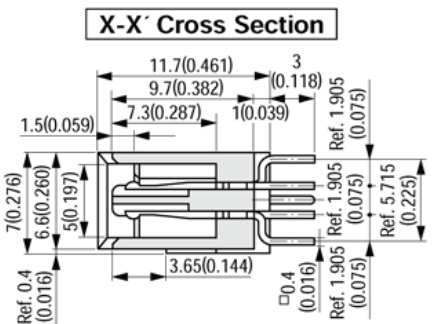
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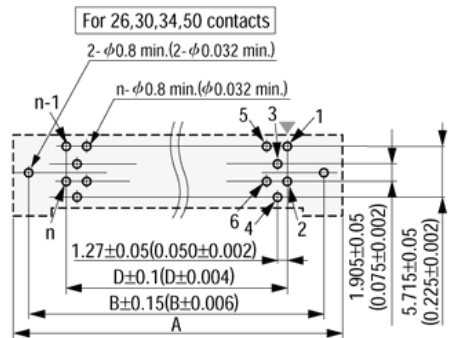
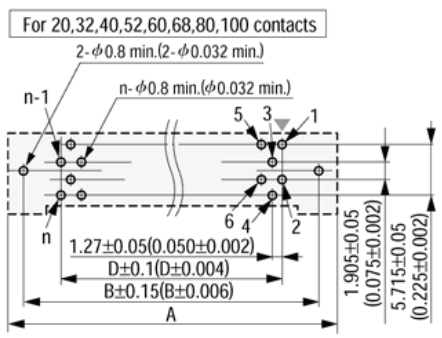
## Product Table / Dimensions for Straight and Right Angle Plugs

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

| Contact Quantity | A                | B                | C                | D                |
|------------------|------------------|------------------|------------------|------------------|
| 50               | 44.48<br>[1.751] | 39.37<br>[1.550] | 34.88<br>[1.373] | 30.48<br>[1.200] |
| 52               | 45.75<br>[1.801] | 40.64<br>[1.593] | 36.15<br>[1.423] | 31.75<br>[1.250] |
| 60               | 50.83<br>[2.001] | 45.72<br>[1.800] | 41.23<br>[1.623] | 36.83<br>[1.450] |
| 68               | 55.91<br>[2.201] | 50.8<br>[2.000]  | 46.31<br>[1.823] | 41.91<br>[1.650] |
| 80               | 63.53<br>[2.501] | 58.42<br>[2.300] | 53.93<br>[2.123] | 49.53<br>[1.950] |
| 100              | 76.23<br>[3.001] | 71.12<br>[2.800] | 66.63<br>[2.623] | 62.23<br>[2.450] |



## 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.

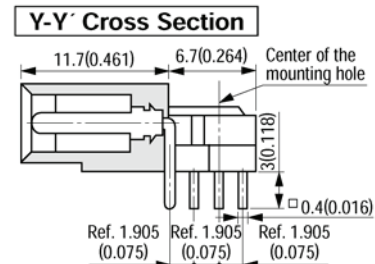
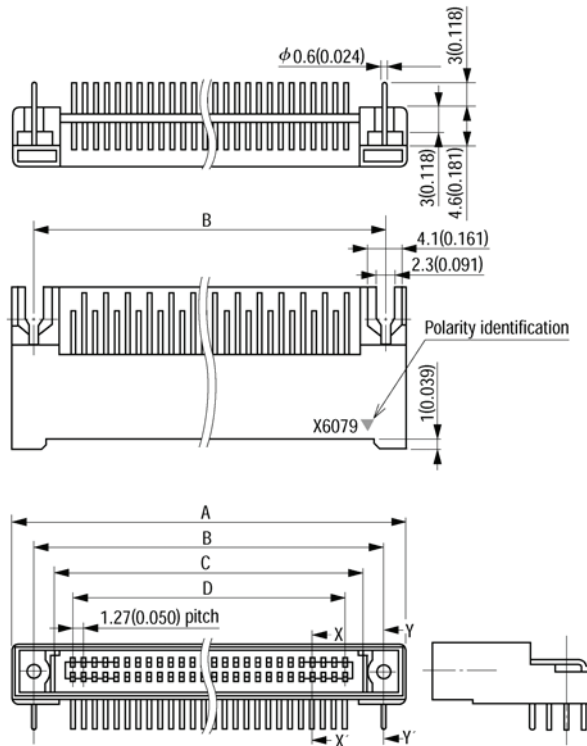
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# 3M™ Pak 50 Plug

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## Right Angle



## 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 - XXXPG - XXX - EA** (RIA E1 and C1 apply)

Contact Quantity:  
See Table

Solder Tail Options:  
S1 = Straight  
SR1 = Right Angle

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