

# 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

TS-2051-C  
Sheet 1 of 3

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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" [.25 μm] 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

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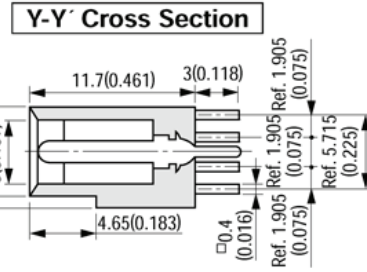
## Product Table / Dimensions for Straight and Right Angle Plugs

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]

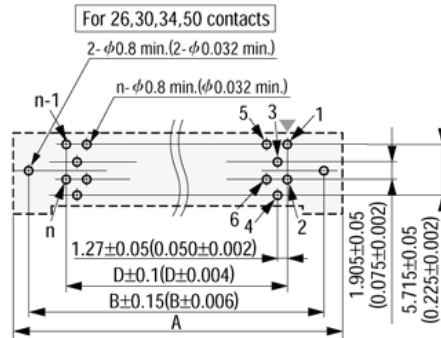
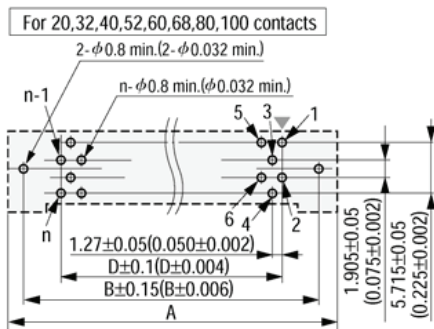
Contact Quantity	A	B	C	D
50	44.48 [1.751]	39.37 [1.550]	34.88 [1.373]	30.48 [1.200]
52	45.75 [1.801]	40.64 [1.593]	36.15 [1.423]	31.75 [1.250]
60	50.83 [2.001]	45.72 [1.800]	41.23 [1.623]	36.83 [1.450]
68	55.91 [2.201]	50.8 [2.000]	46.31 [1.823]	41.91 [1.650]
80	63.53 [2.501]	58.42 [2.300]	53.93 [2.123]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



Straight



## 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.

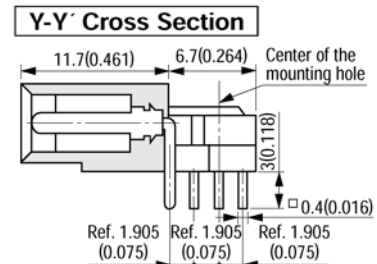
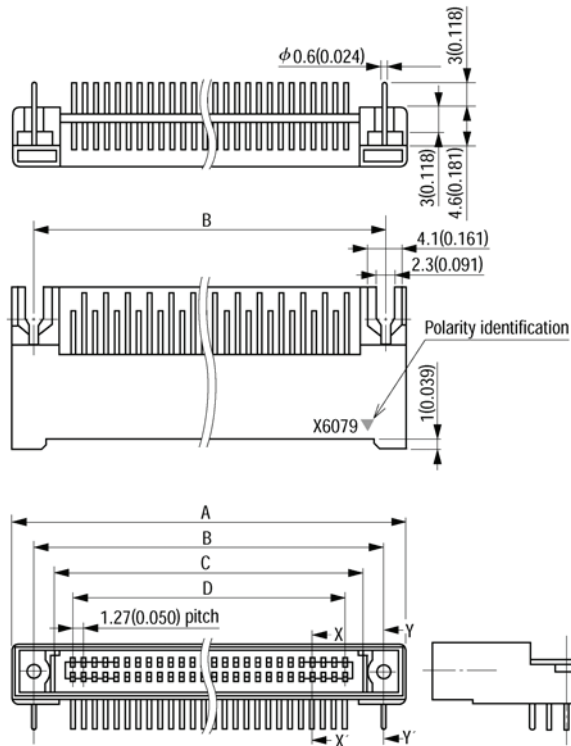
TS-2051-C  
 Sheet 2 of 3

# 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

TS-2051-C  
Sheet 3 of 3

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**3M Electronics Solutions Division**

6801 River Place Blvd.  
Austin, TX 78726-9000  
U.S.A.  
1-800-225-5373  
[www.3Mconnector.com](http://www.3Mconnector.com)

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### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

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