

# 3M™ Pak 10 Boardmount Plug

1 mm Right Angle, Through-Hole

PK10M Series



- 1 mm pitch connector system
- Four mating heights available
- Available power contacts rated at 5A
- Available frame ground connection through surfacemount retention clips
- Keyed design helps prevent mating misalignment
- RoHS compliant\* version (DA plating suffix) available

Date Modified: January 2007

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## Physical

### Insulation

Material: Glass Filled LCP  
Flammability: UL 94V-0  
Color: Black

### Materials

Signal Contact: Copper Alloy  
Power Contact: Copper Alloy  
Retention Clips: Copper Alloy

### Contact Plating

Underplating: 120  $\mu$ " [ 3.0  $\mu$ m ] Nickel  
Wipin Area: 4  $\mu$ " [ 0.10  $\mu$ m ] min. Gold  
Solder Tails: Tin Alloy or Gold Flash (RoHS compliant)

Retention Clip Plating: Tin Copper over 120  $\mu$ " [ 3.0  $\mu$ m ] Nickel

Marking: Polarity Identification Triangle, Lot Number, Standoff Indicator Code

## Electrical

**Current Rating:** 0.5 A per Signal Contact, 5 A Power Contact

**Insulation Resistance:**  $1 \times 10^3$  M $\Omega$  min at 250 V<sub>DC</sub>

**Withstanding Voltage:** 300 V<sub>AC</sub> for 1 minute

## Environmental

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

**Process Rating:** Maximum 260°C

"RoHS compliant" means that the product or part does not contain any of the following substances in excess of the following maximum concentration values in any homogeneous material, unless the substance is in an application that is exempt under RoHS: (a) 0.1% (by weight) for lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers; or (b) 0.01% (by weight) for cadmium. Unless otherwise stated by 3M in writing, this information represents 3M's knowledge and belief based upon information provided by third party suppliers to 3M.

# 3M™ Pak 10 Boardmount Plug

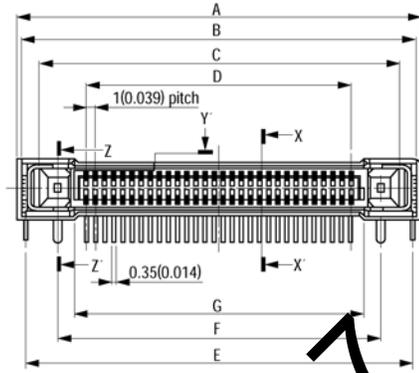
1 mm Right Angle, Through-Hole

PK10M Series

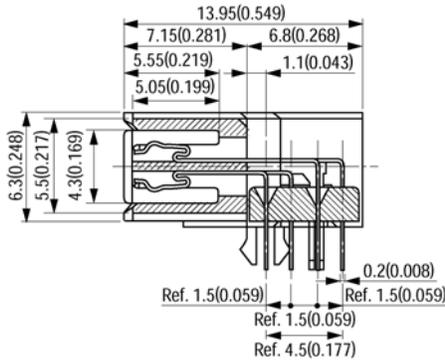
Plug with Power Contacts and without Standoff

Product Table / Dimensions

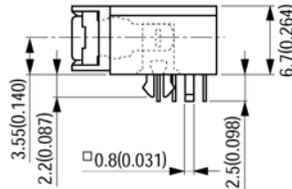
Contact Quantity	A	B	C	D	E	F	G
40	34.30	33.20	29.80	19.00	32.36	25.40	21.80
	[1.350]	[1.307]	[1.173]	[0.748]	[1.274]	[1.000]	[0.858]
50	39.30	38.20	34.80	24.00	37.36	30.40	26.80
	[1.547]	[1.504]	[1.370]	[0.945]	[1.471]	[1.197]	[1.055]
60	44.30	43.20	39.80	29.00	42.36	35.40	31.80
	[1.744]	[1.701]	[1.567]	[1.142]	[1.668]	[1.394]	[1.252]
80	54.30	53.20	49.80	39.00	52.36	45.40	41.80
	[2.138]	[2.094]	[1.961]	[1.535]	[2.061]	[1.787]	[1.646]



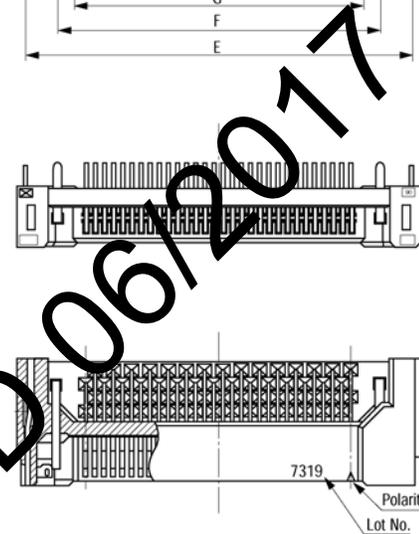
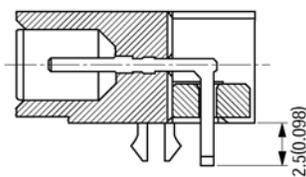
X-X' Cross Section



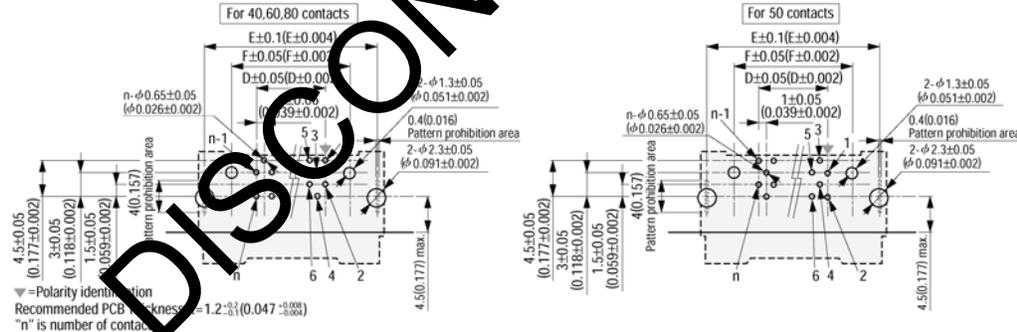
Y-Y' Cross Section



Z-Z' Cross Section



Printed Circuit Board Layout (Component Side View)



## Ordering Information

PK10M - XXXPX - THX - XX

Contact Quantity  
See Table

P = With Power Contacts  
Omit = Without Power Contacts

Standoff Height:

- R = Without Standoff
- 1 = Standoff Height 1 mm [ 0.039" ]
- 2 = Standoff Height 2 mm [ 0.079" ]
- 3 = Standoff Height 3 mm [ 0.118" ]
- 4 = Standoff Height 4 mm [ 0.157" ]

Plating Suffix:

- TGF = Gold flash with tin-lead tails
- DA = Gold flash overall (RoHS compliant)

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3M

Interconnect Solutions

<http://www.3M.com/interconnects/>

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For technical, sales or ordering information call

800-225-5373

# 3M™ Pak 10 Boardmount Plug

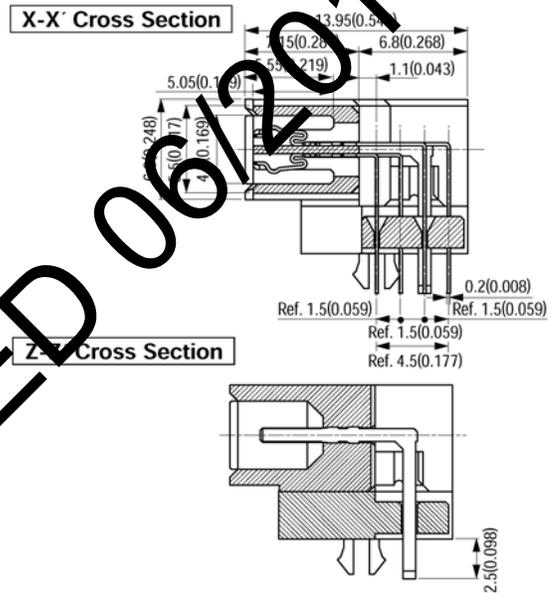
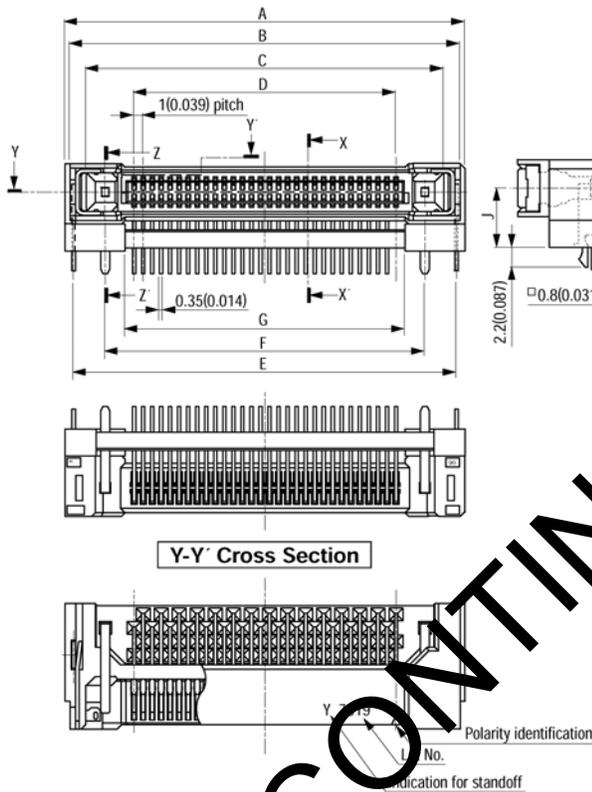
1 mm Right Angle, Through-Hole

PK10M Series

Plug with Power Contacts with Standoff  
Product Table / Dimensions

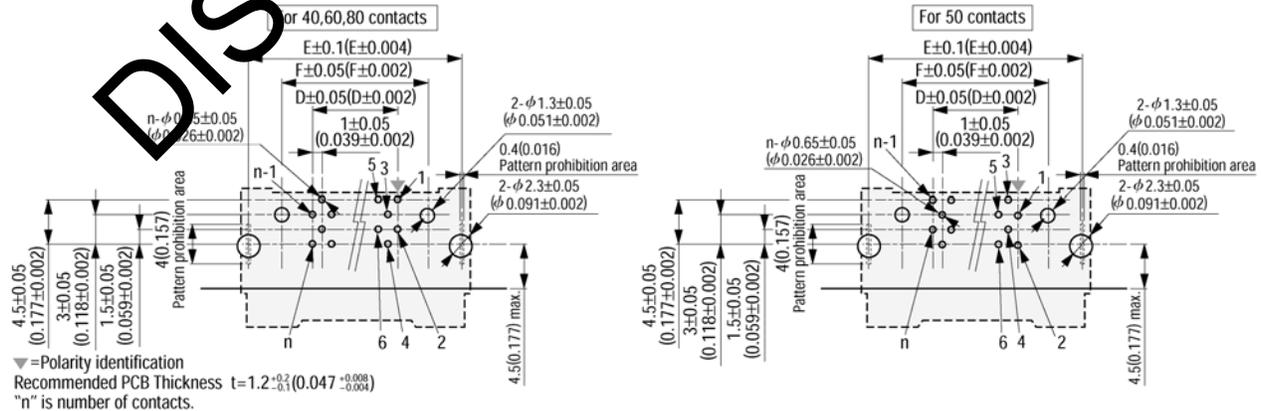
Contact Quantity	A	B	C	D	E	F	G
40	34.30	33.20	29.80	19.00	32.36	25.40	21.00
	[1.350]	[1.307]	[1.173]	[0.748]	[1.274]	[1.000]	[0.827]
50	39.30	38.20	34.80	24.00	37.36	30.40	26.00
	[1.547]	[1.504]	[1.370]	[0.945]	[1.471]	[1.197]	[1.024]
60	44.30	43.20	39.80	29.00	42.36	35.40	31.00
	[1.744]	[1.701]	[1.567]	[1.142]	[1.668]	[1.394]	[1.220]
80	54.30	53.20	49.80	39.00	52.36	45.40	41.00
	[2.138]	[2.094]	[1.961]	[1.535]	[2.061]	[1.787]	[1.614]

Standoff Code	Connector Height	H	J
1	7.70	1.00	4.55
	[0.303]	[0.039]	[0.179]
2	8.70	2.00	5.55
	[0.343]	[0.079]	[0.219]
3	9.70	3.00	6.55
	[0.382]	[0.118]	[0.258]
4	10.70	4.00	7.55
	[0.421]	[0.157]	[0.297]



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



# 3M™ Pak 10 Boardmount Plug

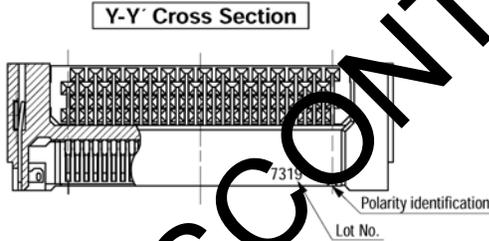
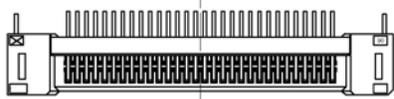
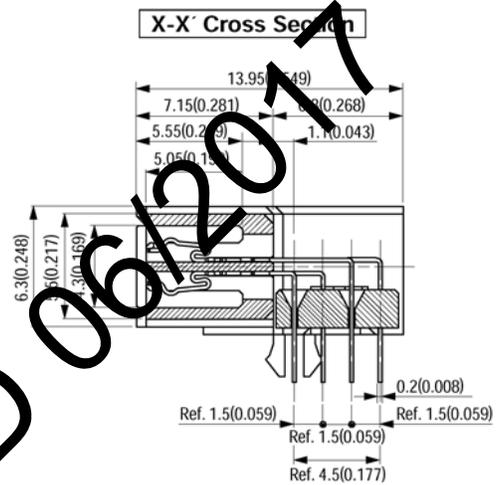
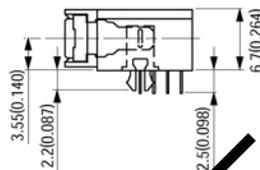
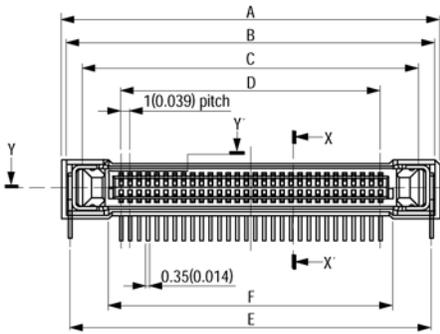
1 mm Right Angle, Through-Hole

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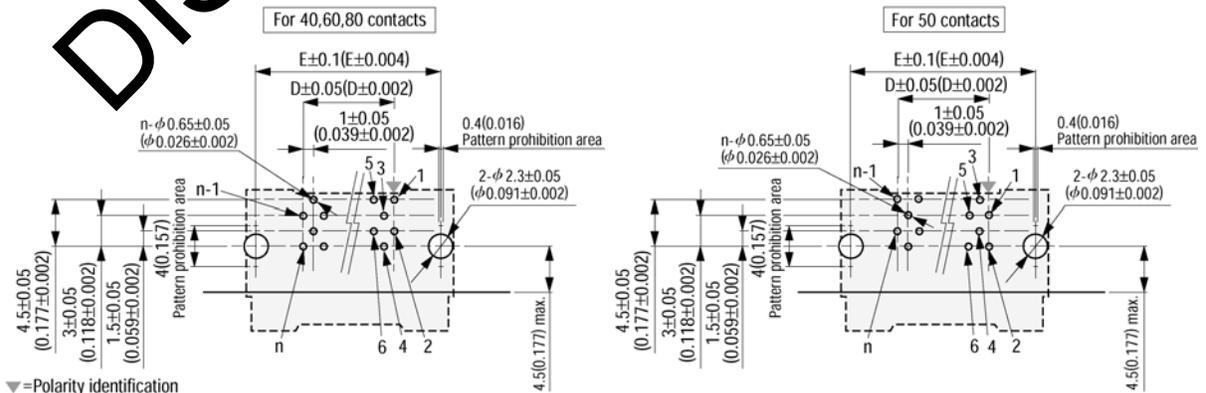
Plug without Power Contacts and Standoff

Product Table / Dimensions

Contact Quantity	A	B	C	D	E	F
40	32.30 [1.272]	31.20 [1.228]	27.80 [1.094]	19.00 [0.748]	30.36 [1.195]	21.80 [0.858]
50	37.30 [1.469]	36.20 [1.425]	32.80 [1.291]	24.00 [0.945]	35.36 [1.392]	26.80 [1.055]
60	42.30 [1.665]	41.20 [1.622]	37.80 [1.488]	29.00 [1.142]	40.36 [1.589]	31.80 [1.252]
80	52.30 [2.059]	51.20 [2.016]	47.80 [1.882]	39.00 [1.535]	50.36 [1.983]	41.80 [1.646]



Printed Circuit Board Layout (Component Side View)



▼ = Polarity identification  
 Recommended PCB Thickness  $t = 1.2 \pm 0.047 \pm 0.008$   
 "n" is number of contacts.

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# 3M™ Pak 10 Boardmount Plug

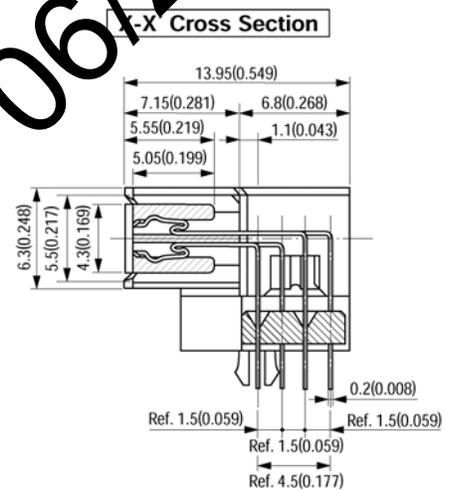
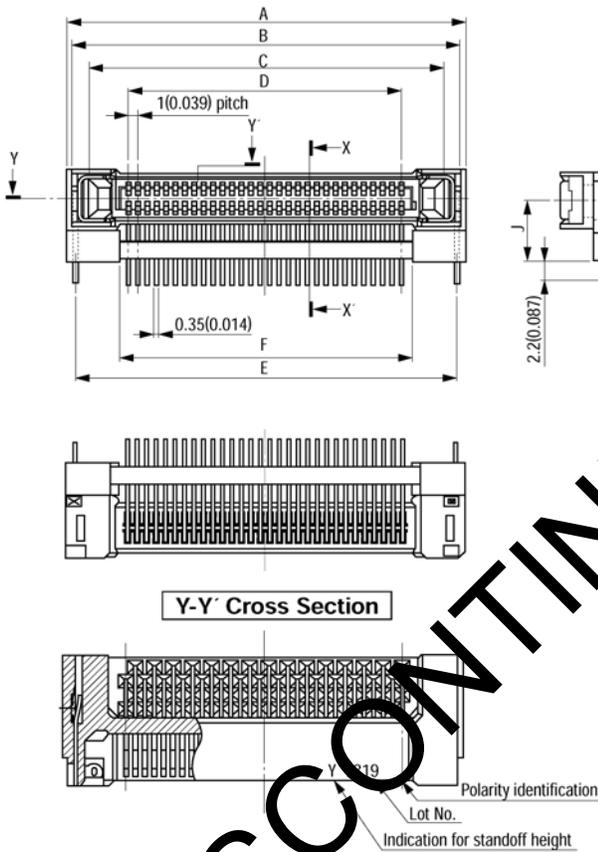
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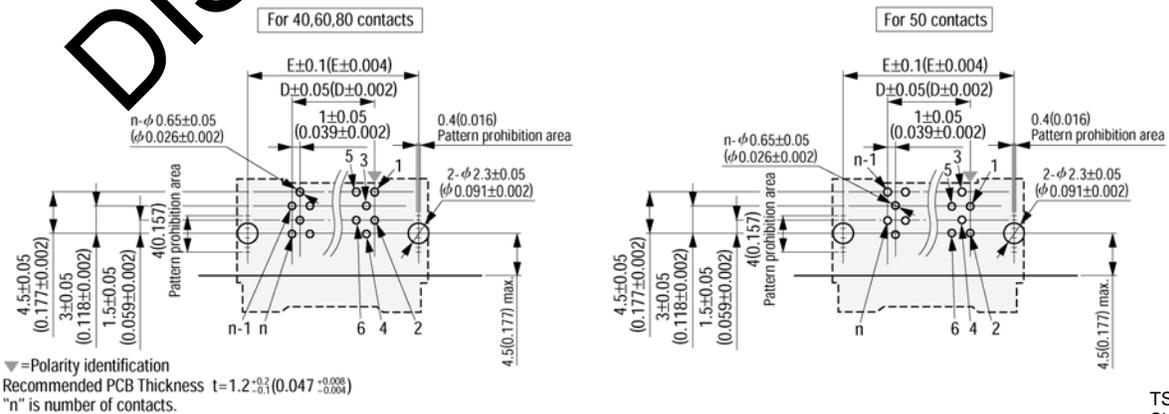
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## Printed Circuit Board Layout (Component Side View)



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6801 River Place Blvd.  
Austin, TX 78726-9000  
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