

3M™ Pak 50 Boardmount Plug

.050" Straight and Right Angle Maxi-Mate

P50 Series



- High density connectors with up to 200 contacts
- Horizontal, parallel and vertical mating availability
- Insulator designed to prevent mating misalignment
- RoHS* compliant

Date Modified: December 11, 2006

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Physical

Insulation

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

Electrical

Current Rating: 0.5 A
Insulation Resistance: 10³ Ω at 500 V_{DC}
Withstanding Voltage: 650 V_{AC} for 1 minute

Environmental

Temperature Rating: -55°C to +85°C
Process Rating: 260°C (per J-STD-020C)

**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 in writing by 3M, this information represents 3M's knowledge and belief based on information provided by third party suppliers to 3M.

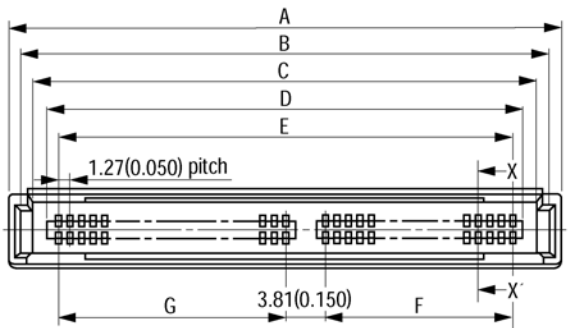
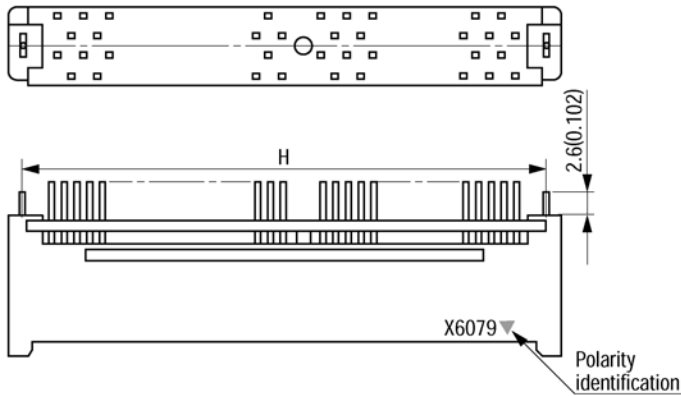
UL File No.: E68080

3M™ Pak 50 Boardmount Plug

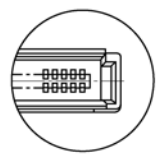
.050" Straight and Right Angle Maxi-Mate

P50 Series

Straight without Flanges and with Retention Clips

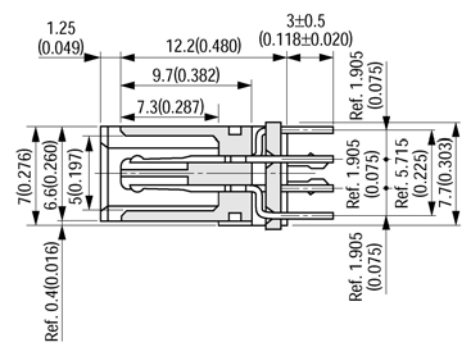


For 160, 180, 200 contacts

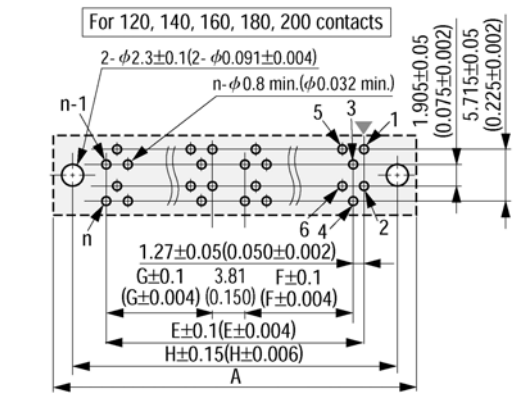


For 120, 140 contacts

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.

Ordering Information

P50 - XXXP - XXX - EA

Contact Quantity
See Table

Solder Tail, Flange and Clip Options:
 S1 = Straight, with Flanges, without Retention Clips
 SR1 = Right Angle, with Flanges, without Retention Clips
 R1 = Straight, without Flanges, with Retention Clips
 RR1 = Right Angle, without Flanges, with Retention Clips

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.050" Straight and Right Angle Maxi-Mate

P50 Series

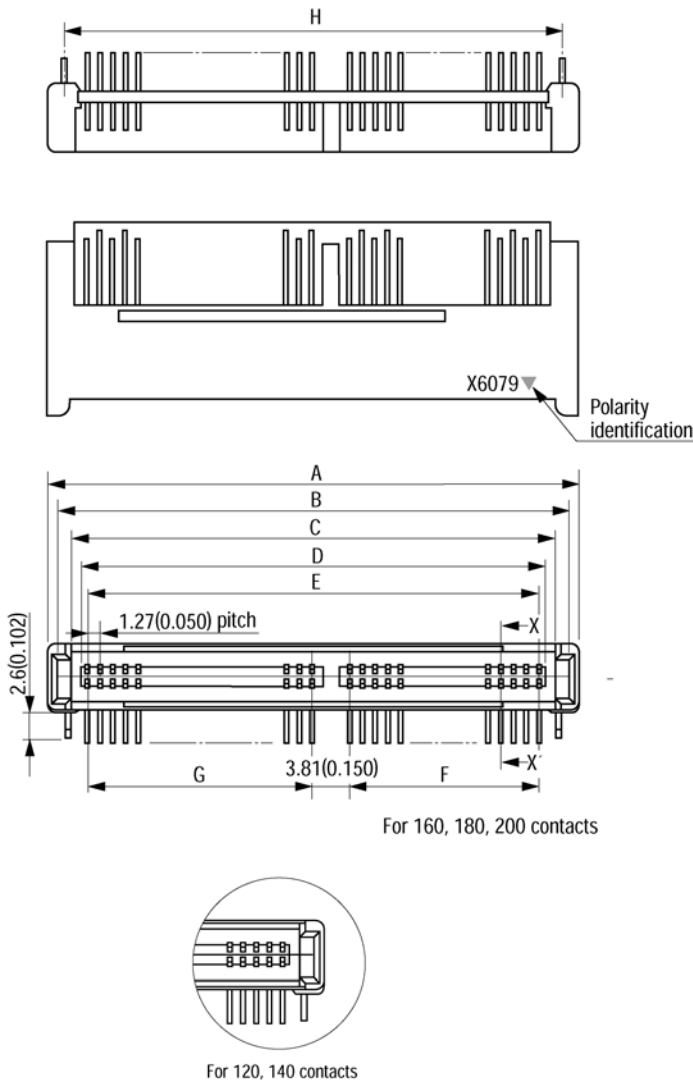
Product Table / Dimensions for Straight and Right Angle without Flanges and with Retention Clips

Contact Quantity	A	B	C	D	E	F	G	H
120	86.50	84.50	81.87	79.17	77.47	24.13	49.53	83.82
	[3.406]	[3.327]	[3.223]	[3.117]	[3.050]	[0.950]	[1.950]	[3.300]
140	99.20	97.20	94.57	91.87	90.17	24.13	62.23	96.52
	[3.906]	[3.827]	[3.723]	[3.617]	[3.550]	[0.950]	[2.450]	[3.800]
160	111.90	109.90	107.27	104.57	102.87	36.83	62.23	109.22
	[4.406]	[4.327]	[4.223]	[4.117]	[4.050]	[1.450]	[2.450]	[4.300]
180	124.60	122.60	119.97	117.27	115.57	49.53	62.23	121.92
	[4.906]	[4.827]	[4.723]	[4.617]	[4.550]	[1.950]	[2.450]	[4.800]
200	137.30	135.30	132.67	129.97	128.27	62.23	62.23	134.62
	[5.406]	[5.327]	[5.223]	[5.117]	[5.050]	[2.450]	[2.450]	[5.300]

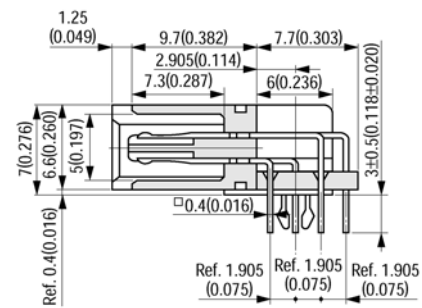
side and 40 pins on the other. All other pin counts have 100 pins on one side and the balance on the other side.



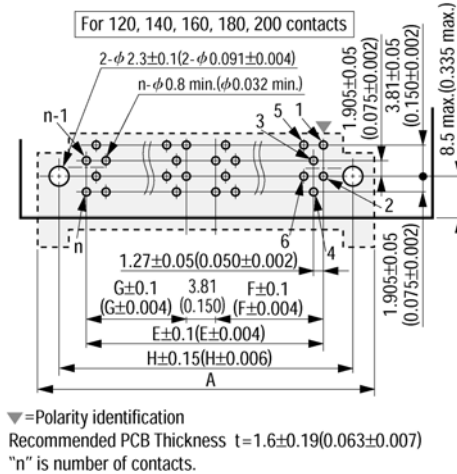
Right Angle without Flanges and with Retention Clips



X-X' Cross Section



Printed Circuit Board Layout (Component Side View)



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3M™ Pak 50 Boardmount Plug

.050" Straight and Right Angle Maxi-Mate

P50 Series

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

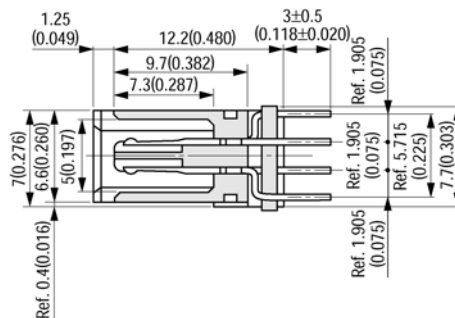
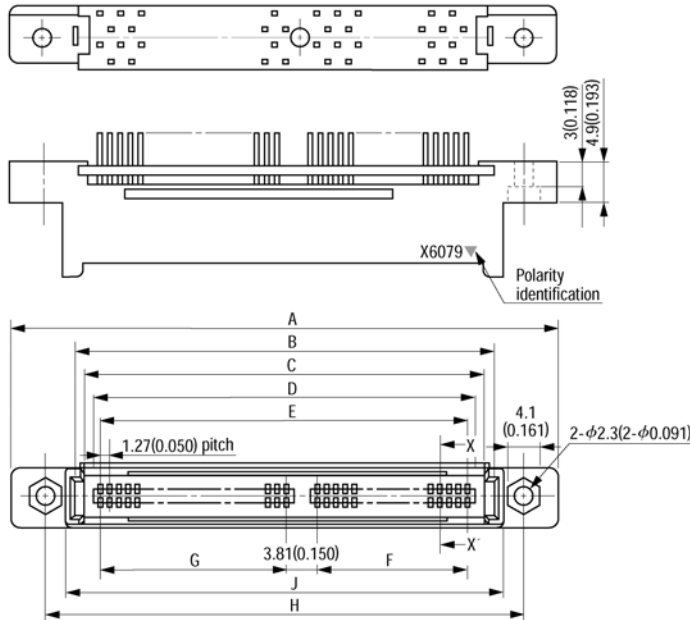
Contact Quantity	A	B	C	D	E	F	G	H	J
120	99.20	84.50	81.87	79.17	77.47	24.13	49.53	91.44	86.50
	[3.906]	[3.327]	[3.223]	[3.117]	[3.050]	[0.950]	[1.950]	[3.600]	[3.406]
140	111.90	97.20	94.57	91.87	90.17	24.13	62.23	104.14	99.20
	[4.406]	[3.827]	[3.723]	[3.617]	[3.550]	[0.950]	[2.450]	[4.100]	[3.906]
160	124.60	109.90	107.27	104.57	102.87	36.83	62.23	116.84	111.90
	[4.906]	[4.327]	[4.223]	[4.117]	[4.050]	[1.450]	[2.450]	[4.600]	[4.406]
180	137.30	122.60	119.97	117.27	115.57	49.53	62.23	129.54	124.60
	[5.406]	[4.827]	[4.723]	[4.617]	[4.550]	[1.950]	[2.450]	[5.100]	[4.906]
200	150.00	135.30	132.67	129.97	128.27	62.23	62.23	142.24	137.30
	[5.906]	[5.327]	[5.223]	[5.117]	[5.050]	[2.450]	[2.450]	[5.600]	[5.406]

Note:

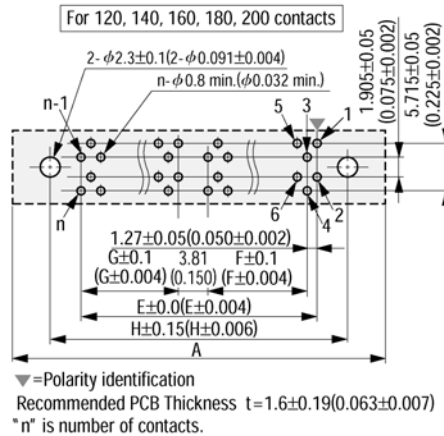
These connectors do not have a symmetrical board layout pattern. The 120 pin connectors have 80 pins on one side and 40 pins on the other. All other pin counts have 100 pins on one side and the balance on the other side.

X-X' Cross Section

Straight with Flanges and without Retention Clips



Printed Circuit Board Layout (Component Side View)



▼=Polarity identification
Recommended PCB Thickness t=1.6±0.19(0.063±0.007)

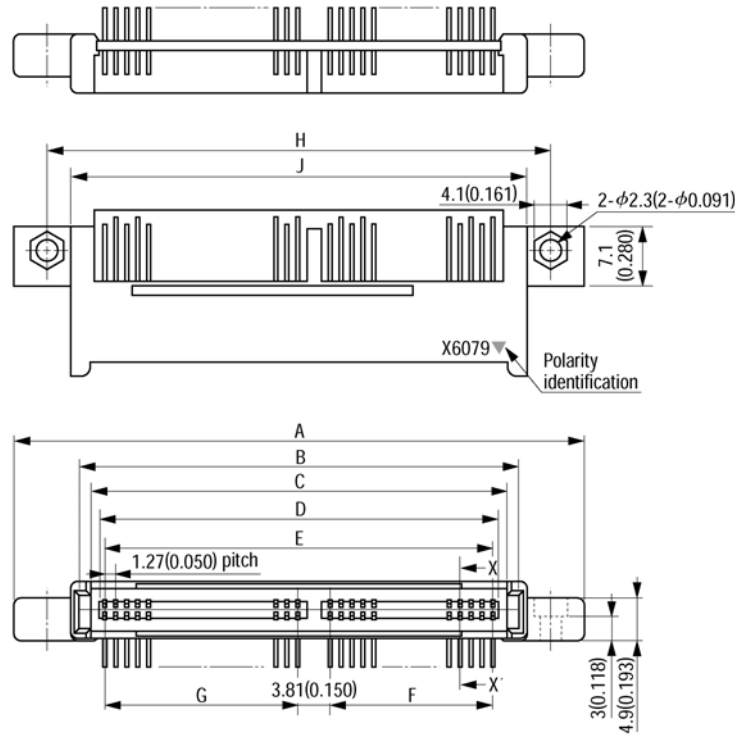
X-X' Cross Section Straight

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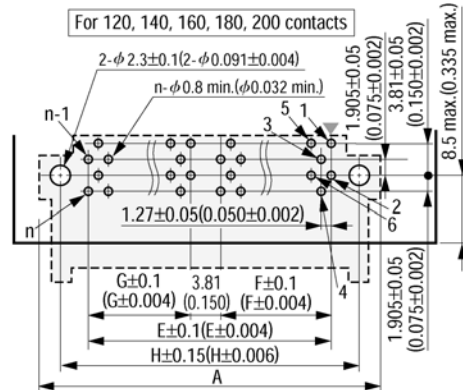
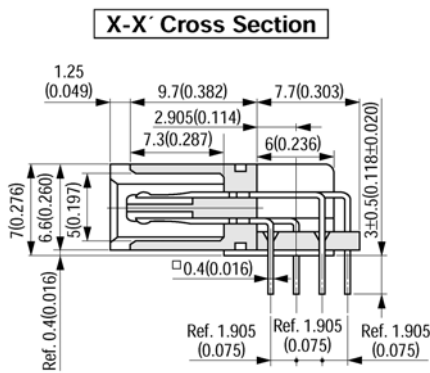
.050" Straight and Right Angle Maxi-Mate

P50 Series

Right Angle with Flanges and 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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6801 River Place Blvd.
Austin, TX 78726-9000
800/225-5373
www.3M.com/electronics

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