

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

Date Modified: March 10, 2003

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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: See Ordering Information
Solder Tails: Tin Alloy over Nickel

Electrical

Current Rating: 0.5 A
Insulation Resistance: 10^3 M Ω min. at 500 VDC
Withstanding Voltage: 650 VAC for 1 minute

Environmental

Temperature Rating: -55°C to +85°C

UL File No.: E68080

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

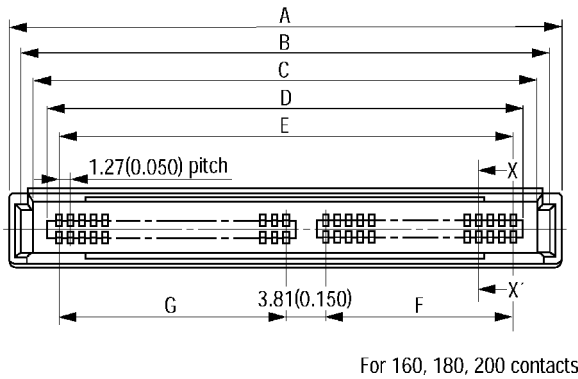
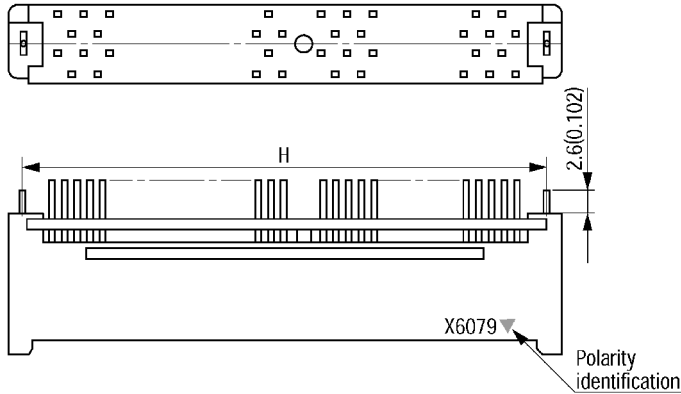
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3M™ Pak 50 Boardmount Plug

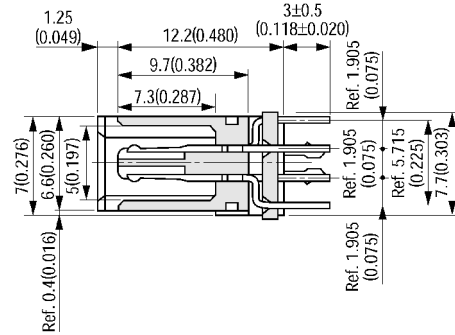
.050" Straight and Right Angle Maxi-Mate

P50 Series

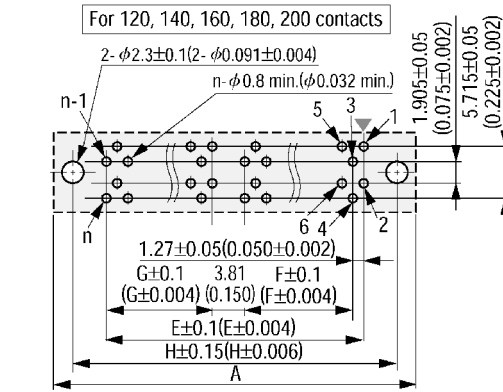
Straight without Flanges and with Retention Clips



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 - XXXX

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

Plating Options:
 TGF = 2 μ" [0.05 μm] min. Gold
 TG = 10 μ" [0.25 μm] min. Gold
 TG30 = 30 μ" [0.75 μm] min. Gold

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.050" Straight and Right Angle Maxi-Mate

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

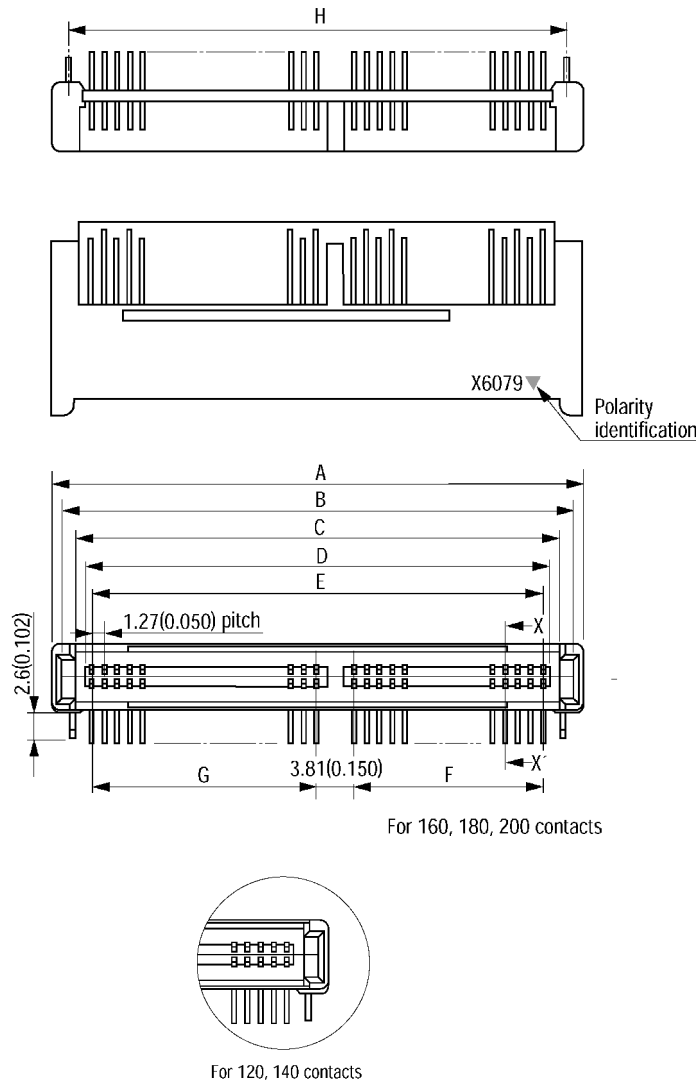
Contact Quantity	A	B	C	D	E	F	G	H
120	86.50	84.50	81.87	79.17	77.47	24.13	49.53	83.82
	[3.406]	[3.327]	[3.223]	[3.117]	[3.050]	[0.950]	[1.950]	[3.300]
140	99.20	97.20	94.57	91.87	90.17	24.13	62.23	96.52
	[3.906]	[3.827]	[3.723]	[3.617]	[3.550]	[0.950]	[2.450]	[3.800]
160	111.90	109.90	107.27	104.57	102.87	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]



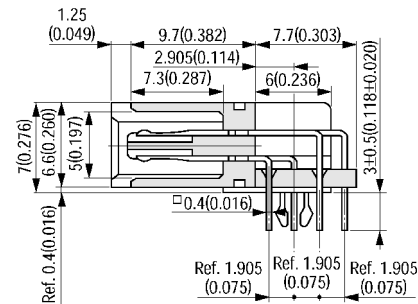
Note:

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.

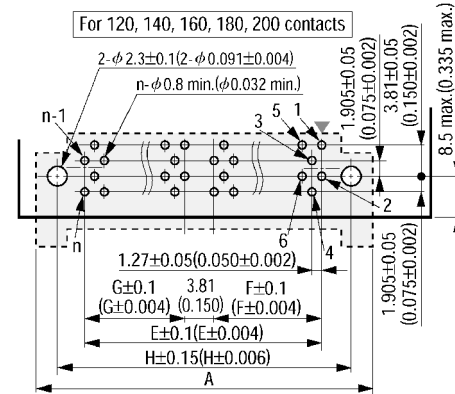
Right Angle without Flanges and with Retention Clips



X-X' Cross Section



Printed Circuit Board Layout (Component Side View)



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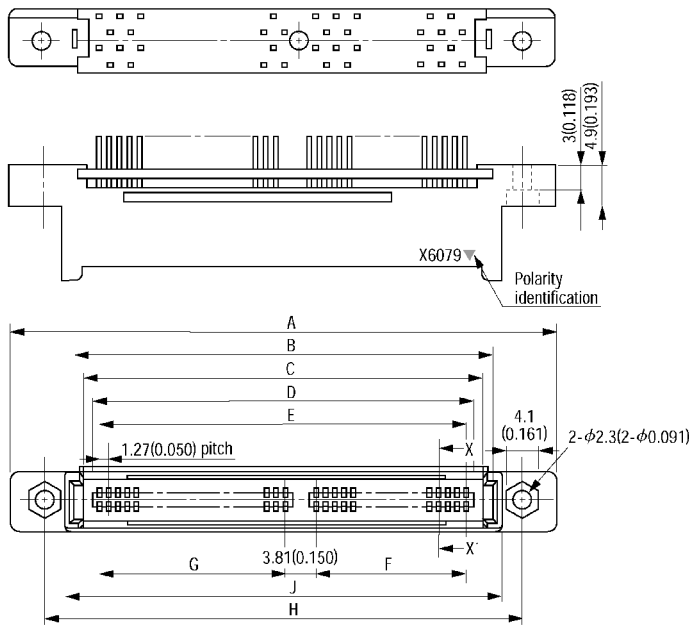
Product Table / Dimensions for Straight and Right Angle with Flanges and without Retention Clips

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]

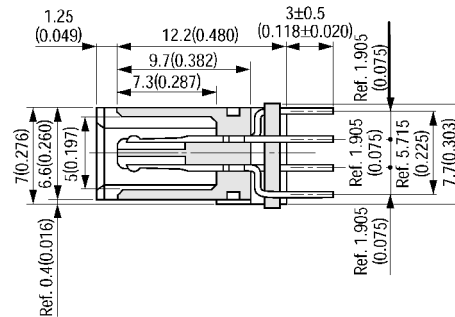
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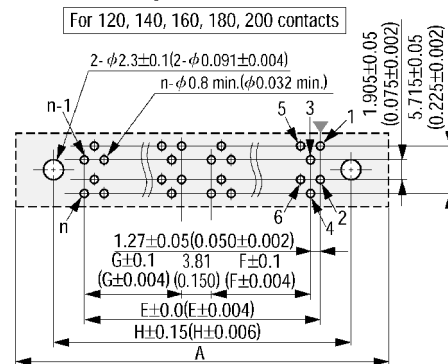
Straight with Flanges and without Retention Clips



X-X Cross Section



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.

X-X Cross Section Straight

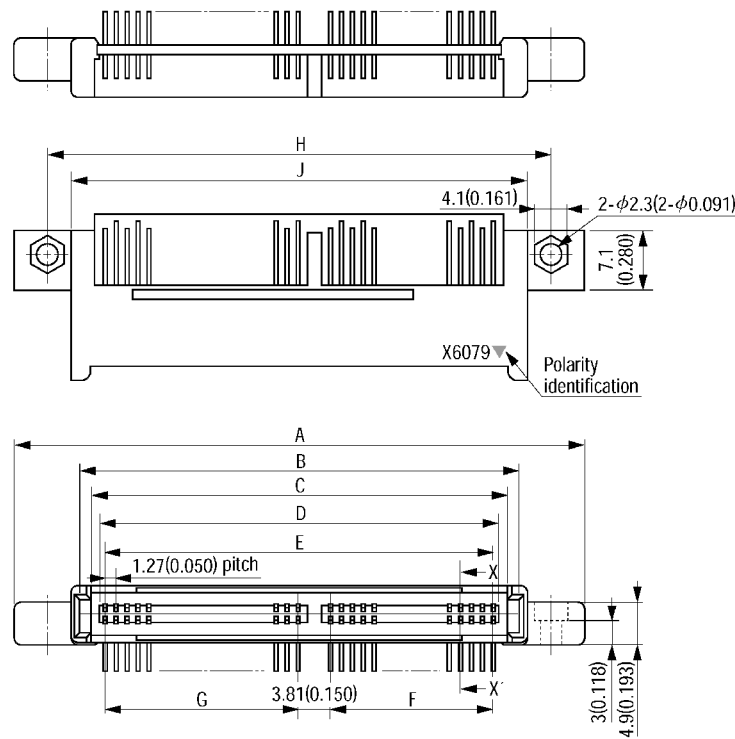
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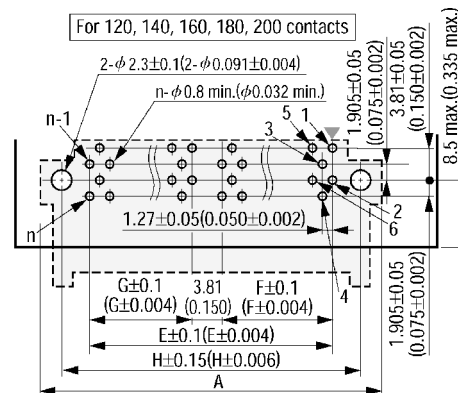
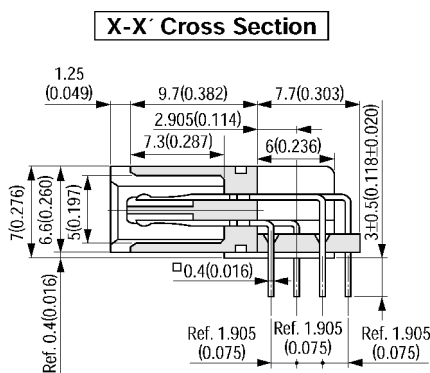
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P50 Series

Right Angle with Flanges and without Retention Clips



Printed Circuit Board Layout (Component Side View)



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6801 River Place Blvd.
Austin, TX 78726-9000
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