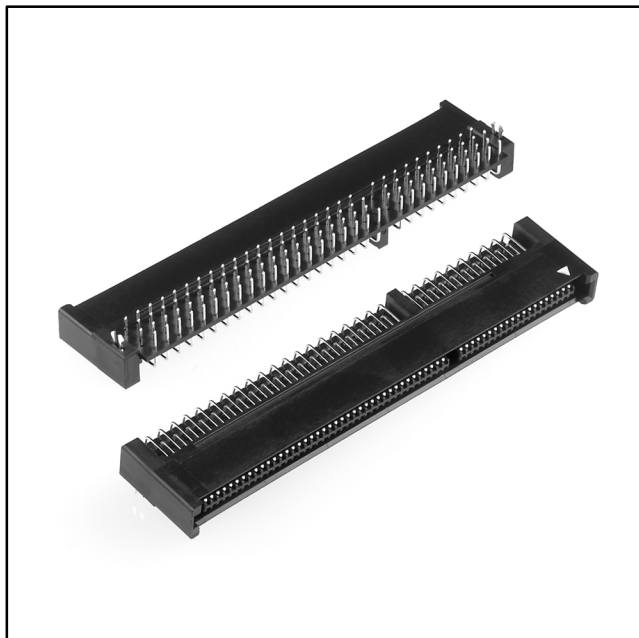


3M™ Pak 50 Boardmount Plug

.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

TS-2049-01
Sheet 1 of 5

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

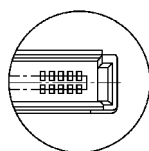
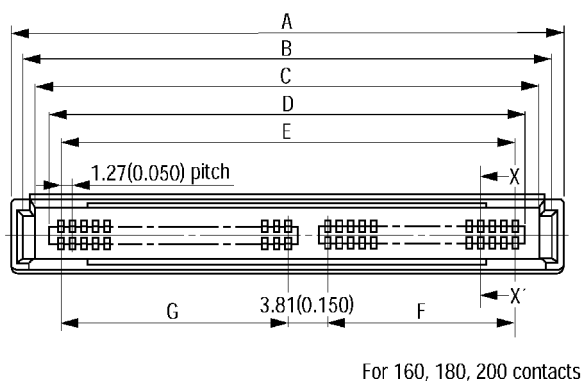
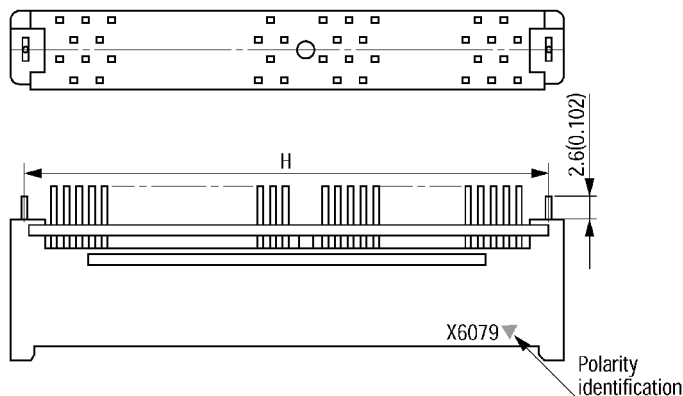
<http://www.3M.com/interconnects/>

3M is a trademark of 3M Company.
For technical, sales or ordering information call
800-225-5373

3M™ Pak 50 Boardmount Plug .050" Straight and Right Angle Maxi-Mate

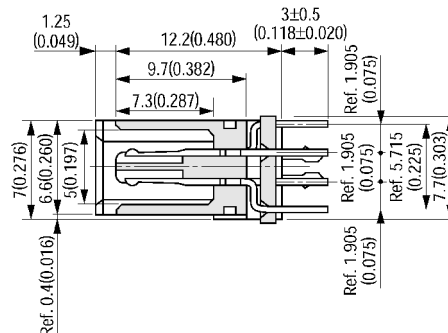
P50 Series

Straight without Flanges and with Retention Clips

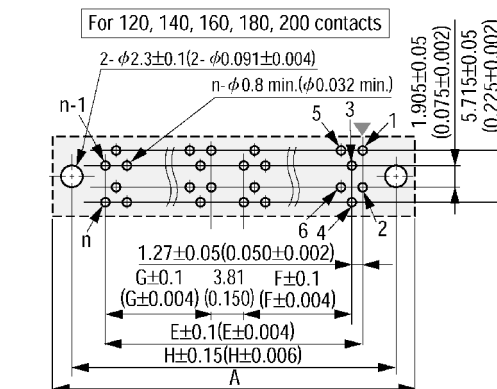


For 120, 140 contacts

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 - 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 = $2 \mu\text{m}$ [$0.05 \mu\text{m}$] min. Gold
TG = $10 \mu\text{m}$ [$0.25 \mu\text{m}$] min. Gold
TG30 = $30 \mu\text{m}$ [$0.75 \mu\text{m}$] min. Gold

TS-2049-01
Sheet 2 of 5

3M™ Pak 50 Boardmount Plug .050" Straight and Right Angle Maxi-Mate

P50 Series

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

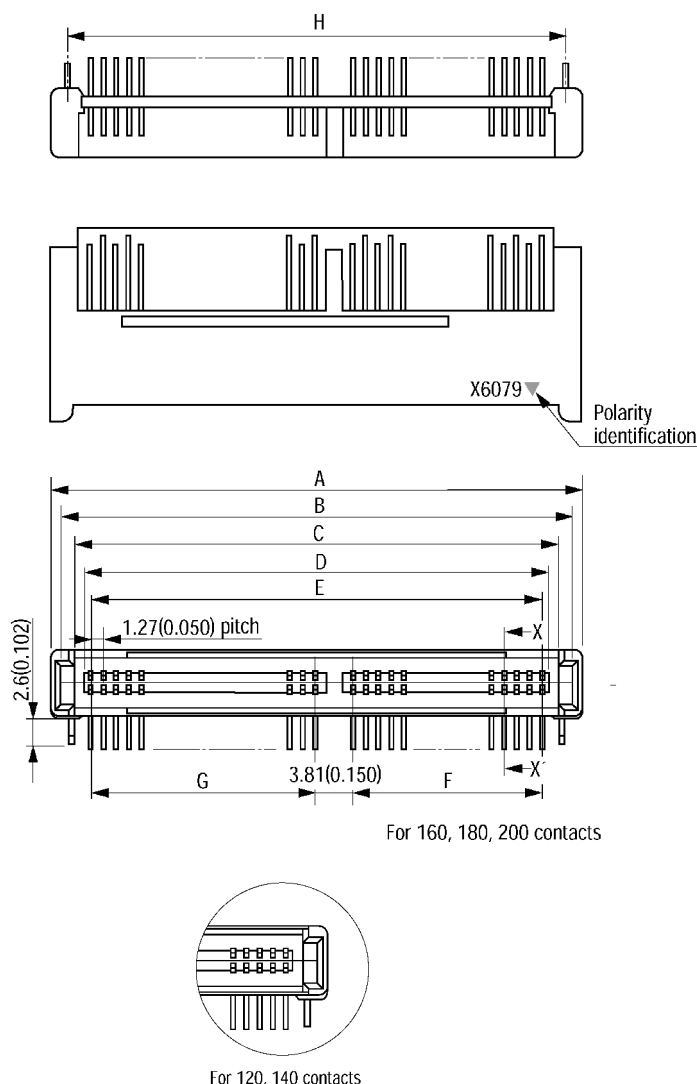
Contact Quantity	A	B	C	D	E	F	G	H
120	86.50	84.50	81.87	79.17	77.47	24.13	49.53	83.82
	[3.406]	[3.327]	[3.223]	[3.117]	[3.050]	[0.950]	[1.950]	[3.300]
140	99.20	97.20	94.57	91.87	90.17	24.13	62.23	96.52
	[3.906]	[3.827]	[3.723]	[3.617]	[3.550]	[0.950]	[2.450]	[3.800]
160	111.90	109.90	107.27	104.57	102.87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



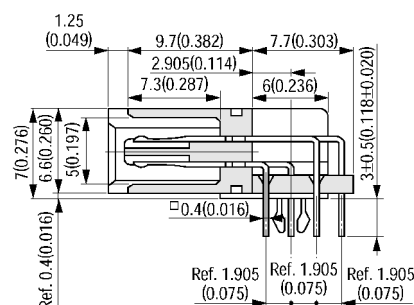
Note:

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.

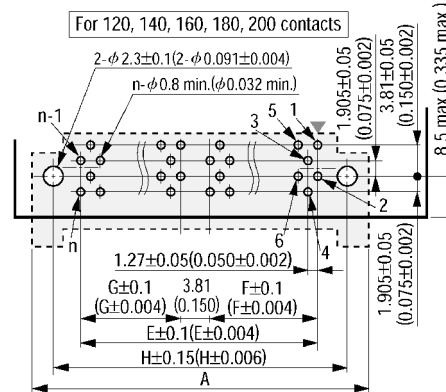
Right Angle without Flanges and with Retention Clips



X-X' Cross Section



Printed Circuit Board Layout (Component Side View)



▼=Polarity identification
Recommended PCB Thickness $t = 1.6 \pm 0.19 (0.063 \pm 0.007)$
"n" is number of contacts.

TS-2049-01
Sheet 3 of 5

3M™ Pak 50 Boardmount Plug

.050" Straight and Right Angle Maxi-Mate

P50 Series

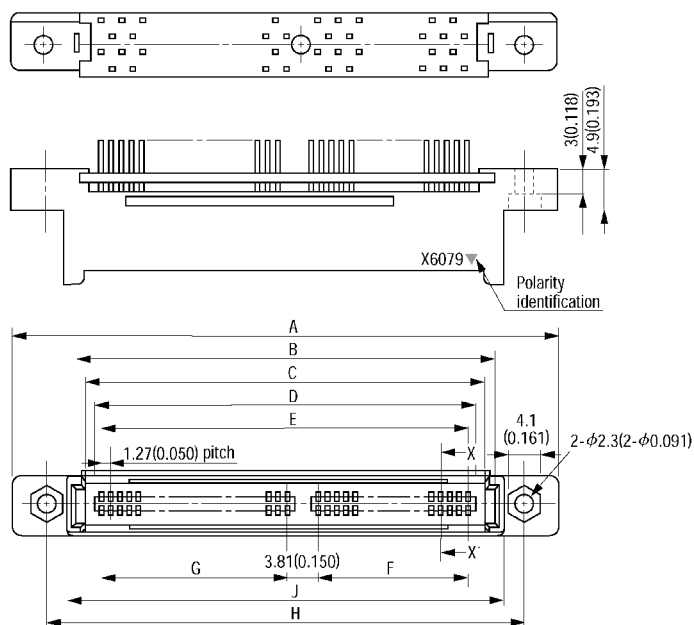
Product Table / Dimensions for Straight and Right Angle with Flanges and without Retention Clips

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]

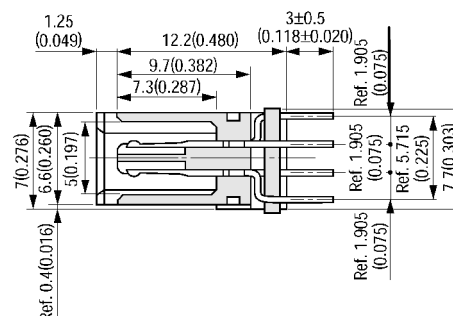
Note:

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.

Straight with Flanges and without Retention Clips

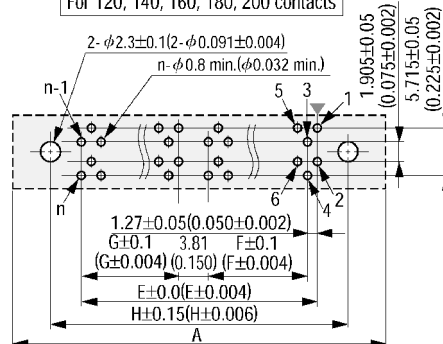


X-X' Cross Section



Printed Circuit Board Layout (Component Side View)

For 120, 140, 160, 180, 200 contacts



▼ = Polarity identification

Recommended PCB Thickness $t = 1.6 \pm 0.19 (0.063 \pm 0.007)$

"n" is number of contacts.

X-X' Cross Section Straight

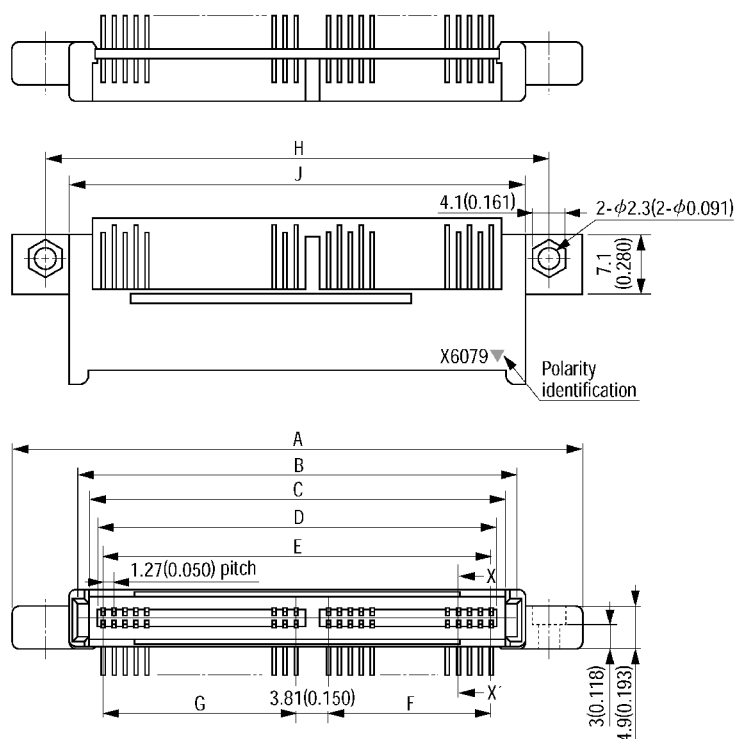
TS-2049-01
Sheet 4 of 5

3M™ Pak 50 Boardmount Plug

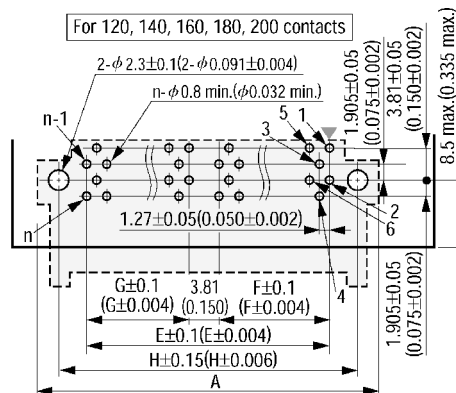
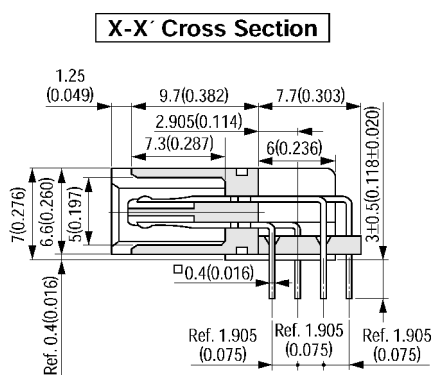
.050" Straight and Right Angle Maxi-Mate

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.

TS-2049-01
Sheet 5 of 5

Important Notice

All statements, technical information, and recommendations related to 3M's products are based on information believed to be reliable, but the accuracy or completeness is not guaranteed. Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use. Any statements related to the product which are not contained in 3M's current publications, or any contrary statements contained on your purchase order shall have no force or effect unless expressly agreed upon, in writing, by an authorized officer of 3M.



Electronic and Interconnect Solutions Division

6801 River Place Blvd.
Austin, TX 78726-9000
www.3M.com/eisd

Warranty; Limited Remedy; Limited Liability.

This product will be free from defects in material and manufacture for a period of 1 year from the date of purchase. **3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product. **Except where prohibited by law, 3M will not be liable for any loss or damage arising from this 3M product, whether direct, indirect, special, incidental or consequential regardless of the legal theory asserted.**