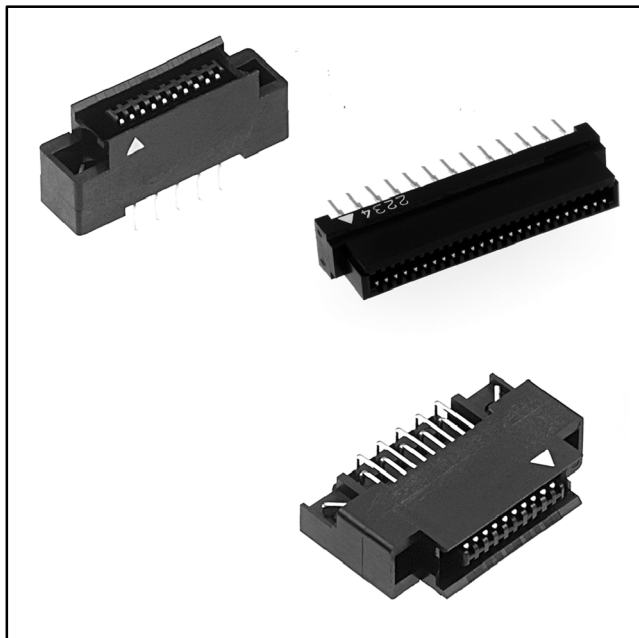


3M™ Pak 50 Socket

.050" Straight and Right Angle Socket, with Ret. Clips, Flng. Option

P50 Series



- Contact design features two contact points and straight beam construction for connector reliability and low insertion force
- Available retention clip secures connector for wave soldering eliminating additional hardware expenses
- Horizontal, parallel or vertical mating available
- Insulator design prevents mis-insertion errors and contact damage
- Available with and without flanges

Date Modified: May 15, 2003

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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 500V DC
Withstanding Voltage 650V AC 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 Socket

.050" Straight and Right Angle Socket, with Ret. Clips, Flng. Option

P50 Series

Straight with Flanges, with and without Retention Clips

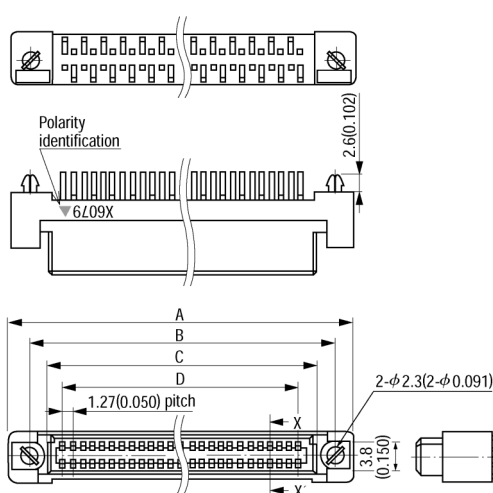
Product Table / Dimensions for Straight Plug with and without Retention Clips

Contact Quantity	A	B	C	D
20	25.43 [1.001]	20.32 [0.800]	15.43 [0.608]	11.43 [0.450]
26	29.24 [1.151]	24.13 [0.950]	19.24 [0.758]	15.24 [0.600]
30	31.78 [1.251]	26.67 [1.050]	21.78 [0.858]	17.78 [0.700]
32	33.05 [1.301]	27.94 [1.100]	23.05 [0.908]	19.05 [0.750]
34	34.32 [1.351]	29.21 [1.150]	24.32 [0.958]	20.32 [0.800]
40	38.13 [1.501]	33.02 [1.300]	28.13 [1.108]	24.13 [0.950]

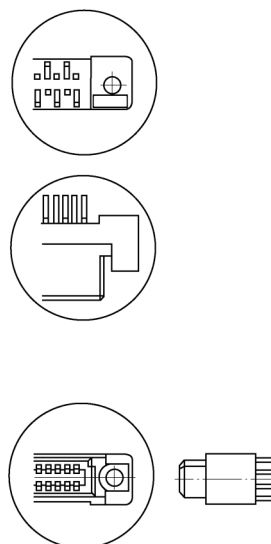
Contact Quantity	A	B	C	D
50	44.48 [1.751]	39.37 [1.550]	34.48 [1.358]	30.48 [1.200]
52	45.75 [1.801]	40.64 [1.600]	35.75 [1.408]	31.75 [1.250]
60	50.83 [2.001]	45.72 [1.800]	40.83 [1.608]	36.83 [1.450]
68	55.91 [2.201]	50.80 [2.000]	45.91 [1.808]	41.91 [1.650]
80	63.53 [2.501]	58.42 [2.300]	53.53 [2.108]	49.53 [1.950]
100	76.23 [3.001]	71.12 [2.800]	66.23 [2.608]	62.23 [2.450]



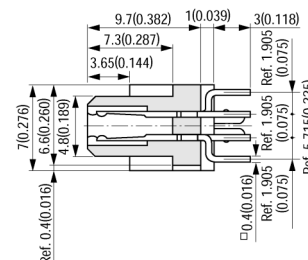
With Retention Clips



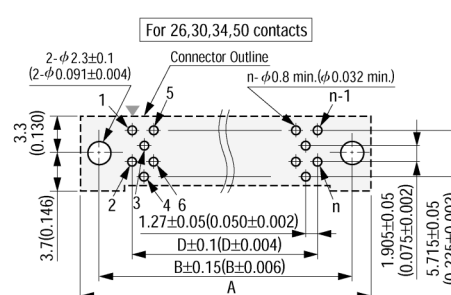
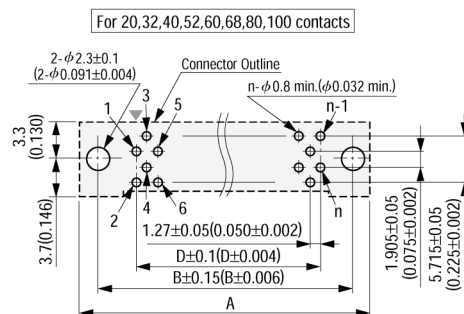
Without Retention Clips



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.

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Sheet 2 of 5

3M™ Pak 50 Socket

.050" Straight and Right Angle Socket, with Ret. Clips, Flng. Option

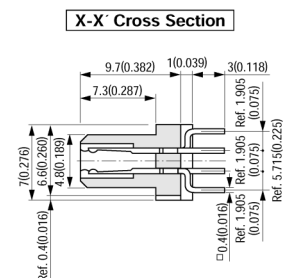
P50 Series

Without Flanges

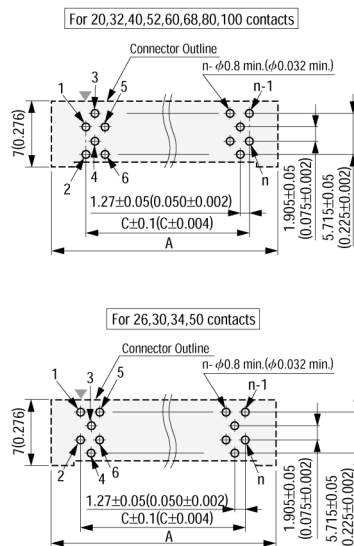
Product Table / Dimensions for Straight Plug without Flanges

Contact Quantity	A	B	C
20	17.83 [0.702]	15.43 [0.608]	11.43 [0.450]
26	21.64 [0.852]	19.24 [0.758]	15.24 [0.600]
30	24.18 [0.952]	21.78 [0.858]	17.78 [0.700]
32	25.45 [1.002]	23.05 [0.908]	19.05 [0.750]
34	26.72 [1.052]	24.32 [0.958]	20.32 [0.800]
40	30.53 [1.202]	28.13 [1.108]	24.13 [0.950]

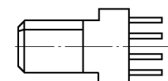
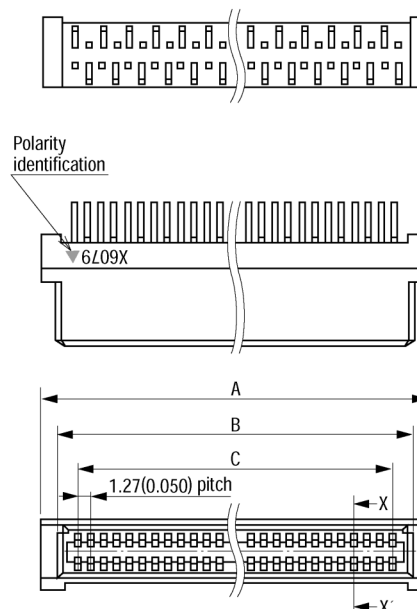
Contact Quantity	A	B	C
50	36.88 [1.452]	34.48 [1.358]	30.48 [1.200]
52	38.15 [1.502]	35.75 [1.408]	31.75 [1.250]
60	43.23 [1.702]	40.83 [1.608]	36.83 [1.450]
68	48.31 [1.902]	45.91 [1.808]	41.91 [1.650]
80	55.93 [2.202]	53.53 [2.108]	49.53 [1.950]
100	68.63 [2.702]	66.23 [2.608]	62.23 [2.450]



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

P5X - XXXS - XXX - XXXX

Mounting Options:
0 = With Flanges
1 = Without Flanges, offered without retention clips only

Contact Quantity
See Table

Solder Tail and Clip Options:
S1 = Straight without retention clips
SR1 = Right Angle without retention clips
*R1 = Straight with retention clips
*RR1 = Right Angle with retention clips

*Note: R1 and RR1 do not apply to P51

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

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3M™ Pak 50 Socket

.050" Straight and Right Angle Socket, with Ret. Clips, Flng. Option

P50 Series

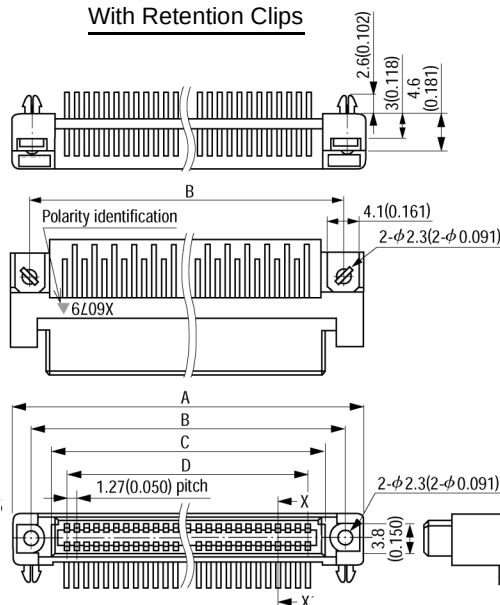
Right Angle with Flanges

Product Table / Dimensions for Right Angle Plug with and without Retention

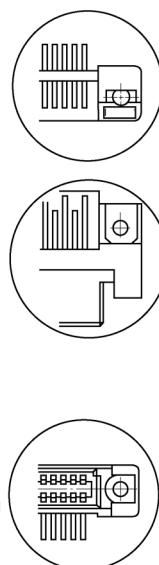
Contact Quantity	A	B	C	D
20	25.43 [1.001]	20.32 [0.800]	15.43 [0.608]	11.43 [0.450]
26	29.24 [1.151]	24.13 [0.950]	19.24 [0.758]	15.24 [0.600]
30	31.78 [1.251]	26.67 [1.050]	21.78 [0.858]	17.78 [0.700]
32	33.05 [1.301]	27.94 [1.100]	23.05 [0.908]	19.05 [0.750]
34	34.32 [1.351]	29.21 [1.150]	24.32 [0.958]	20.32 [0.800]
40	38.13 [1.501]	33.02 [1.300]	28.13 [1.108]	24.13 [0.950]

Contact Quantity	A	B	C	D
50	44.48 [1.751]	39.37 [1.550]	34.48 [1.358]	30.48 [1.200]
52	45.75 [1.801]	40.64 [1.600]	35.75 [1.408]	31.75 [1.250]
60	50.83 [2.001]	45.72 [1.800]	40.83 [1.608]	36.83 [1.450]
68	55.91 [2.201]	50.80 [2.000]	45.91 [1.808]	41.91 [1.650]
80	63.53 [2.501]	58.42 [2.300]	53.53 [2.108]	49.53 [1.950]
100	76.23 [3.001]	71.12 [2.800]	66.23 [2.608]	62.23 [2.450]

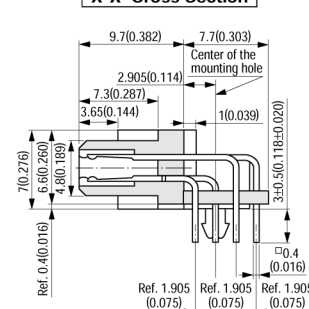
With Retention Clips



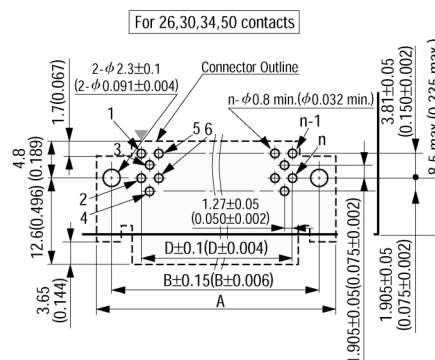
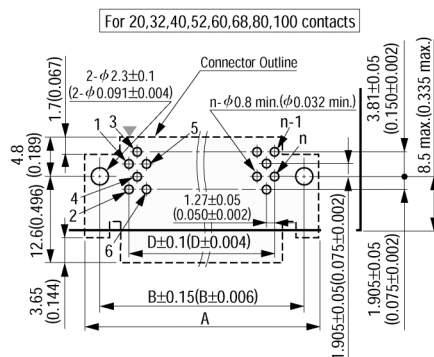
Without Retention Clips



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.

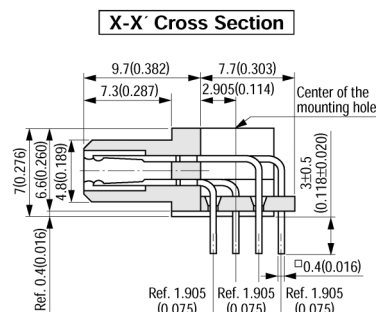
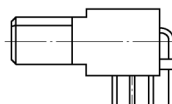
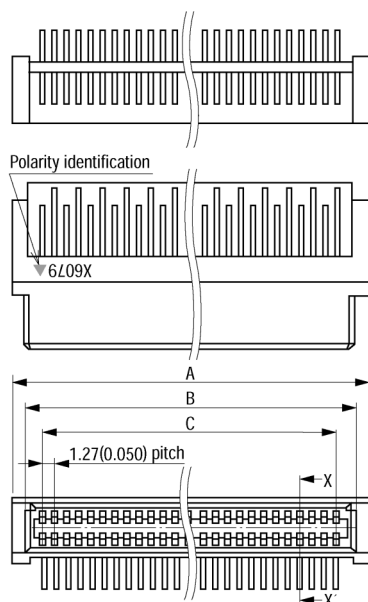
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Right Angle without Flanges

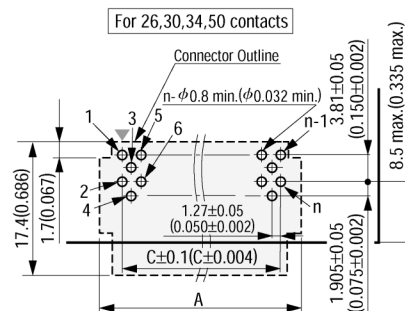
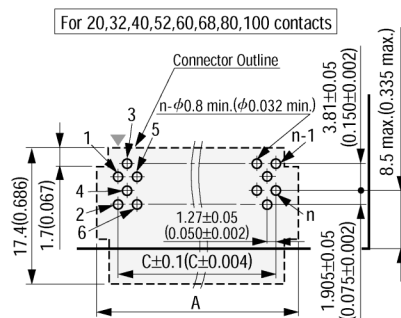
Product Table / Dimensions for Right Angle Plug without Flanges

Contact Quantity	A	B	C
20	17.83 [0.702]	15.43 [0.608]	11.43 [0.450]
26	21.64 [0.852]	19.24 [0.758]	15.24 [0.600]
30	24.18 [0.952]	21.78 [0.858]	17.78 [0.700]
32	25.45 [1.002]	23.05 [0.908]	19.05 [0.750]
34	26.72 [1.052]	24.32 [0.958]	20.32 [0.800]
40	30.53 [1.202]	28.13 [1.108]	24.13 [0.950]

Contact Quantity	A	B	C
50	36.88 [1.452]	34.48 [1.358]	30.48 [1.200]
52	38.15 [1.502]	35.75 [1.408]	31.75 [1.250]
60	43.23 [1.702]	40.83 [1.608]	36.83 [1.450]
68	48.31 [1.902]	45.91 [1.808]	41.91 [1.650]
80	55.93 [2.202]	53.53 [2.108]	49.53 [1.950]
100	68.63 [2.702]	66.23 [2.608]	62.23 [2.450]



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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