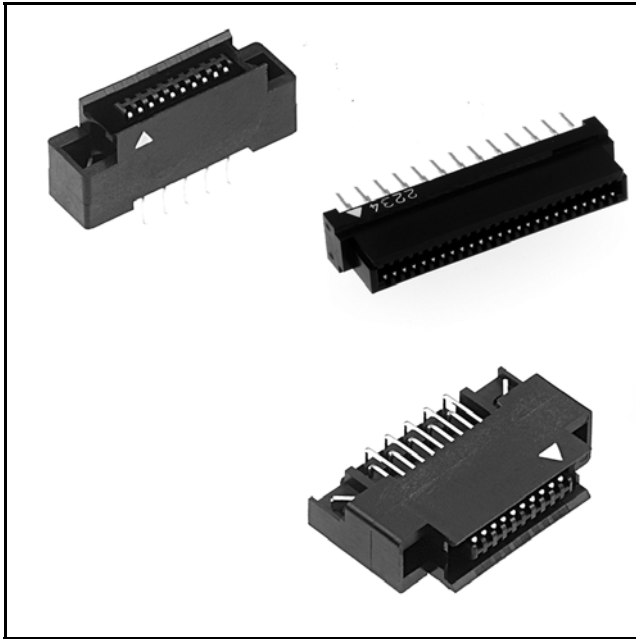


3M™ Pak 50 Socket

.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
- RoHS* compliant

Date Modified: November 11, 2006

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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: 10 μ " [0.25 μ m] Gold
Solder Tails: Gold Flash
Retaining Clips: Tin-Copper

Electrical

Current Rating: 0.5 A
Insulation Resistance: $> 1 \times 10^3 \Omega$ 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 by 3M in writing, this information represents 3M's knowledge and belief based upon information provided by third party suppliers to 3M.

UL File No.: E68080

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

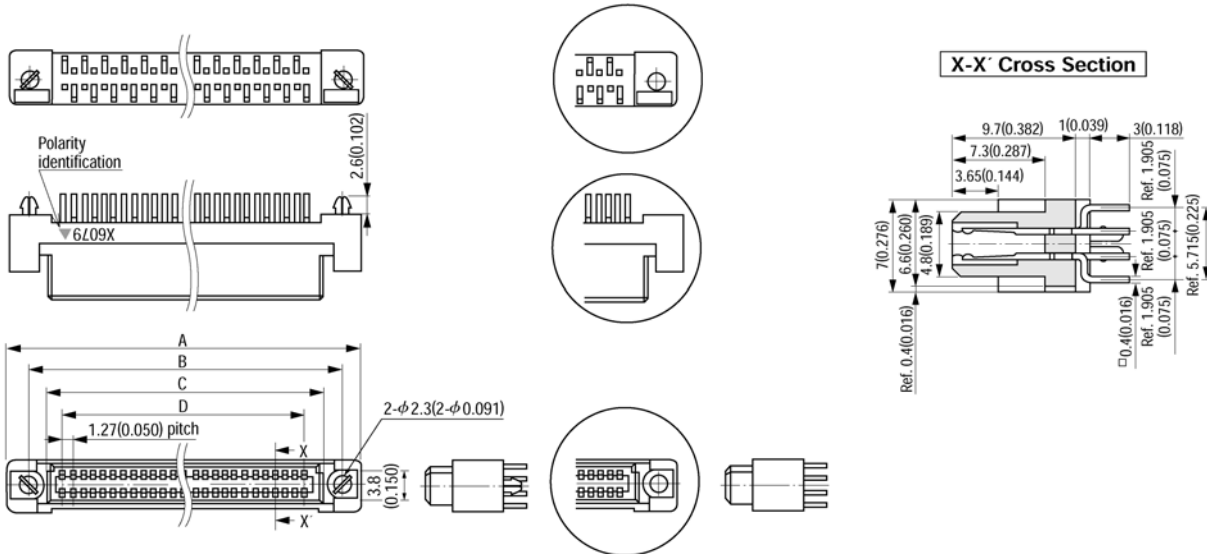
Product Table / Dimensions for Straight Plug with and without Retention Clips

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

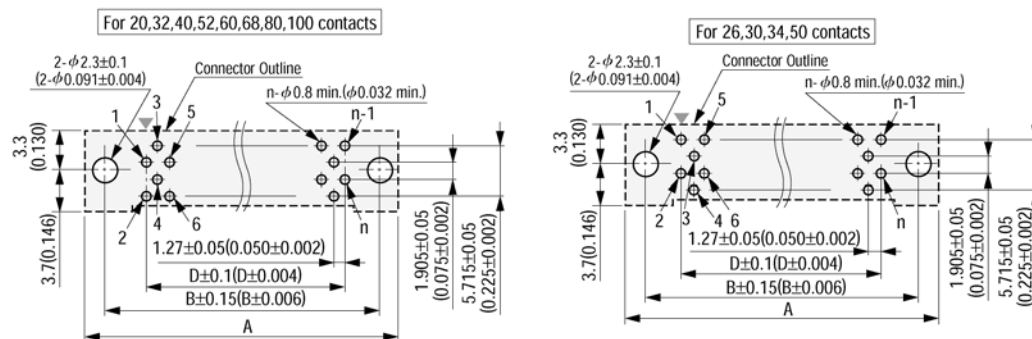
Contact Quantity	A	B	C	D
50	44.48	39.37	34.48	30.48
	[1.751]	[1.550]	[1.358]	[1.200]
52	45.75	40.64	35.75	31.75
	[1.801]	[1.600]	[1.408]	[1.250]
60	50.83	45.72	40.83	36.83
	[2.001]	[1.800]	[1.608]	[1.450]
68	55.91	50.80	45.91	41.91
	[2.201]	[2.000]	[1.808]	[1.650]
80	63.53	58.42	53.53	49.53
	[2.501]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

With Retention Clips

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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 Sheet 2 of 5

3M™ Pak 50 Socket

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

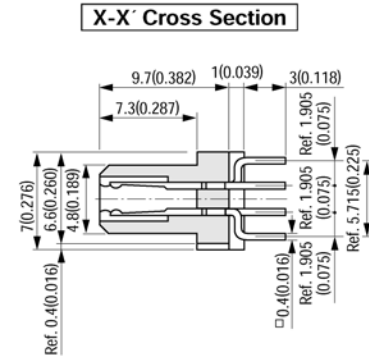
P50 Series

Without Flanges

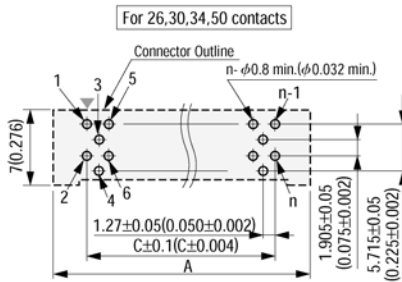
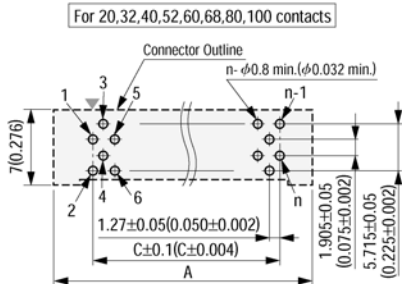
Product Table / Dimensions for Straight Plug without Flanges

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

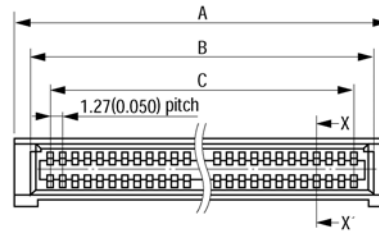
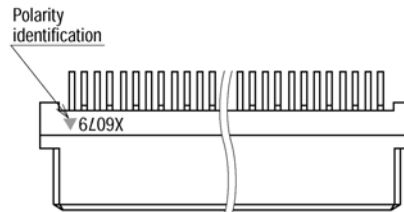
Contact Quantity	A	B	C
50	36.88	34.48	30.48
	[1.452]	[1.358]	[1.200]
52	38.15	35.75	31.75
	[1.502]	[1.408]	[1.250]
60	43.23	40.83	36.83
	[1.702]	[1.608]	[1.450]
68	48.31	45.91	41.91
	[1.902]	[1.808]	[1.650]
80	55.93	53.53	49.53
	[2.202]	[2.108]	[1.950]
100	68.63	66.23	62.23
	[2.702]	[2.608]	[2.450]



Printed Circuit Board Layout
(Component Side View)
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 - EA

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

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Sheet 3 of 5

3M™ Pak 50 Socket

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

P50 Series

Right Angle with Flanges

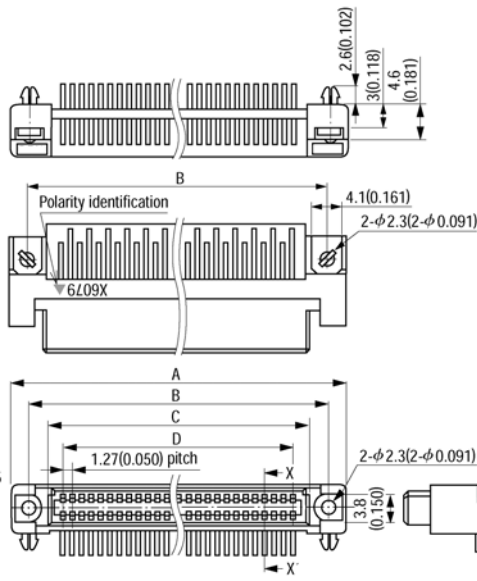
Product Table / Dimensions for Right Angle Plug with and without Retention Clips

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

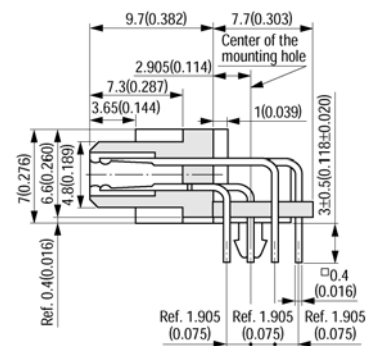
Contact Quantity	A	B	C	D
50	44.48	39.37	34.48	30.48
	[1.751]	[1.550]	[1.358]	[1.200]
52	45.75	40.64	35.75	31.75
	[1.801]	[1.600]	[1.408]	[1.250]
60	50.83	45.72	40.83	36.83
	[2.001]	[1.800]	[1.608]	[1.450]
68	55.91	50.80	45.91	41.91
	[2.201]	[2.000]	[1.808]	[1.650]
80	63.53	58.42	53.53	49.53
	[2.501]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

With Retention Clips

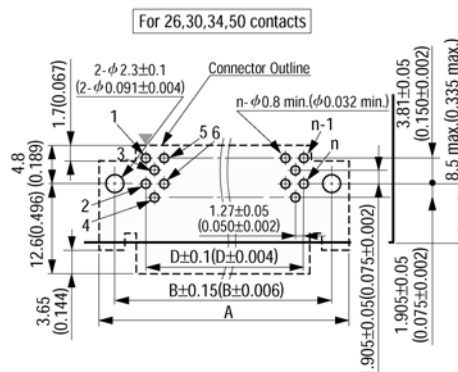
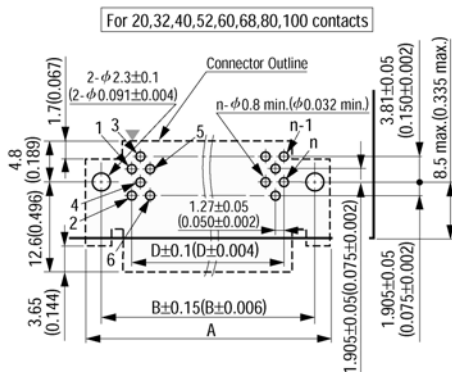
Without Retention Clips



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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3M™ Pak 50 Socket

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

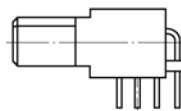
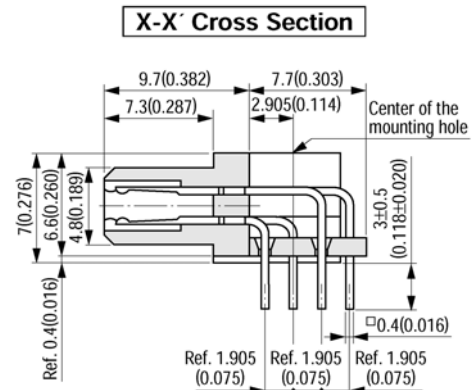
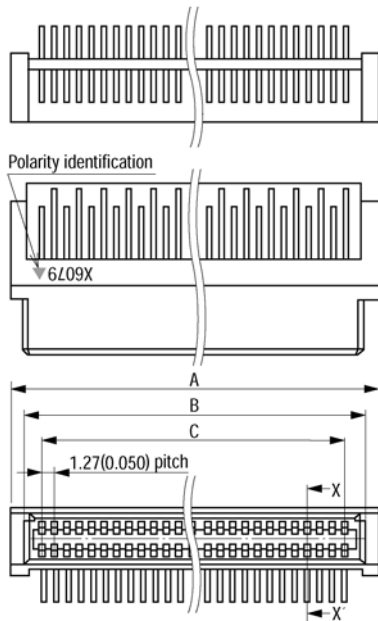
P50 Series

Right Angle without Flanges

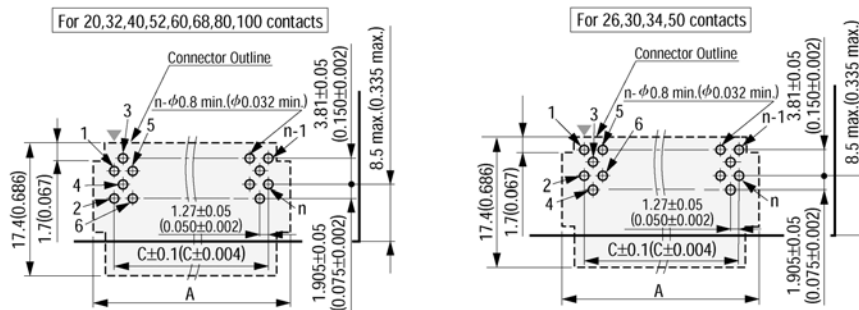
Product Table / Dimensions for Right Angle Plug without Flanges

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

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



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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 Sheet 5 of 5

Important Notice

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