

3M™ Pak 50 Low Profile Plug

.050" Vertical Stacking with and without Flanges

P50L Series



- Low profile offers mating heights between 0.276" - 0.472" (7-12 mm) for board stacking applications
- High temperature insulator compatible with IR and wave soldering
- Guide posts for easy mating/unmating
- Retention clips stabilize connector to the board during wave soldering
- RoHS* compliant version (DA plating suffix) available

Date Modified: March 1, 2006

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Physical

Insulation

Material: Glass filled PPS
Flammability: UL 94V-0
Color: Black

Contact

Material: Phosphor Bronze

Plating

Underplating: Nickel
Wiping Area: Gold flash
Solder Tails: Tin Alloy over Nickel or Gold Flash (RoHS compliant)
Retaining Clips: Tin lead or tin-copper (RoHS compliant)

Electrical

Current Rating: 0.5 A
Insulation Resistance: $10^3 \Omega$ at 500 Vdc
Withstanding Voltage: 650V 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.

File No.: E68080

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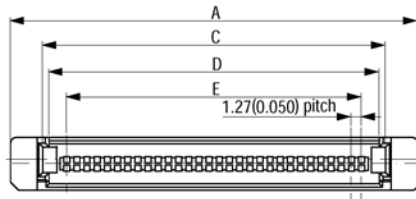
P50L Series

Plug with Flanges and Retention Clips

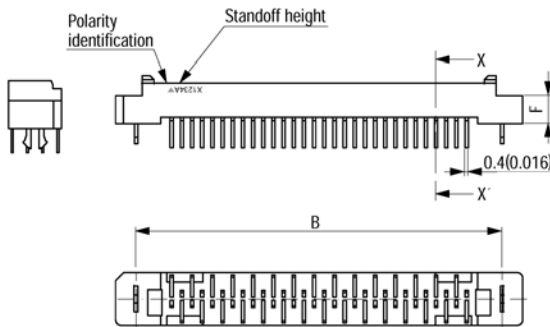
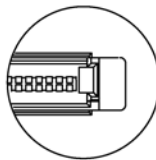
Product Table / Dimensions

Contact Quantity	A	B	C	D	E
20	25.43	20.32	17.43	15.83	11.43
	[1.001]	[0.800]	[0.686]	[0.623]	[0.450]
30	31.78	26.67	23.78	22.18	17.78
	[1.251]	[1.050]	[0.936]	[0.873]	[0.700]
40	38.13	33.02	30.13	28.53	24.13
	[1.501]	[1.300]	[1.186]	[1.123]	[0.950]
50	44.48	39.37	36.48	34.88	30.48
	[1.751]	[1.550]	[1.436]	[1.373]	[1.200]
60	50.83	45.72	42.83	41.23	36.83
	[2.001]	[1.800]	[1.686]	[1.623]	[1.450]
80	63.53	58.42	55.53	53.93	49.53
	[2.501]	[2.300]	[2.186]	[2.123]	[1.950]
100	76.23	71.12	68.23	66.63	62.23
	[3.001]	[2.800]	[2.686]	[2.623]	[2.450]
120	88.93	83.82	80.93	79.33	74.93
	[3.501]	[3.300]	[3.186]	[3.123]	[2.950]

A type (Standoff height)



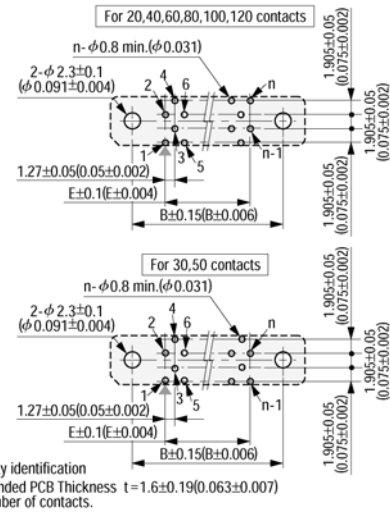
C type



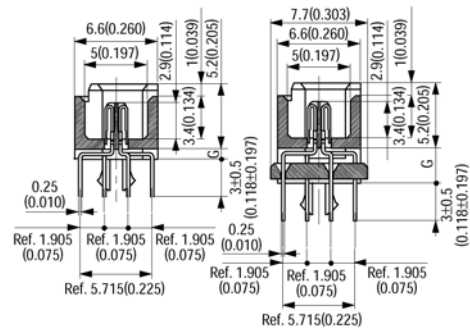
Note:
Plugs/Sockets with flanges and retention clips are not interchangeable with plugs/sockets without flanges and retention clips

Type	F	G
A	3.50	0.80
	[0.138]	[0.032]
C	5.50	2.80
	[0.217]	[0.110]

Printed Circuit Board Layout (Component Side View)



X-X' Cross Section



A type

C type

Ordering Information

P5XL - XXXP - X - XXX

0 = With Flanges and Retention Clips
1 = Without Flanges and Retention Clips

Contact Quantity
See Table

A = Type A
C = Type C

Plating Options:
TGF = $2 \mu\text{m}$ [$0.05 \mu\text{m}$] min. Gold with Sn-Pb solder tails
DA = Gold flash overall (RoHS compliant)

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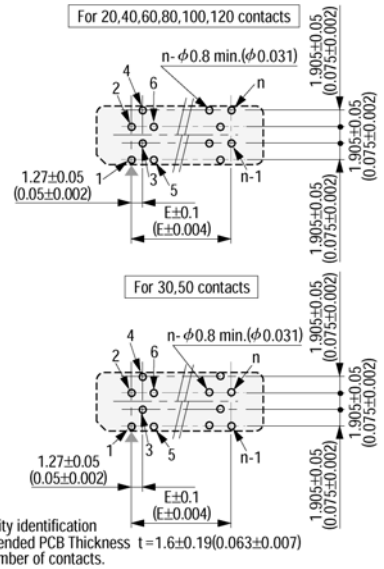
P50L Series

Product Table / Dimensions

Contact Quantity	A	B	C	D	E
20	18.83	17.43	15.83	14.23	11.43
	[0.741]	[0.686]	[0.623]	[0.560]	[0.450]
30	25.18	23.78	22.18	20.58	17.78
	[0.991]	[0.936]	[0.873]	[0.810]	[0.700]
40	31.53	30.13	28.53	26.93	24.13
	[1.241]	[1.186]	[1.123]	[1.060]	[0.950]
50	37.88	36.48	34.88	33.28	30.48
	[1.491]	[1.436]	[1.373]	[1.310]	[1.200]
60	44.23	42.83	41.23	39.63	36.83
	[1.741]	[1.686]	[1.623]	[1.560]	[1.450]
80	56.93	55.53	53.93	52.33	49.53
	[2.241]	[2.186]	[2.123]	[2.060]	[1.950]
100	69.63	68.23	66.63	65.03	62.23
	[2.741]	[2.686]	[2.623]	[2.560]	[2.450]
120	82.33	80.93	79.33	77.73	74.93
	[3.241]	[3.186]	[3.123]	[3.060]	[2.950]

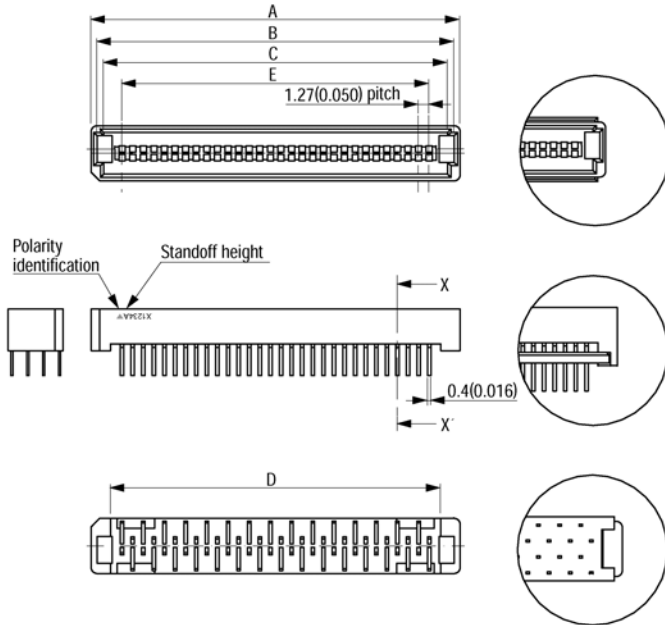
Plug without Flanges and Retention Clips

Printed Circuit Board Layout (Component Side View)

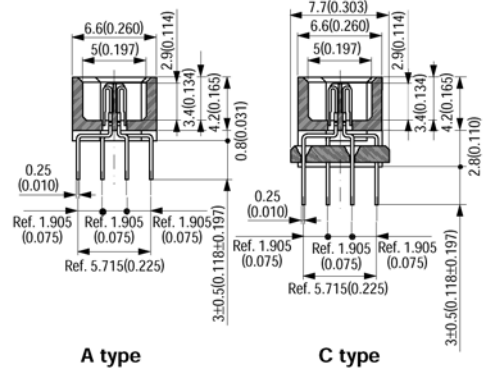


A type (Standoff height)

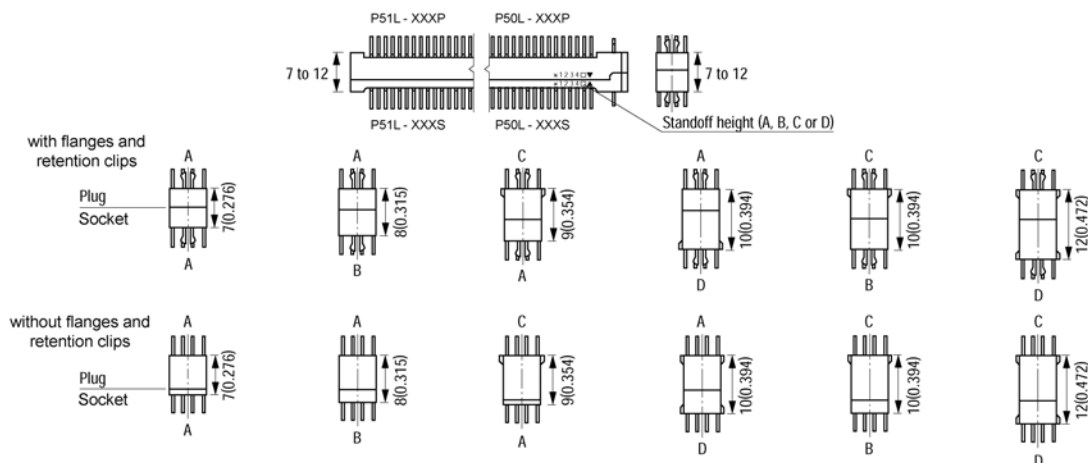
C type



X-X' Cross Section



Stacked Mating Combinations



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