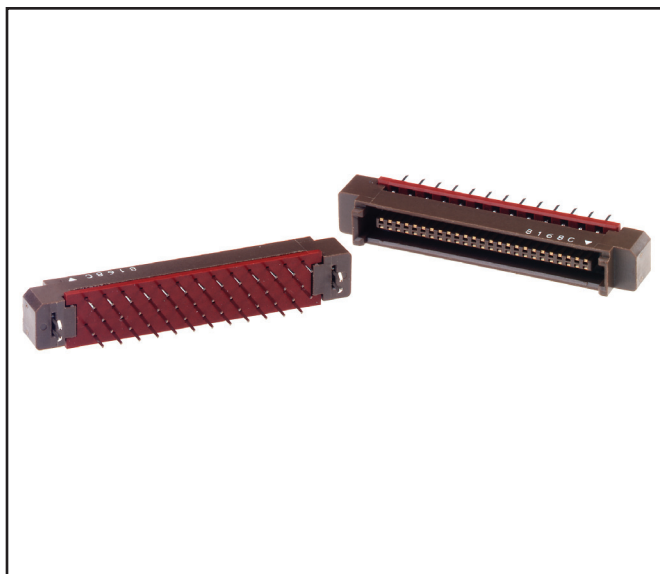


3M™ Pak 50 Low Profile Plug

.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. See the Regulatory Information Appendix (RIA) in the "RoHS Compliance" section of www.3Mconnector.com for compliance information (RIA E1 and C1 apply)

Date Modified: August 4, 2010

TS-2053-C
Sheet 1 of 3

Physical

Insulator:

Material: Glass Filled PPS

Flammability: UL 94V-0

Color: Black

Contact Material: Phosphor Bronze

Plating:

Underplating: Nickel

Wiping Area: Gold Flash

Solder Tails: Gold Flash

Retaining Clips: Tin-Copper

Mating Compatibility: TS-1146, TS-2054

Electrical

Current Rating: 0.5 A

Insulation Resistance: $> 1 \times 10^9 \Omega$ at 500 V_{DC}

Withstanding Voltage: 650 V_{AC} for 1 minute

Environmental

Temperature Rating: -55°C to +85°C

Process Rating: 260°C MSL1 (per J-STD-020C)

UL File No.: E68080



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3M™ Pak 50 Low Profile Plug

.050" Vertical Stacking with and without Flanges

P50L Series

Plug with Flanges and Retention Clips

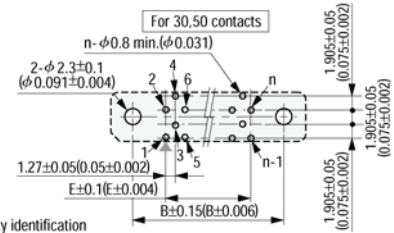
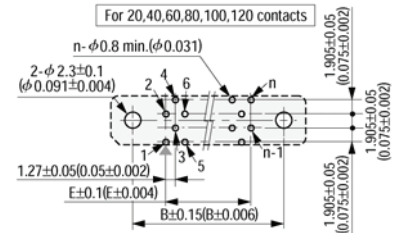
Product Table / Dimensions

Contact Quantity	A	B	C	D	E
20	25.43 [1.001]	20.32 [0.800]	17.43 [0.686]	15.83 [0.623]	11.43 [0.450]
30	31.78 [1.251]	26.67 [1.050]	23.78 [0.936]	22.18 [0.873]	17.78 [0.700]
40	38.13 [1.501]	33.02 [1.300]	20.13 [1.186]	28.53 [1.123]	24.13 [0.950]
50	44.48 [1.751]	39.37 [1.550]	36.48 [1.436]	34.88 [1.373]	30.48 [1.200]
60	50.83 [2.001]	45.72 [1.800]	42.83 [1.686]	41.23 [1.623]	36.83 [1.450]
80	63.53 [2.501]	58.42 [2.300]	55.53 [2.186]	53.93 [2.123]	49.53 [1.950]
100	76.23 [3.001]	71.12 [2.800]	68.23 [2.686]	66.63 [2.623]	62.23 [2.450]
120	88.93 [3.501]	83.82 [3.300]	80.93 [3.186]	79.33 [3.123]	74.93 [2.950]

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

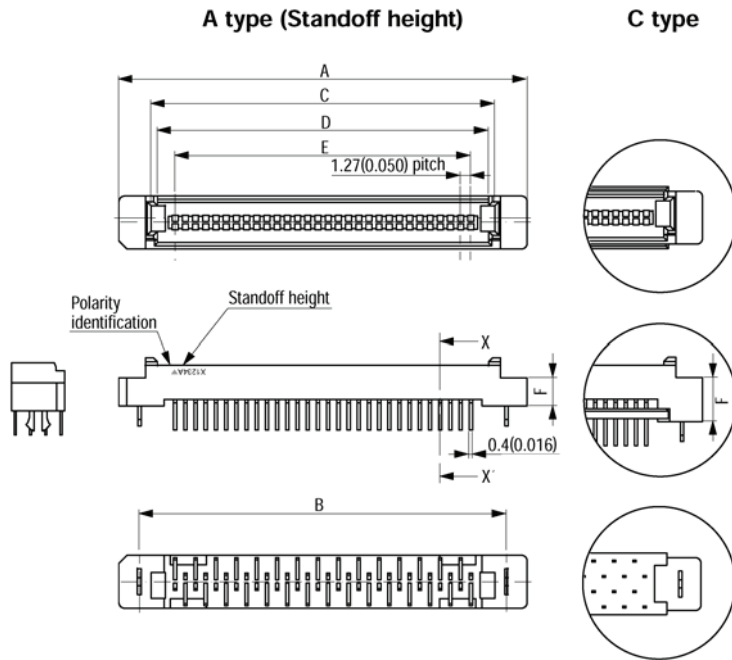
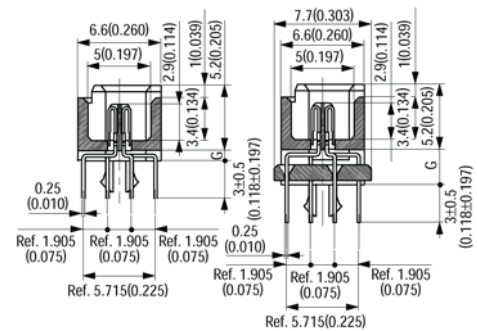


Printed Circuit Board Layout
(Component Side View)



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

X-X' Cross Section



Note:

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

Ordering Information

P5XL - XXXP - X - DA (RIA E1 and C1 apply)

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

A = Type A
C = Type C

Contact Quantity
See Table

TS-2053-C
Sheet 2 of 3



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3M™ Pak 50 Low Profile Plug

.050" Vertical Stacking with and without Flanges

P50L Series

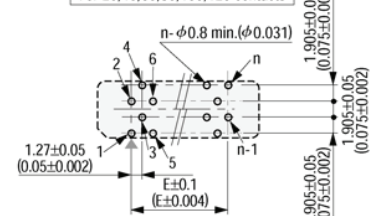
Product Table / Dimensions

Plug without Flanges and Retention Clips

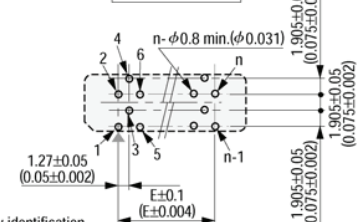
Contact Quantity	A	B	C	D	E
20	18.83 [0.741]	17.43 [0.686]	15.83 [0.623]	14.23 [0.560]	11.43 [0.450]
30	25.18 [0.991]	23.78 [0.936]	22.18 [0.873]	20.58 [0.810]	17.78 [0.700]
40	31.53 [1.241]	30.13 [1.186]	28.53 [1.123]	26.93 [1.060]	24.13 [0.950]
50	37.88 [1.491]	36.48 [1.436]	34.88 [1.373]	33.28 [1.310]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

Printed Circuit Board Layout (Component Side View)

For 20,40,60,80,100,120 contacts

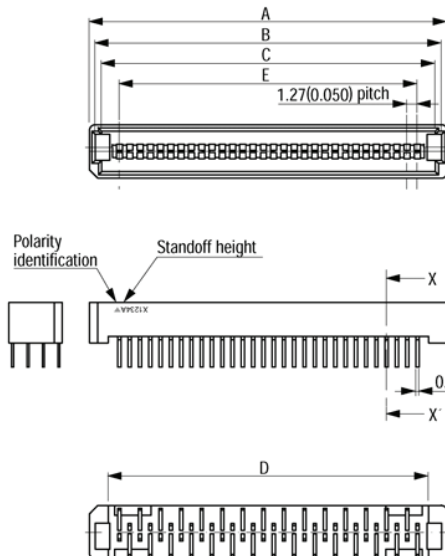


For 30,50 contacts

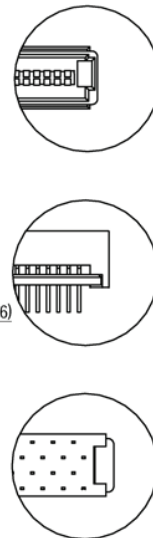


▽ = Polarity identification
Recommended PCB Thickness $t = 1.6 \pm 0.19 (0.063 \pm 0.007)$
"n" is number of contacts.

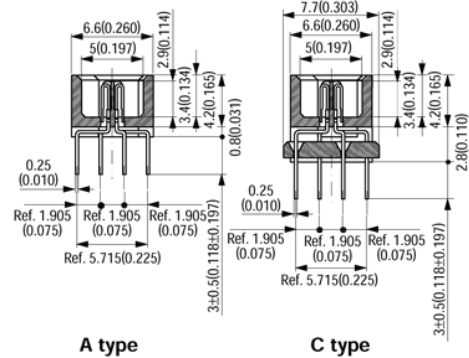
A type (Standoff height)



C type

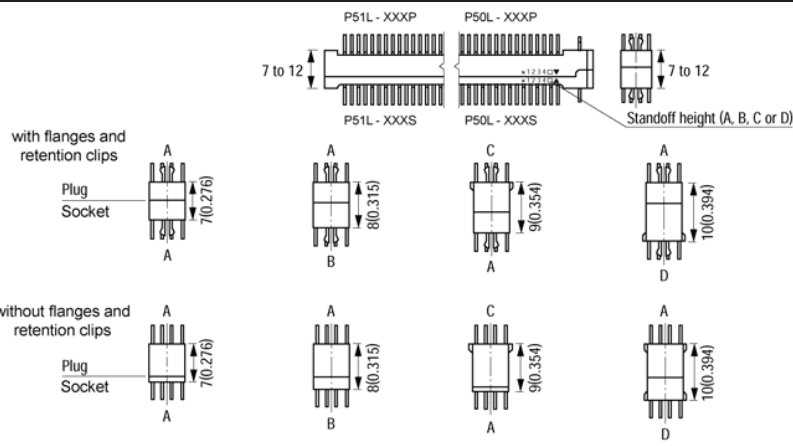


X-X' Cross Section



A type

C type



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Sheet 3 of 3

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