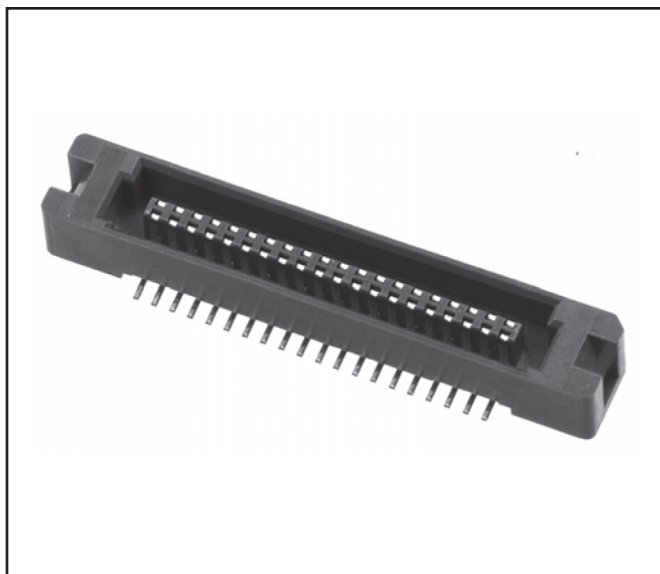


3M™ Pak 50 Low Profile Plug

.050" Plug, (1.27) Straight, Right Angle and SMT, Low Profile

P50LE Series



- Latch/eject mechanism maintains a secure connection
- Low profile 11.8 mm mated height when using the surfacemount version
- Mates to the P25LE wiremount socket
- 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: July 13, 2011

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Physical

Insulator:

Material: Glass Filled PPS

Flammability: UL 94V-0

Color: Brown

Contact Material: Phosphor Bronze

Plating:

Underplating: Nickel

Wiping Area: Gold Flash

Solder Tails: Gold Flash

Retaining Clips: Tin-Copper

Mating Compatibility: TS-1142

Electrical

Current Rating: 0.5 A

Insulation Resistance: $> 1 \times 10^9 \Omega$ at 250 V_{DC}

Withstanding Voltage: 300 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



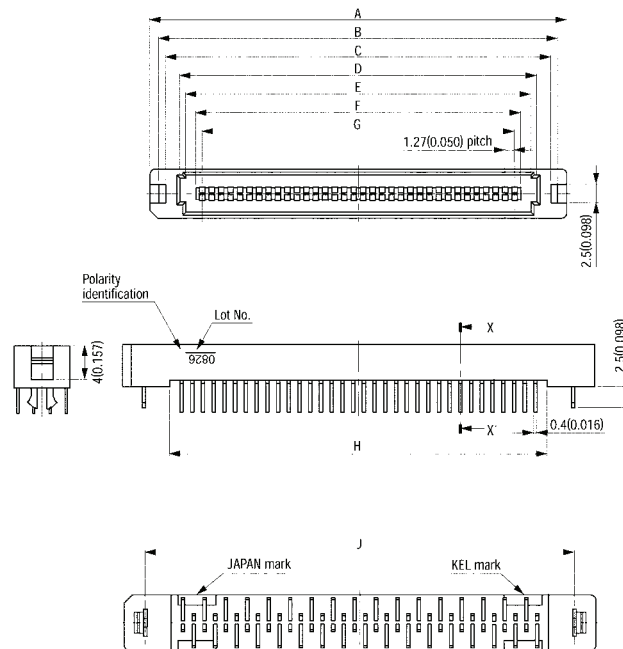
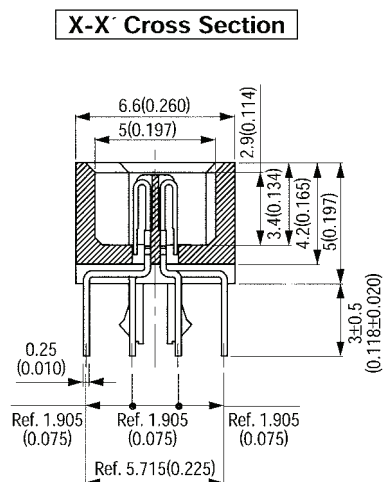
Electronic Solutions Division
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.050" Plug, (1.27) Straight, Right Angle and SMT, Low Profile

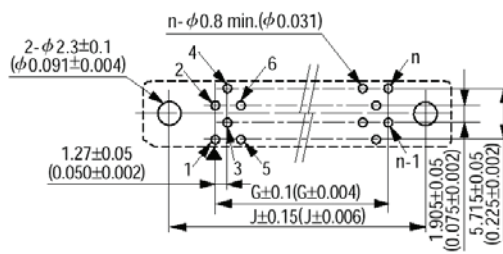
P50LE Series

Straight Plug (Through Hole Solder Tails)

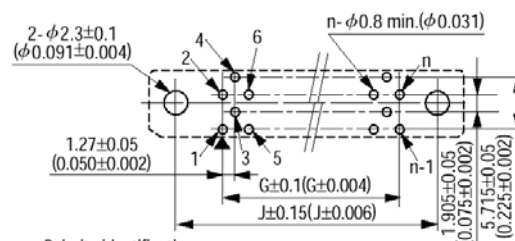


Printed Circuit Board Layout (Component Side View)

For 20,40,60,68,80,100 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.

Ordering Information

P50LE - XXXP1 - XXX - DA (RIA E1 and C1 apply)

Contact Quantity: _____
See Table

- Solder Tail Options:

R1 = Straight/ .118" (3.0) Through hole

RR1 = Right Angle/ .118" (3.0) Through hole

SML = Vertical Surface Mounts

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P50LE Series

Contact Quantity	A	B	C	D	E	F	G	H	J
20	25.43 [1.001]	23.03 [0.906]	21.23 [0.836]	17.43 [0.686]	15.83 [0.623]	13.13 [0.517]	11.43 [0.450]	14.23 [0.560]	20.32 [0.800]
30	31.78 [1.251]	29.38 [1.157]	27.58 [1.086]	23.78 [0.936]	22.18 [0.873]	19.48 [0.767]	17.78 [0.700]	20.58 [0.810]	26.67 [1.050]
40	38.13 [1.501]	35.73 [1.407]	33.93 [1.336]	30.13 [1.186]	28.53 [1.123]	25.83 [1.017]	24.13 [0.950]	26.93 [1.060]	33.02 [1.300]
50	44.48 [1.751]	42.08 [1.657]	40.28 [1.586]	36.48 [1.436]	34.88 [1.373]	32.18 [1.267]	30.48 [1.200]	33.28 [1.310]	39.37 [1.550]
60	50.83 [2.001]	48.43 [1.907]	46.63 [1.836]	42.83 [1.686]	41.23 [1.623]	38.53 [1.517]	36.83 [1.450]	39.63 [1.560]	45.72 [1.800]
68	55.91 [2.201]	53.51 [2.107]	51.71 [2.036]	47.91 [1.886]	46.31 [1.823]	43.61 [1.717]	41.91 [1.650]	44.71 [1.760]	50.80 [2.000]
80	63.53 [2.501]	61.13 [2.407]	59.33 [2.336]	55.53 [2.186]	53.93 [2.123]	51.23 [2.017]	49.53 [1.950]	52.33 [2.060]	58.42 [2.300]
100	76.23 [3.001]	73.83 [2.907]	72.03 [2.836]	68.23 [2.686]	66.63 [2.623]	63.93 [2.517]	62.23 [2.450]	65.03 [2.560]	71.12 [2.800]

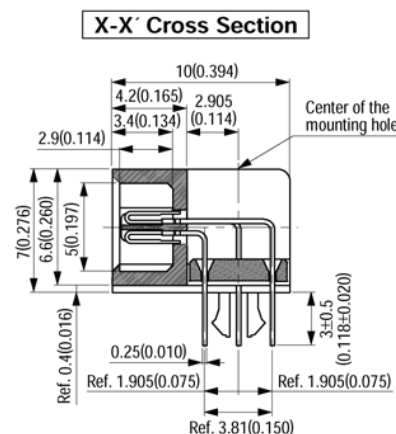
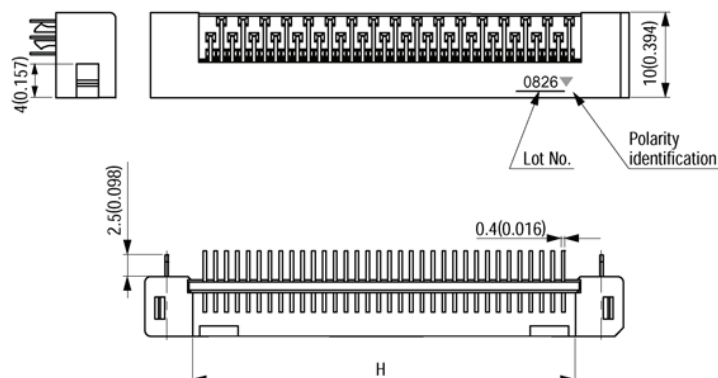


Figure 1 illustrates the dimensions of the 16-pin connector. The diagram shows a side view of the connector with various dimensions labeled A through G, J, X, and X'. The pitch between pins is specified as 1.27(0.050). The height of the pin array is 2.5(0.098).



For 20,40,60,80,100 contacts

2- $\phi 2.3 \pm 0.1$
($\phi 0.091 \pm 0.004$)

$n/2 - \phi 0.65 \text{ min.} (\phi 0.026)$

$n/2 - \phi 0.8 \text{ min.} (\phi 0.031)$

5.5(0.217) max.

Edge of the PC board

1.27 ± 0.05 (0.050 ± 0.002)

$G \pm 0.10$ ($G \pm 0.004$)

$J \pm 0.15$ ($J \pm 0.006$)

1.905 ± 0.05
(0.075 ± 0.002)

For 30,50 contacts

2- $\phi 2.3 \pm 0.1$
($\phi 0.091 \pm 0.004$)

$n/2 - \phi 0.65 \text{ min.} (\phi 0.026)$

$n/2 - \phi 0.8 \text{ min.} (\phi 0.031)$

5.5(0.217) max.

Edge of the PC board

1.27 ± 0.05 (0.050 ± 0.002)

$G \pm 0.10$ ($G \pm 0.004$)

$J \pm 0.15$ ($J \pm 0.006$)

1.905 ± 0.05
(0.075 ± 0.002)

▼=Polarity identification

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

"n" = number of contacts.

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Sheet 3 of 4

3M™ Pak 50 Low Profile Plug

.050" Plug, (1.27) Straight, Right Angle and SMT, Low Profile

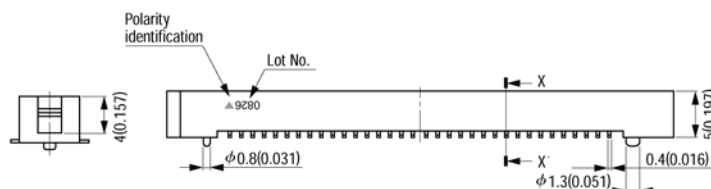
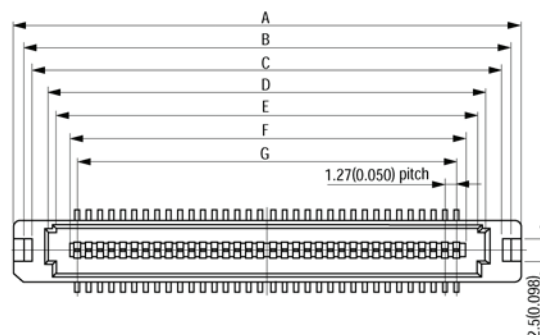
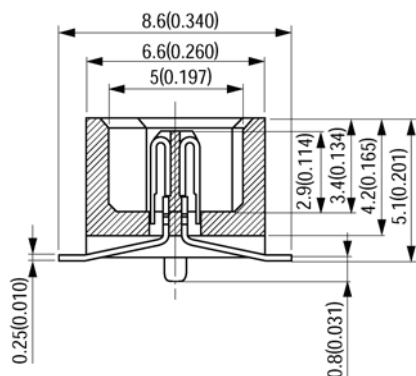
P50LE Series

Product Table / Dimensions for SMT Plug

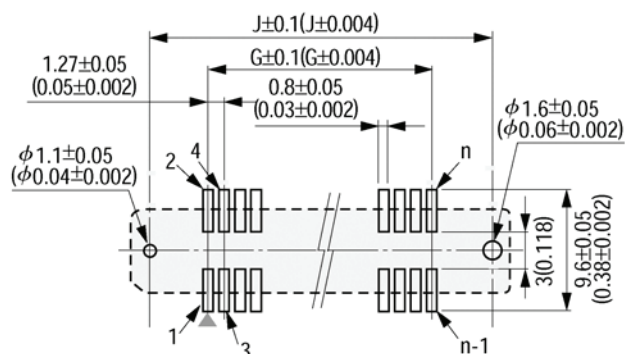
Contact Quantity	A	B	C	D	E	F	G	H	J
20	25.43 [1.001]	23.03 [0.907]	21.23 [0.836]	17.43 [0.686]	15.83 [0.623]	13.13 [0.517]	11.43 [0.450]	14.23 [0.560]	16.51 [0.650]
30	31.78 [1.251]	29.38 [1.157]	27.58 [1.086]	23.78 [0.936]	22.18 [0.873]	19.48 [0.767]	17.78 [0.700]	20.58 [0.810]	22.86 [0.900]
40	38.13 [1.501]	35.73 [1.407]	33.93 [1.336]	30.13 [1.186]	28.53 [1.123]	25.83 [1.017]	24.13 [0.950]	26.93 [1.060]	29.21 [1.150]
50	44.48 [1.751]	42.08 [1.657]	40.28 [1.586]	36.48 [1.436]	34.88 [1.373]	32.18 [1.267]	30.48 [1.200]	33.28 [1.310]	35.56 [1.400]
60	50.83 [2.001]	48.43 [1.907]	46.63 [1.836]	42.83 [1.686]	41.23 [1.623]	38.53 [1.517]	36.83 [1.450]	39.63 [1.560]	41.91 [1.650]
68	55.91 [2.201]	53.51 [2.107]	51.71 [2.036]	47.91 [1.886]	46.31 [1.823]	43.61 [1.717]	41.91 [1.650]	44.71 [1.760]	46.99 [1.850]
80	63.53 [2.501]	61.13 [2.407]	59.33 [2.336]	55.53 [2.186]	53.93 [2.123]	51.23 [2.017]	49.53 [1.950]	52.33 [2.060]	54.61 [2.150]
100	76.23 [3.001]	73.83 [2.907]	72.03 [2.836]	68.23 [2.686]	66.63 [2.623]	63.93 [2.517]	62.23 [2.450]	65.03 [2.560]	67.31 [2.650]

Straight Plug (SMT)

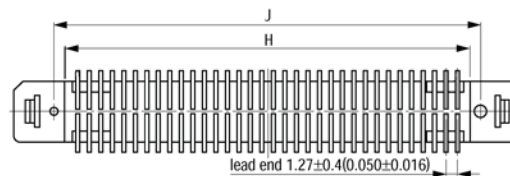
X-X' Cross Section



**Printed Circuit Board Layout
(Component Side View)**



▼=Polarity identification
"n" is number of contacts.



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Sheet 4 of 4



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