

3M™ Mini D Ribbon (MDR) Connectors

.050" Boardmount Thru-Hole Right Angle Receptacle-Shielded

102 Series



- Wiper-on-wiper contact for reliable repetitive plugging
- Rugged die cast metal case construction
- SMT compatible PCT insulator material
- Screw or ground lock for reliable PCB retention
- Interface latch design for connection stability
- IEEE 1284C Interface as a 36 contact connector
- Contacts: 14, 20, 26, 36, 40, 50, 68, 80 and 100
- RoHS* compliant version (-PC plating suffix) available

Date Modified: April 5, 2005

TS-0531-13
Sheet 1 of 3

Physical

Insulation

Material: Glass Reinforced Polyester (PCT)
Flammability: UL 94V-0
Color: Beige

Contact

Material: Copper Alloy (C521)

Plating

Underplating: 80 μ " (2.0 μ m) Nickel - QQ-N-290, Class 2
Wiping Area: 30 μ " (0.76 μ m) Min Gold - MIL-G-45204, Type II, Grade C
Solder Tail Plating: See ordering information

Body

Material: Zinc Alloy
Plating: Nickel

Shroud & Latch Hook

Material: Steel
Plating: Nickel

Marking: 3M Logo & Part Number

Electrical

Current Rating: 1 A
Insulation Resistance: $> 5 \times 10^8 \Omega$ at 500 VDC
Withstanding Voltage: 500 Vrms for 1 Minute

Environmental

Temperature Rating: -55°C to +105°C
Process Rating: Reflow solder process compatible up to 240-250°C for 10 sec.

UL File No.: E68080 *RoHS = Directive 2002/95/EC, Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment.

3M™ Mini D Ribbon (MDR) Connectors

.050" Boardmount Thru-Hole Right Angle Receptacle-Shielded

102 Series

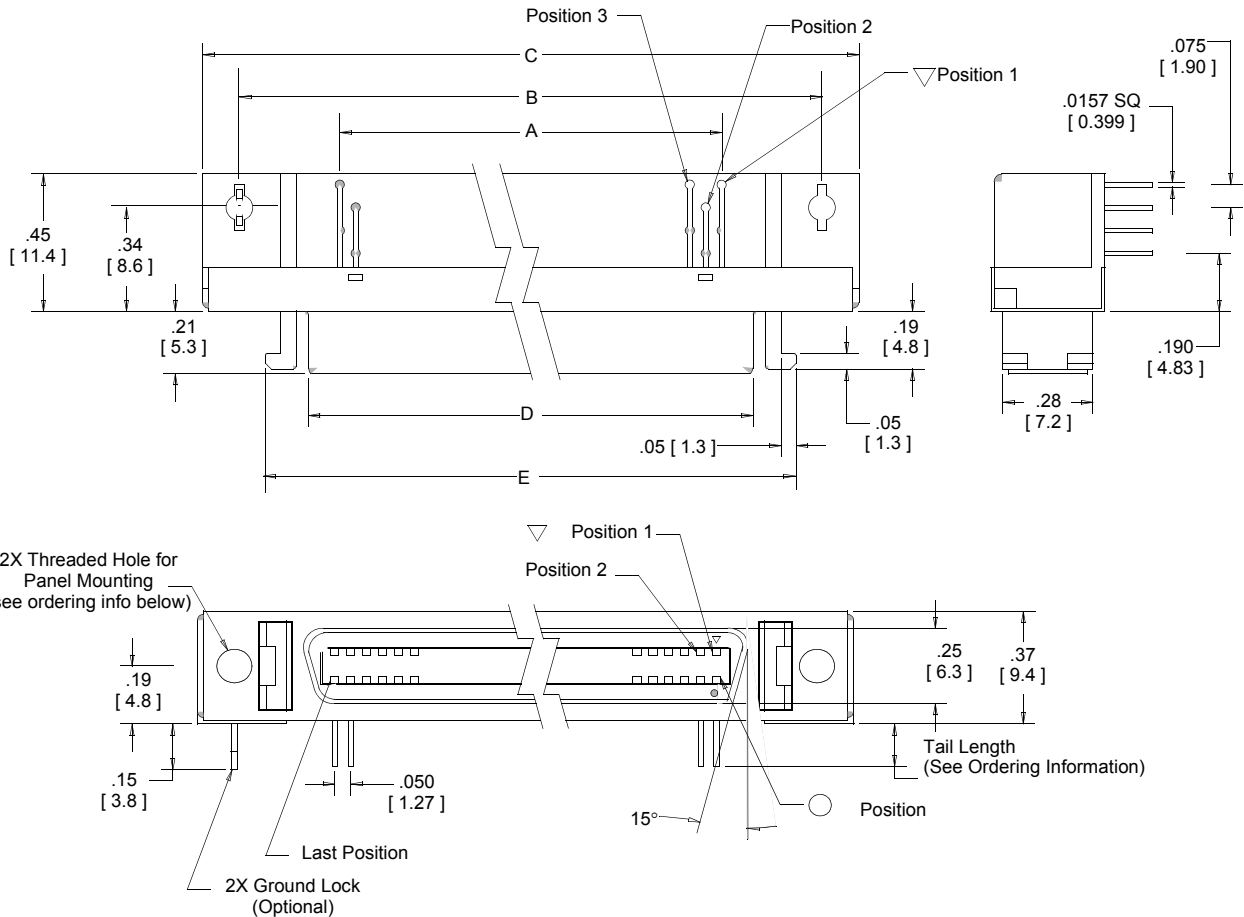
Contact Quantity	Dimensions				
	A	B	C	D	E
14	0.300 [7.62]	0.93 [23.6]	1.16 [29.5]	0.50 [12.6]	0.77 [19.5]
20	0.450 [11.43]	1.08 [27.5]	1.31 [33.4]	0.65 [16.4]	0.92 [23.4]
26	0.600 [15.24]	1.23 [31.3]	1.46 [37.2]	0.80 [20.2]	1.07 [27.2]
36	0.850 [21.59]	1.48 [37.6]	1.71 [43.5]	1.05 [26.6]	1.32 [33.5]
40	0.950 [24.13]	1.58 [40.2]	1.81 [46.1]	1.15 [29.1]	1.42 [36.1]
50	1.200 [30.48]	1.83 [46.5]	2.06 [52.4]	1.40 [35.5]	1.67 [42.4]
68	1.650 [41.91]	2.28 [57.9]	2.51 [63.8]	1.85 [46.9]	2.12 [53.8]
80	1.950 [49.53]	2.58 [65.6]	2.81 [71.5]	2.15 [54.5]	2.42 [61.5]
100	2.450 [62.23]	3.08 [78.3]	3.31 [84.2]	2.65 [67.2]	2.92 [74.2]



Inch
[mm]

Tolerance Unless Noted			
	.0	.00	.000
inch	±.1	±.01	±.005

[] Dimensions for Reference Only



Ordering Information

N102XX-52XXXC

Contact Quantity
(See Table)
A0 = 100 pos.

Tail Length
2 = .15 [3.9] (Standard)
3 = .11 [2.8] (Special Order)

Solder tail plating:
V = tin-lead over Ni
P = flash gold over Ni (RoHS compliant)

Panel/Board Retention Features
 Contacts 14-40: 1 = M2.5 panel/M2.5 screw lock
 B = M2.5 panel/ground lock
 G = M2.5 panel / with .086 [2.2] ground lock (Special Order see note)
 Contacts 50-100: 4 = 4-40 panel/4-40 screw lock
 E = 4-40 panel/ground lock
 G = 4-40 panel/with .086 [2.2] ground lock (Special Order see note)

Note: Option G is used with the 52X3 Tail length only.

TS-0531-13
Sheet 2 of 3

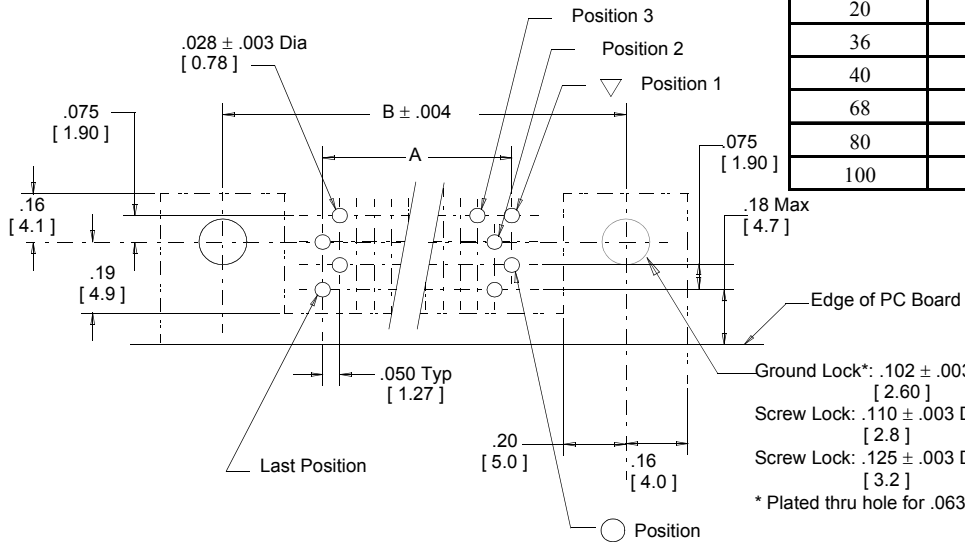
3M™ Mini D Ribbon (MDR) Connectors

.050" Boardmount Thru-Hole Right Angle Receptacle-Shielded

102 Series

Recommended Board Layout

(Viewed from Connector Side for 20, 36, 40, 68, 80 and 100 position only)

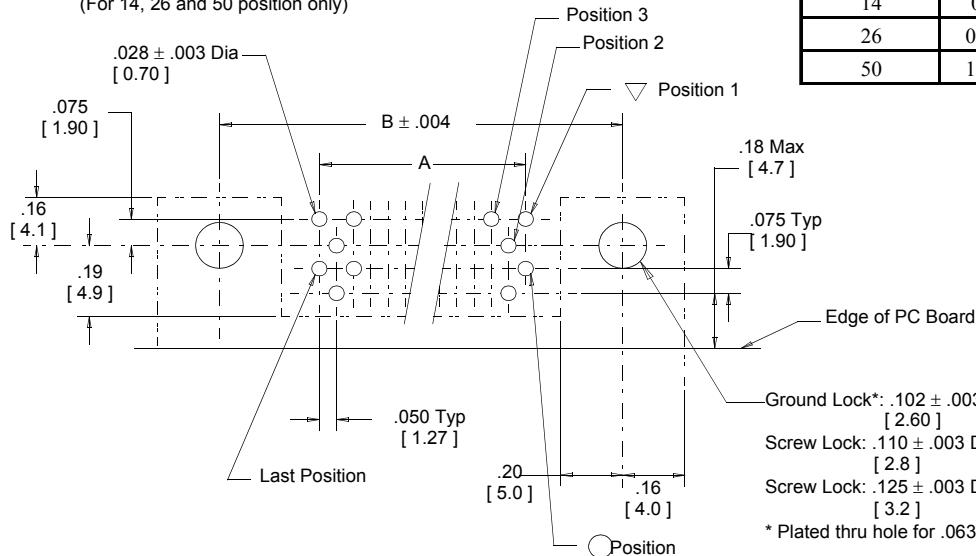


Contact Quantity	Dimensions	
	A	B
20	0.450 [11.43]	1.081 [27.45]
36	0.850 [21.59]	1.481 [37.61]
40	0.950 [24.13]	1.581 [40.15]
68	1.650 [41.91]	2.281 [57.93]
80	1.950 [49.53]	2.581 [65.55]
100	2.450 [62.23]	3.081 [78.25]

Ground Lock*: .102 ± .003 Dia 2X [2.60]
 Screw Lock: .110 ± .003 Dia (14-40 pos) 2X [2.8]
 Screw Lock: .125 ± .003 Dia. (50-100 pos) 2X [3.2]
 * Plated thru hole for .063" board thickness

Recommended Board Layout

(For 14, 26 and 50 position only)

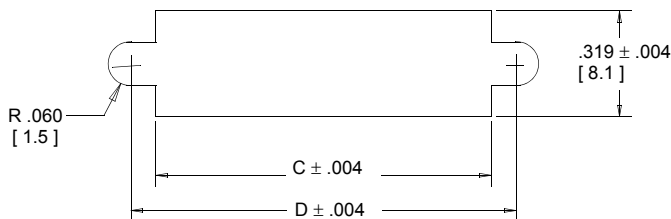


Contact Quantity	Dimensions	
	A	B
14	0.300 [7.62]	0.931 [23.64]
26	0.600 [15.24]	1.231 [31.26]
50	1.200 [30.48]	1.831 [46.50]

Ground Lock*: .102 ± .003 Dia 2X [2.60]
 Screw Lock: .110 ± .003 Dia (14-40 pos) 2X [2.8]
 Screw Lock: .125 ± .003 Dia. (50-100 pos) 2X [3.2]
 * Plated thru hole for .063" board thickness

Recommended Panel Cut-out

Note: Panel thickness .079 [2.00] Max.



Contact Quantity	Dimensions	
	C	D
14	.78 [19.9]	.93 [23.64]
20	.94 [23.8]	1.08 [27.45]
26	1.09 [27.6]	1.23 [31.26]
36	1.33 [33.9]	1.48 [37.61]
40	1.44 [36.5]	1.58 [40.15]
50	1.69 [42.8]	1.83 [46.50]
68	2.13 [54.2]	2.28 [57.93]
80	2.44 [61.9]	2.58 [65.55]
100	2.94 [74.6]	3.08 [78.25]

TS-0531-13
 Sheet 3 of 3

Important Notice

All statements, technical information, and recommendations related to 3M's products are based on information believed to be reliable, but the accuracy or completeness is not guaranteed. Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use. Any statements related to the product which are not contained in 3M's current publications, or any contrary statements contained on your purchase order shall have no force or effect unless expressly agreed upon, in writing, by an authorized officer of 3M.

Warranty; Limited Remedy; Limited Liability.

This product will be free from defects in material and manufacture for a period of 90 days from the time of purchase. **3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product. **Except where prohibited by law, 3M will not be liable for any indirect, special, incidental or consequential loss or damage arising from this 3M product, regardless of the legal theory asserted.**



Electronic Solutions Division

6801 River Place Blvd.
Austin, TX 78726-9000
www.3M.com/esd



Minimum 10%
Post-consumer Fiber

Printed in USA.

© 3M 2005