

# 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

Date Modified: May 30, 2003

TS-0531-11  
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 μm) Nickel — QQ-N-290, Class 2

Wiping Area: 30 μ" (0.76 μm) Min Gold — MIL-G-45204, Type II, Grade C

### Body

Material: Zinc Alloy

Plating: Nickel

### Shroud & Latch Hook

Material: Steel

Plating: Nickel

Marking: 3M Logo and 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:** Surface mount compatible up to 240°C peak for short durations.

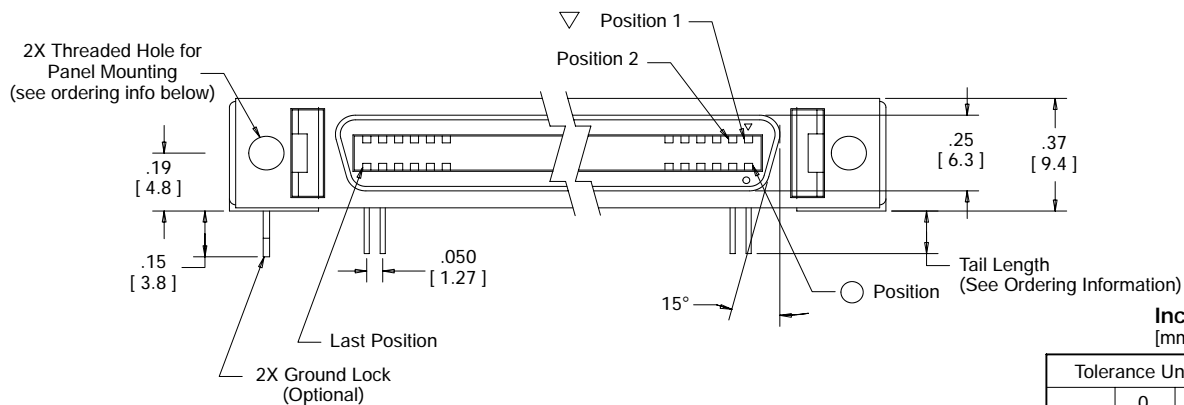
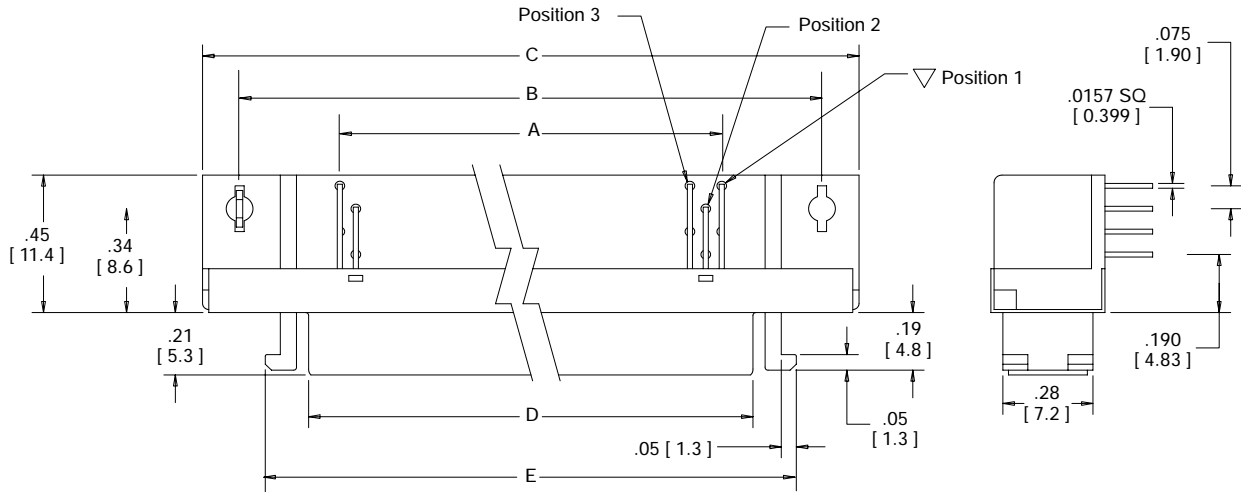
UL File No.: E68060

# 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 ]



Tolerance Unless Noted			
Inch	.0	.00	.000
	±	±	±
		.01	.005

[ ] Dimensions for Reference only

### Ordering Information

**N102XX-52XXVC**

Contact Quantity  
(See Table)  
A0 = 100 pos.

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

#### 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.

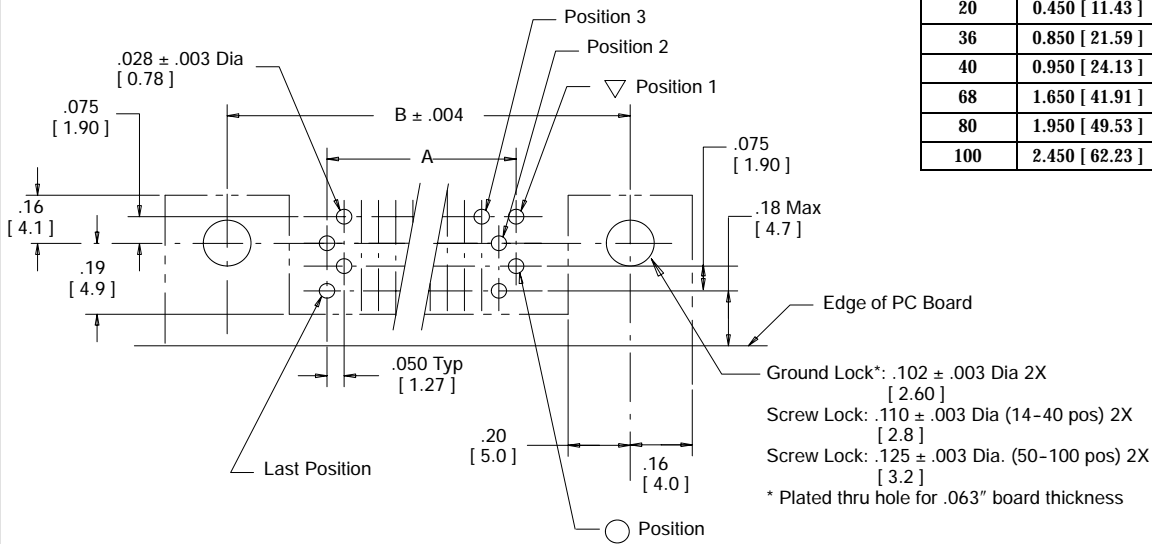
TS-0531-11  
Sheet 2 of 3

# 3M™ Mini D Ribbon (MDR) Connectors .050" Boardmount Thru-Hole Right Angle Receptacle—Shielded

102 Series

## Recommended Board Layout

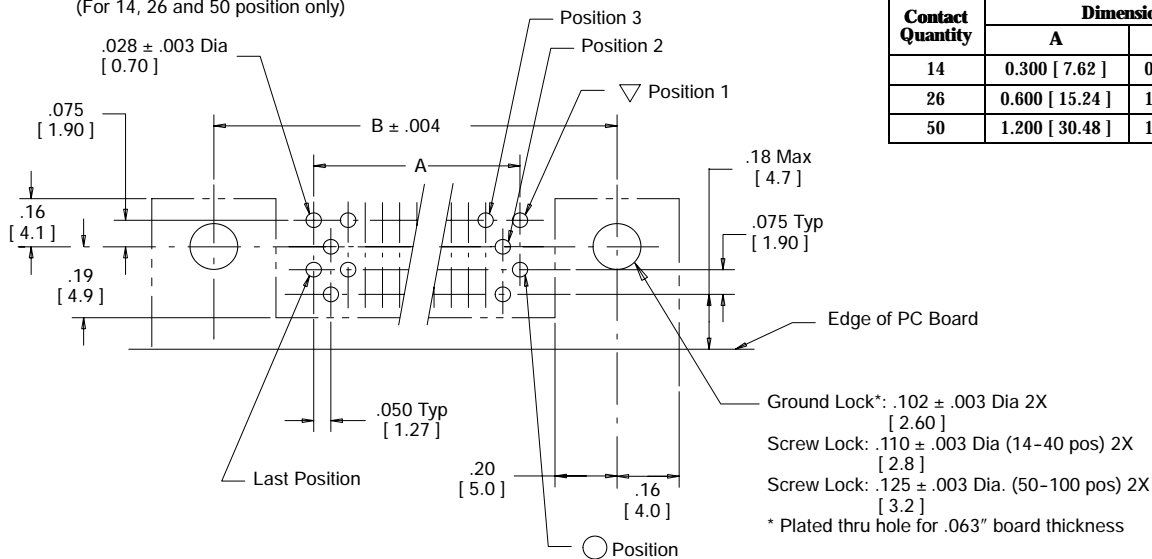
(Viewed from Connector Side for 20, 36, 40, 68, 80 and 100 position only)



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 ]

## Recommended Board Layout

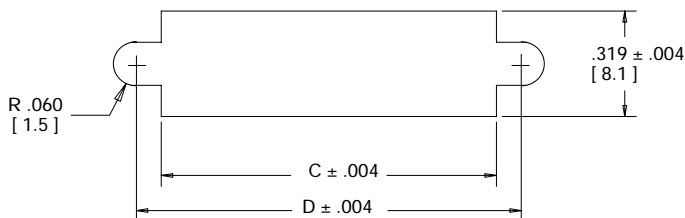
(For 14, 26 and 50 position only)



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 ]

## 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-0531-11  
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.



### **Electronic and Interconnect Solutions Division**

6801 River Place Blvd.  
Austin, TX 78726-9000  
[www.3M.com/eisd](http://www.3M.com/eisd)

### **Warranty; Limited Remedy; Limited Liability.**

This product will be free from defects in material and manufacture for a period of 1 year from the date 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 loss or damage arising from this 3M product, whether direct, indirect, special, incidental or consequential regardless of the legal theory asserted.**