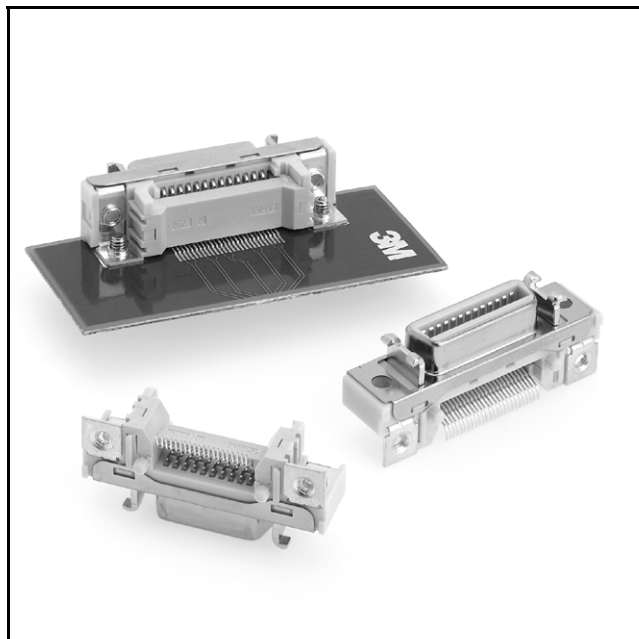


# 3M™ Mini D Ribbon (MDR) Connectors

.050" Surface Mount Right Angle Receptacle - Shielded

102 Series



- Wiper-on-wiper contact for reliable repetitive plugging
- Ultra-low signal skew for high data rate transmission
- Interface latch design for connection stability
- MDR digital LCD interface as a 20 or 26 contact connector
- Contacts: 14, 20, 26, 40 and 50
- RoHS\* compliant version (-PE plating suffix) available

Date Modified: April 5, 2005

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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  $\mu$ " (2.0  $\mu$ m) Nickel - QQ-N-290, Class 2  
Wiping Area: 30  $\mu$ " (0.76  $\mu$ m) Min Gold - MIL-G-45204, Type II, Grade C  
Solder Tails: See ordering information

### Shroud & Latch Hook

Material: Steel  
Plating: Nickel

### Screw Lock

Material: Copper Alloy (C521)  
Plating: Tin

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:** Surface mount compatible - max. temp. 240°-250°C for 10 seconds.

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

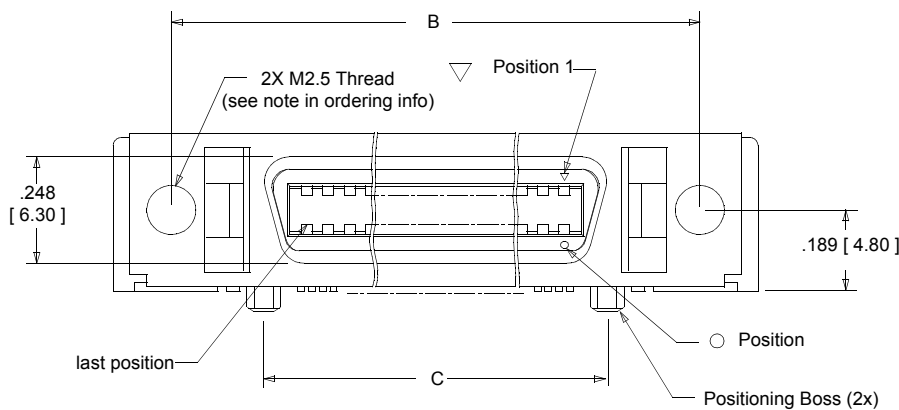
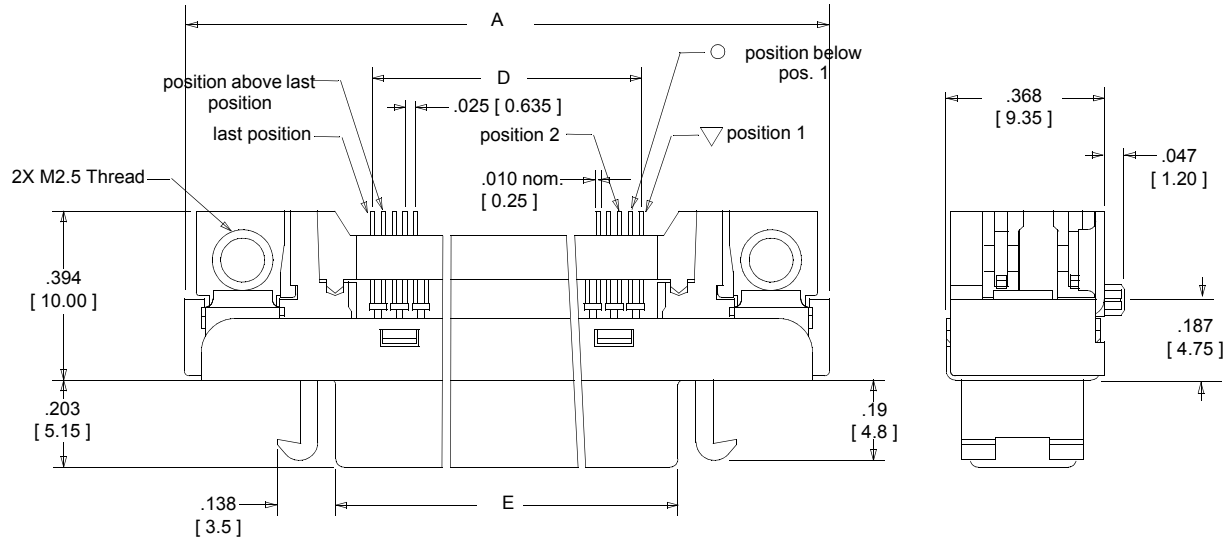
# 3M™ Mini D Ribbon (MDR) Connectors

.050" Surface Mount Right Angle Receptacle - Shielded

102 Series



Contact Quantity	3M Part Number	Dimensions				
		A±.008	B±.006	C±.006	D±.006	E±.006
14	10214-1210 VE	1.16 [ 29.5 ]	.93 [ 23.64 ]	.47 [ 12.70 ]	.33 [ 8.26 ]	.50 [ 12.6 ]
20	10220-1210 VE	1.32 [ 33.4 ]	1.081 [ 27.45 ]	.650 [ 16.51 ]	.475 [ 12.07 ]	.646 [ 16.4 ]
26	10226-1210 VE	1.50 [ 38.2 ]	1.231 [ 31.26 ]	.800 [ 20.32 ]	.625 [ 15.88 ]	.795 [ 20.2 ]
40	10240-1210 VE	1.85 [ 47.1 ]	1.581 [ 40.15 ]	1.150 [ 29.21 ]	.975 [ 24.77 ]	1.150 [ 29.2 ]
50	10250-1210 VE	2.06 [ 52.4 ]	1.831 [ 46.50 ]	1.400 [ 35.56 ]	1.225 [ 31.12 ]	1.40 [ 35.5 ]



Inch [mm]			
Tolerance Unless Noted			
	.0	.00	.000
inch	±.1	±.01	±.005

[ ] Dimensions for Reference Only

## Ordering Information

**102XX-1210XE**

Contact Quantity  
(See Table)

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

Note: Use (M2.5x8 mm) screws to mount to panel with max. thickness of 2.0 mm.

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# 3M™ Mini D Ribbon (MDR) Connectors

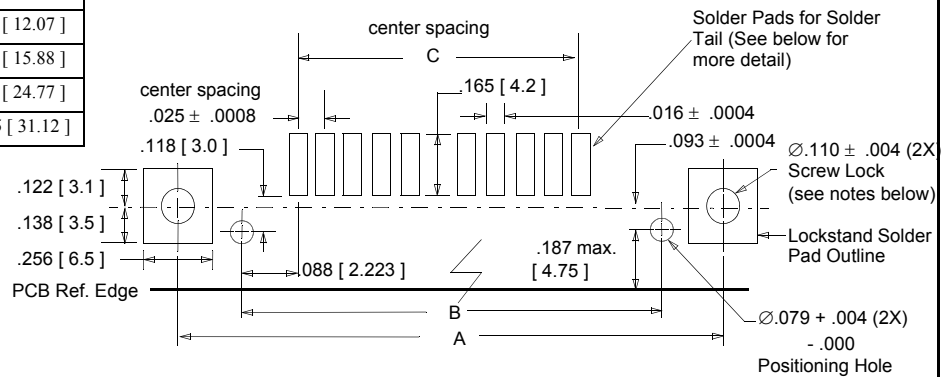
.050" Surface Mount Right Angle Receptacle - Shielded

102 Series

Contact Quantity	Dimensions		
	A ± .002	B ± .002	C ± .002
14	.930 [ 23.64 ]	.500 [ 12.70 ]	.325 [ 8.26 ]
20	1.081 [ 27.45 ]	.650 [ 16.51 ]	.475 [ 12.07 ]
26	1.230 [ 31.26 ]	.800 [ 20.32 ]	.625 [ 15.88 ]
40	1.581 [ 40.15 ]	1.150 [ 29.21 ]	.975 [ 24.77 ]
50	1.831 [ 46.50 ]	1.400 [ 35.56 ]	1.225 [ 31.12 ]

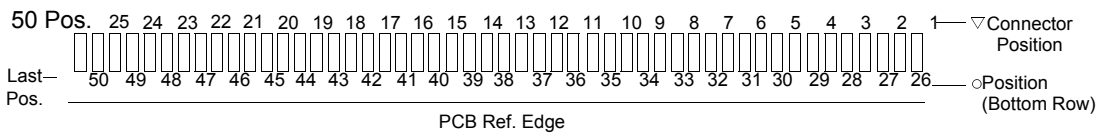
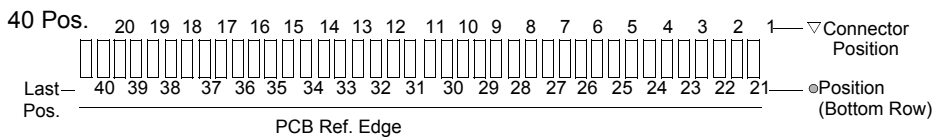
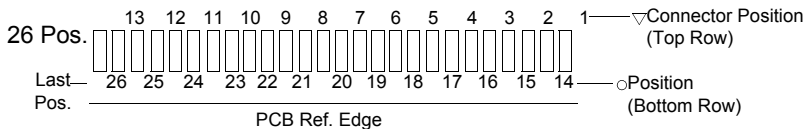
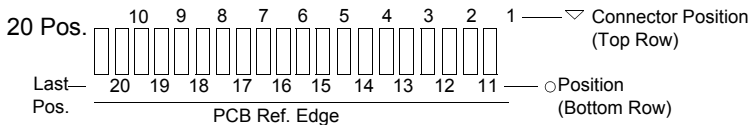
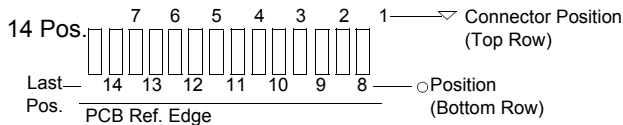
## Recommended Board Layout

(viewed from connector side)



## Solder Tail Layout Detail

(#'s Correspond to Connector Contact # Shown on Previous Page)



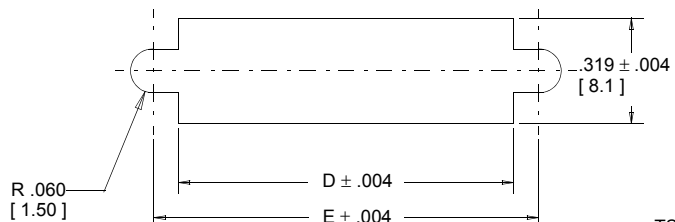
Contact Quantity	D	E
14	1.10 [ 19.9 ]	.931 [ 23.64 ]
20	.94 [ 23.8 ]	1.081 [ 27.45 ]
26	1.09 [ 27.6 ]	1.231 [ 31.26 ]
40	1.44 [ 36.5 ]	1.581 [ 40.15 ]
50	1.69 [ 42.8 ]	1.830 [ 46.50 ]

\*\*Notes:

1. Plated through holes for .062" board thickness.
2. Use mounting screws ( M2.5 ) to fasten to board.

## Recommended Panel Cut-out

Note: Panel thickness .079 [ 2.00 ] Max.



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