

# Micro D Series Filtered Connectors

For designs that require even smaller connector packages, Spectrum has designed a line of filtered Micro D-Subminiature connectors. This line of connectors offers a range of reliable filtering options, including capacitive and ESD versions, and several sizes and termination options. Spectrum has a Micro D-sub connector to satisfy your smallest space constraints.

## Features

- Light weight
- Compact size
- Environmentally sealed contact area when mated
- Corrosion resistant
- Durable (500 cycles min.)
- Superior electrical performance
- RoHS compliant



## Mechanical Specifications

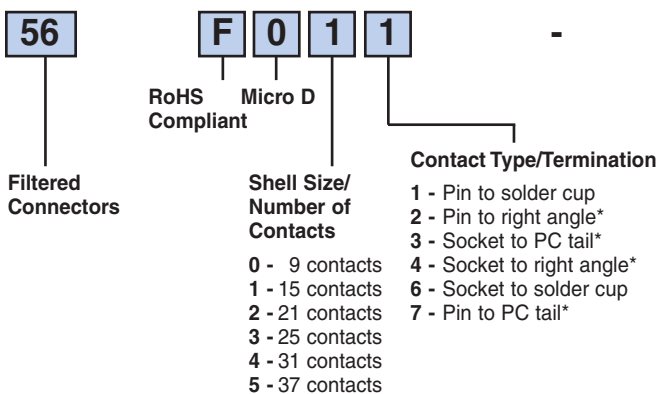
<i>Shell</i> . . . . .	Aluminum, electroless nickel plated 500 $\mu$ in (12.7 $\mu$ m) minimum
<i>Insulator</i> . . . . .	High temperature plastic, flammability UL94V-0
<i>Contacts</i> . . . . .	Copper alloy, gold plated 50 $\mu$ in (1.27 $\mu$ m) minimum
<i>Potting</i> . . . . .	Flammability UL94V-0
<i>Interfacial Seal</i> . . . . .	Silicon

## Electrical Specifications

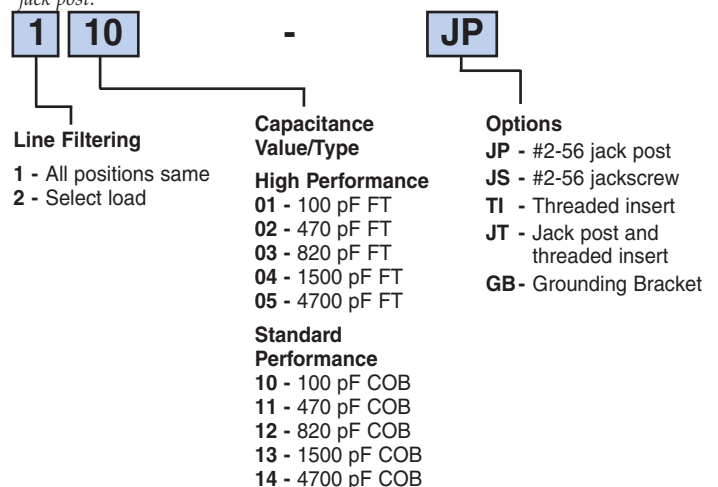
<i>Operating Voltage</i> . . . . .	100 VDC
<i>Dielectric Withstanding Voltage</i> . . . . .	300 VDC
<i>Current Rating</i> . . . . .	3 Amps
<i>Insulation Resistance</i> . . . . .	5G ohms @ 100 VDC

## Ordering Information

Example: **56-F011-110-JP**



This part number represents a micro D-sub connector with a shell size of 15 and a pin to solder cup configuration. All lines are filtered with same capacitance value, which is 100 pF COB. The connector includes an optional #2-56 jack post.



\* Right angle and PC tail length is 0.109. Other lengths available, consult factory.

All capacitance values  $\pm 20\%$  @ 25°C

# Micro D Series Filtered Connectors

## High Performance

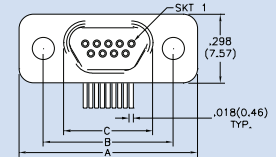
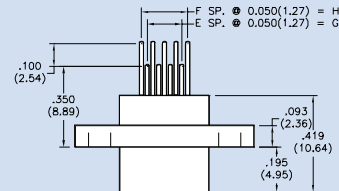
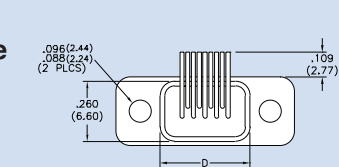
Filter Designation	Type	Capacitance		Dielectric Withstanding Voltage	Working Voltage DC -55°C to +125°C	Minimum Insertion Loss - Decibels (dB) 50 ohm system per MIL-STD-220 (no load)							
		Value	Tolerance			5 MHz	10 MHz	20 MHz	50 MHz	100 MHz	200 MHz	500 MHz	1 GHz
01	FT	100 pF	±20%	300V	100V	—	—	—	—	1	6	14	20
02	FT	470 pF	±20%	300V	100V	—	—	2	8	14	20	28	34
03	FT	820 pF	±20%	300V	100V	—	2	6	13	19	25	33	39
04	FT	1500 pF	±20%	300V	100V	—	5	10	18	24	30	38	44
05	FT	4700 pF	±20%	300V	100V	8	14	20	28	34	40	48	54

## Standard Performance

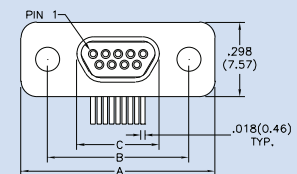
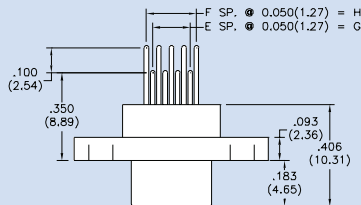
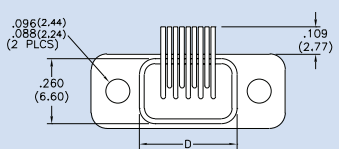
Filter Designation	Type	Capacitance		Dielectric Withstanding Voltage	Working Voltage DC -55°C to +125°C	Minimum Insertion Loss - Decibels (dB) 50 ohm system per MIL-STD-220 (no load)							
		Value	Tolerance			5 MHz	10 MHz	20 MHz	50 MHz	100 MHz	200 MHz	500 MHz	1 GHz
10	COB	100 pF	±20%	300V	100V	—	—	—	—	1	6	14	20
11	COB	470 pF	±20%	300V	100V	—	—	2	8	14	20	28	32
12	COB	820 pF	±20%	300V	100V	—	2	6	13	19	25	32	32
13	COB	1500 pF	±20%	300V	100V	—	5	10	18	24	30	32	32
14	COB	4700 pF	±20%	300V	100V	8	14	20	28	32	32	32	32

## Right Angle PCB

### Receptacle



### Plug



Size	A	B	C (RCPT)	C (Plug)	D	E	F	G	H
9	.775 (19.69)	.565 (14.35)	.388 (9.86)	.330 (8.38)	.390 (9.91)	4	5	.200 (5.08)	.250 (6.35)
15	.925 (23.50)	.715 (18.16)	.538 (13.67)	.480 (12.19)	.540 (13.72)	7	8	.350 (8.89)	.400 (10.16)
21	1.075 (27.31)	.865 (21.97)	.688 (17.48)	.630 (16.00)	.690 (17.53)	10	11	.500 (12.70)	.550 (13.97)
25	1.175 (29.85)	.965 (24.51)	.788 (20.02)	.730 (18.54)	.790 (20.07)	12	13	.600 (15.24)	.650 (16.51)
31	1.325 (33.66)	1.115 (28.32)	.938 (23.83)	.880 (22.35)	.940 (23.88)	15	16	.750 (19.05)	.800 (20.32)
37	1.475 (37.47)	1.265 (32.13)	1.088 (27.64)	1.030 (26.16)	1.090 (27.69)	18	19	.900 (22.86)	.950 (24.13)

Dimensions in inches (mm)

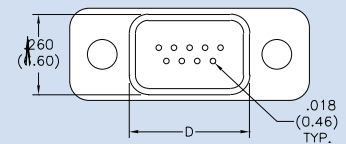
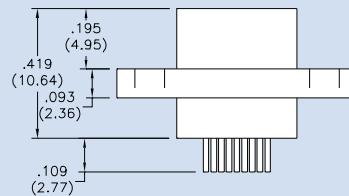
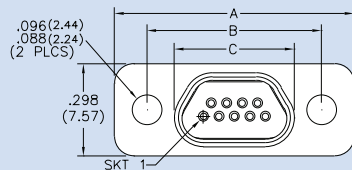
# Micro D Series Filtered Connectors

Size	A	B	C (RCPT)	C (Plug)	D
9	.775 (19.69)	.565 (14.35)	.388 (9.86)	.330 (8.38)	.390 (9.91)
15	.925 (23.50)	.715 (18.16)	.538 (13.67)	.480 (12.19)	.540 (13.72)
21	1.075 (27.31)	.865 (21.97)	.688 (17.48)	.630 (16.00)	.690 (17.53)
25	1.175 (29.85)	.965 (24.51)	.788 (20.02)	.730 (18.54)	.790 (20.07)
31	1.325 (33.66)	1.115 (28.32)	.938 (23.83)	.880 (22.35)	.940 (23.88)
37	1.475 (37.47)	1.265 (32.13)	1.088 (27.64)	1.030 (26.16)	1.090 (27.69)

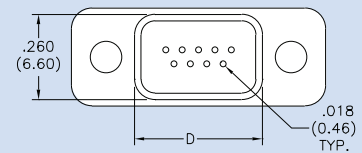
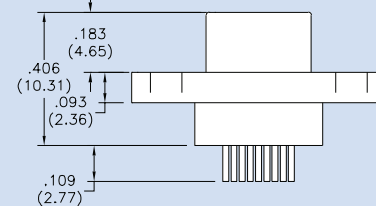
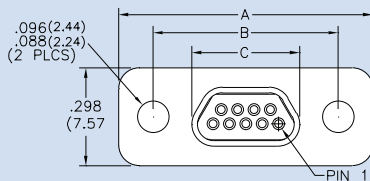
Dimensions in inches (mm)

## Vertical PCB

### Receptacle

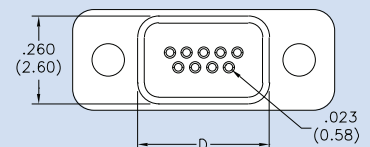
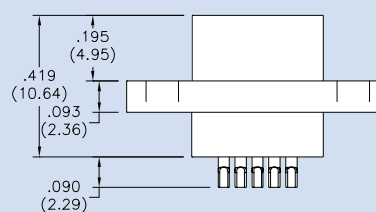
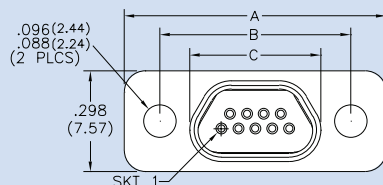


### Plug

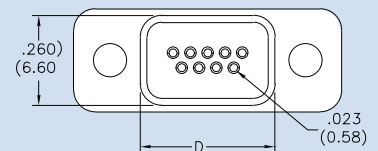
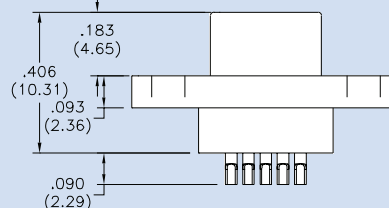
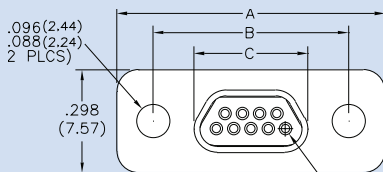


## Solder Cup

### Receptacle

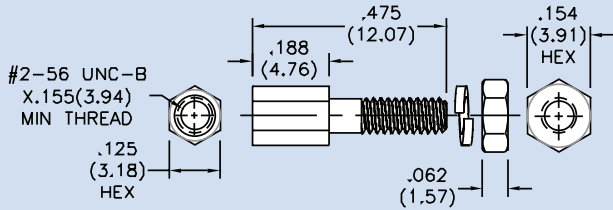


### Plug

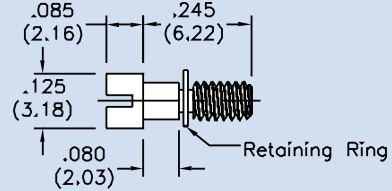


# Micro D Series Filtered Connectors Options

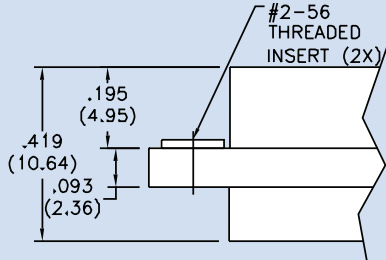
**JP - #2-56 Jack Post M83513/05-07**



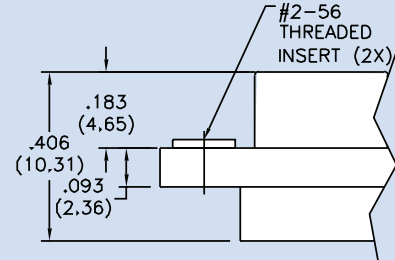
**JS - #2-56 Jack Screw M83513/05-05**



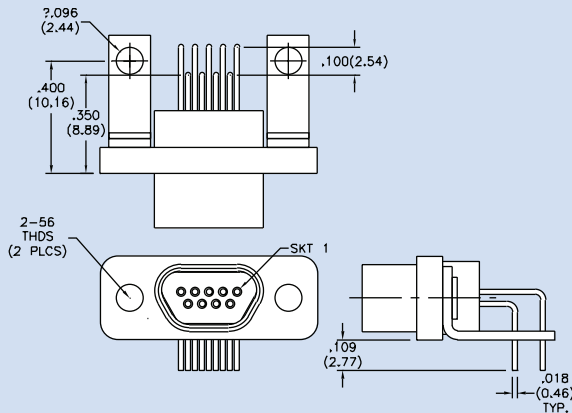
**TI - Threaded Insert Receptacle**



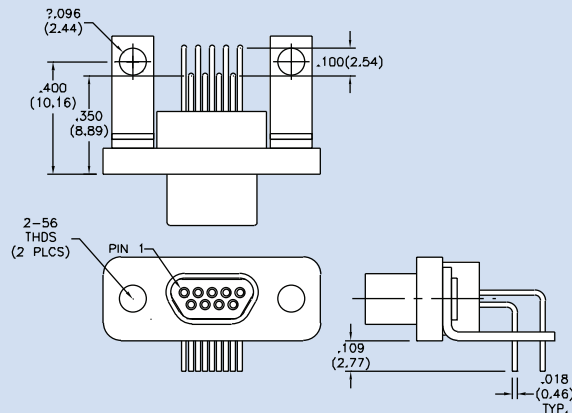
**TI - Threaded Insert Plug**



**GB - Ground Bracket Receptacle**



**GB - Ground Bracket Plug**

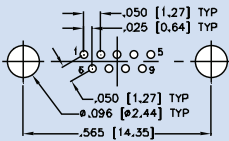


# Micro D Series Filtered Connectors Board and Panel Cutouts

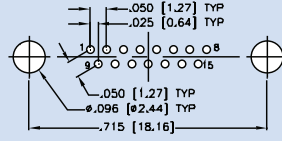
## Vertical PCB Layouts

Pin Connector Shown

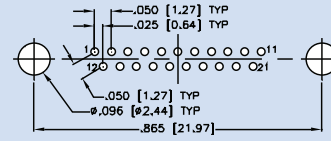
### 9 Contacts



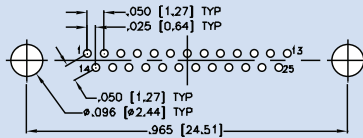
### 15 Contacts



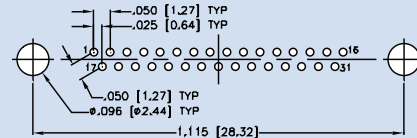
### 21 Contacts



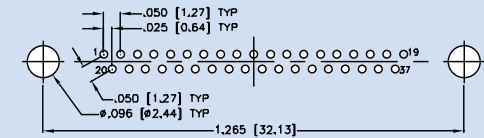
### 25 Contacts



### 31 Contacts



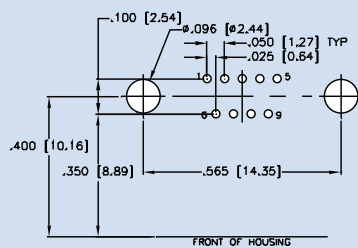
### 37 Contacts



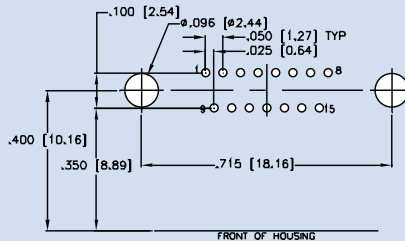
## Right Angle PCB Layouts

Pin Connector Shown

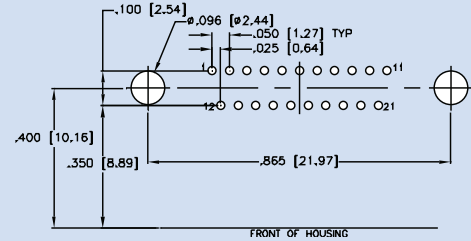
### 9 Contacts



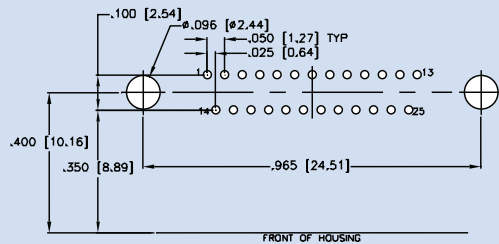
### 15 Contacts



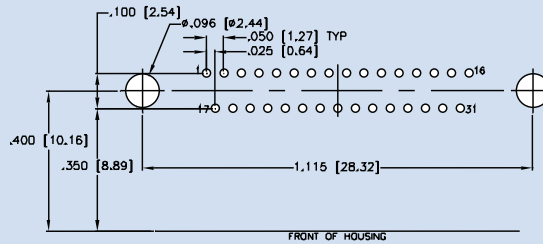
### 21 Contacts



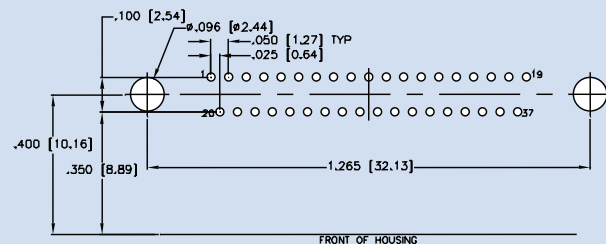
### 25 Contacts



### 31 Contacts



### 37 Contacts



Notes: PC Tail Diameter 0.018 ±0.002 (0.46 ±0.05) Contact numbers shown are pin connector. Reverse for socket. Patterns shown are for connector mounting side of PC board.