

smiths connectors

FILTER D-SUB CONNECTORS

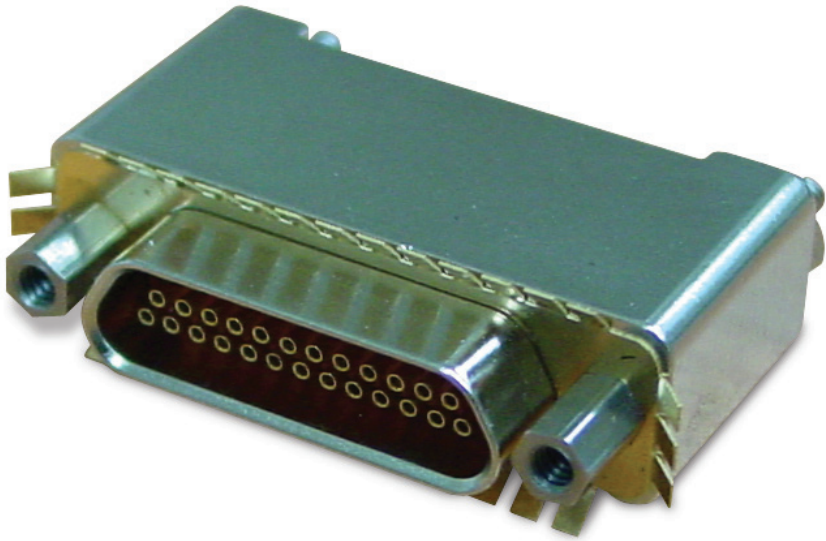


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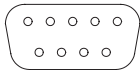
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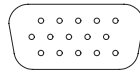
MIL-DTL-24308 D-Subminiature filter connectors are designed to meet or exceed all applicable requirements of the military specification. These connectors are intermateable and interchangeable with the standard non-filtered connectors. Smith Connectors also offers combo D-Sub arrangements for power coaxial and signal contacts mixed arrangements. These layouts include 5W5, 8W8, 17W2, 9W1 and 24W7.

| MATERIALS AND FINISHES | |
|------------------------|--------------------------------|
| Shell | Aluminum alloy/Steel/Composite |
| Insulator | High grade plastic/epoxy |
| Contacts | Copper alloy, gold plate |
| Grommet & Seal | Silicon base elastomer |
| Capacitor | Barium Titanate |
| Inductor | Ferrite bead |

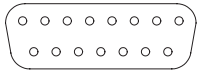
Insert Arrangements



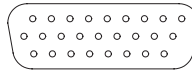
9 #20



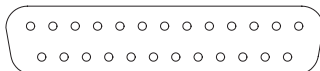
15 #22



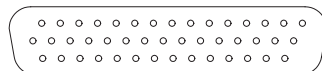
15 #20



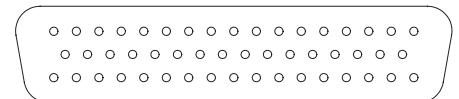
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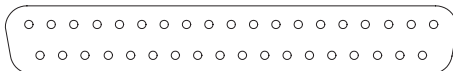
25 #20



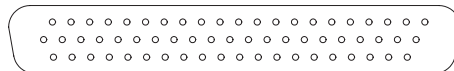
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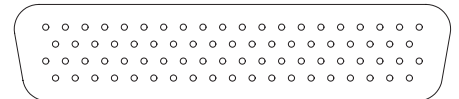
50 #20



37 #20



62 #22

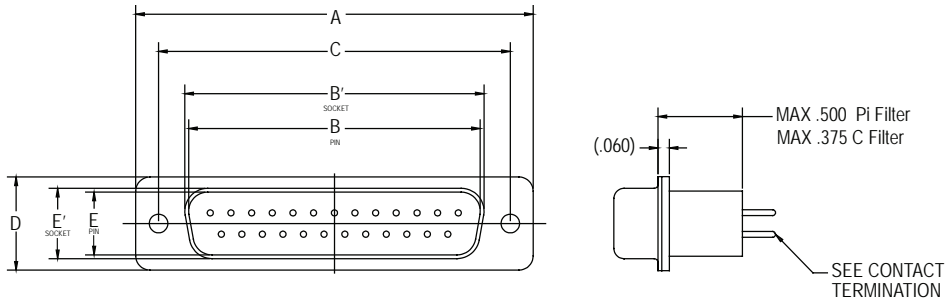


78 #22

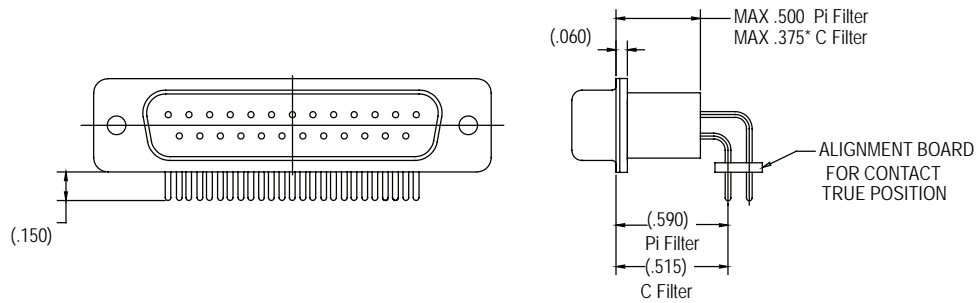
Consult Factory for Combo D-Sub Arrangements.

Smith Connectors provides specialty, enhanced performance connectors and cable assemblies and as such does not currently offer circular, rack and panel, or D-subminiature connectors that are listed on military standard Qualified Products Lists (QPL) per applicable detail specification sheets. Smith Connectors' connectors are fully intermateable with applicable QPL products and meet the applicable requirements of all military standards listed in this catalog.

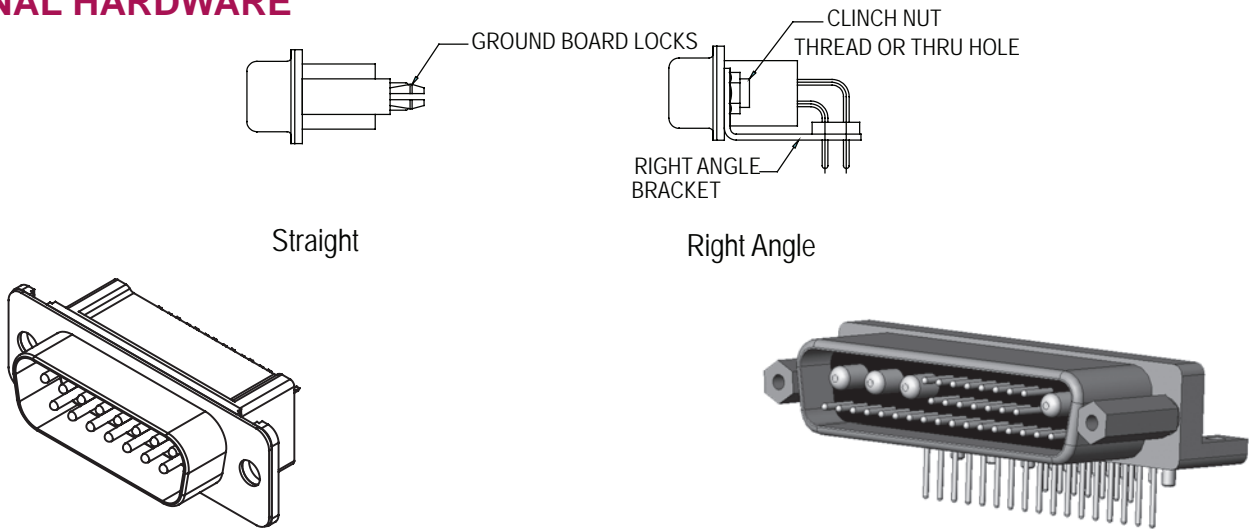
▶ STRAIGHT D-SUBMINIATURE



▶ RIGHT ANGLE D-SUBMINIATURE

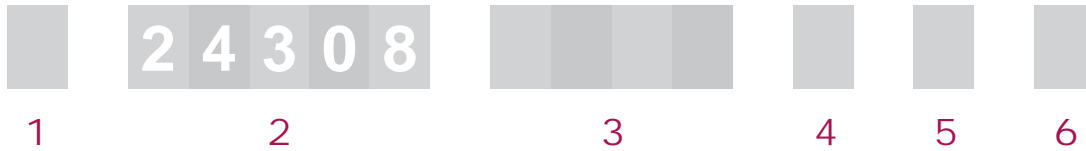


▶ OPTIONAL HARDWARE



| Shell Size | Standard Layout Size 20 | A ± 0.015 | B (Pin) ± 0.005 | B' (Socket) ± 0.005 | C Basic | D ± 0.010 | E (Pin) ± 0.005 | E' (Socket) ± 0.005 |
|------------|-------------------------|--------------|--------------------|------------------------|---------|--------------|--------------------|------------------------|
| E | 9 Contact | 1.213 | .667 | .642 | .984 | .494 | .330 | .310 |
| A | 15 Contact | 1.541 | .995 | .970 | 1.312 | .494 | .330 | .310 |
| B | 25 Contact | 2.088 | 1.535 | 1.150 | 1.852 | .494 | .330 | .310 |
| C | 37 Contact | 2.729 | 2.183 | 2.158 | 2.500 | .494 | .330 | .310 |
| D | 50 Contact | 2.635 | 2.063 | 2.063 | 2.406 | .605 | .437 | .422 |

HOW TO ORDER



1 ▸ FILTER TYPE

Pi, **L**, **C**

2 ▸ PREFIX

3 ▸ CONTACT ARRANGEMENT

LOW DENSITY **9**, **15**, **25**, **37**, **50**

HIGH DENSITY **15HD**, **26HD**, **44HD**, **62HD**, **78HD**

4 ▸ CONTACT TYPE

P PIN

S SOCKET

5 ▸ CONTACT TERMINATION

S SOLDER CUP

P PC TAIL

C CRIMP

6 ▸ PLATING

C CADMIUM (YELLOW CHROMATE)

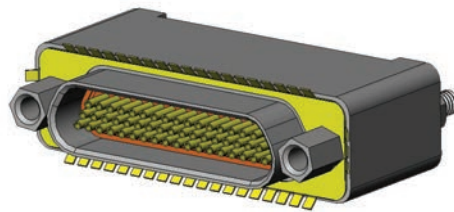
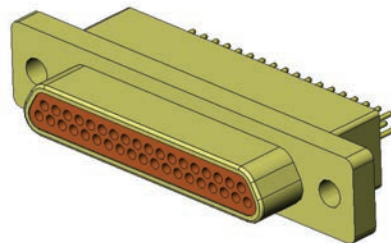
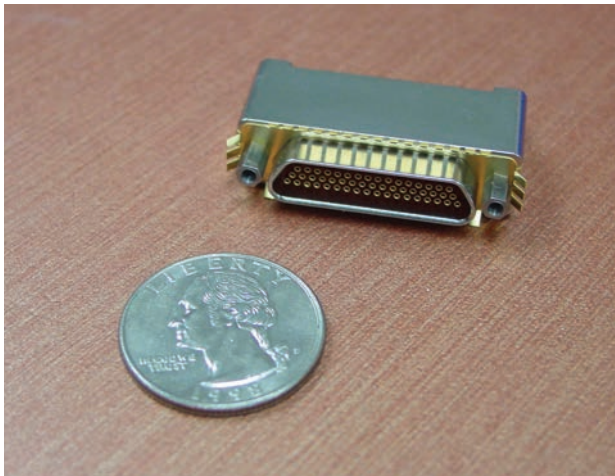
N ELECTROLESS NICKEL

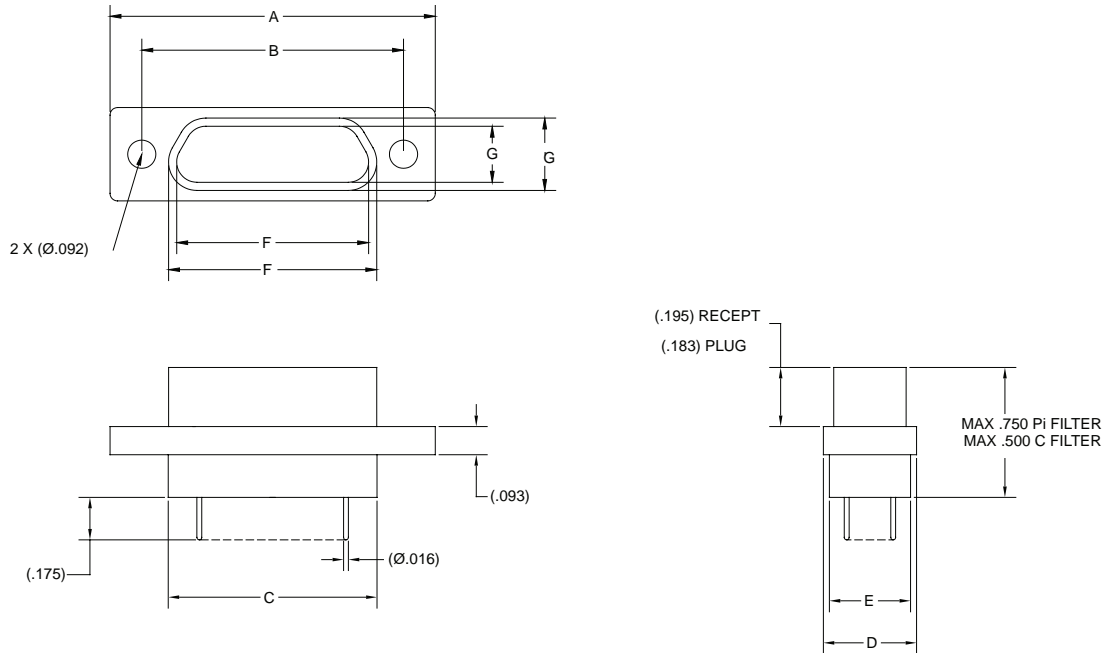


MIL-DTL-83513 Micro-D filter connectors are designed to meet or exceed all applicable requirements of the military specification. These connectors are interchangeable and interchangeable with the standard non-filtered connectors. Unique configurations are also available with customized shells and EMI ground springs.

MATERIALS AND FINISHES

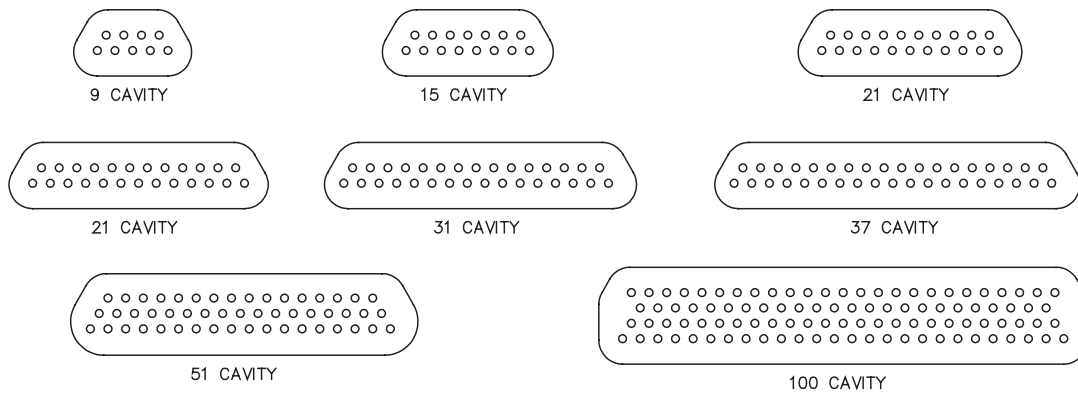
| | |
|----------------|--------------------------|
| Shell | Aluminum alloy |
| Insulator | High grade plastic/epoxy |
| Contacts | Copper alloy, gold plate |
| Grommet & Seal | Silicon base elastomer |
| Capacitor | Barium Titanate |
| Inductor | Ferrite bead |





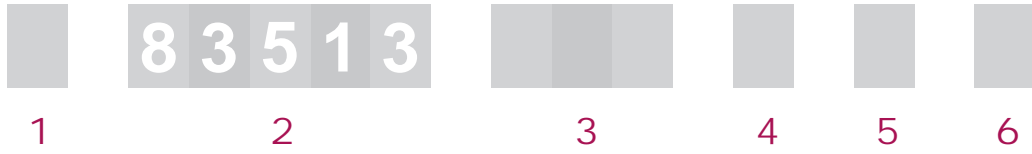
| Cavity | A ± .010 | B Basic | C + .010 -.018 | D ± .010 | E Max | F Basic Recept | F' Basic Plug | G Basic Recept | G' Basic Plug |
|--------|-------------|------------|----------------------|-------------|----------|----------------------|------------------|----------------------|------------------|
| 9 | .775 | .565 | .390 | .298 | .270 | .3342 | .338 | .1852 | .1848 |
| 15 | .925 | .715 | .540 | .298 | .270 | .4842 | .4838 | .1852 | .1848 |
| 21 | 1.075 | .865 | .690 | .298 | .270 | .6342 | .6338 | .1852 | .1848 |
| 25 | 1.175 | .956 | .790 | .298 | .270 | .7342 | .7338 | .1852 | .1848 |
| 31 | 1.325 | 1.115 | .940 | .298 | .270 | .8842 | .8838 | .1852 | .1848 |
| 37 | 1.475 | 1.265 | 1.090 | .298 | .270 | 1.0342 | 1.0338 | .1852 | .1848 |
| 51 | 1.425 | 1.215 | 1.040 | .341 | .310 | .9842 | .9838 | .2282 | .2278 |
| 100 | 2.160 | 1.800 | 1.432 | .384 | .360 | 1.3842 | 1.3838 | .2712 | .2708 |

Insert Arrangements



* Consult Factory For Additional or Custom Layouts

HOW TO ORDER



1 ▶ FILTER TYPE

Pi, **L**, **C**

2 ▶ PREFIX

3 ▶ CONTACT ARRANGEMENT

9, **15**, **21**, **25**, **31**, **37**, **51**, **100**

4 ▶ CONTACT TYPE

P PIN

S SOCKET

5 ▶ CONTACT TERMINATION

S SOLDER CUP

P PC TAIL

F FLYING LEADS

R RIGHT ANGLE*

6 ▶ PLATING

C CADMIUM (YELLOW CHROMATE)

N ELECTROLESS NICKEL

* Consult factory for alternate plating options.
Consult factory for footprint dimensions.

Smith Connectors provides specialty, enhanced performance connectors and cable assemblies and as such does not currently offer circular, rack and panel, or D-subminiature connectors that are listed on military standard Qualified Products Lists (QPL) per applicable detail specification sheets. Smith Connectors' connectors are fully intermateable with applicable QPL products and meet the applicable requirements of all military standards listed in this catalog.

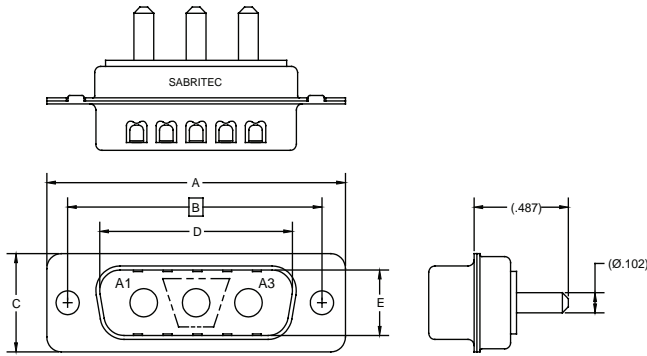


Combo D-Sub 3W3/3WK3 Filtered Power Connectors

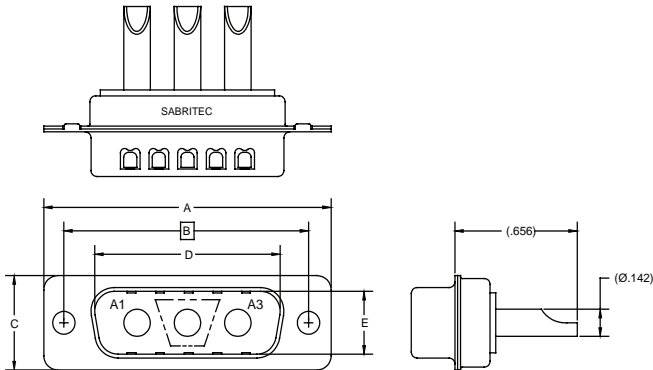
Smith Connectors offers a complete line of high powered EMI filtered D-Sub connectors including the single row size #8 power contacts (3W3, 3WK3, etc.). Our ceramic planar capacitors can easily achieve up to 47 nF per line on this series. The planar capacitor provides excellent attenuation as well as meeting the Bellcore requirements for 1000 VDC Dielectric Withstanding Voltage. The materials used in the construction meet the UL flammability requirements of 94V-0. Smith Connectors' filtered D-Sub connectors are intermateable with standard non-filter D-Sub connectors.

This series is available in PC tail, solder cup and solderless press-fit terminations into standard plated-thru holes. Smith Connectors also offers combo D-Sub arrangements for power coaxial and signal contacts mixed arrangements including layouts 5W5, 8W8, 17W2, 9W1 and 24W7.

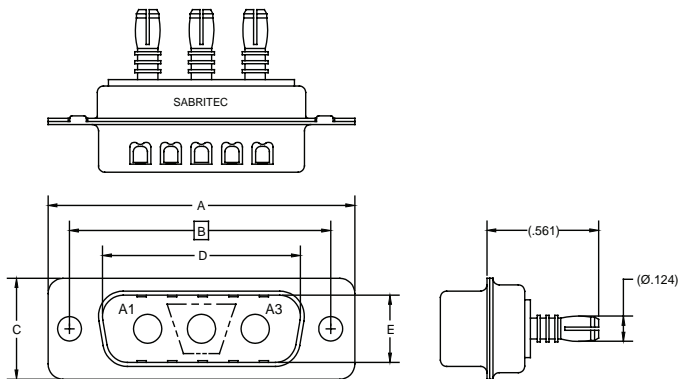
PC Tail



Solder Cup



Press-Fit



D-Sub High Power Plugs

| PART NUMBER | EMI FILTER | | VOLTAGE RATING |
|--------------------|------------|--------|----------------|
| | CAP VALUE | LAYOUT | |
| 310031-1000 | 1 NF | 3W3 | 400 VDC |
| 310032-1001 | 1 NF | 3WK3 | 400 VDC |
| 310031-1002 | 5 NF | 3W3 | 400 VDC |
| 310032-1003 | 5 NF | 3WK3 | 400 VDC |
| 310031-1004 | 47 NF | 3W3 | 400 VDC |
| 310032-1005 | 47 nF | 3WK3 | 400 VDC |

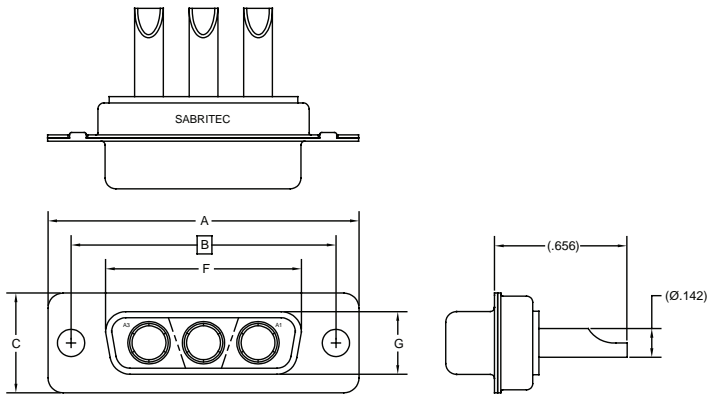
| PART NUMBER | EMI FILTER | | VOLTAGE RATING |
|--------------------|------------|--------|----------------|
| | CAP VALUE | LAYOUT | |
| 310031-2000 | 1 NF | 3W3 | 400 VDC |
| 310032-2001 | 1 NF | 3WK3 | 400 VDC |
| 310031-2002 | 5 NF | 3W3 | 400 VDC |
| 310032-2003 | 5 NF | 3WK3 | 400 VDC |
| 310031-1004 | 47 NF | 3W3 | 400 VDC |
| 310032-2005 | 47 nF | 3WK3 | 400 VDC |

| PART NUMBER | EMI FILTER | | VOLTAGE RATING |
|--------------------|------------|--------|----------------|
| | CAP VALUE | LAYOUT | |
| 310031-4000 | 1 NF | 3W3 | 400 VDC |
| 310032-4001 | 1 NF | 3WK3 | 400 VDC |
| 310031-4002 | 5 NF | 3W3 | 400 VDC |
| 310032-4003 | 5 NF | 3WK3 | 400 VDC |
| 310031-4004 | 47 NF | 3W3 | 400 VDC |
| 310032-4005 | 47 nF | 3WK3 | 400 VDC |

| Dimensions | A | B | C | D | E | F | G |
|------------|--------|-------|--------|--------|--------|--------|--------|
| | + .010 | Basic | + .010 | + .004 | + .004 | + .004 | + .004 |
| | 1.541 | 1.312 | 0.494 | 0.995 | 0.329 | 0.970 | 0.310 |

► D-SUB HIGH POWER RECEPTACLES

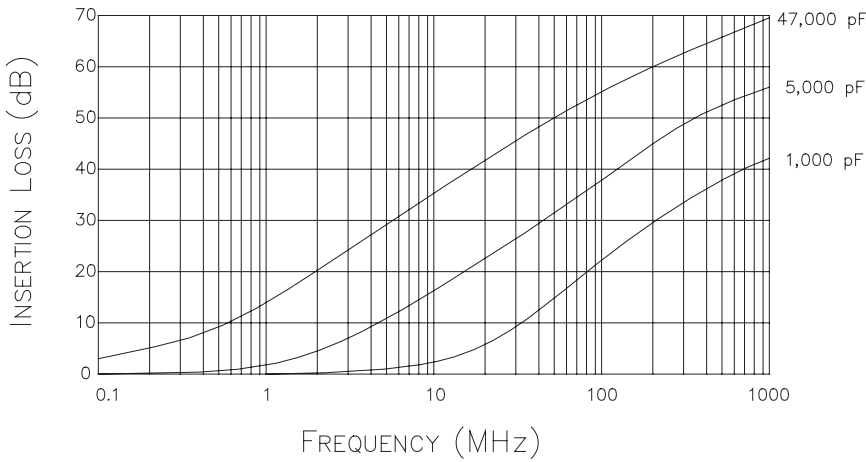
Solder Cup



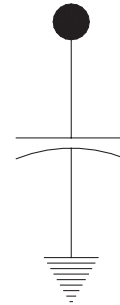
| PART NUMBER | EMI FILTER | | VOLTAGE RATING |
|--------------------|------------|--------|----------------|
| | CAP VALUE | LAYOUT | |
| 310031-3000 | 1 nF | 3W3 | 400 VDC |
| 310032-3001 | 1 nF | 3WK3 | 400 VDC |
| 310031-3002 | 5 nF | 3W3 | 400 VDC |
| 310032-3003 | 5 nF | 3WK3 | 400 VDC |
| 310031-3004 | 47 nF | 3W3 | 400 VDC |
| 310032-3005 | 47 nF | 3WK3 | 400 VDC |

| Dimensions | A +.010 | B Basic | C +.010 | D +.004 | E +.004 | F +.004 | G +.004 |
|------------|------------|------------|------------|------------|------------|------------|------------|
| | 1.541 | 1.312 | 0.494 | 0.995 | 0.329 | 0.970 | 0.310 |

Insertion Loss Curves



“C” Filter Schematic



INSERTION LOSS TABLE

| Frequency (MHz) | C1 (1 nF) | C5 (5 nF) | C47 (47 nF) |
|-----------------|-----------|-----------|-------------|
| 1 | 0.1 | 1.4 | 15 |
| 10 | 4 | 16 | 34 |
| 100 | 22 | 36 | 52 |
| 1000 | 42 | 56 | 68 |

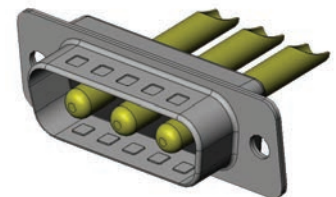
ELECTRICAL CHARACTERISTICS

| | |
|--------------------------------|---|
| Operating Temperature | -55°C to +125°C |
| Voltage | 1,000 VDC DWV 400 VDC Working |
| DC Current Rating | 30 Amps max per contact |
| Surge Voltage | 1,000 Volts, 1.2 x 50µ's Waveform (12 ohms) 1,000 Volts, 8 x 20µ's Waveform (2 ohms) |
| Insulation Resistance | 5,000 Mega ohms @ 400 VDC |
| Capacitance | 1 nF, 5 nF, 47 nF, (± 20%) |
| International Standard for EMC | Meets or exceeds EN 61000-4-5 IEC 1000-4-5 |

MATERIALS AND FINISHES

| | |
|--------------|--|
| Shell | Tin plated steel |
| Insulator | Thermoplastic (UL 94V-Ø rated) |
| Contacts | Copper Alloy, gold plate per ASTM-B488 over nickel plate per QQ-N-290 |
| Filter Array | Monolithic capacitor, X7R material |

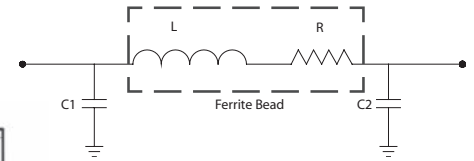
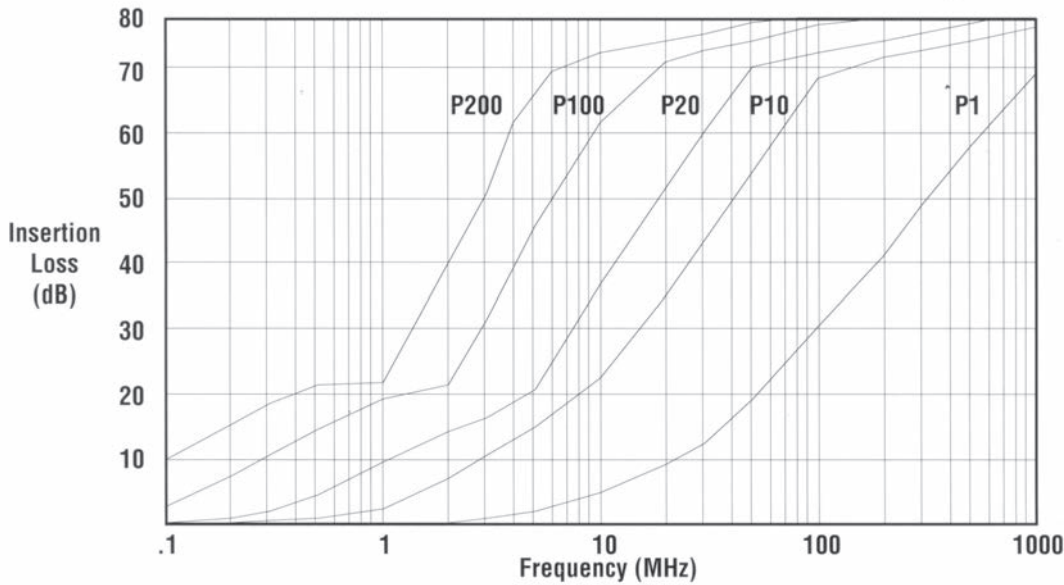
Terminations
PC Tail
Solder Cup
Press Fit



▶ ELECTRICAL CHARACTERISTICS - 'PI' SECTION

| FILTER DESCRIPTION | P200 | P100 | P76 | P38 | P20 | P10 | P8 | P4 | P2 | P1 |
|--|---|------|-----|-----|-----|-------------------------|----|----|----|----|
| Operating Temperature Range | -55°C to + 125°C | | | | | | | | | |
| Voltage Rating | 100 VDC | | | | | 200 VDC-120 Vrms 400 Hz | | | | |
| Current Rating DC | 15 amps size 16/7.5 amps size 20/5 amps size 22 | | | | | | | | | |
| Insulation Resistance | 5000 megohms min. @100 VDC | | | | | | | | | |
| Current Rating R.F. | 3.0 amps max. | | | | | | | | | |
| DWV Sea Level w/ 50 micro-amps max. charge/discharge | 250 VDC | | | | | 500 VDC | | | | |

▶ 'PI' SECTION CURVES



▶ INSERTION LOSS TABLE

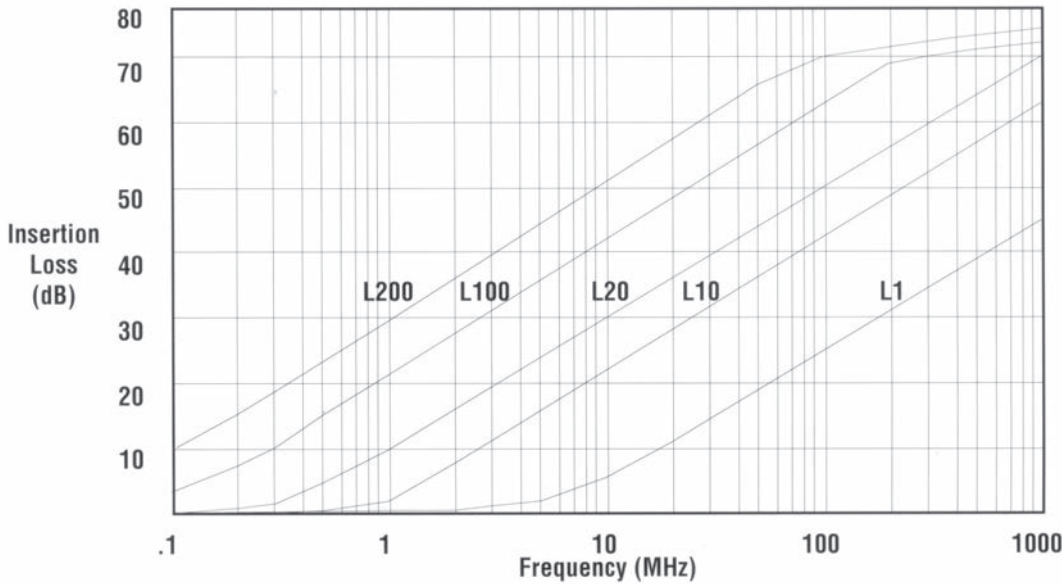
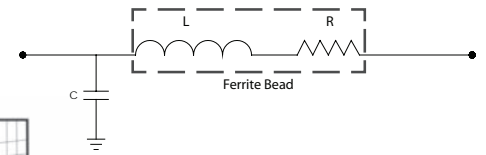
| FILTER DESCRIPTION | SEE NOTES | P200 | P100 | P76 | P38 | P20 | P10 | P8 | P4 | P2 | P1 |
|--|-----------|------|------|------|------|------|------|------|------|------|------|
| Capacitance in Nanofarads @ 1Khz., 1VRMS | | 160 | 80 | 60 | 30 | 16 | 8 | 6.4 | 3.2 | 1.6 | .8 |
| | | 240 | 120 | 91 | 46 | 24 | 12 | 9.2 | 4.8 | 2.4 | 1.2 |
| Minimum No Attenuation loss @ 25° | Freq Mhz | | | | | | | | | | |
| | .1 | 8 | 4.1 | 3 | 1 | .3 | .1 | - | - | - | - |
| | 1.0 | 22.2 | 19.6 | 18.2 | 13.3 | 8.2 | 3.9 | 2.9 | .9 | .2 | - |
| | 2 | 32.8 | 21.7 | 19.7 | 16.8 | 12.7 | 8 | 6.6 | 2.9 | 1 | .3 |
| | 10 | 73.5 | 61 | 57 | 44.4 | 31.5 | 20.6 | 18.3 | 12.8 | 8.1 | 4.0 |
| | 100 | 85+ | 85+ | 85+ | 85+ | 78 | 65.8 | 61.9 | 49.6 | 37.3 | 25.6 |
| 500-1k | 85+ | 85+ | 85+ | 85+ | 85+ | 85+ | 80 | 75 | 64 | 52 | |

Notes:
 1. P200 & P100 Capacitance Values for Size 20 Contact Arrangement & Larger
 2. No Load Minimum Attenuation Values per MIL-STD-220
 3. Capacitance in Nanofarads (Nominal Value)
 4. Consult Factory for Higher Voltages & Capacitance Values

▶ ELECTRICAL CHARACTERISTICS - 'L' SECTION

| FILTER DESCRIPTION | L200 | L100 | L76 | L38 | L20 | L10 | L8 | L4 | L2 | L1 |
|--|---|------|-----|-----|-----|-------------------------|----|----|----|----|
| Operating Temperature Range | -55°C to + 125°C | | | | | | | | | |
| Voltage Rating | 100 VDC | | | | | 200 VDC-120 Vrms 400 Hz | | | | |
| Current Rating DC | 15 amps size 16/7.5 amps size 20/5 amps size 22 | | | | | | | | | |
| Insulation Resistance | 5000 megohms min. @100 VDC | | | | | | | | | |
| Current Rating R.F. | 3.0 amps max. | | | | | | | | | |
| DVV Sea Level w/ 50 micro-amps max. charge/discharge | 250 VDC | | | | | 500 VDC | | | | |

▶ 'L' SECTION CURVES



▶ INSERTION LOSS TABLE

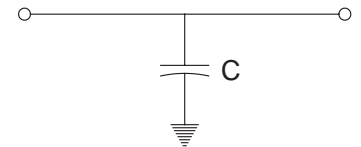
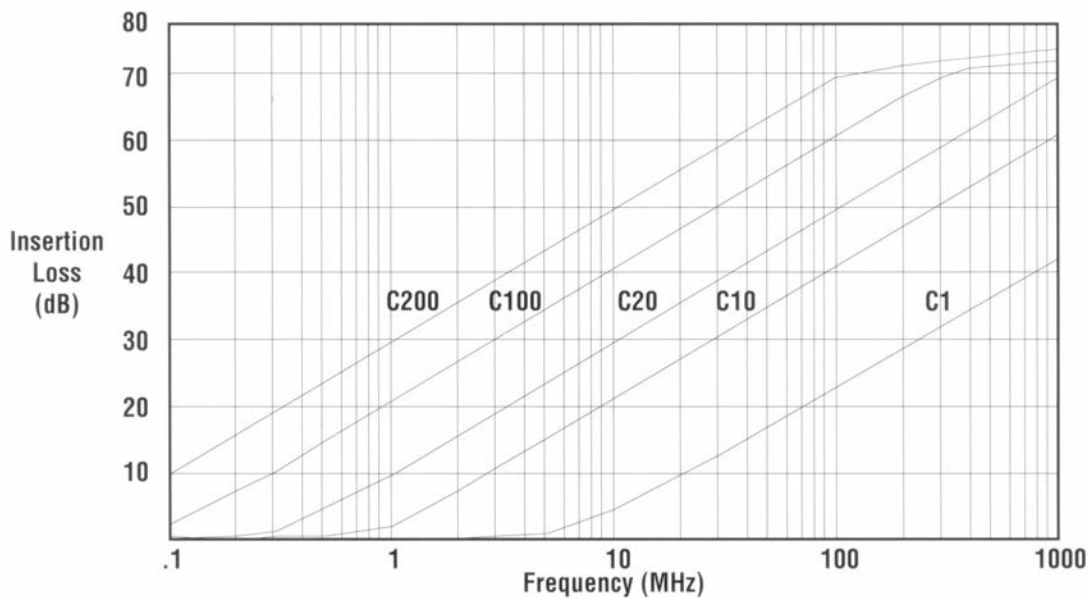
| FILTER DESCRIPTION | SEE NOTES | L200 | L100 | L76 | L38 | L20 | L10 | L8 | L4 | L2 | L1 |
|---|-----------|------|------|------|------|------|------|------|------|------|------|
| Capacitance in Nanofarads @ 1Khz, 1VRMS | | 160 | 80 | 60 | 30 | 16 | 8 | 6.4 | 3.2 | 1.6 | .8 |
| | | 240 | 120 | 91 | 46 | 24 | 12 | 9.2 | 4.8 | 2.4 | 1.2 |
| Minimum No Attenuation loss @ 25° | Freq Mhz | | | | | | | | | | |
| | .1 | 8.6 | 4.1 | 3 | 1 | .3 | .1 | - | - | - | - |
| | 1.0 | 28 | 22 | 20.1 | 14.2 | 8.6 | 4 | 3 | .9 | .2 | - |
| | 2 | 34.3 | 28.3 | 26.3 | 20.3 | 14.4 | 8.8 | 7.2 | 3.1 | 1 | - |
| | 10 | 49 | 43 | 41.1 | 35 | 29 | 23 | 21.1 | 15.1 | 9.5 | 4.8 |
| | 100 | 69.9 | 63.9 | 62 | 55.9 | 49.9 | 43.9 | 42 | 35.9 | 29.9 | 23.9 |
| 500-1k | 83.7 | 77.7 | 75.8 | 69.7 | 63.7 | 57.7 | 55.8 | 49.7 | 43.7 | 37.7 | |

Notes:
 1. L200, L100 & L76 Capacitance Values for Size 20 Contact Arrangement & Larger
 2. No Load Minimum Attenuation Values per MIL-STD-220
 3. Capacitance in Nanofarads (Nominal Value)
 4. Consult Factory for Higher Voltages & Capacitance Values

▶ ELECTRICAL CHARACTERISTICS - 'C' SECTION

| FILTER DESCRIPTION | C200 | C100 | C76 | C38 | C20 | C10 | C8 | C4 | C2 | C1 |
|--|---|------|-----|-----|-----|-------------------------|----|----|----|----|
| Operating Temperature Range | -55°C to + 125°C | | | | | | | | | |
| Voltage Rating | 100 VDC | | | | | 200 VDC-120 Vrms 400 Hz | | | | |
| Current Rating DC | 15 amps size 16/7.5 amps size 20/5 amps size 22 | | | | | | | | | |
| Insulation Resistance | 5000 megohms min. @100 VDC | | | | | | | | | |
| Current Rating R.F. | 3.0 amps max. | | | | | | | | | |
| DWV Sea Level w/ 50 micro-amps max. charge/discharge | 250 VDC | | | | | 500 VDC | | | | |

▶ 'C' SECTION CURVES



▶ INSERTION LOSS TABLE

| FILTER DESCRIPTION | SEE NOTES | C200 | C100 | C76 | C38 | C20 | C10 | C8 | C4 | C2 | C1 |
|--|-----------|------|------|------|------|------|-----|------|------|-----|-----|
| Capacitance in Nanofarads @ 1Khz., 1VRMS | | 160 | 80 | 60 | 30 | 16 | 8 | 6.4 | 3.2 | 1.6 | .8 |
| | | 240 | 120 | 91 | 46 | 24 | 12 | 9.2 | 4.8 | 2.4 | 1.2 |
| Minimum No Attenuation loss @ 25° | Freq Mhz | | | | | | | | | | |
| | .1 | 8.6 | 4.1 | 3 | 1 | .3 | .1 | - | - | - | - |
| | 1.0 | 28 | 22 | 20.1 | 14.2 | 8.6 | 4.1 | 3 | 1 | .3 | .1 |
| | 2 | 34 | 28 | 26.1 | 20.1 | 14.2 | 8.6 | 7 | 3 | 1 | .3 |
| | 10 | 48 | 42 | 40 | 34 | 28 | 22 | 20.1 | 14.2 | 8.6 | 4.1 |
| | 100 | 68 | 62 | 60 | 54 | 48 | 42 | 40 | 34 | 28 | 22 |
| 500-1k | 82 | 76 | 74 | 68 | 62 | 56 | 54 | 48 | 42 | 36 | |

Notes:
 1. C200, C100 & C76 Capacitance Values for Size 20 Contact Arrangement & Larger
 2. No Load Minimum Attenuation Values per MIL-STD-220
 3. Capacitance in Nanofarads (Nominal Value)
 4. Consult Factory for Higher Voltages & Capacitance Values

Smith Connectors connectors conform to the applicable military specifications and standards for materials, finishes and mechanical form, fit, and function. Filter connectors are fully intermateable and interchangeable in most instances with standard non-filtered QPL MIL-SPEC connectors.



| MATERIALS AND FINISHES | |
|------------------------|--|
| Shell & Jam Nut | Aluminum Alloy Electroless Nickel per MIL-C-26074 |
| Pin Contacts | Brass per ASTM B16 Gold Plate per MIL-G-45204 |
| Socket & Contacts | Copper Alloy Gold Plate per MIL-G-45204 |
| Insulators | High Grade Plastic/Epoxy |
| Seal & Grommet | Silicon Base Elastomer |

| PRODUCTION AUTOMATION TEST SYSTEM MEASUREMENTS | | | |
|--|-------------------|---------------|-------|
| | Range | Accuracy | Notes |
| Capacitance | 1 pF-1µf | 0.2% + 0.1 pf | 1 |
| DF | 0.00001-10 | 1% | 2 |
| Inductance | 100 nH-10KH | 0.2%+10 nH | 1 |
| IR | 1 K Ohm - 5 T Ohm | 1% | 3,4,5 |
| DWV | 10 pA-100 mA | 1%+10 pA | 3,4,6 |
| VR | 10 mV-100V | 0.2% + 10 mV | 7 |
| Ground & Contact Resistance | 0.1 mV-1V | 0.1%+0.1 mV | 7 |

- Notes:**
1. Frequency = 20 Hz to 1 MHz
 2. Dissipation factor
 3. With 5-500 volts applied
 4. Measures each pin to all other pins grounded to shell
 5. Insulation resistance
 6. Dielectric withstanding voltage
 7. Isource = 1nA-1A

Performance Data

Smith Connectors' Filter Connectors meet or exceed the applicable requirements of the following specifications:

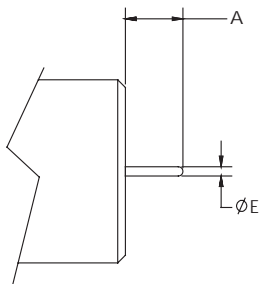
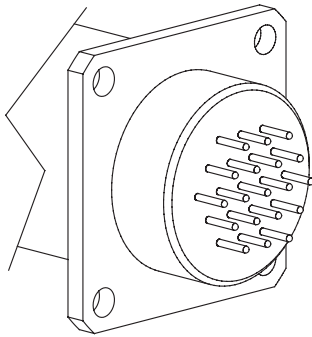
- MIL-DTL-38999 MIL-C-26482
- MIL-DTL-83723 MIL-DTL-26500
- MIL-DTL-24308 MIL-DTL-83723
- MIL-DTL-83513 MIL-C-81511
- MIL-DTL-83527 ARINC 600
- ARINC 404 (MIL-C-81659)

Smith Connectors connectors can meet qualification requirements of MIL-DTL-38999, MIL-C-26482, ARINC 404 (MIL-C-81659), and ARINC 600. Smith Connectors can perform most test requirements in-house. This includes both electrical and mechanical testing for qualification, engineering evaluation and final acceptance. All products are available for space grade applications.

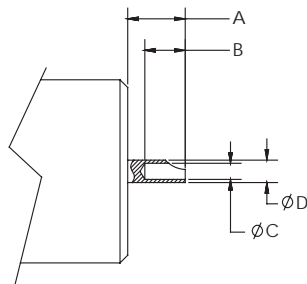
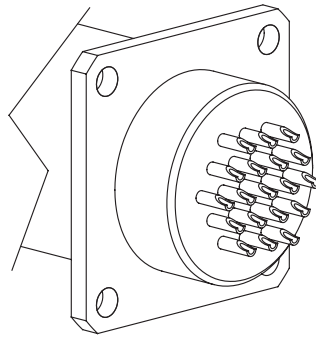
All specifications subject to change without notice.

Smith Connectors provides specialty, enhanced performance connectors and cable assemblies and as such does not currently offer circular, rack and panel, or D-subminiature connectors that are listed on military standard Qualified Products Lists (QPL) per applicable detail specification sheets. Smith Connectors' connectors are fully intermateable with applicable QPL products and meet the applicable requirements of all military standards listed in this catalog.

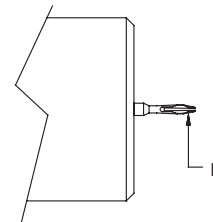
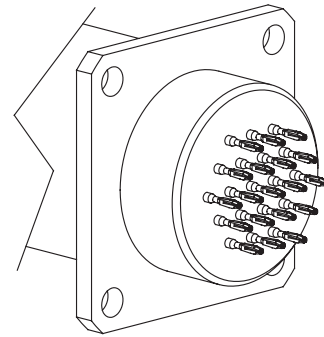
PC TAIL



SOLDER CUP

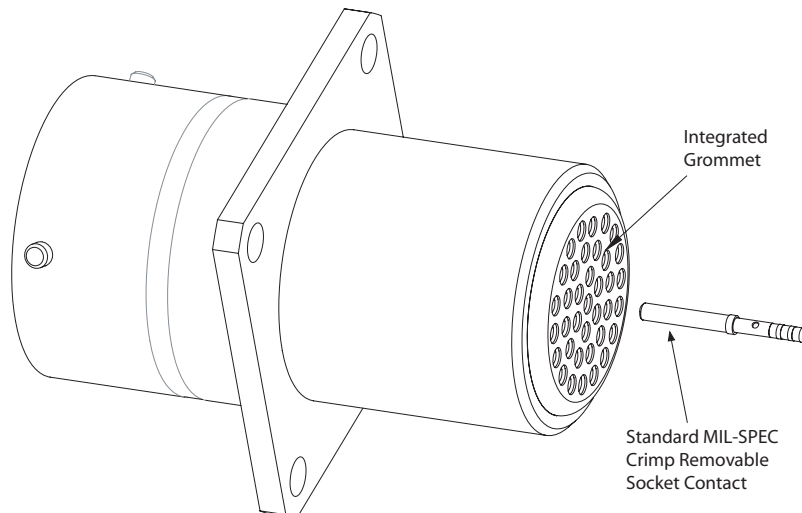


COMPLIANT PRESS-FIT (SOLDERLESS)



| DIMENSIONS | | | | | | |
|--------------|-------------|--------------|--------------|--------------|-------------|---------------------------------------|
| Contact Size | A + .025 | B | C | D | E + .003 | F |
| 22 | 0.175 | .125 .094 | .040 .035 | .055 .051 | .020 | PCB Finished Hole 0.026 + .002 |
| 20 | | .156 .125 | .048 .042 | .088 .061 | .030 | Consult factory for alternate size |
| 16 | | .172 | .082 .069 | .103 .097 | .050 | |
| 12 | | .141 | .120 .112 | .142 .136 | .065 | |

Crimp / Removable*



* Add 0.700" to overall length for crimp removable connector with integrated grommet.

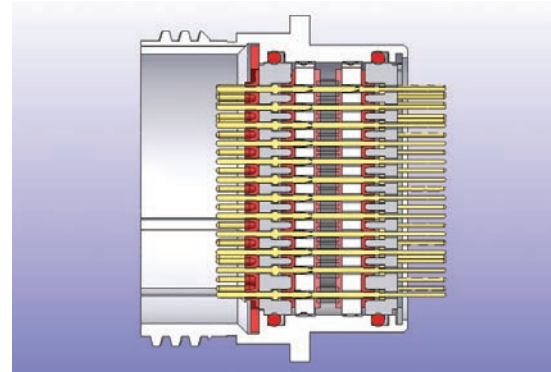
Smith Connectors offers filtered connectors that are capable of providing exceptional low pass filtering and effective insertion loss without the use of soldered components.

Smith Connectors has qualified the solderless filter connector design to the applicable requirements listed in MIL-DTL-38999. For the qualification test report summary, please visit the technical notes section of our website.

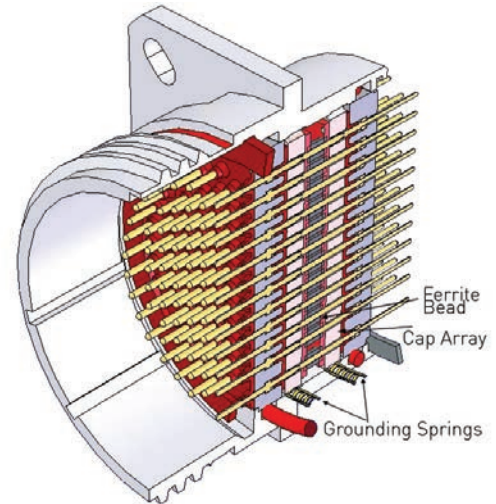
Solderless filter connectors contain a specially designed contact clip to make the connection from the signal/power contact to the capacitor array. An EMI ground spring provides a low resistance path between the capacitor array and connector shell. These connectors meet the same stringent electrical and mechanical requirements of soldered type filter connectors. A uniquely designed seal allows for water wash immersion of the connector in the unmated condition.

BENEFITS OF SOLDERLESS FILTER TECHNOLOGY

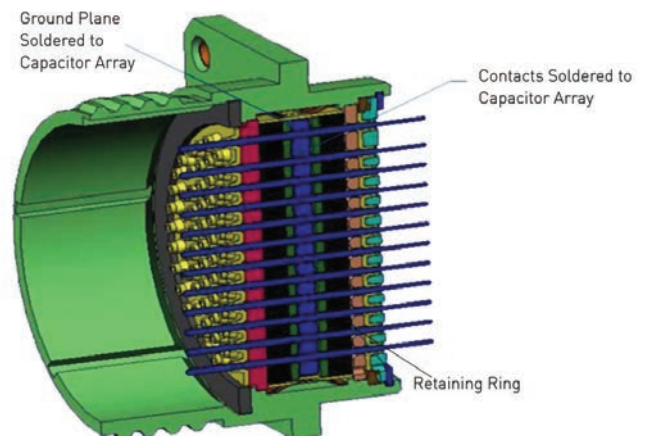
- ▶ RoHS Compliant
- ▶ No Solder design (not potted)
- ▶ Reworkable filter module assembly
- ▶ Modular construction
- ▶ High temperature lead free solder tolerant
- ▶ Qualification data available upon request



Solderless Filter Assembly



Solder Filter Assembly

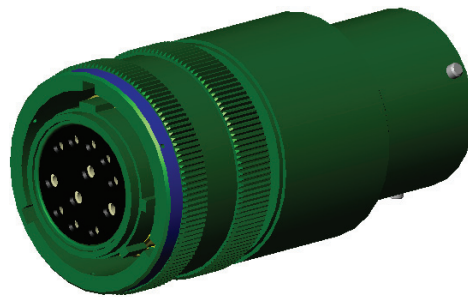


| MATERIALS AND FINISHES | |
|------------------------|--------------------------------|
| Connector Shell | Aluminum alloy/Steel/Composite |
| Insulator | High grade plastic/epoxy |
| Contacts | Copper alloy, gold plate |
| Grommet & Seal | Silicon base elastomer |
| Jam Nut (if used) | Aluminum alloy |
| Capacitor | Barium Titanate |
| Inductor | Ferrite bead |



Non-filter applications can easily be upgraded to EMI/Transient protection without modification to the system with Smith Connectors' In-Line Filter Adapters. Filter adapters provide the system designer great flexibility in situations where the filtering or system requirements are subject to change. The adapters are designed to be installed between the existing plug and receptacle without having to re-wire or disassemble the system. Both in-line cable and bulkhead/panel mount versions are available. Adapters can be built for any connector series including MIL-DTL-38999, MIL-C-26482, MIL-DTL-83723, MIL-DTL-24308, MIL-DTL-83513, ARINC 404, and ARINC 600. Consult the factory for more information.

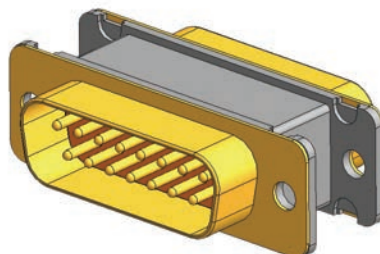
MIL-DTL-38999 Series I Adapter



MIL-DTL-38999 Series III Adapter



MIL-DTL-24308 D-Subminiature Adapter





SMITHS CONNECTORS GLOBAL SUPPORT

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