

MIL-DTL-83723

MIL-DTL-83723 Series III / MIL-DTL-26500 filter connectors are designed to meet or exceed all applicable requirements of the military specifications. The filter connectors are interchangeable and interchangeable with standard non-filtered connectors.

Smiths Interconnect designs and manufactures a full spectrum of sophisticated filter connector products. Our specialty is in the design of interconnect solutions addressing EMI/RFI filtering, and transient protection to meet demanding HIRF and Lightning requirements.

In addition to MIL-Spec interface type products, many of our designs are unique, built to conform to customer specifications requiring a high level of integration, special packaging, and critical electrical performance. Innovation is our distinction and our products address a wide variety of applications. Our achievements lead the industry in the design and manufacture of special filter connector products.

Our Design Strategy

Smiths Interconnect's design strategy for filter connectors is based on extensive experience with filter capacitor arrays and diodes. Our engineers understand the extreme environmental conditions that can cause a filter or diode to fail or, worse yet, cause a system dysfunction. This design strategy is built on the foundation of system reliability and the efficient use of available space. The capacitor array is protected from thermally induced mechanical stresses by a barrier located between the capacitor array surface and the epoxy filled region. This barrier isolates the epoxy and the ceramic array and prevents damage to the array from the expansion influence of the epoxy.

Modularization

Smiths Interconnect uses a disciplined design approach that employs methods of grouping multiple components into subassemblies wherever feasible. Such subassemblies may include a filter module, diode module, circuit assembly module and a transition interface assembly. Modularization results in cleaner, more standardized designs that provide flexibility in maintaining and upgrading the connector. An important advantage of modularization is that individual modules may be removed or replaced in the field without disturbing other subassemblies and components.

Integration

There is considerable unused space available in a standard non-filtered connector. Smiths Interconnect takes advantage of this space by removing components from elsewhere in the system and integrating them within the connector, freeing up valuable board space. Isolating components electrically eliminates external wire connections and decreases crosstalk. The connector shell protects critical components from environmental or mechanical damage.



Type T



Type B

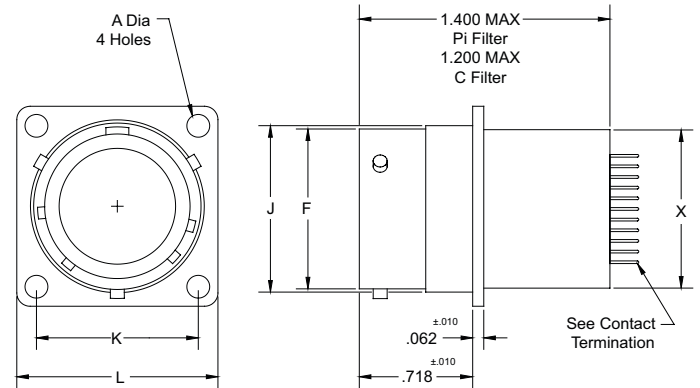
Material and Finishes

Shell	Aluminum alloy/Steel/Composite
Insulator	High grade plastic/epoxy
Contacts	Copper alloy, gold plate
Grommet & Seal	Silicon base elastomer
Jam Nut	Aluminum alloy
Ground Plane	Brass, silver plate
Capacitor	Barium Titanate
Inductor	Ferrite bead

MIL-DTL-83723

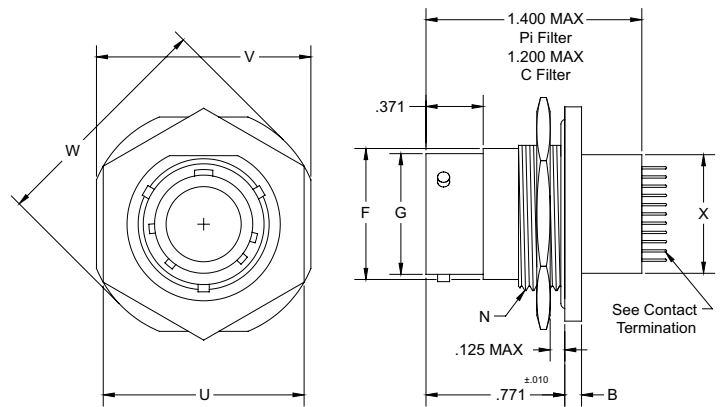
Square Flange Receptacle - Type B

Shell Size	A Max	K BSC	L	J Dia	F Dia	X Max Dia
8	0.120	0.594	0.812	0.561	0.536 0.531	0.500
10	0.120	0.719	0.937	0.696	0.659 0.654	0.620
12	0.120	0.812	1.031	0.875	0.829 0.824	0.740
14	0.120	0.906	1.125	0.925	0.898 0.893	0.890
16	0.120	0.969	1.250	1.062	1.025 1.020	1.000
18	0.120	1.062	1.343	1.187	1.131 1.126	1.120
20	0.120	1.156	1.437	1.312	1.256 1.251	1.250
22	0.120	1.250	1.562	1.437	1.381 1.376	1.390
24	0.149	1.375	1.703	1.562	1.506 1.501	1.500












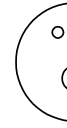









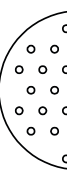



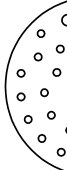





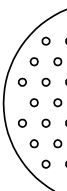

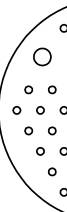
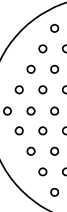

Jam Nut Receptacle - Type B

Shell Size	B	F Dia	G Dia	N Thrd	U	V	W	X
8	0.137 0.097	0.561	0.536 0.531	0.625-20	0.670	0.979	1.068	0.500
10	0.137 0.097	0.696	0.659 0.654	0.750-20	0.796	1.104	1.192	0.620
12	0.113 0.097	0.875	0.829 0.824	0.9375-20	0.984	1.291	1.380	0.740
14	0.137 0.097	0.935	0.898 0.893	1.000-20	1.046	1.391	1.505	0.890
16	0.137 0.097	1.062	1.025 1.020	1.125-20	1.171	1.516	1.630	1.000
18	0.137 0.097	1.187	1.131 1.126	1.250-18	1.296	1.641	1.756	1.120
20	0.137 0.097	1.312	1.256 1.251	1.375-18	1.484	1.766	1.860	1.250
22	0.168 0.128	1.437	1.381 1.376	1.500-18	1.609	1.954	2.068	1.390
24	0.168 0.128	1.562	1.506 1.501	1.625-18	1.734	2.079	2.160	1.500



Smiths Interconnect 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. Smiths Interconnect connectors are fully interchangeable with applicable QPL products and meet the applicable requirements of all military standards listed in this catalog.

MIL-DTL-83723 Layouts

 2 #20 8-2	 3 #20 8-3	 3 #20 8-98	 2 #20 10-2	 5 #20 10-5	 6 #20 10-6	 2 #16 10-20	 3 #16 12-3
 12 #20 12-12	 2 #16, 1 #8 COAX 14-3	 4 #12 14-4	 7 #16 14-7	 9 #20, 3 #16 14-12	 15 #20 14-15	 10 #16 16-10	
 24 #20 16-24	 8 #12 18-8	 10 #16, 1 #8 COAX 18-11	 14 #16 18-14	 31 #20 18-31	 16 #16 20-16		
 19 #20, 6 #12 20-25	 24 #20, 4 #12 20-28	 37 #20, 2 #16 20-39	 41 #20 20-41	 12 #12 22-12			
 19 #16 22-19	 26 #20, 6 #12 22-32	 27 #20, 12 #16 22-39	 55 #20 22-55				
 23 #20, 20 #16 24-43	 55 #20, 2 #12 24-57	 61 #20 24-61	 Custom Layout* XX-XX				

MIL-DTL-83723

How to Order



<p>1 Filter Type</p>	<p>Pi, L, C,</p>
<p>2 Prefix</p>	
<p>3 Shell Style</p>	<p>J Jam Nut F 4 Hole Flange</p>
<p>4 Shell Size</p>	<p>8 Thru 2 4</p>
<p>5 Insert Arrangement</p>	
<p>5 Contact Type</p>	<p>P Pin S Socket</p>
<p>6 Contact Termination</p>	<p>S Solder Cup P PC Tail C Crimp</p>
<p>7 Plating</p>	<p>C Olive Drab Cadmium Over Nickel N Electroless Nickel</p>
<p>8 Polarization</p>	<p>N, 6, 7, 8, 9</p>