

High-Density Filtered Adapter for Telecommunications



Within the telecommunications industry, it has been standard practice to use an adapter (male/female) type of EMI filtered system connector as the interface between the switching system electronics and the premise wiring. These filtered adapters provide effective containment of EMI compared to either D-subminiature or 50-position “ribbon” contact type connectors.

The following several factors have mandated the development of a new generation of filtered adapters.

Special Requirements

- Higher density wiring
- The need for more contacts, usually a multiple of 16
- Higher reliability contact geometries
- Bellcore TR-NWT-001089 requirements
 - 1000 volts AC withstand for one minute
 - 2500 volts spike surge testing
- Improved flammable resistant plastic insulators

API’s Spectrum Control brand, in response to these unique requirements of the telecommunication industry, has developed a new high-density filtered adapter.

Features

- New ceramic technology and filter element construction to accept higher voltages
- Improved reliability compared to “ribbon” type connectors
- Integral ground plane and one-piece diecast housing for the highest level of EMI integrity
- More contacts/wires per square inch of panel space through high-density arrangements
- 64 contact positions standard, with 78 positions available by request in any filter combination

Mechanical Specifications

- Shell* Zinc or aluminum diecast, nickel plated 150 μ inches (3.81 μ m) min.
- Insulators* Thermoplastic, UL94V-0
- Contacts* One-piece, screw machined Copper alloy, contact area plated 50 μ inches (1.27 μ m) gold over 50 μ inches (1.27 μ m) nickel
- Ground Plane* Brass, solder plated
- Grounding Springs* Beryllium copper, tin plated per MIL-T-10727
- Operating Temperature* -55°C to +125°C
- Capacitor* High performance ceramic feed-through utilizing ultra low ESR design

Electrical Specifications

- Rated Voltage* 100 VDC
- Current Rating* 3 Amps
- DC Resistance* 15 milliohm max.
- Dielectric Withstanding Voltage* 1000 VRMS (FCC Part 68 test)
- Capacitance* 1000 pF, \pm 25%
- Voltage Surge* meets 2500 volts surge (10/1000) (See Wave form figure on next page)

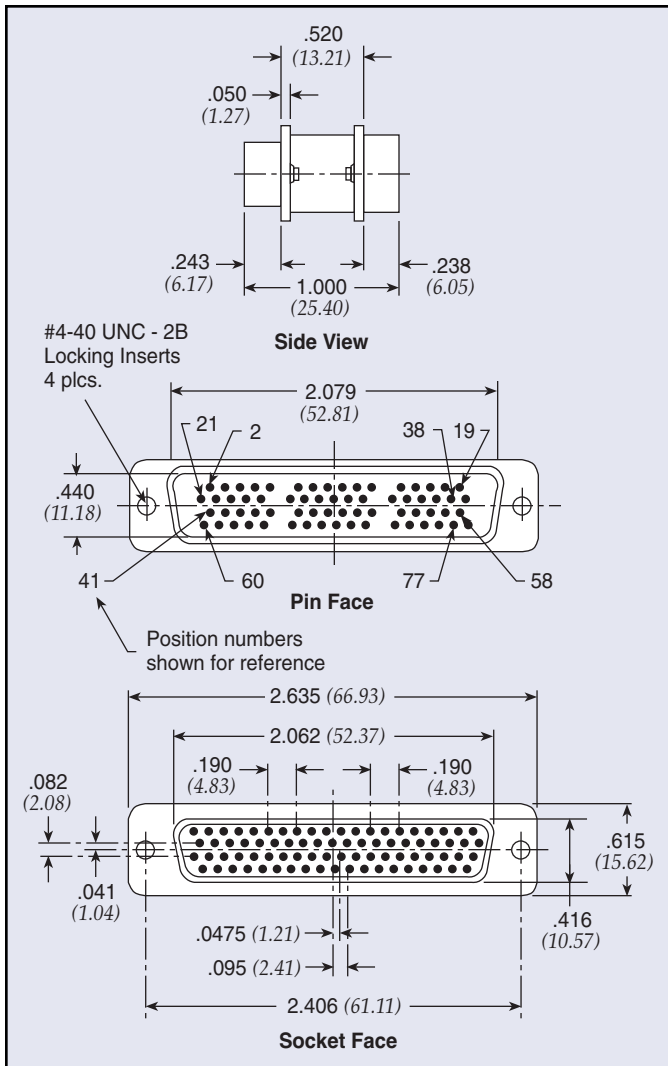
High-Density Filtered Adapter for Telecommunications

Filter Performance

Minimum Insertion Loss	
20 MHz	7 dB
50 MHz	14 dB
100 MHz	20 dB
500 MHz	32 dB
1 GHz	35 dB
2 GHz	41 dB
5 GHz	39 dB

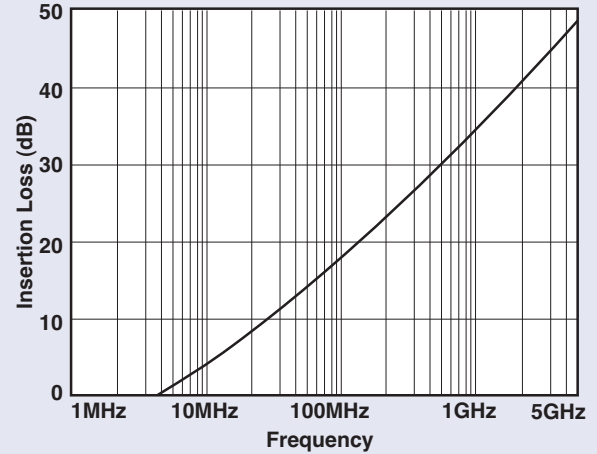
Insertion loss measured per MIL-STD-220, no load, 50 ohm source and load. Above data represents guaranteed minimum.

Part Number for Ordering: #56-645-002



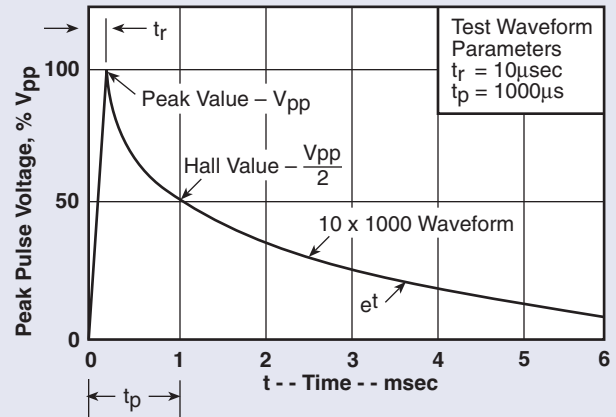
Dimensions in inches (mm)

Typical Insertion Loss



Above curves represent application of proper grounding fundamentals, for assistance consult with API.

Pulse Wave Form* (10 x 1000)



* Reference Bellcore TR-NWT-1089, $V_{pp} = 1000V$

Series 700 High Performance Filtered Connectors

Filter Selection

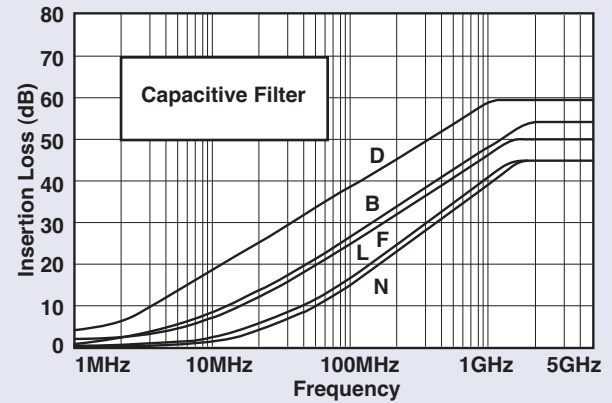
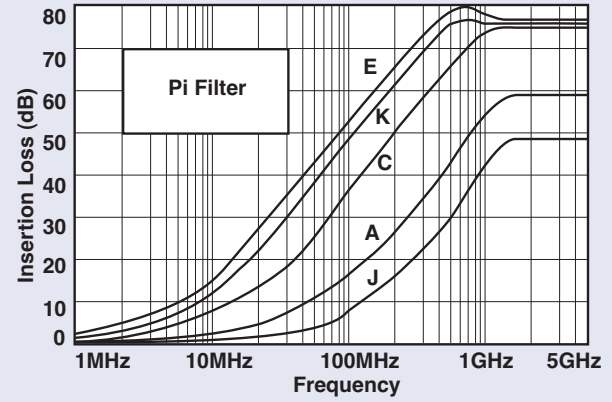
API's Spectrum Control brand of Series 700 connectors offer the highest performance filtering for all types of professional applications.

Features

- Available in 9, 15, 25, 37 and 50 shell sizes
- Variety of termination configurations including right angle and straight PCB for both pin and socket contact and as an adapter
- Capacitive and Pi type filters in a full range of capacitance values

The catalog data for this series is presented in order of shell size, and grouped by pin and socket contacts. Part numbers must be selected from the tables within the series section.

Typical Insertion Loss



Above curves represent application of proper grounding fundamentals, for assistance consult with API.

Insertion loss measured per MIL-STD-220, no load, 50ohm source and load.

Electrical Specifications: High Performance Connectors

Filter Designations	Filter Circuits	Capacitance		3 dB Cut-off Frequency Max. (MHz)	Dielectric With-standing Voltage	Working Voltage DC -55°C to +125°C	Minimum Insertion Loss - Decibels (dB)									
		Value	Tol.				5 MHz	10 MHz	20 MHz	50 MHz	100 MHz	200 MHz	500 MHz	1 GHz	2 GHz	5 GHz
J	Pi	100 pF	+100 -0%	32	300V	100V	—	—	—	2	6	11	27	40	43	40
A		310 pF	±20%	17	300V	100V	—	—	3	7	13	21	36	43	50	45
C		1000 pF	+150 -0%	3.2	300V	100V	—	5	9	19	30	43	62	70	68	63
K		2500 pF	+100 -0%	1.3	150V	50V	8	13	18	33	45	58	73	78	70	65
E		4000 pF	+100 -0%	0.8	150V	50V	8	13	20	35	48	61	76	80	70	65
N	C	375 pF	±20%	14	600V	200V	—	—	2	7	13	20	29	35	30	29
L		500 pF	±20%	10.6	600V	200V	—	—	3	10	15	22	31	37	33	31
F		830 pF	±20%	6.4	600V	200V	—	4	9	16	22	28	35	39	38	36
B		1000 pF	+100 -0%	3.2	600V	200V	—	5	10	17	23	30	37	43	44	42
D		5000 pF	+100 -0%	0.64	300V	100V	10	16	22	30	35	41	50	52	52	50

Filter designation "G" for grounded contacts, "I" for insulated (not filtered) contacts. Filter designation "O" for omitted contact and no hole in ground plane.

Above data represents guaranteed minimum.

Series 700 Specifications and Connector Ordering

Mechanical Specifications

- Shell* Zinc or aluminum diecast, nickel plated
 150 μ inches (3.81 μ m) min.
- Insulators* Glass-filled polyester,
 flammability UL94V-0
- Pin Contacts* Copper alloy, 15 μ inches
 (0.38 μ m) gold plated * over nickel
- Socket Contacts* Copper alloy, 30 μ inches
 (0.76 μ m) gold plated * over nickel
 * Heavier gold plating available upon request.
 See pg. FC43: Connector Options
- Terminations* Gold flash for PCB mount and solder
 cups. Solder dipped also available.
- Ground Plane* Brass, solder plated
- Grounding
 Springs* Beryllium copper, tin plated per
 MIL-T-10727
- Operating
 Temperature* -55°C to +125°C
- Capacitors* Proprietary barium titanate
 ceramic formulations

Electrical Specifications

- Current Rating* 5 Amps
 - R.F. Current
 Rating* 0.3 Amps
 - Contact
 Resistance* 10 milliohms maximum
 - UL Recognized* Under category of communication
 circuit accessories, File #E149046
 - Inductance on
 PI Filters* ~ 860 nH between 100 kHz and 1 MHz
- Solder cups accept up to a 20 gauge wire.

Note:
 For additional mechanical, electrical, and
 environmental specifications, refer to page FC79.

Ordering Your Connector

STEP 1: SELECTING THE FILTER

- Using the insert loss graphs on page FC20 determine which filters provide the required attenuation at the troublesome frequency, while not affecting the signal frequency by more than 3 to 6 dB.
- Choose the filter type, either feed-through capacitor or Pi. The Pi is generally considered better due to its superior high frequency performance and steeper curve. The feed-through capacitor is lower cost.
- Select capacitance value.
- Note the Spectrum letter designation for the filter chosen from the table on page FC20.

STEP 2: SELECTING THE CONNECTOR

- Turn to the appropriate size section.
 (9, 15, 25, 37, 50)
- Choose either pin contacts (plug) or socket contacts (receptacle).
- Choose the required termination type.
- From the table on the appropriate connector page, using the filter letter designation chosen in step 1 above, select the part number.

STEP 3: SPECIFYING OPTIONS

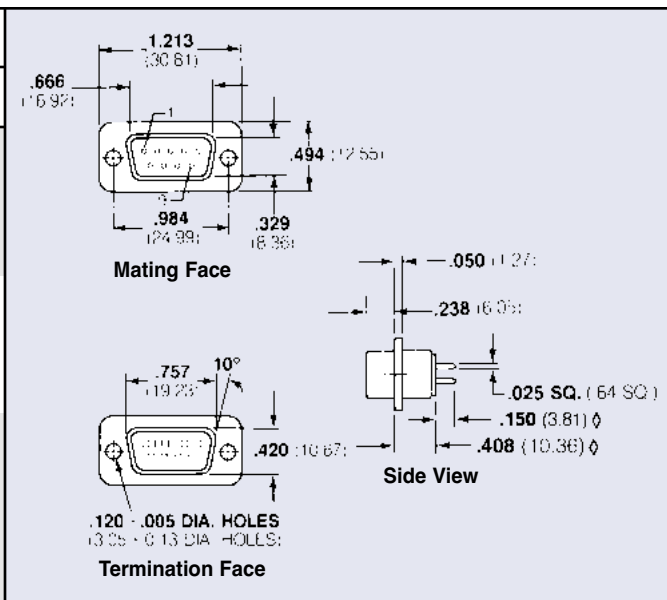
- Refer to page FC43 for special options including heavy gold plating, 4-40 mounting threads, grounding brackets, hardware, and others.
- Most options are available within the standard lead times.
- Some options require a part number suffix, while other combinations may require factory assistance for part number assignment. If a suffix is shown, add it to your selected part number. If more than one option is needed, consult with factory for part number assignment.

9 Series 700
Shell Size Pin Contact



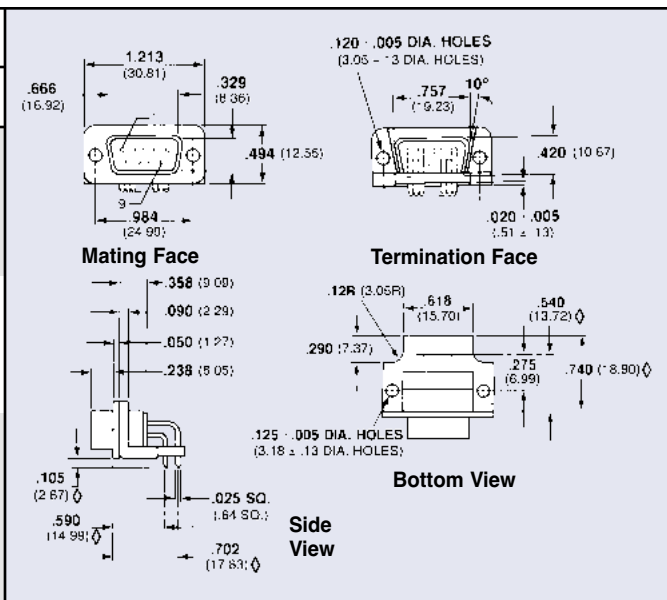
Printed Circuit Board Mount

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
56-701-001	A	310 pF Pi
56-701-002	B	1000 pF C
56-701-003	C	1000 pF Pi
56-701-004	D	5000 pF C
56-701-005	E	4000 pF Pi
56-701-028	F	830 pF C
56-701-029	J	100 pF Pi
56-701-030	K	2500 pF Pi
56-701-047	N	375 pF C
56-701-086	L	500 pF C



Printed Circuit Board Right Angle Mount

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
* 56-702-001	A	310 pF Pi
56-702-002	B	1000 pF C
* 56-702-003	C	1000 pF Pi
56-702-004	D	5000 pF C
* 56-702-005	E	4000 pF Pi
56-702-007	F	830 pF C
56-702-008	J	100 pF Pi
56-702-009	K	2500 pF Pi
56-702-013	N	375 pF C
* 56-702-033	L	500 pF C



* May be available from distributor stock.
 ** See page FC20 for filter performance.
 Standard Tolerance = ±.005 except where noted, ∅ = ±.015

Dimensions in inches (mm)

9 Series 700
Shell Size Pin Contact



Solderless Wire Wrap

Spectrum Part Number <i>Select one</i>	EMI Filter				
	L .500	L .375	L .250	Filter Desig.**	Cap. Value
56-701 -006 -022 -017				A	310 pF Pi
56-701 -007 -023 -018				B	1000 pF C
56-701 -008 -024 -019				C	1000 pF Pi
56-701 -009 -025 -020				D	5000 pF C
56-701 -010 -026 -021				E	4000 pF Pi
56-701 -037 -034 -031				F	830 pF C
56-701 -038 -035 -032				J	100 pF Pi
56-701 -039 -036 -033				K	2500 pF Pi
56-701 -050 -049 -048				N	375 pF C

Mating Face

Termination Face

Side View

Solder Cup Termination

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
* 56-701-011	A	310 pF Pi
* 56-701-012	B	1000 pF C
* 56-701-013	C	1000 pF Pi
* 56-701-014	D	5000 pF C
* 56-701-015	E	4000 pF Pi
* 56-701-040	F	830 pF C
56-701-041	J	100 pF Pi
56-701-042	K	2500 pF Pi
56-701-081	N	375 pF C
56-701-087	L	500 pF C

Mating Face

Termination Face

Side View

* May be available from distributor stock.
 ** See page FC20 for filter performance.
 Standard Tolerance = ±.005 except where noted, Ø = ±.015

Dimensions in inches (mm)

9 Series 700 Socket Contact

Shell Size



Printed Circuit Board Mount

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
56-703-001	A	310 pF Pi
56-703-002	B	1000 pF C
56-703-003	C	1000 pF Pi
56-703-004	D	5000 pF C
56-703-005	E	4000 pF Pi
56-703-022	F	830 pF C
56-703-023	J	100 pF Pi
56-703-024	K	2500 pF Pi
56-703-036	N	375 pF C
56-703-047	L	500 pF C

Printed Circuit Board Right Angle Mount

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
56-704-001	A	310 pF Pi
56-704-002	B	1000 pF C
* 56-704-003	C	1000 pF Pi
56-704-004	D	5000 pF C
* 56-704-005	E	4000 pF Pi
56-704-007	F	830 pF C
56-704-008	J	100 pF Pi
56-704-009	K	2500 pF Pi
56-704-018	N	375 pF C
56-704-035	L	500 pF C

* May be available from distributor stock.

** See page FC20 for filter performance.

Standard Tolerance = ±.005 except where noted, ∅ = ±.015

Dimensions in inches (mm)

9 Series 700 Shell Size Socket Contact & Pin/Socket Adapter



Solderless Wire Wrap

Spectrum Part Number <i>Select one</i>	EMI Filter				
	L .500	L .375	L .250	Filter Desig.**	Cap. Value
56-703-006	-016	-011		A	310 pF Pi
56-703-007	-017	-012		B	1000 pF C
56-703-008	-018	-013		C	1000 pF Pi
56-703-009	-019	-014		D	5000 pF C
* 56-703-010	-020	* -015		E	4000 pF Pi
56-703-031	-028	-025		F	830 pF C
56-703-032	-029	-026		J	100 pF Pi
56-703-033	-030	-027		K	2500 pF Pi
56-703-039	-038	-037		N	375 pF C

Mating Face

Termination Face

Side View

Solder Cup Termination

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
* 56-706-001	A	310 pF Pi
56-706-002	B	1000 pF C
* 56-706-003	C	1000 pF Pi
56-706-004	D	5000 pF C
* 56-706-005	E	4000 pF Pi
56-706-006	F	830 pF C
56-706-007	J	100 pF Pi
* 56-706-008	K	2500 pF Pi
56-706-009	N	375 pF C
56-706-017	L	500 pF C

Mating Face

Termination Face

Side View

Pin/Socket Adapter

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
* 56-705-001	A	310 pF Pi
56-705-002	B	1000 pF C
* 56-705-003 €	C	1000 pF Pi
56-705-004	D	5000 pF C
* 56-705-005 €	E	4000 pF Pi
* 56-705-008	F	830 pF C
56-705-009	J	100 pF Pi
56-705-010	K	2500 pF Pi
56-705-026	N	375 pF C
56-705-049	L	500 pF C

Socket Face

Pin Face

Side View

€ Also available through API's authorized European distributors/agents.

* May be available from distributor stock.

** See page FC20 for filter performance.

Standard Tolerance = ±.005 except where noted, φ = ±.015

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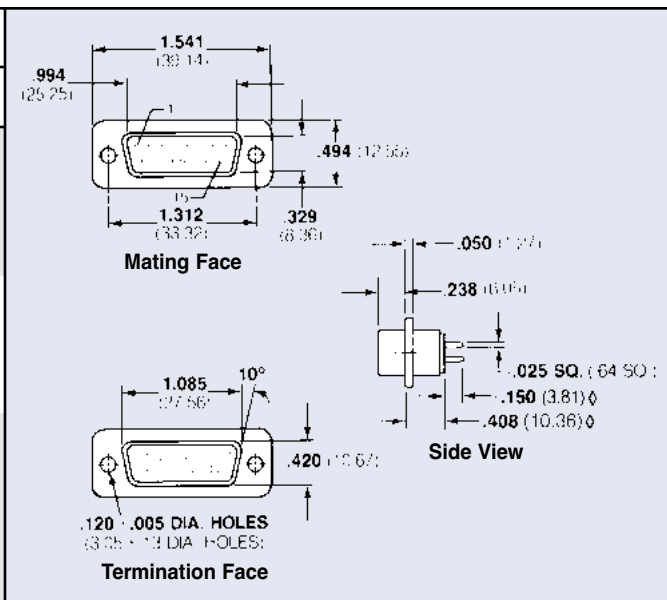
Dimensions in inches (mm)

15 Series 700 Shell Size Pin Contact



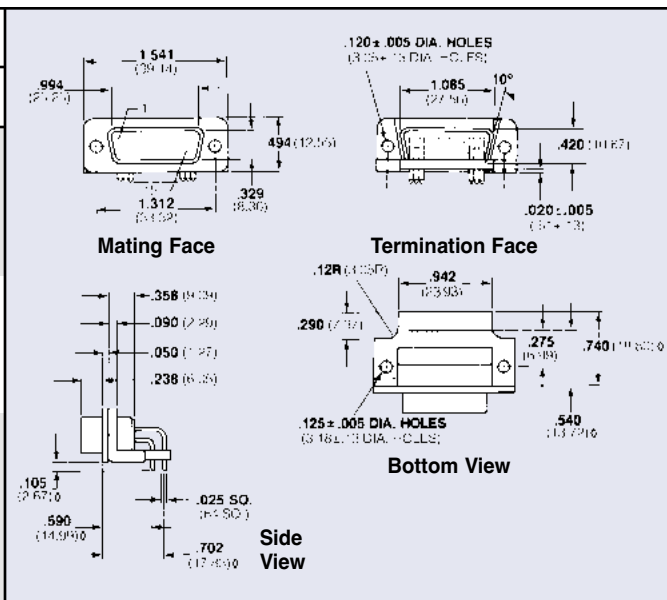
Printed Circuit Board Mount

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
56-711-001	A	310 pF Pi
56-711-002	B	1000 pF C
56-711-003	C	1000 pF Pi
56-711-004	D	5000 pF C
56-711-005	E	4000 pF Pi
56-711-028	F	830 pF C
56-711-029	J	100 pF Pi
56-711-030	K	2500 pF Pi
56-711-048	N	375 pF C
56-711-088	L	500 pF C



Printed Circuit Board Right Angle Mount

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
* 56-712-001	A	310 pF Pi
56-712-002	B	1000 pF C
* 56-712-003	C	1000 pF Pi
56-712-004	D	5000 pF C
* 56-712-005	E	4000 pF Pi
* 56-712-007	F	830 pF C
56-712-008	J	100 pF Pi
56-712-009	K	2500 pF Pi
56-712-017	N	375 pF C
56-712-039	L	500 pF C



* May be available from distributor stock.
 ** See page FC20 for filter performance.
 Standard Tolerance = ±.005 except where noted, ± = ±.015

Dimensions in inches (mm)

15 Series 700 Shell Size Pin Contact



Solderless Wire Wrap

Spectrum Part Number <i>Select one</i>	EMI Filter		Filter Desig.**	Cap. Value
	L .500	L .375		
56-711-006	-023	-018	A	310 pF Pi
56-711-007	-024	-019	B	1000 pF C
56-711-008	-025	-020	C	1000 pF Pi
56-711-009	-026	-021	D	5000 pF C
56-711-010	-027	-022	E	4000 pF Pi
56-711-037	-034	-031	F	830 pF C
56-711-038	-035	-032	J	100 pF Pi
56-711-039	-036	-033	K	2500 pF Pi
56-711-051	-050	-049	N	375 pF C

Solder Cup Termination

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
* 56-711-011	A	310 pF Pi
56-711-012	B	1000 pF C
* 56-711-013	C	1000 pF Pi
56-711-014	D	5000 pF C
* 56-711-015	E	4000 pF Pi
* 56-711-040	F	830 pF C
56-711-041	J	100 pF Pi
56-711-042	K	2500 pF Pi
56-711-085	N	375 pF C
56-711-086	L	500 pF C

* May be available from distributor stock.
 ** See page FC20 for filter performance.
 Standard Tolerance = ±.005 except where noted, ∅ = ±.015

Dimensions in inches (mm)

15 Series 700 Shell Size Socket Contact



Printed Circuit Board Mount

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
56-713-001	A	310 pF Pi
56-713-002	B	1000 pF C
56-713-003	C	1000 pF Pi
56-713-004	D	5000 pF C
56-713-005	E	4000 pF Pi
56-713-021	F	830 pF C
56-713-022	J	100 pF Pi
56-713-023	K	2500 pF Pi
56-713-037	N	375 pF C
56-713-045	L	500 pF C

Mating Face

Side View

Termination Face

Printed Circuit Board Right Angle Mount

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
* 56-714-001	A	310 pF Pi
56-714-002	B	1000 pF C
* 56-714-003	C	1000 pF Pi
56-714-004	D	5000 pF C
* 56-714-005	E	4000 pF Pi
* 56-714-006	F	830 pF C
56-714-007	J	100 pF Pi
56-714-008	K	2500 pF Pi
56-714-017	N	375 pF C
56-714-031	L	500 pF C

Mating Face

Termination Face

Side View

Bottom View

* May be available from distributor stock.

** See page FC20 for filter performance.

Standard Tolerance = ±.005 except where noted, ∅ = ±.015

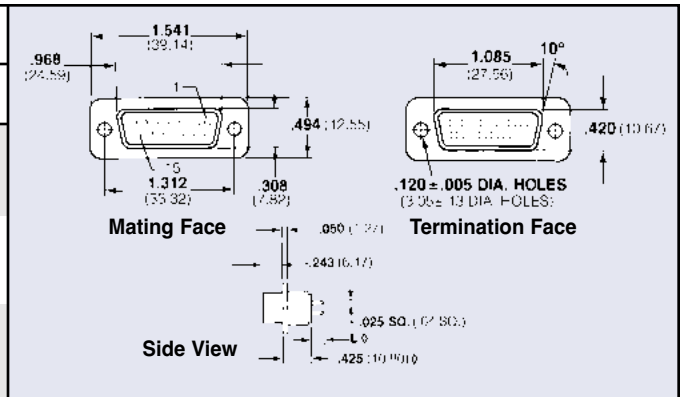
Dimensions in inches (mm)

15 Series 700 Shell Size Socket Contact & Pin/Socket Adapter



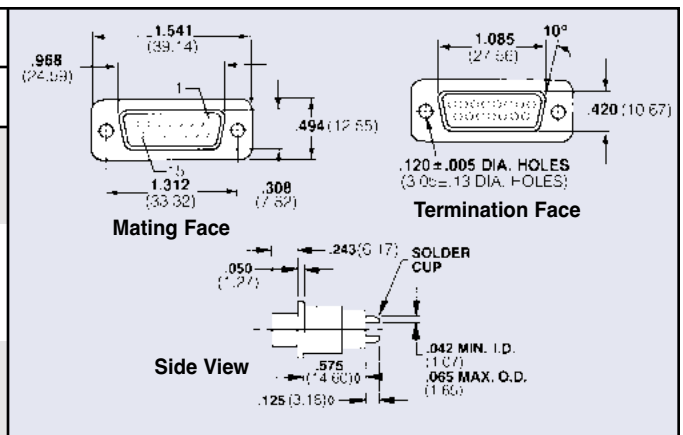
Solderless Wire Wrap

Spectrum Part Number <i>Select one</i>	EMI Filter			
	L .500	L .375	L .250	Filter Desig.**
56-713 -006	-016	-011	A	310 pF Pi
56-713 -007	-017	-012	B	1000 pF C
56-713 -008	-018	-013	C	1000 pF Pi
56-713 -009	-019	-014	D	5000 pF C
56-713 -010	-020	-015	E	4000 pF Pi
56-713 -030	-027	-024	F	830 pF C
56-713 -031	-028	-025	J	100 pF Pi
56-713 -032	-029	-026	K	2500 pF Pi
56-713 -040	-039	-038	N	375 pF C



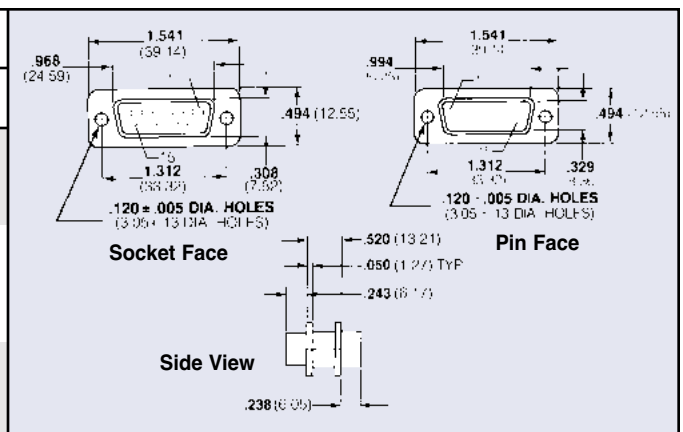
Solder Cup Termination

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
* 56-716-001	A	310 pF Pi
56-716-002	B	1000 pF C
* 56-716-003	C	1000 pF Pi
56-716-004	D	5000 pF C
* 56-716-005	E	4000 pF Pi
56-716-006	F	830 pF C
56-716-007	J	100 pF Pi
* 56-716-008	K	2500 pF Pi
56-716-009	N	375 pF C
56-716-013	L	500 pF C



Pin/Socket Adapter

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
* 56-715-001	A	310 pF Pi
56-715-002	B	1000 pF C
* 56-715-003 €	C	1000 pF Pi
56-715-004	D	5000 pF C
* 56-715-005 €	E	4000 pF Pi
56-715-007	F	830 pF C
56-715-008	J	100 pF Pi
56-715-009	K	2500 pF Pi
56-715-015	N	375 pF C
56-715-040	L	500 pF C



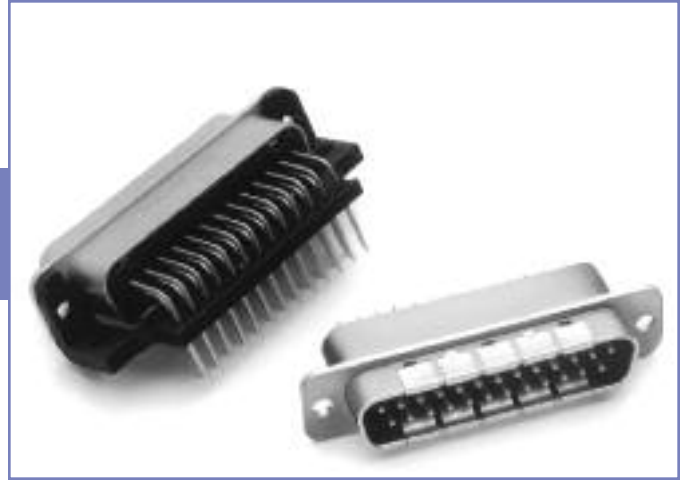
€ Also available through API's authorized European distributors/agents.

* May be available from distributor stock.

** See page FC20 for filter performance.

Standard Tolerance = ±.005 except where noted, ∅ = ±.015

25 Series 700 Shell Size Pin Contact



Printed Circuit Board Mount

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
56-721-001	A	310 pF Pi
56-721-002	B	1000 pF C
56-721-003	C	1000 pF Pi
56-721-004	D	5000 pF C
56-721-005	E	4000 pF Pi
56-721-033	F	830 pF C
56-721-034	J	100 pF Pi
56-721-035	K	2500 pF Pi
56-721-063	N	375 pF C
56-721-111	L	500 pF C

Mating Face

Termination Face

Side View

Printed Circuit Board Right Angle Mount

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
* 56-722-001	A	310 pF Pi
56-722-002	B	1000 pF C
* 56-722-003	C	1000 pF Pi
56-722-004	D	5000 pF C
* 56-722-005	E	4000 pF Pi
* 56-722-008	F	830 pF C
56-722-009	J	100 pF Pi
56-722-010	K	2500 pF Pi
56-722-027	N	375 pF C
56-722-060	L	500 pF C

Mating Face

Termination Face

Bottom View

Side View

* May be available from distributor stock.

** See page FC20 for filter performance.

Standard Tolerance = ±.005 except where noted, ∅ = ±.015

Dimensions in inches (mm)

25 Series 700 Shell Size Pin Contact



Solderless Wire Wrap

Spectrum Part Number <i>Select one</i>	EMI Filter				
	L .500	L .375	L .250	Filter Desig.**	Cap. Value
56-721 -006 -028 -024				A	310 pF Pi
56-721 -007 -029 -025				B	1000 pF C
56-721 -008 -030 -026				C	1000 pF Pi
56-721 -009 -031 -022				D	5000 pF C
56-721 -010 -032 -027				E	4000 pF Pi
56-721 -042 -039 -036				F	830 pF C
56-721 -043 -040 -037				J	100 pF Pi
56-721 -044 -041 -038				K	2500 pF Pi
56-721 -066 -065 -064				N	375 pF C

Mating Face

Side View

Termination Face

Solder Cup Termination

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
* 56-721-011	A	310 pF Pi
* 56-721-012	B	1000 pF C
* 56-721-013	C	1000 pF Pi
56-721-014	D	5000 pF C
* 56-721-015	E	4000 pF Pi
* 56-721-045	F	830 pF C
56-721-046	J	100 pF Pi
56-721-047	K	2500 pF Pi
56-721-070	N	375 pF C
56-721-112	L	500 pF C

Mating Face

Side View

Termination Face

* May be available from distributor stock.
 ** See page FC20 for filter performance.
 Standard Tolerance = ±.005 except where noted, ∅ = ±.015

Dimensions in inches (mm)

25 Series 700 Shell Size Socket Contact



Printed Circuit Board Mount

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
56-723-001	A	310 pF Pi
56-723-002	B	1000 pF C
56-723-003	C	1000 pF Pi
56-723-004	D	5000 pF C
56-723-005	E	4000 pF Pi
56-723-023	F	830 pF C
56-723-024	J	100 pF Pi
56-723-025	K	2500 pF Pi
56-723-045	N	375 pF C
56-723-069	L	500 pF C

Mating Face

Side View

Termination Face

Printed Circuit Board Right Angle Mount

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
* 56-724-001	A	310 pF Pi
56-724-002	B	1000 pF C
* 56-724-003	C	1000 pF Pi
56-724-004	D	5000 pF C
* 56-724-005	E	4000 pF Pi
* 56-724-008	F	830 pF C
56-724-009	J	100 pF Pi
56-724-010	K	2500 pF Pi
56-724-021	N	375 pF C
56-724-046	L	500 pF C

Mating Face

Termination Face

Side View

Bottom View

* May be available from distributor stock.

** See page FC20 for filter performance.

Standard Tolerance = ±.005 except where noted, ∅ = ±.015

Dimensions in inches (mm)

25 Series 700 Shell Size Pin/Socket Adapter



Solderless Wire Wrap

Spectrum Part Number <i>Select one</i>	EMI Filter			
	L .500	L .375	L .250	Filter Desig.** / Cap. Value
* 56-723 -006 -017 * -012				A / 310 pF Pi
56-723 -007 -018 -013				B / 1000 pF C
* 56-723 -008 -019 * -014				C / 1000 pF Pi
56-723 -009 -020 -015				D / 5000 pF C
* 56-723 -010 -021 * -016				E / 4000 pF Pi
* 56-723 -032 -029 * -026				F / 830 pF C
56-723 -033 -030 -027				J / 100 pF Pi
56-723 -034 -031 -028				K / 2500 pF Pi
56-723 -048 -047 -046				N / 375 pF C

Solder Cup Termination

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
* 56-726-001	A	310 pF Pi
56-726-002	B	1000 pF C
* 56-726-003	C	1000 pF Pi
56-726-004	D	5000 pF C
* 56-726-005	E	4000 pF Pi
56-726-006	F	830 pF C
56-726-007	J	100 pF Pi
* 56-726-008	K	2500 pF Pi
56-726-009	N	375 pF C
56-726-021	L	500 pF C

Pin/Socket Adapter

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
* 56-725-001	A	310 pF Pi
56-725-002	B	1000 pF C
* 56-725-003 €	C	1000 pF Pi
56-725-004	D	5000 pF C
* 56-725-005 €	E	4000 pF Pi
* 56-725-019	F	830 pF C
56-725-020	J	100 pF Pi
* 56-725-021	K	2500 pF Pi
56-725-064	N	375 pF C
56-725-073	L	500 pF C

€ Also available through API's authorized European distributors/agents.

* May be available from distributor stock.

** See page FC20 for filter performance.

Standard Tolerance = ±.005 except where noted, ∅ = ±.015

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Dimensions in inches (mm)

37 Series 700 Shell Size Pin Contact



Printed Circuit Board Mount

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
56-731-001	A	310 pF Pi
56-731-002	B	1000 pF C
56-731-003	C	1000 pF Pi
56-731-004	D	5000 pF C
56-731-005	E	4000 pF Pi
56-731-028	F	830 pF C
56-731-029	J	100 pF Pi
56-731-030	K	2500 pF Pi
56-731-048	N	375 pF C
56-731-076	L	500 pF C

Printed Circuit Board Right Angle Mount

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
56-732-001	A	310 pF Pi
56-732-002	B	1000 pF C
* 56-732-003	C	1000 pF Pi
56-732-004	D	5000 pF C
* 56-732-005	E	4000 pF Pi
56-732-006	F	830 pF C
56-732-007	J	100 pF Pi
56-732-008	K	2500 pF Pi
56-732-009	N	375 pF C
56-732-023	L	500 pF C

* May be available from distributor stock.
** See page FC20 for filter performance.
Standard Tolerance = ±.005 except where noted, ϕ = ±.015

Dimensions in inches (mm)

37 Series 700 Shell Size Pin Contact



Solderless Wire Wrap

Spectrum Part Number <i>Select one</i>	EMI Filter				
	L .500	L .375	L .250	Filter Desig.**	Cap. Value
56-731 -006 -023 -018				A	310 pF Pi
56-731 -007 -024 -019				B	1000 pF C
56-731 -008 -025 -020				C	1000 pF Pi
56-731 -009 -026 -021				D	5000 pF C
56-731 -010 -027 -022				E	4000 pF Pi
56-731 -037 -034 -031				F	830 pF C
56-731 -038 -035 -032				J	100 pF Pi
56-731 -039 -036 -033				K	2500 pF Pi
56-731 -051 -050 -049				N	375 pF C

Solder Cup Termination

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
* 56-731-011	A	310 pF Pi
56-731-012	B	1000 pF C
* 56-731-013	C	1000 pF Pi
56-731-014	D	5000 pF C
* 56-731-015	E	4000 pF Pi
* 56-731-040	F	830 pF C
56-731-041	J	100 pF Pi
56-731-042	K	2500 pF Pi
56-731-060	N	375 pF C
56-731-077	L	500 pF C

* May be available from distributor stock.
 ** See page FC20 for filter performance.
 Standard Tolerance = ±.005 except where noted, ∅ = ±.015

Dimensions in inches (mm)

37 Series 700 Shell Size Socket Contact



Printed Circuit Board Mount

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
56-733-001	A	310 pF Pi
56-733-002	B	1000 pF C
56-733-003	C	1000 pF Pi
56-733-004	D	5000 pF C
56-733-005	E	4000 pF Pi
56-733-021	F	830 pF C
56-733-022	J	100 pF Pi
56-733-023	K	2500 pF Pi
56-733-035	N	375 pF C
56-733-046	L	500 pF C

Mating Face

Side View

Termination Face

Printed Circuit Board Right Angle Mount

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
56-734-001	A	310 pF Pi
56-734-002	B	1000 pF C
56-734-003	C	1000 pF Pi
56-734-004	D	5000 pF C
56-734-005	E	4000 pF Pi
56-734-006	F	830 pF C
56-734-007	J	100 pF Pi
56-734-008	K	2500 pF Pi
56-734-012	N	375 pF C
56-734-021	L	500 pF C

Mating Face

Side View

Termination Face

Bottom View

* May be available from distributor stock.

** See page FC20 for filter performance.

Standard Tolerance = ±.005 except where noted, Ø = ±.015

Dimensions in inches (mm)

37 Series 700 Shell Size Socket Contact & Pin/Socket Adapter



Solderless Wire Wrap

Spectrum Part Number <i>Select one</i>	EMI Filter			Filter Desig.**	Cap. Value	
	L .500	L .375	L .250			
* 56-733 -006	-016	* -011	A	310 pF Pi		
56-733 -007	-017	-012	B	1000 pF C		
56-733 -008	-018	-013	C	1000 pF Pi		
56-733 -009	-019	-014	D	5000 pF C		
56-733 -010	-020	-015	E	4000 pF Pi		
56-733 -030	-027	-024	F	830 pF C		
56-733 -031	-028	-025	J	100 pF Pi		
56-733 -032	-029	-026	K	2500 pF Pi		
56-733 -038	-037	-036	N	375 pF C		

Solder Cup Termination

Spectrum Part Number	EMI Filter		
	Filter Designation**	Cap. Value	
* 56-736-001	A	310 pF Pi	
56-736-002	B	1000 pF C	
* 56-736-003	C	1000 pF Pi	
56-736-004	D	5000 pF C	
* 56-736-005	E	4000 pF Pi	
56-736-006	F	830 pF C	
56-736-007	J	100 pF Pi	
* 56-736-008	K	2500 pF Pi	
56-736-009	N	375 pF C	
56-736-015	L	500 pF C	

Pin/Socket Adapter

Spectrum Part Number	EMI Filter		
	Filter Designation**	Cap. Value	
* 56-735-001	A	310 pF Pi	
56-735-002	B	1000 pF C	
* 56-735-003 €	C	1000 pF Pi	
56-735-004	D	5000 pF C	
* 56-735-005 €	E	4000 pF Pi	
* 56-735-008	F	830 pF C	
56-735-009	J	100 pF Pi	
56-735-010	K	2500 pF Pi	
56-735-025	N	375 pF C	
56-735-034	L	500 pF C	

€ Also available through API's authorized European distributors/agents.

* May be available from distributor stock.

** See page FC20 for filter performance.

Standard Tolerance = ±.005 except where noted, ∅ = ±.015

Dimensions in inches (mm)

50 Series 700
Shell Size Pin Contact



Printed Circuit Board Mount

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
56-741-001	A	310 pF Pi
56-741-002	B	1000 pF C
56-741-003	C	1000 pF Pi
56-741-004	D	5000 pF C
56-741-005	E	4000 pF Pi
56-741-027	F	830 pF C
56-741-028	J	100 pF Pi
56-741-029	K	2500 pF Pi
56-741-042	N	375 pF C
56-741-066	L	500 pF C

Mating Face

Termination Face

Side View

Printed Circuit Board Right Angle Mount

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
56-742-001	A	310 pF Pi
56-742-002	B	1000 pF C
56-742-003	C	1000 pF Pi
56-742-004	D	5000 pF C
56-742-005	E	4000 pF Pi
56-742-006	F	830 pF C
56-742-007	J	100 pF Pi
56-742-008	K	2500 pF Pi
56-742-009	N	375 pF C
56-742-022	L	500 pF C

Mating Face

Termination Face

Side View

Bottom View

* May be available from distributor stock.
 ** See page FC20 for filter performance.
 Standard Tolerance = ±.005 except where noted, ∅ = ±.015

Dimensions in inches (mm)

50 Series 700 Shell Size Pin Contact



Solderless Wire Wrap

Spectrum Part Number <i>Select one</i>	EMI Filter				
	L .500	L .375	L .250	Filter Desig.**	Cap. Value
56-741 -006 -022 -017				A	310 pF Pi
56-741 -007 -023 -018				B	1000 pF C
56-741 -008 -024 -019				C	1000 pF Pi
56-741 -009 -025 -020				D	5000 pF C
56-741 -010 -026 -021				E	4000 pF Pi
56-741 -036 -033 -030				F	830 pF C
56-741 -037 -034 -031				J	100 pF Pi
56-741 -038 -035 -032				K	2500 pF Pi
56-741 -045 -044 -043				N	375 pF C

Mating Face

Termination Face

Side View

Solder Cup Termination

Spectrum Part Number	EMI Filter	
	Filter Designation**	Cap. Value
* 56-741-011	A	310 pF Pi
* 56-741-012	B	1000 pF C
* 56-741-013	C	1000 pF Pi
* 56-741-014	D	5000 pF C
* 56-741-015	E	4000 pF Pi
56-741-039	F	830 pF C
56-741-040	J	100 pF Pi
56-741-041	K	2500 pF Pi
56-741-063	N	375 pF C
56-741-067	L	500 pF C

Mating Face

Termination Face

Side View

* May be available from distributor stock.
 ** See page FC20 for filter performance.
 Standard Tolerance = ±.005 except where noted, φ = ±.015

Dimensions in inches (mm)

50 Series 700 Shell Size Socket Contact



Printed Circuit Board Mount

Spectrum Part Number	EMI Filter		
	Filter Designation**	Cap. Value	
56-743-001	A	310 pF Pi	
56-743-002	B	1000 pF C	
56-743-003	C	1000 pF Pi	
56-743-004	D	5000 pF C	
56-743-005	E	4000 pF Pi	
56-743-021	F	830 pF C	
56-743-022	J	100 pF Pi	
56-743-023	K	2500 pF Pi	
56-743-033	N	375 pF C	
56-743-043	L	500 pF C	

Printed Circuit Board Right Angle Mount

Spectrum Part Number	EMI Filter		
	Filter Designation**	Cap. Value	
56-744-001	A	310 pF Pi	
56-744-002	B	1000 pF C	
56-744-003	C	1000 pF Pi	
56-744-004	D	5000 pF C	
56-744-005	E	4000 pF Pi	
56-744-006	F	830 pF C	
56-744-007	J	100 pF Pi	
56-744-008	K	2500 pF Pi	
56-744-009	N	375 pF C	
56-744-012	L	500 pF C	

* May be available from distributor stock.
 ** See page FC20 for filter performance.
 Standard Tolerance = ±.005 except where noted, $\phi = \pm .015$

Dimensions in inches (mm)

50 Series 700 Shell Size Socket Contact & Pin/Socket Adapter



Solderless Wire Wrap

Spectrum Part Number <i>Select one</i>	EMI Filter			Filter Desig.**	Cap. Value	
	L .500	L .375	L .250			
56-743 -006	-016	-011	A	310 pF Pi		
56-743 -007	-017	-012	B	1000 pF C		
56-743 -008	-018	-013	C	1000 pF Pi		
56-743 -009	-019	-014	D	5000 pF C		
56-743 -010	-020	-015	E	4000 pF Pi		
56-743 -030	-027	-024	F	830 pF C		
56-743 -031	-028	-025	J	100 pF Pi		
56-743 -032	-029	-026	K	2500 pF Pi		
56-743 -036	-035	-034	N	375 pF C		

Solder Cup Termination

Spectrum Part Number	EMI Filter		
	Filter Designation**	Cap. Value	
56-746-001	A	310 pF Pi	
56-746-002	B	1000 pF C	
56-746-003	C	1000 pF Pi	
56-746-004	D	5000 pF C	
56-746-005	E	4000 pF Pi	
56-746-006	F	830 pF C	
56-746-007	J	100 pF Pi	
56-746-008	K	2500 pF Pi	
56-746-009	N	375 pF C	
56-746-018	L	500 pF C	

Pin/Socket Adapter

Spectrum Part Number	EMI Filter		
	Filter Designation**	Cap. Value	
* 56-745-001	A	310 pF Pi	
56-745-002	B	1000 pF C	
* 56-745-003	C	1000 pF Pi	
56-745-004	D	5000 pF C	
* 56-745-005	E	4000 pF Pi	
56-745-006	F	830 pF C	
56-745-007	J	100 pF Pi	
56-745-008	K	2500 pF Pi	
56-745-019	N	375 pF C	
56-745-027	L	500 pF C	

* May be available from distributor stock.

** See page FC20 for filter performance.

Standard Tolerance = ±.005 except where noted, ∅ = ±.015

Dimensions in inches (mm)