



## Series 700 High Performance Filtered Connectors

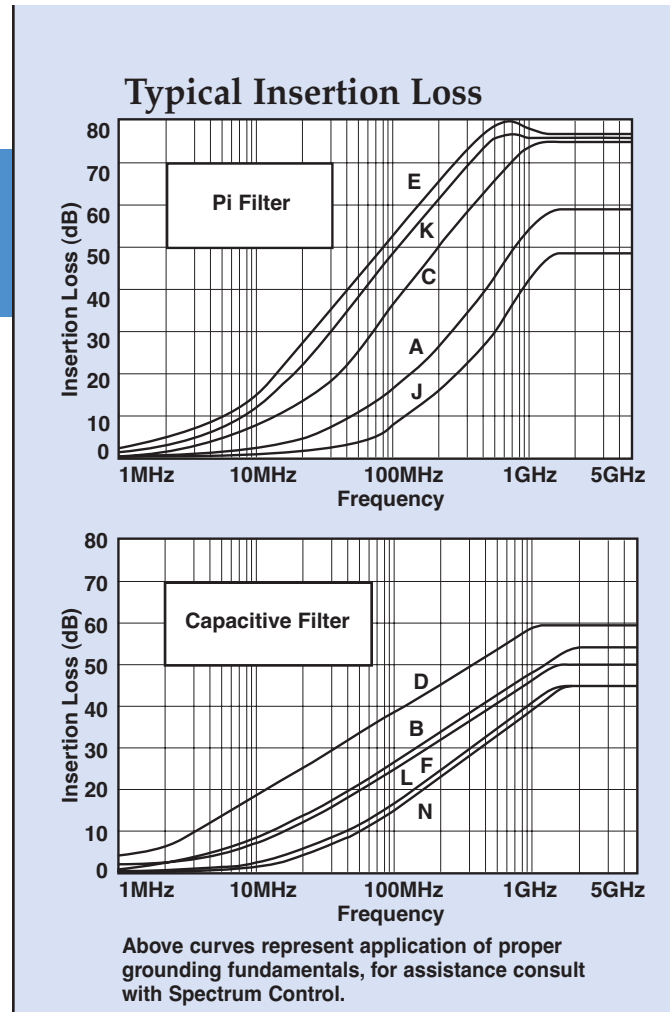
### Filter Selection

Spectrum Control 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.



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	+100 -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 diecast, nickel plated  
150  $\mu$  inches (3.81  $\mu$ m) min.
- Insulators* . . . . . Glass-filled polyester,  
flammability UL94V-0
- Pin Contacts* . . . . . Copper alloy, 15  $\mu$  inches  
(0.38  $\mu$ m) gold plated \* over nickel
- Socket Contacts* . . . . . Copper alloy, 30  $\mu$  inches  
(0.76  $\mu$ m) gold plated \* over nickel  
  
\* Heavier gold plating available upon request.  
See pg. 169: 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 201.

## Ordering Your Connector

### STEP 1: SELECTING THE FILTER

- Using the insert loss graphs on page 149 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-thru capacitor or Pi. The Pi is generally considered better due to its superior high frequency performance and steeper curve. The feed-thru capacitor is lower cost.
- Select capacitance value.
- Note the Spectrum letter designation for the filter chosen from the table on page 149.

### 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 172 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.

Filtered Connectors



# 9 Series 700 Pin Contact

Shell Size



## 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

**Mating Face**  
 .666 (16.92) 1.213 (30.81) .494 (12.55)  
 .984 (24.99) .329 (8.36)

**Termination Face**  
 .757 (19.23) 10° .420 (10.67)  
 .120 ± .005 DIA. HOLES (3.05 ± 0.13 DIA. HOLES)

**Side View**  
 .050 (1.27) .238 (6.05) .025 SQ. (.64 SQ.)  
 .150 (3.81) ∅ .408 (10.36) ∅

## 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

**Mating Face**  
 .666 (16.92) 1.213 (30.81) .329 (8.36) .494 (12.55)  
 .984 (24.99)

**Termination Face**  
 .120 ± .005 DIA. HOLES (3.05 ± 0.13 DIA. HOLES)  
 .757 (19.23) 10° .420 (10.67)  
 .020 ± .005 (51 ± 13)

**Bottom View**  
 .12R (3.05R) .618 (15.70) .540 (13.72) ∅  
 .290 (7.37) .275 (6.99) .740 (18.80) ∅  
 .125 ± .005 DIA. HOLES (3.18 ± .13 DIA. HOLES)

**Side View**  
 .105 (2.67) ∅ .590 (14.99) ∅ .025 SQ. (.64 SQ.)  
 .702 (17.83) ∅

\* May be available from distributor stock.  
 \*\* See page 149 for filter performance.  
 Standard Tolerance = ±.005 except where noted, ∅ = ±.015

Dimensions in inches (mm)



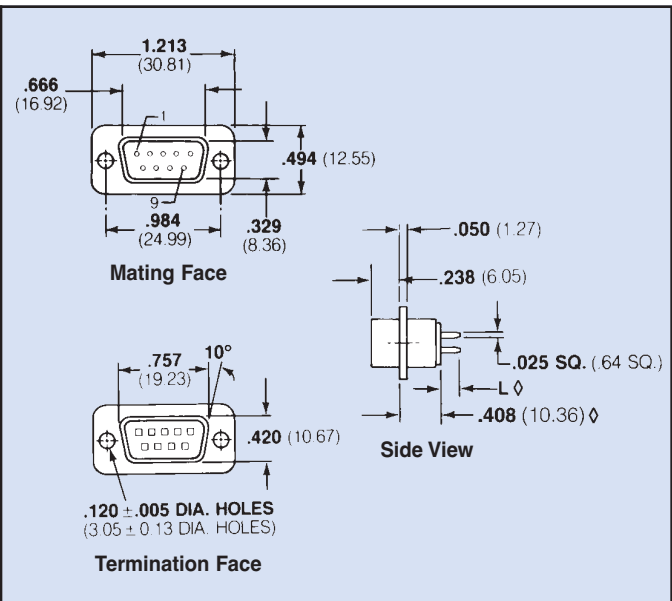
# 9 Series 700 Pin Contact

Shell Size



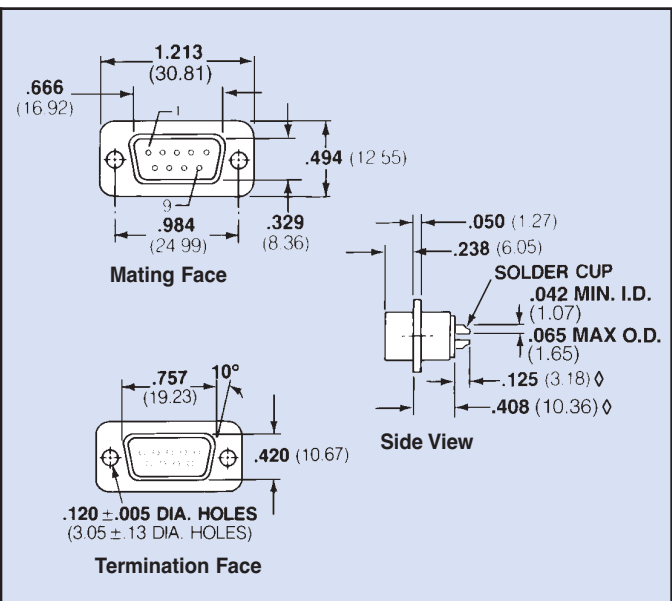
## Solderless Wire Wrap

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



## 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



\* May be available from distributor stock.  
 \*\* See page 149 for filter performance.  
 Standard Tolerance = ±.005 except where noted,  $\phi$  = ±.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

**Mating Face**  
 .640 (16.26) 1.213 (30.81) .494 (12.55)  
 .984 (24.99) .308 (7.82)

**Termination Face**  
 .757 (19.23) 10° .420 (10.67)  
 .120 ± .005 DIA. HOLES (3.05 ± 0.13 DIA. HOLES)

**Side View**  
 .050 (1.27) .243 (6.17) .150 (3.81) ∅ .425 (10.80) ∅

## 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

**Mating Face**  
 .640 (16.26) 1.213 (30.81) .494 (12.55)  
 .984 (24.99) .308 (7.82)

**Termination Face**  
 .757 (19.23) 10° .420 (10.67)  
 .120 ± .005 DIA. HOLES (3.05 ± 0.13 DIA. HOLES)

**Bottom View**  
 .125 ± .005 DIA. HOLES (3.18 ± 0.13 DIA. HOLES)  
 .12R (3.05R) .618 (15.70) .540 (13.72) ∅ .275 (6.99) .740 (18.80) ∅

**Side View**  
 .105 (2.67) ∅ .590 (14.99) ∅ .025 SQ. (64 SQ.) .702 (17.83) ∅

\* May be available from distributor stock.  
 \*\* See page 149 for filter performance.  
 Standard Tolerance = ±.005 except where noted, ∅ = ±.015

Dimensions in inches (mm)



**9**  
Shell Size

**Series 700  
Socket Contact &  
Pin/Socket Adapter**



**Solderless Wire Wrap**

Spectrum Part Number	Select one			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

**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

**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

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

Dimensions in inches (mm)

\* May be available from distributor stock.

\*\* See page 149 for filter performance.

Standard Tolerance = ±.005 except where noted,  $\phi$  = ±.015



# 15 Series 700 Pin Contact

Shell Size



## 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

**Mating Face**  
 .994 (25.25) total length, 1.541 (39.14) shell length, .494 (12.55) height, 1.312 (33.32) pin length, .329 (8.36) pin diameter, .150 (3.81) pin pitch.

**Termination Face**  
 1.085 (27.56) shell length, 10° angle, .420 (10.67) height, .120 ± .005 DIA. HOLES (3.05 ± .13 DIA. HOLES).

**Side View**  
 .050 (1.27) pin thickness, .238 (6.05) pin width, .025 SQ. (.64 SQ.) pin cross-section, .150 (3.81) pin pitch, .408 (10.36) pin diameter.

## 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

**Mating Face**  
 .994 (25.25) total length, 1.541 (39.14) shell length, .494 (12.55) height, 1.312 (33.32) pin length, .329 (8.36) pin diameter, .150 (3.81) pin pitch.

**Termination Face**  
 1.085 (27.56) shell length, 10° angle, .420 (10.67) height, .120 ± .005 DIA. HOLES (3.05 ± .13 DIA. HOLES).

**Bottom View**  
 .12R (3.05R) shell width, .942 (23.93) shell length, .290 (7.37) pin width, .275 (6.99) pin width, .740 (18.80) pin diameter, .540 (13.72) pin diameter, .125 ± .005 DIA. HOLES (3.18 ± .13 DIA. HOLES).

**Side View**  
 .105 (2.67) pin thickness, .590 (14.99) pin width, .025 SQ. (.64 SQ.) pin cross-section, .702 (17.83) pin diameter.

\* May be available from distributor stock.  
 \*\* See page 149 for filter performance.  
 Standard Tolerance = ±.005 except where noted, ∅ = ±.015

Dimensions in inches (mm)



# 15 Series 700 Pin Contact

Shell Size



## Solderless Wire Wrap

Spectrum Part Number <i>Select one</i>	EMI Filter			Filter Desig.**	Cap. Value
	L .500	L .375	L .250		
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 149 for filter performance.  
 Standard Tolerance = ±.005 except where noted, ∅ = ±.015

Dimensions in inches (mm)





# 15 Series 700 Socket Contact

Shell Size



## 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**  
 .968 (24.59)  
 1.541 (39.14)  
 .494 (12.55)  
 .15  
 1.312 (33.32)  
 .308 (7.82)

**Termination Face**  
 1.085 (27.56)  
 10°  
 .420 (10.67)  
 .120 ± .005 DIA. HOLES (3.05 ± .13 DIA. HOLES)

**Side View**  
 .050 (1.27)  
 .243 (6.17)  
 .025 SQ. (.64 SQ.)  
 .150 (3.81) ∅  
 .425 (10.80) ∅

## 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**  
 .968 (24.59)  
 1.541 (39.14)  
 .494 (12.55)  
 .15  
 1.312 (33.32)  
 .308 (7.82)

**Termination Face**  
 1.085 (27.56)  
 10°  
 .420 (10.67)  
 .120 ± .005 DIA. HOLES (3.05 ± .13 DIA. HOLES)

**Side View**  
 .050 (1.27)  
 .243 (6.17)  
 .025 SQ. (.64 SQ.)  
 .150 (3.81) ∅  
 .425 (10.80) ∅

**Bottom View**  
 .125 ± .005 DIA. HOLES (3.18 ± .13 DIA. HOLES)  
 .540 (13.72) ∅  
 .275 (6.99)  
 .740 (18.80) ∅  
 .942 (23.93)  
 .12R (3.05R)  
 .290 (7.37)

\* May be available from distributor stock.  
 \*\* See page 149 for filter performance.  
 Standard Tolerance = ±.005 except where noted, ∅ = ±.015

Dimensions in inches (mm)

Filtered Connectors



# 15 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		
56-713-006	-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 Spectrum Control's authorized European distributors/agents. Dimensions in inches (mm)  
 \* May be available from distributor stock.  
 \*\* See page 149 for filter performance.  
 Standard Tolerance = ±.005 except where noted,  $\phi = \pm .015$



# 25 Series 700 Pin Contact

Shell Size



## 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

## 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

\* May be available from distributor stock.  
 \*\* See page 149 for filter performance.  
 Standard Tolerance = ±.005 except where noted, ∅ = ±.015

Dimensions in inches (mm)

Filtered Connectors



# 25 Series 700 Pin Contact

Shell Size



## Solderless Wire Wrap

Spectrum Part Number <i>Select one</i>	EMI Filter			Filter Desig.**	Cap. Value
	L .500	L .375	L .250		
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

## 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

\* May be available from distributor stock.  
 \*\* See page 149 for filter performance.  
 Standard Tolerance = ±.005 except where noted, ∅ = ±.015

Dimensions in inches (mm)



# 25 Series 700 Socket Contact

Shell Size



## 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**  
 2.088 (53.04)  
 1.508 (38.30)  
 .494 (12.55)  
 1.852 (47.04)  
 .308 (7.82)

**Termination Face**  
 1.625 (41.28)  
 10°  
 .420 (10.67)  
 .120 ± .005 DIA. HOLES (3.05 ± .13 DIA. HOLES)

**Side View**  
 .050 (1.27)  
 .243 (6.17)  
 .025 SQ. (.64 SQ.)  
 .150 (3.81) ∅  
 .425 (10.80) ∅

## 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**  
 2.088 (53.04)  
 1.508 (38.30)  
 .494 (12.55)  
 1.852 (47.04)  
 .308 (7.82)

**Termination Face**  
 .120 ± .005 DIA. HOLES (3.05 ± .13 DIA. HOLES)  
 10°  
 1.625 (41.28)  
 .420 (10.67)  
 .020 ± .005 (51 ± 13)

**Bottom View**  
 .125 ± .005 DIA. HOLES (3.18 ± .13 DIA. HOLES)  
 1.490 (37.85)  
 .275 (6.99)  
 .740 (18.80) ∅  
 .540 (13.72) ∅

**Side View**  
 .125 (3.05R)  
 .090 (2.29)  
 .050 (1.27)  
 .243 (6.17)  
 .105 (2.67) ∅  
 .590 (14.99) ∅  
 .025 SQ. (.64 SQ.)  
 .702 (17.83) ∅

\* May be available from distributor stock.  
 \*\* See page 149 for filter performance.  
 Standard Tolerance = ±.005 except where noted, ∅ = ±.015

Dimensions in inches (mm)



# 25 Series 700 Shell Size Socket Contact & Pin/Socket Adapter



## Solderless Wire Wrap

Spectrum Part Number	Select one			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 Spectrum Control's authorized European distributors/agents.

\* May be available from distributor stock.

\*\* See page 149 for filter performance.

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

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Dimensions in inches (mm)

Filtered Connectors



# 37 Series 700 Pin Contact Shell Size



## 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

**Mating Face**  
 2.729 (69.32)  
 2.182 (55.42)  
 .494 (12.55)  
 2.500 (63.50)  
 .329 (8.36)  
 37

**Termination Face**  
 2.273 (57.73)  
 10°  
 .420 (10.67)  
 .120 ± .005 DIA. HOLES (3.05 ± .13 DIA. HOLES)

**Side View**  
 .050 (1.27)  
 .238 (6.05)  
 .025 SQ. (.64 SQ.)  
 .150 (3.81) ∅  
 .408 (10.36) ∅

## 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

**Mating Face**  
 2.729 (69.32)  
 2.182 (55.42)  
 .494 (12.55)  
 2.500 (63.50)  
 .329 (8.36)  
 37

**Termination Face**  
 2.273 (57.73)  
 10°  
 .420 (10.67)  
 .020 ± .005 (51 ± 13)  
 120 ± .005 DIA. HOLES (3.05 ± .13 DIA. HOLES)

**Bottom View**  
 .12R (3.05R)  
 .290 (7.37)  
 2.142 (54.41)  
 .275 (6.99)  
 .740 (18.80) ∅  
 .125 ± .005 DIA. HOLES (3.18 ± .13 DIA. HOLES)  
 .540 (13.72) ∅

**Side View**  
 .358 (9.09)  
 .090 (2.29)  
 .050 (1.27)  
 .238 (6.05)  
 .105 (2.67) ∅  
 .025 SQ. (.64 SQ.)  
 .590 (14.99) ∅  
 .702 (17.83) ∅

\* May be available from distributor stock.  
 \*\* See page 149 for filter performance.  
 Standard Tolerance = ±.005 except where noted, ∅ = ±.015

Dimensions in inches (mm)



# 37 Series 700 Pin Contact Shell Size



## Solderless Wire Wrap

Spectrum Part Number	Select one			EMI Filter	
	L .500	L .375	L .250	Filter Desig.**	Cap. Value
56-731-006	-006	-023	-018	A	310 pF Pi
56-731-007	-007	-024	-019	B	1000 pF C
56-731-008	-008	-025	-020	C	1000 pF Pi
56-731-009	-009	-026	-021	D	5000 pF C
56-731-010	-010	-027	-022	E	4000 pF Pi
56-731-037	-037	-034	-031	F	830 pF C
56-731-038	-038	-035	-032	J	100 pF Pi
56-731-039	-039	-036	-033	K	2500 pF Pi
56-731-051	-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 149 for filter performance.  
 Standard Tolerance = ±.005 except where noted, ∅ = ±.015

Dimensions in inches (mm)





# 37 Series 700 Socket Contact

Shell Size



## 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**  
 2.729 (69.32)  
 2.156 (54.76)  
 .494 (12.55)  
 .308 (7.82)  
 2.500 (63.50)  
 37

**Termination Face**  
 2.273 (57.73)  
 10°  
 .420 (10.67)  
 .120 ± .005 DIA. HOLES (3.05 ± .13 DIA. HOLES)

**Side View**  
 .050 (1.27)  
 .243 (6.17)  
 .025 SQ. (.64 SQ.)  
 .150 (3.81) ∅  
 .425 (10.80) ∅

## 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**  
 2.729 (69.32)  
 2.156 (54.76)  
 .494 (12.55)  
 .308 (7.82)  
 2.500 (63.50)  
 37

**Termination Face**  
 2.273 (57.73)  
 10°  
 .420 (10.67)  
 .020 ± .005 (51 ± 13)  
 .120 ± .005 DIA. HOLES (3.05 ± .13 DIA. HOLES)

**Bottom View**  
 .125 ± .005 DIA. HOLES (3.18 ± .13 DIA. HOLES)  
 .290 (7.37)  
 .275 (6.99)  
 .740 (18.80) ∅  
 .540 (13.72) ∅

**Side View**  
 .375 (9.53)  
 .090 (2.29)  
 .050 (1.27)  
 .243 (6.17)  
 .105 (2.67) ∅  
 .590 (14.99) ∅  
 .025 SQ. (.64 SQ.)  
 .702 (17.83) ∅

\* May be available from distributor stock.  
 \*\* See page 149 for filter performance.  
 Standard Tolerance = ±.005 except where noted, ∅ = ±.015

Dimensions in inches (mm)

Filtered Connectors



# 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 Spectrum Control's authorized European distributors/agents.

\* May be available from distributor stock.

\*\* See page 149 for filter performance.

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

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Dimensions in inches (mm)

Filtered Connectors



# 50 Series 700 Pin Contact Shell Size



## 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**  
 2.635 (66.93)  
 2.079 (52.81)  
 .605 (15.37)  
 2.406 (61.11)  
 .436 (11.07)

**Termination Face**  
 2.170 (55.12)  
 10°  
 .527 (13.39)  
 .120 ± .005 DIA. HOLES (3.05 ± .13 DIA HOLES)

**Side View**  
 .050 (1.27)  
 .238 (6.05)  
 .025 SQ. (.64 SQ.)  
 .150 (3.81) ∅  
 .408 (10.36) ∅

## 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**  
 2.635 (66.93)  
 2.079 (52.81)  
 .605 (15.37)  
 2.406 (61.11)  
 .436 (11.07)

**Termination Face**  
 2.170 (55.12)  
 10°  
 .527 (13.39)  
 .120 ± .005 DIA. HOLES (3.05 ± .13 DIA HOLES)  
 .020 ± .005 (.51 ± .13)

**Bottom View**  
 .12R (3.05R)  
 2.038 (51.77)  
 .400 (10.16)  
 .275 (6.99)  
 .850 (21.59) ∅  
 .125 ± .005 DIA. HOLES (3.18 ± .13 DIA HOLES)  
 .540 (13.72) ∅

**Side View**  
 .358 (9.09)  
 .090 (2.29)  
 .050 (1.27)  
 .238 (6.05)  
 .105 (2.67) ∅  
 .025 SQ. (.64 SQ.)  
 .590 (14.99) ∅  
 .702 (17.83) ∅  
 .814 (20.68) ∅

\* May be available from distributor stock.  
 \*\* See page 149 for filter performance.  
 Standard Tolerance = ±.005 except where noted, ∅ = ±.015

Dimensions in inches (mm)



# 50 Series 700 Pin Contact Shell Size



## Solderless Wire Wrap

Spectrum Part Number <i>Select one</i>	EMI Filter			Filter Desig.**	Cap. Value
	L .500	L .375	L .250		
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	

## 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

\* May be available from distributor stock.  
 \*\* See page 149 for filter performance.  
 Standard Tolerance = ±.005 except where noted, ∅ = ±.015

Dimensions in inches (mm)



# 50 Series 700 Socket Contact

Shell Size



## Printed Circuit Board Mount

Spectrum Part Number	EMI Filter		Mating Face	Termination Face	Side View
	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		Mating Face	Termination Face	Bottom View	Side View
	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 149 for filter performance.  
 Standard Tolerance = ±.005 except where noted, ∅ = ±.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 149 for filter performance.  
 Standard Tolerance = ±.005 except where noted, ⌀ = ±.015

Dimensions in inches (mm)

Filtered Connectors

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