

Series 700 High Performance Filtered Connectors

Filter Selection

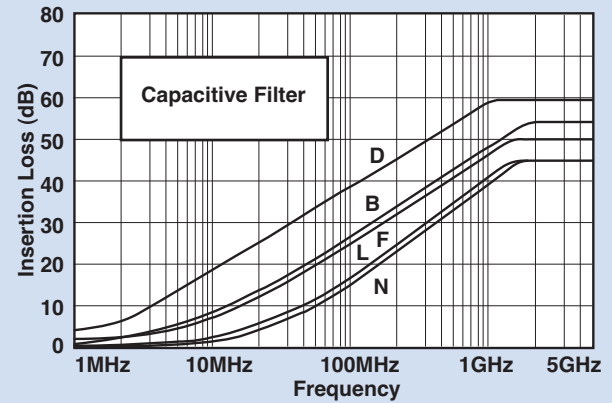
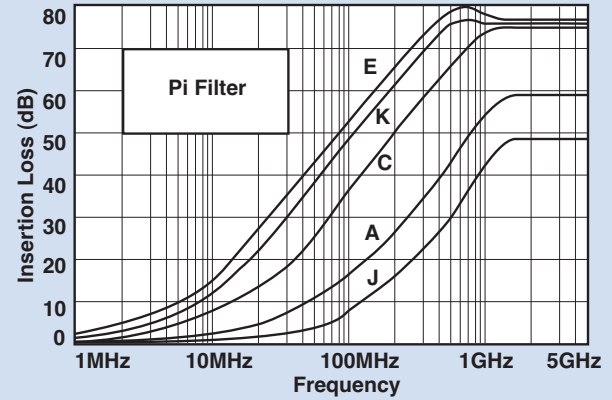
API's Spectrum Control brand of Series 700 connectors offer the highest performance filtering for all types of professional applications.

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 |

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

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

Side View
 .050 (1.27) x .238 (6.05) x .150 (3.81) ± .025 SQ. (.64 SQ.)
 .408 (10.36) ± .020 (51 ± .13)

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) x 1.213 (30.81) x .494 (12.55)
 .984 (24.99) x .329 (8.36)

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

Bottom View
 .125 ± .005 DIA. HOLES (3.18 ± .13 DIA. HOLES)
 .358 (9.09) x .090 (2.29) x .050 (1.27) x .238 (6.05)
 .12R (3.05R) x .618 (15.70) x .540 (13.72) ± .290 (7.37) x .275 (6.99) x .740 (18.80) ± .020 (51 ± .13)

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

* 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, ∅ = ±.015

Dimensions in inches (mm)

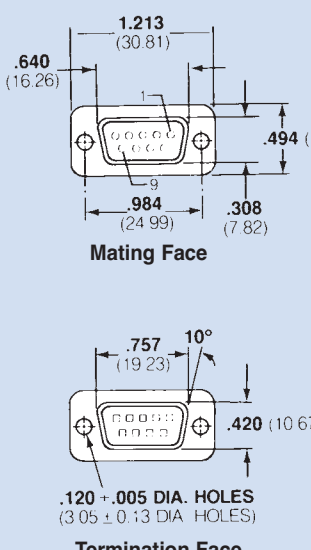
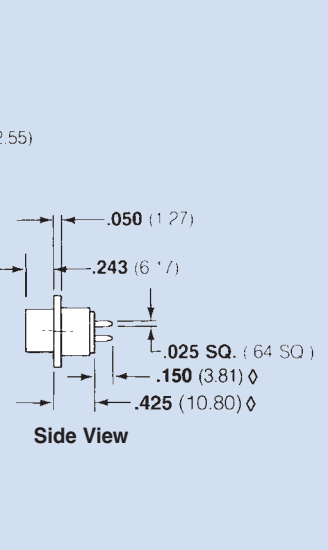
9 Series 700 Socket Contact

Shell Size



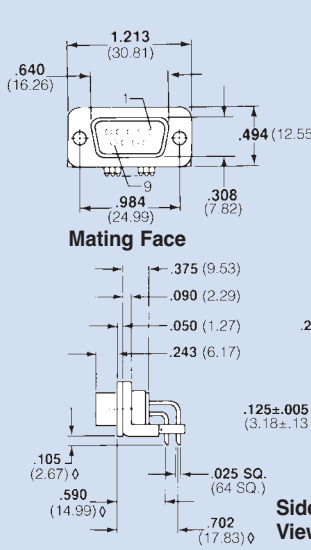
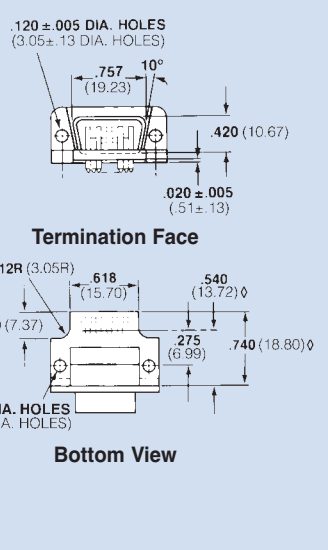
Printed Circuit Board Mount

| 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, Ø = ±.015

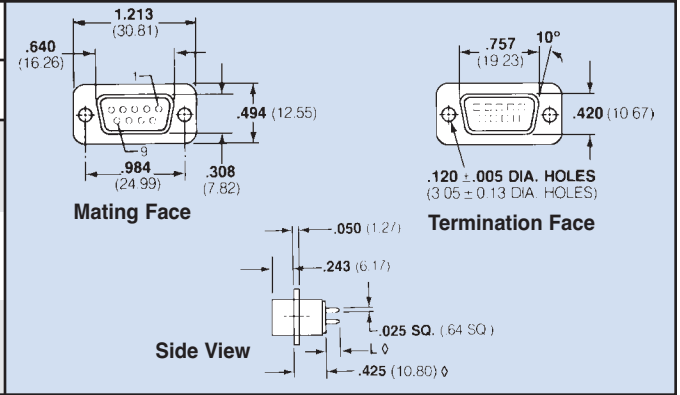
Dimensions in inches (mm)

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



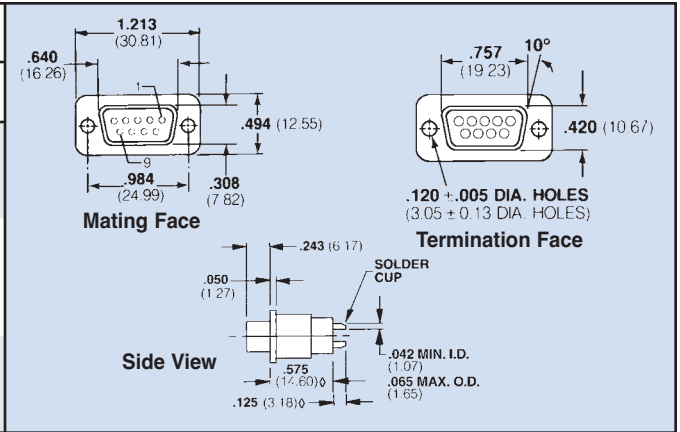
Solderless Wire Wrap

| Spectrum Part Number | Select one | | | EMI Filter | |
|----------------------|------------|-----------|-----------|-----------------|------------|
| | L .500 | L .375 | L .250 | Filter Desig.** | Cap. Value |
| 56-703 | -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 |



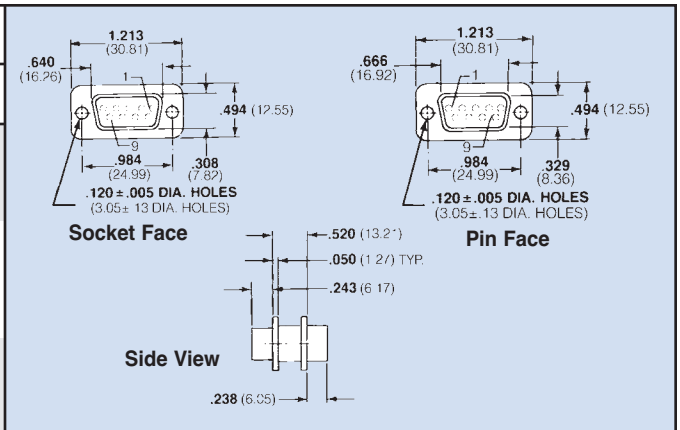
Solder Cup Termination

| 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 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

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

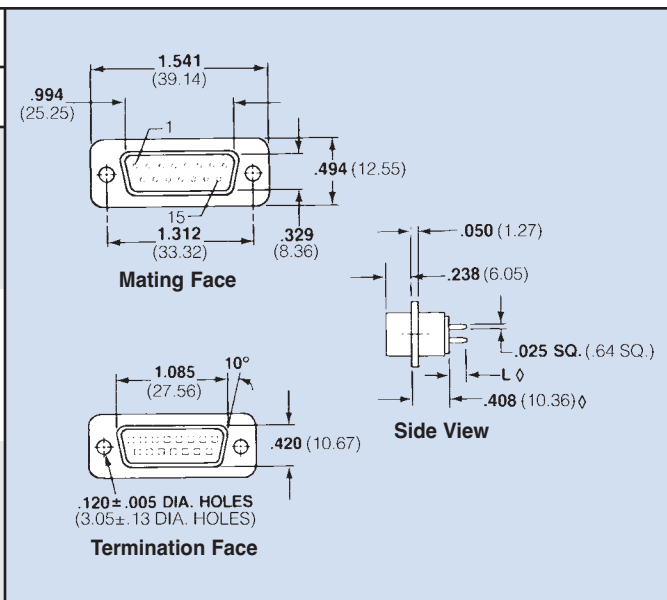
Dimensions in inches (mm)

15 Series 700 Shell Size Pin Contact



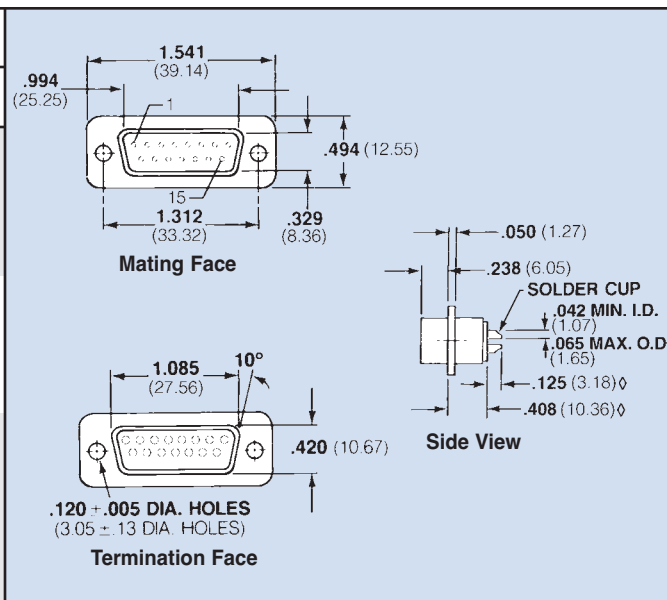
Solderless Wire Wrap

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

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 |

* May be available from distributor stock.

** See page FC20 for filter performance.

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

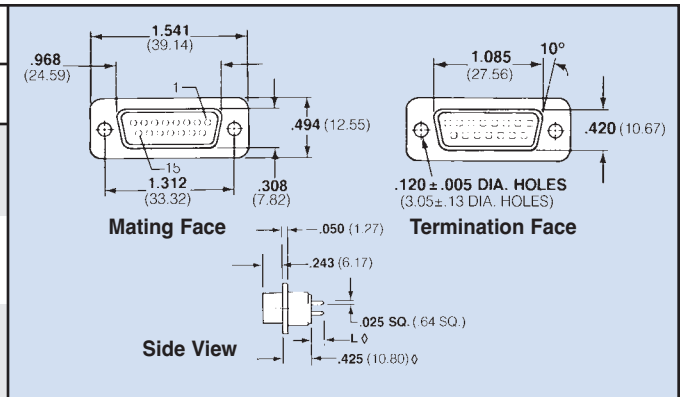
Dimensions in inches (mm)

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



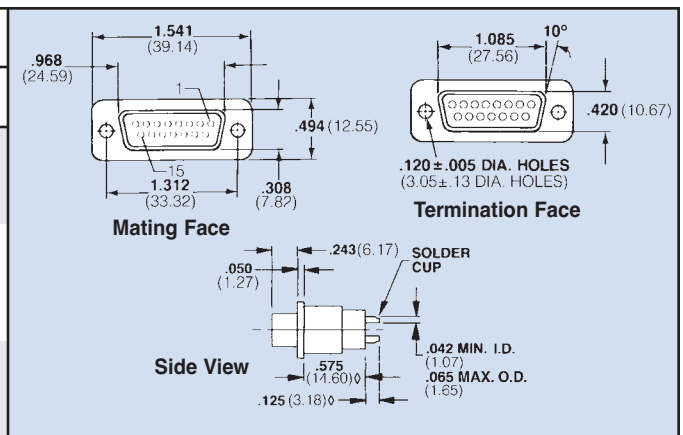
Solderless Wire Wrap

| Spectrum Part Number <i>Select one</i> | EMI Filter | | | 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 |



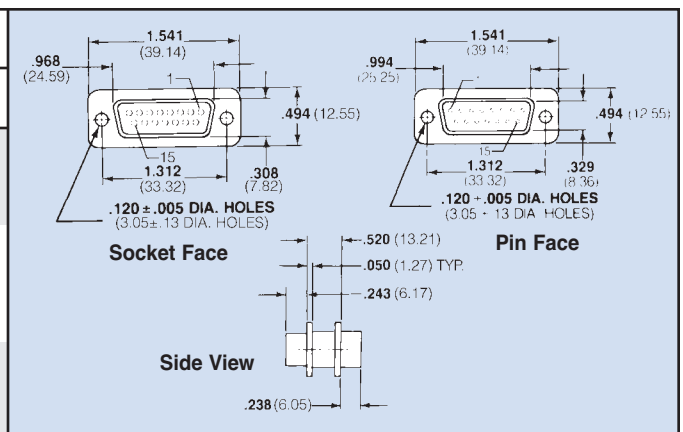
Solder Cup Termination

| 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 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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API TECHNOLOGIES' SPECTRUM CONTROL GmbH • Hansastrasse 6 • 91126 Schwabach, Germany • Phone: (49)-9122-795-0 • Fax: (49)-9122-795-58

Dimensions in inches (mm)

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

Termination Face

Side View

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

Termination Face

Side View

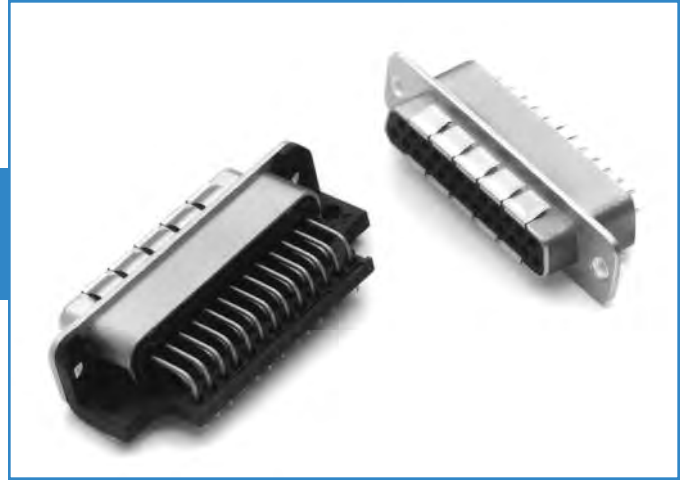
* May be available from distributor stock.

** See page FC20 for filter performance.

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

Dimensions in inches (mm)

25 Series 700 Shell Size 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 |

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 |

* May be available from distributor stock.

** See page FC20 for filter performance.

Standard Tolerance = ± 0.005 except where noted, $\diamond = \pm 0.015$

Dimensions in inches (mm)

25 Series 700 Shell Size Pin/Socket Adapter



Solderless Wire Wrap

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

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

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

* 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 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, Ø = ±.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 |

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 |

* May be available from distributor stock.

** See page FC20 for filter performance.

Standard Tolerance = ± 0.005 except where noted, $\diamond = \pm 0.015$

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 | | | |
| 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

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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, ∅ = ±.015

Dimensions in inches (mm)

50 Series 700 Shell Size Socket Contact



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 | Side View | Bottom 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 FC20 for filter performance.

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

Dimensions in inches (mm)

50 Series 700 Shell Size Pin/Socket Adapter



Solderless Wire Wrap

| Spectrum Part Number <i>Select one</i> | EMI Filter | | | Filter Design.** | Cap. Value | Mating Face | | Termination Face | Side View |
|---|------------|-----------|-----------|------------------|---------------|---------------|---------------|--|--|
| | L .500 | L .375 | L .250 | | | 2.635 (66.93) | 2.062 (52.37) | | |
| 56-743 -006 | -016 | -011 | A | 310 pF Pi | 2.406 (61.11) | .420 (10.67) | .605 (15.37) | .120 ± .005 DIA. HOLES (3.05 ± .13 DIA HOLES) | .050 (1.27) .243 (6.17) .025 SQ. (.64 SQ.) L ∅ .425 (10.80) ∅ |
| 56-743 -007 | -017 | -012 | B | 1000 pF C | 2.170 (55.12) | .527 (13.39) | | | |
| 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 | | Mating Face | | Termination Face | Side View |
|----------------------|----------------------|------------|---------------|---------------|------------------|-----------|
| | Filter Designation** | Cap. Value | 2.635 (66.93) | 2.062 (52.37) | | |
| 56-746-001 | A | 310 pF Pi | 2.406 (61.11) | .420 (10.67) | .605 (15.37) | |
| 56-746-002 | B | 1000 pF C | 2.170 (55.12) | .527 (13.39) | | |
| 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 | | Socket Face | | Pin Face | Side View |
|----------------------|----------------------|------------|---------------|---------------|--------------|-----------|
| | Filter Designation** | Cap. Value | 2.635 (66.93) | 2.062 (52.37) | | |
| * 56-745-001 | A | 310 pF Pi | 2.406 (61.11) | .420 (10.67) | .605 (15.37) | |
| 56-745-002 | B | 1000 pF C | 2.170 (55.12) | .527 (13.39) | | |
| * 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)