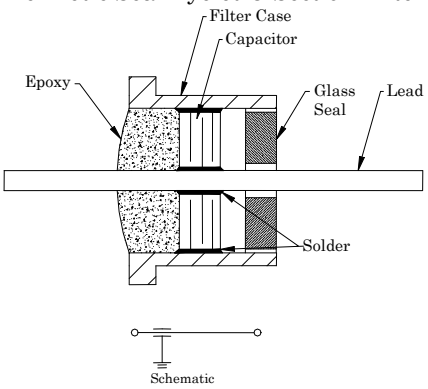
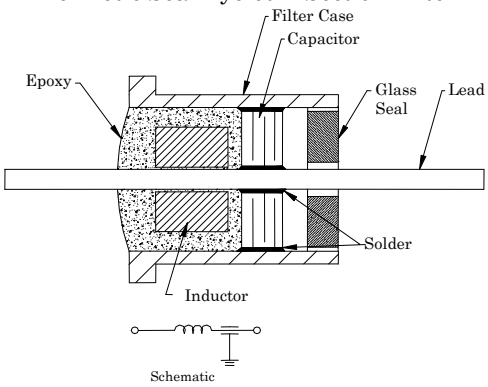
EMI FILTERS
"C" AND "L" TYPE

EYELET

Hermetic Seal Eyelet C-Section Filter



Hermetic Seal Eyelet L-Section Filter



FEATURES:

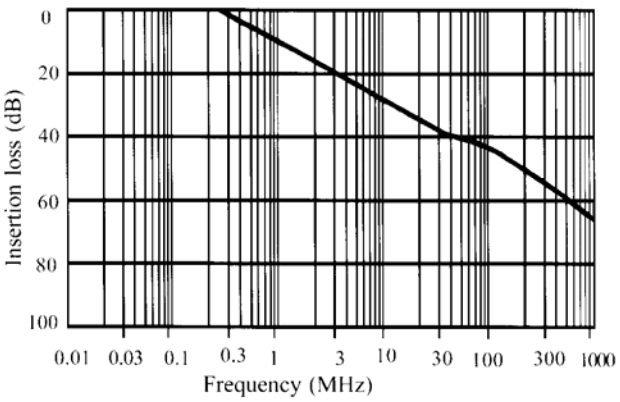
- Equivalent to MIL-F-28861/12 through /15.
- Hermetically sealed at one end, epoxy at opposite.
- Miniature size for optimum use of design space.
- Wide capacitance/voltage range.
- High capacitance per unit volume.
- Tin, gold, or silver plating.

APPLICATIONS:

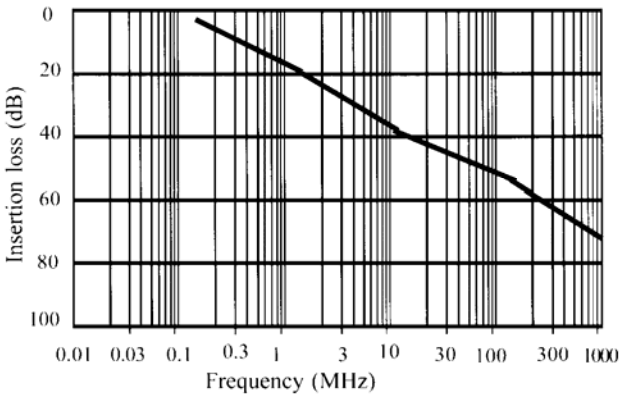
The feed-thru type of "C" section eyelet style filters are designed for solder-in bulkhead mounting to suppress conducted interference on DC bias lines for RF oscillator and amplifier circuitry. These units are hermetically sealed (glass to metal) at one end and epoxy sealed at the other end. A feed-thru filter consists of a single capacitive element and is best suited for high source and load impedance systems when a moderate attenuation slope of 20db/decade satisfies system insertion loss requirements.

The eyelet style "L" section filter offers the designer an option of having either high impedance or low impedance input depending on the orientation of the filter in the circuit. It is commonly used with an inductor (ferrite bead) facing either low impedance source or low impedance load in order to create the impedance mismatch which would produce the best insertion loss results. Effective filtering starts below 300 KHz and continues through 10 GHz.

TYPICAL INSERTION LOSS "C" .027 µF



TYPICAL INSERTION LOSS "L" .10 µF



EYELET

EMI FILTERS
“C” AND “L” TYPE

GENERAL SPECIFICATIONS

Capacitance / Tolerance:	Measured @ 1 KHz and .1-1 Vrms, 25°C / -0% +100%
Dissipation Factor:	2.5% max @ 1 KHz and .1-1 Vrms, 25°C
Insulation Resistance:	100 GΩ or 1000 MΩ - mF, whichever is less @ 25°C, WVDC
Working Voltage:	50 VDC to 400 VDC
Dielectric Withstanding Voltage:	250 % of WVDC min. @ 25°C for 5±1 sec, 50 mA max chg. Current
Volt-Temperature Limit:	+10% -30% @ WVDC and -55°C to +125°C
Current Rating:	5 Amp through 15 Amp
DC Resistance:	.01Ω max.
Insertion Loss:	Measured per Mil-STD-220, IL between any two adjacent specified frequency shall be that of the lower of the two frequencies in order to accommodate resonant dips.
Operating Temperature:	-55°C to +125°C
Storage Temperature:	-65°C to +160°C
Materials: Case	Cold rolled steel per ASTM A-108
Terminals	Iron-nickel alloy (alloy 52) per ASTM F-30
Finish: Case	Gold plate per MIL-G-45204 Type II, Class I / silver optional
Terminals	Gold plate per MIL-G-45204 Type II, Class I / silver optional
Applicable MIL Specifications:	Mil-F-28861 / Mil-C-11015
Environmental Test Spec:	Mil-STD-202
Thermal Shock:	Method 107, Condition A except step 3 @ 125°C
Salt Spray:	Method 101, Condition B
Barometric Pressure:	Method 105, Condition B
Resistance to Soldering Heat:	Method 210, Condition B
Seal:	Not Applicable
Vibration:	Method 204, Condition D
Shock:	Method 213, Condition I
Terminal Strength:	Method 211, Condition A
Solderability:	Method 208
Life:	Method 108, Condition D

Steel case only

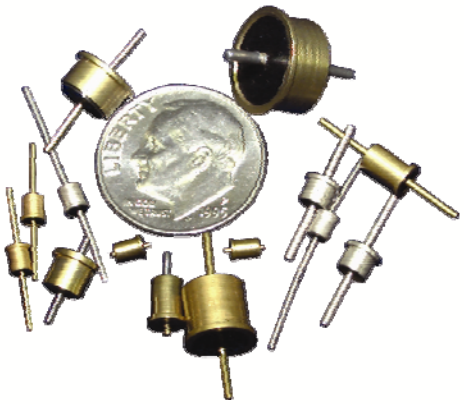
INSTALLATION GUIDE

In order to reduce the possibility of damage as a result of thermal stress caused by the application of soldering heat, adhere to following procedure:

1) Preheat the part and the chassis to 125-140ºC for 5 minutes.
2) Use silver bearing solder preforms such as 60/38/2 % tin/lead/silver or 60/40 % tin/lead.
3) Apply the heat in the immediate vicinity of the filter with sufficient magnitude to reflow the solder preform and only for the minimum time required to make a good solder connection.
4) Allow the assembly to cool at the rate similar to that of the preheat operation.
5) Avoid bending or flexing terminals at the point of exit from the glass or epoxy seal to preserve the integrity of the seal and/or ceramic capacitor.
6) Solder connections to the terminals should be performed with temperatures not exceeding 230’C, placing a heat sink between soldering point and filter body whenever possible.

EMI FILTERS
"C" AND "L" TYPE
.128 OD, 5 AMP

EYELET



Hermetic Seal Eyelet L-Section Filter

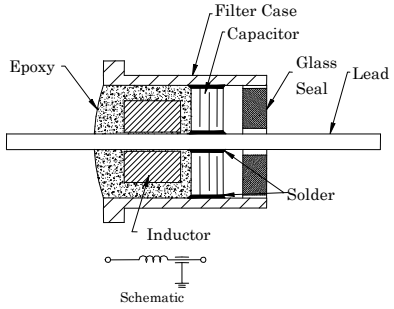


FIGURE 1

C-SECTION FILTER – SOLDER MOUNT

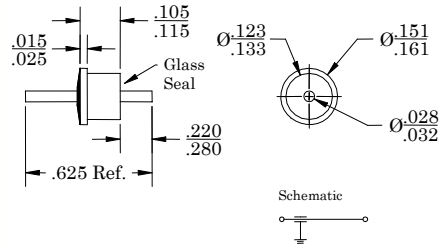
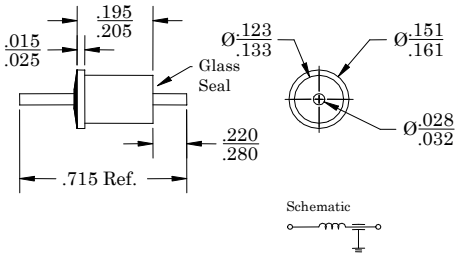


FIGURE 2

L-SECTION FILTER – Solder Mount



FILTER DIVISION PART NUMBER	FIG.	WORKING VOLTAGE (VDC)	MIN CAP pF	MINIMUM INSERTION LOSS (dB) Per MIL-STD-220				
				1 MHz	10 MHz	100 MHz	1 GHz	10 GHz
1115-1115-273**	1	50	27000	10	30	42	65	70
1115-1115-153**	1	50	15000	7	25	40	60	60
1115-1115-103**	1	50	10000	4	20	35	50	60
1125-1115-502**	1	100	5000	-	15	30	50	60
1125-1115-272**	1	100	2700	-	10	25	45	60
1135-1115-102**	1	200	1000	-	4	20	40	55
1135-1115-501**	1	200	500	-	-	15	34	50
1135-1115-101**	1	200	100	-	-	3	20	40
1135-1115-250**	1	200	25	-	-	-	10	25
1135-1115-100**	1	200	10	-	-	-	5	20
1135-1115-5R0**	1	200	5	-	-	-	2	15
1215-1A15-273**	2	50	27000	10	30	48	65	70
1215-1A15-153**	2	50	15000	7	25	45	60	60
1215-1A15-103**	2	50	10000	4	20	38	55	60
1225-1A15-502**	2	100	5000	-	15	30	50	60
1225-1A15-272**	2	100	2700	-	10	25	50	60
1235-1A15-102**	2	200	1000	-	4	20	45	55
1235-1A15-501**	2	200	500	-	-	15	34	55
1235-1A15-101**	2	200	100	-	-	3	20	40
1235-1A15-250**	2	200	25	-	-	-	20	25
1235-1A15-100**	2	200	10	-	-	-	15	20
1235-1A15-5R0**	2	200	5	-	-	-	5	15

NOTE: For glass seal at the flange end, change the first digit of the part number from 1 to 5.

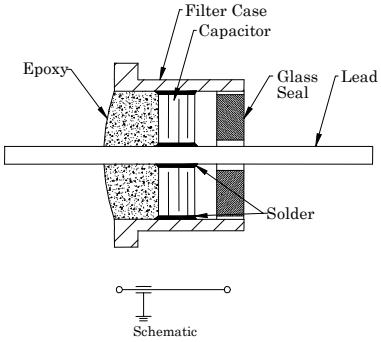
Details subject to change without notice.

**** PART NUMBERS ARE INCOMPLETE. PLEASE SEE PAGE 49 TO COMPLETE THE NUMBERS.**

EYELET

EMI FILTERS
"C" AND "L" TYPE
.165 OD, 10 AMP

Hermetic Seal Eyelet C-Section Filter



FILTER DIVISION PART NUMBER	FIG.	WORKING VOLTAGE (VDC)	MIN CAP pF	MINIMUM INSERTION LOSS (dB) Per MIL-STD-220					
				500 KHz	1 MHz	10 MHz	100 MHz	1 GHz	10 GHz
1116-S415-104**	3	50	100000	14	20	38	48	70	70
1116-S415-653**	3	50	65000	10	16	35	45	70	70
1126-S415-503**	3	100	50000	8	15	33	44	67	70
1126-S415-403**	3	100	40000	5	12	31	43	65	70
1126-S415-273**	3	100	27000	-	10	30	42	65	70
1126-S415-153**	3	100	15000	-	7	25	40	60	60
1136-S415-103**	3	200	10000	-	4	20	35	52	60
1136-S415-502**	3	200	5000	-	-	15	34	50	60
1216-S715-104**	4	50	100000	14	20	38	52	70	70
1216-S715-653**	4	50	65000	10	16	36	51	70	70
1226-S715-503**	4	100	50000	8	15	34	50	70	70
1226-S715-403**	4	100	40000	5	12	33	49	65	70
1226-S715-273**	4	100	27000	-	10	30	48	65	70
1226-S715-153**	4	100	15000	-	7	25	45	60	60
1236-S715-103**	4	200	10000	-	4	20	38	55	60
1236-S715-502**	4	200	5000	-	-	15	35	55	60

FIGURE 3

C-SECTION FILTER – Solder Mount

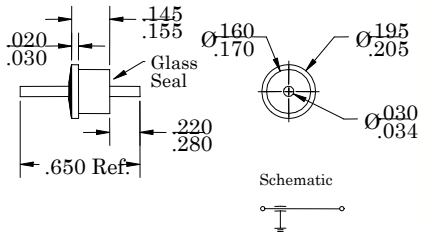
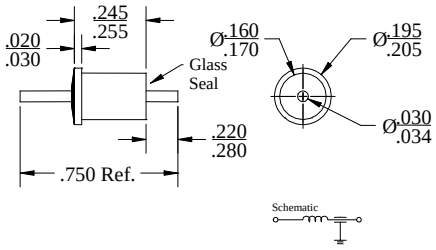


FIGURE 4

L-SECTION FILTER - Solder Mount



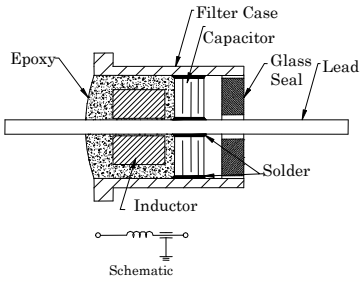
NOTE: For glass seal at the flange end, change the first digit of the part number from 1 to 5.
Details subject to change without notice.

**** PART NUMBERS ARE INCOMPLETE. PLEASE SEE PAGE 49 TO COMPLETE THE NUMBERS.**

EMI FILTERS
"C" AND "L" TYPE
.250 OD, 10 AMP

EYELET

Hermetic Seal Eyelet L-Section Filter



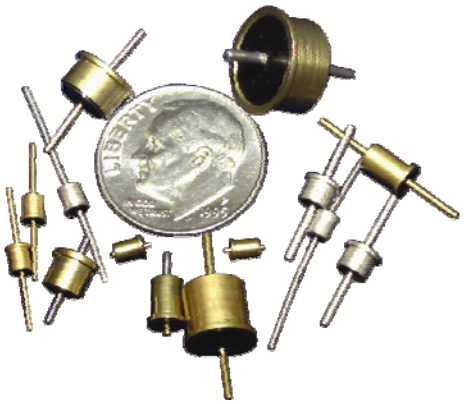


FIGURE 5

C-SECTION FILTER - Solder Mount

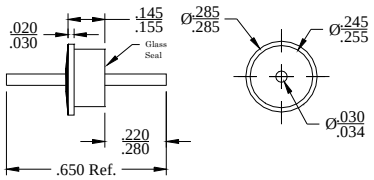
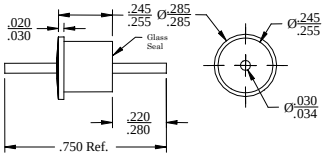


FIGURE 5

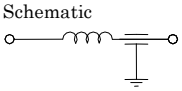
Schematic

FIGURE 6

L-SECTION FILTER - Solder Mount



Schematic



FILTER DIVISION PART NUMBER	FIG.	WORKING VOLTAGE (VDC)	MIN CAP µF	MINIMUM INSERTION LOSS (dB) Per MIL-STD-220					
				500 KHz	1 MHz	10 MHz	100 MHz	1 GHz	10 GHz
1116-T415-394**	5	50	.39	21	31	43	55	70	70
1116-T415-204**	5	50	.2	18	28	40	52	70	70
1116-T415-154**	5	50	.15	17	24	38	50	70	70
1126-T415-104**	5	100	.1	14	20	38	48	70	70
1126-T415-753**	5	100	.075	12	18	37	46	70	70
1126-T415-503**	5	100	.05	8	15	35	44	70	70
1136-T415-273**	5	200	.027	4	10	30	42	65	70
1136-T415-223**	5	200	.022	2	8	26	40	58	70
1136-T415-153**	5	200	.015	-	7	25	40	55	60
1166-T415-103**	5	300	.01	-	4	20	35	52	60
1166-T415-502**	5	300	.05	-	-	15	34	50	60
1216-T715-394**	6	50	.39	21	32	46	60	70	70
1216-T715-204**	6	50	.2	18	29	42	55	70	70
1216-T715-154**	6	50	.15	17	26	40	53	70	70
1226-T715-104**	6	100	.1	14	20	39	52	70	70
1226-T715-753**	6	100	.075	12	18	37	51	70	70
1226-T715-503**	6	100	.05	9	15	36	50	70	70
1236-T715-273**	6	200	.027	4	10	30	48	65	70
1236-T715-223**	6	200	.022	2	8	27	45	65	70
1236-T715-153**	6	200	.015	-	7	25	45	60	60
1266-T715-103**	6	300	.01	-	4	20	38	55	60
1233-T715-502**	6	300	.005	-	-	15	34	50	60

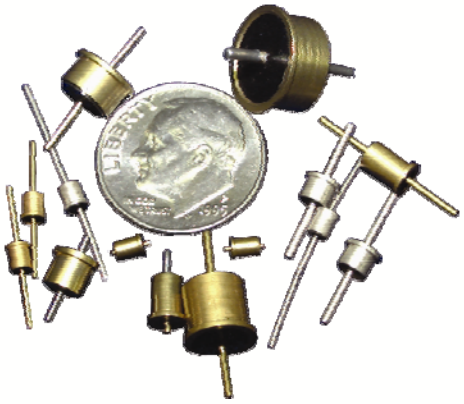
NOTE: For glass seal at the flange end, change the first digit of the part number from 1 to 5.

Details subject to change without notice.

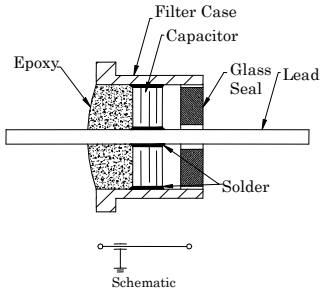
**** PART NUMBERS ARE INCOMPLETE. PLEASE SEE PAGE 49 TO COMPLETE THE NUMBERS.**

EYELET

EMI FILTERS
"C" AND "L" TYPE
.400 OD, 15 AMP



Hermetic Seal Eyelet C-Section Filter



FILTER DIVISION PART NUMBER	FIG.	WORKING VOLTAGE (VDC)	MIN CAP µF	MINIMUM INSERTION LOSS (dB) Per MIL-STD-220					
				500 KHz	1 MHz	10 MHz	100 MHz	1 GHz	10 GHz
1118-UA15-125**	7	50	1.2	33	37	52	70	70	70
1128-UA15-105**	7	70	1.0	31	40	48	64	70	70
1128-UA15-704**	7	100	.7	30	36	44	60	70	70
1128-UA15-504**	7	100	.5	26	34	42	58	70	70
1138-UA15-254**	7	200	.25	20	30	40	55	70	70
1138-UA15-154**	7	200	.15	17	24	38	50	70	70
1138-UA15-104**	7	200	.1	14	20	38	48	70	70
1148-UA15-753**	7	115 VAC	.075	12	18	37	46	70	70
1148-UA15-503**	7	115 VAC	.05	7	15	34	44	70	70
1158-UA15-403**	7	400	.04	6	12	31	43	65	70
1158-UA15-103**	7	400	.01	-	4	20	35	52	60
1218-UB15-125**	8	50	1.2	33	38	53	70	70	70
1218-UB15-105**	8	70	1.0	31	41	50	65	70	70
1228-UB15-704**	8	100	.7	30	38	46	62	70	70
1228-UB15-504**	8	100	.5	26	36	44	60	70	70
1238-UB15-254**	8	200	.25	20	30	42	56	70	70
1238-UB15-154**	8	200	.15	17	26	40	53	70	70
1238-UB15-104**	8	200	.10	14	20	39	52	70	70
1248-UB15-753**	8	115 VAC	.075	12	18	37	51	70	70
1248-UB15-503**	8	115 VAC	.05	7	15	34	50	70	70
1258-UB15-403**	8	400	.04	6	12	33	49	65	70
1258-UB15-103**	8	400	.01	-	4	20	38	65	60

FIGURE 7

C-SECTION FILTER – Solder Mount

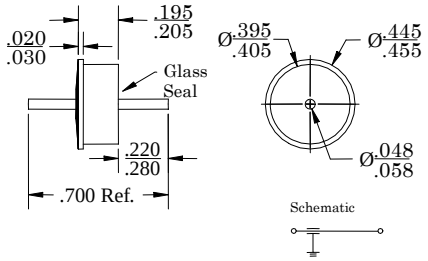
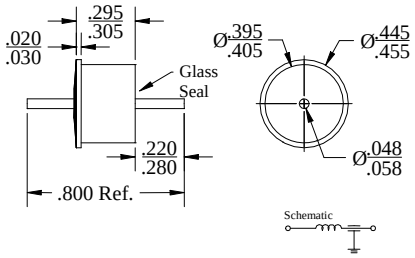


FIGURE 8

L-SECTION FILTER - Solder Mount



NOTE: For glass seal at the flange end, change the first digit of the part number from 1 to 5.
Details subject to change without notice.

**** PART NUMBERS ARE INCOMPLETE. PLEASE SEE PAGE 49 TO COMPLETE THE NUMBERS.**