ORGANIZATION OF CATALOG

In this catalog are sections covering the following products:

EMI/RFI FILTERS
- Tubular Filters/Cylindrical Filters
- Custom and Rectangular Filters
- EMP and Transient Voltage Filters

CAPACITORS
- Filter Capacitors
- Film/Foil Capacitors
- Recon Mica Capacitors

MAGNETICS
- Transformers
- Inductors

This catalog is produced by Ultra EMS and is intended as a resource for the design and selection of the above types of passive components. It can be used to select a specific part number, or, very typically, as a starting point for specifying an entirely new design. More product information can be found on our web site www.ultra-ems.com. Design and application assistance is available through the on-line Design Portal, **https://www.ultra-electronics.com/ems/design-portal**. Our engineers are available to assist customers throughout the design process both verbally and/or on-line.

The products assembled in the catalog are brought together under the banner "RFI Specialty Components", since the majority were either developed by RFI Corporation before its acquisition by Ultra EMS, or by another acquired company, such as Stanley, Del, Sprague, or Filtron. All are designed and built for demanding performance and environmental applications, including those in defense, aerospace, medical, and high-end industrial. Every product is designed and built at the New York facilities of Ultra EMS.

Ultra EMS is a part of the Ultra Maritime division. It is a world-class, AS9100 rev. D/ISO 9001:2015 certified manufacturer of defense electronic systems. It supplies the US government and allied nations with equipment in the field of magnetic and electric field countermeasures for naval mine warfare, sensor design, and power conversion.

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TUBULAR FILTER OFFERING

Included in the RFI Specialty Components program are three families of tubular/cylindrical filters.

The first section provides information about Mil-PRF-15733 type filters. These are the most popular QPL designs, and for this reason EMS maintains a long list of qualifications. For those who wish to make selections using these mil specifications, these pages reference the relevant slash sheet plus the corresponding EMS part numbers.

For applications that require Higher Reliability, in the second section we offer the option of the RF6900 series of subminiature filters. All these products were designed according to Mil-PRF-28861 and are available in various circuit configurations, at voltages from 50 VDC to 125 VAC, and current ratings from 0.1 to 15 Amperes. The RF6900 Series meet the requirements of the Mil-PRF-28861.

The military-grade filters developed by Sprague were originally designed for major defense and aerospace systems, and remain available by EMS in support of those systems, or for new designs. Incorporated into this catalog is key technical data for the more popular Sprague types; contact the factory for any other information.

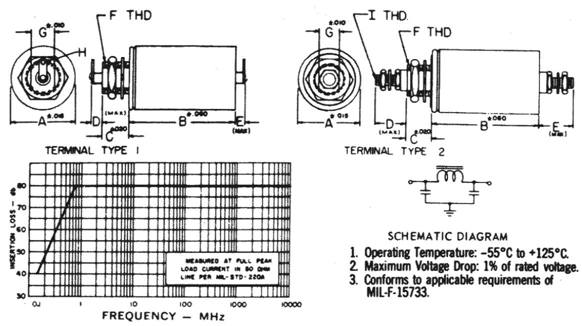
Note that the above three families of tubular filters are not interchangeable among one another.

For applications where high energy events are a consideration, refer to the EMP and Voltage Transient section of this catalog.

For a filter with performance or features not found in these pages, contact your local sales representative or the factory for an application-specific solution.

CYLINDRICAL FILTERS
PI CIRCUIT TYPES

40 db Minimum at 0.15 MHz
at full RATED LOAD
M15733/72, /73, /74

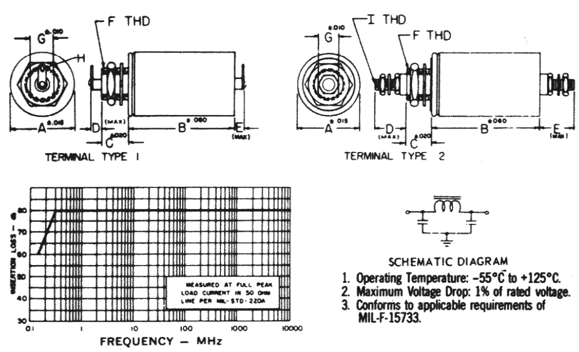


RATING		M15733/	PART NO.	A	B	C	D	E	F	G	H	I	Terminal Type
100 VDC	0.5A.	72-0033	RF700	.67	1.94	.25	.19	.19	1/4 - 28	.201	1/16		1
	1A.	72-0036	RF701	.67	1.94	.25	.19	.19	1/4 - 28	.201	1/16		1
	3A.	72-0039	RF702	.75	2.38	.28	.32	.32	5/16 - 24	.250	1/16 X 1/8		1*
	5A.	72-0042	RF703	1.13	2.25	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1
	10A.	72-0045	RF704	1.25	2.56	.44	.25	.25	7/16 - 20	.370	3.32 X 3/16		1
	20A.	72-0048	RF705	1.25	3.25	.50	.69	.69	5/8 - 24	.530		8-32	2
	30A.	72-0050	RF706	2.25	4.00	.56	.81	.81	1-1/8 - 18	1.065		10-32	2
	50A.	72-0052	RF707	2.25	4.00	.56	.88	.88	1-1/8 - 18	1.065		1/4-20	2
115 VAC 0-400 Hz 400 VDC	0.5A.	73-0033	RF708	.67	2.32	.25	.19	.19	1/4 - 28	.201	1/16		1
	1A.	73-0036	RF709	.67	2.32	.25	.19	.19	1/4 - 28	.201	1/16		1
	3A.	73-0039	RF710	1.00	2.56	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1
	5A.	73-0042	RF711	1.13	2.88	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1
	10A.	73-0045	RF712	1.25	3.25	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1
	20A.	73-0048	RF713	1.50	3.63	.50	.69	.69	3/4 - 20	.656		8-32	2
	30A.	73-0050	RF714	2.25	4.00	.56	.81	.81	1-1/8 - 18	1.065		10-32	2
	50A.	73-0052	RF715	2.25	4.00	.56	.88	.88	1-1/8 - 18	1.065		1/4-20	2
250 VAC 0-400 Hz 600 VDC	0.5A.	74-0029	RF716	.75	2.38	.28	.32	.32	5/16 - 24	.250	1/16 X 1/8		1*
	1A.	74-0032	RF717	.75	2.88	.28	.32	.32	5/16 - 24	.250	1/16 X 1/8		1*
	3A.	74-0035	RF718	1.00	3.19	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1
	5A.	74-0038	RF719	1.25	3.63	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1
	10A.	74-0041	RF720	1.25	4.25	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1
	20A.	74-0044	RF721	1.50	4.50	.50	.69	.69	3/4 - 20	.656		8-32	2
	30A.	74-0046	RF722	2.25	5.00	.56	.81	.81	1-1/8 - 18	1.065		10-32	2
	50A.	74-0047	RF723	2.25	5.38	.56	.88	.88	1-1/8 - 18	1.065		1/4-20	2

*45° Lug

CYLINDRICAL FILTERS
PI CIRCUIT TYPES

60 db Minimum at 0.15 MHz
at full RATED LOAD
M15733/72, /73, /74

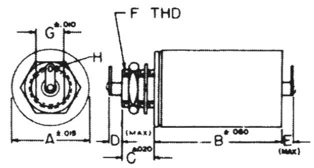


RATING		M15733/	PART NO.	A	B	C	D	E	F	G	H	I	Terminal Type
100 VDC	0.5A.	72-0034	RF724	.75	2.13	.28	.32	.32	5/16 - 24	.250	1/16 X 1/8		1*
	1A.	72-0037	RF725	.75	2.32	.28	.32	.32	5/16 - 24	.250	1/16 X 1/8		1*
	3A.	72-0040	RF726	1.13	2.38	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1
	5A.	72-0043	RF727	1.13	2.63	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1
	10A.	72-0046	RF728	1.50	3.50	.50	.69	.69	3/4 - 20	.656			2
	20A.	72-0049	RF729	1.50	3.89	.50	.69	.69	3/4 - 20	.656		8-32	2
	30A.	72-0051	RF730	2.25	4.00	.56	.81	.81	1-1/8 - 18	1.065		10-32	2
	50A.	72-0053	RF731	2.25	4.50	.56	.88	.88	1-1/8 - 18	1.065		1/4-20	2
115 VAC 0-400 Hz 400 VDC	0.5A.	73-0034	RF732	.75	2.75	.28	.32	.32	5/16 - 24	.250	1/16 X 1/8		1*
	1A.	73-0037	RF733	1.00	2.38	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1
	3A.	73-0040	RF734	1.13	3.00	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1
	5A.	73-0043	RF735	1.25	4.13	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1
	10A.	73-0046	RF736	1.50	4.19	.50	.69	.69	3/4 -20	.656		8-32	2
	20A.	73-0049	RF737	1.75	5.00	.50	.69	.69	3/4 - 20	.656		8-32	2
	30A.	73-0051	RF738	2.25	4.89	.56	.81	.81	1-1/8 - 18	1.065		10-32	2
	50A.	73-0053	RF739	2.25	5.75	.56	.88	.88	1-1/8 - 18	1.065		1/4-20	2
250 VAC 0-400 Hz 600 VDC	0.5A.	74-0030	RF740	1.00	2.75	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1
	1A.	74-0033	RF741	1.00	3.19	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1
	3A.	74-0036	RF742	1.25	3.75	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1
	5A.	74-0039	RF743	1.50	4.00	.50	.69	.69	3/4 - 20	.656		8-32	2
	10A.	74-0042	RF744	1.50	5.13	.50	.69	.69	3/4 - 20	.656		8-32	2
	20A.	74-0045	RF745	2.25	5.00	.56	.69	.69	1-1/8 - 18	1.065		8-32	2

*45° Lug

CYLINDRICAL FILTERS
PI CIRCUIT TYPES

80 db Minimum at 0.15 MHz
at full RATED LOAD
M15733/72, /73, /74



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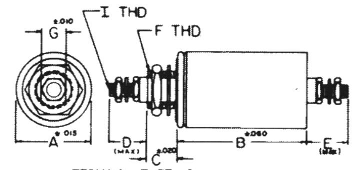

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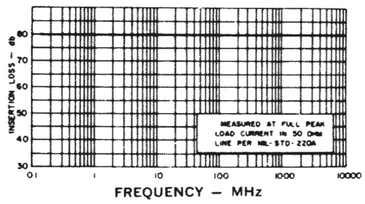
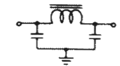




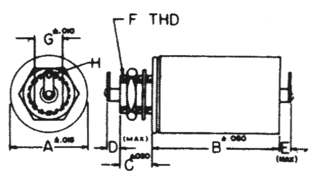
SCHEMATIC DIAGRAM

1. Operating Temperature: –55°C to +125°C.
2. Maximum Voltage Drop: 1% of rated voltage.
3. Conforms to applicable requirements of MIL-F-15733

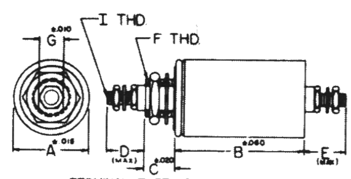
RATING		M15733/	PART NO.	A	B	C	D	E	F	G	H	I	Terminal Type
100 VDC	0.5A.	72-0035	RF746	1.00	2.25	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1
	1A.	72-0038	RF747	1.00	2.50	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1
	3A.	72-0041	RF748	1.25	4.19	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1
	5A.	72-0044	RF749	1.50	3.88	.50	.69	.69	3/4 - 20	.656		8-32	2
	10A.	72-0047	RF750	2.25	3.88	.56	.69	.69	1-1/8 - 18	1.065		8-32	2
115 VAC 0-400 Hz 400 VDC	0.5A.	73-0035	RF751	1.00	3.00	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1
	1A.	73-0038	RF752	1.13	3.32	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1
	3A.	73-0041	RF753	1.50	3.75	.50	.69	.69	3/4 - 20	.656		8-32	2
	5A.	73-0044	RF754	1.50	4.38	.50	.69	.69	3/4 - 20	.656		8-32	2
	10A.	73-0047	RF755	2.25	5.25	.56	.69	.69	1-1/8 - 18	1.065		8-32	2
250 VAC 0-400 Hz 600 VDC	0.5A.	74-0031	RF756	1.13	3.56	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1
	1A.	74-0034	RF757	1.25	4.25	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1
	3A.	74-0037	RF758	1.75	4.50	.50	.69	.69	3/4 - 20	.656		8-32	2
	5A.	74-0040	RF759	1.75	5.75	.50	.69	.69	3/4 - 20	.656		8-32	2
	10A.	74-0043	RF760	2.25	6.50	.56	.69	.69	1-1/8 - 18	1.065		8-32	2

CYLINDRICAL FILTERS
L CIRCUIT TYPES

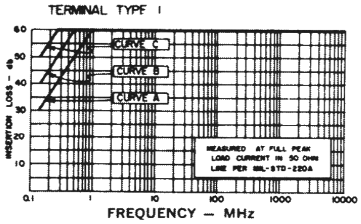
M15733/72, /73, /74

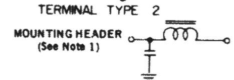


TERMINAL TYPE 1



TERMINAL TYPE 2





SCHEMATIC DIAGRAM

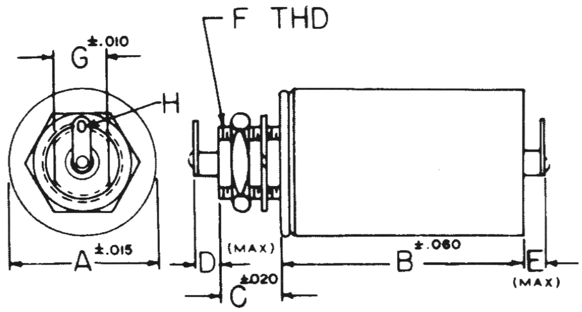
1. For coil input to mounting header, add -R to Part No. (i.e., RF761R).
2. Operating Temperature: –55°C to +125°C.
3. Maximum Voltage Drop: 1% of rated voltage.
4. Conforms to applicable requirements of MIL-F-15733

RATING		Cap Input to Mtg. M15733/	PART NO.	Coil Input to Mtg. M15733/	PART NO.	A	B	C	D	E	F	G	H	I	CURVE	Terminal Type
100 VDC	0.5A	72-0001	RF761	72-0002	RF761R	.67	1.38	.25	.19	.19	1/4 - 28	.201	1/16		A	1
	0.5A	72-0003	RF762	72-0004	RF762R	1.00	1.81	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		C	1
	1A	72-0005	RF763	72-0006	RF763R	.67	1.63	.25	.19	.19	1/4 - 28	.201	1/16		A	1
	1A	72-0007	RF764	72-0008	RF764R	1.00	1.69	.44	.25	.25	7/16 - 20	.370	3.32 X 3.16		C	1
	3A	72-0009	RF765	72-0010	RF765R	.75	1.94	.28	.32	.32	5/16 - 24	.250	1/16 X 1/8		A	1*
	3A	72-0011	RF766	72-0012	RF766R	1.25	2.81	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		B	1
	5A	72-0013	RF767	72-0014	RF767R	1.13	2.06	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		A	1
	5A	72-0015	RF768	72-0016	RF768R	1.50	2.62	.50	.69	.69	3/4 - 20	.656		8-32	B	2
115 VAC 0-400 Hz 400 VDC	0.5A	73-0001	RF769	73-0002	RF769R	.67	1.69	.25	.19	.19	1/4 - 28	.201	1/16		A	1
	0.5A	73-0003	RF770	73-0004	RF770R	1.00	2.00	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		C	1
	1A	73-0005	RF771	73-0006	RF771R	.67	1.94	.25	.19	.19	1/4 - 28	.201	1/16		A	1
	1A	73-0007	RF772	73-0008	RF772R	1.13	2.13	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		C	1
	3A	73-0009	RF773	73-0010	RF773R	1.00	2.19	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		A	1
	3A	73-0011	RF774	73-0012	RF774R	1.50	2.31	.50	.69	.69	3/4 - 20	.656		8-32	B	2
	5A	73-0013	RF775	73-0014	RF775R	1.13	2.69	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		A	1
	5A	73-0015	RF776	73-0016	RF776R	1.50	3.13	.50	.69	.69	3/4 - 20	.656		8-32	B	2
250 VAC 0-400 Hz 600 VDC	0.5A	74-0001	RF777	74-0002	RF777R	.75	1.63	.28	.32	.32	5/16 - 24	.250	1/16 X 1/8		A	1*
	0.5A	74-0003	RF778	74-0004	RF778R	1.13	2.25	.44	.25	.25	7/16 -20	.370	3/32 X 3/16		C	1
	1A	74-0005	RF779	74-0006	RF779R	.75	2.50	.28	.32	.32	5/16 - 24	.250	1/16 X 1/8		A	1*
	1A	74-0007	RF780	74-0008	RF780R	1.25	2.56	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		C	1
	3A	74-0009	RF781	74-0010	RF781R	1.00	2.81	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		A	1
	3A	74-0011	RF782	74-0012	RF782R	1.75	2.62	.50	.69	.69	3/4 - 20	.656		8-32	B	2
	5A	74-0013	RF783	74-0014	RF783R	1.25	3.44	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		A	1
	5A	74-0015	RF784	74-0016	RF784R	1.75	4.06	.50	.69	.69	3/4 - 20	.656		8-32	B	2

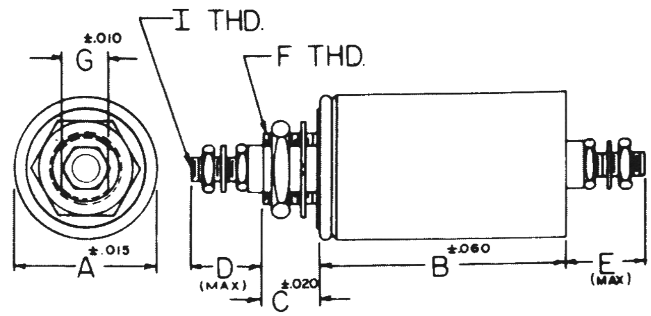
*45° Lug

CYLINDRICAL FILTERS
DOUBLE "L" CIRCUIT TYPES

M15733/72, /73, /74



TERMINAL TYPE 1



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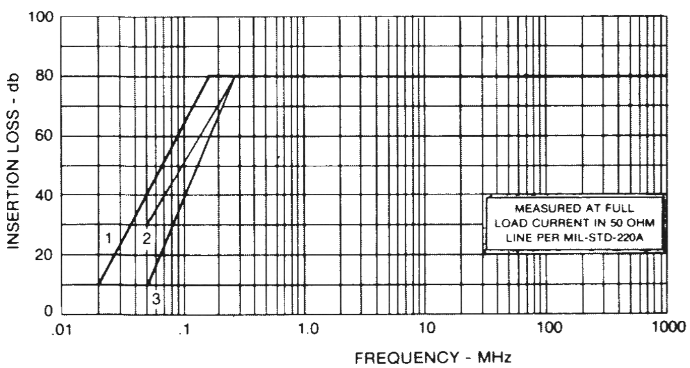
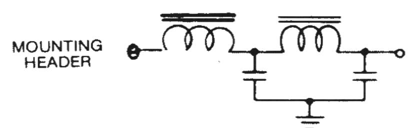




SCHEMATIC DIAGRAM

NOTE: For capacitor at opposite end - add suffix "L" to part no., i.e., RF9710-7L.

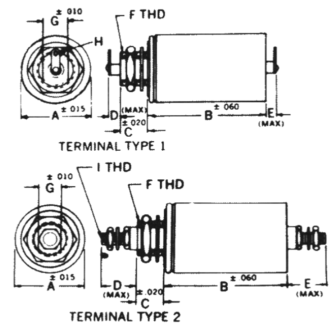
1. Operating Temperature: −55°C to +125°C.
2. Maximum Voltage Drop: 1% of rated voltage.
3. Conforms to applicable requirements of MIL-F-15733.

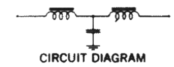
RATING		Cap Input to Mtg. M15733/	PART NO.	Coil Input to Mtg. M15733/	PART NO.	A	B	C	D	E	F	G	H	I	Terminal Type	Insertion Loss Graph
100 VDC	0.5A.	72-0017	RF9710-1L	72-0018	RF9710-1	.75	2.50	.28	.32	.32	5/16 - 24	.250	1/16 X 1/8		1*	1
	1A.	72-0019	RF9710-2L	72-0020	RF9710-2	.75	2.62	.28	.32	.32	5/16 - 24	.250	1/16 X 1/8		1*	1
	3A.	72-0021	RF9710-3L	72-0022	RF9710-3	1.13	2.87	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1	2
	5A.	72-0023	RF9710-4L	72-0024	RF9710-4	1.13	3.12	.44	.25	.25	7/16 -20	.370	3/32 X 3/16		1	2
	10A.	72-0025	RF9710-5L	72-0026	RF9710-5	1.50	4.25	.50	.69	.69	3/4 - 20	.656		8-32	2	2
	20A.	72-0027	RF9710-6L	72-0028	RF9710-6	1.50	4.87	.50	.69	.69	3/4 - 20	.656		8-32	2	3
	30A.	72-0029	RF9710-7L	72-0030	RF9710-7	2.25	5.00	.56	.81	.81	1-1/8 - 18	1.065		10-32	2	3
	50A.	72-0031	RF9710-8L	72-0032	RF9710-8	2.25	6.00	.56	.88	.88	1-1/8 - 18	1.065		1/4-20	2	3
115 VAC 0-400 Hz 400 VDC	0.5A.	73-0017	RF9710-9L	73-0018	RF9710-9	.75	3.12	.28	.32	.32	5/16 - 24	.250	1/16 X 1/8		1*	1
	1A.	73-0019	RF9710-10L	73-0018	RF9710-10	1.00	3.25	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1	1
	3A.	73-0021	RF9710-11L	73-0018	RF9710-11	1.13	3.50	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1	2
	5A.	73-0023	RF9710-12L	73-0018	RF9710-12	1.25	4.50	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1	2
	10A.	73-0025	RF9710-13L	73-0018	RF9710-13	1.50	4.50	.50	.69	.69	3/4 - 20	.656		8-32	2	3
	20A.	73-0027	RF9710-14L	73-0018	RF9710-14	1.75	5.50	.50	.69	.69	3/4 - 20	.656		8-32	2	3
	30A.	73-0029	RF9710-15L	73-0018	RF9710-15	2.25	5.62	.56	.81	.81	1-1/8 - 18	1.065		10-32	2	3
	50A.	73-0031	RF9710-16L	73-0018	RF9710-16	2.25	6.50	.56	.88	.88	1-1/8 - 18	1.065		1/4-20	2	3
250 VAC 0-400 Hz 600 VDC	0.5A.	74-0017	RF9710-17L	74-0018	RF9710-17	1.00	3.12	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1	1
	1A.	74-0019	RF9710-18L	74-0018	RF9710-18	1.00	3.62	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1	1
	3A.	74-0021	RF9710-19L	74-0018	RF9710-19	1.25	4.37	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1	2
	5A.	74-0023	RF9710-20L	74-0018	RF9710-20	1.50	4.37	.50	.69	.69	3/4 - 20	.656		8-32	2	2
	10A.	74-0025	RF9710-21L	74-0018	RF9710-21	1.50	5.75	.50	.69	.69	3/4 - 20	.656		8-32	2	2
	20A.	74-0027	RF9710-22L	74-0018	RF9710-22	2.25	6.50	.56	.69	.69	1-1/8 - 18	1.065		8-32	2	3

*45° Lug

CYLINDRICAL FILTERS
T CIRCUIT TYPES

25 db Minimum at 0.15 MHz
at full RATED LOAD
M15733/72, /73, /74





SPECIFICATIONS

OPERATING TEMPERATURE:
-55°C TO +125C.

MAXIMUM VOLTAGE DROP: 1% OF RATED VOLTAGE.

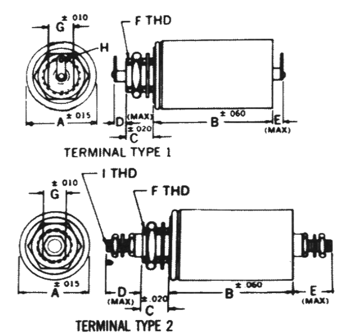
CONFORMS TO APPLICABLE REQUIREMENTS OF MIL-F-15733

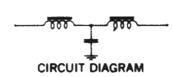
RATING		M15733/	PART NO.	A	B	C	D	E	F	G	H	I	Terminal Type	.15 MHz	.30 MHz	.6 MHz	1.0 MHz	10 MHz	1 MHz
100 VDC	0.5A	72-0054	RF6100	.67	1.94	.25	.19	.19	1/4 - 28	.201	1/16		1	45	60	70	70	70	70
	1A	72-0056	RF6101	.67	1.94	.25	.19	.19	1/4 - 28	.201	1/16		1	35	50	60	70	70	70
	3A	72-0058	RF6102	.75	2.38	.28	.32	.32	5/16 - 24	.250	1/16 X 1/8		1*	25	35	45	60	70	70
	5A	72-0060	RF6103	1.13	2.25	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1	25	35	45	60	70	70
	10A	72-0062	RF6104	1.25	2.75	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1	25	35	45	50	70	70
	20A	72-0064	RF6105	1.25	3.25	.50	.69	.69	5/8 - 24	.530		8-32	2	25	35	45	50	70	70
	30A	72-0066	RF6106	2.25	4.50	.56	.81	.81	1-1/8 -18	1.065		10-32	2	25	35	45	50	70	70
	50A	72-0068	RF6107	2.25	4.50	.56	.88	.88	1-1/8 -18	1.065		1/4 - 20	2	25	35	45	50	70	70
115 VAC 0-400 Hz 400 VDC	0.5A	73-0054	RF6108	.67	2.32	.25	.19	.19	1/4 - 28	.201	1/16		1	60	70	70	70	70	70
	1A	73-0056	RF6109	.67	2.32	.25	.19	.19	1/4 - 28	.201	1/16		1	35	50	60	70	70	70
	3A	73-0058	RF6110	1.00	2.56	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1	25	40	50	60	70	70
	5A	73-0060	RF6111	1.13	2.88	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1	25	35	45	60	70	70
	10A	73-0062	RF6112	1.25	3.25	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1	25	35	45	50	70	70
	20A	73-0064	RF6113	1.50	3.63	.50	.69	.69	3/4 - 20	.656		8-32	2	25	35	45	50	70	70
	30A	73-0066	RF6114	2.25	4.50	.56	.81	.81	1-1/8 -18	1.065		10-32	2	25	35	45	50	70	70
	50A	73-0068	RF6115	2.25	4.75	.56	.88	.88	1-1/8 -18	1.065		1/4 - 20	2	25	35	45	50	70	70
250 VAC 0-400 Hz 600 VDC	0.5A	74-0048	RF6116	.75	2.38	.28	.32	.32	5/16 - 24	.250	1/16 X 1/8		1*	50	65	70	70	70	70
	1A	74-0050	RF6117	.75	2.88	.28	.32	.32	5/16 - 24	.250	1/16 X 1/8		1*	30	50	60	70	70	70
	3A	74-0052	RF6118	1.00	3.19	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1	25	40	60	70	70	70
	5A	74-0054	RF6119	1.25	3.63	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1	25	35	50	60	70	70
	10A	74-0056	RF6120	1.25	4.25	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1	25	35	45	50	70	70
	20A	74-0058	RF6121	1.50	4.50	.50	.69	.69	3/4 - 20	.656		8-32	2	25	35	45	50	70	70
	30A	74-0060	RF6122	2.25	5.50	.56	.81	.81	1-1/8 - 18	1.065		10-32	2	25	35	45	50	70	70
	50A	74-0061	RF6123	2.25	5.75	.56	.88	.88	1-1/8 - 18	1.065		1/4 - 20	2	25	35	45	50	70	70

*45° Lug

CYLINDRICAL FILTERS
T CIRCUIT TYPES

15 db Minimum at 14 MHz
at full RATED LOAD
M15733/72, /73, /74





SPECIFICATIONS

OPERATING TEMPERATURE:
-55°C TO +125°C.

MAXIMUM VOLTAGE DROP: 1% OF RATED VOLTAGE.

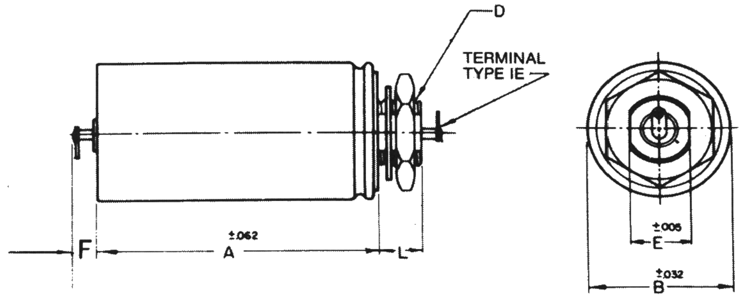
CONFORMS TO APPLICABLE REQUIREMENTS OF MIL-F-15733

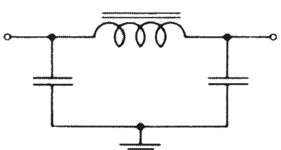
RATING		M15733/	PART NO.	A	B	C	D	E	F	G	H	I	Terminal Type	14 KHz	50 KHz	.15 MHz	0.6 MHz	1.0 MHz	10 MHz	1 MHz
100 VDC	0.5A	72-0055	RF6124	1.00	2.25	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1	20	50	60	60	60	70	70
	1A	72-0057	RF6125	1.00	2.87	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1	20	50	60	60	60	70	70
	3A	72-0059	RF6126	1.25	4.19	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1	20	45	60	60	60	70	70
	5A	72-0061	RF6127	1.50	3.88	.50	.69	.69	3/4 - 20	.656		8-32	2	20	45	60	60	60	70	70
	10A	72-0063	RF6128A	1.75	3.88	.50	.69	.69	3/4 - 20	.656		8-32	2	15	28	37	53	58	70	70
	20A	72-0065	RF6129	1.50	4.00	.50	.69	.69	3/4 - 20	.656		8-32	2	15	28	37	53	58	70	70
	30A	72-0067	RF6130	2.25	4.75	.56	.81	.81	1-1/8 - 18	1.065		10-32	2	15	28	37	53	58	70	70
	50A	72-0069	RF6131	2.25	5.50	.56	.88	.88	1-1/8 - 18	1.065		1/4 - 20	2	15	28	37	50	58	70	70
115 VAC 0-400 Hz 400 VDC	0.5A	73-0055	RF6132	1.00	3.00	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1	20	50	60	60	60	70	70
	1A	73-0057	RF6133	1.13	3.87	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1	20	50	60	60	60	70	70
	3A	73-0059	RF6134	1.50	3.75	.50	.69	.69	3/4 - 20	.656		8-32	2	20	45	60	60	60	70	70
	5A	73-0061	RF6135	1.50	4.38	.50	.69	.69	3/4 - 20	.656		8-32	2	15	40	50	60	60	70	70
	10A	73-0063	RF6136A	1.75	5.00	.50	.69	.69	3/4 - 20	.656		8-32	2	15	28	37	53	58	70	70
	20A	73-0065	RF6137	1.75	5.00	.50	.69	.69	3/4 - 20	.656		8-32	2	15	28	37	53	58	70	70
	30A	73-0067	RF6138	2.25	5.50	.56	.81	.81	1-1/8 - 18	1.065		10-32	2	15	28	37	53	58	70	70
	50A	73-0069	RF6139	2.25	6.50	.56	.88	.88	1-1/8 - 18	1.065		1/4 - 20	2	15	28	37	50	58	70	70
250 VAC 0-400 Hz 600 VDC	0.5A	74-0049	RF6140	1.13	3.56	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1	20	50	60	60	60	70	70
	1A	74-0051	RF6141	1.25	4.25	.44	.25	.25	7/16 - 20	.370	3/32 X 3/16		1	20	50	60	60	60	70	70
	3A	74-0053	RF6142	1.75	4.50	.50	.69	.69	3/4 - 20	.656		8-32	2	20	40	60	68	68	70	70
	5A	74-0055	RF6143	1.75	5.75	.50	.69	.69	3/4 - 20	.656		8-32	2	15	28	37	53	58	70	70
	10A	74-0057	RF6144	2.25	5.50	.56	.69	.69	1-1/8 - 18	1.065		8-32	2	15	28	37	53	58	70	70
	20A	74-0059	RF6145	2.25	5.50	.56	.69	.69	1-1/8 - 18	1.065		8-32	2	15	28	37	50	58	70	70

*45° Lug

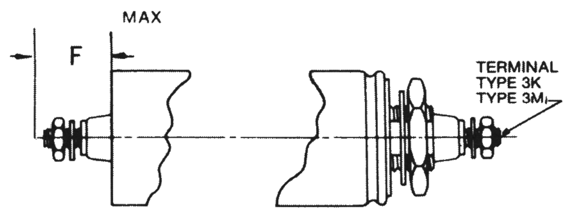
CYLINDRICAL FILTERS
T CIRCUIT TYPES

STYLES FL22 AND FL24
M15733/1 AND M15733/2

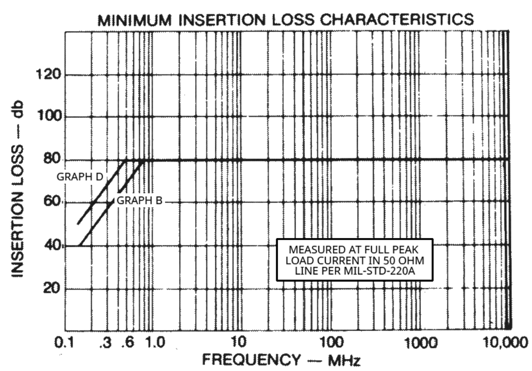




CIRCUIT DIAGRAM



TERMINAL TYPE	THREAD SIZE	THREAD LENGTH
3K	10-32-UNF-2A	.312
3M	¼-28-UNF-2A	.438



FL22

M15733/1 DASH NO.	PART NO.	RATING	A	B	D	E	F	L	INSERTION LOSS GRAPH	TERMINAL TYPE	APPROX. WEIGHT
0001	RF1700E	1A 100VDC	2.094	.750	5/16-24 UNEF-2A	.250	.25	.265 - .286	D	1E	1.4 OZS.
0002	RF1701E	5A 100VDC	2.375	1.000	1/2-28 UNEF-2A	.440	.25	.359 - .380	B	1E	3.2 OZS.
0003	RF1702E	5A 100VDC	2.750	1.000	1/2-28 UNEF-2A	.440	.25	.359 - .380	D	1E	3.7 OZS.
0004	RF1703E	10A 100VDC	2.750	1.125	7/16-20 UNEF-2A	.370	.25	.370 - .380	B	1E	4.2 OZS.
0005	RF1704E	10A 100VDC	2.500	1.250	5/8-24 NEF-2A	.530	.25	.370 - .380	D	1E	5 OZS.
0006	RF1705K	20A 100VDC	3.000	1.375	5/8-24 NEF-2A	.530	.62	.370 - .380	D	3K	7.5 OZS.
0007	RF1706K	30A 100VDC	3.250	1.500	3/4-20 UNEF-2A	.655	.62	.370 - .380	D	3K	10 OZS.

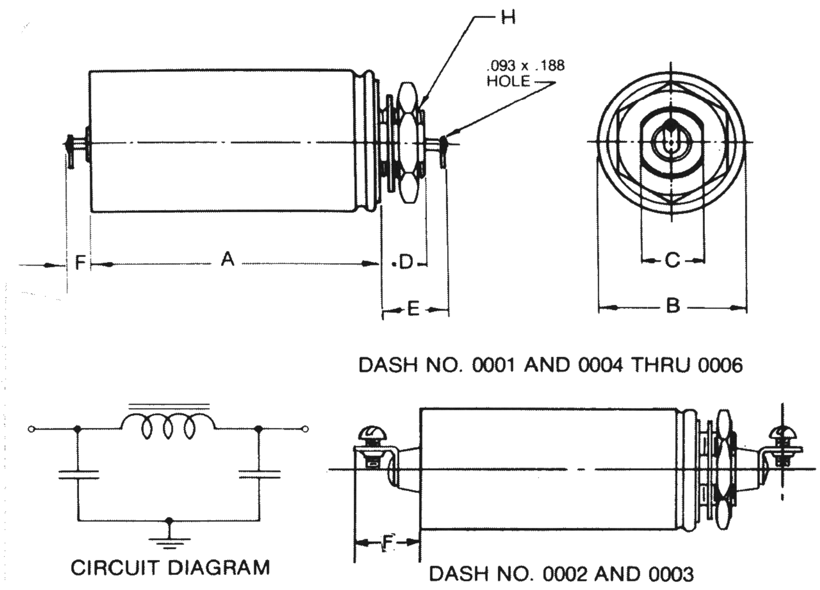
FL24

M15733/2 DASH NO.	PART NO.	RATING	A	B	D	E	F	L	INSERTION LOSS GRAPH	TERMINAL TYPE	APPROX. WEIGHT
0001	RF1707E	1A 125VAC 0-400 Hz, 400VDC	2.562	.875	1/2-28 UNEF-2A	.440	.25	.360 - .390	D	1E	2.5 OZS.
0002	RF1708E	5A 125VAC 0-400 Hz, 400VDC	3.875	1.125	5/8-24 UNEF-2A	.530	.25	.360 - .390	D	1E	6 OZS.
0003	RF1709E	10A 125VAC 0-400 Hz, 400VDC	3.875	1.250	3/4-20 UNEF-2A	.655	.25	.360 - .390	D	1E	7.8 OZS.
0004	RF1710K	15A 125VAC 0-400 Hz, 400VDC	4.125	1.375	3/4-20 UNEF-2A	.655	.62	.360 - .390	D	3K	9.5 OZS.
0005	RF1711K	20A 125VAC 0-400 Hz, 400VDC	4.156	1.500	3/4-20 UNEF-2A	.655	.62	.360 - .390	D	3K	12 OZS.
0006	RF1712M	55A 125VAC 0-400 Hz, 400VDC	4.125	2.25	1-1/8-18 NEF-2A	1.055	.81	.495 - .505	D	3K	29 OZS.

This series of RFI filters conforms fully with all of the requirements of Style FL22 and Style FL24 as specified in MIL-PRF-15733. Operating temperature range: -55°C +85°C.

CYLINDRICAL FILTERS

STYLE FL84
M15733/41



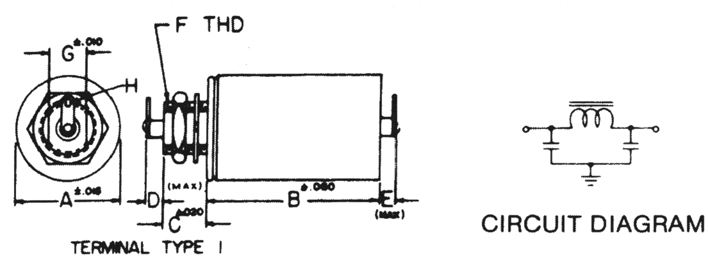
M15733/41 DASH NO.	PART NO.	A MAX	B MAX	C MAX	D MAX	E MAX	F MAX	H
0001	RF7553-1	2.655	1.187	.380	.454	.781	.250	7/16-20
0002	RF7553-2	4.562	1.395	.661	.390	1.046	.781	3/4-20
0003	RF7553-3	3.937	1.270	.661	.390	1.046	.781	3/4-20
0004	RF7553-4	3.031	1.312	.536	.391	.843	.406	5/8-24
0005	RF7553-5	3.120	1.032	.385	.457	.737	.218	7/16-20
0006	RF7553-6	3.499	1.312	.531	.391	.781	.406	5/8-24

MINIMUM INSERTION LOSS IN DECIBELS MIL-STD-220 A (FULL LOAD)

M15733/41 DASH NO.	PART NO.	AMP	DC VOLTS	AC VOLTS	MAX VOLT DROP	150 KHz	300 KHz	1 MHz	10 MHz	1 GHz
0001	RF7553-1	10	400	125	.5	24	46	79	88	70
0002	RF7553-2	20	400	125	.16	55	75	90	90	90
0003	RF7553-3	15	400	125	.5	38	58	80	80	80
0004	RF7553-4	20	125	--	1.25	58	--	90	90	--
0005	RF7553-5	1	400	125	1.25	60	75	80	80	80
0006	RF7553-6	10	400	125	.22	60	--	100	85	--

CYLINDRICAL FILTERS
SERIES 9707
PI CIRCUIT TYPES

HIGH INSERTION LOSS



Specifications

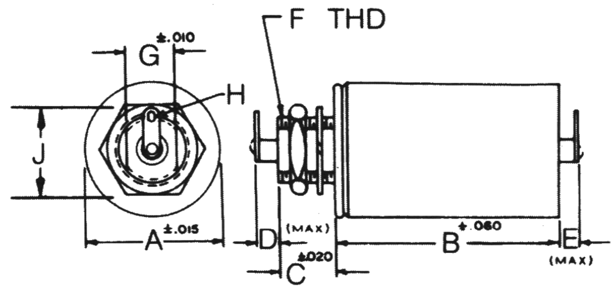
1. Operating Temperature: -55°C to +125°C
2. Maximum Voltage Drop: 1% of rated voltage.
3. Dielectric Test: 2X rated voltage.
4. Conforms to applicable requirements of MIL-PRF-15733.

MINIMUM INSERTION LOSS IN DECIBELS MIL-STD-220 A (FULL LOAD)

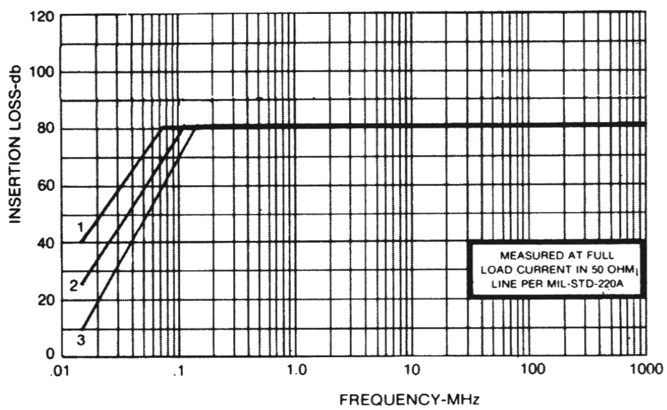
RATING		PART NO.	A	B	C	D	E	F	G	H	14 KHz	20 KHz	50 KHz	100 KHz	200 KHz - 1 GHz
100 VDC	1A	RF9707-1	1.50	5.50	.50	.25	.25	3/4 - 20	.656	.093	65	80	100	100	100
	3A	RF9707-2	1.75	5.50	.50	.25	.25	3/4 - 20	.656	.093	65	80	100	100	100
	6A	RF9707-3	2.25	4.75	.56	.25	.25	1-1/8 - 18	1.065	.093	40	50	75	85	100
	10A	RF9707-4	2.25	5.25	.56	.25	.25	1-1/8 - 18	1.065	.093	40	50	75	85	100
125 VAC 0-400 Hz	1A	RF9707-5	1.50	5.75	.50	.25	.25	3/4 - 20	.656	.093	65	80	100	100	100
	3A	RF9707-6	2.25	5.75	.56	.25	.25	1-1/8 - 18	1.065	.093	65	80	100	100	100
	6A	RF9707-7	2.25	5.25	.56	.25	.25	1-1/8 - 18	1.065	.093	40	50	75	85	100
	10A	RF9707-8	2.25	6.50	.56	.25	.25	1-1/8 - 18	1.065	.093	40	50	75	85	100

MINIATURE FILTERS
SERIES 1100

14 KHz to 1000 MHz
50VDC



TERMINAL TYPE 1



TYPE	CURVE
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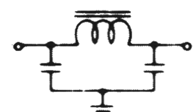
-2A	2
-3A	2
-4A	3
-5A	3



CIRCUIT DIAGRAM

TYPE	RATING	A	B	C	D	E	F	G	J	H
RF1100-1A	0.5A 50 VDC	.48	2.50	.25	.19	.19	1/4 - 28	.201	7/16	1/16
RF1100-2A	1A 50 VDC	.48	2.50	.25	.19	.19	1/4 - 28	.201	7/16	1/16
RF1100-3A	2A 50 VDC	.67	2.62	.25	.19	.19	1/4 - 28	.201	7/16	1/16
RF1100-4A	3A 50 VDC	.75	2.62	.28	*.32	*.32	5/16 - 24	.252	7/16	1/16 X 1/8
RF1100-5A	5A 50 VDC	1.00	2.62	.28	*.32	*.32	5/16 - 24	.252	7/16	1/16 X 1/8

*45 Lug

ELECTRICAL AND ENVIRONMENTAL CHARACTERISTICS:

Operating Temperature Range: -55°C to +125°

Dielectric Test: 2 times rated voltage

Life-Filters are capable of withstanding a 1000 hour life test at 85°C at maximum rated voltage.

Low Frequency Vibration — per MIL-PRF-15733.

High Frequency Vibration — 10 to 2000 cps at 15 g.

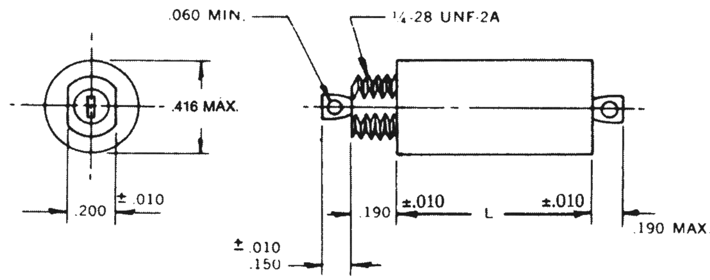
Moisture Resistance — per MIL-PRF-15733 except polarizing voltage not applicable. After completion of test, filters shall meet insertion loss “check” test and surgevoltage test.

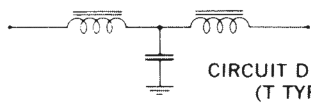
Temperature and Immersion Cycling — per MIL-PRF-15733. After completion of test parts shall meet insertion loss “check” test and surge voltage test.

Seal Test — per MIL-PRF-15733.

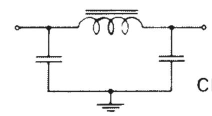
SUBMINIATURE FILTERS

"PI" and "T" TYPE
50 VDC





CIRCUIT DIAGRAM
(T TYPE)



CIRCUIT DIAGRAM
(PI TYPE)

TYPE	CURRENT RATING	MAXIMUM RESISTANCE	CIRCUIT	INSERTION LOSS CHARACTERISTIC	LENGTH L
RF2500-1	0.25A	1.2 Ohms	PI	G	.550
RF2500-2	1.0A	0.32 Ohms	PI	H	.550
RF2500-33	3.0A	0.06 Ohms	PI	J	.550
RF2500-36	5.0A	0.04 Ohms	PI	K	.550
RF2500-3	2.0A	0.18 Ohms	T	L	.975
RF2500-4	5.0A	0.04 Ohms	T	M	1.140

MINIMUM INSERTION LOSS IN DECIBELS MIL-STD-220 A (FULL LOAD)							
CHARACTERISTIC	30 KHz	50 KHz	150 KHz	300 KHz	1 MHz	10 MHz	1000 MHz
G	15	30	55	75	80	80	80
H	5	15	40	60	80	80	80
J	--	--	15	40	75	80	80
K	--	--	2	25	65	80	80
L	9	12	20	30	42	80	80
M	9	12	20	30	42	80	80

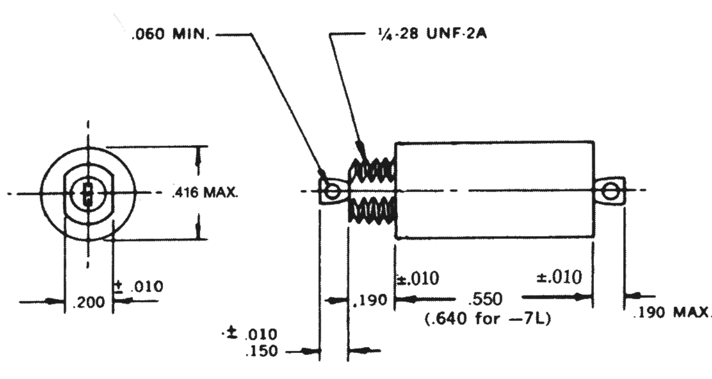
SPECIFICATIONS FOR "PI", "T" AND "L" TYPES

Voltage Rating: 50 VDC
Operating Temperature: -55°C to 125°C
Dielectric Test: 125 VDC @ 25°C (50 Ma MAX. Charge Current)
Insulation Resistance: 100 Megohms MIN. @ 25°C @ 50 VDC
(50 Megohms MIN. after life test)

Conforms to the applicable requirements of MIL-PRF-15733.
Filter supplied with lockwasher & hex nut
Finish: Hot Solder Dip

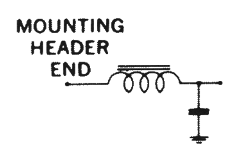
SUBMINIATURE FILTERS

"L" TYPE
50 VDC



TYPE	CURRENT RATING	MAXIMUM RESISTANCE	INSERTION LOSS CHARACTERISTIC
RF2500-7	60 MA	70 Ohms	A
RF2500-13	150 MA	12 Ohms	B
RF2500-5	250 MA	4 Ohms	C
RF2500-12	300 MA	2.3 Ohms	D
RF2500-6	450 MA	1.2 Ohms	E
RF2500-9	10 A	.01 Ohms	F

MINIMUM INSERTION LOSS IN DECIBELS MIL-STD-220 A (FULL LOAD)						
CHARACTERISTIC	30 KHz	150 KHz	300 KHz	1 MHz	10 MHz	1000 MHz
A	44	70	70	70	70	70
B	24	52	64	70	70	70
C	18	42	56	70	70	70
D	16	35	44	62	70	70
E	15	31	37	55	70	70
F	15	28	33	44	56	70

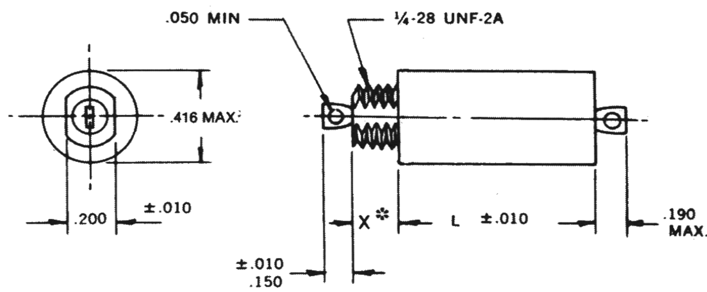


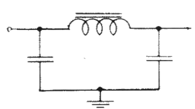
CIRCUIT DIAGRAM

NOTE—FOR CAPACITOR
AT OPPOSITE END—
ADD SUFFIX "L"
TO PART NO., i.e.
RF2500-7L

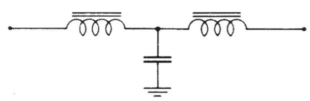
SUBMINIATURE FILTERS

"PI" and "T" TYPE
100 VDC





CIRCUIT DIAGRAM
(PI TYPE)



CIRCUIT DIAGRAM
(T TYPE)

*THREAD LENGTH X
STANDARD PART THREAD LENGTH .190
DESIGNATE .312 THREAD
LENGTH BY ADDING SUFFIX A TO
PART NO i.e. RF2575-10A

MINIMUM INSERTION LOSS IN DECIBELS MIL-STD-220 A
(FULL LOAD)

TYPE	CURRENT RATING	MAXIMUM RESISTANCE	CIRCUIT	30 KHz	50 KHz	150 KHz	300 KHz	1 MHz	10 MHz	1000 MHz	LENGTH L
RF2575-10	0.5A	.5 Ohms	PI	13	33	65	80	80	80	80	.59
RF2575-11	1.0A	.25 Ohms	PI	5	26	56	73	80	80	80	.59
RF2575-12	2.0A	.07 Ohms	PI	--	--	45	64	80	80	80	.59
RF2575-13	3.0A	.07 Ohms	PI	--	--	35	57	80	80	80	.59
RF2575-14	5.0A	.015 Ohms	PI	--	--	--	44	79	80	80	.59
RF2575-15	10.0A	.01 Ohms	PI	--	--	--	27	67	80	80	.975
RF2575-16	0.5A	1.0 Ohms	T	10	19	42	60	80	80	80	.975
RF2575-17	1.0A	.3 Ohms	T	10	15	32	43	71	80	80	.975
RF2575-18	2.0A	.15 Ohms	T	5	10	25	34	60	80	80	.975
RF2575-19	3.0A	.15 Ohms	T	5	10	24	33	52	80	80	.975
RF2575-20	5.0A	.02 Ohms	T	8	12	22	28	42	80	80	.975
RF2575-21	10.0A	.01 Ohms	T	--	12	24	30	39	63	80	.975

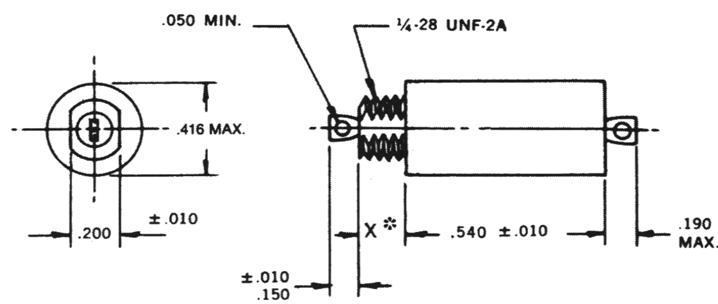
SPECIFICATIONS FOR "PI", "T" AND "L" TYPES

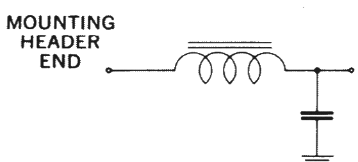
Voltage Rating: 100 VDC
Operating Temperature: -55°C to +125°C
Dielectric Test: 200 VDC @ 25°C (50 Ma MAX. Charge Current)
Insulation Resistance: 100 Megohms MIN. @ 25°C @ 50 VDC
(50 Megohms MIN. after life test)

Conforms to the applicable requirements of MIL-PRF-15733.
Filter supplied with lockwasher & hex nut
Finish: Hot Solder Dip

SUBMINIATURE FILTERS

"L" TYPE
100 VDC





CIRCUIT DIAGRAM (L TYPE)

NOTE—FOR CAPACITOR
AT OPPOSITE END—
ADD SUFFIX L
TO PART NO., i.e.
RF2575-22L

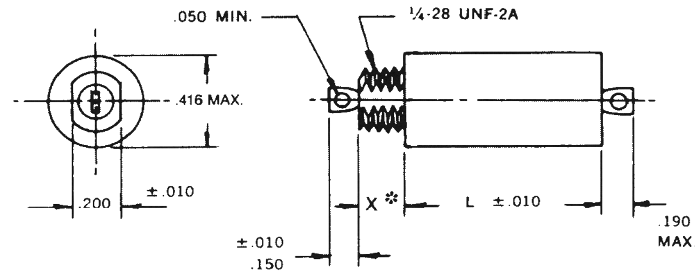
*THREAD LENGTH X
STANDARD PART THREAD LENGTH .190
DESIGNATE .312 THREAD LENGTH BY
ADDING SUFFIX A TO PART NO. i.e. RF2575-22A

MINIMUM INSERTION LOSS IN DECIBELS MIL-STD-220 A
(FULL LOAD)

TYPE	CURRENT RATING	MAXIMUM RESISTANCE	CIRCUIT	30 KHz	50 KHz	150 KHz	300 KHz	1 MHz	10 MHz	1000 MHz
RF2575-22	0.5A	.55 Ohms	L	13	18	33	44	64	70	70
RF2575-23	1.0A	.25 Ohms	L	10	15	27	36	57	70	70
RF2575-24	2.0A	.07 Ohms	L	10	14	24	31	48	70	70
RF2575-25	3.0A	.07 Ohms	L	10	14	24	31	44	70	70
RF2575-26	5.0A	.015 Ohms	L	6	11	20	27	38	68	70
RF2575-27	10.0A	.01 Ohms	L	10	15	26	29	38	56	70

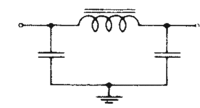
SUBMINIATURE FILTERS

"PI" and "T" TYPE
115 VAC, 0-400 Hz, 200 VDC

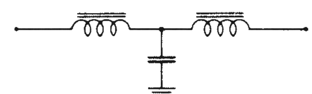


MINIMUM INSERTION LOSS IN DECIBELS MIL-STD-220 A
(FULL LOAD)

TYPE	CURRENT RATING	MAXIMUM RESISTANCE	CIRCUIT	50 KHz	150 KHz	300 KHz	500 KHz	1 MHz	10 MHz	1000 MHz	LENGTH L
RF2550-20	0.5A	.5 Ohms	PI	13	46	62	76	80	80	80	.870
RF2550-21	1.0A	.25 Ohms	PI	3	35	53	66	80	80	80	.870
RF2550-22	2.0A	.07 Ohms	PI	--	16	42	56	76	80	80	.870
RF2550-23	3.0A	.07 Ohms	PI	--	--	28	47	64	80	80	.870
RF2550-24	5.0A	.015 Ohms	PI	--	--	12	40	58	80	80	.870
RF2550-25	10.0A	.01 Ohms	PI	--	--	--	19	48	80	80	.975
RF2550-26	0.5A	1.0 Ohms	T	20	32	48	60	78	70	70	.975
RF2550-27	1.0A	.3 Ohms	T	5	22	34	43	60	70	70	.975
RF2550-28	2.0A	.15 Ohms	T	5	13	22	31	42	70	70	.975
RF2550-29	3.0A	.15 Ohms	T	5	11	18	25	34	70	70	.975
RF2550-30	5.0A	.02 Ohms	T	--	13	19	23	31	70	70	.975
RF2550-31	10.0A	.01 Ohms	T	--	15	20	21	30	56	70	.975



CIRCUIT DIAGRAM
(PI TYPE)



CIRCUIT DIAGRAM
(T TYPE)

*THREAD LENGTH X
STANDARD PART THREAD
LENGTH .190
DESIGNATE .312 THREAD
LENGTH BY ADDING SUFFIX A TO
PART NO. i.e. RF2550-20A

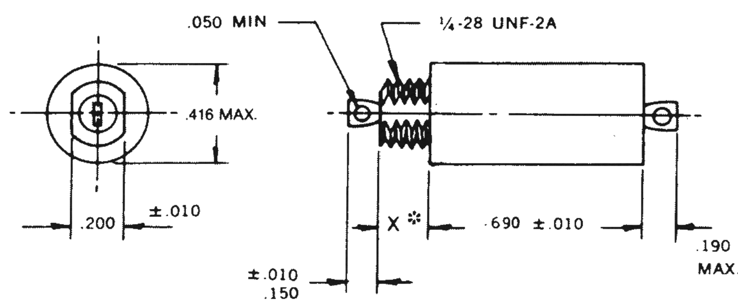
SPECIFICATIONS FOR "PI", "T" AND "L" TYPES

Voltage Rating: 115 VAC, 0-400 Hz, 200 VDC
Operating Temperature: -55°C to +125°C
Dielectric Test: 400 VDC @ 25°C (50 Ma MAX. Charge Current)
Insulation Resistance: 100 Megohms MIN. @ 25°C @ 50 VDC

Conforms to the applicable requirements of MIL-PRF-15733.
Filter supplied with lockwasher & hex nut
Finish: Hot Solder Dip

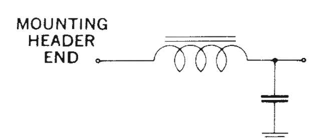
SUBMINIATURE FILTERS

"L" TYPE
115 VAC, 0-400 Hz, 200 VDC



MINIMUM INSERTION LOSS IN DECIBELS MIL-STD-220 A
(FULL LOAD)

TYPE	CURRENT RATING	MAXIMUM RESISTANCE	CIRCUIT	30 KHz	50 KHz	150 KHz	300 KHz	1 MHz	10 MHz	1000 MHz
RF2550-32	0.5A	.55 Ohms	L	2	10	23	35	54	70	70
RF2550-33	1.0A	.25 Ohms	L	2	5	18	26	46	70	70
RF2550-34	2.0A	.07 Ohms	L	2	6	15	22	36	70	70
RF2550-35	3.0A	.07 Ohms	L	2	6	15	20	34	67	70
RF2550-36	5.0A	.015 Ohms	L	2	5	15	21	32	60	70
RF2550-37	10.0A	.01 Ohms	L	2	7	17	21	33	56	70



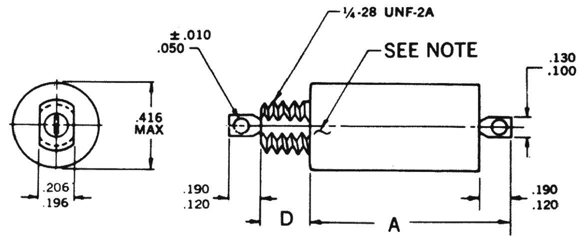
CIRCUIT DIAGRAM

NOTE—FOR CAPACITOR
AT OPPOSITE END—
ADD SUFFIX L
TO PART NO., i.e.
RF2550-32L

*THREAD LENGTH X
STANDARD PART THREAD LENGTH .190
DESIGNATE .312 THREAD LENGTH BY
ADDING SUFFIX A TO PART NO. i.e. RF2550-32A

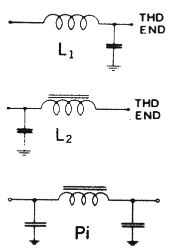
SUBMINIATURE FILTERS

STYLES FL10 and FL11
M15733/23
50 VDC and 150 VDC



SPECIFICATIONS
OPERATING TEMPERATURE: −55°C TO +125°C
DIELECTRIC TEST: 2.5 TIMES RATED VOLTAGE
INSULATION RESISTANCE: 1000 MEGOHMS MIN. @ 25°C @ RATED VOLTAGE
CONFORMS TO THE APPLICABLE REQUIREMENTS OF MIL-F-15733.
FILTER SUPPLIED WITH LOCKWASHER & HEX NUT
FINISH: HOT SOLDER DIP

CIRCUIT CONFIGURATIONS



NOTE: THE CASE SHALL BE MARKED AT THE THREADED END OF FILTER, WITH THE SYMBOL "C" OR THE SYMBOL "L", AS FOLLOWS:

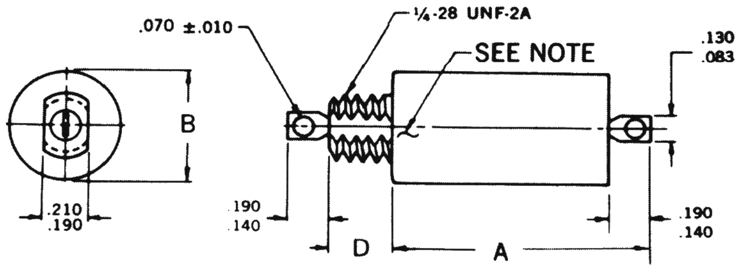
CIRCUIT	SYMBOL
L_1	C
L_2	L

MINIMUM INSERTION LOSS IN DECIBELS MIL-STD-220 A (FULL LOAD)

M15733/	PART NO.	CKT	AMP	DC VOLTS	A MAX	D ± .010	MAX VOLT DROP	15 KHz	30 KHz	50 KHz	100 KHz	150 KHz	300 KHz	500 KHz	1 MHz	10 MHz	1 GHz
23-0001	RF5003-1	L_2	.10	50	.630	.312	.17	9	20	29	41	48	60	69	70	70	70
23-0002	RF5003-2	L_2	.10	50	.630	.187	.17	9	20	29	41	48	60	69	70	70	70
23-0003	RF5003-3	L_1	.10	50	.630	.312	.17	9	20	29	41	48	60	69	70	70	70
23-0004	RF5003-4	L_1	.10	50	.630	.187	.17	9	20	29	41	48	60	69	70	70	70
23-0005	RF5003-5	P_i	.10	50	.730	.312	.17	15	36	50	69	79	80	80	80	80	80
23-0006	RF5003-6	P_i	.10	50	.730	.187	.17	15	36	50	69	79	80	80	80	80	80
23-0007	RF5003-7	L_2	.10	150	.630	.312	.17	2	11	20	32	39	51	60	60	60	60
23-0008	RF5003-8	L_2	.10	150	.630	.187	.17	2	11	20	32	39	51	60	60	60	60
23-0009	RF5003-9	L_1	.10	150	.630	.312	.17	2	11	20	32	39	51	60	60	60	60
23-0010	RF5003-10	L_1	.10	150	.630	.187	.17	2	11	20	32	39	51	60	60	60	60
23-0011	RF5003-11	P_i	.10	150	.730	.312	.17	--	17	31	49	60	70	70	70	70	70
23-0012	RF5003-12	P_i	.10	150	.730	.187	.17	--	17	31	49	60	70	70	70	70	70
23-0013	RF5003-13	L_2	.30	50	.630	.312	.23	6	15	23	35	42	54	63	70	70	70
23-0014	RF5003-14	L_2	.30	50	.630	.187	.23	6	15	23	35	42	54	63	70	70	70
23-0015	RF5003-15	L_1	.30	50	.630	.312	.23	6	15	23	35	42	54	63	70	70	70
23-0016	RF5003-16	L_1	.30	50	.630	.187	.23	6	15	23	35	42	54	63	70	70	70
23-0017	RF5003-17	P_i	.30	50	.730	.312	.23	4	29	44	62	73	80	80	80	80	80
23-0018	RF5003-18	P_i	.30	50	.730	.187	.23	4	29	44	62	73	80	80	80	80	80
23-0019	RF5003-19	L_2	.30	150	.630	.312	.23	--	6	13	25	32	44	52	60	60	60
23-0020	RF5003-20	L_2	.30	150	.630	.187	.23	--	6	13	25	32	44	52	60	60	60
23-0021	RF5003-21	L_1	.30	150	.630	.312	.23	--	6	13	25	32	44	52	60	60	60
23-0022	RF5003-22	L_1	.30	150	.630	.187	.23	--	6	13	25	32	44	52	60	60	60
23-0023	RF5003-23	P_i	.30	150	.730	.312	.23	--	8	24	43	53	70	70	70	70	70
23-0024	RF5003-24	P_i	.30	150	.730	.187	.23	--	8	24	43	53	70	70	70	70	70
23-0025	RF5003-25	L_2	.50	50	.630	.312	.18	5	12	19	29	36	48	57	69	70	70
23-0026	RF5003-26	L_2	.50	50	.630	.187	.18	5	12	19	29	36	48	57	69	70	70
23-0027	RF5003-27	L_1	.50	50	.630	.312	.18	5	12	19	29	36	48	57	69	70	70
23-0028	RF5003-28	L_1	.50	50	.630	.187	.18	5	12	19	29	36	48	57	69	70	70
23-0029	RF5003-29	P_i	.50	50	.730	.312	.18	--	21	37	56	67	80	80	80	80	80
23-0030	RF5003-30	P_i	.50	50	.730	.187	.18	--	21	37	56	67	80	80	80	80	80
23-0031	RF5003-31	L_2	.50	150	.630	.312	.18	--	3	9	20	26	39	47	59	60	60
23-0032	RF5003-32	L_2	.50	150	.630	.187	.18	--	3	9	20	26	39	47	59	60	60
23-0033	RF5003-33	L_1	.50	150	.630	.312	.18	--	3	9	20	26	39	47	59	60	60
23-0034	RF5003-34	L_1	.50	150	.630	.187	.18	--	3	9	20	26	39	47	59	60	60
23-0035	RF5003-35	P_i	.50	150	.730	.312	.18	--	--	15	37	48	66	70	70	70	70
23-0036	RF5003-36	P_i	.50	150	.730	.187	.18	--	--	15	37	48	66	70	70	70	70
23-0037	RF5003-37	L_2	1.0	50	.630	.312	.14	5	11	15	21	26	36	44	55	70	70
23-0038	RF5003-38	L_2	1.0	50	.630	.187	.14	5	11	15	21	26	36	44	55	70	70
23-0039	RF5003-39	L_1	1.0	50	.630	.312	.14	5	11	15	21	26	36	44	55	70	70
23-0040	RF5003-40	L_1	1.0	50	.630	.187	.14	5	11	15	21	26	36	44	55	70	70
23-0041	RF5003-41	P_i	1.0	50	.730	.312	.14	--	--	20	41	52	71	80	80	80	80
23-0042	RF5003-42	P_i	1.0	50	.730	.187	.14	--	--	20	41	52	71	80	80	80	80
23-0043	RF5003-43	L_2	1.0	150	.630	.312	.14	--	3	6	12	16	26	34	46	60	60
23-0044	RF5003-44	L_2	1.0	150	.630	.187	.14	--	3	6	12	16	26	34	46	60	60
23-0045	RF5003-45	L_1	1.0	150	.630	.312	.14	--	3	6	12	16	26	34	46	60	60
23-0046	RF5003-46	L_1	1.0	150	.630	.187	.14	--	3	6	12	16	26	34	46	60	60
23-0047	RF5003-47	P_i	1.0	150	.730	.312	.14	--	--	--	18	32	51	65	70	70	70
23-0048	RF5003-48	P_i	1.0	150	.730	.187	.14	--	--	--	18	32	51	65	70	70	70
23-0049	RF5003-49	L_2	2.0	50	.630	.312	.14	5	10	14	20	24	32	38	48	70	70
23-0050	RF5003-50	L_2	2.0	50	.630	.187	.14	5	10	14	20	24	32	38	48	70	70
23-0051	RF5003-51	L_1	2.0	50	.630	.312	.14	5	10	14	20	24	32	38	48	70	70
23-0052	RF5003-52	L_1	2.0	50	.630	.187	.14	5	10	14	20	24	32	38	48	70	70
23-0053	RF5003-53	P_i	2.0	50	.730	.312	.14	--	--	--	33	46	65	76	80	80	80
23-0054	RF5003-54	P_i	2.0	50	.730	.187	.14	--	--	--	33	46	65	76	80	80	80
23-0055	RF5003-55	L_2	2.0	150	.630	.312	.14	--	3	5	11	15	23	29	38	60	60
23-0056	RF5003-56	L_2	2.0	150	.630	.187	.14	--	3	5	11	15	23	29	38	60	60
23-0057	RF5003-57	L_1	2.0	150	.630	.312	.14	--	3	5	11	15	23	29	38	60	60
23-0058	RF5003-58	L_1	2.0	150	.630	.187	.14	--	3	5	11	15	23	29	38	60	60
23-0059	RF5003-59	P_i	2.0	150	.730	.312	.14	--	--	--	--	22	45	59	70	70	70
23-0060	RF5003-60	P_i	2.0	150	.730	.187	.14	--	--	--	--	22	45	59	70	70	70

SUBMINIATURE FILTERS

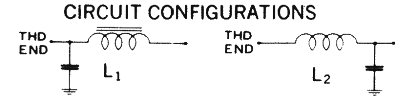
STYLE FL12
M15733/24
28 VDC



MINIMUM INSERTION LOSS IN DECIBELS
MIL-STD-220 A (FULL LOAD)

M15733/	PART NO.	CKT	AMP	DC VOLTS	A MAX	B MAX	D ± .010	MAX VOLT DROP	30 KHz	150 KHz	300 KHz	1 MHz	10 MHz	1 GHz
24-0001	RF5000-1	L_2	.300	28	.760	.385	.187	.69	16	34	44	62	70	70
24-0002	RF5000-2	L_2	.300	28	.740	.385	.312	.69	16	34	44	62	70	70
24-0003	RF5000-3	L_1	.300	28	.740	.385	.857	.69	16	34	44	62	70	70
24-0004	RF5000-4	L_1	.300	28	.740	.385	.312	.69	16	34	44	62	70	70
24-0005	RF5000-5	L_2	10.0	28	.760	.385	.387	.10	15	28	31	42	56	70
24-0006	RF5000-6	L_2	10.0	28	.760	.385	.312	.10	15	28	31	42	56	70
24-0007	RF5000-7	L_1	10.0	28	.740	.385	.187	.10	15	28	31	42	56	70
24-0008	RF5000-8	L_1	10.0	28	.740	.385	.312	.10	15	28	31	42	56	70
24-0009	RF5000-9	L_2	.060	28	.760	.385	.187	4.2	44	68	70	70	70	70
24-0010	RF5000-10	L_2	.150	28	.760	.385	.187	1.8	24	48	58	70	70	70
24-0011	RF5000-11	L_2	.250	28	.760	.385	.187	1.0	18	42	51	70	70	70
24-0012	RF5000-12	L_2	.450	28	.760	.385	.187	.54	15	29	33	46	66	70
24-0013	RF5000-13	L_2	.060	28	.740	.385	.312	4.2	44	68	70	70	70	70
24-0014	RF5000-14	L_2	.150	28	.740	.385	.312	1.8	24	48	58	70	70	70
24-0015	RF5000-15	L_2	.250	28	.760	.385	.312	1.0	18	42	51	70	70	70
24-0016	RF5000-16	L_2	.450	28	.760	.385	.312	.54	15	29	33	46	66	70
24-0017	RF5000-17	L_1	.060	28	.740	.385	.187	4.2	44	68	70	70	70	70
24-0018	RF5000-18	L_1	.150	28	.740	.385	.187	1.8	24	48	58	70	70	70
24-0019	RF5000-19	L_1	.250	28	.760	.385	.187	1.0	18	42	51	70	70	70
24-0020	RF5000-20	L_1	.450	28	.760	.385	.187	.54	15	29	33	46	66	70
24-0021	RF5000-21	L_1	.060	28	.740	.385	.312	4.2	44	68	70	70	70	70
24-0022	RF5000-22	L_1	.150	28	.740	.385	.312	1.8	24	48	58	70	70	70
24-0023	RF5000-23	L_1	.250	28	.760	.385	.312	1.0	18	42	51	70	70	70
24-0024	RF5000-24	L_1	.450	28	.760	.385	.312	.54	15	29	33	40	66	70

CIRCUIT CONFIGURATIONS



NOTE: THE CASE SHALL BE MARKED AT THE THREADED END OF FILTER, WITH THE SYMBOL "C" OR THE SYMBOL "L", AS FOLLOWS:

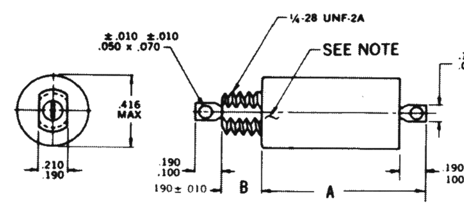
CIRCUIT	SYMBOL
L_1	C
L_2	L

SPECIFICATIONS

Operating Temperature: -55°C to +125°C
Dielectric Test: 2.5 Times Rated Voltage
Insulation Resistance: 1000 Megohms MIN.
@ 25°C @ Rated Voltage
Conforms to the applicable requirements
of MIL-PRF-15733.
Filter supplied with lockwasher & hex nut
Finish: Hot Solder Dip

SUBMINIATURE FILTERS

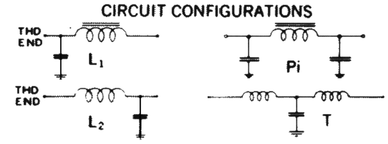
STYLE FL13
M15733/25
100 VDC



MINIMUM INSERTION LOSS IN DECIBELS
MIL-STD-220 A (FULL LOAD)

M15733/	RFI PART NO.	CKT	AMP	DC VOLTS	A MAX	B ± .010	MAX VOLT DROP	75 KHz	150 KHz	300 KHz	1 MHz	10 MHz	1 GHz
25-0001	RF5004-1	L_1	1.0	100	.743	.187	.250	15	23	34	55	70	70
25-0002	RF5004-2	P_1	1.0	100	.793	.187	.250	--	33	52	80	80	70
25-0003	RF5004-3	L_2	1.0	100	.738	.187	.250	15	23	34	55	70	70
25-0004	RF5004-4	P_1	3.0	100	.793	.187	.150	--	20	34	68	80	70
25-0005	RF5004-5	L_1	5.0	100	.743	.187	.075	11	17	23	35	69	70
25-0006	RF5004-6	P_1	5.0	100	.793	.187	.075	--	--	17	57	80	70
25-0007	RF5004-7	T	4.0	100	1.345	.187	.250	16	22	28	43	80	70
25-0008	RF5004-8	L_2	5.0	100	.738	.187	.075	11	17	23	35	69	70
25-0009	RF5004-9	L_1	.25	100	.743	.187	.375	24	35	47	68	70	70
25-0010	RF5004-10	P_1	.25	100	.793	.187	.375	31	48	66	80	80	70
25-0011	RF5004-11	L_2	2.0	100	.738	.187	.375	24	35	47	68	70	70
25-0012	RF5004-12	T	1.0	100	1.179	.187	.20	16	22	31	55	80	70
25-0013	RF5004-13	L_1	1.0	100	.743	.312	.250	15	23	34	55	70	70
25-0014	RF5004-14	P_1	1.0	100	.793	.312	.250	--	33	52	80	80	70
25-0015	RF5004-15	L_2	1.0	100	.738	.312	.250	15	23	34	55	70	70
25-0016	RF5004-16	P_1	3.0	100	.793	.312	.150	--	20	34	68	80	70
25-0017	RF5004-17	T	5.0	100	.743	.312	.075	11	17	23	35	69	70
25-0018	RF5004-18	P_1	5.0	100	.793	.312	.075	--	--	17	57	80	70
25-0019	RF5004-19	T	4.0	100	1.345	.312	.250	16	22	28	43	80	70
25-0020	RF5004-20	L_2	5.0	100	.738	.312	.075	11	17	23	35	69	70
25-0021	RF5004-21	L_1	.25	100	.743	.312	.375	24	35	47	68	70	70
25-0022	RF5004-22	P_1	.25	100	.793	.312	.375	31	48	66	80	80	70
25-0023	RF5004-23	L_2	.25	100	.738	.312	.375	24	35	47	38	70	70
25-0024	RF5004-24	T	2.0	100	1.179	.312	.20	16	22	31	55	80	70

CIRCUIT CONFIGURATIONS



SPECIFICATIONS

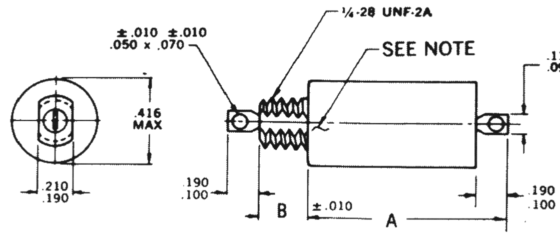
Operating Temperature: -55°C to +125°C
Dielectric Test: 2.5 Times Rated Voltage
Insulation Resistance: 1000 Megohms MIN.
@ 25°C @ Rated Voltage
Conforms to the applicable requirements
of MIL-PRF-15733.
Filter supplied with lockwasher & hex nut
Finish: Hot Solder Dip

NOTE: THE CASE SHALL BE MARKED AT THE THREADED END OF FILTER, WITH THE SYMBOL "C" OR THE SYMBOL "L", AS FOLLOWS:

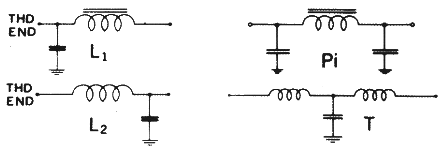
CIRCUIT	SYMBOL
L_1	C
L_2	L

SUBMINIATURE FILTERS

STYLE FL14
M15733/26
125 VAC, 0-400 Hz, 150 VDC



CIRCUIT CONFIGURATIONS



NOTE: THE CASE SHALL BE MARKED AT THE THREADED END OF FILTER, WITH THE SYMBOL "C" OR THE SYMBOL "L", AS FOLLOWS:

CIRCUIT	SYMBOL
L_1	C
L_2	L

SPECIFICATIONS

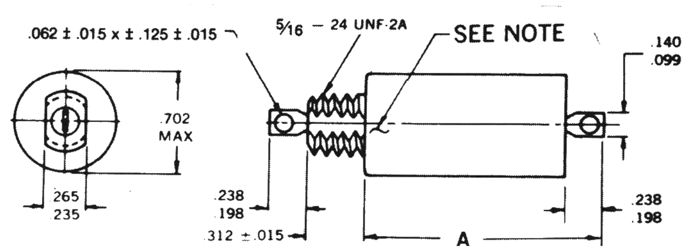
Operating Temperature: -55°C to +125°C
Dielectric Test: 2.5 Times Rated Voltage
Insulation Resistance: 1000 Megohms MIN. @ 25°C @ Rated Voltage
Conforms to the applicable requirements of MIL-PRF-15733.
Filter supplied with lockwasher & hex nut
Finish: Hot Solder Dip

MINIMUM INSERTION LOSS IN DECIBELS MIL-STD-220 A (FULL LOAD)

M15733/	PART NO.	CKT	A MAX	B ± .015	AMP	DC VOLTS	AC VOLTS AT 60 Hz & 400 Hz	MAX VOLT DROP	150 KHz	300 KHz	1 MHz	10 MHz	1 GHz
26-0001	RF4914-1	L_1	.743	.187	1	150	125	.250	13	24	45	80	70
26-0002	RF4914-2	P	.793	.187	1	150	125	.250	11	32	63	80	70
26-0003	RF4914-3	L_2	.738	.187	1	150	125	.250	13	24	45	80	70
26-0004	RF4914-4	L_1	.743	.187	3	150	125	.150	8	15	30	68	70
26-0005	RF4914-5	P_1	.793	.187	3	150	125	.150	5	6	47	80	70
26-0006	RF4914-6	L_2	.738	.187	3	150	125	.150	8	15	30	68	70
26-0007	RF4914-7	L_1	.743	.187	5	150	125	.075	8	14	25	58	70
26-0008	RF4914-8	T	1.345	.187	4	150	125	.250	11	18	33	80	70
26-0009	RF4914-9	P_1	.793	.187	5	150	125	.075	7	10	35	80	70
26-0010	RF4914-10	L_2	.738	.187	5	150	125	.075	8	14	25	58	70
26-0011	RF4914-11	P_1	.793	.187	.25	150	125	.375	29	47	70	80	70
26-0012	RF4914-12	T	1.179	.187	2	150	125	200	13	21	43	80	70
26-0013	RF4914-13	L_1	.743	.312	1	150	125	250	13	24	45	80	70
26-0014	RF4914-14	P_1	.793	.312	1	150	125	250	11	32	63	80	70
26-0015	RF4914-15	L_2	.738	.312	1	150	125	250	13	24	45	80	70
26-0016	RF4914-16	L_1	.743	.312	3	150	125	150	8	15	30	68	70
26-0017	RF4914-17	P_1	.793	.312	3	150	125	150	5	6	47	80	70
26-0018	RF4914-18	L_2	.738	.312	3	150	125	150	8	15	30	68	70
26-0019	RF4914-19	L_1	.743	.312	5	150	125	.075	8	14	25	58	70
26-0020	RF4914-20	T	1.345	.312	4	150	125	250	11	18	33	80	70
26-0021	RF4914-21	P_1	.793	.312	5	150	125	.075	7	10	35	80	70
26-0022	RF4914-22	L_2	.738	.312	5	150	125	.075	8	14	25	58	70
26-0023	RF4914-23	P_1	.793	.312	.25	150	125	375	29	47	70	80	70
26-0024	RF4914-24	T	1.179	.312	2	150	125	200	13	21	43	80	70

SUBMINIATURE FILTERS

STYLE FL15
M15733/27
125 VAC, 0-400 Hz, 200 VDC

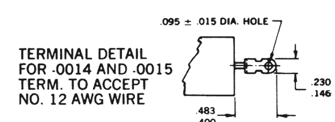


MINIMUM INSERTION LOSS IN DECIBELS MIL-STD-220 A (FULL LOAD)

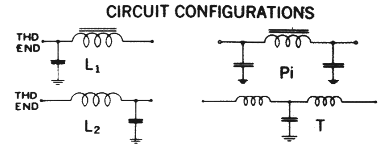
M15733/	RFI PART NO.	CKT	AMP	DC VOLTS	AC VOLTS AT 60 Hz & 400 Hz	A MAX	MAX VOLT DROP	50 KHz	100 KHz	150 KHz	300 KHz	1 MHz	10 MHz	1 GHz
27-0001	RF5001-1	L_1	1	200	125	.900	.40	11	18	25	37	58	80	70
27-0002	RF5001-2	L_2	1	200	125	.900	.40	11	18	25	37	58	80	70
27-0003	RF50013	P_1	1	200	125	1.031	.40	20	32	43	61	80	80	70
27-0004	RF5001-4	P_1	1	200	125	1.195	.35	20	36	47	65	80	80	70
27-0005	RF5001-5	L_1	3	200	125	.900	.15	5	10	14	21	39	80	70
27-0006	RF5001-6	L_2	3	200	125	.900	.15	5	10	14	21	39	80	70
27-0007	RF5001-7	P_1	3	200	125	1.031	.15	5	10	19	42	75	80	70
27-0008	RF5001-8	L_1	5	200	125	.900	.10	5	10	13	19	32	39	70
27-0009	RF5001-9	L_2	5	200	125	.900	.10	5	10	13	19	32	39	70
27-0010	RF5001-10	P_1	5	200	125	1.195	.10	--	--	10	28	64	80	70
27-0011	RF5001-11	L_1	10	200	125	1.031	.075	5	8	13	19	30	61	70
27-0012	RF5001-12	L_2	10	200	125	1.031	.075	5	8	13	19	30	61	70
27-0013	RF5001-13	P_1	10	200	125	1.195	.075	--	--	16	18	48	80	70
27-0014	RF5001-14	L_1	15	200	125	1.763	.075	9	15	19	25	36	60	70
27-0015	RF5001-15	L_2	15	200	125	1.763	.075	9	15	19	25	36	60	70
27-0016	RF5001-16	T	.7	200	125	1.195	.42	19	28	38	56	80	80	70
27-0017	RF5001-17	T	1.5	200	125	1.195	.225	6	12	19	32	62	70	70
27-0018	RF5001-18	T	4	200	125	1.195	.12	6	11	14	21	36	70	70
27-0019	RF5001-19	L_1	2	200	125	.900	.20	5	11	15	25	45	80	70
27-0020	RF5001-20	L_2	2	200	125	.900	.20	5	11	15	25	45	80	70
27-0021	RF5001-21	P_1	2	200	125	1.031	.20	1	15	28	48	79	80	70
27-0022	RF5001-22	P_1	2	200	125	1.195	.22	4	24	36	54	80	80	70
27-0023	RF5001-23	T	2	200	125	1.195	.15	5	11	15	25	51	70	70

SPECIFICATIONS

Operating Temperature: -55°C to +125°C
Dielectric Test: 2.5 Times Rated Voltage
Insulation Resistance: 1000 Megohms MIN. @ 25°C @ Rated Voltage
Conforms to the applicable requirements of MIL-PRF-15733.
Filter supplied with lockwasher & hex nut
Finish: Hot Solder Dip



CIRCUIT CONFIGURATIONS

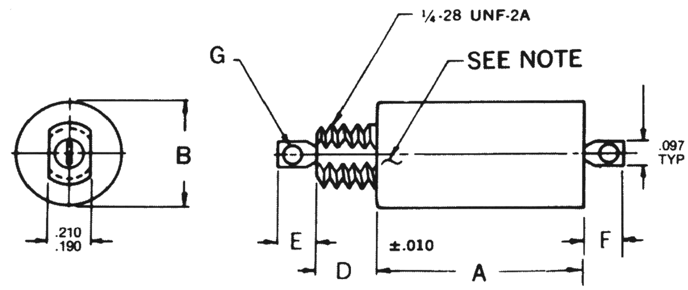


NOTE: THE CASE SHALL BE MARKED AT THE THREADED END OF FILTER, WITH THE SYMBOL "C" OR THE SYMBOL "L", AS FOLLOWS:

CIRCUIT	SYMBOL
L_1	C
L_2	L

SUBMINIATURE FILTERS

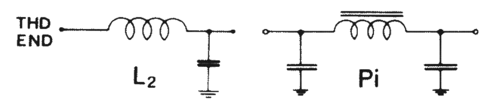
STYLE FL16
M15733/38
50 VDC and 150 VDC



SPECIFICATIONS

Operating Temperature: -55°C to +125°C
Dielectric Test: Per MIL-PRF-15733/38 Spec.
Insulation Resistance: 500 Megohms for dash number 0001, 100 megohms for dash numbers 0002 thru 0006 @25˚C @ rated voltage.
Conforms to applicable requirements of MIL-PRF-15733
Filter supplied with lockwasher & hex nut
Finish: Hot Solder Dip

CIRCUIT CONFIGURATIONS



NOTE: THE CASE SHALL BE MARKED AT THE THREADED END OF FILTER, WITH THE SYMBOL "L", AS FOLLOWS:

CIRCUIT	SYMBOL
L_2	L

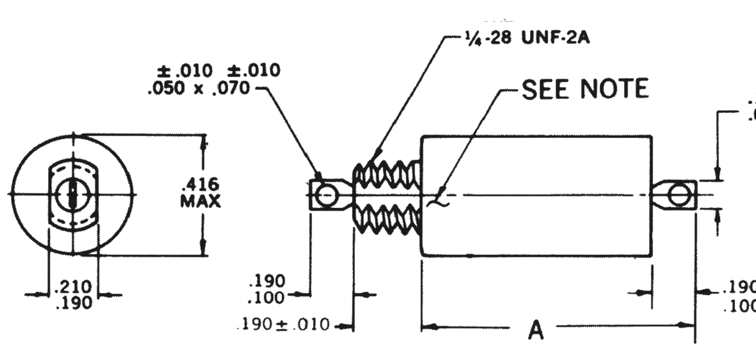
M15733/	PART NO.	A MAX	B MAX	D	E MIN.	E MAX.	F MIN.	F MAX.	G
38-0001	RF7632-1	.310	.42	.312	.100	.190	.100	.190	.05 X .07
38-0002	RF7632-2	.291	.415	.187	.100	.190	.100	.190	.05 X .07
38-0003	RF7632-3	.550	.385	.187	.100	.190	.100	.190	.05 X .07
38-0004	RF7632-4	.180	.385	.187	.100	.190	.100	.190	.05 X .07
38-0005	RF7632-5	.180	.385	.187	.100	.190	.100	.190	.05 X .07
38-0006	RF7632-6	.291	.415	.312	.100	.190	.100	.190	.05 X .07

MINIMUM INSERTION LOSS IN DECIBELS
MIL-STD-220 A (FULL LOAD)

M15733/	PART NO.	CKT	AMP	DC VOLTS	MAX VOLT DROP	30 KHz	100 KHz	150 KHz	300 KHz	1 MHz	10 MHz	1 GHz
38-0001	RF7632-1	L_2	10	50	.04	--	24	--	--	44	64	--
38-0002	RF7632-2	L_2	15	50	.12	15	--	28	33	44	64	70
38-0003	RF7632-3	P_1	3	150	.15	--	--	7	24	54	80	80
38-0004	RF7632-4	L_2	10	50	.08	15	--	28	33	44	60	70
38-0005	RF7632-5	L_2	10	50	.08	15	--	28	33	44	60	70
38-0006	RF7632-6	L_2	15	50	.12	15	--	28	33	44	64	70

SUBMINIATURE FILTERS

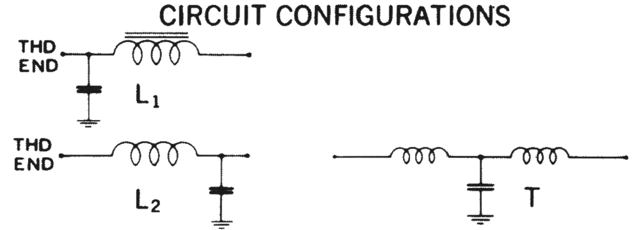
STYLE FL64
M15733/59
150 VAC/200 VDC



NOTE: THE CASE SHALL BE MARKED AT THE THREADED END OF FILTER, WITH THE SYMBOL "C" OR THE SYMBOL "L", AS FOLLOWS:

CIRCUIT	SYMBOL
L_1	C
L_2	L

CIRCUIT CONFIGURATIONS



SPECIFICATIONS

Operating Temperature: -55°C to +125°C
Dielectric Test: 2.0 Times Rated Voltage
Insulation Resistance: 1000 Megohms MIN. @ 25°C @ Rated Voltage. Conforms to the applicable requirements of MIL-PRF-15733.
Filter supplied with lockwasher & hex nut
Finish: Hot Solder Dip

MINIMUM INSERTION LOSS IN
DECIBELS MIL-STD-220 A (FULL LOAD)

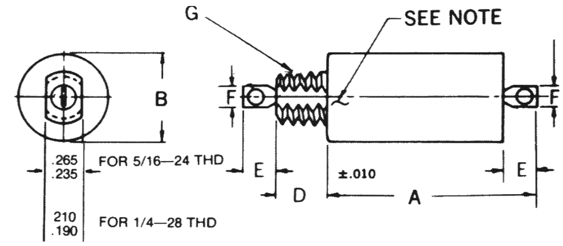
M15733/	PART NO.	CKT	AMP	DC VOLTS	AC VOLTS 400 Hz	A MAX	MAX VOLT DROP	150 KHz	300 KHz	1 MHz	10 MHz	1 GHz
59-0001	RF9498-1	L_2	1.0	200	150	.743	.250	12	23	44	70	70
59-0002	RF9498-2	L_1	1.0	200	150	.743	.250	12	23	44	70	70
59-0003	RF9498-3	L_2	3.0	200	150	.743	.150	7	13	29	67	70
59-0004	RF9498-4	L_1	3.0	200	150	.743	.150	7	13	29	67	70
59-0005	RF9498-5	L_2	5.0	200	150	.743	.075	7	12	24	57	70
59-0006	RF9498-6	L_1	5.0	200	150	.743	.075	7	12	24	57	70
59-0007	RF9498-7	T	2.0	200	150	1.17	.200	11	19	42	70	70
59-0008	RF9498-8	T	4.0	200	150	1.17	.200	10	17	32	70	70

SUBMINIATURE FILTERS

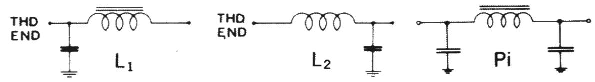
STYLE FL90
M15733/34
AC and DC

SPECIFICATIONS

Operating Temperature: -55°C to +125°C
Dielectric Test: 2.5 Times Rated Voltage
Insulation Resistance: 1000 Megohms MIN. @ 25°C
Conforms to the applicable requirements of MIL-PRF-15733.
Filter supplied with lockwasher & hex nut
Finish: Hot Solder Dip



CIRCUIT CONFIGURATIONS



NOTE: THE CASE SHALL BE MARKED AT THE THREADED END OF FILTER, WITH THE SYMBOL "C" OR THE SYMBOL "L", AS FOLLOWS:

CIRCUIT	SYMBOL
L_1	C
L_2	L

WIRE HOLE DIMENSION TABLE		
DASH NUMBER	WIRE HOLE TYPE AND SIZE (2 PLACES)	
0001 and 0002	Round Hole	.095 ±.015 dia.
0003, 0016, thru 0018 and 0030	Round Hole	.050 ±.010 dia.
0015	Round Hole Slotted Hole	.062 ±.020 dia. or .050 ±.010 x .070 ±.010
0004 thru 0006, 0020, 0021 and 0029	Slotted Hole	.062 ±.015 x .125 ±.015
0007, 0008	Round Hole	.070 ±.020 dia.
0009, 0010, 0014 and 0019	Round Hole Slotted Hole	.060 ±.020 dia. or .060 ±.015 x .125 ±.015
0011 thru 0013	Round Hole Slotted Hole	.093 dia. or .062 x .125

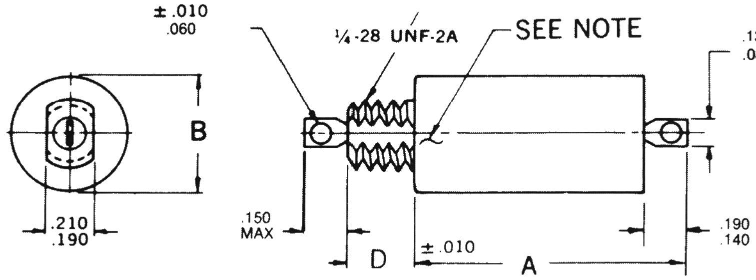
M15733/	PART NO.	A MAX	B MAX	D ± .010	E		F		G
					MIN.	MAX.	MIN.	MAX.	
34-0001	RF5005-1	1.763	.702	.312	.400	.483	.146	.230	5/16 - 24
34-0002	RF5005-2	1.763	.702	.312	.400	.483	.146	.230	5/16 - 24
34-0003	RF5005-3	.730	.416	.187	.120	.190	.083	.130	1/4 - 28
34-0004	RF5005-4	1.195	.702	.312	.198	.238	.099	.140	5/16 - 24
34-0005	RF5005-5	1.195	.702	.312	.198	.238	.099	.140	5/16 - 24
34-0006	RF5005-6	1.195	.702	.312	.198	.238	.099	.140	5/16 - 24
34-0007	RF5005-7	.760	.385	.187	.140	.190	.083	.130	1/4 - 28
34-0008	RF5005-8	.760	.385	.187	.140	.190	.083	.130	1/4 - 28
34-0009	RF5005-9	1.170	.690	.312	.198	.238	.099	.140	5/16 - 24
34-0010	RF5005-10	.793	.416	.312	.120	.190	.099	.140	1/4 - 28
34-0011	RF5005-11	.890	.702	.312	.199	.234	.099	.140	5/16 - 24
34-0012	RF5005-12	.890	.702	.312	.199	.234	.099	.140	5/16 - 24
34-0013	RF5005-13	.890	.702	.312	.199	.234	.099	.140	5/16 - 24
34-0014	RF5005-14	.730	.416	.312	--	.190	--	.130	1/4 - 28
34-0015	RF5005-15	.743	.416	.312	--	.190	.099	.119	1/4 - 28
34-0016	RF5005-16	.890	.416	.187	.140	.190	.1	.190	1/4 - 28
34-0017	RF5005-17	.740	.416	.187	.140	.190	.1	.190	1/4 - 28
34-0018	RF5005-18	.740	.416	.187	.140	.190	.1	.190	1/4 - 28
34-0019	RF5005-19	.793	.416	.312	--	.190	.1	.190	1/4 - 28
34-0020	RF5005-20	.900	.702	.312	.198	.238	.099	.140	5/16 - 24
34-0021	RF5005-21	.900	.702	.312	.198	.238	.099	.140	5/16 - 24
34-0029	RF5005-29	.900	.702	.312	--	.238	--	.140	5/16 - 24
34-0030	RF5005-30	.690	.416	.187	--	.190	.14	.160	1/4 - 28

MINIMUM INSERTION LOSS IN DECIBELS MIL-STD-220 A (FULL LOAD)

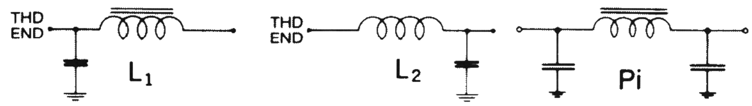
M15733/	PART NO.	CKT	AMP	DC VOLTS	AC VOLTS AT 400 Hz	MAX VOLT DROP	30 KHz	50 KHz	100 KHz	150 KHz	300 KHz	1 MHz	10 MHz	1 GHz
34-0001	RF5005-1	L_1	20	200	125	.100	--	9	14	19	25	35	57	70
34-0002	RF5005-2	L_2	20	200	125	.100	--	9	14	19	25	35	57	70
34-0003	RF5005-3	P_1	2	50	--	.14	--	--	33	46	65	80	80	80
34-0004	RF5005-4	P_1	5	200	1258	.10	--	--	--	10	28	64	80	70
34-0005	RF5005-5	P_1	10	200	125	.750	--	--	--	16	18	48	80	70
34-0006	RF5005-6	P_1	2	200	125	.22	--	4	24	36	54	80	80	70
34-0007	RF5005-7	L_2	10	28	--	.10	15	--	--	28	31	42	56	70
34-0008	RF5005-8	L_2	.450	28	--	.54	15	--	--	29	33	46	66	70
34-0009	RF5005-9	P_1	5	100	--	.10	--	--	20	38	50	80	80	80
34-0010	RF5005-10	L_2	2	150	125	.13	--	--	--	8	15	30	68	70
34-0011	RF5005-11	L_1	10	150	125	.08	--	9	14	18	24	34	54	70
34-0012	RF5005-12	L_1	10	300	125	.3	5	--	--	19	25	30	57	70
34-0013	RF5005-13	L_2	10	150	125	.3	--	6	12	14	21	30	54	70
34-0014	RF5005-14	P_1	5	100	--	.05	--	--	--	--	17	55	70	70
34-0015	RF5005-15	L_1	3	150	125	.15	--	--	--	8	15	30	68	--
34-0016	RF5005-16	L_1	3	200	125	.2	2	6	--	15	20	34	67	70
34-0017	RF5005-17	L_1	10	100	--	.1	10	15	--	26	29	38	56	70
34-0018	RF5005-18	L_1	.5	100	--	.375	13	18	--	33	44	64	70	70
34-0019	RF5005-19	P_1	3	150	125	.15	--	--	--	--	20	55	80	80
34-0020	RF5005-20	L_1	3	200	125	.15	--	--	10	14	21	39	80	--
34-0021	RF5005-21	L_1	5	200	125	.1	--	--	10	13	19	32	69	--
34-0029	RF5005-29	L_1	2	200	125	.2	--	--	11	15	25	45	80	--
34-0030	RF5005-30	L_1	5	200	125	.750	2	5	--	15	21	32	60	70

SUBMINIATURE FILTERS

STYLE FL91
M15733/39
50 VDC/100 VDC



CIRCUIT CONFIGURATIONS



SPECIFICATIONS

Operating Temperature: -55°C to +125°C
Dielectric Test: 2.5 Times Rated Voltage
Insulation Resistance: 1000 Megohms MIN.
@ 25°C @ Rated Voltage Conforms to the applicable requirements of MIL-PRF-15733.
Filter supplied with lockwasher & hex nut
Finish: Hot Solder Dip

NOTE: THE CASE SHALL BE MARKED AT THE THREADED END OF FILTER, WITH THE SYMBOL "C" OR THE SYMBOL "L", AS FOLLOWS:

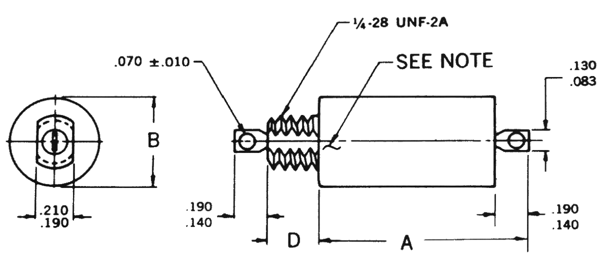
CIRCUIT	SYMBOL
L_1	C
L_2	L

MINIMUM INSERTION LOSS IN DECIBELS MIL-STD-220 A (FULL LOAD)

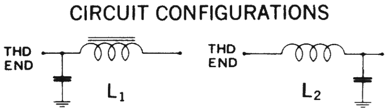
M15733/	PART NO.	CKT	AMP	DC VOLTS	A MAX	B MAX	D ± .010	MAX VOLT DROP	.03 MHz	.15 MHz	.3 MHz	1 MHz	2 MHz	5 MHz	10 MHz	20 MHz	50 MHz	100 MHz	1 GHz
39-0001	RF5008-1	L_1	0.5	100	.760	.385	.187	1.0	6	28	40	60	60	60	60	60	60	60	70
39-0002	RF5008-2	L_2	0.5	100	.760	.385	.187	1.0	6	28	40	60	60	60	60	60	60	60	70
39-0003	RF5008-3	L_1	1.0	100	.760	.385	.187	1.0	6	20	30	50	60	60	60	60	60	60	70
39-0004	RF5008-4	L_2	1.0	100	.760	.385	.187	1.0	6	20	30	50	60	60	60	60	60	60	70
39-0005	RF5008-5	L_1	2.0	100	.760	.385	.187	1.0	6	20	26	40	48	60	60	60	60	60	70
39-0006	RF5008-6	L_2	2.0	100	.760	.385	.187	1.0	6	20	26	40	48	60	60	60	60	60	70
39-0007	RF5008-7	L_1	5.0	100	.760	.385	.187	1.0	6	20	26	35	42	52	60	60	60	60	70
39-0008	RF5008-8	L_2	5.0	100	.760	.385	.187	1.0	6	20	26	35	42	52	60	60	60	60	70
39-0009	RF5008-9	L_1	10.0	100	.760	.385	.187	1.0	6	20	26	35	41	49	56	60	60	60	70
39-0010	RF5008-10	L_2	10.0	100	.760	.385	.187	1.0	6	20	26	35	41	49	56	60	60	60	70
39-0011	RF5008-11	P_1	10.0	100	.760	.385	.187	.03	9	24	29	40	--	--	70	70	70	70	70
39-0012	RF5008-12	P_1	10.0	100	.760	.385	.187	.03	9	24	29	40	--	--	70	70	70	70	70
39-0013	RF5008-13	L_2	10.0	50	.760	.385	.312	.03	14	28	34	44	--	--	52	70	--	--	70
39-0014	RF5008-14	L_1	10.0	50	.760	.385	.312	.03	14	28	34	44	--	--	52	70	--	--	70
39-0016	RF5008-16	P_1	.25	100	.800	.416	.187	.375	--	--	76	80	--	--	80	--	--	--	80
39-0017	RF5008-17	P_1	3.0	100	.800	.416	.187	18	--	--	41	76	--	--	80	--	--	--	80
39-0018	RF5008-18	P_1	5.0	100	.800	.416	.187	2	--	--	28	68	--	--	80	--	--	--	80

SUBMINIATURE FILTERS

STYLE FL92
M15733/48
28 VDC/30 VDC



CIRCUIT CONFIGURATIONS



MINIMUM INSERTION LOSS IN DECIBELS MIL-STD-220 A (FULL LOAD)

M15733/	PART NO.	CKT	AMP	DC VOLTS	A MAX	B MAX	D ± .010	MAX VOLT DROP	30 KHz	150 KHz	300 KHz	1 MHz	10 MHz	1 GHz
48-0001	RF5006-1	L_1	10.0	28	.760	.385	.187	.10	15	28	33	44	64	70
48-0002	RF5006-2	L_2	10.0	30	.861	.406	.187	.10	15	28	33	44	64	70
48-0003	RF5006-3	L_1	10.0	28	.760	.385	.312	.10	15	28	33	44	64	70
48-0004	RF5006-4	L_2	.150	28	.760	.385	.312	1.8	24	52	64	70	70	70
48-0005	RF5006-5	L_2	10.0	28	.760	.385	.312	.10	15	28	33	44	64	70

SPECIFICATIONS

Operating Temperature: -55°C to +125°C Dielectric Test: 2.5 Times Rated Voltage Insulation Resistance: 1000 Megohms MIN. for Dash 0001, 100 Megohms for Dash 0002 Thru 0005 @ 25°C @ Rated Voltage. Conforms to the applicable requirements of MIL-PRF-15733. Filter supplied with lockwasher & hex nut Finish: Hot Solder Dip

NOTE: THE CASE SHALL BE MARKED AT THE THREADED END OF FILTER, WITH THE SYMBOL "C" OR THE SYMBOL "L", AS FOLLOWS:

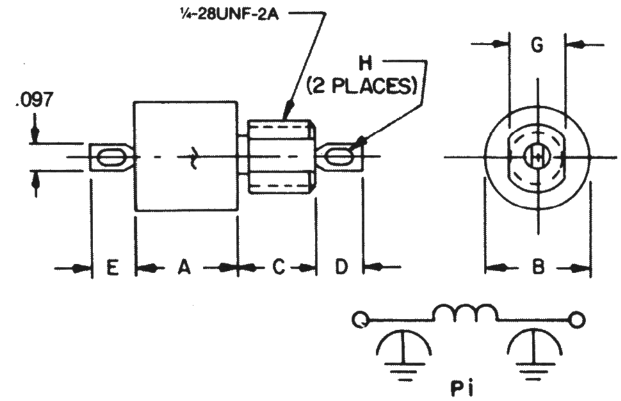
CIRCUIT	SYMBOL
L_1	C
L_2	L

SUBMINIATURE FILTERS

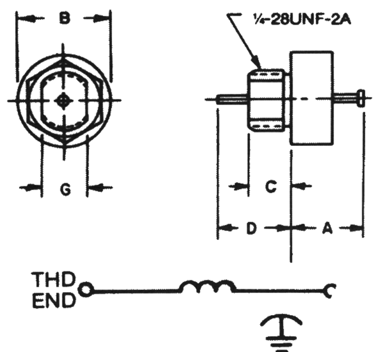
STYLE FL93
M15733/49
50-150 VDC

SPECIFICATIONS

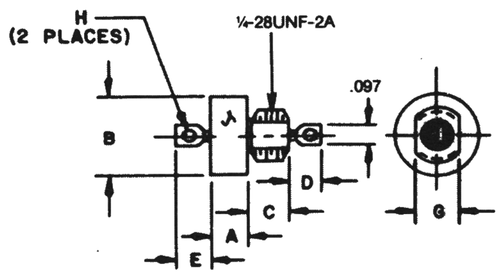
Operating Temperature: -55°C to +125°C
Dielectric Test: 2.5 Times Rated Voltage
Conforms to the applicable requirements of MIL-PRF-15733.
Filter supplied with lockwasher & hex nut
Finish: Hot Solder Dip, Silver Plate - 0001 Only.



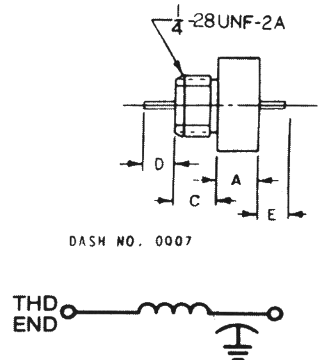
CIRCUIT CONFIGURATION
FOR -0002



CIRCUIT CONFIGURATION
FOR -0001



Dash number 0003 and 0004, 0006



CIRCUIT CONFIGURATION

M15733/	PART NO.	A MAX	B MAX	C +.01	D		E		G MAX.	H
					MIN.	MAX.	MIN.	MAX.		
49-0001	RF7876	.319	.416	.187	.281	.343	--	--	.200	--
49-0002	RF7632-3	.550	.385	.187	--	.190	.140	.160	.210	.05 x .07
49-0003	RF7632-4	.180	.385	.187	.140	.160	--	.190	.210	.05 x .07
49-0004	RF7632-5	.180	.385	.187	.140	.160	--	.190	.210	.05 x .07
49-0006	RF9956	.180	.385	.187	.140	.160	.100	.190	.210	.05 x .07
49-0007	RF9956-1	.180	.385	.187	.250	.270	.250	.270	.210	--

MINIMUM INSERTION LOSS IN DECIBELS
MIL-STD-220 A (FULL LOAD)

M15733/	PART NO.	CKT	AMP	DC VOLTS	MAX VOLT DROP	30 KHz	150 KHz	300 KHz	1 MHz	10 MHz	1 GHz
49-0001	RF7876	L_2	15	100	.12	8	20	28	38	55	70
49-0002	RF7632-3	P_1	3	150	.15	--	7	24	54	80	80
49-0003	RF7632-4	L_2	10	50	.08	15	28	33	44	60	70
49-0004	RF7632-5	L_2	10	50	.08	15	28	33	44	60	70
49-0006	RF9956	L_2	15	50	.15	15	28	33	44	60	70
49-0007	RF9956-1	L_2	15	50	.15	15	28	33	44	60	70

HIGH REL FILTER SERIES

The RF6900 Subminiature Filter Series compliments our other tubular filter types as a high-reliability option for design engineers. These filters were designed according to, and meet the relevant requirements of Mil-PRF-28861.

This filter series incorporates monolithic discoidal feedthrough capacitors designed for minimum size, optimum performance, and reliability. Filters are available in various circuit configurations, at voltages from 50 VDC to 125 VAC, and current ratings from 0.1 to 15 Amperes.

These filters can be employed in space, aerospace and mission critical applications or any program which requires high reliability components.

RF6901 SERIES..50 to 200 VDC

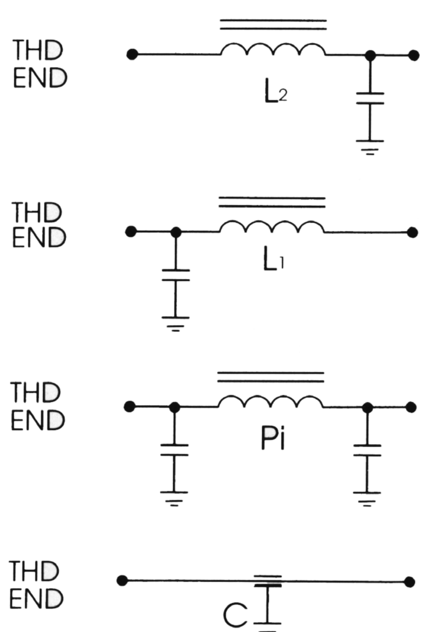
RF6902 SERIES..100 VDC

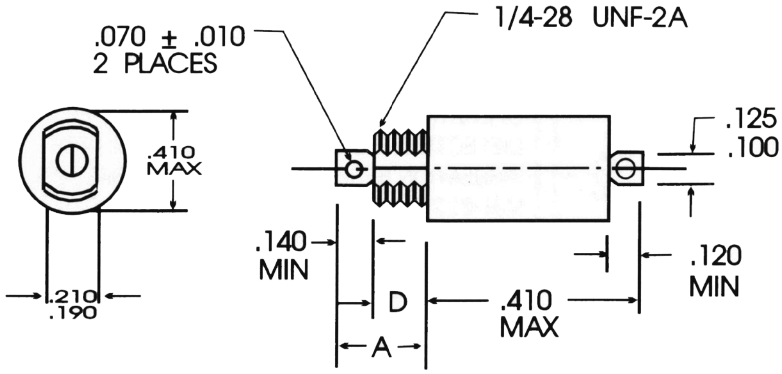
RF6903 SERIES..150 VDC

RF6904 SERIES..70 VDC

RF6905 SERIES..........................200 VDC, 125VAC, 400Hz

CIRCUIT CONFIGURATIONS



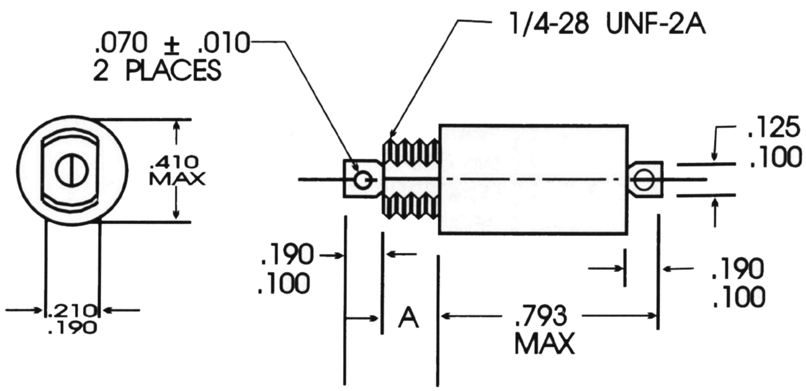


RF6901 SERIES SPECIFICATIONS

Operating Temperature: -55°C to +125°C
Dielectric Test: 2.5 Times Rated Voltage
Insulation Resistance: 1000 Megohms MIN. @ 25°C
Conforms to the applicable requirements of MIL-PRF-28861
Filter supplied with lockwasher & hex nut
Finish: Hot Solder Dip
Rated for 50-200 VDC

MINIMUM INSERTION LOSS IN DECIBELS
MIL-STD-220 A (FULL LOAD)

PART NO.	CKT	RATING		ACV	A MAX	D ± .010	MAX VOLT DROP	30 KHz	150 KHz	300 KHz	1 MHz	100 MHz	1 GHz
		AMP	DC VOLTS										
RF6901-1X	L_2	15	50	--	.357	.187	.12	15	28	33	40	70	70
RF6901-2X	C	15	50	--	.357	.187	.12	15	28	33	40	70	70
RF6901-3X	L_2	15	70	--	.357	.187	.12	10	24	30	40	64	70
RF6901-4X	C	15	70	--	.357	.187	.12	10	24	30	40	64	70
RF6901-5X	L_2	15	100	--	.357	.187	.12	6	19	25	36	60	70
RF6901-6X	C	15	100	--	.357	.187	.12	6	19	25	36	60	70
RF6901-7X	L_2	15	150	--	.357	.187	.12	--	14	20	31	56	70
RF6901-8X	C	15	150	--	.357	.187	.12	--	14	20	31	56	70
RF6901-9X	L_2	15	200	125	.357	.187	.12	--	10	16	26	52	70
RF6901-10X	C	15	200	125	.357	.187	.12	--	10	16	26	52	70
RF6901-11X	L_2	15	50	--	.482	.312	.12	15	28	33	40	70	70
RF6901-12X	C	15	50	--	.482	.312	.12	15	28	33	40	70	70
RF6901-13X	L_2	15	70	--	.482	.312	.12	10	24	30	40	64	70
RF6901-14X	C	15	70	--	.482	.312	.12	10	24	30	40	64	70
RF6901-15X	L_2	15	100	--	.482	.312	.12	6	19	25	36	60	70
RF6901-16X	C	15	100	--	.482	.312	.12	6	19	25	36	60	70
RF6901-17X	L_2	15	150	--	.482	.312	.12	--	14	20	31	56	70
RF6901-18X	C	15	150	--	.482	.312	.12	--	14	20	31	56	70
RF6901-19X	L_2	15	200	125	.482	.312	.12	--	10	16	26	52	70
RF6901-20X	C	15	200	125	.482	.312	.12	--	10	16	26	52	70

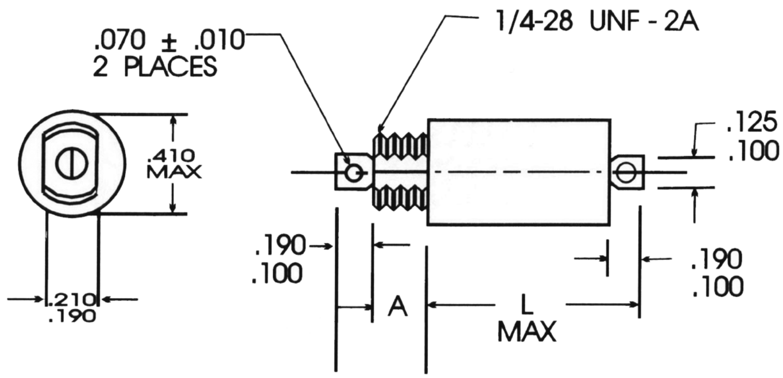


RF6902 SERIES SPECIFICATIONS

Operating Temperature: -55°C to +125°C
Dielectric Test: 2.5 Times Rated Voltage
Insulation Resistance: 1000 Megohms MIN. @ 25°C
Conforms to the applicable requirements of MIL-PRF-28861
Filter supplied with lockwasher & hex nut
Finish: Hot Solder Dip
Rated for 100 VDC

MINIMUM INSERTION LOSS IN DECIBELS
MIL-STD-220 A (FULL LOAD)

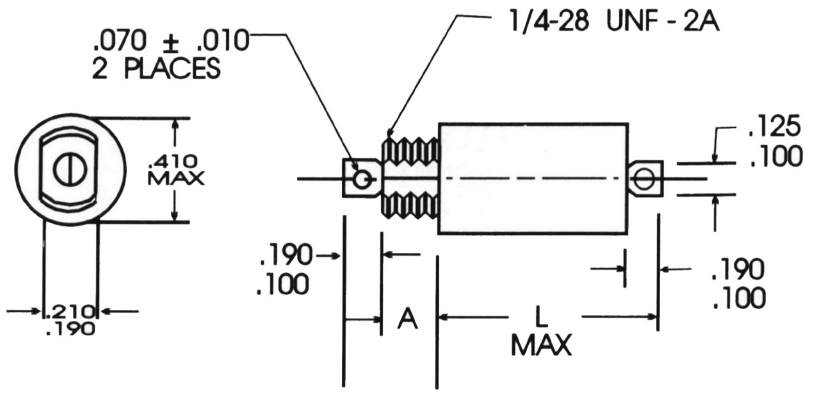
PART NO.	CKT	RATING		A ± .010	MAX VOLT DROP	100 KHz	150 KHz	300 KHz	1 MHz	10 MHz	1 GHz
		AMP	DC VOLTS								
RF6902-1X	L_1	.25	100	.187	.375	30	38	50	60	60	70
RF6902-2X	L_2	.25	100	.187	.375	30	38	50	60	60	70
RF6902-3X	P_1	.25	100	.187	.375	54	64	8/0	80	80	80
RF6902-4X	L_1	1.0	100	.187	.25	15	23	34	55	60	70
RF6902-5X	L_2	1.0	100	.187	.25	15	23	34	55	60	70
RF6902-6X	P_1	1.0	100	.187	.25	40	52	70	80	80	80
RF6902-7X	L_1	3.0	100	.187	.15	14	18	27	45	60	70
RF6902-8X	L_2	3.0	100	.187	.15	14	18	27	45	60	70
RF6902-9X	P_1	3.0	100	.187	.15	--	25	51	80	80	80
RF6902-10X	L_1	5.0	100	.187	.075	14	17	24	36	60	70
RF6902-11X	L_2	5.0	100	.187	.075	14	17	24	36	60	70
RF6902-12X	P_1	5.0	100	.187	.075	--	--	38	75	80	80
RF6902-13X	L_1	.25	100	.312	.375	30	38	50	60	60	70
RF6902-14X	L_2	.25	100	.312	.375	30	38	50	60	60	70
RF6902-15X	P_1	.25	100	.312	.375	54	64	8/0	80	80	80
RF6902-16X	L_1	1.0	100	.312	.25	15	23	34	55	60	70
RF6902-17X	L_2	1.0	100	.312	.25	15	23	34	55	60	70
RF6902-18X	P_1	1.0	100	.312	.25	40	52	70	80	80	80
RF6902-19X	L_1	3.0	100	.312	.15	14	18	27	45	60	70
RF6902-20X	L_2	3.0	100	.312	.15	14	18	27	45	60	70
RF6902-21X	P_1	3.0	100	.312	.15	--	25	51	80	80	80
RF6902-22X	L_1	5.0	100	.312	.075	14	17	24	36	60	70
RF6902-23X	L_2	5.0	100	.312	.075	14	17	24	36	60	70
RF6902-24X	P_1	5.0	100	.312	.075	--	--	38	75	80	80



RF6903 SERIES SPECIFICATIONS

Operating Temperature: -55°C to +125°C
Dielectric Test: 2.5 Times Rated Voltage
Insulation Resistance: 1000 Megohms MIN. @ 25°C
Conforms to the applicable requirements of MIL-PRF-28861
Filter supplied with lockwasher & hex nut
Finish: Hot Solder Dip
Rated for 150 VDC

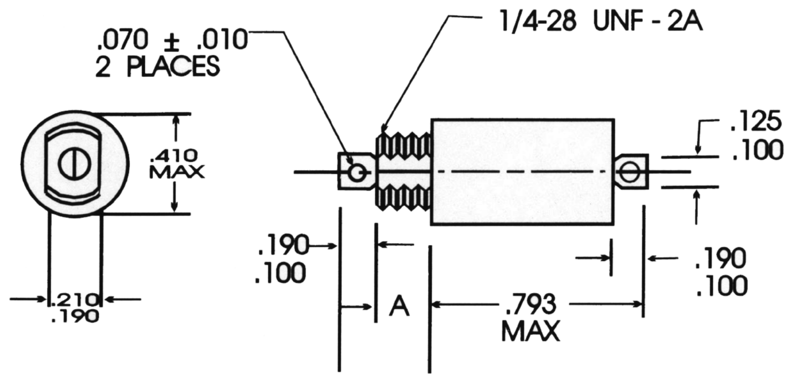
PART NO.	CKT	RATING		L MAX	A ± .010	MAX VOLT DROP	MINIMUM INSERTION LOSS IN DECIBELS MIL-STD-220 A (FULL LOAD)					
		AMP	DC VOLTS				100 KHz	150 KHz	300 KHz	1 MHz	10 MHz	1 GHz
RF6903-1X	L_1	.1	150	.630	.187	.17	32	39	51	60	60	70
RF6903-2X	L_2	.1	150	.630	.187	.17	32	39	51	660	60	70
RF6903-3X	P_1	.1	150	.730	.187	.17	49	60	70	80	80	80
RF6903-4X	L_1	.3	150	.630	.187	.23	25	30	44	60	60	70
RF6903-5X	L_2	.3	150	.630	.187	.23	25	30	44	60	60	70
RF6903-6X	P_1	.3	150	.730	.187	.23	43	53	70	80	80	80
RF6903-7X	L_1	.5	150	.630	.187	.18	20	26	39	59	60	70
RF6903-8X	L_2	.5	150	.630	.187	.18	20	26	39	59	60	70
RF6903-9X	P_1	.5	150	.730	.187	.18	37	48	66	80	80	80
RF6903-10X	L_1	1.0	150	.630	.187	.14	12	46	26	48	60	70
RF6903-11X	L_2	1.0	150	.630	.187	.14	12	16	26	48	60	70
RF6903-12X	P_1	1.0	150	.730	.187	.14	28	40	58	80	80	80
RF6903-13X	L_1	3.0	150	.630	.187	.15	11	15	50	36	60	70
RF6903-14X	L_2	3.0	150	.630	.187	.15	11	15	20	36	60	70
RF6903-15X	P_1	3.0	150	.730	.187	.15	--	--	38	70	80	80
RF6903-16X	L_1	5.0	150	.630	.187	.075	8	12	20	32	60	70
RF6903-17X	L_2	5.0	150	.630	.187	.075	8	12	20	32	60	70
RF6903-18X	P_1	5.0	150	.730	.187	.075	--	--	38	63	80	80
RF6903-19X	L_1	.1	150	.630	.312	.17	32	39	51	60	60	70
RF6903-20X	L_2	.1	150	.630	.312	.17	32	39	51	660	60	70
RF6903-21X	P_1	.1	150	.730	.312	.17	49	60	70	80	80	80
RF6903-22X	L_1	.3	150	.630	.312	.23	25	30	44	60	60	70
RF6903-23X	L_2	.3	150	.630	.312	.23	25	30	44	60	60	70
RF6903-24X	P_1	.3	150	.730	.312	.23	43	53	70	80	80	80
RF6903-25X	L_1	.5	150	.630	.312	.18	20	26	39	59	60	70
RF6903-26X	L_2	.5	150	.630	.312	.18	20	26	39	59	60	70
RF6903-27X	P_1	.5	150	.730	.312	.18	37	48	66	80	80	80
RF6903-28X	L_1	1.0	150	.630	.312	.14	12	46	26	48	60	70
RF6903-29X	L_2	1.0	150	.630	.312	.14	12	16	26	48	60	70
RF6903-30X	P_1	1.0	150	.730	.312	.14	28	40	58	80	80	80
RF6903-31X	L_1	3.0	150	.630	.312	.15	11	15	50	36	60	70
RF6903-32X	L_2	3.0	150	.630	.312	.15	11	15	20	36	60	70
RF6903-33X	P_1	3.0	150	.730	.312	.15	--	--	38	70	80	80
RF6903-34X	L_1	5.0	150	.630	.312	.075	8	12	20	32	60	70
RF6903-35X	L_2	5.0	150	.630	.312	.075	8	12	20	32	60	70
RF6903-36X	P_1	5.0	150	.730	.312	.075	--	--	38	63	80	80



RF6904 SERIES SPECIFICATIONS

Operating Temperature: -55°C to +125°C
Dielectric Test: 2.5 Times Rated Voltage
Insulation Resistance: 1000 Megohms MIN. @ 25°C
Conforms to the applicable requirements of MIL-PRF-28861
Filter supplied with lockwasher & hex nut
Finish: Hot Solder Dip
Rated for 70 VDC

PART NO.	CKT	RATING		L MAX	A ± .010	MAX VOLT DROP	MINIMUM INSERTION LOSS IN DECIBELS MIL-STD-220 A (FULL LOAD)						
		AMP	DC VOLTS				15 KHz	30 KHz	150 KHz	300 KHz	1 MHz	10 MHz	1 GHz
RF6904-1X	L_1	.1	70	.630	.187	.17	9	20	48	60	7	70	70
RF6904-2X	L_2	.1	70	.630	.187	.17	9	20	48	60	70	70	70
RF6904-3X	P_1	.1	70	.730	.187	.17	15	36	79	80	80	80	80
RF6904-4X	L_1	.3	70	.630	.187	.23	6	15	42	54	70	70	70
RF6904-5X	L_2	.3	70	.630	.187	.23	6	15	42	54	70	70	70
RF6904-6X	P_1	.3	70	.730	.187	.23	--	29	73	80	80	80	80
RF6904-7X	L_1	.5	70	.630	.187	.18	5	12	36	48	69	70	70
RF6904-8X	L_2	.5	70	.630	.187	.18	5	12	36	48	69	70	70
RF6904-9X	P_1	.5	70	.730	.187	.18	--	21	67	80	80	80	80
RF6904-10X	L_1	1.0	70	.630	.187	.14	5	11	26	36	55	70	70
RF6904-11X	L_2	1.0	70	.630	.187	.14	5	11	26	36	55	70	70
RF6904-12X	P_1	1.0	70	.730	.187	.14	--	--	57	75	80	80	80
RF6904-13X	L_1	3.0	70	.630	.187	.15	5	10	24	31	45	70	70
RF6904-14X	L_2	3.0	70	.630	.187	.15	5	10	24	31	45	70	70
RF6904-15X	P_1	3.0	70	.730	.187	.15	--	--	26	51	80	80	80
RF6904-16X	L_1	5.0	70	.630	.187	.075	--	--	17	24	36	70	70
RF6904-17X	L_2	5.0	70	.630	.187	.075	--	--	17	24	36	70	70
RF6904-18X	P_1	5.0	70	.730	.187	.075	--	--	16	38	75	80	80
RF6904-19X	L_1	.1	70	.630	.312	.17	9	20	48	60	7	70	70
RF6904-20X	L_2	.1	70	.630	.312	.17	9	20	48	60	70	70	70
RF6904-21X	P_1	.1	70	.730	.312	.17	15	36	79	80	80	80	80
RF6904-22X	L_1	.3	70	.630	.312	.23	6	15	42	54	70	70	70
RF6904-23X	L_2	.3	70	.630	.312	.23	6	15	42	54	70	70	70
RF6904-24X	P_1	.3	70	.730	.312	.23	--	29	73	80	80	80	80
RF6904-25X	L_1	.5	70	.630	.312	.18	5	12	36	48	69	70	70
RF6904-26X	L_2	.5	70	.630	.312	.18	5	12	36	48	69	70	70
RF6904-27X	P_1	.5	70	.730	.312	.18	--	21	67	80	80	80	80
RF6904-28X	L_1	1.0	70	.630	.312	.14	5	11	26	36	55	70	70
RF6904-29X	L_2	1.0	70	.630	.312	.14	5	11	26	36	55	70	70
RF6904-30X	P_1	1.0	70	.730	.312	.14	--	--	57	75	80	80	80
RF6904-31X	L_1	3.0	70	.630	.312	.15	5	10	24	31	45	70	70
RF6904-32X	L_2	3.0	70	.630	.312	.15	5	10	24	31	45	70	70
RF6904-33X	P_1	3.0	70	.730	.312	.15	--	--	26	51	80	80	80
RF6904-34X	L_1	5.0	70	.630	.312	.075	--	--	17	24	36	70	70
RF6904-35X	L_2	5.0	70	.630	.312	.075	--	--	17	24	36	70	70
RF6904-36X	P_1	5.0	70	.730	.312	.075	--	--	16	38	75	80	80



RF6905 SERIES SPECIFICATIONS

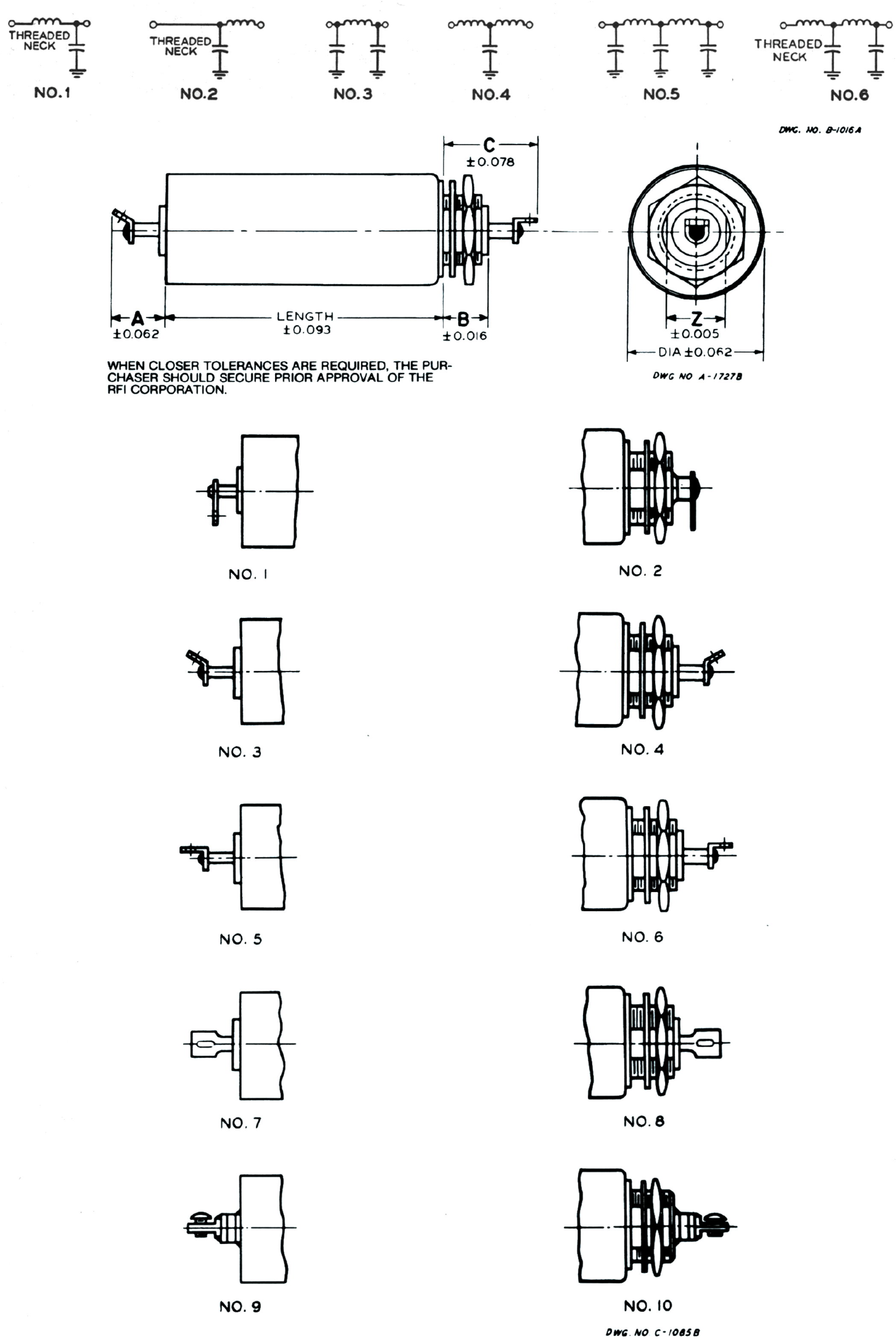
Operating Temperature: -55°C to +125°C
Dielectric Test: 2.5 Times Rated Voltage
Insulation Resistance: 1000 Megohms MIN. @ 25°C
Conforms to the applicable requirements of MIL-PRF-28861
Filter supplied with lockwasher & hex nut
Finish: Hot Solder Dip
Rated for 200 VDC, 125 VAC, 400 Hz

MINIMUM INSERTION LOSS IN DECIBELS
MIL-STD-220 A (FULL LOAD)

PART NO.	CKT	RATING		ACV	A ± .010	MAX VOLT DROP	100 KHz	150 KHz	300 KHz	1 MHz	10 MHz	1 GHz
		AMP	DC VOLTS									
RF6905-1X	L_1	.25	200	125	.187	.375	22	28	40	60	60	70
RF6905-2X	L_2	.25	200	125	.187	.375	22	28	40	60	60	70
RF6905-3X	P_1	.25	200	125	.187	.375	.4	44	62	80	80	80
RF6905-4X	L_1	1.0	200	125	.187	.25	8	13	24	45	60	70
RF6905-5X	L_2	1.0	200	125	.187	.25	8	13	24	45	60	70
RF6905-6X	P_1	1.0	200	125	.187	.25	18	32	50	80	80	80
RF6905-7X	L_1	3.0	200	125	.187	.15	5	8	16	30	60	70
RF6905-8X	L_2	3.0	200	125	.187	.15	5	8	16	30	60	70
RF6905-9X	P_1	3.0	200	125	.187	.15	--	--	19	59	80	80
RF6905-10X	L_1	5.0	200	125	.187	.075	5	8	14	26	60	70
RF6905-11X	L_2	5.0	200	125	.187	.075	5	8	14	26	60	70
RF6905-12X	P_1	5.0	200	125	.187	.075	--	--	--	51	80	80
RF6905-13X	L_1	.25	200	125	.312	.375	22	28	40	60	60	70
RF6905-14X	L_2	.25	200	125	.312	.375	22	28	40	60	60	70
RF6905-15X	P_1	.25	200	125	.312	.375	.4	44	62	80	80	80
RF6905-16X	L_1	1.0	200	125	.312	.25	8	13	24	45	60	70
RF6905-17X	L_2	1.0	200	125	.312	.25	8	13	24	45	60	70
RF6905-18X	P_1	1.0	200	125	.312	.25	18	32	50	80	80	80
RF6905-19X	L_1	3.0	200	125	.312	.15	5	8	16	30	60	70
RF6905-20X	L_2	3.0	200	125	.312	.15	5	8	16	30	60	70
RF6905-21X	P_1	3.0	200	125	.312	.15	--	--	19	59	80	80
RF6905-22X	L_1	5.0	200	125	.312	.075	5	8	14	26	60	70
RF6905-23X	L_2	5.0	200	125	.312	.075	5	8	14	26	60	70
RF6905-24X	P_1	5.0	200	125	.312	.075	--	--	--	51	80	80

THE SPRAGUE FILTER

The Sprague filter remains a popular option for replacement parts and new designs. The following pages provide design and performance details for 60 popular Sprague cylindrical-style filters. These are now included with RFI Specialty Components. All are suitable for continuous operation within the specified ambient temperature range. For applications that require intermittent duty cycles or surge conditions, contact the factory for recommendations.



TERMINAL DRAWINGS REPRESENT STYLE AND NOT NECESSARILY RADIAL ORIENTATION. IF ORIENTATION IS CRITICAL, SUBMIT YOUR REQUIREMENTS TO THE FACTORY.

SPRAGUE FILTERS PERFORMANCE CHARACTERISTICS

1. Rating
Filters are designed for continuous operation at rated current, voltage, frequency, and temperature. A-C filters may be operated at any frequency, up to and including the rated line frequency.

2. Operating Temperature Range
The temperature ranges common to this type of filter are from –55C to +85C, +100C, and +125C. Units that do not fall in these temperature ranges may be designed upon request.

3. Insertion Loss
The tabulated insertion loss values represent minimum no-load filter performance when measured in accordance with Military Standard MIL-STD-220.

4. Dielectric Withstanding Voltage
Filters shall withstand a voltage of twice rated value for two minutes, applied between either terminal and case.

4.1
The test voltage must be applied and discharged through a resistor of at least one ohm per volt.

4.2
Types 2JX49 and 2JX83 shall withstand a voltage of 400 volts d-c.

5. Altitude
Filters shall withstand the application of 125% rated voltage at the specified altitude.

6. Terminal Strength
Filters shall withstand the application of the specified force applied to the terminal at the point where the lead from the external circuit connects to it. The force applied in any direction including the weakest and shall be increased gradually to the specified magnitude and held at that value for at least 30 seconds.

Any terminal that shows visible bending in the termnal-pull test shall be bent back and forth five times through an arc of 90°.

7. Heat Rise
The case temperature rise, when operated at rated current, voltage, and line frequency, shall not exceed 25°C.

8. Vibration
Filters shall withstand the vibration test as detailed in Military Specification MIL-PRF-15733 (Military Standard MIL-STD-202, method 204, test condition B).

9. Corrosion
Filters shall withstand the corrosion test as detailed in Military Specification MIL-PRF-15733 (Military Standard MIL-STD-202, method 101) for the conditions specified below:

Condition A: 96 Hours

10. Temperature cycling
Filters shall withstand the temperature cycling test specified in Military Specification MIL-PRF-15733.

11. Immersion Cycling
Filters shall withstand the immersion cycling test of Military Specification MIL-PRF-15733.

12. Shock
Filters shall withstand the shock test as detailed in Military Specification MIL-PRF-15733 (MIL-STD-202, Method 205, test condition C).

Catalog Number	Current in Amperes	Voltage Rating		Maximum Ambient Temperature	Maximum Altitude in Feet	Circuit Number	Max. D-C Ohms	Terminal Pull in lbs.
		D-C	A-C @ Frequency					
1JX141	0.005	200	--	85 C	80K	3	18.5	2.5
1JX15	0.03	400	--	100 C	80K	1	16.0	5.0
1JX315	0.05	50	30 @ 400 Hz	85 C	80K	5	2.7	2.5
1JX152	0.05	300	--	125 C	80K	6	10.0	2.5
1JX113	0.05	500	115 @ 1000 Hz	85 C	60K	6	6.8	2.5
1JX311	0.1	300	115 @ 60 Hz	85 C	80K	3	4.5	1.5
1JX313	0.1	125	--	85 C	80K	3	6.1	1.5
1JX125	0.1	300	--	85 C	80K	1	3.5	1.0
1JX181	0.1	300	--	100 C	80K	3	2.8	1.5
1JX177	0.1	600	250 @ 60 Hz	85 C	60K	3	8.5	5.0
1JX312	0.2	400	115 @ 60 Hz	85 C	80K	3	2.9	5.0
1JX182	0.25	125	--	100 C	80K	2	0.83	1.5
1JX112	0.3	125	--	85 C	80K	6	0.41	2.5
1JX97	0.3	300	--	85 C	80K	6	2.7	2.5
1JX106	0.4	125	--	125 C	80K	6	2.0	2.5
1JX98	0.5	100	--	85 C	80K	6	2.0	2.5
1JX96	0.5	125	--	85 C	80K	3	2.5	5.0
1JX134	0.5	150	--	85 C	80K	3	2.3	5.0
1JX179	0.5	400	125 @ 60 Hz	85 C	80K	3	2.4	5.0
1JX161	0.5	1000	--	85 C	40K	3	2.9	5.0
1JX92	1.0	100	--	85 C	80K	1	0.17	1.5
1JX127	1.0	100	--	85 C	80K	3	0.65	5.0
1JX314	1.0	125	--	85 C	80K	3	0.70	5.0
1JX63	1.0	300	--	85 C	80K	1	0.17	1.0
1JX165	1.0	400	125 @ 400 Hz	85 C	80K	3	0.70	5.0
1JX117	1.0	300	115 @ 1600 Hz	85 C	80K	3	0.50	1.0
1JX130	1.0	600	250 @ 60 Hz	125 C	60K	3	0.50	2.5
2JX32	1.5	300	115 @ 1200 Hz	85 C	80K	3	0.40	5.0
2JX89	1.5	50	--	85 C	80K	3	0.12	5.0
2JX49	1.5	300	125 @ 400 Hz	85 C	80K	2	0.19	1.0
2JX83	1.5	300	125 @ 400 Hz	85 C	80K	1	0.19	1.0
2JX51	1.5	400	115 @ 400 Hz	125 C	80K	3	0.071	2.5
2JX40	2.0	50	--	85 C	80K	3	0.13	2.5
2JX27	2.0	100	--	85 C	80K	3	0.24	5.0
2JX47	2.0	100	--	85 C	80K	1	0.13	5.0
2JX48	2.0	100	--	85 C	80K	2	0.13	1.0
2JX11	2.0	100	65 @ 400 Hz	100 C	80K	1	0.10	2.5
2JX90	2.0	400	115 @ 60 Hz	85 C	80K	3	0.19	5.0
2JX38	2.0	400	125 @ 60 Hz	85 C	80K	3	0.36	5.0
2JX44	2.0	400	115 @ 400 Hz	95 C	80K	3	0.29	5.0
2JX50	2.0	600	250 @ 400 Hz	85 C	60K	3	0.15	5.0
3JX39	2.5	300	125 @ 1000 Hz	125 C	80K	3	0.085	3.0
3JX56	3.0	300	125 @ 60 Hz	85 C	80K	3	0.10	5.0
4JX61	3.2	300	115 @ 4000 Hz	100 C	80K	3	0.075	5.0
4JX15	3.5	400	115 @ 1200 Hz	85 C	80K	3	0.068	2.5
5JX118	5.0	100	--	85 C	80K	3	0.027	1.5
5JX130	5.0	125	--	85 C	80K	3	0.06	5.0
5JX94	5.0	400	125 @ 400 Hz	85 C	80K	3	0.072	5.0
5JX100	5.0	600	250 @ 60 Hz	125 C	60K	3	0.035	2.5
10JX33	10.0	400	125 @ 60 Hz	85 C	80K	3	0.014	2.5
10JX78	10.0	125	--	85 C	80K	3	0.016	5.0
10JX63	10.0	400	125 @ 400 Hz	85 C	80K	3	0.022	5.0
10JX34	10.0	600	250 @ 60 Hz	125 C	60K	3	0.014	2.5
15JX26	15.0	400	125 @ 400 Hz	105 C	80K	3	0.0074	5.0
20JX91	20.0	125	--	85 C	80K	3	0.0052	5.0
20JX35	20.0	400	125 @ 400 Hz	85 C	80K	3	0.0063	5.0
20JX31	20.0	400	125 @ 400 Hz	125 C	80K	3	0.008	5.0
20JX21	30.0	125	--	85 C	80K	3	0.0033	5.0
30JX25	30.0	600	250 @ 60 Hz	125 C	60K	3	0.0025	5.0
50JX33*	50.0	400	120 @ 400 Hz	85 C	70K	3	0.002	5.0

* THIS UNIT FEATURES A MOUNTING BRACKET, WITH A 1/4" X 1/2" SLOT, THE CENTERS OF WHICH ARE LOCATED 2" FROM THE BULKHEAD MOUNTING SURFACE, AND 1-9/16" FROM THE CENTER LINE OF THE FILTER (CROSS-SECTIONAL VIEW THROUGH TERMINAL

Minimum No-Load Insertion Loss in Decibels						Body Size		Terminals		Terminal Dimensions				
.15 MHz	.5 MHz	1.0 MHz	10 MHz	100 MHz	400 MHz	Length	Dia.	Left	Right	Thd. Size	Z	A	B	C
33	33	33	40	40	40	1.250	0.670	1	2	1/4 - 28	.201	.172	.250	.406
30	37	40	40	54	60	1.297	0.734	3	4	1/2 - 28	.437	.469	.375	.703
42	80	80	70	70	70	1.250	0.670	1	2	1/4 - 28	.201	.125	.250	.375
60	90	90	70	70	70	1.250	0.670	1	2	1/4 - 28	.201	.188	.250	.375
45	80	80	80	63	61	1.250	0.670	1	2	1/4 - 28	.201	.125	.250	.406
36	65	68	80	80	80	1.875	0.625	3	6	5/16 - 24	.250	.344	.281	.609
56	87	87	87	80	80	2.062	0.625	3	6	5/16 - 24	.250	.344	.281	.578
28	50	58	44	54	60	1.093	0.562	7	8	5/16 - 24	.250	.296	.281	.578
42	75	80	80	74	74	1.875	0.625	7	2	5/16 - 24	.250	.312	.297	.469
70	80	80	80	80	80	2.281	0.875	3	4	1/2 - 28	.437	.344	.375	.703
34	66	80	66	60	60	2.218	0.670	1	2	1/2 -28	.437	.281	.312	.578
24	44	60	53	60	60	1.437	0.562	1	6	5/16 - 24	.250	.188	.297	.609
40	68	85	85	85	70	1.625	0.500	1	2	1/4 - 28	.201	.125	.250	.375
40	72	80	80	60	60	1.250	0.670	1	2	1/4 - 28	.201	.125	.250	.406
46	84	100	70	70	70	1.250	0.670	1	2	1/4 - 28	.201	.188	.250	.375
50	90	100	90	74	74	1.250	0.670	1	2	1/4 - 28	.201	.125	.250	.406
67	95	95	95	90	90	2.125	0.688	5	6	1/2 - 28	.437	.469	.375	.875
80	80	80	80	80	80	2.250	1.000	5	6	1/2 - 28	.437	.469	.375	.875
80	80	100	80	80	80	2.750	1.000	5	6	1/2 - 28	.437	.469	.375	.875
60	85	85	85	85	85	2.937	0.875	3	4	1/2 - 28	.437	.344	.375	.765
33	52	60	60	80	80	1.688	0.670	7	8	5/16 - 24	.250	.344	.281	.594
74	100	95	80	80	80	2.438	1.000	5	6	1/2 - 28	.437	.469	.375	.875
50	82	100	80	80	80	2.188	0.750	3	4	1/2 - 28	.437	.344	.375	.766
32	52	63	66	80	80	2.656	0.670	7	8	5/16 - 24	.250	.344	.281	.594
50	78	90	90	90	90	2.469	0.875	3	4	1/2 - 28	.437	.344	.375	.703
45	80	80	63	50	50	1.250	1.125	1	2	7/16 - 20	.375	.156	.438	.579
60	91	96	75	75	75	2.688	1.000	1	2	7/16 - 20	.375	.234	.438	.703
52	85	100	87	86	86	2.000	0.875	1	2	7/16 - 20	.375	.125	.312	.438
45	75	90	90	90	90	2.062	0.750	3	4	1/2 - 28	.437	.344	.375	.766
20	38	49	70	60	60	1.188	0.562	7	8	5/16 - 24	.250	.312	.281	.578
20	38	49	70	60	60	1.188	0.562	7	8	5/16 - 24	.250	.312	.281	.578
40	70	88	90	90	90	2.062	0.670	1	2	1/4 - 28	.201	.156	.250	.406
50	80	85	85	85	70	1.625	0.750	1	2	7/16 - 20	.375	.188	.438	.750
57	86	95	95	90	90	2.250	0.875	5	6	1/2 - 28	.437	.469	.375	.875
20	38	49	70	60	60	1.188	0.562	1	2	5/16 - 24	.250	.188	.281	.421
20	38	49	70	60	60	1.188	0.562	7	8	5/16 - 24	.250	.312	.281	.578
20	41	53	50	66	80	1.297	0.875	3	4	1/2 - 28	.437	.469	.375	.703
20	42	70	100	76	76	2.188	0.750	3	4	1/2 -28	.437	.344	.375	.766
80	100	100	80	80	80	2.937	1.250	5	6	3/4 - 20	.656	.469	.375	.875
50	81	100	85	80	80	2.000	0.875	1	2	7/16 - 20	.375	.188	.312	.547
57	87	100	80	90	90	3.000	1.125	3	4	5/8 - 24	.531	.344	.375	.765
45	74	90	80	80	80	2.031	1.000	1	2	7/16 - 20	.375	.188	.438	.719
42	74	89	92	84	80	3.312	0.750	5	6	1/2 - 28	.437	.453	.375	.875
46	77	95	92	80	80	2.188	1.250	1	2	5/8- 24	.531	.156	.312	.515
46	76	80	80	80	80	2.438	1.000	1	2	3/8 - 24	.312	.188	.375	.640
49	78	96	100	85	80	2.125	0.750	3	4	1/2 - 28	.437	.312	.375	.656
60	92	100	80	80	80	2.658	0.875	3	4	1/2 - 28	.437	.344	.375	.766
54	85	94	84	80	80	3.000	1.125	3	4	5/8 - 24	.531	.344	.375	.703
60	90	100	80	80	80	3.438	1.250	1	2	7/16 - 20	.375	.218	.438	.688
44	73	90	90	90	90	2.562	1.125	1	2	7/16 20	.375	.188	.438	.703
65	95	100	100	87	80	3.000	1.125	3	4	5/8 - 24	.531	.344	.375	.766
60	88	100	85	85	85	3.406	1.250	3	4	5/8 - 24	.531	.344	.375	.703
60	90	90	90	80	80	3.750	1.500	1	2	5/8 - 24	.531	.218	.437	.703
38	70	80	80	80	80	3.094	1.250	9	10	3/4 - 20	.656	.688	.375	1.062
58	86	90	90	90	84	2.938	1.250	3	4	5/8 - 24	.531	.344	.375	.765
54	83	100	100	100	90	3.594	1.500	9	10	3/4 - 20	.656	.688	.375	1.062
52	82	90	90	90	90	4.000	1.500	9	10	3/4 - 20	.656	.688	.375	1.062
64	95	100	100	90	90	3.593	1.500	9	10	3/4 - 20	.656	.688	.375	1.062
60	80	80	80	80	80	4.000	2.188	9	10	1-1/8 - 18	1.046	.812	.562	1.125
60	90	90	90	90	90	4.000	2.243	9	10	1-1/8 - 18	N/A	.859	.531	1.093

CUSTOM/RECTANGULAR FILTER OFFERING

RFI Specialty Components includes a wide range of SPECIAL Filters for EMI/RFI needs.

Ultra EMS offers parts that are qualified to Mil-PRF-15733. But more commonly rectangular filters are custom designed multi-circuit assemblies intended for specific applications.

Popular applications include power and signal filtering for defense and aerospace equipment, for radar, for radio, and for shielded rooms and secure areas, among many others.

Installation options seen in this catalog include feed-through and chassis mounting, and a variety of termination styles.

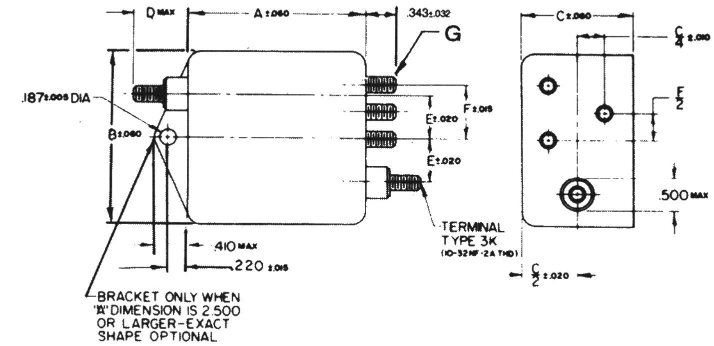
For applications that may involve transient voltage or EMP (electro-magnetic pulse) refer to that section of this catalog.

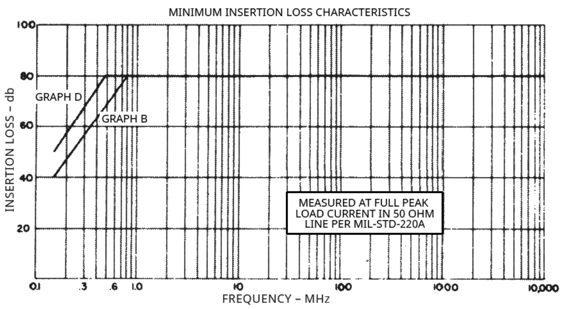
For any option that is not seen in this catalog, please consult the factory.

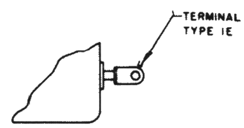
RECTANGULAR FILTERS

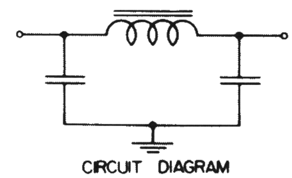
FOR FEED-THRU MOUNTING

100 VDC, 125 VAC/400VDC
250 VAC/600 VDC









PART NO.	RATING		A	B	C	D	E	F	G	INSERTION LOSS GRAPH	TERMINAL TYPE
RF 3289-1	1A	100 VDC	1.750	1.250	.895	.620	.281	.312	6-32	D	1E
RF 3289-2	3A	100 VDC	1.750	1.250	1.000	.620	.281	.312	6-32	D	1E
RF 3289-3	5A	100 VDC	1.750	1.250	1.125	.620	.281	.562	6-32	B	1E
RF 3289-4	5A	100 VDC	2.000	2.000	1.000	.880	.500	.562	6-32	D	1E
RF 3289-5	10A	100 VDC	2.000	2.000	1.125	.880	.500	.562	6-32	D	3K
RF 3289-6	15A	100 VDC	2.000	2.000	1.250	.880	.500	.562	6-32	D	3K
RF 3289-7	30A	100 VDC	2.000	2.000	1.500	.880	.500	.562	6-32	B	3K
RF 3289-8A	30A	100 VDC	2.500	2.000	1.750	.880	.500	.562	8-32	D	3K
RF 3289-9A	55A	100 VDC	2.875	2.250	1.562	.880	.500	.562	8-32	B	3K
RF 3289-10A	55A	100 VDC	2.875	2.250	1.875	.880	.500	.562	8-32	D	3K

PART NO.	RATING				A	B	C	D	E	F	G	INSERTION LOSS GRAPH	TERMINAL TYPE
RF 3290-1	1A	125 VAC	0-400 Hz	400 VDC	1.750	1.250	.875	.620	.281	.312	6-32	D	1E
RF 3290-2	3A	125 VAC	0-400 Hz	400 VDC	2.000	2.000	.875	.880	.500	.562	6-32	D	1E
RF 3290-3	5A	125 VAC	0-400 Hz	400 VDC	2.000	2.000	1.125	.880	.500	.562	6-32	D	1E
RF 3290-4	10A	125 VAC	0-400 Hz	400 VDC	2.000	2.000	1.500	.880	.500	.562	6-32	D	1E
RF 3290-5	15A	125 VAC	0-400 Hz	400 VDC	2.500	2.000	1.500	.880	.500	.562	8-32	B	3K
RF 3290-6	15A	125 VAC	0-400 Hz	400 VDC	2.500	2.000	1.750	.880	.500	.562	8-32	D	3K
RF 3290-7	30A	125 VAC	0-400 Hz	400 VDC	2.500	2.000	2.125	.880	.500	.562	10-32	B	3K
RF 3290-8	30A	125 VAC	0-400 Hz	400 VDC	3.250	2.250	2.125	.880	.500	.562	10-32	D	3K
RF 3290-9	55A	125 VAC	0-400 Hz	400 VDC	3.188	2.250	2.125	.880	.500	.562	10-32	B	3K
RF 3290-10	55A	125 VAC	0-400 Hz	400 VDC	3.312	2.250	2.125	.880	.500	.562	10-32	D	3K

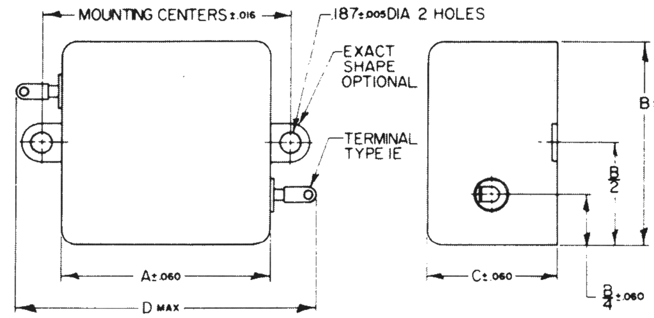
RF 3291-1	1A	250 VAC	0-400 Hz	600 VDC	1.750	1.250	1.000	.620	.281	.312	4-40	D	1E
RF 3291-2	3A	250 VAC	0-400 Hz	600 VDC	2.000	2.000	1.000	.880	.500	.562	6-32	D	1E
RF 3291-3	5A	250 VAC	0-400 Hz	600 VDC	2.000	2.000	1.250	.880	.500	.562	6-32	D	1E
RF 3291-4	10A	250 VAC	0-400 Hz	600 VDC	2.000	2.000	1.750	.880	.500	.562	8-32	D	3K
RF 3291-5	15A	250 VAC	0-400 Hz	600 VDC	2.500	2.000	1.875	.880	.500	.562	6-32	B	3K
RF 3291-6	15A	250 VAC	0-400 Hz	600 VDC	2.750	2.500	1.750	.880	.500	.562	6-32	D	3K
RF 3291-7	30A	250 VAC	0-400 Hz	600 VDC	3.062	2.875	2.125	.880	.500	.562	10-32	D	3K
RF 3291-8	55A	250 VAC	0-400 Hz	600 VDC	3.062	3.062	2.500	.880	.500	.562	10-32	B	3K
RF 3291-9	55A	250 VAC	0-400 Hz	600 VDC	3.500	3.500	2.500	.880	.500	.562	10-32	D	3K

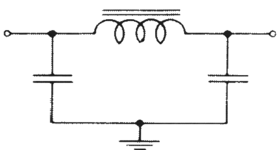
Operating temperature range: –65°C to + 85°C

RECTANGULAR FILTERS

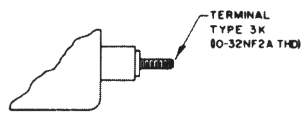
FOR CHASSIS MOUNTING INCLUDING STYLE FL53 M15733/4

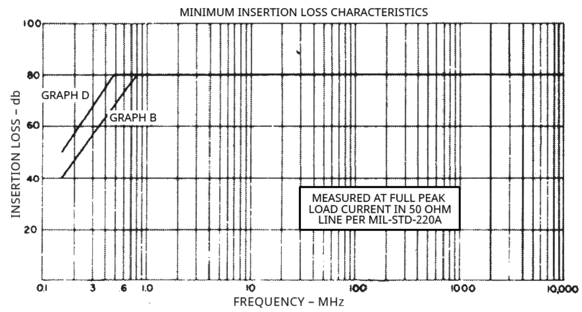
100 VDC, 125 VAC/400VDC 250 VAC/600 VDC





CIRCUIT DIAGRAM





PART NO.	RATING		A	B	C	D	MOUNTING CENTER	INSERTION LOSS GRAPH	TERMINAL TYPE
RF 3292-1	1A	100 VDC	1.750	1.250	.875	3.406	2.125	D	1E
RF 3292-2	3A	100 VDC	1.750	1.250	1.000	3.406	2.125	D	1E
RF 3292-3	5A	100 VDC	1.750	1.250	1.125	3.594	2.125	B	1E
RF 3292-4	5A	100 VDC	2.000	2.000	1.000	3.594	2.375	D	1E
RF 3292-5	10A	100 VDC	2.000	2.000	1.125	3.594	2.375	D	3K
RF 3292-6	15A	100 VDC	2.000	2.000	1.250	3.594	2.375	D	3K
RF 3292-7	30A	100 VDC	2.000	2.000	1.500	3.594	2.375	B	3K
RF 3292-8	30A	100 VDC	2.500	2.000	1.750	4.219	2.938	D	3K
RF 3292--9	55A	100 VDC	2.875	2.250	1.562	4.594	3.500	B	3K
RF 3292--10	55A	100 VDC	2.875	2.250	1.875	4.594	3.500	D	3K

FL53

M15733/4 DASH NO.	PART NO.	RATING				A	B	C	D	MOUNTING CENTER	INSERTION LOSS GRAPH	TERMINAL TYPE
0001	RF 3286-1	1A	125 VAC	0-400 Hz	400 VDC	1.750	1.250	.875	3.406	2.215	D	1E
0002	RF 3286-2	3A	125 VAC	0-400 Hz	400 VDC	2.000	2.000	.875	3.594	2.375	D	1E
0003	RF 3286-3	5A	125 VAC	0-400 Hz	400 VDC	2.000	2.000	1.125	3.594	2.375	D	1E
0004	RF 3286-4	10A	125 VAC	0-400 Hz	400 VDC	2.000	2.000	1.500	3.594	2.375	D	3K
0005	RF 3286-5	15A	125 VAC	0-400 Hz	400 VDC	2.500	2.000	1.500	4.094	2.938	B	3K
0006	RF 3286-6	15A	125 VAC	0-400 Hz	400 VDC	2.500	2.000	1.750	4.094	2.938	D	3K
0007	RF 3286-7	30A	125 VAC	0-400 Hz	400 VDC	2.500	2.000	2.125	4.094	2.938	B	3K
0008	RF 3286-8	30A	125 VAC	0-400 Hz	400 VDC	3.250	2.250	2.125	4.969	3.875	D	3K
0009	RF 3286-9	55A	125 VAC	0-400 Hz	400 VDC	3.188	2.250	2.125	4.906	3.812	B	3K
0010	RF 3286-10	55A	125 VAC	0-400 Hz	400 VDC	3.312	2.250	2.125	5.031	3.938	D	3K

RF 3287-1	1A	250 VAC	0-400 Hz	600 VDC	1.750	1.250	1.000	3.406	2.125	D	1E
RF 3287-2	3A	250 VAC	0-400 Hz	600 VDC	2.000	2.000	1.000	3.594	2.375	D	1E
RF 3287-3	5A	250 VAC	0-400 Hz	600 VDC	2.000	2.000	1.250	3.594	2.375	D	1E
RF 387-4	10A	250 VAC	0-400 Hz	600 VDC	2.000	2.000	1.750	3.594	2.375	D	3K
RF 3287-5	15A	250 VAC	0-400 Hz	600 VDC	2.500	2.000	1.875	4.094	2.938	B	3K
RF 3287-6	15A	250 VAC	0-400 Hz	600 VDC	2.750	2.500	1.750	4.281	3.187	D	3K
RF 3287-7	30A	250 VAC	0-400 Hz	600 VDC	3.062	2.875	2.125	4.656	3.500	D	3K
RF 3287-8	55A	250 VAC	0-400 Hz	600 VDC	3.062	3.062	2.500	4.656	3.500	B	3K
RF 3287-9	55A	250 VAC	0-400 Hz	600 VDC	3.500	3.500	2.500	5.094	3.938	D	3K

Operating temperature range: –65°C to +85°C

RECTANGULAR FILTERS

FOR CHASSIS MOUNTING

250 VAC/600 VDC

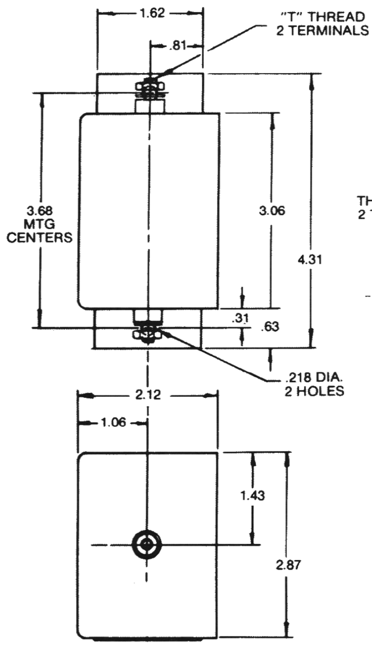


FIGURE NO. 1

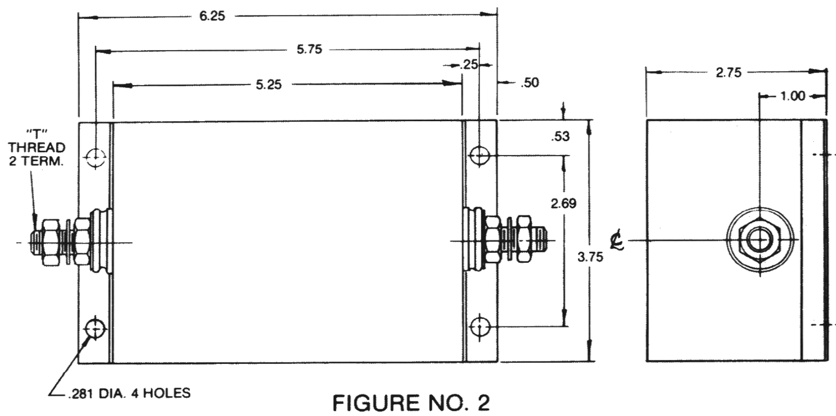
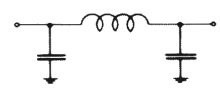


FIGURE NO. 2

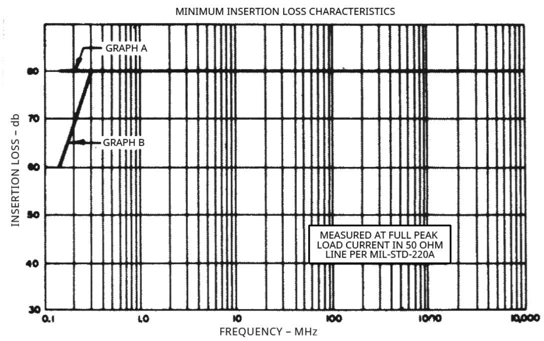


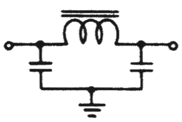
CIRCUIT DIAGRAM

PART NO.	MAX CURRENT (AMPERES)	MAX VOLTAGE		POWER LINE FREQ.	FIG NO.	ATTENUATION (db) (NO LOAD, TYPICAL)										"T" THD SIZE	APPROX. WT. (LBS.)
		AC	DC			0.15 MHz	0.3 MHz	0.5 MHz	1.0 MHz	5.0 MHz	10 MHz	30 MHz	50 MHz	100 MHz	150 MHz		
RF3576	5	250	600	0—60Hz	1	62	85	84	77	69	64	55	51	47	42	10-32NF-2A	1.50
RF3577	10	250	600	0—60Hz	1	62	85	84	77	69	64	55	51	47	42	10-32NF-2A	1.50
RF3578	15	250	600	0—60Hz	1	47	67	83	85	73	68	63	59	50	42	10-32NF-2A	1.75
RF418	25	250	600	0—60Hz	1	47	67	83	85	73	68	63	59	50	42	10-32NF-2A	1.75
RF4280	30	250	600	0—60Hz	1	40	64	81	79	70	65	57	53	45	40	10-32NF-2A	1.75
RF2326	50	250	600	0—60Hz	1	35	60	70	75	65	60	55	50	40	35	10-32NF-2A	1.75
RF3579	75	250	600	0—60Hz	2	67	86	91	89	73	68	60	54	40	33	3/8-16NC-2A	5.25
RF3216	100	250	600	0—60Hz	2	67	86	91	89	73	68	60	54	40	33	3/8-16NC-2A	5.25
RF3580	5	250	600	0—400Hz	1	62	85	84	77	69	64	55	51	47	42	10-32NF-2A	1.50
RF3581	10	250	600	0—400Hz	1	62	85	84	77	69	64	55	51	47	42	10-32NF-2A	1.50
RF3173	15	250	600	0—400Hz	1	47	67	83	85	73	68	63	59	50	42	10-32NF-2A	1.75
RF3174	25	250	600	0—400Hz	1	47	67	83	85	73	68	63	59	50	42	10-32NF-2A	1.75
RF596	50	250	600	0—400Hz	1	35	60	70	75	65	60	55	50	40	35	10-32NF-2A	1.75
RF3582	75	250	600	0—400Hz	2	67	86	91	89	73	68	60	54	40	33	3/8-16NC-2A	5.25
RF3583	100	250	600	0—400Hz	2	67	86	91	89	73	68	60	54	40	33	3/8-16NC-2A	5.25

DUAL CIRCUIT
TRIPLE CIRCUIT
POWER FILTERS

FOR FEED-THRU MOUNTING
M15733/75





SCHEMATIC DIAGRAM

1. Operating Temperature: –55°C to +125°C.
2. Maximum Voltage Drop: 1% of rated voltage.
3. Conforms to applicable requirements of MIL-F-15733
4. Bracket supplied with units over 6 inches long.

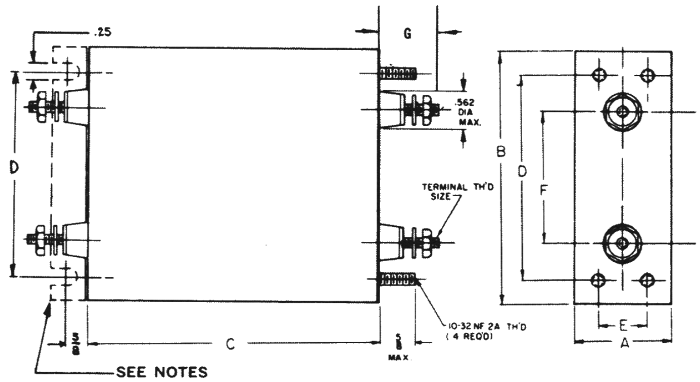


FIGURE 1

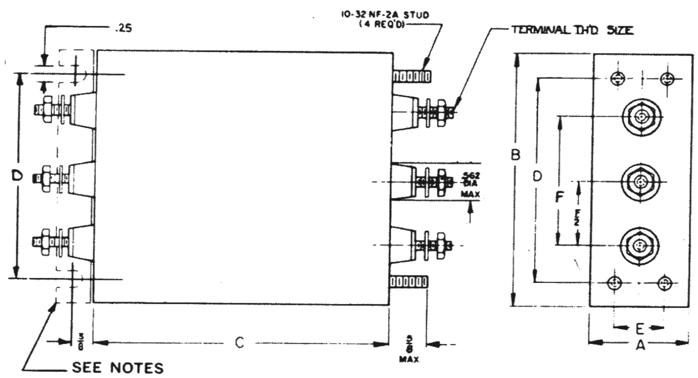


FIGURE 2

FIGURE 1 DUAL CIRCUIT FILTERS

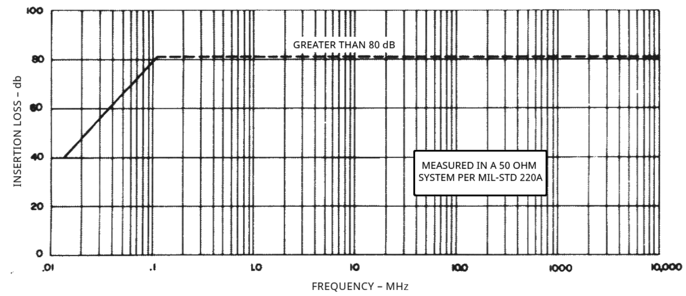
M15733/	PART NO.	RATING		A	B	C	D	E	F	TERMINAL TH'D SIZE	G MAX	INSERTION LOSS GRAPH
75-0001	RF-3706-1	2x3A		1.13	2.25	3.58	1.750	.625	.75	8-32 NC-2A	.69	B
75-0003	RF-3706-2	2x5A		1.25	2.50	4.71	2.000	.750	1.25	8-32 NC-2A	.69	B
75-0005	RF-3706-3	2x10A		1.50	3.00	5.37	2.500	1.000	1.50	8-32 NC-2A	.69	B
75-0007	RF-3706-4	2x20A	115 VAC	1.75	3.50	6.19	3.000	1.250	1.75	8-32 NC-2A	.69	B
75-0008	RF-3706-5	2x30A	400 VDC	2.25	4.50	6.08	4.000	1.750	2.25	10-32 NF-2A	.69	B
75-0009	RF-3706-6	2x50A	0-400 Hz	2.25	4.50	6.94	4.000	1.750	2.25	1/4-20 UNC	1.25	B
75-0002	RF-3707-1	2x3A		1.50	3.00	4.94	2.500	1.000	1.50	8-32 NC-2A	.69	A
75-0004	RF-3707-2	2x5A		1.50	3.00	5.57	2.500	1.000	1.50	8-32 NC-2A	.69	A
75-0006A	RF-3707-3	2x10A		2.25	4.50	6.44	4.000	1.750	2.25	8-32 NC-2A	.69	A

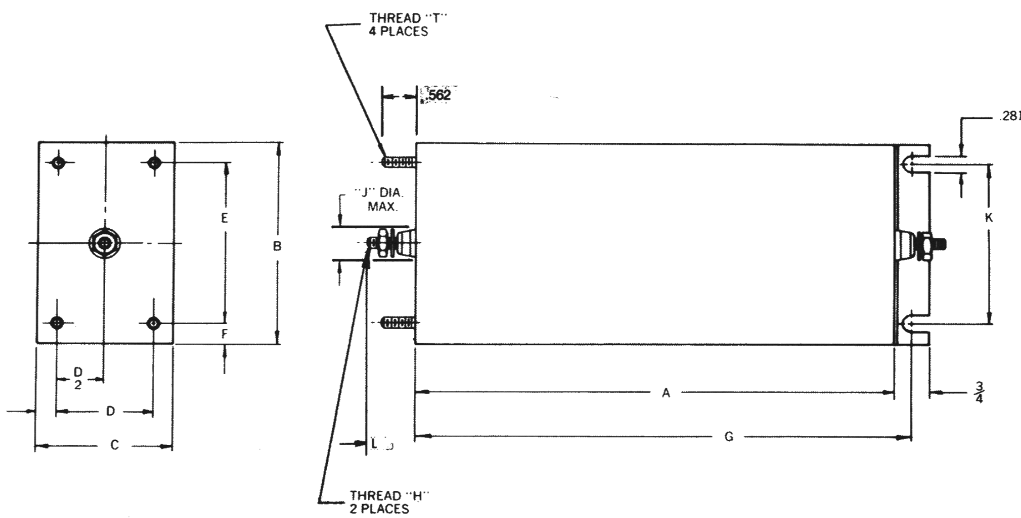
FIGURE 2 TRIPLE CIRCUIT FILTERS

75-0010	RF-3708-1	3x3A		1.13	3.38	3.58	2.875	.625	2.00	8-32 NC-2A	.69	B
75-0012	RF-3708-2	3x5A		1.25	3.75	4.71	3.250	.750	2.50	8-32 NC-2A	.69	B
75-0014	RF-3708-3	3x10A		1.50	4.50	5.37	4.000	1.000	3.00	8-32 NC-2A	.69	B
75-0016	RF-3708-4	3x20A	115 VAC	1.75	5.25	6.19	4.750	1.250	3.50	8-32 NC-2A	.69	B
75-0017	RF-3708-5	3x30A	400 VDC	2.25	6.75	6.08	6.250	1.750	4.50	10-32 NF-2A	.69	B
75-0018	RF-3708-6	3x50A	0-400 Hz	2.25	6.75	6.94	6.250	1.750	4.50	1/4-20 UNC	1.25	B
75-0011	RF-3709-1	3x3A		1.50	4.50	4.94	4.000	1.000	3.00	8-32 NC-2A	.69	A
75-0013	RF-3709-2	3x5A		1.50	4.50	5.57	4.000	1.000	3.00	8-32 NC-2A	.69	A
75-0015	RF-3709-3	3x10A		2.25	6.75	6.44	6.250	1.750	4.50	8-32 NC-2A	.69	A

SERIES 2925
POWER FILTERS

FOR FEED-THRU MOUNTING
40DB AT 14 KHZ
PER MIL-STD-220A





PART NO.	RATING	A ± 1/16	B ± 1/16	C ± 1/32	D ± 1/64	E ± 1/64	F ± 1/32	G ± 1/32	THREAD 'H'	L	THREAD 'T'	"J" DIA.	K ± 1/64
RF-2925-5B	5A 115VAC 0-400Hz	8	2	2	1-1/4	1-1/4	3/8	8-3/8	8-32 NC-2A	.69	8-32 NC-2A	.562	1-1/4
RF-2925-10B	10A 115VAC 0-400Hz	8	3-1/4	2-1/16	1-1/4	2-1/2	3/8	8-3/8	8-32 NC-2A	.69	10-32 NC-2A	.562	2-1/4
RF-2925-20B	20A 115VAC 0-400Hz	12	3-1/4	2-1/16	1-1/4	2-1/2	3/8	12-3/8	8-32 NC-2A	.69	10-32 NC-2A	.562	2-1/4
RF-2925-30B	30A 115VAC 0-400Hz	12	3-1/4	2-1/2	1-3/4	2-1/2	3/8	12-3/8	10-32 NF-2A	.69	10-32 NC-2A	.687	2-1/4
RF-2925-50B	50A 115VAC 0-400Hz	12	3	3	2-1/4	2-1/4	3/8	12-3/8	1/4-20NC-2A	1.25	10-32 NC-2A	.875	2-1/4

1. OPERATING TEMPERATURE: -55° C TO 125° C.
2. MAXIMUM VOLTAGE DROP: 1% OF RATED VOLTAGE.
3. DIELECTRIC TEST: 2X RATED VOLTAGE.
4. CONFORMS TO APPLICABLE REQUIREMENTS OF MIL-PRF-15733

SERIES 5400
GENERAL PURPOSE FILTERS

The 5400 Series of general filters are designed for use in a wide range of commercial applications, including data processing equipment, medical and industrial electronics applications, office equipment and other electronic devices.

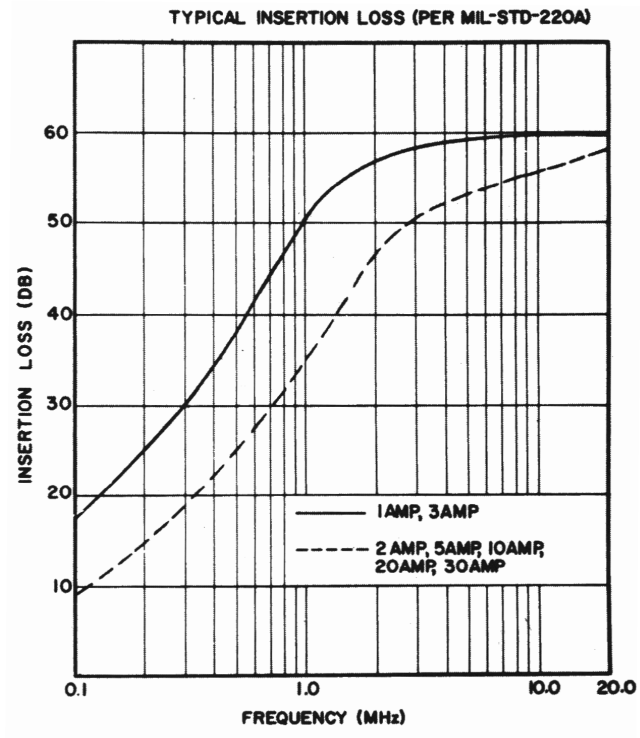
Standard configurations are indicated. Parts can be modified, if necessary, to meet individual customer applications.

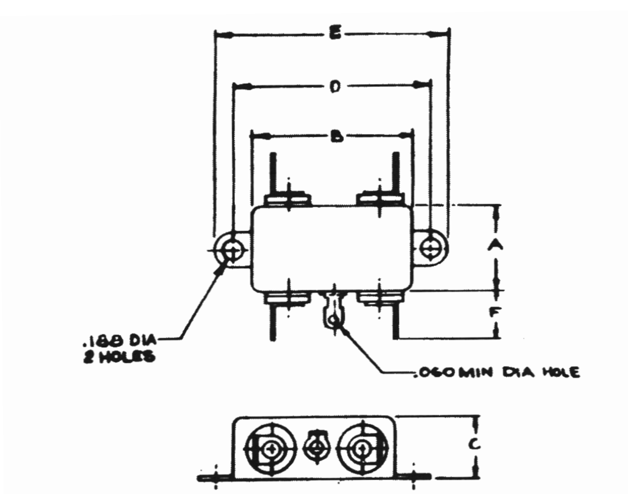
Terminals for Styles J and K will accept quick disconnect lugs or may be used as solder terminals, as required.

ELECTRICAL CHARACTERISTICS

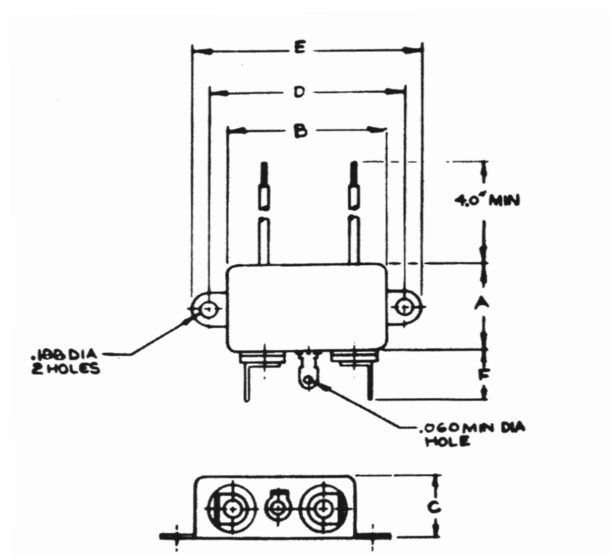
MAXIMUM LEAKAGE CURRENT EACH
LINE TO GROUND @ 115VAC 60 Hz: 0.5 MA
@ 250VAC 60 Hz: 1.1 MA
TEST VOLTAGE: 2250 VDC
OPERATING FREQUENCY: 50-400Hz
RATED VOLTAGE: 115-250 VAC

PART NO.	MAX CURRENT (AMPERE)	STYLE	A MAX	B ± .06	C ± .05	D ± .015	E ± .03	F MAX
RF5400 J01	1	J	0.94	1.75	0.65	2.125	2.50	0.62
K01		K	0.94	1.75	0.65	2.125	2.50	0.62
U01		U	0.94	1.75	0.65	2.125	2.50	—
W01		W	1.85	2.00	0.75	1.500	—	0.62
X01		X	1.85	2.00	0.75	1.500	—	—
RF5400 J02	2	J	0.94	1.75	0.65	2.125	2.50	0.62
K02		K	0.94	1.75	0.65	2.125	2.50	0.62
U02		U	0.94	1.75	0.65	2.125	2.50	—
W02		W	1.85	2.00	0.75	1.500	—	0.62
X02		X	1.85	2.00	0.75	1.500	—	—
RF5400 J03	3	J	1.33	1.75	0.75	2.125	2.50	0.62
K03		K	1.33	1.75	0.75	2.125	2.50	0.62
U03		U	1.33	1.75	0.75	2.125	2.50	—
W03		W	2.09	2.00	0.75	1.500	—	0.62
X03		X	2.09	2.00	0.75	1.500	—	—
RF5400 J05	5	J	1.33	1.75	0.75	2.125	2.50	0.62
K05		K	1.33	1.75	0.75	2.125	2.50	0.62
U05		U	1.33	1.75	0.75	2.125	2.50	—
W05		W	2.09	2.00	0.75	1.500	—	0.62
X05		X	2.09	2.00	0.75	1.500	—	—
RF5400 J10	10	J	1.33	1.75	1.13	2.125	2.50	0.62
K10		K	1.33	1.75	1.13	2.125	2.50	0.62
U10		U	1.33	1.75	1.13	2.125	2.50	—
V10		V	1.25	1.75	1.13	2.125	2.50	0.56
W10		W	2.09	2.00	1.13	1.500	—	0.62
X10		X	2.09	2.00	1.13	1.500	—	—
RF5400 J20	20	J	2.06	2.00	1.13	2.375	2.78	0.62
V20	20	V	2.06	2.00	1.13	2.375	2.78	0.56
RF5400 Y30	30	Y	3.87	3.31	1.50	3.750	4.12	0.75



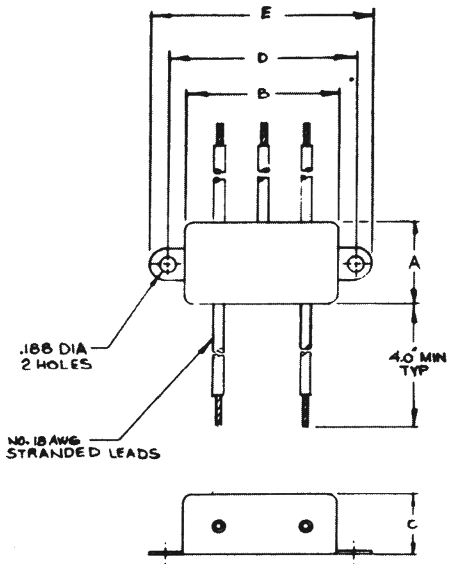


STYLE J

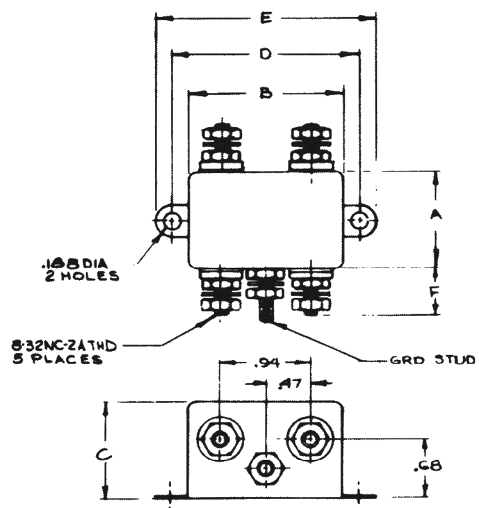


STYLE K

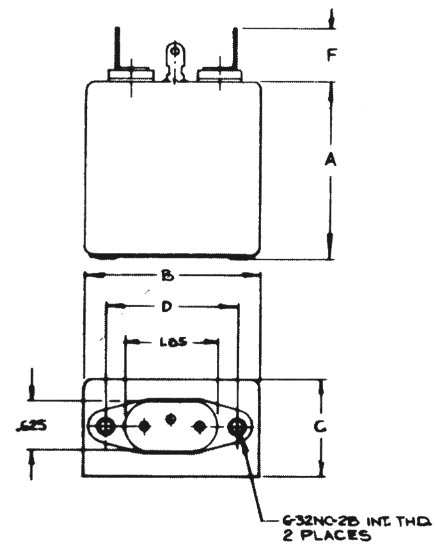
**SERIES 5400
CONTINUED**



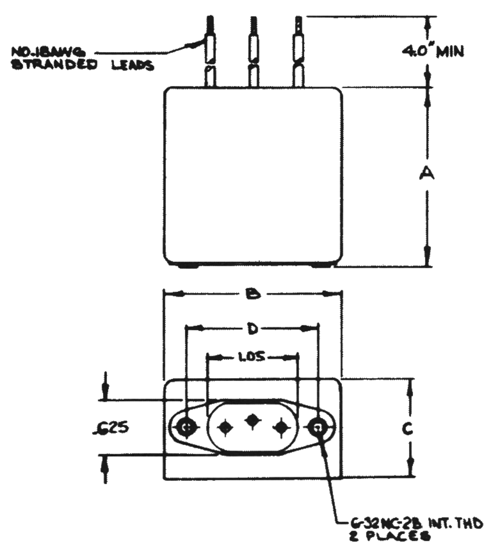
STYLE U



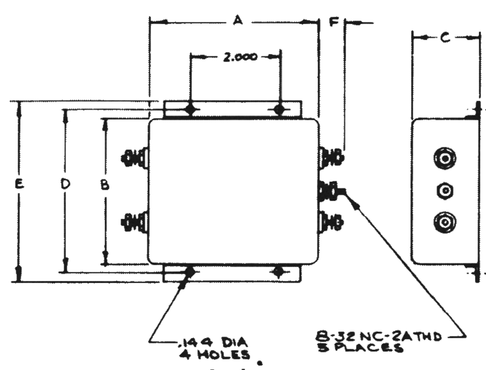
STYLE V



STYLE W



STYLE X



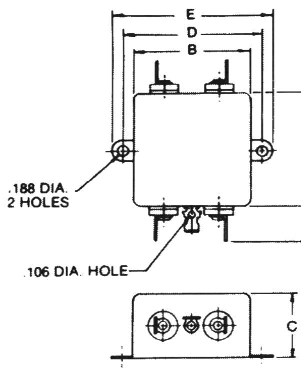
STYLE Y

SERIES 5500
GENERAL PURPOSE FILTERS

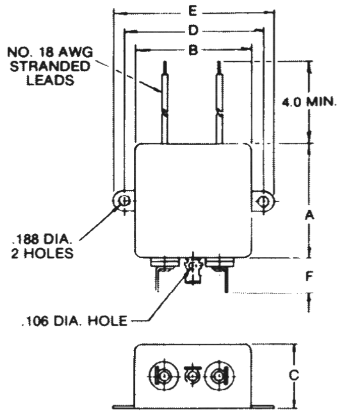
The 5500 Series of general filters are designed for use in a wide range of commercial applications, including data processing equipment, medical and industrial electronics applications, office equipment and other electronic devices. These filters provide for the suppression of line-to-line as well as line-to ground interference.

Standard configurations are indicated. Parts can be modified, if necessary, to meet individual customer applications.

Terminals for Styles J and K will accept quick disconnect lugs or may be used as solder terminals, as required.



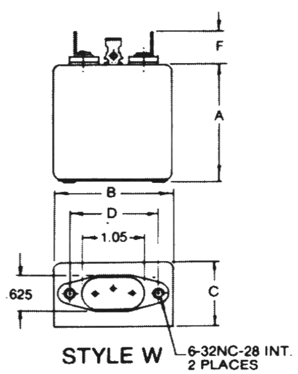
STYLE J



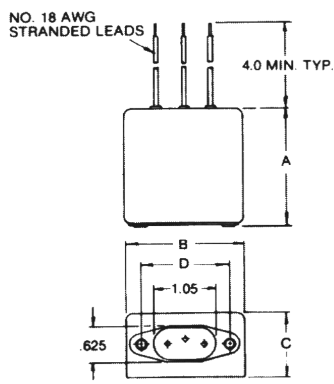
STYLE K

ELECTRICAL CHARACTERISTICS

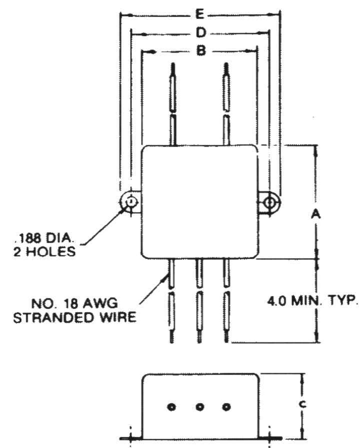
RATED VOLTAGE: 115-250 VAC
OPERATING FREQUENCY: 50-400 Hz
RATED CURRENT: See Table
TEST VOLTAGE: Line to ground – 2250 VDC
Line to line – 1450 VDC
MAXIMUM LEAKAGE CURRENT
Each line to ground @ 115 VAC 60 Hz – 0.5 ma
@250 VAC 60 Hz – 1.1 ma



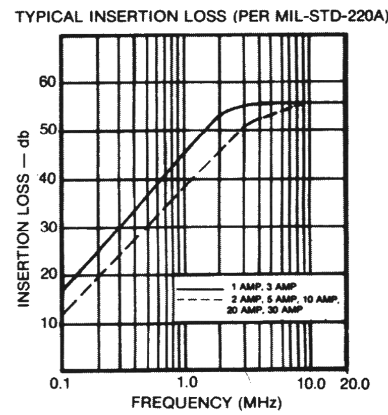
STYLE W

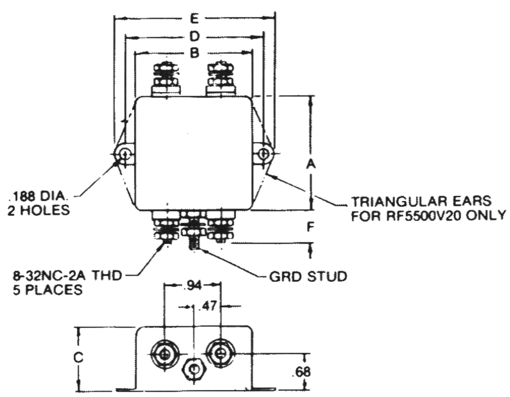


STYLE X

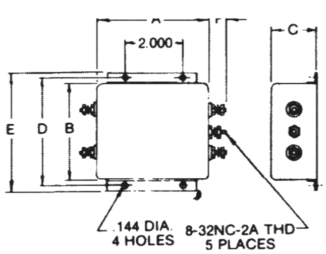


STYLE U





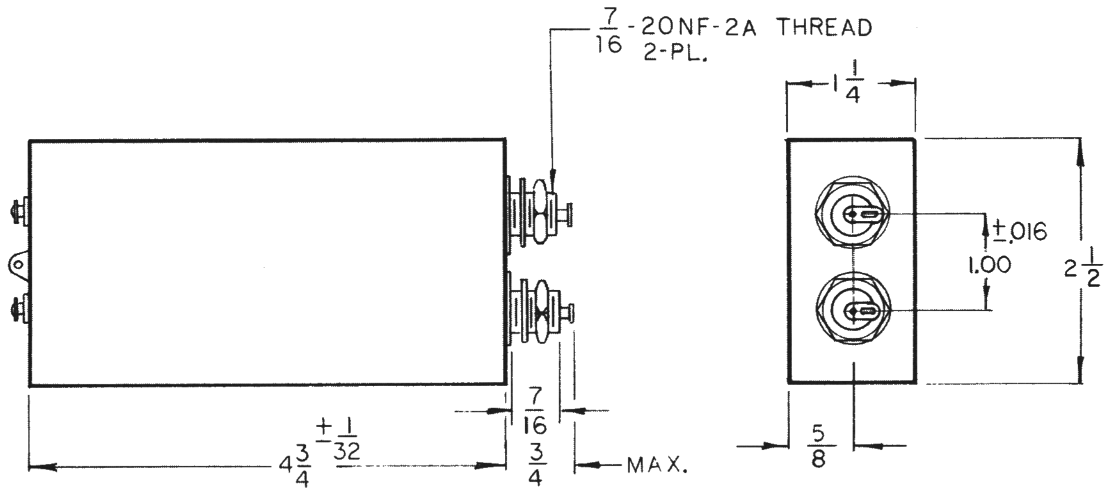
STYLE V



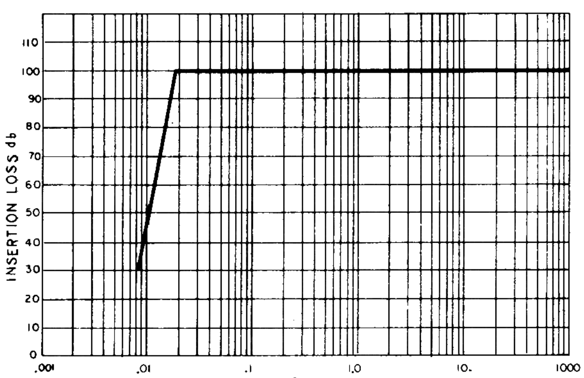
STYLE Y

PART NO.	MAX CURRENT (AMPERE)	STYLE	A MAX	B ± .06	C ± .05	D ± .015	E ± .03	F MAX
RF5500J01	1	J	1.85	2.00	0.875	2.375	2.78	0.62
RF5500K01		K	1.85	2.00	0.875	2.375	2.78	0.62
RF5500U01		U	1.85	2.00	0.875	2.375	2.78	—
RF5500W01		W	2.09	2.00	0.875	1.500	—	0.62
RF5500X01		X	2.09	2.00	0.875	1.500	—	—
RF5500J02	2	J	1.85	2.00	0.875	2.375	2.78	0.62
RF5500K02		K	1.85	2.00	0.875	2.375	2.78	0.62
RF5500U02		U	1.85	2.00	0.875	2.375	2.78	—
RF5500W02		W	2.09	2.00	0.875	1.500	—	0.62
RF5500X02		X	2.09	2.00	0.875	1.500	—	—
RF5500J03	3	J	1.85	2.00	1.13	2.375	2.78	0.62
RF5500K03		K	1.85	2.00	1.13	2.375	2.78	0.62
RF5500U03		U	1.85	2.00	1.13	2.375	2.78	—
RF5500W03		W	2.09	2.00	1.13	1.500	—	0.62
RF5500X03		X	2.09	2.00	1.13	1.500	—	—
RF5500J05	5	J	1.85	2.00	1.13	2.375	2.78	0.62
RF5500K05		K	1.85	2.00	1.13	2.375	2.78	0.62
RF5500U05		U	1.85	2.00	1.13	2.375	2.78	—
RF5500W05		W	2.09	2.00	1.13	1.500	—	0.62
RF5500X05		X	2.09	2.00	1.13	1.500	—	—
RF5500J10	10	J	2.09	2.00	1.13	2.375	2.78	0.62
RF5500K10		K	2.09	2.00	1.13	2.375	2.78	0.62
RF5500U10		U	2.09	2.00	1.13	2.375	2.78	—
RF5500vv10		v	2.09	2.00	1.13	2.375	2.78	0.62
RF5500J20	20	J	2.06	2.55	1.50	2.937	3.40	0.62
RF5500V20	20	V	2.06	2.55	1.50	2.937	3.32	0.62
RF5500Y30	30	Y	3.87	3.31	1.50	3.750	4.12	0.75

RF 2398
TELEPHONE LINE FILTERS
FOR SECURE INSTALLATIONS



TELEPHONE LINE FILTER — TYPE RF2398



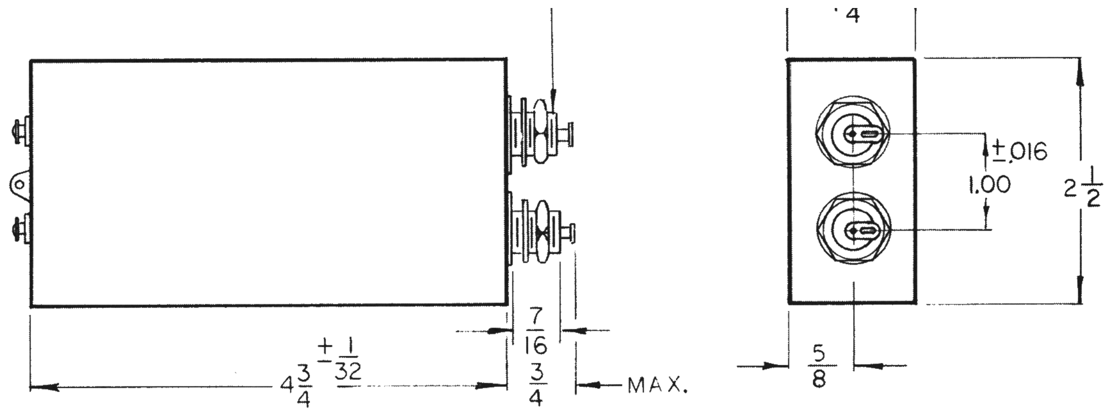
MEASURED IN A 50 OHM SYSTEM PER MIL-STD-220A
FIG.1

NOTES

1. Rating: 2 × 0.5A 600 VDC
2. Insertion loss pass band in 300 ohm line, unbalanced to ground per MIL-STD-220.
   1 KHz .25 db maximum
   3 KHz .6 db maximum
   5 KHz 1.5 db maximum
   Stop band per fig. 1
3. Operating temp.: −55° C to +85°C.
4. Unit hermetically sealed.
5. Finish: hot solder dip.
6. Filter meets all applicable electrical and environmental specs. of MIL-F-15733.
7. Elements corresponding to each other by mirror symmetry in the ground plane will not differ from each other by more than 2%.
8. Approved by the cognizant security agencies for secure telephone installations.

The RF2398 is available in multi circuit assemblies.
The part number RF6800-100-75 would be supplied with 75 Dual filter elements with the remaining 25 holes sealed with RF tight plugs.

DATA LINE FILTER
FOR SECURE INSTALLATIONS



Mechanical configuration - all types

PART NO.	RATING	DATA RATE	IMPED. LINE TO GROUND
RF11497	2x .5 A 300 VDC	4800 BPS	300 OHMS
RF10694	2x .5 A 300 VDC	9600 BPS	300 OHMS
RF11486	2x .5 A 300 VDC	19.2 KBPS	300 OHMS
RF11481	2x .15 A 300 VDC	30.0 KBPS	300 OHMS
RF11747	2x .5 A 300 VDC	48.0 KBPS	300 OHMS
RF11646	2x .1 A 300 VDC	64.0 KBPS	67.5 OHMS

	LOW FREQUENCY CHARACTERISTICS MEASURED IN IMPEDANCE SPECIFIED							HIGH FREQUENCY CHARACTERISTICS MEASURED PER MIL-STD-220, 50 OHMS					
PART	TYPICAL INSERTION LOSS							TYPICAL INSERTION LOSS					
NO.	DC-10 KHz	15 KHz	30 KHz	60 KHz	90 KHz	145 KHz	190 KHz	.05 MHz	.1 MHz	.25 MHz	.35 MHz	.7 MHz	1MHz to 1 GHz
RF11497	.5 db	3.0 db	--	--	--	--	--	100 db	100 db	100 db	100 db	100 db	100 db
RF10694	.5 db	.5 db	3.0 db	--	--	--	--	45 db	100 db	100 db	100 db	100 db	100 db
RF11486	.5 db	.5 db	.5 db	3.0 db	--	--	--	--	55 db	100 db	100 db	100 db	100 db
RF11481	.5 db	.5 db	.5 db	.5 db	3.0 db	--	--	--	--	60 db	100 db	100 db	100 db
RF11747	.5 db	.5 db	.5 db	.5 db	.5 db	3.0 db	--	--	--	--	50 db	100 db	100 db
RF11646	.5 db	.5 db	.5 db	.5 db	.5 db	.5 db	3.0 db	--	--	--	30 db	90 db	100 db

These data filters are available in the following multi-circuit assemblies.

Internal filter	Multi filter assembly
P/N RF11497	RF6801
P/N RF10694	RF6802
P/N RF11486	RF6803
P/N RF11481	RF6804
P/N RF11747	RF6805
P/N RF11646	RF6806

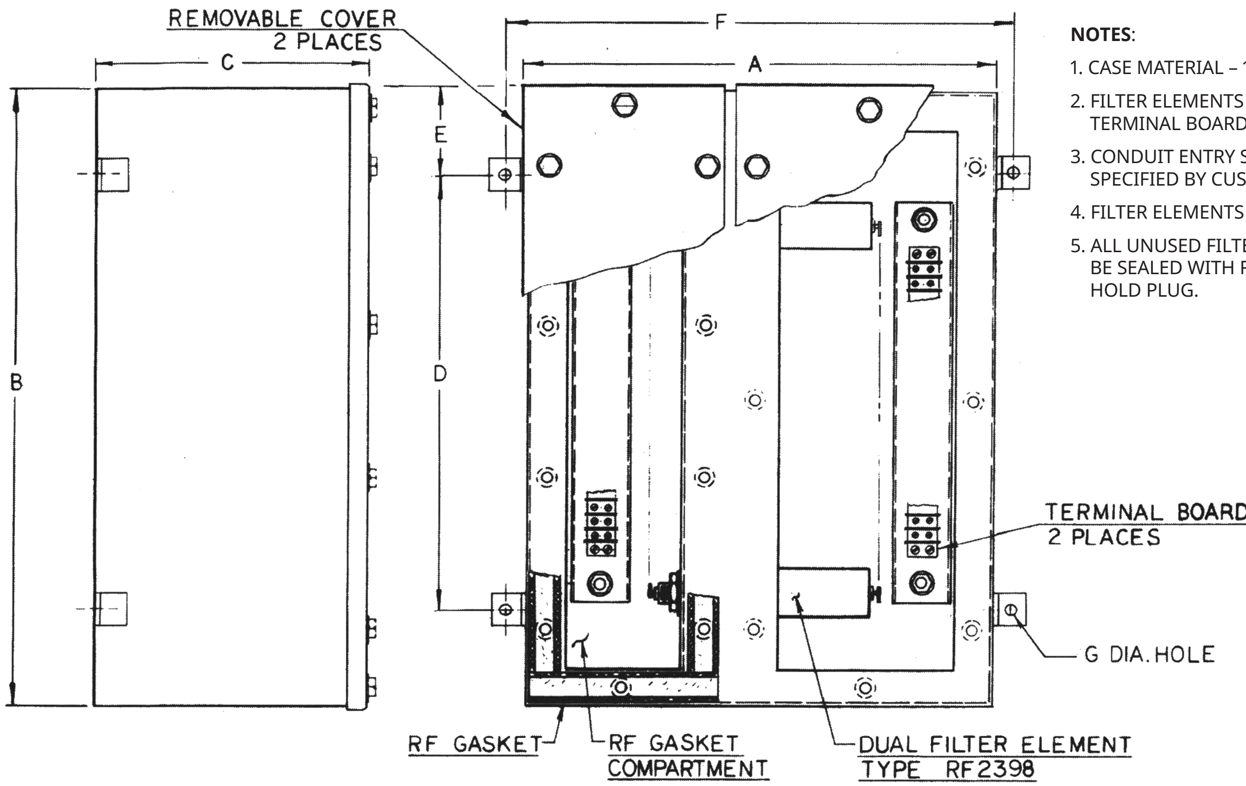
Parts may be ordered with any number of filter elements.

For example RF6801-100-75 would be supplied with 75 Dual filters elements with the 25 remaining holes sealed with R.F. tight plugs.

The multi circuit assemblies, RF6801 thru RF6806, are the same size as the RF6800’s in the catalog.

SIGNAL FILTER ASSEMBLIES FOR SECURE INSTALLATIONS

TYPE RF6800 SERIES
SIX TO TWENTY PAIR CAPACITY



NOTES:

1. CASE MATERIAL – 11 GA. STAINLESS STEEL.
2. FILTER ELEMENTS SHALL BE WIRED TO TERMINAL BOARDS.
3. CONDUIT ENTRY SIZE & LOCATION TO BE SPECIFIED BY CUSTOMER.
4. FILTER ELEMENTS RF 2398.
5. ALL UNUSED FILTER POSITIONS WILL BE SEALED WITH RF TIGHT GASKETED HOLD PLUG.

PART NO.	A	B	C	D	E	F	G	RATINGS	MAX NO. OF DUAL FILTER ELEMENTS	APPROX. WEIGHT
RF6800-6	16	10-1/4	3-3/4	6-1/4	2	18	.390	12 X .5 AMP 600 VDC	6	35lbs.
RF6800-10	16	16-1/4	3-3/4	9-1/4	3-1/2	18	.390	20 X .5 AMP 600 VDC	10	50lbs.
RF6800-20	16	19	7	11	4	18	.390	40 X .5 AMP 600 VDC	20	80lbs.

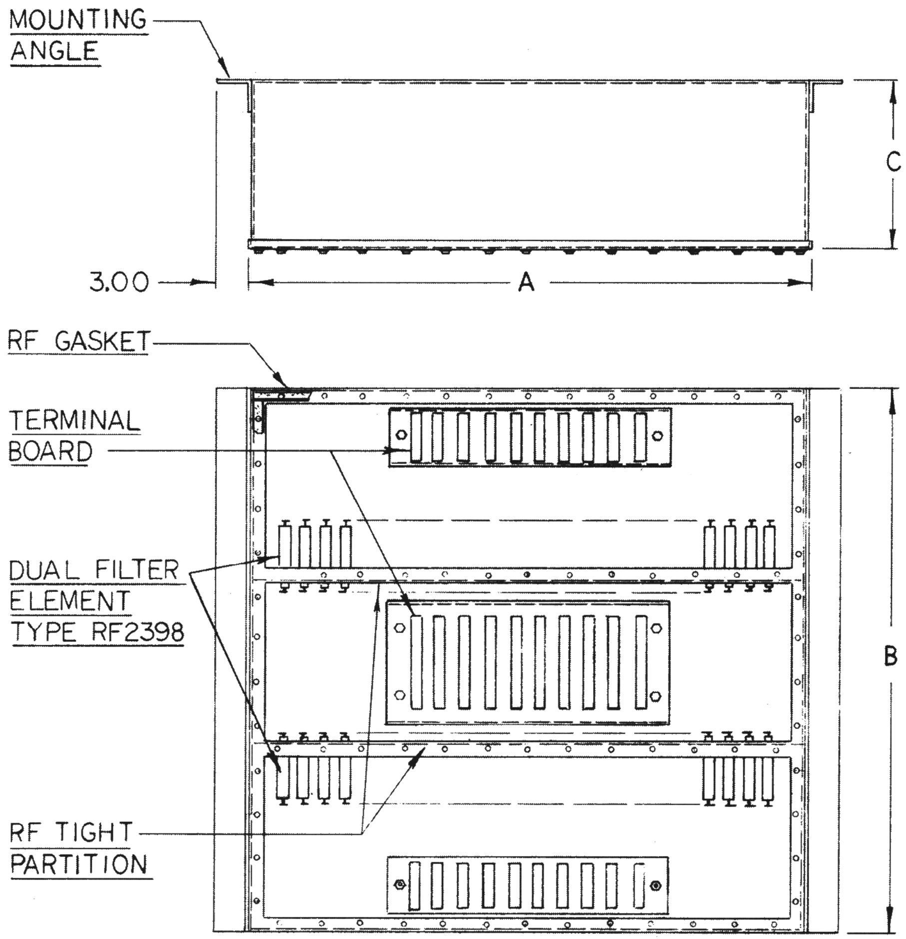
Parts may be ordered with any no. of dual filter elements up to and including max. no. shown. For example: RF6800-6-4 would be supplied with (4) four dual filter elements and two R.F. tight hole plugs.

Filter cases are 11 gauge stainless steel. Filter elements (Type RF2398) are wired to terminal boards. The conduit entry size and location are to be specified by the customer. Data liters may be supplied in place of type RF2398 telephone filters.

TYPE RF6800 SERIES

SIGNAL FILTER ASSEMBLIES FOR SECURE INSTALLATIONS

FIFTY TO TWO HUNDRED PAIR CAPACITY



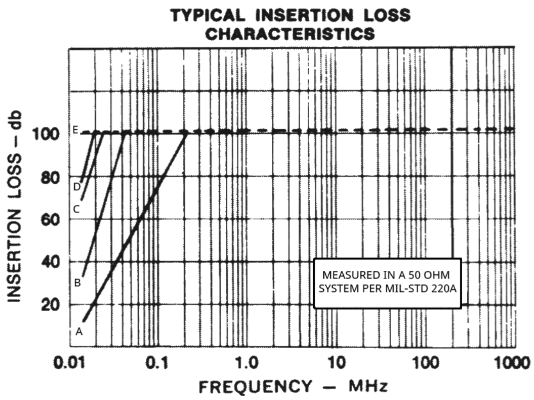
PART NO.	RATING	A	B	C	MAX. NO. OF DUAL FILTER ELEMENTS	APPROX. WEIGHT
RF6800-50	100 x .5 amp 600 vdc	27	40	8	50	225lbs.
RF6800-100	200 x .5 amp 600 vdc	33	45	12	100	375lbs.
RF6800-200	400 x .5 amp 600 vdc	48	48	15	200	650lbs.

Parts may be ordered with any number of dual elements, up to and including maximum shown. For example: RF6800-100-75 would be capable of holding 100 dual filter elements, but would be supplied with 75 filters. All unused positions are sealed with RF tight sealing plugs.

Filter cases are 11 gauge stainless steel. Filter elements (Type RF2398) are wired to terminal boards. The conduit entry size and location are to be specified by the customer. Data filters may be supplied in place of type RF2398 telephone filters.

SERIES 222

SIGNAL AND TELEPHONE CIRCUIT RFI/EMC FILTERS



LOW FREQUENCY CHARACTERISTICS
MEASURED IN A 300 OHM LINE TO GROUND SYSTEM

TYPE		TYPICAL INSERTION LOSS			
FIGURE 1	FIGURE 2	1 KHz	3 KHz	4 KHz	5 KHz
RF222-101	RF222-006	.25	.25	.25	.5
RF222-002	RF222-007	0.17	0.17	0.17	0.5
RF222-003	RF222-008	0.25	0.60	1.7	11
RF222-004	RF222-009	0.20	0.30	0.80	2.8
RF222-205	RF222-010	0.17	0.5	2.0	18

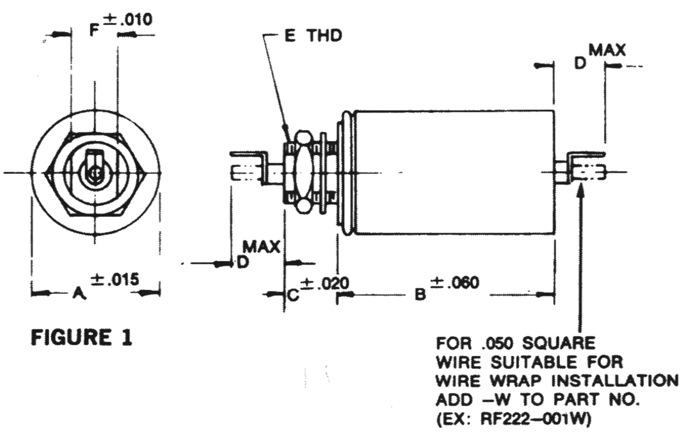


FIGURE 1

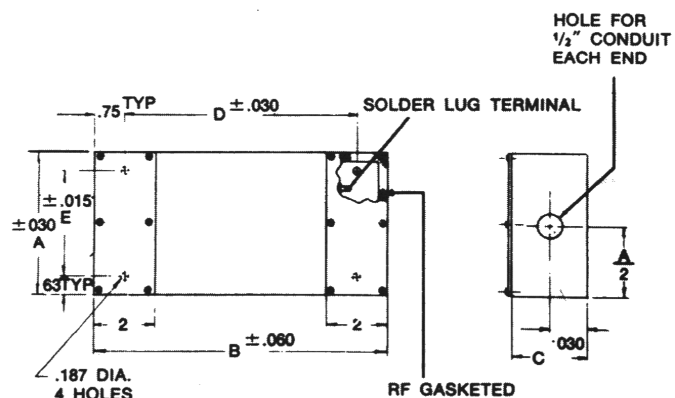


FIGURE 2

FIGURE 1

TYPE	RATING	GRAPH	A	B	C	D	E	F	MAX RESISTANCE	APPROX. WEIGHT
RF222-101	0.5A 300 VDC	A	1.13	3.25	.44	.50	7/16 -20	.370	4 Ohms	6 ozs.
RF222-002	0.15A 300 VDC	B	1.00	3.37	.28	.50	5/16 -24	.250	12 Ohms	4 ozs.
RF222-003	0.15A 300 VDC	C	1.00	3.63	.28	.50	5/16 -24	.250	14 Ohms	4 ozs.
RF222-004	0.5A 300 VDC	D	1.25	5.00	.44	.50	7/16 -20	.370	12 Ohms	9 ozs.
RF222-205	0.15A 300 VDC	E	1.38	4.13	.38	.50	3/4 -20	.655	11 Ohms	10 ozs.

FIGURE 2

TYPE	RATING	GRAPH	A	B	C	D	E	MAX RESISTANCE	APPROX. WEIGHT
RF222-006	2x 0.5A 300 VDC	A	2.50	9.00	1.50	7.50	1.25	4 Ohms	24 ozs.
RF222-007	2x 0.15A 300 VDC	B	2.25	8.63	1.38	7.13	1.00	12 Ohms	20 ozs.
RF222-008	2x 0.15A 300 VDC	C	2.25	8.63	1.38	7.13	1.00	14 Ohms	20 ozs.
RF222-009	2x 0.5A 300 VDC	D	2.75	10.00	1.63	8.50	1.50	12 Ohms	36 ozs.
RF222-010	2x 0.15A 300 VDC	E	3.00	10.00	1.75	8.50	1.75	11 Ohms	48 ozs.

The Series 222 group of RFI/EMC filters for 600 OHM signal and telephone circuit applications are designed to cover the broad frequency spectrum requirements of our most sophisticated communication systems.

Filters may be supplied as individual cylindrical types suitable for “bulkhead” mounting, or dual circuit packages designed to be chassis mounted.

In addition, Ultra EMS has supplied pre-wired, multi-circuit box assemblies with hundreds of filters wired to telephone-type terminal boards, for ease of installation. These assemblies are provided ready for installation by the customer at the site.

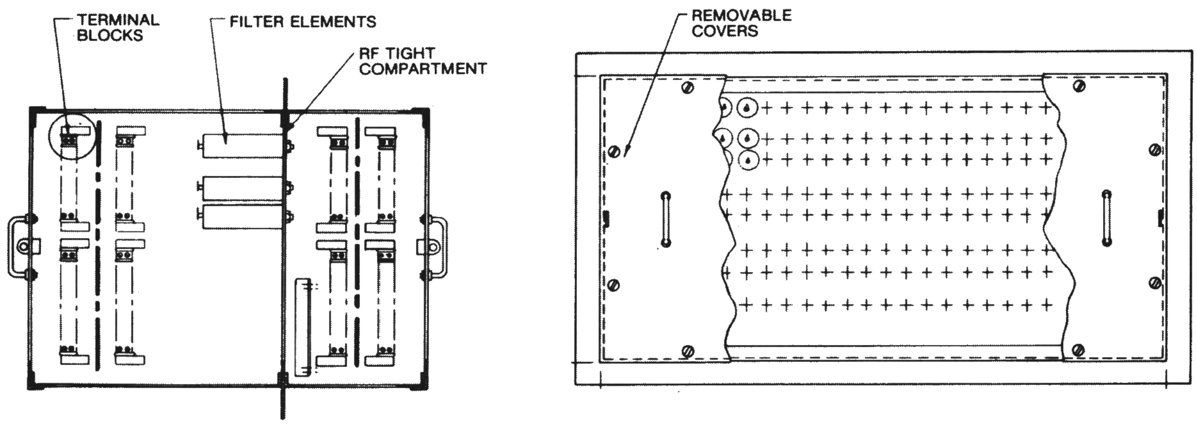
Filters can also be custom-engineered for specific requirements of pass and stop band frequencies, line impedance, mechanical configuration, and other pertinent parameters, consistent with particular system requirements.

SIGNAL AND TELEPHONE CIRCUIT RFI/EMC FILTER
MULTI-CIRCUIT ASSEMBLIES

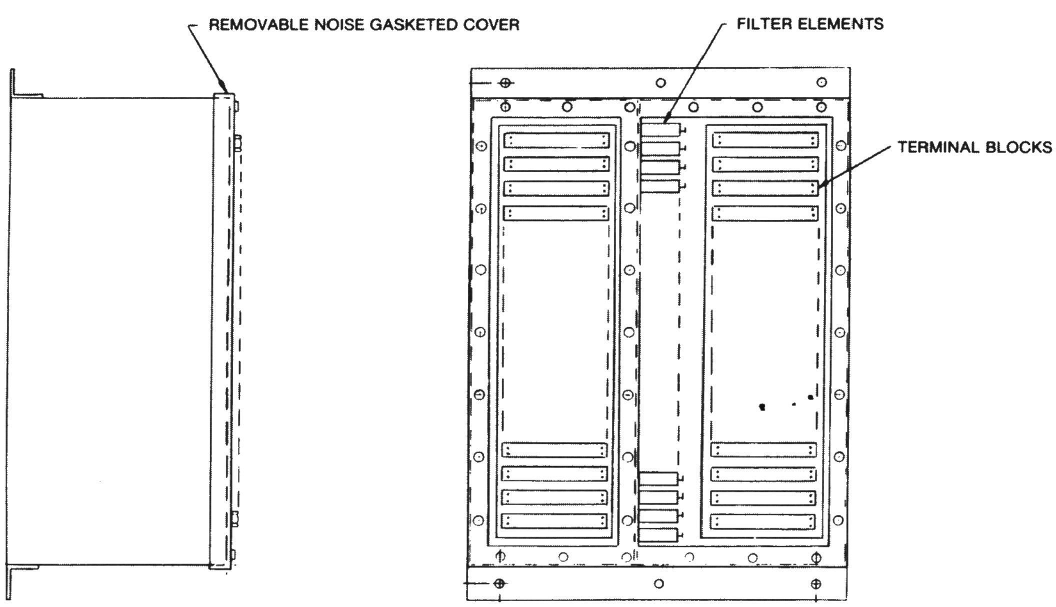
All signal and telephone circuit filters, both standard and custom-engineered, can be supplied as completely pre-wired, multi-circuit assemblies, for ease of on-site installation.

Assemblies consist of filters mounted in RF shielded cabinets, and pre-wired to appropriate terminal boards. Cabinets may be supplied with shielded and gasketed filter mounting holes for future expansion capability.

Typical cabinet assemblies are illustrated below.



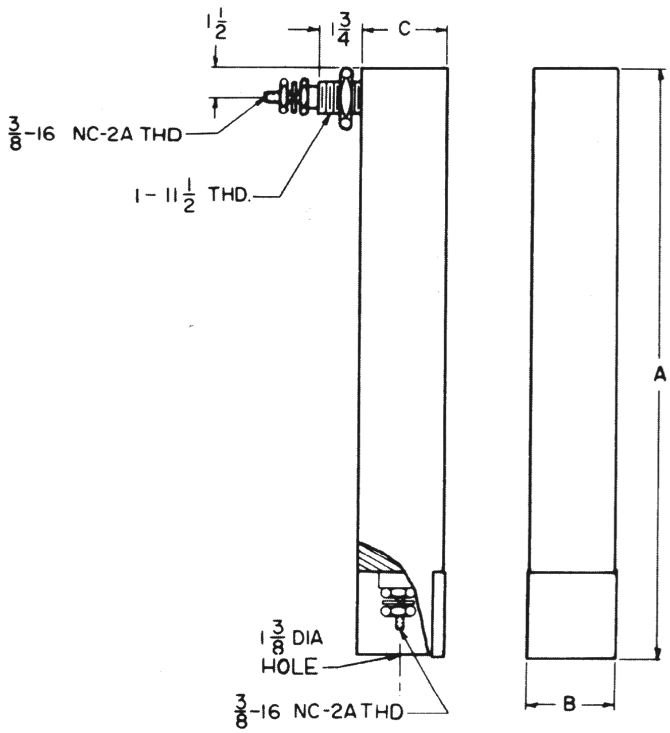
TYPICAL THRU-WALL MOUNTED CABINET



TYPICAL FLUSH MOUNTED CABINET

SERIES 130

POWER LINE FILTERS FOR SHIELDED AREAS

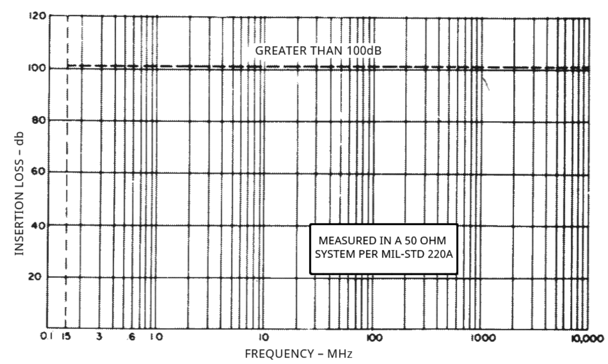


The RF 130 Series of power filters is designed for direct mounting through the wall of a shielded room or cabinet. The filter package includes a threaded mounting bushing which may be installed directly into a wireway, thus providing simple access to the filter termination. These filters are completely RF tight, and eliminates the need for removable covers which are often a source of RF leakage. Filters are provided with bleeder resistors installed in order to prevent electrical shock due to accidental discharge of filter capacitors while power is disconnected.

100 db FROM 150 KHz to 10 GHz PER MIL-STD-220A

PART NO.	RATING			A	B	C	APPROX. WT. (LBS.)
RF130	30A	277 VAC	0-60 Hz	21	4	4-1/2	18
RF133	30A	277 VAC	0-400 Hz	21	4	4-1/2	18
RF134	50A	277 VAC	0-400 Hz	21	4	4-1/2	18
RF131	60A	277 VAC	0-60 Hz	21	4	4-1/2	18
RF135	75A	277 VAC	0-400 Hz	21	4	4-1/2	18
RF132	100A	277 VAC	0-60 Hz	21	4	4-1/2	18
RF136	100A	277 VAC	0-400 Hz	21	4	4-1/2	18

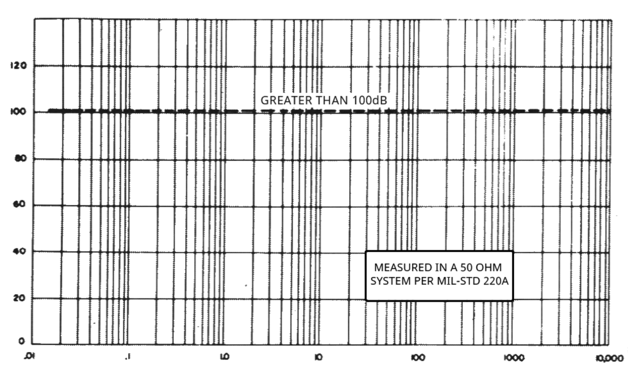
ALL VOLTAGE RATINGS ARE LINE TO GROUND. PARTS RATED AT 277 VAC ARE SUITABLE FOR USE IN 480 VAC. LINE TO LINE SYSTEM AT 60Hz.
*120 VAC MAX. OPERATING VOLTAGE AT LINE FREQ. OF 400 Hz.



100 db FROM 14 KHz to 10 GHz PER MIL-STD-220A, FULL LOAD

PART NO.	RATING*			A	B	C	APPROX. WT. (LBS.)
RF137	30A	277 VAC	0-400 Hz	34	4-1/2	5	30
RF138	50A	277 VAC	0-400 Hz	34	4-1/2	5	30
RF139	100A	277 VAC	0-400 Hz	40	10	5-1/2	95
RF140	150A	277 VAC	0-400 Hz	40	15	5-1/2	135
RF141	200A	277 VAC	0-400 Hz	40	15	5-1/2	150

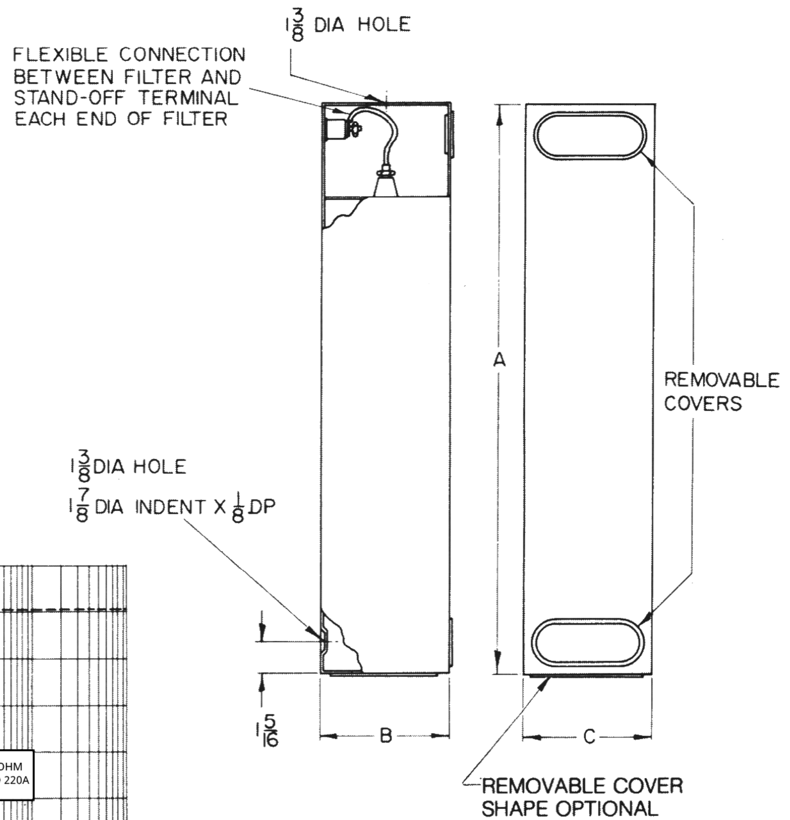
ALL VOLTAGE RATINGS ARE LINE TO GROUND. PARTS RATED AT 277 VAC ARE SUITABLE FOR USE IN 480 VAC. LINE TO LINE SYSTEM AT 60Hz.
*120 VAC MAX. OPERATING VOLTAGE AT LINE FREQ. OF 400 Hz.

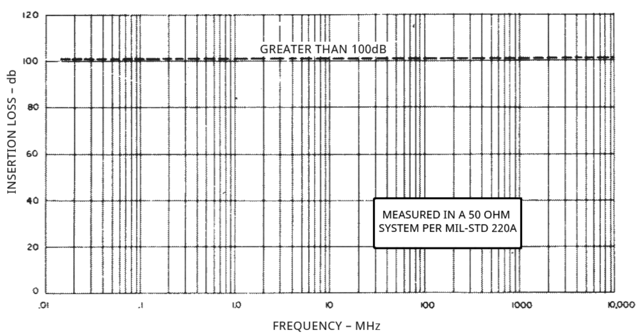


SERIES 6300

POWER LINE FILTER FOR SHIELDED AREAS

100 db FROM 14 KHz to 10 GHz PER MIL-STD-220A FULL LOAD





PART NO.	RATING			A	B	C	APPROX. WT. (LBS.)
RF6300-1	5A	277 VAC	0-400 Hz	28	4-3/4	4-1/2	30
RF6300-2	10A	277 VAC	0-400 Hz	28	4-3/4	4-1/2	30
RF6300-3	25A	277 VAC	0-400 Hz	34	4-3/4	4-1/2	40
RF6300-4	50A	277 VAC	0-400 Hz	34	4-3/4	4-1/2	40
RF6300-5	100A	277 VAC	0-400 Hz	40	5	9	90
RF6300-6	150A	277 VAC	0-400 Hz	40	5-1/4	15	140
RF6300-7	200A	277 VAC	0-400 Hz	40	5-1/4	15	140
RF6300-8	400A	277 VAC	0-60 Hz	52	26	10	360

ALL VOLTAGE RATINGS ARE LINE TO GROUND. PARTS RATED AT 277 VAC ARE SUITABLE FOR USE IN 480 VAC. LINE TO LINE SYSTEM.
*120 VAC MAX. OPERATING VOLTAGE AT LINE FREQ. OF 400 Hz.

The RF6300 Series of filters are designed for use on shielded rooms and other areas requiring high insertion loss at frequencies as low as 14 KHz. All filters are hermetically sealed in order to provide reliable, leak-proof service.

Electrical connection to the filter assembly is made by the installer to a flame-retardent plastic stand-off insulator, which is connected by means of a flexible lead to the ceramic filter terminal.

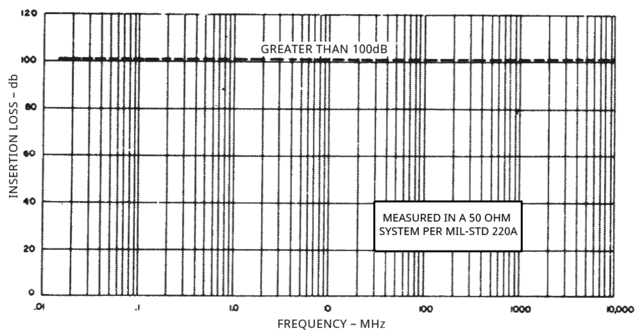
All filters are designed to withstand a surge of ten times rated current.

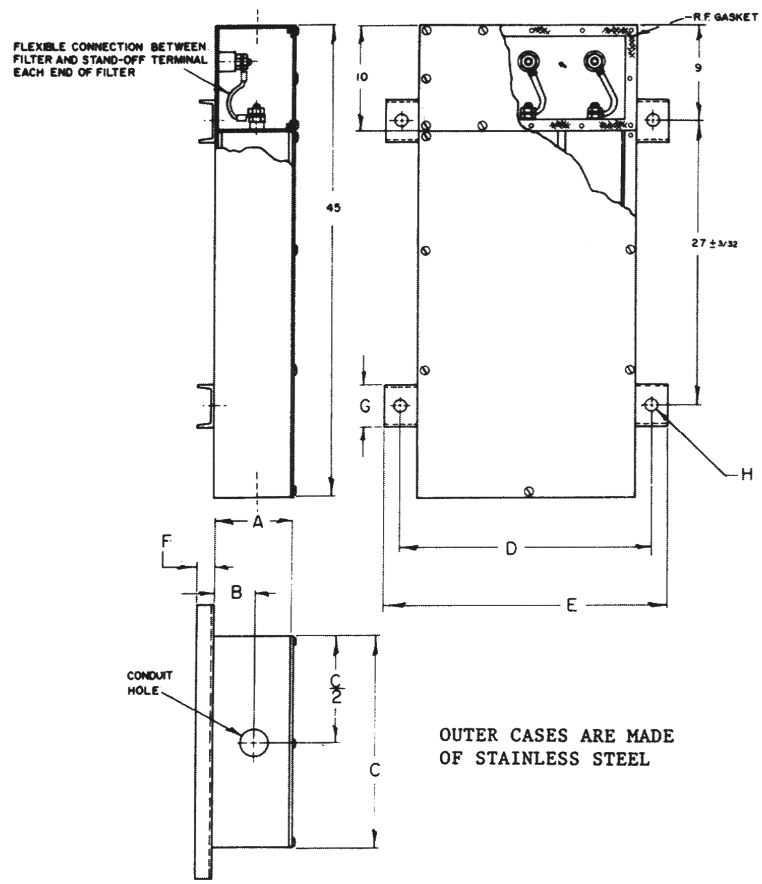
Filter are provided with bleeder resistors installed in order to prevent electrical shock due to accidental discharge of filter capacitors while power is disconnected.

SERIES 3300

POWER LINE FILTERS FOR ASSEMBLIES FOR SHIELDED ROOMS AND SECURE AREAS

100 db FROM 14 KHz to 10 GHz PER MIL-STD-220A, FULL LOAD





PART NO.	current rating (amperes)	A	B	C	D	E	CONDUIT HOLE	F	G	H	APPROX. WT. (LBS.)
RF3300-1	2 x 25	7	4	13	15	17	1-3/8	1-1/2	3	5/8	155
RF3300-2	3 x 25	7	4	18	20	22	1-1/2	1-1/2	3	5/8	180
RF3300-3	4 x 25	7	4	23	25	27	1-1/2	1-1/2	3	5/8	240
RF3300-4	2 x 50	7	4	13	15	17	1-1/3	1-1/2	3	5/8	155
RF3300-5	3 x 50	7	4	18	20	22	2	1-1/2	3	5/8	180
RF3300-6	4 x 50	7	4	23	25	27	2	1-1/2	3	5/8	240
RF3300-7	2 x 75	12	8	15	18	21	2	1-3/4	4	5/8	280
RF3300-8	3 x 75	12	8	20	23	26	2-1/2	1-3/4	4	1	340
RF3300-9	4 x 75	12	8	26	29	32	2-1/2	1-3/4	4	1	410
RF3300-10	2 x 100	12	8	15	18	21	2	1-3/4	4	1	280
RF3300-11	3 x 100	12	8	20	23	26	2-1/2	1-3/4	4	1	340
RF3300-12	4 x 100	12	8	26	29	32	2-1/2	1-3/4	4	1	410
RF3300-13	2 x 150	18	14	15	18	21	2-1/2	1-3/4	4	1	380
RF3300-14	3 x 150	18	14	20	23	26	3	1-3/4	4	1	500
RF3300-15	4 x 150	18	14	26	29	32	3	1-3/4	4	1	650
RF3300-16	2 x 200	18	14	15	18	21	3	1-3/4	4	1	380
RF3300-17	3 x 200	18	14	20	23	26	3	1-3/4	4	11	500
RF3300-18	4 x 200	18	14	26	29	32	3	1-3/4	4		650

ALL FILTERS ARE RATED FOR A MAXIMUM OF 277 VAC LINE TO GROUND, 480 VAC LINE TO LINE AT POWER LINE FREQUENCIES FROM 0 TO 60 Hz.

120 VAC MAX. OPERATING VOLTAGE AT 400 Hz.

The RF6300 Series of filters are designed for use on shielded rooms, secure communications areas and high-powered ground and shipboard electronic installations.

All filters are ruggedly designed and constructed. Filter cases are hermetically sealed for reliable operation.

Electrical connection to the filter assembly is made by the installer to a flame-retardent plastic stand-off insulator, which is connected by means of a flexible lead to the ceramic filter terminal.

All three wire filters are provided with a ground stud mounted through the filter mounting bulkhead, for termination and continuation of grounded neutral wire.

Filter cases are of steel construction, and are adequately plated to resist corrosion. RF tight compartments are gasketed with corrosion-resistant metal mesh.

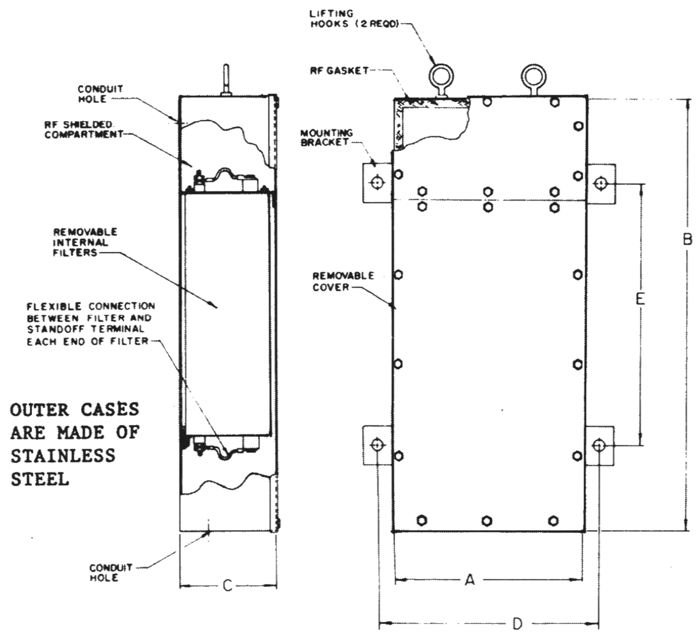
The maximum voltage drop at 60Hz power line frequency is 2 volts.

Filters are provided with bleeder resistors installed in order to prevent electrical shock due to accidental discharge of filter capacitors while power is disconnected.

SERIES 5200

HIGH CURRENT POWER LINE FILTERS FOR ASSEMBLIES FOR SHIELDED ROOMS AND SECURE AREAS

100 db FROM 14 KHz to 10 GHz at Full Load, Using Extended Range Buffer Networks



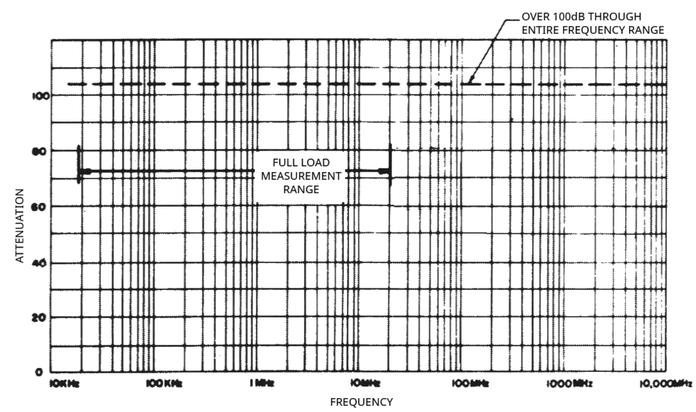
The RF5200 Series of filters are designed for use in shielded rooms, secure communications areas and high-powered ground and shipboard electronic installations.

All filters are ruggedly designed and constructed. The hermetically sealed filter cases are continuously seam welded to assure leak proof construction. Individual units are impregnated with non-flammable material as recognized by Underwriters Laboratories. Electrical connection to the filter assembly is made by the installer to a flame retardant plastic stand-off insulator, which is connected by means of a flexible lead to the ceramic filter terminal.

Filter cases are of steel construction, and are adequately plated to resist corrosion. RF tight compartments are gasketed with corrosion-resistant metal mesh. All cases include grounded neutral terminals. The maximum voltage drop at 60 Hz power line frequency is 2 volts.

Filters are provided with bleeder resistors installed in order to prevent electrical shock due to accidental discharge of filter capacitors while power is disconnected.

All filters are designed for continuous duty operation at rated conditions, will withstand 140% of rated current for 15 minutes and momentary surges of 10 times rated current.



PART NO.	CURRENT AMPERES	A	B	C	D	E	CONDUIT HOLE DIA.	APPROX. WEIGHT (LBS.)
RF5201-25	25	12-1/4	37	5	14-1/4	25	1-3/8	65
RF5202-25	2 x 25	12-1/4	37	5	14-1/4	25	1-3/8	115
RF5203-25	3 x 25	23	37	5	25	25	1-3/8	170
RF5204-25	4 x 25	23	37	5	25	25	1-3/8	230
RF5201-50	50	15-1/2	48	11	17-1/2	36	1-3/4	130
RF5202-50	2 x 50	15-1/2	48	11	17-1/2	36	1-3/4	230
RF5203-50	3 x 50	25	48	11	27	36	1-3/4	360
RF5204-50	4 x 50	25	48	11	27	36	1-3/4	570
RF5201-100	100	16-1/2	60	11	18-1/2	48	2	180
RF5202-100	2 x 100	16-1/2	60	11	18-1/2	48	2	305
RF5203-100	3 x 100	25	60	11	27	48	2	470
RF5204-100	4 x 100	25	60	11	27	48	2	615
RF5201-150	150	17-1/2	60	17	19-1/2	48	2-1/2	290
RF5202-150	2 x 150	17-1/2	60	17	19-1/2	48	2-1/2	500
RF5203-150	3 x 150	25	60	17	27	48	2	770
RF5204-150	4 x 150	25	60	17	27	48	2	1235
RF5201-200	200	17-1/2	60	25	19-1/2	48	3	425
RF5202-200	2 x 200	17-1/2	60	25	19-1/2	48	3	835
RF5203-200	3 x 200	25	60	25	27	48	3	1250
RF5204-200	4 x 200	25	60	25	27	48	3	1400
RF5201-400	400	24	80	30	29	40	3	525
RF5202-400	2 x 400	24	80	30	29	40	3	1250
RF5203-400	3 x 400	45	80	30	50	40	3	1775
RF5204-400	4 x 400	45	80	30	50	40	3	2100

ALL FILTERS IN THE TABLE ARE RATED FOR 0-60 Hz POWER LINE FREQUENCIES.

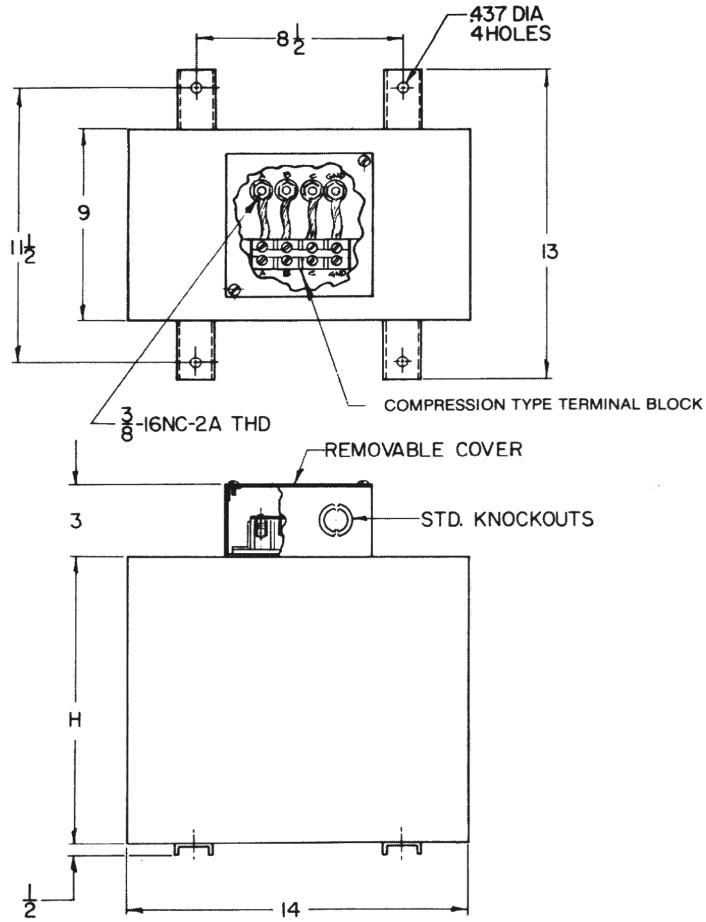
FILTERS FOR 400 Hz POWER ARE AVAILABLE UPON REQUEST.

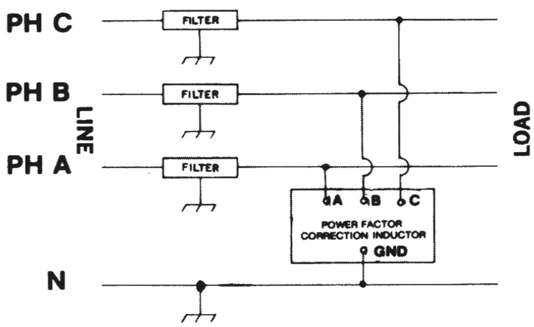
VOLTAGE RATING: 0-277 VAC LINE-TO-NEUTRAL OR 0-480 VAC LINE-TO-LINE. 600 VDC MAXIMUM.

SERIES 3320

POWER FACTOR CORRECTION INDUCTOR ASSEMBLIES

To Reduce Generator Load Current





TYPICAL CONNECTION DIAGRAM
(3 PHASE, 4 WIRE, NEUTRAL GROUNDED)

POWER FACTOR CORRECTION INDUCTOR PART NO.	USED WITH RFI FILTER PART NO.	APPROX. UNCORRECTED REACTIVE CURRENT (115 VAC 400 Hz) AMPERES	APPROX. CORRECTED REACTIVE CURRENT (115 VAC 400 Hz) AMPERES
RF3320-(*)	RF133, RF134	6	1.5
RF3321-(*)	RF135, RF136, RF6300-1, RF6300-2	9	1.5
RF3322-(*)	RF137, RF138, RF6300-3, RF6300-4	17	2
†RF3323-(*)	RF139 RF6300-5	35	3

*SELECT DASH NO. FROM RIGHT HAND BLOCK BASED UPON APPLICATION

*DASH NUMBER	H	APPLICATION
-2	6	Single Phase, One Line Ground
-3	9	Single Phase, Ungrounded System
-4	12	Three Phase, 4 Wire, Neutral Grounded
-5	15	Three Phase, 4 Wire, Ungrounded system

†SIZES
• RF3323-2 IS 18 X 9 X 10 HIGH • RF3323-3 IS 18 X 9 X 15 HIGH.
• RF3323-4 IS 18 X 9 X 20 HIGH • RF3323-5 IS 18 X 9 X 28 HIGH.

Broadband filters of the type used for interference control generally consist of inductors in series with the power line, and capacitors which are connected (within the filter) from the power line to ground.

These filter capacitors apply a reactive current load to the generator at all times that the filters are connected. In the case of a 400 Hz power source, the filter reactive current can present difficulty to a generator with inadequate reserve capability.

The Power Factor Correction Inductors herein described are designed to minimize the effect of filter reactive loading by providing an inductive load to the generator of equal magnitude as the capacitive load, thus effectively, canceling the capacitive load current.

Power Factor Correction Inductors can be custom engineered for any application where the capacitive loading value is known.

EMP AND VOLTAGE TRANSIENT OFFERING

Ultra EMS' RFI Specialty Components range of products includes EMI filters that are specially designed in order to provide protection to control, telephone, and power lines against high energy transient events. These include:

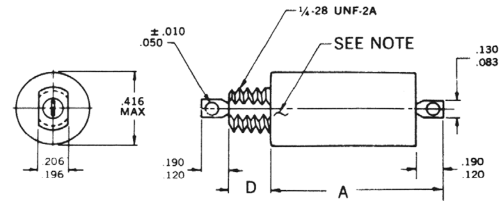
- ELECTROMAGNETIC PULSE (EMP)
- LIGHTNING STRIKE
- HIGH ALTITUDE EMP (HEMP)
- SOLAR ACTIVITY
- NUCLEAR EXPLOSION (NEMP)

This section includes a variety of useful EMI filters that ranges from subminiature types to ones configured into seam-welded cases for anechoic chambers and secure rooms. A custom-designed filter is always an option.

RF5305E SERIES

SUBMINIATURE RFI/EMP FILTERS

5 VDC

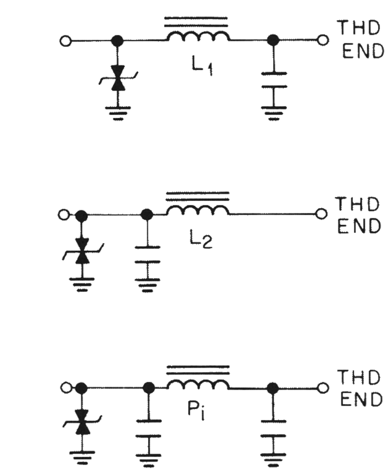


SPECIFICATIONS
OPERATING TEMPERATURE: –55°C TO +125°C
FILTER PERFORMANCE IS EQUIVALENT TO MIL SERIES M15733/23 MODIFIED TO INCORPORATE TRANSIENT SUPPRESSION.
CONFORMS TO THE APPLICABLE REQUIREMENTS OF MIL-F-15733.
FILTER SUPPLIED WITH LOCKWASHER & HEX NUT
FINISH: HOT SOLDER DIP

This low voltage filter series incorporates a shunt bi-directional zener diode transient suppression element, designed to protect equipments from damage due to undesired transient or EMP (Electro-Magnetic Pulse) voltages. The device transient performance and power rating is defined in the electrical characteristics table and power rating curves herein. In addition these filter units provide high broadband insertion loss to meet RFI/EMI system requirements.

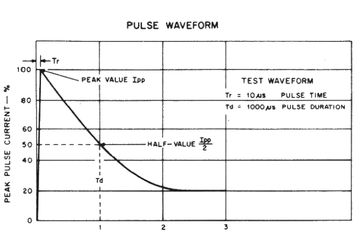
		RATING					MINIMUM INSERTION LOSS IN DECIBELS MIL-STD-220A (FULL LOAD)									
PART NO.	CKT	AMP	DC VOLTS	A MAX	D ±10	MAX VOLT. DROP	15 KHz	30 KHz	50 KHz	100 KHz	150 KHz	300 KHz	500 KHz	1 MHz	10 MHz	1 GHz
RF3505E-1	L_2	.10	5	.940	.312	.17	9	20	29	41	48	60	69	70	70	70
RF3505E-2	L_2	.10	5	.940	.187	.17	9	20	29	41	48	60	69	70	70	70
RF3505E-3	L_1	.10	5	.940	.312	.17	9	20	29	41	48	60	69	70	70	70
RF3505E-4	L_1	.10	5	.940	.187	.17	9	20	29	41	48	60	69	70	70	70
RF3505E-5	P_1	.10	5	1.065	.312	.17	15	36	50	69	79	80	80	80	80	80
RF3505E-6	P_1	.10	5	1.065	.187	.17	15	36	50	69	79	80	80	80	80	80
RF3505E-7	L_2	.30	5	.940	.312	.23	6	15	23	35	42	54	63	70	70	70
RF3505E-8	L_2	.30	5	.940	.187	.23	6	15	23	35	42	54	63	70	70	70
RF3505E-9	L_1	.30	5	.940	.312	.23	6	15	23	35	42	54	63	70	70	70
RF3505E-10	L_1	.30	5	.940	.187	.23	6	15	23	35	42	54	63	70	70	70
RF3505E-11	P_1	.30	5	1.065	.312	.23	4	29	44	62	73	80	80	80	80	80
RF3505E-12	P_1	.30	5	1.065	.187	.23	4	29	44	62	73	80	80	80	80	80
RF3505E-13	L_2	.50	5	.940	.312	.18	5	12	19	29	36	48	57	69	70	70
RF3505E-14	L_2	.50	5	.940	.187	.18	5	12	19	29	36	48	57	69	70	70
RF3505E-15	L_1	.50	5	.940	.312	.18	5	12	19	29	36	48	57	69	70	70
RF3505E-16	L_1	.50	5	.940	.187	.18	5	12	19	29	36	48	57	69	70	70
RF3505E-17	P_1	.50	5	1.065	.312	.18	—	21	37	56	67	80	80	80	80	80
RF3505E-18	P_1	.50	5	1.065	.187	.18	—	21	37	56	67	80	80	80	80	80
RF3505E-19	L_2	1.0	5	.940	.312	.14	5	11	15	21	26	36	44	55	70	70
RF3505E-20	L_2	1.0	5	.940	.187	.14	5	11	15	21	26	36	44	55	70	70
RF3505E-21	L_1	1.0	5	.940	.312	.14	5	11	15	21	26	36	44	55	70	70
RF3505E-22	L_1	1.0	5	.940	.187	.14	5	11	15	21	26	36	44	55	70	70
RF3505E-23	P_1	1.0	5	1.065	.312	.14	—	—	20	41	52	71	80	80	80	80
RF3505E-24	P_1	1.0	5	1.065	.187	.14	—	—	20	41	52	71	80	80	80	80
RF3505E-25	L_2	2.0	5	.940	.312	.14	5	10	14	20	24	32	38	48	70	70
RF3505E-26	L_2	2.0	5	.940	.187	.14	5	10	14	20	24	32	38	48	70	70
RF3505E-27	L_1	2.0	5	.940	.312	.14	5	10	14	20	24	32	38	48	70	70
RF3505E-28	L_1	2.0	5	.940	.187	.14	5	10	14	20	24	32	38	48	70	70
RF3505E-29	P_1	2.0	5	1.065	.312	.14	—	—	—	33	46	65	76	80	80	80
RF3505E-30	P_1	2.0	5	1.065	.187	.14	—	—	—	33	46	65	76	80	80	80

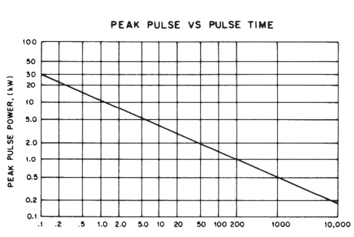
CIRCUIT CONFIGURATIONS

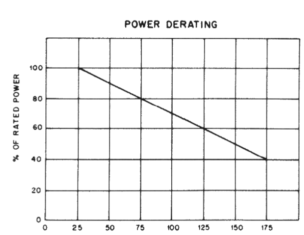


NOTE: THE CASE SHALL BE MARKED AT THE THREADED END OF FILTER, WITH THE SYMBOL "C" OR THE SYMBOL "L", AS FOLLOWS:

CIRCUIT	SYMBOL
L_1	C
L_2	L





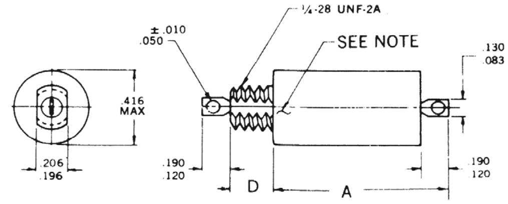


ELECTRICAL CHARACTERISTICS @ 25°C							
REVERSE STAND-OFF VOLTAGE	BREAKDOWN VOLTAGE			MAXIMUM REVERSE LEAKAGE @VR	MAXIMUM CLAMPING VOLTAGE @Ipp	MAXIMUM PEAK PULSE CURRENT	MAXIMUM VOLTAGE TEMPERATURE VARIATION OF BV
VR VOLTS	VBR VOLTS MIN.	MAX.	@ IT mA	IR μA	VC(Max.) VOLTS	Ipp (Max.) A	θV (Max.) mV/°C
6.5	7.22	7.98	10	400	11.2	44.7	5.0

RF5305E SERIES

SUBMINIATURE RFI/EMP FILTERS

50 VDC



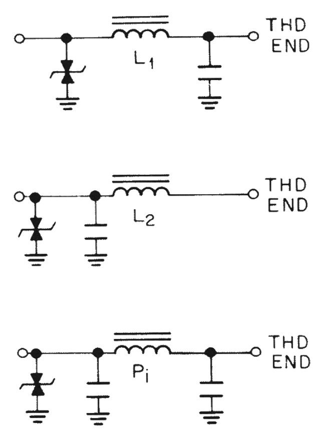
SPECIFICATIONS

OPERATING TEMPERATURE: −55°C TO +125°C
FILTER PERFORMANCE IS EQUIVALENT TO MIL SERIES M15733/23
MODIFIED TO INCORPORATE TRANSIENT SUPPRESSION.
CONFORMS TO THE APPLICABLE REQUIREMENTS OF MIL-F-15733.
FILTER SUPPLIED WITH LOCKWASHER & HEX NUT
FINISH: HOT SOLDER DIP

This low voltage filter series incorporates a shunt bi-directional zener diode transient suppression element, designed to protect equipments from damage due to undesired transient or EMP (Electro-Magnetic Pulse) voltages. The device transient performance and power rating is defined in the electrical characteristics table and power rating curves herein. In addition these filter units provide high broadband insertion loss to meet RFI/EMI system requirements.

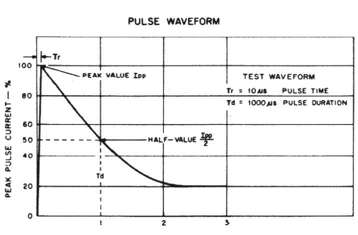
		RATING		MINIMUM INSERTION LOSS IN DECIBELS MIL-STD-220A (FULL LOAD)												
PART NO.	CKT	AMP	DC VOLTS	A MAX	D ±010	MAX VOLT. DROP	15 KHz	30 KHz	50 KHz	100 KHz	150 KHz	300 KHz	500 KHz	1 MHz	10 MHz	1 GHz
RF3505E-31	L_2	.10	50	.940	.312	.17	9	20	29	41	48	60	69	70	70	70
RF3505E-32	L_2	.10	50	.940	.187	.17	9	20	29	41	48	60	69	70	70	70
RF3505E-33	L_1	.10	50	.940	.312	.17	9	20	29	41	48	60	69	70	70	70
RF3505E-34	L_1	.10	50	.940	.187	.17	9	20	29	41	48	60	69	70	70	70
RF3505E-35	P_1	.10	50	1.065	.312	.17	15	36	50	69	79	80	80	80	80	80
RF3505E-36	P_1	.10	50	1.065	.187	.17	15	36	50	69	79	80	80	80	80	80
RF3505E-37	L_2	.30	50	.940	.312	.23	6	15	23	35	42	54	63	70	70	70
RF3505E-38	L_2	.30	50	.940	.187	.23	6	15	23	35	42	54	63	70	70	70
RF3505E-39	L_1	.30	50	.940	.312	.23	6	15	23	35	42	54	63	70	70	70
RF3505E-40	L_1	.30	50	.940	.187	.23	6	15	23	35	42	54	63	70	70	70
RF3505E-41	P_1	.30	50	1.065	.312	.23	4	29	44	62	73	80	80	80	80	80
RF3505E-42	P_1	.30	50	1.065	.187	.23	4	29	44	62	73	80	80	80	80	80
RF3505E-43	L_2	.50	50	.940	.312	.18	5	12	19	29	36	48	57	69	70	70
RF3505E-44	L_2	.50	50	.940	.187	.18	5	12	19	29	36	48	57	69	70	70
RF3505E-45	L_1	.50	50	.940	.312	.18	5	12	19	29	36	48	57	69	70	70
RF3505E-46	L_1	.50	50	.940	.187	.18	5	12	19	29	36	48	57	69	70	70
RF3505E-47	P_1	.50	50	1.065	.312	.18	—	21	37	56	67	80	80	80	80	80
RF3505E-48	P_1	.50	50	1.065	.187	.18	—	21	37	56	67	80	80	80	80	80
RF3505E-49	L_2	1.0	50	.940	.312	.14	5	11	15	21	26	36	44	55	70	70
RF3505E-50	L_2	1.0	50	.940	.187	.14	5	11	15	21	26	36	44	55	70	70
RF3505E-51	L_1	1.0	50	.940	.312	.14	5	11	15	21	26	36	44	55	70	70
RF3505E-52	L_1	1.0	50	.940	.187	.14	5	11	15	21	26	36	44	55	70	70
RF3505E-53	P_1	1.0	50	1.065	.312	.14	—	—	20	41	52	71	80	80	80	80
RF3505E-54	P_1	1.0	50	1.065	.187	.14	—	—	20	41	52	71	80	80	80	80
RF3505E-55	L_2	2.0	50	.940	.312	.14	5	10	14	20	24	32	38	48	70	70
RF3505E-56	L_2	2.0	50	.940	.187	.14	5	10	14	20	24	32	38	48	70	70
RF3505E-57	L_1	2.0	50	.940	.312	.14	5	10	14	20	24	32	38	48	70	70
RF3505E-58	L_1	2.0	50	.940	.187	.14	5	10	14	20	24	32	38	48	70	70
RF3505E-59	P_1	2.0	50	1.065	.312	.14	—	—	—	33	46	65	76	80	80	80
RF3505E-60	P_1	2.0	50	1.065	.187	.14	—	—	—	33	46	65	76	80	80	80

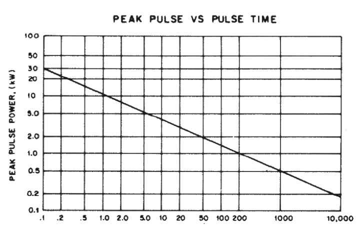
CIRCUIT CONFIGURATIONS

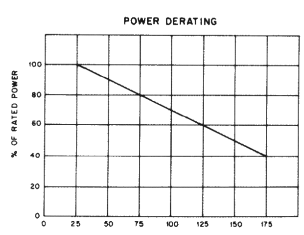


NOTE: THE CASE SHALL BE MARKED AT THE THREADED END OF FILTER, WITH THE SYMBOL "C" OR THE SYMBOL "L", AS FOLLOWS:

CIRCUIT	SYMBOL
L_1	C
L_2	L





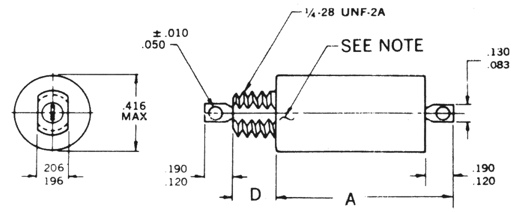


ELECTRICAL CHARACTERISTICS @ 25°C							
REVERSE STAND-OFF VOLTAGE	BREAKDOWN VOLTAGE			MAXIMUM REVERSE LEAKAGE @VR	MAXIMUM CLAMPING VOLTAGE @Ipp	MAXIMUM PEAK PULSE CURRENT	MAXIMUM VOLTAGE TEMPERATURE VARIATION OF BV
VR VOLTS	VBR VOLTS MIN.	MAX.	@ IT mA	IR uA	VC(Max.) VOLTS	Ipp (Max.) A	θV (Max.) mV/°C
58	64.4	71.2	1	1	93.6	5.3	70

RF5305E SERIES

SUBMINIATURE RFI/EMP FILTERS

150 VDC

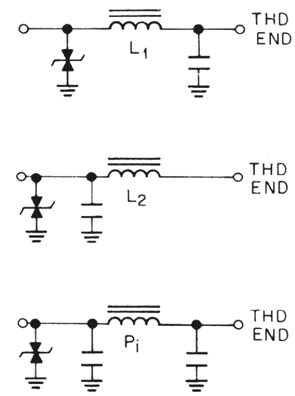


SPECIFICATIONS
OPERATING TEMPERATURE: –55°C TO +125°C
FILTER PERFORMANCE IS EQUIVALENT TO MIL SERIES M15733/23 MODIFIED TO INCORPORATE TRANSIENT SUPPRESSION.
CONFORMS TO THE APPLICABLE REQUIREMENTS OF MIL-F-15733.
FILTER SUPPLIED WITH LOCKWASHER & HEX NUT
FINISH: HOT SOLDER DIP

This low voltage filter series incorporates a shunt bi-directional zener diode transient suppression element, designed to protect equipments from damage due to undesired transient or EMP (Electro-Magnetic Pulse) voltages. The device transient performance and power rating is defined in the electrical characteristics table and power rating curves herein. In addition these filter units provide high broadband insertion loss to meet RFI/EMI system requirements.

		RATING		MINIMUM INSERTION LOSS IN DECIBELS MIL-STD-220A (FULL LOAD)												
PART NO.	CKT	AMP	DC VOLTS	A MAX	D ±010	MAX VOLT. DROP	15 KHz	30 KHz	50 KHz	100 KHz	150 KHz	300 KHz	500 KHz	1 MHz	10 MHz	1 GHz
RF3505E-61	L_2	.10	150	.940	.312	.17	2	11	20	32	39	51	60	60	60	60
RF3505E-62	L_2	.10	150	.940	.187	.17	2	11	20	32	39	51	60	60	60	60
RF3505E-63	L_1	.10	150	.940	.312	.17	2	11	20	32	39	51	60	60	60	60
RF3505E-64	L_1	.10	150	.940	.187	.17	2	11	20	32	39	51	60	60	60	60
RF3505E-65	P_1	.10	150	1.065	.312	.17	—	17	31	49	60	70	70	70	70	70
RF3505E-66	P_1	.10	150	1.065	.187	.17	—	17	31	49	60	70	70	70	70	70
RF3505E-67	L_2	.30	150	.940	.312	.23	—	6	13	25	32	44	52	60	60	60
RF3505E-68	L_2	.30	150	.940	.187	.23	—	6	13	25	32	44	52	60	60	60
RF3505E-69	L_1	.30	150	.940	.312	.23	—	6	13	25	32	44	52	60	60	60
RF3505E-70	L_1	.30	150	.940	.187	.23	—	6	13	25	32	44	52	60	60	60
RF3505E-71	P_1	.30	150	1.065	.312	.23	—	8	24	43	53	70	70	70	70	70
RF3505E-72	P_1	.30	150	1.065	.187	.23	—	8	24	43	53	70	70	70	70	70
RF3505E-73	L_2	.50	150	.940	.312	.18	—	3	9	20	26	39	47	59	60	60
RF3505E-74	L_2	.50	150	.940	.187	.18	—	3	9	20	26	39	47	59	60	60
RF3505E-75	L_1	.50	150	.940	.312	.18	—	3	9	20	26	39	47	59	60	60
RF3505E-76	L_1	.50	150	.940	.187	.18	—	3	9	20	26	39	47	59	60	60
RF3505E-77	P_1	.50	150	1.065	.312	.18	—	—	15	37	48	66	70	70	70	70
RF3505E-78	P_1	.50	150	1.065	.187	.18	—	—	15	37	48	66	70	70	70	70
RF3505E-79	L_2	1.0	150	.940	.312	.14	—	3	6	12	16	26	34	46	60	60
RF3505E-80	L_2	1.0	150	.940	.187	.14	—	3	6	12	16	26	34	46	60	60
RF3505E-81	L_1	1.0	150	.940	.312	.14	—	3	6	12	16	26	34	46	60	60
RF3505E-82	L_1	1.0	150	.940	.187	.14	—	3	6	12	16	26	34	46	60	60
RF3505E-83	P_1	1.0	150	1.065	.312	.14	—	—	—	18	32	51	65	70	70	70
RF3505E-84	P_1	1.0	150	1.065	.187	.14	—	—	—	18	32	51	65	70	70	70
RF3505E-85	L_2	2.0	150	.940	.312	.14	—	3	5	11	15	23	29	60	60	60
RF3505E-86	L_2	2.0	150	.940	.187	.14	—	3	5	11	15	23	29	60	60	60
RF3505E-87	L_1	2.0	150	.940	.312	.14	—	3	5	11	15	23	29	60	60	60
RF3505E-88	L_1	2.0	150	.940	.187	.14	—	3	5	11	15	23	29	60	60	60
RF3505E-89	P_1	2.0	150	1.065	.312	.14	—	—	—	—	22	45	59	70	70	70
RF3505E-90	P_1	2.0	150	1.065	.187	.14	—	—	—	—	22	45	59	70	70	70

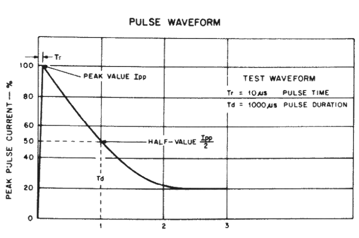
CIRCUIT CONFIGURATIONS



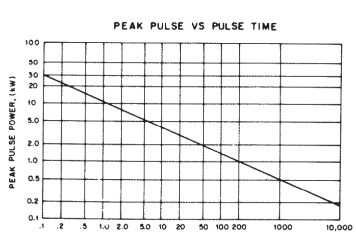
NOTE: THE CASE SHALL BE MARKED AT THE THREADED END OF FILTER, WITH THE SYMBOL "C" OR THE SYMBOL "L", AS FOLLOWS:

CIRCUIT	SYMBOL
L_1	C
L_2	L

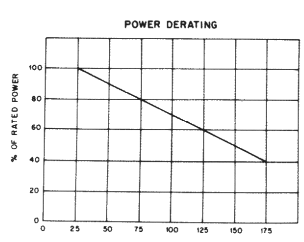
PULSE WAVEFORM



PEAK PULSE VS PULSE TIME



POWER DERATING



ELECTRICAL CHARACTERISTICS @ 25°C							
REVERSE STAND-OFF VOLTAGE	BREAKDOWN VOLTAGE			MAXIMUM REVERSE LEAKAGE @VR	MAXIMUM CLAMPING VOLTAGE @Ipp	MAXIMUM PEAK PULSE CURRENT	MAXIMUM VOLTAGE TEMPERATURE VARIATION OF BV
VR VOLTS	VBR VOLTS @IT MIN.	MAX.	mA	IR μA	Vc(Max.) VOLTS	Ipp (Max.) A	ΘV(Max.) mV/°C
160	178	197	1	1	259	1.9	196

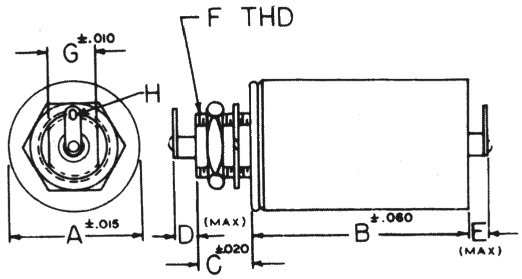
RF 9710E SERIES

RFI/EMP FILTERS

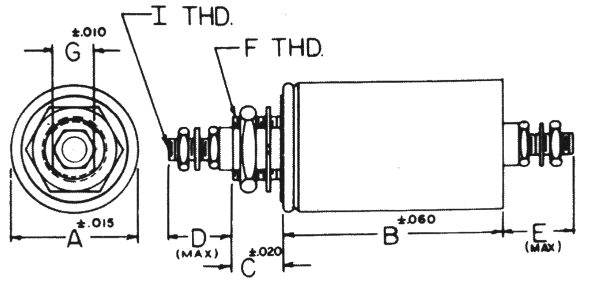
DOUBLE “L” CIRCUIT TYPES

100 VDC

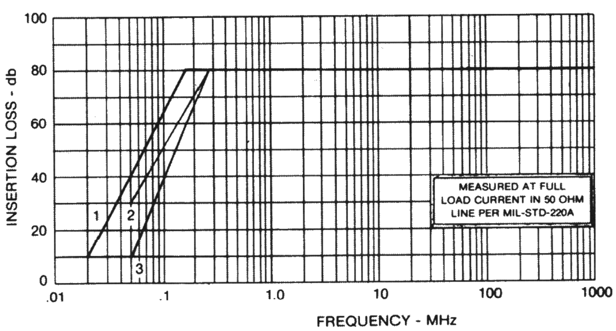
This medium voltage filter series incorporates a shunt metal-oxide varistor (MOV) transient suppression element, designed to protect equipments from damage due to undesired transient or EMP (Electro-Magnetic Pulse) voltages. The device transient performance and power rating is defined in the electrical specifications and pulse rating curves herein. In addition, these filters will provide high broadband insertion loss to meet RFI/EMI system requirements.

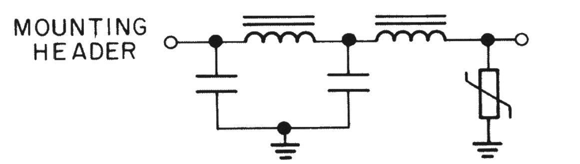


TERMINAL TYPE 1



TERMINAL TYPE 2



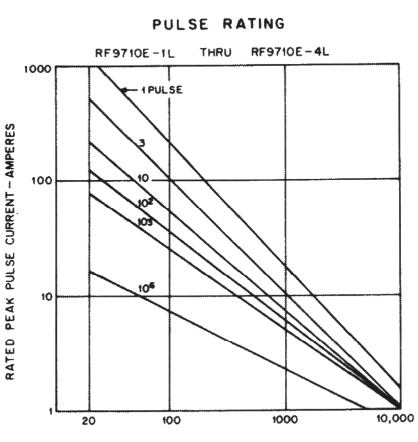


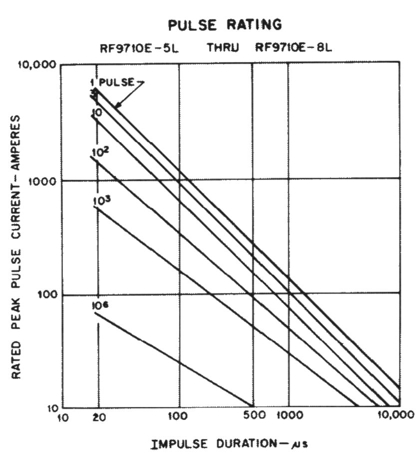
SCHEMATIC DIAGRAM

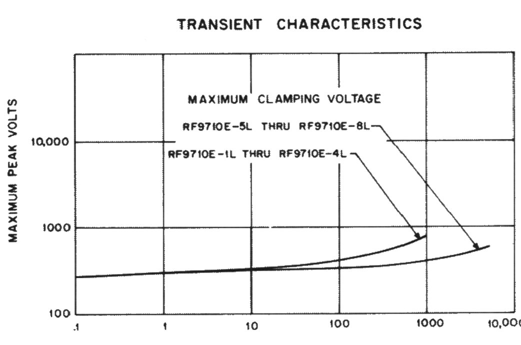
NOTES:

1. Operating Temperature: –55°C to +125°C.
2. Maximum Voltage Drop: 1% of rated voltage.
3. Conforms to applicable requirements of MIL-F-15733.
4. Transient characteristics see Pulse Rating and E-I Curves below.
5. Filter performance is equivalent to MIL series M15733/72 modified to incorporate transient suppression.

RATING		PART NO.	CLAMPING VOLTS MAX @1MADC	ENERGY 10/1000μs JOULES	PEAK CURRENT 80/20μs A	A	B	C	D	E	F	G	H	I	TERMINAL TYPE	INSERTION LOSS GRAPH
100 VDC	0.5A	RF9710E-1L	228	11	1200	.75	3.00	.28	.32	.32	5/16-24	.250	1/16x1/8		1*	1
	1A	RF9710E-2L	228	11	1200	.75	3.13	.28	.32	.32	5/16-24	.250	1/16x1/8		1*	1
	3A	RF9710E-3L	228	11	1200	1.13	3.25	.44	.25	.25	7/16-20	.370	3/32x3/16		1	2
	5A	RF9710E-4L	228	11	1200	1.13	3.50	.44	.25	.25	7/16-20	.370	3/32x3/16		1	2
	10A	RF9710E-5L	228	70	6500	1.50	4.62	.50	.69	.69	3/4-20	.656		8-32	2	2
	20A	RF9710E-6L	228	70	6500	1.50	5.25	.50	.69	.69	3/4-20	.656		8-32	2	3
	30A	RF9710E-7L	228	70	6500	2.25	5.37	.56	.81	.81	1-1/8-18	1.065		10-32	2	3
	50A	RF9710E-8L	228	70	6500	2.25	6.37	.56	.88	.88	1-1/8-18	1.065		1/4-20	2	3







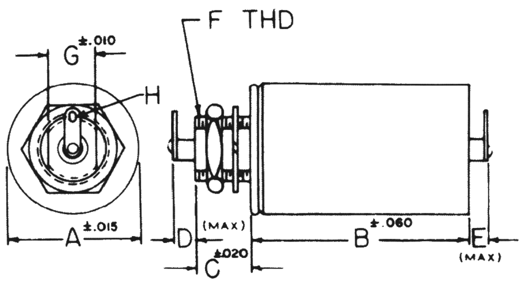
RF 9710E SERIES

RFI/EMP FILTERS

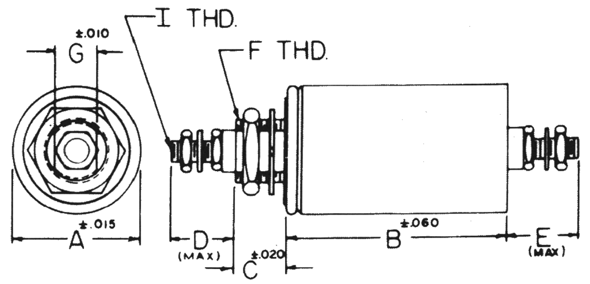
DOUBLE "L" CIRCUIT TYPES

200 VDC

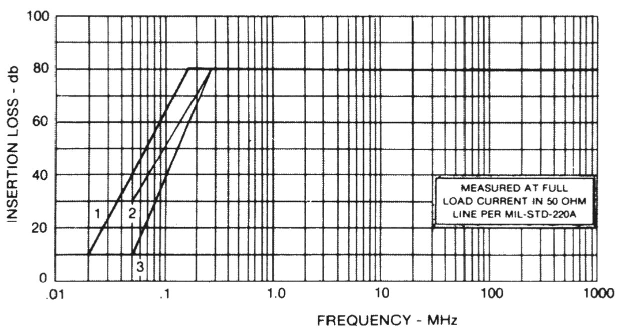
This medium voltage filter series incorporates a shunt metal-oxide varistor (MOV) transient suppression element, designed to protect equipments from damage due to undesired transient or EMP (Electro-Magnetic Pulse) voltages. The device transient performance and power rating is defined in the electrical specifications and pulse rating curves herein. In addition, these filters will provide high broadband insertion loss to meet RFI/EMI system requirements.

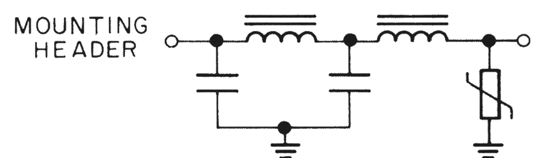


TERMINAL TYPE 1



TERMINAL TYPE 2



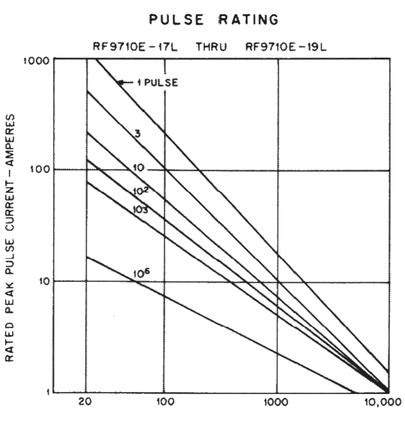


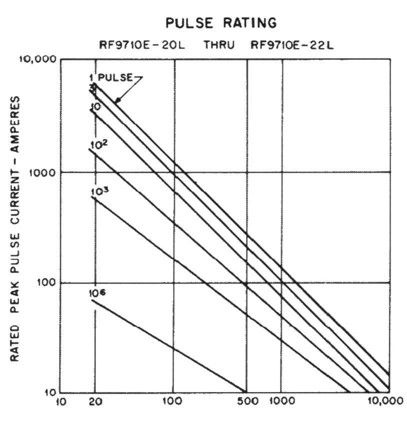
SCHEMATIC DIAGRAM

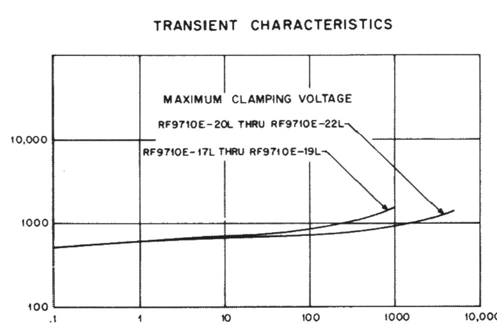
NOTES:

1. Operating Temperature: –55°C to +125°C.
2. Maximum Voltage Drop: 1% of rated voltage.
3. Conforms to applicable requirements of MIL-F-15733.
4. Transient characteristics see Pulse Rating and E-I Curves below.
5. Filter performance is equivalent to MIL series M15733/74 modified to incorporate transient suppression.

RATING		PART NO.	CLAMPING VOLTS MAX @1MADC	ENERGY 10/1000µs JOULES	PEAK CURRENT 80/20µs A	A	B	C	D	E	F	G	H	I	TERMINAL TYPE	INSERTION LOSS GRAPH
115 VAC 0-400 Hz 200 VDC	0.5A	RF9710E-9L	268	13	1200	.75	3.62	.28	.32	.32	5/16-24	.250	1/16x1/8		1*	1
	1A	RF9710E-10L	268	13	1200	1.00	3.75	.44	.25	.25	7/16-20	.370	3/32x3/16		1	1
	3A	RF9710E-11L	268	13	1200	1.13	3.87	.44	.25	.25	7/16-20	.370	3/32x3/16		1	2
	5A	RF9710E-12L	268	13	1200	1.25	4.87	.44	.25	.25	7/16x20	.370	3/32x3/16		1	2
	10A	RF9710E-13L	268	80	6500	1.50	4.87	.50	.69	.69	3/4-20	.656		8-32	2	3
	20A	RF9710E-14L	268	80	6500	1.75	5.87	.50	.69	.69	3/4-20	.656		8-32	2	3
	30A	RF9710E-15L	268	80	6500	2.25	6.00	.56	.81	.81	1-1/8-18	1.065		10-32	2	3
	50A	RF9710E-16L	268	80	6500	2.25	6.87	.56	.88	.88	1-1/8-18	1.065		1/4-20	2	3







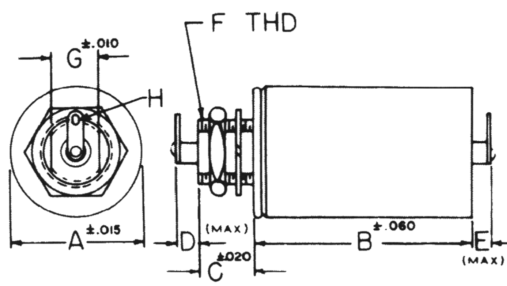
RF 9710E SERIES

RFI/EMP FILTERS

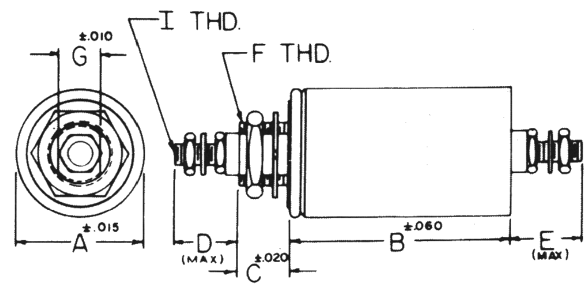
DOUBLE "L" CIRCUIT TYPES

360 VDC

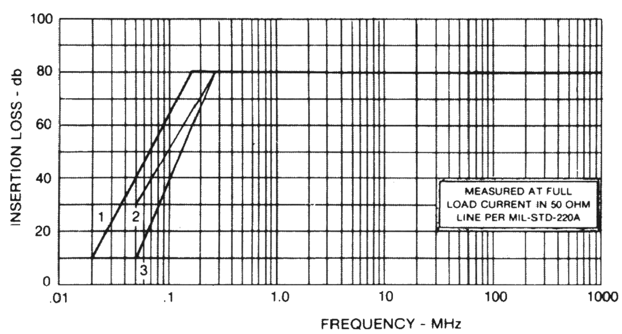
This medium voltage filter series incorporates a shunt metal-oxide varistor (MOV) transient suppression element, designed to protect equipments from damage due to undesired transient or EMP (Electro-Magnetic Pulse) voltages. The device transient performance and power rating is defined in the electrical specifications and pulse rating curves herein. In addition, these filters will provide high broadband insertion loss to meet RFI/EMI system requirements.

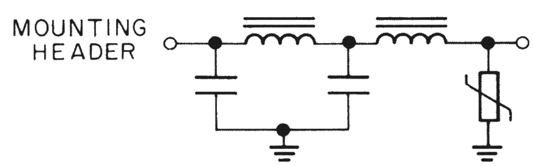


TERMINAL TYPE 1



TERMINAL TYPE 2



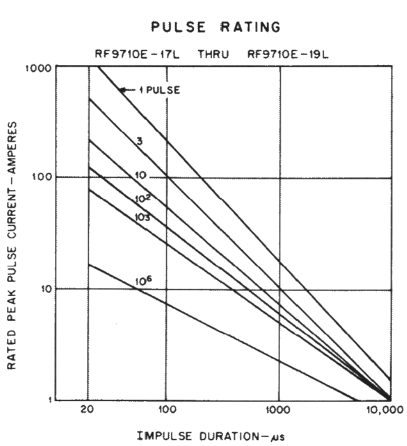


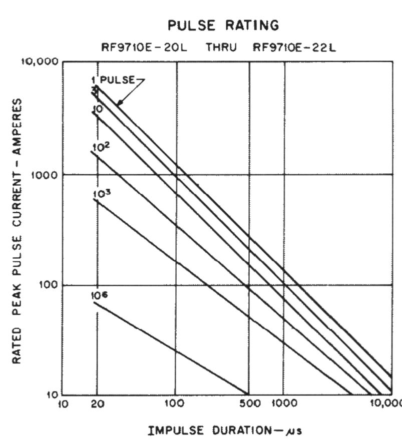
SCHEMATIC DIAGRAM

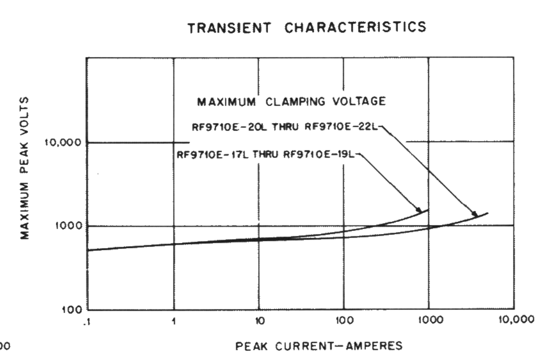
NOTES:

1. Operating Temperature: –55°C to +125°C.
2. Maximum Voltage Drop: 1% of rated voltage.
3. Conforms to applicable requirements of MIL-F-15733.
4. Transient characteristics see Pulse Rating and E-I Curves below.
5. Filter performance is equivalent to MIL series M15733/74 modified to incorporate transient suppression.

RATING		PART NO.	CLAMPING VOLTS MAX @1MADC	ENERGY 10/1000μs JOULES	PEAK CURRENT 80/20μs A	A	B	C	D	E	F	G	H	I	TERMINAL TYPE	INSERTION LOSS GRAPH
250 VAC 0-400 Hz 360 VDC	0.5A	RF9710E-17L	473	23	1200	1.00	3.62	.44	.25	.25	7/16-20	.370	3/32x3/16		1	1
	1A	RF9710E-18L	473	23	1200	1.00	4.12	.44	.25	.25	7/16-20	.370	3/32x3/16		1	1
	3A	RF9710E-19L	473	23	1200	1.25	4.75	.44	.25	.25	7/16-20	.370	3/32x3/16		1	2
	5A	RF9710E-20L	473	140	6500	1.50	4.75	.50	.69	.69	3/4-20	.656		8-32	2	2
	10A	RF9710E-21L	473	140	6500	1.50	6.12	.50	.69	.69	3/4-20	.656		8-32	2	2
	20A	RF9710E-22L	473	140	6500	2.25	6.87	.56	.69	.69	1-1/8-18	1.065		8-32	2	3



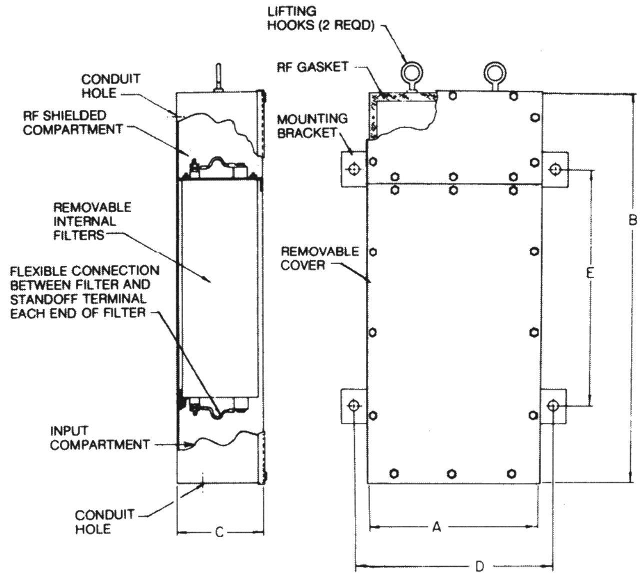




SERIES 6700E

RFI/EMP HIGH CURRENT POWER LINE FILTER ASSEMBLIES FOR SHIELDED ROOMS AND SECURE AREAS

100 db FROM 14 KHz to 10 GHz AT FULL LOAD, USING EXTENDED RANGE BUFFER NETWORKS



ALL FILTERS IN THE TABLE ARE RATED FOR 0-60Hz POWER LINE FREQUENCIES. FILTERS FOR 400 Hz POWER ARE AVAILABLE UPON REQUEST.
VOLTAGE RATING 0-277 VAC LINE-TO-NEUTRAL OR 0-480 VAC LINE-TO-LINE.

PART NO.	CURRENT AMPERES	A	B	C	D	E	CONDUIT HOLE DIA.	CLAMPING VOLTAGE MAX. AT 1MADC	ENERGY 10/1000µs JOULES	PEAK CURRENT 8/20µs A	APPROX. WEIGHT (lbs)
RF6701E-25	25	12-1/4	45	5	14-1/4	25	1-3/8	540	160	6,500	72
RF6702E-25	2 x 25	12-1/4	45	5	14-1/4	25	1-3/8	540	160	6,500	127
RF6703E-25	3 x 25	23	45	5	25	25	1-3/8	540	160	6,500	187
RF6704E-25	4 x 25	23	45	5	25	25	1-3/8	540	160	6,500	253
RF6701E-50	50	15-1/2	60	11	17-1/2	36	1-3/4	540	160	6,500	143
RF6702E-50	2 x 50	15-1/2	60	11	17-1/2	36	1-3/4	540	160	6,500	253
RF6703E-50	3 x 50	25	60	11	27	36	1-3/4	540	160	6,500	396
RF6704E-50	4 x 50	23	60	11	27	36	1-3/4	540	160	6,500	627
RF6701E-100	100	16-1/2	60	11	18-1/2	48	2	540	160	6,500	198
RF6702E-100	2 x 100	16-1/2	60	11	18-1/2	48	2	540	160	6,500	336
RF6703E-100	3 x 100	25	60	11	27	48	2	540	160	6,500	517
RF6704E-100	4 x 100	25	60	11	27	48	2	540	160	6,500	677
RF6701E-150	150	17-1/2	80	17	19-1/2	48	2-1/2	540	390	20,000	319
RF6702E-150	2 x 150	17-1/2	80	17	19-1/2	48	2-1/2	540	390	20,000	550
RF6703E-150	3 x 150	25	80	17	27	48	2-1/2	540	390	20,000	847
RF6704E-150	4 x 150	25	80	17	27	48	2-1/2	540	390	20,000	1359
RF6701E-200	200	17-1/2	80	25	19-1/2	48	3	540	390	20,000	468
RF6702E-200	2 x 200	17-1/2	80	25	19-1/2	48	3	540	390	20,000	919
RF6703E-200	3 x 300	25	80	25	27	48	3	540	390	20,000	1375
RF6704E-200	4 x 200	25	80	25	27	48	3	540	390	20,000	1540
RF6701E-400	400	24	90	30	29	48	3	540	390	20,000	578
RF6702E-400	2 x 400	24	90	30	29	48	3	540	390	20,000	1375
RF6703E-400	3 x 400	45	90	30	50	48	3	540	390	20,000	1953
RF6704E-400	4 x 400	45	90	30	50	48	3	540	390	20,000	2310

The RF6700E series of filters are designed for use in shielded rooms, secure communications areas and high-powered ground and shipboard electronic installations.

This medium voltage high current filter series incorporates a shunt metal-oxide varistor (MOV) transient suppression element, installed in the filter input compartments and designed to protect equipments from damage due to undesired transient or EMP (Electro-Magnetic Pulse) voltages. The device transient performance and power rating is defined in the electrical specifications and pulse rating curves herein. In addition, these filters will provide high broadband insertion loss to meet RFI/EMI system requirements.

All filters are ruggedly designed and constructed. The hermetically sealed filter cases are continuously seam welded to assure leakproof construction. Individual units are impregnated with non-flammable material as recognized by Underwriters Laboratories. Electrical connection to the filter assembly is made by the installer to a flame retardent plastic stand-off insulator, which is connected by means of a flexible lead to the ceramic filter terminal.

Filter cases are of steel construction, and are adequately plated to resist corrosion. RF tight compartments are gasketed with corrosion-resistant metal mesh. All cases include grounded neutral terminals. The maximum voltage drop at 60 Hz power line frequency is 2 volts.

Filters are provided with bleeder resistors installed in order to prevent electric shock due to accidental discharge of filter capacitors while power is disconnected.

All filters are designed for continuous duty operation at rated conditions, will withstand 140% of rated current for 15 minutes and momemtary surges of 10 times rated current.

CAPACITOR OFFERING

The RFI Specialty Components program of Ultra EMS includes a variety of capacitors, including high voltage applications. Some capacitors are the result of in-house development, while others are available as a result of acquisitions, including Stanley and RFI. Our capacitors are typically either Recon (Reconstituted) Mica or Film/Foil designs, with other types available as required.

Capacitors in a feed-through design are available in ratings up to 50 Ampere.

Recon Mica types are available with capacitance ranging between 0.001 and 10µf, and voltages up to 20,000 VDC.

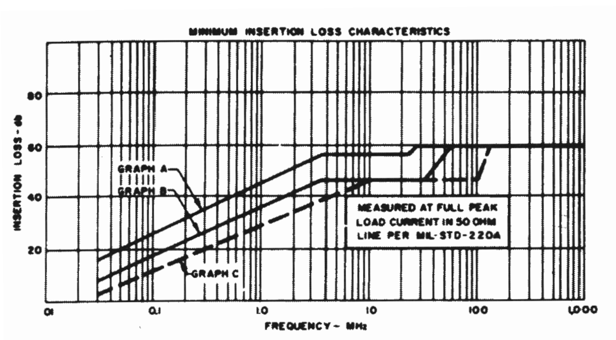
Film/Foil capacitors are capable of voltages of up to 200,000 VDC, and capacitance ranging from 0.0002µf to 10µf.

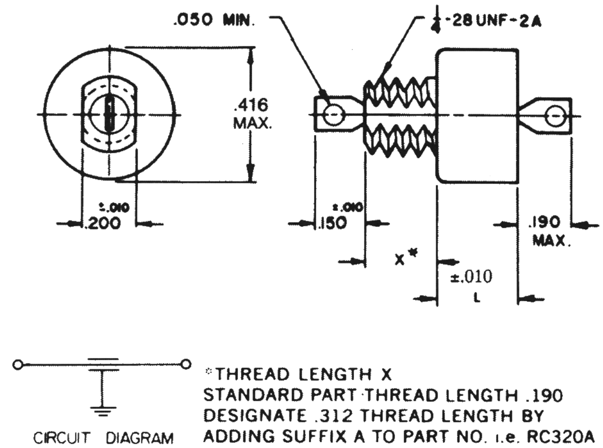
For any requirement that is not addressed in these pages, please consult with the factory about a custom design for your application.

SUBMINIATURE FEED-THROUGH CAPACITORS

TYPE	CURRENT RATING	CAPACITANCE MIN.	VOLTAGE RATING	INSERTION LOSS	SERIES RESISTANCE	DIELECTRIC TEST*	LENGTH L
RC320	15 Amps	1.5 Mfd.	50 VDC @ 125°C	GRAPH A	.008 Ohms Max.	125 VDC	.250
RC321	15 Amps	0.75 Mfd.	100 VDC @ 125°C	GRAPH B	.008 Ohms Max.	200 VDC	.250
RC322	15 Amps	0.3 Mfd.	115 VDC @ 125°C 200 VDC	GRAPH C	.008 Ohms Max.	400 VDC	.350

*Dielectric Test @ 25°C (50MA Max. Charge Current)





*THREAD LENGTH X
STANDARD PART THREAD LENGTH .190
DESIGNATE .312 THREAD LENGTH BY
ADDING SUFFIX A TO PART NO. i.e. RC320A

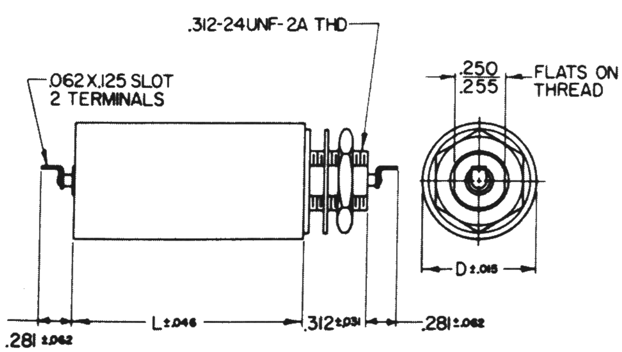
FEED-THROUGH CAPACITORS

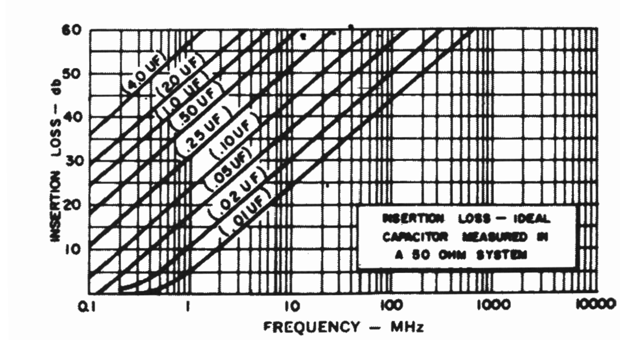
10 AMPERE

SCHEMATIC DIAGRAM

1. Operating Temperature: —55°C to +125°C.
2. DC Resistance: 0.01 ohms max.
3. Capacitance Tolerance: ±20%.
4. Dielectric Test: 2 X rated voltage.

PART NO.	RATED CURRENT	NOMINAL CAPACITANCE µF	RATED VOLTAGE		L	D
			A.C.	D.C.		
RC 24B 473	10A	0.047	--	100	.750	.400
RC 24B 104	10A	0.1	--	100	.875	.400
RC 24B 224	10A	0.22	--	100	1.375	.400
RC 24B 474	10A	0.47	--	100	1.375	.562
RC 24B 105	10A	1.0	--	100	1.875	.670
RC 24B 205	10A	2.0	--	100	2.125	1.00
RC 24C 473	10A	0.047	--	200	.875	.400
RC 24C 104	10A	0.1	--	200	1.125	.400
RC 24C 224	10A	0.22	--	200	1.125	.562
RC 24C 474	10A	0.47	--	200	1.875	.562
RC 24C 105	10A	1.0	--	200	2.125	.750
RC 24E 473	10A	0.047	125	400	1.125	.400
RC 24E 104	10A	0.1	125	400	1.125	.562
RC 24E 224	10A	0.22	125	400	1.875	.562
RC 24E 474	10A	0.47	125	400	2.125	.750
RC 24F 103	10A	0.01	250	600	.750	.400
RC 24F 473	10A	0.047	250	600	1.375	.400
RC 24F 104	10A	0.1	250	600	1.375	.562
RC 24F 224	10A	0.22	250	600	1.875	.670
RC 24F 474	10A	0.47	250	600	2.375	.750



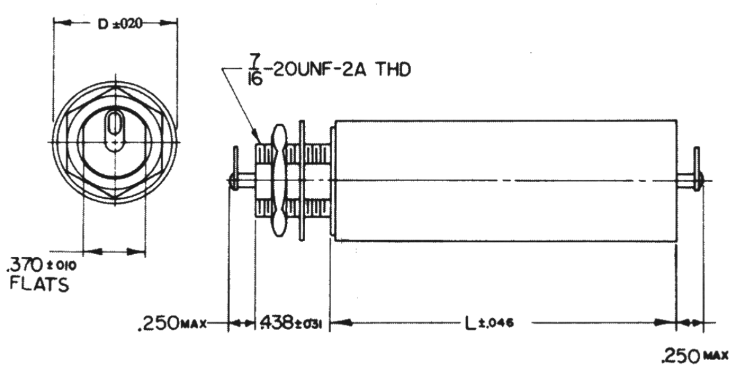


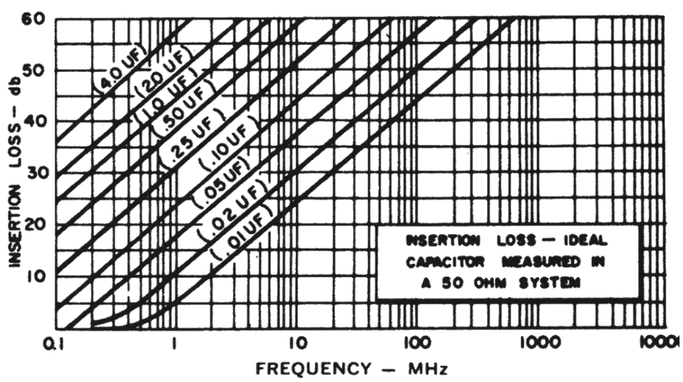
FEED-THROUGH CAPACITORS

20 AMPERE

PART NO.	RATED CURRENT	NOMINAL CAPACITANCE μF	RATED VOLTAGE		D	L
			A.C.	D.C.		
RC 60B 473	20A	0.047	--	100	.670	.875
RC 60B 104	20A	0.1	--	100	.670	.875
RC 60B 224	20A	0.22	--	100	.670	1.000
RC 60B 474	20A	0.47	--	100	.670	1.375
RC 60B 105	20A	1.0	--	100	.750	2.000
RC 60B 205	20A	2.0	--	100	1.000	2.125
RC 60C 473	20A	0.047	--	200	.670	.875
RC 60C 104	20A	0.1	--	200	.670	.875
RC 60C 224	20A	0.22	--	200	.670	1.125
RC 60C 474	20A	0.47	--	200	.670	1.625
RC 60C 105	20A	1.0	--	200	.750	2.375
RC 60E 223	20A	0.022	125	400	.670	.875
RC 60E 473	20A	0.047	125	400	.670	.875
RC 60E 104	20A	0.1	125	400	.670	1.125
RC 60E 224	20A	0.22	125	400	.670	1.625
RC 60E 474	20A	0.47	125	400	.750	2.125
RC 60E 105	20A	1.0	125	400	1.000	2.125
RC 60F 103	20A	0.01	250	600	.670	.875
RC 60F 223	20A	0.022	250	600	.670	.875
RC 60F 473	20A	0.047	250	600	.670	1.000
RC 60F 104	20A	0.1	250	600	.670	1.375
RC 60F 224	20A	0.22	250	600	.670	1.875
RC 60F 474	20A	0.47	250	600	.750	2.590
RC 60G 103	20A	0.01	330	1000	.670	1.125
RC 60G 223	20A	0.022	330	1000	.670	1.125
RC 60G 473	20A	0.047	330	1000	.670	1.375
RC 60G 104	20A	0.1	330	1000	.670	1.750
RC 60G 224	20A	0.22	330	1000	.750	2.500
RC 60G 474	20A	0.47	330	1000	1.000	2.625

1. Operating Temperature: —55°C to +125°C
2. DC Resistance: 0.01 ohms max.
3. Capacitance Tolerance: ±20%.
4. Dielectric Test: 2 X rated voltage.



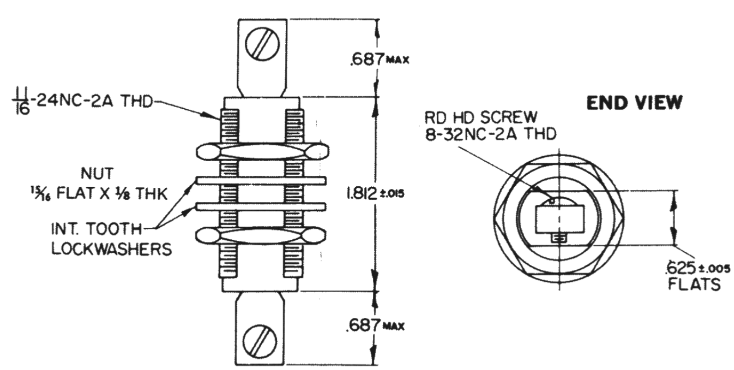


FEED-THROUGH CAPACITORS

50 AMPERE

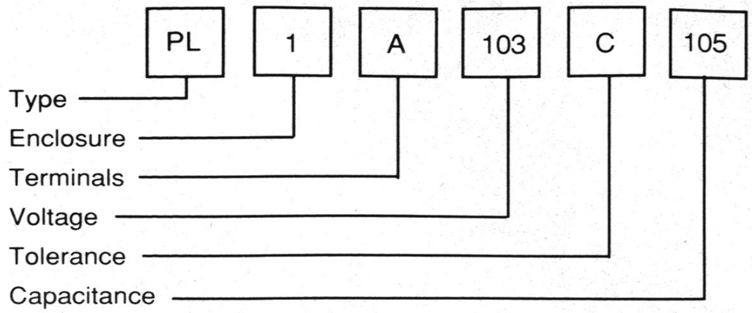
PART NO.	CURRENT	VOLTAGE	CAPACITANCE
RC 210-1	50 Amps	100 VDC	1.5 Mfd.
RC 210-2	50 Amps	115 VAC 400 VDC	0.22 Mfd.
RC 210-3	50 Amps	250 VAC 600 VDC	0.15 Mfd.

The insertion loss characteristics for these parts comply with the requirements of MIL-C-11693B for the values of capacitors indicated.



1. Operating Temperature: —55°C to +125°C
2. DC Resistance: 0.001 ohms max.
3. Capacitance Tolerance: ±20%.
4. Dielectric Test: 2 X rated voltage.

Ordering Information for HV Capacitors



Type:

Mica/Resin & Mica/Epoxy Section:

ZD	Mica Paper/Resin	DC
ZP	Mica Paper/Resin	Repetitive Pulse
ED	Mica Paper/Epoxy	DC
EP	Mica Paper/Epoxy	Repetitive Pulse

The sizes listed in the Mica Section are for the ZD and ZP styles. The sizes for the ED and EP styles are smaller. Contact our engineering staff for the corresponding dimensions.

Film/Paper/Oil Section:

PL	Round Phenolic Tube	DC Filtering-Coupling
RL	Rectangular Phenolic Tube	DC Filtering-Coupling
SL	Metal Housing: Hermetically Sealed	DC Filtering-Coupling
PR	Round Phenolic Tube	Energy Storage
RR	Rectangular Phenolic Tube	Energy Storage
SR	CP72 Metal Housing: Hermetically Sealed	Energy Storage
ER	Welded Metal Housing: Hermetically Sealed	Energy Storage

Enclosure:

1. Wrap and Fill
2. Plastic Case
3. Round Phenolic Tube
4. Rectangular Phenolic Tube
5. CP72 Style Hermetically Sealed
6. Welded-Hermetically Sealed

Terminals:

* A-Inserts:
B-Turrets
C-Screws:
+ D-Pigtails: .040 Dia x 2" Long Solder Coated Copper
+ E-Tabs: .010 Thick x 0.50 Wide x 2" Long
* F-Leads: Insulated, Flexible 12" Long
G-Ceramic-Solder Seal

**Available in plastic and phenolic cases*
+Available in wrap and fill only

Voltage:

The working voltage expressed in volts by a three digit number. The first two digits are significant figures and the last digit specifies the number of zeros to follow:

Example: 103=10,000 Volts = 10KV

Capacitance Tolerance:

Symbol	Tolerance(±)
A	2%
B	5%
C	10%
D	20%

Capacitance:

The nominal capacitance value expressed in picofarads (pf) is identified by a three-digit number. The first two digits are significant figures and the last digit specifies the number of zeros to follow:

Example: 503=50,000 picofarad=0.05MFD

CAPACITOR DIELECTRIC SELECTOR CHART

DIELECTRIC	VOLTAGE RATING	SERVICE	TEMP. RANGE	INSULATION RESISTANCE MΩ XMFD	TYPES
+Mylar/Kraft Paper Mineral Oil	1,000 to 100,000	DC Filtering Energy Storage	-55°C to +105°C	10,000	PL, RL, ER, SL, WL
+Mylar/Kraft Paper Castor Oil	1,000 to 100,000	DC Filtering Energy Storage	-25°C to +105°C	10,000	PL, RL, ER, SL, WL
Recon Mica/Resin Recon Mica/Epoxy	600 to 100,000	DC Energy Storage Repetitive Pulse	-55°C to +125°C	10,000	ZP, ZD, ED, EP
Polypropylene/Kraft Paper Mineral Oil	150 to 100,000	High Rep. Rate Repetitive Pulse Discharge & Energy Storage	-55°C to +105°C	10,000	PR, RR, SR
Polypropylene/Kraft Paper Castor Oil	1,500 to 100,000	High Rep. Rate Repetitive Pulse Discharge & Energy Storage	-25°C to +105°C	10,000	PR, RR, SR

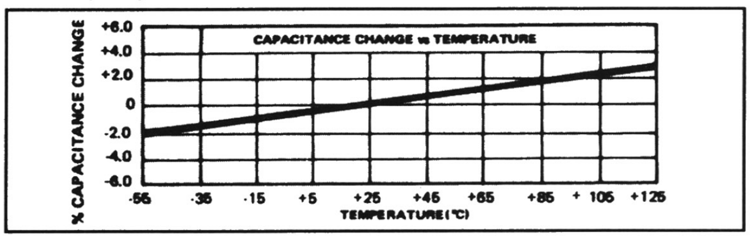
RECON MICA™ CAPACITORS: TECHNICAL DATA

Stanley Recon Mica™ capacitors provide the designer of high voltage electronic and electrical equipment substantial savings in size and weight over the conventional oil-filled, ceramic insulated types. Combining the well-known characteristics of mica and the versatility of polyester resin, Stanley offers the user flexibility in circuit layout utilizing the freedom of shape factor and the absence of encumbering protrusions.

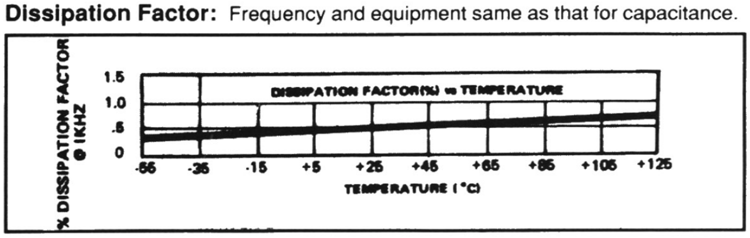
Very low inductance is realizable as a result of the dry construction which eliminates the need for inherently high inductance ceramic insulating bushings. Because there is no oil to leak, Stanley Recon Mica™ capacitors offer the system designer greater reliability than would be encountered when using oil-filled components.

Performance Curves:

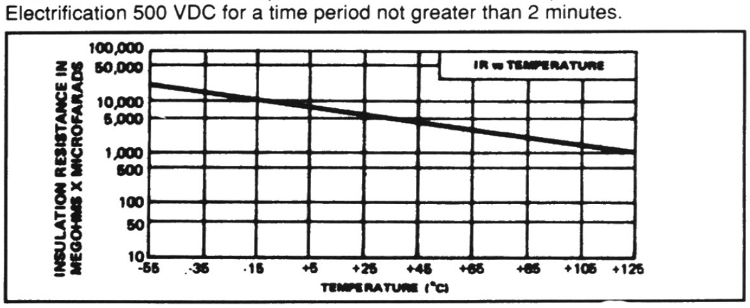
Capacitance: (Ref. Mil-STD-202, Method 305)
Test Frequency: 1000 Hz<1.0 UF Rating, 60 Hz=1.0 UF Rating



Dissipation Factor: Frequency and equipment same as that for capacitance.



Insulation Resistance: (Ref. Mil-STD-202, Method 302)
Electrification 500 VDC for a time period not greater than 2 minutes.



+ Trademark of DuPont Company

Features:

- High Energy Densities
- High Corona Resistance
- Low Capacitance Change with Temperature and Frequency
- High Radiation Resistance
- Dry Solid State Package-No Leaks
- No Cumbersome High Voltage Bushings
- Compatible for use in Dielectric Fluids
- Wide Temperature Capability

Applications:

- High Voltage D-C
- Low Inductance Energy Discharge
- Pulse Forming Networks
- D-C Filtering
- By-Pass
- Laser Power Supplies
- Marx Generator
- Power Factor Correction
- Voltage Doubling

Environmental Characteristics:

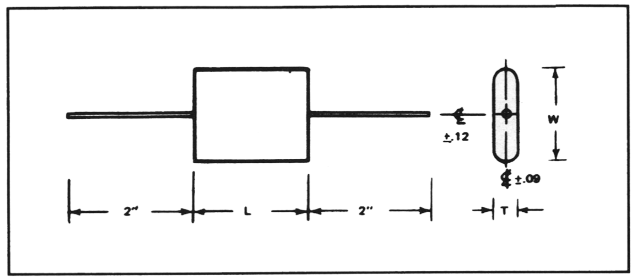
Operating Termperature:
-65°C to +125°C without derating
(Higher temperature available upon request)

Applicable Military Specifications:

Meets Life requirements, Vibration and Shock, Moisture Resistance and Temperature Immersion cycling as specified in applicable portions of Mil-C-5, Mil-C-25, Mil-C-19978, Mil-N-23182.

RECON MICA™: DC CAPACITORS WRAP AND FILL

Stanley Recon Mica™ wrap and fill high voltage D-C capacitors are manufactured under controlled environmental conditions and utilize the very finest of materials. The reconstituted mica paper, aluminum foil, thermosetting resin, polyester thermosetting tape and two-part epoxy end fill are all of the highest quality controlled by specification, thereby assuring consistency in the end product. These capacitors are ideally suited for power supply filtering, energy storage, voltage doubling and D-C blocking.

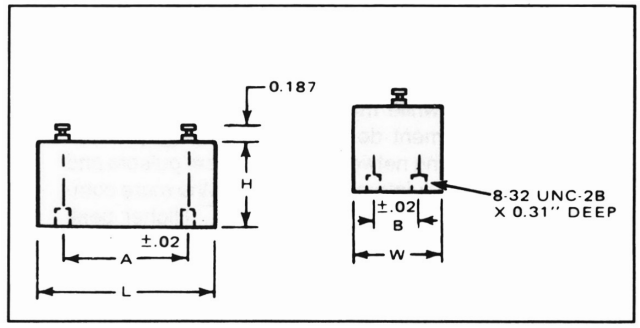


PART NO.	MFD	L	W	T
1,000 wvdc				
ZD1D102C224	0.22	2.00	1.81	0.19
ZD1D102C254	0.25	2.00	1.84	0.21
ZD1D102C334	0.33	2.00	1.91	0.25
ZD1D102C504	0.50	2.00	1.84	0.39
ZD1D102C105	1.00	2.00	1.84	0.76
ZD1D102C205	2.00	2.00	1.84	1.49
ZD1D102C405	4.00	3.00	1.87	1.73
ZD1D102C605	6.00	3.00	1.87	2.59
ZD1D102C805	8.00	3.00	1.87	3.42
ZD1D102C106	10.00	3.00	1.94	4.15
2,000 wvdc				
ZD1D202C104	0.10	2.00	1.73	0.12
ZD1D202C224	0.22	2.00	1.86	0.22
ZD1D202C254	0.25	2.00	1.90	0.24
ZD1D202C334	0.33	2.00	1.98	0.30
ZD1D202C504	0.50	2.00	1.90	0.46
ZD1D202C105	1.00	2.00	1.90	0.90
ZD1D202C205	2.00	2.00	1.90	1.78
ZD1D202C405	4.00	3.00	1.95	2.09
ZD1D202C605	6.00	3.00	1.95	3.13
3,000 wvdc				
ZD1D302C103	0.010	1.50	1.66	0.07
ZD1D302C223	0.022	1.50	1.71	0.11
ZD1D302C253	0.025	1.50	1.72	0.12
ZD1D302C333	0.033	1.50	1.76	0.14
ZD1D302C503	0.050	1.50	1.82	0.19
ZD1D302C104	0.100	2.00	1.84	0.20
ZD1D302C224	0.22	2.00	2.06	0.36
ZD1D302C254	0.25	2.00	1.89	0.45
ZD1D302C334	0.33	2.00	1.96	0.57
ZD1D302C504	0.50	2.00	1.97	0.84
ZD1D302C105	1.00	3.12	1.92	0.96
ZD1D302C205	2.00	3.12	1.92	1.89
ZD1D302C405	4.00	4.25	2.70	1.89
4,000 wvdc				
ZD1D402C103	0.010	1.50	1.71	0.11
ZD1D402C223	0.022	1.50	1.79	0.17
ZD1D402C253	0.025	1.50	1.82	0.19
ZD1D402C333	0.033	1.50	1.86	0.22
ZD1D402C503	0.050	1.50	1.83	0.38
ZD1D402C104	0.10	2.00	2.01	0.33
ZD1D402C224	0.22	2.00	2.04	0.68
ZD1D402C254	0.25	2.00	2.60	0.65
ZD1D402C334	0.33	2.00	2.04	1.01
ZD1D402C504	0.50	2.00	2.60	1.30
ZD1D402C105	1.00	4.25	1.97	1.08
ZD1D402C205	2.00	4.25	1.97	2.16
5,000 wvdc				
ZD1D502C103	0.010	2.00	1.70	0.10
ZD1D502C223	0.022	2.00	1.79	0.16
ZD1D502C253	0.025	2.00	1.80	0.18
ZD1D502C333	0.033	2.00	1.86	0.22
ZD1D502C503	0.050	2.00	1.80	0.34
ZD1D502C104	0.10	2.00	1.80	0.66
ZD1D502C224	0.22	3.12	1.99	0.61
ZD1D502C254	0.25	3.12	2.04	0.66
ZD1D502C334	0.33	3.12	1.99	0.91
ZD1D502C504	0.50	3.12	2.04	1.30
ZD1D502C105	1.00	3.12	2.04	2.58

PART NO.	MFD	L	W	T
6,000 wvdc				
ZD1D602C103	0.010	2.12	1.73	0.13
ZD1D602C253	0.025	2.12	1.86	0.22
ZD1D602C333	0.033	2.12	1.93	0.27
ZD1D602C503	0.050	2.12	1.86	0.42
ZD1D602C104	0.10	2.12	1.86	0.82
ZD1D602C254	0.25	3.12	1.93	1.01
ZD1D602C334	0.33	3.12	2.01	1.25
ZD1D602C504	0.50	4.25	2.01	1.24
ZD1D602C105	1.00	4.25	2.01	2.46
7,500 wvdc				
ZD1D752C103	0.010	4.25	1.68	0.09
ZD1D752C253	0.025	4.25	1.77	0.15
ZD1D752C333	0.033	4.25	1.81	0.18
ZD1D752C503	0.050	4.25	1.90	0.32
ZD1D752C104	0.10	4.25	1.90	0.48
ZD1D752C254	0.25	4.25	1.96	1.09
ZD1D752C334	0.33	4.25	1.92	1.46
ZD1D752C504	0.50	4.25	1.96	2.16
ZD1D752C105	1.00	4.25	1.96	4.29
10,000 wvdc				
ZD1D103C153	0.005	4.25	1.70	0.10
ZD1D103C103	0.010	4.25	1.75	0.14
ZD1D103C253	0.025	4.25	2.00	0.25
ZD1D103C333	0.033	4.25	1.82	0.35
ZD1D103C503	0.050	4.25	2.00	0.48
ZD1D103C104	0.10	4.25	2.00	0.94
ZD1D103C254	0.25	4.25	1.86	2.40
12,500 wvdc				
ZD1D123C252	0.0025	4.25	1.67	0.09
ZD1D123C153	0.0050	4.25	1.72	0.12
ZD1D123C103	0.010	4.25	1.81	0.18
ZD1D123C253	0.025	4.25	1.86	0.41
ZD1D123C333	0.033	4.25	1.92	0.50
ZD1D123C503	0.050	4.25	1.93	0.75
ZD1D123C104	0.10	4.25	1.98	1.42
ZD1D123C254	0.25	4.25	1.99	3.49
15,000 wvdc				
ZD1D153C102	0.0010	4.25	1.66	0.08
ZD1D153C252	0.0025	4.25	1.72	0.12
ZD1D153C502	0.0050	4.25	1.79	0.17
ZD1D153C103	0.010	4.25	1.92	0.26
ZD1D153C253	0.025	4.25	1.98	0.58
ZD1D153C333	0.033	4.25	1.94	0.77
ZD1D153C503	0.050	4.25	1.98	1.13
ZD1D153C104	0.10	4.25	1.91	2.32
20,000 wvdc				
ZD1D203C102	0.0010	4.25	1.70	0.10
ZD1D203C252	0.0025	4.25	1.79	0.17
ZD1D203C502	0.0050	4.25	1.92	0.27
ZD1D203C103	0.010	4.25	1.92	0.50
ZD1D203C253	0.025	4.25	1.99	1.16
ZD1D203C333	0.033	4.25	2.01	1.51
ZD1D203C503	0.050	4.25	1.99	2.30
ZD1D203C104	0.10	5.00	2.50	2.72

RECON MICA™: DC CAPACITORS PLASTIC CASE

Stanley Recon Mica™ plastic-encased high voltage D-C capacitors are manufactured under controlled environmental conditions and utilize the very finest of materials. The reconstituted mica paper, aluminum foil, thermosetting resin, G-10 grade epoxy fiberglass laminate and two-part epoxy encapsulant are all of the highest quality controlled by specification, thereby assuring consistency in the end product. These capacitors are ideally suited for power supply filtering, energy storage, voltage doubling and D-C blocking.



PART NO.	MFD	L	W	H	A	B
1,000 wvdc						
ZD2B102C254	0.25	2.12	2.25	0.72	1.62	1.75
ZD2B102C334	0.33	2.12	2.25	0.75	1.62	1.75
ZD2B102C504	0.50	2.12	2.25	0.89	1.62	1.75
ZD2B102C105	1.00	2.12	2.25	1.26	1.62	1.75
ZD2B102C205	2.00	2.12	2.25	1.99	1.62	1.75
ZD2B102C405	4.00	3.25	2.25	2.23	2.75	1.75
ZD2B102C605	6.00	3.25	2.25	3.09	2.75	1.75
ZD2B102C805	8.00	3.25	2.25	3.92	2.75	1.75
ZD2B102C106	10.00	3.25	2.25	4.65	2.75	1.75
2,000 wvdc						
ZD2B202C104	0.10	2.12	2.00	0.72	1.62	1.50
ZD2B202C254	0.25	2.12	2.25	0.74	1.62	1.75
ZD2B202C334	0.33	2.12	2.25	0.80	1.62	1.75
ZD2B202C504	0.50	2.12	2.25	0.96	1.62	1.75
ZD2B202C105	1.00	2.12	2.25	1.40	1.62	1.75
ZD2B202C205	2.00	2.12	2.25	2.28	1.62	1.75
ZD2B202C405	4.00	3.25	2.25	2.59	2.75	1.75
ZD2B202C605	6.00	3.25	2.25	3.63	2.75	1.75
3,000 wvdc						
ZD2B302C103	0.010	1.62	2.00	0.72	1.12	1.50
ZD2B302C253	0.025	1.62	2.00	0.72	1.12	1.50
ZD2B302C333	0.033	1.62	2.25	0.72	1.12	1.75
ZD2B302C503	0.050	1.62	2.25	0.72	1.12	1.75
ZD2B302C104	0.10	2.12	2.25	0.72	1.62	1.75
ZD2B302C254	0.25	2.12	2.25	0.95	1.62	1.75
ZD2B302C334	0.33	2.12	2.25	1.07	1.62	1.75
ZD2B302C504	0.50	2.12	2.25	1.34	1.62	1.75
ZD2B302C105	1.00	3.25	2.25	1.46	2.75	1.75
ZD2B302C205	2.00	3.25	2.25	2.39	2.75	1.75
ZD2B302C405	4.00	4.25	2.25	2.39	3.75	1.75
4,000 wvdc						
ZD2B402C103	0.010	1.62	2.00	0.72	1.12	1.50
ZD2B402C253	0.025	1.62	2.25	0.72	1.12	1.75
ZD2B402C333	0.033	1.62	2.25	0.72	1.12	1.75
ZD2B402C503	0.050	1.62	2.25	0.88	1.12	1.75
ZD2B402C104	0.10	2.12	2.25	0.83	1.62	1.75
ZD2B402C254	0.25	2.12	2.25	1.15	1.62	1.75
ZD2B402C334	0.33	2.12	2.25	1.51	1.62	1.75
ZD2B402C504	0.50	2.12	2.25	1.80	1.62	1.75
ZD2B402C105	1.00	4.25	2.25	1.58	3.75	1.75
ZD2B402C205	2.00	4.25	2.25	2.66	3.75	1.75
5,000 wvdc						
ZD2B502C103	0.010	2.12	2.00	0.72	1.62	1.50
ZD2B502C253	0.025	2.12	2.25	0.72	1.62	1.75
ZD2B502C333	0.033	2.12	2.25	0.72	1.62	1.75
ZD2B502C503	0.050	2.12	2.25	0.84	1.62	1.75
ZD2B502C104	0.10	2.12	2.25	1.16	1.62	1.75
ZD2B502C254	0.25	3.25	2.25	1.16	2.75	1.75
ZD2B502C334	0.33	3.25	2.25	1.41	2.75	1.75
ZD2B502C504	0.50	3.25	2.25	1.80	2.75	1.75
ZD2B502C105	1.00	3.25	2.25	3.18	2.75	1.75

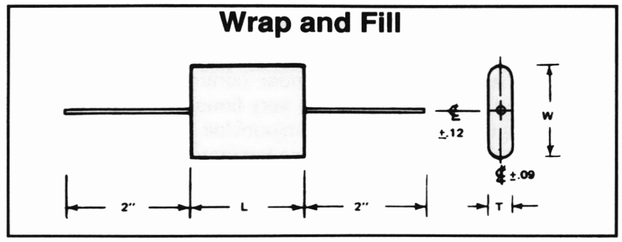
PART NO.	MFD	L	W	H	A	B
6,000 wvdc						
ZD2B602C103	0.010	2.12	2.00	0.72	1.62	1.50
ZD2B602C253	0.025	2.12	2.25	0.72	1.62	1.75
ZD2B602C333	0.033	2.12	2.25	0.77	1.62	1.75
ZD2B602C503	0.050	2.12	2.25	0.92	1.62	1.75
ZD2B602C104	0.10	2.12	2.25	1.32	1.62	1.75
ZD2B602C254	0.25	3.25	2.25	1.51	2.75	1.75
ZD2B602C334	0.33	3.25	2.25	1.75	2.75	1.75
ZD2B602C504	0.50	4.25	2.25	1.75	3.75	1.75
ZD2B602C105	1.00	4.25	2.25	2.96	3.75	1.75
7,500 wvdc						
ZD2B752C103	0.010	4.25	2.00	0.72	3.75	1.50
ZD2B752C253	0.025	4.25	2.25	0.72	3.75	1.75
ZD2B752C333	0.033	4.25	2.25	0.72	3.75	1.75
ZD2B752C503	0.050	4.25	2.25	0.75	3.75	1.75
ZD2B752C104	0.10	4.25	2.25	0.98	3.75	1.75
ZD2B752C254	0.25	4.25	2.25	1.60	3.75	1.75
ZD2B752C334	0.33	4.25	2.25	1.96	3.75	1.75
ZD2B752C504	0.50	4.25	2.25	2.66	3.75	1.75
ZD2B752C105	1.00	4.25	2.25	4.80	3.75	1.75
10,000 wvdc						
ZD2B103C502	0.0050	4.25	2.00	0.72	3.75	1.50
ZD2B103C103	0.010	4.25	2.00	0.72	3.75	1.50
ZD2B103C253	0.025	4.25	2.25	0.75	3.75	1.75
ZD2B103C333	0.033	4.25	2.25	0.85	3.75	1.75
ZD2B103C503	0.050	4.25	2.25	0.98	3.75	1.75
ZD2B103C104	0.10	4.25	2.25	1.44	3.75	1.75
ZD2B103C254	0.025	4.25	2.25	2.90	3.75	1.75
12,500 wvdc						
ZD2B123C252	0.0025	4.25	2.00	0.72	3.75	1.50
ZD2B123C502	0.0050	4.25	2.00	0.72	3.75	1.50
ZD2B123C103	0.010	4.25	2.25	0.72	3.75	1.75
ZD2B123C253	0.025	4.25	2.25	0.91	3.75	1.75
ZD2B123C333	0.033	4.25	2.25	1.00	3.75	1.75
ZD2B123C503	0.050	4.25	2.25	1.25	3.75	1.75
ZD2B123C104	0.10	4.25	2.25	1.92	3.75	1.75
ZD2B123C254	0.25	4.25	2.25	3.99	3.75	1.75
15,000 wvdc						
ZD2B153C102	0.0010	4.25	2.00	0.72	3.75	1.50
ZD2B153C252	0.0025	4.25	2.00	0.72	3.75	1.50
ZD2B153C502	0.0050	4.25	2.25	0.72	3.75	1.75
ZD2B153C103	0.010	4.25	2.25	0.76	3.75	1.75
ZD2B153C253	0.025	4.25	2.25	1.08	3.75	1.75
ZD2B153C333	0.033	4.25	2.25	1.27	3.75	1.75
ZD2B153C503	0.050	4.25	2.25	1.63	3.75	1.75
ZD2B153C104	0.10	4.25	2.25	2.82	3.75	1.75
20,000 wvdc						
ZD2B203C102	0.0010	4.25	2.00	0.72	3.75	1.50
ZD2B203C252	0.0025	4.25	2.25	0.72	3.75	1.75
ZD2B203C502	0.0050	4.25	2.25	0.77	3.75	1.75
ZD2B203C103	0.010	4.25	2.25	1.00	3.75	1.75
ZD2B203C253	0.025	4.25	2.25	1.56	3.75	1.75
ZD2B203C333	0.033	4.25	2.25	2.01	3.75	1.75
ZD2B203C503	0.050	4.25	2.25	2.80	3.75	1.75

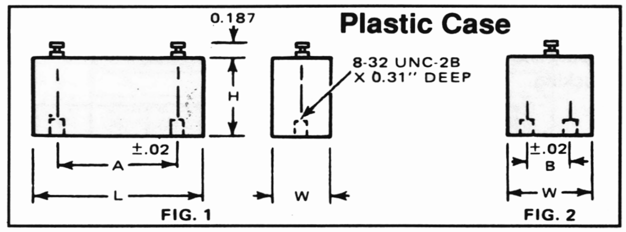
RECON MICA™: REPETITIVE DISCHARGE CAPACITORS

Stanley Recon Mica™ repetitive discharge capacitors are ideally suited for applications requiring complete discharge at repetition rates from 1 pps up to and including 16,000 pps, at peak currents reaching 1,000 amperes.† These devices are optimally designed to yield the greatest power handling capability while maintaining the lowest volume affording the equipment designer more energy per unit volume. Pulse forming networks for both laser pulsers and radar transmitter modulators are just two of the more common uses for the capacitors listed herein. Higher peak currents are achievable at lower repetition frequencies. To increase the peak current and stay within the rating of the capacitor, reduce the pulse repetition rate by the square of the current ratio.

Example: P/N ZP1D601C503 is listed at 15,000 pps at 50 amperes. To increase to 100 amperes reduce the prf to 3750 pps. $15{,}00/(100/50)^2=3750$

† Higher repetition frequencies and higher voltages are available upon request.





WRAP AND FILL

PART NO.	MFD	L	W	T	MAX** PRF	MAX* I PK
600 V						
ZP1D601C503	0.05	1.75	1.69	0.10	15,000	40
ZP1D601C104	0.10	1.75	1.78	0.16	10,000	40
ZP1D601C254	0.25	2.25	2.21	0.19	5,000	60
ZP1D601C504	0.50	3.25	2.24	0.21	3,500	125
ZP1D601C105	1.0	3.25	2.24	0.42	2,100	400
ZP1D601C205	2.0	3.25	2.24	0.83	1,300	1,000
1,000 V						
ZP1D102C103	0.01	1.50	1.25	0.07	16,000	75
ZP1D102C503	0.05	1.75	1.72	0.11	5,000	80
ZP1D102C104	0.10	1.75	1.81	0.18	3,000	80
ZP1D102C254	0.25	2.25	2.27	0.22	2,000	95
ZP1D102C504	0.50	3.25	2.67	0.23	1,600	160
ZP1D102C105	1.0	3.25	2.67	0.45	1,000	480
ZP1D102C205	2.0	3.25	2.67	0.87	500	1,000
3,000 V						
ZP1D302C501	0.0005	1.25	1.25	0.06	16,000	20
ZP1D302C503	0.0010	1.25	1.30	0.10	16,000	20
ZP1D302C152	0.0015	1.50	1.30	0.10	13,000	40
ZP1D302C252	0.0025	1.75	1.31	0.10	9,000	60
ZP1D302C502	0.005	2.00	1.34	0.13	6,000	60
ZP1D302C103	0.010	2.00	1.78	0.16	3,700	80
ZP1D302C253	0.025	2.00	1.95	0.28	1,800	115
ZP1D302C503	0.05	2.50	2.22	0.37	1,300	500
ZP1D302C104	0.10	4.50	2.21	0.35	1,000	1,000
ZP1D302C254	0.25	4.50	2.25	0.80	500	1,000
5,000 V						
ZP1D502C501	0.0005	1.25	1.27	0.14	12,000	30
ZP1D502C102	0.0010	1.25	1.29	0.18	6,600	30
ZP1D502C152	0.0015	1.75	1.29	0.16	5,800	90
ZP1D502C252	0.0025	2.00	1.30	0.18	4,000	90
ZP1D502C502	0.005	2.50	2.10	0.17	3,800	95
ZP1D502C103	0.010	2.50	2.12	0.25	2,000	250
ZP1D502C253	0.025	4.50	2.15	0.27	1,500	500
ZP1D502C503	0.05	4.50	2.25	0.44	1,000	500
ZP1D502C104	0.10	4.50	2.27	0.85	500	1,000
10,000 V						
ZP1D103C501	0.0005	1.25	1.71	0.35	5,000	40
ZP1D103C102	0.0010	1.25	1.77	0.48	3,000	75
ZP1D103C152	0.0015	1.75	1.74	0.41	2,400	100
ZP1D103C252	0.0025	2.00	2.14	0.43	2,000	320
ZP1D103C502	0.005	3.25	2.24	0.43	1,700	670
ZP1D103C103	0.010	4.50	2.55	0.45	1,200	1,000
ZP1D103C253	0.025	4.50	2.70	0.78	600	1,000
15,000 V						
ZP1D153C501	0.0005	1.50	1.70	0.55	3,000	60
ZP1D153C102	0.0010	1.50	1.75	0.74	1,800	180
ZP1D153C152	0.0015	1.75	1.75	0.72	1,300	320
ZP1D153C252	0.0025	2.00	2.17	0.82	1,100	350
ZP1D153C502	0.005	3.25	2.54	0.75	900	850
ZP1D153C103	0.010	4.50	2.57	0.87	600	1,000

PLASTIC CASE

PART NO.	MFD	L	W	H	FIG.	A	B	MAX** PRF	MAX* I PK
600 V									
ZP2B601C503	0.05	2.38	0.38	2.00	1	1.88	--	15,000	40
ZP2B601C104	0.10	2.38	0.44	2.12	1	1.88	--	10,000	40
ZP2B601C254	0.25	2.88	0.44	2.50	1	2.38	--	5,000	60
ZP2B601C504	0.50	3.88	0.50	2.50	1	3.38	--	3,500	125
ZP2B601C105	1.0	3.88	0.68	2.50	1	3.38	--	2,100	400
ZP2B601C205	2.0	3.88	1.12	2.50	2	3.38	0.62	1,300	1,000
1,000 V									
ZP2B102C103	0.01	2.12	0.38	1.50	1	1.62	--	16,000	75
ZP2B102C503	0.05	2.38	0.38	2.00	1	1.88	--	5,000	80
ZP2B102C104	0.10	2.38	0.44	2.12	1	1.88	--	3,000	80
ZP2B102C254	0.25	2.88	0.50	2.62	1	2.38	--	2,000	95
ZP2B102C504	0.50	3.88	0.50	3.00	1	3.38	--	1,600	160
ZP2B102C105	1.0	3.88	1.00	3.00	2	3.38	0.50	1,000	480
ZP2B102C205	2.0	3.88	1.12	3.00	2	3.38	0.62	500	1,000
3,000 V									
ZP2B302C501	0.0005	1.88	0.38	1.50	1	1.38	--	16,000	20
ZP2B302C102	0.0010	1.88	0.38	1.62	1	1.38	--	16,000	20
ZP2B302C152	0.0015	2.12	0.38	1.62	1	1.62	--	13,000	40
ZP2B302C252	0.0025	2.38	0.38	1.62	1	1.88	--	9,000	60
ZP2B302C502	0.005	2.62	0.38	1.62	1	2.12	--	6,000	60
ZP2B302C103	0.010	2.62	0.44	2.00	1	2.12	--	3,700	80
ZP2B302C253	0.025	2.62	0.62	2.25	1	2.12	--	1,800	115
ZP2B302C503	0.05	3.12	0.62	2.50	1	2.62	--	1,300	500
ZP2B302C104	0.10	5.12	0.62	2.50	1	4.62	--	1,000	1,000
ZP2B302C254	0.25	5.12	1.12	2.50	2	4.62	0.62	500	1,000
5,000 V									
ZP2B502C501	0.0005	1.88	0.44	1.62	1	1.38	--	12,000	30
ZP2B502C102	0.0010	1.88	0.44	1.62	1	1.38	--	6,600	30
ZP2B502C152	0.0015	2.38	0.44	1.62	1	1.88	--	5,800	90
ZP2B502C252	0.0025	2.62	0.44	1.62	1	2.12	--	4,000	90
ZP2B502C502	0.005	3.12	0.44	2.38	1	2.62	--	3,800	95
ZP2B502C103	0.010	3.12	0.50	2.38	1	2.62	--	2,000	250
ZP2B502C253	0.025	5.12	0.62	2.50	1	4.62	--	1,500	500
ZP2B502C503	0.05	5.12	0.75	2.50	1	4.62	--	1,000	500
ZP2B502C104	0.10	5.12	1.12	2.62	2	4.62	0.62	500	1,000
10,000 V									
ZP2B103C501	0.0005	1.88	0.62	2.00	1	1.38	--	5,000	40
ZP2B103C102	0.0010	1.88	0.75	2.00	1	1.38	--	3,000	75
ZP2B103C152	0.0015	2.38	0.75	2.00	1	1.88	--	2,400	100
ZP2B103C252	0.0025	2.62	0.75	2.50	1	2.12	--	2,000	320
ZP2B103C502	0.005	3.88	0.88	2.50	1	3.38	--	1,700	670
ZP2B103C103	0.010	5.12	0.75	2.88	1	4.62	--	1,200	1,000
ZP2B103C253	0.025	5.12	1.00	3.00	2	4.62	0.50	600	1,000
15,000 V									
ZP2B153C501	0.0005	2.12	0.88	2.00	1	1.62	--	3,000	60
ZP2B153C102	0.0010	2.12	1.00	2.00	2	1.52	0.50	1,800	180
ZP2B153C152	0.0015	2.38	1.00	2.00	2	1.88	0.50	1,300	320
ZP2B153C252	0.0025	2.62	1.12	2.50	2	2.12	0.62	1,100	350
ZP2B153C502	0.005	3.88	1.00	2.88	2	3.38	0.50	900	850
ZP2B153C103	0.010	5.12	1.12	2.88	2	4.62	0.62	600	1,000

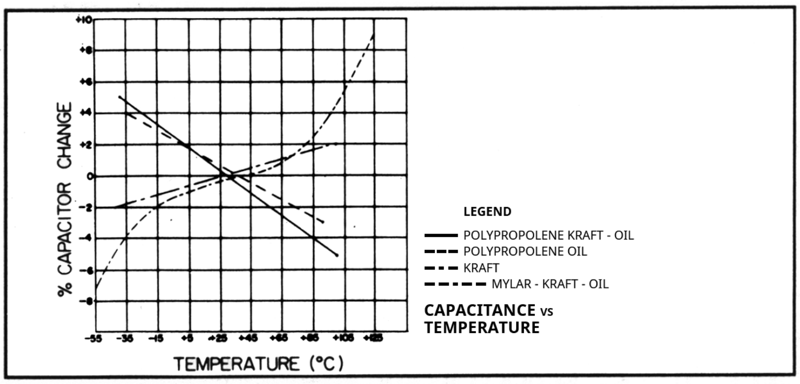
*Amperes **In Pulses per Second @ 25o C. For Higher Ambient Temperatures Reduce Average Power or Provide External Cooling or Consult EMS Engineering Staff.

FILM CAPACITORS: TECHNICAL DATA

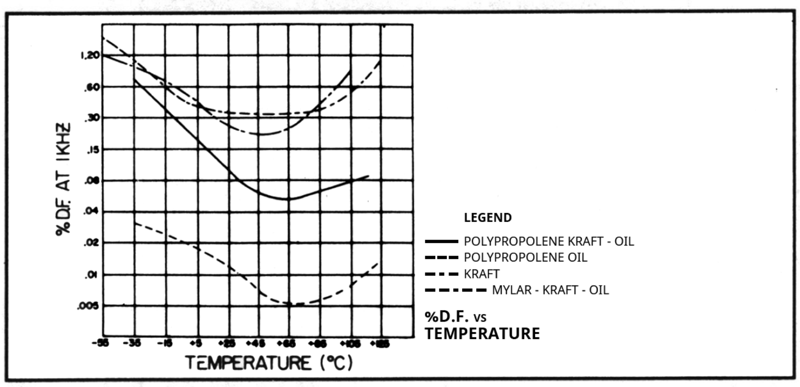
Stanley Film Capacitors are designed and manufactured to conform to MIL-C-19978. Large amounts of energy are capable of being stored in moderate volumes because of the high dielectric strength achievable with the use of plastic films and oil. Only the finest films and purest dielectric fluids are used to assure the greatest reliability and the longest life associated with the best engineering practices. We will be pleased to recommend the proper combinations of dielectric films, kraft paper and dielectric fluids to satisfy the specific parameters of all requirements.

Performance Curves:

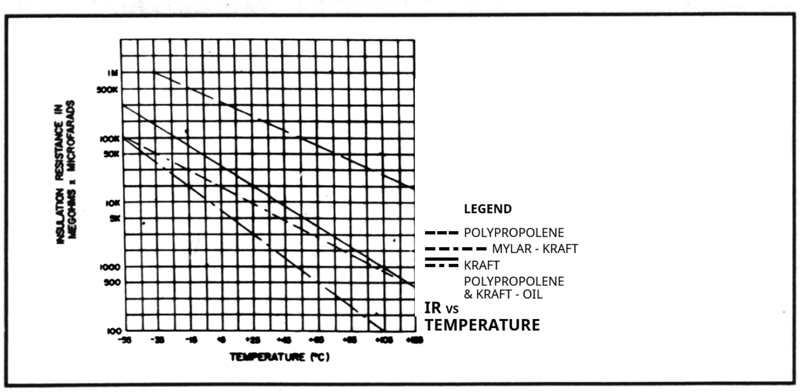
Capacitance: (Ref Mil-Std-202, Method 305)
Test Frequency: 1000 Hz<1.0 UF Rating, 60 Hz=1.0 UF Rating



Dissipation Factor:
Frequency and equipment same as that for capacitance.



Insulation Resistance: (Ref. Mil-STD-202, Method 302)
Electrification 500 VDC for a time period not greater than 2 minutes.



CUSTOM DESIGN:

If your requirements for a specific application are not listed within the pages of this catalog our engineers can provide custom designs. This represents a large part of our engineering effort. Where size and shape are critical, consult our engineering department for prompt answers to your needs.

Capacitor Parameters:

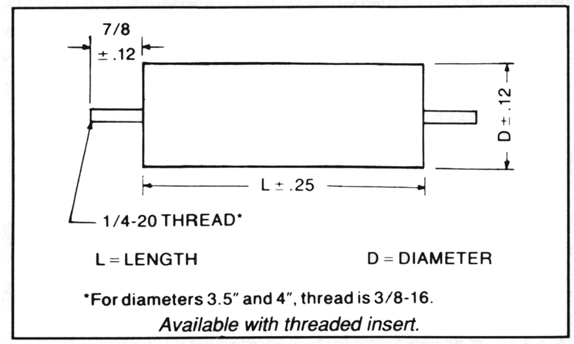
- Voltage to 200KV
- Current to 200 A RMS, 10,000 A PK
- Frequency DC to 100KHz
- Q to 1,000
- Temperature -55°C to +125°C
- Low ESR
- High IR
- Low Dissipation Factor
- Low Inductance

Applications:

- Power Inverters
- High Frequency
- Lasers
- X-Ray
- MIL-Spec
- Pulse Modulators
- Induction Heating
- Power Supply Filters

FILM CAPACITORS: ROUND PHENOLIC TUBE

Stanley Electronics Phenolic Tube capacitors feature a composite paper and plastic film dielectric that is oil impregnated to provide optimum high voltage performance. These capacitors are particularly suited for filter and coupling applications (Types PL and RL) and pulse or discharge service (Types PR and RR). The convenience of vertical and horizontal mounting makes these capacitor shapes popular. Since the tubes are made of heavy wall phenolic/paper laminate and are insulators, the cost of expensive ceramic terminals is avoided with these designs. Types PL and RL Capacitors are designed for low discharge current such as required in coupling and filter circuits. Types PR and RR Capacitors are designed to accomodate higher discharge currents in pulse applications and high frequencies. They can be used for AC service with derating.



PL SERIES: FILTER & COUPLING

PART NO.	MFD	D	L
2,500 VDC			
PL3*252C104	.1	1.0	3.5
PL3*252C504	.5	1.5	7.5
PL3*252C105	1.0	2.5	3.5
PL3*252C505	5.0	2.5	7.5
PL3*252C106	10.0	3.5	7.5
5,000 VDC			
PL3*502C503	.05	1.5	3.5
PL3*502C104	.1	1.5	3.5
PL3*502C504	.5	1.5	7.5
PL3*502C105	1.0	2.0	7.5
PL3*502C505	5.0	4.0	7.5
10,000 VDC			
PL3*103C103	.01	1.5	3.5
PL3*103C503	.05	2.0	3.5
PL3*103C104	.1	2.0	7.5
PL3*103C504	.5	2.5	9.5
PL3*103C105	1.0	3.5	9.5
20,000 VDC			
PL3*203C103	.01	1.0	9.5
PL3*203C503	.05	1.5	13.5
PL3*203C104	.1	2.0	13.5
PL3*203C504	.5	3.5	17.5
50,000 VDC			
PL3*503C501	.0005	1.0	9.5
PL3*503C102	.001	1.0	13.5
PL3*503C502	.005	1.5	13.5
PL3*503C103	.01	2.0	13.5
PL3*503C503	.05	2.5	21.5
100,000 VDC			
PL3*104C501	.0005	1.0	21.5
PL3*104C102	.001	1.5	21.5
PL3*104C502	.005	2.0	21.5
PL3*104C103	.01	2.0	41.5
PL3*104C503	.05	3.5	41.5
200,000 VDC			
PL3*204C202	.0002	1.0	33.5
PL3*204C502	.0005	1.5	33.5
PL3*204C103	.001	2.0	33.5

PR SERIES: PULSE

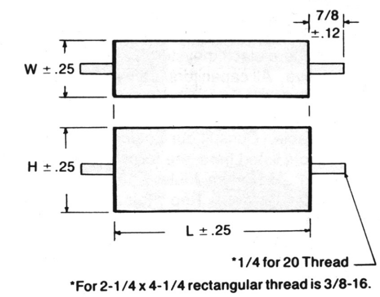
PART NO.	MFD	D	L
2,500 VDC			
PR3*252C503	.05	1.5	3.5
PR3*252C104	.1	1.5	3.5
PR3*252C504	.5	2.0	7.5
PR3*252C105	1.0	2.0	7.5
PR3*252C205	2.0	2.5	7.5
5,000 VDC			
PR3*502C103	.01	1.0	3.5
PR3*502C503	.05	2.0	3.5
PR3*502C104	.1	1.5	7.5
PR3*502C504	.5	2.5	7.5
PR3*502C105	1.0	3.0	7.5
10,000 VDC			
PR3*103C103	.01	1.5	3.5
PR3*103C503	.05	1.5	7.5
PR3*103C104	.1	2.0	7.5
PR3*103C504	.5	4.0	13.5
PR3*103C105	1.0	4.0	13.5
20,000 VDC			
PR3*203C502	.005	1.0	9.5
PR3*203C103	.01	1.5	13.5
PR3*203C503	.05	2.0	13.5
PR3*203C104	.1	2.5	17.5
50,000 VDC			
PR3*503C501	.0005	1.0	13.5
PR3*503C102	.001	1.5	13.5
PR3*503C502	.005	2.0	21.5
PR3*503C103	.01	2.0	21.5
PR3*503C503	.05	4.0	33.5
100,000 VDC			
PR3*104C101	.0001	1.0	17.5
PR3*104C501	.0005	1.5	21.5
PR3*104C102	.001	1.5	21.5
PR3*104C502	.005	2.0	41.5
PR3*104C103	.01	2.5	41.5

*Select either studs or inserts, See page 63

FILM CAPACITORS: RECTANGULAR PHENOLIC TUBE

The Round Tube Capacitors (Type PL and PR) are very well suited for vertical mounting in high voltage equipment. The Rectangular Tubes can be obtained with side mounted studs for mounting them horizontally on flat insulated surfaces or between insulated supports. Because of tube material limitations, Phenolic Tube Capacitors are restricted for use in non-critical enironments such as low humidity, under oil or closed containers. Where military applications require hermeticity it is suggested that metal housings such as found in the EL, ER, SR Series be used.

Ceramic Tube Capacitors: Many of the lower voltage round tube capacitors (up to 40 KVDC) can be produced by Ultra EMS in ceramic tubes. These capacitors are excellent for higher humidity conditions. Our standard line of ceramic tube capacitors (Types CL and CR) are listed in a separate bulletin. Special sizes and ratings are available in ceramic, as well as phenolic tubes to meet customer requirements.



Available with threaded insert.

RL SERIES: FILTER & COUPLING

PART NO.	MFD	L	W	H
25,000 VDC				
RL4*253C502	.005	5.5	1.5	2.0
RL4*253C103	.01	5.5	1.5	2.0
RL4*253C203	.02	5.5	1.75	2.75
RL4*253C503	.05	5.5	2.25	4.5
50,000 VDC				
RL4*503C102	.001	9.5	1.5	2.0
RL4*503C202	.002	9.5	1.5	2.0
RL4*503C502	.005	11.5	1.5	2.0
RL4*503C103	.01	9.5	1.75	2.75
RL4*503C203	.02	17.5	1.75	2.75
RL4*503C503	.05	13.5	2.25	4.5
100,000 VDC				
RL4*104C102	.001	13.5	1.5	2.0
RL4*104C202	.002	17.5	1.5	2.0
RL4*104C502	.005	17.5	1.75	2.75
RL4*104C103	.01	13.5	2.25	4.5
RL4*104C203	.02	21.5	2.25	4.5
RL4*104C503	.05	33.5	2.25	4.5
150,000 VDC				
RL4*154C102	.001	19.5	1.5	2.0
RL4*154C202	.002	19.5	1.75	2.75
RL4*154C502	.005	33.5	1.75	2.75
RL4*154C103	.01	21.5	2.25	4.5
RL4*154C203	.02	39.5	2.25	4.5

RR SERIES: PULSE

PART NO.	MFD	L	W	H
25,000 VDC				
RR4*253C202	.002	5.5	1.5	2.0
RR4*253C502	.005	7.5	1.5	2.0
RR4*253C103	.01	7.5	1.75	2.75
RR4*253C203	.02	9.5	1.75	2.75
50,000 VDC				
RR4*503C501	.0005	5.5	1.5	2.0
RR4*503C102	.001	9.5	1.5	2.0
RR4*503C202	.002	9.5	1.75	2.75
RR4*503C502	.005	9.5	1.75	2.75
RR4*503C103	.01	11.5	2.25	4.5
RR4*503C203	.02	13.5	2.25	4.5
100,000 VDC				
RR4*104C501	.0005	13.5	1.5	2.0
RR4*104C102	.001	17.5	1.5	2.0
RR4*104C202	.002	21.5	1.75	2.75
RR4*104C502	.005	25.5	2.25	4.5
RR4*104C103	.01	33.5	2.25	4.5
RR4*104C203	.02	39.5	2.25	4.5

*Select either studs or inserts, See page 63

STEEL CASED HEMETICALLY SEALED CAPACITORS

Energy storage capacitors are intended for use in applications wherein the capacitor is charged over a relatively long time and discharged rapidly. In order to realize maximum peak currents quickly these capacitors are designed for minimum inductance and minimum equivalent series resistance.

To prevent overheating as a result of excess internal losses, a high quality film and capacitor tissue dielectric system is employed along with a high purity mineral oil derivative. All capacitors are vacuum inpregnated and completely oil filled thereby eliminating any tendency to arc or corona. These capacitors have been designed for light duty energy storage applications. Heavier duty versions are available. Consult our Engineering Department.

For those capacitors listed here, the following limitations apply:

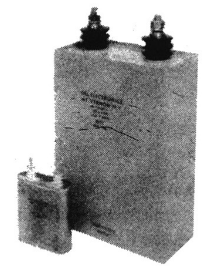
1. Maximum Joules - 125
2. Maximum Rep. Rate - 25 PPS
3. Maximum Voltage Reversal - 20%
4. Peak Current - 2K Amps
5. Voltage Range - 2.5KV to 15KV

The popular CP72 deep drawn steel cans are used to house the type SL and SR capacitors. Filter and coupling applications are typical uses of type SL capacitors. Type SR capacitors are used for pulse type applications. They are designed for service up to 25 PPS at 80% of rated DC voltage. The DC ratiing can be used for 5 PPS and below.

Pulse type capacitors use extended foil construction. The standard designs use mineral oil impregnant. Castor oil is available as an option.

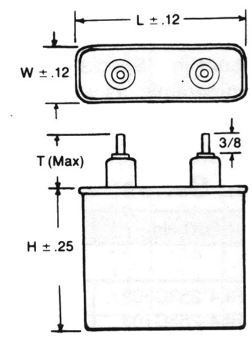
Terminals for SL and SR type capacitors are steatite ceramic with solder-seal design. Sizes of terminals vary with voltage ratings as shown in the tabulation. Standard spacing between terminals is 2”. Standard terminals stud sizes are indicated.

Pulse type capacitors can be designed in CP72 cans for 100 PPS or more on a custom basis. The standard peak current rating is 2K amps and maximum discharge voltage reversal is 20%. Higher rated peak current and discharge voltage reversal requirements can be met with custom designed capacitors.



Standard Terminals

DC Voltage	T	Stud
1,500	1.0	6-32
2,500	1.0	6-32
5,000	1.57	8-32
7,500	2.25	10-32
10,000	2.25	10-32
15,000	2.25	10-32
20,000	2.50	10-32



ER SERIES: ENERGY STORAGE

PART NO.	MFD	L	W	H
2,500 VDC				
ER6G252C505	5.0	1.75	3.75	3.75
ER6G252C106	10.0	1.75	3.75	5.75
ER6G252C206	20.0	3.19	3.75	5.75
ER6G252C306	30.0	3.75	4.56	5.75
5,000 VDC				
ER6G502C205	2.0	1.75	3.75	4.75
ER6G502C505	5.0	3.19	3.75	6.25
ER6G502C106	10.0	3.75	4.56	7.25
7,500 VDC				
ER6G752C504	.5	1.75	3.75	4.75
ER6G752C105	1.0	1.75	3.75	5.50
ER6G752C205	2.0	3.19	3.75	5.50
10,000 VDC				
ER6G103C104	.1	1.25	3.75	4.50
ER6G103C504	.5	1.75	3.75	5.55
ER6G103C105	1.0	3.19	3.75	5.25
ER6G103C205	2.0	3.75	4.56	6.00
15,000 VDC				
ER6G153C503	.05	1.25	3.75	4.25
ER6G153C104	.1	2.25	3.75	4.25
ER6G153C204	.2	2.25	3.75	5.25
ER6G153C504	.5	2.25	3.75	6.50

SR SERIES: PULSE

PART NO.	MFD	L	W	H
1,500 VDC				
SR6G152C205	2.0	4.75	1.75	3.75
SR6G152C505	5.0	6.25	2.25	3.75
SR6G152C106	10.0	6.25	3.75	4.56
SR6G152C206	20.0	9.25	3.75	4.56
2,500 VDC				
SR6G252C105	1.0	4.75	1.25	3.75
SR6G252C205	2.0	6.25	2.25	3.75
SR6G252C505	5.0	7.25	3.75	4.56
SR6G252C106	10.0	8.25	3.75	4.56
5,000 VDC				
SR6G502C504	.5	4.75	1.75	3.75
SR6G502C105	1.0	4.75	2.50	3.75
SR6G502C205	2.0	7.25	3.75	4.56
SR6G502C505	5.0	9.25	3.75	4.56
10,000 VDC				
SR6G103C503	.05	3.25	1.25	3.75
SR6G103C104	.1	4.75	1.25	3.75
SR6G103C504	.5	6.25	3.75	4.56
SR6G103C105	1.0	6.25	3.75	4.56
15,000 VDC				
SR6G153C203	.02	3.25	1.25	3.75
SR6G153C503	.05	4.75	1.75	3.75
SR6G153C104	.1	4.75	2.25	3.75
SR6G153C204	.2	6.25	3.75	4.56

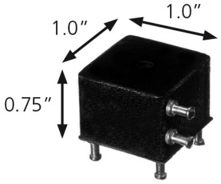
SL SERIES: FILTER & COUPLING

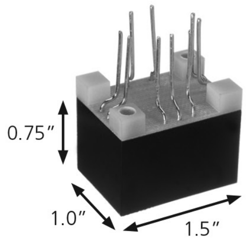
PART NO.	MFD	L	W	H
1,500 VDC				
SL6G152C505	5.0	4.75	1.25	3.75
SL6G152C106	10.0	6.25	2.25	3.75
SL6G152C206	20.0	6.75	3.75	4.56
SL6G152C306	30.0	8.25	3.75	4.56
2,500 VDC				
SL6G252C505	5.0	4.75	2.25	3.75
SL6G252C106	10.0	6.25	3.19	3.75
SL6G252C206	20.0	7.25	3.75	4.56
SL6G252C306	30.0	9.25	3.75	4.56
5,000 VDC				
SL6G502C105	1.0	4.75	1.25	3.75
SL6G502C205	2.0	4.75	2.25	3.75
SL6G502C505	5.0	6.25	3.75	4.56
SL6G502C106	10.0	9.25	3.75	4.56
10,000 VDC				
SL6G103C104	.1	3.25	1.25	3.75
SL6G103C504	.5	6.25	2.25	3.75
SL6G103C105	1.0	6.25	3.75	4.56
SL6G103C205	2.0	6.75	3.75	4.56
15,000 VDC				
SL6G153C503	.05	4.75	1.25	3.75
SL6G153C104	.1	4.75	1.75	3.75
SL6G153C204	.2	6.25	2.25	3.75
SL6G153C504	.5	7.25	3.75	4.56
20,000 VDC				
SL6G203C503	.05	4.75	1.25	3.75
SL6G203C104	.1	4.75	1.75	3.75
SL6G203C204	.2	7.25	2.25	3.75
SL6G203C504	.5	8.25	3.75	4.56

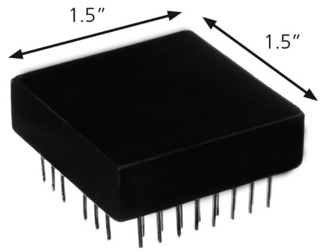
CUSTOM MAGNETICS

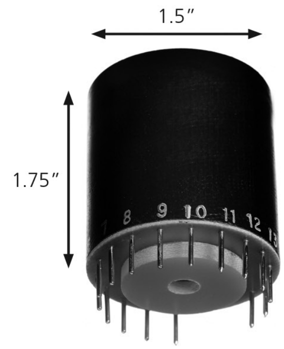
Ultra EMS designs and manufactures military-grade magnetic components. These products are frequently the preferred options for a wide range of applications in defense, as well as for demanding applications in aerospace, industrial, medical, and telecommunication.

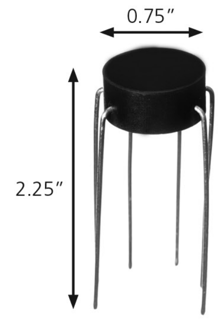
Multiphase Power Isolation Transformers Designed to Meet Low Input Current Harmonics of Mil-STD-1399 and DE-160F











TRANSFORMERS & INDUCTORS

These products are 100% custom-designed using virtually any bobbin or core configuration. Performance and feature options include high frequency, high current, high vibration, high shock, high voltage, pulse, auto toroidal, gate drive, single-phase and poly-phase. All magnetic products meet Mil-PRF-27.

Specification Ranges:

Power levels: 1mW to 75kW

Voltage: 50V to 10kV

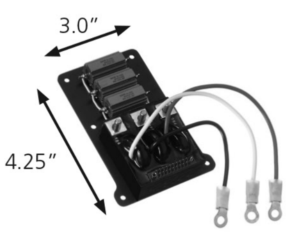
Frequency: 1Hz to 1MHz

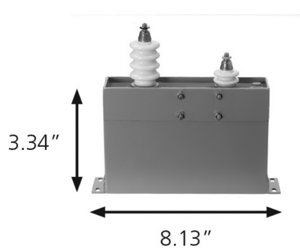
Inductance: 1µH to 500mH

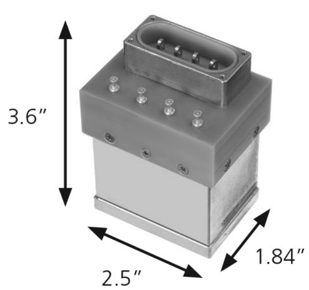
Rated current: 1mA to 1KA

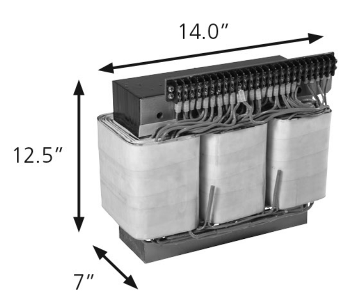
OTHER PRECISION MAGNETIC COMPONENTS

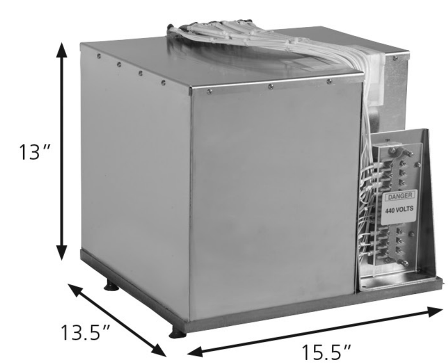
This is a broad portfolio of successful output that includes DC Reactors, Charging Reactors, Modulators, ATRUs, TRUs, and Pulse Forming Networks.











In-house capabilities include Corona testing, soldering to J-STD-001, potting and hermetic sealing and seal testing.
Ultra EMS is AS9100 rev. D/ISO 9001:2015 certified.

ENGINEER’S NOTES

CIRCUIT CONFIGURATIONS

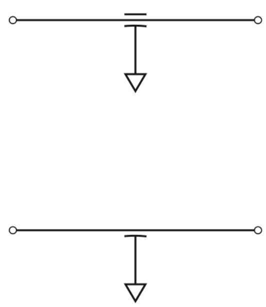
INSTALLATION GUIDELINES

MIL-STD-461 COMPLIANCE

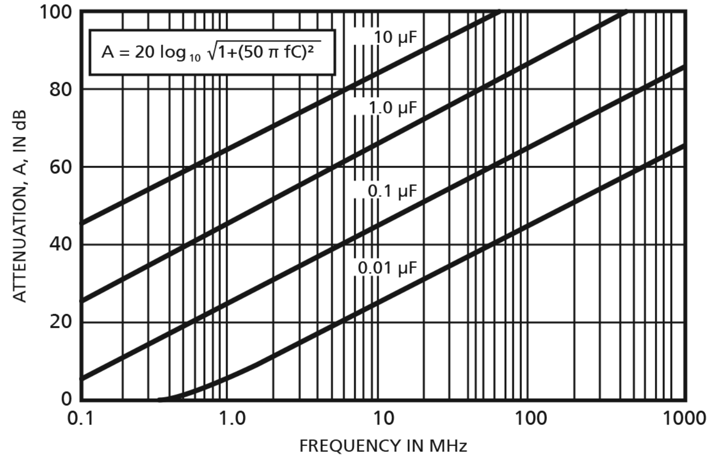
CIRCUIT CONFIGURATIONS

Feedthrough Capacitor — A single element, a capacitor from line to ground, with a through wire connecting the input to output. It has attenuation characteristics that increase at 20dB per decade from its cutoff frequency to at least that frequency where it exhibits a minimum attenuation of 60dB. It maintains this attenuation at higher frequencies. A feedthrough capacitor filter is usually the best choice for filtering lines that exhibit very high impedance. Its schematic symbol and its attenuation characteristics are shown below. A feedthrough capacitor is called a C filter.

C Filter



ATTENUATION CHARACTERISTICS
FOR IDEAL CAPACITORS
AT 50Ω IMPEDENCE, PER MIL-STD-220



L Circuit — Two elements: a feedthrough capacitor from line to ground, and an inductor connected between the input and output terminals. The capacitive element can be placed on either the line or load side of the filter, making it either a capacitive or inductive input. Its attenuation increases at 40dB per decade from its cutoff frequency to at least that frequency where it exhibits a minimum attenuation of 70 dB. It maintains this level at higher frequencies.

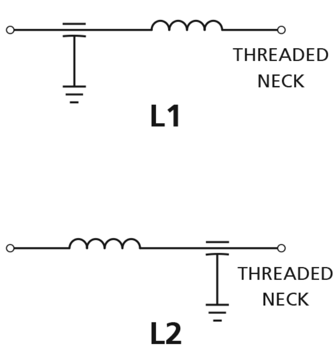
L-Circuit filters are usually the best choices when the line and load impedances exhibit large differences in impedance. The inductive element is best placed so that it faces the lower impedance.

Schematic symbols and typical attenuation characteristics are shown below. They are commonly referred to as L filters.

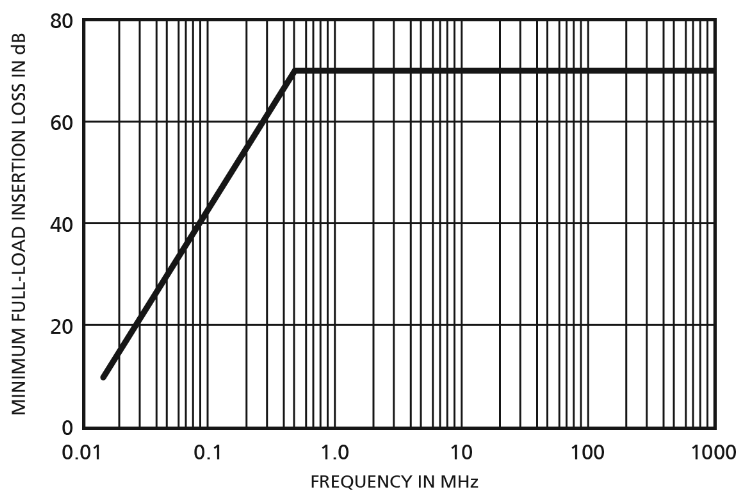
L1 indicates that the inductive element is on the end with the threaded mounting neck.

L2 indicates that the capacitive element is on the end with the threaded mounting neck.

L-Circuit Filters



TYPICAL ATTENTUATION CHARACTERISTICS

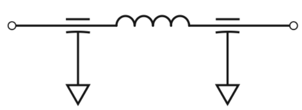


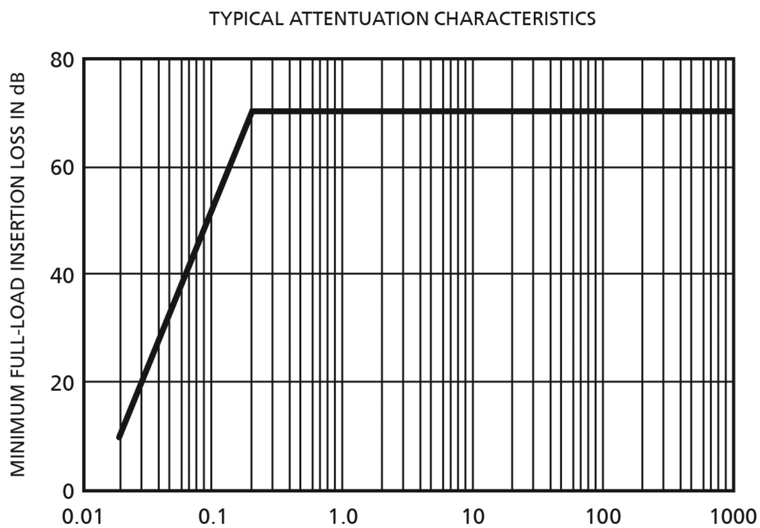
Pi Circuit — A three section filter consisting of two feedthrough capacitors to ground with a series inductor between them. The Pi filter is usually symmetrical, but circumstances sometimes warrant use of asymmetrical Pi circuits.

A Pi filter has attenuation characteristics that increase at 60dB per decade from its cutoff frequency to at least that frequency where it exhibits a minimum attenuation of 80 dB. It maintains this level at higher frequencies.

A Pi filter is usually the best choice when high levels of attenuation are required and where input and output impedances are similar values. It should not be used with switching circuits.

Pi-Circuit Filter



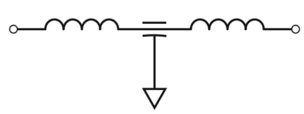


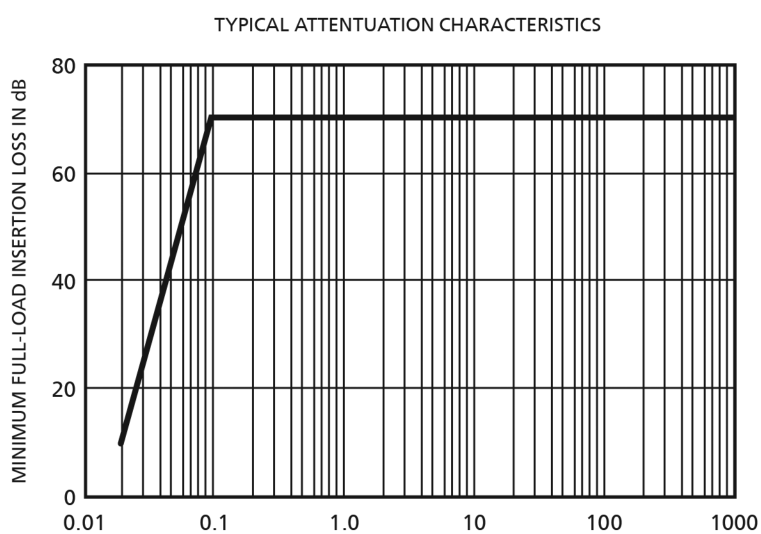
T Circuit — A three-section filter consisting of two series-connected inductors between the input and output terminals, with a feedthrough capacitor between them from line to ground. The T filter is usually symmetrical (identical inductive elements), but circumstances sometimes warrant use of asymmetrical circuits.

A T filter has attenuation characteristics that increase at 60 dB from its cutoff frequency to at least that frequency where it exhibits a minimum attenuation of 70dB. It maintains this level at higher frequencies.

A T circuit filter is usually the best choice where both input and output impedances are low. The schematic symbol and typical attenuation characteristics are shown below.

T-Circuit Filter





LL Circuit — Four section filter consisting of two feedthrough capacitors connected between line and ground with two interspersed inductors connected between the input and output terminals.

The LL filter is usually made with identical capacitor and inductor elements.

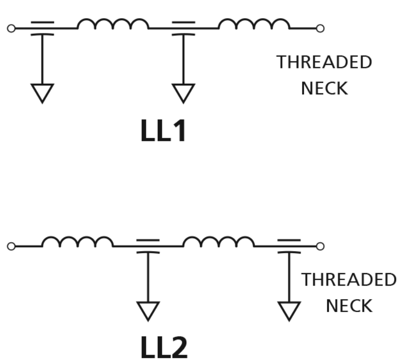
LL1 filters have an inductive element closest to the end with the threaded mounting neck.

LL2 filters have a capacitive element adjacent to the end with the threaded mounting neck.

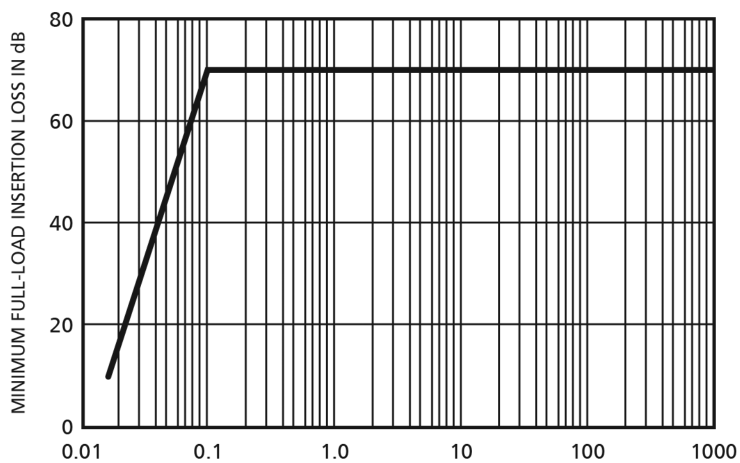
An LL has attenuation characteristics that increase at 80 dB per decade from its cutoff frequency to that frequency where its attenuation is at least 90 dB. It maintains this level at higher frequencies.

LL circuit filters are used where extremely high attenuation is required and where input and output impedances vary significantly.

LL-Circuit Filters



TYPICAL ATTENTUATION CHARACTERISTICS



INSTALLATION GUIDELINES

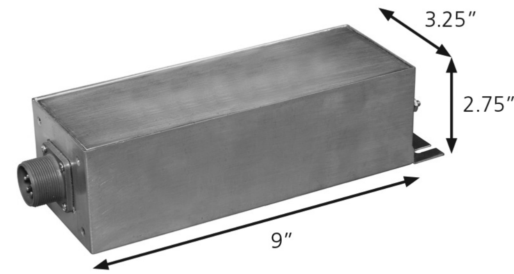
When installing an EMI filter for any purpose, observe these basic rules:

- The filters metal case must make direct, low resistance contact with the metal chassis,cabinet, or groundplane.
- Ground connections should be physically short and should exhibit the lowest possible rf impedance. Never use wires for rf grounds.
- The filter’s input and output leads should be physically separated to provide the greatest amount of electrical isolation possible.
- Mount the filter as close as possible to the point power lines egress from the device being filtered. At any point of penetration through the device’s shield, make sure the shield’s continuity is maintained. In every instance, the preferred installation technique is “bulkhead” mount.
- The most economical filter selection will always be that one with the fewest internal elements.
- Feedthrough capacitor filters are usually the best choice for use with very high impedance lines.
- L-Circuit filters, or LL filters, are usually the best choice when the difference between line and load impedances is large, The inductive element is best placed so that it faces the lower impedance.
- Pi-Circuit filters are usually the best choice when high levels of attenuation are required and input and output impedances are similar. A Pi-filter should not be used with switching circuits.
- T-Circuit filters are usually the best choice when both the input and output impedances are low.
- LL-Circuit filters should only be used when extremely high attenuation is required and when input and output impedances vary significantly.

MIL-STD-461 COMPLIANT FILTERS FOR EMI NOISE REDUCTION

Ultra EMS can provide EMI filters specifically designed for reducing emissions and lessen susceptibility for compliance to Mil-STD-461. The filters will comply with the restrictions on Leakage Current for both 60Hz and 400 Hz power systems but are characterized with Insertion Loss data directly related to the Mil-STD-461 testing methods.

Insertion Loss for most filters is specified in accordance with Mil-STD-220. This test method uses a 50Ω source and load impedance. This is very useful information when evaluating the performance of one filter to another for Quality Control purposes. The results are accurate and repeatable. However, when you have a system that exceeds the noise limits of Mil-STD-461, and you are trying to select a filter to bring the system into compliance, Mil-STD-220 data will not accurately indicate how that filter will perform when installed into your system.



Mil-STD-461 uses a totally different test method for measuring system noise. Current probes are used to detect the noise level of the system. This method gives very different Insertion Loss data when compared to Mil-STD-220. It is almost impossible to predict how a filter will perform in a system when all you have is Mil-STD-220 performance data.

Ultra EMS designs filters to be compatible with the Mil-STD-461 method of noise measurement. All Insertion Loss data in the tables below represents typical Current Probe performance. Using Ultra EMS' filter design, one is able to make direct comparisons between filter performance and system performance. In other words, filter db reduction equals system db reduction.

Ultra EMS can offer many options, including these six filters with different voltage and current configurations. These six will satisfy many applications. All are true "Double L" topologies with inductive inputs at the connector. The Operating Temperature Range is -55° C to +85° C without derating. Filters are designed and manufactured in accordance with all applicable sections of Mil-PRF-15733. Custom designs are also available; contact the factory or your representative.

TABLE 1

PART NO.	MAX. VOLTAGE	FREQUENCY	MAX. CURRENT	CIRCUIT TOPOLOGY	INPUT CONNECTOR	CASE SIZE (W x H x L)
RF16747	250 VAC/600 VDC	50/60 Hz	2 x 20 Amps	Single Phase	MS3102R-16-10P	2.5″ x 2.5″ x 7″
RF16748	440 VAC	50/60 Hz	3 x 20 Amps	3 Phase - Delta	MS3102R-18-11P	3.25″ x 2.75″ x 9″
RF16749	250/440 VAC	50/60 Hz	4 x 20 Amps	3 Phase - Wye	MS3102R-18-11P	3.25″ x 3.25″ x 9″
RF16750	115 VAC	400 Hz	2 x 20 Amps	Single Phase	MS3102R-16-10P	2.5″ x 2.5″ x 7″
RF16751	200 VAC	400 Hz	3 x 20 Amps	3 Phase - Delta	MS3102R-18-11P	3.25″ x 2.75″ x 9″
RF16752	115/200 VAC	400 Hz	4 x 20 Amps	3 Phase - Wye	MS3102R-18-11P	3.25″ x 3.25″ x 9″

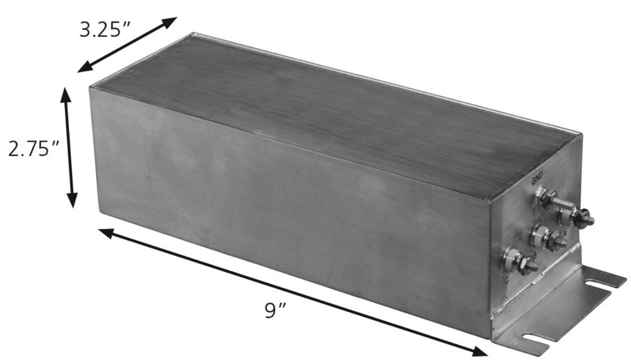


TABLE 2 TYPICAL INSERTION LOSS (CI)

FREQUENCY	COMMON MODE	DIFFERENTIAL MODE
10 Khz	20 db	3 db
50 Khz	35 db	30 db
100 Khz	45 db	50 db
500 Khz	60 db	60 db
1 Mhz	70 db	60 db
10 Mhz	70 db	60 db
50 Mhz	70 db	60 db
100 Mhz - 1 Ghz	60 db	~

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