HIGH PERFORMANCE
CYLINDRICAL STYLE FILTERS
GENERAL PURPOSE

CAPTOR DELIVERS

- standard filters at minimum cost
- fastest shipments in the filter industry
- custom or standard designs to your specifications
- prompt attention to problem-solving prototypes

PERFORMANCE CHARACTERISTICS

RATING: Filters are designed for continuous operation at rated current and voltage. Operating temperature range is -55° C to +125° C. AC filters may be operated at power frequencies up to 400 Hz.

TERMINAL STYLE: All filters rated at 10 amps or less have solder type terminals; those rated above 10 amps have stud-type terminals.

TEMPERATURE RISE: The case temperature rise shall not exceed 25° C when operated at rated current, voltage, and line frequency.

DIELECTRIC TEST: Filters shall withstand the over-voltage dielectric test specified by MIL-PRF-15733 as applicable.

INSULATION RESISTANCE: The insulation resistance of these filters shall be in accordance with MIL-PRF-15733.

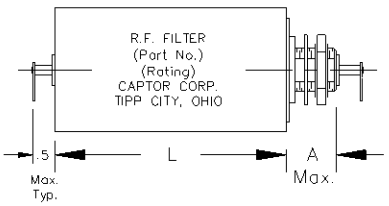
VOLTAGE DROP: The voltage drop shall not exceed 1% of rated voltage when the filter is carrying the specified rated current. AC filter voltage drop shall be measured at unity power factor.

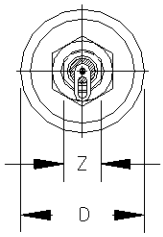
INSERTION LOSS: The loss shown at 0.15 MHz is conservatively rated and is in accordance with MIL-STD-220. Additional data on request.

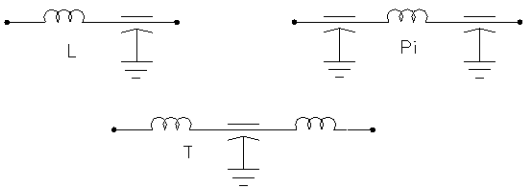
TERMINAL STRENGTH: Terminals shall pass the requirements of MIL-PRF-15733.

ALL FILTERS SHALL PASS MIL-PRF-15733 REQUIREMENTS AS LISTED

CHARACTERISTIC	MIL-STD-202 METHOD	TEST CONDITION
Vibration	201	-
Salt Spray Corrosion	101	B
Thermal Shock	107	A
Moisture Resistance	106	-
Immersion Cycling	104	A

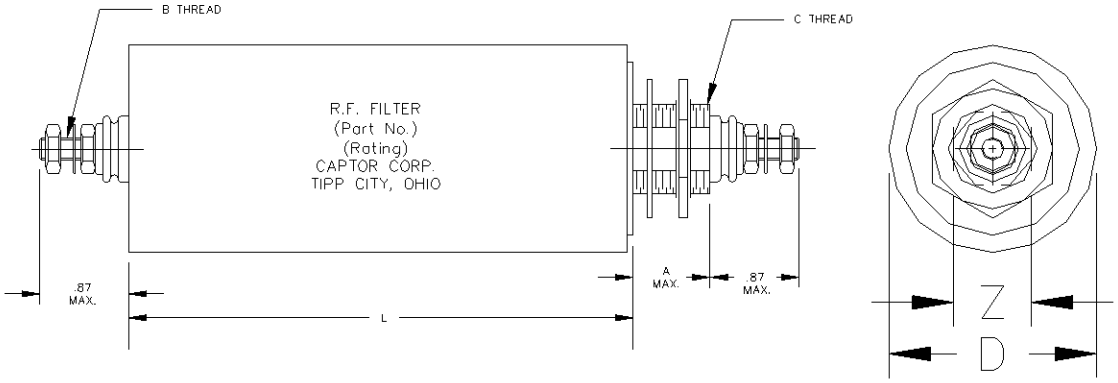






Part Number	Amp	CKT	Voltage		Insertion Loss @ 0.15 MHz	Body		Terminal Dimensions		
			AC	DC		L	D	A	Thread	Z
A-201	1	L*	30	100	40	2.00	.67	.50	5/16-24	.250
A-202	1	L*	120	400	40	2.25	1.00	.50	7/16-20	.250
A-203	1	L*	250	600	40	2.50	1.25	.50	7/16-20	.370
A-204	1	Pi	30	100	60	2.75	.67	.50	5/16-24	.250
A-205	1	Pi	120	400	60	2.87	1.00	.50	7/16-20	.370
A-206	1	Pi	250	600	60	3.00	1.25	.50	7/16-20	.370
A-207	1	T	30	100	55	2.63	.87	.50	7/16-20	.250
A-208	1	T	120	400	55	2.87	1.00	.50	7/16-20	.250
A-209	1	T	250	600	55	3.37	1.25	.50	7/16-20	.370
A-210	2	L*	30	100	40	2.00	.87	.50	7/16-20	.250
A-211	2	L*	120	400	40	2.25	1.25	.50	7/16-20	.370
A-212	2	L*	250	600	40	2.50	1.25	.50	7/16-20	.370
A-213	2	Pi	30	100	60	2.75	.87	.50	7/16-20	.250
A-214	2	Pi	120	400	60	2.37	1.25	.50	7/16-20	.370
A-215	2	Pi	250	600	60	2.87	1.25	.50	7/16-20	.370
A-216	2	T	30	100	55	2.62	1.25	.50	7/16-20	.370
A-217	2	T	120	400	55	2.87	1.25	.50	7/16-20	.370
A-218	2	T	250	600	55	3.37	1.25	.50	7/16-20	.370
A-219	5	L*	30	100	40	2.37	1.50	.50	7/16-20	.370
A-220	5	L*	120	400	40	2.50	1.50	.50	7/16-20	.370
A-221	5	L*	250	600	40	2.75	1.50	.50	7/16-20	.370
A-222	5	Pi	30	100	60	2.75	1.50	.50	7/16-20	.370
A-223	5	Pi	120	400	60	3.00	1.50	.50	7/16-20	.370
A-224	5	Pi	250	600	60	3.75	1.50	.68	7/16-20	.370
A-225	5	T	30	100	55	3.37	1.50	.50	7/16-20	.370
A-226	5	T	120	400	55	3.50	1.50	.50	7/16-20	.370
A-227	5	T	250	600	55	3.75	1.50	.50	7/16-20	.370
A-228	10	L*	30	100	40	3.50	1.75	.68	¾-20	.656
A-229	10	L*	120	400	40	4.00	1.75	.68	¾-20	.656
A-230	10	L*	250	600	40	4.25	1.75	.68	¾-20	.656
A-231	10	Pi	30	100	60	3.00	1.75	.68	¾-20	.656
A-232	10	Pi	120	400	60	3.50	1.75	.68	¾-20	.656
A-233	10	Pi	250	600	60	3.75	1.75	.68	¾-20	.656
A-234	10	T	30	100	45	3.00	1.75	.68	¾-20	.656
A-235	10	T	120	400	45	4.12	1.75	.68	¾-20	.656
A-236	10	T	250	600	45	4.37	1.75	.68	¾-20	.656

*NOTE: All “L” Type filters are shown with inductors on the threaded neck ends. Filters with reverse circuits will be supplied when “R” is added to the part number.



Part Number	Amp	CKT	Voltage		Insertion Loss @ 0.15 MHz	Body		Terminal Dimensions			
			AC	DC		L	D	A	B Thread	C Thread	Z
A-237	30	L*	30	100	35	3.75	1.75	.68	10-32	¾-20	.656
A-238	30	L*	120	400	35	4.12	1.75	.68	10-32	¾-20	.656
A-239	30	L*	250	600	35	4.37	1.75	.68	10-32	¾-20	.656
A-240	30	Pi	30	100	60	3.75	1.75	.68	10-32	¾-20	.656
A-241	30	Pi	120	400	60	4.00	1.75	.68	10-32	¾-20	.656
A-242	30	Pi	250	600	60	4.25	1.75	.68	10-32	¾-20	.656
A-243	30	T	30	100	35	4.25	1.75	.68	10-32	¾-20	.656
A-244	30	T	120	400	35	4.37	1.75	.68	10-32	¾-20	.656
A-245	30	T	250	600	35	4.48	1.75	.68	10-32	¾-20	.656
A-246	50	L*	30	100	30	3.00	2.48	.75	¼-28	1 1/8-20	1.046
A-247	50	L*	120	400	30	4.50	2.48	.75	¼-28	1 1/8-20	1.046
A-248	50	L*	250	600	30	4.75	2.48	.75	¼-28	1 1/8-20	1.046
A-249	50	Pi	30	100	55	3.50	2.48	.75	¼-28	1 1/8-20	1.046
A-250	50	Pi	120	400	55	5.00	2.48	.75	¼-28	1 1/8-20	1.046
A-251	50	Pi	250	600	55	5.25	2.48	.75	¼-28	1 1/8-20	1.046
A-252	50	T	30	100	35	4.50	2.48	.75	¼-28	1 1/8-20	1.046
A-253	50	T	120	400	35	5.75	2.48	.75	¼-28	1 1/8-20	1.046
A-254	50	T	250	600	35	6.00	2.48	.75	¼-28	1 1/8-20	1.046

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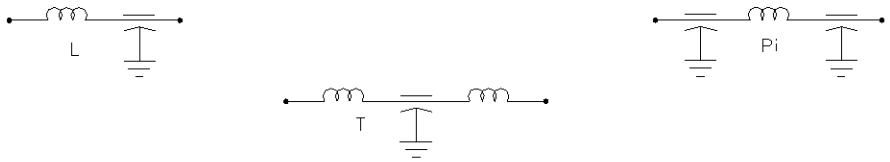

FILTER CIRCUIT AND APPLICATION INFORMATION

Three different types of filter circuits are shown in this series; L, Pi and T; each with its own characteristics. An analysis of each application by engineering personnel will indicate a preferred circuit from cost, performance, and size considerations, as directed below:

TYPE	FEATURES	BUT.....
L	least expensive	most effective with high impedance noise sources
Pi	often used in line filters when source and load impedance are not known	can increase unfiltered interference in control circuits or switch circuits
T	reduces line noise level best in low impedance applications	most expensive

L filters provide significant insertion loss because of the impedance mismatch created when the capacitor end of the filter is mounted towards the high impedance noise source (load) and the inductor end is mounted towards the low impedance line.

Pi filters usually provide maximum “dB per dollar” in a matched 50 ohm system, but many times are less effective under actual operating or test conditions. They are particularly suspect in installations involving switching transients, since they can in some instances increase the interference problem rather than correct it.

The T circuit is used primarily with switching circuits. It reduces noise level on the system lines, causes no deterioration in the life of switching contacts, and in some instances actually prolongs switch contacts life.

The successful operation of any high frequency filter depends on adequate bonding and good RF isolation between input and output. The filter must be bonded to same potential as one side of the RF noise source being filtered. The performance of the filter can be completely masked by ineffective bonding or poor RF isolation between input and output circuits. The RF filter uses the case as common ground for the internal capacitor and cannot provide its total performance if RF is permitted to bypass the filters by means of coupling between input and output circuits.

If you have any questions about the circuit to be employed, please call our engineering department for application advice and information.