

INCH-POUND

MIL-PRF-15733/62D  
26 April 2004  
SUPERSEDING  
MIL-PRF-15733/62C  
26 November 1982

PERFORMANCE SPECIFICATION SHEET

FILTERS, RADIO FREQUENCY INTERFERENCE,  
STYLES FL31 AND FL47

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The complete requirements for acquiring the filters described herein shall consist of this specification sheet and the latest issue of MIL-PRF-15733.

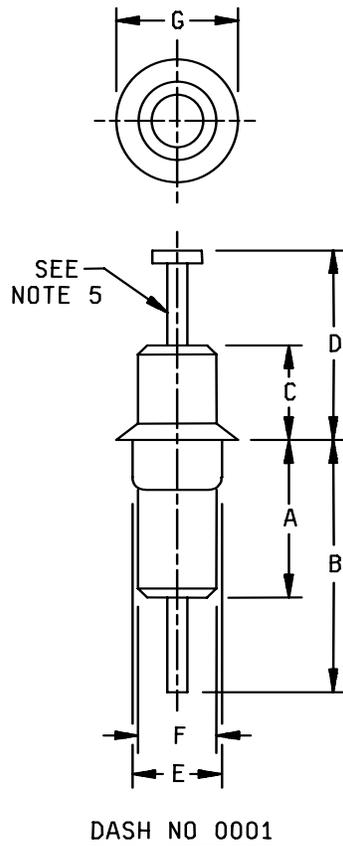
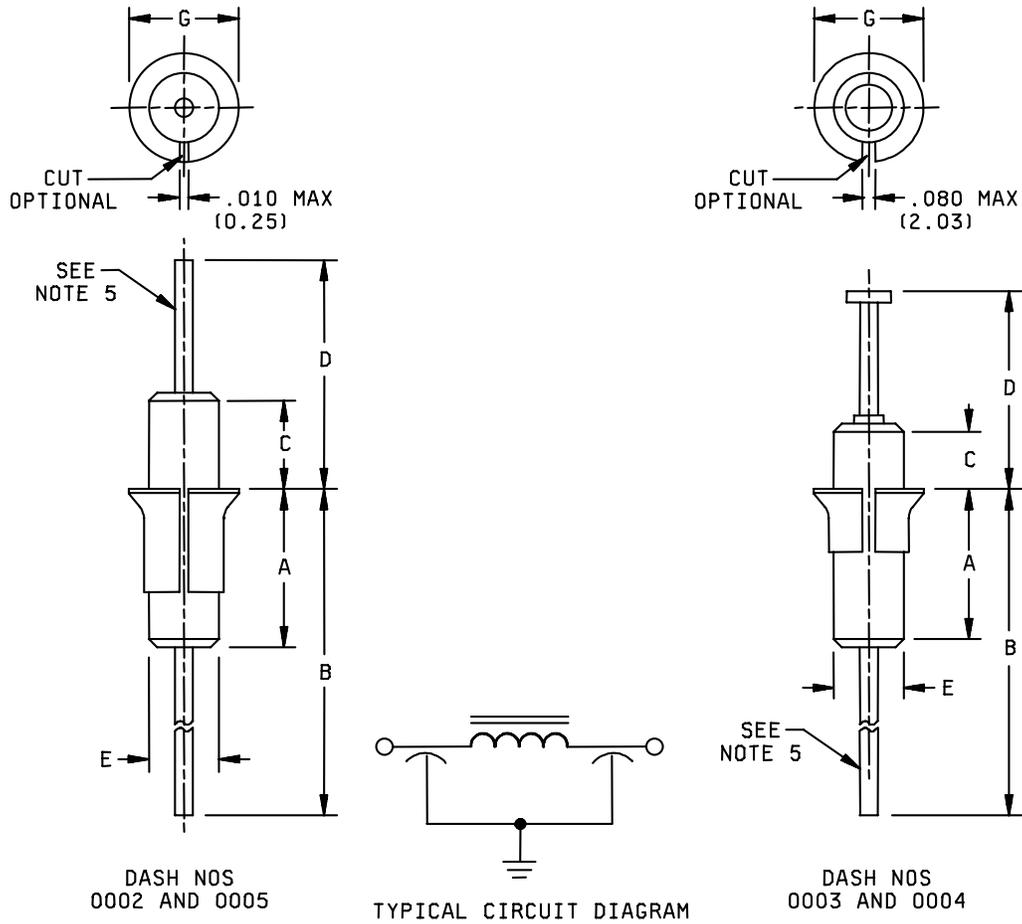


FIGURE 1. Case dimensions and circuit configuration.



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are in parenthesis.
3. Metric equivalents are given for general information only.
4. Circuit diagram is for information only.
5. Leads shall be solid, tinned, AWG 20, .032 (.81 mm) diameter.
6. Turret-headed terminal is optional on dash numbers 0001, 0003, and 0004.

FIGURE 1. Case dimensions and circuit configuration - Continued.

TABLE I. Dimensions.

Dash no.	A		B		C		D		E		F		G	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
0001	.219 (5.56)	.281 (7.14)	.375 (9.52)	.437 (11.10)	.125 (3.18)	.187 (4.75)	.281 (7.14)	.343 (8.71)	.130 (3.30)	.160 (4.06)	.110 (2.79)	.140 (3.56)	.175 (4.44)	.205 (5.21)
0002	.185 (4.70)	.277 (7.04)	1.154 (29.31)	1.308 (33.22)	.078 (1.98)	.140 (3.56)	1.047 (26.59)	1.171 (29.74)	.095 (2.41)	.125 (3.18)	--	--	.133 (3.37)	.153 (3.89)
0003	.247 (6.27)	.297 (7.54)	.375 (9.52)	.500 (12.70)	.141 (3.58)	.171 (4.34)	.281 (7.14)	.343 (8.71)	.130 (3.30)	.160 (4.06)	--	--	.175 (4.44)	.205 (5.21)
0004	.120 (3.05)	.182 (4.62)	.749 (19.02)	.811 (20.60)	.062 (1.57)	.124 (3.15)	.242 (6.15)	.304 (7.72)	.130 (3.30)	.160 (4.06)	--	--	.188 (4.77)	.203 (5.16)
0005	.284 (7.21)	.346 (8.79)	1.284 (32.61)	1.365 (34.67)	.094 (2.39)	.125 (3.18)	1.094 (27.79)	1.156 (29.36)	.123 (3.12)	.153 (3.87)	--	--	.160 (4.06)	.190 (4.82)

FIGURE 1. Case dimensions and circuit configuration - Continued.

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REQUIREMENTS:

Design and construction:

Dimensions and configuration: See figure 1 and table I.

Weight:

Dash number 0001 - 1.2 grams maximum

Dash numbers 0002, 0003, and 0004 - .7 grams maximum.

Dash number 0005 - .9 grams maximum.

Case: Not applicable (metallic mounting eyelet termination).

Terminals, mounting termination: Solderable. Pure tin is prohibited as an undercoat and as a final finish.

Operating temperature range: -55°C to +125°C.

Rated voltage: See table II.

Rated current: 10 amperes, dc or ac (rms).

Voltage conditioning (conformance inspection only): The test shall be performed as follows:

Test temperature: 125°C + 4°C, -0°C.

Test voltage: 200 percent of the rated dc voltage. Charging current shall not exceed 50 mA.

Points of applications of test voltage: Between each terminal and case.

Duration of exposure to test voltage: 100 ±4 hours.

After completion of exposure, and while filters are established at 125°C, insulation resistance shall be measured. Filters shall then be stabilized at 25°C, and insulation resistance shall be measured. A reject shall be defined as a filter whose insulation resistance does not meet initial requirements when measured at 125°C and 25°C.

Seal: Not applicable.

Capacitance to ground: In accordance with MIL-PRF-15733. Minimum capacitance shall be as specified in table II.

Temperature rise: In accordance with MIL-PRF-15733. Temperature rise shall be 25°C, maximum.

Dielectric withstanding voltage: In accordance with MIL-PRF-15733. The following exceptions shall apply:

The test voltage shall be as follows and shall be applied for 1 to 5 seconds:

0001 and 0005	-	1,000 V dc
0002	-	600 V dc
0003	-	300 V dc
0004	-	200 V dc

TABLE II. Electrical characteristics.

Dash no.	Rated voltage		Cap. (min) pF	Minimum insertion loss (dB) in accordance with MIL-STD-220																		
	V dc	V rms <u>2/</u>		+ 25°C <u>1/</u>							-55°C, +25°C, and +125°C						-55° and +125°C <u>1/</u>					
				5 MHz	10 MHz	20 MHz	50 MHz	100 MHz	200 MHz	400 MHz	500 MHz	1 GHz	2 GHz	10 GHz	5 MHz	10 MHz	20 MHz	50 MHz	100 MHz	200 MHz	400 MHz	
0001	200	140	1,500	--	3	13	32	45	58	--	70	70	--	70	--	--	5	15	28	46	--	
0002	200	--	1,500	--	5	12	28	45	--	--	68	70	70	--	--	--	5	15	28	--	--	
0003	70	--	1,500	5	--	19	--	50	--	65	--	65	--	65	--	--	7	--	32	--	63	
0004	70	--	12,000	--	22	30	--	70	--	65	--	--	--	65	--	11	17	--	70	--	63	
0005	200	140	3,000	3	12	23	38	50	60	--	--	65	65	65	--	5	10	16	30	48	--	

1/ Full-load insertion loss measurements shall be performed at 5, 10 and 20 MHz; all other measurements shall be performed at no-load.

2/ 0 to 400 MHz.

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Barometric pressure (reduced): In accordance with MIL-PRF-15733. The following exceptions shall apply:

test condition D (100,000 ft.) for -0001

test condition E (150,000 ft.) for -0002 and -0005

test condition B (50,000 ft.) for -0003 and -0004

Dielectric withstanding voltage: In accordance with initial requirements, except that the test voltage shall be 1.2 times the rated dc voltage.

Insulation resistance: In accordance with MIL-PRF-15733. Minimum insulation resistance measured between both terminals connected together and the case shall be as follows:

	<u>At 25°C</u>	<u>At 125°C</u>
0001, 0002, and 0005	10 gigohms	1 gigohm
0003 and 0004	5 gigohms	500 megohms

Voltage drop: In accordance with MIL-PRF-15733. Maximum voltage drop shall be 0.1 volt.

Insertion loss: In accordance with MIL-PRF-15733 at 25°C and temperature extremes (see table II).

Overload: In accordance with MIL-PRF-15733. The following exception shall apply:

Measurements at 25°C after test: Insulation resistance only shall be measured and shall meet initial requirements.

Terminal strength: In accordance with MIL-PRF-15733 and method 211, MIL-STD-202: test condition A.

Applied force: 5 pounds.

Resistance to solvents: Not applicable.

Salt atmosphere (corrosion): Not applicable.

Thermal shock and immersion: Not applicable.

Shock (specified pulse): In accordance with MIL-PRF-15733 and Method 213, MIL-STD-202: test condition I.

Vibration, high frequency: In accordance with MIL-PRF-15733 and Method 204, MIL-STD-202: test condition D.

Moisture resistance: In accordance with MIL-PRF-15733. The following exceptions shall apply:

Initial measurements and load voltage: Not applicable.

Polarization voltage: Not applicable.

Measurements after 24 hours drying period, at a temperature not to exceed 85°C, and a relative humidity of 50 percent:

Dielectric withstanding voltage with 90 percent of initial voltage applied for  $5 \pm 1$  seconds.

Insulation resistance shall be not less than 1 gigohm.

Insertion loss shall meet the initial requirements.

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Life: In accordance with MIL-PRF-15733 and method 108, MIL-STD-202, test condition D, except that following the test, insulation resistance shall not be less than 1 gigohm.

Marking: Filters shall not be marked. Full marking, in accordance with MIL-PRF-15733 shall be marked on the unit package.

Part or identifying number (PIN): M15733/62 (dash number from table II).

Supersession data: Filters in this specification supersedes filters in MIL-PRF-15733/37(USAF) and MIL-PRF-15733/50(USAF) as follows:

PIN M15733/62-	Superseded Part number
0001	M15733/37-0001
0002	M15733/50-0001
0003	M15733/50-0002
0004	M15733/50-0004

VERIFICATION:

Conformance inspection: In accordance with MIL-PRF-15733, except as follows:

Group A: In accordance with MIL-PRF-15733, except that prior to the group A inspection 100 percent of each lot of filters shall be subjected to the voltage conditioning test. If the total rejects from any particular lot exceed 10 percent that entire lot shall be rejected.

NOTES:

Referenced documents. In addition to MIL-PRF-15733, this specification sheet references the following documents:

MIL-STD-202

Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

Custodians:  
Army - CR  
Navy - EC  
Air Force - 11  
DLA - CC

Preparing activity:  
DLA - CC

(Project 5915-0431)

Review activities:  
Army - AT, AV, MI  
Navy - AS, MC, OS  
Air Force - 19, 99

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at [www.dodssp.daps.mil](http://www.dodssp.daps.mil).