

INCH-POUND

MIL-PRF-15733/44F
17 July 2003
SUPERSEDING
MIL-PRF-15733/44E
11 December 1985

PERFORMANCE SPECIFICATION SHEET

FILTERS, RADIO FREQUENCY INTERFERENCE,
STYLE FL45

This specification sheet 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.

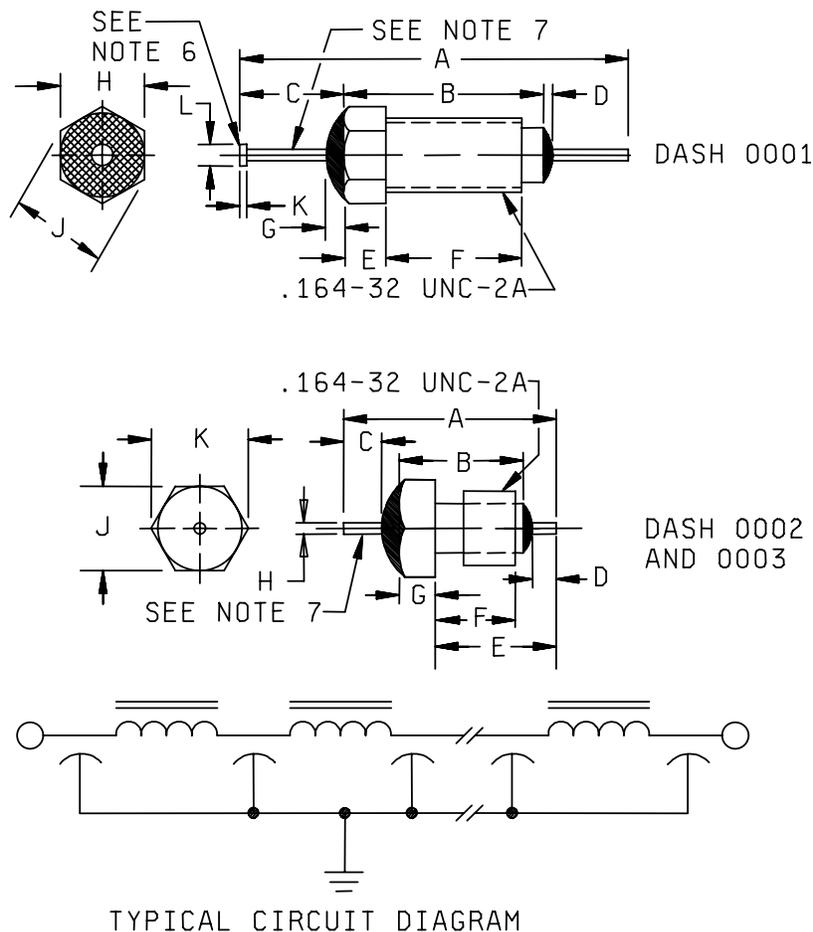


FIGURE 1. Case and circuit configuration.

Dash number	A	B	C		D	E		F		G	H		J	K	L	Weight Max (grams)
	Ref	Ref	Min	Max	Max	Min	Max	Min	Max	Max	Min	Max	Max	Ref	Ref	
0001	.600 (15.24)	.336 (8.53)	.097 (2.46)	.167 (4.24)	.030 (0.76)	.079 (2.01)	.109 (2.77)	.177 (4.50)	.222 (5.64)	.030 (0.76)	.173 (4.38)	.203 (5.16)	.211 (5.36)	.030 (0.76)	.060 (1.52)	1.2
0002	A		B	C	D	E		F	G	H		J		K		1.2
	Min	Max	Ref	Min	Min	Min	Max	Ref	Ref	Min	Max	Min	Max	Max		
0003	.390 (9.91)	.430 (10.92)	.200 (5.08)	.050 (1.27)	.050 (1.27)	.213 (5.41)	.263 (6.68)	.125 (3.18)	.062 (1.57)	.039 (0.91)	.045 (1.14)	.185 (4.70)	.191 (4.85)	.211 (5.36)		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Circuit diagram is for information only.
4. Mounting torque 3 to 5 inch-pounds.
5. Case is ground terminal.
6. Mounting hardware (lockwasher and hex nut) will be supplied with filter.
7. Leads shall be solid, solder coated, AWG 18 (.040 inch).
8. Turret head terminal optional.
9. An undercut or imperfect threads out to a maximum of .052 inch from the hexhead or mounting surface is permissible.

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FIGURE 1. Case and circuit configuration - Continued.

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REQUIREMENTS:

Dimensions and configuration: See figure 1.

Weight: See figure 1.

Case and hardware finish: In accordance with MIL-PRF-15733. Pure tin finish is prohibited.

Terminals: Solderable.

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

Rated voltage: 125 V dc or 85 V rms, dc to 424 Hz.

Rated current: 15 amperes.

Insertion loss: In accordance with MIL-PRF-15733 and table I.

Voltage conditioning: Applicable to conformance inspection only. 100 percent of each lot of filters shall be subjected to the voltage conditioning test. The test shall be conducted prior to the group A inspection of MIL-PRF-15733, as follows:

Test temperature: 125°C +4°C, -0°C.

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

Points of application of test voltage: Between each terminal and the case.

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

After completion of exposure, and while filters are stabilized 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 the +125°C and +25°C conditions as specified in this test. If the total rejects from any particular lot exceeds 10 percent, that entire lot shall be rejected.

Thermal shock and immersion: Not applicable.

Moisture resistance: Not applicable.

Capacitance to ground: In accordance with MIL-PRF-15733. Measured capacitance shall be as follows:

<u>Dash no.</u>	<u>Dissipation factor</u>	<u>Measured capacitance</u> <u>-0 percent, +100 percent</u>
-0001	3.0 percent max	3,000 pF
-0002	3.0 percent max	1,500 pF
-0003	3.0 percent max	65 pF

Temperature rise: 25°C, maximum.

Insulation resistance: In accordance with MIL-PRF-15733. The insulation resistance shall be 500 megohms minimum at +25°C and 100 megohms minimum at +125°C.

Voltage drop: In accordance with MIL-PRF-15733 and table I.

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

Applied force: 5 pounds.

Salt atmosphere (corrosion): In accordance with MIL-PRF-15733 and Method 101, MIL-STD-202; test condition A, except that the salt solution concentration shall be 20 percent.

TABLE I. Electrical characteristics.

Dash number	Voltage drop maximum		Minimum insertion loss (dB) in accordance with MIL-STD-220, at +25°C.								
	Volts dc	Volts ac rms	4 MHz	10 MHz	100 MHz	150 MHz	500 MHz	1 GHz	5 GHz	1 GHz to 18 GHz	10 GHz to 18 GHz
0001	0.30	0.20	---	10	30	---	55	---	---	65	---
0002	0.10	0.07	3	5	20	---	40	---	---	50	---
0003	0.05	0.03	---	---	---	3	---	16	35	---	42

Dash number	Minimum insertion loss (dB) in accordance with MIL-STD-220, at -55°C and +125°C									
	4 MHz	10 MHz	100 MHz	150 MHz	500 MHz	1 GHz	5 GHz	1 GHz to 18 GHz	10 GHz to 18 GHz	
0001	---	8	28	---	53	---	---	65	---	
0002	---	3	18	---	38	---	---	50	---	
0003	---	---	---	---	---	16	35	---	42	

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

Vibration, high frequency: In accordance with MIL-PRF-15733 and Method 204, MIL-STD-202; test condition D (20 g).

Part or Identifying Number (PIN): M15733/44- (dash number from table I).

Marking: Each filter shall be marked with the PIN, as shown on figure 2. In addition, full marking in accordance with method I requirements of MIL-STD-1285 shall be marked on each unit package.

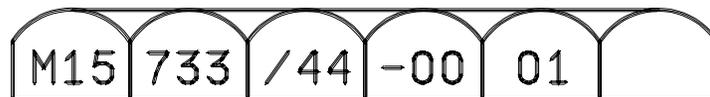


FIGURE 2. Hex flats - expanded view.

Application note: These nonhermetically sealed filters may be susceptible to moisture intrusion when subjected to repeated thermal cycling. If these items are to be utilized in applications enduring harsh environments, the user should consider placing them within hermetic enclosures.

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Extent of qualification: Qualification testing and approval to M15733/44-0001 shall be sufficient to grant qualification approval to M15733/44-0001 through -0003.

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 5915-0421)

Review activities:

Army - AR, AT, AV, MI
Navy - AS, MC, OS
Air Force - 19, 99