INCH-POUND

MIL-F-15733/48G
W/AMENDMENT 1
25 November 2008
SUPERSEDING
MIL-F-15733/48G
31 March 2003

MILITARY SPECIFICATION SHEET

FILTERS, RADIO FREQUENCY INTERFERENCE, HERMETICALLY SEALED, STYLE FL92

*

Inactive for new design after 20 June 1983. For new design, see table III for substitution data.

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

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

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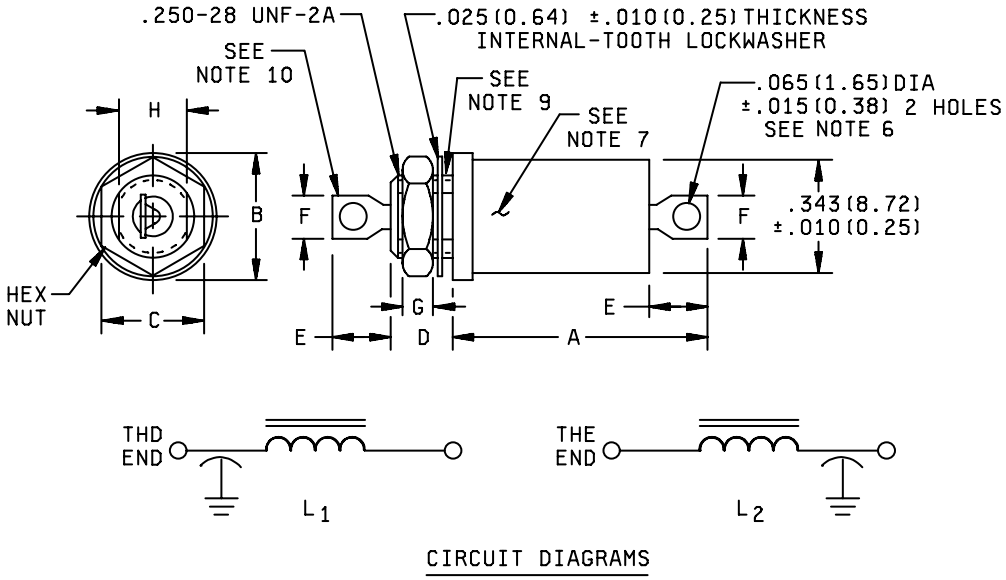

FIGURE 1. Case dimensions and circuit configuration.

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are in parentheses and are for general information only.
3. Circuit diagram is for information only.
4. All filters shall be supplied with mounting hardware.
5. Use of style FL92 with or without shoulder is optional.
* 6. Optional terminal hole .050 ±.010 x .070 ±.010 (1.27 ±0.25 mm x 1.78 ±0.25 mm) may be supplied.
7. Terminal identification (nonsymmetrical filters): The case shall be marked at the threaded end of the filter, with the symbol "L" or "C" as follows:

Circuit	Symbol
L_1	C
L_2	L

8. Recommended mounting torque: 48 ounce-inch maximum.
9. Imperfect thread or undercut optional .050 (1.27 mm) maximum.
10. The flag terminals shall be aligned to within 10° of the vertical (thread bushing flats).

Dimensions

Dash	A	B	C		D		E		F		G		H	
no.	Max	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
0001	.760 (19.30)	.385 (9.78)	.302 (7.67)	.322 (8.18)	.177 (4.50)	.197 (5.00)	.140 (3.56)	.190 (4.83)	.100 (2.54)	.130 (3.30)	.088 (2.24)	.098 (2.49)	.190 (4.83)	.210 (5.33)
0002	.861 (21.87)	.406 (10.31)	.302 (7.67)	.322 (8.18)	.177 (4.50)	.197 (5.00)	.140 (3.56)	.160 (4.06)	.100 (2.54)	.130 (3.30)	.088 (2.24)	.098 (2.49)	.190 (4.83)	.210 (5.33)
0003	.76 (19.3)	.385 (9.78)	.302 (7.67)	.322 (8.18)	.302 (7.67)	.322 (8.18)	.140 (3.56)	.160 (4.06)	.100 (2.54)	.130 (3.30)	.088 (2.24)	.098 (2.49)	.190 (4.83)	.210 (5.33)
0004	.76 (19.3)	.385 (9.78)	.302 (7.67)	.322 (8.18)	.302 (7.67)	.322 (8.18)	.140 (3.56)	.160 (4.06)	.100 (2.54)	.130 (3.30)	.088 (2.24)	.098 (2.49)	.190 (4.83)	.210 (5.33)
0005	.76 (19.3)	.385 (9.78)	.302 (7.67)	.322 (8.18)	.302 (7.67)	.322 (8.18)	.140 (3.56)	.160 (4.06)	.100 (2.54)	.130 (3.30)	.088 (2.24)	.098 (2.49)	.190 (4.83)	.210 (5.33)

FIGURE 1. Case dimensions and circuit configuration - Continued.

REQUIREMENTS:

Dimensions and configuration: See figure 1.

Weight: 7 grams, maximum.

Case and hardware: Metal. Finish shall be in accordance with MIL-PRF-15733. Pure tin finish is prohibited.

Terminals: Solderable.

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

Rated voltage: See table I.

Rated current: See table I.

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

Seal: In accordance with MIL-PRF-15733.

Capacitance to ground: Not applicable.

Temperature rise: 25°C maximum.

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

Test temperature: 25°C.

Test voltage: 100 V dc applied between each terminal and ground, for a period of 1 to 5 seconds.

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

Test condition E (150,000 feet) for dash number 0001.

Voltage conditioning (applicable to dash number 0001 only):

The burn-in test shall be conducted as follows:

Test temperature: 125°C.

Test voltage: 70 V dc.

Points of application of test voltage: Between case and the live terminals.

Duration of exposure to test voltage: 250 hours.

Insulation resistance: In accordance with MIL-PRF-15733. The following details and exceptions shall apply:

Test potential: 50 V dc.

Insulation resistance minimum	Dash number
700 Megohms at +25°C	0001
100 Megohms at +25°C	0002 through 0005
70 Megohms at +125°C	0001

Voltage drop: See table I.

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

Force: 5 pounds.

Salt atmosphere (corrosion): In accordance with MIL-PRF-15733 and Method 101, MIL-STD-202 and the following:

Test condition	Dash number
B	0001 and 0002
A	0003 through 0005

Shock (specified pulse): In accordance with MIL-PRF-15733 and Method 213, MIL-STD-202 and the following:

Test condition	Dash number
I	0001 and 0002
A	0003 through 0005

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

Radiographic inspection: (applicable to dash number 0001 only). The radiographic inspection shall be conducted as follows:

Filters shall be X-rayed in one plane at 90 degree rotation (perpendicular to the filter longitudinal axis). Any evidence of poor capacitor mounting or uneven soldering of capacitor to case shall be cause for rejection. Rejected units shall be dissected and examined for poor workmanship or uneven soldering. Any defects noted shall require corrective action prior to acceptance of any future lots. Magnification during visual examination shall be two power, minimum. Unless otherwise specified, one radiograph shall be taken of each unit. Filters shall be positioned to yield a longitudinal image of the body.

Moisture resistance: In accordance with MIL-PRF-15733 except after the 24 hour drying period, insulation resistance shall be not less than 50 Megohms.

Life: In accordance with MIL-PRF-15733 and Method 108, MIL-STD-202. Test condition D (1,000 hours) for qualification inspection; test condition B (250 hours) for group C inspection.

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

Group A: In accordance with MIL-PRF-15733 for dash numbers 0002 through 0005. Group A inspection for dash number 0001 shall be in accordance with table II. Lots having greater than 10 percent rejects shall be considered reject lots. Reject lots, at the option of the manufacturer, may be reworked and submitted to 100 percent, group A inspection of table II.

TABLE I. Electrical characteristics.

Dash no.	Circuit config-uration	Max. rated current (amp.)	Rated dc voltage (volts)	Max. voltage drop (volts)	Minimum insertion loss (dB) in accordance with MIL-STD-220 at 25°C 1/						Minimum insertion loss (dB) in accordance with MIL-STD-220 at -55 and +125°C 1/					
					30 kHz	150 kHz	300 kHz	1 MHz	10 MHz	1 GHz	30 kHz	150 kHz	300 kHz	1 MHz	10 MHz	1 GHz
0001 2/	L_1	10	28	0.10	15	28	33	44	56	70	13	26	31	42	56	70
0002 2/	L_2	10	30	0.10	15	28	33	44	56	70	---	16	21	32	56	70
0003 2/	L_1	10	28 3/	0.10	15	28	33	44	56	70	---	16	21	32	56	70
0004 2/	L_2	.150	28 3/	1.80	24	52	64	70	70	70	12	40	52	58	70	70
0005 2/	L_2	10	28 3/	0.10	15	28	33	44	56	70	---	16	21	32	56	70

1/ Full-load insertion loss measurements shall be performed over the frequency range of 100 kHz to 20 MHz inclusive. Measurements below or above this frequency range shall be performed at no-load.
2/ Inactive for new design.
3/ Rated voltage at -55°C to +125°C or -55°C to +85°C at 50 V dc.

TABLE II. Group A inspection.

Test or inspection	Sampling procedure
Voltage conditioning	100%
Dielectric withstanding voltage	100%
Insulation resistance	100%
Voltage drop	100%
Insertion loss (check test)	100%
Radiographic inspection	100%
Visual and mechanical inspection	See MIL-PRF-15733, group A inspection.

Part or Identifying Number (PIN): M15733/48- (dash number from table I).

Supersession data: See table III.

* TABLE III. Supersession data.

Inactive PIN	Superseding specification sheet	Superseding PIN
M15733/48-0001	MIL-PRF-15733/58	M15733/58-0002
M15733/48-0002	MIL-PRF-15733/58	M15733/58-0001
M15733/48-0003	MIL-PRF-15733/58	M15733/58-0004
M15733/48-0004	MIL-PRF-28861/4	M28861/04-020TB
M15733/48-0005	MIL-PRF-15733/58	M15733/58-0001

* Referenced documents. In addition to MIL-PRF-15733, this document also references the following:

MIL-PRF-15733/58
MIL-PRF-28861/4
MIL-STD-202
MIL-STD-220

* Changes from previous issue. The margins of this specification sheet are marked with asterisks to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

Custodians:
Army - CR
Navy - EC
Air Force - 85
DLA - CC

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

Preparing activity:
DLA - CC

(Project 5915-2008-016)

* 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 http://assist.daps.dla.mil.