

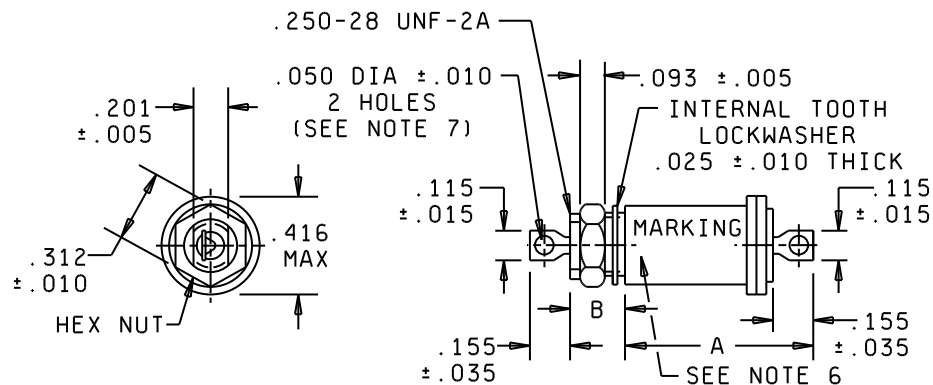
PERFORMANCE SPECIFICATION SHEET

FILTERS, RADIO FREQUENCY INTERFERENCE, HERMETICALLY SEALED,
STYLES FL10 AND FL11

The following dash numbers are inactive for new design after 31 May 1990: -0001, through -0006, -0013 through -0018, -0025 through -0030, -0037 through -0042, and -0049 through -0054. The following dash numbers are inactive for new design after 30 November 1993: -0007 through -0012, -0019 through -0024, -0031 through -0036, -0043 through -0048, and -0055 through -0060. For new design, see table III for supersession data.

This specification 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](#).



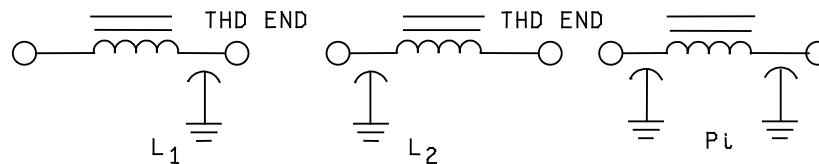
Inch	mm	Inch	mm
.005	0.13	.155	3.94
.010	0.25	.187	4.75
.015	0.38	.201	5.11
.025	0.64	.250	6.35
.035	0.89	.312	7.92
.050	1.27	.416	10.57
.070	1.78	.630	16.00
.093	2.36	.730	18.54
.115	2.92		

FIGURE 1. Case dimensions and circuit diagrams.



MIL-PRF-15733/23C

DIMENSION					
A = .630 inches max				A = .730 inches max	
B ± .010				B ± .010	
.312		.187		.312	.187
Dash no.		Dash no.		Dash no.	Dash no.
0001	0031	0002	0032	0005	0006
0003	0033	0004	0034	0011	0012
0007	0037	0008	0038	0017	0018
0009	0039	0010	0040	0023	0024
0013	0043	0014	0044	0029	0030
0015	0045	0016	0046	0035	0036
0019	0049	0020	0050	0041	0042
0021	0051	0022	0052	0047	0048
0025	0055	0026	0056	0053	0054
0027	0057	0028	0058	0059	0060



CIRCUIT DIAGRAMS

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Circuit diagrams are for information only.
4. All filters shall be supplied with mounting hardware.
5. Use of styles FL10 or FL11 with or without shoulder is optional.
6. Terminal identification (non-symmetrical filters): The case shall be marked at the threaded end of the filter with the symbol "C" or "L" as follows:

Symbol	Circuit
C -----	L ₁
L -----	L ₂

7. Optional terminal hole of .070 ± .010 inch or terminal slot of .050 ± .010 x .070 ± .010 inch may be supplied.

FIGURE 1. Case dimensions and circuit diagrams - Continued.

TABLE I. Electrical characteristics.

Dash no.	Cir-cuit	Max rated current (amp)	Rated dc voltage (volts)	Max voltage drop (volts)	Minimum insertion loss (dB) in accordance with MIL-STD-220 1/																	
					At 25°C									At -55°C and +125°C								
					15 kHz	30 kHz	50 kHz	100 kHz	150 kHz	300 kHz	1 MHz	10 MHz	1 GHz	15 kHz	30 kHz	50 kHz	100 kHz	150 kHz	300 kHz	1 MHz	10 MHz	1 GHz
0001	L ₂	.10	50	.17	9	20	29	41	48	60	70	70	70	7	18	27	39	46	58	70	70	70
0002	L ₂	.10	50	.17	9	20	29	41	48	60	70	70	70	7	18	27	39	46	58	70	70	70
0003	L ₁	.10	50	.17	9	20	29	41	48	60	70	70	70	7	18	27	39	46	58	70	70	70
0004	L ₁	.10	50	.17	9	20	29	41	48	60	70	70	70	7	18	27	39	46	58	70	70	70
0005	Pi	.10	50	.17	15	36	50	69	79	80	80	80	80	13	34	48	67	77	78	80	80	80
0006	Pi	.10	50	.17	15	36	50	69	79	80	80	80	80	13	34	48	67	77	78	80	80	80
0007	L ₂	.10	150	.17	2	11	20	32	39	51	60	60	60	NA	9	18	30	37	49	60	60	60
0008	L ₂	.10	150	.17	2	11	20	32	39	51	60	60	60	NA	9	18	30	37	49	60	60	60
0009	L ₁	.10	150	.17	2	11	20	32	39	51	60	60	60	NA	9	18	30	37	49	60	60	60
0010	L ₁	.10	150	.17	2	11	20	32	39	51	60	60	60	NA	9	18	30	37	49	60	60	60
0011	Pi	.10	150	.17	NA	17	31	49	60	70	70	70	70	NA	15	29	47	58	70	70	70	70
0012	Pi	.10	150	.17	NA	17	31	49	60	70	70	70	70	NA	15	29	47	58	70	70	70	70
0013	L ₂	.30	50	.23	6	15	23	35	42	54	70	70	70	4	13	21	33	40	52	70	70	70
0014	L ₂	.30	50	.23	6	15	23	35	42	54	70	70	70	4	13	21	33	40	52	70	70	70
0015	L ₁	.30	50	.23	6	15	23	35	42	54	70	70	70	4	13	21	33	40	52	70	70	70
0016	L ₁	.30	50	.23	6	15	23	35	42	54	70	70	70	4	13	21	33	40	52	70	70	70
0017	Pi	.30	50	.23	4	29	44	62	73	80	80	80	80	2	27	42	60	71	80	80	80	80
0018	Pi	.30	50	.23	4	29	44	62	73	80	80	80	80	2	27	42	60	71	80	80	80	80
0019	L ₂	.30	150	.23	NA	6	13	25	32	44	60	60	60	NA	4	11	23	30	42	60	60	60
0020	L ₂	.30	150	.23	NA	6	13	25	32	44	60	60	60	NA	4	11	23	30	42	60	60	60
0021	L ₁	.30	150	.23	NA	6	13	25	32	44	60	60	60	NA	4	11	23	30	42	60	60	60
0022	L ₁	.30	150	.23	NA	6	13	25	32	44	60	60	60	NA	4	11	23	30	42	60	60	60
0023	Pi	.30	150	.23	NA	8	24	43	53	70	70	70	70	NA	6	22	41	51	69	70	70	70
0024	Pi	.30	150	.23	NA	8	24	43	53	70	70	70	70	NA	6	22	41	51	69	70	70	70
0025	L ₂	.50	50	.18	5	12	19	29	36	48	69	70	70	3	10	17	27	34	46	67	70	70
0026	L ₂	.50	50	.18	5	12	19	29	36	48	69	70	70	3	10	17	27	34	46	67	70	70
0027	L ₁	.50	50	.18	5	12	19	29	36	48	69	70	70	3	10	17	27	34	46	67	70	70
0028	L ₁	.50	50	.18	5	12	19	29	36	48	69	70	70	3	10	17	27	34	46	67	70	70
0029	Pi	.50	50	.18	NA	21	37	56	67	80	80	80	80	NA	19	35	54	65	78	80	80	80
0030	Pi	.50	50	.18	NA	21	37	56	67	80	80	80	80	NA	19	35	54	65	78	80	80	80

See footnote at end of table.

TABLE I. Electrical characteristics - Continued.

Dash no.	Cir- cuit	Max rated current (amp)	Rated dc voltage (volts)	Max voltage drop (volts)	Minimum insertion loss (dB) in accordance with MIL-STD-220 1/																	
					At 25°C									At -55°C and +125°C								
					15 kHz	30 kHz	50 kHz	100 kHz	150 kHz	300 kHz	1 MHz	10 MHz	1 GHz	15 kHz	30 kHz	50 kHz	100 kHz	150 kHz	300 kHz	1 MHz	10 MHz	1 GHz
0031	L ₂	.50	150	.18	NA	3	9	20	26	39	59	60	60	NA	1	7	18	24	37	57	60	60
0032	L ₂	.50	150	.18	NA	3	9	20	26	39	59	60	60	NA	1	7	18	24	37	57	60	60
0033	L ₁	.50	150	.18	NA	3	9	20	26	39	59	60	60	NA	1	7	18	24	37	57	60	60
0034	L ₁	.50	150	.18	NA	3	9	20	26	39	59	60	60	NA	1	7	18	24	37	57	60	60
0035	Pi	.50	150	.18	NA	NA	15	37	48	66	70	70	70	NA	NA	13	35	46	64	70	70	70
0036	Pi	.50	150	.18	NA	NA	15	37	48	66	70	70	70	NA	NA	13	35	46	64	70	70	70
0037	L ₂	1.0	50	.14	5	11	15	21	26	36	55	70	70	3	9	13	19	24	34	53	70	70
0038	L ₂	1.0	50	.14	5	11	15	21	26	36	55	70	70	3	9	13	19	24	34	53	70	70
0039	L ₁	1.0	50	.14	5	11	15	21	26	36	55	70	70	3	9	13	19	24	34	53	70	70
0040	L ₁	1.0	50	.14	5	11	15	21	26	36	55	70	70	3	9	13	19	24	34	53	70	70
0041	Pi	1.0	50	.14	NA	NA	20	41	52	71	80	80	80	NA	NA	18	39	50	69	80	80	80
0042	Pi	1.0	50	.14	NA	NA	20	41	52	71	80	80	80	NA	NA	18	39	50	69	80	80	80
0043	L ₂	1.0	150	.14	NA	3	6	12	16	26	46	60	60	NA	1	4	10	14	24	44	60	60
0044	L ₂	1.0	150	.14	NA	3	6	12	16	26	46	60	60	NA	1	4	10	14	24	44	60	60
0045	L ₁	1.0	150	.14	NA	3	6	12	16	26	46	60	60	NA	1	4	10	14	24	44	60	60
0046	L ₁	1.0	150	.14	NA	3	6	12	16	26	46	60	60	NA	1	4	10	14	24	44	60	60
0047	Pi	1.0	150	.14	NA	NA	NA	18	32	51	70	70	70	NA	NA	NA	16	30	49	68	70	70
0048	Pi	1.0	150	.14	NA	NA	NA	18	32	51	70	70	70	NA	NA	NA	16	30	49	68	70	70
0049	L ₂	2.0	50	.14	5	10	14	20	24	32	48	70	70	3	8	12	18	22	30	46	70	70
0050	L ₂	2.0	50	.14	5	10	14	20	24	32	48	70	70	3	8	12	18	22	30	46	70	70
0051	L ₁	2.0	50	.14	5	10	14	20	24	32	48	70	70	3	8	12	18	22	30	46	70	70
0052	L ₁	2.0	50	.14	5	10	14	20	24	32	48	70	70	3	8	12	18	22	30	46	70	70
0053	Pi	2.0	50	.14	NA	NA	NA	33	46	65	80	80	80	NA	NA	NA	31	44	63	80	80	80
0054	Pi	2.0	50	.14	NA	NA	NA	33	46	65	80	80	80	NA	NA	NA	31	44	63	80	80	80
0055	L ₂	2.0	150	.14	NA	3	5	11	15	23	38	60	60	NA	1	3	9	13	21	36	60	60
0056	L ₂	2.0	150	.14	NA	3	5	11	15	23	38	60	60	NA	1	3	9	13	21	36	60	60
0057	L ₁	2.0	150	.14	NA	3	5	11	15	23	38	60	60	NA	1	3	9	13	21	36	60	60
0058	L ₁	2.0	150	.14	NA	3	5	11	15	23	38	60	60	NA	1	3	9	13	21	36	60	60
0059	Pi	2.0	150	.14	NA	NA	NA	NA	22	45	70	70	70	NA	NA	NA	NA	20	43	70	70	70
0060	Pi	2.0	150	.14	NA	NA	NA	NA	22	45	70	70	70	NA	NA	NA	NA	20	43	70	70	70

1/ Full load insertion loss measurements shall be performed at frequencies between 100 kHz to 10 MHz inclusive; all other measurements shall be performed at no-load.

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REQUIREMENTS:

Dimensions and configuration: See figure 1.

Case: Metal.

Case and mounting hardware finish: In accordance with [MIL-PRF-15733](#). Pure tin finish is prohibited.

Terminals: Solder lug.

Operating temperature range: -55° 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](#) except the duration of application of voltage shall be 1 to 5 seconds.

Insulation resistance: In accordance with [MIL-PRF-15733](#). The following details shall apply:

Test temperature: 25°C.

Test potential: Rated dc voltage.

Insulation resistance: Shall be not less than 1,000 megohms.

Voltage drop: See table I.

Overload: In accordance with [MIL-PRF-15733](#). After the filter has returned to room temperature, the insulation resistance and voltage drop measurements shall meet initial requirements.

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](#); Test condition B.

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 (20g).

Moisture resistance: In accordance with [MIL-PRF-15733](#) except after the 24 hour drying period, insulation resistance shall meet initial requirement.

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

Part or Identifying number (PIN): M15733/23-(dash number from table I).

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Initial qualification to MIL-PRF-15733/23 may be granted based on qualification to [MIL-PRF-28861/3](#) and [MIL-PRF-28861/4](#) as indicated in table II. Extension of qualification from [MIL-PRF-28861/3](#) and [MIL-PRF-28861/4](#) to MIL-PRF-15733/23 is permissible under the following provisions:

- The MIL-PRF-15733/23 parts use the same design and dielectric characteristics as the [MIL-PRF-28861/3](#) and [MIL-PRF-28861/4](#) parts.
- The [MIL-PRF-28861/3](#) and [MIL-PRF-28861/4](#) qualification data verifies that the physical and electrical characteristics of the MIL-PRF-15733/23 parts are satisfied.

TABLE II. Extension of qualification.

Qualification to MIL-PRF-28861/3	Will qualify MIL-PRF-15733/23		Qualification to MIL-PRF-28861/3	Will qualify MIL-PRF-15733/23
-020	-0007		-007	-0034
-002	-0008		-027	-0035
-019	-0009		-009	-0036
-001	-0010		-029	-0043
-021	-0011		-011	-0044
-003	-0012		-028	-0045
-023	-0019		-010	-0046
-005	-0020		-030	-0047
-022	-0021		-012	-0048
-004	-0022		-032	-0055
-024	-0023		-014	-0056
-006	-0024		-031	-0057
-026	-0031		-013	-0058
-008	-0032		-033	-0059
-025	-0033		-015	-0060
Qualification to MIL-PRF-28861/4	Will qualify MIL-PRF-15733/23		Qualification to MIL-PRF-28861/4	Will qualify MIL-PRF-15733/23
-020	-0001		-007	-0028
-002	-0002		-027	-0029
-019	-0003		-009	-0030
-001	-0004		-029	-0037
-021	-0005		-011	-0038
-003	-0006		-028	-0039
-023	-0013		-010	-0040
-005	-0014		-030	-0041
-022	-0015		-012	-0042
-004	-0016		-032	-0049
-024	-0017		-014	-0050
-006	-0018		-031	-0051
-026	-0025		-013	-0052
-008	-0026		-033	-0053
-025	-0027		-015	-0054

Periodic inspection: Group C inspection shall be in accordance with [MIL-PRF-15733](#) except styles FL10 and FL11 may be combined for the Group C inspection sample requirement.

Supersession data: See table III.

MIL-PRF-15733/23C

TABLE III. Supersession data.

Inactive PIN M15733/23-	Superseding specification	Superseding PIN M28861	Inactive PIN M15733/23-	Superseding specification	Superseding PIN M28861
0001	MIL-PRF-28861/4	/04-020	0031	MIL-PRF-28861/3	/03-026
0002	MIL-PRF-28861/4	/04-002	0032	MIL-PRF-28861/3	/03-008
0003	MIL-PRF-28861/4	/04-019	0033	MIL-PRF-28861/3	/03-025
0004	MIL-PRF-28861/4	/04-001	0034	MIL-PRF-28861/3	/03-007
0005	MIL-PRF-28861/4	/04-021	0035	MIL-PRF-28861/3	/03-027
0006	MIL-PRF-28861/4	/04-003	0036	MIL-PRF-28861/3	/03-009
0007	MIL-PRF-28861/3	/03-020	0037	MIL-PRF-28861/4	/04-029
0008	MIL-PRF-28861/3	/03-002	0038	MIL-PRF-28861/4	/04-011
0009	MIL-PRF-28861/3	/03-019	0039	MIL-PRF-28861/4	/04-028
0010	MIL-PRF-28861/3	/03-001	0040	MIL-PRF-28861/4	/04-010
0011	MIL-PRF-28861/3	/03-021	0041	MIL-PRF-28861/4	/04-030
0012	MIL-PRF-28861/3	/03-003	0042	MIL-PRF-28861/4	/04-012
0013	MIL-PRF-28861/4	/04-023	0043	MIL-PRF-28861/3	/03-029
0014	MIL-PRF-28861/4	/04-005	0044	MIL-PRF-28861/3	/03-011
0015	MIL-PRF-28861/4	/04-022	0045	MIL-PRF-28861/3	/03-028
0016	MIL-PRF-28861/4	/04-004	0046	MIL-PRF-28861/3	/03-010
0017	MIL-PRF-28861/4	/04-024	0047	MIL-PRF-28861/3	/03-030
0018	MIL-PRF-28861/4	/04-006	0048	MIL-PRF-28861/3	/03-012
0019	MIL-PRF-28861/3	/03-023	0049	MIL-PRF-28861/4	/04-032
0020	MIL-PRF-28861/3	/03-005	0050	MIL-PRF-28861/4	/04-014
0021	MIL-PRF-28861/3	/03-022	0051	MIL-PRF-28861/4	/04-031
0022	MIL-PRF-28861/3	/03-004	0052	MIL-PRF-28861/4	/04-013
0023	MIL-PRF-28861/3	/03-024	0053	MIL-PRF-28861/4	/04-033
0024	MIL-PRF-28861/3	/03-006	0054	MIL-PRF-28861/4	/04-015
0025	MIL-PRF-28861/4	/04-026	0055	MIL-PRF-28861/3	/03-032
0026	MIL-PRF-28861/4	/04-008	0056	MIL-PRF-28861/3	/03-014
0027	MIL-PRF-28861/4	/04-025	0057	MIL-PRF-28861/3	/03-031
0028	MIL-PRF-28861/4	/04-007	0058	MIL-PRF-28861/3	/03-013
0029	MIL-PRF-28861/4	/04-027	0059	MIL-PRF-28861/3	/03-033
0030	MIL-PRF-28861/4	/04-009	0060	MIL-PRF-28861/3	/03-015

Referenced documents. In addition to [MIL-PRF-15733](#), this specification sheet references the following documents:

[MIL-PRF-28861/3](#)
[MIL-PRF-28861/4](#)
[MIL-STD-202](#)
[MIL-STD-220](#)

The margins of this specification sheet are marked vertical lines 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

Preparing activity:
DLA - CC

(Project 5915-2015-013)

Review activities:

Army - AR, AT, MI
Navy - AS, MC, OS, SH
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 <https://assist.dla.mil/>.