

INCH-POUND

MIL-PRF-15733/31F
w/AMENDMENT 3
5 February 2025
SUPERSEDING
MIL-PRF-15733/31F
w/AMENDMENT 2
3 June 2010

PERFORMANCE SPECIFICATION SHEET

FILTERS, RADIO FREQUENCY INTERFERENCE, HERMETICALLY SEALED, STYLE FL83

The following part numbers are inactive for new design after 23 February 1987: M15733/31-0003 through -0006 and M15733/31-0011 through -0038. The following part numbers are inactive for new design after 8 December 1995: M15733/31-0039 and 0040. For new design, see table II.

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](#).

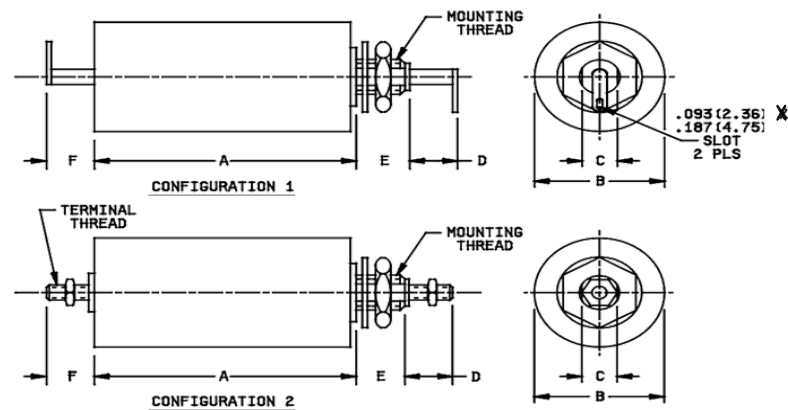


FIGURE 1. Case dimensions and circuit diagrams.

AMSC N/A

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FSC 5915



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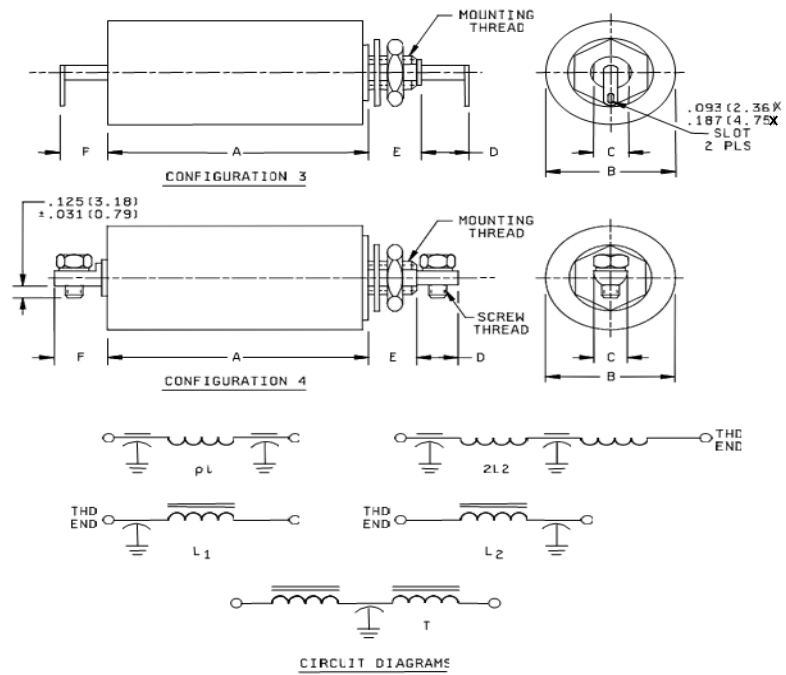
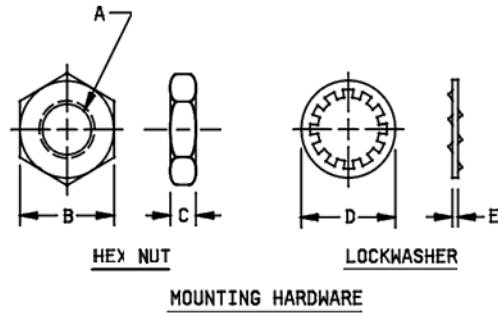


FIGURE 1. Case dimensions and circuit diagrams - Continued.

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Mounting Hardware

A THD	B ±.006 (.15)	C ±.003 (.08)	D ±.005 (.13)	E ±.005 (.13)
.3125 - 24 UNF-2B	.437 (11.10)	.125 (3.18)	.430 (10.92)	.022 (.56)
.4375 - 20 UNF-2B	.625 (15.88)	.125 (3.18)	.780 (19.81)	.035 (.89)
.6250 - 24 UNEF-2B	.875 (22.22)	.156 (3.96)	.875 (22.22)	.022 (.56)
.7500 - 20 UNEF-2B	1.062 (26.98)	.156 (3.96)	1.062 (26.98)	.022 (.56)
1.000 - 14 UNS-2B	1.500 (38.10)	.187 (4.75)	1.614 (41.00)	.062 (1.57)
1.125 - 18 UNEF-2B	1.625 (41.28)	.187 (4.75)	1.812 (46.02)	.062 (1.57)

FIGURE 1. Case dimensions and circuit diagrams - Continued.

TABLE I. Electrical characteristics.

Configuration	Dash no.	Weight ounces maximum	Dimensions								Terminal thread	Mounting thread	Screw thread
			A		B	C	D	E		F			
			Min	Max	Max	Max	Max	Min	Max	Max			
1	0001	13	3.81 (96.8)	3.93 (99.8)	1.50 (38.1)	.685 (17.40)	.50 (12.7)	.62 (15.7)	.74 (18.8)	.50 (12.7)	N/A	.750-20 UNEF-2A	N/A
2	0002	14	3.81 (96.8)	3.93 (99.8)	1.50 (38.1)	.685 (17.40)	.87 (22.1)	.62 (15.7)	.74 (18.8)	.87 (22.1)	.250-28 UNF-2A	.750-20 UNEF-2A	N/A
1	0003	6	3.50 (88.9)	3.62 (91.9)	1.145 (29.08)	.380 (9.65)	.25 (6.4)	.420 (10.67)	.460 (11.68)	.25 (6.4)	N/A	.4375-20 UNF-2A	N/A
3	0004	12	3.35 (85.1)	3.53 (89.7)	1.31 (33.3)	.380 (9.65)	.375 (9.52)	.422 (10.72)	.454 (11.53)	.28 (7.1)	N/A	.4375-20 UNF-2A	N/A
3	0005	5	2.59 (65.8)	2.79 (70.9)	1.06 (26.9)	.380 (9.65)	.375 (9.52)	.418 (10.62)	.458 (11.63)	.312 (7.92)	N/A	.4375-20 UNF-2A	N/A
3	0006	7	3.40 (86.4)	3.60 (91.4)	1.19 (30.2)	.380 (9.65)	.375 (9.52)	.418 (10.62)	.458 (11.63)	.312 (7.92)	N/A	.4375-20 UNF-2A	N/A
3	0007	12	3.65 (92.7)	3.85 (97.8)	1.56 (39.6)	.535 (13.59)	.375 (9.52)	.418 (10.62)	.458 (11.63)	.312 (7.92)	N/A	.625-24 UNEF-2A	N/A
4	0008	20	4.78 (121.4)	4.98 (126.5)	1.81 (46.0)	.930 (23.62)	.562 (14.27)	.480 (12.19)	.520 (13.21)	.625 (15.88)	N/A	1.000-14 UNS-2A	.164-32 UNC-2A
4	0009	36	4.40 (111.8)	4.60 (116.8)	2.31 (58.7)	1.070 (27.18)	.625 (15.88)	.542 (13.77)	.582 (14.78)	.969 (24.61)	N/A	1.125-18 UNEF-2A	.250-20 UNC-2A
4	0010	32	3.90 (99.1)	4.10 (104.1)	2.31 (58.7)	1.070 (27.18)	.625 (15.88)	.542 (13.77)	.582 (14.78)	.969 (24.61)	N/A	1.125-18 UNEF-2A	.250-20 UNC-2A
3	0011	2	1.57 (39.9)	1.69 (42.9)	.765 (19.4)	.260 (6.60)	.32 (8.1)	.260 (6.60)	.300 (7.62)	.32 (8.1)	N/A	.3125-24 UNF-2A	N/A
3	0012	2	1.57 (39.9)	1.69 (42.9)	.765 (19.4)	.260 (6.60)	.32 (8.1)	.260 (6.60)	.300 (7.62)	.32 (8.1)	N/A	.3125-24 UNF-2A	N/A

FIGURE 1. Case dimensions and circuit diagrams - Continued.

TABLE I. Electrical characteristics.

Configuration	Dash No.	Weight ounces maximum	Dimensions								Terminal thread	Mounting thread	Screw thread
			A		B	C	D	E		F			
			Min	Max	Max	Max	Max	Min	Max	Max			
3	0013	5	2.19 (55.6)	2.31 (58.7)	1.145 (29.08)	.380 (9.65)	.25 (6.4)	.420 (10.67)	.460 (11.68)	.25 (6.4)	N/A	.4375-20 UNF-2A	N/A
3	0014	5	2.19 (55.6)	2.31 (58.7)	1.145 (29.08)	.380 (9.65)	.25 (6.4)	.420 (10.67)	.460 (11.68)	.25 (6.4)	N/A	.4375-20 UNF-2A	N/A
3	0015	3	2.44 (61.0)	2.56 (65.0)	.765 (19.4)	.260 (6.60)	.32 (8.1)	.260 (6.60)	.300 (7.62)	.32 (8.1)	N/A	.3125-24 UNF-2A	N/A
3	0016	3	2.44 (61.0)	2.56 (65.0)	.765 (19.4)	.260 (6.60)	.32 (8.1)	.260 (6.60)	.300 (7.62)	.32 (8.1)	N/A	.3125-24 UNF-2A	N/A
3	0017	6	2.50 (63.5)	2.62 (66.5)	1.265 (32.13)	.380 (9.65)	.25 (6.4)	.420 (10.67)	.460 (11.68)	.25 (6.4)	N/A	.4375-20 UNF-2A	N/A
3	0018	6	2.50 (63.5)	2.62 (66.5)	1.265 (32.13)	.380 (9.65)	.25 (6.4)	.420 (10.67)	.460 (11.68)	.25 (6.4)	N/A	.4375-20 UNF-2A	N/A
3	0019	4	2.75 (69.8)	2.87 (72.9)	1.015 (25.78)	.380 (9.65)	.25 (6.4)	.420 (10.67)	.460 (11.68)	.25 (6.4)	N/A	.4375-20 UNF-2A	N/A
3	0020	4	2.75 (69.8)	2.87 (72.9)	1.015 (25.78)	.380 (9.65)	.25 (6.4)	.420 (10.67)	.460 (11.68)	.25 (6.4)	N/A	.4375-20 UNF-2A	N/A
2	0021	12	2.56 (65.0)	2.68 (68.1)	1.765 (44.83)	.666 (16.92)	.69 (17.5)	.480 (12.19)	.520 (13.21)	.69 (17.5)	.164-32 UNC-2A	.4375-20 UNF-2A	N/A
2	0022	12	2.56 (65.0)	2.68 (68.1)	1.765 (44.83)	.666 (16.92)	.69 (17.5)	.480 (12.19)	.520 (13.21)	.69 (17.5)	.164-32 UNC-2A	.4375-20 UNF-2A	N/A
3	0023	7	3.24 (82.3)	3.64 (92.5)	1.265 (32.13)	.380 (9.65)	.25 (6.4)	.420 (10.67)	.460 (11.68)	.25 (6.4)	N/A	.4375-20 UNF-2A	N/A
3	0024	7	3.24 (82.3)	3.64 (92.5)	1.265 (32.13)	.380 (9.65)	.25 (6.4)	.420 (10.67)	.460 (11.68)	.25 (6.4)	N/A	.4375-20 UNF-2A	N/A
2	0025	16	4.00 (101.6)	4.12 (104.6)	1.765 (44.83)	.666 (16.92)	.69 (17.5)	.480 (12.19)	.520 (13.21)	.69 (17.5)	.164-32 UNC-2A	.750-20 UNEF-2A	N/A

FIGURE 1. Case dimensions and circuit diagrams - Continued.

TABLE I. Electrical characteristics.

Configuration	Dash No.	Weight ounces maximum	Dimensions								Terminal thread	Mounting thread	Screw thread
			A		B	C	D	E		F			
			Min	Max	Max	Max	Max	Min	Max	Max			
2	0026	16	4.00 (101.6)	4.12 (104.6)	1.765 (44.83)	.666 (16.92)	.69 (17.5)	.480 (12.19)	.520 (13.21)	.69 (17.5)	.164-32 UNC-2A	.750-20 UNEF-2A	N/A
3	0027	2	2.32 (58.9)	2.44 (62.0)	.765 (19.43)	.260 (6.60)	.320 (8.13)	.260 (6.60)	.300 (7.62)	.320 (8.13)	N/A	.3125-24 UNF-2A	N/A
3	0028	3	3.50 (88.9)	3.62 (91.9)	1.145 (29.08)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	N/A	.4375-20 UNF-2A	N/A
3	0029	3	2.82 (71.6)	2.94 (74.7)	.765 (19.43)	.260 (6.60)	.320 (8.13)	.260 (6.60)	.300 (7.62)	.320 (8.13)	N/A	.3125-24 UNF-2A	N/A
3	0030	9	4.19 (106.4)	4.31 (109.5)	1.265 (32.13)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	N/A	.4375-20 UNF-2A	N/A
3	0031	5	3.13 (79.5)	3.25 (82.6)	1.015 (25.78)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	N/A	.4375-20 UNF-2A	N/A
2	0032	18	4.44 (112.8)	4.56 (115.8)	1.765 (44.83)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.164-32 UNC-2A	.750-20 UNEF-2A	N/A
3	0033	7	3.57 (90.7)	3.69 (93.7)	1.265 (32.13)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	N/A	.4375-20 UNF-2A	N/A
2	0034	20	5.69 (144.5)	5.81 (147.6)	1.765 (44.83)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.164-32 UNC-2A	.750-20 UNEF-2A	N/A
3	0035	9	4.19 (106.4)	4.31 (109.5)	1.265 (32.13)	.380 (9.65)	.250 (6.35)	.420 (10.67)	.460 (11.68)	.250 (6.35)	N/A	.4375-20 UNF-2A	N/A
2	0036	32	5.44 (138.2)	5.56 (141.2)	2.265 (57.53)	1.075 (27.30)	.690 (17.53)	.540 (13.72)	.580 (14.73)	.690 (17.53)	.164-32 UNC-2A	1.125-18 UNEF-2A	N/A
2	0037	15	4.44 (112.8)	4.56 (115.8)	1.515 (38.48)	.666 (16.92)	.690 (17.53)	.480 (12.19)	.520 (13.21)	.690 (17.53)	.164-32 UNC-2A	.750-20 UNEF-2A	N/A
2	0038	38	5.44 (138.2)	5.56 (141.2)	2.265 (57.53)	1.075 (27.30)	.690 (17.53)	.540 (13.72)	.580 (14.73)	.690 (17.53)	.164-32 UNC-2A	1.125-18 UNEF-2A	N/A
2	0039	38	5.44 (138.2)	5.56 (141.2)	2.265 (57.53)	1.075 (27.30)	.810 (20.57)	.540 (13.72)	.580 (14.73)	.810 (20.57)	.190-32 UNF-2A	1.125-18 UNEF-2A	N/A
2	0040	41	5.69 (144.5)	5.81 (147.6)	2.265 (57.53)	1.075 (27.30)	.880 (22.35)	.540 (13.72)	.580 (14.73)	.880 (22.35)	.250-20 UNC-2A	1.125-18 UNEF-2A	N/A

FIGURE 1. Case dimensions and circuit diagrams - Continued.

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Metric equivalents are in parentheses.
4. Circuit diagram is for information only.
5. Mounting hardware shall be supplied with filter.
6. Terminal identification (non-symmetrical filters): The case shall be marked at the threaded end of the filter with the symbol "C" or the symbol "L" as follows:

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

FIGURE 1. Case dimensions and circuit diagrams - Continued.

TABLE I. Electrical characteristics.

Dash no.	Circuit configuration	Maximum rated current (amperes)	Maximum voltage drop volts dc and ac (rms)	Minimum full load insertion loss (dB) in accordance with MIL-STD-220 at +25C <u>2/</u> <u>3/</u> <u>4/</u>											
				0.15 MHz	0.30 MHz	0.60 MHz	1 MHz	10 MHz	20 MHz	40 MHz	100 MHz	400 MHz	500 MHz	1,000 MHz	
0001	2L2 <u>1/</u>	5.0	0.5	60	70	80	80	80	80	80	80	---	80	80	
0002		5.0	0.5	60	70	80	80	80	80	80	80	---	80	80	
0003 <u>5/</u>	Pi	0.5	0.5	← 80 dB from 0.15 MHz to 10 GHz →											
0004 <u>5/</u>	Pi	5.0	0.5	42	62	80	100	88	80	---	80	80	---	80	
0005 <u>5/</u>	Pi	1.0	0.5	55	---	73	80	82	---	---	82	82	---	80	
0006 <u>5/</u>	Pi	3.0	0.5	55	---	73	80	82	---	---	82	82	---	80	
0007	Pi	10.0	0.5	50	---	73	80	82	---	---	82	82	---	80	
0008	Pi	20.0	0.5	46	---	73	80	82	---	---	82	82	---	80	
0009	Pi	50.0	0.5	46	---	73	80	82	---	---	82	82	---	80	
0010	Pi	30.0	0.5	46	---	73	80	82	---	---	82	82	---	80	
0011 <u>5/</u>	L ₁	0.5	1.0	30	43	53	60	60	60	60	60	60	60	60	
0012 <u>5/</u>	L ₂	0.5	1.0	30	43	53	60	60	60	60	60	60	60	60	
0013 <u>5/</u>	L ₁	0.5	1.0	50	60	60	60	60	60	60	60	60	60	60	
0014 <u>5/</u>	L ₂	0.5	1.0	50	60	60	60	60	60	60	60	60	60	60	
0015 <u>5/</u>	L ₁	1.0	1.0	30	43	53	60	60	60	60	60	60	60	60	
0016 <u>5/</u>	L ₂	1.0	1.0	30	43	53	60	60	60	60	60	60	60	60	
0017 <u>5/</u>	L ₁	1.0	1.0	50	60	60	60	60	60	60	60	60	60	60	
0018 <u>5/</u>	L ₂	1.0	1.0	50	60	60	60	60	60	60	60	60	60	60	
0019 <u>5/</u>	L ₁	3.0	0.5	30	43	53	60	60	60	60	60	60	60	60	
0020 <u>5/</u>	L ₂	3.0	0.5	30	43	53	60	60	60	60	60	60	60	60	

1/ Maximum operating temperature of +85°C.

2/ Dash number 0004 shall also meet the following no-load insertion requirements.

0.15 MHz	0.5 MHz	1 MHz	10 MHz
53 dB	86 dB	100 dB	90 dB

3/ For dash number 0005 through 0010, all insertion loss measurements shall be performed at no-load.

4/ Unless otherwise specified (see 2/ and 3/), full load insertion-loss measurements shall be performed from 0.15 MHz to 20 MHz.
Insertion-loss measurements above 20 MHz shall be performed at no-load.

5/ Inactive for new design.

TABLE I. Electrical characteristics.

Dash no.	Circuit configuration	Maximum rated current (amperes)	Maximum voltage drop volts dc and ac (rms)	Minimum full- load insertion in accordance with MIL-STD-220 at +25°C <u>2/ 3/ 4/</u>										
				0.15 MHz	0.30 MHz	0.60 MHz	1 MHz	10 MHz	20 MHz	40 MHz	100 MHz	400 MHz	500 MHz	1,000 MHz
0021 <u>5/</u>	L ₁	3.0	0.5	40	53	60	60	60	60	60	60	60	60	60
0022 <u>5/</u>	L ₂	3.0	0.5	40	53	60	60	60	60	60	60	60	60	60
0023 <u>5/</u>	L ₁	5.0	0.5	30	43	53	60	60	60	60	60	60	60	60
0024 <u>5/</u>	L ₂	5.0	0.5	30	43	53	60	60	60	60	60	60	60	60
0025 <u>5/</u>	L ₁	5.0	0.5	40	53	60	60	60	60	60	60	60	60	60
0026 <u>5/</u>	L ₂	5.0	0.5	40	53	60	60	60	60	60	60	60	60	60
0027 <u>5/</u>	T	0.5	2.5	25	35	45	50	70	70	70	70	70	70	70
0028 <u>5/</u>	T	0.5	2.5	37	47	53	57	70	70	70	70	70	70	70
0029 <u>5/</u>	T	1.0	2.5	25	35	45	50	70	70	70	70	70	70	70
0030 <u>5/</u>	T	1.0	2.5	37	47	53	57	70	70	70	70	70	70	70
0031 <u>5/</u>	T	3.0	1.5	25	35	45	50	70	70	70	70	70	70	70
0032 <u>5/</u>	T	3.0	1.5	37	47	53	57	70	70	70	70	70	70	70
0033 <u>5/</u>	T	5.0	1.0	25	35	45	50	70	70	70	70	70	70	70
0034 <u>5/</u>	T	5.0	1.0	37	47	53	57	70	70	70	70	70	70	70
0035 <u>5/</u>	T	10.0	0.5	25	35	45	50	70	70	70	70	70	70	70
0036 <u>5/</u>	T	10.0	0.5	37	47	53	57	70	70	70	70	70	70	70
0037 <u>5/</u>	T	20.0	0.5	25	35	45	50	70	70	70	70	70	70	70
0038 <u>5/</u>	T	20.0	0.5	37	47	53	57	70	70	70	70	70	70	70
0039 <u>5/</u>	T	30.0	0.5	25	35	45	50	70	70	70	70	70	70	70
0040 <u>5/</u>	T	50.0	0.5	25	35	45	50	70	70	70	70	70	70	70

1/ Maximum operating temperature of +85°C.

2/ Dash number 0004 shall also meet the following no-load insertion requirements.

0.15 MHz	0.5 MHz	1 MHz	10 MHz
53 dB	86 dB	100 dB	90 dB

3/ For dash number 0005 through 0010, all insertion loss measurements shall be performed at no-load.

4/ Unless otherwise specified (see 2/ and 3/), full load insertion-loss measurements shall be performed from 0.15 MHz to 20MHz.
Insertion-loss measurements above 20 MHz shall be performed at no-load.

5/ Inactive for new design.

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REQUIREMENTS:

Dimensions and configurations: See [figure 1](#) and [table I](#).

Case: Metal.

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

Rated voltage: 600 volts dc, 250 volts ac.

Rated current: See [table I](#).

Insertion loss: In accordance with [MIL-PRF-15733](#) and the following:

At +25°C: Shall be as specified in table I.

At -55°C and +125°C: Shall be as specified in table I except a degradation of 2 dB from the value specified in table I shall be allowed up to 10 MHz.

Operating temperature range:

Dash numbers 0001 and 0002: -65°C to +85°C.

Dash numbers 0003 through 0040: -55°C to +125°C.

Seal: In accordance with [MIL-PRF-15733](#).

Temperature rise: In accordance with [MIL-PRF-15733](#) and the following:

25°C maximum for parts rated up to and including 10 amperes.

35°C maximum for parts rated above 10 amperes.

Maximum voltage drop: See [table I](#).

Insulation resistance: In accordance with [MIL-PRF-15733](#). Insulation resistance shall be not less than 1,000 megohms minimum.

Terminal strength: In accordance with [MIL-PRF-15733](#) and [MIL-STD-202-211](#). The following details shall apply:

Configuration 1: Test condition A (Applied force - 9 pounds) and test condition B (5 bends).

Configuration 2: Test condition E.

Salt atmosphere (corrosion): In accordance with [MIL-PRF-15733](#) and [MIL-STD-202-101](#); test condition A.

Thermal shock and immersion: In accordance with [MIL-PRF-15733](#). The following exception shall apply:

Thermal shock:

For dash numbers 0001 and 0002, use [MIL-STD-202-107](#), test condition B, except the temperature at step 3 shall be +85°C.

Shock (specified pulse): In accordance with [MIL-PRF-15733](#) and [MIL-STD-202-213](#); test condition I. Vibration, high

frequency: In accordance with [MIL-PRF-15733](#) and [MIL-STD-202-204](#) test condition B.

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

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Thermal shock:

For dash numbers 0001 and 0002 use [MIL-STD-202-107](#), test condition B, except the temperature at step 3 shall be +85°C.

Life: In accordance with [MIL-PRF-15733](#) and [MIL-STD-202-108](#); test condition B. Part or

identifying number (PIN): M15733/31-(dash number from table I).

New design data: For new design see [table II](#).

TABLE II. New design data.

Inactive PIN M15733/31-	For new design use MIL-PRF-15733/74 PIN M15733/74-	Inactive PIN M15733/31-	For new design use MIL-PRF-15733/74 PIN M15733/74-
0003	0031	0024	0014
0004	0038	0025	0015
0005	0033	0026	0016
0006	0036	0027	0048
0011	0001	0028	0049
0012	0002	0029	0050
0013	0003	0030	0051
0014	0004	0031	0052
0015	0005	0032	0053
0016	0006	0033	0054
0017	0007	0034	0055
0018	0008	0035	0056
0019	0009	0036	0057
0020	0010	0037	0058
0021	0011	0038	0059
0022	0012	0039	0060
0023	0013	0040	0061

MIL-PRF-15733/31F
w/AMENDMENT 3

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

MIL-PRF-15733/74
MIL-STD-202-101
MIL-STD-202-107
MIL-STD-202-108
MIL-STD-202-204
MIL-STD-202-211
MIL-STD-202-213
MIL-STD-220

Amendment notations. The margins of this specification sheet are marked with an asterisk to indicate modifications generated by this amendment. 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.

Custodians:

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

Preparing activity:

DLA - CC

(Project 5915-2025-003)

Review activities:

Army - AT, AV
Navy - AS, MC
Air Force - 19

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/>.