

INCH-POUND

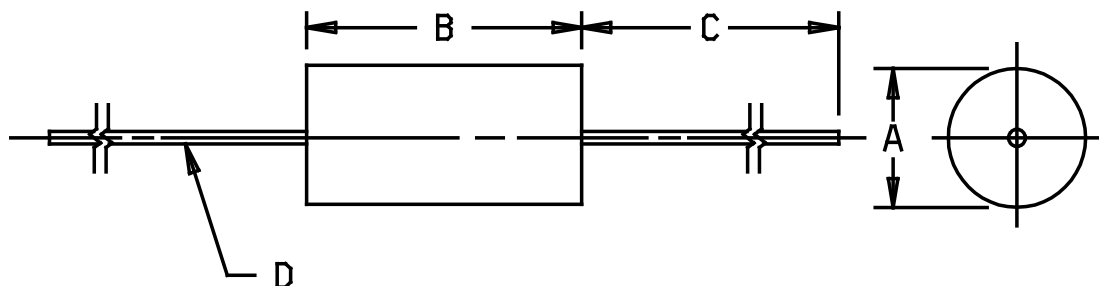
MIL-PRF-39010/3E
W/AMENDMENT 2
14 December 2022
SUPERSEDING
MIL-PRF-39010/3E
W/AMENDMENT 1
6 September 2018

PERFORMANCE SPECIFICATION SHEET

COILS, FIXED, RADIO FREQUENCY, MOLDED, MICROMINIATURE,
MAGNETICALLY SHIELDED (FERRITE CORE-FERRITE SLEEVE),
ESTABLISHED RELIABILITY AND NONESTABLISHED RELIABILITY

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

The requirements for acquiring the product described herein shall consist of this
specification sheet and MIL-PRF-39010.



Letter	Dimensions are in inches with metric equivalents (mm) in parentheses	Dimensions are in inches with metric equivalents (mm) in parentheses
	Minimum	Maximum
A	.152 (3.86)	.172 (4.37)
B	.390 (9.91)	.430 (10.92)
C	1.250 (31.75)	1.626 (41.30)
D	.023 (0.58)	.027 (0.69)

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.

FIGURE 1. Dimensions and configuration.

AMSC N/A

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

FSC 5950



REQUIREMENTS:

Interface and physical dimensions: See figure 1.

Material: Ferrite core with ferrite sleeve.

Weight: 0.04 ounce maximum.

Operating temperature range: -55°C to +105°C.

Dielectric withstanding voltage: [MIL-STD-202-301](#); test voltage of 1,000 V rms.

Barometric pressure: [MIL-STD-202-105](#), test condition C, 70,000 feet with a test voltage of 200 V rms.

Electrical characteristics: See table I and table II.

Inductance: See table I.

Inductance tolerance: See table I.

Q values: See table I.

Self-resonant frequency: See table I.

Percent coupling: 3 percent maximum.

DC resistance: See table I.

Temperature rise: 15°C.

Terminal pull: 5 pounds.

Part or Identifying Number (PIN): M39010/03 (dash number from table I).

Supersession data: This specification supersedes MS75089 and MS21363.

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TABLE I. Electrical characteristics (initial) and dash numbers.

Dash number 1/	Inductance μH	Inductance tolerance ± percent	Q min	Test frequency (MHz)	Self- resonant frequency minimum (MHz)	DC resistance (25°C) maximum (ohms)	Rated dc current (mA) 2/	Incremental current
A150**	15	5, 10	45	2.5	49	.80	315.0	250
A160**	16	5	45	2.5	45	.89	300.0	235
A180**	18	5, 10	45	2.5	45	.89	300.0	235
A200**	20	5	45	2.5	41	.96	290.0	220
A220**	22	5, 10	45	2.5	41	.96	290.0	220
A240**	24	5	45	2.5	38	1.19	260.0	200
A270**	27	5, 10	45	2.5	38	1.19	260.0	200
A300**	30	5	45	2.5	34	1.37	240.0	190
A330**	33	5, 10	45	2.5	34	1.37	240.0	190
A360**	36	5	45	2.5	29	1.93	205.0	180
A390**	39	5, 10	50	2.5	29	1.93	205.0	180
A430**	43	5	50	2.5	27	2.11	195.0	175
A470**	47	5, 10	50	2.5	27	2.11	195.0	175
A510**	51	5	50	2.5	25	2.23	190.0	160
A560**	56	5, 10	50	2.5	25	2.23	190.0	160
A620**	62	5	50	2.5	21	2.44	180.0	150
A680**	68	5, 10	50	2.5	21	2.44	180.0	150
A750**	75	5	50	2.5	10.5	2.70	170.0	140
A820**	82	5, 10	50	2.5	10.5	2.70	170.0	140
A910**	91	5	50	2.5	10.0	3.12	160.0	120
A101**	100	5, 10	50	2.5	10.0	3.12	160.0	120
A111**	110	5	50	.79	9.7	3.60	150.0	95
A121**	120	5, 10	55	.79	9.7	3.60	150.0	95
A131**	130	5	55	.79	8.5	4.10	140.0	90
A151**	150	5, 10	55	.79	8.5	4.10	140.0	90
A161**	160	5	55	.79	8.0	4.40	135.0	85
A181**	180	5, 10	55	.79	8.0	4.40	135.0	85
A201**	200	5	55	.79	7.5	5.00	125.0	80
A221**	220	5, 10	55	.79	7.5	5.00	125.0	80
A241**	240	5	55	.79	7.0	5.80	115.0	70
A271**	270	5, 10	55	.79	7.0	5.80	115.0	70
A301**	300	5	55	.79	6.5	6.40	110.0	65

See footnotes at end of table.

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TABLE I. Electrical characteristics (initial) and dash numbers - Continued.

Dash number <u>1/</u>	Inductance μ H	Inductance tolerance $\pm$ percent	Q min	Test frequency (MHz)	Self-resonant frequency minimum (MHz)	DC resistance (25°C) maximum (ohms)	Rated dc current (mA) <u>2/</u>	Incremental current
A331**	330	5, 10	55	.79	6.5	6.40	110.0	65
A361**	360	5	55	.79	6.2	7.40	105.0	60
A391**	390	5, 10	60	.79	6.2	7.40	105.0	60
A431**	430	5	60	.79	5.7	9.50	92.0	58
A471**	470	5, 10	60	.79	5.7	9.50	92.0	58
A511**	510	5	60	.79	4.7	10.5	90.0	55
A561**	560	5, 10	60	.79	4.7	10.5	90.0	55
A621**	620	5	60	.79	4.5	11.8	80.0	50
A681**	680	5, 10	60	.79	4.5	11.8	80.0	50
A751**	750	5	60	.79	4.2	13.0	80.0	45
A821**	820	5, 10	60	.79	4.2	13.0	80.0	45
A911**	910	5	60	.79	3.8	17.5	70.0	40
A102**	1,000	5, 10	60	.79	3.8	17.5	70.0	40
A112**	1,100	5	45	.25	1.5	22.1	60.0	35
A122**	1,200	5, 10	45	.25	1.5	22.1	60.0	35
A132**	1,300	5	45	.25	1.2	26.5	55.0	33
A152**	1,500	5, 10	45	.25	1.2	26.5	55.0	33
A162**	1,600	5	45	.25	1.0	29.9	50.0	30
A182**	1,800	5, 10	45	.25	1.0	29.9	50.0	30
A202**	2,000	5	45	.25	.97	33.8	50.0	27
A222**	2,200	5, 10	45	.25	.97	33.8	50.0	27
A242**	2,400	5	45	.25	.92	47.3	40.0	25
A272**	2,700	5, 10	45	.25	.92	47.3	40.0	25
A302**	3,000	5	45	.25	.84	53.0	40.0	22
A332**	3,300	5, 10	45	.25	.84	53.0	40.0	22
A362**	3,600	5	45	.25	.80	73.8	35.0	20
A392**	3,900	5, 10	45	.25	.80	73.8	35.0	20
A432**	4,300	5	45	.25	.74	81.6	31.0	19
A472**	4,700	5, 10	45	.25	.74	81.6	31.0	19
A512**	5,100	5	44	.25	.73	98.9	28.0	17
A562**	5,600	5, 10	44	.25	.73	98.9	28.0	17
A622**	6,200	5	40	.25	.66	111.0	27.0	16

See footnotes at end of table.

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TABLE I. Electrical characteristics (initial) and dash numbers - Continued.

Dash number <u>1/</u>	Inductance μ H	Inductance tolerance $\pm$ percent	Q min	Test frequency (MHz)	Self-resonant frequency minimum (MHz)	DC resistance (25°C) maximum (ohms)	Rated dc current (mA) <u>2/</u>	Incremental current
A682**	6,800	5, 10	40	.25	.66	111.0	27.0	16
A752**	7,500	5	40	.25	.54	119.0	26.0	15
A822**	8,200	5, 10	40	.25	.54	119.0	26.0	15
A912**	9,100	5	40	.25	.47	137.0	24.0	14
A103**	10,000	5, 10	40	.25	.47	137.0	24.0	14
A113**	11,000	5	30	.079	.33	143.0	23.0	13
A123**	12,000	5, 10	30	.079	.33	143.0	23.0	13
A133**	13,000	5	30	.079	.29	157.0	22.0	12
A153**	15,000	5, 10	30	.079	.29	157.0	22.0	12
A163**	16,000	5	30	.079	.28	175.0	21.0	10
A183**	18,000	5, 10	30	.079	.28	175.0	21.0	10
A203**	20,000	5	27	.079	.25	274.0	17.0	9
A223**	22,000	5, 10	27	.079	.25	274.0	17.0	9
A243**	24,000	5	27	.079	.21	308.0	16.0	8
A273**	27,000	5, 10	27	.079	.21	308.0	16.0	8
A303**	30,000	5	27	.079	.19	343.0	15.0	7.5
A333**	33,000	5, 10	27	.079	.19	343.0	15.0	7.5
A363**	36,000	5	27	.079	.17	376.0	15.0	6.0
A393**	39,000	5, 10	27	.079	.17	376.0	15.0	6.0
A433**	43,000	5	23	.079	.16	473.0	13.0	5.5
A473**	47,000	5, 10	23	.079	.16	473.0	13.0	5.5
A513**	51,000	5	23	.079	.14	512.0	13.0	5.0
A563**	56,000	5, 10	23	.079	.14	512.0	13.0	5.0
A623**	62,000	5	23	.079	.13	580.0	12.0	4.0
A683**	68,000	5, 10	23	.079	.13	580.0	12.0	4.0
A753**	75,000	5	21	.079	.12	618.0	11.0	3.5
A823**	82,000	5, 10	21	.079	.12	618.0	11.0	3.5
A913**	91,000	5	18	.079	.11	678.0	11.0	3.0
A104**	100,000	5, 10	18	.079	.11	678.0	11.0	3.0

1/ The complete dash number will include two additional letters (indicated by **). The first additional letter will indicate the inductance tolerance and the second additional letter will indicate the product level (e.g., C, M, P, R, S) and will be added to the end of the dash number.

2/ The rated dc current is based on 90°C ambient temperature with a 15°C rise.

TABLE II. Electrical characteristics (final). 1/

Inspection group	Allowable variation from initial measurement	Allowable variation from initial measurement	Allowable percent from specified minimum value in electrical characteristics (initial) table	Allowable percent from specified minimum value in electrical characteristics (initial) table
	Inductance (percent)	DC resistance	Self-resonant frequency	Q
Qualification inspection				
Group II	±5			-10
Group IV	±10	±(5% +.001 ohm)	<u>2/</u>	-20
Group V	±5	±(2% +.001 ohm)	<u>2/</u>	-20
Quality conformance inspection Group B				
Subgroup 1	±5	±(2% +.001 ohm)	<u>2/</u>	-20
Subgroup 3	±5			-10
Subgroup 4	±10	±(5% +.001 ohm)	<u>2/</u>	-20

1/ Test fixture allowance of +.01 μH shall be added to all change in inductance limits ±(_ percent +.01μH).

2/ The self-resonant frequency shall be not less than the value specified in table I.

Amendment notations. The margins of this specification are marked with vertical lines 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.

Referenced documents. In addition to [MIL-PRF-39010](#), this document references the following:

MIL-STD-202-105, MIL-STD-202-301

Custodians:

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

Preparing activity:
DLA - CC

Review activities:

Army - AR, CR4, MI
Navy - AS, CG, MC, OS, SH
Air Force - 19

(Project 5950-2022-071)

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