

INCH-POUND

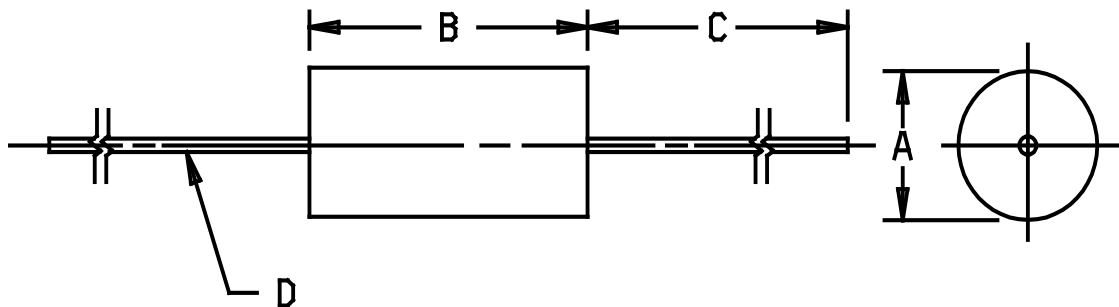
MIL-PRF-39010/7F
W/AMENDMENT 2
14 December 2022
SUPERSEDING
MIL-PRF-39010/7F
W/AMENDMENT 1
6 September 2018

PERFORMANCE SPECIFICATION SHEET

COILS, FIXED, RADIO FREQUENCY, MOLDED, MICROMINIATURE
(POWDERED IRON CORE), 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	.146 (3.71)	.166 (4.22)
B	.365 (9.27)	.385 (9.78)
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: Iron core.

Weight: 0.03 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.

DC resistance: See table I.

Temperature rise: 15°C.

Terminal pull: 5 pounds, minimum.

Part or Identifying Number (PIN): M39010/07 (dash number from table I).

Supersession data: This specification supersedes MS14046.

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

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>
A5R1**	5.1	5	45	7.9	60	0.32	495
A5R6**	5.6	5, 10	45	7.9	60	0.32	495
A6R2**	6.2	5	45	7.9	55	0.50	395
A6R8**	6.8	5, 10	50	7.9	55	0.50	395
A7R5**	7.5	5	50	7.9	50	0.60	360
A8R2**	8.2	5, 10	50	7.9	50	0.60	360
A9R1**	9.1	5	50	7.9	45	0.90	290
A100**	10.0	5, 10	55	7.9	45	0.90	290
A110**	11.0	5	55	2.5	42	1.10	265
A120**	12.0	5, 10	65	2.5	42	1.10	265
A130**	13.0	5	65	2.5	40	1.40	240
A150**	15.0	5, 10	65	2.5	40	1.40	240
A160**	16.0	5	65	2.5	34	2.25	185
A180**	18.0	5, 10	75	2.5	34	2.25	185
A200**	20.0	5	75	2.5	30	2.50	175
A220**	22.0	5, 10	75	2.5	30	2.50	175
A240**	24.0	5	60	2.5	25	2.60	170
A270**	27.0	5, 10	60	2.5	25	2.60	170
A300**	30.0	5	60	2.5	19	3.00	165
A330**	33.0	5, 10	65	2.5	19	3.00	165

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>
A360**	36.0	5	60	2.5	15.5	2.50	180
A390**	39.0	5	60	2.5	14.5	2.60	176
A430**	43.0	5	60	2.5	13.7	2.70	172
A470**	47.0	5	55	2.5	13.0	2.75	170
A510**	51.0	5	55	2.5	12.7	2.85	167
A560**	56.0	5	55	2.5	12.0	3.00	164
A620**	62.0	5	55	2.5	11.5	3.15	160
A680**	68.0	5	55	2.5	11.0	3.30	156
A750**	75.0	5	55	2.5	10.5	3.70	147
A820**	82.0	5	50	2.5	10.3	3.90	143
A910**	91.0	5	50	2.5	10.0	4.30	136
A101**	100	5	50	2.5	9.5	4.50	133
A111**	110	5	60	.79	8.9	4.90	128
A121**	120	5	65	.79	8.7	5.20	124
A131**	130	5	65	.79	8.5	5.45	121
A151**	150	5	65	.79	8.0	6.05	114
A161**	160	5	65	.79	7.5	6.40	111
A181**	180	5	65	.79	7.0	6.75	108
A201**	200	5	65	.79	6.5	7.10	106
A221**	220	5	65	.79	6.2	7.45	103
A241**	240	5	65	.79	5.9	7.80	101

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.

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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	±2			-10
Group IV	±5	±(3% +.001 ohm)	<u>2/</u>	-10
Group V	±5	±(2% +.001 ohm)	<u>2/</u>	-15
Quality conformance inspection Group B				
Subgroup 1	±5	±(2% +.001 ohm)	<u>2/</u>	-15
Subgroup 3	±2			-10
Subgroup 4	±5	±(3% +.001 ohm)	<u>2/</u>	-10

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

I 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 5950-2022-075)

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 this information above using the ASSIST Online database at <https://assist.dla.mil>.