INCH-POUND

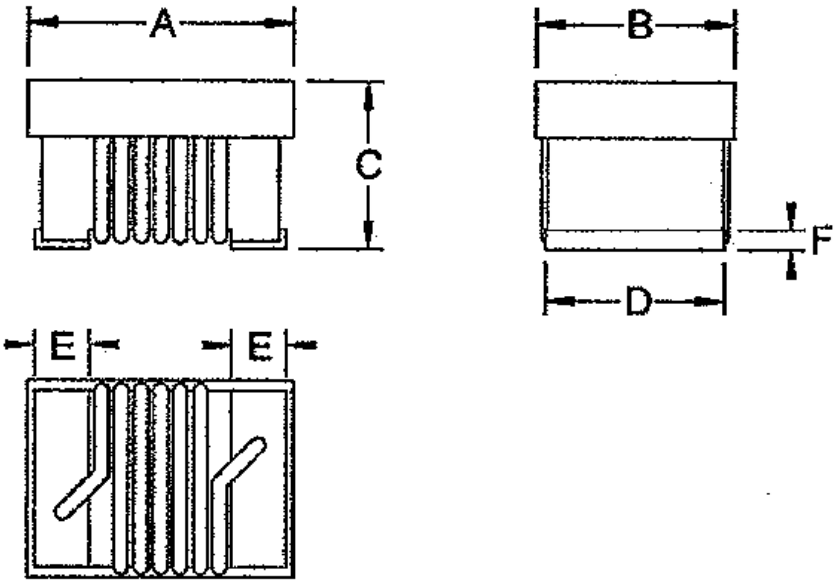
MIL-PRF-83446/37A
w/AMENDMENT 3
6 November 2024
SUPERSEDING
MIL-PRF-83446/37A
w/AMENDMENT 2
2 September 2019

PERFORMANCE SPECIFICATION SHEET

COILS, RADIO FREQUENCY, CHIP, OPEN CONSTRUCTION, SURFACE MOUNT, 0805 SIZE

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-83446.



	INCHES	MILLIMETERS
A	0.095 Max.	2.41 Max.
B	0.070 Max.	1.78 Max.
C	0.060 Max.	1.52 Max. For Termination finish A
	0.066 Max.	1.68 Max. For Termination finish B or F
D	0.050 (Ref. Only)	1.27 (Ref. Only)
E	0.017 (Ref. Only)	0.43 (Ref. Only)
F	0.008 (Ref. Only)	0.20 (Ref. Only)

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

FIGURE 1. Dimensions and configuration.

AMSC N/A FSC 5950

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

TABLE I. Electrical characteristics (initial).

Dash Number	Inductance nH 1/	Inductance Tolerance Percent (±)	Inductance Test Frequency MHz	Q (min) 1/	Q Test Frequency (MHz)	Self Resonant Frequency MHz (min) 2/	DC Resistance Ohms (max)	Current Rating mA (max)
-01	2.2	5, 10, 20	250	55	1800	6000	0.08	1000
-02	2.7	5, 10, 20	250	55	1800	6000	0.08	1000
-03	3.3	5, 10, 20	250	50	1500	6000	0.08	1000
-04	4.7	10, 20	250	60	1500	5000	0.08	1000
-05	5.6	5, 10, 20	250	60	1500	5000	0.09	1000
-06	6.8	5, 10, 20	250	60	1500	4600	0.11	1000
-07	8.2	5, 10, 20	250	55	1500	4600	0.12	970
-08	10	5, 10, 20	250	60	1500	4500	0.13	930
-09	12	2, 5, 10	250	65	500	4000	0.15	870
-10	15	2, 5, 10	250	50	500	2800	0.17	810
-11	18	2, 5, 10	250	50	500	2600	0.20	750
-12	22	2, 5, 10	250	55	500	2300	0.22	720
-13	27	2, 5, 10	250	55	500	2300	0.25	670
-14	33	2, 5, 10	250	60	500	2000	0.27	650
-15	39	2, 5, 10	250	60	500	2000	0.29	625
-16	47	2, 5, 10	250	60	500	1900	0.31	600
-17	56	2, 5, 10	250	50	500	1600	0.34	570
-18	68	2, 5, 10	250	50	500	1500	0.38	540
-19	82	2, 5, 10	150	55	500	1330	0.42	520
-20	100	2, 5, 10	150	55	500	1250	0.46	490
-21	120	2, 5, 10	150	45	250	1100	0.51	470
-22	150	2, 5, 10	100	45	250	920	0.70	400
-23	180	2, 5, 10	100	45	250	920	0.80	370
-24	220	2, 5, 10	100	45	250	820	1.20	300
-25	270	2, 5, 10	100	40	200	730	1.20	300
-26	330	2, 5, 10	100	40	200	750	1.80	250
-27	390	2, 5, 10	100	40	200	700	2.00	230
-28	470	2, 5, 10	100	40	200	600	3.00	210
-29	560	2, 5, 10	100	40	200	500	3.50	180
-30	680	2, 5, 10	50	40	200	450	4.00	170
-31	820	2, 5, 10	25	15	25	250	2.50	210
-32	1000	2, 5, 10	25	15	25	250	3.00	195
-33	1800	2, 5, 10	7.9	15	7.9	50	4.50	150
-34	2200	2, 5, 10	7.9	15	7.9	40	5.00	140

1/ Inductance and Q are tested using HP4291A or HP4287A with test fixture 16193A, or equivalent.
2/ Self resonant Frequency tested using HP8753C, or equivalent.

TABLE II. Electrical characteristics (final).

Inspection group	Allowable percent variation			
Qualification Inspection:	Inductance 1/	Q 2/	Self-resonant Frequency 2/	DC resistance 1/
Group II	±5	-10	-8	±3 (+.001 ohm)
Group IV	±5	-10	-10	±3 (+.001 ohm)
Group V	±5	-10	-----	-----
Quality Conformance Inspection:				
Group C				
Subgroup II	±5	-10	-10	±2 (+.001 ohm)
Subgroup IV	±5	-10	-8	±3 (+.001 ohm)
Subgroup V	±5	-10	-----	-----

1/ From initial measurement.
2/ From specified minimum value in electrical characteristics (initial) table.

REQUIREMENTS:

Dimensions and configuration: See figure 1.

Bond strength: Force 1 pounds.

Weight: 0.025 gram maximum.

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

Temperature rise (at +90°C): +35°C.

Maximum operating temperature: +125°C.

Altitude: 70,000 feet.

Solderability: Test method S of J-STD-002, except solder preforms may be used or MIL-STD-202-208, test method B. Both terminals immersed simultaneously. Magnet wire and bond are excluded from solder coverage.

Dielectric withstanding voltage: MIL-STD-202-301, test voltage 200 Vrms for 5 seconds for quality conformance.

Barometric pressure: MIL-STD-202-105, test condition C, (70,000 feet), test voltage 80 Vrms.

DWV, Barometric pressure and Insulation resistance tests are to be performed with units mounted to a test substrate. Tests are moved to after visual/mechanical inspection of qualification Group I, and after electrical characteristics (initial) of subgroup II groupC.

Electrical characteristics (initial): See table I.

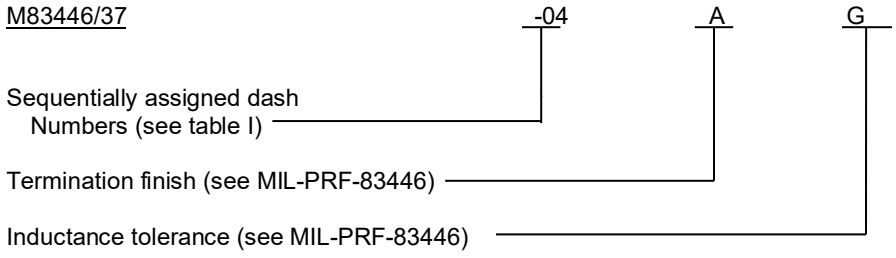
Electrical characteristics (final): See table II.

Vibration: MIL-STD-202-204, test condition D. During testing, each part to be monitored for electrical continuity. Any discontinuity exceeding 100 microseconds shall be cause for rejection.

Mechanical shock: MIL-STD-202-213, test condition I. After test parts are to be inspected for mechanical damage and verified for electrical continuity.

Vibration and Mechanical shock testing shall be performed as part of Group V tests for qualification (before moisture resistance) and as part of subgroup V (semiannually) for group C testing. Parts shall be mounted on test substrates.

Part or Identifying Number (PIN): The PIN shall be in the following form:



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-83446, this document references the following:

MIL-STD-202-105
MIL-STD-202-204
MIL-STD-202-208
MIL-STD-202-213
MIL-STD-202-301
J-STD-002

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

Review activities:
Army - MI
Navy - AS, OS
Air Force - 19

Preparing activity:
DLA - CC

(Project 5950-2024-035)

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.