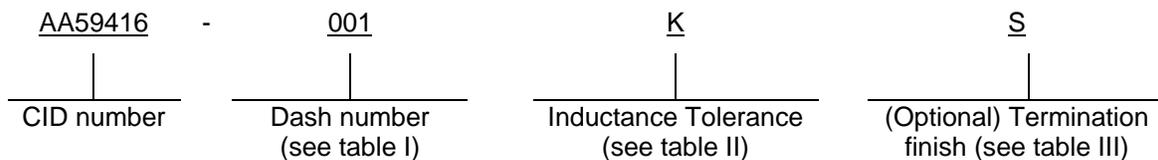


COMMERCIAL ITEM DESCRIPTION

INDUCTOR, CHIP, FIXED, HIGH SELF RESONANT FREQUENCY, SURFACE MOUNT

The General Services Administration has authorized the use of this commercial item description (CID) for all federal agencies.

1. **SCOPE.** This CID covers the general requirements for an inductor. Inductors covered by this CID are intended for commercial/industrial applications.
2. **CLASSIFICATION.** This CID uses a classification system which is included in the Part Identification Number (PIN) as shown in the following example (see 7.1).



3. SALIENT CHARACTERISTICS.

3.1 Interface and physical dimensions. Inductors supplied to this CID shall be as specified herein. (see figure 1).

3.2. Electrical characteristics. The electrical characteristics shall be as specified in table I.

3.3 Weight. The weight shall be no greater than 0.5 gram maximum.

3.4 Operating temperature range. The operating temperature range is -40°C to $+125^{\circ}\text{C}$.

3.5 Temperature rise. DC current rating for a 15°C rise.

3.6 Altitude. The maximum altitude is 70,000 feet.

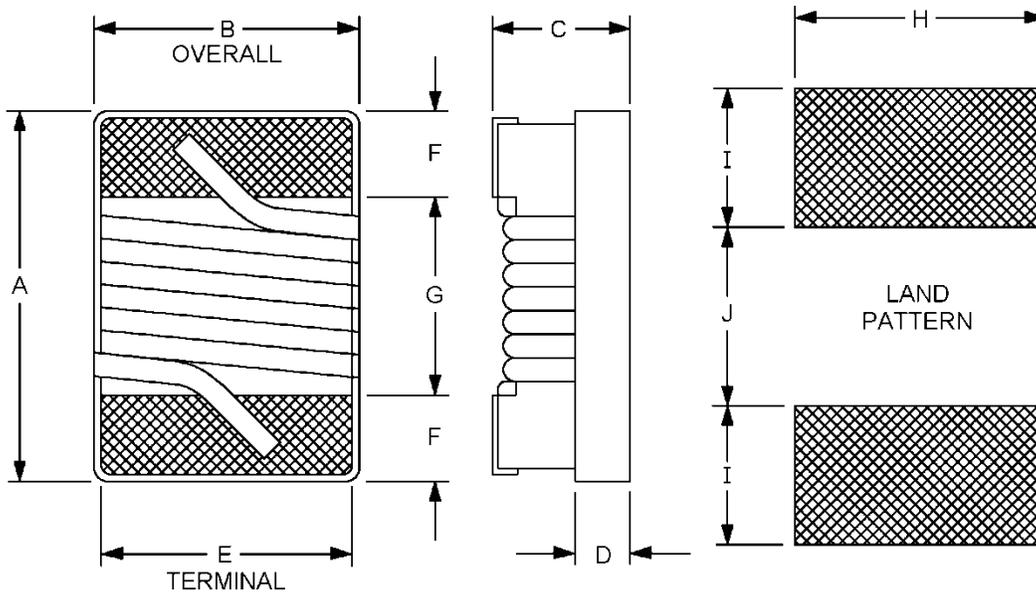
3.7 Marking. Inductors supplied to this CID shall be marked with the manufacturer's standard commercial PIN.

3.8 Pure tin. The use of pure tin, as an underplate or final finish is prohibited both internally and externally. Tin content of transformer components and solder shall not exceed 97 percent, by mass. Tin shall be alloyed with a minimum of 3 percent lead, by mass.

3.9 Recycled, recovered, environmentally preferable, or biobased materials. Recycled, recovered, environmentally preferable, or biobased materials should be used to the maximum extent possible, provided that the material meets or exceeds the operational and maintenance requirements, and promotes economically advantageous life cycle costs.

Beneficial comments recommendations, additions, deletions, clarifications, etc., and any data which may improve this document should be addressed to: DLA Land and Maritime, Columbus, ATTN: VAT, P.O. Box 3990, Columbus OH 43218-3990, or email (transformers@dla.mil). Since contact information can change you may want to verify the currency of the address information using the ASSIST Online database at <https://assist.dla.mil>.

3.10 Workmanship. Inductors shall be processed in such a manner as to be uniform in quality and shall be free from other defects that will affect life, serviceability, or appearance.



Dimension	Inches	mm
A Max.	.071	1.80
B Max.	.044	1.12
C Max.	.040	1.02
D Ref.	.015	0.38
E	.030	0.76
F	.013	0.33
G	.034	0.86
H	.040	1.02
I	.025	0.64
J	.025	0.64

NOTES:

1. Dimensions are in Inches.
2. Metric equivalents are listed for general information only.

FIGURE 1. Configuration and dimensions.

TABLE I. Electrical characteristics.

CID dash number AA59416-	Inductance(nH)	Tolerance (±%)	Q Min	900 MHz		1.7 GHz		SRF Min (GHz)	DCR Max (OHMS)	1/ I _{DC} MAX (mA)
				L Typ	Q Typ	L Typ	Q Typ			
001**	1.6 @ 250 MHz	5	24	1.67	49	1.65	63	12.5	0.030	700
002**	1.8 @ 250 MHz	5	16	1.83	35	1.86	50	12.5	0.045	700
003**	2.2 @ 250 MHz	5	13	2.22	31	2.24	44	12.5	0.250	100
004**	3.3 @ 250 MHz	5, 3, 2	35	3.31	75	3.38	88	5.9	0.045	700
005**	3.6 @ 250 MHz	5, 3, 2	22	3.72	53	3.71	65	5.9	0.063	700
006**	3.9 @ 250 MHz	5, 3, 2	22	3.95	49	3.96	67	6.9	0.080	700
007**	4.3 @ 250 MHz	5, 3, 2	22	4.32	50	4.33	70	5.9	0.063	700
008**	4.7 @ 250 MHz	5, 3, 2	20	4.72	47	4.75	57	5.8	0.116	700
009**	5.1 @ 250 MHz	5, 3, 2	20	4.93	47	4.95	56	5.7	0.140	700
010**	5.6 @ 250 MHz	5, 3, 2	26	5.77	63	6.05	80	4.76	0.075	700
011**	6.8 @ 250 MHz	5, 3, 2	27	6.75	60	7.10	81	5.8	0.110	700
012**	7.5 @ 250 MHz	5, 3, 2	28	7.70	60	7.82	65	4.8	0.106	700
013**	8.2 @ 250 MHz	5, 3, 2	30	8.25	82	8.37	87	4.2	0.115	700
014**	8.7 @ 250 MHz	5, 3, 2	28	8.86	62	9.32	58	4.6	0.109	700
015**	9.5 @ 250 MHz	5, 3, 2	28	9.7	59	9.92	61	5.4	0.135	700
016**	10 @ 250 MHz	5, 3, 2	31	10.0	66	10.6	83	4.8	0.130	700
017**	11 @ 250 MHz	5, 3, 2	30	11.0	53	11.5	56	4.0	0.130	700
018**	12 @ 250 MHz	5, 3, 2	35	12.3	72	13.5	83	4.0	0.130	700
019**	15 @ 250 MHz	5, 3, 2	35	15.4	64	16.8	89	4.0	0.170	700
020**	16 @ 250 MHz	5, 3, 2	34	16.2	55	17.3	52	3.3	0.170	700
021**	18 @ 250 MHz	5, 3, 2	35	18.7	70	21.4	69	3.1	0.170	700
022**	22 @ 250 MHz	5, 3, 2	38	22.8	73	26.1	71	3.0	0.190	700
023**	23 @ 250 MHz	5, 3, 2	38	24.1	71	28.0	67	2.85	0.190	700
024**	24 @ 250 MHz	5, 3, 2	36	24.5	45	28.7	39	2.65	0.190	700
025**	27 @ 250 MHz	5, 3, 2	40	29.2	74	34.6	65	2.8	0.220	600
026**	30 @ 250 MHz	5, 3, 2	37	31.4	47	39.9	28	2.25	0.220	600
027**	33 @ 250 MHz	5, 3, 2	40	36.0	67	49.5	42	2.3	0.220	600
028**	36 @ 250 MHz	5, 3, 2	37	39.4	47	52.7	24	2.08	0.250	600
029**	39 @ 250 MHz	5, 3, 2	40	42.7	60	60.2	40	2.2	0.250	600
030**	43 @ 250 MHz	5, 3, 2	38	47.0	44	64.9	21	2.0	0.280	600
031**	47 @ 200 MHz	5, 3, 2	38	52.2	62	77.2	35	2.0	0.280	600
032**	51 @ 200 MHz	5, 3, 2	35	55.5	69	82.2	34	1.9	0.270	600
033**	56 @ 200 MHz	5, 3, 2	38	62.5	56	97.0	26	1.9	0.310	600
034**	68 @ 200 MHz	5, 3, 2	37	80.5	54	168	21	1.7	0.340	600
035**	72 @ 150 MHz	5, 3, 2	34	82.0	53	135	20	1.7	0.490	400

TABLE I. Electrical characteristics – continued.

CID dash number AA59416-	Inductance(nH)	Tolerance (±%)	Q Min	900 MHz		1.7 GHz		SRF Min (GHz)	DCR Max (OHMS)	1/ I _{DC} MAX (mA)
				L Typ	Q Typ	L Typ	Q Typ			
036**	82 @ 150 MHz	5, 3, 2	34	96.2	54	177	21	1.7	0.540	400
037**	100 @ 150 MHz	5, 3, 2	34	124	49	--	--	1.4	0.580	400
038**	110 @ 150 MHz	5, 3, 2	32	138	43	--	--	1.35	0.610	300
039**	120 @ 150 MHz	5, 3, 2	32	166	39	--	--	1.3	0.650	300
040**	150 @ 150 MHz	5, 3, 2	28	250	25	--	--	.99	0.920	280
041**	180 @ 100 MHz	5, 3, 2	25	305	22	--	--	.99	1.25	240
042**	200 @ 100 MHz	5, 3, 2	25	--	--	--	--	.90	1.98	200
043**	210 @ 100 MHz	5, 3, 2	27	--	--	--	--	.895	2.06	200
044**	220 @ 100 MHz	5, 3, 2	25	--	--	--	--	.90	2.10	200
045**	250 @ 100 MHz	5, 3, 2	25	--	--	--	--	.822	3.55	120
046**	270 @ 100 MHz	5, 3, 2	24	--	--	--	--	.90	2.30	170
047**	330 @ 100 MHz	5, 3, 2	25	--	--	--	--	.90	3.89	100
048**	390 @ 100 MHz	5, 3, 2	25	--	--	--	--	.90	4.35	100

1/ DC current rating for a 15°C rise.

TABLE II. Inductance tolerances

Code	Tolerance (percentage)
G	±2
J	±5
K	±10

TABLE III. Termination finish.

Code	Termination finish
Leave blank	Tin-lead
L	RoHS compliant, silver-palladium-platinum-glass-frit
T	RoHS, tin-silver-copper (95.5/4/0.5)

4. REGULATORY REQUIREMENTS. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR).

5. PRODUCT CONFORMANCE PROVISIONS

5.1 Product conformance. The products provided shall meet the salient characteristics of this CID, conform to the producer's own drawings, specifications, standards, and quality assurance practices, and be the same product offered for sale in the commercial market. The Government reserves the right to require proof of such conformance.

5.2 Market acceptance. The following market acceptance criteria are necessary to document the quality of the product to be provided under this CID:

- a. The company producing the item must have been producing a product meeting the requirements of this CID for at least 2 years.
- b. The company must have sold 1,000 units meeting this CID in the commercial marketplace over the past 2 years.

6. PACKAGING. Preservation, packing, and marking shall be as specified in the contract or order.

7. NOTES.

7.1 PIN. The PIN should be used for Government purposes to buy commercial products to this CID. See section 2 for PIN format example.

7.2 Environmentally preferable material. Environmentally preferable materials should be used to the maximum extent possible to meet the requirements of this specification. As of the dating of this document, the U.S. Environmental Protection Agency (EPA) is focusing efforts on reducing 31 priority chemicals. The list of chemicals is available on their website at <http://www.epa.gov/epaoswer/hazwaste/minimize/chemlist.htm>. Further information is available at the following EPA site: <http://www.epa.gov/epaoswer/hazwaste/minimize/>. Included in the EPA list of 31 priority chemicals are cadmium, lead, and mercury. Use of the materials on the list should be minimized or eliminated unless needed to meet the requirements specified herein (see Section 3).

7.3 Commercial and Government Entity (CAGE) code. For ordering purposes, inventory control, and submission of these inductors to DSCC under the Military Parts Control Advisory Group (MPCAG) evaluation program, CAGE code 58536 should be used.

7.4 Source of documents.

FEDERAL REGULATIONS

FAR - Federal Acquisition Regulations (FAR)

(Copies of these documents are available online at www.acquisition.gov/comp/far/index.html or from the U.S. Government Printing Office, 732 North Capital Street, NW, Washington D.C. 20401.)

7.5 Tin whisker growth. The use of alloys with tin content greater than 97 percent, by mass, may exhibit tin whisker growth problems after manufacture. Tin whiskers may occur anytime from a day to years after manufacture and can develop under typical operating conditions, on products that use such materials. Conformal coatings applied over top of a whisker-prone surface will not prevent the formation of tin whiskers. Alloys of 3 percent lead, by mass, have shown to inhibit the growth of tin whiskers. For additional information on this matter, refer to ASTM-B545 (Standard Specification for Electrodeposited Coatings of Tin)

7.6 Ordering data. The contract or order should specify the following:

- a. CID document number, revision, and CID PIN.
- b. Product conformance provisions.
- c. Packaging requirements.

7.7 Commercial products. As part of the market analysis and research effort, this CID was coordinated with the following manufacturers of commercial products. At the time of CID preparation and coordination, these manufacturers were known to have commercial products that would meet the requirements of this CID. (NOTE: This information should not be considered as a list of approved manufacturers or be used to restrict procurement to only the manufacturers shown.)

<u>MFR's CAGE</u>	<u>MFR's name and address</u>
02113	Coilcraft Inc 1102 Silver Lake Road Cary, Illinois 60013-1658 Phone number (847) 639-2361 Uniform Resource Locator (URL): www.coilcraft.com

7.8 Part number (P/N) supersession data. This CID supersedes the following manufacturers' P/N's as shown. This information is being provided to assist in reducing proliferation in the government inventory system.

TABLE IV. P/N supersession data. 1/

CID dash number (see table I) AA59416-	Vendor commercial PIN 2/ CAGE 02113	CID dash number (see table I) AA59416-	Vendor commercial PIN 2/ CAGE 02113
001**	0603CS-1N6XJL*	025**	0603CS-27NX*L*
002**	0603CS-1N8XJL*	026**	0603CS-30NX*L*
003**	0603CS-2N2XJL*	027**	0603CS-33NX*L*
004**	0603CS-3N3X*L*	028**	0603CS-36NX*L*
005**	0603CS-3N6X*L*	029**	0603CS-39NX*L*
006**	0603CS-3N9X*L*	030**	0603CS-43NX*L*
007**	0603CS-4N3X*L*	031**	0603CS-47NX*L*
008**	0603CS-4N7X*L*	032**	0603CS-51NX*L*
009**	0603CS-5N1X*L*	033**	0603CS-56NX*L*
010**	0603CS-5N6X*L*	034**	0603CS-68NX*L*
011**	0603CS-6N8X*L*	035**	0603CS-72NX*L*
012**	0603CS-7N5X*L*	036**	0603CS-82NX*L*
013**	0603CS-8N2X*L*	037**	0603CS-R10X*L*
014**	0603CS-8N7X*L*	038**	0603CS-R11X*L*
015**	0603CS-9N5X*L*	039**	0603CS-R12X*L*
016**	0603CS-10NX*L*	040**	0603CS-R15X*L*
017**	0603CS-11NX*L*	041**	0603CS-R18X*L*
018**	0603CS-12NX*L*	042**	0603CS-R20X*L*
019**	0603CS-15NX*L*	043**	0603CS-R21X*L*
020**	0603CS-16NX*L*	044**	0603CS-R22X*L*
021**	0603CS-18NX*L*	045**	0603CS-R25X*L*
022**	0603CS-22NX*L*	046**	0603CS-R27X*L*
023**	0603CS-23NX*L*	047**	0603CS-R33X*L*
024**	0603CS-24NX*L*	048**	0603CS-R39X*L*

- 1/ When "*" is used for coded values, it's the contractors responsibility to select those options allowed by the CID.
- 2/ The manufacturer's P/N shall not be used for procurement to the requirements of this CID.

At the time of preparation of this CID, the aforementioned commercial products were reviewed and could be replaced by the CID P/N shown.

7.9 Government users. To acquire information on obtaining these coils from the Government inventory system, contact DLA Land and Maritime, ATTN: FMTC, Post Office Box 3990, Columbus, OH 43218-3990, or telephone (614) 692-7727.

7.10 Changes from previous issue. The margins of this CID are marked with asterisks 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.

MILITARY INTERESTS:

Custodians:
Navy - EC
DLA - CC

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - 7FXE

Preparing Activity:

DLA - CC

Project 5950-2013-010

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>.