

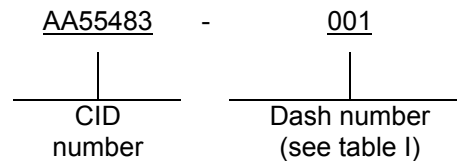
INCH-POUND

A-A-55483A
 15 July 2003
 SUPERSEDING
 A-A-55483
 7 September 1994

COMMERCIAL ITEM DESCRIPTION SHIELDING BEAD, ELECTRONIC

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 electronic shielding beads made of ferrite material. Electronic shielding beads covered by this CID are intended for commercial/industrial applications.
2. **CLASSIFICATION/PART OR IDENTIFICATION NUMBER (PIN).** 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. Electronic shielding beads supplied to this CID shall be as specified in figure 1.
- 3.2 Material. Electronic shielding beads supplied to this CID shall be as specified in table I.
- 3.3 Initial permeability (μ_0). Initial permeability shall be as specified in table I, from +20°C to +25°C as measured toroidally.
- 3.4 Saturation flux density (β_s). Saturation flux density shall be as specified in table I, from +20°C to +25° as measured toroidally.
- 3.5 Curie temperature (T_c). Curie temperature shall be as specified in table I.
- 3.6 Operating temperature range. The operating temperature range is -55°C to +125°C.
- 3.7 Impedance (Ω). Minimum impedance shall be as specified in table I. When μ_0 is 2,000 or 2,500, it is measured at 25 MHz. The remaining impedance is measured at 100 MHz. All impedances are measured with 1 turn of wire through the shielding bead.
- 3.8 Workmanship. The shielding beads shall be fabricated and finished in such a manner that criteria for appearance, fix, and adherence to specific tolerances shall be observed. The beads shall be of uniform quality and shall be free from defects that will affect life or serviceability.

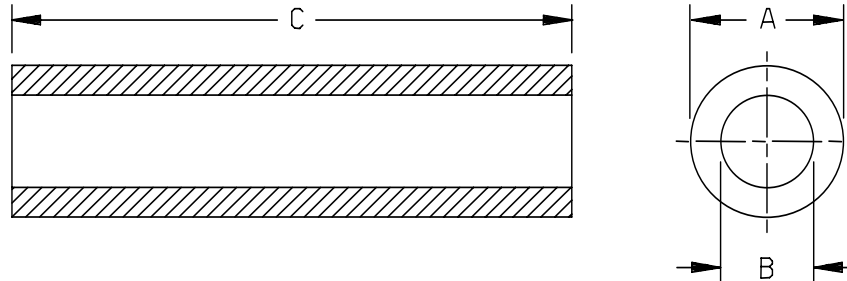
Beneficial comments recommendations, additions, deletions, clarifications, etc., and any data which may improve this document should be addressed to: Defense Supply Center, Columbus, ATTN: DSCC-VAT, Post Office Box 3990, Columbus, OH 43216-5000, or telephone (614) 692-0557, or facsimile (FAX) (614) 692-6939.

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

FSC 5950

A-A-55483A

3.9 Marking. Parts supplied to this CID shall not be marked. The unit package supplied shall be marked with the manufacturer's standard commercial PIN.



Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm
.001	0.03	.029	0.74	.058	1.47	.118	3.00	.195	4.95	.380	9.65
.002	0.05	.030	0.76	.059	1.50	.120	3.05	.200	5.08	.396	10.06
.003	0.08	.031	0.79	.060	1.52	.128	3.25	.230	5.84	.410	10.41
.004	0.10	.035	0.89	.062	1.57	.138	3.51	.236	5.99	.415	10.54
.005	0.13	.038	0.97	.063	1.60	.146	3.71	.250	6.35	.437	11.10
.006	0.15	.041	1.04	.068	1.73	.150	3.81	.256	6.50	.440	11.18
.007	0.18	.043	1.09	.072	1.83	.159	4.04	.296	7.52	.450	11.43
.008	0.20	.047	1.19	.076	1.93	.160	4.06	.297	7.54	.500	12.70
.010	0.25	.050	1.27	.080	2.03	.175	4.45	.316	8.03	.562	14.27
.012	0.30	.051	1.30	.090	2.29	.190	4.83	.323	8.20	1.125	28.58
.015	0.38	.054	1.37	.094	2.39	.192	4.88	.330	8.38		
.020	0.51	.055	1.40	.106	2.69	.193	4.90	.350	8.89		
.027	0.69	.057	1.45	.112	2.84	.194	4.93	.375	9.53		

NOTES:

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

FIGURE 1. Configuration and dimensions.

A-A-55483A

CID PIN AA55483	Dimensions		
	A	B	C
-001	.038 ±.001 (.97 ±0.03)	.020 +.002 -.001 (.51 +0.05 -0.03)	.194 ±.005 (4.93 ±0.13)
-002	.041 ±.002 (1.04 ±0.05)	.028 ±.003 (.69 ±0.08)	.156 ±.007 (4.04 ±0.10)
-003	.054 ±.003 (1.37 ±0.08)	.029 ±.002 (0.74 ±0.03)	.090 ±.007 (2.29 ±0.13)
-004	.080 ±.004 (2.03 ±0.10)	.035 +.003 -.002 (0.89 -0.08 -0.05)	.150 ±.055 (3.81 ±1.40)
-005	.072 ±.005 (1.83 ±0.13)	.043 ±.003 (1.09 ±0.08)	.410 ±.010 (10.54 ±0.38)
-006	.072 ±.005 (1.83 ±0.13)	.043 ±.003 (1.09 ±0.08)	.410 ±.010 (10.54 ±0.38)
-007	.076 ±.004 (1.93 ±0.10)	.043 ±0.02 (1.09 ±0.05)	.060 ±.007 (1.52 ±0.18)
-008	.076 ±.004 (1.93 ±0.10)	.043 ±.002 (1.09 ±0.05)	.150 ±.010 (3.81 ±0.25)
-009	.076 ±.004 (1.93 ±0.10)	.043 ±.002 (1.09 ±0.05)	.150 ±.010 (3.81 ±0.25)
-010	.112 ±.005 (2.84 ±0.13)	.068 ±.004 (1.73 ±0.10)	.410 ±.012 (10.41 ±0.30)
-011	.138 ±.010 (3.51 ±0.25)	.031 ±.003 (0.79 ±0.08)	.175 ±.015 (4.45 ±0.38)
-012	.138 ±.010 (3.51 ±0.25)	.031 ±.003 (0.79 ±0.08)	.350 ±.020 (8.89 ±0.51)
-013	.138 ±.008 (3.51 ±0.20)	.047 +.008, -.000 (1.19 +0.20, -0.00)	.050 ±.005 (1.27 ±0.13)
-014	.138 ±.008 (3.51 ±0.20)	.047 +.008, -.000 (1.19 +0.20, -0.00)	.118 +.020, -.000 (3.00 +0.51, -0.00)
-015	.138 ±.008 (3.51 ±0.20)	.047 +.008, -.000 (1.19 +0.20, -0.00)	.160 ±.010 (4.06 ±0.25)
-016	.138 ±.008 (3.51 ±0.20)	.047 +.008, -.000 (1.19 +0.20, -0.00)	.160 ±.010 (4.06 ±0.25)
-017	.138 ±.008 (3.51 ±0.20)	.047 +.008, -.000 (1.19 +0.20, -0.00)	.236 ±.010 (5.99 ±0.25)
-018	.138 ±.008 (3.51 ±0.20)	.047 +.008, -.000 (1.19 +0.20, -0.00)	.236 ±.010 (5.99 ±0.25)
-019	.138 ±.008 (3.51 ±0.20)	.047 +.008, -.000 (1.19 +0.20, -0.00)	.236 ±.010 (5.99 ±0.25)
-020	.138 ±.008 (3.51 ±0.20)	.047 +.008, -.000 (1.19 +0.20, -0.00)	.500 ±.015 (12.70 ±0.38)
-021	.138 ±.008 (3.51 ±0.20)	.047 +.008, -.000 (1.19 +0.20, -0.00)	.500 ±.015 (12.70 ±0.38)
-022	.138 ±.008 (3.51 ±0.20)	.047 +.008, -.000 (1.19 +0.20, -0.00)	.500 ±.015 (12.70 ±0.38)
-023	.138 ±.008 (3.51 ±0.20)	.047 +.008, -.000 (1.19 +0.20, -0.00)	.236 ±.010 (5.99 ±0.25)
-024	.138 ±.008 (3.51 ±0.20)	.063 ±.004 (1.60 ±0.10)	.118 +.020, -.000 (3.00 +0.51, -0.00)
-025	.200 ±.010 (5.08 ±0.20)	.062 ±.005 (1.57 ±0.13)	.250 ±.010 (6.35 ±0.25)
-026	.138 ±.008 (3.51 ±0.20)	.047 +.008, -.000 (1.19 +0.20, -0.00)	.118 +.020, -.000 (3.00 +0.51, -0.00)
-027	.200 ±.010 (5.08 ±0.20)	.062 ±.005 (1.57 ±0.13)	.437 ±.015 (11.10 ±0.38)
-028	.296 ±.012 (7.52 ±0.30)	.094 ±.006 (2.39 ±0.15)	.297 ±.010 (7.54 ±0.25)
-029	.296 ±.005 (7.52 ±0.13)	.094 ±.005 (2.39 ±0.13)	.297 ±.010 (7.54 ±0.25)
-030	.296 ±.012 (7.52 ±0.30)	.094 ±.006 (2.39 ±0.15)	.297 ±.010 (7.54 ±0.25)
-031	.375 ±.012 (9.53 ±0.30)	.193 ±.007 (4.90 ±0.18)	.410 ±.010 (10.41 ±0.25)
-032	.375 ±.012 (9.53 ±0.30)	.193 ±.007 (4.90 ±0.18)	.410 ±.010 (10.41 ±0.25)
-033	.380 ±.010 (9.65 ±0.20)	.195 ±.010 (4.95 ±0.25)	.190 ±.010 (4.83 ±0.25)
-034	.562 ±.020 (14.27 ±0.51)	.250 ±.010 (6.35 ±0.25)	1.125 ±.030 (28.58 ±0.76)
-035	.138 ±.008 (3.51 ±0.20)	.047 +.008, -.000 (1.19 +0.20, -0.00)	.118 +.020, -.000 (3.00 +0.51, -0.00)
-036	.138 ±.008 (3.51 ±0.20)	.047 +.008, -.000 (1.19 +0.20, -0.00)	.118 +.020, -.000 (3.00 +0.51, -0.00)
-037	.138 ±.008 (3.51 ±0.20)	.047 +.008, -.000 (1.19 +0.20, -0.00)	.236 ±.010 (5.99 ±0.25)
-038	.138 ±.008 (3.51 ±0.20)	.047 +.008, -.000 (1.19 +0.20, -0.00)	.500 ±.015 (12.70 ±0.38)
-039	.296 ±.005 (7.52 ±0.13)	.094 ±.005 (2.39 ±0.13)	.297 ±.010 (7.54 ±0.25)

FIGURE 1. Configuration and dimensions - Continued.

A-A-55483A

TABLE I. Typical material requirements.

CID PIN AA55483	μ_0 ($\pm 20\%$)	β_s (gauss)	Minimum T_c (°C)	Impedance (Ω) (min)
-001	2,500	3,900	160	21
-002	2,500	3,900	160	15
-003	2,500	3,900	160	13.6
-004	850	2,900	130	22
-005	850	2,900	130	46
-006	2,500	3,900	160	34
-007	2,500	3,900	160	9.6
-008	850	2,900	130	24.8
-009	2,500	3,900	160	21.9
-010	2,500	3,900	160	46.4
-011	850	2,900	130	56
-012	850	2,900	130	112
-013	850	2,900	130	20
-014	850	2,900	130	32
-015	850	2,900	130	35
-016	2,500	3,900	160	30
-017	850	2,900	130	35
-018	250	2,200	210	40
-019	2,500	3,900	160	49.6
-020	850	2,900	130	100
-021	250	2,200	210	68
-022	2,500	3,900	160	100
-023	850	2,900	130	48
-024	850	2,900	130	28
-025	850	2,900	130	65.6
-026	600	2,900	130	31
-027	850	2,900	130	104
-028	850	2,900	130	73
-029	250	2,200	210	57
-030	2,500	3,900	160	41.6
-031	850	2,900	130	64
-032	2,000	4,600	200	25
-033	850	2,900	130	34
-034	850	2,900	130	200
-035	1,000	3,800	150	38
-036	250	3,300	250	33
-037	125	2,350	350	40
-038	125	2,350	350	100
-039	125	2,350	350	74

4. **REGULATORY REQUIREMENTS.** The offeror/contractor is encouraged to use recovered materials to the maximum extent practical, 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.

A-A-55483A

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 companies producing the items have been producing a product meeting the requirements of this CID for at least 2 years.
- b. The companies 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 Commercial and Government Entity (CAGE) code. For ordering purposes, inventory control, and submission of these electronic shielding beads to DSCC under the Military Parts Control Advisory Group (MPCAG) evaluation program, CAGE code 58536 should be used.

7.3 Source of documents. This section is not applicable to this CID.

7.4 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.

7.5 Commercial products. As part of the market analysis and research effort, this CID was coordinated with the following manufacturer 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 manufacturer shown.)

<u>MFR's CAGE</u>	<u>MFR's name and address</u>
34899	Fair-Rite Products Corporation 1 Commercial Row Wallkill, NY 12589-4438 Phone number: (845) 895-2055 Fax number: (845) 895-2629 E-mail: ferrites@fair-rite.com Uniform Resource Locator (URL): www.fair-rite.com
02114	Ferroxcube 5083 Kings Highway Saugerties, N. Y. 12477 Phone number: (914) 246-2822 FAX number: (915) 860-3270 Email: salesusa@ferroxcube.com Uniform Resource Locator (URL): www.ferroxcube.com

A-A-55483A

- 7.6 PIN supersession data. This CID supersedes the following manufacturers' PIN's as shown in table II. This information is being provided to assist in reducing proliferation in the government inventory system.

TABLE II. PIN supersession data.

Dash number (see table I)	CAGE 34899 PIN <u>1/</u>	CAGE 02114 PIN <u>1/</u>
-001	2673004501	
-002	2673004601	
-003	2673004701	
-004	2643004801	
-005	2643002201	
-006	2673002201	
-007	2673000501	
-008	2643000201	
-009	2673000201	
-010	2673004901	
-011	2643004101	BD3.5/0.8/3.3-4A11
-012	2643004201	
-013	2643000401	
-014	2643000101	BD3.5/1.3/3.3-4S2
-015	2643000601	
-016	2673000601	
-017	2643000301	BD3.5/1.3/6-4S2
-018	2661000301	
-019	2673000301	
-020	2643000701	BD3.5/1.3/13-4S2
-021	2661000701	BD3/1/10-4S3-P
-022	2673000701	
-023	2643000301	BD3.5/1.3/6-4S2
-024	2643001501	BD3.5/1.3/3.3-4S2
-025	2643022401	BD5.1/2/7.1-4S2
-026		
-027	2643021801	BD5.1/1.5/10-4S2
-028	2643000801	BD7.7/2.3/7.6-4S2
-029	2661000801	
-030	2673000801	
-031	2643006302	CST9.5/4.8/10-4S2
-032	2677006302	
-033	2643002402	CST9.7/5/5.1-4S2
-034	2643540002	CST14/6.4/29-4S2
-035		BD3/1/4-3S2-P
-036		BD3/1/4-4S3-P
-037	2661000301	
-038	2661000701	
-039	2661000801	

- 1/ The manufacturer's PIN 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 PIN shown. For actual part marking requirements see 3.9.

A-A-55483A

7.7 Supersession information. Supersession information is specified in table III.

TABLE III. Supersession information.

CID PIN AA55483	Superseded PIN in accordance with 84127 16 Sept 1992	CID PIN AA55483	Superseded PIN in accordance with 84127 16 Sept 1992
-001	84127-01	-019	84127-19
-002	84127-02	-020	84127-20
-003	84127-03	-021	84127-21
-004	84127-04	-022	84127-22
-005	84127-05	-023	84127-23
-006	84127-06	-024	84127-24
-007	84127-07	-025	84127-25
-008	84127-08	-026	84127-26
-009	84127-09	-027	84127-27
-010	84127-10	-028	84127-28
-011	84127-11	-029	84127-29
-012	84127-12	-030	84127-30
-013	84127-13	-031	84127-31
-014	84127-14	-032	84127-32
-015	84127-15	-033	84127-33
-016	84127-16	-034	84127-34
-017	84127-17	-035	84127-35
-018	84127-18	-036	84127-36

7.8 Government users. To acquire information on obtaining these electronic shielding beads from the Government inventory system, contact Defense Supply Center, Columbus, ATTN: DSCC-CPAA, Post Office Box 3990, Columbus, OH 43216-5000, or telephone (614) 692-7741.

MILITARY INTERESTS:

Custodians:
Navy - EC
DLA - CC

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - 7FXE
Preparing Activity:
DLA - CC
Project 5950-1160