

[INCH-POUND]  
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 a family of electronic shielding beads made of ferrite material.
2. CLASSIFICATION. Shielding beads covered by this CID are intended for commercial/industrial applications and shall not be used in military systems needing stringent environmental and electrical requirements.
- 2.1 Part or Identifying Number (PIN). The PIN for the CID shall be as shown in the following example:

AA55483	001
CID number	Dash number

### 3. SALIENT CHARACTERISTICS.

- 3.1 Design, construction, and dimensions. Shielding beads supplied to this CID shall be as specified on figure 1.
- 3.2 Material. Shielding beads supplied to this CID shall be marked as specified in table I.
- 3.3 Initial permeability ( $\mu_0$ ). Initial permeability shall be as specified in table I, from +20°C to +25°C as measured toroidally.
- 3.4 Saturation flux density ( $B_s$ ). Saturation flux density shall be as specified in table I, from +20°C to +25°C 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 shall be -55°C to +125°C.
- 3.7 Impedance ( $Z$ ). Minimum impedance shall be as specified in table I. When  $\mu_0$  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 bead shall be uniform in quality and shall be free from defects that will affect life or serviceability.

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Beneficial comments, recommendations, additions, deletions clarifications, etc and any other data which may improve this document should be sent to: Defense Electronics Supply Center, ATTN DESC-ELDM, 1507 Wilmington Pike, Dayton, OH 45444-5765, or telephone (513) 296-6189, or facsimile (FAX) (513) 296-8868.

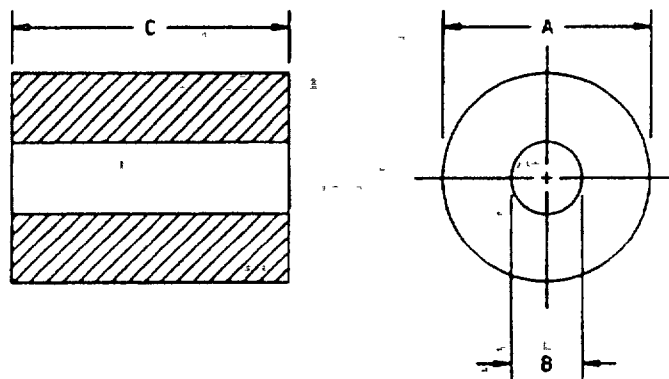
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AMSC N/A

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FSC 5950

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CID PIN AA55483	Dimensions		
	A	B	C
-001	.038 ±.001 (.97 ±0.03)	.020 +.002 - .001 (.51 +0.05 -0.03)	.195 ±.003 (4.95 ±0.08)
-002	.041 +.002 - .001 (1.04 +0.05 -0.03)	.028 ±.002 (.69 ±0.10)	.156 ±.007 (4.04 ±0.10)
-003	.054 ±.002 (1.37 ±0.05)	.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)	.105 ±.010 (2.69 ±0.15)
-005	.072 ±.004 (1.83 ±0.10)	.043 ±.002 (1.09 ±0.05)	.410 ±.010 (10.54 ±0.38)
-006	.072 ±.004 (1.83 ±0.10)	.043 ±.002 (1.09 ±0.05)	.410 ±.010 (10.54 ±0.38)
-007	.076 ±.002 (1.93 ±0.05)	.043 ±.002 (1.09 ±0.05)	.060 ±.007 (1.52 ±0.18)
-008	.076 ±.002 (1.93 ±0.05)	.043 ±.002 (1.09 ±0.05)	.150 ±.010 (3.81 ±0.25)
-009	.076 ±.002 (1.93 ±0.05)	.043 ±.002 (1.09 ±0.05)	.150 ±.010 (3.81 ±0.25)
-010	.112 ±.005 (2.84 ±0.13)	.068 ±.003 (1.73 ±0.80)	.410 ±.010 (10.41 ±0.25)

FIGURE 1. Dimensions and configuration.

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CID PIN AA55483	Dimensions			CID PIN AA55483	Dimensions		
	A	B	C		A	B	C
-011	.138 ±.010	.031 ±.002	.175 ±.015	-024	.138 ±.008	.063 ±.004	.118 ±.020 -.000
-012	"	"	.350 ±.020	-025	.200 ±.010	.062 ±.005	.250 ±.010
-013	.138 ±.008	.047 ±.008 -.000	.050 ±.005	-026	.138 ±.008	.047 ±.008 -.000	.118 ±.020 -.000
-014	"	"	.118 ±.020 -.000	-027	.200 ±.010	.062 ±.005	.437 ±.015
-015	"	"	.160 ±.010	-028	.296 ±.005	.094 ±.005	.297 ±.010
-016	"	"	"	-029	"	"	"
-017	"	"	.236 ±.010	-030	"	"	"
-018	"	"	"	-031	.375 ±.010	.193 ±.007	.410 ±.010
-019	"	"	"	-032	"	"	"
-020	"	"	.500 ±.015	-033	.380 ±.010	.195 ±.010 -.005	.190 ±.010
-021	.136 ±.008	.047 ±.008 -.000	.500 ±.015	-034	.562 ±.020	.250 ±.010	1.125 ±.030
-022	.138 ±.008	.047 ±.008 -.000	.500 ±.015	-035	.138 ±.008	.047 ±.008 -.000	.118 ±.020 -.000
-023	"	"	.236 ±.010	-036	.138 ±.008	.047 ±.008 -.000	.118 ±.020 -.000

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

## NOTES:

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

FIGURE 1. Dimensions and configuration - Continued

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TABLE I. Typical material requirements.

CID PIN AA55483	$\mu_o$ ( $\pm 20\%$ )	$B_s$ (gauss)	Minimum $T_c$ (°C)	Impedance ( $\Omega$ )(min)
-001	2,500	4,000	160	43
-002	2,500	4,000	160	36
-003	2,500	4,000	160	15
-004	850	2,750	130	22
-005	850	2,750	130	46
-006	2,500	4,000	160	34
-007	2,500	4,000	160	10
-008	850	2,750	130	25
-009	2,500	4,000	160	22
-010	2,500	4,000	160	62
-011	850	2,750	130	56
-012	850	2,750	130	112
-013	850	2,750	130	20
-014	850	2,750	130	32
-015	850	2,750	130	35
-016	2,500	4,000	160	30
-017	850	2,750	130	48
-018	250	2,200	210	42
-019	2,500	4,000	160	50
-020	850	2,750	130	100
-021	250	2,200	210	68
-022	2,500	4,000	160	70
-023	850	2,750	130	48
-024	850	2,750	130	28
-025	850	2,750	130	66
-026	600	2,900	130	31
-027	850	2,750	130	104
-028	850	2,750	130	73
-029	250	2,200	210	57
-030	2,500	4,000	160	52

TABLE I. Typical material requirements - continued.

CID PIN AA55483	$\mu\Omega$ ( $\pm 20\%$ )	Bs (gauss)	Minimum Tc (°C)	Impedance ( $\Omega$ )(min)
-031	850	2,750	130	64
-032	2,000	4,600	200	35
-033	850	2,750	130	34
-034	850	2,750	130	200
-035	1,000	3,800	150	38
-036	250	3,300	250	33

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

4. REGULATORY REQUIREMENTS. This section is not applicable to this CID.

5. QUALITY ASSURANCE PROVISIONS.

5.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection, examination, and test requirements specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the inspection requirements specified herein, unless disapproved by the government. The government reserves the right to perform any of the inspections, examinations, or tests set forth in this description where such inspections, examinations, and tests are deemed necessary to assure supplies and services conform to prescribed requirements.

5.2 Contractor certification. The contractor shall certify and maintain substantiating evidence that the product offered meets the salient characteristics of this CID, and that the product conforms to the producer's own drawings, specifications, standards, and quality assurance practices. The government reserves the right to require proof of such conformance prior to first delivery and thereafter as may be otherwise provided for under the provisions of the contract.

5.3 Certificate of compliance. Each contractor desiring to be listed as a suggested source of supply shall submit a DESC certificate of compliance to DESC-ELDM. This certificate shall state that the contractor's product meets all the requirements of this CID. In addition, a certificate of compliance shall accompany all shielding beads supplied to this CID.

5.4 Packaging.

5.4.1 Preservation, packaging, packing, labeling, and marking. Preservation, packaging, labeling, and marking shall be as specified in the contract or purchase order.

6. NOTES.

6.1 Part or Identifying Number (PIN). The PIN should be used for government purposes to buy commercial products to this CID. See 2.1 for PIN format.

6.2 Government users. To acquire information on obtaining these shielding beads from the Government inventory system, contact Defense Electronics Supply Center, ATTN: DESC-EOP, 1507 Wilmington Pike, Dayton, OH 45444-5765, or telephone (513) 296-6141.

6.3 Ordering data. Acquisition documents should specify the following:

- CID document number, revision, and CID PIN.
- Quality assurance provisions.
- If a bid sample is required.
- Packaging requirements.

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6.4 Supersession information. Supersession information is specified in table II

Table II. Supersession information.

CID PIN AA55483	Superseded PIN per 84127 16 Sept 1992	CID PIN AA55483	Superseded PIN per 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

6.5 Suggested sources of supply. Suggested sources of supply are listed below. Additional sources will be added as they become available. The vendors listed have submitted a certificate of compliance to DESC-ELDM.

CID PIN AA55483	Vendor commercial PIN CAGE 34899
-001	2673004501
-002	2673004601
-003	2673004701
-004	2643004801
-005	2643002201
-006	2673002201
-007	2673000501
-008	2643000201
-009	2673000201
-010	2673004901
-011	2643004101
-012	2643004201
-013	2643000401
-014	2643000101
-015	2643000601
-016	2673000601
-017	2643000301
-018	2664000301
-019	2673000301
-020	2643000701
-021	2664000701
-022	2673000701
-023	2643000301
-024	2643001501
-025	2643022401
-026	
-027	2643021801
-028	2643000801
-029	2664000801
-030	2673000801
-031	2643006302
-032	2677006302
-033	2643002402
-034	2643540002
-035	
-036	

Vendor CAGE  
number

34899

Vendor name  
and address

Fair-Rite Products Corporation  
1 Commercial Row  
Wallkill, NY 12589  
Phone: (914) 895-2055

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - 7FXE

PREPARING ACTIVITY:

DLA-ES

Project 5950-D240