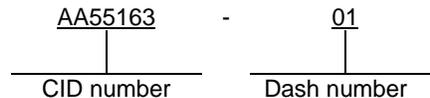


COMMERCIAL ITEM DESCRIPTION

FILTER, RADIO FREQUENCY INTERFERENCE

The General Services Administration has authorized the use of this commercial item description (CID) for all federal agencies as a replacement for Federal Specification W-F-2190/3.

1. **SCOPE.** This CID covers the general requirements for radio frequency interference (RFI) suppression power line filters. These filters consist of capacitors and inductors used in combination with each other and are provided with resistors as a safety feature. Filters covered by this CID are intended for commercial/industrial applications and should not be used in military systems needing stringent environmental and electrical requirements.
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.

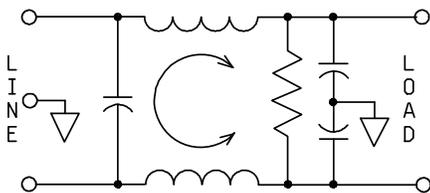
- 3.1 Interface and physical dimensions. Filters supplied to this CID shall be as specified herein (see figures 1 and 2).
- 3.2 Voltage rating. The voltage rating shall be 120 V ac at 60 Hz; 250 V ac at 50 Hz.
- 3.3 Operating frequency. The operating frequency shall be 50/60 Hz.
- 3.4 Current rating. The current rating shall be as specified in table I.
- 3.5 Operating ambient temperature range. The operating ambient temperature range shall be -10°C to +40°C at rated current.
- 3.6 Maximum leakage current, line-to-ground. The maximum leakage current, line-to-ground, shall be 0.5 mA at 120 V ac, 60 Hz; 1.0 mA at 250 V ac, 50 Hz.
- 3.7 Hipot rating (1 minute). The hipot rating shall be 2,250 V dc line-to-ground; 1,450 V dc line-to-line.
- 3.8 Insertion loss. Insertion loss is given for line-to-ground in a 50-ohm circuit. Values shall be as specified in table I.
- 3.9 Electrical schematics. The electrical schematics shall be as specified on figure 1.
- 3.10 Marking. Filters supplied to this CID shall be marked with the manufacturer's (MFR's) standard commercial PIN.

Comments, suggestions or questions on this document should be addressed to DLA Land and Maritime, ATTN: VAT, Post Office Box 3990, Columbus, OH 43218-3990, or emailed to CapacitorFilter@dla.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <https://assist.dla.mil>.

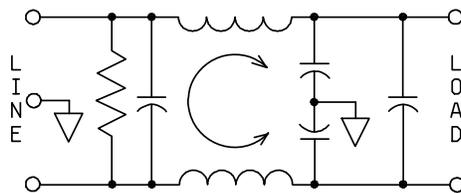


TABLE I. Current rating and insertion loss.

| PIN AA55163- | Current rating | Electrical schematic | Minimum insertion loss (dB) Line-to-ground in 50 -ohm circuit | | | | | |
|-----------------|----------------|-------------------------|--|----|----|----|----|----|
| | | | Frequency (MHz) | | | | | |
| | | | .15 | .5 | 1 | 5 | 10 | 30 |
| 01 | 1 A | A | 15 | 30 | 38 | 50 | 50 | 50 |
| 02 | 1 A | B | 15 | 30 | 38 | 50 | 50 | 50 |
| 03 | 2 A | A | 7 | 20 | 25 | 40 | 45 | 48 |
| 04 | 2 A | B | 6 | 19 | 28 | 42 | 45 | 50 |
| 05 | 3 A | A | 15 | 30 | 38 | 50 | 50 | 50 |
| 06 | 3 A | B | 15 | 30 | 38 | 50 | 50 | 50 |
| 07 | 5 A | A | 7 | 20 | 25 | 40 | 45 | 48 |
| 08 | 5 A | B | 6 | 19 | 28 | 42 | 45 | 50 |
| 09 | 10 A | A | 7 | 20 | 25 | 40 | 45 | 48 |
| 10 | 10 A | B | 6 | 19 | 28 | 42 | 45 | 50 |



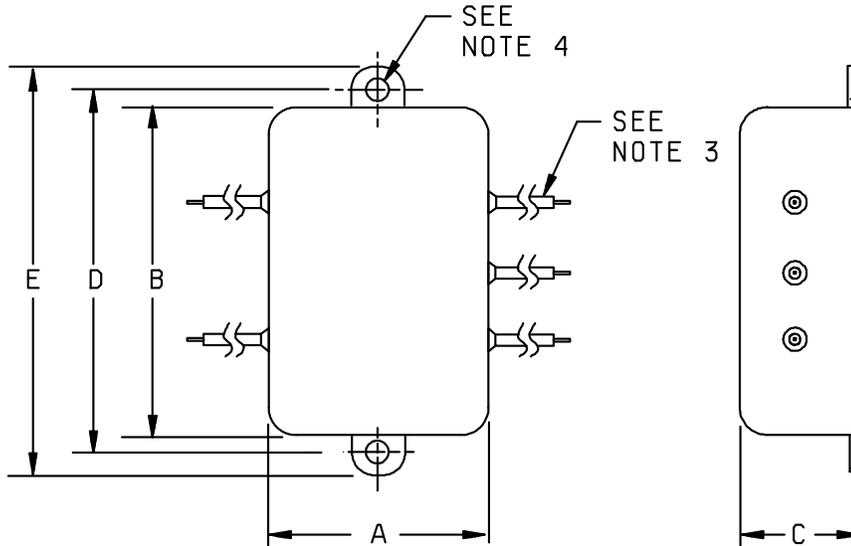
Schematic A



Schematic B

FIGURE 1. Electrical schematics.

A-A-55163C



| PIN AA55163- | A (max) | | B (max) | | C (max) | | D $\pm.015/\pm.38$ | | E (max) | |
|-----------------|------------|------|------------|------|------------|------|-----------------------|-------|------------|------|
| | Inch | mm | Inch | mm | Inch | mm | Inch | mm | Inch | mm |
| 01 | .96 | 24.4 | 1.82 | 46.2 | .66 | 16.8 | 2.125 | 53.98 | 2.53 | 64.3 |
| 02 | 1.81 | 46.0 | 2.07 | 52.6 | .91 | 23.1 | 2.375 | 60.33 | 2.81 | 71.4 |
| 03 | .96 | 24.4 | 1.82 | 46.2 | .66 | 16.8 | 2.125 | 53.98 | 2.53 | 64.3 |
| 04 | 1.81 | 46.0 | 2.07 | 52.6 | .91 | 23.1 | 2.375 | 60.33 | 2.81 | 71.4 |
| 05 | 1.32 | 33.5 | 1.82 | 46.2 | .78 | 19.8 | 2.125 | 53.98 | 2.53 | 64.3 |
| 06 | 1.81 | 46.0 | 2.07 | 52.6 | 1.16 | 29.5 | 2.375 | 60.33 | 2.81 | 71.4 |
| 07 | 1.32 | 33.5 | 1.82 | 46.2 | .78 | 19.8 | 2.125 | 53.98 | 2.53 | 64.3 |
| 08 | 1.81 | 46.0 | 2.07 | 52.6 | 1.16 | 29.5 | 2.375 | 60.33 | 2.81 | 71.4 |
| 09 | 1.32 | 33.5 | 1.82 | 46.2 | 1.16 | 29.5 | 2.125 | 53.98 | 2.53 | 64.3 |
| 10 | 2.07 | 52.6 | 2.07 | 52.6 | 1.16 | 29.5 | 2.375 | 60.33 | 2.81 | 71.4 |

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Wire leads: (Five) length 4.0 inches (101.6 mm) minimum; 18 AWG for -01 through -08, 16 AWG for -09 and -10
Mounting holes: (Two) .188 inch (4.78 mm) diameter.

FIGURE 2. Case configuration and dimensions.

3.11 Recycled, recovered, or environmentally preferable, or biobased materials. Recycled, recovered, or 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.

3.12 Workmanship. Filters 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.

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.

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 filters to DLA Land and Maritime 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 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> |
|-------------------|-------------------------------|

| | |
|-------|---|
| 06SY2 | Filter Concepts A Division of Astrodyne 22895 Eastpark Drive Yorba Linda, CA 92887 |
|-------|---|

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

TABLE II. PIN supersession data.

| PIN AA55163- | MFR's CAGE 06SY2 |
|-----------------|----------------------------|
| | MFR's Commercial PIN 1/ |
| 01 | ----- |
| 02 | ----- |
| 03 | ----- |
| 04 | LF2W |
| 05 | ----- |
| 06 | LF3W |
| 07 | ----- |
| 08 | LE5W |
| 09 | ----- |
| 10 | LE10W |

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 3.10.

7.7 Government users. To acquire information on obtaining these filters from the Government inventory system, contact DLA Land and Maritime, ATTN: VAT, Post Office Box 3990, Columbus, OH 43218-3990, telephone (614) 692-0551.

7.8 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 and additional information is available on their website <http://www.epa.gov/osw/hazard/wastemin/priority.htm>. Included in the EPA list of 31 priority chemicals are cadmium, lead, and mercury. Use of these materials should be minimized or eliminated unless needed to meet the requirements specified herein (see Section 3).

7.9 Changes from previous issue. The margins of this CID are marked with vertical lines 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 - FAS
Preparing Activity:
DLA-CC
Project 5915-2015-002

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/>.