

INCH POUND

MIL-T-27/163D  
8 June 2012  
SUPERSEDING  
MIL-T-27/163C  
20 April 1993

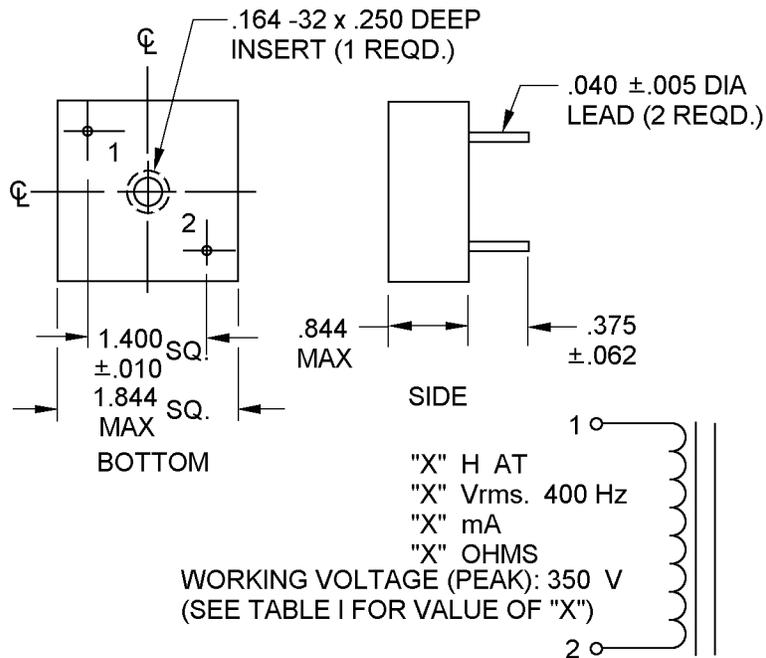
MILITARY SPECIFICATION SHEET

TRANSFORMERS AND INDUCTORS  
(AUDIO, POWER AND HIGH-POWER PULSE),  
INDUCTORS, AUDIO FREQUENCY, HIGH Q

Inactive for new design after 20 April 1993

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The complete requirements for procuring the product described herein shall consist of this document and the latest issue of specification MIL-PRF-27.



CIRCUIT DIAGRAM AND MARKING

FIGURE 1. Dimensions and configurations.

Inches	mm
.005	0.13
.010	0.25
.040	1.02
.062	1.57
.164	4.17
.250	6.35
.375	9.32
.844	21.44
1.400	35.56
1.844	46.84

## NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Marking shall be on the side of the case opposite terminal pins.
4. Electrical values shall be marked as specified in table I as applicable.
5. Insert is located on bottom of the inductor with the terminals.

FIGURE 1. Dimensions and configurations - Continued.

REQUIREMENTS: (When numbers in parentheses, i.e., (1-2) are used, they indicate the winding and the extreme terminals of the windings.)

## Electrical ratings:

Working voltage (peak): 350 volts.

Temperature coefficient (-55°C to +105°C): ±1.5 percent.

## Design and construction:

Dimensions and configuration: See figure 1.

Case: Encapsulated.

Material: Epoxy.

Terminals: Type N-4, tin-lead plated, in accordance with MIL-STD-1276.

Diameter: .040 inch, ±.005.

Length: .375 inch, ±.062.

Weight: 170 grams, maximum.

Operating temperature range: -55°C to +105°C.

Terminal strength: MIL-STD-202, method 211, test condition A, 2 pounds.

TABLE I. Electrical ratings.

Dash no	Inductance H $\pm 1\%$ (1-2)	Current <sup>1/</sup> mA (1-2) (max)	Voltage V rms (1-2)	DC resistance ohms (max) (1-2)	Quality factor	
					(Minimum)	Test condition
01	0.1	60	1 at 400 Hz	4.2	210	1 V rms 3 kHz
02	0.5	25	1 at 400 Hz	23	185	1 V rms 3 kHz
03	1.0	18	1 at 400 Hz	43	185	1 V rms 3 kHz
04	2.0	12	1 at 400 Hz	92	140	1 V rms 2 kHz
05	5.0	8	1 at 400 Hz	240	120	1 V rms 1.5 kHz
06	10.0	6	1 at 400 Hz	440	95	1 V rms 1 kHz

<sup>1/</sup> The amount of dc current that will reduce the inductance a maximum of 7 percent.

Vibration (high frequency): MIL-STD-202, method 204.

Dielectric withstanding voltage (at sea level): 1,000 V rms.

Electrical characteristics:

Inductance: The inductance in table I is measured with 1.0 V rms, 400 Hz across (1-2) and ) A dc applied to (1-2).

VERIFICATION:

Qualification inspection: Not applicable for this specification sheet.

Conformance inspection: Groups A and B tests of MIL-PRF-27 shall be applicable.

Marking location: See figure 1.

Part or Identifying Number (PIN): M27/163-(dash number from table I).

Changes from previous issue. The margins of this specification 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.

Referenced documents. In addition to MIL-PRF-27, this document references the following:

MIL-STD-202  
MIL-STD-1276

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

Preparing activity:  
DLA - CC

(Project 5950 2009-088)

Review activities:  
Army - AR  
Navy – AS, MC, OS  
Air Force - 19, 99

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 this information above using the ASSIST Online database at <https://assist.daps.dla.mil> .