

INCH-POUND

MIL-T-27/175C
4 May 2012
SUPERSEDING
MIL-T-27/175B
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 transformer described herein shall consist of this document and the latest issue of specification MIL-PRF-27.

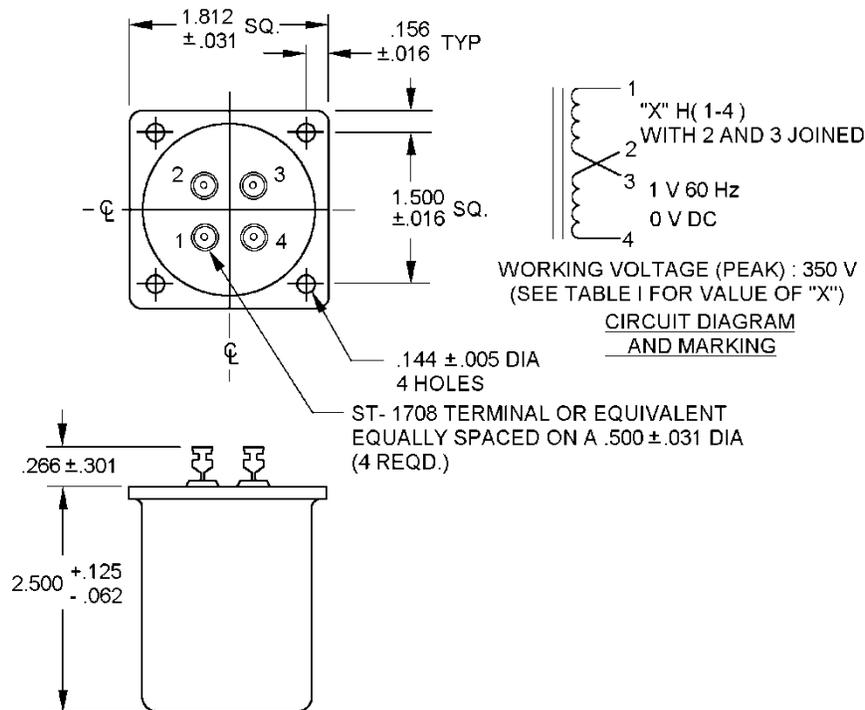


FIGURE 1. Dimensions and configurations.

Inches	mm
.005	0.13
.016	0.41
.031	0.79
.062	1.57
.125	3.18
.144	3.66
.156	3.96
.266	6.76
.500	12.70
1.500	38.10
1.812	46.02
2.500	63.50

NOTES:

1. Dimensions are in millimeters.
2. Metric equivalents are given for general information only.
3. Marking shall be on the sides of the case.
4. Electrical values shall be as specified in table I, as applicable

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 winding.)

Electrical ratings: See table I

TABLE I. Electrical ratings.

Dash no	Inductance H ± 2 percent		<u>1/</u> Potential V at 60 Hz (1-4)	Current ampere (1-4)	DC resistance ohms $\pm 20\%$ with (2-3) connected (1-4)	Temperature stability (-55°C to +105°C)	Quality factor (min) at 1 V, 50 Hz	Working voltage (peak)
	Series connected	Parallel connected						
	(1-4)	(1-4)						
01	1.0	0.25	1.0/0.5	0	5.0	± 3 percent	25	350
02	10	2.5	1.0/0.5	0	50	± 3 percent	25	350
03	20	5	1.0/0.5	0	82	± 3 percent	28	350
04	200	50	1.0/0.5	0	820	± 3 percent	30	350
05	400	100	1.0/0.5	0	2100	± 3 percent	30	350
06	2500	652	1.0/0.5	0	13k	± 3 percent	30	350

1/ Values correspond to the winding being connected in series/parallel respectively.

Design and construction:

Dimensions and configurations: See figure 1.

Duty cycle: Continuous.

Terminals: Solder lug type, ST-1708 or equivalent.

Terminal height: .266 ±.031 inch.

Weight: 0.454 kilograms, maximum.

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

Terminal strength: MIL-STD-202, method 211, test condition A, 5 pounds.

Shock (specified pulse): MIL-STD-202, method 213, test condition H.

Dielectric withstanding voltage (at sea level): 1000 V rms

Electrical characteristics:

Inductance:

Series connected: With 1 V rms, 60 Hz across (1-4), and 0 ampere dc applied to (1-4) the inductance shall be as specified in table I.

Parallel connected: With 0.5 V rms, 60 Hz across (1-4), and 0 ampere dc applied to (1-4) the inductance shall be as specified in table I.

Q: At 1 V, 50 Hz, the Q shall be as specified in table I.

VERIFICATION:

Qualification inspection: Not applicable.

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

Marking location: See figure 1.

Part or Identifying Number (PIN): M27/175-(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

Custodians:

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

Preparing activity:
DLA - CC

(Project 5950-2009-079)

Review Activities:

Army – AR, CR4
Navy – AS, MC, OS, SH
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 the information above using the ASSIST Online database at <https://assist.daps.dla.mil>.