

INCH-POUND

MIL-T-27/170C  
8 June 2012  
SUPERSEDING  
MIL-T-27/170B  
13 March 1991

MILITARY SPECIFICATION SHEET

TRANSFORMERS, AUDIO FREQUENCY

Inactive for new design after 13 March 1991.

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

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

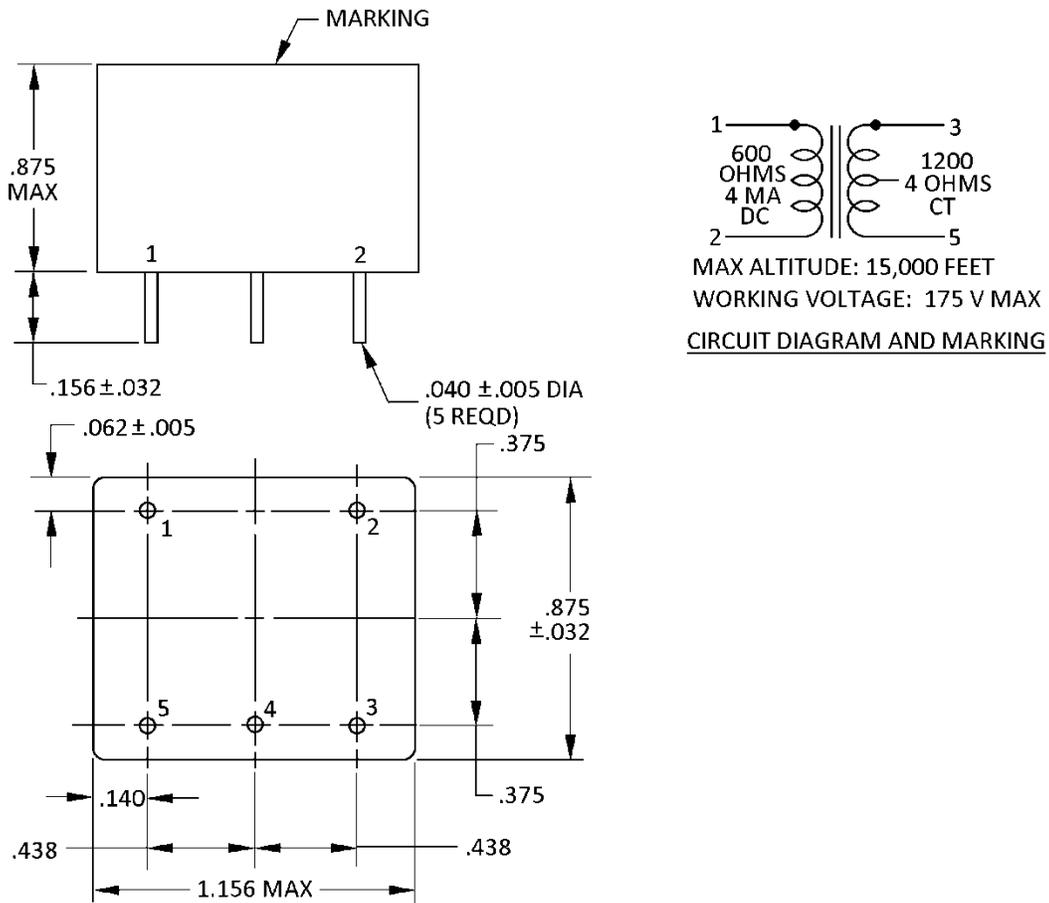


FIGURE 1. Dimensions and configurations

INCHES	MM
.005	0.13
.032	0.81
.040	1.02
.062	1.57
.140	3.56
.156	3.96
.375	9.52
.438	11.13
.875	22.22
1.156	29.36

## NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is  $\pm 0.010$  (0.25 mm).
4. Marking shall be on the top of the case.
5. Terminal identification marking shall be on the sides of the case.

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:

Power level: 1 milliwatt.

Working voltage: 175 volts maximum.

Primary current: 4 milliamps, dc.

Primary impedance (1-2): 600 ohms.

Secondary load impedance (3-5): 1,200 ohms center tap.

DC resistance:

(1-2): 47 ohms  $\pm 25$  percent.

(3-5): 93 ohms  $\pm 25$  percent.

Design and construction:

Dimensions and configurations: See figure 1.

Duty cycle: Continuous.

Case: Epoxy.

Altitude: 15,000 feet, maximum.

Terminals: Pin (printed circuit).

Material: Nickel iron alloy tin dipped.

Diameter: 0.040  $\pm 0.005$ .

Length: 1.56  $\pm 0.032$ .

Weight: 1.750 ounces, maximum.

Operating temperature range:  $-55^{\circ}\text{C}$  to  $+105^{\circ}\text{C}$

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

Resistance to soldering heat: MIL-STD-202, method 210, temperature  $271^{\circ}\text{C} \pm 5^{\circ}\text{C}$  ( $520^{\circ}\text{F} \pm 9^{\circ}\text{F}$ ), and immersion 15 seconds duration minimum.

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

Shock (specified pulse): MIL-STD-202, method 213, test condition I, except 11 milliseconds duration and half sine waveform.

Dielectric withstanding voltage:

- At sea level: 500 V rms.
- At barometric pressure: 300 V rms.

Electrical characteristics:

Primary impedance: 600 ohms  $\pm$ 10 percent with 1 volt, 1 kilohertz and 4 milliamperes, dc applied to (1-2) and 1,200 ohms across (3-5).

Frequency response:

- $Z_S = 600$  ohms (1-2).
- $Z_L = 1,200$  ohms (3-5).
- $E_S = 12$  volts.
- Reference frequency = 1 kilohertz.
- Frequency range: 300 to 3,400 hertz  $\pm$ 1 dB.

Polarity: Additive with terminals 2 and 3 connected.

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 Identification Number (PIN): M27/170-01.

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 5950-2009-083)

Review activities:  
Army – AR, CR4, MI  
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 this information above using the ASSIST Online database at <https://assist.daps.dla.mil>.