

INCH-POUND

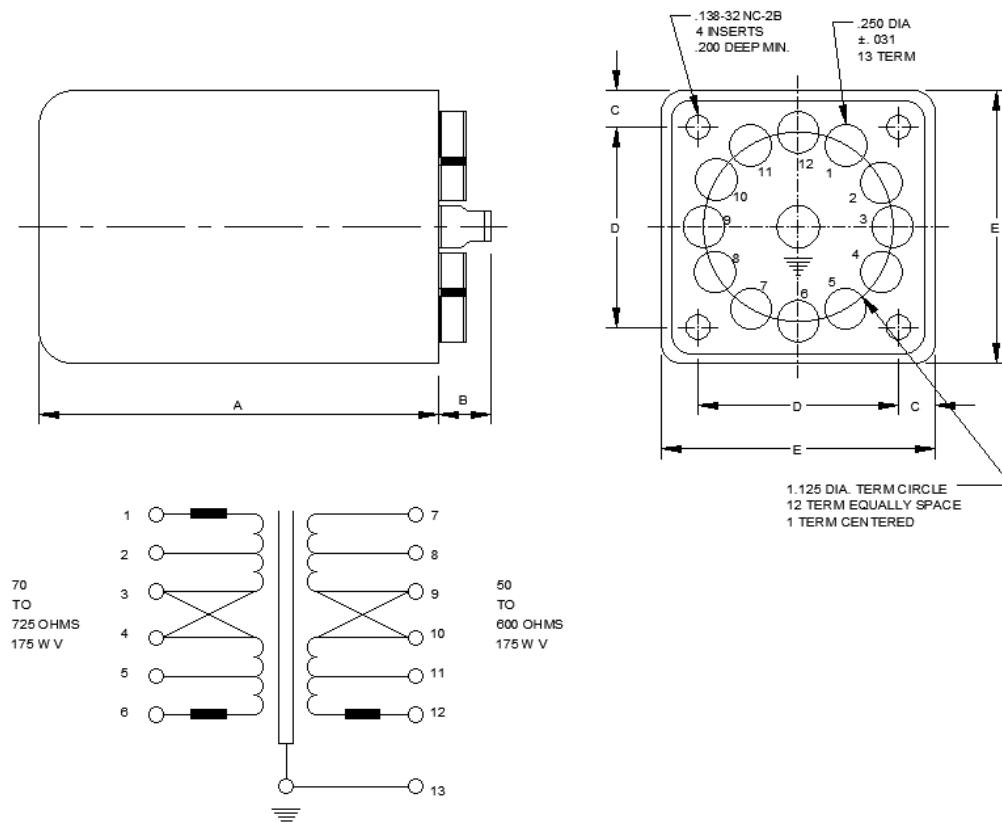
MIL-PRF-27/30C
W/AMENDMENT 2
24 March 2022
SUPERSEDING
MIL-PRF-27/30C
W/AMENDMENT 1
23 September 2020

PERFORMANCE SPECIFICATION SHEET

TRANSFORMER, AUDIO FREQUENCY

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

The requirements for acquiring the transformer described herein shall consist of this specification sheet and MIL-PRF-27.



CIRCUIT DIAGRAM AND MARKING

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.

FIGURE 1. Dimensions and configurations.

AMSC N/A

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MIL-PRF-27/30C
w/AMENDMENT 2

LTR	Inches	mm
A	2.375 +.000 -.125	60.33 +.000 -3.18
B	.312 ±.031	7.92 ±0.79
C	.218	5.54
D	1.187 ±.060	30.15 ±1.52
E	1.625 +.000 -.125	41.28 +.000 -3.18

FIGURE 1. Dimensions and configurations - continued.

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

Electrical ratings:

Source impedance: 70Ω to 725Ω.

Load impedance: 50Ω to 600Ω.

Primary power level: +7 dB maximum (6.0 mW reference level).

Working voltage: 175 V.

Design and construction:

Dimensions and configuration: See figure 1.

Duty cycle. Continuous.

Case:

Material: Metal.

Terminals: Solder, turret type.

Weight: 10.6 ounces, maximum.

Altitude:

Operating: 10,000 feet, maximum.

Nonoperating: 25,000 feet, maximum.

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

Maximum operating temperature: +105°C (ambient plus temperature rise).

Temperature rise: 20°C.

| Terminal strength: [MIL-STD-202-211](#), test condition A, 5 pounds.

| Dielectric withstanding voltage: [MIL-STD-202-301](#), test voltage, 500 V rms.

| Insulation resistance: [MIL-STD-202-302](#), test voltage, 500 volts dc.

MIL-PRF-27/30C
w/AMENDMENT 2

Electrical characteristics:

Primary (terminals 1, 2, 3, 4, 5, and 6):

Impedance: See table I.

Direct current: Zero.

Inductance: 12 H minimum, 5 V, 60 Hz (terminals 1-6, connect 3 to 4).

Secondary (terminals 7, 8, 9, 10, 11, and 12):

Impedance: See table II.

Direct current: Zero.

Frequency response:

2 dB: 10 Hz to 20 kHz.

6 dB: 50 kHz.

Polarity: Terminals 1 and 12 shall be the same polarity.

Marking location: See figure 1.

Part or Identification Number (PIN): M27/30-01.

TABLE I. Primary impedance at 2000 Hz.

Primary impedance	Connect to terminal	Join to terminal
<u>Ohms $\pm 5\%$</u>		
70	2 and 4	2 to 3 and 4 to 5
165 or 180	1 and 4	1 to 3 and 4 to 6
280 or 325	2 and 5	3 to 4
425	1 and 5	3 to 4
625 or 725	1 and 6	3 to 4

TABLE II. Secondary impedance.

Secondary impedance	Connect to terminal	Join to terminal
<u>Ohms</u>		
50	8 and 10	8 to 9 and 10 to 11
125 or 150	7 and 10	7 to 9 and 10 to 12
200 or 250	8 and 11	9 to 10
333	7 and 11	9 to 10
500 or 600	7 and 12	9 to 10

MIL-PRF-27/30C
w/AMENDMENT 2

Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. 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.

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

| MIL-STD-202-211, MIL-STD-202-301, MIL-STD-202-302

Custodians:

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

Preparing activity:

DLA - CC

(Project 5950-2022-015)

Review activities:

Army – AR, CR4, MI
Navy - AS, MC, OS, SH
Air Force - 19

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.dla.mil>.