

INCH-POUND

MIL-PRF-27/67C  
W/AMENDMENT 1  
31 March 2021  
SUPERSEDING  
MIL-PRF-27/67C  
28 April 2008

## PERFORMANCE SPECIFICATION SHEET

### TRANSFORMERS, AUDIO FREQUENCY

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

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

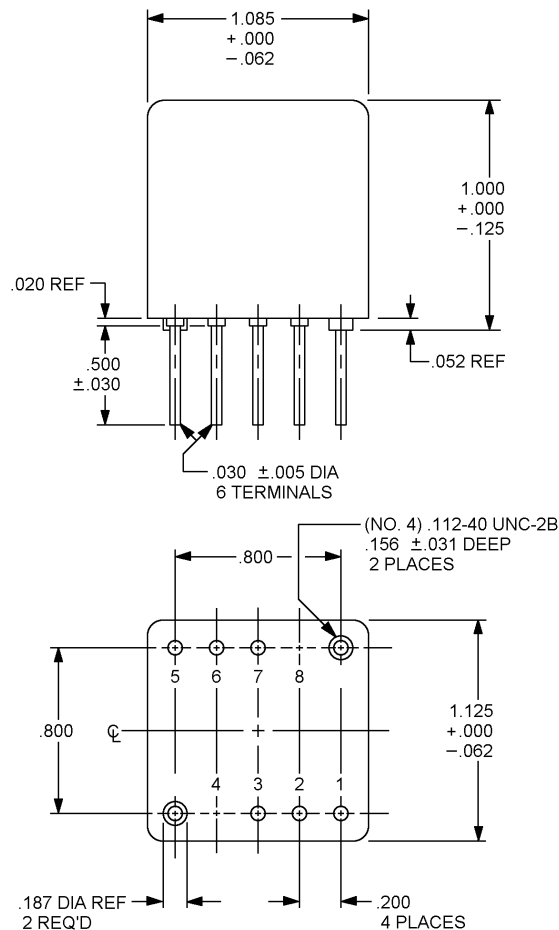


FIGURE 1. Dimensions and configuration.

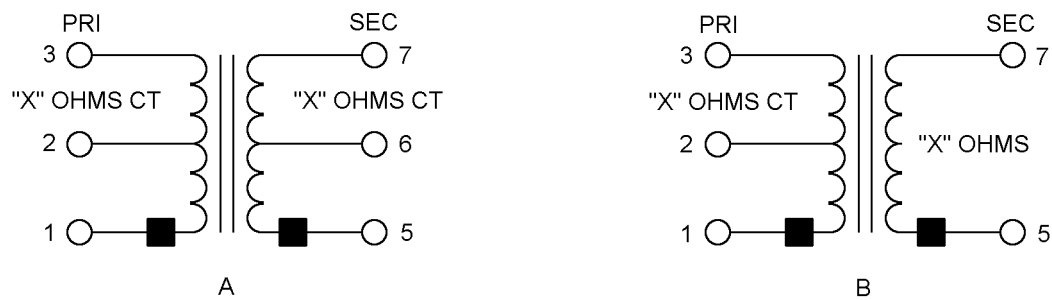
AMSC N/A

FSC 5950



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| Inches | mm   | Inches | mm    |
|--------|------|--------|-------|
| .005   | 0.13 | .156   | 3.96  |
| .020   | 0.51 | .187   | 4.75  |
| .030   | 0.76 | .200   | 5.08  |
| .031   | 0.79 | .500   | 12.70 |
| .052   | 1.32 | .800   | 20.32 |
| .062   | 1.57 | 1.000  | 25.40 |
| .112   | 2.84 | 1.085  | 27.56 |
| .125   | 3.18 | 1.125  | 28.58 |



WORKING VOLTAGE: "X" V  
ALTITUDE: 70 KFT MAX  
(SEE TABLE I FOR VALUE OF "X")

CIRCUIT DIAGRAMS AND MARKING

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 sides and/or top of case.
5. Electrical values shall be marked as specified in table I, as applicable.

FIGURE 1. Dimensions and configuration – Continued.

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REQUIREMENTS: (When numbers in parentheses, i.e., (1.-3) are used, they indicate the winding and the extreme terminals of the winding.)

Electrical ratings: See table I.

Frequency range: 60 hertz to 10 kilohertz.

Power level: 500 milliwatts maximum at 60 hertz.

TABLE I. Electrical ratings. 1/

| Dash number | Circuit diagram (see figure 1) | Primary impedance ohms (1-3) | Secondary impedance ohms (5-7) | Primary DCR ohms $\pm 25\%$ (1-3) | Secondary DCR ohms $\pm 25\%$ (5-7) | Primary unbalanced DC current max (mA) | Working voltage |
|-------------|--------------------------------|------------------------------|--------------------------------|-----------------------------------|-------------------------------------|----------------------------------------|-----------------|
| 01          | A                              | 10,000 CT                    | 10,000 CT                      | 700                               | 900                                 | 1.0                                    | 355             |
| 02          | A                              | 10,000 CT                    | 600 CT                         | 700                               | 50                                  | 1.0                                    | 355             |
| 03          | B                              | 10,000 CT                    | 4                              | 700                               | 0.37                                | 1.0                                    | 355             |
| 04          | B                              | 1,500 CT                     | 15                             | 93                                | 1.2                                 | 2.5                                    | 175             |
| 05          | A                              | 1,000 CT                     | 600 CT                         | 65                                | 50                                  | 3.0                                    | 175             |
| 06          | B                              | 1,000 CT                     | 4                              | 65                                | 0.37                                | 3.0                                    | 175             |
| 07          | A                              | 600 CT                       | 600 CT                         | 37                                | 50                                  | 4.0                                    | 175             |
| 08          | A                              | 600 CT                       | 60 CT                          | 37                                | 5                                   | 4.0                                    | 175             |
| 09          | B                              | 600 CT                       | 15                             | 37                                | 1.2                                 | 4.0                                    | 175             |
| 10          | B                              | 600 CT                       | 4                              | 37                                | 0.37                                | 4.0                                    | 175             |
| 11          | A                              | 250 CT                       | 600 CT                         | 16                                | 50                                  | 7.0                                    | 175             |

1/ Qualification testing and approval to M27/67-01 shall be sufficient to grant qualification approval to M27/67-02 through M27/67-11, inclusive. Qualification by similarity can be obtained for MIL-PRF-27/68, /69, /70, /71, and /72 by the submission of two samples each, (of dash number 01 for MIL-PRF-27/68, /69, /70, /71, and /72) which shall be subjected to group A, subgroup II tests, with zero defects allowed.

Design and construction:

Dimensions and configuration: See figure 1.

Duty cycle: Continuous.

Case: Encapsulated.

Material: Plastic.

Terminals: Pin (printed circuit).

Material: Nickel iron alloy, tin plated.

Diameter:  $0.30 \pm .005$  inch

Length:  $.500 \pm .030$  inch.

Weight: 73.71 grams.

Altitude: 70,000 feet, maximum.

Operating temperature range:  $-55^{\circ}\text{C}$  to  $+130^{\circ}\text{C}$ .

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

Dielectric withstanding voltage:

At sea level: 1,000 volts rms (except 500 volts rms on M27/67-04 through M27/67-11).

At barometric pressure: 444 volts rms (except 300 volts rms on M27/67-04 through M27/67-11).

Electrical characteristics: See table II.

Frequency response.

Reference frequency: 1 kilohertz.

Polarity: Additive, with terminals 3 and 5 connected.

TABLE II. Electrical characteristics.

| Dash number | Frequency response at<br>60 Hz to 10 kHz $\pm$ 1 dB |                                 |                         |                                      |
|-------------|-----------------------------------------------------|---------------------------------|-------------------------|--------------------------------------|
|             | Z <sub>s</sub><br>(1-3)<br>ohms                     | Z <sub>L</sub><br>(5-7)<br>ohms | E <sub>L</sub><br>volts | Primary<br>dc current<br>(1-3)<br>mA |
| 01          | 10 k                                                | 10 k                            | 16.0                    | 0.5                                  |
| 02          | 10 k                                                | 600                             | 16.0                    | 0.5                                  |
| 03          | 10 k                                                | 4                               | 16.0                    | 0.5                                  |
| 04          | 1.5 k                                               | 15                              | 6.0                     | 1.25                                 |
| 05          | 1.0 k                                               | 600                             | 5.0                     | 1.5                                  |
| 06          | 1.0 k                                               | 4                               | 5.0                     | 1.5                                  |
| 07          | 600                                                 | 600                             | 4.0                     | 2.0                                  |
| 08          | 600                                                 | 60                              | 4.0                     | 2.0                                  |
| 09          | 600                                                 | 15                              | 4.0                     | 2.0                                  |
| 10          | 600                                                 | 4                               | 4.0                     | 2.0                                  |
| 11          | 250                                                 | 600                             | 4.0                     | 3.5                                  |

Marking location: See figure 1.

Part or Identifying Number (PIN): M27/67- (dash number from table I).

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-PRF-27/68  
MIL-PRF-27/69  
MIL-PRF-27/70  
MIL-PRF-27/71  
MIL-PRF-27/72

Custodians:

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

Preparing activity:  
DLA – CC

(Project 5950-2021-011)

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>.