

INCH-POUND

MIL-PRF-27/68C
28 April 2008
SUPERSEDING
MIL-PRF-27/68B
2 June 2003

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 products described herein shall consist of this specification and MIL-PRF-27.

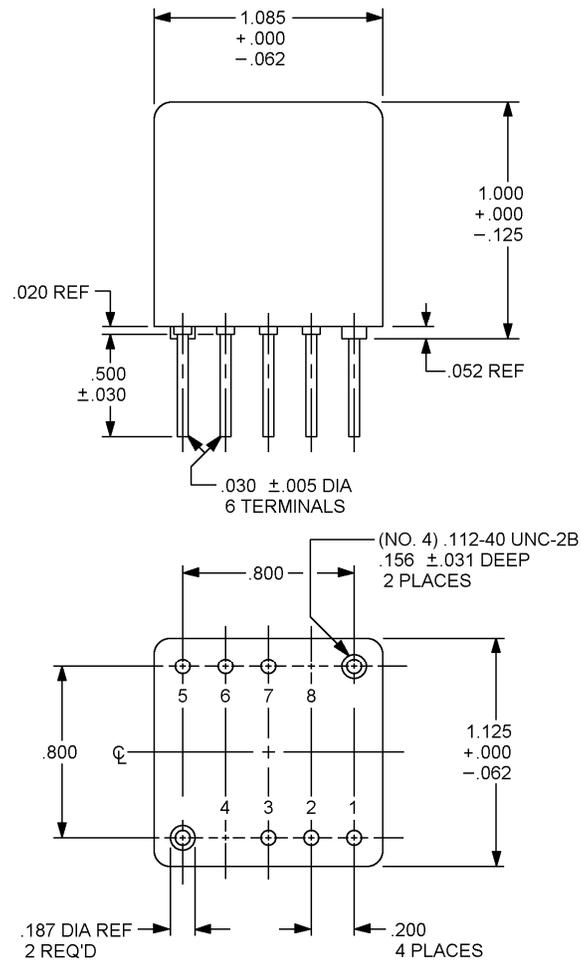
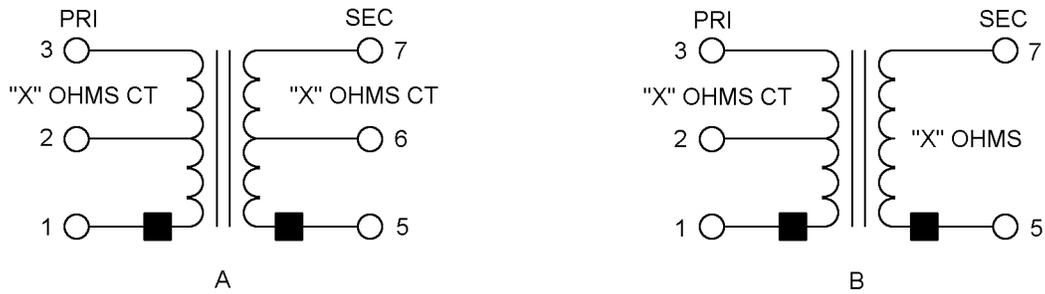


FIGURE 1. Dimensions and configuration.

MIL-PRF-27/68C

Inches	mm	Inches	mm
.005	0.13	.200	5.08
.020	0.51	.500	12.70
.030	0.76	.600	15.24
.052	1.32	.800	20.32
.062	1.57	.900	22.86
.112	2.84	1.000	25.40
.125	3.18	1.085	27.56
.187	4.75		



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 ± 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.

MIL-PRF-27/68C

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.

Power level: 500 milliwatts maximum at 100 hertz.

Working voltage: 175 volts (except 355 volts on M27/68-07).

Frequency range: 100 hertz to 8 kilohertz (except 100 hertz to 8 kilohertz on M27/68-01).

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 ± 25%	Secondary DCR ohm ± 25%	Primary unbalanced DC current max (mA)
01	A	10k CT	10k CT	700	1,000	1.0
02	A	10k CT	600 CT	700	60	1.0
03	B	10k CT	4	700	0.4	1.0
04	B	1,500 CT	15	105	1.5	2.5
05	A	1,000 CT	600 CT	70	60	3.0
06	B	1,000 CT	4	70	0.4	3.0
07	A	600 CT	25k CT	42	6	4.0
08	A	600 CT	600 CT	42	2,600	4.0
09	B	600 CT	60	42	6	4.0
10	B	600 CT	15	42	1.5	4.0
11	B	600 CT	4	42	0.4	4.0
12	A	250 CT	600 CT	17	60	7.0

1/ Qualification testing and approval to M27/68-01 and all tests in accordance with table VII of MIL-PRF-27 for M27/68-07 shall be sufficient to grant qualification approval to M27/68-01 through M27/68-12, inclusive. Qualification by similarity can be obtained for MIL-PRF-26/67, /69, /70, /71, and /72 by the submission of two samples each, (of dash number 01 for MIL-PRF-27/67, /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: .030 ± .005 inch.

Length: .500 ± .030 inch.

MIL-PRF-27/68C

Weight: 56.70 grams maximum.

Altitude: 70,000 feet, maximum.

Operating temperature range: -55°C to +130°C.

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

Dielectric withstanding voltage:

At sea level: 500 volts rms (except 1,000 volts rms on M27/68-07).

At barometric pressure: 300 volts rms (except 444 volts rms on M27/68-07).

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 100 Hz to 10 kHz \pm 1 dB			
	Z _s (1-3) ohms	Z _L (5-7) ohms	E _L volts	Primary dc current (1-3) mA
01 ^{1/}	10 k	10 k	12.0	0.5
02	10 k	600	12.0	0.5
03	10 k	4	12.0	0.5
04	1,500	15	5.0	1.25
05	1,000	600	4.0	1.5
06	1,000	4	4.0	1.5
07	600	25 k	3.0	2.0
08	600	600	3.0	2.0
09	600	60	3.0	2.0
10	600	15	3.0	2.0
11	600	4	3.0	2.0
12	250	600	2.0	3.5

^{1/} Frequency response is 100 hertz to 8 kilohertz \pm 1 dB.

Marking location: See figure 1.

Part or Identifying Number (PIN): M27/68- (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-PRF-27/67
MIL-PRF-27/69
MIL-PRF-27/70
MIL-PRF-27/71
MIL-PRF-27/72

Custodians:

Army – CR
Navy – EC
Air Force – 11
DLA - CC

Preparing activity:
DLA – CC

(Project 5950-2008-010)

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 <http://assist.daps.dla.mil>.