

INCH-POUND

MIL-PRF-27/70C
2 June 2003
SUPERSEDING
MIL-PRF-27/70B
11 July 1979

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.

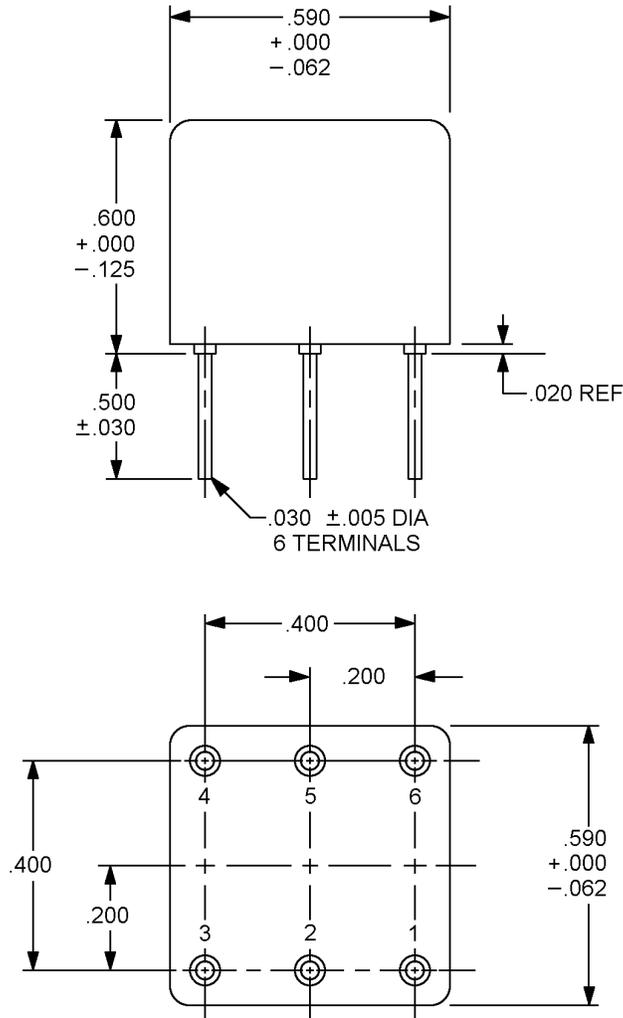
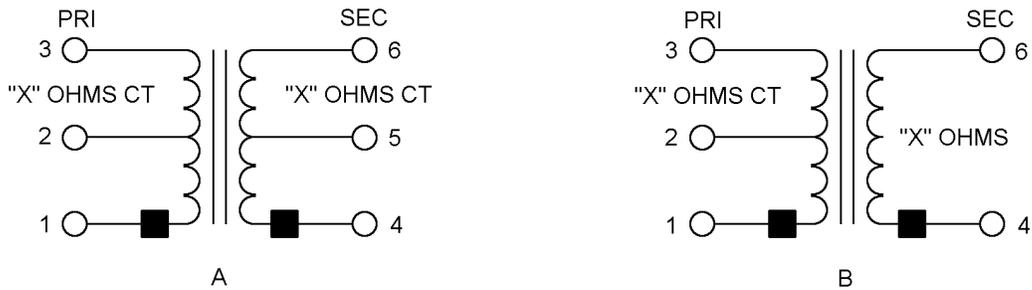


FIGURE 1. Dimensions and configuration.

Inches	mm
.005	0.13
.020	0.51
.030	0.76
.062	1.57
.125	3.18
.200	5.08
.400	10.16
.500	12.70
.590	14.99
.600	15.24



WORKING VOLTAGE: 175 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 ± 0.005 (0.13 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-27/70C

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.

Working voltage: 175 volts.

Frequency range: 200 hertz to 50 kilohertz (except 200 hertz to 15 kilohertz for M27/70-01).

TABLE I. Electrical ratings. 1/

Dash number	Circuit diagram (see figure 1)	Primary impedance ohms (1-3)	Secondary impedance ohms (4-6)	Primary DCR ohms ± 25%	Primary power level at 200 Hz mW (max)	Secondary DCR ohm ± 25%	Primary unbalanced DC current max (mA)
01	A	100 k CT	1,000 CT	5,300	60	55	0
02	A	25 k CT	1,000 CT	2,600	150	130	0
03	A	10 k CT	10 k CT	1,000	150	1,300	1.0
04	A	10 k CT	1,500 CT	1,000	150	200	1.0
05	A	10 k CT	600 CT	1,000	150	65	1.0
06	A	4,000 CT	10 k CT	350	150	1,300	1.5
07	A	1,000 CT	600 CT	90	150	65	3.0
08	B	1,000 CT	4	90	150	0.5	3.0
09	A	600 CT	25 k CT	50	150	3,200	4.0
10	A	600 CT	600 CT	50	150	65	4.0
11	B	600 CT	60	50	150	6.5	4.0
12	B	600 CT	4	50	150	0.5	4.0

1/ Qualification testing and approval to M27/70-01 and all tests in accordance with table VII of MIL-PRF-27 for M27/70-05 and M27/70-08 shall be sufficient to grant qualification approval to M27/70-01 through M27/70-12, inclusive. Qualification by similarity can be obtained for MIL-PRF-27/67, /68, /69, /71, and /72 by the submission of two samples each, (of dash number 01 for MIL-PRF-27/67, /68, /69, /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.

Weight: 12.8 grams maximum.

MIL-PRF-2770C

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.

At barometric pressure: 300 volts rms.

Electrical characteristics: See table II.

Frequency response.

Reference frequency: 1 kilohertz.

Polarity: Additive, with terminals 3 and 4 connected.

TABLE II. Electrical characteristics.

Dash number	Frequency response at 200 Hz to 50 kHz \pm 1 dB			
	Z _s (1-3) ohms	Z _L (4-6) ohms	E _L volts	Primary dc current (1-3) mA
01 <u>1/</u>	100 k	1,000	7.0	0
02	25 k	1,000	7.0	0
03	10 k	10 k	22.0	0.5
04	10 k	1,500	22.0	0.5
05	10 k	600	22.0	0.5
06	4,000	10 k	14.0	0.75
07	1,000	600	7.0	1.5
08	1,000	4	7.0	1.5
09	600	25 k	5.0	2.0
10	600	600	5.0	2.0
11	600	60	5.0	2.0
12	600	4	5.0	2.0

1/ Frequency response is 200 hertz to 15 kilohertz \pm 1 dB.

Marking location: See figure 1.

Part or Identifying Number (PIN): M27/70- (dash number from table I).

Substitution data (information only): This military transformer is substitutable for CAGE 70674, PIN 324-5H. This in no way implies that the manufacturer's part is substitutable for the military item. This information is not intended to be complete.

MIL-PRF-27/70C

Custodians:

Army – CR
Navy – EC
Air Force – 11

Preparing activity:
DLA – CC

(Project 5950-1101)

Review activities:

Army – AR, CR4, MI
Navy – AS, MC, OS, SH
Air Force – 19, 99