

INCH-POUND

MIL-PRF-27/71D
21- February-2003
SUPERSEDING
MIL-PRF-27/71C
23 July 1990

PERFORMANCE SPECIFICATION
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.

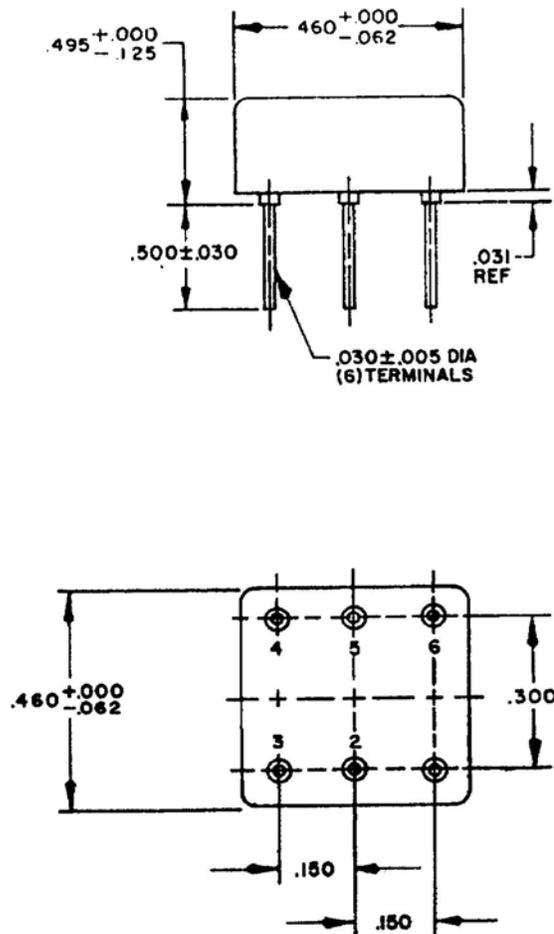
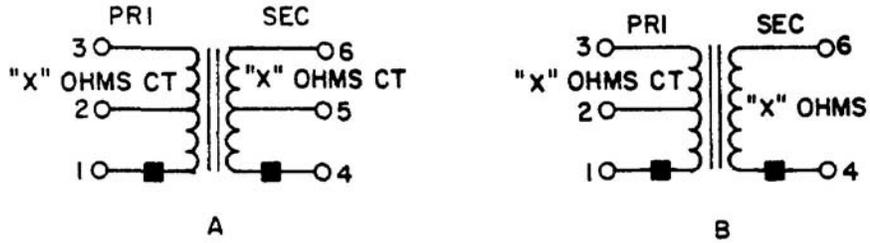


FIGURE 1. Dimensions and configuration.

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Inches	mm	Inches	mm
.005	0.13	.150	3.81
.030	0.76	.300	7.62
.031	0.79	.460	11.68
.062	1.57	.495	12.57
.125	3.18	.500	12.70



Working voltage: 175 V
 Altitude : 70,000 ft maximum
 (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. Part marking shall be on sides or top of case.
5. Electrical values shall be marked as specified in table I, as applicable.

FIGURE 1. Dimensions and configurations - 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 windings.)

Electrical ratings: See table I.

Working voltage: 175 volts.

Frequency range: 300 hertz to 100 kilohertz (except 300 hertz to 20 kilohertz for M27/71-01 and M27/71-02).

TABLE I. Electrical ratings.

Dash number	Circuit diagram (see figure 1)	Primary impedance ohms (1-3)	Secondary impedance ohms (4-6)	Primary DCR ohms $\pm 25\%$	Primary power level At 300 Hz mW (Max)	Secondary DCR ohms $\pm 25\%$	Primary unbalanced DC current mA (Max)
01	A	100 k CT	1 k CT	2,900	10	60	0
02	A	25 k CT	1,000 CT	2,500	10	140	0
03	A	10 k CT	10 k CT	1,000	30	1,300	1.0
04	A	10 k CT	1,500 CT	1,000	30	165	1.0
05	A	10 k CT	600 CT	1,000	30	65	1.0
06	A	4,000 CT	10 k CT	440	30	1,300	1.5
07	A	1,000 CT	600 CT	100	30	65	3.0
08	B	1,000 CT	4	100	30	0.45	3.0
09	A	600 CT	25 k CT	65	30	3,300	4.0
10	A	600 CT	600 CT	65	30	65	4.0
11	B	600 CT	60	65	30	7	4.0
12	B	600 CT	4	65	30	0.45	4.0

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: 0.030 \pm 0.005 inch.

Length: 0.500 \pm 0.030 inch.

Weight: 5.10 grams, maximum.

Altitude: 70,000 feet maximum.

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

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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 300 Hz to 100 KHz ± 2 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	17	0
02 <u>1/</u>	25 k	1,000	3	0
03	10 k	10 k	10	0.5
04	10 k	1,500	10	0.5
05	10 k	600	10	0.5
06	4,000	10 k	5	0.25
07	1,000	600	3	1.5
08	1,000	4	3	1.5
09	600	25 k	2.5	2
10	600	600	2.5	2
11	600	60	2.5	2
12	600	4	2.5	2

1/ Frequency response is 300 hertz to 20 kilohertz ± 2 dB.

Quality assurance provisions:

Qualification inspection: Not applicable.

Quality conformance inspection: Groups A and B tests of MIL-PRF-27 shall be applicable.

Marking location: See figure 1.

Part or Identifying Number (PIN): M27/71-(dash number from table I).

Substitution data (information only): This military transformer is substitutable for CAGE 70674, PIN 324-6A. This in no way implies that the manufacturer's part is substitutable for the military item. This information is not intended to be complete.

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Custodians:

Army - CR
Navy - EC
Air Force - 11

Preparing activity:

DLA - CC

(Project 5950-1102)

Review activities:

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