

INCH-POUND

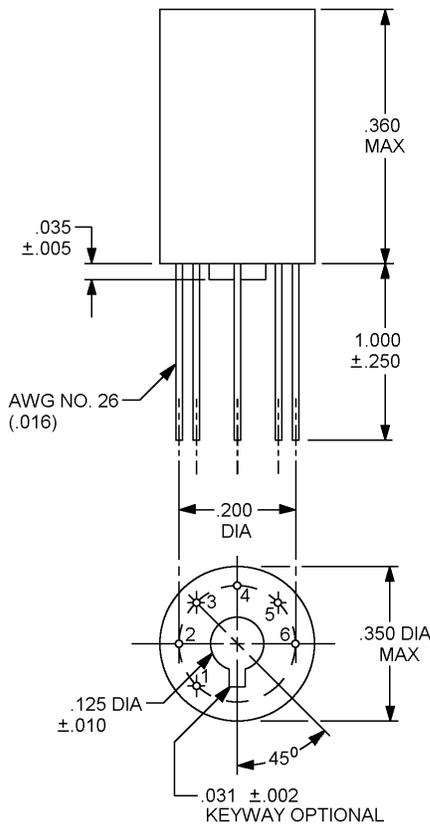
MIL-PRF-27/97C  
 2 June 2003  
 SUPERSEDING  
 MIL-PRF-27/97B  
 14 January 1988

PERFORMANCE SPECIFICATION SHEET

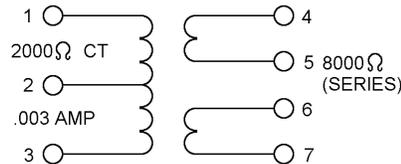
TRANSFORMERS, AUDIO FREQUENCY, SUB-MINIATURE

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

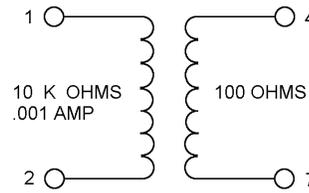
The requirements for acquiring the products described herein shall consist of this specification and MIL-PRF-27.



FREQUENCY RANGE: 400 Hz TO 100 kHz  
 POWER LEVEL: 125 mW



WORKING VOLTAGE: 49 V MAX  
 ALTITUDE: 70,000 FT MAX



WORKING VOLTAGE: 50 V

CIRCUIT DIAGRAM

Inches	mm
.002	0.05
.005	0.13
.010	0.25
.016	0.41
.031	0.79
.035	0.89
.125	3.18
.200	5.08
.250	6.35
.350	8.89
.360	9.14
1.000	25.40

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. The number of terminals shall be as shown in circuit diagram.
4. Terminals are spaced the same as "TO-76" transistors and micrologic elements.
5. For vibration and shock test, the specimen shall be rigidly mounted on a printed circuit board.

FIGURE 1. Dimensions and configuration.

MIL-PRF-27/97C

REQUIREMENTS:

Electrical ratings: See table I.

Primary power level: 125 mW.

TABLE I. Electrical ratings.

Dash number	Circuit diagram	Primary impedance (ohms)	Secondary Impedance (ohms)	Primary dc current (mA)	Primary dc resistance $\pm 25$ percent (ohms)	Secondary dc resistance $\pm 25$ percent (ohms)	Working voltage (volts)
01	A	2,000 CT	(4-5) 8,000 (6-7) 8,000	3	200	(4-(5+6)-7) 450	49
02	B	10 k	100	1	1,000	10	50

Design and construction:

Dimensions and configuration: See figure 1.

Duty cycle: Continuous.

Terminals: Pin for printed circuit.

Material: Type D in accordance with MIL-STD-1276.

Diameter: .016 inch.

Length: 1.000  $\pm$  .250 inch.

Weight: 2.4 grams maximum.

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

Altitude: 70,000 feet.

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

Dielectric withstanding voltage:

At sea level: 100 volts rms.

At reduced barometric pressure: 100 volts rms.

Electrical characteristics:

Harmonic distortion: Total harmonic content of output 5 percent at 1 kHz.

No load (CT voltage balance only): With 10 volts, 10 kHz applied to (1-3), unbalance (4-5) and (6-7) shall be 3 percent, maximum.

Self-resonant frequency: See table II.

MIL-PRF-27/97C

Frequency response: See table II.

Polarity: See table II.

Vibration, high frequency: MIL-STD-202, method 204, test condition B.

TABLE II. Electrical characteristics.

Dash number	Frequency response $\pm 3$ dB at 400 Hz to 100 kHz and 1 mW			Resonance, self resonant frequency (min)	Polarity (additive with terminals connected)
	Z <sub>s</sub>	Z <sub>L</sub>	E <sub>s</sub>		
01	2 k $\Omega$	8 k $\Omega$	<u>volts</u> 3	<u>kHz</u> 40	3-4 and 5-6
02	10 k $\Omega$	100 $\Omega$	6.32	---	2-4

Part or Identifying Number (PIN): M27/97- (dash number from table I).

TABLE III. Substitution data <sup>1/</sup>

PIN M27/97-	CAGE	Manufacturer's PIN
01	31669	C265
02	31669	C3375

<sup>1/</sup> These transformers are substitutable for the manufacturer's PINs. This in no way implies that the manufacturer's PIN is substitutable for the military PIN. This information is not intended to be complete.

MIL-PRF-27/97C

Custodians:

Army – CR  
Navy – EC  
Air Force – 11

Preparing activity:

DLA – CC

(Project 5950-1104)

Review activities:

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