

NOTE: The document identifier and heading have been changed on this page to reflect that this is a performance specification. There are no other changes to this document. The document identifier on subsequent pages has not been changed, but will be changed the next time this document is revised.

MIL-PRF-27/18D  
 25 April 1988  
 SUPERSEDING  
 MIL-T-27/18C  
 15 April 1987

PERFORMANCE SPECIFICATION SHEET

TRANSFORMER, POWER, 5.76 VA, 60 Hz, TF5S03ZZ

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

The requirements for acquiring the transformer described herein shall consist of this specification and the latest issue of MIL-T-27.

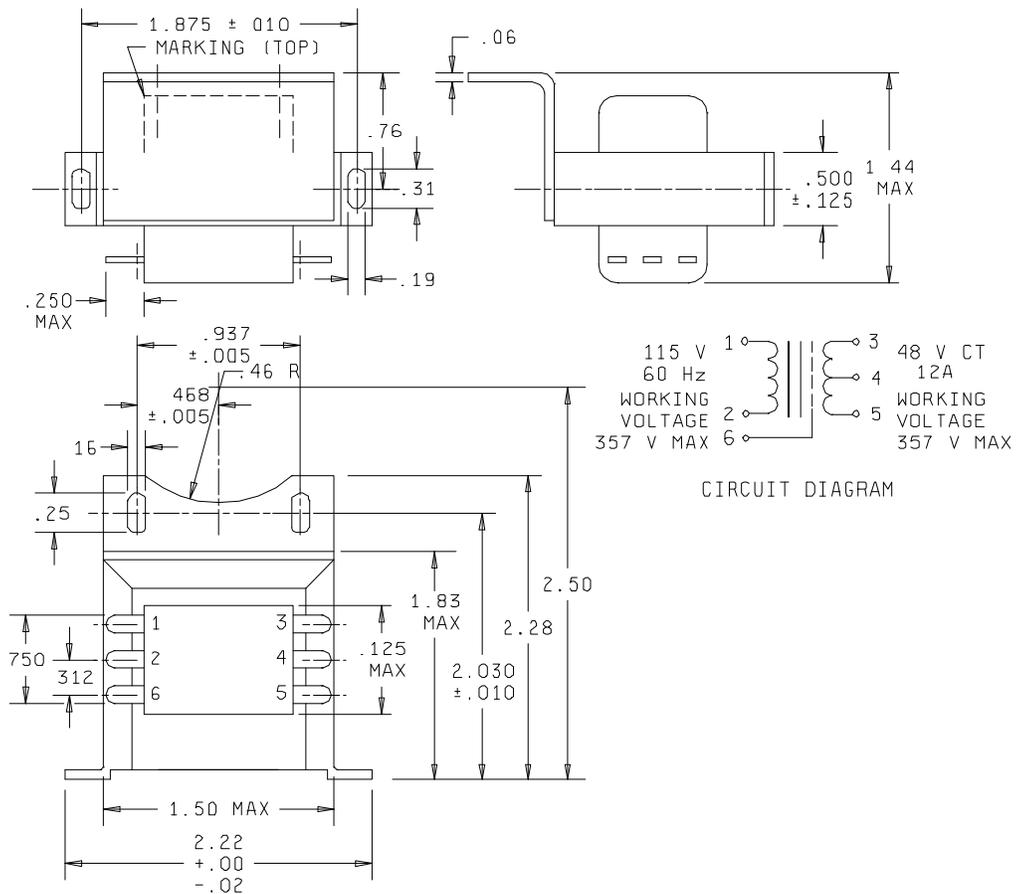


FIGURE 1. Dimensions and configuration.

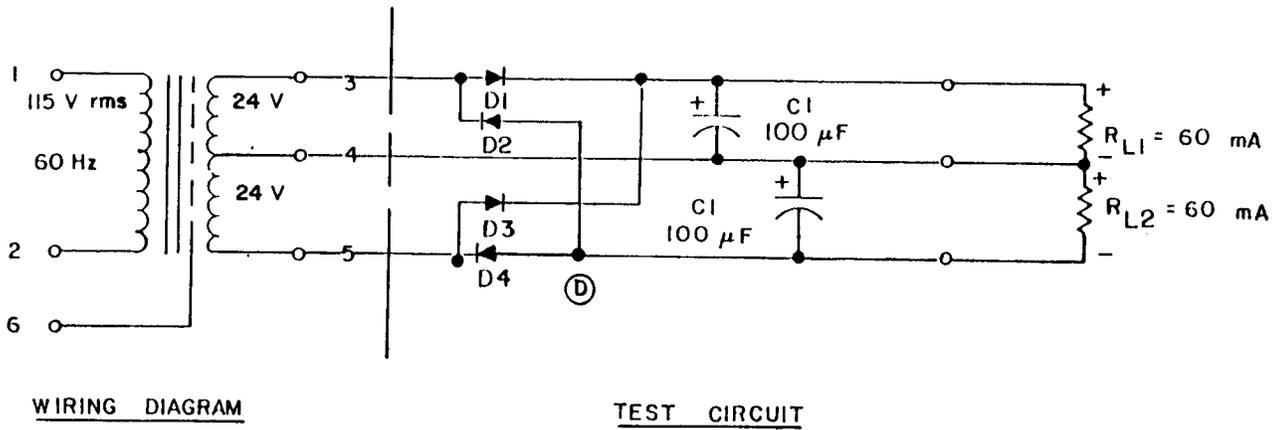
(D) denotes changes

Inches	mm		Inches	mm
.005	0.13		.750	19.05
.010	0.25		.76	19.3
.02	0.5		.812	20.62
.06	1.5		.937	23.80
.125	3.18		1.25	31.8
.16	4.1		1.44	36.6
.19	4.8		1.50	38.1
.25	6.4		1.83	46.5
.31	7.9		1.875	47.63
.312	7.92		2.030	51.56
.46	11.7		2.22	56.4
.468	11.89		2.28	57.9
.500	12.70		2.50	63.5

## NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerances is  $\pm 0.02$  (0.5 mm) for two place decimals.
4. Tolerance on terminal position dimensions is  $\pm 0.062$  (1.57 mm).
5. Marking shall be on the top of the case.

FIGURE 1. Dimensions and configuration - Continued.



## NOTES:

1. D1, D2, D3, and D4 diodes are 1N5059.
2. C1 and C2 are 100  $\mu$ F at 250 V dc.
3.  $R_{L1}$  and  $R_{L2}$  are 400 $\Omega$  approximately. Adjust for 60 mA current.
4. Test circuit to be used when making rectified voltage measurements.

FIGURE 2. Test configuration.

REQUIREMENTS: (When numbers in parentheses, i.e., (1-2) are used, they indicate the winding and the extreme terminals of the winding.)

Electrical ratings:

Primary voltage (1-2): 5.8 voltamperes, 115 volts rms, 60 Hz.

Secondary voltage (3-5): 48 volts rms at rated load (rectified).

Working voltage:

(1-2): 357 volts rms.

(3-5): 357 volts rms.

Design and construction:

Dimensions and configuration: See figure 1.

Duty cycle: Continuous.

Case: Encapsulated.

Material: Epoxy.

Terminals: Solder type.

Height: .25 inch maximum.

Width: .125 ±.02 inch.

Weight: .50 pound maximum.

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

Turns:

Primary (1-2): 2,300 turns.

Secondary (3-5): 1,100 turns.

Ratio: 1:0.48.

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

Dielectric withstanding voltage (each winding) (at sea level): 1,000 volts rms.

Electrical characteristics:

No load: With 115 V rms and 60 Hz across (1-2), current in (1-2) shall not exceed 25 milliamperes, and the power in (1-2) shall not exceed 1.0 watts. Voltage across (3-5) shall be 55 volts rms ±2 percent.

Rated load: With 115 volts rms, 60 Hz across (1-2), and the rated current, the voltage across (3-5) shall be 48 volts rms ±3 percent, using rectified load shown on figure 2 (a .06 A dc, full wave bridge, capacitance filter).

DC resistance:

(1-2): 305 ohms maximum.

(3-5): 56 ohms maximum.

Efficiency: 70 percent minimum at rated load.

Regulation: 
$$\frac{\text{Voltage (no load)} - \text{Voltage (rated load)}}{\text{Voltage (rated load)}} \times 100$$
 Shall not exceed 21 percent

Polarity: Additive with terminals 2 and 3 connected.

Electrostatic shielding: The voltage ratio shall be a minimum of 5 to 1 at 20 kHz.

Temperature rise: 40°C with 115 volts rms, 60 hertz across (1-2) at an ambient temperature of 90°C, full load terminals (3-5).

Marking location: See figure 1.

Part number: M27/18-01.

Custodians:

Army - ER  
Navy - EC  
Air Force - 85

Review activities:

Army - AR  
Navy - OS, SH  
Air Force - 11, 17, 99  
DLA - ES

User activities:

Army - ME  
Navy - AS, MC  
Air Force - 19

Preparing activity:

Army - ER

Agent:

DLA - ES

(Project 5950-0715)