

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-27/19C  
 15 April 1987  
 SUPERSEDING  
 MIL-T-27/19B  
 22 April 1980

PERFORMANCE SPECIFICATION SHEET

TRANSFORMER, POWER, 52 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.

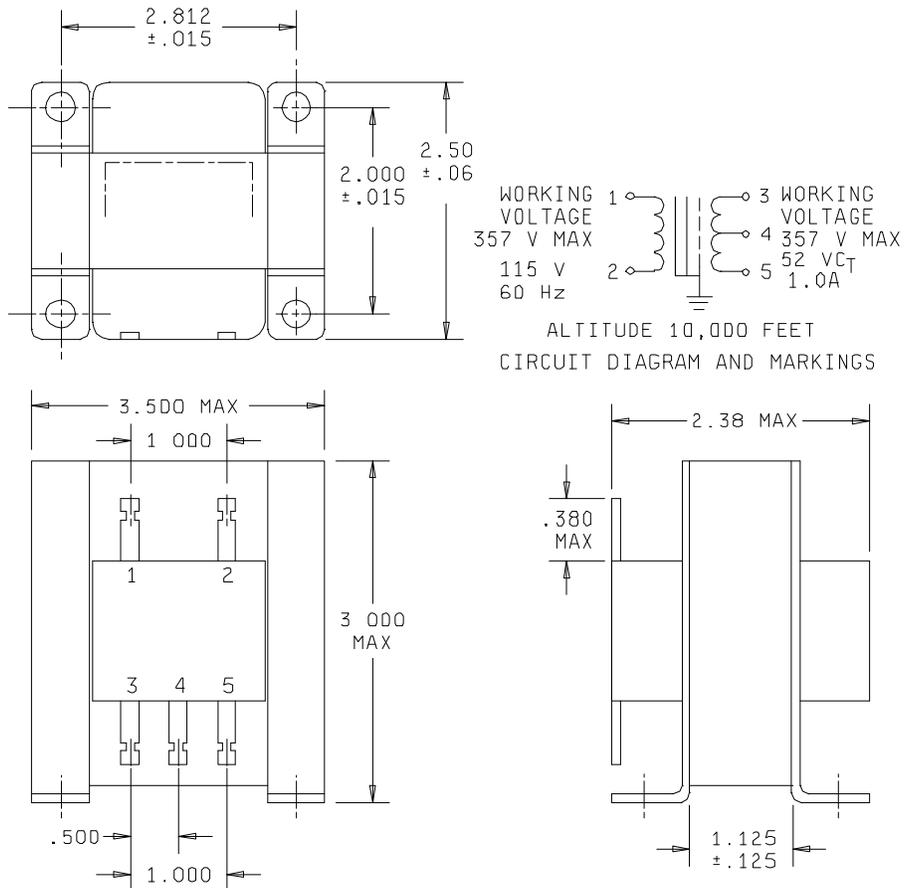


FIGURE 1. Dimensions and configuration.

Ⓒ denotes changes

Inches	mm	Inches	mm
.015	0.38	1.000	25.40
.06	1.5	1.125	28.58
.125	3.18	2.000	50.80
.19	4.8	2.38	60.5
.25	6.4	2.50	63.5
.380	9.65	2.812	71.42
.500	12.70	3.000	76.20
		3.500	88.90

## NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is  $\pm .02$  (0.5 mm) for two place decimals.
4. Tolerance on terminal position dimensions is  $\pm .062$  (1.57 mm).
5. Marking shall be on the top of the case.

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FIGURE 1. Dimensions and configuration - Continued.

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): 58 voltamperes, 115 volts rms, 60 Hz.

Secondary voltage (3-5): 52 volts rms CT, 1.0 ampere rms.

Working voltage:

(1-2): 357 volts rms maximum.

(3-5): 357 volts rms maximum.

Design and construction:

Dimensions and configuration: See figure 1.

Duty cycle: Continuous.

Case: Encapsulated.

Material: Epoxy.

Terminals: Solder type.

Height: .38 inch maximum.

Weight: 3.5 pounds maximum.

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

Altitude: 10,000 feet.

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 200 milliamperes, and the power in (1-2) shall not exceed 4.5 watts. Voltage across (3-5) shall be 55.5 volts rms ±2 percent.

Rated load: With 115 volts rms and 60 Hz across (1-2), and the rated current in secondary, voltage across (3-5) shall be 52 volts rms ±3 percent.

Ⓒ DC resistance:

(1-2): 9.89 ohms maximum.

(3-5): 1.43 ohms maximum.

Efficiency: 90 percent at rated load.

Regulation:  $\frac{\text{Voltage (no load)} - \text{Voltage (rated load)}}{\text{Voltage (rated load)}} \times 100$   
Shall not exceed 12 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 Hz across (1-2) at an ambient temperature of 90°C, full load terminals (3-5).

Marking location: See figure 1.

Part number: N27/19-01.

Custodians:

Army - ER  
Navy - EC  
Air Force - 85

Review activities:

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

User activities:

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

Preparing activity:

Army - LR

Agent:

DLA - ES

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