

INCH-POUND

MIL-PRF-27/193B  
18 July 2008  
SUPERSEDING  
MIL-T-27/193A  
15 May 1978

PERFORMANCE SPECIFICATION SHEET

TRANSFORMER, POWER, STEPDOWN

Inactive for new design  
after 14 February 1997

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.

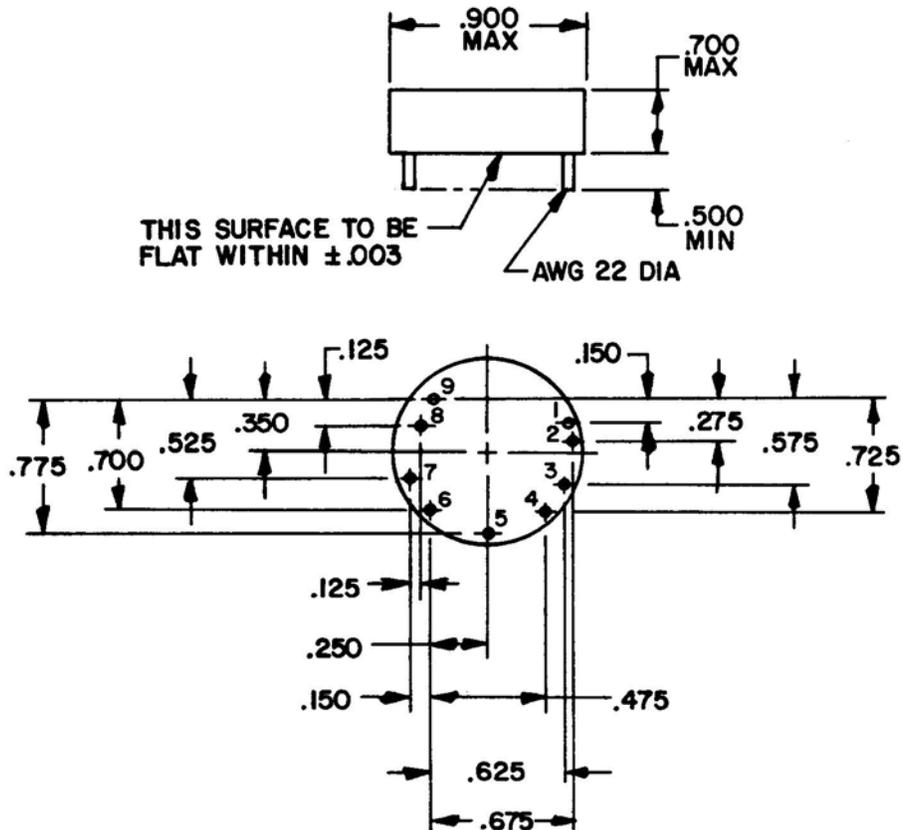
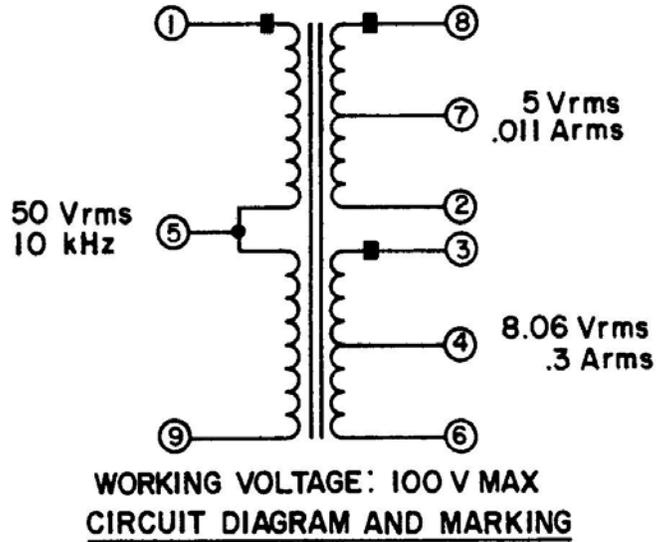


FIGURE 1. Dimensions and configurations.



INCHES	MM	INCHES	MM
.003	0.08	.525	13.34
.125	3.18	.575	14.60
.150	3.81	.625	15.88
.250	6.35	.675	17.14
.275	6.98	.700	17.78
.350	8.89	.725	18.42
.475	12.06	.775	19.68
.500	12.70	.900	22.86

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is  $\pm 0.005$  (.13 mm).
4. Marking shall be on the top of the case.

FIGURE 1. Dimensions and configuration – Continued.

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

Electrical ratings:

Primary voltage (1-9): 50 volts rms, 10 kilohertz.

Primary current: .006 ampere rms.

Primary power: .3 volt ampere.

Secondary voltage:

(2-8): 5 volts rms, .011 ampere rms.

(3-6): 8.06 volts rms, .3 ampere rms.

Working voltage: 100 volts, maximum.

DC resistance:

(1-9): 10.6 ohms.

(2-8): 1.5 ohms.

(3-6): .52 ohm.

Design and construction:

Dimensions and configuration: See figure 1.

Duty cycle: Continuous.

Case: Encapsulated.

Material: Epoxy.

Weight: .5 ounce.

Terminals: Pin type.

Material: Type S with tin, lead, or lead alloy coating, in accordance with A-A-59551.

Height: .500 inch, minimum.

Diameter: AWG 22 (.025 inch).

Operating temperature range: see table I.

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

Dielectric withstanding voltage (at sea level): 300 volts rms.

Electrical characteristics:

No load: With 50 volts rms and 10 kilohertz in (1-9):

Current in (1-9): 10 milliamperes, maximum.

Power in (1-9): .32 watt, maximum.

Voltage across (8-2): 5 volts rms  $\pm$ 1 percent.

Voltage across (3-6): 8.06 volts rms  $\pm$ 1 percent.

Rated load: With 50 volts rms and 10 kilohertz (1-9):

Voltage across (8-3): 5 volts rms  $\pm$ 10 percent.

Voltage across (3-6): 8.06 volts rms  $\pm$ 10 percent.

Polarity: Additive with terminals 9 and 8, and 2 and 3 connected.

Temperature rise: 20°C with 50 volts rms, 10 kilohertz across (1-9) at specified ambient temperature. (see table I).

Vibration (high frequency): MIL-STD-202, method 204.

Shock (specified pulse): MIL-STD-202, method 213, test condition A.

VERIFICATION:

Qualification inspection: Not applicable for this specification sheet.

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): M27/193-(dash number from Table I).

TABLE I. Temperature characteristics.

Dash no.	Type designation	Ambient temperature	Temperature rise	Operating temperature range
01	TF5S03ZZ	110°C	20°C	-55°C to +130°C
02	TF5T03ZZ	150°C	20°C	-55°C to +170°C

Changes from previous issue. The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

Referenced documents. In addition to MIL-PRF-27, this document references the following:

MIL-STD-202  
A-A-59551

Custodians:  
Army – CR  
Navy – EC  
Air Force – 85  
DLA - CC

Preparing activity:  
DLA – CC  
  
(Project 5950-2008-027)

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

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of this information above using the ASSIST Online database at <http://assist.daps.dla.mil>.