

MIL-PRF-27/33A
W/AMENDMENT 2
24 March 2022
SUPERSEDING
MIL-PRF-27/33A
W/AMENDMENT 1
2 February 2016

PERFORMANCE SPECIFICATION SHEET

TRANSFORMER, POWER, STEP-UP

Inactive for New Design
after 23 May 1997

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

The complete requirements for procuring the transformer described herein shall consist of this document and the latest issue of specification MIL-PRF-27.

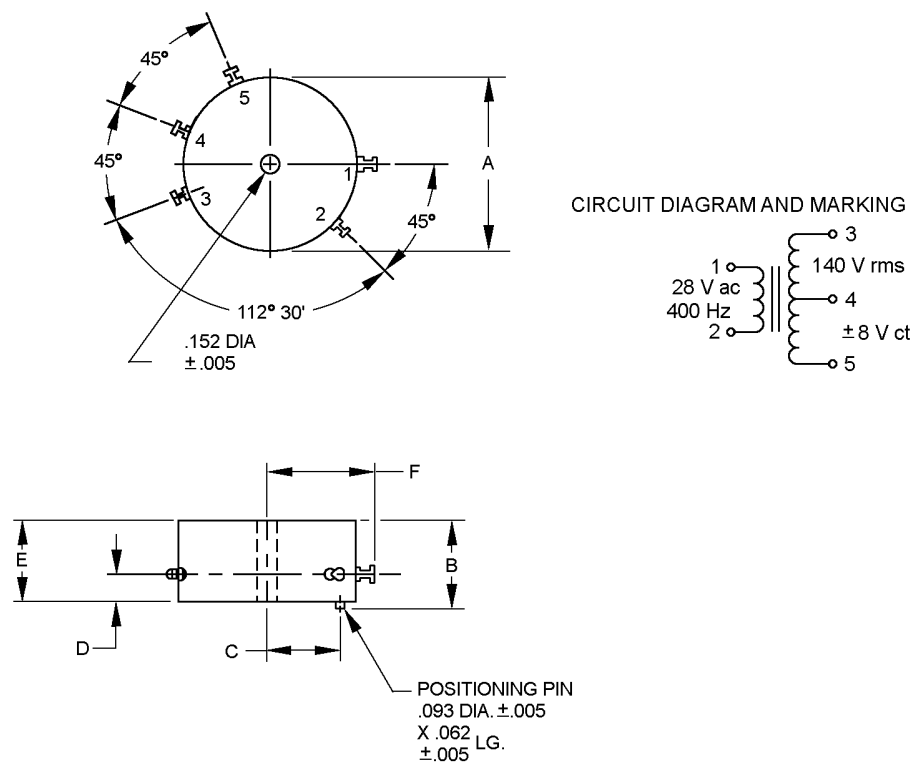


FIGURE 1. Dimensions and configurations.



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LTR	Inches	Millimeters
A	1.65 Max	41.91 Max
B	.927 Max	23.55 Max
C	.768 $\pm$.005	19.5 $\pm$.12
D	.25 $\pm$.02	6.35 $\pm$.51
E	.850 $\pm$.010	21.59 $\pm$.254
F	.985 Max	25.02 Max

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Marking shall be on the side of the case.
4. Terminal angular position tolerance is $\pm 1^\circ$.

FIGURE 1. Dimensions and configurations - Continued

REQUIREMENTS: (When numbers in parentheses, i.e., (1-3) are used, they indicate the winding and the extreme terminals of the winding.)

Electrical ratings:

Primary voltage (1-2): 28 volts rms, 400 Hz $\pm$ 5 percent.

Secondary voltage:

(3-4): 70 volts rms, $\pm$ 4 volts rms.

(3-5): 140 volts rms, $\pm$ 8 volts rms centertap.

(4-5): 70 volts rms, $\pm$ 4 volts rms.

Working voltage:

(1-2): 200 volts maximum.

(3-5): 200 volts maximum.

Design and construction:

Dimensions and configuration: See figure 1.

Duty cycle: Continuous.

Case: Encapsulated.

Material: Diallyl phthalate.

Terminals: Turret, solder type, brass, hot tinned dip.

Terminal height: 0.156 inch $\pm$ 0.005.

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Weight: 4 ounces.

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

Terminal strength: [MIL-STD-202-211](#), test condition A, 2 pounds.

Dielectric withstanding voltage (at sea level): 560 volts rms.

Electrical characteristics:

No load: With 28 volts, 400 Hz across (1-2); voltage across (3-4): 70 volts rms ± 4 volts, and the voltage across (4-5): 70 volts rms ± 4 volts.

Rated load: With 28 volts, 400 Hz across (1-2); voltage across (3-5) shall be 140 volts rms centertap, ± 8 volts.

DC resistance,

(1-2): 16.5 ohms ± 20 percent.

(3-4): 97 ohms ± 20 percent.

(4-5): 112 ohms ± 20 percent.

Polarity: Additive with 2 and 3 connected.

Temperature rise: 30°C maximum.

Quality assurance provisions:

Retention of qualification: 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 Identification Number (PIN): M27/33-01.

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Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. 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.

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

| MIL-STD-202-211

Custodians:

Army - CR
Navy - EC
Air Force - 85
DLA -CC

Preparing activity:

DLA - CC

(Project 5950-2022-016)

Review activities:

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

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 <https://assist.dla.mil>.