

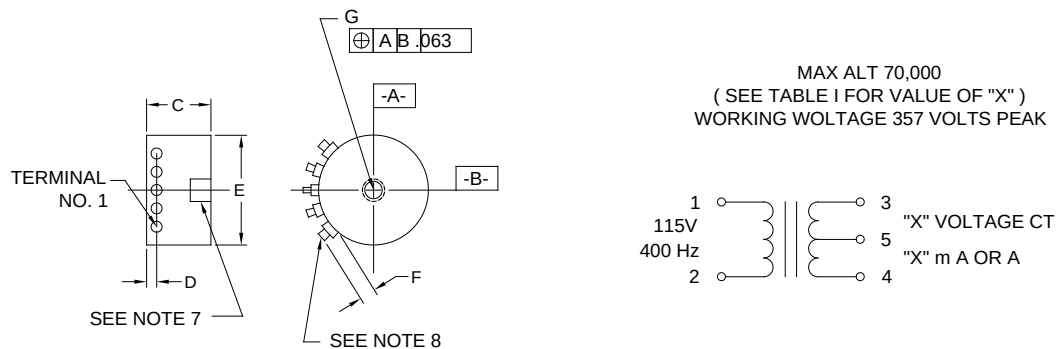
MIL-PRF-27/352E
 AMENDMENT 1
21 May 2018
 SUPERSEDING
 MIL-PRF-27/352E
 28 July 2008

PERFORMANCE SPECIFICATION SHEET

TRANSFORMERS, POWER, 50 VOLTAMPERES, 400 HZ

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.



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information.
3. Dimensional tolerance shall be ± 0.03 (0.8 mm) unless otherwise specified.
4. Marking shall be on the top case.
5. Terminals shall be identified by numbers 1 through 5 marked on the top of case above each terminal.
6. Secondary electrical values shall be marked as specified in table I, as applicable.
7. The insert shall be 5 full threads minimum.
8. Terminal spacing is $.35 \pm 0.03$ (8.9 ± 0.8 mm).
9. For dash number 12, pin 5 on the circuit diagram is not used.

FIGURE 1. Dimensions and configuration.



Inches		mm
C	1.10	27.9
D	.15	3.8
E	2.13	54.1
F	.23 Max	5.8 Max
G	INSERT .164-32 UNC-2B	

FIGURE 1. Dimensions and configurations - 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: See table I.

Primary voltage (1-2): 115 volts ± 10 percent, 400 hertz ± 5 percent.

Working voltage: 357 volts, rms, maximum.

Design and construction:

Dimensions and configuration: See figure 1.

Weight: .52 pound, maximum.

Duty cycle: Continuous.

Case: Epoxy fiberglass or diallyl phthalate.

Altitude: 70,000 feet, maximum.

Operating temperature range: -55°C to $+130^{\circ}\text{C}$.

Terminals: Feedthrough.

Terminal height: 0.23 inch, maximum.

Terminal strength: MIL-STD-202-211, test condition A, 5 pounds.

Dielectric withstanding voltage:

At sea level: 1000 volts, rms.

At reduced barometric pressure: 1.25 times the peak working voltage specified.

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Electrical characteristics:

No load: With 115 volts, 400 hertz across (1-2); current in (1-2) shall not exceed 30 milliamperes rms.

Rated load: With 115 volts, 400 hertz across (1-2) and a resistive load with current as specified in table I in (3-4), the voltage across (3-4) shall be as specified in table I.

Efficiency: 90 percent minimum at rated load.

Polarity: Additive with terminals 2 and 3 connected.

Regulation:
$$\frac{\text{Voltage (no load)} - \text{Voltage (rated load)}}{\text{Voltage (rated load)}} \times 100$$

Shall not exceed 5 percent

Temperature rise: 40°C maximum with 115 volts, 400 hertz across (1-2) at an ambient temperature of 90°C.

Marking location: See figure 1.

Part or Identifying Number (PIN) example: M27/352-(dash number from table I).

TABLE I. Electrical ratings.

Dash number M27/352	Secondary voltage <u>1/</u> (3-4) (V rms) ±5%	Secondary current (3-4) (amperes rms)
-01	5.0	10.00
-02	7.0	7.14
-03	10.0	5.00
-04	12.0	4.17
-05	14.0	3.57
-06	17.0	2.94
-07	24.0	2.08
-08	28.0	1.79
-09	34.0	1.47
-10	115.0	0.43
-11	26.0	1.920
-12	5	10.00

1/ One-half of the listed output voltage is available between pins 3 and 5 or pins 4 and 5, except dash number 12.

VERIFICATION:

Extent of qualification:

Qualification testing and approval to M27/350-11 and M27/354-09 shall be sufficient to grant qualification approval to MIL-PRF-27/350 through MIL-PRF-27/354 inclusive, all parts.

Qualification testing and approval to M27/352-12 shall be sufficient to grant qualification approval to M27/352-01 through M27/352-12.

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 5950-2018-002)

Review activities:

Army – AR, CR4
Navy - AS, MC, OS
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 the information above using the ASSIST Online database at <https://assist.dla.mil>.