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INCH-POUND

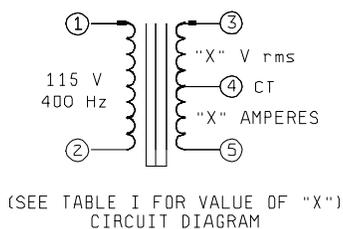
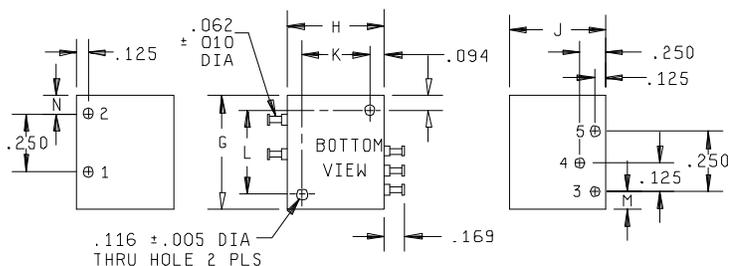
MIL-PRF-27/338D
22 January 1992
SUPERSEDING
MIL-T-27/338C
17 January 1986

PERFORMANCE SPECIFICATION SHEET

TRANSFORMERS, POWER, 2 VOLT AMPERES, 400 HZ, TF5S03ZZ

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

The requirements for acquiring the product described herein shall consist of this specification sheet and the issue of the following specification listed in that issue of the Department of Defense Index of Specifications and Standards (DODISS) specified in the solicitation: MIL-T-27.



| | Inches | mm |
|--|--------|------|
| | .005 | 0.13 |
| | .010 | 0.25 |
| | .031 | 0.79 |
| | .062 | 1.57 |
| | .094 | 2.39 |
| | .116 | 2.95 |
| | .125 | 3.18 |
| | .169 | 4.29 |
| | .250 | 6.35 |

| Ltr | Dimensions | |
|-----|------------|------------|
| | Inches | mm |
| G | .87 ±.015 | 22.1 ±0.38 |
| H | .74 ±.015 | 18.8 ±0.38 |
| J | .78 ±.015 | 19.8 ±0.38 |
| K | .55 ±.015 | 14.0 ±0.38 |
| L | .68 ±.015 | 17.3 ±0.38 |
| M | .187 ±.031 | 4.75 ±0.79 |
| N | .187 ±.031 | 4.75 ±0.79 |

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Marking shall be on the top and sides of case.
4. Dimensional tolerance shall be ±.031 unless otherwise specified.
5. Dimensions G and H to be measured at top of transformer.

FIGURE 1. Dimensions and configuration.

(D) denotes changes

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): 115 volts rms, 400 ±20 hertz.

Secondary voltage and current (3-5): See table I.

Voltampere: 2 voltamperes.

Working voltage (1-2): 535 volts peak.

Design and construction:

Dimensions and configuration: See figure 1.

Duty cycle: Continuous.

Case: Encapsulated.

Material: Diallyl phthalate.

Terminals: Turret type.

Height: .169 inch.

Weight: .06 pound, maximum.

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

Altitude: 70,000 feet.

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

Dielectric withstanding voltage (each winding):

At sea level: 1500 volts rms.

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

Electrical characteristics:

Rated load: With 115 volts rms and 400 Hz in (1-2), and rated current in secondary, the voltage across (3-5) shall be as specified in table I, ±5 percent.

DC resistance (1-2): 201 ohms ±25 percent.

Temperature rise: 45°C with 115 volts rms, 400 hertz across (1-2) at an ambient temperature of 85°C, full load terminals (3-5).

Regulation:
$$\frac{\text{Voltage (no load)} - \text{Voltage (rated load)}}{\text{Voltage (rated load)}} \times 100$$
 (Shall not exceed 10 percent.)

Polarity: Additive, with terminals 2 and 3 connected.

Marking location: See figure 1.

Part or Identifying Number (PIN). M27/338- (dash number from table I).

QUALITY ASSURANCE PROVISIONS:

Extent of qualification:

- ① Qualification testing and approval to M27/338-28 and M27/343-32 shall be sufficient to grant qualification approval to MIL-T-27/338 through MIL-T-27/343 inclusive, all parts.
- ② Qualification testing and approval to M27/338-28 shall be sufficient to grant qualification approval to M27/338-01 through M27/338-28.

TABLE I. Electrical ratings.

| Dash number M27/338 | Secondary voltage (3-5) (V rms) $\pm 5\%$ (CT) | Secondary current (3-5) (amperes) | Secondary DCR (3-5) (ohms) $\pm 25\%$ |
|------------------------|---|---|---|
| -01 | 5.0 | 0.400 | 0.60 |
| -02 | 6.3 | 0.317 | 1.06 |
| -03 | 8.0 | 0.250 | 1.63 |
| -04 | 10.0 | 0.200 | 2.50 |
| -05 | 12.6 | 0.158 | 4.10 |
| -06 | 14.0 | 0.142 | 5.59 |
| -07 | 16.0 | 0.125 | 6.63 |
| -08 | 18.0 | 0.111 | 9.00 |
| -09 | 20.0 | 0.100 | 10.9 |

TABLE I. Electrical ratings - Continued.

| Dash number M27/338 | Secondary voltage (3-5) (V rms) $\pm 5\%$ (CT) | Secondary current (3-5) (amperes) | Secondary DCR (3-5) (ohms) $\pm 25\%$ |
|---------------------------|--|--|--|
| -10 | 22.0 | 0.091 | 14.6 |
| -11 | 25.0 | 0.080 | 20.4 |
| -12 | 28.0 | 0.071 | 30.0 |
| -13 | 31.0 | 0.064 | 25.6 |
| -14 | 35.0 | 0.057 | 29.5 |
| -15 | 39.0 | 0.051 | 38.6 |
| -16 | 43.0 | 0.046 | 44.3 |
| -17 | 48.0 | 0.041 | 57.0 |
| -18 | 55.0 | 0.036 | 89.0 |
| -19 | 63.0 | 0.031 | 100.0 |
| -20 | 70.0 | 0.028 | 139.0 |
| -21 | 80.0 | 0.025 | 163.0 |
| -22 | 90.0 | 0.022 | 218.0 |
| -23 | 100.0 | 0.020 | 283.0 |
| -24 | 110.0 | 0.018 | 392.0 |
| -25 | 123.0 | 0.016 | 495.0 |
| -26 | 138.0 | 0.014 | 550.0 |
| (D) -27 | 26.0 | 0.077 | 21.22 |
| (D) -28 | 115.0 | 0.017 | 410.0 |

CONCLUDING MATERIAL

Custodians:

Army - ER
Navy - EC
Air Force - 85

Review activities:

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

User activities:

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

Preparing activity:

Army - ER

Agent:

DLA - ES

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