

INCH-POUND

MIL-T-27/36B
13 March 1991
SUPERSEDING
MIL-T-27/36A
28 JANUARY 1988

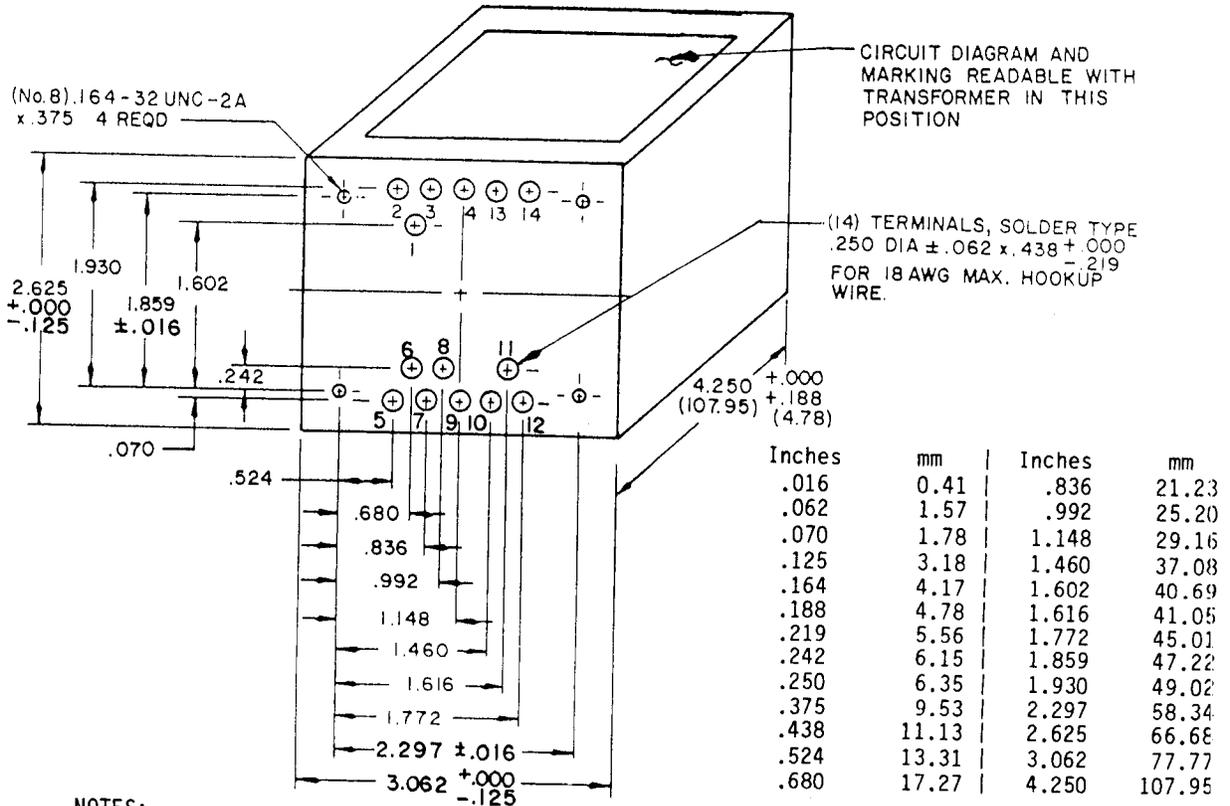
MILITARY SPECIFICATION SHEET

TRANSFORMER, POWER, STEPDOWN AND STEP-UP, TYPE TF4R03HA322

(B) Inactive for new design after the date of this specification.

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.



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Tolerance on terminal position dimensions is ±.031 (0.79 mm).

FIGURE 1. Dimensions and configurations.

(B) denotes changes

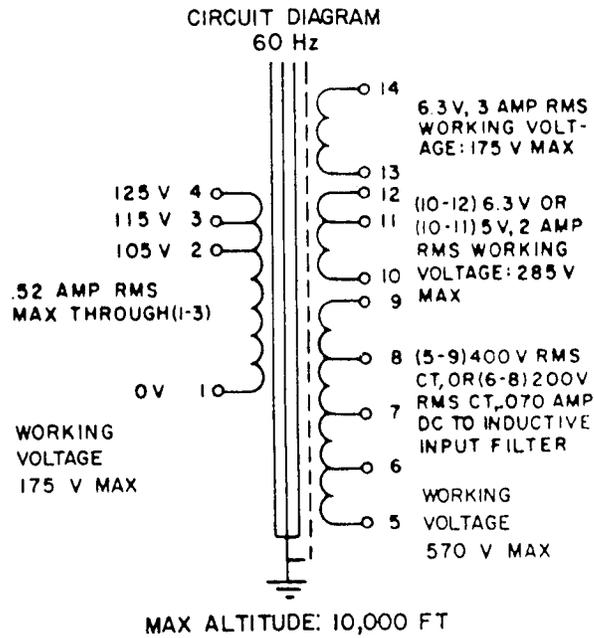


FIGURE 2. Circuit diagram.

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REQUIREMENTS: (When numbers in parentheses, i.e., (1-4) are used, they indicate the extreme terminals of the windings.)

Electrical ratings:

Primary voltage (1-2-3-4): 105/115/125 V, 60 Hz \pm 10 percent.

Primary current (1-3): 0.52 ampere rms maximum.

Secondary voltage:

(5-6-7-8-9): (5-9) 400 V rms, ct, or (6-8) 200 V rms, ct, 0.070 ampere dc to inductive input filter with full-wave rectifier.

(10-11-12): 6.3/5 V, 2 amperes.

(13-14): 6.3 V, 3 amperes.

Working voltage:

(1-4): 175 V maximum.

(5-9): 570 V maximum.

(10-12): 285 V maximum.

(13-14): 175 V maximum.

Design and construction:

Dimensions and configuration: See figure 1.

Duty cycle: Continuous.

Case: Metal encased.

Size: HA.

Material: Steel.

Altitude: 10,000 feet maximum.

Terminals: Solder lug, number 18 AWG.

Height: 0.438 \pm 0.000, -0.219 inch.

Weight: 4.625 pounds maximum.

Operating temperature range: -55°C to +105°C.

Terminal strength: MIL-STD-202, method 211, test condition A, 4.5 pounds.

Dielectric withstanding voltage (at sea level):

(1-4): 1,500 V rms.

(5-9): 1,600 V rms.

(10-12): 1,600 V rms.

(13-14): 1,500 V rms.

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Electrical characteristics:

No load: With 115 V and 60 Hz in (1-3):

Current in (1-3): 0.190 ampere rms maximum.

Power in (1-3): 2.6 watts maximum.

Voltage across (5-9): 437 V maximum.

Voltage across (6-8): 218 V maximum.

Unbalance (5-7) and (7-9): 2 percent maximum.

Unbalance (6-7) and (7-8): 2 percent maximum.

Voltage across (10-11): 5.5 V maximum.

Voltage across (10-12): 6.89 V maximum.

Voltage across (13-14): 7.01 V maximum.

Voltage across (1-2): 105 V \pm 1 percent.

Voltage across (1-4): 125 V \pm 1 percent.

Rated load: With 105 V, 60 Hz across (1-2) and (5-9) loaded with 5R4WGB full wave rectifier and 0.070 ampere dc into 7.5 H inductive input filter and rated current in (10-12) and (13-14):

Voltage across (5-9): 400 V \pm 4 percent.

Voltage across (10-12): 6.3 V \pm 2 percent.

Voltage across (13-14): 6.3 V \pm 2 percent.

Electrostatic shielding: Voltage ratio: 5 to 1 at 20 kHz.

Polarity: Additive, with terminals 4 and 5; 9 and 10; and 12 and 13 connected.

Temperature rise: $+40^{\circ}\text{C}$ with 105 V, 54 Hz across (1-2) and (5-9) loaded with 5R4WGB full wave rectifier and 0.070 ampere dc into 7.5 H inductive input filter and rated current in (10-12) and (13-14) at an ambient temperature of $+65^{\circ}\text{C}$.

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Ⓑ Quality assurance provisions:

Qualification inspection: Not applicable.

Quality conformance inspection: Groups A and B tests of MIL-T-27 shall be applicable.

Marking location: See figure 1.

Part number: M27/36-01.

NOTE: Transformers covered by this specification sheet are substitutable for transformers, MS part number MS90026-2, type TF4RX03HA001.

CONCLUDING MATERIAL

Custodians:

Army - ER
Navy - EC
Air Force - 85

Review activities:

Army - MI
Navy - OS, SH
Air Force - 17, 80
DLA - ES

User activities:

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

Preparing activity:
Army - ER

Agent:
DLA - ES

(Project 5950-0753-28)