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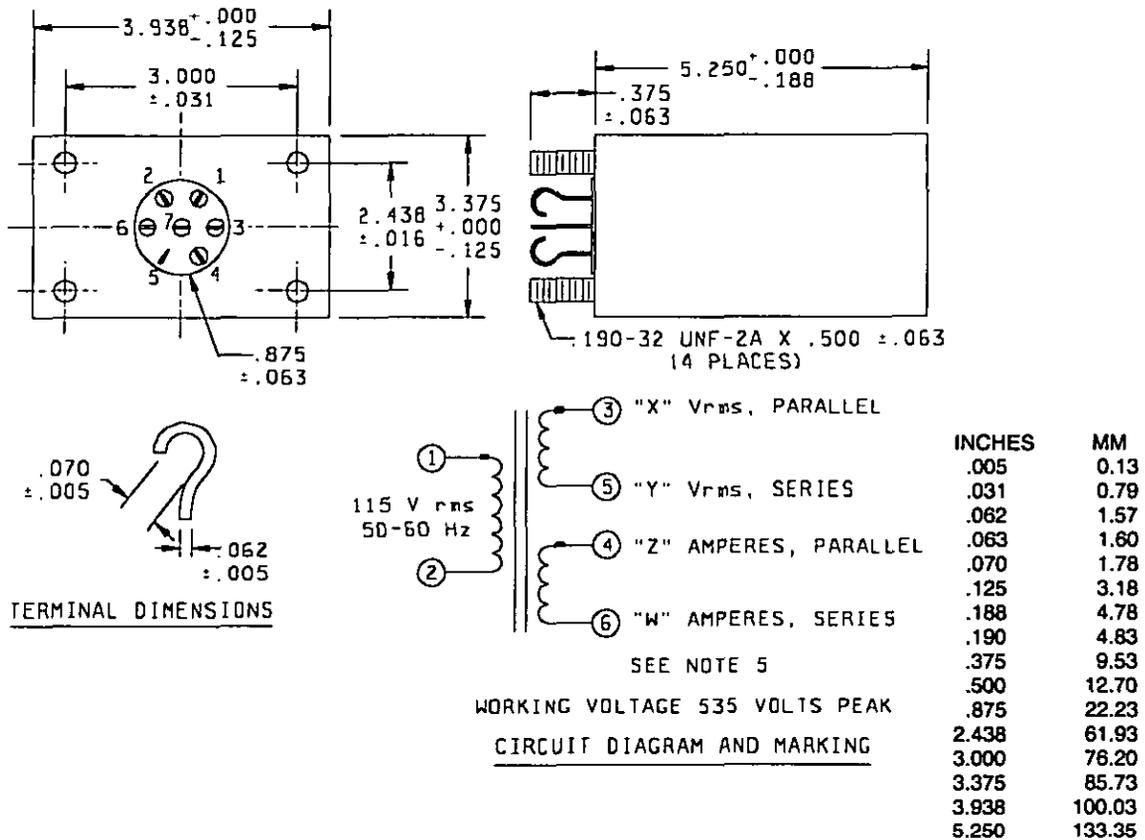
MIL-PRF-27/331B
 2 April 1984
 SUPERSEDING
 MIL-T-27/331A
 14 January 1983

PERFORMANCE SPECIFICATION SHEET

TRANSFORMERS, POWER, 160 VA AND 170 VA, TF4S03KA

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

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



NOTES:

- Dimensions are in inches.
- Metric equivalents are given for general information.
- Marking shall be on the sides of the case. Terminal identification shall be as shown on the figure.
- Electrical values shall be marked as specified in table I.
- For series output connect terminals 4 and 5 together. For parallel output connect pins 3 to 4 and 5 to 6.

(B)

FIGURE 1. Dimensions and configurations.

(B) denotes changes

MIL-T-27/331B

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 (1-2): 115 V rms, 50 to 65 Hz.

Primary dc resistance: 1.08 ohms \pm 25 percent.

Secondary: See table I.

Volt ampere:

160 VA (dash number 01).

170 VA (dash number 02 through 08).

Working voltage: 535 volts pk.

Design and construction

Dimensions and configuration: See figure 1.

Duty cycle Continuous.

Case Metal enclosed.

Material Steel.

Terminals Solderable hook terminals.

Height .375 \pm .063 inch.

Diameter: .062 \pm .005 inch.

Weight 10.5 pounds, maximum.

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

Altitude 10,000 feet.

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

Dielectric withstanding voltage (each winding, secondary winding shall be connected in parallel):

At sea level. 1500 V rms.

Electrical characteristics:

Rated load: With 115 V rms and 60 Hz in (1-2), and rated current in secondary, secondary voltage shall be as specified in table I within \pm 3 percent.

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 and 5 and 4 connected.

Temperature rise 40°C with 115 V rms, 60 Hz across (1-2) at an ambient temperature of 90°C.

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

Marking location See figure 1.

Part number: M27/331-(dash number from table I).

TABLE I. Electrical ratings.

Dash number	Secondary voltage (series) volts rms (3-6)	Secondary current (series) amperes (3-6)	Secondary voltage (parallel) volts rms (3-5)	Secondary current (parallel) amperes (3-5)	Secondary dc resistance each winding ohms $\pm 25\%$
01	16.0	10.00	8.0	20.00	0.0163
02	20.0	8.50	10.0	17.00	0.0256
03	24.0	7.08	12.0	14.16	0.039
04	34.0	5.00	17.0	10.00	0.088
05	40.0	4.25	20.0	8.50	0.13
06	56.0	3.03	28.0	6.06	0.196
07	88.0	1.93	44.0	3.86	0.53
08	120.0	1.41	60.0	2.82	0.92

QUALITY ASSURANCE PROVISIONS.

Extent of qualification

Qualification testing and approval to M27/326-10 and M27/331-08 shall be sufficient to grant qualification approval to MIL-T-27/326 through MIL-T-/331 inclusive, all parts.

Qualification testing and approval to M27/331-08 shall be sufficient to grant qualification approval to M27/331-01 through M27/331-08.

Custodians:

Army - ER
Navy - EC
Air Force - 85

Preparing activity:
Army - ER

(Project 5950-0623-47)

Review activities

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

User activities:

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

Agent:

DLA - ES