

INCH-POUND

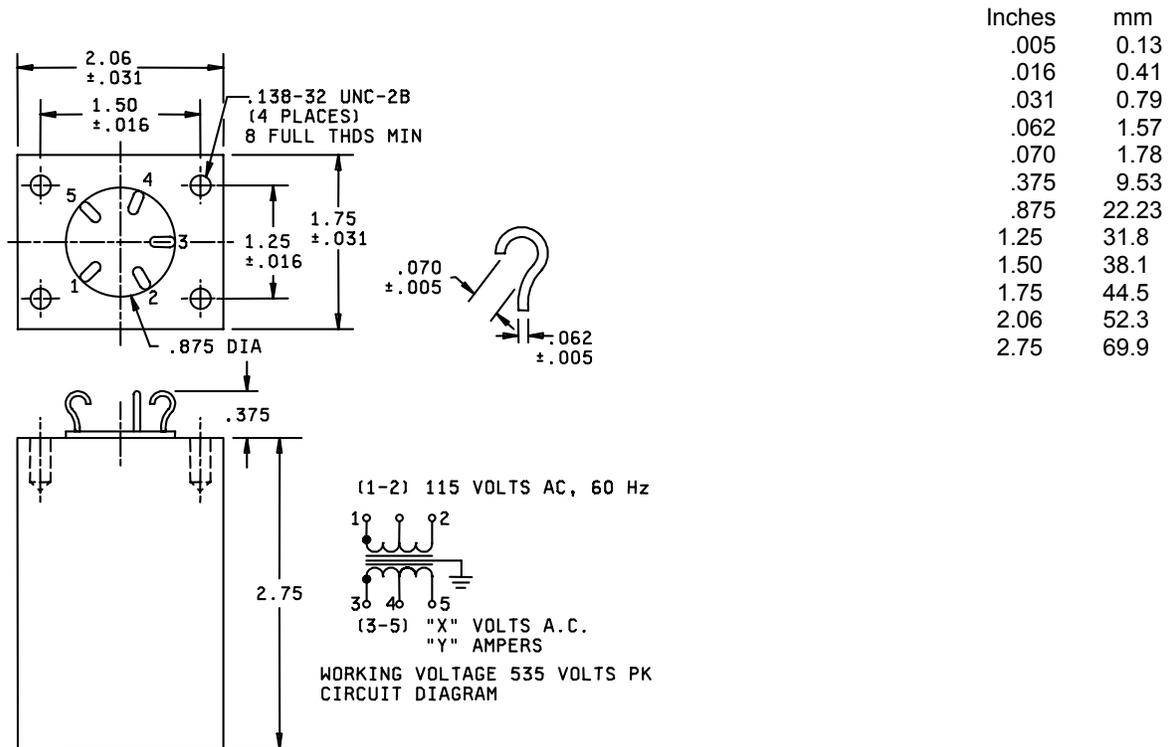
MIL-PRF-27/313B  
19 May 2003  
SUPERSEDING  
MIL-PRF-27/313A  
14 January 1983

PERFORMANCE SPECIFICATION SHEET

TRANSFORMERS, POWER, 10 VOLT-AMPERES, 60 HERTZ

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 only.
3. Marking shall be on the sides of the case.
4. Unless otherwise specified, tolerance shall be  $\pm .063$  (1.60 mm).
5. Electrical values shall be marked as specified in table I.

FIGURE 1. Dimensions and configuration.

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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 ac, 50 to 60 hertz.

Primary dc resistance: 36 ohms  $\pm$ 25 percent.

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

Volt-ampere rating: 10 volt-amperes.

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

Design and construction:

Dimensions and configuration: See figure 1.

Duty cycle. Continuous.

Case: Metal enclosed.

Material: Steel.

Terminals: Solderable hook terminals.

Terminal height: 0.375  $\pm$ 0.063 inch.

Terminal diameter: 0.062  $\pm$ 0.005 inch.

Weight: 1.5 pounds, maximum.

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

Altitude: 10,000 feet.

Terminal strength: Method 211, MIL-STD-202, test condition A, 2.0 pounds.

Dielectric withstanding voltage (each winding) (at sea level): 1,500 volts rms.

Electrical characteristics:

Rated load: With 115 volts ac and 60 Hz across (1-2), and rated current in secondary, the voltage across (3-5) shall be as specified in table I.

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

Shall not exceed 12 percent.

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Polarity: Additive with terminals 2 and 3 connected.

Temperature rise: 35°C with 115 volts ac, 60 hertz across (1-2) at an ambient temperature of 95°C, full load terminals (3-5).

Marking location: See figure 1.

Part number: M27/313-(dash number from table I).

TABLE I. Electrical ratings.

Dash number	Secondary (3-5)		
	Voltage (volts) ±3 percent	Current <sup>1/</sup> (amperes)	DC resistance (ohms) ±25 percent
01	5.0	2.00	0.12
02	6.3	1.58	0.18
03	8.0	1.25	0.27
04	10.0	1.00	0.42
05	12.6	0.79	0.65
06	14.0	0.72	0.74
07	16.0	0.68	1.08
08	18.0	0.55	1.42
09	20.0	0.50	1.54
10	22.0	0.45	1.90
11	25.0	0.40	2.55
12	28.0	0.36	3.00
13	31.0	0.32	3.80
14	35.0	0.29	4.50
15	39.0	0.26	6.30
16	43.0	0.23	7.00
17	48.0	0.21	9.30
18	55.0	0.18	11.0
19	63.0	0.16	16.4
20	70.0	0.143	19.0
21	80.0	0.125	25.0
22	90.0	0.111	30.4
23	100	0.100	40.5
24	110	0.091	44.5
25	123	0.081	70.0
26	138	0.073	80.0
27	157	0.064	100
28	175	0.057	111
29	200	0.050	160
30	220	0.045	168

<sup>1/</sup> For 50 Hz operation, reduce secondary current by 10 percent.

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VERIFICATION:

Extent of qualification:

Qualification testing and approval to M27/312-26, M27/316-30, and M27/322-24 shall be sufficient to grant qualification approval to MIL-PRF-27/312 through MIL-PRF-27/322, inclusive, all parts.

Qualification testing and approval to M27/313-30 shall be sufficient to grant qualification approval M27/313-01 through M27/313-30.

Custodians:

Army - CR  
Navy - EC  
Air force - 11

Preparing activity:

DLA - CC

Review activities:

Army - CR4, MI  
Navy - AS, MC, OS  
Air Force - 19, 99

(Project 5950-1079)