

INCH-POUND

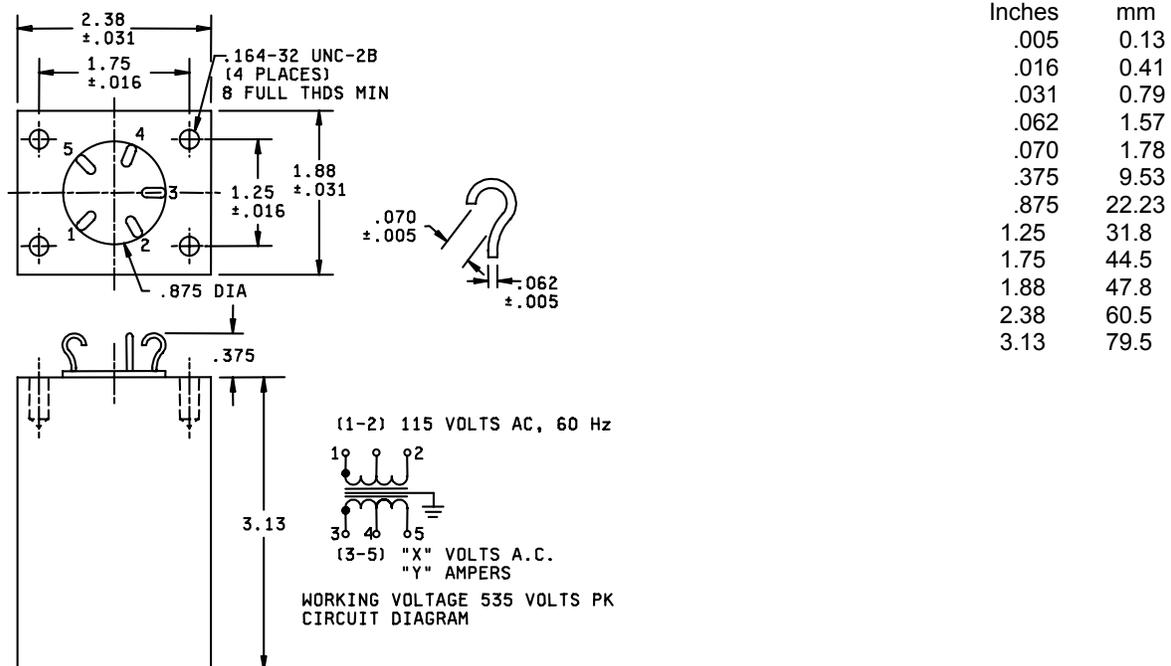
MIL-PRF-27/314B  
19 May 2003  
SUPERSEDING  
MIL-PRF-27/314A  
14 January 1983

PERFORMANCE SPECIFICATION SHEET

TRANSFORMERS, POWER, 15 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 configurations.

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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: 24 ohms  $\pm$ 25 percent.

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

Volt-ampere rating: 15 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: 2.0 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 10 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: M27/314-(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	3.00	0.07
02	6.3	2.38	0.094
03	8.0	1.88	0.16
04	10.0	1.50	0.23
05	12.6	1.19	0.40
06	14.0	1.07	0.60
07	16.0	0.94	0.67
08	18.0	0.83	0.78
09	20.0	0.75	0.90
10	22.0	0.68	1.20
11	25.0	0.60	1.40
12	28.0	0.54	1.90
13	31.0	0.48	2.20
14	35.0	0.43	3.00
15	39.0	0.38	3.50
16	43.0	0.35	4.65
17	48.0	0.31	5.20
18	55.0	0.27	7.50
19	63.0	0.24	8.60
20	70.0	0.212	11.2
21	80.0	0.187	13.6
22	90.0	0.167	20.0
23	100	0.150	22.0
24	110	0.136	28.0
25	123	0.122	33.5
26	138	0.108	46.0
27	157	0.096	53.0
28	175	0.086	70.0
29	200	0.075	87.0
30	220	0.068	118

<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 M27/314-30 shall be sufficient to grant qualification approval M27/314-01 through M27/314-30.

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 5950-1080)