

INCH-POUND

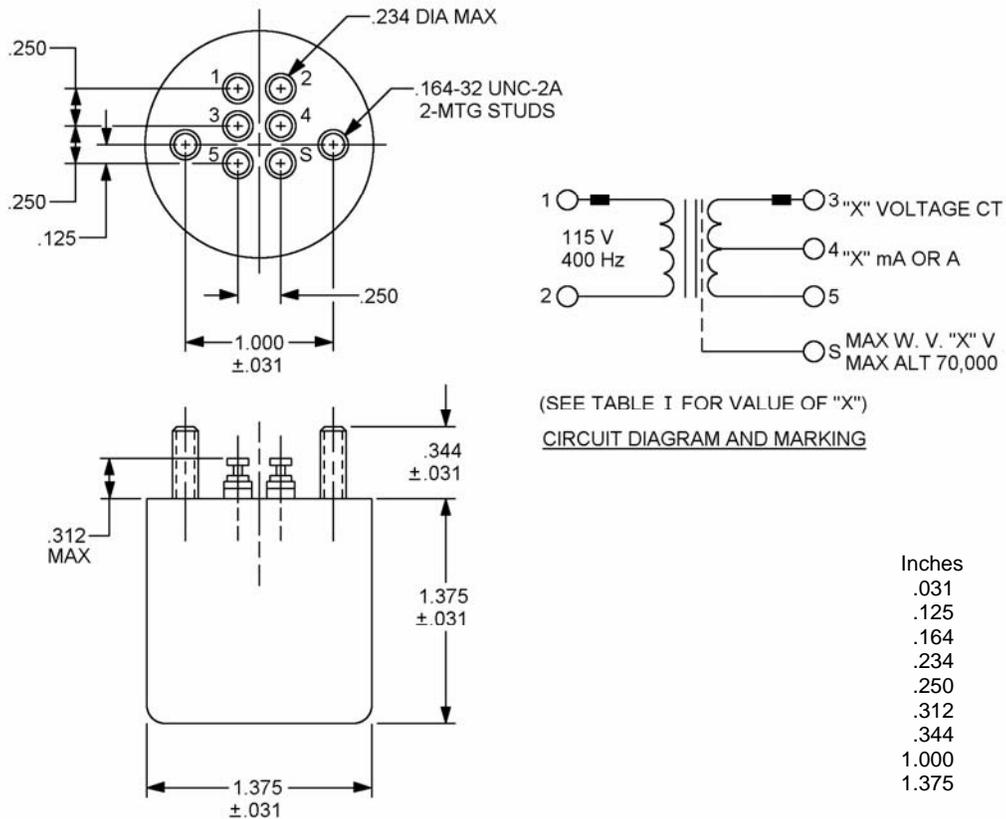
MIL-PRF-27/62D  
6 May 2005  
SUPERSEDING  
MIL-PRF-27/62C  
7 February 1984

PERFORMANCE SPECIFICATION SHEET

TRANSFORMERS, POWER, 25 VOLT AMPERES, 400 HZ,  
ELECTROSTATIC SHIELDED

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

The requirements for acquiring the transformers described  
herein shall consist of this specification and MIL-PRF-27.



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Tolerance on terminal position dimensions is  $\pm 0.015$  (0.38 mm).
4. Marking shall be on the side of the case.
5. Terminals are color coded for permanent identification in addition to terminal marking shown. Ground terminal "S" is black.
6. Secondary electrical values shall be marked as specified in table I, as applicable.

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: See table I.

Primary voltage (1-2): 115 volts  $\pm$ 10 percent, 400 Hz  $\pm$ 5 percent.

Design and construction:

Dimensions and configuration: See figure 1.

Weight: 4.95 ounces, maximum.

Duty cycle: Continuous.

Case: Metal enclosed.

Material: Steel.

Altitude: 70,000 feet, maximum.

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

Terminals: Feed thru.

Terminal height: .312 inch (7.92 mm), maximum.

Terminal strength: Method 211 of MIL-STD-202, test condition A, 5 pounds.

Dielectric withstanding voltage:

At sea level: 2.8 times the maximum working voltage specified in table I.

At reduced barometric pressure: 1.25 times the maximum working voltage specified in table I.

Electrical characteristics:

No load: With 115 volts, 400 Hz across (1-2): Current in (1-2) shall not exceed 25 mA rms.

Rated load: With 115 volts, 400 Hz across (1-2) and a resistive load with current as specified in table I in (3-5), the voltage across (3-5) shall be as specified in table I.

Efficiency: 88 percent minimum at rated load.

Electrostatic shielding: The voltage ratio shall be a minimum of 5 to 1 at 20 kHz.

Polarity: Additive with terminals 2 and 3 connected.

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

Shall not exceed 7 percent.

Phase shift: 1.0 electrical degree between primary and secondary voltage at rated load, maximum.

Temperature rise: 45°C, maximum with 115 volts, 400 Hz across (1-2) at ambient temperature of 85°C.

Vibration: MIL-STD-202, method 204, test condition D.

Marking location: See figure 1.

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VERIFICATION:

Extent of qualification:

Qualification testing and approval to M27/49-44 A or B, M27/51-44 A or B, M27/53-44 A or B, M27/56-44 and M27/66-27 shall be sufficient to grant qualification approval to MIL-PRF-27/48 through MIL-PRF-27/66 inclusive, all parts.

Qualification testing and approval to M27/62-44 shall be sufficient to grant qualification approval to M27/62-01 through M27/62-44.

Part or Identifying Number (PIN) example:

M  
|  
MIL specification item
27/62  
|  
Specification sheet no.
-01  
|  
Dash no.

TABLE I. Electrical ratings.

Dash number	Secondary voltage (3-5) (V rms) ±3%	Secondary current (3-5) (amps rms)	Working voltage (V rms max)
01	6	4.167	325
02	6.3	3.968	325
03	7	3.571	325
04	7.5	3.333	325
05	8	3.125	325
06	9	2.778	325
07	10	2.500	325
08	11	2.273	325
09	12	2.083	325
10	12.6	1.984	325
11	13	1.923	325
12	15	1.667	325
13	16	1.563	325
14	18	1.389	325
15	20	1.250	325
16	22	1.136	325
17	24	1.042	325
18	26	0.962	325
19	28	0.893	325
20	30	0.833	325
21	33	0.758	325
22	36	0.694	325
23	39	0.641	325
24	43	0.581	325
25	47	0.532	325
26	51	0.490	325
27	56	0.446	325
28	62	0.403	325
29	68	0.367	325
30	75	0.333	325
31	82	0.305	325
32	91	0.275	325
33	100	0.250	325
34	110	0.227	325
35	115	0.218	325
36	120	0.208	325
37	130	0.192	325
38	150	0.166	325
39	180	0.139	325
40	200	0.125	440
41	220	0.113	440
42	240	0.104	440
43	270	0.093	580
44	300	0.083	580

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Referenced documents. In addition to MIL-PRF-27, this document references the following:

MIL-STD-202

The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

Custodians:

Army – CR  
Navy – EC  
Air Force – 11

Preparing activity:  
DLA - CC

(Project 5950-1201)

Review activities:

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

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of this information above using the ASSIST Online database at <http://assist.daps.dla.mil>.