

INCH-POUND

MIL-PRF-27/48D
AMENDMENT 1
24 December 2015
SUPERSEDING
MIL-PRF-27/48D
29 September 2009

PERFORMANCE SPECIFICATION SHEET

TRANSFORMERS, POWER, 1.5 VOLT AMPERES, 400 HZ

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

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

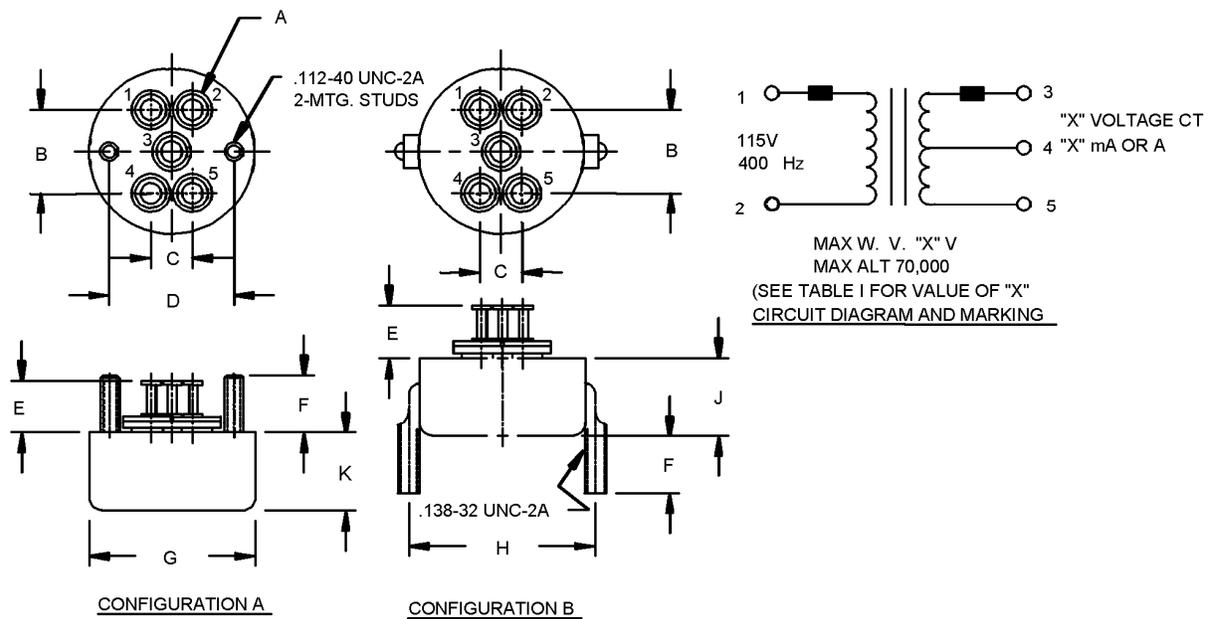


FIGURE 1. Dimensions and configurations



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Dim	Inches	mm
A	.234 DIA Max	5.94 DIA Max
B	.500	12.7
C	.250	6.35
D	.750	19.05
E	.312 Max	7.92 Max
F	.344 ±.031	8.74 ±0.77
G	1.000 ±.031	25.4 ±0.77
H	1.125 ±.031	28.58 ±0.77
J	.469 ±.031	11.9 ±0.77
K	.469 ±.031	11.9 ±0.77

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Tolerance on terminal position dimensions is ± 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.
6. Secondary electrical values shall be marked as specified in table I, as applicable.

FIGURE 1. Dimensions and configurations – continued.

REQUIREMENTS: (When numbers in parentheses, such as (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 ± 10 percent, 400 Hz ± 5 percent.

Design and construction:

Dimensions and configuration: See figure 1.

Weight: 1 ounce, maximum.

Duty cycle: Continuous.

Case: Metal enclosed.

Material: Steel.

Altitude: 70,000 feet, maximum.

Operating temperature range: -55°C to $+130^{\circ}\text{C}$.

Terminals: Feed thru.

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

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

Dielectric withstanding voltage:

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

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

Electrical characteristics:

No load: With 115 volts rms, 400 Hz across (1-2): Current in (1-2) shall not exceed 1.5 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: 70 percent minimum at rated load.

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 23 percent.

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

Temperature rise: 17°C, maximum with 115 volts, 400 Hz across (1-2) at ambient temperature of 113°C.

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

Marking location: See figure 1.

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 M27/48-44 shall be sufficient to grant qualification approval to M27/48-01 through M27/48-44.

Part or Identifying Number (PIN), example:



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TABLE I. Electrical ratings.

Dash No.	Secondary voltage (3-5) (V rms) $\pm 3\%$	Secondary current (3-5) (amps rms)	Working voltage (V rms) (MAX)
01 A or B	6	0.250	325
02 A or B	6.3	0.238	325
03 A or B	7	0.214	325
04 A or B	7.5	0.200	325
05 A or B	8	0.188	325
06 A or B	9	0.167	325
07 A or B	10	0.150	325
08 A or B	11	0.136	325
09 A or B	12	0.125	325
10 A or B	12.6	0.119	325
11 A or B	13	0.115	325
12 A or B	15	0.100	325
13 A or B	16	0.094	325
14 A or B	18	0.083	325
15 A or B	20	0.075	325
16 A or B	22	0.068	325
17 A or B	24	0.063	325
18 A or B	26	0.058	325
19 A or B	28	0.053	325
20 A or B	30	0.050	325
21 A or B	33	0.045	325
22 A or B	36	0.042	325
23 A or B	39	0.038	325
24 A or B	43	0.035	325
25 A or B	47	0.032	325
26 A or B	51	0.029	325
27 A or B	56	0.027	325
28 A or B	62	0.024	325
29 A or B	68	0.022	325
30 A or B	75	0.020	325
31 A or B	82	0.018	325
32 A or B	91	0.016	325
33 A or B	100	0.015	325
34 A or B	110	0.014	325
35 A or B	115	0.013	325
36 A or B	120	0.0125	325
37 A or B	130	0.0115	325
38 A or B	150	0.010	325
39 A or B	180	0.0085	325
40 A or B	200	0.0075	440
41 A or B	220	0.007	440
42 A or B	240	0.006	440
43 A or B	270	0.0055	580
44 A or B	300	0.005	580

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Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. 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.

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

MIL-STD-202-204
MIL-STD-202-211

Custodians:
Army - CR
Navy - EC
Air Force - 85
DLA - CC

Preparing activity:
DLA - CC

(Project 5950-2015-030)

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 the information above using the ASSIST Online database at <https://assist.dla.mil>.