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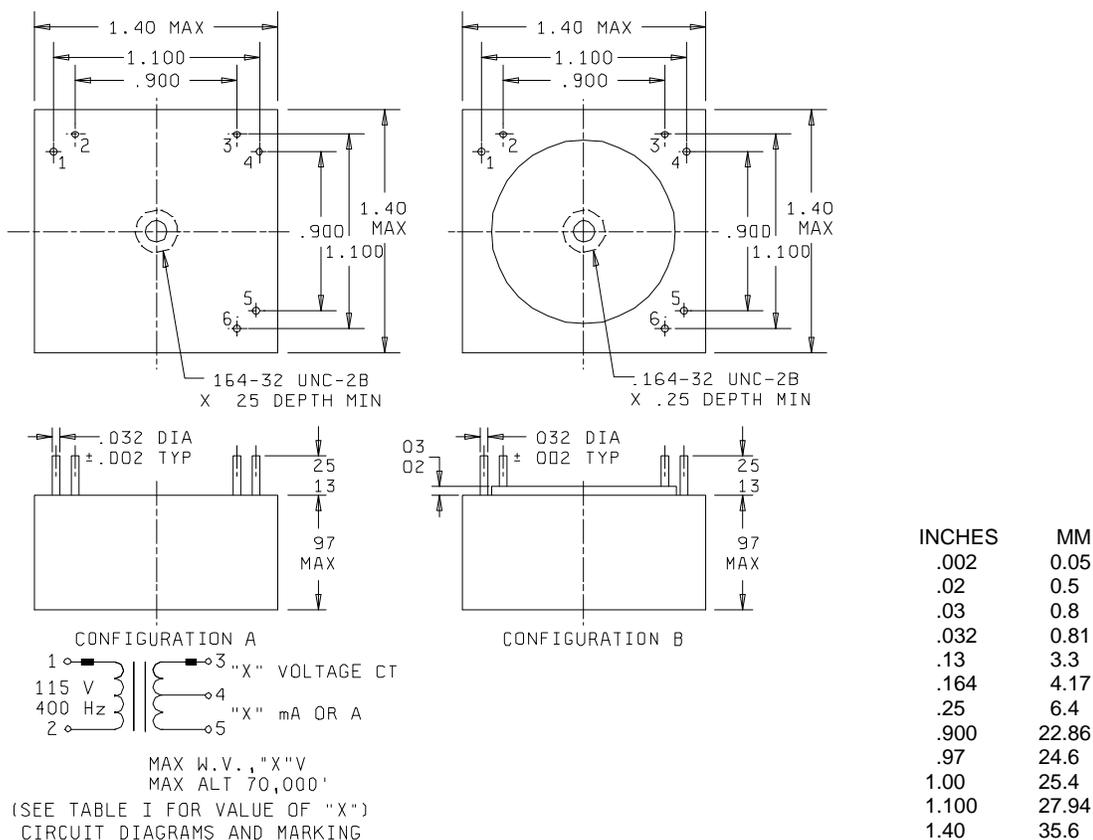
MIL-PRF-27/44B  
7 February 1984  
~~SUPERSEDING~~  
MIL-T-27/44A  
20 October 1976

PERFORMANCE SPECIFICATION SHEET

TRANSFORMERS, POWER, 16 VOLT AMPERES, 400 HZ,  
TF5S03ZZ708 TO TF5S03ZZ751, INCLUSIVE

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

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



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Tolerance on terminal position dimensions is ±.005 (0.13 mm).
4. Marking shall be on the side of the case.
5. A white dot shall be marked on the side opposite the terminals, over terminal 1, in addition to the terminal marking shown.
6. Secondary electrical values shall be marked as specified in table I, as applicable.

FIGURE 1. Dimensions and configuration.

(B) denotes changes

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: 3.4 ounces, maximum.

Duty cycle: Continuous.

Case: Plastic encapsulated.

Material: Plastic.

Altitude: 70,000 feet, maximum.

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

Terminals: Printed circuit pins - tinned brass.

Terminal strength: Method 211 of MIL-STD-202, test condition A, 2.0 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 16 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: 87 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 8 percent.

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

Temperature rise:  $32^{\circ}\text{C}$ , maximum.

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

Marking location: See figure 1.

Ⓑ QUALITY ASSURANCE PROVISIONS:

Extent of qualification:

Qualification testing and approval to M27/37-44 A or B, M27/42-44 A or B, and M27/46-44 A or B shall be sufficient to grant qualification approval to MIL-T-27/37 through MIL-T-27/47 inclusive, all parts.

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

Part number example:

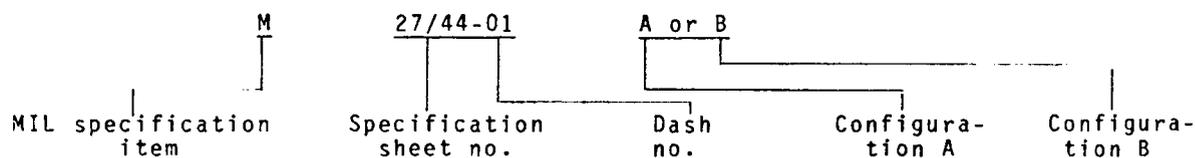


TABLE I. Electrical ratings.

Dash no.	Type designation	Secondary voltage (3-5) (V rms) $\pm 3\%$	Secondary current (3-5) (amps rms)	Working voltage (V rms max)
01	A or B	708	6	325
02	"	709	6.3	"
03	"	710	7	"
04	"	711	7.5	"
05	"	712	8	"
06	"	713	9	"
07	"	714	10	"
08	"	715	11	"
09	"	716	12	"
10	"	717	12.6	"
11	"	718	13	"
12	"	719	15	"
13	"	720	16	"
14	"	721	18	"
15	"	722	20	"
16	"	723	22	"
17	"	724	24	"
18	"	725	26	"
19	"	726	28	"
20	"	727	30	"
21	"	728	33	"
22	"	729	36	"
23	"	730	39	"
24	"	731	43	"
25	"	732	47	"
26	"	733	51	"
27	"	734	56	"
28	"	735	62	"
29	"	736	68	"
30	"	737	75	"
31	"	738	82	"
32	"	739	91	"
33	"	740	100	"
34	"	741	110	"
35	"	742	115	"
36	"	743	120	"
37	"	744	130	"
38	"	745	150	"
39	"	746	180	"
40	"	747	200	440
41	"	748	220	440
42	"	749	240	440
43	"	750	270	580
44	"	751	300	580

Custodians:

Army - ER  
Navy - EC  
Air Force - 85

Preparing activity:

Army - ER

(Project 5950-0623-10)

Review activities:

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

User activities:

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

Agent:

DLA - ES