

NOTE: The document identifier and heading have been changed on this page to reflect that this is a performance specification. There are no other changes to this document. The document identifier on subsequent pages has not been changed, but will be changed the next time this document is revised.

INCH-POUND

MIL-PRF-27/342E
 3 August 1994
 SUPERSEDING
 MIL-T-27/342D
 22 January 1992

PERFORMANCE SPECIFICATION SHEET

TRANSFORMERS, POWER, 80 VOLTAMPERES, 400 HZ, TF5S03ZZ

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 and the issue of the following specification listed in that issue of the Department of Defense Index of Specifications and Standards (DODISS) specified in the solicitation: MIL-T-27.

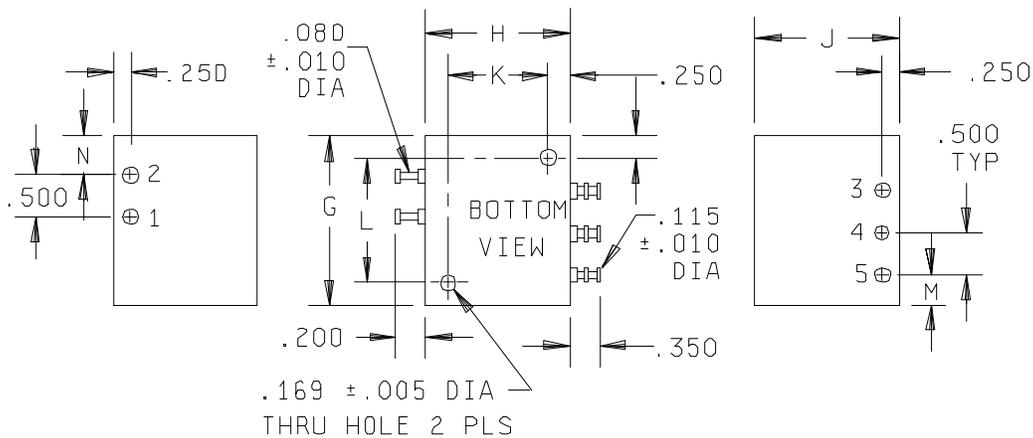
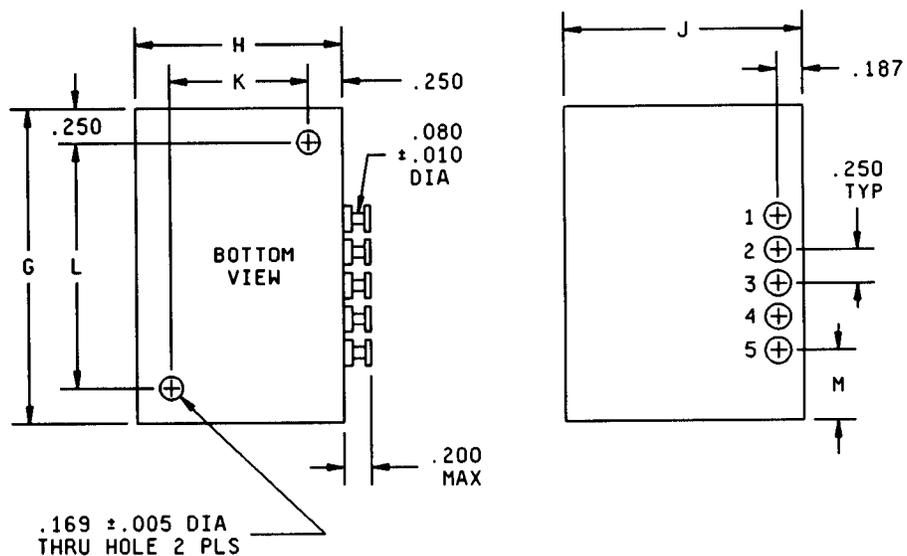


FIGURE 1. Dimensions and configurations.

(E) denotes changes



DASH NOS 04 THROUGH 32

Ltr	ⓔ Dimensions	
	Inches	mm
G	2.31 ±.015	58.7 ±0.38
H	1.52 ±.015	38.6 ±0.38
J	1.75 ±.015	44.5 ±0.38
K	1.02 ±.015	25.9 ±0.38
L	1.81 ±.015	46.0 ±0.38
M	.500 ±.031	12.70 ±0.79
N	.750 ±.031	19.05 ±0.79

Inches	mm
.005	0.13
.010	0.25
.080	2.03
.115	2.92
.169	4.29
.187	4.75
.200	6.08
.250	6.35
.380	8.89

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information.
3. Marking shall be on the top and sides of case.
- ⓔ 4. Dimensional tolerance shall be ±.031 (0.79 mm) unless otherwise specified.
- ⓔ 5. Dimensions G and H to be measured at top of transformer.

FIGURE 1. Dimensions and configuration - Continued.

MIL-T-27/342E

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 rms, 400 ±20 hertz.

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

Voltampere: 80 voltamperes.

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

Design and construction:

Dimensions and configuration: See figure 1.

Duty cycle: Continuous.

Case: Encapsulated.

Material: Diallyl phthalate.

Terminals: Turret type.

Height: See figure 1.

Weight: 0.80 pound, maximum.

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

Altitude: 70,000 feet.

Terminal strength: MIL-STD-202, method 211, test condition A, 2 pounds.

Dielectric withstanding voltage (each winding):

At sea level: 1500 volts rms.

At reduced barometric pressure: 1.25 times the peak working voltage specified.

Electrical characteristics:

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

DC resistance:

(1-2): 2.0 ohms ±25 percent.

(3-5): See table I.

Temperature rise: 45°C with 115 volts rms, 400 hertz across (1-2) at an ambient temperature of 85°C, full load terminals (3-5).

Regulation:
$$\frac{\text{Voltage (no load)} - \text{Voltage (rated load)}}{\text{Voltage (rated load)}} \times 100 \quad (\text{shall not exceed } 10 \text{ percent}).$$

Polarity: Additive, with terminals 2 and 3 connected.

Marking location: See figure 1.

MIL-T-27/342E

Part or Identifying Number (PIN): M27/342- (dash number from table I).

TABLE I. Electrical ratings.

Dash number M27/342	Secondary voltage (3-5) (V rms) $\pm 5\%$ (CT)	Secondary current (3-5) (amperes)	Secondary DCR (3-5) (ohms) $\pm 25\%$
-01	5.0	16.0	.0051
-02	6.3	12.8	.0055
-03	8.0	10.0	.014
-04	10.0	8.0	.021
-05	12.6	6.35	.025
-06	14.0	5.6	.028
-07	16.0	5.0	.041
-08	18.0	4.45	.062
-09	20.0	4.0	.09
-10	22.0	3.63	.096
-11	25.0	3.2	.13
-12	28.0	2.85	.14
-13	31.0	2.47	.16
-14	35.0	2.28	.23
-15	39.0	2.05	.32
-16	43.0	1.86	.35
-17	48.0	1.66	.40
-18	55.0	1.45	.54
-19	63.0	1.27	.79
-20	70.0	1.14	.87
-21	80.0	1.0	1.0
-22	90.0	.89	1.08
-23	100.0	.80	1.64
-24	110.0	.728	2.03

MIL-T-27/342E

TABLE I. Electrical ratings - Continued.

Dash number M27/342	Secondary voltage (3-5) (V rms) $\pm 5\%$ (CT)	Secondary current (3-5) (amperes)	Secondary DCR (3-5) (ohms) $\pm 25\%$
-25	123.0	.65	2.35
-26	138.0	.58	3.55
-27	157.0	.508	3.95
-28	175.0	.455	5.5
-29	200.0	.400	6.3
-30	220.0	.364	9.0
-31	26.0	3.080	0.14
-32	115.0	.696	2.12

QUALITY ASSURANCE PROVISIONS:

Extent of qualification:

- Ⓔ Qualification testing and approval to M27/338-26 and M27/343-30 shall be sufficient to grant qualification approval to MIL-T-27/338 through MIL-T-27/343 inclusive, all parts.
- Ⓔ Qualification testing and approval to M27/342-30 shall be sufficient to grant qualification approval to M27/342-01 through M27/342-32.

CONCLUDING MATERIAL

Custodians:

Army - ER
Navy - EC
Air Force - 85

Review activities:

Army - AR, ME
Navy - AS, MC, OS
Air Force - 17, 19, 99
DLA - ES

Preparing activity:
Army - ER

Agent:
DLA - ES

(Project 5950-0855)