

INCH-POUND

MIL-PRF-27/343F
1 October 2010
SUPERSEDING
MIL-PRF-27/343E
3 August 1994

PERFORMANCE SPECIFICATION SHEET

TRANSFORMERS, POWER, 175 VOLTAMPERES, 400 HZ

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

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

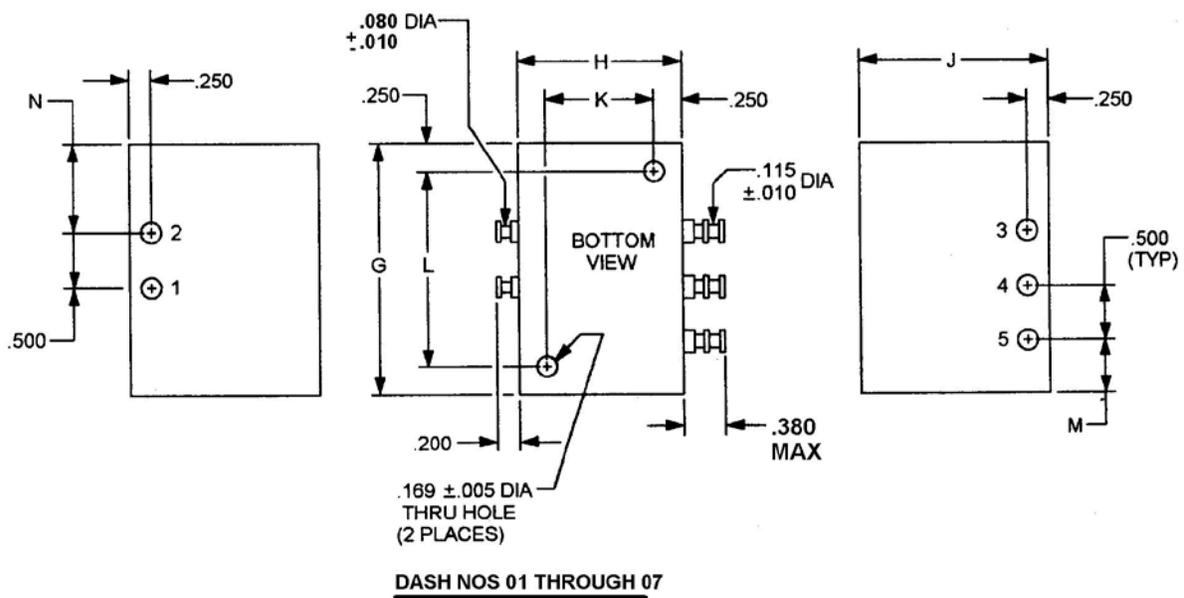
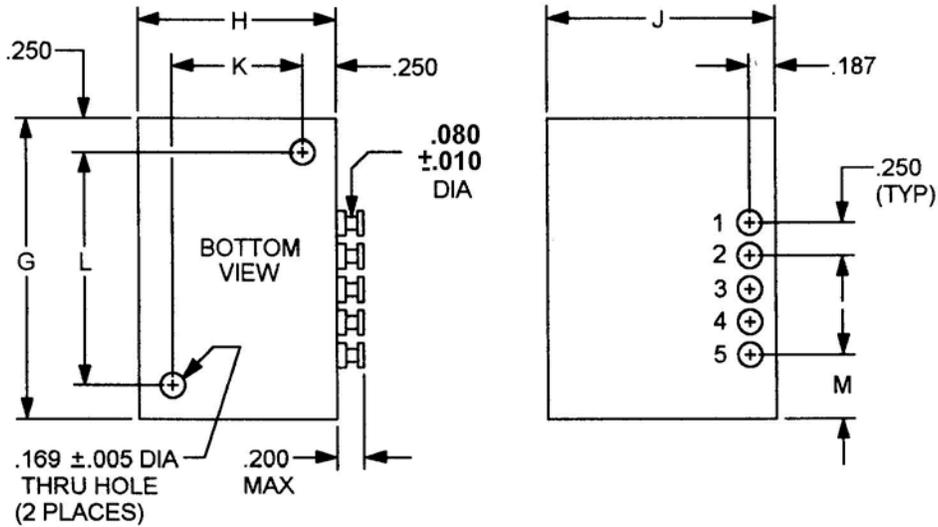


FIGURE 1. Dimensions and configurations.



DASH NUMBERS 08 THROUGH 32

Ltr	Dimensions		Inches	mm
	Inches	mm		
G	$2.75 \pm .015$	$69.85 \pm .038$	.250	6.35
H	$2.71 \pm .015$	$68.83 \pm .038$	.187	4.75
J	$2.31 \pm .015$	$58.67 \pm .038$	.115	2.92
K	$2.21 \pm .015$	$56.13 \pm .038$	.169	4.29
L	$2.25 \pm .015$	$57.15 \pm .038$	.200	5.08
M	$.750 \pm .031$	$19.05 \pm .079$	.080	2.03
N	$1.00 \pm .031$	$25.40 \pm .079$	.100	2.54

NOTES:

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

FIGURE 1. Dimensions and configurations - Continued.

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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 rms, 400 \pm 20 hertz.

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

Volt-ampere: 175 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: 2.2 pounds, maximum.

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

Altitude: 70,000 feet.

Terminal strength: MIL-STD-202, method 211, test condition A, 2.0 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): 0.7 ohm \pm 25 percent.

(3-5): See table I.

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

Shall not exceed 10 percent.

Polarity: Additive with terminals 2 and 3 connected.

Marking location: See figure 1.

Part or Identifying Number (PIN): M27/343-(dash number from table I).

TABLE I. Electrical ratings.

Dash number M27/343-	Secondary voltage (3-5) (V rms) ±5% (CT)	Secondary current (3-5) (amperes)	Secondary DCR (3-5) (ohms) ±25%
01	5.0	35.0	.0020
02	6.3	27.8	.0026
03	8.0	22.0	.0046
04	10.0	17.5	.0053
05	12.6	13.9	.011
06	14.0	12.5	.013
07	16.0	10.9	.014
08	18.0	9.7	.015
09	20.0	8.75	.017
10	22.0	7.9	.018
11	25.0	7.0	.035
12	28.0	6.25	.049
13	31.0	5.65	.052
14	35.0	5.0	.098
15	39.0	4.48	.110
16	43.0	4.06	.114
17	48.0	3.65	.160
18	55.0	3.17	.196
19	63.0	2.77	.20
20	70.0	2.5	.25
21	80.0	2.18	.34
22	90.0	1.94	.38
23	100.0	1.75	.52
24	110.0	1.59	.72

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TABLE I. Electrical ratings – Continued.

Dash number M27/342-	Secondary voltage (3-5) (V rms) ±5% (CT)	Secondary current (3-5) (amperes)	Secondary DCR (3-5) (ohms) ±25%
25	123.0	1.42	.81
26	138.0	1.26	1.14
27	157.0	1.1	1.31
28	175.0	1.0	1.87
29	200.0	.875	2.65
30	220.0	.790	2.92
31	26.0	6.730	0.044
32	115.0	1.520	0.72

VERIFICATION:

Extent of qualification:

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

Qualification testing and approval to M27/343-30 shall be sufficient to grant qualification approval to M27/343-01 through M27/343-32.

Changes from previous issue. 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.

Referenced documents.

MIL-PRF-27 MIL-PRF-27/338 MIL-PRF-27/339 MIL-PRF-27/340 MIL-PRF-27/341
MIL-PRF-27/342 MIL-PRF-27/343 MIL-STD-202

Custodians:

Army - CR
Navy - EC
Air force - 85

Preparing activity:

DLA - CC

Review activities:

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

(Project 5950-2009-070)

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.daps.dla.mil>.