

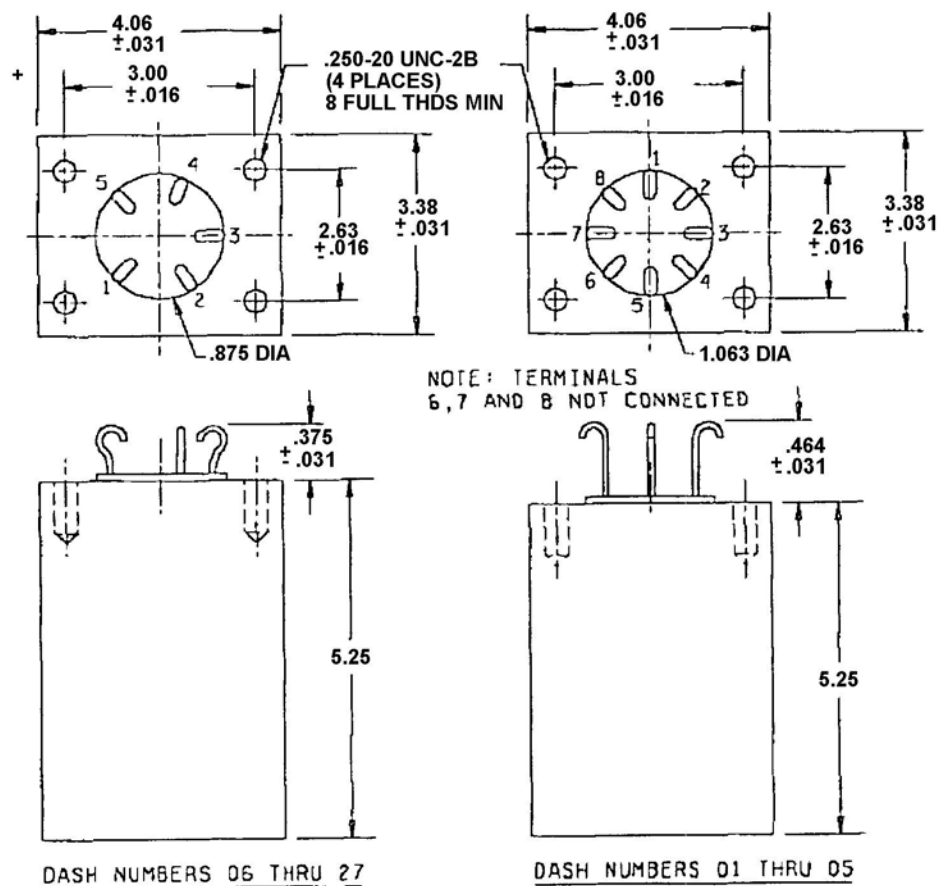
MIL-PRF-27/321D
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SUPERSEDING
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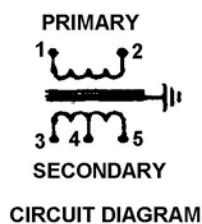
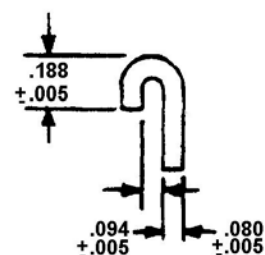
PERFORMANCE SPECIFICATION SHEET

TRANSFORMERS, POWER, 200 VOLT-AMPERES, 60 HERTZ

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.



Inches	mm	Inches	mm
.005	0.13	.464	11.79
.010	0.25	.625	15.88
.016	0.41	.875	22.22
.031	0.79	1.063	27.00
.062	1.57	2.63	66.8
.070	1.78	2.75	69.8
.080	2.03	3.00	76.2
.094	2.39	3.38	85.8
.125	3.18	3.88	98.6
.188	4.78	4.06	103.1
.250	6.35	4.69	119.1
.375	9.52	5.25	133.4
		6.00	152.4

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Marking shall be on the sides of the case.
4. Unless otherwise specified, tolerance shall be $\pm.063$ (1.60 mm).
5. Electrical values shall be marked as specified in table I, except DCR.
6. The mounting surface can be painted.

FIGURE 1. Dimensions and configurations - Continued.

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 ac, 50 to 60 hertz.

Primary dc resistance: 1.1 ohms ± 25 percent.

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

Volt-ampere rating: 200 volt-amperes.

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

Design and construction:

Dimensions and configuration: See figure 1.

Duty cycle. Continuous.

Case: Metal enclosed.

Material: Steel.

Terminals: Solderable terminals.

<u>Dash numbers</u>	<u>Terminal type</u>	<u>Height (inches)</u>	<u>Diameter (inches)</u>
01 through 05	hook	0.464 $\pm$.031	0.080 $\pm$.005
06 through 27	hook	0.375 $\pm$.031	0.062 $\pm$.005

Weight: 10.5 pounds, maximum.

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

Altitude: 10,000 feet.

Terminal strength: MIL-STD-202, method 211, test condition A, 2.0 pounds.

Dielectric withstanding voltage (each winding) (at sea level): 1,500 volts rms.

Electrical characteristics:

Rated load: With 115 volts ac and 60 Hz across (1-2), and rated current in secondary, the voltage across (3-5) shall be as specified in table I.

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.

Temperature rise: +35°C with 115 volts ac, 60 hertz across (1-2) at an ambient temperature of +95°C, full load terminals (3-5).

Shock (specified pulse): MIL-STD-202, Method 213, test condition G.

Marking location: See figure 1.

Part or Identification Number (PIN): M27/321-(dash number from table I).

TABLE I. Electrical ratings.

Dash number	Secondary (3-5)		
	Voltage (volts) ±3 percent	Current <u>1</u> / (amperes)	DC resistance (ohms) ±25 percent
01	10.0	20.00	0.015
02	12.6	15.90	0.027
03	14.0	14.30	0.029
04	16.0	12.50	0.034
05	18.0	11.10	0.045
06	20.0	10.00	0.066
07	22.0	9.10	0.073
08	25.0	8.00	0.079
09	28.0	7.10	0.11
10	31.0	6.40	0.12
11	35.0	5.71	0.17
12	39.0	5.12	0.18
13	43.0	4.64	0.26
14	48.0	4.17	0.29
15	55.0	3.64	0.41
16	63.0	3.18	0.47
17	70.0	2.860	0.67
18	80.0	2.500	0.74
19	90.0	2.220	1.05
20	100	2.000	1.17
21	110	1.820	1.60
22	123	1.620	1.80
23	138	1.450	2.50
24	157	1.270	2.86
25	175	1.140	4.09
26	200	1.000	4.55
27	220	0.914	6.50

1/ For 50 Hz operation, reduce secondary current by 10 percent.

| VERIFICATION:

Extent of qualification:

Qualification testing and approval to M27/312-26, M27/316-30, and M27/322-24 shall be sufficient to grant qualification approval to MIL-PRF-27/312 through MIL-PRF-27/322, inclusive, all parts.

Qualification testing and approval to M27/321-27 shall be sufficient to grant qualification approval M27/321-01 through M27/321-27.

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

MIL-STD-202

MIL-PRF-27/312

MIL-PRF-27/316

MIL-PRF-27/322

Custodians:

Army - CR

Navy - EC

Air Force - 85

DLA - CC

Preparing activity:

DLA - CC

(Project 5950-2009-064)

Review activities:

Army – AR, CR4

Navy - AS, MC, OS, SH

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.daps.dla.mil>.