INCH-POUND

MIL-T-27/181C
29 September 2009
SUPERSEDING
MIL-T-27/181B
4 April 1989

MILITARY SPECIFICATION SHEET

TRANSFORMER, POWER, STEP-DOWN AND STEP-UP

Inactive for new design
after 25 August 1998

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.

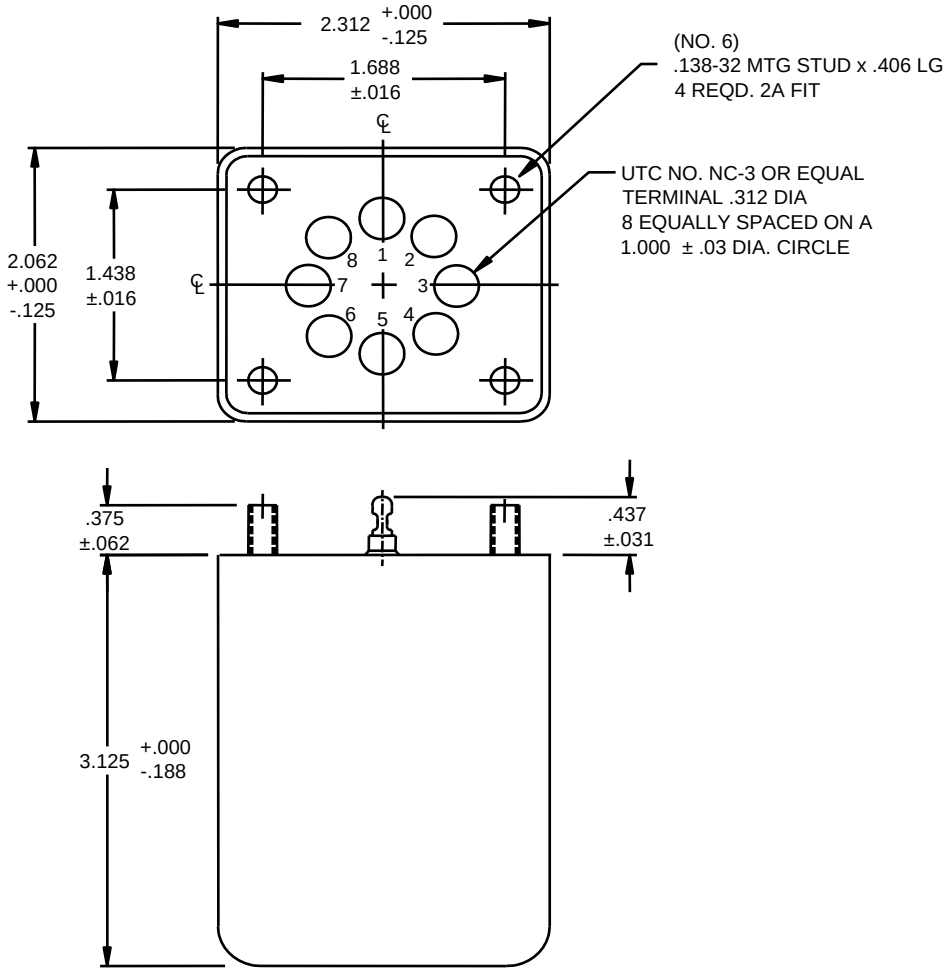
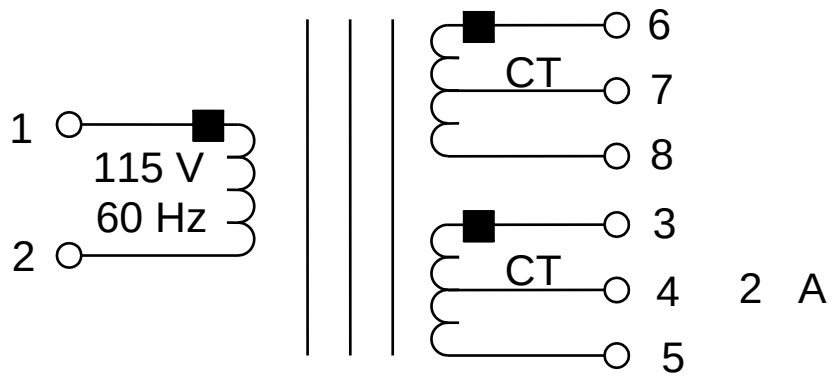


FIGURE 1. Dimensions and configuration.



WV = 535 VOLTS PK

CIRCUIT DIAGRAM AND MARKING

Inches	mm	Inches	mm
.016	0.41	.375	9.52
.03	0.8	.406	10.31
.031	0.79	.437	11.10
.062	1.57	1.000	25.40
.125	3.18	1.438	36.53
.138	3.51	1.688	42.88
.188	4.78	2.062	52.37
.312	7.92	2.312	58.72
		3.125	79.38

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Tolerance on terminal position dimensions is ±.015 (0.38 mm).
4. Marking shall be on the side of the case.

FIGURE 1. Dimensions and configurations – Continued.

REQUIREMENTS: (When numbers in parentheses, such as (1-3) are used, they indicate the winding and the extreme terminals of the winding.)

Electrical ratings:

Primary voltage:

(1-2): 115 volts, 60 Hz.

Secondary voltage:

(3-5): 6.3 volts ct, 2 amperes rms.

(6-8): 450 volts ct, 30 milliamperes dc.

Working voltage: 535 volts peak.

Volt-ampere rating: 26.1 volt-ampere.

Design and construction:

Dimensions and configuration: See figure 1.

Duty cycle: Continuous.

Case: Metal.

Material: Steel.

Terminals: Solder lug.

Terminal height: .437 ±.031 inch (11.10 ±0.79 mm).

Weight: 2.0 pounds, maximum.

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

Terminal strength: MIL-STD-202, method 211, test condition A, 5.0 pounds.

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

Electrical characteristics:

No load: With 115 volts, 60 hertz across (1-2), current in (1-2), shall not exceed 200 milliamperes and the power in (1-2) shall not exceed 2 watts.

Voltage across (3-5): 7.27 volts ±3 percent; voltage across (6-8): 514 volts ±3 percent.

Rated load: With 115 volts, 60 hertz across (1-2), the voltage across (3-5) shall be 6.3 volts ±3 percent with 2 amperes load; the voltage across (6-8) shall be 450 ±3 percent with 30 milliamperes load.

DC resistance:

(1-2): 30 ohms, maximum.

(3-5): .25 ohm, maximum.

(6-8): 1,770 ohms, maximum.

Polarity: Additive, with terminals 2 and 3, and 5 and 6 connected.

Temperature rise: +40°C maximum with 115 volts, 60 hertz across (1-2) at an ambient temperature of +90°C.

Shock (specified pulse): MIL-STD-202, method 213, test condition H.

Marking location: See figure 1.

Part or Identification Number (PIN): M27/181-01.

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

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

Preparing activity:
DLA - CC

(Project 5950-2009-013)

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 http://assist.daps.dla.mil.