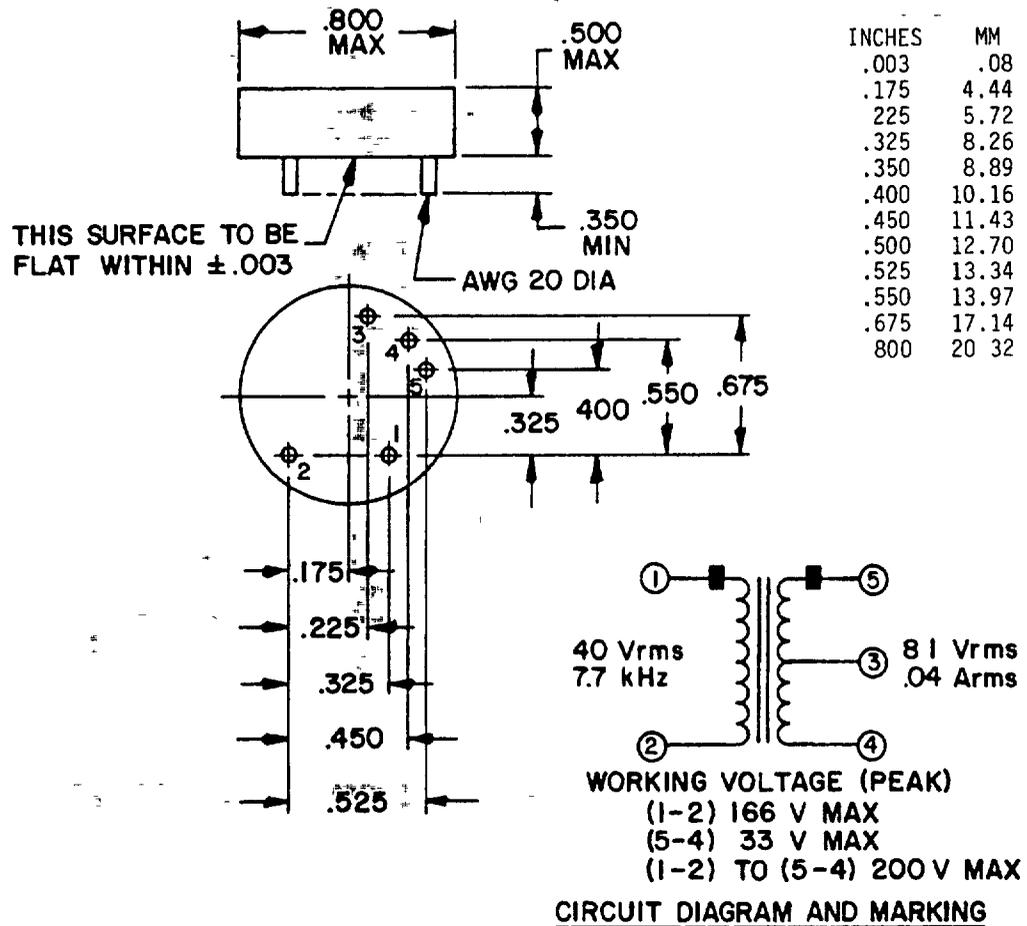


MILITARY SPECIFICATION SHEET

TRANSFORMER, POWER, STEPDOWN, TF5S032Z

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

The complete requirements for procuring the transformer described herein shall consist of this document and the latest issue of Specification MIL-T-27.



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only and are based upon 1.00 inch = 25.4 mm.
3. Unless otherwise specified, tolerance is ± 0.005 (.13 mm).
4. Marking shall be on the top of the case.

FIGURE 1. Dimensions and configuration.

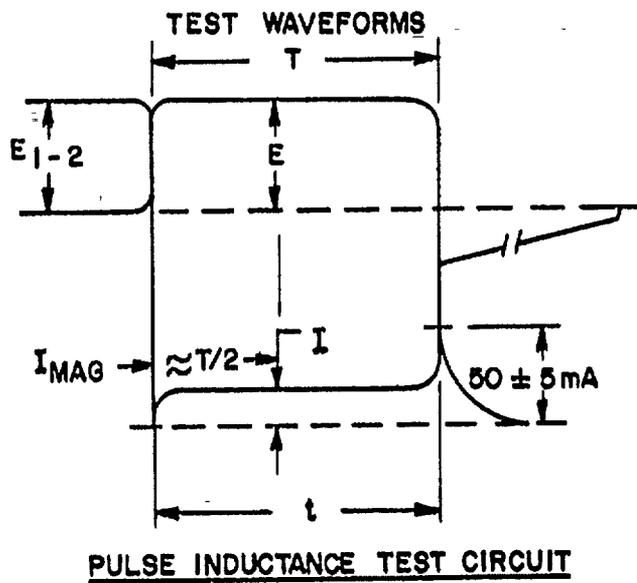
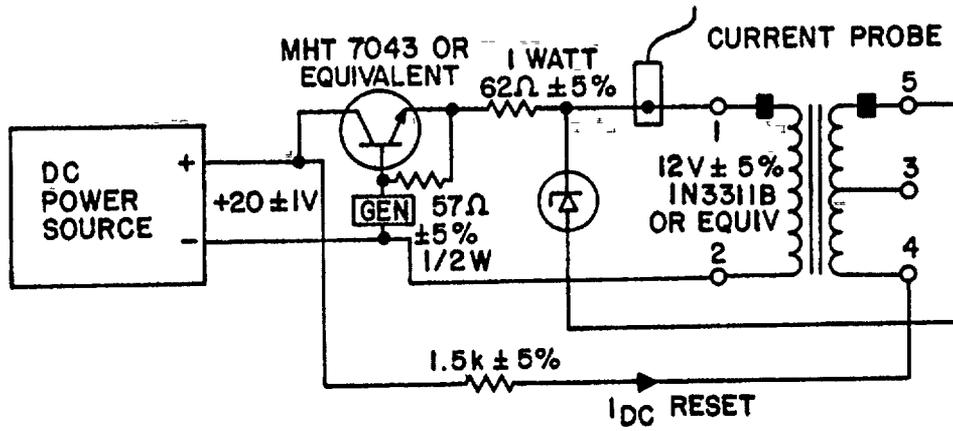


FIGURE 2. Pulse inductance test circuit.

REQUIREMENTS: (When numbers in parentheses, i.e. (1-2) are used, they indicate the winding and the extreme terminals of the windings.)

Electrical ratings.

Primary voltage (1-2): 40 volts rms, 7.7 kilohertz.

Primary current: 4.0 milliamperes, rms.

Primary power: .15 volt ampere.

Secondary voltage (5-4): 8.1 volts rms, .04 ampere rms.

DC resistance:

Primary (1-2): 35 ohms, maximum.

Secondary (5-4): 2.15 ohms, maximum.

Working voltage:

(1-2): 166 volts peak, maximum.

(5-4): 33 volts peak, maximum.

(1-2) to (4-5): 200 volts peak, maximum.

Design and construction:

Dimensions and configuration: See figure 1.

Duty cycle: Continuous.

Case: Encapsulated.

Material: Epoxy.

Terminals: Pin type.

Material: QQ-W-343, type S, tin, lead or lead alloy coated.

Diameter: AWG 20 (.032 inch).

Height: .350 inch, minimum.

Weight: 3 ounces.

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

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

Dielectric withstanding voltage (at sea level): 900 volts rms.

Electrical characteristics:

No load: With 40 volts rms and 7.7 kilohertz in (1-2).

Current in (1-2): 4.0 milliamperes rms.

Power in (1-2) .15 watt, maximum.

Voltage across (5-4) 8.08 percent \pm 1.

Rated load With 40 volts rms and 7.7 kilohertz (1-2)

Voltage across (5-4) 8.1 volts rms \pm 10 percent.

Pulse inductance The transformer shall meet the following electrical requirements when tested under the following conditions using the test circuit in figure 2. The values shown shall be applicable to parts with a squareness ratio of 0.80 to 0.94.

a. Volt-millisecond product (ExT) = 2.85 \pm 5 percent at I_{mag} - 50 milliamperes \pm 5.

(For parts with a squareness ratio above 0.94, the ExT = 2.50 \pm 5 percent at I_{mag} - 50 milliamperes \pm 5).

b. Linear current (I) = 3.4 milliamperes \pm 0.6 at time T/2 (For parts with a squareness ratio above 0.94, I = 7.0 milliamperes, maximum at time T/2.

c. I Reset = 13.3 milliamperes \pm 10 percent.

d. Pulse width (T) = 240 microseconds, nominal. (For parts with a squareness ratio above 0.94, the T = 200 microseconds, nominal.)

e. Pulse rate - 200 hertz maximum.

f. Pulse voltage (E_{1-2}) = 12 volts \pm 5 percent.

g. Rise time (input pulse) = 0.5 microsecond, maximum.

h. Current probe: Tektronix type 6019 with model 134 amplifier or equivalent.

Polarity. Additive with terminals 2 and 5 connected.

Temperature rise: 20°C with 40 volts rms, 7.7 kilohertz across (1-2) at an ambient temperature of 125°C.

MIL-T-27/195

Vibration (high frequency): MIL-STD-202, method 204.

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

Marking location: See figure 1.

Part number: M27/195-01.

Custodians:

Army - EL
Navy - EC
Air Force - 85

Review activities:

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

User activities:

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

Preparing activity:

Army - EL

Agent:

DLA - ES

(Project 5950-0538-55)

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TF5503ZZ

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