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INCH-POUND

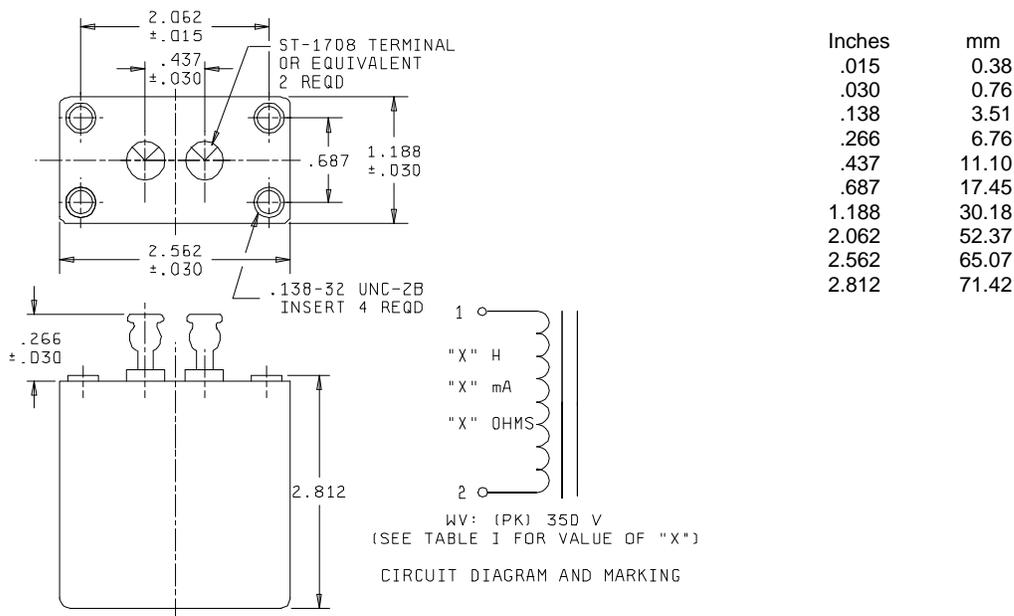
MIL-PRF-27/147D  
 20 July 1993  
 SUPERSEDING  
 MIL-T-27/147C  
 31 March 1992

PERFORMANCE SPECIFICATION SHEET

TRANSFORMERS AND INDUCTORS (AUDIO, POWER, AND HIGH-POWER PULSE),  
 INDUCTORS, AUDIO, HIGH Q, TF4R20YY

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 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.



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Marking shall be on the side of the case.
4. Tolerances on all dimensions shall be  $\pm 0.015$  inch (0.38 mm), unless otherwise specified.
5. Electrical values shall be marked as specified in table I, as applicable.

FIGURE 1. Dimensions and configuration.

(D) denotes change.

TABLE I. Electrical ratings. 1/

Dash no.	Inductance <u>2/</u> H $\pm 2\%$ (1-2)	DC <u>3/</u> current mA (1-2)	DC resistance ohms $\pm 20\%$ (1-2)	Quality factor (min)	Temperature stability ( $-55^{\circ}\text{C}$ to $+105^{\circ}\text{C}$ )	Working voltage (peak) V	Voltage (1-2)
01	0.010	400	0.30	180 at 3 kHz	$\pm 1.5\%$	350	1 V at 500 Hz
02	0.030	250	0.90	180 at 3 kHz	$\pm 1.5\%$	350	1 V at 500 Hz
03	0.070	170	2.2	200 at 3 kHz	$\pm 1.5\%$	350	1 V at 500 Hz
04	0.12	120	3.6	200 at 3 kHz	$\pm 1.5\%$	350	1 V at 500 Hz
05	0.50	60	16	200 at 3 kHz	$\pm 1.5\%$	350	1 V at 500 Hz
06	1.0	40	28	190 at 3 kHz	$\pm 1.5\%$	350	1 V at 500 Hz
07	2.0	30	64	165 at 2 kHz	$\pm 1.5\%$	350	1 V at 500 Hz
08	3.5	22	101	135 at 1.5 kHz	$\pm 1.5\%$	350	1 V at 500 Hz
09	7.5	16	230	110 at 1 kHz	$\pm 1.5\%$	350	1 V at 500 Hz
10	12	11	373	100 at 1 kHz	$\pm 1.5\%$	350	1 V at 500 Hz
11	18	9.0	463	85 at 700 Hz	$\pm 1.5\%$	350	1 V at 500 Hz
12	25	8.0	680	75 at 700 Hz	$\pm 1.5\%$	350	1 V at 500 Hz
13	40	6.0	1075	65 at 400 Hz	$\pm 1.5\%$	350	1 V at 400 Hz
14	60	4.0	1670	65 at 400 Hz	$\pm 1.5\%$	350	1 V at 400 Hz

① 1/ Qualification testing and approval to M27/147-14 shall be sufficient to grant qualification approval to M27/147-01 through M27/147-13. For partial qualification, testing to one particular inductance value shall be sufficient to grant qualification approval to any smaller inductance value than what was qualified.

2/ The inductance is measured with 0 A dc applied to (1-2) and at the specified voltage across (1-2).

3/ The amount of dc current that will reduce the inductance a maximum of 8 percent.

MIL-T-27/147D

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

Electrical ratings: See table I.

Design and construction:

Dimensions and configuration: See figure 1.

Duty cycle: Continuous.

Case: Metal encased.

Terminals: Solder terminal, ST-1708 or equivalent.

Terminal height: .266 inch  $\pm$ .030 inch.

Weight: 550 grams, maximum.

Operating temperature range:  $-55^{\circ}\text{C}$  to  $+105^{\circ}\text{C}$ .

Terminal strength: MIL-STD-202, method 211, test condition A, 5 pounds.

Vibration (high frequency): Method 204 of MIL-STD-202.

Dielectric withstanding voltage (at sea level): 1,000 volts rms.

Marking location: See figure 1.

Part or Identifying Number (PIN): M27/147-(dash number from table I).

CONCLUDING MATERIAL

Custodians:

Army - ER  
Navy - EC  
Air Force - 85

Preparing activity:

Army - ER

Review activities:

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

Agent:

DLA - ES

(Project 5950-0818)

User activities:

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