

INCH-POUND

MIL-T-27/142C

31 March 1992

SUPERSEDING

MIL-T-27/142B

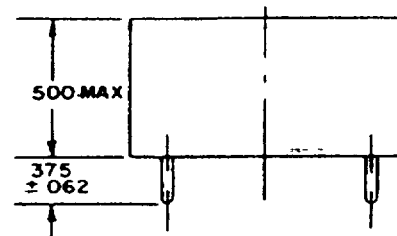
17 April 1980

# MILITARY SPECIFICATION SHEET

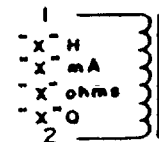
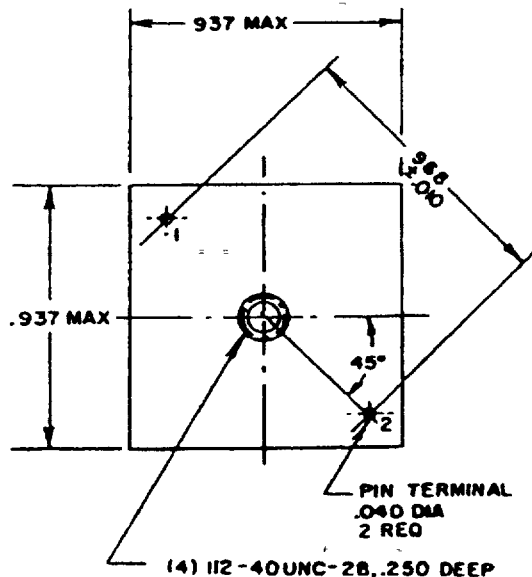
## TRANSFORMERS AND INDUCTORS (AUDIO, POWER AND HIGH-POWER PULSE) INDUCTORS, AUDIO FREQUENCY, TF5R20ZZ

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.



| Inches | mm    |
|--------|-------|
| .010   | 0.25  |
| .040   | 1.02  |
| .062   | 1.57  |
| .112   | 2.84  |
| .250   | 6.35  |
| .375   | 9.52  |
| .500   | 12.70 |
| .937   | 23.80 |
| .968   | 24.59 |



WV: 350 V pk

SEE TABLE 1 FOR VALUE OF "X"

CIRCUIT DIAGRAM  
AND MARKING

### NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only
3. Marking shall be on the top of the case

(C)

FIGURE 1. Dimensions and configurations.

(C) denotes changes

AMSC N/A

DISTRIBUTION STATEMENT A

1 of 3

Approved for public release; distribution is unlimited.

FSC 5950

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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:

Voltage (1-2): 1 volt rms, 1 kHz

Working voltage: 350 volts peak.

Power: .080 watt.

Design and construction

Dimensions and configurations. See figure 1.

Material: Diallyl phthalate.

Weight: 7 ounce

Duty cycle: Continuous.

Case: Encapsulated

Operating temperature range: -55°C to +105°C.

Terminals: Pin, N-4 type, tin-lead plated in accordance with MIL-STD-1276.

Terminal length: 375 ± .062 inch

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

Dielectric withstanding voltage: Method 301 of MIL-STD-202, test voltage at sea level 1,000 volts rms

Electrical characteristics. See table I

TABLE I. Electrical characteristics.

| Dash number<br>1/ | Inductance (H)<br>(1-2) ±1%<br>(1 Vrms, 1 kHz) | Self-resonant frequency (kHz) (min) | DC current 2/ (mA) | DC resistance (ohms) (max)<br>(1-2) | Quality factor (Q) (min) |
|-------------------|------------------------------------------------|-------------------------------------|--------------------|-------------------------------------|--------------------------|
| 01                | 0.01                                           | 170                                 | 70                 | 2.5                                 | 100 at 10 kHz            |
| 02                | 0.02                                           | 120                                 | 50                 | 5.1                                 | 105 at 10 kHz            |
| 03                | 0.05                                           | 76                                  | 30                 | 12.0                                | 105 at 10 kHz            |
| 04                | 0.10                                           | 54                                  | 22                 | 22.0                                | 105 at 10 kHz            |
| 05                | 0.50                                           | 24                                  | 10                 | 122.0                               | 80 at 5 kHz              |
| 06                | 1.00                                           | 17                                  | 7                  | 250.0                               | 80 at 5 kHz              |
| 07                | 2.00                                           | 12                                  | 5                  | 500.0                               | 60 at 5 kHz              |

1/ Qualification testing and approval to M27/142-07 shall be sufficient to grant qualification approval to M27/142-01 thru M27/142-06

2/ The amount that will reduce the inductance by 7 percent, maximum

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Temperature stability.  $\pm 1.5$  percent at  $-55^{\circ}\text{C}$  to  $+105^{\circ}\text{C}$

Vibration, high frequency MIL-STD-202, method 204, test condition D.

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

Marking location: See figure 1.

Part or Identifying Number (PIN) M27/142-(dash number from table I)

CONCLUDING MATERIAL

Custodians

Army - ER

Navy - EC

Air Force - 85

Review activities.

Army - AS

Navy - OS, SH

Air Force - 17, 99

DLA - ES

User activities:

Army - AR

Navy - AS, MC

Air Force - 19

Preparing activity

Army - ER

Agent

DLA - ES

(Project 5950-0800)