

NOTE: The document identifier and heading have been changed on this page to reflect that this is a performance specification. There are no other changes to this document. The document identifier on subsequent pages has not been changed, but will be changed the next time this document is revised.

INCH-POUND

MIL-PRF-27/356C
 8 April 1992
 SUPERSEDING
 MIL-T-27/356B
 25 January 1985

PERFORMANCE SPECIFICATION SHEET

TRANSFORMERS AND INDUCTORS
 (AUDIO, POWER AND HIGH-POWER PULSE),
 INDUCTORS, POWER, TF5S04ZZ

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 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.

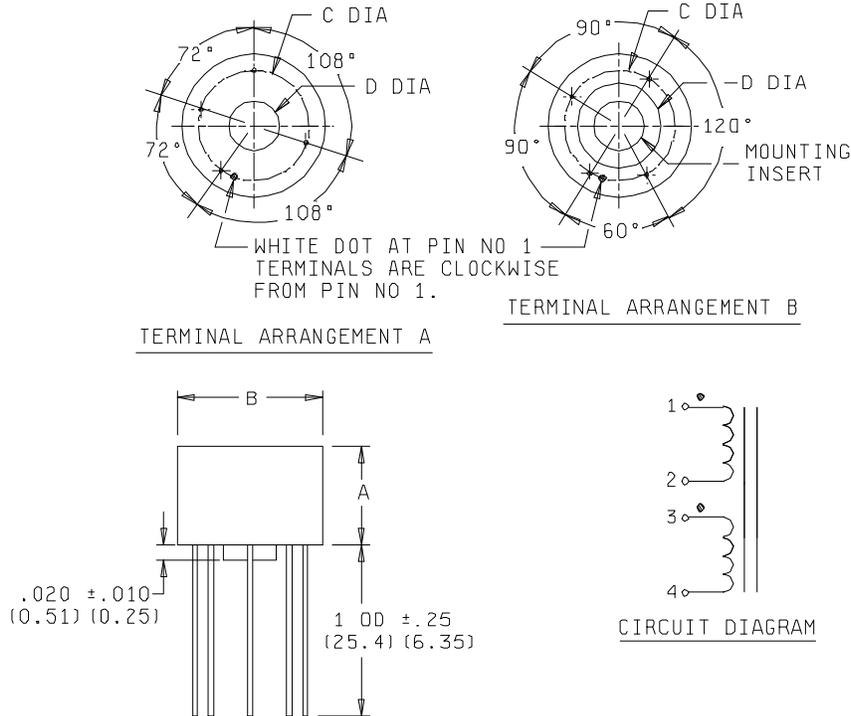


FIGURE 1. Dimensions and configuration.

Ⓒ denotes changes

Dash number	A Max.	B Max Dia.	C $\pm .010$	Insert	Terminal arrangement	Terminal diameter inches $\pm .002$
01,06,11,16, 21,26,31,36, 41,46,51,56, 61	.280 (7.11)	.410 (10.41)	.260 (6.6)		A	.012
02,07,12,17, 22,27,32,37, 42,47,52,57, 62	.340 (8.63)	.500 (12.7)	.350 (8.89)		A	.012
03,08,13,18, 23,28,33,38, 43,48,53,58, 63	.415 (10.54)	.630 (16.0)	.440 (11.17)		A	.016
04,09,14,19, 24,29,34,39, 44,49,54,59	.500 (12.70)	.800 (20.32)	.560 (14.22)		B	.016
05,10,15,20, 25,30,35,40, 45,50,55,60	.635 (16.12)	.950 (24.13)	.670 (17.0)	.138-32 UNC-2B .200 Min deep	B	.020

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Marking shall be on the side or on top.
4. For series connection join terminals 2 and 3, for parallel connection join terminals 1 and 3, 2 and 4.
5. Metric equivalents are in parentheses.

FIGURE 1. Dimensions and configurations - Continued.

TABLE I. Electrical ratings.

Dash number	1/ Series inductance (mH)	Series dc current (max) (amps)	Series dc resistance $\pm 25\%$ (ohms)	1/ Parallel inductance (mH)	Parallel dc current (max) (amps)	Parallel dc resistance $\pm 25\%$ (ohms)
01	20	.06	54	5	.12	13.5
02	20	.10	29	5	.20	7.25
03	20	.14	20	5	.28	5.0
04	20	.22	12.4	5	.44	3.1
05	20	.29	10.2	5	.58	2.55
06	15	.07	40.5	3.75	.14	10.125
07	15	.12	22	3.75	.24	5.5
08	15	.16	15	3.75	.32	3.75
09	15	.25	9.3	3.75	.50	2.325
10	15	.33	7.7	3.75	.66	1.925
11	10	.08	27	2.5	.16	6.75
12	10	.14	14.6	2.5	.28	3.65
13	10	.20	10	2.5	.40	2.5
14	10	.31	6.2	2.5	.62	1.55
15	10	.40	5.1	2.5	.80	1.275
16	7.5	.10	20.3	1.88	.20	5.075
17	7.5	.17	11	1.88	.34	2.75
18	7.5	.24	7.5	1.88	.48	1.875
19	7.5	.38	4.7	1.88	.76	1.175
20	7.5	.49	3.8	1.88	.98	.95

See footnote at end of table.

TABLE I. Electrical ratings - Continued.

Dash number	1/ Series inductance (mH)	Series dc current (max) (amps)	Series dc resistance $\pm 25\%$ (ohms)	1/ Parallel inductance (mH)	Parallel dc current (max) (amps)	Parallel dc resistance $\pm 25\%$ (ohms)
21	5.0	.12	13.5	1.25	.24	3.375
22	5.0	.21	7.3	1.25	.42	1.825
23	5.0	.30	5	1.25	.60	1.25
24	5.0	.47	3.1	1.25	.94	.775
25	5.0	.6	2.6	1.25	1.2	.65
26	5.0	.16	8.1	.75	.32	2.025
27	3	.27	4.4	.75	.54	1.1
28	3	.38	3	.75	.76	.75
29	3	.6	1.9	.75	1.2	.475
30	3	.78	1.5	.75	1.56	.375
31	2	.19	5.4	.5	.38	1.35
32	2	.33	2.9	.5	.66	.725
33	2	.47	2	.5	.94	.5
34	2	.74	1.3	.5	1.48	.325
35	2	.95	1	.5	1.9	.25
36	1	.27	2.7	.25	.54	.675
37	1	.47	1.5	.25	.94	.375
38	1	.66	1	.25	1.32	.25
39	1	1	.62	.25	2	.155
40	1	1.3	.5	.25	2.6	.125

See footnote at end of table.

TABLE I. Electrical ratings - Continued.

Dash number	1/ Series inductance (mH)	Series dc current (max) (amps)	Series dc resistance $\pm 25\%$ (ohms)	1/ Parallel inductance (mH)	Parallel dc current (max) (amps)	Parallel dc resistance $\pm 25\%$ (ohms)
41	.750	.31	2	.1875	.62	.5
42	.750	.54	1	.1875	1.08	.25
43	.750	.76	.75	.1875	1.52	.1875
44	.750	1.2	.47	.1875	2.4	.1175
45	.750	1.6	.38	.1875	3.2	.095
46	.500	.38	1.3	.125	.76	.325
47	.500	.66	.66	.125	1.32	.165
48	.500	.93	.5	.125	1.86	.125
49	.500	1.47	.31	.125	2.94	.0775
50	.500	1.9	.25	.125	3.8	.0625
51	.250	.53	.66	.0625	1.06	.165
52	.250	.93	.33	.0625	1.86	.0825
53	.250	1.3	.25	.0625	2.6	.0625
54	.250	2.08	.16	.0625	4.16	.04
55	.250	2.7	.13	.0625	5.4	.0325
56	.100	.78	.30	.025	1.56	.075
57	.100	1.35	.17	.025	2.7	.043
58	.100	1.95	.11	.025	3.9	.028
59	.100	3.08	.07	.025	6.16	.018
60	.100	3.88	.06	.025	7.76	.015

See footnote at end of table.

TABLE I. Electrical ratings - Continued.

Dash number	<u>1/</u> Series inductance (mH)	Series dc current (max) (amps)	Series dc resistance $\pm 25\%$ (ohms)	<u>1/</u> Parallel inductance (mH)	Parallel dc current (max) (amps)	Parallel dc resistance $\pm 25\%$ (ohms)
61	.040	1.18	.14	.01	2.36	.035
62	.040	2.03	.07	.01	4.06	.018
63	.040	2.68	.06	.01	5.36	.015

1/ The inductance must be at least 80 percent of the listed value when measured with rated dc current at 0.1 V rms, 10 kHz.

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

Electrical ratings: See table I.

Design and construction:

Dimensions and configurations: See figure 1.

Duty cycle: Continuous.

Case: Epoxy.

Terminals: Printed circuit, solderable.

Weight: 1.25 ounces, maximum.

Altitude: 75,000 feet, maximum.

Operating temperature range: -55°C to $+130^{\circ}\text{C}$.

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

Dielectric withstanding voltage:

At sea level: 200 volts rms.

At reduced barometric pressure: 100 volts rms.

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

Magnetic shield: All units are magnetically shielded.

Temperature rise: 30°C with .1 volt rms, rated dc current as specified in table I at an ambient temperature of 100°C , maximum.

Marking location: See figure 1.

Part or Identifying Number (PIN): M27/356-(dash number from table I).

Qualification: Qualification testing and approval to M27/356-01 shall be sufficient to grant qualification approval to M27/356-01 through M27/356-63.

CONCLUDING MATERIAL

Custodians:

Army - ER
Navy - EC
Air Force - 85

Review activities:

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

User activities:

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

Preparing activity:

Army - ER

Agent:

DLA - ES

(Project 5950-0795)