

MIL-PRF-27/372A
w/AMENDMENT 1
7 July 2023
SUPERSEDING
MIL-PRF-27/372A
12 February 2018

PERFORMANCE SPECIFICATION SHEET

TRANSFORMERS AND INDUCTORS (AUDIO, POWER AND HIGH-POWER PULSE), INDUCTOR, SURFACE MOUNT, LEADLESS

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-PRF-27](#).

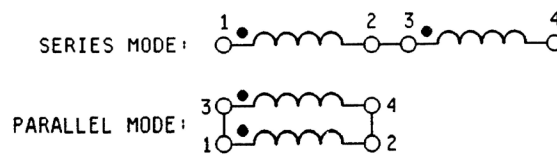
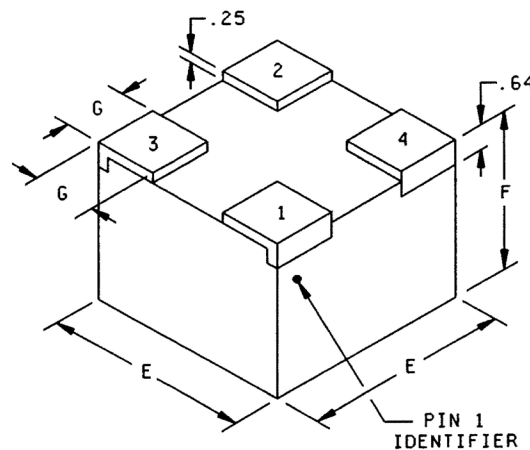


FIGURE 1. Dimensions and configurations.



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Size	E _{max} Millimeters (inches)	F _{max} Millimeters (inches)	G <u>1/</u> Millimeters (inches)
A	6.60 (.260)	5.84 (.230)	2.16 (.085)
B	10.41 (.410)	5.84 (.230)	3.43 (.135)
C	10.41 (.410)	7.87 (.310)	3.43 (.135)
D	13.59 (.535)	7.87 (.310)	5.08 (.200)
E	17.78 (.700)	10.16 (.400)	6.35 (.250)
F	6.60 (.260)	5.05 (.199)	2.16 (.085)

1/ The tolerance for all dimensions shall be ± 0.25 mm (.010 inch).

mm	Inches
0.25	.010
0.64	.025

NOTES:

1. Dimensions are in millimeters.
2. Inch-pound equivalents are given for general information only.
3. The US Government preferred system of measurement is the metric SI system. However, since this item was originally designed using inch-pound units of measurement, in the event of conflict between the metric and inch-pound units, the inch-pound units shall take precedence.

FIGURE 1. Dimensions and configurations - continued.

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TABLE I. Electrical characteristics.

Dash numbers	Series			Parallel			Configur- ation	Power rating (mW)
	Inductance ±10 percent (mH)	Rated dc current (mA)	DC resistance (max)	Inductance ±10 percent (mH)	Rated dc current (mA)	DC resistance (max)		
001	0.100	300	1.60	0.025	600	0.400	A	125
002	0.100	600	0.96	0.025	1200	0.240	B	250
003	0.100	780	0.37	0.025	1560	0.093	C	300
004	0.100	1350	0.21	0.025	2700	0.053	D	450
005	0.250	200	3.11	0.062	400	0.778	A	125
006	0.250	400	1.98	0.062	800	0.495	B	250
007	0.250	530	0.82	0.062	1060	0.205	C	300
008	0.250	930	0.41	0.062	1860	0.103	D	450
009	0.500	150	6.14	0.125	300	1.535	A	125
010	0.500	300	3.35	0.125	600	0.838	B	250
011	0.500	380	1.62	0.125	760	0.405	C	300
012	0.500	660	0.82	0.125	1320	0.205	D	450
013	0.750	120	9.45	0.187	240	2.363	A	125
014	0.750	250	5.20	0.187	500	1.300	B	250
015	0.750	310	2.50	0.187	620	0.625	C	300
016	0.750	540	1.25	0.187	1080	0.313	D	450
017	1.000	95	12.85	0.250	190	3.213	A	125
018	1.000	200	6.90	0.250	400	1.725	B	250
019	1.000	270	3.37	0.250	540	0.843	C	300
020	1.000	470	1.87	0.250	940	0.468	D	450
021	2.000	75	25.60	0.500	150	6.400	A	125
022	2.000	150	12.20	0.500	300	3.050	B	250
023	2.000	190	6.75	0.500	380	1.690	C	300
024	2.000	330	3.62	0.500	660	0.910	D	450
025	3.000	60	38.40	0.750	120	9.600	A	125
026	3.000	120	18.30	0.750	240	4.580	B	250
027	3.000	160	10.12	0.750	320	2.530	C	300
028	3.000	270	5.50	0.750	540	1.380	D	450
029	5.000	45	64.00	1.250	90	16.000	A	125
030	5.000	90	30.40	1.250	180	7.600	B	250
031	5.000	120	16.87	1.250	240	4.220	C	300
032	5.000	210	9.12	1.250	420	2.280	D	450
033	7.500	30	96.00	1.875	60	24.000	A	125
034	7.500	70	46.00	1.875	140	11.500	B	250
035	7.500	100	25.37	1.875	200	6.350	C	300
036	7.500	170	13.75	1.875	340	3.440	D	450
037	10.000	20	128.00	2.500	40	32.000	A	125
038	10.000	50	61.00	2.500	100	15.250	B	250
039	10.000	80	33.75	2.500	160	8.440	C	300
040	10.000	140	18.25	2.500	280	4.570	D	450

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TABLE I. Electrical characteristics - continued

Dash numbers	Series			Parallel			Configur- ation
	Inductance ±12 percent (μH)	Rated dc current (mA)	DC resistance (max)	Inductance ±12 percent (μH)	Rated dc current (mA)	DC resistance (max)	
041	11	4800	.024	2.76	9600	.006	E
042	18	3700	.036	4.50	7400	.009	E
043	27	3000	.052	6.75	6000	.013	E
044	38	2500	.076	9.50	5000	.019	E
045	44	2400	.084	11.00	4800	.021	E
046	100	1600	.20	25.00	3200	.050	E
047	200	1100	.46	50.00	2200	.115	E
048	400	800	.84	100.00	1600	.210	E
049	500	710	1.16	125.00	1420	.290	E
050	760	670	1.76	167.60	1140	.440	E
051	1000	500	2.00	250.00	1000	.500	E
052	2000	350	4.32	500.00	700	1.075	E
053	3000	290	6.64	750.00	580	1.660	E
054	4000	250	7.68	1000.00	500	1.920	E
055	7500	180	16.20	1875.00	360	4.050	E
056	10,000	150	18.80	2500.00	300	4.070	E
057	11	6000	.020	2.75	12,000	.005	E
058	18	4600	.032	4.50	9200	.008	E
059	27	3700	.044	6.75	7400	.011	E
060	38	3100	.064	9.50	6200	.016	E
061	44	3000	.068	11.00	6000	.017	E
062	100	2000	.152	25.00	4000	.038	E
063	200	1300	.340	50.00	2600	.085	E
064	400	890	.600	100.00	1780	.150	E
065	500	800	.848	125.00	1600	.212	E
066	750	700	1.32	187.50	1400	.330	E
067	1000	600	1.52	250.00	1200	.380	E
068	2000	430	3.40	500.00	860	.850	E
069	3000	360	5.20	750.00	720	1.300	E
070	4000	310	6.08	1000.00	620	1.520	E
071	7500	220	13.20	1875.00	440	3.300	E
072	10,000	180	15.20	2500.00	360	3.800	E
073	.08	3300	.020	.020	6600	.005	F
074	.14	2800	.024	.035	5600	.006	F
075	.22	2400	.036	.055	4600	.009	F
076	.44	1800	.056	.110	3600	.014	F
077	.56	1500	.072	.140	3000	.018	F
078	.60	2300	.036	.150	4600	.009	F
079	.86	1900	.048	.215	3800	.012	F
080	1.30	1900	.048	.340	3800	.012	F

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TABLE I. Electrical characteristics - continued

Dash numbers	Series			Parallel			Configur- ation
	Inductance ±12 percent (μH)	Rated dc current (mA)	DC resistance (max)	Inductance ±12 percent (μH)	Rated dc current (mA)	DC resistance (max)	
081	1.86	1800	.052	.465	3600	.013	F
082	2.44	1700	.060	.610	3400	.015	F
083	3.46	1500	.064	.865	3000	.016	F
084	4.40	1200	.080	1.10	2400	.020	F
085	5.40	1000	.120	1.35	2000	.030	F
086	7.80	950	.160	1.95	1900	.040	F
087	10.60	850	.240	2.65	1700	.060	F
088	12.16	800	.260	3.04	1600	.065	F
089	13.80	750	.280	3.45	1500	.070	F
090	17.48	650	.360	4.37	1300	.090	F
091	19.52	600	.400	4.88	1200	.100	F
092	10.60	550	.500	5.40	1100	.125	F
093	26.20	500	.560	6.55	1000	.140	F
094	31.20	450	.600	7.80	900	.150	F
095	48.60	400	.900	12.15	800	.225	F
096	58.80	350	1.30	14.70	700	.325	F
097	78.00	300	1.52	19.50	600	.380	F
098	90.80	280	2.20	22.70	560	.550	F
099	100.00	250	2.40	25.00	500	.600	F

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.

Case: Grade 5, encapsulated.

Terminals: The terminals shall be tin-lead plated phosphor bronze.

Weight: 1.25 ounces, maximum.

Altitude: 70,000 feet, maximum.

Operating temperature range: -55°C to +125°C.

Resistance to soldering heat: [MIL-STD-202-210](#), test condition B. Depth of immersion shall be the entire mounting surface for 4 to 5 seconds.

Bond Strength: [MIL-STD-883](#), method 2011, test condition F.

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Force: 2 pounds.

Barometric pressure: [MIL-STD-202-105](#), test condition C, (70,000 feet), test voltage 100 V rms.

Insulation resistance: [MIL-STD-202-302](#), 1,000 megohms minimum at 100 V dc.

Terminal strength: [MIL-STD-202-211](#), 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-202-204](#), test condition D.

Moisture resistance: [MIL-STD-202-106](#), method of mounting shall be on a test substrate that provide test pieces on inch minimum separation.

Temperature rise: The temperature rise shall be 35°C over ambient temperature of 90°C.

Marking location: Marking shall be on top of the case.

Part or Identifying Number (PIN): M27/372-(dash number from table I).

Qualification: Qualification testing and approval to M27/372-099 shall be sufficient to grant qualification approval to M27/372-001 through M27/372-099 inclusive.

Referenced documents. In addition to [MIL-PRF-27](#), this document references the following:

MIL-STD-202-105 MIL-STD-202-106 MIL-STD-202-204 MIL-STD-202-210 MIL-STD-202-211
MIL-STD-202-302 MIL-STD-883

Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. 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.

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

Preparing activity:
DLA - CC

(Project 5950-2023-012)

Review activities:
Army - AR, MI
Navy - AS, MC, OS
Air Force - 19

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