400Hz MIL-PRF-27* Power Transformers

- Military Designation Grade 5, Class S Construction
- Encapsulated, rugged MIL-PRF-27* transformers
- Capable of operation at high temperatures
- For airborne, missile, and space applications



Specifications

Input Primary:
115 V AC, 400Hz ±20 Hz, 1 phase.

Regulation:
Size A: 12% or less no load to full load.

Sizes B-F: 10% or less no load to full load.

Secondary Voltage Tolerance:
Within 5% when measured at full load and 115 V AC input.

Dielectric Withstanding Voltage:
1500 V rms.

Efficiency:
Ranges from 68% to 96% typical.

Operating Ambient Temperature:
85°C maximum.

Construction:
To MIL-PRF-27*, Grade 5, Class S.

Environment:
Encapsulated to meet MIL-STD-810, including vibration, shock, sand, dust, humidity, saltspray, fungus, sunshine, rain, explosion, and altitude (to 70,000 ft).

NOTE: For high altitude operation, encapsulate terminals.

Output Secondary:
See output voltage and current of specific models listed.

Other outputs and/or inputs available upon request.

Output Volts (FL)	Output Current (Amp)	Size	Secondary DCR Ohms (Typical)	Model No.	QPL Model No.	Output Volts (FL)	Output Current (Amp)	Size	Secondary DCR Ohms (Typical)	Model No.	QPL Model No.
5.0	0.400	A	0.60	2E5CT	M27/338-01	10.0	0.200	A	2.50	2E10CT	M27/338-04
	1.200	B	0.173	6E5CT	M27/339-01		0.600	B	0.587	6E10CT	M27/339-04
	3.000	C	0.046	15E5CT	M27/340-01		1.500	C	0.27	15E10CT	M27/340-04
	4.800	D	0.040	24E5CT	M27/341-01		2.400	D	0.180	24E10CT	M27/341-04
	16.000	E2	0.009	80E5CT	M27/342-01		8.000	E	0.03	80E10CT	M27/342-04
	35.000	F2	0.012	175E5CT	M27/343-01		17.500	F2	0.020	175E10CT	M27/343-04
6.3	0.317	A	1.06	2E6.3CT	M27/338-02	12.6	0.158	A	4.10	2E12.6CT	M27/338-05
	0.950	B	0.24	6E6.3CT	M27/339-02		0.475	B	0.99	6E12.6CT	M27/339-05
	2.380	C	0.088	15E6.3CT	M27/340-02		1.180	C	0.32	15E12.6CT	M27/340-05
	3.800	D	0.107	24E6.3CT	M27/341-02		1.900	D	0.225	24E12.6CT	M27/341-05
	12.800	E2	0.016	80E6.3CT	M27/342-02		6.350	E	0.03	80E12.6CT	M27/342-05
	27.800	F2	0.019	175E6.3CT	M27/343-02		13.900	F2	0.021	175E12.6CT	M27/343-05
8.0	0.250	A	1.63	2E8CT	M27/338-03	14.0	0.142	A	5.59	2E14CT	M27/338-06
	0.750	B	0.396	6E8CT	M27/339-03		0.428	B	1.11	6E14CT	M27/339-06
	1.800	C	0.135	15E8CT	M27/340-03		1.070	C	0.35	15E14CT	M27/340-06
	3.000	D	0.140	24E8CT	M27/341-03		1.700	D	0.32	24E14CT	M27/341-06
	10.000	E2	0.017	80E8CT	M27/342-03		5.600	E	0.04	80E14CT	M27/342-06
	22.000	F2	0.010	175E8CT	M27/343-03		12.500	F2	0.022	175E14CT	M27/343-06

See next page for additional models

** Supersedes MIL-T-27.*

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400Hz MIL-PRF-27* Power Transformers

Output Volts (FL)	Output Current (Amp)	Size	Secondary DCR Ohms (Typical)	Model No.	QPL Model No.
16.0	0.125	A	6.63	2E16CT	M27/338-07
	0.375	B	1.58	6E16CT	M27/339-07
	0.940	C	0.54	15E16CT	M27/340-07
	1.500	D	0.35	24E16CT	M27/341-07
	5.000	E	0.05	80E16CT	M27/342-07
	10.900	F2	0.025	175E16CT	M27/343-07
18.0	0.111	A	9.00	2E18CT	M27/338-08
	0.333	B	2.21	6E18CT	M27/339-08
	0.832	C	0.74	15E18CT	M27/340-08
	1.330	D	0.40	24E18CT	M27/341-08
	4.450	E	0.08	80E18CT	M27/342-08
	9.700	F	0.027	175E18CT	M27/343-08
20.0	0.100	A	10.90	2E20CT	M27/338-09
	0.300	B	2.78	6E20CT	M27/339-09
	0.750	C	1.40	15E20CT	M27/340-09
	1.200	D	0.48	24E20CT	M27/341-09
	4.000	E	0.09	80E20CT	M27/342-09
	8.750	F	0.020	175E20CT	M27/343-09
22.0	0.091	A	14.60	2E22CT	M27/338-10
	0.273	B	2.80	6E22CT	M27/339-10
	0.680	C	0.92	15E22CT	M27/340-10
	1.090	D	0.63	24E22CT	M27/341-10
	3.630	E	0.12	80E22CT	M27/342-10
	7.900	F	0.020	175E22CT	M27/343-10
25.0	0.080	A	20.40	2E25CT	M27/338-11
	0.240	B	3.60	6E25CT	M27/339-11
	0.600	C	1.30	15E25CT	M27/340-11
	0.960	D	0.68	24E25CT	M27/341-11
	3.200	E	0.13	80E25CT	M27/342-11
	7.000	F	0.042	175E25CT	M27/343-11
26.0	0.077	A	21.22	2E26CT	M27/338-27
	0.231	B	3.74	6E26CT	M27/339-31
	0.577	C	1.35	15E26CT	M27/340-31
	0.923	D	0.71	24E26CT	M27/341-31
	3.08	E	0.14	80E26CT	M27/342-31
	6.73	F	0.044	175E26CT	M27/343-31
28.0	0.071	A	30.00	2E28CT	M27/338-12
	0.214	B	4.20	6E28CT	M27/339-12
	0.535	C	1.83	15E28CT	M27/340-12
	0.855	D	0.98	24E28CT	M27/341-12
	2.850	E	0.14	80E28CT	M27/342-12
	6.250	F	0.043	175E28CT	M27/343-12
31.0	0.064	A	25.60	2E31CT	M27/338-13
	0.192	B	5.71	6E31CT	M27/339-13
	0.485	C	1.62	15E31CT	M27/340-13
	0.772	D	1.27	24E31CT	M27/341-13
	2.470	E	0.18	80E31CT	M27/342-13
	5.650	F	0.061	175E31CT	M27/343-13
35.0	0.057	A	29.50	2E35CT	M27/338-14
	0.171	B	6.89	6E35CT	M27/339-14
	0.428	C	2.28	15E35CT	M27/340-14
	0.685	D	1.70	24E35CT	M27/341-14
	2.280	E	0.28	80E35CT	M27/342-14
	5.000	F	0.098	175E35CT	M27/343-14
39.0	0.051	A	38.60	2E39CT	M27/338-15
	0.154	B	9.39	6E39CT	M27/339-15
	0.384	C	2.54	15E39CT	M27/340-15
	0.615	D	2.20	24E39CT	M27/341-15
	2.050	E	0.32	80E39CT	M27/342-15
	4.480	F	0.110	175E39CT	M27/343-15
43.0	0.046	A	44.30	2E43CT	M27/338-16
	0.139	B	10.25	6E43CT	M27/339-16
	0.348	C	2.85	15E43CT	M27/340-16
	0.556	D	2.42	24E43CT	M27/341-16
	1.860	E	0.35	80E43CT	M27/342-16
	4.060	F	0.114	175E43CT	M27/343-16
48.0	0.041	A	57.00	2E48CT	M27/338-17
	0.125	B	15.30	6E48CT	M27/339-17
	0.312	C	4.05	15E48CT	M27/340-17
	0.500	D	3.27	24E48CT	M27/341-17
	1.660	E	0.40	80E48CT	M27/342-17
	3.650	F	0.160	175E48CT	M27/343-17
55.0	0.036	A	89.00	2E55CT	M27/338-18
	0.109	B	17.30	6E55CT	M27/339-18
	0.262	C	7.20	15E55CT	M27/340-18
	0.435	D	3.83	24E55CT	M27/341-18
	1.450	E	0.67	80E55CT	M27/342-18
	3.170	F	0.196	175E55CT	M27/343-18
63.0	0.031	A	100.00	2E63CT	M27/338-19
	0.095	B	24.90	6E63CT	M27/339-19
	0.238	C	6.51	15E63CT	M27/340-19
	0.380	D	5.35	24E63CT	M27/341-19
	1.270	E	0.71	80E63CT	M27/342-19
	2.770	F	0.20	175E63CT	M27/343-19
70.0	0.028	A	139.00	2E70CT	M27/338-20
	0.085	B	27.10	6E70CT	M27/339-20
	0.214	C	9.40	15E70CT	M27/340-20
	0.342	D	8.10	24E70CT	M27/341-20
	1.140	E	0.80	80E70CT	M27/342-20
	2.500	F	0.25	175E70CT	M27/343-20
80.0	0.025	A	163.00	2E80CT	M27/338-21
	0.075	B	39.00	6E80CT	M27/339-21
	0.198	C	13.40	15E80CT	M27/340-21
	0.300	D	9.00	24E80CT	M27/341-21
	1.000	E	0.92	80E80CT	M27/342-21
	2.180	F	0.34	175E80CT	M27/343-21

See next page for additional models

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400Hz MIL-PRF-27* Power Transformers

Output Volts (FL)	Output Current (Amp)	Size	Secondary DCR Ohms (Typical)	Model No.	QPL Model No.
90.0	0.022	A	218.00	2E90CT	M27/338-22
	0.067	B	41.00	6E90CT	M27/339-22
	0.166	C	15.90	15E90CT	M27/340-22
	0.267	D	12.50	24E90CT	M27/341-22
	0.890	E	1.08	80E90CT	M27/342-22
	1.940	F	0.38	175E90CT	M27/343-22
100.0	0.020	A	283.00	2E100CT	M27/338-23
	0.060	B	59.50	6E100CT	M27/339-23
	0.150	C	16.80	15E100CT	M27/340-23
	0.240	D	14.40	24E100CT	M27/341-23
	0.800	E	1.642	80E100CT	M27/342-23
	1.750	F	0.520	175E100CT	M27/343-23
110	0.018	A	392.00	2E110CT	M27/338-24
	0.054	B	62.30	6E110CT	M27/339-24
	0.136	C	22.10	15E110CT	M27/340-24
	0.218	D	19.50	24E110CT	M27/341-24
	0.728	E	2.03	80E110CT	M27/342-24
	1.590	F	0.72	175E110CT	M27/343-24
115	0.017	A	410.00	2E115CT	M27/338-28
	0.052	B	65.10	6E115CT	M27/339-32
	0.130	C	23.10	15E115CT	M27/340-32
	0.209	D	20.40	24E115CT	M27/341-32
	0.696	E	2.12	80E115CT	M27/342-32
	1.520	F	0.72	175E115CT	M27/343-32
123	0.016	A	495.00	2E123CT	M27/338-25
	0.048	B	96.00	6E123CT	M27/339-25
	0.122	C	30.70	15E123CT	M27/340-25
	0.195	D	21.90	24E123CT	M27/341-25
	0.650	E	2.35	80E123CT	M27/342-25
	1.420	F	0.81	175E123CT	M27/343-25
138	0.014	A	550.00	2E138CT	M27/338-26
	0.043	B	133.00	6E138CT	M27/339-26
	0.108	C	36.00	15E138CT	M27/340-26
	0.174	D	30.30	24E138CT	M27/341-26
	0.580	E	3.17	80E138CT	M27/342-26
	1.260	F	1.14	175E138CT	M27/343-26
157	0.038	B	153.00	6E157CT	M27/339-27
	0.095	C	53.00	15E157CT	M27/340-27
	0.152	D	36.10	24E157CT	M27/341-27
	0.508	E	3.60	80E157CT	M27/342-27
	1.100	F	1.31	175E157CT	M27/343-27
175	0.034	B	168.00	6E175CT	M27/339-28
	0.085	C	56.00	15E175CT	M27/340-28
	0.136	D	49.50	24E175CT	M27/341-28
	0.455	E	5.50	80E175CT	M27/342-28
	1.000	F	1.87	175E175CT	M27/343-28
200	0.030	B	248.00	6E200CT	M27/339-29
	0.071	C	65.00	15E200CT	M27/340-29
	0.120	D	57.00	24E200CT	M27/341-29
	0.400	E	5.60	80E200CT	M27/342-29
	0.875	F	2.65	175E200CT	M27/343-29
220	0.027	B	278.0	6E220CT	M27/339-30
	0.068	C	91.50	15E220CT	M27/340-30
	0.109	D	79.00	24E220CT	M27/341-30
	0.364	E	8.10	80E220CT	M27/342-30
	0.790	F	2.92	175E220CT	M27/343-30
250	0.024	B	407.00	6E250CT	N/A
	0.060	C	141.00	15E250CT	N/A
	0.096	D	114.00	24E250CT	N/A
	0.320	E	11.20	80E250CT	N/A
	0.700	F	3.95	175E250CT	N/A
275	0.021	B	417.00	6E275CT	N/A
	0.054	C	146.00	15E275CT	N/A
	0.087	D	120.00	24E275CT	N/A
	0.290	E	13.60	80E275CT	N/A
	0.635	F	4.65	175E275CT	N/A
310	0.019	B	592.00	6E310CT	N/A
	0.048	C	160.00	15E310CT	N/A
	0.077	D	180.00	24E310CT	N/A
	0.256	E	14.10	80E310CT	N/A
	0.565	F	6.80	175E310CT	N/A
350	0.017	B	680.00	6E350CT	N/A
	0.042	C	232.00	15E350CT	N/A
	0.068	D	200.00	24E350CT	N/A
	0.217	E	21.20	80E350CT	N/A
	0.500	F	8.00	175E350CT	N/A
387	0.038	C	310.00	15E387CT	N/A
	0.062	D	225.00	24E387CT	N/A
	0.206	E	22.70	80E387CT	N/A
	0.450	F	10.00	175E387CT	N/A
433	0.034	C	457.00	15E433CT	N/A
	0.055	D	300.00	24E433CT	N/A
	0.184	E	31.60	80E433CT	N/A
	0.404	F	11.20	175E433CT	N/A
486	0.049	D	340.00	24E486CT	N/A
	0.164	E	35.60	80E486CT	N/A
	0.360	F	16.00	175E486CT	N/A

See next page for drawings and dimensions

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400Hz MIL-PRF-27* Power Transformers

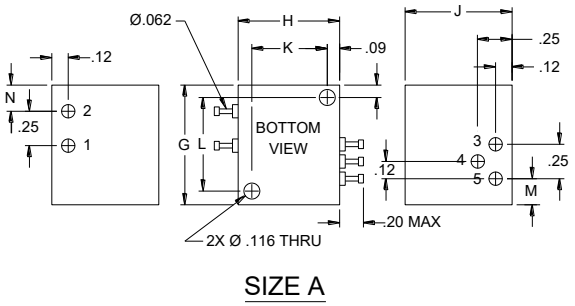
Dimensions

Size	G	H	J	K	L	M	N
A	.87	.74	.78	.55	.68	.187	.187
B	1.25	1.19	.88	.94	1.00	.25	—
C	1.43	1.24	1.27	.99	1.18	.25	—
D	1.47	1.28	1.40	1.03	1.22	.25	—
E	2.31	1.52	1.75	1.02	1.81	.50	—
E2	2.31	1.52	1.75	1.02	1.81	.50	.75
F	2.75	2.71	2.31	2.21	2.25	.75	—
F2	2.75	2.71	2.31	2.21	2.25	.75	1.00

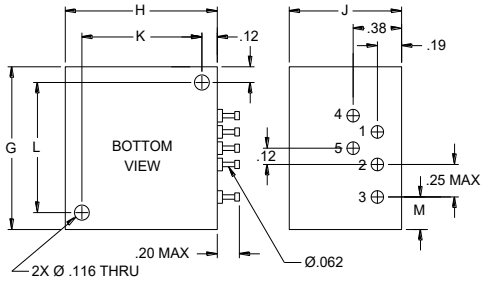
Model Type	Weight lb. (Max)	Primary DCR Ohms (Typ.)
2E	0.06	201.0
6E	0.15	61.0
15E	0.28	14.0
24E	0.32	12.0
80E	0.80	2.0
175E	2.2	0.7

Dimension tolerance: M, N = ± .031, .xx = ± .015; .xxx = ± .005.
NOTE: Dimensions G and H measured at top of transformer.

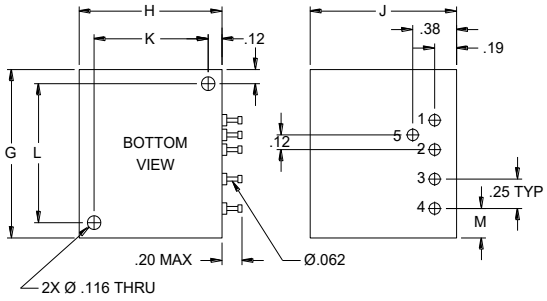
Mechanical Drawings



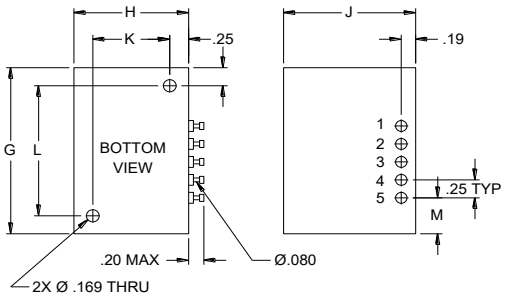
SIZE A



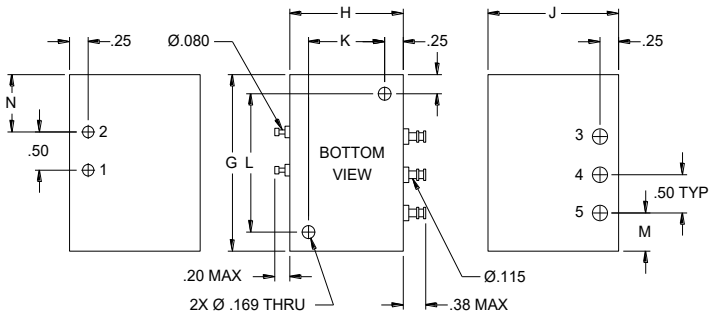
SIZE B



SIZE C, D

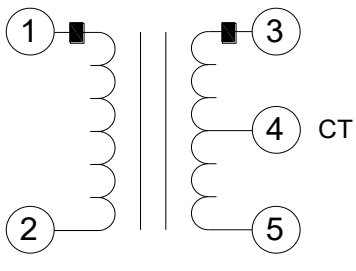


SIZE E, F



SIZE E2, F2

TYPICAL CIRCUIT DIAGRAM



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