

60 Hz MIL-PRF-27F* Power Transformers

- Military Designation TF4S03YY
- Hermetically sealed, rugged MIL-PRF-27F* transformers
- Standard output voltages: 5 to 486 volts
- Threaded inserts for versatile mounting
- Wide range of power ratings: 5, 10, 15, 20, 30, 40, 80, 120, 160, 200, and 300 VA

Specifications

Input Primary:
115 V ac, 60 Hz +5 Hz**, 1 phase.

"A" Option: 230 V ac. Add suffix "A" to model number, e.g., 5P10CTA (Fig. 1).

"B" Option: 115/230 V ac. Add suffix "B" to model number, e.g., 5P10CTB (Fig. 2).

**For 50 Hz operation, reduce secondary current by 10% of listed ratings (These units are capable of 400 Hz operation.)

Regulation:
12% or less no load to full load (Sizes A1-A2) 10% or less no load to full load (Sizes A3-A11).

Secondary Voltage Tolerance:
Within 3% of listed output voltage when measured at full load and listed input.

Dielectric Withstanding Voltage:
1750 V ac.

Efficiency:
Ranges from 80% to 90% typical.

Operating Ambient Temperature:
95° C maximum.

Construction:
To MIL-PRF-27F*, Grade 4, Class S; steel case.

* Superseded MIL-T-27



Environment:
Encapsulated to meet MIL-STD-810 for vibration, shock, acceleration, sand, dust, humidity, saltspray, fungus, sunshine, rain, explosion, and altitude.
NOTE: For high altitude operation, encapsulate terminals.

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

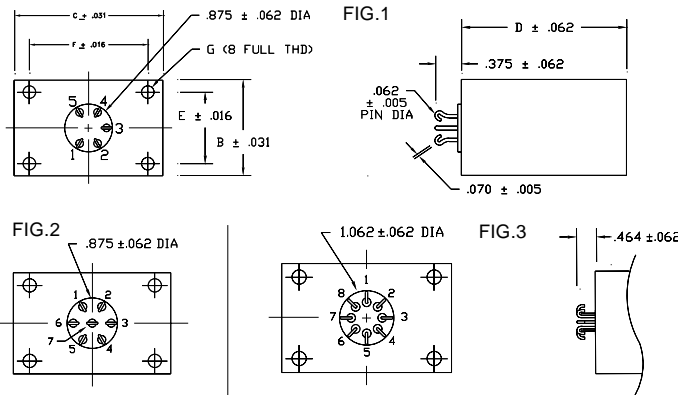
Other outputs and/or inputs available upon request.

Dimensions

Size	B	C	D	E	F	G	Model Type	Weight Lbs (max)	Primary DCR Ohms (Typical)
A1	1.500	1.750	2.375	1.062	1.250	6-32	5P	1.0	86.0
A2	1.750	2.062	2.750	1.250	1.500	6-32	10P	1.5	36.0
A3	1.875	2.375	3.125	1.250	1.750	8-32	15P	2.0	24.0
A4	2.000	2.375	3.125	1.500	1.750	8-32	20P	2.5	15.0
A5	2.125	2.687	3.500	1.500	2.000	8-32	30P	3.0	8.5
A6	2.250	2.687	3.500	1.625	2.000	8-32	40P	3.3	6.7
A7*	2.625	3.125	4.125	2.000	2.250	8-32	80P	5.0	3.7
A8*	2.875	3.437	4.500	2.250	2.500	10-32	120P	6.5	1.9
A9*	3.125	3.750	4.875	2.437	2.750	10-32	160P	8.2	1.6
A10*	3.375	4.062	5.250	2.625	3.000	1/4-20	200P	10.5	1.1
A11*	3.875	4.687	6.000	2.750	3.500	1/4-20	300P	17.0	0.5

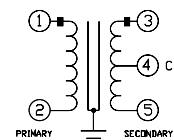
*See Fig.3 for header configuration used on any unit with output current greater than 10 amps.

Mechanical Drawings



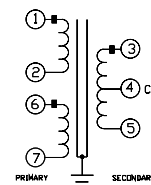
Circuit Diagram

Standard and "A" Option



"B" Option

for 115 V. Connect 1 and 6, 2 and 7.
for 230 V. Connect 2 and 6



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60 Hz MIL-PRF-27F Power Transformers

Output Volts (F.L.)	Output Current (Amp)	Size	Secondary DCR Ohms (Typical)	Model No.	QPL Model No.	Output Volts (F.L.)	Output Current (Amp)	Size	Secondary DCR Ohms (Typical)	Model No.	QPL Model No.
5.0	1.00	A1	0.335	5P5CT	M27/312-01	20	0.25	A1	5.25	5P20CT	M27/312-09
	2.00	A2	0.12	10P5CT	M27/313-01		0.50	A2	1.54	10P20CT	M27/313-09
	3.00	A3	0.07	15P5CT	M27/314-01		0.75	A3	0.9	15P20CT	M27/314-09
	4.00	A4	0.066	20P5CT	M27/315-01		1.00	A4	0.85	20P20CT	M27/315-09
	6.00	A5	0.04	30P5CT	M27/316-01		1.50	A5	0.4	30P20CT	M27/316-09
	8.00	A6	0.03	40P5CT	M27/317-01		2.00	A6	0.43	40P20CT	M27/317-09
	16.00	A7	0.011	80P5CT	M27/318-01		4.00	A7	0.19	80P20CT	M27/318-09
6.3	0.79	A1	0.53	5P6.3CT	M27/312-02	22	6.00	A8	0.12	120P20CT	M27/319-08
	1.58	A2	0.18	10P6.3CT	M27/313-02		8.00	A9	0.07	160P20CT	M27/320-07
	2.38	A3	0.094	15P6.3CT	M27/314-02		10.00	A10	0.066	200P20CT	M27/321-06
	3.16	A4	0.1	20P6.3CT	M27/315-02		15.00	A11	0.023	300P20CT	M27/322-03
	4.76	A5	0.06	30P6.3CT	M27/316-02		0.22	A1	7.3	5P22CT	M27/312-10
	6.35	A6	0.059	40P6.3CT	M27/317-02		0.45	A2	1.9	10P22CT	M27/313-10
	12.70	A7	0.016	80P6.3CT	M27/318-02		0.68	A3	1.2	15P22CT	M27/314-10
	19.00	A8	0.012	120P6.3CT	M27/319-01		0.91	A4	0.95	20P22CT	M27/315-10
8.0	0.67	A1	0.87	5P8CT	M27/312-03	25	1.36	A5	0.55	30P22CT	M27/316-10
	1.25	A2	0.27	10P8CT	M27/313-03		1.82	A6	0.57	40P22CT	M27/317-10
	1.88	A3	0.16	15P8CT	M27/314-03		3.64	A7	0.25	80P22CT	M27/318-10
	2.50	A4	0.15	20P8CT	M27/315-03		5.45	A8	0.125	120P22CT	M27/319-09
	3.76	A5	0.08	30P8CT	M27/316-03		7.27	A9	0.092	160P22CT	M27/320-08
	5.00	A6	0.079	40P8CT	M27/317-03		9.10	A10	0.073	200P22CT	M27/321-07
	10.00	A7	0.037	80P8CT	M27/318-03		13.60	A11	0.031	300P22CT	M27/322-04
	15.00	A8	0.018	120P8CT	M27/319-02		0.20	A1	8.23	5P25CT	M27/312-11
	20.00	A9	0.014	160P8CT	M27/320-01		0.40	A2	2.55	10P25CT	M27/313-11
10	0.50	A1	1.34	5P10CT	M27/312-04	28	0.60	A3	1.4	15P25CT	M27/314-11
	1.00	A2	0.42	10P10CT	M27/313-04		0.80	A4	1.37	20P25CT	M27/315-11
	1.50	A3	0.23	15P10CT	M27/314-04		1.20	A5	0.7	30P25CT	M27/316-11
	2.00	A4	0.23	20P10CT	M27/315-04		1.60	A6	0.67	40P25CT	M27/317-11
	3.00	A5	0.14	30P10CT	M27/316-04		3.20	A7	0.3	80P25CT	M27/318-11
	4.00	A6	0.11	40P10CT	M27/317-04		4.80	A8	0.182	120P25CT	M27/319-10
	8.00	A7	0.05	80P10CT	M27/318-04		6.40	A9	0.11	160P25CT	M27/320-09
	12.00	A8	0.031	120P10CT	M27/319-03		8.00	A10	0.079	200P25CT	M27/321-08
	16.00	A9	0.018	160P10CT	M27/320-02		12.00	A11	0.042	300P25CT	M27/322-05
	20.00	A10	0.015	200P10CT	M27/321-01		0.18	A1	11.4	5P28CT	M27/312-12
	12.6	0.39	A1	2.06	5P12.6CT		M27/312-05	31	0.36	A2	3.0
0.79		A2	0.65	10P12.6CT	M27/313-05	0.54	A3		1.9	15P28CT	M27/314-12
1.19		A3	0.4	15P12.6CT	M27/314-05	0.71	A4		1.6	20P28CT	M27/315-12
1.59		A4	0.34	20P12.6CT	M27/315-05	1.07	A5		0.94	30P28CT	M27/316-12
2.38		A5	0.2	30P12.6CT	M27/316-05	1.43	A6		0.90	40P28CT	M27/317-12
3.18		A6	0.18	40P12.6CT	M27/317-05	2.86	A7		0.4	80P28CT	M27/318-12
6.35		A7	0.07	80P12.6CT	M27/318-05	4.29	A8		0.205	120P28CT	M27/319-11
9.53		A8	0.041	120P12.6CT	M27/319-04	5.72	A9		0.15	160P28CT	M27/320-10
12.70		A9	0.038	160P12.6CT	M27/320-03	7.10	A10		0.11	200P28CT	M27/321-09
15.90		A10	0.027	200P12.6CT	M27/321-02	10.70	A11		0.046	300P28CT	M27/322-06
14		0.36	A1	2.95	5P14CT	M27/312-06	35		0.16	A1	13.8
	0.72	A2	0.74	10P14CT	M27/313-06	0.32		A2	3.8	10P31CT	M27/313-13
	1.07	A3	0.6	15P14CT	M27/314-06	0.48		A3	2.2	15P31CT	M27/314-13
	1.43	A4	0.4	20P14CT	M27/315-06	0.64		A4	2.2	20P31CT	M27/315-13
	2.15	A5	0.23	30P14CT	M27/316-06	0.97		A5	0.96	30P31CT	M27/316-13
	2.86	A6	0.19	40P14CT	M27/317-06	1.29		A6	0.95	40P31CT	M27/317-13
	5.72	A7	0.1	80P14CT	M27/318-06	2.58		A7	0.45	80P31CT	M27/318-13
	8.59	A8	0.055	120P14CT	M27/319-05	3.87		A8	0.31	120P31CT	M27/319-12
	11.40	A9	0.042	160P14CT	M27/320-04	5.17		A9	0.166	160P31CT	M27/320-11
	14.30	A10	0.029	200P14CT	M27/321-03	6.40		A10	0.12	200P31CT	M27-321-10
	16	0.34	A1	3.35	5P16CT	M27/312-07		39	9.67	A11	0.054
0.68		A2	1.08	10P16CT	M27/313-07	0.14	A1		17.6	5P35CT	M27/312-14
0.94		A3	0.67	15P16CT	M27/314-07	0.29	A2		4.5	10P35CT	M27/313-14
1.25		A4	0.52	20P16CT	M27/315-07	0.43	A3		3.0	15P35CT	M27/314-14
1.87		A5	0.28	30P16CT	M27/316-07	0.57	A4		2.4	20P35CT	M27/315-14
2.50		A6	0.28	40P16CT	M27/317-07	0.86	A5		1.4	30P35CT	M27/316-14
5.00		A7	0.12	80P16CT	M27/318-07	1.14	A6		1.32	40P35CT	M27/317-14
7.50		A8	0.072	120P16CT	M27/319-06	2.28	A7		0.5	80P35CT	M27/318-14
10.00		A9	0.046	160P16CT	M27/320-05	3.43	A8		0.35	120P35CT	M27/319-13
12.50		A10	0.034	200P16CT	M27/321-04	4.57	A9		0.24	160P35CT	M27/320-12
18.70		A11	0.016	300P16CT	M27/322-01	5.71	A10		0.17	200P35CT	M27/321-11
18	0.28	A1	4.65	5P18CT	M27/312-08	39	8.59	A11	0.072	300P35CT	M27/322-08
	0.55	A2	1.42	10P18CT	M27/313-08		0.13	A1	19.7	5P39CT	M27/312-15
	0.83	A3	0.78	15P18CT	M27/314-08		0.26	A2	6.3	10P39CT	M27/313-15
	1.11	A4	0.62	20P18CT	M27/315-08		0.38	A3	3.5	15P39CT	M27/314-15
	1.67	A5	0.38	30P18CT	M27/316-08		0.51	A4	3.6	20P39CT	M27/315-15
	2.21	A6	0.36	40P18CT	M27/317-08		0.77	A5	1.62	30P39CT	M27/316-15
	4.44	A7	0.16	80P18CT	M27/318-08		1.03	A6	1.5	40P39CT	M27/317-15
	6.68	A8	0.08	120P18CT	M27/319-07		2.05	A7	0.7	80P39CT	M27/318-15
	8.89	A9	0.06	160P18CT	M27/320-06		3.07	A8	0.342	120P39CT	M27/319-14
	11.10	A10	0.045	200P18CT	M27/321-05		4.10	A9	0.27	160P39CT	M27/320-13
	16.70	A11	0.02	300P18CT	M27/322-02		5.12	A10	0.18	200P39CT	M27/321-12
						7.69	A11	0.08	300P39CT	M27/322-09	



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Output Volts (F.L.)	Output Current (Amp)	Size	Secondary DCR Ohms (Typical)	Model No.	QPL Model No.
43	0.12	A1	22.0	5P43CT	M27/312-16
	0.23	A2	7.0	10P43CT	M27/313-16
	0.35	A3	4.65	15P43CT	M27/314-16
	0.46	A4	4.0	20P43CT	M27/315-16
	0.70	A5	2.15	30P43CT	M27/316-16
	0.93	A6	1.62	40P43CT	M27/317-16
	1.85	A7	0.94	80P43CT	M27/318-16
	2.79	A8	0.48	120P43CT	M27/319-15
	3.70	A9	0.382	160P43CT	M27/320-14
	4.64	A10	0.26	200P43CT	M27/321-13
	6.95	A11	0.108	300P43CT	M27/322-10
48	0.10	A1	30.0	5P48CT	M27/312-17
	0.21	A2	9.3	10P48CT	M27/313-17
	0.31	A3	5.2	15P48CT	M27/314-17
	0.42	A4	4.4	20P48CT	M27/315-17
	0.63	A5	2.4	30P48CT	M27/316-17
	0.83	A6	2.35	40P48CT	M27/317-17
	1.63	A7	1.0	80P48CT	M27/318-17
	2.50	A8	0.66	120P48CT	M27/319-16
	3.33	A9	0.405	160P48CT	M27/320-15
	4.17	A10	0.29	200P48CT	M27/321-14
	6.26	A11	0.165	300P48CT	M27/322-11
55	0.09	A1	34.4	5P55CT	M27/312-18
	0.18	A2	11.0	10P55CT	M27/313-18
	0.27	A3	7.5	15P55CT	M27/314-18
	0.36	A4	6.0	20P55CT	M27/315-18
	0.55	A5	3.5	30P55CT	M27/316-18
	0.73	A6	3.2	40P55CT	M27/317-18
	1.46	A7	1.5	80P55CT	M27/318-18
	2.18	A8	0.82	120P55CT	M27/319-17
	2.91	A9	0.6	160P55CT	M27/320-16
	3.64	A10	0.41	200P55CT	M27/321-15
	5.46	A11	0.175	300P55CT	M27/322-12
63	0.08	A1	52.0	5P63CT	M27/312-19
	0.16	A2	16.4	10P63CT	M27/313-19
	0.24	A3	8.6	15P63CT	M27/314-19
	0.32	A4	8.6	20P63CT	M27/315-19
	0.48	A5	3.9	30P63CT	M27/316-19
	0.64	A6	3.7	40P63CT	M27/317-19
	1.27	A7	1.7	80P63CT	M27/318-19
	1.91	A8	1.11	120P63CT	M27/319-18
	2.25	A9	0.64	160P63CT	M27/320-17
	3.18	A10	0.47	200P63CT	M27/321-16
	4.76	A11	0.187	300P63CT	M27/322-13
70	0.071	A1	63.0	5P70CT	M27/312-20
	0.143	A2	19.0	10P70CT	M27/313-20
	0.212	A3	11.2	15P70CT	M27/314-20
	0.286	A4	9.8	20P70CT	M27/315-20
	0.429	A5	5.5	30P70CT	M27/316-20
	0.572	A6	5.2	40P70CT	M27/317-20
	1.140	A7	2.4	80P70CT	M27/318-20
	1.720	A8	1.20	120P70CT	M27/319-19
	2.280	A9	0.93	160P70CT	M27/320-18
	2.860	A10	0.67	200P70CT	M27/321-17
	4.290	A11	0.26	300P70CT	M27/322-14
80	0.067	A1	80.0	5P80CT	M27/312-21
	0.125	A2	25.0	10P80CT	M27/313-21
	0.187	A3	13.6	15P80CT	M27/314-21
	0.250	A4	13.4	20P80CT	M27/315-21
	0.375	A5	6.4	30P80CT	M27/316-21
	0.500	A6	6.4	40P80CT	M27/317-21
	1.000	A7	2.7	80P80CT	M27/318-21
	1.500	A8	1.43	120P80CT	M27/319-20
	2.000	A9	1.06	160P80CT	M27/320-19
	2.500	A10	0.74	200P80CT	M27/321-18
	3.750	A11	0.3	300P80CT	M27/322-15
90	0.055	A1	112.00	5P90CT	M27/312-22
	0.111	A2	30.4	10P90CT	M27/313-22
	0.167	A3	20.0	15P90CT	M27/314-22
	0.222	A4	14.8	20P90CT	M27/315-22
	0.332	A5	8.6	30P90CT	M27/316-22
	0.445	A6	8.4	40P90CT	M27/317-22
	0.890	A7	3.8	80P90CT	M27/318-22
	1.340	A8	1.96	120P90CT	M27/319-21
	1.780	A9	1.49	160P90CT	M27/320-20
	2.220	A10	1.05	200P90CT	M27/321-19
	3.320	A11	0.43	300P90CT	M27/322-16

Output Volts (F.L.)	Output Current (Amp)	Size	Secondary DCR Ohms (Typical)	Model No.	QPL Model No.
100	0.050	A1	113.0	5P100CT	M27/312-23
	0.100	A2	40.5	10P100CT	M27/313-23
	0.150	A3	22.0	15P100CT	M27/314-23
	0.200	A4	15.5	20P100CT	M27/315-23
	0.300	A5	10.0	30P100CT	M27/316-23
	0.400	A6	9.4	40P100CT	M27/317-23
	0.800	A7	4.2	80P100CT	M27/318-23
	1.200	A8	2.75	120P100CT	M27/319-22
	1.600	A9	1.69	160P100CT	M27/320-21
	2.000	A10	1.17	200P100CT	M27/321-20
	3.000	A11	0.48	300P100CT	M27/322-17
110	0.045	A1	140.0	5P110CT	M27/312-24
	0.091	A2	44.5	10P110CT	M27/313-24
	0.136	A3	28.0	15P110CT	M27/314-24
	0.182	A4	23.0	20P110CT	M27/315-24
	0.272	A5	13.6	30P110CT	M27/316-24
	0.364	A6	12.5	40P110CT	M27/317-24
	0.726	A7	5.7	80P110CT	M27/318-24
	1.090	A8	3.05	120P110CT	M27/319-23
	1.450	A9	2.3	160P110CT	M27/320-22
	1.820	A10	1.6	200P110CT	M27/321-21
	2.720	A11	0.65	300P110CT	M27/322-18
123	0.040	A1	198.0	5P123CT	M27/312-25
	0.081	A2	70.0	10P123CT	M27/313-25
	0.122	A3	33.5	15P123CT	M27/314-25
	0.162	A4	35.0	20P123CT	M27/315-25
	0.244	A5	15.3	30P123CT	M27/316-25
	0.325	A6	14.6	40P123CT	M27/317-25
	0.650	A7	6.5	80P123CT	M27/318-25
	0.970	A8	4.35	120P123CT	M27/319-24
	1.300	A9	2.57	160P123CT	M27/320-23
	1.620	A10	1.8	200P123CT	M27/321-22
	2.440	A11	0.74	300P123CT	M27/322-19
138	0.036	A1	227.0	5P138CT	M27/312-26
	0.073	A2	80.0	10P138CT	M27/313-26
	0.108	A3	46.0	15P138CT	M27/314-26
	0.145	A4	37.5	20P138CT	M27/315-26
	0.217	A5	21.0	30P138CT	M27/316-26
	0.289	A6	20.5	40P138CT	M27/317-26
	0.580	A7	9.5	80P138CT	M27/318-26
	0.870	A8	4.85	120P138CT	M27/319-25
	1.150	A9	3.6	160P138CT	M27/320-24
	1.450	A10	2.5	200P138CT	M27/321-23
	2.170	A11	1.02	300P138CT	M27/322-20
157	0.064	A2	100.0	10P157CT	M27/313-27
	0.096	A3	53.0	15P157CT	M27/314-27
	0.127	A4	48.2	20P157CT	M27/315-27
	0.191	A5	24.5	30P157CT	M27/316-27
	0.254	A6	23.6	40P157CT	M27/317-27
	0.510	A7	10.5	80P157CT	M27/318-27
	0.760	A8	5.45	120P157CT	M27/319-26
	1.020	A9	4.1	160P157CT	M27/320-25
	1.270	A10	2.86	200P157CT	M27/321-24
	1.910	A11	1.16	300P157CT	M27/322-21
175	0.057	A2	111.0	10P175CT	M27/313-28
	0.086	A3	70.0	15P175CT	M27/314-28
	0.114	A4	55.0	20P175CT	M27/315-28
	0.171	A5	35.0	30P175CT	M27/316-28
	0.228	A6	33.7	40P175CT	M27/317-28
	0.457	A7	14.8	80P175CT	M27/318-28
	0.685	A8	7.6	120P175CT	M27/319-27
	0.914	A9	5.82	160P175CT	M27/320-26
	1.140	A10	4.09	200P175CT	M27/321-25
	1.710	A11	1.63	300P175CT	M27/322-22
200	0.050	A2	160.0	10P200CT	M27/313-29
	0.075	A3	87.0	15P200CT	M27/314-29
	0.100	A4	75.0	20P200CT	M27/315-29
	0.150	A5	40.5	30P200CT	M27/316-29
	0.200	A6	38.5	40P200CT	M27/317-29
	0.400	A7	17.0	80P200CT	M27/318-29
	0.600	A8	8.8	120P200CT	M27/319-28
	0.800	A9	6.7	160P200CT	M27/320-27
	1.000	A10	4.55	200P200CT	M27/321-26
	1.500	A11	1.92	300P200CT	M27/322-23

NOTE: Other Standard outputs up to 1000 volts available

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