



Bill of Materials for 440 VAC Power Factor Correction Demonstration Board

Design Title 440 VAC Power Factor Correction Board
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Total Parts 102

Assembly Parts List for 440VAC Power Factor Correction Board

Item	Designator	QTY	Value	Description	Manufacturer	Manufacturer #
1	C1, C8	2	220pF	220pF ±10% 50V X7R Ceramic Capacitor 1206	Vishay	VJ1206Y221KBAAT4X
2	C36, C37, C5, C7	4	1UF	1µF ±10% 25V X7R Ceramic Capacitor 1206	Vishay	VJ1206Y105KXXAT
3						
4	C38	1	47UF	CAP CER 47UF 25V 20% X5R 1206	TDK Corporation	C3216X5R1E476M160AC
5	C4	1	10000PF	10000pF ±10% 50V X7R Ceramic Capacitor 1206	Vishay	VJ1206Y103KXACW1BC
6	C6	1	3.9uF	C1206C395K3PACTU	KEMET	CGA5L1X7R1E685K160AC

7	C3, C39, C50, C42	4	0.1UF	0.10μF ±10% 50V X7R Ceramic Capacitor 1206	Vishay	VJ1206Y104KXACW1BC
8	C60, C11, C34, C35, C32, C33	6	0.15UF	CAP CER 0.15UF 1KV 10% X7R 2225	KEMET	C2225C154KDRACU
9	C9	1	820pF	820pF ±10% 50V X7R Ceramic Capacitor 1206	Vishay	VJ1206Y821KBAAT4X
10	C12A, C12B,	2	50UF	CAP FILM 50UF 5% 900VDC RAD 4LD	Vishay	MKP1848C65090JY5
11	C15	1	2000PF	CAP CER 2000PF 50V NP0 1206	AVX Corporation	12065A202JAT2A
12	C20	1	47UF	CAP TANT 47UF 25V 10% 2917	AVX Corporation	TAJY476K025RNJ
13	C24, 25	2	1UF	CAP FILM 1UF 10% 1KVDC RADIAL	KEMET	R76QW4100SE30K
14	R1	1	27k	RES SMD 27K OHM 1% 1/4W 1206	Stackpole Electronics	RMCF1206FT27K0
15	R8	1	20k	RES SMD 20K OHM 1% 1/4W 1206	Stackpole Electronics	RMCF1206FT20K0
16	R11, R9, R10	3	10K	RES SMD 10K OHM 1% 1/4W 1206	Panasonic	ERJ-8ENF1002V
17	R5	1	4.12k	RES SMD 4.12K OHM 1% 1/4W 1206	Stackpole Electronics	RMCF1206FT4K12
18	R2A, R2B, R19A, R19B	4	249K	RES SMD 249K OHM 1% 1/4W 1206	Panasonic	ERJ-8ENF2493V
19	R3	1	9.31K	RES SMD 9.31K OHM 1% 1/4W 1206	Panasonic	ERJ-8ENF9311V
20	R4A, R4B, R20A, R20B	4	267K	RES SMD 267K OHM 1% 1/4W 1206	Panasonic	ERJ-8ENF2673V
21	R6	1	17.4k	RES SMD 17.4K OHM 1% 1/4W 1206	Stackpole Electronics	RMCF1206FT17K4
22	R7	1	909k	RES SMD 909K OHM 1% 1/4W 1206	Stackpole Electronics	RMCF1206FT909K
23	R12	1	4.22K	RES SMD 4.22K OHM 1% 1/4W 1206	Stackpole Electronics	RMCF1206FT4K22

24	R51		7.87k	RES SMD 7.87K OHM 1% 1/4W 1206	Stackpole Electronics	RMCF1206FT7K87
25	R13A, R13B, R21A, R21B, R50A,B,C,D	8	634k	RES SMD 634K OHM 1% 1/4W 1206	Stackpole Electronics	RMCF1206FT634KCT-ND
28	R14	1	0.2	RES SMD 0.2 OHM 1% 5W 4527	Vishay Dale	WSR5R2000FEA
29	RG_H	1	7.5	RES SMD 7.5 OHM 1% 1/4W 1206	Panasonic	ERJ-8RQF7R5V
30	RG_L	1	15	RES SMD 15 OHM 1% 1/4W 1206	Panasonic	ERJ-8ENF15R0V
31	R40, R42	2	1k	RES SMD 1K OHM 1% 1/4W 1206	Stackpole Electronics	RMCF1206FT1K00
32	R41	1	100k	RES SMD 100K OHM 1% 1/4W 1206	Stackpole Electronics	RMCF1206FT100K
33	B1	1	60	FERRITE CHIP 60 OHM 6000MA 1806	Murata	BLM41PG600SN1L
34	T1, T3	2		TERM BLOCK 2POS SIDE ENTRY 10MM	TE Connectivity	282858-2
35	T2	1		CONN TERMINAL BLOCK 2POS 5.08MM	Molex	395443002
36	DH, DL, D5, D8	4	40V	DIODE SCHOTTKY 40V 1A SOD123	Diodes Incorporated	1N5819HW-7-F
37	D7	1	1kV	DIODE GEN PURP 1KV 60A TO247AC	Vishay	VS-60APF10-M3
38	D10	1	2.7	DIODE ZENER 2.7V 500MW SOD123	Diodes Incorporated	MMSZ5223B-7-F
39	U1	1		IC PFC CTRLR AVERAGE CURR 16SOIC	Texas Instruments	UCC3818D
40	U2	1		IC DRIVER MOSF 12A LO SIDE 8SOIC	Micrel	MIC4452YM TR
41	U3	1		IC COMP OTT R-R 44V TSOT-23-5	Linear Technology	LT1716CS5#TRMPBF
42	F1	1		FUSE BLOK CARTRIDGE 500V 10A PCB	Schurter, Inc	0031.8211

43	BR1	1		RECT BRIDGE GPP 15A 800V GBJ	Micro Commercial Co	GBJ1508-BP
44	AC1, AC2, CAI, CAOUT, CT, DRV, EN, GND1,GND2,GND3, GND4, HV, HV_Return, IAC, MOUt, PKLMT, SS, VAOUT, VCC, VFF,	21		TERMINAL TURRET DBL .082"L	Keystone	1573-2
45	VGS, VDS	2		CONN BNC JACK STR 50 OHM PCB	TE Connectivity	5-1634503-1
46	L2	1		CHOKe COMM MODE W/HDR 1mH 10A	Bourns	8108-RC
47	Q2	1		MOSFET N-CH 30V 1.8A MCPH3	On Semiconductor	MCH3475-TL-E
48	F1 - FUSE Cover	1		Fuse Cover	Schurter, Inc	853.0551
49	L1	1		MPP Core (68Turns, 14 AWG)	Magnetics Inc	55438
50				APCDX402530MS-182L-101-0.6-B1, 3	MGT (Taiwan), sales@mgt.co.com	+886 (0)2 8663 8890 (Taiwan) +49 (0)641 94 439-0 (Europe)
51				STATIKOLA@maminc.net	MAM Inc.	1-908-393-2571 (US)
52	Q1	1		1.2kV, 100 mOhm Cascode	United silicon Carbide	UJC1210K
53	D1	1	5A	1.2kV, 5A SiC diode	United silicon Carbide	UJ2D1205T