

Designator (Motherboard)	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
C10	1	CAP CER, NPO, 22pF, 50V	22pF	5%	0603	Würth	885012006053	Yes	Yes
C11	1	CAP CER 0.1UF 50V 10% X7R 0603	0.1u	10%	0603	Murata	GCM188R71H104KA57D	Yes	Yes
C14	1	CAP CER 10 nF 50 V X7R 0603	10n	10%	0603	Yageo	CC0603KRX7R9BB103	Yes	Yes
C15	1	CAP CER 0.1UF 50V 10% X7R 0603	0.1uF	10%	0603	Murata	GCM188R71H104KA57D	Yes	Yes
C17	1	CAP CER 0.1UF 50V 10% X7R 1206	0.1uF	10%	1206	Kemet	C1206C104K5RACAUTO	Yes	Yes
C19	1	CAP CER 10UF 25V 10% X7R 1206	10uF	10%	1206	Samsung	CL31B106KAHNNNE	Yes	Yes
C25	1	CAP ALUM 22UF 20% 50V RADIAL	22uF	20%	Radial	Nichicon	UVK1H220MDD1TD	Yes	Yes
C26	1	CAP CER 2200PF 50V X7R 0603	2.2nF	20%	0603	Kemet	C0603C222M5RACTU	Yes	Yes
C29	1	CAP CER 22nF 50 V X7R 0603	22n	10%	0603	Kemet	C0603C223K5RACTU	Yes	Yes
C30	1	CAP CER 1UF 25V 10% X7R 0603	1uF	10%	0603	Samsung	CL10B105KA8NNNC	Yes	Yes
C31	1	CAP CER 22UF 25V 10% X5R 1206	22uF	10%	1206	Samsung	CL31A226KAHNNNE	Yes	Yes
C1-2	2	Cap, X Type, 275V.AC, Polypropylene	820nF	20%	Box, Radial	Kemet	R46K138204P0M	No	Yes
C12-13	2	CAP CER 1 nF 630 V X7R 1206	1nF	20%	1206	Yageo	CC1206KKX7RZBB102	Yes	Yes
C16 C18	2	CAP ALUM 100uF 20% 450V Rad. 18x40mm	100uF	20%	Round, Radial	United Chemi-Con	EKXG451ELL101MM40S	No	Yes
C20-21	2	CAP CER 0.1UF 630V 10% X7R 1210	0.1u	10%	1210	Kemet	C1210C104KBAC7800	Yes	Yes
C22-23	2	CAP FILM 2200PF 20% 1.25KVDC RAD	2.2nF	20%	Radial, 13x4mm	Kemet	PHE850EA4220MA01R17	Yes	Yes
C27-28	2	CAP CER DNP Placeholder 0603	DNP		0603			Yes	Yes
C4 C8-9	3	CAP CER 220pF C0G/NPO 0603	220pF	5%	0603	Kemet	C0603C221J5GACTU	Yes	Yes
C5-6	2	Cap, Disc, Y Type, 760VAC	2.2nF	20%	Box, Axial	Kemet	C961U222MWWDBA7317	Yes	Yes
C7 C24	2	CAP CER 1000PF 50V C0G/NPO 0603	1nF	5%	0603	Kemet	C0603X102J5GAC7867	Yes	Yes
D5	1	Diode, Schottky, 30V, 200mA	BAT54H		SOD323	onsemi	BAT54HT1G	No	Yes
D6	1	Diode Ultrafast 600V SOD-123-FL	ES1J		SOD-123_FL	onsemi	ES1JFL	No	Yes
D1-2	2	Diode GEN PURP 1kV 3A	S3M		SMC	onsemi	S3M	No	Yes
D3-4	2	Diode, Schottky, 30V, 200mA	BAT54H		SOD323	onsemi	BAT54HT1G	No	Yes
D7-10	4	DIODE GEN PURP 100V 200MA SOD123	MMSD4148		SOD-123	onsemi	MMSD4148T1G	No	Yes
F1	1	Fuse, 8.4 x4mm, 5.08mm spacing	5A		Thru-Hole	Bel Fuse	RSTA 5 AMMO	Yes	Yes
J10	1	Connector, Header, 100Mil spacing			Thru-Hole	Amphenol	67997-224HLF	Yes	Yes
J11	1	Jumper, 1mm dia, 10.16mm, Gold			Thru-Hole	Harwin	D3082-05	Yes	Yes
J12	1	Conn, Edge, Dual, Female, 26 Position			Thru-Hole, 26 pos	TE Connectivity	1761426-3	No	Yes
J1 J7-9	4	Testpin, Gold, 40mil,			SIP-1	Mill-Max	3103-2-00-21-00-00-08-0	Yes	Yes
J2 J6	2	Header, Vert. 3 pin, 5MM Spacing			Thru-Hole	OST	ED100/3DS	Yes	Yes
J3-4	2	2 Position Wire to Board Terminal Block Horizontal with Board 0.138" (3.5mm) LS	10 Amp		TBD	Phoenix Contact	1984617	Yes	Yes
L1	1	Inductor, Differential, 150uH, 5.4A, 42mOhm	150uH	20%	Thru-Hole	Würth	7447076	No	Yes
L2	1	PFC Inductor, AUX, 150 uH, 3 A, Np:Naux = 10:1	150uH	10%	PQ3230	Würth	750319168	No	Yes
L3	1	Common Mode Choke, 2x 35mH, 2x 80mOhm, 3.5A	35mH	+50%/-30%	Thru-Hole	Würth	7448040435	No	Yes
L4	1	Common Mode Choke, 2x 7mH, 2x 20mOhm, 7A	7mH	+50%/-30%	Thru-Hole	Würth	7448040707	No	Yes
M1-2	2	MOSFET N CH 650V 44A TO-220F			TO-220	onsemi	FCPF067N65S3	No	Yes
MT1-5	5	HEX STANDOFF #6-32 NYLON 3/4"			Thru-Hole	Keystone	1903D	Yes	Yes
MT1-5 Screw		MACHINE SCREW PAN PHILLIPS 6-32, NYLON			Thru-Hole	B&F Fastener Supply	NY PMS 632 0025 PH	Yes	Yes
Q2	1	Transistor, PNP, 40V, 200mA			SOT23	onsemi	MMBT3906	No	Yes
Q1 Q3	2	Transistor, NPN			SOT-23	onsemi	MMBT3904LT1G	No	Yes
R1	1	RES 10K OHM 1% 1/8W 0603	10k	1%	0603	Stackpole	RNCP0603FTD10K0	Yes	Yes
R4	1	RES, SMD, 1/10W	10	1%	0603	Yageo	RC0603FR-0710RL	Yes	Yes
R8	1	RES SMD 0603 PLACEDHOLDER	DNP		0603	NA	NA	Yes	Yes
R18	1	RES SMD 1/2W 1206	DNP		1206	NA	NA	Yes	Yes
R38	1	RES SMD 1K OHM 5% 1/2W 1206	1k	5%	1206	Vishay Dale	CRCW12061K00JNEAHP	Yes	Yes
R41	1	RES SMD 47.5K OHM 1% 1/10W 0603	47.5k	1%	0603	Stackpole	RMCF0603FT47K5	Yes	Yes
R10 R15	2	RES SMD JUMPER 5% 1/4W 1206	0	5%	1206	Panasonic	ERJ-8GEY0R00V	Yes	Yes
R11-14 R33 R35	6	RES SMD 3.3M OHM 1% 1/4W 1206	3.3Meg	1%	1206	Vishay Dale	CRCW12063M30FKEA	Yes	Yes
R16-17	2	RES SMD 100K OHM 1% 1/10W 0603	100k	1%	0603	Stackpole	RMCF0603FT100K	Yes	Yes
R19-20	2	RES SMD 47K OHM 5% 1/8W 0805	47k	5%	0805	Vishay Dale	CRCW080547K0JNEA	Yes	Yes
R2-3 R5 R37	4	RES SMD 1.0K OHM 1% 1/10W 0603	1.0k	1%	0603	Yageo	RC0603FR-071KL	Yes	Yes
R21-22	2	RES, SMD, 1/10W	49.9	1%	0603	Yageo	AC0603FR-0749R9L	Yes	Yes
R23-24	2	RES, SMD, 1/10W	10	1%	0603	Yageo	RC0603FR-0710RL	Yes	Yes
R25-27	3	RES SMD 2.49M OHM 1% 1/4W 1206	2.49Meg	1%	1206	Stackpole	RMCF1206FT2M49	Yes	Yes
R34 R36 R42	3	RES SMD 100K OHM 1% 1/10W 0603	100k	1%	0603	Stackpole	RMCF0603FT100K	Yes	Yes
R39-40	2	RES SMD 4.99K OHM 1% 1/10W 0603	4.99k	1%	0603	Yageo	RC0603FR-074K99L	Yes	Yes
R6-7	2	RES, SMD, 2W	250m	1%	WSR2_4527	Vishay	WSR2R2500FEA	No	Yes
R9 R28-32	6	RES 10K OHM 1% 1/8W 0603	10k	1%	0603	Stackpole	RNCP0603FTD10K0	Yes	Yes
RT1	1	NTC 100k 4250K 5% 0805	100k	5%	0805	Murata	NCP21WF104J03RA	Yes	Yes
RT2	1	Thermistor, NTC, 10 Ohm, 3.7A	DNP		Thru-Hole	TDK	B57237S0100M000	Yes	Yes
RT3	1	Vairistor, Disc, 470V, 4.5kA			Thru-Hole	Littlefuse	V300LA20AP	Yes	Yes
S1	1	Switch, Mom, 32V, 50mA, SMD			SMD	C&K	KMR221GLFS	Yes	Yes
TP1 TP3-9 TP11-14 TP16-17 TP19-24	20	TEST POINT PC MINI RED			Thru-Hole	Keystone	5000	Yes	Yes
TP2 TP10 TP15 TP18	4	TEST POINT PC MINI BLK			Thru-Hole	Keystone	5001	Yes	Yes
U1	1	Totem Pole PFC Controller, SOIC16	NCP1680		SOIC-16	onsemi	NCP1680AAD1R2G	No	Yes
U2	1	High Frequency Gate Driver	NCP51530		SOIC-8	onsemi	NCP51530ADR2G	No	Yes
Z1	1	Zener Diode	4.7V		SOD-123	onsemi	MMSZ5230BT1G	Yes	Yes
Z2-3	2	Zener Diode	15V		SOD-123	onsemi	MMSZ4702T1G	Yes	Yes