



ChangeMe in variant

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	#Column Name Error:A	Alternate Manufacturer
IPC81	1		Printed Circuit Board		PMP41006	Any		
Br33	1		Current sense board					
Br44	1		ECAP Board					
Br55	1		GaN daughter card with LMG3410R070	eg: 0603	LMG3410-HB-EVM	TEXAS INSTRUMENTS		
C1	1	47pF	CAP, CERM, 47 pF, X1 250 VAC/Y1 300 VAC, +/- 10%, B, TH	TH, 2- Leads, Body 7x5mm, Pin Spacing 7.5mm	DE11XKX470JN4AC05 F	MuRata		
C2	1	0.01uF	CAP, CERM, 0.01 uF, 630 V, +/- 10%, X7R, 1206	1206	GRM31BR72J103KW01 L	MuRata		
C3	1	0.1uF	CAP, CERM, 0.1 uF, 500 V, +/- 10%, X7R,		C1210V104KCRACU	Kemet		
C4	1	33uF	CAP, CERM, 33 uF, 25 V, +/- 20%, X5R, 1206	1206	C3216X5R1E336M160 AC	TDK		
C5	1	220uF	CAP, AL, 220 uF, 25V, +/- 20%, 6.3x7.7mm, SMD	6.3x7.7mm	EEE-FTE221XAV	Panasonic		
C6	1	470uF	CAP, AL, 470 uF, 10 V, +/- 20%, 6.3x7.7mm, SMD	D6,3x7.7	EEE-FTA471XAP	Panasonic		
C7	1	0.1uF	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, 0603	0603	GCJ188R71E104KA12 D	MuRata		
C8	1	47uF	CAP, CERM, 47 uF, 25 V, +/- 20%, JB, 1206	1206	C3216JB1E476M160A C	TDK		
C11, C14, C23, C24, C36, C97, C98, C105, C107, C112	10	0.1uF	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, 0603	0603	C1608X7R1E104K080A A	TDK		
C12, C40	2	4.7uF	CAP, CERM, 4.7 uF, 25 V, +/- 10%, X5R, 0603	0603	GRM188R61E475KE11 D	MuRata		
C13, C37	2	22uF	CAP, CERM, 22 uF, 10 V, +/- 20%, X5R, 0603	0603	C1608X5R1A226M080 AC	TDK		
C17, C20	2	2200pF	CAP, CERM, 2200 pF, 50 V, +/- 10%, X7R, 0603	0603	C0603C222K5RACTU	Kemet		
C18, C25, C28, C29, C35	5	470pF	CAP, CERM, 470 pF, 50 V, +/- 10%, X7R, 0603	0603	C0603C471K5RACTU	KEMET		
C19, C22, C26, C27, C31, C38, C39, C50, C96	9	1uF	CAP, CERM, 1uF, 25V, +/-10%, X7R, 0603	0603	C1608X7R1E105K080A B	TDK		
C21	1	0.047uF	CAP, CERM, 0.047 uF, 25 V, +/- 10%, X7R, 0603	0603	CC0603KRX7R9BB473	AVX		
C30, C32	2	0.01uF	CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, 0603	0603	GCJ188R71H103KA01 D	MuRata		
C33, C99	2	0.1uF	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	0603	C1608X7R1H104K080A A	TDK		
C34	1	100pF	CAP, CERM, 100 pF, 25 V, +/- 10%, X7R, 0603	0603	CL10B101KB8NNNC	Samsung		
C41, C43, C47, C49	4	1500pF	CAP, CERM, 1500 pF, V, +/- 20%, E, D8xT6mm	D8xT6mm	CD45-E2GA152M-NKA	TDK		
C42, C48	2	330pF	CAP, CERM, 330 pF, X1 250 VAC/Y2 300 VAC, +/- 10%, B, TH	TH, 2- Leads, Body 7x5mm, Pin Spacing 7.5mm	DE2B3KY331KB3BU02 F	MuRata		
C44	1	0.22uF	CAP, Film, 0.22 uF, 275 V, +/- 10%, TH	18x6x11.5mm	890324025027CS	Würth Elektronik		
C45	1	1.5uF	CAP, Film, 1.5 uF, 275 V, +/- 10%, TH	26x10mm	890324026030	Würth Elektronik		
C51	1	0.56uF	CAP, Film, 0.56 uF, 275V, +/- 10%, TH	26x6mm	890324026018CS	Würth Elektronik		
C52, C88, C89	3	1000pF	CAP, CERM, 1000 pF, 50 V, +/- 10%, X7R, 0603	0603	GCJ188R71H102KA01 D	MuRata		
C53, C60	2	10uF	CAP, CERM, 10 uF, 25 V, +/- 10%, X7R, 1206 190	1206 190	C1206C106K3RACTU	Kemet		
C54, C62, C65, C68, C72, C77, C78	7	1uF	CAP, CERM, 1 uF, 10 V, +/- 10%, X5R, 0402	0402	GRM155R61A105KE15 D	MuRata		
C55, C59	2	33nF	CAP, Film, 33nF, 630 V, +/- 5%, TH	18x6x11mm	B32642B6333J	TDK		
C56	1	470nF	0.47 uF Film Capacitor 310V	RADIAL	ECWFD2J105	PANASONIC [Panasonic Semiconductor]		
C57, C58	2	3300uF	CAP, AL, 3300 uF, 16 V, +/- 20%, 0.023 ohm, TH	D13xL30mm	860160378040	Würth Elektronik		
C63, C66, C73, C74, C79	5	0.1uF	CAP, CERM, 0.1 uF, 50 V, +/- 20%, X7R, 0402	0402	GRM155R71H104ME14 D	MuRata		
C64, C69, C70, C71, C75, C80, C81, C82	8	100pF	CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603	C0603C101J5GAC	Kemet		
C67, C76	2	0.33uF	CAP, CERM, 0.33 uF, 50 V, +/- 10%, X7R, 0603	0603	C1608X7R1H334K080A C	TDK		
C83, C84, C85	3	0.1uF	CAP, CERM, 0.1 uF, 630 V, +/- 10%, X7R, 1210	1210	C1210C104KBRAC780 0	Kemet		
C86	1	680uF	CAP, AL, 680 uF, 450 V, +/- 20%, TH	Dia 35mm	450MXK680MEFCSN35 X45	Rubycon		
C87, C91, C92	3	10uF	CAP, CERM, 10 uF, 25 V, +/- 10%, X5R, 0805	0805	GRM21BR61E106MA73 L	MuRata		
C90, C93	2	0.1uF	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, 0603	0603	885012206071	Würth Elektronik		
C94	1	0.01uF	CAP, CERM, 0.01 uF, 25 V, +/- 10%, X7R, 0603	0603	GRM188R71E103KA01 D	MuRata		
C95	1	0.1uF	CAP, CERM, 0.1 uF, 25 V, +/- 5%, X7R, 0603	0603	C0603C104J3RAC	Kemet		
C100	1	1uF	CAP, CERM, 1 uF, 25 V, +/- 10%, X7R, 0603	0603	C1608X7R1E105K080A A	TDK		
C103	1	39nF	CAP, CERM, 39nF, 25 V, +/- 10%, NP0, 0603	0603		TDK		
C108	1	1uF	CAP, CERM, 1 uF, 16 V, +/- 20%, X7R, AEC-Q200 Grade 1, 0603	0603	GCM188R71C105MA64 D	MuRata		
C110	1	0.01uF	CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, 0603	0603	GRM188R71H103KA01 D	MuRata		
C114, C115, C117	3	1uF	Capacitor 1uF 10% 25V 0603 X7R		GCJ188R71E105KA01 D	Murata		
C116	1	10nF	Capacitor 10nF 10% 25V 0603 X7R		GCD188R71H103KA01 D	Murata		
C118	1	150pF	Capacitor 150pF 5% 100V 0603 X7R		GCM1885C2A151JA16 D	Murata		
C119	1	10pF	Capacitor 10pF 10% 25V 0402 X7R		GCM1555C1H100JA16 D	Murata		
CST1	1		Current Sense Transformer, 5mH,0.7ohm, 10A, 50:1,	none	75004600	Würth Elektronik		
CY2, CY3	2	2200pF	CAP, CERM, 2200 pF, 3000 V,+/- 10%, B, Dia 12.5mm	Dia 12.5mm	CK45-B3FD222KYVNA	TDK		
CY4	1	100pF	CAP, CERM, 100 pF, X1 440 VAC/Y1 250 VAC, +/- 10%, B, D6xT4mm	D6xT4mm	DE1B3RA101KN4AN01 F	MuRata		
D1	1	100V	Diode, Schottky, 100 V, 1 A, SMA	SMA	B1100-13-F	Diodes Inc.		
D2, D14	2	600V	Diode, Superfast Rectifier, 600 V, 1 A, 3.5x1.6mm	3.5x1.6mm	CRF03	Toshiba		
D3	1	24V	Diode, Zener, 24 V, 1 W, PowerDI123	PowerDI123	DFLZ24-7	Diodes Inc.		

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D4	1	70V	Diode, Schottky, 70 V, 1 A, SMA	SMA	B170-13-F	Diodes Inc.		
D5, D9, D11, D13, D15, D16, D17, D18	8	100V	Diode, Ultrafast, 100 V, 0.25 A, SOD-323	SOD-323	BAS316	Toshiba		
D6	1	18V	Diode, Zener, 18 V, 700 mW, SOD-123	SOD-123	CRZ18(TE85L,Q,M)	Toshiba		
D7	1	50V	Diode, Schottky, 50 V, 2 A, SMA	SMA	B250A-13-F	Diodes Inc.		
D8	1	100V	Diode, Switching, 100 V, 0.25 A, SOD-523	SOD-523	BAS516	Toshiba		
D10	1	1000V	Diode, Ultrafast, 1000 V, 1 A, SMA	SMA	US1M-13-F	Diodes Inc.		
D12	1	800V	Diode, Switching-Bridge, 800 V, 4 A, TH	GBU	GBU4K	Micro Commercial Co		
F1	1		FUSE CERAMIC 12A 600VAC/500VDC	21x5.6mm	0ADKP9120-RE	Bel Fuse Inc.		
FAN1	1		Header, 100mil, 4x1, Gold, TH	4x1 Header	TSW-104-07-G-S	Samtec		
H1, H2, H3, H4	4		MACHINE SCREW PAN PHILLIPS M3	M3 Screw	RM3X8MM 2701	APM HEXSEAL		
HS2	1		Copper Heat Sink, TO-220 customized	Heat Sink, TO-220 Vertical	Heatsink-PFC	Any		
J1, J5	2		C2000 controlCARD-120HSEC connector, SMT	C2000 pin numbering	HSEC8-160-01-L-DV-A-BL	Samtec		
J2	1		Header, 100mil, 12x2, Gold, TH	12x2 Header	TSW-112-07-G-D	Samtec		
J3	1		Receptacle, 12x2, 2.54mm, Gold, TH	Receptacle, 12x2, 2.54mm, TH	SSW-112-01-G-D	Samtec		
J4	1		Receptacle, 2.54mm, 14x2, Gold, TH	Receptacle, 2.54mm, 14x2, TH	SSW-114-01-G-D	Samtec		
J6	1		Header, 100mil, 14x2, Gold, TH	14x2 Header	TSW-114-07-G-D	Samtec		
J7	1		Receptacle, 2.54mm, 6x1, Gold, TH	Receptacle, 2.54mm, 6x1, TH	0448120024	Molex		
J8	1		CONN HEADER R/A 6POS 1.27MM					
K1	1		Relay, SPST-NO (1 Form A), 10 A, 12 V, TH	18.2x10.2mm	T77S1D10-12	TE Connectivity		
L1, L2	2	10uH	Inductor, Wirewound, Ferrite, 10 uH, 0.68 A, 0.46 ohm, SMD	2.5x1x2mm	74438323100	Würth Elektronik		
L3	1	2mH	Coupled inductor, 2x 2 mH, 10 A, 2 x 0.006 ohm, TH	23x17x25mm	7448031002	Würth Elektronik		
L4	1	4mH	1000W COMMON MODE CHOKE	32x20mm	YXS80466T	YAXIN ELECTRONIC TECH		
L5	1		1000W RESONANT CHOKE	PQ2010	YXS50494T	YAXIN ELECTRONIC TECH		
L6	1	300uH	1000W PFC CHOKE	30x22x34mm	YXS70311T	YAXIN ELECTRONIC TECH		
Q1, Q2, Q3	3	60V	MOSFET, N-CH, 60V, 0.26A, SOT-23	SOT-23	T2N7002BK	Toshiba		
Q4, Q5	2	600	MOSFET, N-CH, 650 V, 38.8 A,	TO-220	TK39A60W	Toshiba		
Q6, Q7	2		P-Channel MOSFET	E3	SSM3J15CT	Toshiba		
Q8, Q9, Q10, Q11	4		N-Channel MOSFET		SSM3K15ACTC,L3F	Toshiba		
Q12	1	20V	MOSFET, N-CH, 20 V, 0.5 A, YJM0003A (PICOSTAR-3)	YJM0003A	CSD15380F3	Texas Instruments		
R1	1	150k	RES, 150 k, 5%, 0.25 W, 1206	1206	RCV1206150KFKEA	Vishay-Dale		
R2	1	15	RES, 15, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603	CRCW060315R0JNEA	Vishay-Dale		
R3, R99	2	51.1k	RES, 51.1 k, 1%, 0.1 W, 0603	0603	RC0603FR-0751K1L	Yageo		
R4, R35, R36	3	0	RES, 0, 5%, 0.1 W, 0603	0603	RC0603JR-070RL	Yageo		
R5	1	24.0k	RES, 24.0 k, 1%, 0.1 W, 0603	0603	RC0603FR-0724KL	Yageo		
R6	1	2.00k	RES, 2.00 k, 1%, 0.1 W, 0603	0603	RC0603FR-072KL	Yageo		
R7, R44, R98	3	88.7k	RES, 88.7 k, 1%, 0.1 W, 0603	0603	CRCW060388K7FKEA	Vishay-Dale		
R8, R45	2	22.1k	RES, 22.1 k, 1%, 0.1 W, 0603	0603	CRCW060322K1FKEA	Vishay-Dale		
R9, R11, R108, R116	4	100	RES, 100R, 1%, 0.1 W, 0603	0603	100R	Panasonic		
R10, R28, R96, R97, R101, R102, R106	7	1.00k	RES, 1.00 k, 1%, 0.1 W, 0603	0603	ERJ-3EKF1001V	Panasonic		
R12, R40, R43	3	20.0k	RES, 20.0 k, 1%, 0.1 W, 0603	0603	RC0603FR-0720KL	Yageo		
R13, R15, R17, R31	4	5.10k	RES, 5.10 k, 1%, 0.1 W, 0603	0603	RC0603FR-075K1L	Yageo		
R14, R29, R30, R34, R46, R47, R48, R51, R70, R71, R72, R73, R76, R78, R79, R80, R81	17	100	RES, 100, 1%, 0.1 W, 0603	0603	RC0603FR-07100RL	Yageo		
R16, R21, R22, R23, R64, R74, R75, R82, R91, R92, R126	11	10.0k	RES, 10.0 k, 1%, 0.1 W, 0603	0603	ERJ-3EKF1002V	Panasonic		
R18, R88, R94, R95, R103	5	10.0	RES, 10.0, 1%, 0.1 W, 0603	0603	RC0603FR-0710RL	Yageo		
R19	1	510	RES, 510, 1%, 0.1 W, 0603	0603	RC0603FR-07510RL	Yageo		
R20, R25	2	3.57k	RES, 3.57 k, 1%, 0.1 W, 0603	0603	RC0603FR-073K57L	Yageo		
R24, R26, R27, R41	4	21.5k	RES, 21.5k ohm, 1%, 0.1W, 0603	0603	CRCW060321K5FKEA	Vishay-Dale		
R32, R49, R50, R52, R53	5	9.31k	RES, 9.31 k, 1%, 0.1 W, 0603	0603	RC0603FR-079K31L	Yageo		
R33	1	1.35k	RES, 1.35 k, 0.1%, 0.1 W, 0603	0603	RT0603BRD071K35L	Yageo America		
R38	1	4.30k	RES, 4.30 k, 1%, 0.1 W, 0603	0603	RC0603FR-074K3L	Yageo		
R39	1	7.50k	RES, 7.50 k, 1%, 0.1 W, 0603	0603	ERJ-3EKF7501V	Panasonic		
R42	1	430k	RES, 430 k, 1%, 0.1 W, 0603	0603	RC0603FR-07430KL	Yageo		
R54, R55, R56, R60, R61, R62, R83, R84, R86, R87, R89, R90	12	1.00Meg	RES SMD 1M OHM 1% 1/4W 1206	1206	RCV12061M00FKEA	Vishay Dale		
R57, R58, R59	3	330k	RES SMD 330K OHM 1% 1/4W 1206	1206	RV1206FR-07330KL	Yageo		
R63	1	51.1	RES, 51.1, 1%, 0.1 W, 0603	0603	RC0603FR-0751R1L	Yageo		
R65, R66, R67, R68	4	0.0005	RES, 0.0005, 1%, 2 W, 2512	2512	CSNL2512FTL500	Stackpole Electronics Inc		
R69	1	2.00	RES, 2.00, 1%, 0.125 W, 0603	0603	MC T06030C2008FP500	Vishay/Beyschlag		
R85, R93	2	100k	RES, 100 k, 1%, 0.1 W, 0603	0603	RC0603FR-07100KL	Yageo		
R105, R110, R113, R118	4	3.00k	RES, 3.00 k, 1%, 0.1 W, 0603	0603	ERJ-3EKF3001V	Panasonic		

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R107, R109, R115, R117	4	10.00k	RES, 10.00 k, 1%, 0.1 W, 0603	0603	ERJ-3EKF1002V	Panasonic		
R111, R114	2	1.00k	RES, 1.00 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603	CRCW06031K00FKEA	Vishay-Dale		
R112	1	4.00k	RES, 4 k, 1%, 0.1 W, 0603	1206	ERJ-3EKF4001V	Panasonic		
R119, R122, R123, R125	4	0	Resistor 0ohm 5% 0402		ERJ-2GE0R00X	Panasonic		
R120, R121	2	10k	Resistor 10k 5% 0402		ERJ-2GEJ103X	Panasonic		
R124	1	1.5k	Resistor 1.5k 5% 0603		ERJ-3EKF1501V	Panasonic		
RT1	1	50	ICL 60 OHM 13MM	PTCEL13R600LBE	PTCEL13R600LBE	Vishay		
RT2, RT4	2		Thermistor, TMP6131LPGM (TO-92S)	DEC0002A	TMP6131LPGM	Texas Instruments		
RV1	1		Varistor 275V RMS 10MM Radial, TH	10mm Radial	S10K275E2	EPCOS Inc		
SIL1, SIL2, SIL3, SIL4	4		Silicon Thermal Pad	12.7x19.05 mm	SP600-58	Bergquist Company		
T1	1		flyback transformer for UCC28911 dual output	TRF_8	750344367	Wurth Elektronik		
TP2, TP3, TP4	3		Pin Receptacle, .032-.046" .075" Dia, Gold, TH	Pin Receptacle	0312-0-15-15-34-27-10-0	Mill-Max		
TRAN1	1		1000W MAIN TRANSFORMER	PQ3230	YXS61041T	YAXIN ELECTRONIC TECH		
U1	1		700V Flyback Switcher with Constant-Voltage Constant-Current and Primary-side Regulation, D0007A (SOIC-7)	D0007A	UCC28911DR	Texas Instruments		
U2, U6	2		4V to 36 V 0.6 A Synchronous Step-Down Converter, DBV0006A (SOT-23-6)	DBV0006A	TPS560430XDBVR	Texas Instruments		
U3	1		Low- and High-Side Measurement, Multichannel, Voltage Output, Current-Sense Amplifier, DBV0005A (SOT-5)	DBV0005A	INA180A4IDBV	Texas Instruments		
U4	1		SINGLE-POLE DOUBLE-THROW ANALOG SWITCH, DRY0006A	DRY0006A	SN74LVC1G3157DRYR	Texas Instruments		
U5	1		Precision, Low Noise, Low Quiescent Current Operational Amplifier, 2 to 5.5 V, -40 to 125 degC, 8-pin SOIC (D0008A), Green (RoHS & no Sb/Br)	D0008A	OPA2376AIDG4	Texas Instruments		
U7	1		5.7 kVrms, 100 Mbps, Reinforced 4-Channel 2/2 Digital Isolator, DW0016B (SOIC-16)	DW0016B	ISO7742DWR	Texas Instruments		
U8, U11	2		3 Pin 100mA Fixed 5V Positive Voltage Regulator, PK0003A (SOT-3)	PK0003A	UA78L05CPK	Texas Instruments		
U9, U12	2		High Speed, Robust EMC Reinforced Dual-Channel Digital Isolator, DWV0008A (SOIC-8)	DWV0008A	ISO7721FDWVVR	Texas Instruments		
U10	1		Single 2-Input Positive-AND Gate, DBV0005A (SOT-23-5)	DBV0005A	SN74AHC1G08DBVR	Texas Instruments		
U13	1		4-A, 6-A, 3.0-kVRMS Isolated Dual-Channel Gate Driver, D0016A (SOIC-16)	D0016A	UCC21222D	Texas Instruments		
U14	1		TMCS1100A1DT, D0008A (SOIC-8)	D0008A	TMCS1100A1DT	Texas Instruments		
U15	1		Capacitor-Free, 150-mA, Low-Dropout Regulator with Foldback Current Limit for Portable Devices, DBV0005A	DBV0005A	TLV71333PDBVT	Texas Instruments		
U16, U18	2		50-MHz, Low-Power, Gain of 6-V/V Stable, Rail-to-Rail Output CMOS Operational Amplifier, DBV0005A (SOT-23-5)	DBV0005A	OPA365	Texas Instruments		
U17	1		High Bandwidth Low-Iq Programmable Shunt Regulator, DBZ0003A (SOT-23-3)	DBZ0003A	ATL431LIBIDBZR	Texas Instruments		
U19	1		Dual, 5A, High-Speed Low-Side Power MOSFET Driver, DSD0008D (WSON-8)		UCC27525DSDR	Texas Instruments		
ZZ1	1		This Assembly Note is for PCB labels only					
ZZ2	1		These assemblies are ESD sensitive, ESD precautions shall be observed.					
ZZ3	1		These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.					
ZZ4	1		These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.					

Notes:

Unless otherwise noted in the Alternate PartNumber and/or Alternate Manufacturer columns, all parts may be substituted with equivalents.