

ChangeMe in variant

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
IPCB	1		Printed Circuit Board		PMP41006	Any		
Brd1	1		GaN daughter card with LMG3410R070		LMG3410-HB-EVM	TEXAS INSTRUMENTS		
Brd2	1		ECAP Board					
Brd3	1		Current sense board					
Brd4	1		MCU_LLC Board					
Brd5	1		MCU_PFC Board					
Brd6	1		X_CAP Board					
C1, C2	2	2200pF	CAP, CERM, 2200 pF, 50 V, +/- 10%, X7R, 0603	603	C0603C222K5RACTU	Kemet		
C3, C31, C35, C36, C98	5	470pF	CAP, CERM, 470 pF, 50 V, +/- 10%, X7R, 0603	603	C0603C471K5RACTU	KEMET		
C4, C12, C18, C28, C29, C77, C79, C87, C320, C321	10	0.1uF	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, 0603	603	C1608X7R1E104K080A	TDK		
C5, C6, C97	3	100pF	CAP, CERM, 100 pF, 25 V, +/- 10%, X7R, 0603	603	CL10B101KB8NNNC	Samsung		
C7	1	0.22uF	CAP, Film, 0.22 uF, 275 V, +/- 10%, TH	18x6x11.5mm	890324025027CS	Würth Elektronik		
C9, C86	2	4.7uF	CAP, CERM, 4.7 uF, 35 V, +/- 10%, X7R, 0805	805	C2012X7R1V475K125A	TDK		
C10, C21	4	33nF	CAP, Film, 33nF, 630 V, +/- 5%, TH	18x6x11mm	B32642B6333J	TDK		
C11, C57	2	3300uF	CAP, AL, 3300 uF, 16 V, +/- 20%, 0.023 ohm, TH	D13xL30mm	860160378040	Würth Elektronik		
C13	1	1.5uF	CAP, Film, 1.5 uF, 275 V, +/- 10%, TH	26x10mm	890324026030	Würth Elektronik		
C14, C22	2	22uF	CAP, CERM, 22 uF, 10 V, +/- 20%, X5R, 0603	603	C1608X5R1A226M080	TDK		
C15, C23	2	4.7uF	CAP, CERM, 4.7 uF, 25 V, +/- 10%, X5R, 0603	603	GRM188R61E475KE11	MuRata		
C16	1	0.01uF	CAP, CERM, 0.01 uF, 630 V, +/- 10%, X7R, 1206	1206	GRM31BR72J103KW01	MuRata		
C17	1	0.1uF	CAP, CERM, 0.1 uF, 500 V, +/- 10%, X7R,		C1210V104KCRACTU	Kemet		
C19, C56, C71	3	0.1uF	CAP, CERM, 0.1 uF, 630 V, +/- 10%, X7R, 1210	1210	C1210C104KBRAC780	Kemet		
C20, C27, C33, C39, C40, C45, C49, C58, C59, C62, C72, C82, C90	13	1uF	CAP, CERM, 1uF, 25V, +/-10%, X7R, 0603	603	C1608X7R1E105K080A	TDK		
C24	1	0.47uF	CAP, Film, 0.47 uF, 310 V, +/- 10%, TH	18x8mm	890334024005	Würth Elektronik		
C25, C43, C61	3	0.1uF	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	603	C1608X7R1H104K080A	TDK		
C26	1	33uF	CAP, CERM, 33 uF, 25 V, +/- 20%, X5R, 1206	1206	C3216X5R1E336M160	TDK		
C30, C41, C42, C46	4	1500pF	CAP, CERM, 1500 pF, V, +/- 20%, E, D8xT6mm	D8xT6mm	CD45-E2GA152M-NKA	TDK		
C32, C47	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	MuRata		
C34	1	0.047uF	CAP, CERM, 0.047 uF, 25 V, +/- 10%, X7R, 0603	603	CC0603KRX7R9BB473	AVX		
C37, C38	2	0.01uF	CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, 0603	603	GCJ188R71H103KA01	MuRata		
C44	1	220uF	CAP, AL, 220 uF, 25V, +/- 20%, 6.3x7.7mm, SMD	6.3x7.7mm	EEE-FTE221XAV	Panasonic		
C48, C64, C65, C84	4	1000pF	CAP, CERM, 1000 pF, 50 V, +/- 10%, X7R, 0603	603	GCJ188R71H102KA01	MuRata		
C50	1	680uF	CAP, AL, 680 uF, 450 V, +/- 20%, TH	Dia 35mm	450MXK680MEFCSN35	Rubycon		
C51, C52, C106	3	10uF	CAP, CERM, 10 uF, 25 V, +/- 10%, X5R, 0805	805	GRM21BR61E106MA73	MuRata		
C53	1	470uF	CAP, AL, 470 uF, 10 V, +/- 20%, 6.3x7.7mm, SMD	D6.3x7.7	EEE-FTA471XAP	Panasonic		
C54	1	0.1uF	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, 0603	603	GCJ188R71E104KA12	MuRata		
C55	1	47uF	CAP, CERM, 47 uF, 25 V, +/- 20%, JB, 1206	1206	C3216JB1E476M160A	TDK		
C70	1	47pF	CAP, CERM, 47 pF, X1 250 VAC/Y1 300 VAC, +/- 10%, B, TH	TH, 2- Leads, Body 7x5mm, Pin Spacing 7.5mm	DE11KX470JN4AC05	MuRata		
C74	1	39nF	CAP, CERM, 39nF, 25 V, +/- 10%, NP0, 0603	603		TDK		
C80	1	1uF	CAP, CERM, 1 uF, 16 V, +/- 20%, X7R, AEC-Q200 Grade 1, 0603	603	GCM188R71C105MA64	MuRata		
C83	1	0.01uF	CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, 0603	603	GRM188R71H103KA01	MuRata		
C88	1	0.22uF	CAP, CERM, 0.22 uF, 50 V, +/- 10%, X7R, 0603	603	GRM188R71H224KAC4	MuRata		
C91, C92, C94	3	1uF	Capacitor 1uF 10% 25V 0603 X7R		GCJ188R71E105KA01	Murata		
C93	1	10nF	Capacitor 10nF 10% 25V 0603 X7R		GCD188R71H103KA01	Murata		
C95	1	150pF	Capacitor 150pF 5% 100V 0603 X7R		GCM1885C2A151JA16	Murata		
C96	1	10pF	Capacitor 10pF 10% 25V 0402 X7R		GCM1555C1H100JA16	Murata		
C101	1	0.56uF	CAP, Film, 0.56 uF, 275V, +/- 10%, TH	26x6mm	890324026018CS	Würth Elektronik		
C102, C105	2	0.1uF	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, 0603	603	885012206071	Würth Elektronik		
C103	1	0.01uF	CAP, CERM, 0.01 uF, 25 V, +/- 10%, X7R, 0603	603	GRM188R71E103KA01	MuRata		
C104	1	0.1uF	CAP, CERM, 0.1 uF, 25 V, +/- 5%, X7R, 0603	603	C0603C104J3RAC	Kemet		
CST1	1		Current Sense Transformer, 5mH, 0.7ohm, 10A, 50:1,	none	75004600	Würth Electronics		
CY1, CY46	2	2200pF	CAP, CERM, 2200 pF, 3000 V, +/- 10%, B, Dia 12.5mm	Dia 12.5mm	CK45-B3FD222KYVNA	TDK		
CY2	1	100pF	CAP, CERM, 100 pF, X1 440 VAC/Y1 250 VAC, +/- 10%, B, D6xT4mm	D6xT4mm	DE1B3RA101KN4AN01	MuRata		
D1, D3, D5, D6, D7, D8, D11, D12, D14, D16	10	100V	Diode, Ultrafast, 100 V, 0.25 A, SOD-323	SOD-323	BAS316	Toshiba		
D2	1	100V	Diode, Schottky, 100 V, 1 A, SMA	SMA	B1100-13-F	Diodes Inc.		
D4, D9, D15	3	600V	Diode, Superfast Rectifier, 600 V, 1 A, 3.5x1.6mm	3.5x1.6mm	CRF03	Toshiba		
D10	1	70V	Diode, Schottky, 70 V, 1 A, SMA	SMA	B170-13-F	Diodes Inc.		
D13	1	800V	Diode, Switching-Bridge, 800 V, 4 A, TH	GBU	GBU4K	Micro Commercial Co		

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D17	1	50V	Diode, Schottky, 50 V, 2 A, SMA	SMA	B250A-13-F	Diodes Inc.		
D18	1	18V	Diode, Zener, 18 V, 700 mW, SOD-123	SOD-123	CRZ18(TE85L,Q,M)	Toshiba		
D19	1	24V	Diode, Zener, 24 V, 1 W, PowerDI123	PowerDI123	DFLZ24-7	Diodes Inc.		
D23	1	100V	Diode, Switching, 100 V, 0.25 A, SOD-523	SOD-523	BAS516	Toshiba		
DC1, DC2	2		F280049C control card		TMDSCNCD280049C	Texas Instruments		
F1	1		FUSE CERAMIC 12A 600VAC/500VDC	21x5.6mm	0ADK9120-RE	Bel Fuse Inc.		
FAN	1		Header, 100mil, 4x1, Gold, TH	4x1 Header	TSW-104-07-G-S	Samtec		
H1, H2, H3, H5	4		MACHINE SREW PAN PHILLIPS M3	M3 Screw	RM3X8MM 2701	APM HEXSEAL		
HS1	1		Copper Heat Sink, TO-220 customized	Heat Sink, TO-220 Vertical	Heatsink-PFC	Any		
HS2	1		Copper Heat Sink, TO-220 customized		Heatsink_LL_C	Any		
J1, J3	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		
J4	1		Receptacle, 12x2, 2.54mm, Gold, TH	Receptacle, 12x2, 2.54mm, TH	SSW-112-01-G-D	Samtec		
J5	1		Receptacle, 2.54mm, 14x2, Gold, TH	Receptacle, 2.54mm, 14x2, TH	SLW-114-01-G-D	Samtec		
J6	1		Header, 100mil, 14x2, Gold, TH	14x2 Header	TSW-114-07-G-D	Samtec		
J8	1		Receptacle, 2.54mm, 6x1, Gold, TH	Receptacle, 2.54mm, 6x1, TH	448120024	Molex		
J9	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		
L5	1	16uH	1000W RESONANT CHOKE	PQ2010		YAXIN ELECTRONIC TECH		
L6	1	2mH	Coupled inductor, 2x 2 mH, 10 A, 2 x 0.006 ohm, TH	23x17x25mm	7448031002	Würth Elektronik		
L7	1	4mH	1000W COMMON MODE CHOKE	32x20mm	YXS80466T	YAXIN ELECTRONIC TECH		
L8, L10	2	10uH	Inductor, Wirewound, Ferrite, 10 uH, 0.68 A, 0.46 ohm, SMD	2.5x1x2mm	74438323100	Würth Elektronik		
L11	1	300uH	1000W PFC CHOKE	30x22x34mm	YXS70311T	YAXIN ELECTRONIC TECH		
Q1, Q3, Q5, Q6	4	600	600V, 44A,50mohm	VQFN	LMG3422R050RQZR	TI		None
Q2, Q4	2		P-Channel MOSFET	E3	SSM3J15CT	Toshiba		
Q7, Q8, Q12	3	60V	MOSFET, N-CH, 60V, 0.26A, SOT-23	SOT-23	T2N7002BK	Toshiba		None
Q9, Q10, Q11, Q13	4		N-Channel MOSFET		SSM3K15ACTC,L3F	Toshiba		
Q14	1	20V	MOSFET, N-CH, 20 V, 0.5 A, YJM0003A (PICOSTAR-3)	YJM0003A	CSD15380F3	Texas Instruments		None
R1, R2, R5, R58, R80, R82, R84, R87	8	5.10k	RES, 5.10 k, 1%, 0.1 W, 0603	603	RC0603FR-075K1L	Yageo		
R3, R12, R77, R103	4	20.0k	RES, 20.0 k, 1%, 0.1 W, 0603	603	RC0603FR-0720KL	Yageo		
R4, R6, R8, R101	4	100	RES, 100, 1%, 0.1 W, 0603	603	RC0603FR-07100RL	Yageo		
R7, R11, R126	3	88.7k	RES, 88.7 k, 1%, 0.1 W, 0603	603	CRCW060388K7FKFA	Vishay-Dale		
R9, R14	2	22.1k	RES, 22.1 k, 1%, 0.1 W, 0603	603	CRCW060322K1FKFA	Vishay-Dale		
R10	1	2.2	RES, 2.20, 1%, 0.1 W, 0603	603	ERJ-3RQF2R2V	Panasonic		
R13, R27	2	4.99	RES, 4.99, 1%, 0.125 W, 0805	805	CRCW08054R99FKFA	Vishay-Dale		
R15, R16, R22, R90	4	0.0005	RES, 0.0005, 1%, 2 W, 2512	2512	CSNL2512FTL500	Stackpole Electronics Inc		
R17, R24, R31, R46, R56, R69, R71, R76, R91	9	10.0k	RES, 10.0 k, 1%, 0.1 W, 0603	603	ERJ-3EKF1002V	Panasonic		
R18, R19, R41, R60, R68, R74, R75, R94, R99, R123	10	1.00k	RES, 1.00 k, 1%, 0.1 W, 0603	603	ERJ-3EKF1001V	Panasonic		
R20, R34, R42, R72	4	100k	RES, 100 k, 1%, 0.1 W, 0603	603	RC0603FR-07100KL	Yageo		
R21, R43, R104	3	0	RES, 0, 5%, 0.1 W, 0603	603	RC0603JR-070RL	Yageo		
R25, R26, R29, R30, R38, R39, R40, R44, R47, R49, R70, R96	12	1.00Meg	RES SMD 1M OHM 1% 1/4W 1206	1206	RCV12061M00FKFA	Vishay Dale		
R32, R48	2	3.57k	RES, 3.57 k, 1%, 0.1 W, 0603	603	RC0603FR-073K57L	Yageo		
R33, R105, R113, R124	4	100	RES, 100R, 1%, 0.1 W, 0603	603	100R	Panasonic		
R35	1	150k	RES, 150 k, 5%, 0.25 W, 1206	1206	RCV1206150KFKEA	Vishay-Dale		
R36, R37, R45, R73, R125	5	10	RES, 10.0, 1%, 0.1 W, 0603	603	RC0603FR-0710RL	Yageo		
R50	1	15	RES, 15, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	603	CRCW060315R0JNEA	Vishay-Dale		
R51, R55, R57, R98	4	21.5k	RES, 21.5k ohm, 1%, 0.1W, 0603	603	CRCW060321K5FKFA	Vishay-Dale		
R52	1	1.35k	RES, 1.35 k, 0.1%, 0.1 W, 0603	603	RT0603BRD071K35L	Yageo America		
R53	1	510	RES, 510, 1%, 0.1 W, 0603	603	RC0603FR-07510RL	Yageo		
R54	1	2	RES, 2.0, 1%, 0.1 W, 0603	603		Yageo		
R59, R127	2	51.1k	RES, 51.1 k, 1%, 0.1 W, 0603	603	RC0603FR-0751K1L	Yageo		
R61, R85, R86, R88, R89	5	9.31k	RES, 9.31 k, 1%, 0.1 W, 0603	603	RC0603FR-079K31L	Yageo		
R62	1	24.0k	RES, 24.0 k, 1%, 0.1 W, 0603	603	RC0603FR-0724KL	Yageo		
R63	1	51.1	RES, 51.1, 1%, 0.1 W, 0603	603	RC0603FR-0751R1L	Yageo		
R64	1	2.00k	RES, 2.00 k, 1%, 0.1 W, 0603	603	RC0603FR-072KL	Yageo		
R65, R66, R67	3	330k	RES SMD 330K OHM 1% 1/4W 1206	1206	RV1206FR-07330KL	Yageo		
R92	1	10	RES, 10R, 1%, 0.1 W, 0603	603	10R	Panasonic		
R93, R107, R110, R115	4	3.00k	RES, 3.00 k, 1%, 0.1 W, 0603	603	ERJ-3EKF3001V	Panasonic		
R95, R106, R112, R114	4	10.00k	RES, 10.00 k, 1%, 0.1 W, 0603	603	ERJ-3EKF1002V	Panasonic		
R97	1	4.30k	RES, 4.30 k, 1%, 0.1 W, 0603	603	RC0603FR-074K3L	Yageo		
R100	1	7.50k	RES, 7.50 k, 1%, 0.1 W, 0603	603	ERJ-3EKF7501V	Panasonic		
R102	1	430k	RES, 430 k, 1%, 0.1 W, 0603	603	RC0603FR-07430KL	Yageo		
R108, R111	2	1.00k	RES, 1.00 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603	CRCW06031K00FKFA	Vishay-Dale		
R109	1	4.00k	RES, 4 k, 1%, 0.1 W, 0603	1206	ERJ-3EKF4001V	Panasonic		

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
R116, R119, R120, R122	4	0	Resistor 0ohm 5% 0402		ERJ-2GE0R00X	Panasonic		
R117, R118	2	10k	Resistor 10k 5% 0402		ERJ-2GEJ103X	Panasonic		
R121	1	1.5k	Resistor 1.5k 5% 0603		ERJ-3EKF1501V	Panasonic		
RT1	1	50	ICL 60 OHM 13MM	PTCEL13R600LBE	PTCEL13R600LBE	Vishay		
RT2, RT3, RT4	3		Thermistor, TMP6131LPGM (TO-92S)	DEC0002A	TMP6131LPGM	Texas Instruments	PTMP6131LPG	Texas Instruments
RV1	1		Varistor 275V RMS 10MM Radial, TH	10mm Radial	S10K275E2	EPCOS Inc		
SIL1, SIL2, SIL3, SIL5	4		Silicon Thermal Pad	12.7x19.05 mm	SP600-58	Bergquist Company		
T1	1		flyback transformer for UCC28911 dual output	TRF_8	750344367	Würth Elektronik		
TP6, TP7, TP8	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		SINGLE-POLE DOUBLE-THROW ANALOG SWITCH, DRY0006A	DRY0006A	SN74LVC1G3157DRYR	Texas Instruments		Texas Instruments
U2	1		4A/6A, 5.7 kVrms Isolated Dual Channel Gate Driver, DW0016B (SOIC-16)	DW0016B	UCC21540DWR	Texas Instruments	UCC21540DW	Texas Instruments
U3, U9	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		Texas Instruments
U4	1		High Bandwidth Low-Iq Programmable Shunt Regulator, DBZ0003A (SOT-23-3)	DBZ0003A	ATL431LIBIDBZR	Texas Instruments		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	Equivalent	Texas Instruments
U6	1		5.7 kVrms, 100 Mbps, Reinforced 4-Channel 2/2 Digital Isolator, DW0016B (SOIC-16)	DW0016B	ISO7742DWR	Texas Instruments	ISO7842DW	Texas Instruments
U7-2	1		TMCS1100A1DT, D0008A (SOIC-8)	D0008A	TMCS1100A1DT	Texas Instruments		Texas Instruments
U8	1		4-A, 6-A, 3.0-kVRMS Isolated Dual-Channel Gate Driver, D0016A (SOIC-16)	D0016A	UCC21222D	Texas Instruments		Texas Instruments
U10, U13	2		4V to 36 V 0.6 A Synchronous Step-Down Converter, DBV0006A (SOT-23-6)	DBV0006A	TPS560430XDBVR	Texas Instruments	TPS560430XDBVT	Texas Instruments
U11	1		Dual, 5A, High-Speed Low-Side Power MOSFET Driver, DSD0008D (WSON-8)		UCC27525DSDR	Texas Instruments		Texas Instruments
U12	1		Low- and High-Side Measurement, Multichannel, Voltage Output, Current-Sense Amplifier, DBV0005A (SOT-5)	DBV0005A	INA180A4IDBV	Texas Instruments		Texas Instruments
U301	1		700V Flyback Switcher with Constant-Voltage Constant-Current and Primary-side Regulation, D0007A (SOIC-7)	D0007A	UCC28911DR	Texas Instruments	UCC28911D	Texas Instruments
U304	1		Capacitor-Free, 150-mA, Low-Dropout Regulator with Foldback Current Limit for Portable Devices, DBV0005A	DBV0005A	TLV71333PDBVT	Texas Instruments		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.

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