

ChangeMe in variant

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
IPC8101	1		Printed Circuit Board		PMP40586	Any		
C1, C2, C3, C196, C209	5	330µF	330 µF 16 V Aluminum - Polymer Capacitors Radial, Can - SMD 6.5mOhm 5000 Hrs @ 105°C	Radial	16SVPG330M	Panasonic		
C4, C5, C6, C7, C8, C9, C210	7	1200uF	1200 µF 16 V Aluminum - Polymer Capacitors Radial, Can - SMD 7mOhm 5000 Hrs @ 105°C	D10xL8mm	16SVPG1200M	Panasonic		
C101	1	4700pF	CAP, CERM, 4700 pF, 1000 V, +/- 10%, X7R, 5.0x7.5mm	5.5x3.15mm	RDER73A472K2K1H03B	MuRata		
C102, C103, C107, C108	4	0.047uF	CAP, Film, 0.047 µF, 800 V,+/- 3%, TH	15.7x9.7mm	ECW-H8473HA	Panasonic		
C104, C105	2	0.1uF	CAP, CERM, 0.1 uF, 630 V, +/- 10%, X7R, 1812	1812	GRM43DR72J104KW01L	MuRata		
C106, C134, C135, C137	4	47uF	CAP, AL, 47 µF, 450 V, +/- 20%, TH	D18xL33mm	860241481007	Wurth Elk		
C109, C110	2	2200pF	CAP, CERM, 2200 pF, 100 V, +/- 5%, C0G/NP0, 1206	1206	GRM3195C2A222JA01D	MuRata		
C111, C113	2	2.2uF	CAP, CERM, 2.2 uF, 25 V,+/- 10%, X7R, 0805	805	GRJ21BR71E225KE01	MuRata		
C112, C115, C117, C119, C140, C143, C153	7	0.1uF	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, 0603	603	GRM188R71E104KA01D	MuRata		
C114, C118, C130, C152, C208	5	1uF	CAP, CERM, 1 µF, 25 V,+/- 10%, X7R, 0603	603	GRJ188R71E105KE11D	MuRata		
C116, C132, C136, C141, C145, C149, C150, C151	8	0.01uF	CAP, CERM, 0.01 uF, 25 V, +/- 10%, X7R, 0603	603	GRM188R71E103KA01D	MuRata		
C120, C121, C122, C123, C124, C125, C126, C127, C133, C154, C155, C156, C157, C158, C159, C211, C212, C213, C214, C215, C216, C217, C218, C219, C220, C221, C222, C223, C224, C225, C226, C227, C228	43	22uF	CAP, CERM, 22 µF, 25 V,+/- 10%, X7R, 1210	1210	C1210C226K3RAC7800	Kemet		
C128	1	1uF	CAP, CERM, 1 uF, 25 V, +/- 10%, X7R, 0603	603	C1608X7R1E105K080AA	TDK		
C131	1	1uF	CAP, CERM, 1 uF, 25 V, +/- 10%, X7R, 0805	805	GRM21BR71E105KA99L	MuRata		
C139, C144	2	220pF	CAP, CERM, 220 pF, 50 V, +/- 5%, C0G/NP0, 0603	603	GRM1885C1H221JA01D	MuRata		
C142	1	100pF	CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, 0603	603	GRM1885C1H101JA01D	MuRata		
C160, C161	2	33pF	CAP, CERM, 33 pF, 50 V, +/- 5%, C0G/NP0, 0603	603	GRM1885C1H330JA01D	MuRata		
C164	1	10pF	CAP, CERM, 10 pF, 50 V,+/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0402	402	GCM1555C1H100JA16D	MuRata		
C165, C172, C176, C177, C180	5	22uF	CAP, CERM, 22 uF, 16 V, +/- 20%, X6S, 0805	805	GRM21BC81C226ME44L	MuRata		
C166, C168, C169, C171, C181, C183	6	10uF	CAP, CERM, 10 uF, 25 V, +/- 20%, X5R, 0603	603	C1608X5R1E106M080AC	TDK		
C167, C170, C175, C179, C182, C184	6	0.1uF	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	603	C0603C104K5RACTU	Kemet		
C173	1	680pF	CAP, CERM, 680 pF, 25 V, +/- 10%, X7R, 0805	805	GRM216R71E681KA01D	MuRata		
C174, C178	2	33pF	CAP, CERM, 33 pF, 100 V, +/- 5%, C0G/NP0, 0603	603	GRM1885C2A330JA01D	MuRata		

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C185, C186	2	0.01uF	CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, 0603	603	C0603X103K5RACTU	Kemet		
C187, C188	2	47nF	0.047 uF ±1% 25V Ceramic Capacitor COG, NP0 0805 (2012 Metric)	805	C0805C473F3GAC7800	KEMET		
C190	1	100pF	CAP, CERM, 100 pF, 50 V, +/- 1%, C0G/NP0, 0603	603	06035A101FAT2A	AVX		
C193, C197, C200	3	0.1uF	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, 0603	603	C1608X7R1E104K080A	TDK		
C195, C201, C207	3	2200pF	CAP, CERM, 2200 pF, 50 V, +/- 10%, X7R, 0603	603	C0603C222K5RACTU	Kemet		
C202, C206	2	470pF	CAP, CERM, 470 pF, 50 V, +/- 10%, X7R, 0603	603	GRM188R71H471KA01D	MuRata		
C203	1	1uF	CAP, CERM, 1 uF, 16 V, +/- 20%, X7R, AEC-Q200 Grade 1, 0603	603	GCM188R71C105MA64D	MuRata		
C205	1	0.01uF	CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, 0603	603	GRM188R71H103KA01D	MuRata		
C1190, C1240	2	4700pF	CAP, CERM, 4700 pF, 100 V, +/- 10%, X7S, AEC-Q200 Grade 1, 0402	402	CGA2B3X7S2A472K050BB	TDK		
D101	1	600V	Diode, Ultrafast, 600 V, 1 A, AEC-Q101, SMAF	SMAF	ES1JAF	Fairchild Semiconductor		
D102, D103, D104, D105, D106, D107, D119, D120, D121, D122	10	100V	Diode, Ultrafast, 100 V, 0.25 A, SOD-323	SOD-323	BAS316,115	Nexperia		
D116	1	Green	LED, Green, SMD	1.6x0.8x0.8mm	LTST-C190GKT	Lite-On		
D117	1	15V	Diode, Zener, 15 V, 300 mW, SOD-323	SOD-323	MM3Z15VST1G	ON Semiconductor		
D118	1	5.1V	Diode, Zener, 5.1 V, 500 mW, SOD-123	SOD-123	MMSZ5231B-7-F	Diodes Inc.		
F101	1		Fuse, 5 A, 250VAC/VDC, TH	8x8.5x4mm	39215000000	Littelfuse		
J101	1		Terminal Block, 10.16mm, 2x1, Tin, TH	Terminal Block, 10.16mm, 2x1, TH	282843-2	TE Connectivity		
J102	1		Header, 100mil, 3x2, Gold, TH	Sullins 100mil, 2x3, 230 mil above insulator	PBC03DAAN	Sullins Connector Solutions		
J103	1		Header, 2.54mm, 2x2, Gold, TH	Header, 2.54mm, 2x2, TH	PBC02DAAN	Sullins Connector Solutions		
J104	1		Header, 2mm, 20x2, Gold, TH	20x2 Header	87758-4016	Molex		
J105	1		C2000 controlCARD-120HSEC connector, SMT	C2000 pin numbering	HSEC8-160-01-L-DV-A-BL	Samtec		
J106, J107, J109, J111, J112	5		Header, 100mil, 3x1, Gold, TH	3x1 Header	TSW-103-07-G-S	Samtec		
J108	1		12 Position Receptacle, Bottom Entry Connector Surface Mount	HDR12	HLE-106-02-G-DV-BE-A	Samtec		
J110	1		Header, 100mil, 6x1, Gold, TH	6x1 Header	TSW-106-07-G-S	Samtec		
L101	1		1000W RESONANT CHOKE	PQ2010	YXS50494T	YAXIN ELECTRONIC TECH		
L102	1	110n	Inductor, Shielded, Ferrite, 110 nH, 55 A, 0.00015 ohm, SMD	SMD 13.46x8.0x12.95mm	SLC1480-111MLB	Coilcraft		
L103	1	470nH	Inductor, Shielded, Powdered Iron, 470 nH, 3.4 A, 0.04 ohm, SMD	SMD, 2.5x2mm	7.44383E+11	Würth Elektronik		
L104	1	2.2uH	Inductor, Metal Composite, 2.2 uH, 3.4 A, 0.063 ohm, SMD	4.1x4.1mm	HBLE041B-2R2MSA	Cyntec		
MP101	1		HEATSINK AND CLIPS FOR 2 TO-247	PTH_HEATSINK_50 MM0 19MM94	C247-050-2AE	Ohmite		
Q101, Q106	2	600V	MOSFET, N-CH, 600 V, 48 A, TO-247	TO-247	IPW60R060P7XKSA1	Infineon Technologies		None
Q102, Q103, Q104, Q105, Q107, Q108, Q109, Q110	8	40V	MOSFET, N-CH, 40 V, 42 A, DNK0008A (VSON-CLIP-8)	DNK0008A	CSD18510Q5B	Texas Instruments		None
Q111, Q117, Q118	3	60V	MOSFET, N-CH, 60 V, 0.115 A, SOT-323	SOT-323	2N7002W-7-F	Diodes Inc.		None
Q112, Q113, Q114	3	25V	MOSFET, N-CH, 25 V, 100 A, DNK0008A (VSON-CLIP-8)	DNK0008A	CSD16570Q5B	Texas Instruments		None
R1, R2, R3, R4	4	300	RES, 300, 1%, 0.25 W, 1206	1206	RC1206FR-07300RL	Yageo America		
R101, R108, R123, R124, R125, R128, R129, R130, R132, R150, R162, R164, R165, R167	14	10.0k	RES, 10.0 k, 1%, 0.1 W, 0603	603	RC0603FR-0710KL	Yageo		
R102, R103, R109, R110	4	10	RES, 10.0, 1%, 0.25 W, 1206	1206	RC1206FR-0710RL	Yageo America		
R104, R105, R106, R107, R112, R113, R114, R115	8	1	RES, 1.00, 1%, 0.125 W, 0805	805	RC0805FR-071RL	Yageo America		
R111	1	1	RES, 1.00, 1%, 0.25 W, AEC-Q200 Grade 0, 1206	1206	ERJ-8RQF1R0V	Panasonic		
R116	1	8.87	RES, 8.87, 1%, 0.125 W, 0805	805	RC0805FR-078R87L	Yageo America		
R118, R120, R121, R122, R126, R127	6	4.7	RES, 4.70, 1%, 0.125 W, 0805	805	RC0805FR-074R7L	Yageo America		

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R119, R144, R171, R203, R214, R219, R221	7	5.10k	RES, 5.10 k, 1%, 0.1 W, 0603	603	RC0603FR-075K1L	Yageo		
R131, R138	2	0	RES, 0, 5%, 0.1 W, 0603	603	RC0603JR-070RL	Yageo		
R133, R146, R148	3	1.00k	RES, 1.00 k, 1%, 0.1 W, 0603	603	RC0603FR-071KL	Yageo		
R134	1	10.0k	RES, 10.0 k, 1%, 0.125 W, AEC-Q200 Grade 0, 0805	805	ERJ-6ENF1002V	Panasonic		
R135, R136, R137, R176	4	0.0005	RES, 0.0005, 1%, 3 W, AEC-Q200 Grade 0, 2512	2512	WSP2512L5000FEA	Vishay-Dale		
R143, R151	2	120k	RES, 120 k, 1%, 0.1 W, 0603	603	RC0603FR-07120KL	Yageo		
R147, R155	2	2.00k	RES, 2.00 k, 1%, 0.1 W, 0603	603	RC0603FR-072KL	Yageo		
R149	1	10	RES, 10.0, 1%, 0.1 W, 0603	603	RC0603FR-0710RL	Yageo		
R154	1	549	RES, 549, 1%, 0.1 W, 0603	603	RC0603FR-07549RL	Yageo		
R156	1	100k	RES, 100 k, 1%, 0.1 W, 0603	603	RC0603FR-07100KL	Yageo		
R160	1	470	RES, 470, 1%, 0.1 W, 0603	603	RC0603FR-07470RL	Yageo		
R161, R163	2	499	RES, 499, 1%, 0.1 W, 0603	603	RC0603FR-07499RL	Yageo		
R166	1	4.99k	RES, 4.99 k, 1%, 0.1 W, 0603	603	RC0603FR-074K99L	Yageo		
R168, R169	2	51	RES, 51.0, 1%, 0.1 W, 0603	603	RC0603FR-0751RL	Yageo		
R170, R173, R210	3	20.0k	RES, 20.0 k, 1%, 0.1 W, 0603	603	RC0603FR-0720KL	Yageo		
R172, R198, R199, R201, R208, R211, R213	7	100	RES, 100R, 1%, 0.1 W, 0603	603	100R	Panasonic		
R174, R175, R218, R222, R223	5	10.0k	RES, 10.0 k, 1%, 0.1 W, 0603	603	ERJ-3EKF1002V	Panasonic		
R177, R180, R181	3	100k	RES, 100 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	402	CRCW0402100KFKED	Vishay-Dale		
R178	1	453k	RES, 453 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	402	CRCW0402453KFKED	Vishay-Dale		
R179	1	249k	RES, 249 k, 1%, 0.063 W, 0402	402	CRCW0402249KFKED	Vishay-Dale		
R182	1	9.31k	RES, 9.31 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	402	CRCW04029K31FKED	Vishay-Dale		
R183	1	34.0k	RES, 34.0 k, 1%, 0.063 W, 0402	402	CRCW040234K0FKED	Vishay-Dale		
R184, R185, R192	3	10.0k	RES, 10.0 k, 1%, 0.1 W, 0603	603	CRCW060310K0FKEA	Vishay-Dale		
R186, R187	2	20k	RES, 20 k, 5%, 0.1 W, 0603	603	CRCW060320K0JNEA	Vishay-Dale		
R188	1	220k	RES, 220 k, 1%, 0.1 W, 0603	603	RC0603FR-07220KL	Yageo		
R189	1	43.0k	RES, 43.0 k, 1%, 0.1 W, 0603	603	RC0603FR-0743KL	Yageo		
R190	1	2.00k	RES, 2.00 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603	ERJ3EKF2001V	Panasonic		
R191, R220	2	30.0k	RES, 30.0 k, 1%, 0.1 W, 0603	603	RC0603FR-0730KL	Yageo		
R193, R194	2	30k	RES, 30 k, 5%, 0.1 W, 0603	603	CRCW060330K0JNEA	Vishay-Dale		
R195, R205, R206, R217	4	3.00k	RES, 3.00 k, 1%, 0.1 W, 0603	603	ERJ-3EKF3001V	Panasonic		
R196	1	1.00k	RES, 1.00 k, 1%, 0.1 W, 0603	603	ERJ-3EKF1001V	Panasonic		
R197	1	3.30k	RES, 3.30 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603	CRCW06033K30FKEA	Vishay-Dale		
R200, R202, R207, R209	4	10.00k	RES, 10.00 k, 1%, 0.1 W, 0603	603	ERJ-3EKF1002V	Panasonic		
R212, R216	2	1.00k	RES, 1.00 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603	CRCW06031K00FKEA	Vishay-Dale		
R215	1	4.00k	RES, 4 k, 1%, 0.1 W, 0603	1206	ERJ-3EKF4001V	Panasonic		
R1180, R1290	2	100	RES, 100, 1%, 0.063 W, 0402	402	CRCW0402100RFKED	Vishay-Dale		
S101	1		Switch, SPDT, Slide, On-On, 2 Pos, TH	SPDT switch	4.50301E+11	Würth Elektronik		
T101	1		1000W TRANSFORMER 140~160uH	PTH 42MM0 42MM0	YXS61075T	YAXIN ELECTROINC TECH		
T102	1		Current Sense Transformer	SMT10MM25_10MM6	CST1211-100LD	Coilcraft		
T103, T104, T105, T106	4		Terminal 50A Lug	CB35-36-CY	CB35-36-CY	Panduit		
TP109, TP112, TP114, TP115, TP117, TP141	6			Pin Receptacle	0312-0-15-15-34-27-10-0	Mill-Max		
U101	1		Reinforced Isolation Dual-Channel Gate Driver 18V 4A/6A SOIC14	SOIC14	UCC21540DWKR	Texas Instruments		
U102, U103	2		Dual, 5A, High-Speed Low-Side Power MOSFET Driver, DGN0008D (VSSOP-8)	DGN0008D	UCC27524DGN	Texas Instruments		Texas Instruments
U105	1		TLVx376, 5.5 MHz, Low-Noise, Low Quiescent Current, Precision Operational Amplifiers, DBV0005A (SOT-23-5)	DBV0005A	TLV376IDBVR	Texas Instruments	TLV376IDBVT	Texas Instruments
U106	1		N+1 and OR-ing Power Rail Controller, 0.8 to 16.5 V, -40 to 85 degC, 14-pin TSSOP (PW), Green (RoHS & no Sb/Br)	PW0014A	TPS2411PWR	Texas Instruments		
U107	1		2.4V, 10µA Temperature Sensor, 5-pin SC-70 Micro SMD, Pb-Free	DCK0005A	LM20BIM7X/NOPB	Texas Instruments		
U108	1	40 V	Transistor, NPN/PNP Pair, 40 V, 0.2 A, AEC-Q101, SOT-363	SOT-363	MMDT3946-7-F	Diodes Inc.		
U109, U114	2		Single Bus Buffer Gate With 3-State Output, DBV0005A (SOT-23-5)	DBV0005A	SN74AHCT1G126DBVR	Texas Instruments		
U110	1		3-V to 17-V, Synchronous Buck Converters in 1.6 mm x 2.1 mm SOT583 Package	FCSOT8	TPS629210QDRLRQ1	Texas Instruments		
U111	1		2.7-V to 6-V Step-Down Converter in SOT583 Package	FCSOT-8	TPS628510DRLR	Texas Instruments		
U112, U113	2		3V to 16 V Input, 3-A Synchronous Step-Down Voltage Regulator Module, QFN-FCMOD7	QFN-FCMOD7	TPSM863252RDX	Texas Instruments		
U115, U116	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
U117	1		High Bandwidth Low-Iq Programmable Shunt Regulator, DBZ0003A (SOT-23-3)	DBZ0003A	ATL431LIBIDBZR	Texas Instruments		Texas Instruments
U118	1		Single 2-Input Positive-AND Gate, DBV0005A (SOT-23-5)	DBV0005A	SN74AHC1G08DBVR	Texas Instruments	SN74AHC1G08DBVT	Texas Instruments

Notes:

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

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