

EM1402EVM-580

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
IPC81	1		Printed Circuit Board		PWR580	Any		
C1	1	2.2uF	CAP, CERM, 2.2uF, 6.3V, +/-20%, X5R, 0603	0603	C1608X5R0J225M	TDK	-	-
C2, C14, C15, C17, C33, C34, C35, C39, C40, C43, C46, C49, C61, C62, C68, C69, C70, C95, C96, C97, C106, C120, C122, C123	24	0.1uF	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, 0603	0603	C0603C104K3RACTU	Kemet		
C3, C109, C110, C111, C115	5	0.01uF	CAP, CERM, 0.01uF, 16V, +/-10%, X7R, 0603	0603	GRM188R71C103KA01D	MuRata	-	-
C4, C5	2	4.7uF	CAP, CERM, 4.7 uF, 25 V, +/- 10%, X8R, 1210	1210	CGA6P3X8R1E475K250AB	TDK		
C6, C16, C20	3	2.2uF	CAP, CERM, 2.2uF, 16V, +/-10%, X7R, 0805	0805	C0805C225K4RACTU	Kemet	-	-
C7, C8, C9	3	3.3uF	CAP, CERM, 3.3 uF, 16 V, +/- 10%, X5R, 1206	1206	C1206C335K4PACTU	Kemet		
C10	1	47pF	CAP, CERM, 47 pF, 50 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0603	0603	CGA3E2C0G1H470J080AA	TDK		
C11	1	1uF	CAP, CERM, 1uF, 100V, +/-10%, X7R, 1210	1210	GRM32ER72A105KA01L	MuRata	-	-
C12, C13, C24	3	10uF	CAP, CERM, 10 uF, 25 V, +/- 10%, X5R, 1206	1206	GRM31CR61E106KA12L	MuRata		
C18	1	0.022uF	CAP, CERM, 0.022 uF, 250 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 1, 1812	1812	CGA8L3C0G2E223J160KA	TDK		
C19	1	1uF	CAP, CERM, 1 uF, 25 V, +/- 10%, X7R, 0805	0805	C2012X7R1E105K	TDK		
C21, C25, C26, C98, C99, C100, C101, C102, C103, C104	10	0.1uF	CAP, CERM, 0.1uF, 25V, +/-10%, X7R, 0603	0603	C1608X7R1E104K	TDK		
C22, C27	2	4.7uF	CAP, CERM, 4.7 uF, 25 V, +/- 10%, X8R, AEC-Q200 Grade 0, 1210	1210	CGA6P3X8R1E475K250AB	TDK		
C23, C51	2	0.01uF	CAP, CERM, 0.01 uF, 25 V, +/- 5%, C0G/NP0, 0603	0603	C1608C0G1E103J	TDK		
C28, C30, C31, C63, C64, C66, C90, C91, C93	9	0.1uF	CAP, CERM, 0.1uF, 100V, +/-10%, X7R, 0805	0805	HMK212B7104KG-T	Taiyo Yuden	-	-
C29, C65, C73, C80, C92	5	1uF	CAP, CERM, 1uF, 100V, +/-20%, C Series, 1206	1206	C3216X7R2A105M	TDK	-	-
C32, C67, C94	3	4.7uF	CAP, CERM, 4.7uF, 16V, +/-10%, X5R, 0805	0805	EMK212BJ475KG-T	Taiyo Yuden	-	-
C36	1	1uF	CAP, CERM, 1uF, 100V, +/-10%, X7R, 1206	1206	GRM31CR72A105KA01L	MuRata	-	-
C37	1	0.1uF	CAP, CERM, 0.1uF, 100V, +/-10%, X7R, 1210	1210	GRM32NR72A104KA01L	MuRata		
C38	1	4.7uF	CAP, CERM, 4.7uF, 50V, +/-10%, X7R, 1206	1206	GRM31CR71H475KA12L	MuRata	-	-
C41, C45	2	4.7uF	CAP, CERM, 4.7uF, 16V, +/-10%, X7R, 0805	0805	GRM21BR71C475KA73L	MuRata	-	-
C42	1	1.8uF	CAP, CERM, 1.8uF, 25V, +/-10%, X7R, 1210	1210	C1210C185K3RACTU	Kemet	-	-
C44	1	390pF	CAP, CERM, 390pF, 50V, +/-5%, C0G/NP0, 0805	0805	08055A391JAT2A	AVX		
C47	1	0.022uF	CAP, CERM, 0.022uF, 50V, +/-10%, X7R, 0603	0603	C1608X7R1H223K	TDK	-	-
C48	1	4.7uF	CAP, CERM, 4.7uF, 16V, +/-10%, X7R, 0805	0805	GRM21BR71C475KA73L	MuRata		
C50	1	1uF	CAP, CERM, 1uF, 16V, +/-10%, X7R, 0603	0603	GRM188R71C105KA12D	MuRata		
C52	1	1uF	CAP, CERM, 1 uF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603	GCM188R71C105KA64D	MuRata		
C53, C54, C55, C56, C57, C58, C59, C60	8	1000pF	CAP, CERM, 1000pF, 1000V, +/-10%, X7R, 1206	1206	CC1206KKX7RCBB102	Yageo America	-	-
C71, C72, C74, C75, C76, C77, C78, C79, C81, C82, C83, C84, C85, C86, C87, C88, C89, C108	18	1uF	CAP, CERM, 1 uF, 100 V, +/- 10%, X7R, 1210	1210	GRM32ER72A105KA01L	MuRata		
C105	1	0.47uF	CAP, CERM, 0.47 uF, 16 V, +/- 10%, X7R, 0603	0603	GRM188R71C474KA88D	MuRata		
C107	1	0.1uF	CAP, CERM, 0.1uF, 100V, +/-10%, X7R, 0805	0805	C2012X7R2A104K	TDK	-	-
C112, C116	2	0.1uF	CAP, CERM, 0.1uF, 25V, +/-10%, X7R, 0603	0603	C0603X104K3RACTU	Kemet		
C113	1	22uF	CAP, CERM, 22 uF, 25 V, +/- 10%, X5R, AEC-Q200 Grade 3, 1206	1206	GRT31CR61E226KE01L	MuRata		
C114	1	4.7uF	CAP, CERM, 4.7uF, 50V, +/-10%, X7R, 1210	1210	GRM32ER71H475KA88L	MuRata	-	-
C117	1	10uF	CAP, CERM, 10uF, 16V, +/-20%, X7R, 1210	1210	C3225X7R1C106M	TDK	-	-
C118, C127	2	1uF	CAP, CERM, 1 uF, 10 V, +/- 10%, X5R, 0603	0603	GRM188R61A105KA61D	MuRata		
C119, C121, C128	3	0.01uF	CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, 0603	0603	GRM188R71H103KA01D	MuRata		
C124	1	10uF	CAP, CERM, 10 uF, 35 V, +/- 10%, X7R, AEC-Q200 Grade 1, 1206 190	1206_190	CGA5L1X7R1V106K160AC	TDK		
C125, C130	2	0.1uF	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 0, 0805	0805	C0805C104K5RACAUTO	Kemet		
C126	1	2.2uF	CAP, CERM, 2.2 uF, 25 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	0805	CGA4J3X7R1E225K125AB	TDK		
C129	1	4.7uF	CAP, CERM, 4.7 uF, 10 V, +/- 10%, X5R, 0603	0603	CGB3B1X5R1A475K055AC	TDK		
D1	1	2.4V	Diode, Zener, 2.4V, 500mW, SOD-123	SOD-123	MMSZ4681	Vishay-Semiconductor	-	-

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
D2, D5, D7	3	40V	Diode, Schottky, 40 V, 1 A, SOD-123	SOD-123	1N5819HW-7-F	Diodes Inc.		
D3	1	30V	Diode, Zener, 30V, 550mW, SMB	SMB	1SMB5936BT3G	ON Semiconductor	-	-
D4, D15	2	Green	LED, Green, SMD	LED 0805	LTST-C170KGKT	Lite-On		
D6	1	6.2V	Diode, Zener, 6.2V, 225mW, SOT-23	SOT-23	BZX84C6V2L1G	ON Semiconductor		
D8, D11, D13, D24, D43	5	100V	Diode, Schottky, 100 V, 0.2 A, SOD-123	SOD-123	BAT41ZFILM	STMicroelectronics		
D9	1	15V	Diode, Zener, 15V, 225mW, SOT-23	SOT-23	BZX84C15LT1G	ON Semiconductor		
D10	1	100V	Diode, Zener, 100 V, 550 mW, SMB	SMB	1SMB5949BT3G	ON Semiconductor		
D12	1	0.5V	Diode, Schottky, 20V, 1A, SMA	SMA	B120-13-F	Diodes Inc.	-	-
D14, D25, D44	3	100V	Diode, Switching, 100 V, 0.2 A, SOT-363	SOT-363	BAV99S,115	NXP Semiconductor		
D16, D17	2	1.25V	Diode, Ultrafast, 100V, 0.15A, SOD-123	SOD-123	1N4148W-7-F	Diodes Inc.		
D18, D19	2	1.4V	Diode, Ultrafast, 100V, 0.25A, SOD-323	SOD-323	BAS316,115	NXP Semiconductor	-	-
D20	1	15V	Diode, TVS, Bi, 15 V, 160 W, SOD-323	SOD-323	PESD1LN,115	NXP Semiconductor		
D21, D22, D23	3	40V	Diode, Schottky, 40 V, 0.2 A, AEC-Q101, SOT-363	SOT-363	BAS40TW-7-F	Diodes Inc.		
D26, D27, D28, D29, D30, D31, D32, D33, D34, D35, D36, D37, D38, D39, D40, D42	16	6.2V	DIODE ZENER 6.2V 500MW SOD-123	SOD-123	DDZ6V2B-7	Diodes Inc	-	-
D41	1	70V	Diode, TVS, Uni, 70V, 400W, SMA	SMA	SMAJ70A	Littelfuse		
D45	1	15V	Diode, Zener, 15V, 500mW, SOD-123	SOD-123	MMSZ4702T1G	ON Semiconductor		
D46	1	0.79V	Diode, Schottky, 80V, 1A, SMA	SMA	B180-13-F	Diodes Inc.	-	-
D47, D48, D49, D50	4	30V	Diode, Schottky, 30 V, 0.5 A, SOD-123	SOD-123	MBR0530T1G	ON Semiconductor		
F1	1		Fuse, 3 A, 125 V, SMD	PicoSMF459	0459003	Littelfuse		
F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12, F13, F14, F15, F16, F17, F18	17		Fuse, 8 A, 125 V, SMD		6.1x2.54x2.54mm SSQ 8	Bel Fuse		
FID1, FID2, FID3, FID4, FID5, FID6	6		Fiducial mark. There is nothing to buy or mount.	Fiducial	N/A	N/A		
H1, H2, H7, H8	4		Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	Screw	NY PMS 440 0025 PH	B&F Fastener Supply		
H3, H4, H10, H11	4		Standoff, Hex, 0.5"L #4-40 Nylon	Standoff	1902C	Keystone		
H5, H6	2		MACHINE SCREW PAN PHILLIPS M2		MPMS 002 0005 PH	B&F Fastener Supply		
H9, H12	2		Rectangular Housing Connector, 4 Pos, 2.54mm		50-57-9404	Molex		
J1	1		CONN HEADER (Shrouded), 3 mm, 2x1, Gold, R/A, TH	CONN HEADER (Shrouded), 3 mm, 2x1, R/A, TH	43045-0222	Molex		
J2	1		Header, 1.27mm, 4x2, TH	Header, 1.27mm, 4x2, TH	GRPB042VWVN-RC	Sullins Connector Solutions		
J3	1		CONN RCPT CAP 20POS R/A TIN, TH	1860x1580x6030mm	175785-1	TE Connectivity		
J4, J5	2		Header(shrouded), 2.54mm, 4x1, R/A, Gold, TH	Header(shrouded), 2.54mm, 4x1, R/A, TH	70551-0038	Molex		
J6	1		MOLEX CONN RECEPT 16POS 3MM VERT DUAL	43045-1601	43045-1601	Molex	-	-
J7	1		Header, 0.5mm, 6x1, R/A, Gold, TH	Header, 0.5mm, 6x1, R/A, TH	22-12-4062	Molex		
L1	1	6.8uH	Inductor, Shielded Drum Core, Ferrite, 6.8 uH, 13 A, 0.009 ohm, SMD	12.1x9.5x11.4mm	7443320680	Würth Elektronik		
L2	1	0.1uH	Inductor, Shielded, Powdered Iron, 0.1 uH, 12 A, 0.004 ohm, SMD	4.45x1.8x4.06mm	SRP4020TA-R10Y	Bourns		
L3, L4, L5, L6	4	470uH	Coupled inductor, 470 uH, 0.4 A, 0.35 ohm, SMD	5x3.3mm	744242471	Würth Elektronik		
L7, L8, L9, L10	4	100uH	Inductor, Ferrite, 100 uH, 0.15 A, 2 ohm, SMD	SMD, 4-Leads, Body 4.7 x 3.7 mm	ACT45B-101-2P-TL003	TDK		
L11	1	220uH	Inductor, Shielded Drum Core, Ferrite, 220 uH, 0.28 A, 1.35 ohm, AEC-Q200 Grade 0, SMD	6.3x3.0x6.3mm	B82462G4224M	TDK		
L12	1	10uH	Inductor, Shielded, Ferrite, 10uH, 1.3A, 0.17 ohm, SMD	ELL6RH	PCD2107TR-ND	Panasonic	Equivalent	Any
L13, L14	2	100 ohm	Ferrite Bead, 1000 ohm @ 100 MHz, 0.8 A, 0603	0603	MPZ1608S101ATAH0	TDK		
Q1, Q2	2	30V	MOSFET, N-CH, 30 V, 100 A, LFPAK	LFPAK	PSMN4R0-30YLDX	NXP Semiconductor		None
Q3	1	-20V	MOSFET, P-CH, -20 V, -2.4 A, SOT-23	SOT-23	FDN302P	Fairchild Semiconductor		None
Q4	1	150V	100A, 47nC, rDS(on) @ 4.5V = 0.0021 Ohm	PowerPAK SO-8	SI7846DP-T1-E3	Vishay/Siliconix		
Q5	1	-40V	MOSFET, P-CH, -40 V, -30 A, PowerPAK SO-8L	PowerPAK SO-8L	SQJ463EP-T1-GE3	Vishay-Siliconix		None
Q6, Q46, Q73, Q74	4	60V	MOSFET N-CH 60V 115MA SOT323	SOT323	2N7002W-7-F	Vishay-Siliconix		
Q7	1	-150V	MOSFET, P-CH, -150 V, -3 A, PowerPAK SO-8	PowerPAK SO-8	SI7439DP-T1-E3	Vishay-Siliconix		None
Q8, Q9, Q10, Q11, Q12, Q13, Q14, Q15, Q16, Q17, Q18, Q19, Q22, Q23, Q24, Q25, Q26, Q27, Q28, Q29, Q30, Q31, Q32, Q33, Q34, Q35, Q36, Q37, Q38, Q39, Q40, Q41, Q42, Q43, Q44, Q45, Q47, Q48, Q49, Q50, Q51, Q52, Q53, Q54, Q55, Q56, Q57, Q58, Q59, Q60, Q61, Q62, Q63, Q64, Q65, Q66, Q67, Q68, Q69, Q70	60	40V	MOSFET, N-CH, 40V, 15A, SON 5x6mm	SON 5x6mm	CSD18504Q5A	Texas Instruments		None
Q20	1	150 V	Transistor, NPN, 150 V, 1 A, SOT-89	SOT-89	ZXTN4004ZTA	Diodes Inc.		

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Q21	1	-20V	MOSFET P-CH, -20 V, -3.6 A, SOT-23	SOT-23	DMP2035U-7	Diodes Inc.		None
Q71	1	-80V	MOSFET P-CH, -80 V, -1.2 A, SOT-23	SOT-23	SI2337DS-T1-E3	Vishay-Siliconix		None
Q72	1	-20V	MOSFET P-CH, -20 V, -3.7 A, SOT-23	SOT-23	SI2323DS	Vishay-Siliconix		None
R1	1	402k	RES, 402k ohm, 1%, 0.1W, 0603	0603	CRCW0603402KFKEA	Vishay-Dale		-
R2, R19, R30, R38, R44, R50, R64, R65, R66, R67, R68, R69, R70, R71, R113, R124, R134	17	0	RES, 0 ohm, 5%, 0.1W, 0603	0603	CRCW0603000Z0EA	Vishay-Dale	-, -, -, -, [NoValue], -, [NoValue], -, -, -, -, [NoValue], -, [NoValue]	
R3, R10, R17, R20, R34, R37, R82	7	1.00k	RES, 1.00 k, 1%, 0.1 W, 0603	0603	RC0603FR-071KL	Yageo America		
R4, R12, R13, R14, R25, R26, R27, R28, R63, R129, R130, R135	12	100k	RES, 100k ohm, 1%, 0.1W, 0603	0603	CRCW0603100KFKEA	Vishay-Dale		-
R5, R9, R45	3	2.0k	RES, 2.0 k, 5%, 0.1 W, 0603	0603	RC0603JR-072KL	Yageo America		
R6, R16	2	1.87k	RES, 1.87k ohm, 1%, 0.1W, 0603	0603	CRCW06031K87FKEA	Vishay-Dale		
R7, R8	2	5.1	RES, 5.1 k, 5%, 0.1 W, 0603	0603	CRCW06035R10JNEA	Vishay-Dale		
R11, R33	2	10k	RES, 10 k, 5%, 0.1 W, 0603	0603	RC0603JR-0710KL	Yageo America		
R15	1	0.01	RES, 0.01 ohm, 1%, 1W, 2512	2512	ERJ-M1WSF10MU	Panasonic		-
R18	1	26.1k	RES, 26.1 k, 1%, 0.1 W, 0603	0603	CRCW060326K1FKEA	Vishay-Dale		-
R21	1	2.21Meg	RES, 2.21 M, 1%, 0.1 W, 0603	0603	RC0603FR-072M21L	Yageo America		
R22	1	18.2k	RES, 18.2 k, 1%, 0.1 W, 0603	0603	CRCW060318K2FKEA	Vishay-Dale		
R23	1	63.4k	RES, 63.4 k, 1%, 0.1 W, 0603	0603	CRCW060363K4FKEA	Vishay-Dale		
R24	1	22.0	RES, 22.0, 1%, 1 W, AEC-Q200 Grade 0, 2512	2512	CRCW251222R0FKEG	Vishay-Dale		
R29	1	0	RES, 0, 5%, 0.1 W, 0603	0603	RC0603JR-070RL	Yageo America		
R31, R32, R39, R40	4	10	RES, 10, 5%, 0.25 W, 1206	1206	CRCW120610R0JNEA	Vishay-Dale		
R35	1	10.0k	RES, 10.0 k, 1%, 0.1 W, 0603	0603	CRCW060310K0FKEA	Vishay-Dale		
R36	1	0.01	RES, 0.01, 1%, 1 W, 2010	2010	PMR50HZPFU10L0	Rohm		
R41, R86, R112	3	499	RES, 499 ohm, 1%, 0.1W, 0603	0603	CRCW0603499RFKEA	Vishay-Dale		-
R42, R43	2	402	RES, 402, 1%, 1 W, 2512	2512	CRCW2512402RFKEG	Vishay-Dale		
R46, R47	2	1.0	RES, 1.0 ohm, 5%, 0.1W, 0603	0603	CRCW06031R00JNEA	Vishay-Dale		
R48	1	0.39	RES, 0.39 ohm, 1%, 0.1W, 0603	0603	ERJ-3RQFR39V	Panasonic		-
R49	1	100	RES, 100 ohm, 1%, 0.25W, 1206	1206	CRCW1206100RFKEA	Vishay-Dale		-
R51, R52, R53, R54, R55, R56, R57, R58	8	10.0	RES, 10.0 ohm, 1%, 0.25W, 1206	1206	CRCW120610R0FKEA	Vishay-Dale		
R59, R60, R61, R62	4	49.9	RES, 49.9 ohm, 1%, 0.1W, 0603	0603	CRCW060349R9FKEA	Vishay-Dale		-
R72, R73, R74, R75, R76, R77, R78	7	10.0	RES, 10.0 ohm, 1%, 0.1W, 0603	0603	RC0603FR-0710RL	Yageo America		-
R79, R83, R84, R85, R89, R90, R91, R92, R94, R96, R107, R108, R136	13	10.0k	RES, 10.0k ohm, 1%, 0.1W, 0603	0603	CRCW060310K0FKEA	Vishay-Dale	-, -, [NoValue], -, [NoValue], -, -, [NoValue], -, [NoValue], [N	
R80	1	49.9k	RES, 49.9k ohm, 1%, 0.1W, 0603	0603	RC0603FR-0749K9L	Yageo America		
R81	1	15.0k	RES, 15.0k ohm, 1%, 0.1W, 0603	0603	CRCW060315K0FKEA	Vishay-Dale		
R87, R88, R93, R95, R97, R98, R99, R100, R101, R102, R103, R104, R105, R106, R109, R110, R111	17	1.0k	RES, 1.0 k, 5%, 0.1 W, 0603	0603	CRCW06031K00JNEA	Vishay-Dale		
R114, R115, R116, R117, R118, R119, R120	7	20.0k	RES, 20.0k ohm, 1%, 0.1W, 0603	0603	CRCW060320K0FKEA	Vishay-Dale		-
R121	1	174k	RES, 174k ohm, 1%, 0.1W, 0603	0603	CRCW0603174KFKEA	Vishay-Dale		-
R122, R137	2	200k	RES, 200k ohm, 5%, 0.1W, 0603	0603	CRCW0603200KJNEA	Vishay-Dale		-
R123	1	665k	RES, 665k ohm, 1%, 0.1W, 0603	0603	CRCW0603665KFKEA	Vishay-Dale		-
R125	1	1.20k	RES, 1.20k ohm, 0.1%, 0.1W, 0603	0603	RG1608P-122-B-T5	Susumu Co Ltd		-
R126	1	442k	RES, 442k ohm, 1%, 0.1W, 0603	0603	CRCW0603442KFKEA	Vishay-Dale		-
R127	1	1.50	RES, 1.50 ohm, 1%, 0.125W, 0805	0805	ERJ-6RQF1R5V	Panasonic		-
R128	1	4.99k	RES, 4.99 k, 1%, 0.1 W, 0603	0603	CRCW06034K99FKEA	Vishay-Dale		-
R131	1	4.48k	RES, 4.48 k, 0.5%, 0.1 W, 0603	0603	RT0603DRE074K48L	Yageo America		-
R132	1	232k	RES, 232k ohm, 1%, 0.1W, 0603	0603	CRCW0603232KFKEA	Vishay-Dale		-
R133, R140	2	2.0	RES, 2.0, 5%, 0.1 W, 0603	0603	CRCW06032R00JNEA	Vishay-Dale		
R138	1	1.00Meg	RES, 1.00 M, 1%, 0.1 W, 0603	0603	CRCW06031M00FKEA	Vishay-Dale		
R139	1	15.00Meg	RES, 1.00 M, 1%, 0.1 W, 0603	0603	RK73BJ1TTDD156J	Vishay-Dale		
R141	1	1.58Meg	RES, 1.58 M, 1%, 0.1 W, 0603	0603	CRCW06031M58FKEA	Vishay-Dale		
SW1	1		Switch, Slide, SPDT, 0.2A, GULL, 12V, SMD	SMD, 3-Leads, Body 8.5x3.5mm, Pitch 2.5mm	CL-SB-12B-01T	Copal Electronics		
T1	1	128uH	Transformer, 128 uH, SMT	SMD, 10-Leads, Body 14.5x14.5mm	PA3856.005NLT	Pulse Engineering		
T2	1	Triple	Terminal, Turret, TH, Triple	Keystone1598-2	1598-2	Keystone	Equivalent	Any
T3	1	475uH	Transformer, 475uH, SMT	10.05x4.19x6.73 mm	760390014	Würth Elektronik		
TP1, TP2, TP3, TP4, TP5, TP6, TP7	7	White	Test Point, Miniature, White, TH	White Miniature Testpoint	5002	Keystone		
U1	1		16 Cell Battery Monitor with Passive Cell Balancing, PFC0080A	PFC0080A	BQ76PL455ATPFCRQ1	Texas Instruments	BQ76PL455ATPFCQ1	Texas Instruments
U2	1		PWM Controller	TSSOP-28	EMB1499QMH	Texas Instruments		
U3	1		Robust EMC, Low Power, Quad-Channel Digital Isolators, DW0016B	DW0016B	ISO7342FCDWR	Texas Instruments	ISO7342FCDW	Texas Instruments

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
U4, U14	2		Inverter, Schmitt Trigger, SSOP5	SSOP5	BU4S584G2-TR	Rohm		
U5	1		Window Comparator for Over- and Undervoltage Detection, DDC0006A	DDC0006A	TPS3700QDDCRQ1	Texas Instruments		Texas Instruments
U6	1		150-mA, 30-V, 1-uA IQ Voltage Regulators with Enable, DBV0005A	DBV0005A	TPS70950DBVR	Texas Instruments	TPS70950DBVT	Texas Instruments
U7, U10	2		Single-Channel High-Speed Low-Side Gate Driver (with 4-A Peak Source and 8-A Peak Sink), DBV0006A	DBV0006A	UCC27511DBVR	Texas Instruments	UCC27511DBVT	Texas Instruments
U8	1		Automotive Catalog Low-Capacitance + / - 15 kV ESD-Protection Array for High-Speed Data Inter, 2 Channels, -40 to +85 degC, 5-pin SOT (DRL), Green (RoHS & no Sb/Br)	DRL0005A	TPD2E001DRLRQ1	Texas Instruments	Equivalent	Texas Instruments
U9	1		Nanopower, 1.8V, Comparator with Voltage Reference, DCK0006A	DCK0006A	TLV3012AIDCKR	Texas Instruments	TLV3011AIDCKT	Texas Instruments
U11, U15, U18	3		Switch Matrix Gate Driver, RHS0048A	RHS0048A	EMB1428QSQ/NOPB	Texas Instruments		Texas Instruments
U12, U13	2		1, 4, 6 CHANNEL PROTECTION SOLUTION FOR SUPER-SPEED (UP TO 6 GBPS) INTERFACE, DQA0010A	DQA0010A	TPD4E05U06QDQARQ1	Texas Instruments		Texas Instruments
U16	1		8-BIT SHIFT REGISTER WITH 3-STATE OUTPUT REGISTER, PW0016A	PW0016A	SN74AHC595QPWRQ1	Texas Instruments		Texas Instruments
U17	1		8-Bit Micro Power Digital-to-Analog Converter with Rail-to-Rail Output, 6-pin Tiny SOT23, Pb-Free	MK06A	DAC081S101CIMK/NOPB	Texas Instruments		
U19, U20	2	6.1V	DIODE ARRAY ESD 6.1V Breakdown	SOT23-5	ESDA6V1SC5	STMicroelectronics		
U21	1		100V, 350 mA Constant On-Time Buck Switching Regulator, 8-pin MSOP, Pb-Free	MUA08A	LM5008AMM/NOPB	Texas Instruments		
U22	1		Low Input Boost Converter With Integrated Power Diode and Input/Output Isolation, DSK0010A (WSON-10)	DSK0010A	TPS61093QDSKRQ1	Texas Instruments		Texas Instruments
U23	1		Transformer Driver for Isolated Power Supplies, DBV0005A	DBV0005A	SN6501QDBVRQ1	Texas Instruments		Texas Instruments
U24	1		60-V, 5-µA IQ, 100-mA, Low-Dropout VOLTAGE REGULATOR With Enable and Power-Good, DGN0008B	DGN0008B	TPS7A1601QDGNRQ1	Texas Instruments		Texas Instruments
ZZ4	1		USB Serial Cable		TTL-232R-5V	FTDI		
ZZ5	1		Screws H9 and H10 are for the J1 header					
ZZ6	1		Battery Cable Pigtail		PWR580A_Battery_Cable	Texas Instruments		
ZZ7	1		H11 is an empty plug to be inserted in J4		39500-0010	Molex		
ZZ8	1		12V Cable Pigtail		PWR580A_12V_Cable	Texas Instruments		
ZZ9	1		H12 is an empty plug to be inserted in J5		39500-0010	Molex		

Notes:

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

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