

Bill of Materials

MCP19125 Flyback Battery Charger

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Quantity	Designator	Description_	Manufacturer 1	Manufacturer Part Number 1	Supplier Part Number 1
1	C1	CAP CER 1uF 50V 10% X7R SMD 0805	Murata Electronics North America	GRM21BR71H105KA12L	490-4736-1-ND
2	C2, C3	CAP CER 10uF 50V 20% X7S SMD 1210	TDK	C3225X7S1H106M	445-4537-1-ND
2	C4, C5	CAP CER 4.7uF 50V 10% X7R SMD 1210	Murata Electronics North America	GRM32ER71H475KA88L	490-1864-1-ND
1	C6	CAP CER 0.1uF 50V 20% Y5V SMD 0603	AVX	06035G104ZAT2A	478-3724-1-ND
1	C8	CAP ALU 120uF 50V 20% SMD E	Nichicon	PCR1H121MCL2GS	493-13772-1-ND
2	C17, C21	CAP CER 10000pF 50V 10% X7R SMD 0603	AVX Corporation	06035C103KAT2A	478-1227-1-ND
1	C18	CAP CER 910pF 50V 5% NP0 SMD 0603	Murata Electronics North America	GRM1885C1H911JA01D	490-1450-2-ND
2	C19, C23	CAP CER 4.7uF 16V 10% X5R SMD 0603	TDK Corporation	C1608X5R1C475K080AC	445-7478-1-ND
1	C20	CAP CER 0.068uF 25V 10% X8R SMD 0603	TDK	C1608X8R1E683K	445-3421-1-ND
3	C22, C24, C26	CAP CER 1uF 25V 10% X7R SMD 0603	TDK Corporation	CGA3E1X7R1E105K080AC	445-6931-1-ND
1	C25	CAP CER 1000pF 50V 20% X7R SMD 0603	TDK Corporation	C1608X7R2A102K080AA	445-1298-1-ND
2	C31, C32	CAP CER 680pF 100V 5% NP0 SMD 0805	KEMET	C0805C681J1GACTU	399-8111-1-ND
2	D2, D5	DIO ZNR BZX84-C5V1 5.1V 250mW SOT-23-3	Nexperia USA Inc.	BZX84-C5V1.215	1727-2939-1-ND
2	J1, J2	CON JACK Banana 4.5mm Female TH VERT	Keystone Electronics	575-8	36-575-8-ND
1	J3	CON HDR 3.96mm Male 1x3 Tin Lock 7.7MH TH VERT	TE Connectivity AMP Connectors	1-1123723-3	A104903-ND
2	J4, J5	CON HDR-2.54 Male 1x6 Gold 5.84MH TH R/A	FCI	68016-106HLF	609-3313-ND
1	J7	CON HDR-2.54 Male 2x3 Gold 5.84MH TH VERT	Samtec	TSW-103-08-L-D	SAM1040-03-ND
1	LD1	DIO LED RED 1.8V 40mA 10mcd Clear SMD 0603	Lite-On	LTST-C190KRKT	160-1436-1-ND
2	Q1, Q2	TRANS FET N-CH BSZ240N12NS3 G 120V 37A 66W TSDSON-8	Infineon Technologies	BSZ240N12NS3 G	BSZ240N12NS3 GCT-ND
2	Q3, Q5	TRANS FET DUAL N+P SI3552DV-T1-GE3 30V, -30V 2.5A, -1.8A 1.15W SOT-23-6	Vishay Siliconix	SI3552DV-T1-GE3	SI3552DV-T1-GE3CT-ND
1	Q4	TRANS FET N-CH FDV301N 25V 220mA 350mW SOT-23-3	Fairchild	FDV301N	FDV301NCT-ND

7	R1, R2, R6, R12, R15, R17, R24	RES TKF 0R 1/10W SMD 0603	Panasonic	ERJ-3GSY0R00V	P0.0GTR-ND
1	R3	RES TF 0.05R 1% 1W SMD 0612	SUSUMU	PRL1632-R050-F-T1	PRL1632.050FCT-ND
1	R4	RES TF 0.1R 1% 1W SMD 0612	SUSUMU	L1632-R100-F-T5	1653247
1	R7	RES TKF 10k 1% 1/10W SMD 0603	Vishay	CRCW060310K0FKEA	541-10.0KHCT-ND
1	R10	RES TKF 1.5k 1% 1/10W SMD 0603	Panasonic	ERJ-3EKF1501V	P1.50KHTR-ND
1	R11	RES TKF 390R 1% 1/10W SMD 0603	Panasonic	ERJ-3EKF3900V	P390HCT-ND
1	R16	RES TKF 10.2k 1% 1/10W SMD 0603	Yageo	RC0603FR-0710K2L	311-10.2KHRCT-ND
6	R20, R21, R29, R49, R50, R51	RES TKF 10k 5% 1/10W SMD 0603	Panasonic	ERJ-3GEYJ103V	P10KGCT-ND
1	R22	RES TKF 1k 5% 1/10W SMD 0603	Panasonic	ERJ-3GEYJ102V	P1.0KGTR-ND
2	R26, R30	RES TKF 15k 5% 1/10W SMD 0603	Panasonic	ERJ-3GEYJ153V	P15KGCT-ND
1	R27	RES TF 100k 0.1% 1/10W SMD 0603	Panasonic Electronic Components	ERA-3AEB104V	P100KDBCT-ND
1	R28	RES TKF 10R 5% 1/10W SMD 0603	Panasonic	ERJ-3GEYJ100V	P10GCT-ND
1	R31	RES TF 15k 0.1% 1/10W SMD 0603	Panasonic Electronic Components	ERA-3AEB153V	P15KDBCT-ND
3	R32, R35, R36	RES TKF 4.7k 5% 1/10W SMD 0603	Panasonic	ERJ-3GEYJ472V	P4.7KGCT-ND
2	R33, R47	RES TKF 30k 5% 1/10W SMD 0603	Panasonic	ERJ-3GEYJ303V	P30KGCT-ND
1	R41	RES TF 22.6K 0.1% 1/10W SMD 0603	Panasonic Electronic Components	ERA-3AEB2262V	P22.6KDBCT-ND
2	R42, R43	RES 22 OHM 1/4W 1% 1206 SMD	Panasonic Electronic Components	ERJ-8ENF22R0V	P22.0FCT-ND
2	R45, R46	RES TKF 0R 1/8W SMD 0805	Panasonic	ERJ-6GEY0R00V	P0.0ATR-ND
1	SW1	SWITCH TACT SPST 12V 50mA PTS645SM43SMTR92 LFS SMD	Wurth Electronics Inc	430182043816	732-7004-1-ND
21	TP1, TP2, TP3, TP4, TP6, TP7, TP8, TP9, TP10, TP11, TP12, TP13, TP14, TP15, TP16, TP17, TP18, TP19, TP20, TP21, TP22	MISC, TEST POINT MULTI PURPOSE MINI BLACK	Keystone	5001	36-5001-ND
1	X1	INDUCTOR DUAL 15uH 4.5A 20% SMD MSD1583	Coilcraft	MSD1583-153MEB	994-MSD1583-153MEB
Microchip Parts listed below					
1	U2	MCHP ANALOG PWM CONTROLLER 2MHz MCP19125-E/MQ QFN-28	Microchip Technology Inc	MCP19125-E/MQ	Microchip Technology Inc MCP19125-E/MQ
1	U3	MCHP ANALOG CHARGE PUMP 5V - 11V TC1240AECCTR SOT-23-6	Microchip Technology Inc	TC1240AECCTR	TC1240AECCT-ND
Mechanical Parts to be added in the package					
1	LABEL	LABEL, ASSY W/REV LEVEL (SMALL MODULES) PER MTS-0002			
4	SCR1, SCR2, SCR3, SCR4	MACHINE SCREW PAN PHILLIPS 4-40	Keystone Electronics	9900	36-9900-ND
4	STANDOFF1, STANDOFF2, STANDOFF3, STANDOFF4	MECH HW STAND-OFF F-F 4-40 NYLON 1/2	Keystone Electronics	1902C	36-1902C-ND
Do Not Populate Parts listed below					
1	C7	CAP CER 0.1uF 50V 20% X7R SMD 0603	TDK	C1608X7R1H104M	445-5098-1-ND
3	C10, C11, C12	CAP CER 2.2uF 100V 10% X7R SMD 1210	KEMET	C1210C225K1RACTU	399-5511-1-ND
1	C13	CAP CER 220pF 50V 5% NP0 SMD 0603	KEMET	C0603C221J5GACTU	399-1066-1-ND
3	C14, C15, C16	CAP CER 1uF 16V 10% X5R SMD 0603	AVX	0603YD105KAT2A	478-1249-1-ND
2	C27, C28	CAP CER 0.1uF 50V 20% Y5V SMD 0603	AVX	06035G104ZAT2A	478-3724-1-ND
1	C29	CAP CER 4.7uF 16V 10% X5R SMD 0603	TDK Corporation	C1608X5R1C475K080AC	445-7478-1-ND
1	C30	CAP CER 1uF 25V 10% X7R SMD 0603	TDK Corporation	CGA3E1X7R1E105K080AC	445-6931-1-ND
1	C33	CAP CER 680pF 100V 5% NP0 SMD 0805	KEMET	C0805C681J1GACTU	399-8111-1-ND
1	D1	DIO RECTARR BAV23,215 1V 225mA 200V SMD SOT-143B	Nexperia USA Inc.	BAV23,215	1727-2910-1-ND
1	D3	DIO TVS SMAJ90A 90VWM 400W SMD DO-214AC SMA	Littelfuse Inc	SMAJ90A	SMAJ90ALFCT-ND
1	D4	DIO SCKY STPS2H100 790mV 2A 100V DO-214AC_SMA	STMicroelectronics	STPS2H100A	497-3758-1-ND

1	J6	CON USB2.0 MICRO-B FEMALE TH/SMD R/A	FCI	10118194-0001LF	609-4618-1-ND
1	LD2	DIO LED YELLOW 2.1V 20mA 6mcd Clear SMD 0603	Lite-On	LTST-C190YKT	160-1184-2-ND
1	R5	RES TF 100k 0.1% 1/10W SMD 0603	Panasonic Electronic Components	ERA-3AEB104V	P100KDBCT-ND
2	R8, R9	RES TF 1k 0.1% 1/10W SMD 0603	Panasonic - ECG	ERA-3AEB102V	P1.0KDBTR-ND
2	R13, R18	RES TKF 3.92k 1% 1/10W SMD 0603	Panasonic	ERJ-3EKF3921V	P3.92KHCT-ND
4	R14, R19, R23, R48	RES TKF 0R 1/10W SMD 0603	Panasonic	ERJ-3GSY0R00V	P0.0GTR-ND
1	R25	RES TKF 10R 5% 1/10W SMD 0603	Panasonic	ERJ-3GEYJ100V	P10GCT-ND
1	R34	RES MF 330R 5% 1/16W SMD 0603	Panasonic Electronic Components	ERA-V33J331V	P330CHTR-ND
3	R37, R38, R39	RES TKF 4.7k 5% 1/10W SMD 0603	Panasonic	ERJ-3GEYJ472V	P4.7KGCT-ND
1	R40	RES TKF 1k 5% 1/10W SMD 0603	Panasonic	ERJ-3GEYJ102V	P1.0KGTR-ND
1	R44	RES 22 OHM 1/4W 1% 1206 SMD	Panasonic Electronic Components	ERJ-8ENF22R0V	P22.0FCT-ND
1	U1	MCHP ANALOG OPAMP 1-Ch 1.2MHz MCP6071T-E/OT SOT-23-5	Microchip Technology	MCP6071T-E/OT	MCP6071T-E/OTCT-ND
1	U4	MCHP INTERFACE USB I2C UART MCP2221-I/ML QFN-16	Microchip Technology	MCP2221-I/ML	MCP2221-I/ML-ND