

Bill of Materials

MCP39F511N Power Monitor Demo Board

Document Number: 02-10480
 Board Number: 04-10480
 Part Number: ADM00706
 Revision: 1.1
 Engineer: Craig King
 Drawn By: Craig King



Creation Date: 11:02:48 AM
 Print Date: 4:01:54 PM

Quantity	Designator	Description_	Manufacturer 1	Manufacturer Part Number 1	Supplier 1	Supplier Part Number 1
1	C1	CAP FILM 0.01uF 330V 20% RAD P10L13W4H9	Epcos	B32911A3103M	Digi-Key	495-3236-ND
6	C2, C3, C4, C5, C7, C15	CAP CER 0.033uF 50V 10% X7R SMD 0603	TDK	C1608X7R1H333K	Digi-Key	445-5093-1-ND
1	C6	CAP ALU 100uF 16V 20% SMD D	Nichicon	UWX1C101MCL1GB	Digi-Key	493-2105-2-ND
3	C8, C22, C25	CAP CER 10uF 10V 10% X7R SMD 0805	TDK Corporation	C2012X7R1A106K125AC	Digi-Key	445-6857-1-ND
10	C9, C12, C13, C17, C23, C26, C27, C28, C29, C31	CAP CER 0.1uF 25V 10% X7R SMD 0603	Murata	GRM188R71E104KA01D	Digi-Key	490-1524-1-ND
2	C10, C11	CAP ALU 4.7uF 400V 20% RAD P3.5D8H13	Nichicon	UVC2G4R7MPD1TD	Digi-Key	493-10417-1-ND
1	C14	CAP TANT 47uF 4V 10% 2.6Ohm SMD A	AVX	TAJA476K004RNJ	Digi-Key	478-1669-1-ND
1	C18	CAP CER 4.7uF 25V 10% X7R SMD 0805	TDK Corporation	C2012X7R1E475K125AB	Digi-Key	445-5972-1-ND
1	C24	CAP CER 10uF 25V 10% X7R SMD 1206	Taiyo Yuden	TMK316B7106KL-TD	Digi-Key	587-2399-1-ND
1	C30	CAP CER 4.7uF 10V 10% X5R SMD 0805	Taiyo Yuden	LMK212BJ475KD-T	Digi-Key	587-1297-1-ND
1	C32	CAP CER 0.47uF 6.3V 10% X5R SMD 0603	Murata	GRM188R60J474KA01D	Digi-Key	490-1548-1-ND
1	D1	DIO RECT ES1G 1.25V 1A 400V SMD DO-214AC SMA	Diodes Incorporated	ES1G-13-F	Digi-Key	ES1G-FDICT-ND
3	D2, D3, D4	DIO RECT MRA4005 1.1V 1A 600V DO-214AC SMA	ON Semiconductor	MRA4005T3G	Digi-Key	MRA4005T1GOSCT-ND
4	FB1, FB2, FB5, FB6	FERRITE 800mA 0.15R SMD 0805	Laird	LI0805H151R-10	Digi-Key	240-2384-1-ND
2	FB3, FB4	FERRITE 7A RAD P5L5.3D3.8	Murata Electronics North	BL02RN1R2M2B	Digi-Key	490-11001-ND
1	J1	CON IEC 250V 15A Inlet C14 TH R/A	Schurter Inc	GSP1.9103.1	Digi-Key	486-1130-ND
2	J2, J4	CON IEC 250V 15A Outlet C13 TH R/A	Schurter Inc	6182.0033	Digi-Key	486-1343-ND
1	J3	CON POWER 2.5mm 5.5mm SWITCH TH R/A	CUI Inc	PJ-002B	Digi-Key	CP-002B-ND

1	J5	CON HDR-2.54 Male 1x4 Tin 5.84MH TH VERT	FCI	68002-404HLF	Digi-Key	609-3305-ND
4	J6, J7, J8, J9	CON HDR-2.54 Male 1x2 Tin 6.10MH TH VERT	Molex Inc	0022284020	Digi-Key	WM6402-ND
1	J10	CON USB MINI-B Female TH VERT	Molex Connector Corpora	500075-1517	Digi-Key	WM2072-ND
2	JP2, JP3	CON HDR-2.54 Male 1x3 Gold 5.84MH TH VERT	FCI	68000-103HLF	Digi-Key	609-3461-ND
2	L1, L2	INDUCTOR 1mH 240mA 20% SMD L6W6H2.4	Coilcraft	LPS6225-105MRB	Mouser	994-LPS6225-105MRB
4	LD1, LD2, LD3, LD4	DIO LED RED 1.95V 30mA 700mcd Clear SMD 0603	Kingbright	APTD1608SURCK	Digi-Key	754-1541-1-ND
1	LD5	DIO LED BI RED, GREEN 1.95V, 2.1V 30mA 0805	Kingbright Corp	APHBM2012SURKCGKC	Digi-Key	754-1093-1-ND
1	MOV1	RES VARISTOR 275V 130J TH DISC 14mm	EPCOS Inc	S14K275E2K1	Digi-Key	495-4291-ND
2	R1, R9	RES SHUNT MF 0.002R 1% 2W 2512	Stackpole Electronics Inc	CSNL2512FT2L00	Digi-Key	CSNL2512FT2L00CT-ND
2	R2, R3	RES TKF 499k 1% 3/4W SMD 2010	Vishay Dale	CRCW2010499KFKF	Digi-Key	541-499KACCT-ND
2	R4, R10	RES TKF 470R 5% 1W SMD 2512	Panasonic	ERJ-1TYJ471U	Digi-Key	PT470XCT-ND
15	R5, R6, R7, R11, R18, R23, R24, R25, R26, R27, R28, R29, R30, R33, R34	RES TKF 1k 1% 1/10W SMD 0603	Panasonic	ERJ-3EKF1001V	Digi-Key	P1.00KHCT-ND
1	R8	RES TKF 5.1k 1% 1/10W SMD 0603	Panasonic	ERJ-3EKF5101V	Digi-Key	P5.10KHTR-ND
2	R12, R16	RES TKF 2.05k 1% 1/10W SMD 0603	Yageo	RC0603FR-072K05L	Digi-Key	311-2.05KHRTR-ND
2	R13, R14	RES TKF 4.7k 1% 1/10W SMD 0603	Panasonic	ERJ-3EKF4701V	Digi-Key	P4.70KHCT-ND
2	R15, R19	RES TKF 51k 1% 1/10W SMD 0603	Panasonic	ERJ-3EKF5102V	Digi-Key	P51.0KHCT-ND
1	R17	RES TKF 8.2k 1% 1/10W SMD 0603	Panasonic	ERJ-3EKF8201V	Digi-Key	P8.20KHCT-ND
1	R20	RES TKF 33R 5% 1/10W SMD 0603	Yageo	9C06031A33R0JLHFT	Digi-Key	311-33GTR-ND
4	R21, R22, R31, R32	RES TKF 100R 5% 1/10W SMD 0603	Vishay	CRCW0603100RJNEA	Digi-Key	541-100GCT-ND
1	R35	RES TKF 10k 1% 1/10W SMD 0603	Panasonic	ERJ-3EKF1002V	Digi-Key	P10.0KHCT-ND
4	TP1, TP2, TP4, TP5	CON TP PIN Tin TH	Harwin	H2121-01	Mouser	855-H2121-01
1	U3	IC SWITCHER LNK304 SO-8C	Power Integrations	LNK304DG-TL	Digi-Key	596-1237-1-ND
1	U6	IC PHOTO ACSL-7210-06RE Bi-Dir 3.3V and 5V SOIC-8	Avago Technologies	ACSL-7210-06RE	Mouser	630-ACSL-7210-06RE
4	U7, U8, U9, U10	IC PHOTO HCPL-181 4-SMD	Avago Technologies	HCPL-181-00CE	Digi-Key	516-1788-1-ND

Microchip Parts listed below

1	U1	MCHP ANALOG ENERGY MEASUREMENT 4000:1 MCP39F511N-E/MQ QFN-28	Microchip Technology Inc	MCP39F511N-E/MQ	Microchip Tech	MCP39F511N-E/MQ
1	U5	MCHP ANALOG LDO 3.3V MCP1754ST-3302E/DB SOT-223-3	Microchip	MCP1754ST-3302E/DB	Microchip	MCP1754ST-3302E/DB
1	U11	MCHP INTERFACE USB I2C UART MCP2221-I/ST TSSOP-14	Microchip Technology	MCP2221-I/ST	Microchip Tech	MCP2221-I/ST

Mechanical Parts to be added in the package

1	LABEL1	LABEL, NEED HELP WITH ASSY/SERIAL				
1	CBL1	MECH HW CABLE USB-A Male to Mini USB-B Male 3ft Black	Katerno	10UM-02103BK	Katerno	10UM-02103BK

2	CBL2, CBL3	MECH HW 1ft 18 AWG Monitor Power Adapter Cord (NEMA 5-15R to IEC320C14)	Katerno	152360	Katerno	152360
1	CBL4	MECH HW 6ft 16 AWG Universal Power Cord (IEC320C13 to NEMA 5-15P)	Katerno	153879	Katerno	153879
1	ENCLOSURE1	MECH ENCLOSURE Slim Ref Side Port Meter	Tech-Demos.com	TD03-0102R0	Tech-Demos.com	TD03-0102R0
2	JP4, JP5	MECH HW JUMPER 2.54mm 1x2 Handle Gold	TE Connectivity	881545-2	Digi-Key	A26242-ND
1	LABEL2	MECH HW LABEL HIGH VOLTAGE	Panduit Corp	PLD-56	Digi-Key	PLD-56-ND
6	NUT1, NUT2, NUT3, NUT4, NUT5, NUT6	HEX NUT 0.217" STEEL M3	Keystone Electronics	4708	Digi-Key	KEY1149-ND
6	SCR1, SCR2, SCR3, SCR4, SCR5, SCR6	MACHINE SCREW PAN PHILLIPS M3	Digi-Key	335-1156-ND	Digi-Key	335-1156-ND

PCB

1	PCB1	Printed Circuit Board		04-10480-1		
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Do Not Populate Parts listed below

Approved

Notes

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