

Bill of Materials MCP39F501 Energy Monitor PICtail

Project: ADM00509-R2 MCP39F501 Energy Monitor PICtail.PrjPcb

Source Data: C:\ALTIUM_WORK\00509_MCP39F501 Power Monitor PICtail\ADM00509-R2 MCP39F501 Energy Monitor PICtail.PrjPcb

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MICROCHIP

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Quantity	Designator	Description_	Manufacturer 1	Manufacturer Part Number 1	Supplier 1	Supplier Part Number 1
4	C2, C6, C8, C10	CAP CER 33nF 25V 5% C0G, NP0 SMD 0805	TDK	C2012C0G1E333J	Digi-Key	445-2675-1-ND
8	C3, C4, C9, C11, C17, C23, C24, C26	CAP CER 0.1uF 16V 10% X7R 0603	TDK	C1608X7R1C104K	Digi-Key	445-1317-1-ND
1	C15	CAP CER 0.1uF 25V 5% X7R SMD 0603	AVX	06033C104JAT2A	Digi-Key	478-3713-1-ND
2	C16, C22	CAP CER 10uF 10V 20% Y5V SMD 0805	TDK	C2012Y5V1A106Z	Digi-Key	445-1371-1-ND
1	C19	CAP FILM 0.01uF 330V 20% RAD P10L13W4H9	Epcos	B32911A3103M	Digi-Key	495-3236-ND
1	C20	CAP ALU 470uF 25V 20% SMD G	Nichicon	UWT1E471MNL1GS	Digi-Key	493-2194-1-ND
1	C21	CAP FILM 1.5uF 310V 20% RAD P27.5L31.5W13.5H23	Epcos	B32924A2155M	Digi-Key	495-1625-ND
2	C25, C27	CAP CER 1uF 10V 20% X7R SMD 0603	TDK	C1608X7R1A105M	Digi-Key	445-5139-1-ND
2	D1, D2	DIO RECT MRA4005 1.1V 1A 600V DO-214AC_SMA	ON Semiconductor	MRA4005T3G	Digi-Key	MRA4005T1GOSCT-ND
1	D3	DIO ZNR 1N4744A 15V 1W DO-41	Fairchild	1N4744A	Digi-Key	1N4744A-ND
1	D4	DIO SCTKYARR BAS40-05 1V 200mA 40V SOT-23-3	Vishay	BAS40-05-V-GS08	Digi-Key	BAS40-05-V-GS08CT-ND
2	FB1, FB2	FERRITE 800mA 0.15R SMD 0805	Laird	LI0805H151R-10	Digi-Key	240-2384-1-ND
2	FB3, FB4	FERRITE 7A 0.01R RAD P5L5.3D3.8	Panasonic - ECG	EXC-ELSR35S	Digi-Key	P9821BK-ND
1	J1	CON JACK Power Jack 2.5mm	CUI Inc	PJ-006B-SMT	Digi-Key	CP-006BPJCT-ND
1	J2	CON USB Mini USB-B Female SMD R/A	Hirose	UX60-MB-5ST	Digi-Key	H2959TR-ND
1	J3	CON EDGE Mini Edge Card MEC1-EM 1mm Female 2x60 SMD R/A	Samtec	MEC1-160-02-L-D-EM2	Newark	41T0707
7	J4, J5, J9, J10, J12, J14, J15	CON HDR-2.54 Male 1x2 TH VERT	FCI	77311-118-02LF	Digi-Key	609-4434-ND
1	J6	CON IEC 250V 15A Inlet TH R/A	Schurter Inc	GSP1.9103.1	Digi-Key	486-1130-ND
1	J7	CON IEC 250V 15A Outlet TH R/A	Schurter Inc	6182.0033	Digi-Key	486-1343-ND
5	J8, J11, J13, J16, J17	CON HDR-2.54 Male 1x3 TH VERT	FCI	68000-103HLF	Digi-Key	609-3461-ND
1	LD1	DIO LED BI RED, GREEN 1.95V, 2.1V 30mA 0805	Kingbright Corp	APHBM2012SURKCGKC	Digi-Key	754-1093-1-ND

5	LD2, LD3, LD4, LD5, LD6	DIO LED RED 1.65V 30mA RAD T-1 3/4	Kingbright Corp	WP7113LSRD	Digi-Key	754-1267-ND
1	MOV1	RES VARISTOR MO 420V 45J Disc 10mm	EPCOS Inc	S10K420	Digi-Key	495-3791-ND
7	R1, R3, R11, R18, R21, R23, R50	RES TKF 4.7k 5% 1/10W SMD 0603	Panasonic	ERJ-3GEYJ472V	Digi-Key	P4.7KGCT-ND
4	R2, R4, R14, R20	RES TKF 1k 1% 1/10W SMD 0603	Panasonic	ERJ-3EKF1001V	Digi-Key	P1.00KHCT-ND
1	R6	RES SHUNT MF 0.002R 1% 2W 2512	Stackpole Electronics Inc	CSNL2512FT2L00	Digi-Key	CSNL2512FT2L00CT-ND
2	R7, R8	RES 499K OHM 3/4W 1% 2010 SMD	Vishay Dale	CRCW2010499KFKEF	Digi-Key	RES 499K OHM 3/4W 1% 2010 SMD
5	R9, R15, R16, R17, R19	RES TKF 1k 5% 1/10W SMD 0603	Panasonic	ERJ-3GEYJ102V	Digi-Key	P1.0KGCT-ND
5	R12, R13, R22, R24, R51	RES TKF 3.3k 5% 1/10W SMD 0603	Panasonic	ERJ-3GEYJ332V	Digi-Key	P3.3KGCT-ND
1	R27	RES TKF 100R 1% 1/10W SMD 0603	Panasonic	ERJ-3EKF1000V	Digi-Key	P100HCT-ND
1	R34	RES 33 OHM 5W 1% AXIAL	Ohmite	45F33RE	Digi-Key	45F33RE-ND
3	R37, R38, R39	RES TKF 390R 5% 1/10W SMD 0603	Panasonic	ERJ-3GEYJ391V	Digi-Key	P390GCT-ND
1	R41	RES TKF 10k 5% 1/10W SMD 0603	Panasonic	ERJ-3GEYJ103V	Digi-Key	P10KGCT-ND
5	U1, U3, U7, U8, U9	IC PHOTO PC365N 4-SMD	Sharp Microelectronics	PC365NJ0000F	Digi-Key	425-2098-1-ND
1	U5	IC ISOLATOR IL721-3E SOIC-8	NVE Corp/Isolation Products	IL721-3E	Digi-Key	390-1130-ND
1	X1	RESONATOR 12MHz 0.1% SMD CSTCE-G	Murata	CSTCE12M0G15L99-R0	Mouser	81-CSTCE12M0G15L99R0

Microchip Parts listed below

1	U2	MCHP ANA LDO MCP1754ST-3302E/MB SOT-89-3	Microchip Technology	MCP1754ST-3302E/MB	Digi-Key	MCP1754ST-3302E/MBCT-ND
1	U4	MCHP INT USB MCP2200 SSOP-20	Microchip	MCP2200-I/SS	Microchip	MCP2200-I/SS
1	U6	MCP39F501 QFN-28	Microchip	MCP39F501-E/MQ	Microchip	MCP39F501-E/MQ
1	U10	MCHP ANA Temperature Sensor MCP9700 SOT-23-3	Microchip	MCP9700T-E/TT	Microchip	MCP9700T-E/TT

Mechanical Parts to be added in the package

5	J8, J11, J13, J16, J17	MECH HW JUMPER 2.54mm 1x2 Handle Gold	TE Connectivity	881545-2	Digi-Key	A26242-ND
4	PAD1-4	MECH HW RUBBER PAD Bumpon Hemisphere 0.44" x 0.20" Black	3M	SJ-5003 (BLACK)	Digi-Key	SJ5003-0-ND
1	Included in Box at time of packing	USB A Male to Mini USB B 5 pin Cable - 3ft (Distributor....Katerno.com)	Katerno.com	10UM-02103BK	Katerno.com	10UM-02103BK
1	Included in Box at time of packing	6ft 16 AWG Universal Power Cord (IEC320C13 to NEMA 5-15P)	Katerno.com	25545_c2g	Katerno.com	153879
1	Included in Box at time of packing	1ft 18 AWG Monitor Power Adapter Cord (NEMA 5-15R to IEC320C14)	Katerno.com	03147_c2g	Katerno.com	152360
4	Fasten J6 & J7 to PCB at four locations	MACHINE SCREW PAN PHILLIPS 6-32	B&F Fastener Supply	NY PMS 632 0038 PH	Digi-Key	H556-ND
4	Fasten J6 & J7 to PCB at four locations	HEX NUT 5/16" NYLON 6-32	B&F Fastener Supply	NY HN 632	Digi-Key	H620-ND

1	Meter Enclosure	Clear Acrylic Enclosure	Tech-Demos.com		Tech-Demos.com
* Note One dispenser Covers 200	Placed on Bottom side of Enclosure	LABEL ELECTRL WARN 1.5"X1" 200PC	Panduit Corp	PLD-56	Digi-Key PLD-56-ND

Do Not Populate Parts listed below						
0	C18	CAP FILM 0.47uF 305V 20% RAD P15L18W11H18.5	Epcos	B32932A3474M	Digi-Key	495-4353-ND
0	J18	CON HDR-2.54 Male 1x2 TH VERT	FCI	77311-118-02LF	Digi-Key	609-4434-ND
0	R10	RES TKF 2.49R 1% 1/10W SMD 0603	Vishay	CRCW06032R49FKEA	Digi-Key	541-2.49HHCT-ND
2	C1, C5	CAP CER 18pF 50V 5% NP0 SMD 0603	Panasonic	ECJ-1VC1H180J	Digi-Key	PCC180ACVCT-ND
1	X2	CRYSTAL 4MHz 18pF SMD HC49/US	Abracon	ABLS-4.000MHZ-B4-T	Digi-Key	535-10202-1-ND
Approved Notes						
	J8, J11, J13, J16, J17	Jumpers to be left on header after test	on the Bottom side of PCB			
	PAD1-4	Rubber Bumpons to be placed on Ea. Corner				