

Bill of Materials

MCP3911 Single Phase Anti-Tamper Energy Meter

Project: 102-00385-R4 MCP3911 Single Phase Anti Tamper Meter.PrjPCB
 Source Data FX:\AIPD Eval Boards\102-00381 thru 00390\102-00385\Design Files\REV 4\102-00385-R4 MCP3911
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Quantity	Designator	Description_	Manufacturer 1	Manufacturer Part Number 1	Supplier 1	Supplier Part Number 1
2	R35, R37	RES 0 Ohm 1/10W 0603 SMD	Panasonic - ECG	ERJ-3GEY0R00V	Digi-Key	P0.0GCT-ND
1	C24	CAP FILM .01uF 330VAC SUPPRESS	EPCOS	B32911A3103M	Digi-Key	495-3236-ND
28	C8, C9, C12, C13, C16, C17, C22, C23, C27, C31, C33, C35, C36, C37, C38, C39, C40, C41, C42, C43, C45, C46, C47, C49, C50, C51, C52, C53	CAP CER 0.1uF 16V 10% X7R 0603	TDK	C1608X7R1C104K	Digi-Key	445-1317-1-ND
6	R1, R7, R8, R9, R10, R39	RES 1k Ohm 1/10W 1% 0603 SMD	Panasonic - ECG	ERJ-3EKF1001V	Digi-Key	P1.00KHCT-ND
9	R15, R21, R22, R25, R28, R30, R31, R33, R51	RES 1k Ohm 1/10W 5% 0603 SMD	Panasonic - ECG	ERJ-3GEYJ102V	Digi-Key	P1.0KGCT-ND
1	C25	CAP FILM 1uF 305VAC Power Supply	EPCOS	B32933A3105M000	EPCOS Inc	B32933A3105M000
3	C14, C30, C32	CAP CER 1uF 16V 10% X7R 0603	TDK	C1608X7R1C105K	Digi-Key	445-1604-1-ND
1	R38	RES 1.50M Ohm 1/10W 1% 0603 SMD	Panasonic - ECG	ERJ-3EKF1504V	Digi-Key	P1.50MHCT-ND
5	R47, R48, R49, R50, R53	RES 2k Ohm 1/10W 5% 0603 SMD	Panasonic - ECG	ERJ-3GEYJ202V	Digi-Key	P2.0KGCT-ND
2	R24, R27	RES TKF 2.2M 5% 1/10W SMD 0603	Yageo	9C06031A2204JLHFT	Digi-Key	311-2.2MGTR-ND
1	R20	RES 4.7k Ohm 1/10W 5% 0603 SMD	Panasonic - ECG	ERJ-3GEYJ472V	Digi-Key	P4.7KGCT-ND
1	R36	RES 4.7M Ohm 1/10W 1% 0603 SMD	Yageo	RC0603FR-074M7L	Digi-Key	311-4.70MHRCT-ND
2	R11, R12	RES 5.6 Ohm 1/8W 1% 0805 SMD	Vishay/Dale	CRCW08055R60FKEA	Digi-Key	541-5.60CCCT-ND
1	X1	CRYSTAL 7.3728 MHz 18pF HC49-SMD-B	Abracon Corporation	ABLS-7.3728MHZ-B4-T	Digi-Key	535-10211-1-ND
9	R14, R34, R57, R58, R59, R60, R61, R62, R63	RES 10 Ohm 1/10W 5% 0603 SMD	Panasonic - ECG	ERJ-3GEYJ100V	Digi-Key	P10GCT-ND
1	R29	RES 10k Ohm 1/10W 1% 0603 SMD	Panasonic - ECG	ERJ-3EKF1002V	Digi-Key	P10.0KHCT-ND
2	R52, R54	RES 10k Ohm 1/10W 5% 0603 SMD	Panasonic - ECG	ERJ-3GEYJ103V	Digi-Key	P10KGCT-ND
2	C20, C21	CAP CER 10pF 50V 5% C0G 0603	Murata	GRM1885C1H100JA01D	Digi-Key	490-1403-1-ND
1	C11	CAP CER 10uF 10V X7R 20% 1206	TDK	C3216X7R1A106M	Digi-Key	445-1602-1-ND
3	C7, C10, C15	CAP TANT 10uF 6.3V 20% 300mOhm Size A	AVX	TCJA106M006R0300	Digi-Key	478-3134-1-ND
1	R17	RES 12k Ohm 1/10W 1% 0603 SMD	Yageo	RC0603FR-0712KL	Digi-Key	311-12.0KHRCT-ND
1	X3	RESONATOR CER 12.0MHz CSTCE_G	Murata Electronics North	CSTCE12M0G55-R0	Digi-Key	490-1197-1-ND
1	R16	RES 18k Ohm 1/10W 1% 0603 SMD	Panasonic - ECG	ERJ-3EKF1802V	Digi-Key	P18.0KHCT-ND

Quantity	Designator	Description_	Manufacturer 1	Manufacturer Part Number 1	Supplier 1	Supplier Part Number 1
1	R26	RES 20k Ohm 1/10W 1% 0603 SMD	Panasonic - ECG	ERJ-3EKF2002V	Digi-Key	P20.0KHCT-ND
1	R55	RES 20k Ohm 1/10W 5% 0603 SMD	Panasonic - ECG	ERJ-3GEYJ203V	Digi-Key	P20KGCT-ND
2	C18, C19	CAP CER 27PF 50V C0G 5% 0603	TDK	C1608C0G1H270J	Digi-Key	445-1274-1-ND
1	X2	CRYSTAL 32.768KHz 12.5pF CYL SMD	Abracon Corporation	AB26TRB-32.768KHZ-T	Digi-Key	535-9033-1-ND
1	C48	CAP CER 33nF 50V 10% X7R 0603	TDK	C1608X7R1H333K	Digi-Key	445-5093-1-ND
1	R32	RES 47k Ohm 1/10W 5% 0603 SMD	Panasonic - ECG	ERJ-3GEYJ473V	Digi-Key	P47KGCT-ND
1	C2	CAP TANT 47uF 4V 10% Size A	AVX	TAJA476K004RNJ	Digi-Key	478-1669-1-ND
2	R19, R42	RES 51k Ohm 1/10W 1% 0603 SMD	Panasonic - ECG	ERJ-3EKF5102V	Digi-Key	P51.0KHCT-ND
4	C3, C4, C5, C6	CAP CER 68nF 50V 5% C0G 1206	Murata	GRM31C5C1H683JA01L	Digi-Key	490-3360-1-ND
1	R23	RES MO 100 Ohm 3W 5% AXIAL	Stackpole Electronics Inc	RSMF3JT100R	Digi-Key	RSMF3JT100RCT-ND
3	R2, R3, R56	RES 100k Ohm 1/4W 1% 1206 SMD	Panasonic - ECG	ERJ-8ENF1003V	Digi-Key	P100KFCT-ND
1	C34	CAP TANT LOESR 100UF 6.3V 10% Size B	AVX	TPSB107K006R0400	Digi-Key	478-4976-1-ND
2	R4, R5	RES 330k Ohm 1/10W 5% 0603 SMD	Panasonic - ECG	ERJ-3GEYJ334V	Digi-Key	P330KGCT-ND
1	C28	CAP ELECT 470uF 16V 20% VS Size F	Panasonic	EEE-1CA471UP	Digi-Key	PCE3892CT-ND
1	R46	RES 499 Ohm 1/10W 1% 0603 SMD	Panasonic - ECG	ERJ-3EKF4990V	Digi-Key	P499HCT-ND
1	D7	DIODE SCHOTKY SS 40V 200mA SOT-23-3	Vishay Semiconductors	BAS40-05-V-GS08	Digi-Key	BAS40-05-V-GS08CT-ND
1	BT1	HOLDER COIN CELL 2032 SMD	MPD	BK-883-TR	Digi-Key	BK-883CT-ND
1	D4	DIODE ZENER 15V 3W SMA	Micro Commercial Co	3SMAJ5929B-TP	Digi-Key	3SMAJ5929B-TPMSCT-ND
1	CT2	Current Transformer 100A	Vacuumschmelze	T60404-E4626-X502		
3	FB1, L1, L2	FERRITE 800MA 150 mOhm 0805 SMD	Laird	LI0805H151R-10	Digi-Key	240-2384-1-ND
2	FB2, FB3	BEAD CORE SINGLE 10 mOhm 7A 3.8X5.3mm Radial	Panasonic - ECG	EXC-ELSR35S	Digi-Key	P9821BK-ND
1	U9	OPTOCOUPLER BIDIR 3.3V 5V SOIC-8	Fairchild Optoelectronics	FOD8012	Digi-Key	FOD8012-ND
1	J2	CONN HDR Male .100 1x6POS VERT	FCI	68001-106HLF	Digi-Key	609-3272-ND
2	J4, J5	CONN HDR Male .100 1x2POS VERT	FCI	77311-118-02LF	Digi-Key	609-4434-ND
2	LD2, LD3	LED 5mm RED 640nm 20mcd 2mA	Kingbright Corp	WP7113LSRD	Digi-Key	754-1267-ND
1	D2	LED 2X1.2mm RD/GN WTR CLR SMD	Kingbright Corp	APHBM2012SURKCGKC	Digi-Key	754-1093-1-ND
1	Q5	TRANS NPN 40V 200mA 350mW SOT-23-3	Diodes Inc	MMBT3904-7-F	Digi-Key	MMBT3904-FDICT-ND
1	Q4	TRANS PNP 40V 200mA 300mW SOT-23-3	Diodes Inc	MMBT3906-7-F	Digi-Key	MMBT3906-FDICT-ND
2	D1, D3	DIODE STD REC 1A 600V SMA	ON Semiconductor	MRA4005T3G	Digi-Key	MRA4005T1GOSCT-ND
2	U10, U11	Photocoupler DARL OUT 4-SMD	Sharp Microelectronics	PC365NJ0000F	Digi-Key	425-2098-1-ND
1	U8	MCU PIC 32K FLASH XLP TQFP-80	Microchip	PIC18F85K90-I/PTRSL	Digi-Key	PIC18F85K90-I/PTRSL-ND
1	J1	CONN POWER JACK MALE 2.5MM CLSD	CUI Inc	PJ-002B	Digi-Key	CP-002B-ND
1	MOV1	VARISTOR 420VRMS 10mm RADIAL	EPCOS Inc	S10K420	Digi-Key	495-3791-ND
1	Q1	PHOTOTRANSISTOR 880nm 5mm RADIAL	OSRAM	SFH 300 FA-3/4	Digi-Key	475-1438-ND
1	LD1	IR Emitter GaAlAs 880nm 5mm RADIAL	OSRAM	SFH 484-2	Digi-Key	475-1468-ND
3	U4, U5, U6	SENSOR SS HALL EFFECT LINEAR	Honeywell	SS49E	Digi-Key	480-2006-ND
3	SW1, SW2, SW3	SWITCH TACT 6MM 160GF H=4.3MM	Omron Electronics Inc-EM	B3S-1000P	Digi-Key	SW836CT-ND
1	J6	CONN RECEPT USB TH VERT 5POS	Molex Connector Corpora	500075-1517	Digi-Key	WM2072-ND

Quantity	Designator	Description_	Manufacturer 1	Manufacturer Part Number 1	Supplier 1	Supplier Part Number 1
Microchip Consigned Parts listed below						
1	U2	IC REG LDO 3.3V 250mA SOT-23-3	Microchip	MCP1703T-3302E/CB	Digi-Key	MCP1703T-3302E/CBCT-ND
1	U7	IC REG LDO 250mA 3.3V SOT-223-3	Microchip	MCP1703-3302E/DB	Digi-Key	MCP1703-3302E/DB-ND
1	U12	IC USB TO UART SSOP-20	Microchip	MCP2200-I/SS	Digi-Key	MCP2200-I/SS-ND
1	U1	IC AFE 16/24 Bit 125 Ksps SPI SSOP-20	Microchip	MCP3911A0-E/SS	Digi-Key	MCP3911A0-E/SS-ND
1	U3	IC OPAMP SGL 1.8V 1MHZ SOT-23-5	Microchip	MCP6001T-E/OT	Digi-Key	MCP6001T-E/OTCT-ND
1	LCD1	LCD 7 Digits 28 pins from India		LCD_INDIA	Microchip Stock	

Mechanical Parts to be added in the package						
1	BAT1	BATTERY LITHIUM COIN 3V CR2032	Panasonic - BSG	CR2032	Digi-Key	P189-ND

Do Not Populate Parts listed below						
2	R6, R13	RES 5.1 Ohm 1/8W 1% 0805 SMD	Vishay/Dale	CRCW08055R10FKEA	Digi-Key	541-5.10CCCT-ND
1	J7	CONN HDR Male .100 1x4POS VERT	Tyco Electronics	HDR M 1x4 Vertical		
1	C1	CAP CER 33nF 50V 10% X7R 0603	TDK	C1608X7R1H333K	Digi-Key	445-5093-1-ND
1	C26	CAP FILM 0.47uF 305VAC Power Supply	EPCOS	B32932A3474M	Digi-Key	495-4353-ND
1	R18	RES 51k Ohm 1/10W 1% 0603 SMD	Panasonic - ECG	ERJ-3EKF5102V	Digi-Key	P51.0KHCT-ND
1	CT1	Current Transformer PCB Mount 2500/1 128Ohm 300A	Taehwatrans	TZ71V		

Approved	Notes