



Microchip Technology Incorporated  
2355 W. Chandler Blvd.  
Chandler, AZ 85224-6199

## Product Tree

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ASSEMBLY NUMBER: 114-00398 5.0V LCD REV: 2 LAST ECO: None Part No: ADM00398  
ASSEMBLY NAME: MCP3911 ADC Eval Board for 16-Bit MCUs

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Part Number	Rev	Type	Description
111-00398 5.0	2	B	CM ASSY, MCP3911 ADC Eval Board for 16-Bit MCUs
102-00398 5.0	2	B	PCB ASSY, MCP3911 ADC Eval Board for 16-Bit MCUs
102-00398 5.0'	2	D	PCB ASSY DWG, MCP3911 ADC Eval Board for 16-Bit MCUs
103-00398 5.0'	2	D	SCHEMATIC, MCP3911 ADC Eval Board for 16-Bit MCUs
104-00398 5.0'	2	D	PCB FABRICATION DWG, MCP3911 ADC Eval Board for 16-Bit MCUs
105-00398 5.0'	2	D	GERBER FILES, MCP3911 ADC Eval Board for 16-Bit MCUs
113-00398 5.0'	2	D	TEST PROCEDURE, MCP3911 ADC Eval Board for 16-Bit MCUs
108-00004	2	LBL	LABEL, AIPD ASSEMBLY AND MANUFACTURING CODE NUMBERS, VERY SMALL
108-00001	3	LBL	LABEL, AIPD PRODUCT LABEL WITH BARCODE, SMALL ( Refer to SPI 47209 )
108-00006	2	LBL	AIPD Evaluation Board Kit "Inspection" Label

KEY
D: Drawing
B: BOM
LBL: Label



# Bill of Materials MCP3911 Eval Board with 5V LCD

Project: 102-00398-R2 MCP3911 Eval board.PRJPCB

Assembly Nurr 102-00398

Assembly Narr MCP3911 ADC Evaluation Board for 16-Bit MCUs

Engineer: Andrei Hapenciuc

Drawn By: Andrei Hapenciuc



Creation Date: 5:53:40 PM

Print Date: 2:57:44 PM

Quantity	Designator	Description_	Manufacturer 1	Manufacturer Part Number 1	Supplier 1	Supplier Part Number 1
33	C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C14, C16, C18, C27, C28, C29, C30, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C46	CAP CER 0.1uF 16V 10% X7R 0603	TDK	C1608X7R1C104K	Digi-Key	445-1317-1-ND
3	C13, C44, C45	CAP TANT 10UF 6.3V 20% Size B	AVX	TAJB106M006RNJ	Digi-Key	478-3874-1-ND
1	C15	CAP TANT 10uF 20V 10% Size B	AVX	TAJB106K020RNJ	Digi-Key	478-1674-1-ND
1	C17	CAP CER 10UF 10V X7R 20% 1206	TDK	C3216X7R1A106M	Digi-Key	445-1602-1-ND
2	C25, C26	CAP CER 22pF 50V 5% C0G 0603	TDK	C1608C0G1H220J	Digi-Key	445-1273-1-ND
1	D1	DIODE STD REC 1A 600V SMA	ON Semiconductor	MRA4005T3G	Digi-Key	MRA4005T1GOSCT-ND
3	J1, J3, J4	CONN HDR Male .100 2x3POS VERT	FCI	67996-206HLF	Digi-Key	609-3210-ND
2	J2, J5	CONN TERM BLK PLUG 6A 3.5MM 3POS (Mates with 8724 HDR-24pin)	Keystone Electronics	8723	Digi-Key	8723K-ND
1	J2, J5	HDR-24pin 3.5mm Pitch (1 for 4 boards)	Keystone Electronics	8724	Digi-Key	8724K-ND
4	J6, J12, J13, J19	CONN HDR Male .100 1x2POS VERT	3M	961102-6404-AR	Digi-Key	3M9447-ND
2	J7, J9	CONN HDR Male .100 2x2 Pos VERT	FCI	67997-404HLF	Digi-Key	609-3242-ND

Quantity	Designator	Description_	Manufacturer 1	Manufacturer Part Number 1	Supplier 1	Supplier Part Number 1
1	J8	CONN HDR Male .100 2x8 Pos VERT	FCI	68602-116HLF	Digi-Key	609-3364-ND
1	J10	CONN POWER JACK MALE 2.5MM CLSD	CUI Inc	PJ-002B	Digi-Key	CP-002B-ND
1	J11	CONN HDR Male .100 1x6POS RA	FCI	68016-106HLF	Digi-Key	609-3313-ND
1	J14	CONN D-SUB RCPT R/A 9POS 15GOLD	TE Connectivity	1734354-2	Digi-Key	A35108-ND
1	J15	CONN RECEPT MINI SMD R/A 5POS	Hirose Electric Co Ltd	UX60-MB-5ST	Digi-Key	H2959CT-ND
1	J16	CONN HDR Male .100 1x3POS VERT	FCI	68000-103HLF	Digi-Key	609-3461-ND
1	J17	Mini Edge Card Socket 1mm Pitch Vertical	Samtec	MEC1-160-02-L-D-A	Samtec	MEC1-160-02-L-D-A
1	L1	FERRITE 300MA 150 OHM 1806 SMD	Laird	L11806C151R-10	Digi-Key	240-2418-1-ND
2	LD1, LD2	LED SMARTLED GREEN 570NM 0603	OSRAM	LG L29K-G2J1-24-Z	Digi-Key	475-2709-1-ND
1	LD3	LED SMARTLED 630NM RED 0603 SMD	OSRAM	LS L29K-G1J2-1-0-2-R18-2	Digi-Key	475-2506-1-ND
2	LD4, LD5	LED SS 5MM 640nm RED DIFF	Kingbright Corp	WP7113LSRD	Digi-Key	754-1267-ND
1	LD6	LED 2X1.2MM RD/GN WTR CLR SMD	Kingbright Corp	APHBM2012SURKCGKC	Digi-Key	754-1093-1-ND
1	Q1	MOSFET P-CH G-S 12V SC-70-3	Vishay/Siliconix	SI1307EDL-T1-GE3	Digi-Key	SI1307EDL-T1-GE3CT-ND
25	R3, R4, R11, R13, R15, R19, R21, R22, R25, R26, R29, R30, R35, R37, R45, R46, R47, R49, R50, R51, R56, R57, R59, R60, R63	RES 1k Ohm 1/10W 5% 0603 SMD	Panasonic - ECG	ERJ-3GEYJ102V	Digi-Key	P1.0KGCT-ND
11	R5, R6, R7, R8, R9, R10, R12, R14, R16, R17, R18	RES 10 Ohm 1/10W 5% 0603 SMD	Panasonic - ECG	ERJ-3GEYJ100V	Digi-Key	P10GCT-ND
2	R20, R42	RES 1M Ohm 1/10W 1% 0603 SMD	Panasonic - ECG	ERJ-3EKF1004V	Digi-Key	P1.00MHCT-ND
2	R27, R32	RES 0 Ohm 1/10W 0603 SMD	Panasonic - ECG	ERJ-3GEY0R00V	Digi-Key	P0.0GCT-ND
2	R28, R62	RES 10k Ohm 1/10W 5% 0603 SMD	Panasonic - ECG	ERJ-3GEYJ103V	Digi-Key	P10KGCT-ND

Quantity	Designator	Description_	Manufacturer 1	Manufacturer Part Number 1	Supplier 1	Supplier Part Number 1
6	R33, R36, R44, R48, R55, R58	RES 4.7k Ohm 1/10W 5% 0603 SMD	Panasonic - ECG	ERJ-3GEYJ472V	Digi-Key	P4.7KGCT-ND
2	R38, R39	RES 2.2k Ohm 1/10W 5% 0603 SMD	Panasonic - ECG	ERJ-3GEYJ222V	Digi-Key	P2.2KGCT-ND
1	R53	RES 56 Ohm 1/10W 5% 0603 SMD	Panasonic - ECG	ERJ-3GEYJ560V	Digi-Key	P56GCT-ND
1	R54	RES 510 Ohm 1/10W 5% 0603 SMD	Panasonic - ECG	ERJ-3GEYJ511V	Digi-Key	P510GCT-ND
4	SW1, SW2, SW3, SW4	SWITCH TACT 6MM 160GF H=4.3MM	Omron Electronics	B3S-1000P	Digi-Key	SW836CT-ND
1	U4	IC REG LDO 800MA 5V SOT-223	National Semiconductor	LM1117MPX-5.0/NOPB	Digi-Key	LM1117MPX-5.0OCT-ND
2	U6, U7	Photocoupler TRANS OUT 4-MINIPAK	Avago Technologies	HCPL-181-00CE	Digi-Key	516-1788-1-ND
1	U8	IC LINE DRVR/RCVR RS232 20-TSSOP	Texas Instruments	SN75C3223PWR	Digi-Key	296-13501-1-ND
4	U10	25 X 1 Header 1.27mm pitch ( 100 pin sock	SAMTEC	MTMS-125-01-G-S-230	SAMTEC	MTMS-125-01-G-S-230
1	U11	IC VOLT-LEVEL TRANSLATOR US-8	Texas Instruments	TXS0102DCUR	Digi-Key	296-21931-1-ND
1	X1	CRYSTAL 10.000 MHZ 18pF SMD	Abracon Corporation	ABLS-10.000MHZ-B4-T	Digi-Key	535-10215-1-ND
1	X2	CRYSTAL 7.3728 MHZ 18pF SMD	Abracon Corporation	ABLS-7.3728MHZ-B4-T	Digi-Key	535-10211-1-ND
1	X3	CER RESONATOR 12.0MHZ SMD	Murata Electronics	CSTCE12M0G55-R0	Digi-Key	490-1197-1-ND
6	Jumper	CONN JUMPER W/HANDLE 2 POS .100" 30 GOLD	TE Connectivity	881545-2	Digi-Key	A26242-ND
4	Rubber Pad	BUMPON HEMISPHERE .44X.20 BLACK	3M	SJ-5003 (BLACK)	Digi-Key	SJ5003-0-ND

**Microchip will provide these parts**

1	LCD1	LCD 16X2 CHIP ON GLASS REFLECTIVE 5V	Fema Electronics	CG1626-SGR1	Microchip Stock	
1	U2	IC LDO REG 500MA 3.3V SOT-223-3	Microchip	MCP1825S-3302E/DB	Digi-Key	MCP1825S-3302E/DB-ND
1	U3	IC REG LDO 150mA 3.3V SOT-223-3	Microchip	MCP1754ST-3302E/DB	Digi-Key	MCP1754ST-3302E/DB-ND
1	U5	IC AFE 24BIT 64KSPS SSOP-20	Microchip	MCP3911A0T-I/SS	Digi-Key	MCP3911A0-I/SS-ND
1	U9	IC USB TO UART 20SOIC	Microchip	MCP2200-I/SO	Digi-Key	MCP2200-I/SO-ND

Quantity	Designator	Description_	Manufacturer 1	Manufacturer Part Number 1	Supplier 1	Supplier Part Number 1
<b>Do Not Populate these parts</b>						
6	C19, C20, C21, C22, C23, C24	CAP CER 0.1uF 16V 10% X7R 0603	TDK	C1608X7R1C104K	Digi-Key	445-1317-1-ND
1	LCD2	LCD 16X2 FTN Reflective No. BLWT COG 3V	TianMa	TM162JCAWG1	Microchip Stock	
10	R1, R2, R23, R24, R40, R41, R43, R52, R31, R34	RES 0603 SMD				
1	U1	IC DSPIC MCU/DSP 256K 100TQFP	Microchip	DSPIC33FJ256MC710-I/PF	Digi-Key	DSPIC33FJ256MC710-I/PF-ND
<b>Approved</b>	<b>Notes</b>					
1	100mil single row 40 pin Header bar (to be used for J6, J12, J13, J16, J19 = 11 positions total)	CONN HDR BRKWAY .100 40POS VERT (one header is enough for 3.6 boards)	Tyco Electronics	4-103185-0	Digi-Key	A26513-40-ND
1	100mil double row 80 pin Header bar (to be used for J1, J3, J4, J7, J8, J9 = 21 positions total)	CONN HDR BRKWAY .100 80POS VERT (one header is enough for 3.8 boards)	Tyco Electronics	4-103186-0	Digi-Key	A26529-40-ND
	U10	100 Pin Socket made of 4 Headers 1.27mm Pitch 25x1	SAMTEC	MTMS-125-01-G-S-230		



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**PACK LIST**

ASSEMBLY NUMBER: 114-00398 5.0V LCD REV: 2 Part No: ADM00398

ASSEMBLY NAME: MCP3911 ADC Eval Board for 16-Bit MCUs

111-00398 5.0V LCD CM ASSY, MCP3911 ADC Eval Board for 16-Bit MCUs				Rev: 2	Check Off
Qty	Part Number	Description			
1	1	102-00398 5.0V LCD	PCB ASSY, MCP3911 ADC Eval Board for 16-Bit MCUs		
2	1	DS21912	SOFTWARE, MCP3911 ADC Eval Board for 16-Bit MCUs, CD ROM		
3	1	MA240015	PIC24FJ256GA110 PIM (MA240015) * <b>Must use REV A5 or newer</b> (Plug in Module)		
4	1	Mini-USB Cable	USB Type A Male / Mini-B Male Cable, 5 Pin, Black, 3 ft - 10UM-02103BK		