

Bill of Materials

MCP2221 I2C Demo Board

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Drawn By: Valentin Stoia

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Quantity	Designator	Description_	Manufacturer 1	Manufacturer Part Number 1	Supplier 1	Supplier Part Number 1
15	C1, C3, C4, C5, C6, C7, C8, C9, C11, C12, C14, C16, C18, C20, C21	CAP CER 0.1uF 16V 10% X7R SMD 0603	AVX	0603YC104KAT2A	Digi-Key	478-1239-1-ND
1	C2	CAP CER 0.47uF 6.3V 10% X5R SMD 0603	Murata	GRM188R60J474KA01D	Digi-Key	490-1548-1-ND
3	C10, C13, C19	CAP CER 1uF 10V 20% Y5V SMD 0603	Murata	GRM188F51A105ZA01D	Digi-Key	490-1585-2-ND
2	C15, C17	CAP CER 4.7uF 10V 10% X5R SMD 0603	Taiyo Yuden	LMK107BJ475KA-T	Digi-Key	587-1441-1-ND
1	J1	SOCKET IC PUSH DIP 20 TH	Mill-Max	110-99-320-41-001	Digi-Key	ED3120-ND
4	J2, J7, J10, J13	CON HDR-2.54 Female 1x2 Gold TH VERT	Samtec Inc	SSW-102-01-T-S	Digi-Key	SAM1213-02-ND
10	J3, J6, J8, J9, J11, J14, J15, J18, J20, J24	CON HDR-2.54 Male 1x2 Gold 5.84MH TH VERT	FCI	77311-118-02LF	Digi-Key	609-4434-ND
2	J4, J21	CON USB2.0 MINI-B FEMALE SMD R/A	Molex Inc	0548190572	Digi-Key	WM17116TR-ND
1	J5	CON DSUB DE-9 Female TH R/A	Fuk Hing Industries	DR-9S	CAMtech	CON0001
1	J12	CON HDR-2.54 Male 2x4 Tin 5.84MH TH VERT	FCI	67996-408HLF	Digi-Key	609-3391-ND
1	J16	CON HDR-2.54 Female 1x8 Tin TH VERT	Sullins	PPTC081LFBN-RC	Digi-Key	S7006-ND
1	J17	CON HDR-2.54 Male 1x8 Gold 5.84MH TH	FCI	68001-108HLF	Digi-Key	609-3273-ND
1	J19	CON HDR-2.54 Male 1x3 Gold 5.84MH TH VERT	FCI	68000-103HLF	Digi-Key	609-3461-ND
1	J22	CON USB2.0 STD-A FEMALE SMD R/A	ASSMANN Electronic	AU-Y1006-R	Digi-Key	AE9924-ND
1	J23	CON HDR-2.54 Male 1x6 Gold 5.84MH TH R/A	FCI	68016-106HLF	Digi-Key	609-3313-ND
1	J25	CON HDR-2.54 Female 1x6 Gold TH R/A	Sullins	PPPC061LGBN-RC	Digi-Key	S5481-ND
1	LD1	DIO LED TRI RED, GREEN, BLUE 2V, 3.2V, 3.2V 20mA, 20mA, 20mA SMD 6-PLCC	CLX6A-FKB-CJNNRFJBI	Cree Inc	Digi-Key	CLX6A-FKB-CJNNRFJBE

8	LD2, LD3, LD4, LD5, LD6, LD7, LD8, LD9	DIO LED GREEN 2.2V 25mA 15mcd Clear SMD 0603	Kingbright	APT1608SGC	Digi-Key	754-1121-1-ND
2	R1, R2	RES TKF 10k 5% 1/10W SMD 0603	Panasonic	ERJ-3GEYJ103V	Digi-Key	P10KGCT-ND
3	R3, R4, R5	RES TF 10k 1% 1/8W SMD 0603	Vishay Beyschlag	MCT06030C1002FP500	Digi-Key	MCT0603-10.0K-CFTR-N
1	R6	RES TKF 470k 1% 1/10W SMD 0603	Vishay	CRCW0603470KFKEA	Digi-Key	541-470KHCT-ND
1	R7	RES TKF 1.5k 5% 1/10W SMD 0603	Panasonic	ERJ-3GEYJ152V	Digi-Key	P1.5KGTR-ND
1	R8	RES TKF 3.3k 5% 1/10W SMD 0603	Panasonic	ERJ-3GSYJ332V	Digi-Key	P3.3KGTR-ND
1	R9	RES TKF 2.7k 5% 1/10W SMD 0603	Panasonic	ERJ-3GSYJ272V	Digi-Key	P2.7KGTR-ND
2	R10, R11	RES TKF 4.7k 5% 1/10W SMD 0603	Yageo	RC0603JR-074K7L	Digi-Key	311-4.7KGRTR-ND
8	R12, R14, R15, R16, R18, R19, R20, R22	RES TKF 1k 5% 1/10W SMD 0603	Panasonic	ERJ-3GEYJ102V	Digi-Key	P1.0KGCT-ND
1	R13	RES TRIMMER Cermet 10k 10% 500mW TH 3386F	Bourns	3386F-1-103TLF	Digi-Key	3386F-103TLF-ND
1	R17	RES CER 0.025R 1% 2W SMD 2512	TT Electronics	LRF2512-R025FW	Digi-Key	985-1214-1-ND
1	R21	RES TKF 20k 5% 1/10W SMD 0603	Yageo	RC0603JR-0720KL	Digi-Key	311-20KGRCT-ND
8	TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8	MISC, TEST POINT MULTI PURPOSE MINI BLACK	Keystone	5001	Digi-Key	5001K-ND
1	U1	IC TRANSCEIVER MAX3232 SSOP-16	Texas Instruments	MAX3232CDBR	Digi-Key	296-13093-1-ND

Microchip Parts listed below

1	U2	MCHP ANALOG LDO 3.3V MCP1825ST-3302E/DB SOT-223-3	Microchip	MCP1825S-3302E/DB	Microchip	MCP1825S-3302E/DB
1	U3	MCHP INTERFACE USB I2C UART MCP2221-I/ST TSSOP-14	Microchip Technology	MCP2221-I/ST	Microchip Tech	MCP2221-I/ST
1	U4	MCHP MEMORY SERIAL EEPROM 128k I2C 24LC128-I/SN SOIC-8	Microchip	24LC128T-I/SN	Microchip	24LC128T-I/SN
1	U5	MCHP ANALOG TEMP SENSOR -40C to +125C MCP9808-E/MS MSOP-8	Microchip	MCP9808-E/MS	Digi-Key	MCP9808-E/MS-ND
1	U6	MCHP ANALOG CURRENT SENSE MONITOR PAC1710-1-AIA-TR DFN-10	Microchip Technology	PAC1710-1-AIA-TR	Digi-Key	PAC1710-1-AIA-CT-ND
2	U7, U10	MCHP ANALOG VREF 2.5V MCP1525-I/TTG SOT-23-3	Microchip	MCP1525T-I/TT	Microchip	MCP1525T-I/TT
1	U8	MCHP ANALOG DAC 1-Ch 12-bit MCP4726A0T-E/CH SOT-23-6	Microchip Technology	MCP4726A0T-E/CH	Digi-Key	MCP4726A0T-E/CHCT-N
1	U9	MCHP ANALOG ADC-SAR 12-bit MCP3221A5T-E/OT SOT-23-5	Microchip Technology	MCP3221A5T-E/OT	Digi-Key	MCP3221A5T-E/OTTR-N
1	U11	MCHP INTERFACE GPIO-PORT EXPAND I2C 8-Port MCP23008T-E/SS SSOP-20	Microchip	MCP23008T-E/SS	Microchip	MCP23008T-E/SS
1	U12	MCHP MCU 8-BIT 20MHz 14kB 512B PIC16F1509-I/P PDIP-20	Microchip	PIC16F1509-I/P	Microchip	PIC16F1509-I/P

Mechanical Parts to be added in the package

1	LABEL1	LABEL, NEED HELP WITH ASSY/SERIAL				
2	CBL1, CBL2	MECH HW CABLE USB-A Male to Mini USB-B Male 3ft Black	Katerno	10UM-02103BK	Katerno	10UM-02103BK

9	JP6, JP9, JP12a, JP12b, JP14, JP18, JP19, JP20, JP24	MECH HW JUMPER 2.54mm 1x2	3M	969102-0000-DA	Digi-Key	3M9580-ND
4	PAD1, PAD2, PAD3, PAD4	MECH HW RUBBER PAD CYLINDRICAL D12.7 H3.5 GRAY	3M	SJ-5012	Digi-Key	SJ5012-0-ND

PCB						
1	PCB1	Printed Circuit Board		04-10437-R1		

Do Not Populate Parts listed below						

Approved	Notes	Description
	U12	Mount the MCU on J1 Socket