

Bill of Materials

ADM00505 - MCP37xxx VTLA Evaluation Board

Document Number: 02-10077
 Board Number: 04-10077
 Part Number: ADM00505
 Revision: 3
 Engineer: Youbok Lee
 Drawn By: Youbok Lee



Creation Date: Aug 28 2014
 Print Date: 11:09:12 AM

Quantity	Designator	Description	Manufacturer	Manufacturer Part Number	Supplier	Supplier Part Number
16	Uin.0, Uin.1, Uin.2, Uin.3, Uin.4, Uin.5, Uin.6, Uin.7, UinA.0, UinA.1, UinA.2, UinA.3, UinA.4, UinA.5, UinA.6, UinA.7	1:1 Flux Coupled Transformer 0.3-200MHz	M/A-Com Tech Solutions	MABAES0060	Digikey	1465-1317-1-ND
1	U10	1:1 Mini Wideband Transformer 0.25-750MHz	CoilCraft	WBC1-1TL_	CoilCraft	WBC1-1TL_
2	J13, J15	Backplane Connector Header 40POS 2.5mm Press Fit RA Thru-Hole	Tyco	6469169-1	Avnet	6469169-1
1	SW2	DIP Switch 4POS Half Pitch 24V	C&K Components	TDA04H0SB1	Digikey	CKN9065-ND
1	SW1	Switch Tactile SPST-NO 0.05A 12V	Panasonic ECG	EVQ-5PN04K	Digikey	P13595SCT-ND
1	D5	Schottky Diode GP LN 20V SOT-23	Avago Technologies	HSMS-2812-TR1G	Digikey	516-1814-6-ND
4	Jin.0, Jin.2, Jin.3, Jin.7	SMA Connector 50 Ohm Edge Mount	Emerson	142-0761-881	Digikey	J801-ND
1	J10	SMA Connector 50 Ohm Straight	TE Connectivity	5-1814832-1	Digikey	A97594-ND
4	Jin.1, Jin.4, Jin.5, Jin.6	SMA Connector 50 Ohm Straight	Emerson	142-9701-201	Digikey	J666-ND
2	U20, U21	IC UHS Dual Buffer with Open Drain Outputs SC706	Fairchild Semiconductor	NC7WZ07P6X	Digikey	NC7WZ07P6XTR-ND
1	J17	Power Jack Connector 2.1x5.5MM SMD	CUI Inc.	PJ-002A-SMT	Digikey	CP-002APJCT-ND
3	U11, U22, U23	IC Dual-Bit Dual-Supply Bus Transceiver	Texas Instruments	SN74AVC2T245RSWR	Avnet	296-23684-2-ND
2	J5, J16	Header 6x2	<generic 108 header>			
9	FB1, FB2, FB4, FB5, FB6, FB7, FB8, FB9, FB13	Ferrite Chip 5 Ohm 300mA 0402	Murata	BLM15BA050SN1D	Digikey	490-5179-1-ND
3	D1, D3, D4	LED Red/Clear 636NM 0402 SMD	Lumex Opto	SML-LX0402SIC-TR	Digikey	67-1878-1-ND
29	R1n.0, R1n.1, R1n.2, R1n.3, R1n.4, R1n.5, R1n.6, R1n.7, R1p.0, R1p.1, R1p.2, R1p.3, R1p.4, R1p.5, R1p.6, R1p.7, R36, R38, R103, R104, R136, Rc.0, Rc.1, Rc.2, Rc.3, Rc.4, Rc.5, Rc.6, Rc.7	Resistor 0.0 Ohm 1/16W 0402 SMD	Vishay Dale	CRCW04020000Z0ED	Digikey	541-0.0JDKR-ND
4	R37, R43, R46, R60	Resistor 1.00 Ohm 1/16W 1% 0402 SMD	Vishay Dale	CRCW04021R00FKED	Digikey	541-1.00LLTR-ND
16	R2n.0, R2n.1, R2n.2, R2n.3, R2n.4, R2n.5, R2n.6, R2n.7, R2p.0, R2p.1, R2p.2, R2p.3, R2p.4, R2p.5, R2p.6, R2p.7	Resistor 4.99 Ohm 1/16W 1% 0402 SMD	Vishay Dale	CRCW04024R99FKED	Digikey	541-4.99LLTR-ND

16	Rcn.0, Rcn.1, Rcn.2, Rcn.3, Rcn.4, Rcn.6, Rcn.7, Rcn.15, Rcp.0, Rcp.1, Rcp.2, Rcp.3, Rcp.4, Rcp.5, Rcp.6, Rcp.7, Rcm	Resistor 24.9 Ohm 1/16W 0.1% 0402 SMD	TE Connectivity	9-1879212-8	Digikey	A102737TR-ND
21	R3n.0, R3n.1, R3n.2, R3n.3, R3n.4, R3n.5, R3n.6, R3n.7, R3p.0, R3p.1, R3p.2, R3p.3, R3p.4, R3p.5, R3p.6, R3p.7, R40, R47, R89, R90, R116	Resistor 49.9 Ohm 1/16W 0.1% 0402 SMD	Panasonic	ERA-2AEB49R9X	Digikey	P49.9DCDKR-ND
3	R2, R81, R82	Resistor 330 Ohm 1/16W 1% 0402 SMD	Yageo	RC0402FR-07330RL	Digikey	311-330LRDKR-ND
4	R51, R52, R96, R122	Resistor 1K Ohm 1/16W 1% 0402 SMD	Yageo	RC0402FR-071KL	Digikey	311-1.00KLRCT-ND
20	R27, R28, R29, R31, R34, R59, R61, R97, R98, R99, R102, R109, R111, R115, R117, R118, R119, R120, R121, R123	Resistor 10K Ohm 1/16W 1% 0402 SMD	Yageo	RC0402FR-0710KL	Digikey	311-10.0KLRCT-ND
6	R66, R67, R74, R77, R86, R93	Resistor 20K Ohm 1/16W 1% 0402 SMD	Yageo	RC0402FR-0720KL	Digikey	311-20.0KLRDKR-ND
2	R65, R92	Resistor 40.2K Ohm 1/16W 1% 0402 SMD	Yageo	RC0402FR-0740K2L	Digikey	311-40.2KLRDKR-ND
2	R63, R84	Resistor 69.8K Ohm 1/16W 1% 0402 SMD	Vishay Dale	CRCW040269K8FKED	Digikey	541-69.8KLCT-ND
2	R72, R76	Resistor 147K Ohm 1/16W 1% 0402 SMD	Vishay Dale	CRCW0402147KFKED	Digikey	541-147KLTR-ND
8	C2.0, C2.1, C2.2, C2.3, C2.4, C2.5, C2.6, C2.7	Ceramic Capacitor 3.3pF 50V NP0 0402	Samsung EM America	CL05C3R3CB5NNNC	Digikey	1276-1141-1-ND
8	C34, C36, C49, C51, C61, C79, C89, C100, C111	Ceramic Capacitor 150pF 50V 5% NP0 0402	Samsung EM America	CL05C151JB5NNNC	Digikey	1276-1046-1-ND
10	C35, C37, C50, C52, C62, C70, C92, C101, C112, C116	Ceramic Capacitor 1000pF 50V 10% X7R 0402	Samsung EM America	CL05B102KB5NCNC	Digikey	1276-1492-1-ND
10	C31, C42, C43, C57, C58, C72, C85, C93, C114, C173	Ceramic Capacitor 5600pF 50V 10% X7R 0402	Samsung EM America	CL05B562KB5NNNC	Digikey	1276-1579-6-ND
2	C165, C166	Ceramic Capacitor 0.022uF 50V 10% X7R 0402	Murata	GRM155R71H223KA12D	Digikey	490-3884-6-ND
18	C29, C32, C33, C38, C41, C54, C63, C69, C84, C90, Cc.0, Cc.1, Cc.2, Cc.3, Cc.4, Cc.5, Cc.6, Cc.7	Ceramic Capacitor 0.1uF 50V 10% X7R 0402	TDK Corporation	CGA2B3X7R1H104K050BB	Digikey	445-6899-1-ND
7	C109, C110, C160, C164, C170, C172, C182	Ceramic Capacitor 0.22uF 10V 10% X5R 0402	Samsung EM America	CL05A224KP5NNNC	Digikey	1276-1049-6-ND
6	C39, C46, C53, C80, C83, C91	Ceramic Capacitor 1uF 10V 10% X5R 0402	Samsung EM America	CL05A105KP5NNNC	Digikey	1276-1076-6-ND
3	C76, C161, C163, C48	Ceramic Capacitor 2.2uF 6.3V 20% X5R 0402	Samsung EM America	CL05A225MQ5NNNC	Digikey	1276-1469-6-ND
11	C30, C40, C44, C45, C73, C117, C121, C131, C141, C147, C153	Ceramic Capacitor 4.7uF 6.3V 20% X5R 0402	Samsung EM America	CL05A475MQ5NQNC	Digikey	1276-1483-6-ND
6	C123, C124, C135, C142, C148, C155	Ceramic Capacitor 10uF 6.3V 20% X5R 0603	Samsung EM America	CL10A106MQ8NNNC	Digikey	1276-1119-6-ND
5	Underside of Board	Cylindrical Bumpers 0.375" Diameter Black	3M	SJ61A4	Digikey	SJ5750-0-ND

Microchip Parts listed below

1	U13	IC 18-Bit Analog-to-Digital Converter with I2C Interface	Microchip	MCP3421A0T-E/CH	Digikey	MCP3421A0T-E/OTTR-ND
1	U6	IC 18-Bit Analog-to-Digital Converter with I2C Interface	Microchip	MCP3421A1T-E/CH	Digikey	MCP3421A1T-E/OTTR-ND
1	U18	IC 18-Bit Analog-to-Digital Converter with I2C Interface	Microchip	MCP3421A2T-E/CH	Digikey	MCP3421A2T-E/OTTR-ND
1	U25	IC 18-Bit Analog-to-Digital Converter with I2C Interface	Microchip	MCP3421A3T-E/CH	Digikey	MCP3421A3T-E/OTTR-ND
6	U5, U12, U16, U17, U19, U14	IC LDO Regulator Adjustable 1.5A 8DFN	Microchip	MCP1727-ADJE/MF	Digikey	MCP1727-ADJE/MF-ND
1	U1	IC EEPROM 128KBIT 400KHz 8SOIC	Microchip	24LC128-I/SN	Digikey	24LC128-I/SN-ND
1	U8	IC 16-Bit 200 Msps Low-Power ADC with 8-Channel Mux	Microchip	MCP37D31-200	Microchip	MCP37D31-200

Mechanical Parts to be added in the package						
1	Included in packaged box	Wall Mount AC Adapters 5W 5V 1.0A 2 pole USA plug	Mean Well	GS06U-1P1J	Mouser	709-GS06U-1P1J

Do Not Populate Parts listed below						
2	R39, R49	0 ohm Resistor (0402)	<generic>		Digikey	
3	FB3, FB10, FB11	Ferrite Chip 5 Ohm 300mA 0402	Murata	BLM15BA050SN1D	Digikey	490-5179-1-ND
8	Rin.0, Rin.1, Rin.2, Rin.3, Rin.4, Rin.5, Rin.6, Rin.7	49.9 Ohm Resistor (0402)	<generic>		Digikey	
2	R41, R44	24.9 Ohm Resistor (0402)	<generic>		Digikey	
2	C98, C99	22nF Capacitor (0402)	<generic>		Digikey	
8	C107, C108, C167, C168, C169, C171, C183	220nF Capacitor (0402)	<generic>		Digikey	
3	R42, R45, R48	1k Resistor (0402)	<generic>		Digikey	
10	C1.0, C1.1, C1.2, C1.3, C1.4, C1.5, C1.6, C1.7, C105, C106	150pF Capacitor (0402)	<generic>		Digikey	
1	R112	10k Resistor (0402)	<generic>		Digikey	
6	C118, C125, C136, C143, C149, C156	3.3uF Capacitor (0603)	<generic>		Digikey	
1	Y2	200 MHz Differential Crystal Oscillator	Crystek	CCPD-034-50-200.000	Digikey	744-1041-ND
1	Y1	100 MHz Crystal Oscillator	Crystek	CCHD-950-50-100.000	Digikey	744-1054-ND
10	C119, C120, C126, C127, C137, C138, C150, C151, C157, C158	100uF Capacitor (1210)	<generic>		Digikey	
4	U26, U28, U29, U30	Trimmer 200K Ohm 0.125W SMD	Bourns Inc.	3223W-1-204E	Digikey	3223W-1-204ETR-ND
5	M1, M2, M3, M4, M5	Mounthole				
12	TP1, TP3, TP4, TP12, TP14, TP15, TP16, TP17, TP18, TP19, TP20, TP21	SIP-1P Test Point				

Notes

Crystal Oscillator	An oscillator can be added using the instructions found in the MCP37xxx Evaluation Kit User's Guide (section: "Input/Output Optimization")
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