

# Bill of Materials

# MCP16502 Evaluation Board

Document Number: **02-11018**  
 Board Number: **04-11018**  
 Part Number: **DT100105**  
 Revision: **1**  
 Engineer: **Catalin Bibirica**  
 Drawn By: **Catalin Bibirica**



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Quantity	Designator	Description	Manufacturer 1	Manufacturer Part Number 1	Supplier 1	Supplier Part Number 1
6	C1, C3, C7, C8, C9, C10	CAP CER 4.7uF 10V 10% X7S SMD 0603	TDK	C1608X7S1A475K080AC	Digi-Key	445-14258-1-ND
4	C2, C4, C11, C12	CAP CER 22uF 10V 20% X7S SMD 0805	TDK	C2012X7S1A226M125AC	Digi-Key	445-14560-1-ND
1	C5	CAP CER 2.2uF 10V 10% X7R SMD 0603	Taiyo Yuden	LMK107B7225KA-T	Digi-Key	587-2983-1-ND
1	C6	CAP CER 10uF 10V 10% X7R SMD 0805	Samsung	CL21B106KPOFNFE	Digi-Key	1276-2934-1-ND
1	C13	CAP CER 0.1uF 16V 10% X7R SMD 0603	Taiyo Yuden	EMK107B7104KA-T	Digi-Key	587-1240-1-ND
1	C14	CAP CER 0.47uF 6.3V 10% X5R SMD 0603	Murata	GRM188R60J474KA01D	Digi-Key	490-1548-1-ND
1	C15	CAP ALU 330uF 25V 20% SMD F	Nichicon	UWT1E331MNL1GS	Digi-Key	493-2193-1-ND
1	D1	DIO RECT 1N4148WS 1.25V 150mA 75V SOD-323	Diodes	1N4148WS-7-F	Digi-Key	1N4148WS-FDICT-ND
6	J1, J2, J32, J33, J34, J37	CON HDR-2.54 Male 1x2 Gold 5.84MH TH VERT	Amphenol ICC	77311-118-02LF	Digi-Key	609-4434-ND
8	J18, J22, J23, J25, J27, J31, J41, J42	CON HDR-2.54 Male 1x3 Tin 5.84MH TH VERT	Samtec	TSW-103-07-T-S	Digi-Key	SAM1035-03-ND
1	J20	CON HDR-2.54 Male 1x4 Gold 5.84MH TH VERT	Würth Electronics	61300411121	Digi-Key	732-5317-ND
1	J30	CON USB2.0 MICRO-B FEMALE SMD R/A	Amphenol FCI	10118192-0001LF	Digi-Key	609-4613-1-ND
4	L1, L2, L3, L4	INDUCTOR 1.5uH 3.5A 20% SMD 1008	Murata	DFE252012P-1R5M=P2	Digi-Key	490-10648-6-ND
1	Q1	TRANS FET N-CH IPZ40N04S5L-2R8 40V 40A 0.0028R 71W TDSO8-8 AEC-Q101	Infineon	IPZ40N04S5L2R8ATMA1	Digi-Key	IPZ40N04S5L2R8ATMA1
5	R1, R3, R4, R17, R18	RES TKF 0R SMD 0402 AEC-Q200	Panasonic	ERJ-2GE0R00X	Digi-Key	P0.0JCT-ND
1	R2	RES TKF 4.7R 5% 1W SMD 2512	Stackpole Electronics	RPC2512JT4R70	Digi-Key	RPC2512JT4R70CT-ND
1	R5	RES TKF 4.7R 1% 1/10W SMD 0805	Panasonic	ERJ-B3BF4R7V	Digi-Key	ERJ-B3BF4R7V-ND
1	R6	RES TF 100k 1% 1/8W SMD 0603	Vishay Beyschlag	MCT06030C1003FP500	Digi-Key	MCT0603-100K-CFTR-N
2	R7, R22	RES TF 10k 1% 1/16W SMD 0603	TE Connectivity Neohm	CPF0603F10KC1	Digi-Key	A102203CT-ND
2	R9, R10	RES TKF 2.2k 1% 1/10W SMD 0603	Panasonic	ERJ3EKF2201V	Digi-Key	P2.20KHCT-ND
3	R16, R19, R20	RES TKF 100R 1% 1/10W SMD 0402	Panasonic	ERJ2RKF1000X	Digi-Key	P100LCT-ND
1	R33	RES TKF 1k 5% 1/10W SMD 0603	Panasonic	ERJ3GEY102V	Digi-Key	P1.0KGCT-ND
1	R34	RES TKF 20k 5% 1/10W SMD 0603	Panasonic	ERJ-3GEYJ203V	Digi-Key	P20KGCT-ND
1	SW1	SWITCH TACT SPST 12V 50mA TL3301NF160QG/TR SMD	E-Switch	TL3301NF260QG	Digi-Key	EG1868CT-ND
13	TP3, TP4, TP15, TP16, TP17, TP18, TP19, TP21, TP22, TP23, TP24, TP25, TP26	CON TP PIN Tin TH	Harwin	H2121-01	Digi-Key	952-1440-ND
4	TP27, TP28, TP29, TP30	MISC, TEST POINT MULTI PURPOSE MINI WHITE	PermaBond	5002	Digi-Key	36-5002-ND

### Microchip Parts listed below

1	U1	MCHP ANALOG PMIC SWITCHER Buck ADJ MCP16502-I/S8B QFN-32	Microchip Technology	MCP16502-I/S8B	Microchip Tech	MCP16502-I/S8B
1	U2	MCHP INTERFACE USB I2C UART MCP2221-I/ST TSSOP-14	Microchip Technology	MCP2221-I/ST	Microchip Tech	MCP2221-I/ST

### Mechanical Parts to be added in the package

6	JP1, JP2, JP3, JP4, JP5, JP6	MECH HW JUMPER 2.54mm 1x2	3M	969102-0000-DA	Digi-Key	3M9580-ND
1	LABEL1	LABEL, ASSY W/REV LEVEL (SMALL MODULES) PER MTS-0002				
4	PAD1, PAD2, PAD3, PAD4	MECH HW RUBBER PAD CYLINDRICAL D7.9 H5.3 BLACK	3M	70006431483	Digi-Key	SJ5747-0-ND

### PCB

1	PCB1	Printed Circuit Board		04-11018-R1		
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### Do Not Populate Parts listed below

1	C16	CAP CER 0.1uF 16V 10% X7R SMD 0603	Taiyo Yuden	EMK107B7104KA-T	Digi-Key	587-1240-1-ND
1	C20	CAP CER 10000pF 25V 10% X7R SMD 0603	Panasonic	ECJ-1VB1E103K	Digi-Key	PCC1763TR-ND
6	J16, J17, J21, J24, J28, J29	CON HDR-2.54 Male 2x2 Gold 5.84MH TH VERT	Würth Electronics	61300421121	Digi-Key	732-5294-ND

Approved	Notes	Description