

Bill of Materials

MIC21LV33 Evaluation Board

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Part Number: EV93M52A
Revision: 1
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Quantity	Designator	Description_	Manufacturer 1	Manufacturer Part Number 1	Supplier 1	Supplier Part Number 1
1	C1	CAP CER 10pF 25V 5% NP0 SMD 0603	Wurth Electronics	885012006032	Digi-Key	732-7774-1-ND
4	C2, C4, C5, C7	CAP CER 100pF 50V 10% X7R SMD 0603	Wurth Electronics	885012206077	Digi-Key	732-7995-1-ND
1	C8	CAP CER 1uF 100V 10% X7S SMD 0805	TDK	C2012X7S2A105K125AE	Digi-Key	445-5205-1-ND
1	C10	CAP CER 8200pF 50V 5% X7R SMD 0603	Yageo	CC0603JRX7R9BB822	Digi-Key	311-4024-1-ND
1	C11	CAP CER 3300pF 50V 10% X7R SMD 0603	Wurth Electronics	885012206086	Digi-Key	732-8004-1-ND
1	C12	CAP CER 10000pF 50V 10% X7R SMD 0603	Wurth Electronics	885382206002	Digi-Key	732-13185-1-ND
1	C13	CAP CER 1000pF 50V 10% X7R SMD 0603	Wurth Electronics	885012206083	Digi-Key	732-8001-1-ND
1	C14	CAP CER 2.2uF 25V 10% X5R SMD 0603	Murata	GRM188R61E225KA12D	Digi-Key	490-10731-1-ND
1	C15	CAP CER 4.7uF 35V 10% X7R SMD 0805	TDK	C2012X7R1V475K125AE	Digi-Key	445-172489-1-ND
5	C16, C41, C42, C43, C44	CAP CER 0.1uF 16V 10% X7R SMD 0603	Wurth Electronics	885012206046	Digi-Key	732-7965-1-ND
2	C17, C19	CAP CER 0.1uF 100V 10% X7R SMD 0603	Wurth Electronics	885012206120	Digi-Key	732-885012206120TR-N
1	C18	CAP CER 4.7uF 16V 10% X5R SMD 0603	TDK	C1608X5R1C475K080AC	Digi-Key	445-7478-1-ND
2	C20, C21	CAP CER 0.1uF 25V 10% X7R SMD 1206	Wurth Electronics	885012208058	Digi-Key	732-8109-1-ND
6	C22, C23, C24, C25, C26, C27	CAP CER 2.2uF 25V 10% X7R SMD 1206	KEMET	C1206C225K3RACTU	Digi-Key	399-8180-1-ND
2	C28, C45	CAP ALU 330uF 35V 20% RAD P3.5D8H20	Wurth Electronics	860080574014	Digi-Key	732-9106-1-ND

6	C29, C30, C31, C32, C33, C34	CAP CER 47uF 16V 20% X5R SMD 1210	Würth Electronics	885012109011	Digi-Key	732-7382-1-ND
6	C35, C36, C37, C38, C39, C40	CAP TANT 470uF 2.5V 20% 0.007Ohm SMD D2E	Panasonic	2R5TPE470M7	Digi-Key	P16548CT-ND
2	C201, C202	CAP CER 220pF 200V 5% COG, NP0 SMD 0805	Würth Electronics	885342007001	Digi-Key	732-12178-1-ND
2	D1, D2	DIO RECTIFIER RS07B-GS08 100V 500mA SMD DO-219AB	Vishay Semiconductors	RS07B-GS08	Digi-Key	RS07B-GS08GICT-ND
1	D5	DIO ZNR MM3Z20VT1G 20V 300mW SOD-323	ON Semiconductor	MM3Z20VT1G	Digi-Key	MM3Z20VT1GOSCT-ND
2	J1, J2	CON HDR-2.54 Male 1x3 Gold 5.84MH TH VERT	Amphenol ICC	68000-103HLF	Digi-Key	609-3461-ND
6	J3, J4, J5, J7, J8, J9	CON TERMINAL WE 74651173R 50A Male 1x1 TH VERT	Würth Electronics	74651173R	Digi-Key	732-10904-1-ND
1	J6	CON HDR-2.54 Male 1x2 Gold 5.84MH TH VERT	Amphenol ICC / FCI	77311-118-02LF	Digi-Key	609-4434-ND
1	J10	CON HDR-2.54 Male 1x1 Gold 5.84MH TH VERT	Samtec	TSW-101-07-S-S	Digi-Key	SAM1033-01-ND
2	L1, L2	INDUCTOR 0.4uH 24A 20% SMD L10.5W10.2H4.7 AEC-Q200	Würth Electronics	744325040	Mouser	710-744325040
1	Q1	TRANS FET N-CH SIRA74DP 40V 24A 46.2W PPAK SO-8	Vishay Siliconix	SIRA74DP-T1-GE3	Digikey	742-SIRA74DP-T1-GE3C
2	Q2, Q4	TRANS FET N-CH BSC032NE2LS 25V 84A 37W TDSO-8	Infineon	BSC032NE2LSATMA1	Mouser	726-BSC032NE2LS
2	Q3, Q5	TRANS FET N-CH BSC010NE2LSIATMA1 25V 38A 96W TDSO-8	Infineon	BSC010NE2LSIATMA1	Digi-Key	BSC010NE2LSIATMA1C
2	R1, R9	RES TF 100k 1% 1/8W SMD 0603	Vishay Beyschlag	MCT06030C1003FP500	Digi-Key	MCT0603-100K-CFTR-N
4	R2, R3, R4, R5	RES TKF 100R 1% 1/10W SMD 0603	Panasonic	ERJ3EKF1000V	Digi-Key	P100HCT-ND
1	R6	RES TKF 30k 5% 1/10W SMD 0603	Panasonic	ERJ3GEYJ303V	Digi-Key	P30KGCT-ND
1	R7	RES TKF 90.9k 1% 1/10W SMD 0603	Panasonic	ERJ-3EKF9092V	Digi-Key	P90.9KHTR-ND
1	R10	RES TKF 40.2k 1% 1/10W SMD 0603	Yageo	RC0603FR-0740K2L	Digi-Key	311-40.2KHRTR-ND
1	R11	RES TKF 100R 5% 1/10W SMD 0603	Vishay Dale	CRCW0603100RJNEA	Digi-Key	541-100GCT-ND
1	R12	RES TKF 20k 1% 1/10W SMD 0603	Panasonic	ERJ3EKF2002V	Digi-Key	P20.0KHCT-ND
1	R13	RES TKF 56k 1% 1/10W SMD 0603	Stackpole Electronics	RMCF0603FT56K0	Digi-Key	RMCF0603FT56K0CT-N
1	R14	RES TKF 300R 1% 1/10W SMD 0603	Yageo	RC0603FR-07300RL	Digi-Key	311-300HRCT-ND
1	R15	RES TF 4.99k 0.5% 0.15W SMD 0603 AEC-Q200	Vishay Beyschlag	MCT0603MD4991DP500	Digi-Key	MCT0603-4.99K-MDCT-N
1	R16	RES TF 10k 1% 1/16W SMD 0603	NEOHM - TE CONNECT	CPF0603F10K1	Digi-Key	A102203CT-ND
1	R17	RES TF 2.21R 0.1% 1/16W SMD 0603	Stackpole Electronics	RNCF0603BKC2R21	Digi-Key	RNCF0603BKC2R21CT-N
1	R20	RES TKF 47k 1% 1/4W SMD 0603	Vishay	CRCW060347K0FKEAH	Digi-Key	541-47.0KSCT-ND
10	R22, R26, R27, R28, R29, R30, R32, R33, R36, R39	RES TKF 0R 1/10W SMD 0603	Panasonic	ERJ-3GEY0R00V	Digi-Key	P0.0GTR-ND
1	R23	RES TF 0.1R 1% 1/2W SMD 1206	Susumu	RL1632R-R100-F	Digi-Key	RL16R.10FCT-ND
2	R24, R31	RES TKF 4.7R 1% 1/10W SMD 0603	Panasonic	ERJ-3RQF4R7V	Digi-Key	P4.7AJCT-ND
1	R25	RES TKF 750R 1% 1/10W SMD 0603	Vishay	CRCW0603750RFKEA	Digi-Key	541-750HCT-ND
1	R37	RES TKF 1.2R 1% 1/10W AEC-Q200 SMD 0603	Panasonic	ERJ-3RQF1R2V	Digi-Key	P1.2AJCT-ND
1	R38	RES TKF 95.3k 1% 1/10W SMD 0603	Panasonic	ERJ-3EKF9532V	Digi-Key	P95.3KHCT-ND
2	R201, R202	RES TKF 3.3R 1% 1/8W SMD 0805 AEC-Q200	Stackpole Electronics	RMCF0805FT3R30	Digi-Key	RMCF0805FT3R30CT-N

1	TH1	RES THERMISTOR 47k 1% 100mW SMD 0603	Murata	NCU18WB473F60RB	Farnell România	2614208
13	TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP11, TP12, TP14, TP16, TP17	CON TP PIN Tin TH	Harwin	H2121-01	Digi-Key	952-1440-ND

Microchip Parts listed below

1	U1	MCHP ANALOG 36V Dual Phase COT Switching Buck Controller MIC21LV33YML-TR QFN-32	Microchip Technology	MIC21LV33YML-TR	Microchip Tech	MIC21LV33YML-TR

Mechanical Parts to be added in the package

3	JP1, JP2, JP3	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, 0.374" x 0.189" Clear	Essentra	RBS-35	Digi-Key	RPC1620-ND
1	Test Procedure					

PCB

1	PCB1	Printed Circuit Board		04-11424-R1		
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Do Not Populate Parts listed below

0	C3, C6	CAP CER 100pF 50V 10% X7R SMD 0603	Würth Electronics	885012206077	Digi-Key	732-7995-1-ND
0	C9	CAP CER 10pF 25V 5% NP0 SMD 0603	Würth Electronics	885012006032	Digi-Key	732-7774-1-ND
0	C48	CAP CER 1uF 16V 10% X5R SMD 0603	Kyocera AVX	0603YD105KAT2A/4K	Digi-Key	478-1249-1-ND
0	C49	CAP CER 0.47uF 25V 10% X7R SMD 0603	Murata	GRM188R71E474KA12D	Digi-Key	490-3291-1-ND
0	C101	CAP CER 0.1uF 16V 10% X7R SMD 0603	Taiyo Yuden	CEEMK107B7104KA-T	Digi-Key	587-1240-1-ND
0	Q2B, Q4B	TRANS FET N-CH BSC032NE2LS 25V 84A 37W TDSO-8	Infineon	BSC032NE2LSATMA1	Mouser	726-BSC032NE2LS
0	Q3B, Q5B	TRANS FET N-CH BSC010NE2LSIATMA1 25V 38A 96W TDSO-8	Infineon	BSC010NE2LSIATMA1	Digi-Key	BSC010NE2LSIATMA1C
0	Q6	TRANS FET N-CH SIRA74DP 40V 24A 46.2W PPAK SO-8	Vishay Siliconix	SIRA74DP-T1-GE3	Digikey	742-SIRA74DP-T1-GE3C
0	R8	RES TKF 107k 1% 1/10W SMD 0603	Panasonic	ERJ-3EKF1073V	Digi-Key	P107KHCT-ND
0	R18	RES TKF 90.9k 1% 1/10W SMD 0603	Panasonic	ERJ-3EKF9092V	Digi-Key	P90.9KHTR-ND

0	R19	RES TKF 150k 1% 1/8W SMD 0603	KOA Speer	SG73S1JTTD1503F	Farnell	1627808
0	R21	RES TKF 0R 1/10W SMD 0603	Panasonic	ERJ-3GEY0R00V	Digi-Key	P0.0GTR-ND
0	R34, R35	RES TKF 39k 1% 1/10W SMD 0603	Panasonic	ERJ-3EKF3902V	Digi-Key	P39.0KHCT-ND
0	RX	RES TKF 0.1R 1% 1/3W SMD 1210	Panasonic	ERJ-L14KF10CU	Digi-Key	P100NACT-ND
0	TH2, TH3	RES THERMISTOR 47k 1% 100mW SMD 0603	Murata	NCU18WB473F60RB	Farnell Romani	2614208
0	TP10	CON TP PIN Tin TH	Harwin	H2121-01	Digi-Key	952-1440-ND

Approved	Notes	Description