

# Bill of Materials



TI DESIGNS  
TIDA-00231

Quantity	Designator	Description	PartNumber	Manufacturer
1	!PCB	Printed Circuit Board	TIDA-00231	Any
3	C1, C2, C5	CAP, CERM, 2.2uF, 100V, +/-10%, X7R, 1210	GRM32ER72A225KA35L	MuRata
1	C3	CAP, CERM, 10uF, 50V, +/-10%, X7R, 1210	GRM32ER71H106KA12L	MuRata
10	C4, C11, C12, C14, C16, C18, C19, C24, C25, C32	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	C0603C104K5RACTU	Kemet
0	C6	CAP, CERM, 0.47uF, 50V, 10%, X5R, 0603	UMK107ABJ474KA-T	Taiyo Yuden
1	C7	CAP, CERM, 1uF, 50V, +/-10%, X5R, 0603	GRM188R61H105KAALD	MuRata
1	C8	CAP, CERM, 0.47uF, 100V, +/-10%, X7R, 1206	GRM31MR72A474KA35L	MuRata
1	C9	CAP, CERM, 10uF, 35V, +/-20%, X7R, 1210	GMK325AB7106MM-T	Taiyo Yuden
1	C10	CAP, CERM, 0.01uF, 100V, +/-5%, X7R, 0603	06031C103JAT2A	AVX
2	C13, C20	CAP, CERM, 1uF, 50V, +/-10%, X7R, 0805	08055C105KAT2A	AVX
2	C15, C23	CAP, CERM, 10uF, 16V, +/-20%, X5R, 0805	0805YD106MAT2A	AVX
3	C17, C50, C51	CAP, CERM, 1000pF, 2KV 10% X7R 1206	202R18W102KV4E	Johanson Dielectrics Inc
2	C21, C22	CAP, CERM, 2.2uF, 25V, +/-10%, X7R, 0805	GRM21BR71E225KA73L	MuRata
10	C26, C31, C34, C38, C41, C43, C45, C47, C49, C55	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	06035C104KAT2A	AVX
0	C27	CAP, CERM, 2.2uF, 50V, +/-10%, X5R, 1206	GRM31CR61H225KA88L	MuRata
1	C28	CAP, CERM, 4.7uF, 25V, +/-10%, X5R, 0805	TMK212BJ475KG-T	Taiyo Yuden
1	C29	CAP, CERM, 0.01uF, 50V, +/-5%, X7R, 0603	C0603C103J5RACTU	Kemet
3	C30, C33, C42	CAP, CERM, 4.7uF, 50V, +/-10%, X5R, 0805	C2012X5R1H475K125AB	TDK
1	C35	CAP, CERM, 0.047uF, 25V, +/-5%, X7R, 0603	06033C473JAT2A	AVX
1	C36	CAP, CERM, 2700pF, 50V, +/-10%, X7R, 0603	GRM188R71H272KA01D	MuRata
0	C37	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	06035C104KAT2A	AVX
2	C39, C40	CAP, CERM, 2.2uF, 50V, +/-10%, X7R, 1206	GRM31CR71H225KA88L	MuRata
1	C44	CAP, CERM, 100pF, 50V, +/-5%, C0G/NP0, 0603	06035A101JAT2A	AVX
1	C46	CAP, CERM, 0.01uF, 100V, +/-10%, X7R, 0603	C0603C103K1RACTU	Kemet
0	C48	CAP, CERM, 1000pF, 2KV 10% X7R 1206	202R18W102KV4E	Johanson Dielectrics Inc
1	C52	CAP, CERM, 0.1uF, 100V, +/-10%, X7R, 0603	GRM188R72A104KA35D	MuRata
1	C53	CAP, CERM, 3300pF, 100V, +/-5%, X7R, 0603	06031C332JAT2A	AVX
1	C54	CAP, CERM, 1000pF, 100V, +/-20%, X7R, 0603	06031C102MAT2A	AVX
2	D1, D2	Diode, Schottky, 200V, 1A, PowerDI123	DFLS1200-7	Diodes Inc.
1	D3	LED SmartLED Green 570NM	LG L29K-G2J1-24-Z	OSRAM
1	D4	DIODE ZENER 5.9V 1W PMDS	PTZTE255.6B	Rohm Semiconductor
2	D5, D8	Diode, Zener, 36V, 500mW, SOD-123	MMSZ5258B-7-F	Diodes Inc.
1	D6	Diode, Zener, 2.7V, 500mW, SOD-123	MMSZ5223B-7-F	Diodes Inc.
2	D7, D11	Diode, Schottky, 40V, 0.5A, SOD-123	MBR0540T1G	ON Semiconductor
1	D9	Diode, Signal, 300-mA, 75-V, 350-mW	1N4148W-7-F	Diodes
2	D10, D12	DIODE SCHOTTKY 60V 2A SOD123W	PMEG6020ER,115	NXP Semiconductor
1	D13	Diode, TVS, Uni, 28V, 1500W, SMC	SMCJ28A	Fairchild Semiconductor
0	D14	TVS 18 VOLT 600 WATT BI-DIR SMB	SMBJ18CA	Littelfuse Inc
1	D15	Diode, Schottky, 45V, 0.1A, SOD-523	SDM10U45-7-F	Diodes Inc.
1	F1	PTC RESTTBLE 0.05A 60V CHIP 1210	0ZCB0005FF2E	Bel Fuse Inc
2	FB1, FB2	FERRITE CHIP 1000 OHM 300MA 0603	MMZ1608B102C	TDK Corporation
2	H1, H2	Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	NY PMS 440 0025 PH	B&F Fastener Supply
2	J1, J2	Terminal Block, 2x1, 2.54mm, TH	282834-2	TE Connectivity
1	J3	Receptacle, 0.8mm, 25x2, SMT	ERF8-025-05.0-L-DV-K-TR	Samtec
1	L2	INDUCTOR POWER 220UH .22A SMD	VLCF5028T-221MR22-2	TDK Corporation
1	LBL1	Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 10,000 per roll	THT-14-423-10	Brady
1	Q1	MOSFET, N-CH, 60V, 50A, SON 5x6mm	CSD18537NQ5A	Texas Instruments
1	R1	RES, 95.3k ohm, 1%, 0.1W, 0603	CRCW060395K3FKFA	Vishay-Dale
1	R2	RES, 7.15k ohm, 1%, 0.1W, 0603	CRCW06037K15FKFA	Vishay-Dale
1	R3	RES, 0.02 ohm, 1%, 1W, 1206	PRL1632-R020-F-T1	Susumu Co Ltd
1	R4	RES, 9.09k ohm, 1%, 0.1W, 0603	CRCW06039K09FKFA	Vishay-Dale
2	R5, R52	RES, 10k ohm, 5%, 0.1W, 0603	CRCW060310K0JNEA	Vishay-Dale
1	R6	RES, 56.0k ohm, 0.1%, 0.1W, 0603	RG1608P-563-B-T5	Susumu Co Ltd
0	R7, R8, R15, R16, R22	RES, 10k ohm, 5%, 0.063W, 0402	CRCW040210K0JNED	Vishay-Dale
5	R9, R14, R27, R28, R29	RES, 10k ohm, 5%, 0.063W, 0402	CRCW040210K0JNED	Vishay-Dale
4	R10, R11, R12, R13	RES, 0 ohm, 5%, 0.063W, 0402	RC0402JR-070RL	Yageo America
1	R17	RES, 10.0k ohm, 1%, 0.1W, 0603	CRCW060310K0FKFA	Vishay-Dale
1	R18	RES, 560 ohm, 5%, 0.1W, 0603	CRCW0603560RJNEA	Vishay-Dale
1	R19	RES, 1.00k ohm, 1%, 0.1W, 0603	CRCW06031K00FKFA	Vishay-Dale
1	R20	RES, 280k ohm, 0.1%, 0.1W, 0603	RT0603BRD07280KL	Yageo America

1	R21	RES, 12.1k ohm, 0.1%, 0.1W, 0603	RT0603BRD0712K1L	Yageo America
3	R23, R34, R49	RES, 0 ohm, 5%, 0.063W, 0402	CRCW04020000Z0ED	Vishay-Dale
2	R24, R41	RES, 68k ohm, 5%, 0.1W, 0603	CRCW060368K0JNEA	Vishay-Dale
1	R25	RES, 15.0k ohm, 1%, 0.1W, 0603	CRCW060315K0FKEA	Vishay-Dale
1	R26	RES, 10.0 ohm, 1%, 0.1W, 0603	CRCW060310R0FKEA	Vishay-Dale
1	R30	RES, 53.6k ohm, 1%, 0.1W, 0603	RC0603FR-0753K6L	Yageo America
1	R31	RES, 3.3k ohm, 5%, 0.1W, 0603	CRCW060333K0JNEA	Vishay-Dale
3	R32, R48, R50	RES, 1.00Meg ohm, 1%, 0.1W, 0603	CRCW06031M00FKEA	Vishay-Dale
1	R33	RES, 15k ohm, 1/10W 0.1% 0603	RT0603BRB0715KL	Vishay-Dale
0	R35	RES, 10k ohm, 5%, 0.1W, 0603	CRCW060310K0JNEA	Vishay-Dale
1	R36	RES, 49.9 ohm, 0.1%, 0.1W, 0603	RT0603BRD0749R9L	Yageo America
1	R37	RES, 10 ohm, 5%, 0.25W, 1206	CRCW120610R0JNEA	Vishay-Dale
1	R38	RES 10 OHM .4W 1% 0204 MELF	MMA02040C1009FB300	Vishay Beyschlag
1	R39	RES, 56.2k ohm, 0.1%, 0.1W, 0603	RT0603BRD0756K2L	Yageo America
1	R40	RES, 4.87k ohm, 1%, 0.1W, 0603	RC0603FR-074K87L	Yageo America
2	R42, R43	RES, 1.5k ohm, 5%, 0.063W, 0402	CRCW04021K50JNED	Vishay-Dale
1	R44	RES, 60.4k ohm, 0.1%, 0.1W, 0603	RT0603BRD0760K4L	Yageo America
1	R45	RES, 100k ohm, 1%, 0.1W, 0603	CRCW0603100K0FKEA	Vishay-Dale
1	R46	RES, 71.5k ohm, 1%, 0.1W, 0603	CRCW060371K5FKEA	Vishay-Dale
1	R47	RES, 14.3k ohm, 1%, 0.1W, 0603	CRCW060314K3FKEA	Vishay-Dale
1	R51	RES, 51k ohm, 5%, 0.1W, 0603	CRCW060351K0JNEA	Vishay-Dale
1	T1	Transformer, 50uH, SMT	750342178	Würth Elektronik eiSos
1	U1	Positive High Voltage Hot Swap / Inrush Current Controller with Power Limiting, 10-pin MSOP, Pb-Free	LM5069MM-2/NOPB	National Semiconductor
1	U2	IC, EEPROM, 2KBIT, 1MHZ, SOIC-8	AT24C02C-SSHM-B	Atmel
1	U3	100V, 600mA Constant On-Time Synchronous Buck Regulator, DDA0008B	LM5017MRE/NOPB	Texas Instruments
1	U4	IC REG LDO 3.3V 0.15A SOT23-5	TPS70933DBVT	Texas Instruments
1	U5	50 Mbps Low-Power Dual Channels Digital Isolator, 3.3 V / 5 V, -40 to +125 degC, 8-pin SOIC (D), Green (RoHS & no Sb/Br)	ISO7420ED	Texas Instruments
1	U6	4242-VPK Small-Footprint and Low-Power Quad Channels Digital Isolators, DBQ0016A	ISO7141CCDBQ	Texas Instruments
1	U7	IC REG LDO 5V 0.15A SOT23-5	TPS70950DBVR	Texas Instruments
1	U8	IC, 1 Ohm SPDT Analog Switch	TS5A3159ADBVR	Texas Instruments
1	U9	1.2A High Voltage Boost Converter in 2x2mm QFN Package, DRV0006A	TPS61170DRV	Texas Instruments
1	U10	1-Channel, 16-Bit, Programmable Current/Voltage Output DAC for 4-20mA Current Loop Applications	DAC8760IPWP	Texas Instruments
1	U11	Low Power, RRO, General Purpose Operational Amplifier in MicroPackage, 2.7 to 36 V, -40 to 125 degC, 8-pin SOP (DGK0008A), Green (RoHS & no Sb/Br)	OPA2171AIDGKR	Texas Instruments

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