

TIDA-010047 REV E1 Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
IPCB	1		TIDA-010047	Any	Printed Circuit Board	
BC1	1	120 ohm	BLM31PG121SN1L	MuRata	Ferrite Bead, 120 ohm @ 100 MHz, 3.5 A, 1206	1206
BD1, BD2	2	600V	Z4DGP406L-HF	Comchip Technology	Diode, P-N-Bridge, 600 V, 4 A, Z4-D	Z4-D
C1	1	220pF	GRM188R72E221KW07D	MuRata	CAP, CERM, 220 pF, 250 V, +/- 10%, X7R, 0603	0603
C5, C6, C7, C8	4	33uF	C3216X5R1E336M160AC	TDK	CAP, CERM, 33 µF, 25 V, +/- 20%, X5R, 1206	1206
C11	1	0.1uF	C1210C104KCRCTU	Kemet	CAP, CERM, 0.1 µF, 500 V, +/- 10%, X7R, 1210	1210
C12	1	0.47uF	1812Y5000474KXTWS2	Knowles Capacitors	CAP, CERM, 0.47 µF, 500 V, +/- 10%, X7R, 1812	1812
C17	1	0.047uF	GRM188R71H473KA61D	MuRata	CAP, CERM, 0.047 µF, 50 V, +/- 10%, X7R, 0603	0603
C22	1	22uF	C2012JB1V226M125AC	TDK	CAP, CERM, 22 µF, 35 V, +/- 20%, JB, 0805	0805
C23	1	680uF	687AVG025MGBJ	Illinois Capacitor	Capacitor, aluminum polymer, 680 µF, 25 V, ± 20%, 0.29256 ohm, TH	D10xL13.5mm
C24	1	1uF	UMK107AB7105KA-T	Taiyo Yuden	CAP, CERM, 1 µF, 50 V, +/- 10%, X7R, 0603	0603
C25, C29, C41, C61, C76, C78	6	1uF	UMK107AB7105KA-T	Taiyo Yuden	CAP, CERM, 1 µF, 50 V, +/- 10%, X7R, 0603	0603
C26	1	33pF	GRM1555C1H330JA01D	MuRata	CAP, CERM, 33 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
C27, C70	2	2.2uF	GRM188R61H225KE11D	MuRata	CAP, CERM, 2.2 µF, 50 V, +/- 10%, X5R, 0603	0603
C28	1	4.7uF	GRM31CZ72A475KE11	MuRata	CAP, CERM, 4.7 µF, 100 V, +/- 10%, X7R, 1206	1206
C30	1	4700pF	GRM155R71H472KA01D	MuRata	CAP, CERM, 4700 pF, 50 V, +/- 10%, X7R, 0402	0402
C31	1	1uF	C1608X7R1E105K080AB	TDK	CAP, CERM, 1 µF, 25 V, +/- 10%, X7R, 0603	0603
C35	1	0.01uF	C0402C103J5RACTU	Kemet	CAP, CERM, 0.01 µF, 50 V, +/- 5%, X7R, 0402	0402
C36	1	3.3pF	GRM1555C1H3R3CA01D	MuRata	CAP, CERM, 3.3 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
C37	1	0.1uF	GRM188R71H104KA93D	MuRata	CAP, CERM, 0.1 µF, 50 V, +/- 10%, X7R, 0603	0603
C38	1	22pF	GRM1885C1H220JA01D	MuRata	CAP, CERM, 22 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C39	1	2200pF	GRM155R71H222KA01D	MuRata	CAP, CERM, 2200 pF, 50 V, +/- 10%, X7R, 0402	0402
C42, C43, C44	3	0.33uF	C3225X7T2E334K200AA	TDK	CAP, CERM, 0.33 µF, 250 V, +/- 10%, X7T, 1210	1210
C47, C54, C79	3	220pF	GRM1555C1H221JA01D	MuRata	CAP, CERM, 220 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
C50	1	4.7uF	C2012X6S1H475K125AC	TDK	CAP, CERM, 4.7 µF, 50 V, +/- 10%, X6S, 0805	0805
C57	1	3900pF	GRM188R72A392KA01D	MuRata	CAP, CERM, 3900 pF, 100 V, +/- 10%, X7R, 0603	0603
C59	1	0.033uF	GRM188R71H333KA61D	MuRata	CAP, CERM, 0.033 µF, 50 V, +/- 10%, X7R, 0603	0603
C60	1	1uF	GRM188R71E105KA12D	MuRata	CAP, CERM, 1 µF, 25 V, +/- 10%, X7R, 0603	0603
C62, C77	2	220pF	GRM1885C1H221JA01D	MuRata	CAP, CERM, 220 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C63	1	2200pF	GRM1885C1H222JA01D	MuRata	CAP, CERM, 2200 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C65	1	10pF	VJ1206A100JXGAT5Z	Vishay-Vitramon	CAP, CERM, 10 pF, 1000 V, +/- 5%, C0G/NP0, 1206	1206
C66	1	1uF	C0805C105K3RACTU	Kemet	CAP, CERM, 1 µF, 25 V, +/- 10%, X7R, 0805	0805
C75	1	0.1uF	C2012X7T2E104K125AA	TDK	CAP, CERM, 0.1 µF, 250 V, +/- 10%, X7T, 0805	0805
C#1	1	220 nF	890324026003	Würth Elektronik	WCAP-FTX2 Film Capacitors, 26x6x15mm, 275V AC, 220 nF	26x6x15mm
C#2	1	0.47uF	ECW-FD2W474Q1	Panasonic	CAP, Film, 0.47 µF, 450 V, +/- 10%, TH	12.6x6.5x12.7mm
Cblk	1	68uF	450BXW68MEFC14.5X35	Rubycon	CAP, AL, 68 µF, 450 V, +/- 20%, TH	D12.5xL45mm
CX2	1	470 nF	890324025039	Würth Elektronik	WCAP-FTX2 Film Capacitors, 18x8x14mm, 275V AC, 470 nF	18x8x14mm
CY	1	33pF	DE21XKY330JN3AM02F	MuRata	CAP, CERM, 33 pF, X1 250 VAC/Y2 250 VAC, +/- 5%, SL, 8x5mm	8x5mm
D1	1	800V	RS3K-E3/9AT	Vishay-Semiconductor	Diode, Switching, 800 V, 3 A, SMC	SMC
D2	1	600V	MURS360T3G	ON Semiconductor	Diode, Ultrafast, 600 V, 3 A, SMC	SMC
D4	1	10V	CZRU52C10	Comchip Technology	Diode, Zener, 10 V, 150 mW, SOD-523F	SOD-523F
D6, D15	2	16V	CZRU52C16	Comchip Technology	Diode, Zener, 16 V, 150 mW, SOD-523F	SOD-523F
D7	1	600V	ES1JAF	Fairchild Semiconductor	Diode, Ultrafast, 600 V, 1 A, AEC-Q101, SMAF	SMAF

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D13	1	10V	CZRU52C10V	Comchip Technology	Diode, Zener, 10 V, 150 mW, SOD-523F	SOD-523F
D14, D16, D19, DA3	4	50V	CDBU0245	Comchip Technology	Diode, Schottky, 50 V, 0.2 A, SOD-523F	SOD-523F
D17	1	200V	RF071M2S	Rohm	Diode, Ultrafast, 200 V, 1 A, SOD-123	SOD-123
D25	1	11V	CZRU52C11	Comchip Technology	Diode, Zener, 11 V, 150 mW, SOD-523F	SOD-523F
D30	1	30V	RB520S30,115	NXP Semiconductor	Diode, Schottky, 30 V, 0.2 A, SOD-523	SOD-523
DA1, DA2	2	600V	CSFMT108-HF	Comchip Technology	Diode, Superfast Rectifier, 600 V, 1 A, 3.5x1.6mm	3.5x1.6mm
Dhvg1	1	24V	CZRU52C24	Comchip Technology	Diode, Zener, 24 V, 150 mW, SOD-523F	SOD-523F
Dz1	1	20V	CZRU52C20	Comchip Technology	Diode, Zener, 20 V, 150 mW, SOD-523F	SOD-523F
F1	1	3.15A	Fuse, 3.15 A, 250VAC/VDC, TH	39213150000	Littelfuse	8.35x7.7x4mm
R46, R47, R48, R60, R61, R62, R71, R72, R73	9	3.24Meg	CRCW12063M24FKEA	Vishay-Dale	RES, 3.24 M, 1%, 0.25 W, 1206	1206
L1	1	150µH	7447018	Würth Elektronik	WE-FI Leaded Toroidal Line Choke, L = 150µH	
L3	1	1uH	744316100	Würth Elektronik	FIXED IND 1UH 11.5A 4.75 MOHM	5.5x5.3mm
L4	1	0.68uH	74479136	Würth Elektronik	Inductor, Multilayer, Ferrite, 0.68 µH, 0.19 A, 0.67 ohm, 1206	4.8x1.8x4.8mm
LCM1	1	5.5mH=/ -32%	750343092	Würth Elektronik	Coupled inductor, 5.5mH+/-32%, 2.5 A, 0.040 ohm	
LCM2	1	5mH	744823305	Würth Elektronik	WE-CMB Common Mode Power Line Choke, Type M, 5mH	
Lpfc	1	340uH	750343984	Würth Elektronik Midcom	Transformer 6-Terminal , THT, RM10	RM10
Q2	1	100V	DMN10H220L-7	Diodes Inc.	MOSFET, N-CH, 100 V, 1.4 A, SOT-23	SOT-23
Q3	1	600V	STN1NK60Z	STMicroelectronics	MOSFET, N-CH, 600 V, 0.3 A, SOT-223	SOT-223
Q4	1	60V	2N7002	Fairchild Semiconductor	MOSFET, N-CH, 60 V, 115 A, SOT-23	SOT-23
Q7	1	600V	BSS126 H6906	Infineon Technologies	MOSFET, N-CH, 600 V, 0.021 A, AEC-Q101, SOT-23	SOT-23
Q8	1	600V	SiHH120N60E	Vishay	N-Channel 600V 24A (Tc) 156W (Tc) Surface Mount PowerPAK® 8 x 8	PG-VSON-4
Q9, Q13, Q16, Q17, Qp3	5	60V	2N7002KW	Fairchild Semiconductor	MOSFET, N-CH, 60 V, 0.31 A, SOT-323	SOT-323
Q10	1	100V	BSS123W-7-F	Diodes Inc.	MOSFET, N-CH, 100 V, 0.17 A, SOT-323	SOT-323
Qp1	1	40 V	MMBT3906-7-F	Diodes Inc.	Transistor, PNP, 40 V, 0.2 A, SOT-23	SOT-23
Q_SR1	1	150V	BSC093N15NS5ATMA1	Infineon Technologies	MOSFET, N-CH, 150 V, 87 A, PG-TDSON-8	PG-TDSON-8
R2	1	22	ERJ-6GEYJ220V	Panasonic	RES, 22, 5%, 0.125 W, 0805	0805
R4	1	2.21Meg	CRCW12062M21FKEA	Vishay-Dale	RES, 2.21 M, 1%, 0.25 W, 1206	1206
R10	1	100	CRCW0402100RFKED	Vishay-Dale	RES, 100, 1%, 0.063 W, 0402	0402
R11, RG1	2	10.0	CRCW060310R0FKEA	Vishay-Dale	RES, 10.0, 1%, 0.1 W, 0603	0603
R14	1	1.21k	CRCW04021K21FKED	Vishay-Dale	RES, 1.21 k, 1%, 0.063 W, 0402	0402
R17, R18, R75, R76	4	0.22	ERJ-8RQFR22V	Panasonic	RES, 0.22, 1%, 0.25 W, 1206	1206
R22, R29, R80, R89	4	10.0k	CRCW040210K0FKED	Vishay-Dale	RES, 10.0 k, 1%, 0.063 W, 0402	0402
R23	1	432k	CRCW0402432KFKEA	Vishay-Dale	RES, 432 k, 1%, 0.063 W, 0402	0402
R24	1	75.0k	CRCW040275K0FKED	Vishay-Dale	RES, 75.0 k, 1%, 0.063 W, 0402	0402
R25, R88	2	10.0	CRCW040210R0FKED	Vishay-Dale	RES, 10.0, 1%, 0.063 W, 0402	0402
R26	1	150k	ERJPA3F1503V	Panasonic	RES, 150.0 k, 1%, 0.1 W, 150V, 0603	0603
R28	1	562	CRCW0402562RFKED	Vishay-Dale	RES, 562, 1%, 0.063 W, 0402	0402
R30, R37, R41	3	150k	CRCW0402150KFKEA	Vishay-Dale	RES, 150 k, 1%, 0.063 W, 0402	0402
R31	1	49.9k	CRCW040249K9FKED	Vishay-Dale	RES, 49.9 k, 1%, 0.063 W, 0402	0402
R32	1	30.1k	CRCW040230K1FKED	Vishay-Dale	RES, 30.1 k, 1%, 0.063 W, 0402	0402
R33	1	56.2k	CRCW040256K2FKED	Vishay-Dale	RES, 56.2 k, 1%, 0.063 W, 0402	0402
R34	1	15.0k	CRCW040215K0FKED	Vishay-Dale	RES, 15.0 k, 1%, 0.063 W, 0402	0402

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R35	1	121	CRCW0603121RFKEA	Vishay-Dale	RES, 121, 1%, 0.1 W, 0603	0603
R36	1	1.00Meg	RC0402FR-071ML	Yageo America	RES, 1.00 M, 1%, 0.063 W, 0402	0402
R38	1	274k	CRCW0402274KFKED	Vishay-Dale	RES, 274 k, 1%, 0.063 W, 0402	0402
R44, R45	2	1.00	RC0805FR-071RL	Yageo America	RES, 1.00, 1%, 0.125 W, 0805	0805
R49, R50, R51	3	1.00k	CRCW12061K00FKEA	Vishay-Dale	RES, 1.00 k, 1%, 0.25 W, 1206	1206
R63	1	332k	CRCW0603332KFKEA	Vishay-Dale	RES, 332 k, 1%, 0.1 W, 0603	0603
R65	1	2.00	CRCW06032R00FKEA	Vishay-Dale	RES, 2.00, 1%, 0.1 W, 0603	0603
R66	1	64.9k	CRCW060364K9FKEA	Vishay-Dale	RES, 64.9 k, 1%, 0.1 W, 0603	0603
R68	1	182k	CRCW0603182KFKEA	Vishay-Dale	RES, 182 k, 1%, 0.1 W, 0603	0603
R74	1	24.3k	RT0603DRE0724K3L	Yageo America	RES, 24.3 k, 0.5%, 0.1 W, 0603	0603
R78	1	750	CRCW0603750RFKEA	Vishay-Dale	RES, 750, 1%, 0.1 W, 0603	0603
R81	1	24.9	CRCW040224R9FKED	Vishay-Dale	RES, 24.9, 1%, 0.063 W, 0402	0402
R82, R84, R95, R99, Rp2	5	100k	CRCW0402100KFKED	Vishay-Dale	RES, 100 k, 1%, 0.063 W, 0402	0402
R83	1	178k	CRCW0402178KFKED	Vishay-Dale	RES, 178 k, 1%, 0.063 W, 0402	0402
R97, Rb2	2	39.2k	CRCW040239K2FKED	Vishay-Dale	RES, 39.2 k, 1%, 0.063 W, 0402	0402
R98	1	3.16Meg	CRCW08053M16FKEA	Vishay-Dale	RES, 3.16 M, 1%, 0.125 W, 0805	0805
R101	1	NC	CRCW040293K1FKED	Vishay-Dale	NC	NC
R102	1	NC	CRCW040237K4FKED	Vishay-Dale	NC	NC
R103	1	NC	CRCW040224K9FKED	Vishay-Dale	NC	NC
Rb1	1	332k	CRCW0402332KFKED	Vishay-Dale	RES, 332 k, 1%, 0.063 W, 0402	0402
RG2	1	1.00	CRCW06031R00FKEA	Vishay-Dale	RES, 1.00, 1%, 0.1 W, 0603	0603
RG3	1	82.5k	CRCW060382K5FKEA	Vishay-Dale	RES, 82.5 k, 1%, 0.1 W, 0603	0603
Rp1	1	43.2k	CRCW040243K2FKED	Vishay-Dale	RES, 43.2 k, 1%, 0.063 W, 0402	0402
RT1	1	100k ohm	NCP18WF104F12RB	MuRata	Thermistor NTC, 100k ohm, 1%, 0603	0603
Rvs1	1	75.0k	ERJPA3F7502V	Panasonic	RES, 75.0 k, 1%, 0.1 W, 150V, 0603	0603
Rvs2	1	12.4k	CRCW040212K4FKED	Vishay-Dale	RES, 12.4 k, 1%, 0.063 W, 0402	0402
T1	1	Np:Ns:Np1: Np2:Ns1=27 :5:6:11:10	750344527	Würth Elektronik	Transformer, 110 uH, RM10	RM10
U2	1		UCC24612-1DBVR	Texas Instruments	UCC24612-1DBV, DBV0005A (SOT-23-5)	DBV0005A
U3	1		UCC27712DR	Texas Instruments	620-V High-Side Low-Side Gate Driver with 2.5A Peak Output and RobustDrive, D0008A (SOIC-8)	D0008A
U4	1		UCC28780RTER	Texas Instruments	Active-Clamp Flyback Controller, RTE0016C (WQFN-16)	RTE0016C
U5	1		FODM8801AV	Fairchild Semiconductor	Optocoupler, 3.75 kV, 80-160% CTR, SMT	Mini Flat Package
U6	1		TPS7B4250QDBVRQ1	Texas Instruments	Low Dropout Voltage Tracking LDO, DBV0005A (SOT-5)	DBV0005A
U7	1		ATL431BQDBZR	Texas Instruments	Adjustable Precision Shunt Regulator, 34 ppm / degC, 100 mA, 0 to 70 degC, 3-pin SOT-23 (DBZ), Green (RoHS & no Sb/Br)	DBZ0003A
U9	1		LMC7111BIM5	Texas Instruments	Tiny CMOS Operational Amplifier with Rail-to-Rail Input and Output, DBV0005A	DBV0005A
U10	1		UCC28056DBV	Texas Instruments	6-Pin Single-Phase Transition-Mode PFC Controller, DBV0006A (SOT-23-6)	DBV0006A
U11	1		LP2981AIM5-5.0/NOPB	Texas Instruments	Micropower 100 mA Ultra Low-Dropout Regulator, 5-pin SOT-23	MF05A