

TIDA-010081 REV 1 Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
!PCB1	1		TIDA-010081	Any	Printed Circuit Board	
C1	1	680uF	450USH680MEFCSN35X45	Rubycon	CAP, AL, 680 μ F, 450 V, +/- 20%, TH	D35xL45mm
C1_1	1	150uF	LLS2W151MELZ	Nichicon	CAP, AL, 150 μ F, 450 V, +/- 20%, TH	D22xL42mm
C2, C3, C4, C11, C12, C13, C61	7	2200pF	AY2222M35Y5US63L7	Vishay-Bccomponents	CAP, CERM, 2200 pF, X1 440 VAC/Y2 300 VAC, +/- 20%, Y5U, AEC-Q200 Grade 1, D9.5xT5mm	D9.5xT5mm
C5	1	2.2uF	B32674D4225K	TDK	CAP, Film, 2.2 μ F, 450 V, +/- 10%, 0.0078 ohm, TH	31.5x21.5x12.5mm
C6, C7	2	0.1uF	C3225X7T2J104M160AC	TDK	CAP, CERM, 0.1 μ F, 630 V, +/- 20%, X7T, 1210	1210
C8, C10	2	1.5 uF	890324026030	Würth Elektronik	WCAP-FTX2 Film Capacitors, 26x10x21mm, 275V AC, 1.5 uF	WCAP-FTX2_26x10x21
C9	1	220 nF	890324026003	Würth Elektronik	WCAP-FTX2 Film Capacitors, 26x6x15mm, 275V AC, 220 nF	WCAP-FTX2_26x6x15
C14, C19, C42, C49, C51	5	100pF	06033C101KAT2A	AVX	CAP, CERM, 100 pF, 25 V, +/- 10%, X7R, 0603	0603
C15, C18	2	2.2uF	GRM188R6YA225KA12D	MuRata	CAP, CERM, 2.2 μ F, 35 V, +/- 10%, X5R, 0603	0603
C16	1	0.47uF	GCM188R71E474KA64D	MuRata	CAP, CERM, 0.47 μ F, 25 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C20, C53	2	0.1uF	C1608X7R1H104K080AA	TDK	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	0603
C21	1	1500pF	GRM188R71E152KA01D	MuRata	CAP, CERM, 1500 pF, 25 V, +/- 10%, X7R, 0603	0603
C22, C44, C60	3	1uF	C1608X5R1E105K080AC	TDK	CAP, CERM, 1 uF, 25 V, +/- 10%, X5R, 0603	0603
C23	1	4700pF	GRM188R71C472KA01D	MuRata	CAP, CERM, 4700 pF, 16 V, +/- 10%, X7R, 0603	0603
C24	1	820pF	GRM1885C1E821JA01D	MuRata	CAP, CERM, 820 pF, 25 V, +/- 5%, C0G/NP0, 0603	0603
C25	1	0.47uF	GRM188R71C474KA88D	MuRata	CAP, CERM, 0.47 μ F, 16 V, +/- 10%, X7R, 0603	0603
C26	1	2.2uF	GRM188Z71C225KE43	MuRata	CAP, CERM, 2.2 μ F, 16 V, +/- 10%, X7R, 0603	0603
C27	1	68pF	GRM31A7U3A680JW31D	MuRata	CAP, CERM, 68 pF, 1000 V, +/- 5%, U2J, 1206	1206
C28	1	330pF	GRM31A5C2J331JW01D	MuRata	CAP, CERM, 330 pF, 630 V, +/- 5%, C0G/NP0, 1206	1206
C29, C30, C31, C32, C33	5	680uF	100ZLJ680M18X35.5	Rubycon	CAP, AL, 680 μ F, 100 V, +/- 20%, AEC-Q200 Grade 1, TH	D18xL35.5mm
C34	1	2.2uF	EMK107BB7225KA-T	Taiyo Yuden	CAP, CERM, 2.2 uF, 16 V, +/- 10%, X7R, 0603	0603
C35	1	1uF	UMK107AB7105KA-T	Taiyo Yuden	CAP, CERM, 1 uF, 50 V, +/- 10%, X7R, 0603	0603
C36, C37, C38, C39	4	10uF	GRM32ER71J106KA12L	MuRata	CAP, CERM, 10 μ F, 63 V, +/- 10%, X7R, 1210	1210
C40, C41	2	0.082uF	B32642B6823J	TDK	CAP, Film, 0.082 μ F, 300 VAC/630 VDC, +/- 5%, AEC-Q200 Grade 2, TH	26.5x10mm
C43	1	8200pF	GRM188R71E822KA01D	MuRata	CAP, CERM, 8200 pF, 25 V, +/- 10%, X7R, 0603	0603
C45, C46	2	0.01uF	GRM188R71H103KA01D	MuRata	CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, 0603	0603
C47	1	1uF	12063C105KAT2A	AVX	CAP, CERM, 1 μ F, 25 V, +/- 10%, X7R, 1206	1206
C48	1	0.12uF	GRM188R71E124KA01D	MuRata	CAP, CERM, 0.12 μ F, 25 V, +/- 10%, X7R, 0603	0603
C50	1	0.33uF	GRM188R71C334KA01D	MuRata	CAP, CERM, 0.33 μ F, 16 V, +/- 10%, X7R, 0603	0603
C52	1	47uF	C3216JB1E476M160AC	TDK	CAP, CERM, 47 μ F, 25 V, +/- 20%, JB, 1206	1206
C54	1	4.7uF	GRM188R61E475KE11D	MuRata	CAP, CERM, 4.7 uF, 25 V, +/- 10%, X5R, 0603	0603
C55, C58	2	0.01uF	GRM188R71E103KA01D	MuRata	CAP, CERM, 0.01 μ F, 25 V, +/- 10%, X7R, 0603	0603
C56	1	10pF	GRM1885C1H100JA01D	MuRata	CAP, CERM, 10 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C57	1	3.9pF	06035A3R9CAT2A	AVX	CAP, CERM, 3.9 pF, 50 V, +/- 6%, C0G/NP0, 0603	0603
C59	1	0.01uF	GRM188R71C103KA01D	MuRata	CAP, CERM, 0.01 uF, 16 V, +/- 10%, X7R, 0603	0603
D1	1	600V	1N5406	Vishay-Semiconductor	Diode, Switching-Bridge, 600 V, 3 A, TH	DO-201AD
D2	1	600V	RURG3060	Fairchild Semiconductor	Diode, Ultrafast, 600 V, 30 A, TH	TO-247-2
D3	1	600V	LVB2560	Vishay-Semiconductor	Diode, Switching-Bridge, 600 V, 25 A, TH	GSIB-5S
D4, D5	2	1000V	RS1MB-13-F	Diodes Inc.	Diode, P-N, 1000 V, 1 A, SMB	SMB
D6	1	30V	BAT54HT1G	ON Semiconductor	Diode, Schottky, 30V, 0.2A, SOD-323	SOD-323

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
D7	1	5.6V	MMSZ4690T1G	ON Semiconductor	Diode, Zener, 5.6 V, 500 mW, SOD-123	SOD-123
D8	1	250V	BAV23C,215	Nexperia	Diode, Switching, 250 V, 0.225 A, SOT-23	SOT-23
D9	1	600V	STTH3R06S	ST	Diode, Ultrafast, 600 V, 3 A, SMC	SMC
D10	1	600V	US1J-13-F	Diodes Inc.	Diode, Ultrafast, 600 V, 1 A, SMA	SMA
D11	1	24V/20V	MMSZ5252BT1G	ON Semiconductor	Diode, Zener, 24 V, 500 mW, AEC-Q101, SOD-123	SOD-123
D12, D13	2	40V	XBS104S13R-G	Torex USA Corporation	Diode, Schottky, 40 V, 1 A, SOD-323	SOD-323
F1	1		0215012.MXP	Bel Fuse	Fuse, 12 A, 250 VAC	9.8x3.05mm
J2	1		TSW-114-08-L-S-RA	Samtec	Header, 100 mil, 14x1, Gold, R/A, TH	Header, 100 mil, 14x1, R/A, TH
L1	1	532uH	029E1-002	Qingdao Yunlu Energy Techno	Custom PFC Inductor	
L2	1	2mH	7448031002	Würth Elektronik	Coupled inductor, 2x 2 mH, 10 A, 2 x 0.006 ohm, TH	
L3	1	4mH	YXS80466T	YAXIN ELECTRONIC TECH	1000W COMMON MODE CHOKE	
L4	1	16uH	029D-001	Qingdao Yunlu Energy Techno	Custom Resonant Inductor	
L5	1	300nH	PA2607.301NLT	Pulse Engineering	Inductor, Ferrite, 300 nH, 32 A, 0.00031 ohm, SMD	10.31x7.65mm
Q1,	1	650V	IPW60R060C7	Infineon	MOSFET, N-CH, 650 V, 33 A, TO-247	TO-247
Q5, Q8	2	650V	TK040N65Z	Toshiba	MOSFET, N-CH, 650 V, 57 A, TO-247	TO-247
Q2	1	600V	TK290P60Y,RQ	Toshiba	MOSFET, N-CH, 600 V, 11.5 A, DPAK	DPAK
Q3, Q6, Q10	3	30 V	BC858C-7-F	Diodes Inc.	Transistor, PNP, 30 V, 0.1 A, SOT-23	SOT-23
Q4, Q11	2	60V	2N7002	Fairchild Semiconductor	MOSFET, N-CH, 60 V, 115 A, SOT-23	SOT-23
Q7, Q9	2	200V	IPP076N15N5	Infineon	MOSFET, N-CH, 150 V, 112 A, TO-220-3	TO-220AB
Q12	1	65 V	BC 846PN H6327	Infineon Technologies	Transistor, NPN/PNP Pair, 65 V, 0.1 A, SOT-363	SOT-363
R1	1	15	CRCW120615R0JNEA	Vishay-Dale	RES, 15, 5%, 0.25 W, 1206	1206
R2, R33, R42, R47, R54, R60	6	10k	CRCW060310K0JNEA	Vishay-Dale	RES, 10 k, 5%, 0.1 W, 0603	0603
R3	1	18.2	CRCW080518R2FKEA	Vishay-Dale	RES, 18.2, 1%, 0.125 W, 0805	0805
R4	1	49.9k	ERJ-3EKF4992V	Panasonic	RES, 49.9 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R5, R6	2	0.02	CSRN2512FK20L0	Stackpole Electronics Inc	RES, 0.02, 1%, 2 W, 2512	2512
R7, R8, R10	3	3.0Meg	CRCW12063M00JNEA	Vishay-Dale	RES, 3.0 M, 5%, 0.25 W, 1206	1206
R9, R11, R12, R16, R32, R41	6	100k	CRCW0603100KJNEA	Vishay-Dale	RES, 100 k, 5%, 0.1 W, 0603	0603
R15	1	2.0Meg	CRCW06032M00JNEA	Vishay-Dale	RES, 2.0 M, 5%, 0.1 W, 0603	0603
R17	1	10	CRCW060310R0JNEA	Vishay-Dale	RES, 10, 5%, 0.1 W, 0603	0603
R18, R22	2	330k	CRCW1206330KJNEA	Vishay-Dale	RES, 330 k, 5%, 0.25 W, 1206	1206
R19	1	340k	CRCW1206340KFKEA	Vishay-Dale	RES, 340 k, 1%, 0.25 W, 1206	1206
R20, R69	2	127k	CRCW0603127KFKEA	Vishay-Dale	RES, 127 k, 1%, 0.1 W, 0603	0603
R21	1	220	CRCW0603220RJNEA	Vishay-Dale	RES, 220, 5%, 0.1 W, 0603	0603
R23	1	1.18Meg	CRCW06031M18FKEA	Vishay-Dale	RES, 1.18 M, 1%, 0.1 W, 0603	0603
R24	1	9.1k	CRCW06039K10JNEA	Vishay-Dale	RES, 9.1 k, 5%, 0.1 W, 0603	0603
R25	1	12k	CRCW060312K0JNEA	Vishay-Dale	RES, 12 k, 5%, 0.1 W, 0603	0603
R26	1	22k	CRCW060322K0JNEA	Vishay-Dale	RES, 22 k, 5%, 0.1 W, 0603	0603
R27	1	13.0k	CRCW060313K0FKEA	Vishay-Dale	RES, 13.0 k, 1%, 0.1 W, 0603	0603
R28	1	33k	CRCW060333K0JNEA	Vishay-Dale	RES, 33 k, 5%, 0.1 W, 0603	0603
R29	1	24k	RC0603JR-0724KL	Yageo America	RES, 24 k, 5%, 0.1 W, 0603	0603
R30, R37	2	5.6	CRCW08055R60JNEA	Vishay-Dale	RES, 5.6, 5%, 0.125 W, 0805	0805
R31, R43, R45	3	2.0	CRCW06032R00JNEA	Vishay-Dale	RES, 2.0, 5%, 0.1 W, 0603	0603
R34	1	30	CRCW060330R0JNEA	Vishay-Dale	RES, 30, 5%, 0.1 W, 0603	0603
R35	1	43k	RC0603JR-0743KL	Yageo America	RES, 43 k, 5%, 0.1 W, 0603	0603
R36	1	14.0k	CRCW251214K0FKEG	Vishay-Dale	RES, 14.0 k, 1%, 1 W, AEC-Q200 Grade 0, 2512	2512
R38	1	0.0005	WSL2512L5000FEA18	Vishay-Dale	RES, 0.0005, 1%, 2 W, 2512	2512
R39	1	8.2k	CRCW06038K20JNEA	Vishay-Dale	RES, 8.2 k, 5%, 0.1 W, 0603	0603
R40	1	51	CRCW060351R0JNEA	Vishay-Dale	RES, 51, 5%, 0.1 W, 0603	0603
R44, R46	2	10.0	CRCW060310R0FKEAHP	Vishay-Dale	RES, 10.0, 1%, 0.25 W, AEC-Q200 Grade 0, 0603	0603

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
R48	1	75k	CRCW060375K0JNEA	Vishay-Dale	RES, 75 k, 5%, 0.1 W, 0603	0603
R49	1	360k	CRCW0603360KJNEA	Vishay-Dale	RES, 360 k, 5%, 0.1 W, 0603	0603
R50	1	6.04k	CRCW06036K04FKEA	Vishay-Dale	RES, 6.04 k, 1%, 0.1 W, 0603	0603
R51	1	130k	CRCW0603130KJNEA	Vishay-Dale	RES, 130 k, 5%, 0.1 W, 0603	0603
R52, R61	2	1.0k	RC0603JR-071KL	Yageo America	RES, 1.0 k, 5%, 0.1 W, 0603	0603
R53	1	0	RMCF0603ZT0R00	Stackpole Electronics Inc	RES, 0, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R55, R68, R70	3	10k	RC1608J103CS	Samsung Electro-Mechanics	RES, 10 k, 5%, 0.1 W, 0603	0603
R56	1	200k	CRCW0603200KJNEA	Vishay-Dale	RES, 200 k, 5%, 0.1 W, 0603	0603
R57	1	16.9k	RC0603FR-0716K9L	Yageo America	RES, 16.9 k, 1%, 0.1 W, 0603	0603
R58	1	89.8k	RT0603DRE0789K8L	Yageo America	RES, 89.8 k, 0.5%, 0.1 W, 0603	0603
R59	1	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0, 5%, 0.1 W, 0603	0603
R62, R65	2	5.1Meg	CRCW12065M10JNEA	Vishay-Dale	RES, 5.1 M, 5%, 0.25 W, 1206	1206
R63	1	10.2k	CRCW060310K2FKEA	Vishay-Dale	RES, 10.2 k, 1%, 0.1 W, 0603	0603
R64	1	46.4k	CRCW060346K4FKEA	Vishay-Dale	RES, 46.4 k, 1%, 0.1 W, 0603	0603
R66	1	102k	CRCW0603102KFKEA	Vishay-Dale	RES, 102 k, 1%, 0.1 W, 0603	0603
R67	1	5.6Meg	CRCW12065M60JNEA	Vishay-Dale	RES, 5.6 M, 5%, 0.25 W, 1206	1206
RF1	1	47	MOF5WS-47R	SR PASSIVES	RES, 47, 10%, 5 W, Axial resistor	Axial resistor
RV1	1	275V	S10K275E2	TDK	Varistor 275V RMS 10MM Radial, TH	10mm Radial
T1	1	144uH	029H1-001	Qingdao Yunlu Energy Technology Co.LTD	Custom	
U1	1		UCC27517DBVR	Texas Instruments	4A/4A Single Channel High-speed Low-side Gate Driver, DBV0005A (SOT-23-5)	DBV0005A
U3	1		UCC28180DR	Texas Instruments	8-PIN CONTINUOUS CONDUCTION MODE (CCM) PFC CONTROLLER, D0008A (SOIC-8)	D0008A
U4	1		PTLV9101IDBVR	Texas Instruments	16V, Low-Power, RRO, General-Purpose Operational Amplifier, DBV0005A (SOT-23-5)	DBV0005A
U5	1		UCC24624D	Texas Instruments	High Performance Synchronous Rectifier Driver for LLC Resonant Converter, D0008A (SOIC-8)	D0008A
U6	1		INA180A4IDBV	Texas Instruments	Low- and High-Side Measurement, Multichannel, Voltage Output, Current-Sense Amplifier, DBV0005A (SOT-5)	DBV0005A
U7	1		UCC25640-3DDBR	Texas Instruments	LLC Resonant Controller Enabling Low Standby Power, DDB0014A (SOIC-14)	DDB0014A
U8	1		TLV9002IDDFR	Texas Instruments	TLV9002IDDFR, DDF0008A (SOT-23-THN-8)	DDF0008A
U9, U11	2		VO618A	Vishay-Semiconductor	Optocoupler, 5.3 kV, 50-600% CTR, TH	DIP, 4-Leads, Body 6.86x4.83mm, Pitch 2.54mm
U10	1		ATL431BQDBZR	Texas Instruments	2.5V Low Iq Adjustable Precision Shunt Regulator, DBZ0003A (SOT-23-3)	DBZ0003A