

Variant: 001  
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 TID #: TIDA-010038



TIDA-010038 REV E1 Bill of Materials

Item	Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
1	PCB	1		TIDA-010038	Any	Printed Circuit Board	
2	C2, C3, C11, C12, C59	5	10uF	GRM31CR61H106KA12L	MuRata	CAP, CERM, 10 uF, 50 V, +/- 10%, X5R, 1206	1206
3	C4, C10	2	820uF	UHW1V821MHD	Nichicon	CAP, AL, 820 uF, 35 V, +/- 20%, TH	10x25mm
4	C5, C6	2	150pF	GRM31A5C2J151JW01D	MuRata	CAP, CERM, 150 pF, 630 V, +/- 5%, COG/NP0, 1206	1206
5	C7, C37	2	2.2uF	GRM188Z71C225KE43	MuRata	CAP, CERM, 2.2 uF, 16 V, +/- 10%, X7R, 0603	0603
6	C8, C21	2	1uF	UMK107AB7105KA-T	Taiyo Yuden	CAP, CERM, 1 uF, 50 V, +/- 10%, X7R, 0603	0603
7	C13	1	0.022uF	B3267126223J189	TDK	CAP, Film, 0.022 uF, 630 V, +/- 10%, TH	13mmx4mm
8	C14	1	6800pF	GRM1882C1H682JA01	MuRata	CAP, CERM, 6800 pF, 50 V, +/- 5%, COG/NP0, 0603	0603
9	C15	1	120uF	35ZLQ120MEFC6.3X11	Rubycon	CAP, AL, 120 uF, 35 V, +/- 20%, TH	D6.3xL11mm
10	C16	1	1000pF	DE1E3KX102MA4BL01	MuRata	CAP, CERM, 2200 pF, 250 V, +/- 20%, E, Cap, 7x12x9 mm	7x12x9 mm
11	C17, C27, C61	3	0.1uF	GRM188R71H104KA93D	MuRata	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	0603
12	C18, C22, C54, C55	4	1uF	GCM188R71C105MA64D	MuRata	CAP, CERM, 1 uF, 16 V, +/- 20%, X7R, AEC-Q200 Grade 1, 0603	0603
13	C19	1	1uF	12063C105KAT2A	AVX	CAP, CERM, 1 uF, 25 V, +/- 10%, X7R, 1206	1206
14	C23, C24, C57	3	100pF	C1608COG1H101J080AE	TDK	CAP, CERM, 100 pF, 50 V, +/- 5%, COG/NP0, 0603	0603
15	C25	1	2.2uF	GRM188R6YA225KA12D	MuRata	CAP, CERM, 2.2 uF, 35 V, +/- 10%, X5R, 0603	0603
16	C26	1	330pF	C0603C331J5GACTU	Kemet	CAP, CERM, 330 pF, 50 V, +/- 5%, COG/NP0, 0603	0603
17	C28	1	4.7uF	GCM21BC71E475KE36L	MuRata	CAP, CERM, 4.7 uF, 25 V, +/- 10%, X7S, AEC-Q200 Grade 1, 0805	0805
18	C29	1	220pF	GRM188R71H221KA01D	MuRata	CAP, CERM, 220 pF, 50 V, +/- 10%, X7R, 0603	0603
19	C31, C34	2	0.01uF	GRM188R71H103KA01D	MuRata	CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, 0603	0603
20	C32	1	0.047uF	GRM188R71E473KA01D	MuRata	CAP, CERM, 0.047 uF, 25 V, +/- 10%, X7R, 0603	0603
21	C33	1	2.7pF	06035A2R2CAT2A	AVX	CAP, CERM, 2.7 pF, 50 V, +/- 11%, COG/NP0, 0603	0603
22	C36	1	4700pF	06031C472KAT2A	AVX	CAP, CERM, 4700 pF, 100 V, +/- 10%, X7R, 0603	0603
23	C40, C41	2	0.47uF	890324024005	Würth Elektronik	CAP, Film, 0.47 uF, 275 V, +/- 10%, TH	15x10mm
24	C44	1	0.47uF	B32672P4474K000	TDK	CAP, Film, 0.47 uF, 450 V, +/- 10%, TH	5x10.5x18mm
25	C45	1	150uF	450U5150MEFCNS25x25	Rubycon	CAP, AL, 150 uF, 450 V, +/- 20%, TH	D25xL25mm
26	C46	1	10pF	VJ0805A100JXGAT5Z	AVX	CAP, CERM, 10 pF, 100 V, +/- 5%, COG/NP0, 0805	0805
27	C47, C48, C49, C50	4	0.1uF	C1210V104KCRACTU	Kemet	CAP, CERM, 0.1 uF, 500 V, +/- 10%, X7R,	1210
28	C51	1	3900pF	GRM188R72A392KA01D	MuRata	CAP, CERM, 3900 pF, 100 V, +/- 10%, X7R, 0603	0603
29	C52	1	100pF	C1608COG2A101F080AA	TDK	CAP, CERM, 100 pF, 100 V, +/- 1%, COG/NP0, 0603	0603
30	C53	1	0.47uF	GRM188R71E474KA12D	MuRata	CAP, CERM, 0.47 uF, 25 V, +/- 10%, X7R, 0603	0603
31	C56	1	0.033uF	GRM188R71C333KA01D	MuRata	CAP, CERM, 0.033 uF, 16 V, +/- 10%, X7R, 0603	0603
32	C58	1	1000pF	GRM188R61H102KA01D	MuRata	CAP, CERM, 1000 pF, 50 V, +/- 10%, X5R, 0603	0603
33	C60	1	2200pF	GRM188R71E222KA01D	MuRata	CAP, CERM, 2200 pF, 25 V, +/- 10%, X7R, 0603	0603
34	D1, D3, D9, D15	4		1N4148W-7-F	Diodes Inc.	Diode, Schottky, 70 V, 0.015 A, SOD-123	SOD-123
35	D2	1		PMEG10010ELRX	Nexperia	Diode, Schottky, 100 V, 2 A, AEC-Q101, SOD-123W	SOD-123W
36	D4	1		ES1JTR	SMC Diode Solutions	Diode, Superfast Rectifier, 600 V, 1 A, SMA	SMA
37	D5, D20	2		MMSZ5234B-7-F	Diodes Inc.	Diode, Zener, 6.2 V, 500 mW, SOD-123	SOD-123
38	D6	1		BAT43W	Diodes Inc.	Diode, Schottky, 30 V, 0.2 A, SOD-123	SOD-123
39	D7	1		BAW56-V-GS08	Vishay-Semiconductor	Diode, Switching, 70 V, 0.25 A, SOT-23	SOT-23
40	D8	1		MMSZ5251B-7-F	Diodes Inc.	Diode, Zener, 22 V, 500 mW, SOD-123	SOD-123
41	D10	1		S3JB-13-F	Diodes Inc.	Diode, Ultrafast, 600 V, 1 A, SMB	SMB
42	D11	1		GBU6J	Fairchild Semiconductor	Diode, Switching-Bridge, 600 V, 6 A, TH	GBU
43	D12	1		STTH506B-TR	STMicroelectronics	Diode, Ultrafast, 600 V, 5 A, DPAK	DPAK
44	D13, D14, D16, D17	4		MURA160T3G	ON Semiconductor	Diode, Ultrafast, 600 V, 1 A, AEC-Q101, SMA	SMA
45	D18	1		MMSZ4690T1G	ON Semiconductor	Diode, Zener, 5.6 V, 500 mW, SOD-123	SOD-123
46	F1	1		39215000000	Littelfuse	Fuse, 5 A, 250VAC/VDC, TH	8x8.5x4mm
47	L1	1	300uH	7447060	Würth Elektronik	WE-FI Leaded Toroidal Line Choke, L = 300uH	
48	L2	1	200uH	750316570	Würth Elektronik	Inductor, 200 uH, 0.235 ohm, TH	
49	L3	1	10mH	744823210	Würth Elektronik	Coupled inductor, 10 mH, 2 A, 0.125 ohm, TH	
50	L4	1	1mH	744821201	Würth Elektronik	Coupled inductor, 1 mH, 2 A, 0.045 ohm, TH	
51	NTC1	1	1.02k	CRCW06031K02FKEA	Vishay-Dale	RES, 1.02 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
52	Q1, Q4	2		CSD19533Q5A	Texas Instruments	MOSFET, N-CH, 100 V, 13 A, DQJ0008A (VSONP-8)	DQJ0008A
53	Q2, Q3	2		TK290P65Y.RQ	Toshiba	MOSFET, N-CH, 650 V, 11.5 A, DPAK	DPAK
54	Q5, Q7	2		BC 846PN H6327	Infineon Technologies	Transistor, NPN/PNP Pair, 65 V, 0.1 A, SOT-363	SOT-363
55	Q6	1		TK16G60W.RVQ	Toshiba	MOSFET, N-CH, 600 V, 15.8 A, DPAK	DDPAK
56	Q8	1	600V	TK290P60Y.RQ	Toshiba	MOSFET, N-CH, 600 V, 11.5 A, DPAK	DPAK
57	Q9	1	60V	2N7002-7-F	Diodes Inc.	MOSFET, N-CH, 60 V, 0.17 A, SOT-23	SOT-23
58	R1, R4, R8	3	5.10Meg	KTR18EZPF5104	Rohm	RES, 5.10 M, 1%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
59	R9, R23, R26	3	2.00	CRCW06032R00FKEA	Vishay-Dale	RES, 2.00, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
60	R3, R15, R49	3	5.60	RC0805FR-075R6L	Yageo America	RES, 5.60, 1%, 0.125 W, 0805	0805
61	R5, R20, R51	3	1.00	RC0805FR-071R1L	Yageo America	RES, 1.00, 1%, 0.125 W, 0805	0805
62	R6, R18, R21, R29, R36, R44, R81	7	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
63	R7	1	910	RC0603FR-07910RL	Yageo	RES, 910, 1%, 0.1 W, 0603	0603
64	R10, R11, R35	3	0	RMCF0603ZT0R00	Stackpole Electronics Inc	RES, 0, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
65	R12	1	270k	CRCW0603270KJNEA	Vishay-Dale	RES, 270 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
66	R13	1	300k	CRCW0603300KJNEA	Vishay-Dale	RES, 300 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
67	R17	1	100	CRCW0603100RFKEA	Vishay-Dale	RES, 100, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603

68	R19, R22	2	0.008	ERI-M1WTF8M0U	Panasonic	RES, 0.008, 1%, 1 W, 2512	2512
69	R24	1	510	RC0603FR-07510RL	Yageo	RES, 510, 1%, 0.1 W, 0603	0603
70	R25	1	1.50k	CRCW06031K50FKEA	Vishay-Dale	RES, 1.50 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
71	R27	1	6.2k	CRCW06036K20JNEA	Vishay-Dale	RES, 6.2 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
72	R28	1	2.7k	CRCW06032K70JNEA	Vishay-Dale	RES, 2.7 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
73	R30, R67, R76	3	1.00k	CRCW06031K00FKEA	Vishay-Dale	RES, 1.00 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
74	R32	1	8.2k	CRCW06038K20JNEA	Vishay-Dale	RES, 8.2 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
75	R33, R34	2	10.2	CRCW060310R2FKEA	Vishay-Dale	RES, 10.2, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
76	R37	1	2.0k	CRCW06032K00JNEA	Vishay-Dale	RES, 2.0 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
77	R38	1	402k	CRCW0603402KFKEA	Vishay-Dale	RES, 402 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
78	R39	1	24.0k	RC0603FR-0724KL	Yageo	RES, 24.0 k, 1%, 0.1 W, 0603	0603
79	R40	1	56.2k	CRCW060356K2FKEA	Vishay-Dale	RES, 56.2 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
80	R41, R78	2	5.11k	CRCW06035K11FKEA	Vishay-Dale	RES, 5.11 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
81	R42	1	5k	PV37W502C01B00	Bourns	Trimmer Potentiometer, Lead Sealed Type Multiturn PV37 Series, TH	6.71x4.5mm
82	R43	1	3.65k	CRCW06033K65FKEA	Vishay-Dale	RES, 3.65 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
83	R45, R46, R47, R48, R50, R53	6	3.3Meg	CRCW12063M30JNEA	Vishay-Dale	RES, 3.3 M, 5%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
84	R52	1	24.3k	RC0603FR-0724K3L	Yageo	RES, 24.3 k, 1%, 0.1 W, 0603	0603
85	R54, R60, R65	3	1.62k	RC1206FR-071K62L	Yageo America	RES, 1.62 k, 1%, 0.25 W, 1206	1206
86	R55	1	2.00k	RC0603FR-072KL	Yageo	RES, 2.00 k, 1%, 0.1 W, 0603	0603
87	R56, R57	2	0.12	CSR1206FTR120	Stackpole Electronics Inc	RES, 0.12, 1%, 0.5 W, 1206	1206
88	R58, R59, R63, R64, R80	5	100k	CRCW0603100KFKEA	Vishay-Dale	RES, 100 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
89	R61, R70	2	0	CRCW12060000Z0EA	Vishay-Dale	RES, 0, 5%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
90	R62, R66, R68	3	3.0Meg	CRCW12063M00JNEA	Vishay-Dale	RES, 3.0 M, 5%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
91	R69, R73	2	130k	CRCW0603130KFKEA	Vishay-Dale	RES, 130 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
92		1	2.05	RC1206FR-072R05L	Yageo America	RES, 2.05, 1%, 0.25 W, 1206	1206
93	R71	1	82.0k	ERJ3EKF8202V	Panasonic	RES, 82.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
94	R72	1	182k	CRCW0603182KFKEA	Vishay-Dale	RES, 182 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
95	R74	1	120k	CRCW0603120KJNEA	Vishay-Dale	RES, 120 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
96	R75, R77, R79	3	51.1k	CRCW060351K1FKEA	Vishay-Dale	RES, 51.1 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
97	RT1	1	10	B57236S0100M000	TDK	Thermistor NTC, 10 ohm, 20%, Disc_11.5mmx6mm	Disc_11.5mmx6mm
98	RV1	1	275V	S10K275E2	TDK	Varistor 275V RMS 10MM Radial, TH	10mm Radial
99	T1	1	408uH	750344060	Würth Elektronik	WE-LLC Resonant Converter, size ER28, 408uH, 34:4:3, 150W	
100	U1	1		PUCC24624D	Texas Instruments	High frequency Dual Synchronous Rectifier Controller for LLC Converter	D0008A_N
101	U2	1		LM317LCPK	Texas Instruments	3-Terminal Adjustable Regulator, PK0003A (SOT-3)	PK0003A
102	U3	1		UCC25630-1DDBR	Texas Instruments	Enhanced LLC Resonant Controller with Driver, DDB0014A (SOIC-14)	DDB0014A
103	U4	1		INA180A3IDBV	Texas Instruments	Low- and High-Side Measurement, Multichannel, Voltage Output, Current-Sense Amplifier, DBV0005A (SOT-5)	DBV0005A
104	U5	1		VO618A	Vishay-Semiconductor	Optocoupler, 5.3 kV, 50-600% CTR, TH	DIP, 4-Leads, Body 6.86x4.83mm, Pitch 2.54mm
105	U6	1		TL103WAID	Texas Instruments	Dual Operational Amplifier with Internal Reference, 3 to 32 V, -40 to 105 degC, 8-pin SOIC (D8), Green (RoHS & no Sb/Br)	D0008A
106	U7	1		UCC28056DBV	Texas Instruments	6-Pin Single-Phase Transition-Mode PFC Controller, DBV0006A (SOT-23-6)	DBV0006A
107	U8	1		LM258D	Texas Instruments	Dual Operational Amplifier, D0008A (SOIC-8)	D0008A

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