

## TIDA-00707 REV E1 Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
!PCB	1		TIDA-00707	Any	Printed Circuit Board	
BR1	1	GBJ1508	GBJ1508-BP	Micro Commercial Co	Diode, Bridge Rectifier, GPP 15A 800V GBJ	1.190 x 0.190 inch
C1, C2	2	0.68uF	B32923C3684M	EPCOS Inc	CAP, Film, 0.68 $\mu$ F, 630 V, +/- 20%, TH	B32923_16.5mm_10.5
C3	1	1uF	450MPK105J	Rubycon	CAP, Film, 1 $\mu$ F, 450 V, +/- 5%, TH	18x9.5mm
C4, C5	2	220 uF	450MXK220MEFCSN22X40	RUBYCON	CAP ALUM 220UF 20% 450V SNAP, TH	
C6, C13	2	4.7uF	CC0603KRX5R7BB475	Yageo	CAP, CERM, 4.7 $\mu$ F, 16 V, +/- 10%, X5R, 0603	0603
C7, C8, C9, C10	4	2200pF	DE2E3KY222MA2BM01	MuRata	CAP, CERM, 2200pF, 250V, +/-20%, KY, Radial D8x5mm	Radial D8x5mm
C11, C14, C18, C28, C32	5	0.1uF	C0603C104K4RACTU	Kemet	CAP, CERM, 0.1 $\mu$ F, 16 V, +/- 10%, X7R, 0603	0603
C12	1	10uF	C0805C106K8PACTU	Kemet	CAP, CERM, 10 $\mu$ F, 10 V, +/- 10%, X5R, 0805	0805
C15, C16, C36, C37	4	1000pF	C0603C102K5RACTU	Kemet	CAP, CERM, 1000 pF, 50 V, +/- 10%, X7R, 0603	0603
C17, C27	2	1uF	C0603C105K4PACTU	Kemet	CAP, CERM, 1 $\mu$ F, 16 V, +/- 10%, X5R, 0603	0603
C19, C20	2	270pF	GRM1885C1H271JA01D	MuRata	CAP, CERM, 270 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C22, C34, C35	3	0.1uF	GRM188R72A104KA35J	MuRata	CAP, CERM, 0.1 $\mu$ F, 100 V, +/- 10%, X7R, 0603	0603
C23, C26	2	0.1uF	C0603C104K5RACTU	Kemet	CAP, CERM, 0.1 $\mu$ F, 50 V, +/- 10%, X7R, 0603	0603
C24, C25	2	1uF	C1608X7R1E105K080AB	TDK	CAP, CERM, 1 $\mu$ F, 25 V, +/- 10%, X7R, 0603	0603
C29, C30, C31	3	33pF	06035A330JAT2A	AVX	CAP, CERM, 33 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C33	1	0.027uF	C0603C273K1RACTU	Kemet	CAP, CERM, 0.027 $\mu$ F, 100 V, +/- 10%, X7R, 0603	0603
D1	1	600V	C3D04060A	Cree	Diode, Schottky, 600 V, 4 A, TH	TO-220-F2
D2	1	600V	S3J	Fairchild Semiconductor	DIODE GEN PURP 600V 3A SMC	SMC (DO-214AB)
D3	1	100V	MMDL914-TP	Micro Commercial Component	Diode, Switching, 100 V, 0.2 A, SOD-323	SOD-323
D5	1	40V	BAT54AFILM	ST Microelectronics	Diode, Schottky, 40V, 0.3A, SOT-23	SOT-23
D6, D7, D8, D10, D11	5	30V	BAT54S-7-F	Diodes Inc.	Diode, Schottky, 30 V, 0.2 A, SOT-23	SOT-23
D9	1	30V	BAT54C-7-F	Diodes Inc.	Diode, Schottky, 30 V, 0.2 A, SOT-23	SOT-23
D13	1	100V	1N4148W-7-F	Diodes Inc.	Diode, Ultrafast, 100V, 0.15A, SOD-123	SOD-123
D17	1	30V	BAT42WS-7-F	Diodes Inc.	DIODE SCHOTTKY 30V 200MA SOD323	SOD-323
F1	1	15A	0217015.MXEP	Littelfuse	Fuse, 15A, 250Vac, Through-Hole	Radial, TH
FID1, FID2, FID3	3		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	Fiducial
H1, H2, H3, H4, H5	5		SJ-5303 (CLEAR)	3M	Bumpon, Hemisphere, 0.44 X 0.20, Clear	Transparent Bumpon
H7, H8, H9	3		NY PMS 440 0050 PH	B&F Fastener Supply	MACHINE SCREW PAN PHILLIPS 4-40, length 12.7mm	
H10, H11, H12	3		3200	Keystone	Washer, Flat, #4 Nylon	
HS1	1		HJ97207	Wuxi-Hejiu Technology	HEATSINK VERT MAX CLIP, BLACK, 97x20x45mm (for customization details, refer to TIDA-00707_heatsink_customization.pdf)	
J1	1		ED120/3DS	On-Shore Technology	TERMINAL BLOCK 5.08MM VERT 3POS, TH	TERM_BLK, 3pos, 5.08mm
J3	1		PEC02SAAN	Sullins Connector Solutions	Header, 100mil, 2x1, Tin, TH	Header, 2 PIN, 100mil, Tin
J6	1		GBC05SBSN-M89	Sullins Connector Solutions	Header, 100mil, 5x1, Gold, R/A, SMT	5x1 Header

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J7	1		850-10-004-40-001000	Mill-Max	Header, 50mil, 4x1, Gold, R/A, SMT	Header, 50mil, R/A, SMT
K1	1		G5LE-1A4 DC12	Omron Electronic Components	Relay, SPDT (1 Form C), 5A, 5 VDC, TH	TH, 4-Leads, Body 19.6x15.6mm
L1	1	327uH	750343145	Würth	Inductor, Toroid, 327uH, 6A rms, 9.5A peak, TH	Inductor, 16.5x30x31.5
L2	1	5mH	744825605	Würth Elektronik	Coupled inductor, 5 mH, 6 A, 2X0.045 ohm, TH	21x30x40mm
L3	1	1.25-2.3mH	750343135	Würth Elektronik	Coupled inductor, 1.25-2.3mH, 6 A.	14x9x19mm
M1, M2	2		43-77-9G	Aavid Thermalloy	THERMALFILM THERMAL PAD TO-220	
PGND	1	Black	5001	Keystone	Test Point, Miniature, Black, TH	Black Miniature Testpoint
Q1	1	600 V	IPP60R190P6	Infineon Technologies	MOSFET, N-CH, 600 V, 20.2 A, TO-220	
Q2	1	60V	2N7002-7-F	Diodes Inc.	MOSFET, N-CH, 60V, 0.17A, SOT-23	SOT-23
Q3	1	60V	2N7002-7-F	Diodes Inc.	MOSFET, N-CH, 60 V, 0.17 A, SOT-23	SOT-23
R1	1	0.04	CRA2512-FZ-R040ELF	Bourns	RES, 0.04, 1%, 3 W, 2512	2512
R2	1	0.01	CRA2512-FZ-R010ELF	Bourns	RES, 0.01, 1%, 3 W, 2512	2512
R3	1	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0 k, 1%, 0.1 W, 0603	0603
R4	1	2.21	CRCW06032R21FKEA	Vishay-Dale	RES, 2.21, 1%, 0.1 W, 0603	0603
R5	1	3.01	CRCW06033R01FKEA	Vishay-Dale	RES, 3.01, 1%, 0.1 W, 0603	0603
R6, R47, R49	3	100	CRCW0603100RFKEA	Vishay-Dale	RES, 100, 1%, 0.1 W, 0603	0603
R7	1	1.10k	CRCW06031K10FKEA	Vishay-Dale	RES, 1.10 k, 1%, 0.1 W, 0603	0603
R8, R9, R10, R12, R13, R14, R16, R17, R18, R20, R21, R22	12	200k	CRCW1206200KFKEA	Vishay-Dale	RES, 200 k, 1%, 0.25 W, 1206	1206
R11, R15	2	3.48k	CRCW08053K48FKEA	Vishay-Dale	RES, 3.48 k, 1%, 0.125 W, 0805	0805
R19, R23	2	3.16k	CRCW08053K16FKEA	Vishay-Dale	RES, 3.16 k, 1%, 0.125 W, 0805	0805
R24, R25	2	2.00k	CRCW06032K00FKEA	Vishay-Dale	RES, 2.00 k, 1%, 0.1 W, 0603	0603
R26, R27	2	42.2k	CRCW060342K2FKEA	Vishay-Dale	RES, 42.2 k, 1%, 0.1 W, 0603	0603
R29, R30, R35	3	1.00k	CRCW06031K00FKEA	Vishay-Dale	RES, 1.00 k, 1%, 0.1 W, 0603	0603
R31	1	1.62k	CRCW06031K62FKEA	Vishay-Dale	RES, 1.62 k, 1%, 0.1 W, 0603	0603
R32	1	1.00	CRCW08051R00FKEA	Vishay-Dale	RES, 1.00, 1%, 0.125 W, 0805	0805
R33	1	4.75k	CRCW06034K75FKEA	Vishay-Dale	RES, 4.75 k, 1%, 0.1 W, 0603	0603
R34, R39, R42, R43, R46	5	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0, 5%, 0.1 W, 0603	0603
R36	1	47.5k	CRCW060347K5FKEA	Vishay-Dale	RES, 47.5 k, 1%, 0.1 W, 0603	0603
R37	1	100	CRCW1206100RFKEA	Vishay-Dale	RES, 100, 1%, 0.25 W, 1206	1206
R38	1	10k	CRCW060310K0JNEA	Vishay-Dale	RES, 10 k, 5%, 0.1 W, 0603	0603
R40	1	0.5	RL0603FR-070R5L	Yageo America	RES, 0.5, 1%, 0.1 W, 0603	0603
R44, R45	2	1.50k	CRCW06031K50FKEA	Vishay-Dale	RES, 1.50 k, 1%, 0.1 W, 0603	0603
R48	1	1.65k	CRCW06031K65FKEA	Vishay-Dale	RES, 1.65 k, 1%, 0.1 W, 0603	0603
R50	1	5.11k	CRCW06035K11FKEA	Vishay-Dale	RES, 5.11 k, 1%, 0.1 W, 0603	0603
RCL1	1	50 Ohm PTC	B59751B0120A070	Littelfuse	Polyfuse, Resettable PTC	Radial, 12.5 x 16.5mm
RV1	1	275V	S10K275E2	EPCOS Inc	Varistor 275V RMS 10MM Radial, TH	10mm Radial
U1	1		TLV70433DBVT	Texas Instruments	Single Output LDO, 150 mA, Fixed 3.3 V Output, 2.5 to 24 V Input, with Ultra-Low IQ, 5-pin SOT-23 (DBV), -40 to 125 degC, Green (RoHS & no Sb/Br)	DBV0005A
U2	1	UCC27517A DBV	UCC27517ADBVT	TI	IC, 4A Single Channel High-Speed Low-Side Gate Drivers	SOT23-5

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U3	1		OPA2376AIDGKR	Texas Instruments	Precision, Low Noise, Low Quiescent Current Operational Amplifier, 2 to 5.5 V, -40 to 125 degC, 8-pin SOP (DGK0008A), Green (RoHS & no Sb/Br)	DGK0008A
U4	1		PC357N4J000F	Sharp Microelectronics	Optocoupler, 3.75 kV, 300-600% CTR, SMT	4.4x2.6x3.6mm
U5	1		ISO7321CD	Texas Instruments	25 Mbps Dual Channels, 1 / 1, Digital Isolator, 3.3 V / 5 V, -40 to +125 degC, 8-pin SOIC (D), Green (RoHS & no Sb/Br)	D0008A
U6	1		UCD3138ARMHT	Texas Instruments	Highly Integrated Digital Controller for Isolated Power, RMH0040A	RMH0040A
VDC	1	Red	5000	Keystone	Test Point, Miniature, Red, TH	Red Miniature Testpoint
TIDA-00708 Board	1		<a href="#">TIDA-00708 Board</a>		<a href="#">This is a 5 W power supply, details can be found on TI website</a>	
C21	0	330pF	GRM31A7U3A331JW31D	MuRata	CAP, CERM, 330 pF, 1000 V, +/- 5%, U2J, 1206	1206
J2	0		PBC06SGBN	SULLINS	CONNECTOR, HEADER, 2.54MM PITCH, 6 POS, RIGHT ANGLE, TH, ROHS	
J4	0		PBC02SGBN	SULLINS	CONNECTOR, HEADER, 2.54MM PITCH, 2 POS, RIGHT ANGLE, TH, ROHS	
R28	0	100	541-100RACT-ND	Vishay-Dale	RES, 100, 1%, 1 W, 2512	2512

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