

TIDA-01353 REV E1 Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
I PCB1	1		TIDA-01353	Any	Printed Circuit Board	
C1, C2, C8, C11, C12	5	1uF	08055C105KAT2A	AVX	CAP, CERM, 1 µF, 50 V, +/- 10%, X7R, 0805	0805
C3, C10	2	1000pF	VY2102M29Y5UG63V7	Vishay-Bccomponents	CAP, CERM, 1000 pF, 300 V, +/- 20%, Y5U, Radial Disc 7.5mm, Is=7.5	Radial Disc 7.5mm, Is=7.5
C4, C9	2	3300pF	DE1E3KX332MN4AP01F	MuRata	CAP, CERM, 3300 pF, 300 V, +/- 20%, E, D10xT7mm	D10xT7mm
C5, C6	2	0.33uF	BFC233840334	Vishay-Bccomponents	CAP, Film, 0.33 µF, 630 V, +/- 20%, TH	17.5x16.5x10mm
C7	1	1000uF	381LR102M200K032	Cornell Dubilier Electronics	CAP, AL, 1000 µF, 200 V, +/- 20%, 0.149 ohm, TH	D30xL35mm
C13	1	0.1uF	C0603C104K5RACTU	Kemet	CAP, CERM, 0.1 µF, 50 V, +/- 10%, X7R, 0603	0603
C14	1	0.1uF	GRM155R61A104KA01D	MuRata	CAP, CERM, 0.1 µF, 10 V, +/- 10%, X5R, 0402	0402
C15	1	100uF	EEE-FK1V101XP	Panasonic	CAP, AL, 100 µF, 35 V, +/- 20%, 0.34 ohm, AEC-Q200 Grade 2, SMD	SMT Radial D8
C16	1	0.01uF	C0805C103K5RACTU	Kemet	CAP, CERM, 0.01 µF, 50 V, +/- 10%, X7R, 0805	0805
C17	1	10uF	UCY2G100MPD1TD	Nichicon	CAP, AL, 10 µF, 400 V, +/- 20%, ohm, TH	D10xL16
C18	1	1uF	GRM188R61E105KA12D	MuRata	CAP, CERM, 1 µF, 25 V, +/- 10%, X5R, 0603	0603
C19	1	4.7uF	GRM188R60J475KE19D	MuRata	CAP, CERM, 4.7 µF, 6.3 V, +/- 10%, X5R, 0603	0603
C24	1	2200pF	C0603C222K5RAC	Kemet	CAP, CERM, 2200 pF, 50 V, +/- 10%, X7R, 0603	0603
C25, C52, C53, C54, C55, C64, C65	7	220pF	06035A221FAT2A	AVX	CAP, CERM, 220 pF, 50 V, +/- 1%, C0G/NP0, 0603	0603
C26	1	0.47uF	C0805C474K4RACTU	Kemet	CAP, CERM, 0.47 µF, 16 V, +/- 10%, X7R, 0805	0805
C27, C29, C32	3	10uF	0805YD106MAT2A	AVX	CAP, CERM, 10uF, 16V, +/-20%, X5R, 0805	0805
C28, C30, C31, C35, C36	5	0.1uF	0603YC104JAT2A	AVX	CAP, CERM, 0.1 µF, 16 V, +/- 5%, X7R, 0603	0603
C37, C41, C42, C43	4	10pF	06035A100JAT2A	AVX	CAP, CERM, 10 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C38	1	0.1uF	0603YC104JAT2A	AVX	CAP, CERM, 0.1uF, 16V, +/-5%, X7R, 0603	0603
C39, C45, C67	3	1000pF	GRM188R61H102KA01D	MuRata	CAP, CERM, 1000 pF, 50 V, +/- 10%, X5R, 0603	0603
C44	1	33pF	06035A330JAT2A	AVX	CAP, CERM, 33 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C46, C47, C58	3	0.1uF	06033C104JAT2A	AVX	CAP, CERM, 0.1 µF, 25 V, +/- 5%, X7R, 0603	0603
C48, C49, C59	3	0.1uF	GRM21BR71E104KA01L	MuRata	CAP, CERM, 0.1 µF, 25 V, +/- 10%, X7R, 0805	0805
C50, C51, C56, C57, C60, C66	6	1uF	GRM21BR71E105KA99L	MuRata	CAP, CERM, 1 µF, 25 V, +/- 10%, X7R, 0805	0805
C61, C62, C63	3	0.1uF	VJ1808Y104KXPAT5Z	Vishay-Vitramon	CAP, CERM, 0.1 µF, 250 V, +/- 10%, X7R, 1808	1808
D1, D2, D3, D5, D6	5	40V	SBRT3U40P1-7	Diodes Inc.	Diode, Super Barrier Rectifier, 40 V, 3 A, AEC-Q101, PowerDI123	PowerDI123
D4	1	200V	GBJ3502-BP	Micro Commercial Component	Diode, P-N-Bridge, 200 V, 35 A, TH	Diode Bridge, TH
D7, D8	2	400V	MURS140-13-F	Diodes Inc.	Diode, Ultrafast, 400 V, 1 A, SMB	SMB
D13	1	Red	150060RS75000	Würth Elektronik	LED, Red, SMD	LED_0603
D14	1	Blue	150060BS75000	Würth Elektronik	LED, Blue, SMD	LED_0603
D15	1	Green	150060VS75000	Würth Elektronik	LED, Green, SMD	LED_0603
D16, D17, D18, D19	4	30V	CDBP0130L-G	Comchip Technology	Diode, Schottky, 30 V, 0.1 A, SOD-723	SOD-723
D20, D21, D26	3	1000V	US1M-13-F	Diodes Inc.	Diode, Ultrafast, 1000 V, 1 A, SMA	SMA
D22, D23, D24, D25, D27, D28	6	40V	SDM20U40-7-F	Diodes Inc.	Diode, Schottky, 40 V, 0.25 A, SOD-523	SOD-523
F1	1		0217015.MXEP	Littelfuse	Fuse, 15 A, 250 VDC, TH	D5.5xL21.5mm
H1, H2, H3, H4	4		NY PMS 440 0025 PH	B&F Fastener Supply	Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	Screw
H5, H6, H7, H8	4		1902C	Keystone	Standoff, Hex, 0.5"L #4-40 Nylon	Standoff

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
J1, J3	2		ED120/5DS	On-Shore Technology	Terminal Block, 5.08 mm, 5x1, Brass, TH	TH, 5-Leads, Body 25.4x9mm, Pitch 5.08mm
J2	1		SBH11-PBPC-D07-ST-BK	Sullins Connector Solutions	Header (shrouded), 100 mil, 7x2, Gold, TH	7x2 Shrouded Header
J4, J5, J12, J13, J15	5		HTSW-102-09-G-S	Samtec	Header, 100mil, 2x1, Gold, TH	Header, 2x1, 2.54mm, TH
J16	1		ED120/3DS	On-Shore Technology	Terminal Block, 5.08 mm, 3x1, Brass, TH	3x1 5.08 mm Terminal Block
L1	1	10uH	XAL1010-103MEB	Coilcraft	Inductor, Shielded, Composite, 10 µH, 15.5 A, 0.01 ohm, SMD	Inductor, 11.3x10x10mm
L2	1	2.5mH	8114-RC	Bourns	Coupled inductor, 2.5 mH, 12.5 A, 0.011 ohm, TH	1450x1500x800 mil
L3	1	1.8mH	MSS1210-185KE	Coilcraft	Inductor, Shielded, Ferrite, 1.8 mH, 0.79 A, 1.54 ohm, SMD	Inductor, 12.3x10x12.3mm
LBL1	1		THT-14-423-10	Brady	Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 10,000 per roll	PCB Label 0.650"H x 0.200"W
Q2, Q3, Q4, Q5, Q6, Q7	6	200V	IRFU13N20DPBF	International Rectifier	MOSFET, N-CH, 200 V, 13 A, IPAK	IPAK
R1, R3, R6, R9, R11, R30, R31	7	47k	CRCW060347K0JNEA	Vishay-Dale	RES, 47k ohm, 5%, 0.1W, 0603	0603
R2, R4, R7, R10, R12	5	8.25k	CRCW25128K25FKEG	Vishay-Dale	RES, 8.25 k, 1%, 1 W, AEC-Q200 Grade 0, 2512	2512
R5, R8	2	499k	CRCW2010499KFKEF	Vishay-Dale	RES, 499 k, 1%, 0.75 W, AEC-Q200 Grade 0, 2010	2010
R13	1	143k	CRCW0402143KFKEF	Vishay-Dale	RES, 143 k, 1%, 0.063 W, 0402	0402
R14	1	10.2k	CRCW040210K2FKED	Vishay-Dale	RES, 10.2 k, 1%, 0.063 W, 0402	0402
R15	1	15.0k	CRCW040215K0FKED	Vishay-Dale	RES, 15.0 k, 1%, 0.063 W, 0402	0402
R26	1	5.11k	CRCW06035K11FKEA	Vishay-Dale	RES, 5.11 k, 1%, 0.1 W, 0603	0603
R27	1	2.55k	CRCW06032K55FKEA	Vishay-Dale	RES, 2.55 k, 1%, 0.1 W, 0603	0603
R29	1	20.0	CRCW060320R0FKEA	Vishay-Dale	RES, 20.0, 1%, 0.1 W, 0603	0603
R32, R44, R55, R87, R88	5	100	CRCW0603100RFKEA	Vishay-Dale	RES, 100, 1%, 0.1 W, 0603	0603
R34	1	8.87k	RC0603FR-078K87L	Yageo America	RES, 8.87 k, 1%, 0.1 W, 0603	0603
R35, R36, R37, R41, R42, R43, R47, R48, R49	9	68.1k	CRCW120668K1FKEA	Vishay-Dale	RES, 68.1 k, 1%, 0.25 W, 1206	1206
R38, R40, R46	3	226k	RC1206FR-07226KL	Yageo America	RES, 226 k, 1%, 0.25 W, 1206	1206
R39	1	3.28k	RT0603BRD073K28L	Yageo America	RES, 3.28 k, 0.1%, 0.1 W, 0603	0603
R45	1	15.0k	CRCW060315K0FKEA	Vishay-Dale	RES, 15.0 k, 1%, 0.1 W, 0603	0603
R50	1	10.0k	RG1608P-103-B-T5	Susumu Co Ltd	RES, 10.0 k, 0.1%, 0.1 W, 0603	0603
R51, R52, R53	3	3.6k	CRCW06033K60JNEA	Vishay-Dale	RES, 3.6 k, 5%, 0.1 W, 0603	0603
R54	1	12.0k	RC0603FR-0712KL	Yageo America	RES, 12.0 k, 1%, 0.1 W, 0603	0603
R56, R57, R76	3	3.3	CRCW06033R30JNEA	Vishay-Dale	RES, 3.3, 5%, 0.1 W, 0603	0603
R58, R59, R64, R65, R70, R71, R77, R80, R83	9	5.11	RC0603FR-075R11L	Yageo America	RES, 5.11, 1%, 0.1 W, 0603	0603
R60, R61, R72, R73, R78, R84	6	10.0	CRCW060310R0FKEAHP	Vishay-Dale	RES, 10.0, 1%, 0.25 W, 0603	0603
R62, R63, R68, R69, R79, R82	6	51.1	CRCW060351R1FKEA	Vishay-Dale	RES, 51.1, 1%, 0.1 W, 0603	0603
R66, R67, R74, R75, R81, R85	6	20.0k	CRCW060320K0FKEA	Vishay-Dale	RES, 20.0 k, 1%, 0.1 W, 0603	0603
R86	1	0.1	PWR220T-20-R100F	Bourns	RES, 0.1, 1%, 20 W, TO-220AC	TO-220AC
RT1	1	2.2 ohm	B57237S229M	TDK	Thermistor NTC, 2.2 ohm, 20%, 15x7mm	15x7mm
RV1	1	275V	S10K275E2	TDK	Varistor 275V RMS 10MM Radial, TH	10mm Radial
S1	1		4-1437565-1	TE Connectivity	Switch, Tactile, SPST-NO, 0.05A, 12V, SMT	SW, SPST 6x6 mm

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
SH-J4, SH-J5, SH-J12, SH-J13, SH-J15	5	1x2	969102-0000-DA	3M	Shunt, 100mil, Gold plated, Black	Shunt
U1, U2, U3, U4, U5	5		LTV-817S	Lite-On	Optocoupler, 5 kV, 50-600% CTR, SMT	DIP-4 SMT
U6	1		LP2985-33DBVR	Texas Instruments	100-mA ULTRA-LOW DROPOUT REGULATOR WITH SHUTDOWN, DBV0005A (SOT-5)	DBV0005A
U7	1		UCC28881DR	Texas Instruments	700-V Lowest Quiescent Current Off-Line Switcher, D0007A (SOIC-7)	D0007A
U8	1		MSP430F5132IDA	Texas Instruments	25 MHz Mixed Signal Microcontroller with 8 KB Flash, 1024 B SRAM and 29 GPIOs, -40 to 85 degC, 38-pin SOP (DA), Green (RoHS & no Sb/Br)	DA0038A
U9, U15, U16, U17, U18, U19, U20	7		TPD1E10B06DPYR	Texas Instruments	ESD in 0402 Package with 10 pF Capacitance and 6 V Breakdown, 1 Channel, -40 to +125 degC, 2-pin X2SON (DPY), Green (RoHS & no Sb/Br)	DPY0002A
U10	1		LMT84LPM	Texas Instruments	1.5V, TO-92, Analog Temperature Sensor with Class-AB Output, LP0003A	LP0003A
U11	1		TLV316IDBVR	Texas Instruments	10-MHz, Rail-to-Rail Input/Output, Low-Voltage, 1.8-V CMOS Operational Amplifier, DBV0005A (SOT-5)	DBV0005A
U12, U13, U14	3		UCC27714DR	Texas Instruments	High-Speed, 4A, 600V High-side Low-side Gate Driver Device, D0014A	D0014A
FID1, FID2, FID3, FID4, FID5, FID6	0		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	Fiducial

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