

## TIDA-010988 REV E1 Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
IPCB1	1		TIDA-010988	Any	Printed Circuit Board	
C1_1, C1_2, C1_3, C1_4, C1_5, C1_6, C1_7, C1_8, C2_1, C2_2, C2_3, C2_4, C2_5, C2_6, C2_7, C2_8	16	0.022uF	C1206C223KDRACTU	Kemet	CAP, CERM, 0.022 $\mu$ F, 1000 V, +/- 10%, X7R, AEC-Q200 Grade 1, 1206	1206
C3, C4, C5, C6, C7, C8, C23	7	1uF	8.85012E+11	Wurth Elektronik	CAP, CERM, 1 uF, 25 V, +/- 10%, X7R, 0603	0603
C9, C10, C11, C12, C13, C14, C16, C39	8	0.1uF	8.85012E+11	Wurth Elektronik	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, 0603	0603
C15	1	0.01uF	C0603H103J3GACTU	Kemet	CAP, CERM, 0.01 uF, 25 V, +/- 5%, C0G/NP0, 0603	0603
C17, C22	2	10uF	8.85012E+11	Wurth Elektronik	CAP, CERM, 10 uF, 25 V, +/- 10%, X7R, 1206	1206
C18	1		8.85012E+11	Wurth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0603, X7R, 470nF, 25VDC	
C19	1	0.47uF	08053D474KAT2A	AVX	CAP, CERM, 0.47 uF, 25 V, +/- 10%, X5R, 0805	0805
C20	1		8.85342E+11	Wurth Elektronik	WCAP-CSMH Multilayer Ceramic Chip Capacitor, Mid and High Voltage, size 1206, X7R Class II, 1nF, 2000VDC	
C21	1	22 $\mu$ F	8.85012E+11	Wurth	22 $\mu$ F $\pm$ 10% 25V Ceramic Capacitor X7R 1210 (3225 Metric)	1210
C24, C25	2		8.85342E+11	Wurth Elektronik	WCAP-CSMH Multilayer Ceramic Chip Capacitor, Mid and High Voltage, size 1812, X7R Class II, 2.2nF, 3000VDC	
C26, C27	2		8.85012E+11	Wurth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0805, NP0, 22pF, 50VDC	
C28, C29	2	47uF	GRM21BR61A476ME15L	MuRata	CAP, CERM, 47 $\mu$ F, 10 V, +/- 20%, X5R, 0805	0805
C31	1		8.85012E+11	Wurth Electronics	4.7 $\mu$ F $\pm$ 10% 50V Ceramic Capacitor X7R 1206 (3216 Metric)	1206
C32	1	4.7 $\mu$ F	8.85012E+11	Wurth	4.7 $\mu$ F $\pm$ 10% 50V Ceramic Capacitor X7R 1210 (3225 Metric)	1210
C33	1	0.1uF	8.85012E+11	Wurth Elektronik	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	0603
C34	1		8.85012E+11	Wurth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0603, X7R, 47nF, 50VDC	
C35, C36, C38, C40	4	1uF	8.85012E+11	Wurth Elektronik	CAP, CERM, 1 uF, 16 V, +/- 10%, X7R, 0603	0603
C37	1		8.85012E+11	Wurth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0805, X7R Class II, 470nF, 100VDC	
C41, C43	2		8.85012E+11	Wurth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0603, X7R, 15nF, 25VDC	
C42	1	10 $\mu$ F	8.85012E+11	Wurth	10 $\mu$ F $\pm$ 20% 25V Ceramic Capacitor X5R 0603 (1608 Metric)	0603
C44	1	22uF	CL10A226MO7JZNC	Samsung	CAP, CERM, 22 $\mu$ F, 16 V, +/- 20%, X5R, 0603	0603

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
D1_1, D1_2, D1_3, D1_4, D1_5, D1_6, D1_7, D1_8, D2_1, D2_2, D2_3, D2_4, D2_5, D2_6, D2_7, D2_8	16	11V	1SMB5926BT3G	ON Semiconductor	Diode, Zener, 11 V, 550 mW, SMB	SMB
D3, D7, D15, D17, D20, D21	6	Green	150040GS73240	Würth Elektronik	LED, Green, SMD	1x0.5mm
D4, D5, D6	3		ESD401DPYR	Texas Instruments	1-Channel ESD Protection Diode with Low RDYN and Low Clamping Voltage, DPY0002A (X1SON-2)	DPY0002A
D10	1		BZX84C27VDBZRQ1	Texas Instruments	Zener Diode 27 V 250 mW ±5% Surface Mount SOT-23-3	SOT23-3
D11	1	30V	VS-20BQ030HM3/5BT	Vishay-Semiconductor	Diode, Schottky, 30 V, 2 A, AEC-Q101, SMB	SMB
D12	1	75V	CMDD4448	Central Semiconductor	Diode, Ultrafast, 75 V, 0.25 A, SOD-323	SOD-323
D13	1	8.2V	BZX84B8V2LT1G	ON Semiconductor	Diode, Zener, 8.2 V, 225 mW, SOT-23	SOT-23
D14	1	40V	B340A-13-F	Diodes Inc.	Diode, Schottky, 40 V, 3 A, SMA	SMA
D16	1		RBS1LAM40ATR	Rohm	DIODE SCHOTTKY 20V 1A PMDTM	SOD128
D18, D19	2	20V	SDM40E20LC-7	Diodes Inc.	Diode, Schottky, 20 V, 0.4 A, SOT-23	SOT-23
F1_1, F1_2, F1_3, F1_4, F1_5, F1_6, F1_7, F1_8	8		nanoASMDCH020F-2	Littelfuse	Polymeric PTC Resettable Fuse 30V 200 mA 1h Surface Mount 1206 (3216 Metric), Concave	1206
FID4, FID5, FID6	3		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	N/A
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
J1_1, J1_2, J1_3, J1_4, J1_5, J1_6, J1_7, J1_8	8		6.91211E+11	Würth Elektronik	Receptacle, 2.54mm, 2x1, Tin, R/A, TH	Receptacle, 2.54mm, 2x1, R/A, TH
J2	1		6.29105E+11	Würth Electronics	USB - micro B USB 2.0 Receptacle Connector 5 Position Surface Mount, Right Angle; Through Hole	CONN_USB_8MM0_6 MM6
J3	1		61300311121	Würth Elektronik	Header, 2.54 mm, 3x1, Gold, TH	Header, 2.54mm, 3x1, TH
J4, J6, J7	3		M22-2510505	Harwin	Header, 2mm, 5x1, Gold, TH	Header, 2mm, 5x1, TH
J5	1		6.91103E+11	Würth	2 Position Wire to Board Terminal Block Horizontal with Board 0.138" (3.50mm) Through Hole	CONN_TERM_POS2
K1_1, K1_2, K1_3, K1_4, K1_5, K1_6, K1_7, K1_8	8		AQY232G3HS	Panasonic	Relay SSR 1mA 1.75V DC-IN 2A 60V AC/DC-OUT 4-Pin SOP Tube	SOP4
L1, L2, L3, L4, L5	5	600 ohm	782633601	Würth Elektronik	Ferrite Bead, 600 ohm @ 100 MHz, 1 A, 0603	0603
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 x 0.200 inch

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
R1_1, R1_2, R1_3, R1_4, R1_5, R1_6, R1_7, R1_8, R2_1, R2_2, R2_3, R2_4, R2_5, R2_6, R2_7, R2_8	16	10Meg	CRCW060310M0DHEAP	Vishay-Dale	RES, 10 M, 0.5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R3_1, R3_2, R3_3, R3_4, R3_5, R3_6, R3_7, R3_8	8	340	RT0603BRD07340RL	Yageo America	RES, 340, 0.1%, 0.1 W, 0603	0603
R4_1, R4_2, R4_3, R4_4, R4_5, R4_6, R4_7, R4_8	8	249	TNPW1206249RBEEA	Vishay-Dale	RES, 249, 0.1%, 0.25 W, 1206	1206
R5, R9, R12, R17, R18, R19, R20, R21, R22, R29, R30	11	49.9	RT0603DRE0749R9L	Yageo America	RES, 49.9, 0.5%, 0.1 W, 0603	0603
R6, R15, R23, R26	4	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R7	1	8.2k	CRCW06038K20JNEA	Vishay-Dale	RES, 8.2 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R8	1	330k	RC0603FR-07330KL	Yageo	RES, 330 k, 1%, 0.1 W, 0603	0603
R10, R56	2	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R11	1	220k	RC0603FR-07220KL	Yageo	RES, 220 k, 1%, 0.1 W, 0603	0603
R13, R14, R27, R28, R31, R32	6	4.70k	RC0603FR-074K7L	Yageo	RES, 4.70 k, 1%, 0.1 W, 0603	0603
R16, R25	2	47k	RC0603JR-0747KL	Yageo	RES, 47 k, 5%, 0.1 W, 0603	0603
R24	1	100k	ERA-3AEB104V	Panasonic	RES, 100 k, 0.1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R33	1	120k	RG1608P-124-B-T5	Susumu Co Ltd	RES, 120 k, 0.1%, 0.1 W, 0603	0603
R34, R54, R55	3	3.3k	CRCW04023K30JNED	Vishay-Dale	RES, 3.3 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R35	1	0.047	ERJ-L03KF47MV	Panasonic	RES, 0.047, 1%, 0.1 W, AEC-Q200 Grade 1, 0603	0603
R39, R40	2		CHV2010-FX-3304ELF	Bourns	RES SMD 3.3M OHM 1% 1/2W 2010	2010
R41	1	8.2k	CRCW04028K20JNED	Vishay-Dale	RES, 8.2 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R42, R43	2	100	RG2012P-101-B-T5	Susumu Co Ltd	RES, 100, 0.1%, 0.125 W, 0805	0805
R46	1	68k	CRCW040268K0JNED	Vishay-Dale	RES, 68 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R47	1	536k	RC0603FR-07536KL	Yageo	RES, 536 k, 1%, 0.1 W, 0603	0603
R48	1	174k	RC0603FR-07174KL	Yageo	RES, 174 k, 1%, 0.1 W, 0603	0603
R50	1	100k	RC0603FR-07100KL	Yageo	RES, 100 k, 1%, 0.1 W, 0603	0603
R52	1	12.1k	RC0603FR-0712K1L	Yageo	RES, 12.1 k, 1%, 0.1 W, 0603	0603
T1	1		750317605	Würth Electronics	Transformer, 0.13Ohm PRI, 0.019Ohm SEC, 3:1, 9.5x9.78x10.54mm SMT	SMT_XFRMR_9MM5_9MM78
TP1, TP2	2		5001	Keystone Electronics	Test Point, Miniature, Black, TH	Black Miniature Testpoint
TP5	1		5015	Keystone Electronics	Test Point, Miniature, SMT	Testpoint_Keystone_Miniature

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
U1_1, U1_2, U1_3, U1_4, U1_5, U1_6, U1_7, U1_8, U2_1, U2_2, U2_3, U2_4, U2_5, U2_6, U2_7, U2_8	16		TVS3301DRBR	Texas Instruments	33 V Bidirectional Flat-Clamp Surge Protection Device, DRB0008A (VSON-8)	DRB0008A
U3	1		ADS125H18IRHBR	Texas Instruments	ADS125H18IRHBR	VQFN36
U4	1		MSPM0G1507SRGE	Texas Instruments	Mixed-Signal Microcontroller, VQFN24	VQFN24
U5	1		ISO6441DBQR	Texas Instruments	General-Purpose, Basic and Reinforced, Quad-Channel Digital Isolators	SSOP16
U6	1		TXE8116RGER	Texas Instruments	TXE8116RGER	VQFN24
U7	1		REF6025IDGKR	Texas Instruments	5ppm/C High-Precision Voltage Reference with Integrated High-Bandwidth Buffer, DGK0008A (VSSOP-8)	DGK0008A
U8	1		LM5180NGUR	Texas Instruments	70-VIN PSR Flyback DC/DC Converter With 100-V, 1.5-A Integrated Power MOSFET, NGU0008C (WSON-8)	NGU0008C
U9	1		TPS7A2050PDBVR	Texas Instruments	300-mA, ultra-low-noise, low-IQ, low-dropout (LDO) linear regulator with high PSRR 5-SOT-23 -40 to 125	SOT23-5
U10, U11	2		TLV709A33DBVR	Texas Instruments	150-mA 30-V low-dropout (LDO) linear regulator with 3.2-µA supply current 5-SOT-23 -40 to 125	SOT23-5
U12	1		UCC33420	Texas Instruments	1.5W, High-Density, >3 kVRMS Isolated DC-DC Converter	VSON-FCRLF12
C30	0		8.85342E+11	Wurth Elektronik	WCAP-CSMH Multilayer Ceramic Chip Capacitor, Mid and High Voltage, size 1206, X7R Class II, 1nF, 2000VDC	
C45, C46	0		8.85342E+11	Wurth Elektronik	WCAP-CSMH Multilayer Ceramic Chip Capacitor, Mid and High Voltage, size 1812, X7R Class II, 2.2nF, 3000VDC	
FID1, FID2, FID3	0		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	N/A
R0_1, R0_2, R0_3, R0_4, R0_5, R0_6, R0_7, R0_8	0	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R36, R37	0		CHV2010-FX-3304ELF	Bourns	RES SMD 3.3M OHM 1% 1/2W 2010	2010
R51	0	130k	RC0603FR-07130KL	Yageo	RES, 130 k, 1%, 0.1 W, 0603	0603

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