

## TIDA-00426 REV A0 Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
IPCB1	1		TIDA-00491	Any	Printed Circuit Board	
C1, C22	2	10uF	CL05A106MP5NUNC	MuRata	CAP, CERM, 10 µF, 10 V, +/- 20%, X5R, 0402	0402
C2, C23	2	0.1uF	GRM155R61A104KA01D	MuRata	CAP, CERM, 0.1 µF, 10 V, +/- 10%, X5R, 0402	0402
C3, C5, C7, C9, C10, C13, C15, C24, C25, C26	10	100pF	GRM1555C1H101JA01D	MuRata	CAP, CERM, 100 pF, 50 V, +/- 5%, COG/NPO, 0402	0402
C4, C12	2	2.2uF	C1005X5R1A225K050BC	TDK	CAP, CERM, 2.2 µF, 10 V, +/- 10%, X5R, 0402	0402
C6, C11	2	22uF	CL10A226MP8NUNE	Samsung	CAP, CERM, 22 µF, 10 V, +/- 20%, X5R, 0603	0603
C8, C14	2	10uF	C0805C106K8PACTU	Kemet	CAP, CERM, 10 µF, 10 V, +/- 10%, X5R, 0805	0805
C16	1	0.056uF	GRM188R71H563KA93D	MuRata	CAP, CERM, 0.056 µF, 50 V, +/- 10%, X7R, 0603	0603
C17	1	3300pF	GRM155R72A332KA01D	MuRata	CAP, CERM, 3300 pF, 100 V, +/- 10%, X7R, 0402	0402
C18	1	1800pF	06031C182JAT2A	AVX	CAP, CERM, 1800 pF, 100 V, +/- 5%, X7R, 0603	0603
C19, C110, C111	3	1uF	C1005X5R1C105K050BC	TDK	CAP, CERM, 1 µF, 16 V, +/- 10%, X5R, 0402	0402
C20, C112	2	0.1uF	C1005X5R1A104K050BA	TDK	CAP, CERM, 0.1 µF, 10 V, +/- 10%, X5R, 0402	0402
C21	1	0.1uF	0603YC104JAT2A	AVX	CAP, CERM, 0.1 µF, 16 V, +/- 5%, X7R, 0603	0603
C61, C62	2	30pF	GRM1885C1H300JA01D	MuRata	CAP, CERM, 30 pF, 50 V, +/- 5%, COG/NPO, 0603	0603
C63	1	2200pF	C0603C222K5RACTU	Kemet	CAP, CERM, 2200 pF, 50 V, +/- 10%, X7R, 0603	0603
C64, C73	2	220pF	C0603C221K5RACTU	Kemet	CAP, CERM, 220 pF, 50 V, +/- 10%, X7R, 0603	0603
C65	1	0.47uF	GRM188R61C474KA93D	MuRata	CAP, CERM, 0.47 µF, 16 V, +/- 10%, X5R, 0603	0603
C66, C67	2	0.1uF	GRM155R71C104KA88D	MuRata	CAP, CERM, 0.1 µF, 16 V, +/- 10%, X7R, 0402	0402
C68	1	0.1uF	C0603C104K4RACTU	Kemet	CAP, CERM, 0.1 µF, 16 V, +/- 10%, X7R, 0603	0603
C69	1	22uF	EEE-FK1A220R	Panasonic	CAP, AL, 22 µF, 10 V, +/- 20%, 1.35 ohm, SMD	SMT Radial B
C70	1	1uF	C2012X7R1C105K125AA	TDK	CAP, CERM, 1 µF, 16 V, +/- 10%, X7R, 0805	0805
C71	1	0.01uF	GRM188R71C103KA01D	MuRata	CAP, CERM, 0.01 µF, 16 V, +/- 10%, X7R, 0603	0603
C72	1	2.2uF	LMK212B7225KG-T	Taiyo Yuden	CAP, CERM, 2.2 µF, 10 V, +/- 10%, X7R, 0805	0805
C74, C76	2	0.01uF	GRM033R71A103KA01D	MuRata	CAP, CERM, 0.01 µF, 10 V, +/- 10%, X7R, 0201	0201
C75, C77, C79	3	0.01uF	GRM033R61A103KA01D	MuRata	CAP, CERM, 0.01 µF, 10 V, +/- 10%, X5R, 0201	0201
C78, C80, C82, C84, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99, C100, C101, C102, C103, C104, C105, C106, C107, C108, C109	28	0.1uF	CL03A104KP3NNNC	Samsung	CAP, CERM, 0.1 µF, 10 V, +/- 10%, X5R, 0201	0201
C81, C83, C85	3	0.022uF	GRM033R60J223KE01D	MuRata	CAP, CERM, 0.022 µF, 6.3 V, +/- 10%, X5R, 0201	0201
D1, D30	2	Green	LTST-C190GKT	Lite-On	LED, Green, SMD	1.6x0.8x0.8mm
D2, D3, D6, D7, D8, D9, D14, D15, D16, D17, D22, D23, D24, D25, D26, D27, D28, D29	18	Red	SML-311UTT86	Rohm	LED, Red, SMD	LED, 1.6x.8x.8mm
D4	1	Green	SSF-LXH305GD-TR	Lumex	LED, Green, SMD	7x4mm
D5	1	7.5V	1SMB5922BT3G	ON Semiconductor	Diode, Zener, 7.5 V, 550 mW, SMB	SMB
D10, D11, D12, D13, D18, D19, D20, D21	8	Green	LG L29K-G2J1-24-Z	OSRAM	LED, Green, SMD	1.7x0.65x0.8mm

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
FB1	1	60 ohm	BK1608HS600-T	Taiyo Yuden	Ferrite Bead, 60 ohm @ 100 MHz, 0.8 A, 0603	0603
H2, H3, H4, H5	4		NY PMS 440 0025 PH	B&F Fastener Supply	Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	Screw
H6, H7, H8, H9	4		1902C	Keystone	Standoff, Hex, 0.5"L #4-40 Nylon	Standoff
J1	1		39544-3004	Molex	Terminal Block, 4x1, 5.08mm, TH	4x1 Terminal Block
J3	1		1734035-2	TE Connectivity	Connector, Receptacle, Mini-USB Type B, R/A, Top Mount SMT	USB Mini Type B
J4, J5	2		1X8A_81_MXP-S50-0-2/111_NE	Huber+Suhner	Straight PCB plug Pin-in-hole/SMT	1373x268x203mil
J6, J7, J9, J10	4		142-0761-881	Johnson	Connector, TH, End launch SMA 50 ohm	Connector, TH, End launch SMA
L1	1	120 ohm	BLM18SG121TN1D	MuRata	Ferrite Bead, 120 ohm @ 100 MHz, 3 A, 0603	0603
Q1	1	50V	BSS138	Fairchild Semiconductor	MOSFET, N-CH, 50 V, 0.22 A, SOT-23	SOT-23
R1	1	390	CRCW0603390RJNEA	Vishay-Dale	RES, 390, 5%, 0.1 W, 0603	0603
R2	1	270	CRCW0603270RJNEA	Vishay-Dale	RES, 270, 5%, 0.1 W, 0603	0603
R3	1	10	CRCW040210R0JNED	Vishay-Dale	RES, 10, 5%, 0.063 W, 0402	0402
R4	1	330	CRCW0402330RJNED	Vishay-Dale	RES, 330, 5%, 0.063 W, 0402	0402
R5	1	47	CRCW040247R0JNED	Vishay-Dale	RES, 47, 5%, 0.063 W, 0402	0402
R6	1	33	CRCW040233R0JNED	Vishay-Dale	RES, 33, 5%, 0.063 W, 0402	0402
R7	1	18	CRCW040218R0JNED	Vishay-Dale	RES, 18, 5%, 0.063 W, 0402	0402
R8, R9, R10, R60, R61	5	10k	CRCW060310K0JNEA	Vishay-Dale	RES, 10 k, 5%, 0.1 W, 0603	0603
R11, R12, R13, R14	4	51	CRCW040251R0JNED	Vishay-Dale	RES, 51, 5%, 0.063 W, 0402	0402
R15, R16, R17	3	12k	CRCW060312K0JNEA	Vishay-Dale	RES, 12 k, 5%, 0.1 W, 0603	0603
R18, R43, R44, R45, R46, R47, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R62, R63, R64, R65, R66, R67, R68	25	750	CRCW0402750RJNED	Vishay-Dale	RES, 750, 5%, 0.063 W, 0402	0402
R25	1	360	CRCW0402360RJNED	Vishay-Dale	RES, 360, 5%, 0.063 W, 0402	0402
R30, R31, R32, R33, R35, R36	6	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, 0402	0402
R34, R81	2	200	CRCW0603200RJNEA	Vishay-Dale	RES, 200, 5%, 0.1 W, 0603	0603
R37, R41	2	33k	CRCW040233K0JNED	Vishay-Dale	RES, 33 k, 5%, 0.063 W, 0402	0402
R38, R39	2	33.0	ERJ-2RKF33R0X	Panasonic	RES, 33.0, 1%, 0.1 W, 0402	0402
R40	1	1.50k	CRCW04021K50FKED	Vishay-Dale	RES, 1.50 k, 1%, 0.063 W, 0402	0402
R42	1	1.2Meg	CRCW04021M20JNED	Vishay-Dale	RES, 1.2 M, 5%, 0.063 W, 0402	0402
R69, R70	2	2.7k	CRCW06032K70JNEA	Vishay-Dale	RES, 2.7 k, 5%, 0.1 W, 0603	0603
R71, R74	2	1.0k	CRCW06031K00JNEA	Vishay-Dale	RES, 1.0 k, 5%, 0.1 W, 0603	0603
R73	1	1.0k	CRCW04021K00JNED	Vishay-Dale	RES, 1.0 k, 5%, 0.063 W, 0402	0402
R82	1	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0, 5%, 0.1 W, 0603	0603
S1	1		EVQ-PSD02K	Panasonic	Switch, Tactile, SPST-NO, SMT	Switch, 6.1x1.8x4.6 mm
TP1	1	Red	5000	Keystone	Test Point, Miniature, Red, TH	Red Miniature Testpoint
U1	1		LMX2581SQ/NOPB	Texas Instruments	LMX2581 Wideband Frequency Synthesizer with Integrated VCO, RTV0032A	RTV0032A
U4	1		MSP430F5529IPN	Texas Instruments	Mixed Signal MicroController, PN0080A	PN0080A
U5	1		TPS73533DRBR	Texas Instruments	500mA, Low Quiescent Current, Ultra-Low Noise, High PSRR Low-Dropout Linear Regulator, DRB0008A	DRB0008A
U6	1		TPD4E004DRYR	Texas Instruments	4-CHANNEL ESD-PROTECTION ARRAY FOR HIGH-SPEED DATA INTERFACES, DRY006A	DRY0006A
U7	1		TCA6424ARGJR	Texas Instruments	Low-Voltage 24-Bit I2C and SMBus I/O Expander, 24 Outputs, 1.65 to 5.5 V, -40 to 85 degC, 32-pin UQFN (RGJ), Green (RoHS & no Sb/Br)	RGJ0032A

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
U8	1		DS125DF1610FBE/NOPB	Texas Instruments	9.8 to 12.5 Gbps 16-Channel Retimer, ABB0196A	ABB0196A
Y1	1		CWX813-100.0M	Connor-Winfield	OSC 100.0000MHZ 3.3V +-25PPM SMD	7x1.3x5mm
Y2	1		ECS-240-20-5PX-TR	ECS Inc.	Crystal, 24.000MHz, 20pF, SMD	Crystal, 11.4x4.3x3.8mm
Y3	1		NBXDPA017LN1TAG	ON Semiconductor	OSC, 156.25/312.5 MHz, 2.5 to 3.3 V, SMD	5x7mm
C27	0	2.2uF	LMK212B7225KG-T	Taiyo Yuden	CAP, CERM, 2.2 uF, 10 V, +/- 10%, X7R, 0805	0805
C28	0	1uF	C2012X7R1C105K125AA	TDK	CAP, CERM, 1 uF, 16 V, +/- 10%, X7R, 0805	0805
C29, C48	0	0.01uF	GRM188R71C103KA01D	MuRata	CAP, CERM, 0.01 uF, 16 V, +/- 10%, X7R, 0603	0603
C30	0	220uF	6SVPE220MW	Panasonic	CAP, AL, 220 uF, 6.3 V, +/- 20%, 0.015 ohm, SMD	E61
C31	0	0.1uF	C1005X5R1A104K050BA	TDK	CAP, CERM, 0.1 uF, 10 V, +/- 10%, X5R, 0402	0402
C32	0	1uF	C1005X5R1A105K050BB	TDK	CAP, CERM, 1 uF, 10 V, +/- 10%, X5R, 0402	0402
C33	0	10uF	C1608X5R1A106M080AC	TDK	CAP, CERM, 10 uF, 10 V, +/- 20%, X5R, 0603	0603
C34	0	1000pF	C1608C0G1H102J080AA	TDK	CAP, CERM, 1000 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C35, C36, C39, C40, C41, C42, C43, C49, C50	0	47uF	C3216X5R1C476M160AB	TDK	CAP, CERM, 47 uF, 16 V, +/- 15%, X5R, 1206	1206
C37	0	22uF	C2012X5R1V226M125AC	TDK	CAP, CERM, 22 uF, 35 V, +/- 20%, X5R, 0805	0805
C38, C53	0	330pF	C1608C0G1H331F080AA	TDK	CAP, CERM, 330 pF, 50 V, +/- 1%, C0G/NP0, 0603	0603
C44	0	3300pF	C1608C0G1H332J080AA	TDK	CAP, CERM, 3300 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C45	0	0.1uF	C1005X7R1H104K050BB	TDK	CAP, CERM, 0.1 uF, 50 V, +/- 10%, C0G/NP0, 0402	0402
C46	0	4.7uF	CGB3B1X5R1A475K055AC	TDK	CAP, CERM, 4.7 uF, 10 V, +/- 10%, X5R, 0603	0603
C47	0	0.1uF	C1608X7R1H104K080AA	TDK	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	0603
C51	0	10uF	C2012X5R0J106M125AB	TDK	CAP, CERM, 10 uF, 6.3 V, +/- 20%, X5R, 0805	0805
C52, C56	0	0.01uF	C1608X8R1H103K080AA	TDK	CAP, CERM, 0.01 uF, 50 V, +/- 10%, X8R, 0603	0603
C54, C55	0	22uF	C2012JB1V226M125AC	TDK	CAP, CERM, 22 uF, 35 V, +/- 20%, JB, 0805	0805
C57	0	4700pF	C1608X8R1H472K080AA	TDK	CAP, CERM, 4700 pF, 50 V, +/- 10%, X8R, 0603	0603
C58	0	10pF	C1608C0G1H100D080AA	TDK	CAP, CERM, 10 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C59	0	1000pF	06031C102JAT2A	AVX	CAP, CERM, 1000 pF, 100 V, +/- 5%, X7R, 0603	0603
FID1, FID2, FID3	0		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	Fiducial
H1	0		ATS-P2-168-C1-R0	Advanced Thermal Solutions	PushPIN™ Heat Sink Assembly	Heatsink
J2	0		PJ-002AH-SMT-TR	CUI Inc.	Power Jack, SMT	14.8x11x12.6mm
J8, J11	0		1X8A_81_MXP-S50-0-2/111_NE	Huber+Suhner	Straight PCB plug Pin-in-hole/SMT	1373x268x203mil
L3	0	1.5uH	XAL4020-152MEB	Coilcraft	Inductor, Shielded, Composite, 1.5 uH, 7.12 A, 0.02 ohm, SMD	4x2.1x4mm
R19, R27	0	3.92	CRCW06033R92FKEA	Vishay-Dale	RES, 3.92, 1%, 0.1 W, 0603	0603
R20	0	1.69k	CRCW04021K69FKED	Vishay-Dale	RES, 1.69 k, 1%, 0.063 W, 0402	0402
R21	0	3.57k	CRCW04023K57FKED	Vishay-Dale	RES, 3.57 k, 1%, 0.063 W, 0402	0402
R22	0	392k	CRCW0603392KFKEA	Vishay-Dale	RES, 392 k, 1%, 0.1 W, 0603	0603
R23	0	10.0k	CRCW040210K0FKED	Vishay-Dale	RES, 10.0 k, 1%, 0.063 W, 0402	0402
R24	0	4.22k	CRCW04024K22FKED	Vishay-Dale	RES, 4.22 k, 1%, 0.063 W, 0402	0402
R26	0	27.4k	CRCW060327K4FKEA	Vishay-Dale	RES, 27.4 k, 1%, 0.1 W, 0603	0603
R28, R29	0	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, 0402	0402
R72, R75, R77, R78, R80	0	1.0k	CRCW04021K00JNED	Vishay-Dale	RES, 1.0 k, 5%, 0.063 W, 0402	0402
R76, R79	0	20k	CRCW040220K0JNED	Vishay-Dale	RES, 20 k, 5%, 0.063 W, 0402	0402
U2	0		TPS73533DRBR	Texas Instruments	500mA, Low Quiescent Current, Ultra-Low Noise, High PSRR Low-Dropout Linear Regulator, DRB0008A	DRB0008A
U3	0		TPS54122RHLLT	Texas Instruments	Dual-Output, 3-A, Quiet Supply with Integrated DC-DC Converter and Low-Noise LDO, RHL0024A	RHL0024A

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