

TIDA-03027 REV A Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
I/PCB1	1		TIDA-03027	Any	Printed Circuit Board	
C1, C2, C62	3	22uF	C2012X5R1V226M125AC	TDK	CAP, CERM, 22 µF, 35 V, +/- 20%, X5R, 0805	0805
C3, C6	2	1000pF	C1005X7R1H102M	TDK	CAP, CERM, 1000 pF, 50 V, +/- 20%, X7R, 0402	0402
C4, C19, C111	3	10uF	CL05A106MQ5NUNC	Samsung Electro-Mechanics	CAP, CERM, 10 µF, 6.3 V, +/- 20%, X5R, 0402	0402
C5, C7, C8, C9, C10, C16, C20, C42, C43, C45, C47, C50, C52, C60, C76, C81, C87, C90, C91, C92, C93, C94, C100, C103	24	0.1uF	C1005X7R1H104K050BB	TDK	CAP, CERM, 0.1 µF, 50 V, +/- 10%, X7R, 0402	0402
C11, C12, C14, C17, C82, C83, C85, C88, C99	9	1uF	C1005X5R1A105K050BB	TDK	CAP, CERM, 1 µF, 10 V, +/- 10%, X5R, 0402	0402
C13, C84	2	10uF	CL05A106MP5NUNC	Samsung Electro-Mechanics	CAP, CERM, 10 µF, 10 V, +/- 20%, X5R, 0402	0402
C15, C75, C77, C86	4	22uF	C1608X5R1A226M080AC	TDK	CAP, CERM, 22 µF, 10 V, +/- 20%, X5R, 0603	0603
C18, C89	2	0.22uF	GRM188R71E224KA88D	MuRata	CAP, CERM, 0.22 µF, 25 V, +/- 10%, X7R, 0603	0603
C21	1	1uF	885012106017	Wurth Elektronik	CAP, CERM, 1 µF, 16 V, +/- 20%, X5R, 0603	0603
C22, C23, C109, C110	4	220pF	GRM033R71E221KA01D	MuRata	CAP, CERM, 220 pF, 25 V, +/- 10%, X7R, 0201	0201
C24	1	0.1uF	CL03A104KP3NNNC	Samsung Electro-Mechanics	CAP, CERM, 0.1 µF, 10 V, +/- 10%, X5R, 0201	0201
C25	1	2.2uF	C1005X5R1A225K050BC	TDK	CAP, CERM, 2.2 µF, 10 V, +/- 10%, X5R, 0402	0402
C26, C27, C28, C29, C30, C31, C33, C34, C35, C36, C37, C38	12	0.1uF	GRM033C81E104KE14D	MuRata	CAP, CERM, 0.1 µF, 25 V, +/- 10%, X6S, 0201	0201
C32, C39, C41	3	22pF	GCM0335C1E220JD03D	MuRata	CAP, CERM, 22 pF, 25 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0201	0201
C40, C48, C53, C54, C55, C56, C57, C102, C107, C108, C112, C113, C119	13	0.1uF	GRM033R61E104KE14J	MuRata	CAP, CERM, 0.1 µF, 25 V, +/- 10%, X5R, 0201	0201
C44, C46, C49, C51, C71, C79, C114	7	0.01uF	C0402C103J5RACTU	Kemet	CAP, CERM, 0.01 µF, 50 V, +/- 5%, X7R, 0402	0402
C58, C59	2	18pF	GRM1555C1H180JA01D	MuRata	CAP, CERM, 18 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
C61, C63	2	0.1uF	C1005X7R1H104M	TDK	CAP, CERM, 0.1uF, 50V, +/-20%, C0G/NP0, 0402	0402
C64, C65	2	100uF	C1210C107M8PACTU	Wurth Elektronik	CAP, CERM, 100 µF, 10 V, +/- 20%, X5R, 1210	1210
C66, C80	2	0.1uF	GRM155R71E104KE14D	MuRata	CAP, CERM, 0.1 µF, 25 V, +/- 10%, X7R, 0402	0402
C67	1	4.7pF	GRM1555C1E4R7CA01D	MuRata	CAP, CERM, 4.7 pF, 25 V, +/- 5%, C0G/NP0, 0402	0402
C68	1	2700pF	GRM033R61A272KA01D	MuRata	CAP, CERM, 2700 pF, 10 V, +/- 10%, X5R, 0201	0201
C69, C70, C115, C116, C117, C118	6	100uF	T495E107K025ATE100	Kemet	CAP, TA, 100 µF, 25 V, +/- 10%, 0.1 ohm, SMD	7360-38
C72	1	10uF	GRM188R61A106ME69D	MuRata	CAP, CERM, 10 µF, 10 V, +/- 20%, X5R, 0603	0603
C73	1	4.7uF	GRM188R60J475KE19D	MuRata	CAP, CERM, 4.7 µF, 6.3 V, +/- 10%, X5R, 0603	0603

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C74	1	62pF	GRM1885C1H620JA01D	MuRata	CAP, CERM, 62 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C78	1	150uF	16TQC150MYF	Panasonic	CAP, Tantalum Polymer, 150 µF, 16 V, +/- 20%, 0.05 ohm, 7343-31 SMD	7343-31
C95, C96, C97, C98, R72, R91	6	0	ERJ-1GE0R00C	Panasonic	RES, 0, 5%, 0.05 W, 0201	0201
C101	1	220pF	GRM033R71C221KA01D	MuRata	CAP, CERM, 220 pF, 16 V, +/- 10%, X7R, 0201	0201
C104, C105	2	1uF	C1005JB1V105K050BC	TDK	CAP, CERM, 1 µF, 35 V, +/- 10%, JB, 0402	0402
C106	1	0.1uF	GMK105BJ104KV-F	Taiyo Yuden	CAP, CERM, 0.1 µF, 35 V, +/- 10%, X5R, 0402	0402
C120, C121	2	47uF	TAJE476M035RNJ	AVX	CAP, TA, 47 µF, 35 V, +/- 20%, 0.9 ohm, AEC-Q200 Grade 1, SMD	7343-43
D1	1	30V	PMEG3050EP,115	NXP Semiconductor	Diode, Schottky, 30 V, 5 A, SOD-128	SOD-128
D2, D8	2	30V	NSR20F30NXT5G	ON Semiconductor	Diode, Schottky, 30 V, 2 A, 2-XDFN	2-XDFN
D3, D4, D5	3	30V	DB2G32600L1	Panasonic	Diode, Schottky, 30 V, 1 A, 1x0.6mm	1x0.6mm
D6, D11, D12, D34	4	White	LW QH8G-Q2S2-3K5L-1	OSRAM	LED, White, SMD	0402, White
D7	1	Blue	LB Q39G-L2N2-35-1	OSRAM	LED, Blue, SMD	BLUE 0603 LED
D9	1	Green	150060GS75000	Würth Elektronik	LED, Green, SMD	LED_0603
D10, D13, D14, D15, D16, D17, D18, D19, D20, D21, D22, D23, D24, D25, D26, D27, D28, D29, D30, D31, D32, D33	22		TPD1E01B04DPLR	Texas Instruments	1 Channel ESD Protection Diode for High Speed Data Lines up to 20Gbps, DPL0002A	DPL0002A
FID1, FID2, FID3, FID4, FID5, FID6	6		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	Fiducial
J1	1		800-10-003-10-001000	Mill-Max	Header, 100mil, 3x1, TH	Header, 3x1, 100mil, TH
J2	1		20-0000016-01	Lintes Technology	Connector, Receptacle, USB Type C, R/A, SMT	Connector, Receptacle, USB Type C, SMT
J3	1		47630-1010	Molex	Receptacle, HDMI 19 Position, R/A, TH	Receptacle, HDMI 19 Position, R/A, TH
J4	1		GSB411B34HR	Amphenol Canada	Connector, Receptacle, USB 3.1 Type A, Gold, R/A, Blue, TH	Connector, Receptacle, USB 3.1 Type A, R/A, TH
J6	1		PEC05DAAN	Sullins Connector Solutions	Header, 100mil, 5x2, Tin, TH	Header, 5x2, 100mil, Tin
J7	1		DX07P024MJ1R1500	JAE Electronics	Plug, USB3.1, TYPE-C, R/A, SMT	Plug, USB3.1, TYPE-C, R/A, SMT
L1, L4	2	60 ohm	MPZ1608S600ATAH0	TDK	Ferrite Bead, 60 ohm @ 100 MHz, 3.5 A, 0603	0603
L2, L8	2	21 ohm	FBMJ2125HM210NT	Taiyo Yuden	Ferrite Bead, 21 ohm @ 100MHz, 6A, 0805	0805
L3, L5	2	10uH	ASPI-0630LR-100M-T15	ABRACON		7.2 mm x 6.65 mm
L6	1	1uH	SDR0403-1R0ML	Bourns	Inductor, Drum Core, Ferrite, 1 µH, 3.8 A, 0.033 ohm, SMD	4.5x3.2x4mm
L7	1	2.2uH	SRP4020-2R2M	Bourns	Inductor, Flat Wire, Powdered Iron, 2.2 µH, 4 A, 0.033 ohm, SMD	Inductor, 4.8x2x4mm
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
Q1	1	-30V	SSM6J507NU,LF	Toshiba	MOSFET, P-CH, -30 V, -10 A, UDFN6B	UDFN6B
Q2, Q3, Q4	3	20V	BSH105,215	NXP Semiconductor	MOSFET, N-CH, 20 V, 1.05 A, SOT-23	SOT-23
Q5, Q6, Q7, Q9, Q10, Q11, Q14	7	30V	NX3020NAKW,115	NXP Semiconductor	MOSFET, N-CH, 30 V, 0.18 A, SOT-323	SOT-323
Q8, Q13	2	30V	CSD87501L	Texas Instruments	MOSFET, N-CH, 30 V, A, YJG0010A	YJG0010A
Q12	1	-30V	SI4427BDY-E3	Vishay-Siliconix	MOSFET, P-CH, -30 V, -9.7 A, SOIC-8	SOIC-8
R1	1	8.2k	CRCW04028K20JNED	Vishay-Dale	RES, 8.2 k, 5%, 0.063 W, 0402	0402

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R2	1	30k	CRCW040230K0JNED	Vishay-Dale	RES, 30 k, 5%, 0.063 W, 0402	0402
R3	1	270	CRCW0402270RJNED	Vishay-Dale	RES, 270, 5%, 0.063 W, 0402	0402
R4, R6, R7, R8	4	100k	CRCW0603100KJNEA	Vishay-Dale	RES, 100 k, 5%, 0.1 W, 0603	0603
R5, R55	2	9.53k	CRCW04029K53FKED	Vishay-Dale	RES, 9.53 k, 1%, 0.063 W, 0402	0402
R9, R76	2	8.87k	CRCW04028K87FKED	Vishay-Dale	RES, 8.87 k, 1%, 0.063 W, 0402	0402
R10	1	3.65k	CRCW04023K65FKED	Vishay-Dale	RES, 3.65 k, 1%, 0.063 W, 0402	0402
R11	1	2.20k	CRCW04022K20FKED	Vishay-Dale	RES, 2.20 k, 1%, 0.063 W, 0402	0402
R12, R13, R14, R15, R23, R24, R108, R109, R121	9	100k	CRCW0402100KJNED	Vishay-Dale	RES, 100 k, 5%, 0.063 W, 0402	0402
R16, R30, R31, R34, R46, R62, R63, R82, R90, R92, R100, R103, R127, R129, R130	15	100k	CRCW0201100KFKED	Vishay-Dale	RES, 100 k, 1%, 0.05 W, 0201	0201
R17, R84	2	15.0k	CRCW040215K0FKED	Vishay-Dale	RES, 15.0 k, 1%, 0.063 W, 0402	0402
R18, R19, R20, R28, R29, R120, R123	7	1.0Meg	CRCW04021M00JNED	Vishay-Dale	RES, 1.0 M, 5%, 0.063 W, 0402	0402
R22	1	32.4k	CRCW040232K4FKED	Vishay-Dale	RES, 32.4 k, 1%, 0.063 W, 0402	0402
R25, R35	2	0.005	ERJ3LWFR005V	Panasonic	RES, 0.005, 1%, 0.25 W, AEC-Q200 Grade 1, 0603	0603
R27, R56, R60, R64, R67, R69, R70, R80, R81, R102, R107, R112	12	10.0k	MCR006YRTF1002	Rohm	RES, 10.0 k, 1%, 0.05 W, 0201	0201
R32, R33, R57, R87	4	1.00Meg	RK73H1HTTC1004F	KOA Speer	RES, 1.00 M, 1%, 0.05 W, AEC-Q200 Grade 0, 0201	0201
R37	1	249	CRCW0402249RFKED	Vishay-Dale	RES, 249, 1%, 0.063 W, 0402	0402
R40, R42, R43, R44, R48, R134, R135	7	10.0k	CRCW020110K0FKED	Vishay-Dale	RES, 10.0 k, 1%, 0.05 W, 0201	0201
R41, R83, R85, R86, R110, R128, R138, R139, R140	9	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, 0402	0402
R45	1	4.7k	CRCW04024K70JNED	Vishay-Dale	RES, 4.7 k, 5%, 0.063 W, 0402	0402
R47, R52, R54	3	2.2k	CRCW04022K20JNED	Vishay-Dale	RES, 2.2 k, 5%, 0.063 W, 0402	0402
R49	1	27k	CRCW060327K0JNEA	Vishay-Dale	RES, 27 k, 5%, 0.1 W, 0603	0603
R50	1	4.7Meg	CRCW06034M70JNEA	Vishay-Dale	RES, 4.7 M, 5%, 0.1 W, 0603	0603
R51	1	470	CRCW0603470RJNEA	Vishay-Dale	RES, 470, 5%, 0.1 W, 0603	0603
R53	1	20k	CRCW060320K0JNEA	Vishay-Dale	RES, 20 k, 5%, 0.1 W, 0603	0603
R58	1	90.9k	CRCW040290K9FKED	Vishay-Dale	RES, 90.9 k, 1%, 0.063 W, 0402	0402
R61	1	1uF	CL03A105MP3NSNC	Samsung Electro-Mechanics	CAP, CERM, 1 μ F, 10 V, +/- 20%, X5R, 0201	0201
R73	1	150k	CRCW0402150KFKED	Vishay-Dale	RES, 150 k, 1%, 0.063 W, 0402	0402
R74	1	66.5k	CRCW040266K5FKED	Vishay-Dale	RES, 66.5 k, 1%, 0.063 W, 0402	0402
R75	1	100k	CRCW0402100KFKED	Vishay-Dale	RES, 100 k, 1%, 0.063 W, 0402	0402
R77, R78	2	100k	CRCW0603100KFKEA	Vishay-Dale	RES, 100 k, 1%, 0.1 W, 0603	0603
R79	1	20.5k	CRCW040220K5FKED	Vishay-Dale	RES, 20.5 k, 1%, 0.063 W, 0402	0402
R88, R115	2	2.0k	CRCW04022K00JNED	Vishay-Dale	RES, 2.0 k, 5%, 0.063 W, 0402	0402
R93, R94, R95, R96, R98, R99, R132, R133	8	3.3k	CRCW04023K30JNED	Vishay-Dale	RES, 3.3 k, 5%, 0.063 W, 0402	0402

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R97, R116, R117, R118, R124, R125	6	1.0k	CRCW04021K00JNED	Vishay-Dale	RES, 1.0 k, 5%, 0.063 W, 0402	0402
R101, R131	2	10k	CRCW040210K0JNED	Vishay-Dale	RES, 10 k, 5%, 0.063 W, 0402	0402
R104, R105, R114	3	1.00k	CRCW02011K00FKED	Vishay-Dale	RES, 1.00 k, 1%, 0.05 W, 0201	0201
TP1, TP2, TP3, TP4	4		5019	Keystone	Test Point, Miniature, SMT	Test Point, Miniature, SMT
U1	1		LM3489QMM/NOPB	Texas Instruments	Hysteretic PFET Buck Controller with Enable Pin, 8-pin MSOP, Pb-Free	MUA08A
U2, U17	2		TPS65983ACZQZR	Texas Instruments	USB Type-C and USB PD Controller, Power Switch, and High Speed Multiplexer, ZQZ0096A	ZQZ0096A
U3	1		HD3SS3212RKSR	Texas Instruments	Two-Channel Differential 2:1/1:2 USB3.1 Mux/Demux, RKS0020A	RKS0020A
U4, U19	2		TPD8S300RUK	Texas Instruments	USB Type C Interface Protector: Short-to-VBUS Over Voltage and IEC 61000-4-2 ESD Protection, RUK0020B	RUK0020B
U5	1		TPS54334DRCR	Texas Instruments	4.2V TO 28V INPUT, 3A OUTPUT, SYNCHRONOUS SWIFT™ STEP DOWN VOLTAGE CONVERTER, DRC0010J	DRC0010J
U7	1		MCDP2850-BB	Mega Chips	DisplayPort1.2a to HDMI2.0 Level Shifter/Protocol Converter, LFBGA64	64-BGA
U8, U18	2		W25Q80DVSNIIG	Winbond	3V, 8Mbit, Serial Flash Memory with Dual and Qual SPI, SOIC-8	SOIC-8
U9	1		TPD13S523RSVR	Texas Instruments	13 Channel ESD Protection Solution with Current-Limit Load Switch for HDMI Port, RSV0016A	RSV0016A
U10	1		TUSB8041RGCR	Texas Instruments	Four-Port USB 3.0 Hub, RGC0064G	RGC0064G
U11	1		TS3USB221ARSER	Texas Instruments	ESD Protected, High-Speed USB 2.0 (480-Mbps) 1:2 Multiplexer / Demultiplexer Switch, 1:2 Mux / Demux, 6 ohm RON, 2.5 to 3.3V, -40 to 85 degC, 10-Pin UQFN (RSE), Green (RoHS & no Sb/Br)	RSE0010A
U12	1		AT24C04D-MAHM-T	Atmel	EEPROM 4KBIT 1MHZ,8UDFN	UDFN-8
U13	1		TPS62065DSGR	Texas Instruments	Buck Step Down Regulator with 2.9 to 6 V Input and 0.8 to 6 V Output, -40 to 85 degC, 8-Pin WSON (DSG), Green (RoHS & no Sb/Br)	DSG0008A
U14	1		TPS2500DRCR	Texas Instruments	Integrated USB Power Switch with Boost Converter, DRC0010J	DRC0010J
Y1	1		ABM10-27.000MHZ-D30-T3	Abrakon Corporation	Crystal, 27.000MHz, 10pF, SMD	2.5x0.5x2.0mm
Y2	1		NX5032GA-24.000M-STD-CSK-4	NDK	Crystal, 24MHz, SMD	5x3.2mm
R21, R26, R59, R65, R66, R68, R71	0	10.0k	MCR006YRTF1002	Rohm	RES, 10.0 k, 1%, 0.05 W, 0201	0201
R36, R89, R113	0	0	ERJ-1GE0R00C	Panasonic	RES, 0, 5%, 0.05 W, 0201	0201
R38, R39, R136, R137	0	1.00Meg	RK73H1HTTC1004F	KOA Speer	RES, 1.00 M, 1%, 0.05 W, AEC-Q200 Grade 0, 0201	0201
R119	0	84.5k	CRCW060384K5FKEA	Vishay-Dale	RES, 84.5 k, 1%, 0.1 W, 0603	0603