

TIDA-050000 REV E2 Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
IPCB	1		TIDA-050000	Any	Printed Circuit Board	
C1, C14, C18	3	0.1uF	GRM155R71A104KA01D	MuRata	CAP, CERM, 0.1 uF, 10 V, +/- 10%, X7R, 0402	0402
C2, C15, C19, C23, C24	5	2.2uF	GRM188R71A225KE15D	MuRata	CAP, CERM, 2.2 uF, 10 V, +/- 10%, X7R, 0603	0603
C3, C4, C5, C6, C16, C17, C20, C21, C88, C89	10	22uF	C2012X7S1A226M125AC	TDK	CAP, CERM, 22 uF, 10 V, +/- 20%, X7S, 0805	0805
C7, C114	2	1uF	885012106017	Wurth Elektronik	CAP, CERM, 1 uF, 16 V, +/- 20%, X5R, 0603	0603
C8, C12, C13, C69, C70, C71, C72, C82, C83	9	22uF	C3225X7R1C226K250AC	TDK	CAP, CERM, 22 uF, 16 V, +/- 10%, X7R, 1210	1210
C22	1	1500pF	GRM155R71H152KA01D	MuRata	CAP, CERM, 1500 pF, 50 V, +/- 10%, X7R, 0402	0402
C25	1	4.7uF	885012207025	Wurth Elektronik	CAP, CERM, 4.7 uF, 10 V, +/- 10%, X7R, 0805	0805
C68, C73, C74	3	0.1uF	C1005X7R1E104M050BB	TDK	CAP, CERM, 0.1 uF, 25 V, +/- 20%, X7R, 0402	0402
C75, C76, C77, C78, C90, C91	6	47uF	GRM32ER71A476KE15L	MuRata	CAP, CERM, 47 uF, 10 V, +/- 10%, X7R, 1210	1210
C79	1	47pF	GRM1555C1E470JA01D	MuRata	CAP, CERM, 47 pF, 25 V, +/- 5%, C0G/NP0, 0402	0402
C80	1	4.7uF	CGB3B1X5R1A475K055AC	TDK	CAP, CERM, 4.7 uF, 10 V, +/- 10%, X5R, 0603	0603
C81	1	0.047uF	C1005X7R1H473K050BB	TDK	CAP, CERM, 0.047 uF, 50 V, +/- 10%, X7R, 0402	0402
C84	1	10uF	C3216X7R1E106M160AE	TDK	CAP, CERM, 10 uF, 25 V, +/- 20%, X7R, 1206_190	1206_190
C93	1	22pF	GCM1555C1H220JA16D	MuRata	CAP, CERM, 22 pF, 50 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0402	0402
C99, C100, C101, C102	4	910pF	GRM1555C1E911JA01D	MuRata	CAP, CERM, 910 pF, 25 V, +/- 5%, C0G/NP0, 0402	0402
C103, C106, C107	3	510pF	GRM1555C1E511JA01D	MuRata	CAP, CERM, 510 pF, 25 V, +/- 5%, C0G/NP0, 0402	0402
C104, C108, C111, C112	4	100pF	GRM1555C1H101JA01D	MuRata	CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
C105, C109, C110, C113	4	10pF	GRM1555C1H100FA01D	MuRata	CAP, CERM, 10 pF, 50 V, +/- 1%, C0G/NP0, 0402	0402
D2	1	Cool White	LNJ037X8ARA	Panasonic	LED, Cool White, SMD	
D3	1	Red	VLMR334BACB-GS08	Vishay-Semiconductor	LED, Red, SMD	3x2.8mm
D4, D7, D8, D9, D10	5	Green	LTST-C190KGKT	Lite-On	LED, Green, SMD	1.6x0.8x0.8mm
D5	1	Orange	LTST-C190KFKT	Lite-On	LED, Orange, SMD	1.6x0.8x0.8mm
D6	1	Yellow	LTST-C170KSKT	Lite-On	LED, Yellow, SMD	0805 LED
H1, H2	2		NY PMS 440 0025 PH	B&F Fastener Supply	Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	Screw
H3, H4	2		1902C	Keystone	Standoff, Hex, 0.5"L #4-40 Nylon	Standoff
J1	1		PJ-058B	CUI Inc.	Connector, DC Jack 2.5 mm Center Pin, TH	Connector, 2.5 mm Center Pin, TH
J2	1		1725656	Phoenix Contact	Terminal Block, 100mil, 2x1, 6A, 63V, TH	6.2x8.5x5.54 mm
J6	1		MPS-04-7.70-01-L-V	Samtec	Receptacle, 5mm, 4x1, Gold with Tin tail, TH	Receptacle, 5mm, 4x1, TH
J7	1		BSE-060-01-L-D-A	Samtec	Socket Assembly, 0.8mm, 60x2, Gold, SMT	Socket Assembly, 0.8mm, 60x2, SMT
L1, L2, L3	3	2.2uH	TFM252012ALMA2R2MTAA	TDK	Inductor, Film, 2.2 uH, 2.6 A, 0.084 ohm, AEC-Q200 Grade 0, SMD	2.5x2mm
L8	1	470nH	IHLP2020BZERR47M01	Vishay-Dale	Inductor, Shielded Drum Core, Powdered Iron, 470 nH, 11.5 A, 0.0081 ohm, SMD	5.49x2x5.18mm

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L9	1	1uH	IHLP1212ABER1R0M11	Vishay-Dale	Inductor, Shielded Drum Core, Powdered Iron, 1 uH, 3 A, 0.038 ohm, SMD	3.0x1.2x3.0mm
Q1, Q3, Q4, Q5, Q6, Q7, Q8, Q9	8	60V	2N7002-7-F	Diodes Inc.	MOSFET, N-CH, 60V, 0.17A, SOT-23	SOT-23
Q2	1	-50V	BSS84-7-F	Diodes Inc.	MOSFET, P-CH, -50 V, -0.13 A, SOT-23	SOT-23
R1	1	10.0	CRCW040210R0FKED	Vishay-Dale	RES, 10.0, 1%, 0.063 W, 0402	0402
R3, R4	2	5.6k	CRCW04025K60JNED	Vishay-Dale	RES, 5.6 k, 5%, 0.063 W, 0402	0402
R5, R6	2	68	CRCW040268R0JNED	Vishay-Dale	RES, 68, 5%, 0.063 W, 0402	0402
R7	1	10.2k	CRCW040210K2FKED	Vishay-Dale	RES, 10.2 k, 1%, 0.063 W, 0402	0402
R8, R10, R84, R87, R88, R89, R94, R99	8	100k	CRCW0402100KJNED	Vishay-Dale	RES, 100 k, 5%, 0.063 W, 0402	0402
R9, R15, R22, R23, R26, R74	6	100k	RG1005P-104-B-T5	Susumu Co Ltd	RES, 100 k, 0.1%, 0.063 W, 0402	0402
R11, R12, R13, R14, R72, R90, R91, R92, R95, R96, R100	11	10k	CRCW040210K0JNED	Vishay-Dale	RES, 10 k, 5%, 0.063 W, 0402	0402
R16	1	200k	CRCW0402200KFKED	Vishay-Dale	RES, 200 k, 1%, 0.063 W, 0402	0402
R17	1	226k	CRCW0402226KFKED	Vishay-Dale	RES, 226 k, 1%, 0.063 W, 0402	0402
R21	1	316k	CRCW0402316KFKED	Vishay-Dale	RES, 316 k, 1%, 0.063 W, 0402	0402
R24, R73	2	49.9k	ERJ-2RKF4992X	Panasonic	RES, 49.9 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0402	0402
R66, R70, R78, R136	4	0	CRCW12060000Z0EA	Vishay-Dale	RES, 0, 5%, 0.25 W, 1206	1206
R75, R76	2	51.1k	CRCW040251K1FKED	Vishay-Dale	RES, 51.1 k, 1%, 0.063 W, 0402	0402
R77, R79	2	10.0k	RT0402BRD0710KL	Yageo America	RES, 10.0 k, .1%, .0625 W, 0402	0402
R83	1	97.6k	ERJ-2RKF9762X	Panasonic	RES, 97.6 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0402	0402
R86	1	76.8k	ERA-2AEB7682X	Panasonic	RES, 76.8 k, 0.1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R93, R97, R98, R101	4	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, 0402	0402
R102, R103, R104, R105, R106, R107, R108, R109, R110, R111, R112, R113, R114, R115, R116	15	1.0Meg	CRCW04021M00JNED	Vishay-Dale	RES, 1.0 M, 5%, 0.063 W, 0402	0402
R117	1	240	CRCW0402240RJNED	Vishay-Dale	RES, 240, 5%, 0.063 W, 0402	0402
R118	1	360	ERJ-2GEJ361X	Panasonic	RES, 360, 5%, 0.1 W, AEC-Q200 Grade 0, 0402	0402
R119, R120, R122, R129, R130, R131	6	150	CRCW0402150RJNED	Vishay-Dale	RES, 150, 5%, 0.063 W, 0402	0402
R121	1	160	CRCW0402160RJNED	Vishay-Dale	RES, 160, 5%, 0.063 W, 0402	0402
R123, R124, R125, R126, R127, R128, R132, R133, R134	9	0	RC0402JR-070RL	Yageo America	RES, 0, 5%, 0.063 W, 0402	0402
R139, R141, R143, R145, R146, R147, R150, R152, R154	9	0	CRCW02010000Z0ED	Vishay-Dale	RES, 0, 5%, 0.05 W, 0201	0201

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
S1	1		KST221JLFS	C&K Components	Switch, Tactile, SPST-NO, SMT	Switch, 6.2X5X6.2 mm
U1	1		TPS65023BRSBR	Texas Instruments	6-channel Power Management IC (PMIC) with 3DC/DCs, 3 LDOs, I2C Interface and DVS, RSB0040B (WQFN-40)	RSB0040B
U7	1		TPS568215RNNR	Texas Instruments	4.5V to 17V Input, DCAP3 Mode, 8A Synchronous SWIFT(TM) Step-Down Converter, RNN0018A (VQFN-HR-18)	RNN0018A
U8	1		TPS62067DSGR	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
C9, C27, C37, C40, C44, C48, C49, C64	0	2.2uF	GRM188R71A225KE15D	MuRata	CAP, CERM, 2.2 uF, 10 V, +/- 10%, X7R, 0603	0603
C10, C41, C65	0	1uF	GRM155R61A105ME15D	MuRata	CAP, CERM, 1 uF, 10 V, +/- 20%, X5R, 0402	0402
C11, C42, C66	0	4.7uF	JMK107BB7475MA-T	Taiyo Yuden	CAP, CERM, 4.7 uF, 6.3 V, +/- 10%, X7R, 0603	0603
C26, C36, C43, C95	0	0.1uF	GRM155R71A104KA01D	MuRata	CAP, CERM, 0.1 uF, 10 V, +/- 10%, X7R, 0402	0402
C28, C29, C30, C31, C38, C39, C45, C46	0	22uF	C2012X7S1A226M125AC	TDK	CAP, CERM, 22 uF, 10 V, +/- 20%, X7S, 0805	0805
C32, C115	0	1uF	885012106017	Würth Elektronik	CAP, CERM, 1 uF, 16 V, +/- 20%, X5R, 0603	0603
C33, C34, C35, C52, C53, C54, C55	0	22uF	C3225X7R1C226K250AC	TDK	CAP, CERM, 22 uF, 16 V, +/- 10%, X7R, 1210	1210
C47	0	1500pF	GRM155R71H152KA01D	MuRata	CAP, CERM, 1500 pF, 50 V, +/- 10%, X7R, 0402	0402
C50	0	4.7uF	885012207025	Würth Elektronik	CAP, CERM, 4.7 uF, 10 V, +/- 10%, X7R, 0805	0805
C51, C56, C57	0	0.1uF	C1005X7R1E104M050BB	TDK	CAP, CERM, 0.1 uF, 25 V, +/- 20%, X7R, 0402	0402
C58, C59, C60, C61	0	47uF	GRM32ER71A476KE15L	MuRata	CAP, CERM, 47 uF, 10 V, +/- 10%, X7R, 1210	1210
C62	0	47pF	GRM1555C1E470JA01D	MuRata	CAP, CERM, 47 pF, 25 V, +/- 5%, C0G/NP0, 0402	0402
C63	0	4.7uF	CGB3B1X5R1A475K055AC	TDK	CAP, CERM, 4.7 uF, 10 V, +/- 10%, X5R, 0603	0603
C67	0	0.047uF	C1005X7R1H473K050BB	TDK	CAP, CERM, 0.047 uF, 50 V, +/- 10%, X7R, 0402	0402
C85, C86, C87, C97, C98	0	10uF	GRM21BR70J106KE76L	MuRata	CAP, CERM, 10 uF, 6.3 V, +/- 10%, X7R, 0805	0805
C92	0	4.7uF	GRM21BR60J475KA11L	MuRata	CAP, CERM, 4.7 uF, 6.3 V, +/- 10%, X5R, 0805	0805
C94	0	10pF	GRM1555C1H100JA01D	MuRata	CAP, CERM, 10 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
C96	0	1000pF	C1005X7R1H102M050BE	TDK	CAP, CERM, 1000 pF, 50 V, +/- 20%, X7R, 0402	0402
D1	0	40V	12CWQ04FNPBF	Vishay-Semiconductor	Diode, Schottky, 40 V, 12 A, DPAK	DPAK
FID1, FID2, FID3	0		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	N/A
J3, J4	0		800-10-006-10-001000	Mill-Max	Header, 100mil, 6x1, TH	Header, 6x1, 100mil, TH
J5	0		1725656	Phoenix Contact	Terminal Block, 100mil, 2x1, 6A, 63V, TH	6.2x8.5x5.54 mm
L4, L5, L6	0	2.2uH	TFM252012ALMA2R2MTAA	TDK	Inductor, Film, 2.2 uH, 2.6 A, 0.084 ohm, AEC-Q200 Grade 0, SMD	2.5x2mm
L7	0	470nH	IHLP2525CZERR47M01	Vishay-Dale	Inductor, Shielded Drum Core, Powdered Iron, 470 nH, 17.5 A, 0.004 ohm, SMD	IHLP-2525CZ
R2, R33, R62, R67, R68, R69, R71, R135	0	0	CRCW12060000Z0EA	Vishay-Dale	RES, 0, 5%, 0.25 W, 1206	1206
R18, R19, R20, R25, R27, R28, R36, R37, R39, R41, R51, R52, R53, R57, R58, R59	0	68	CRCW040268R0JNED	Vishay-Dale	RES, 68, 5%, 0.063 W, 0402	0402
R29, R81, R85	0	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, 0402	0402
R30	0	10.0	CRCW040210R0FKED	Vishay-Dale	RES, 10.0, 1%, 0.063 W, 0402	0402

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R31, R32	0	5.6k	CRCW04025K60JNED	Vishay-Dale	RES, 5.6 k, 5%, 0.063 W, 0402	0402
R34	0	24.9k	CRCW040224K9FKED	Vishay-Dale	RES, 24.9 k, 1%, 0.063 W, 0402	0402
R35, R42, R48, R55, R63	0	100k	RG1005P-104-B-T5	Susumu Co Ltd	RES, 100 k, 0.1%, 0.063 W, 0402	0402
R38, R43, R82, R156	0	100k	CRCW0402100KJNED	Vishay-Dale	RES, 100 k, 5%, 0.063 W, 0402	0402
R40	0	66.5k	CRCW040266K5FKED	Vishay-Dale	RES, 66.5 k, 1%, 0.063 W, 0402	0402
R44, R45, R46, R47, R60, R80, R155	0	10k	CRCW040210K0JNED	Vishay-Dale	RES, 10 k, 5%, 0.063 W, 0402	0402
R49, R54, R56	0	200k	CRCW0402200KFKED	Vishay-Dale	RES, 200 k, 1%, 0.063 W, 0402	0402
R50	0	86.6k	ERA-2AEB8662X	Panasonic	RES, 86.6 k, 0.1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R61	0	49.9k	ERJ-2RK4992X	Panasonic	RES, 49.9 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0402	0402
R64, R65	0	51.1k	CRCW040251K1FKED	Vishay-Dale	RES, 51.1 k, 1%, 0.063 W, 0402	0402
R137, R138, R140, R142, R144, R148, R149, R151, R153	0	0	CRCW02010000Z0ED	Vishay-Dale	RES, 0, 5%, 0.05 W, 0201	0201
R157	0	1.0Meg	CRCW04021M00JNED	Vishay-Dale	RES, 1.0 M, 5%, 0.063 W, 0402	0402
S2	0		KST221JLFS	C&K Components	Switch, Tactile, SPST-NO, SMT	Switch, 6.2X5X6.2 mm
U2, U4, U6	0		TPS22920YZPR	Texas Instruments	3.6V, 4A, 5.3mΩ Load Switch with Quick Output Discharge, YZP0008ADCD (DSBGA-8)	YZP0008ADCD
U3	0		TPS65023BRSBR	Texas Instruments	6-channel Power Management IC (PMIC) with 3DC/DCs, 3 LDOs, I2C Interface and DVS, RSB0040B (WQFN-40)	RSB0040B
U5	0		TPS56C215RNNR	Texas Instruments	4.5V to 17V Input, DCAP3 Mode, 12A Synchronous Step-Down SWIFT(TM) Converter, RNN0018A (VQFN-HR-18)	RNN0018A
U9	0		TPS51200DRCR	Texas Instruments	Single Output LDO, 3 A, 2.375 to 3.5 V Input, with DDR Termination, 10-pin SON (DRC), -40 to 85 degC, Green (RoHS & no Sb/Br)	DRC0010J