

TIDA-01589 REV E2 Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
C1	1	15pF	GRM1555C1H150JA01D	MuRata	CAP, CERM, 15 pF, 50 V,+/- 5%, C0G/NP0, 0402	0402
C2, C3, C4, C5	4	33pF	GRM0335C1H330JA01D	MuRata	CAP, CERM, 33 pF, 50 V,+/- 5%, C0G/NP0, 0201	0201
C6	1	2.2uF	GRM188R60J225KE19D	MuRata	CAP, CERM, 2.2 µF, 6.3 V,+/- 10%, X5R, 0603	0603
C7, C8, C9, C10, C12, C15, C16, C17, C18, C19, C20, C22, C25, C39, C42, C43, C44, C45, C46, C47, C48, C49, C50, C52, C56, C58, C61, C62, C67, C68, C87, C95, C99, C100, C101, C102, C103, C104, C105, C110, C114, C117, C138, C139	44	0.1uF	GRM155R71A104KA01D	MuRata	CAP, CERM, 0.1 µF, 10 V,+/- 10%, X7R, 0402	0402
C11, C14, C21, C38, C41, C60	6	10uF	CL05A106MP8NUB8	Samsung Electro-Mechanics	CAP, CERM, 10 µF, 10 V,+/- 20%, X5R, 0402	0402
C13, C23, C40, C53	4	1000pF	GRM155R71H102KA01D	MuRata	CAP, CERM, 1000 pF, 50 V,+/- 10%, X7R, 0402	0402
C24, C27, C29, C31, C33, C35, C51, C55, C57, C59, C109, C113, C116	13	1uF	GRM155R61A105KE15D	MuRata	CAP, CERM, 1 µF, 10 V,+/- 10%, X5R, 0402	0402
C26, C28, C30, C32, C34, C36, C54, C69, C85, C115	10	0.01uF	GRM155R71C103KA01D	MuRata	CAP, CERM, 0.01 µF, 16 V,+/- 10%, X7R, 0402	0402
C37	1	0.1uF	GRM155R61A104KA01D	MuRata	CAP, CERM, 0.1 µF, 10 V,+/- 10%, X5R, 0402	0402
C63, C72, C73, C74, C75	5	10uF	CL21B106KOQNNNE	Samsung Electro-Mechanics	CAP, CERM, 10 µF, 16 V,+/- 10%, X7R, 0805	0805
C64, C66, C71, C83, C88, C106	6	0.1uF	GCM155R71C104KA55D	MuRata	CAP, CERM, 0.1 µF, 16 V,+/- 10%, X7R, 0402	0402
C65	1	4.7uF	CL05A475MO5NUNC	Samsung Electro-Mechanics	CAP, CERM, 4.7 µF, 16 V,+/- 20%, X5R, 0402	0402
C70	1	220uF	UUD1E221MNL1GS	Nichicon	CAP, AL, 220 µF, 25 V, +/- 20%, 0.17 ohm, SMD	8x10
C76, C77, C78	3	22uF	CL21A226KPCLRNC	Samsung Electro-Mechanics	CAP, CERM, 22 µF, 10 V,+/- 20%, X7R, 0805	0805
C79, C98	2	4.7uF	CL10A475MP5LNNC	Samsung Electro-Mechanics	CAP, CERM, 4.7 µF, 10 V,+/- 20%, X7R, 0603	0603
C80	1	1000pF	GRM1885C1E102JA01D	MuRata	CAP, CERM, 1000 pF, 25 V,+/- 5%, C0G/NP0, 0603	0603
C81, C82	2	4.7uF	GRM188Z71C475KE21D	MuRata	CAP, CERM, 4.7 µF, 16 V,+/- 10%, X7R, 0603	0603
C84, C91, C94, C96, C97	5	1000pF	GRM033R71C102KA01D	MuRata	CAP, CERM, 1000 pF, 16 V,+/- 10%, X7R, 0201	0201
C86	1	0.027uF	GRM155R71E273KA88D	MuRata	CAP, CERM, 0.027 µF, 25 V,+/- 10%, X7R, 0402	0402
C89, C90, C92, C93	4	0.022uF	GRM155R71E223KA61D	MuRata	CAP, CERM, 0.022 µF, 25 V,+/- 10%, X7R, 0402	0402
C107	1	1uF	C1005X5R1C105K050BC	TDK	CAP, CERM, 1 µF, 16 V,+/- 10%, X5R, 0402	0402

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C108, C112	2	22uF	GRM219R61C226ME15L	MuRata	CAP, CERM, 22 µF, 16 V, +/- 20%, X5R, 0805	0805
C111	1	0.1uF	GRM188R71C104KA01D	MuRata	CAP, CERM, 0.1 µF, 16 V, +/- 10%, X7R, 0603	0603
D1	1	20V	SBR0220T5-7-F	Diodes Inc.	Diode, Schottky, 20 V, 0.2 A, SOD-523	SOD-523
D2	1	5.5V	D5V0M1U2LP3-7	Diodes Inc.	Diode, TVS, Uni, 5.5 V, 11 Vc, 2-XFDFN	2-XFDFN
F1	1		0154003.DR	Littelfuse	Fuse, 5 A, 125VAC/VDC, SMD	SMD, 2-Leads, Body 9.73x5.03mm
F2	1		3413.0117.22	Schurter	Fuse, 1.5 A, 125VAC/VDC, SMD	3.2x1.6mm
J1	1		FTSH-110-01-L-DV-K	Samtec	Header (Shrouded), 1.27mm, 10x2, Tin, SMT	Header (Shrouded), 1.27mm, 10x2, SMT
J4, J5	2		TSHC-123-D-03-145-GT-LF	Major League Electronics	Header, 2.54 mm, 23x2, Gold, TH	Header, 23x2, 2.54mm
J7	1		TSM-107-01-L-DV	Samtec	Header, 2.54mm, 7x2, Gold, SMT	Header, 2.54mm, 7x2, SMT
J8	1		DM3BT-DSF-PEJS	Hirose Electric Co. Ltd.	Connector, micro SD, 8+2 Pos, R/A, SMT	Connector, micro SD, 8+2 Pos, R/A, SMT
J9	1		10118194-0001LF	FCI	Receptacle, USB 2.0, Micro-USB Type B, R/A, SMT	USB-micro B USB 2.0, 0.65mm, 5 Pos, R/A, SMT
J10	1		PJ-063AH	CUI Inc.	DC POWER JACK, R/A, TH	DC POWER JACK, R/A, TH
J11, J12, J13, J14	4		TMM-102-03-T-S	Samtec	Header, 2mm, 2x1, Gold, TH	Header, 2mm, 2x1, TH
J15	1		ED555/2DS	On-Shore Technology	Terminal Block, 3.5mm Pitch, 2x1, TH	7.0x8.2x6.5mm
L1, L3, L4	3	600 ohm	BLM18KG601SN1D	MuRata	Ferrite Bead, 600 ohm @ 100 MHz, 1.3 A, 0603	0603
L2, L5, L6, L7, L8, L9	6	470 ohm	BLM15GG471SN1D	MuRata	Ferrite Bead, 470 ohm @ 100 MHz, 0.2 A, 0402	0402
L12, L13, L14	3	2.2uH	VLCF4020T-2R2N1R7	TDK	Inductor, Shielded, Ferrite, 2.2 µH, 1.72 A, 0.059 ohm, SMD	4.0x2.0x4.0mm
L16	1	2.2uH	74438356022	Würth Elektronik	Inductor, Shielded, 2.2 µH, 4.7 A, 0.029 ohm, SMD	4.1x4.1mm
L61, L62	2	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0, 5%, 0.1 W, 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
LED0, LED1, VDD_BBB, Vin_5V	4	Green	LTST-C191TGKT	Lite-On	LED, Green, SMD	LED_0603
LS1	1		SPS0916B-J-01	AAC Technologies	Dynamic Speaker	24x24mm
Q2	1	50 V	DDC114YU-7-F	Diodes Incorporated	Transistor, Dual NPN, 50 V, 0.1 A, SOT-363	SOT-363
R1, R13, R22, R34, R39, R40, R45, R51, R52, R55, R56, R57, R58, R59, R60, R63, R64, R65, R93, R94, R95, R107, R114, R115, R116, R117, R136, R149	28	10k	CRCW040210K0JNED	Vishay-Dale	RES, 10 k, 5%, 0.063 W, 0402	0402
R12, R62, R98, R101, R129, R130, R133, R134	8	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, 0402	0402

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R14, R17, R23, R26, R28, R29, R30, R31, R32, R33, R35, R36, R37, R38, R53, R54, R66, R123, R124, R135, R138, R139, R144, R145, R146, R147	26	22	CRCW040222R0JNED	Vishay-Dale	RES, 22, 5%, 0.063 W, 0402	0402
R15, R48	2	100	CRCW0402100RJNED	Vishay-Dale	RES, 100, 5%, 0.063 W, 0402	0402
R16, R18	2	22	EXB-2HV220JV	Panasonic	RES, 22, 5%, 0.0625 W, Resistor Array - 8x1	Resistor Array - 8x1
R19, R20	2	1.50k	CRCW06031K50FKEA	Vishay-Dale	RES, 1.50 k, 1%, 0.1 W, 0603	0603
R21, R69, R73	3	100k	CRCW0402100KJNED	Vishay-Dale	RES, 100 k, 5%, 0.063 W, 0402	0402
R27	1	8.06k	CRCW04028K06FKED	Vishay-Dale	RES, 8.06 k, 1%, 0.063 W, 0402	0402
R41, R42, R102	3	33	CRCW040233R0JNED	Vishay-Dale	RES, 33, 5%, 0.063 W, 0402	0402
R43, R44, R46, R119, R120, R121	6	10.0	CRCW040210R0FKED	Vishay-Dale	RES, 10.0, 1%, 0.063 W, 0402	0402
R47, R49	2	4.7k	CRCW04024K70JNED	Vishay-Dale	RES, 4.7 k, 5%, 0.063 W, 0402	0402
R50, R71, R72, R84, R85, R86, R87, R92, R99, R100, R105	11	1.00k	CRCW04021K00FKED	Vishay-Dale	RES, 1.00 k, 1%, 0.063 W, 0402	0402
R61, R83	2	470	CRCW0402470RJNED	Vishay-Dale	RES, 470, 5%, 0.063 W, 0402	0402
R67, R68	2	4.75k	CRCW04024K75FKED	Vishay-Dale	RES, 4.75 k, 1%, 0.063 W, 0402	0402
R74, R80, R81, R82	4	47k	CRCW040247K0JNED	Vishay-Dale	RES, 47 k, 5%, 0.063 W, 0402	0402
R88, R89	2	100k	CRCW0402100KFKED	Vishay-Dale	RES, 100 k, 1%, 0.063 W, 0402	0402
R90	1	22.1k	CRCW040222K1FKED	Vishay-Dale	RES, 22.1 k, 1%, 0.063 W, 0402	0402
R91	1	75.0k	CRCW040275K0FKED	Vishay-Dale	RES, 75.0 k, 1%, 0.063 W, 0402	0402
R103	1	68.1k	CRCW040268K1FKED	Vishay-Dale	RES, 68.1 k, 1%, 0.063 W, 0402	0402
R104, R108, R110, R112	4	10.0k	CRCW040210K0DHEDP	Vishay-Dale	RES, 10.0 k, 0.5%, 0.063 W, 0402	0402
R106	1	23.2k	CRCW040223K2FKED	Vishay-Dale	RES, 23.2 k, 1%, 0.063 W, 0402	0402
R109	1	32.4k	CRCW040232K4FKED	Vishay-Dale	RES, 32.4 k, 1%, 0.063 W, 0402	0402
R111	1	21.0k	RC0402FR-0721KL	Yageo	RES, 21.0 k, 1%, 0.063 W, 0402	0402
R113, R118	2	33	EXB-2HV100JV	Panasonic	RES, 33, 5%, 0.0625 W, Resistor Array - 8x1	Resistor Array - 8x1
R125	1	10.0k	CRCW040210K0FKED	Vishay-Dale	RES, 10.0 k, 1%, 0.063 W, 0402	0402
S1, S2, S3, S4	4		B3U-1100P	Omron Electronic Components	Switch, SPST-NO, Off-Mom, 12 V, SMD	SMD, 3-Leads, Body 3x2.5mm
U1	1		TMS320C5517AZCH20	Texas Instruments	Fixed-Point Digital Signal Processor, ZCH0196A (NFBGA-196)	ZCH0196A
U2, U3	2		TPS22915BYFPR	Texas Instruments	5.5V, 2A, 38mΩ Load Switch With Quick Output Discharge, YFP0004AAAA (DSBGA-4)	YFP0004AAAA
U4	1		TPD2EUSB30DRTR	Texas Instruments	ESD Solution for Super-Speed (6 Gbps) USB 3.0 Interface, 2 Channels, -40 to +85 degC, 3-pin SOT (DRT), Green (Rohs & No Sb/Br)	DRT0003A
U5, U15, U16	3		SN74LVC1G126DRLR	Texas Instruments	Single Bus Buffer Gate With 3-State Outputs, DRL0005A, LARGE T&R	DRL0005A
U6	1		TPS65023RSBR	Texas Instruments	Power Management IC (PMIC) with 3DC/DCs, 3 LDOs, I2C Interface and DVS, RSB0040B (WQFN-40)	RSB0040B
U7	1		TPS3850G33DRCR	Texas Instruments	Precision Voltage Supervisor with Window Watchdog Timer, DRC0010J (VSON-10)	DRC0010J
U8	1		TPS386000RGPR	Texas Instruments	Quad Supply Voltage Supervisors with Programmable Delay and Watchdog Timer, RGP0020A (VQFN-20)	RGP0020A
U9	1		AS4C32M16MS-7BCN	Alliance Memory	512M Low Power Mobile SDRAM (MSDR), BGA-54	BGA-54

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
U10	1		TAS2557YZR	Texas Instruments	5.7-W Class-D Mono Audio Amplifier with Class-H Boost and Speaker Sense, YZ0042-C01 (DSBGA-42)	YZ0042-C01
U11	1		TPD6F003DQDR	Texas Instruments	EMI Filter for Display Interface, 6 Channels, -40 to +85 degC, 12-pin WSON (DQD), Green (RoHS & no Sb/Br)	DQD0012A
U12	1		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
U13	1		TPS22912CYZVR	Texas Instruments	5.5V, 2A, 61mΩ Load Switch With Reverse Current Protection, YZV0004ADAD (DSBGA-4)	YZV0004ADAD
Y1	1		ABS06-32.768KHZ-9-1-T	Abrakon Corporation	Crystal, 32.768 kHz, 10 ppm, 9, SMD	2x1.2mm
Y2	1		ABM10AIG-12.000MHZ-4Z-T3	Abrakon Corporation	Crystal, 12 MHz, SMD	2.5x2mm
Y3	1		SIT8008BC-71-33E-12.288000G	SiTime	Oscillator, 12.288 MHz, AEC-Q200 Grade 4, SMD	2x1.6mm
C118, C119	0	0.1uF	GRM188R71C104KA01D	MuRata	CAP, CERM, 0.1 μF, 16 V,+/- 10%, X7R, 0603	0603
C120, C121, C122, C123, C124	0	0.1uF	GRM155R71A104KA01D	MuRata	CAP, CERM, 0.1 μF, 10 V,+/- 10%, X7R, 0402	0402
D3	0	30V	NSR20F30NXT5G	ON Semiconductor	Diode, Schottky, 30 V, 2 A, 2-XFDFN	2-XFDFN
D5, D8	0		T5V0LCS5-7	Diodes Inc.	Diode, TVS, Uni, 3 V, SOD-523	SOD-523
Q1	0	40 V	MMBT3904-7-F	Diodes Inc.	Transistor, NPN, 40 V, 0.2 A, SOT-23	SOT-23
Q3	0	-12V	CSD23280F3	Texas Instruments	MOSFET, P-CH, -12 V, 1.8 A, YJM0003A (PICOSTAR-3)	YJM0003A
R2, R3	0	4.7k	CRCW04024K70JNED	Vishay-Dale	RES, 4.7 k, 5%, 0.063 W, 0402	0402
R4, R5, R6, R8, R9, R11, R24, R25, R122, R142, R143	0	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, 0402	0402
R7, R70, R77, R78, R79, R96, R97	0	1.00k	CRCW04021K00FKED	Vishay-Dale	RES, 1.00 k, 1%, 0.063 W, 0402	0402
R10, R126	0	10k	CRCW040210K0JNED	Vishay-Dale	RES, 10 k, 5%, 0.063 W, 0402	0402
R75, R76	0	47k	CRCW040247K0JNED	Vishay-Dale	RES, 47 k, 5%, 0.063 W, 0402	0402
R127, R128, R131, R132, R137, R140, R141, R148	0	22	CRCW040222R0JNED	Vishay-Dale	RES, 22, 5%, 0.063 W, 0402	0402