

TIDA-01414 REV E1 Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
!PCB1	1		TIDA-01414	Any	Printed Circuit Board	
C1, C16, C22, C101, C112, C124, C142, C201, C212, C224, C242, C301, C312, C324, C342, C401, C412, C424, C442, C501, C512, C524, C542, C619, C712	25	0.1uF	C0603C104K5RACTU	Kemet	CAP, CERM, 0.1 µF, 50 V, +/- 10%, X7R, 0603	0603
C2, C620, C727, C728, C729, C730, C731, C737, C738, C739, C740, C741, C742, C743, C744, C745, C746, C752, C753, C754, C755, C756	22	22pF	GRM1885C1H220JA01D	MuRata	CAP, CERM, 22 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C3, C5	2	47uF	EEE-FK1H470P	Panasonic	CAP, AL, 47 µF, 50 V, +/- 20%, 0.68 ohm, SMD	SMT Radial E
C4, C9, C10	3	2.2uF	C2012X7R1H225K125AC	TDK	CAP, CERM, 2.2 µF, 50 V, +/- 10%, X7R, 0805	0805
C6	1	1uF	UMK107AB7105KA-T	Taiyo Yuden	CAP, CERM, 1 µF, 50 V, +/- 10%, X7R, 0603	0603
C7	1	75pF	GRM1885C1H750JA01D	MuRata	CAP, CERM, 75 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C8, C116, C127, C136, C141, C216, C227, C236, C241, C316, C327, C336, C341, C416, C427, C436, C441, C516, C527, C536, C541	21	0.01uF	C0603C103K5RACTU	Kemet	CAP, CERM, 0.01 µF, 50 V, +/- 10%, X7R, 0603	0603
C11, C17	2	47uF	EEE-FK1C470P	Panasonic	CAP, AL, 47 µF, 16 V, +/- 20%, 0.36 ohm, SMD	SMT Radial D
C12, C18, C23	3	10uF	EEE-FK1C100R	Panasonic	CAP, AL, 10 µF, 16 V, +/- 20%, 1.35 ohm, SMD	SMT Radial B
C13, C19, C24	3	100uF	EEE-FK0J101UR	Panasonic	CAP, AL, 100 µF, 6.3 V, +/- 20%, 0.7 ohm, SMD	SMT Radial C
C14, C20	2	4.7uF	GRM31CR71E475KA88L	MuRata	CAP, CERM, 4.7 µF, 25 V, +/- 10%, X7R, 1206	1206
C15, C21	2	0.47uF	GRM188R71E474KA12D	MuRata	CAP, CERM, 0.47 µF, 25 V, +/- 10%, X7R, 0603	0603
C25, C26, C48, C49, C50, C51, C53, C57	8	470pF	GRM1555C1E471JA01D	MuRata	CAP, CERM, 470 pF, 25 V, +/- 5%, C0G/NP0, 0402	0402
C27	1	3600pF	GRM1885C1H362JA01D	MuRata	CAP, CERM, 3600 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603

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C28, C52	2	2200pF	885012206036	Wurth Elektronik	CAP, CERM, 2200 pF, 16 V, +/- 10%, X7R, 0603	0603
C29, C30, C31, C32, C33, C34, C36, C37, C38, C43, C44, C45, C46, C56, C105, C107, C109, C130, C144, C145, C205, C207, C209, C230, C305, C307, C309, C330, C405, C407, C409, C430, C505, C507, C509, C530, C602, C604, C606, C616, C732, C733, C734, C735, C736, C747, C748, C749, C750, C751, C757, C758, C759, C760, C761, C762, C763, C764, C765, C766	60	0.1uF	GRM155R71A104KA01D	MuRata	CAP, CERM, 0.1 µF, 10 V, +/- 10%, X7R, 0402	0402
C35, C55	2	1uF	C1005X5R0J105M050BB	TDK	CAP, CERM, 1 µF, 6.3 V, +/- 20%, X5R, 0402	0402
C58, C59	2	12pF	GRM1555C1H120JA01D	MuRata	CAP, CERM, 12 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
C100, C111, C200, C211, C300, C311, C400, C411, C500, C511	10	1000uF	EEV-FK1H102M	Panasonic	CAP, AL, 1000 µF, 50 V, +/- 20%, 0.073 ohm, AEC-Q200 Grade 2, SMD	SMT Radial J16
C102, C103, C113, C114, C202, C203, C213, C214, C302, C303, C313, C314, C402, C403, C413, C414, C502, C503, C513, C514	20	1uF	GRM31MR71H105KA88L	MuRata	CAP, CERM, 1 µF, 50 V, +/- 10%, X7R, 1206	1206

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C104, C106, C108, C204, C206, C208, C304, C306, C308, C404, C406, C408, C504, C506, C508, C601, C603, C605	18	10uF	GRM188R61A106ME69D	MuRata	CAP, CERM, 10 µF, 10 V, +/- 20%, X5R, 0603	0603
C110, C119, C129, C134, C210, C219, C229, C234, C310, C319, C329, C334, C410, C419, C429, C434, C510, C519, C529, C534, C600, C610, C700, C701, C702, C703, C704, C705, C706, C707, C708, C709	32	10uF	GRM31CR71C106KAC7L	MuRata	CAP, CERM, 10 µF, 16 V, +/- 10%, X7R, 1206	1206
C115, C126, C135, C140, C215, C226, C235, C240, C315, C326, C335, C340, C415, C426, C435, C440, C515, C526, C535, C540	20	1uF	C3225X7R2A105K200AA	TDK	CAP, CERM, 1 µF, 100 V, +/- 10%, X7R, 1210	1210
C117, C121, C217, C221, C317, C321, C417, C421, C517, C521, C609	11	1000pF	GRM1555C1H102JA01D	MuRata	CAP, CERM, 1000 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
C118, C125, C131, C137, C218, C225, C231, C237, C318, C325, C331, C337, C418, C425, C431, C437, C518, C525, C531, C537, C607, C612	22	100pF	GRM1885C1H101JA01D	MuRata	CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
C120, C123, C138, C139, C220, C223, C238, C239, C320, C323, C338, C339, C420, C423, C438, C439, C520, C523, C538, C539	20	0.033uF	GRM188R71E333KA01D	MuRata	CAP, CERM, 0.033 μ F, 25 V, +/- 10%, X7R, 0603	0603
C122, C128, C222, C228, C322, C328, C422, C428, C522, C528, C611, C613	12	2.2uF	C1005X5R1A225K050BC	TDK	CAP, CERM, 2.2 μ F, 10 V, +/- 10%, X5R, 0402	0402
C132, C133, C232, C233, C332, C333, C432, C433, C532, C533	10	1uF	GRM188R71C105KA12D	MuRata	CAP, CERM, 1 μ F, 16 V, +/- 10%, X7R, 0603	0603
C143, C243, C343, C443, C543	5	0.047uF	GRM188R71H473KA61D	MuRata	CAP, CERM, 0.047 μ F, 50 V, +/- 10%, X7R, 0603	0603
C608, C614, C615, C713, C714, C715, C716, C717, C718, C719, C720, C721, C722, C723, C724, C725, C726	17	10uF	GRM188R61C106MAALD	MuRata	CAP, CERM, 10 μ F, 16 V, +/- 20%, X5R, 0603	0603
C617, C618, C710, C711	4	10uF	EMK212BJ106KG-T	Taiyo Yuden	CAP, CERM, 10 μ F, 16 V, +/- 10%, X5R, 0805	0805
Cable1	1		H3CCS-5018G	Used in BOM report	50 Pin Ribbon Cable Assembly, 18"	Used in PnP output and some BOM reports
Cable2	1		IDC20x18"	Used in BOM report	20 Pin Ribbon Cable Assembly, 18"	Used in PnP output and some BOM reports
Cable3	1		IDC20-24x18"	Used in BOM report	18" 20-24 Pin Ribbon Cable Assembly	Used in PnP output and some BOM reports
Cable4	1		IDC20-24x26"	Used in BOM report	26" 20-24 Pin Ribbon Cable Assembly	Used in PnP output and some BOM reports
Cable5	1		TBD	Used in BOM report	20 Pin Ribbon Cable Assembly, 18"	Used in PnP output and some BOM reports

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CENTER-TWEETER, CENTER-WOOFER, FL-TWEETER, FL-WOOFER, FR-TWEETER, FR-WOOFER, SUBOUT, SURROUND-LEFT, SURROUND-RIGHT, UPMIX-LEFT, UPMIX-RIGHT	11		RCJ-024	CUI Inc.	RCA Jack, Vertical, Yellow, TH	RCA Jack, Vertical, Yellow, TH
CT+, CT-, CW+, CW-, FLT+, FLT-, FLW+, FLW-, FRT+, FRT-, FRW+, FRW-, SL+, SL-, SR+, SR-, UPL+, UPL-, UPR+, UPR-	20		63066-1	TE Connectivity	PC Quick-Fit 0.250 Tab, Vertical, TH	Terminal 250 FASTON TAB, TH
D1, D2, D3, D4, D5	5	Blue	SMLP12BC7TT86	Rohm	LED, Blue, SMD	Blue LED
D6	1	Red	LTST-C190CKT	Lite-On	LED, Red, SMD	Red LED, 1.6x0.8x0.8mm
D12	1	60V	B560C-13-F	Diodes Inc.	Diode, Schottky, 60 V, 5 A, SMC	SMC
D13, D14, D15, D700	4	Green	LTST-C171GKT	Lite-On	LED, Green, SMD	LED_0805
DIN2-SEL, JP100, JP101, JP102, JP103, JP200, JP201, JP202, JP203, JP300, JP301, JP302, JP303, JP400, JP401, JP402, JP403, JP500, JP501, JP502, JP503	21	1x3	PBC03SAAN	Sullins Connector Solutions	Header, 100mil, 3x1, Gold, TH	PBC03SAAN
FAULT	1	Red	LTST-C170KRKT	Lite-On	LED, Red, SMD	Red 0805 LED
FID7, FID8, FID9	3		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	Fiducial
H1, H2, H3, H4, H5, H6, H7, H8, H9	9		9912-250	Bivar	NYLON TUBE SPACER	NYLON TUBE SPACER
H10, H11, H12, H13, H14, H15, H16, H17, H18	9		3205	Keystone	Flat Nylon Washer	Flat Nylon Washer
I2S-IN, I2S-OUT	2		SBH11-PBPC-D10-ST-BK	Sullins Connector Solutions	Header (Shrouded), 2.54mm, 10x2, Gold, Black, TH	Header (Shrouded), 2.54mm, 10x2, TH
J1	1		923345-05-C	3M	Jumper Wire, 500mil spacing, Green, pkg of 200	500 mil Jumper Wire

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J2, J700	2		N2550-6002-RB	3M	Header(Shrouded), 2.54mm, 25x2, Gold, TH	Header, 2.54mm, 25x2, TH
J4, J600, J601	3		923345-07-C	3M	Jumper Wire, 700mil spacing, Violet, pkg of 150, TH	700 mil Jumper Wire
J5	1		923345-20-C	3M	Jumper Wire, 2" spacing, Red, pkg of 100, TH	Jumper Wire, 2" Spacing, Red, Pkg of 100
J6	1		923345-30-C	3M	Jumper Wire, 3" spacing, Orange, pkg of 75, TH	Jumper Wire, 3" Spacing, Orange, Pkg of 75
J8	1		923345-50-C	3M	Jumper Wire, 5" spacing, Green, pkg of 75, TH	Jumper Wire, 5" Spacing, Graan, Pkg of 75
J11	1		PBC02SAAN	Sullins Connector Solutions	Header, 100mil, 2x1, Gold, TH	Sullins 100mil, 1x2, 230 mil above insulator
JTAG	1		851-43-006-10-001000	Mill-Max	Receptacle, 50mil, 6x1, Gold, TH	Receptacle, 6x1, 50mil, TH
L1	1	100uH	7447714101	Würth Elektronik	Inductor, Shielded Drum Core, Ferrite, 100 µH, 1.5 A, 0.165 ohm, SMD	SMD
L100, L200, L300, L400, L500	5	10uH	GLFR1608T100M-LR	TDK	Inductor, Wirewound, 10 µH, 0.08 A, 0.36 ohm, SMD	0603
L101, L102, L201, L202, L301, L302, L401, L402, L501, L502	10	10uH	UA8014-ALD	Coilcraft	Coupled inductor, 10 µH, 6.6 A, SMD	15.5x14mm
L600, L700	2	10uH	NRS4012T100MDGJV	Taiyo Yuden	Inductor, Wirewound, 10 µH, 0.8 A, 0.204 ohm, SMD	2-Pin SMD, Body 4 x 4 mm, Height 1.2 mm
LOAD, MODE1, MODE2, MODE3, MODE4, MUTE, RESET, VOL-DN, VOL-UP	9		TL1015AF160QG	E-Switch	Switch, Tactile, SPST-NO, 0.05A, 12V, SMT	Switch, 4.4x2x2.9 mm
OTW	1	Orange	LTST-C170KFKT	Lite-On	LED, Orange, SMD	LED_0805
Q1, Q3	2	60V	2N7002-7-F	Diodes Inc.	MOSFET, N-CH, 60 V, 0.17 A, SOT-23	SOT-23
Q2, Q4, Q5, Q6, Q7, Q8	6	40 V	MMBT2222A	Fairchild Semiconductor	Transistor, NPN, 40 V, 0.15 A, SOT-23	SOT-23
R1, R64, R619, R620, R744, R745, R746, R747, R748, R749, R750, R751, R752, R753	14	100k	CRCW0402100KFKED	Vishay-Dale	RES, 100 k, 1%, 0.063 W, 0402	0402
R2, R21, R22, R23, R24, R25, R29, R30, R31, R32, R33, R93	12	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0, 5%, 0.1 W, 0603	0603

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R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16	14	2.00k	ERJ-2RKF2001X	Panasonic	RES, 2.00 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0402	0402
R17	1	30.0k	RC0603FR-0730KL	Yageo America	RES, 30.0 k, 1%, 0.1 W, 0603	0603
R18, R26	2	1.00k	CRCW06031K00FKEA	Vishay-Dale	RES, 1.00 k, 1%, 0.1 W, 0603	0603
R19, R27	2	47k	RC0603JR-0747KL	Yageo America	RES, 47 k, 5%, 0.1 W, 0603	0603
R20, R28, R102, R106, R108, R116, R202, R206, R208, R216, R302, R306, R308, R316, R402, R406, R408, R416, R502, R506, R508, R516, R603, R608	24	100	CRCW0603100RFKEA	Vishay-Dale	RES, 100, 1%, 0.1 W, 0603	0603
R34	1	215k	CRCW0603215KFKEA	Vishay-Dale	RES, 215 k, 1%, 0.1 W, 0603	0603
R36	1	25.5k	CRCW060325K5FKEA	Vishay-Dale	RES, 25.5 k, 1%, 0.1 W, 0603	0603
R37	1	12.1k	CRCW060312K1FKEA	Vishay-Dale	RES, 12.1 k, 1%, 0.1 W, 0603	0603
R38, R39, R40, R42, R44, R45, R60, R61	8	33.2k	CRCW040233K2FKED	Vishay-Dale	RES, 33.2 k, 1%, 0.063 W, 0402	0402
R41, R74	2	47.5k	CRCW040247K5FKED	Vishay-Dale	RES, 47.5 k, 1%, 0.063 W, 0402	0402
R43	1	332	CRCW0402332RFKED	Vishay-Dale	RES, 332, 1%, 0.063 W, 0402	0402
R46, R62, R65, R68, R70, R72	6	100	ERJ-2RKF1000X	Panasonic	RES, 100, 1%, 0.1 W, 0402	0402
R48	1	150k	RC0603FR-07150KL	Yageo America	RES, 150 k, 1%, 0.1 W, 0603	0603
R49	1	0	CRCW12060000Z0EA	Vishay-Dale	RES, 0, 5%, 0.25 W, 1206	1206
R50, R63, R67, R69, R71, R73	6	2.15k	CRCW04022K15FKED	Vishay-Dale	RES, 2.15 k, 1%, 0.063 W, 0402	0402
R51, R52, R53, R754	4	360	CRCW0402360RJNED	Vishay-Dale	RES, 360, 5%, 0.063 W, 0402	0402
R54, R55, R56, R57, R58, R66	6	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0 k, 1%, 0.1 W, 0603	0603
R59	1	10.0k	CRCW040210K0FKED	Vishay-Dale	RES, 10.0k ohm, 1%, 0.063W, 0402	0402
R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92	18	49.9	CRCW040249R9FKED	Vishay-Dale	RES, 49.9, 1%, 0.063 W, 0402	0402
R100, R200, R300, R400, R500, R601	6	10	CRCW060310R0JNEA	Vishay-Dale	RES, 10, 5%, 0.1 W, 0603	0603

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R101, R103, R105, R107, R201, R203, R205, R207, R301, R303, R305, R307, R401, R403, R405, R407, R501, R503, R505, R507, R602, R607	22	499	CRCW0603499RFKEA	Vishay-Dale	RES, 499, 1%, 0.1 W, 0603	0603
R104, R109, R118, R120, R204, R209, R218, R220, R304, R309, R318, R320, R404, R409, R418, R420, R504, R509, R518, R520	20	3.3	CRCW06033R30JNEA	Vishay-Dale	RES, 3.3, 5%, 0.1 W, 0603	0603

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R112, R113, R114, R212, R213, R214, R312, R313, R314, R412, R413, R414, R512, R513, R514, R600, R604, R606, R609, R610, R611, R614, R615, R616, R700, R701, R702, R703, R704, R705, R706, R707, R708, R709, R710, R711, R712, R713, R714, R715, R716, R717, R718, R719, R720, R721, R722, R723, R724, R725, R726, R727, R728, R729, R730, R731, R732, R733, R734, R735, R736, R737, R738, R739,	68	10.0k	ERJ-2RKF1002X	Panasonic	RES, 10.0 k, 1%, 0.1 W, 0402	0402
R115, R117, R215, R217, R315, R317, R415, R417, R515, R517, R617, R618	12	4.99k	CRCW04024K99FKED	Vishay-Dale	RES, 4.99 k, 1%, 0.063 W, 0402	0402
R119, R219, R319, R419, R519	5	22.0k	RC0603FR-0722KL	Yageo America	RES, 22.0 k, 1%, 0.1 W, 0603	0603
R605	1	49.9	CRCW060349R9FKEA	Vishay-Dale	RES, 49.9, 1%, 0.1 W, 0603	0603
TP1	1		5003	Keystone	Test Point, Miniature, Orange, TH	Orange Miniature Testpoint
U1	1		TCA6408ARSVR	Texas Instruments	Low-Voltage 8-Bit I2C and SMBus I/O Expander, 1.65 to 5.5 V, -40 to 85 degC, 16-pin UQFN (RSV), Green (RoHS & no Sb/Br)	RSV0016A
U2	1		MSP430F5234IRGZT	Texas Instruments	Mixed Signal Microcontroller, RGZ0048B (VQFN-48)	RGZ0048B
U3	1		TCA9548ARGER	Texas Instruments	8-Channel I2C Switch With Reset, RGE0024C (VQFN-24)	RGE0024C
U4, U5, U6, U7, U8, U9, U10, U12, U13, U14, U102, U103	12		SN74LVC1G125DCKR	Texas Instruments	Single Bus Buffer Gate With 3-State Output, DCK0005A	DCK0005A

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U11	1		24LC512-I/ST	Microchip	EEPROM, 512KBIT, 400KHZ, 8TSSOP	TSSOP-8
U100, U200, U300, U400, U500, U600	6		PCM5252RHBR	Texas Instruments	4.2VRMS DirectPath™, 114dB Audio Stereo Differential-Output DAC with 32-bit, 384kHz PCM Interface, RHB0032E	RHB0032E
U101, U201, U301, U401, U501	5		TPA3244DDWR	Texas Instruments	40-W Stereo, 100-W peak PurePath™ Ultra-HD Pad Down Class-D Amplifier, DDW0044D	DDW0044D
U601, U700, U701, U702, U703, U704, U705, U706, U707, U708, U709	11		NE5532AD	Texas Instruments	Dual Low-Noise Operational Amplifier, 10 to 30 V, 0 to 70 degC, 8-pin SOIC (D0008A), Green (RoHS & no Sb/Br)	D0008A
USB-I2X	1		PPPC082LFBN-RC	Sullins Connector Solutions	Receptacle, 2.54mm, 8x2, Gold, TH	Receptacle, 2.54mm, 8x2, TH
VR1	1		TPS54340DDAR	Texas Instruments	42 V Input, 3.5 A, Step Down DC-DC Converter with Eco-mode, DDA0008E (SOIC-8)	DDA0008E
VR2, VR3	2		LM2940CT-12/NOPB	Texas Instruments	1A Low Dropout Regulator, 3-pin TO-220, Pb-Free	T03B
VR4, VR5, VR6	3		TLV1117-33IKVURG3	Texas Instruments	FIXED LOW-DROPOUT VOLTAGE REGULATOR, KVVU0003A (TO-252-3)	KVVU0003A
Y2	1		NX3215SA-32.768K-STD-MUA-8	NDK	Crystal, 32.768kHz, 12.5pF, SMD	2-SMD
FID1, FID2, FID3, FID4, FID5, FID6	0		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	Fiducial
GND-IN	0		5001	Keystone	Test Point, Miniature, Black, TH	Black Miniature Testpoint
PWR-IN	0		5000	Keystone	Test Point, Miniature, Red, TH	Red Miniature Testpoint
R35	0	365k	CRCW0603365KFKEA	Vishay-Dale	RES, 365 k, 1%, 0.1 W, 0603	0603
R47	0	86.6k	CRCW060386K6FKEA	Vishay-Dale	RES, 86.6 k, 1%, 0.1 W, 0603	0603
R94	0	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0, 5%, 0.1 W, 0603	0603
R110, R111, R210, R211, R310, R311, R410, R411, R510, R511, R612, R613	0	10.0k	ERJ-2RKF1002X	Panasonic	RES, 10.0 k, 1%, 0.1 W, 0402	0402
TP2	0		5003	Keystone	Test Point, Miniature, Orange, TH	Orange Miniature Testpoint

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