

TIDA-011030 REV E1 Mainboard Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
PCB1	1		TIDA-011030	Any	Printed Circuit Board	
ANT1	1		2450AT18D0100001E	Johanson	2.4GHz Chip RF Antenna 2.4GHz ~ 2.5GHz 1.5dBi Solder Surface Mount	1206
C1, C2, C3, C7, C8, C9, C10, C13, C18, C25, C35	11	0.1uF	GCM155R71C104KA55D	MuRata	CAP, CERM, 0.1 uF, 16 V, +/- 10%, X7R, 0402	0402
C4	1	15pF	04025A150FAT2A	AVX	CAP, CERM, 15 pF, 50 V, +/- 1%, C0G/NP0, 0402	0402
C5, C6	2	1.5pF	GRM1555C1H1R5CA01D	MuRata	CAP, CERM, 1.5 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
C11, C12, C34	3	10uF	GRT188D71A106ME13D	Murata	Multi-Layer Ceramic Capacitor 10uF 10V X7T ±20% 0603 Paper T/R	0603
C14, C17, C21, C26	4	680pF	GRM155R71H681KA01D	MuRata	CAP, CERM, 680 pF, 50 V, +/- 10%, X7R, 0402	0402
C15	1	33pF	885012005058	Würth Electronics	33 pF ±5% 50V Ceramic Capacitor C0G, NP0 0402 (1005 Metric)	0402
C16	1	2.2nF	C0402C222F3GAC7867	KEMET	2200 pF ±1% 25V Ceramic Capacitor C0G, NP0 0402 (1005 Metric)	0402
C19	1	470pF	GRM1555C1H471JA01D	MuRata	CAP, CERM, 470 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
C20, C22	2	100pF	04025A101JAT2A	AVX	100pF ±5% 50V Ceramic Capacitor C0G, NP0 0402 (1005 Metric)	0402
C23, C24, C31, C32, C33	5	47uF	GRM21BR61A476ME15L	MuRata	CAP, CERM, 47 uF, 10 V, +/- 20%, X5R, 0805	0805
C27	1	0.015uF	GRM155R71H153KA12D	MuRata	CAP, CERM, 0.015 uF, 50 V, +/- 10%, X7R, 0402	0402
C28	1	1uF	GRM155R61C105MA12D	MuRata	CAP, CERM, 1 uF, 16 V, +/- 20%, X5R, 0402	0402
C29, C30	2	2.2uF	C5750X6S2W225K250KA	TDK	CAP, CERM, 2.2 uF, 450 V, +/- 10%, X6S, 2220	2220
D1, D4	2		PMEG3005ELS-QYL	Nexperia	Diode 30 V 500mA Surface Mount DFN1006BD-2	DFN1006BD-2
D2	1	RGB	150066M153000	Würth Elektronik	LED, RGB, SMD	1.6x1.6mm
D3	1		ESD321DYAR	Texas Instruments	0.9pF 3.6V ±30kV ESD protection diode with 6.8V 16A TLP clamping for USB 2.0 2-SOT-5X3 -55 to 150	SOT-5X3
D5, D6, D8	3	600V	CD1408-FU1600	Bourns	Diode, Ultrafast, 600 V, 1 A, 1408 Diode	1408 Diode
D7	1	8.2V	DDZ8V2C-7	Diodes Inc.	Diode, Zener, 8.2 V, 500 mW, SOD-123	SOD-123
FB1, FB2	2		74269244182	Würth Electronics	1.8 kOhms @ 100MHz 1 Power, Signal Line Ferrite Bead 0402 (1005 Metric) 210mA 2.1Ohm	0402
GND1	1		5001	Keystone Electronics	Test Point, Miniature, Black, TH	Black Miniature Testpoint
J1	1		61000621821	Würth Electronics	WR-PHD 2.54 mm Dual Row SMT Socket Header 6 pins	HDR6
J2	1		61000821821	Würth Electronics	CONNECTOR, RCPT, 8POS, 2ROW, 2.54MM	CONN_RCPT_8
J3	1		61300821121	Würth Electronics	CONN HEADER VERT 8POS 2.54MM	HDR8
L1	1	2.8nH	LQG15WZ2N8B02D	MuRata	Inductor, Multilayer, Air Core, 2.8 nH, 0.9 A, 0.08 ohm, AEC-Q200 Grade 1, SMD	0402
L2	1	10uH	LQM18DH100M70L	Murata	10 uH Shielded Multilayer Inductor 300 mA 1.37Ohm Max 0603 (1608 Metric)	0603
L3	1		74404064102		POWER INDUCTOR General Purpose Inductor, 1000uH, 10%, 1 Element, SMD, 2424	
R1, R5, R25, R26	4	100k	CRCW0402100KFKEDC	Vishay	100 kOhms ±1% 0.063W, 1/16W Chip Resistor 0402 (1005 Metric) Thick Film	0402
R2, R3, R4	3	330	ERJ-2RKF3300X	Panasonic	RES, 330, 1%, 0.1 W, AEC-Q200 Grade 0, 0402	0402
R6, R13, R21	3	33	RC0402FR-0733RL	Yageo America	RES, 33.0, 1%, 0.062 W, 0402	0402
R7, R8, R16, R17	4	91k	ERA-2AEB913X	Panasonic	Res Thin Film 0402 91K Ohm 0.1% 0.063W ±25ppm/°C Molded SMD Punched Carrier T/R	0402

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R9, R15	2	22k	ERA2AEB223X	Panasonic	22 kOhms $\pm 0.1\%$ 0.063W, 1/16W Chip Resistor 0402 (1005 Metric) Automotive AEC-Q200 Thin Film	0402
R10, R11, R12	3	330k	TNPV1206330KBEEN	Vishay Draloric	RES, 330 k, 0.1%, 1 W, 1206	1206
R14	1	2.00k	RT0603BRD072KL	Yageo America	RES, 2.00 k, 0.1%, 0.1 W, 0603	0603
R18, R19, R22, R24	4	41.2k	RT0402BRD0741K2L	Yageo	High Precision-High Stability Chip Resistor Thin Film 0402 41.2kOhm 0.1% Paper T/R	0402
R20, R23	2	1.00k	ERA-2AEB102X	Panasonic	RES, 1.00 k, 0.1%, 0.063 W, 0402	0402
R27	1	8.2k	RC0402FR-078K2L	Yageo	Res Thick Film 0402 8.2K Ohm 1% 0.063W(1/16W) ± 100 ppm/ $^{\circ}$ C Pad SMD T/R	0402
R28	1	38.3k	CRCW040238K3FKED	Vishay-Dale	RES, 38.3 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R29	1	10.0k	ERJ-2RK1002X	Panasonic	RES, 10.0 k, 1%, 0.1 W, 0402	0402
SW1	1		430133050816	Wurth	Tactile Switch SPST-NO Top Actuated Surface Mount	SMD2
U1	1		CC2340R53E0RKPR	Texas Instruments	SimpleLink™ Bluetooth @ 5.3 Low Energy Wireless MCU, VQFN40	VQFN40
U2, U3	2		TPD2E001DRYR	Texas Instruments	Low-Capacitance 2-Channel +/-15kV ESD Protection Array for High-Speed Data Interfaces, DRY0006A (USON-6)	DRY0006A
U4	1		OPA2323IDDFR	Texas Instruments	TLV9002IDDFR, DDF0008A (SOT-23-THN-8)	DDF0008A
U5	1		DRV8213DSG	Texas Instruments	4-A Brushed DC Motor Driver with Integrated Current Sense, Current Regulation and Stall Detection	WSON8
U6	1		UCC28881DR	Texas Instruments	700-V Lowest Quiescent Current Off-Line Switcher, D0007A (SOIC-7)	D0007A
U7	1		TLV709A33DBVR	Texas Instruments	150-mA 30-V low-dropout (LDO) linear regulator with 3.2- μ A supply current 5-SOT-23 -40 to 125	SOT23-5
Y1	1		TZ3908AAAO43	TAI-SAW Thechnology	Crystal Unit SMD 2.0x1.6 48.0MHz	SMT4_2MM05_1MM65
Z1	1	1.9nH	LQG15WZ1N9S02D	MuRata	Inductor, Multilayer, Air Core, 1.9 nH, 1 A, 0.05 ohm, AEC-Q200 Grade 1, SMD	0402
Z2, Z3	0	1.5pF	GRM1555C1H1R5CA01D	MuRata	CAP, CERM, 1.5 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402

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!PCB1	1		TIDA-011030	Any	Printed Circuit Board	
C1	1	100nF	GRM155R71H104KE14D	Murata	Chip Multilayer Ceramic Capacitors for General Purpose, 0402, 0.10uF, X7R, 15%, 10%, 50V	0402
J1, J4	2		1710878	Phoenix Contact	Conn PC Terminal Block F 4 POS 5mm Solder ST Thru-Hole 24A	TERM_BLK_4
J2	1		HW-03-11-L-D-649-SM	Samtec	High Temperature Flexible Board Stacking Header for Surface Mount, 0.100" Pitch 6 pins 2 rows	HDR8
J3	1		HW-04-11-L-D-649-SM	Samtec	High Temperature Flexible Board Stacking Header for Surface Mount, 0.100" Pitch 8 pins 2 rows	HDR8
K1	1		G6QE-1A DC5	Omron	General Purpose Relay SPST-NO (1 Form A) 5VDC Coil Through Hole 32A	PTH_RELAY_30MM5 16MM0
MP1, MP2	2		9774040243R		Spacer, Steel, With Internal Thread M2, 4MM Length, 4.35MM Outer Diameter	
R1	1	0.001	WSK12161L000FEA	Vishay Dale	Res Metal Strip 1216 0.001 Ohm 1% 3W ±150ppm/C Pad SMD T/R	1216
U1	1		TMP236A2DCKR	Texas Instruments	Low-Power, High-Accuracy Analog Output Temperature Sensors	SOT23-5

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