TIDA-011019 REV E1 Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	WE Alternative	Description	PackageReference
!PCB	1		TIDA-011019	Any		Printed Circuit Board	
BT1	1	3.6V	SL360/P	Tadiran Batteries		Battery, 3.6 V, 2.4 Ah, Axial, TH	Battery, 50.5x 14.7mm. TH
C1, C2, C8, C34, C36, C45, C48, C52, C55	9	0.1uF	GRM033C71A104KE14D	MuRata	885012104001	CAP, CERM, 0.1 uF, 10 V,+/- 10%, X7S, 0201	0201
C3, C33	2	22uF	GRM188C80J226ME15D	MuRata	885012106032	CAP, CERM, 22 µF, 6.3 V,+/- 20%, X6S, 0603	0603
C4	1	0.1uF	GRM155R70J104KA01D	MuRata	885012205018	CAP, CERM, 0.1 uF, 6.3 V, +/- 10%, X7R, 0402	0402
C5	1			Wurth Elektronik		WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0201, NP0 Class I, 15pF, 25VDC	
C6, C26	2			Wurth Elektronik		WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0201, NP0 Class I, 100pF, 50VDC	
C7	1			Wurth Elektronik		WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0201, NP0 Class I, 12pF, 25VDC	
C10, C20, C23	3	1nF	885012006044	Wurth Electronics		1000 pF ±5% 25V Ceramic Capacitor C0G, NP0 0603 (1608 Metric)	0603
C12, C13, C14, C37	4	0.47uF	GRM155R60J474KE19D	MuRata	885012105004	CAP, CERM, 0.47 uF, 6.3 V, +/- 10%, X5R, 0402	0402
C15	1	10uF	GRM188R60J106ME84	MuRata	885012106006	CAP, CERM, 10 uF, 6.3 V, +/- 20%, X5R, 0603	0603
C16	1	0.1uF	GRM155R61H104ME14D	MuRata	885012205086	CAP, CERM, 0.1 uF, 50 V, +/- 20%, X5R, 0402	0402
C17, C38	2	0.47uF	GCM155C71A474KE36D	MuRata	885012105004	CAP, CERM, 0.47 uF, 10 V,+/- 10%, X7S, 0402	0402
C18	1	0.01uF	GRM155R61C103KA01D	MuRata	885012205031	CAP, CERM, 0.01 uF, 16 V, +/- 10%, X5R, 0402	0402
C19	1	1uF	GRM155R61E105KA12D	MuRata	885012105019	CAP, CERM, 1 uF, 25 V, +/- 10%, X5R, 0402	0402
C21, C39, C40	3	3300pF	GRM1885C1H332JA01D	MuRata		CAP, CERM, 3300 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C22, C25, C28, C35	4	15pF	885012005056	Wurth Elektronik	885012005056	CAP, CERM, 15 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
C27, C29	2	2pF	GJM0335C1E2R0BB01D	Murata		Ceramic Capacitor 2pF ±0.1pF 25V C0G 0201 (0603 Metric)	0201
C41	1	47nH				Capacitor SMD	
C42	1	47pF				Capacitor SMD	
C43, C53	2	1nF				Capacitor SMD	
C44	1			Wurth Elektronik		WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0201, X5R Class II, 1µF, 16VDC	
C50	1	470nF				Capacitor SMD	
C51	1	1µF	GRM155C71A105KE11D	Murata		1µF ±10% 10V Ceramic Capacitor X7S 0402 (1005 Metric)	0402
C54, C56, C57, C58	4	100pF	GRM1555C1H101JA01D	MuRata	885012005061	CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
C59, C60	2	7.5pF	GRM0335C1H7R5BA01J	Murata		Chip Multilayer Ceramic Capacitors for General Purpose, 0201, 7.5pF, C0G, 30ppm/°C, 0.1pF, 50V	0201
C69	1	47uF	GRM21BR61A476ME15L	MuRata		CAP, CERM, 47 µF, 10 V,+/- 20%, X5R, 0805	0805
C70	1			Wurth Elektronik		WCAP-ATG8 Aluminum Electrolytic Capacitor, Radial, THT, D13 x H20mm, 1800uF, 25V	
D1, D2, D7	3	Infrared	SFH 4556	OSRAM	15400594A3590	LED, Infrared, TH	D5.5mm
D3, D6, D9	3		SFH 2704	OSRAM Opto Semiconductors		Photodiode 900nm 47ns, 67ns 2-SMD, No Lead	SMD2
D4	1		TPD1E0B04DPYR	Texas Instruments		1-Channel ESD Protection Diode for USB Type-C and Antenna Protection, DPY0002A (X1SON-2)	DPY0002A
D5	1	Yellow	150040YS73240	Wurth Elektronik		LED, Yellow, SMD	1x0.5mm
DS1	1		GDH-1638WP	Xiamen Ocular Optics		GDH-1638WP	PTH_DS_43MM0_17MM6
FID1, FID2, FID3	3		N/A	N/A		Fiducial mark. There is nothing to buy or mount.	N/A
FL1	1		LFB18868MBG9E212	Murata		Balance Matching BAND PASS FILTER 868 MHZ	SMD
J1, J3	2		TSW-105-08-G-S-RA	Samtec		Header, 100mil, 5x1, Gold, R/A, TH	5x1 R/A Header
J2	1		61300211121	Wurth Elektronik		Header, 2.54 mm, 2x1, Gold, TH	Header, 2.54mm, 2x1, TH
J4	1		SFW8S-2STE1LF	Amphenol ICC		1.00mm Flex Connector, SFW Straight series, 8 Position, Top Entry Surface Mount, ZIF	CONN_FF_FPC_VERT_8P

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J5, J6, J7, J8, J9, J10, J11, J12, J13, J14, J15, J16, J17	13		TMS-101-02-T-S	Samtec		Header, 1x1, Tin, TH	Header, 1x1, 50mil, TH
L1, L2	2	2.9nH	LQP03TN2N9BZ2B	Murata	7447820030G	Film type RF Inductor for Automotive 2.9nH ±0.1nH 500mA 0.2Ω 0201 (0603)	0201 (0603)
L3	1	6.8uH	MLZ2012N6R8LT000	TDK	74479777268	Inductor, Multilayer, Ferrite, 6.8 uH, 0.11 A, 0.25 ohm, SMD	0805
L4, L6, L9	3	235uH	GT1128-0	Gemphil Technologies	7447462221	Inductor, 235uH, TH	D5.7mm
L5	1		BLM03AX121SN1D	Murata		Ferrite Bead, 0201, 120Ω @ 100MHz, 25%, 0.23Ω, 450mA	0201
L7	1	15uH				Inductor SMD	
L8	1	47nH	LQW15AN47NG00D	MuRata	744765147A	Inductor, Wirewound, 47 nH, 0.21 A, 1.08 ohm, SMD	1x.5x.5mm
L10	1	4.7nH				Inductor SMD	
L11	1		0201DS-9N6XJE	Coilcraft	7447820091G	Chip Inductors - 0201DS Series (0603)	0603
R2, R34, R42, R43, R44, R45	6	0	NRC02ZOTRF	NIC Components		0 Ohms Jumper 0.05W, 1/20W Chip Resistor 0201 (0603 Metric) Automotive AEC-Q200 Thick Film	0201
R3, R5, R18, R19, R36	5	470	RC0402FR-07470RL	Yageo America	560112110167	RES, 470, 1%, 0.063 W, 0402	0402
R6, R9	2	100k	CRCW0402100KJNED	Vishay-Dale	560112110063	RES, 100 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R7, R8, R17, R23, R32, R33, R41	7	0	5113	Keystone Electronics	560112110001	0 Ohms Jumper Chip Resistor 0402 (1005 Metric) Metal Element	0402
R10, R13	2	47k	CRCW040247K0JNED	Vishay-Dale	560112110013	RES, 47 k, 5%, 0.063 W, 0402	0402
R11, R12, R47	3	0	CRCW04020000Z0EDHP	Vishay Dale	560112110001	RES Thick Film, 0Ω, 0.2W, 0402	0402
R14	1	10k	CRCW040210K0FKEDC	Vishay	560112110020	10 kOhms ±1% 0.063W, 1/16W Chip Resistor 0402 (1005 Metric) Thick Film	0402
R15, R16	2	2.2k	CRCW04022K20JNED	Vishay-Dale	560112110011	RES, 2.2 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R20, R26	2	100R				Resistor SMD - IEC symbol version	
R21, R22, R39	3	270	CRCW0402270RJNED	Vishay-Dale		RES, 270, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R29	1	6.2k	CRCW04026K20JNED	Vishay-Dale	560112110256	RES, 6.2 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R46	1	10k	RC0201JR-0710KL	Yageo America		RES, 10 k, 5%, 0.05 W, 0201	0201
TP1, TP2, TP3, TP4, TP10, TP15	6		5000	Keystone Electronics		Test Point, Miniature, Red, TH	Red Miniature Testpoint
U1	1		CC1312R74T0RGZ	Texas Instruments		SimpleLink High-Performance Sub-1 GHz Wireless MCU	VQFN48
U2	1		TPS27081ADDCR	Texas Instruments		1.2V - 8V, 3A PFET High Side Load Switch w/ Level Shift & Adj Slew Rate Control, DDC0006A (SOT-23-T-6)	DDC0006A
U3	1		TMAG5231B1DQBZR	Texas Instruments		Low-Power, Hall Effect Switch	SOT-23-3
U4	1		LM66100DCKR	Texas Instruments		+/-6V, Low IQ Ideal Diode with Input Polarity Protection, DCK0006A (SOT-SC70-6)	DCK0006A
U6	1		MSPM0L2117SPMR	Texas Instruments		MSPM0L2117SPMR	LQFP64
U7	1					0900FM15D0039 - Johanson IPD Filter for SX1261, SX1262	
U8	1					SX1262- Ultra low power RF transceiver	
U9	1					BGS12SN6 Infineon RF Switch	
U10	1		MX25V1635FZUI	Macronix International Co., LTD		2.3V-3.6V, 16M-BIT [x 1/x 2/x 4] CMOS MXSMIO (SERIAL MULTI I/O) FLASH MEMORY, SON-8	2x3mm USON-8
U11	1		RTC66016	RichWave		0.1 GHz - 7.125 GHz SPDT Switch	QFN6
Y1	1		NX2016SA-26.000M-STD-CZS-2	NDK	830108212609	Crystal, 26 MHz, 8pF, SMD	2.0x0.45x1.6mm
Y2	1			NDK	831056248	48MHz TCXO Oscillator 4-SMD, No Lead	SMT_XTAL_2MM0_1MM6
Y3	1		Q22FA1280009200	Epson	830072546	Crystal, 32 MHz, 10pF, SMD	Crystal, 2.6x0.5x1.6mm
Y6	1		X1A0001410014	Epson	830009678	Crystal, 32.768 KHz, 12.5 pF, SMD	SMD, 2-Leads, Body 3.2x1.5mm
Y7	1		FC-135 32.7680KA-A3	Epson	830009678	Crystal, 32.768 KHz, 12.5 pF, SMD	SMD, 2-Leads, Body 3.2x1.5mm

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