KiCAD Freakduino BOM

16/07/2013

element14

Qty	Reference(s)	Manufacturer	Part No.	Description	element14 SKU	MOQ	Price ea.	Amount
1	ANT1	Johnson/ Emerson	SMA-02-113-TGG	RP-SMA Connector	1789593	1	23.660	23.66
1	BATT1	JST	S2B-XH-A	2-pin mated, polarized connector, male	1516289	10	0.240	2.40
1	BATT2	Keystone	2462	2-AA battery case	1702630	1	2.660	2.66
1	BLN1	Johanson Technology	2450BL15B100E	100 ohm diff/50 ohm single ended, 2.4GHz, balun, 0805 (Different pin layout!)	1885503	1	0.884	0.88
10	C1,C10,C11,C13,C14, C16,C18,C20,C21,C23	TDK	C1608Y5V1H104Z	0.1uF/50V,0603	1844266	1	0.030	0.30
0	C2,R3,R9			DNI (Do Not Insert)				0.00
1	C3	Nichicon	UUR1C101MCL1GS	100uF/16V, electrolytic, SMD	1898740	1	0.355	0.36
1	C4	Johanson Technology	251R14S0R4AV4T	0.4pf, 0603 RF, Hi Q	1885354	25	0.228	5.70
2	C5,C22	TDK	C2012X5R0J226M/1.25	22uF, 6.3V, 0805, MLCC	2309030	1	0.214	0.43
2	C6,C7	Taiyo Yuden	UMK105C-G5R6DW-F	5.6pf, 50V, 0402,RF	1611949	1	0.030	0.06
2	C8,C12	Multicomp	MC0603B103M160CT	0.01uF, 0603	1709946	1	0.020	0.04
1	C9	Nichicon	F920G226MPA	22uf, 6.3V, Tant, 0805	1892302	1	1.800	1.80
1	C15	TDK	C1608X5R1A106M080AC	10uF, 10V, 0603	1962113	1	0.562	0.56
2	C17,C19	Multicomp	MC0603N120J101CT	12pF, 50V, 0603	2341488	1	0.030	0.06
1	D1	Vishay	VLMB1300-GS08	Blue LED, 0603	2251459	1	0.207	0.21
2	D2,D6	Vishay	VLMO1300-GS08	Red LED, 0603	2251473	1	0.207	0.41
2	D3,D4	Vishay	VLMTG1300-GS08	Green LED, 0603	2251490	1	0.160	0.32
0	D5	ST Micro	1N6263	Schottky Diode, thru	9801251	1	0.000	0.00
1	FB1	Murata	BLM18TG601TN1D	Ferrite Bead, 0603	1115050	10	0.020	0.20
1	H3	Molex	10897061	3x2 straight male header, 2.54mm (0.100")	1508365	1	0.902	0.90
1	JP1	Molex	22-28-5030	1x3 straight male header, 2.54mm (0.100")	1513726	1	0.077	0.08
2	JP2,JP7	Molex	22-28-4022	1x2 straight male header, 2.54mm (0.100")	1704910	1	0.201	0.40
2	JP4,JP6	Molex	90147-1208	1x8 straight female header, 2.54mm (0.100")	1508676	1	1.000	2.00
2	JP3,JP5	Molex	90147-1106	1x6 straight female header, 2.54mm (0.100")	1508728	1	1.780	3.56
1	J1	Multicomp	MC32598	USB Mini-AB connector	1696539	1	2.280	2.28
1	J2	Lumberg	NEB 21 R	DC Power Jack, 1.95mm center conductor	1217037	1	2.260	2.26
1	L1	Johanson Technology	L-14C3N3SV4T	3.3nH RF inductor, 0603	1865790	50	0.132	6.60
1	L2	Taiyo Yuden	BRL1608T4R7M	4.7uH inductor, 310mA, thru	1904348	1	0.858	0.86
5	R1,R2,R7,R8,R12	Multicomp	MCMR06X2200FTL	220 ohms, 0603	2073428	100	0.004	0.40
2	R4,R5	Multicomp	MCMR06X102 JTL	1 Kohm, 0603	2073354	100	0.005	0.50
4	R6,R10,R11,R13	Multicomp	MCSR06X103 JTL	10 Kohms, 0603	2074170	100	0.003	0.30
2	R14,R15	Multicomp	MCMR06X104 JTL	100 Kohms, 0603	2073357	100	0.003	0.30
1	SW1	Omron	A6TN-2104	DIP switch, SPST, 2 poles, raised slide, thru	2066443	1	2.660	2.66
1	S1	C & K Components	OS102011MA1QN1	Right angle slide switch, SPDT, ON-ON	1201431	1	1.820	1.82
1	S2	Wurth Elektronik	430471031826	SMD SPST Tactile Switch/Pushbutton	1867986	1	1.360	1.36
1	U1	FTDI	FT232RL	USB-to-Serial converter	1146032	1	11.830	11.83
1	U2	Texas Instruments	LM1117MP-3.3	3.3V regulator SOT	9778195	1	1.340	1.34
1	U3	Atmel	AT86RF231-ZU QFN	2.4GHz, 802.15.4 radio.	1748493	1	8.970	8.97
1	U4	NXP	GTL2003	Voltage level shifter, 8-bit, TSSOP-20 package	2212068	1	1.260	1.26
1	U5	Texas Instruments	TPS61222DCKT	5V boost converter	1755643	1	2.930	2.93
1	U6	Atmel	ATMEGA328-QFP32	AVR Microcontroller	1972086	1	4.450	4.45
1	VR1	ST Micro	L78M05CDT-TR	5.0V regulator D-PAK 500mA	1261392	1	0.890	0.89
1	Y1	Aker	C3E-16.000-12-1010-X	16MHz crystal, 10ppm, 12pf	1640978	1	6.210	6.21
							Total	**104.21**

COLOUR KEY

	BLACK	As originally specified for Freakduino v2.1a.
	ORANGE	Alternative part with same footprint as original. Additional orange text shows difference in part parameters.
	PURPLE	Alternative part with **different** footprint to original.
	RED	Part not available and no alternative so far found. Red in price column indicates price unreasonably high.

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DigiKey

Qty	Reference(s)	Manufacturer	Part No.	Description	DigiKey SKU	MOQ	USD ea.	Amount
1	ANT1	ChangHong	SMA-02-113-TGG	RP-SMA Connector			0.00	
1	BATT1	JST	JST-XH2P	2-pin mated, polarized connector, male				
1	BATT2	COMF	BH321-1P	2-AA battery case				
1	BLN1	Murata	LDB-182G4510C-110	100 ohm diff/50 ohm single ended, 2.4GHz, balun				
10	C1,C10,C11,C13,C14,C16,C18,C20,C21,C23	Various		0.1uF/50V,0603				
0	C2,R3,R9		DNI					
1	C3	Various		100uF/16V				
1	C4	Johanson Technology	251R14S0R4	0.4pf,0603 RF capacitor				
2	C5,C22	Various		22uF, 6.3V,0805, MLCC				
2	C6,C7	Taiyo Yuden	UMK105C-G5R6DW-F	5.6pf,50V,0402,RF				
2	C8,C12	Various		0.01uF, 0603				
2	C9,C15	Various		100uF, 35V, thru				
2	C17,C19	Various		12pF, 50V, 0603				
1	D1	Various		Blue LED, 0603				
2	D2,D6	Various		Red LED, 0603				
2	D3,D4	Various		Green LED, 0603				
1	D5	Vishay	BAT43	Schottky Diode, thru				
1	FB1	Various		Ferrite Bead, 0805				
1	H3	Various	H3X2	3x2 straight male header, 2.54mm (0.100")				
1	JP1	Various	JP3/THRU_VERT	1x3 straight male header, 2.54mm (0.100")				
2	JP2,JP7	Various	1X2	1x2 straight male header, 2.54mm (0.100")				
2	JP4,JP6	Various		1x8 straight male header, 2.54mm (0.100")				
2	JP3,JP5	Various		1x6 straight male header, 2.54mm (0.100")				
1	J1	4UCON	9558	USB Mini-AB connector				
1	J2	4UCON	5537	DC Power Jack, 2.0mm center conductor				
1	L1	Johanson Technology	L-14C3N3SV4T	3.3nH RF inductor				
1	L2	Various		47uH inductor, 200mA, thru				
5	R1,R2,R7,R8,R12	Various		220 ohms, 0603				
4	R6,R10,R11,R13			10 Kohms, 0603				
2	R14,R15	Various		100 Kohms, 0603				
2	R4,R5	Various		1 Kohm, 0603				
1	SW1	Various		2-input DIP switch, thru				
1	S1	Various		Right angle slide switch				
1	S2	Various		SMD SPST Tactile Switch/Pushbutton				
1	U1	FTDI	FT232RL	USB-to-Serial converter				
1	U2	Microchip	TC1264-3.3	3.3V regulator				
1	U3	Atmel	AT86RF231	2.4GHz, 802.15.4 radio				
1	U4	Fairchild	FXMA108	Voltage level converter, DQFN-20 package	FXMA108BQXFSCT-ND	1	1.52	
1	U5	Holtek	HT7750A	5V boost converter	NOT AVAILABLE			
1	U6	Atmel	ATMEGA328-QFP32	AVR Microcontroller				
1	VR1	NJRC	NJM2845-5.0	5.0V regulator				
1	Y1	NDK	NX3225SA,15ppm	16MHz crystal, 15ppm				