Winlink HF Simulator Ver 2a/2b

Device	QTY	As Built QTY	Value
C1, C9, C11, C12, C13, C18	6	6	0.1uf
C14	1	1	.15uf
C3, C4, C5, C6, C7, C8	6	6	.01uf
C2, C11, C19, C24, C17	5	3	10uf
C15, C16, C23, C22, C20, C21	6	6	2.2uf
R1, R2, R3, R4	4	4	1.2k
R5, R6	2	2	4.7k
R7, R8, R9, R10, R11, R12, R13, R14, R22, R37, R29	11	8	10k
R20, R30, R31, R15, R16, R17, R18, R19	8	8	120 Ohms
R23	1	0	240 Ohms
R21	1	0	470 Ohms
R27, R35, R25, R28	4	4	100k
R32, R24	2	2	0 Ohms
R26, R34	2	2	1k
Q1	1	0	IRLML6244TR
L1, L2, L3	3	1	1K @100 MHz
U1	1	1	Teensy 4.0
U2, U3	2	2	PEC11R-4230F-S0024
U4	1	1	AP7313-18SRG
U5	1	1	SGTL5000
U6	1	0	PVT312LSPBF
U7	1	1	OPA2322AID
J1	1	0	P02EK381V2
J2, J3	2	2	STX-3120-3B
P1	1	0	4 pin, .1in Male Pins
P2	1	1	14 pin, .1in header
P3	1	0	9 pin, .1in header
P4	1	1	5 pin, .1in header
U1 Socket for Teensy 4.0	2	2	14 pin, .1in header

D1, D2, D4	3	0	LED Amber
D3	1	0	Led Green
	2	2	Knob, .250 Shaft
	0	0	Case, Poly
	1	1	Case, Poly
	4	4	Case PCB, Screws
PCB	1	1	Circuit Board
LCD	1	1	2.8in TFT LCD
PCB Assembly	1	1	PCB Assembly
Shipping Cost, Misc	1	1	
Duty	1	1	

ESW-105-23-L-S
ESW-114-23-L-S

C16, C23, C20, C21
C16, C23, C20, C21

Note	Pkg	Mfg Part Number	Mfg	Most small p Cost (100's)
X5R, X7R, 50V	0805	C0805C104M5RACTU	Kemet	0.05
X5R, X7R, 50V	0805	CC0805KRX7R9BB154	Yageo	0.07
X5R, X7R, 50V	0805	C0805C103J5RAC7210	Kemet	0.05
X5R, X7R, 16V	0805	C0805C106K4PACTU	Kemet	0.07
X5R, X7R, 16V	0805	CC0805KRX5R7BB225	Yageo	0.08
	0805	RC0805FR-071K2L	Yageo	0.02
	0805	RC0805FR-074K7L	Yageo	0.02
	0805	RC0805FR-0710KL	Yageo	0.02
	0805	RC0805FR-07120RL	Yageo	0.02
	0805	RC0805FR-07240RL	Yageo	0.02
	0805	RC0805FR-07470RL	Yageo	0.02
	0805	RC0805FR-07100KL	Yageo	0.02
	0805	RC0805FR-070RL	Yageo	0.02
	0805	RC0805FR-071KL	Yageo	0.02
	SOT-23	IRLML6244TRPBF	Infineon	0.18
	0805	BK2125HS102-T	Taiyo Yuden	0.40
Processor, with pins			PJRC	22.95
Encoder		PEC11R-4230F-S0024	Bourns	1.56
1.8v LDO	SOT-23	AP7313-18SAG-7	Diode Inc	0.19
Audio Codex	QFN32	SGTL5000XNNA3	NXP	3.03
SS Relay	6-SMD	PVT312LSPBF	NXP	2.84
Dual Op-Amp	8-MSOP	OPA2322AID	TI	1.49
Wire Connector, 2 pin		P02EK381V2	Kobiconn	0.49
1/8 in Stero Audio Jack		STX-3120-3B	Kycon	0.49
Male Pins	2.54mm			0.68
13.59mm tall	2.54mm	ESW-114-23-L-S	Samtec	2.46
13.59mm tall	2.54mm	ESW-109-23-L-S	Samtec	1.24
13.59mm tall	2.54mm	ESW-105-23-L-S	Samtec	1.05
8.5mm tall	2.54mm	PPPC141LFBN-RC	Sullins	0.68

0805	LTST-C171AKT	Lite-On	0.08
0805	LTST-C171KGKT	Lite-On	0.08
Black	420063B14	APEM	2.81
Case, Gray	JG-22450A*01	PolyCase	0.00
Case, Gray	DC-45PMBYT*01	PolyCase	22.00
4/24, 3/8 in			0.02
			3.00
320x240, No Touch Panel	MSP2806	China	6.00
			37.00
			5.00
			18.00
			Total:

Alt Parts

47uf 10v 0805 X5R	GRM21BR61A476ME15L	Murata	0.37
22uf 10v 0805 X5R	GRM21BR61A226ME51L	Murata	0.15

parts are priced at 100 each
Total

Total	Notes	Comment
0.30		Substitute parts ok
0.07		Substitute parts ok
0.30		Substitute parts ok
0.21	C19, C24 Not Installed	Substitute parts ok
0.48		
0.00		
0.00		
0.08		Substitute parts ok
0.04		Substitute parts ok
0.16	R22, R29, R37 Not Installed	Substitute parts ok
		Substitute parts ok
0.16		Substitute parts ok
0.00	Not Installed	Substitute parts ok
0.00	Not Installed	Substitute parts ok
0.08		Substitute parts ok
0.04		Substitute parts ok
0.04		Substitute parts ok
0.00		
0.00	Not Installed	
0.00		
0.00		
0.40	L2, L3 Not Installed	
0.00		
22.95		
3.12		
0.19		
3.03		
0.00	Not Installed	
1.49		
0.00		
0.00	Not Installed	
0.98		
0.00		
0.00	Not Installed	I2C Connector
2.46		
0.00	Not Installed	For 2.2in display
1.05		
0.00		
1.36		
0.00		

0.00	Not Installed
0.00	Not Installed
0.00	
5.62	
0.00	ARSFI, Special Part number, machine and silkscreen
22.00	
0.08	
3.00	
6.00	Alt Parts MSP2807 with
37.00	
5.00	
18.00	
135.69	

Touch