

Reference	Description	Part Number	Manufacturer	Quantity
Capacitors				
C1, C4, C5, C6, C9, C10, C11, C12, C13, C14, C16, C17, C18, C19, C22, C23, C30, C31, C36	0.1uF, 50V Ceramic Capacitor, SMD, 0603	CL10B104KB8NNNL	Samsung	19
C2, C15, C21	4.7uF, 50V Ceramic Capacitor, SMD, 1206	CL31B475KBHNNNE	Samsung	3
C3, C20	10uF, 50V Ceramic Capacitor, SMD, 1206	CL31B106KBHNNNE	Samsung	2
C7, C8	220pF, 50V Ceramic Capacitor, SMD, 0603	CL10B221KB8NFNC	Samsung	2
C24	1uF, 25V Ceramic Capacitor, SMD, 0603	CL10B105KA8NFNC	Samsung	1
C25, C26, C27, C28	22uF, 25V Ceramic Capacitor, SMD, 1210	CL32B226KAJNNWE	Samsung	4
C29, C32	470uF, 25V Polymer Capacitor	EEH-AZK1E471B	Panasonic	2
C33, C34, C35	0.01uF, 50V Ceramic, SMD, 0603	CL10B103KB8NNNC	Samsung	3
Resistors				
R1, R2, R3, R11, R12, R14	100k Resistor, SMD, 0603, 1/10W, 1%	CRCW0603100KFKEAC	Vishay	6
R4, R6, R26, R27, R28, R29, R30, R31, R32, R33, R34	10k Resistor, SMD, 0603, 1/10W, 1%	CRCW060310K0FKECC	Vishay	11
R5, R7, R16, R20, R22, R25	1M Resistor, SMD, 0603, 1/10W, 1%	CRCW06031M00FKEA	Vishay	6
R8	1k Resistor, SMD, 1206, 1/4W, 1%	CRCW12061K00FKEBC	Vishay	1
R9, R10	1.3K Resistor, SMD, 5W, 1%	35501K3FT	TE Connectivity	2
R13, R15	39 Ohm Resistor, SMD, 0805, 1/2W, 5%	ERJ-P06J390V	Panasonic	2
R17	1.8M Resistor, SMD, 0805, 1/10W, 0.1%	CPF0805B1M8E	TE Connectivity	1
R18	1.3M Resistor, SMD, 0805, 1/10W, 0.1%	CPF0805B1M3E1	TE Connectivity	1
R19	10M Resistor, SMD, 0805, 1/8W, 0.5%	CRCW080510M0DHEAP	Vishay	1
R21, R23	2.2k Resistor, SMD, 0603, 1/10W, 1%	CRCW06032K20FKEAC	Vishay	2
R24	180 Ohm Resistor, SMD, 0805, 1/8W, 0.5%	ERA-6AED181V	Panasonic	1
Potentiometers				
RV2, RV5	10K Potentiometer, 1/20W	PTV09A-4015U-B103	Bourns	2
LEDs				
D2	Yellow/Green SMD LED	19-213SYGW/S5888/TR8	Everlight Electronics	1
D4	Red LED	LTL-307P	LITEON	1
Diodes				
D1	Zener Diode, 12.88V, 500mW	DDZ13BSF-7	Diodes Inc	1
D3, D5	Zener Diode, 8.2V, 250mW	BZX84-C8V2,235	Nexperia	2
D6	Schottky Diode	V3FM12-M3/H	Vishay	1
Inductors				
FB1, FB2	Ferrite Bead	MFBM1V3216-102-R	Eaton	2
L1	22uH Inductor	SRP1265C-220M	Bourns	1
L2	47uH Inductor	CLF12577NIT-470M-D	TDK	1
Transistors				
Q1	N-CH/P-CH Dual MOSFET, 12V, 4.5A	SIA517DJ-T1-GE3	Vishay	1
Q2	P-CH MOSFET, 40V, 3.3A	DMP4047LFDE-7	Diodes Inc	1
Q3	P-CH MOSFET, 30V, 4A	PMPB47XP	Nexperia	1
Q4, Q5	NPN BJT, 45V, 100mA	BC847,215	Nexperia	2
IC's				
U1	Mux/Demux 2x 4:1	CD4052BPWRG3	Texas Instruments	1
U2	Class D Amplifier	MAX98357AETE+T	Analog Devices (Maxim)	1

U3	MCU, ARM Cortex M4	ATSAMG53N19B-AU	Microchip	1
U4, U5	Optoisolator, A/C Input	VOS627A-X001T	Vishay	2
U6	MRAM Module, 128kb (16kx8), SPI	MR25H128A	Everspin Technologies	1
U7	2.5V Voltage Reference	LT6654BHS6-2.5#TRMPBF	Analog Devices	1
U8	Switching Regulator, Buck, 5V, 2.5A	TLS4125D0EPV50XUMA1	Infineon	1
U9	Dual Comparator	LM2903DR2G	onsemi	1
U10	Switching Regulator, Buck, 3.3V, 1A	AP1509-33SG-13	Diodes Inc	1
U11	IO Expander 16b, I2C	PI4IOE5V9535LEX	Diodes Inc	1
Display				
DS1	Character LCD, 16x2	C162BLBSBSW6WN33PAB	Focus LCDs	1
Connectors, Switches, Etc.				
F1, F2	Fuse Holder, 5mmx20mm Fuses	4527	Keystone Electronics	2
J1	SWD Connector	3220-10-0100-00	CNC Tech	1
J2	MircoSD Card Connector	MEM2051-00-195-00-A	GCT	1
J3	Doorbell Wire Terminal (3 Wire)	1935174	Phoenix Contact	1
(LS1)*	Speaker	3968	Adafruit	1
BT1, LS1	Wire Connector Terminal, 2 Pos	559350210	Molex	2
*	Wire Connector Housing, 2 Pos	513820200	Molex	2
*	Connector Wire Contact	561349100	Molex	4
SW1	Rotary Encoder	PEC12R-4115F-S0012	Bourns	1
(F1)*	3.15A Fuse, Ceramic, Slow Blow, 5mmx20mm	0659C3150-12	Bel Fuse	1
(F2)*	63mA Fuse, Glass, Slow Blow, 5mmx20mm	5ST 63-R	Bel Fuse	1
RV1	MOV, 39V 2kA	V10E25P	Littelfuse	1
RV3, RV4	MOV, 56V 2kA	V10E35P	Littelfuse	2
(DS1)*	Machine Screw, M2.5x0.45	29300	Keystone Electronics	4
(DS1)*	Standoff, M2.5x0.45, 11mm	M2106-2545-AL	RAF Electronic Hardware	4
(DS1)*	DS1 Pin Header	PREC007DAAN-RC	Sullins Connector	1
(DS1)*	DS1 Socket Header	PPTC072LFBN-RC	Sullins Connector	1

*=Not on Schematic