





Comment	Description	Designator	Footprint	LibRef	Quantity
Capacitor	Capacitor	C1, C2	CAPC2012N	Capacitor	2
Power Jack	Power Jack 3 Pin, 2.1x5.5 mm, Through Hole	CN1	POWER-JACK-2.1x5.5	Power Jack 2.1x5.5	1
MOTOR OUT	Screw Terminal Block 2- Way, Through Hole, 5.08mm Pitch	CN2	TB2	Screw Terminal Block 2- Way	1
M7	Diode	D1	DO-214AC	Diode	1
7-Segment Display	14.2 mm General Purpose Blue 7- Segment Display: CC, RH DP, Gray Surface	DS1, DS2	7-SEG-DISPLAY-14.2	7-Segment Display	2
Electrolytic Capacitor	Electrolytic Capacitor	E1, E2	TANTALUMC3216N	Electrolytic Capacitor	2
5V	Header Female	HDR1	HDRM-2.54-S-1X3	Header Female 1x3	1
3.3V	Header Female	HDR2	HDRM-2.54-S-1X3	Header Female 1x3	1
GND	Header Female	HDR3	HDRM-2.54-S-1X3	Header Female 1x3	1
KEYPAD 4x4	Header Female	HDR4	HDRF-2.54-R-1X8	Header Female 1x8	1
Header Male 1x20	Header Male	HDR5, HDR8	HDRM-2.54-S-1X20	Header Male 1x20	2
Header Female 1x20	Header Female 1x20	HDR6, HDR7	HDRF-2.54-S-1X20	Header Female 1x20	2
LCD BACKLIGHT	Jumper 2 Pin	J1	HDR1X2	Jumper 2 Pin	1
LCD DISPLAY 4-BIT MODE	1602 LCD	LCD1	1602-LCD-2	1602 LCD	1
PWR	LED Red	LD1, LD2, LD3	LEDC2012N	LED Red	3
Potentiometer	Potentiometer 3 Pin	P1	POT-R16K1	Potentiometer	1
BD139	Transistor NPN Type2	Q1	TO-225-3	Transistor NPN Type2	1
BC847ALT1	Transistor NPN Type1	Q2, Q3	SOT-23-3N	Transistor NPN Type1	2
Resistor	Resistor	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24, R25	RESC2012N	Resistor	25
KEY1	Tact Switch 4 Pin, Push Button	T1	TACT-6X6	Tact Switch 4 Pin	1
KEY2	Tact Switch 4 Pin, Push Button	T2	TACT-6X6	Tact Switch 4 Pin	1
LM317	Three-Terminal Adjustable Output Positive Voltage Regulator	U1	D-PAK/TO-252-AA	LM317	1
4N37-X	Optocoupler, Phototran	U2	DIP-6	4N37-X	1