

Designator	Description	Manufacturer	PartNumber	Value	Quantity
C1, C3	4.7μF ±10% 6.3V Ceramic Capacitor X5R 0603	Kemet	C0603C475K9PACT U	4.7uF	2
C2, C4, C13	Ceramic Capacitor X7R 0603 ±10% 16V	Yageo	CC0603KPX7R7BB1 04	100nF	3
C5, C14, C15, C16, C17, C18, C22, C23, C25, C26	Ceramic Capacitor X5R ±10% 16V 0402	Yageo	CC0402KRX5R7BB1 0	100nF	10
C6	CAP TANT 220UF 10% 6.3V 2312	KEMET	T491C227K006AT	220uF	1
C7, C8, C9, C10	10μF ±20% 6.3V Ceramic Capacitor X5R 0603	Taiyo Yuden	JMK107ABJ106MA- T	10uF	4
C11	10000pF ±10% 16V Ceramic Capacitor X7R 0402	Taiyo Yuden	EMK105B7103KV-F	10nF	1
C12	Multilayer Ceramic Capacitors MLCC - SMD/SMT 100UF 6.3V X5R 1210	Taiyo Yuden	JMK325ABJ107MM -P	100uF	1
C19, C20	Ceramic Capacitor COG, NP0 ±10% 16V 0402, CapCeramic Capacitor COG, NP0 ±10% 16V 0402	Yageo	CC0402KRNPO7BN 100	10pF	2
C21, C24	Ceramic Capacitor COG, NP0 ±5% 16V 0402	Yageo	CC0402JRNPO7BN2 20	22pF	2
C28	Multilayer Ceramic Capacitors MLCC - SMD/SMT 100UF 6.3V 10% 1206	Murata Electronics	GRM31CR60J107KE 39K	100uF	1
D1	LED RED CLEAR 1006 SMD	Rohm Semiconductor	SML-P11UTT86R		1
D3, D4, D5, D6, D7, D8	Transient Voltage Suppressor, 6.40 to 231 V, 5 V Stand-off Voltage, Bi-Directional, -55 to 155 degC, 2-pin DO-214AC, Pb-Free, Tape and Reel	Vishay Semiconductor	SMAJ5.0CA-E3/5A		6
L1	Fixed Inductors 1.5Uh Shld 9.1A 15.8mOhms	Coilcraft	XFL4020-152MEC	1.5uH	1
L2	Fixed Inductors 22uH Shld 20% 830mA 360 mOhms	Coilcraft	LPS4018-223M	22uH	1
ok1	RES SMD 5.23M OHM 1% 1/16W 0402	Yageo	RC0402FR- 075M23L	5.23M	1
ok2, ov1	RES SMD 6.2M OHM 1% 1/16W 0402	Yageo	RC0402FR-076M2L	6.2M	2
ok3	RES SMD 1.6M OHM 1% 1/16W 0402	Yageo	RC0402FR-071M6L	1.6M	1
ov2	±1% 0.1W, 1/10W Chip Resistor 0603	Yageo	RC0402FR-076M8L	6.8M	1
P1, P2, P4, P5, P9	Connector Header Surface Mount, Right Angle 2 position 0.049" (1.25mm)	Amphenol ICC (FCI)	10114830-10102LF		5
P6	Header, 4-Pin, Dual row	深圳市山谷道电子 有限	SGDBM-08-008P- H20		1
P7	Header, 7-Pin, Dual row	深圳市山谷道电子 有限	SGDBM-08-014P- H20		1
Q1, Q2	Dual P-Channel MOSFET	ON Semiconductor	FDC6312P		2
R1, R3, R6, R10, R11, R12, R13	±1% 0.063W, 1/16W Chip Resistor 0402	Yageo	AC0402FR-0710KL	10K	7

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R2, R4	±1% 0.063W, 1/16W Chip Resistor 0402	Yageo	AC0402FR-0747KL	47K	2
R8	±1% 0.063W, 1/16W Chip Resistor 0402	Yageo	AC0402FR-07330RL	330	1
R9	±1% 0.063W, 1/16W Chip Resistor 0402	Yageo	AC0402FR-0756KL	56K	1
S1	DIP Switch, 2 Position, SPST	CUI Devices	DS05-127-2-02BK- SMT-TR		1
U1	IC REG BCK BST 3.3V 3.5A 14VSON	Texas Instruments	TPS63021DSJR		1
U2	Ultra Low-Power Boost Charger with Battery Management and Autonomous Power Multiplexer for Primary Battery in Energy Harvester Applications, 0.1 to 5.1 V, -40 to 85 degC, 20- Pin VQFN (RGR), Green (RoHS & no Sb/Br), Tape and Reel		BQ25505RGRT		1
U3	IC MCU 32BIT 256KB FLASH 48QFPN	STMicroelectronics	STM32L452CCU6		1
U4	Accelerometer, Gyroscope, Magnetometer, 9 Axis Sensor I <sup>2</sup> C, SPI Output	Bosch Sensortec	BMX160		1
Y1	Crystal Oscillator	Abracon LLC	ABS07-166- 32.768KHZ-T	32.768K	1
Y2	Crystal with GND pins	NDK	NX2520SA	8MHz	1
Case	Plastic Case				1
BAT1	Lithium Battery	EVE	ER34615		1
BAT2	Supercapacitors parallel with BAT1	CDA	LIC0820Q3R8406		1
BAT3	Supercapacitors with PH 1.25mm female connector	CDA	LIC1030 Q 3R8 127		1
PCB	PCB Material: FR-4 PCB Dimension (mm):42 x 70 PCB Layers: 2 PCB Layer Order: ☐TOP ☐BOTTOM PCB Thickness: 1.0mm Copper Weight: 1oz PCB Color: Green Silkscreen: White Surface Finish: Electroless Nickel Immersion Gold (ENIG) RoHS Via solder mask: Solder mask cover				1
	D Battery Holder with PH1.25mm				1
SWITCH 1	POWER SWITCH - Water Proof with PH1.25mm				1
SWITCH 1	Toggle SWITCH - Water Proof with PH1.25mm				1
S1	Solar Panel with PH1.25mm (68*37mm max 5V 100mA)				1
PCBA Coating	PCBA Coating with Conformal				1