

3.2 Bill of Materials and Schematic

Table 2. Bill of Materials

COUNT	RefDes	VALUE	Description	Size	Part Number	MFR
2	C1, C3	1.0uF	Capacitor, Ceramic, 25V, X5R, 10%	0603	Std	MFR
3	C2, C5, C12	1.0uF	Capacitor, Ceramic, 6.3V, X5R, 10%	0402	Std	Std
2	C4, C6	4.7uF	Capacitor, Ceramic, 25V, X5R, 10%	0805	Std	Std
1	C7	0.01uF	Capacitor, Ceramic, 16V, X7R, 10%	0402	Std	Std
1	C8	10uF	Capacitor, Ceramic, 10V, X5R, 10%	0603	Std	Std
1	C9	47uF	Capacitor, Ceramic, 10V, X5R, 20%	1206	Std	Std
4	C10, C11, C13, C15	0.1uF	Capacitor, Ceramic, 6.3V, X5R, 10%	0402	Std	Std
1	C14	0.033uF	Capacitor, Ceramic, 16V, X7R, 10%	0402	Std	Std
1	D1	Green	Diode, LED, Green, 2.1-V, 20-mA, 6-mcd	0603	LTST-C190GKT	Liteon
6	J1, J3, J4, J6, J8, J10	PEC02SAAN	Header, Male 2-pin, 100mil spacing.	0.100 inch x 2	PEC02SAAN	Sullins
0	J11	Open	Connector, Male Straight 2x5 pin, 100mil spacing, 4 Wall	0.338 x 0.788 inch	N2510-6002-RB	3M
1	J12	ED555/3DS	Terminal Block, 3-pin, 6-A, 3.5mm	0.41 x 0.25 inch	ED555/3DS	OST
1	J13	ED555/4DS	Terminal Block, 4-pin, 6-A, 3.5mm	0.55 x 0.25 inch	ED555/4DS	OST
1	J14	22-05-3041	Header, Friction Lock Assy, 4-pin Right Angle	0.400 x 0.500	22-05-3041	Molex
3	J2, J5, J9	ED555/2DS	Terminal Block, 2-pin, 6-A, 3.5mm	0.27 x 0.25	ED555/2DS	OST
1	J7	UX60-MB-5ST	Connector, Recept, USB-B, Mini, 5-pins, SMT	0.354 X 0.303 Inches	UX60-MB-5ST	Hirose
2	JP1, JP2	PEC02SAAN	Header, Male 2-pin, 100mil spacing.	0.100 inch x 2	PEC02SAAN	Sullins
2	JP4, JP5	PEC03SAAN	Header, Male 3-pin, 100mil spacing.	0.100 inch x 3	PEC03SAAN	Sullins
1	JP3	PEC03SAAN	Header, Male 3-pin, 100mil spacing.	0.100 inch x 3	PEC03SAAN	Sullins
1	L1	1.5uH	Inductor, SMT, 3.5A, 70 milliohm	4.1x4.4 mm	SPM4012T-1R5M Alternate: FDS0415-H-1R5M	TDK Alternate: Toko
1	Q1	CSD25401Q3	MOSFET, PChan, -20V, 60A, 8.7 milliohm	QFN3, 3x3, 3mm	CSD25401Q3	TI
1	R1	0	Resistor, Chip, 1/16W, 1%	0603	Std	Std
0	R3	0	Resistor, Chip, 1/16W, 1%	0603	Std	Std
4	R10, R11, R12, R13	10.0k	Resistor, Chip, 1/16W, 1%	0402	Std	Std
1	R2	510k	Resistor, Chip, 1/16W, 1%	0402	Std	Std
0	R4, R5	Open	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R6	1.80M	Resistor, Chip, 1/16W, 1%	0402	Std	Std
1	R7	18.2k	Resistor, Chip, 1/16W, 1%	0402	Std	Std

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bq27530EVM with bq27530 Battery Management Unit Impedance Track™ Fuel Gauge and bq24161 2.5-A, Dual-Input, Switch-Mode Battery Charger for Single-Cell Applications

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Circuit Module Physical Layouts, Bill of Materials, and Schematic

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Table 2. Bill of Materials (continued)

COUNT	RefDes	VALUE	Description	Size	Part Number	MFR
1	R8	0.01	Resistor, Chip, 1/4W, 1%	0805	WSL0805R0100FEA18	Vishay
2	R9, R14	1.00k	Resistor, Chip, 1/16W, 1%	0402	Std	Std
20	TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP10, TP11, TP12, TP13, TP14, TP15, TP16, TP17, TP18, TP19, TP20	5002	Test Point, White, Thru Hole Color Keyed	0.100 x 0.100 inch	5002	Keystone
1	U1	BQ24161YFF	IC, 2.5A, Dual-Input, Single Cell Switchmode Li-Ion BATTERY CHARGER with Power Path Management	BGA	BQ24161YFF	TI
1	U2	BQ27530-G1YZF	IC, Battery Monitor and Data Logger	DSBGA	BQ27530-G1YZF	TI
4	--	--	Shunt, 100-mil, Black	0.100	929950-00	3M
1	--	--	PCB		HPA763	Any
1	--	--	Label (See note 5)	1.25 x 0.25 inch	THT-13-457-10	Brady
2	J5 mate		Connector, Female, 0.100 Centers		22-01-3047	Molex
8	N/A		Terminals, Crimp, Tin		08-50-0114	Molex
	N/A		Wire, Insulated 24 Awg, Red, 18 inches (+/- 3 inches)(USB_5V)		1854-3	Alpha
	N/A		Wire, Insulated 24 Awg, White, 18 Inches (+/- 3 inches)(SCL)		1854-1	Alpha
	N/A		Wire, Insulated 24 Awg, Black, 18 Inches (+/- 3 inches)(GND)		1854-2	Alpha
	N/A		Wire, Insulated 24 Awg, Brown, 18 Inches (+/- 3 inches)(SDA)		1854-7	Alpha
1	N/A		Heatshrink 1" placed at middle of wire set		Any	Any

12 bq27530EVM with bq27530 Battery Management Unit Impedance Track™ Fuel Gauge and bq24161 2.5-A, Dual-Input, Switch-Mode Battery Charger for Single-Cell Applications

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