

# Battery Buddy Bill-of-Material (for TI LMR62421)

## Notes

- 1 Do not stuff R3. This was for a short-circuit detection function that did not work correctly.
- 2 I buy the Spiderfire 16340 batteries and chargers from dx.com.

## Common parts (for both 5V and 12V circuits)

Reference Designator	Description	Manufacturer	Part Number
C1, C2, C3	22 uF 16V X5R 10% 1206	Taiyo Yuden	EMK316BBJ226ML HT
C5	0.1 uF 16V X7R 5% 0603	Vishay	VJ0603Y104JXJP W1BC
CON5	Fixed Terminal Block 5.08 mm	Altech	MBES-152
D1	20V 2A Schottky Rectifier SOD-123F	NXP	PMEG2020EH,115
D2	Red LED 2 mm x 1.25mm	OSRAM Opto	LSR976-NR-1
D3	Yellow LED 2 mm x 1.25mm	OSRAM Opto	LYR971-HL-1
D4	Green LED 2 mm x 1.25mm	OSRAM Opto	LGR971-KN-1
PB1	Tactile Switch 4.3 mm SMT	C&K Components	PTS645SL43SMTR 92LFS
Q1	N-Channel MOSFET 30V 4.8A SOT-23	NXP Semiconductor	PMV20XN,215
R2	10 kohm 1% 100 mW 0603	KOA Speer	RK73H1JTTD1002 F
R4, R5, R6	133 ohm 1% 100 mW 0603	KOA Speer	RK73H1JTTD1330 F
U1	Switching Regulator SOT23-5	Texas Instruments	LMR62421XMFE
U2	8-bit Microcontroller SOIC8	Microchip	PIC12F510-I/SN

## 5V Version Specific Parts

Reference Designator	Description	Manufacturer	Part Number
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C4	820 pF 50V X7R 10% 0603	Vishay	VJ0603Y821KXAC W1BC
L1	2.6 uH 3 A 5.8mm SMT power inductor	Bourns	SRR5028-2R6Y
R1	30.1 kohm 1% 100 mW 0603	KOA Speer	RK73H1JTDD3012 F

#### 12V Version Specific Parts

Reference Designator	Description	Manufacturer	Part Number
C4	270 pF 50V X7R 10% 0603	Vishay	VJ0603Y271KXAC W1BC
L1	10 uH 1.5 A 5.8mm SMT power inductor	Bourns	SRR5028-100Y
R1	84.5 kohm 1% 100 mW 0603	KOA Speer	RK73H1JTDD8452 F