

### 5.3 Bill of Materials

**Table 2. HPA740A Bill of Materials**

Count	RefDes	Value	Description	Size	Part Number	MFR
2	C1, C5	0.1 µF	Capacitor, Ceramic, 25V, X7R, 10%	1206	Std	Std
0	C2, C4	Open	Capacitor, Ceramic, 25V, X7R, 10%	1206	Std	Std
1	C3	1 µF	Capacitor, Ceramic, 6.3V, X5R, 20%	0805	Std	Std
1	C6	0.1 µF	Capacitor, Ceramic, 25V, X7R, 10%	0603	Std	Std
7	C101, C102, C103, C104, C105, C106, C107	1 µF	Capacitor, Ceramic, 10V, X5R, 10%	0603	ECJ-1VB1A105K	Panasonic
1	D1	Red	Diode, LED, Red, 1.8-V, 20-mA, 20-mcd	0603	LTST-C190CKT	Liteon
1	D101	BZX84C10LT1G	Diode, Zener, 10-V, 350-mW	SOT-23	BZX84C10LT1G	On Semi
2	J1, J3	ED555/2DS	Terminal Block, 2-pin, 6-A, 3.5mm	0.27 x 0.25	ED555/2DS	OST
1	J2	ED555/4DS	Terminal Block, 4-pin, 6-A, 3.5mm	0.55 x 0.25 inch	ED555/4DS	OST
16	JP1, JP2, JP3, JP101, JP102, JP103, JP104, JP105, JP106, JP107, JP108, JP109, JP110, JP111, JP112, JP113	PEC02SAAN	Header, Male 2-pin, 100mil spacing,	0.100 inch x 2	PEC02SAAN	Sullins
1	Q101	MMBT3904LT1G	Bipolar, NPN, 40-V, 200-mA, 225-mW	SOT23	MMBT3904LT1G	On Semi
1	R1	24.3k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
0	R101		Resistor, Chip, 1/16W, 1%	0603	Std	Std
3	R102, R106, R3	1.00k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
3	R103, R107, R110	0	Resistor, Chip, 1/16W, 1%	0603	Std	Std
3	R104, R111, R113	100k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R108	100	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R109	2.00k	Potentiometer, 1/4 in. Cermet, 12-Turn, Top-Adjust	0.25x0.17	3266W-1-202LF	Bourns
1	R2	11.3k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R4	1.50k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
4	R5, R6, R112, R114	10.0k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	S101	G12AP	Switch, ON-ON Mini Toggle	0.28 x 0.18 inch	G12AP	NKK
0	TP1, TP2, TP5, TP7, TP8, TP9, TP10	Open	Test Point, 0.032 Hole		STD	STD
1	U1	BQ25070DQC	IC, 1A, Single-Input, Single Cell LiFePO <sub>4</sub> Linear Battery Charger with 50mA LDO	TDFN-10	BQ25070DQC	TI
1	U101	MC74HC74ADTR2G	IC, Dual D Flip Flop with Set and Reset	TSSOP	MC74HC74ADTR2G	On Semi
1	U102	TPS76133DBV	IC, Low-Power 100 mA LDO Regulator	SOT23-5	TPS76133DBV	TI
3	U103, U106, U107	SN74LV175APW	IC, Quad D-Flip Flop with Clear	TSSOP	SN74LV175APW	TI
1	U104	SN74LVC2G132DCTR	IC, Dual 2-Input NAND Gate With Schmitt-Trigger Inputs	SSOP-8	SN74LVC2G132DCTR	TI
1	U105	SN74HC10QPWREP	IC, Triple 3-Input Positive NAND Gate	TSSOP	SN74HC10QPWREP	TI
4	—		Shunt, 100-mil, Black	0.1	929950-00	3M
1	—		PCB, 2.4 In x 2.3 In x 0.031 In		HPA740	Any

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