



OpticSpy Analog: Crowd Supply Edition
 Bill-of-Materials
 HW A, Document 1.0, January 18, 2018

Item	Quantity	Reference	Manufacturer	Manuf. Part #	Distributor	Distrib. Part #	Description
1	9	C1, C2, C3, C4, C5, C6, C7, C11, C14	Kemet	C0805C104K5RACTU	Digi-Key	399-1170-1-ND	Capacitor, 0.1uF, 50V, Ceramic, 10%, X7R, 0805
2	1	C8	Kemet	C0805C103K5RACTU	Digi-Key	399-1158-1-ND	Capacitor, 0.01uF, 50V, Ceramic, 10%, X7R, 0805
3	2	C9, C10	Samsung	CL21C470JBANNNC	Digi-Key	1276-1156-1-ND	Capacitor, 47pF, 50V, Ceramic, 5%, C0G, 0805
4	2	C12, C13	Vishay Sprague	293D106X0016A2TE3	Digi-Key	718-1956-1-ND	Capacitor, 10uF, 16V, Tantalum, 20%, Size A
5	1	C15	Yageo	CC0805KRX7R9BB471	Digi-Key	311-1124-1-ND	Capacitor, 470pF, 50V, Ceramic, 10%, X7R, 0805
6	1	D1	Vishay Semiconductor	BPW21R	Digi-Key	751-1013-ND	Photodiode, Silicon PN, 420-675nm, TO-5
7	2	D2, D3	Kingbright	APT2012SYCK	Digi-Key	754-1134-1-ND	LED, Yellow clear, 150mcd, 2.0Vf, 590nm, 0805
8	1	L1	TDK	MPZ2012S221AT000	Digi-Key	445-1568-1-ND	Inductor, Ferrite Bead, 220R @ 100MHz, 3A, 0805
9	1	P1	Hirose Electric	UX60-MB-5S8	Digi-Key	H2960CT-ND	Connector, Mini-USB, 5-pin, SMT w/ PCB mount
10	1	Q1	ON Semiconductor	MMBT3904	Digi-Key	MMBT3904FSCT-ND	Transistor, NPN, 40V, 200mA, SOT23-3
11	1	R1	Any	Any	Digi-Key	P100KACT-ND	Resistor, 100k, 5%, 1/8W, 0805
12	2	R2, R12	Bourns	PVG5A203C03R00	Digi-Key	490-2667-1-ND	Resistor, Variable Trimmer, 20k, 1/8W, SMD
13	3	R3, R6, R11	Any	Any	Digi-Key	P1.0KACT-ND	Resistor, 1k, 5%, 1/8W, 0805
14	1	R4	Bourns	PVG5A504C03R00	Digi-Key	490-2674-1-ND	Resistor, Variable Trimmer, 500k, 1/8W, SMD
15	3	R5, R15, R16	Any	Any	Digi-Key	P4.7KACT-ND	Resistor, 4.7k, 5%, 1/8W, 0805
16	3	R7, R8, R9	Any	Any	Digi-Key	P10KACT-ND	Resistor, 10k, 5%, 1/8W, 0805
17	1	R10	Bourns	PVG5A105C03R00	Digi-Key	490-2663-1-ND	Resistor, Variable Trimmer, 1.0M, 1/8W, SMD
18	2	R13, R14	Any	Any	Digi-Key	P27ACT-ND	Resistor, 27 ohm, 5%, 1/8W, 0805
19	1	SW1	C&K Components	JS202011CQN	Digi-Key	401-2001-ND	Switch, DPDT slide, 300mA @ 6VDC, PCB mount
20	2	U1, U2	Maxim Integrated	MAX4124EUK+T	Digi-Key	MAX4124EUK+TCT-ND	IC, Operational Amplifier, Rail-to-Rail, SOT23-5
21	1	U3	Maxim Integrated	MAX985EUK+T	Digi-Key	MAX985EUK+TCT-ND	IC, Comparator, Push-Pull, Rail-to-Rail, SOT23-5
22	1	U4	FTDI	FT231XS-R	Digi-Key	768-1129-1-ND	IC, USB-to-UART Bridge, SSOP20
23	1	U5	Microchip	MIC5205-3.3YM5	Digi-Key	576-1259-1-ND	Linear Regulator, LDO, 3.3V, 150mA, SOT23-5