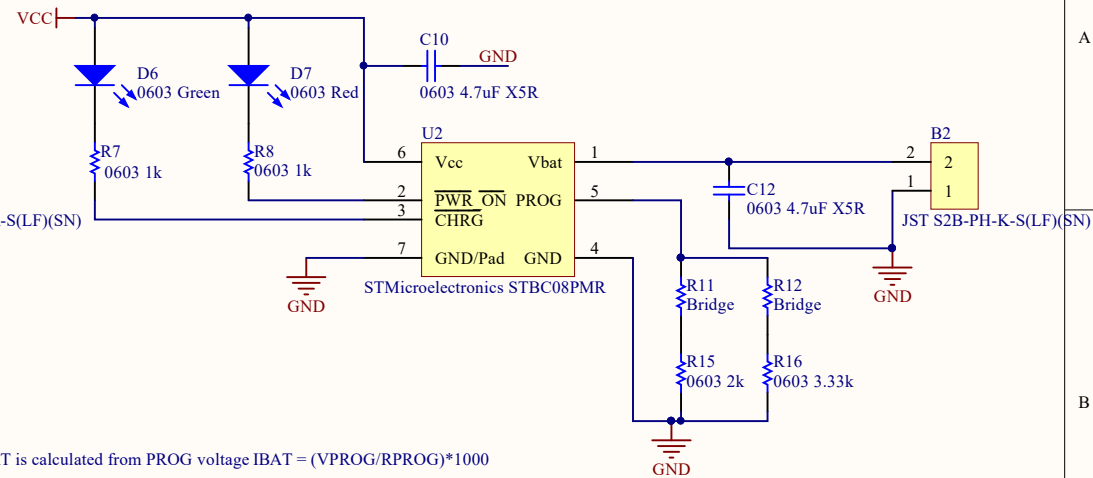
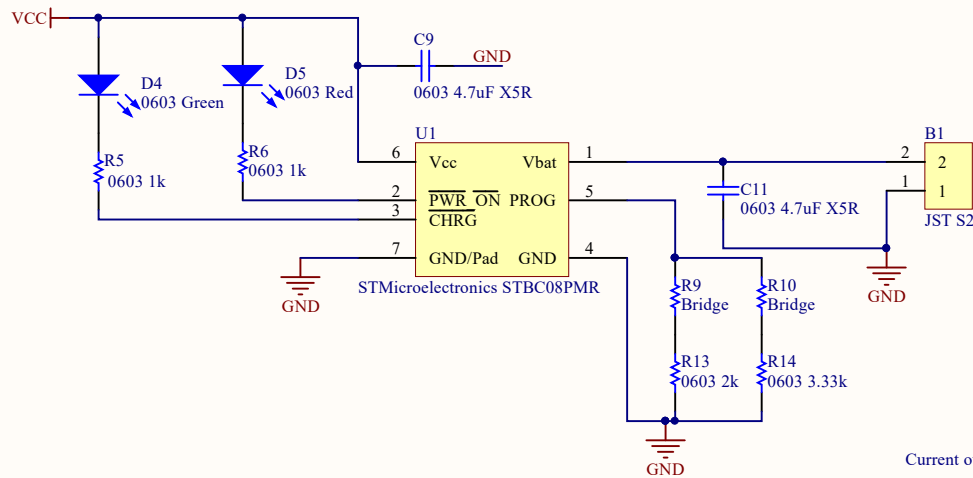


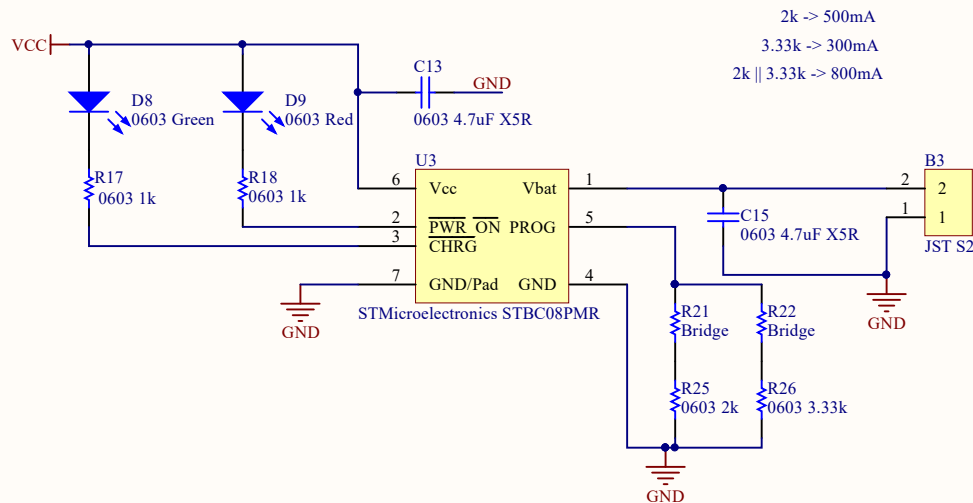
Comment	Description	Designator	Footprint	LibRef	Quantity
JST S2B-PH-K-S(LF)(SN)	CONN HEADER PH SIDE 2POS 2MM	B1, B2, B3, B4	JST S2B-PH-K-S	CMP-642951-6	4
0603 100nF	AVX 0603YC104K4Z2A	C1	CAPC1608X90X35NL15T 15	CMP-955451-2	1
0603 10pF	Multilayer Ceramic Capacitors MLCC - SMD/SMT 50volts 10pF 5% COG	C2	CAPC1608X90X35NL15T 15	CMP-3554890-2	1
1210 10uF	CAP CER 10UF 25V 10% X5R 1210	C3, C4	CAPC3225X279X50ML20 T25	CMP-127194-2	2
0603 1uF	CAP CER 1UF 10V Y5V 0603	C5, C8	CAPC1608X90X35NL15T 15	CMP-126001-2	2
0603 10nF	CAP CER 10000PF 25V 10% X7R 0603	C6	CAPC1608X90X35NL15T 15	CMP-171279-2	1
1210 47uF	1210 47 uF 10 V ±10% Tolerance X5R SMT Multilayer Ceramic Capacitor	C7	PCB- h26gble9h939I4c191wl- 1	CMP- cdd204dbeb8b1215-2	1
0603 4.7uF X5R	Cap Ceramic 4.7uF 10V X5R 10% SMD 0603 85C Paper T/R	C9, C10, C11, C12, C13, C14, C15, C16	CAPC1608X90X35ML10T 15	CMP-9133140-3	8
SMB 3A 40V	DIODE SCHOTTKY 100V 3A SMB	D1	PCB-816754-1	CMP-816754-2	1
SMAJ30CAHE3/5A	Transient Voltage Suppressor, 6.40 to 231 V, 30 V Stand-off Voltage, Bi-Directional, -55 to 155 degC, 2-pin DO-214AC, Pb-Free, Tape and Reel	D2	VISH-DO-214AC-2_M	CMP-16576639-3	1
0603 Red	LED SUPER RED CLR THIN 0603 SMD	D3, D5, D7, D9, D11	LED1608x55N	CMP-1544848-3	5
0603 Green	Green 1.6 x 0.8 x 0.8 mm 130° Water Clear 6 mcd 2.1 V SMT LED	D4, D6, D8, D10	LED1608x55N	CMP-1544853-3	4
XT60PT	Amass PCB Mount XT60 Connector	DC IN1	PCB- 9eoogmb27k46wcqkg2 ko-1	CMP- ys0k18bgy9431xyemrn- 1	1
Fiducial	Fiducial	FID1, FID2, FID3	PCB- 4cof372i0ax01akz57r7-1	CMP- 4cof372i0ax01akz57r7-1	3
IHLP2525EZER3R3M01	Surface Mount Power Inductor, IHLP-2525EZ- 01 Series, 3.3 H, 20%, Shielded, 0.0209 ohm, 8 A	L1	PCB- w72kg8ogivlijd3jpx38-1	CMP- 55fd9e7d09658a3a-1	1
0603 10k	RES SMD 10K OHM 0.1% 1/10W 0603	R1	RESC1609X55X30NL10T 20	CMP-1863099-2	1
0603 1k	Precision resistor, SMD [Panasonic Automotive & Industrial Systems] ERJ3EKF1001V Precision resistor, SMD	R2, R5, R6, R7, R8, R17, R18, R19, R20	RESC1608X55X30ML15T 15	CMP-3654795-5	9
0603 133k 1%	Thick Film Resistors - SMD 0603 133Kohms 1% Tol	R3	RESC1608X55X30ML15T 15	CMP-3663980-2	1
0603 24k 1%	Thick Film Resistors - SMD 0603 24Kohms 5% Tol	R4	RESC1608X55X30ML15T 15	CMP-3679912-2	1
Bridge	Bridge resistor 0ohm	R9, R10, R11, R12, R21, R22, R23, R24	RESC1005X40X25NL05T 05	CMP-15792799-5	8
0603 2k	RES SMD 2K OHM 5% 1/10W 0603	R13, R15, R25, R27	RESC1609X50X30ML10T 20	CMP-1877180-2	4
0603 3.33k	Thick Film Resistors - SMD 0603 3.3Kohms 5% Tol	R14, R16, R26, R28	RESC1608X55X30ML15T 15	CMP-3656259-2	4
STMicroelectronics STBC08PMR	IC BATT CHRGR LI-ION 4.2V 800MA DFN6	U1, U2, U3, U4	PCB-aislhnijl0l1jo7ju5i- 1	CMP-facc33d44885250b- 1	4
Texas Instruments TPS54	4.5V to 23V Input, 3A Sy	U5	SOIC127P600X170_HS-9	CMP-82774aeb049e5db0	1



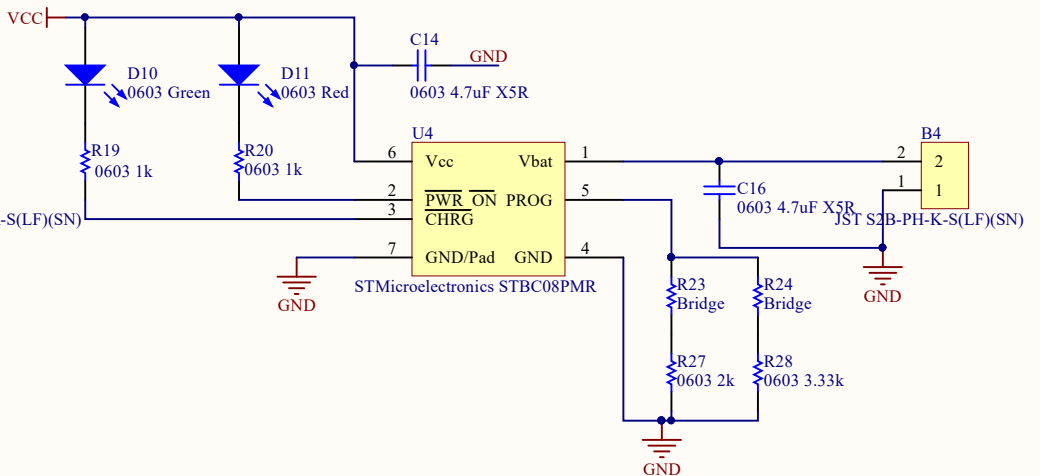
Current out of BAT is calculated from PROG voltage $I_{BAT} = (V_{PROG}/R_{PROG}) * 1000$

The battery charge current is 1000 times the PROG pin current value.

Vprog can be around 1V

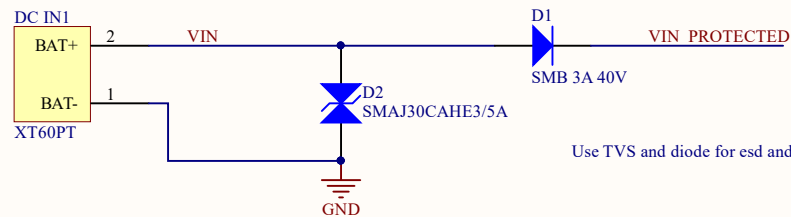


2k -> 500mA
3.33k -> 300mA
2k || 3.33k -> 800mA

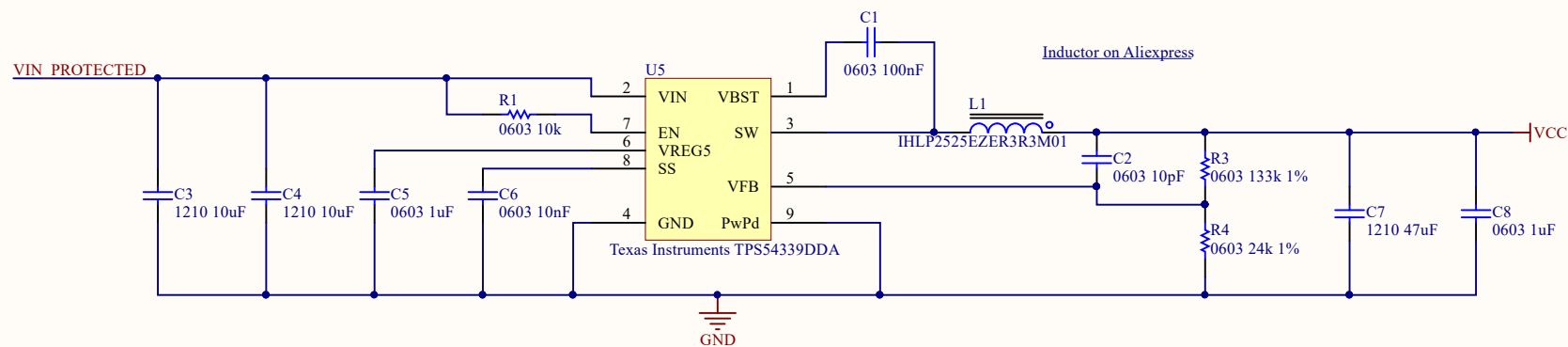


Title		
Size	Number	Revision
A4		
Date:	4/09/2016	Sheet of
File:	MultiCharge2.SchDoc	Drawn By:

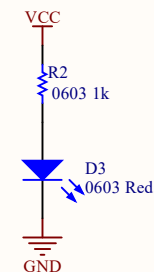
XT60 PCB Mount



4 charge controllers (VCC 5V) which draw combined ~14W peak, 8W standard
3A 5V switching supply, >90% efficiency



Power LED



FID1
Fiducial

FID2
Fiducial

FID3
Fiducial

Title		
Size A4	Number	Revision
Date: 4/09/2016	Sheet of	
File: PSU.SchDoc	Drawn By:	

Quad Independent 1S
Lipo/Lilon Charger

DC IN1

9-20V DC IN
3-5S Lipo IN

V2.0

RotorMagic

Jumper Settings

0.3 only = 300mA

0.5 only = 500mA

0.3 + 0.5 = 800mA

B1

B2

B3

B4