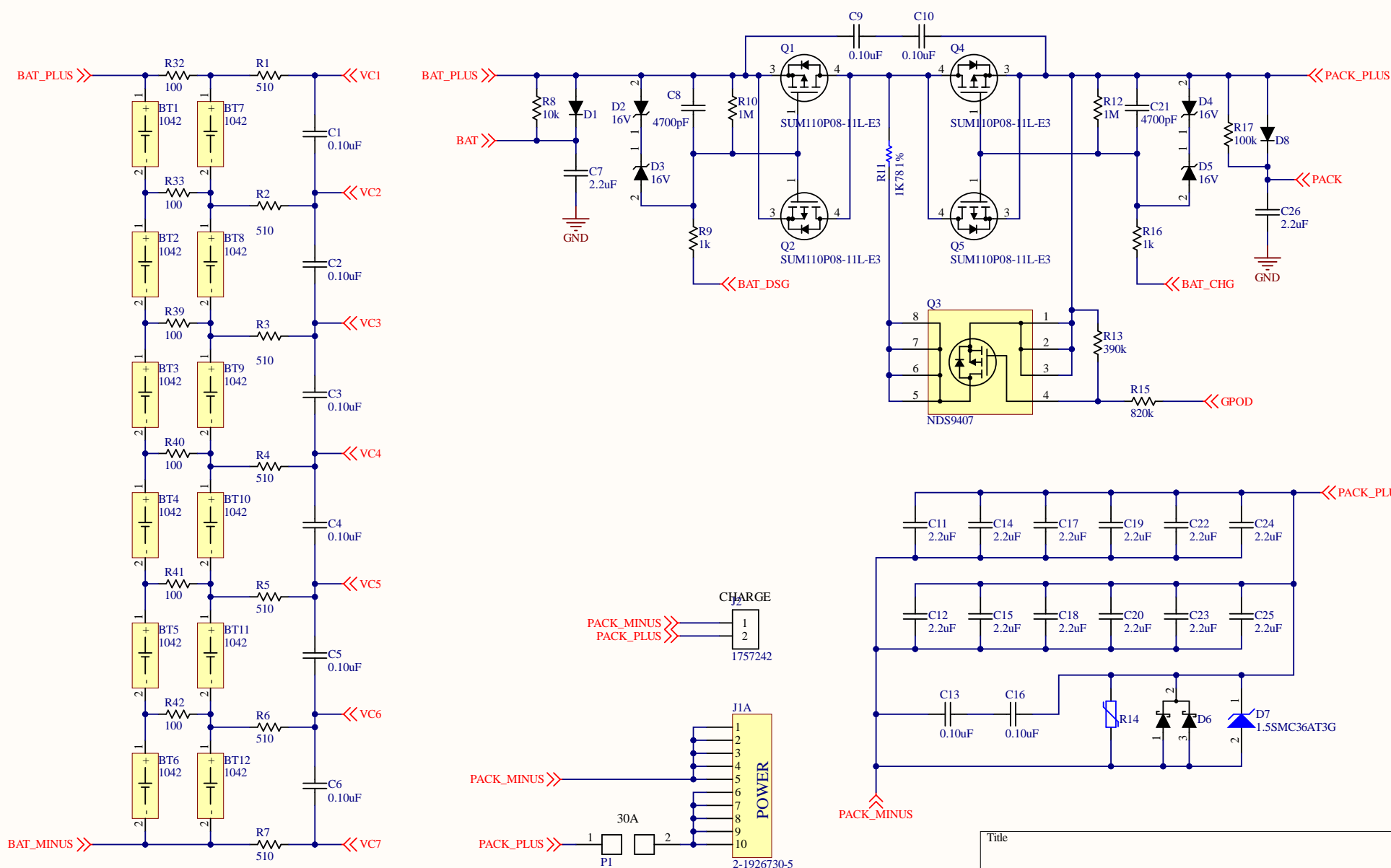


Title		
Size	Number	Revision
A4		
Date:	11/08/2020	Sheet of
File:	D:\Documents\...\BMS_Balancer.SchDoc	Drawn By:



Title		
Size	Number	Revision
A4		
Date:	11/08/2020	Sheet of
File:	D:\Documents\BMS_Battery_Connections	Dr. S. B.



Comment	Description	Designator	Footprint	LibRef	Quantity
1042	Battery Holder, 18650 SMD	BT1, BT2, BT3, BT4, BT5, BT6, BT7, BT8, BT9, BT10, BT11, BT12	KEYSTONE_1042	CONN-00077	12
0.10uF	CAP, 0.10uF, 10%, 50V, X7R, 0805	C1, C2, C3, C4, C5, C6, C9, C10, C13, C16, C27, C28, C29, C39, C42, C43	chip_0805	CAP-00072	16
2.2uF	CAP, 2.2uF, +20%, 100V, X7R, 0603	C7, C11, C12, C14, C15, C17, C18, C19, C20, C22, C23, C24, C25, C26, C33, C35	chip_1210	CAP-00536	16
4700pF	CAP, 4700pF, 10%, 100V, X7R, 0805	C8, C21	chip_0805	CAP-00032	2
1uF	CAP, 1uF, 10%, 50V, X7R, 0805	C30, C31, C38, C47	chip_0805	CAP-00109	4
4.7uF	CAP, 4.7uF, 10%, 25V, X7R, 0805	C32, C36	chip_0805	CAP-00128	2
10000pF	CAP, 10000pF, 10%, 25V, X7R, 0805	C34, C48	chip_0805	CAP-00045	2
6pF	CAP, 6pF, ±10%, 50V, COG, 0603	C37, C41	chip_0603	CAP-00538	2
10uF	CAP, 10uF, 10%, 10V, X7R, 0805	C40	chip_0805	CAP-00131	1
18pF	CAP, 18pF, ±1%, 50V, COG, 0603	C44, C45	chip_0603	CAP-00417	2
cap_single_np	CAP, 0.1uF, ±10%, 16V, X7R, 0603	C46	chip_0603	CAP-00542	1
diode_0	Dio, Silicon, 200mA, 1V, 100V, SOD-123	D1, D8	sod123_0	DIO-00060	2
16V	Dio, Zener, 16V, 300mW, SOD-523	D2, D3, D4, D5	sod523_0	DIO-00082	4
V40PWM10C-M3/I	Dio, Schottky Array, Dual, Common Cathode, 100V 20A, SLIM DPAK	D6	DPAK_SLIM	DIO-00081	1
1.55MC36AT3G	1500 W Peak Power Zener Transient Voltage Suppressor, Unidirectional, 2-Pin SMC, Pb-Free, Tape and Reel	D7	ONSC-SMC-2-403-03_V	CMP-1061-00497-1	1
SM05T1G	Transient Voltage Suppressor Diode Array, Dual Common Anode Diodes for ESD Protection, 3-Pin SOT-23, Pb-Free, Tape and Reel	D9, D10, D12	ONSC-SOT-23-3-318-08_V	CMP-1061-00666-1	3
2.65V	LED, Green, SMD Right Angle, Low Current, Kingbright HEL12 Series	D11, D13, D14, D15	APA2107	DIO-00083	4
2-1926730-5	Backplane Header, Blades and Pins, Edge Mount Right Angle, 10 Power 25 Signal	J1	TE_CONN_2-1926730-5	CONN-00093	1
1757242	Terminal Blk Header, 2 Pos, 5.08mm, 12A, Right Angle	J2	PHOENIX_1757242	CONN-00102	1
B2B-PH-K	JST PH 2x1, TH, 2.00mm Pitch	J3	JST_PHR_2_0	CONN-00048	1
conn-fuse-holder_0	Fuse Holder, 30A, 500V, LP-Mini 897, ATOF 257	P1	FUSE HOLDER_KEYST ONE_3557-2	CONN-00015	1
conn-Sx2_0	Header, 10-pin IDC, 2.54mm Pitch	PH	CNC_TECH_3020-10-0100-KX	CONN-00054	1
conn-2x1_0	Header, 2x1, 0.1" XSTR, MODEL T P-Channel, 80V 110A, D2PAK	PS	hdb_2x1_0	CONN-00055	1
SUM110P08-11L-E3	KSTR P1ET, 3A, 40V, 2.5W, SOIC-8	Q1, Q2, Q4, Q5	D2PAK-3_1	KSTR-00050	4
ND59407	KSTR P1ET, 3A, 40V, 2.5W, SOIC-8	Q3	SO-8	KSTR-00036	1
S10	RES SMD 510 OHM 1% 1/8W 0805	R1, R2, R3, R4, R5, R6, R7	chip_0805	RES-00240	7
10k	RES SMD 10k OHM 1% 1/8W 0805	R8, R27, R34, R48, R49, R50	chip_0805	RES-00307	6
1k	RES SMD 1k OHM 1% 1/8W 0805	R9, R16, R26	chip_0805	RES-00361	3
1M	RES SMD 1M OHM 1% 1/8W 0805	R10, R12	chip_0805	RES-00363	2
1K78 1%	1K78 1W 1% 2512 (6432 Metric) SMD	R11	RESC2512(6432)_L	CMP-1018-00536-1	1
390k	RES SMD 390k OHM 1% 1/8W 0805	R13	chip_0805	RES-00455	1
MOV_0	Varistor, Ceramic, 47V 300A 21, 1210	R14	chip_1210	AMSC-00057	1
820k	RES SMD 820k OHM 1% 1/8W 0805	R15	chip_0805	RES-00567	1
100k	RES SMD 100k OHM 1% 1/8W 0805	R17, R20	chip_0805	RES-00302	2
0	RES SMD 0 OHM 1/8W 0805 Thick Film	R18, R19, R22, R25, R43	chip_0805	RES-00720	5
200	RES SMD 200 OHM 1% 1/8W 0805	R21, R24	chip_0805	RES-00197	2
0.001	RES, 0.001, 1%, 1W, 2512	R23	chip_2512	RES-00002	1
CRCW0805A4R8FCEA		R28	RESC2013X50X30ML2 0T20	CMP-2001-04091-1	1
ERJ-6ENF6192V		R29	RESC2013X70X40ML2 0T20	CMP-2001-00256-1	1
res_single	RES SMD 470 OHM 1% 1/4W 0603	R30, R31	chip_0603	RES-00236	2
100	RES SMD 100 OHM 1% 1/8W 0805	R32, R33, R39, R40, R41, R42	chip_0805	RES-00179	6
330	RES SMD 330 OHM 1% 1/8W 0805	R35, R36, R37, R38	chip_0805	RES-00222	4
4.7k	RES SMD 4.7k OHM 1% 1/8W 0805	R44, R47	chip_0805	RES-00471	2
24k	RES SMD 24k OHM 1% 1/8W 0805	R45	chip_0805	RES-00400	1
3.3k	RES SMD 3.3k OHM 1% 1/8W 0805	R46	chip_0805	RES-00420	1
SW_1P1T_0	Switch, SPST, Tactile, 32V 50mA	SW1	KMR6	AMSC-00024	1
B0777PL900	Batt Mgr/Mgr, Li-Ion, 5-10 cells, bq77PL900	U1	SSOP-48_0	PAWREG-00024	1
STM32F103C8	STM32 M3, LQFP-48	U2	LQFP48_0	UCTRL-00008	1
REF50xx	IC, Voltage Reference, 2.5V, 3ppm/C, REF5020	U3	SO-8_1	ANLG-00055	1
osc_xtal_2p_0	XTAL, 32.768kHz, 6pF, 20ppm	V1	AB325_OSC	OSC-00003	
osc_xtal_4p-1-3	XTAL, 8MHz, 10pF, 10ppm	V2	ECX-538	OSC-00006	1