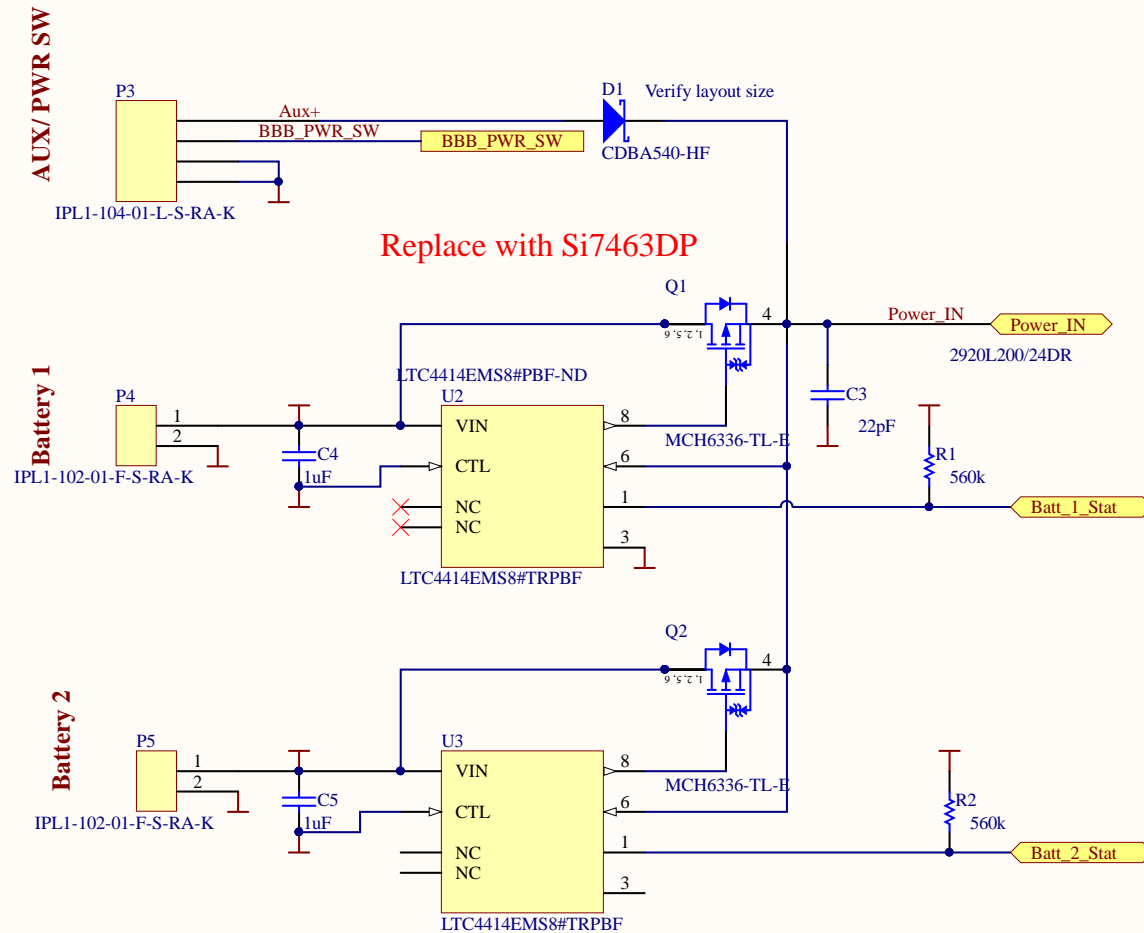


To Lid Pwr Jack and switch



<http://cds.linear.com/docs/en/datasheet/4412hvf.pdf>

Batt range: max 16.8V V nom 14.4V V cutoff 9.6V

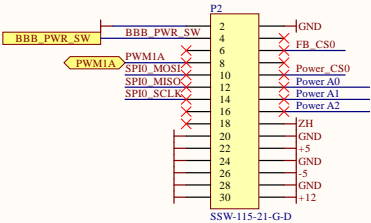
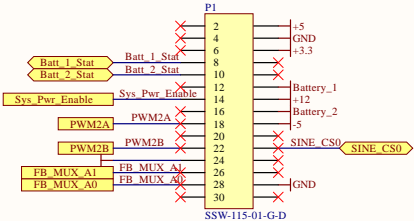
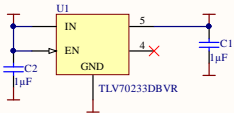
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Size: Orcad A	Number:LM-008	Revision:B	
Date: 9/11/2018	Time: 11:18:45 AM Sheet 1 of 6		
File: C:\Users\zls\Desktop\Land_Meter_PCB\LM-008\Rev C\Power_Input.SchDoc			



VERIFY LAYOUT REQ AND EXT CAPS ETC

+3.3V Supply

Maximum ESR should be less than 200 mΩ

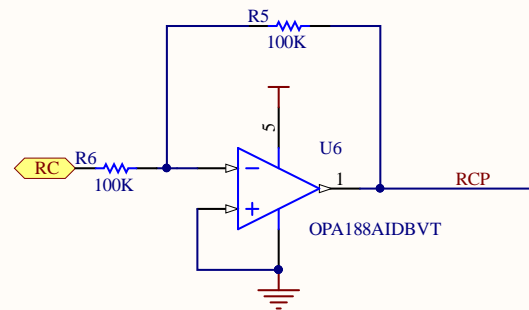
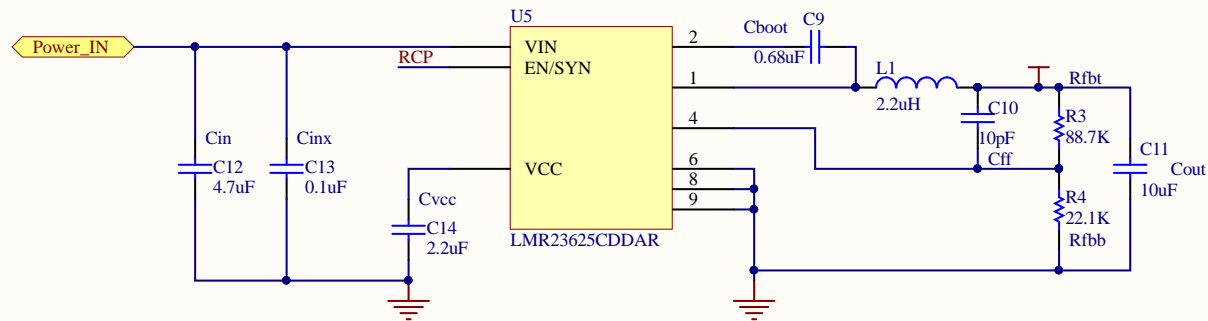
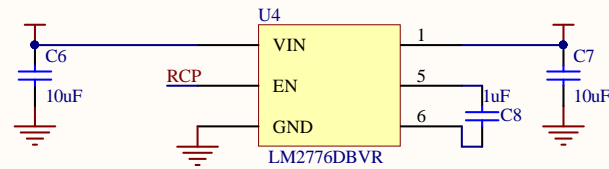


BATTERY CONNECTIONS
P1 BATTERY
2 A- NEGATIVE
3 B- TEMPERATURE
4 C- DATA
5 D- CLOCK
1 E- POSITIVE
N/C F- KEY



Title Main			ZLS Corporation 7801 North Lamar Blvd. Suite E-184 Austin, Texas 78752 USA (512) 453-0288
Size: Tabletoid	Number: LM-008	Revision: B	
Date: 9/11/2018	Time: 11:18:45 AM	Sheet2 of 6	
File: C:\Users\zls\Desktop\Land_Meter_PCB\LM-008\Rev C\LM-008_SchDoc			





Title **5R Supply**

Size: Orcad A

Number: LM-008

Revision: C

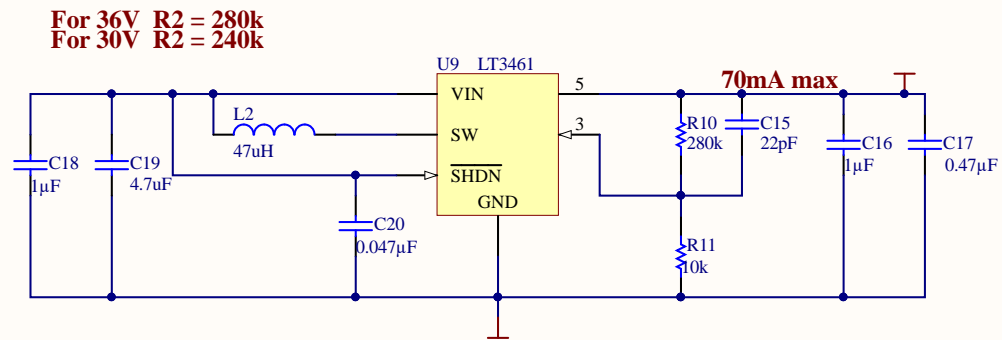
Date: 9/11/2018

Time: 11:18:45 AM Sheet 3 of 6

File: C:\Users\zls\Desktop\Land_Meter_PCB\LM-008\Rev C\5R_Supply.doc.SchDoc

ZLS Corporation
7801 North Lamar Blvd.
Suite E-184
Austin, Texas 78752 USA
(512) 453-0288





Title **36V DC-DC Converter**

Size: Orcad A

Number: LM-008

Revision: C

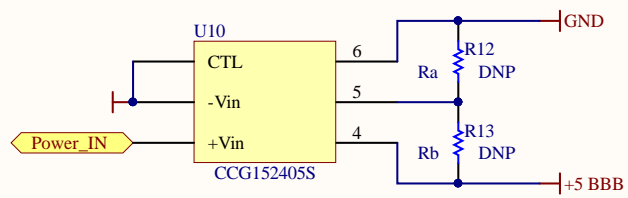
Date: 9/11/2018


Time: 11:18:45 AM Sheet 4 of 6

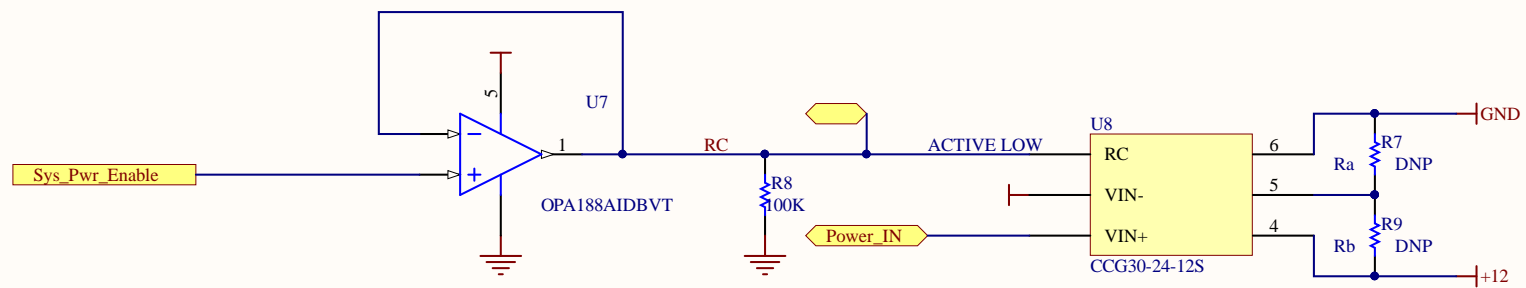
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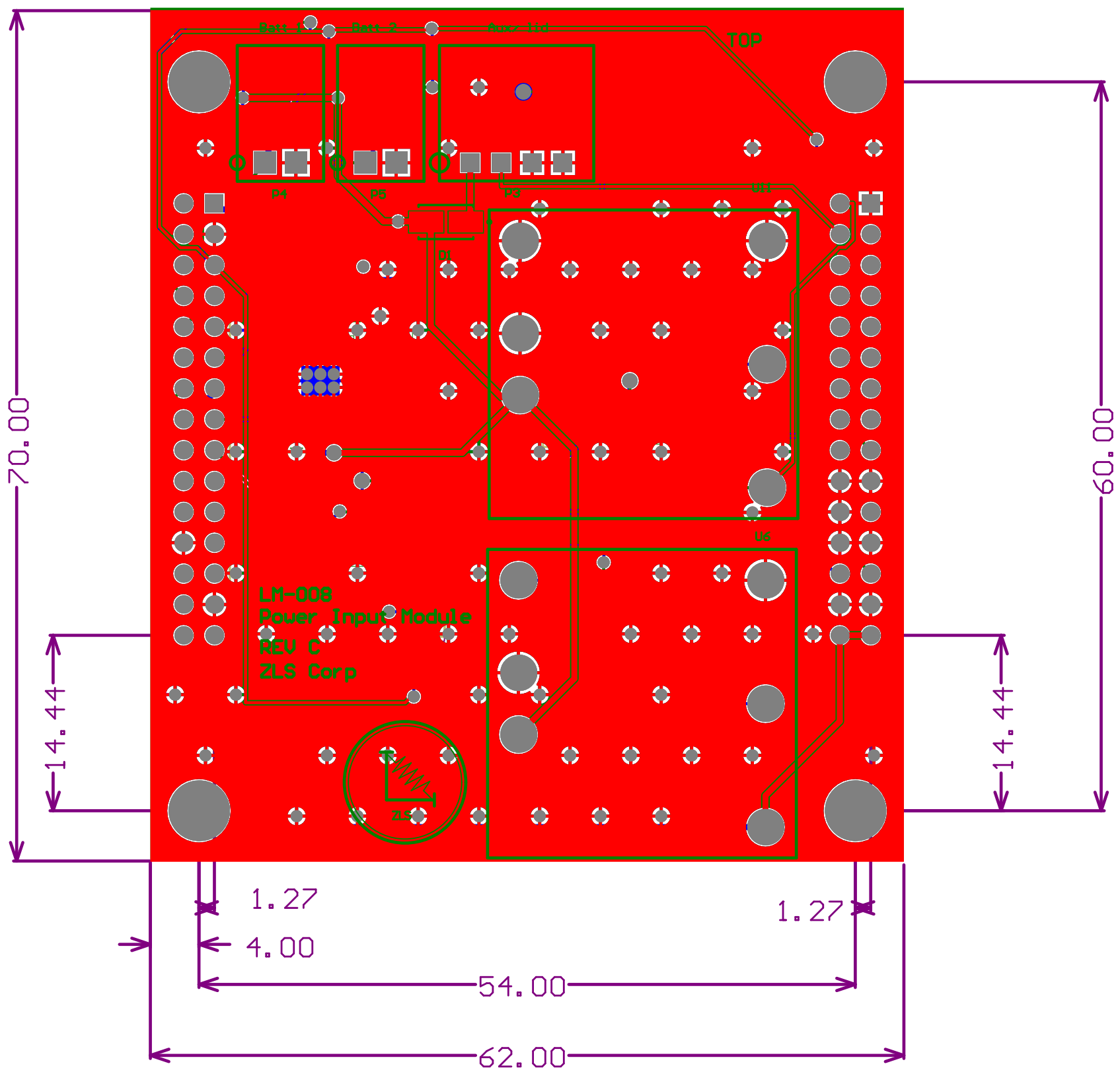
ZLS Corporation
7801 North Lamar Blvd.
Suite E-184
Austin, Texas 78752 USA
(512) 453-0288





Title BBB Supply			ZLS Corporation 7801 North Lamar Blvd. Suite E-184 Austin, Texas 78752 USA (512) 453-0288	
Size: Orcad A	Number:LM-008	Revision:C		
Date: 9/11/2018	Time: 11:18:45 AM	Sheet5 of 6		
File: C:\Users\zls\Desktop\Land_Meter_PCB\LM-008\Rev C\BBB-Supply.SchDoc				





Comment	Description	Designator	Footprint	LibRef	Manufacturer 1	Manufacturer Part Number 1	Quantity	SheetNumber	Supplier 1	Supplier Currency 1	Supplier Order Qty 1	Supplier Part Number 1	Supplier Stock 1	Supplier Subtotal 1	Supplier Unit Price 1
CAP CER 1UF 50V X7R 1210	CAP CER 1UF 50V X7R 1210	C1, C2	CAPC1206(3216)13 0_N	CMP-1037-04913-1	Murata Electronics North America	GRM32ZRR71H105K A01L	2	2	Digi-Key	USD	2	490-1863-6-ND	0	1.32	0.66
CAP CER 100UF 6.3V XSR 1206	CAP CER 100UF 6.3V XSR 1206	C3, C4, C5	CAPC1206(3216)13 0_N	CMP-1037-04913-1	Taiyo Yuden	JMK316BJ106AL-M	3	1	Digi-Key	USD	3	587-5447-1-ND	4	0.9	0.3
CAP CER 100UF 16V X65 0805	CAP CER 100UF 16V X65 0805	C6, C7, C11	CAPC0805(2012)14 5_N	CMP-1036-04795-1	TDK Corporation	C2012X651C106K0 B5AC	3	3	Digi-Key	USD	3	445-14483-6-ND	35820	1.14	0.38
CAP CER 1UF 25V X7R 0805	CAP CER 1UF 25V X7R 0805	C8	CAPC0805(2012)14 5_N	CMP-1036-04795-1	Yageo	CC0805KKX7R6BB1 05	1	3	Digi-Key	USD	1	311-1458-6-ND	15492	0.25	0.25
CAP CER 0.68UF 50V XSR 0603	CAP CER 0.68UF 50V XSR 0603	C9	1608[D403]	Cap Semi	TDK Corporation	C1608X5R1H684K0 80AB	1	3	Digi-Key	USD	1	445-7466-6-ND	40000	0.24	0.24
CAP CER 10PF 16V COG/NPO 0805	CAP CER 10PF 16V COG/NPO 0805	C10	CAPC0805(2012)14 5_N	CMP-1036-04795-1	KEMET	C0805C100M4GAC TU	1	3	Digi-Key	USD	1	399-9147-6-ND	6077	0.13	0.13
CAP CER 4.7UF 50V X7R 1210	CAP CER 4.7UF 50V X7R 1210	C12	C1210	Cap Semi	Murata Electronics North America	GRM32ER71H475K A88E	1	3	Digi-Key	USD	1	490-1864-6-ND	10000	1.66	1.66
CAP CER 0.1UF 50V XSR 0603	CAP CER 0.1UF 50V XSR 0603	C13	1608[D403]	Cap Semi	TDK Corporation	C1608X5R1H104K0 80AA	1	3	Digi-Key	USD	1	445-7456-6-ND	0	0.1	0.1
CAP CER 2.2UF 10V XSR 0603	CAP CER 2.2UF 10V XSR 0603	C14	1608[D403]	Cap Semi	Murata Electronics North America	GRM188R61A225K E34D	1	3	Digi-Key	USD	1	490-1545-6-ND	0	0.21	0.21
CAP CER 22PF 50V COG/NPO 1206	CAP CER 22PF 50V COG/NPO 1206	C15	CAPC1206(3216)17 0_L	CMP-1037-04573-1	KEMET	C1206C220K5GAC1 U	1	4	Digi-Key	USD	1	399-8165-1-ND	6	0.22	0.22
CAP CER 1UF 50V X7R 1210	CAP CER 1UF 50V X7R 1210	C16	CAPC1210(3225)10 0_N	CMP-1038-01123-1	Taiyo Yuden	UMK325B7105K0-K	1	4	Digi-Key	USD	1	587-1366-1-ND	0	0.41	0.41
CAP CER 0.47UF 50V X7R 1206	CAP CER 0.47UF 50V X7R 1206	C17	CAPC1206(3216)19 0_N	CMP-1037-04570-1	Taiyo Yuden	UMK316B7474KL-T	1	4	Digi-Key	USD	1	587-1325-1-ND	0	0.37	0.37
CAP CER 1UF 16V X7R 0805	CAP CER 1UF 16V X7R 0805	C18	CAPC0805(2012)14 5_N	CMP-1036-04795-1	Taiyo Yuden	EMK212B7105K6-T	1	4	Digi-Key	USD	1	587-1283-1-ND	3000	0.15	0.15
CAP CER 4.7UF 16V X7R 0805	CAP CER 4.7UF 16V X7R 0805	C19	CAPC0805(2012)14 5_M	CMP-1036-04750-1	KEMET	C0805C475K4RAC T U	1	4	Digi-Key	USD	1	399-7415-1-ND	0	0.29	0.29
CAP CER 0.047UF 16V X7R 0603	CAP CER 0.047UF 16V X7R 0603	C20	CAPC0805(2012)14 5_N	CMP-1036-04795-1	Murata Electronics North America	GRM188R71C473K A01D	1	4	Digi-Key	USD	1	490-1529-6-ND	0	0.14	0.14
CDBA540-HF	DIODE SCHOTTKY 40V 5A DO214AB	D1	VISH-DO-214AC-2_M	D Schottky	Comchip Technology	CDBA540-HF	1	1	Digi-Key	USD	1	641-1707-6-ND	12064	0.49	0.49
2.2uH	FIXED IND 2.2UH 4.3A 48 MOHM SMD	L1	PA4332	Inductor	Pulse Electronics Power	PA4332.222NLT	1	3	Digi-Key	USD	1	553-3290-4-ND	657	0.64	0.64
47uH	FIXED IND 47UH 170MA 1.3 OHM SMD	L2	C1210	Inductor	Murata Electronics North America	LQH32CN470K23L	1	4	Digi-Key	USD	1	490-2497-1-ND	8811	0.33	0.33
SSW-115-01-G-D	Header, 15-Pin, Dual row	P1	HDR2X15	Header 15X2	Samtec Inc.	SSW-115-01-G-D	1	2	Digi-Key	USD	1	SAM1208-15-ND	0	5.69	5.69
SSW-115-21-G-D	Header, 15-Pin, Dual row	P2	HDR2X15	Header 15X2	Samtec Inc.	SSW-115-21-G-D	1	2	Digi-Key	USD	1	SSW-115-21-G-D-ND	0	4.78	4.78
IPL1-104-01-L-S-RA-K	IPL1-104-01-L-S-RA-K	P3	IPL1-104-01-L-S-RA-K	IPL1-104-01-L-S-RA-K	Samtec Inc.	IPL1-104-01-L-S-RA-K	1	1	Digi-Key	USD	1	SAM9597-ND	121	2.53	2.53
IPL1-102-01-F-S-RA-K	100 TERMINAL ASSEMBLY	P4, P5	IPL1-102-01-F-S-RA-K	IPL1-102-01-F-S-RA-K	Samtec Inc.	IPL1-102-01-F-S-RA-K	2	1	Digi-Key	USD	2	IPL1-102-01-F-S-RA-K-ND	0	4.18	2.09
MCH6336-TL-E	P-Channel Power MOSFET, -12 V, -5 A, 43 mOhm, Single, 6-Pin MCHP, Pb-Free, Tape and Reel	Q1, Q2	ONSC-MCPH-6_V	CMP-1058-00598-1	ON Semiconductor	MCH6336-TL-E	2	1	Digi-Key	USD	2	MCH6336-TL-EOSCT-ND	3000	1.36	0.68
560k	RES SMD 560K OHM 1% 1/10W 0402	R1, R2	RESC0402(1005)_L	CMP-1011-00927-1	Panasonic Electronic Components	ERJ-2RKF5603X	2	1	Digi-Key	USD	2	P560KLCT-ND	193497	0.2	0.1
88.7K	RES SMD 88.7K OHM 1% 1/8W 0805	R3	RESC0805(2012)_M	CMP-1013-00017-1	Vishay Dale	CRCW0805588K7FK EA	1	3	Digi-Key	USD	1	541-88.7KDCRR-ND	66	0.1	0.1
22.1K	RES SMD 22.1K OHM 1% 1/8W 0805	R4	RESC0805(2012)_M	CMP-1013-00017-1	Vishay Dale	CRCW0805522K1FK EA	1	3	Digi-Key	USD	1	541-22.1KDCRR-ND	0	0.1	0.1
RES SMD 100K OHM 1% 1/8W 0805	RES SMD 100K OHM 1% 1/8W 0805	R5, R6, R8	RESC0805(2012)_M	CMP-1013-00017-1	Vishay	CRCW0805100KFK EA	3	3, 3, 6	Armet	USD	3	CRCW0805100KFK EA/BKN	0	0.306	0.102
DNP	Vout = 12.05 - (445.7 / 63.1 + Ra), Vout = 12.05 + (50.96 / 22 -Rb), Vout = 12.05 - (445.7 / 63.1 + Ra), Vout = 12.05 + (50.96 / 22 -Rb)	R7, R9, R12, R13	RESC0805(2012)_M	CMP-1013-00017-1			4	6, 6, 5, 5							
RES SMD 280K OHM 1% 1/8W 0805	RES SMD 280K OHM 1% 1/8W 0805	R10	RESC0805(2012)_M	CMP-1013-00017-1	Vishay Dale	CRCW0805280KFK EA	1	4	Digi-Key	USD	1	541-280KCTR-ND	0		
RES SMD 10K OHM 1% 1/8W 0805	RES SMD 10K OHM 1% 1/8W 0805	R11	RESC0805(2012)_M	CMP-1013-00017-1	Yageo	RC0805FR-0710KL	1	4	Digi-Key	USD	1	311-10.0KCRCT-ND	31373445	0.1	0.1
TLV70233DBVR	Single Output LDO, 300 mA, Fixed 3.3 V Output, 2 to 5.5 V Input, with Low IQ, 5-pin SOT-23 (DBV), -40 to 125 degC, Green (RoHS & no Sb/Br)	U1	DBV0005A_N	CMP-0394-00528-2	Texas Instruments	TLV70233DBVR	1	2	Digi-Key	USD	1	296-32415-1-ND	62832	0.51	0.51
LTC4414EMS8#TRPBF	Low Loss PowerPath Controller for Large PFET, 3 to 36 V Vin, 8-pin SOP (MS8-B), -40 to 85 degC, Pb-Free, Tape and Reel	U2, U3	LT-MS8-B_L	CMP-0479-00214-1	Linear Technology/Analog Devices	LTC4414EMS8#PBF	2	1	Digi-Key	USD	2	LTC4414EMS8#PBF-ND	414	7.58	3.79
LM2776DBVR	IC REG SWITCHD CAP INV 6SOT23	U4	LM2776DBVR	LM2776DBVR	Texas Instruments	LM2776DBVR	1	3	Digi-Key	USD	1	296-43957-6-ND	12422	1.05	1.05
LMR23625CDDAR	DC-DC CONVERTER 5V 15W	U5	LMR23625CDDAR	LMR23625CDDAR	Texas Instruments	LMR23625CDDAR	1	3	Digi-Key	USD	1	296-47268-1-ND	0	3.24	3.24
OPA188AIDBVT	Precision, Low Noise, Rail-to-Rail Output, Zero-Drift Operational Amplifier, 4 to 36 V, -40 to 125 degC, 5-pin SOT23 (DBVS), Green (RoHS & no Sb/Br)	U6, U7	DBV0005A_L	CMP-0809-00006-2	Texas Instruments	OPA188AIDBVT	2	3, 6	Digi-Key	USD	2	296-36218-1-ND	8627	5.66	2.83
CCG30-24-12S	DC-DC CONVERTER 12V 30W	U8	PXB15-24W05/N	CCG302412S	TDK-Lambda Americas Inc.	CCG302412S	1	6	Digi-Key	USD	1	285-2419-ND	287	41.1	41.1
LT3461	IC REG BOOST ADJ 0.5A TSOT23-6	U9	LT-56-6-TSOT-23_N	CMP-0491-01698-1	Linear Technology	LT3461AES6#TRMPBF	1	4	Digi-Key	USD	1	LT3461AES6#TRMPBF-CT-ND	583	4.02	4.02
CCG152405S	DC-DC CONVERTER 5V 15W	U10	PXB15-24W05/NT	PXB15-24W05/NT	TDK-Lambda Americas Inc.	CCG152405S	1	5	Digi-Key	USD	1	285-2605-ND	140	28.5	28.5