

Bias power supply with SMPS pre-regulator

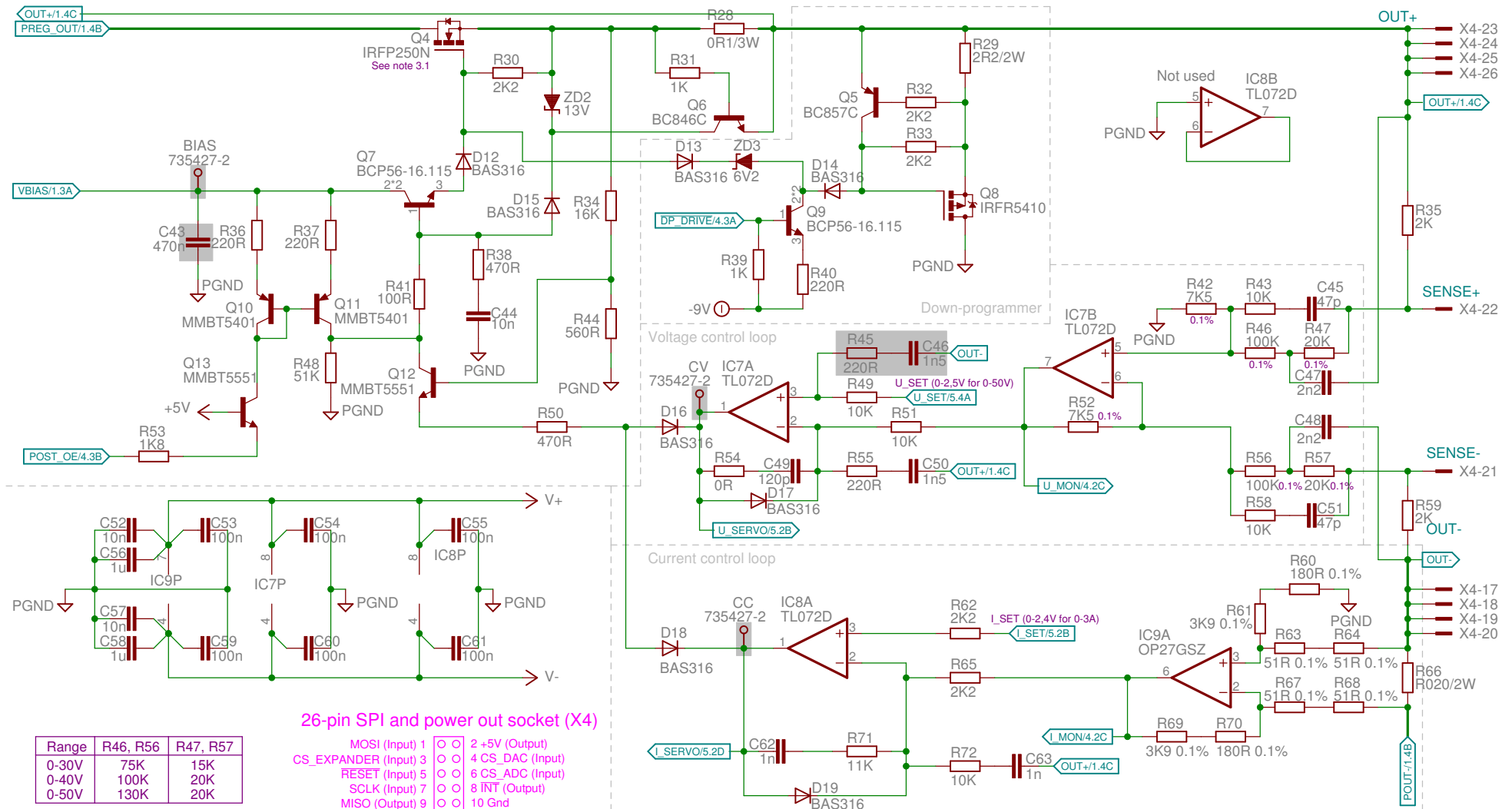
TITLE: EEZ PSU power board r5B6b

Document Number:

REV:

Date: 28. 03. 2016. 10:48

Sheet: 2/5



26-pin SPI and power out socket (X4)

Range	R46, R56	R47, R57
0-30V	75K	15K
0-40V	100K	20K
0-50V	130K	20K

Range	R61, R69	Q4
0-3.12A	3K9	IRFP250N
0-4.16A	3K24	IRFP250N
0-5A	2K37	IRFP260N

MOSI (Input) 1	2 +5V (Output)
CS_EXPANDER (Input) 3	4 CS_DAC (Input)
RESET (Input) 5	6 CS_ADC (Input)
SCLK (Input) 7	8 INT (Output)
MISO (Output) 9	10 Gnd
AUX_USET_IN (Input) 11	12 Gnd
TEMP_NTC (Output) 13	14 Gnd
MCU_VCC (Input) 15	16 Gnd
-Vout 17	18 -Vout
-Vout 19	20 -Vout
Sense- (Input) 21	22 Sense+ (Input)
+Vout (Output) 23	24 +Vout (Output)
+Vout (Output) 25	26 +Vout (Output)

Note 3.1: Q4 is mounted on the external heatsink

Licensed under the TAPR Open Hardware License ([www.tapr.org/OHL](http://www.tapr.org/OHL))  
 More info at <http://www.envox.hr/eez>  
 Repository: <https://github.com/eez-open>

TEMP  
 SSW-102-02-S-S  
 10K NTC  
 e.g. Farnell: 1187100  
 or TME: NTC-K45-10 X3-1

CV/CC linear post-regulator  
 Output enable and "down-programmer"

TITLE: EEZ PSU power board r5B6b

Document Number:

REV:

Date: 28. 03. 2016. 10:48

Sheet: 3/5

# Digital control (SPI)

SSW-113-02-T-D-RA

X4-9 PS\_MISO  
X4-5 PS\_RESET  
X4-1 PS\_MOSI  
X4-7 PS\_SCLK  
X4-3 CS\_EXPANDER

+5V  
X4-2  
X4-10  
X4-12  
X4-14  
X4-16  
PGND

X4-8 INT

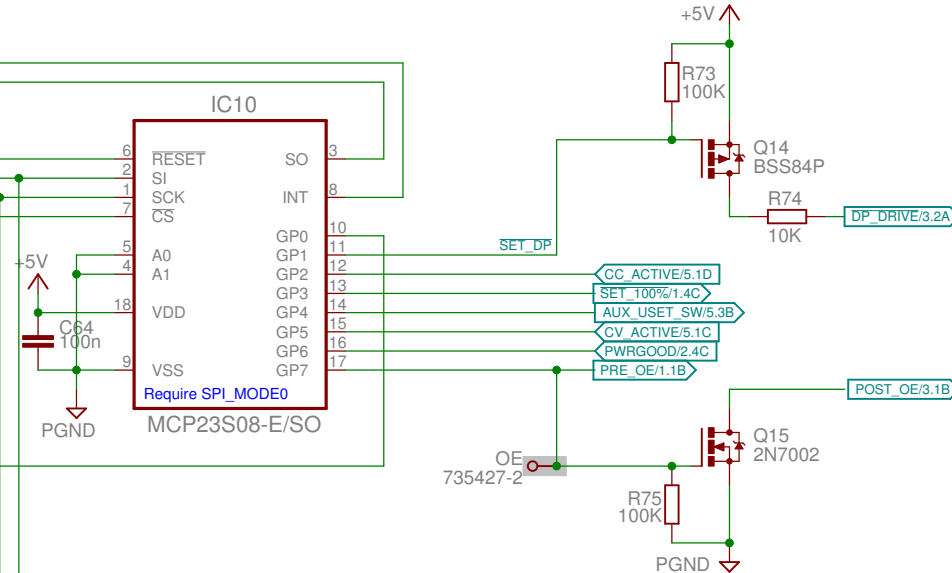
## Interrupt jumper settings

INT I/O expander generated (default)  
1 2 3 4  
INT ADC generated  
1 2 3 4

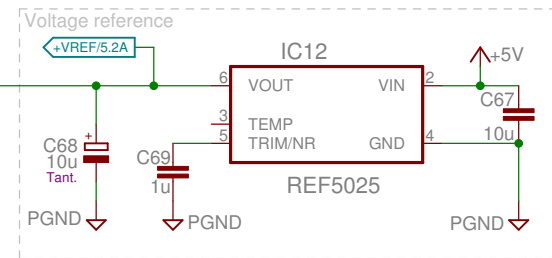
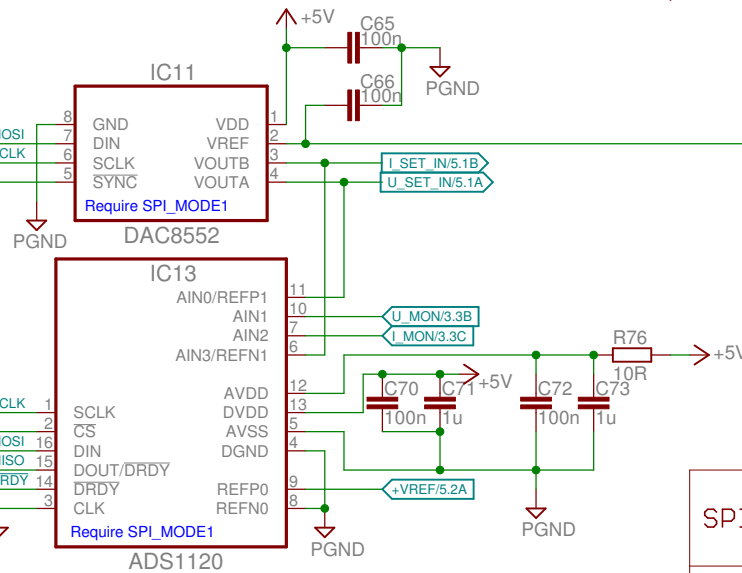
X4-4 CS\_DAC

X4-6 CS\_ADC

JMP2-0R



I/O Expander		
Bit	Function	Direction
0	IRQ	Output
1	Down programmer disable	Output
2	CC	Input
3	Set 100% duty cycle	Output
4	Remote programming	Output
5	CV	Input
6	Power good	Input
7	Output enable	Output



SPI I/O expander, DAC, ADC, Voltage reference

TITLE: EEZ PSU power board r5B6b

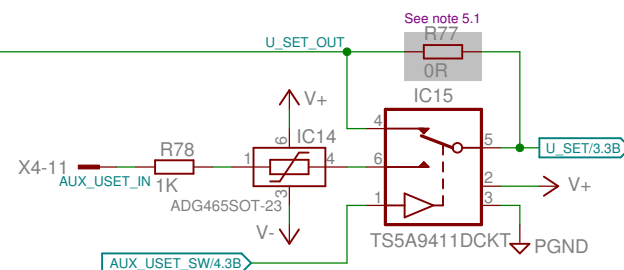
Document Number:

REV:

Date: 28. 03. 2016. 10:48

Sheet: 4/5

## Remote programming



Note 5.1: Use zero ohm jumper only if remote programming is not used

[illegible]

REV:

Sheet: 5/5