

Bias power supply with SMPS pre-regulator

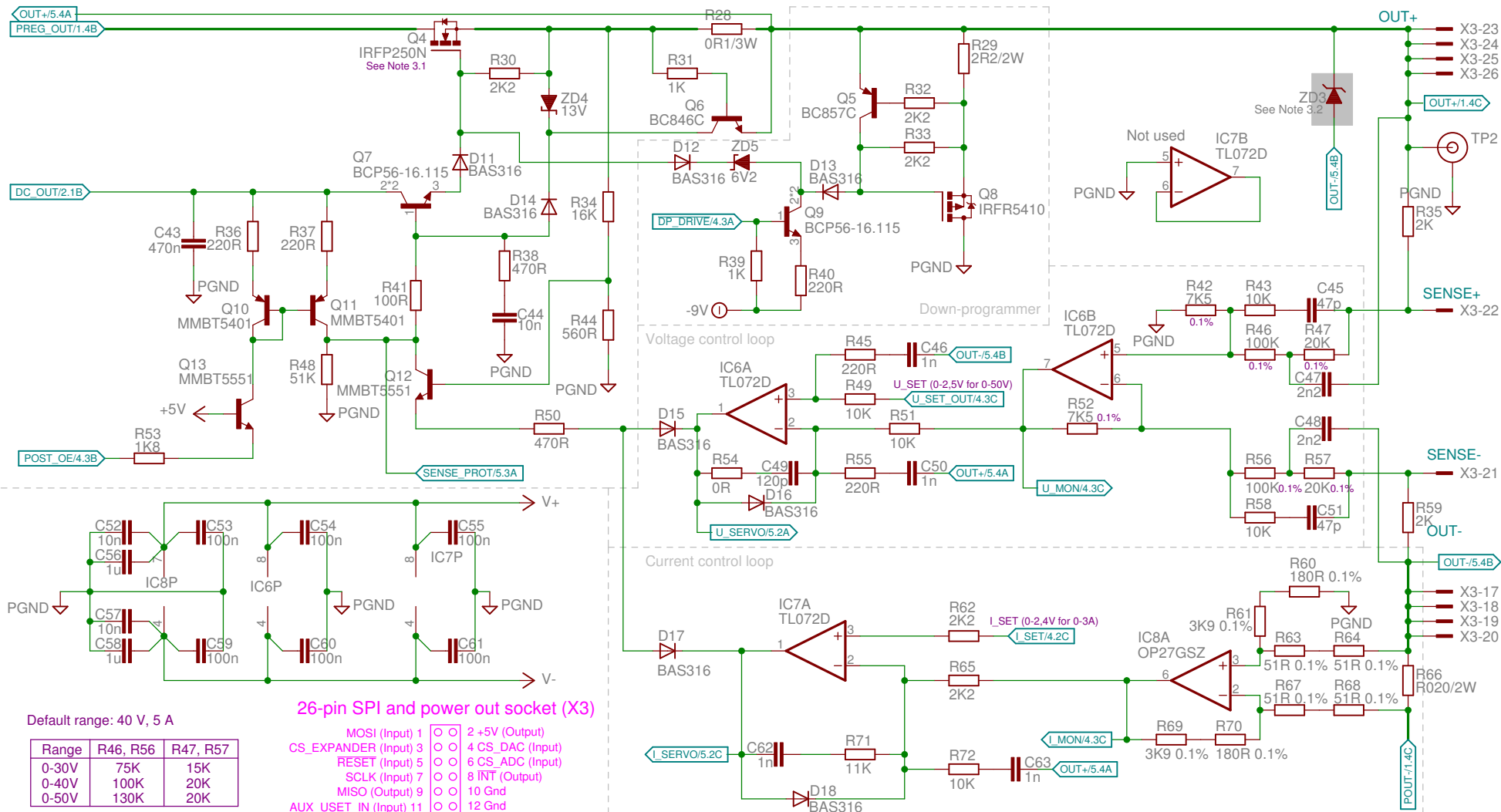
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Default range: 40 V, 5 A

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

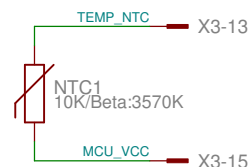
26-pin SPI and power out socket (X3)

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_USER_IN (Input) 11	12 Gnd
TEMP_NTC (Output) 13	14 Gnd
MCU_VCC (Input) 15	16 Sync (Input)
-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 (e.g. RAD-A4463/120)
Note 3.2: Place for optional TVS (primary place is the Arduino shield board)

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More info at <http://www.envox.hr/eez>
Repository: <https://github.com/eez-open>

Temperature sensor



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

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Digital control (SPI)

SSW-113-02-T-D-RA

X3-9 PS_MISO

X3-5 PS_RESET

X3-1 PS_MOSI

X3-7 PS_SCLK

X3-3 CS_EXPANDER

+5V

X3-2

X3-10

X3-12

X3-14

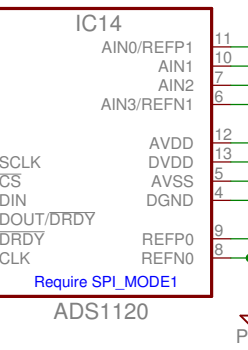
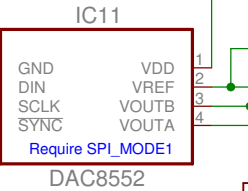
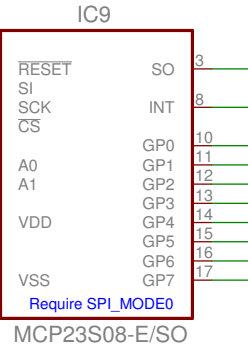
PGND

X3-8 INT

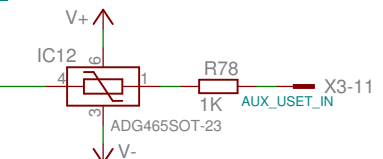
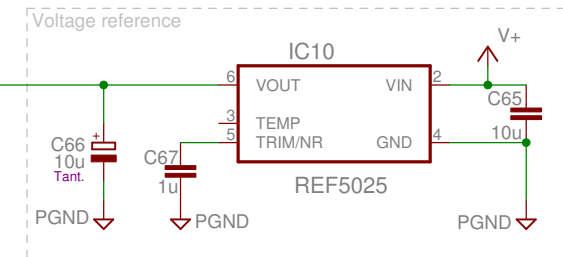
JMP2-0R

X3-4 CS_DAC

X3-6 CS_ADC



I/O Expander		
Bit	Function	Direction
0	Sense error	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
Remote programming

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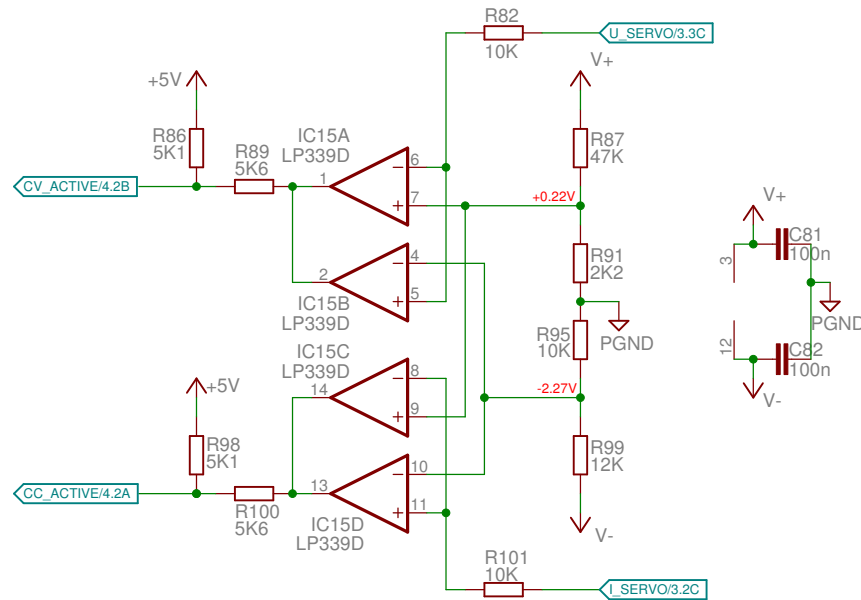
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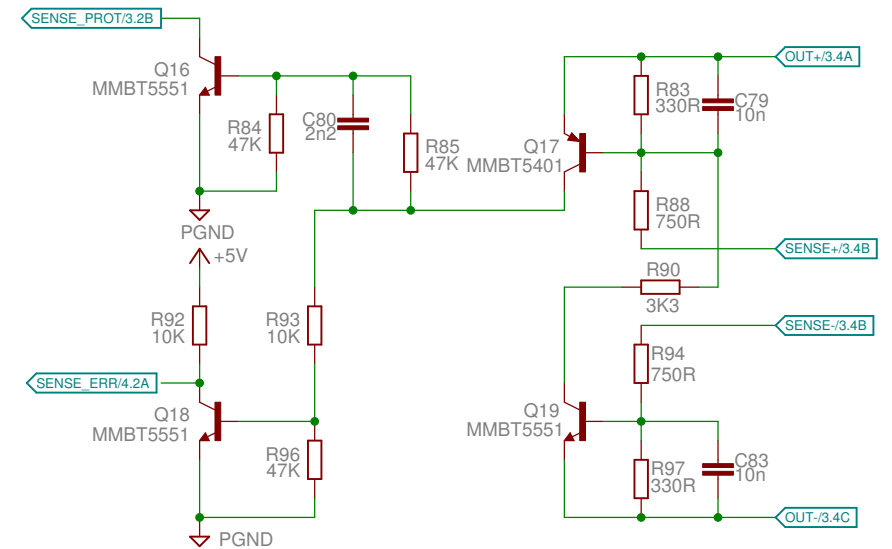
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Constant Voltage (CV) and Constant Current (CC) mode indicator



Remote sense reverse polarity detection



CC/CV indicators, Sense error detection

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