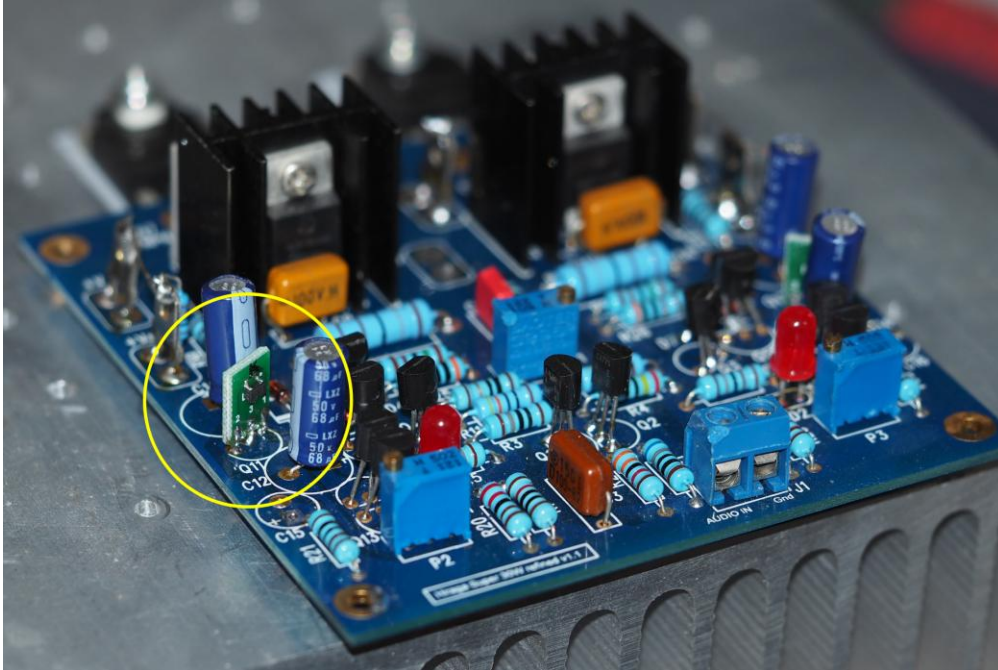
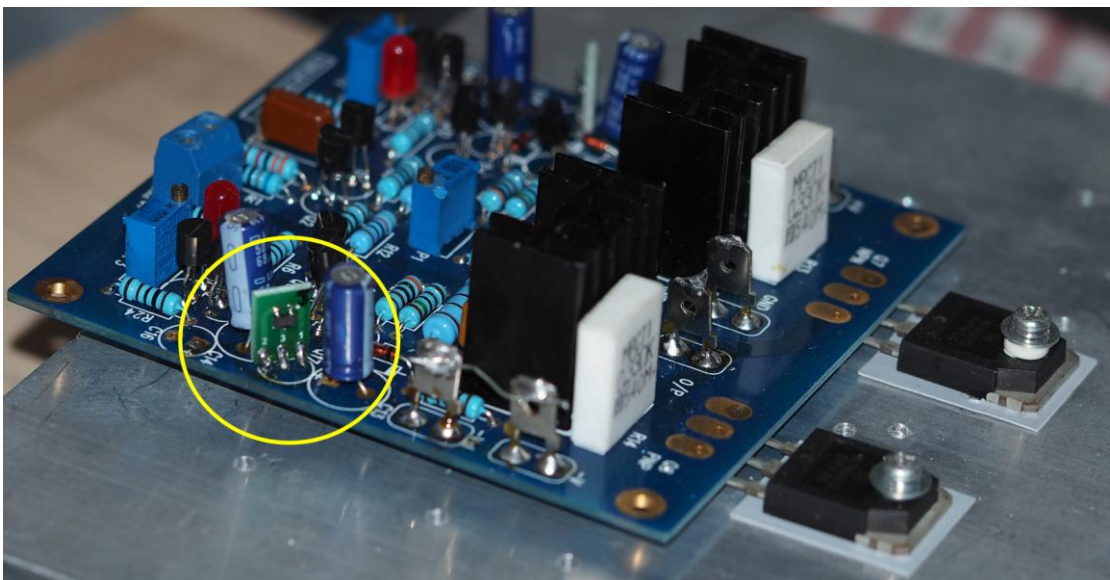


Hiraga 30W + Kubota regulator kit construction guide

1. Install and solder all the components.
2. Orientation of Q11



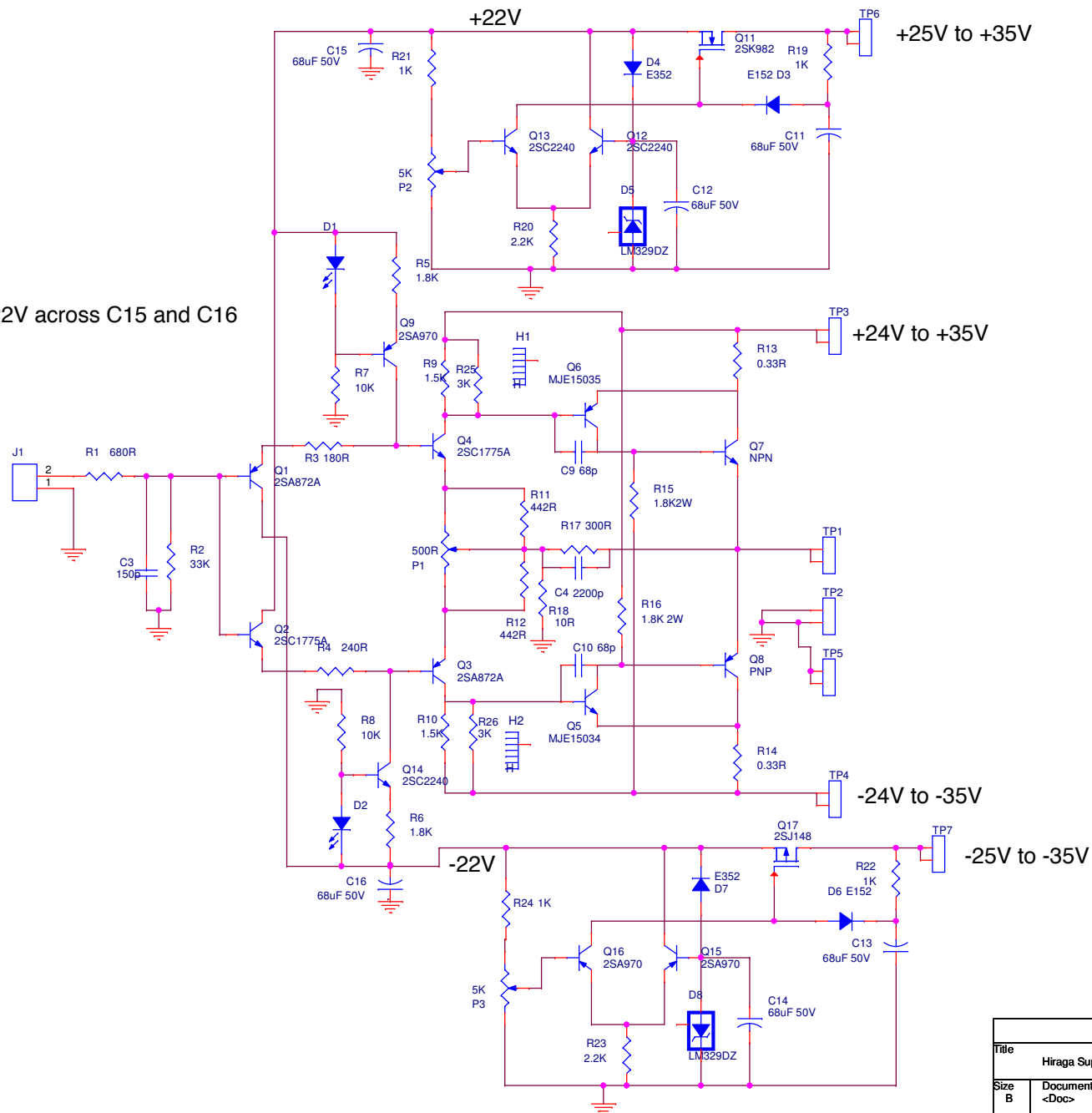
3. Orientation of Q17



4. Connect +/-25V to +/-35V to +Vsl and -Vsl respectively. It is highly recommended to use a current controlled regulator power supply for the first time of power up.

5. Adjust P2 and P3 so that the voltage across the two poles of C15 and C16 to be +22V and -22V respectively.
6. Adjustment of small signal section power supply is completed. Next stage is the whole power amplifier power up.
7. Use a bare copper wire to connect +V to +Vsl , and another bare copper wire to connect -V to -Vsl.
8. Connect a +/-25V to +/-35V to +V and -V respectively. It is highly recommended to use a current controlled power supply for the first time of power up.
9. Without connecting to a resistive load of a speaker, measure the DC voltage at O/P to GND. Adjust P1 until a minimum is obtained. Normally less than 5mV can be achieved.
10. Adjustment is completed.

Adjust P2 and P3 to get +22V and -22V across C15 and C16 respectively



PAD8 PAD9
PAD10 PAD11

| | | |
|------------------|--------------------------|--------------|
| Title | | |
| Hiraga Super 30W | | |
| Size | Document Number | Rev |
| B | <Doc> | <RevCode> |
| Date: | Thursday, March 20, 2014 | Sheet 1 of 1 |

Hiraga 30W class A refined part list

| Item | Quantity | Reference | Part |
|--|----------|---------------------|----------------------|
| | | | |
| 1 | 1 | C3 | 150p |
| 2 | 1 | C4 | 2200p |
| 3 | 2 | C9,C10 | 68p |
| 4 | 6 | C11,C12,C13,C14,C15 | 68uF 50V |
| 5 | 2 | D1,D2 | 3mm green LED |
| 6 | 2 | D3,D6 | E152 |
| 7 | 2 | D4,D7 | E352 |
| 8 | 2 | D5,D8 | LM329DZ |
| 9 | 1 | J1 | 2 pin terminal block |
| 11 | 1 | P1 | 500R multitem |
| 12 | 2 | P2,P3 | 5K multitem |
| 13 | 2 | Q1,Q3 | 2SA872A |
| 14 | 2 | Q2,Q4 | 2SC1775A |
| 15 | 1 | Q5 | MJE15034 |
| 16 | 1 | Q6 | MJE15035 |
| 17 | 1 | Q7 | NPN power transistor |
| 18 | 1 | Q8 | PNP power transistor |
| 19 | 3 | Q9,Q15,Q16 | 2SA970 |
| 20 | 1 | Q11 | 2SK982/2SK1062 |
| 21 | 3 | Q12,Q13,Q14 | 2SC2240 |
| 22 | 1 | Q17 | 2SJ148/2SJ168 |
| 23 | 1 | R1 | 680R |
| 24 | 1 | R2 | 33K |
| 25 | 1 | R3 | 180R |
| 26 | 1 | R4 | 240R |
| 27 | 2 | R5,R6 | 1.8K |
| 28 | 2 | R7,R8 | 10K |
| 29 | 2 | R9,R10 | 1.5K |
| 30 | 2 | R11,R12 | 442R |
| 31 | 2 | R13,R14 | 0.33R |
| 32 | 1 | R15 | 1.8K2W |
| 33 | 1 | R16 | 1.8K 2W |
| 34 | 1 | R17 | 300R |
| 35 | 1 | R18 | 10R |
| 36 | 4 | R19,R21,R22,R24 | 1K |
| 37 | 2 | R20,R23 | 2.2K |
| 38 | 2 | R25,R26 | 3K |
| | | | |
| Note : all the resistors are 1/4W or 1/2W except R15 and R16 | | | |