

DAC - END

The best DAC

Andrea Ciuffoli starting in the 2008

development by Quanghao

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Note:

This DAC use a single ended vacuum tube amplifier without the expensive output transformers used in my original DAC End.

The DAC board follows the original design but has been inserted a jump to switch the phase of output signal.

In any vacuum tube stage the signal on the anode is in out phase with the grid signal so the jump is necessary to get a correct in phase output.

Power supply 5V

1. + 5V Analog

2. -5V Analog

3. +5V Digital

4. + 5V Digital

5. + 5V Digital

6. + 5V Analog

Symbol



Interpretation

D GND

AGND

ANA

DIG

EARTH

Caption

GND Digital

GND Analog

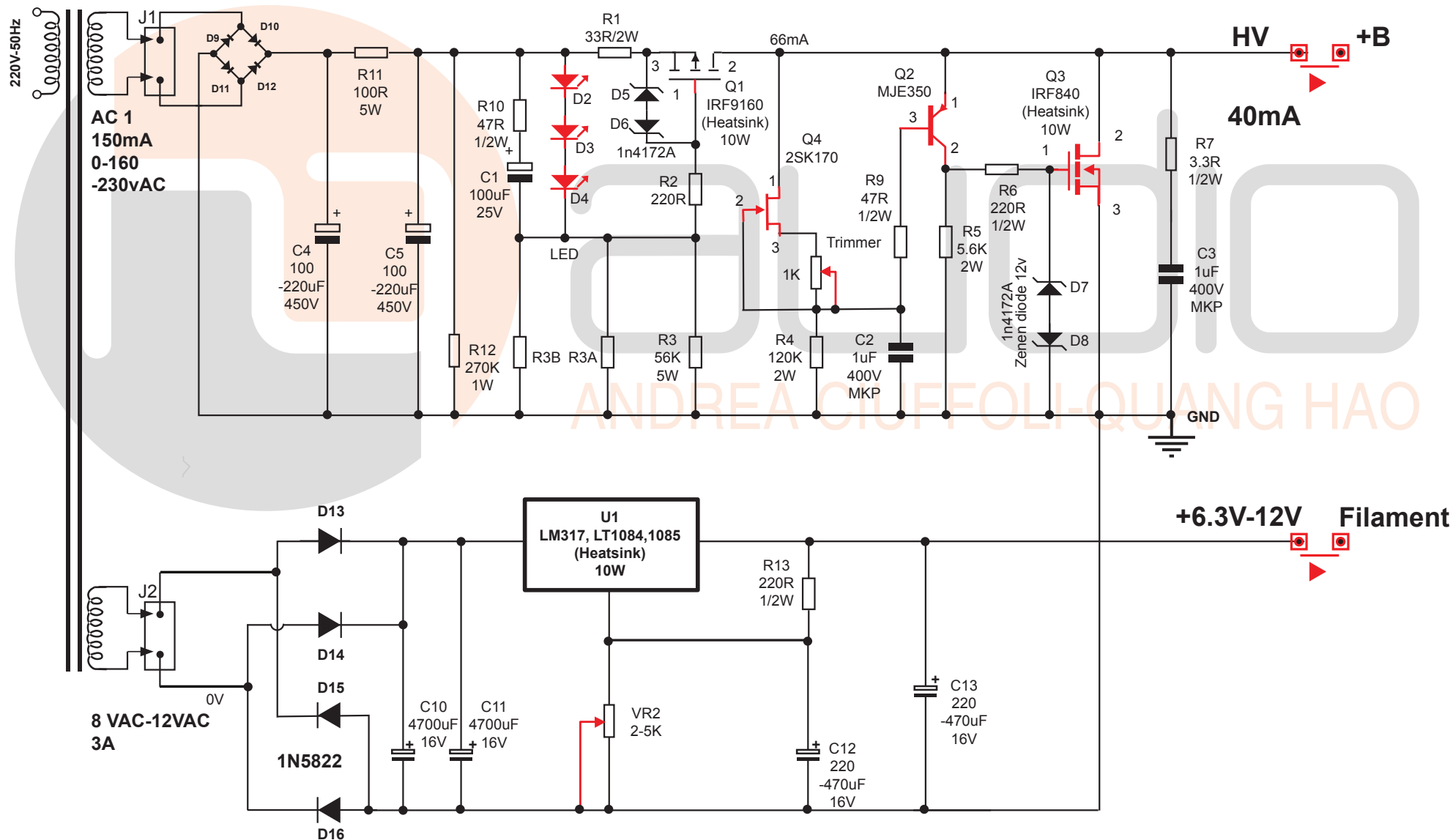
Supply+ Analog

Supply + Digital



SSHV for *IVstage DAC-END* design by Salas - layout Quanghao

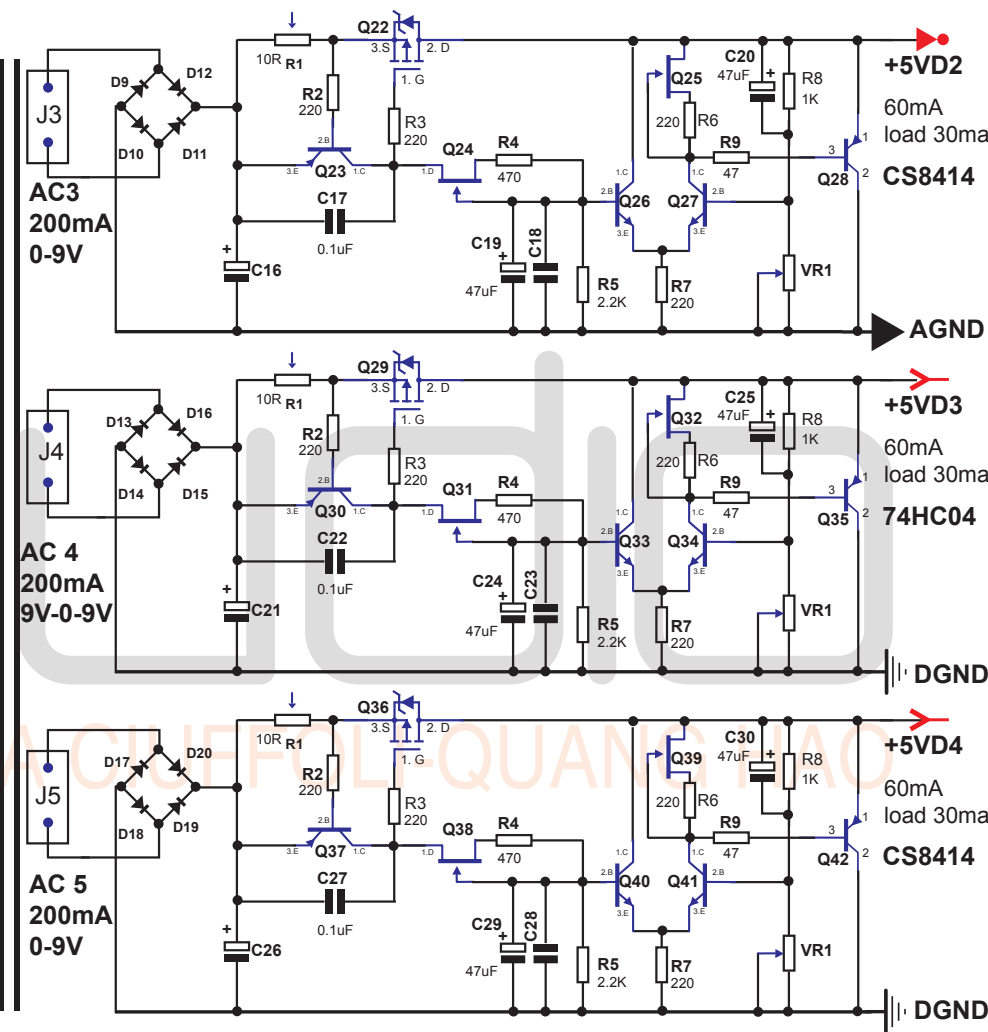
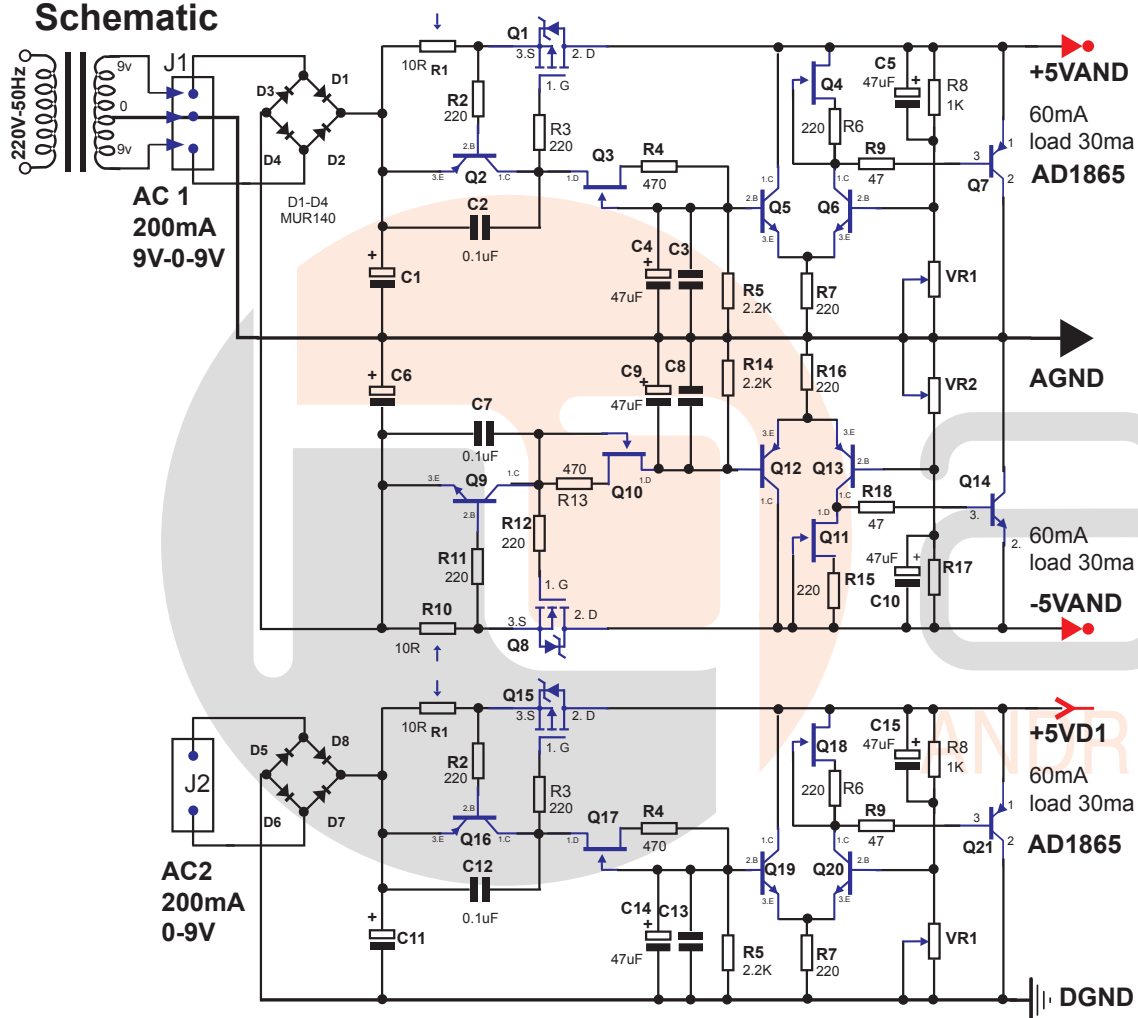
Schematic



HQ Supper LOW SHUNT REGULATOR

Design by HQ Audio for DAC-END

Schematic



- 1. CCS Current**
CCS current = $0.6/R1$
- 2. Performance:**
 - a.Noise 5Hz-30kHz
<10 μ (Typ. 5 μ V)_{iz},
 - b. Min. Diff. Vin= 10V

2. Bill of Materials

- a. Adjust VR**
variable resistor for exact voltage. Vin 5.5 volts more than Vout target after rectification
- b. All mosfet can be**
replaced by equivalent
- c. All Transistor can be**
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replaced by equivalent
NPN PNP, Better use 550
560,
C. All J-Fet use 2SK30 or
2Sk170,
Note: Q5, Q6, Q9 =
BC556/557/558/559/560.
Q2, Q12, Q13 =

BC546/547/548/549/550.
Q7= MJE350
Q14= MJE340
3.Transfomer
a. 9-0-9VAC/200mA min
b. 0-9VAC/200mA min



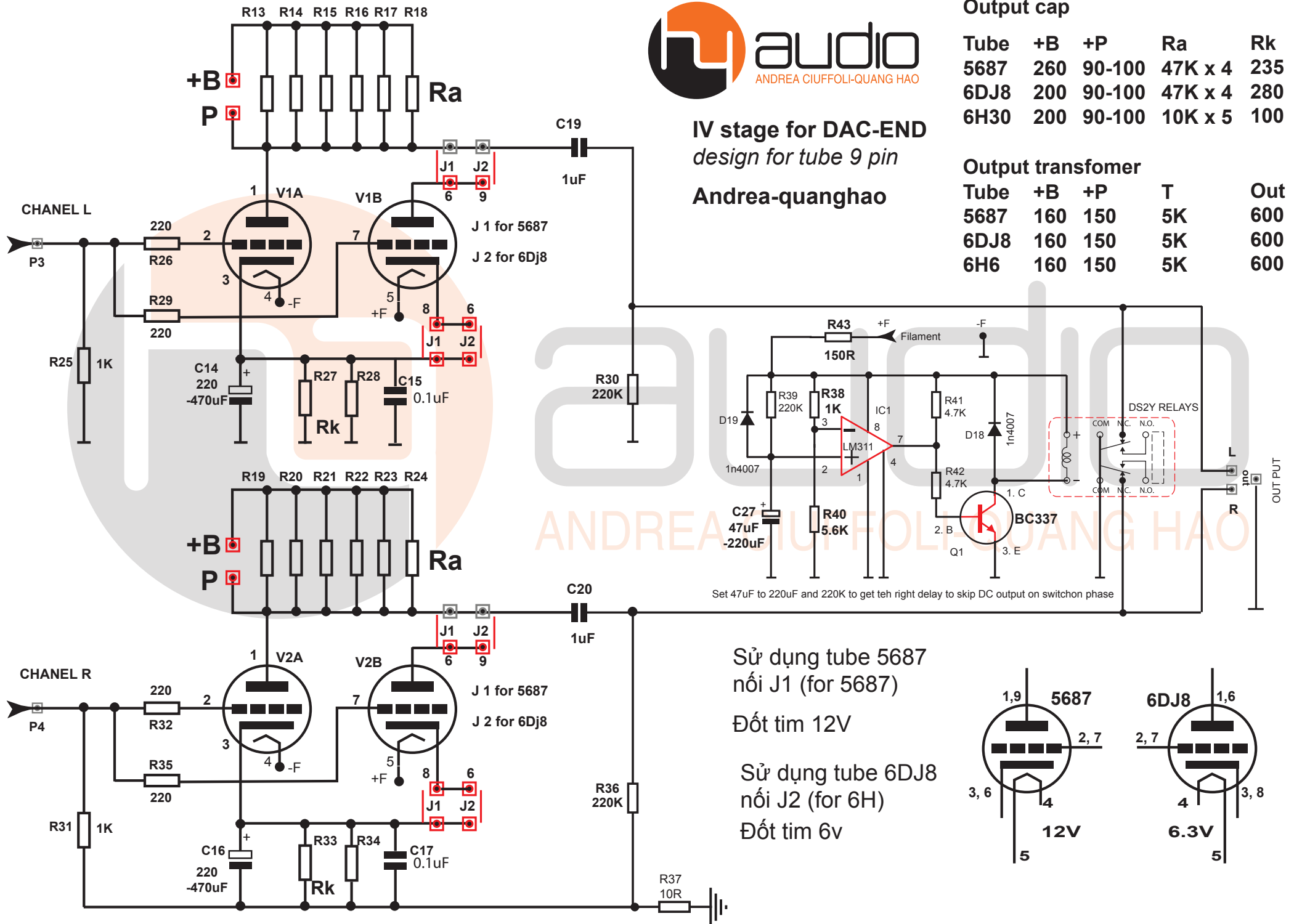
IV stage for DAC-END
design for tube 9 pin
Andrea-quanghao

Output cap

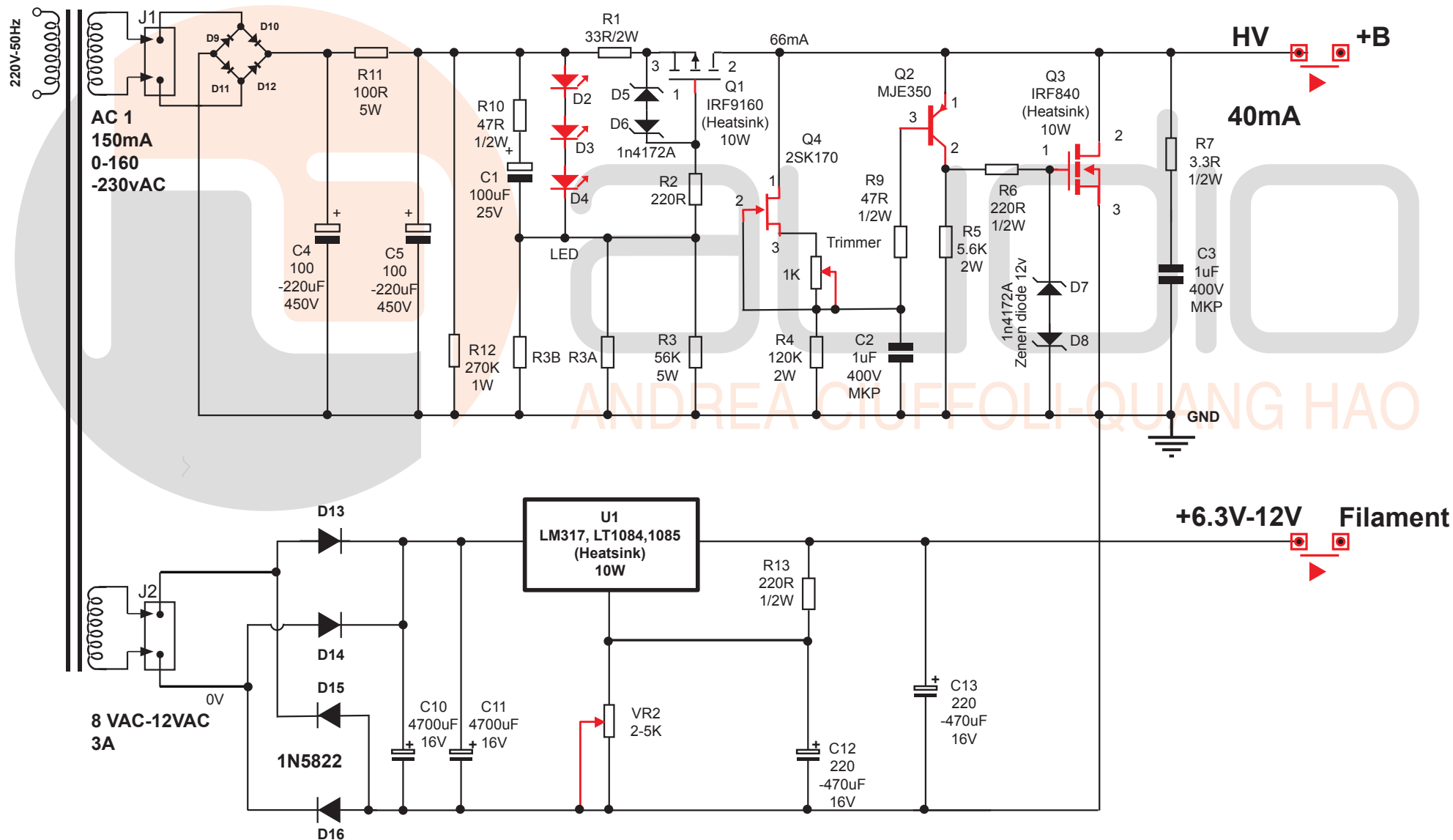
Tube	+B	+P	Ra	Rk
5687	260	90-100	47K x 4	235
6DJ8	200	90-100	47K x 4	280
6H30	200	90-100	10K x 5	100

Output transformer

Tube	+B	+P	T	Out
5687	160	150	5K	600
6DJ8	160	150	5K	600
6H6	160	150	5K	600



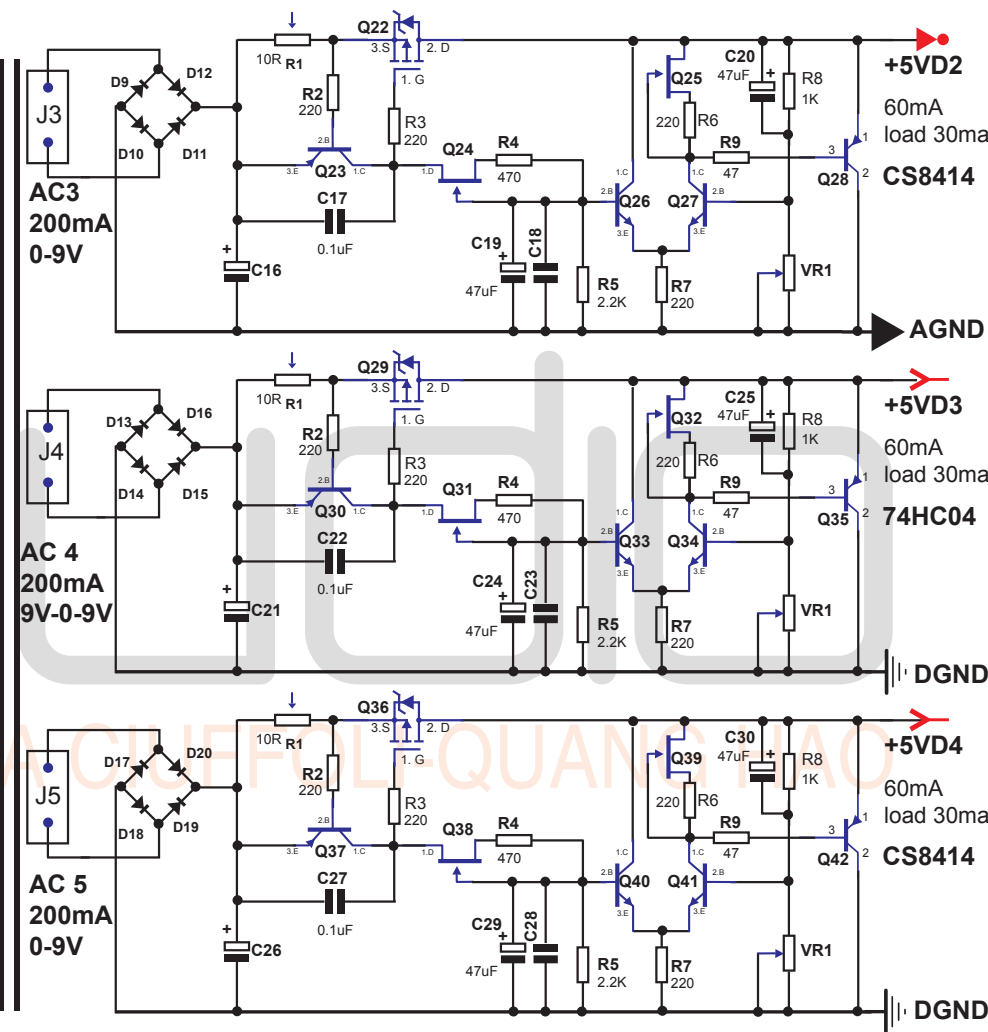
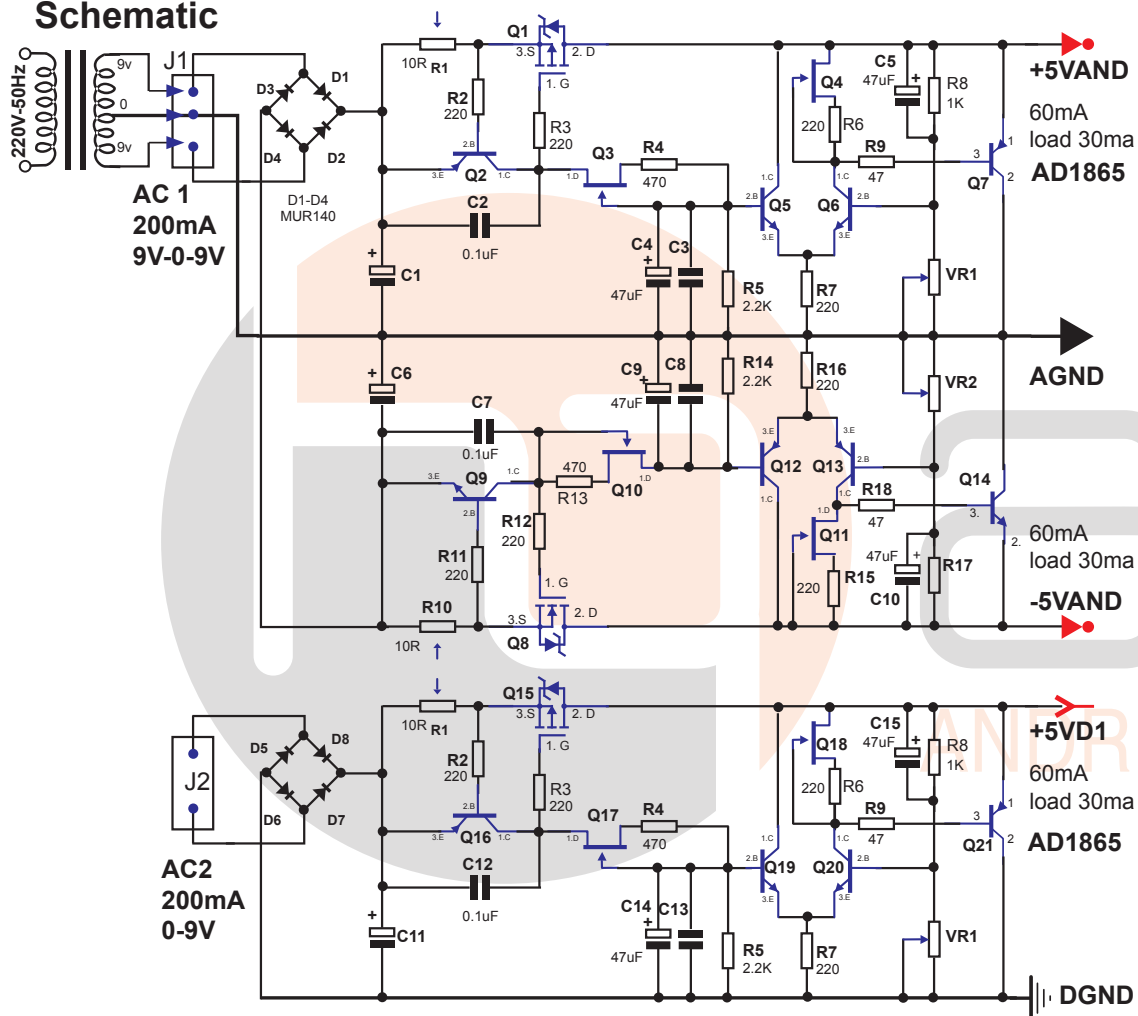
SSHV for *IVstage* DAC-END
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