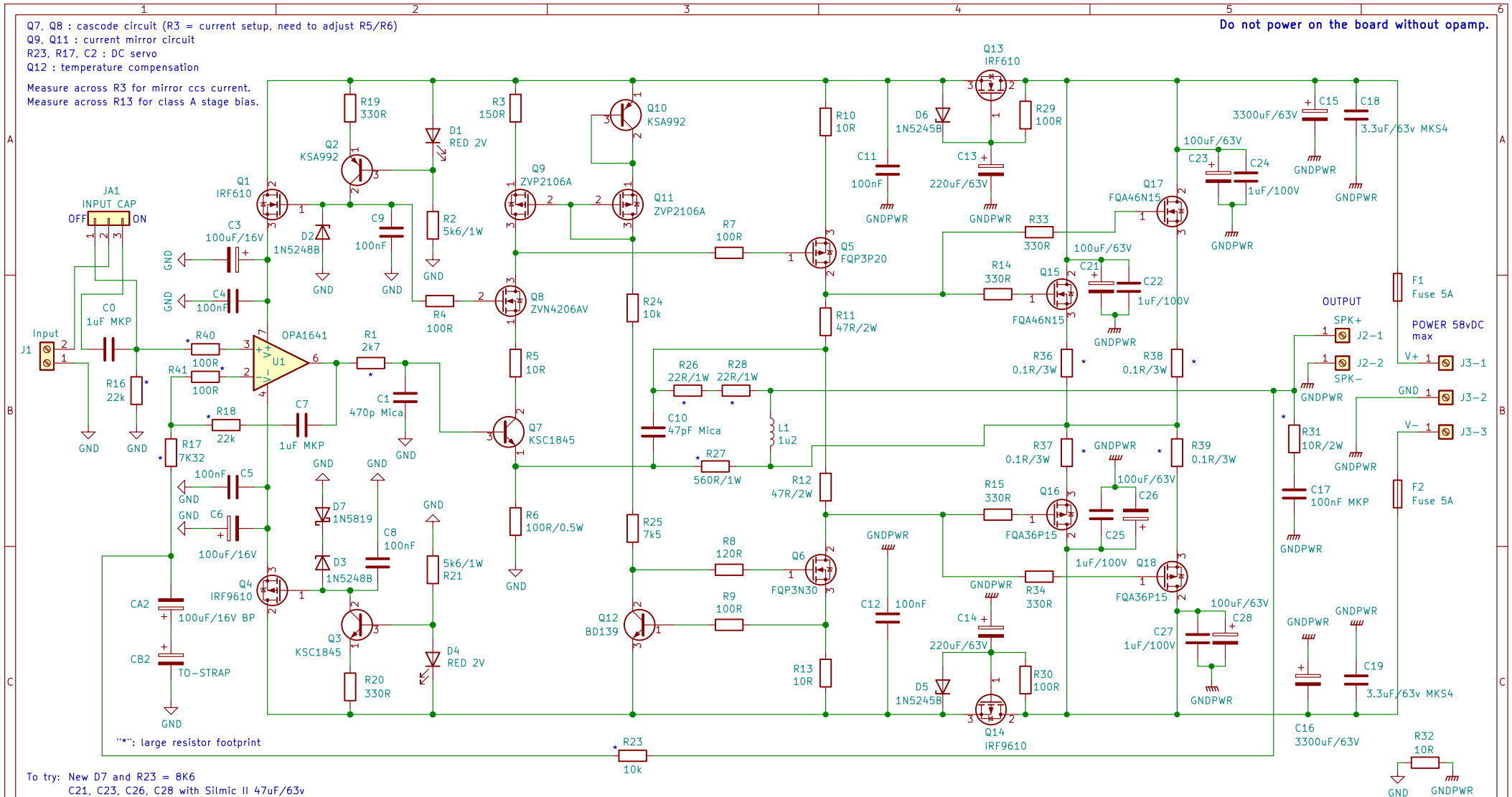


Q7, Q8 : cascode circuit (R3 = current setup, need to adjust R5/R6)
 Q9, Q11 : current mirror circuit
 R23, R17, C2 : DC servo
 Q12 : temperature compensation

Measure across R3 for mirror ccs current.
 Measure across R13 for class A stage bias.

Do not power on the board without opamp.



To try: New D7 and R23 = 8K6
 C21, C23, C26, C28 with Silmic II 47uF/63v
 New R40 and R41

1/4Watt, 1/2Watt resistor : Vishay MRS25 or CCF07
 C4, C5 : 100nF COG KEMET C322C104K3G5TA or SMD1206 on back
 C3, C6 : ELNA Silmic II RFS 100uF 16V
 C3, C5, C13, C14, C21, C23, C26, C28 : Panasonic FC
 R1 : Vishay Dale 2K7 1/4Watt RN60D2202FRE6
 R16 : Vishay Dale 22K 1/4Watt RN60D2202FRE6
 R26, R28 : Ohmite 25R 1W WNB25RFET
 R27 : Ohmite 560R 1W WNB560FET
 R31 : Ohmite 10R 2W WNC10RFE
 R36, R37, R38, R39 : Noble RGC5 or KOA BPR5B 0.1R 5W (white sugar)
 R40, R41 : Vishay Dale 100R 1/4Watt RN60E1000FB14
 C7 : use MKP capacitor (MKP1F041005100JYSD or MKP4D041005D00JSSD).
 C17 : use MKP capacitor (MKP1F031004B00KI00 or FKP3C031004C00JSSD).
 C2 : use bipolar capacitor (Nichicon Muse UES1A101MPM).
 C1, C10 : use Mica CDE CD15 or Polystyrene capacitor.
 J2 and J3 : FASTON 250 PCB connector (TE Connectivity 63849-1)

For input sensibility at 1.5v: R17 = 7K32
 For input sensibility at 0.750v: R17 = 3K3

Exicon ECW laterals:
 R11,R12 = 10R 2W, R14 = 510R and R15 = 390R

Q17 a QUAD405 audiophile approach

Modified by Stef for the Q17-P2 project
 by eng. Tiberiu Nicol

Sheet: /
 File: Q17-P2.kicad_sch

Title: Q17-P2 Amplifier

Size: A4 Date: 2022-01-08

KiCad E.D.A. kicad (6.99.0)

Rev: 1.2.1

Id: 1/1

U1 : OPA1641 (JFET) or OPA1611 (BIPOLAR)

Q1, Q13 : IRF610

Q2, Q10 : KSA992

Q4, Q14 : IRF9610

Q3, Q7 : KSC1845

Q5 : FQP3P20

Q6 : FQP3N30

Q8 : ZVN4206AV or 2N7000 (not TA)

Q12 : BD139

Q9, Q11 : ZVP2106A or BS250P (Diodes Inc)

Q15, Q17 : FQA46N15

Q16, Q18 : FQA36P15

C0 : CDE 1uF 100v 930C1W1K-F

1W resistor : Vishay PR01

2W resistor : Vishay CCF02 or PR02

C15, C16 : Vishay 256 PMG-SI

C18, C19 : Wima MKS4C043303G

100nF : Wima MKS2

D1, D4 : LED RED 2V

D2, D3 : 1N5248B

D5, D6 : 1N5245

D7 : Onsemi 1N5819RLG