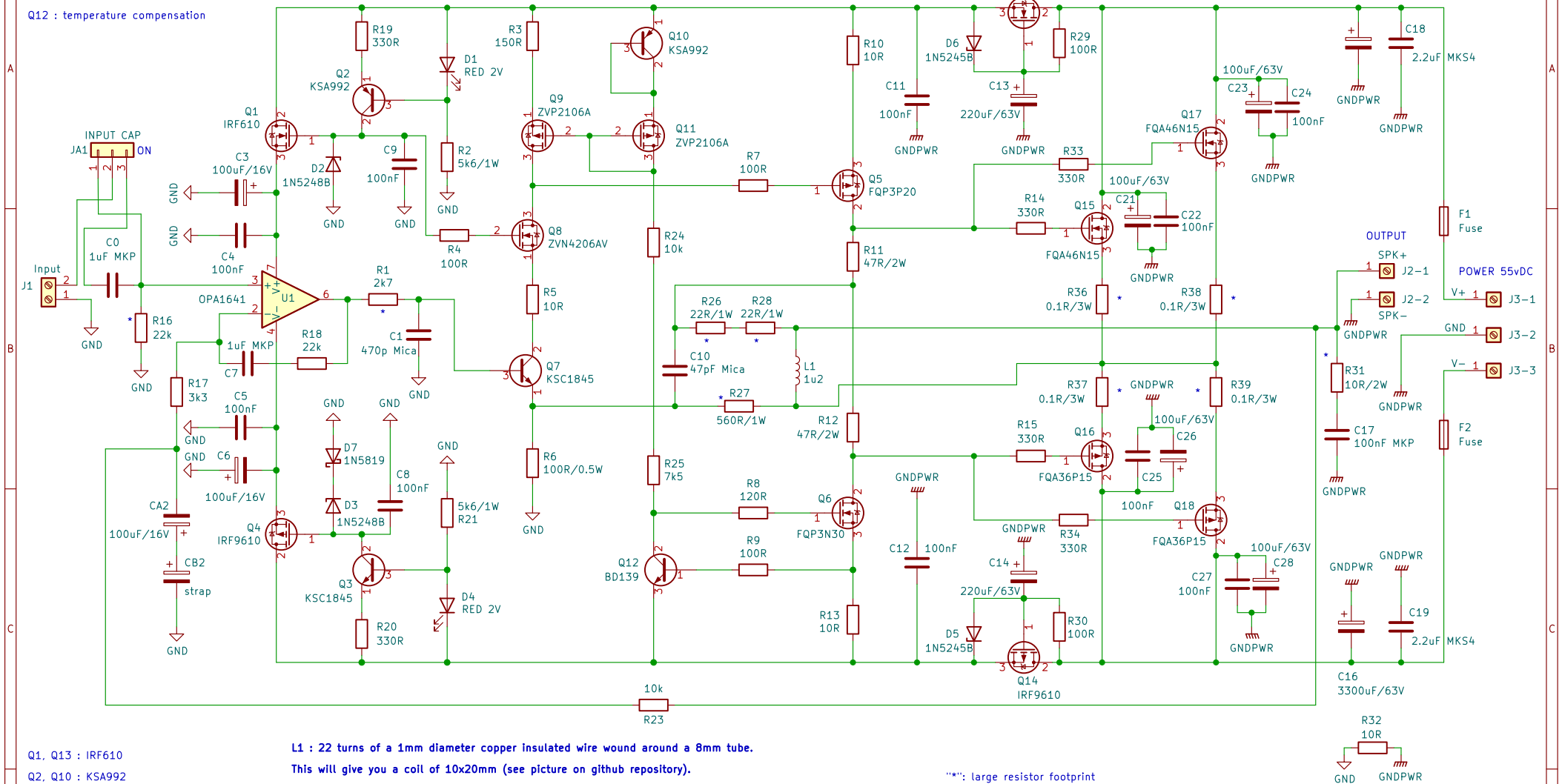


Q7, Q8 : cascode circuit
 Q9, Q11 : current mirror circuit
 R23, R17, C2 : DC servo
 Q12 : temperature compensation

Do not power on the board without opamp.



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

L1 : 22 turns of a 1mm diameter copper insulated wire wound around a 8mm tube.
 This will give you a coil of 10x20mm (see picture on github repository).

C15, C16 : Vishay 256 PMG-SI
 C18, C19 : Wima MKS4
 100nF : Wima MKS2
 0.5W, 1W resistor : Vishay PR01
 2W resistor : Vishay CCF or PR02
 U1 : OPA1641
 D1, D4 : LED RED 2V
 D2, D3 : 1N5248B
 D5, Q6 : 1N5245
 D7 : 1N5819
 C3, C5, C13, C14, C21, C23, C26, C28 : Panasonic FC
 R26, R27, R28 : try to use non inductive 1W resistor (Vishay Dale or Ohmite).
 R36, R37, R38, R39 : Noble RGC5 or KOA BPR58 0.1R 5W (white sugar)
 C7 : use MKP capacitor (MKP1F041005I00JYSD or MKP4D041005D00JSSD).
 C17 : use MKP capacitor (MKP1F031004B00KI00 or FKP3C031004C00JSSD).
 CA2 & CB2 : use 100uF/16V BP for CA2 and strap CB2.
 C1, C10 : use Mica CDE CD15 or Polystyrene capacitor.
 J2 and J3: FASTON 250 PCB connector (TE Connectivity 63849-1)

***: large resistor footprint
 Exicon laterals : R11 and R12 = 10R 2W

Q17 a QUAD405 audiophile approach

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

Sheet: /
 File: Q17-P2.kicad_sch

Title: Q17-P2 Amplifier

Size: A4
 KiCad E.D.A. kicad (6.0.0-rc1-343-g73b39e836d)

Date: 2021-12-20

Rev: 1.1.1

Id: 1/1