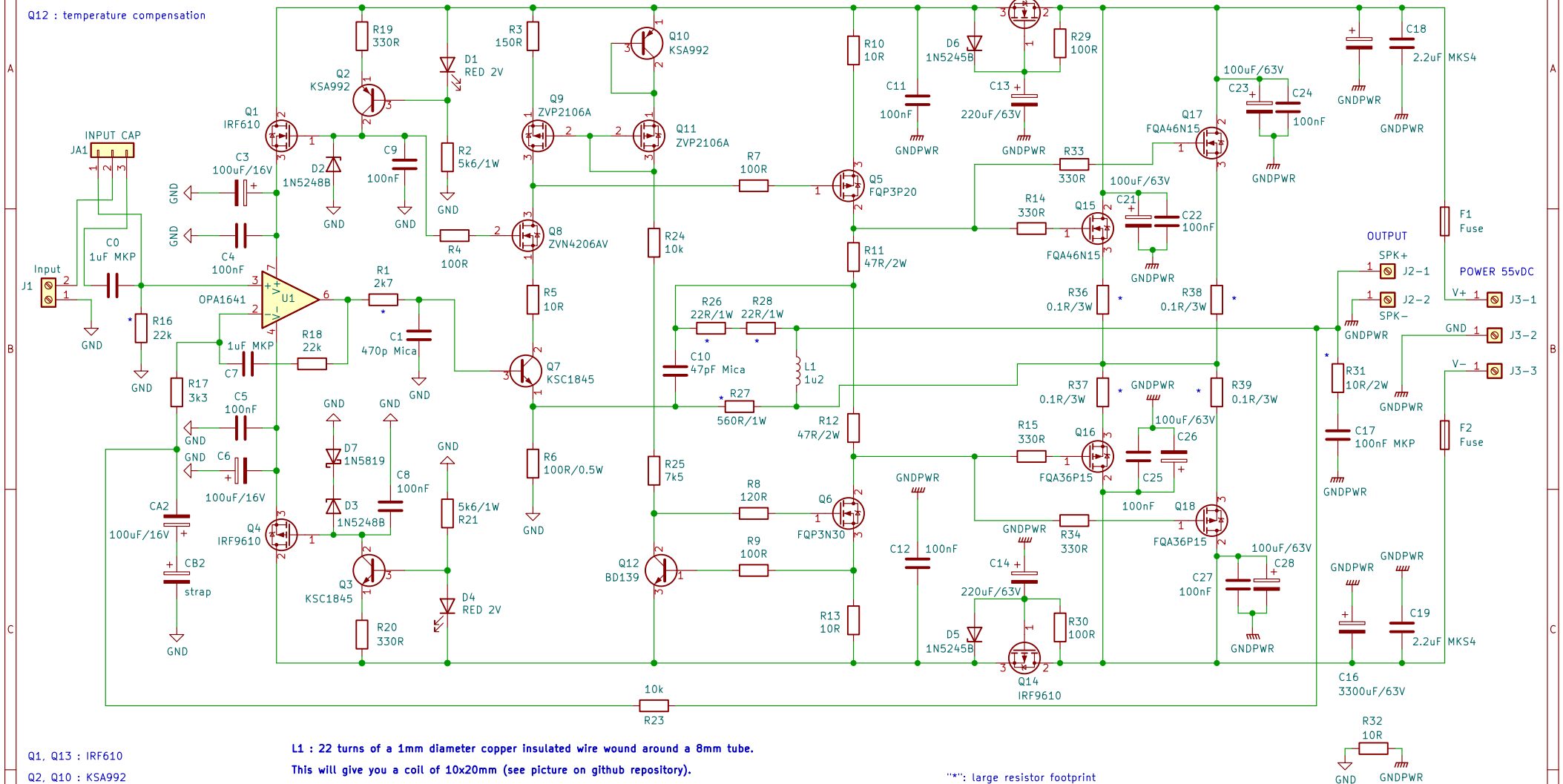


Q7, Q8 : cascode circuit  
 Q9, Q11 : current mirror circuit  
 R23, R17, C2 : DC servo  
 Q12 : temperature compensation

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).

R36, R37, R38, R39 : KOA BPR58 0.1R 5W (white sugar)  
 C18, C19 : Vishay 256 PMG-SI  
 100nF capacitor : Wima MKS2  
 0.5W, 1W resistor : Vishay PR01  
 2W resistor : Vishay CCF or PR02  
 U1 : OPA1641 or OPA1611  
 D1, D4 : LED RED 2V  
 D2, D3 : 1N5248B  
 D5, Q6 : 1N5245  
 C3, C5, C13, C14 : Panasonic FC  
 R26, R27, R28 : try to use non inductive 1W resistor (Vishay Dale or Ohmite).  
 C15, C16 : Vishay 048 RML (MAL204858222E3) or Nichicon UFW (UFW1J222MHD).  
 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

BETA SCHEMATIC – DO NOT USE  
 Modified by Stef for the Q17-P2 project  
 by eng. Tiberiu Nicol

Sheet: /  
 File: Q17-P2.kicad\_sch

**Title: Q17-P2 Amplifier**

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

Date: 2021-12-19

Rev: 1.1.0

Id: 1/1