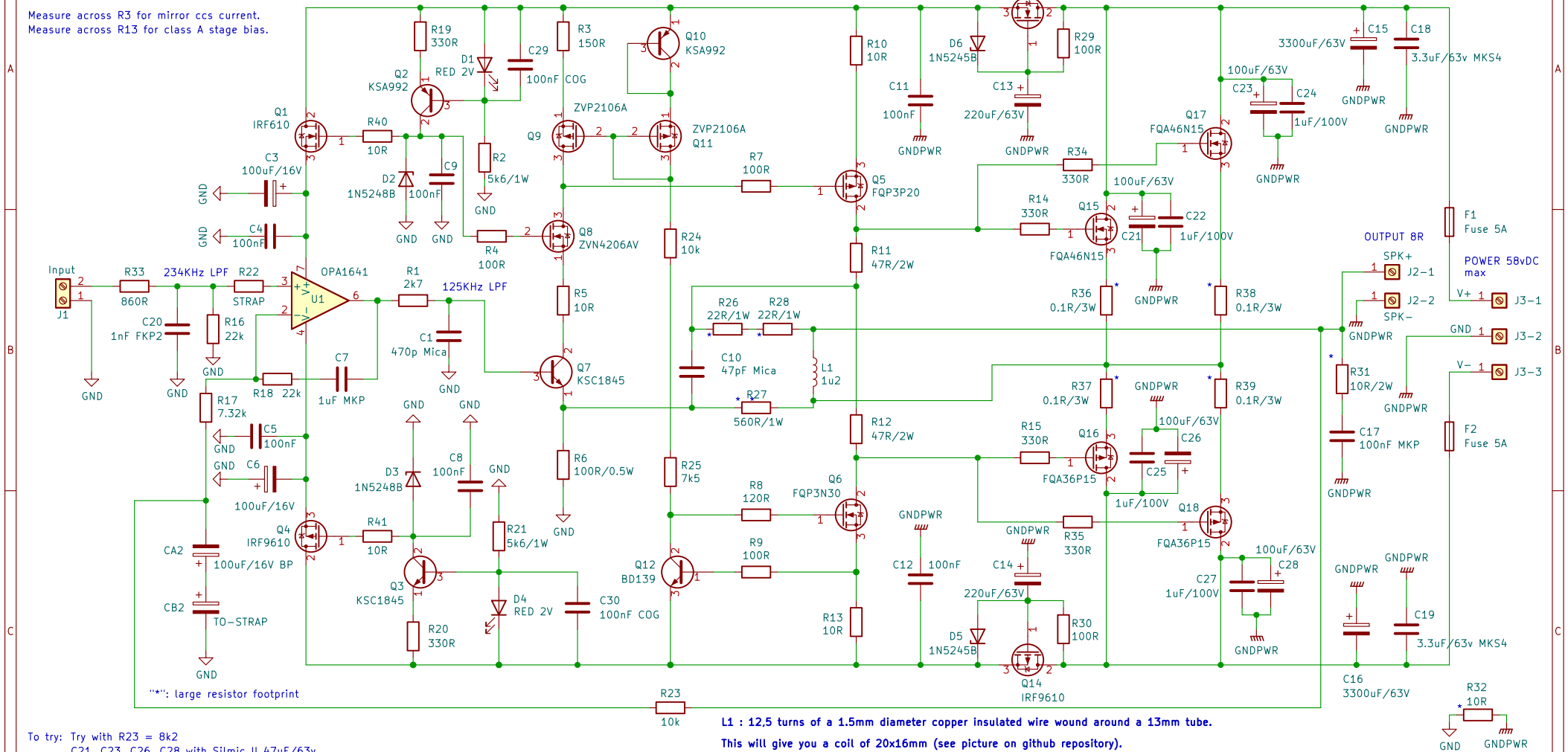


Q7, Q8 : cascode circuit (R3 = current setup, need to adjust R5/R6)
 Q9, Q11 : current mirror circuit
 R23, R17, C2 : DC servo
 Q12 : temperature compensation

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

Do not power on the board without opamp.



<p>U1 : OPA1641 (JFET) or OPA1611 (BIPOLAR)</p> <p>Q1, Q13 : IRF610</p> <p>Q2, Q10 : KSA992</p> <p>Q4, Q14 : IRF9610</p> <p>Q3, Q7 : KSC1845 or 2SC2240</p> <p>Q5 : FQP3P20</p> <p>Q6 : FQP3N30</p> <p>Q8 : ZVN4206AV or 2N7000 (not TA)</p> <p>Q12 : BD139</p> <p>Q9, Q11 : ZVP2106A or BS250P (Diodes Inc)</p> <p>Q15, Q17 : FQA46N15 or IRF610</p> <p>Q16, Q18 : FQA36P15 or IRF9610</p>	<p>C0 : CDE 1uF 100v 930C1W1K-F</p> <p>C15, C16 : Vishay 256 PMG-SI</p> <p>C18, C19 : Wima MKS4C043303G</p> <p>C3, C6 : ELNA Silmic II RFS 100uF 16V</p> <p>100nF : Wima MKS2</p> <p>D1, D4 : LED RED 2V</p> <p>D2, D3 : 1N5248B</p> <p>D5, D6 : 1N5245</p> <p>1W resistor : Vishay PR01</p> <p>2W resistor : Vishay CCF02 or PR02</p> <p>R26, R28 : TE Connectivity H4P22RFZA</p> <p>R27 : 560R 1W 1% Ohmite WNB560FET</p> <p>C15, C16 : Nichicon UFW (UFW1J222MHD) or Vishay 048 (MAL204858222E3) or Wurth WCAP-ATG8 (860010781028).</p>	<p>For resistor < 150R : sort then or use 1% range.</p> <p>0.25W, 0.5W resistor : Vishay MRS25 or CCF07</p> <p>R31 : 10R 2W Ohmite WNC10RFE</p> <p>R36, R37, R38, R39 : Noble RGC5 or KOA BPR58 0.1R 5W (white sugar)</p> <p>C1 : 470pF CDE CD15FD471J03F or Polystyrene capacitor.</p> <p>C2 : Non polar capacitor Nichicon Muse UES1A101MPM.</p> <p>C4, C5, C29, C30 SMD : 100nF COG TDK C3216C0G1H104J160AA</p> <p>C3, C5, C13, C14, C21, C23, C26, C28 : Panasonic FC</p> <p>C7 : 1uF Wima MKP2D041001N00JSSD or MKS4B041002C00JF00.</p> <p>C10 : 47pF Mica CDE CD15ED470J03 or Polystyrene capacitor.</p> <p>C17 : 1uF MKP capacitor FKP3C031004C00JSSD or MKP1F031004B00K100.</p> <p>C20 : 1nF Wima FKP2C011001D00HSSD or Vishay MKT BFC237085102 or Mica.</p> <p>J2 and J3 : FASTON 250 PCB connector (TE Connectivity 63849-1)</p>	<p>For input sensibility at 1.5v: R17 = 7K32</p> <p>For input sensibility at 0.750v: R17 = 3K3</p> <p>Exicon ECW laterals: R11,R12 = 10R 2W, R14 = 510R and R15 = 390R</p>
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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 1.0 serie Amplifier

Size: A4 Date: 2022-07-24

KiCad E.D.A. kicad (6.0.6-0)

Rev: 1.0.1

Id: 1/1