I(dq) is in the range of 125mA to 250mA, to even 500mA! Ideally VDC == 12.5v for RD15HVF1. The 100nF + 680R negative feedback circuit is calculated for RD15HVF1. Negative feedback is compulsory so that I(dq) can be properly set, without the MOSFET trying to amplify spurious signals when the DC bias is increased. Motivation: IRF510 is awesome @ 24v but we want to operate at 13.8v with higher efficiency at 21 MHz and 28 MHz in the field. (VU2ASH) The PCB layout should be linear in PA as the signal proceeds, to avoid input—output feedback especially at higher frequency. It improves stability. PWR_FLAG GND GND GND PWR_FLAG L1 Bifilar winding on FT50-43 24/25/26 SWG, 10T RFC1 RV1 RF_OUT1 C2 100nF (100v) 680 0.1 R5 C 100nF **9** R1 C9 3.3k DRAIN R2 10 RF_IN1 GND CAN RD15HVF1 Q1 GND Robust Class-C / Class-D Single-ended RD15HVF1 powered HF PA Uses ideas from VU2ASH, HAMBREWERS, QRP Labs, Tom (AK2B), VK3PE, and G6LBQ Author: Dhiru Kholia (VU3CER) Sheet: / File: Finals-RD15.kicad_sch Title: Easy-PA-With-Pluggable-LPF Date: 2022-03-18 Rev: v0.01 KiCad E.D.A. eeschema 6.0.4-6f826c9f35~116~ubuntu22.04.1 ld: 1/1