

ceramic capacitors on this page are 10V X5R unless otherwise noted QHVPower QHVPower M7 diodes are similar in specification to 1N4007but are in surface mount packages. PWR\_FLAG +5V D1 D2 L1 oPower ♦ М7 М7 **Power** 470µH D11 FUSED\_AC М7 R148 3.6k BP2525 U1 QHVPower DRAIN > HVDC C173 C172 EC2 R20 CS  $1\mu$ 510  $2.2 \mu$ 10µ 100 400V 400V R18 R8 R7 SEL R17 1.3 L2 **QPower** 470µH U1\_GND  $\rightarrow$ U1\_GND is not the same as system ground. C170 GND D3 در E1J 本 470µ 10V BP2525 is a switched mode power supply chip that produces at 3.3V or 5V non-isolated (referenced to neutral line) supply.

Because SEL is tied to ground this is set to 5V. GND U1 produces a regulated voltage output at the right side of L2 referenced to system ground even though it does not directly receive system ground. It must rely on a calculated relationship between U1\_GND and GND. The datasheet seems to indicate that current sensing is part of this. Sheet: /power supply/ File: powersupply.kicad\_sch Title: T smart switched power outlet Size: USLetter Date: Rev: KiCad E.D.A. 9.0.3 ld: 2/3

