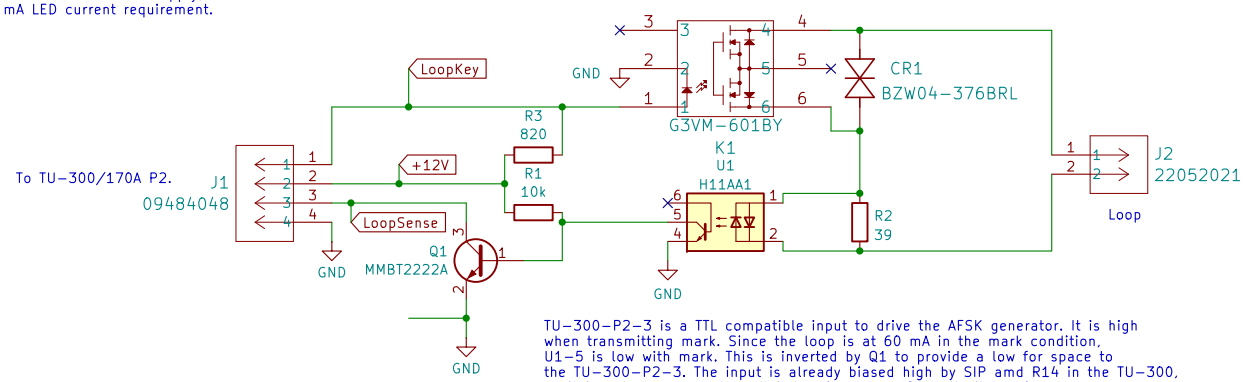
TU-300-P2-1 is the TTL output of the TU-300. According to the schematic at https://www.navy-radio.com/rtty/flesher/TU-300-MB-lft-side.pdf , it is pulled low in the space condition by Q5. In mark, it is pulled high by the a 4.7k (SIP) and low by 3.5k (R15). This results in a Thevenin voltage of 5.12 volts and a Thevenin resistance of 2k. The LED forward voltage is 1.15 V typical, so the LED current will be 2 mA. The recommended LED current is 15 mA. Since P2-2 is a +12V supply, R3 adds another 13 mA to the 2 mA to meet the 15 mA LED current requirement.



TU-300-P2-3 is a TTL compatible input to drive the AFSK generator. It is high when transmitting mark. Since the loop is at 60 mA in the mark condition, U1-5 is low with mark. This is inverted by Q1 to provide a low for space to the TU-300-P2-3. The input is already biased high by SIP amd R14 in the TU-300, so it is only necessary to pull it low for space. Q1 pulls it low for space.

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