



VIN = 5V
LED = 2V
LED current = 25milli amps
Voltage across resistor 3 volts
Resistance of Collector resistor = $E/R = 3 - 0.3/.025 = 100 \text{ Ohms}$
wattage = $.025 * 3 = 0.075 < 1/8 \text{ Watt}$

R base min = collector current / gain = $0.025 / 60 = 0.4 \text{ milli amps}$
Voltage in = 2.75
Rbase = $2.75 - .6 / 0.004 = 530 \text{ Ohms}$ or 510 Ohms