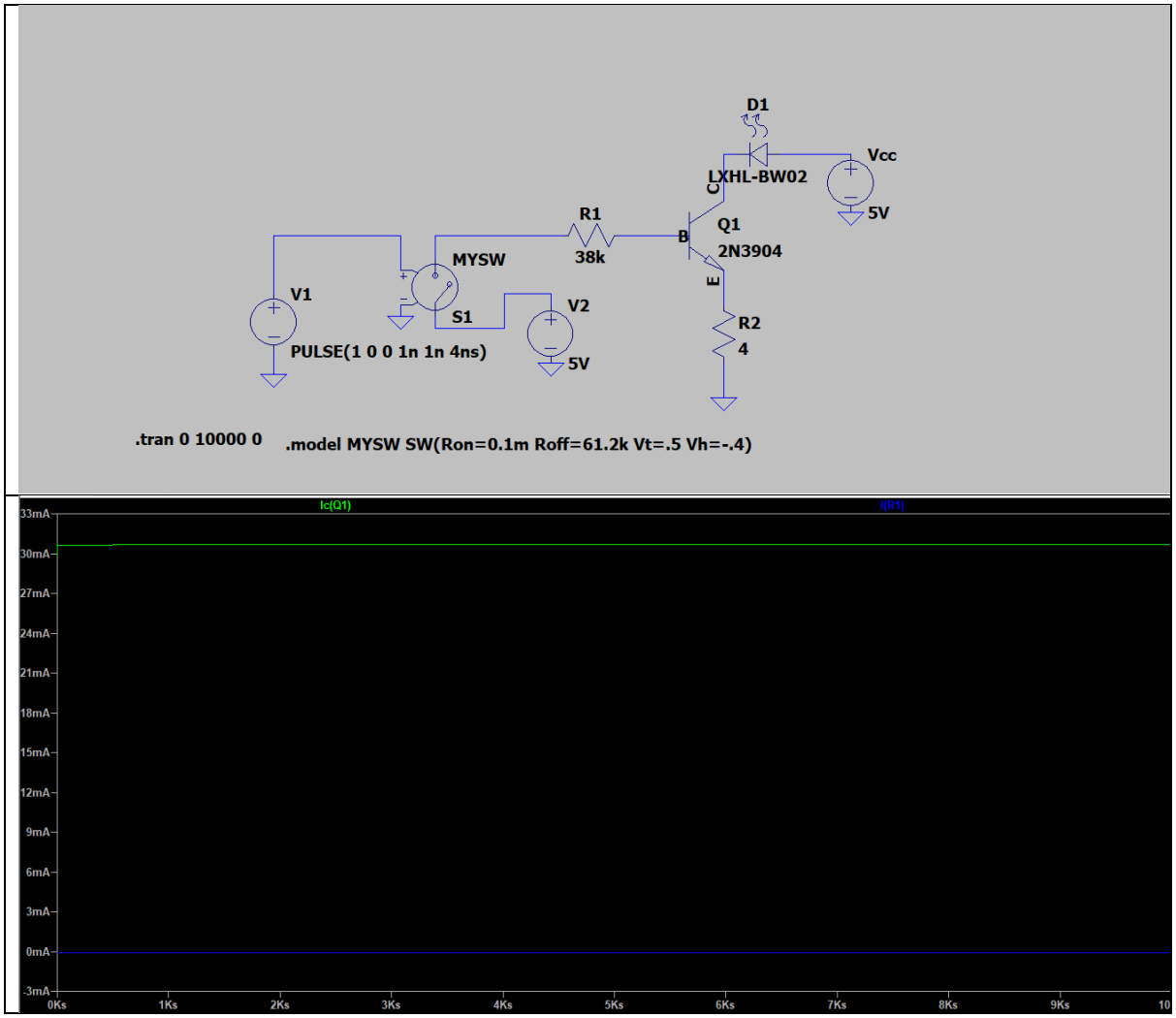
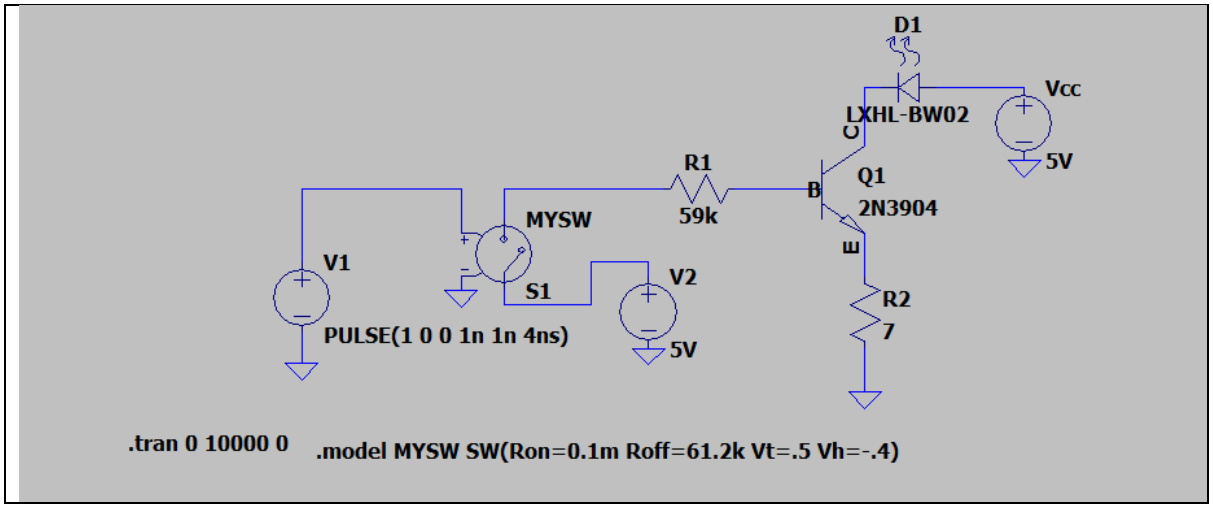
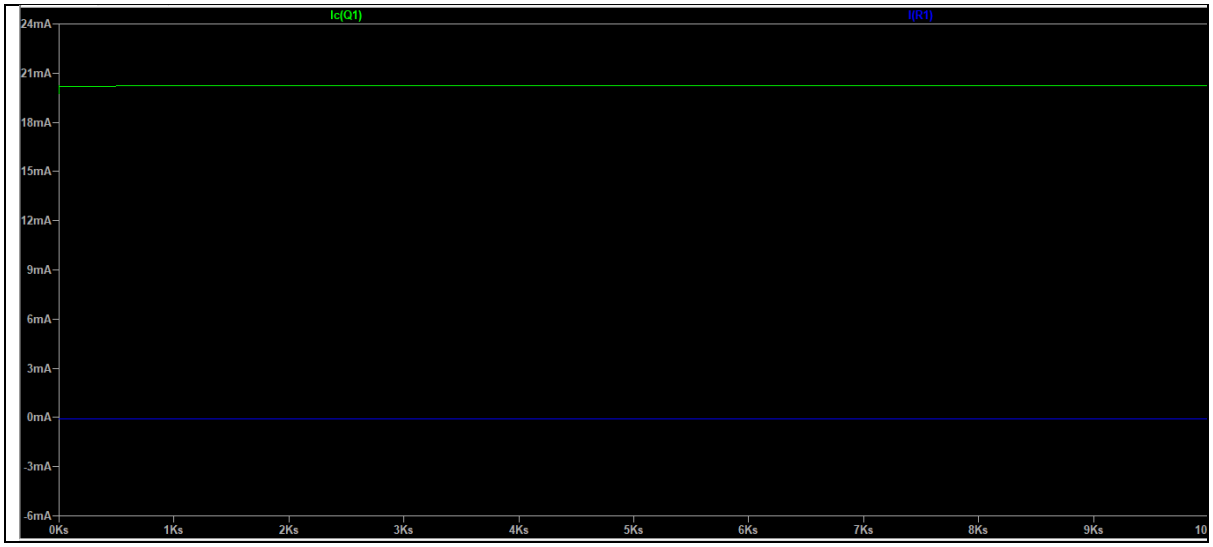
1)Active Buzzer: 3.3V to 5V and the current requirement is **≤32 mA,** the below current drive circuit is useful for generating a constant current drive of 30.2mA which is required for Buzzer.



2)**IR sensor:** 3.3 to 5V the current requirement is 20mA, the below current drive circuit is useful for generating a constant current drive of 20.2mA which is required for Buzzer.





Note: due to the unavailability of the buzzer in Ltspice I designed the current driver circuit by using a LED even in the case of IR drive.

The reason behind choosing those values for resistors is that by applying KVL in the collector-emitter and base-emitter loop with the internal LED voltage, I got the approximate values of the chosen ones as the values. I can choose a PNP transistor instead of NPN but the reason is The voltage and current behaviour of an NPN transistor is significantly more intuitive and NPNs provide a more straightforward interface to digital output signals such as a control signal generated by a microcontroller. To avoid power wastage and control the current driving with it's pulses a PWM control is used here.