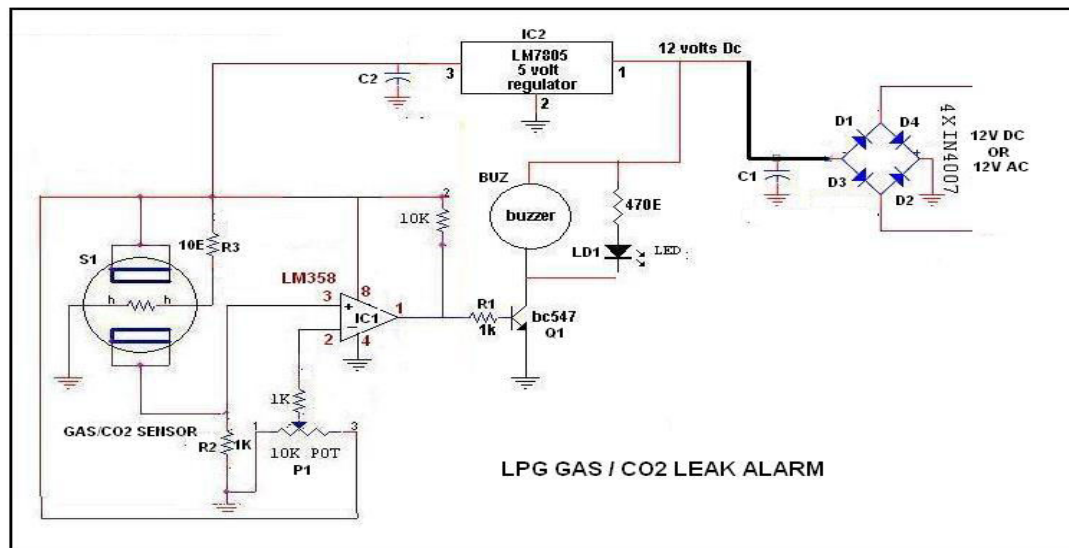
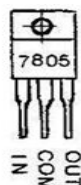
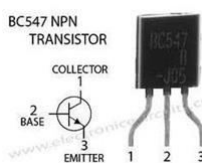


## SMOKE ALARM:

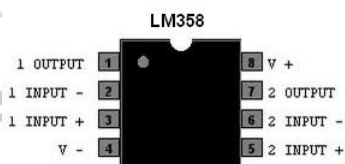


This circuit can detect carbon-di-oxide or carbon-monoxide gas using a typical gas sensor (MQ 7) with a voltage comparator circuit using LM 358 (IC -1). A voltage comparator has 2 inputs and 1 output. 1st input is supplied with an adjustable reference voltage and the other input is connected to the gas sensor resistance network. Normally the sensing input voltage is set lesser than the reference input voltage, if a gas is sensed by the sensor, the sensor input voltage is increased which exceeds to that of the reference input resulting in a high logic voltage of the comparator output. The output of the comparator switches on a buzzer using Q1 BC547, a NPN transistor. The gas sensor has an internal heater element which is supplied with 5 volts. The sensor settles down after 2 minutes and then start sensing. This circuit is operated with 12 volts adapter. IC - 2 7805 is responsible for outputting 5 volts for the heater.

Components: R1 = 1k resistor, R2 = 470 ohms resistor, R3 = 10e Resistor, C1 = 1000uf capacitor, C2= , Q1 = BC 547 NPN Transistor, P1=pot/preset, D1 – D4 = in4007 diode, LD1 = L E D, IC 1 = LM 358 (with base), IC2- LM7805, 12v adapter, DC Socket, Buzzer, MQ7-CO2 or Gas Sensor.



Smoke Sensor



L.E.D



Preset/Pot