

## **15-1892 Technical Description**

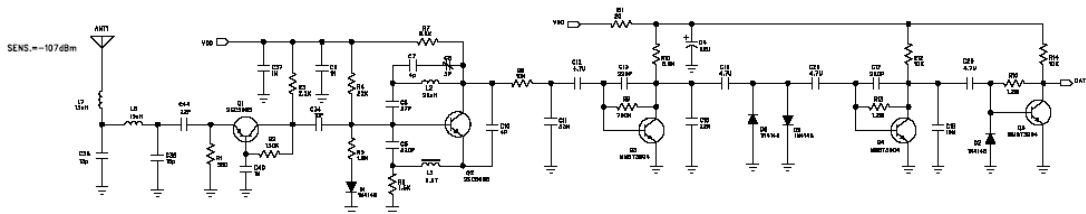
15-1892 is an UHF remote control TV receiver, which can be divided into a few parts:

### ***Receiver***

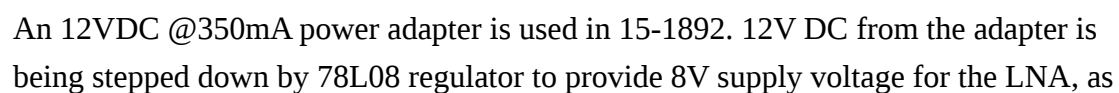
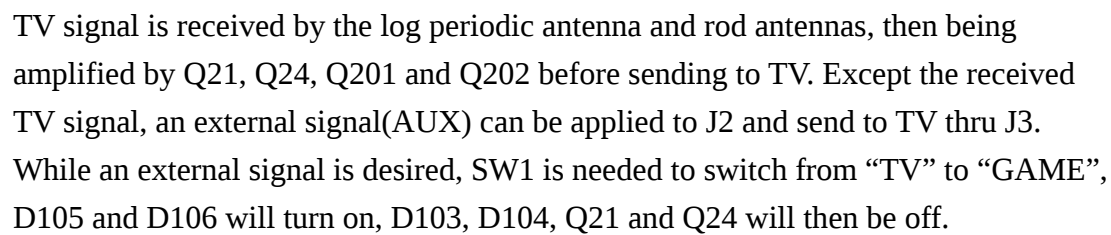
1. 433.92MHz Remote Control receiver
2. UHF TV LNA
3. Regulated voltage circuitry
4. MCU and MOTOR circuitry

### ***Brief Description of each section:***

#### **1. 433.92MHz Remote Control receiver**

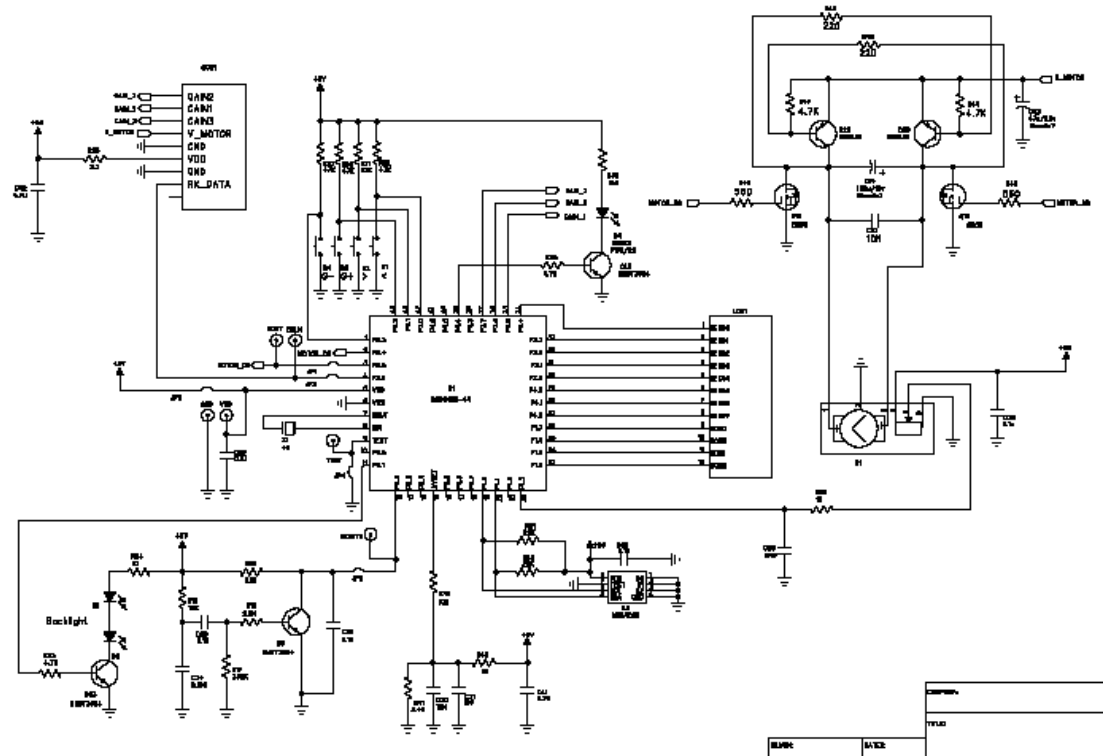


433.92MHz control signal from the remote control is being received by an quarter wavelength antenna and then amplified by Q1. Q2 is an oscillating detector which C7, C8, C6, C10 and L2 are combined gives the oscillation at 433.92MHz, C5, L3, and R6 create necessary quenching action that produces the superregenerative effect. The desired signal is then amplified by Q3 and Q4. D8 and D9 are acted as limiter which restricts the received signal level. Q5 is an comparator to demodulate the signal to coded data.



well being further stepped down by 78L05 to give supply voltage for the MCU. The motor gear (V\_MTR) is operated at 12V DC directly.

#### 4. MCU and MOTOR circuitry



S3C9488-44 MCU is operated with a 4MHz(X1) resonator and it stores its data in EEPROM U3 NC24C02.

S3C9488-44 MCU is also responsible for the following tasks:

1. Flashes the LED when command is received successfully (Q15 and D4)
2. Displays channel numbers, direction, and gain levels on the LCD1.
3. Controlling the motor gear rotating action by sending pulses to Q18 and Q19.
4. Taking commands from the S1-S4 buttons.