TPMS Transmitter (Sensor Module) Operation Description

The transmitter (Sensor Module) operates with 3.0V lithium cell battery. SP13 pressure sensor will performs the pressure and Temperature measurement, and the measured data will than pass to the microcontroller for processing. The controller processes the sensor data and than transmit out with data rate of 3Kbit/sec to the RF transmitter circuit. The transmitter circuit consists of a 433.92MHz saw resonator, UHF wideband transistor and a helical antenna. The data will be modulated out with the center frequency of 433.92MHz.

The circuit has very low power consumption with the supply of 3.0V. Current consumption is approximately 0.8mA at a 50% duty cycle modulation. During standby mode the transmitter will drawn current less than 0.1mA.