

THEORY OF OPERATION

P90/X130 FOB Transmitter

Overview

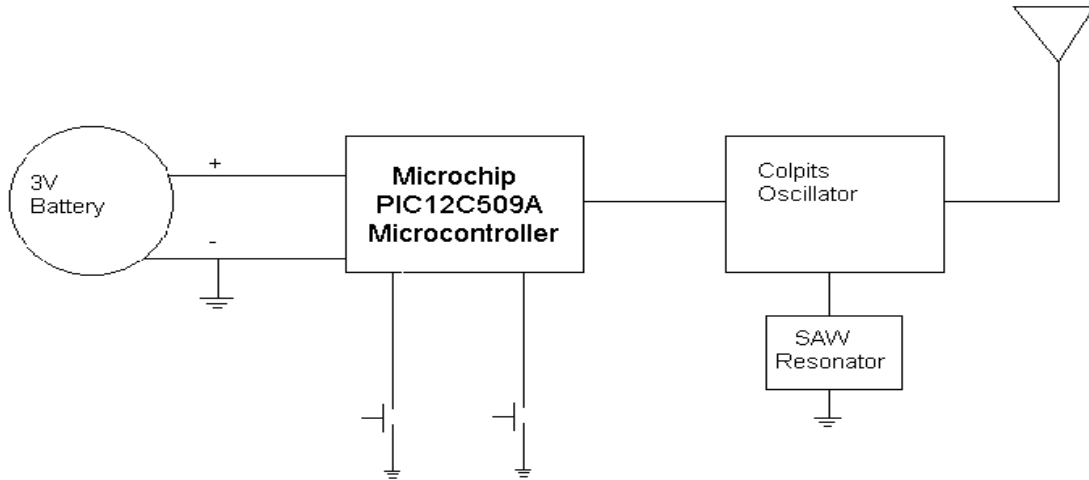
The FOB transmitter is used in conjunction with a vehicle mounted receiver/BCM to provide remote vehicle functions such as lock, unlock & trunk release. The P90/X130 BCM/RKE system is installed on various platforms of General Motors vehicles.

Circuit Theory

The transmitter provides a rolling code type of secure RF link based on a Delphi proprietary algorithm. The FOB transmitter uses the Microchip PIC12C509A microcontroller to decode keypad inputs, generate the appropriate function code and encryption data, and provide a complete digital message stream to the RF output stage.

The RF output stage is a single stage transistor SAW based colpits oscillator operating at 433Mhz +/- 100Khz. The antenna is a circuit board trace.

Transmitter Block Diagram



2-4 switch inputs are employed