

Re: Class II for Lear Corporation
RFAX FOB Redesign
FCC ID: KOBGT04A
IC: 3521A-T04A

DESCRIPTION OF OPERATION

GENERAL DESCRIPTION

The product for which certification is pursued will be manufactured for General Motors Company by Lear Corporation for automotive applications. This 315 MHz transmitter works in conjunction with a heterodyne receiver that is mounted in the vehicle. The transmitter is a 3-volt, single cell battery operated fob type that is carried by the user. It is part of a keyless entry system and can be used to perform certain functions such as lock and unlock the driver and passenger doors, open the trunk, etc... depending on how the receiver module in the vehicle is programmed.

There are 3, 4, 5, and 6 button versions of this transmitter. The only differences between these units are the number of buttons used, the printing on the buttons, and the GM/LEAR part number stamped on the back. Each of the 4 version have a remote start version giving an overall 8 unique housings/button combinations. The PCB is the same for all versions. The two piece exterior housing is injection molded plastic with GM/LEAR # and programming instruction's molded into the back of the housing. The FCC/IC numbers will be located on the printed circuit board.

TECHNICAL DESCRIPTION

When the buttons are depressed, the encoder IC will power up and generate the proper data code which can only be recognized by a matched receiver. The code is carried by 315 MHz carrier with AM OOK (on-off keying) modulation and radiated by a printed circuit board antenna. The data code is of a pulse width modulation format to express bits "0" and "1". The encoder clock controls the data code period, which is a RC oscillator type that is integrated into the encoder. The 315 MHz transmit frequency is generated by a SAWR (Surface Acoustic Wave Resonator) stabilized, Colpits oscillator. Frequency tolerance is better than 315 MHz, +/- 100 kHz.