

August 14, 2003

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RE: Certification for TRW TPM '04 Sensor

Model #: 42753-S3V-A0
FCC ID: GQ43-21T
Canada IC: 1470A-2T

GENERAL DESCRIPTION

This transmitter is a transmitter device with tire valve, which is mounted in the valve hole of the wheel rim and transmits the pressure and temperature inside the tire, the battery voltage of the transmitter, and the tire identification code (ID) at normal and abnormal condition with the radio wave (RF) that conforms to the used area. Also this device has a countermeasure function such as the random delay of transmission time so that the RF signal from each tire will not interfere such as due to the simultaneous transmission. The transmitter device also has a Low Frequency (LF) receiver. This receiver supports Low Frequency (LF) magnetic field communications allowing the changing of measurement/monitoring states of the transmitter by commands sent via the wheel-arch mounted TPMS Initiator (LF transmitter). The RF signal operates at 315MHz and uses ASK bi-phase modulation.

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PRINCIPLES OF CIRCUIT OPERATION

The transmitter consists of 4 blocks: a battery, a micro-core measurement integrated circuit (IC), a low frequency (LF) receiver circuit, and a radio frequency (RF) transmitter circuit, reference block diagram in Figure 2.