



Wednesday, May 12, 2004

TUV Product Services
10040 Mesa Rim Road
San Diego, CA 92121

RE: FCC ID EZSDEI487

Dear Sir or Madam,

This letter is to address the following for the 547T Transceiver:

1. System transmission frequency range
2. Data transmission duty cycle description
3. Manuals

1. This transmitter is a single frequency device. It has a crystal controlled PLL oscillator which generates the RF carrier. The crystal based oscillator can maintain a center frequency of 433.92MHz within a +/-35KHz tolerance. The receiver operated by this transmitter is a single band receiver tuned to 433.92MHz and only capable of receiving this frequency.
2. The 547T is a data transmission device. Its protocol consists of the following worst case condition for duty cycle credit calculation:
 - a) 17 preamble bits: 9 x 300us HI bits and 8 x 300us LO bits = 2.7ms ON time out of 5.1ms total time.
 - b) There's a 3ms gap between the preamble bits and the data bits.
 - c) 57 data bits of 300us or 600us each, they are random. Worst case of 600us HI bits and 300us LO will be used. So, 29 x 600us and 28 x 300us LO = 17.4ms HI out of 25.8ms total time.
 - c) There's a 60ms gap between the end of the data bits and the beginning of the next frame.
 - d) Total worst case word = 2.7ms + 17.4ms = 20.1ms ON time out of 93.9ms (5.1ms+3ms+25.8ms+60ms)

So for a worst case 100ms frame we have:

20.1ms ON out of 93.9ms + 3.3ms ON out of 6.1ms = **23.4ms out of 100ms = 23.4% ON time**
OR a -12.62dB FCC duty cycle credit.

3. There are no dedicated manuals for this device. The 547T transceiver is part of several car alarm and remote start systems. Included are the installation and owner's guides for the system with the most features which is representative of other, less feature rich systems. The installation guide of all systems have a section covering the wiring of the transceiver. There are no user features associated with this device. Once installed in the vehicle by certified car alarm installers (Just connection) no interfacing to the device is necessary. No user or installer settings are available, the device is purely to do RF communication. Please refer to the wiring diagram on page 53 in the installation guide.

Sincerely,

Minas Minassian
RF Engineer