

RF Exposure Information for AeroScout TAG-2000 TAG M/N TAG-5100 FCC ID: Q3HTAG2000

1. Typical uses of the E.U.T. are tracking of children in amusement parks, security personnel in enterprises, hospital patients, and many more. The E.U.T. is typically worn on a wristband.
2. This portable device has been excluded from Sar testing due to the following summary of FCC KDB Inquiry no. 459647:

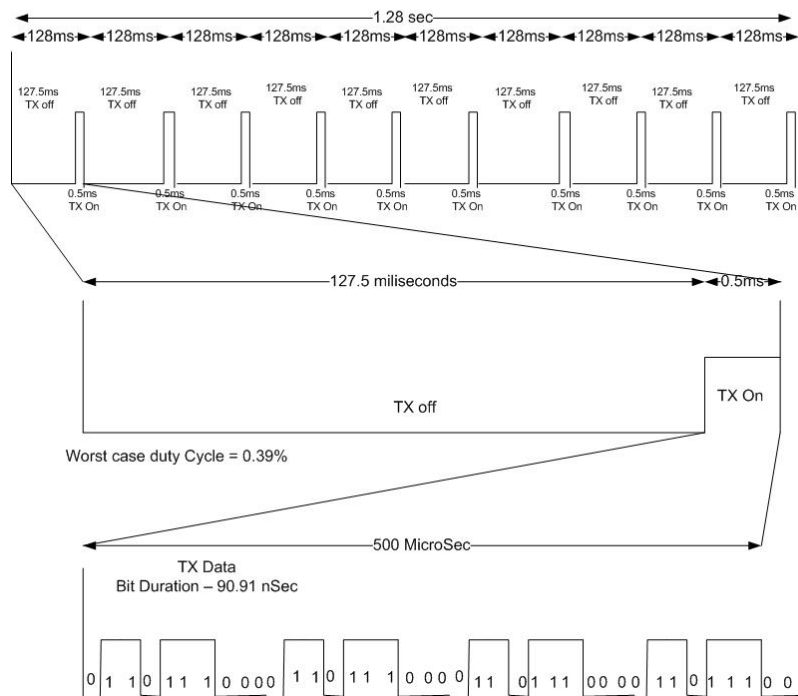
2.1. 21.2 dBm is peak power.

2.2. The pattern shown below is all that is transmitted

The E.U.T. is used as 802.11b beaconing unit with worse case transmissions interval of 128 mSec and transmissions duration of 500µSec. Off – 128mSec. On – 500uSec.

Duty cycle calculation $500e6/128e-3 = 0.0039 = 0.39\%$

Worst case Transmit timing



- 2.3. Tracking, sending of signal, response with multiple units in a close proximity is explained as follows:

The E.U.T. transmits a message every pre-programmed interval (optional worst case is 1 second interval). The access point receives the signal and measures the RSSI or the time and based on that, the location is calculated. The E.U.T. doesn't respond, it just transmits. The receiver is used only to measure channel RSSI in order to avoid collisions.

- 2.4. The E.U.T. can transmit a 0.5 ms duration signal with the shortest interval before the next transmission being 127.5 ms and the longest interval before the next transmission being 1 second.

- 2.5. According to the FCC response to KDB Inquiry No. 459647 of 09 July 2009 “ ... the average factor should utilize the value of 0.5/128,...”

The device in terms of source based average power has:

$$P_{AV} = P_{Peak} \times \text{Average Factor}$$

$$\text{Average Factor} = 0.5/128 = 0.00390625$$

Note: Maximum transmission time is 0.5 ms.

$$\text{Peak} = 21.2 \text{ dBm} = 132 \text{ mW}$$

$$P_{AV} = 132 \times 0.00390625 = 0.515625 \text{ mW}$$

Therefore:

$$60/\text{Freq (GHZ)} = 60/2.48 = 24.19$$

And therefore:

$$P_{AV} < 60/\text{Freq (GHz)}$$

$$0.515625 < 24.19$$

- 2.6. According to the last response for KDB Inquiry no. 459647 from the FCC:

“Since this is a portable device, SAR testing would normally be required. Because of the low duty factor for this device, as communicated through this KDB inquiry, **it has been determined that SAR testing can be excluded.**”