

**Audiotel
International LTD**

Detect IV

FCC Certification File

RF Exposure Information

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RF Exposure Information

The FCC limits for Maximum Permissible Exposure (MPE) for Occupational/Controlled Exposure within the NLJD TX frequency band is given below:

$$300-1500\text{MHz} = f/300$$

The frequency band of operation is 902.2MHz to 927.8MHz, therefore the following limits for MPE are given below:

$$\begin{aligned} 902.2\text{MHz} &= 3.007\text{mW/cm}^2 \\ 927.8\text{MHz} &= 3.092\text{mW/cm}^2 \end{aligned}$$

The TX antenna is a wideband Archimedean spiral which has no gain. The peak chassis power is +31dBm. The peak output power including cable losses and circular polarisation is 500mW/M^2

The FCC Limits are given in mW/cm^2 , so peak output power needs to be converted into the correct units. $1\text{M}^2 = 10000\text{cm}^2$.

Peak output power is 0.05mW/cm^2

From the above it can be seen that the unit is well within the limits for MPE. This level will be further reduced by the pulsed duty cycle of 10mS on to 90mS off and the location of the closest body part (the hand) at a minimum distance of 22cm.