RF Exposure

The equipment under test (EUT) is a Satelite Speaker with 5.2GHz function operating in 5155-5245MHz. The EUT is powered by AC 100-240V, 50/60Hz. For more detail information pls. refer to the user manual.

5.2G:

Modulation Type: GFSK
Antenna Type: Integral antenna
Antenna 1 Gain: 3.63dBi (This information is provided by applicant, and the applicant is responsible for the authenticity of the provided information.)
Antenna 2 Gain: 2.70dBi (This information is provided by applicant, and the applicant is responsible for the authenticity of the provided information.)
The nominal conducted output power specified: -1dBm (Tolerance: +/- 3dB)

The maximun conducted output power for the EUT is 0.59dBm in the frequency 5155MHz(ANT2) which is within the production variation.

The minimum conducted output power for the EUT is -3.30dBm in the frequency 5155MHz(ANT1) which is within the production variation.

According to FCC Part 2.1091, this unlicensed transmitting devices is categorically excluded from routine environmental evaluation for RF exposure prior to equipment authorization or use, According to the KDB 447498 D04 V01 and OET 65, the simple calculation as below:

The source-based time averaged maximum radiated power = 2dBm +3.63dBi = 5.63dBm = 3.66mW

At the distance (R) of 20cm to 40cm and in 0.3 GHz to 6 GHz, ERP Exclusion Threshold Level:

$$P_{\text{th}}\,(\text{mW}) = ERP_{20\text{ cm}}\,(\text{mW}) = \begin{cases} 2040f & 0.3\text{ GHz} \le f < 1.5\text{ GHz} \\ 3060 & 1.5\text{ GHz} \le f \le 6\text{ GHz} \end{cases}$$

The ERP Threshold is 3060mW for general population and uncontrolled exposure in the 5.2GHz frequency range according to FCC Part 1.1307. As the maximum ERP at 20cm from the transmitter is lower than the ERP Threshold, the compliance to the ERP Threshold can be ensured by indicating the minimum 20cm separation between the transmitter's radiating structure and body of the user or nearby persons.