

3.1.8 RF Exposure

Test Requirement: FCC 47CFR 15.247(i)
Test Date: 2017-6-26
Mode of Operation: Bluetooth mode

Test Method:

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines.

Test Results:

The EUT complied with the requirement(s) of this section.

EUT meets the requirements of these sections as proven through MPE calculation

The MPE calculation for EUT @ 20cm

Based on the highest P = 0.929 mW

The power tune up tolerance is -4.32 ± 1.0 dBm

Max. duty factor is 100%

$$\begin{aligned} P_d &= P_G / 4\pi R^2 = (0.929 \times 1.6) / 12.566 \times (20)^2 \\ &= (1.4864) / 12.566 \times 400 = 1.4864 / 5026.4 \\ &= 0.000296 \text{ mW/cm}^2 \end{aligned}$$

where:

* P_d = power density in mW/cm²

* G = Antenna numeric gain (1.6); $\text{Log } G = g/10$ ($g = 2.12$ dBi).

* P = Conducted RF power to antenna (0.929 mW).

* R = Minimum allowable distance. (20 cm)

* The power density $P_d = 0.000296 \text{ mW/cm}^2$ is less than 1 mW/cm^2 (listed MPE limit)

* The SAR evaluation is not needed (this is a desk top device, $R > 20 \text{ cm}$)

* The EUT(antenna) must be 0.2 meters away from the General Population.