

3.1.8 RF Exposure

Test Requirement: FCC 47CFR 15.247(i)
Test Date: 2017-05-08
Mode of Operation: Wifi 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 =48.08 mW

The power tune up tolerance is 15.82±1.0dBm

Max. duty factor is 100%

$$\begin{aligned} P_d &= PG / 4\pi * R^2 = (48.08 \times 1.55) / 12.566 * (20)^2 \\ &= (74.524) / 12.566 \times 400 = 74.524 / 5026.4 \\ &= 0.0148 \text{ mW/cm}^2 \end{aligned}$$

where:

*Pd = power density in mW/cm²

* G = Antenna numeric gain (1.55); Log G = g/10 (g = 1.9dBi).

* P = Conducted RF power to antenna (48.08 mW).

* R = Minimum allowable distance.(20 cm)

*The power density Pd = 0.0148mW/cm² is less than 1 mW/cm² (listed MPE limit)

*The SAR evaluation is not needed (this is a desk top device, R> 20 cm)

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