

RF Exposure

Test Requirement: FCC 47CFR 15.247(i)
Test Date: 2018-12-21
Mode of Operation: **Tx** 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

For Bluetooth DSS:

Based on the highest P = 2.296 mW

$$\begin{aligned} P_d &= PG / 4\pi R^2 = (2.296 \times 1) / 12.566 \times (20)^2 \\ &= (2.296) / 12.566 \times 400 = 2.296 / 5026.4 \\ &= 0.00046 \text{ mW/cm}^2 \end{aligned}$$

where:

* P_d = power density in mW/cm²

* G = Antenna numeric gain (1.0); Log G = g/10 (g = 0dBi).

* P = Conducted RF power to antenna (2.296 mW).

* R = Minimum allowable distance. (20 cm)

* The DSS power density $P_d = 0.0046 \text{ mW/cm}^2$ 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.