

RF Exposure

HMD19110001
Test Requirement: FCC 47CFR 15.247(i)
Test Date: 2019-11-01
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.
This evaluation used FCC 47CFR 2.1091 to perform.

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
The power tune up tolerance is $\pm 1.0\text{dBm}$
Based on the highest P = $-1.083 + 1 = -0.083\text{dBm}$
 $= 0.981\text{ mW}$

$$\begin{aligned} P_d &= PG / 4\pi R^2 = (0.981 \times 1.995) / 12.566 \times (20)^2 \\ &= (1.957) / 12.566 \times 400 = 1.957 / 5026.4 \\ &= 0.000389\text{mW/cm}^2 \end{aligned}$$

where:

- * P_d = power density in mW/cm^2
- * G = Antenna numeric gain (1.995); $\text{Log } G = g/10$ ($g = 3\text{dBi}$).
- * P = Conducted RF power to antenna (0.779 mW).
- * R = Minimum allowable distance.(20 cm)

- *The power density $P_d = 0.000389\text{ mW/cm}^2$ 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.