

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 $= -1.083 + 1 = -0.083\text{dBm}$
 $= 0.981\text{ mW}$

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

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.