

Test No.13

Name of Test:	<i>Radio Frequency Exposure</i>	Test Standard:	<i>FCC OET Bulletin 65 &RSS-GEN</i>
Tested By:	WEI LI	Test Date:	06/24/2022-07/08/2022

Minimum Standard: For FCC: Public Exposure to Radio Frequency Energy Levels (1.1307 (b)(1)). Limits in Table 1 (B),
for Public $S = 1.0 \text{ mW/cm}^2$
for Professional, $S = 5.0 \text{ mW/cm}^2$

For IC: With formula of $1.31 \times 10^{-2} f 0.6834 \text{ W}$, more restricted EIRP limit value can be calculated.

Method of Measurement:

$$d = 0.282 * 10^{((P + G) / 20) / \sqrt{S}}$$

Equation (1)

$$S = 0.0795 * 10^{((P + G)/10)/d^2}$$

Equation (2)

where

d = MPE distance in cm

P = Power in dBm

G = Antenna Gain in dBi

S = Power Density Limit in mW/cm^2

Equation (1) and the measured peak power is used to calculate the MPE distance.

Equation (2) and the measured peak power is used to calculate the Power density.

Test Result:

Test Data:

NA

Calculation:

*For this EUT, max emission level is under the limit set in Section 15.209. No RF hazard need to be concerned.

APPLICABLE LIMITS for separation $\geq 20\text{cm}$

FCC: From §1.1310 Table 1 (B), for Public $S = 1.0 \text{ mW/cm}^2$; for Professional, $S = 5.0 \text{ mW/cm}^2$

IC: With formula of $1.31 \times 10^{-2} f^{0.6834} \text{ W}$, more restricted EIRP limit value is given as following.

RESULTS

No non-compliance noted:

Per No.9 testing result, EUT has max. peak emission level, 55.36dBuV/m @3m at 297.6MHz (RBW=1MHz). Converting to 50MHz RBW setting, the max. peak value is 89.33dBuV/m. Therefore the e.r.i.p is -5.87dBm, i.e 0.26mW.

---For FCC, the worst case for this EUT, $P+G=-5.87\text{dBm}$, and $d=20\text{cm}$

Plug all items into equation (2), yielding,

Power Density Limit (mV/cm ²)	Output Power+ Antenna] Gain (dBm)		Power Density (mW/cm ²)	Meet min. PD Limit
1.0/5.0	-5.87		5.18E-5	Yes

---For ISSED, the limit @ 300MHz is 0.58W. EUT max. e.r.i.p =0.26mW, which is under the limit.

Therefore, all of results are below the FCC/ISED limit.

NOTE: For mobile or fixed location transmitters, the minimum separation distance between the antenna & radiating structures of the device and nearby persons is 20 cm, even if calculations indicate that the MPE distance would be less.