



8. Radio Frequency Exposure

8.1. Applicable Standards

The measurements shown in this test report were made in accordance with the procedures given in FCC Part 2 (Section 2.1091)

8.2. EUT Specification

Frequency band (Operating)	☐ WLAN: 2412MHz ~ 2462MHz ☐ WLAN: 5150MHz ~ 5250MHz ☐ WLAN: 5250MHz ~ 5350MHz ☐ WLAN: 5470MHz ~ 5725MHz ☐ WLAN: 5725MHz ~ 5850MHz ☐ Bluetooth: 2402MHz ~ 2480MHz ☒ NFC: 13.553MHz~13.567MHz
Device category	☐ Portable (<20cm separation) ☒ Mobile (>20cm separation)
Antenna diversity	☒ Single antenna ☐ Multiple antennas ☐ Tx diversity ☐ Rx diversity ☐ Tx/Rx diversity
Evaluation applied	☐ Blanket 1 mW Blanket Exemption ☒ MPE-based Exemption ☐ SAR-based Exemption
Remark: 1. For ANT B ,The maximum Fundamental Emission is <u>95.89dBuV/m</u> at <u>13.56MHz</u> (with <u>0dBi</u> antenna gain.) 2. For ANT C,The maximum Fundamental Emission is <u>94.83dBuV/m</u> at <u>13.56MHz</u> (with <u>0dBi</u> antenna gain.)	



8.1. Test Results

No non-compliance noted.

8.2. Calculation

$$\text{Given } E = \frac{\sqrt{30 \times P \times G}}{d} \quad \& \quad S = \frac{E^2}{3770}$$

Where E = Field strength in Volts / meter

P = Power in Watts

G = Numeric antenna gain

d = Distance in meters

S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{3770 d^2}$$

Changing to units of mW and cm, using:

$P \text{ (mW)} = P \text{ (W)} / 1000$ and

$d \text{ (cm)} = d \text{ (m)} / 100$

Yields

$$S = \frac{30 \times (P/1000) \times G}{3770 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2} \quad \text{Equation 1}$$

Where d = Distance in cm

P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²

**8.3. Result**

Modulation Mode	Channel Frequency (MHz)	Fundamental Emission (dBm)	Max. Tune up power (dBm)	Antenna Gain(dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
ASK	13.56	0.21	0.71	0	20	0.00023	0.9789334

Antenna Gain (dBi)	Antenna Gain (linear)	Distance (m)	Fundamental Emission (dBuV/m)	Fundamental Emission (V/m)	Fundamental Emission (W)	Fundamental Emission (dBm)
0	1	3	95.44	0.06	0.00105	0.21

No non-compliance noted.

Maximum Permissible Exposure (Co-location)

Modulation Type	Channel Frequency (MHz)	Max. Conducted output power (dBm)	Max. Tune up power (dBm)	Antenna Gain(dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	MPE Ratio
ASK	13.56	0.21	0.71	0	20	0.000234	0.979	0.0002
GFSK	2480	10.5	11	6.4	20	0.010933	1.000	0.0109
Co-location Total								0.0111
Σ MPE ratios Limit								1

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