



13. Radio Frequency Exposure

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

13.1 EUT Specification

| | |
|---|--|
| Frequency band (Operating) | <input type="checkbox"/> WLAN: 2412MHz ~ 2462MHz <input type="checkbox"/> WLAN: 5150MHz ~ 5250MHz <input type="checkbox"/> WLAN: 5250MHz ~ 5350MHz <input type="checkbox"/> WLAN: 5470MHz ~ 5725MHz <input type="checkbox"/> WLAN: 5725MHz ~ 5850MHz <input checked="" type="checkbox"/> Bluetooth: 2402MHz ~ 2480MHz |
| Device category | <input type="checkbox"/> Portable (<20cm separation) <input checked="" type="checkbox"/> Mobile (>20cm separation) |
| Exposure classification | <input type="checkbox"/> Occupational/Controlled exposure <input checked="" type="checkbox"/> General Population/Uncontrolled exposure |
| Antenna diversity | <input checked="" type="checkbox"/> Single antenna <input type="checkbox"/> Multiple antennas <input type="checkbox"/> Tx diversity <input type="checkbox"/> Rx diversity <input type="checkbox"/> Tx/Rx diversity |
| Evaluation applied | <input checked="" type="checkbox"/> MPE Evaluation* <input type="checkbox"/> SAR Evaluation <input type="checkbox"/> N/A |
| Remark: | |
| 1. The maximum conducted output power is 7.32dBm (5.395mW) at 2402MHz (with 2.62dBi antenna gain.) 2. DTS device is not subject to routine RF evaluation; MPE estimate is used to justify the compliance. 3. For mobile or fixed location transmitters, no SAR consideration applied. The maximum power density is 1.0 mW/cm ² even if the calculation indicates that the power density would be larger. | |



13.2 Test Results

No non-compliance noted.

13.3 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 (mW) = P (W) / 1000 and

d (cm) = d (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

**13.4 Maximum Permissible Exposure**

| Modulation Mode | 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) |
|-----------------|-------------------------|-----------------------------------|--------------------------|-------------------|---------------|-------------------------------------|-----------------------------|
| GFSK | 2402-2480 | 6.82 | 8.82 | 2.62 | 20 | 0.003 | 1 |
| $\pi/4$ -DQPSK | 2402-2480 | 6.77 | 8.77 | 2.62 | 20 | 0.003 | 1 |
| 8DPSK | 2402-2480 | 7.32 | 9.32 | 2.62 | 20 | 0.003 | 1 |

Maximum Permissible Exposure (Co-location)

BT+2.4G

| 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 |
|--------------------|-------------------------|-----------------------------------|--------------------------|-------------------|---------------|-------------------------------------|-----------------------------|-----------|
| 11g | 2412-2462 | 25.34 | 27.34 | 2.6 | 20 | 0.196 | 1.000 | 0.196 |
| 8DPSK | 2402-2480 | 7.32 | 9.32 | 2.62 | 20 | 0.003 | 1.000 | 0.003 |
| Co-location Total | | | | | | | | 0.199 |
| Σ MPE ratios Limit | | | | | | | | 1 |

BT+5G

| 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 |
|--------------------|-------------------------|-----------------------------------|--------------------------|-------------------|---------------|-------------------------------------|-----------------------------|-----------|
| 8DPSK | 2402-2480 | 7.32 | 9.32 | 2.62 | 20 | 0.003 | 1.000 | 0.003 |
| 11ac VHT80 | 5745-5825 | 19.65 | 21.65 | 3.93 | 20 | 0.072 | 1.000 | 0.072 |
| Co-location Total | | | | | | | | 0.075 |
| Σ MPE ratios Limit | | | | | | | | 1 |

-----THE END OF REPORT-----