



14. Radio Frequency Exposure

14.1.Applicable Standards

The measurements shown in this test report were made in accordance with the procedures given in FCC Part 2 (Section 2.1091)
KDB 447498

14.2.EUT Specification

Frequency band (Operating)	☒ WLAN: 2412MHz ~ 2462MHz ☒ WLAN: 5150MHz ~ 5250MHz ☐ WLAN: 5250MHz ~ 5350MHz ☐ WLAN: 5470MHz ~ 5725MHz ☒ WLAN: 5725MHz ~ 5850MHz ☐ Bluetooth: 2402MHz ~ 2480MHz
Device category	☐ Portable (<20cm separation) ☒ Mobile (>20cm separation)
Exposure classification	☐ Occupational/Controlled exposure (S = 5mW/cm ²) ☒ General Population/Uncontrolled exposure (S=1mW/cm ²)
Antenna diversity	☐ Single antenna ☒ Multiple antennas ☐ Tx diversity ☐ Rx diversity ☒ Tx/Rx diversity
Evaluation applied	☒ MPE Evaluation* ☐ SAR Evaluation ☐ N/A

Remark:

1. The maximum output power is 23dBm at 5180MHz (with 6.91 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 0.195 mW/cm² even if the calculation indicates that the power density would be larger.

14.3.Test Results

No non-compliance noted.



14.4.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

**14.5.Maximum Permissible Exposure****Maximum Permissible Exposure (Non-Beamforming)**

Channel Frequency (MHz)	Max. Conducted output power (dBm)	Antenna Gain(dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
5180-5240	23.00	6.91	20	0.195	1
5745-5825	22.67	7.08	20	0.188	1

Maximum Permissible Exposure (Beamforming)

Channel Frequency (MHz)	Max. Conducted output power (dBm)	Antenna Gain(dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
5180-5240	19.99	9.92	20	0.195	1
5745-5825	19.66	10.09	20	0.188	1

**Maximum Permissible Exposure (Co-location)****(Non-Beamforming)**

Modulation Mode	Channel Frequency (MHz)	Max. Conducted output power (dBm)	Antenna Gain(dBi)	Distance (cm)	Power Density (mW/cm ²)
802.11b	2412-2462	22.54	5.2	20	0.118
802.11a	5180-5240	23	6.91	20	0.195
802.11a	5745-5825	22.67	7.08	20	0.188
Co-location Total					0.501
Maximum Permissible Exposure Limit					1

(Beamforming)

Modulation Mode	Channel Frequency (MHz)	Max. Conducted output power (dBm)	Antenna Gain(dBi)	Distance (cm)	Power Density (mW/cm ²)
802.11g	2412-2462	19.47	8.21	20	0.117
802.11a	5180-5240	19.99	9.92	20	0.195
802.11a	5500-5700	19.66	10.09	20	0.188
Co-location Total					0.500
Maximum Permissible Exposure Limit					1