13. Radio Frequency Exposure

13.1. Applicable Standards

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

13.2. 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 ☒ General Population/Uncontrolled exposure

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 conducted output power is <u>19.65dBm (92.257 mW)</u> at <u>5775MHz</u> (with <u>2.11 dBi antenna gain</u>.)* *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/cm² even if the calculation indicates that the power density would be larger.*	

13.3. Test Results

No non-compliance noted.

13.4.Calculation

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

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

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

Where　d = Distance in cm
P = Power in mW
G = Numeric antenna gain
S = Power density in mW / cm^2

13.5.Maximum Permissible Exposure

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)
5180-5240	19.62	21.62	2.80	20	0.055	1
5745-5825	19.65	21.65	2.11	20	0.047	1

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/cm2)	Limit (mW/cm2)	MPE Ratio
8DPSK	2402-2480	7.32	9.32	2.62	20	0.003	1.000	0.003
11ac VHT20	5180-5240	19.62	21.62	2.80	20	0.055	1.000	0.055
Co-location Total								0.058
Σ MPE ratios Limit								1