12. Radio Frequency Exposure

12.1. Applicable Standards

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

12.2. 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 conducted output power is <u>29.72dBm (937.409mW)</u> at <u>5745MHz</u> (with <u>5.18 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/cm^2 even if the calculation indicates that the power density would be larger.*

12.3. Test Results

No non-compliance noted.

12.4.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:

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

Changing to units of mW and cm, using:

$P\ (mW) = P\ (W) / 1000$ and
$d\ (cm) = d(m) / 100$

Yields

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

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

12.5.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	25.95	25.95	4.23	20	0.207	1
5745-5825	29.72	29.72	5.18	20	0.615	1

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