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)

KDB 447498

IEEE C95.1:2005

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 16.93dBm (49.354mW) at 5755MHz (with 1.59 dBi 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.*	

13.3. Test Results

No non-compliance noted.

13.4.Calculation

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

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

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

Where *d = Distance in cm*
P = Power in mW
G = Numeric antenna gain
S = Power density in mW / cm²

13.5.Maximum Permissible Exposure

Channel Frequency (MHz)	Max. Conducted output power (dBm)	Antenna gain (dBi)	Distance (cm)	Power density (mW/cm^2)	Limit (mW/cm^2)
5180-5240	15.65	2.52	20	0.013	1
5260-5320	15.95	2.52	20	0.014	1
5500-5700	16.45	2.02	20	0.014	1
5745-5825	16.93	1.59	20	0.014	1

Maximum Permissible Exposure (Co-location)

BT+Wifi 2.4G

Modulation Type	Channel Frequency (MHz)	Max. Conducted output power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)	MPE Ratio
11n HT20	2412-2462	23.64	3.53	20	0.104	1.000	0.104
GFSK	2402-2480	4.94	3.53	20	0.001	1.000	0.001
Co-location Total							0.105
∑MPE ratios Limit							1

BT+Wifi 5G

Modulation Type	Channel Frequency (MHz)	Max. Conducted output power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)	MPE Ratio
11ac VHT40	5745-5825	16.93	1.59	20	0.014	1.000	0.014
GFSK	2402-2480	4.94	3.53	20	0.001	1.000	0.001
Co-location Total							0.015
∑MPE ratios Limit							1