

# 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)

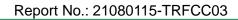
### **12.2 EUT Specification**

	🗌 WLAN: 2412MHz ~ 2462MHz				
	🗌 WLAN: 5150MHz ~ 5250MHz				
Frequency band	🗌 WLAN: 5250MHz ~ 5350MHz				
(Operating)	🗌 WLAN: 5470MHz ~ 5725MHz				
	🗌 WLAN: 5725MHz ~ 5850MHz				
	Bluetooth: 2402MHz ~ 2480MHz				
Device esterem	Portable (<20cm separation)				
Device category	Mobile (>20cm separation)				
Exposure	Occupational/Controlled exposure				
classification	General Population/Uncontrolled exposure				
Antenna diversity	🖂 Single antenna				
	🗌 Multiple antennas				
	Tx diversity				
	Rx diversity				
	Tx/Rx diversity				
	MPE Evaluation*				
Evaluation applied	SAR Evaluation				
	□ N/A				
- ·					

#### Remark:

- 1. The maximum conducted output power is 5.81dBm (3.811mW) at 2402MHz (with 2.00dBi 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<sup>2</sup> even if the calculation indicates that the power density would be larger.

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### **12.3 Test Results**

No non-compliance noted.

## 12.4 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 WattsG = 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:

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

Changing to units of mW and cm, using:

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

Yields

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

Where d = Distance in cm P = Power in mW G = Numeric antenna gain S = Power density in mW / cm<sup>2</sup> Equation 1



Channel Frequency (MHz)	Max. Conducted output power (dBm)	Max. Tune up power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
2402-2480	5.81	7.81	2.00	20	0.002	1

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

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