



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

Remark:

1. The maximum conducted output power is 28.60dBm (724.827 mW) at 5785MHz (with 7.25 dBi antenna gain.) Form Non-Beamforming
2. The maximum conducted output power is 25.60dBm (362.947 mW) at 5230MHz (with 10.22 dBi antenna gain.) Form Beamforming
3. DTS device is not subject to routine RF evaluation; MPE estimate is used to justify the compliance.
4. 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.

12.3.Test Results

No non-compliance noted.



12.4. 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:

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

Changing to units of mW and cm, using:

P (mW) = P (W) / 1000 and

d (cm) = d (m) / 100

Yields

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

Where d = Distance in cm

P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²



12.5. Maximum Permissible Exposure

Non-Beamforming

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	27.25	27.75	6.37	32	0.201	1
5260-5320	23.91	24.41	3.44	32	0.047	1
5500-5700	23.98	24.48	3.84	32	0.053	1
5745-5825	28.60	29.10	7.25	32	0.335	1

Beamforming

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)
5230	25.60	26.10	10.22	32	0.333	1
5290	19.73	20.23	10.23	32	0.086	1
5610	19.63	20.13	10.5	32	0.090	1
5745	25.49	25.99	10.42	32	0.340	1



Maximum Permissible Exposure (Co-location)

Non-Beamforming

Modulation Type	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)	MPE Ratio
11AX40	2422	29.93	30.43	4.02	32	0.217	1.000	0.217
11A	5785	28.6	29.1	7.25	32	0.335	1.000	0.335
Co-location Total								0.552
Σ MPE ratios Limit								1

Beamforming

Modulation Type	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)	MPE Ratio
11ax HE40	2452	26.58	27.08	9.37	32	0.343	1.000	0.343
11ac VHT40	5230	25.6	26.1	10.22	32	0.333	1.000	0.333
Co-location Total								0.676
Σ MPE ratios Limit								1

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