



FCC RF EXPOSURE REPORT

EUT	WIFI module
Frequency band (Operating)	<input checked="" type="checkbox"/> WLAN: 2.412GHz ~ 2.462GHz <input checked="" type="checkbox"/> WLAN: 2.422GHz ~ 2.452GHz <input checked="" type="checkbox"/> WLAN: 5.180GHz ~ 5.240GHz <input type="checkbox"/> WLAN: 5.190GHz ~ 5.230GHz
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
Max. output power	25.64dBm (366.438mW)
Antenna gain (Max)	Chain 1: 3.61dBi for 2400~2500MHz band, 2.76dBi for 5150~5850MHz band. Chain 2: 3.40dBi for 2400~2500MHz band, 2.89dBi for 5150~5850MHz band. MIMO: 6.52dBi for 2400~2500MHz band, 5.84dBi for 5150~5850MHz band.
Evaluation applied	<input checked="" type="checkbox"/> MPE Evaluation* <input type="checkbox"/> SAR Evaluation <input type="checkbox"/> N/A



TEST RESULTS

No non-compliance noted.

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:

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

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

Maximum Permissible Exposure

Modulation Mode	Frequency band (MHz)	Peak output power(dBm)	Peak output power(mW)	Antenna Gain (dBi)	Antenna gain (Numeric)	Distance (cm)	Power density (mW/cm2)	Limit (mW/cm2)
802.11b	2412-2462	20.57	114.0249788	3.61	2.30	20	0.05210184	1
802.11g	2412-2462	23.56	226.9864852	3.4	2.19	20	0.09882187	1
802.11n HT20	2412-2462	22.50	177.827941	3.4	2.19	20	0.07741998	1
802.11n HT40	2422-2452	21.45	139.6368361	3.61	2.30	20	0.06380476	1
802.11a	5180-5240	12.5	17.7827941	2.76	1.8879913	20	0.00668118	1
802.11an HT20	5180-5240	12.81	19.09853259	2.89	1.9453601	20	0.00739355	1
802.11an HT40	5180-5240	12.64	18.36538343	2.76	1.8879913	20	0.00690006	1
802.11ac VHT20	5180-5240	12.95	19.72422736	2.89	1.9453601	20	0.00763577	1
802.11ac VHT40	5180-5240	12.68	18.53531623	2.76	1.8879913	20	0.00696391	1
802.11ac VHT80	5180-5240	12.4	17.37800829	2.89	1.9453601	20	0.00672749	1