FCC RF EXPOSURE REPORT

EUT	IEEE 802.11a/b/g/n 2T2R USB Wi-Fi Module
FCC ID	2AR82-SKIWB7638U1
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

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:

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

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 / cm^2

Maximum Permissible Exposure

Maximum tune up tolerance

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)
WLAN 2.4G	2412-2462	24.45	278.6121169	4.51	2.82	20	0.1565774	1
	2422-2452	24.56	285.7590543	4.51	2.82	20	0.1605939	1
WLAN 5G	5180-5240	16.53	44.97798549	4.51	2.82	20	0.0252772	1
	5260-5320	16.33	42.95364268	4.51	2.82	20	0.0241395	1
	5500-5700	17.27	53.33348955	4.51	2.82	20	0.0299729	1
	5745-5825	16.88	48.75284901	4.51	2.82	20	0.0273986	1