

Test Result of RF Exposure Evaluation

According to the KDB-447498 D01 V06, FCC 47CFR § 2.1091 the following RF exposure evaluation shall to demonstrate RF exposure compliance.

Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

P_d = power density in mW/cm², P_{out} = output power to antenna in mW;

G = gain of antenna in linear scale, $\pi = 3.1416$;

R = distance between observation point and center of the radiator in cm.

WIFI 2.4GHz ANT 1

Frequency (MHz)	Output Power (dBm)	Target power W/ tolerance (dBm)	Max tune up power tolerance (dBm)	Output power to antenna (mW)	Antenna Gain(dBi)	Power Density at R=20cm (mW/cm ²)	Limit (mW/cm ²)	Result
802.11b								
2412	7.69	6.7±1.0	7.7	5.888	5	0.00370	1	Pass
2437	7.57	6.7±1.0	7.7	5.888	5	0.00370	1	Pass
2462	7.28	6.7±1.0	7.7	5.888	5	0.00370	1	Pass
802.11g								
2412	6.85	5.9±1.0	6.9	4.898	5	0.00308	1	Pass
2437	6.74	5.9±1.0	6.9	4.898	5	0.00308	1	Pass
2462	6.48	5.9±1.0	6.9	4.898	5	0.00308	1	Pass
802.11n(20)								
2412	3.54	2.6±1.0	3.6	2.291	5	0.00144	1	Pass
2437	3.56	2.6±1.0	3.6	2.291	5	0.00144	1	Pass
2462	3.46	2.6±1.0	3.6	2.291	5	0.00144	1	Pass
802.11n(40)								
2422	4.12	3.8±1.0	4.8	3.020	5	0.00190	1	Pass
2437	4.48	3.8±1.0	4.8	3.020	5	0.00190	1	Pass
2452	4.75	3.8±1.0	4.8	3.020	5	0.00190	1	Pass

ANT 2

Frequency (MHz)	Output Power (dBm)	Target power W/ tolerance (dBm)	Max tune up power tolerance (dBm)	Output power to antenna (mW)	Antenna Gain(dBi)	Power Density at R=20cm (mW/cm2)	Limit (mW/cm2)	Result
802.11b								
2412	7.65	6.7±1.0	7.7	5.888	5	0.00370	1	Pass
2437	7.54	6.7±1.0	7.7	5.888	5	0.00370	1	Pass
2462	7.32	6.7±1.0	7.7	5.888	5	0.00370	1	Pass
802.11g								
2412	6.83	5.9±1.0	6.9	4.898	5	0.00308	1	Pass
2437	6.66	5.9±1.0	6.9	4.898	5	0.00308	1	Pass
2462	6.32	5.9±1.0	6.9	4.898	5	0.00308	1	Pass
802.11n(20)								
2412	3.36	2.4±1.0	3.4	2.188	5	0.00138	1	Pass
2437	3.18	2.4±1.0	3.4	2.188	5	0.00138	1	Pass
2462	3.34	2.4±1.0	3.4	2.188	5	0.00138	1	Pass
802.11n(40)								
2422	4.51	3.9±1.0	4.9	3.090	5	0.00194	1	Pass
2437	4.62	3.9±1.0	4.9	3.090	5	0.00194	1	Pass
2452	4.84	3.9±1.0	4.9	3.090	5	0.00194	1	Pass

Simultaneous transmission MPE According to KDB447498 for Transmitters used in mobile exposure conditions for simultaneous transmission operations; \sum of MPE ratios ≤ 1.0

ANT 1+ANT 2

	Frequency (MHz)	Power Density at R=20cm (mW/cm ²) ANT A	Power Density at R=20cm (mW/cm ²) ANT B	Power Density at R=20cm (mW/cm ²) ANT A+ANT B	Limit (mW/cm ²)	Result
802.11b	2412	0.00370	0.00370	0.00741	1	Pass
	2437	0.00370	0.00370	0.00741	1	Pass
	2462	0.00370	0.00370	0.00741	1	Pass
802.11g	2412	0.00308	0.00308	0.00616	1	Pass
	2437	0.00308	0.00308	0.00616	1	Pass
	2462	0.00308	0.00308	0.00616	1	Pass
802.11n20	2412	0.00144	0.00138	0.00282	1	Pass
	2437	0.00144	0.00138	0.00282	1	Pass
	2462	0.00144	0.00138	0.00282	1	Pass
802.11n40	2422	0.00190	0.00194	0.00384	1	Pass
	2437	0.00190	0.00194	0.00384	1	Pass
	2452	0.00190	0.00194	0.00384	1	Pass

Conclusion:

So no SAR is required.