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: Pd = (Pout*G)/(4*pi*r2)

Where

Pd = power density in mW/cm2, Pout = output power to antenna in mW;

G = gain of antenna in linear scale, Pi = 3.1416;

R = 20cm, distance between observation point and center of the radiator in cm.

WIFI 2.4GHz Antenna 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/cm2)	Limit (mW/cm2)	Result
802.11b								
2412	11.13	10.2±1.0	11.2	13.183	3.03	0.00527	1.0	Pass
2437	11.17	10.2±1.0	11.2	13.183	3.03	0.00527	1.0	Pass
2462	11.09	10.2±1.0	11.2	13.183	3.03	0.00527	1.0	Pass
802.11g								
2412	10.35	9.5±1.0	10.5	11.220	3.03	0.00449	1.0	Pass
2437	10.42	9.5±1.0	10.5	11.220	3.03	0.00449	1.0	Pass
2462	10.28	9.5±1.0	10.5	11.220	3.03	0.00449	1.0	Pass
802.11n(HT20)								
2412	9.34	8.4±1.0	9.4	8.710	3.03	0.00348	1.0	Pass
2437	9.25	8.4±1.0	9.4	8.710	3.03	0.00348	1.0	Pass
2462	9.26	8.4±1.0	9.4	8.710	3.03	0.00348	1.0	Pass
802.11n(HT40)								
2422	8.27	7.4±1.0	8.4	6.918	3.03	0.00277	1.0	Pass
2437	8.31	7.4±1.0	8.4	6.918	3.03	0.00277	1.0	Pass
2452	8.22	7.4±1.0	8.4	6.918	3.03	0.00277	1.0	Pass

Antenna 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	11.05	10.2±1.0	11.2	13.183	3.03	0.00527	1.0	Pass
2437	11.09	10.2±1.0	11.2	13.183	3.03	0.00527	1.0	Pass
2462	11.12	10.2±1.0	11.2	13.183	3.03	0.00527	1.0	Pass
802.11g								
2412	10.23	9.3±1.0	10.3	10.715	3.03	0.00428	1.0	Pass
2437	10.24	9.3±1.0	10.3	10.715	3.03	0.00428	1.0	Pass
2462	10.17	9.3±1.0	10.3	10.715	3.03	0.00428	1.0	Pass
802.11n(HT20)								
2412	9.16	8.3±1.0	9.3	8.511	3.03	0.00340	1.0	Pass
2437	9.23	8.3±1.0	9.3	8.511	3.03	0.00340	1.0	Pass
2462	9.22	8.3±1.0	9.3	8.511	3.03	0.00340	1.0	Pass
802.11n(HT40)								
2422	8.16	7.3±1.0	8.3	6.761	3.03	0.00270	1.0	Pass
2437	8.17	7.3±1.0	8.3	6.761	3.03	0.00270	1.0	Pass
2452	8.21	7.3±1.0	8.3	6.761	3.03	0.00270	1.0	Pass

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

WIFI 2.4G Antenna 1+ Antenna 2

Model	Frequency (MHz)	Power Density at R=20cm (mW/cm2) ANT 1	Power Density at R=20cm (mW/cm2) ANT 2	Power Density at R=20cm (mW/cm2) ANT 1+ANT 2	Limit (mW/cm2)	Result
802.11b	2412	0.00527	0.00527	0.01054	1.0	Pass
	2437	0.00527	0.00527	0.01054	1.0	Pass
	2462	0.00527	0.00527	0.01054	1.0	Pass
802.11g	2412	0.00449	0.00428	0.00877	1.0	Pass
	2437	0.00449	0.00428	0.00877	1.0	Pass
	2462	0.00449	0.00428	0.00877	1.0	Pass
802.11n (HT20)	2412	0.00348	0.00340	0.00688	1.0	Pass
	2437	0.00348	0.00340	0.00688	1.0	Pass
	2462	0.00348	0.00340	0.00688	1.0	Pass
802.11n (HT40)	2422	0.00277	0.00270	0.00554	1.0	Pass
	2437	0.00277	0.00270	0.00554	1.0	Pass
	2452	0.00277	0.00270	0.00547	1.0	Pass

Conclusion:

So no SAR is required.