

## 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/cm<sup>2</sup>,  $P_{out}$  = 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.

### BT4.0

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 <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Result
2402	1.876	0.9±1.0	1.9	1.549	1.0	0.00039	1.0	Pass
2440	1.758	0.9±1.0	1.9	1.549	1.0	0.00039	1.0	Pass
2480	1.659	0.9±1.0	1.9	1.549	1.0	0.00039	1.0	Pass

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 <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Result
802.11b								
2412	9.24	8.6±1.0	9.6	9.120	5	0.00574	1	Pass
2437	9.56	8.6±1.0	9.6	9.120	5	0.00574	1	Pass
2462	9.55	8.6±1.0	9.6	9.120	5	0.00574	1	Pass
802.11g								
2412	8.52	7.7±1.0	8.7	7.413	5	0.00466	1	Pass
2437	8.67	7.7±1.0	8.7	7.413	5	0.00466	1	Pass
2462	8.62	7.7±1.0	8.7	7.413	5	0.00466	1	Pass
802.11n(20)								
2412	6.48	5.7±1.0	6.7	4.677	5	0.00294	1	Pass
2437	6.64	5.7±1.0	6.7	4.677	5	0.00294	1	Pass
2462	6.37	5.7±1.0	6.7	4.677	5	0.00294	1	Pass
802.11n(40)								
2422	6.65	5.9±1.0	6.9	4.898	5	0.00308	1	Pass
2437	6.84	5.9±1.0	6.9	4.898	5	0.00308	1	Pass
2452	6.72	5.9±1.0	6.9	4.898	5	0.00308	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	9.15	8.5±1.0	9.5	8.913	5	0.00561	1	Pass
2437	9.27	8.5±1.0	9.5	8.913	5	0.00561	1	Pass
2462	9.42	8.5±1.0	9.5	8.913	5	0.00561	1	Pass
802.11g								
2412	8.41	7.5±1.0	8.5	7.079	5	0.00445	1	Pass
2437	8.38	7.5±1.0	8.5	7.079	5	0.00445	1	Pass
2462	8.39	7.5±1.0	8.5	7.079	5	0.00445	1	Pass
802.11n(20)								
2412	6.62	5.7±1.0	6.7	4.677	5	0.00294	1	Pass
2437	6.54	5.7±1.0	6.7	4.677	5	0.00294	1	Pass
2462	6.52	5.7±1.0	6.7	4.677	5	0.00294	1	Pass
802.11n(40)								
2422	6.27	5.4±1.0	6.4	4.365	5	0.00275	1	Pass
2437	6.35	5.4±1.0	6.4	4.365	5	0.00275	1	Pass
2452	6.38	5.4±1.0	6.4	4.365	5	0.00275	1	Pass

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

ANT 1+ANT 2

	Frequency (MHz)	Power Density at R=20cm (mW/cm <sup>2</sup> ) ANT A	Power Density at R=20cm (mW/cm <sup>2</sup> ) ANT B	Power Density at R=20cm (mW/cm <sup>2</sup> ) ANT A+ANT B	Limit (mW/cm <sup>2</sup> )	Result
802.11b	2412	0.00574	0.00561	0.01134	1	Pass
	2437	0.00574	0.00561	0.01134	1	Pass
	2462	0.00574	0.00561	0.01134	1	Pass
802.11g	2412	0.00466	0.00445	0.00912	1	Pass
	2437	0.00466	0.00445	0.00912	1	Pass
	2462	0.00466	0.00445	0.00912	1	Pass
802.11n20	2412	0.00294	0.00294	0.00589	1	Pass
	2437	0.00294	0.00294	0.00589	1	Pass
	2462	0.00294	0.00294	0.00589	1	Pass
802.11n40	2422	0.00308	0.00275	0.00583	1	Pass
	2437	0.00308	0.00275	0.00583	1	Pass
	2452	0.00308	0.00275	0.00583	1	Pass

**Conclusion:**

So no SAR is required.