

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.

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 ²)	Limit (mW/cm ²)	Result
802.11b								
2402	1.923	1.0±1.0	2.0	1.585	1	0.00040	1	Pass
2440	2.231	1.3±1.0	2.3	1.698	1	0.00043	1	Pass
2480	2.756	1.8±1.0	2.8	1.905	1	0.00048	1	Pass

WIFI 5GHz ANT A

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
5736	-5.453	-4.4±1.0	-5.4	0.288	2.408	0.00010	1	Pass
5762	-5.671	-4.6±1.0	-5.6	0.275	2.408	0.00010	1	Pass
5814	-5.767	-4.7±1.0	-5.7	0.269	2.408	0.00009	1	Pass

WIFI 5GHz ANT A

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
5736	-5.561	-4.5±1.0	-5.5	0.282	2.408	0.00010	1	Pass
5762	-5.785	-4.7±1.0	-5.7	0.269	2.408	0.00009	1	Pass
5814	-5.926	-4.9±1.0	-5.9	0.257	2.408	0.00009	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

WIFI 5G ANT A+ANT B

Frequency (MHz)	Power Density at R=20cm (mW/cm2) ANT A	Power Density at R=20cm (mW/cm2) ANT B	Power Density at R=20cm (mW/cm2) ANT A+ANT B	Limit (mW/cm2)	Result
5736	0.00010	0.00010	0.00020	1	Pass
5762	0.00010	0.00009	0.00019	1	Pass
5814	0.00009	0.00009	0.00018	1	Pass

Conclusion:

So no SAR is required.