

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, $\pi = 3.1416$;

$R = 20\text{cm}$, distance between observation point and center of the radiator in cm.

2.4G (Antenna gain: 2.86 dBi)

	Channel Frequency (MHz)	Target power W/ tolerance (dBm)	Max tune up power tolerance(dBm)	Max Output power to antenna (mW)	Power Density at R=20cm (mW/cm ²)	Limit (mW/cm ²)	Result
802.11b	2412MHz	11±1	12	15.85	0.00609	1.0	Pass
802.11b	2437MHz	11±1	12	15.85	0.00609	1.0	Pass
802.11b	2462MHz	11±1	12	15.85	0.00609	1.0	Pass
802.11g	2412MHz	10±1	11	12.59	0.00484	1.0	Pass
802.11g	2437MHz	10±1	11	12.59	0.00484	1.0	Pass
802.11g	2462MHz	10±1	11	12.59	0.00484	1.0	Pass
802.11n (HT20)	2412MHz	9±1	10	10.00	0.00384	1.0	Pass
802.11n (HT20)	2437MHz	9±1	10	10.00	0.00384	1.0	Pass
802.11n (HT20)	2462MHz	9±1	10	10.00	0.00384	1.0	Pass
802.11n (HT40)	2422MHz	8±1	9	7.94	0.00305	1.0	Pass
802.11n (HT40)	2437MHz	8±1	9	7.94	0.00305	1.0	Pass
802.11n (HT40)	2452MHz	8±1	9	7.94	0.00305	1.0	Pass

5.2G (Antenna gain: 2.29 dBi)

	Channel Frequency (MHz)	Target power W/ tolerance (dBm)	Max tune up power tolerance(dBm)	Max Output power to antenna (mW)	Power Density at R=20cm (mW/cm ²)	Limit (mW/cm ²)	Result
802.11a	5180MHz	11±1	12	15.85	0.00534	1.0	Pass
802.11a	5200MHz	10±1	11	12.59	0.00424	1.0	Pass
802.11a	5240MHz	11±1	12	15.85	0.00534	1.0	Pass
802.11n (HT20)	5180MHz	11±1	12	15.85	0.00534	1.0	Pass
802.11n (HT20)	5200MHz	11±1	12	15.85	0.00534	1.0	Pass
802.11n (HT20)	5240MHz	10±1	11	12.59	0.00424	1.0	Pass
802.11 n(HT40)	5190MHz	10±1	11	12.59	0.00424	1.0	Pass
802.11 n(HT40)	5230MHz	11±1	12	15.85	0.00534	1.0	Pass