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

2.4G

ANT 1

	Channel	Target power	Max tune up	Max Output power	Power Density at	Limit	Result
	Frequency	W/ tolerance	power	to antenna (mW)	R=20cm (mW/cm ²)	(mW/c	
	(MHz)	(dBm)	tolerance(dBm)			m²)	
802.11b	2412MHz	1 4±1	15	31.62	0.00997	1.0	Pass
802.11g	2412MHz	13 ±1	14	25.12	0.00792	1.0	Pass
802.11n (HT20)	2412MHz	12 ±1	13	19.95	0.00629	1.0	Pass
802.11 n(HT40)	2422MHz	11 ±1	12	15.85	0.00500	1.0	Pass

ANT 2

	Channel	Target power	Max tune up	Max Output power	Power Density at	Limit	Result
	Frequency	W/ tolerance	power	to antenna (mW)	R=20cm (mW/cm ²)	(mW/c	
	(MHz)	(dBm)	tolerance(dBm)			m²)	
802.11b	2412MHz	1 3±1	14	25.12	0.00792	1.0	Pass
802.11g	2412MHz	12 ±1	13	19.95	0.00629	1.0	Pass
802.11n (HT20)	2412MHz	11 ±1	12	15.85	0.00500	1.0	Pass
802.11 n(HT40)	2422MHz	10 ±1	11	12.59	0.00397	1.0	Pass

5.2G

	Channel	Target power	Max tune up	Max Output power	Power Density at	Limit	Result
	Frequency	W/ tolerance	power	to antenna (mW)	R=20cm (mW/cm ²)	(mW/c	
	(MHz)	(dBm)	tolerance(dBm)			m²)	
802.11a	5180MHz	15±1	16	39.81	0.01485	1.0	Pass
802.11n	E100MLI=	12±1	13	10.05	0.00744	1.0	Pass
(HT20)	5180MHz	12±1	13	19.95	0.00744		
802.11	5400MI I-	40.1.4	11	12.50	0.00470	1.0	Pass
n(HT40)	5190MHz	10±1	111	12.59	0.00470		
802.11ac	5180MHz	5400MH= 44.14	12	15 05	0.00501	1.0	Pass
(VHT20)	5100101112	11±1	12	15.85	0.00591		
802.11ac	5190MHz	40.1.4	44	12.50	0.00470	1.0	Pass
(VHT40)		10±1	11	12.59	0.00470		
802.11ac	5040 MIL	40.14	44	12.50	0.00470	1.0	Pass
(VHT80)	5210 MHz	10±1	11	12.59	0.00470		

5.8G

	Channel	Target power	Max tune up	Max Output power	Power Density at	Limit	Result
	Frequency	W/ tolerance	power	to antenna (mW)	R=20cm (mW/cm ²)	(mW/c	
	(MHz)	(dBm)	tolerance(dBm)			m²)	
802.11a	5745MHz	14±1	15	31.62	0.01180	1.0	Pass
802.11n	5745MLI=	11±1	12	15.05	0.00591	1.0	Pass
(HT20)	5745MHz	1111	12	15.85			
802.11	5755MI	40.1.4	44	12.50	0.00470	1.0	Pass
n(HT40)	5755MHz	10±1	11	12.59	0.00470		
802.11ac	5745MHz	ALI-	12	15.05	0.00591	1.0	Pass
(VHT20)		11±1	12	15.85			
802.11ac	5755141	40.1.4		12.59	0.00470	1.0	Pass
(VHT40)	5755MHz	10±1 11	11				
802.11ac	5775 MIL	40.1.4	44	12.50	0.00470	1.0	Pass
(VHT80)	5775 MHz	10±1	11	12.59	0.00470		

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+ANT2+ ANT 3 (The worst)

Power	Power	Power	Power Density	Limit	Result
Density at	Density at	Density at	at R=20cm	(mW/cm2)	
R=20cm	R=20cm	R=20cm	(mW/cm2)		
(mW/cm2)	(mW/cm2)	(mW/cm2)	ANT 1+ANT 2		
ANT 1	ANT 2	ANT3	+ANT3		
0.00997	0.00792	0.01485	0.03274	1.0	Pass

Conclusion:

So no SAR is required.