



Radio Frequency Exposure

EUT INFORMATION

FCC ID	2AVW4E53238496
EUT	Wireless Solution
Frequency band (Operating)	802.11a, 802.11n HT20: 5745MHz ~ 5825MHz 802.11n HT40: 5755 MHz ~ 5795MHz
Max. output power	-13.89 dBm
Antenna gain (Max)	23 dBi

According to KDB 447498 D01 and FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency Radiation as specified in § 1.1307(b).

Limits for Maximum Permissible Exposure (MPE)

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density(mW/cm ²)	Average Time
(A) Limits for Occupational/Control Exposures				
300-1500	--	--	F/300	6
1500-100000	--	--	5	6
(B) Limits for General Population/Uncontrol Exposures				
300-1500	--	--	F/1500	6
1500-100000	--	--	1	30

TEST RESULT

The modular use shall be at least 20cm distance away from human body.

MPE Calculation Method

$$E \text{ (V/m)} = \frac{\sqrt{30 \cdot P \cdot G}}{d}$$

$$\text{Power Density} = P_d \text{ (mW/cm}^2\text{)} = E^2 / 3770$$

Combine these two formulas can be changed to



$$Pd = (30 \cdot P \cdot G) / (3770 \cdot d^2)$$

Note:

1. "E" means Electric field (V/m).
2. "P" means Peak RF output power (W).
3. "G" means EUT Antenna numeric gain (numeric).
4. "d" means the minimum mobile separation distance is 0.2m between radiator and human body.

$$G = 10^{(23 / 10)} = 199.526$$

Modulation Type	Channel	Frequency (MHz)	Output Power to Antenna (dBm)	Tune-up power (dBm)	Power Density (mW/cm ²)	Limit of Power Density (mW/cm ²)
802.11a	149	5475	-15.15	-15±1	0.00158	1
	157	5785	-16.29	-16±1	0.0013	1
	165	5825	-15.21	-15±1	0.0016	1
802.11n HT20	149	5475	-14.46	-14±1	0.002	1
	157	5785	-14.81	-14±1	0.002	1
	165	5825	-13.89	-13±1	0.0025	1
802.11n HT40	151	5755	-15.51	-15±1	0.0016	1
802.11n HT40	159	5795	-15.29	-15±1	0.0016	1

Tested By:

Reviewed by:

Mar. 19, 2020

(Date)

Bing/Engineer

Mar. 19, 2020

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Bell/Manager

FCC Designation Number: TW2954