



Radio Frequency Exposure

EUT INFORMATION

FCC ID	2ACLCECNSDSBC310H80
EUT	Embedded computer / module
Frequency band (Operating)	2412 MHz ~ 2462 GHz
Max. output power	21.53 dBm
Antenna gain (Max)	2 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



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

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.

$$G = 10^{(2/10)} = 1.585$$

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)
802.11b	1	2412	15.98	16±1	0.0158	1
	6	2437	16.33	16±1	0.0158	1
	11	2462	16.22	16±1	0.0158	1
802.11g	1	2412	21.24	22±1	0.0629	1
	6	2437	21.38	22±1	0.0629	1
	11	2462	21.47	22±1	0.0629	1
802.11n HT20	1	2412	21.28	22±1	0.0629	1
	6	2437	21.43	22±1	0.0629	1
	11	2462	21.53	22±1	0.0629	1

Tested By:

Reviewed by:

Dec. 14, 2018

(Date)

Bing/Engineer

Dec. 14, 2018

(Date)

Bell/Manager

FCC Designation Number: TW2954