

## 9. RADIO FREQUENCY EXPOSURE

### 9.1 RF Exposure Limit

According to the FCC rule §1.1310, the limit for General Population/Uncontrolled exposure is 1 mW/cm<sup>2</sup> for the device operating 1 500 ~ 100 000 MHz.

### 9.1 RF Exposure consideration

This equipment should be operated with a minimum distance of 2 cm between the radiator and front of face. This equipment should not be placed directly on the ear when the speaker is active

### 9.3 EUT Description

Kind of EUT	Remote Control		
Operating Frequency Band	<input type="checkbox"/> Wireless Microphone: 494.000 MHz ~ 501.000 MHz and 498.200 MHz ~ 505.200 MHz <input checked="" type="checkbox"/> WLAN(802.11b/g/n(HT20)): 2 412 MHz ~ 2 462 MHz <input checked="" type="checkbox"/> WLAN(802.11n(HT40)): 2 422 MHz ~ 2 452 MHz <input type="checkbox"/> WLAN: 5 180 MHz ~ 5 320 MHz / 5 500 MHz ~ 5 700 MHz <input type="checkbox"/> WLAN: 5 745 MHz ~ 5 825 MHz <input type="checkbox"/> Bluetooth: 2 402 MHz ~ 2 480 MHz <input checked="" type="checkbox"/> Zigbee:2 425 MHz, 2 450 MHz, 2 475 MHz		
Device Category	<input type="checkbox"/> Portable (< 20 cm separation) <input type="checkbox"/> Mobile (> 20 cm separation) <input checked="" type="checkbox"/> Others		
Max. Output Power	WLAN	802.11b	14.80 dBm
		802.11g	13.97 dBm
		802.11n (HT20)	14.05 dBm
		802.11n (HT40)	13.39 dBm
	Zigbee	Antenna 0	-4.67 dBm
		Antenna 1	-4.78 dBm
Used Antenna	WLAN	Inserted into the main board (Chip Antenna)	
	Zigbee	Inserted into the main board (PCB Antenna)	
Used Antenna Gain	WLAN	3.3 dBi	
	Zigbee	Antenna0	-0.61 dBi
		Antenna1	1.73 dBi
Exposure Evaluation Applied	<input checked="" type="checkbox"/> MPE <input type="checkbox"/> SAR <input type="checkbox"/> N/A		

#### 9.4 Test Result for WLAN

According to the procedure, KDB 447498 D01, the standalone SAR test exclusion threshold is

$$\begin{aligned} &[(\text{Max. Power of channel, including tune-up tolerance, mW})/(\text{Mim. test separation distance, mm})] \times [\sqrt{f(\text{GHz})}] < 3 \\ &= [30.2/20] \times \sqrt{2.462} = 2.37 \end{aligned}$$

Conclusion: The SAR test exclusion threshold is less than 3, so the device meets the RF Exposure Requirement and excluded SAR Test.

#### 9.5 Test Result for Zigbee

According to the procedure, KDB 447498 D01, the standalone SAR test exclusion threshold is

$$\begin{aligned} &[(\text{Max. Power of channel, including tune-up tolerance, mW})/(\text{Mim. test separation distance, mm})] \times [\sqrt{f(\text{GHz})}] < 3 \\ &= [0.34/20] \times \sqrt{2.425} = 0.026 \end{aligned}$$

Conclusion: The SAR test exclusion threshold is less than 3, so the device meets the RF Exposure Requirement and excluded SAR Test.