



Maximum Permissible Exposure Evaluation

FCC ID: 2BD6T-DB-DBW2-B

1. Client Information

Applicant	:	Juan IOT Technology (Hong Kong) Co., Limited
Address	:	ROOM 803, CHEVALIER HOUSE 45-51 CHATHAM ROAD SOUTH TSIM SHA TSUI, KOWLOON, HONG KONG, CHINA
Manufacturer	:	DONGSONG INTERNATIONAL VIETNAM COMPANY LIMITED
Address	:	Lot 32,Road 7, Tan Duc Industrail Park, Duc Hoa Ha Commune, Duc Hoa District, Long An Province, Vietnam

2. General Description of EUT

EUT Name	:	Doorbell
Models No.	:	DB-DBW2-B, DB-W2DB-B, DB-DBW2, DB-DBW2CH, DB-DBW2-B-V2
Model Different	:	All these models are identical in the same PCB, layout and electrical circuit, The only difference is model name.
Brand Name	:	Night Owl
Sample ID	:	HC-C-202404-0342-01-01
Product Description	:	Operation Frequency: 802.11b/g/n: 2412MHz~2462MHz
Power Rating	:	Input: 5.0V=1.0A or AC 14-24V
Software Version	:	1.0.26
Hardware Version	:	V163P
Remark	:	The antenna gain provided by the manufacturer, the verified for the RF conduction test provided by TOBY test lab.

Method of Measurement for FCC

1. Max. Antenna Gain:

Mode	Antenna Type	Antenna Gain(dBi)
WLAN	Metal	3.50
The above antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.		

2. EUT Operation Condition:

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

3. Exposure Evaluation:

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S=(PG)/4\pi R^2$$

Where

S: power density

P: power input to the antenna

G: power gain of the antenna in the direction of interest relative to an isotropic radiator.

R: distance to the center of radiation of the antenna

Simultaneous transmission MPE Considerations

According to KDB447498: All transmitters and antennas in the host must be either evaluated for MPE compliance, by measurement or computational modeling, or qualify for the standalone MPE test exclusion in section 7.1. Simultaneous transmission MPE test exclusion applies when the sum of the MPE ratios for all simultaneous transmitting antennas incorporated in a host device, based on the calculated/estimated, numerically modeled or measured field strengths or power density, is ≤ 1.0 .

This means that:

$$\sum \text{ of MPE ratios } \leq 1.0$$



4. Test Result:

Worst MPE Result							
Test Mode	Frequency (MHz)	Conducted Power(max) (dBm)	Turn-up Power (dB)	Max tune up power (dBm) [P]	Max. ANT Gain (dBi) [G]	Distance (cm) [R]	Power Density (mW/ cm ²) [S]
802.11B	2412	15.92	15±1	16	3.50	20	0.0177
	2437	15.93	15±1	16	3.50	20	0.0177
	2462	15.79	15±1	16	3.50	20	0.0177
802.11G	2412	15.57	15±1	16	3.50	20	0.0177
	2437	15.46	15±1	16	3.50	20	0.0177
	2462	14.70	15±1	16	3.50	20	0.0177
802.11N20	2412	15.66	15±1	16	3.50	20	0.0177
	2437	15.26	15±1	16	3.50	20	0.0177
	2462	15.25	15±1	16	3.50	20	0.0177
802.11N40	2422	14.50	14±1	15	3.50	20	0.0141
	2437	15.09	15±1	16	3.50	20	0.0177
	2452	13.64	14±1	15	3.50	20	0.0141

5. Conclusion:

As specified in Table 1B of 47 CFR 1.1310- Limits for Maximum Permissible Exposure (MPE),

Limits for General Population/ Uncontrolled Exposure

Frequency Range (MHz)	Power density (mW/ cm ²)
300-1,500	F/1500
1,500-100,000	1.0

For: 2402~2480MHz

MPE limit S: 1mW/ cm²

The MPE is calculated as **0.0177mW / cm² < limit 1mW / cm²**.

So, RF exposure limit warning or SAR test are not required.

The EUT will only be used with a separation of 20cm or greater between the antenna and nearby persons and can therefore be considered a mobile transmitter per 47 CFR2.1091 (b). The RF Exposure Information page from the manual is included here for reference.

-----END OF REPORT-----

