

RF Exposure Evaluation

FCC ID: 2AW9NYK-MH-701A

1. Client Information

Applicant	:	Shenzhen Yifei Technology Co., Ltd
Address	:	808-A, No.43, Lixin Road, Danzhutou Community, Nanwan Street, Longgang District, Shenzhen City, Guangdong Province, China
Manufacturer	:	Zhongshan Qiantu Electric Appliance Co., Ltd
Address	:	No.7 of Xinfu Road, Xiaoli Community, Dongfeng Town, Zhongshan city(First Floor), China

2. General Description of EUT

EUT Name	:	Ultrasonic Humidifier	
Models No.	:	YK-MH-701A	
Model Difference	:	N/A	
Sample ID	:	20200724-02-01#	
Product Description	Operation Frequency:	2.4G: 802.11b/g/n(HT20): 2412MHz~2462MHz	
	Modulation Type:	802.11b: DSSS(CCK, DQPSK, DBPSK) 802.11g/n: OFDM(BPSK,QPSK,16QAM, 64QAM)	
Power Rating	:	Input: AC 110-120V, 50/60Hz.	
Software Version	:	V1.0.0	
Hardware Version	:	YK-013K-ZNE	
Connecting I/O Port(S)	:	Please refer to the User's Manual	
Remark	:	The antenna gain provided by the applicant, the verified for the RF conduction test provided by TOBY test lab.	

Note: More test information about the EUT please refer the RF Test Report.

MPE Calculations for WIFI

1. Antenna Gain:

PCB ant:	Model	Frequency Range
	N/A	2400~2483.5MHz
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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

4. Test Result:

2.4G WiFi

Mode	Conducted Power(max) (dBm)	Turn-up Power (dB)	Max tune up power (dBm) [P]	ANT Gain (dBi) [G]	Distance (cm) [R]	Power Density (mW/ cm ²) [S]	Limit of Power Density (mW/ cm ²) (S)
802.11B	16.06	16±1	17	3	20	0.01989	1
802.11G	14.81	15±1	16	3	20	0.01580	1
802.11N(HT20)	14.48	15±1	16	3	20	0.01580	1

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 WIFI: 802.11b/g/n(HT20): 2412MHz~2462MHz

MPE limit S: 1mW/ cm²

The MPE is calculated as **0.01989mW / 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.

Note

For a more detailed features description, please refer to the RF Test Report.

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