

Maximum Permissible Exposure Evaluation

FCC ID: 2AKUR-INDOOR-CAMERA

1. Client Information

Applicant	:	Hangzhou Jufeng Technology Co., Ltd.
Address	:	Building 9, Yinhu Innovation Center, No.9 Fuxian Road, Yinhu Street, Fuyang,Zhejiang, China
Manufacturer	:	Hangzhou Jufeng Technology Co., Ltd.
Address	:	Building 9, Yinhu Innovation Center, No.9 Fuxian Road, Yinhu Street, Fuyang,Zhejiang, China

2. General Description of EUT

EUT Name	:	Indoor camera	
Models No.	:	Indoor camera	
Model Different	:	N/A	
Product Description	:	Operation Frequency:	802.11b/g/n(HT20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz
		RF Output Power:	802.11b: 15.68 dBm 802.11g: 14.54 dBm 802.11n (HT20): 13.74 dBm 802.11n (HT40): 12.80 dBm
		Antenna Gain:	3dBi FPC Antenna
		Modulation Type:	802.11b: DSSS(CCK, DQPSK, DBPSK) 802.11g/n: OFDM(BPSK,QPSK,16QAM, 64QAM)
Power Rating	:	Adapter model:CS-1201000 Input: AC 100-240V, 50/60Hz 0.5A Output: DC 12V,1A	
Software Version	:	General_FPT_Telecom_IPC_HI3516CV300_53H20L_FPT_8188EU_V4.03.R12	
Hardware Version	:	XMDZ-FPT-HL-38X38-SD-WIFI V2.01	
Connecting Port(S)	I/O :	Please refer to the User's Manual	

TB-RF-075-1.0

MPE Calculations for WIFI

1. Antenna Gain:

FPC Antenna: 3dBi.

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:

Worst Maximum MPE Result									
Mode	Freq. (MHz)	Conducted Power(max) (dBm) [P]	Tune up Power (dB)	Max tune up power (dBm) [P]	ANT Gain (dBi) [G]	Distance (cm) [R]	Power Density (mW/ cm ²) [S]	Power Density Limit (mW/ cm ²)	Result
B	2412	15.48	15.48±1	16.48	3	20	0.01764993	1	PASS
	2437	15.68	15.68±1	16.68			0.01848174		
	2462	15.28	15.28±1	16.28			0.01685555		
G	2412	14.51	14.51±1	15.51			0.01411702		
	2437	14.54	14.54±1	15.54			0.01421487		
	2462	14.43	14.43±1	15.43			0.01385935		
N20	2412	13.38	13.38±1	14.38			0.01088286		
	2437	13.74	13.74±1	14.74			0.01182342		
	2462	13.59	13.59±1	14.59			0.01142202		
N40	2422	12.80	12.80±1	13.8			0.00952232		
	2437	12.56	12.56±1	13.56			0.00901038		
	2452	12.31	12.31±1	13.31			0.00850634		
Max Power Density(mW/ cm ²)		Power Density=0.01848174							
Note: RF Output power specifies that Maximum Conducted Peak Output Power.									

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

802.11n(HT40):2412~2462 MHz

MPE limit S: 1mW/ cm²

The MPE is calculated as $0.01848174 \text{ mW} / \text{cm}^2 < \text{limit } 1 \text{ mW} / \text{cm}^2$. So, the device compliance the RF Exposure requirement.

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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