

RF Exposure Evaluation

FCC ID: P96WF71RL

1. Client Information

Applicant : HUIZHOU TCL KING HIGH FRENQUENCY ELECTRONIC CO., LTD
Address : HUA YU RD., NO.75, ZHONGKAI HIGH-TECH DEVELOPMENT AREA, HUIZHOU, CHINA
Manufacturer : HUIZHOU TCL KING HIGH FRENQUENCY ELECTRONIC CO., LTD
Address : HUA YU RD., NO.75, ZHONGKAI HIGH-TECH DEVELOPMENT AREA, HUIZHOU, CHINA

2. General Description of EUT

EUT Name	:	WIFI MODULE
Models No.	:	WF71RL1500C
Model Difference	:	N/A
Product Description	:	Operation Frequency: 802.11b/g/n(HT20): 2412MHz~2462MHz 802.11n(HT40):2422MHz~2452MHz
	Number of Channel:	802.11b/g/n(HT20):11 channels 802.11n(HT40):7 channels
	Out Power	802.11b: 17.93 dBm 802.11g: 14.98 dBm 802.11n (HT20): 13.99 dBm 802.11n(HT40): 13.37 dBm
	Antenna Gain:	1 dBi Printed Antenna
	Modulation Type:	802.11b: CCK, QPSK, BPSK 802.11g: OFDM 802.11n (20M): OFDM

	:	Bit Rate of Transmitter:	802.11b:11/5.5/2/1 Mbps 802.11g:54/48/36/24/18/12/9/6 Mbps 802.11n:up to 150Mbps
Power Supply	:	DC Voltage supplied from PC System.	
Power Rating	:	DC 3.3V by USB adapter from PC System.	
Connecting I/O Port(S)	:	Please refer to the User's Manual	

Note:

- (1) More detail information about Equipment, please refer to User's manual, more information about the RF, please refer to test report.

MPE Calculations for WIFI

1. Antenna Gain:

Printed Antenna: 1 dBi.

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:

Band	Channel	Frequency (MHz)	Power (dBm) [P]	ANT Gain (dBi) [G]	Distance (cm) [R]	Power Density (mW/ cm ²) [S]
802.11b	CH1	2412	17.21	1	20	0.013
	CH6	2437	17.57	1	20	0.014
	CH11	2462	17.93	1	20	0.016
802.11g	CH1	2412	14.82	1	20	0.008
	CH6	2437	14.98	1	20	0.008
	CH11	2462	14.36	1	20	0.007
802.11n (HT20)	CH1	2412	13.99	1	20	0.006
	CH6	2437	13.47	1	20	0.005
	CH11	2462	13.51	1	20	0.006
802.11n (HT40)	CH3	2422	13.27	1	20	0.005
	CH6	2437	13.37	1	20	0.005
	CH9	2452	13.25	1	20	0.005

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 (2412~2462 MHz)

MPE limit S: 1 mW/ cm²

The MPE is calculated as 0.016mW / cm² < limit 1 mW / 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 47CFR2.1091 (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.