Maximum Permissible Exposure Evaluation

FCC ID: SJ8-CA825

1. Client Information

Applicant	:	RDI Technology (Shenzhen) Co., Ltd.
Address	:	BUILDING 1#, YONGYUE ROAD 7#, XINTANG INDUSTRIAL PARK, EAST BAISHIXIA, FUYONG, BAOAN, SHENZHEN, PRC, China
Manufacturer	:	RDI Technology (Shenzhen) Co., Ltd.
Address	:	BUILDING 1#, YONGYUE ROAD 7#, XINTANG INDUSTRIAL PARK, EAST BAISHIXIA, FUYONG, BAOAN, SHENZHEN, PRC, China

2. General Description of EUT

EUT Name	:	Wireless Camera	
Models No.	:	CA825, VC5800	
Model Different	:	All these models are identical in the same PCB, layout and electrical circuit, the only difference is model name.	
Product Description	:	Operation Frequency:	802.11b/g: 2412MHz~2462MHz
		Number of Channel:	802.11b/g:11 channels
		Antenna Gain:	Dipole antenna, Maximum Gain: 2.0dBi
Power Rating		Adapter: (CS6D090060FUF) Input: 100-240V~, 50/60Hz 200mA Output: DC 9V, 600mA	
Software Version	:	N/A	
Hardware Version	:	N/A	
Connecting I/O Port(S)	:	Please refer to the User's Manual	
Remark	:	the evaluation report used the EUT(RW-C-202206-0130-4-2#).	

MPE Calculations for WIFI

1. **Antenna Gain:**
   Dipole Antenna: 2.0dBi.

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

2.4G WiFi MPE Result								
Mode	N_{TX}	Freq. (MHz)	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]
802.11b	1	2412	15.03	15±1	16	2.0	20	0.0125
		2437	14.31	14±1	15	2.0	20	0.0099
		2462	14.36	14±1	15	2.0	20	0.0099
802.11g	1	2412	8.25	8±1	9	2.0	20	0.0025
		2437	9.24	9±1	10	2.0	20	0.0031
		2462	8.23	8±1	9	2.0	20	0.0025

Note:
N_{TX}= Number of Transmit Antennas
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 2.4WIFI:2412~2462 MHz

MPE limit S: 1mW/ cm^2

The MPE is calculated as ***0.0125mW / cm^2 < limit 1mW / cm^2***. 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.

6. Conclusion:

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

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