Maximum Permissible Exposure Evaluation

FCC ID: 2ARNK-AI

1. Client Information

Applicant	:	Shenzhen Skymee Technology Co.,Ltd.
Address	:	11/F, Department Store Plaza Building East, No.123, Shennan East Road, Dongmen Street, Luohu District, Shenzhen City, China
Manufacturer	:	Skywise medical instrument (shenzhen) co.,ltd
Address	:	No.17-1 South Pingxi Road, Pingdi Town, Longgang District, Shenzhen, China

2. General Description of EUT

EUT Name	:	Petalk AI Dog Camera	
Models No.	:	Petalk AI, Petalk AI Ⅱ, Petalk AI Ⅲ, Petalk AI Ⅳ, Petalk AI V, Petalk AI Ⅵ, Petalk AI Ⅶ, Petalk AI Ⅷ, Petalk AI Ⅸ, AI-A10, AI-A20, AI-A30, AI-A40, AI-A50, AI-A60, AI-A70, AI-A80, AI-B10, AI-B20, AI-B30, AI-B40, AI-B50, AI-B60, AI-B70, AI-B80, AI-D30 AI-D40, AI-D50, AI-D60, AI-D70, AI-D80, AI-D90, AI-C10, AI-C20, AI-C30, AI-C40, AI-C50, AI-C60, AI-C70, AI-C80, AI-E10, AI-E20, AI-E30, AI-E40, AI-E50, AI-E60, AI-E70, AI-E80	
Model Difference	:	All these models are identical in the same PCB, layout and electrical circuit, the only difference is shapes and colors.	
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 **see note(3)** 802.11n(HT40): 7 channels **see note(3)**
		RF Output Power:	802.11b: 17.33 dBm 802.11g: 16.33 dBm 802.11n (HT20): 13.75 dBm 802.11n (HT40): 13.33 dBm
		Antenna Gain:	2 dBi PCB Antenna
		Modulation Type:	802.11b: CCK, QPSK, BPSK 802.11g/n: OFDM
Power Supply	:	USB DC 5V from Switching Adapter(FJ-SW1260502000UN): Input: AC 100-240V, 50/60Hz, Max 0.4A. Output: DC 5V, 2000mA.	
Software Version	:	N/A	
Hardware Version	:	N/A	
Connecting I/O Port(S)	:	Please refer to the User's Manual	

Note:

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

MPE Calculations for WiFi

1. **Antenna Gain:**
   PIFA Antenna: 2Bi.

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	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	17.14	17±1	18	2	20	0.0199
		2437	17.33	17±1	18	2	20	0.0199
		2462	17.14	17±1	18	2	20	0.0199
802.11g	1	2412	16.33	16±1	17	2	20	0.0158
		2437	16.26	16±1	17	2	20	0.0158
		2462	16.11	16±1	17	2	20	0.0158
802.11n (HT20)	1	2412	13.34	14±1	15	2	20	0.0100
		2437	13.75	14±1	15	2	20	0.0100
		2462	13.58	14±1	15	2	20	0.0100
802.11n (HT40)	1	2422	13.22	13±1	14	2	20	0.0079
		2437	13.33	13±1	14	2	20	0.0079
		2452	13.33	13±1	14	2	20	0.0079

Note:
(1) N_{TX}= Number of Transmit Antennas
(2) 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 (2412~2462 MHz)
MPE limit S: 1 mW/cm^2
The MPE is calculated as ***0.0199mW / cm²*** < limit 1 mW/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.

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