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RF Exposure Evaluation Report

Report No. :	CQASZ20190400249E-02
Applicant:	Shenzhen PENGLIXIN Technology Co., Limited
Address of Applicant:	Rm. 532-540, C Building, Huahui Road No.73, Dalang, Longhua District, Shenzhen, China
Manufacturer:	Shenzhen PENGLIXIN Technology Co., Limited
Address of Manufacturer:	Rm. 532-540, C Building, Huahui Road No.73, Dalang, Longhua District, Shenzhen, China
Equipment Under Test (EUT):	
Product:	WIFI Otoscope
Model No.:	WF-500
Brand Name:	N/A
FCC ID:	2AKMMPLXWF-500
Standards:	47 CFR Part 1.1307 47 CFR Part 2.1093 KDB447498D01 General RF Exposure Guidance v06
Date of Test:	2019-04-16 to 2019-05-09
Date of Issue:	2019-05-09
Test Result :	**PASS***

Tested By: Daisy Qin

(Daisy Qin)

Reviewed By: Aaron Ma

(Aaron Ma)

Approved By:

(Jack Ai)

SHENZHEN HUAXIA TESTING TECHNOLOGY CO.,LTD 华夏准测 APPROVED

* In the configuration tested, the EUT complied with the standards specified above.

1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20190400249E-02	Rev.01	Initial report	2019-05-09

2 Contents

3 General Information

3.1 Client Information

Applicant:	Shenzhen PENGLIXIN Technology Co., Limited
Address of Applicant:	Rm. 532-540, C Building, Huahui Road No.73, Dalang, Longhua District, Shenzhen, China
Manufacturer:	Shenzhen PENGLIXIN Technology Co., Limited
Address of Manufacturer:	Rm. 532-540, C Building, Huahui Road No.73, Dalang, Longhua District, Shenzhen, China

3.2 General Description of EUT

Product Name:	WIFI Otoscope
Model No.:	WF-500
Trade Mark:	N/A
Hardware Version:	V1.3
Software Version:	V1.2
Sample Type:	☒ Mobile ☐ Portable ☐ Fix Location
Power Supply:	DC3.7V, 420mAh; Charge by USB

3.3 General Description of WIFI

Operation Frequency:	IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz IEEE 802.11n(HT40): 2422MHz to 2452MHz
Channel Numbers:	IEEE 802.11b/g, IEEE 802.11n HT20: 11 Channels IEEE 802.11n HT40: 7 Channels
Channel Separation:	5MHz
Type of Modulation:	IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g : OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20/40): OFDM (64QAM, 16QAM,QPSK,BPSK)
Transfer Rate:	IEEE for 802.11b: 1Mbps/2Mbps/5.5Mbps/11Mbps IEEE for 802.11g : 6Mbps/9Mbps/12Mbps/18Mbps/24Mbps/36Mbps/48Mbps/54Mbps IEEE for 802.11n(HT20) : 6.5Mbps/13Mbps/19.5Mbps/26Mbps/39Mbps/52Mbps/58.5Mbps/65Mbps IEEE for 802.11n(HT40) : 13.5Mbps/27Mbps/40.5Mbps/54Mbps/81Mbps/108Mbps/121.5Mbps/135Mbps
Test Software of EUT:	SecureCRT(manufacturer declare)
Antenna Type:	internal antenna
Antenna Gain:	0dBi

4 SAR Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

4.1.2 Limits

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

☐ f(GHz) is the RF channel transmit frequency in GHz
☐ Power and distance are rounded to the nearest mW and mm before calculation[17]
☐ The result is rounded to one decimal place for comparison
The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion

4.1.3 EUT RF Exposure

1)For WIFI:

Measurement Data

802.11b mode				
Test channel	Average Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2412MHz)	7.38	7.5±1	8.5	7.079
Middle(2437MHz)	7.89	7.5±1	8.5	7.079
Highest(2462MHz)	8.21	7.5±1	8.5	7.079
802.11g mode				
Test channel	Average Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2412MHz)	6.98	7.0±1	8	6.310
Middle(2437MHz)	7.78	7.0±1	8	6.310
Highest(2462MHz)	7.63	7.0±1	8	6.310
802.11n(HT20)mode				
Test channel	Average Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2412MHz)	6.86	7.0±1	8	6.310
Middle(2437MHz)	7.57	7.0±1	8	6.310
Highest(2462MHz)	7.42	7.0±1	8	6.310
802.11n(HT40)mode				
Test channel	Average Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2422MHz)	6.77	7.0±1	8	6.310
Middle(2437MHz)	7.47	7.0±1	8	6.310
Highest(2452MHz)	7.34	7.0±1	8	6.310

Worst case: 802.11b mode						
Channel	Average Conducted Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
Lowest (2402MHz)	7.38	7.5±1	8.5	7.079	2.20	3.0
Middle (2440MHz)	7.89	7.5±1	8.5	7.079	2.21	
Highest (2480MHz)	8.21	7.5±1	8.5	7.079	2.22	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: CQASZ20190400249E-01