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RF Exposure Evaluation Report

Report No. :	CQASZ20190500384E-02
Applicant:	Shenzhen heng shang pin technology co., LTD
Address of Applicant:	4004 Hao Wuhedadao Bantianjiedao Longgangqu, Shenzhen, China
Manufacturer:	Shenzhen heng shang pin technology co., LTD
Address of Manufacturer:	4004 Hao Wuhedadao Bantianjiedao Longgangqu, Shenzhen, China
Equipment Under Test (EUT):	
Product:	Bluetooth Headset
All Model No.:	HSP-B1, HSP-B3, HSP-B3-PRO, HSP-B8, HSP-B9, HSP-B10
Test Model No.:	HSP-B1
Brand Name:	HonShoop
FCC ID:	2ALXX-HSP-B
Standards:	47 CFR Part 1.1307 47 CFR Part 2.1093 KDB447498D01 General RF Exposure Guidance v06
Date of Test:	2019-05-29 to 2019-06-03
Date of Issue:	2019-06-03
Test Result :	**PASS***

Tested By： Daisy Qin

(Daisy Qin)

Reviewed By: Aaron Ma

(Aaron Ma)

Approved By: Jack Ai

(Jack Ai)

SHENZHEN HUAXIA TESTING TECHNOLOGY CO., LTD 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
CQASZ20190500384E-02	Rev.01	Initial report	2019-06-03

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3 General Information

3.1 Client Information

Applicant:	Shenzhen heng shang pin technology co., LTD
Address of Applicant:	4004 Hao Wuhedadao Bantianjiedao Longgangqu, Shenzhen, China
Manufacturer:	Shenzhen heng shang pin technology co., LTD
Address of Manufacturer:	4004 Hao Wuhedadao Bantianjiedao Longgangqu, Shenzhen, China

3.2 General Description of EUT

Product Name:	Bluetooth Headset
All Model No.:	HSP-B1, HSP-B3, HSP-B3-PRO, HSP-B8, HSP-B9, HSP-B10
Test Model No.:	HSP-B1
Trade Mark:	HonShoop
Hardware Version:	V0.5
Software Version:	V0.5
Operation Frequency:	2402MHz~2480MHz
Bluetooth Version:	V5.0
Modulation Technique:	Frequency Hopping Spread Spectrum(FHSS)
Modulation Type:	GFSK, π/4DQPSK, 8DPSK
Transfer Rate:	1Mbps/2Mbps/3Mbps
Number of Channel:	79
Hopping Channel Type:	Adaptive Frequency Hopping systems
Product Type:	☐ Mobile ☒ Portable ☐ Fix Location
Test Software of EUT:	Blue test 3 (manufacturer declare)
Antenna Type:	PCB antenna
Antenna Gain:	2dBi
Power Supply:	lithium battery: DC3.7V, 85mAh, Charge by DC5.0V

Note:

All model: HSP-B1, HSP-B3, HSP-B3-PRO, HSP-B8, HSP-B9, HSP-B10

Only the model HSP-B1 was tested, since the electrical circuit design, layout, components used and internal wiring were identical for the above models, with difference being color of appearance and model name.

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

Measurement Data

GFSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	4.420	4.5±1	5.5	3.548
Middle(2441MHz)	5.990	5.5±1	6.5	4.467
Highest(2480MHz)	6.060	5.5±1	6.5	4.467
π/4DQPSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	2.100	2.5±1	3.5	2.239
Middle(2441MHz)	3.980	3.5±1	4.5	2.818
Highest(2480MHz)	4.030	3.5±1	4.5	2.818
π/4DQPSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	2.520	2.5±1	3.5	2.239
Middle(2441MHz)	4.400	3.5±1	4.5	2.818
Highest(2480MHz)	4.440	3.5±1	4.5	2.818

Worst case: GFSK						
Channel	Maximum Peak Conducted Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
Lowest (2402MHz)	4.420	4.5±1	5.5	3.548	1.10	3.0
Middle (2441MHz)	5.990	5.5±1	6.5	4.467	1.40	
Highest (2480MHz)	6.060	5.5±1	6.5	4.467	1.41	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: CQASZ20190500384E-01