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RF Exposure Evaluation Report

Report No. : CQASZ20200600533E-02
Applicant: Shenzhen heng shang pin technology co., LTD
Address of Applicant: 4004 Hao Wuhedadao Bantianjiedao Longgangqu, Shenzhen, China, 518120
Equipment Under Test (EUT):
EUT Name: Bluetooth Headset
Model No.: HSP-B3, HSP-B3-PRO, HSP-B3-Plus, HSP-B7, HSP-B7-PRO
Test Model No.: HSP-B3
Brand Name: HonShoop
FCC ID: 2ALXX-B3
Standards: 47 CFR Part 1.1307
47 CFR Part 2.1093
KDB447498D01 General RF Exposure Guidance v06
Date of Receipt: 2020-06-15
Date of Test: 2020-06-15 to 2020-06-24
Date of Issue: 2020-06-29
Test Result : PASS*

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

Tested By:

Tom Chen

(Tom Chen)

Reviewed By:

Sheek Luo

(Sheek Luo)

Approved By:

Jack Ai

(Jack Ai)



1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20200600533E-02	Rev.01	Initial report	2020-06-29

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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, 518120
Manufacturer:	Shenzhen heng shang pin technology co., LTD
Address of Manufacturer:	4004 Hao Wuhedadao Bantianjiedao Longgangqu, Shenzhen, China, 518120
Factory:	Shenzhen Zhongchuan Precision Mould Co., Ltd
Address of Factory:	(South Face) First Floor, Building#1, C1 District, Luoshan Industrial Zone, Shanxia Community, Pinghu Town, Longgang district, Shenzhen, China

3.2 General Description of EUT

Product Name:	Bluetooth Headset
Model No.:	HSP-B3, HSP-B3-PRO, HSP-B3-Plus, HSP-B7, HSP-B7-PRO
Test Model No.:	HSP-B3
Trade Mark:	HonShoop
Hardware Version:	Ver 1.0
Software Version:	Ver 1.23
Operation Frequency:	2402MHz~2480MHz
Bluetooth Version:	V5.0
Modulation Technique:	Frequency Hopping Spread Spectrum(FHSS)
Modulation Type:	GFSK, $\pi/4$ DQPSK, 8DPSK
Number of Channel:	79
Transfer Rate:	1Mbps/2Mbps/3Mbps
Hopping Channel Type:	Adaptive Frequency Hopping systems
Sample Type:	☐ Mobile ☒ Portable ☐ Fix Location
Test Software of EUT:	BlueTest3 (manufacturer declare)
Antenna Type:	Ceramic Chip Antenna
Antenna Gain:	1.72 dBi
Power Supply:	lithium battery: DC 3.7V 150mAh, Charge by DC 5.0V

Model No.: HSP-B3, HSP-B3-PRO, HSP-B3-Plus, HSP-B7, HSP-B7-PRO

Only the model HSP-B3 was tested, since the electrical circuit design, layout, components used and internal wiring were identical for the above models, with difference being appearance and shape.

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:

$$\left[\frac{(\text{max. power of channel, including tune-up tolerance, mW})}{(\text{min. test separation distance, mm})} \right] \cdot \sqrt{f(\text{GHz})} \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$

$f(\text{GHz})$ is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation¹⁷

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)	2.640	2.5±1	3.5	2.239
Middle(2441MHz)	2.420	2.5±1	3.5	2.239
Highest(2480MHz)	2.820	2.5±1	3.5	2.239
π/4DQPSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	4.900	4.5±1	5.5	3.548
Middle(2441MHz)	4.820	4.5±1	5.5	3.548
Highest(2480MHz)	5.330	4.5±1	5.5	3.548
8DPSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	5.710	5.5±1	6.5	4.467
Middle(2441MHz)	5.580	5.5±1	6.5	4.467
Highest(2480MHz)	6.040	5.5±1	6.5	4.467

Worst case: 8DPSK						
Channel	Maximum Peak Conducted Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune- up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
Lowest (2402MHz)	5.710	5.5±1	6.5	4.467	1.385	3.0
Middle (2441MHz)	5.580	5.5±1	6.5	4.467	1.396	
Highest (2480MHz)	6.040	5.5±1	6.5	4.467	1.407	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: CQASZ20200600533E-01