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RF Exposure Evaluation Report

Report No.:	CQASZ20220400688E-03
Applicant:	Shenzhen Baseus Technology Co., Ltd.
Address of Applicant:	2th Floor, Building B, Baseus Intelligence Park, No.2008, Xuegang Rd, Gangtou Community, Bantian Street, Longgang District, Shenzhen.
Equipment Under Test (EUT):	
EUT Name:	Baseus Bowie H1 Noise-Cancelling Wireless Headphones
Model No.:	Baseus Bowie H1
Test Model No.:	Baseus Bowie H1
Brand Name:	Baseus
FCC ID:	2A482-H1
Standards:	47 CFR Part 1.1307 47 CFR Part 2.1093 KDB447498D01 General RF Exposure Guidance v06
Date of Receipt:	2021-10-08
Date of Test:	2021-10-08 to 2022-01-11
Date of Issue:	2022-05-25
Test Result:	**PASS***

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

Tested By: lewis zhou

(Lewis Zhou)

Reviewed By: K. Liao

(K Liao)

Approved By:

(Jack Ai)

1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20220400688E-03	Rev.01	Initial report	2022-05-25

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3 General Information

3.1 Client Information

Applicant:	Shenzhen Baseus Technology Co., Ltd.
Address of Applicant:	2th Floor, Building B, Baseus Intelligence Park, No.2008, Xuegang Rd, Gangtou Community, Bantian Street, Longgang District, Shenzhen.
Manufacturer:	Shenzhen Baseus Technology Co., Ltd.
Address of Manufacturer:	2th Floor, Building B, Baseus Intelligence Park, No.2008, Xuegang Rd, Gangtou Community, Bantian Street, Longgang District, Shenzhen.
Factory:	Shengyang Acoustics (Guangdong) Co., Ltd.
Address of Factory:	No.5 Minxing Street Zhongshan East, Shilong Town, Dongguan, Guangdong Province, China

3.2 General Description of EUT

Product Name:	Baseus Bowie H1 Noise-Cancelling Wireless Headphones
Model No.:	Baseus Bowie H1
Test Model No.:	Baseus Bowie H1
Trade Mark:	Baseus
Software Version:	V17
Hardware Version:	V3.2
Power Supply:	Li-ion battery*2: DC 3.7V 400mAh, Charge by DC 5V for adapter

3.3 General Description of BLE

Operation Frequency:	2402MHz~2480MHz
Modulation Type:	GFSK
Transfer Rate:	1Mbps/2Mbps
Number of Channel:	40
Product Type:	☐ Mobile ☒ Portable ☐ Fix Location
Antenna Type:	PCB antenna
Antenna Gain:	-1 dBi

3.4 General Description of BT

Operation Frequency:	2402MHz~2480MHz
Modulation Type:	GFSK, π/4DQPSK, 8DPSK
Transfer Rate:	1Mbps/2Mbps/3Mbps
Number of Channel:	79
Product Type:	☐ Mobile ☒ Portable ☐ Fix Location
Antenna Type:	PCB antenna
Antenna Gain:	-1 dBi

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 BLE

Measurement Data

L

Worst case: GFSK mode (1Mbps)						
Channel	Maximum Peak Conducted Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
Lowest (2402MHz)	1.7	2.0±1	3.0	1.995	0.618	3.0
Middle (2440MHz)	1.89	2.0±1	3.0	1.995	0.623	
Highest (2480MHz)	0.35	0.5±1	1.5	1.413	0.445	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

R

Worst case: GFSK mode (1Mbps)						
Channel	Maximum Peak Conducted Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
Lowest (2402MHz)	1.99	2.0±1	3.0	1.995	0.618	3.0
Middle (2440MHz)	2.03	2.0±1	3.0	1.995	0.623	
Highest (2480MHz)	0.53	0.5±1	1.5	1.413	0.445	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: CQASZ20220400688E-02
BT can not simultaneous transmitting at same time.

2) **For BT**

Measurement Data

L

GFSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	2.36	2.5±1	3.5	2.239
Middle(2441MHz)	2.29	2.0±1	3.0	2.239
Highest(2480MHz)	0.95	1.0±1	2.0	1.585
π/4DQPSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	3.63	3.5±1	4.5	2.818
Middle(2441MHz)	3.66	3.5±1	4.5	2.818
Highest(2480MHz)	2.36	2.5±1	3.5	2.239
8DPSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	3.16	3.0±1	4.0	2.512
Middle(2441MHz)	3.27	3.0±1	4.0	2.512
Highest(2480MHz)	2.27	2.0±1	3.0	1.995

R

GFSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	1.43	1.5±1	2.5	1.778
Middle(2441MHz)	1.48	1.5±1	2.5	1.778
Highest(2480MHz)	0.12	0±1	1.0	1.259
π/4DQPSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	2.9	3.0±1	4.0	2.512
Middle(2441MHz)	2.94	3.0±1	4.0	2.512
Highest(2480MHz)	1.65	1.5±1	2.5	1.778
8DPSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	3.15	3.0±1	4.0	2.512
Middle(2441MHz)	3.13	3.0±1	4.0	2.512
Highest(2480MHz)	2.03	2.0±1	3.0	1.995

L

Worst case: GFSK mode						
Channel	Maximum Peak Conducted Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
Lowest (2402MHz)	3.63	3.5±1	4.5	2.818	0.874	3.0
Middle (2441MHz)	3.66	3.5±1	4.5	2.818	0.881	
Highest (2480MHz)	2.36	2.5±1	3.5	2.239	0.705	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

R

Worst case: GFSK mode						
Channel	Maximum Peak Conducted Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
Lowest (2402MHz)	3.15	3.0±1	4.0	2.512	0.779	3.0
Middle (2441MHz)	3.13	3.0±1	4.0	2.512	0.785	
Highest (2480MHz)	2.03	2.0±1	3.0	1.995	0.628	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: CQASZ20220400688E-01
BLE can not simultaneous transmitting at same time.

*** END OF REPORT ***