

RF Exposure Evaluation Report

Product : Dinosaur Series Wireless Headset
Trade mark : MINISO
Model/Type reference : 2304
Serial Number : N/A
Report Number : EED32P80431603
FCC ID : 2A2H62304
Date of Issue : May 05, 2023
: 47 CFR Part 1.1307
: 47 CFR Part 2.1093
Test Standards : KDB447498D01 General RF
Exposure Guidance v06
Test result : PASS

Prepared for:

Shenzhen Bao Tianhua Technology Co., Ltd
201, Building Plant No.6 Baidajie Road, Xi Keng Community Yuanshan
Sub-district, Longgang district, Shenzhen, Guangdong, China

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1 Version

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3 General Information

3.1 Client Information

Applicant:	Shenzhen Bao Tianhua Technology Co., Ltd
Address of Applicant:	201, Building Plant No.6 Baidajie Road, Xi Keng Community Yuanshan Sub-district, Longgang district, Shenzhen, Guangdong, China
Manufacturer:	Shenzhen Bao Tianhua Technology Co., Ltd
Address of Manufacturer:	201, Building Plant No.6 Baidajie Road, Xi Keng Community Yuanshan Sub-district, Longgang district, Shenzhen, Guangdong, China
Factory:	Shenzhen Bao Tianhua Technology Co., Ltd
Address of Factory:	201, Building Plant No.6 Baidajie Road, Xi Keng Community Yuanshan Sub-district, Longgang district, Shenzhen, Guangdong, China

3.2 General Description of EUT

Product Name:	Dinosaur Series Wireless Headset
Model No.(EUT):	2304
Trade mark:	MINISO
Product Type:	☐ Mobile ☒ Portable ☐ Fix Location
Power Supply:	Battery DC 3.7V
Test Voltage:	DC 3.7V
Sample Received Date:	Mar. 30, 2023
Sample tested Date:	Mar. 30, 2023 to Apr. 11, 2023
Remark:	Company Name and Address shown on Report, the sample(s) and sample Information were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.

3.3 General Description of BLE

Operation Frequency:	2402MHz~2480MHz
Modulation Type:	GFSK
Transfer Rate:	☒ 1Mbps ☒ 2Mbps
Number of Channel:	40
Antenna Type:	PCB Antenna
Antenna Gain:	1.9dBi

3.4 General Description of BT Classic

Operation Frequency:	2402MHz~2480MHz
Modulation Technique:	Frequency Hopping Spread Spectrum(FHSS)
Modulation Type:	GFSK, $\pi/4$ DQPSK, 8DPSK
Number of Channel:	79
Hopping Channel Type:	Adaptive Frequency Hopping systems
Antenna Type:	PCB Antenna
Antenna Gain:	1.9dBi

3.5 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax: +86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

3.6 Deviation from Standards

None.

3.7 Abnormalities from Standard Conditions

None.

3.8 Other Information Requested by the Customer

None.

4 SAR Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06
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.

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

4.1.2 EUT RF Exposure

1) For BLE

Measurement Data:

1M:

GFSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	-1.38	-1±1	0	1
Middle(2440MHz)	-0.9	-1±1	0	1
Highest(2480MHz)	-1.09	-1±1	0	1

2M:

GFSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	-1.23	-1±1	0	1
Middle(2440MHz)	-0.79	-1±1	0	1
Highest(2480MHz)	-0.96	-1±1	0	1

Worst case: 2M

Channel	Maximum Peak Conducted Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune- up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
Lowest (2402MHz)	-1.23	-1±1	0	1	0.315	3.0
Middle (2440MHz)	-0.79	-1±1	0	1	0.315	
Highest (2480MHz)	-0.96	-1±1	0	1	0.315	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: EED32P80431601.

2) For BT Classic
Measurement Data

GFSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	-1.13	-1±1	0	1
Middle(2441MHz)	-0.86	-1±1	0	1
Highest(2480MHz)	-1.04	-1±1	0	1
π/4DQPSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	-0.46	0±1	1.0	1.259
Middle(2441MHz)	-0.1	0±1	1.0	1.259
Highest(2480MHz)	-0.39	0±1	1.0	1.259
8DPSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	-0.23	0±1	1.0	1.259
Middle(2441MHz)	0.03	0±1	1.0	1.259
Highest(2480MHz)	-0.13	0±1	1.0	1.259

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)	-0.23	0±1	1.0	1.259	0.397	3.0
Middle (2441MHz)	0.03	0±1	1.0	1.259	0.397	
Highest (2480MHz)	-0.13	0±1	1.0	1.259	0.397	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: EED32P80431602.

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*** End of Report ***