

RF Exposure Evaluation Report

Product : Mini Matte Wireless Earbuds
Trade mark : MINISO
Model/Type reference : K88
Serial Number : N/A
Report Number : EED32N80843502
FCC ID : WTD-K88
Date of Issue : Oct. 19, 2021
Test Standards : 47 CFR Part 1.1307
47 CFR Part 2.1093
KDB447498D01 General RF
Exposure Guidance v06
Test result : PASS

Prepared for:

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1 Version

Version No.	Date	Description
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3 General Information

3.1 Client Information

Applicant:	Shenzhen Sande Dacom Electronics Co.,Ltd.
Address of Applicant:	2/4/5F, Building I, No.10. East Area of ShangXue Science&Technology Industrial Park, Bantian street, I LongGang district. Shenzhen. China
Manufacturer:	Shenzhen Sande Dacom Electronics Co.,Ltd.
Address of Manufacturer:	2/4/5F, Building I, No.10. East Area of ShangXue Science&Technology Industrial Park, Bantian street, I LongGang district. Shenzhen. China
Factory:	Shenzhen Sande Dacom Electronics Co.,Ltd.
Address of Factory:	2/4/5F, Building I, No.10. East Area of ShangXue Science&Technology Industrial Park, Bantian street, I LongGang district. Shenzhen. China

3.2 General Description of EUT

Product Name:	Mini Matte Wireless Earbuds
Model No.(EUT):	K88
Test Model No.:	K88
Trade mark:	MINISO
Bluetooth Version:	V5.1
Product Type:	☐ Mobile ☒ Portable ☐ Fix Location
Power Supply:	DC 3.7V
Test Voltage:	DC 3.7V
Sample Received Date:	Sep.9, 2021
Sample tested Date:	Sep.9, 2021 to Sep.15, 2021
Remark:	During the test, the data was showed in all modes, only the worst case left ear was recorded in the report. The left and right headphone are same electrical circuit design and color.

3.3 General Description of BT Classic

Operation Frequency:	2402MHz~2480MHz
Modulation Technique:	Frequency Hopping Spread Spectrum(FHSS)
Modulation Type:	GFSK, $\pi/4$ DQPSK
Number of Channel:	79
Hopping Channel Type:	Adaptive Frequency Hopping systems
Antenna Type:	Chip Antenna
Antenna Gain:	1.15dBi

3.4 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

3.5 Deviation from Standards

None.

3.6 Abnormalities from Standard Conditions

None.

3.7 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 BT Classic

Measurement Data

GFSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	1.67	2.5±1	3.5	2.239
Middle(2441MHz)	2.48	2.5±1	3.5	2.239
Highest(2480MHz)	3.13	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)	2.3	3.0±1	4.0	2.512
Middle(2441MHz)	3.21	3.0±1	4.0	2.512
Highest(2480MHz)	3.65	3.0±1	4.0	2.512

Worst case: $\pi/4$ DQPSK						
Channel	Maximum Peak Conducted Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune- up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
Lowest (2402MHz)	2.3	3.0±1	4.0	2.512	0.8	3.0
Middle (2441MHz)	3.21	3.0±1	4.0	2.512	0.8	
Highest (2480MHz)	3.65	3.0±1	4.0	2.512	0.8	
Conclusion: the calculated value ≤ 3.0 , SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: EED32N80843501.

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32N80843501 for EUT external and internal photos.

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.

*** End of Report ***