

RF Exposure Evaluation Report

Product : TWS Earphones
Trade mark : MINISO
Model/Type reference : T15
Serial Number : N/A
Report Number : EED32O80902602
FCC ID : 2ART4-T15
Date of Issue : Jul. 18, 2022
Test Standards : 47 CFR Part 1.1307
47 CFR Part 2.1093
KDB447498D01 General RF
Exposure Guidance v06
Test result : PASS

Prepared for:

MINISO Corporation

**Room 2501, No. 486 Heye Square Kangwang Middle Road,
Liwan District, Guangzhou, Guangdong, China**

Prepared by:

**Centre Testing International Group Co., Ltd.
Hongwei Industrial Zone, Bao'an 70 District,
Shenzhen, Guangdong, China**

TEL: +86-755-3368 3668

FAX: +86-755-3368 3385

Compiled by:

Frazer Li

Reviewed by:

Tom Chen

Approved by:

Aaron Ma

Date:

Jul. 18, 2022

Aaron Ma

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2 Version

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4 General Information

4.1 Client Information

Applicant:	MINISO Corporation
Address of Applicant:	Room 2501, No. 486 Heye Square Kangwang Middle Road, Liwan District, Guangzhou, Guangdong, China
Manufacturer:	KYM Technology Co., Ltd
Address of Manufacturer:	1001-01, No.1, Kanghuai Industrial Park, No.60 Ping'an Road, Dafu Community, Guanlan Street, Longhua District, Shenzhen, China
Factory:	KYM Technology Co., Ltd
Address of Factory:	1001-01, No.1, Kanghuai Industrial Park, No.60 Ping'an Road, Dafu Community, Guanlan Street, Longhua District, Shenzhen, China

4.2 General Description of EUT

Product Name:	TWS Earphones
Model No.(EUT):	T15
Trade Mark:	MINISO

4.3 Product Specification subjective to this standard

Frequency Range:	2402MHz~2480MHz
Modulation Type:	GFSK, $\pi/4$ DQPSK
Antenna Type:	Chip Antenna
Antenna Gain:	2.48dBi
Power Supply:	DC 3.7V by battery or DC 5.0V by USB port
Max Conducted Peak Output Power:	-1.52dBm The Max Conducted Peak Output Power data refer to the report EED32O80902601
Sample Received Date:	Jun. 23, 2022
Sample tested Date:	Jun. 23, 2022 to Jul. 05, 2022

Remark:

Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.

Model No.:Q51

The left earphone is identical to the inside of the right earphone, only the left earphone was tested, since the electrical circuit design, layout, components used and internal wiring were identical for the above models.

4.4 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

4.5 Deviation from Standards

None.

4.6 Abnormalities from Standard Conditions

None.

4.7 Other Information Requested by the Customer

None.

5 SAR Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 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.

5.1.2 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:

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

5.1.3 EUT RF Exposure

1) For Bluetooth Classic

Measurement Data:

GFSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	-3.16	-2.5±1	-1.5	0.708
Middle(2441MHz)	-2.47	-2.5±1	-1.5	0.708
Highest(2480MHz)	-2.36	-2.5±1	-1.5	0.708

$\pi/4$ DQPSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	-2.28	-2±1	-1	0.794
Middle(2441MHz)	-1.59	-2±1	-1	0.794
Highest(2480MHz)	-1.52	-2±1	-1	0.794

Worst case is Ear L: $\pi/4$ DQPSK						
Channel	Maximum Peak Conducted Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune- up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
Lowest (2402MHz)	-2.28	-2±1	-1	0.794	0.246	3.0
Middle (2441MHz)	-1.59	-2±1	-1	0.794	0.246	
Highest (2480MHz)	-1.52	-2±1	-1	0.794	0.246	
Conclusion: the calculated value ≤ 3.0 , SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: EED32O80902601 .

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 ***