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RF Exposure Evaluation Report

Report No.: CQASZ20190600504E-02

Applicant: Wicked Audio, Inc

Address of Applicant: 875 WEST 325 NORTH, LINDON, UT 84042, USA

Equipment Under Test (EUT):

Product: Bluetooth Earbud

All Model No.: 17LY72, WI-BT1750, WI-BT1751, WI-BT1752, WI-BT1753, WI-BT1754,

WI-BT1755, WI-1756, WI-BT1757, WI-BT1758, WI-BT1759

Test Model No.: 17LY72

Brand Name: N/A

FCC ID: 2AFM7WI-BT17XX 47 CFR Part 1.1307

47 CFR Part 2.1093

KDB447498D01 General RF Exposure Guidance v06

Date of Receipt: 2019-06-27

Date of Test: 2019-06-27 to 2019-07-02

Date of Issue: 2019-07-02

Test Result: PASS*

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

Tested By: Martin Del

(Martin Lee)

Reviewed By:

(Aaron Ma)

Approved By:

(Jack Ai)



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 CQA, this report can't be reproduced except in full.

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



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1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20190600504E-02	Rev.01	Initial report	2019-07-02





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3 General Information

3.1 Client Information

Applicant:	Wicked Audio, Inc		
Address of Applicant:	875 WEST 325 NORTH, LINDON, UT 84042, USA		
Manufacturer:	Shenzhen Jia Hua Li Dian Zi You Xian Gong Si		
Address of Manufacturer:	NO 101, 201, BUILDING E, NEW INDUSTRIAL ZONE, SHENZHU ROAD, LIUYUE SHENKENG VILLAGE, HENGGANG, LONGGANG DISTRICT, SHENZHEN CHINA.		

3.2 General Description of EUT

Product Name:	Bluetooth Earbud		
All Model No.:	17LY72, WI-BT1750, WI-BT1751, WI-BT1752, WI-BT1753, WI-BT1754, WI-BT1755, WI-1756, WI-BT1757, WI-BT1758, WI-BT1759		
Test Model No.:	17LY72		
Trade Mark:	N/A		
Hardware Version:	V1.0		
Software Version:	V1.0		
Operation Frequency:	2402MHz~2480MHz		
Bluetooth Version:	V4.2		
Modulation Technique:	Frequency Hopping Spread Spectrum(FHSS)		
Modulation Type:	GFSK, π/4DQPSK, 8DPSK		
Transfer Rate:	1Mbps/2Mbps		
Number of Channel:	79		
Hopping Channel Type:	Adaptive Frequency Hopping systems		
Product Type:	☐ Mobile ☐ Portable ☐ Fix Location		
Test Software of EUT:	BK32xx RF Test - V1.5_en (manufacturer declare)		
Antenna Type:	PCB antenna		
Antenna Gain:	0dBi		
Power Supply:	lithium battery:DC3.7V, Charge by DC5.0V		

Note:

All model: 17LY72, WI-BT1750, WI-BT1751, WI-BT1752, WI-BT1753, WI-BT1754, WI-BT1755, WI-1756, WI-BT1757, WI-BT1758, WI-BT1759

Only the model 17LY72 was tested, since the electrical circuit design, layout, components used and internal wiring were identical for the above models, with difference being color of appearance and model name.



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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)] \cdot [$\sqrt{f(GHz)}$] \leq 3.0 for 1-g SAR and \leq 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 calculation¹⁷

The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is \leq 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





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4.1.3 EUT RF Exposure

Measurement Data

Measurement Data					
	GFSK	mode			
Test channel	Peak Output Power	Tune up tolerance	Maximum tune-up Power		
	(dBm)	(dBm)	(dBm)	(mW)	
Lowest(2402MHz)	3.540	3.0±1	4.0	2.512	
Middle(2441MHz)	4.260	3.5±1	4.5	2.818	
Highest(2480MHz)	4.650	4.0±1	5.0	3.162	
	π/4DQPS	SK mode			
Test channel	Peak Output Power	Tune up tolerance	Maximum tune-up Power		
	(dBm)	(dBm)	(dBm)	(mW)	
Lowest(2402MHz)	2.350	1.5±1	2.5	1.778	
Middle(2441MHz)	3.470	2.5±1	3.5	2.239	
Highest(2480MHz)	3.730	3.0±1	4.0	2.512	
	8DPSK	mode			
Test channel	Peak Output Power	Tune up tolerance	Maximum tune-up Power		
	(dBm)	(dBm)	(dBm)	(mW)	
Lowest(2402MHz)	2.630	2.0±1	3.0	1.995	
Middle(2441MHz)	3.650	3.0±1	4.0	2.512	
Highest(2480MHz)	3.930	3.0±1	4.0	2.512	

Worst case: GFSK Maximum Maximum tune-						
	Peak	Tune up	up Power		Calculated	Exclusion
Channel		tolerance (dBm)	(dBm)	(mW)	value	threshold
Lowest (2402MHz)	3.540	3.0±1	4.0	2.512	0.78	
Middle (2441MHz)	4.260	3.5±1	4.5	2.818	0.88	3.0
Highest (2480MHz)	4.650	4.0±1	5.0	3.162	1.00	

Remark: The Max Conducted Peak Output Power data refer to report Report No.: CQASZ20190600504E-01