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Report Template Version: V04
Report Template Revision Date: 2018-07-06

RF Exposure Evaluation Report

Report No. :	CQASZ20200100029E-02
Applicant:	Wicked Audio, Inc
Address of Applicant:	875 WEST 325 NORTH, LINDON, UT 84042, USA
Equipment Under Test (EUT):	
EUT Name:	Elektrix
Model No.:	18LY52, WI-BT4350, WI-BT4351, WI-BT4352, WI-BT4353, WI-BT4354, WI-BT4355, WI-BT4450, WI-BT4451, WI-BT4452, WI-BT4453, WI-BT4454, WI-BT4455
Test Model No.:	WI-BT4351
Brand Name:	Wicked Audio
FCC ID:	2AFM7WI-BT4XXX
Standards:	47 CFR Part 1.1307 47 CFR Part 1.1310 KDB447498D01 General RF Exposure Guidance v06
Date of Receipt:	2020-01-09
Date of Test:	2020-01-09 to 2020-01-16
Date of Issue:	2020-01-16
Test Result :	**PASS***

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

Tested By: Tom Chen.

(Tom Chen)

Reviewed By: Aaron Ma

(Aaron Ma)

Approved By:

(Jack Ai)

SHENZHEN HUAXIA TESTING TECHNOLOGY CO., LTD APPROVED

1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20200100029E-02	Rev.01	Initial report	2020-01-16

2 Contents

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:	Elektrix
Model No.:	18LY52, WI-BT4350, WI-BT4351, WI-BT4352, WI-BT4353, WI-BT4354, WI-BT4355, WI-BT4450, WI-BT4451, WI-BT4452, WI-BT4453, WI-BT4454, WI-BT4455
Test Model No.:	WI-BT4351
Trade Mark:	Wicked Audio
Hardware Version:	V1.4
Software Version:	V1.0
Operation Frequency:	2402MHz~2480MHz
Bluetooth Version:	V5.0
Modulation Technique:	Frequency Hopping Spread Spectrum(FHSS)
Modulation Type:	GFSK, π/4DQPSK, 8DPSK
Transfer Rate:	1Mbps/2Mbps/3Mbps
Number of Channel:	79
Hopping Channel Type:	Adaptive Frequency Hopping systems
Product Type:	☐ Mobile ☒ Portable ☐ Fix Location
Test Software of EUT:	BK32xx RF Test – V1.8.2_en (manufacturer declare)
Antenna Type:	Ceramic antenna
Antenna Gain:	0dBi
Power Supply:	lithium battery:DC3.7V, Charge by DC5.0V

Model No.: 18LY52, WI-BT4350, WI-BT4351, WI-BT4352, WI-BT4353, WI-BT4354, WI-BT4355, WI-BT4450, WI-BT4451, WI-BT4452, WI-BT4453, WI-BT4454, WI-BT4455

Only the model WI-BT4351 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.

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

Measurement Data

GFSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	-0.090	-1.0±1	0	1.000
Middle(2441MHz)	0.520	-0.5±1	0.5	1.122
Highest(2480MHz)	1.100	0.5±1	1.5	1.413
π/4DQPSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	1.650	1.0±1	2.0	1.585
Middle(2441MHz)	2.160	1.5±1	2.5	1.778
Highest(2480MHz)	2.750	1.5±1	3.0	1.995
8DPSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	2.040	1.5±1	2.5	1.778
Middle(2441MHz)	2.550	2.0±1	3.0	1.995
Highest(2480MHz)	3.160	2.5±1	3.5	2.239

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)	2.040	1.5±1	2.5	1.778	0.551	3.0
Middle (2441MHz)	2.550	2.0±1	3.0	1.995	0.623	
Highest (2480MHz)	3.160	2.5±1	3.5	2.239	0.705	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: CQASZ20200100029E-01