SAR Exclusion Evaluation Report

Applicant	:	LEXON
Product Type	:	MINO X
Trade Name	:	LEXON
Model Number	:	LA120
Test Specification	:	ANSI / IEEE Std.C95.1-1992 / IEEE Std. 1528-2013 47 CFR § 2.1093 / KDB 865664 D01 v01r04 KDB 865664 D02 v01r02 / KDB 447498 D01 v06
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Issue by

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Taiwan Accreditation Foundation accreditation number: 1330
Test Firm MRA designation number: TW0010

Note:

1.The test results are valid only for samples provided by customers and under the test conditions described in this report.
2.This report shall not be reproduced except in full, without the written approval of A Test Lab Technology Corporation.
3.The relevant information is provided by customers in this test report. According to the correctness, appropriateness or completeness of the information provided by the customer, if there is any doubt or error in the information which affects the validity of the test results, the laboratory does not take the responsibility.

Revision History

Rev.	Issue Date	Revisions	Revised By
00	Aug. 12, 2019	Initial Issue	Jennifer Liu

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1. Reference Testing Standards

Standard	Description	Version
ANSI/IEEE C95.1	American National Standard safety levels with respect to human exposure to radio frequency electromagnetic fields, 300 kHz to 100 GHz, New York.	1992
IEEE 1528	IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head From Wireless Communications Devices: Measurement Techniques.	2013
FCC 47 CFR Part 2.1093	Radiofrequency radiation exposure evaluation: portable devices.	---
FCC KDB 865664 D01	SAR measurement 100 MHz to 6 GHz - describes SAR measurement procedures for devices operating between 100 MHz to 6 GHz	v01r04
FCC KDB 865664 D02	RF Exposure Reporting - provides general reporting requirements as well as certain specific information required to support MPE and SAR compliance.	v01r02
FCC KDB 447498 D01	General RF Exposure Guidance - provides guidance pertaining to RF exposure requirements for mobile and portable device equipment authorizations.	v06

2. Description of Equipment under Test (EUT)

Applicant	LEXON 91 avenue Jean-Baptiste Clément - 92100 Boulogne - FRANCE	
Manufacturer	LEXON 91 avenue Jean-Baptiste Clément - 92100 Boulogne - FRANCE	
Product Type	MINO X	
Trade Name	LEXON	
Model Number	LA120	
FCC ID	2ARD3-LA120	
Frequency Range	Operate Band	Frequency Range (MHz)
	Bluetooth LE	2402 - 2480
Antenna information	Type	Max. Gain (dBi)
	Inverted F Antenna	-0.58

The above equipment was tested by A Test Lab Techno Corp. For compliance with the requirements set forth in 47 CFR § 2.1093. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

3. SAR Test Exclusion

As RF exposure evaluation of portable device, SAR test is not required when the evaluation results. According to KDB 447498 4.3.1, unless excluded by specific FCC test procedures, portable devices shall include SAR data for equipment approval. SAR test necessity will be based on the exclusion result.

The test exclusion refers KDB 447498 as below:

≤50 mm:

[(*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

>50 mm and <200 mm:

a) [Power allowed at numeric threshold for 50 mm in step 1) + (test separation distance - 50 mm)·(f(MHz)/150)] mW, at 100 MHz to 1500 MHz

b) [Power allowed at numeric threshold for 50 mm in step 1) + (test separation distance - 50 mm)·10] mW at > 1500 MHz and ≤ 6 GHz

3.1 Conducted Power

The conducted power turn-up tolerance, please reference manufacturer specification.

Operate Band	Frequency (MHz)	Packet Type	Average Conducted power (dBm)
Bluetooth BR GFSK	2402.0	DH1	5.06
		DH3	5.09
		DH5	5.11
	2441.0	DH1	5.20
		DH3	5.22
		DH5	**5.25**
	2480.0	DH1	4.93
		DH3	4.95
		DH5	4.98
Bluetooth EDR π/4-DQPSK	2402.0	DH1	3.83
		DH3	3.85
		DH5	3.88
	2441.0	DH1	4.00
		DH3	4.03
		DH5	**4.06**
	2480.0	DH1	3.71
		DH3	3.74
		DH5	3.76

3.2 Antenna Location

Ant. Used	Antenna to user distance (mm)	
	Front	Back
Bluetooth Antenna	5	5

Note：We use a minimum distance of 5mm for bluetooth function.

3.3 Evaluation Results

The evaluation of SAR test reduction according to KDB447498

SAR test is not required when the results showed “EXEMPT”.

SAR test reduction						
Ant. Used	Band	Frequency (GHz)	Power		Calculated threshold value	
			(dBm)	(mW)	Front	Back
DSS	Bluetooth LE	2.48	6	3.981	1.3	1.3
					EXEMPT	EXEMPT

Exclusion Considerations: SAR is not required

Note:
1. Calculated Value include string "mW",that is meam through compare output power with threshold, if the output power more than threshold value the SAR test should be perform. Otherwise,the SAR test could be exempt. (> 50mm)
2. Calculated Value only inculde number format, that is mean through compare output power with threshold, if the Calculated value more than 3, the SAR test should be perform. Otherwise, the SAR test could be exempt. (<50mm)
3. When an antenna qualifies for the standalone SAR test exclusion of KDB 447498 section 4.3.1 and also transmits simultaneously with other antennas, the standalone SAR value must be estimated according to KDB 447498 section "4.3.2. Simultaneous transmission SAR test exclusion considerations b) "
4. We used highest frequency and power,that result should be evaluated the worst case.
5. Power and distance are rounded to the nearest mW and mm before calculation.
6. The result is rounded to one decimal place for comparison.
7. We use a minimum distance of 5mm for bluetooth function.

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