Shenzhen Huaxia Testing Technology Co., Ltd

1F., Block A of Tongsheng Technology Building, Huahui Road, Dalang Street, Longhua District, Shenzhen, China

Telephone: +86-755-26648640
Fax: +86-755-26648637
Website: www.cqa-cert.com

Report Template Version: V03
Report Template Revision Date: Mar.1st, 2017

RF Exposure Evaluation Report

Report No. :	CQASZ20180500110E-03
Applicant:	1MORE INC.
Address of Applicant:	Tianliao Building F14 East Block (New Materials Industrial Park), Xueyuan Road, Nanshan District, Shenzhen, China
Manufacturer:	1MORE Shen Zhen Acoustic Technology Co., Ltd.
Address of Manufacturer:	Tianliao Building 1403-1411, Zone A Tianliao Industrial Park, Taoyuan Street, Nanshan District, Shenzhen, P.R. China
Equipment Under Test (EUT):	
Product:	1MORE Spearhead VR BT In-Ear Headphones
Model No.:	E1020BT
Brand Name:	1MORE
FCC ID:	2AF8ZE1020BT
Standards:	47 CFR Part 1.1307 47 CFR Part 2.1093 KDB447498D01 General RF Exposure Guidance v06
Date of Test:	2018-05-28 to 2018-07-11
Date of Issue:	2018-07-11
Test Result :	**PASS***

Tested By: Aaron Ma
(Aaron Ma)

Reviewed By: Owen Zhou
(Owen Zhou)

Approved By: Jack Ai
(Jack Ai)

SHENZHEN HUAXIA TESTING TECHNOLOGY CO., LTD. 华夏准测 APPROVED

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

2 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20180500110E-03	Rev.01	Initial report	2018-07-11

3 Contents

4 General Information

4.1 Client Information

Applicant:	1MORE INC.
Address of Applicant:	Tianliao Building F14 East Block (New Materials Industrial Park), Xueyuan Road, Nanshan District, Shenzhen, China
Manufacturer:	1MORE Shen Zhen Acoustic Technology Co., Ltd.
Address of Manufacturer:	Tianliao Building 1403-1411, Zone A Tianliao Industrial Park, Taoyuan Street, Nanshan District, Shenzhen, P.R. China

4.2 General Description of EUT

Product Name:	1MORE Spearhead VR BT In-Ear Headphones
Model No.:	E1020BT
Trade Mark:	1MORE
Hardware Version:	V1.0
Software Version:	V1.0
Operation Frequency:	2402MHz~2480MHz
Bluetooth Version:	V4.1
Modulation Technique:	Frequency Hopping Spread Spectrum(FHSS)
Modulation Type:	BT classic: GFSK, π/4DQPSK, 8DPSK BLE: GFSK
Number of Channel:	BT classic:79 BLE:40
Hopping Channel Type:	Adaptive Frequency Hopping systems
Sample Type:	portable production
Test Software of EUT:	CBT (manufacturer declare)
Antenna Type:	Ceramic antenna

5 SAR Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 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.

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:

[(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

5.1.3 EUT RF Exposure

For BT: Measurement Data

GFSK mode	
Test channel	Peak Output Power (dBm)
Lowest	-3.340
Middle	-2.910
Highest	-2.580
π/4DQPSK mode	
Test channel	Peak Output Power (dBm)
Lowest	-1.160
Middle	-0.740
Highest	-0.450
8DPSK mode	
Test channel	Peak Output Power (dBm)
Lowest	-0.430
Middle	-0.030
Highest	0.240

Remark: The Conducted Peak Output Power data refer to report Report No.: CQASZ20180500110E-01

For BLE:

Measurement Data

GFSK mode	
Test channel	Peak Output Power (dBm)
Lowest	-3.03
Middle	-3.74
Highest	-4.47

Remark: The Conducted Peak Output Power data refer to report Report No.: CQASZ20180500110E-02

BDR, EDR and BLE can not simultaneous transmitting at same time.

The worst case data: 8DPSK_highest channel

The Max Conducted Peak Output Power is 0.24dBm in highest channel(2.480GHz);

The best case gain of the antenna is 1.72dBi.

EIRP= 0.24dBm + 1.72dBm= 1.96dBm

1.96Bm logarithmic terms convert to numeric result is nearly 1.57mW

According to the formula. calculate the EIRP test result:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)]

General RF Exposure = (1.57mW / 5 mm) x √2.480GHz = 0.5 ①

SAR requirement:

S= 3.0 ② ;

① < ②.

So the SAR report is not required.