

Test Report

Report No.: CQASZ20180400028EW-01

Test Description: Bluetooth RF Conformance Test Report
Product/Design Name: 1MORE Triple Driver BT In-Ear Headphones
Product/Design ID: E1001BT
Trademark: 1MORE
Applicant: 1MORE Shen Zhen Acoustic Technology Co., Ltd.
Manufacturer: 1MORE Shen Zhen Acoustic Technology Co., Ltd.
Test Specification: Radio Frequency (RF) *Bluetooth*[®] Test Specification
Document Number RF.TS.5.0.1



Test Report Prepared by.....
Test Engineer Aaron Wu



Test Report Reviewed by.....
Test Reviewer Owen Zhou

Bluetooth[®] Radio Frequency (RF) Conformance Test Report

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1 General Information

1.1 General

1.1.1 Administrative data of Test Report Issuer

Test Facility: Shenzhen Huaxia Testing Technology Co., Ltd

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1.1.2 Administrative data of Applicant

Applicant: 1MORE Shen Zhen Acoustic Technology Co., Ltd.

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Responsible Person: Mrs. He

Phone Number : 13242075433

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Email : xiao.he<xiao.he@tiinlab.com.cn>

1.1.3 Administrative data of EUT Manufacturer

EUT Manufacturer: 1MORE Shen Zhen Acoustic Technology Co., Ltd.

Manufacturer Address: Tianliao Building 1403-1411, Zone A Tianliao Industrial Park, Taoyuan Street, Nanshan District, Shenzhen, P.R. China

Responsible Person: Mrs. He

Phone Number : 13242075433

Fax :

Email : xiao.he<xiao.he@tiinlab.com.cn>

1.2 Description of EUT

Product name: 1MORE Triple Driver BT In-Ear Headphones

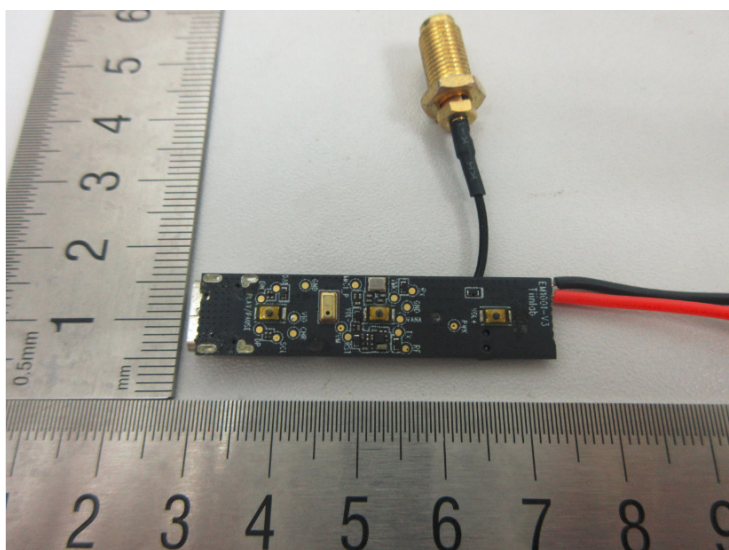
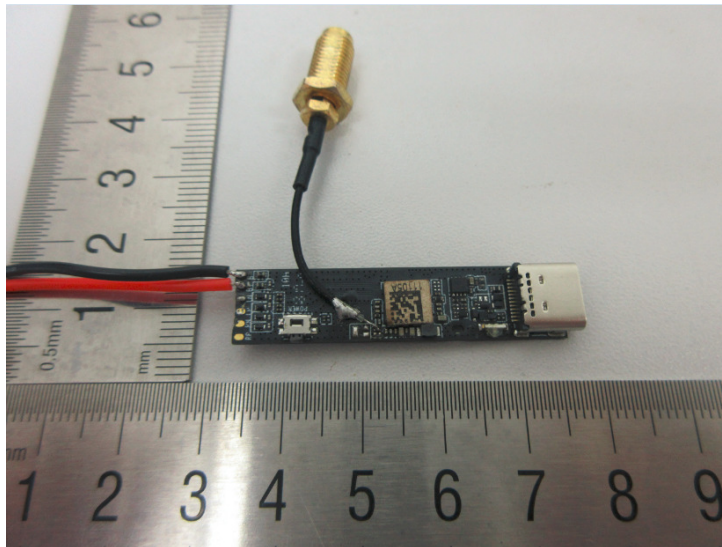
Product description: 1MORE Triple Driver BT In-Ear Headphones

Product ID/Model: E1001BT

Hardware Version: v1.0

Software Version: v1.0

Internal Photos:





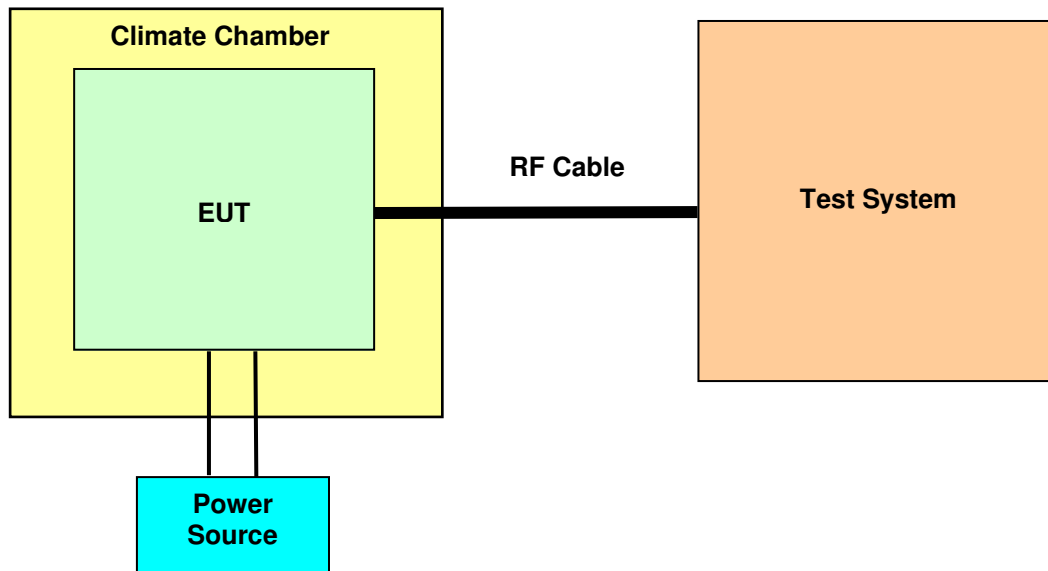
2 Summary List of All Test Cases

For RF-Conformance Testing:

Bluetooth RF-Conformance Testing				
No.	TC identifier	Description	Verdict	Comments
1	TP/TRM/CA/BV-01-C	Output Power	PASS	NTC
2	TP/TRM/CA/BV-02-C	Power Density	PASS	NTC
3	TP/TRM/CA/BV-03-C	Power Control	PASS	NTC
4	TP/TRM/CA/BV-04-C	TX Output Spectrum - Frequency range	PASS	NTC
5	TP/TRM/CA/BV-05-C	TX Output Spectrum - 20 dB Bandwidth	PASS	NTC
6	TP/TRM/CA/BV-06-C	TX Output Spectrum - Adjacent channel power	PASS	NTC
7	TP/TRM/CA/BV-07-C	Modulation Characteristics	PASS	NTC
8	TP/TRM/CA/BV-08-C	Initial Carrier Frequency Tolerance	PASS	NTC
9	TP/TRM/CA/BV-09-C	Carrier Frequency Drift	PASS	NTC
10	TP/TRM/CA/BV-10-C	EDR Relative Transmit Power	PASS	NTC
11	TP/TRM/CA/BV-11-C	EDR Carrier Frequency Stability and Modulation Accuracy	PASS	NTC
12	TP/TRM/CA/BV-12-C	EDR Differential Phase Encoding	PASS	NTC
13	TP/TRM/CA/BV-13-C	EDR In-band Spurious Emissions	PASS	NTC
14	TP/TRM/CA/BV-14-C	Enhanced Power Control	PASS	NTC
15	TP/TRM/CA/BV-15-C	EDR Guard Time	PASS	NTC
16	TP/TRM/CA/BV-16-C	EDR Synchronization Sequence and Trailer	PASS	NTC
17	TP/RCV/CA/BV-01-C	Sensitivity - single slot packets	PASS	NTC
18	TP/RCV/CA/BV-02-C	Sensitivity - multi-slot packets	PASS	NTC
19	TP/RCV/CA/BV-03-C	C/I performance	PASS	NTC
20	TP/RCV/CA/BV-04-C	Blocking performance	PASS	NTC
21	TP/RCV/CA/BV-05-C	Intermodulation Performance	PASS	NTC
22	TP/RCV/CA/BV-06-C	Maximum Input Level	PASS	NTC
23	TP/RCV/CA/BV-07-C	EDR Sensitivity	PASS	NTC
24	TP/RCV/CA/BV-08-C	EDR BER Floor Performance	PASS	NTC
25	TP/RCV/CA/BV-09-C	EDR C/I Performance	PASS	NTC
26	TP/RCV/CA/BV-10-C	EDR Maximum Input Level	PASS	NTC

3 RF Conformance Testing

3.1 Description of Test Set-up



The Test System is a Bluetooth SIG validated Bluetooth RF conformance tester for Bluetooth Qualification. All RF conformance test cases are carried out via conducted method to minimize measurement uncertainty.



3.2 List of Performed Test Cases

Core Specification Version of EUT: 2.0 2.0+EDR 2.1 2.1+EDR 3.0 4.0 4.1 4.2

TC-Identifier	Final Verdict	Date of Test
TP/RCV/CA/BV-01-C	Pass	2018-06-25 ~ 2018-06-28
TP/TRM/CA/BV-01-C	Pass	2018-06-25 ~ 2018-06-28
TP/TRM/CA/BV-02-C	Pass	2018-06-25 ~ 2018-06-28
TP/TRM/CA/BV-04-C	Pass	2018-06-25 ~ 2018-06-28
TP/TRM/CA/BV-05-C	Pass	2018-06-25 ~ 2018-06-28
TP/TRM/CA/BV-06-C	Pass	2018-06-25 ~ 2018-06-28
TP/TRM/CA/BV-07-C	Pass	2018-06-25 ~ 2018-06-28
TP/TRM/CA/BV-08-C	Pass	2018-06-25 ~ 2018-06-28
TP/TRM/CA/BV-09-C	Pass	2018-06-25 ~ 2018-06-28
TP/RCV/CA/BV-02-C	Pass	2018-06-25 ~ 2018-06-28
TP/RCV/CA/BV-03-C	Pass	2018-06-25 ~ 2018-06-28
TP/RCV/CA/BV-04-C	Pass	2018-06-25 ~ 2018-06-28
TP/RCV/CA/BV-05-C	Pass	2018-06-25 ~ 2018-06-28
TP/RCV/CA/BV-06-C	Pass	2018-06-25 ~ 2018-06-28
TP/RCV/CA/BV-07-C	Pass	2018-06-25 ~ 2018-06-28
TP/RCV/CA/BV-08-C	Pass	2018-06-25 ~ 2018-06-28
TP/RCV/CA/BV-09-C	Pass	2018-06-25 ~ 2018-06-28
TP/RCV/CA/BV-10-C	Pass	2018-06-25 ~ 2018-06-28
TP/TRM/CA/BV-03-C	Pass	2018-06-25 ~ 2018-06-28
TP/TRM/CA/BV-10-C	Pass	2018-06-25 ~ 2018-06-28
TP/TRM/CA/BV-11-C	Pass	2018-06-25 ~ 2018-06-28
TP/TRM/CA/BV-12-C	Pass	2018-06-25 ~ 2018-06-28
TP/TRM/CA/BV-13-C	Pass	2018-06-25 ~ 2018-06-28
TP/TRM/CA/BV-15-C	Pass	2018-06-25 ~ 2018-06-28
TP/TRM/CA/BV-16-C	Pass	2018-06-25 ~ 2018-06-28



3.3 Referenced Documents

Document Name	Version	Issue Date
Radio Frequency (RF) <i>Bluetooth</i> ® Test Specification	RF.TS.5.0.1	2017-07-18
Radio (RF) <i>Bluetooth</i> ® Implementation Conformance Statement (ICS) Proforma	RF.ICS.5.0.0	2016-12-13
Test Case Reference List for the Bluetooth Qualification Program (Bluetooth Core 2.0 – 5.0 Implementations)	Core.TCRL.2017-2	2017-12-19

3.4 Additional Information

The test results presented in this test report apply only to the particular equipment under test (EUT) Declared in Clause 1.2 of this report, for the functionality described in the relevant Protocol Implementation Statement (PICS), as presented for test on the date(s) declared in the relevant Protocol Implementation Extra Information for testing (PIXIT).

This test report does not constitute or imply, by its own, to be an approval of the product by Qualification Bodies, Certification Bodies or competent Authorities.

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Abbreviations in this report:

OK, Pass, P	=	passed
F	=	failed
N/A	=	not applicable
NT	=	not tested
EUT	=	equipment under test
NTC	=	normal test conditions (RF test spec Section 6.4)
ETC	=	extreme test conditions (RF test spec Section 6.5)
PICS	=	protocol implementation conformance statement
PIXIT	=	protocol implementation extra information for test

3.5 Test Sample Information

The following sample was used for testing.

Sample No	Serial No/BT address	Date Of Reception
SZCR180617-01	67564534571E	2018-06-17

3.6 List of Test Equipments

Validated *Bluetooth* RF conformance test system for all test cases is InterLab Bluetooth RF test Solution V5.1.4.

3.7 Measurement Uncertainty

Measurements and results are all in compliance with the applied test specification listed in this report.

The measurement uncertainties of the test laboratory which carried out the test cases are compliant with requirements stated in Section 6.10 of the applied test specification.

All measurements and results are recorded and maintained at the laboratory performing the tests. Measurements uncertainties are taken into account when concluding measurement to pass / fail criteria.

The detailed measurement uncertainty is defined in relative lab's documents.

3.8 List of Integrated Tested Components in EUT

Bluetooth QD ID	Product ID	Manufacturer
85736 (D031923)	Dual mode controller subsystem 4.2	Bestechnic (Shanghai) Co., Ltd
86144 (D032196)	Dual mode host subsystem 4.2	Bestechnic (Shanghai) Co., Ltd

Annex 1 PICS

Radio

General Information

Table 1: RF Capabilities

Support	Item	Capability	System Spec Reference	Status	Comment
<input type="checkbox"/>	1/1	Power Class = 1	RF, 3	C.5	C.5: At least one of 1/1 (Power Class 1) OR 1/2 (Power Class 2) OR 1/3 (Power Class 3) shall be supported.
<input checked="" type="checkbox"/>	1/2	Power Class = 2	RF, 3	C.5	C.5: At least one of 1/1 (Power Class 1) OR 1/2 (Power Class 2) OR 1/3 (Power Class 3) shall be supported.
<input type="checkbox"/>	1/3	Power Class = 3	RF, 3	C.5	C.5: At least one of 1/1 (Power Class 1) OR 1/2 (Power Class 2) OR 1/3 (Power Class 3) shall be supported.
<input checked="" type="checkbox"/>	1/4	Power Control	RF, 3	C.1	C.1: Mandatory if 1/1 is supported, otherwise Optional.
<input checked="" type="checkbox"/>	1/5	1-slot packets supported	BB, 6.5	M	
<input checked="" type="checkbox"/>	1/6	3-slot packets supported	BB, 6.5	O	
<input checked="" type="checkbox"/>	1/7	5-slot packets supported	BB, 6.5	O	
<input checked="" type="checkbox"/>	1/8	79 Channels	RF, 2	M	
<input checked="" type="checkbox"/>	1/9	Support for GFSK modulation	RF, 3.1	M	
<input checked="" type="checkbox"/>	1/10	Support for pi/4-DQPSK modulation	RF, 3.2	C.2	C.2: Mandatory if (SUM ICS 22/1 or 22/2 or 22/3 or 22/4) is supported, otherwise Excluded.
<input checked="" type="checkbox"/>	1/11	Support for 8DPSK modulation	RF, 3.3	C.3	C.3: Mandatory if (SUM ICS 22/1 or 22/2 or 22/3) is supported; Optional if (SUM ICS 22/4) is supported, otherwise Excluded.
<input checked="" type="checkbox"/>	1/12	Enhanced Power Control	RF, 3	C.4	C.4: Optional if Core Specification 3.0 or later and 1/4 is supported, otherwise Excluded.

Annex 2 PIXIT

PIXIT Reference	PICS Reference	Identifier	Value/Type	Units (if applicable)
RF:P2	23.B.301-A.2/2	Inband Image frequency	0	MHz
RF:P3	23.B.301-A.2/3	Value n for Intermodulation test	5	Integer
RF:P6	23.B.301-A.2/6	Type of power source	DC	N/A
RF:P7	23.B.301-A.2/7	Nominal power source voltage	3.7	V
RF:P8	23.B.301-A.2/8	Operating temperature range	0 ~ +50	°C
RF:P9	23.B.301-A.2/9	Extreme power source voltage	3.2 ~ 4.2	V
RF:P10	23.B.301-A.2/10	Antenna gain	2.72	dBi



Annex 3 Test plan generated by launch studio

RF.TS.5.0.1			
Test Case ID	Legacy Test Case ID	Test Case Description	Test Case Category
TP/RCV/CA/BV-01-C	TP/RCV/CA/BV-01-C	Sensitivity - single slot packets (Nominal + Extremes)	A
TP/TRM/CA/BV-01-C	TP/TRM/CA/BV-01-C	Output Power (Nominal + Extremes)	A
TP/TRM/CA/BV-02-C	TP/TRM/CA/BV-02-C	Power Density (Nominal + Extremes)	A
TP/TRM/CA/BV-04-C	TP/TRM/CA/BV-04-C	TX Output Spectrum - Frequency range (Nominal + Extremes)	A
TP/TRM/CA/BV-05-C	TP/TRM/CA/BV-05-C	TX Output Spectrum - 20 dB Bandwidth (Nominal + Extremes)	A
TP/TRM/CA/BV-06-C	TP/TRM/CA/BV-06-C	TX Output Spectrum - Adjacent channel power (Nominal + Extremes)	A
TP/TRM/CA/BV-07-C	TP/TRM/CA/BV-07-C	Modulation Characteristics (Nominal + Extremes)	A
TP/TRM/CA/BV-08-C	TP/TRM/CA/BV-08-C	Initial Carrier Frequency Tolerance (Nominal + Extremes)	A
TP/TRM/CA/BV-09-C	TP/TRM/CA/BV-09-C	Carrier Frequency Drift (Nominal + Extremes)	A
TP/RCV/CA/BV-02-C	TP/RCV/CA/BV-02-C	Sensitivity - multi-slot packets (Nominal + Extremes)	A
TP/RCV/CA/BV-03-C	TP/RCV/CA/BV-03-C	C/I performance (Nominal Only)	A
TP/RCV/CA/BV-04-C	TP/RCV/CA/BV-04-C	Blocking performance (Nominal Only)	A
TP/RCV/CA/BV-05-C	TP/RCV/CA/BV-05-C	Intermodulation Performance (Nominal Only)	A
TP/RCV/CA/BV-06-C	TP/RCV/CA/BV-06-C	Maximum Input Level (Nominal Only)	A
TP/RCV/CA/BV-07-C	TP/RCV/CA/BV-07-C	EDR Sensitivity (Nominal + Extremes)	A
TP/RCV/CA/BV-08-C	TP/RCV/CA/BV-08-C	EDR BER Floor Performance (Nominal Only)	A
TP/RCV/CA/BV-09-C	TP/RCV/CA/BV-09-C	EDR C/I Performance (Nominal Only)	A
TP/RCV/CA/BV-10-C	TP/RCV/CA/BV-10-C	EDR Maximum Input Level (Nominal Only)	A
TP/TRM/CA/BV-03-C	TP/TRM/CA/BV-03-C	Power Control (Nominal Only)	A
TP/TRM/CA/BV-10-C	TP/TRM/CA/BV-10-C	EDR Relative Transmit Power (Nominal + Extremes)	A
TP/TRM/CA/BV-11-C	TP/TRM/CA/BV-11-C	EDR Carrier Frequency Stability and Modulation Accuracy(Nominal + Extremes)	A
TP/TRM/CA/BV-12-C	TP/TRM/CA/BV-12-C	EDR Differential Phase Encoding (Nominal Only)	A
TP/TRM/CA/BV-13-C	TP/TRM/CA/BV-13-C	EDR In-band Spurious Emissions (Nominal + Extremes)	A
TP/TRM/CA/BV-15-C	TP/TRM/CA/BV-15-C	EDR Guard Time	B
TP/TRM/CA/BV-16-C	TP/TRM/CA/BV-16-C	EDR Synchronization Sequence and Trailer	B