



Shenzhen Global Test Service Co.,Ltd.

No.7-101 and 8A-104, Building 7 and 8, DCC Cultural and Creative Garden, No.98, Pingxin North Road, Shangmugu Community, Pinghu Street, Longgang District, Shenzhen, Guangdong

RF Exposure evaluation

Report Reference No.....: GTSR18110003-MPE

FCC ID.....: 2AQN5 -LPW02

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Date of issue.....: Nov.19, 2018

Representative Laboratory Name ..: Shenzhen Global Test Service Co.,Ltd.

Address.....: No.7-101 and 8A-104, Building 7 and 8, DCC Cultural and Creative Garden, No.98, Pingxin North Road, Shangmugu Community, Pinghu Street, Longgang District, Shenzhen, Guangdong, China

Applicant's name ..: Shenzhen Bencse Electronic Technology Co.,Ltd

Address ..: Plant Building 1, Jinshali Industrial Park, No.374 Xuegang North Road ,Qinghu Community, Longhua Subdistrict, Longhua District, Shenzhen City

Test specification

Standard ..: 47CFR §2.1093(d)/KDB447498 v06

TRF Originator ..: Shenzhen Global Test Service Co.,Ltd.

Master TRF ..: Dated 2014-12

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Test item description: Home Party speaker

Trade Mark ..: /

Manufacturer ..: Shenzhen Bencse Electronic Technology Co.,Ltd

Model/Type reference ..: LPW02

Listed Models ..: LPB02, LPG02, BENCI-W02, BENCI-B02, BENCI-G02, W02, B02, G02

Difference ..: All the same except the model number

Hardware Version ..: V9

Software Version ..: V1.9_0

Rating ..: DC 16.8V from Battery or DC 19V from adapter

Result.....: **PASS**

TEST REPORT

Test Report No. :	GTSR18110003-MPE	Nov. 19, 2018 Date of issue
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Equipment under Test : **Home Party speaker**

Model /Type : LPW02

Listed Models : LPB02, LPG02, BENCI-W02, BENCI-B02, BENCI-G02, W02, B02, G02

Applicant : **Shenzhen Bencse Electronic Technology Co.,Ltd**

Address : **Plant Building 1, Jinshali Industrial Park, No.374 Xuegang North Road ,Qinghu Community, Longhua Subdistrict, Longhua District, Shenzhen City**

Manufacturer : **Shenzhen Bencse Electronic Technology Co.,Ltd**

Address : **Plant Building 1, Jinshali Industrial Park, No.374 Xuegang North Road ,Qinghu Community, Longhua Subdistrict, Longhua District, Shenzhen City**

Test Result:	PASS
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The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Contents

<u>1.</u>	<u>SUMMARY</u>	4
1.1.	EUT configuration	4
1.2.	Product Description	4
<u>2.</u>	<u>TEST ENVIRONMENT</u>	5
2.1.	Address of the test laboratory	5
2.2.	Test Facility	5
2.3.	Environmental conditions	5
2.4.	Statement of the measurement uncertainty	5
<u>3.</u>	<u>METHOD OF MEASUREMENT</u>	6
3.1.	Applicable Standard	6
3.2.	Requirement	6
3.3.	Simultaneous transmission MPE Considerations	6
3.4.	Antenna Information	7
<u>4.</u>	<u>EVALUATION RESULT</u>	8
<u>5.</u>	<u>CONCLUSION</u>	8

1. SUMMARY

1.1. EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

● - supplied by the manufacturer

○ - supplied by the lab

<input type="radio"/>	/	M/N:	/
		Manufacturer:	/

1.2. Product Description

Product Name:	Home Party speaker
Trade Mark:	/
Model/Type reference:	LPW02
Listed Models	LPB02, LPG02, BENCI-W02, BENCI-B02, BENCI-G02, W02, B02, G02
Power Supply	DC 16.8V from Battery or DC 19V from adapter
BT	
Modulation Type	GFSK
Operation frequency	2402-2480 MHz
Antenna Type:	Internal Antenna
Antenna Gain:	0.83 dBi

2. TEST ENVIRONMENT

2.1. Address of the test laboratory

Shenzhen Global Test Service Co.,Ltd.

No.7-101 and 8A-104, Building 7 and 8, DCC Cultural and Creative Garden, No.98, Pingxin North Road, Shangmugu Community, Pinghu Street, Longgang District, Shenzhen, Guangdong

2.2. Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

FCC-Registration No.: 165725

Shenzhen Global Test Service Co.,Ltd EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

A2LA-Lab Cert. No.: 4758.01

Shenzhen Global Test Service Co.,Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

CNAS-Lab Code: L8169

Shenzhen Global Test Service Co.,Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories. Date of Registration: Dec. 11, 2015. Valid time is until Dec. 10, 2018.

2.3. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15-35 °C
Humidity:	30-60 %
Atmospheric pressure:	950-1050mbar

2.4. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to TR-100028-01 "Electromagnetic compatibility and Radio spectrum Matters (ERM);Uncertainties in the measurement of mobile radio equipment characteristics; Part 1" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM);Uncertainties in the measurement of mobile radio equipment characteristics; Part 2 " and is documented in the Shenzhen Global Test Service Co.,Ltd quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen GTS laboratory is reported:

Test Items	Measurement Uncertainty	Notes
Transmitter power conducted	0.57 dB	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3. Method of measurement

3.1. Applicable Standard

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to §1.1310 and §2.1093 RF exposure requirement

KDB447498 v06: Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies.

3.2. Requirement

According to KDB447498 D01 General RF Exposure Guidance v06 Section 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 Test Exclusion Threshold condition, listed below, is satisfied. These test exclusion conditions are based on source-based time-averaged maximum conducted output power of the RF channel requiring evaluation, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions.²² The minimum test separation distance is determined by the smallest distance from the antenna and radiating structures or outer surface of the device, according to the host form factor, exposure conditions and platform requirements, to any part of the body or extremity of a user or bystander (see 5) of section 4.1). To qualify for SAR test exclusion, the test separation distances applied must be fully explained and justified by the operating configurations and exposure conditions of the transmitter and applicable host platform requirements, typically in the SAR measurement or SAR analysis report, according to the required published RF exposure KDB procedures. When no other RF exposure testing or reporting is required, a statement of justification and compliance must be included in the equipment approval, in lieu of the SAR report, to qualify for the SAR test exclusion. When required, the device specific conditions described in the other published RF exposure KDB procedures must be satisfied before applying these SAR test exclusion provisions; for example, handheld PTT two-way radios, handsets, laptops & tablets etc.²³"

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f \text{ (GHz)}}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where:}$

- $f \text{ (GHz)}$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum test separation distance is $\leq 50 \text{ mm}$ and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is $< 5 \text{ mm}$, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

3.3. Simultaneous transmission MPE Considerations

When one of the following test exclusion conditions is satisfied for all combinations of simultaneous transmission configurations, further equipment approval is not required to incorporate transmitter modules in host devices that operate in the mixed mobile and portable host platform exposure conditions. The grantee is responsible for documenting this according to Class I permissive change requirements. Antennas that qualify for standalone SAR test exclusion must apply the estimated standalone SAR to determine simultaneous transmission test exclusion.

The $[\sum \text{ of (the highest measured or estimated SAR for each standalone antenna configuration, adjusted for maximum tune-up tolerance) / 1.6 W/kg} + [\sum \text{ of MPE ratios}]] \leq 1.0$.

The SAR to peak location separation ratios of all simultaneously transmitting antenna pairs operating in portable device exposure conditions are all ≤ 0.04 , and the $[\sum \text{ of MPE ratios}] \leq 1.0$.

3.4. Antenna Information

L8 can only use antennas certificated as follows provided by manufacturer;

Internal Identification	Antenna Identification in Internal photos	Antenna type and antenna number	Operate frequency band	Maximum antenna gain
Antenna 1	BT LE Chain 1	Internal Antenna	2.4GHz – 2.4835 GHz	0.83 dBi

4. Evaluation Result

BT						
f (GHz)	Peak Output power	Target power W/ tolerance (dBm)	Max tune up power tolerance (dBm)	Maximum Output Power: mW	SAR Test Exclusion Threshold	SAR Test Exclusion
2402	5.48	6±1.0	7	5.01	1.553<3.0	Yes
2440	6.67	6±1.0	7	5.01	1.565<3.0	Yes
2480	5.52	6±1.0	7	5.01	1.578<3.0	Yes

5. Conclusion

The measurement results comply with the FCC Limit per 47 CFR 2.1093 for the uncontrolled RF Exposure and SAR Exclusion Threshold per KDB 447498 v06.

.....End of Report.....