



FCC RF EXPOSURE REPORT

For

**Bluetooth Headphone
MODEL NUMBER: SPACE ONE WIRELESS**

**FCC ID: UXDF398801
IC: 21561-F398801**

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Prepared for

**GP Electronics (HK) Ltd.
9/F, Building 12W, 12 Science Park West Avenue, Hong Kong Science Park, Pak
Shek Kok, New Territories, Hong Kong**

Prepared by

**UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch
Room 101, Building 10, Innovation Technology Park,
Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China
Tel: +86 769 33817100
Fax: +86 769 33244054
Website: www.ul.com**

Revision History

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TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS.....	4
2. TEST METHODOLOGY	5
3. FACILITIES AND ACCREDITATION.....	5
4. REQUIREMENT	6

1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name: GP Electronics (HK) Ltd.
Address: 9/F, Building 12W, 12 Science Park West Avenue, Hong Kong Science Park, Pak Shek Kok, New Territories, Hong Kong

Manufacturer Information

Company Name: GP Electronics (Huizhou) Co., Limited
Address: No. 76, Hui Feng Si Road, Zhong Kai Hi-Tech Ind. Development Zone, Huizhou, Guangdong, China

Factory Information

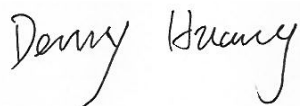
Company Name: Charter Media (Dongguan) Co., Ltd.
Address: Dabandi Industrial Zone, Daning District, Humen Town, 523930 Dongguan City, Guangdong Province, PEOPLE'S REPUBLIC OF CHINA

EUT Description

Product Name: Bluetooth Headphone
Brand Name: KEF
Model Name: SPACE ONE WIRELESS
Date Tested: July 4, 2017 ~ July 18, 2017

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC 47CFR§2.1093	Complies
KDB-447498 D01 V06	Complies

Tested By:



Denny Huang
Engineer Project Associate
Approved By:



Stephen Guo
Laboratory Manager

Check By:



Shawn Wen
Laboratory Leader

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with KDB 447498 D01 General RF Exposure Guidance v05.

3. FACILITIES AND ACCREDITATION

Test Location	Dongguan Dongdian Testing Service Co., Ltd
Address	No. 17, Zongbu Road 2, Songshan Lake Sci&Tech Park, Dongguan City, Guangdong Province, 523808, China
Accreditation Certificate	<p>Dongguan Dongdian Testing 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. Valid time is until January 31, 2018.</p> <p>Dongguan Dongdian Testing 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. Registration 270092, Renewal date March 11, 2015, valid time is until March 11, 2018.</p> <p>The 3m Alternate Test Site of Dongguan Dongdian Testing Service Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 10288A on April 23, 2015, valid time is until April 23, 2018.</p>

4. REQUIREMENT

RF EXPOSURE LIMIT

FCC 1.1310: The criteria listed in table 1 shall be used to evaluate the environmental impact of human exposure to radiofrequency (RF) radiation as specified in

§ 1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of § 2.1093 of this chapter. Further information on evaluating compliance with these limits can be found in the FCC’s OST/OET Bulletin Number 65, “Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation.”

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f ²)	6
30–300	61.4	0.163	1.0	6
300–1500 .....	.....	.....	f/300	6
1500–100,000 .....	.....	.....	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f ²)	30

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)—Continued

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
30–300	27.5	0.073	0.2	30
300–1500 .....	.....	.....	f/1500	30
1500–100,000 .....	.....	.....	1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density

NOTE 1 TO TABLE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2 TO TABLE 1: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

According to KDB-447498 D01 V06 Standalone SAR test exclusion considerations:

a) For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR, and ≤ 7.5 for 10-g extremity SAR, 30 where

f(GHz) is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation³¹

The result is rounded to one decimal place for comparison

The values 3.0 and 7.5 are referred to as numeric thresholds in step b) below

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 according to 4.1 f) is applied to determine SAR test exclusion.

CALCULATION METHOD

The Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * R^2)$

Where;

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

$\pi \approx 3.1416$

R = distance between observation point and center of the radiator in cm

CALCULATED RESULTS

Frequency	Tune Up Tolerance	Max Tune Up Power		Distance	SAR Test Exclusion Thresholds (5mm) (mW)
(GHz)	(dBm)	(dBm)	(mW)	(mm)	--
2.480	2.9±1.0	3.9	2.45	5	9.525

Calculation value: $3(\text{mW})/5 (\text{mm}) \times \sqrt{2.48} = 0.945$

Remark:

- Max conducted power is 2.45(mW), so 3(mW) was calculated.

- Note:
1. Calculation Results = Max Tune Up Power (mW) /5* $\sqrt{\text{Frequency (GHz)}}$
 2. The Power comes from report operational description.
 3. Only the worst data recoded in the report.
 4. The minimum separation distance of the device = 0 mm, according to KDB-447498 D01 V06, 5 mm is applied to determine SAR test exclusion.
 5. Owing to the maximum Calculated Result is below the limit, so it deemed to comply with the basic restrictions without testing which means that no SAR is required.

END OF REPORT