



FCC IC RF EXPOSURE REPORT

For

Wireless Speaker

MODEL NUMBER: LSX

FCC ID: UXD18001

IC: 21561-18001

REPORT NUMBER: 4788430402-2

ISSUE DATE: July 08, 2018

Prepared for

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Prepared by

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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

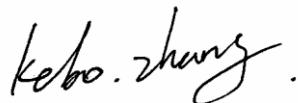
Company Name: GP Electronics (HK) Ltd.
Address: 9/F, Building 12W, 12 Science Park West Avenue, Hong Kong
Science Park, Pak Shek Kok New Territories - Hong Kong

EUT Description

Product Name: Wireless Speaker
Model Name: LSX
Sample Status: Good
Sample Received date: April 23, 2018
Date Tested: April 23~July 6, 2018

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC 47CFR§2.1091	Complies
KDB-447498 D01 V06	

Tested By:



Kebo Zhang
Engineer

Checked By:



Shawn Wen
Laboratory Leader

Approved By:



Stephen Guo
Laboratory Manager

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with KDB 447498 D01 General RF Exposure Guidance v06.

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	<p>A2LA (Certificate No.: 4102.01) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA.</p> <p>IAS (Lab Code: TL-702) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has demonstrated compliance with ISO/IEC Standard 17025:2005, General requirements for the competence of testing and calibration laboratories</p> <p>FCC (FCC Designation No.: CN1187) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules</p> <p>IC(Company No.: 21320) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with Industry Canada. The Company Number is 21320.</p> <p>VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793. Facility Name: Chamber D, the VCCI registration No. is G-20019 and R-20004 Shielding Room B , the VCCI registration No. is C-20012 and T-20011</p>
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Note 1: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China

Note 2: The test anechoic chamber in UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.

4. REQUIREMENT

LIMIT

Limits for General Population/Uncontrolled Exposure

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/150	30
1500-100,000	--	--	1.0	30
Note 1: f = frequency in MHz, * means Plane-wave equivalent power density				
Note 2: 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 cannot exercise control over their exposure.				
Note 3: The limit value 1.0mW/cm ² is available for this EUT.				

MPE CALCULATION METHOD

$$S = PG / (4\pi R^2)$$

where: S = power density (in appropriate units, e.g. mW/ cm²)

P = power input to the antenna (in appropriate units, e.g., mW)

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

CALCULATED RESULTS

Radio Frequency Radiation Exposure Evaluation

Bluetooth (Worst case)					
Operating Mode	Max. Tune up Power	Antenna Gain		Power density	Limit
	(dBm)	(dBi)	(num)	(mW/ cm ²)	
BT4.1+EDR	1	3.3	2.14	0.0005	1

Wireless 2.4G (Worst case)					
Operating Mode	Max. Tune up Power	Antenna Gain		Power density	Limit
	(dBm)	(dBi)	(num)	(mW/ cm ²)	
2.4G	-1	7.6	5.75	0.0009	1

WIFI2.4G (Worst case)					
Operating Mode	Max. Tune up Power	Antenna Gain		Power density	Limit
	(dBm)	(dBi)	(num)	(mW/ cm ²)	
802.11b	13	4.4	2.75	0.0109	1

WIFI5G (Worst case)					
Operating Mode	Max. Tune up Power	Antenna Gain		Power density	Limit
	(dBm)	(dBi)	(num)	(mW/ cm ²)	
802.11a (UNII1)	13	2.6	1.82	0.0072	1
802.11a (UNII3)	9	5.1	3.24	0.0051	1

Note: the calculated distance is 20cm.

WIFI2.4G and WIFI5G cannot simultaneously transmit.

WIFI2.4GHz+2.4GHz=0.0109/1+0.009/1=0.0199(mW/ cm²)

WIFI5GHz+2.4GHz=0.0072/1+0.009/1=0.0162(mW/ cm²)

Bluetooth+2.4GHz=0.0005/1+0.009/1=0.0095(mW/ cm²)

Therefor the maximum calculations of above situations are less than the “1” limit

END OF REPORT