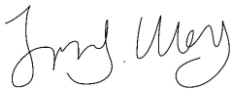
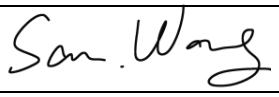
Shenzhen Global Test Service Co.,Ltd.
1F, Building No. 13A, Zhonghaixin Science and Technology City, No.12,6 Road, Ganli Industrial Park, Buji Street, Longgang District, Shenzhen, Guangdong

RF Exposure evaluation

Report Reference No.....:	**GTSR17032020-03**	
FCC ID.....:	**2AJX9-PULSE001**	
Compiled by (position+printed name+signature)..:	File administrators Jimmy Wang	
Supervised by (position+printed name+signature)..:	Test Engineer Peter Xiao	
Approved by (position+printed name+signature)..:	Manager Sam Wang	
Date of issue.....:	Mar. 27, 2017	
Representative Laboratory Name.:	**Shenzhen Global Test Service Co.,Ltd.**	
Address .....:	1F, Building No. 13A, Zhonghaixin Science and Technology City, No.12,6 Road, Ganli Industrial Park, Buji Street, Longgang District, Shenzhen, Guangdong	
Applicant's name.....:	**Music Play Analytics LLC**	
Address .....:	217 Pointers Run, Englewood, OH 45322,USA	
Test specification .....:		
Standard .....:	**47CFR §2.1093(d)/KDB447498 v06**	
Test item description .....:	Soundstr Pulse	
Trade Mark .....:	/	
Manufacturer .....:	SHENZ WEIPAI INDUSTRIAL CO., LTD	
Model/Type reference.....:	PULSE-001	
Listed Models .....:	/	
Operation Frequency.....:	WIFI2.4G From 2412MHz to 2462MHz Bluetooth From 2402MHz to 2480MHz	
Hardware version .....:	BFQ-3288 MAIN BOARD FR_4 V0.3 2016-09-30	
Software version .....:	V1.0	
Rating .....:	DC 3.70V	
Result.....:	**PASS**	

T E S T R E P O R T

Test Report No. :	**GTSR17032020-03**	Mar. 27, 2017 Date of issue

Equipment under Test	:	Soundstr Pulse
Model /Type	:	PULSE-001
Listed Models	:	/
Applicant	:	**Music Play Analytics LLC**
Address	:	217 Pointers Run, Englewood, OH 45322,USA
Manufacturer	:	**SHENZ WEIPAI INDUSTRIAL CO., LTD**
Address	:	2nd Floor,Building F, Huahaotai Industrial Park Longhua new District, Shenzhen,china

Test result	**Pass**

Contents

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

○	/	M/N:	/
		Manufacturer:	/

1.2. Product Description

Product Name:	Soundstr Pulse
Trade Mark:	/
Model/Type reference:	PULSE-001
List Model:	/
Power Supply	Battery DC 3.70V
Adapter Information	Model: CP0530 Input: 100-240V～50/60Hz 0.5A Output:DC5V/3A
WIFI	
Supported type:	802.11b/802.11g/802.11n HT20
Modulation:	802.11b: DSSS(CCK,DQPSK,DBPSK) 802.11g: OFDM(64QAM, 16QAM, QPSK, BPSK) 802.11n HT20: OFDM (64QAM, 16QAM, QPSK,BPSK)
Operation frequency:	802.11b:2412-2462MHz 802.11g:2412-2462MHz 802.11n HT20:2412-2462MHz
Antenna Type	Internal Antenna
Antenna gain	-0.80dBi
Bluetooth	
Supported type:	BT 4.0
Modulation:	GFSK
Operation frequency:	2402-2480MHz
Antenna gain	-0.80dBi

Note: For more details, refer to the user's manual of the EUT.

2. TEST ENVIRONMENT

2.1. Address of the test laboratory

Shenzhen Global Test Service Co.,Ltd.
1F, Building No. 13A, Zhonghaixin Science and Technology City, No.12,6 Road, Ganli Industrial Park, Buji Street, Longgang District, Shenzhen, Guangdong

2.2. Test Facility

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

FCC-Registration No.: 964637

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. Registration 964637, Jul 24, 2015.

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. Standalone SAR test exclusion 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 "

[(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
- 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 ≤ 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 5) in section 4.1 is applied to determine SAR test exclusion.

3.3. Simultaneous transmission MPE Considerations

According to KDB447498 :For mobile exposure host platform to qualify for simultaneous transmission MPE test exclusion, all transmitters and antennas in the host must be either evaluated for MPE compliance, by measurement or computational modeling, or qualify for the standalone MPE test exclusion in section 7.1. Simultaneous transmission MPE test exclusion applies when the sum of the MPE ratios for all simultaneous transmitting antennas incorporated in a host device, based on the calculated/estimated, numerically modeled or measured field strengths or power density, is ≤ 1.0.
This means that:
∑ of MPE ratios ≤ 1.0

For the EUT, WIFI and BT share an antenna,So We do not consider the Simultaneous transmission.

3.4. Conducted Power Results

<WLAN 2.4GHz>

Mode	Channel	Frequency (MHz)	Worst case Data rate	Conducted Output Power (dBm)	
				PK	Average
802.11b	01	2412	1Mbps	13.25	8.45
	06	2437	1Mbps	13.21	8.42
	11	2462	1Mbps	13.13	8.38
802.11g	01	2412	6Mbps	12.56	7.51
	06	2437	6Mbps	12.58	7.56
	11	2462	6Mbps	12.38	7.42
802.11n HT20	01	2412	6.5 Mbps	11.62	6.41
	06	2437	6.5 Mbps	11.53	6.32
	11	2462	6.5 Mbps	11.33	6.18

<BT4.0>

Mode	Channel	Frequency (MHz)	Worst case Data rate	Conducted Output Power (dBm)	
				PK	Average
BLE	0	2402	1Mbps	6.42	4.88
	19	2440	1Mbps	5.79	4.27
	39	2480	1Mbps	5.38	3.86

Manufacturing tolerance

WiFi

802.11b (Average)			
Frequency	2412	2437	2462
Target (dBm)	8.0	8.0	8.0
Tolerance ±(dB)	1	1	1
802.11g (Average)			
Frequency	2412	2437	2462
Target (dBm)	7.0	7.0	7.0
Tolerance ±(dB)	1	1	1
802.11n HT20 (Average)			
Frequency	2412	2437	2462
Target (dBm)	6.0	6.0	6.0
Tolerance ±(dB)	1	1	1

BT4.0

GFSK (Average)			
Frequency	2402	2440	2480
Target (dBm)	4.0	4.0	4.0
Tolerance ±(dB)	1	1	1

4. Evaluation Result

Band/Mode	f (GHz)	Antenna Distance (mm)	RF output power (including tune-up tolerance)		SAR Test Exclusion Threshold	SAR Test Exclusion
			dBm	mW		
WIFI	2.462	5	9.0	7.943	2.5<3.0	Yes
BT4.0	2.480	5	5.0	3.162	1.0<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.....