



Report No.: SZEM190601470805

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RF Exposure Evaluation Report

Application No.: SZEM1906014708CR
Applicant: Pushd inc
Address of Applicant: 50 ELDRIDGE STREET SUITE 5D, NEW YORK, United States 10002
Manufacturer: JIANGXI JOYHONG TECHNOLOGY CO., LTD
Address of Manufacturer: Tianji Photoelectric Industrial Park, Jinggangsan Economic-Technological Development Zone, Ji'an city, Jiangxi Province, China
Factory: JIANGXI JOYHONG TECHNOLOGY CO., LTD
Address of Factory: Tianji Photoelectric Industrial Park, Jinggangsan Economic-Technological Development Zone, Ji'an city, Jiangxi Province, China
Equipment Under Test (EUT):
Product Name: Lite Frame-Smart digital photo frame
Model No.: JD090H-A02
Trade mark: AURA
FCC ID: 2AI5H-W0902
Standards: 47 CFR Part 1.1307 (2016)
47 CFR Part 1.1310 (2016)
Date of Receipt: 2019-06-03
Date of Test: 2019-06-14 to 2019-07-08
Date of Issue: 2019-07-10

Test Result :	PASS*
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* In the configuration tested, the EUT complied with the standards specified above.

Keny Xu

Keny Xu
EMC Laboratory Manager



SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch EMC Laboratory

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2 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2019-07-10		Original

Authorized for issue by:				
		Bill Chen		
		Bill Chen /Project Engineer		
		Eric Fu		
		Eric Fu /Reviewer		





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4 General Information

4.1 General Description of EUT

Power supply:	Adapter: Model:SR-A30503000U2 Input:AC 100-240V 50/60Hz 0.55Max Output:DC 5V 3A 15W
Cable:	USB cable 1:20cm unshielded USB cable 1:120cm unshielded DC cable:195cm unshielded
For BT	
Operation Frequency:	2402MHz to 2480MHz
Bluetooth Version:	V4.2
Spectrum Spread Technology:	Frequency Hopping Spread Spectrum(FHSS)
Modulation Type:	GFSK, $\pi/4$ DQPSK, 8DPSK
Number of Channels:	79
Channel Spacing:	1MHz
Antenna Type:	Integral
Antenna Gain:	2.01dBi
For BLE	
Operation Frequency:	2402MHz to 2480MHz
Bluetooth Version:	V4.2
Modulation Type:	GFSK
Number of Channels:	40
Channel Spacing:	2MHz
Antenna Type:	Integral
Antenna Gain:	2.01dBi





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For 2.4G	
Operation Frequency:	802.11b/g/n(HT20): 2412MHz to 2462MHz
Modulation Type:	802.11b: DSSS (CCK, DQPSK, DBPSK) 802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK)
Number of Channels:	802.11b/g/n(HT20):11
Channel Spacing:	5MHz
Antenna Type:	Integral
Antenna Gain:	2.01dBi



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Member of the SGS Group (SGS SA)

4.2 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

No. 1 Workshop, M-10, Middle section, Science & Technology Park, Shenzhen, Guangdong, China
518057

Telephone: +86 (0) 755 2601 2053 Fax: +86 (0) 755 2671 0594

No tests were sub-contracted.

4.3 Test Facility

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

• CNAS (No. CNAS L2929)

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

• A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

• VCCI

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

• FCC –Designation Number: CN1178

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

• Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.



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4.4 Deviation from Standards

None.

4.5 Abnormalities from Standard Conditions

None.

4.6 Other Information Requested by the Customer

None.



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5 RF Exposure Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 Limits

According to FCC Part1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in part1.1307(b)

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
30–300	27.5	0.073	0.2	30
300–1500 .....	.....	.....	f/1500	30
1500–100,000 .....	.....	.....	1.0	30

F= Frequency in MHz

Friis Formula

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

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

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

P_d is the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

5.1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.





4.1.3 EUT RF Exposure Evaluation

For BT

Antenna: 2.01dBi

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 1.59 in linear scale.

Output Power Into Antenna & RF Exposure Evaluation Distance:

Channel	Frequency (MHz)	Max Conducted Peak Output Power (dBm)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm ²)	Limit	Result
Lowest	2402MHz	0.87	1.22	0.0004	1.0	PASS

Note: Refer to report No. SZEM190601470802 for EUT test Max Conducted Peak Output Power value.

The distancer (4th column) calculated from the Fries transmission formula is far greater than 20 cm separation requirement.

For BLE

Antenna: 2.01dBi

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 1.59 in linear scale.

Output Power Into Antenna & RF Exposure Evaluation Distance:

Channel	Frequency (MHz)	Max Conducted Peak Output Power (dBm)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm ²)	Limit	Result
Lowest	2402MHz	9.47	8.85	0.0028	1.0	PASS

Note: Refer to report No. SZEM190601470803 for EUT test Max Conducted Peak Output Power value.

The distancer (4th column) calculated from the Fries transmission formula is far greater than 20 cm separation requirement.

For 2.4G WIFI

Antenna: 2.01dBi

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 1.59 in linear scale.

Output Power Into Antenna & RF Exposure Evaluation Distance:

Channel	Frequency (MHz)	Max Conducted Peak Output Power (dBm)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm ²)	Limit	Result
Lowest	2412MHz	25.29	338.06	0.1069	1.0	PASS

Note: Refer to report No. SZEM190601470804 for EUT test Max Conducted Peak Output Power value.

The distancer (4th column) calculated from the Fries transmission formula is far greater than 20 cm separation requirement.

- End of the Report -

