



1 Cover Page

RF Exposure Evaluation Report

Application No.: SHEM1802001228CR
FCC ID: 2AFF6OG5IUAM
Applicant: Adam Hall GmbH
Address of Applicant: Adam-Hall-Str. 1, 61267 Neu-Anspach, Germany
Manufacturer: Adam Hall GmbH
Address of Manufacturer: Adam-Hall-Str. 1, 61267 Neu-Anspach, Germany
Factory: Speaker Electronic (Jia Shan) Co., Ltd
Address of Factory: No. 8 Development Zone Road, Huimin Sub-district, JiaShan County, Zhejiang, 314112, P.R. China

Equipment Under Test (EUT):

EUT Name: Active PA Box
Model No.: MAUI® 5 GO
Trade mark: LD SYSTEMS
Standard(s) : FCC Rules 47 CFR §2.1091
KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt: 2019-03-12
Date of Test: 2019-03-12 to 2019-04-03
Date of Issue: 2019-11-26

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

Parlan Zhan

Parlan Zhan
E&E Section Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.



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Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.
Testing Center EMC Lab 201612

NO.588 West Jindu Road, Songjiang District, Shanghai, China 201612
中国·上海·松江区金都西路588号 邮编: 201612

t(86-21) 61915666 f(86-21) 61915678 www.sgsgroup.com.cn
t(86-21) 61915666 f(86-21) 61915678 e.sgs.china@sgs.com



Revision Record			
Version	Description	Date	Remark
00	Original	2019-11-26	/

Authorized for issue by:				
		Bill Wu		
		Bill Wu / Project Engineer		
		Parlam Zhan		
		Parlam Zhan / Reviewer		



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3 General Information

3.1 General Description of E.U.T.

Brand Name:	LD SYSTEMS
Power supply:	100-120V AC / 50-60Hz 200-240V AC / 50-60Hz Max. 300W
Test voltage:	AC 120V, 60Hz
Cable:	AC Cable: 150cm

3.2 Details of E.U.T.

Antenna Gain	1.54dBi
Antenna Type	PCB
Channel Spacing	1MHz
Modulation Type	GFSK, $\pi/4$ DQPSK, 8DPSK
Number of Channels	79
Operation Frequency	2402MHz to 2480MHz
Spectrum Spread Technology	Frequency Hopping Spread Spectrum(FHSS)



3.3 Test Location

All tests were performed at:

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

588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China.

Tel: +86 21 6191 5666

Fax: +86 21 6191 5678

3.4 Test Facility

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

- **CNAS (No. CNAS L0599)**

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. 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.

- **NVLAP (Certificate No. 201034-0)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP). Certificate No. 201034-0.

- **FCC –Designation Number: CN5033**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been recognized as an accredited testing laboratory.

Designation Number: CN5033. Test Firm Registration Number: 479755.

- **Innovation, Science and Economic Development Canada**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. EMC Laboratory has been recognized by ISCED as an accredited testing laboratory.

IC Registration No.: 8617A-1. CAB Identifier: CN0020.

- **VCCI (Member No.: 3061)**

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-13868, C-14336, T-12221, G-10830 respectively.



4 Test Standards and Limits

4.1 FCC Radiofrequency radiation exposure limits:

According to §1.1310, the limit for general population/uncontrolled exposures

Frequency	Power density(mW/cm ²)	Averaging time(minutes)
300MHz~1.5GHz	f/1500	30
1.5GHz~100GHz	1.0	30

5 Measurement and Calculation

5.1 Maximum transmit power

The Power Data is based on the RF Test Report SHEM180200122801

Test Mode	Test Frequency (MHz)	Output Power (dBm)	Reading Power (mW)
GFSK	2402	1.4	1.38
	2441	3.62	2.30
	2480	3.37	2.17
$\pi/4$ DQPSK	2402	-0.7	0.85
	2441	1.66	1.47
	2480	1.49	1.41
8DPSK	2402	-0.52	0.89
	2441	1.85	1.53
	2480	1.69	1.48



5.2 MPE Calculation

For FCC:

According to the formula $S=P/4\pi R^2$, we can calculate S which is MPE.

Note:

- 1) P (mW)
- 2) R = distance to the center of radiation of antenna (in meter) = 20cm
- 3) MPE limit = 1mW/cm²

The max. antenna gain is 1.54 dBi

Max. Conducted Power P(mW)	Gain in Linear Scale G	Operation Distance R(cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Result
2.3	1.426	20	0.00065	1	Pass

So the device is exclusion from SAR test.

--End of the Report--