Shenzhen Huaxia Testing Technology Co., Ltd

1F., Block A of Tongsheng Technology Building, Huahui Road, Dalang Street, Longhua District, Shenzhen, China

Telephone: +86-755-26648640
Fax: +86-755-26648637
Website: www.cqa-cert.com

Report Template Version: V03
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RF Exposure Evaluation Report

Report No. :	CQASZ20180800076E-02
Applicant:	ShenZhen Annidigital Technology Co., Ltd
Address of Applicant:	3rd Floor, Hasee Bldg, NO.1, Banlan Road, Bantian, Buji Town, Longgang,, Shenzhen, China
Manufacturer:	ShenZhen Annidigital Technology Co., Ltd
Address of Manufacturer:	3rd Floor, Hasee Bldg, NO.1, Banlan Road, Bantian, Buji Town, Longgang,, Shenzhen, China
Equipment Under Test (EUT):	
Product:	Video Doorbell
Model No.:	DB1
Brand Name:	anni
FCC ID:	2ANNW-DB1
Standards:	47 CFR Part 1.1307 47 CFR Part 2.1093 KDB447498D01 General RF Exposure Guidance v06
Date of Test:	2018-08-20 to 2018-09-12
Date of Issue:	2018-09-12
Test Result :	**PASS***

Tested By: Tiny You

(Tiny You)

Reviewed By: Aaron Ma

(Aaron Ma)

Approved By:

(Jack Ai)

SHENZHEN HUAXIA TESTING TECHNOLOGY CO., LTD. 华夏准测 APPROVED

* In the configuration tested, the EUT complied with the standards specified above.

2 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20180800076E-02	Rev.01	Initial report	2018-09-12

3 Contents

4 General Information

4.1 Client Information

Applicant:	ShenZhen Annidigital Technology Co., Ltd
Address of Applicant:	3rd Floor, Hasee Bldg, NO.1, Banlan Road, Bantian, Buji Town, Longgang,, Shenzhen, China
Manufacturer:	ShenZhen Annidigital Technology Co., Ltd
Address of Manufacturer:	3rd Floor, Hasee Bldg, NO.1, Banlan Road, Bantian, Buji Town, Longgang,, Shenzhen, China

4.2 General Description of EUT

Product Name:	Video Doorbell
Model No.:	DB1
Trade Mark:	anni
Hardware version：	V13
Software version：	V1.0
Operation Frequency:	IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz
Channel Numbers:	IEEE 802.11b/g, IEEE 802.11n HT20: 11 Channels
Channel Separation:	5MHz
Type of Modulation:	IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g : OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20) : OFDM (64QAM, 16QAM, QPSK,BPSK)
Transfer Rate:	IEEE for 802.11b: 1Mbps/2Mbps/5.5Mbps/11Mbps IEEE for 802.11g : 6Mbps/9Mbps/12Mbps/18Mbps/24Mbps/36Mbps/48Mbps/54Mbps IEEE for 802.11n(HT20) : 6.5Mbps/13Mbps/19.5Mbps/26Mbps/39Mbps/52Mbps/58.5Mbps/65Mbps
Product Type:	☐ Mobile ☒ Portable ☐ Fix Location
Test Software of EUT:	RF test (manufacturer declare)
Antenna Type:	integral antenna
Antenna Gain:	0dBi
Power Supply:	4XAA battery DC 6V

5 SAR Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

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 Exclusion Threshold condition, listed below, is satisfied.

5.1.2 Limits

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(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[17]
The result is rounded to one decimal place for comparison

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 is applied to determine SAR test exclusion

5.1.3 EUT RF Exposure

For WIFI:

Measurement Data

802.11b mode	
Test channel	Average Output Power (dBm)
Lowest	6.55
Middle	8.23
Highest	8.38
802.11g mode	
Test channel	Average Output Power (dBm)
Lowest	6.61
Middle	8.25
Highest	7.18
802.11n(HT20) mode	
Test channel	Average Output Power (dBm)
Lowest	6.48
Middle	7.83
Highest	7.45

The Max Average Output Power is 8.38dBm in highest channel(2.462GHz);

The best case gain of the antenna is 0dBi.

EIRP= 8.38dBm + 0dBi = 8.38dBm

8.38dBm logarithmic terms convert to numeric result is nearly 6.89mW

According to the formula. calculate the EIRP test result:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)]

General RF Exposure = (6.89mW / 5 mm) x √2.462GHz = 2.16 ①

SAR requirement:

S= 3.0 ② ;

① < ②.

So the SAR report is not required.

Remark: The Max Conducted Average Output Power data refer to report Report No.: CQASZ170800076E-01