FCC RF EXPOSURE EVALUATION REPORT

Product Name:	2.4GHz Digital Wireless Baby Monitor
Trade Mark:	N/A
Model No.:	GD8205
Add. Model No.:	N/A
Report Number:	200717004RFC-2
Test Standards:	FCC 47 CFR Part 1 Subpart I
FCC ID:	TW5GD8205
Test Result:	PASS
Date of Issue:	August 18, 2020

Prepared for:

Shenzhen Gospell Smarthome Electronic Co., Ltd.
Block A,No.1 Industrial park,Fenghuanggang,Baoan Area,Shenzhen City,P.R.China

Prepared by:

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Version

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V1.0	August 18, 2020	Original

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1. GENERAL INFORMATION

1.1 CLIENT INFORMATION

Applicant:	Shenzhen Gospell Smarthome Electronic Co., Ltd.
Address of Applicant:	Block A,No.1 Industrial park,Fenghuanggang,Baoan Area,Shenzhen City,P.R.China
Manufacturer:	Shenzhen Gospell Smarthome Electronic Co., Ltd.
Address of Manufacturer:	Block A,No.1 Industrial park,Fenghuanggang,Baoan Area,Shenzhen City,P.R.China

1.2 EUT INFORMATION

Product Name:	2.4GHz Digital Wireless Baby Monitor	
Model No.:	GD8205	
Add. Model No.:	N/A	
Trade Mark:	N/A	
DUT Stage:	Production Unit	
EUT Supports Function:	2.4 GHz ISM Band:	2410MHz to 2477MHz
Software Version:	Date: 200/02/28	
Hardware Version:	V8205VBM.162	
Sample Received Date:	July 17, 2020	
Sample Tested Date:	July 17, 2020 to August 18, 2020	

1.3 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD

Frequency Band:	2400 MHz to 2483.5 MHz
Frequency Range:	2410 MHz to 2477 MHz
Modulation Technique:	Frequency Hopping Spread Spectrum(FHSS)
Type of Modulation:	GFSK
Number of Channels:	20
Channel Separation:	3.5 MHz, 4MHz
Antenna Type:	Internal Integral Antenna
Antenna Gain:	3 dBi
Maximum Peak Power:	13.967 dBm

1.4 OTHER INFORMATION

Type of Modulation	Tx/Rx Frequency	Test RF Channel Lists		
		Lowest(L)	**Middle(M)**	**Highest(H)**
GFSK	2410 MHz to 2477 MHz	Channel 0	Channel 9	Channel 19
		2410 MHz	2441.5 MHz	2477 MHz

1.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product, according to the specifications of the manufacturers. It must comply with the requirements of the following standards:

FCC 47 CFR Part 1 Subpart I

All test items have been performed and recorded as per the above standards

1.6 TEST LOCATION

All tests were performed at:

Shenzhen UnionTrust Quality and Technology Co., Ltd.

Address: 16/F, Block A, Building 6, Baoneng Science and Technology Park, Qingxiang Road No.1, Longhua New District, Shenzhen, China 518109
Telephone: +86 (0) 755 2823 0888
Fax: +86 (0) 755 2823 0886

1.7 TEST FACILITY

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

CNAS-Lab Code: L9069
The measuring equipment utilized to perform the tests documented in this report has been calibrated once a year or in accordance with the manufacturer's recommendations, and is traceable under the ISO/IEC/EN 17025 to international or national standards. Equipment has been calibrated by accredited calibration laboratories.

A2LA-Lab Certificate No.: 4312.01
Shenzhen UnionTrust Quality and Technology Co., Ltd. has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

ISED Wireless Device Testing Laboratories
CAB identifier: CN0032

FCC Accredited Lab.
Designation Number: CN1194
Test Firm Registration Number: 259480

1.8 DEVIATION FROM STANDARDS

None.

1.9 ABNORMALITIES FROM STANDARD CONDITIONS

None.

1.10 OTHER INFORMATION REQUESTED BY THE CUSTOMER

None.

2. EQUIPMENT LIST

Please refer to the RF test report.

3. MPE EVALUATION

3.1 REFERENCE DOCUMENTS FOR EVALUATION

No.	Identity	Document Title
1	FCC 47 CFR Part 1 Subpart I	PROCEDURES IMPLEMENTING THE NATIONAL ENVIRONMENTAL POLICY ACT OF 1969
2	KDB 447498 D01 General RF Exposure Guidance v06	RF EXPOSURE PROCEDURES AND EQUIPMENT AUTHORIZATION POLICIES FOR MOBILE AND PORTABLE DEVICES

3.2 MPE COMPLIANCE REQUIREMENT

3.2.1 Limits

According to §1.1307(b)(1), system operating under the provisions of this section shall be operating in a manner that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure.

Limits for Occupational / Controlled Exposure

Frequency range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Times $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f)*	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	F/300	6
1500-100000	/	/	5	6

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 Times $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	F/1500	30
1500-100000	/	/	1	30

Note: f = frequency in MHz: * = Plane-wave equivalents power density.

3.2.2 Test Procedure

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

3.3 MPE CALCULATION METHOD

S = PG/4πR^2= EIRP/4πR^2
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, the power gain factor is normally numeric gain.
R = distance to the center of radiation of the antenna (in appropriate units, e.g., cm)

3.4 MPE CALCULATION RESULTS

Note: *For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.*

3.4.1 Antenna Type:

External Integral Antenna

3.4.2 Antenna Gain:

2410 MHz to 2477 MHz: 3 dBi

3.4.3 Conducted output power:

Operating Mode	Freq.	conducted peak output power	duty cycle factor	conducted average output power
	(MHz)	(dBm)	(dB)	(dBm)
GFSK	2410	13.967	-16.99	-3.023
	2441.5	12.674	-16.99	-4.316
	2477	11.752	-16.99	-5.238

3.4.4 Results

Operating Mode	Freq.	Declared maximum conducted average output power	Max. positive tolerance according manufacturer	Antenna Gain	Calculated maximum EIRP	Declared maximum EIRP	MPE Limit	MPE Value
	(MHz)	(dBm)	(dB)	(dBi)	(dBm)	(mW)	(mw/cm^2)	
GFSK	2410	-4	2	3	1	1.259	1	**0.00025**
	2441.5	-4	2	3	1	1.259	1	0.00025
	2477	-4	2	3	1	1.259	1	0.00025

APPENDIX 1 PHOTOS OF TEST SETUP

N/A

APPENDIX 2 PHOTOS OF EUT CONSTRUCTIONAL DETAILS

Refer to Appendix 2 for EUT external and internal photos.

*** End of Report ***