

Shenzhen Zhongjian Nanfang Testing Co., Ltd.

Report No: CCISE181204901

FCC REPORT

Applicant:	Amcrest Industries LLC		
Address of Applicant:	16727 Park Row Dr. Houston, TX 77084 USA		
Equipment Under Test (E	EUT)		
Product Name:	Baby Monitor		
Model No.:	AC-2-C		
FCC ID:	2AR53AC2C		
Applicable standards:	FCC CFR Title 47 Part 15 Subpart C Section 15.247		
Date of sample receipt:	12 Dec., 2018		
Date of Test:	13 Dec., to 27 Dec., 2018		
Date of report issued:	28 Dec., 2018		
Test Result:	PASS *		

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

Authorized Signature:



Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the CCIS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. 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.

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2 Version

Version No.	Date	Description
00	28 Dec., 2018	Original

Tested by:

aver then

Date:

Date:

28 Dec., 2018

28 Dec., 2018

Test Engineer

Reviewed by:

Dimer **Project Engineer**

<u>CCIS</u>

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4 Test Summary

Test Items	Section in CFR 47	Result
Antenna Requirement	15.203 & 15.247 (c)	Pass
AC Power Line Conducted Emission	15.207	Pass
Conducted Peak Output Power	15.247 (b)(1)	Pass
20dB Occupied Bandwidth	15.247 (a)(1)	Pass
Carrier Frequencies Separation	15.247 (a)(1)	Pass
Hopping Channel Number	15.247 (a)(1)	Pass
Dwell Time	15.247 (a)(1)	Pass
Spurious Emission	15.205 & 15.209	Pass
Band Edge	15.247(d)	Pass
Pass: The EUT complies with the essential requireme N/A: Not Applicable.	nts in the standard.	



5 General Information

5.1 Client Information

Applicant:	Amcrest Industries LLC
Address:	16727 Park Row Dr. Houston, TX 77084 USA
Manufacturer/Factory:	MeiZhou Guo Wei Electronics Co., Ltd.
Address:	AD1 Section, Economic Development Area, Dongsheng Industrial District,
Address.	Meizhou, Guangdong, China.

5.2 General Description of E.U.T.

Product Name:	Baby Monitor
Model No.:	AC-2-C
Operation Frequency:	2410.875MHz~2471.625MHz
Transfer rate:	3 Mbits/s
Number of channel:	19
Modulation type:	GFSK
Modulation technology:	FHSS
Antenna Type:	Internal Antenna
Antenna gain:	2.0 dBi
AC adapter:	Model: NBS05B059100VU Input: AC100-240V, 50/60Hz, 0.2A Output: DC 5.9V, 1.0A
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

	Operation Frequency each of channel						
Channel	Frequency	Channel	Frequency	Channel	Frequency	Chann el	Frequency
1	2410.875MHz	6	2427.750MHz	11	2444.625MHz	16	2461.500MHz
2	2414.250MHz	7	2431.125MHz	12	2448.000MHz	17	2464.875MHz
3	2417.625MHz	8	2434.500MHz	13	2451.375MHz	18	2468.250MHz
4	2421.000MHz	9	2437.875MHz	14	2454.750MHz	19	2471.625MHz
5	2424.375MHz	10	2441.250MHz	15	2458.125MHz		
Note: Cha	nnel 1, 9 & 19 se	lected as L	owest, Middle an	d Highest c	hannel for test.		



5.3 Test environment and test mode

Operating Environment:	
Temperature:	24.0 °C
Humidity:	54 % RH
Atmospheric Pressure:	1010 mbar
Test Modes:	
Non-hopping mode:	Keep the EUT in continuous transmitting mode with worst case data rate.
Hopping mode:	Keep the EUT in hopping mode.

The sample was placed 0.8m (below 1GHz)/1.5m (above 1GHz) above the ground plane of 3m chamber*. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working with a fresh battery, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.

5.4 Description of Support Units

The EUT has been tested as an independent unit.

5.5 Measurement Uncertainty

Parameters	Expanded Uncertainty
Conducted Emission (9kHz ~ 30MHz)	±2.22 dB (k=2)
Radiated Emission (9kHz ~ 30MHz)	±2.76 dB (k=2)
Radiated Emission (30MHz ~ 1000MHz)	±4.28 dB (k=2)
Radiated Emission (1GHz ~ 18GHz)	±5.72 dB (k=2)
Radiated Emission (18GHz ~ 40GHz)	±2.88 dB (k=2)

5.6 Laboratory Facility

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

• FCC - Registration No.: 727551

Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been accredited as a testing laboratory by FCC (Federal Communications Commission). The Registration No. is 727551.

IC - Registration No.: 10106A-1

The 3m Semi-anechoic chamber of Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

• CNAS - Registration No.: CNAS L6048

Shenzhen Zhongjian Nanfang Testing Co., Ltd. is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L6048.

• A2LA - Registration No.: 4346.01

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: https://portal.a2la.org/scopepdf/4346-01.pdf

5.7 Laboratory Location

Shenzhen Zhongjian Nanfang Testing Co., Ltd. Address: No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road,

Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755-23118282, Fax: +86-755-23116366

Email: info@ccis-cb.com, Website: http://www.ccis-cb.com

5.8 Test Instruments list

Radiated Emission:					
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m SAC	SAEMC	9m*6m*6m	966	07-22-2017	07-21-2020
Loop Antenna	SCHWARZBECK	FMZB1519B	00044	03-16-2018	03-15-2019
BiConiLog Antenna	SCHWARZBECK	VULB9163	497	03-16-2018	03-15-2019
Horn Antenna	SCHWARZBECK	BBHA9120D	916	03-16-2018	03-15-2019
Horn Antenna	SCHWARZBECK	BBHA9120D	1805	06-22-2017	06-21-2020
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170582	11-21-2018	11-20-2019
EMI Test Software	AUDIX	E3	V	/ersion: 6.110919	b
Pre-amplifier	HP	8447D	2944A09358	03-07-2018	03-06-2019
Pre-amplifier	CD	PAP-1G18	11804	03-07-2018	03-06-2019
Spectrum analyzer	Rohde & Schwarz	FSP30	101454	03-07-2018	03-06-2019
Spectrum analyzer	Rohde & Schwarz	FSP40	100363	11-21-2018	11-20-2019
EMI Test Receiver	Rohde & Schwarz	ESRP7	101070	03-07-2018	03-06-2019
Cable	ZDECL	Z108-NJ-NJ-81	1608458	03-07-2018	03-06-2019
Cable	MICRO-COAX	MFR64639	K10742-5	03-07-2018	03-06-2019
Cable	SUHNER	SUCOFLEX100	58193/4PE	03-07-2018	03-06-2019
RF Switch Unit	MWRFTEST	MW200	N/A	N/A	N/A
Test Software	MWRFTEST	MTS8200	Version: 2.0.0.0		

Conducted Emission:					
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
EMI Test Receiver	Rohde & Schwarz	ESCI	101189	03-07-2018	03-06-2019
Pulse Limiter	SCHWARZBECK	OSRAM 2306	9731	03-07-2018	03-06-2019
LISN	CHASE	MN2050D	1447	03-19-2018	03-18-2019
LISN	Rohde & Schwarz	ESH3-Z5	8438621/010	07-21-2018	07-20-2019
Cable	HP	10503A	N/A	03-07-2018	03-06-2019
EMI Test Software	AUDIX	E3	\ \	/ersion: 6.110919	b



6 Test results and measurement data

6.1 Antenna Requirement

Standard requirement: FCC Part 15 C Section 15.203 & 247(b)

15.203 requirement:

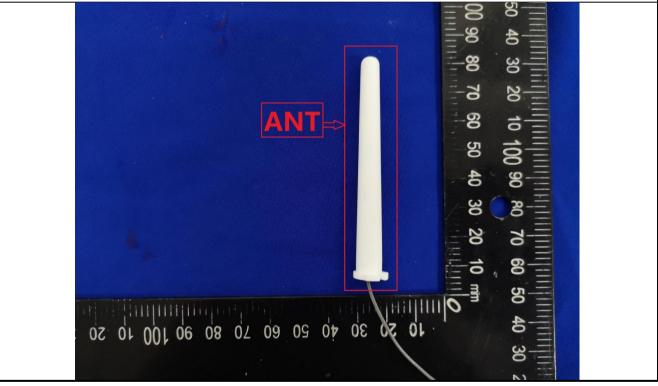
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(b) (4) requirement:

(4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

E.U.T Antenna:

The antenna is an Internal antenna which permanently attached, and the best case gain of the antenna is 2.0 dBi.





6.2 Conducted Emissions

Test I	Requirement:	FCC Part 15 C Section 1	5.207	
Test	Method:	ANSI C63.10:2013		
Test F	Frequency Range:	150 kHz to 30 MHz		
Class	s / Severity:	Class B		
Recei	iver setup:	RBW=9 kHz, VBW=30 k	Hz, Sweep time=auto	
Limit:		Frequency range	Limit (dBuV)
		(MHz)	Quasi-peak	Average
		0.15-0.5	66 to 56*	56 to 46*
		0.5-5	56	46
		5-30	60	50
		* Decreases with the log	arithm of the frequency.	
Test s	setup:	Reference	Plane	
		LISN 40cm 80cm Filter AC power Equipment E.U.T Filter AC power Test table/Insulation plane EMI Receiver Remark: E.U.T. Equipment Under Test LISN: Line Impedence Stabilization Network Test table height=0.8m		
Test p	procedure:	 The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2014 on conducted measurement. 		
Test I	Instruments:	Refer to section 5.8 for details		
Test r	mode:	Hopping mode		
Test r	results:	Pass		



Measurement Data:

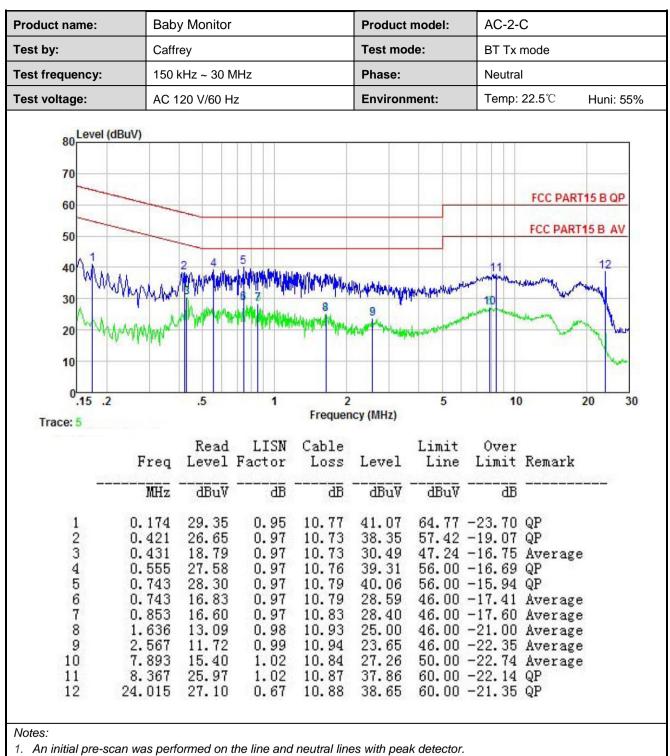
Product name:	Baby	Baby Monitor Caffrey 150 kHz ~ 30 MHz		Product i	model:	AC-2-0	C		
Test by:	Caffre				Test mode: Phase:		BT Tx r	BT Tx mode	
Test frequency:	150 k						Line	Line	
Test voltage:	AC 12	20 V/60 Hz			Environn	nent:	Temp:	22.5 ℃	Huni: 55%
Level (dB	uV)								
80									
70						_			
co								FCC PART	T15 B QP
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10 0.15 .2	Mmur Mir	.5	1	2 Erequen	CY (MH7)	5	10		20 30
10	muyter	.5	1	2 Frequence	cy (MHz)	5	10		20 30
10 0.15 .2	murtur	Read	LISN	Frequen Cable		Limit	Over		20 30
10 0.15 .2	Freq	Read		Frequen	cy (MHz) Level	-	Over	Remark	20 30
10 0.15 .2	Freq MHz	Read	LISN	Frequen Cable		Limit	Over		20 30
10 0.15 .2 Trace: 7	MHz	Read Level dBuV	LISN Factor dB	Frequen Cable Loss dB	Level dBuV	Limit Line dBuV	Over Limit B	Remark	
10 0.15 .2 Trace: 7		Read Level	LISN Factor	Frequen Cable Loss	Level	Limit Line dBuV 55.78	Over Limit B	Remark 	
10 0.15 .2 Trace: 7	MHz 0.154 0.170 0.431	Read Level dBuV 16.59 28.90 20.03	LISN Factor dB 0.18 0.17 0.12	Frequent Cable Loss dB 10.78 10.77 10.73	Level dBuV 27.55 39.84 30.88	Limit Line dBuV 55.78 64.94 47.24	Over Limit 	Remark Average QP Average	
10 0.15 .2 Trace: 7	MHz 0.154 0.170 0.431 0.449	Read Level dBuV 16.59 28.90 20.03 26.78	LISN Factor dB 0.18 0.17 0.12 0.12	Frequent Cable Loss dB 10.78 10.77 10.73 10.74	Level dBuV 27.55 39.84 30.88 37.64	Limit Line dBuV 55.78 64.94 47.24 56.89	Over Limit 	Remark Average QP Average QP	 1
10 0.15 .2 Trace: 7 1 2 3 4 5	MHz 0.154 0.170 0.431 0.449 0.555	Read Level dBuV 16.59 28.90 20.03 26.78 15.87	LISN Factor dB 0.18 0.17 0.12 0.12 0.12 0.12	Frequent Cable Loss dB 10.78 10.77 10.73 10.74 10.76	Level dBuV 27.55 39.84 30.88 37.64 26.75	Limit Line dBuV 55.78 64.94 47.24 56.89 46.00	Over Limit 	Remark Average QP Average QP Average	 1
10 0.15 .2 Trace: 7 1 2 3 4 5 6	MHz 0.154 0.170 0.431 0.449 0.555 0.617	Read Level dBuV 16.59 28.90 20.03 26.78 15.87 25.32	LISN Factor dB 0.18 0.17 0.12 0.12 0.12 0.12 0.13	Frequent Cable Loss dB 10.78 10.77 10.73 10.74 10.76 10.77	Level dBuV 27.55 39.84 30.88 37.64 26.75 36.22	Limit Line dBuV 55.78 64.94 47.24 56.89 46.00 56.00	Over Limit -28.23 -25.10 -16.36 -19.25 -19.25 -19.78	Remark Average QP Average QP Average QP	 1 1
10 0.15 .2 Trace: 7 1 2 3 4 5 6 7	MHz 0.154 0.170 0.431 0.449 0.555 0.617 0.747	Read Level dBuV 16.59 28.90 20.03 26.78 15.87 25.32 13.44	LISN Factor dB 0.18 0.17 0.12 0.12 0.12 0.12 0.13 0.13	Frequent Cable Loss dB 10.78 10.77 10.73 10.74 10.76 10.77 10.79	Level dBuV 27.55 39.84 30.88 37.64 26.75 36.22 24.36	Limit Line dBuV 55.78 64.94 47.24 56.89 46.00 56.00 46.00	Over Limit -28.23 -25.10 -16.36 -19.25 -19.25 -19.78 -21.64	Remark Average QP Average QP Average QP Average	 1 1
10 0.15 .2 Trace: 7 1 2 3 4 5 6 7 8	MHz 0.154 0.170 0.431 0.449 0.555 0.617 0.747 1.249	Read Level dBuV 16.59 28.90 20.03 26.78 15.87 25.32 13.44 23.68	LISN Factor dB 0.18 0.17 0.12 0.12 0.12 0.12 0.13 0.13 0.13	Frequent Cable Loss dB 10.78 10.77 10.73 10.74 10.76 10.77 10.79 10.90	Level dBuV 27.55 39.84 30.88 37.64 26.75 36.22 24.36 34.71	Limit Line dBuV 55.78 64.94 47.24 56.89 46.00 56.00 46.00 56.00	Over Limit -28.23 -25.10 -16.36 -19.25 -19.25 -19.78 -21.64 -21.29	Remark Average QP Average QP Average QP Average QP	 1 1 1
10 0.15 .2 Trace: 7 1 2 3 4 5 6 7 8 9	MHz 0.154 0.170 0.431 0.449 0.555 0.617 0.747 1.249 2.608	Read Level dBuV 16.59 28.90 20.03 26.78 15.87 25.32 13.44 23.68 9.42	LISN Factor dB 0.18 0.17 0.12 0.12 0.12 0.12 0.13 0.13 0.13 0.13 0.16	Frequent Cable Loss dB 10.78 10.77 10.73 10.74 10.76 10.77 10.79 10.90 10.93	Level dBuV 27.55 39.84 30.88 37.64 26.75 36.22 24.36 34.71 20.51	Limit Line dBuV 55.78 64.94 47.24 56.89 46.00 56.00 46.00 56.00 46.00	Over Limit 	Remark Average QP Average QP Average QP Average QP Average	 - - -
10 0.15 .2 Trace: 7 1 2 3 4 5 6 7 8	MHz 0.154 0.170 0.431 0.449 0.555 0.617 0.747 1.249	Read Level dBuV 16.59 28.90 20.03 26.78 15.87 25.32 13.44 23.68	LISN Factor dB 0.18 0.17 0.12 0.12 0.12 0.12 0.13 0.13 0.13	Frequent Cable Loss dB 10.78 10.77 10.73 10.74 10.76 10.77 10.79 10.90	Level dBuV 27.55 39.84 30.88 37.64 26.75 36.22 24.36 34.71	Limit Line dBuV 55.78 64.94 47.24 56.89 46.00 56.00 46.00 56.00 46.00 50.00	Over Limit 	Remark Average QP Average QP Average QP Average Average Average	 - - -

1. An initial pre-scan was performed on the line and neutral lines with peak detector.

2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.

3. Final Level =Receiver Read level + LISN Factor + Cable Loss.





2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.

3. Final Level =Receiver Read level + LISN Factor + Cable Loss.



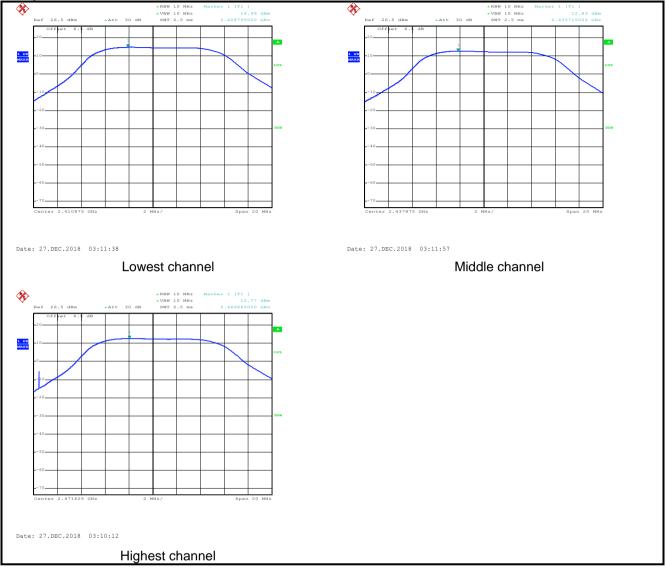
6.3 Conducted Output Power

Test Requirement:	FCC Part 15 C Section 15.247 (b)(1)		
Test Method:	ANSI C63.10:2013 and KDB 558074		
Receiver setup:	RBW=10MHz, VBW=10MHz, Detector=Peak		
Limit:	21dBm		
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane		
Test Instruments:	Refer to section 5.8 for details		
Test mode:	Non-hopping mode		
Test results:	Pass		

Measurement Data:

Test channel	Peak Output Power (dBm)	Limit (dBm)	Result
Lowest channel	14.99	21.00	Pass
Middle channel	12.83	21.00	Pass
Highest channel	12.77	21.00	Pass







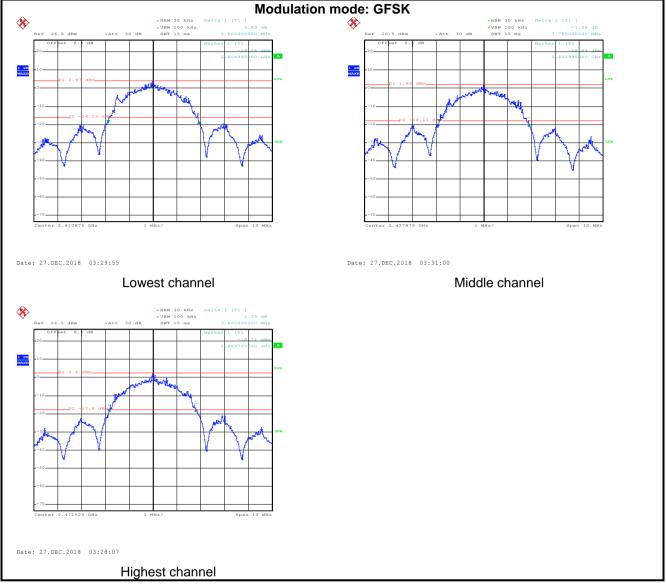
6.4 20dB Occupy Bandwidth

Test Requirement:	FCC Part 15 C Section 15.247 (a)(1)		
Test Method:	ANSI C63.10:2013 and KDB 558074		
Receiver setup:	RBW=30 kHz, VBW=100 kHz, detector=Peak		
Limit:	NA		
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane		
Test Instruments:	Refer to section 5.8 for details		
Test mode:	Non-hopping mode		
Test results:	Pass		

Measurement Data:

Test channel	20dB Occupy Bandwidth (MHz)
Lowest	3.80
Middle	3.78
Highest	3.66







6.5 Carrier Frequencies Separation

Test Requirement:	FCC Part 15 C Section 15.247 (a)(1)		
Test Method:	ANSI C63.10:2013 and KDB 558074		
Receiver setup:	RBW=100 kHz, VBW=300 kHz, detector=Peak		
Limit:	0.025MHz or two-thirds of the 20dB bandwidth (whichever is greater)		
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane		
Test Instruments:	Refer to section 5.8 for details		
Test mode:	Hopping mode		
Test results:	Pass		



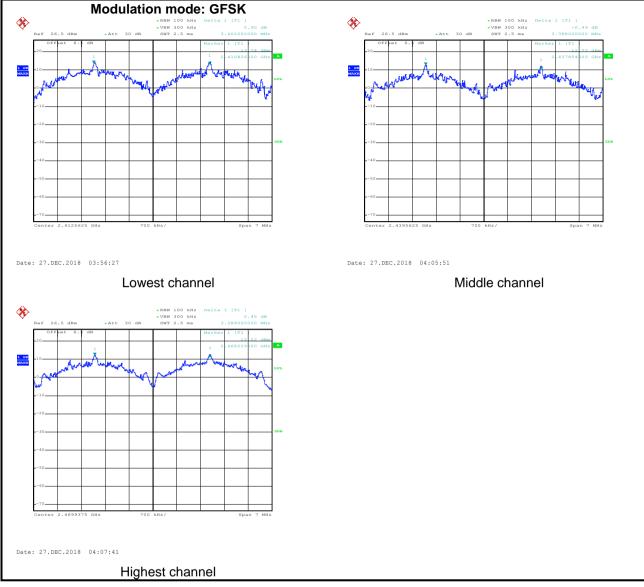
Measurement Data:

Test channel	Carrier Frequencies Separation (MHz)	Limit (MHz)	Result
Lowest	3.402	2.53	Pass
Middle	3.388	2.53	Pass
Highest	3.388	2.53	Pass

Note: According to section 6.4

Mode	20dB bandwidth (MHz)	Limit (MHz)
	(worse case) (Carrier Frequencies Sepa	
GFSK	3.80	2.53







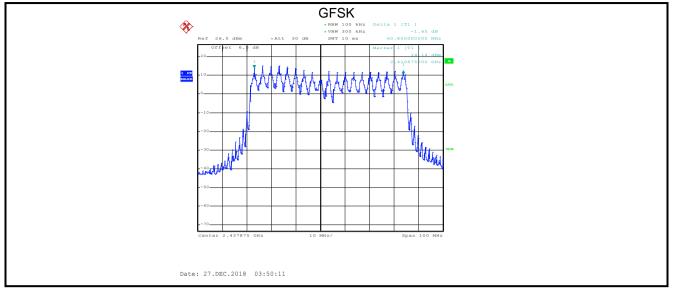
6.6 Hopping Channel Number

Test Requirement:	FCC Part 15 C Section 15.247 (a)(1)		
Test Method:	ANSI C63.10:2013 and KDB 558074		
Receiver setup:	RBW=100 kHz, VBW=300 kHz, Frequency range=2400MHz-2483.5MHz, Detector=Peak		
Limit:	15 channels		
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane		
Test Instruments:	Refer to section 5.8 for details		
Test mode:	Hopping mode		
Test results:	Pass		

Measurement Data:

Mode	Hopping channel numbers	Limit	Result
GFSK	19	15	Pass





6.7 Dwell Time

Test Requirement:	FCC Part 15 C Section 15.247 (a)(1)		
Test Method:	ANSI C63.10:2013 and KDB 558074		
Receiver setup:	RBW=1 MHz, VBW=1 MHz, Span=0 Hz, Detector=Peak		
Limit:	0.4 Second		
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane		
Test Instruments:	Refer to section 5.8 for details		
Test mode:	Hopping mode		
Test results:	Pass		

Measurement Data:

Mode	Dwell time (second)	Limit (second)	Result			
GFSK	0.078192	0.4	Pass			
Note:						
The test period = 0.4 Second/Channel x 19 Channel = 7.6 s						
Dwell time = Ton time per hop * Hopping numbers * Period = 1.448 (ms) * 54 = 78.192 (ms)						

CCIS

-0.30 dB

M. Ledie

T on time slot-1:

Lingdallall

Att 30 dB

RBW 1 MHz •VBW 1 MHz SWT 4 ms

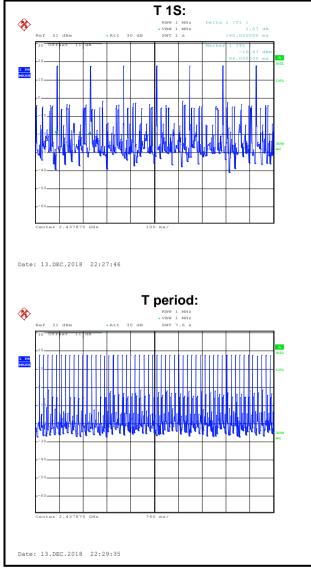
8

1 PR

Ref 31 dBm

pildale

Date: 13.DEC.2018 22:28:39







6.8 Pseudorandom Frequency Hopping Sequence

Frequency hopping systems	FCC Part 15 C Section 15.247 (a)(1) requirement:
	shall have hopping channel carrier frequencies separated by a minimum of the hopping channel, whichever is greater.
channel carrier frequencies th hopping channel, whichever i than 125 mW. The system sh from a Pseudorandom ordere average by each transmitter.	ping systems operating in the 2400-2483.5 MHz band may have hopping hat are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the is greater, provided the systems operate with an output power no greater hall hop to channel frequencies that are selected at the system hopping rate ed list of hopping frequencies. Each frequency must be used equally on the The system receivers shall have input bandwidths that match the hopping corresponding transmitters and shall shift frequencies in synchronization
EUT Pseudorandom Freque	ency Hopping Sequence
outputs are added in a modul	sequence: 2 ⁹ -1 = 511 bits
	ift Register for Generation of the PRBS sequence
	ift Register for Generation of the PRBS sequence m Frequency Hopping Sequence as follow: 62 64 78 1 73 75 77

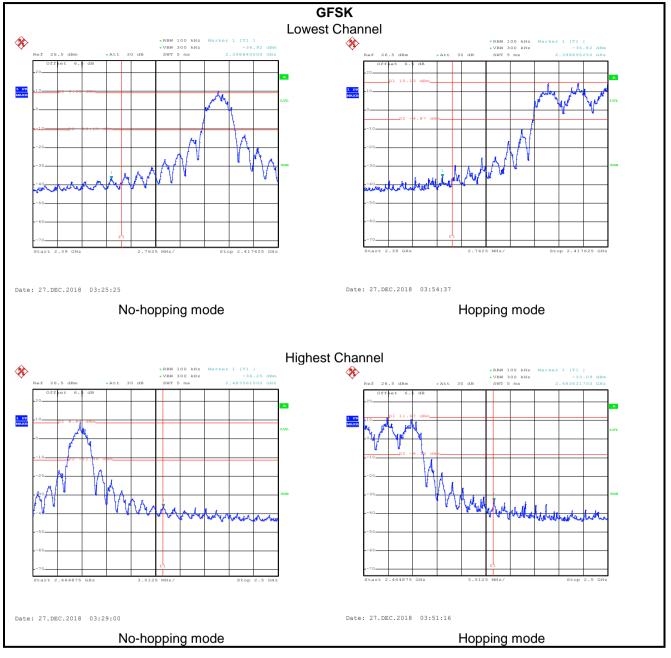


6.9 Band Edge

6.9.1 Conducted Emission Method

Test Requirement:	FCC Part 15 C Section 15.247 (d)					
Test Method:	ANSI C63.10:2013 and KDB 558074					
Receiver setup:	RBW=100 kHz, VBW=300 kHz, Detector=Peak					
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.					
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane					
Test Instruments:	Refer to section 5.8 for details					
Test mode:	Non-hopping mode and hopping mode					
Test results:	Pass					







6.9.2 Radiated Emission Method

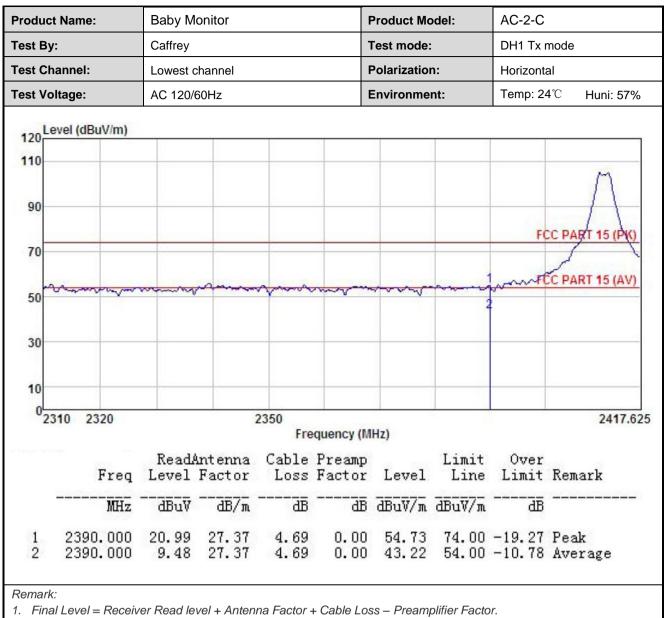
Test Requirement:	FCC Part 15 C	Section 1	5.209	and 15.205			
Test Method:	ANSI C63.10: 2	2013					
Test Frequency Range:	2.3GHz to 2.50	GHz					
Test Distance:	3m						
Receiver setup:	Frequency	Detecto	or	RBW	V	BW	Remark
	Above 1GHz	Peak		1MHz	31	ЛНz	Peak Value
	RMS 1MHz 3MHz Average V						
Limit:	Frequen	су	Lim	it (dBuV/m @3	3m)		Remark
							verage Value
				74.00			Peak Value
		EUT	1000	Horn Antenna A erence Plane	oller	wer	
Test Procedure:	 ground at a determine th 2. The EUT was antenna, wh tower. 3. The antenna ground to de horizontal at measureme 4. For each su and then the and the rota maximum re 5. The test-rece Specified Bas 6. If the emissi limit specifie EUT would I 10dB margin 	3 meter ca ne position as set 3 me nich was m a height is etermine th nd vertical nt. spected er antenna v table was eading. reiver syste andwidth w ion level of ed, then tes be reported n would be	amber of the eters ounter varied polar missic was tr turne was tr turne was tr turne em wa vith M the E sting of d. Oth re-te	r. The table wa e highest radia away from the ed on the top o d from one me eximum value o izations of the on, the EUT wa uned to heights ed from 0 degra as set to Peak aximum Hold I EUT in peak mo could be stopp nerwise the em	is rota interfi f a va ter to of the anter as arra s from ees to Detec Mode wed an ission ne usi	erence- riable-h four me field stru- ina are anged to a 1 meter 360 de stas 10dl d the pe ns that cong peak	ereceiving height antenna eters above the ength. Both set to make the o its worst case er to 4 meters egrees to find the ion and B lower than the eak values of the did not have k, quasi-peak or
Test Instruments:	Refer to section						
Test mode:	Non-hopping m	node					
Test results:	Passed						



GFSK Mode:

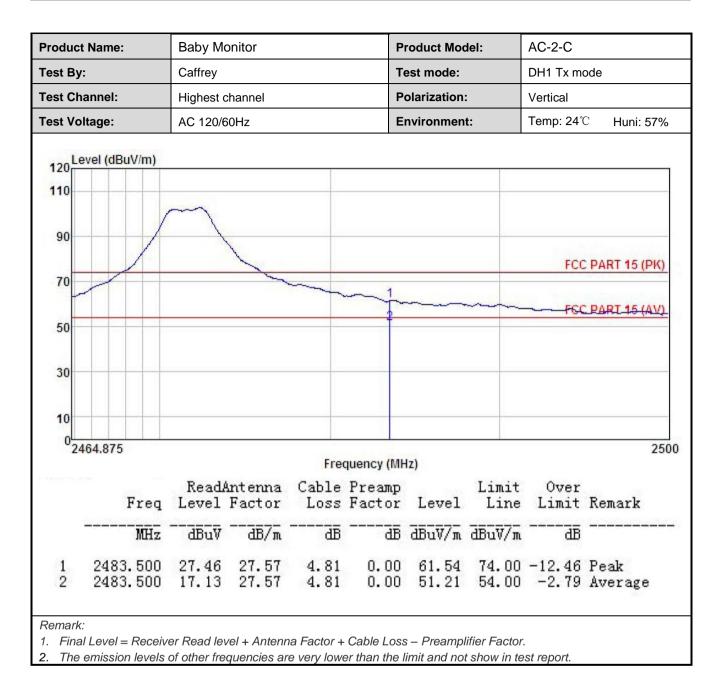
ame:	Baby Monitor Product N				roduct Mod	el:	AC-2-C	
	Caffrey	Caffrey Test mode: DH1 Tx mode					de	
nel:	Lowest ch	Lowest channel Polarization: Vertical						
ge:	AC 120/6	0Hz		E	nvironment	:	Temp: 24°C	Huni: 57%
(dBuV/m)								
(dbdr/ill)								50
								-
							7.5 2.5	
							FCCI	PART 15 (PK).
	~~~		m					
mar	vinner	Ann.	······			many	FCC	PART 15 (AV)
-						Ī		
		_						
2320		2.	350					2417.62
2320		2.		uency (MH	z)			2417.02
12						Limit	Over	2
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Kemark
MHz	dBu∛	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
2390, 000	24,71	27, 37	4.69	0.00	58.45	74.00	-15.55	Peak
	13.36	27.37	4.69	0.00	47.10	54.00	-6.90	Average
	Freq	Caffrey nel: Lowest ch ge: AC 120/6 (dBuV/m) (dBuV/m) 2320 Freq ReadA Freq Level MHz dBuV 2390.000 24.71	Caffrey nel: Lowest channel ge: AC 120/60Hz (dBuV/m) (dBuV/m) 2320 2: ReadAntenna Freq Level Factor MHz dBuV dB/m 2390.000 24.71 27.37	Caffrey nel: Lowest channel ge: AC 120/60Hz  (dBuV/m)  (dBuV/m)  2320 2350 Freq ReadAntenna Cable Freq Level Factor Loss MHz dBuV dB/m dB 2390.000 24.71 27.37 4.69	Caffrey       Transle         nel:       Lowest channel       P         ge:       AC 120/60Hz       E         1(dBuV/m)       I(dBuV/m)       I(dBuV/m)         2320       2350       Frequency (MH)         2320       2350       Frequency (MH)         Freq       Level Factor       Loss Factor         MHz       dBuV       dB/m       dB       dB         2390.000       24.71       27.37       4.69       0.00	Caffrey       Test mode:         nel:       Lowest channel       Polarization:         ge:       AC 120/60Hz       Environment         I(dBuV/m)       I(dBuV/m)       I(dBuV/m)         2320       2350         2320       2350         Frequency (MHz)       ReadAntenna         Cable Preamp       Freq         Freq       Level Factor       Loss Factor         MHz       dBuV       dB/m       dB       dBuV/m	Caffrey       Test mode:         nel:       Lowest channel       Polarization:         ge:       AC 120/60Hz       Environment:         I(dBuV/m)       I(dBuV/m)         200       2350         Status       Frequency (MHz)         ReadAntenna       Cable Preamp       Limit         Frequency       Line         MHz       dBuV       dB/m       dB       dB dBuV/m       dBuV/m	Caffrey       Test mode:       DH1 Tx mo         nel:       Lowest channel       Polarization:       Vertical         ge:       AC 120/60Hz       Environment:       Temp: 24°C         I(dBuV/m)       FCC       FCC       FCC         2320       2350       Frequency (MHz)         ReadAntenna       Cable Preamp       Limit       Over         Freq       Level Factor       Loss Factor       Level       Limit         MHz       dBuV       dB/m       dB       dB dBuV/m       dBuV/m       dB



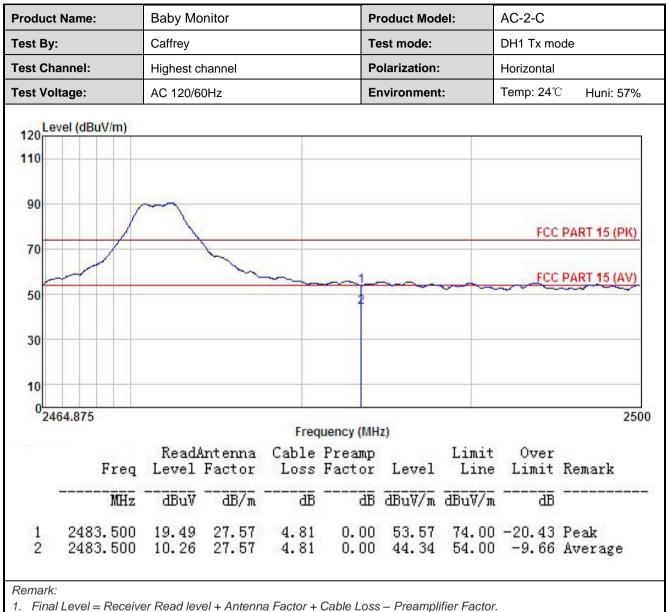


2. The emission levels of other frequencies are very lower than the limit and not show in test report.









2. The emission levels of other frequencies are very lower than the limit and not show in test report.

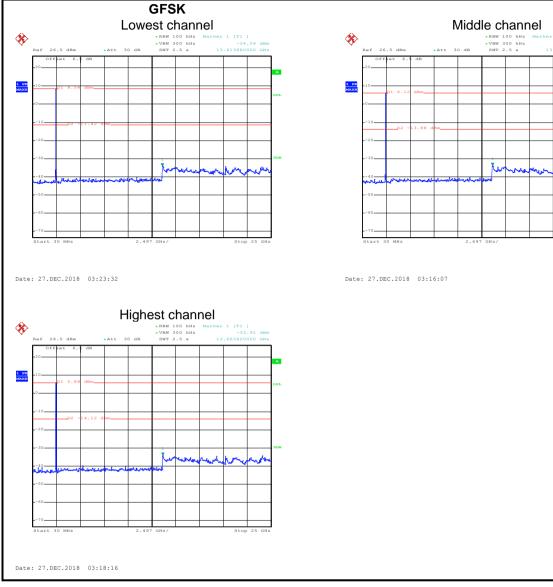


## 6.10 Spurious Emission

### 6.10.1 Conducted Emission Method

Test Requirement:	FCC Part 15 C Section 15.247 (d)						
Test Method:	ANSI C63.10:2013 and KDB 558074						
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.						
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane						
Test Instruments:	Refer to section 5.8 for details						
Test mode:	Non-hopping mode						
Test results:	Pass						

# <u>CCIS</u>





#### 6.10.2 Radiated Emission Method

Test Requirement:	FCC Part 15 C	Section 1	5.209	)			
Test Method:	ANSI C63.10: 2	013					
Test Frequency Range:	9 kHz to 25 GH	Z					
Test Distance:	3m						
Receiver setup:	Frequency	Detec	tor	RBW	VBV	V	Remark
	30MHz-1GHz	Quasi-p	beak	120kHz	300kl	Ηz	Quasi-peak Value
		Peal		1MHz	3MH	z	Peak Value
	Above 1GHz	RMS	3	1MHz	3MH	z	Average Value
Limit:	Frequenc	;y	Lim	it (dBuV/m @	⊉3m)		Remark
						Quasi-peak Value	
	88MHz-216	MHz		43.5		(	Quasi-peak Value
	216MHz-960	MHz		46.0		0	Quasi-peak Value
	960MHz-10	θHz		54.0			Quasi-peak Value
				54.0			Average Value
	Above 1GI	Hz		74.0			Peak Value
Test setup:	Ta	urm 0.8m Able A ad Plane —	4m				Antenna Tower Search Antenna Test eiver
Test Procedure:		Horn Antenna Tower					
		1GHz) al	bove	the ground at	t a 3 me	eter c	hamber. The table

Shenzhen Zhongjian Nanfang Testing Co., Ltd. No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road, Bao'an District, Shenzhen, Guangdong, China Telephone: +86 (0) 755 23118282 Fax: +86 (0) 755 23116366

Project No.: CCISE1812049



	<ol><li>The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li></ol>
	3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
	4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
	<ol><li>The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li></ol>
	6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
Test Instruments:	Refer to section 5.8 for details
Test mode:	Non-hopping mode
Test results:	Pass
Remark:	<ol> <li>Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis is the worst case.</li> <li>9 kHz to 30 MHz is noise floor, so only shows the data of above 30MHz in this report.</li> </ol>

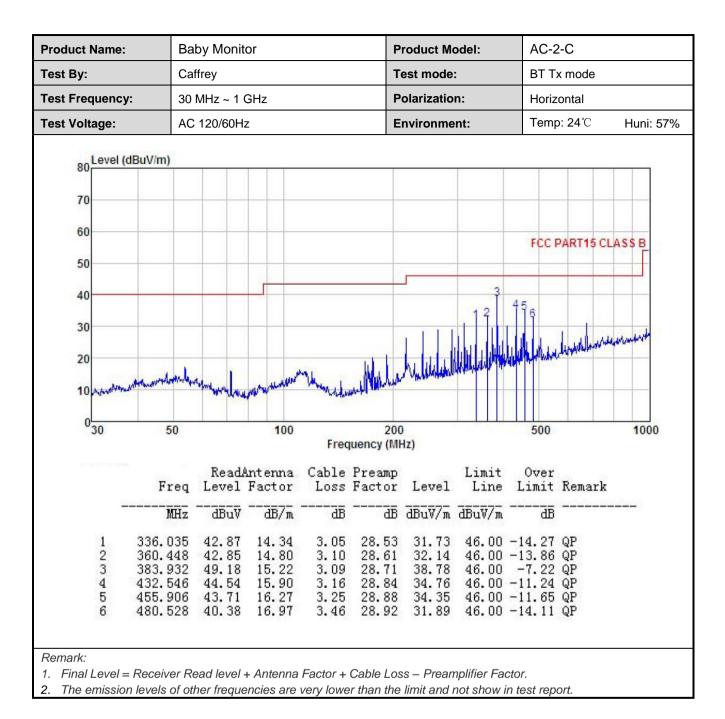


#### Measurement Data (worst case):

Below 1GHz:

	Dai	Baby Monitor			Pr	oduct Mo	del:	AC-2-C		
Гest By:	Caf	frey			Test mode:			BT Tx	x mode	
Test Frequency:	30	30 MHz ~ 1 GHz AC 120/60Hz			Po	Polarization: Environment:		Vertical Temp: 24°C Huni: 5		
Fest Voltage:	AC				Er					Huni: 57%
80 Level (dBu	(V/m)									
80	,									
70	_							_		
60								_		
00								FCC PA	RT15 CLA	SSB
50										
40		4						56		
	1 2	237					1 1.	٦ï	T .	
30	[ May 44	M			1.11				10 al dame	maturde
30	Manhar	M,	1.1.1.16			la d		A when a	Willingham	workinder
20 martin and	Mulut	M. Juda	luhtun	Julia		hoherdoodo		Aller Alder	al al and a start and a start and a start a sta	ngelander
	for the first	Yuuha	luhtun	Julia		hoherderto	hallelay	<b>dh</b> landslob	lehel hand shares	waterneter
20 10	50 50	M. July	100		200	hohenderte	hallelay	500	al di la para	1000
20 martin and	50 50	M. Junitor	100	Frequ	200 tency (MHz	hohendordo e)	hall the with	500	<b>U</b> ddaethar yw	1000
20 10			ntenna	Cable	ency (MHz Preamp	e Lisat mar	Limit	Over		
20 10		ReadA	ntenna	Cable	ien <mark>cy (MH</mark> z	e Local march		Over	Remark	
20 10			ntenna	Cable	ency (MHz Preamp Factor	Level		Over	Remark	
20 10 0 30	Freq MHz 53.882	Level dBuV 49.03	ntenna Factor dB/m 13.40	Cable Loss dB 1.34	Preamp Factor dB 29.80	Level dBuV/m 33.97	Line dBuV/m 40.00	Over Limit dB -6.03		
20 10 0 30	Freq MHz 53.882 60.069	Level dBuV 49.03 50.40	ntenna Factor 	Cable Loss dB 1.34 1.38	Preamp Factor  dB 29.80 29.77	Level dBuV/m 33.97 34.39	Line <u>dBuV/m</u> 40.00 40.00	Over Limit 	QP QP	
20 10 0 30	Freq MHz 53.882 60.069 66.034	Level dBuV 49.03 50.40 52.27	ntenna Factor 	Cable Loss dB 1.34 1.38 1.41	Preamp Factor 29.80 29.77 29.75	Level dBuV/m 33.97 34.39 34.28	Line dBuV/m 40.00 40.00 40.00	Over Limit -6.03 -5.61 -5.72	QP QP QP	
20 10 0 30	Freq MHz 53.882 60.069	Level dBuV 49.03 50.40	ntenna Factor 	Cable Loss dB 1.34 1.38	Preamp Factor  dB 29.80 29.77 29.75 29.71	Level dBuV/m 33.97 34.39	Line dBuV/m 40.00 40.00 40.00 40.00	Over Limit -6.03 -5.61 -5.72 -4.18	QP QP QP QP QP	







#### Above 1GHz:

			Test ch	annel: Lowe	est channel					
			De	tector: Peak	Value					
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization		
4821.75	47.15	35.99	6.80	41.81	48.13	74.00	-25.87	Vertical		
4821.75	47.69	35.99	6.80	41.81	48.67	74.00	-25.33	Horizontal		
Detector: Average Value										
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization		
4821.75	37.47	35.99	6.80	41.81	38.45	54.00	-15.55	Vertical		
4821.75	37.84	35.99	6.80	41.81	38.82	54.00	-15.18	Horizontal		
				annel: Midd						
				tector: Peak	Value					
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization		
4875.75	47.15	36.38	6.86	41.84	48.55	74.00	-25.45	Vertical		
4875.75	47.84	36.38	6.86	41.84	49.24	74.00	-24.76	Horizontal		
			Dete	ctor: Averag	je Value		1			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization		
4875.75	37.41	36.38	6.86	41.84	38.81	54.00	-15.19	Vertical		
4875.75	37.46	36.38	6.86	41.84	38.86	54.00	-15.14	Horizontal		
				annel: Highe						
		. I		tector: Peak	Value					
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization		
4943.25	47.68	36.71	6.91	41.87	49.43	74.00	-24.57	Vertical		
4943.25	47.62	36.71	6.91	41.87	49.37	74.00	-24.63	Horizontal		
			Dete	ctor: Averag	je Value					
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization		
4943.25	37.52	36.71	6.91	41.87	39.27	54.00	-14.73	Vertical		
4943.25	37.54	36.71	6.91	41.87	39.29	54.00	-14.71	Horizontal		
					oss – Pream the limit and r	plifier Factor. not show in tes	t report.			