



## TEST REPORT

**Application No.:** GZCR2107020566AT  
**Applicant:** Happiest Baby Inc.  
**Address of Applicant:** 3115 S. La Cienega Blvd, Los Angeles, CA 90016, America  
**Manufacturer:** Happiest Baby Inc.  
**Address of Manufacturer:** 3115 S. La Cienega Blvd, Los Angeles, CA 90016, America  
**Factory:** Jetta (Guang Zhou) Industries Co., Ltd.  
**Address of Factory:** 163 Cheng Ao Da Dao Dong Lu, Chengjiao Jie, Cong Hua, Guangzhou City, Guangdong Province, P.R.China  
**Equipment Under Test (EUT):**  
**EUT Name:** SNOO  
**Model No.:** S1000  
**FCC ID:** 2AH7Y-101067400  
**Standard(s) :** 47 CFR Part 15, Subpart C 15.247  
**Date of Receipt:** 2021-07-09  
**Date of Test:** 2021-07-13 to 2021-07-15  
**Date of Issue:** 2016-10-26 (for original report GZEM160800587101)  
2018-08-14 (for the report GZEM160800587107)  
2021-07-22 (for the report GZEM160800587109)

<b>Test Result:</b>	Pass*
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\* In the configuration tested, the EUT complied with the standards specified above.

Kobe Jian  
EMC Laboratory Manager



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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2016-10-26		Original
02		2018-08-14		Copy report: Changed adapter and updated PCB.
03		2021-07-22		Copy report: Updated Address of Applicant & Manufacturer, made Class II permissive change for the main IC, crystal and SW

Authorized for issue by:				
		Kevin Zhang		
		Kevin Zhang/Project Engineer		
		Ricky Liu		
		Ricky Liu/Reviewer		


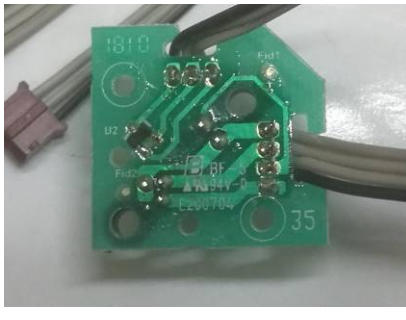


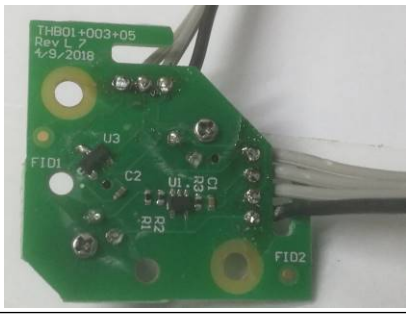

## 2 Test Summary

Radio Spectrum Matter Part				
Item	Standard	Method	Requirement	Result
Conducted Emissions at AC Power Line (150kHz-30MHz)	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 6.2	47 CFR Part 15, Subpart C 15.207	Pass
Radiated Spurious Emissions (Below 1GHz)		ANSI C63.10 (2013) Section 6.4,6.5,6.6	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass
Radiated Spurious Emissions (Above 1GHz)		ANSI C63.10 (2013) Section 6.4,6.5,6.6	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass

### Remark for the report GZEM160800587107:

This test report (Ref. No.: GZEM160800587107) is only valid with the original test report (Ref. No.: GZEM160800587101). Only changed adapter and updated PCB layout.

Considering the adapter and PCB updated, Conducted Emissions at AC Power Line (150kHz-30MHz), Radiated Spurious Emissions below 1GHz tests were performed on the product for evaluating the wireless performance.

New PCB			
Original PCB			
The two PCBs components used and functions are identical only difference in the layout.			

Therefore only new data was kept in this report GZEM160800587107, other test results please refer to GZEM160800587101.

**Report for the report GZEM160800587109**

This test report (Ref. No.: GZEM160800587109) is only valid with the original test report (Ref. No.: GZEM160800587107), updated Address of Applicant & Manufacturer, made Class II permissive change for the main IC, crystal and SW as below:

1. Change the MCU IC from N32905U1DN to N32905U3DN (pin to pin compatible, no need to change PCB) and no change for RF module
2. Change the crystal from 27M to 12M.
3. Change the Switch to match the new 12M crystal.
4. Update label for address

Considering to the difference, test items Conducted Emissions at AC Power Line (150kHz-30MHz), and Radiated Spurious Emissions (Below 1GHz) were performed on the sample and shown new test results in this report, other tests please refer to original report GZEM160800587101 and GZEM160800587107.



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## 4 General Information

### 4.1 Details of E.U.T.

Power supply:	DC 12 V powered by AC/DC adapter as below: Model: AD0301-1202000D Input: AC 100-240 V, 50-60 Hz Output: DC 12 V, 2.0 A, 24 W
Cable(s):	For main unit: DC input ports For AC/DC adapter: AC mains cables (unshielded, 0.8 m) DC output cables (unshielded, 1.2 m)
Test Voltage:	AC 120 V, 60 Hz
Operation Frequency:	802.11b/g/n(HT20): 2412MHz to 2462MHz;802.11n(HT40): 2422MHz to 2452MHz
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;802.11n(HT40):7
Channel Spacing:	5MHz
Antenna Type:	Integral Antenna
Antenna Gain:	1.0 dBi
Firmware Version:	SV01
Hardware Version:	Snoo Rev M 2019-08-22
Testing Software:	Putty_V0.63
Function:	Bassinet with Wi-Fi function

### 4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Mobile Phone	SAMSUNG	SM-G9508	R28K110W9JV
Wireless Router	TP-LINK	TL-WDR5620	1174017009906

### 4.3 Measurement Uncertainty

Test Item	Measurement Uncertainty
Conducted Emissions at AC Power Line (150kHz-30MHz)	±3.12dB
Radiated Spurious Emissions (Below 1GHz)	±5.06dB (3m); ±4.46dB (10m)

#### 4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory,  
198 Kezhu Road, Sciencetech Park, Guangzhou Economic & Technology Development District,  
Guangzhou, China 510663

Tel: +86 20 82155555 Fax: +86 20 82075059

No tests were sub-contracted.

#### 4.5 Test Facility

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

##### ● NVLAP (Lab Code: 200611-0)

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

##### ● ACMA

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian/New Zealand Regulatory Compliance Mark (RCM).

##### ● SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

##### ● CNAS (Lab Code: L0167)

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been assessed and in compliance with CNAS-CL01:2018 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2017 General Requirements) for the Competence of Testing Laboratories.

##### ● FCC Recognized Accredited Test Firm(Registration No.: 486818)

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: CN5016, Test Firm Registration Number: 486818.

##### ● ISED (Registration No.: 4620B, CAB identifier: CN0052)

SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Innovation Science and Economic Development Canada for Wireless Device Testing laboratories to test to Canadian radio equipment requirements. Registration No. 4620B, CAB identifier: CN0052.

##### ● VCCI (Registration No.: R-12460, C-12584, G-20107 and T-11179)

The 10m Semi-anechoic chamber, 966 Anechoic Chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-12460, C-12584, G-20107 and T-11179 respectively.

##### ● CBTL (Lab Code: TL129)

SGS-CSTC Standards Technical Services Co., Ltd., E&E Laboratory has been assessed and fully comply with the requirements of ISO/IEC 17025:2017, the Basic Rules, IECEE 01 and Rules of procedure IECEE 02, and the relevant IECEE CB-Scheme Operational documents.



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#### 4.6 Deviation from Standards

None

#### 4.7 Abnormalities from Standard Conditions

None



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## 5 Equipment List

Conducted Emissions at AC Power Line (150kHz-30MHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Shielding Room	ChangZhou ZhongYu	8m x 3m x 3.8m	EMC0306	N/A	N/A
Two-Line V-Network	Rohde & Schwarz	ENV216	EMC0118	2021-01-08	2022-01-06
Two-Line V-Network-GZ	Rohde & Schwarz	ENV216	EMC2135	2020-09-25	2021-09-24
Coaxial Cable	HangTianXing	2m	EMC0107	2020-09-09	2022-09-08
Test Software E3c	Audix	Ver. 5.4.1221b	GZE100-62	N/A	N/A
EMI Test Receiver(9kHz-3.6GHz)	Rohde & Schwarz	ESR4	EMC2221	2021-06-01	2022-05-31

Radiated Spurious Emissions (Below 1GHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Chamber cable	HangTianXing	N/A	EMC0542	2020-09-09	2022-09-08
Trilog Broadband Antenna(25MHz-1GHz)-Lab	SCHWARZBECK MESS-ELEKTRONIK	VULB 9168	SEM003-18	2019-02-22	2022-02-22
Amplifier(9kHz-1.3GHz)	HP	8447F	EMC2065	2021-05-19	2022-05-18
Active Loop Antenna-RED	ETS-Lindgren	6502	EMC2190	2019-12-27	2021-12-26
10m Semi-Anechoic Chamber	ETS	N/A	EMC0530	2019-10-20	2022-10-19
Test Software E3	Audix	Ver.6.120110a	GZE100-61	N/A	N/A
EMI Test Receiver(1Hz-8GHz)	Rohde & Schwarz	ESW8	EMC2220	2021-05-26	2022-05-25

General used equipment					
Equipment	Equipment	Equipment	Equipment	Equipment	Equipment
DMM	DMM	DMM	DMM	DMM	DMM
DMM	DMM	DMM	DMM	DMM	DMM



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## 6 Radio Spectrum Matter Test Results

### 6.1 Conducted Emissions at AC Power Line (150kHz-30MHz)

Test Requirement 47 CFR Part 15, Subpart C 15.207

Test Method: ANSI C63.10 (2013) Section 6.2

Limit:

Frequency of emission(MHz)	Conducted limit(dBμV)	
	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 logarithm of the frequency.

Detector: Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz

#### 6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 25.5 °C

Humidity: 61.0 % RH

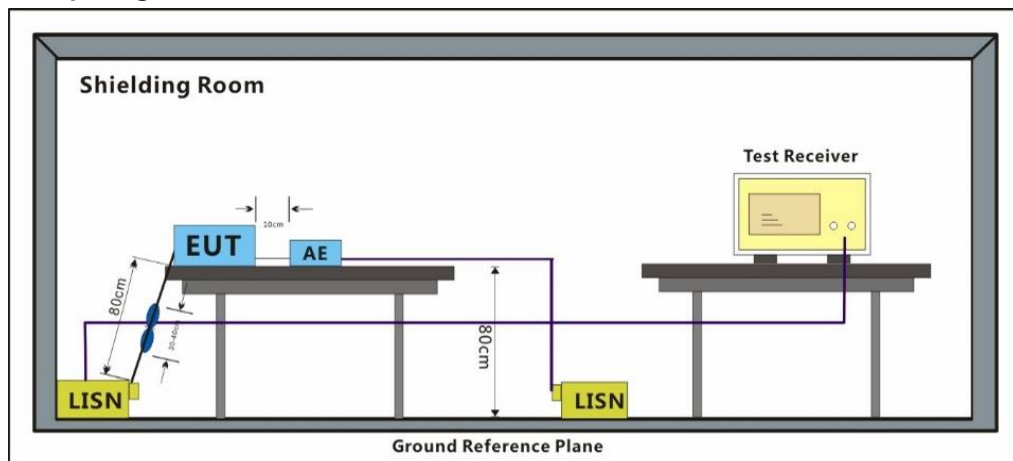
Atmospheric Pressure: 1005 mbar

#### 6.1.2 Test Mode Description

Pre-scan / Mode  
Final test Code Description

TX mode\_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40). Only the data of worst case is recorded in the report.

#### 6.1.3 Test Setup Diagram

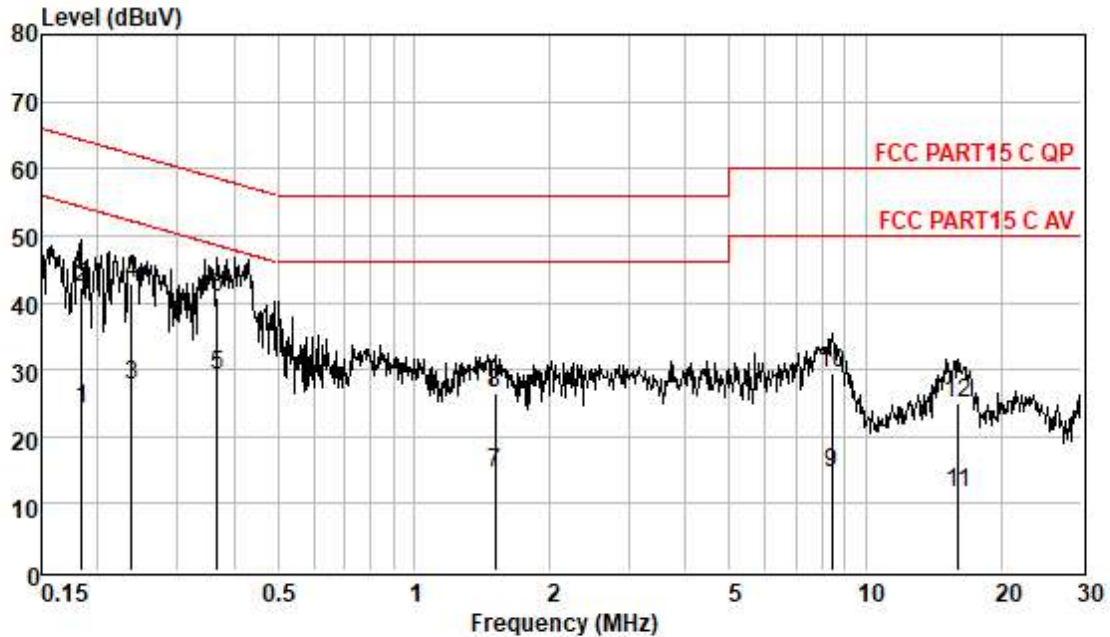


#### 6.1.4 Measurement Procedure and Data

- 1) The mains terminal disturbance voltage test was conducted in a shielded room.
- 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50ohm/50μH + 5ohm linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
- 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane.
- 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.
- 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

Remark: Measurement Level=Read Level+ Cable Loss+ LISN Factor

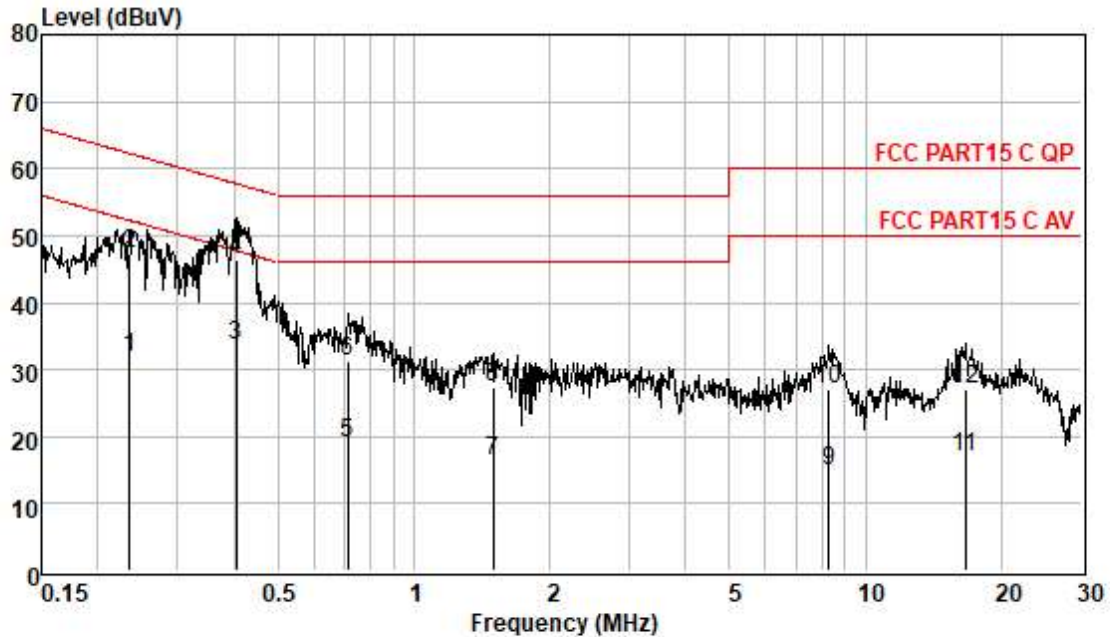
Test Mode: 01; Line: Live line

Pol : LINE  
Mode :  
Model :

Frequency MHz	Read Level dBuV	Cable Loss dB	LISN Factor dB	Measured Level dBuV	Limit Line dBuV	Over Limit dB	Remark
0.18	14.53	0.06	9.62	24.21	54.28	-30.07	Average
0.18	32.57	0.06	9.62	42.25	64.28	-22.03	QP
0.24	18.11	0.06	9.62	27.79	52.17	-24.38	Average
0.24	33.17	0.06	9.62	42.85	62.17	-19.32	QP
0.37	19.50	0.06	9.63	29.19	48.56	-19.37	Average
0.37	31.08	0.06	9.63	40.77	58.56	-17.79	QP
1.51	4.77	0.10	9.61	14.48	46.00	-31.52	Average
1.51	16.72	0.10	9.61	26.43	56.00	-29.57	QP
8.41	4.73	0.22	9.68	14.63	50.00	-35.37	Average
8.41	19.50	0.22	9.68	29.40	60.00	-30.60	QP
16.05	1.62	0.32	9.74	11.68	50.00	-38.32	Average
16.05	14.95	0.32	9.74	25.01	60.00	-34.99	QP



Test Mode: 01; Line: Neutral Line

Pol : NEUTRAL  
Mode :  
Model :

Frequency MHz	Read Level dBuV	Cable Loss dB	LISN Factor dB	Measured Level dBuV	Limit Line dBuV	Over Limit dB	Remark
0.24	22.25	0.06	9.55	31.86	52.26	-20.40	Average
0.24	37.62	0.06	9.55	47.23	62.26	-15.03	QP
0.40	24.01	0.06	9.56	33.63	47.77	-14.14	Average
0.40	36.90	0.06	9.56	46.52	57.77	-11.25	QP
0.72	9.52	0.07	9.55	19.14	46.00	-26.86	Average
0.72	21.51	0.07	9.55	31.13	56.00	-24.87	QP
1.50	6.65	0.10	9.55	16.30	46.00	-29.70	Average
1.50	17.84	0.10	9.55	27.49	56.00	-28.51	QP
8.28	5.17	0.22	9.58	14.97	50.00	-35.03	Average
8.28	17.39	0.22	9.58	27.19	60.00	-32.81	QP
16.57	7.07	0.33	9.65	17.05	50.00	-32.95	Average
16.57	17.01	0.33	9.65	26.99	60.00	-33.01	QP

## 6.2 Radiated Spurious Emissions (Below 1GHz)

Test Requirement 47 CFR Part 15, Subpart C 15.205 &amp; 15.209

Test Method: ANSI C63.10 (2013) Section 6.4,6.5,6.6

Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

### 6.2.1 E.U.T. Operation

Operating Environment:

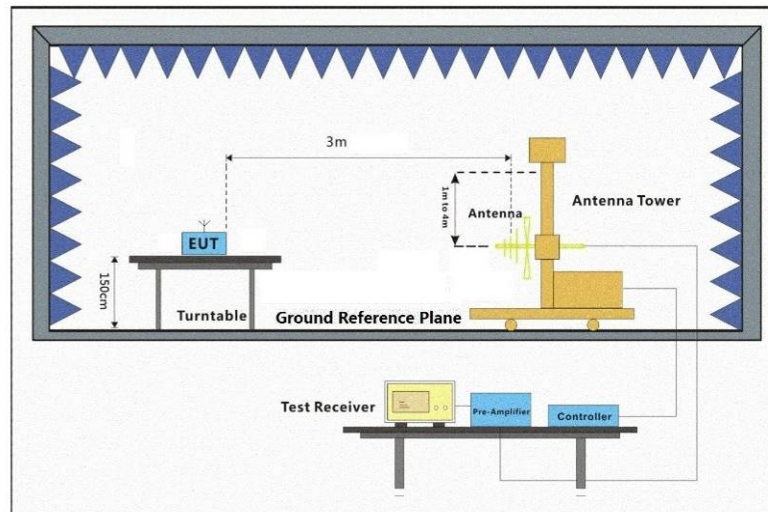
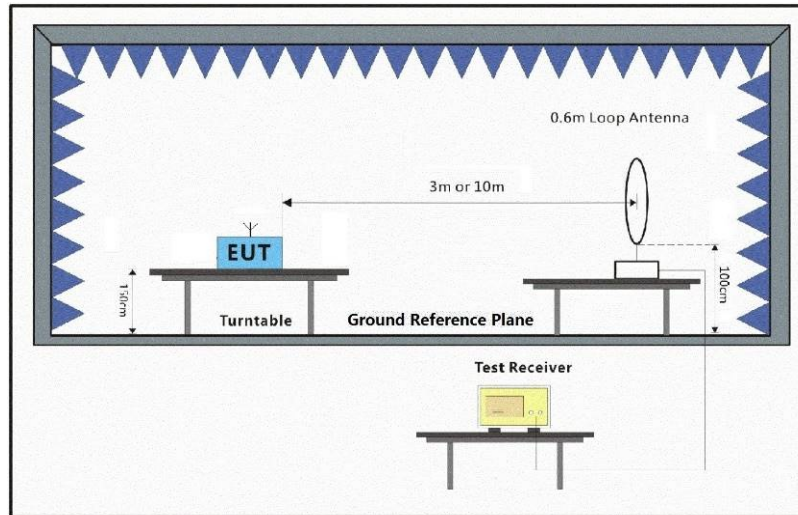
Temperature: 24.1 °C Humidity: 57.1 % RH Atmospheric Pressure: 1005 mbar

### 6.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
--------------------------	--------------	-------------

Final test	01	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40). Only the data of worst case is recorded in the report.
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### 6.2.3 Test Setup Diagram





**6.2.4 Measurement Procedure and Data**

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. 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.
- d. 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 (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. 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.
- g. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- i. Repeat above procedures until all frequencies measured was complete.

**Remark:**

1) Through pre-scan found the worst case is the lowest channel. Only the worst case is recorded in the report.

2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor

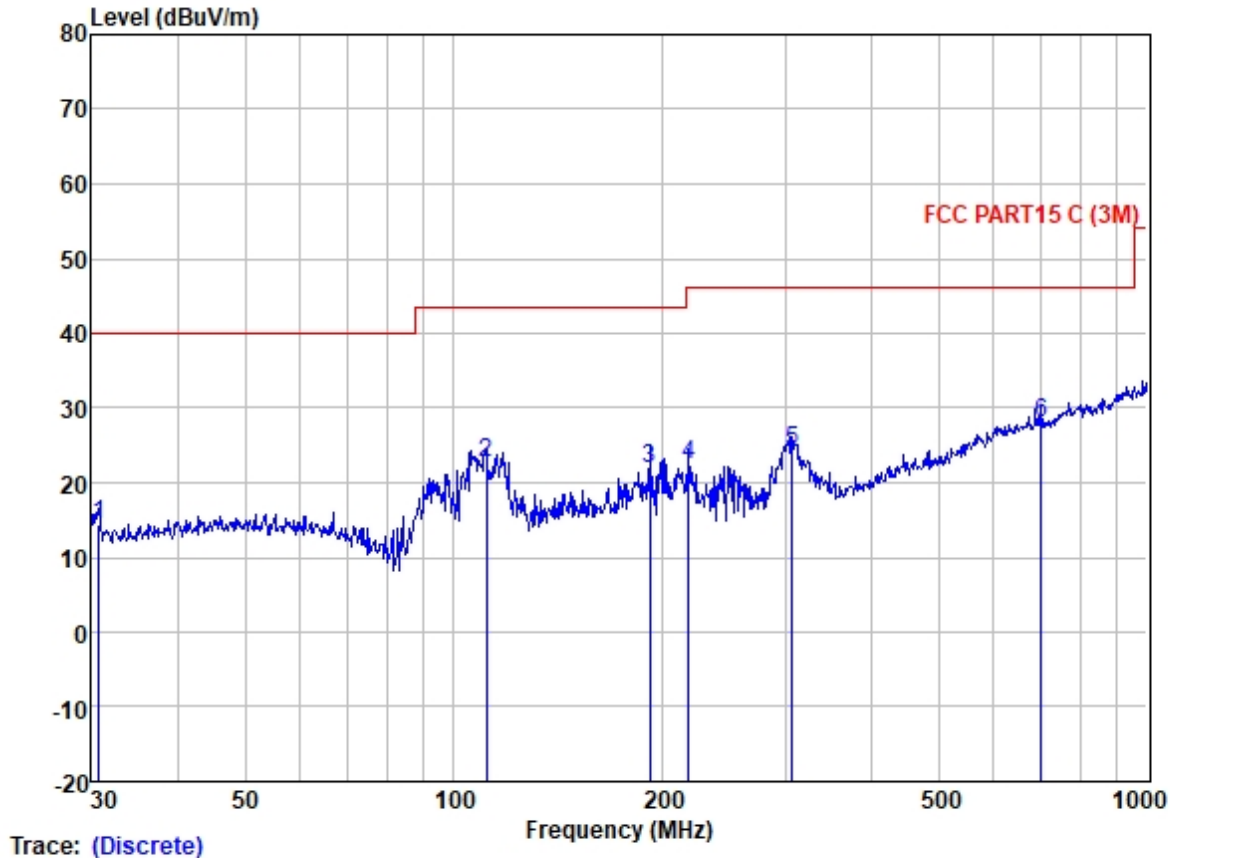
3) Scan from 9kHz to 1 GHz, the disturbance below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.



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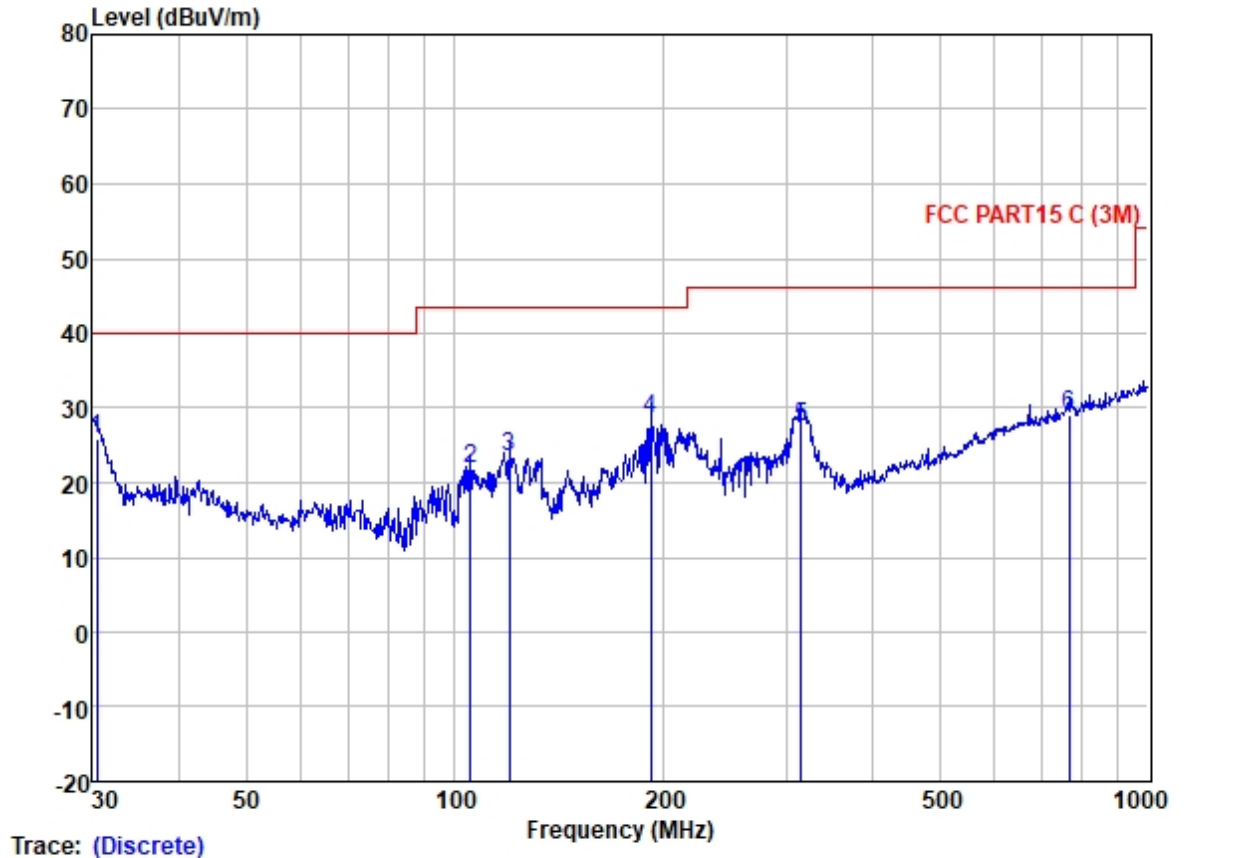
Test Mode: 01; Polarity: Horizontal; Modulation: 802.11b; Bandwidth: 20MHz; Channel: Low



Site : SGS  
Condition : FCC PART15 C (3M) HORIZONTAL  
Job :  
Model :  
Power :  
Test Mode :

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Measured Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dBuV		
1	30.75	28.06	12.51	1.03	27.20	14.40	40.00	-25.60	HORIZONTAL	QP
2	111.35	37.38	10.45	1.80	27.08	22.55	43.50	-20.95	HORIZONTAL	QP
3	191.75	35.37	10.90	2.50	26.80	21.97	43.50	-21.53	HORIZONTAL	QP
4	218.31	36.91	9.80	2.63	26.84	22.50	46.00	-23.50	HORIZONTAL	QP
5	307.83	34.50	13.80	3.23	27.29	24.24	46.00	-21.76	HORIZONTAL	QP
6	704.23	29.27	21.10	5.80	28.11	28.06	46.00	-17.94	HORIZONTAL	QP

Test Mode: 01; Polarity: Vertical; Modulation:802.11b; Bandwidth:20MHz; Channel:Low



Site : SGS  
Condition : FCC PART15 C (3M) VERTICAL  
Job :  
Model :  
Power :  
Test Mode :

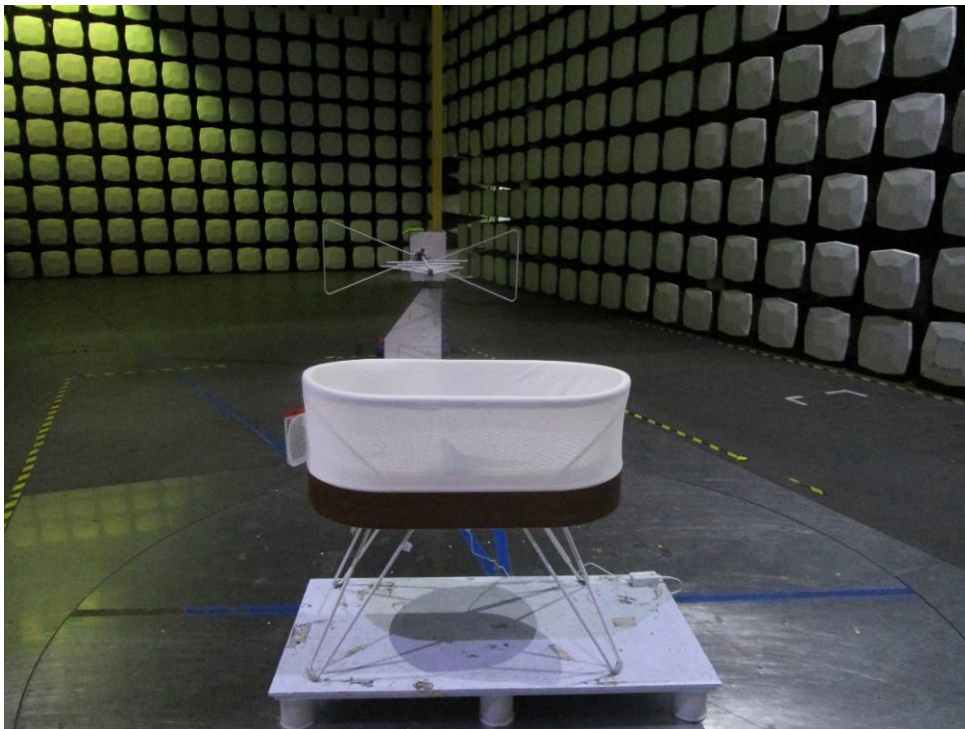
	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Measured Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dBuV		
1	30.42	39.52	12.46	1.02	27.20	25.80	40.00	-14.20	VERTICAL	QP
2	105.27	37.25	9.90	1.76	27.09	21.82	43.50	-21.68	VERTICAL	QP
3	119.86	37.82	10.90	1.86	27.06	23.52	43.50	-19.98	VERTICAL	QP
4	191.75	42.04	10.90	2.50	26.80	28.64	43.50	-14.86	VERTICAL	QP
5	315.48	37.54	14.10	3.29	27.40	27.53	46.00	-18.47	VERTICAL	QP
6	768.75	29.04	22.20	6.05	28.12	29.17	46.00	-16.83	VERTICAL	QP

## 7 Test Setup Photo

### Conducted Emissions at AC Power Line (150kHz-30MHz)



### Radiated Spurious Emissions (Below 1GHz)



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## 8 EUT Constructional Details (EUT Photos)

Refer to external and internal photos for GZCR2107020566AT

- End of the Report -