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Report No.: GZEM170400223903

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FCC ID: 2AFVN-AR100A4BKA

TEST REPORT

Application No.: GZEM1707004692CR
Applicant: BROOKSTONE PURCHASING INC
Address of Applicant: ONE INNOVATION WAY, MERRIMACK, NH 03054 USA
Manufacturer: DONG GUAN SIYOTO ELECTRONICS CO., LTD.
Address of Manufacturer: HE CHENG INDUSTRIAL AREA, DONG JIANG, QIAO TOU TOWN, DONG GUAN CITY
Factory: DONG GUAN SIYOTO ELECTRONICS CO., LTD.
Address of Factory: HE CHENG INDUSTRIAL AREA, DONG JIANG, QIAO TOU TOWN, DONG GUAN CITY
Equipment Under Test (EUT):
EUT Name: Cat Ear headphone V2, Wireless Devil Horn Headphones
Model No.: AR100A4BKA, AR100A4RDA. ✕
✕ Please refer to section 2 of this report for further details.
Trade Mark: BROOKSTONE
Standards: 47 CFR Part 15, Subpart C:2016 Section 15.247
Date of Receipt: 2017-08-01
Date of Test: 2017-08-09 to 2017-08-14
Date of Issue: 2017-06-28 (for original report GZEM170400223901)
2017-08-18 (for copy report GZEM170400223903)

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



Ricky Liu
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. 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. All test results in this report can be traceable to National or International Standards.

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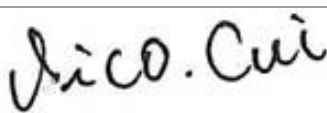
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Guangzhou Branch

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Revision Record				
Version	Chapter	Date	Modifier	Remark
00		2017-06-28		Original Report
01		2017-08-18		Copy Report: Added one new Product Description & Model No. and updated standard

Authorized for issue by:			
Tested By	 Vico_Cui /Project Engineer	2017-08-09 to 2017-08-14 Date	
Checked By	 Ricky_Liu /Reviewer	2017-08-18 Date	

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	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 6.4,6.5,6.6	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass

Remark for report GZEM170400223903

This report GZEM170400223903 was a supplement report based on original report GZEM170400223901, only added one new Product Description **Wireless Devil Horn Headphones & Model No. AR100A4RDA** and updated standard.

Standard

Standard(s) in original report	Standard(s) in updated report
47 CFR Part 15, Subpart C:2015 Section 15.247	47 CFR Part 15, Subpart C:2016 Section 15.247

Reviewed the updated standards, all the technical requirements for the product between original and the newest standards' versions are identical, therefore it's acceptable to update standard(s) without further testing.

Model No.: AR100A4BKA, AR100A4RDA.

According to the declaration from the applicant, the new model AR100A4RDA added in this report and model AR100A4BKA in original report are identical in the electrical circuit design, layout, components used and internal wiring, except for the speaker PCB layout and cosmetic. AR100A4BKA is with Cat Ear Speaker and AR100A4RDA is with Devil Horn speaker.

Based on above product changes we followed the FCC PC2 procedur and Conducted Emissions at AC Power Line (150kHz-30MHz) and Radiated Spurious Emissions(below 1G) tests were performed to new model AR100A4RDA to confirm whether the original test results were changed or not and recorded the new results in this report GZEM170400223903. Other original test results please refer to report GZEM170400223901 for details.



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4 General Information

4.1 Details of E.U.T.

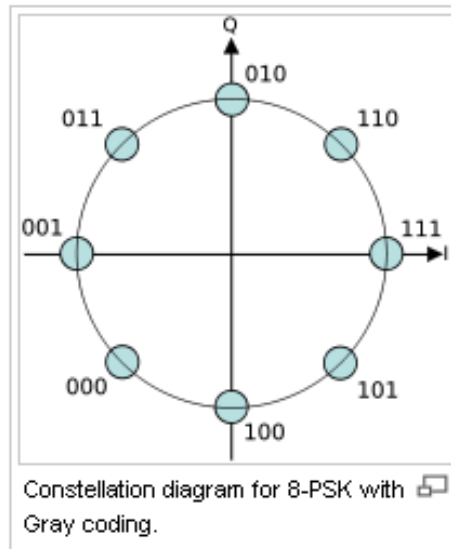
Operating Frequency	2402 MHz to 2480 MHz
Type of Modulation:	GFSK, ($\pi/4$)DQPSK, 8DPSK
Number of Channels	79 Channels
Channel Separation:	1 MHz
Test Software of EUT:	BlueTest 3 Version 2.4.8
Antenna Type	Integral
Antenna gain:	2 dBi
Specialty:	Bluetooth 4.1 single mode
Function:	Headphone with BT functions to transmit and receive audio signal.
Power Supply:	DC 5V for USB charging DC 3.7V internal rechargeable battery
Test Voltage:	DC 5V
Cable:	NA

4.1 Modulation configure

Modulation	Packet	Packet Type	Packet Size
GFSK	DH1	4	24
	DH3	11	183
	DH5	15	339
$(\pi/4)$ DQPSK	2DH1	20	54
	2DH3	26	367
	2DH5	30	379
8DPSK	3DH1	24	83
	3DH3	27	552
	3DH5	31	1021

Remark:**Modulation 8-DPSK**

The modulation 8 PSK works with 8 phases between 0 and 2π (0 and 360 degrees), it can be seeing bellow in the circle.



Normal mode: the Bluetooth has been tested on the Modulation of GFSK;

EDR mode: the Bluetooth has been tested on the Modulation of $(\pi/4)$ DQPSK and 8DPSK, compliance test and record the worst case on 8DPSK.

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
iPod nano	Apple	A1446	
Adapter	Apple	A1357 W010A051	REF. No.SEA0500

4.3 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	7.25 x 10-8
2	Timeout	2s
3	Duty cycle	0.37%
4	Occupied Bandwidth	3%
5	RF Conducted power	0.75dB
6	RF Power Density	2.84dB
7	Conducted Spurious Emissions	0.75dB
8	RF Radiated Power	4.5dB (below 1GHz)
		4.8dB (above 1GHz)
9	Radiated Spurious Emission Test	4.5dB (30MHz-1GHz)
		4.8dB (1GHz-18GHz)
10	Temperature	0.4 °C
11	Humidity	1.3%
12	Supply Voltages	1.5%
13	Time	3%

4.4 Standards Applicable for Testing

Table 1 : Tests Carried Out Under 47 CFR Part 15, Subpart C 15.247

Item	Status
Antenna Requirement	×
Conducted Emissions at AC Power Line (150kHz-30MHz)	✓
Minimum 6dB Bandwidth	×
Conducted Peak Output Power	×
20dB Bandwidth	×
Carrier Frequencies Separation	×
Hopping Channel Number	×
Dwell Time	×
Power Spectrum Density	×
Conducted Band Edges Measurement	×
Conducted Spurious Emissions	✓
Radiated Emissions which fall in the restricted bands	×
Radiated Spurious Emissions	✓
Other requirements Frequency Hopping Spread Spectrum System Hopping Sequence	×

× Indicates that the test is not applicable

✓ Indicates that the test is applicable

4.5 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.

4.6 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 C-Tick mark as a result of our NVLAP accreditation.

- **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-CL01:2006 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2005 General Requirements) for the Competence of Testing Laboratories.

- **FCC Recognized 2.948 Listed Test Firm(Registration No.: 282399)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 282399, May 31, 2002.

- **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, Jul 13, 2017.

- **Industry Canada (Registration No.: 4620B-1)**

The 3m/10m Alternate Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Certification and Engineering of Industry Canada for radio equipment testing with Registration No. 4620B-1.

- **VCCI (Registration No.: R-2460, C-2584, G-449 and T-1179)**

The 10m Semi-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-2460, C-2584, G-449 and T-1179 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 17025:2005, the Basic Rules, IECEE 01 and Rules of procedure IECEE 02, and the relevant IECEE CB-Scheme Operational documents.



4.7 Deviation from Standards

None

4.8 Abnormalities from Standard Conditions

None

5 Equipment List

Conducted Emissions at Mains Terminals (150kHz-30MHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Shielding Room	Zhong Yu	8m x 3m x 3.8m	EMC0306	N/A	N/A
Two-line v-netwok	R&S	ENV216	EMC0118	2017-01-20	2018-01-19
LISN	SCHAFFNER CHASE	MN2050D/1	EMC0102	2016-09-22	2017-09-21
EMI Test Receiver	Rohde & Schwarz	ESCS30	EMC0506	2016-12-02	2017-12-01
Coaxial Cable	HangTianXing	2m	EMC0107	2016-07-24	2018-07-23
Voltage Probe	SGS	N/A	EMC0106	2016-04-05	2018-04-04
Conical metal housing	SGS-EMC	N/A	EMC0167	2016-04-19	2018-04-18

Conducted Spurious Emissions					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
MXA Signal Analyzer	Agilent Technologies	N9020A	SEM004-10	2017-02-13	2018-02-12
ESG vector signal generator	KEYSIGHT	E4438C	SEM006-03	2017-04-14	2018-04-13
EXG Analog Signal Generator	Agilent Technologies	N5171B	SEM006-04	2017-07-26	2020-07-25
Power Meter	Agilent Technologies	U2021XA_Ch2	SEM009-02	2016-10-09	2017-10-09
Power Meter	Agilent Technologies	U2021XA_Ch3	SEM009-03	2016-10-09	2017-10-09

Receiver spurious emissions					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
MXA Signal Analyzer	Agilent Technologies	N9020A	SEM004-10	2017-02-13	2018-02-12
ESG vector signal generator	KEYSIGHT	E4438C	SEM006-03	2017-04-14	2018-04-13
EXG Analog Signal Generator	Agilent Technologies	N5171B	SEM006-04	2014-08-27	2017-08-27
Power Meter	Agilent Technologies	U2021XA_Ch2	SEM009-02	2016-10-09	2017-10-09
Power Meter	Agilent Technologies	U2021XA_Ch3	SEM009-03	2016-10-09	2017-10-09



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General used equipment					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
DMM	Fluke	73	EMC0006	2016-09-01	2017-08-31
DMM	Fluke	73	EMC0007	2016-09-01	2017-08-31

6 Radio Spectrum Matter Test Results

6.1 E.U.T. test conditions

Test Voltage:	DC 3.7V by battery DC 5V from adapter
Temperature:	20.0 -25.0 °C
Humidity:	38-50 % RH
Atmospheric Pressure:	1000 -1010 mbar
Requirements:	15.31(e): For intentional radiators, measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage. For battery operated equipment, the equipment tests shall be performed using a new battery. 15.32: Power supplies and CPU boards used with personal computers and for which separate authorizations are required to be obtained shall be tested as follows: Testing shall be in accordance with the procedures specified in Section 15.31 of this part.

Test frequencies and frequency range:

According to the 15.31(m) Measurements on intentional radiators or receivers, other than TV broadcast receivers, shall be performed and, if required, reported for each band in which the device can be operated with the device operating at the number of frequencies in each band specified in the following table:

According to the 15.33 (a) For an intentional radiator, the spectrum shall be investigated from the lowest radio frequency signal generated in the device, without going below 9 kHz, up to at least the frequency shown in the following table:

Number of fundamental frequencies to be tested in EUT transmit band

Frequency range in which device operates	Number of frequencies	Location in frequency range of operation
1 MHz or less	1	Middle
1 MHz to 10 MHz	2	1 near top and 1 near bottom
More than 10 MHz	3	1 near top, 1 near middle and 1 near bottom

Frequency range of radiated emission measurements

Lowest frequency generated in the device	Upper frequency range of measurement
9 kHz to below 10 GHz	10th harmonic of highest fundamental frequency or to 40 GHz, whichever is lower
At or above 10 GHz to below 30 GHz	5th harmonic of highest fundamental frequency or to 100 GHz, whichever is lower
At or above 30 GHz	5th harmonic of highest fundamental frequency or to 200 GHz, whichever is lower, unless otherwise specified

EUT channels and frequencies list:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	27	2429	54	2456
1	2403	28	2430	55	2457
2	2404	29	2431	56	2458
3	2405	30	2432	57	2459
4	2406	31	2433	58	2460
5	2407	32	2434	59	2461
6	2408	33	2435	60	2462
7	2409	34	2436	61	2463
8	2410	35	2437	62	2464
9	2411	36	2438	63	2465
10	2412	37	2439	64	2466
11	2413	38	2440	65	2467
12	2414	39	2441	66	2468
13	2415	40	2442	67	2469
14	2416	41	2443	68	2470
15	2417	42	2444	69	2471
16	2418	43	2445	70	2472
17	2419	44	2446	71	2473
18	2420	45	2447	72	2474
19	2421	46	2448	73	2475
20	2422	47	2449	74	2476
21	2423	48	2450	75	2477
22	2424	49	2451	76	2478
23	2425	50	2452	77	2479
24	2426	51	2453	78	2480
25	2427	52	2454	/	/
26	2428	53	2455	/	/

Using the special software and development board we can enter the product for engineer mode then we can control the EUT to select the wanted channel for test as above list.

Test frequencies are the lowest channel: 0 channel(2402 MHz), middle channel: 39 channel(2441 MHz) and highest channel: 78 channel(2480 MHz)

6.2 Antenna Requirement

Standard requirement

15.203 requirement:

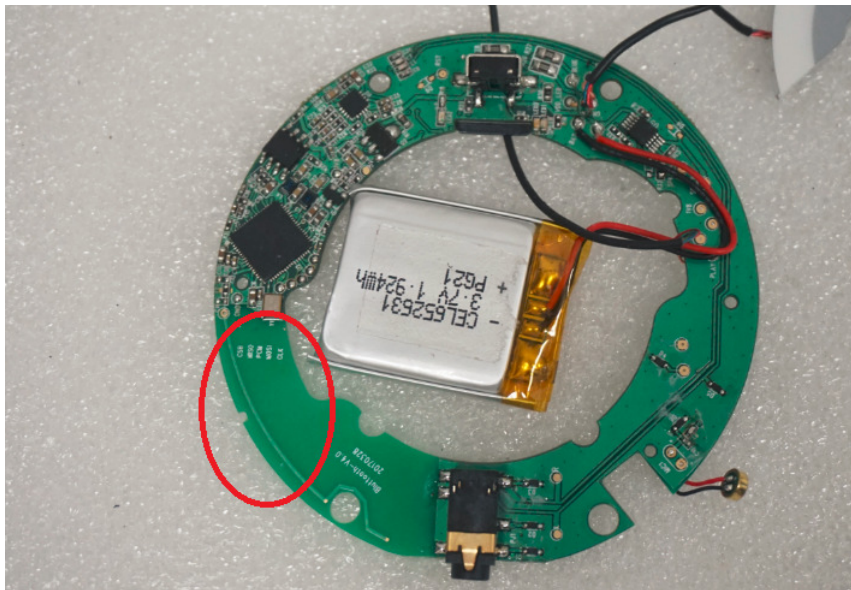
For intentional device. According to 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

15.247(c) (1)(i) requirement:

(i) Systems operating in the 2400-2483.5 MHz bands that are used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna

The antenna is integrated on the main PCB and no consideration of replacement. The maximum gain of the antenna is 2 dBi.



Test result: The unit does meet the FCC requirements.

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

Test Requirement: 47 CFR Part 15, Subpart C 15.247

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.		

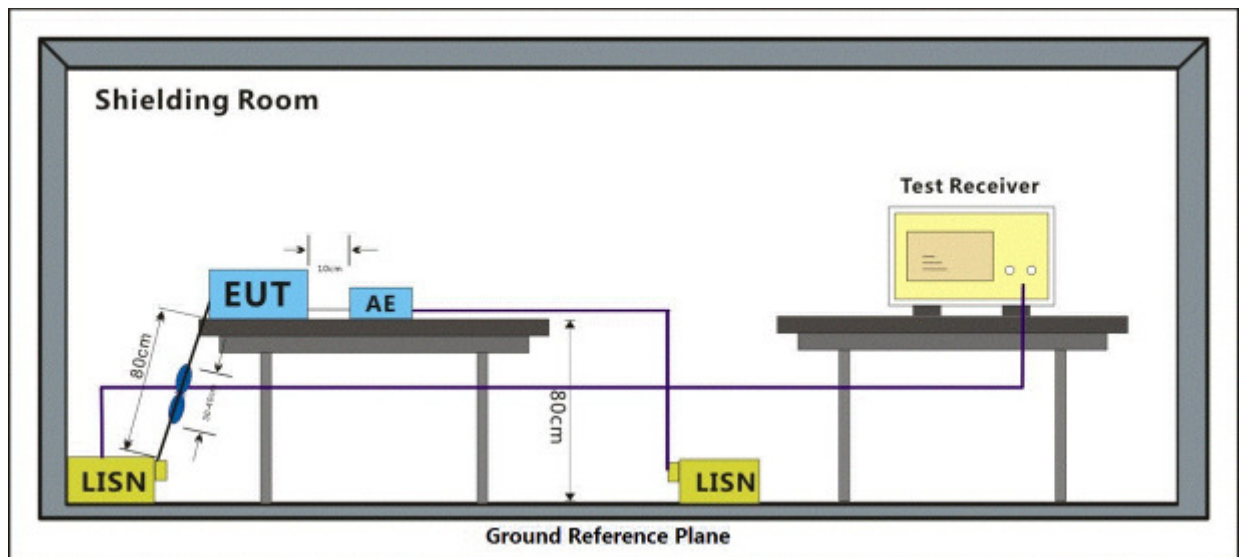
6.3.1 E.U.T. Operation

Operating Environment:

Temperature: 23 °C Humidity: 54 % RH Atmospheric Pressure: 1002 mbar

Test Mode: a: TX_non-Hop mode Keep the EUT in continuously transmitting mode with GFSK modulation, $\pi/4$ DQPSK modulation, 8DPSK modulation. All modes have been tested and only the data of worst case is recorded in the report.

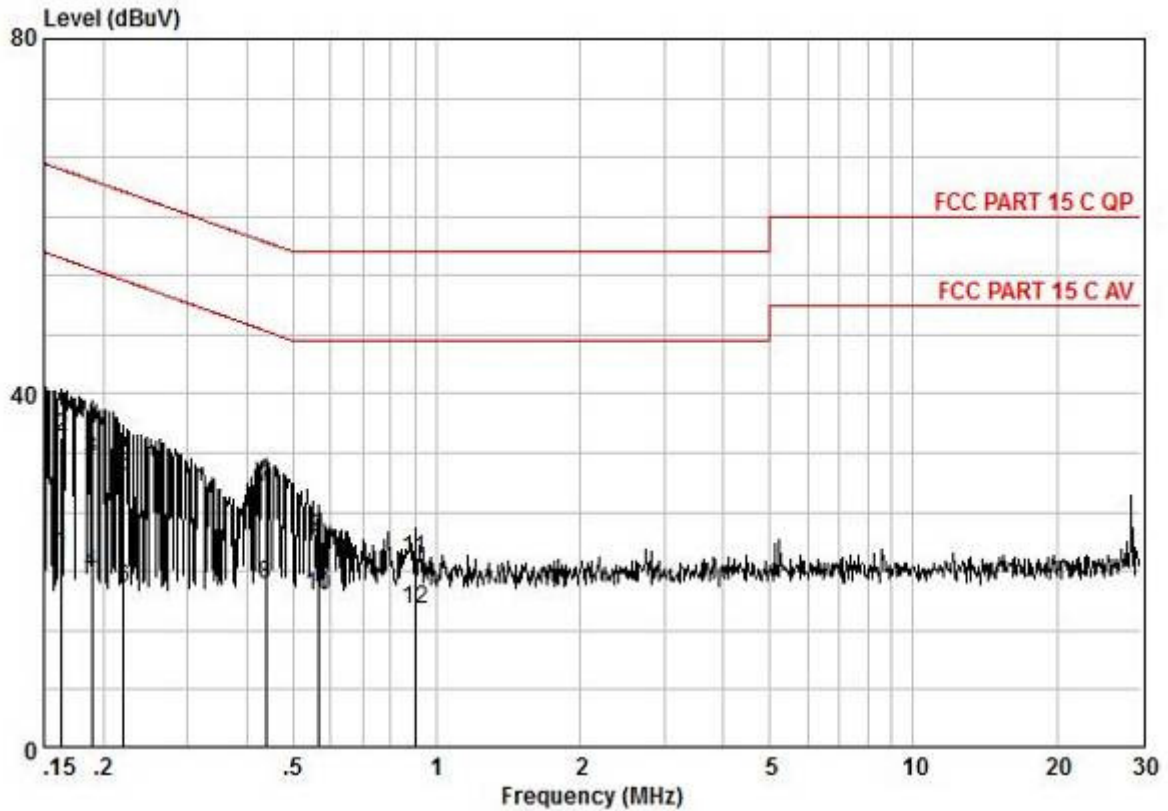
6.3.2 Test Setup Diagram



6.3.3 Measurement Data

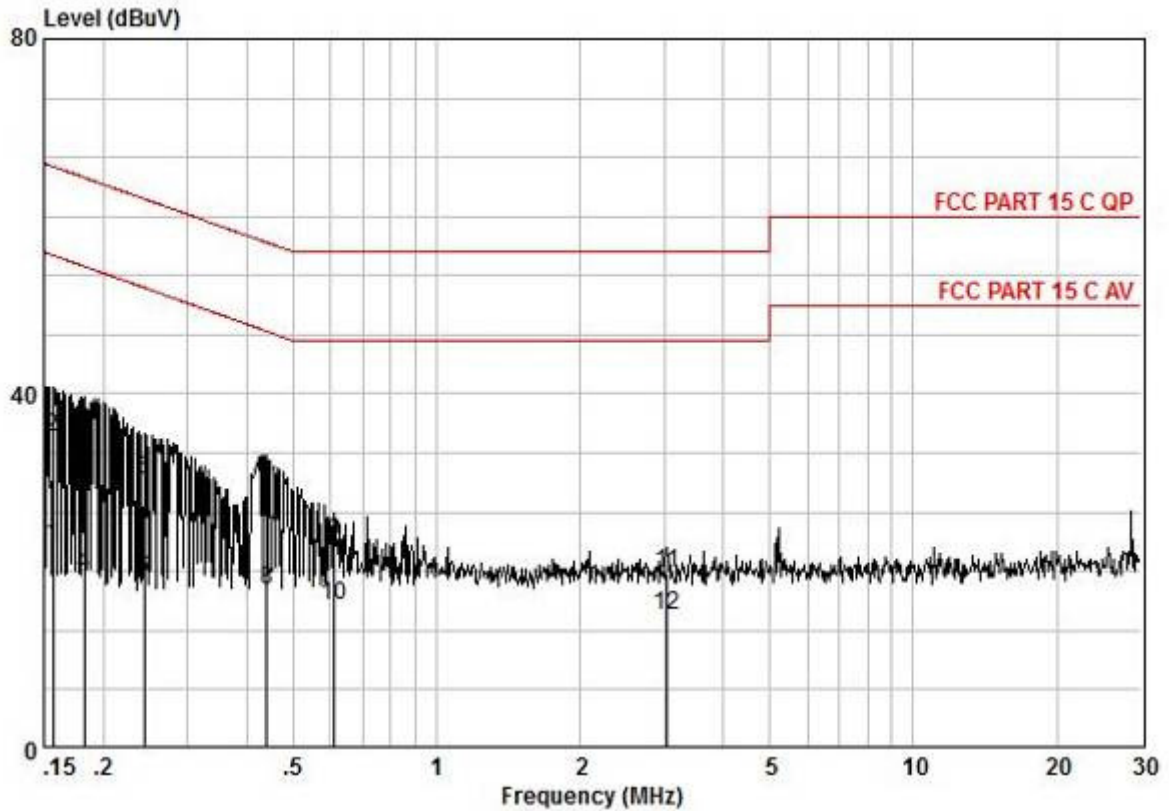
- 1) The mains terminal disturbance voltage test was conducted in a shielded room.
- 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50ohm/50μH + 5ohm linear impedance. The power cables of all other units of the EUT were connected to 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.

Mode:a; Line:Live Line



Pol	: LIVE						
No	:						
Model	:						
Frequency MHz	read level dBuV	Cable Loss dB	LISN Factor dB	Measured level dBuV	Limit Line dBuV	Over limit dB	Remark
0,16	12,19	0,10	9,65	21,94	55,30	-33,36	AVERAGE
0,16	25,24	0,10	9,65	34,99	65,30	-30,31	QP
0,19	23,02	0,10	9,64	32,76	64,06	-31,30	QP
0,19	10,02	0,10	9,64	19,76	54,06	-34,30	AVERAGE
0,22	20,98	0,11	9,64	30,73	62,79	-32,06	QP
0,22	8,39	0,11	9,64	18,14	52,79	-34,65	AVERAGE
0,44	19,54	0,19	9,64	29,37	57,11	-27,74	QP
0,44	8,70	0,19	9,64	18,53	47,11	-28,58	AVERAGE
0,56	13,80	0,22	9,64	23,66	56,00	-32,34	QP
0,56	7,44	0,22	9,64	17,30	46,00	-28,70	AVERAGE
0,90	11,42	0,28	9,65	21,35	56,00	-34,65	QP
0,90	5,77	0,28	9,65	15,70	46,00	-30,30	AVERAGE

Mode:a; Line:Neutral Line



Pol	: NEUTRAL						
No	:						
Model	:						
Frequency MHz	read level dBuV	Cable Loss dB	LISN Factor dB	Measured level dBuV	Limit Line dBuV	Over limit dB	Remark
0.16	13.02	0.10	9.67	22.79	55.65	-32.86	AVERAGE
0.16	25.30	0.10	9.67	35.07	65.65	-30.58	QP
0.18	23.40	0.10	9.67	33.17	64.37	-31.20	QP
0.18	9.80	0.10	9.67	19.57	54.37	-34.80	AVERAGE
0.24	20.62	0.12	9.66	30.40	62.00	-31.59	QP
0.24	9.33	0.12	9.66	19.11	52.00	-32.88	AVERAGE
0.44	19.18	0.19	9.67	29.04	57.07	-28.03	QP
0.44	8.02	0.19	9.67	17.88	47.07	-29.19	AVERAGE
0.61	13.50	0.23	9.67	23.40	56.00	-32.60	QP
0.61	6.30	0.23	9.67	16.20	46.00	-29.80	AVERAGE
3.04	9.64	0.54	9.70	19.88	56.00	-36.12	QP
3.04	4.80	0.54	9.70	15.04	46.00	-30.96	AVERAGE

6.4 Radiated Spurious Emissions

Test Requirement: 47 CFR Part 15, Subpart C 15.247

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

Measurement Distance: 3m

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.

6.4.1 E.U.T. Operation

Operating Environment:

Temperature: 23 °C Humidity: 55 % RH Atmospheric Pressure: 1002 mbar

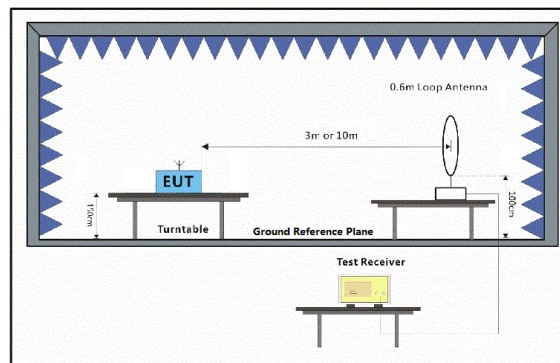
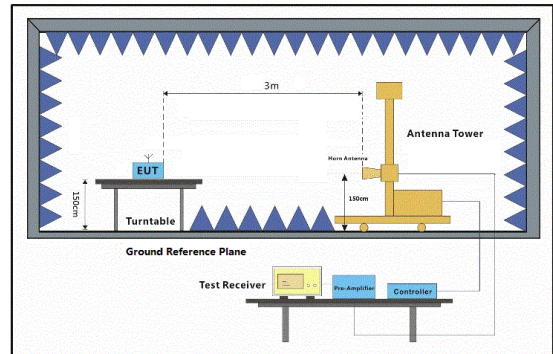
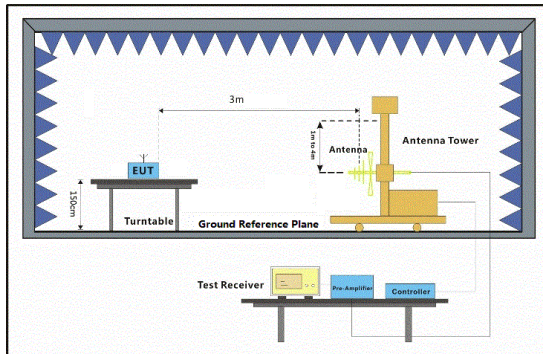
a: TX_non-Hop mode Keep the EUT in continuously transmitting mode with GFSK modulation, $\pi/4$ DQPSK modulation, 8DPSK modulation. All modes have been tested and only the data of worst case is recorded in the report.

Test Mode:

Through pre-scan, the worst case is the lowest channel.

Only the worst case is recorded in the report.

6.4.2 Test Setup Diagram



6.4.3 Measurement 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. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. 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.
- d. 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.
- e. 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.
- f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- g. 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.
- h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- i. 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.
- j. Repeat above procedures until all frequencies measured was complete.

Test Result:

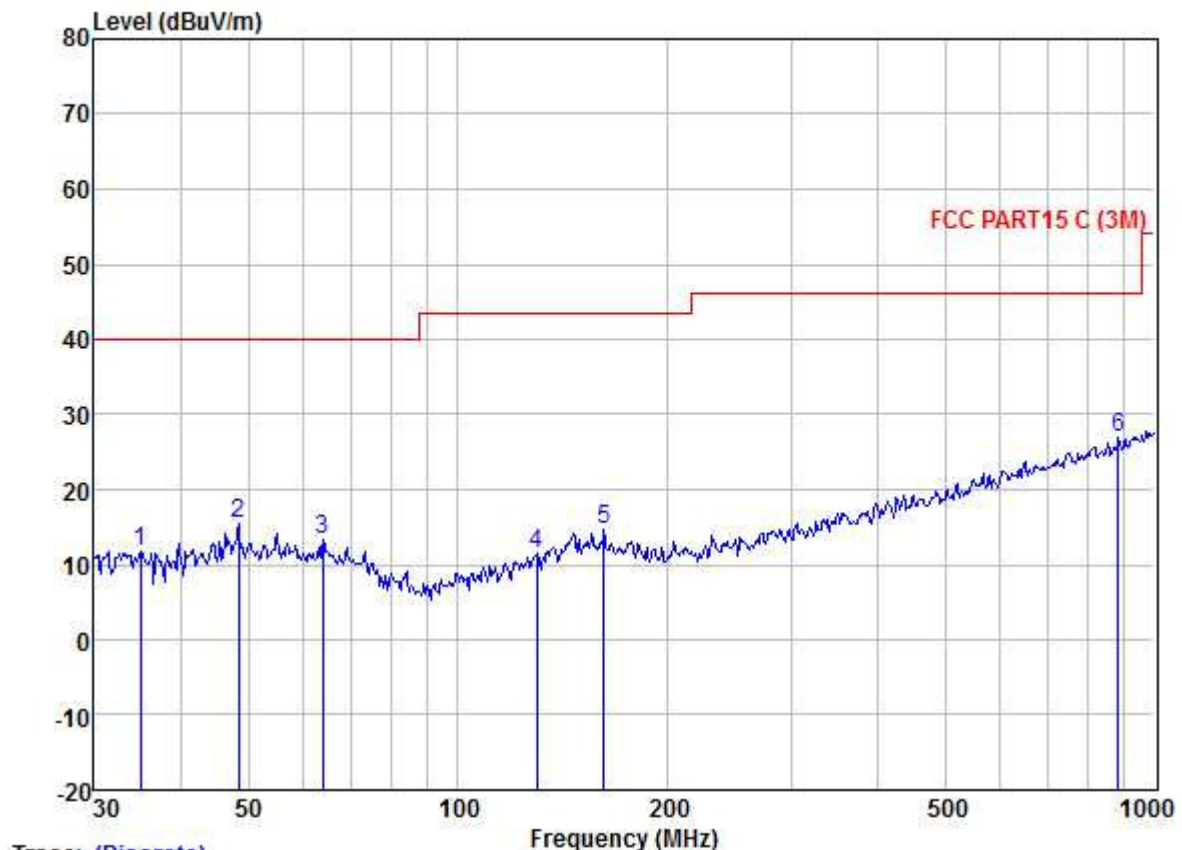
9KHz~30 MHz Field Strength of Unwanted Emissions. Quasi-Peak Measurement

The measurements with Loop antenna and the amplitude of spurious emissions from the radiator are attenuated more than 20dB below the limit, so the test data were not recorded in the test report.

30MHz~1GHz Field Strength of Unwanted Emissions. Quasi-Peak Measurement

The measurements with Log antenna.

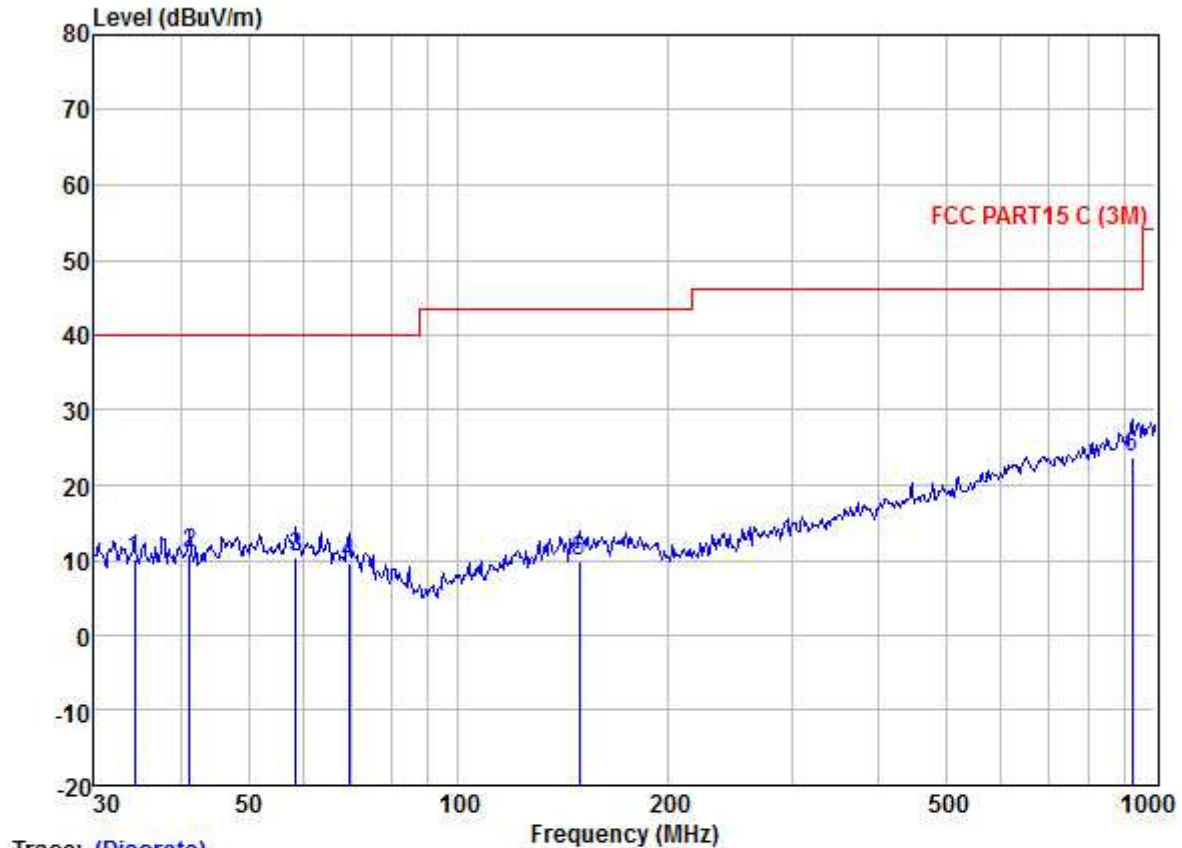
Mode:a; Polarization:Horizontal; Modulation Type:GFSK; Channel:Low



Trace: (Discrete)

	Freq	ReadAntenna	Cable	Preamp		Limit	Over			
		Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	35.005	24.13	13.87	0.60	27.00	11.60	40.00	-28.40	HORIZONTAL	QP
2	48.332	27.44	14.42	0.70	27.00	15.56	40.00	-24.44	HORIZONTAL	QP
3	63.983	25.81	13.60	0.80	27.00	13.21	40.00	-26.79	HORIZONTAL	QP
4	129.468	25.00	12.00	1.23	26.88	11.35	43.50	-32.15	HORIZONTAL	QP
5	162.041	26.33	13.62	1.34	26.73	14.56	43.50	-28.94	HORIZONTAL	QP
6	887.610	28.09	23.32	3.10	27.70	26.81	46.00	-19.19	HORIZONTAL	QP

Mode:a; Polarization:Vertical; Modulation Type:GFSK; Channel:Low



Trace: (Discrete)

	Freq	ReadAntenna	Cable	Preamp	Limit	Over			
	MHz	Level	Loss	Factor	Line	Limit	Pol/Phase	Remark	
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	34.276	22.62	13.93	0.60	27.00	10.15	40.00	-29.85	VERTICAL QP
2	41.132	23.50	13.76	0.62	27.00	10.88	40.00	-29.12	VERTICAL QP
3	58.407	22.49	14.14	0.80	27.00	10.43	40.00	-29.57	VERTICAL QP
4	69.600	22.83	12.74	0.90	27.00	9.47	40.00	-30.53	VERTICAL QP
5	148.963	21.96	13.32	1.30	26.78	9.80	43.50	-33.70	VERTICAL QP
6	925.756	24.53	23.65	3.17	27.60	23.75	46.00	-22.25	VERTICAL QP

--End of Report--