



Aibo Standard Technology (Shenzhen) Co., Ltd.

101, Building B, Tuori New Energy Industrial Park, High-tech Park, Tianliao Community, Yutang Street, Guangming District, Shenzhen City, Guangdong Province, China
Tel.: +(86) 0755 85250797 E-mail: Abonorm@abonorm.com Website: www.Abonorm.com

FCC&IC TEST REPORT

Report No.....: AB25060001FW07
FCC ID.....: 2BQHD-DGEN1
IC ID.....: 34121-DGEN1
Applicant.....: Freedom Factory Inc
Address.....: 4 Peddlers Row 295, Newark, Delaware 19702 USA
Manufacturer.....: Freedom Factory Inc
Address.....: 4 Peddlers Row 295, Newark, Delaware 19702 USA
Product Name.....: dGEN1
Trade Mark.....: Freedom Factory
Test Model.....: dGEN1
Additional Model(s).....: /
Standard.....: FCC 47 CFR Part 15 Subpart C (Part 15.225)
Date of Receipt.....: 2025.04.15
Date of Test Date.....: 2025.04.15-2025.08.26
Date of Issue.....: 2025.08.26
Test Result.....: Pass

Compiled by:
(Printed Name + Signature)

Huajie Li

Huajie Li

Supervised by:
(Printed Name + Signature)

Jay Liu

Jay Liu

Approved by:
(Printed Name + Signature)

Mic Cheng

Mic Cheng

Testing Laboratory Name.....: Aibo Standard Technology (Shenzhen) Co., Ltd.

Address.....: 101, Building B, Tuori New Energy Industrial Park, High-tech Park, Tianliao Community, Yutang Street, Guangming District, Shenzhen City, Guangdong Province, China

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FCC&IC TEST REPORT

Test Report No.: AB25060001FW01	<u>2025.08.26</u> Date of issue
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EUT.....	: dGEN1
Test Model.....	: dGEN1
Applicant.....	: Freedom Factory Inc
Address.....	: 4 Peddlers Row 295, Newark, Delaware 19702 USA
Telephone.....	: +1(726)842-5475
Fax.....	: /
Manufacturer.....	: Freedom Factory Inc
Address.....	: 4 Peddlers Row 295, Newark, Delaware 19702 USA
Telephone.....	: +1(726)842-5475
Fax.....	: /

Test Result	Positive
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The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

REPORT VERSION

Version No.	Issue Date	Description
01	2025.08.26	Initial Issue

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1. GENERAL INFORMATION

1.1. GENERAL DESCRIPTION OF EUT

Product Name:	dGEN1
Trade Mark:	Freedom Factory
Test Model:	dGEN1
Additional Model(s):	/
Model Difference:	/
Hardware Version:	S891_MB_V2
Software Version:	/
Power Supply:	DC 3.87V by battery(4500mAh) or DC 5V 1A from AC/DC adapter
Test Sample(s) Number:	AB25060001-01 (Engineer Sample) AB25060001-02 (Normal Sample)

Radio Specification Subject to this Report

Modulation Technology:	NFC
Modulation Type:	ASK
Operating Frequency:	13.56MHz
Number of Channel:	1
Antenna Type:	Loop antenna
Antenna Gain:	-0.52dBi(Max.)

1.2. DESCRIPTION OF SUPPORT EQUIPMENT

Description	Manufacturer	Model	Serial Number	Supplied by
AC/DC Adapter	Xiaomi	MDY-11-EX	SA62212LA04358J	Applicant

1.3. DESCRIPTION OF EXTERNAL I/O

I/O Port Description	Quantity	Cable
USB Type-C Interface	1	0.8m, unshielded
Earphone Jack	1	N/A

1.4. GENERAL DESCRIPTION OF APPLIED STANDARDS

The tests were performed according to following standards:

[**FCC Rules Part 15.225**](#) - Operation within the band 13.110-14.010 MHz.

1.5. DESCRIPTION OF TEST FACILITY

Test Lab: Aibo Standard Technology (Shenzhen) Co., Ltd.

Address: 101, Building B, Tuori New Energy Industrial Park, High-tech Park, Tianliao Community, Yutang Street, Guangming District, Shenzhen City, Guangdong Province, China

Tel.: +(86) 0755 85250797

E-mail: Aibonorm@aibonorm.com

Website: www.Aibonorm.com

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

A2LA-Lab Certificate No.: 7514.01

Aibo Standard Technology (Shenzhen) 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 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC Accredited Lab.

Designation Number: CN1411

Test Firm Registration Number: 567066

ISED Wireless Device Testing Laboratories

CAB identifier: CN0185

1.6. MEASUREMENT UNCERTAINTY

The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Items	Measurement Uncertainty
Power Line Conducted Emission (9kHz~150kHz)	±3.62dB
Power Line Conducted Emission (150kHz~30MHz)	±3.38dB
Radiated Emission (9kHz~30MHz)	±3.10dB
Radiated Emission (30MHz~1GHz)	±4.90dB
Radiated Emission (1GHz~18GHz)	±3.88dB
Radiated Emission (8GHz~40GHz)	±5.32dB
RF Conducted Power	±0.57dB
Conducted Spurious Emissions	±1.60dB
RF Frequency	±6.0 x 10 ⁻⁷

Note: All measurement uncertainty values are shown with a coverage factor of $k = 2$ to indicate a 95 % level of confidence.

1.7. ENVIRONMENTAL CONDITIONS

During the measurement the environmental conditions were within the listed ranges:

Normal Temperature:	+15°C ~ +35°C
Relative Humidity	20 % ~ 75 %
Air Pressure	98KPa ~ 101KPa

1.8. DESCRIPTION OF TEST MODES

The EUT only have one channel.

CHANNEL	FREQUENCY (MHz)
1	13.56

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports

The worst case was found when positioned on X axis for radiated emission. Following channel(s) was (were) selected for the final test as listed below:

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE	FT	PLC	BW	
A	√	√	√	√	DC5V from Host Unit with NFC

Where RE: Radiated Emission

FT: Frequency tolerance

PLC: Power Line Conducted Emission

BW: 20dB Bandwidth

For portable device, radiated emission was verified over X, Y, Z Axis, and shown the worst case in this report. The following operating modes were applied for the related test items. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data packets and antenna ports (if EUT with antenna diversity architecture), only the result of the worst case was recorded in the report.

EUT CONFIGURE MODE	TESTED CHANNEL	TESTED FREQUENCY (MHz)	MODULATION TYPE	AXIS
A	1	13.56	ASK	X

2. SUMMARY OF TEST RESULT

Test Cases			
FCC&IC Rule	Description of Test Item(s)	Result	Test Engineer
Part 15.207 RSS-Gen 8.8	Power Line Conducted Emission	Pass	Chen He
Part 15.215(c)	20dB Bandwidth	Pass	Chen He
Part 15.225(e)	Frequency tolerance	Pass	Chen He
Part 15.225(a)&(b)&(c)&(d)	Radiated Emissions	Pass	Chen He
Part 15.203	Antenna Requirement	Pass	Chen He

3. MEASUREMENT INSTRUMENTS LIST

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
1	Loop Antenna	Schwarzbeck	FMZB 1519	1519-025	02/19/2025	02/18/2026
2	Power Amplifier	HZEMC	HPA-9K0133	HYPA23029	02/19/2025	02/18/2026
3	Broadband Antenna	Schwarzbeck	VULB 9168	01763	02/19/2025	02/18/2026
4	Attenuator	PRM	ATT50-6-3	ATT50-6-3	01/20/2025	01/19/2026
5	Spectrum Analyzer	R&S	FSV40-N	101365	01/20/2025	01/19/2026
6	Horn Antenna	Schwarzbeck	BBHA 9120 D	02786	02/19/2025	02/18/2026
7	Horn Antenna	Schwarzbeck	ZLB7-18-40G-77	072410839	02/19/2025	02/18/2026
8	Power Amplifier	HZEMC	PA0118-43	HYPA23030	02/19/2025	02/18/2026
9	Power Amplifier	HZEMC	PA01840-45	HYPA23031	02/19/2025	02/18/2026
10	EMI Test Receiver	R&S	ESCI	101196	01/20/2025	01/19/2026
11	LISN	R&S	ENV216	102374	01/20/2025	01/19/2026
12	Pulse Limiter	Schwarzbeck	ESH3-Z2	0357.8810.54	01/20/2025	01/19/2026
13	MXA Signal Analyzer	Keysight	N9020A	MY52091389	01/20/2025	01/19/2026
14	Power Sensor	Agilent	U2021XA	MY54110007	01/31/2025	01/30/2026
15	Power Sensor	Agilent	U2021XA	MY54110009	01/31/2025	01/30/2026
16	MXG Vector Signal Generator	Agilent	N5182A	MY47070153	01/20/2025	01/19/2026
17	Analog Signal Source	Keysight	N5173B	MY60403029	01/20/2025	01/19/2026
18	Vector Signal Generator	R&S	SMCV100B	106103	01/20/2025	01/19/2026
19	WIDEBAND RADIO COMMUNICATION TESTER	R&S	CMW500	118780	01/20/2025	01/19/2026
20	DC POWER SUPPLY	MAISHENG	MT-305DS	2021040016	02/28/2025	02/27/2026
21	Const Temp. & Humidity Chamber	GRT	GR-HWX-150L	GR25010601	01/20/2025	01/19/2026

Test Software		
Software name	Model	Version
Conducted Emission Measurement Software	FASLAB	V4.1
Radiated Emission Measurement Software	FASLAB	V4.1
Bluetooth and WIFI Test System	MTS 8310	V3.0.0.0

4. ANTENNA REQUIREMENT

1) Standard Requirement

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.

2) Conclusion

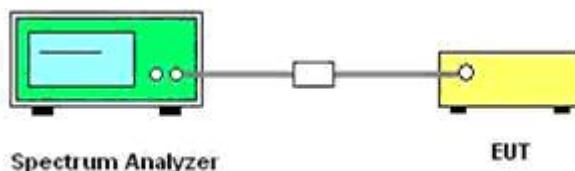
Antenna in the interior of the equipment and no consideration of replacement. It complies with the standard requirement.

5. 20DB BANDWIDTH AND OCCUPIED BANDWIDTH

5.1. LIMIT

None; for reporting purposes only.

5.2. TEST SETUP



5.3. TEST PROCEDURE

- a. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- b. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
- c. Measure the frequency difference of two frequencies that were attenuated 20dB from the reference level. Record the frequency difference as the emission bandwidth.
- d. Repeat above procedures until all frequencies measured were complete.

5.4. TEST RESULT

CHANNEL	CHANNEL FREQUENCY (MHz)	20dB BANDWIDTH (KHz)
1	13.56	8.093

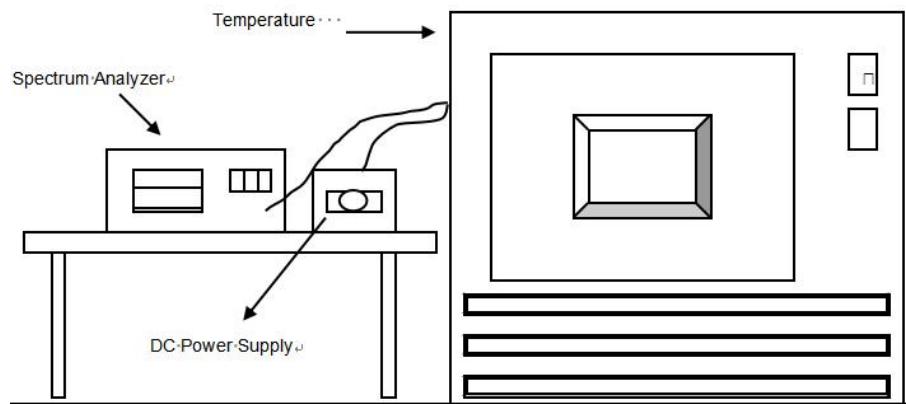


6. FREQUENCY TOLERANCE

6.1. LIMIT

The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% of the operating frequency over a temperature variation of -20 degrees to 50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.

6.2. TEST SETUP



6.3. TEST PROCEDURE

- a) The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
- b) Turn the EUT on and couple its output to a spectrum analyzer.
- c) Turn the EUT off and set the chamber to the highest temperature specified.
- d) Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
- e) Repeat step c) and d) with the temperature chamber set to the lowest temperature.
- f) The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

6.4. TEST RESULT

FREQUEMCY STABILITY VERSUS TEMP.									
TEMP. (°C)	POWER SUPPLY (V)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency	Frequency Drift	Measured Frequency	Frequency Drift	Measured Frequency	Frequency Drift	Measured Frequency	
		(MHz)	%	(MHz)	%	(MHz)	%	(MHz)	
55	DC5V	13.55992	-0.00059	13.55993	-0.00052	13.55993	-0.00052	13.55993	-0.00052
50	DC5V	13.55994	-0.00044	13.55994	-0.00044	13.55994	-0.00044	13.55994	-0.00044
40	DC5V	13.56	0.00000	13.56001	0.00007	13.56	0.00000	13.56	0.00000
30	DC5V	13.55994	-0.00044	13.55994	-0.00044	13.55994	-0.00044	13.55994	-0.00044
20	DC5V	13.56005	0.00037	13.56005	0.00037	13.56006	0.00044	13.56005	0.00037
10	DC5V	13.55999	-0.00007	13.55997	-0.00022	13.55998	-0.00015	13.55998	-0.00015
0	DC5V	13.56002	0.00015	13.56002	0.00015	13.56003	0.00022	13.56002	0.00015
-10	DC5V	13.56004	0.00029	13.56004	0.00029	13.56004	0.00029	13.56004	0.00029
-20	DC5V	13.56001	0.00007	13.56001	0.00007	13.56	0.00000	13.56	0.00000

FREQUEMCY STABILITY VERSUS VOLTAGE									
TEMP. (°C)	POWER SUPPLY (V)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency	Frequency Drift	Measured Frequency	Frequency Drift	Measured Frequency	Frequency Drift	Measured Frequency	
		(MHz)	%	(MHz)	%	(MHz)	%	(MHz)	
20	DC5V	13.55994	-0.00044	13.55994	-0.00044	13.55994	-0.00044	13.55994	-0.00044
	DC5V	13.55994	-0.00044	13.55994	-0.00044	13.55994	-0.00044	13.55994	-0.00044
	DC4.25V	13.55994	-0.00044	13.55994	-0.00044	13.55994	-0.00044	13.55994	-0.00044

7. RADIATED EMISSIONS AND RADIATED BAND EDGES MEASUREMENT

7.1. LIMIT

According to §15.225, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

The field strength of any emissions shall not exceed the following limits:

- (a) 15.848mV/m(84dB_uV/m) at 30m, within the band 13.553-13.567 MHz;
- (b) 334uV/m(50.5dB_uV/m) at 30m, within the band 13.410-13.553 MHz and 13.567-13.710MHz;
- (c) 106uV/m(40.5dB_uV/m) at 30m, within the band 13.110-13.410 MHz and 13.710-14.010MHz;

Limits of Spurious Emissions				
Frequency	Field strength (microvolt/meter)	Limit (dB _u V/m)	Remark	Measurement distance (m)
0.009MHz~0.490MHz	2400/F(kHz)	---	---	300
0.490MHz~1.705MHz	24000/F(kHz)	---	---	30
1.705MHz~30MHz	30	---	---	30
30MHz~88MHz	100	40.0	Quasi-peak	3
88MHz~216MHz	150	43.5	Quasi-peak	3
216MHz~960MHz	200	46.0	Quasi-peak	3
960MHz~1GHz	500	54.0	Quasi-peak	3
Above 1GHz	500	54.0	Average	3

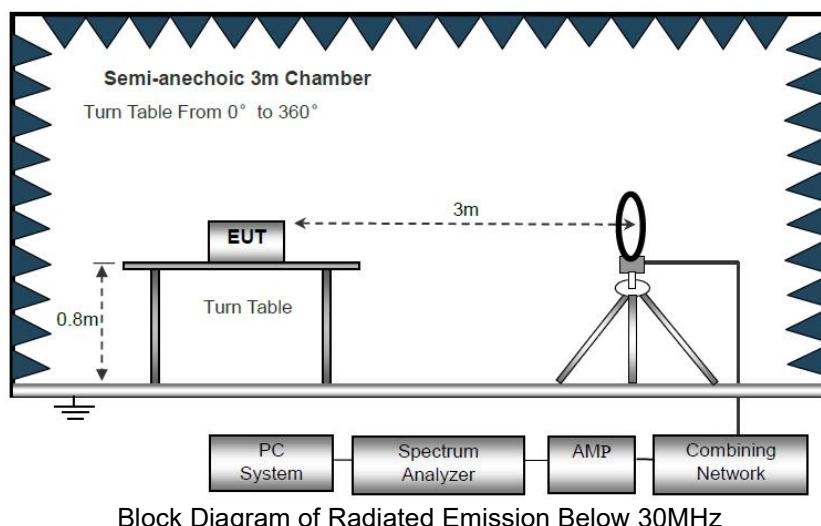
Remark:

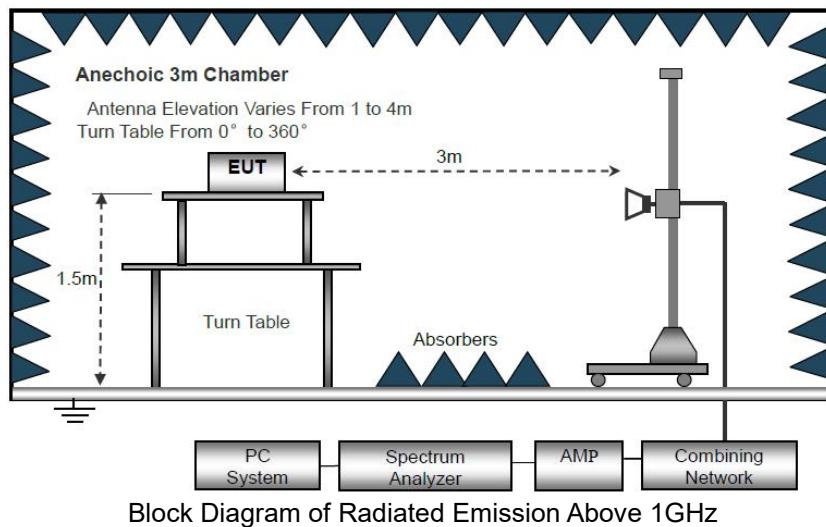
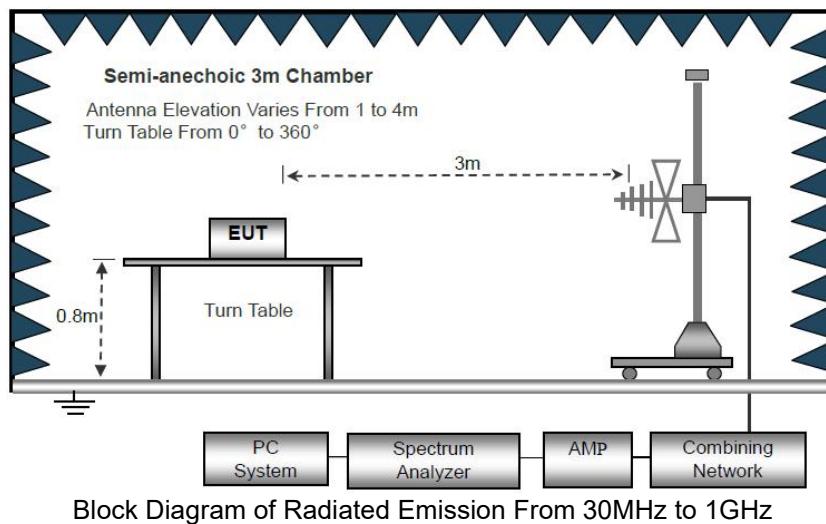
- a) The lower limit shall apply at the transition frequencies.
- b) Emission level (dB_uV/m) = 20*log Emission level (uV/m).
- c) For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.
- d) The measured field strength was extrapolated to distance 30 meters, using the formula that the limit of field strength varies as the inverse distance square (40dB per decade of distance)

Example:

$$\begin{aligned}
13.56\text{MHz} &= 15848\text{uV/m} & 30\text{m} \\
&= 84\text{dB}_u\text{V/m} & 30\text{m} \\
&= 84+20\log(30/3)^2 & 3\text{m} \\
&= 124\text{dB}_u\text{V/m}
\end{aligned}$$

7.2. TEST SETUP





7.3. TEST PROCEDURE

- Below 1GHz measurement the EUT is placed on a turntable which is 0.8m above ground plane, and above 1GHz measurement EUT was placed on a low permittivity and low loss tangent turn table which is 1.5m above ground plane.
- Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0 degree to 360 degree to acquire the highest emissions from EUT.
- And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- Repeat above procedures until all frequency measurements have been completed.
- Radiated emission test frequency band from 9KHz to 25GHz.
- The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and record the worst case in this report.

g) The distance between test antenna and EUT as following table states:

Test Frequency range	Test Antenna Type	Test Distance
9KHz~30MHz	Active Loop Antenna	3
30MHz~1GHz	Bilog Antenna	3
1GHz~18GHz	Horn Antenna	3
18GHz~25GHz	Horn Antenna	1

h) Setting test receiver/spectrum as following table states:

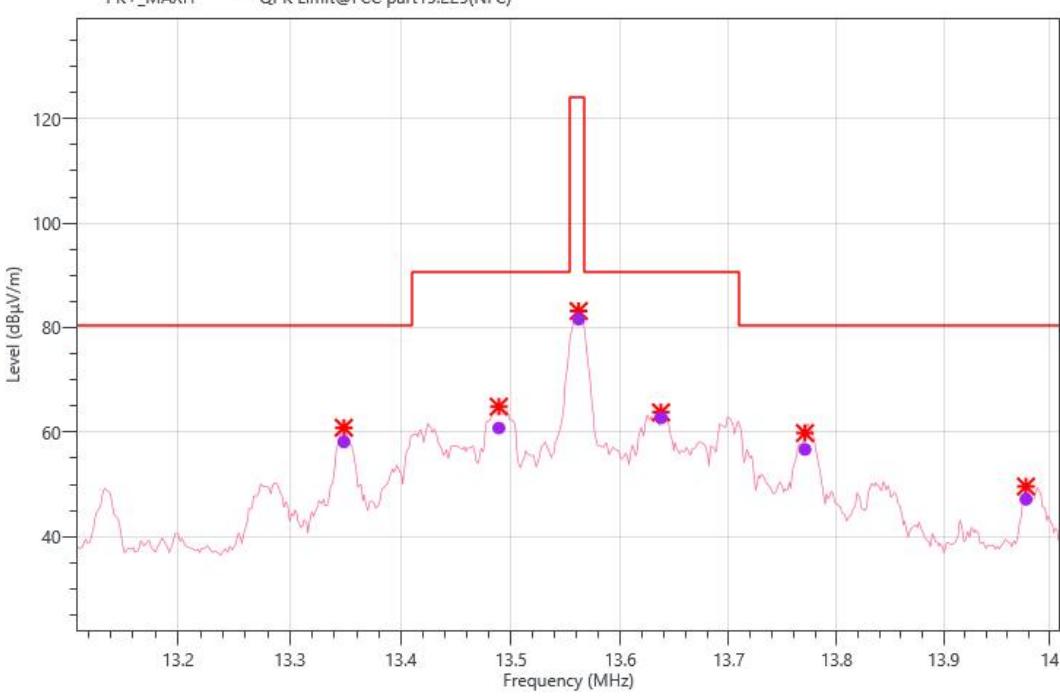
Test Frequency range	Test Receiver/Spectrum Setting	Detector
9KHz~150KHz	RBW=200Hz/VBW=3KHz, Sweep time=Auto	QP
150KHz~30MHz	RBW=9KHz/VBW=100KHz, Sweep time=Auto	QP
30MHz~1GHz	RBW=120KHz/VBW=1000KHz, Sweep time=Auto	QP
1GHz~40GHz	Peak Value: RBW=1MHz/VBW=3MHz, Sweep time=Auto Average Value: RBW=1MHz/VBW=10Hz, Sweep time=Auto	Peak

7.4. TEST RESULT

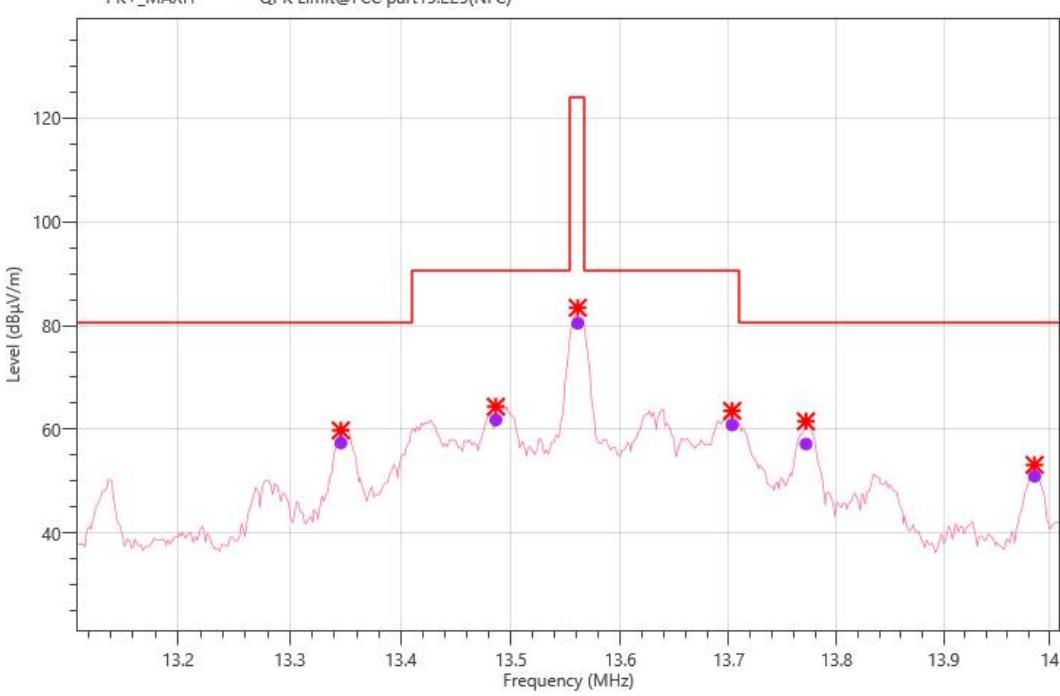
Pass.

Remark:

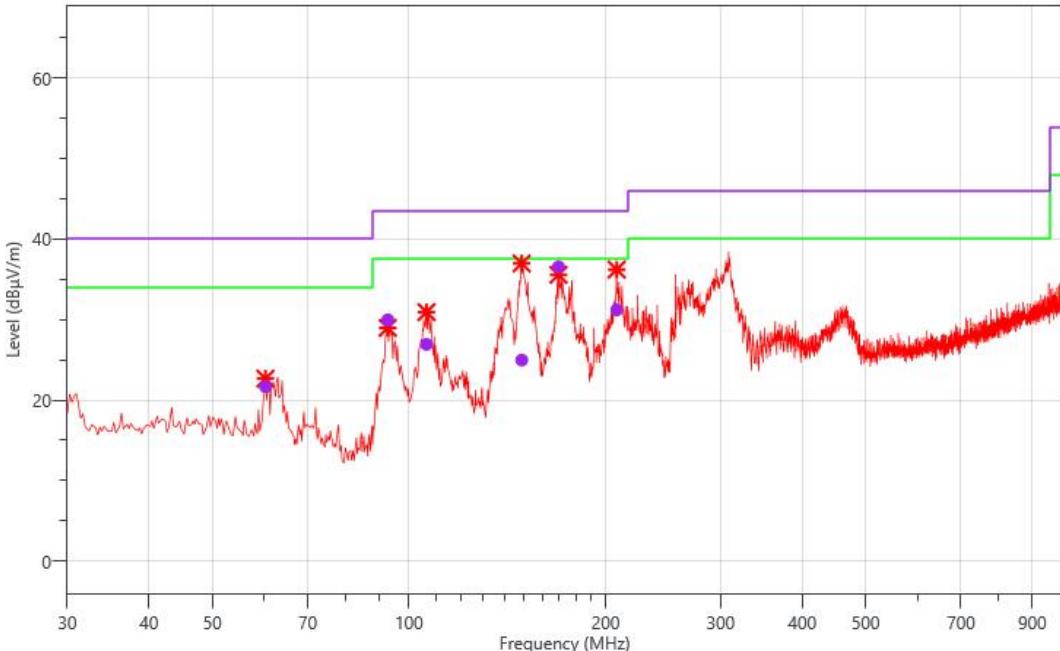
- a) Pre-scan all modes and recorded the worst case in this report.
- b) Radiated emission test from 9KHz to 10th harmonic of fundamental was verified, and the emission levels from 9kHz to 30MHz are attenuated 20dB below the limit and not recorded in report.

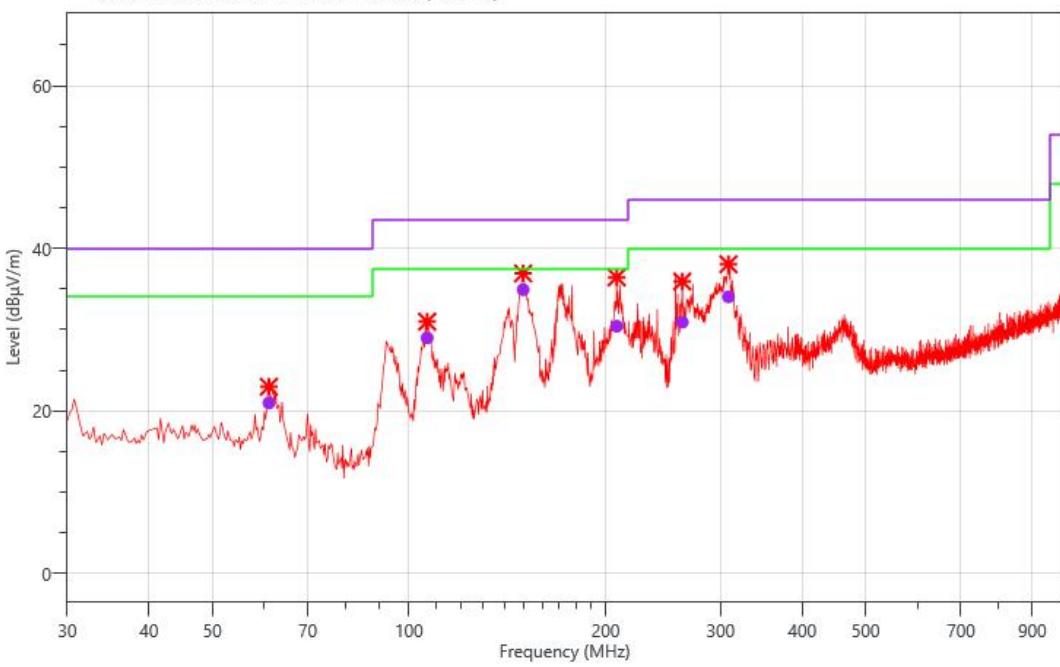
Radiated Emission Test Data (BELOW 30MHz at 3m)								
Environmental Conditions		24.6°C, 53.4% RH		Test Engineer		Chen He		
Worst Test Mode:		NFC		Polarity:		Horizontal		
								
No.	Freq. (MHz)	Reading (dB μ V)	Corr. (dB)	Meas. (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Det.	Pol.
1	13.349	38.18	19.97	58.15	80.50	22.35	QPK	H
2	13.489	40.84	19.96	60.80	90.50	29.70	QPK	H
3	13.562	61.69	19.96	81.65	124.00	42.35	QPK	H
4	13.637	42.79	19.95	62.74	90.50	27.76	QPK	H
5	13.771	36.76	19.95	56.71	80.50	23.79	QPK	H
6	13.978	27.24	19.94	47.18	80.50	33.32	QPK	H

Remark:
Emission Level = Reading + Factor;
Factor = Antenna Factor + Cable Loss – Pre-amplifier;
Margin= Limit -Emission Level .

Radiated Emission Test Data (30MHz to 1GHz)								
Environmental Conditions		24.6°C, 53.4% RH		Test Engineer		Chen He		
Worst Test Mode:		NFC		Polarity:		Vertical		
								
No.	Freq. (MHz)	Reading (dB μ V)	Corr. (dB)	Meas. (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Det.	Pol.
1	13.346	37.43	19.97	57.40	80.50	23.10	QPK	V
2	13.486	41.87	19.96	61.83	90.50	28.67	QPK	V
3	13.561	60.48	19.96	80.44	124.00	43.56	QPK	V
4	13.703	40.89	19.95	60.84	90.50	29.66	QPK	V
5	13.772	37.24	19.95	57.19	80.50	23.31	QPK	V
6	13.986	31.03	19.94	50.97	80.50	29.53	QPK	V

Remark:
Emission Level = Reading + Factor;
Factor = Antenna Factor + Cable Loss – Pre-amplifier;
Margin= Limit -Emission Level .

Radiated Emission Test Data (30MHz to 1GHz)									
Environmental Conditions		24.6°C, 53.4% RH		Test Engineer		Chen He			
Worst Test Mode:		NFC		Polarity:		Horizontal			
									
No.	Freq. (MHz)	Reading (dB μ V)	Corr. (dB)	Meas. (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Det.	Pol.	
1	60.313	35.65	-13.98	21.67	40.00	18.33	QPK	H	
2	92.808	46.60	-16.64	29.96	43.50	13.54	QPK	H	
3	106.388	42.48	-15.56	26.92	43.50	16.58	QPK	H	
4	148.825	36.59	-11.62	24.97	43.50	18.53	QPK	H	
5	169.438	48.64	-12.09	36.55	43.50	6.95	QPK	H	
6	207.995	46.36	-15.16	31.20	43.50	12.30	QPK	H	
<p>Remark:</p> <p>Emission Level = Reading + Factor;</p> <p>Factor = Antenna Factor + Cable Loss – Pre-amplifier;</p> <p>Margin= Limit -Emission Level .</p>									

Radiated Emission Test Data (30MHz to 1GHz)								
Environmental Conditions		24.6°C, 53.4% RH		Test Engineer		Chen He		
Worst Test Mode:		NFC		Polarity:		Vertical		
 <p>Legend: PK+_MAXH (Red line with stars), [QPK Limit@FCC Part 15 E Field 3m Class B (30M-1G)]-6 dB (Green line), QPK Limit@FCC Part 15 E Field 3m Class B (30M-1G) (Purple line)</p> <p>Y-axis: Level (dBμV/m) from 0 to 60. X-axis: Frequency (MHz) from 30 to 900.</p>								
No.	Freq. (MHz)	Reading (dB μ V)	Corr. (dB)	Meas. (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Det.	Pol.
1	61.040	35.04	-14.05	20.99	40.00	19.01	QPK	V
2	106.630	44.49	-15.5	28.99	43.50	14.51	QPK	V
3	149.553	46.49	-11.57	34.92	43.50	8.58	QPK	V
4	207.995	45.59	-15.16	30.43	43.50	13.07	QPK	V
5	262.073	43.74	-12.81	30.93	46.00	15.07	QPK	V
6	308.390	45.27	-11.22	34.05	46.00	11.95	QPK	V

Remark:
Emission Level = Reading + Factor;
Factor = Antenna Factor + Cable Loss – Pre-amplifier;
Margin= Limit -Emission Level .

8. POWER LINE CONDUCTED EMISSIONS

8.1. LIMIT

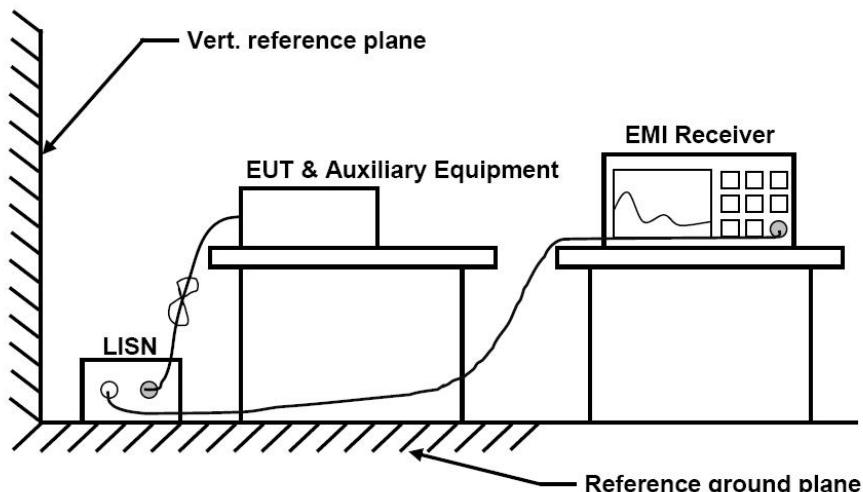
According to the rule FCC Part 15.207, Conducted emissions limit, the limit for a wireless device as below:

Frequency Range (MHz)	Conducted emissions (dBuV)	
	Quasi-peak	Average
0.15~0.5	66 to 56	56 to 46
0.5~5	56	46
5~30	60	50

Remark:

- a) The lower limit shall apply at the transition frequencies.
- b) The limit decreases linearly with the logarithm of the frequency in the range 0.15 to 0.50MHz.

8.2. TEST SETUP



8.3. TEST PROCEDURE

Test frequency range :150KHz-30MHz

- a) The mains terminal disturbance voltage test was conducted in a shielded room.
- b) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a $50\Omega/50\mu\text{H} + 5\Omega$ 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.
- c) 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,
- d) 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.

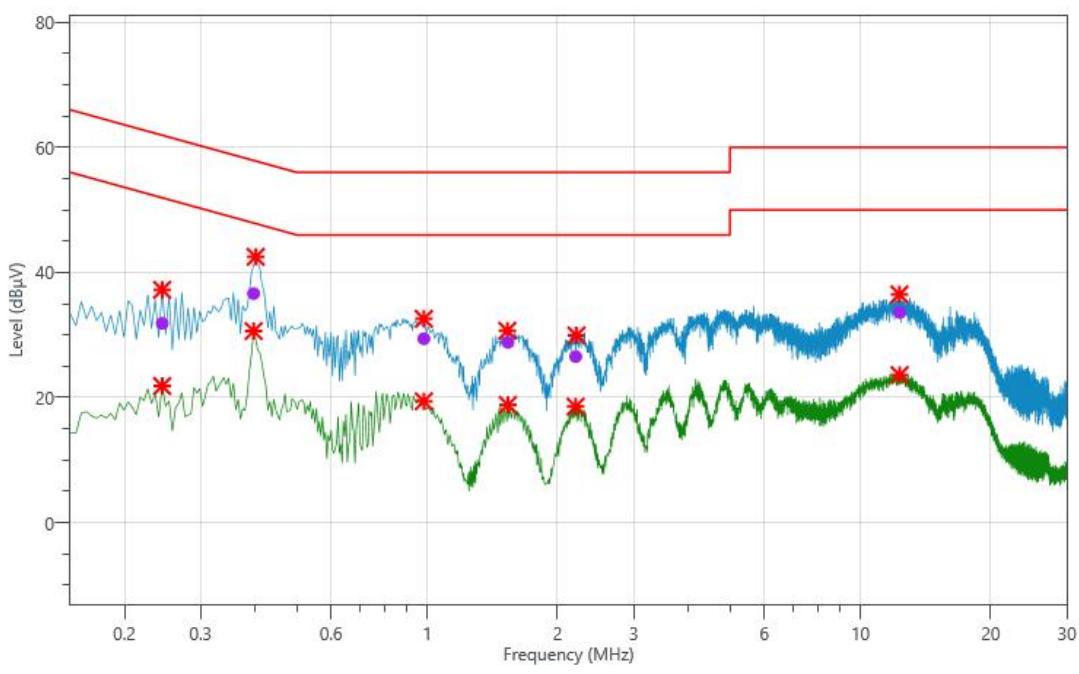
e) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

8.4. TEST RESULT

Pass.

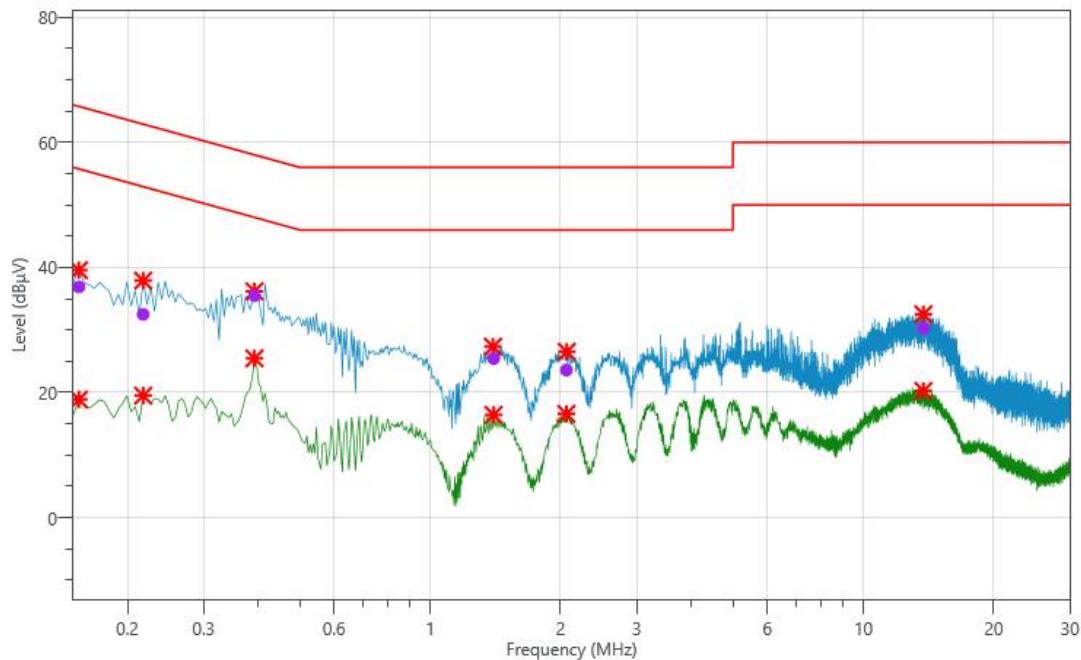
Remark:

a) AC Power line conducted emissions pre-test both at AC 120V/60Hz and AC 240V/50Hz modes, recorded worst case.

Test Plots and Data of Conducted Emissions																																																																																																																																												
Environmental Conditions			24.6°C, 53.4% RH		Test Engineer			Chen He																																																																																																																																				
Test Voltage:			AC 120V/60Hz		Test Power Line:			Live																																																																																																																																				
																																																																																																																																												
<table border="1"> <thead> <tr> <th>No.</th><th>Freq. (MHz)</th><th>Reading (dBμV)</th><th>Corr. (dB)</th><th>Meas. (dBμV)</th><th>Limit (dBμV)</th><th>Margin (dB)</th><th>Det.</th><th>Line</th><th>PE</th></tr> </thead> <tbody> <tr><td>1</td><td>0.245</td><td>21.86</td><td>9.99</td><td>31.85</td><td>61.94</td><td>30.09</td><td>QPK</td><td>L1</td><td>GND</td></tr> <tr><td>2</td><td>0.245</td><td>11.86</td><td>9.99</td><td>21.85</td><td>51.94</td><td>30.09</td><td>AVG</td><td>L1</td><td>GND</td></tr> <tr><td>3</td><td>0.398</td><td>20.63</td><td>9.99</td><td>30.62</td><td>47.91</td><td>17.29</td><td>AVG</td><td>L1</td><td>GND</td></tr> <tr><td>4</td><td>0.398</td><td>26.63</td><td>9.99</td><td>36.62</td><td>57.91</td><td>21.29</td><td>QPK</td><td>L1</td><td>GND</td></tr> <tr><td>5</td><td>0.983</td><td>19.39</td><td>10.01</td><td>29.40</td><td>56.00</td><td>26.60</td><td>QPK</td><td>L1</td><td>GND</td></tr> <tr><td>6</td><td>0.983</td><td>9.39</td><td>10.01</td><td>19.40</td><td>46.00</td><td>26.60</td><td>AVG</td><td>L1</td><td>GND</td></tr> <tr><td>7</td><td>1.536</td><td>18.80</td><td>10.02</td><td>28.82</td><td>56.00</td><td>27.18</td><td>QPK</td><td>L1</td><td>GND</td></tr> <tr><td>8</td><td>1.536</td><td>8.80</td><td>10.02</td><td>18.82</td><td>46.00</td><td>27.18</td><td>AVG</td><td>L1</td><td>GND</td></tr> <tr><td>9</td><td>2.202</td><td>8.53</td><td>10.02</td><td>18.55</td><td>46.00</td><td>27.45</td><td>AVG</td><td>L1</td><td>GND</td></tr> <tr><td>10</td><td>2.202</td><td>16.53</td><td>10.02</td><td>26.55</td><td>56.00</td><td>29.45</td><td>QPK</td><td>L1</td><td>GND</td></tr> <tr><td>11</td><td>12.323</td><td>21.07</td><td>12.52</td><td>33.59</td><td>60.00</td><td>26.41</td><td>QPK</td><td>L1</td><td>GND</td></tr> <tr><td>12</td><td>12.323</td><td>11.07</td><td>12.52</td><td>23.59</td><td>50.00</td><td>26.41</td><td>AVG</td><td>L1</td><td>GND</td></tr> </tbody> </table>											No.	Freq. (MHz)	Reading (dBμV)	Corr. (dB)	Meas. (dBμV)	Limit (dBμV)	Margin (dB)	Det.	Line	PE	1	0.245	21.86	9.99	31.85	61.94	30.09	QPK	L1	GND	2	0.245	11.86	9.99	21.85	51.94	30.09	AVG	L1	GND	3	0.398	20.63	9.99	30.62	47.91	17.29	AVG	L1	GND	4	0.398	26.63	9.99	36.62	57.91	21.29	QPK	L1	GND	5	0.983	19.39	10.01	29.40	56.00	26.60	QPK	L1	GND	6	0.983	9.39	10.01	19.40	46.00	26.60	AVG	L1	GND	7	1.536	18.80	10.02	28.82	56.00	27.18	QPK	L1	GND	8	1.536	8.80	10.02	18.82	46.00	27.18	AVG	L1	GND	9	2.202	8.53	10.02	18.55	46.00	27.45	AVG	L1	GND	10	2.202	16.53	10.02	26.55	56.00	29.45	QPK	L1	GND	11	12.323	21.07	12.52	33.59	60.00	26.41	QPK	L1	GND	12	12.323	11.07	12.52	23.59	50.00	26.41	AVG	L1	GND
No.	Freq. (MHz)	Reading (dBμV)	Corr. (dB)	Meas. (dBμV)	Limit (dBμV)	Margin (dB)	Det.	Line	PE																																																																																																																																			
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<p>Remark:</p> <p>Emission Level = Reading + Correct Factor;</p> <p>Correct Factor = LISN Factor + Cable Loss + Pulse Limiter Attenuation Factor</p> <p>Margin= Emission Level - Limit.</p>																																																																																																																																												

Test Plots and Data of Conducted Emissions (Worst Case: Hopping Mode-GFSK)

Environmental Conditions	24.6°C, 53.4% RH	Test Engineer	Chen He
Test Voltage:	AC 120V/60Hz	Test Power Line:	Neutral



No.	Freq. (MHz)	Reading (dBμV)	Corr. (dB)	Meas. (dBμV)	Limit (dBμV)	Margin (dB)	Det.	Line	PE
1	0.155	26.90	9.99	36.89	65.75	28.86	QPK	N	GND
2	0.155	8.90	9.99	18.89	55.75	36.86	AVG	N	GND
3	0.218	22.51	9.99	32.50	62.91	30.41	QPK	N	GND
4	0.218	9.51	9.99	19.50	52.91	33.41	AVG	N	GND
5	0.393	25.48	9.99	35.47	58.00	22.53	QPK	N	GND
6	0.393	15.48	9.99	25.47	48.00	22.53	AVG	N	GND
7	1.401	15.42	10.01	25.43	56.00	30.57	QPK	N	GND
8	1.401	6.42	10.01	16.43	46.00	29.57	AVG	N	GND
9	2.063	6.57	10.02	16.59	46.00	29.41	AVG	N	GND
10	2.063	13.57	10.02	23.59	56.00	32.41	QPK	N	GND
11	13.763	17.13	13.13	30.26	60.00	29.74	QPK	N	GND
12	13.763	7.13	13.13	20.26	50.00	29.74	AVG	N	GND

Remark:

Emission Level = Reading + Correct Factor;

Correct Factor = LISN Factor + Cable Loss + Pulse Limiter Attenuation Factor

Margin= Emission Level - Limit.

9. PHOTOGRAPHS OF TEST SETUP

Please refer to separated files for Test Setup Photos of the EUT.

10. EXTERNAL PHOTOGRAPHS OF THE EUT

Please refer to separated files for External Photos of the EUT.

11. INTERNAL PHOTOGRAPHS OF THE EUT

Please refer to separated files for Internal Photos of the EUT.

*****THE END*****