



CERTIFICATE #5473.01

Test Report No.:
GJW2024-4237-RF

TEST REPORT

FCC ID : 2BDZP-IOCAH28
Applicant : XIAMEN GALAXY CAMPHOL TECHNOLOGY CO., LTD.
Product Name : Electric Vehicle Charger
Mode No. : See Page 4
Classification Of Test: COMMISSION TEST

CVC Testing Technology Co., Ltd.

Applicant	Name: XIAMEN GALAXY CAMPHOL TECHNOLOGY CO., LTD. Address: UNIT 04,14TH FLOOR BUILDING A1,SOFTWARE PARK 3,JIMEI DISTRICT,XIAMEN, FUJIAN,CHINA		
Manufacturer	Name: XIAMEN GALAXY CAMPHOL TECHNOLOGY CO., LTD. Address: UNIT 04,14TH FLOOR BUILDING A1,SOFTWARE PARK 3,JIMEI DISTRICT,XIAMEN, FUJIAN,CHINA		
Equipment Under Test	Product Name : Electric Vehicle Charger Model No. : IOCAH28-50CRW4 Trade mark : / Serial no. : / Sampling : 1-1		
Date of Receipt.	2024.7.4	Date of Testing	2024.8.1
Test Specification		Test Result	
FCC CFR47 Part 15C Radio Frequency Devices ANSI C63.10-2020/Cor1-2023		PASS	
Evaluation of Test Result	The equipment under test was found to comply with the requirements of the standards applied. Seal of CVC Issue Date: 2024-11-01		
Approved by:	Reviewed by:	Tested by	
Chen Huawen 	Xu Zhenfei 	Lu Weiji 	
Other Aspects: NONE.			
Abbreviations:OK,	Pass= passed	Fail = failed	N/A= not applicable
EUT= equipment, sample(s) under tested			
This test report relates only to the EUT, and shall not be reproduced except in full, without written approval of CVC .			

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1. General Product Information

1.1 General information

Product Name	Electric Vehicle Charger
Model No.	IOCAH28-50CRW4
Additional model	<p>IOCAHX-YZARCD</p> <p>X: denotes for model series: 28: 28 series</p> <p>Y: denotes for output current: 32: 32A 40: 40A 50: 50A (Without plug-connected)</p> <p>Z: denotes for input connection method: Blank: Without plug-connected A: Used NEMA 6-50P plug-connected B: Used NEMA 14-50P plug-connected</p> <p>A: denotes for communication mode: Blank: Standard type C: Used communication protocol</p> <p>R: denotes for RFID function: R: RFID reader embedded</p> <p>C: denotes for wireless function: Blank: Standard type W: Wifi and Bluetooth function embedded</p> <p>D: denotes for 4G function: Blank: Standard type 4: 4G function embedded</p>
Power Supply	<p>Input voltage: 200-240Vac, 1 phase, 50/60Hz.</p> <p>Input current:</p> <p>For IOCAH10-32 and IOCAH28-32 series: 32A Max</p> <p>For IOCAH10-40 and IOCAH28-40 series: 40A Max</p> <p>For IOCAH10-50 and IOCAH28-50 series: 50A Max</p> <p>Output voltage: Same as input voltage.</p> <p>Output current: Same as input current.</p>
Serial Number(SN)	/
hardware	1.0
software	202401100
specific power settings	Default
Antenna Type	Internal Antenna
Antenna Connector	A permanently attached antenna
Antenna Gain	0 dBi (provided by client)
Beamforming gain	Unsupported (provided by client)
Frequency Range	13.56MHz
Channel Number	1 Channel
Type of Modulation	ASK
Max. Power	-42.96dBm
Operate Temp.Range	-30~45°C
Note:	

1. The information of the EUT is declared by the manufacturer.
2. The laboratory is not responsible for the product technical specification provided by the client.
3. EUT is an Electric Vehicle Charger function with RFID, WIFI, Bluetooth and LTE functions. The FCC ID of wireless part contains OYR-CF-813B and XMR201909EC25AFX. All models are identical except for the power rating and input lines. We test IOCAH28-50CRW4 as representative and list the result in this report.

2. Test Sites

2.1 Test Facilities

The tests and measurements refer to this report were performed by RF testing Lab. of CVC Testing Technology Co., Ltd.

Add.: No.3, Tiantaiyi Road, Kaitai Avenue, Science City, Guangzhou, Guangdong, 510663, People's Republic of China

Telephone : +86-20-32293888

Fax : +86-20-32293889

FCC(Test firm designation number: CN1282)

2.2 Description of Non-standard Method and Deviations

The testing and measurement methods used in this report are applied by all standard methods. Not any non-standard method or deviation from the used standards was used.

2.3 List of Test and Measurement Instruments

Refer to **Appendix A**.

3. Test Configuration

3.1 Test Mode

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

Test Mode	Antenna Delivery	Test Channel
Transmitting	1TX	13.56MHz

The radiated emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in lie-down position (X axis) and the worst case was recorded.

In order to find the worst case condition, Pre-tests are needed at the presence of different data rate and different channels. Preliminary tests have been done on all the configurations for confirming worst case. Data rate below means worst-case rate of each test item.

Worst-case data rates and channels are shown as following table.

Test Mode	Data Rate		
	Antenna 1	Antenna 2	MIMO
Transmitting	✓	/	/

Test Items	Test Antenna	Test Mode	Test Channel
Conducted Emissions	Antenna 1	Transmitting	13.56MHz
The field strength of Fundamental Emission	Antenna 1	Transmitting	13.56MHz
Radiated Emissions	Antenna 1	Transmitting	13.56MHz
Frequency tolerance	Antenna 1	Transmitting	13.56MHz
20dB Bandwidth	Antenna 1	Transmitting	13.56MHz

4. Summary of measurement results

Summary of measurements of results	Clause in FCC rules	Verdict	Note
Conducted Emissions	15.207	PASS	/
The field strength of Fundamental Emission	FCC 15.225(a)&(b)&(c)	PASS	/
Radiated Emissions	FCC 15.225 (d) FCC 15.209	PASS	/
Frequency tolerance	FCC 15.225 (e)	PASS	/
20dB Bandwidth	FCC 15.215 (c)	PASS	/
Antenna Requirement	15.203	PASS	See note 1

Note 1: According to 15.203, it is considered sufficient to comply with the provisions of this section.

5. Measurement procedure

5.1 Conducted Emission

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.3kPa

Method of Measurement:

The EUT was setup according to ANSI C63.10-2020/Cor1-2023 for compliance to FCC 47CFR 15.247 requirements. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs) Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.

The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.

Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

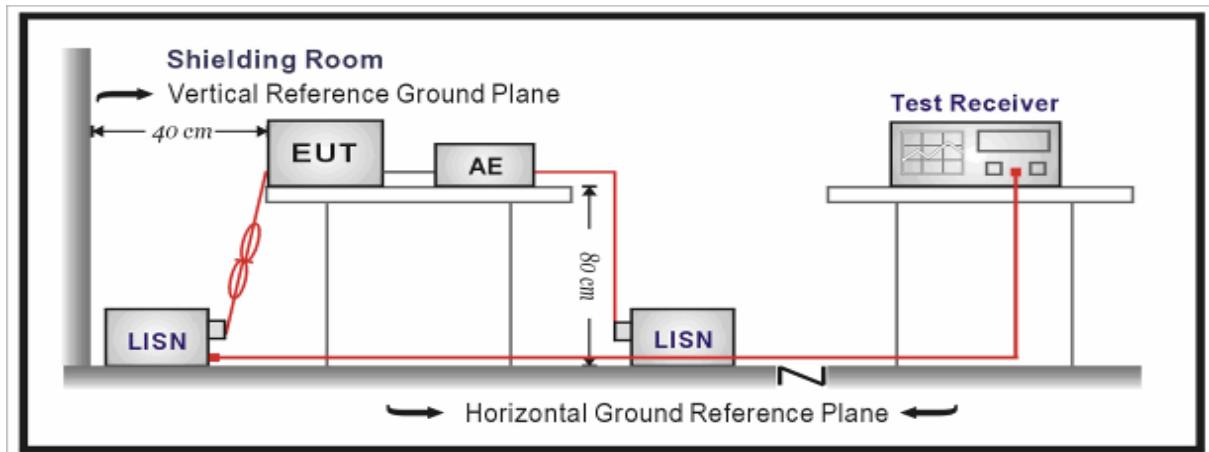
Limits:

Frequency (MHz)	Conducted Limits(dB μ V)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56 [*]	56 to 46 [*]
0.5 - 5	56	46
5 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

Test Setup:



Measurement Data

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

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

Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Level = Reading + Factor.

Measurement Uncertainty:

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$. $U = 3.12$ dB.

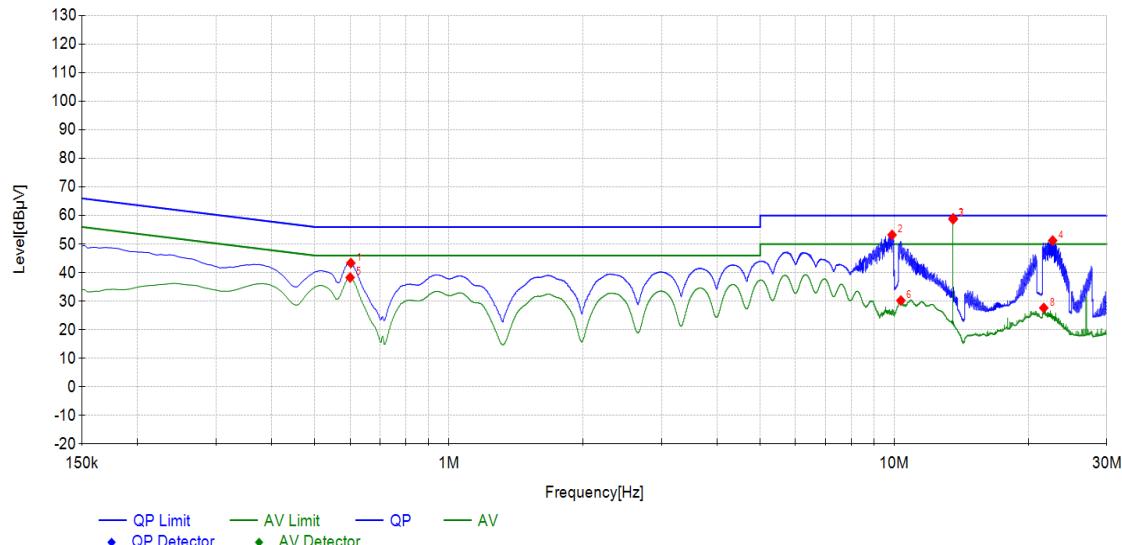
Test Results:

During the test, the Conducted Emission from 150kHz to 30MHz was performed in all modes with all channels, and all antennas. Transmitting, 13.56MHz, Antenna 1 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

Power Line		L1						
Test channel			Worst-Case					

NO.	Freq. [MHz]	Factor [dB]	Reading [dB μ V]	Level [dB μ V]	Limit [dB μ V]	Margin [dB]	Detector	Pass/ Fail
1	0.6022	10.28	33.09	43.37	56.00	12.63	QP	PASS
2	9.888	10.90	42.33	53.23	60.00	6.77	QP	PASS
3	13.56*	11.84	47.18	59.02	---	---	QP	---
4	22.6838	11.70	39.54	51.24	60.00	8.76	QP	PASS
5	0.6	10.28	28.03	38.31	46.00	7.69	AV	PASS
6	10.347	11.00	19.25	30.25	50.00	19.75	AV	PASS
7	13.56*	11.84	46.83	58.67	---	---	AV	---
8	21.6622	11.66	16.00	27.66	50.00	22.34	AV	PASS

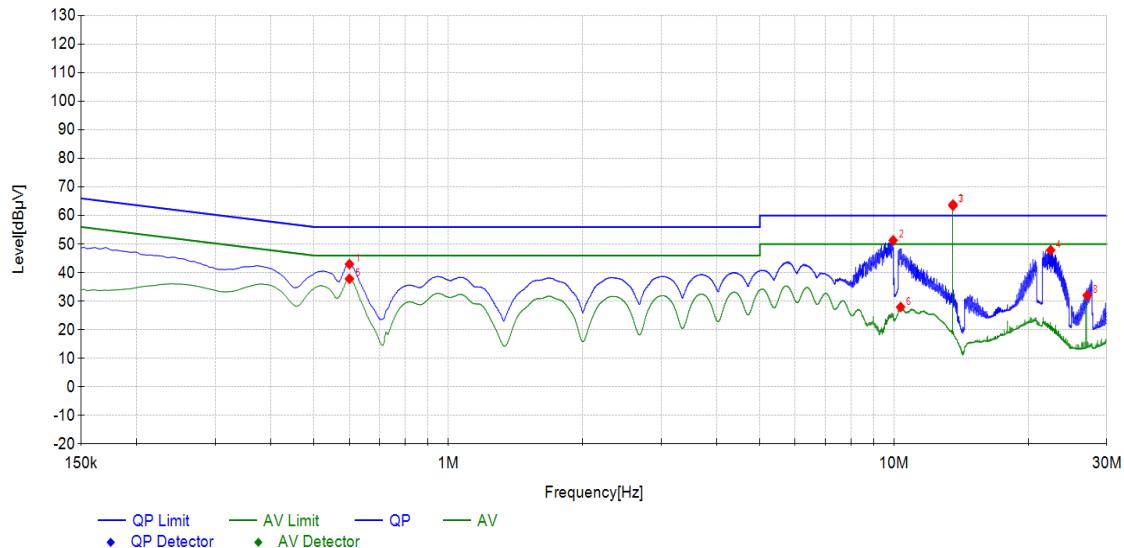
** fundamental frequency.



Power Line			N					
Test channel			Worst-Case					

NO.	Freq. [MHz]	Factor [dB]	Reading [dB μ V]	Level [dB μ V]	Limit [dB μ V]	Margin [dB]	Detector	Pass/Fail
1	0.6	10.23	32.77	43.00	56.00	13.00	QP	PASS
2	9.9555	10.62	40.70	51.32	60.00	8.68	QP	PASS
3	13.56*	10.95	52.92	63.87	---	---	QP	---
4	22.4587	11.18	36.69	47.87	60.00	12.13	QP	PASS
5	0.6	10.23	27.62	37.85	46.00	8.15	AV	PASS
6	10.347	10.65	17.33	27.98	50.00	22.02	AV	PASS
7	13.56*	10.95	52.47	63.42	---	---	AV	---
8	27.1208	11.32	20.76	32.08	50.00	17.92	AV	PASS

** fundamental frequency.



5.2 Radiated Emission

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.3kPa

Method of Measurement:

The EUT was setup and tested according to ANSI C63.10-2020/Cor1-2023.

The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from Antenna to the EUT was 3 meters.

The Antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the Antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10-2020/Cor1-2023 on radiated measurement.

The resolution bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

The frequency range from 30MHz to 10th harmonic is checked.

Note: When doing emission measurement above 1GHz, the horn Antenna will be bended down a little (as horn Antenna has the narrow beamwidth) in order to keeping the Antenna in the “cone of radiation” of EUT.

The 3dB beamwidth is 10~60 degrees for H-plane and 10~90 degrees for E-plane.

Limits:

§15.225

(a) The field strength of any emissions within the band 13.553-13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters. (124.00dB μ V/m@3m)

(b) Within the bands 13.410-13.553 MHz and 13.567-13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters. (90.50dB μ V/m@3m)

(c) Within the bands 13.110-13.410 MHz and 13.710-14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters. (80.50dB μ V/m@3m)

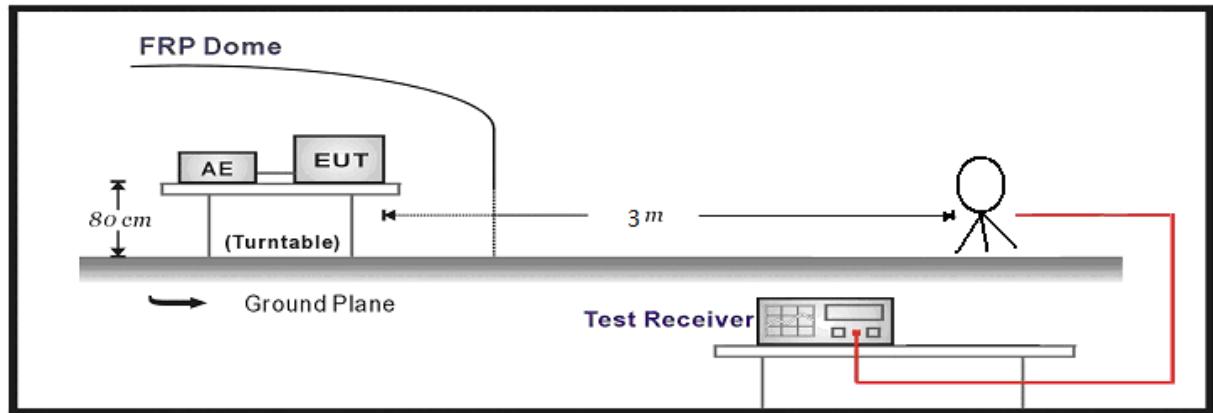
(d) The field strength of any emissions appearing outside of the 13.110– 14.010 MHz and shall not exceed the general radiated emission limits in § 15.209 as follows:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

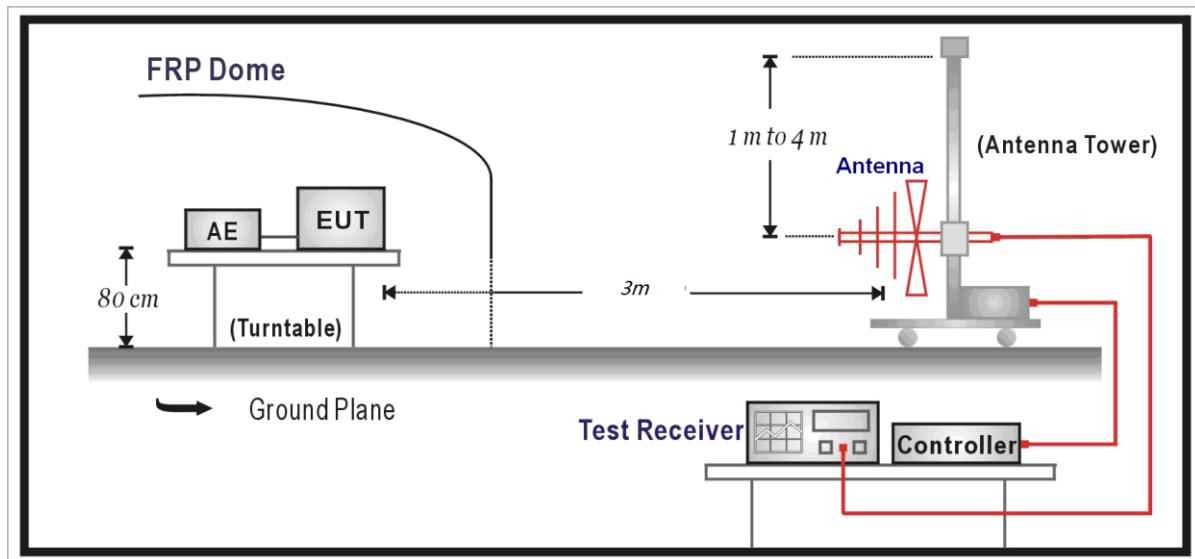
Frequency	Limit (μ V/m)	Limit (dB μ V/m @3m)	Remark
0.009MHz-0.490MHz	2400/F(kHz)@300m	20lg(24000000/F(kHz))	Quasi-peak Level
0.490MHz~1.705MHz	24000/F(kHz)@30m	20lg(2400000/F(kHz))	Quasi-peak Level
1.705MHz~30.0MHz	30@30m	69.54	Quasi-peak Level
30MHz-88MHz	100@3m	40.0	Quasi-peak Level
88MHz-216MHz	150@3m	43.5	Quasi-peak Level
216MHz-960MHz	200@3m	46.0	Quasi-peak Level
960MHz-1GHz	500@3m	54.0	Quasi-peak Level
Above 1GHz	500@3m	54.0	Average Level
	5000@3m	74.0	Peak Level

Test Setup:

Below 30MHz Test Setup:



Below 1GHz Test Setup:



Measurement Data:

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

Final Level =Reading - Factor

Factor = Preamplifier Factor – Antenna Factor–Cable Loss

Measurement Uncertainty:

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$.

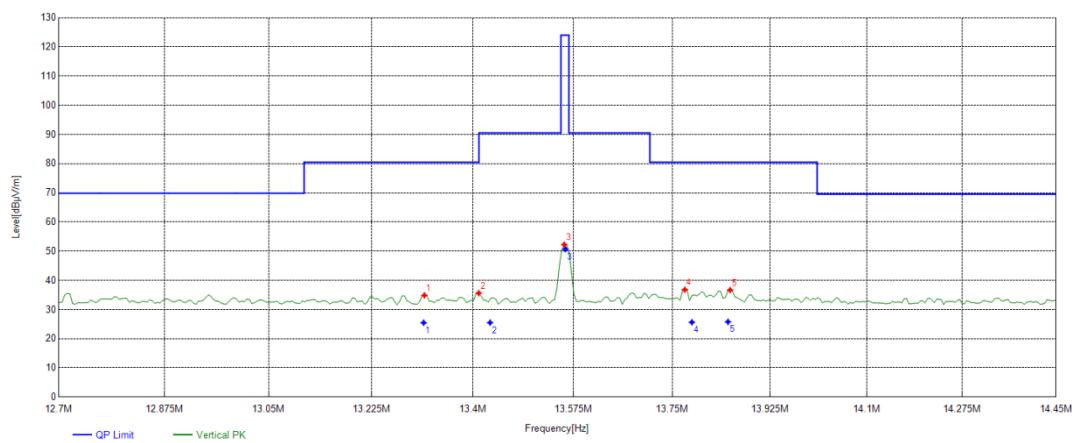
Frequency	Uncertainty
9KHz-30MHz	3.55 dB
30MHz-200MHz	4.19 dB
200MHz-1GHz	3.63 dB
Above 1GHz	3.68 dB

Test Results:

Result of The field strength of Fundamental Emission

During the test, the Radiates Emission from 9kHz to 1GHz was performed in NFC all modes with all channels and all antennas. Transmitting, 13.56MHz, Antenna 1, X Polarity are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

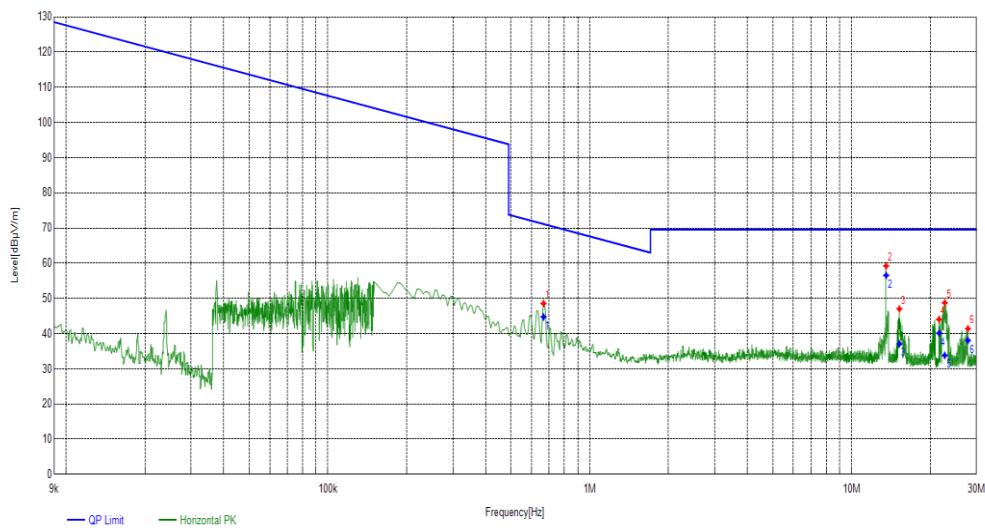
Test channel	13.56MHz								
Polarity	X								
Suspected List									
Frequency [MHz]	Factor [dB]	Reading [dB μ V/m]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
13.3157	20.96	13.89	34.85	80.50	45.65	PK	100	360	PASS
13.4096	20.96	14.65	35.61	80.50	44.89	PK	100	188	PASS
13.5588	20.98	31.26	52.24	124.00	71.76	PK	100	7	PASS
13.7721	20.99	15.81	36.80	80.50	43.70	PK	100	268	PASS
13.8531	20.99	15.69	36.68	80.50	43.82	PK	100	264	PASS
Final Data List									
Frequency [MHz]	Factor [dB]	QP Value [dB μ V/m]	QP Limit [dB μ V/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail		
13.3144	20.96	25.47	80.50	55.03	200	130	PASS		
13.4293	20.96	25.49	90.50	65.01	100	93	PASS		
13.5608	20.98	50.69	124.00	73.31	170	11	PASS		
13.7847	20.99	25.63	80.50	54.87	100	273	PASS		
13.8493	20.99	25.78	80.50	54.72	110	269	PASS		



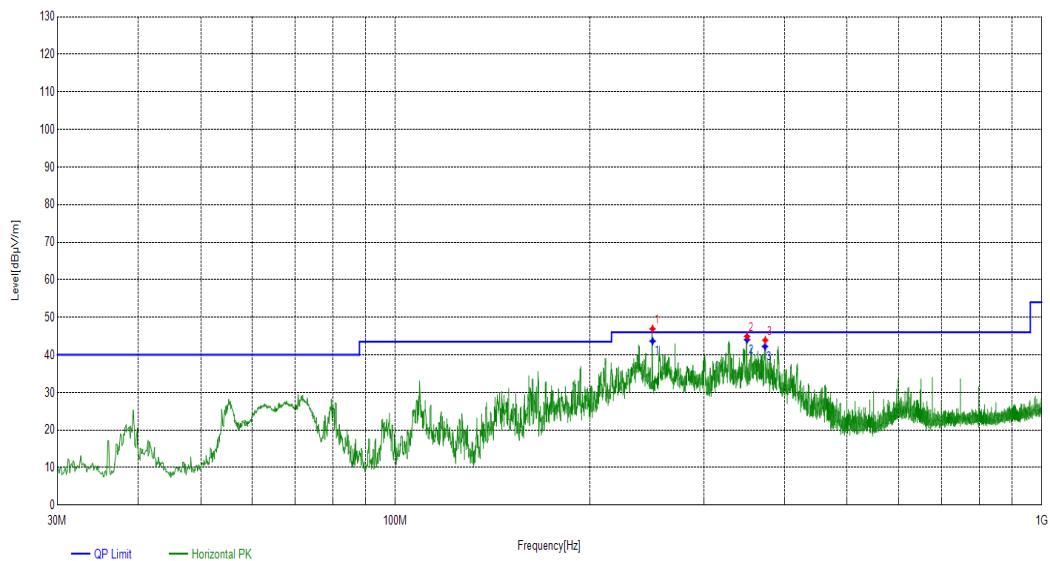
Result of Radiated Emissions

During the test, the Radiates Emission from 9kHz to 1GHz was performed in NFC all modes with all channels and all antennas. Transmitting, 13.56MHz, Antenna 1 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

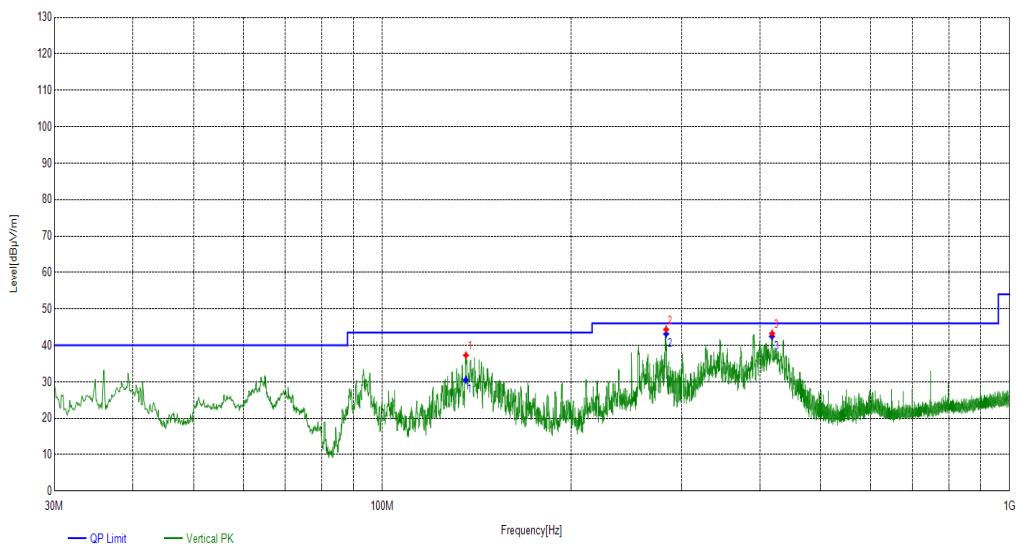
Radiates Emission	9k~30M								
Test channel	13.56MHz								
Polarity	X								
Suspected List									
Frequency [MHz]	Factor [dB]	Reading [dB μ V/m]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
0.6661	20.54	28.02	48.56	71.14	22.58	PK	100	327	PASS
13.5588	20.98	38.24	59.22	69.50	10.28	PK	100	250	PASS
15.2307	20.96	26.06	47.02	69.50	22.48	PK	100	18	PASS
21.5939	20.66	23.39	44.05	69.50	25.45	PK	100	242	PASS
22.707	20.63	28.12	48.75	69.50	20.75	PK	100	96	PASS
27.8377	20.77	20.62	41.39	69.50	28.11	PK	100	190	PASS
Final Data List									
Frequency [MHz]	Factor [dB]	QP Value [dB μ V/m]	QP Limit [dB μ V/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail		
0.6661	20.54	44.74	71.14	26.40	100	327	PASS		
13.5611	20.98	56.55	69.50	12.95	250	336	PASS		
15.2307	20.96	37.10	69.50	32.40	100	18	PASS		
21.5939	20.66	40.13	69.50	29.37	100	242	PASS		
22.707	20.63	33.81	69.50	35.69	100	96	PASS		
27.8377	20.77	38.06	69.50	31.44	100	190	PASS		



Radiates Emission	30M~1G								
Test channel	13.56MHz								
Polarity	Horizontal								
Suspected List									
Frequency [MHz]	Factor [dB]	Reading [dB μ V/m]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
249.921	14.24	32.69	46.93	---	---	PK	100	356	---
349.938	16.70	28.24	44.94	---	---	PK	100	153	---
373.4143	17.26	26.65	43.91	---	---	PK	100	166	---
Final Data List									
Frequency [MHz]	Factor [dB]	QP Value [dB μ V/m]	QP Limit [dB μ V/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail		
249.9933	14.24	43.66	46.00	2.34	117	0	PASS		
349.9937	16.70	44.05	46.00	1.95	380	158	PASS		
373.036	17.26	42.24	46.00	3.76	250	171	PASS		

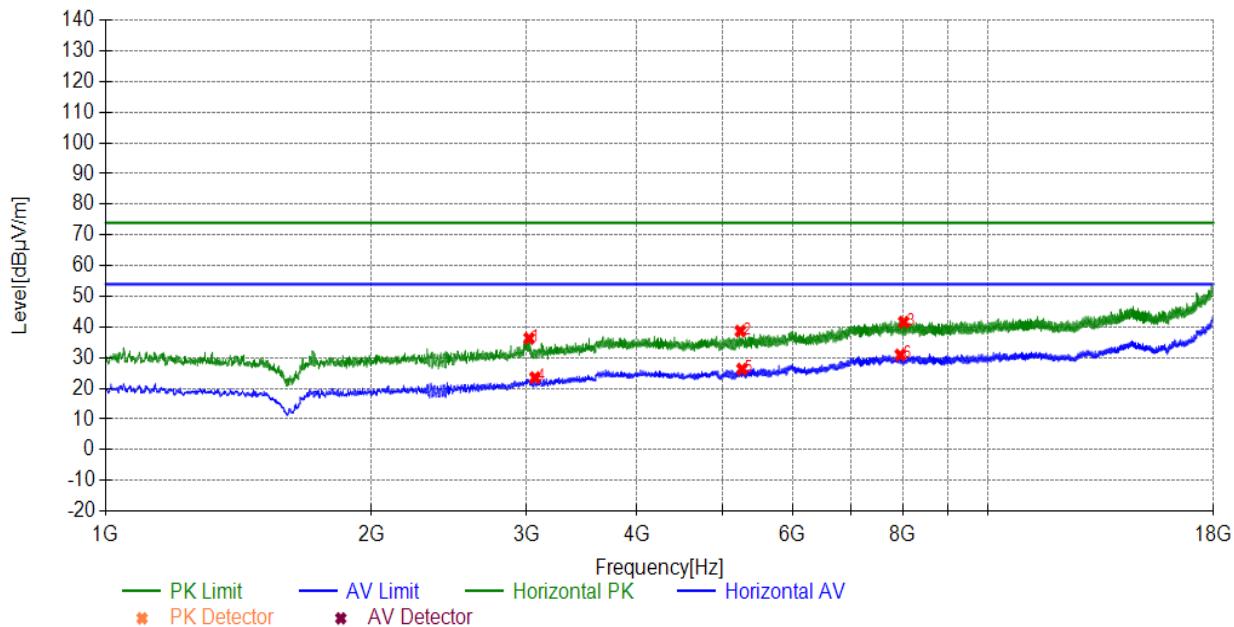


Radiates Emission	30M~1G								
Test channel	13.56MHz								
Polarity	Vertical								
Suspected List									
Frequency [MHz]	Factor [dB]	Reading [dB μ V/m]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
135.9346	9.57	27.70	37.27	---	---	PK	100	352	---
283.4863	15.09	29.27	44.36	---	---	PK	100	31	---
418.3298	18.21	25.05	43.26	---	---	PK	100	235	---
Final Data List									
Frequency [MHz]	Factor [dB]	QP Value [dB μ V/m]	QP Limit [dB μ V/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail		
135.8519	9.57	30.54	43.50	12.96	300	349	PASS		
283.4699	15.09	43.15	46.00	2.85	370	36	PASS		
418.0514	18.21	42.43	46.00	3.57	350	231	PASS		



Due to the presence of certified 2.4G and 4G modules in the EUT, the entire machine will undergo high-frequency radiation testing as follows for verification.

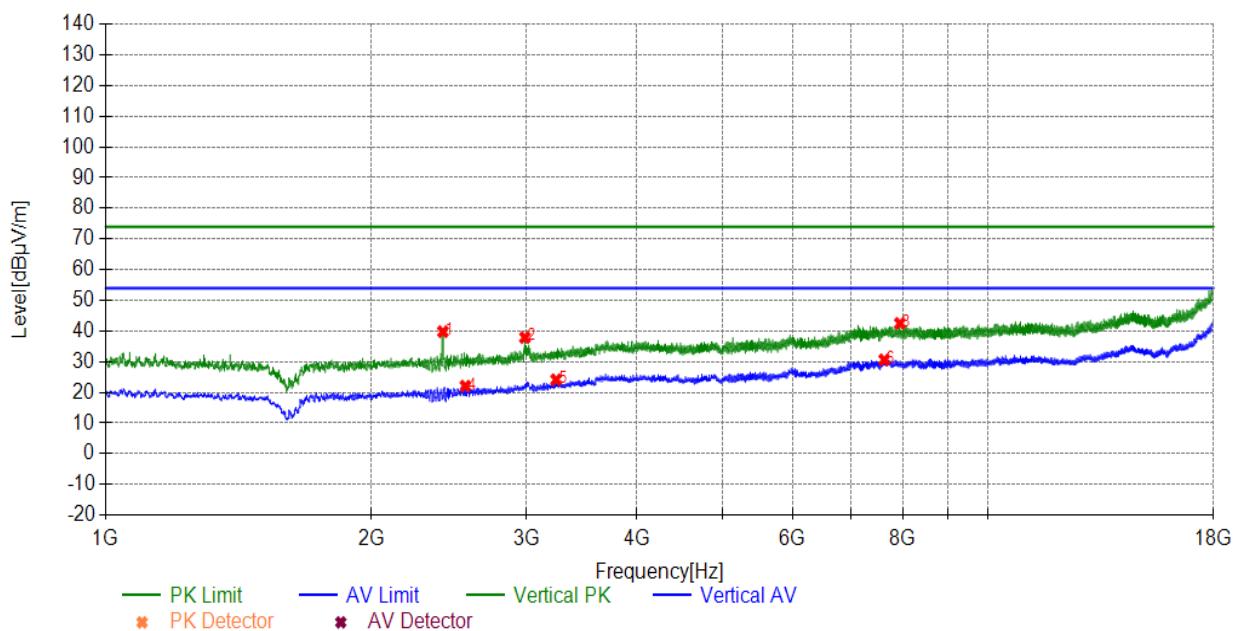
Radiates Emission	Above 1G							
Test channel	Lowest							
polarization	Horizontal							
Suspected List								
Frequency [MHz]	Factor [dB]	Reading [dB μ V/m]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Detect or	Height [cm]	Pass/Fail
3018.850943	-5.00	41.33	36.33	74.00	37.67	PK	150	PASS
5236.611831	-0.53	39.24	38.71	74.00	35.29	PK	150	PASS
8021.351068	5.36	36.27	41.63	74.00	32.37	PK	150	PASS
3064.753238	-4.85	28.35	23.50	54.00	30.50	AV	150	PASS
5259.562978	-0.48	26.74	26.26	54.00	27.74	AV	150	PASS
7949.097455	5.32	25.58	30.90	54.00	23.10	AV	150	PASS



Radiates Emission	Above 1G
Test channel	Lowest
polarization	Vertical

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dB μ V/m]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Detect or	Height [cm]	Pass/Fail
2410.220511	-7.00	46.82	39.82	74.00	34.18	PK	150	PASS
2985.699285	-5.12	43.03	37.91	74.00	36.09	PK	150	PASS
7943.147157	5.32	37.20	42.52	74.00	31.48	PK	150	PASS
2555.577779	-6.62	28.69	22.07	54.00	31.93	AV	150	PASS
3239.011951	-4.25	28.40	24.15	54.00	29.85	AV	150	PASS
7623.531177	5.23	25.40	30.63	54.00	23.37	AV	150	PASS



5.3 FREQUENCY TOLERANCE

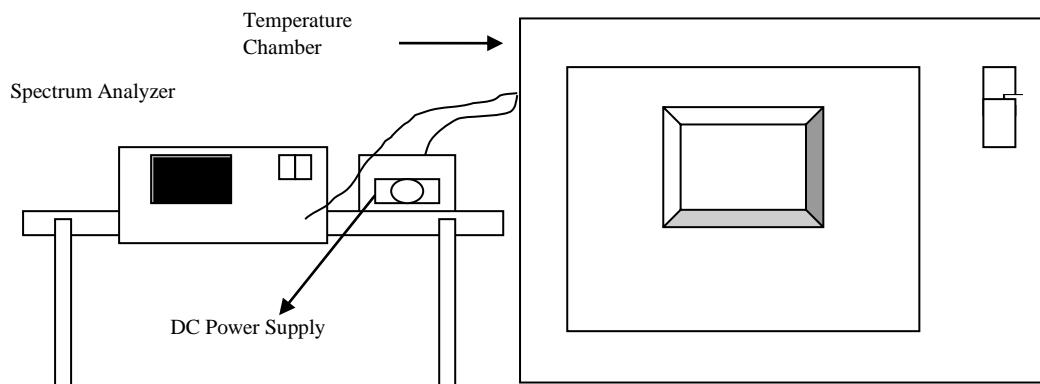
Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.3kPa

Method of Measurement:

- 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.

Test Setup:



LIMITS OF FREQUENCY TOLERANCE

The frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$ (100ppm) 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. For battery operated equipment, the equipment tests shall be performed using a new battery.

Measurement Uncertainty:

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 936$ Hz.

Test Results:

FREQUEMCY STABILITY VERSUS TEMP.												
TEMP. (°C)	POWER SUPPLY (V)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE		Limit (ppm)	PASS/ FAIL	
		Measured Frequency (MHz)	Frequency Drift ppm	Measured Frequency (MHz)	Frequency Drift ppm	Measured Frequency (MHz)	Frequency Drift ppm	Measured Frequency (MHz)	Frequency Drift ppm			
		(MHz)	ppm	(MHz)	ppm	(MHz)	ppm	(MHz)	ppm			
50	24	13.5608	55.9896	13.5608	56.5808	13.5608	56.0550	13.5608	55.8361	100	PASS	
40	24	13.5608	55.9985	13.5608	56.5808	13.5608	56.6691	13.5608	55.7651	100	PASS	
30	24	13.5608	55.9726	13.5608	56.8636	13.5608	55.5728	13.5608	56.6576	100	PASS	
20	24	13.5608	56.7191	13.5608	56.0228	13.5608	55.9166	13.5608	55.5940	100	PASS	
10	24	13.5608	55.9822	13.5608	55.6444	13.5608	56.8337	13.5608	56.1929	100	PASS	
0	24	13.5608	55.6688	13.5608	55.9103	13.5608	55.5834	13.5608	56.7615	100	PASS	
-10	24	13.5608	56.0270	13.5608	55.5750	13.5608	56.0395	13.5608	56.7372	100	PASS	
-20	24	13.5608	56.1101	13.5608	56.4890	13.5608	56.9564	13.5608	56.8291	100	PASS	
20	20.4	13.5608	55.4984	13.5608	56.8000	13.5608	56.0089	13.5608	56.8949	100	PASS	
	27.6	13.5608	56.5517	13.5608	55.7627	13.5608	55.9925	13.5608	56.3176	100	PASS	

5.4 20dB BANDWIDTH MEASUREMENT

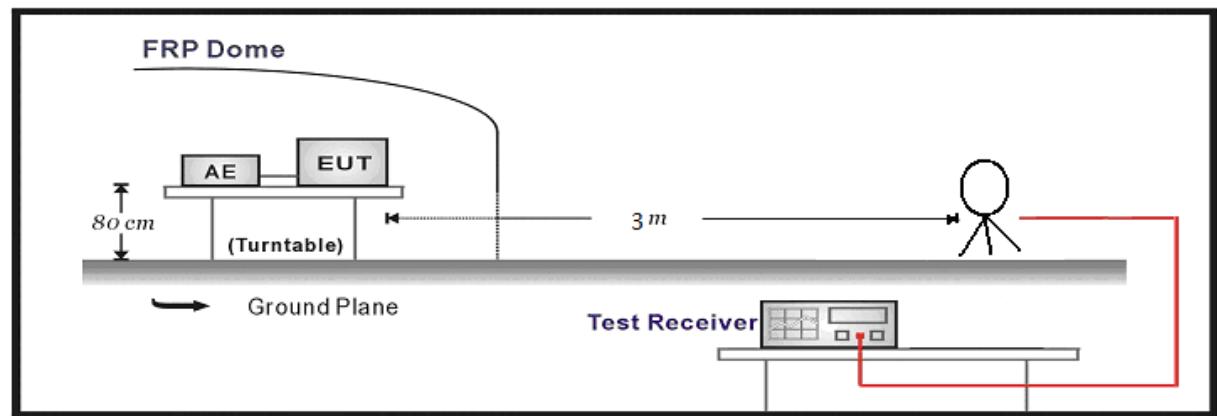
Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.3kPa

Method of Measurement:

The spectrum analyzer was receiving the maximum emission level. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

Test Setup:



LIMITS OF 20dB BANDWIDTH MEASUREMENT

The 20dB bandwidth shall be specified in operating frequency band. (13.11MHz ~ 14.01MHz)

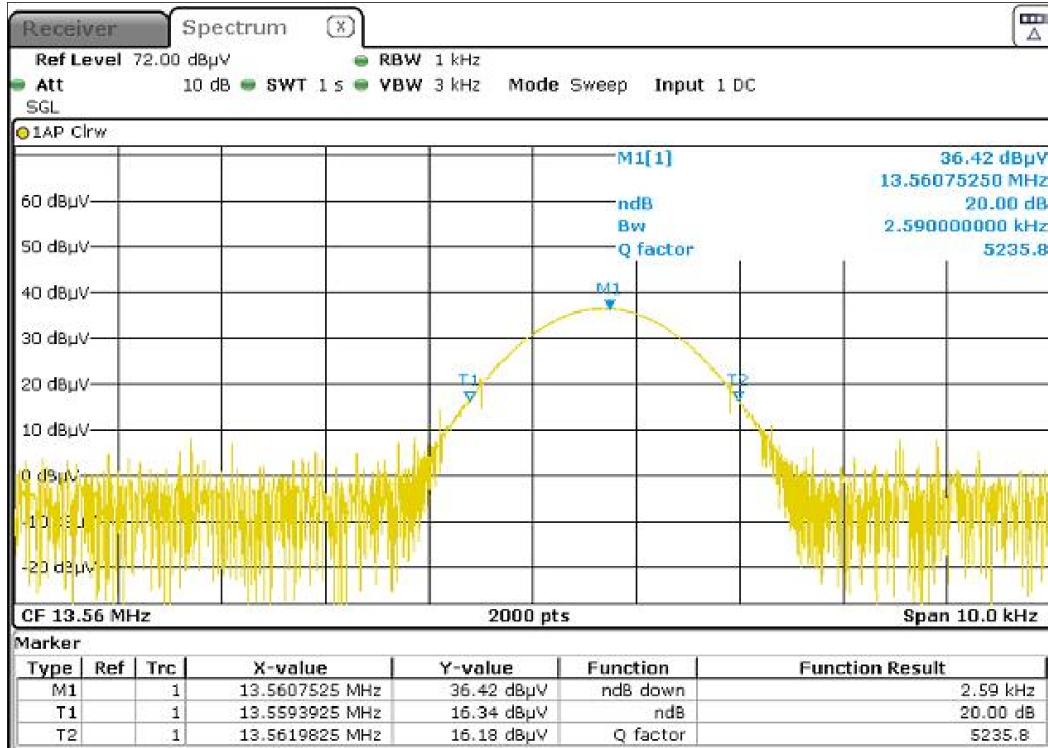
Measurement Uncertainty:

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 936$ Hz.

Test Results:

Frequency (MHz)	20dB Bandwidth (kHz)	Lower (MHz)	Upper (MHz)	Limit (MHz)	PASS/FAIL
13.56	2.59	13.5593925	13.5619825	13.11~14.01	PASS

The plots of test results are attached as below.



6. Appendix A

Test Equipment	Type/Mode	SERIAL NO.	Equipment No.	Manufacturer	Cal. Due
Spectrum Analyzer	FSV40	101580	DZ-000238-3	R&S	2025/04/22
5m Semi-Anechoic Chamber	SAC-5	SAC-5-2.0	EM-000557	COMTEST	2027/02/01
EMI Test Receiver	N9038A-508	MY532290079	EM-000397	Agilent	2025/01/13
EMI Test Receiver	ESR7	102235	EM-000574	R&S	2025/01/13
loop antenna	HLA 6121	540046	EM-000546	TESEQ	2025/06/04
Broadband Antenna	VULB 9163	9163-530	EM-000342	SCHWARZBECK	2025/06/09
Constant temperature and humidity (high and low temperature) test chamber	LGH-80LA	LG20210902-A10	DZ-000328	/	2025/10/09
Temperature and humidity meter	MHO-C201	/	DZ-000249-2	Seconds test	2025/07/28

Dynacomm	Software Release	Software Developer
TS+ (5m,Radiation test)	JS32-RE 5.0.0	Tonscend

The End

Important

1. The test report is invalid without the official stamp of CVC;
2. Any part photocopies of the test report are forbidden without the written permission from CVC;
3. The test report is invalid without the signatures of Author and Reviewer;
4. The test report is invalid if altered;
5. Objections to the test report must be submitted to CVC within 15 days;
6. Generally, commission test is responsible for the tested samples only;
7. As for the test result, “—” or “N” means “not applicable”, “ / ” means “not testing”, “P” means “pass” and “F” means “fail”.

Address: No.3,Tiantaiyi Road, Kaitai Avenue, Science City, Guangzhou, China (Test location)

Post Code: 510663 Tel: 020-32293888

FAX: 020 32293889 E-mail: office@cvc.org.cn