ACCREDITED
CERTIFICATE #5473.01

Test Report No.:
GJW2024-0160-RF

TEST REPORT

FCC ID	:	2AZS3UYUC1800
Applicant	:	URIT Medical Electronic Co., Ltd.
Product Name	:	Automatic Urine Analyzer
Mode No.	:	UC-1800
Classification Of Test:		**COMMISSION TEST**

CVC Testing Technology Co., Ltd.

检验检测专用章

Applicant	**Name:** URIT Medical Electronic Co., Ltd. **Address:** No.D-07 Information Industry District, High-Tech Zone, Guilin, Guangxi 541004, P.R. China
Manufacturer	**Name:** URIT Medical Electronic Co., Ltd. **Address:** No.D-07 Information Industry District, High-Tech Zone, Guilin, Guangxi 541004, P.R. China
Producer	**Name:** URIT Medical Electronic Co., Ltd. **Address:** No.D-07 Information Industry District, High-Tech Zone, Guilin, Guangxi 541004, P.R. China
Equipment Under Test	**Product Name :** Automatic Urine Analyzer **Model No. :** UC-1800 **Trade mark :** / **Serial no. :** — **Sampling :** 1-1

Date of Receipt.	2024.01.05	**Date of Testing**	2024.03.20

Test Specification	**Test Result**
FCC CFR47 Part 15C Radio Frequency Devices ANSI C63.10 (2013)	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:** 2024-03-21

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

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1. General Product Information

1.1 General information

Product Name	Automatic Urine Analyzer
Model No.	UC-1800
Additional model	/
Power Supply	AC 100-240V, 50/60Hz
Serial Number(SN)	/
firmware	V1.0
software	V2.0
specific power settings	Default
Antenna Type	Internal Antenna
Antenna Connector	A permanently attached antenna
Antenna Gain	4.0 dBi (provided by client)
Beamforming gain	Unsupported (provided by client)
Frequency Range	13.56MHz
Channel Number	1 Channel
Type of Modulation	ASK
Max. Power	-33.93dBm
Operate Temp.Range	5~40℃

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.

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	106kbps	/	/

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	No antenna connector is used

5. Measurement procedure

5.1 Conducted Emission

Ambient condition:

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

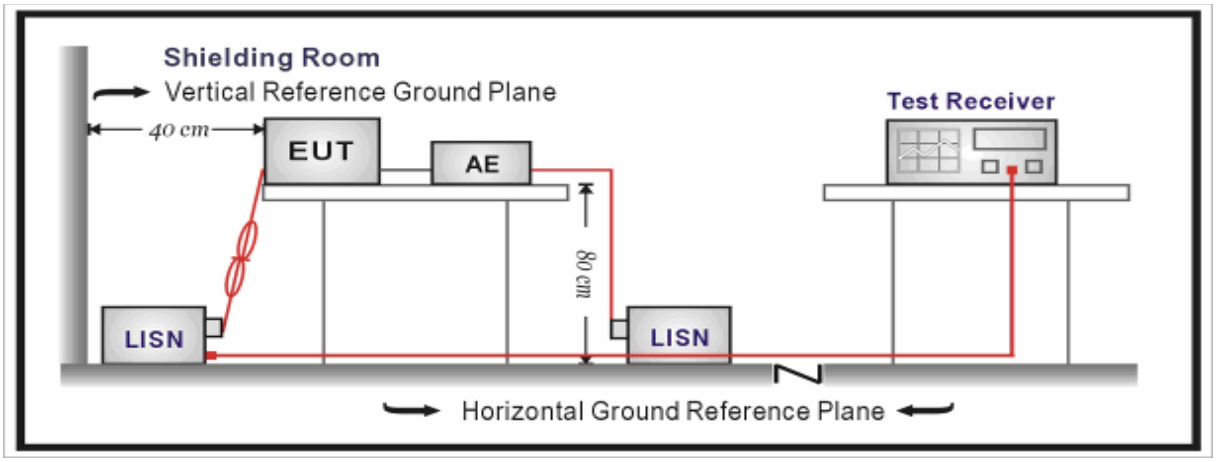
Method of Measurement:

The EUT was setup according to ANSI C63.10, 2013 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(dBμV)	
	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：

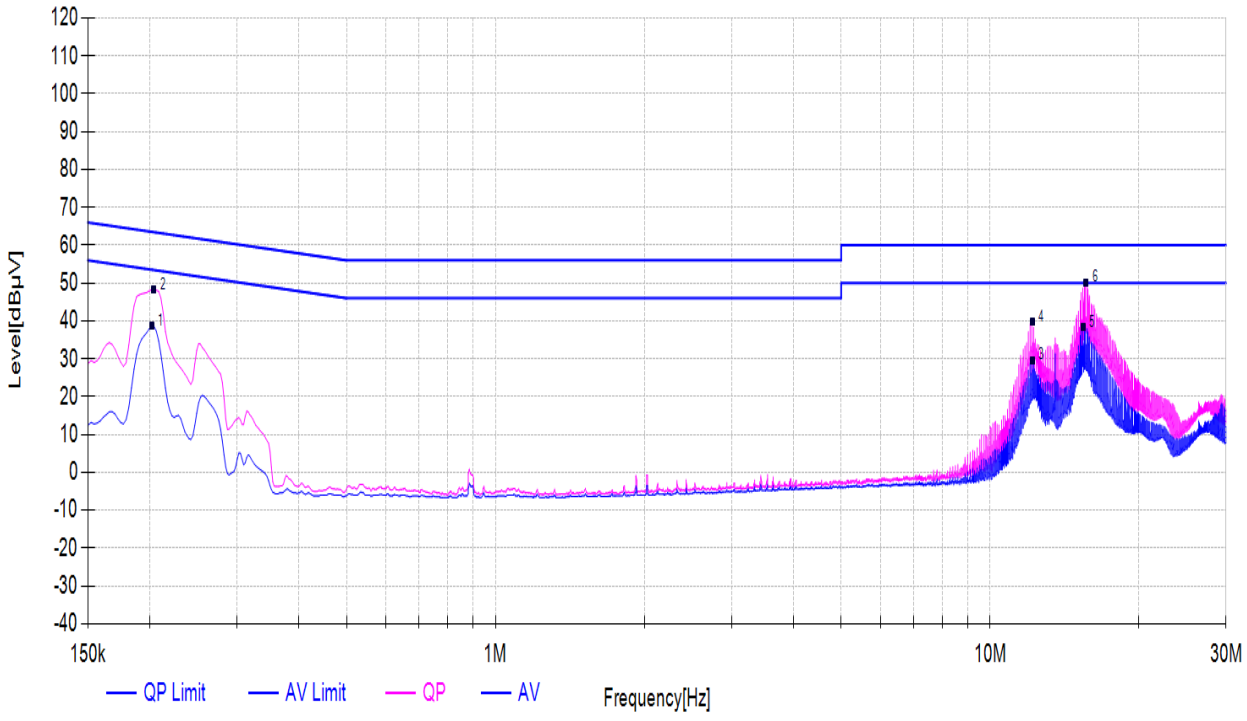
The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 1.96. U= 3.12 dB.

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, Antenna1 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

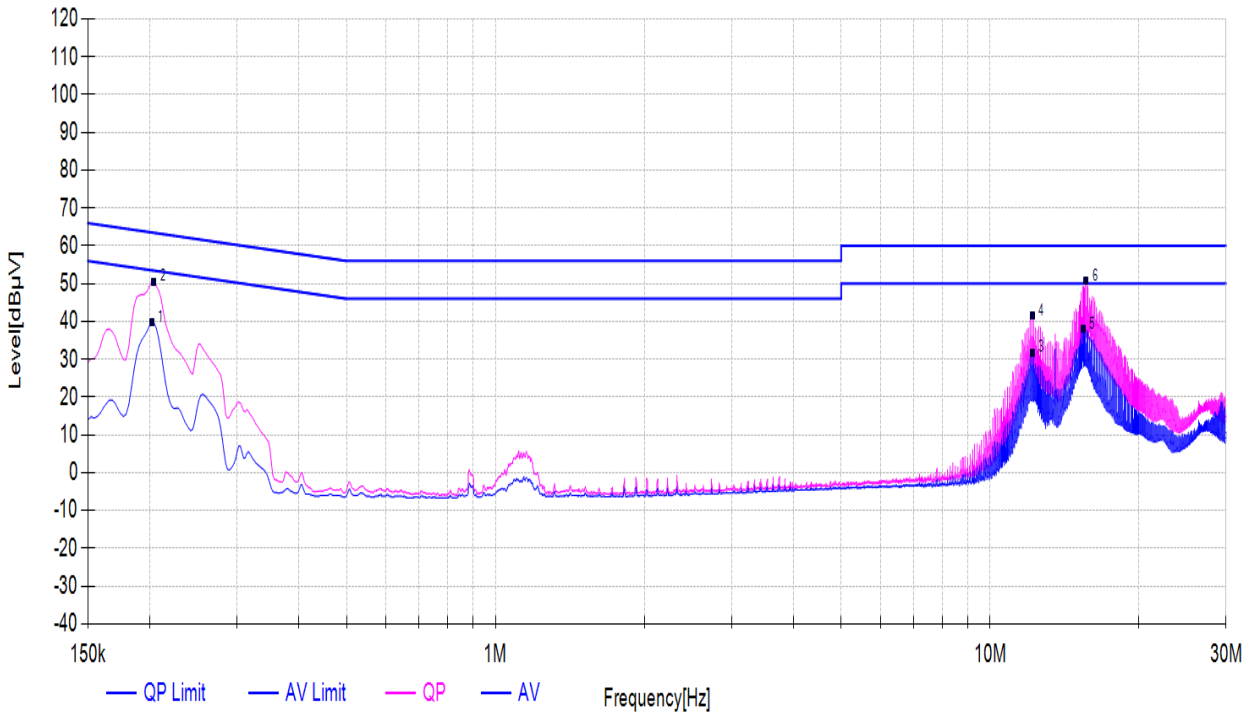
Power Line	L
Test channel	13.56MHz

Suspected List							
Freq. [MHz]	Factor [dB]	Reading [dBµV]	Level [dBµV]	Limit [dBµV]	Margin [dB]	Detector	Pass/Fail
0.2018	10.13	28.55	38.68	53.54	14.86	AV	PASS
0.2040	10.13	38.19	48.32	63.45	15.13	QP	PASS
12.1808	10.44	19.13	29.57	50.00	20.43	AV	PASS
12.1808	10.44	29.22	39.66	60.00	20.34	QP	PASS
15.4275	10.55	27.81	38.36	50.00	11.64	AV	PASS
15.6300	10.55	39.60	50.15	60.00	9.85	QP	PASS



Power Line	N
Test channel	13.56MHz

Suspected List							
Freq. [MHz]	Factor [dB]	Reading [dBµV]	Level [dBµV]	Limit [dBµV]	Margin [dB]	Detector	Pass/Fail
0.2018	10.13	29.67	39.80	53.54	13.74	AV	PASS
0.2040	10.13	40.38	50.51	63.45	12.94	QP	PASS
12.1763	10.42	21.36	31.78	50.00	18.22	AV	PASS
12.1785	10.42	31.16	41.58	60.00	18.42	QP	PASS
15.4230	10.52	27.43	37.95	50.00	12.05	AV	PASS
15.6233	10.52	40.14	50.66	60.00	9.34	QP	PASS



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, 2013.
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 C63.10:2013 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:

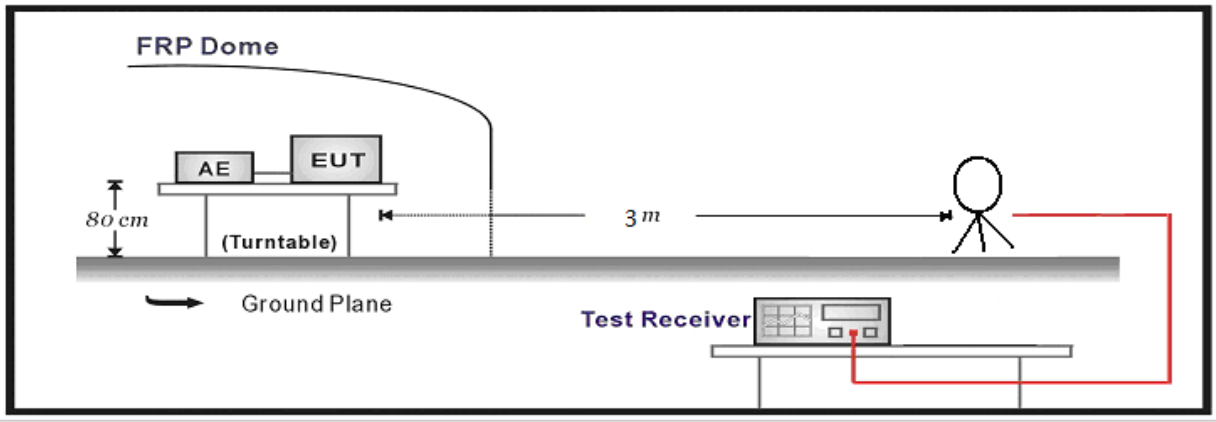
§15.225
(a)The field strength of any emissions within the band 13.553-13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters. (124.00dBμV/m@3m)
(b) Within the bands 13.410-13.553 MHz and 13.567-13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters. (90.50dBμV/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. (80.50dBμV/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)).

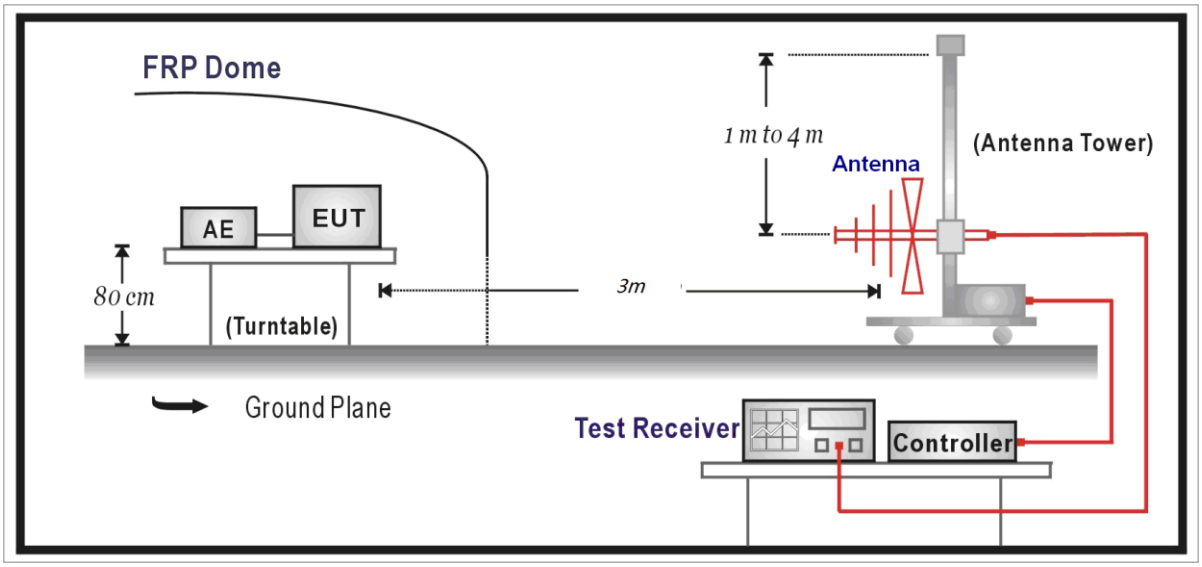
Frequency	Limit (μV/m)	Limit (dBμV/m @3m)	Remark
0.009MHz-0.490MHz	2400/F(kHz)@300m	20lg(24000000/F(kHz))	Quasi-peak Level
0.490MHz~1.705MHz	24000/F(kHz)@30m	20lg(2400000/F(kHz))	Quasi-peak Level
1.705MHz~30.0MHz	30@30m	69.54	Quasi-peak Level
30MHz-88MHz	100@3m	40.0	Quasi-peak Level
88MHz-216MHz	150@3m	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 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

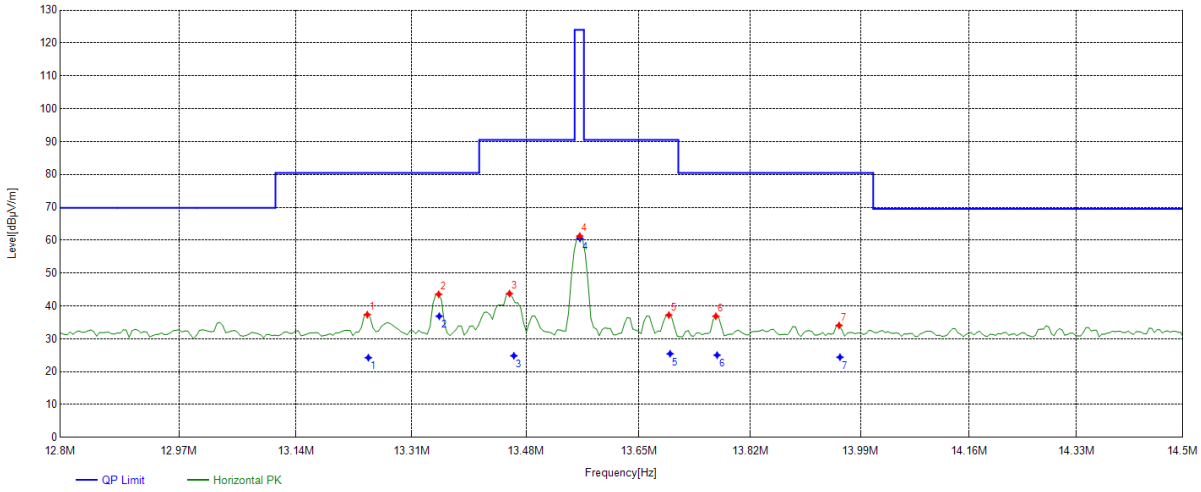
Test channel	13.56MHz
Polarity	X

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
13.2444	20.02	17.34	37.36	80.50	43.14	PK	100	145	PASS
13.3498	20.02	23.52	43.54	80.50	36.96	PK	100	162	PASS
13.4552	20.04	23.72	43.76	90.50	46.74	PK	100	166	PASS
13.5606	20.04	41.23	61.27	124.00	62.73	PK	100	128	PASS
13.6955	20.05	17.17	37.22	90.50	53.28	PK	100	288	PASS
13.7672	20.05	16.81	36.86	80.50	43.64	PK	100	296	PASS
13.9569	20.06	14.01	34.07	80.50	46.43	PK	100	65	PASS

Final Data List

Frequency [MHz]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail
13.2447	20.02	24.25	80.50	56.25	100	150	PASS
13.3506	20.02	36.88	80.50	43.62	100	161	PASS
13.4558	20.04	24.84	90.50	65.66	100	171	PASS
13.5610	20.04	60.55	124.00	63.45	100	130	PASS
13.6952	20.05	25.46	90.50	65.04	100	293	PASS
13.7679	20.05	25.03	80.50	55.47	100	301	PASS
13.9570	20.06	24.41	80.50	56.09	100	70	PASS


Level[dBµV/m]
Frequency[Hz]
12.8M
12.97M
13.14M
13.31M
13.48M
13.65M
13.82M
13.99M
14.16M
14.33M
14.5M
QP Limit
Horizontal PK

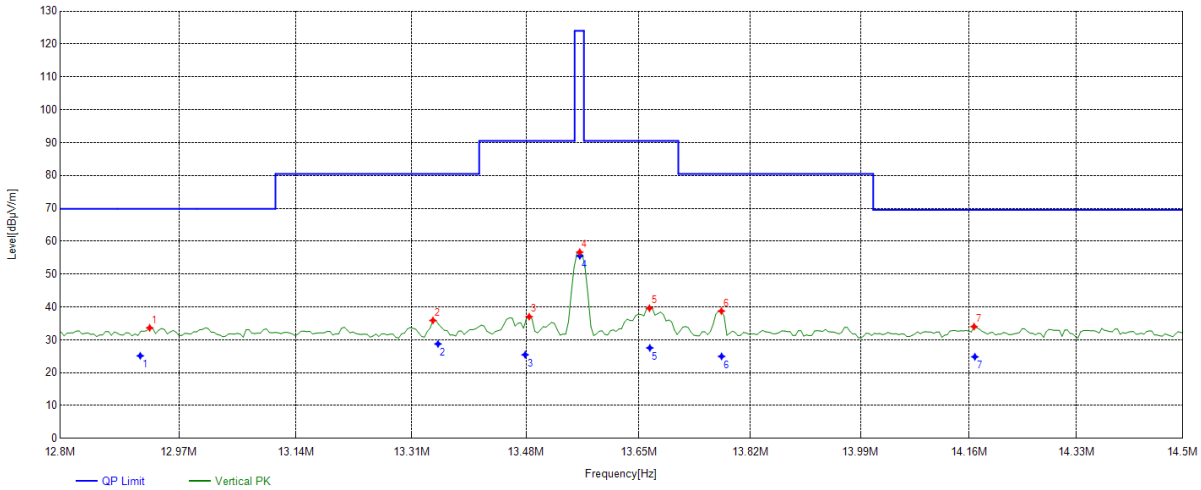
Test channel	13.56MHz
Polarity	Y

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
12.9281	20.01	13.63	33.64	69.85	36.21	PK	100	272	PASS
13.3413	20.02	15.88	35.90	80.50	44.60	PK	100	204	PASS
13.4847	20.04	16.99	37.03	90.50	53.47	PK	100	161	PASS
13.5606	20.04	36.62	56.66	124.00	67.34	PK	100	208	PASS
13.666	20.05	19.57	39.62	90.50	50.88	PK	100	54	PASS
13.7756	20.05	18.70	38.75	80.50	41.75	PK	100	58	PASS
14.1677	20.08	13.94	34.02	69.50	35.48	PK	100	233	PASS

Final Data List

Frequency [MHz]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail
12.9146	20.01	25.13	69.85	44.72	100	277	PASS
13.3488	20.02	28.75	80.50	51.75	100	209	PASS
13.4786	20.04	25.46	90.50	65.04	100	166	PASS
13.5608	20.04	55.53	124.00	68.47	100	205	PASS
13.6666	20.05	27.54	90.50	62.96	100	59	PASS
13.7759	20.05	24.96	80.50	55.54	100	63	PASS
14.1676	20.08	24.83	69.50	44.67	100	238	PASS



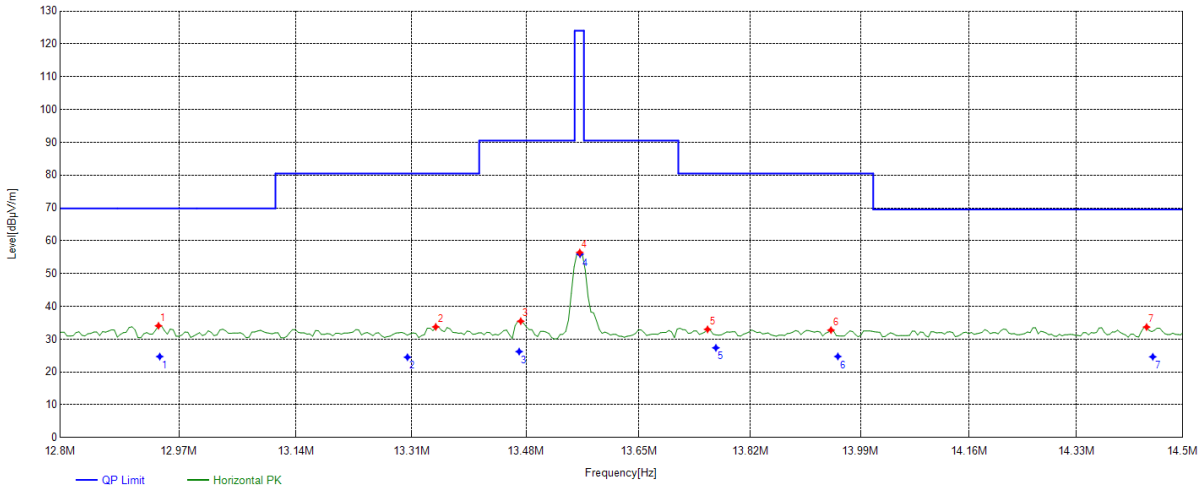
Test channel	13.56MHz
Polarity	Z

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
12.9408	20.01	14.06	34.07	69.85	35.78	PK	100	89	PASS
13.3455	20.02	13.72	33.74	80.50	46.76	PK	100	67	PASS
13.472	20.04	15.43	35.47	90.50	55.03	PK	100	187	PASS
13.5606	20.04	36.38	56.42	124.00	67.58	PK	100	122	PASS
13.7545	20.05	12.93	32.98	80.50	47.52	PK	100	275	PASS
13.9443	20.06	12.69	32.75	80.50	47.75	PK	100	225	PASS
14.4418	20.09	13.60	33.69	69.50	35.81	PK	100	250	PASS

Final Data List

Frequency [MHz]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail
12.9412	20.01	24.69	69.85	45.16	100	94	PASS
13.3036	20.02	24.49	80.50	56.01	100	72	PASS
13.4690	20.04	26.21	90.50	64.29	100	124	PASS
13.5610	20.04	55.90	124.00	68.10	100	127	PASS
13.7672	20.05	27.35	80.50	53.15	100	280	PASS
13.9540	20.06	24.72	80.50	55.78	100	230	PASS
14.4503	20.09	24.62	69.50	44.88	100	255	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.

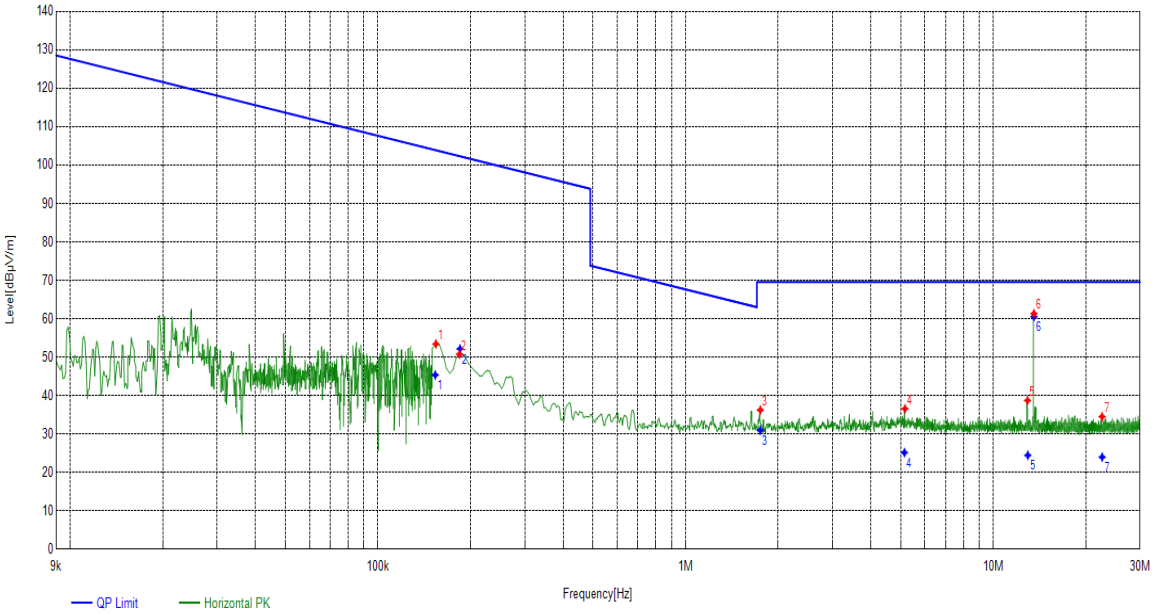
Radiates Emission	9k~30M
Test channel	13.56MHz
Polarity	X

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
0.1543	19.58	33.84	53.42	103.83	50.41	PK	100	202	PASS
0.1841	19.49	31.27	50.76	102.30	51.54	PK	100	1	PASS
1.7493	19.88	16.35	36.23	69.50	33.27	PK	100	202	PASS
5.1655	19.64	16.92	36.56	69.50	32.94	PK	100	124	PASS
12.9234	20.01	18.70	38.71	69.50	30.79	PK	100	138	PASS
13.5588	20.04	41.27	61.31	69.50	8.19	PK	100	129	PASS
22.5791	20.37	14.14	34.51	69.50	34.99	PK	100	297	PASS

Final Data List

Frequency [MHz]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail
0.1536	19.58	45.35	103.87	58.52	100	207	PASS
0.1849	19.49	52.13	102.26	50.13	100	200	PASS
1.7486	19.88	30.96	69.50	38.54	100	207	PASS
5.1447	19.64	25.16	69.50	44.34	100	129	PASS
12.9494	20.01	24.45	69.50	45.05	100	135	PASS
13.5612	20.04	60.53	69.50	8.97	100	134	PASS
22.5912	20.37	23.98	69.50	45.52	100	302	PASS


Level[dBµV/m]
Frequency[Hz]
9k
100k
1M
10M
30M
QP Limit
Horizontal PK

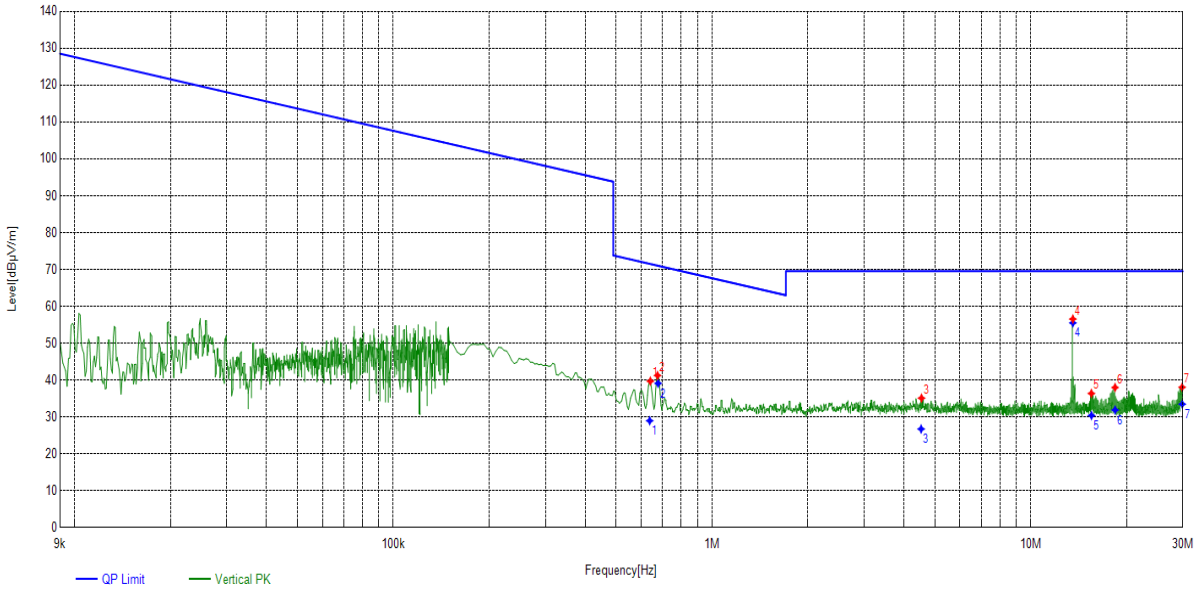
Radiates Emission	9k~30M
Test channel	13.56MHz
Polarity	Y

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
0.6405	19.67	20.04	39.71	71.48	31.77	PK	100	294	PASS
0.6746	19.68	21.56	41.24	71.03	29.79	PK	100	186	PASS
4.5428	19.69	15.42	35.11	69.50	34.39	PK	100	323	PASS
13.5588	20.04	36.52	56.56	69.50	12.94	PK	100	204	PASS
15.4994	20.14	16.24	36.38	69.50	33.12	PK	100	213	PASS
18.391	20.24	17.75	37.99	69.50	31.51	PK	100	173	PASS
29.855	20.90	17.15	38.05	69.50	31.45	PK	100	199	PASS

Final Data List

Frequency [MHz]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail
0.6375	19.67	28.99	71.52	42.53	100	299	PASS
0.6774	19.68	39.12	70.99	31.87	100	191	PASS
4.531	19.69	26.73	69.50	42.77	100	328	PASS
13.5613	20.04	55.50	69.50	14.00	100	209	PASS
15.5111	20.14	30.40	69.50	39.10	100	218	PASS
18.4022	20.24	31.88	69.50	37.62	100	178	PASS
29.8831	20.90	33.48	69.50	36.02	100	204	PASS



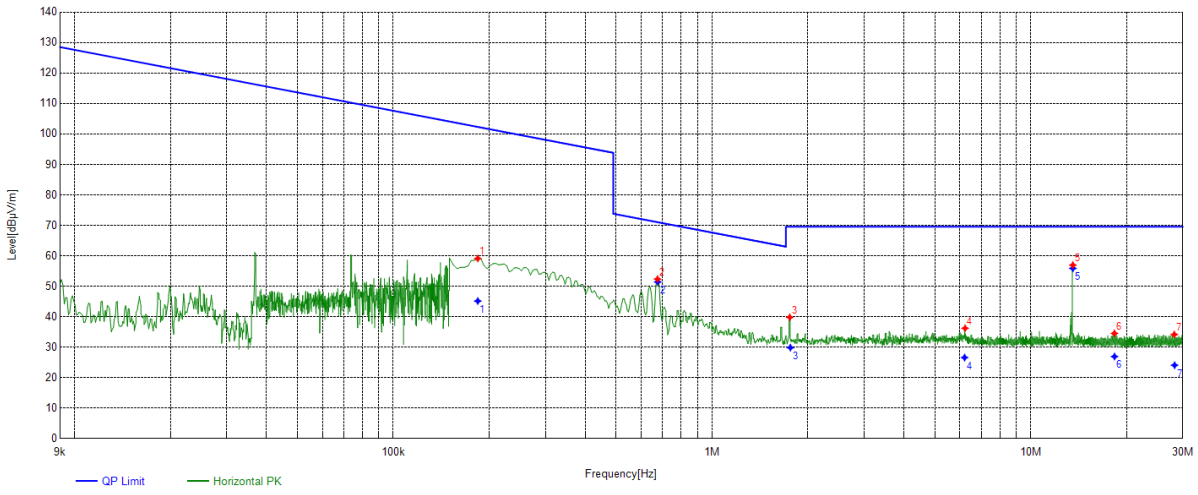
Radiates Emission	9k~30M
Test channel	13.56MHz
Polarity	Z

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
0.1841	19.49	39.62	59.11	102.30	43.19	PK	100	273	PASS
0.6746	19.68	32.68	52.36	71.03	18.67	PK	100	348	PASS
1.7536	19.88	19.92	39.80	69.50	29.70	PK	100	204	PASS
6.2232	19.68	16.53	36.21	69.50	33.29	PK	100	97	PASS
13.5588	20.04	36.90	56.94	69.50	12.56	PK	100	140	PASS
18.3099	20.24	14.30	34.54	69.50	34.96	PK	100	127	PASS
28.2173	20.75	13.41	34.16	69.50	35.34	PK	100	209	PASS

Final Data List

Frequency [MHz]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail
0.1841	19.49	45.21	102.30	97.09	100	278	PASS
0.6756	19.68	51.41	71.02	19.61	100	353	PASS
1.7617	19.88	29.86	69.50	39.64	100	209	PASS
6.2017	19.68	26.59	69.50	42.91	100	102	PASS
13.5608	20.04	55.88	69.50	13.62	100	145	PASS
18.321	20.24	26.93	69.50	42.57	100	132	PASS
28.2769	20.75	24.08	69.50	45.42	100	214	PASS



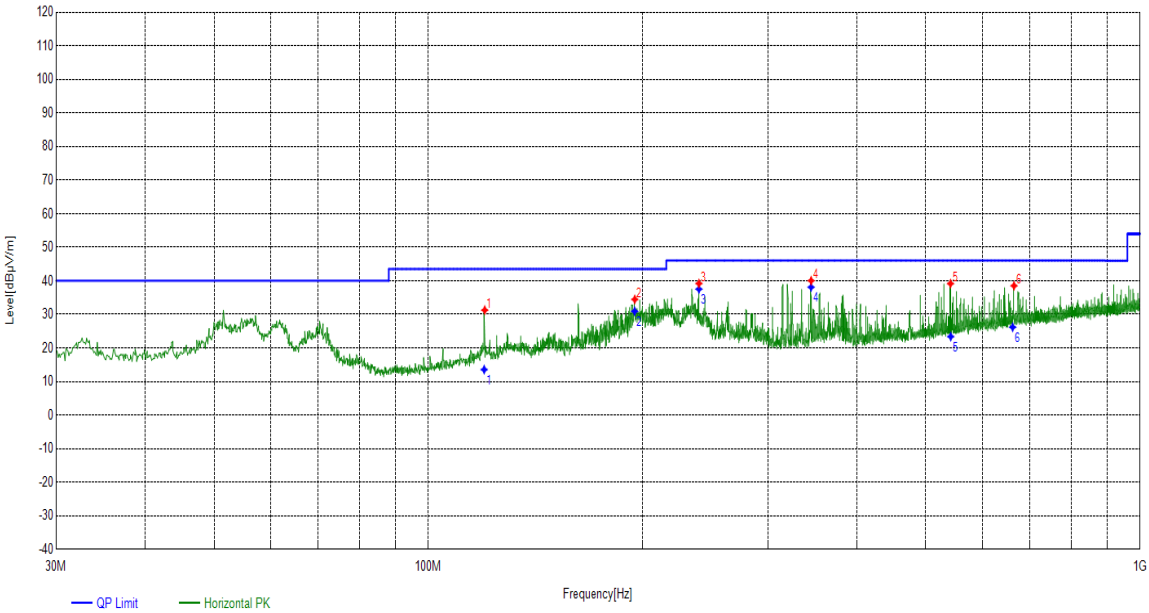
Radiates Emission	30M~1G
Test channel	13.56MHz
Polarity	Horizontal

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
120.025	18.36	12.91	31.27	43.51	12.24	PK	100	282	PASS
195.0135	17.60	16.86	34.46	43.50	9.04	PK	100	1	PASS
240.026	18.98	20.21	39.19	46.00	6.81	PK	100	20	PASS
344.9905	22.56	17.47	40.03	46.00	5.97	PK	100	360	PASS
541.6292	27.51	11.65	39.16	46.00	6.84	PK	100	315	PASS
665.1225	29.79	8.73	38.52	46.00	7.48	PK	100	33	PASS

Final Data List

Frequency [MHz]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail
119.8079	18.36	13.56	43.51	29.95	150	282	PASS
194.9486	17.60	30.92	43.50	12.58	390	1	PASS
240.0121	18.98	37.53	46.00	8.47	120	20	PASS
344.9755	22.56	38.11	46.00	7.89	110	24	PASS
541.9898	27.51	23.38	46.00	22.62	390	315	PASS
662.2734	29.79	26.17	46.00	19.83	370	33	PASS



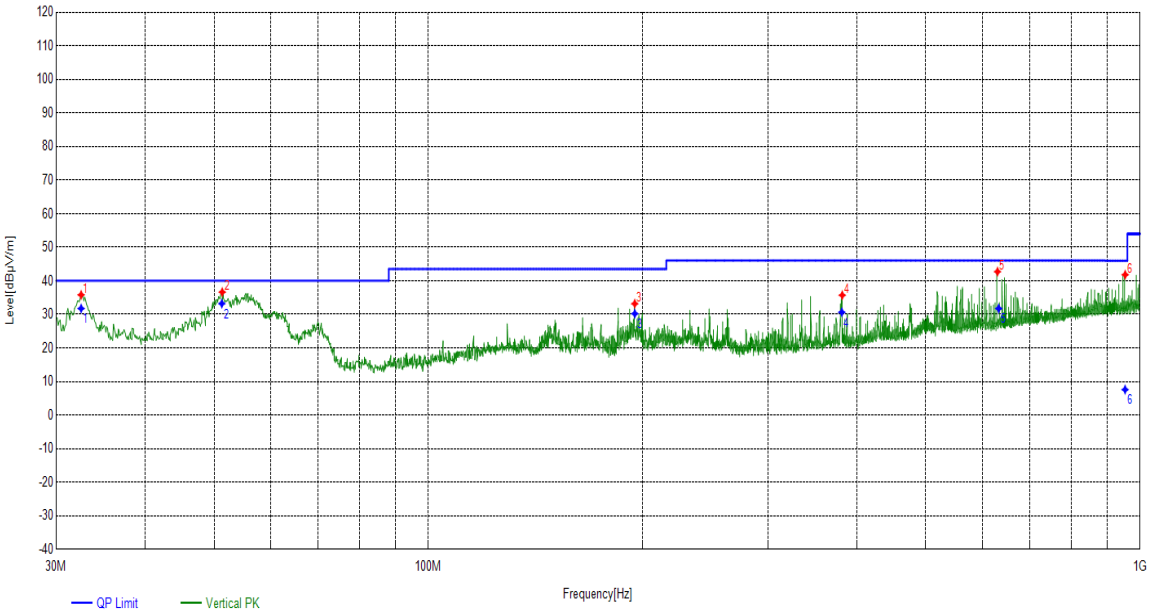
Radiates Emission	30M~1G
Test channel	13.56MHz
Polarity	Vertical

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
32.5223	19.29	16.52	35.81	40.00	4.19	PK	100	247	PASS
51.3421	20.37	16.26	36.63	40.00	3.37	PK	100	313	PASS
195.0135	17.60	15.58	33.18	43.50	10.32	PK	100	162	PASS
381.5632	23.48	12.22	35.70	46.00	10.30	PK	100	1	PASS
630.5871	29.23	13.49	42.72	46.00	3.28	PK	100	20	PASS
953.0473	33.63	8.18	41.81	46.00	4.19	PK	100	27	PASS

Final Data List

Frequency [MHz]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail
32.5228	19.29	31.75	40.00	8.25	170	247	PASS
51.2745	20.37	33.21	40.00	6.79	390	313	PASS
195.0389	17.60	30.21	43.50	13.29	300	162	PASS
381.0497	23.48	30.64	46.00	15.36	260	1	PASS
632.9689	29.23	31.75	46.00	14.25	110	20	PASS
952.7021	33.63	7.60	46.00	38.40	290	27	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.

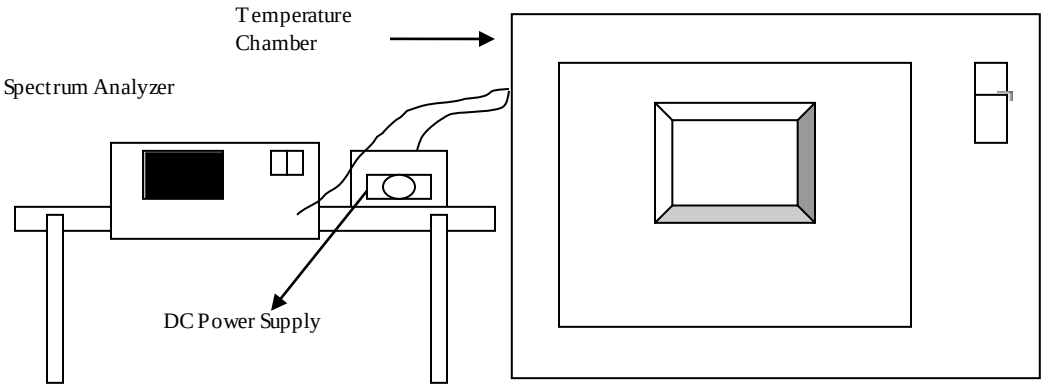
c.Turn the EUT off and set the chamber to the highest temperature specified.

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 ±0.01% (100 ppm) 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. (℃)	POWER SUPPLY (V)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE		Limit (ppm)	PASS/ FAIL
		Measured Frequency	Frequency Drift	Measured Frequency	Frequency Drift	Measured Frequency	Frequency Drift	Measured Frequency	Frequency Drift		
		(MHz)	ppm	(MHz)	ppm	(MHz)	ppm	(MHz)	ppm		
50	5	13.560870	64.159292	13.560882	65.044248	13.560880	64.896755	13.560882	65.044248	100	PASS
40	5	13.560872	64.306785	13.560871	64.233038	13.560882	65.044248	13.560873	64.380531	100	PASS
30	5	13.560872	64.306785	13.560874	64.454277	13.560870	64.159292	13.560871	64.233038	100	PASS
20	5	13.560871	64.233038	13.560870	64.159292	13.560873	64.380531	13.560871	64.233038	100	PASS
10	5	13.560870	64.159292	13.560871	64.233038	13.560873	64.380531	13.560871	64.233038	100	PASS
0	5	13.560870	64.159292	13.560875	64.528024	13.560871	64.233038	13.560874	64.454277	100	PASS
-10	5	13.560872	64.306785	13.560871	64.233038	13.560871	64.233038	13.560873	64.380531	100	PASS
-20	5	13.560871	64.233038	13.560870	64.159292	13.560874	64.454277	13.560873	64.380531	100	PASS
20	4.25	13.560873	64.380531	13.560871	64.233038	13.560872	64.306785	13.560870	64.159292	100	PASS
	5.75	13.560870	64.159292	13.560870	64.159292	13.560870	64.159292	13.560870	64.159292	100	PASS

5.4 20dB BANDWIDTH MEASUREMENT

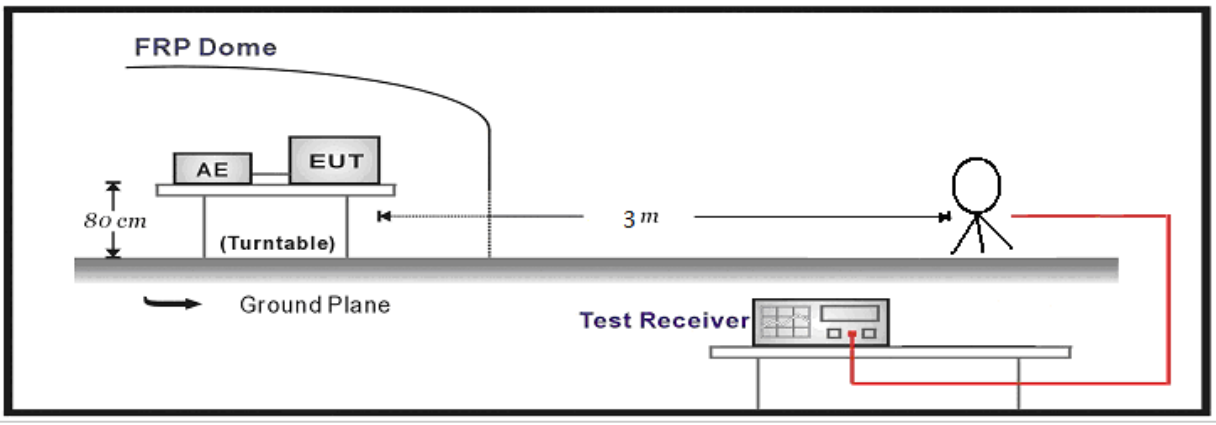
Ambient condition:

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)

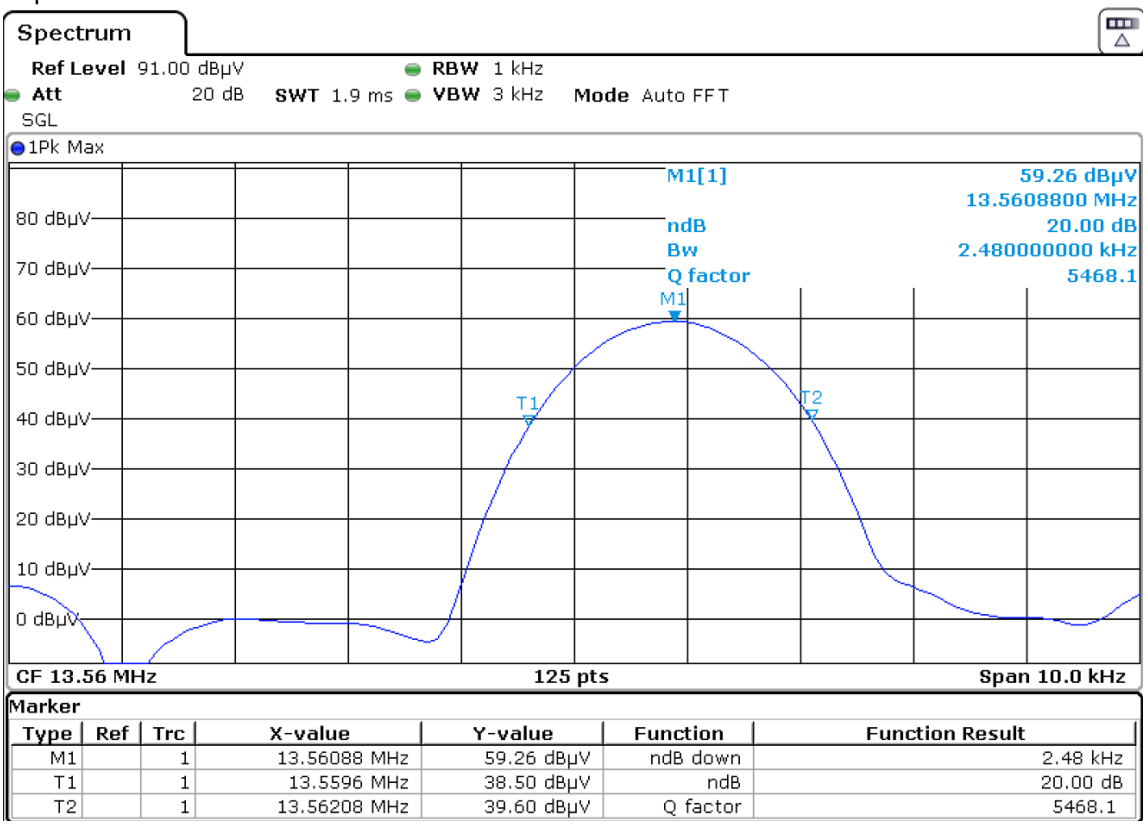
Measurement Uncertainty：

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	2.48	13.5596	13.56208	13.11~14.01	PASS

The plots of test results are attached as below.



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	13.56088 MHz	59.26 dBµV	ndB down	2.48 kHz
T1		1	13.5596 MHz	38.50 dBµV	ndB	20.00 dB
T2		1	13.56208 MHz	39.60 dBµV	Q factor	5468.1

6. Appendix A

Test Equipment	Type/Mode	SERIAL NO.	Equipment No.	Manufacturer	Cal. Due
5m Semi-Anechoic Chamber	SAC-5	SAC-5-2.0	EM-000557	COMTEST	2024/11/02
EMI Test Receiver	ESR7	102235	EM-000574	R&S	2025/01/14
loop antenna	HLA 6121	540046	EM-000546	TESEQ	2024/06/05
Broadband Antenna	VULB 9168	01537	EM-000736-1	SCHWARZBECK	2024/04/24
LISN	NSLK 8127	8127644	EM-000370	SCHWARZBECK	2024/07/27
EMI Test Receiver	ESR3	102394	EM-000520	R&S	2025/01/14
Plus Limiter（#2)	VTSD 9561	9561-F017	EM-000367	SCHWARZBECK	2024/09/03
Shielding Room(#2)	GP1A	002	EM-000372	LEINING	2024/08/07
Temperature and humidity meter	MHO-C201	/	DZ-000249-2	Seconds test	2024/09/23
Programmable DC Power Supply	E3642A	MY59108106	DZ-000242-2	KEYSIGHT	2024/08/03
Spectrum Analyzer	FSV40	101580	DZ-000238-3	R&S	2024/04/22
Constant temperature and humidity (high and low temperature) test chamber	LGH-80LA	LG20210902-A10	DZ-000328	/	2024/10/17

Dynacomm	Software Release	Software Developer
TS+（5m,Radiation test）	JS32-RE 5.0.0	Tonscend
TS+（Conducted Emissions）	JS32-CE 3.0.0.1	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