

FCC Part 15 Subpart C Test Report

for NFC

Product Name : Android Mobile Data Terminal
Model Name : Z-220X

Prepared for:
ZEBEX INDUSTRIES INC.
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Report Number : UL32220141104FCC003-3
Date of Report : 05-01-2015
Date of Test : 05-11-2014~04-01-2015

Notes :

The test results only relate to these samples which have been tested.
Partly using this report will not be admitted unless been allowed by Unilab.
Unilab is only responsible for the complete report with the reported stamp of Unilab.

Applicant: ZEBEX INDUSTRIES INC.
B1-1,NO.207 SEC3,BEIXIN ED,XINDIAN DIST,NEW TAIPEI CITY
23142,TAIWAN

Manufacturer: Mexzen Technology(ShangHai)INC.
Unit B,12F,Building 11,No. 518,xinzhuhan Rd., Songjiang
District,Shanghai,China

Product Name: Android Moblie Data Terminal

Brand Name: ZEBEX

Model Name: Z-220X

FCC ID: JNF-Z-220X

Serial Number: N/A

EUT Voltage: AC input for adapter: AC 100~240V 50/60Hz
Battery: 3.6V~4.2V

Date of Receipt: 04-11-2014

Date of Test: 05-11-2014~04-01-2015

Test Standard: FCC CFR Title 47 Part 15 Subpart C
ANSI C 63.4: 2009

Test Result: PASS

Prepared by :



(Technical Engineer: Andy Wei)

Reviewed by :



(Senior Engineer: Forest Cao)

Approved by :



(Supervisor: Eva Wang)

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1. GENERAL INFORMATION

1.1 EUT DESCRIPTION

Product Name:	Android Mobile Data Terminal
Model Name:	Z-220X
Hardware Version:	V3.0
Software Version:	GST_A81_M20_4500XXXX_MUL_V03_20141201
RF Exposure Environment:	Uncontrolled
NFC	
Operation Frequency:	13.56MHz
Type of Modulation:	ASK
Channel Number:	1
Antenna Type:	FPCB
Antenna Peak Gain:	3.0dBi
Component	
AC Adapter:	Model Name: TS22-501000U
	Input: AC 100-240V 50/60Hz 0.2A
	Output: DC 5V/1A
Note: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.	

1.2 TEST MODE

Unilab has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode
Mode 1: NFC TX

Note: 1. TX means Transmitter (continuously transmitting).

2. For the radiated emission test, every axis (X, Y, Z) was verified, and show the worst result on this report.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4 and FCC CFR 47 2.1049, 2.1051, 2.1053, 2.1055, 2.1057, 15.207, 15.209 and 15.225.

2.1 EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application

2.2 EUT EXERCISE

The EUT was operated in the engineering mode to fix the TX frequency that was for the purpose of the measurements.

2.3 GENERAL TEST PROCEDURES

Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4: 2009 Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-peak and average detector modes.

Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 13.1.4.1 of ANSI C63.4: 2009.

2.4 FCC PART 15.205 RESTRICTED BANDS OF OPERATIONS

(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)
13.36 - 13.41			

1 Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

2 Above 38.6

(b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

3. TECHNICAL SUMMARY

3.1 SUMMARY OF STANDARDS AND TEST RESULTS

The EUT have been tested according to the applicable standards as referenced below:

Test Item	FCC	Result
20dB Bandwidth	§2.1049	P
In-Band Emission	§15.225 (a)(b)(c)	P
Out-Of-Band Emission	§15.225 (d) §15.209(a)	P
Frequency Stability	§15.225 (e)	P
AC Power Line Conducted Emissions	§15.207 (a)	P

Note: P means pass, F means failure, N/A means not applicable

3.2 TEST UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Test item	Value (dB)
Conducted disturbance	3.4
Radiated disturbance	4.2

3.3 TEST EQUIPMENT LIST

Equipment	Manufacturer	Model	Serial No.	Due Date	Cal interval
Receiver	Agilent	N9038A	MY51210142	26/12/2015	1 year
LISN	R&S	ENV216	100069	22/08/2015	1 year
3m Chamber & Accessory Equipment	ETS-LINDGREN	FACT-3	CT-0000336	26/11/2017	3 years
DC Power Supply	Agilent	6612C	MY43002989	03/03/2015	1 year
Temperature Chamber	WEISS	DU/20/40	58226017340050	02/12/2015	1 year
Loop Antenna	Schwarzbeck	FMZB1519	1519-020	25/03/2016	2 years
Biconilog Antenna	Schwarzbeck	VULB 9160	3316	19/09/2016	2 years

3.4 TEST FACILITY

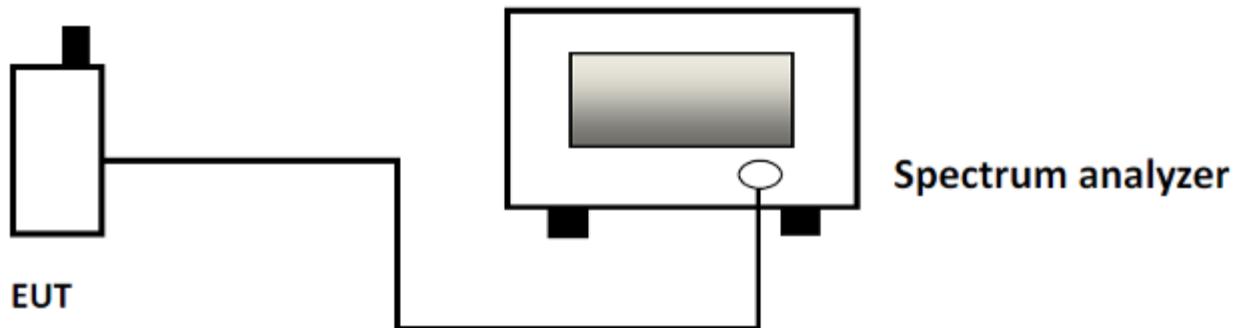
All test facilities used to collect the test data are located at No. 1350, Lianxi Rd. Pudong New District, Shanghai, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4: 2009, CISPR 16-1-1 and other equivalent standards. The laboratory is compliant with the requirements of the ISO/IEC/E 17025.

3.5 TEST SETUP CONFIGURATION

The information contained within this report is intended to show verification of compliance of the EUT to the requirements of CFR 47 FCC Part 15.247. Unilab has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report.

4. 20DB BANDWIDTH

4.1 TEST SETUP



4.2 LIMITS

The 20dB bandwidth of the emissions in the band 13.553MHz~13.567MHz.

4.3 TEST PROCEDURE

Use the following spectrum analyzer settings:

Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a channel

RBW \geq 1% of the 20 dB bandwidth

VBW \geq RBW

Sweep = auto

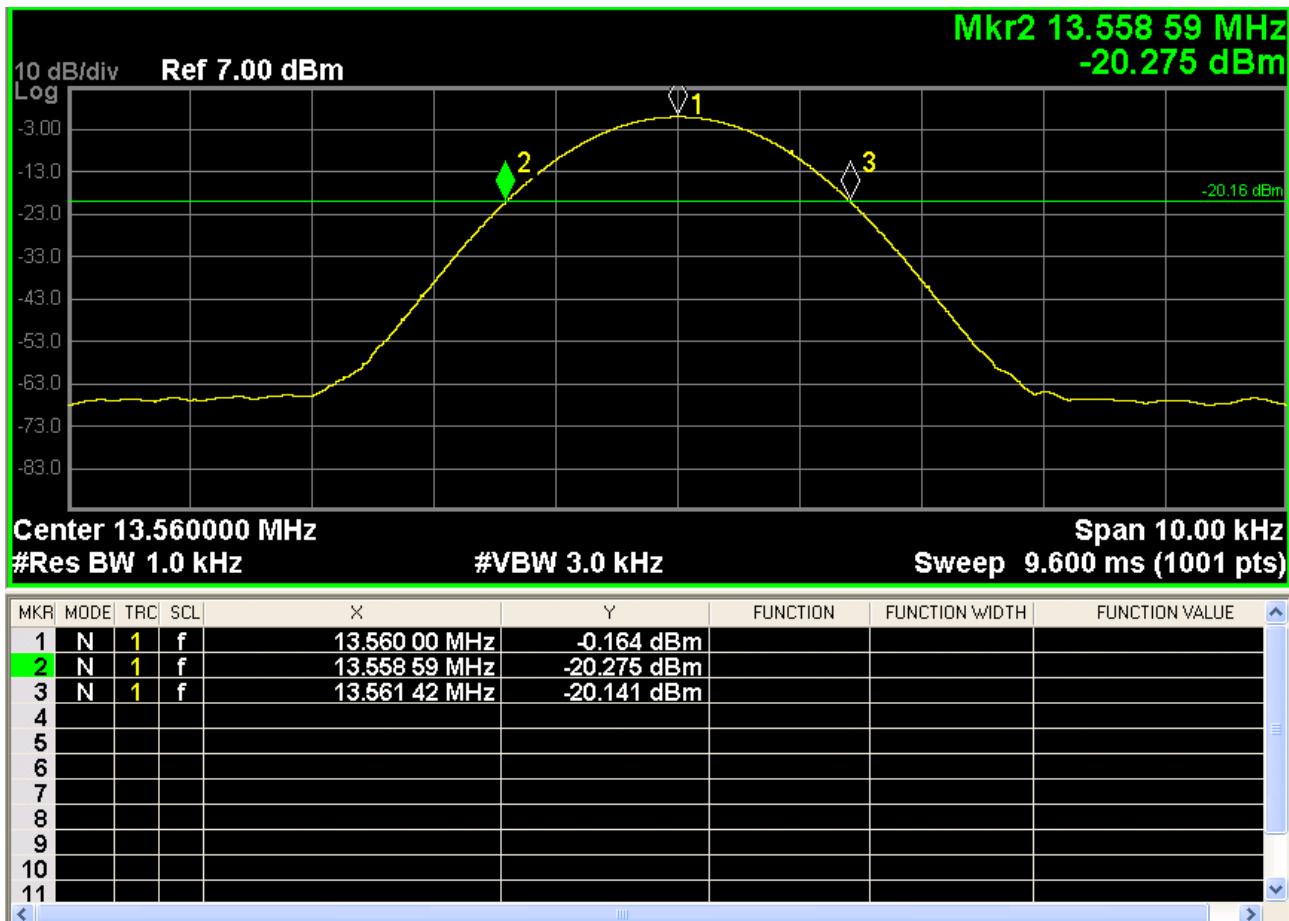
Detector function = peak

Trace = max hold

The EUT should be transmitting at its maximum data rate. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. Use the marker-delta function to measure 20 dB down one side of the emission. Reset the marker-delta function, and move the marker to the other side of the emission, until it is (as close as possible to) even with the reference marker level. The marker-delta reading at this point is the 20 dB bandwidth of the emission.

4.4 TEST RESULTS

Channel	20dB bandwidth (KHz)
13.56MHz	2.83



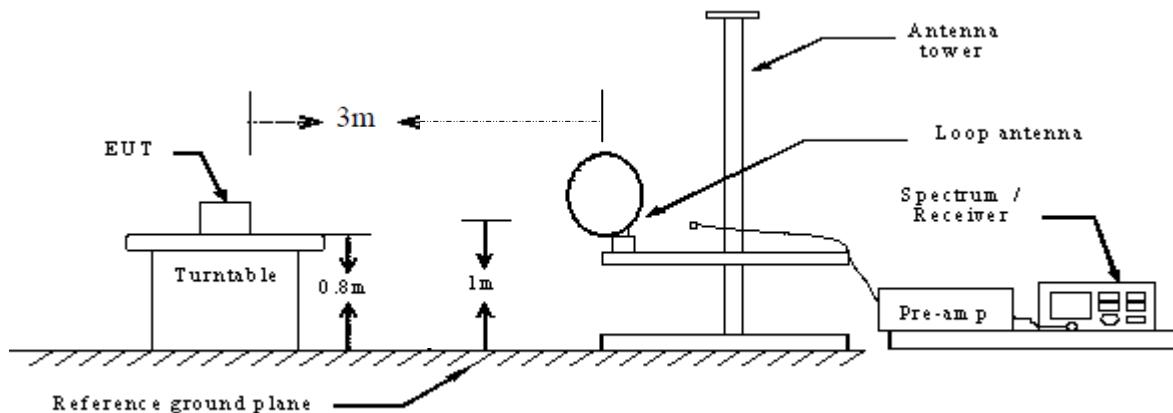
$F_{low}=13.55859\text{MHz}(>13.553\text{MHz})$;

$F_{high}=13.56142\text{MHz}(<13.567\text{MHz})$;

20dB bandwidth=13.56142-13.55859=0.00283MHz.

5. IN-BAND EMISSION (RADIATION)

5.1 TEST SETUP



5.2 LIMITS

Frequency (MHz)	Limits(uV/m) at 30m	Limits(dBuV/m) at 3m
13.110~13.4	106	80.5
13.410~13.5	334	90.5
13.553~13.5	15848	124
13.567~13.7	334	90.5
13.710~14.0	106	80.5

Notes: the calculate formula for below 30MHz

$$L2 = 20\lg(L1) + 40\lg(d1/d2)$$

L2: is the specified limit in dB microvolts per metre at distance d2.

L1: is the specified limit in microvolts per metre at distance d1.

For example:

$L1 = 106 \text{ } (\mu\text{V/m})$, $d1 = 30 \text{ (m)}$, $d2 = 3 \text{ (m)}$, so $L2$ as follows:

$$20\lg(106) + 40\lg(30/3) = 80.5 \text{ (dB}\mu\text{V/m)}$$

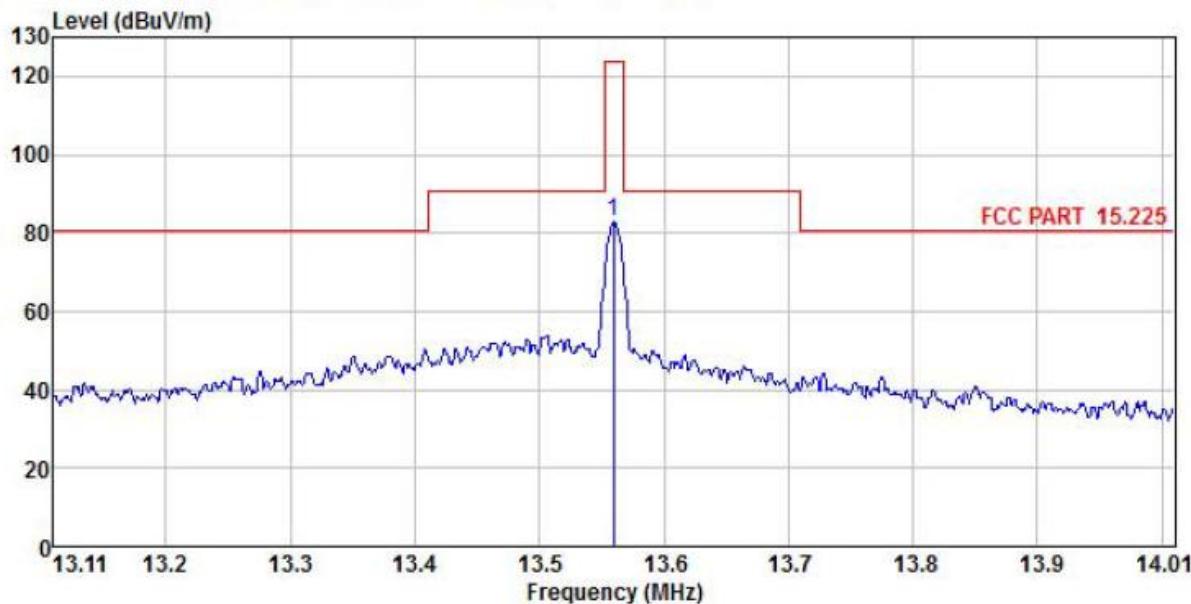
5.3 TEST PROCEDURE

Spurious emissions from the EUT are measured in the frequency range of 13.11MHz to 14.01 MHz using a tuned receiver and a shielded loop antenna. The antenna was positioned 3 meters horizontally from the EUT. The RBW of the spectrum analyzer is set 9KHz. Measurements have been made in all three orthogonal axes and the shielded loop antenna was rotated to locate the maximum of the emissions. The emission limits are based on measurements employing a CISPR quasi-peak detector.

5.4 RESULTS & PERFORMANCE

Test Mode : mode 1

Antenna Polarity : Horizontal



Site : chamber

Condition : FCC PART 15.225 3m FMZB 1519 HORIZONTAL

EUT :

Model Name :

Temp/Humi : 21 °C /50 %

Power Rating: AC 120V/60Hz

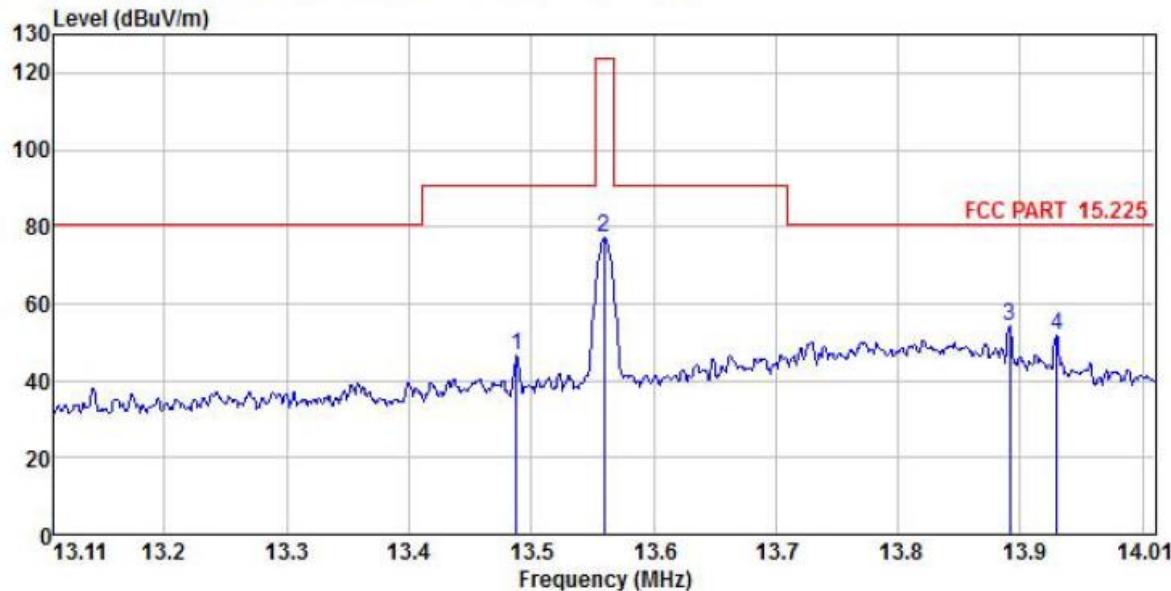
Mode : NFC TX

Memo :

Freq	ReadAntenna		Cable Preamp		Limit	Over	Remark
	Level	Factor	Loss	Factor			
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1 pp	13.56	62.47	19.51	0.95	0.00	82.93	124.00 -41.07 Peak

Test Mode : mode 1

Antenna Polarity : Vertical



Site : chamber

Condition : FCC PART 15.225 3m FMZB 1519 VERTICAL

EUT :

Model Name :

Temp/Humi : 21 °C /50 %

Power Rating: AC 120V/60Hz

Mode : NFC TX

Memo :

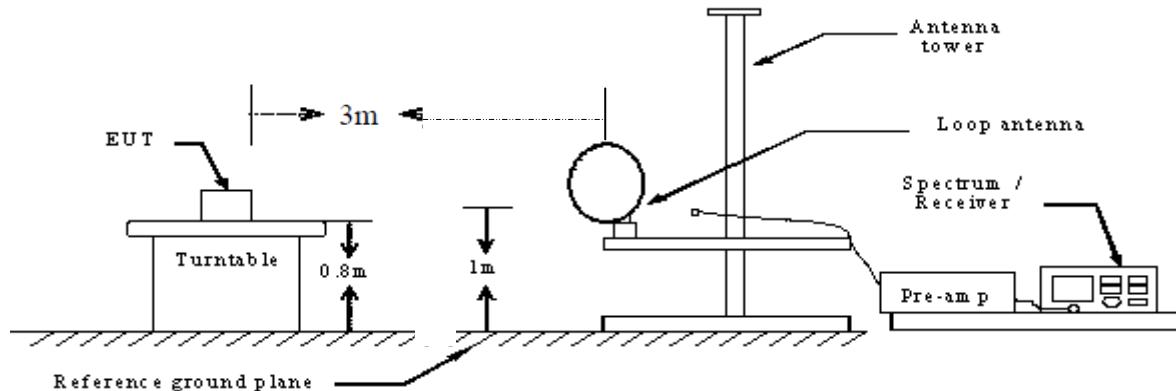
	ReadAntenna	Cable	Preamp	Limit	Over				
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark

	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	13.49	25.84	19.51	0.95	0.00	46.30	90.50	-44.20	Peak
2	13.56	56.59	19.51	0.95	0.00	77.05	124.00	-46.95	Peak
3 pp	13.89	33.95	19.52	0.96	0.00	54.43	80.50	-26.07	Peak
4	13.93	31.36	19.52	0.96	0.00	51.84	80.50	-28.66	Peak

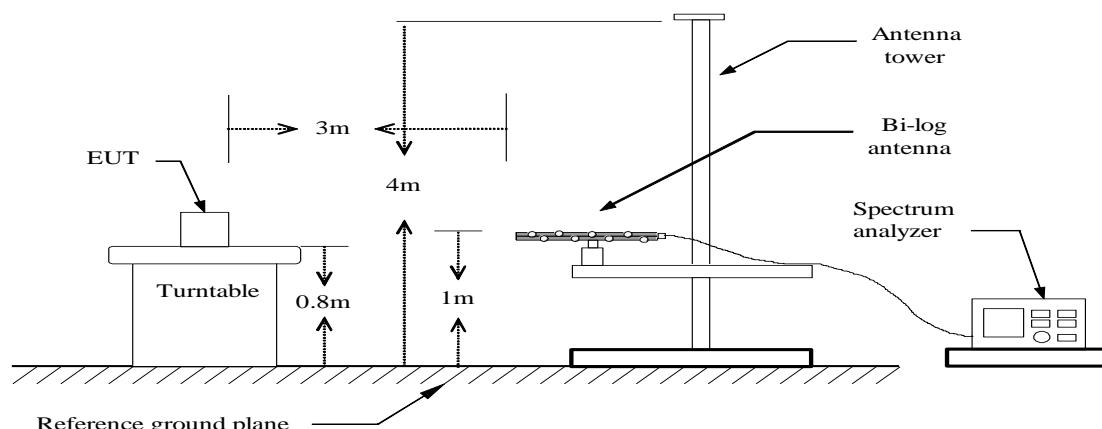
6. OUT-OF-BAND EMISSION (RADIATION)

6.1 TEST SETUP

Radiated Spurious Measurement: below 30MHz



Radiated Spurious Measurement: below 1GHz



6.2 LIMITS

Frequency (MHz)	Limits (μ V/m)	Measurement Distance (Meters)	Limits(dBuV/m) at 3m
0.009-0.490	$2400/F(\text{KHz})$	300	128.5~93.80
0.490-1.705	$24000/F(\text{KHz})$	30	73.80~63.00
1.705-30.0	30	30	69.5
30~88	100	3	40
88~216	150	3	43.5
216~960	200	3	46
Above 960	500	3	54

Notes: the calculate formula for below 30MHz

$L2 = 20\lg(L1) + 40\lg(d1/d2)$

$L2$: is the specified limit in dB microvolts per metre at distance $d2$.

$L1$: is the specified limit in microvolts per metre at distance $d1$.

For example:

$L1 = 2400/9 (\mu\text{V}/\text{m})$, $d1 = 300 (\text{m})$, $d2 = 3 (\text{m})$, so $L2$ as follows:

$$20\lg(2400/9) + 40\lg(300/3) = 128.5(\text{dB}\mu\text{V}/\text{m})$$

6.3 TEST PROCEDURE

Radiated Emission (9 kHz – 30 MHz) :

Spurious emissions from the EUT are measured in the frequency range of 9 kHz to 30 MHz using a tuned receiver and a shielded loop antenna. The antenna was positioned 3 meters horizontally from the EUT. The RBW of the spectrum analyzer is set to 200Hz(measured frequency range was 9KHz~150KHz) or 9KHz(measured frequency range was 150KHz~30MHz). Measurements have been made in all three orthogonal axes and the shielded loop antenna was rotated to locate the maximum of the emissions. The emission limits are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz(these two bands employing a average detector).

Radiated Emission (30 MHz – 1000 MHz) :

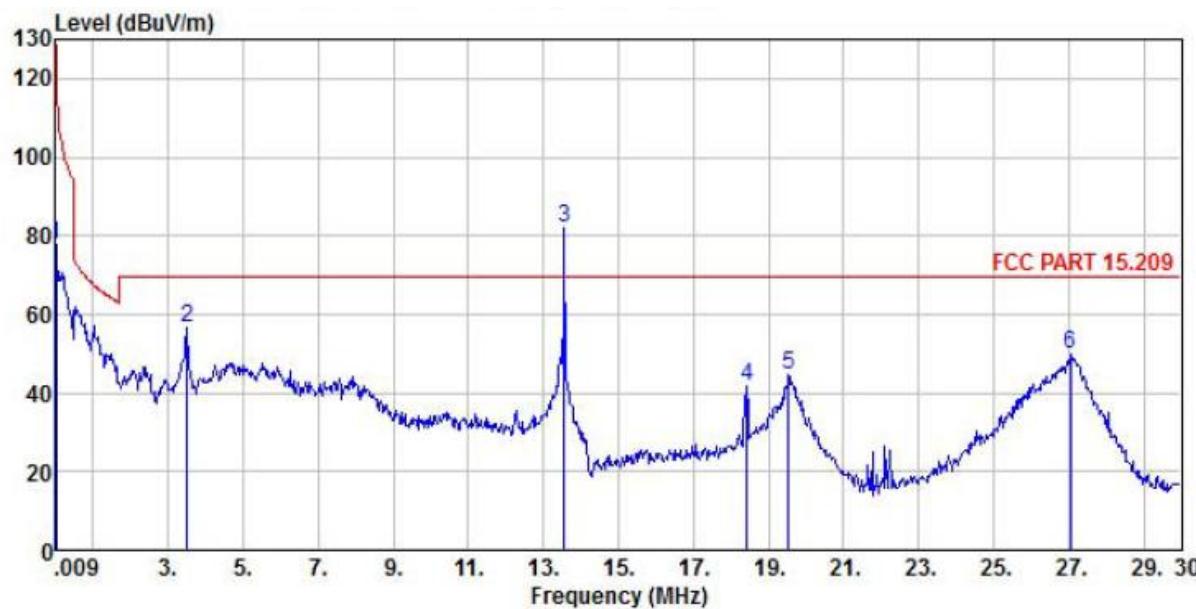
According to description of ANSI C63.4: 2009 sec.13.4, the preliminary radiated emissions measurement were carried out. The preliminary radiated measurements were performed at the measurement distance that specified for compliance to determine the emission characteristics of the EUT. The EUT configuration (in X, Y and Z axis), cable configuration and mode of operation were determined for producing the maximum level of emissions. These configurations were used for the final radiated emissions measurements. The measurement is carried out using a spectrum analyzer or receiver. The Quasi-peak detector is used and RBW is set to 120kHz .The antenna height and turn table rotation is adjusted until the maximum power value is founded on spectrum analyzer or receiver.

6.4 RESULTS & PERFORMANCE

From 9KHz to 30MHz:

Test Mode : mode 1

Antenna Polarity : Horizontal



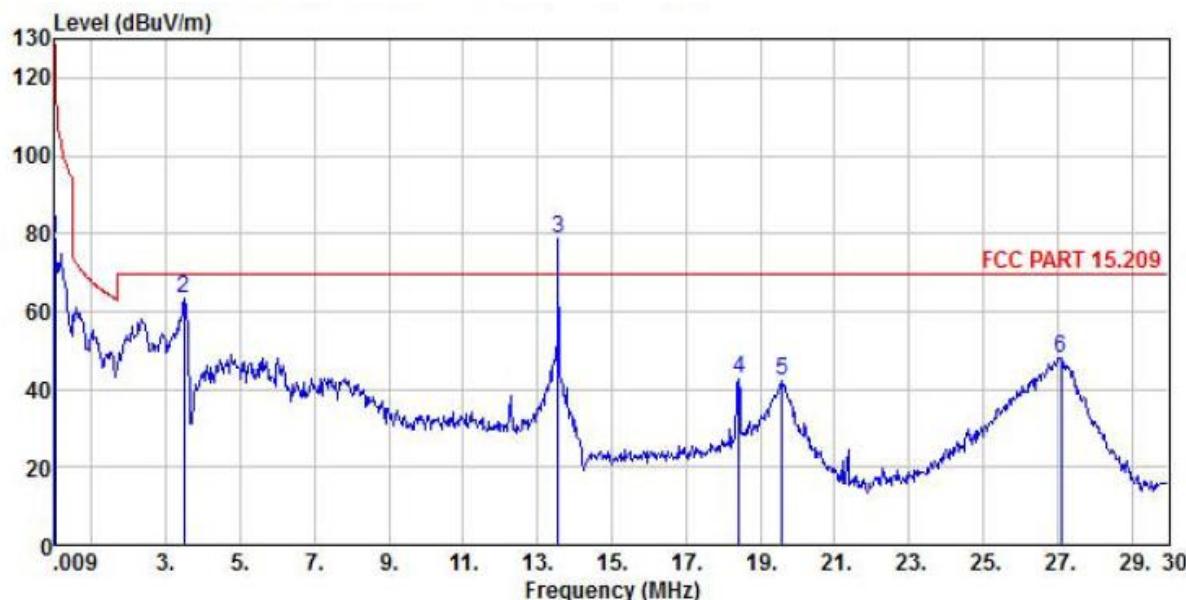
Site : chamber
Condition : FCC PART 15.209 3m FMZB 1519 HORIZONTAL
EUT :
Model Name :
Temp/Humi : 21 °C /50 %
Power Rating: AC 120V/60Hz
Mode : NFC TX
Memo :

Freq	ReadAntenna		Cable Preamp		Limit	Over	Remark	
	Level	Factor	Loss	Factor				
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	0.01	55.43	21.77	0.31	0.00	77.51	128.50	-50.99 Peak
2	3.52	37.17	19.21	0.41	0.00	56.79	69.50	-12.71 Peak
3 pp	13.56	61.65	19.51	0.95	0.00	82.11	69.50	12.61 Peak
4	18.42	20.63	19.60	1.37	0.00	41.60	69.50	-27.90 Peak
5	19.53	23.65	19.60	1.41	0.00	44.66	69.50	-24.84 Peak
6	27.06	28.06	19.58	2.03	0.00	49.67	69.50	-19.83 Peak

Note: 13.56 MHz was fundamental signal which can be ignored.

Test Mode : mode 1

Antenna Polarity : Vertical



Site : chamber
Condition : FCC PART 15.209 3m FMZB 1519 VERTICAL
EUT :
Model Name :
Temp/Humi : 21 °C /50 %
Power Rating: AC 120V/60Hz
Mode : NFC TX
Memo :

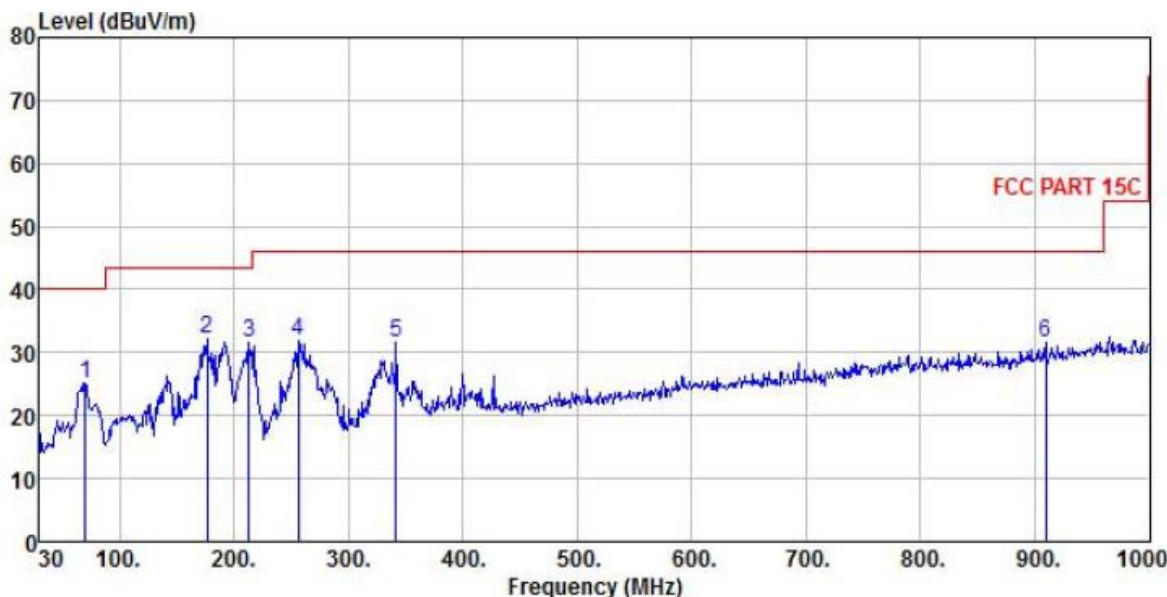
Freq	ReadAntenna		Cable		Preamp	Limit	Over	Remark
	Level	Factor	Loss	Factor	Level			
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	0.01	56.43	21.77	0.31	0.00	78.51	128.50	-49.99 Peak
2	3.49	43.75	19.22	0.41	0.00	63.38	69.50	-6.12 Peak
3 pp	13.56	58.37	19.51	0.95	0.00	78.83	69.50	9.33 Peak
4	18.42	21.51	19.60	1.37	0.00	42.48	69.50	-27.02 Peak
5	19.59	21.17	19.60	1.42	0.00	42.19	69.50	-27.31 Peak
6	27.09	26.53	19.58	2.03	0.00	48.14	69.50	-21.36 Peak

Note: 13.56 MHz was fundamental signal which can be ignored.

From 30MHz to 1GHz:

Test Mode : mode 1

Antenna Polarity : Horizontal

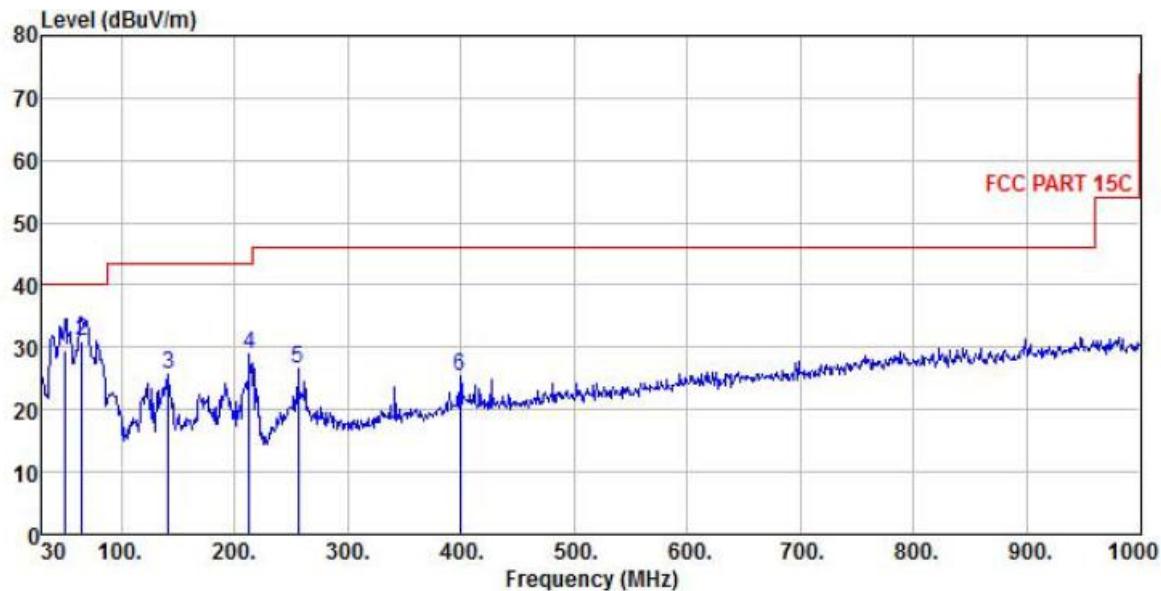


Site : chamber
Condition : FCC PART 15C 3m VULB9160 HORIZONTAL
EUT :
Model Name :
Temp/Humi : 21 °C /50 %
Power Rating: AC 120V/60Hz
Mode : NFC TX
Memo :

Freq	ReadAntenna		Cable Preamp		Limit	Over	Remark	
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	69.77	13.13	10.99	1.12	0.00	25.24	40.00	-14.76 Peak
2 pp	176.47	17.83	12.62	1.87	0.00	32.32	43.50	-11.18 Peak
3	213.33	19.10	10.61	1.99	0.00	31.70	43.50	-11.80 Peak
4	256.01	17.55	12.05	2.17	0.00	31.77	46.00	-14.23 Peak
5	341.37	14.99	14.12	2.52	0.00	31.63	46.00	-14.37 Peak
6	909.79	4.70	22.72	4.08	0.00	31.50	46.00	-14.50 Peak

Test Mode : mode 1

Antenna Polarity : Vertical

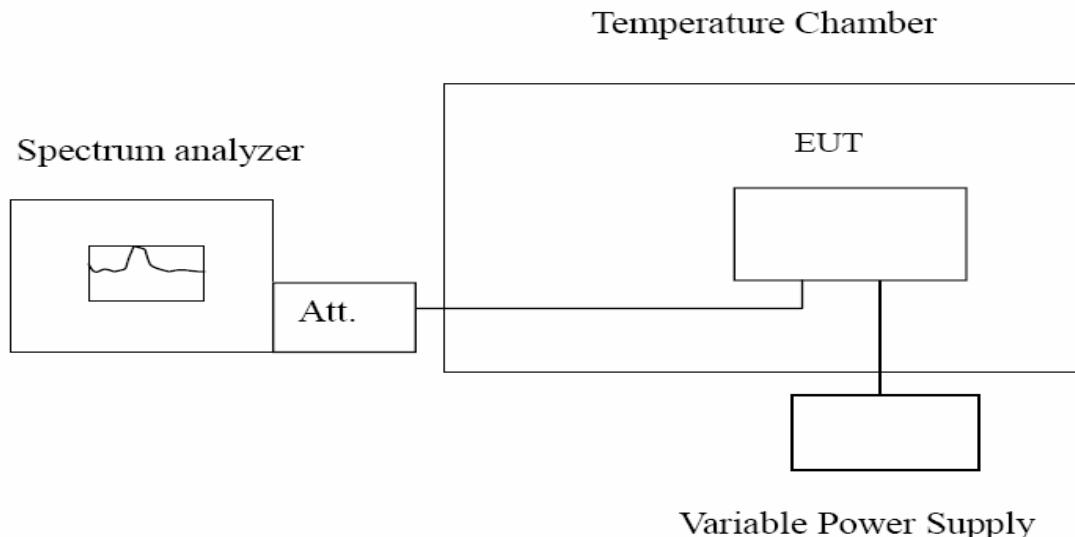


Site : chamber
Condition : FCC PART 15C 3m VULB9160 VERTICAL
EUT :
Model Name :
Temp/Humi : 21 °C /50 %
Power Rating: AC 120V/60Hz
Mode : NFC TX
Memo :

Freq	ReadAntenna		Cable Preamp		Limit	Over	Limit	Remark
	Level	Factor	Loss	Factor				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	50.37	16.09	12.57	0.96	0.00	29.62	40.00	-10.38 QP
2 pp	64.92	17.48	12.34	1.08	0.00	30.90	40.00	-9.10 QP
3	141.55	10.72	13.47	1.62	0.00	25.81	43.50	-17.69 Peak
4 pk	213.33	16.33	10.61	1.99	0.00	28.93	43.50	-14.57 Peak
5	256.01	12.34	12.05	2.17	0.00	26.56	46.00	-19.44 Peak
6	399.57	7.43	15.32	2.65	0.00	25.40	46.00	-20.60 Peak

7. FREQUENCY STABILITY

7.1 TEST SETUP



7.2 LIMITS

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

7.3 TEST PROCEDURE

Use the following spectrum analyzer settings:

Span = wide enough to capture the peak level of emission

RBW = 1KHz;VBW = 3KHz;Sweep = auto;Detector function = peak;Trace = max hold

Frequency Stability Under Temperature Variations:

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -20°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

Frequency Stability Under Voltage Variations:

Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency. Reduce the input voltage to specify extreme voltage variation ($\pm 15\%$) and endpoint, record the maximum frequency change.

7.4 RESULTS & PERFORMANCE

Frequency Stability under Temperature
Voltage=3.8V

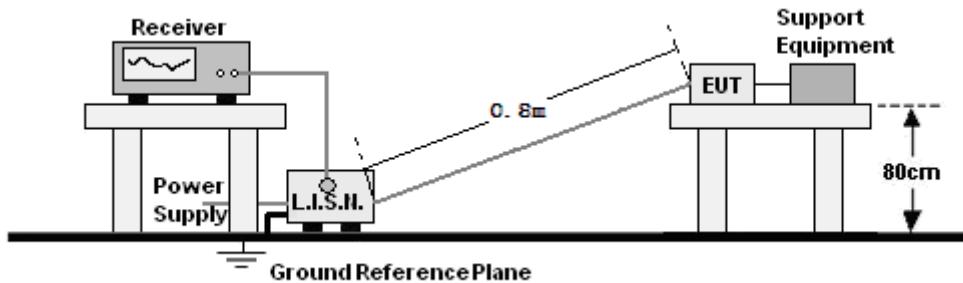
Temperature Interval (°C)	Measurement Frequency (MHz)	Deviation (MHz)	Limit (MHz)
-20	13.56056	0.00056	±0.1356
-10	13.56035	0.00035	±0.1356
0	13.56066	0.00066	±0.1356
10	13.56038	0.00038	±0.1356
20	13.56059	0.00059	±0.1356
30	13.56077	0.00077	±0.1356
40	13.56057	0.00057	±0.1356
50	13.56028	0.00028	±0.1356

Frequency Stability under Voltage
Temperature=20°C

DC Voltage (V)	Measurement Frequency (MHz)	Deviation (MHz)	Limit (MHz)
3.2	13.56032	0.00032	±0.1356
3.8	13.56053	0.00053	±0.1356
4.4	13.56086	0.00086	±0.1356

8. AC POWER LINE CONDUCTED EMISSIONS

8.1 TEST SETUP



8.2 LIMITS

Frequency range (MHz)	Limits dB(μ V)	
	Quasi-peak	Average
0,15 to 0,50	66 to 56	56 to 46
0,50 to 5	56	46
5 to 30	60	50

NOTE: 1. The lower limit shall apply at the transition frequencies.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 to 0.50 MHz.

8.3 TEST PROCEDURE

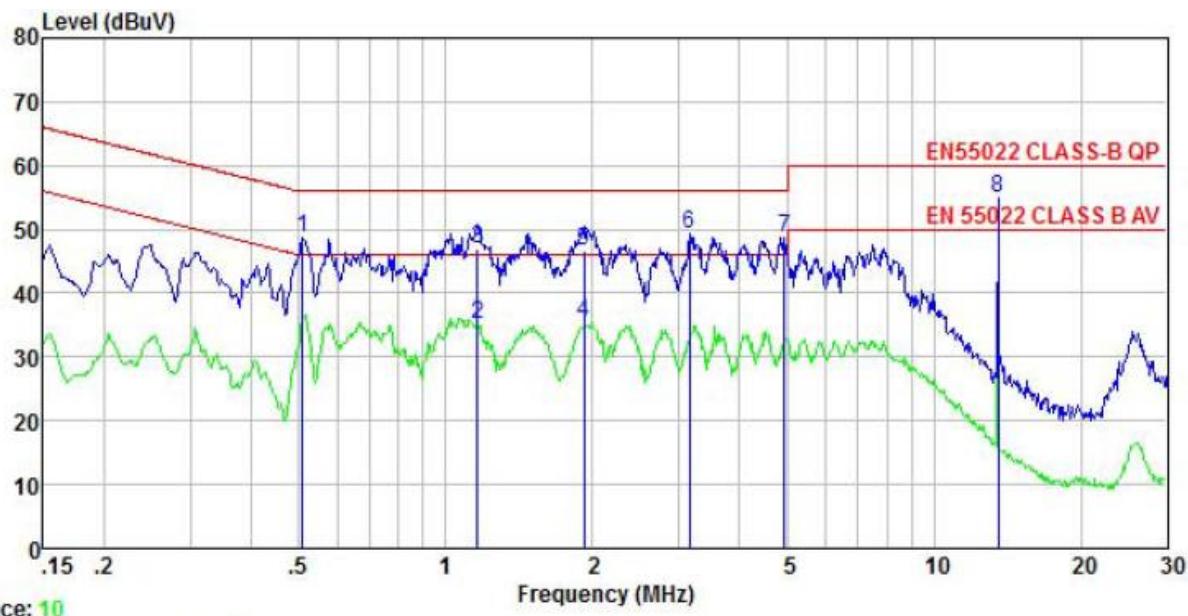
According to description of ANSI C63.4: 2009 sec.13.3, the AC power line preliminary conducted emissions measurements were carried out. The preliminary conducted measurements were performed using the spectrum analyzer to observe the emission characteristics of the EUT. The EUT configuration, cable configuration and mode of operation were determined for producing the maximum level of emissions. These configurations were used for final AC power line conducted emissions measurements. The EUT is placed on a non-metallic table 0.8m above the horizontal metal reference ground plane. The EUT is connected to LISN and LISN is connected to the reference ground. All other supplemental devices are connected with EUT through other LISN. The distance between EUT and LISN is 80cm. A radio link is established between EUT and the tester. The output power of the EUT is controlled by the tester and driven to maximum value. An initial pre-scan was performed on the live L line and neutral line with peak detector (9kHz RBW). Both average detector and quasi-peak detector are performed at the frequencies with maximized peak emission.

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

8.4 RESULTS & PERFORMANCE

Test Mode: mode 1

LISN: LINE

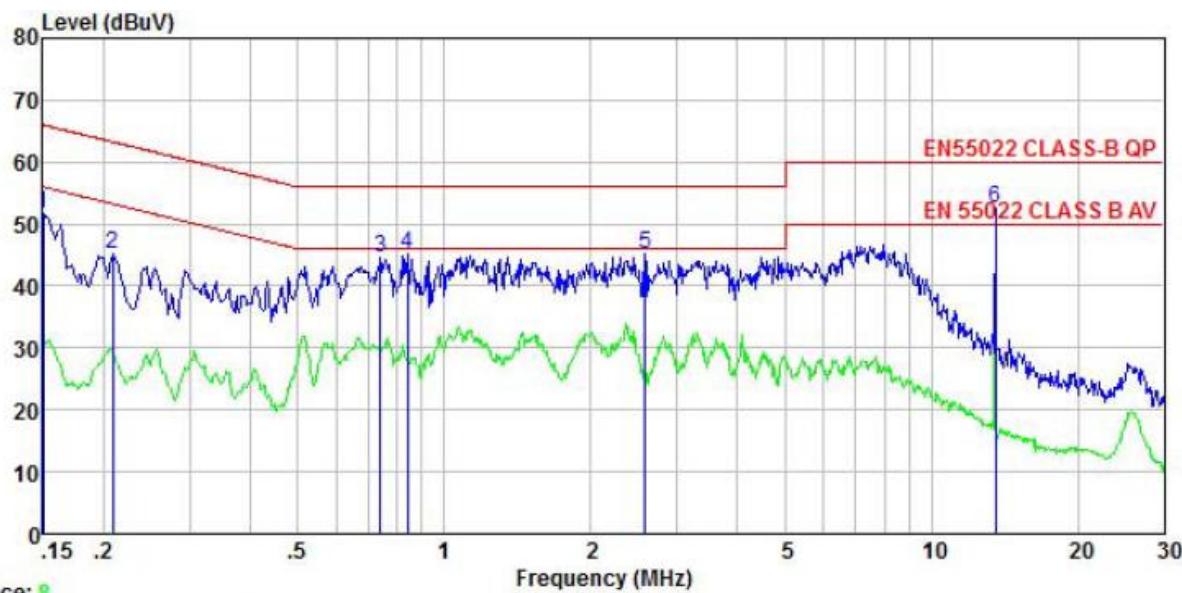


Freq	Read	LISN	Cable	Preamp	Limit	Over	Remark	
	Level	Factor	Loss	Factor				
MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.51	37.94	10.56	0.10	0.00	48.60	56.00	-7.40 Peak
2	1.16	24.53	10.52	0.14	0.00	35.19	46.00	-10.81 Average
3 qp	1.16	36.26	10.52	0.14	0.00	46.92	56.00	-9.08 QP
4 av	1.92	24.74	10.52	0.15	0.00	35.41	46.00	-10.59 Average
5	1.92	35.86	10.52	0.15	0.00	46.53	56.00	-9.47 QP
6	3.16	38.57	10.52	0.15	0.00	49.24	56.00	-6.76 Peak
7	4.95	37.99	10.52	0.14	0.00	48.65	56.00	-7.35 Peak
8 pp	13.55	44.25	10.49	0.24	0.00	54.98	60.00	-5.02 Peak

Note: Point 8 was fundamental signal which can be ignored.

Test Mode:mode 1

LISN:NEUTRAL



Note: Point 6 was fundamental signal which can be ignored.

APPENDIX 1 PHOTOGRAHPS OF TEST SETUP

Please refer to the file named "JNF-Z-220X_Part 15C Setup Photos".

APPENDIX 2 PHOTOGRAHPS OF EUT

Please refer to the two files named "JNF-Z-220X_EUT External Photos" and "JNF-Z-220X_EUT Internal Photos".

---End of the report---