



TEST REPORT

No. I20D00015-EMC01

For

Client : Mobiwire SAS

Production: 2G feature phone

Model Name : Mobiwire NIKITI, Altice F2

Brand Name: Mobiwire, Altice

FCC ID: QPN-NIKITI

Hardware Version: V01

Software Version: ELKI_DS_L_V01.2_181106_MP

Issued date: 2020-03-24

NOTE

1. The test results in this test report relate only to the devices specified in this report.
2. This report shall not be reproduced except in full without the written approval of East China Institute of Telecommunications
3. The measurement uncertainty is not taken into account when deciding conformity, and the results of measurement (or the average of measurement results) are directly used as the criterion for the stating conformity.

Test Laboratory:

East China Institute of Telecommunications

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Revision Version

Report Number	Revision	Date	Memo
I20D00015-EMC01	00	2020-03-09	Initial creation of test report
I20D00015-EMC01	01	2020-03-24	Second creation of test report

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1. Test Laboratory

1.1. Testing Location

Company Name:	ECIT Shanghai, East China Institute of Telecommunications
Address:	Building 4, No. 766, Jingang Road, Pudong New District, Shanghai
Postal Code:	201206
Telephone:	(+86)-021-63843300
FCC registration No:	958356

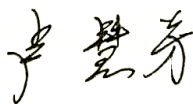
1.2. Testing Environment

Normal Temperature:	15-35℃
Relative Humidity:	30-60% RH
Supply Voltage	120V/60Hz

1.3. Project data

Project Leader:	Chen Minfei
Testing Start Date:	2020-02-22
Testing End Date:	2020-03-03

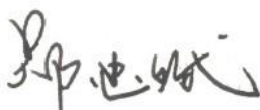
1.4. Signature



Lu Huifang
(Prepared this test report)



You Jinjun
(Reviewed this test report)



Zheng Zhongbin
(Approved this test report)

2. Client Information

2.1. Applicant Information

Company Name	Mobiwire SAS
Address	79 AVENUE FRANCOIS ARAGO 92017 NANTERRE CEDEX France.
Telephone	+33668018722
Postcode	N/A

2.2. Manufacturer Information

Company Name	Mobiwire SAS
Address	79 AVENUE FRANCOIS ARAGO 92017 NANTERRE CEDEX France.
Telephone	+33668018722
Postcode	N/A

3. Equipment under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

Product Name	2G feature phone
Model name	Mobiwire NIKITI, Altice F2
GSM Frequency Band	GSM850/GSM1900
Additional Communication Function	BT 3.0;

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version	Date of receipt
N03	356734109542872/ 356734109542880	V01	ELKI_DS_L_V01.2 _181106_MP	2020-02-22

*EUT ID: is used to identify the test sample in the lab internally.

3.3. Internal Identification of AE used during the test

AE ID*	Description	Model	SN
CA03	Adapter	A31A-050055U-EU1	/
AA02	Earphone	/	/
BA01	Battery	178136112	3612H9121166829
AE1	Notebook PC	DELL Latitude E6510	/
AE2	USB Cable	/	/
AE3	Desktop PC	OptiPlex 790 DT	X8RP1 A01 APCC
AE4	LAN Cable	/	/
AE5	VGA Cable	/	/
AE6	RS232 Cable	/	/
AE7	Keyboard	KB212-B	CN-0Y88XT-65890-12I-005Q-A00
AE8	Mouse	MS111-P	CN-011D3V-71581-19J-1A64
AE9	SanDiskUltra64GB	microSDXC 1	/
AE10	Monitor	Dell E1709Wc	/

*AE ID: is used to identify the test sample in the lab internally.

4. Reference Documents

4.1 Reference Documents for testing

The following documents listed in this section are referred for testing.

Reference	Title	Version
FCC Part 15, Subpart B	Radio frequency devices	2020/2/25
ANSI C63.4	Method of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2014

5. Test Results

5.1 Summary of Test Results

Items	Test List	Clause in FCC rules	Verdict
1	Radiated Emission	15.109(a)	Pass
2	AC Conducted Emission	15.107(a)	Pass

5.2 Statements

The Mobiwire NIKITI, Altice F2 supporting GSM/BT, manufactured by Mobiwire SAS. is a variant product for testing. ECIT performed test cases which identified with Pass/Fail/Inc result in section 5.1.

ECIT has verified that the compliance of the tested device specified in section 3 of this test report is successfully evaluated according to the procedure and test methods as defined in type certification requirement listed in section 4 of this test report.

Note: The project changed LCD based on the I19D00074-EMC01 original report, test content for the original report of the worst mode, embodied in the report data is the worst mode. Other information reference original report.

6. Test Equipment Utilized

6.1 Radiated Emission Equipment list

Item	Instrument Name	Type	Serial Number	Manufacturer	Cal. Date	Cal. interval
1	Universal Radio Communication	CMU200	123126	R&S	2019-05-10	1 year
2	Test Receiver	ESU40	100307	R&S	2019-05-10	1 year
3	Trilog Antenna	VULB9163	VULB9163-5 15	Schwarzbeck	2020-02-28	2 years
4	Double Ridged Guide	ETS-3117	00135885	ETS	2020-02-28	2 years
5	EMI Test Software	EMC32 V9.15	NA	R&S	NA	NA

6.2 AC Conducted Emission Equipment list

Item	Instrument Name	Type	Serial Number	Manufacturer	Cal. Date	Cal. interval
1	Universal Radio Communication	CMU200	123123	R&S	2019-05-10	1 year
2	Test Receiver	ESCI	101235	R&S	2019-05-10	1 year
3	2-Line V-Network	ENV216	101380	R&S	2019-05-10	1 year
4	EMI Test Software	EMC32 V10.35.02	NA	R&S	NA	NA

7. System Configuration during Test

7.1 Test Mode

Test Item	Function Type
AC Conducted Emission	Mode 2: Adapter charging <Figure 2>
Radiated Emission	Mode 1: USB cable (Data Link with PC) <Figure 1>
Remark: 1. All test modes are performed, only the worst cases test data are recorded in this report. 2. Data Link with PC means data application transferred mode between EUT and PC.	

7.2 Connection Diagram of Test System

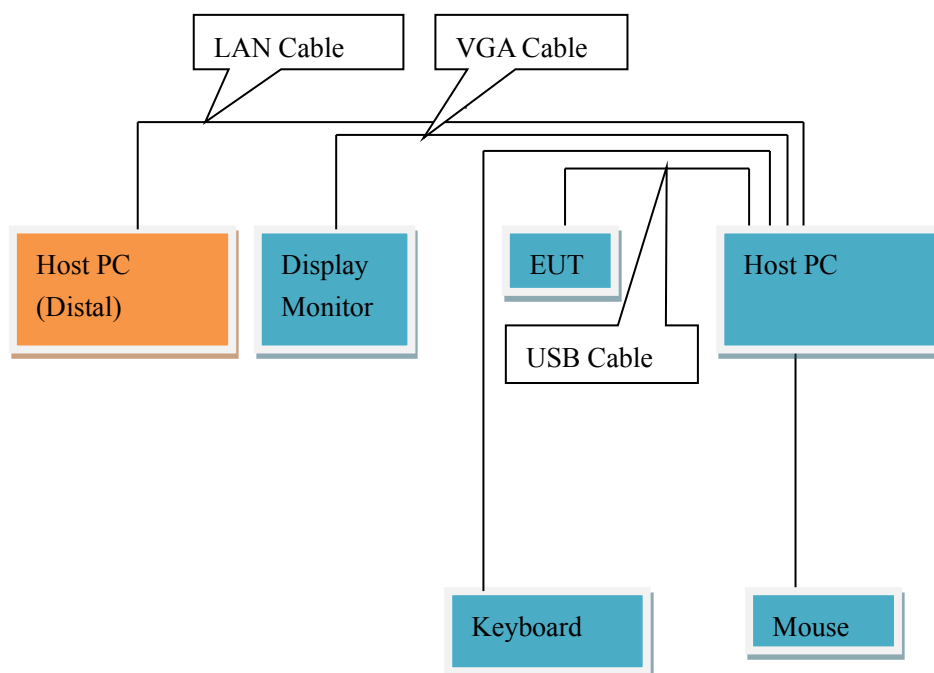


Figure 1> Mode 1



Figure 2> Mode 2

8. Measurement Results

Only the worst test result was shown in this report.

8.1 Radiated Emission 30MHz-18GHz

Method of Measurement

For 30MHz -1000MHz, the EUT was placed on the top of a rotating 0.8m table above the ground at a semi-anechoic chamber. The distance between the EUT and the received antenna was 3 meters. The table was rotated 360 degree and the received antenna mounted on a variable-height antenna tower was varied from 1m to 4m to find the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna were set during the measurement. Tested in accordance with the procedures of ANSI C63.4-2014, section 8.3.

For 1000MHz-18000MHz, The maximal emission value was acquired by adjusting the antenna height, The table was rotated 360 degree to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna were set during the measurement.

Limits for Radiated Emission at a measuring distance of 3m

Frequency Range (MHz)	Quasi-Peak (dBuV/m)
30-88	40
88-216	43.5
216-960	46
Above 960	54

Frequency Range (MHz)	Peak (dBuV/m)	Average (dBuV/m)
Above 1000	74	54

Test conditions

Frequency Range (MHz)	RBW/VBW	Sweep Time (s)
30-1000	120kHz/300kHz	Auto
1000-18000	1MHz/3MHz	Auto

Uncertainty Measurement

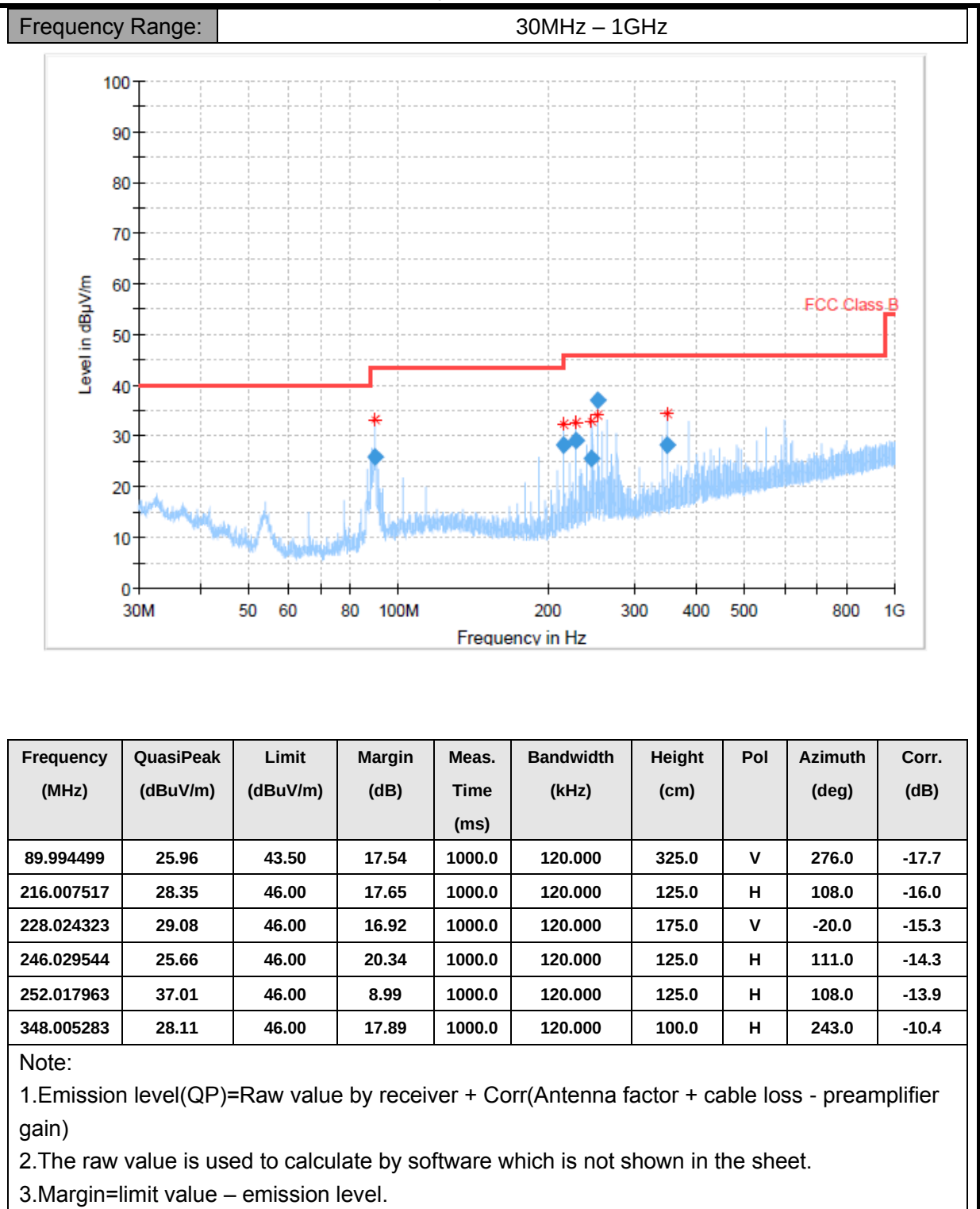
The measurement uncertainty (30MHz-1000MHz) is 4.98 dB (k=2).

The measurement uncertainty (1000MHz-18000MHz) is 5.06 dB (k=2).

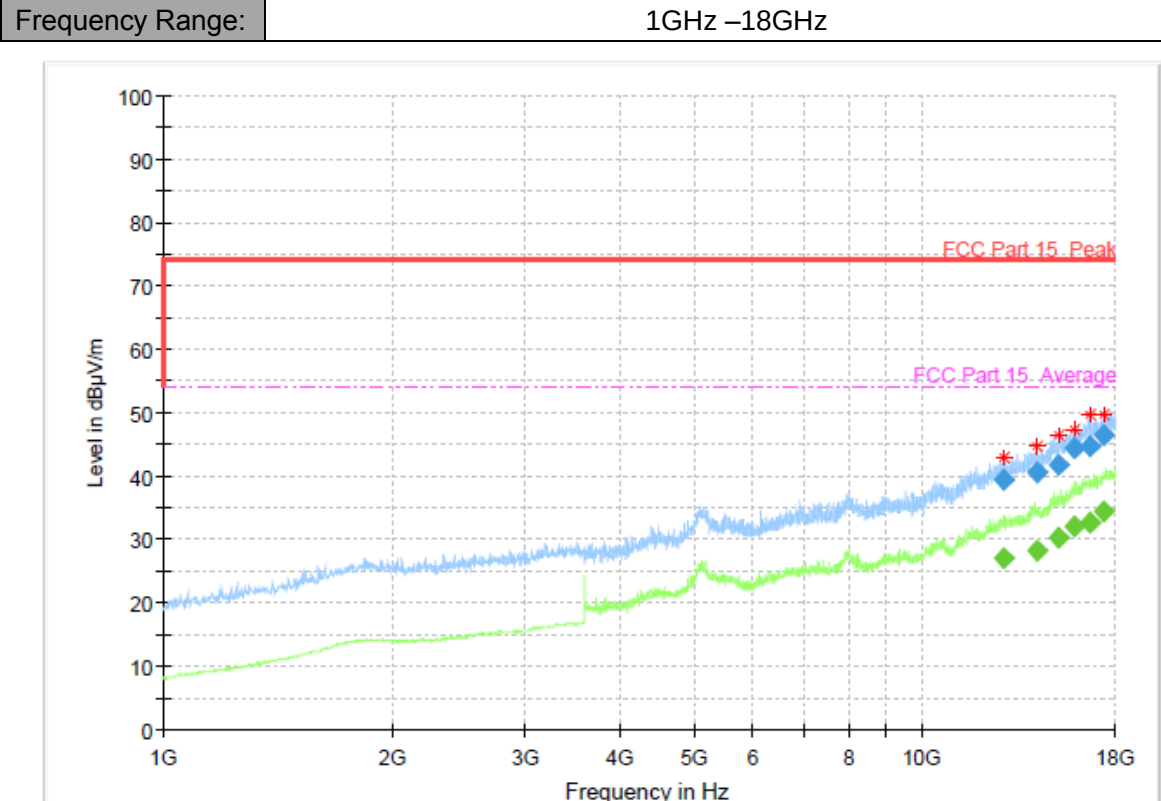
Test Results

Sweep the whole frequency band through the range from 30MHz to the 5th harmonic of the carrier, the Emissions in the frequency band 18GHz-40GHz is more than 20dB below the limit are not report.

Mode 1: USB cable (Data Link with PC) <Figure 1>



Mode 1: USB cable (Data Link with PC) <Figure 1>

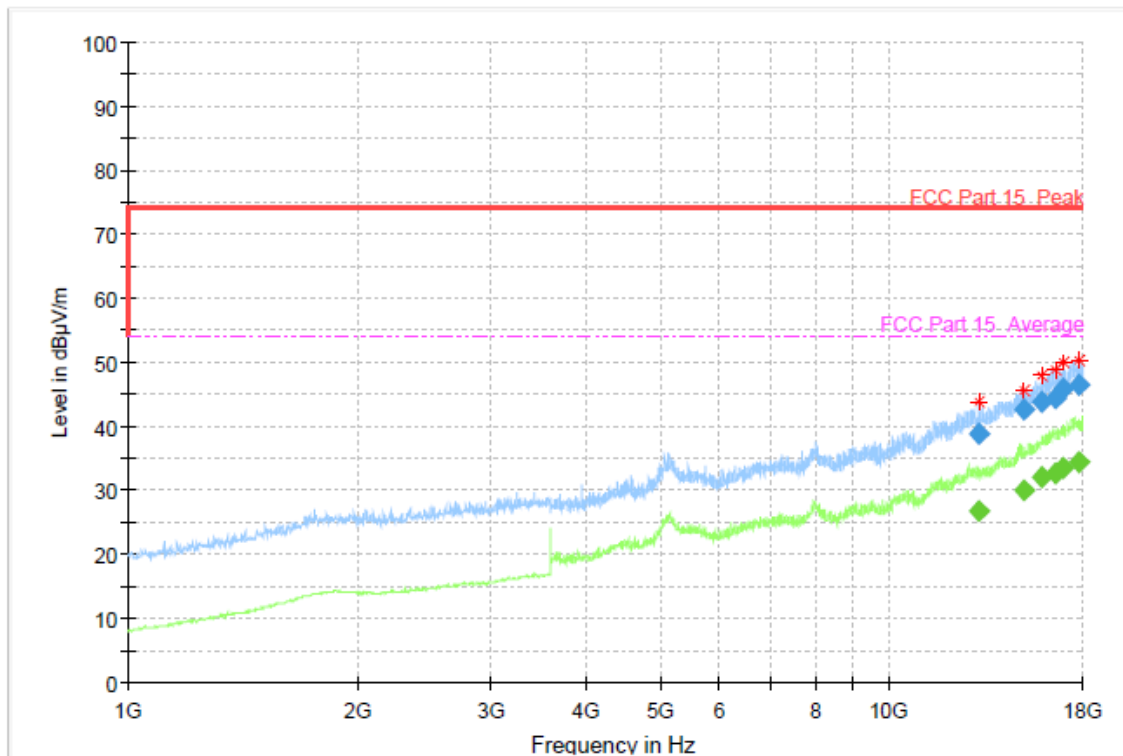


Final Result

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Meas. Time	Band width	Heigh t	Po l	Azimu th	Corr. (dB)
12862.600000	39.35	---	74.00	34.65	100.0	1000.	200.0	H	338.0	10.2
12862.600000	---	26.93	54.00	27.07	100.0	1000.	200.0	H	338.0	10.2
14205.200000	---	28.25	54.00	25.75	100.0	1000.	200.0	H	4.0	11.9
14205.200000	40.64	---	74.00	33.36	100.0	1000.	200.0	H	4.0	11.9
15175.400000	---	30.15	54.00	23.85	100.0	1000.	100.0	H	152.0	13.7
15175.400000	41.81	---	74.00	32.19	100.0	1000.	100.0	H	152.0	13.7
15882.000000	---	32.11	54.00	21.89	100.0	1000.	100.0	H	0.0	15.4
15882.000000	44.27	---	74.00	29.73	100.0	1000.	100.0	H	0.0	15.4
16671.200000	44.68	---	74.00	29.32	100.0	1000.	100.0	H	180.0	16.3
16671.200000	---	32.76	54.00	21.24	100.0	1000.	100.0	H	180.0	16.3
17412.400000	---	34.28	54.00	19.72	100.0	1000.	200.0	H	351.0	17.7
17412.400000	46.59	---	74.00	27.41	100.0	1000.	200.0	H	351.0	17.7

Note:

- 1.Emission level(peak or average)=Raw value by receiver + Corr(Antenna factor+ cable loss - preamplifier gain)
- 2.The raw value is used to calculate by software which is not shown in the sheet.
- 3.Margin=limit value – emission level.



Final Result

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Meas. Time	Bandwi dth	Heigh t	Po l	Azimu th	Corr. (dB)
13165.800000	---	26.74	54.00	27.26	100.0	1000.00	100.0	V	12.0	10.3
13165.800000	38.93	---	74.00	35.07	100.0	1000.00	100.0	V	12.0	10.3
15044.400000	---	29.91	54.00	24.09	100.0	1000.00	200.0	V	224.0	13.6
15044.400000	42.76	---	74.00	31.24	100.0	1000.00	200.0	V	224.0	13.6
15844.200000	---	31.92	54.00	22.08	100.0	1000.00	200.0	V	259.0	15.2
15844.200000	43.71	---	74.00	30.29	100.0	1000.00	200.0	V	259.0	15.2
16564.200000	44.40	---	74.00	29.60	100.0	1000.00	100.0	V	119.0	16.5
16564.200000	---	32.61	54.00	21.39	100.0	1000.00	100.0	V	119.0	16.5
16987.800000	45.76	---	74.00	28.24	100.0	1000.00	100.0	V	83.0	16.7
16987.800000	---	33.54	54.00	20.46	100.0	1000.00	100.0	V	83.0	16.7
17744.200000	---	34.40	54.00	19.60	100.0	1000.00	100.0	V	343.0	17.8
17744.200000	46.50	---	74.00	27.50	100.0	1000.00	100.0	V	343.0	17.8

Note:

- 1.Emission level(peak or average)=Raw value by receiver + Corr(Antenna factor+ cable loss - preamplifier gain)
- 2.The raw value is used to calculate by software which is not shown in the sheet.
- 3.Margin=limit value – emission level.

8.2 AC Conducted Emission

Method of Measurement

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies with the band 150 kHz to 30MHz shall not exceed the limits. Both lines of the power mains connected to the EUT were checked for maximum conducted interference. Tested in accordance with the procedures of ANSI C63.4-2014, section 7.3

Limit of Conducted Emission

Frequency Range (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50
*Decreases with the logarithm of the frequency		

Test Condition in Charging Mode

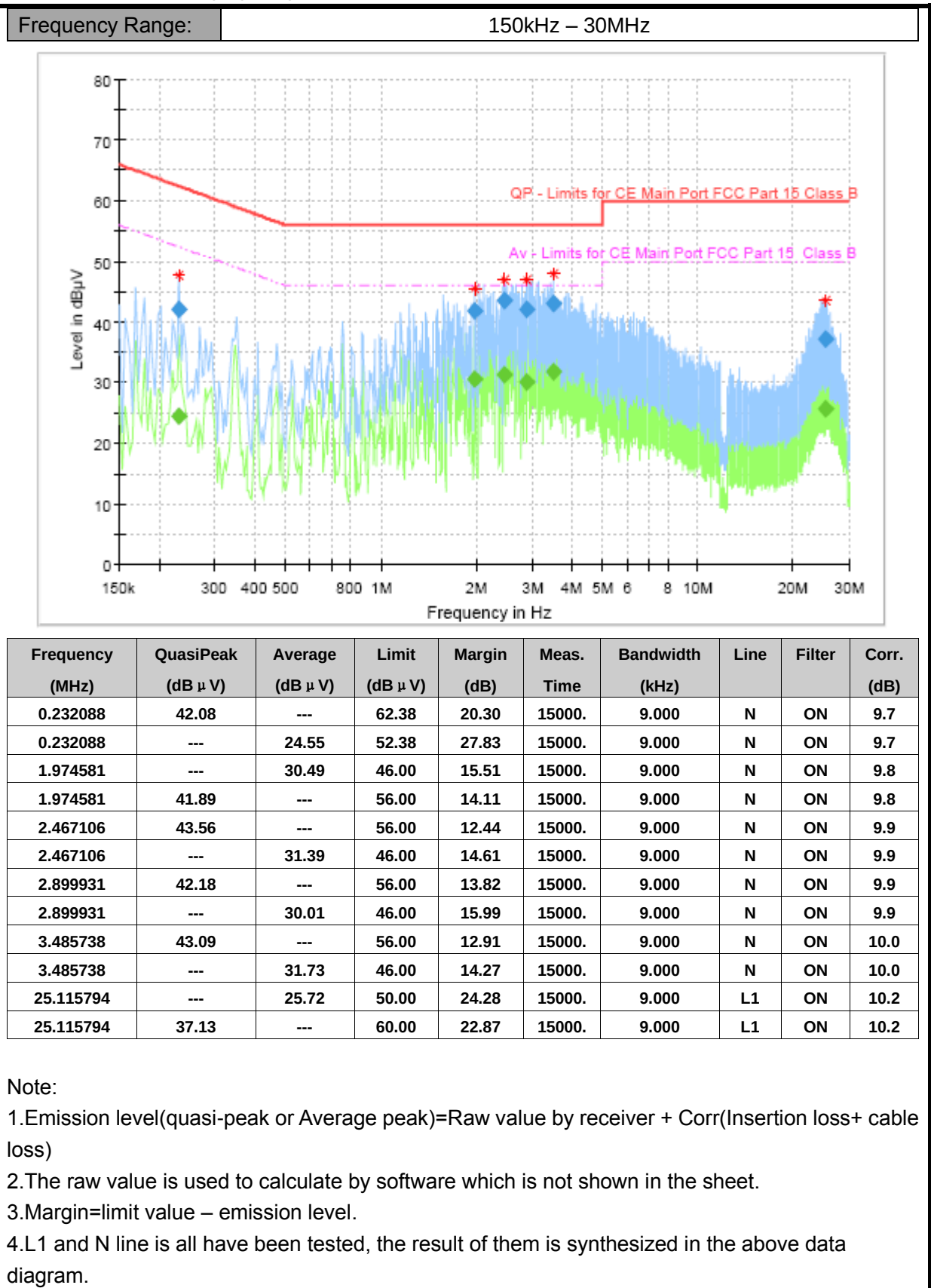
Voltage (V)	Frequency (Hz)	RBW	Sweep Time (s)
120	60	9 kHz	Auto

Uncertainty Measurement

The measurement uncertainty is 3.66dB (k=2).

Test Results

Mode 2: Adapter charging <Figure 2>



*****END OF REPORT*****