



TEST REPORT

REPORT NUMBER: I21W00049-EMC

ON

Type of Equipment: BaseStation
Type of Designation: AIRE100A
Brand Name: PRIME
Manufacturer: Micron Electronics LLC.
FCC ID: ZKQ-BAS4GA

ACCORDING TO

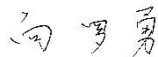
Subpart B, PART 15, RADIO FREQUENCY DEVICES

Chongqing Academy of Information and Communications Technology

Month date, year

Jan 9, 2022

Signature



Xiang Luoyong

Director

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of Chongqing Academy of Information and Communications Technology.



Report No.: I21W00049

Revision Version

Report Number	Revision	Date	Memo
I21W00049-EMC	00	2022-01-09	Initial creation of test report

Chongqing Academy of Information and Communication Technology

Address: No. 8, Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China, 401336
Tel: 0086-23-88069965 FAX: 0086-23-88608777

CONTENTS

1.	Test Laboratory.....	4
1.1.	Testing Location.....	4
1.2.	Testing Environment.....	4
1.3.	Project data.....	4
1.4.	Signature.....	4
2.	Client Information.....	5
2.1.	Applicant Information.....	5
2.2.	Manufacturer Information.....	5
3.	Equipment under Test (EUT) and Ancillary Equipment (AE).....	6
3.1.	About EUT.....	6
3.2.	Internal Identification of EUT used during the test.....	6
3.3.	Internal Identification of AE used during the test.....	6
4.	Reference Documents.....	7
4.1.	Reference Documents for testing.....	7
5.	Test Equipments Utilized.....	8
6.	Test Results.....	9
6.1.	Summary of Test Results.....	9
7.	Test Results.....	10
7.1.	Radiated Emission.....	10
7.2.	Conducted Emission.....	15
	Annex A EUT Photos.....	18
	ANNEX B Deviations from Prescribed Test Methods.....	19

Chongqing Academy of Information and Communication Technology

Address: No. 8, Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China, 401336
Tel: 0086-23-88069965 FAX: 0086-23-88608777

1. Test Laboratory

1.1. Testing Location

Name:	Chongqing Academy of Information and Communications Technology
FCC Registration Number:	CN1239
Address:	Building C, Technology Innovation Center, No.8, Yuma Road, Chayuan New Area, Nan'an District, Chongqing, People's Republic of China
	No.19 East Road, Xiantao Big-data Valley, Yubei District, Chongqing, People's Republic of China
Postal Code:	401336
Telephone:	0086-23-88069965
Fax:	0086-23-88608777

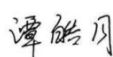
1.2. Testing Environment

Normal Temperature:	17.0-20.5°C
Relative Humidity:	47.0-59.0%

1.3. Project data

Testing Start Date:	2021-12-09
Testing End Date:	2022-01-09

1.4. Signature

	2022-01-09
Tan Haoyue (Prepared this test report)	Date
	2022-01-09
Xiao Yu (Reviewed this test report)	Date
	2022-01-09
Xiang Luoyong Director of the laboratory (Approved this test report)	Date

Chongqing Academy of Information and Communication Technology

Address: No. 8, Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China, 401336
Tel: 0086-23-88069965 FAX: 0086-23-88608777

2. Client Information

2.1. Applicant Information

Company Name:	Micron Electronics LLC.
Address /Post:	1001 Yamato Road, Suite 400, Boca Raton, FL 33431, USA
City:	Boca Raton
Country:	USA
Telephone:	+1 888 538 3489
Fax:	--
Email:	pcheng@micron-electronics.com
Contact Person:	Ping Cheng

2.2. Manufacturer Information

Company Name:	Micron Electronics LLC.
Address /Post:	1001 Yamato Road, Suite 400, Boca Raton, FL 33431, USA
City:	Boca Raton
Country:	USA
Telephone:	+1 888 538 3489
Fax:	--
Email:	pcheng@micron-electronics.com
Contact Person:	Ping Cheng

Chongqing Academy of Information and Communication Technology

Address: No. 8,Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China,401336
Tel: 0086-23-88069965 FAX:0086-23-88608777

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

3.1. About EUT

EUT Description	Micron Electronics LLC.
Model name	AIRE100A
Brand name	PRIME
LTE Frequency Band	2/4/5/12/13

Note: Photographs of EUT are shown in ANNEX B of this test report.

3.2. Internal Identification of EUT used during the test

EUT ID	SN or IMEI	HW Version	SW Version	Date of receipt
S1	860371050880503	A106_V3	LS100AV05.01B04.I01	2021-12-08

*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	SN
--	--	--

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

dB*: is provided customer.

4. Reference Documents

4.1. Reference Documents for testing

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

Reference	Title	Version
FCC CFR Part 15, Subpart B,	RADIO FREQUENCY DEVICES	October 1, 2020

5. Test Equipments Utilized

No.	Equipment	Model	SN	HW Version	SW Version	Manufacturer	Cal. Date	Cal.Due Date
1	Test Receiver	ESU 26	100367	01	4.43 SP3	R&S	2021-05-12	2022-06-11
2	Ultra-wideband Log Periodic Antenna	VULB 9163	01392	--	--	Schwarzbeck	2021-02-05	2023-03-04
3	Double Ridged Guide Antenna	HF907	100357	--	--	Schwarzbeck	2021-01-11	2023-02-10
4	Test Receiver	ECSI	102477	00	4.42 SP2	R&S	2021-05-12	2022-06-11
5	Artificial Main Network	ENV 216	101128	--	--	R&S	2021-05-12	2022-06-11
6	Fully anechoic chamber	--	--	--	--	ETS	2020-05-25	2022-06-25

Test software

No.	Name	version	SN	Manufacture
1	EMC32	V 8.51.0	--	R&S

6. Test Results

6.1. Summary of Test Results

FCC Rules	Name of Test	Result
15.109	Radiated Emission	Pass
15.107	Conducted Emission	Pass
Note: N/A means not applicable.		

7. Test Results

7.1. Radiated Emission

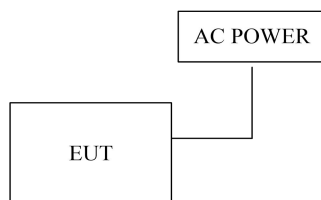
Specifications:	15.109
Date of Tests	2021-12-09—2022-01-07
Test conditions:	Ambient Temperature:17.0℃-20.5℃ Relative Humidity:47.0%RH-59.0%RH Air pressure:98.7kPa-100.4kPa
Operation Mode	Normal
Test Results:	Pass

Limit Level Construction(Except for Class A digital devices):

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

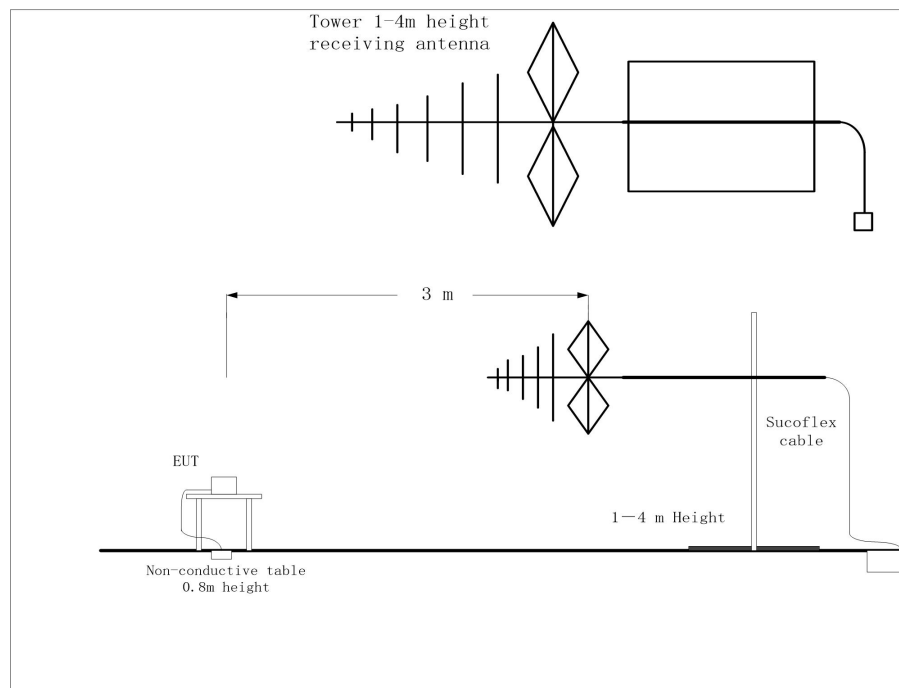
Frequency Range (MHz)	Peak (dBuV/m)	Average (dBuV/m)
Above 1000	74	54

EUT Setup:



Chongqing Academy of Information and Communication Technology

Address: No. 8,Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China,401336
Tel: 0086-23-88069965 FAX:0086-23-88608777



Test Method:

For 30-1000MHz, 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 1000-18000MHz, the maximal emission value was acquired by adjusting the antenna height, and 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.

Uncertainty Measurement:

The measurement uncertainty (30MHz-1000MHz) is 4.09 dB (k=2).

The measurement uncertainty (1000MHz-6000MHz) is 4.84 dB (k=2).

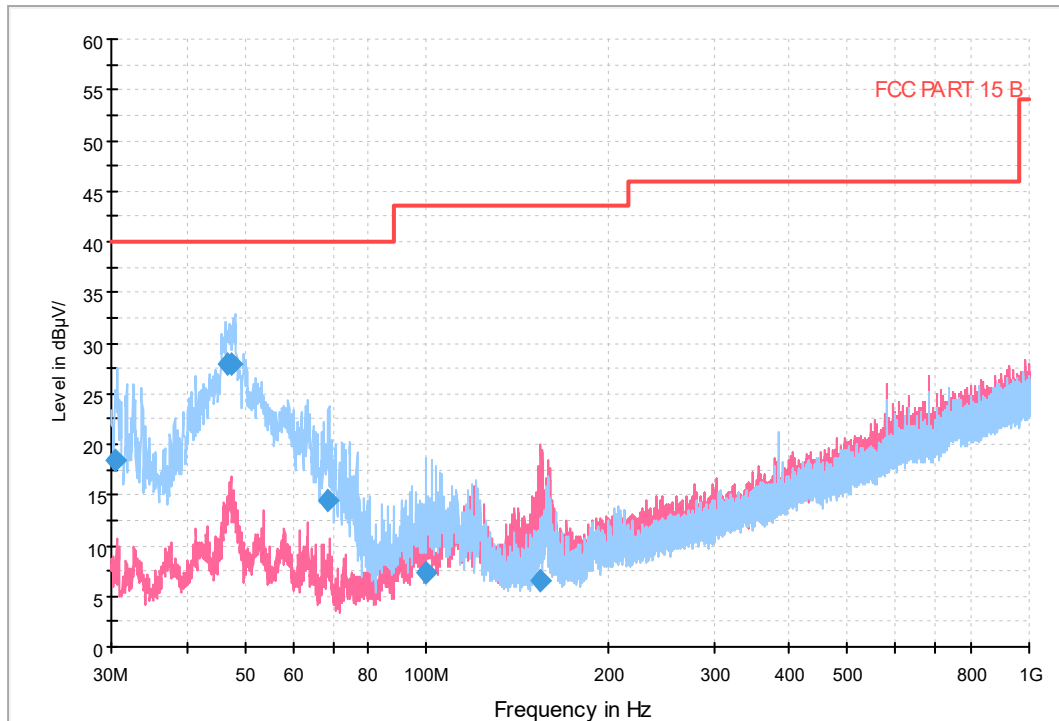
The measurement uncertainty (6000MHz-18000MHz) is 4.52 dB (k=2).

Chongqing Academy of Information and Communication Technology

Address: No. 8, Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China, 401336
Tel: 0086-23-88069965 FAX: 0086-23-88608777

Test Data

RE 30MHz-1GHz



RE 30MHz-1GHz

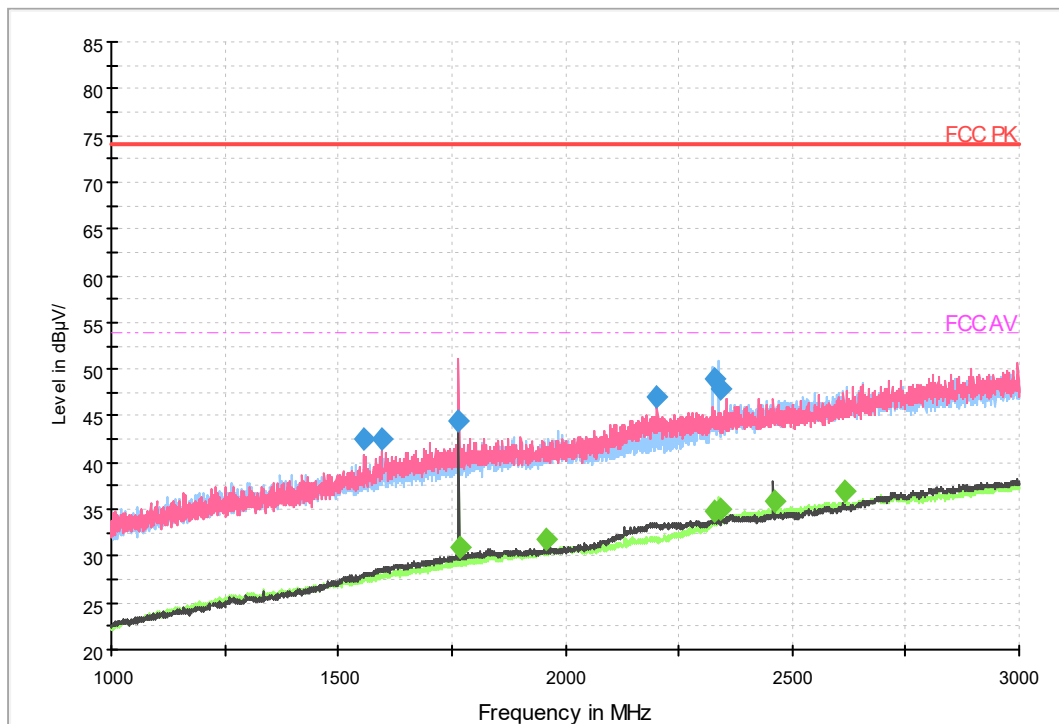
Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
30.579000	18.4	40.0	21.6	5000.0	120.000	185.0	H	100.0
46.693000	27.9	40.0	12.1	5000.0	120.000	100.0	H	10.0
47.642000	27.8	40.0	12.2	5000.0	120.000	100.0	H	-10.0
68.448500	14.4	40.0	25.6	5000.0	120.000	100.0	H	10.0
99.885500	7.3	43.5	36.2	5000.0	120.000	100.0	H	10.0
154.884500	6.4	43.5	37.1	5000.0	120.000	200.0	V	170.0

Note: The red curve represents V polarization, the blue curve represents H polarization.

Chongqing Academy of Information and Communication Technology

Address: No. 8, Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China, 401336
Tel: 0086-23-88069965 FAX: 0086-23-88608777

RE 1GHz-3GHz



RE 1GHz-3GHz

Final_Result

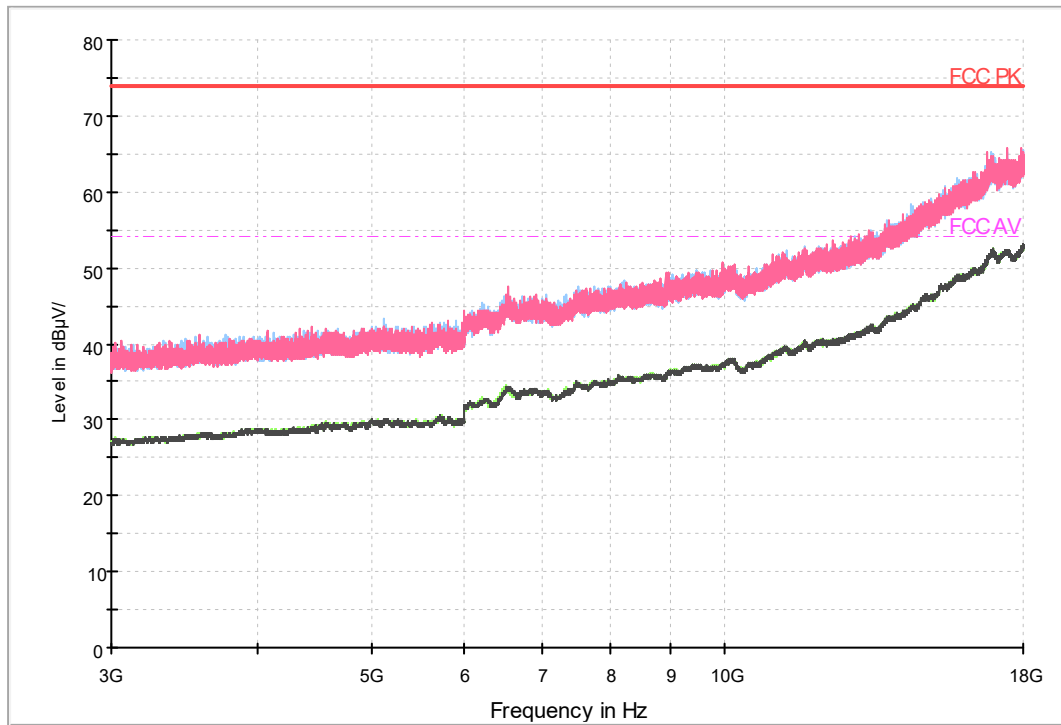
Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
1556.200000	42.5	---	74.00	31.5	50.0	1000.000	100.0	V	285.0
1596.400000	42.6	---	74.00	31.4	50.0	1000.000	100.0	V	173.0
1763.000000	44.4	---	74.00	29.6	50.0	1000.000	100.0	V	255.0
2201.800000	47.1	---	74.00	26.9	50.0	1000.000	100.0	V	285.0
2328.400000	48.9	---	74.00	25.1	50.0	1000.000	100.0	H	195.0
2340.000000	47.9	---	74.00	26.1	50.0	1000.000	100.0	H	195.0
1769.000000	---	30.9	54.00	23.1	50.0	1000.000	100.0	V	285.0
1958.200000	---	31.7	54.00	22.3	50.0	1000.000	100.0	H	94.0
2329.400000	---	34.8	54.00	19.2	50.0	1000.000	100.0	H	195.0
2341.000000	---	34.9	54.00	19.1	50.0	1000.000	100.0	H	173.0
2460.800000	---	36.0	54.00	18.0	50.0	1000.000	100.0	V	-15.0
2614.800000	---	37.0	54.00	17.0	50.0	1000.000	100.0	H	285.0

Note: Both H polarization and V polarization are tested. The figure shows the maximum value of H polarization and V polarization synthesis.

Chongqing Academy of Information and Communication Technology

Address: No. 8, Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China, 401336
Tel: 0086-23-88069965 FAX: 0086-23-88608777

RE 3GHz-18GHz



RE 3GHz-18GHz

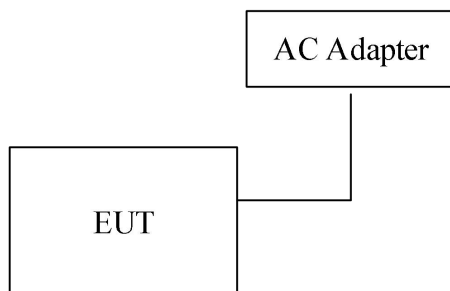
7.2. Conducted Emission

Specifications:	15.107
Date of Tests	2022-01-09
Test conditions:	Ambient Temperature:19.3°C Relative Humidity:46% Air pressure: 99.3kPa
Operation Mode	Normal
Test Results:	Pass
Note: Both EUT have been tested , and the data only reflect the worst case.	

Limit Level Construction:

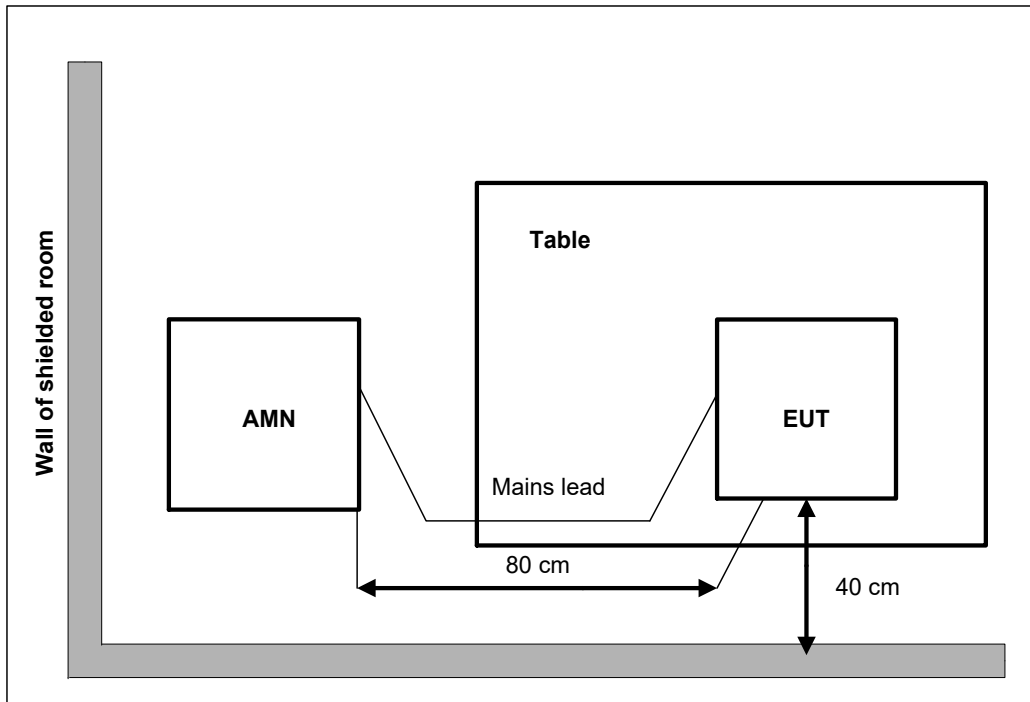
Frequency Range (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50
*Decreases with the logarithm of the frequency		

EUT Setup:



Chongqing Academy of Information and Communication Technology

Address: No. 8,Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China,401336
Tel: 0086-23-88069965 FAX:0086-23-88608777



Test Method:

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

Uncertainty Measurement:

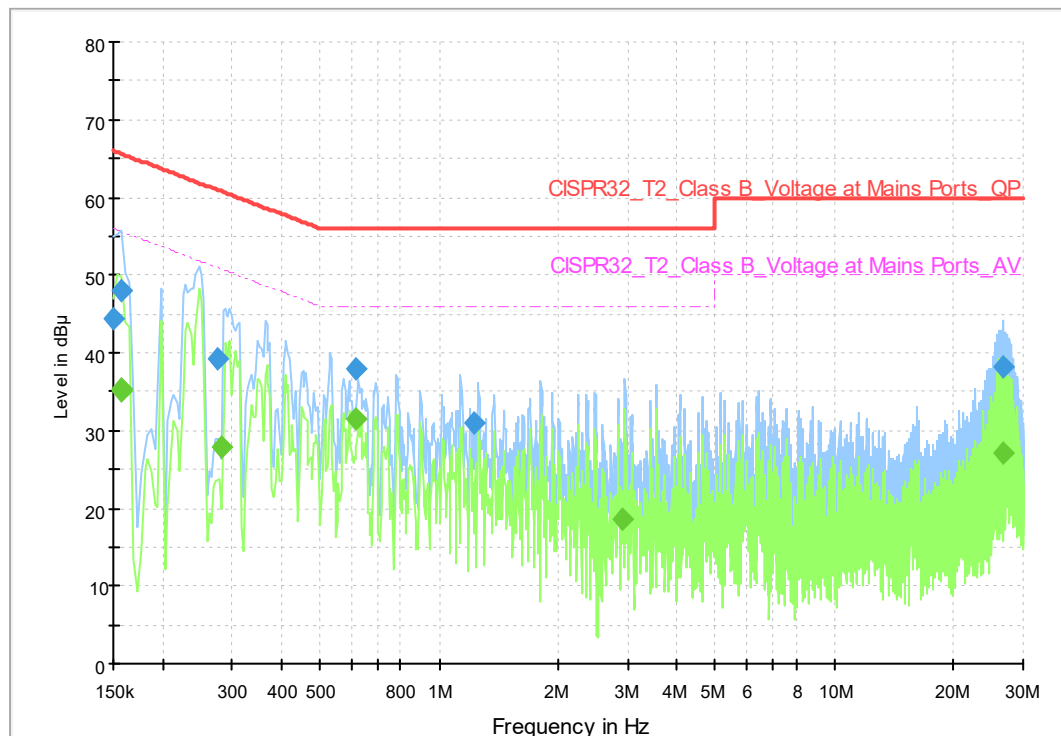
The measurement uncertainty is 1.83 dB (k=2).

Chongqing Academy of Information and Communication Technology

Address: No. 8, Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China, 401336
Tel: 0086-23-88069965 FAX: 0086-23-88608777

Test Data

CISPR N&L1 Voltage 150k to 30MHz-Class B



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Marg in	Meas. Time	Bandwi dth	Line
0.150000	44.4	---	66.0	21.6	1000.0	9.000	N
0.157012	47.9	---	65.6	17.7	1000.0	9.000	N
0.276681	39.1	---	60.9	21.8	1000.0	9.000	N
0.612588	37.9	---	56.0	18.1	1000.0	9.000	L1
1.221050	30.9	---	56.0	25.1	1000.0	9.000	L1
26.753188	38.2	---	60.0	21.8	1000.0	9.000	L1
0.157012	---	35.2	55.6	20.4	1000.0	9.000	N
0.158000	---	35.1	55.6	20.5	1000.0	9.000	N
0.280412	---	28.0	50.8	22.8	1000.0	9.000	N
0.616319	---	31.6	46.0	14.4	1000.0	9.000	L1
2.922438	---	18.6	46.0	27.4	1000.0	9.000	L1
26.597188	---	27.0	50.0	23.0	1000.0	9.000	L1

Note: Both L line and N line are tested. The figure shows the maximum value of L line and N line synthesis.

Chongqing Academy of Information and Communication Technology

Address: No. 8,Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China,401336
Tel: 0086-23-88069965 FAX:0086-23-88608777



Report No.: I21W00049

Annex A EUT Photos

See the document "I21W00049-External Photos".

See the document "I21W00049-Internal Photos".

Test photo See the document "I21W00049_EMC Test Setup Photos".

Chongqing Academy of Information and Communication Technology

Address: No. 8, Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China, 401336
Tel: 0086-23-88069965 FAX: 0086-23-88608777



Report No.: I21W00049

ANNEX B Deviations from Prescribed Test Methods

No deviation from Prescribed Test Methods.

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

Chongqing Academy of Information and Communication Technology

Address: No. 8, Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China, 401336
Tel: 0086-23-88069965 FAX: 0086-23-88608777