



**FCC PART 15C
TEST REPORT
No. I15N00212-NFC**

For

Huawei Technologies Co., Ltd

Smart Phone

Model Name: HUAWEI ALE-L21, ALE-L21

With

Hardware Version: HL3ALICEM

Software Version: ALE-L21 V100R001C900B045

FCC ID: QISALE-L21

Issued Date: Apr 1st, 2015

Test Laboratory:

FCC 2.948 Listed: No.342690

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 CTTL.

Test Laboratory:

CTTL, Telecommunication Technology Labs, Academy of Telecommunication Research, MIIT

No.52, HuayuanNorth Road, Haidian District, Beijing, P. R. China 100191.

Tel:+86(0)10-62304633, Fax:+86(0)10-62304633Email:cttl@chinattl.com, website:www.chinattl.com

REPORT HISTORY

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I15N00212-NFC	Rev.0	1st edition	2015-04-01

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1. Test Laboratory

1.1. Testing Location

Location1: CTTL(South Branch)

Address: No.12, ShangSha Innovation and Technology Park, Futian District,
Shenzhen, Guangdong, P. R. China 518048

Location2: CTTL(huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing, P. R.
China100191

1.2. Testing Environment

Normal Temperature: 15-35℃

Extreme Temperature: -20/+55℃

Relative Humidity: 20-75%

1.3. Project data

Testing Start Date: 2015-03-09

Testing End Date: 2015-03-31

1.4. Signature


Xu Ye

(Prepared this test report)



Tang Weisheng

(Reviewed this test report)



Zhang Bojun

(Approved this test report)

2. Client Information

2.1.Applicant Information

Company Name: Huawei Technologies Co., Ltd.
Address: Administration Building, Headquarters of Huawei Technologies Co.,
Ltd., Bantian, Longgang District, Shenzhen, 518129, P.R.C
City: Shenzhen
Postal Code: /
Country: China
Telephone: 029-89282965
Fax: /

2.2.Manufacturer Information

Company Name: Huawei Technologies Co., Ltd.
Address: Administration Building, Headquarters of Huawei Technologies Co.,
Ltd., Bantian, Longgang District, Shenzhen, 518129, P.R.C
City: Shenzhen
Postal Code: /
Country: China
Telephone: 029-89282965
Fax: /

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

3.1.About EUT

Description	Smart Phone
Model Name	HUAWEI ALE-L21, ALE-L21
Market Name	/
Frequency	13.56MHz
Extreme Temperature	-10/+55℃
Normal Voltage	3.8 V
Extreme Low Voltage	3.6 V
Extreme High Voltage	4.35 V
FCC ID	QISALE-L21

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

3.2.Internal Identification of EUT

EUT ID*	IMEI	HW Version	SW Version
EUT1	/	HL3ALICEM	ALE-L21 V100R001C900B045

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

3.3.Internal Identification of AE

AE ID*	Description	Type	SN
AE1	Charger	HW-050100U01_yingju	/
AE2	Charger	HW-050100U01_BYD	/
AE3	Charger	HW-050100U2W_BYD	/
AE4	Charger	HW-050100U2W_hangjia	/
AE5	Charger	HW-050100E01_BYD	/
AE6	Charger	HW-050100E01_dahong	/
AE7	Charger	HW-050100E01_hangjia	/
AE8	Charger	HW-050100E01_yingju	/
AE9	Charger	HW-050100B01_hangjia	/
AE10	Charger	HW-050100B01_dahong	/

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

4. Reference Documents

4.1. Documents supplied by applicant

EUT feature information is supplied by the applicant or manufacturer, which is the basis of testing.

4.2. Reference Documents for testing

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

Reference	Title	Version
FCC Part15	FCC CFR 47, Part 15, Subpart C: 15.205 Restricted bands of operation; 15.209 Radiated emission limits, general requirements; 15.247 Operation within the bands 902–928MHz, 2400–2483.5 MHz, and 5725–5850 MHz.	2014
ANSI C63.4	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2009

5. Test Results

5.1. Summary of Test Results

No	Test cases	Sub-clause of Part15C	Verdict
0	Antenna Requirement	15.203	P
1	In band and out of band electric field strength test (MASK)	15.225(a)(b)(c)	P
2	Radiated Emission below 30 MHz	15.225(d)	P
3	Radiated Emission $\geq$ 30 MHz	15.225(d)	P
4	Frequency Stability	15.225(e)	P
5	Occupied 20dB Bandwidth	15.215(c)	P
6	AC Power line Conducted Emission	15.207,107	P

See **ANNEX B** and **ANNEX C** for details.

5.2. Statements

CTTL has evaluated the test cases requested by the applicant/manufacture as listed in section 5.1 of this report, for the EUT specified in section 3, according to the standards or reference documents listed in section 4.2

5.3. Terms used in the result table

Terms used in Verdict column

P	Pass
NA	Not Available
F	Fail

Abbreviations

AC	Alternating Current
AFH	Adaptive Frequency Hopping
BW	Band Width
E.I.R.P.	equivalent isotropical radiated power
ISM	Industrial, Scientific and Medical
R&TTE	Radio and Telecommunications Terminal Equipment
RF	Radio Frequency
Tx	Transmitter

5.4. Laboratory Environment

Semi-anechoic chamber (23 meters×17 meters×10 meters) did not exceed following limits:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 15 %, Max. = 75 %
Shielding effectiveness	0.014MHz - 1MHz, >60dB; 1MHz - 1000MHz, >90dB.
Electrical insulation	> 2 M
Ground system resistance	< 4
Normalised site attenuation (NSA)	< ± 4 dB, 3m/10m distance, from 30 to 1000 MHz
Site voltage standing-wave ratio (S_{VSWR})	Between 0 and 6 dB, from 1GHz to 18GHz
Uniformity of field strength	Between 0 and 6 dB, from 80 to 3000 MHz

Shielded room did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 20 %, Max. = 75 %
Shielding effectiveness	0.014MHz - 1MHz, >60dB; 1MHz - 1000MHz, >90dB.
Electrical insulation	> 2 M
Ground system resistance	< 4

6. Test Facilities Utilized

Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Due date	Calibration Period
1	Vector Signal Analyzer	FSV40	100903	Rohde & Schwarz	2015-04-22	1 year

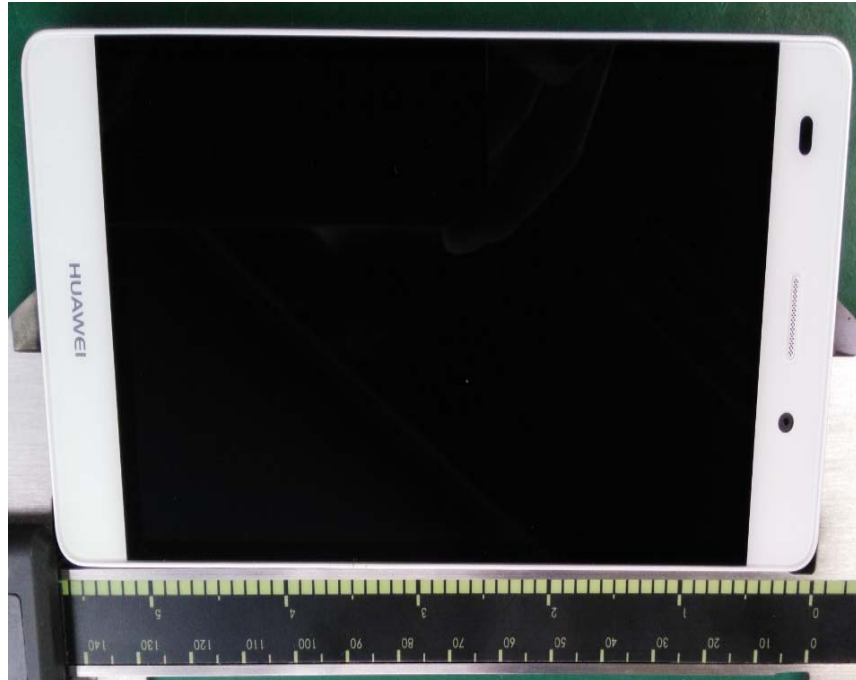
Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Due date	Calibration Period
1	Chamber	FACT10-3	SAC-1	ETS-Lindgren	2016-03-27	3 years
2	Test Receiver	ESU26	100235	Rohde & Schwarz	2016-03-02	1 year
3	Test Receiver	ESCI 7	100948	Rohde & Schwarz	2015-07-16	1 year
4	LISN	ESH2-Z5	100196	Rohde & Schwarz	2015-01-14	1 year
5	Loop Antenna	HFH2-Z2	829324/007	Rohde & Schwarz	2017-12-16	3 years
6	EMI Antenna	VULB9163	9163-234	Schwarzbeck	2016-09-15	3 years
7	EMI Antenna	3115	6914	ETS-Lindgren	2017-12-15	3 years
8	EMI Antenna	3116	2661	ETS-Lindgren	2017-06-17	3 years

Anechoic chamber

Fully anechoic chamber by ETS-Lindgren.

ANNEX A: EUT photograph



Picture A-1: Mobile Phone



Picture A-2: Mobile Phone



Picture A-3: Charger(AE1)



Picture A-4: Charger(AE2)



Picture A-5: Charger(AE3)



Picture A-6: Charger(AE4)



Picture A-7: Charger(AE5)



Picture A-8: Charger(AE6)



Picture A-9: Charger(AE7)



Picture A-10: Charger(AE8)



Picture A-11: Charger(AE9)



Picture A-12: Charger(AE10)

ANNEX B: MEASUREMENT RESULTS FOR RECEIVER**B.0 Antenna requirement****Measurement Limit:**

Standard	Requirement
FCC CRF Part 15.203	An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, § 15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

Conclusion: The Directional gains of antenna used for transmitting is -2.0 dBi.**The RF transmitter uses an integrate antenna without connector.**

B.1 In Band and Out of Band Electric Field Strength Test (MASK)

Measurement Limit:

Standard

FCC 47 CFR Part 15.225(a)(b)(c) RSS-210 Issue8 A2.6

Frequency range (MHz)	E-field strength limit ($\mu\text{V/m}$) at 30m	E-field strength limit ($\text{dB}\mu\text{V/m}$) at 3m
13,56 to ± 7 kHz	+15,848	124
13,410 to 13,553 13,567 to 13,710	+334	90
13,110 to 13,410 13,710 to 14,010	+106	81
According to CFR 47 § 15: Extrapolation(dB)= $40\log_{10}(\text{Measurement Distance/Specification Distance})$		

Measurement Result:

Frequency(MHz)	Test Results	Conclusion
13.56	Fig.1	P

See ANNEX C for test graphs.

Conclusion: PASS

B.2 Radiated Emission Below 30MHz

Measurement Limit:

Standard	Limit
15.225(d) RSS-210 Issue8 A2.6	The field strength of any emissions appearing outside of the 13.110-14.010 MHz band shall not exceed the general radiated emission limits in § 15.209

Limit in restricted band:

Frequency of emission (MHz)	Field strength($\mu\text{V/m}$)	Measurement distance (meters)	E-field strength limit ($\text{dB}\mu\text{V/m}$) at 3m
0.009-0.490	2400/F(kHz)	300	129-94
0.490-1.705	24000/F(kHz)	30	74-63
1.705-30.0	30	30	70
According to CFR 47 § 15: Extrapolation(dB)= $40\log_{10}(\text{Measurement Distance/Specification Distance})$			

Measurement Results:

Frequency(MHz)	Frequency Range	Test Results	Conclusion
13.56	9 kHz ~30 MHz	Fig.2	P

See ANNEX C for test graphs.

Conclusion: Pass

B.3 Radiated Emission ≥ 30 MHz

Measurement Limit:

Standard	Limit
15.225(d) RSS-210 Issue8 A2.6	The field strength of any emissions appearing outside of the 13.110-14.010 MHz band shall not exceed the general radiated emission limits in § 15.209

Limit in restricted band:

Frequency of emission (MHz)	Field strength(μ V/m)	Measurement distance (meters)	E-field strength limit (dB μ V/m) at 3m
30-88	100	3	40
88-216	150	3	43.5
216-960	200	3	46
Above 960	500	3	54

Measurement Results:

Frequency(MHz)	Frequency Range	AE	Test Results	Conclusion
13.56	30 MHz ~1 GHz	AE1	Fig.3	P
		AE2	Fig.4	P
		AE3	Fig.5	P
		AE4	Fig.6	P
		AE5	Fig.7	P
		AE6	Fig.8	P
		AE7	Fig.9	P
		AE8	Fig.10	P
		AE9	Fig.11	P
		AE10	Fig.12	P

See ANNEX C for test graphs.

Conclusion: Pass

B.4 Frequency Stability

Measurement Limit:

Standard

FCC 47 CFR Part 15.225(e) RSS-210 Issue8 A2.6

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 equipments, the equipment test shall be performed using a new battery.

Nominal Frequency	Test Condition		Limits(13.56MHz $\pm$ 1.356kHz) Test Results (MHz)	Conclusion
13.56MHz	Tnom,	Vnom	13.5600	P
	Tmax	Vmax	13.5600	P
	Tmax	Vmin	13.5600	P
	Tmin	Vmax	13.5603	P
	Tmin	Vmin	13.5600	P

Conclusion: Pass

B.5 Occupied 20dB Bandwidth

Measurement Limit:

Standard	Limit
15.215(c)	If a frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of-band operation.

Measurement Result:

Frequency(MHz)	Limit(kHz)	Test Result(kHz)		conclusion
13.56	11.2	Fig.13	0.527	P

See ANNEX C for test graphs.

Conclusion: Pass

B.6 AC Power line Conducted Emission

Test Condition:

Voltage (V)	Frequency (Hz)
120	60

Measurement Result and limit:

NFC (Quasi-peak Limit)-AE1

Frequency range (MHz)	Quasi-peak Limit (dB μ V)	Result (dB μ V)	Conclusion
		Traffic	
0.15 to 0.5	66 to 56	Fig.14	P
0.5 to 5	56		
5 to 30	60		

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

NFC (Average Limit)-AE1

Frequency range (MHz)	Average-peak Limit (dB μ V)	Result (dB μ V)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.14	P
0.5 to 5	46		
5 to 30	50		

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

NFC (Quasi-peak Limit)-AE2

Frequency range (MHz)	Quasi-peak Limit (dB μ V)	Result (dB μ V)	Conclusion
		Traffic	
0.15 to 0.5	66 to 56	Fig.15	P
0.5 to 5	56		
5 to 30	60		

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

NFC (Average Limit)-AE2

Frequency range (MHz)	Average-peak Limit (dB μ V)	Result (dB μ V)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.15	P
0.5 to 5	46		
5 to 30	50		

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

NFC (Quasi-peak Limit)-AE3

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)	Conclusion
		Traffic	
0.15 to 0.5	66 to 56	Fig.16	P
0.5 to 5	56		
5 to 30	60		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.			

NFC (Average Limit)-AE3

Frequency range (MHz)	Average-peak Limit (dBμV)	Result (dBμV)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.16	P
0.5 to 5	46		
5 to 30	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.			

NFC (Quasi-peak Limit)-AE4

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)	Conclusion
		Traffic	
0.15 to 0.5	66 to 56	Fig.17	P
0.5 to 5	56		
5 to 30	60		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.			

NFC (Average Limit)-AE4

Frequency range (MHz)	Average-peak Limit (dBμV)	Result (dBμV)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.17	P
0.5 to 5	46		
5 to 30	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.			

NFC (Quasi-peak Limit)-AE5

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)	Conclusion
		Traffic	
0.15 to 0.5	66 to 56	Fig.18	P
0.5 to 5	56		
5 to 30	60		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.			

NFC (Average Limit)-AE5

Frequency range (MHz)	Average-peak Limit (dBμV)	Result (dBμV)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.18	P
0.5 to 5	46		
5 to 30	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.			

NFC (Quasi-peak Limit)-AE6

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)	Conclusion
		Traffic	
0.15 to 0.5	66 to 56	Fig.19	P
0.5 to 5	56		
5 to 30	60		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.			

NFC (Average Limit)-AE6

Frequency range (MHz)	Average-peak Limit (dBμV)	Result (dBμV)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.19	P
0.5 to 5	46		
5 to 30	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.			

NFC (Quasi-peak Limit)-AE7

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)	Conclusion
		Traffic	
0.15 to 0.5	66 to 56	Fig.20	P
0.5 to 5	56		
5 to 30	60		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.			

NFC (Average Limit)-AE7

Frequency range (MHz)	Average-peak Limit (dBμV)	Result (dBμV)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.20	P
0.5 to 5	46		
5 to 30	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.			

NFC (Quasi-peak Limit)-AE8

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)	Conclusion
		Traffic	
0.15 to 0.5	66 to 56	Fig.21	P
0.5 to 5	56		
5 to 30	60		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.			

NFC (Average Limit)-AE8

Frequency range (MHz)	Average-peak Limit (dBμV)	Result (dBμV)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.21	P
0.5 to 5	46		
5 to 30	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.			

NFC (Quasi-peak Limit)-AE9

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)	Conclusion
		Traffic	
0.15 to 0.5	66 to 56	Fig.22	P
0.5 to 5	56		
5 to 30	60		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.			

NFC (Average Limit)-AE9

Frequency range (MHz)	Average-peak Limit (dBμV)	Result (dBμV)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.22	P
0.5 to 5	46		
5 to 30	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.			

NFC (Quasi-peak Limit)-AE10

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)	Conclusion
		Traffic	
0.15 to 0.5	66 to 56	Fig.23	P
0.5 to 5	56		
5 to 30	60		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.			

NFC (Average Limit)-AE10

Frequency range (MHz)	Average-peak Limit (dBμV)	Result (dBμV)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.23	P
0.5 to 5	46		
5 to 30	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.			

Note: The measurement results include the L1 and N measurements.

See ANNEX C for test graphs.

Conclusion: Pass

ANNEX C: TEST FIGURE LIST

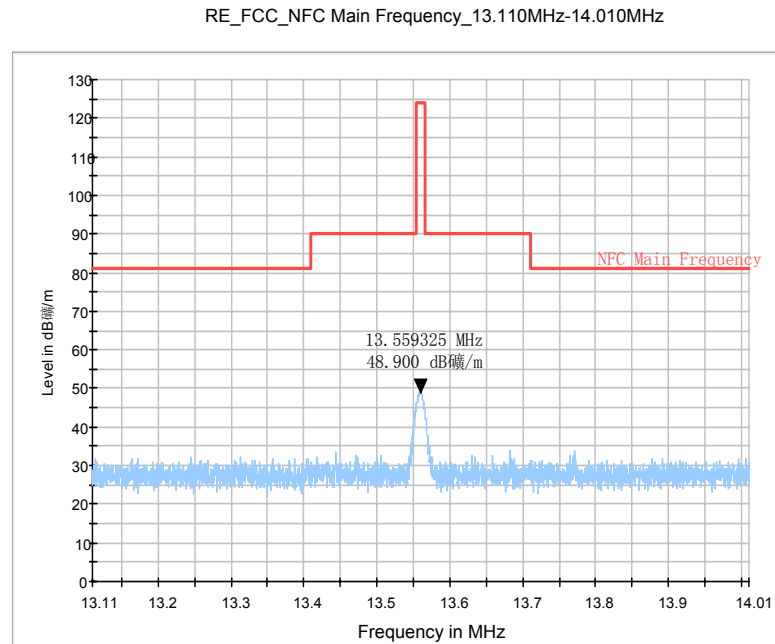


Fig. 1 In band and out of band electric field strength test (MASK)

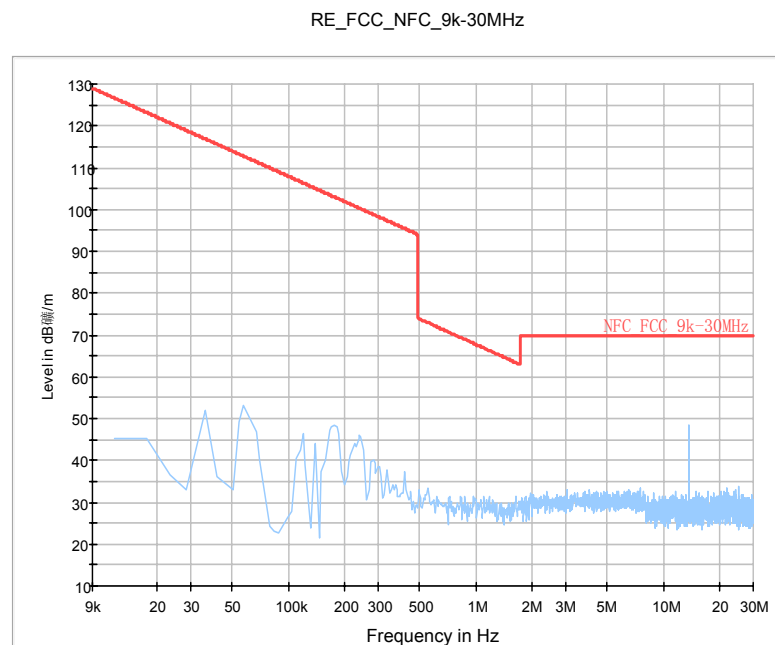


Fig. 2 Radiated Emission Below 30 MHz

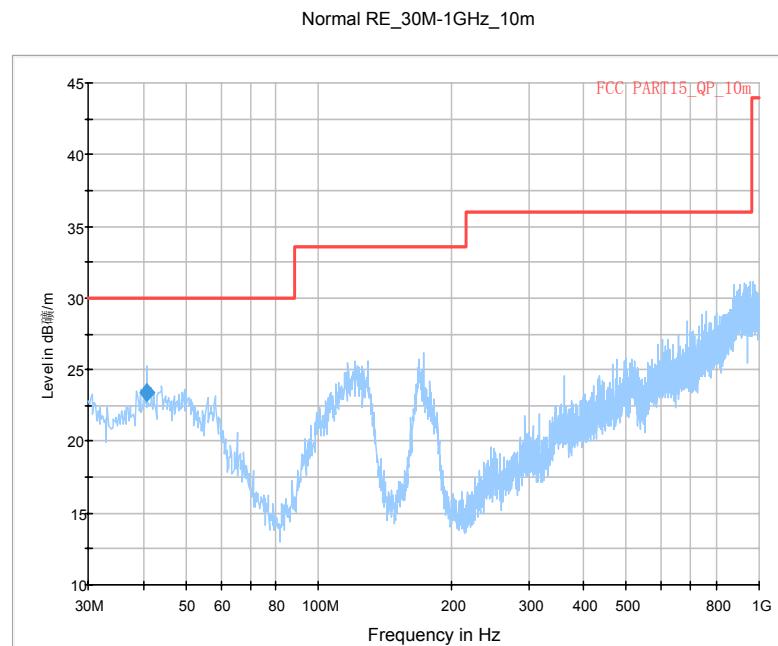


Fig. 3 Radiated Emission ≥ 30 MHz (AE1)

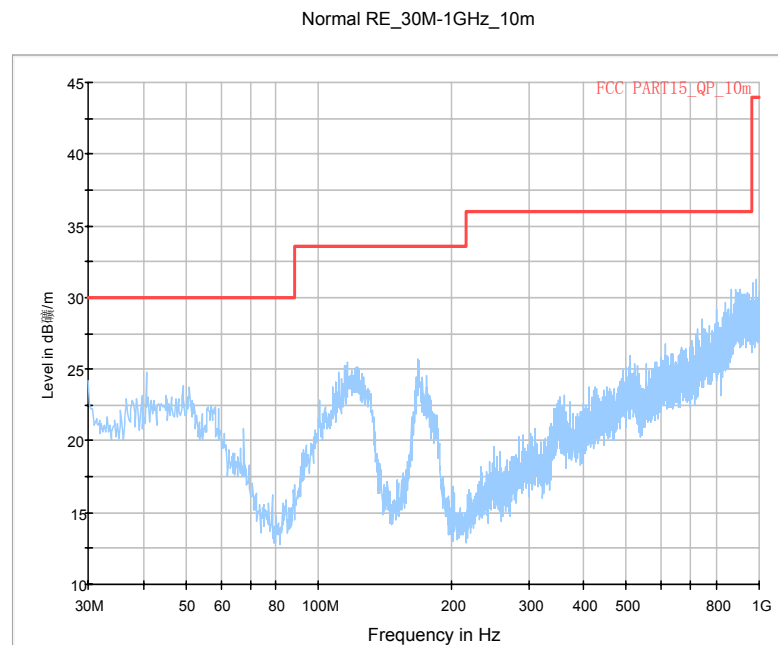


Fig. 4 Radiated Emission ≥ 30 MHz (AE2)

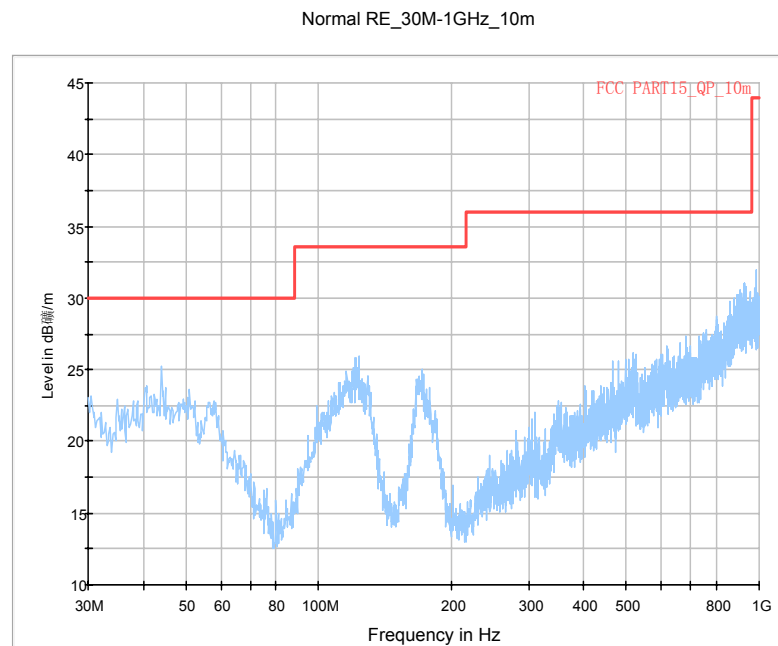


Fig. 5 Radiated Emission $\geq$ 30 MHz (AE3)

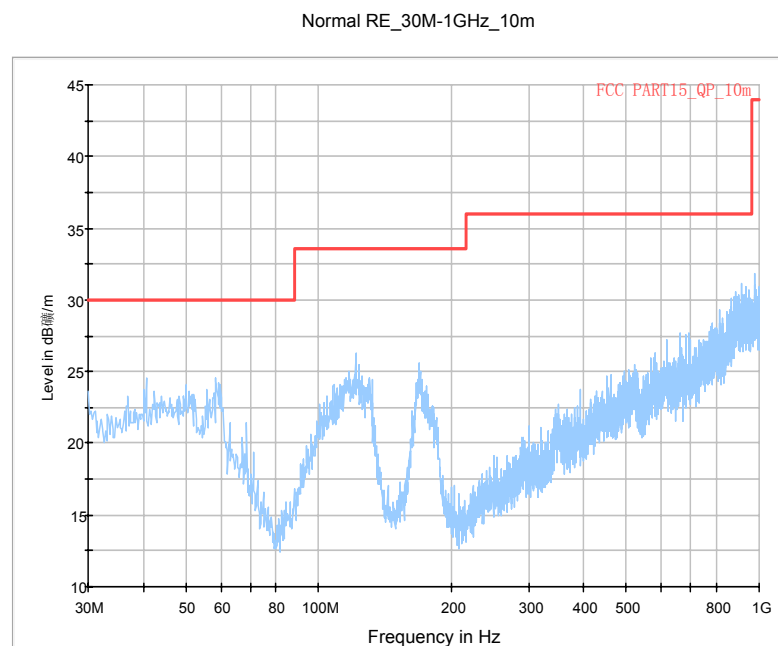


Fig. 6 Radiated Emission $\geq$ 30 MHz (AE4)

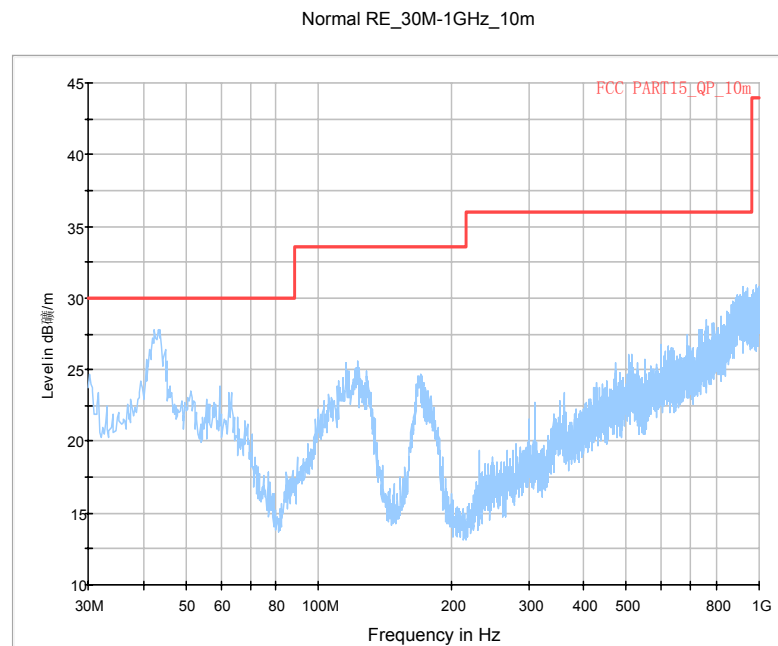


Fig. 7 Radiated Emission ≥ 30 MHz (AE5)

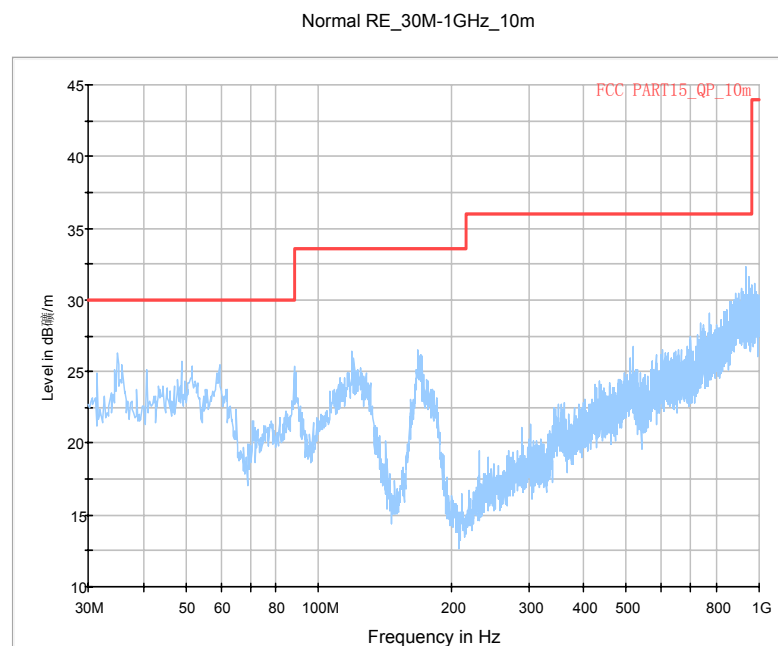


Fig. 8 Radiated Emission ≥ 30 MHz (AE6)

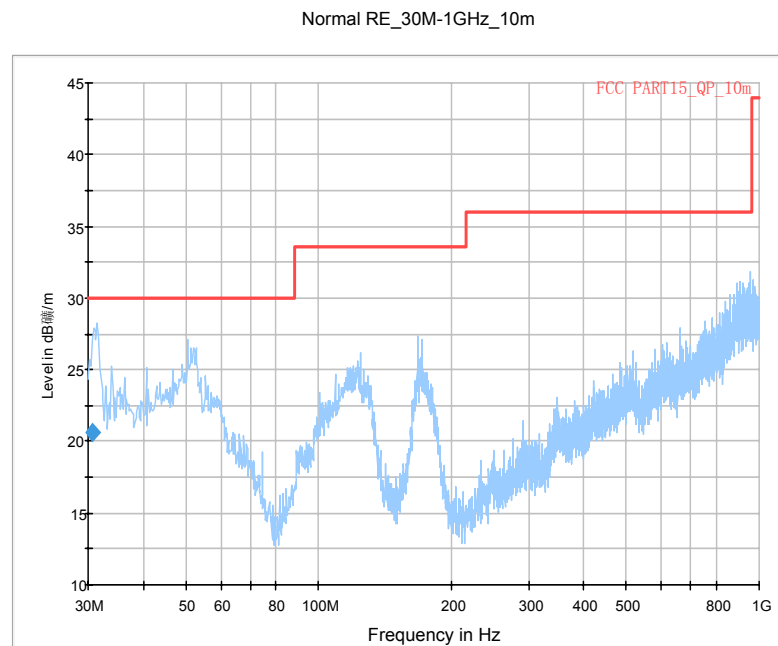


Fig. 9 Radiated Emission ≥ 30 MHz (AE7)

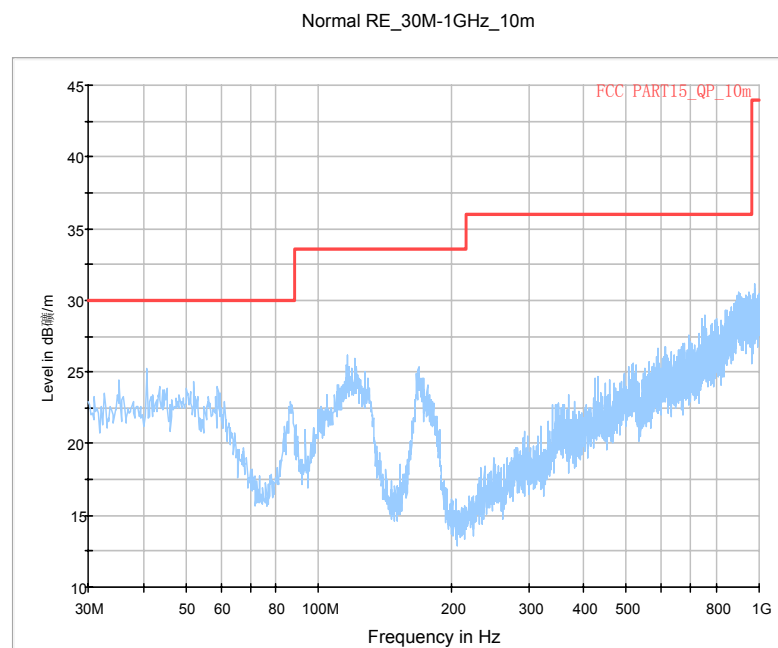


Fig. 10 Radiated Emission ≥ 30 MHz (AE8)

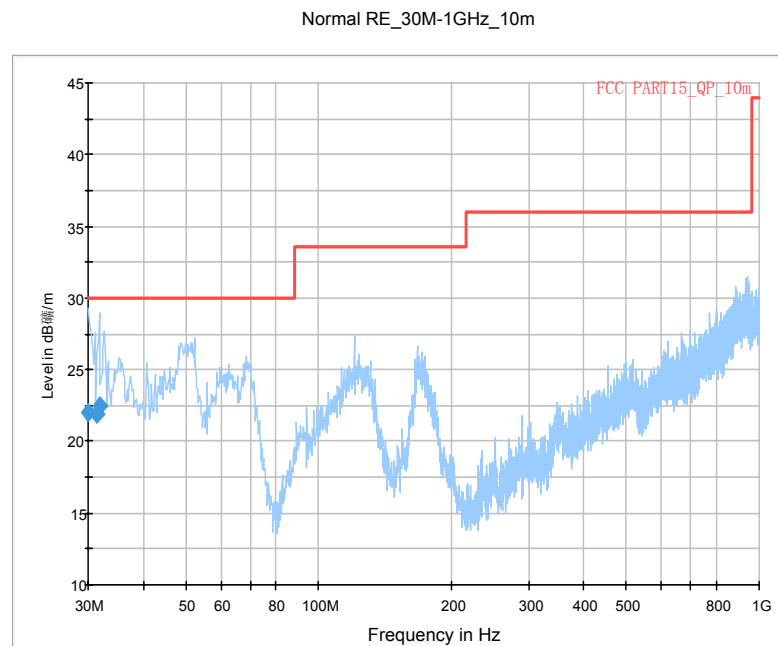


Fig. 11 Radiated Emission ≥ 30 MHz (AE9)

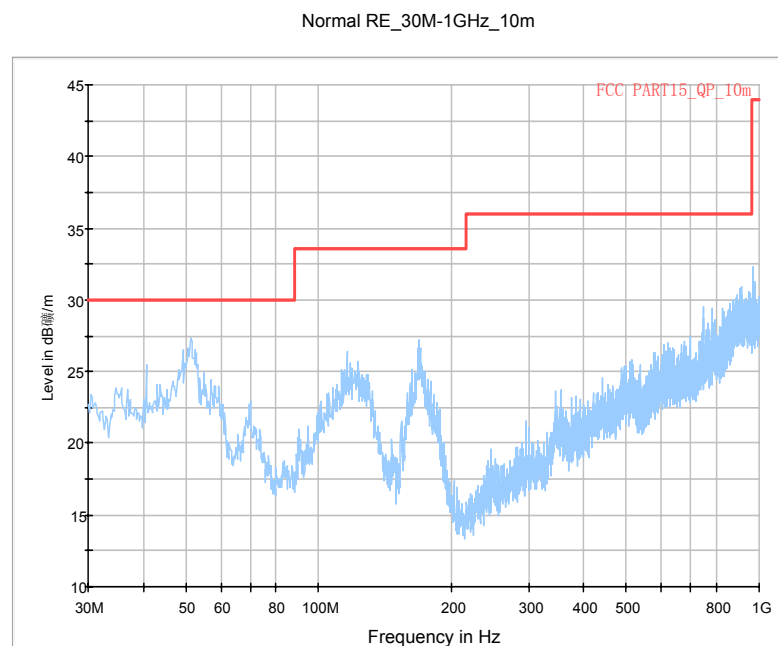


Fig. 12 Radiated Emission ≥ 30 MHz (AE10)

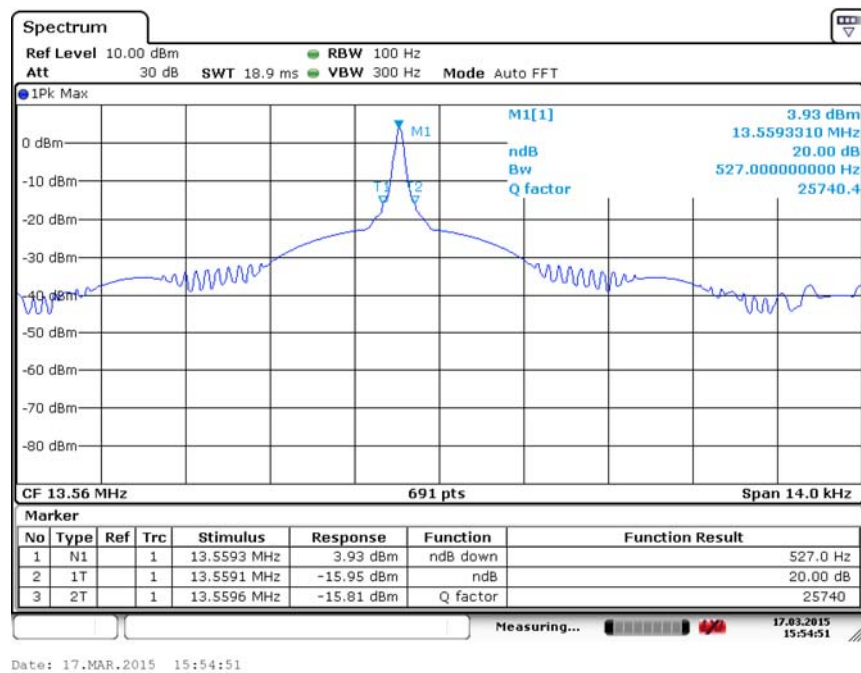


Fig. 13 Occupied 20dB Bandwidth

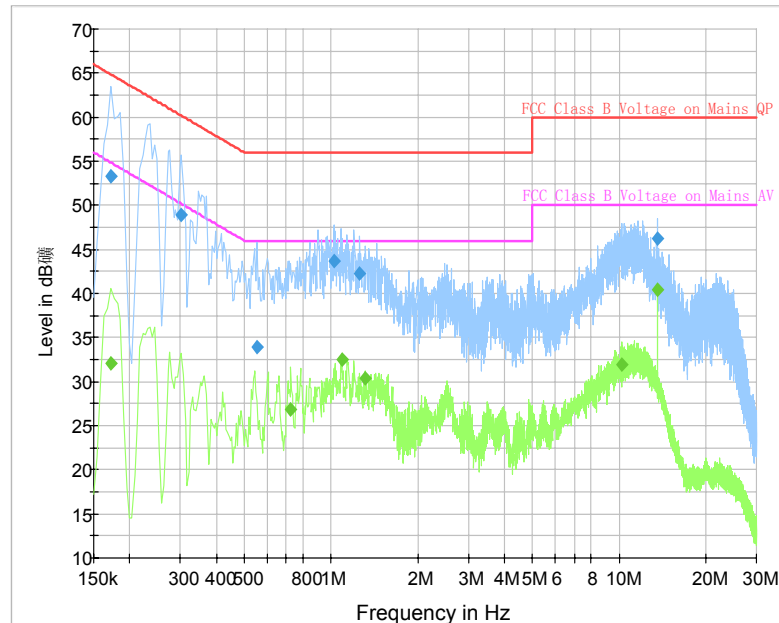


Fig. 14 AC Power line Conducted Emission (Traffic, AE1)

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.172500	53.3	2000.0	9.000	On	L1	19.7	11.6	64.8
0.303000	48.9	2000.0	9.000	On	L1	19.8	11.3	60.2
0.555000	34.0	2000.0	9.000	On	N	19.8	22.0	56.0
1.023000	43.6	2000.0	9.000	On	L1	19.7	12.4	56.0
1.261500	42.3	2000.0	9.000	On	L1	19.7	13.7	56.0
13.560000	46.2	2000.0	9.000	On	N	20.0	13.8	60.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	CAverage (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.172500	32.1	2000.0	9.000	On	L1	19.7	22.7	54.8
0.726000	26.8	2000.0	9.000	On	N	19.8	19.2	46.0
1.090500	32.5	2000.0	9.000	On	L1	19.7	13.5	46.0
1.320000	30.4	2000.0	9.000	On	L1	19.6	15.6	46.0
10.194000	31.9	2000.0	9.000	On	L1	19.8	18.1	50.0
13.560000	40.4	2000.0	9.000	On	L1	20.0	9.6	50.0

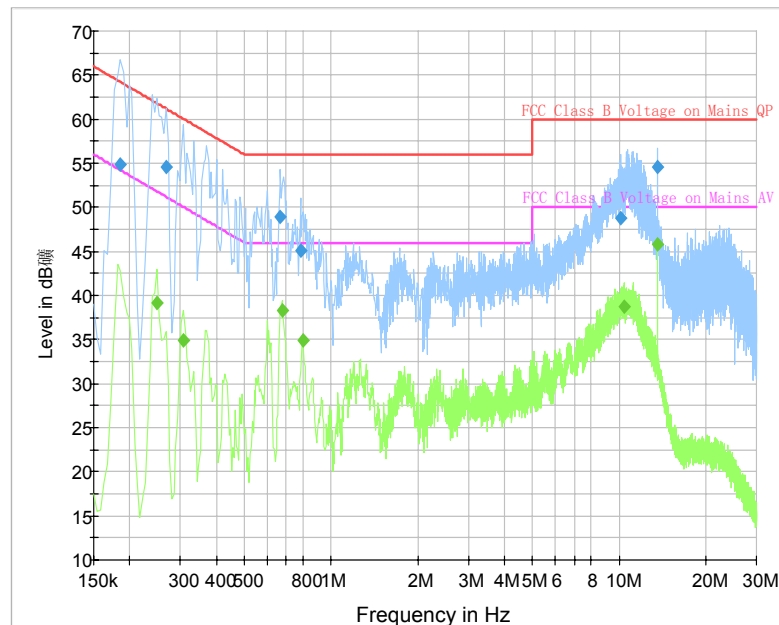


Fig. 15 AC Power line Conducted Emission (Traffic, AE2)

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.186000	54.8	2000.0	9.000	On	N	19.8	9.4	64.2
0.267000	54.5	2000.0	9.000	On	N	19.7	6.7	61.2
0.667500	48.9	2000.0	9.000	On	N	19.8	7.1	56.0
0.784500	45.1	2000.0	9.000	On	N	19.8	10.9	56.0
10.113000	48.8	2000.0	9.000	On	L1	19.8	11.2	60.0
13.560000	54.6	2000.0	9.000	On	N	20.0	5.4	60.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	CAverage (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.249000	39.2	2000.0	9.000	On	L1	19.7	12.6	51.8
0.307500	35.0	2000.0	9.000	On	L1	19.8	15.1	50.0
0.676500	38.3	2000.0	9.000	On	L1	19.8	7.7	46.0
0.798000	35.0	2000.0	9.000	On	L1	19.8	11.0	46.0
10.378500	38.8	2000.0	9.000	On	L1	19.8	11.2	50.0
13.560000	45.8	2000.0	9.000	On	N	20.0	4.2	50.0

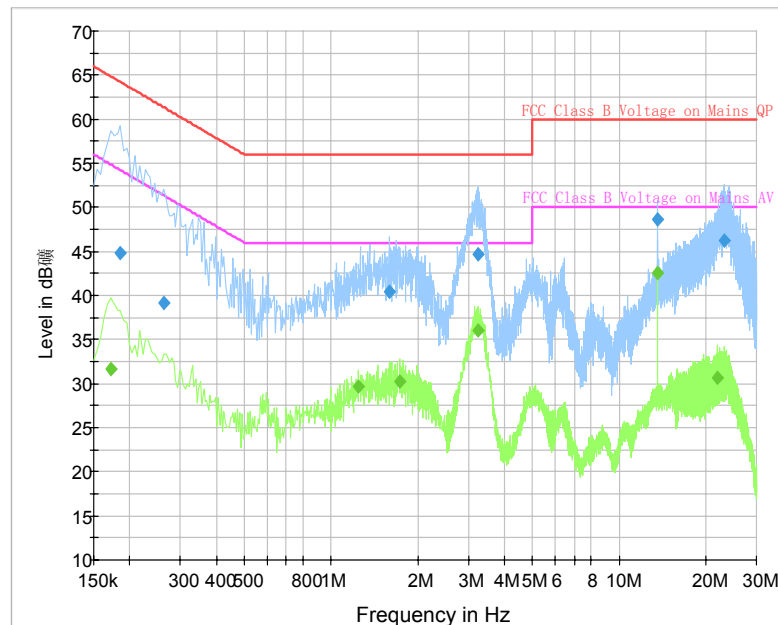


Fig. 16 AC Power line Conducted Emission (Traffic, AE3)

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.186000	44.9	2000.0	9.000	On	L1	19.8	19.3	64.2
0.262500	39.2	2000.0	9.000	On	L1	19.7	22.2	61.4
1.599000	40.4	2000.0	9.000	On	L1	19.7	15.6	56.0
3.250500	44.7	2000.0	9.000	On	L1	19.6	11.3	56.0
13.560000	48.7	2000.0	9.000	On	L1	20.0	11.3	60.0
23.244000	46.3	2000.0	9.000	On	N	20.2	13.7	60.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	CAverage (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.172500	31.6	2000.0	9.000	On	L1	19.7	23.2	54.8
1.243500	29.7	2000.0	9.000	On	L1	19.7	16.3	46.0
1.734000	30.3	2000.0	9.000	On	L1	19.7	15.7	46.0
3.250500	36.0	2000.0	9.000	On	L1	19.6	10.0	46.0
13.560000	42.5	2000.0	9.000	On	L1	20.0	7.5	50.0
21.997500	30.6	2000.0	9.000	On	L1	20.1	19.4	50.0

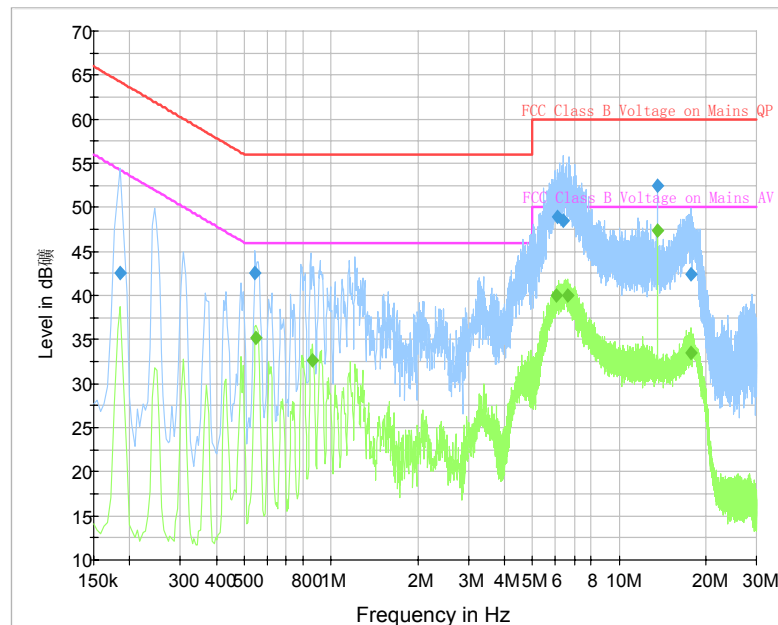


Fig. 17 AC Power line Conducted Emission (Traffic, AE4)

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.186000	42.5	2000.0	9.000	On	L1	19.8	21.7	64.2
0.546000	42.6	2000.0	9.000	On	L1	19.8	13.4	56.0
6.117000	48.9	2000.0	9.000	On	L1	19.7	11.1	60.0
6.382500	48.6	2000.0	9.000	On	L1	19.7	11.4	60.0
13.560000	52.5	2000.0	9.000	On	L1	20.0	7.5	60.0
17.745000	42.4	2000.0	9.000	On	L1	20.1	17.6	60.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	CAverage (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.550500	35.2	2000.0	9.000	On	N	19.8	10.8	46.0
0.861000	32.7	2000.0	9.000	On	L1	19.7	13.3	46.0
6.036000	40.1	2000.0	9.000	On	L1	19.7	10.0	50.0
6.652500	40.0	2000.0	9.000	On	L1	19.7	10.0	50.0
13.560000	47.4	2000.0	9.000	On	L1	20.0	2.6	50.0
17.772000	33.5	2000.0	9.000	On	L1	20.1	16.5	50.0

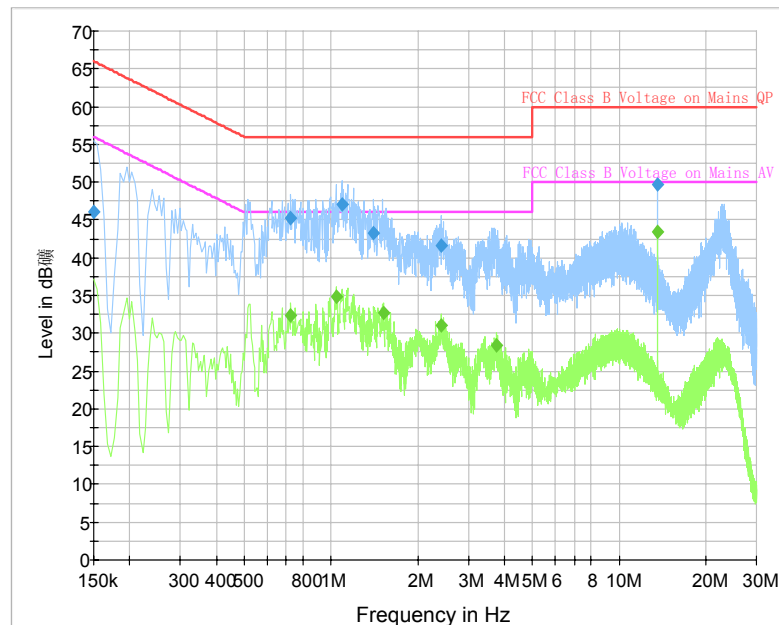


Fig. 18 AC Power line Conducted Emission (Traffic, AE5)

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	46.1	2000.0	9.000	On	L1	20.1	19.9	66.0
0.726000	45.2	2000.0	9.000	On	L1	19.8	10.8	56.0
1.090500	47.0	2000.0	9.000	On	L1	19.7	9.0	56.0
1.405500	43.3	2000.0	9.000	On	L1	19.7	12.7	56.0
2.413500	41.5	2000.0	9.000	On	L1	19.6	14.5	56.0
13.560000	49.7	2000.0	9.000	On	L1	20.0	10.3	60.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	CAverage (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.726000	32.3	2000.0	9.000	On	L1	19.8	13.7	46.0
1.041000	34.8	2000.0	9.000	On	L1	19.7	11.2	46.0
1.518000	32.8	2000.0	9.000	On	L1	19.6	13.2	46.0
2.413500	31.0	2000.0	9.000	On	L1	19.6	15.0	46.0
3.750000	28.4	2000.0	9.000	On	L1	19.7	17.6	46.0
13.560000	43.5	2000.0	9.000	On	L1	20.0	6.5	50.0

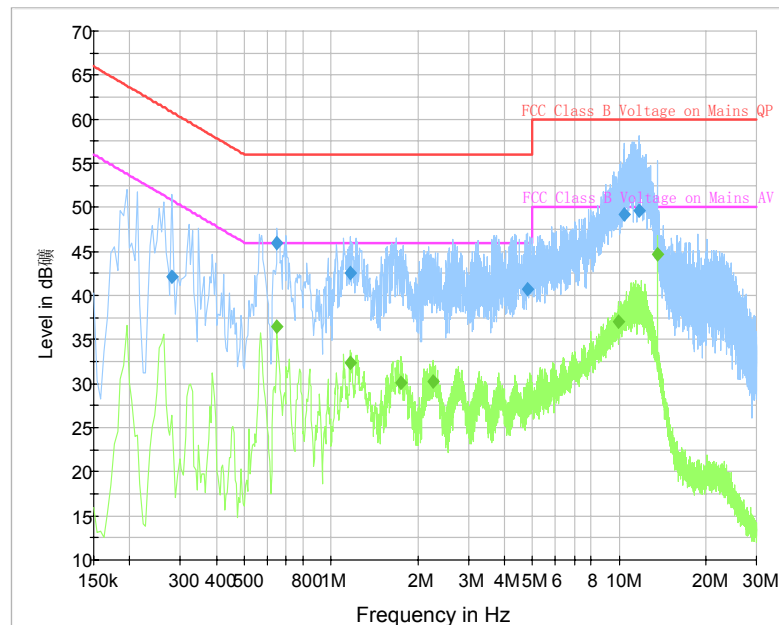


Fig. 19 AC Power line Conducted Emission (Traffic, AE6)

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.280500	42.1	2000.0	9.000	On	L1	19.7	18.7	60.8
0.649500	45.9	2000.0	9.000	On	L1	19.8	10.1	56.0
1.167000	42.5	2000.0	9.000	On	L1	19.6	13.5	56.0
4.789500	40.7	2000.0	9.000	On	L1	19.7	15.3	56.0
10.392000	49.2	2000.0	9.000	On	L1	19.8	10.8	60.0
11.769000	49.6	2000.0	9.000	On	L1	19.8	10.4	60.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	CAverage (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.649500	36.4	2000.0	9.000	On	L1	19.8	9.6	46.0
1.167000	32.3	2000.0	9.000	On	L1	19.6	13.7	46.0
1.752000	30.1	2000.0	9.000	On	L1	19.7	15.9	46.0
2.256000	30.3	2000.0	9.000	On	L1	19.6	15.7	46.0
9.973500	37.1	2000.0	9.000	On	L1	19.8	12.9	50.0
13.560000	44.7	2000.0	9.000	On	L1	20.0	5.3	50.0

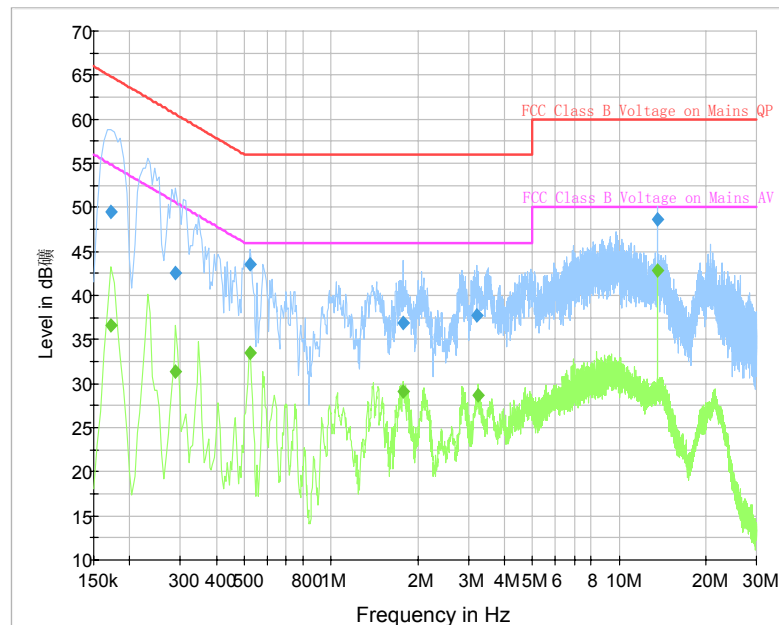


Fig. 20 AC Power line Conducted Emission (Traffic, AE7)

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.172500	49.5	2000.0	9.000	On	L1	19.7	15.3	64.8
0.289500	42.5	2000.0	9.000	On	L1	19.8	18.0	60.5
0.523500	43.5	2000.0	9.000	On	L1	19.8	12.5	56.0
1.783500	36.9	2000.0	9.000	On	L1	19.6	19.1	56.0
3.201000	37.7	2000.0	9.000	On	L1	19.7	18.3	56.0
13.560000	48.6	2000.0	9.000	On	L1	20.0	11.4	60.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	CAverage (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.172500	36.6	2000.0	9.000	On	L1	19.7	18.2	54.8
0.289500	31.4	2000.0	9.000	On	L1	19.8	19.2	50.5
0.523500	33.4	2000.0	9.000	On	L1	19.8	12.6	46.0
1.783500	29.1	2000.0	9.000	On	L1	19.6	16.9	46.0
3.250500	28.7	2000.0	9.000	On	L1	19.6	17.3	46.0
13.560000	42.8	2000.0	9.000	On	L1	20.0	7.2	50.0

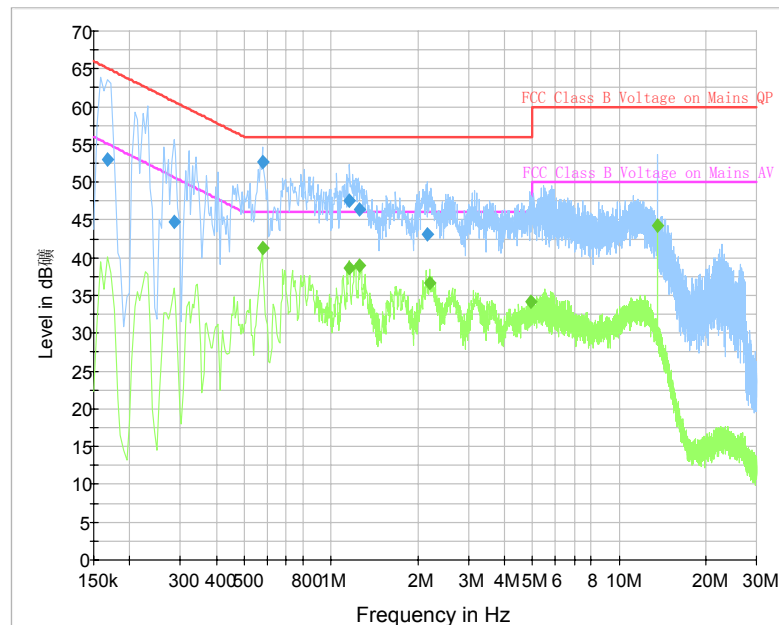


Fig. 21 AC Power line Conducted Emission (Traffic, AE8)

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.168000	53.0	2000.0	9.000	On	L1	19.7	12.1	65.1
0.285000	44.8	2000.0	9.000	On	N	19.8	15.9	60.7
0.577500	52.6	2000.0	9.000	On	L1	19.8	3.4	56.0
1.158000	47.6	2000.0	9.000	On	L1	19.6	8.4	56.0
1.252500	46.4	2000.0	9.000	On	L1	19.7	9.6	56.0
2.157000	43.1	2000.0	9.000	On	L1	19.6	12.9	56.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	CAverage (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.577500	41.3	2000.0	9.000	On	L1	19.8	4.7	46.0
1.158000	38.7	2000.0	9.000	On	L1	19.6	7.3	46.0
1.252500	39.0	2000.0	9.000	On	L1	19.7	7.0	46.0
2.197500	36.6	2000.0	9.000	On	L1	19.6	9.4	46.0
4.947000	34.1	2000.0	9.000	On	L1	19.6	11.9	46.0
13.560000	44.2	2000.0	9.000	On	L1	20.0	5.8	50.0

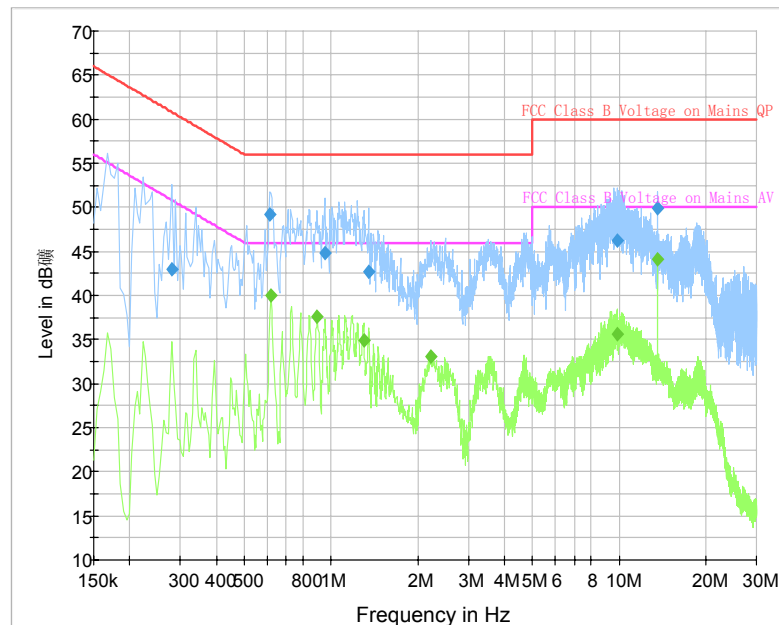


Fig. 22 AC Power line Conducted Emission (Traffic, AE9)

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.280500	43.0	2000.0	9.000	On	L1	19.7	17.8	60.8
0.613500	49.1	2000.0	9.000	On	L1	19.8	6.9	56.0
0.951000	44.9	2000.0	9.000	On	N	19.7	11.1	56.0
1.351500	42.7	2000.0	9.000	On	N	19.6	13.3	56.0
9.865500	46.2	2000.0	9.000	On	L1	19.8	13.8	60.0
13.560000	49.9	2000.0	9.000	On	N	20.0	10.1	60.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	CAverage (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.618000	40.0	2000.0	9.000	On	N	19.8	6.0	46.0
0.897000	37.5	2000.0	9.000	On	L1	19.7	8.5	46.0
1.297500	34.9	2000.0	9.000	On	L1	19.6	11.1	46.0
2.220000	33.1	2000.0	9.000	On	N	19.6	12.9	46.0
9.883500	35.5	2000.0	9.000	On	L1	19.8	14.5	50.0
13.560000	44.2	2000.0	9.000	On	L1	20.0	5.8	50.0

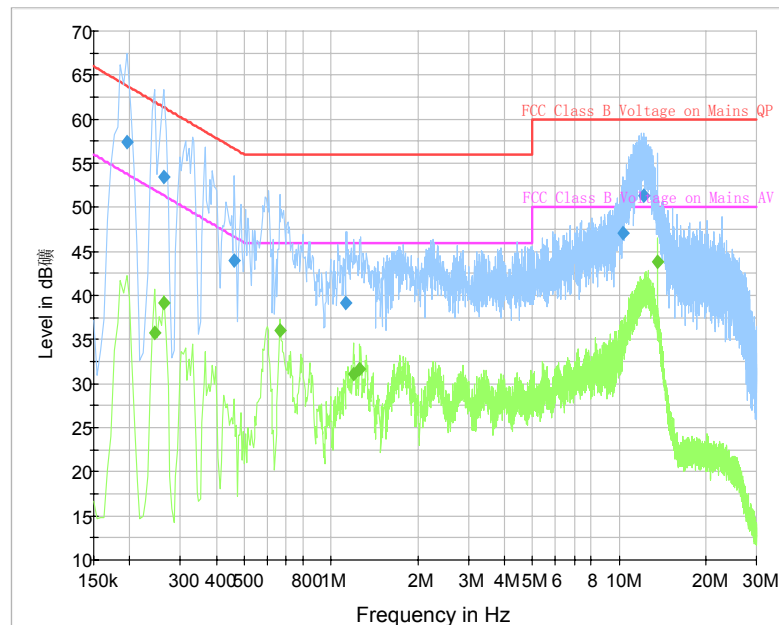


Fig. 23 AC Power line Conducted Emission (Traffic, AE10)

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.195000	57.3	2000.0	9.000	On	L1	19.8	6.5	63.8
0.262500	53.5	2000.0	9.000	On	L1	19.7	7.9	61.4
0.460500	44.0	2000.0	9.000	On	L1	19.8	12.7	56.7
1.126500	39.1	2000.0	9.000	On	L1	19.6	16.9	56.0
10.315500	47.1	2000.0	9.000	On	L1	19.8	12.9	60.0
12.169500	51.3	2000.0	9.000	On	L1	19.9	8.7	60.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	CAverage (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.244500	35.8	2000.0	9.000	On	L1	19.8	16.2	51.9
0.262500	39.2	2000.0	9.000	On	L1	19.7	12.2	51.4
0.663000	36.1	2000.0	9.000	On	L1	19.8	10.0	46.0
1.194000	31.1	2000.0	9.000	On	L1	19.7	14.9	46.0
1.261500	31.6	2000.0	9.000	On	L1	19.7	14.4	46.0
13.560000	43.9	2000.0	9.000	On	L1	20.0	6.1	50.0

ANNEX D: Persons involved in this testing

Test Name	Tester
Maximum Peak Output Power	Xu Ye, Tang Weisheng
Peak Power Spectral Density	Xu Ye, Tang Weisheng
Occupied 6dB Bandwidth	Xu Ye, Tang Weisheng
Band Edges Compliance	Xu Ye, Tang Weisheng
Transmitter Spurious Emission - Conducted	Xu Ye, Tang Weisheng
Transmitter Spurious Emission - Radiated	Xu Ye, Tang Weisheng
AC Powerline Conducted Emission	Xu Ye, Tang Weisheng

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