



**FCC PART 15C  
TEST REPORT  
No.I15N01161-BLE**

**for**

**Huawei Technologies Co.,Ltd**

**Smart Phone**

**Model Name: HUAWEI TAG-L23**

**With**

**Hardware Version: Ver.A**

**Software Version: TAG-L23C464B006\_A**

**FCC ID: QISTAG-L23**

**Issued Date: Dec 30<sup>th</sup>, 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.

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## **REPORT HISTORY**

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## 1. Test Laboratory

### 1.1. Testing Location

Location: CTTL(South Branch)

Address: TCL International E city No. 1001 Zhongshanyuan Road, Nanshan District, Shenzhen, Guangdong, China 518000

### 1.2. Testing Environment

Normal Temperature: 15-35°C

Extreme Temperature: -20/+55°C

Relative Humidity: 20-75%

### 1.3. Project data

Testing Start Date: 2015-10-28

Testing End Date: 2015-12-25

### 1.4. Signature

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Xu Ye

(Prepared this test report)

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Tang Weisheng

(Reviewed this test report)

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(Approved this test report)



## **2. Client Information**

### **2.1. Applicant Information**

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

#### **3.1. About EUT**

Description	Smart Phone
Model Name	HUAWEI TAG-L23
Market Name	HUAWEI GR3
Frequency Band	2402MHz~2480MHz
Type of Modulation	GFSK
Number of Channels	40
FCC ID	QISTAG-L23

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

#### **3.2. Internal Identification of EUT**

<b>EUT ID*</b>	<b>IMEI</b>	<b>HW Version</b>	<b>SW Version</b>
EUT1	/	Ver.A	TAG-L23C464B006_A

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

#### **3.3. Internal Identification of AE**

<b>AE ID*</b>	<b>Description</b>	<b>Type</b>	<b>SN</b>
AE1	Charger	HW-050100U01_BYD	/
AE2	Charger	HW-050100U01_HUNTKEY	/
AE3	Charger	HW-050100U01_Phitek	/
AE4	Charger	HW-050100E01_BYD	/
AE5	Charger	HW-050100E01_HUNTKEY	/
AE6	Charger	HW-050100E01_Phitek	/
AE7	Charger	HW-050100I01_BYD	/
AE8	Charger	HW-050100I01_HUNTKEY	/
AE9	Charger	HW-050100R01_BYD	/
AE10	Charger	HW-050100B01_BYD	/
AE11	Charger	HW-050100A01_BYD	/
AE12	Charger	HW-050100R01_HUNTKEY	/
AE13	Charger	HW-050100B01_HUNTKEY	/
AE14	Charger	HW-050100A01_HUNTKEY	/
AE15	Charger	HW-050100R01_Phitek	/
AE16	Charger	HW-050100B01_Phitek	/
AE17	Charger	HW-050100A01_Phitek	/
AE18	Charger	HW-050100Z01_HUNTKEY	/
AE19	Charger	HW-050100Z01_Phitek	/
AE20	Charger	HW-050100Z01_BYD	/

\*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.

<b>Reference</b>	<b>Title</b>	<b>Version</b>
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.	Oct, 2014
ANSI C63.10	American National Standard for Testing Wireless Devices	Jun,2013

## 5. Test Results

### 5.1. Summary of Test Results

No	Test cases	Standard Sub-clause	Verdict
0	Antenna Requirement	15.203	<b>P</b>
1	Maximum Peak Output Power	15.247 (b)	<b>P</b>
2	Peak Power Spectral Density	15.247 (e)	<b>P</b>
3	Occupied 6dB Bandwidth	15.247 (a)	<b>P</b>
4	Band Edges Compliance	15.247 (d)	<b>P</b>
5	Transmitter Spurious Emission - Conducted	15.247 (d)	<b>P</b>
6	Transmitter Spurious Emission - Radiated	15.247, 15.205, 15.209	<b>P</b>
7	AC Powerline Conducted Emission	15.107, 15.207	<b>P</b>

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 metersx17 metersx10 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	2016-04-21	1 year

### Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Due date	Calibration Period
1	Chamber	FACT5-2.0	4166	ETS-Lindgren	2018-05-13	3 years
2	Test Receiver	ESCI	100701	Rohde & Schwarz	2016-08-10	1 year
3	BiLog Antenna	VULB9163	9163 329	Schwarzbeck	2017-01-20	3 years
4	Horn Antenna	3117	00066577	ETS-Lindgren	2016-04-01	3 years
5	Universal Radio Communication Tester	CMU200	114544	Rohde & Schwarz	2016-09-10	1 year
6	Universal Radio Communication Tester	CMW500	152499	Schwarzbeck	2016-07-23	1 year
7	Spectrum Analyser	FSP40	100378	Rohde & Schwarz	2016-12-18	1 year

### Anechoic chamber

Fully anechoic chamber by ETS-Lindgren.

## **ANNEX A: MEASUREMENT RESULTS FOR RECEIVER**

### **A.0 Antenna requirement**

#### **Measurement Limit:**

<b>Standard</b>	<b>Requirement</b>
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 -2.9 dBi.  
The RF transmitter uses an integrate antenna without connector.**

### A.1 Maximum Average Output Power

Measurement Limit:

Standard	Limit (dBm)
FCC CRF Part 15.247(b)(1)	< 30

Measurement Results:

Mode	Channel	Maximum Peak Output Power (dBm)		Conclusion
GFSK	0	-4.96	Fig.1	P
	19	-6.74	Fig.2	P
	39	-6.11	Fig.3	P

See ANNEX C for test graphs.

Conclusion: Pass

### A.2 Peak Power Spectral Density

Measurement Limit:

Standard	Limit
FCC CRF Part 15.247(d)	< 8 dBm/3 kHz

Measurement Results:

Mode	Channel	Peak Power Spectral Density (dBm)		Conclusion
GFSK	0	Fig.4	-21.56	P
	19	Fig.5	-23.42	P
	39	Fig.6	-22.82	P

See ANNEX C for test graphs.

Conclusion: PASS

### A.3 Occupied 6dB Bandwidth

**Measurement Limit:**

Standard	Limit (kHz)
FCC 47 CFR Part 15.247 (a)	≥ 500

**Measurement Result:**

Mode	Channel	Test Results ( kHz)		conclusion
GFSK	0	Fig.7	694.6	P
	19	Fig.8	687.4	P
	39	Fig.9	687.4	P

See ANNEX C for test graphs.

**Conclusion: PASS**

### A.4 Band Edges Compliance

**Measurement Limit:**

Standard	Limit (dBc)
FCC 47 CFR Part 15.247 (d)	> 20

**Measurement Result:**

Mode	Channel	Test Results	Conclusion
GFSK	0	Fig.10	P
	39	Fig.11	P

See ANNEX C for test graphs.

**Conclusion: Pass**

## A.5 Transmitter Spurious Emission

### A.5.1 Transmitter Spurious Emission - Conducted

**Measurement Limit:**

Standard	Limit
FCC 47 CFR Part 15.247 (d)	20dB below peak output power in 100 kHz bandwidth

**Measurement Results:**

MODE	Channel	Frequency Range	Test Results	Conclusion
GFSK	0	2.402 GHz	Fig.12	P
		30 MHz-3 GHz	Fig.13	P
		3GHz-18GHz	Fig.14	P
	19	2.440 GHz	Fig.15	P
		30 MHz-3 GHz	Fig.16	P
		3GHz-18GHz	Fig.17	P
	39	2.480 GHz	Fig.18	P
		30 MHz-3 GHz	Fig.19	P
		3GHz-18GHz	Fig.20	P
	All channels	18GHz-26GHz	Fig.21	P

See ANNEX C for test graphs.

**Conclusion: Pass**

### A.5.2 Transmitter Spurious Emission - Radiated

#### Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247, 15.205, 15.209	20dB below peak output power

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

#### Limit in restricted band:

Frequency of emission (MHz)	Field strength( $\mu$ V/m)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

#### Test Condition

The EUT was placed on a non-conductive table. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

Frequency of emission (MHz)	RBW/VBW	Sweep Time(s)
30-1000	120kHz/300kHz	5
1000-4000	1MHz/3MHz	15
4000-18000	1MHz/3MHz	40
18000-26500	1MHz/3MHz	20

#### Note:

According to the performance evaluation, the radiated emission margin of EUT is over 20dB in the band from 9kHz to 30MHz. Therefore, the measurement starts from 30MHz to tenth harmonic.

The measurement results include the horizontal polarization and vertical polarization measurements.

**Measurement Results:**

Mode	Channel	Frequency Range	Test Results	Conclusion
GFSK	0	1 GHz ~18 GHz	Fig.22	P
	19	9kHz~30MHz	Fig.23	P
		30MHz~1GHz	Fig.24	P
		1 GHz ~18 GHz	Fig.25	P
		18 GHz~ 26.5 GHz	Fig.26	P
	39	1 GHz ~18 GHz	Fig.27	P
	Power(CH0)	2.38 GHz ~ 2.45 GHz	Fig.28	P
	Power(CH78)	2.45 GHz ~ 2.5 GHz	Fig.29	P

**GFSK CH0 (1-18GHz)**

Frequency (MHz)	MaxPeak-ClearWrite (dB $\mu$ V/m)	Polarization	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
14492.000000	56.2	H	11.7	17.8	74.0
15174.000000	57.1	V	12.1	16.9	74.0
15693.000000	58.9	V	12.8	15.1	74.0
16235.000000	59.1	H	13.3	14.9	74.0
16723.000000	59.7	H	13.9	14.3	74.0
17268.000000	59.5	V	14.1	14.5	74.0

Frequency (MHz)	Average-ClearWrite (dB $\mu$ V/m)	Polarization	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
14526.000000	44.6	V	11.7	9.4	54.0
15152.000000	45.2	V	12.1	8.8	54.0
15678.000000	46.9	V	12.8	7.1	54.0
16205.000000	47.4	V	13.3	6.6	54.0
16751.000000	47.9	V	14.0	6.1	54.0
17295.000000	47.5	V	14.1	6.5	54.0

**GFSK CH19 (1-18GHz)**

Frequency (MHz)	MaxPeak-ClearWrite (dB $\mu$ V/m)	Polarization	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
14544.000000	56.3	H	11.8	17.7	74.0
15062.000000	56.9	H	12.0	17.1	74.0
15794.000000	58.7	V	13.0	15.3	74.0
16208.000000	59.5	V	13.3	14.5	74.0
16737.000000	60.1	V	13.9	13.9	74.0
17335.000000	59.7	V	14.2	14.3	74.0

Frequency (MHz)	Average-ClearWrite (dB $\mu$ V/m)	Polarization	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
14521.000000	44.7	V	11.7	9.3	54.0
15152.000000	45.2	H	12.1	8.8	54.0
15759.000000	46.7	V	12.9	7.3	54.0
16217.000000	47.3	V	13.3	6.7	54.0
16766.000000	47.7	V	14.0	6.3	54.0
17283.000000	47.4	V	14.1	6.6	54.0

**GFSK CH39 (1-18GHz)**

Frequency (MHz)	MaxPeak-ClearWrite (dB $\mu$ V/m)	Polarization	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
14088.000000	56.1	H	11.1	17.9	74.0
15136.000000	57.8	V	12.1	16.2	74.0
15738.000000	58.8	V	12.9	15.2	74.0
16264.000000	58.3	V	13.4	15.7	74.0
16734.000000	59.7	H	13.9	14.3	74.0
17649.000000	59.0	H	14.3	15.0	74.0

Frequency (MHz)	Average-ClearWrite (dB $\mu$ V/m)	Polarization	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
14522.000000	44.5	V	11.7	9.5	54.0
15149.000000	45.1	V	12.1	8.9	54.0
15762.000000	46.6	V	12.9	7.4	54.0
16204.000000	46.8	V	13.3	7.2	54.0
16768.000000	47.2	V	14.0	6.8	54.0
17343.000000	47.1	V	14.2	6.9	54.0

See ANNEX C for test graphs.

**Conclusion: Pass**

**Note:**

A "reference path loss" is established and the  $A_{Rpl}$  is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

$P_{Mea}$  is the field strength recorded from the instrument.

The measurement results are obtained as described below:

$$\text{Result} = P_{Mea} + A_{Rpl} = P_{Mea} + \text{Cable Loss} + \text{Antenna Factor}$$

## A.6 AC Powerline Conducted Emission

### Test Condition:

Voltage (V)	Frequency (Hz)
120	60

### Measurement Result and limit:

BT (Quasi-peak Limit)-AE1- Traffic

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	66 to 56	Fig.30	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.

BT (Average Limit)-AE1-Traffic

Frequency range (MHz)	Average-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.30	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.

BT (Quasi-peak Limit)-AE2- Traffic

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	66 to 56	Fig.31	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.

BT (Average Limit)-AE2-Traffic

Frequency range (MHz)	Average-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.31	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.

BT (Quasi-peak Limit)-AE3- Traffic

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	66 to 56	Fig.32	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.

BT (Average Limit)-AE3-Traffic

Frequency range (MHz)	Average-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.32	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.

BT (Quasi-peak Limit)-AE4- Traffic

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	66 to 56	Fig.33	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.

BT (Average Limit)-AE4-Traffic

Frequency range (MHz)	Average-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.33	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.

BT (Quasi-peak Limit)-AE5- Traffic

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	66 to 56	Fig.34	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.

BT (Average Limit)-AE5-Traffic

Frequency range (MHz)	Average-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.34	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.

BT (Quasi-peak Limit)-AE6- Traffic

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	66 to 56	Fig.35	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.

BT (Average Limit)-AE6-Traffic

Frequency range (MHz)	Average-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.35	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.

BT (Quasi-peak Limit)-AE7- Traffic

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	66 to 56	Fig.36	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.

BT (Average Limit)-AE7-Traffic

Frequency range (MHz)	Average-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.36	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.

BT (Quasi-peak Limit)-AE8- Traffic

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	66 to 56	Fig.37	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.

BT (Average Limit)-AE8-Traffic

Frequency range (MHz)	Average-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.37	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.

BT (Quasi-peak Limit)-AE1-idle

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	Fig.66 to 56	Fig.38	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.

BT (Average Limit)-AE1-idle

Frequency range (MHz)	Average-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.38	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.

BT (Quasi-peak Limit)-AE2-idle

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	Fig.67 to 56	Fig.39	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.

BT (Average Limit)-AE2-idle

Frequency range (MHz)	Average-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.39	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.			

BT (Quasi-peak Limit)-AE3-idle

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	Fig.68 to 56	Fig.40	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.			

BT (Average Limit)-AE3-idle

Frequency range (MHz)	Average-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.40	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.			

BT (Quasi-peak Limit)-AE4-idle

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	Fig.69 to 56	Fig.41	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.			

BT (Average Limit)-AE4-idle

Frequency range (MHz)	Average-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.41	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.			

BT (Quasi-peak Limit)-AE5-idle

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	Fig.70 to 56	Fig.42	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.

BT (Average Limit)-AE5-idle

Frequency range (MHz)	Average-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.42	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.

BT (Quasi-peak Limit)-AE6-idle

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	Fig.71 to 56	Fig.43	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.

BT (Average Limit)-AE6-idle

Frequency range (MHz)	Average-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.43	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.

BT (Quasi-peak Limit)-AE7-idle

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	Fig.72 to 56	Fig.44	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.

BT (Average Limit)-AE7-idle

Frequency range (MHz)	Average-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.44	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.

BT (Quasi-peak Limit)-AE8-idle

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	Fig.73 to 56	Fig.45	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.

BT (Average Limit)-AE8-idle

Frequency range (MHz)	Average-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Traffic	
0.15 to 0.5	56 to 46	Fig.45	P
0.5 to 5	46		
5 to 30	50		

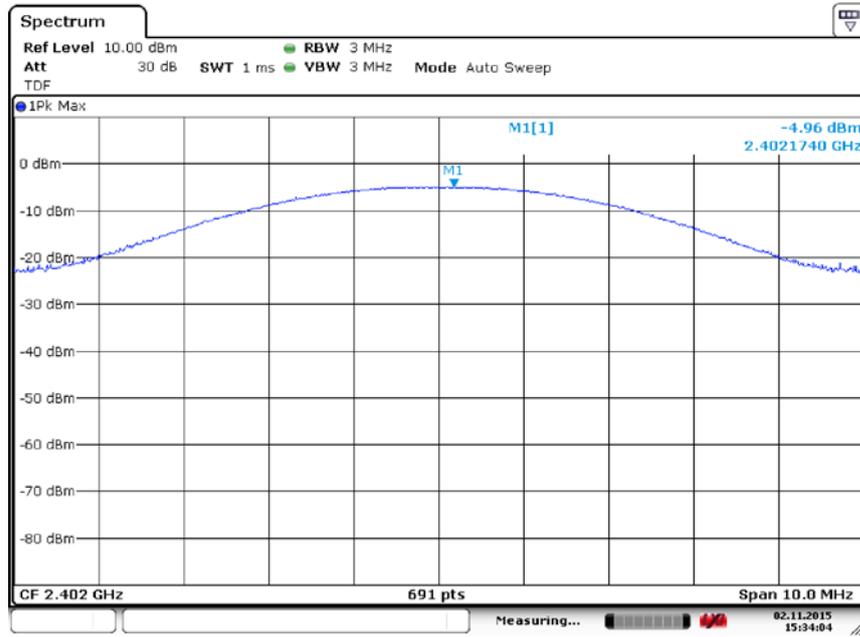
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

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

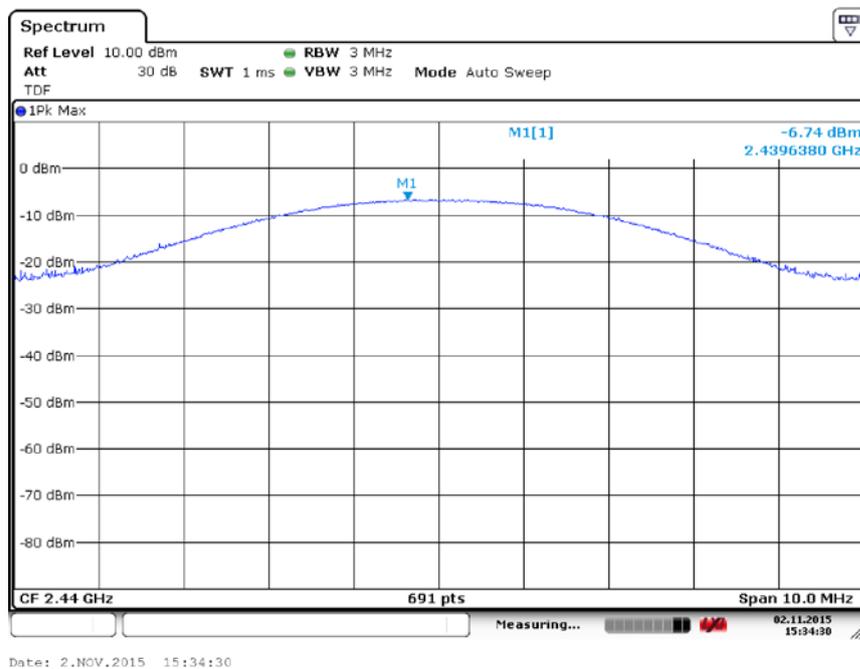
**See ANNEX C for test graphs.**

**Conclusion: Pass**

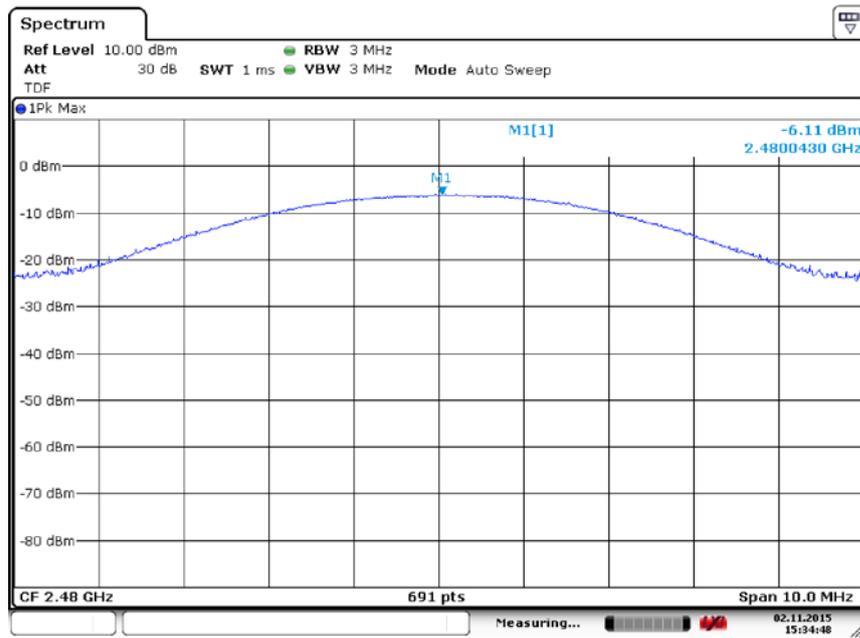
## ANNEX B: TEST FIGURE LIST



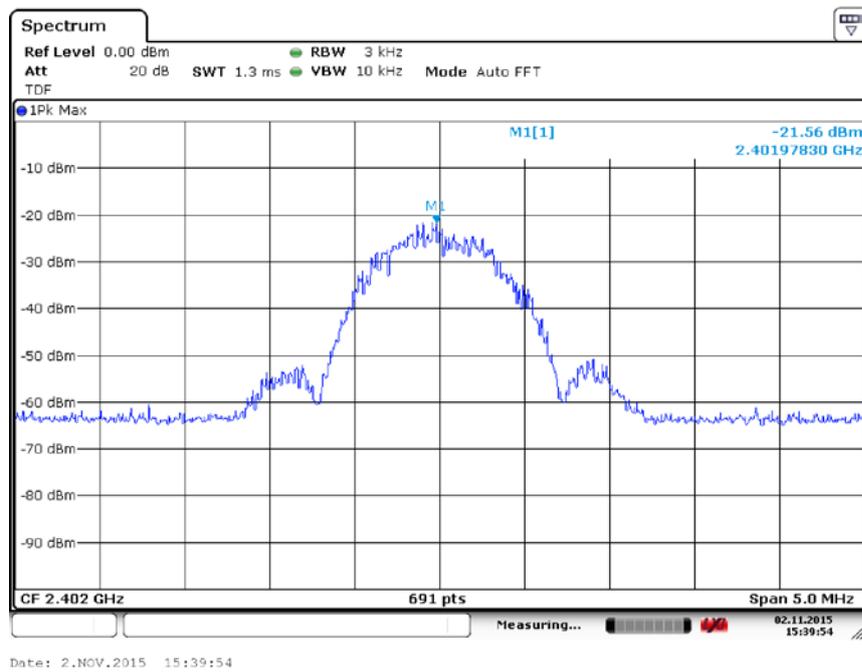
**Fig.1 Maximum Peak Output Power(GFSK, Ch 0)**



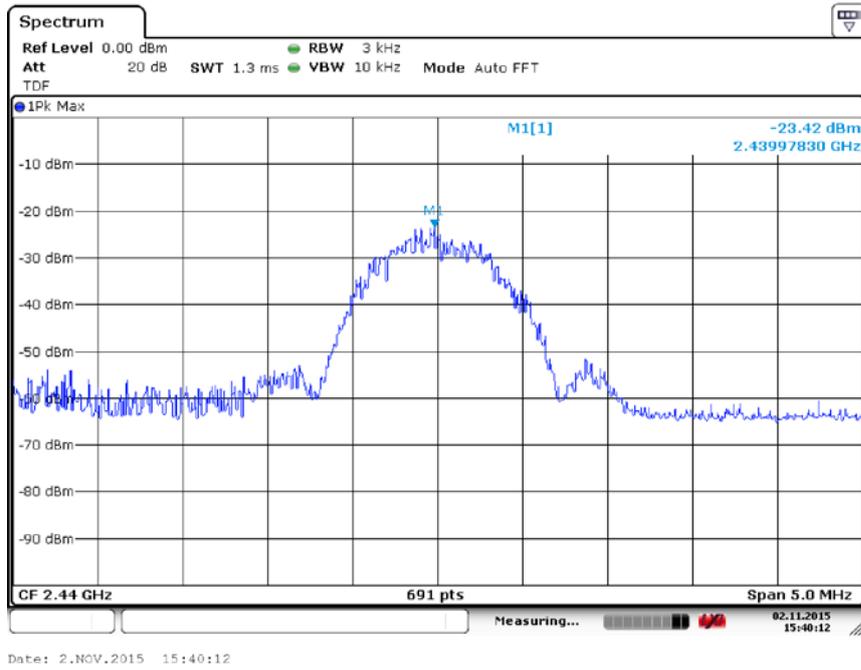
**Fig.2 Maximum Peak Output Power(GFSK, Ch 19)**



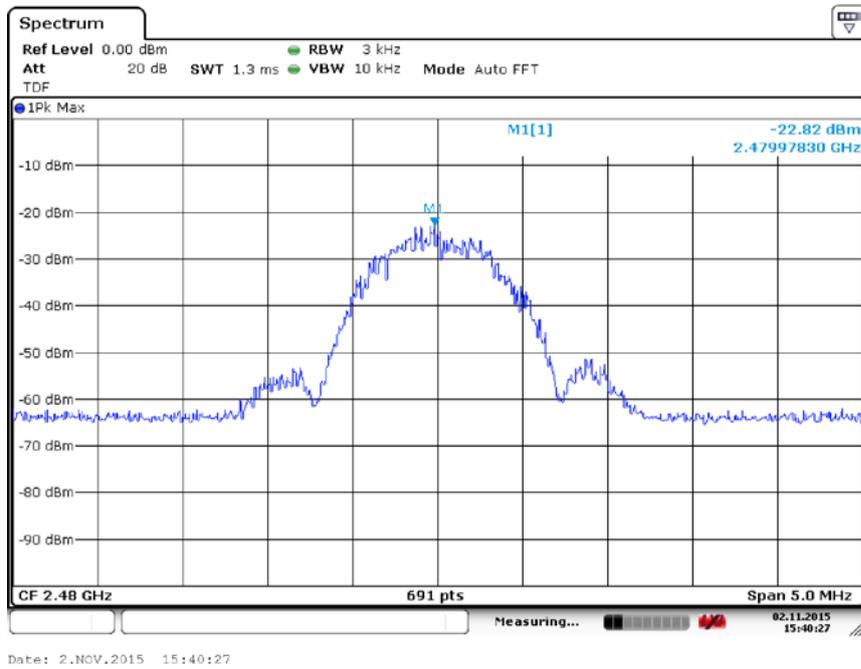
**Fig.3 Maximum Peak Output Power(GFSK, Ch 39)**



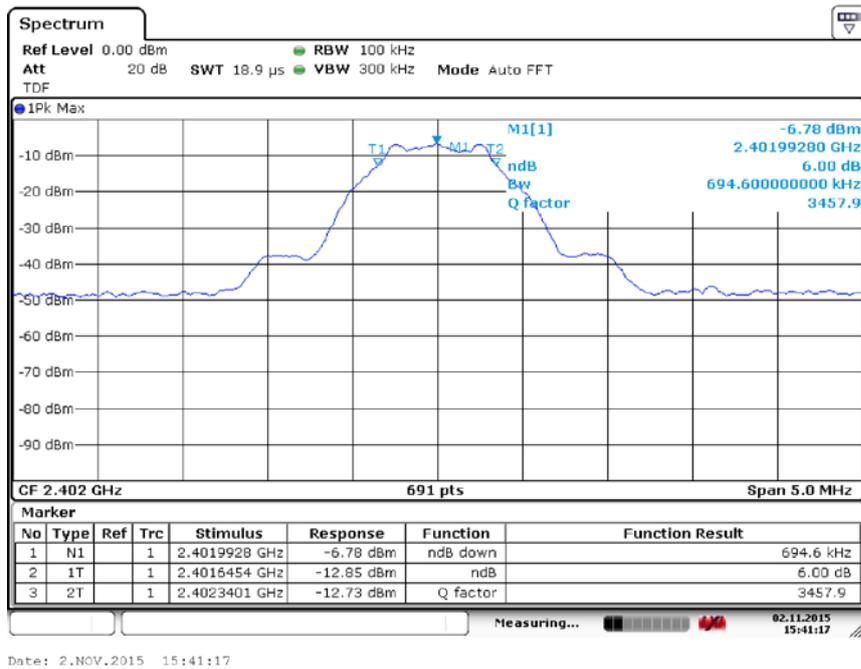
**Fig.4 Power Spectral Density (Ch 0)**



**Fig.5 Power Spectral Density (Ch 19)**

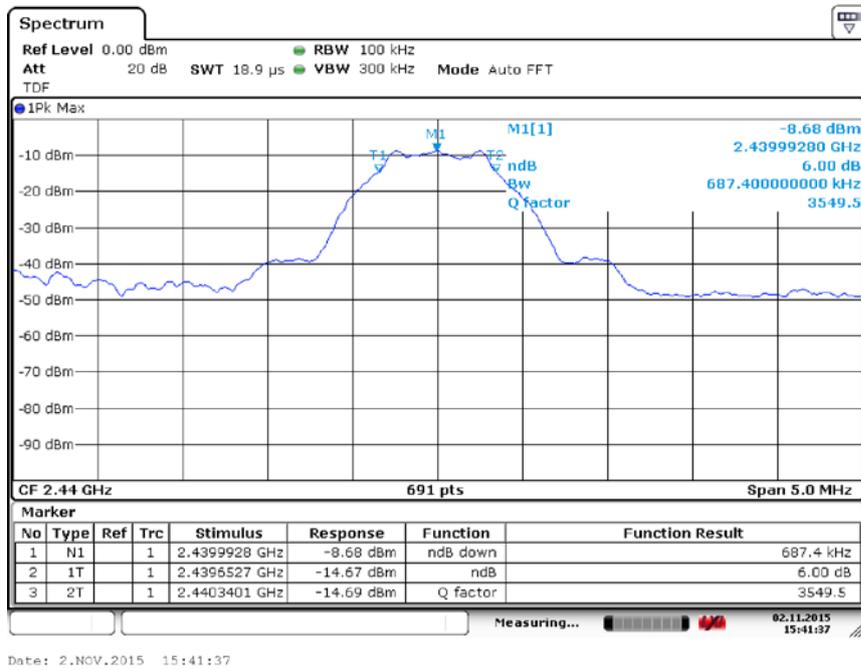


**Fig.6 Power Spectral Density (Ch 39)**



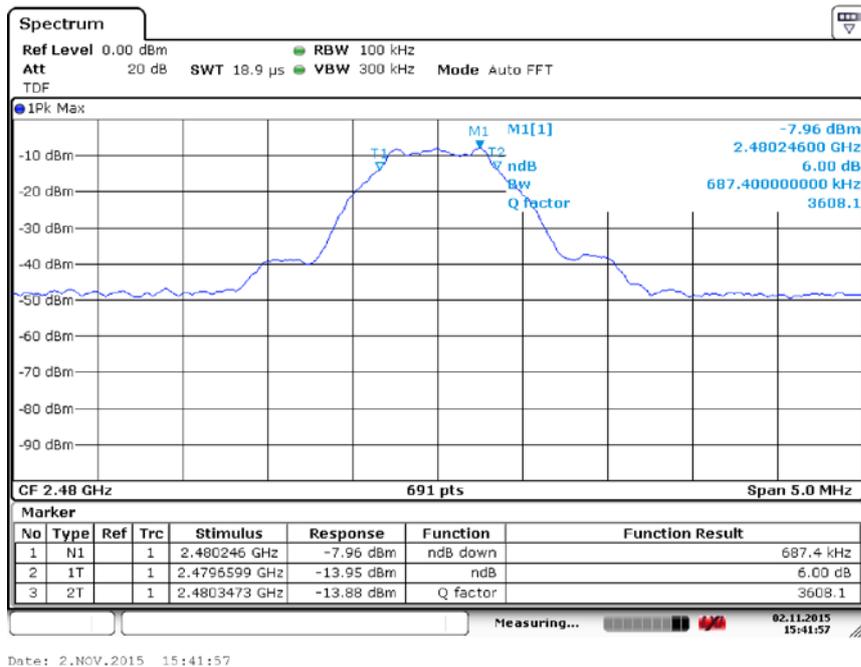
Date: 2.NOV.2015 15:41:17

**Fig.7 Occupied 6dB Bandwidth (Ch 0)**



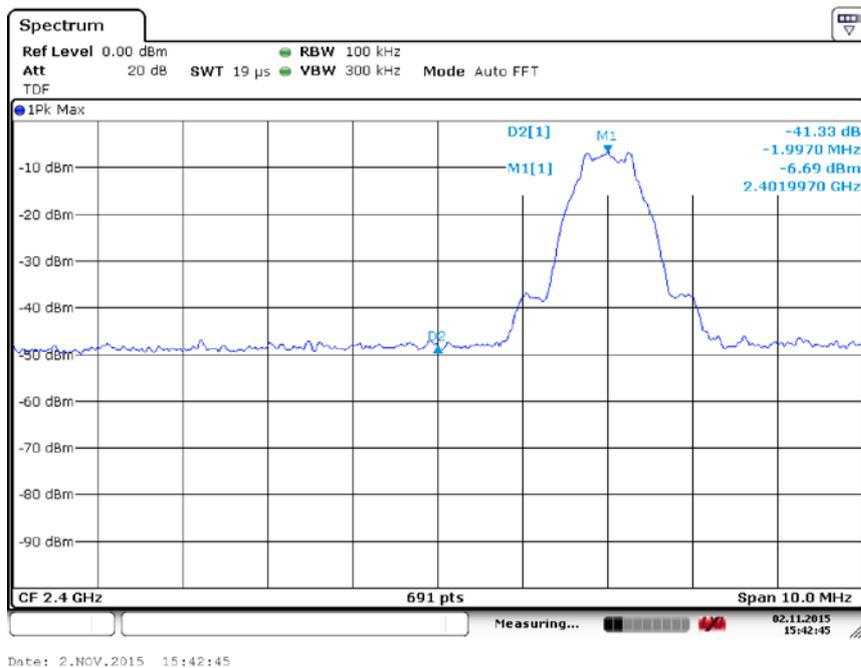
Date: 2.NOV.2015 15:41:37

**Fig.8 Occupied 6dB Bandwidth (Ch 19)**



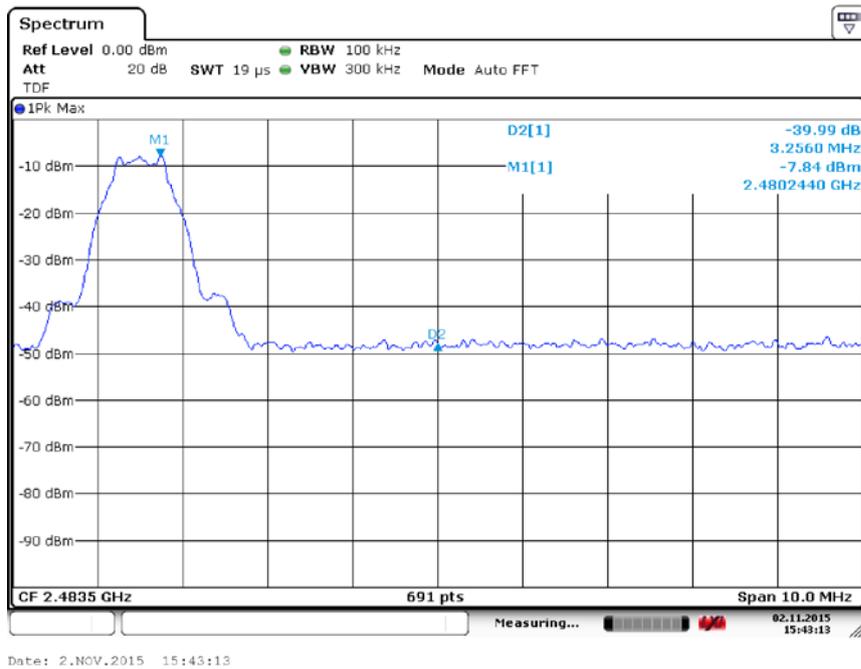
Date: 2.NOV.2015 15:41:57

Fig.9 Occupied 6dB Bandwidth (Ch 39)

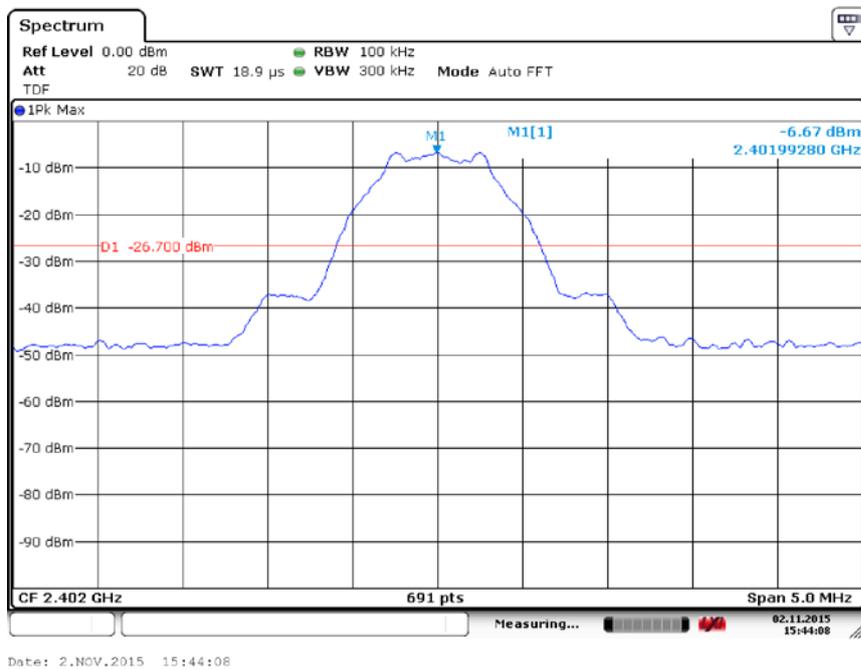


Date: 2.NOV.2015 15:42:45

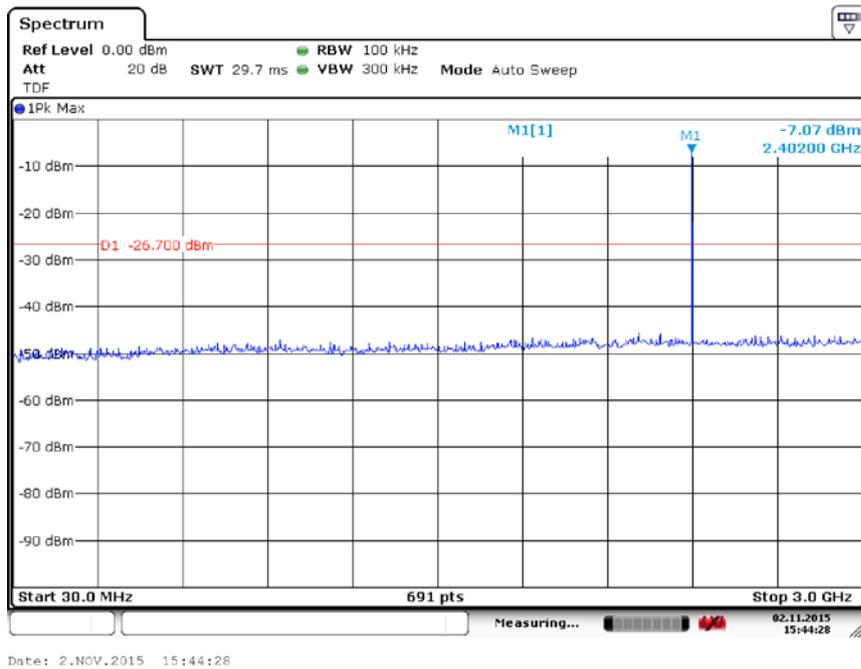
Fig.10 Band Edges (Ch 0)



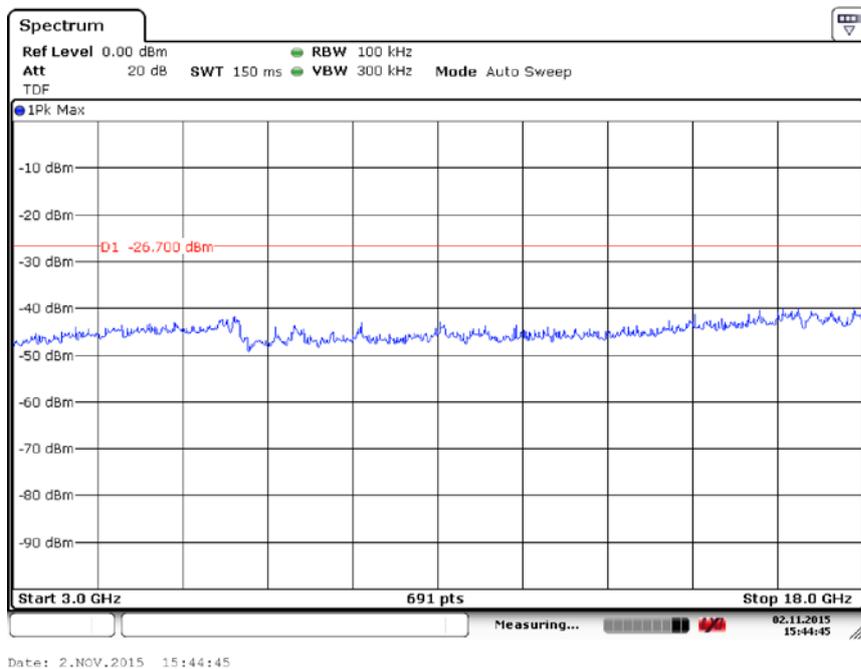
**Fig.11 Band Edges (Ch 39)**



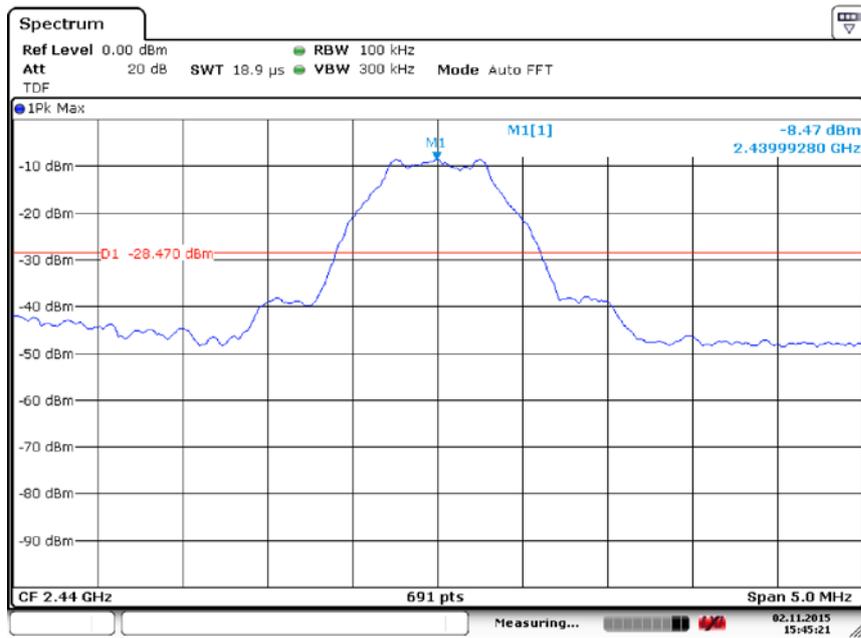
**Fig.12 Conducted Spurious Emission (Ch0, Center Frequency)**



**Fig.13 Conducted Spurious Emission (Ch0, 30 MHz-3 GHz)**

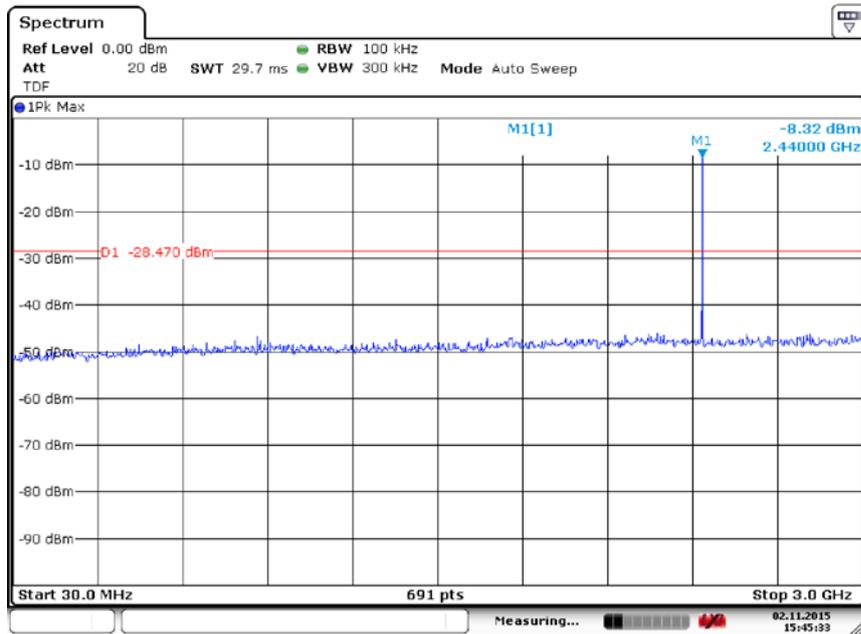


**Fig.14 Conducted Spurious Emission (Ch0, 3 GHz-18 GHz)**



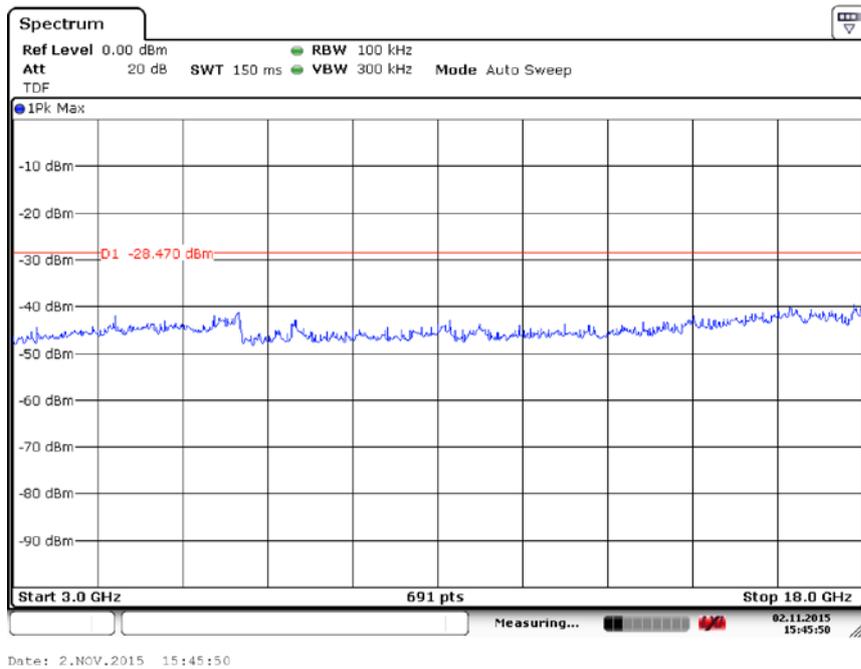
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**Fig.15 Conducted Spurious Emission (Ch19, Center Frequency)**

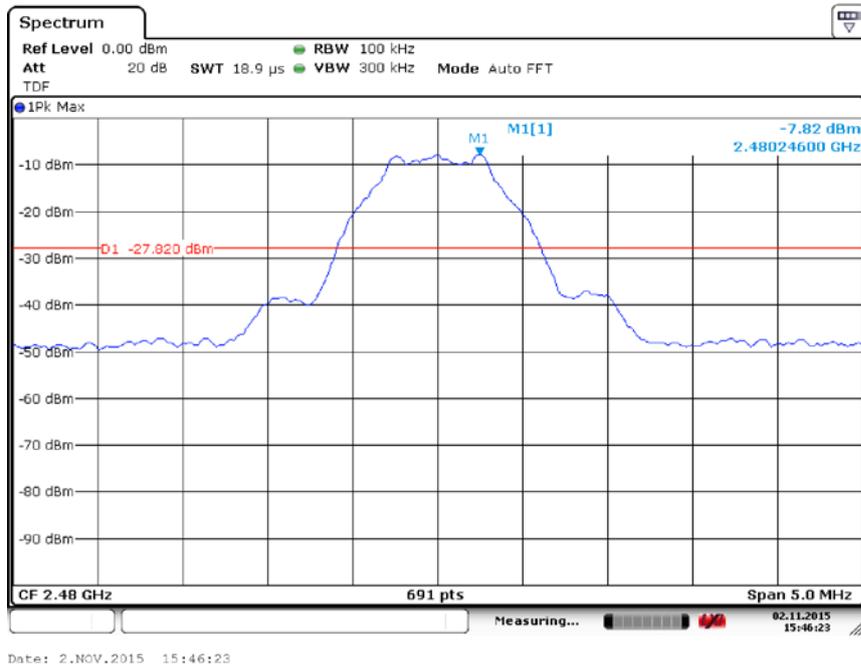


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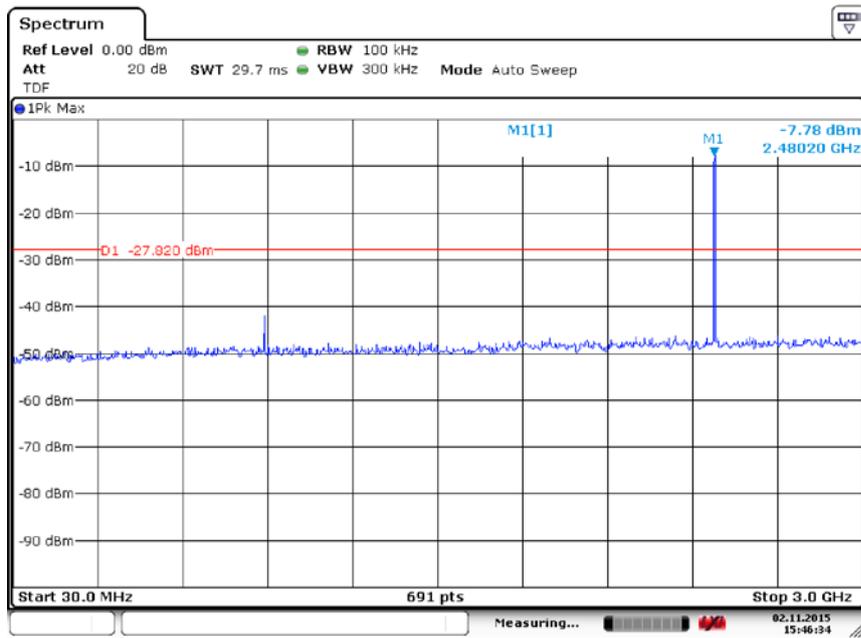
**Fig.16 Conducted Spurious Emission (Ch19, 30 MHz-3 GHz)**



**Fig.17 Conducted Spurious Emission (Ch19, 3 GHz-18 GHz)**

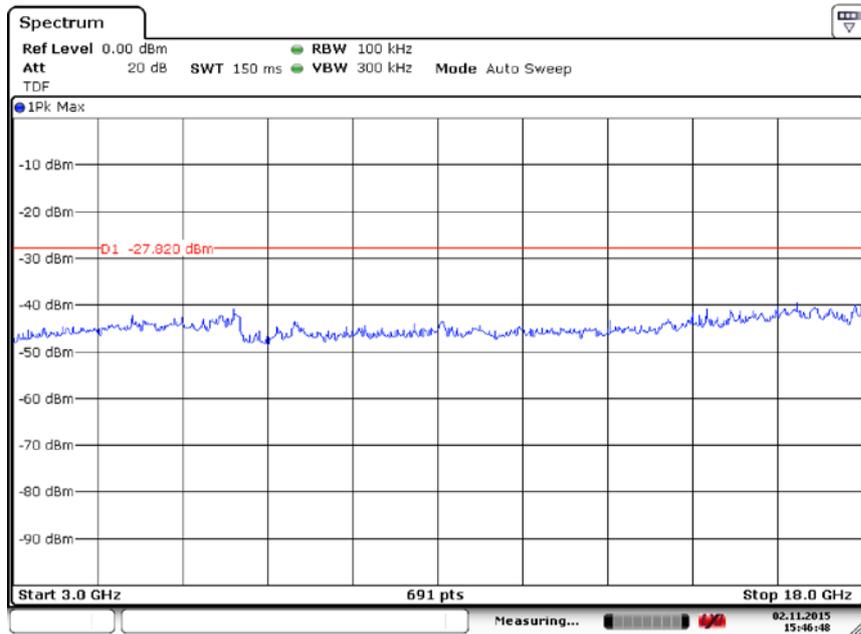


**Fig.18 Conducted Spurious Emission (Ch39, Center Frequency)**



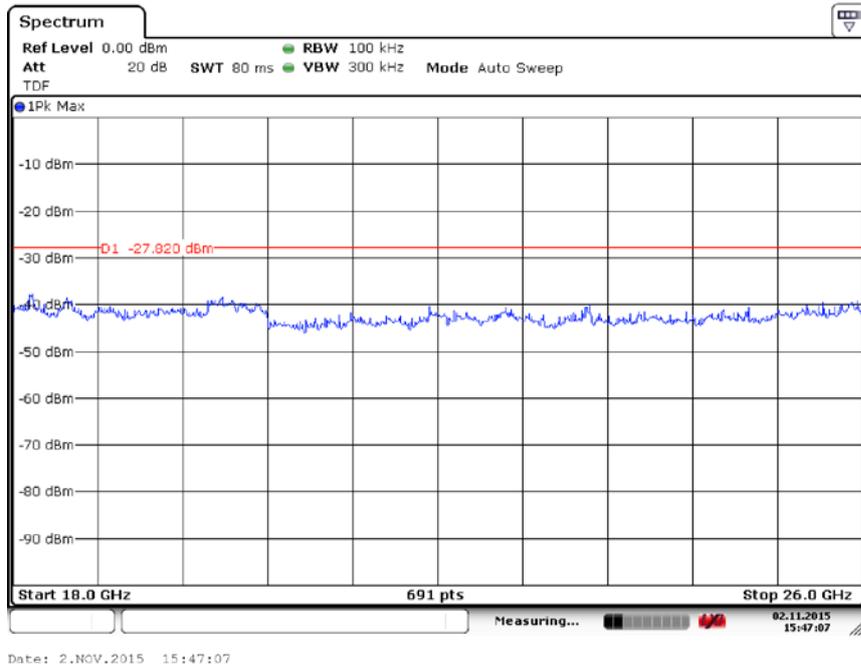
Date: 2.NOV.2015 15:46:34

**Fig.19 Conducted Spurious Emission (Ch39, 30 MHz-3 GHz)**

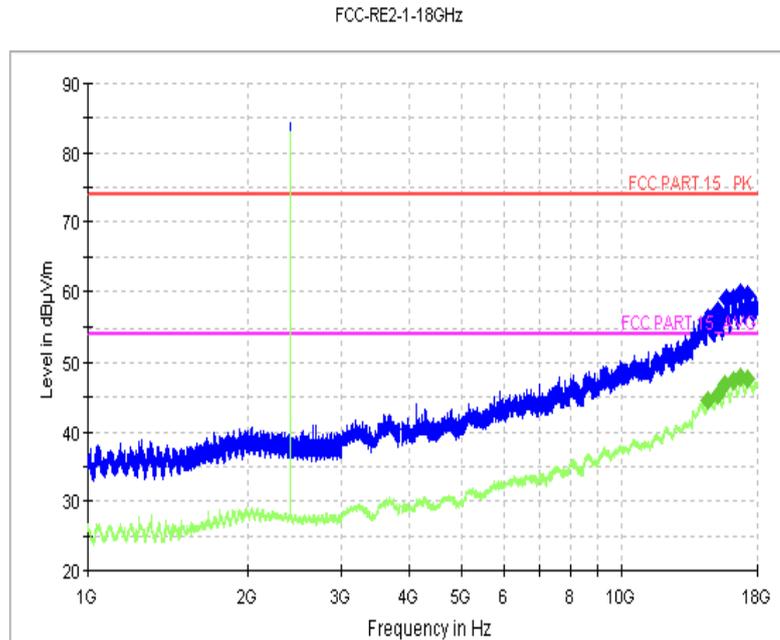


Date: 2.NOV.2015 15:46:48

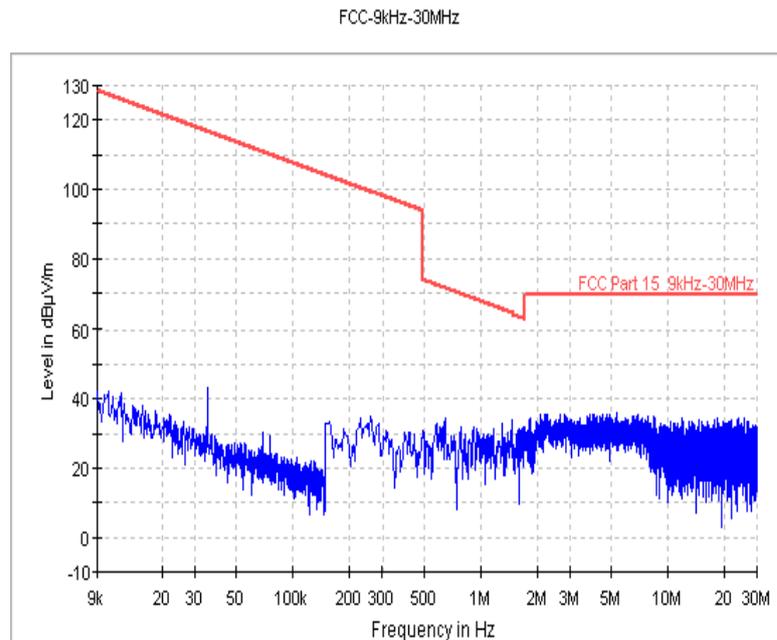
**Fig.20 Conducted Spurious Emission (Ch39, 3 GHz-18 GHz)**



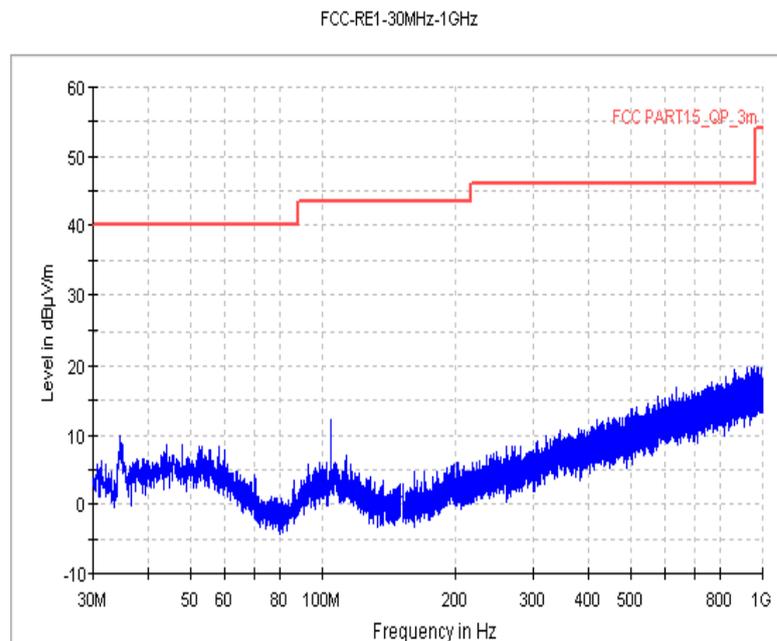
**Fig.21 Conducted Spurious Emission (All channels, 18 GHz-26 GHz)**



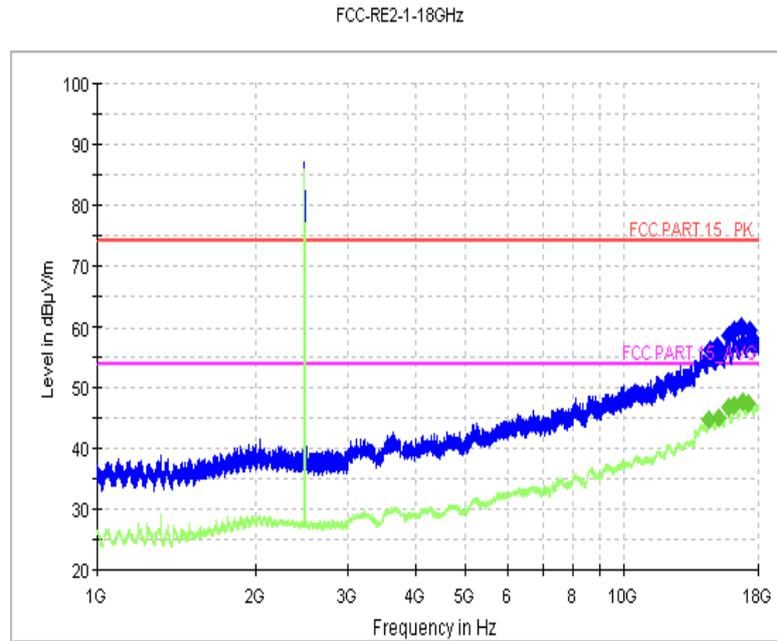
**Fig.22 Radiated Spurious Emission (Ch0, 1 GHz-18 GHz)**



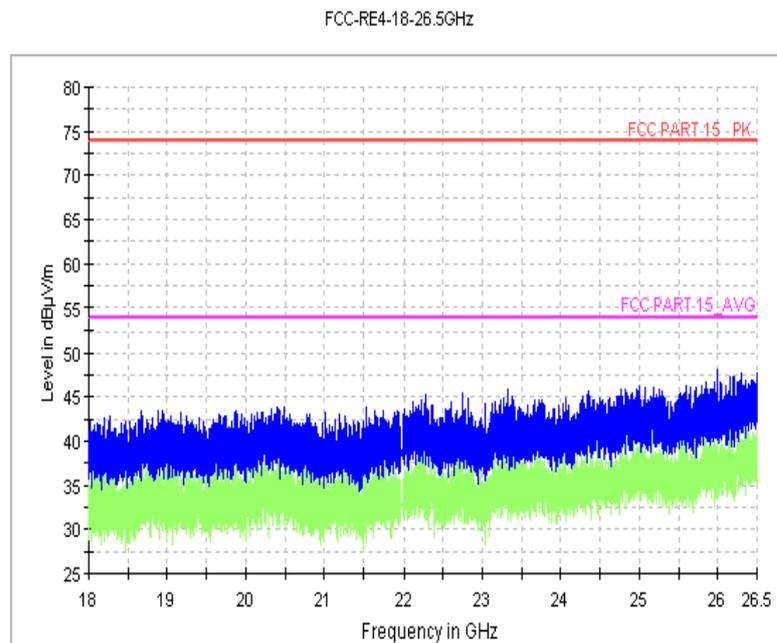
**Fig.23 Radiated Spurious Emission (Ch19, 9 kHz ~30MHz)**



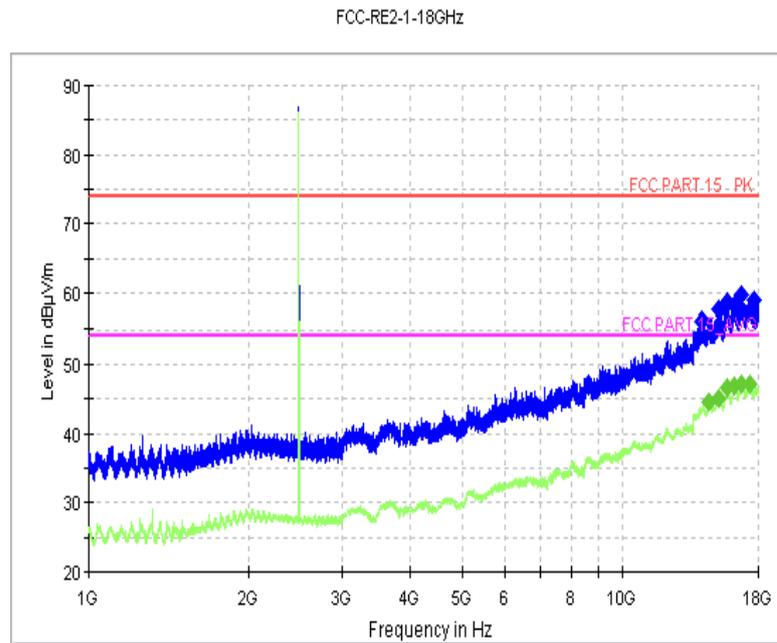
**Fig.24 Radiated Spurious Emission (Ch19, 30 MHz ~1 GHz,AE1)**



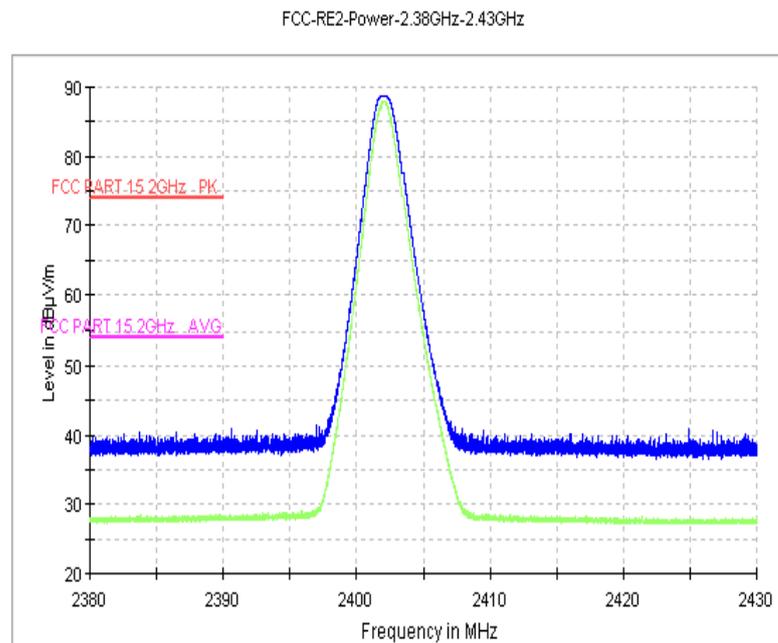
**Fig.25 Radiated Spurious Emission (Ch19, 1 GHz-18 GHz)**



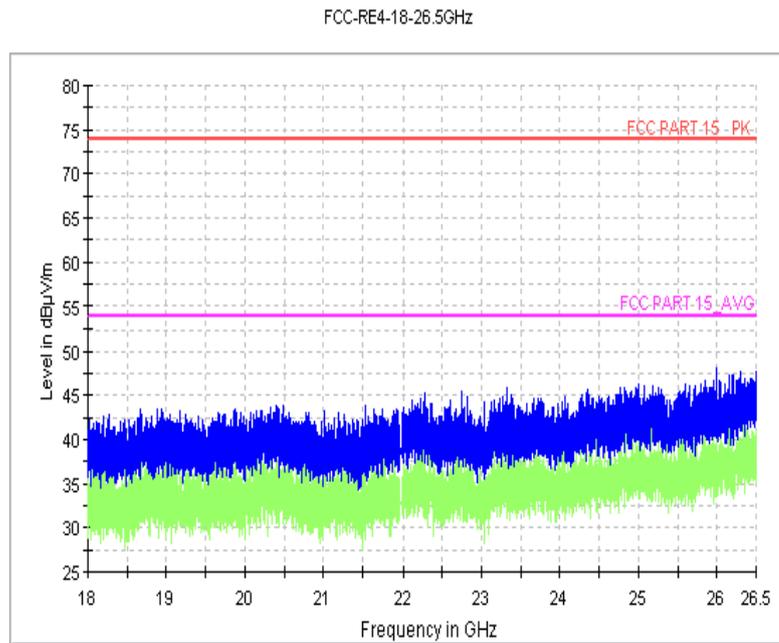
**Fig.26 Radiated Spurious Emission (Ch19, 18 GHz-26.5 GHz)**



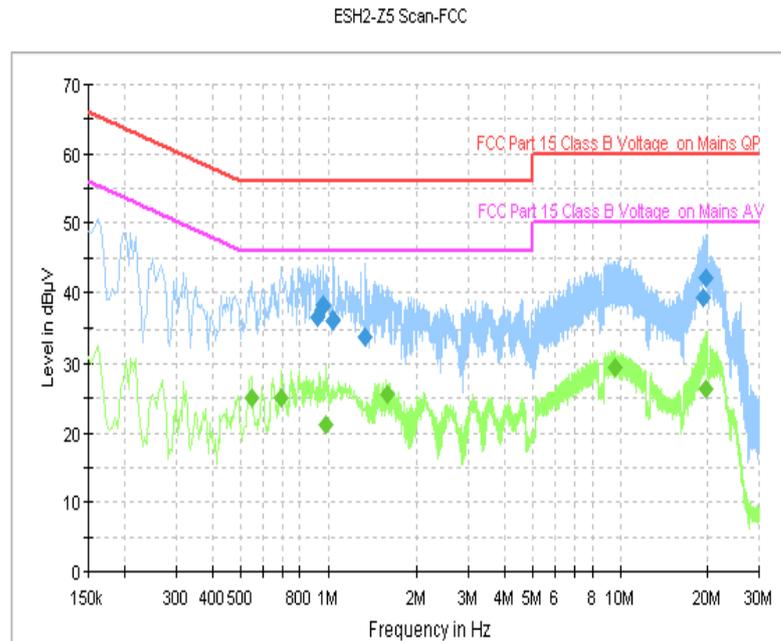
**Fig.27 Radiated Spurious Emission (Ch39, 1 GHz-18 GHz)**



**Fig.28 Radiated Emission Power (GFSK, Ch0, 2380GHz~2450GHz)**



**Fig.29 Radiated Emission Power (GFSK, Ch39, 2450GHz~2500GHz)**



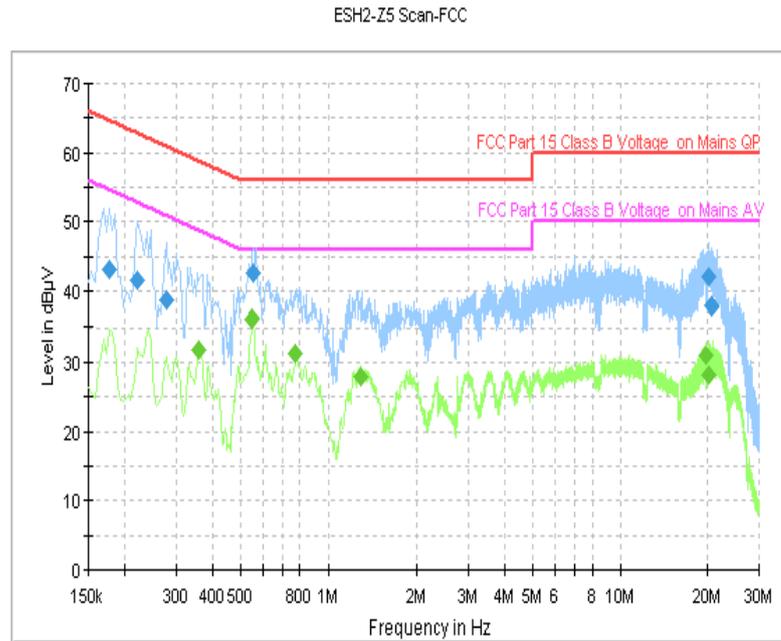
**Fig. 30 AC Power line Conducted Emission (Traffic, AE1)**

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.922000	36.8	GND	N	10.1	19.2	56.0
0.962000	38.1	GND	L1	10.1	17.9	56.0
1.038000	36.2	GND	N	10.1	19.8	56.0
1.346000	33.8	GND	N	10.1	22.2	56.0
19.198000	39.1	GND	N	10.7	20.9	60.0
19.682000	42.2	GND	L1	10.5	17.8	60.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.546000	25.0	GND	L1	10.1	21.0	46.0
0.694000	25.1	GND	L1	10.0	20.9	46.0
0.986000	21.1	GND	L1	10.1	24.9	46.0
1.582000	25.5	GND	L1	10.1	20.5	46.0
9.634000	29.5	GND	L1	10.3	20.5	50.0
19.674000	26.3	GND	L1	10.5	23.7	50.0



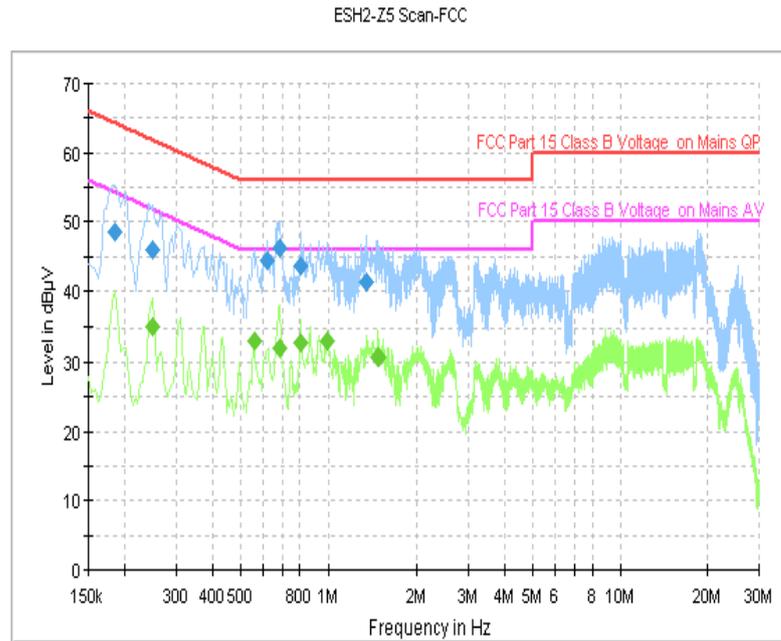
**Fig. 31 AC Power line Conducted Emission (Traffic, AE2)**

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.178000	43.2	GND	L1	10.0	21.3	64.6
0.222000	41.6	GND	L1	10.0	21.1	62.7
0.278000	38.7	GND	L1	10.0	22.2	60.9
0.554000	42.7	GND	N	10.1	13.3	56.0
20.038000	42.1	GND	L1	10.5	17.9	60.0
20.650000	38.0	GND	N	10.7	22.0	60.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.358000	31.7	GND	N	10.1	17.0	48.8
0.550000	36.3	GND	N	10.1	9.7	46.0
0.774000	31.3	GND	N	10.1	14.7	46.0
1.290000	27.9	GND	N	10.1	18.1	46.0
19.602000	31.1	GND	L1	10.5	18.9	50.0
20.246000	28.2	GND	L1	10.6	21.8	50.0



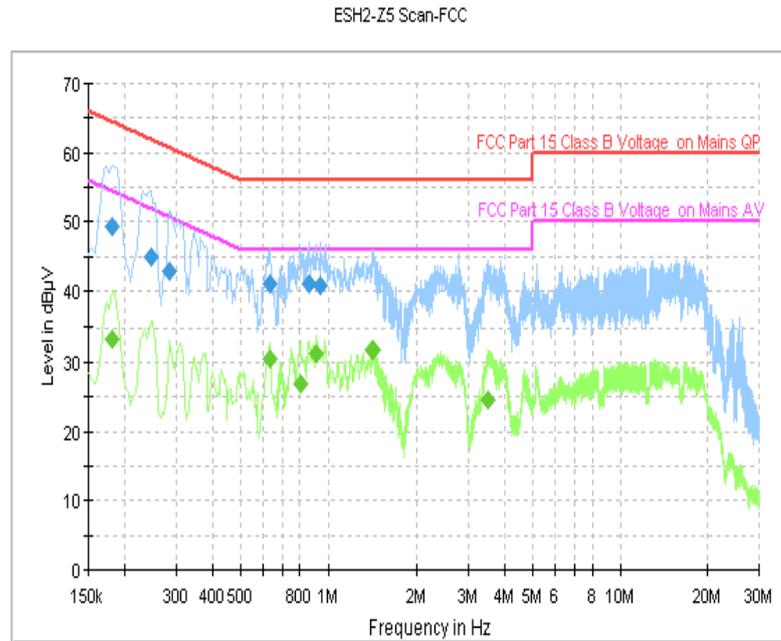
**Fig. 32 AC Power line Conducted Emission (Traffic, AE3)**

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.186000	48.5	GND	L1	10.0	15.7	64.2
0.250000	46.1	GND	L1	10.0	15.7	61.8
0.618000	44.4	GND	L1	10.0	11.6	56.0
0.682000	46.3	GND	L1	10.0	9.7	56.0
0.806000	43.7	GND	L1	10.1	12.3	56.0
1.358000	41.4	GND	L1	10.1	14.6	56.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.250000	35.2	GND	L1	10.0	16.5	51.8
0.558000	33.1	GND	L1	10.1	12.9	46.0
0.682000	31.9	GND	L1	10.0	14.1	46.0
0.806000	32.9	GND	L1	10.1	13.1	46.0
0.990000	33.1	GND	L1	10.1	12.9	46.0
1.486000	30.8	GND	L1	10.1	15.2	46.0



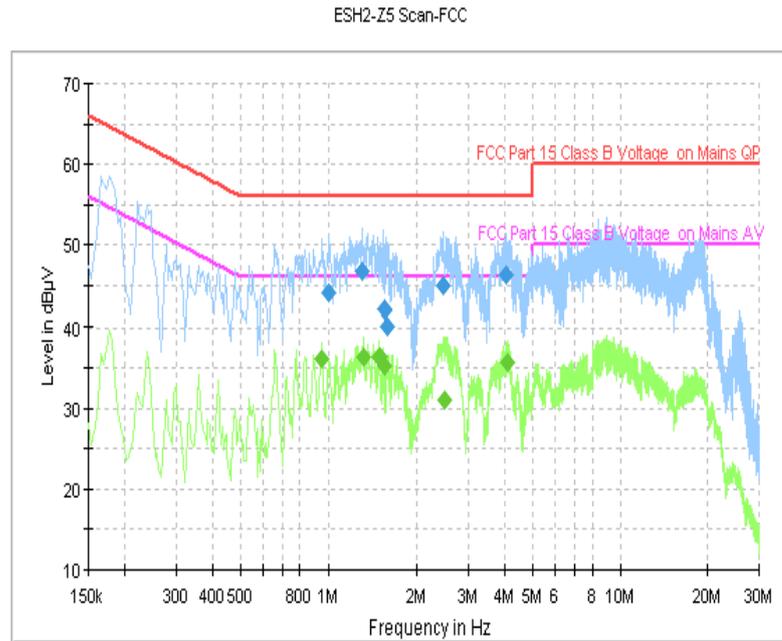
**Fig. 33 AC Power line Conducted Emission (Traffic, AE4)**

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.182000	49.3	GND	L1	10.0	15.1	64.4
0.246000	44.9	GND	L1	10.0	17.0	61.9
0.286000	42.8	GND	L1	10.0	17.9	60.6
0.630000	41.2	GND	L1	10.0	14.8	56.0
0.862000	41.1	GND	L1	10.0	14.9	56.0
0.946000	40.7	GND	L1	10.1	15.3	56.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.182000	33.4	GND	L1	10.0	21.0	54.4
0.630000	30.5	GND	L1	10.0	15.5	46.0
0.802000	26.9	GND	L1	10.1	19.1	46.0
0.914000	31.2	GND	L1	10.1	14.8	46.0
1.414000	31.7	GND	L1	10.1	14.3	46.0
3.522000	24.4	GND	L1	10.2	21.6	46.0



**Fig. 34 AC Power line Conducted Emission (Traffic, AE5)**

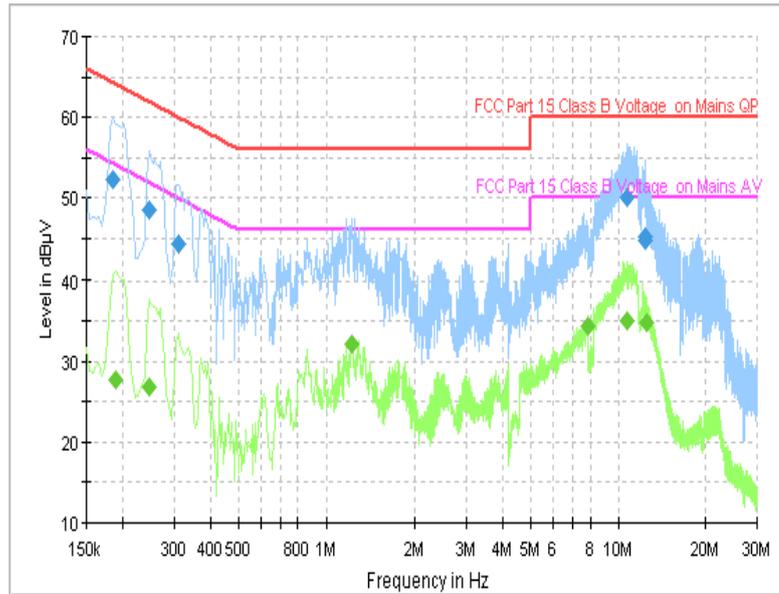
MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
1.010000	44.1	GND	N	10.1	11.9	56.0
1.306000	46.8	GND	L1	10.1	9.2	56.0
1.550000	42.0	GND	N	10.1	14.0	56.0
1.574000	40.1	GND	N	10.1	15.9	56.0
2.466000	45.0	GND	L1	10.1	11.0	56.0
4.074000	46.4	GND	N	10.2	9.6	56.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.954000	36.0	GND	L1	10.1	10.0	46.0
1.322000	36.4	GND	L1	10.1	9.6	46.0
1.490000	36.3	GND	L1	10.1	9.7	46.0
1.550000	35.3	GND	L1	10.1	10.7	46.0
2.482000	31.1	GND	L1	10.2	14.9	46.0
4.078000	35.7	GND	N	10.2	10.3	46.0

ESH2-Z5 Scan-FCC



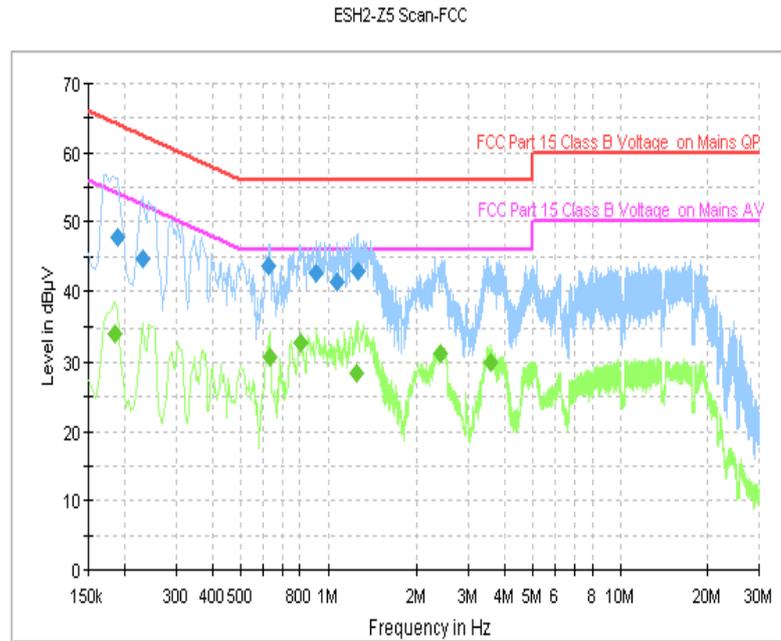
**Fig. 35 AC Power line Conducted Emission (Traffic, AE6)**

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.186000	52.3	GND	L1	10.0	11.9	64.2
0.246000	48.6	GND	L1	10.0	13.3	61.9
0.310000	44.4	GND	L1	10.0	15.6	60.0
10.750000	50.1	GND	L1	10.3	9.9	60.0
12.318000	45.2	GND	L1	10.4	14.8	60.0
12.438000	44.7	GND	L1	10.4	15.3	60.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.190000	27.8	GND	L1	10.0	26.2	54.0
0.246000	26.8	GND	L1	10.0	25.1	51.9
1.230000	32.2	GND	L1	10.1	13.8	46.0
7.838000	34.4	GND	L1	10.3	15.6	50.0
10.762000	35.1	GND	L1	10.3	14.9	50.0
12.486000	34.8	GND	L1	10.4	15.2	50.0



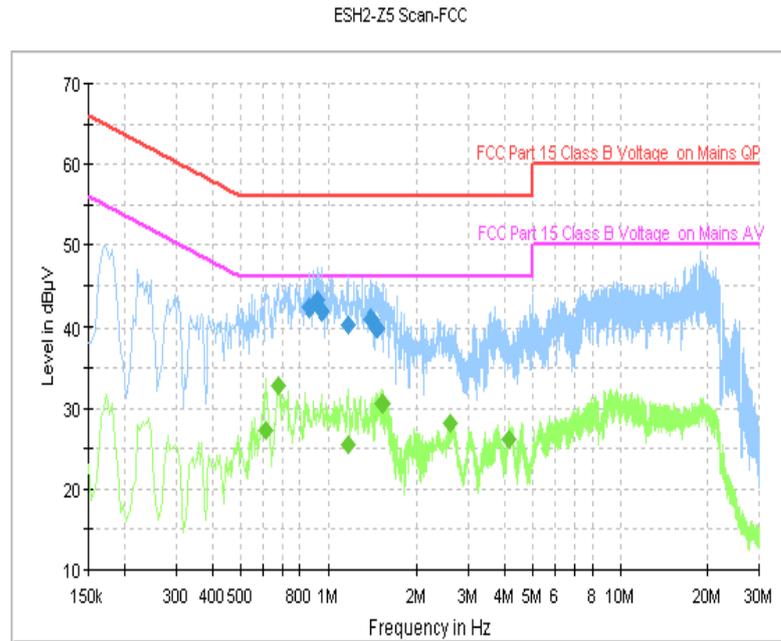
**Fig. 36 AC Power line Conducted Emission (Traffic, AE7)**

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.190000	47.8	GND	L1	10.0	16.3	64.0
0.230000	44.7	GND	L1	10.0	17.7	62.4
0.626000	43.5	GND	L1	10.0	12.5	56.0
0.914000	42.5	GND	L1	10.1	13.5	56.0
1.070000	41.3	GND	L1	10.1	14.7	56.0
1.262000	42.9	GND	L1	10.1	13.1	56.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.186000	34.2	GND	L1	10.0	20.0	54.2
0.630000	30.7	GND	L1	10.0	15.3	46.0
0.802000	32.9	GND	L1	10.1	13.1	46.0
1.254000	28.4	GND	L1	10.1	17.6	46.0
2.418000	31.3	GND	L1	10.1	14.7	46.0
3.574000	29.9	GND	L1	10.2	16.1	46.0



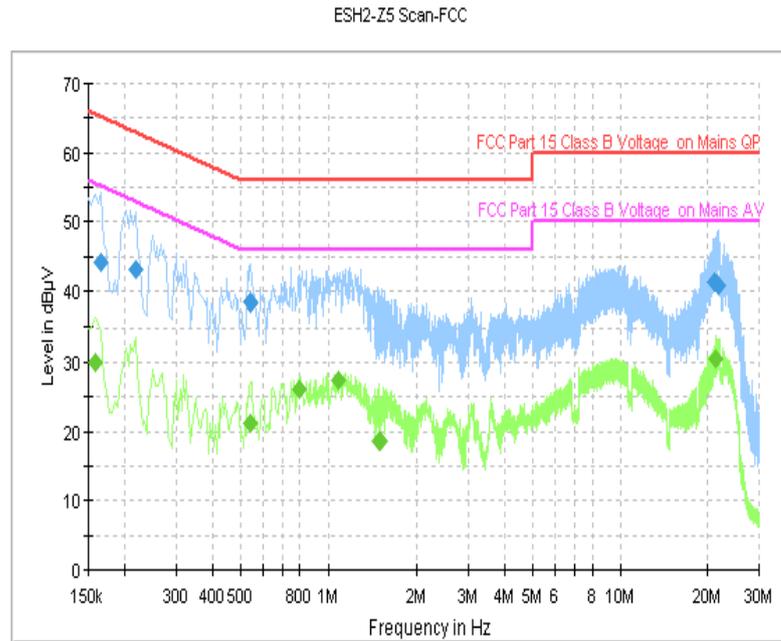
**Fig. 37 AC Power line Conducted Emission (Traffic, AE8)**

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.858000	42.3	GND	L1	10.0	13.7	56.0
0.918000	43.1	GND	L1	10.1	12.9	56.0
0.950000	41.9	GND	L1	10.1	14.1	56.0
1.170000	40.3	GND	N	10.1	15.7	56.0
1.406000	40.9	GND	L1	10.1	15.1	56.0
1.470000	40.0	GND	L1	10.1	16.0	56.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.614000	27.4	GND	L1	10.0	18.6	46.0
0.674000	32.8	GND	L1	10.0	13.2	46.0
1.170000	25.5	GND	N	10.1	20.5	46.0
1.538000	30.5	GND	L1	10.1	15.5	46.0
2.602000	28.2	GND	L1	10.2	17.8	46.0
4.158000	26.1	GND	L1	10.2	19.9	46.0



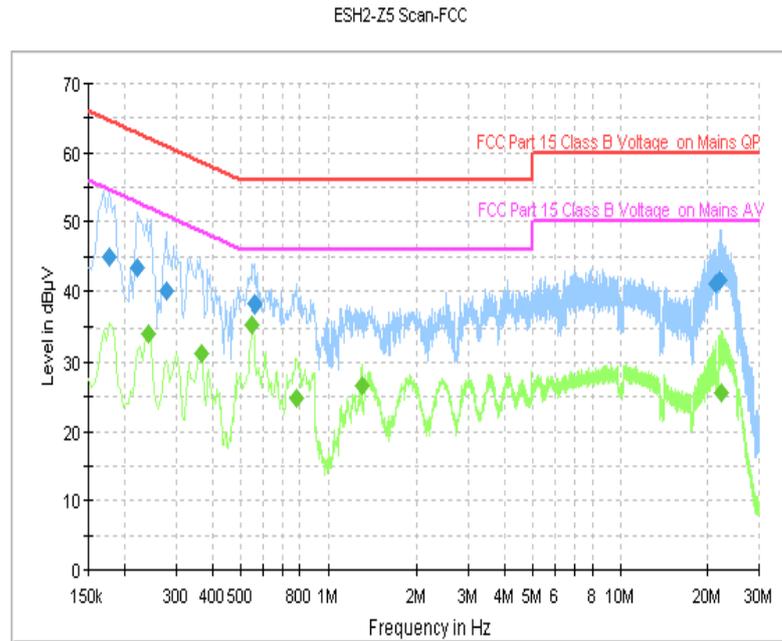
**Fig. 38 AC Power line Conducted Emission (Idle, AE1)**

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.166000	44.1	GND	L1	10.0	21.1	65.2
0.218000	43.1	GND	L1	10.0	19.8	62.9
0.542000	38.6	GND	N	10.1	17.4	56.0
20.958000	41.5	GND	L1	10.6	18.5	60.0
21.574000	41.0	GND	L1	10.6	19.0	60.0
21.706000	40.7	GND	L1	10.6	19.3	60.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.158000	30.1	GND	L1	10.0	25.5	55.6
0.542000	21.1	GND	L1	10.1	24.9	46.0
0.794000	26.1	GND	L1	10.1	19.9	46.0
1.086000	27.4	GND	L1	10.1	18.6	46.0
1.498000	18.7	GND	L1	10.1	27.3	46.0
21.378000	30.4	GND	L1	10.6	19.6	50.0



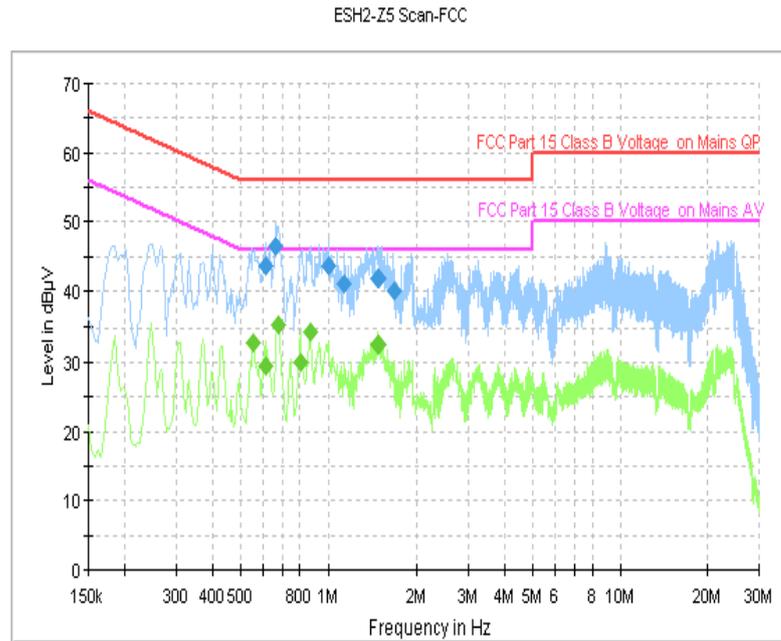
**Fig. 39 AC Power line Conducted Emission (Idle, AE2)**

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.178000	44.9	GND	L1	10.0	19.7	64.6
0.222000	43.3	GND	L1	10.0	19.5	62.7
0.278000	40.1	GND	L1	10.0	20.8	60.9
0.558000	38.1	GND	N	10.1	17.9	56.0
21.198000	41.2	GND	L1	10.6	18.8	60.0
22.074000	41.5	GND	L1	10.6	18.5	60.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.242000	34.2	GND	N	10.0	17.9	52.0
0.366000	31.3	GND	N	10.1	17.3	48.6
0.550000	35.3	GND	N	10.1	10.7	46.0
0.778000	24.9	GND	N	10.1	21.1	46.0
1.306000	26.5	GND	N	10.1	19.5	46.0
22.342000	25.7	GND	L1	10.6	24.3	50.0



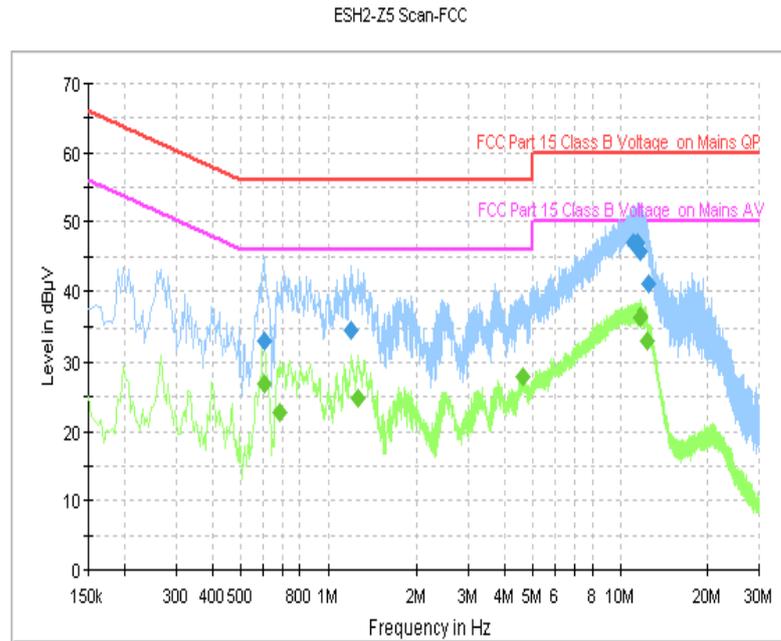
**Fig. 40 AC Power line Conducted Emission (Idle, AE3)**

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.614000	43.6	GND	L1	10.0	12.4	56.0
0.662000	46.6	GND	L1	10.0	9.4	56.0
1.002000	43.6	GND	L1	10.1	12.4	56.0
1.134000	41.0	GND	L1	10.1	15.0	56.0
1.474000	41.8	GND	L1	10.1	14.2	56.0
1.666000	40.0	GND	L1	10.1	16.0	56.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.554000	32.9	GND	L1	10.1	13.1	46.0
0.614000	29.4	GND	L1	10.0	16.6	46.0
0.678000	35.3	GND	L1	10.0	10.7	46.0
0.802000	30.1	GND	L1	10.1	15.9	46.0
0.866000	34.4	GND	L1	10.1	11.6	46.0
1.474000	32.6	GND	L1	10.1	13.4	46.0



**Fig. 41 AC Power line Conducted Emission (Idle, AE4)**

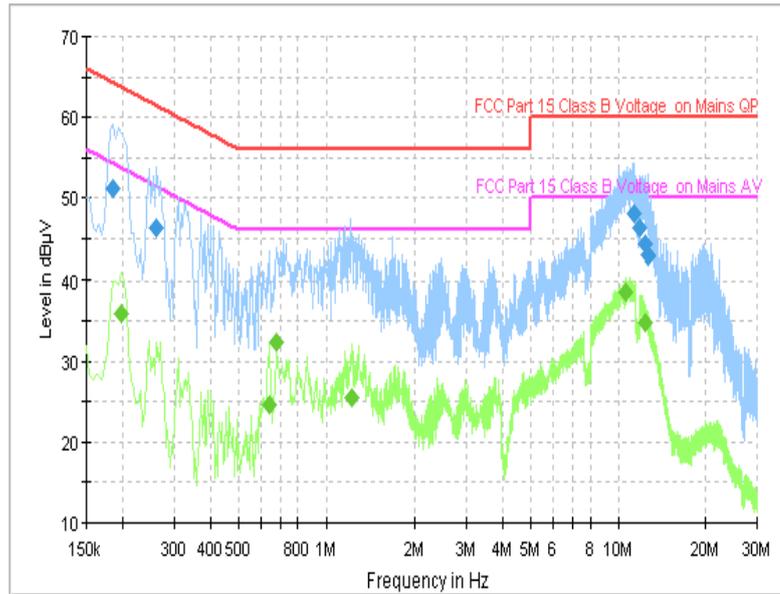
MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.602000	33.1	GND	L1	10.0	22.9	56.0
1.198000	34.6	GND	L1	10.1	21.4	56.0
11.062000	47.1	GND	L1	10.3	12.9	60.0
11.438000	47.1	GND	L1	10.3	12.9	60.0
11.702000	45.6	GND	L1	10.3	14.4	60.0
12.462000	41.0	GND	L1	10.4	19.0	60.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.602000	26.8	GND	L1	10.0	19.2	46.0
0.686000	22.7	GND	L1	10.0	23.3	46.0
1.270000	24.9	GND	L1	10.1	21.1	46.0
4.614000	27.8	GND	L1	10.2	18.2	46.0
11.726000	36.5	GND	L1	10.3	13.5	50.0
12.446000	33.1	GND	L1	10.4	16.9	50.0

ESH2-Z5 Scan-FCC



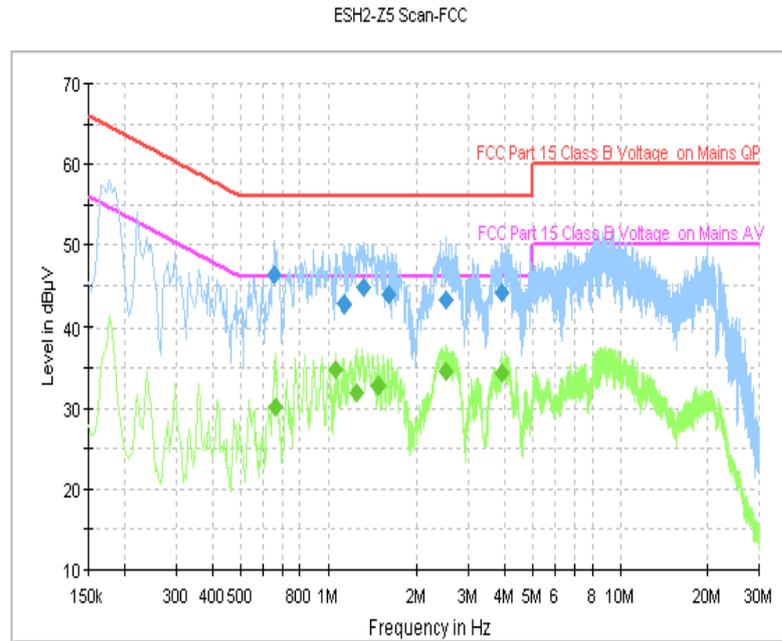
**Fig. 42 AC Power line Conducted Emission (Idle, AE5)**

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.186000	51.2	GND	L1	10.0	13.0	64.2
0.262000	46.2	GND	N	10.1	15.1	61.4
11.298000	48.0	GND	L1	10.3	12.0	60.0
11.886000	46.4	GND	L1	10.4	13.6	60.0
12.450000	44.4	GND	L1	10.4	15.6	60.0
12.634000	42.9	GND	L1	10.4	17.1	60.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.198000	35.9	GND	L1	10.0	17.8	53.7
0.642000	24.6	GND	L1	10.0	21.4	46.0
0.678000	32.4	GND	L1	10.0	13.6	46.0
1.226000	25.6	GND	L1	10.1	20.4	46.0
10.618000	38.6	GND	L1	10.4	11.4	50.0
12.450000	34.7	GND	L1	10.4	15.3	50.0



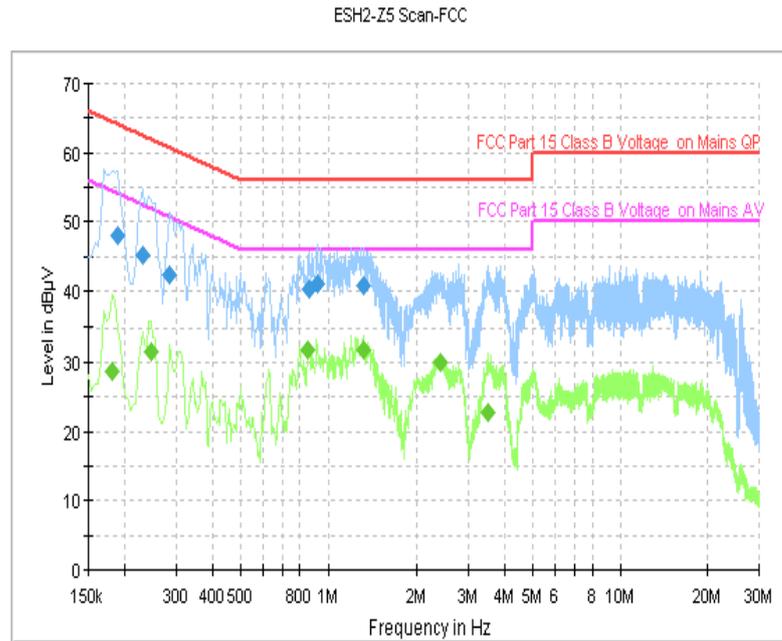
**Fig. 43 AC Power line Conducted Emission (Idle, AE6)**

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.654000	46.3	GND	N	10.0	9.7	56.0
1.130000	42.8	GND	N	10.1	13.2	56.0
1.326000	44.9	GND	L1	10.1	11.1	56.0
1.594000	43.9	GND	L1	10.1	12.1	56.0
2.526000	43.1	GND	L1	10.2	12.9	56.0
3.918000	44.2	GND	N	10.2	11.8	56.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.658000	30.1	GND	L1	10.0	15.9	46.0
1.066000	34.9	GND	L1	10.1	11.1	46.0
1.258000	31.9	GND	L1	10.1	14.1	46.0
1.486000	32.8	GND	L1	10.1	13.2	46.0
2.518000	34.5	GND	L1	10.2	11.5	46.0
3.926000	34.3	GND	L1	10.2	11.7	46.0



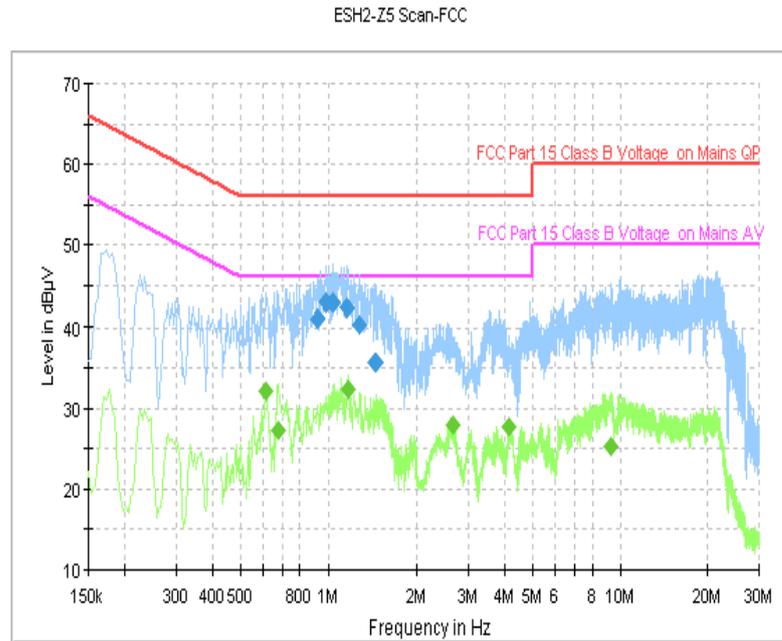
**Fig. 44 AC Power line Conducted Emission (Idle, AE7)**

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.190000	48.1	GND	L1	10.0	16.0	64.0
0.230000	45.2	GND	L1	10.0	17.3	62.4
0.286000	42.3	GND	L1	10.0	18.3	60.6
0.862000	40.3	GND	L1	10.0	15.7	56.0
0.922000	41.1	GND	L1	10.1	14.9	56.0
1.322000	40.7	GND	L1	10.1	15.3	56.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.182000	28.7	GND	L1	10.0	25.7	54.4
0.246000	31.4	GND	L1	10.0	20.5	51.9
0.854000	31.9	GND	L1	10.0	14.1	46.0
1.322000	31.8	GND	L1	10.1	14.2	46.0
2.422000	29.8	GND	L1	10.1	16.2	46.0
3.518000	22.6	GND	L1	10.2	23.4	46.0



**Fig. 45 AC Power line Conducted Emission (Idle, AE8)**

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.922000	41.0	GND	L1	10.1	15.0	56.0
0.978000	43.0	GND	L1	10.1	13.0	56.0
1.038000	42.9	GND	L1	10.0	13.1	56.0
1.162000	42.2	GND	L1	10.1	13.8	56.0
1.286000	40.3	GND	L1	10.1	15.7	56.0
1.450000	35.6	GND	N	10.1	20.4	56.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.610000	32.2	GND	L1	10.0	13.8	46.0
0.678000	27.2	GND	L1	10.0	18.8	46.0
1.170000	32.4	GND	L1	10.1	13.6	46.0
2.654000	27.9	GND	L1	10.2	18.1	46.0
4.158000	27.8	GND	L1	10.2	18.2	46.0
9.290000	25.3	GND	L1	10.3	24.7	50.0

**ANNEX C: 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\*\*\***