



# FCC PART 15C TEST REPORT No. I16N00359-BLE

for

**OnePlus Technology(Shenzhen) Co., Ltd.**

**Mobile Phone**

**Model Name: ONEPLUS A3000**

**With**

**Hardware Version: 16**

**Software Version: Qxygen OS 3.1.0**

**FCC ID: 2ABZ2-A3000**

**Issued Date: May 19<sup>th</sup>, 2016**

**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**

<b>Report Number</b>	<b>Revision</b>	<b>Description</b>	<b>Issue Date</b>
I16N00359-BLE	Rev.0	1st edition	2016-05-10
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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

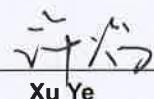
Relative Humidity: 20-75%

### 1.3. Project data

Testing Start Date: 2016-04-06

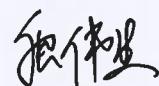
Testing End Date: 2016-05-19

### 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: OnePlus Technology(Shenzhen) Co., Ltd.  
Address: 18/F, Tower C, Tai Ran Building, No.8 Tai Ran Road, Shenzhen, China  
City: Shenzhen  
Postal Code: /  
Country: China  
Telephone: 0755 61898696 EXT 7023  
Fax: /

### **2.2. Manufacturer Information**

Company Name: OnePlus Technology(Shenzhen) Co., Ltd.  
Address: 18/F, Tower C, Tai Ran Building, No.8 Tai Ran Road, Shenzhen, China  
City: Shenzhen  
Postal Code: /  
Country: China  
Telephone: 0755 61898696 EXT 7023  
Fax: /

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

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

Description	Mobile Phone
Model Name	ONEPLUS A3000
Market Name	/
Frequency Band	2402MHz~2480MHz
Type of Modulation	GFSK
Number of Channels	40
FCC ID	2ABZ2-A3000

\*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	Receive Date
EUT1	860046030164299	16	Qxygen OS 3.1.0	2016-04-06

\*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	Power Supply Unit	HK0504	/

\*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.	Nov,2015
ANSI C63.10	American National Standard for Testing Unlicensed 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	P
1	Maximum Peak Output Power	15.247 (b)	P
2	Peak Power Spectral Density	15.247 (e)	P
3	Occupied 6dB Bandwidth	15.247 (a)	P
4	Band Edges Compliance	15.247 (d)	P
5	Transmitter Spurious Emission - Conducted	15.247 (d)	P
6	Transmitter Spurious Emission - Radiated	15.247, 15.205, 15.209	P
7	AC Powerline Conducted Emission	15.107, 15.207	P

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

### 5.2. Statements

CTTL has evaluated the test cases requested by the applicant/manufacturer 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 isotropically 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** did not exceed following limits along the EMC testing

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 35 %, Max. = 60 %
Shielding effectiveness	0.014MHz - 1MHz, >60dB; 1MHz - 1000MHz, >90dB.
Electrical insulation	> 2 MΩ
Ground system resistance	< 4Ω
Normalised site attenuation (NSA)	< ±4dB, 3m/10m distance, from 30 to 1000 MHz
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. = 30 °C
Relative humidity	Min. = 35 %, Max. = 60 %
Shielding effectiveness	0.014MHz - 1MHz, >60dB; 1MHz - 1000MHz, >90dB.
Electrical insulation	> 2 MΩ
Ground system resistance	< 4 Ω

**Fully-anechoic chamber** did not exceed following limits along the EMC testing

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 35 %, Max. = 60 %
Shielding effectiveness	0.014MHz - 1MHz, >60dB; 1MHz - 1000MHz, >90dB.
Electrical insulation	> 2 MΩ
Ground system resistance	< 4Ω
Voltage Standing Wave Ratio (VSWR)	≤6dB, from 1 to 18 GHz, 3m distance

## 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	2017-03-21	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	00066585	ETS-Lindgren	2019-03-05	3 years
5	Spectrum Analyser	FSP40	100378	Rohde & Schwarz	2016-12-18	1 year
6	Loop Antenna	HLA6120	35779	TESEQ	2019-05-10	3 years
7	Test Receiver	ESCI	100702	Rohde & Schwarz	2016-05-30	1 year
8	LISN	ESH2-Z5	100196	Rohde & Schwarz	2017-01-12	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 -3.5 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	-1.24	Fig.1
	19	0.67	Fig.2
	39	-1.12	Fig.3

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	-16.61
	19	Fig.5	-14.64
	39	Fig.6	-16.31

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	672.9	P
	19	Fig.8	680.2	P
	39	Fig.9	680.2	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(µV/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:**

GFSK	0	1 GHz ~18 GHz	Fig.22	P
	19	9 kHz ~30 MHz	Fig.23	P
		30 MHz ~1 GHz	Fig.24	P
		1 GHz ~18 GHz	Fig.25	P
	39	1 GHz ~18 GHz	Fig.26	P
	Power(CH0)	2.38 GHz ~ 2.45 GHz	Fig.27	P
	Power(CH39)	2.45 GHz ~ 2.5 GHz	Fig.28	P
/	All channels	18 GHz~ 26.5 GHz	Fig.29	P

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

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Pathloss. (dB)	antenna factor	Receiver (dBm)	Polarization	Limit (dB $\mu$ V/m)
2385.520	56.8	-38.8	27.7	67.9	H	74
17937.000	58.8	-17.7	45.6	30.9	H	74
17883.750	57.8	-18.5	45.6	30.7	H	74
17967.000	57.8	-17.7	45.6	29.9	V	74
17988.750	57.8	-17.7	45.6	29.9	V	74
17906.250	57.5	-18.5	45.6	30.4	H	74

Frequency (MHz)	Average (dB $\mu$ V/m)	Pathloss. (dB)	antenna factor	Receiver (dBm)	Polarization	Limit (dB $\mu$ V/m)
2390.000	44.2	-38.8	27.7	55.3	H	54
17913.750	46.9	-18.5	45.6	19.8	V	54
17937.000	46.9	-17.7	45.6	19.0	H	54
17996.250	46.8	-17.7	45.6	18.9	V	54
17911.500	46.8	-18.5	45.6	19.7	H	54
17983.500	46.7	-17.7	45.6	18.8	V	54

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

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Pathloss. (dB)	antenna factor	Receiver (dBm)	Polarization	Limit (dB $\mu$ V/m)
17713.500	53.1	-18.9	45.6	26.4	H	74
17824.500	52.8	-18.5	45.6	25.7	H	74
17931.000	52.3	-17.7	45.6	24.4	V	74
17782.500	52.1	-18.5	45.6	25.0	H	74
17725.500	52.1	-18.9	45.6	25.4	H	74
17881.500	52.0	-18.5	45.6	24.9	V	74

Frequency (MHz)	Average (dB $\mu$ V/m)	Pathloss. (dB)	antenna factor	Receiver (dBm)	Polarization	Limit (dB $\mu$ V/m)
17866.500	45.7	-18.5	45.6	18.6	V	54
17869.500	45.6	-18.5	45.6	18.5	V	54
17860.500	45.3	-18.5	45.6	18.2	V	54
17787.000	45.1	-18.5	45.6	18.0	V	54
17698.500	45.0	-18.9	45.6	18.3	H	54
17854.500	44.9	-18.5	45.6	17.8	H	54

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

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Pathloss. (dB)	antenna factor	Receiver (dBm)	Polarization	Limit (dB $\mu$ V/m)
2485.560	56.3	-38.9	27.7	67.5	V	74
17978.250	58.0	-17.7	45.6	30.1	H	74
17912.250	57.7	-18.5	45.6	30.6	V	74
17856.000	57.5	-18.5	45.6	30.4	H	74
17853.750	57.4	-18.5	45.6	30.3	H	74
17973.000	57.4	-17.7	45.6	29.5	V	74

Frequency (MHz)	Average (dB $\mu$ V/m)	Pathloss. (dB)	antenna factor	Receiver (dBm)	Polarization	Limit (dB $\mu$ V/m)
2483.500	44.5	-38.9	27.7	55.7	V	54
17979.750	46.9	-17.7	45.6	19.0	H	54
17976.750	46.7	-17.7	45.6	18.8	H	54
17997.000	46.7	-17.7	45.6	18.8	H	54
17993.250	46.7	-17.7	45.6	18.8	V	54
17980.500	46.7	-17.7	45.6	18.8	H	54

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:

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

## A.6 AC Powerline Conducted Emission

### Test Condition:

Voltage (V)	Frequency (Hz)
120	60

### Measurement Result and limit:

BLE (Quasi-peak Limit)-AE1

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

BLE (Average Limit)-AE1

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

BLE (Quasi-peak Limit)-AE1

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Idle	
0.15 to 0.5	66 to 56		
0.5 to 5	56	Fig.31	P
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.

BLE (Average Limit)-AE1

Frequency range (MHz)	Average-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)	Conclusion
		Idle	
0.15 to 0.5	56 to 46		
0.5 to 5	46	Fig.31	P
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.

### Test Condition:

Voltage (V)	Frequency (Hz)
240	60

**Measurement Result and limit:**

BLE (Quasi-peak Limit)-AE1

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		Traffic	Idle	
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.

BLE (Average Limit)-AE1

Frequency range (MHz)	Average-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		Traffic	Idle	
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.

BLE (Quasi-peak Limit)-AE1

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		Traffic	Idle	
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.

BLE (Average Limit)-AE1

Frequency range (MHz)	Average-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		Traffic	Idle	
0.15 to 0.5	56 to 46	Fig.33	P	
0.5 to 5	46			
5 to 30	50			

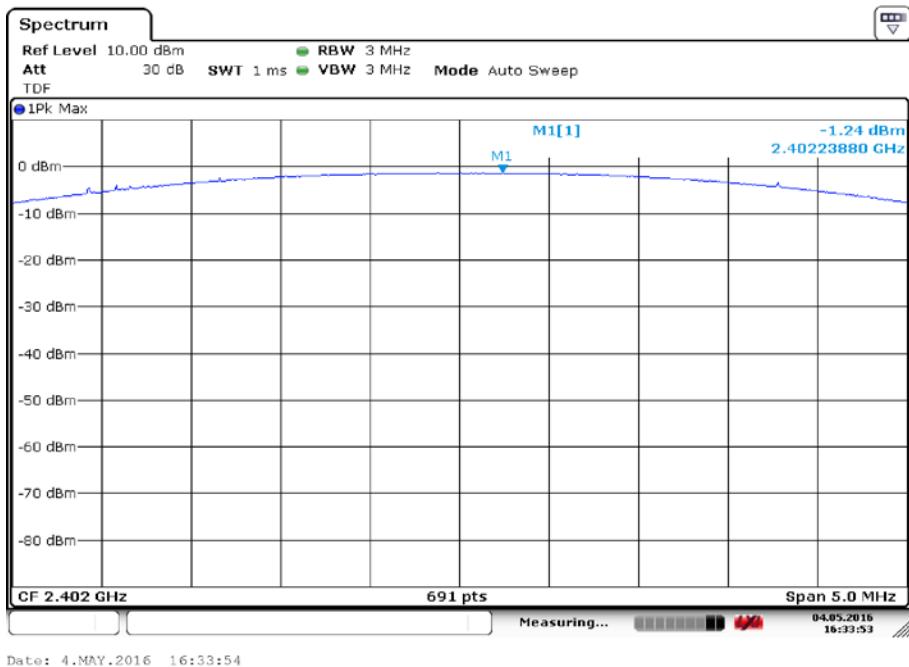
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

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

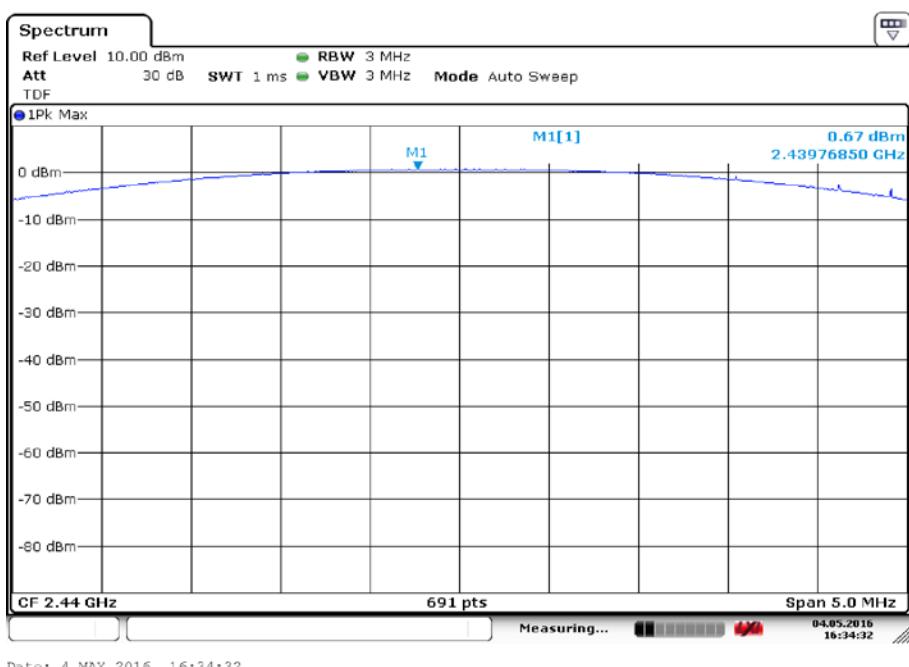
See ANNEX C for test graphs.

Conclusion: Pass

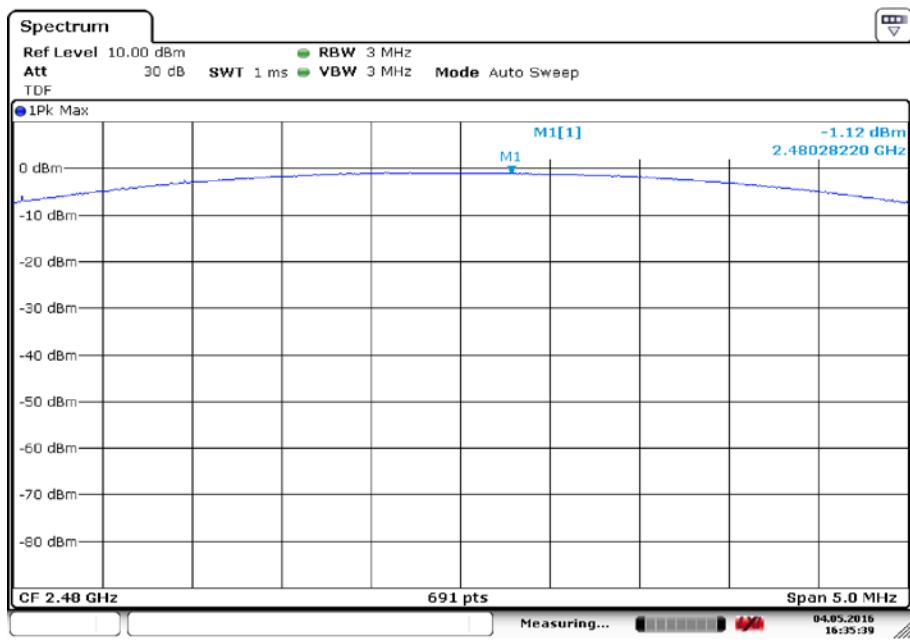
## ANNEX B: TEST FIGURE LIST



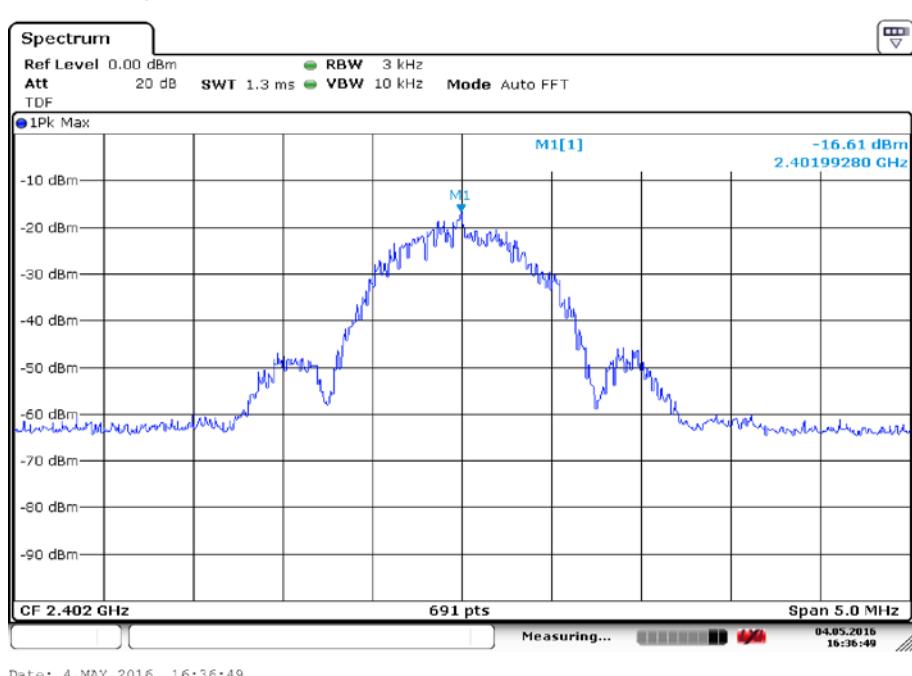
**Fig.1 Maximum Peak Output Power(GFSK, Ch 0)**



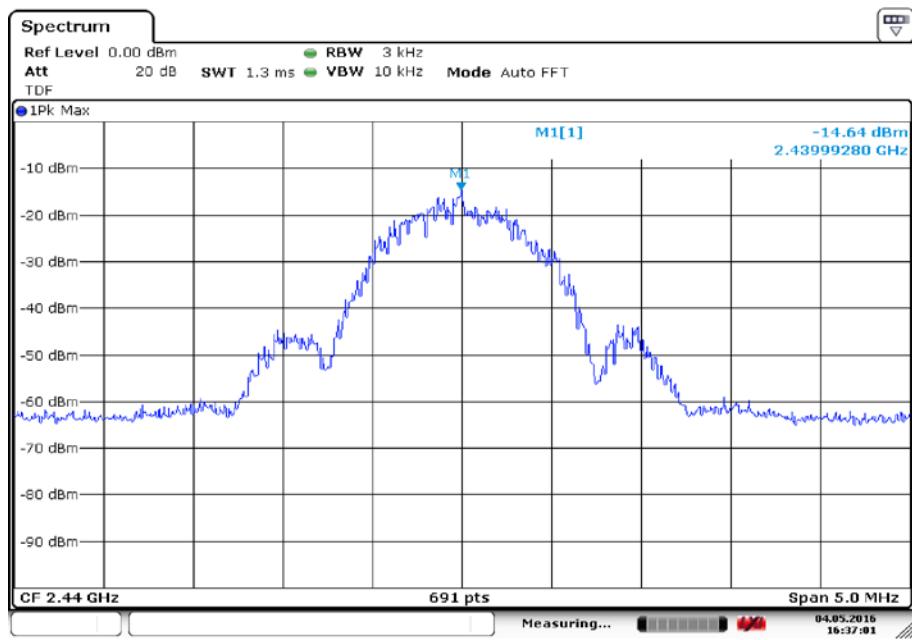
**Fig.2 Maximum Peak Output Power(GFSK, Ch 19)**



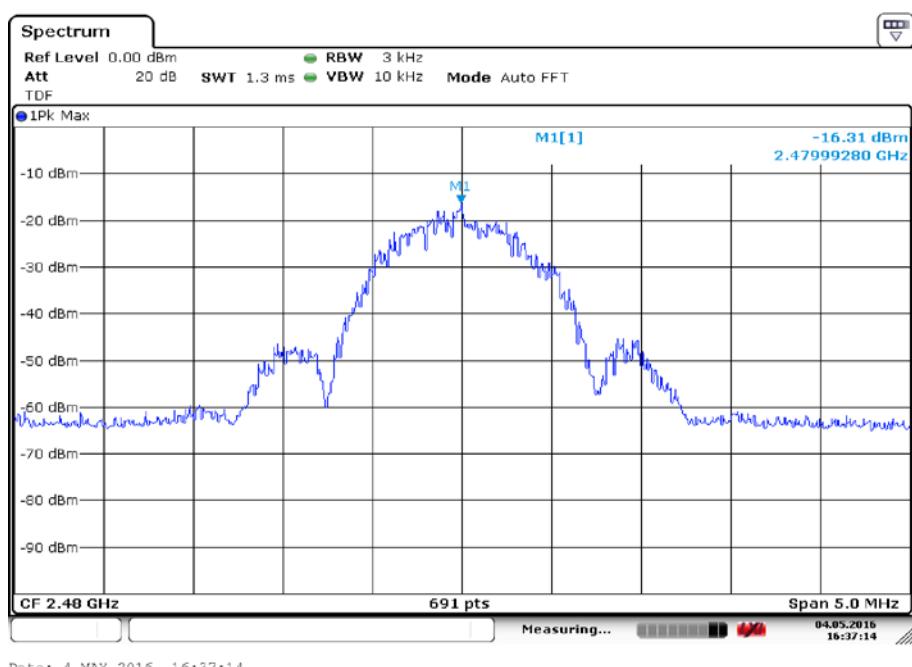
**Fig.3 Maximum Peak Output Power(GFSK, Ch 39)**



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



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



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

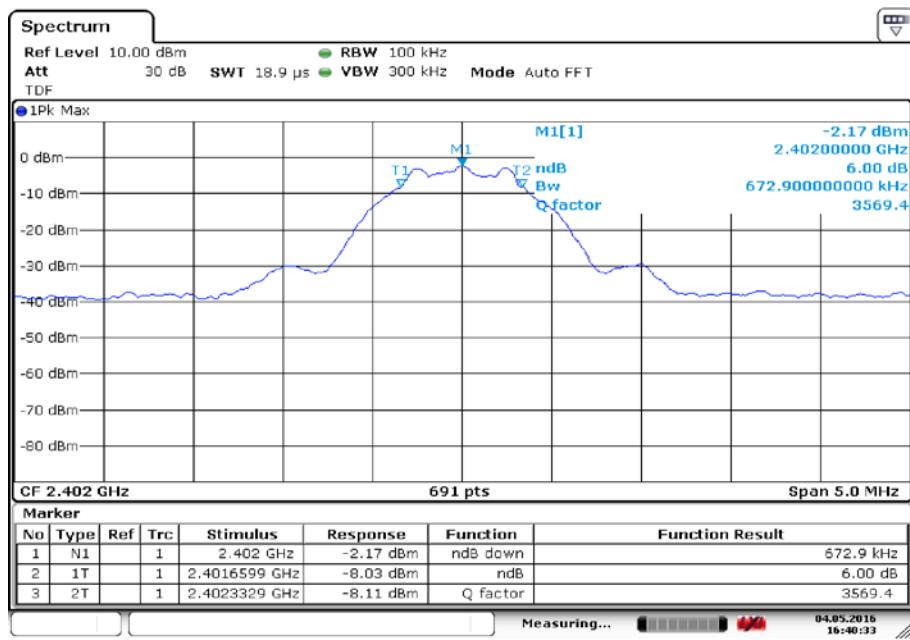


Fig.7 Occupied 6dB Bandwidth (Ch 0)

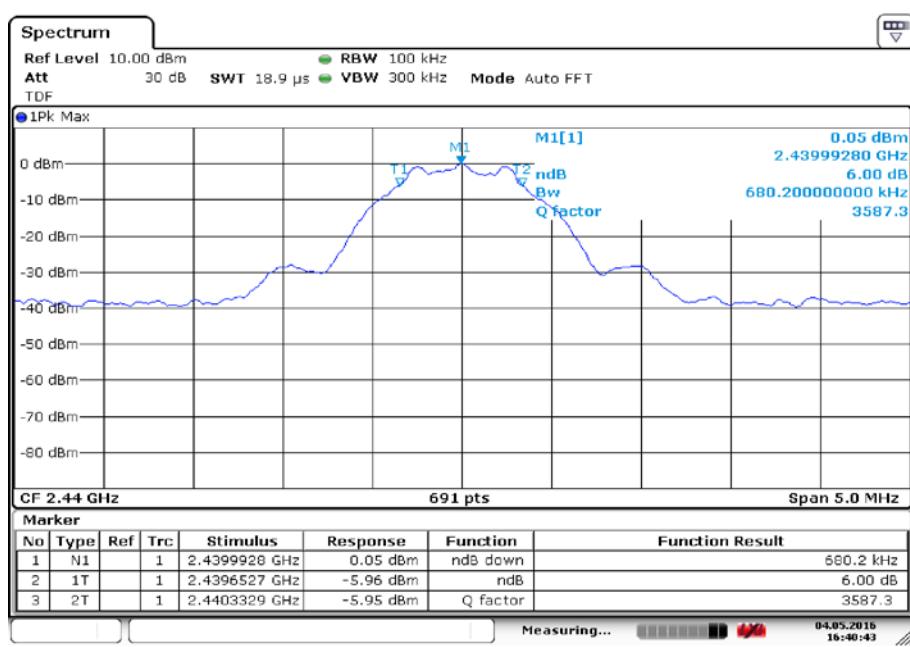


Fig.8 Occupied 6dB Bandwidth (Ch 19)

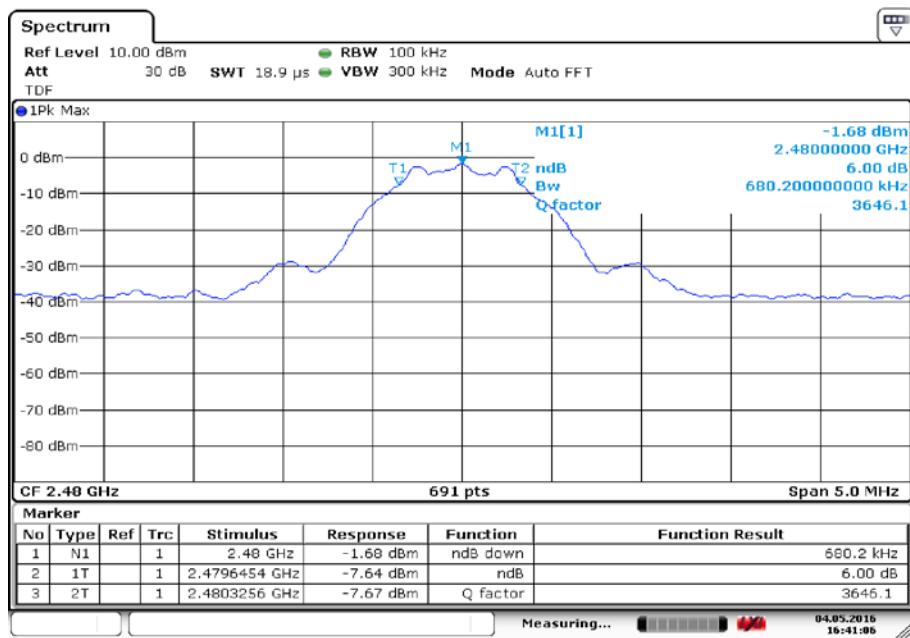


Fig.9 Occupied 6dB Bandwidth (Ch 39)

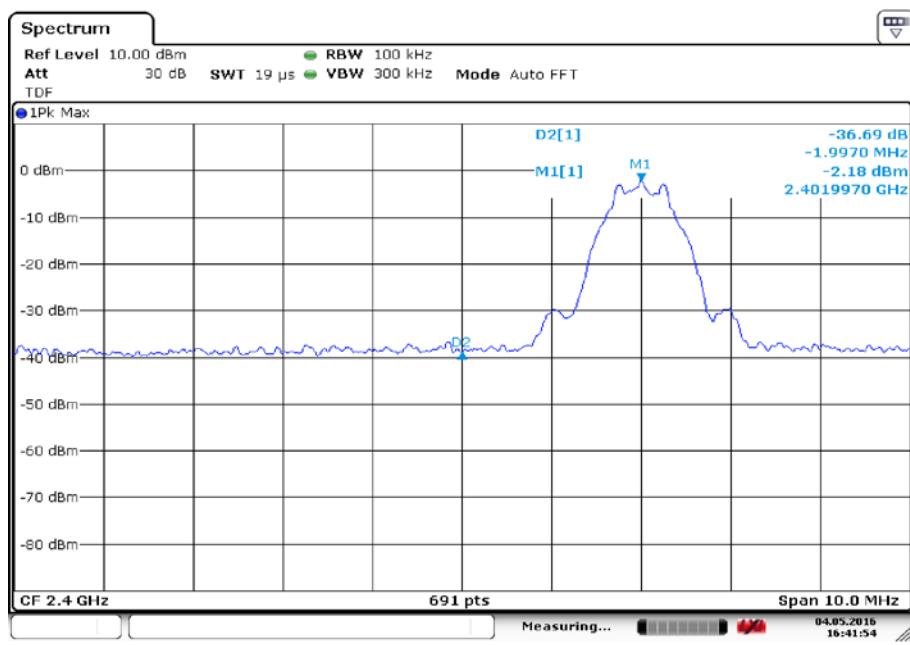
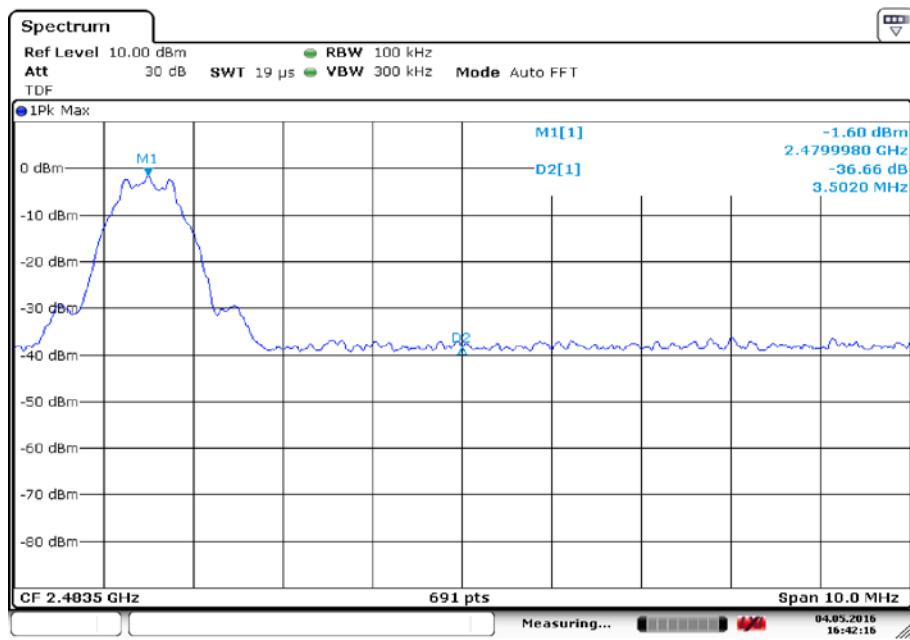
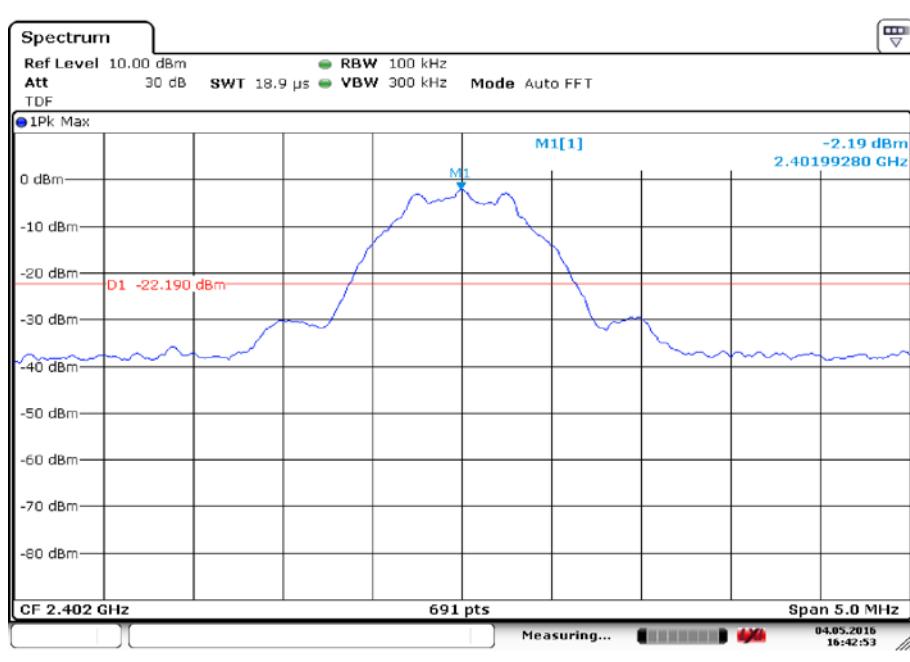


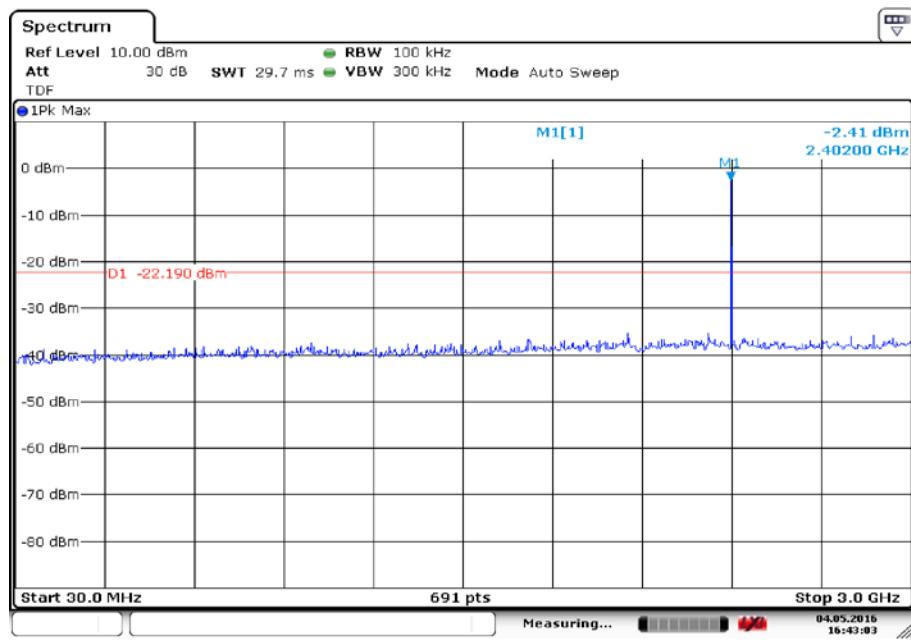
Fig.10 Band Edges (Ch 0)



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

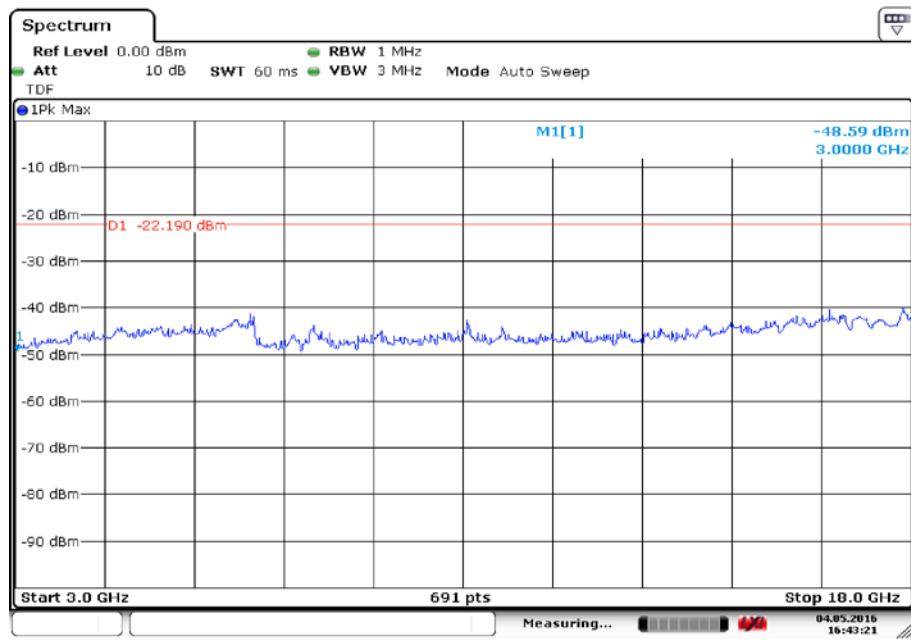


**Fig.12 Conducted Spurious Emission (Ch0, Center Frequency)**



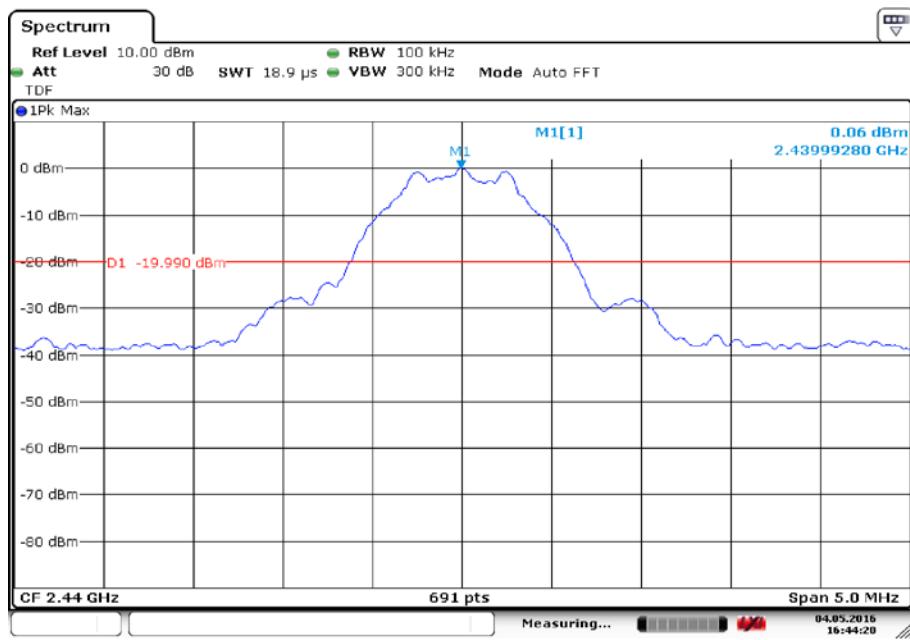
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**Fig.13 Conducted Spurious Emission (Ch0, 30 MHz-3 GHz)**



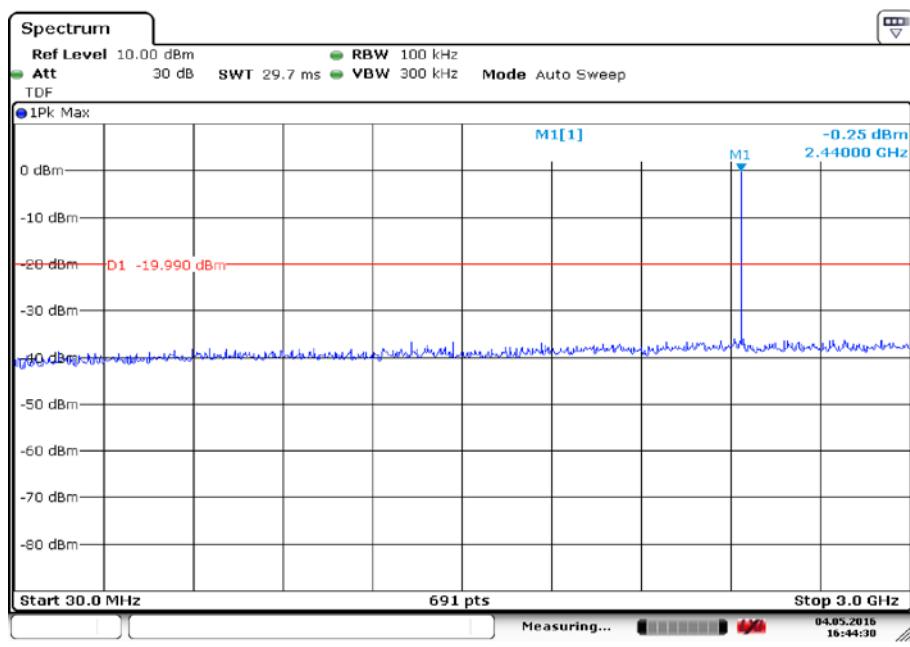
Date: 4.MAY.2016 16:43:21

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



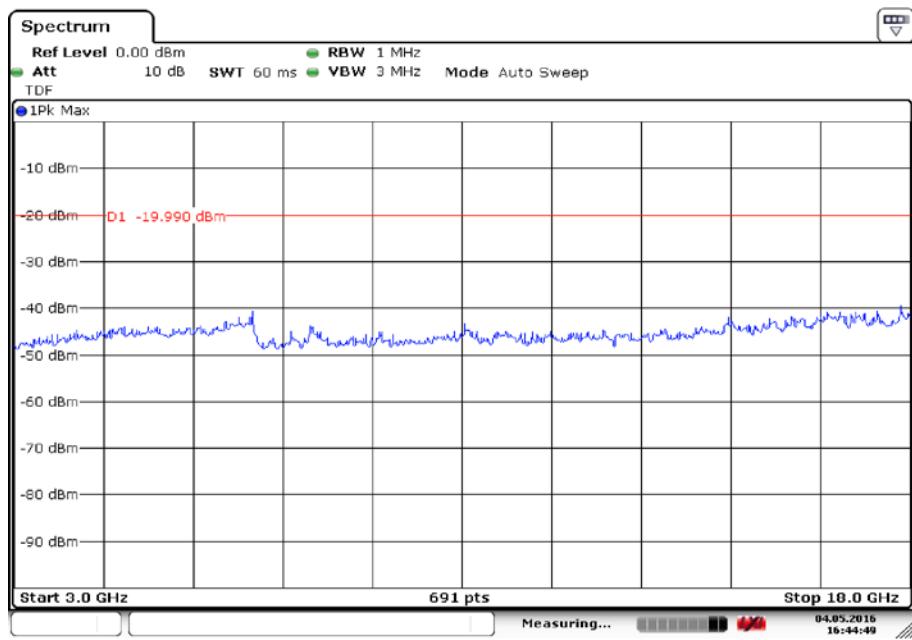
Date: 4.MAY.2016 16:44:19

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



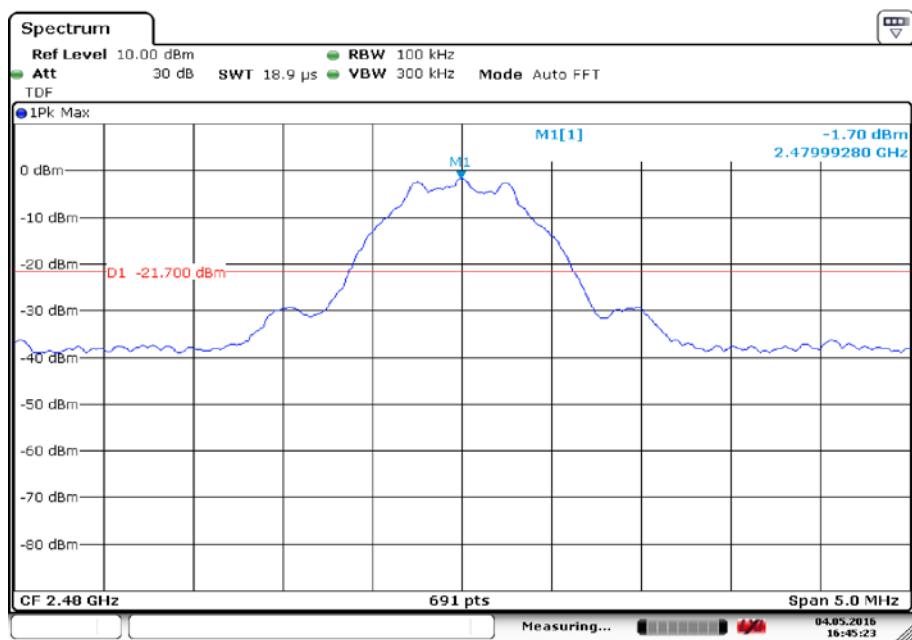
Date: 4.MAY.2016 16:44:30

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



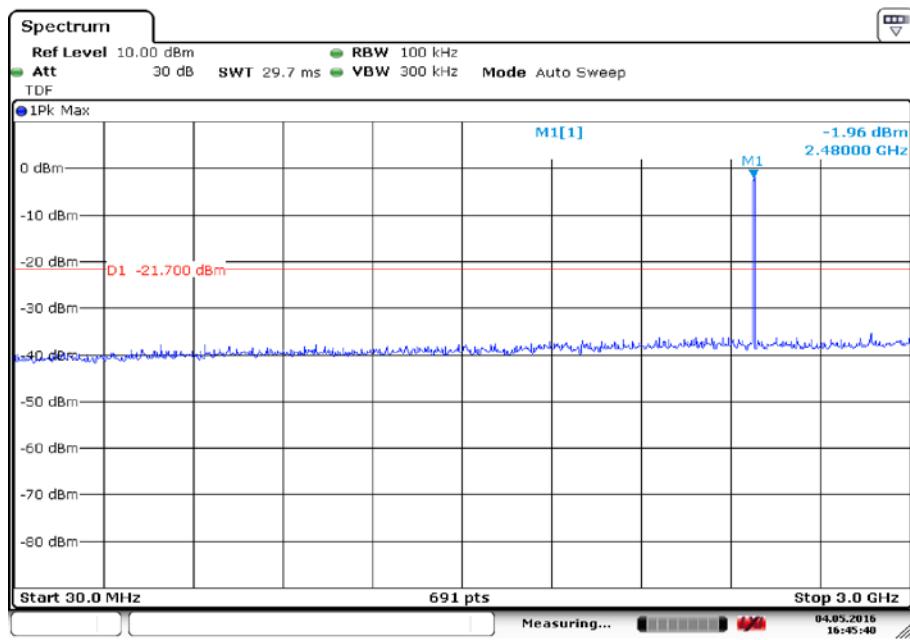
Date: 4.MAY.2016 16:44:49

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



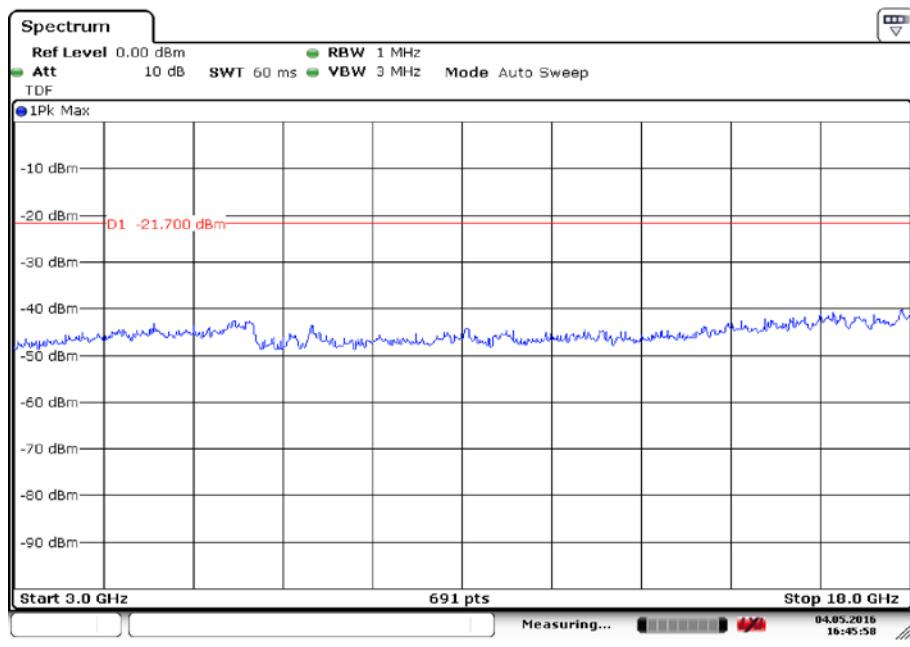
Date: 4.MAY.2016 16:45:23

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



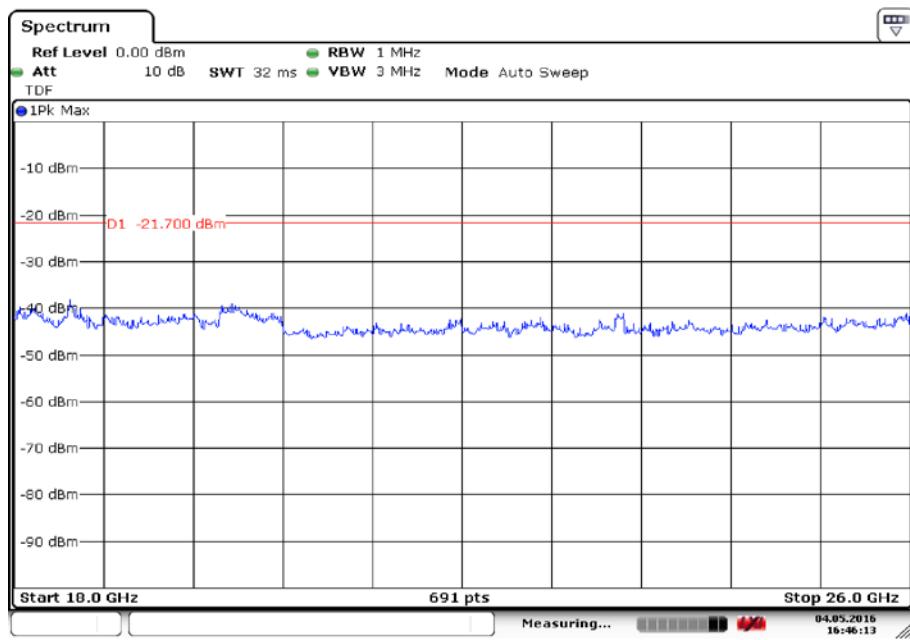
Date: 4.MAY.2016 16:45:40

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

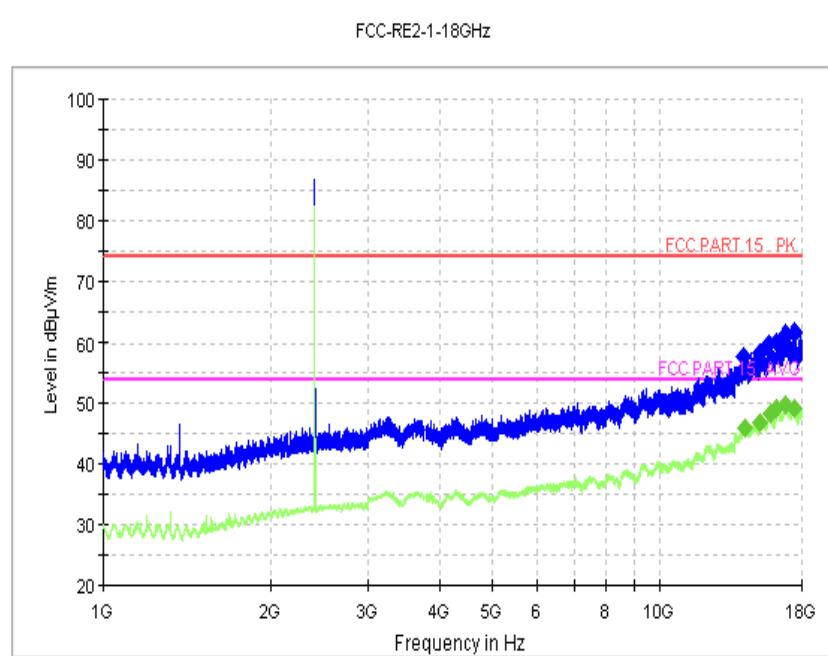


Date: 4.MAY.2016 16:45:58

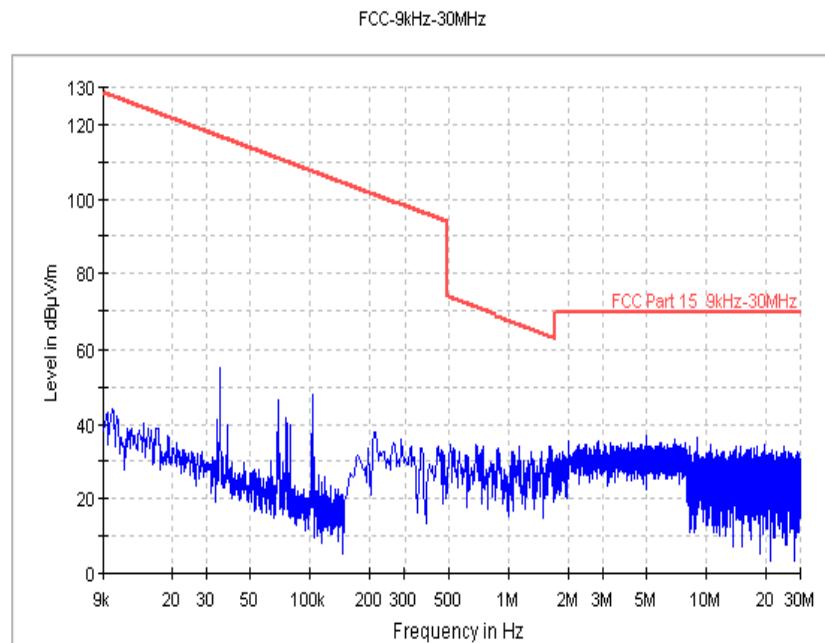
**Fig.20 Conducted Spurious Emission (Ch39, 3 GHz-18 GHz)**



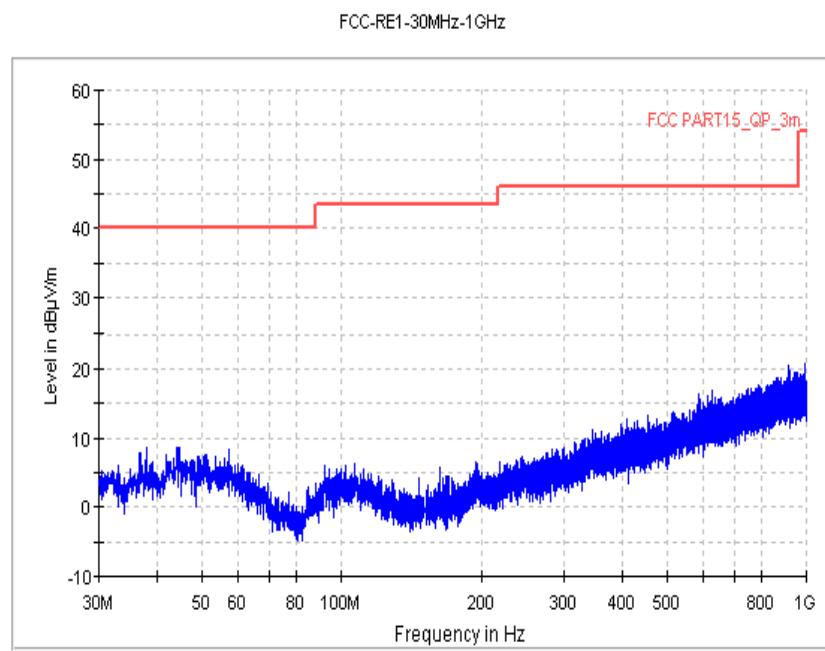
**Fig.21 Conducted Spurious Emission (All channels, 18 GHz-26 GHz)**



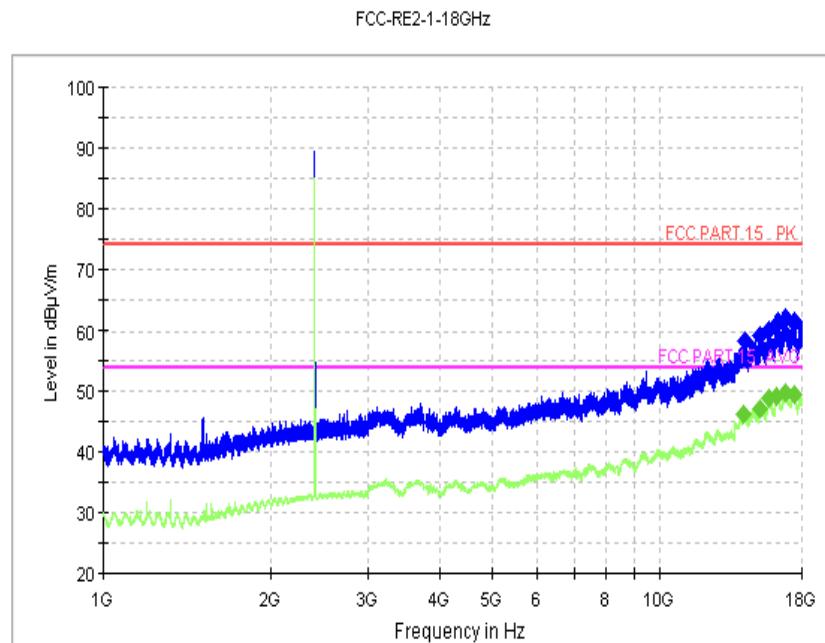
**Fig. 22 Radiated Spurious Emission (GFSK, Ch0, 1 GHz ~18 GHz)**



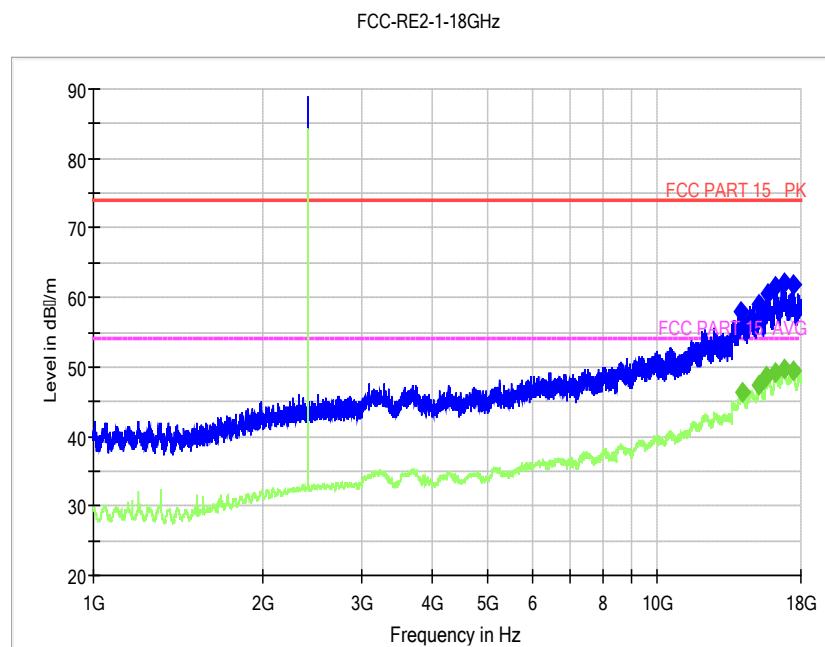
**Fig.23 Radiated Spurious Emission (Ch19, 9 kHz-30 MHz)**



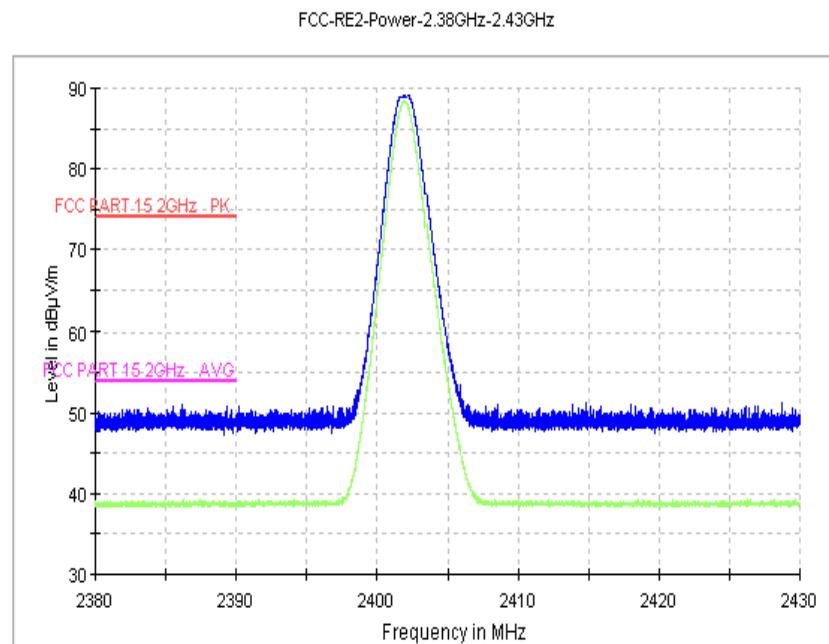
**Fig.24 Radiated Spurious Emission (Ch19, 30 MHz-1 GHz)**



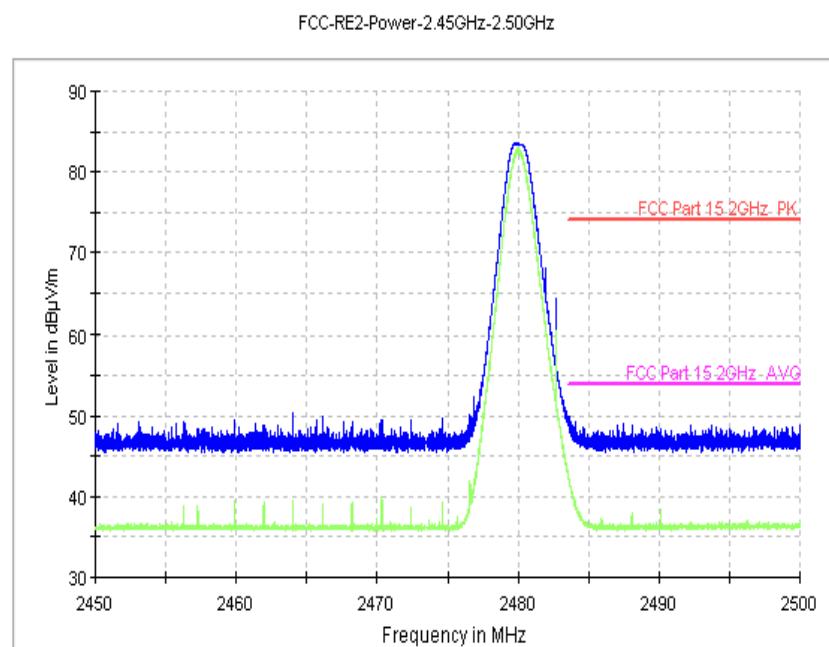
**Fig.25 Radiated Spurious Emission (Ch19, 1 GHz-18 GHz)**



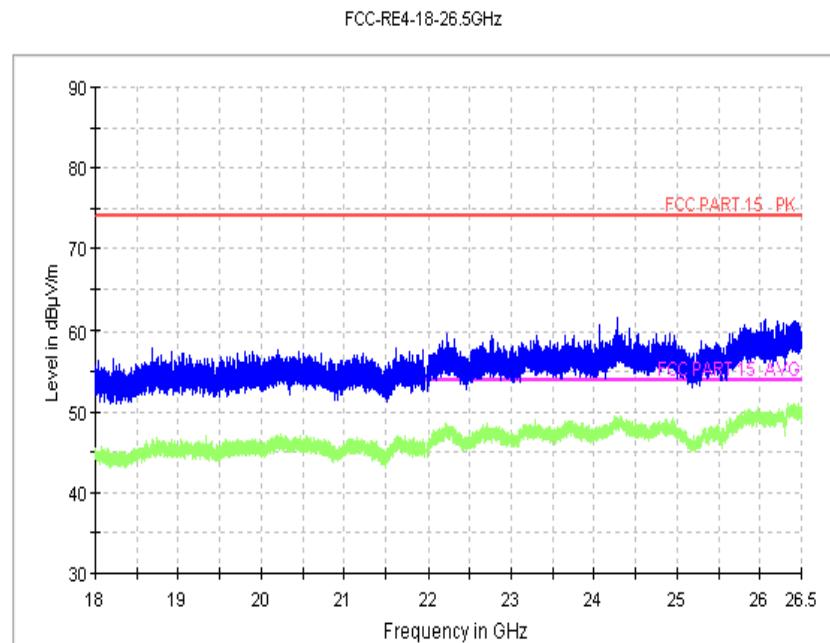
**Fig.26 Radiated Spurious Emission (Ch39, 1 GHz-18 GHz)**



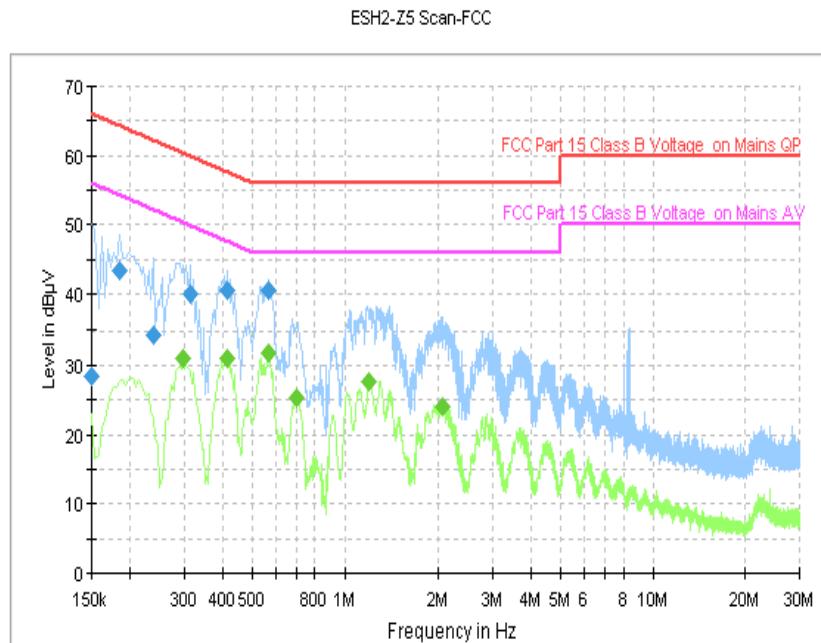
**Fig.27 Radiated Emission Power (GFSK, Ch0, 2380GHz~2450GHz)**



**Fig.28 Radiated Emission Power (GFSK, Ch39, 2450GHz~2500GHz)**



**Fig.29 Radiated emission: 18 GHz – 26.5 GHz**



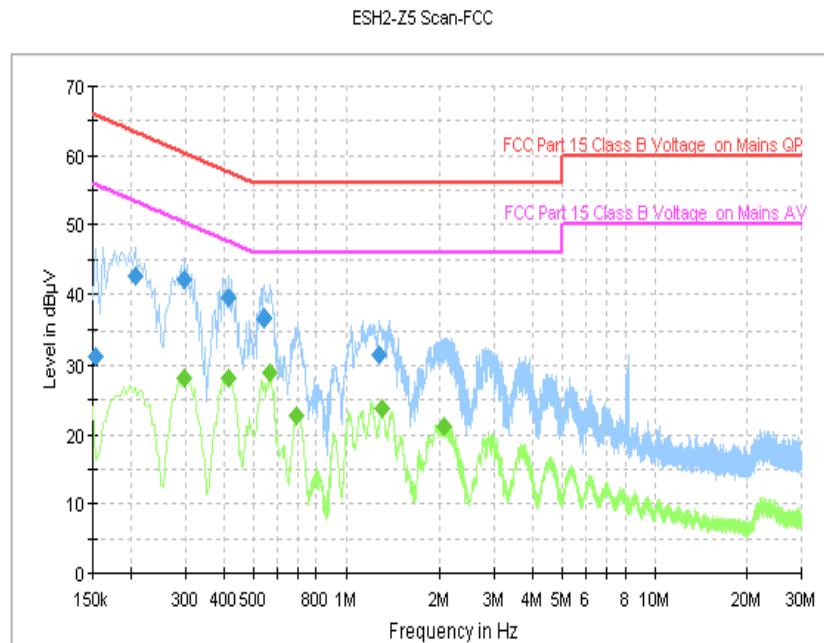
**Fig. 30 AC Powerline Conducted Emission (Traffic, AE1)**

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dB $\mu$ V)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.150000	28.3	GND	N	10.1	37.7	66.0
0.186000	43.3	GND	N	10.1	20.9	64.2
0.238000	34.5	GND	N	10.0	27.7	62.2
0.314000	40.0	GND	N	10.1	19.9	59.9
0.414000	40.5	GND	L1	10.0	17.1	57.6
0.566000	40.6	GND	L1	10.1	15.4	56.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dB $\mu$ V)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.298000	30.9	GND	L1	10.0	19.4	50.3
0.414000	30.9	GND	L1	10.0	16.7	47.6
0.566000	31.8	GND	L1	10.1	14.2	46.0
0.698000	25.4	GND	L1	10.0	20.6	46.0
1.206000	27.7	GND	L1	10.1	18.3	46.0
2.066000	24.1	GND	L1	10.1	21.9	46.0



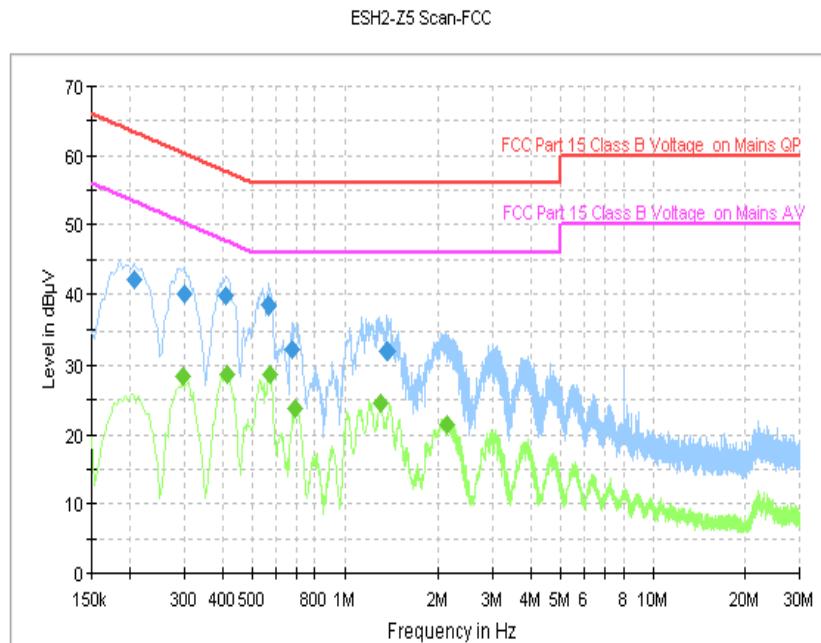
**Fig. 31 AC Power line Conducted Emission (Idle, AE1)**

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.154000	31.2	GND	L1	10.0	34.5	65.8
0.206000	42.5	GND	L1	10.0	20.9	63.4
0.298000	42.1	GND	N	10.1	18.2	60.3
0.414000	39.6	GND	N	10.1	18.0	57.6
0.542000	36.8	GND	N	10.1	19.2	56.0
1.286000	31.6	GND	L1	10.1	24.4	56.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.298000	28.0	GND	L1	10.0	22.3	50.3
0.414000	28.2	GND	L1	10.0	19.3	47.6
0.566000	29.0	GND	L1	10.1	17.0	46.0
0.690000	22.8	GND	L1	10.0	23.2	46.0
1.306000	23.9	GND	L1	10.1	22.1	46.0
2.054000	21.1	GND	L1	10.1	24.9	46.0



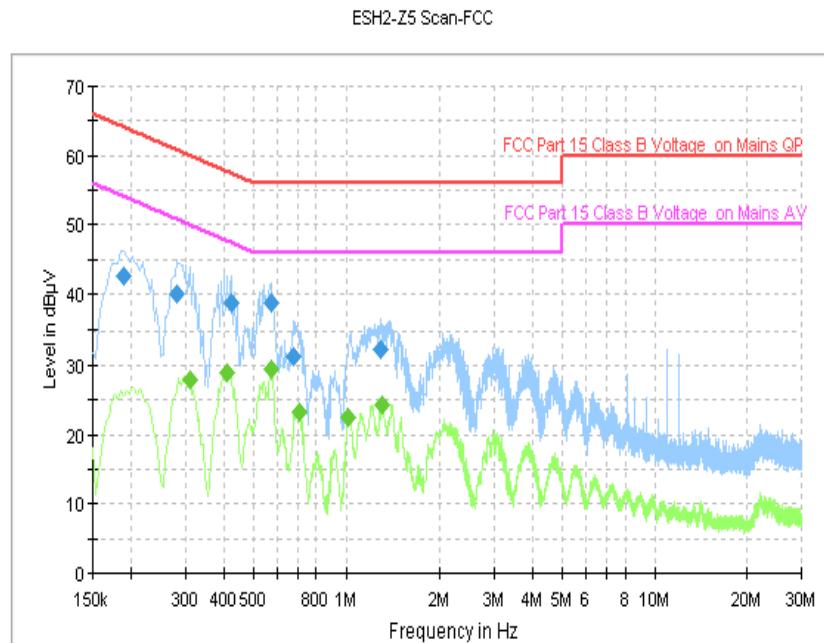
**Fig. 32 AC Powerline Conducted Emission (Traffic, AE1)**

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dB $\mu$ V)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.206000	42.0	GND	L1	10.0	21.3	63.4
0.302000	40.2	GND	N	10.1	20.0	60.2
0.410000	39.7	GND	N	10.1	17.9	57.6
0.566000	38.6	GND	L1	10.1	17.4	56.0
0.678000	32.2	GND	L1	10.0	23.8	56.0
1.378000	32.1	GND	L1	10.1	23.9	56.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dB $\mu$ V)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.298000	28.4	GND	L1	10.0	21.9	50.3
0.414000	28.6	GND	L1	10.0	19.0	47.6
0.574000	28.7	GND	L1	10.1	17.3	46.0
0.690000	23.9	GND	L1	10.0	22.1	46.0
1.314000	24.5	GND	L1	10.1	21.5	46.0
2.142000	21.3	GND	L1	10.1	24.7	46.0



**Fig. 33 AC Power line Conducted Emission (Idle, AE1)**

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dB <sub>u</sub> V)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB <sub>u</sub> V)
0.190000	42.6	GND	N	10.1	21.4	64.0
0.282000	40.1	GND	N	10.1	20.6	60.8
0.426000	38.7	GND	N	10.1	18.6	57.3
0.570000	38.6	GND	L1	10.1	17.4	56.0
0.678000	31.2	GND	N	10.0	24.8	56.0
1.294000	32.2	GND	L1	10.1	23.8	56.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dB <sub>u</sub> V)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB <sub>u</sub> V)
0.310000	27.8	GND	L1	10.0	22.2	50.0
0.410000	28.9	GND	L1	10.0	18.7	47.6
0.570000	29.4	GND	L1	10.1	16.6	46.0
0.702000	23.3	GND	L1	10.0	22.7	46.0
1.022000	22.5	GND	L1	10.0	23.5	46.0
1.310000	24.4	GND	L1	10.1	21.6	46.0

**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\*\*\*