FCC PART 15C
TEST REPORT
No. I17N00063-BLE

for

Power Idea Technology (Shenzhen) Co., Ltd.

TD-LTE digital mobile phone

Model Name: MD501

With

Hardware Version: 1.04

Software Version: MD501_US_1.003.00_20170103

FCC ID: ZLE- MD501

IC: 11113A-MD501

Issued Date: 2017-04-07

Test Laboratory:

FCC 2.948 Listed: No.342690

IC O.A.T.S Listed: No. 21856-1

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, Huayuan North Road, Haidian District, Beijing, P. R. China 100191.

Tel: +86(0)10-62304633-2512, Fax: +86(0)10-62304633-2504

Email: cttl_terminals@catr.cn, website: www.chinattl.com

REPORT HISTORY

Report Number	Revision	Description	Issue Date
I17N00063-BLE	Rev.0	1st edition	2017-03-06
I17N00063-BLE	Rev.1	2st edition	2017-03-22
I17N00063-BLE	Rev.2	3st edition	2017-04-07

CONTENTS

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℃

Relative Humidity: 20-75%

1.3. Project data

Testing Start Date: 2017-01-19

Testing End Date: 2017-02-28

1.4. Signature

An Ran

(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:	Power Idea Technology (Shenzhen) Co., Ltd.
Address:	4th Floor, A Section , Languang Science & technology Building , No.7 Xinxi RD , Hi-Tech Industrial Park North , Nanshan District , Shenzhen , P.R.C.
City:	Shenzhen
Postal Code:	/
Country:	China
Telephone:	0755-86220211
Fax:	/

2.2. Manufacturer Information

Company Name:	Power Idea Technology (Shenzhen) Co., Ltd.
Address:	4th Floor, A Section , Languang Science & technology Building , No.7 Xinxi RD , Hi-Tech Industrial Park North , Nanshan District , Shenzhen , P.R.C.
City:	Shenzhen
Postal Code:	/
Country:	China
Telephone:	0755-86220211
Fax:	/

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

3.1. About EUT

Description	TD-LTE digital mobile phone
Model Name	MD501
Market Name	MD501
Frequency Band	2402MHz~2480MHz
Type of Modulation	GFSK
Number of Channels	40
Antenna	Integrated
Power Supply	3.8V DC by Battery
FCC ID	ZLE-MD501
IC number	11113A-MD501

3.2. Internal Identification of EUT

EUT ID*	IMEI	HW Version	SW Version	Receive Date
EUT1	867453021949659	1.04	MD501_US_1.003.00_20170103	2017-01-19

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

3.3. Internal Identification of AE

AE ID*	Description	SN
AE1	Power Supply	/

AE1

Model	HKC0055010-2D
Manufacturer	SHENZHEN HUNTKEY ELECTRIC CO., LTD

*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	Nov,2015
ANSI C63.10	American National Standard for Testing Unlicensed Wireless Devices	Jun,2013
RSS-Gen	Spectrum Management and Telecommunications Radio Standards Specification General Requirements for Compliance of Radio Apparatus	Issue 4 Nov,2014
RSS-247	Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and License-Exempt Local Area Network (LE-LAN) Devices	Issue 1 May,2015

5. Test Results

5.1. Summary of Test Results

No	Test cases	Sub-clause of Part15C	Sub-clause of IC	Verdict
0	Antenna Requirement	15.203	/	**P**
1	Maximum Peak Output Power	15.247 (b)	RSS-247 Issue1 5.4	**P**
2	Peak Power Spectral Density	15.247 (e)	RSS-247 Issue1 5.2	**P**
3	Occupied 6dB Bandwidth	15.247 (a)	RSS-247 Issue1 5.2	**P**
4	Band Edges Compliance	15.247 (d)	RSS-247 Issue1 5.5	**P**
5	Transmitter Spurious Emission - Conducted	15.247 (d)	RSS-247 Issue1 5.5/RSS-Gen 6.13	**P**
6	Transmitter Spurious Emission - Radiated	15.247, 15.205, 15.209	RSS-247 Issue1 5.5/RSS-Gen 6.13	**P**
7	Occupied Bandwidth	/	RSS-Gen Issue4 6.6	**P**
8	AC Powerline Conducted Emission	15.107, 15.207	RSS-Gen Issue4 8.8	**P**

See **ANNEX B** 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 isotropic 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	LISN	ESH2-Z5	100196	R&S	2018-01-05	1 year
2	Test Receiver	ESCI	100701	R&S	2017-08-09	1 year
3	Loop Antenna	HLA6120	35779	TESEQ	2019-05-02	3 years
4	BiLog Antenna	VULB9163	9163 330	Schwarzbeck	2017-04-22	3 years
5	Horn Antenna	3117	00066585	ETS-Lindgren	2019-03-05	3 years
6	Test Receiver	ESR7	101675	R&S	2017-07-21	1 year
7	Spectrum Analyzer	FSP40	100378	R&S	2017-12-15	1 year
8	Chamber	FACT5-2.0	4166	ETS-Lindgren	2018-05-13	3 years
9	Antenna	3160-09	LM4214/0011 8383	ETS-Lindgren	2018.07.14	3 years

Test software

No.	Equipment	Manufacturer	Version
1	TechMgr Software	CAICT	1.9.1
2	EMC32	Rohde & Schwarz	8.53.0
3	EMC32	Rohde & Schwarz	10.01.00

Use the EUT inside MTK Engineering mode to control the transmitting signal.
The EUT was programmed to be in continuously transmitting mode.

Anechoic chamber

Fully anechoic chamber by ETS-Lindgren

ANNEX A: MEASUREMENT RESULTS FOR RECEIVER

A.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 1.48 dBi.
The RF transmitter uses an integrate antenna without connector.

A.1 Maximum Output Power

Measurement Limit:

Standard	Limit (dBm)
FCC CRF Part 15.247(b) & RSS-247 Issue1 5.4	< 30

Measurement Results:

Mode	Channel	Maximum Peak Output Power（dBm）		Conclusion
GFSK	0	Fig.1	-1.08	P
	19	Fig.2	-0.12	P
	39	Fig.3	-1.96	P

See ANNEX B for test graphs.

Conclusion: Pass

A.2 Peak Power Spectral Density

Measurement Limit:

Standard	Limit
FCC CRF Part 15.247(e) & RSS-247 Issue1 5.2	< 8 dBm/3 kHz

Measurement Results:

Mode	Channel	Peak Power Spectral Density（dBm）		Conclusion
GFSK	0	Fig.4	-17.55	P
	19	Fig.5	-16.37	P
	39	Fig.6	-18.31	P

See ANNEX B for test graphs.

Conclusion: PASS

A.3 6dB Bandwidth

Measurement Limit:

Standard	Limit (kHz)
FCC 47 CFR Part 15.247 (a) & RSS-247 Issue1 5.2	≥ 500

Measurement Result:

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

See ANNEX B for test graphs.

Conclusion: PASS

A.4 Band Edges Compliance

Measurement Limit:

Standard	Limit (dBc)
FCC 47 CFR Part 15.247 (d) & RSS-247 Issue1 5.5	> 20

Measurement Result:

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

See ANNEX B for test graphs.

Conclusion: Pass

A.5 Transmitter Spurious Emission - Conducted

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247 (d) & RSS-247 Issue1 5.5/RSS-Gen 6.13	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 B for test graphs.

Conclusion: Pass

A.6 Transmitter Spurious Emission - Radiated

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247, 15.205, 15.209 & RSS-247 Issue1 5.5/RSS-Gen 6.13	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
		18 GHz~ 26.5 GHz	Fig.26	P
	39	1 GHz ~18 GHz	Fig.27	P
	Restricted Band(CH0)	2.38 GHz ~ 2.45 GHz	Fig.28	P
	Restricted Band(CH39)	2.45 GHz ~ 2.5 GHz	Fig.29	P

GFSK CH0 (1-18GHz)

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol	Corr. (dB)
12860.500000	52.06	74.00	21.94	V	10.8
13662.500000	54.79	74.00	19.21	V	11.1
14222.000000	54.89	74.00	19.11	V	11.3
15754.000000	57.53	74.00	16.47	V	12.8
16758.500000	58.79	74.00	15.21	V	13.9
17413.000000	58.19	74.00	15.81	V	14.0

Frequency (MHz)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol	Corr. (dB)
13174.000000	40.48	54.00	13.52	V	11.2
13931.500000	42.36	54.00	11.64	V	10.8
15676.000000	45.45	54.00	8.55	V	12.6
16209.000000	45.78	54.00	8.22	V	13.1
16749.500000	46.53	54.00	7.47	V	13.9
17370.000000	46.13	54.00	7.87	V	14.0

GFSK CH19 (1-18GHz)

Frequency (MHz)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol	Corr. (dB)
14418.000000	55.00	74.00	19.00	V	11.6
15063.500000	55.87	74.00	18.13	V	12.1
15806.500000	57.14	74.00	16.86	H	12.8
16315.500000	56.48	74.00	17.52	H	13.3
16925.000000	57.44	74.00	16.56	H	14.0
17463.000000	56.57	74.00	17.43	V	14.0

Frequency (MHz)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol	Corr. (dB)
13931.500000	41.32	54.00	12.68	V	10.8
14538.500000	43.36	54.00	10.64	H	11.9
15154.500000	43.87	54.00	10.13	V	12.1
16225.000000	45.04	54.00	8.96	H	13.1
16777.000000	45.80	54.00	8.20	H	13.9
17338.500000	45.16	54.00	8.84	H	14.0

GFSK CH39 (1-18GHz)

Frequency (MHz)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol	Corr. (dB)
14533.000000	55.83	74.00	18.17	V	11.9
15152.000000	55.78	74.00	18.22	H	12.1
15731.000000	57.25	74.00	16.75	V	12.7
16247.000000	57.39	74.00	16.61	V	13.2
16772.000000	57.12	74.00	16.88	H	13.9
17340.500000	56.25	74.00	17.75	V	14.0

Frequency (MHz)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol	Corr. (dB)
14538.500000	43.47	54.00	10.53	V	11.9
15128.500000	43.80	54.00	10.20	V	12.1
15764.000000	45.08	54.00	8.92	H	12.8
16224.000000	44.87	54.00	9.13	H	13.1
16823.000000	45.35	54.00	8.65	H	13.9
17336.000000	44.88	54.00	9.12	H	14.0

See ANNEX B for test graphs.

Conclusion: Pass

Note:

A "reference path loss" is established and the A_{Rpl} is the attenuation of “reference path loss”, and Antenna Factor, 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} +Cable Loss +Antenna Factor-Gain of the preamplifier.

A.7 99% Occupied Bandwidth

Measurement Limit:

Standard	Limit
RSS-Gen Issue4 6.6	/

Measurement Results:

For GFSK

Channel No.	Frequency (MHz)	99% Bandwidth (kHz)		Conclusion
0	2402	Fig.30	1063.7	P
19	2440	Fig.31	1034.7	P
39	2480	Fig.32	1049.2	P

See ANNEX B for test graphs.

Conclusion: PASS

A.8 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 (dBμV)	Result (dBμV) Traffic	Conclusion
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 (dBμV)	Result (dBμV) Traffic	Conclusion
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.			

BLE (Quasi-peak Limit)-AE1

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV) Idle	Conclusion
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.			

BLE (Average Limit)-AE1

Frequency range (MHz)	Average-peak Limit (dBμV)	Result (dBμV) Idle	Conclusion
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.			

Test Condition:

Voltage（V）	Frequency（Hz）
240	60

Measurement Result and limit:

BLE (Quasi-peak Limit)-AE1

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV) Traffic	Conclusion
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.			

BLE (Average Limit)-AE1

Frequency range (MHz)	Average-peak Limit (dBμV)	Result (dBμV) Traffic	Conclusion
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.			

BLE (Quasi-peak Limit)-AE1

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV) Idle	Conclusion
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.			

BLE (Average Limit)-AE1

Frequency range (MHz)	Average-peak Limit (dBμV)	Result (dBμV) Idle	Conclusion
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.			

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

See ANNEX B for test graphs.

Conclusion: Pass

ANNEX B: TEST GRAPHS

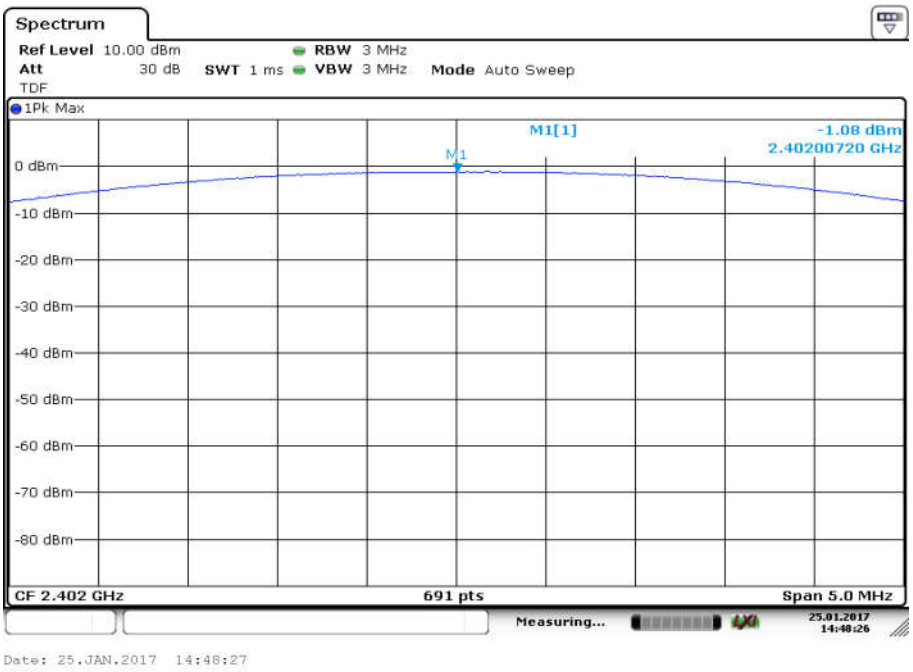

Fig.1 Maximum Peak Output Power(GFSK, Ch 0)

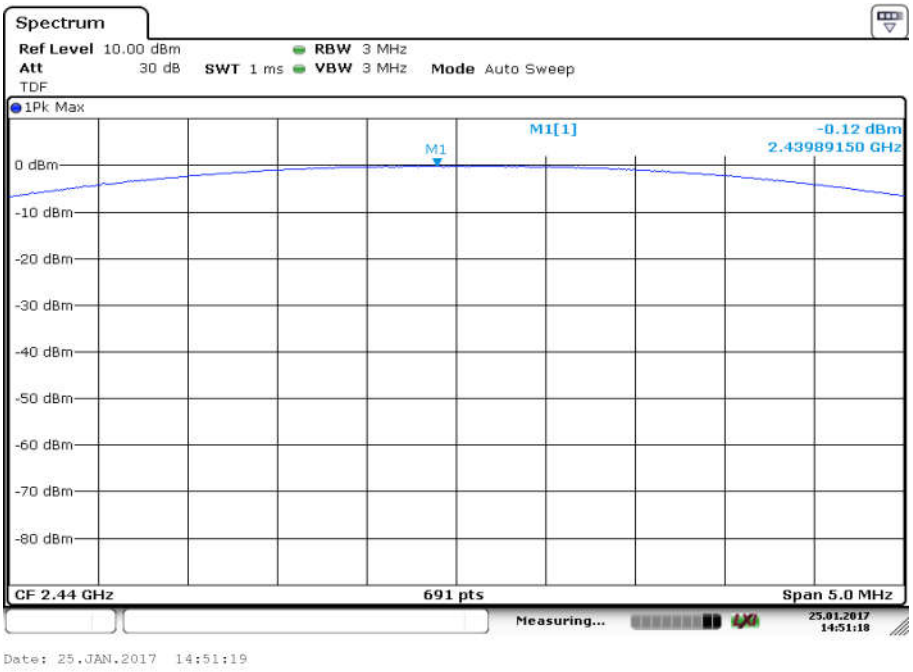

Fig.2 Maximum Peak Output Power(GFSK, Ch 19)

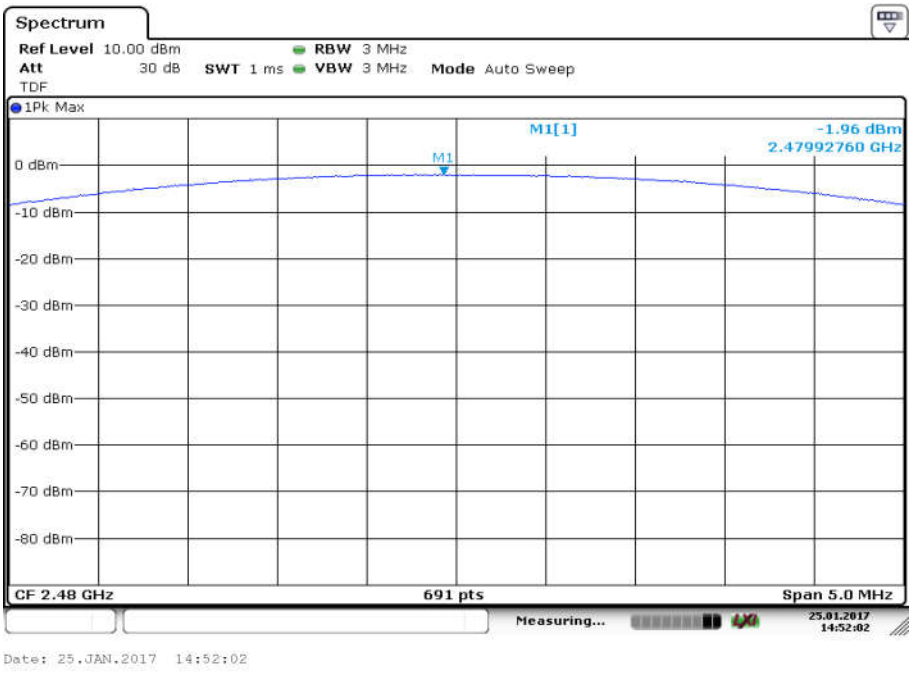

Fig.3 Maximum Peak Output Power(GFSK, Ch 39)

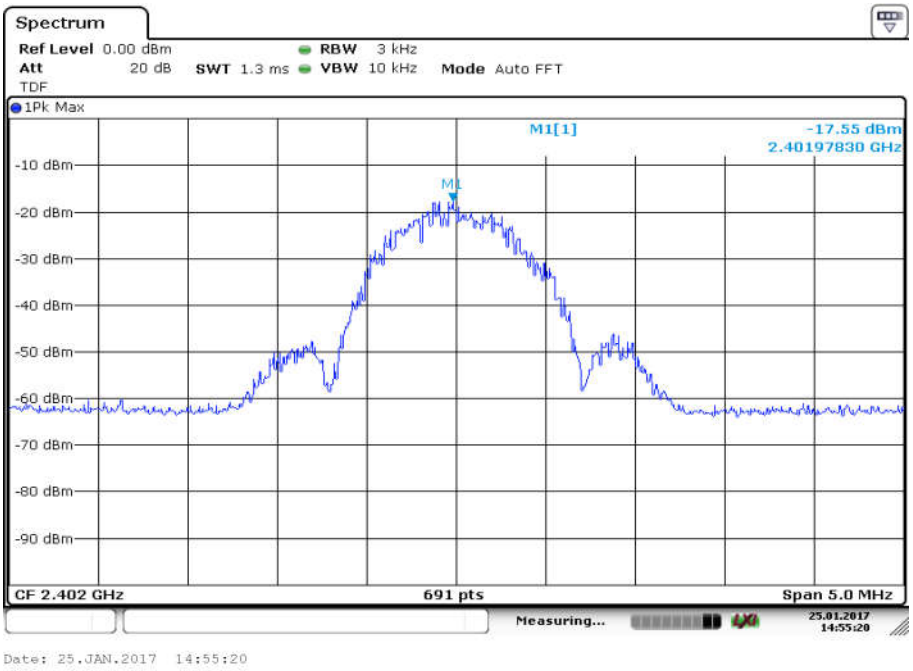

Fig.4 Power Spectral Density (Ch 0)

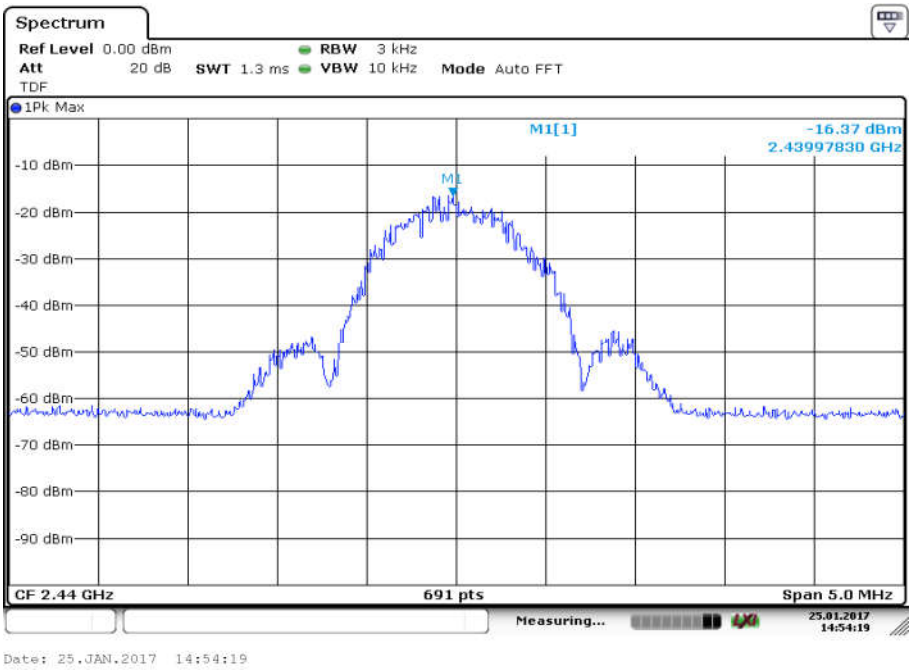

Fig.5 Power Spectral Density (Ch 19)

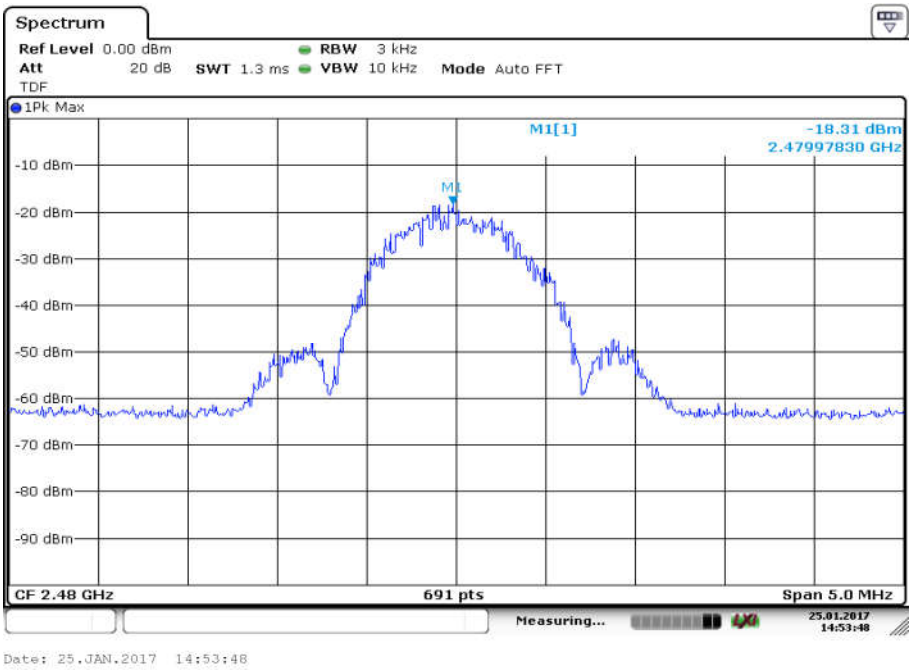

Fig.6 Power Spectral Density (Ch 39)

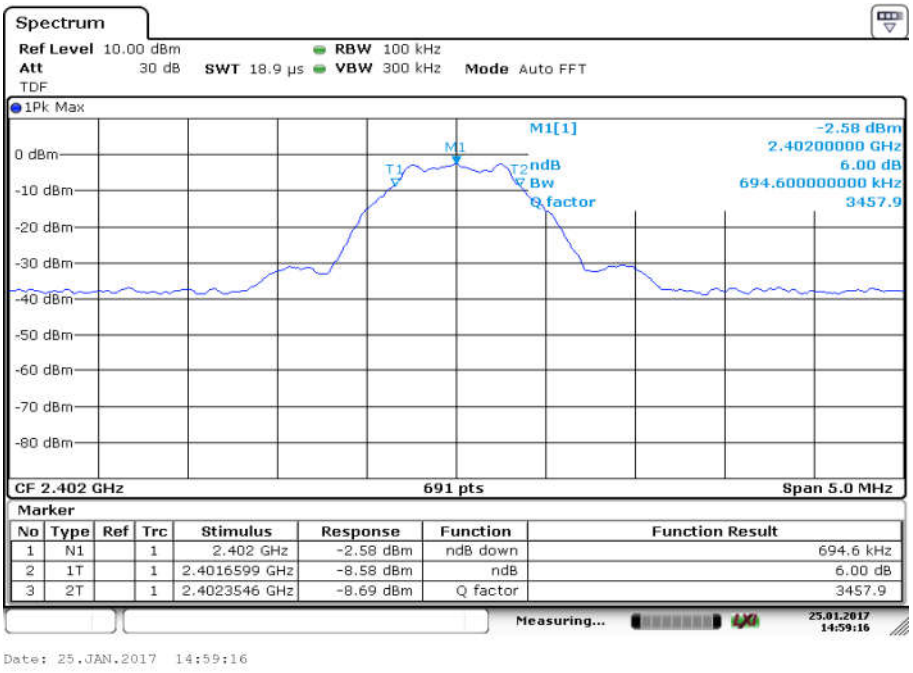

Fig.7 6dB Bandwidth (Ch 0)

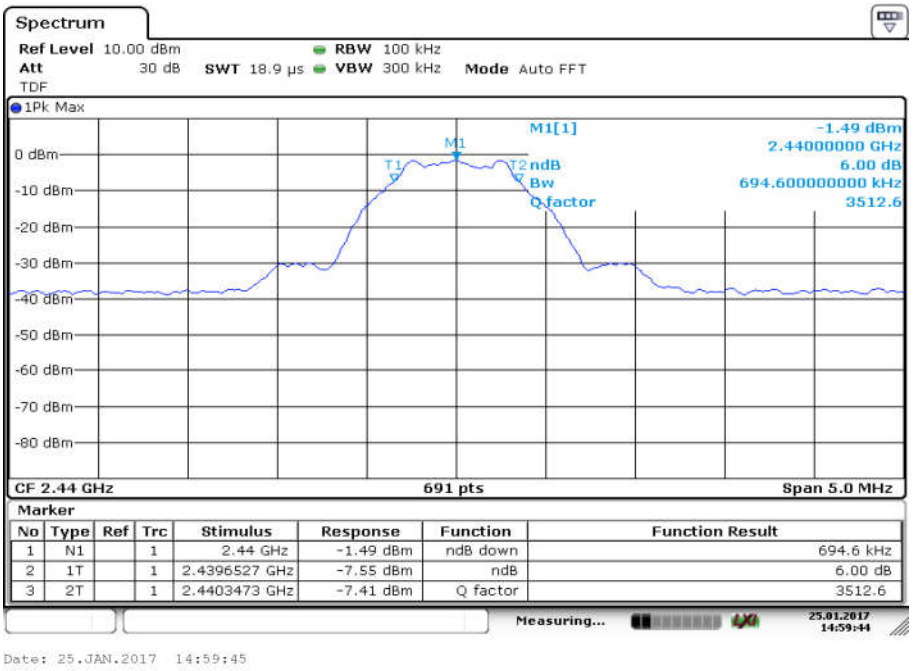

Fig.8 6dB Bandwidth (Ch 19)

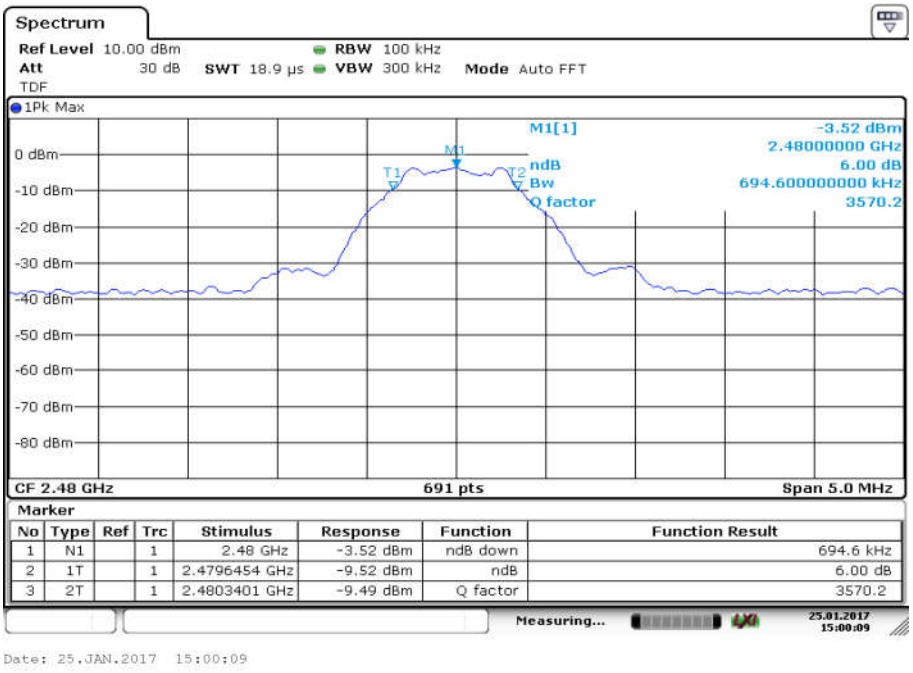

Fig.9 6dB Bandwidth (Ch 39)

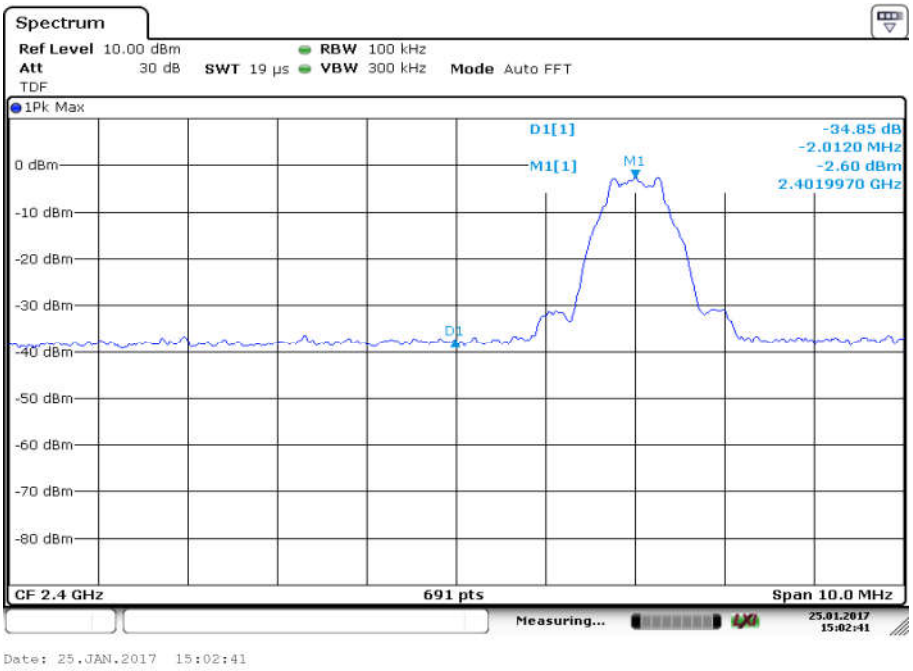

Fig.10 Band Edges (Ch 0)

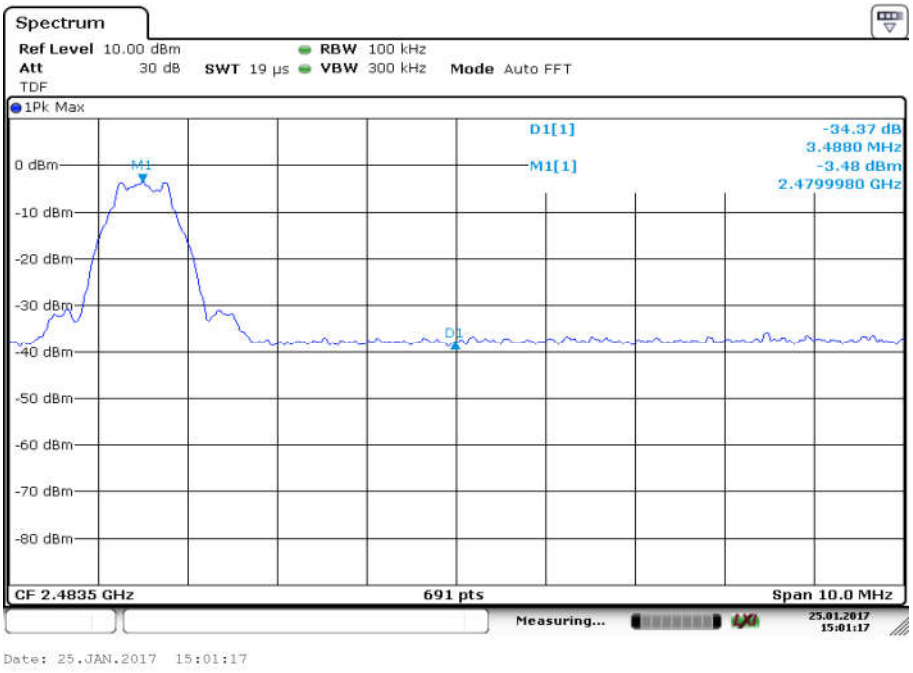

Fig.11 Band Edges (Ch 39)

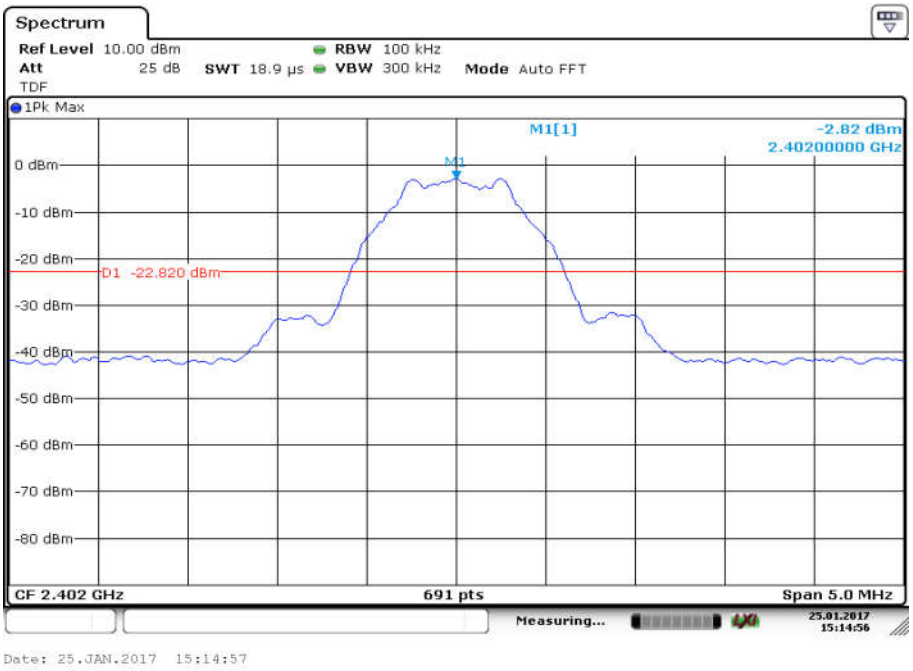

Fig.12 Conducted Spurious Emission (Ch0, Center Frequency)

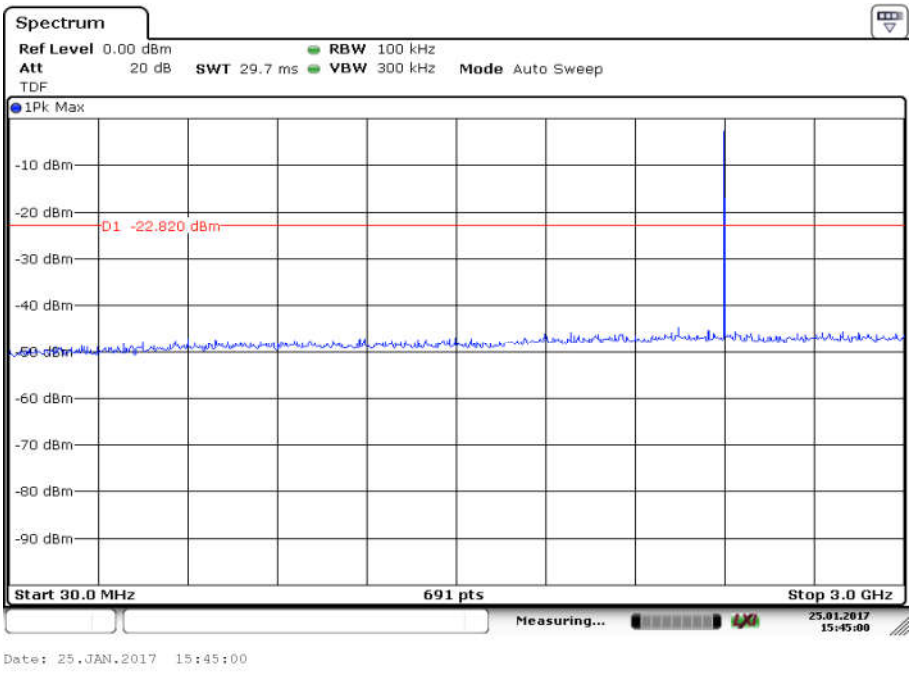

Fig.13 Conducted Spurious Emission (Ch0, 30 MHz-3 GHz)

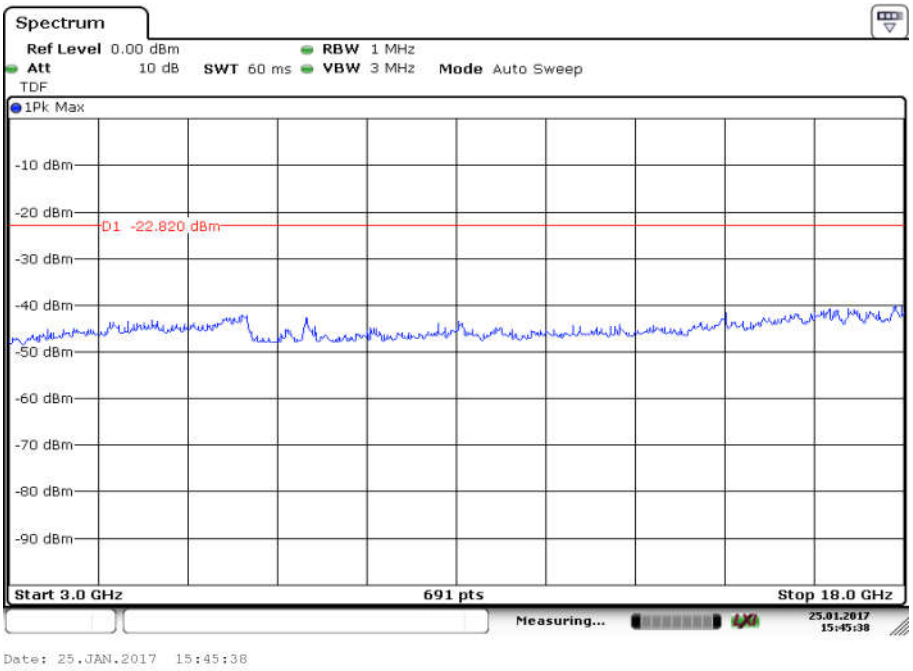

Fig.14 Conducted Spurious Emission (Ch0, 3 GHz-18 GHz)

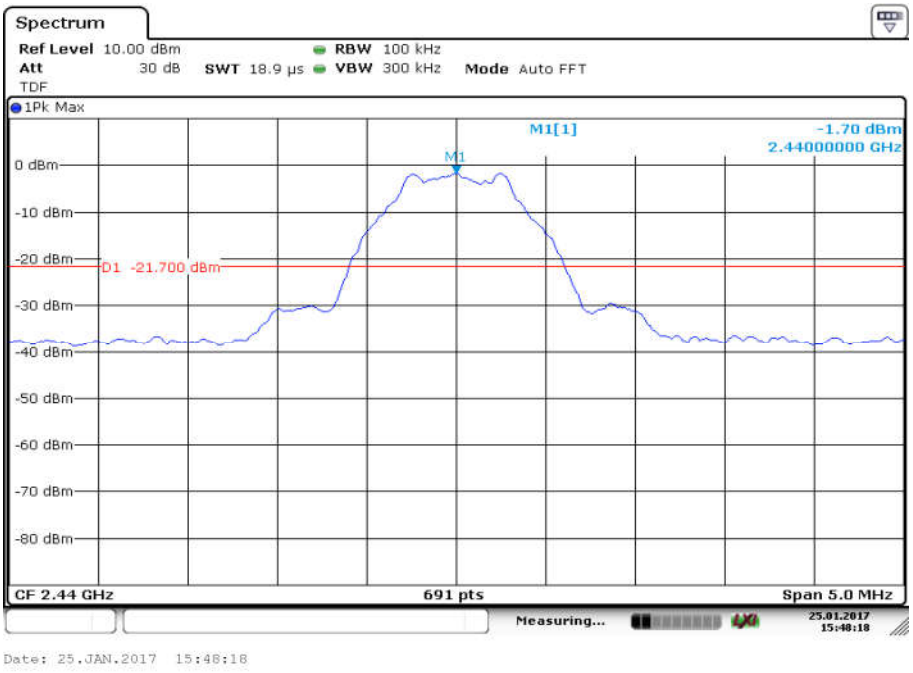

Fig.15 Conducted Spurious Emission (Ch19, Center Frequency)

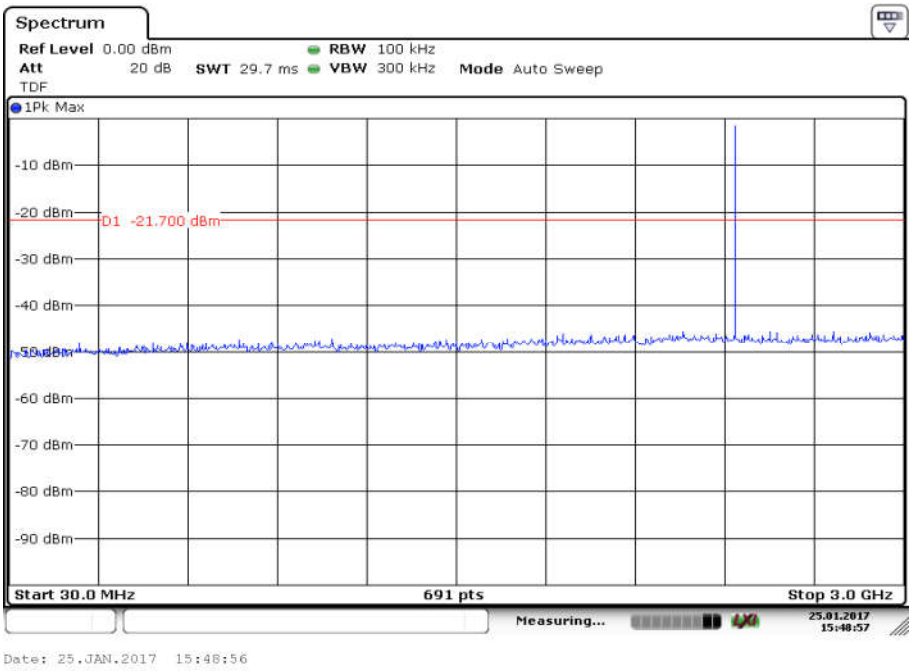

Fig.16 Conducted Spurious Emission (Ch19, 30 MHz-3 GHz)

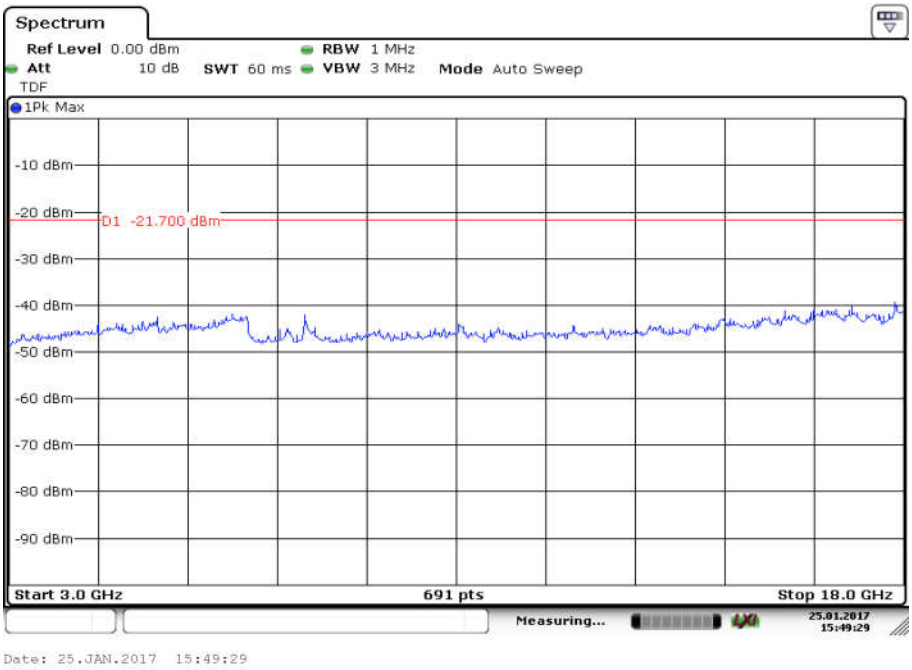

Fig.17 Conducted Spurious Emission (Ch19, 3 GHz-18 GHz)

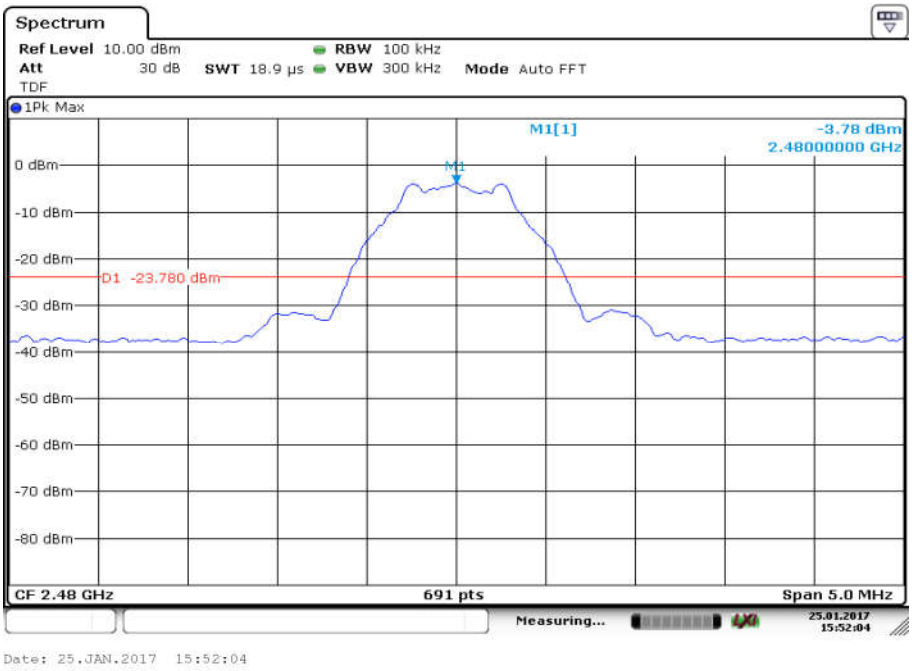

Fig.18 Conducted Spurious Emission (Ch39, Center Frequency)

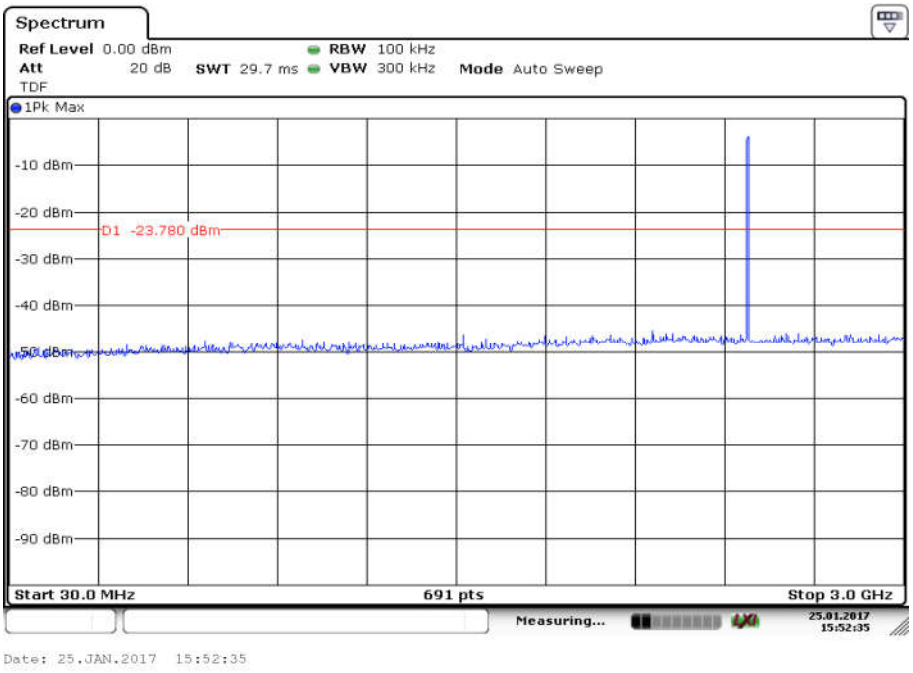

Fig.19 Conducted Spurious Emission (Ch39, 30 MHz-3 GHz)

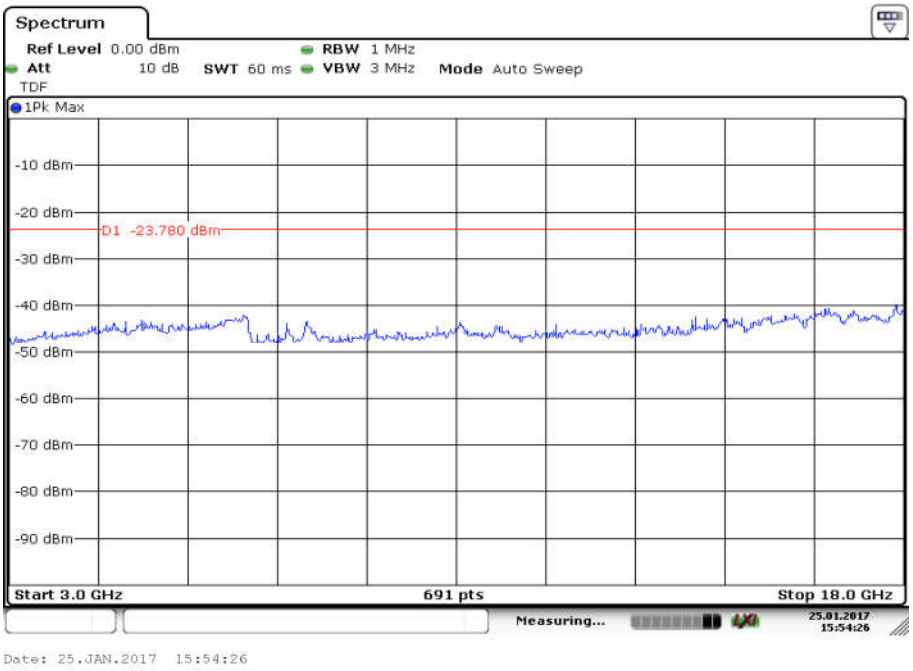

Fig.20 Conducted Spurious Emission (Ch39, 3 GHz-18 GHz)

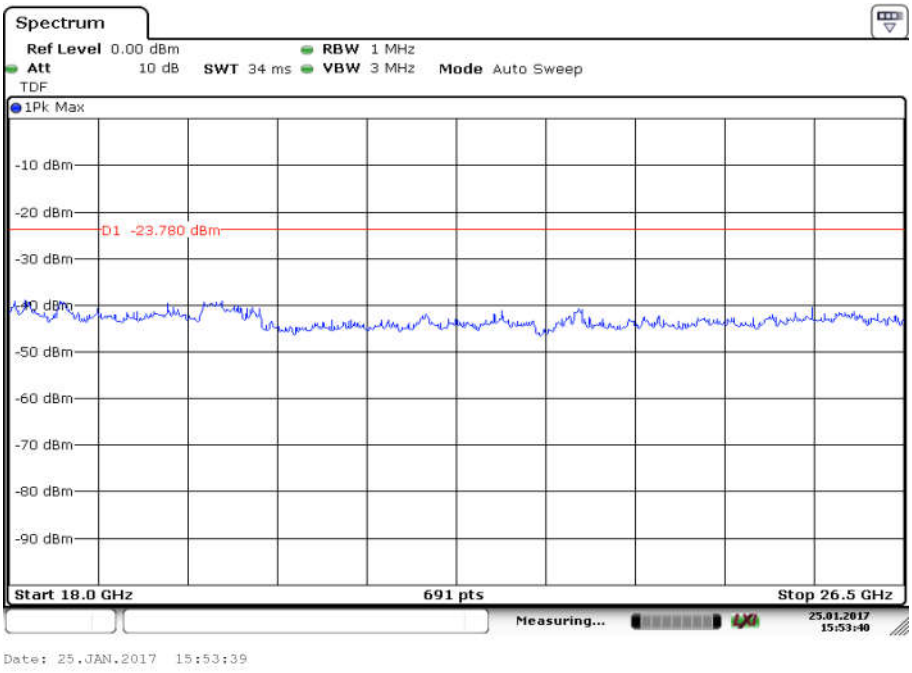

Fig.21 Conducted Spurious Emission (All channels, 18 GHz-26 GHz)

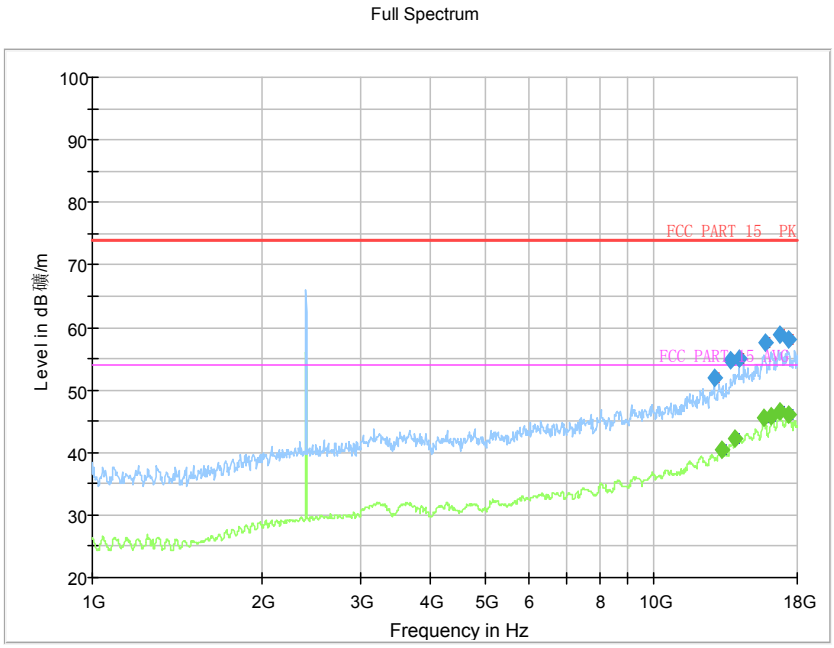

Fig.22 Radiated Spurious Emission (GFSK, Ch0, 1 GHz ~18 GHz)

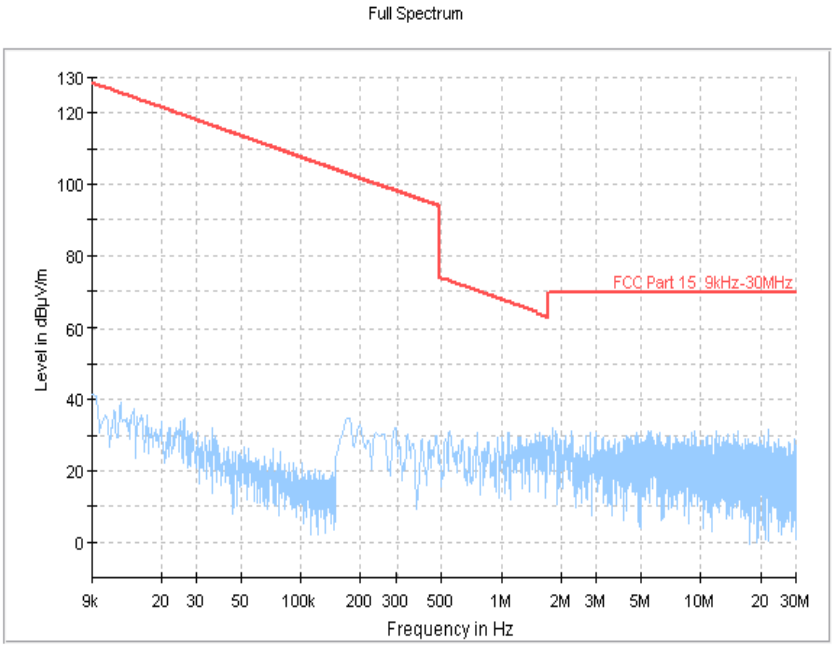

Fig.23 Radiated Spurious Emission (Ch19, 9 kHz-30 MHz)

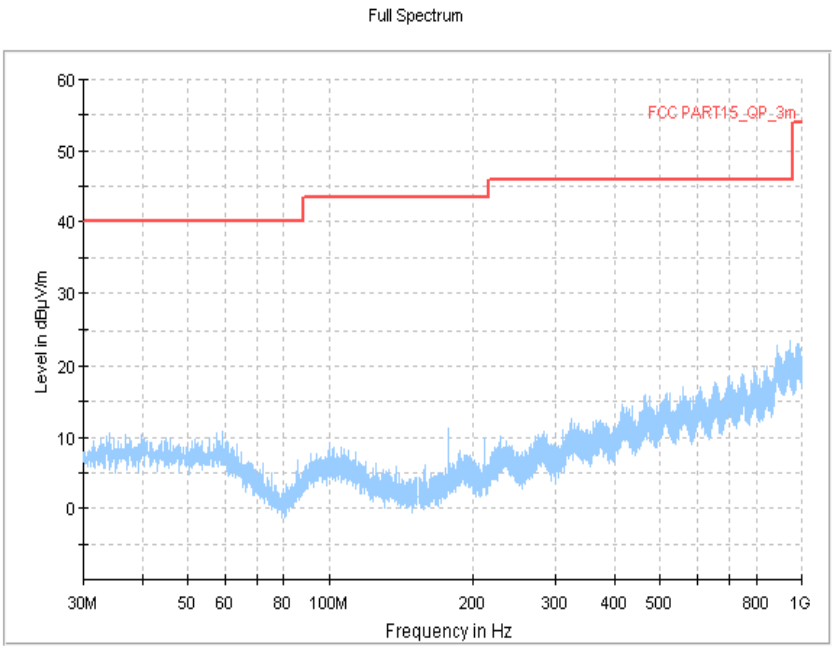

Fig.24 Radiated Spurious Emission (Ch19, 30 MHz-1 GHz)

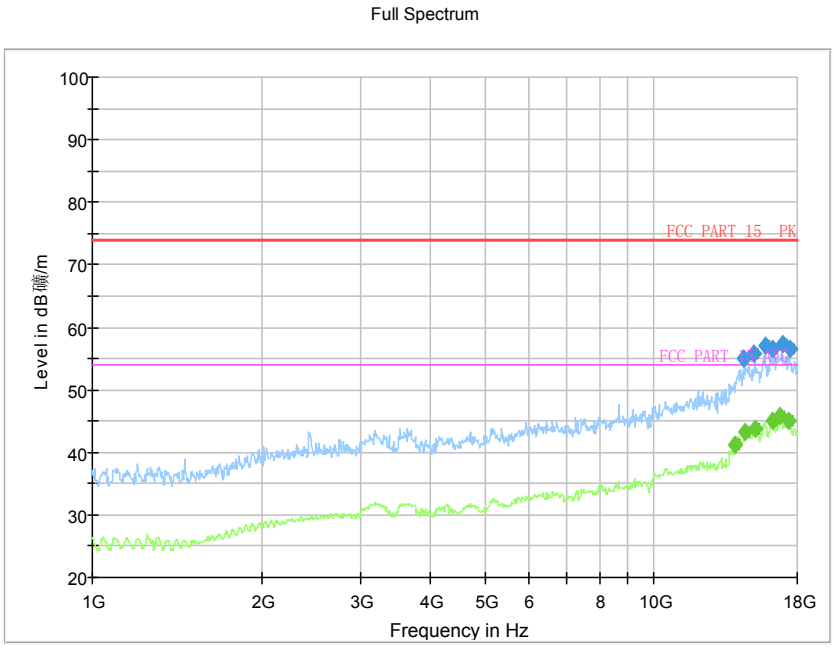

Fig.25 Radiated Spurious Emission (Ch19, 1 GHz- 18 GHz)

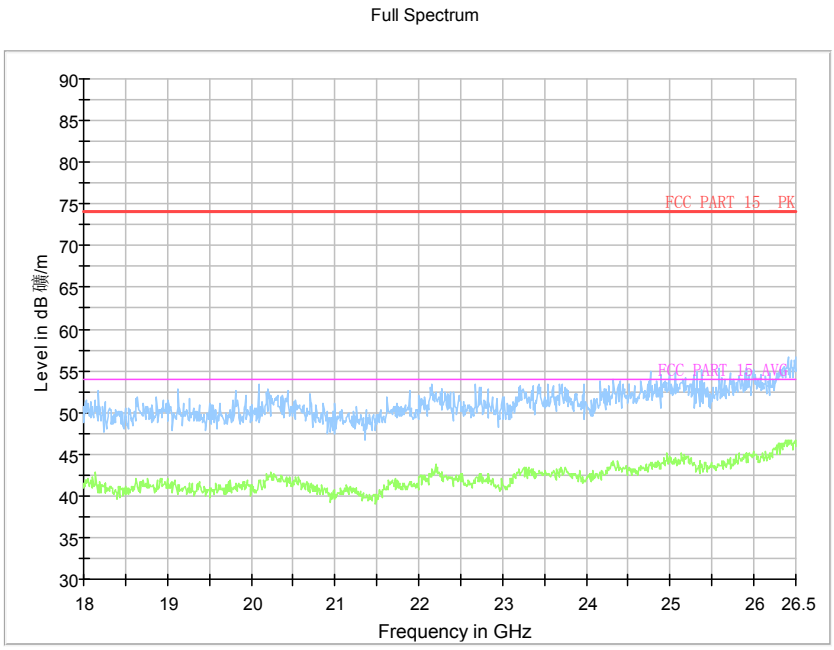

Fig.26 Radiated Spurious Emission (Ch19, 18 GHz-26.5 GHz)

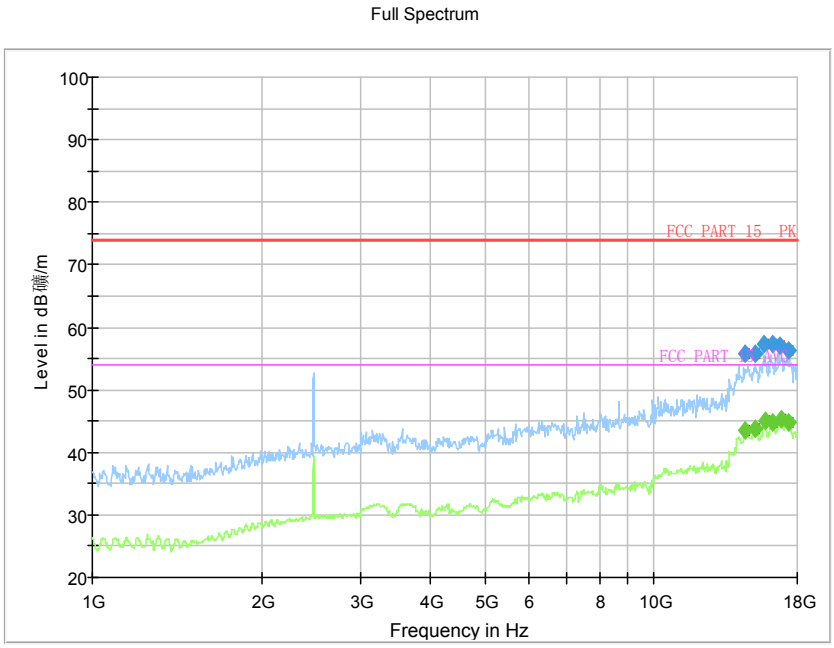

Fig.27 Radiated Spurious Emission (Ch39, 1 GHz-18 GHz)

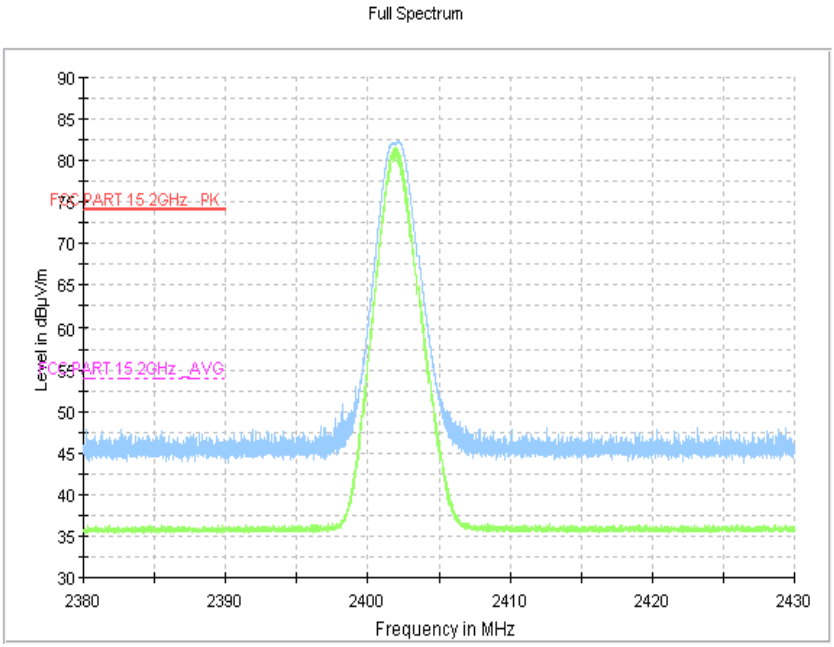

Fig.28 Radiated Emission Power (GFSK, Ch0, 2380GHz~2450GHz)

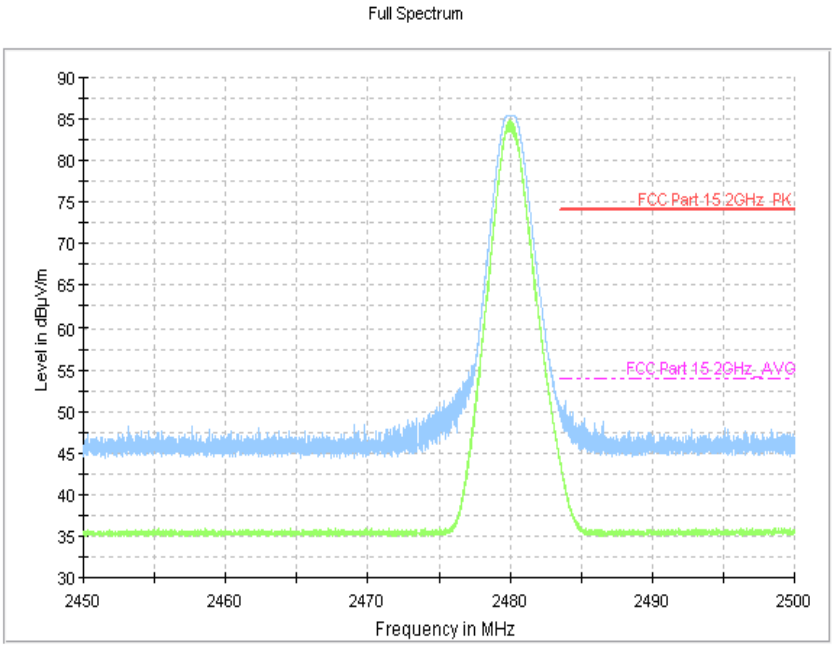

Fig.29 Radiated Emission Power (GFSK, Ch39, 2450GHz~2500GHz)

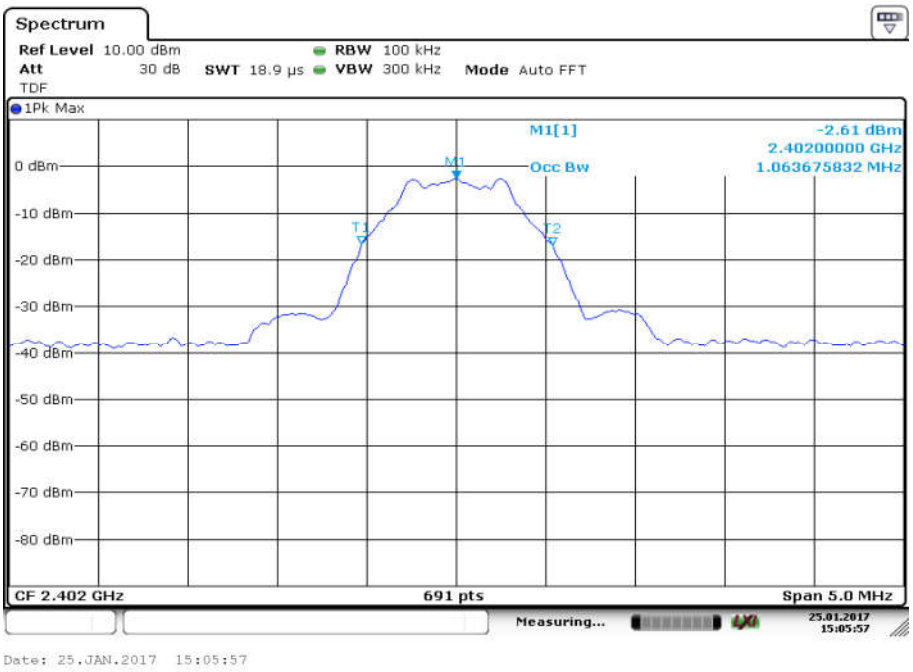

Fig.30 99% Occupied Bandwidth: GFSK, Channel 0

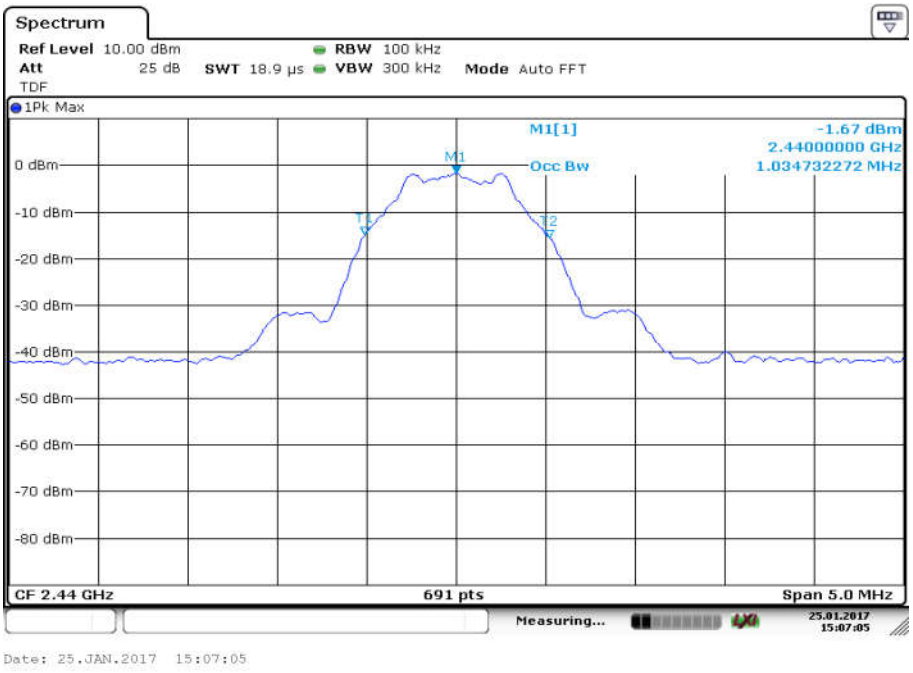

Fig.31 99% Occupied Bandwidth: GFSK, Channel 19

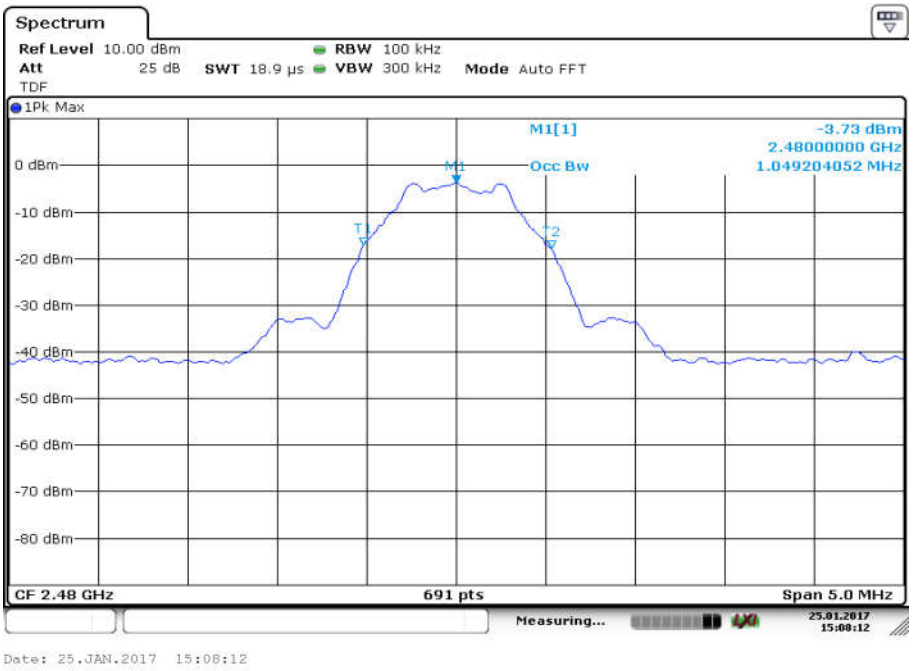

Fig.32 99% Occupied Bandwidth: GFSK, Channel 39

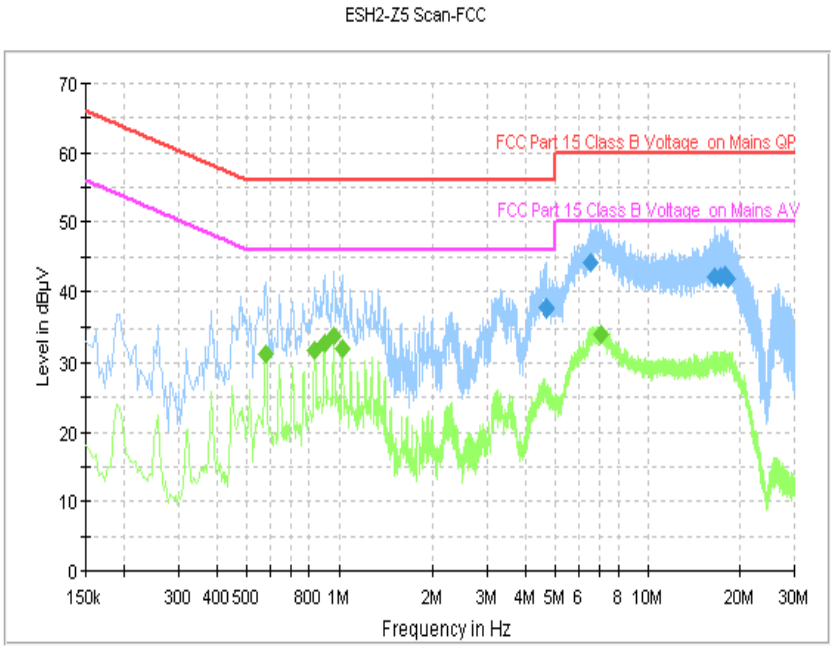

Fig.33 AC Powerline Conducted Emission (Traffic, AE1)

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
4.654000	37.7	GND	N	9.6	18.3	56.0
6.550000	44.2	GND	N	9.7	15.8	60.0
16.486000	42.1	GND	N	9.9	17.9	60.0
17.294000	42.1	GND	N	9.9	17.9	60.0
17.866000	42.4	GND	N	9.9	17.6	60.0
18.318000	41.9	GND	N	9.9	18.1	60.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.578000	31.3	GND	N	9.6	14.7	46.0
0.834000	31.7	GND	N	9.5	14.3	46.0
0.898000	32.8	GND	N	9.6	13.2	46.0
0.962000	33.8	GND	N	9.6	12.2	46.0
1.026000	32.0	GND	N	9.5	14.0	46.0
7.006000	34.0	GND	N	9.7	16.0	50.0

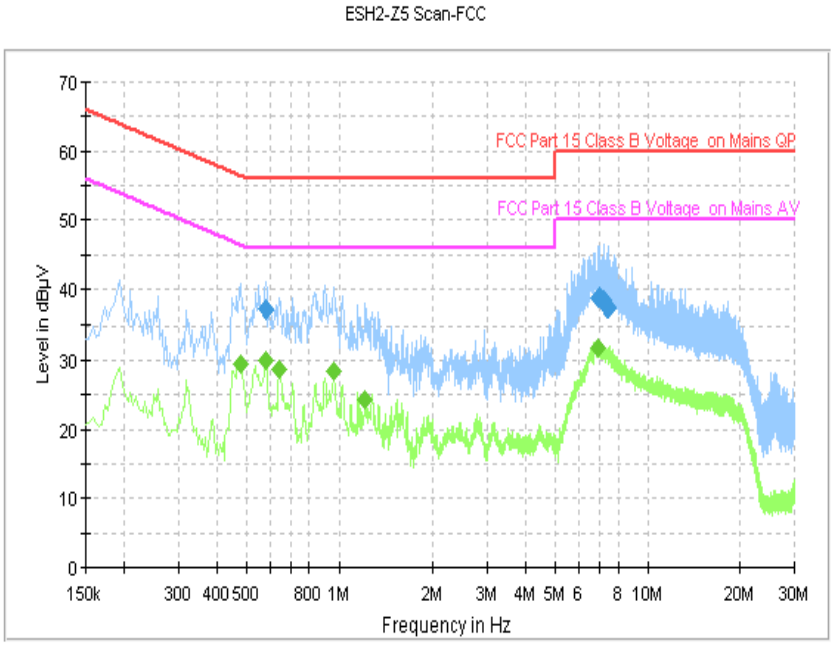

Fig.34 AC Power line Conducted Emission (Idle, AE1)

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.578000	37.2	GND	N	9.6	18.8	56.0
6.866000	38.7	GND	N	9.7	21.3	60.0
6.994000	39.1	GND	N	9.7	20.9	60.0
7.186000	38.4	GND	N	9.7	21.6	60.0
7.402000	37.5	GND	N	9.8	22.5	60.0
7.470000	37.5	GND	N	9.8	22.5	60.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.478000	29.3	GND	N	9.7	17.0	46.4
0.578000	30.0	GND	N	9.6	16.0	46.0
0.642000	28.8	GND	N	9.6	17.2	46.0
0.962000	28.4	GND	N	9.6	17.6	46.0
1.214000	24.2	GND	N	9.5	21.8	46.0
6.910000	31.9	GND	N	9.7	18.1	50.0

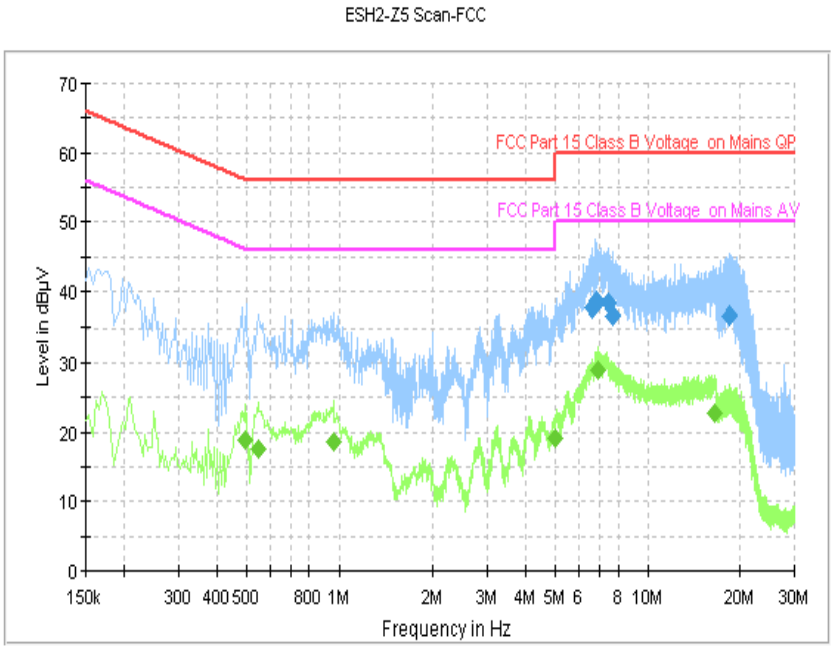

Fig.35 AC Powerline Conducted Emission (Traffic, AE1)

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
6.598000	37.8	GND	N	9.7	22.2	60.0
6.710000	38.3	GND	N	9.7	21.7	60.0
6.802000	38.7	GND	N	9.7	21.3	60.0
7.462000	38.4	GND	N	9.8	21.6	60.0
7.654000	36.7	GND	N	9.8	23.3	60.0
18.506000	36.8	GND	N	9.9	23.2	60.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.494000	18.9	GND	N	9.7	27.2	46.1
0.546000	17.5	GND	N	9.7	28.5	46.0
0.962000	18.7	GND	N	9.6	27.3	46.0
4.998000	19.1	GND	N	9.6	26.9	46.0
6.894000	28.9	GND	N	9.7	21.1	50.0
16.566000	22.8	GND	N	9.9	27.2	50.0

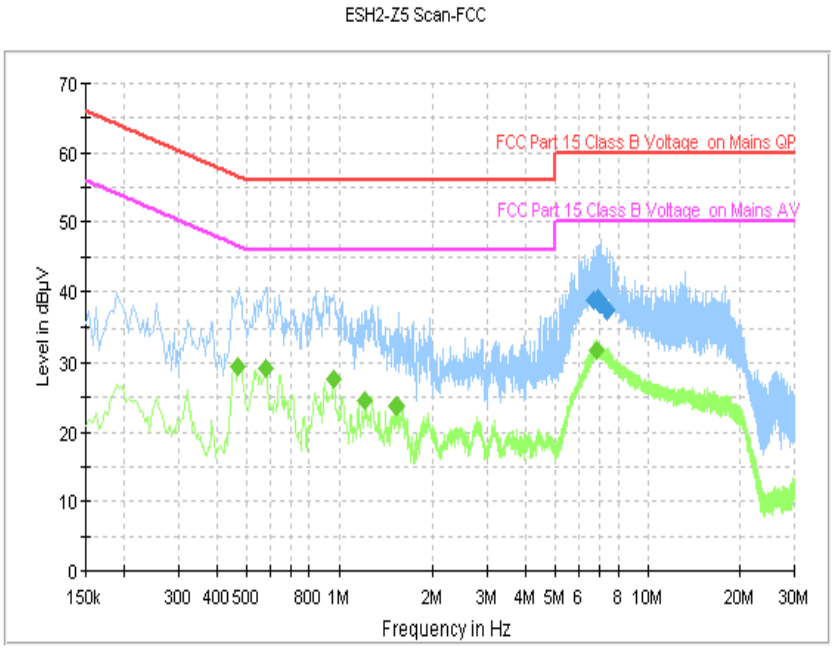

Fig.36 AC Power line Conducted Emission (Idle, AE1)

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
6.670000	38.7	GND	N	9.7	21.3	60.0
6.786000	38.6	GND	N	9.7	21.4	60.0
6.882000	38.9	GND	N	9.7	21.1	60.0
6.994000	38.5	GND	N	9.7	21.5	60.0
7.026000	38.4	GND	N	9.7	21.6	60.0
7.358000	37.4	GND	N	9.8	22.6	60.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.470000	29.5	GND	N	9.7	17.1	46.5
0.578000	29.2	GND	N	9.6	16.8	46.0
0.962000	27.7	GND	N	9.6	18.3	46.0
1.218000	24.7	GND	N	9.6	21.3	46.0
1.538000	23.6	GND	N	9.6	22.4	46.0
6.794000	31.7	GND	N	9.7	18.3	50.0

ANNEX C: Persons involved in this testing

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

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