FCC PART 15C
TEST REPORT
No. I16N01166-BLE

for

Yulong Computer Telecommunication Scientific (Shenzhen) Co.,Ltd.

LTE phone

Model Name: Coolpad E503

With

Hardware Version: P0

Software Version: 6.0.003.P0.161010.3505I-A00

FCC ID: R38YLE503

Issued Date: Dec 1st, 2016

Test Laboratory:

FCC 2.948 Listed: No.342690

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

Test Laboratory:

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

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I16N01166-BLE	Rev.0	1st edition	2016-12-01

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℃
Extreme Temperature:	0/+45℃
Relative Humidity:	20-75%

1.3. Project data

Testing Start Date:	2016-10-19
Testing End Date:	2016-12-01

1.4. Signature

An Ran

(Prepared this test report)

Tang Weisheng

(Reviewed this test report)

Zhang Bojun

(Approvedthis test report)

2. Client Information

2.1. Applicant Information

Company Name:	Yulong Computer Telecommunication Scientific (Shenzhen) Co., Ltd.
Address:	Coolpad Information Harbor, High-tech Industrial Park (North), Nanshan District, Shenzhen, P.R.C.
City:	Shenzhen
Postal Code:	/
Country:	China
Telephone:	0755-83301199-83335
Fax:	/

2.2. Manufacturer Information

Company Name:	Yulong Computer Telecommunication Scientific (Shenzhen) Co., Ltd.
Address:	Coolpad Information Harbor, High-tech Industrial Park (North), Nanshan District, Shenzhen, P.R.C.
City:	Shenzhen
Postal Code:	/
Country:	China
Telephone:	0755-83301199-83335
Fax:	/

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

3.1. About EUT

Description	LTE phone
Model Name	Coolpad E503
Market Name	/
Frequency Band	2402MHz~2480MHz
Type of Modulation	GFSK
Number of Channels	40
FCC ID	R38YLE503

3.2. Internal Identification of EUT

EUT ID*	IMEI	HW Version	SW Version	Receive Date
EUT1	/	P0	6.0.003.P0.161010.3505I-A00	2016-10-19

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

3.3. Internal Identification of AE

AE ID*	Description	Type	SN
AE1	Charger	CA05-050100U	/

*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

5. Test Results

5.1. Summary of Test Results

No	Test cases	Sub-clause of Part15C	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 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 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	2017-08-09	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	2017-06-26	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:

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 0.55 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	-2.00	Fig.1	P
	19	-0.72	Fig.2	P
	39	-1.53	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	-17.55	P
	19	Fig.5	-16.21	P
	39	Fig.6	-17.08	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	687.4	P
	19	Fig.8	687.4	P
	39	Fig.9	694.6	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 ~3 GHz	Fig.22	P
		3 GHz ~18 GHz	Fig.23	P
	19	9 kHz ~30 MHz	Fig.24	P
		30 MHz ~1 GHz	Fig.25	P
		1 GHz ~3 GHz	Fig.26	P
		3 GHz ~18 GHz	Fig.27	P
		18 GHz~ 26.5 GHz	Fig.28	P
	39	1 GHz ~3 GHz	Fig.29	P
		3 GHz ~18 GHz	Fig.30	P
	Power(CH0)	2.38 GHz ~ 2.45 GHz	Fig.31	P
	Power(CH39)	2.45 GHz ~ 2.5 GHz	Fig.32	P

GFSK CH0 (1-3GHz)

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Corr. (dB)	Pol
2736.333333	48.96	74.00	25.04	21.1	H
2788.000000	50.01	74.00	23.99	21.3	H
2816.500000	49.83	74.00	24.17	21.6	H
2854.166667	48.69	74.00	25.31	21.4	H
2891.333333	49.25	74.00	24.75	22.1	H
2937.666667	51.12	74.00	22.88	22.5	H

Frequency (MHz)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Corr. (dB)	Pol
2737.833333	40.83	54.00	13.17	21.1	H
2790.166667	40.99	54.00	13.01	21.4	H
2822.000000	40.79	54.00	13.21	21.2	V
2866.333333	41.21	54.00	12.79	21.7	V
2894.500000	41.90	54.00	12.10	21.9	V
2945.666667	41.55	54.00	12.45	22.5	H

GFSK CH0 (3-18GHz)

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Corr. (dB)	Pol
16915.00000	49.84	74.00	24.16	16.2	V
17075.50000	50.39	74.00	23.61	16.3	V
17270.50000	49.52	74.00	24.48	16.2	V
17477.00000	49.69	74.00	24.31	16.6	V
17691.00000	49.90	74.00	24.10	16.8	V
17844.50000	49.98	74.00	24.02	17.5	V

Frequency (MHz)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Corr. (dB)	Pol
16887.00000	43.22	54.00	10.78	16.3	V
17066.50000	43.89	54.00	10.11	16.4	V
17310.50000	44.39	54.00	9.61	16.3	V
17482.00000	44.15	54.00	9.85	16.6	V
17653.50000	43.66	54.00	10.34	17.0	V
17864.50000	44.47	54.00	9.53	17.6	V

GFSK CH19 (1-3GHz)

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Corr. (dB)	Pol
2729.333333	48.67	74.00	25.33	20.7	V
2782.666667	49.08	74.00	24.92	21.2	H
2830.000000	50.42	74.00	23.58	21.6	H
2865.833333	50.15	74.00	23.85	21.7	V
2894.333333	50.27	74.00	23.73	22.1	H
2931.833333	50.46	74.00	23.54	22.4	H

Frequency (MHz)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Corr. (dB)	Pol
2724.000000	40.39	54.00	13.61	20.5	V
2777.500000	40.80	54.00	13.20	21.0	H
2831.000000	41.17	54.00	12.83	21.6	H
2867.333333	41.32	54.00	12.68	21.7	V
2896.166667	41.13	54.00	12.87	22.0	H
2934.333333	42.22	54.00	11.78	22.4	H

GFSK CH19 (3-18GHz)

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Corr. (dB)	Pol
16543.00000	50.13	74.00	23.87	16.0	H
16888.50000	48.38	74.00	25.62	16.2	H
17143.00000	49.31	74.00	24.69	16.2	H
17216.00000	49.92	74.00	24.08	16.2	H
17521.00000	50.79	74.00	23.21	16.4	H
17801.00000	49.50	74.00	24.50	17.4	H

Frequency (MHz)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Corr. (dB)	Pol
16141.00000	42.51	54.00	11.49	15.2	H
16527.50000	43.25	54.00	10.75	15.9	H
16843.00000	42.67	54.00	11.33	16.3	H
17219.50000	43.21	54.00	10.79	16.2	H
17546.00000	43.88	54.00	10.12	16.5	H
17791.00000	44.45	54.00	9.55	17.4	H

GFSK CH39 (1-3GHz)

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Corr. (dB)	Pol
2736.000000	49.00	74.00	25.00	20.9	V
2774.500000	51.12	74.00	22.88	20.8	V
2839.333333	50.33	74.00	23.67	21.6	H
2882.000000	50.51	74.00	23.49	21.9	H
2907.333333	50.74	74.00	23.26	22.0	V
2942.000000	50.51	74.00	23.49	22.5	H

Frequency (MHz)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Corr. (dB)	Pol
2734.000000	40.99	54.00	13.01	21.0	H
2774.500000	40.35	54.00	13.65	20.8	V
2843.833333	41.11	54.00	12.89	21.6	H
2891.833333	42.65	54.00	11.35	22.1	H
2913.500000	41.87	54.00	12.13	22.0	V
2944.666667	42.47	54.00	11.53	22.5	H

GFSK CH39 (3-18GHz)

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Corr. (dB)	Pol
16522.00000	50.43	74.00	23.57	15.9	V
16771.50000	49.93	74.00	24.07	16.2	V
17140.50000	50.10	74.00	23.90	16.1	H
17386.00000	49.76	74.00	24.24	16.3	H
17510.50000	50.10	74.00	23.90	16.6	V
17822.00000	50.22	74.00	23.78	17.4	H

Frequency (MHz)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Corr. (dB)	Pol
16581.00000	43.82	54.00	10.18	16.0	H
16777.50000	43.75	54.00	10.25	16.2	V
17222.50000	44.04	54.00	9.96	16.2	H
17435.00000	44.17	54.00	9.83	16.7	V
17655.00000	44.62	54.00	9.38	17.0	V
17826.50000	45.14	54.00	8.86	17.3	V

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 (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 C for test graphs.

Conclusion: Pass

ANNEX B: TEST FIGURE LIST

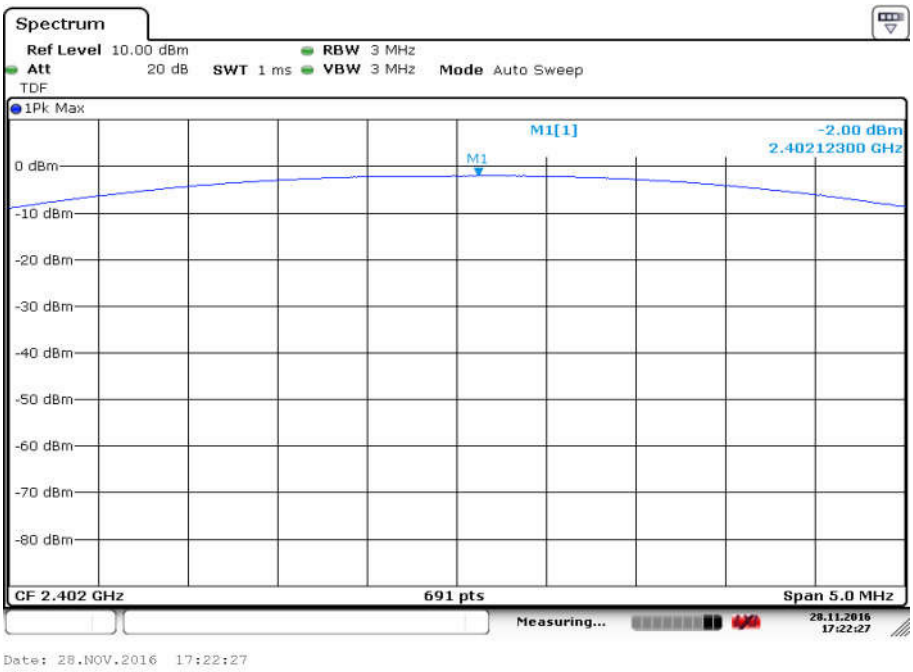


Fig.1 Maximum Peak Output Power(GFSK, Ch 0)

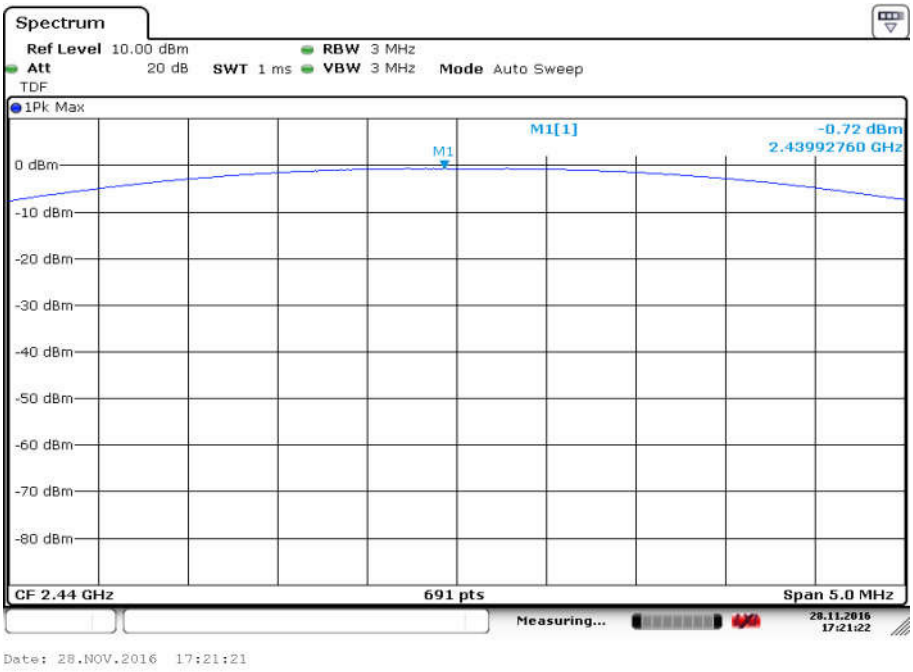


Fig.2 Maximum Peak Output Power(GFSK, Ch 19)

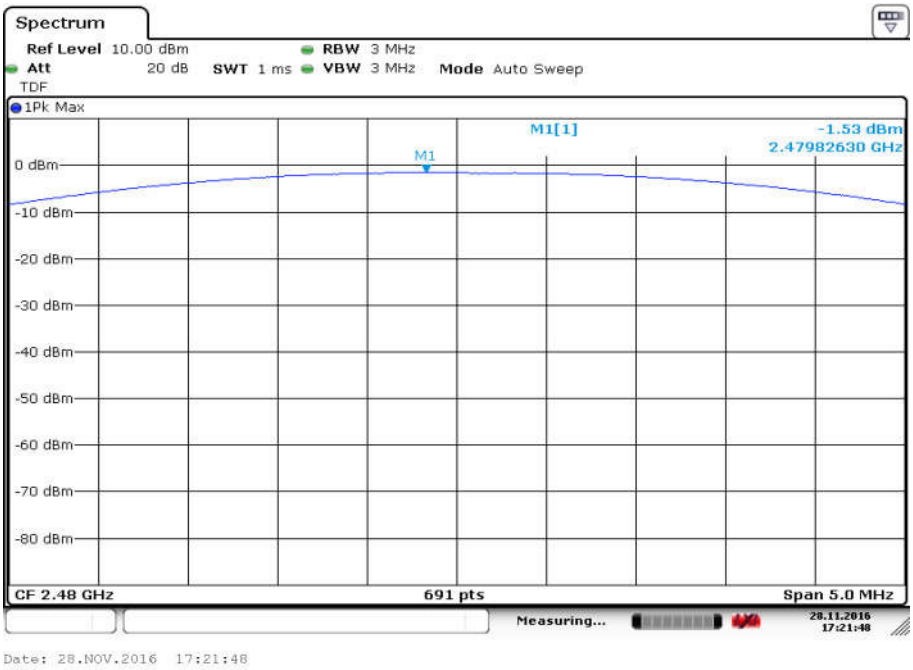


Fig.3 Maximum Peak Output Power(GFSK, Ch 39)

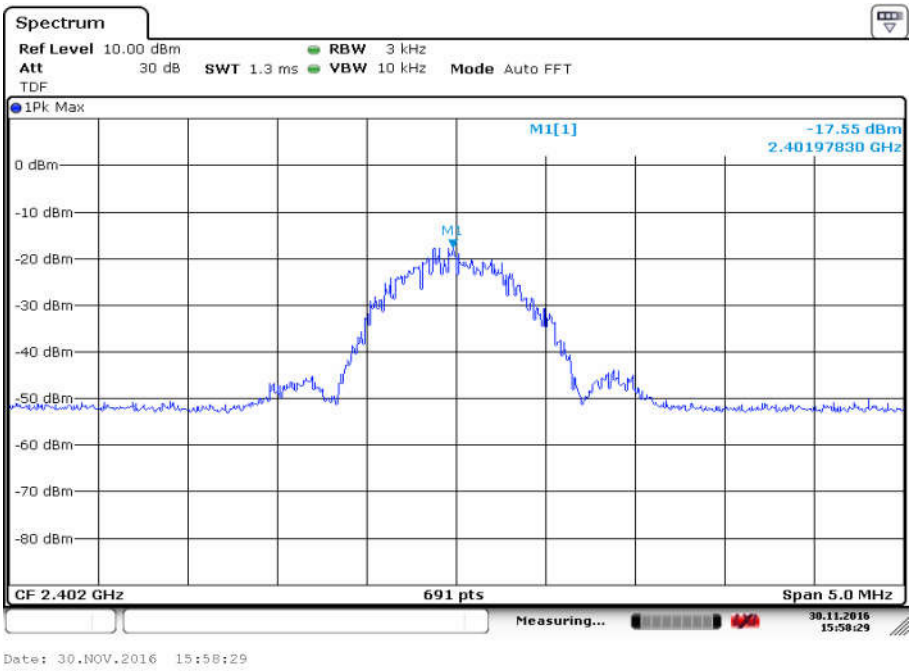


Fig.4 Power Spectral Density (Ch 0)

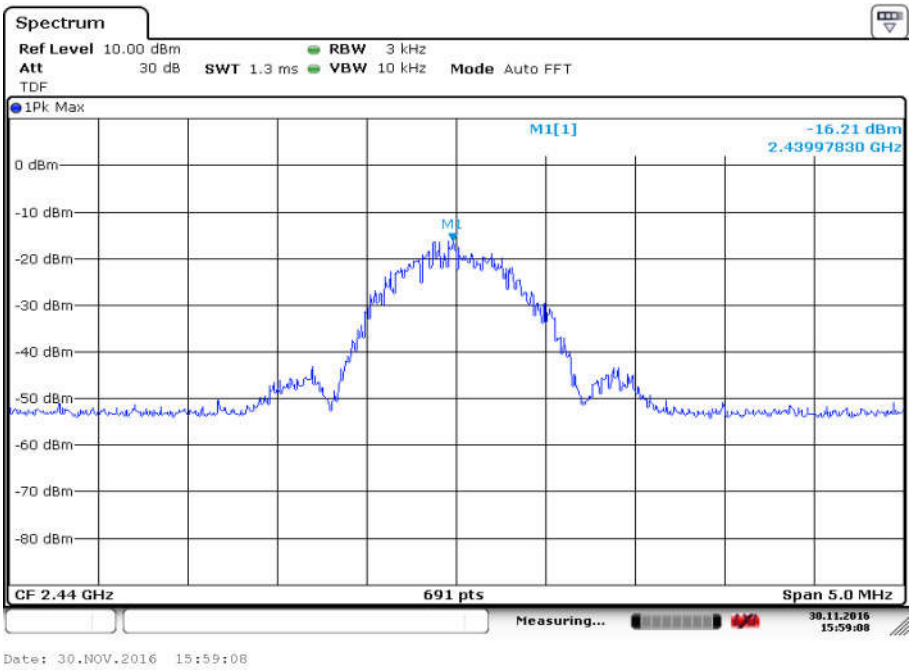


Fig.5 Power Spectral Density (Ch 19)

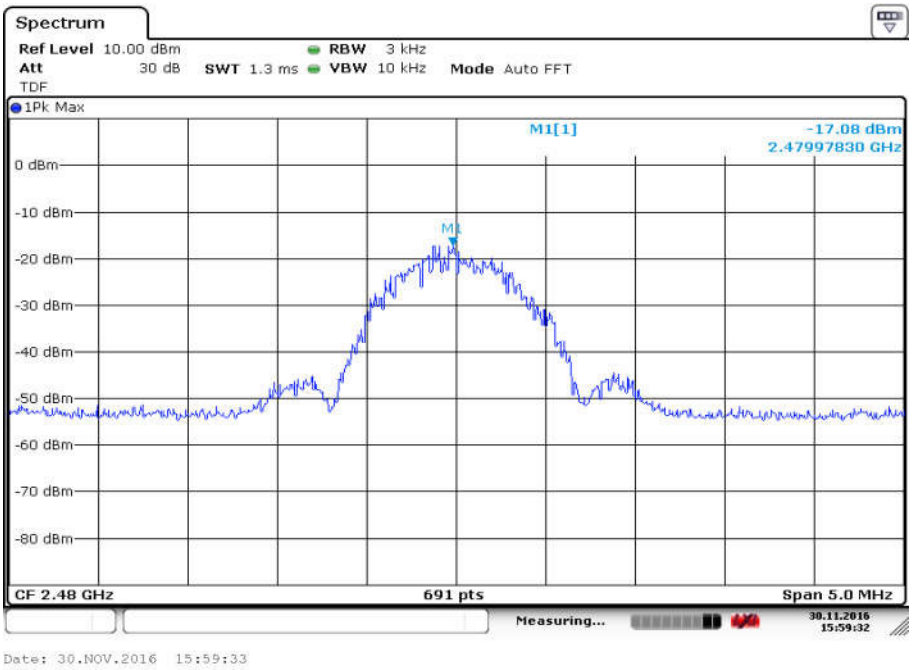


Fig.6 Power Spectral Density (Ch 39)

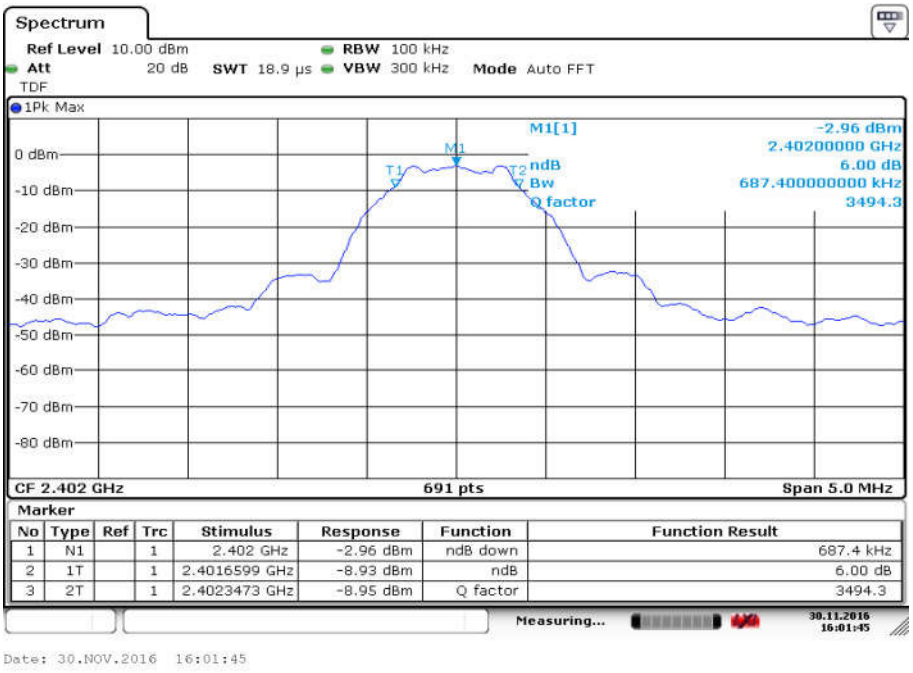


Fig.7 Occupied 6dB Bandwidth (Ch 0)

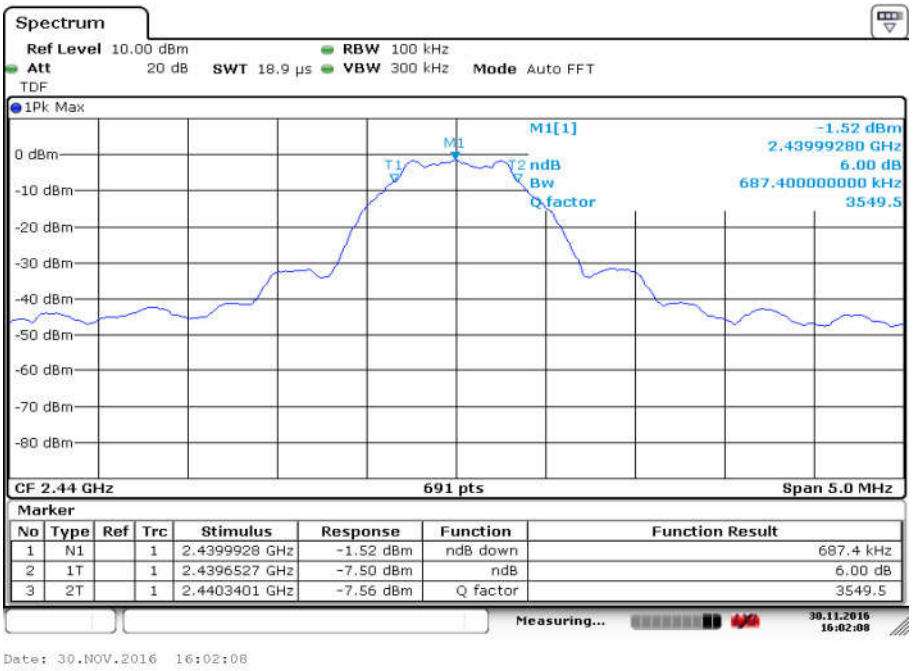


Fig.8 Occupied 6dB Bandwidth (Ch 19)

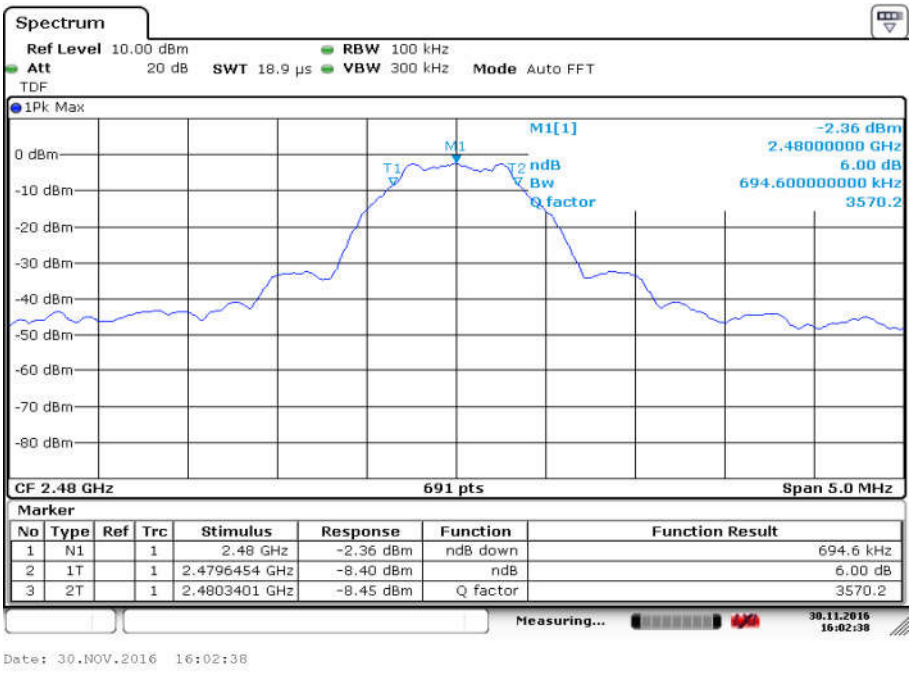


Fig.9 Occupied 6dB Bandwidth (Ch 39)

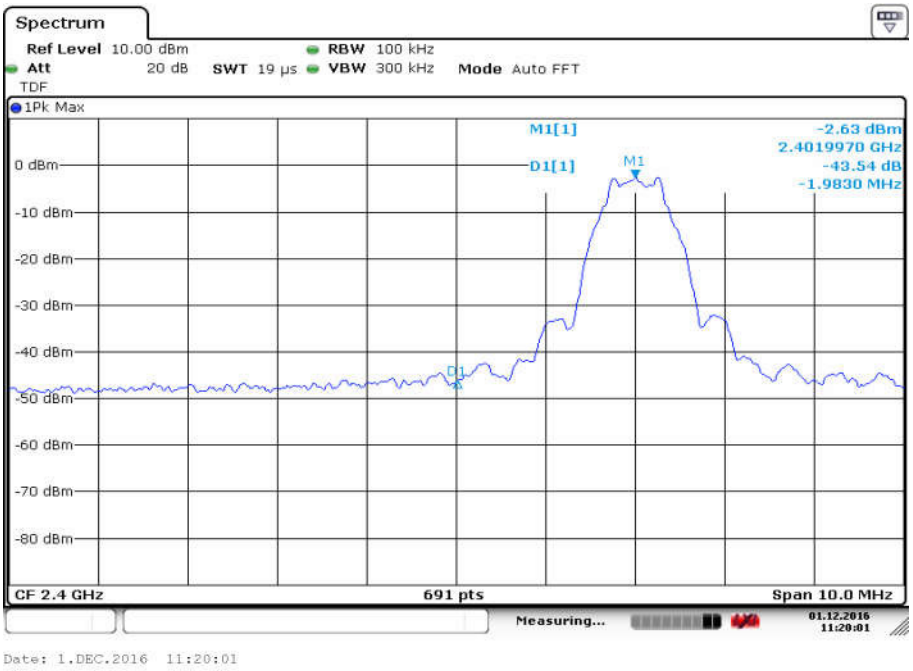


Fig.10 Band Edges (Ch 0)

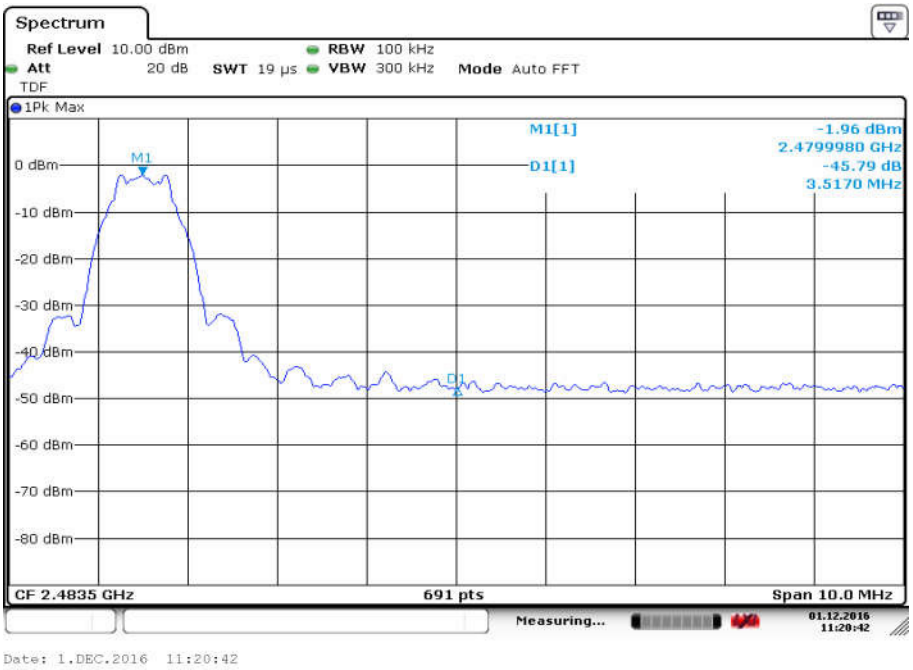


Fig.11 Band Edges (Ch 39)

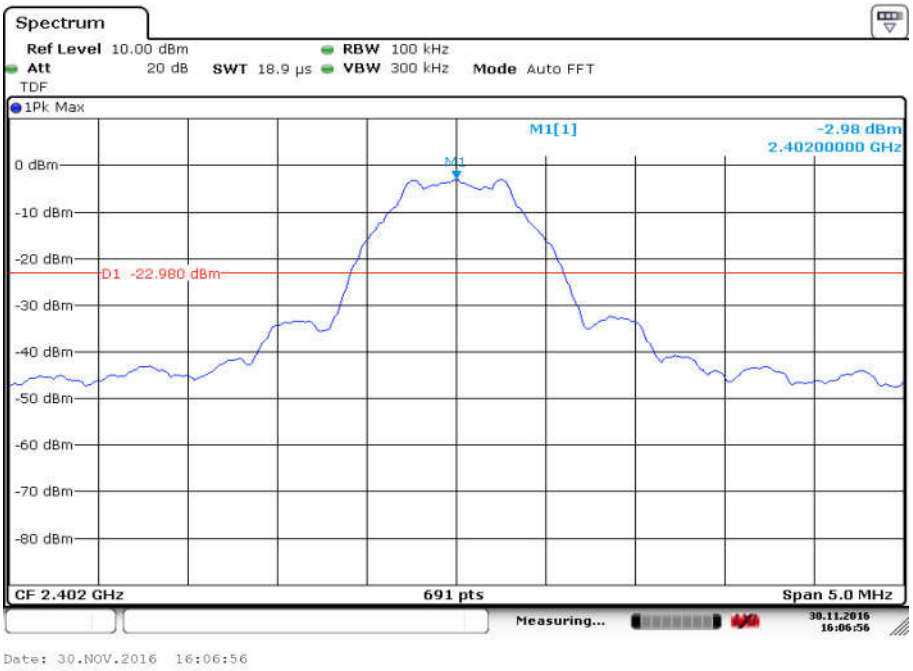


Fig.12 Conducted Spurious Emission (Ch0, Center Frequency)

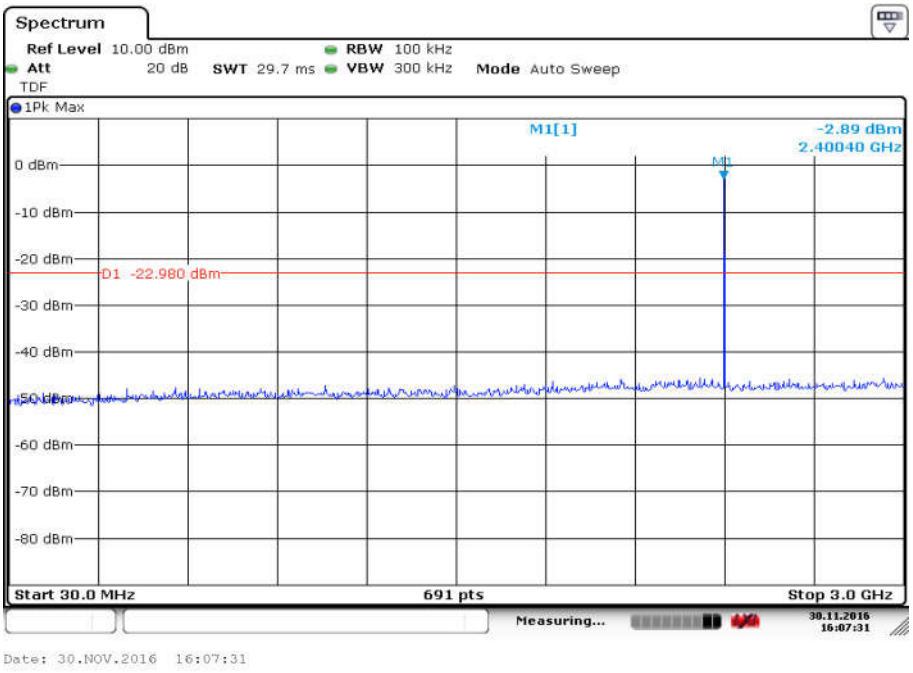


Fig.13 Conducted Spurious Emission (Ch0, 30 MHz-3 GHz)

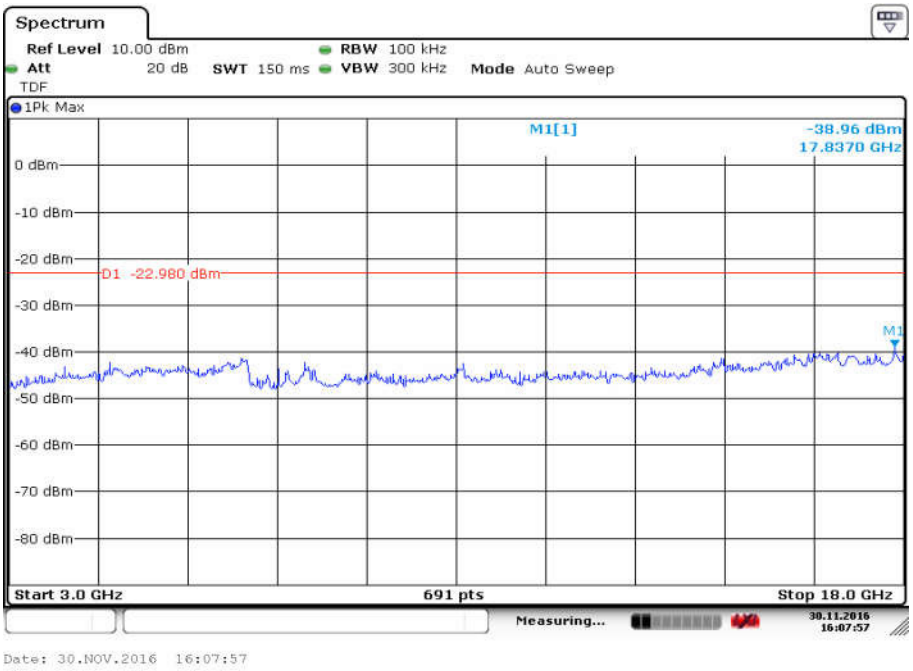


Fig.14 Conducted Spurious Emission (Ch0, 3 GHz-18 GHz)

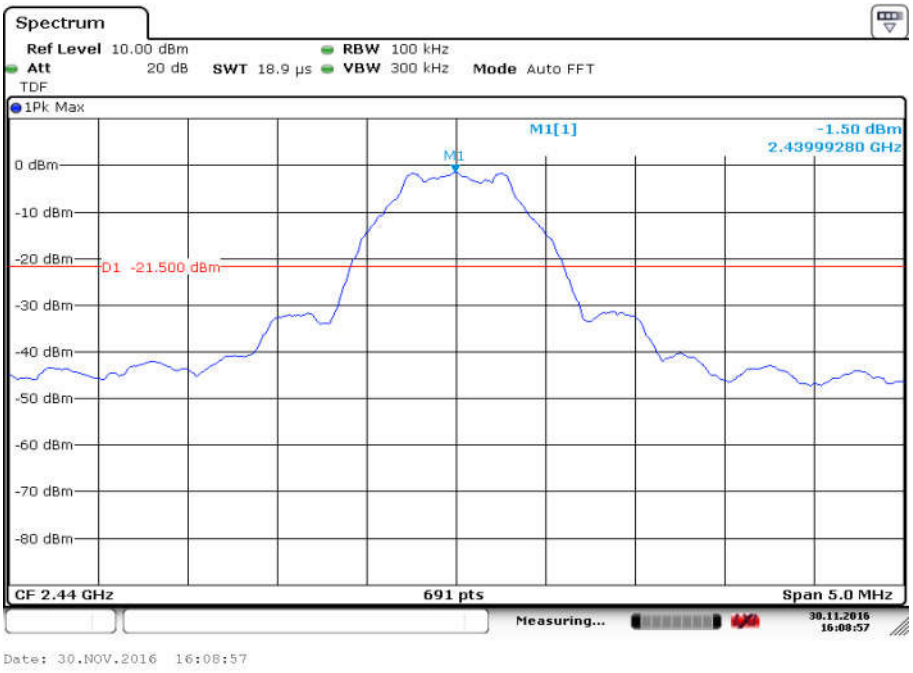


Fig.15 Conducted Spurious Emission (Ch19, Center Frequency)

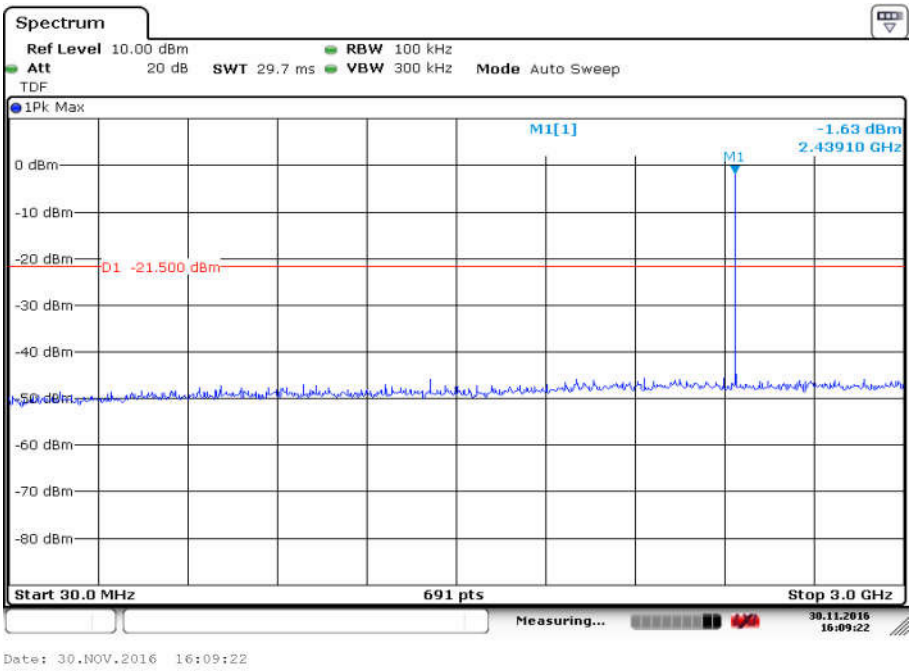


Fig.16 Conducted Spurious Emission (Ch19, 30 MHz-3 GHz)

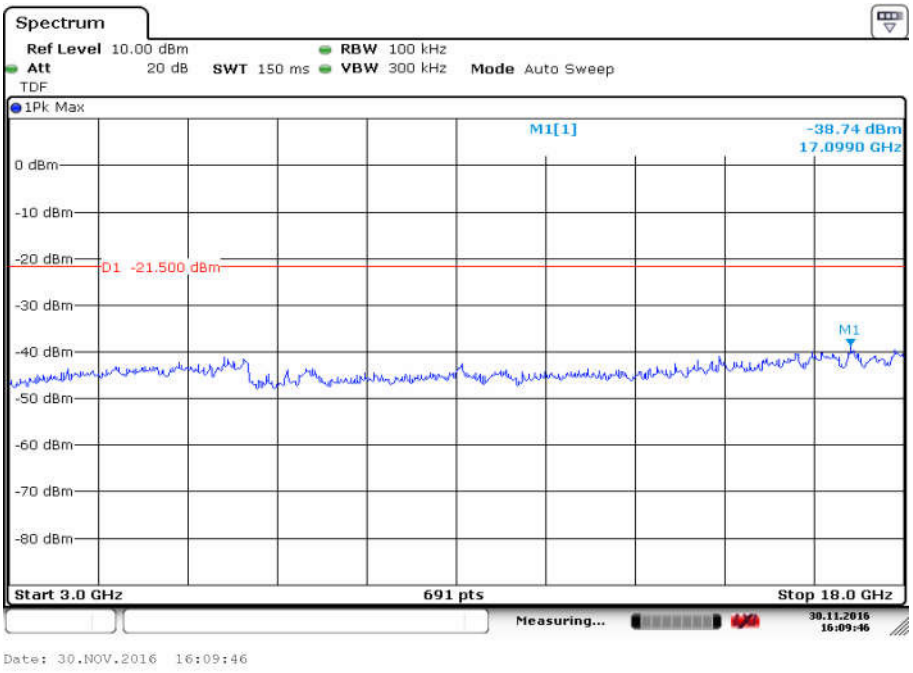


Fig.17 Conducted Spurious Emission (Ch19, 3 GHz-18 GHz)

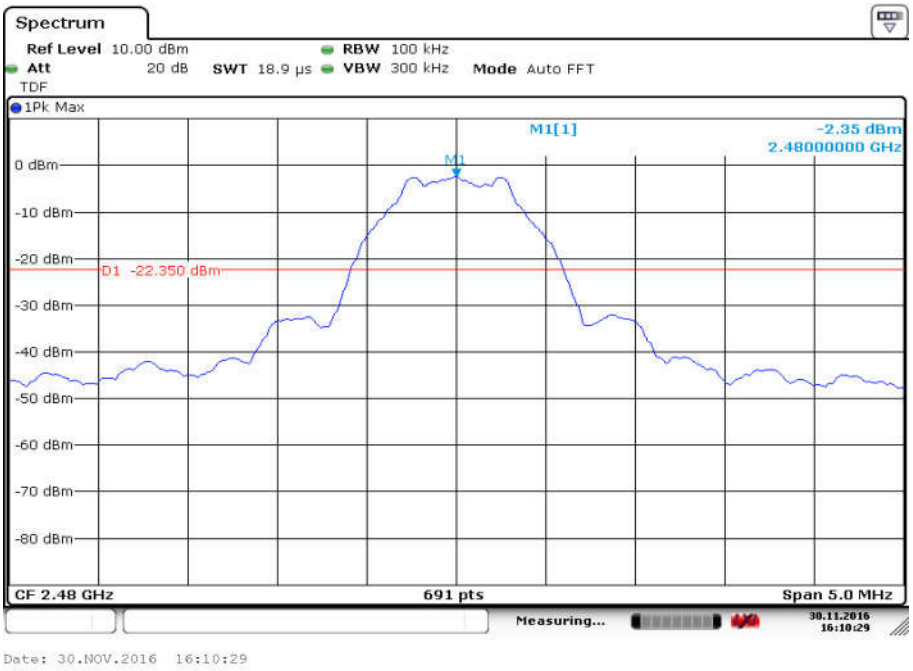


Fig.18 Conducted Spurious Emission (Ch39, Center Frequency)

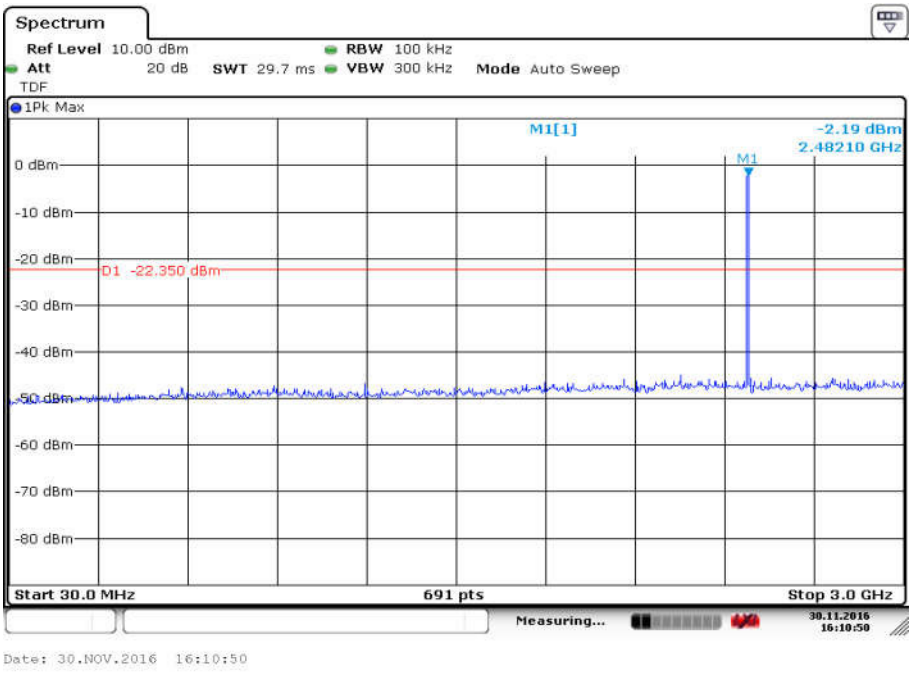


Fig.19 Conducted Spurious Emission (Ch39, 30 MHz-3 GHz)

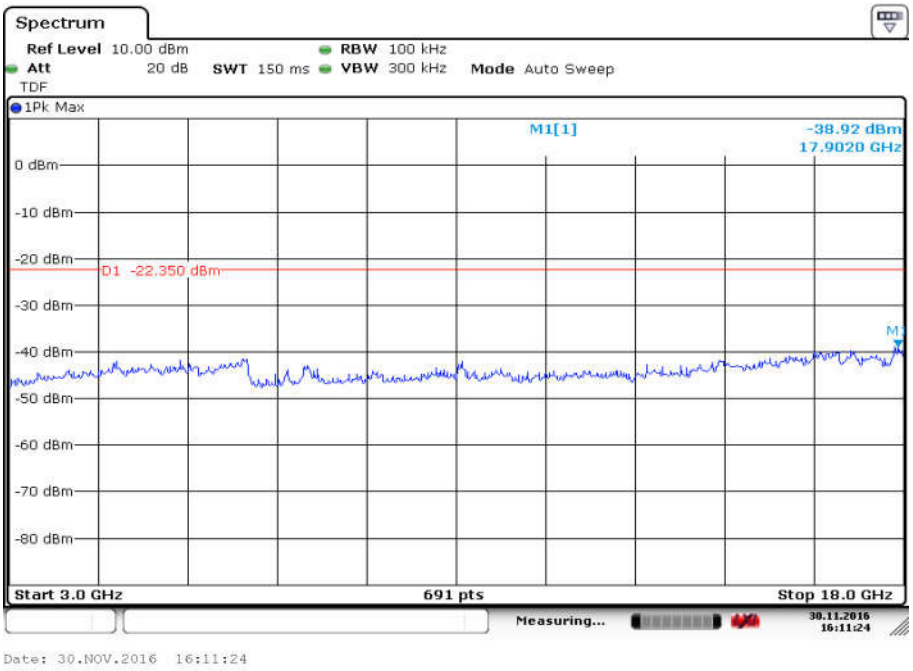


Fig.20 Conducted Spurious Emission (Ch39, 3 GHz-18 GHz)

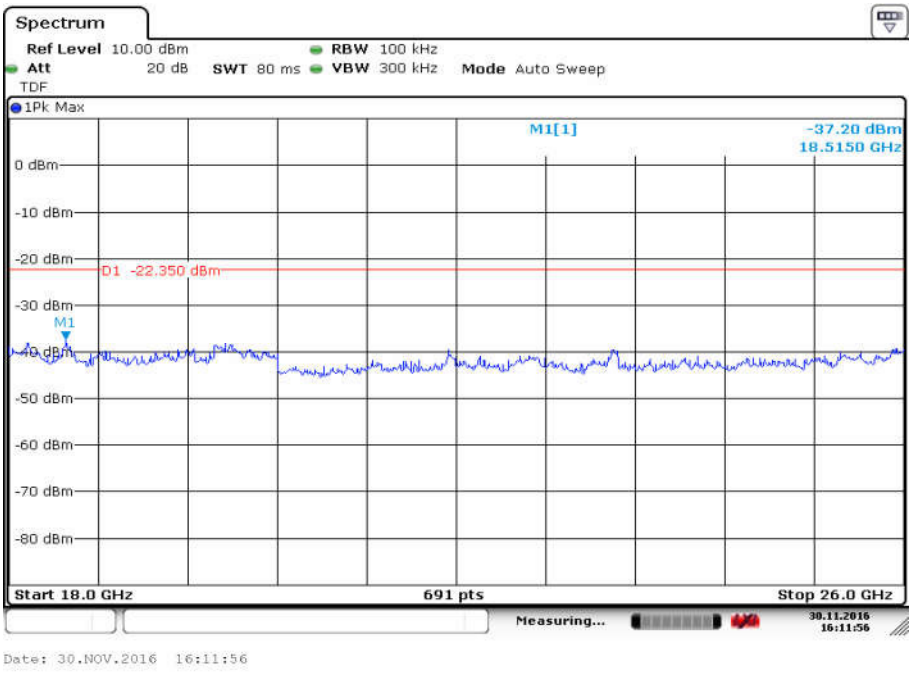
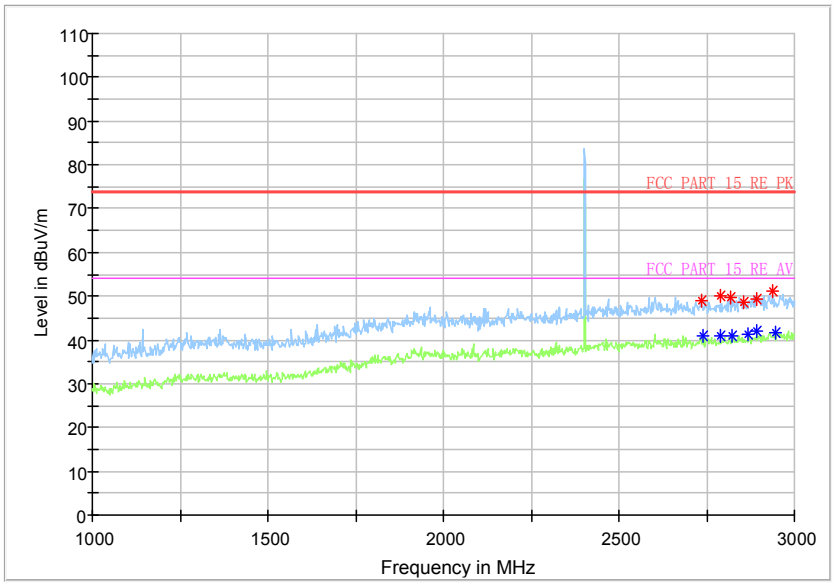
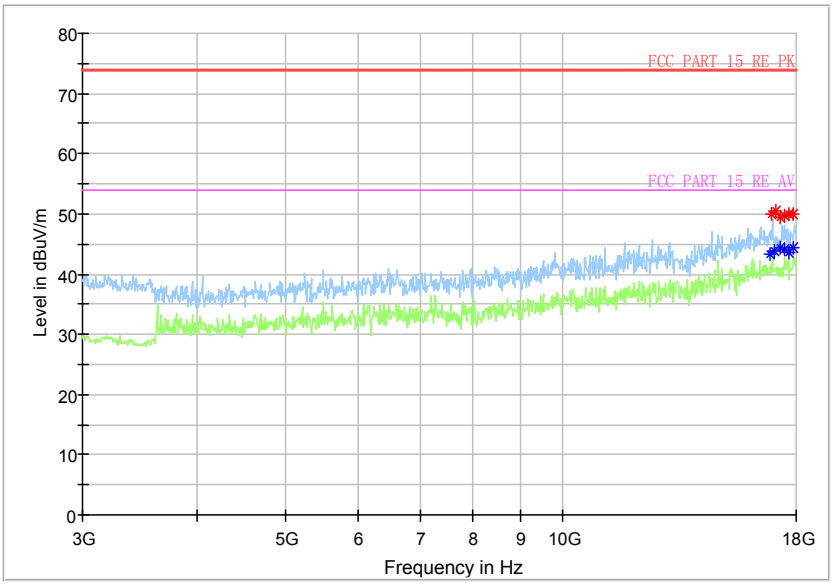


Fig.21 Conducted Spurious Emission (All channels, 18 GHz-26 GHz)



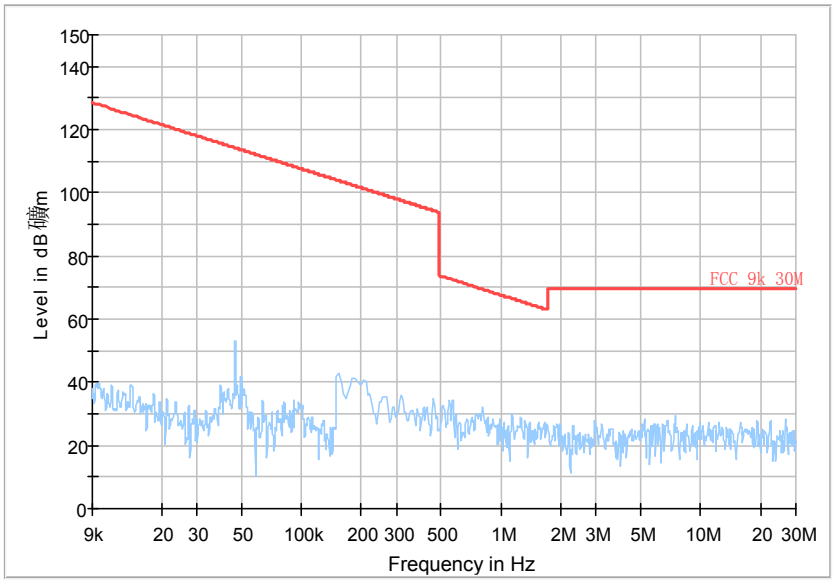
BT_BT4.0GFSK_CH0

Fig.22 Radiated Spurious Emission (GFSK, Ch0, 1 GHz ~3 GHz)



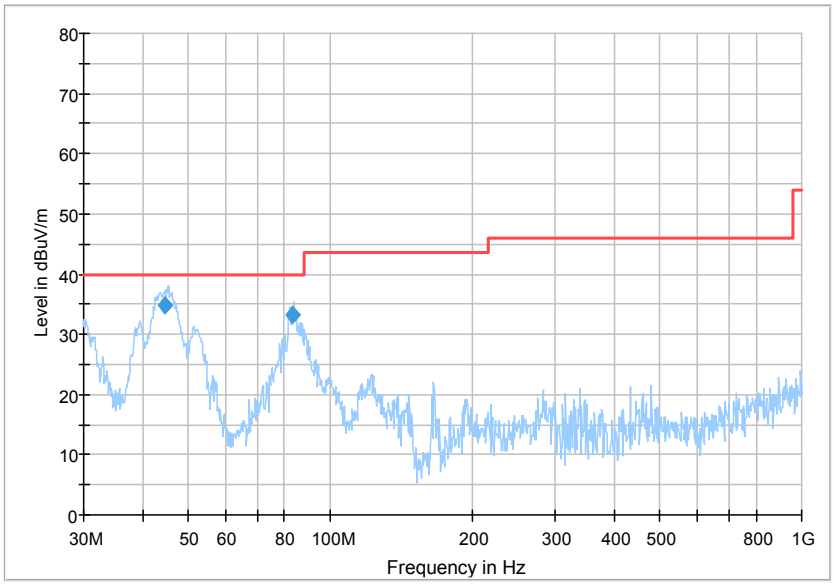
BT_BT4.0GFSK_CH0

Fig.23 Radiated Spurious Emission (GFSK, Ch0, 3 GHz ~18 GHz)



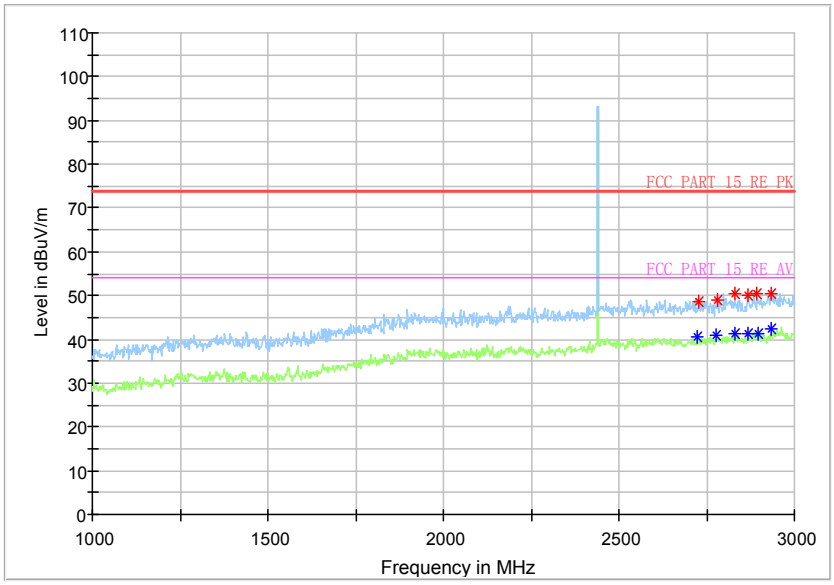
BT_BT4.0GFSK_CH19

Fig.24 Radiated Spurious Emission (Ch19, 9 kHz-30 MHz)



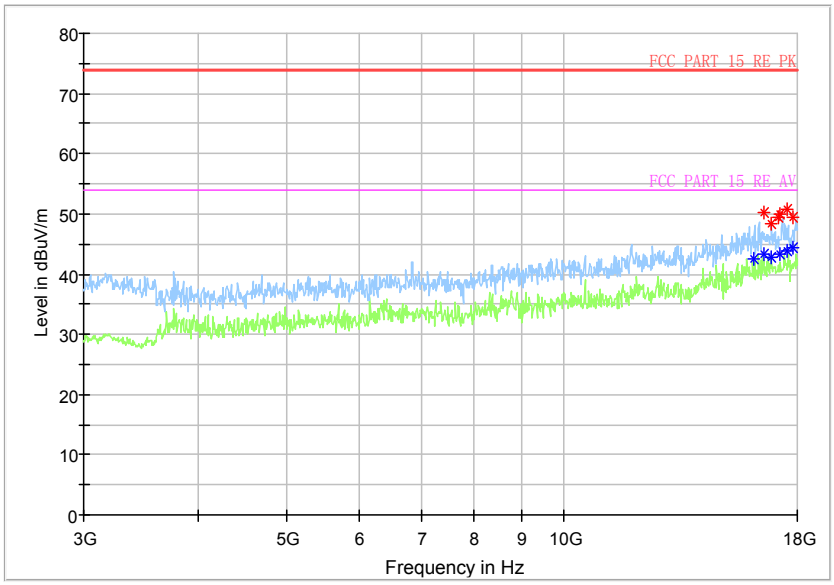
BT_BT4.0GFSK_CH19

Fig.25 Radiated Spurious Emission (Ch19, 30 MHz-1 GHz)



BT_BT4.0GFSK_CH19

Fig.26 Radiated Spurious Emission (Ch19, 1 GHz- 3 GHz)



BT_BT4.0GFSK_CH19

Fig.27 Radiated Spurious Emission (Ch19, 3 GHz-18 GHz)

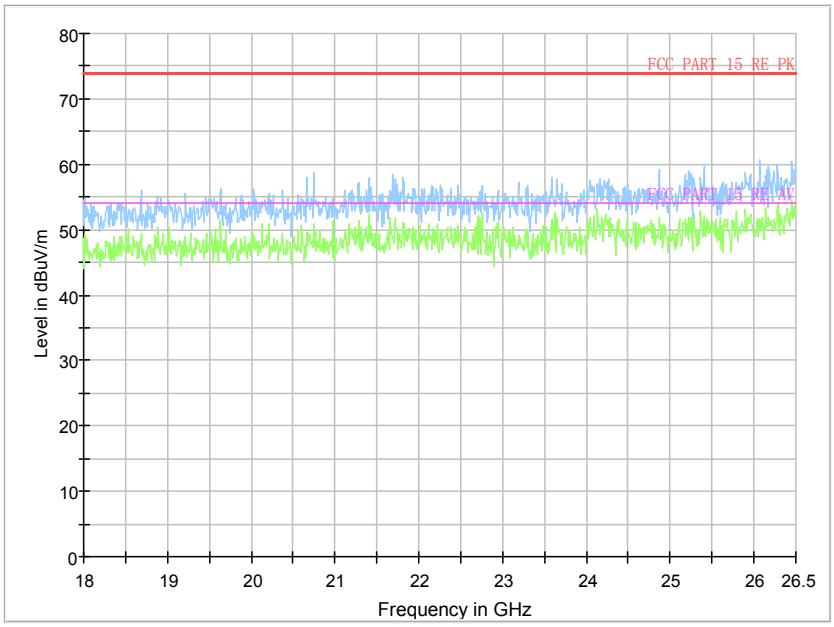
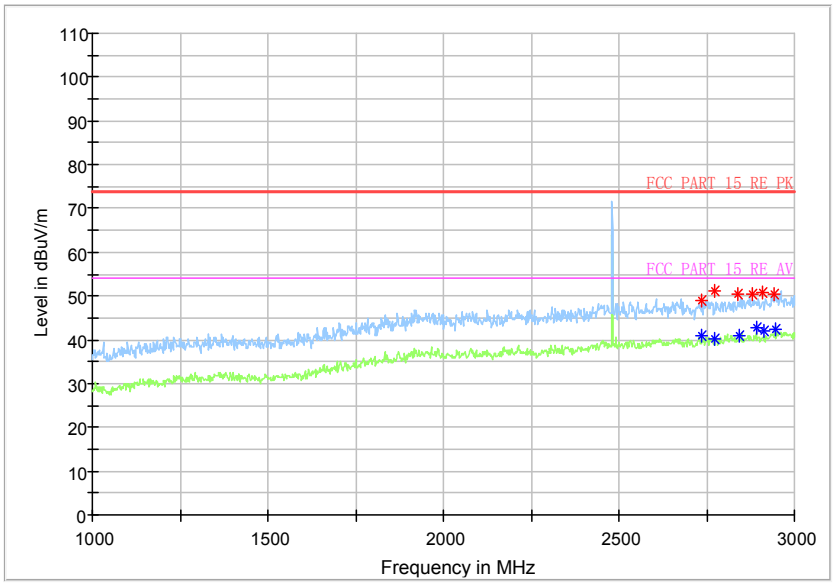
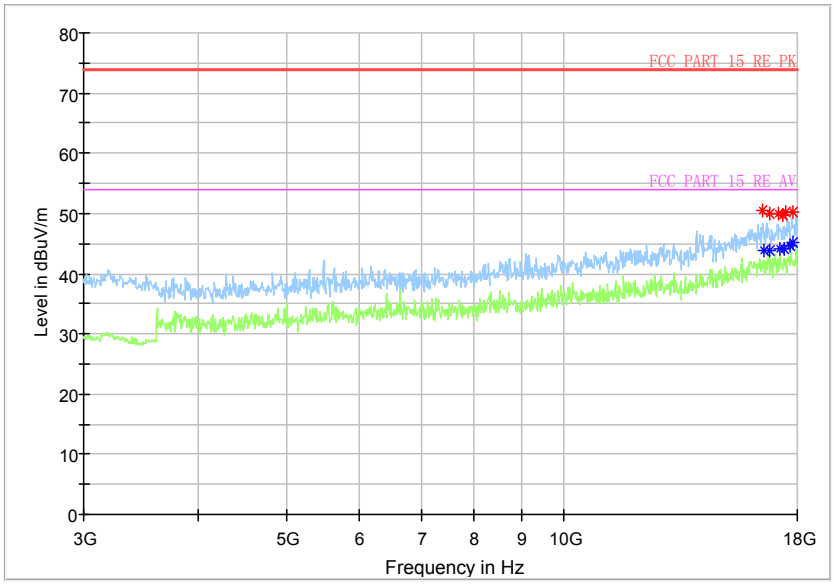


Fig.28 Radiated Spurious Emission (Ch19, 18 GHz-26.5 GHz)



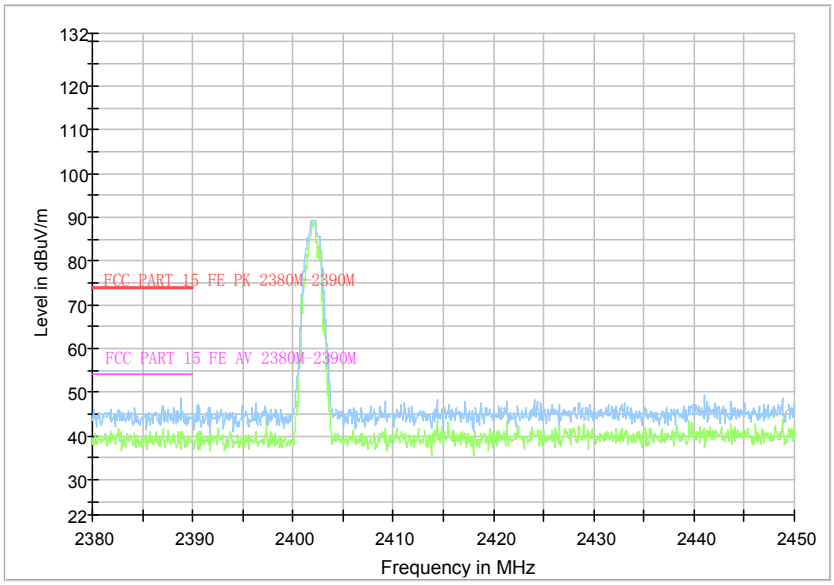
BT_BT4.0GFSK_CH39

Fig.29 Radiated Spurious Emission (Ch39, 1 GHz-3 GHz)



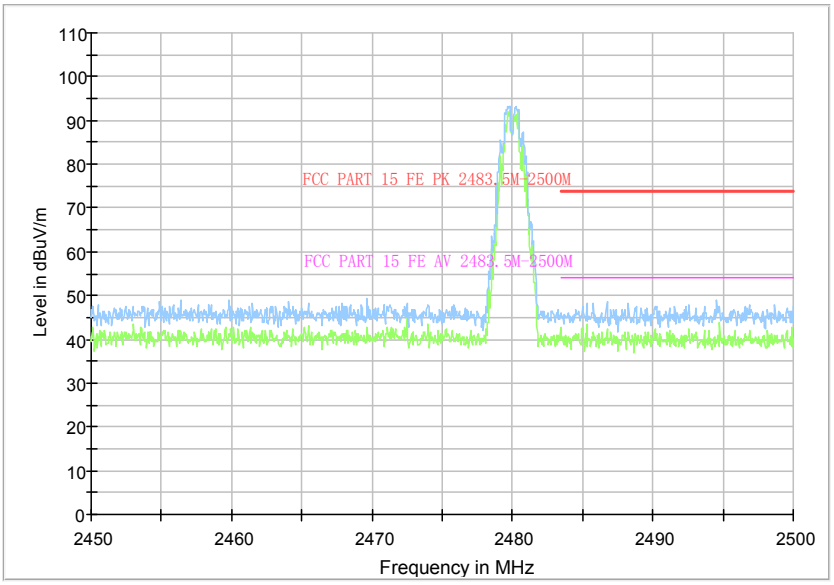
BT_BT4.0GFSK_CH39

Fig.30 Radiated Spurious Emission (Ch39, 3 GHz-18 GHz)



FE_BT4.0GFSK_CH0

Fig.31 Radiated Emission Power (GFSK, Ch0, 2380GHz~2450GHz)



FE_BT4.0GFSK_CH39

Fig.32 Radiated Emission Power (GFSK, Ch39, 2450GHz~2500GHz)

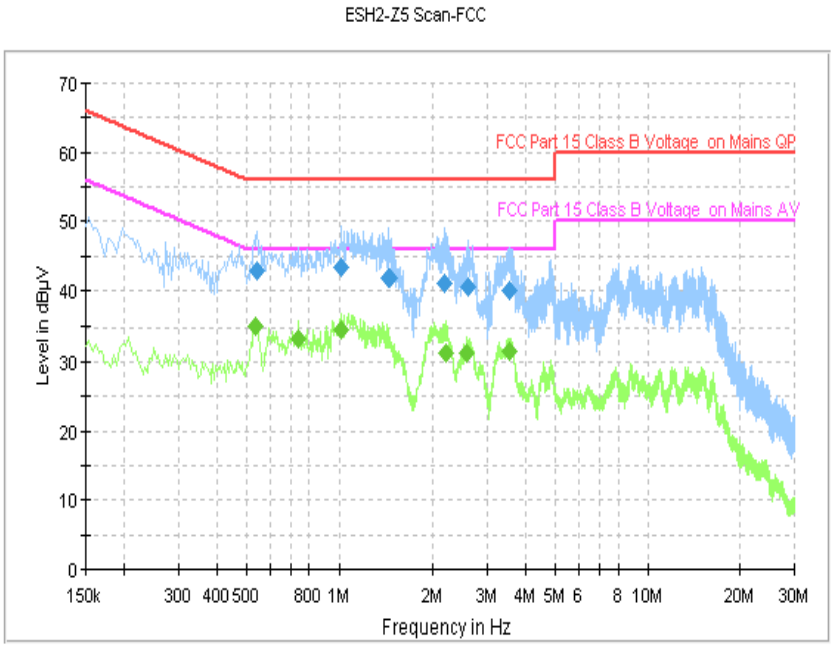


Fig.33 AC Powerline Conducted Emission (Traffic, AE1)

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.542000	42.9	GND	L1	9.8	13.1	56.0
1.018000	43.3	GND	L1	9.8	12.7	56.0
1.446000	41.9	GND	L1	9.8	14.1	56.0
2.174000	41.1	GND	L1	9.8	14.9	56.0
2.606000	40.4	GND	L1	9.8	15.6	56.0
3.546000	40.1	GND	L1	9.8	15.9	56.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.538000	35.0	GND	N	9.7	11.0	46.0
0.734000	33.3	GND	L1	9.8	12.7	46.0
1.018000	34.7	GND	L1	9.8	11.3	46.0
2.194000	31.3	GND	L1	9.8	14.7	46.0
2.574000	31.4	GND	L1	9.8	14.6	46.0
3.554000	31.5	GND	L1	9.8	14.5	46.0

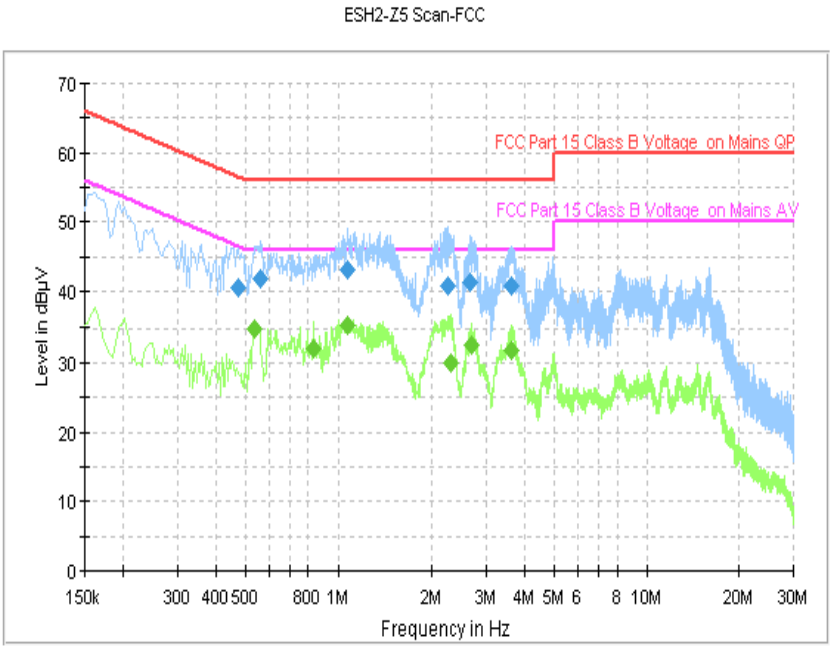


Fig.34 AC Power line Conducted Emission (Idle, AE1)

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.474000	40.4	GND	L1	9.8	16.0	56.4
0.558000	41.9	GND	L1	9.8	14.1	56.0
1.078000	43.2	GND	L1	9.8	12.8	56.0
2.262000	40.9	GND	L1	9.8	15.1	56.0
2.662000	41.4	GND	L1	9.8	14.6	56.0
3.610000	40.8	GND	L1	9.8	15.2	56.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.538000	35.0	GND	N	9.7	11.0	46.0
0.834000	32.0	GND	L1	9.8	14.0	46.0
1.070000	35.4	GND	L1	9.8	10.6	46.0
2.314000	30.1	GND	L1	9.8	15.9	46.0
2.678000	32.6	GND	L1	9.8	13.4	46.0
3.642000	31.8	GND	L1	9.8	14.2	46.0

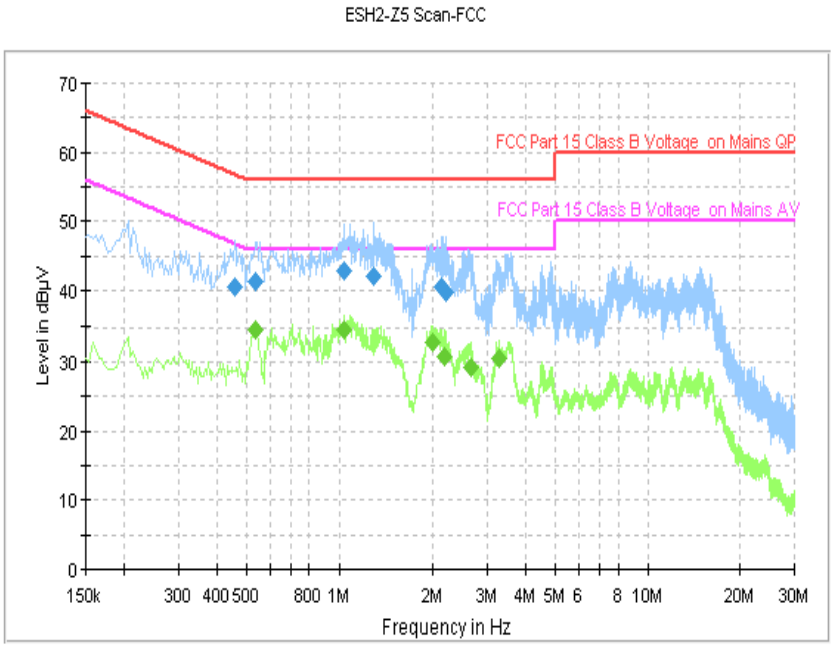


Fig.35 AC Powerline Conducted Emission (Traffic, AE1)

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.458000	40.7	GND	L1	9.8	16.1	56.7
0.538000	41.3	GND	N	9.7	14.7	56.0
1.034000	42.8	GND	L1	9.8	13.2	56.0
1.302000	42.1	GND	L1	9.8	13.9	56.0
2.122000	40.5	GND	L1	9.8	15.5	56.0
2.198000	39.9	GND	L1	9.8	16.1	56.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.538000	34.6	GND	N	9.7	11.4	46.0
1.034000	34.6	GND	L1	9.8	11.4	46.0
2.006000	32.9	GND	L1	9.8	13.1	46.0
2.174000	30.8	GND	L1	9.8	15.2	46.0
2.658000	29.2	GND	L1	9.8	16.8	46.0
3.266000	30.6	GND	L1	9.8	15.4	46.0

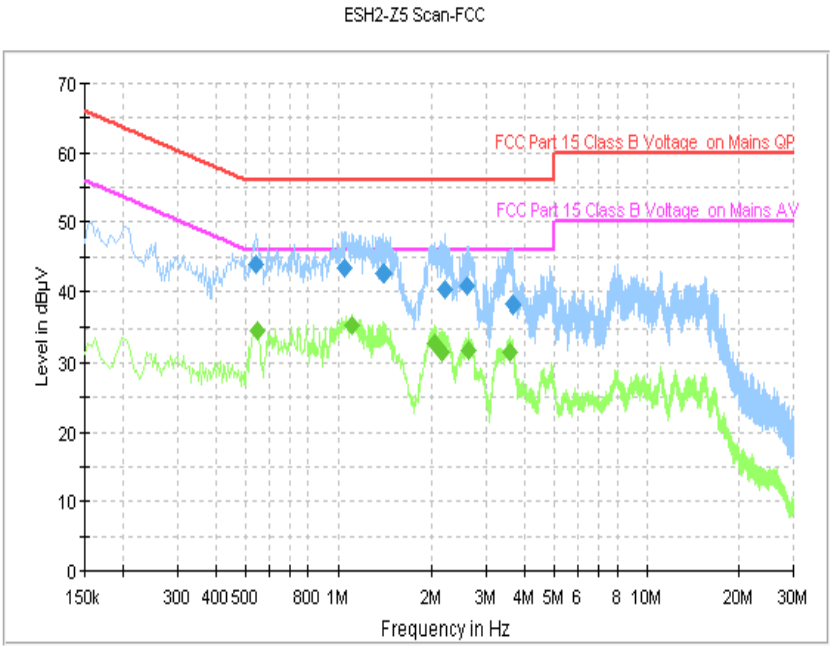


Fig.36 AC Power line Conducted Emission (Idle, AE1)

MEASUREMENT RESULT: " QuasiPeak "

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.542000	43.8	GND	L1	9.8	12.2	56.0
1.050000	43.4	GND	L1	9.8	12.6	56.0
1.402000	42.7	GND	L1	9.8	13.3	56.0
2.214000	40.4	GND	L1	9.8	15.6	56.0
2.610000	40.8	GND	L1	9.8	15.2	56.0
3.654000	38.1	GND	L1	9.8	17.9	56.0

MEASUREMENT RESULT: " Average "

Frequency (MHz)	Average (dBuV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.546000	34.6	GND	N	9.7	11.4	46.0
1.106000	35.4	GND	L1	9.8	10.6	46.0
2.050000	32.7	GND	L1	9.8	13.3	46.0
2.154000	31.5	GND	L1	9.8	14.5	46.0
2.638000	31.8	GND	L1	9.8	14.2	46.0
3.570000	31.6	GND	L1	9.8	14.4	46.0

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*****