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Registration

No.910917

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## TEST REPORT FOR RF TESTING

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Report No.:SRTC2017-9004(F)-0051

Product Name:LTE/WCDMA/GSM (GPRS) Multi-Mode Digital Mobile  
Phone

Product Model: ZTE BLADE A320

Applicant: ZTE Corporation

Manufacturer: ZTE Corporation

Specification: FCCPart 24E, Part 22H Part 2 Part 27 (October, 2016  
edition)

FCC ID: SRQ-ZTEBLADEA320A

The State Radio\_monitoring\_center Testing Center (SRTC)

15th Building, No.30 Shixing Street, Shijingshan District, Beijing, China

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## **1. GENERAL INFORMATION**

### **1.1 Notes of the test report**

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The test results relate only to individual items of the samples which have been tested.

### **1.2 Information about the testing laboratory**

Company:	The State Radio_monitoring_center Testing Center (SRTC)
Address:	15th Building, No.30 Shixing Street, Shijingshan District
City:	Beijing
Country or Region:	P.R.China
Contacted person:	liujia
Tel:	+86 10 5799 6181
Fax:	+86 10 5799 6288
Email:	liujiarf@srtc.org.cn

### **1.3 Applicant's details**

Company:	ZTE Corporation
Address:	ZTE Plaza, #55 Keji Road South, Hi-Tech, Industrial Park, Nanshan District,Guangdong
City:	Shenzhen
Country or Region:	P.R.China
Grantee Code:	SRQ
Contacted person:	Min Zhang
Tel:	021-68897867
Fax:	021-50801070
Email:	zhang.min13@zte.com.cn

### **1.4 Manufacturer's details**

Company:	ZTE Corporation
Address:	ZTE Plaza, #55 Keji Road South, Hi-Tech, Industrial Park, Nanshan District,Guangdong
City:	Shenzhen
Country or Region:	P.R.China
Contacted person:	Min Zhang
Tel:	021-68897867
Fax:	021-50801070
Email:	zhang.min13@zte.com.cn

## 1.5 Test Environment

Date of Receipt of test sample at SRTC:	2017.03.27
Testing Start Date:	2017.03.27
Testing End Date:	2017.06.13

Environmental Data:	Temperature (°C)	Humidity (%)
Ambient	25	38
Maximum Extreme	55	80
Minimum Extreme	-10	---

Normal Supply Voltage (V d.c.):	3.80
Maximum Extreme Supply Voltage (V d.c.):	4.20
Minimum Extreme Supply Voltage (V d.c.):	3.50

## 2 DESCRIPTION OF THE EQUIPMENT UNDER TEST

### 2.1 Final Equipment Build Status

Frequency Range	LTE Band 2: Tx:1850~1910MHz Rx:1930~1990MHz LTE Band 4: Tx:1710~1755MHz Rx:2110~2155MHz LTE Band 5: Tx:825~850MHz Rx:870~900MHz LTE Band 12: Tx:699~716MHz Rx:729~746MHz LTE Band 13: Tx:746~756MHz Rx:777~787MHz LTE Band 17: Tx:704~716MHz Rx:734~746MHz
Modulation Type	QPSK 16QAM
Duplex Mode	FDD
Antenna Type	Fixed Internal
Power Supply	Battery or Charger
HW Version	u4jB
SW Version	FLOW_CW_BA320_V1.0
IMEI	863916030015005

## 2.2 Summary table.

FCC Rule Part	Frequency Range (MHz)	Emission Designator	Emission Bandwidth (MHz)	Communication Type
LTE BAND2				
24E	1850.7-1909.3	1M40G7D	1.4	QPSK
	1850.7-1909.3	1M40D7W	1.4	16QAM
	1851.5-1908.5	3M00G7D	3	QPSK
	1851.5-1908.5	3M00D7W	3	16QAM
	1852.5-1907.5	5M00G7D	5	QPSK
	1852.5-1907.5	5M00D7W	5	16QAM
	1855-1905	10M0G7D	10	QPSK
	1855-1905	10M0D7W	10	16QAM
	1857.5-1902.5	15M0G7D	15	QPSK
	1857.5-1902.5	15M0D7W	15	16QAM
	1860-1900	20M0G7D	20	QPSK
1860-1900	20M0D7W	20	16QAM	
LTE BAND4				
27	1710.7-1754.3	1M40G7D	1.4	QPSK
	1710.7-1754.3	1M40D7W	1.4	16QAM
	1711.5-1753.5	3M00G7D	3	QPSK
	1711.5-1753.5	3M00D7W	3	16QAM
	1712.5-1752.5	5M00G7D	5	QPSK
	1712.5-1752.5	5M00D7W	5	16QAM
	1715-1750	10M0G7D	10	QPSK
	1715-1750	10M0D7W	10	16QAM
	1717.5-1747.5	15M0G7D	15	QPSK
	1717.5-1747.5	15M0D7W	15	16QAM
	1720-1745	20M0G7D	20	QPSK
	1720-1745	20M0D7W	20	16QAM
LTE BAND5				
22H	824.7-848.3	1M40G7D	1.4	QPSK
	824.7-848.3	1M40D7W	1.4	16QAM
	825.5-847.5	3M00G7D	3	QPSK
	825.5-847.5	3M00D7W	3	16QAM
	826.5-846.5	5M00G7D	5	QPSK
	826.5-846.5	5M00D7W	5	16QAM
	829-844	10M0G7D	10	QPSK
	829-844	10M0D7W	10	16QAM
LTE BAND12				
27	699.7-715.3	1M40G7D	1.4	QPSK
	699.7-715.3	1M40D7W	1.4	16QAM
	700.5-714.5	3M00G7D	3	QPSK
	700.5-714.5	3M00D7W	3	16QAM
	701.5-713.5	5M00G7D	5	QPSK
	701.5-713.5	5M00D7W	5	16QAM
	704-711	10M0G7D	10	QPSK
	704-711	10M0D7W	10	16QAM

LTE BAND13				
27	779.5-784.5	5M00G7D	5	QPSK
	779.5-784.5	5M00D7W	5	16QAM
	782	10M0G7D	10	QPSK
	782	10M0D7W	10	16QAM
LTE BAND17				
27	706.5-713.5	5M00G7D	5	QPSK
	706.5-713.5	5M00D7W	5	16QAM
	709-711	10M0G7D	10	QPSK
	709-711	10M0D7W	10	16QAM

## 2.3 Support Equipment

The following support equipment was used to exercise the EUT during testing:

Equipment	Battery1
Manufacturer	Zhongshan Tianmao Battery Co.,Ltd
Model Number	Li3822T43P3h716043
Serial Number	----

Equipment	Battery2
Manufacturer	Zhengzhou BAK Battery Co.,Ltd
Model Number	Li3822T43P3h716043
Serial Number	----

As the information described above, there are one models of battery manufactured by two companies. The relevant tests have been performed in order to verify in which combination case (EUT exercised by one models of battery manufactured by two companies) the EUT would have the worst features. So all the tests shown in this test report are performed when the EUT exercised by the battery 1 manufactured by Zhongshan Tianmao Battery Co.,Ltd.

Note: The original test data of Band2/Band4/Band5 derive from the report:

SRTC2017-9004(F)-0017

Re-test add Band12\Band13\Band17



### **3 REFERENCE SPECIFICATION**

Specification	Version	Title
2.1046	July 7, 1998	Measurements required: RF power output.
2.1049	July 7, 1998	Measurements required: Occupied bandwidth.
2.1051	July 7, 1998	Measurements required: Spurious emissions at antenna terminals.
2.1053	July 7, 1998	Measurements required: Field strength of spurious radiation.
2.1055	Dec. 9, 2003	Measurements required: Frequency stability.
22.355	Oct. 17, 1996	Frequency tolerance.
22.913	Dec. 15, 2004	Effective radiated power limits.
22.917	Dec. 17, 2002	Emission limitations for cellular equipment.
24.232	May 2, 2008	Power and antenna height limits.
24.235/27.54	N/A	Frequency stability.
24.238	Dec. 17, 2002	Emission limitations for Broadband PCS equipment.
27.50	Apr. 7, 1997	Power limits and duty cycle.
27.53	Apr. 7, 1997	Emission limits.

## **4KEY TO NOTES AND RESULT CODES**




The following are the definition of the test result.

Code	Meaning
PASS	Test result shows that the requirements of the relevant specification have been met.
FAIL	Test result shows that the requirements of the relevant specification have not been met.
N/T	Test case is not tested.
NTNV	Nominal voltage, Normal Temperature
HV	High voltage, Normal Temperature
LV	Low voltage, Normal Temperature
HTHV	high voltage, High Temperature
LTHV	High voltage, Low Temperature
HTLV	Low voltage, High Temperature
LTLV	Low voltage, Low Temperature

## 5RESULT SUMMARY

The following table summarizes the test results obtained.

No.	Test case	FCC reference	Verdict
1	RF Power Output	2.1046	Pass
2	Effective Radiated Power and Effective Isotropic Radiated Power	22.913(a)/24.232(c) /27.50(d)(4)	Pass
3	Occupied Bandwidth	2.1049/27.53(h)(1)	Pass
4	Peak-Average Ratio	27.50(d)(5)	Pass
5	Emission Bandwidth	22.917(b)/24.238(b)	Pass
6	Spurious Emissions at antenna terminals	2.1051/22.917(a)/24.238(a)/ 27.53(h)	Pass
7	Band Edges Compliance	2.1051/22.917(a)/24.238(a)/ 27.53(h)	Pass
8	Frequency Stability	2.1055/22.355/24.235/27.54	Pass
9	Radiated Spurious Emissions	2.1053/22.917(a)/24.238(a)/ 27.53(h), 27.53(g)	Pass

This Test Report Is Issued by: Mr. Peng Zhen 	Checked by: Ms. Liu Jia 
Tested by: Mr. Li Bin 	Issued date:  20170609

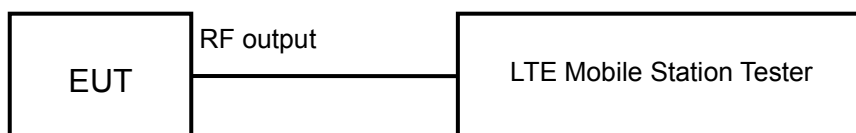
## **6TEST RESULT**

### **6.1 RF Power Output-FCC Part 2.1046**

Ambient condition:

Temperature	Relative humidity	Pressure
23°C	42%	101.9kPa

Test Setup:



Test procedure:

After a radio link has been established between EUT and Tester, the output power of the cell signal of the testing equipment will be decreased until the output power of the EUT reach a maximum value. Then the test data can be read at the tester screen. The loss between RF output port of the EUT and the input port of the tester will be taken into consideration.

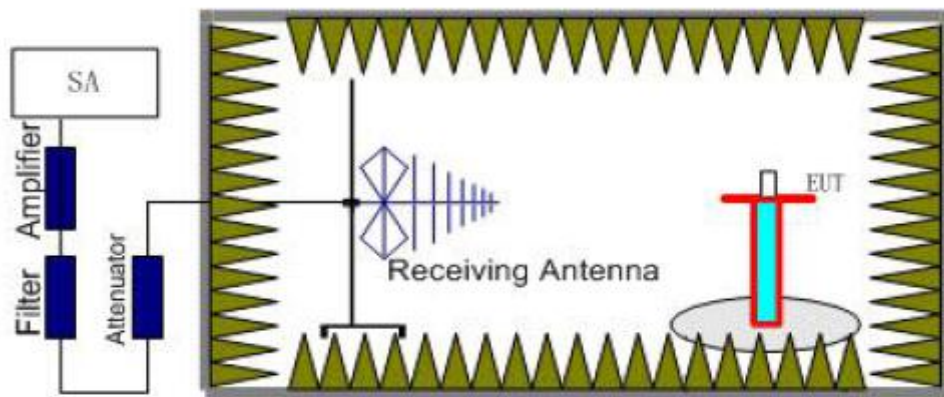
Limits	≤30dBm
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## 6.2 Effective Radiated Power-FCC Part 27.50(d)(4)

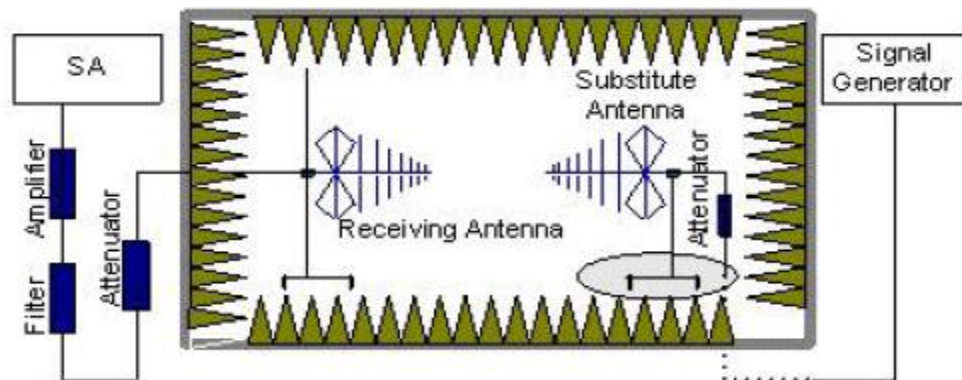
Ambient condition:

Temperature	Relative humidity	Pressure
20.8°C	36.5%	100.9kPa

Test setup:



Step 1



Step 2

Test procedure:

The measurements procedures in TIA-603C-2004 are used.

Step 1:

The measurement is carried out in the fully anechoic chamber. EUT was placed on a 2.4 meters high non-conductive table at a 3 meters test distance from the test receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT. The height of receiving antenna is 2.4m and varies in certain range to find the maximum power value. A radio link shall be established between EUT and Tester. The output power of the cell signal of the tester will be decreased until the output power of the EUT reach a maximum value. A peak detector is used and RBW is set to 3MHz. Then the height of receive antenna shall be moved from 1 to 4 meters, and the antenna shall be performed under horizontal and vertical polarization. The turn table shall be rotated from 0 to 360 degrees for detecting the maximum power value on spectrum analyzer or receiver. And the maximum value of the receiver should be recorded as (Pr).

Step 2:

A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator. To repeat the same procedure as step1 and the level of signal generator will be adjusted till the same power value on the spectrum analyzer or receiver. The ERP/EIRP of the EUT can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.

A power (Pmea) is applied to the input of the substitution antenna, and adjusts the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (Pmea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.

A “reference path loss” should be calculated after test. The attenuation of “reference path loss” is the cable loss between the Signal Source with the Substitution Antenna (Pca) and the Substitution Antenna Gain (Ga).

The measurement results are obtained as described below:

$$\text{Power (EIRP)} = P_{mea} + P_{ca} + G_a$$

This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15dB) and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole,  $ERP = EIRP - 2.15 \text{ (dB)}$ .

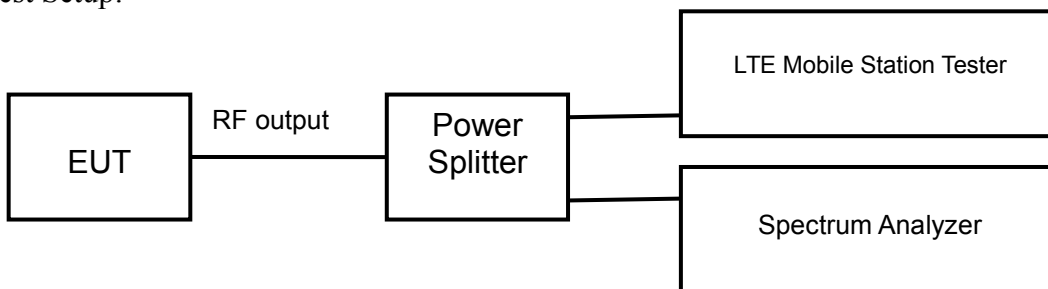
Limits	$\leq 30\text{dBm}$
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### 6.3 Occupied Bandwidth-FCC Part 2.1049/27.53(h)(1)

Ambient condition:

Temperature	Relative humidity	Pressure
23°C	42%	101.9kPa

Test Setup:



Test procedure:

After a radio link has been established between EUT and Tester, the output power of the cell signal of the testing equipment will be decreased until the output power of the EUT reach a maximum value. The occupied bandwidth is measured using spectrum analyzer. RBW is set to 30kHz on spectrum analyzer. The bandwidth of 99% power can be read on spectrum analyzer.

The measurement will be conducted at three channels (Bottom, middle and top channels of LTE band )

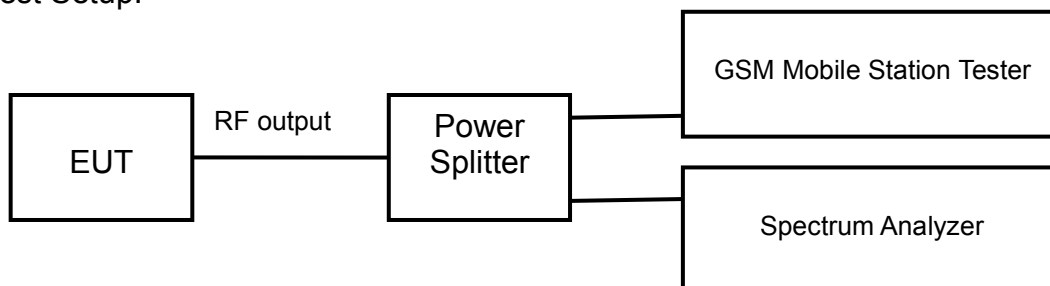
Limits: No specific occupied bandwidth requirements in part 2.1049

## 6.4 Emission Bandwidth-FCC Part22.917(b)

Ambient condition:

Temperature	Relative humidity	Pressure
23℃	42%	101.9kPa

Test Setup:



Test procedure:

After a radio link has been established between EUT and Tester, the output power of the cell signal of the testing equipment will be decreased until the output power of the EUT reach a maximum value. The emission bandwidth is measured using spectrum analyzer. RBW is set to 3kHz on spectrum analyzer. The bandwidth of -26dB transmitter power can be read on spectrum analyzer.

Limits: No specific emission bandwidth requirements in part 22.917(b)

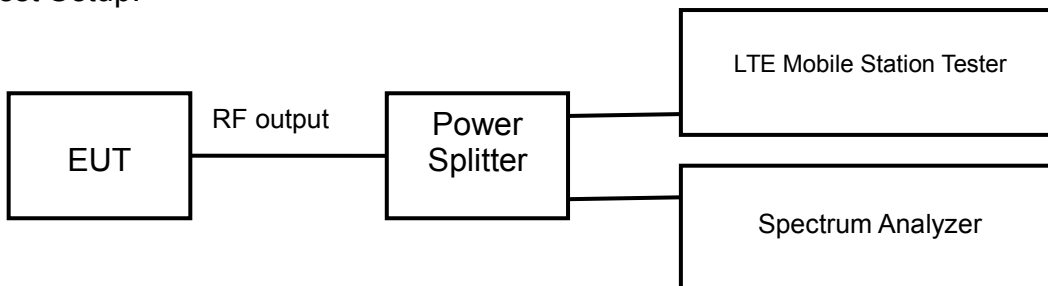


**6.5 Peak-Average Ratio -FCC Part 27.50(d)(5)**

Ambient condition:

Temperature	Relative humidity	Pressure
23°C	42%	101.9kPa

Test Setup:



Test procedure:

After a radio link has been established between EUT and Tester, the output power of the cell signal of the testing equipment will be decreased until the output power of the EUT reach a maximum value. The Peak-Average Ratio is measured using spectrum analyzer. RBW is set to 30kHz on spectrum analyzer. The Peak-Average Ratio can be read on spectrum analyzer.

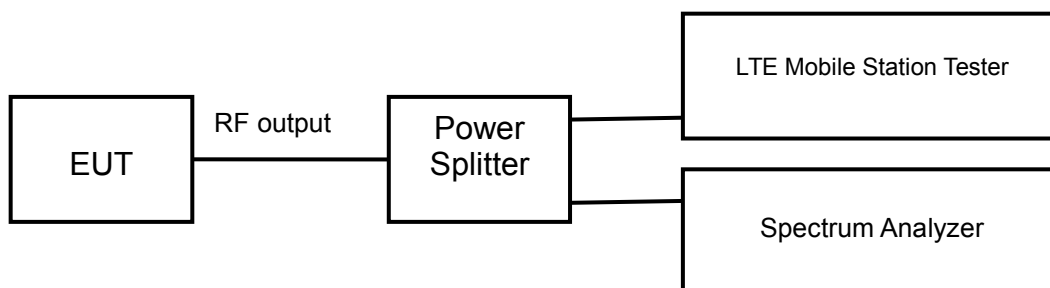
Limits	≤13dB
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### 6.6 Spurious Emissions at antenna terminal-FCC Part2.1051/27.53(h)

Ambient condition:

Temperature	Relative humidity	Pressure
23°C	42%	101.9kPa

Test Setup:



Test procedure:

After a radio link has been established between EUT and Tester, the output power of the cell signal of the testing equipment will be decreased until the output power of the EUT reach a maximum value. The measurement is carried out using a spectrum analyzer. The spectrum analyzer scans from 30MHz to 26GHz (higher than the 10th harmonic of the carrier). The peak detector is used and RBW is set to 1MHz on spectrum analyzer.

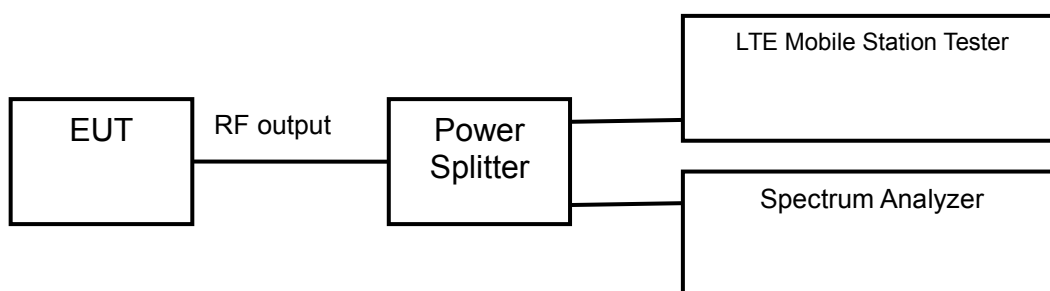
Limits	≤-13dBm
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### 6.7 Band Edges Compliance-FCC Part 2.1051 27.53(h)

Ambient condition:

Temperature	Relative humidity	Pressure
23°C	42%	101.9kPa

Test Setup:



Test procedure:

After a radio link has been established between EUT and Tester, the output power of the cell signal of the testing equipment will be decreased until the output power of the EUT reach a maximum value. The measurement is carried out using a spectrum analyzer. The peak detector is used and RBW is set to at least 1% of the emission bandwidth on spectrum analyzer.

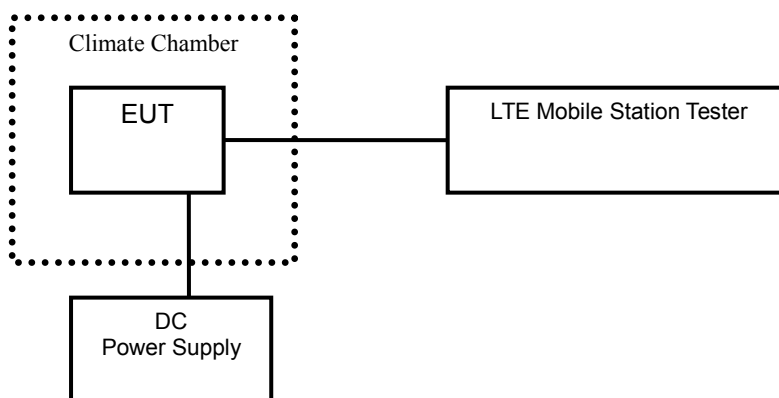
Limits	$\leq -13\text{dBm}$
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## 6.8 Frequency Stability-FCC Part 2.1055/27.54

Ambient condition:

Temperature	Relative humidity	Pressure
23°C	42%	101.9kPa

Test setup:



Test Procedure:

A radio link shall be established between EUT and Tester. The tester will sample the transmitter RF output signal and measure its frequency. The temperature inside the climate chamber is varied from -30 to +50°C in 10°C step size, and also the DC power supply voltage to the EUT is varied from LV to HV. The measurement will be conducted at three channels (Bottom, middle and top channels).

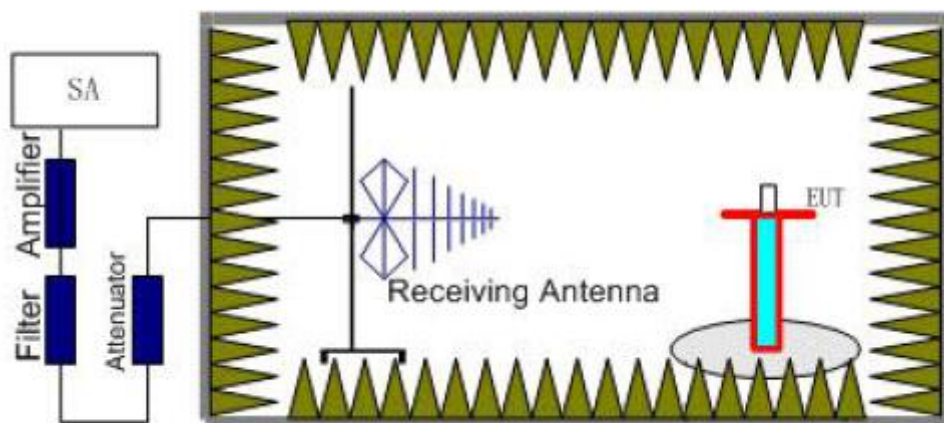
Limits: No specific frequency stability requirements in part 2.1055 and part 22.355.

### 6.9 Radiated Spurious Emissions-FCC Part 2.1053/27.53(h), 27.53(g)

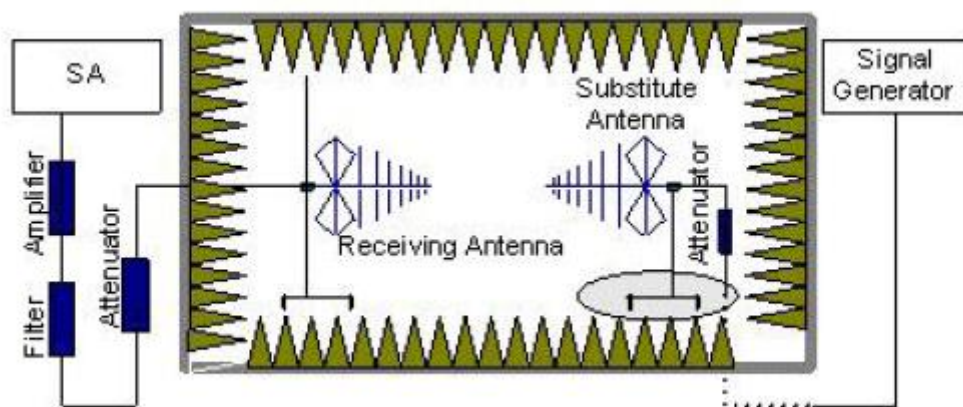
Ambient condition:

Temperature	Relative humidity	Pressure
20.8°C	36.5%	100.9kPa

Test Setup:



Step 1



Step 2

Test procedure:

The measurements procedures in TIA-603C-2004 are used.

The spectrum was scanned from 30MHz to the 10th harmonic of the highest frequency generated within the equipment.

Step 1:

The measurement is carried out in the fully anechoic chamber. EUT was placed on a 2.4 meter high non-conductive table at a 3 meter test distance from the test receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT. The height of receiving antenna is 2.4m and varies in certain range to find the maximum power value. A radio link shall be established between EUT and Tester. The output power of the cell signal of the tester will be decreased until the output power of the EUT reach a maximum value. The measurement is carried out using a spectrum analyzer or receiver. The spectrum analyzer scans from 30MHz to 26GHz (higher than the 10th harmonic of the carrier). The peak detector is used and RBW is set to 1MHz on spectrum analyzer. Then the antenna height and turn table rotation is adjusted till the maximum power value is founded on spectrum analyzer or receiver. A notch filter is necessary in the band near to the carrier frequency. A high pass filter is needed to avoid the distortion of the testing equipment in the band above the carrier frequency.

Step 2:

A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.

A power ( $P_{mea}$ ) is applied to the input of the substitution antenna, and adjusts the level of the signal generator output until the value of the receiver reach the previously recorded ( $P_r$ ). The power of signal source ( $P_{mea}$ ) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.

A “reference path loss” should be calculated after test. The attenuation of “reference path loss” is the cable loss between the Signal Source with the Substitution Antenna ( $P_{ca}$ ) and the Substitution Antenna Gain ( $G_a$ ).

Calculation procedure:

The data of cable loss and antenna gain has been calibrated in full testing frequency range before the testing.

The power of the Radiated Spurious Emissions is calculated by adding the cable loss and antenna gain. The basic equation with a sample calculation is as followed:

$$\text{Power(EIRP)} = P_{mea} + P_{ca} + G_a$$

This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15dB) and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole,  $\text{ERP} = \text{EIRP} - 2.15 \text{ (dB)}$ .

Assumed the power of signal source record is -20dBm. A cable loss of -30dB, and an antenna gain of 11dB are added.

$$P=P_{mea}+P_{ca}+G_a=(-20\text{dBm})+(-30\text{dB})+(11\text{dB})=-39\text{dBm}$$

## 7 MEASUREMENT UNCERTAINTIES

Items	Uncertainty	
RF Power Output	U=0.6 dB	
Occupied Bandwidth	3kHz	
Spurious Emissions	9kHz~2GHz	U=1.2dB
	2G~3.6GHz	U=1.4dB
	3.6G~8GHz	U=2.2dB
	8G~12.75GHz	U=2.7dB
Band Edges Compliance	1.2dB	
Frequency Stability	U=48 Hz	



## **8 TEST EQUIPMENTS**

No.	Name/Model	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
1	Mobile Station Tester	SP8010B	E0095	2016.09.24	2017.09.24
2	N9020A Spectrum Analyzer	Agilent	MY48010771	2016.08.20	2017.08.20
3	DC Power Supply E3645A	Agilent	MY43007648	2016.08.20	2017.08.20
4	Power Splitter 11850C	Agilent	19632	2016.08.20	2017.08.20
5	Temperature chamber SH241	ESPEC	92013758	2016.08.20	2017.08.20
6	12.65m×8.03m×7.50m Fully-Anechoic Chamber	FRANKONIA	-----	-----	-----
7	Turn table Diameter: 1m	HD	-----	-----	-----
8	Antenna master FAC(MA4.0)	MATURO	-----	-----	-----
9	HF 906 Double-Ridged Waveguide Horn Antenna	R&S	100030	2016.08.20	2017.08.20
10	HL562 Ultra log antenna	R&S	100016	2016.08.20	2017.08.20
11	3160-09 Receive antenna	SCHWARZ-BECK	002058-002	2016.08.20	2017.08.20
12	ESI 40 EMI test receiver	R&S	100015	2016.08.20	2017.08.20
13	Radio tester	CMU 200	114667	2016.08.20	2017.08.20
14	Spectrum Analyzer	FSV40	101065	2016.08.20	2017.08.20

## **APPENDIX A – TEST DATA OF CONDUCTED EMISSION**

Please refer to the attachment.

## **APPENDIX B – TEST DATA OF RADIATED EMISSION**

Please refer to the attachment.

## **APPENDIX C – TEST SETUP**

Please refer to the attachment.

## APPENDIX-A TEST DATA OF CONDUCTED EMISSION

### Appendix Test Setup

#### 1 RF Power Output-FCC Part 2.1046

Test result:

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
2	1850.7	18607	1.4	1	0	20.8	20.0
				1	5	20.8	19.9
				3	2	21.0	20.2
				6	0	20.0	19.4

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
2	1880	18900	1.4	1	0	21.0	20.2
				1	5	21.1	20.2
				3	2	21.3	20.0
				6	0	20.1	19.0

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
2	1909.3	19193	1.4	1	0	21.3	19.4
				1	5	21.1	19.6
				3	2	21.2	19.9
				6	0	20.1	19.2

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
2	1851.5	18615	3	1	0	21.1	20.9
				1	14	20.9	20.8
				8	4	20.0	19.4
				15	0	20.1	19.2

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
2	1880	18900	3	1	0	21.0	20.3
				1	14	21.2	19.9
				8	4	20.1	19.0
				15	0	20.1	19.0

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
2	1908.5	19185	3	1	0	21.1	20.2
				1	14	21.1	19.6
				8	4	20.1	19.3
				15	0	20.2	19.5

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
2	1852.5	18625	5	1	0	21.2	19.4
				1	24	20.8	19.2
				12	6	19.8	18.6
				25	0	20.0	19.1

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
2	1880	18900	5	1	0	21.0	20.3
				1	24	21.3	20.2
				12	6	20.1	19.0
				25	0	20.1	19.0

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
2	1907.5	19175	5	1	0	21.0	20.2
				1	24	21.0	20.1
				12	6	20.1	19.3
				25	0	20.1	19.3

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
2	1855	18650	10	1	0	21.3	20.7
				1	49	21.1	20.2
				24	12	20.0	19.1
				50	0	20.0	19.0

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
2	1880	18900	10	1	0	21.2	20.4

				1	49	21.1	20.3
				24	12	20.1	19.2
				50	0	20.1	19.1

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
2	1905	19150	10	1	0	21.4	20.3
				1	49	21.1	20.1
				24	12	20.1	19.3
				50	0	20.2	19.3

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
2	1857.5	18675	15	1	0	21.4	20.5
				1	74	21.1	20.3
				38	18	21.1	20.2
				75	0	20.1	19.1

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
2	1880	18900	15	1	0	21.2	20.3
				1	74	21.3	20.5
				38	18	21.4	20.4
				75	0	20.1	19.2

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
2	1902.5	19125	15	1	0	21.2	20.8
				1	74	21.3	20.7
				38	18	21.2	20.7
				75	0	20.3	19.4

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
2	1860	18700	20	1	0	21.7	20.1
				1	99	21.6	19.8
				50	25	20.1	19.1
				100	0	20.2	19.2

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
2	1900	19100	20	1	0	21.5	21.1
				1	99	21.2	20.8
				50	25	20.3	19.3
				100	0	20.3	19.3

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
2	1880	18900	20	1	0	21.5	21.0
				1	99	21.7	20.9
				50	25	20.3	19.2
				100	0	20.3	19.3

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
4	1732.5	17425	1.4	1	0	21.2	19.9
				1	5	21.2	20.0
				3	2	21.3	19.9
				6	0	20.3	19.2

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
4	1754.3	17643	1.4	1	0	21.2	19.8
				1	5	21.3	19.5
				3	2	21.3	20.3
				6	0	20.3	19.3

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
4	1710.7	17207	1.4	1	0	21.5	20.7
				1	5	21.5	20.5
				3	2	21.3	20.1
				6	0	20.3	19.2

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
4	1711.5	17215	3	1	0	21.1	20.4

				1	14	20.9	20.2
				8	4	20.1	19.5
				15	0	20.2	19.2

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
4	1732.5	17425	3	1	0	21.3	20.3
				1	14	21.1	20.3
				8	4	20.3	19.0
				15	0	20.2	19.1

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
4	1753.5	17635	3	1	0	21.3	19.9
				1	14	21.1	20.1
				8	4	20.2	19.4
				15	0	20.2	19.5

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
4	1712.5	17225	5	1	0	21.1	19.6
				1	24	20.9	19.2
				12	6	20.1	18.9
				25	0	20.3	19.2

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
4	1732.5	17425	5	1	0	21.2	20.4
				1	24	21.2	20.2
				12	6	20.1	19.3
				25	0	20.1	19.1

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
4	1752.5	17625	5	1	0	21.2	20.2
				1	24	21.2	20.2
				12	6	20.1	19.0
				25	0	20.2	19.2

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
4	1715	17250	10	1	0	21.2	21.1
				1	49	21.2	20.7
				24	12	20.3	19.2
				50	0	20.3	19.3

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
4	1732.5	17425	10	1	0	21.3	20.4
				1	49	21.3	20.3
				24	12	20.3	19.2
				50	0	20.3	19.5

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
4	1750	17600	10	1	0	21.3	20.4
				1	49	21.1	20.3
				24	12	20.2	19.3
				50	0	20.2	19.3

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
4	1717.5	17275	15	1	0	21.5	21.0
				1	74	21.4	20.9
				38	18	21.4	20.8
				75	0	20.3	19.4

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
4	1732.5	17425	15	1	0	21.5	20.7
				1	74	21.4	20.6
				38	18	21.4	20.5
				75	0	20.3	19.3

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
4	1747.5	17575	15	1	0	21.3	20.8



				1	74	21.2	20.7
				38	18	21.2	20.7
				75	0	20.2	19.3

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
4	1720	17300	20	1	0	21.4	20.7
				1	99	21.2	20.4
				50	25	20.3	19.4
				100	0	20.4	19.4

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
4	1732.5	17425	20	1	0	21.6	20.8
				1	99	21.3	20.7
				50	25	20.3	19.4
				100	0	20.4	19.3

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
4	1745	17550	20	1	0	21.7	20.9
				1	99	21.3	20.7
				50	25	20.3	19.4
				100	0	20.3	19.4

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
5	824.7	8347	1.4	1	0	22.3	18.7
				1	5	19.2	18.8
				3	2	19.2	18.4
				6	0	18.4	17.4

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
5	836.5	8465	1.4	1	0	19.3	18.4
				1	5	19.3	18.5
				3	2	19.3	18.6
				6	0	18.5	17.6

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
5	848.3	8583	1.4	1	0	19.4	18.7
				1	5	19.4	18.6
				3	2	19.5	18.3
				6	0	18.5	17.8

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
5	825.5	8355	3	1	0	22.4	18.7
				1	14	19.2	18.6
				8	4	18.3	17.2
				15	0	18.4	17.3

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
5	836.5	8465	3	1	0	19.5	18.7
				1	14	19.6	18.8
				8	4	18.5	17.6
				15	0	18.4	17.7

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
5	847.5	8575	3	1	0	19.4	18.4
				1	14	19.4	18.0
				8	4	18.5	17.6
				15	0	18.6	17.6

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
5	826.5	8365	5	1	0	22.4	17.6
				1	24	18.9	17.4
				12	6	18.3	17.2
				25	0	18.4	17.4

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
5	836.5	8465	5	1	0	19.6	18.3

				1	24	19.5	18.3
				12	6	18.5	17.5
				25	0	18.5	17.5

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
5	846.5	8565	5	1	0	19.6	18.6
				1	24	19.2	18.0
				12	6	18.7	17.4
				25	0	18.5	17.5

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
5	829	8390	10	1	0	22.5	18.8
				1	49	19.1	18.5
				24	12	18.3	17.3
				50	0	18.4	17.5

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
5	836.5	8465	10	1	0	19.3	18.8
				1	49	19.3	18.8
				24	12	18.6	17.6
				50	0	18.5	17.6

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
5	844	8540	10	1	0	19.4	18.1
				1	49	19.5	18.1
				24	12	18.6	17.4
				50	0	18.5	17.5

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
12	699.7	23017	1.4	1	0	22.4	17.9
				1	5	18.9	18.2
				3	2	18.8	17.7
				6	0	17.9	16.7

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
12	707.5	23095	1.4	1	0	19.0	18.6
				1	5	19.0	18.5
				3	2	19.0	18.1
				6	0	18.1	17.2

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
12	715.3	23173	1.4	1	0	18.8	17.6
				1	5	18.9	17.6
				3	2	18.8	18.0
				6	0	17.9	16.9

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
12	700.5	23025	3	1	0	18.9	18.0
				1	14	18.8	18.1
				8	4	18.0	17.0
				15	0	18.1	16.7

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
12	707.5	23095	3	1	0	19.0	18.2
				1	14	18.7	18.2
				8	4	18.1	17.1
				15	0	18.1	17.1

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
12	714.5	23165	3	1	0	18.7	17.3
				1	14	18.9	17.6
				8	4	17.9	17.0
				15	0	18.0	16.9

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
12	701.5	23035	5	1	0	19.1	17.5

				1	24	18.9	17.3
				12	6	18.0	16.6
				25	0	18.1	17.2

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
12	707.5	23095	5	1	0	18.8	17.8
				1	24	18.8	17.7
				12	6	18.0	17.0
				25	0	18.0	16.9

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
12	713.5	23155	5	1	0	18.6	17.6
				1	24	18.9	17.8
				12	6	18.0	16.5
				25	0	17.9	16.8

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
12	704	23060	10	1	0	18.9	18.2
				1	49	18.9	18.1
				24	12	18.0	16.9
				50	0	18.0	16.9

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
12	707.5	23095	10	1	0	19.0	17.9
				1	49	18.9	18.0
				24	12	18.0	16.9
				50	0	18.0	16.8

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
12	711	23130	10	1	0	19.1	17.9
				1	49	18.9	17.6
				24	12	18.1	17.0
				50	0	18.0	17.0

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
13	779.5	23205	5	1	0	19.0	17.8
				1	24	19.1	17.4
				12	6	18.4	17.1
				25	0	18.4	17.5

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
13	782	23230	5	1	0	19.5	18.5
				1	24	19.4	18.0
				12	6	18.5	17.2
				25	0	18.5	17.3

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
13	784.5	23255	5	1	0	19.2	18.1
				1	24	19.3	18.2
				12	6	18.6	17.4
				25	0	18.5	17.5

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
13	782	23230	10	1	0	19.4	18.8
				1	49	19.4	18.6
				24	12	18.7	17.4
				50	0	18.5	17.5

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
13	782	23230	10	1	0	19.5	18.5
				1	49	19.3	18.5
				24	12	18.6	17.4
				50	0	18.5	17.5

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
13	782	23230	10	1	0	19.5	18.9
				1	49	19.5	18.5
				24	12	18.7	17.6
				50	0	18.5	17.4

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
17	706.5	23755	5	1	0	22.0	17.0
				1	24	18.4	16.8
				12	6	17.7	16.3
				25	0	17.8	16.7

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
17	710	23790	5	1	0	18.9	17.7
				1	24	18.9	17.6
				12	6	17.7	16.7
				25	0	17.8	16.8

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
17	713.5	23825	5	1	0	18.7	17.3
				1	24	18.6	17.3
				12	6	17.7	16.6
				25	0	17.7	16.7

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
17	709	23780	10	1	0	19.0	18.3
				1	49	18.7	18.2
				24	12	17.8	16.6
				50	0	17.8	16.7

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
17	710	23790	10	1	0	18.8	18.0
				1	49	18.7	17.7
				24	12	17.7	16.7
				50	0	17.8	16.7

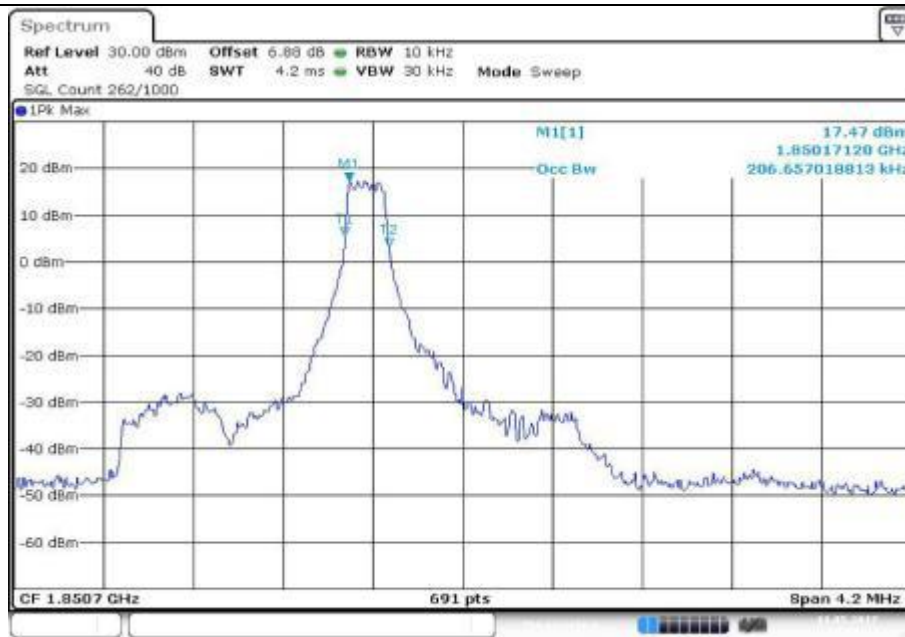
Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
17	711	23800	10	1	0	18.9	17.5
				1	49	18.7	17.4
				24	12	17.7	16.7
				50	0	17.8	16.8

## 2 Occupied Bandwidth-FCC Part 2.1049/27.53(h)(1)

### Test result

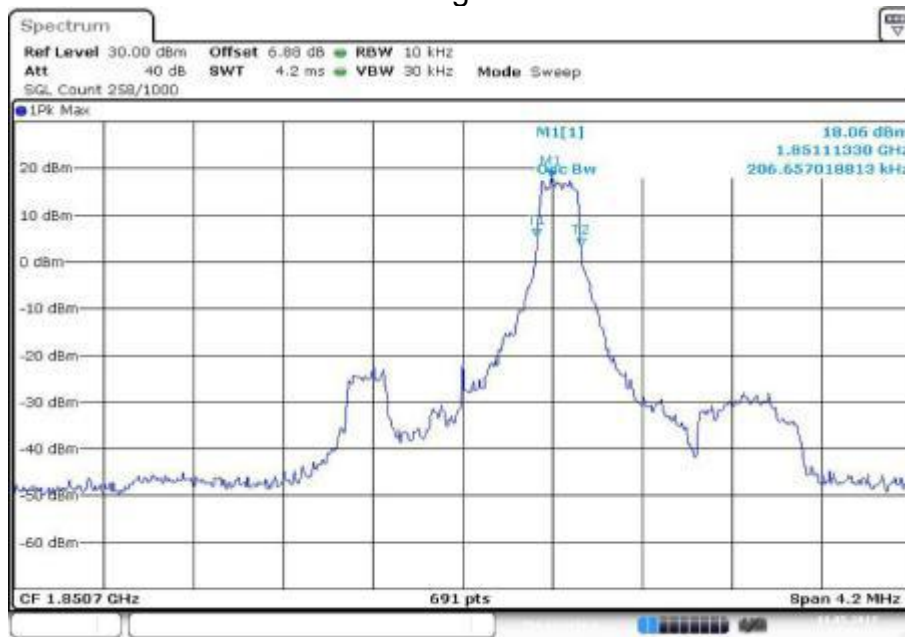
Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
2	1850.7	18607	1.4	1	0	0.207	Fig.1	0.207	Fig.5
				1	5	0.207	Fig.2	0.213	Fig.6
				3	2	0.577	Fig.3	0.571	Fig.7
				6	0	1.100	Fig.4	1.100	Fig.8





Date: 11 MAY 2017 04:00:33

Fig.1



Date: 11 MAY 2017 04:01:24

Fig.2

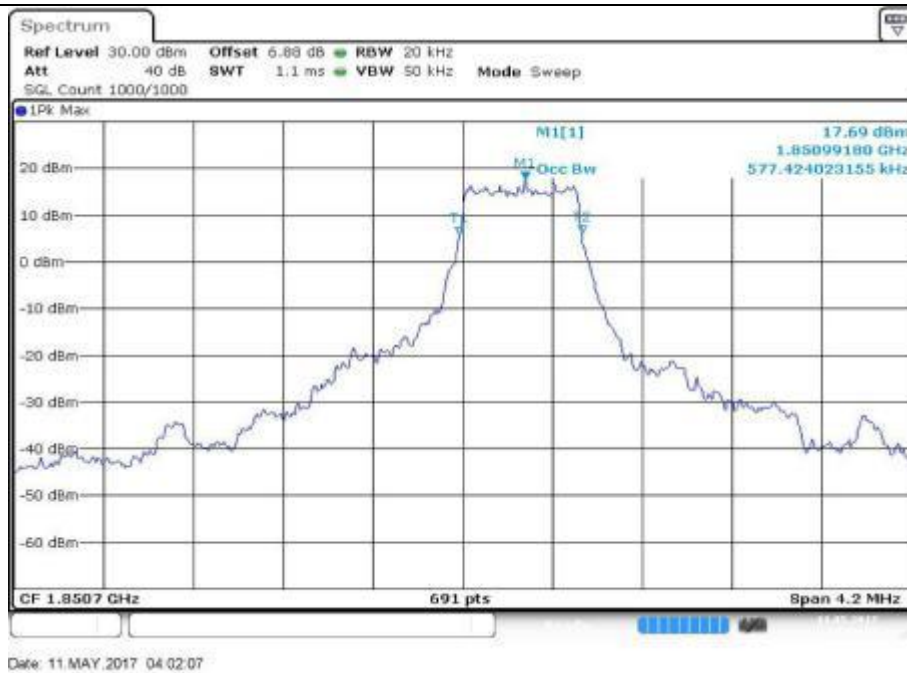


Fig.3

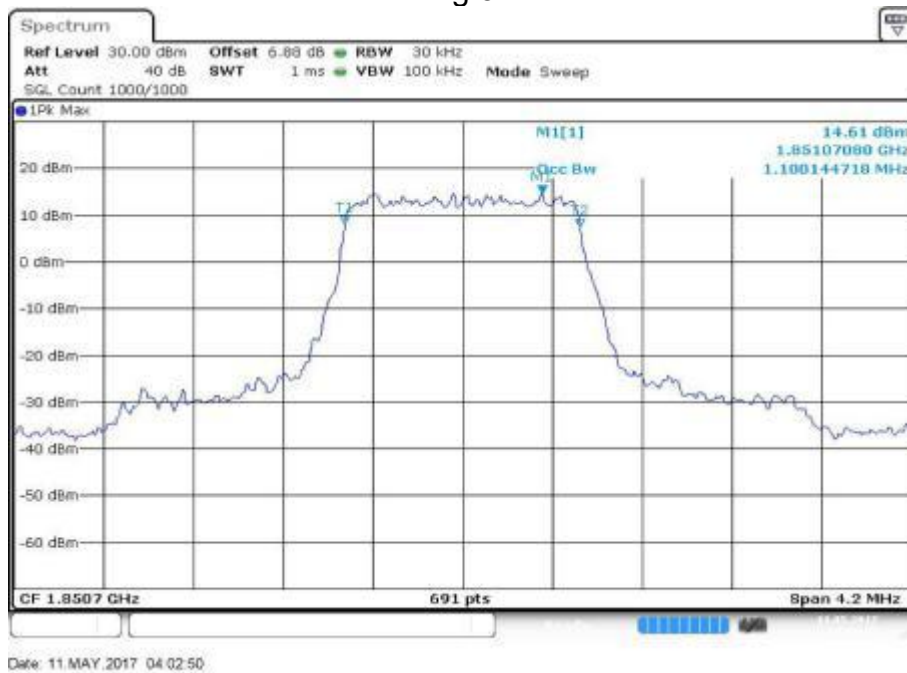
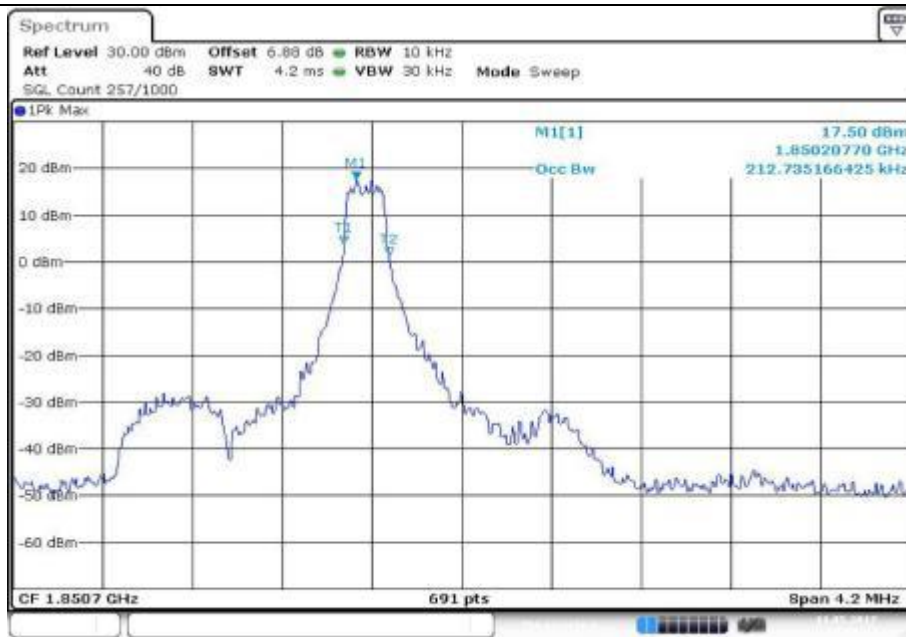
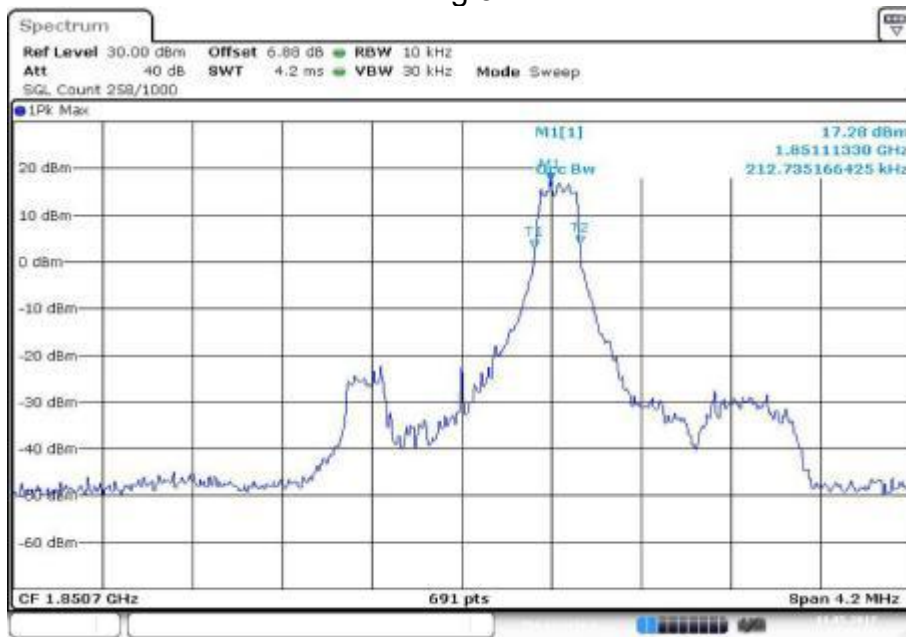


Fig.4



Date: 11 MAY 2017 04:03:34

Fig.5



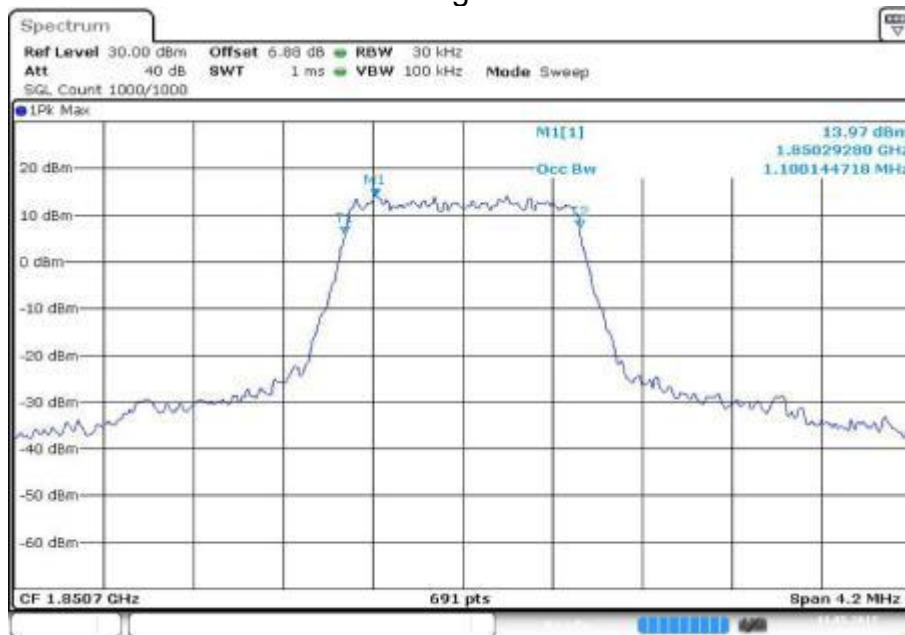
Date: 11 MAY 2017 04:04:17

Fig.6



Date: 11 MAY 2017 04:05:00

Fig.7



Date: 11 MAY 2017 04:05:43

Fig.8

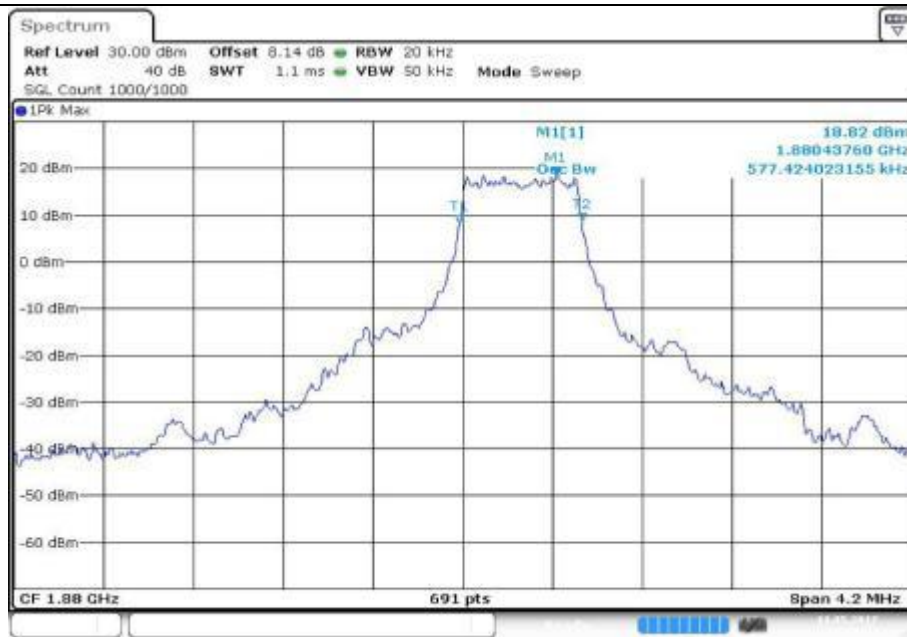
Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
2	1880	18900	1.4	1	0	0.207	Fig.1	0.225	Fig.5
				1	5	0.219	Fig.2	0.219	Fig.6
				3	2	0.577	Fig.3	0.577	Fig.7
				6	0	1.100	Fig.4	1.094	Fig.8



Fig.1

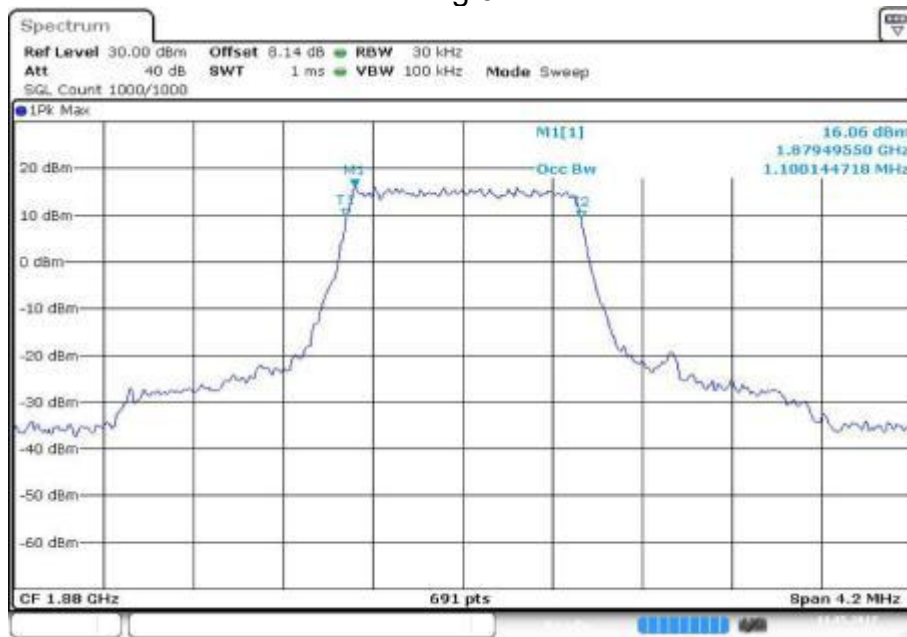


Fig.2



Date: 11 MAY 2017 04:12:20

Fig.3



Date: 11 MAY 2017 04:13:04

Fig.4



Date: 11 MAY 2017 04:13:47

Fig.5



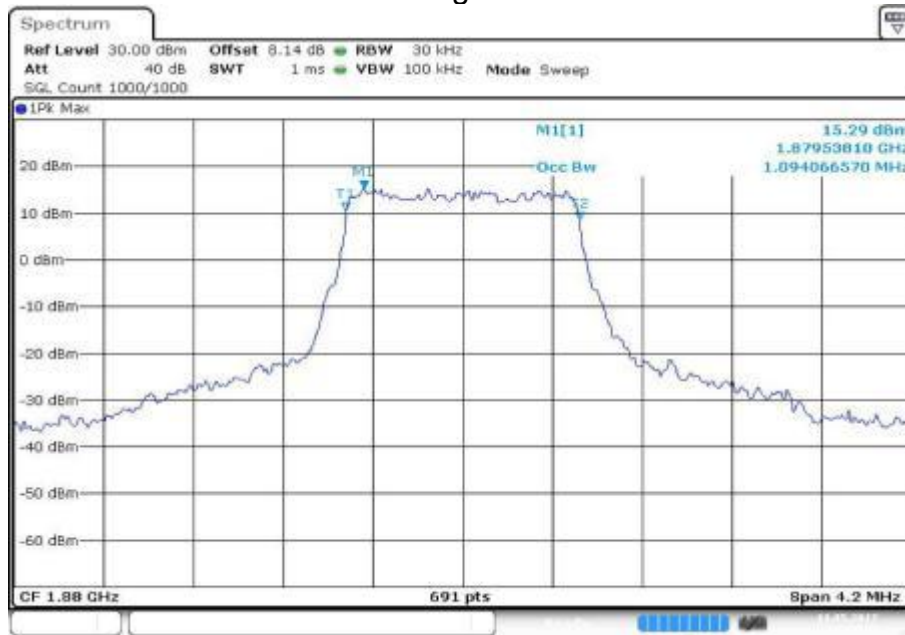
Date: 11 MAY 2017 04:14:30

Fig.6



Date: 11 MAY 2017 04 15 13

Fig.7



Date: 11 MAY 2017 04 15 56

Fig.8

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
2	1909.3	19193	1.4	1	0	0.213	Fig.1	0.219	Fig.5
				1	5	0.207	Fig.2	0.213	Fig.6
				3	2	0.571	Fig.3	0.565	Fig.7
				6	0	1.112	Fig.4	1.100	Fig.8





Fig.1



Fig.2



Date: 11 MAY 2017 04 21:32

Fig.3



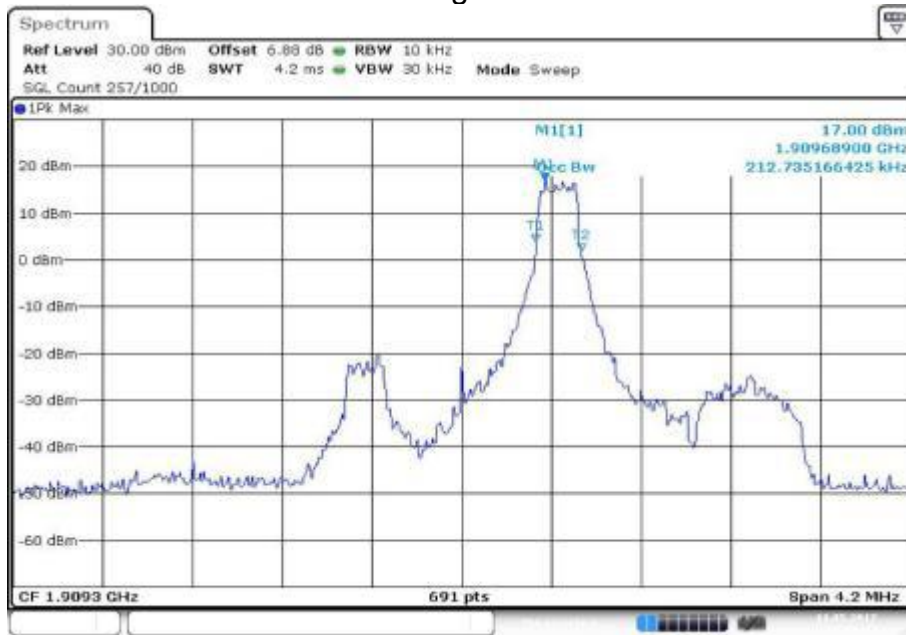
Date: 11 MAY 2017 04 22:15

Fig.4



Date: 11 MAY 2017 04 22 58

Fig.5



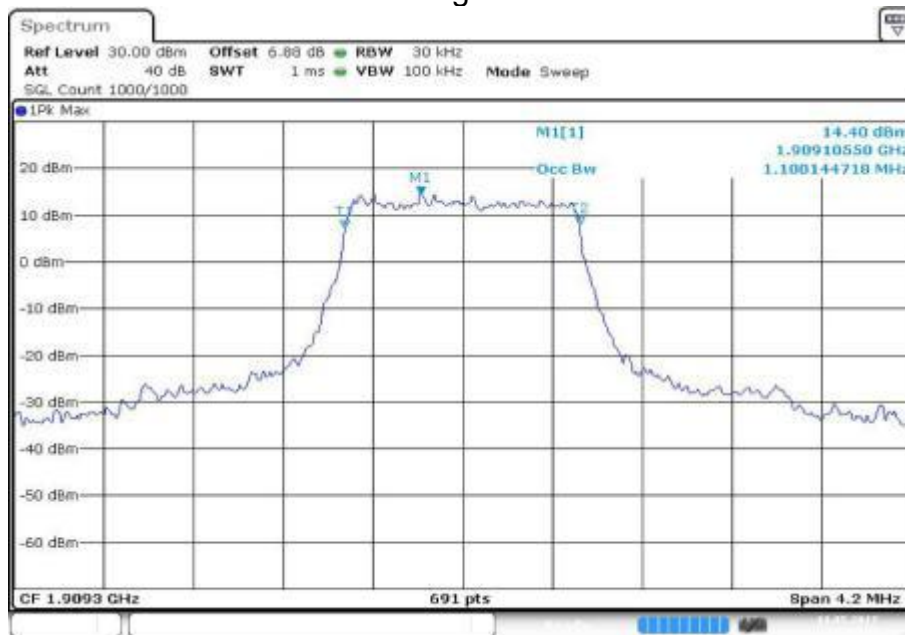
Date: 11 MAY 2017 04 23 41

Fig.6



Date: 11 MAY 2017 04 24 24

Fig.7



Date: 11 MAY 2017 04 25 07

Fig.8

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
2	1851.5	18615	3	1	0	0.221	Fig.1	0.208	Fig.5
				1	14	0.221	Fig.2	0.208	Fig.6
				8	4	1.459	Fig.3	1.446	Fig.7
				15	0	2.735	Fig.4	2.761	Fig.8



Fig.1

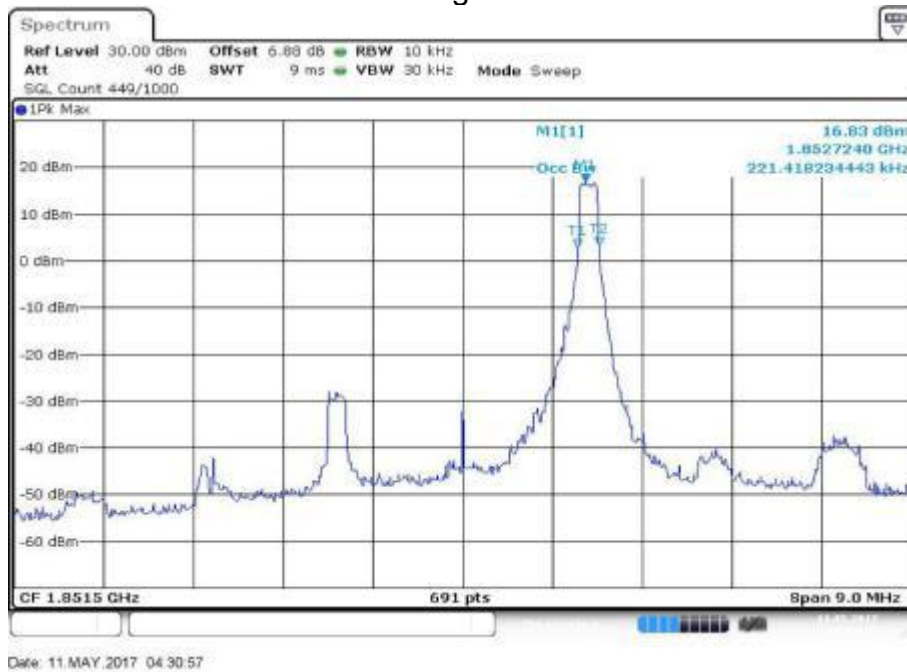


Fig.2

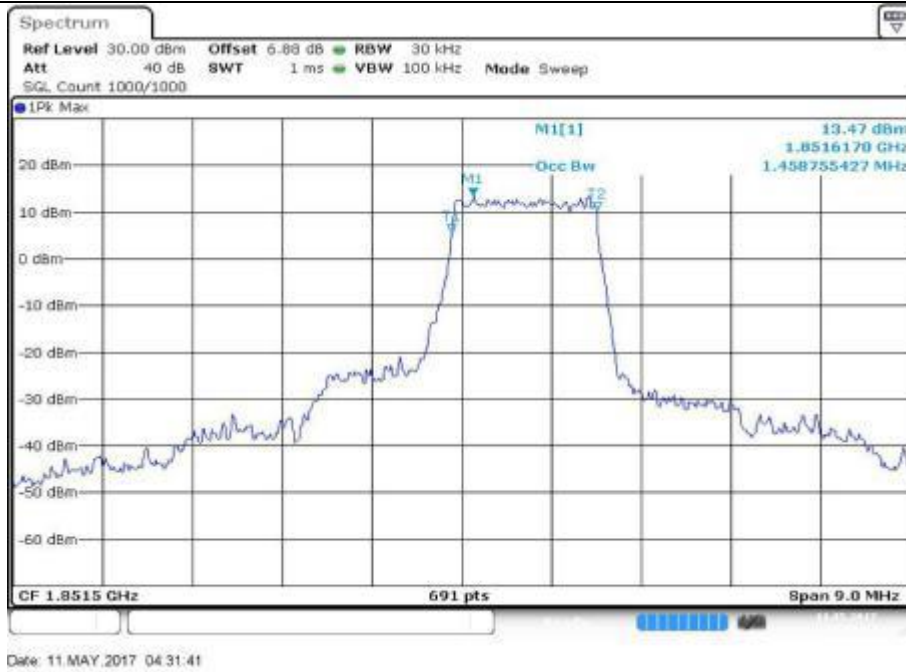


Fig.3

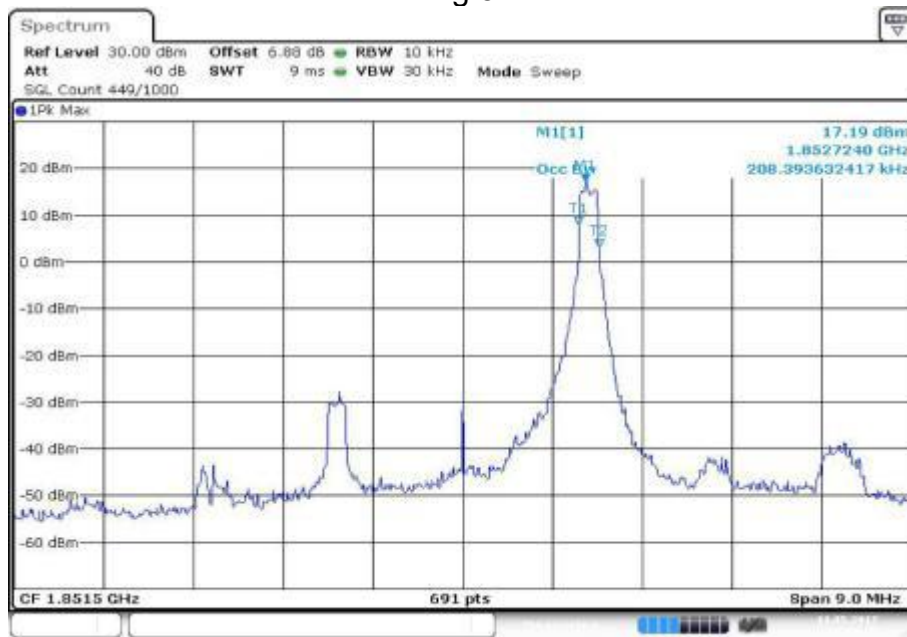


Fig.4



Date: 11 MAY 2017 04:33:07

Fig.5



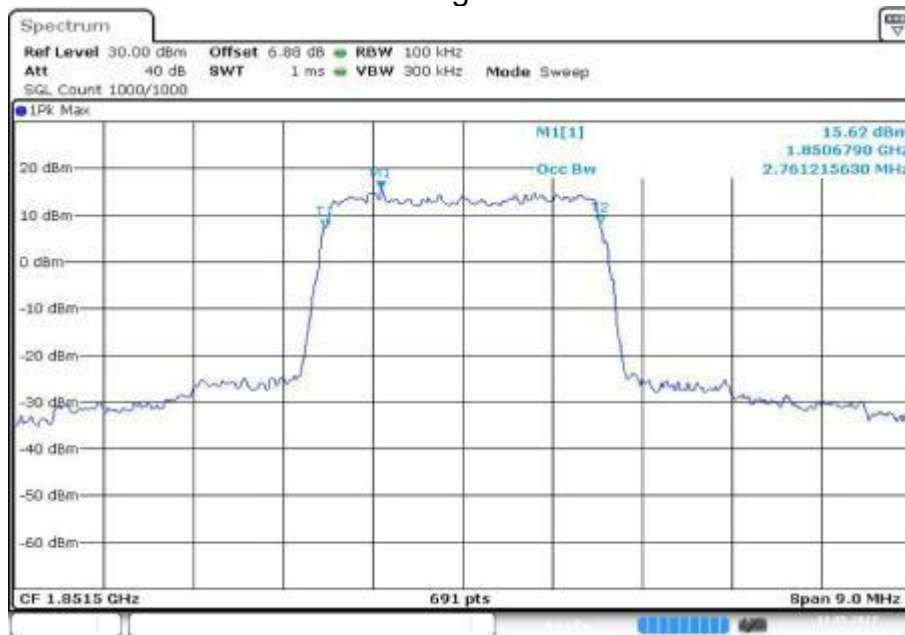
Date: 11 MAY 2017 04:33:50

Fig.6



Date: 11 MAY 2017 04 34 33

Fig.7



Date: 11 MAY 2017 04 35 16

Fig.8

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
2	1880	18900	3	1	0	0.221	Fig.1	0.221	Fig.5
				1	14	0.221	Fig.2	0.221	Fig.6
				8	4	1.446	Fig.3	1.459	Fig.7
				15	0	2.761	Fig.4	2.735	Fig.8





Fig.1

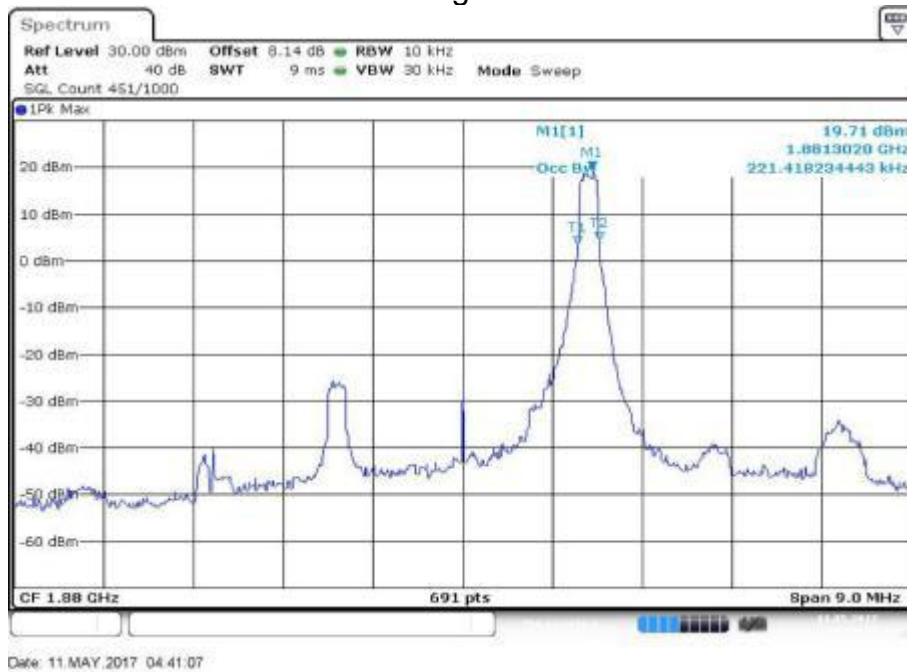


Fig.2

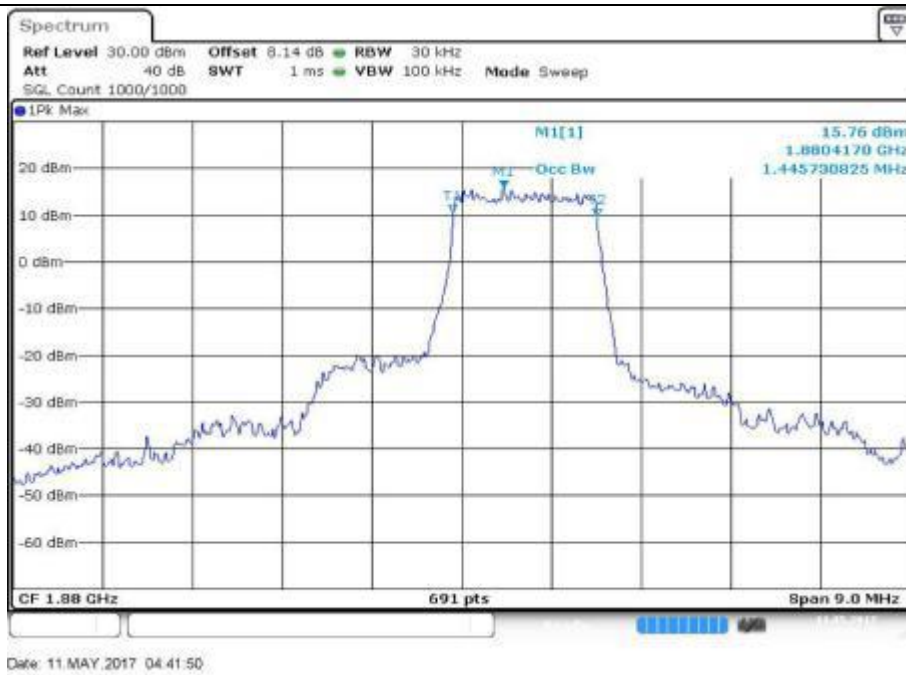


Fig.3

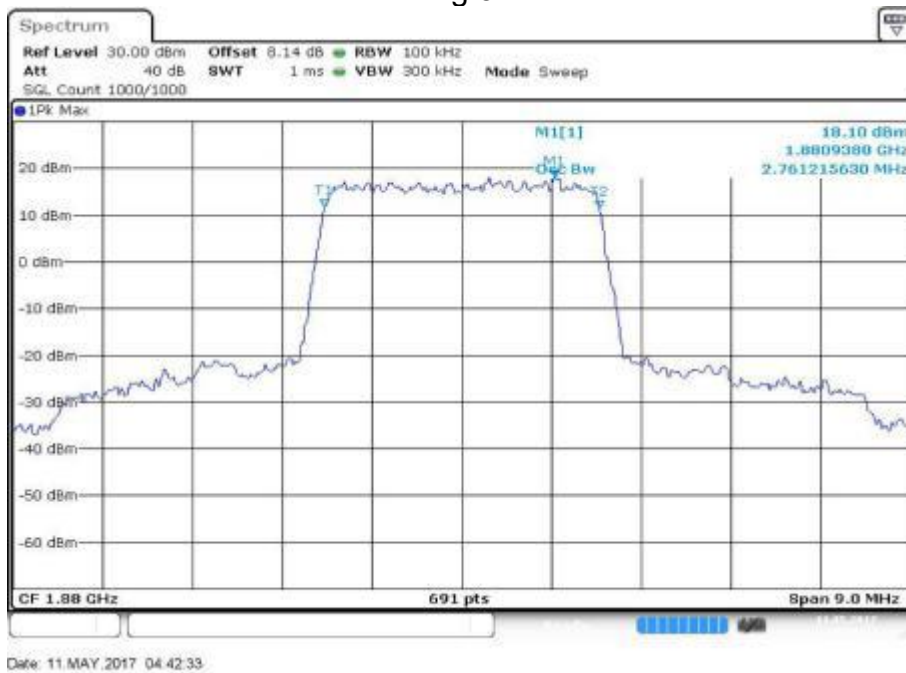
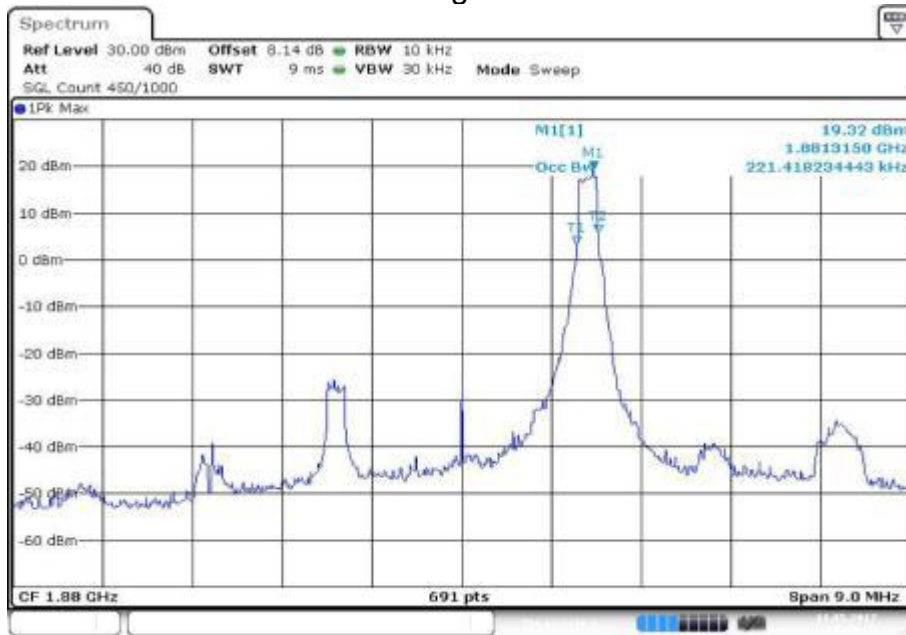


Fig.4



Date: 11 MAY 2017 04:43:16

Fig.5



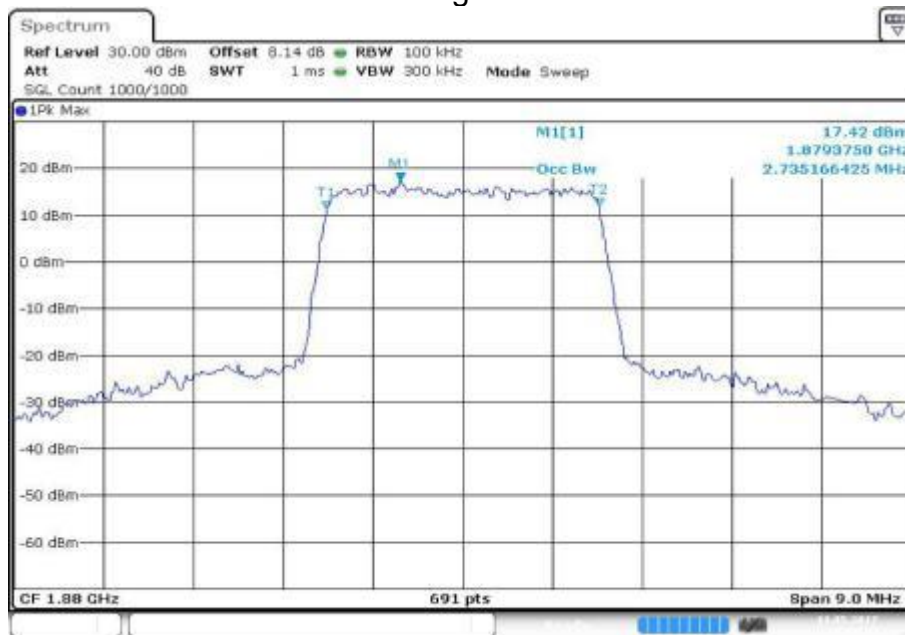
Date: 11 MAY 2017 04:43:59

Fig.6



Date: 11 MAY 2017 04:44:42

Fig.7



Date: 11 MAY 2017 04:45:25

Fig.8

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
2	1908.5	19185	3	1	0	0.221	Fig.1	0.221	Fig.5
				1	14	0.221	Fig.2	0.221	Fig.6
				8	4	1.459	Fig.3	1.459	Fig.7
				15	0	2.735	Fig.4	2.735	Fig.8

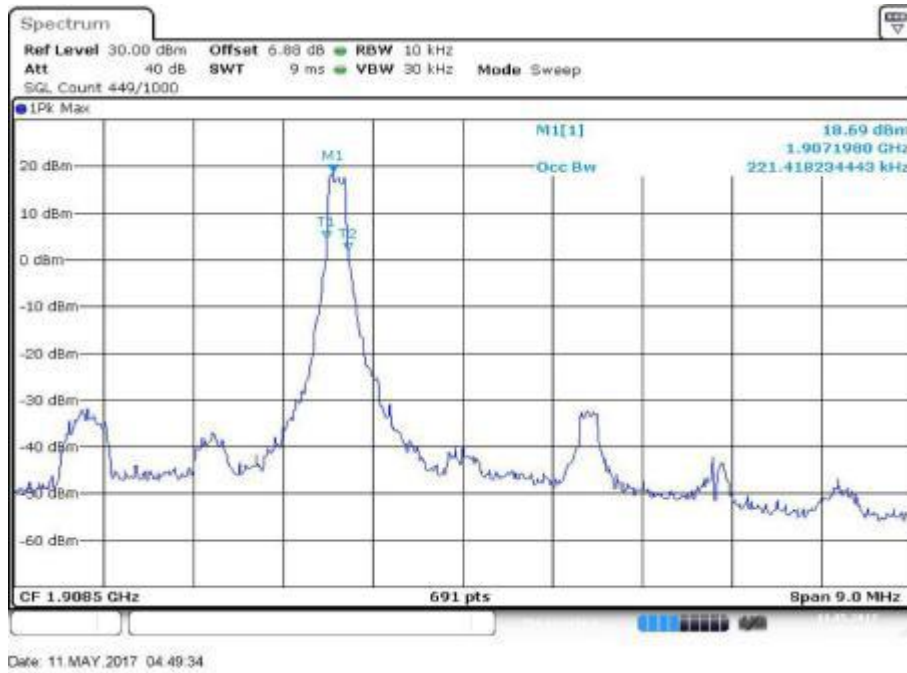


Fig.1

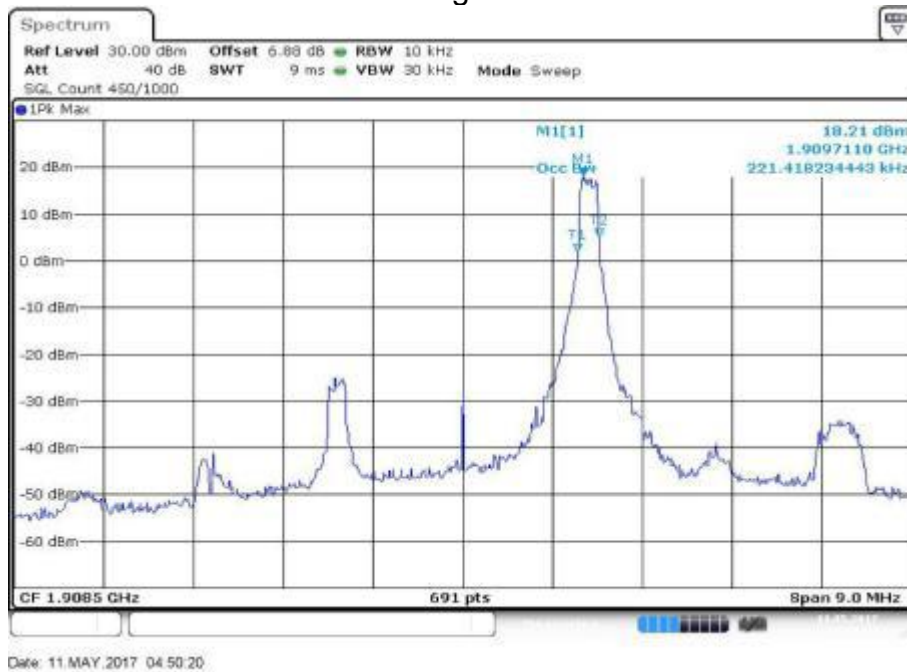
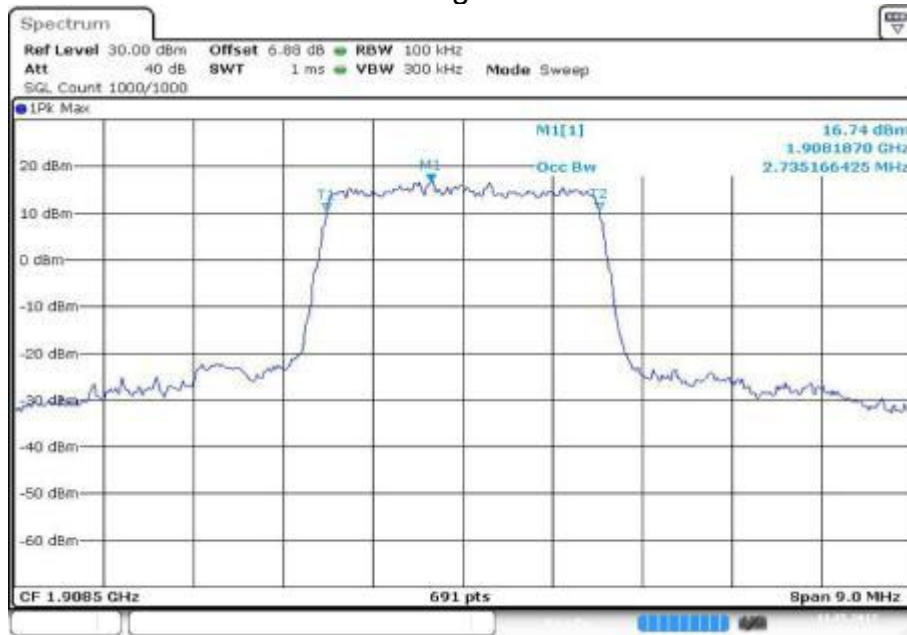


Fig.2



Date: 11 MAY 2017 04:51:03

Fig.3



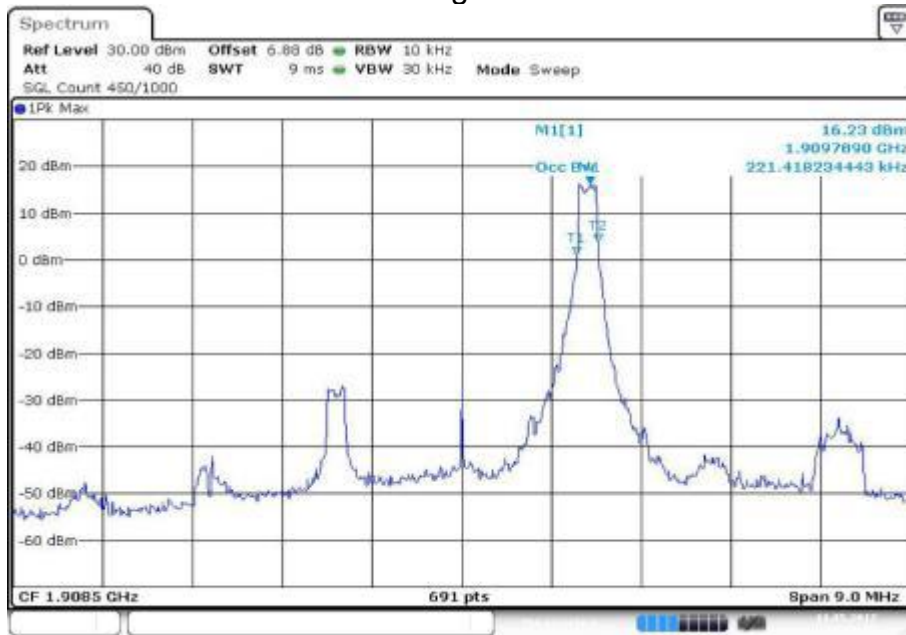
Date: 11 MAY 2017 04:51:46

Fig.4



Date: 11 MAY 2017 04:52:30

Fig.5



Date: 11 MAY 2017 04:53:13

Fig.6



Fig.7

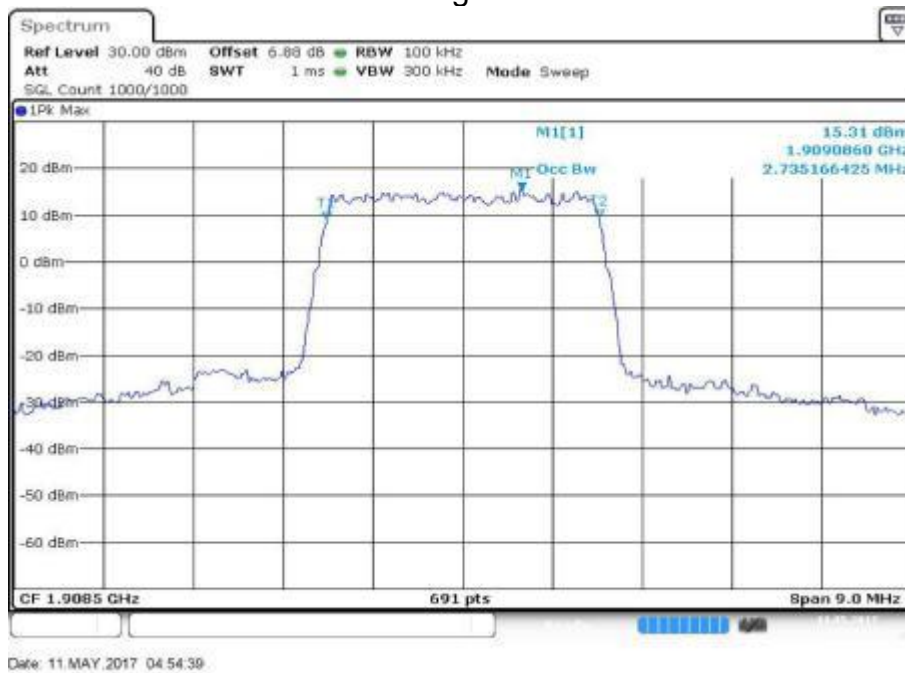


Fig.8

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
2	1852.5	18625	5	1	0	0.239	Fig.1	0.239	Fig.5
				1	24	0.239	Fig.2	0.239	Fig.6
				12	6	2.171	Fig.3	2.171	Fig.7
				25	0	4.537	Fig.4	4.515	Fig.8



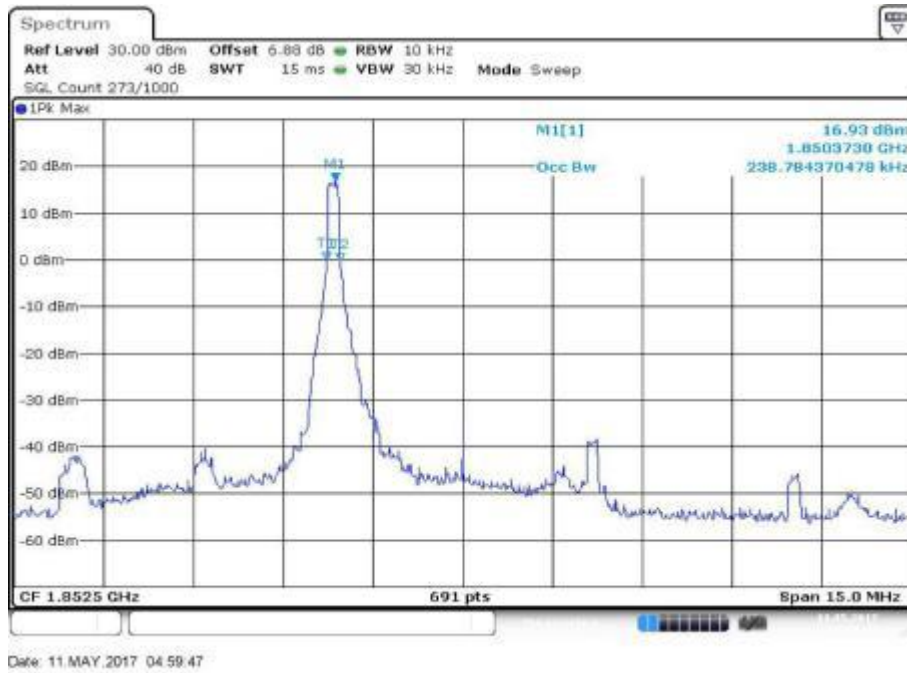


Fig.1

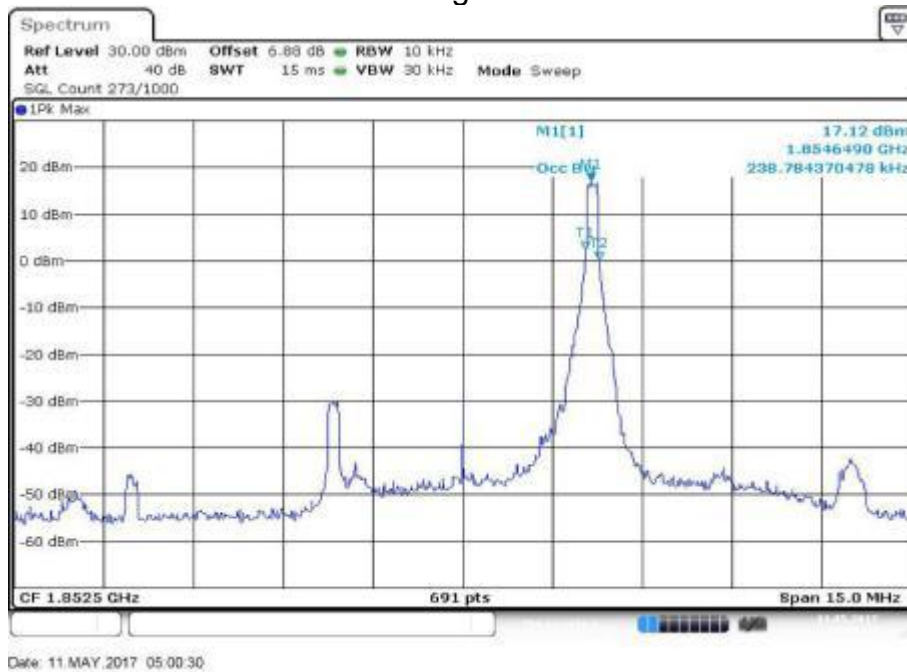
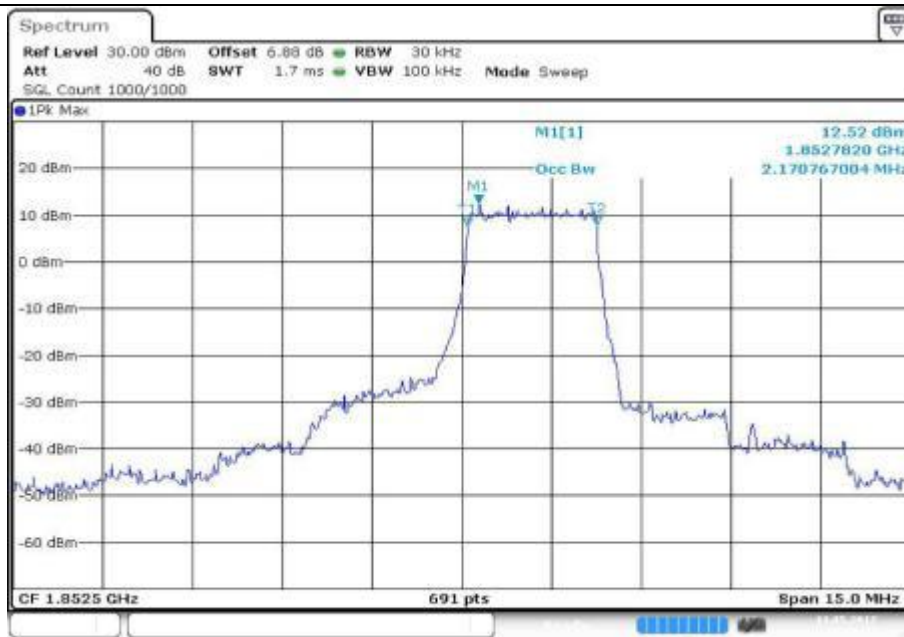
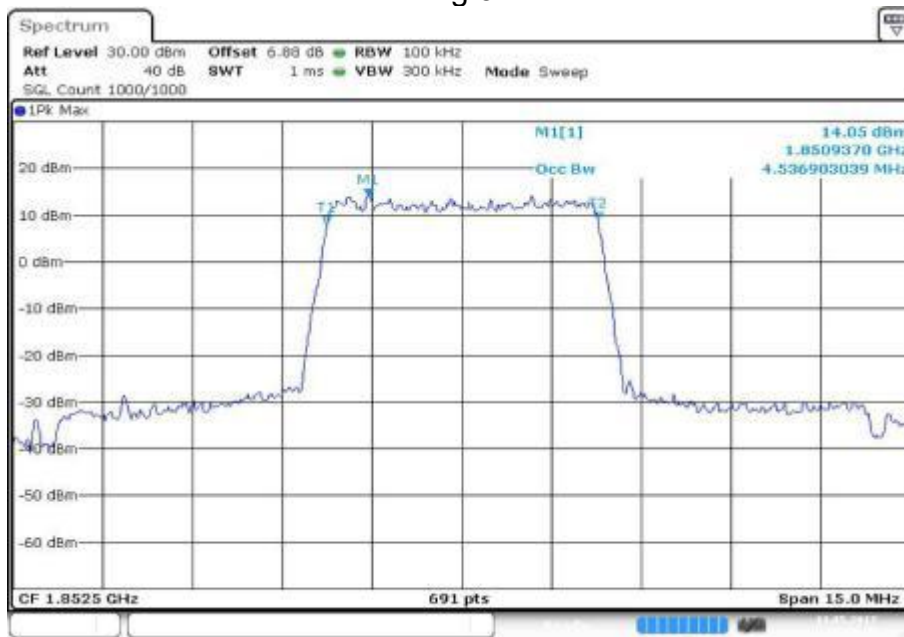


Fig.2



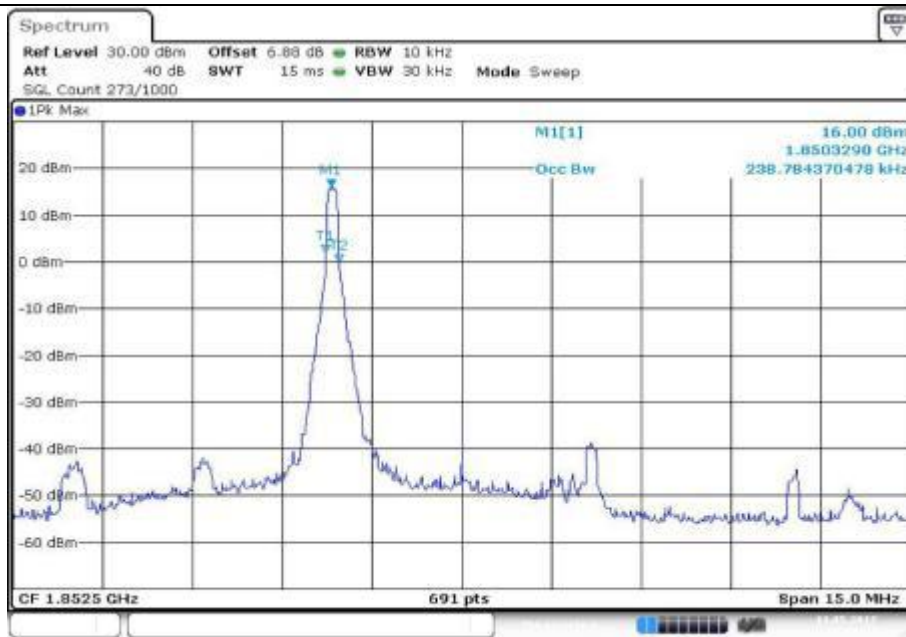
Date: 11 MAY 2017 05:01:13

Fig.3



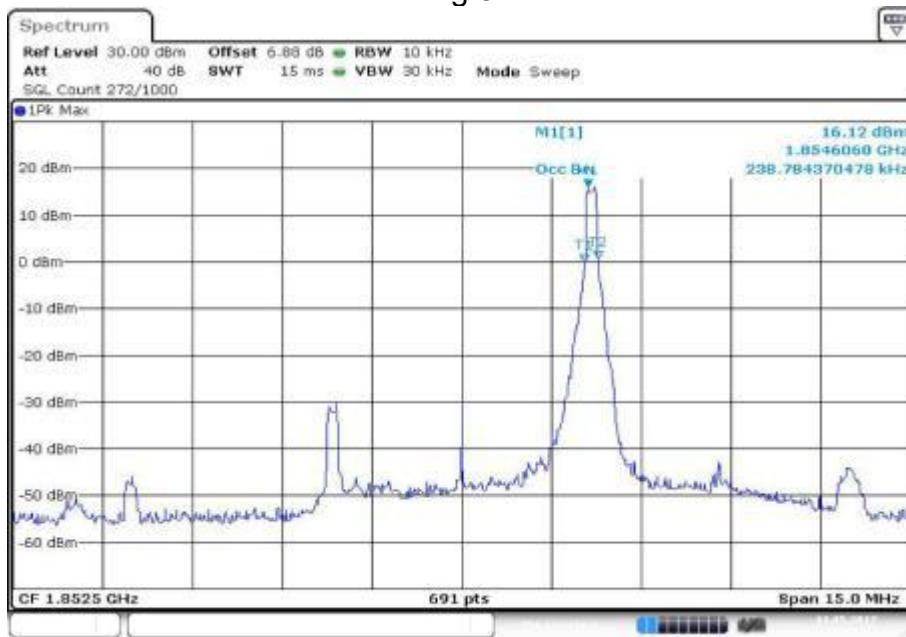
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Fig.4



Date: 11 MAY 2017 05:02:39

Fig.5



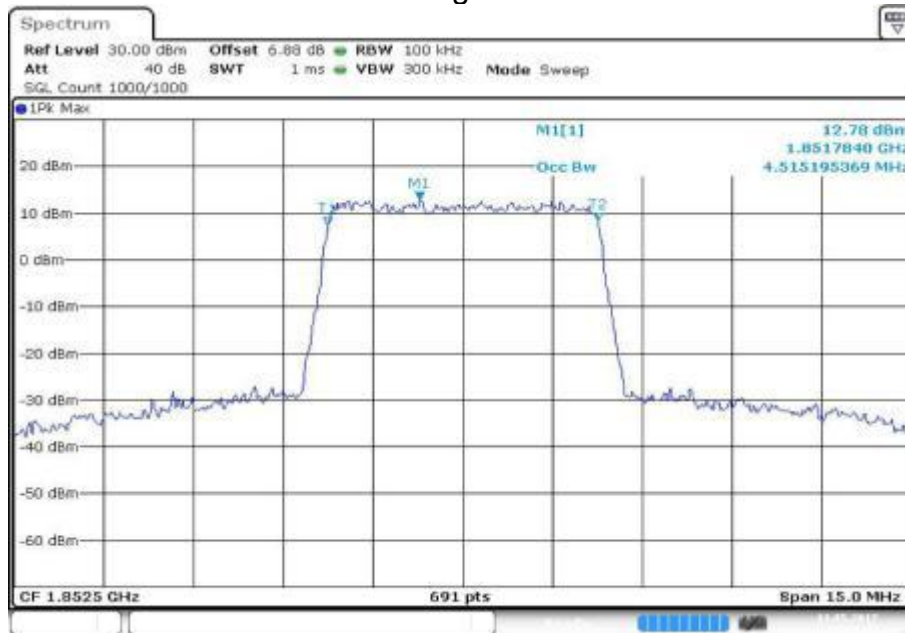
Date: 11 MAY 2017 05:03:22

Fig.6



Date: 11 MAY 2017 05:04:06

Fig.7



Date: 11 MAY 2017 05:04:49

Fig.8

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
2	1880	18900	5	1	0	0.239	Fig.1	0.239	Fig.5
				1	24	0.239	Fig.2	0.239	Fig.6
				12	6	2.171	Fig.3	2.171	Fig.7
				25	0	4.515	Fig.4	4.515	Fig.8

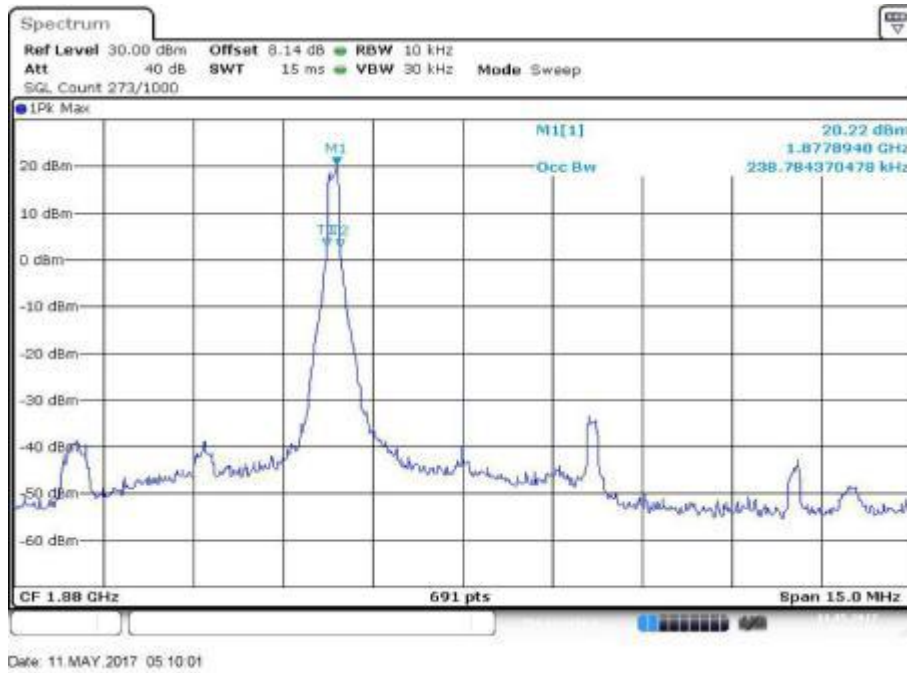


Fig.1

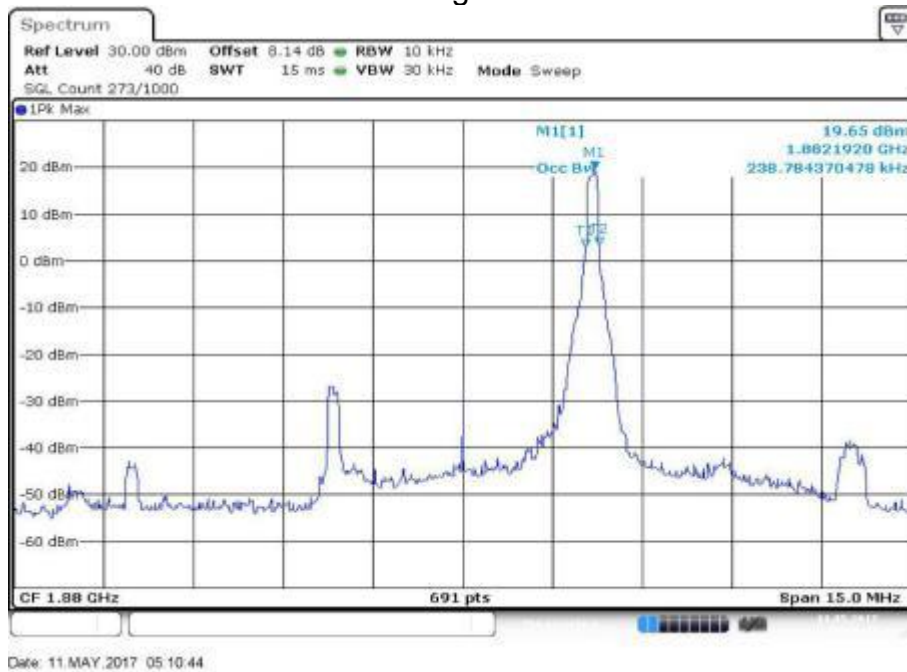
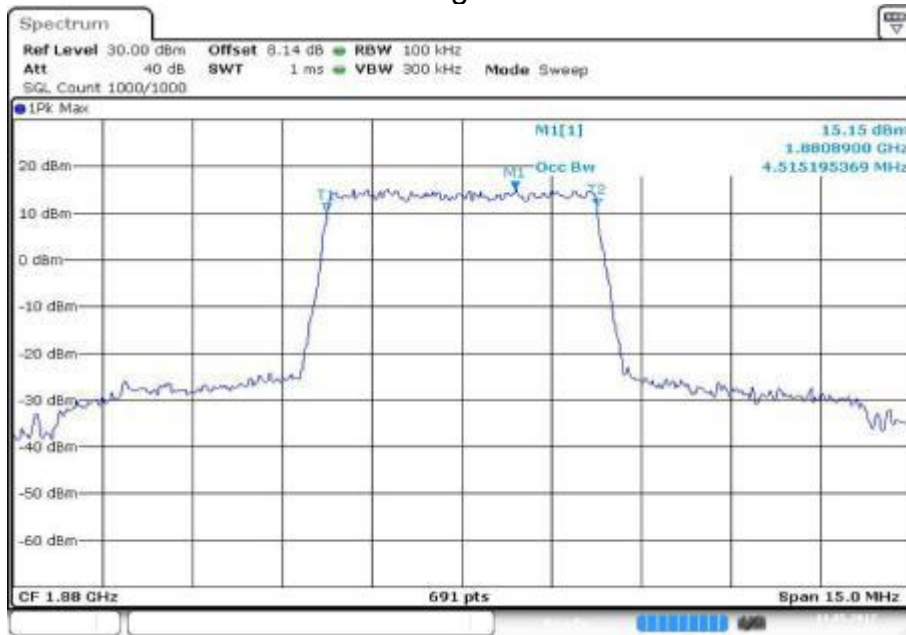


Fig.2



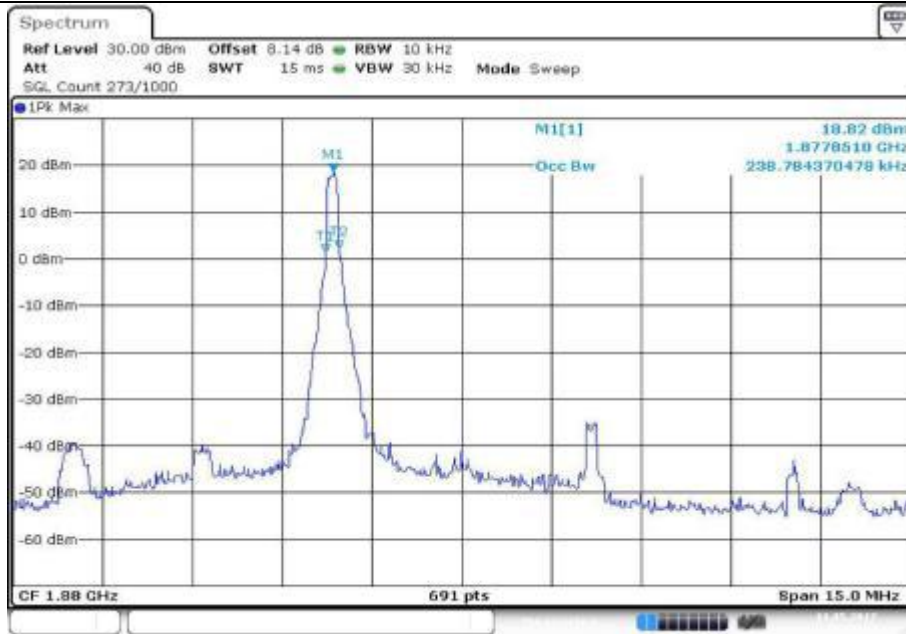
Date: 11 MAY 2017 05:11:28

Fig.3



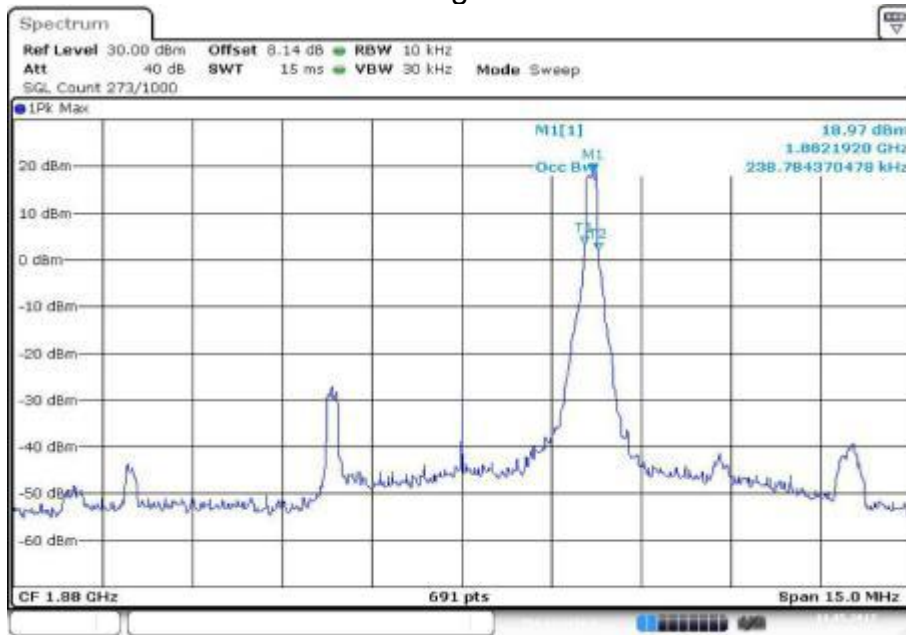
Date: 11 MAY 2017 05:12:11

Fig.4



Date: 11 MAY 2017 05:12:54

Fig.5



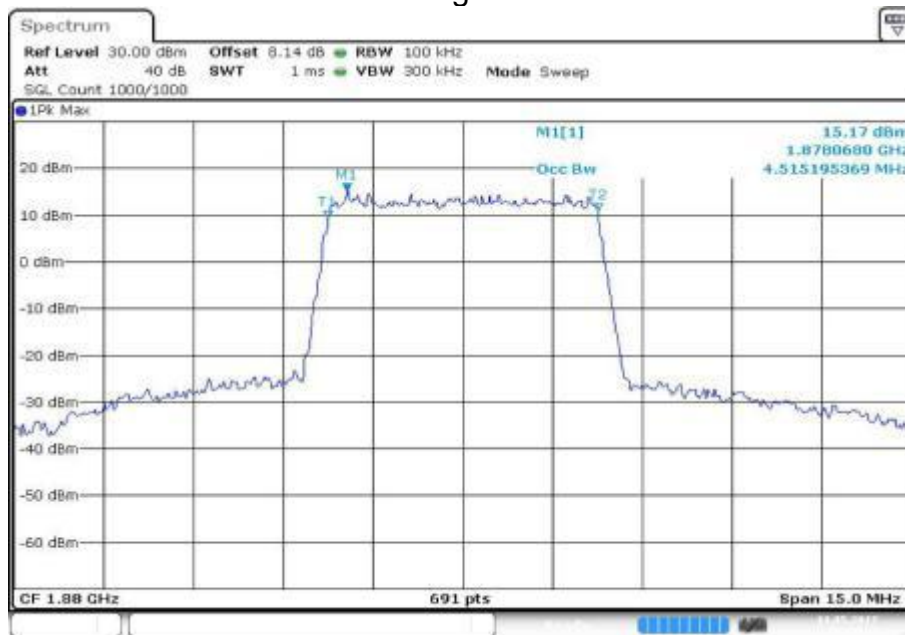
Date: 11 MAY 2017 05:13:37

Fig.6



Date: 11 MAY 2017 05:14:20

Fig.7



Date: 11 MAY 2017 05:15:04

Fig.8

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
2	1907.5	19175	5	1	0	0.239	Fig.1	0.239	Fig.5
				1	24	0.239	Fig.2	0.239	Fig.6
				12	6	2.171	Fig.3	2.171	Fig.7
				25	0	4.515	Fig.4	4.537	Fig.8



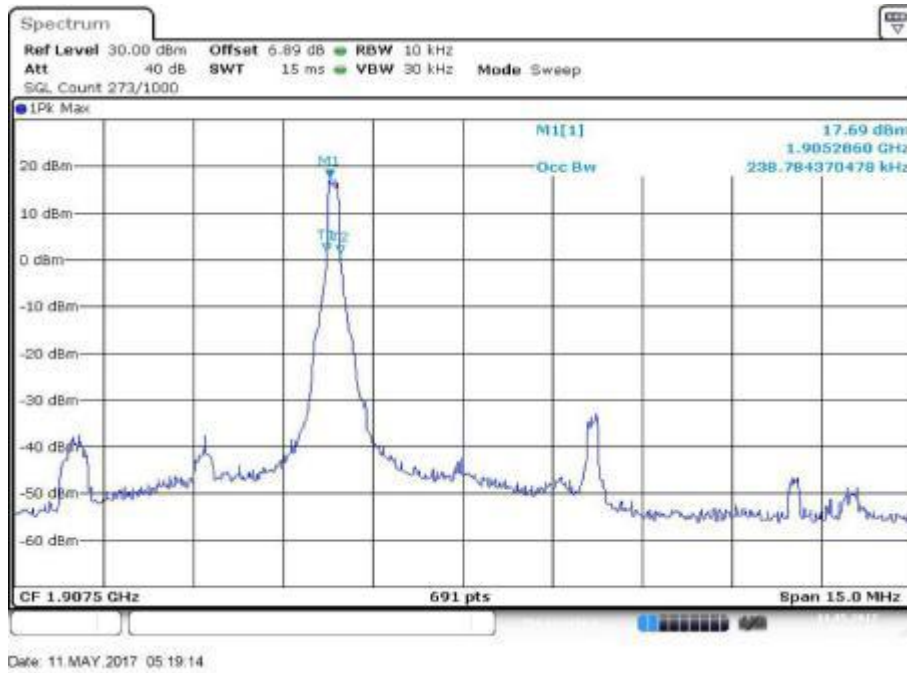


Fig.1

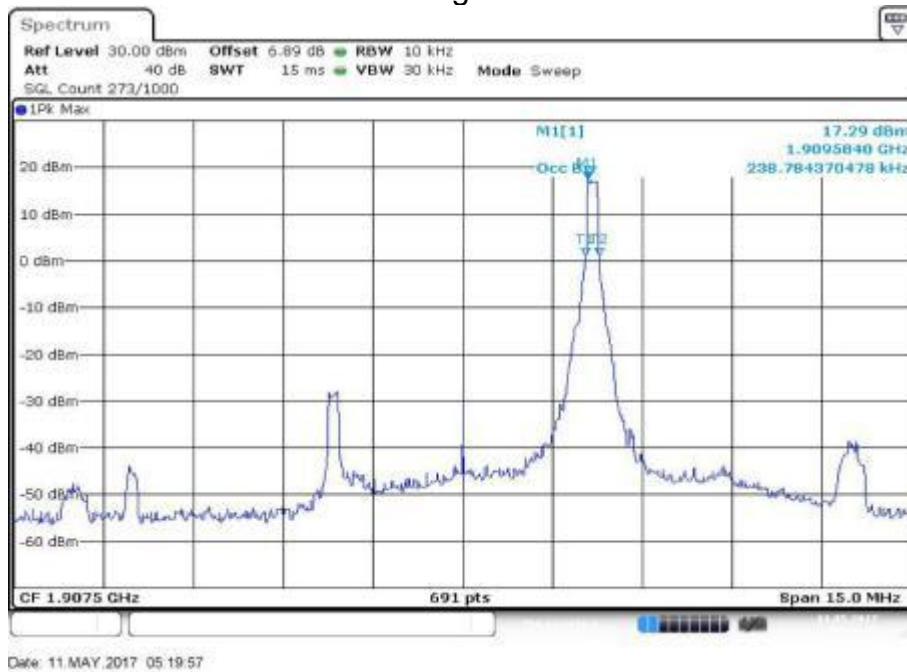
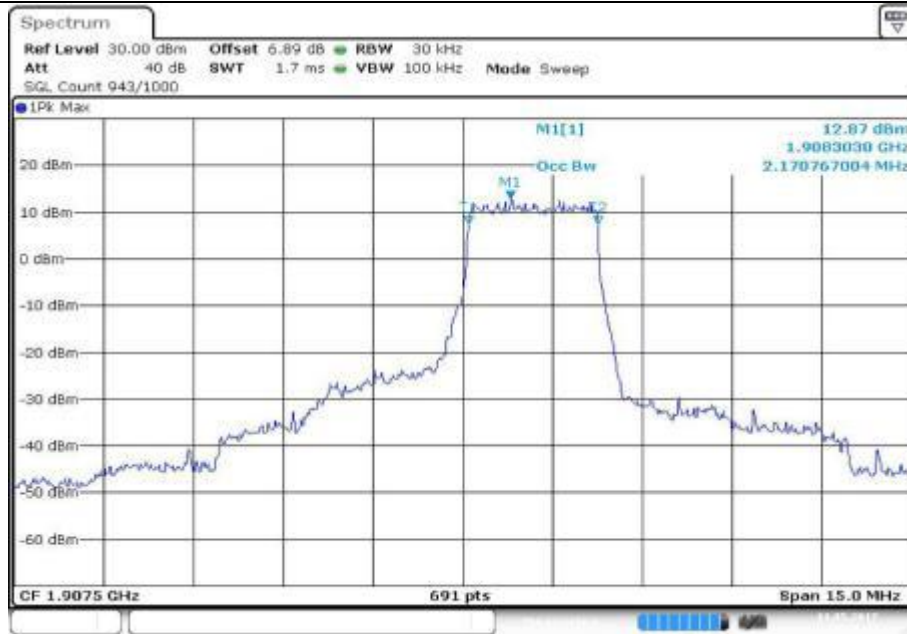
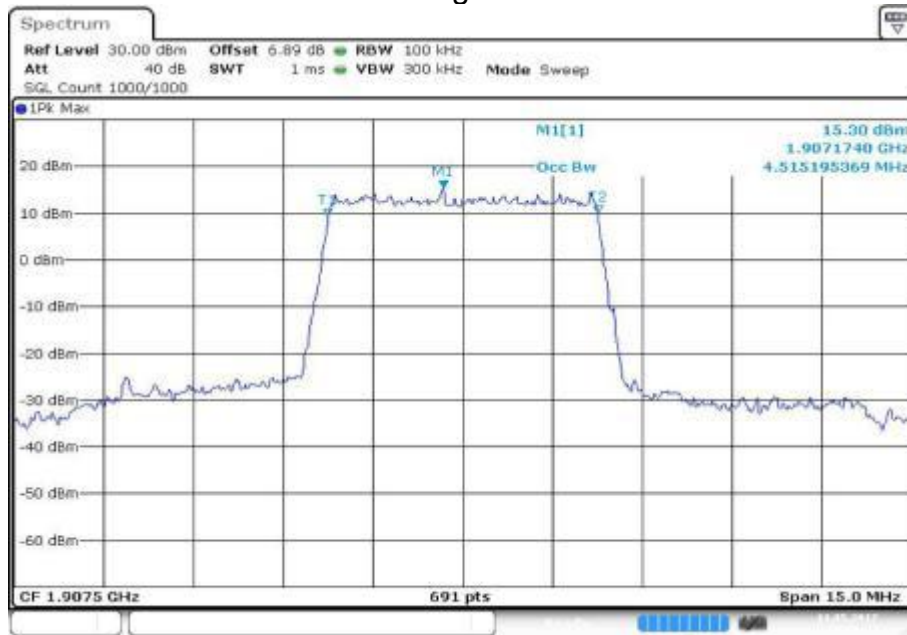


Fig.2



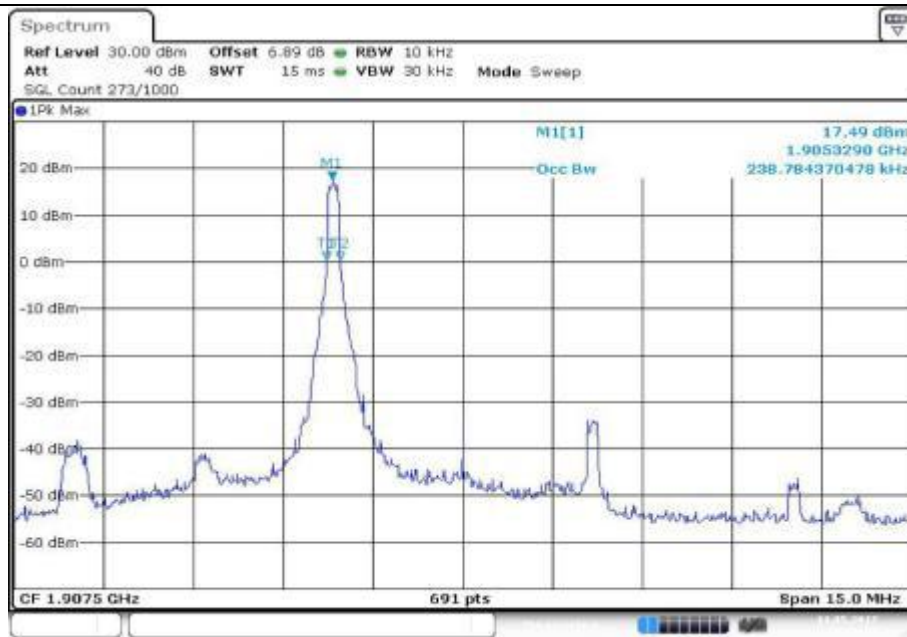
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Fig.3



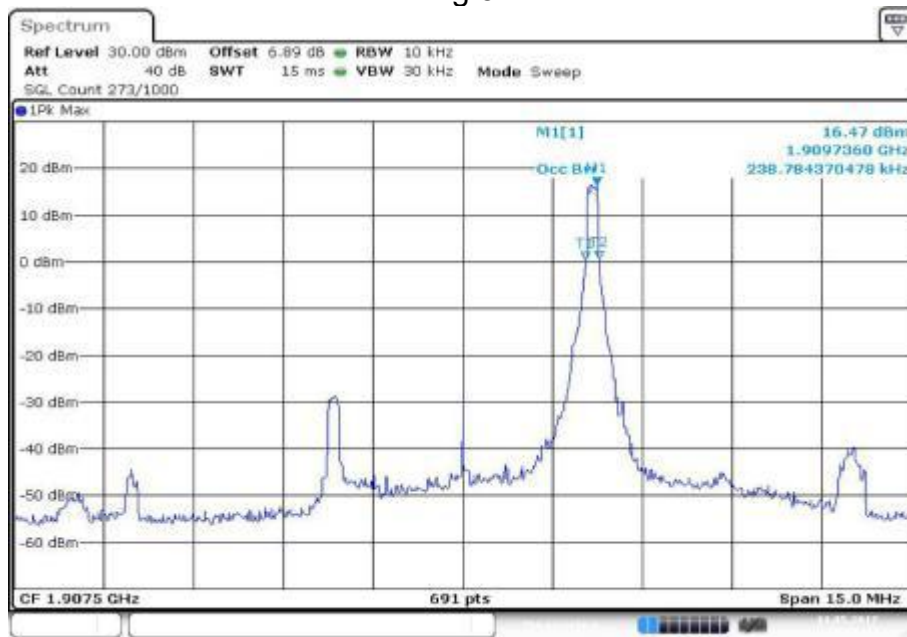
Date: 11 MAY 2017 05:21:23

Fig.4



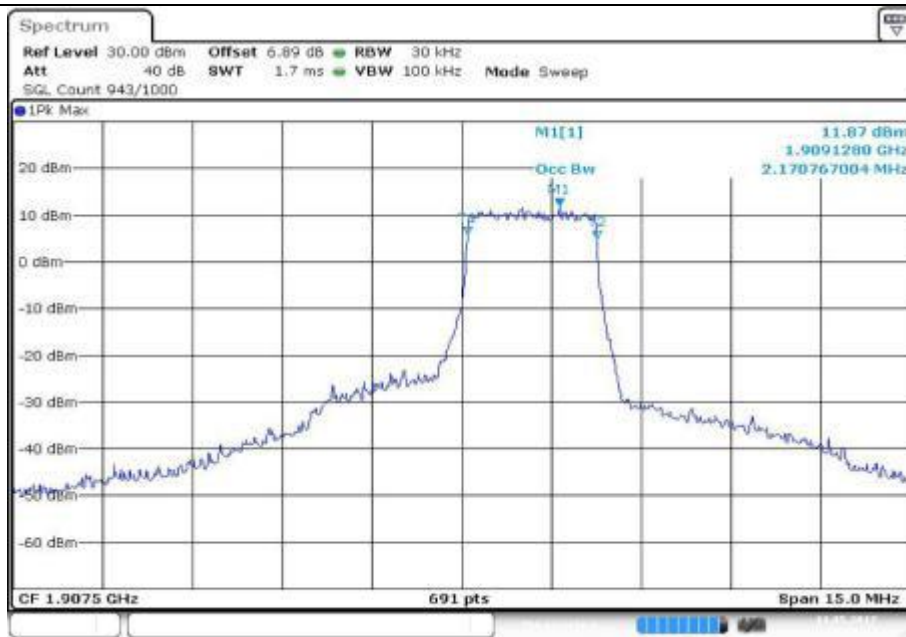
Date: 11 MAY 2017 05 22 07

Fig.5



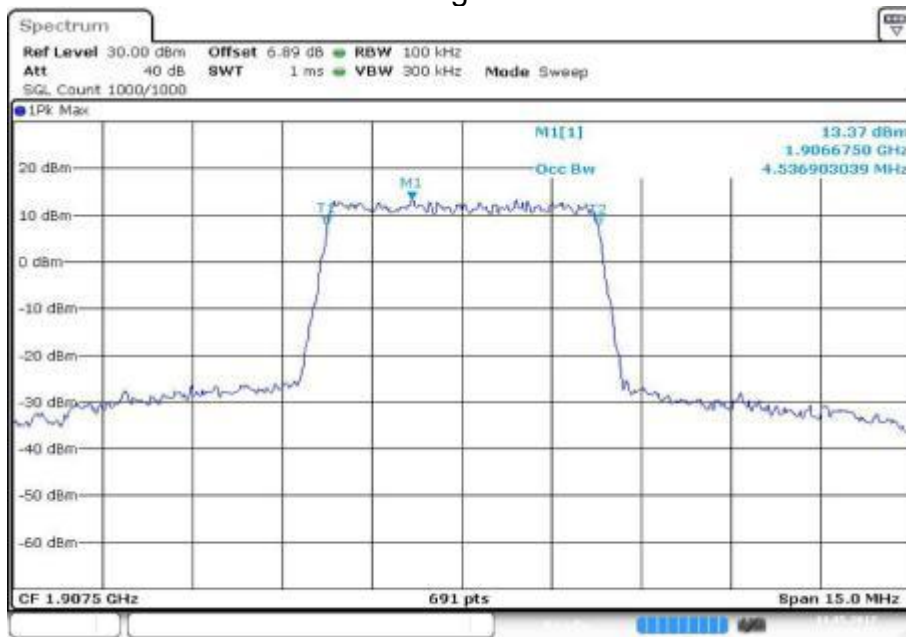
Date: 11 MAY 2017 05 22 50

Fig.6



Date: 11 MAY 2017 05 23 33

Fig.7



Date: 11 MAY 2017 05 24 16

Fig.8

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
2	1855	18650	10	1	0	0.217	Fig.1	0.217	Fig.5
				1	49	0.217	Fig.2	0.217	Fig.6
				24	12	4.342	Fig.3	4.342	Fig.7
				50	0	9.074	Fig.4	9.074	Fig.8

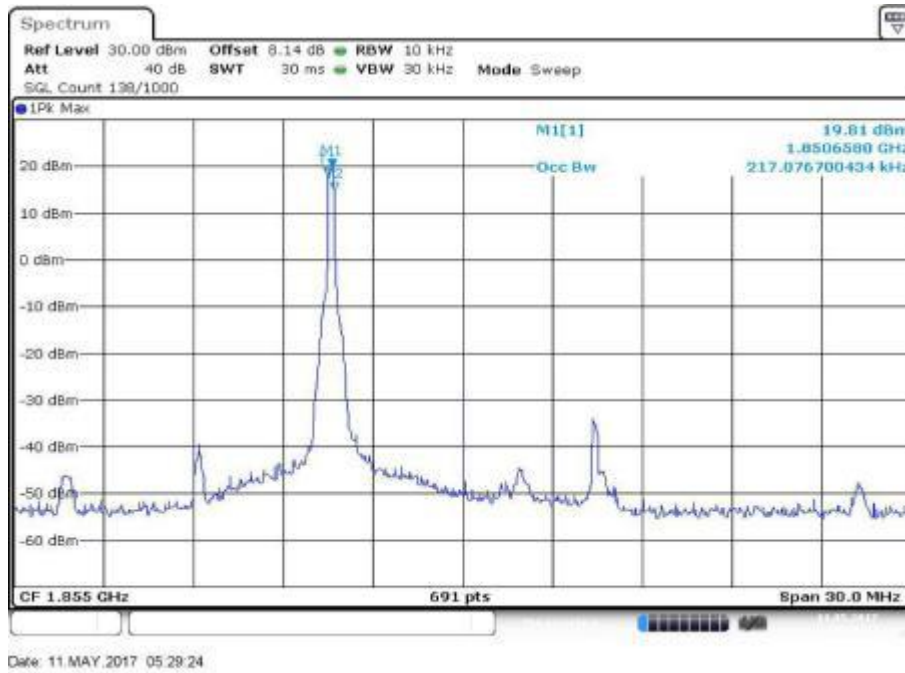


Fig.1

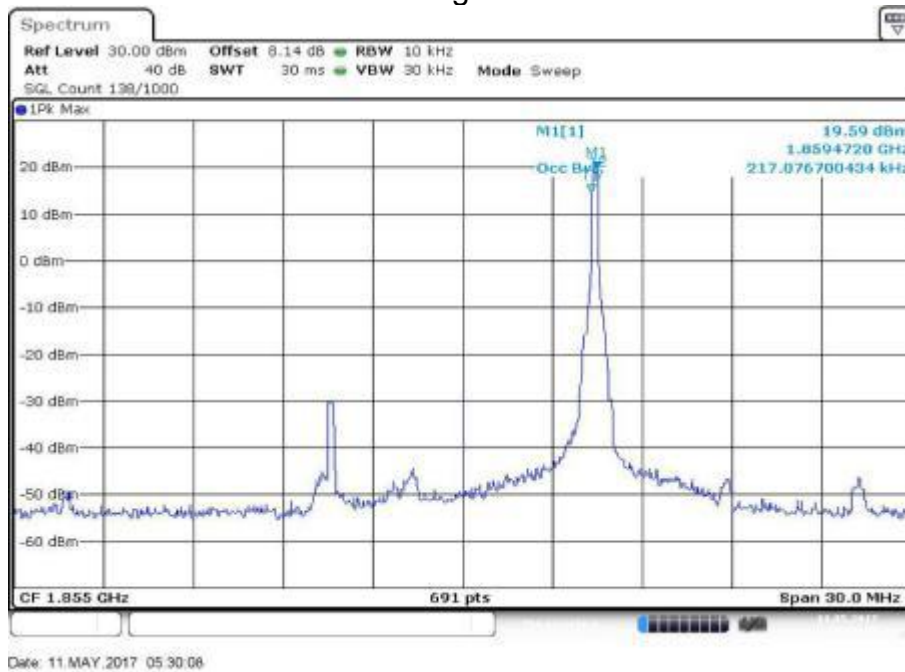
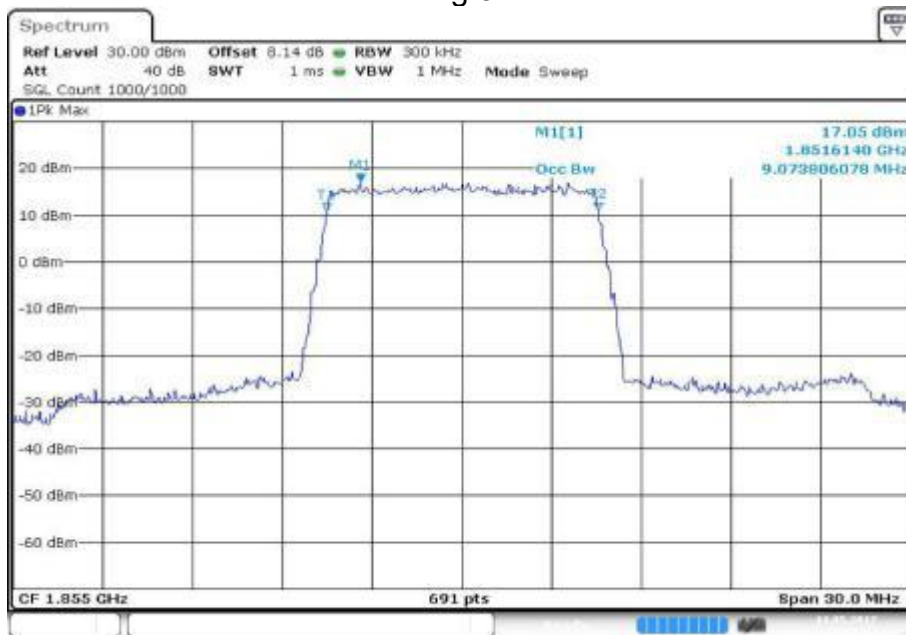


Fig.2



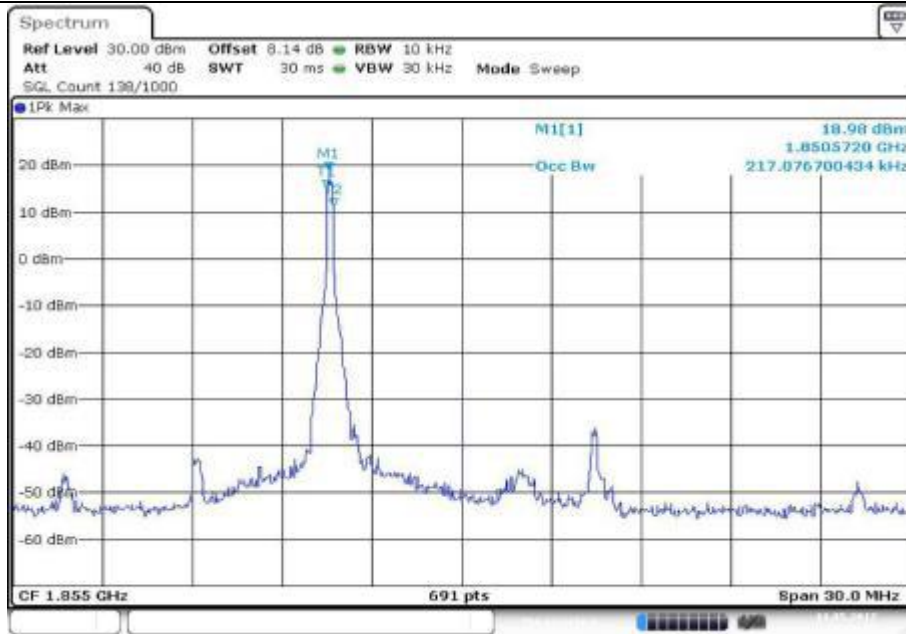
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Fig.3



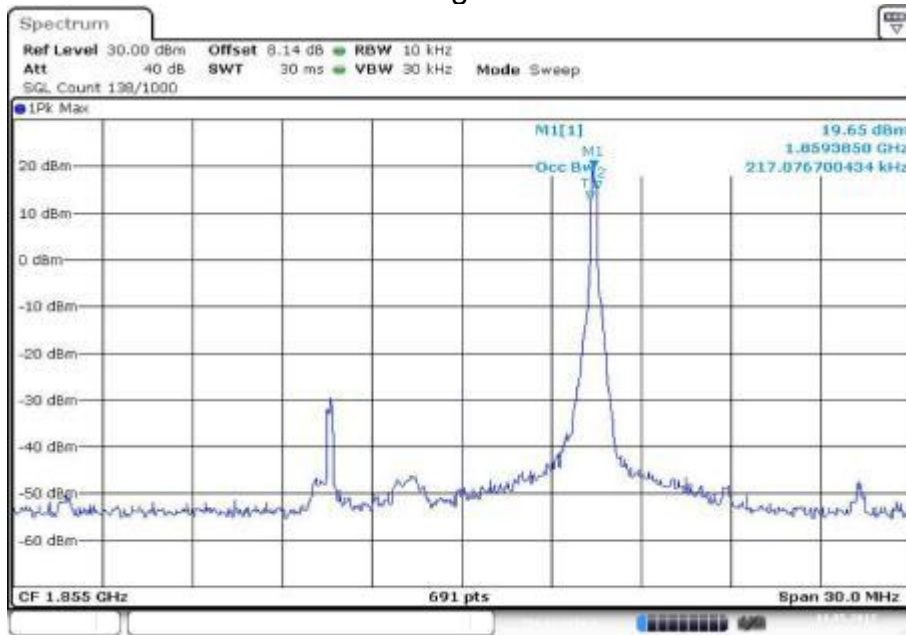
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Fig.4



Date: 11 MAY 2017 05:32:17

Fig.5



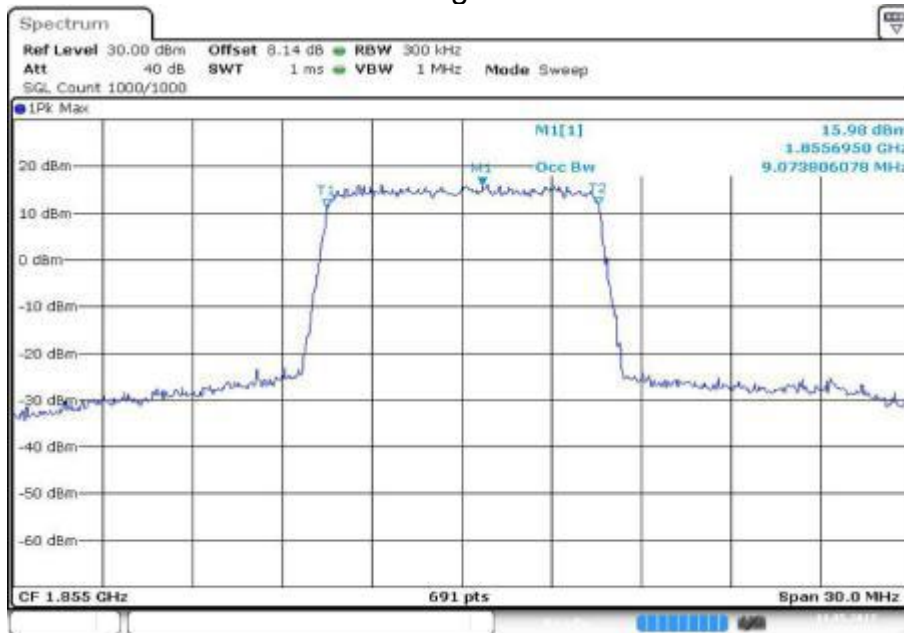
Date: 11 MAY 2017 05:33:00

Fig.6



Date: 11 MAY 2017 05:33:43

Fig.7



Date: 11 MAY 2017 05:34:26

Fig.8

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
2	1880	18900	10	1	0	0.217	Fig.1	0.217	Fig.5
				1	49	0.217	Fig.2	0.217	Fig.6
				24	12	4.342	Fig.3	4.342	Fig.7
				50	0	9.074	Fig.4	9.074	Fig.8



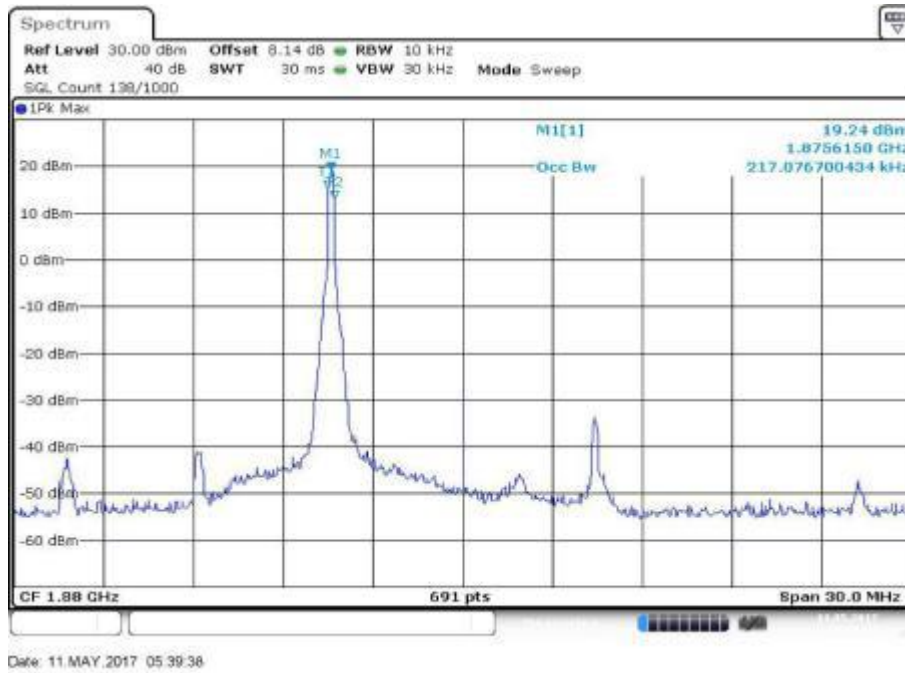


Fig.1

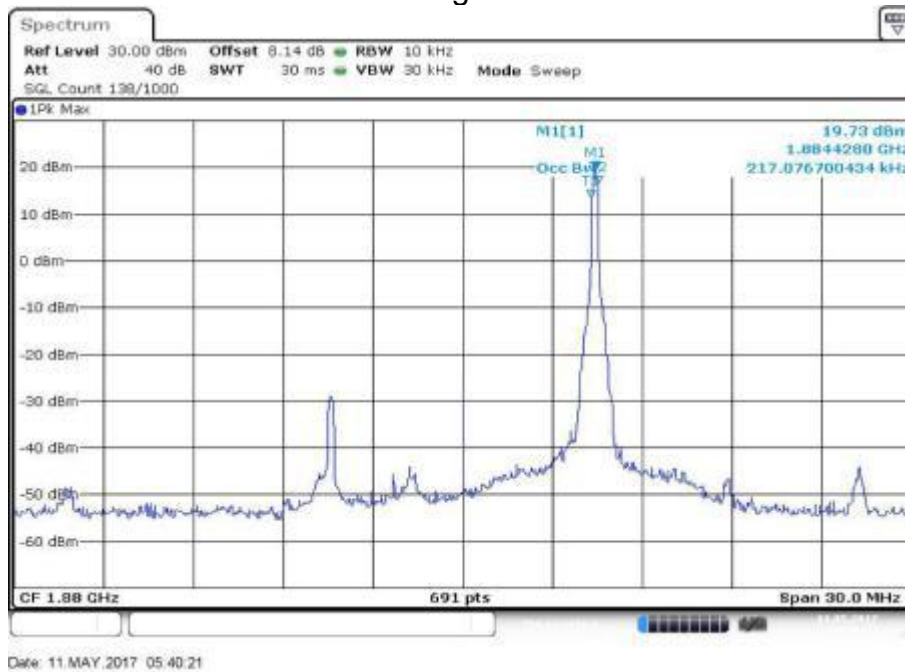
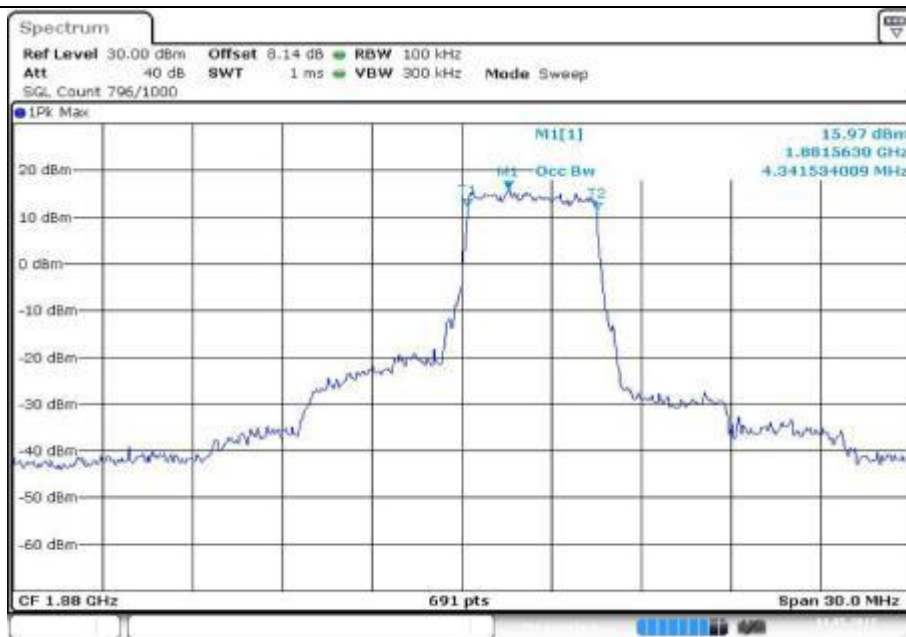
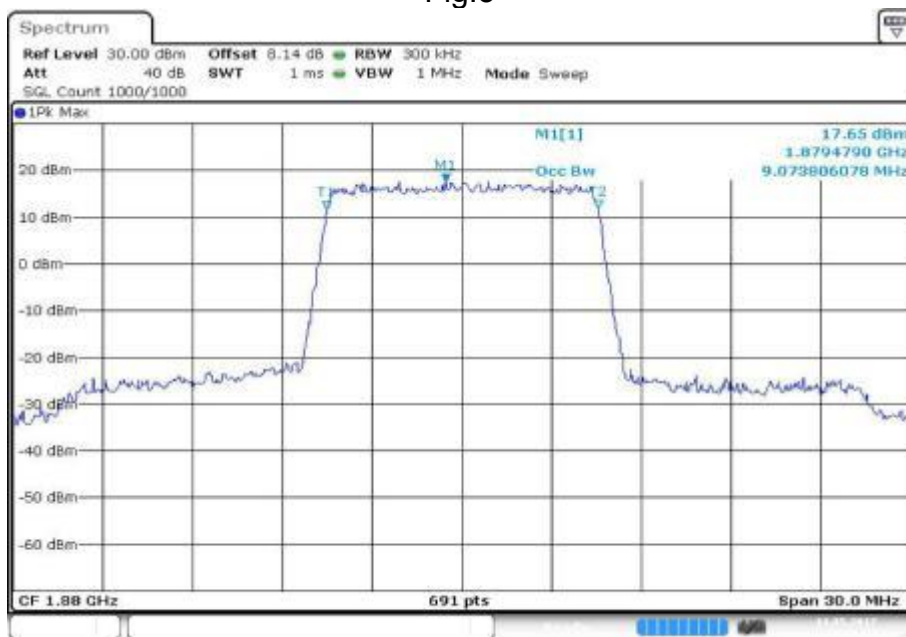


Fig.2



Date: 11 MAY 2017 05:41:04

Fig.3



Date: 11 MAY 2017 05:41:48

Fig.4

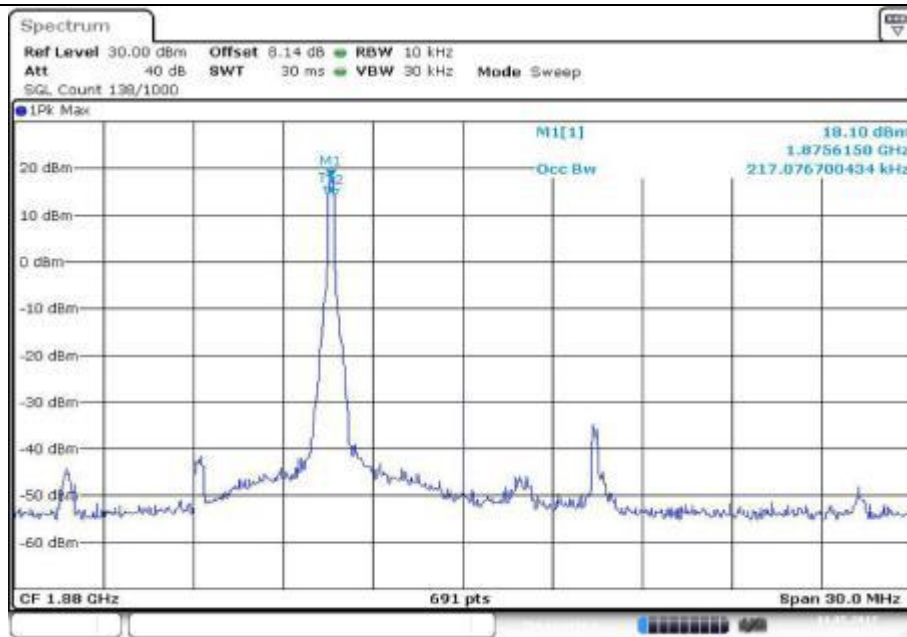


Fig.5

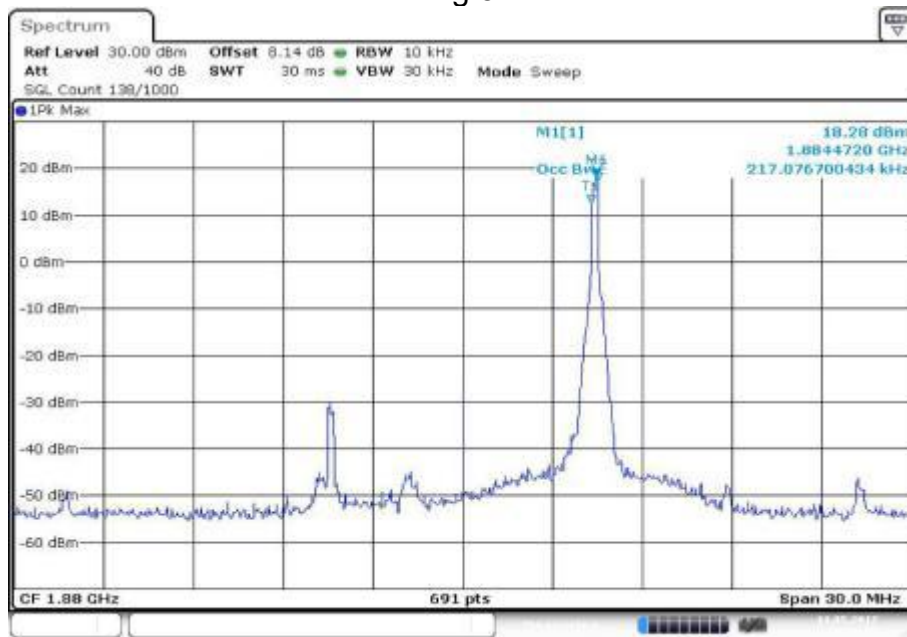
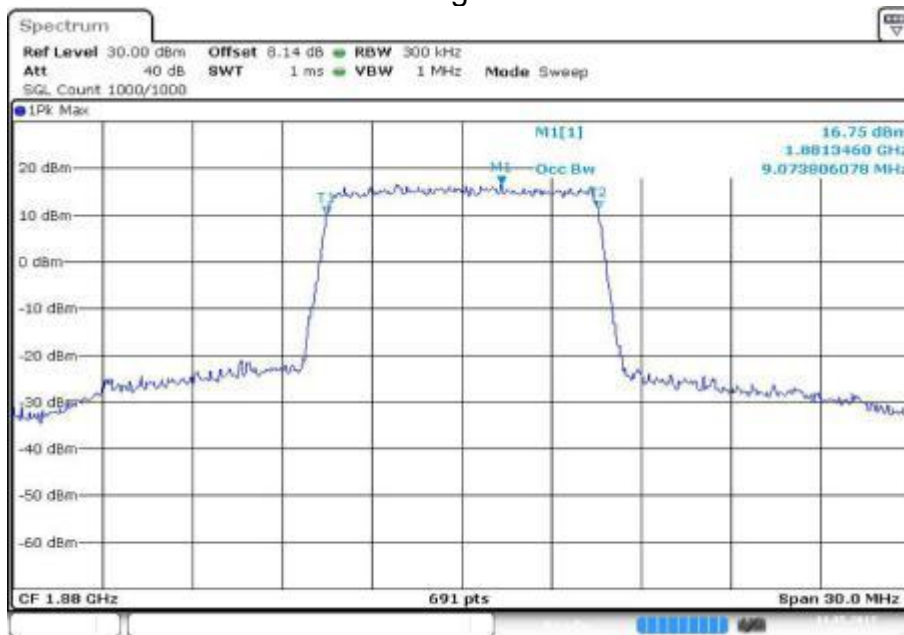


Fig.6



Date: 11 MAY 2017 05:43:57

Fig.7



Date: 11 MAY 2017 05:44:40

Fig.8

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
2	1905	19150	10	1	0	0.217	Fig.1	0.217	Fig.5
				1	49	0.217	Fig.2	0.217	Fig.6
				24	12	4.342	Fig.3	4.342	Fig.7
				50	0	9.074	Fig.4	9.030	Fig.8

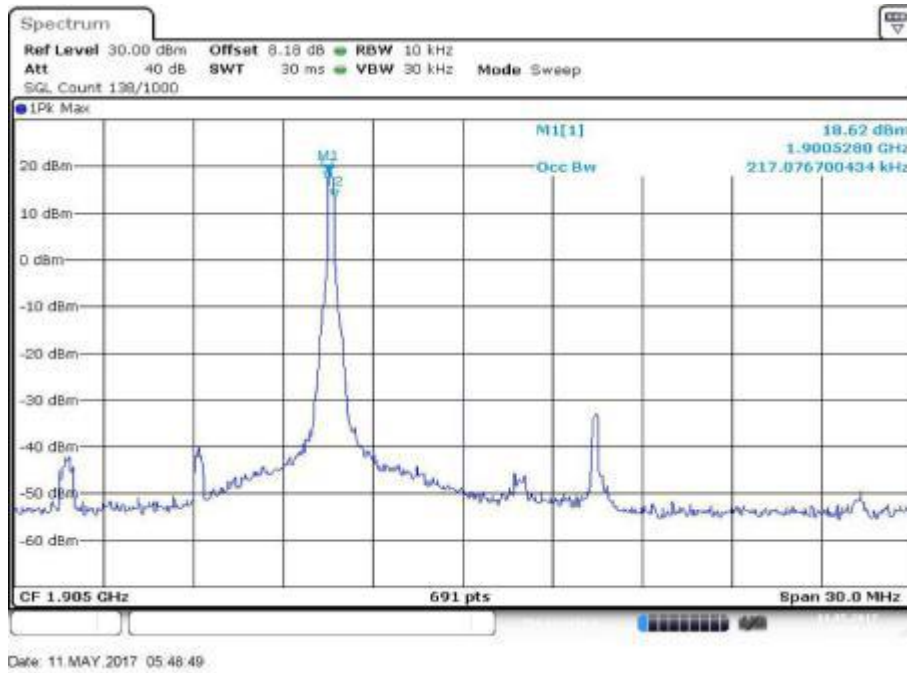


Fig.1

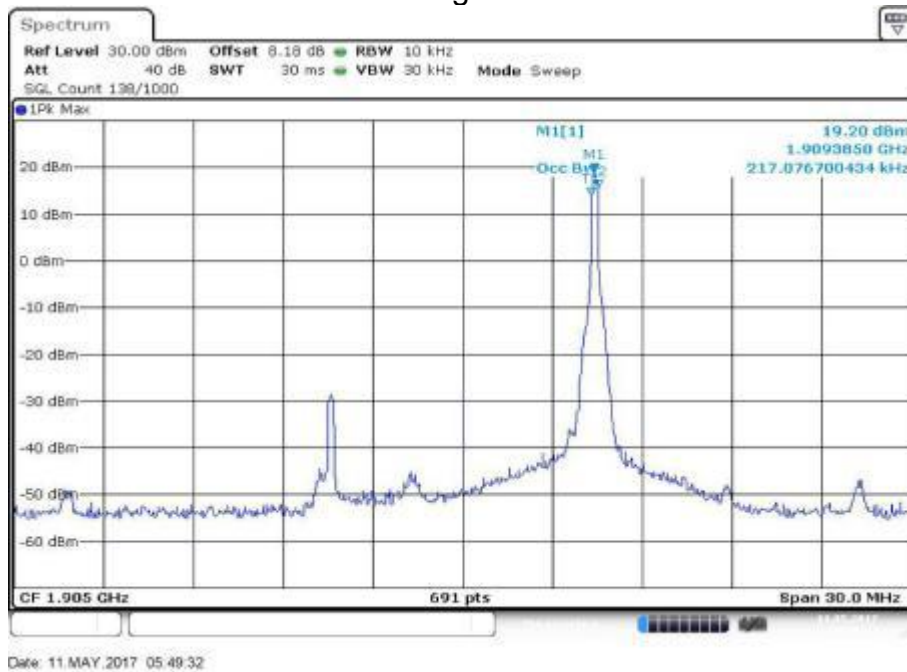
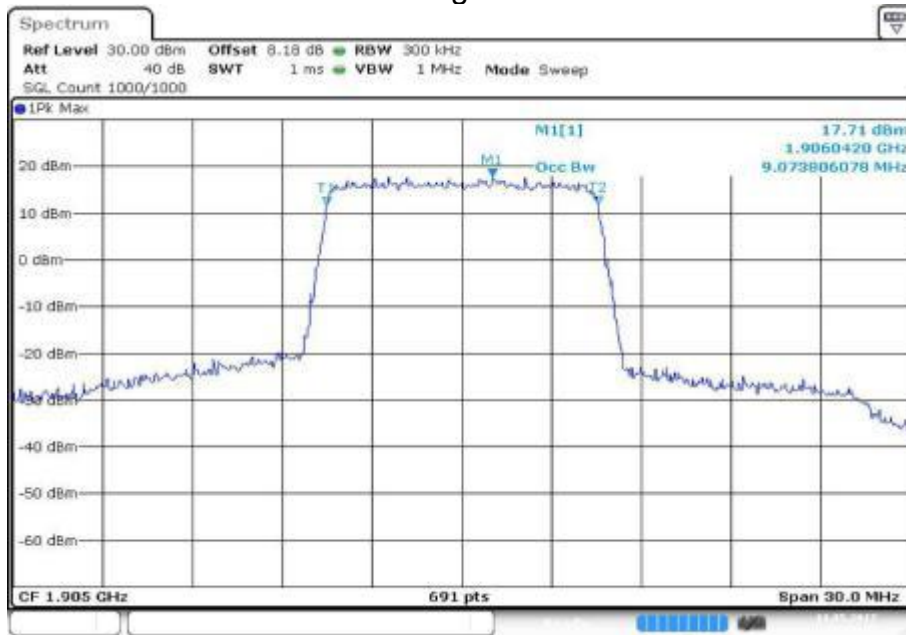


Fig.2



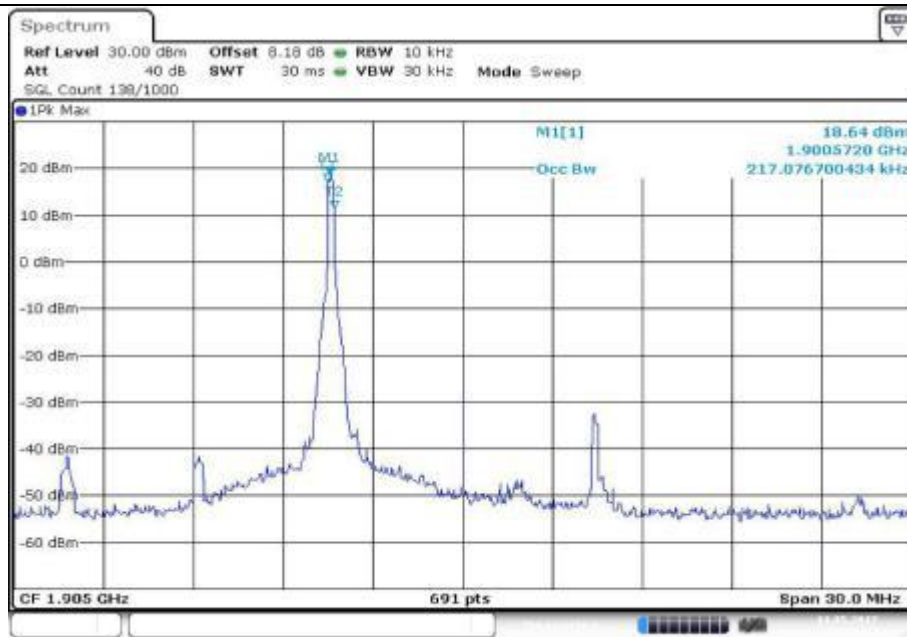
Date: 11 MAY 2017 05:50:15

Fig.3



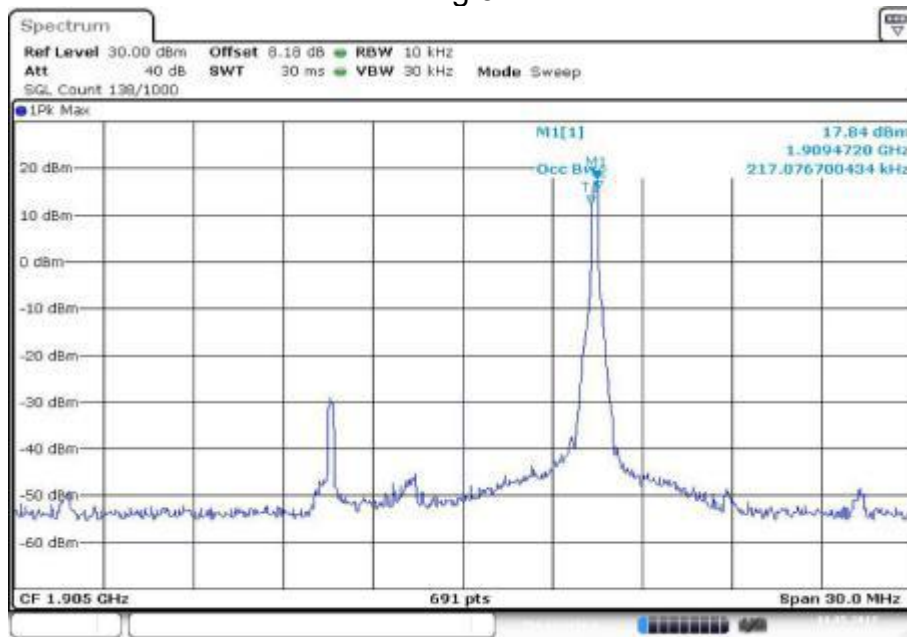
Date: 11 MAY 2017 05:50:58

Fig.4



Date: 11 MAY 2017 05:51:41

Fig.5



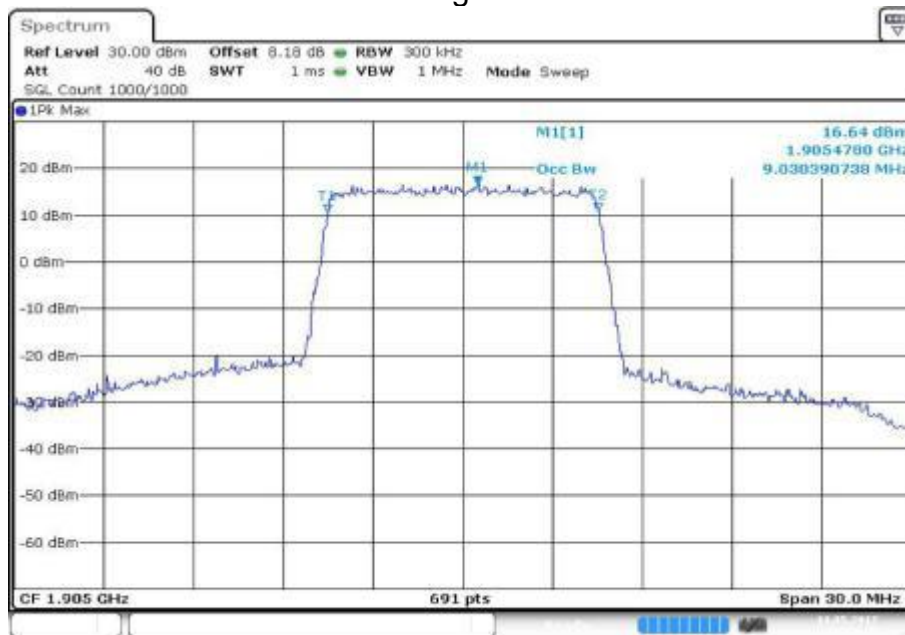
Date: 11 MAY 2017 05:52:24

Fig.6



Date: 11 MAY 2017 05:53:07

Fig.7



Date: 11 MAY 2017 05:53:50

Fig.8

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
2	1857.5	18675	15	1	0	0.260	Fig.1	0.260	Fig.5
				1	74	0.260	Fig.2	0.260	Fig.6
				38	18	0.651	Fig.3	0.651	Fig.7
				75	0	13.546	Fig.4	13.480	Fig.8



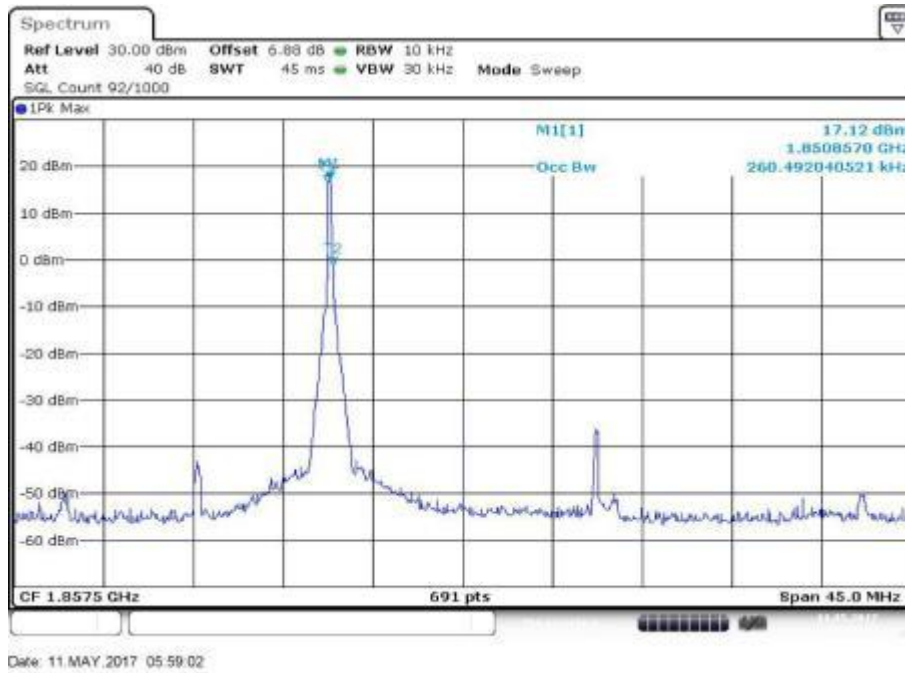


Fig.1

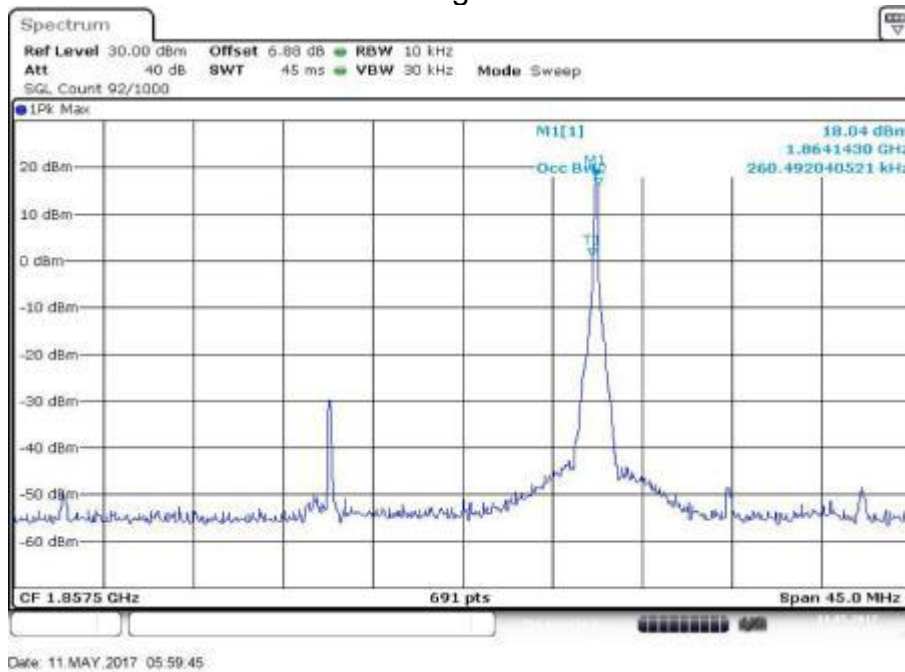
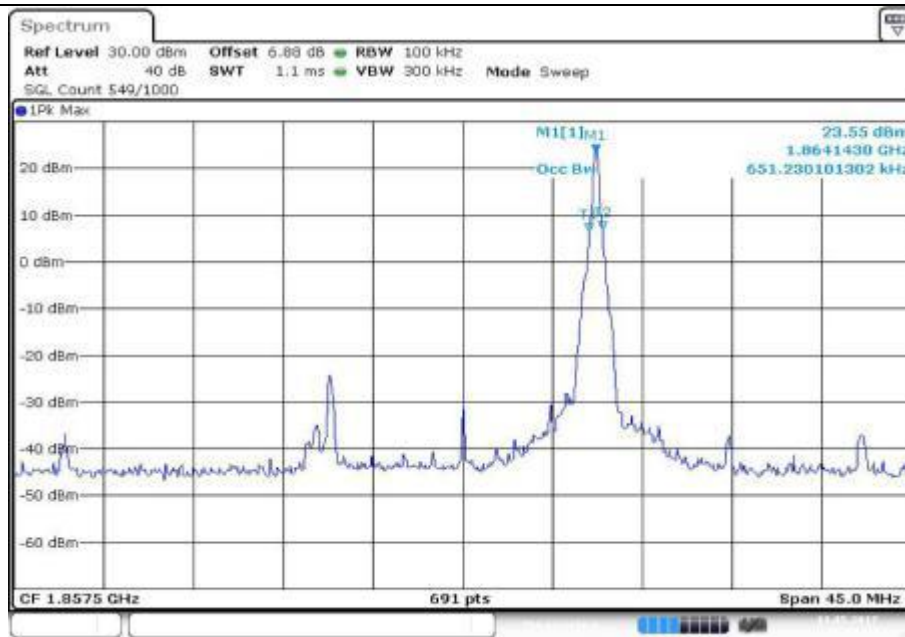
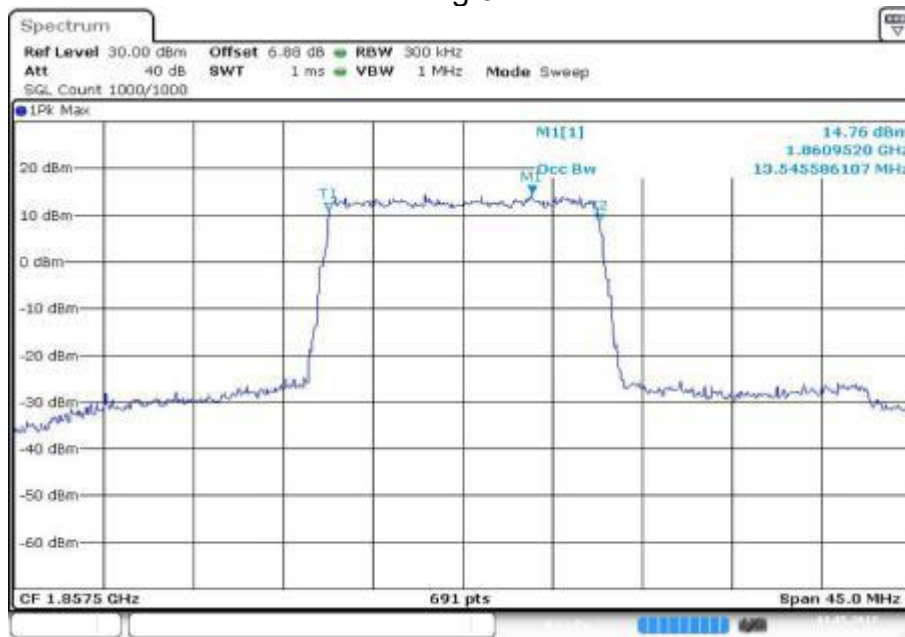


Fig.2



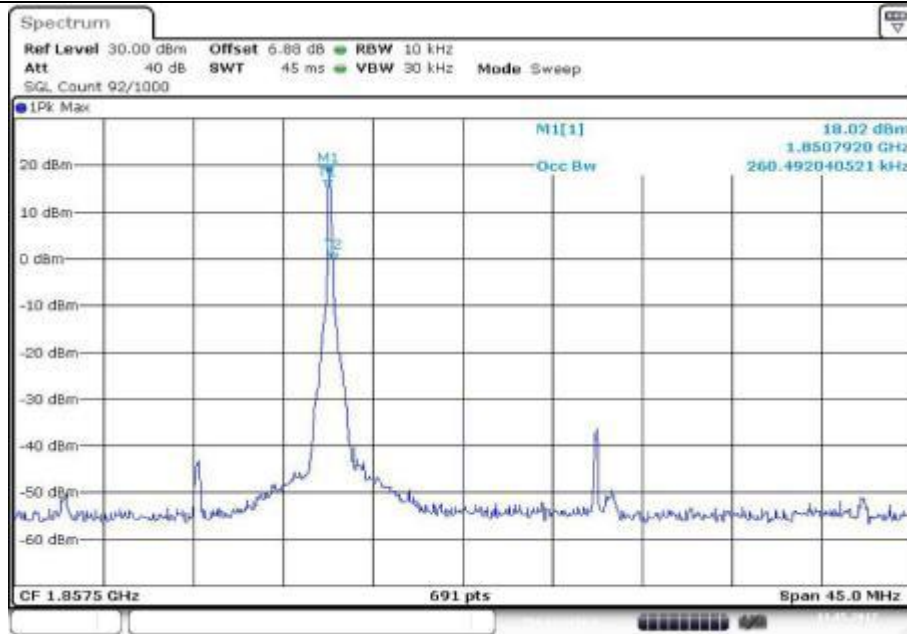
Date: 11 MAY 2017 06:00:28

Fig.3



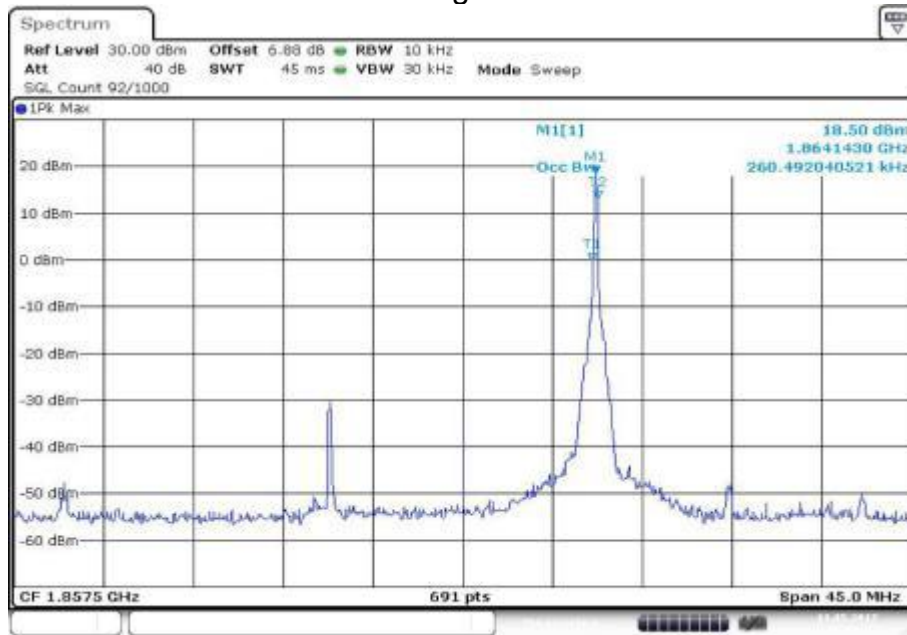
Date: 11 MAY 2017 06:01:11

Fig.4



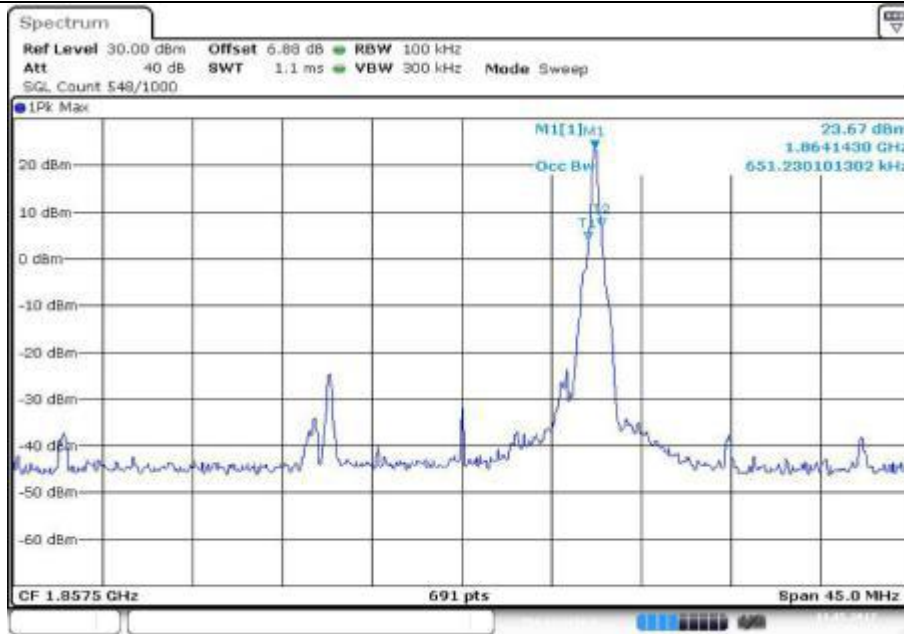
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Fig.5



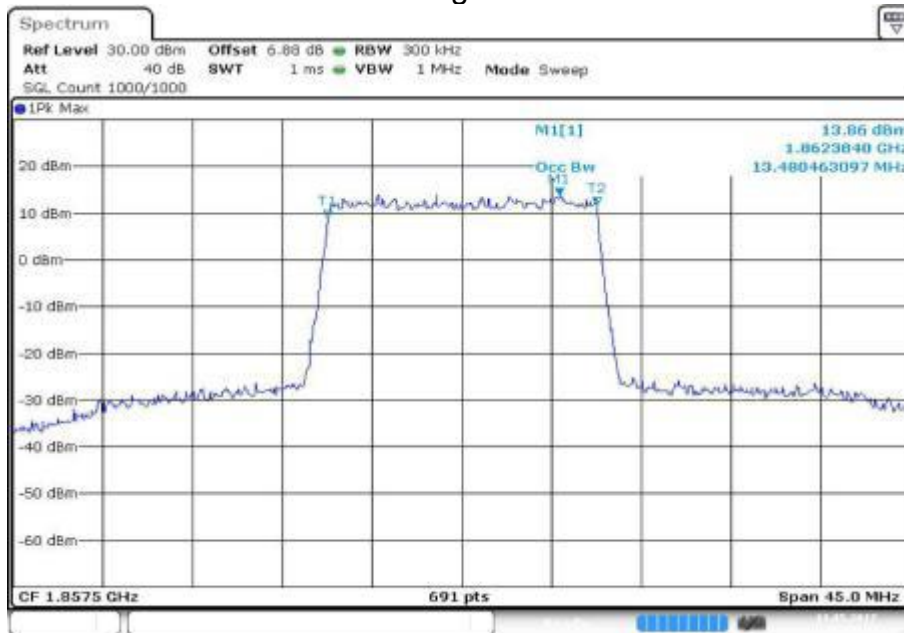
Date: 11 MAY 2017 06:02:38

Fig.6



Date: 11 MAY 2017 06:03:21

Fig.7



Date: 11 MAY 2017 06:04:04

Fig.8

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
2	1880	18900	15	1	0	0.260	Fig.1	0.260	Fig.5
				1	74	0.260	Fig.2	0.260	Fig.6
				38	18	0.716	Fig.3	0.716	Fig.7
				75	0	13.480	Fig.4	13.480	Fig.8

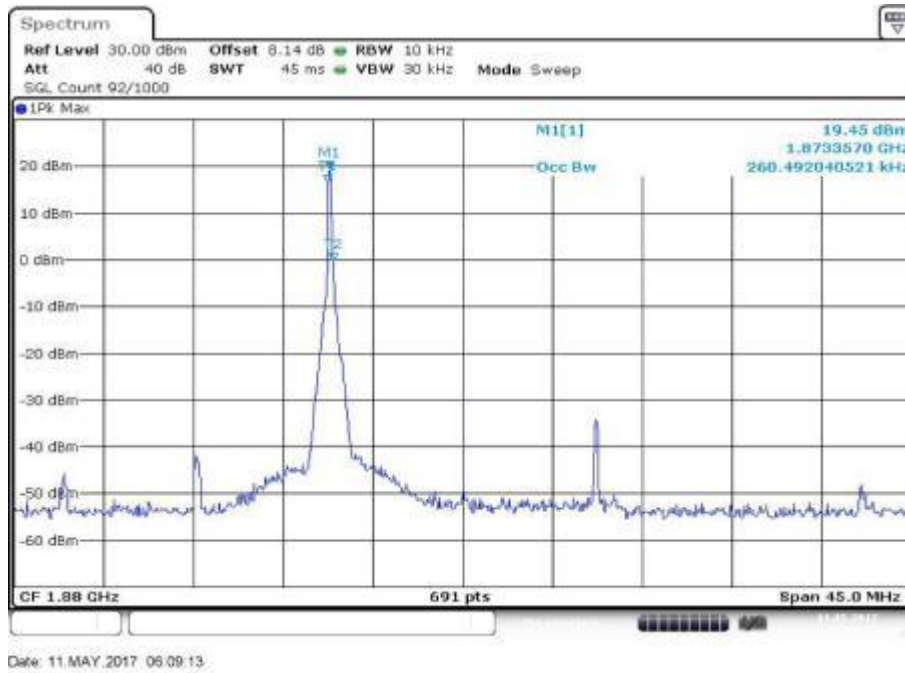


Fig.1

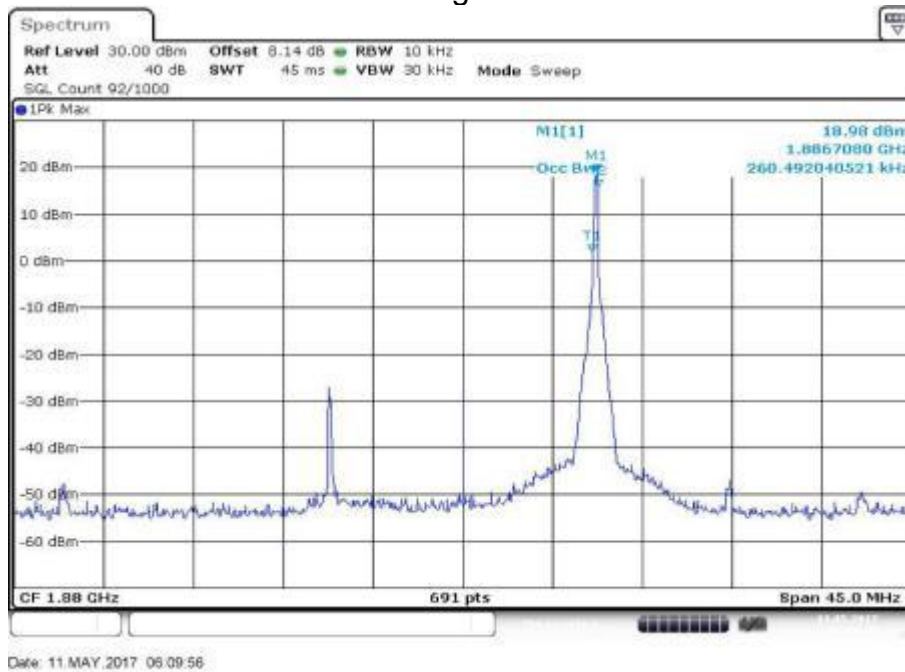
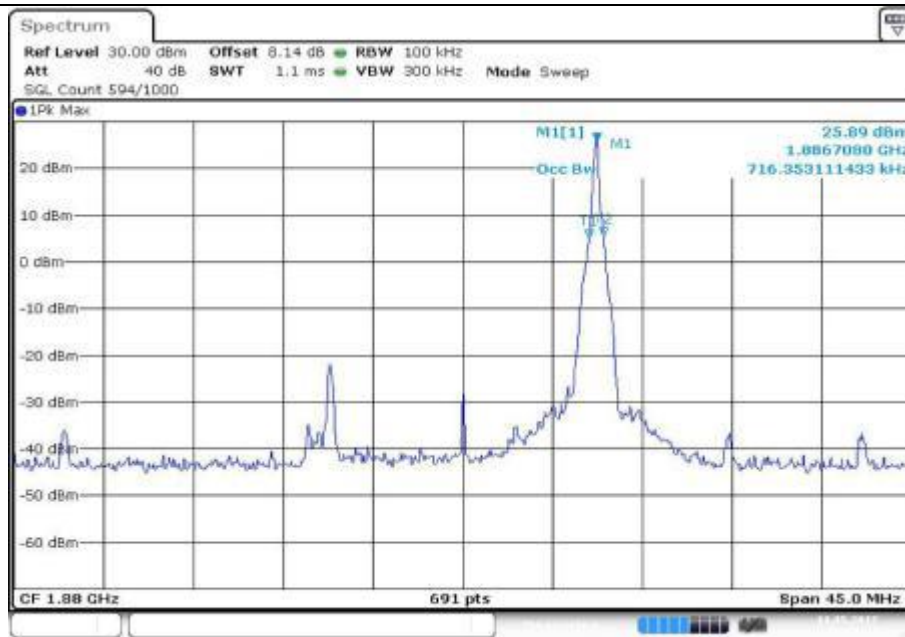
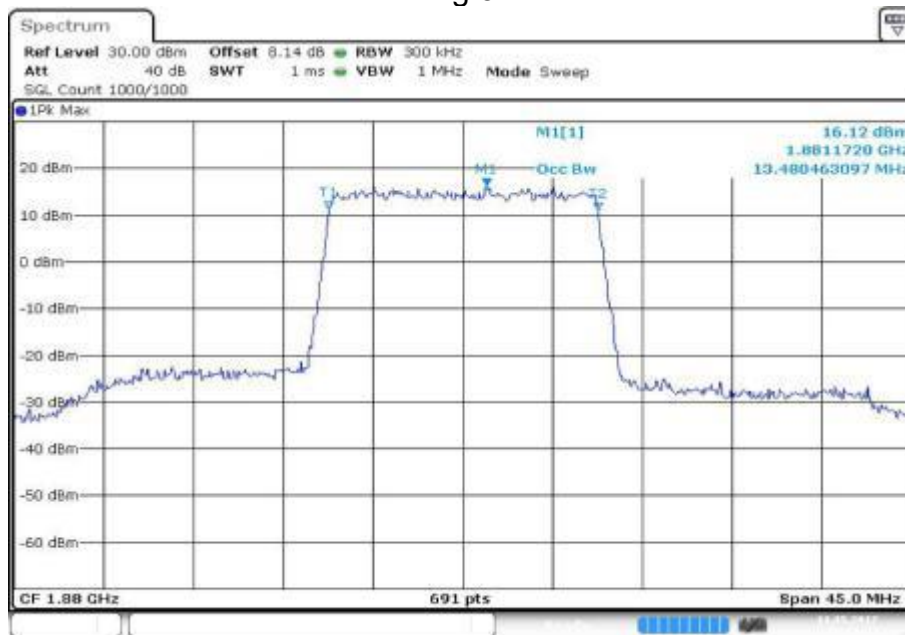


Fig.2



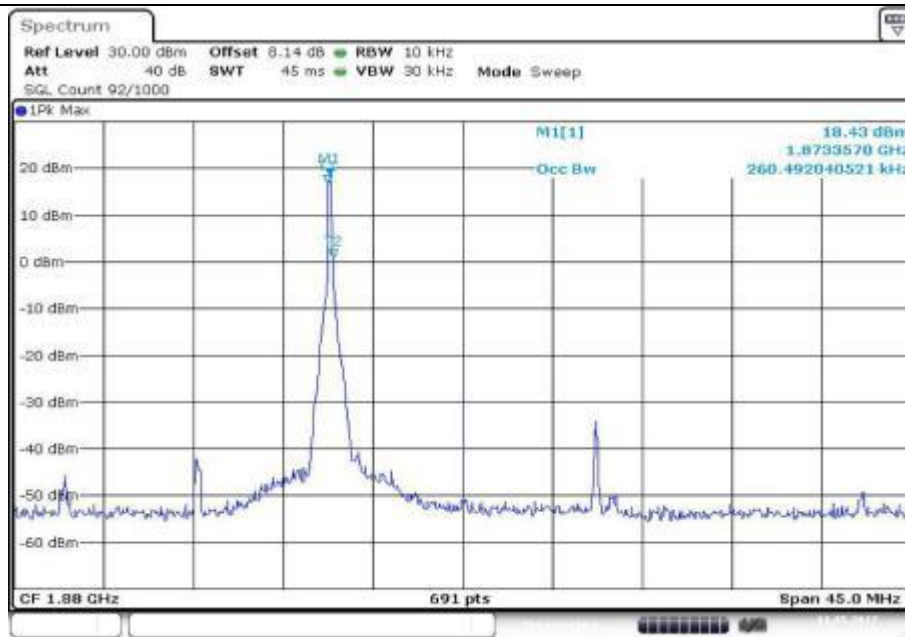
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Fig.3



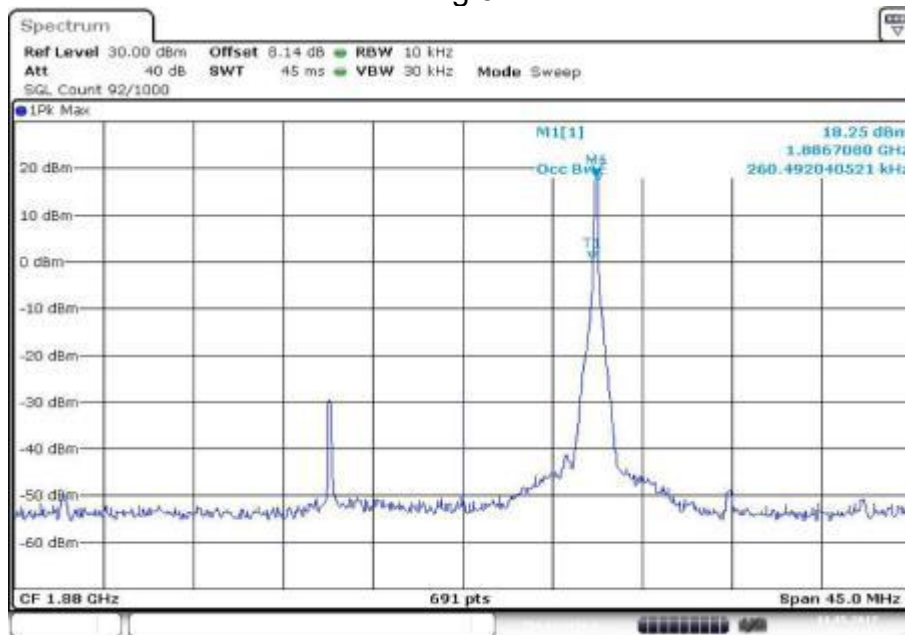
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Fig.4



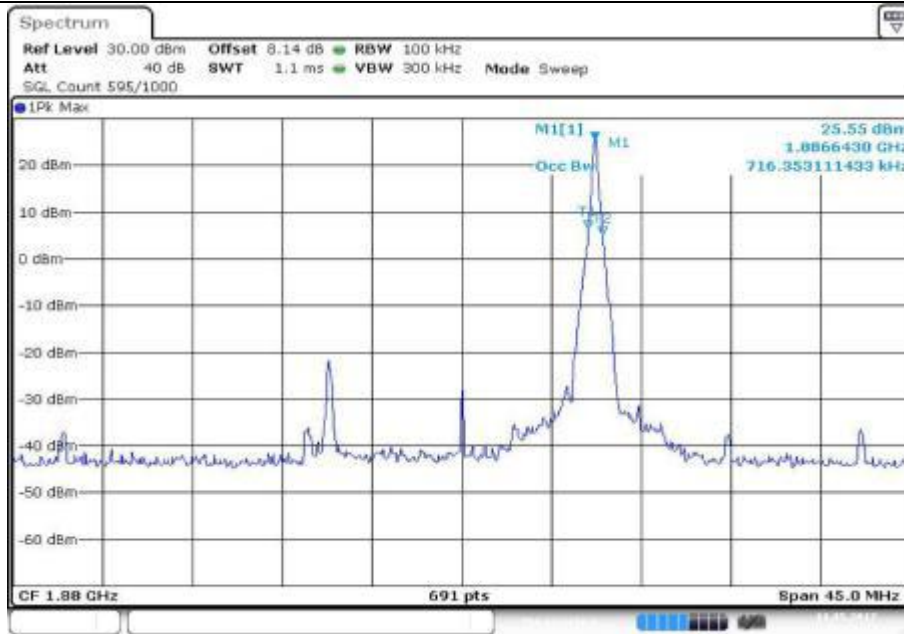
Date: 11 MAY 2017 06:12:05

Fig.5



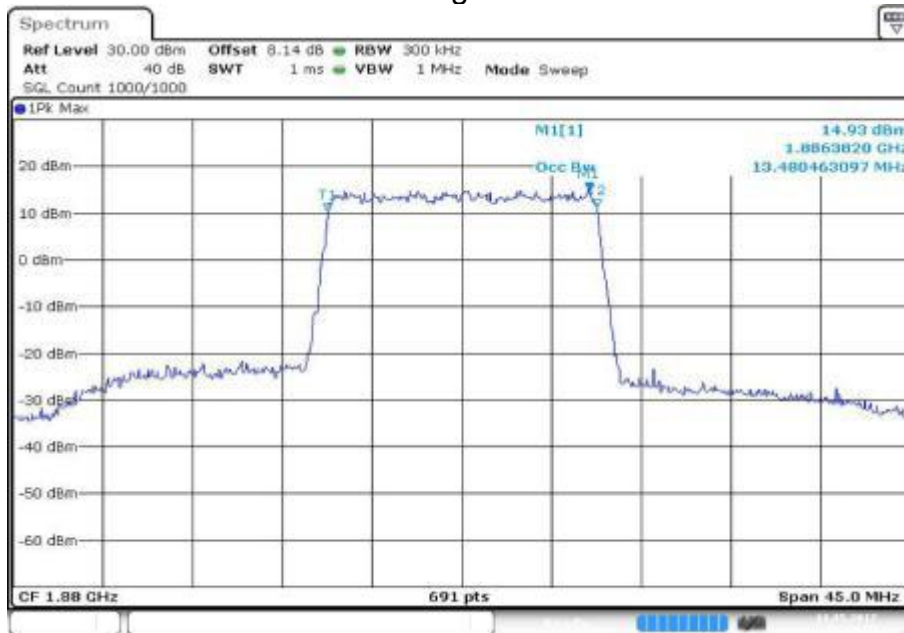
Date: 11 MAY 2017 06:12:48

Fig.6



Date: 11 MAY 2017 06:13:31

Fig.7



Date: 11 MAY 2017 06:14:15

Fig.8

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
2	1902.5	19125	15	1	0	0.260	Fig.1	0.260	Fig.5
				1	74	0.260	Fig.2	0.260	Fig.6
				38	18	0.716	Fig.3	0.651	Fig.7
				75	0	13.480	Fig.4	13.480	Fig.8



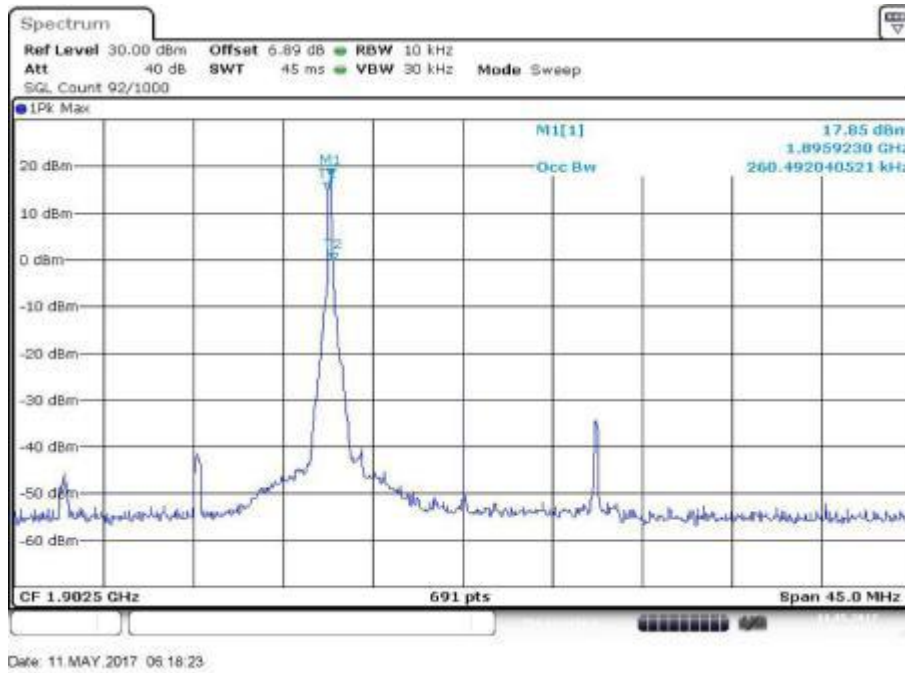


Fig.1

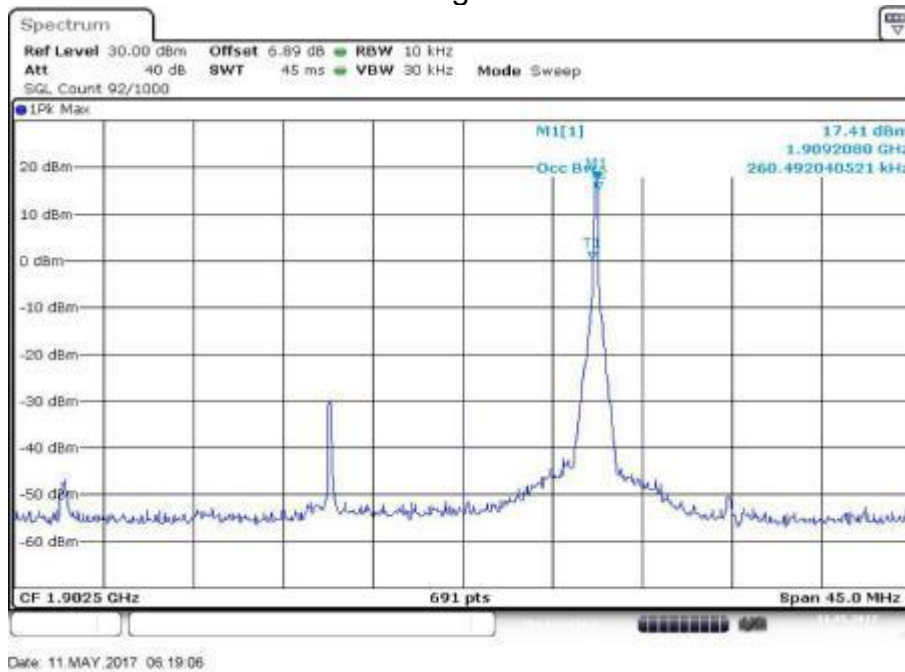
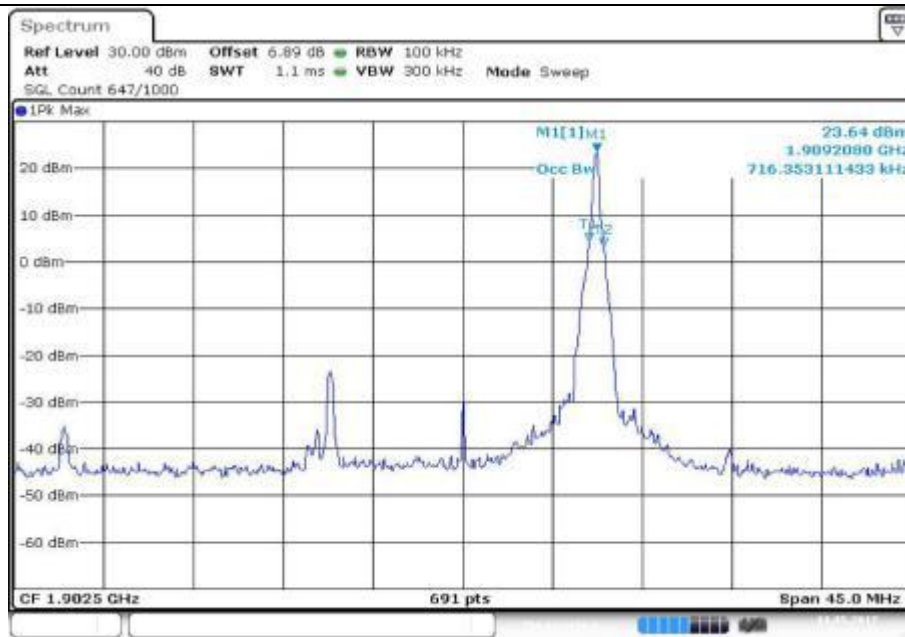
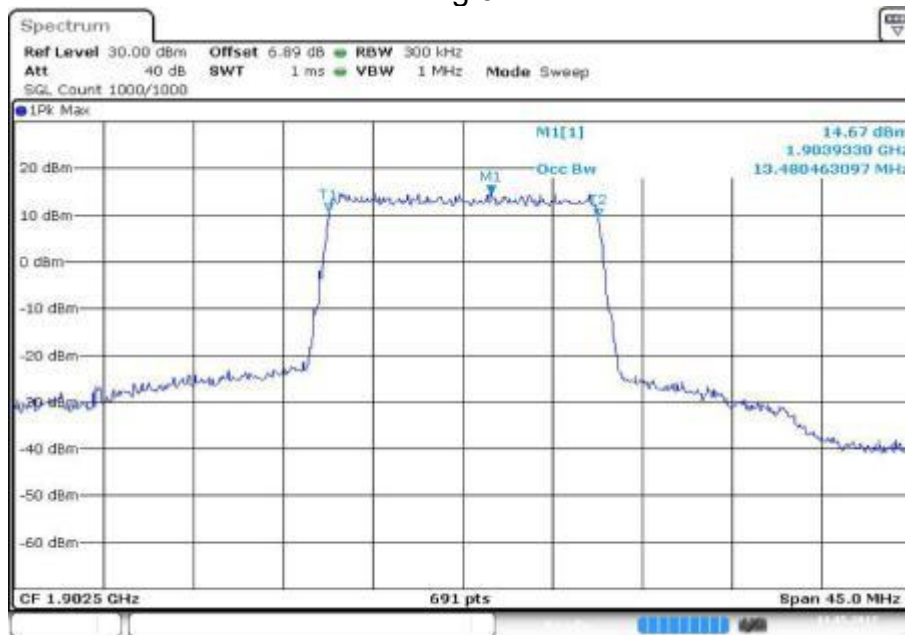


Fig.2



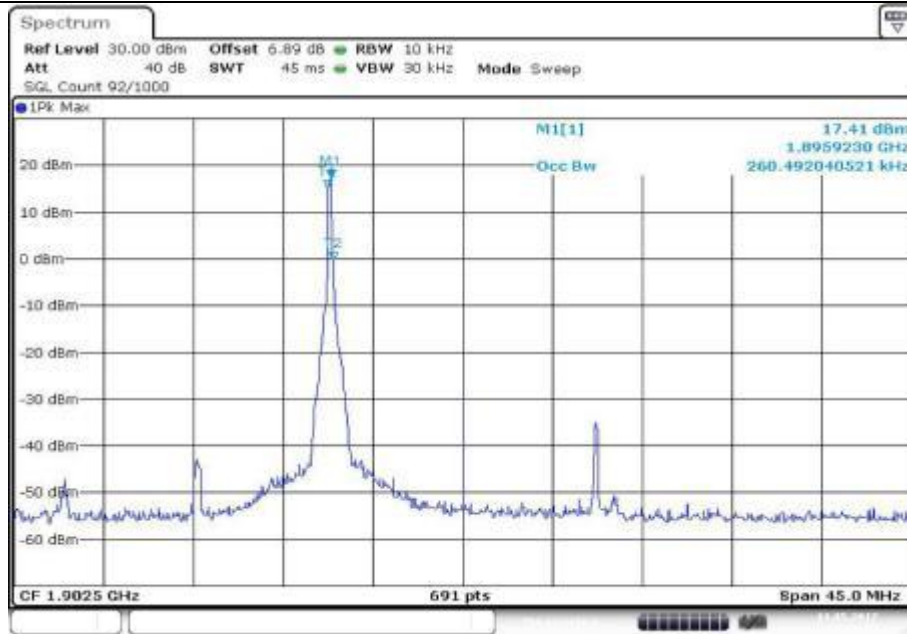
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Fig.3



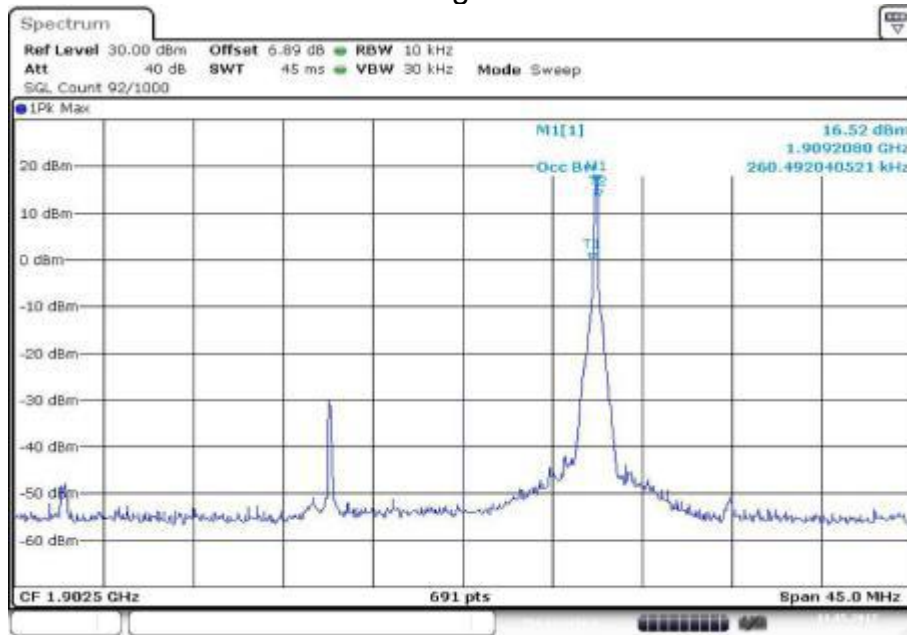
Date: 11 MAY 2017 06:20:32

Fig.4



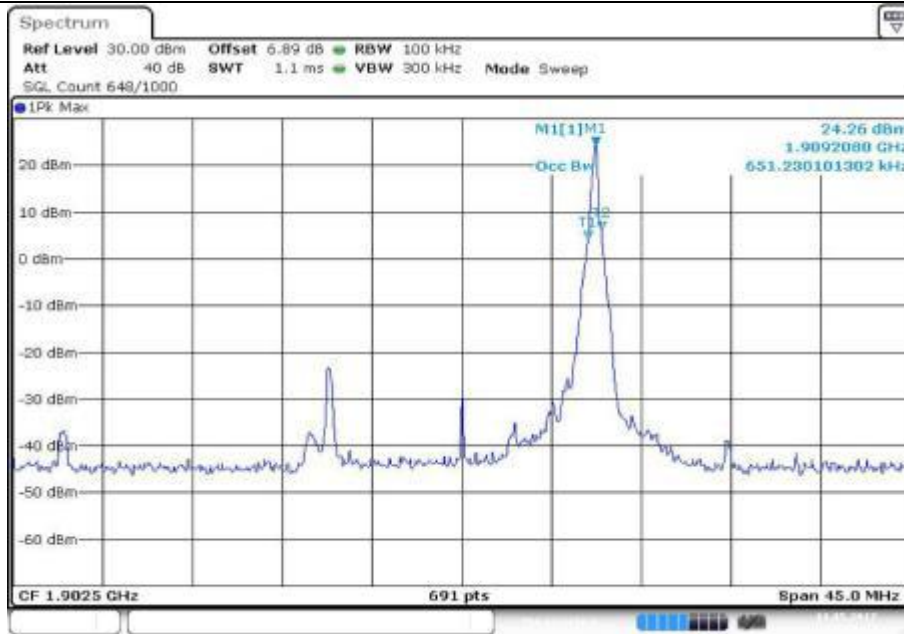
Date: 11 MAY 2017 06:21:15

Fig.5



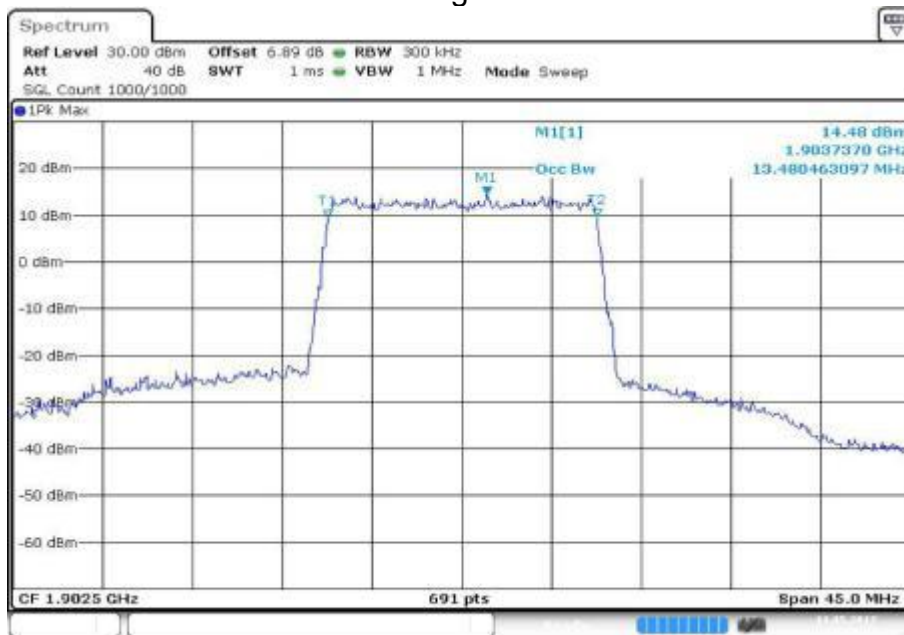
Date: 11 MAY 2017 06:21:58

Fig.6



Date: 11 MAY 2017 06:22:41

Fig.7



Date: 11 MAY 2017 06:23:24

Fig.8

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
2	1860	18700	20	1	0	0.260	Fig.1	0.260	Fig.5
				1	99	0.260	Fig.2	0.260	Fig.6
				50	25	9.117	Fig.3	9.204	Fig.7
				100	0	17.974	Fig.4	17.974	Fig.8