



Registration  
No.910917

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## TEST REPORT FOR RF TESTING

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Report No.: SRTC2017-9004(F)-0031

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

Product Model: 602ZT

Applicant: ZTE Corporation

Manufacturer: ZTE Corporation

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

FCC ID: SRQ-602ZT

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

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

Tel: 86-10-57996181 Fax: 86-10-57996288

## CONTENTS

<b>1. GENERAL INFORMATION</b> .....	<b>2</b>
1.1 Notes of the test report .....	2
1.2 Information about the testing laboratory .....	2
1.3 Applicant’s details .....	2
1.4 Manufacturer’s details.....	2
1.5 Test Environment.....	3
<b>2 DESCRIPTION OF THE EQUIPMENT UNDER TEST</b> .....	<b>4</b>
2.1 Final Equipment Build Status .....	4
2.2 Summary table.....	4
2.3 Support Equipment .....	4
<b>4 KEY TO NOTES AND RESULT CODES</b> .....	<b>6</b>
<b>5 RESULT SUMMARY</b> .....	<b>7</b>
<b>6 TEST RESULT</b> .....	<b>8</b>
<b>7 MEASUREMENT UNCERTAINTIES</b> .....	<b>19</b>
<b>8 TEST EQUIPMENTS</b> .....	<b>20</b>
<b>APPENDIX A – TEST DATA OF CONDUCTED EMISSION</b> .....	<b>21</b>
<b>APPENDIX B – TEST DATA OF RADIATED EMISSION</b> .....	<b>21</b>
<b>APPENDIX C – TEST SETUP</b> .....	<b>21</b>

## **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:	2017.04.11
Testing Start Date:	2017.04.11
Testing End Date:	2017.04.14

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

Normal Supply Voltage (V d.c.):	3.85
Maximum Extreme Supply Voltage (V d.c.):	4.24
Minimum Extreme Supply Voltage (V d.c.):	3.47

## 2 DESCRIPTION OF THE EQUIPMENT UNDER TEST

### 2.1 Final Equipment Build Status

Frequency Range	LTE Band 41: Tx:2545~2595MHz Rx:~2545~2595MHz
Modulation Type	QPSK 16QAM
Duplex Mode	TDD
Antenna Type	Fixed Internal
Power Supply	Battery or Charger
HW Version	csrB
SW Version	602ZT a0.1
IMEI	864766030001540

### 2.2 Summary table.

FCC Rule Part	Frequency Range(MHz)	Output Power (W)	Frequency Tolerance	Emission Designator	Emission Bandwidth (MHz)	Communication Type
LTE BAND41						
27B	2547.5-2592.5	0.13	0.002	5M00G7D	5M	QPSK
	2547.5-2592.5	0.09	0.002	5M00D7W	5M	16QAM
	2550-2590	0.13	0.001	10M0G7D	10M	QPSK
	2550-2590	0.11	0.00	10M0D7W	10M	16QAM
	2552.5-2587.5	0.13	0.002	15M0G7D	15M	QPSK
	2552.5-2587.5	0.11	0.002	15M0D7W	15M	16QAM
	2555-2585	0.14	0.001	20M0G7D	20M	QPSK
	2555-2585	0.11	0.001	20M0D7W	20M	16QAM

### 2.3 Support Equipment

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

Equipment	Battery
Manufacturer	BYD
Model Number	Li3824T44P4h716043

Equipment	Headset
Manufacturer	Dongle Guan Kan Tsang Industrial Co., LTD
Model Number	QZESDM1532001A00

NOTE: Accessories (Charger /USB Cable/headset) are provided by test lab.

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.

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

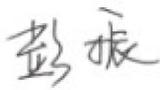
The following are the definition of the test result.

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

## 5 RESULT 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	Pass
3	Occupied Bandwidth	2.1049	Pass
4	Peak-Average Ratio	27.53	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)	Pass
7	Band Edges Compliance	2.1051/22.917(a)/24.238(a)/27.53	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	Pass

Issued by: Mr. Peng Zhen 	Checked by: Ms. Liu Jia 
Tested by: Mr. Li Bin 	Issued date:  20170426

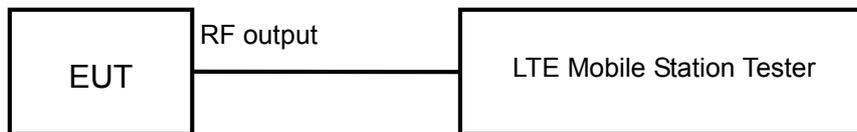
## 6 TEST RESULT

### 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.

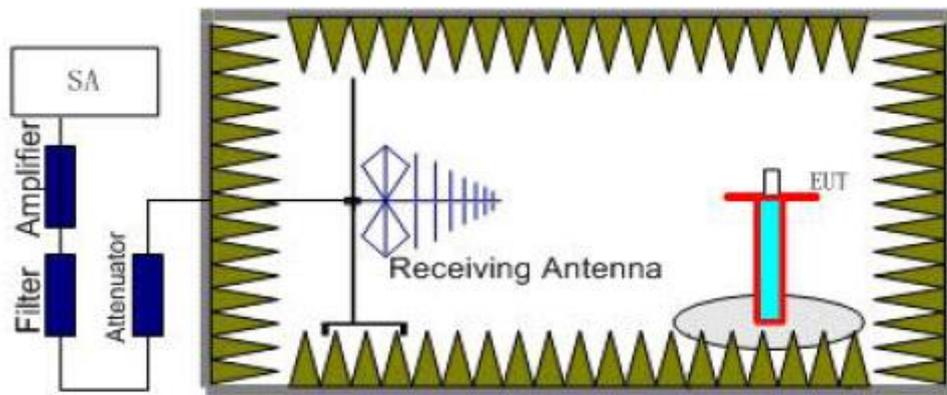
Limits	≤30dBm
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## 6.2 Effective Radiated Power-FCC Part 27.50(d)(4)

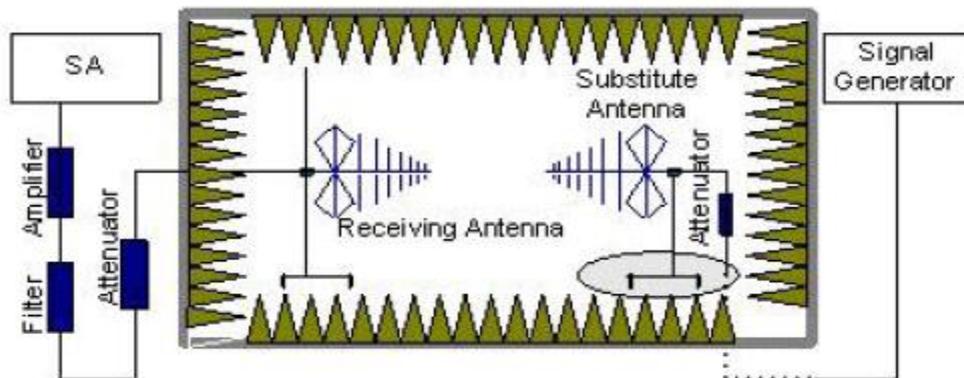
Ambient condition:

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,  $ERP = EIRP - 2.15 \text{ (dB)}$ .

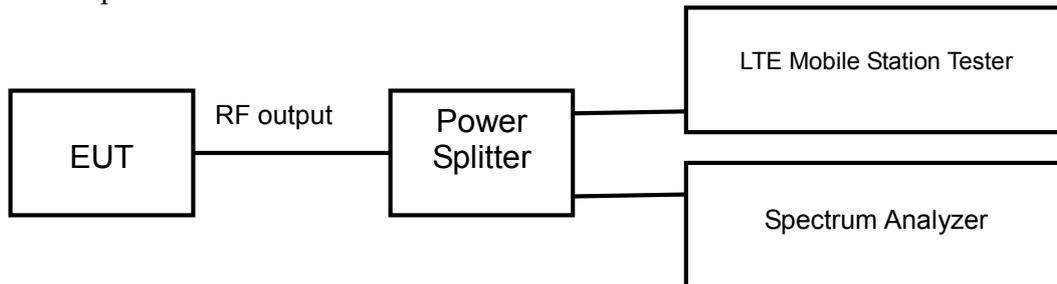
Limits	$\leq 30\text{dBm}$
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### 6.3 Occupied Bandwidth-FCC Part 2.1049

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 )

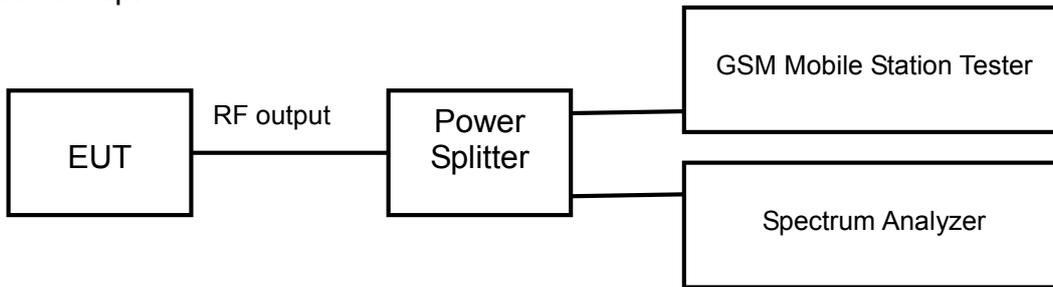
Limits: No specific occupied bandwidth requirements in part 2.1049

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

Ambient condition:

Temperature	Relative humidity	Pressure
23°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 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.

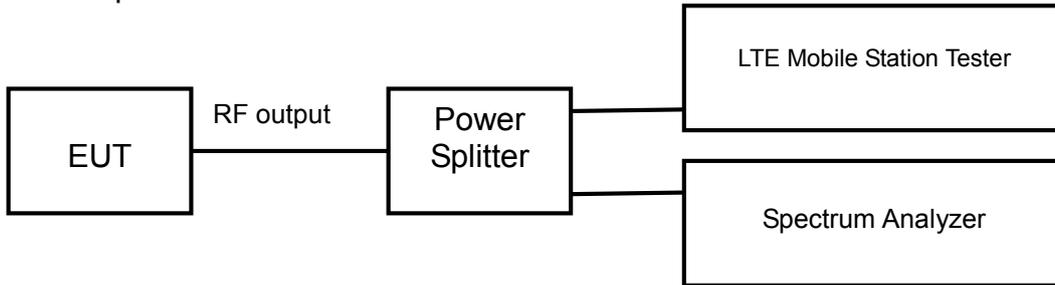
Limits: No specific emission bandwidth requirements in part 22.917(b)

### 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.

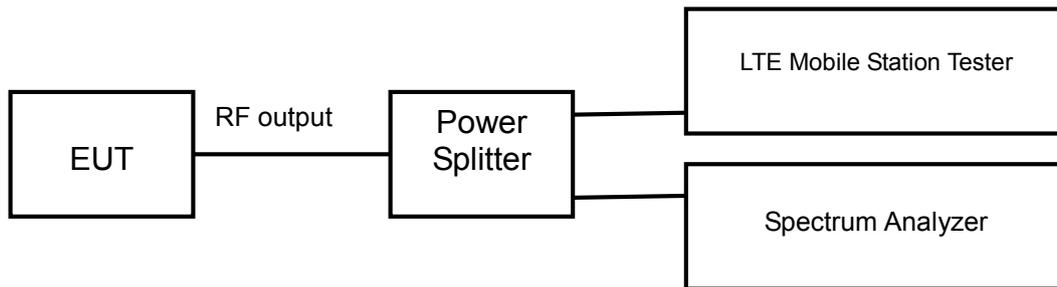
Limits	≤13dB
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## 6.6 Spurious Emissions at antenna terminal-FCC Part 2.1051

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 27GHz (higher than the 10th harmonic of the carrier). The peak detector is used and RBW is set to 1MHz on spectrum analyzer.

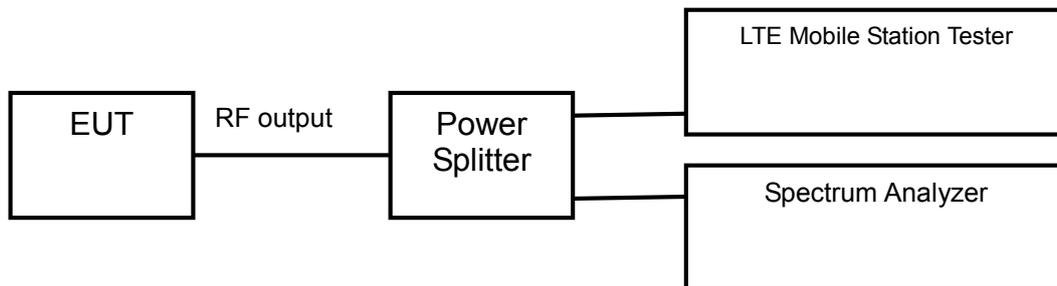
Limits	$\leq -13\text{dBm}$
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## 6.7 Band Edges Compliance-FCC Part 2.1051

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.

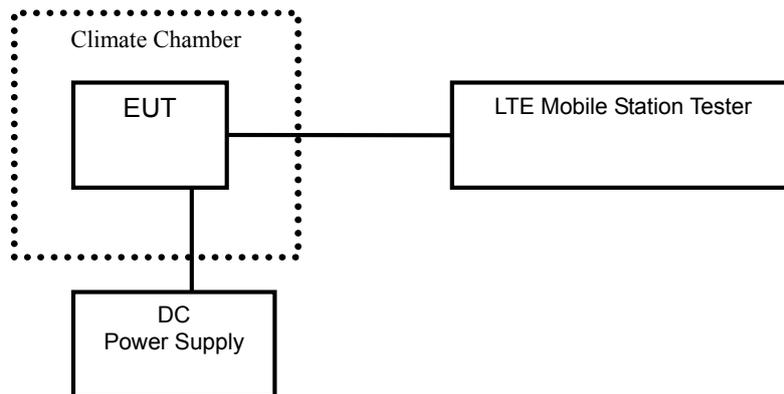
Limits	$\leq -13\text{dBm}$
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## 6.8 Frequency Stability-FCC Part 2.1055/27.54

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 ).

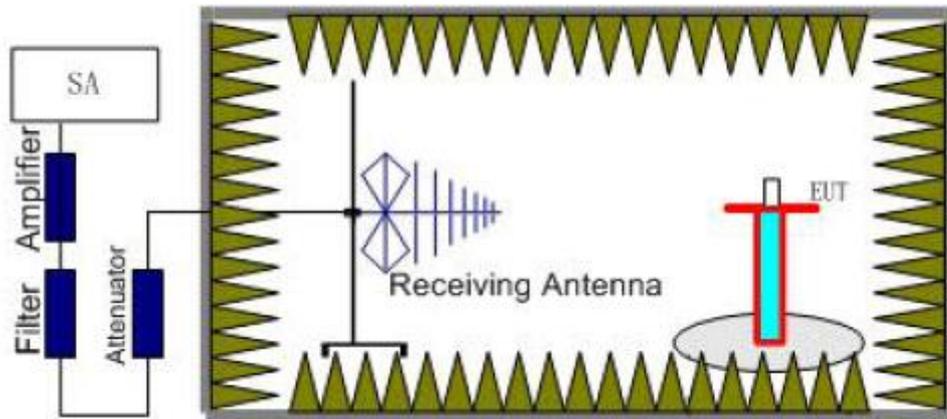
Limits: No specific frequency stability requirements in part 2.1055 and part 22.355.

### 6.9 Radiated Spurious Emissions-FCC Part 2.1053

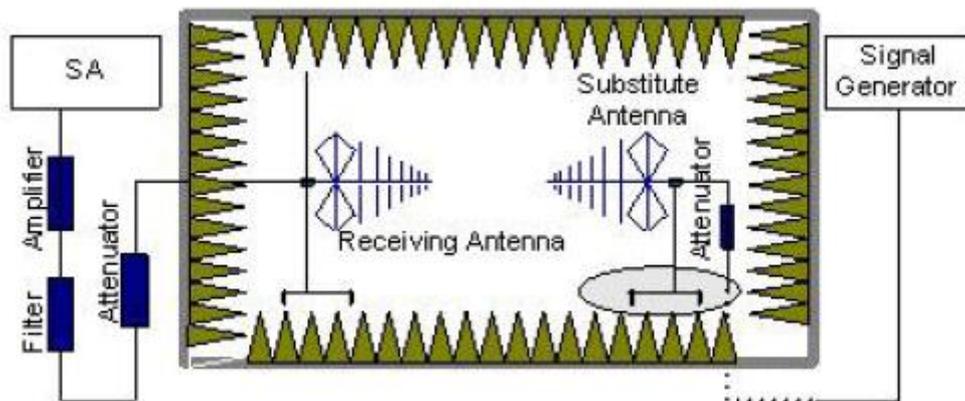
Ambient condition:

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,  $ERP = EIRP - 2.15 \text{ (dB)}$ .

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 Due Date
1	Mobile Station Tester	SP8010B	E0095	2017.09.24
2	N9020A Spectrum Analyzer	Agilent	MY48010771	2017.08.20
3	DC Power Supply E3645A	Agilent	MY43007648	2017.08.20
4	Power Splitter 11850C	Agilent	19632	2017.08.20
5	Temperature chamber SH241	ESPEC	92013758	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	2017.08.20
10	HL562 Ultra log antenna	R&S	100016	2017.08.20
11	3160-09 Receive antenna	SCHWARZ-BECK	002058-002	2017.08.20
12	ESI 40 EMI test receiver	R&S	100015	2017.08.20
13	Radio tester	CMU 200	114667	2017.08.20
14	Spectrum Analyzer	FSV40	101065	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

### 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
41	2547.5	40165	5	1	0	21.0	19.4
				1	24	20.8	19.4
				12	6	19.9	18.7
				25	0	20.0	18.9

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
41	2570	40390	5	1	0	20.6	19.4
				1	24	20.8	19.7
				12	6	19.9	18.9
				25	0	19.9	19.0

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
41	2592.5	40615	5	1	0	21.1	19.5
				1	24	20.9	19.5
				12	6	19.9	18.8
				25	0	19.9	18.9

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
41	2550	40190	10	1	0	20.8	19.9
				1	49	20.8	19.8
				24	12	20.0	19.1
				50	0	19.9	18.9

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
41	2570	40390	10	1	0	21.1	19.8
				1	49	21.2	20.4
				24	12	20.0	18.9
				50	0	20.0	19.0

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
41	2590	40590	10	1	0	21.3	20.2
				1	49	20.9	19.8
				24	12	19.9	19.1
				50	0	20.3	19.1

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
41	2552.5	40215	15	1	0	21.0	20.1
				1	74	20.7	19.6
				38	18	20.8	19.8
				75	0	20.0	18.9

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
41	2570	40390	15	1	0	21.0	20.5
				1	74	20.9	20.4
				38	18	20.9	20.4
				75	0	20.0	19.1

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
41	2587.5	40565	15	1	0	21.1	20.2
				1	74	20.9	20.0
				38	18	20.9	20.0
				75	0	20.1	19.2

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
41	2555	40240	20	1	0	21.2	20.2
				1	99	20.9	19.7
				50	25	19.9	19.1
				100	0	20.0	19.0

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
41	2570	40390	20	1	0	21.3	20.2

				1	99	21.3	20.0
				50	25	20.1	19.2
				100	0	20.1	19.1

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
41	2585	40540	20	1	0	21.6	20.6
				1	99	21.1	20.2
				50	25	20.1	19.3
				100	0	20.1	19.1

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	RF Power Output (dBm)	
						QPSK	16-QAM
41	2585	40540	20	1	0	21.6	20.6
				1	99	21.1	20.2
				50	25	20.1	19.3
				100	0	20.1	19.1



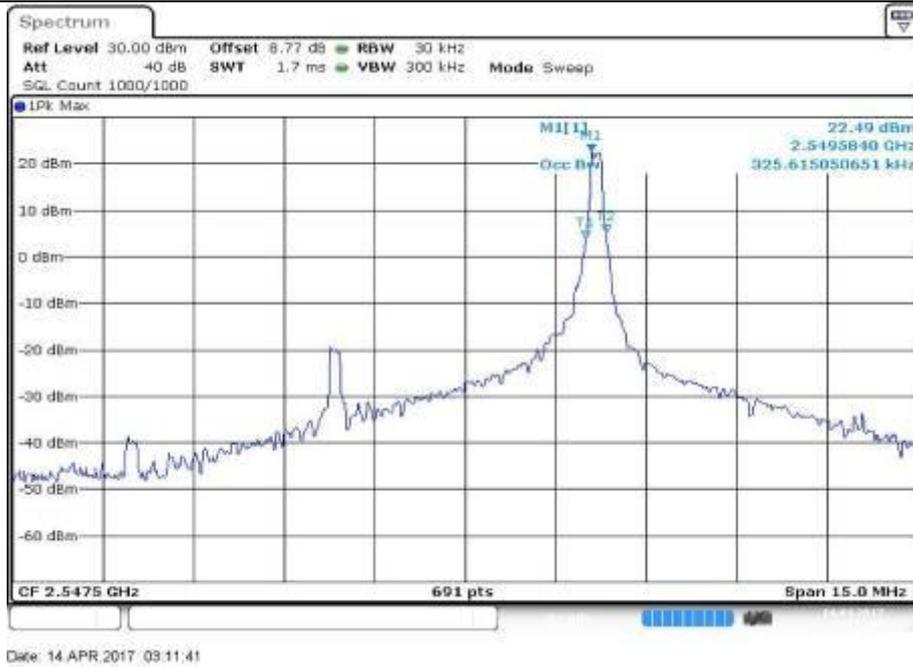


Fig.2

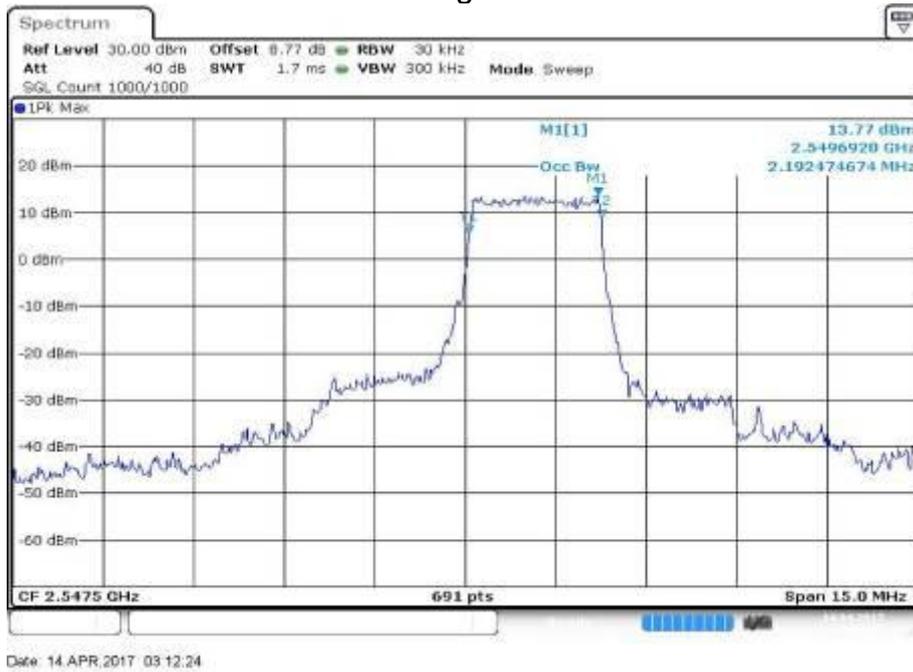
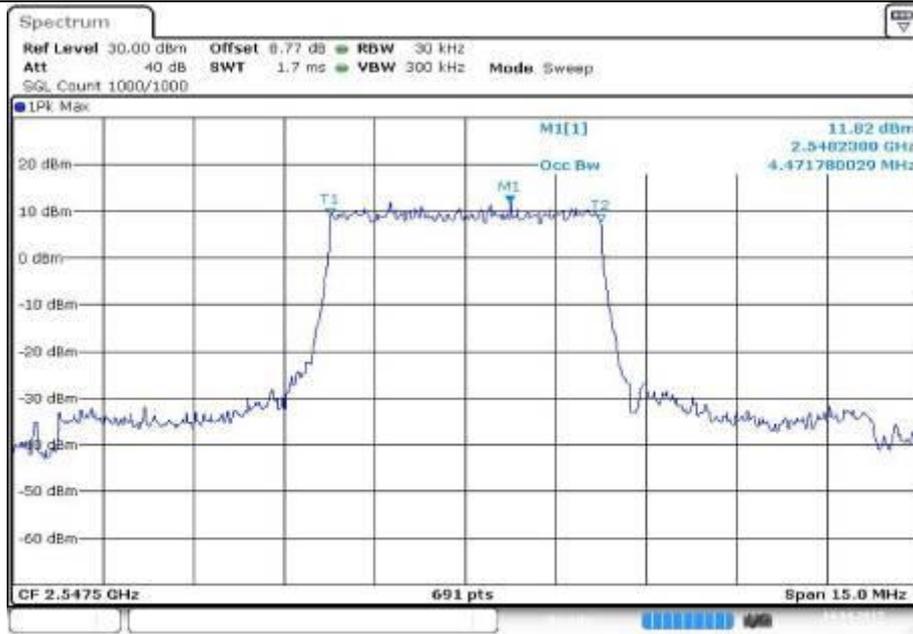


Fig.3



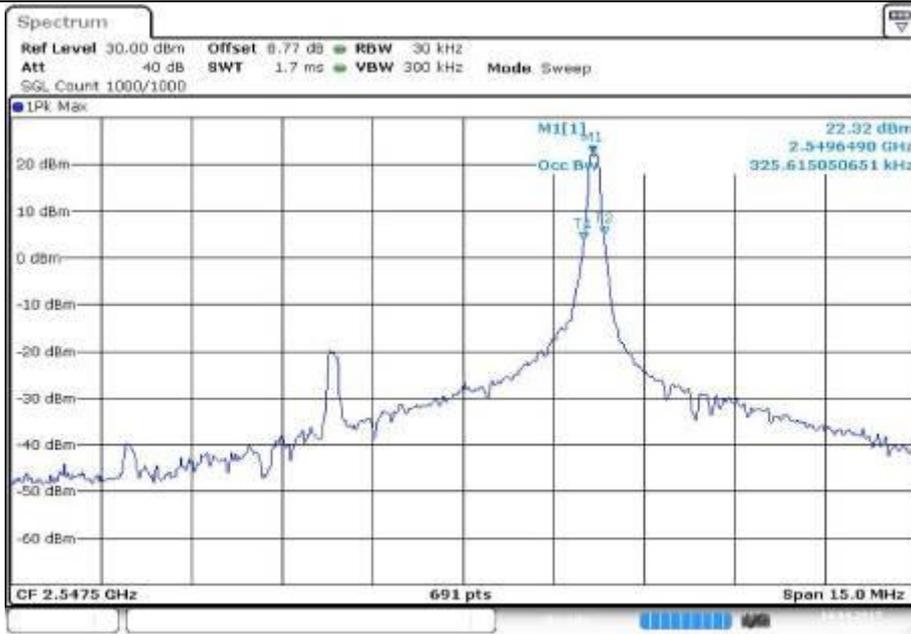
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Fig.4



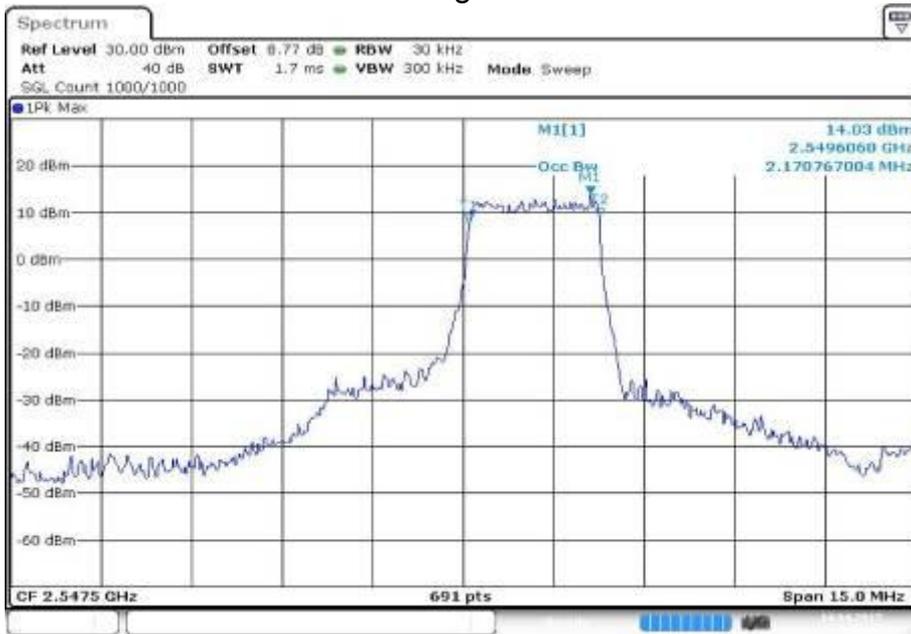
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Fig.5



Date: 14 APR 2017 03 14:34

Fig.6



Date: 14 APR 2017 03 15:17

Fig.7

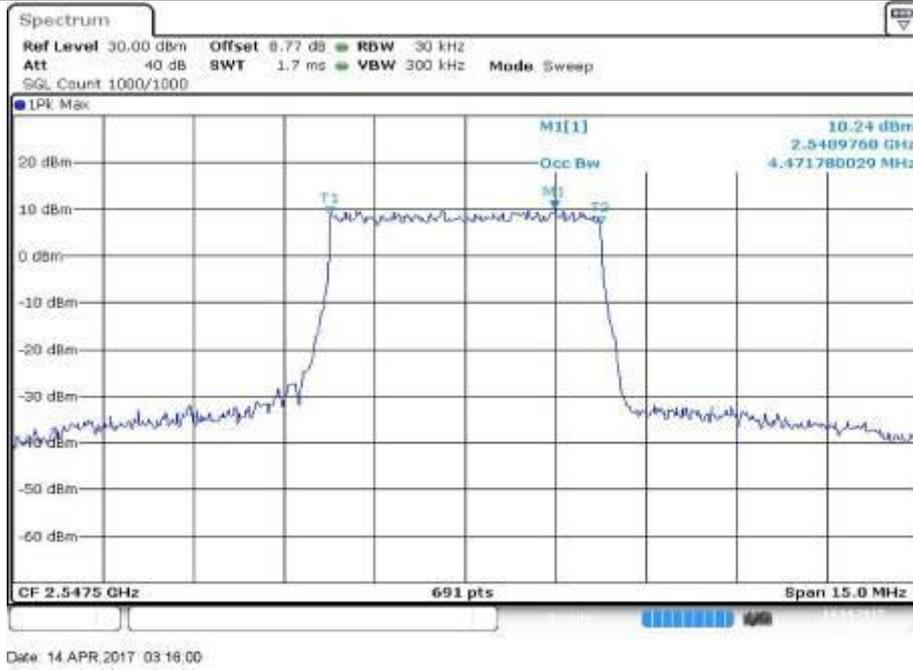


Fig.8

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
41	2570	40390	5	1	0	0.326	Fig.1	0.326	Fig.5
				1	24	0.326	Fig.2	0.304	Fig.6
				12	6	2.192	Fig.3	2.171	Fig.7
				25	0	4.472	Fig.4	4.472	Fig.8

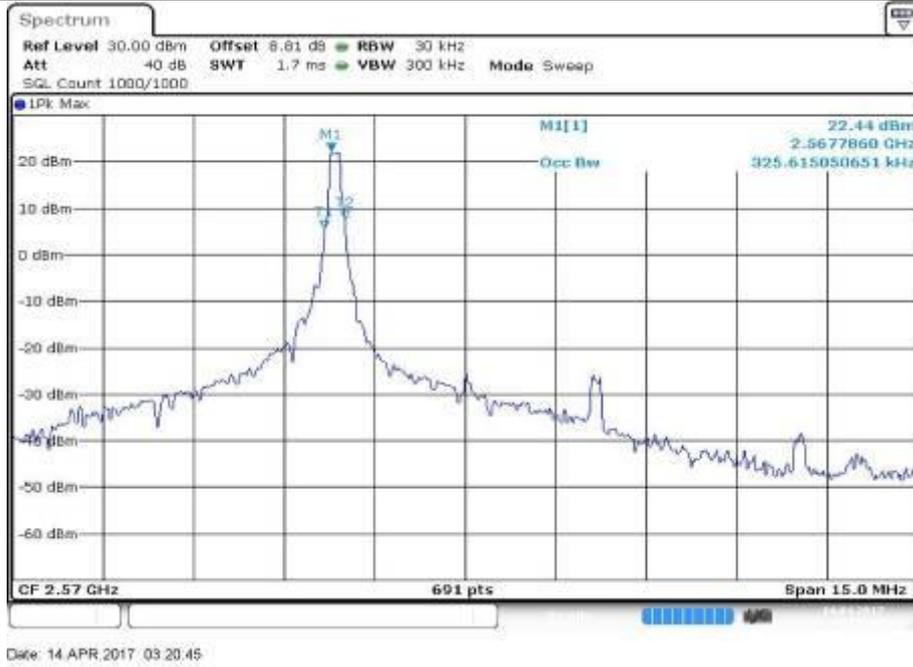


Fig.1

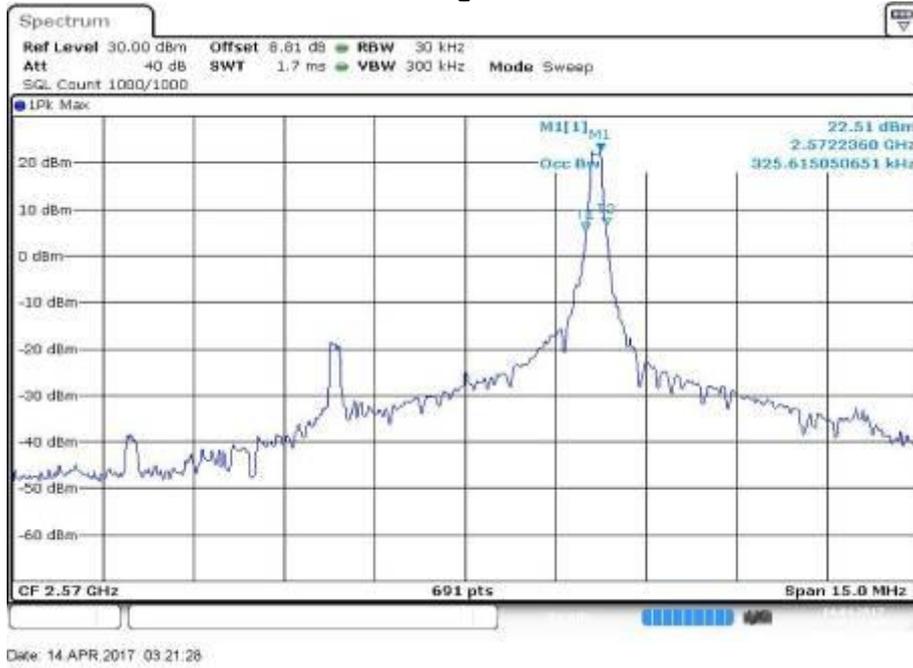


Fig.2



Fig.3

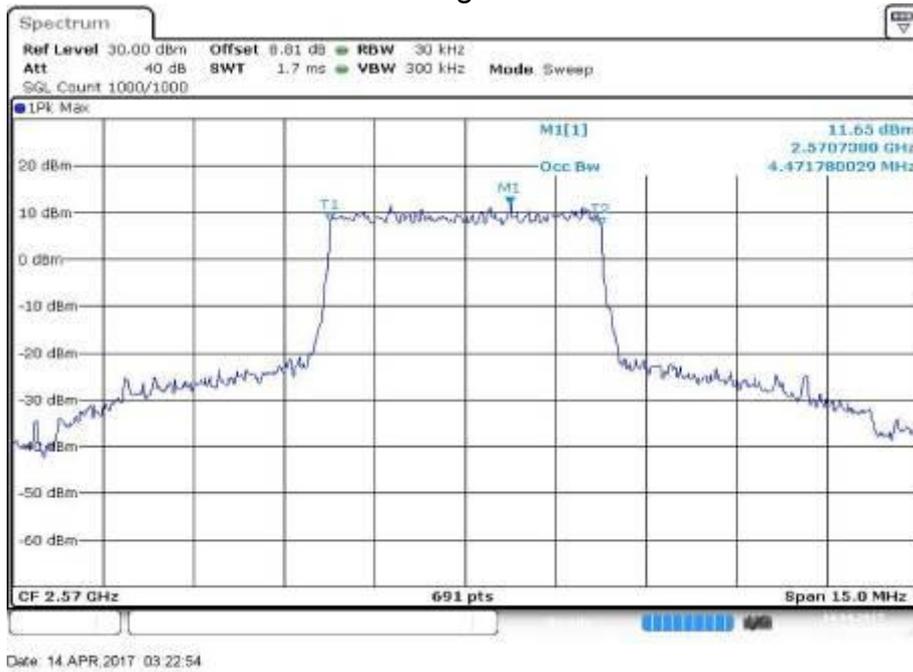


Fig.4



Fig.5

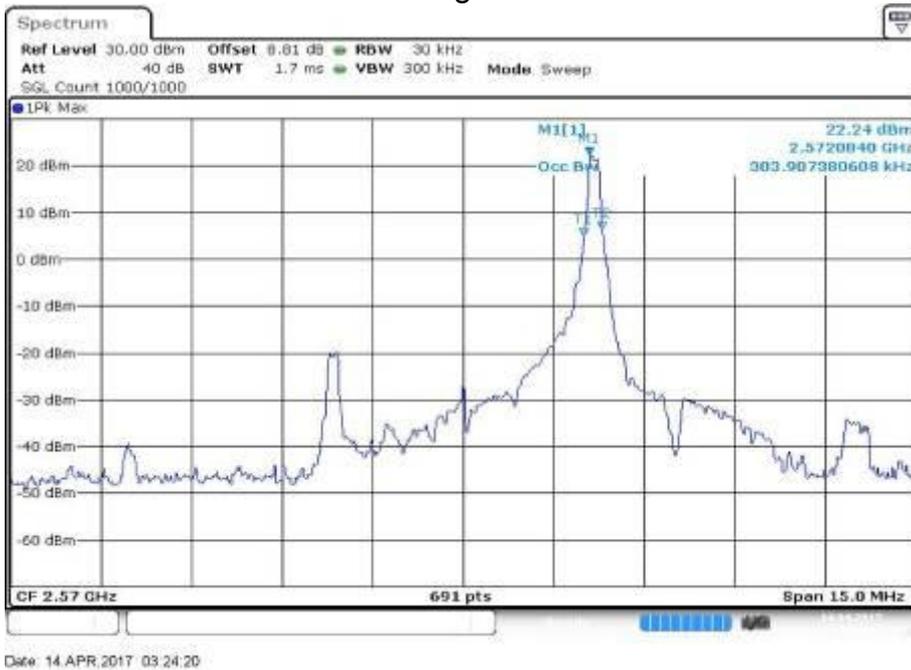
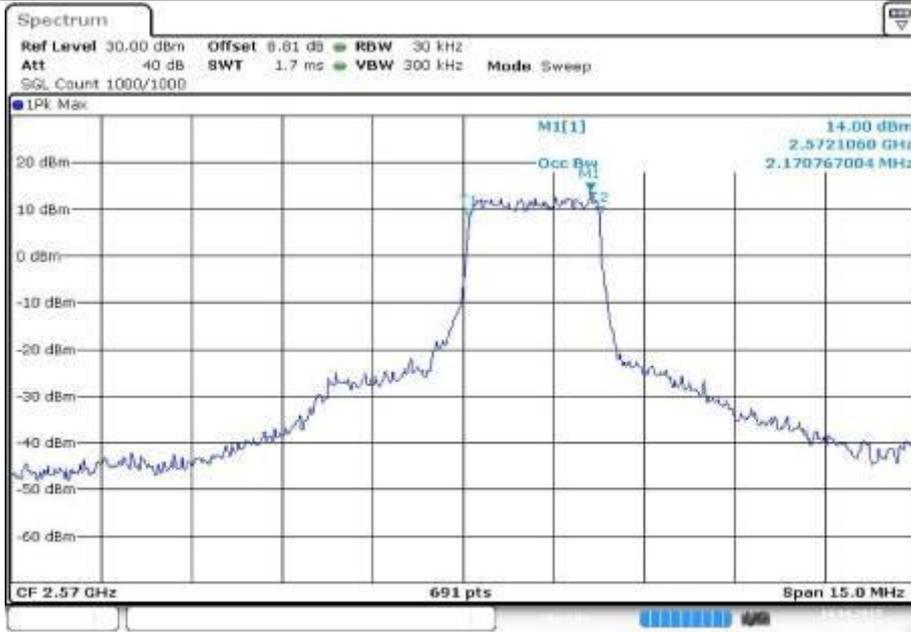
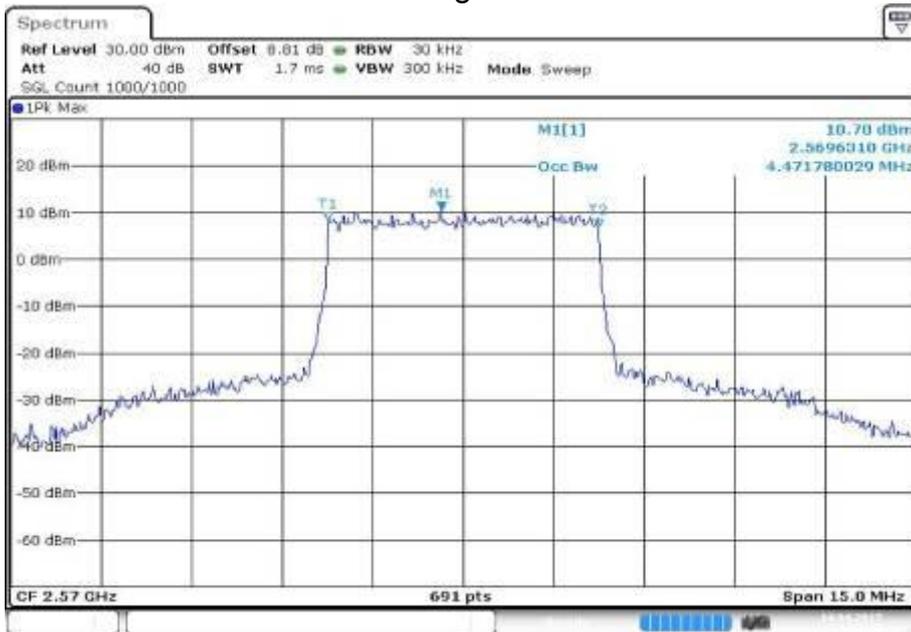


Fig.6



Date: 14 APR 2017 03:25:03

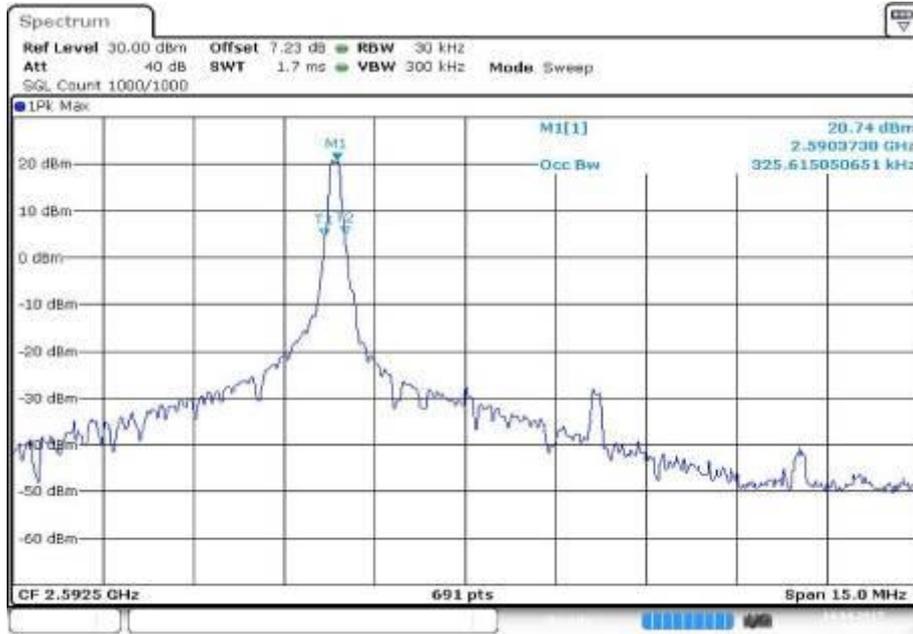
Fig.7



Date: 14 APR 2017 03:25:46

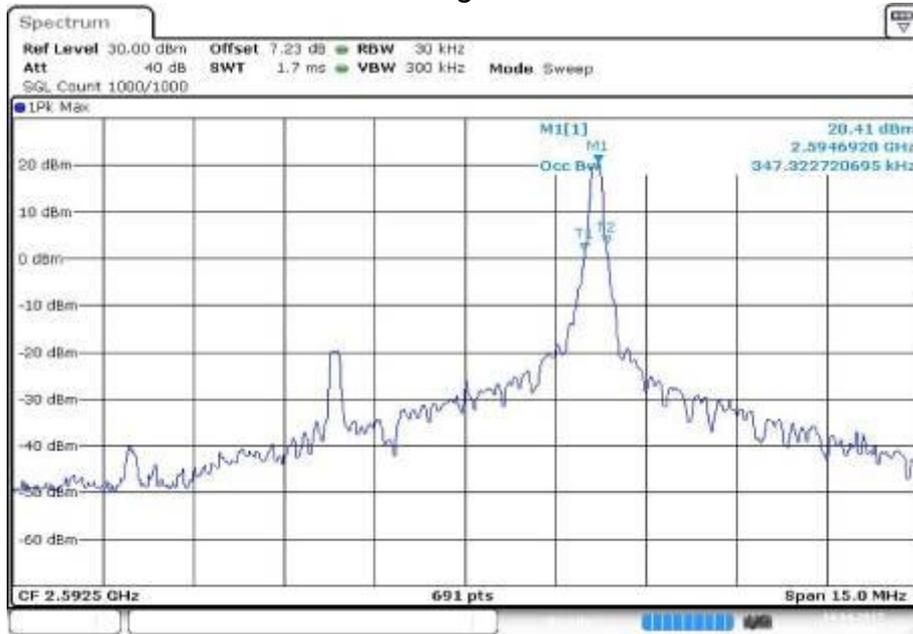
Fig.8

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
41	2592.5	40615	5	1	0	0.326	Fig.1	0.326	Fig.5
				1	24	0.347	Fig.2	0.347	Fig.6
				12	6	2.171	Fig.3	2.171	Fig.7
				25	0	4.472	Fig.4	4.472	Fig.8



Date: 14 APR 2017 03:29:28

Fig.1



Date: 14 APR 2017 03:30:11

Fig.2



Fig.3

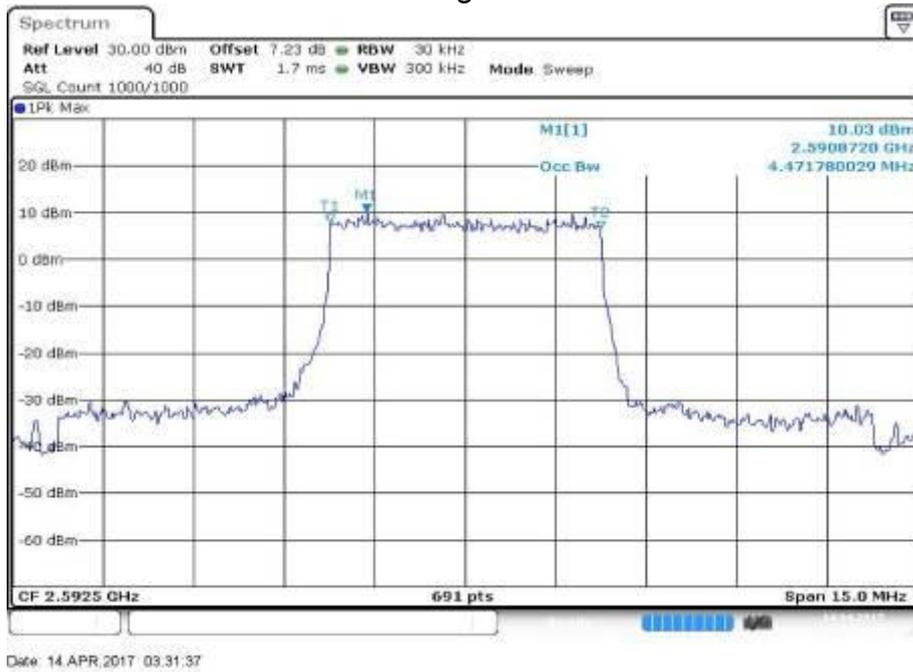
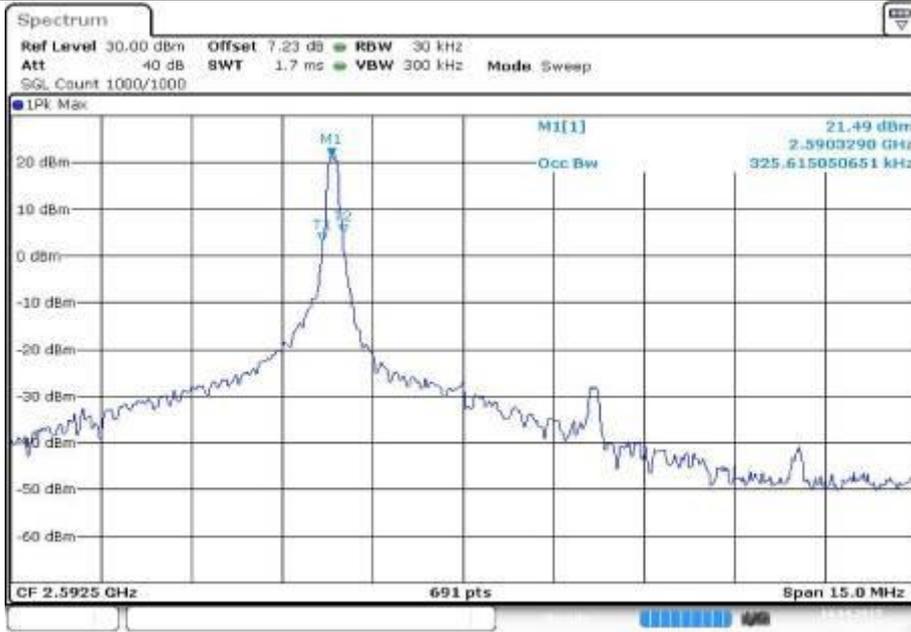
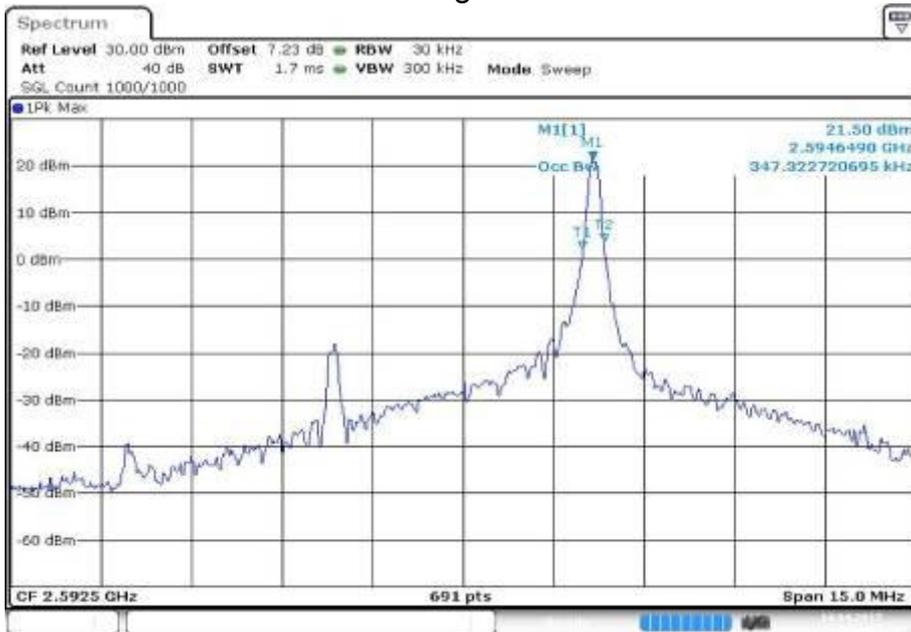


Fig.4



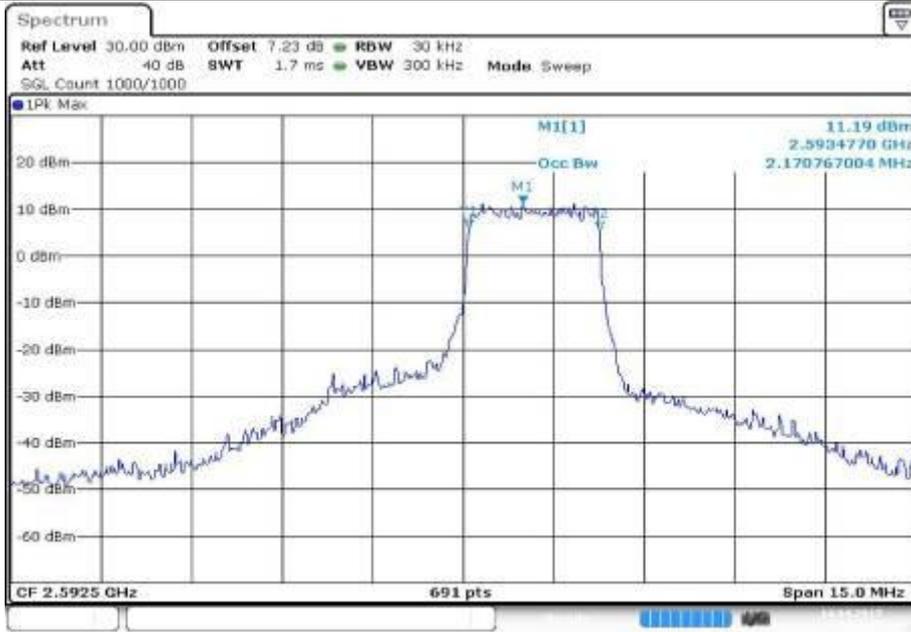
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Fig.5



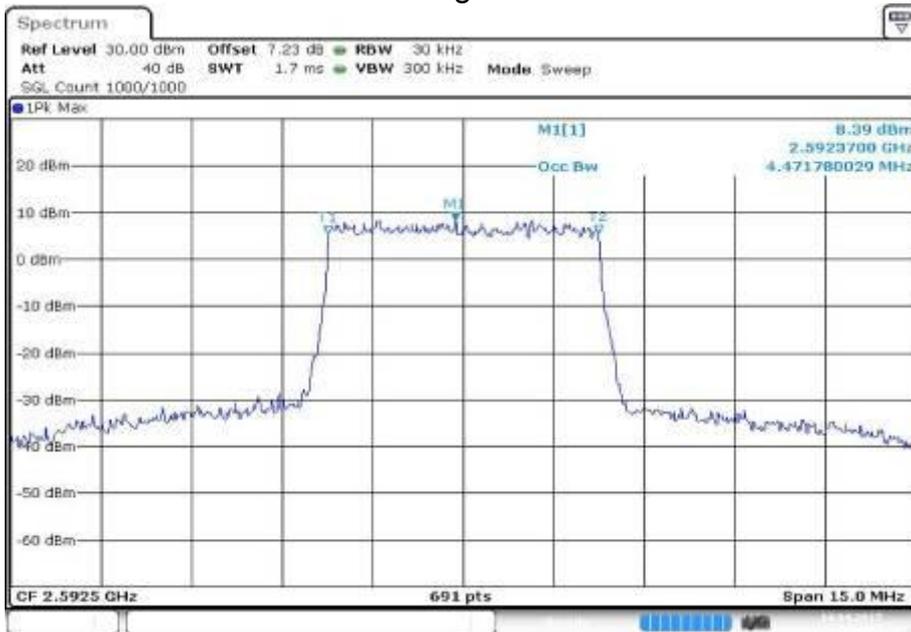
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Fig.6



Date: 14 APR 2017 03:33:46

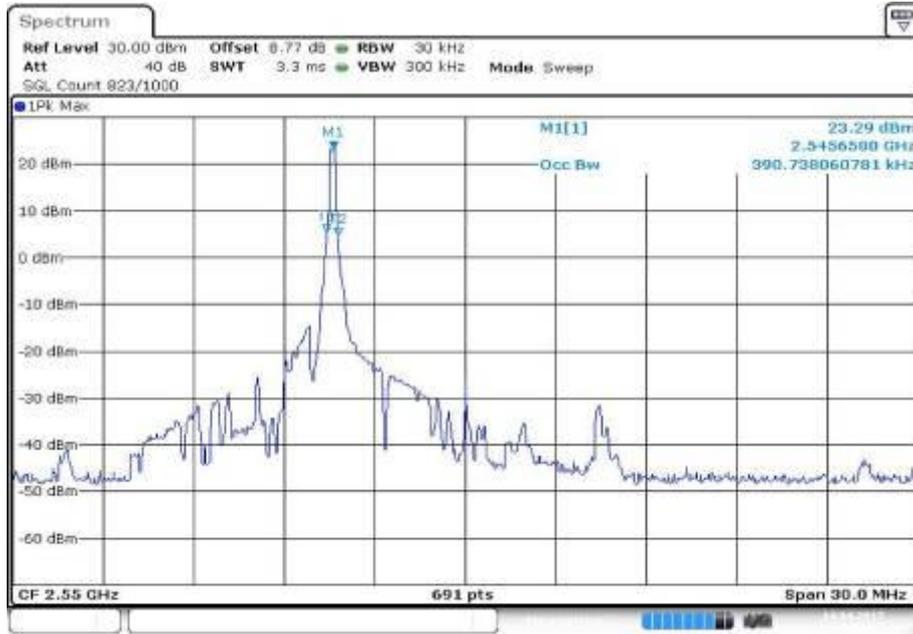
Fig.7



Date: 14 APR 2017 03:34:29

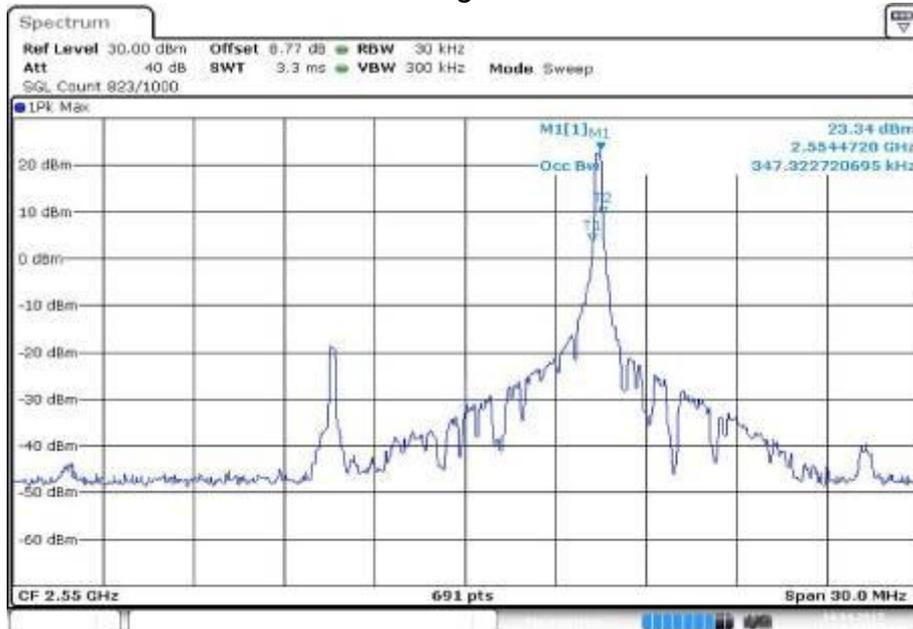
Fig.8

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
41	2550	40190	10	1	0	0.391	Fig.1	0.347	Fig.5
				1	49	0.347	Fig.2	0.347	Fig.6
				24	12	4.342	Fig.3	4.298	Fig.7
				50	0	8.944	Fig.4	8.944	Fig.8



Date: 14 APR 2017 03:39:51

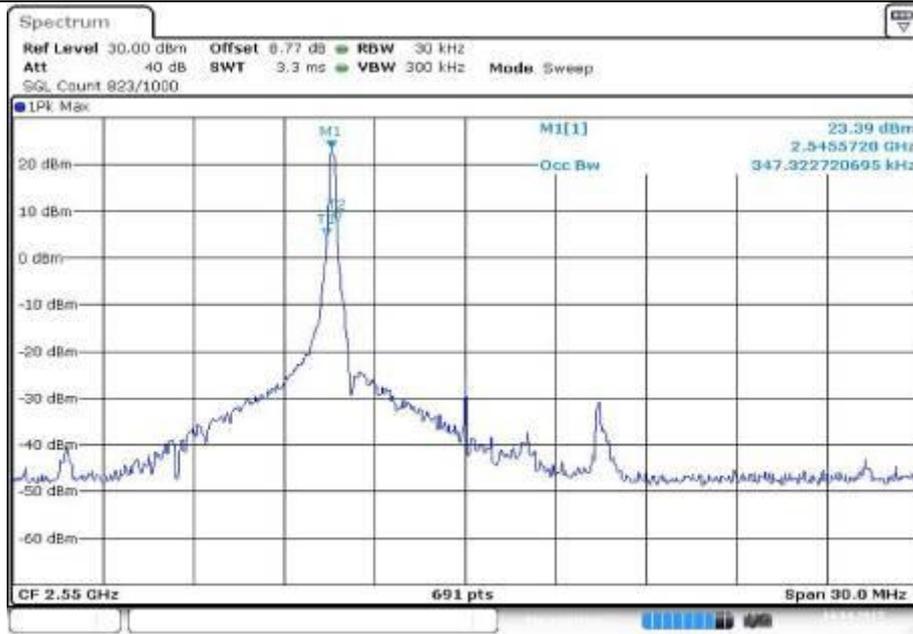
Fig.1



Date: 14 APR 2017 03:40:34

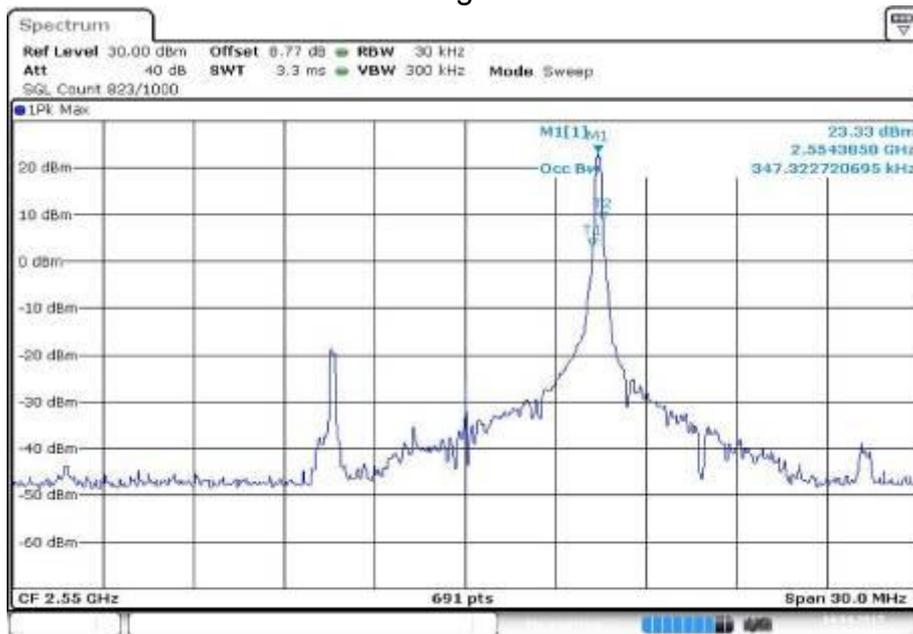
Fig.2





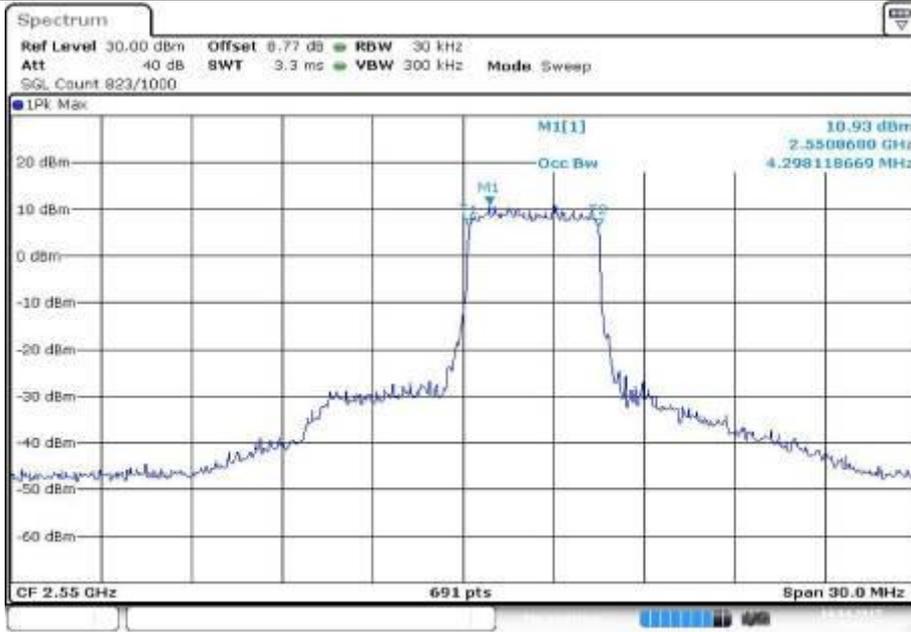
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Fig.5



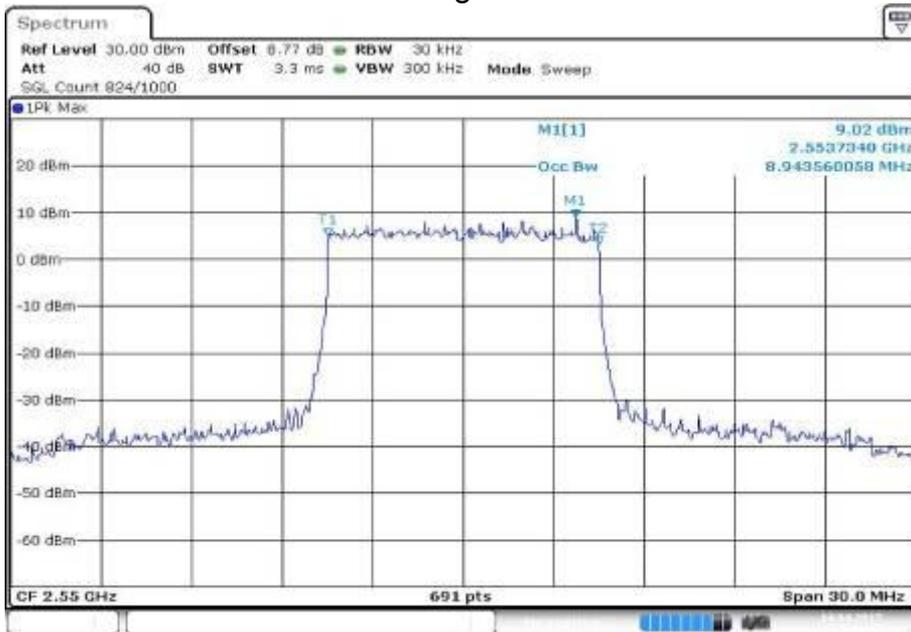
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Fig.6



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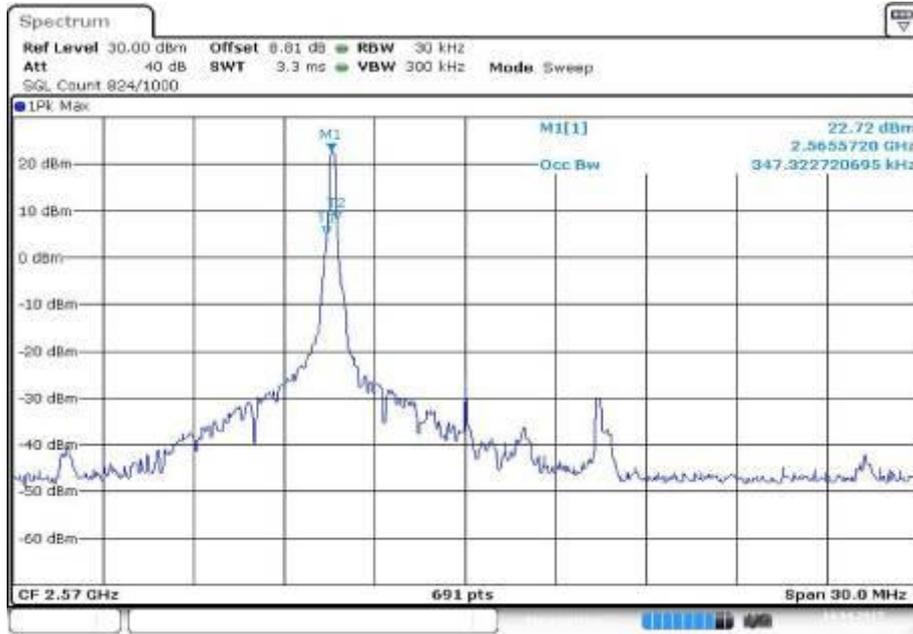
Fig.7



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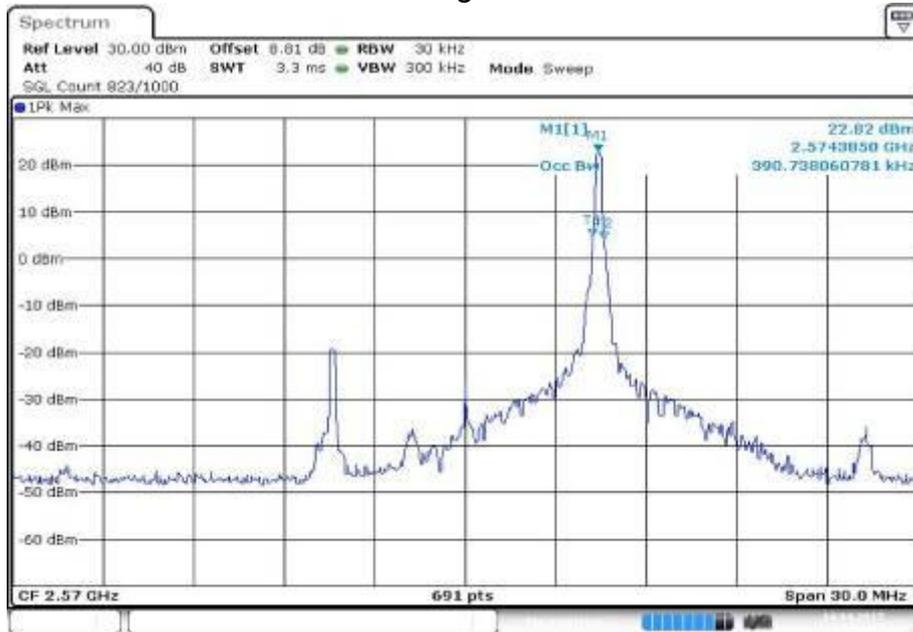
Fig.8

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
41	2570	40390	10	1	0	0.347	Fig.1	0.304	Fig.5
				1	49	0.391	Fig.2	0.347	Fig.6
				24	12	4.342	Fig.3	4.342	Fig.7
				50	0	8.944	Fig.4	8.944	Fig.8



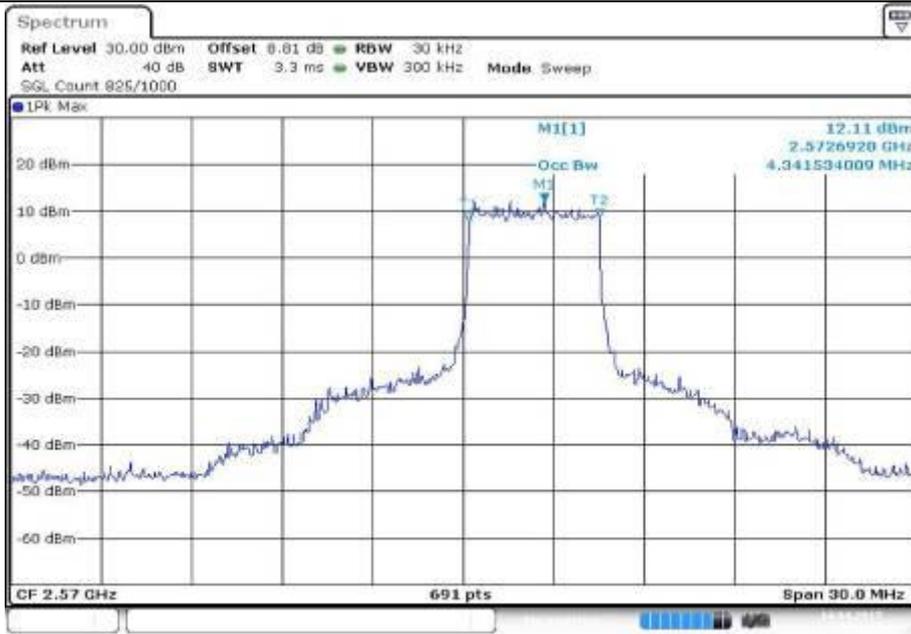
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Fig.1



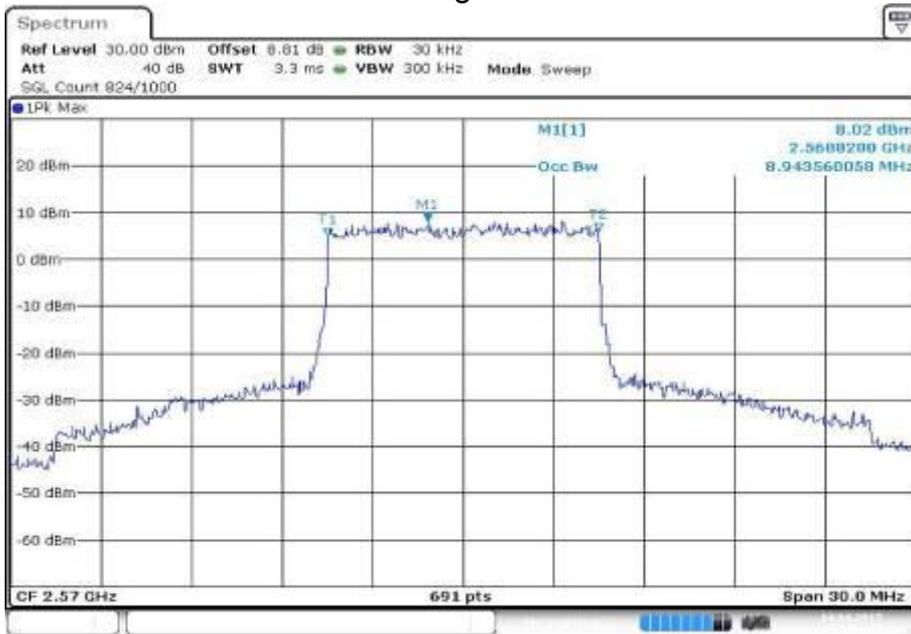
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Fig.2



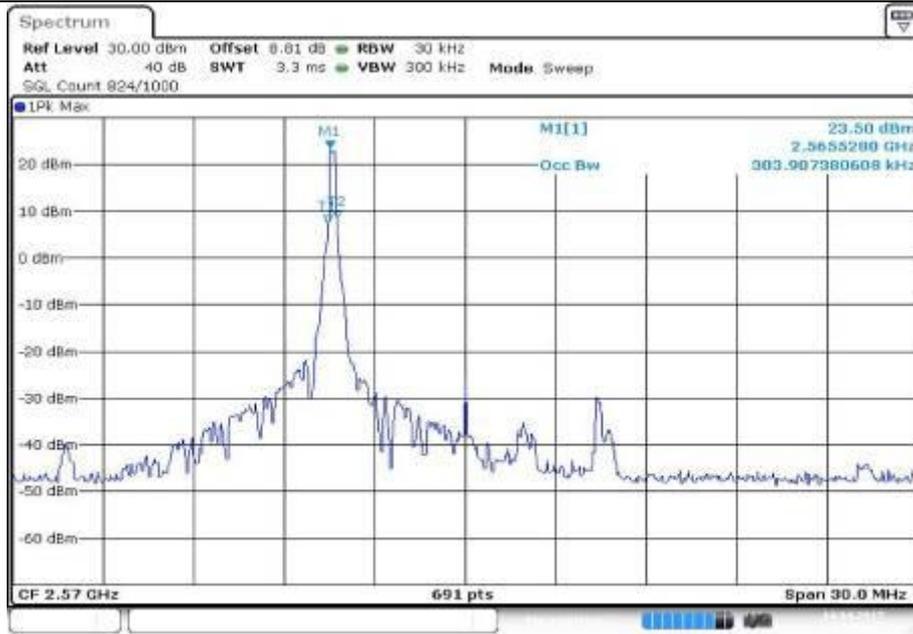
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Fig.3



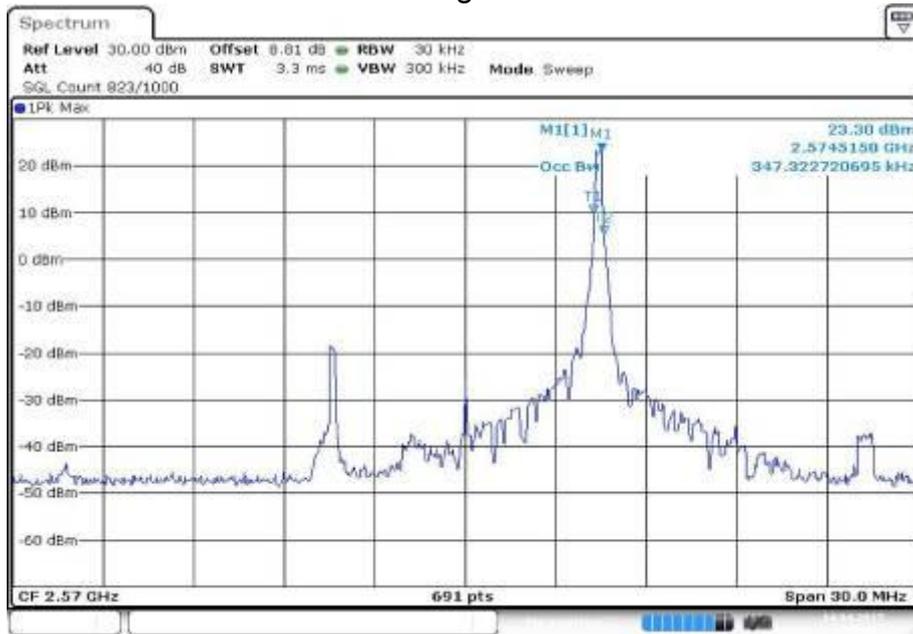
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Fig.4



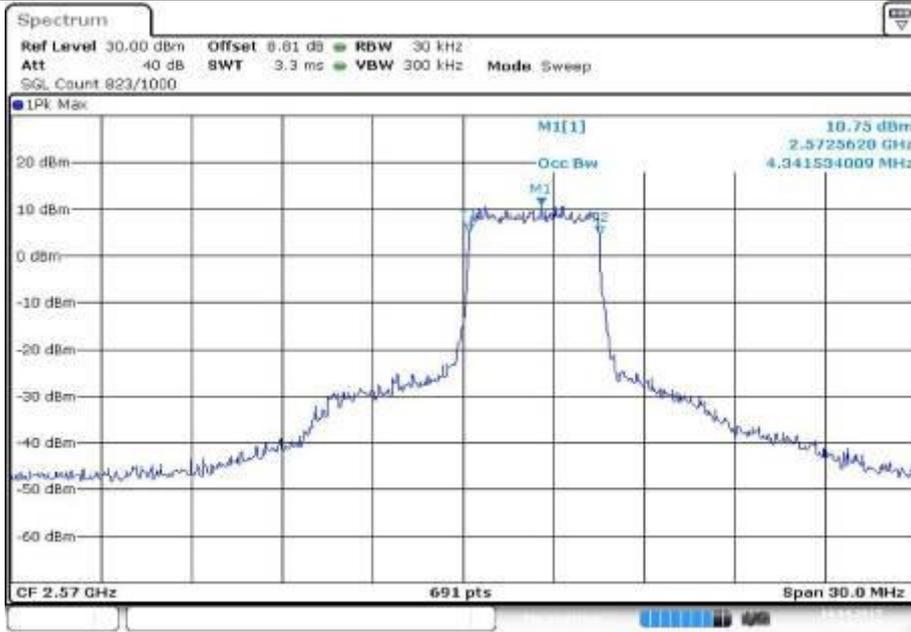
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Fig.5



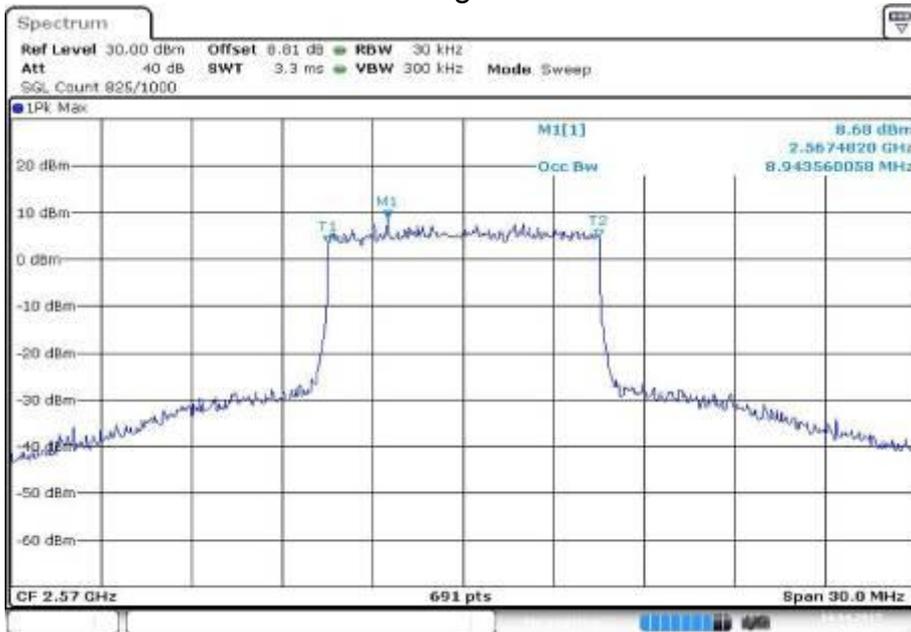
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Fig.6



Date: 14 APR 2017 03:54:37

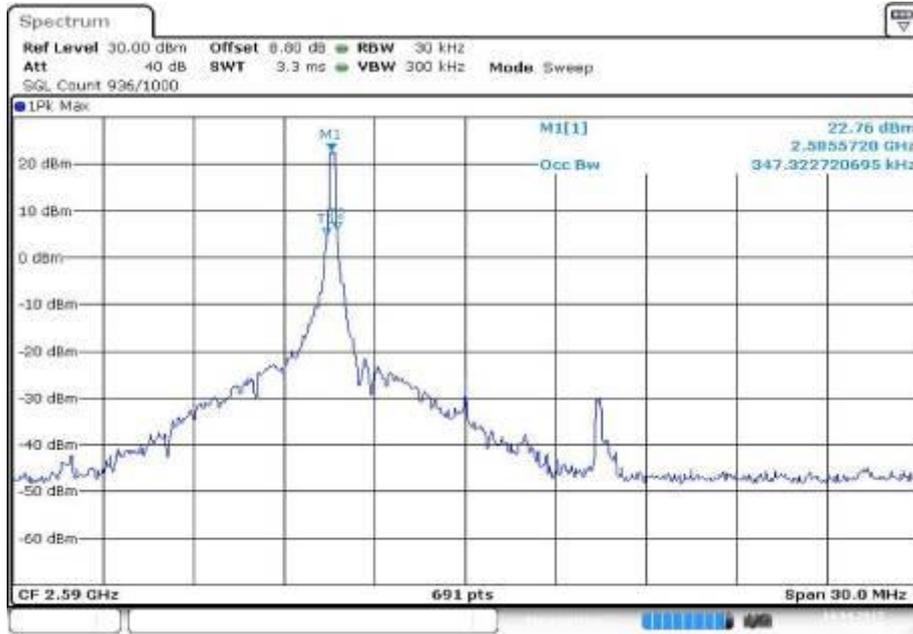
Fig.7



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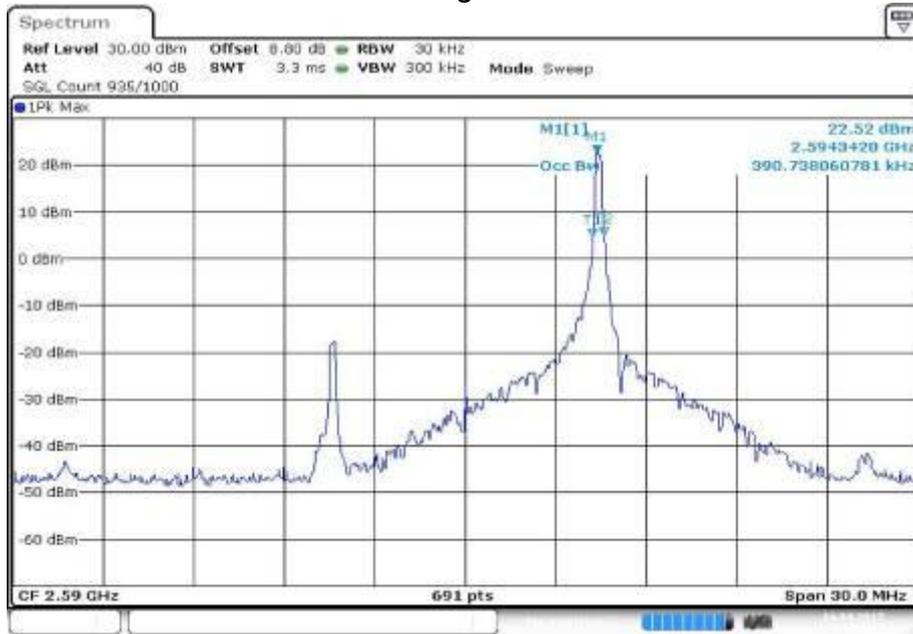
Fig.8

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
41	2590	40590	10	1	0	0.347	Fig.1	0.347	Fig.5
				1	49	0.391	Fig.2	0.391	Fig.6
				24	12	4.298	Fig.3	4.342	Fig.7
				50	0	8.944	Fig.4	8.944	Fig.8



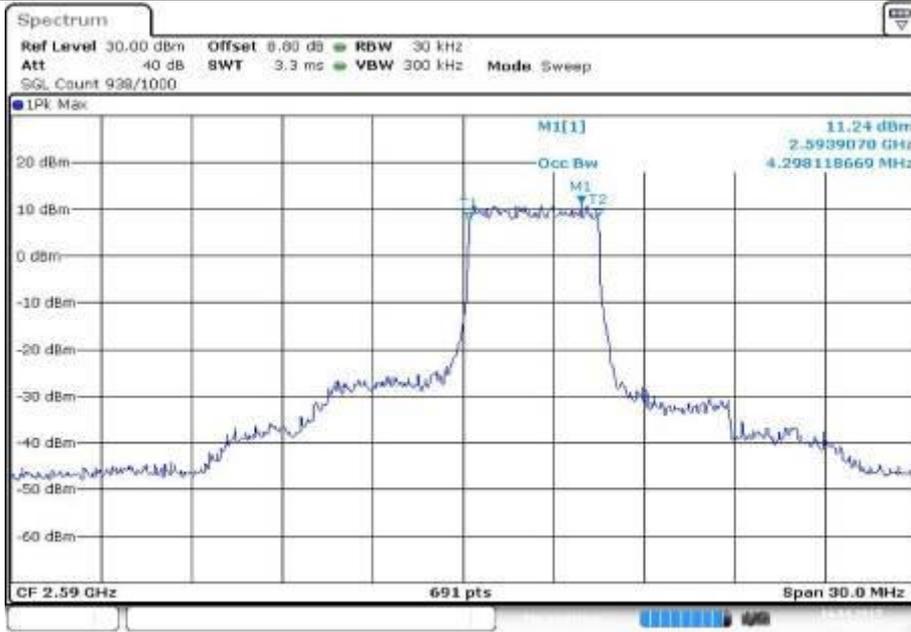
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Fig.1



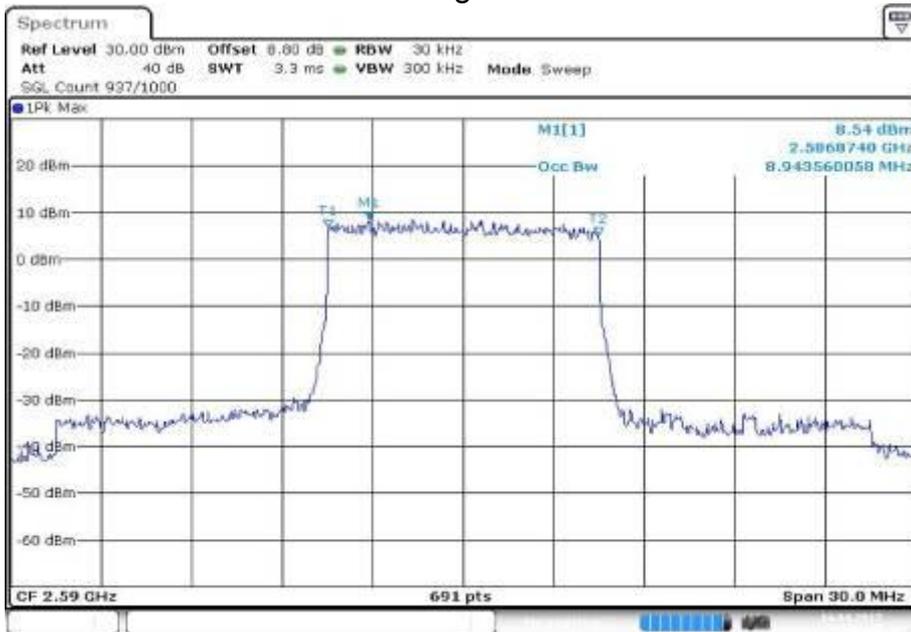
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Fig.2



Date: 14 APR 2017 04:01:06

Fig.3



Date: 14 APR 2017 04:01:49

Fig.4

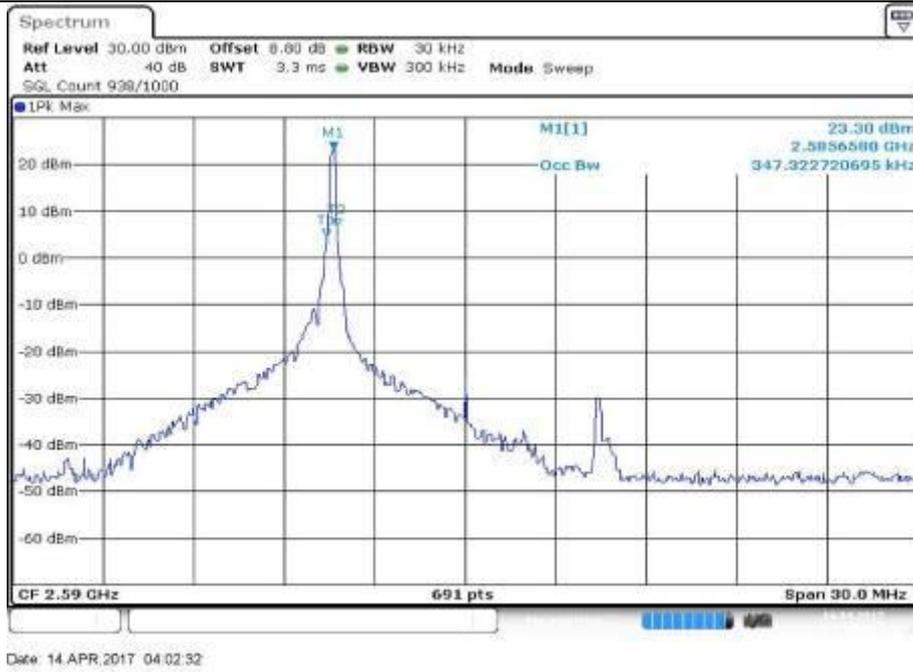


Fig.5

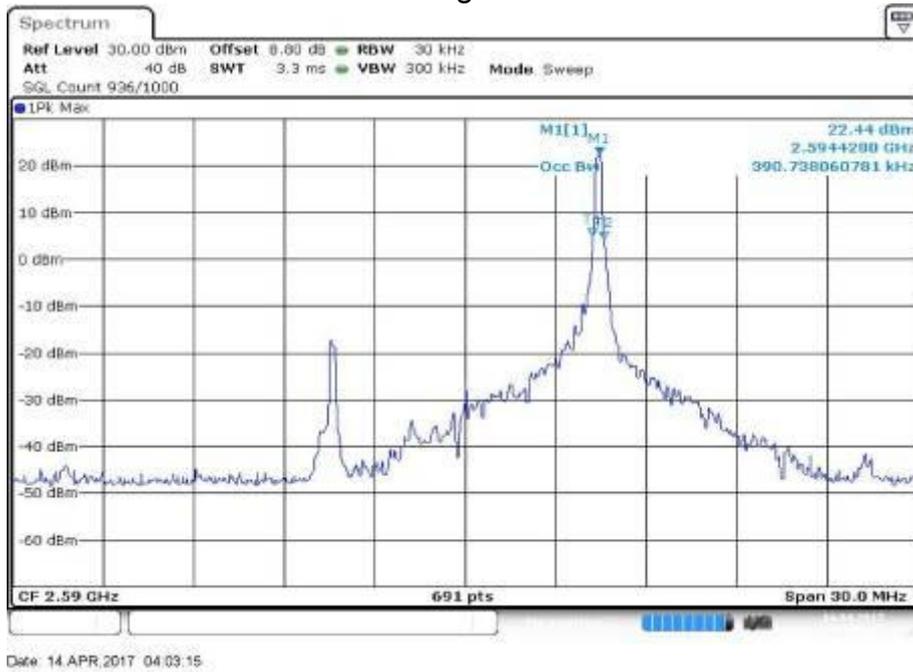
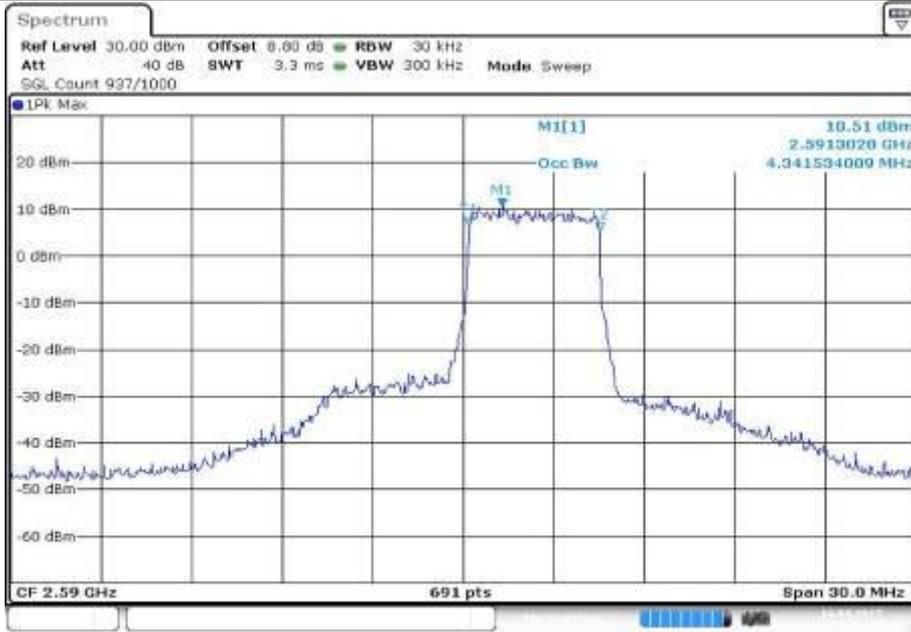
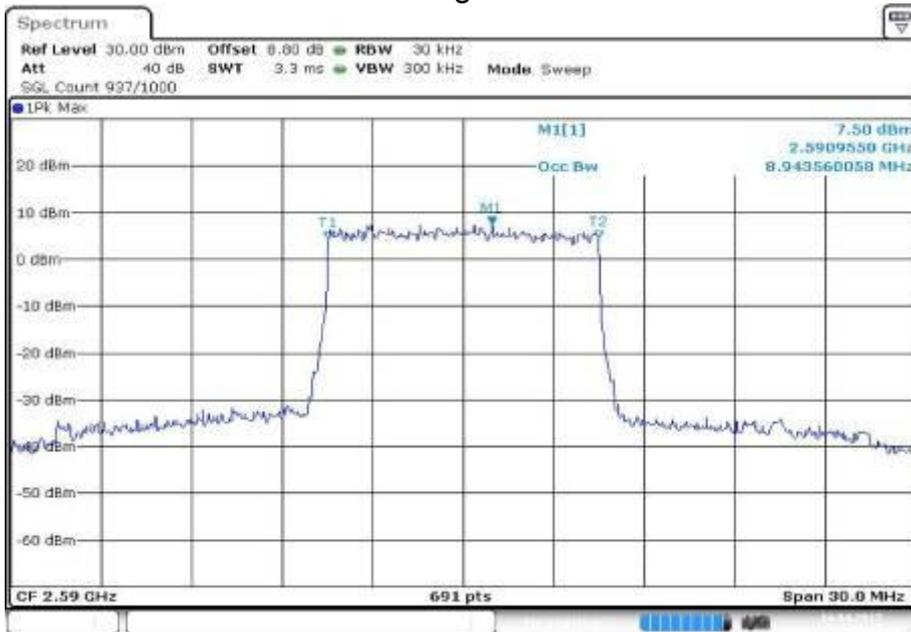


Fig.6



Date: 14 APR 2017 04:03:58

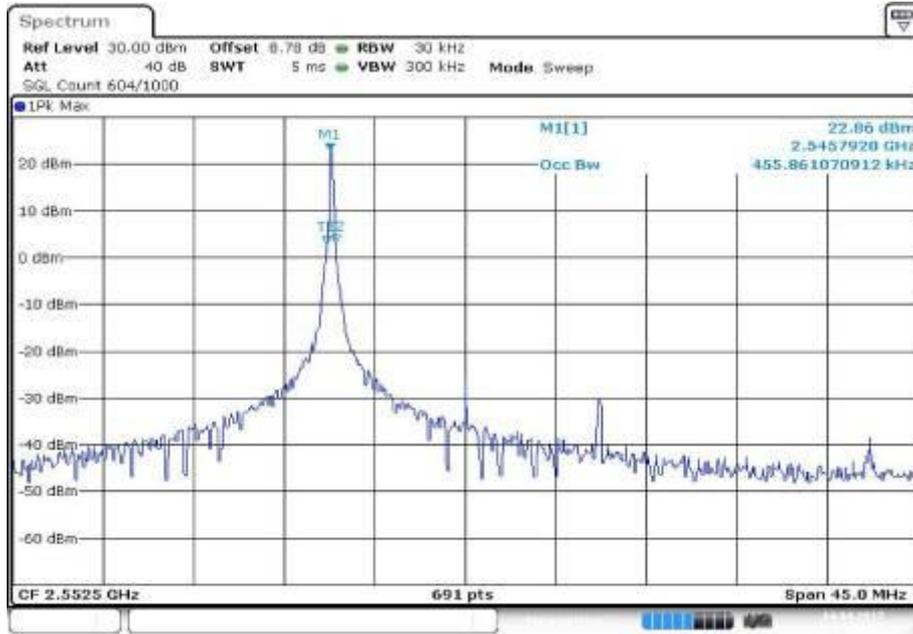
Fig.7



Date: 14 APR 2017 04:04:41

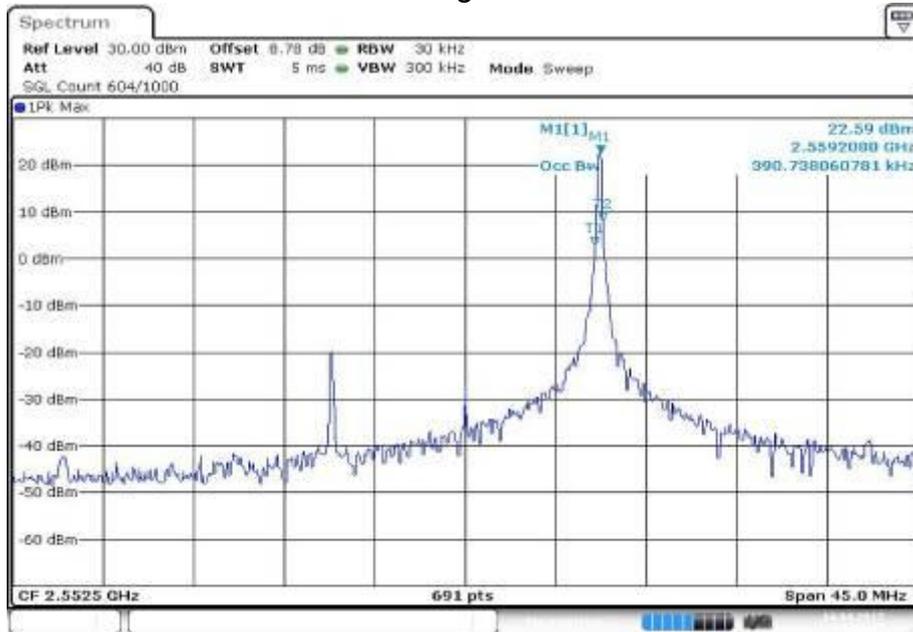
Fig.8

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
41	2552.5	40215	15	1	0	0.456	Fig.1	0.391	Fig.5
				1	74	0.391	Fig.2	0.391	Fig.6
				38	18	0.391	Fig.3	0.391	Fig.7
				75	0	13.415	Fig.4	13.415	Fig.8



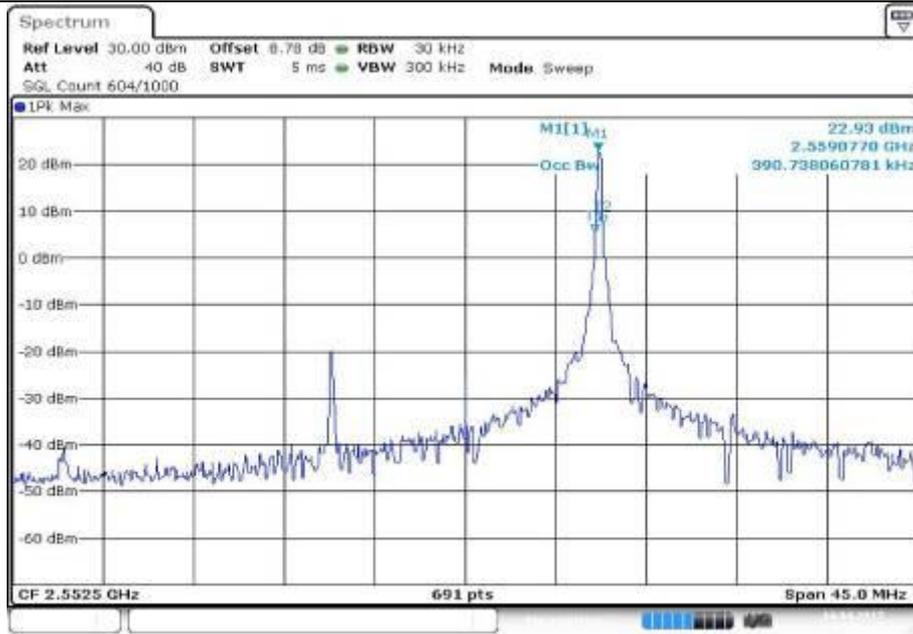
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Fig.1



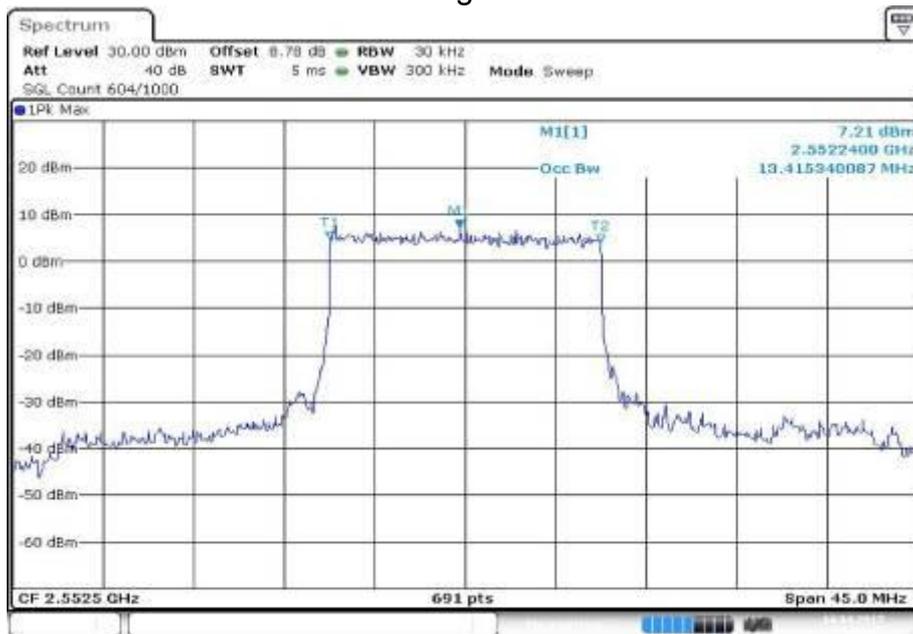
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Fig.2



Date: 14 APR 2017 04:11:32

Fig.3



Date: 14 APR 2017 04:12:15

Fig.4

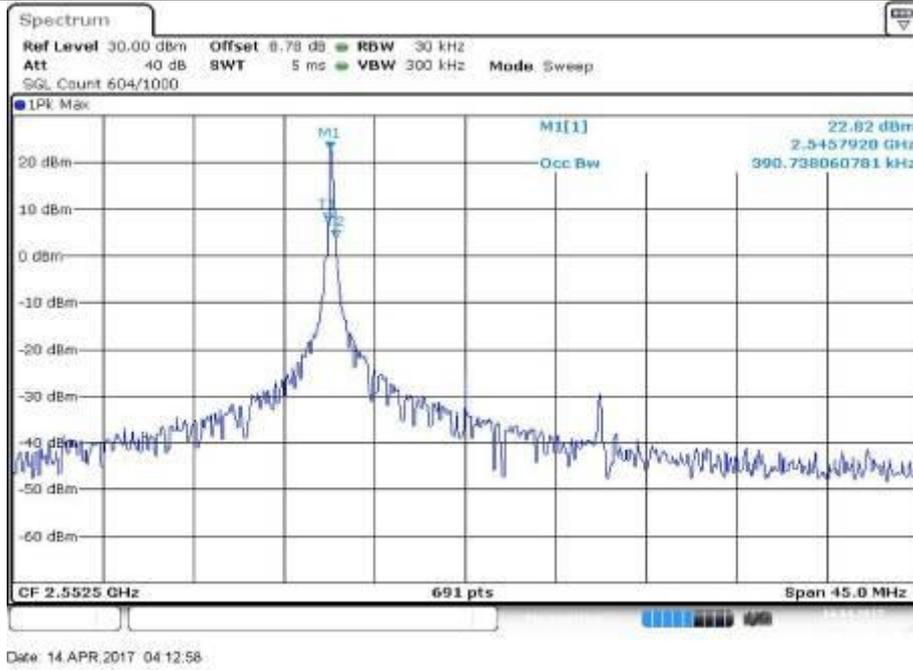


Fig.5

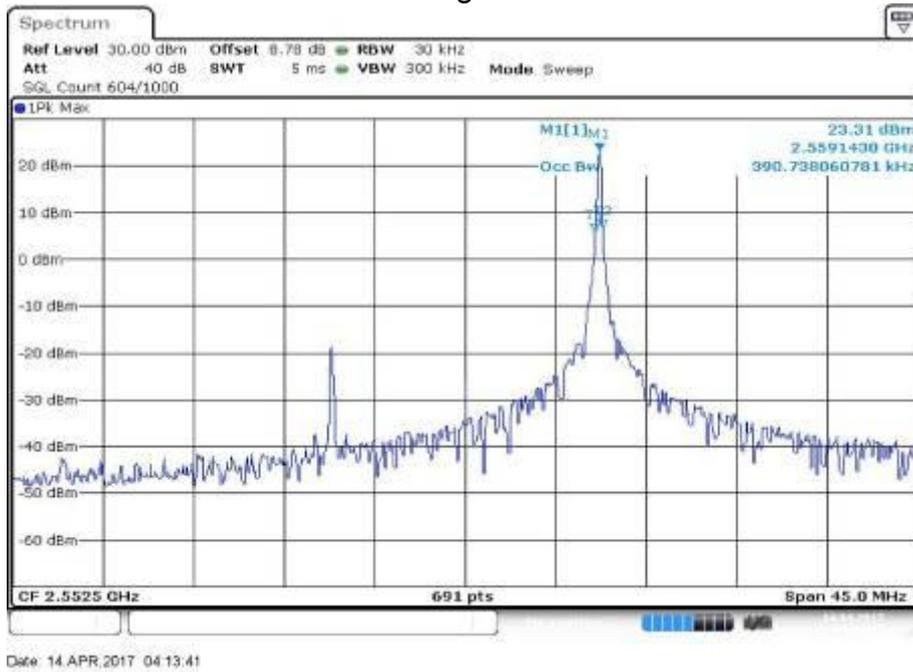
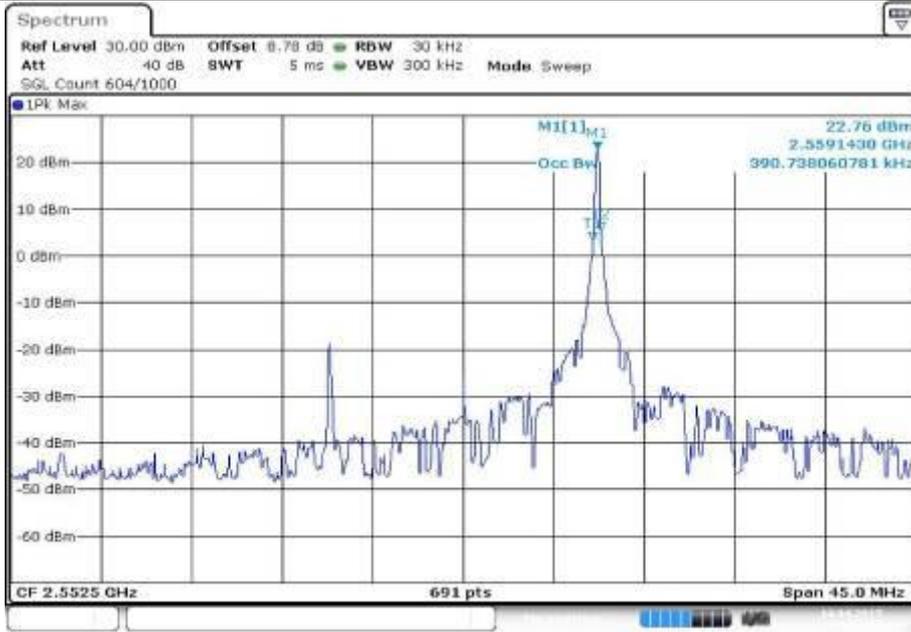
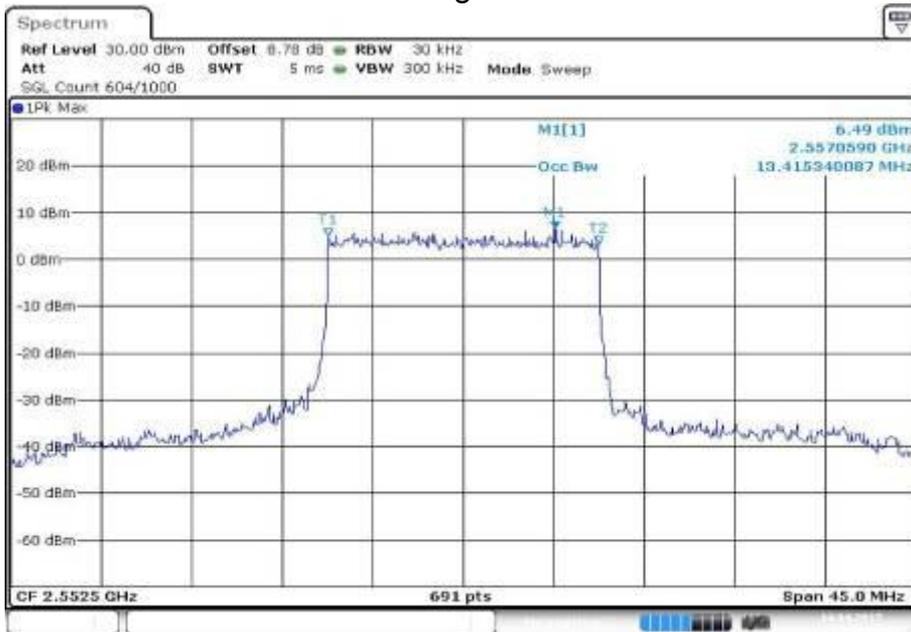


Fig.6



Date: 14 APR 2017 04:14:24

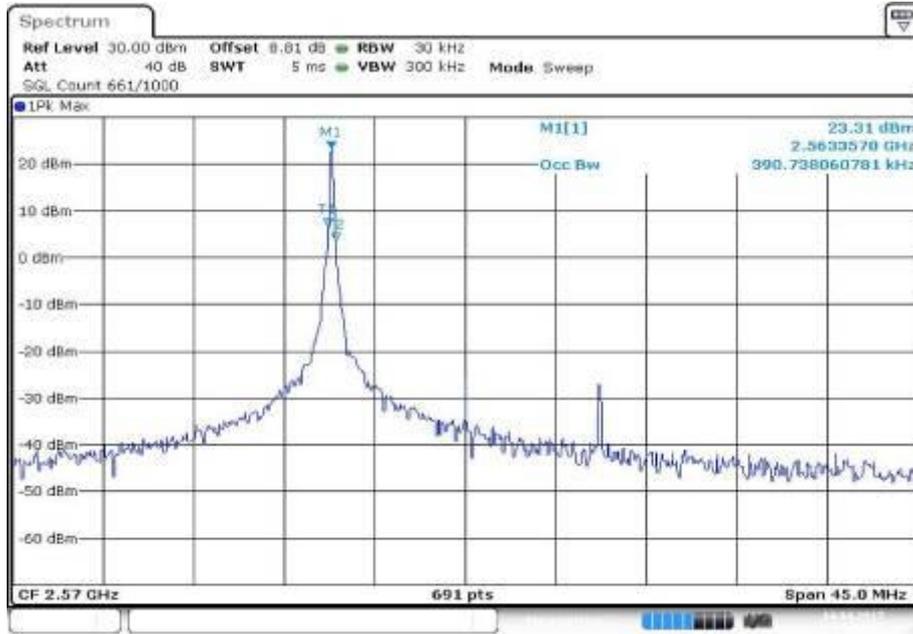
Fig.7



Date: 14 APR 2017 04:15:07

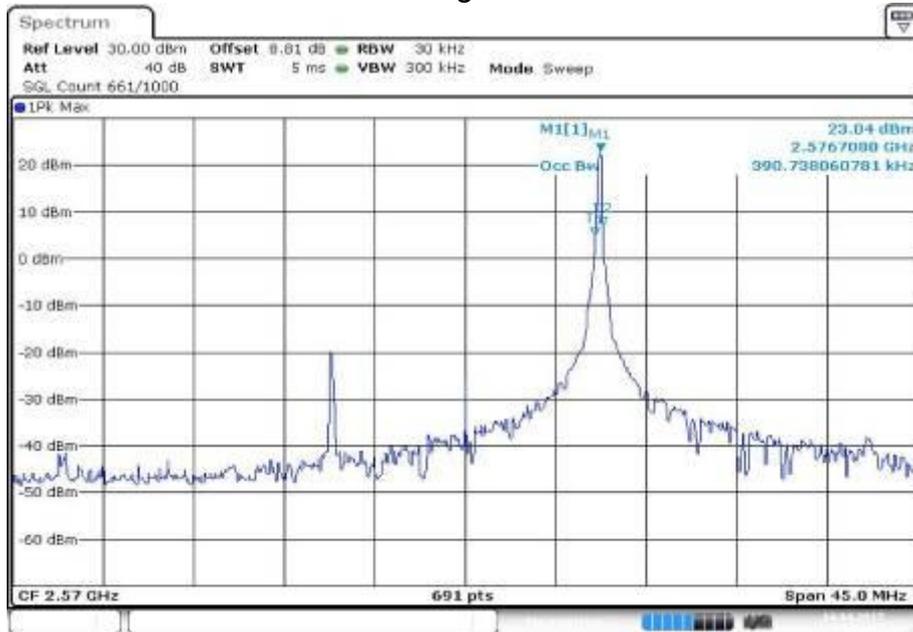
Fig.8

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
41	2570	40390	15	1	0	0.391	Fig.1	0.456	Fig.5
				1	74	0.391	Fig.2	0.391	Fig.6
				38	18	0.391	Fig.3	0.391	Fig.7
				75	0	13.415	Fig.4	13.415	Fig.8



Date: 14 APR 2017 04:20:25

Fig.1



Date: 14 APR 2017 04:21:08

Fig.2

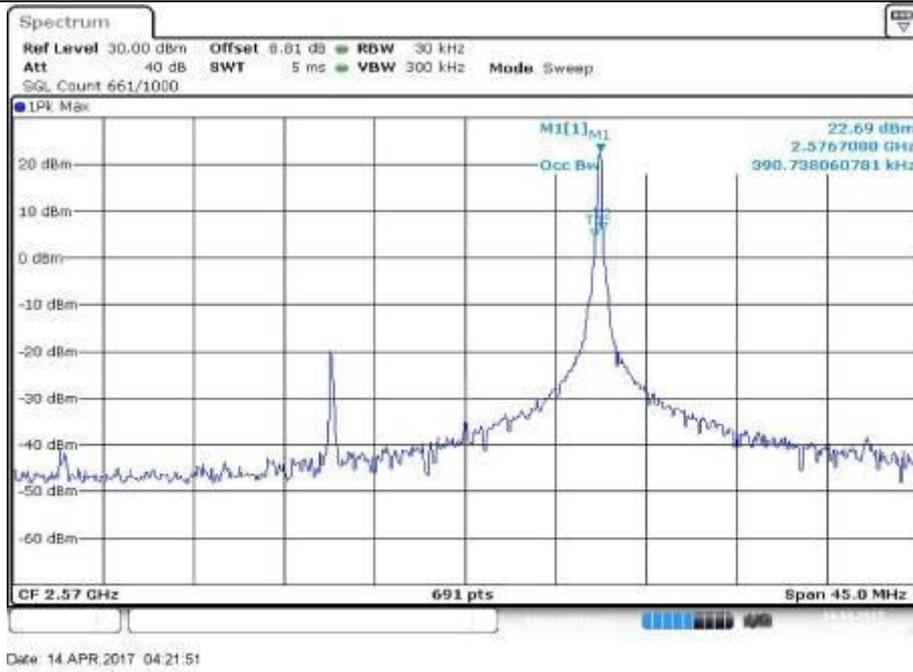


Fig.3

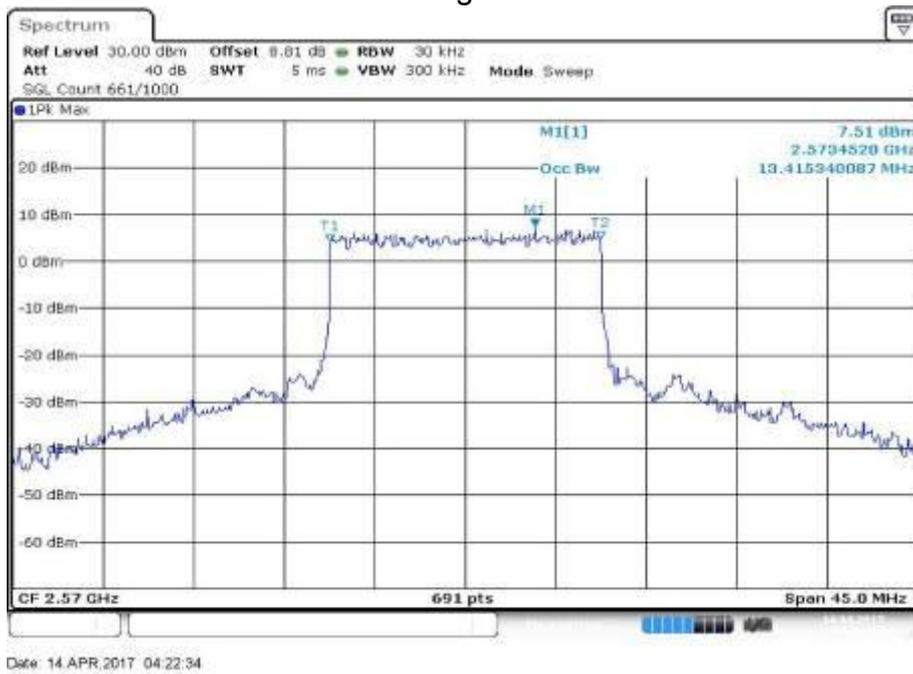
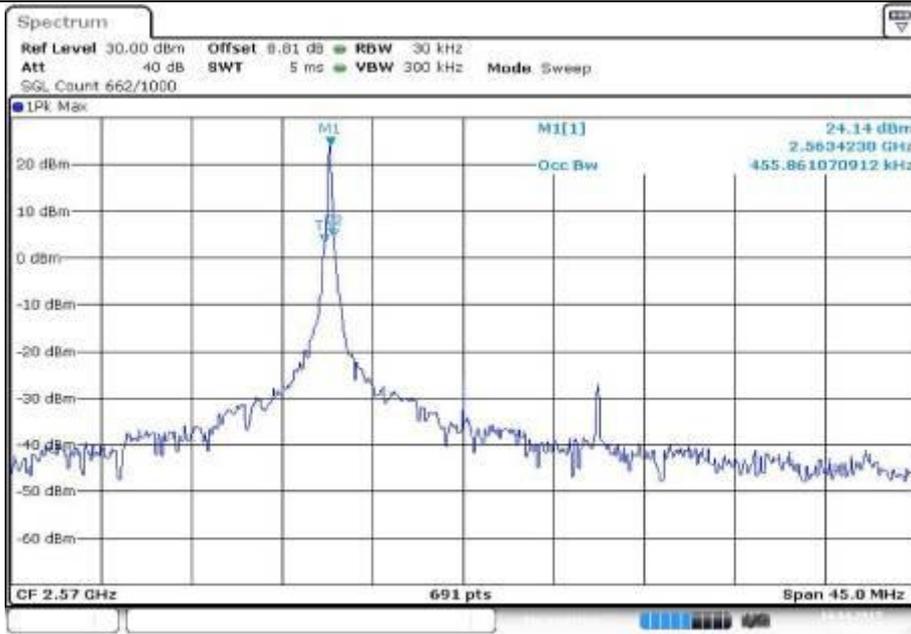
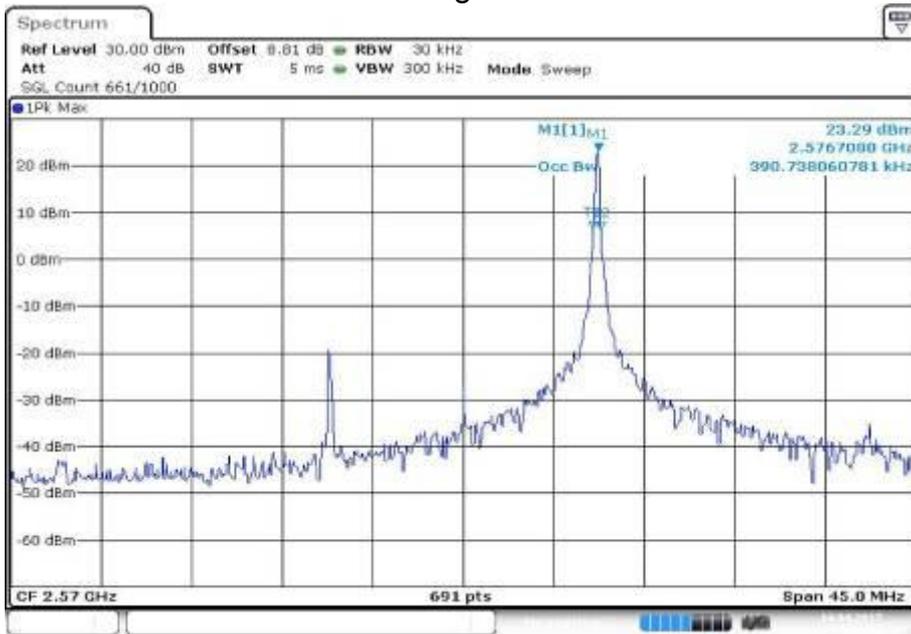


Fig.4



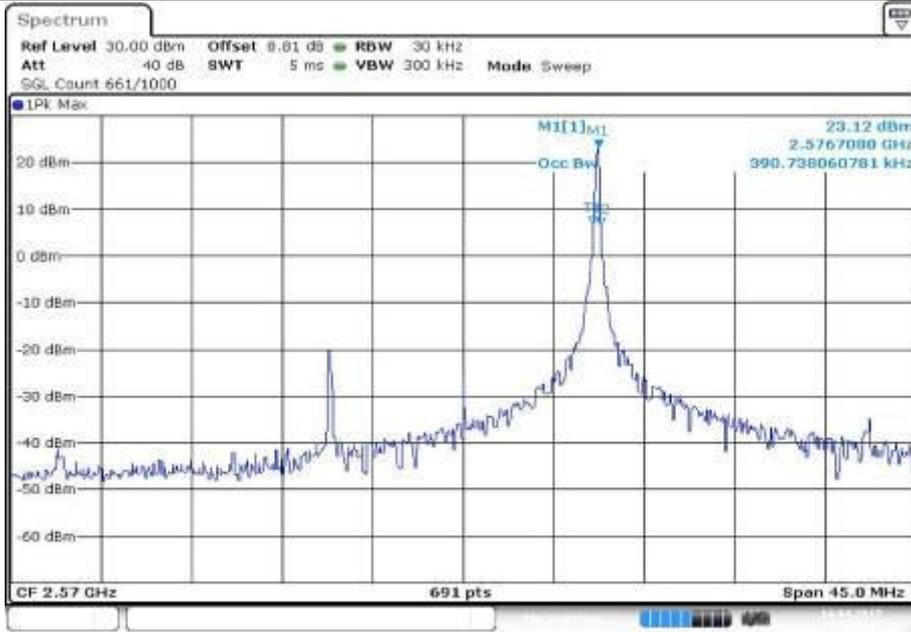
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Fig.5



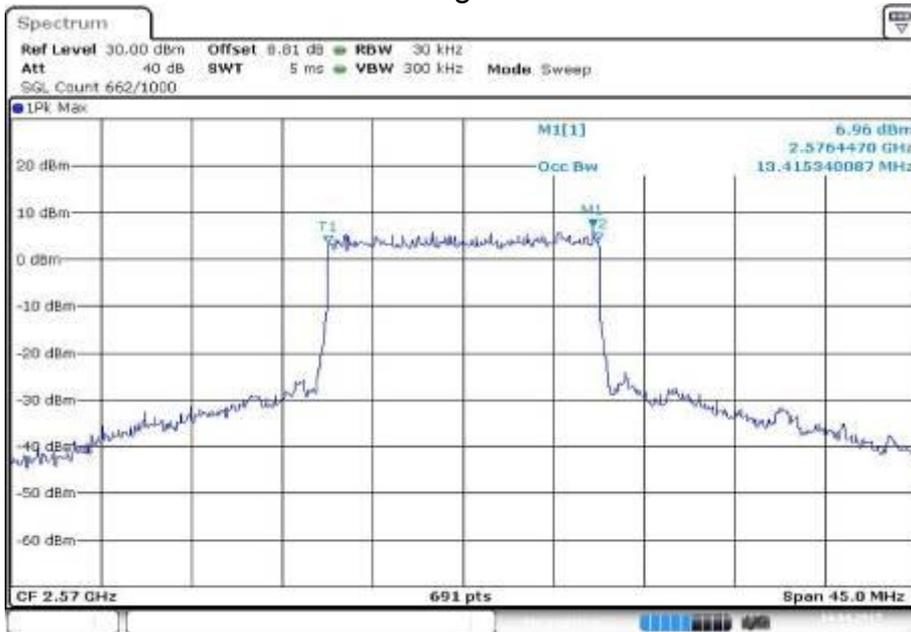
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Fig.6



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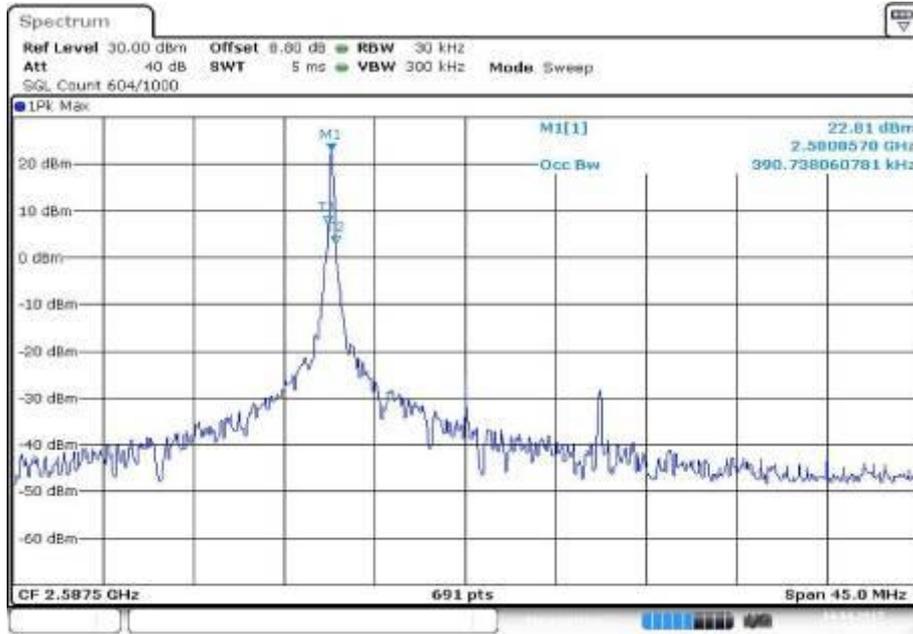
Fig.7



Date: 14 APR 2017 04:25:27

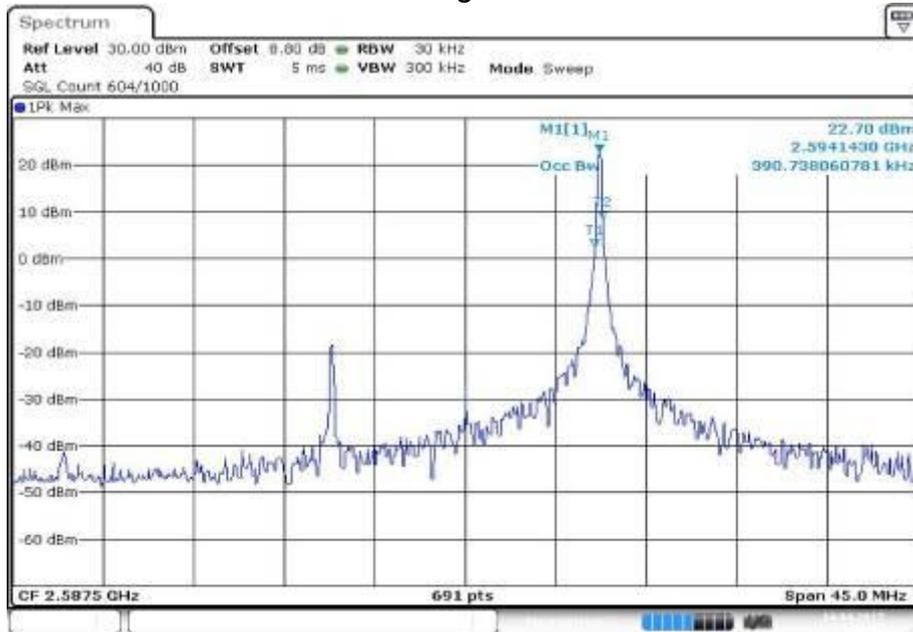
Fig.8

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
41	2587.5	40565	15	1	0	0.391	Fig.1	0.326	Fig.5
				1	74	0.391	Fig.2	0.391	Fig.6
				38	18	0.391	Fig.3	0.391	Fig.7
				75	0	13.415	Fig.4	13.415	Fig.8



Date: 14 APR 2017 04:29:24

Fig.1



Date: 14 APR 2017 04:30:07

Fig.2

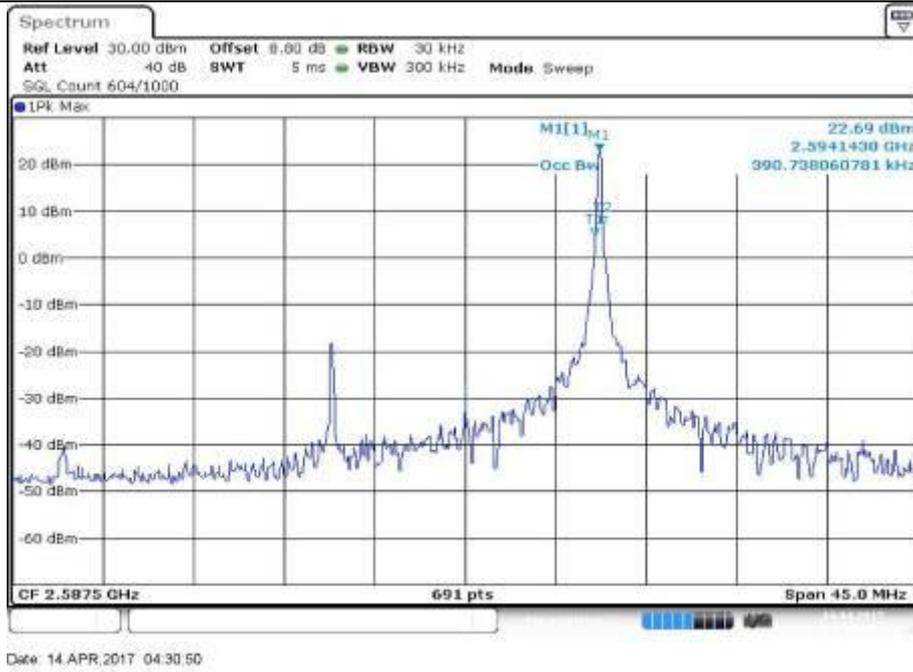


Fig.3

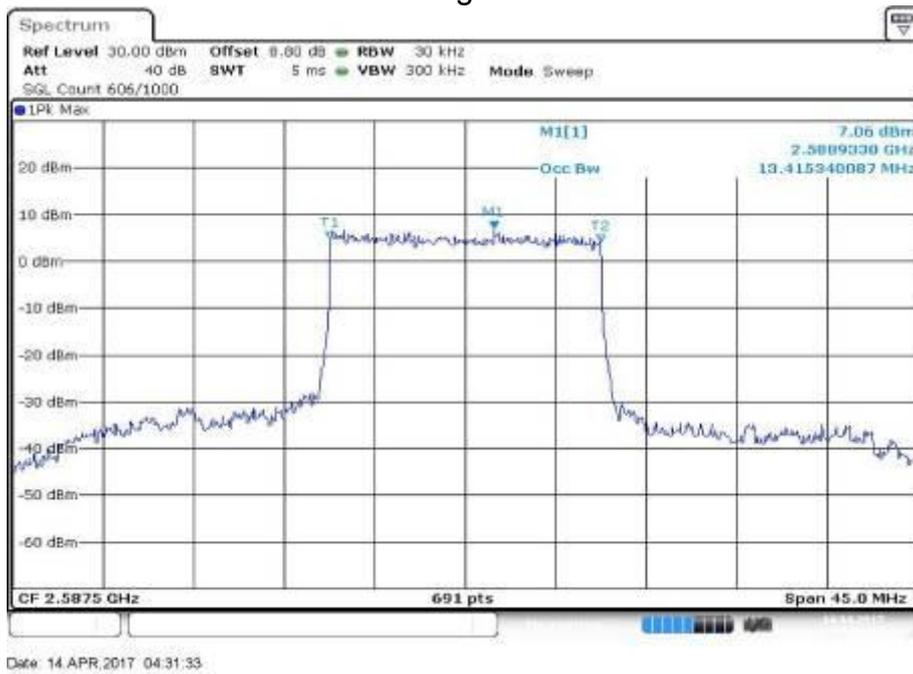


Fig.4

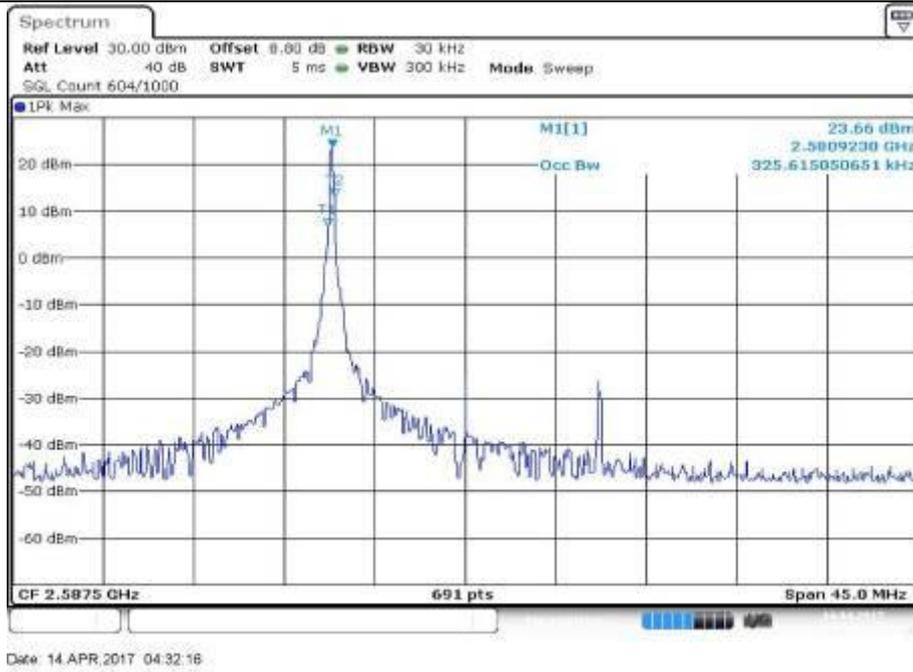


Fig.5

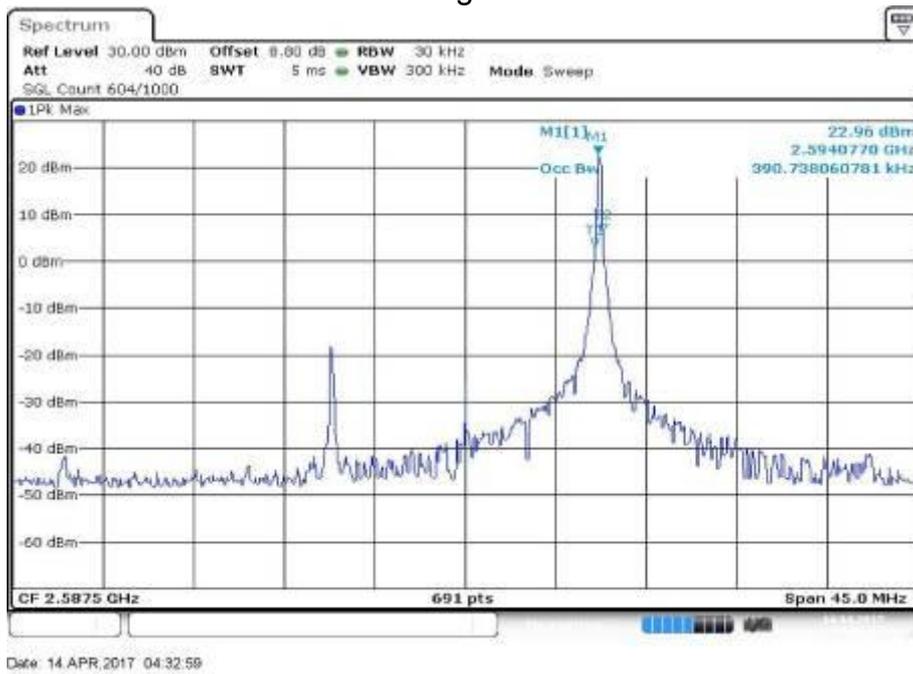
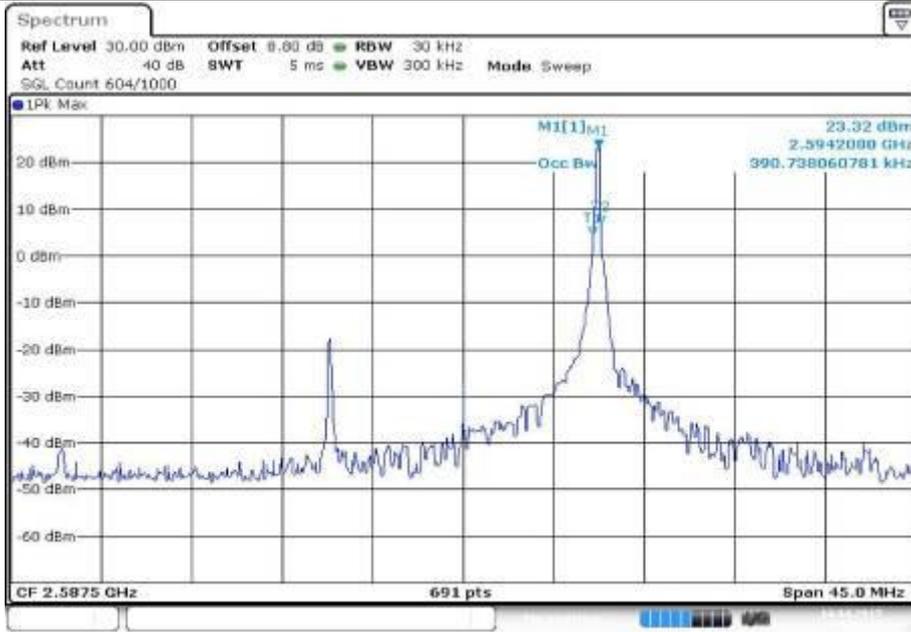
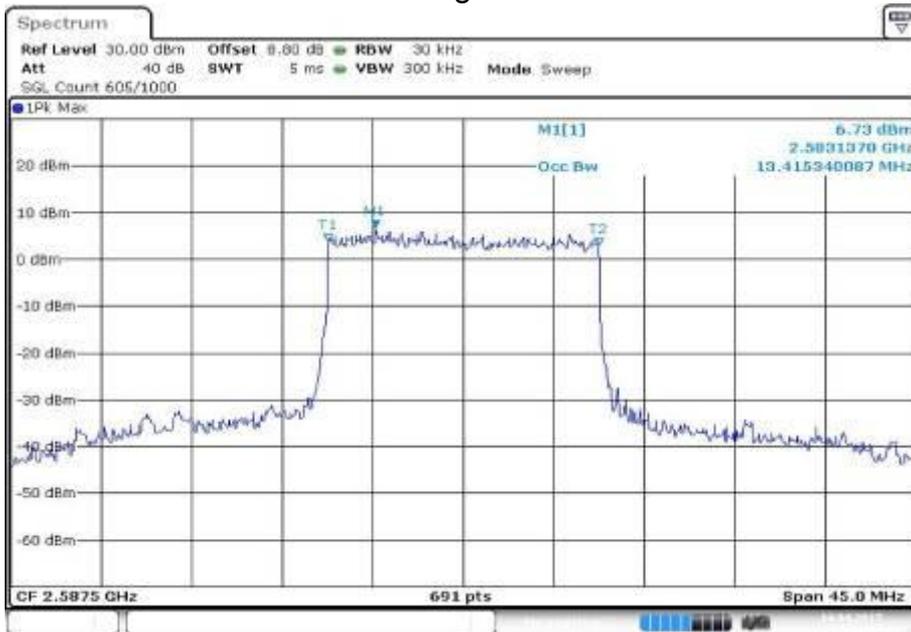


Fig.6



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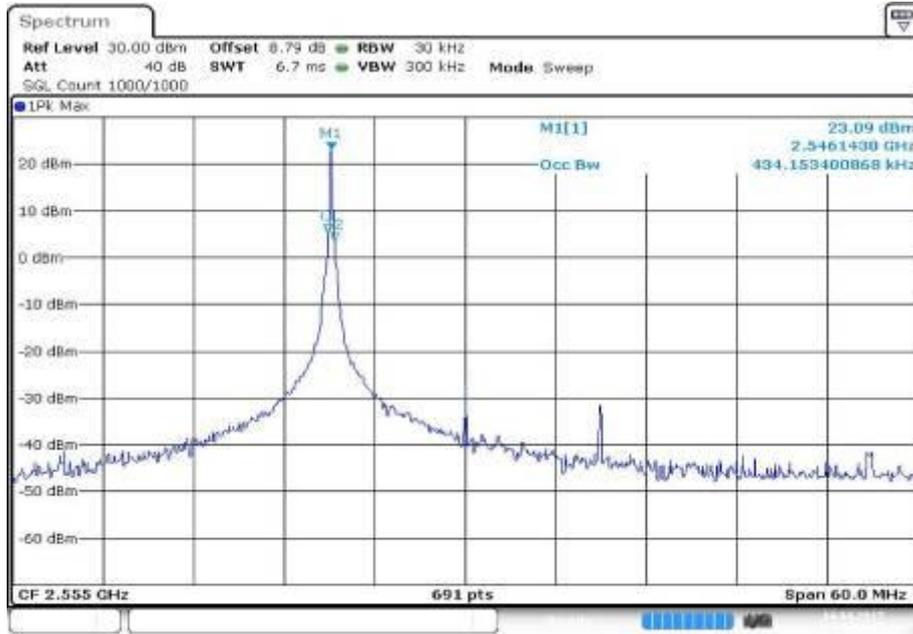
Fig.7



Date: 14 APR 2017 04:34:25

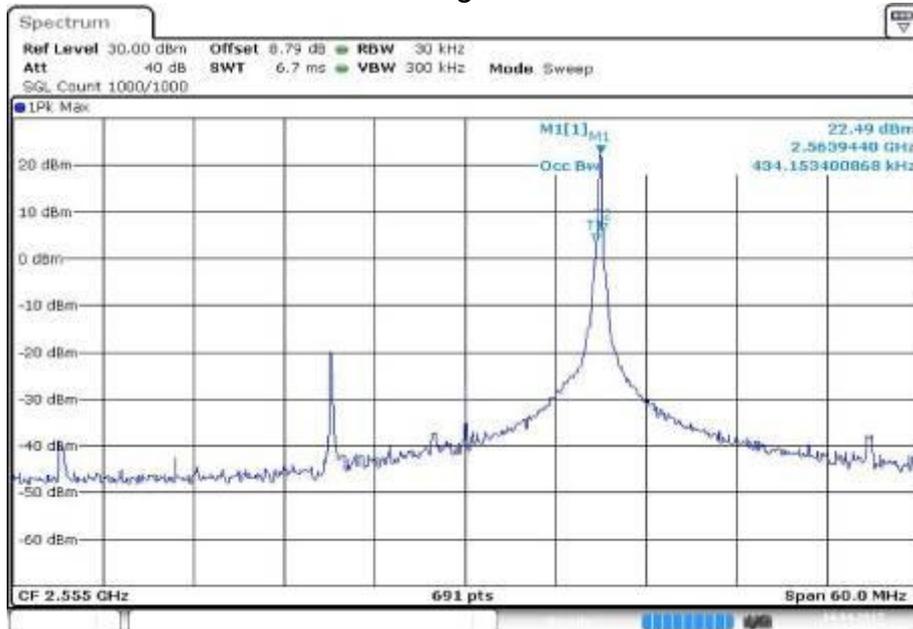
Fig.8

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
41	2555	40240	20	1	0	0.434	Fig.1	0.434	Fig.5
				1	99	0.434	Fig.2	0.434	Fig.6
				50	25	9.030	Fig.3	8.944	Fig.7
				100	0	17.887	Fig.4	17.887	Fig.8



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Fig.1



Date: 14 APR 2017 04:40:30

Fig.2



Fig.3

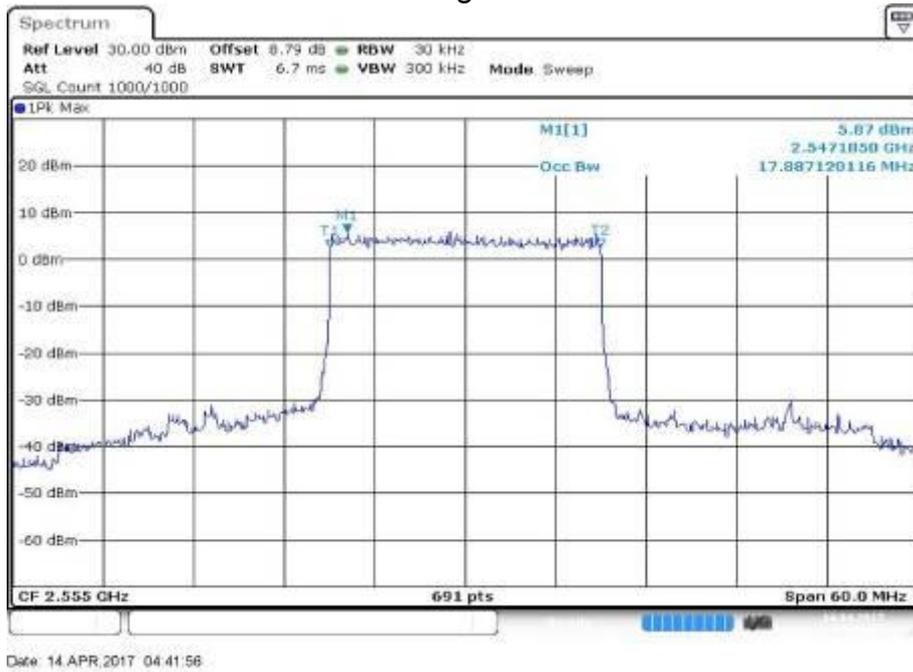


Fig.4

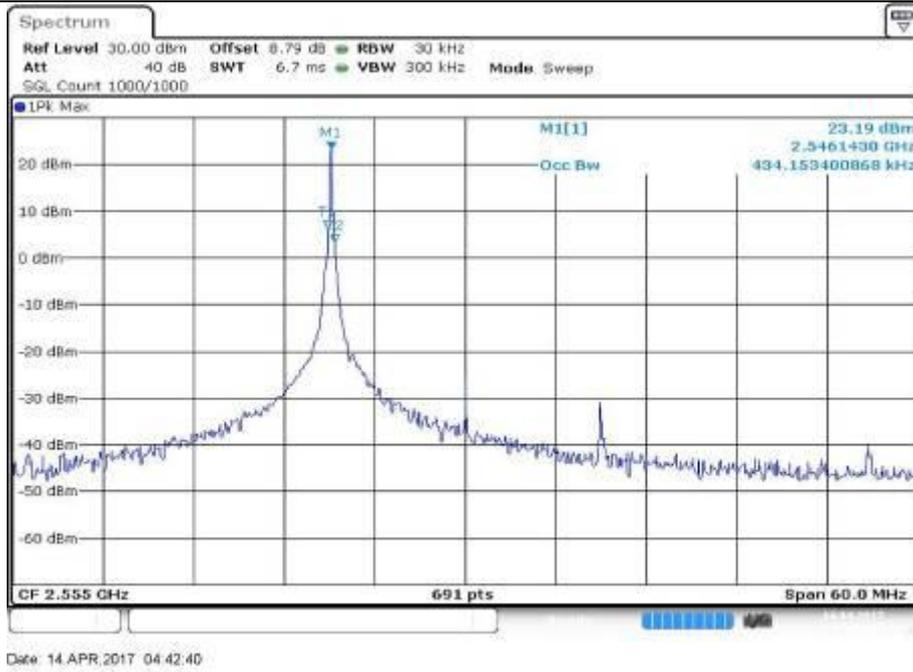


Fig.5

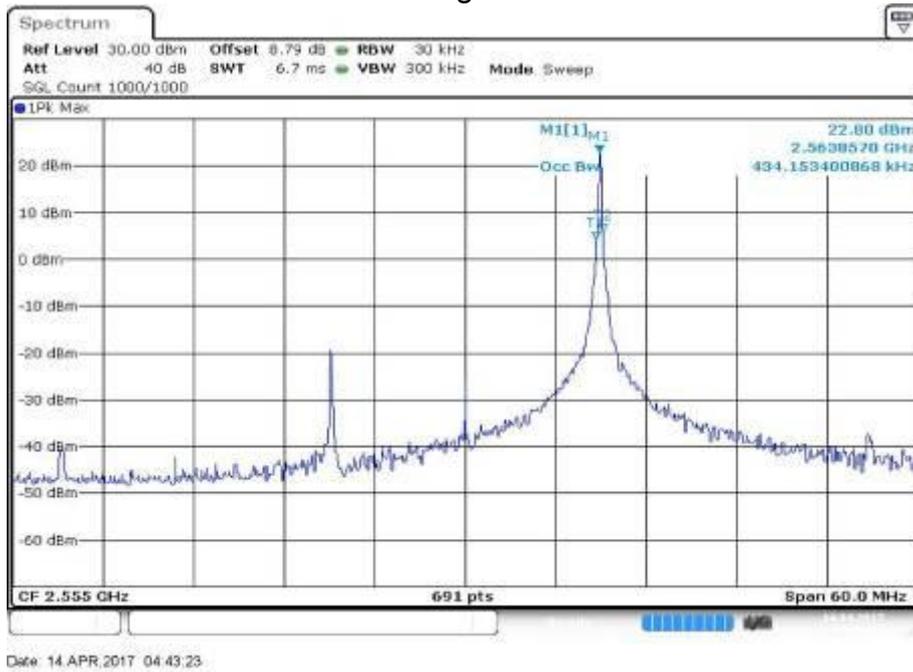
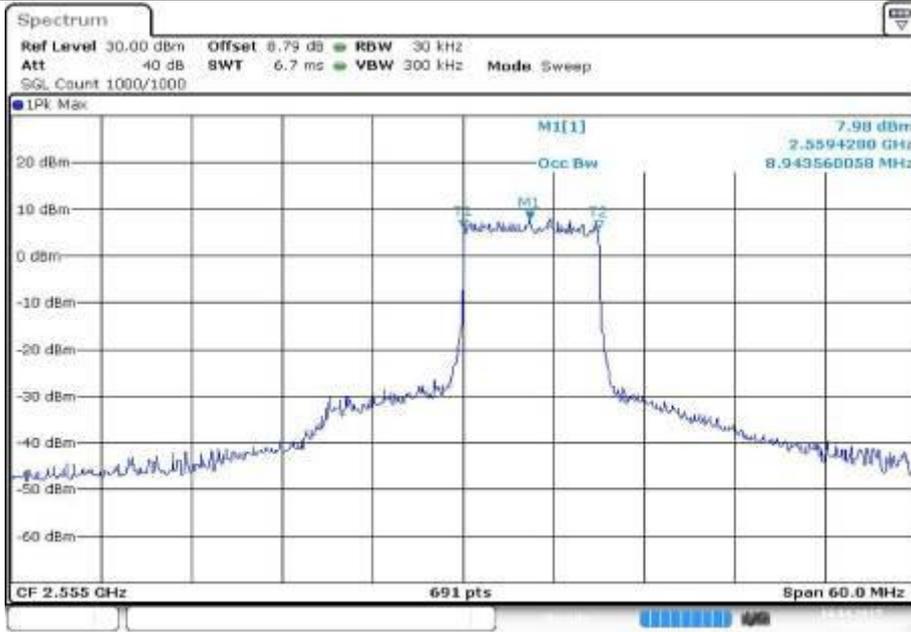
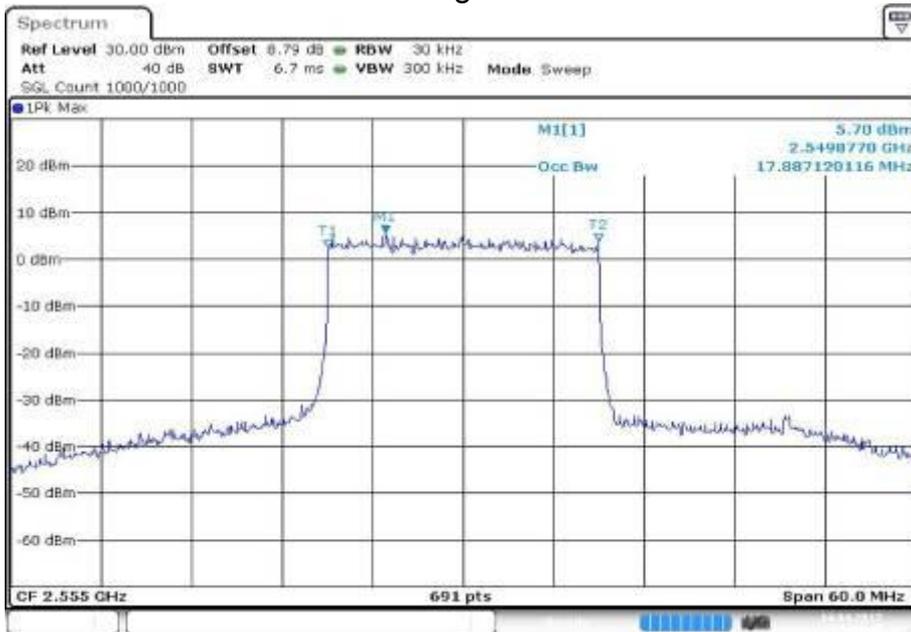


Fig.6



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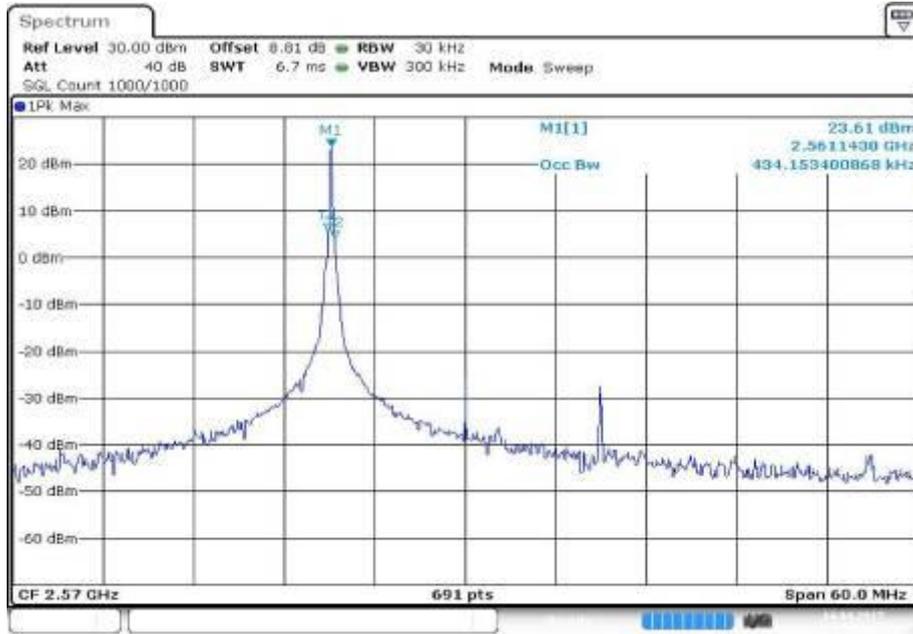
Fig.7



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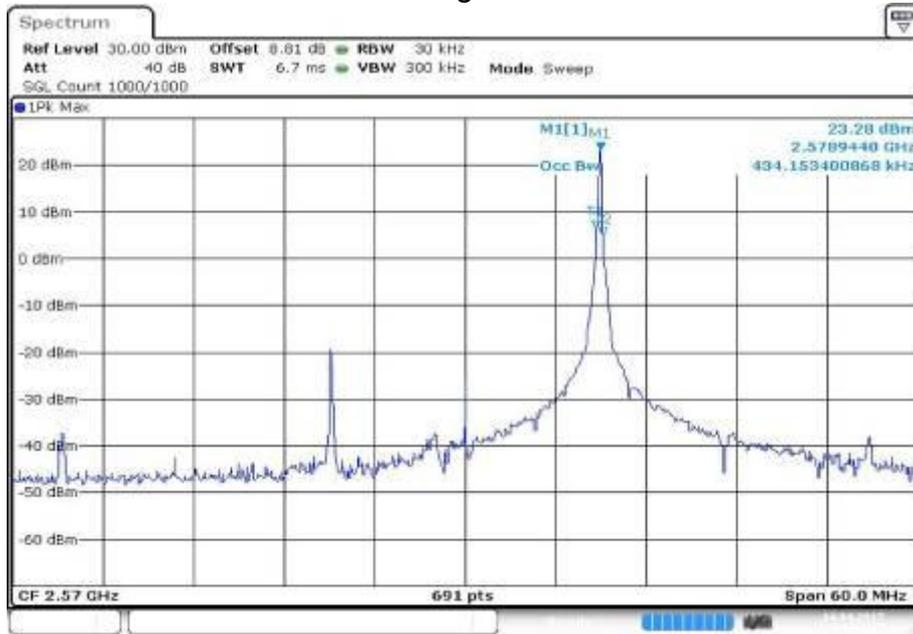
Fig.8

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
41	2570	40390	20	1	0	0.434	Fig.1	0.434	Fig.5
				1	99	0.434	Fig.2	0.434	Fig.6
				50	25	8.944	Fig.3	9.030	Fig.7
				100	0	17.887	Fig.4	17.887	Fig.8



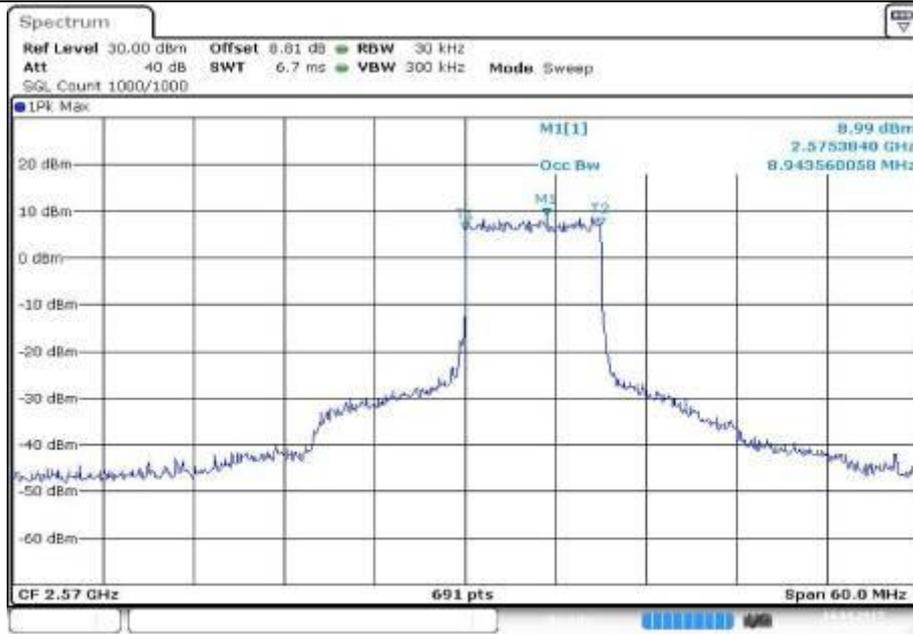
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Fig.1



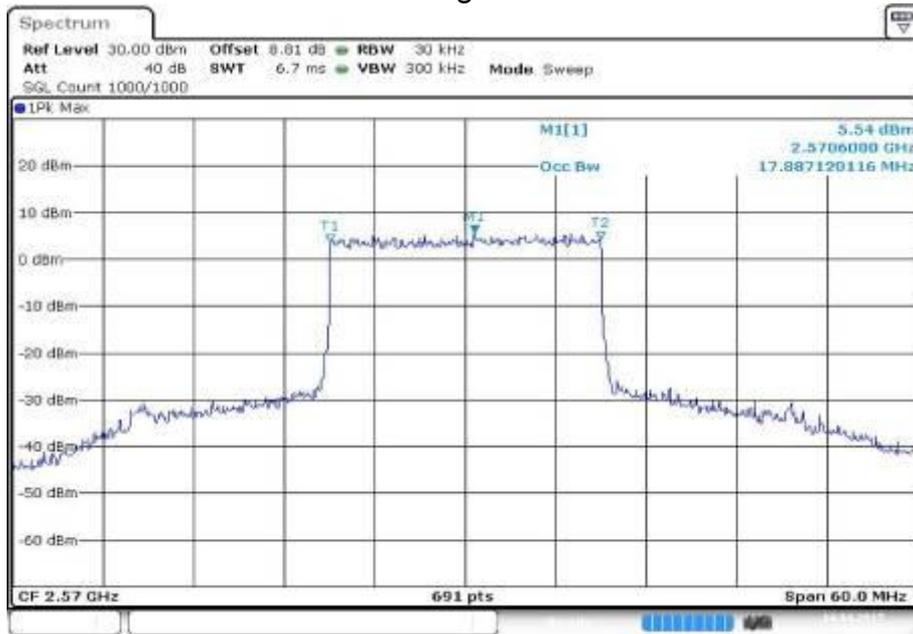
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Fig.2



Date: 14 APR 2017 04:51:44

Fig.3



Date: 14 APR 2017 04:52:27

Fig.4

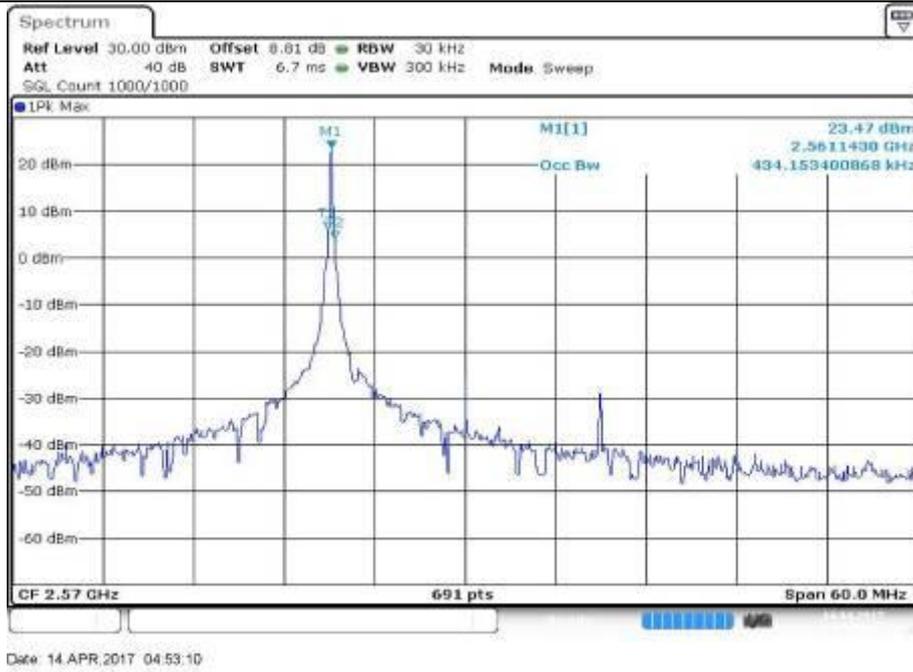


Fig.5

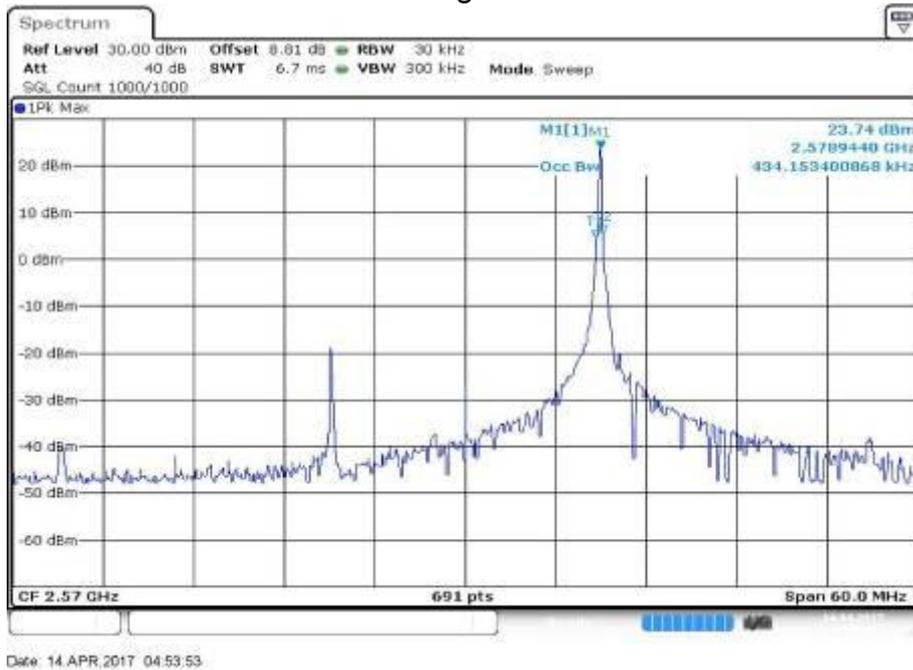


Fig.6

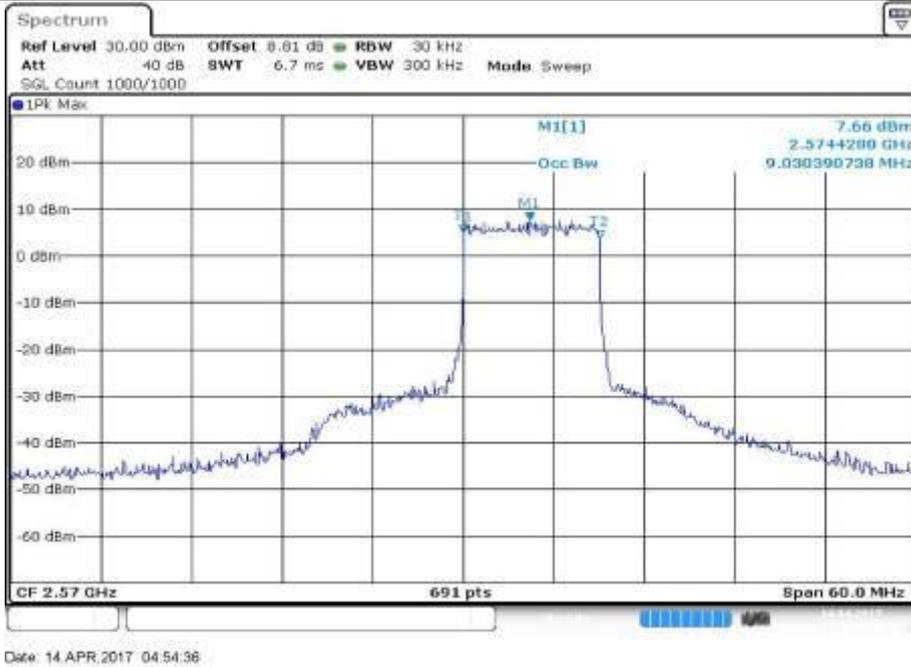


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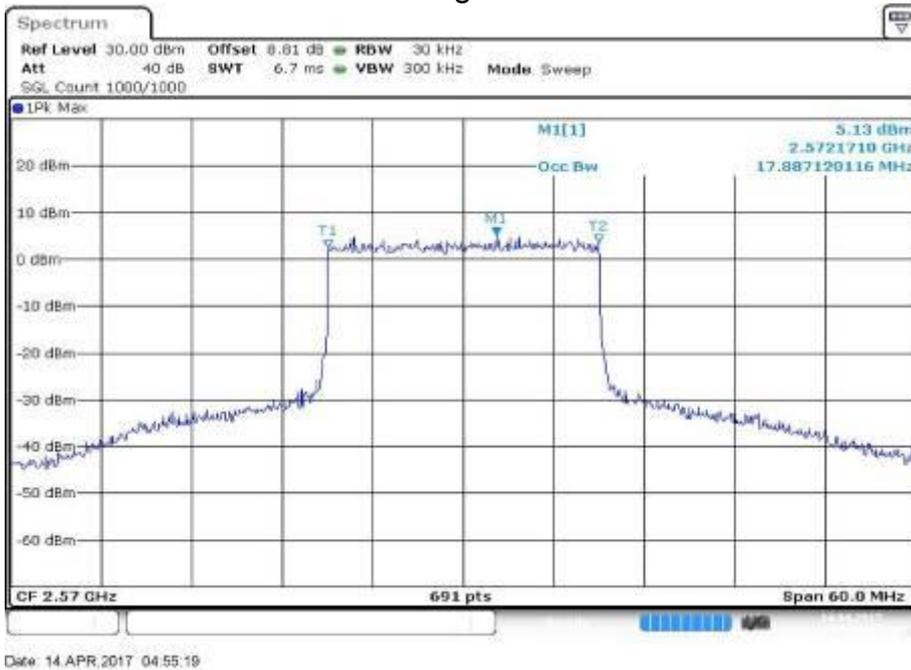
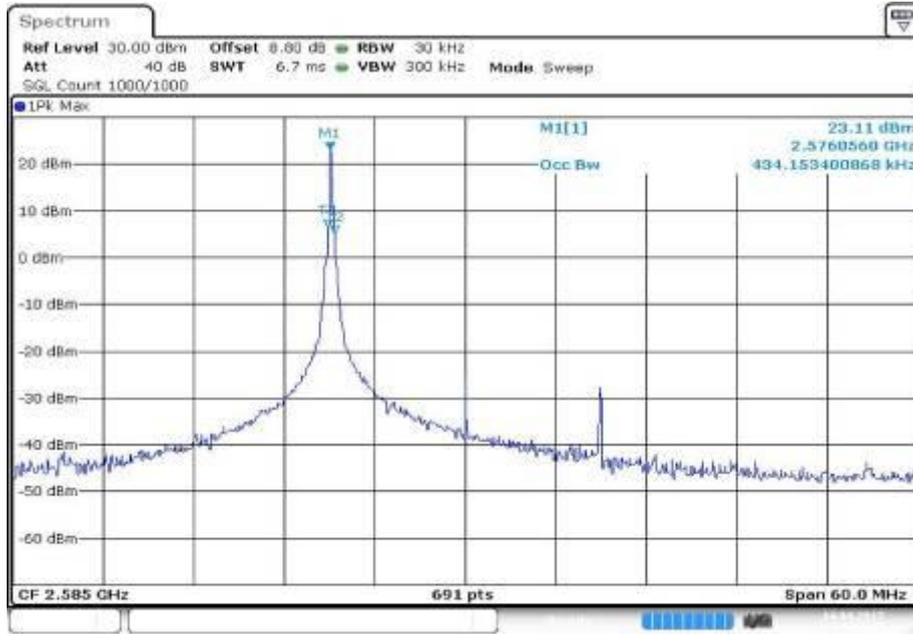


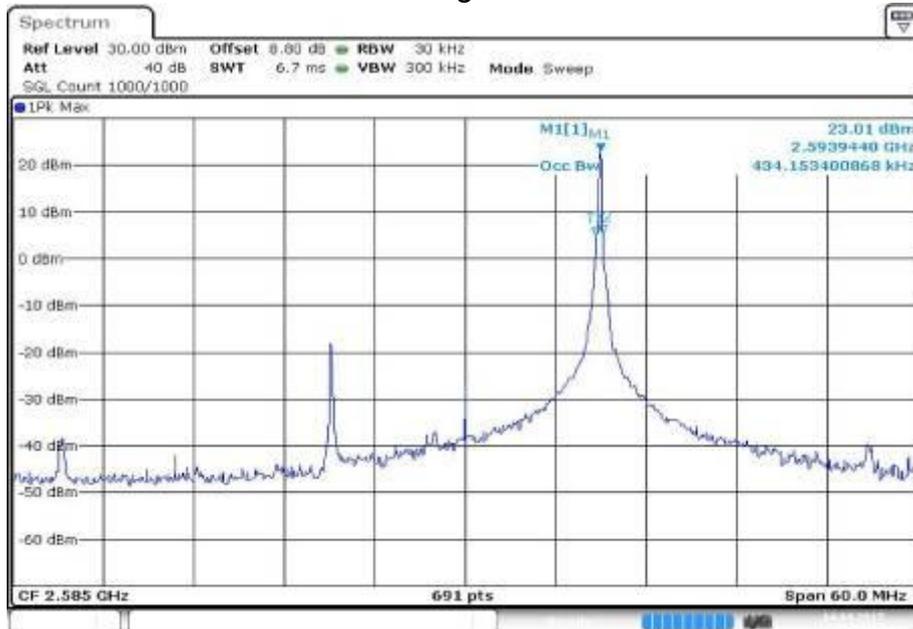
Fig.8

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
41	2585	40540	20	1	0	0.434	Fig.1	0.434	Fig.5
				1	99	0.434	Fig.2	0.434	Fig.6
				50	25	8.944	Fig.3	9.030	Fig.7
				100	0	17.887	Fig.4	17.887	Fig.8



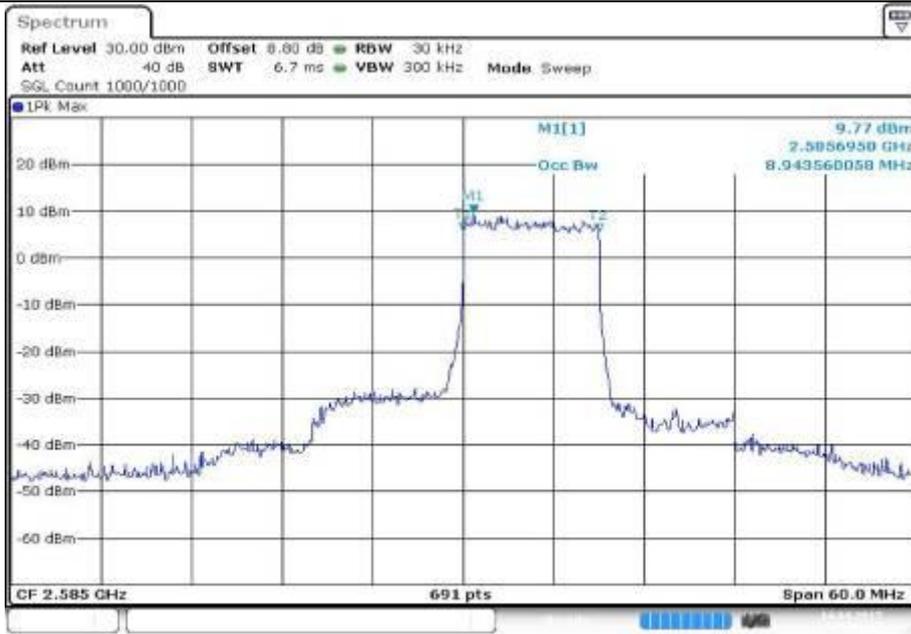
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Fig.1



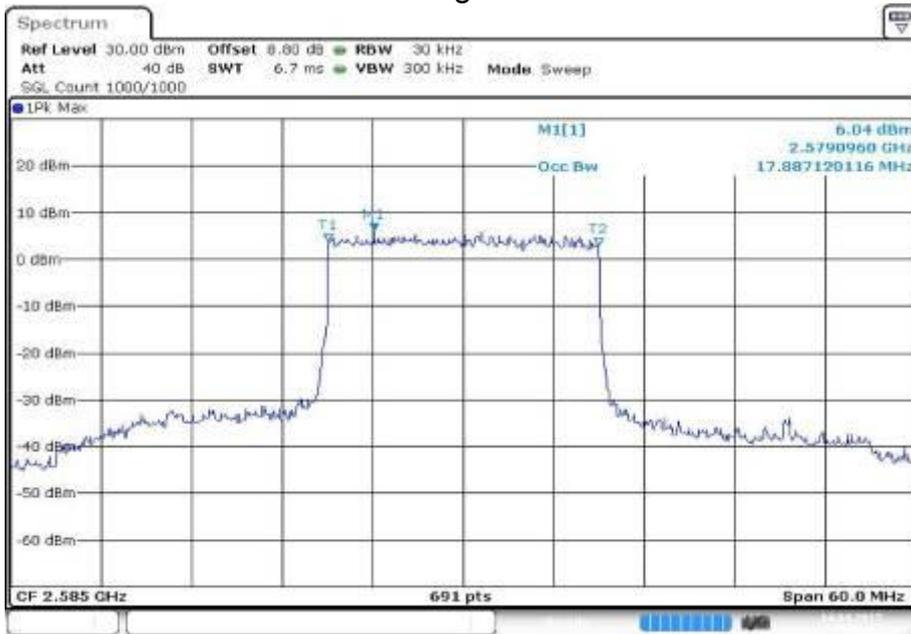
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Fig.2



Date: 14 APR 2017 05:01:07

Fig.3



Date: 14 APR 2017 05:01:50

Fig.4

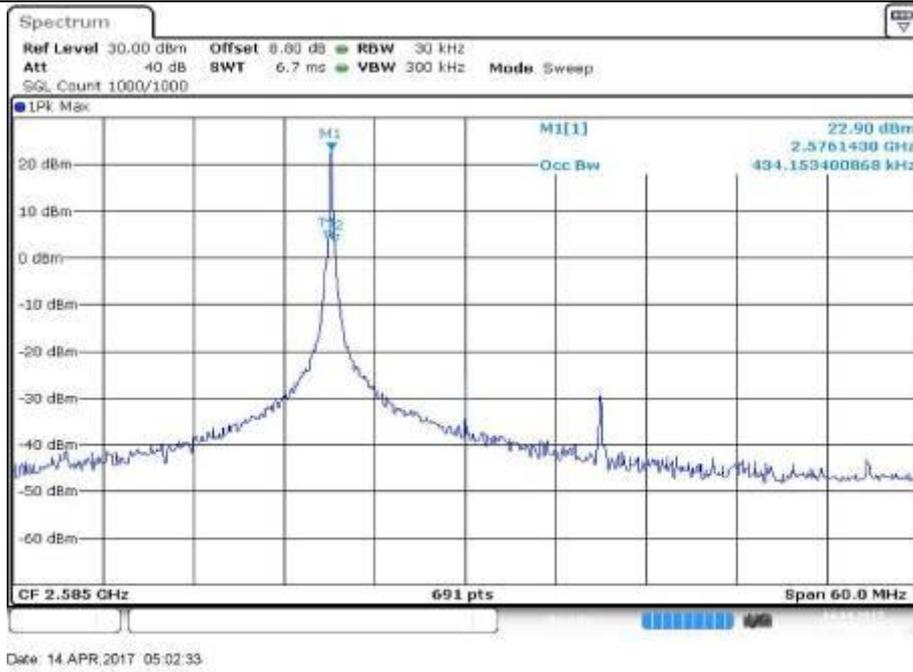


Fig.5

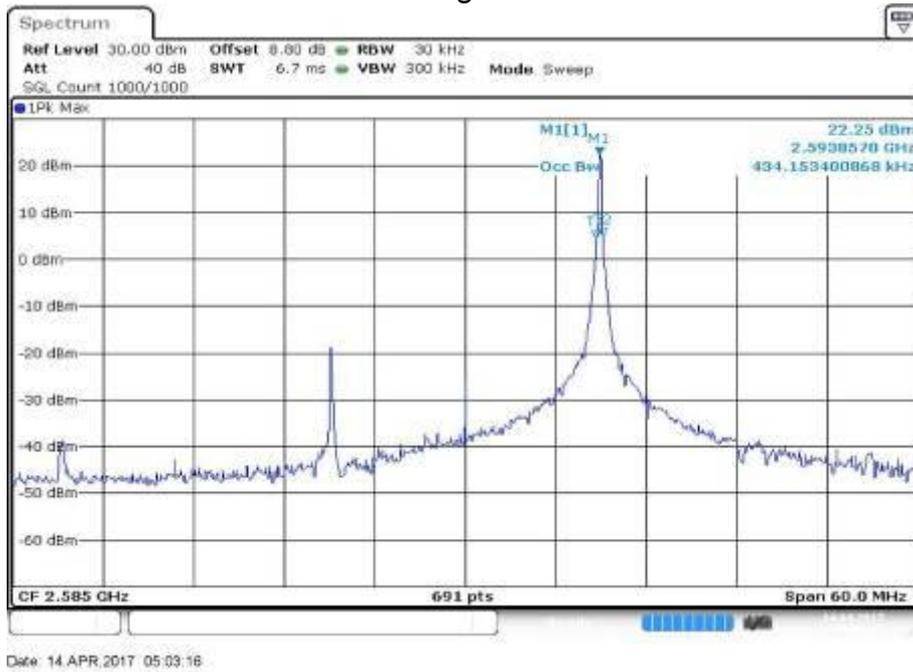
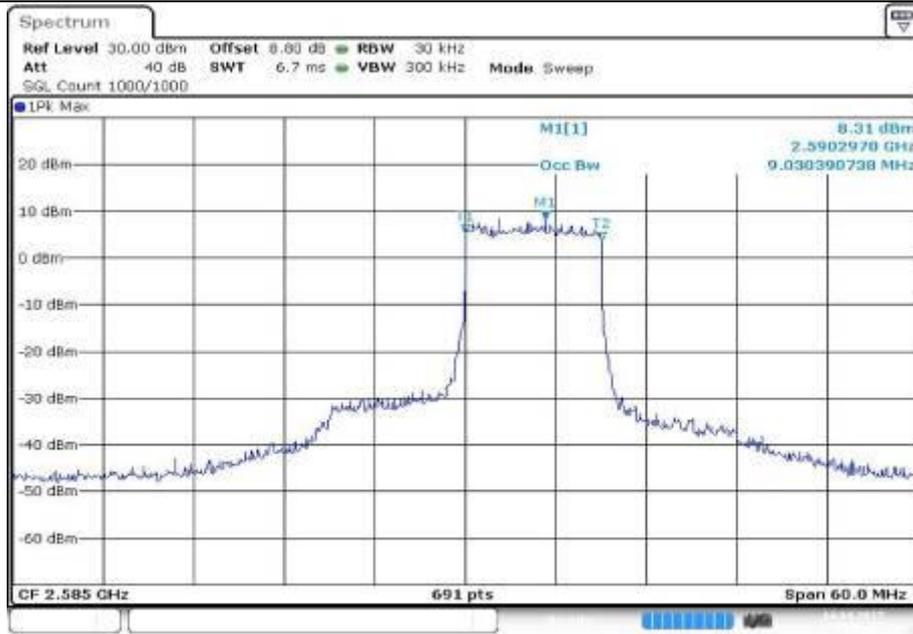
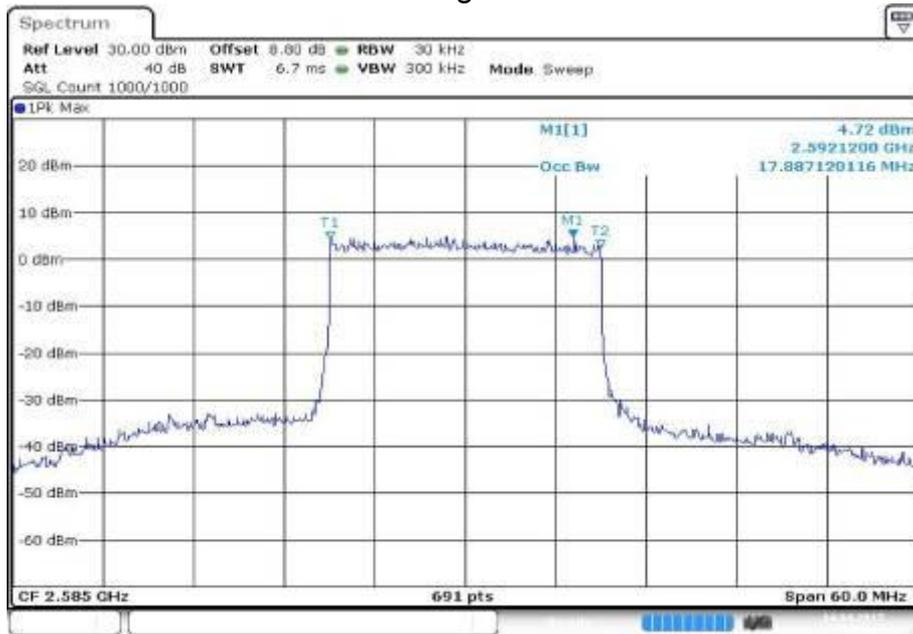


Fig.6



Date: 14 APR 2017 05:03:59

Fig.7



Date: 14 APR 2017 05:04:42

Fig.8

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

Test result

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)			
						QPSK		16-QAM	
41	2547.5	40165	5	1	0	0.521	Fig.1	0.499	Fig.5
				1	24	0.499	Fig.2	0.499	Fig.6
				12	6	2.583	Fig.3	2.562	Fig.7
				25	0	4.906	Fig.4	4.841	Fig.8

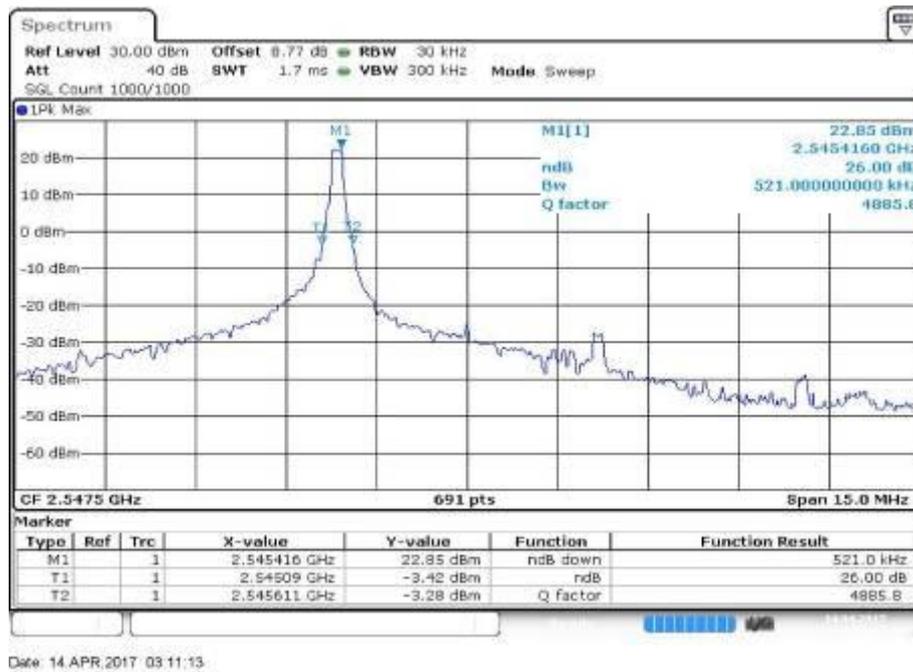


Fig.1



Fig.2

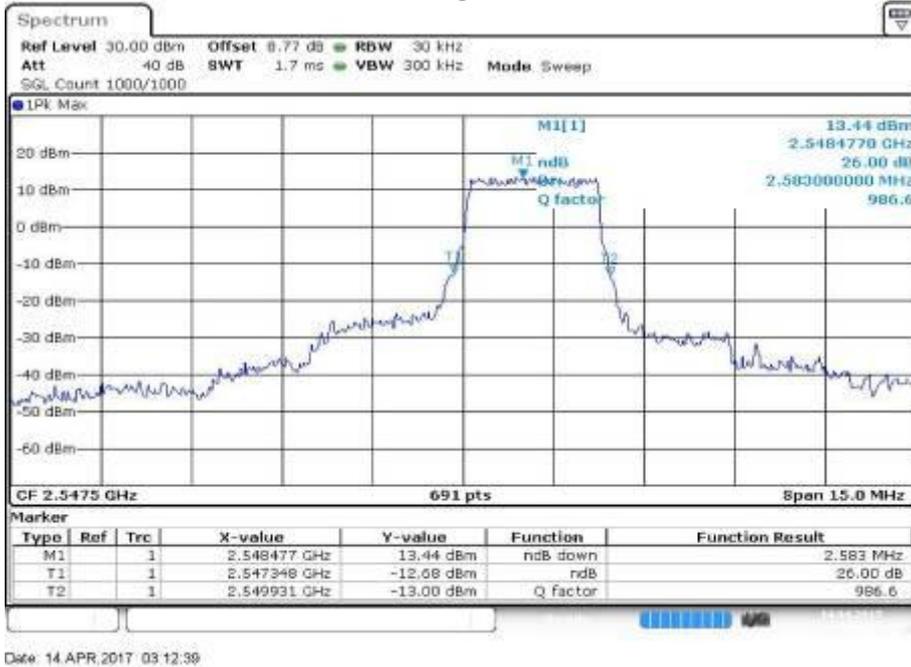
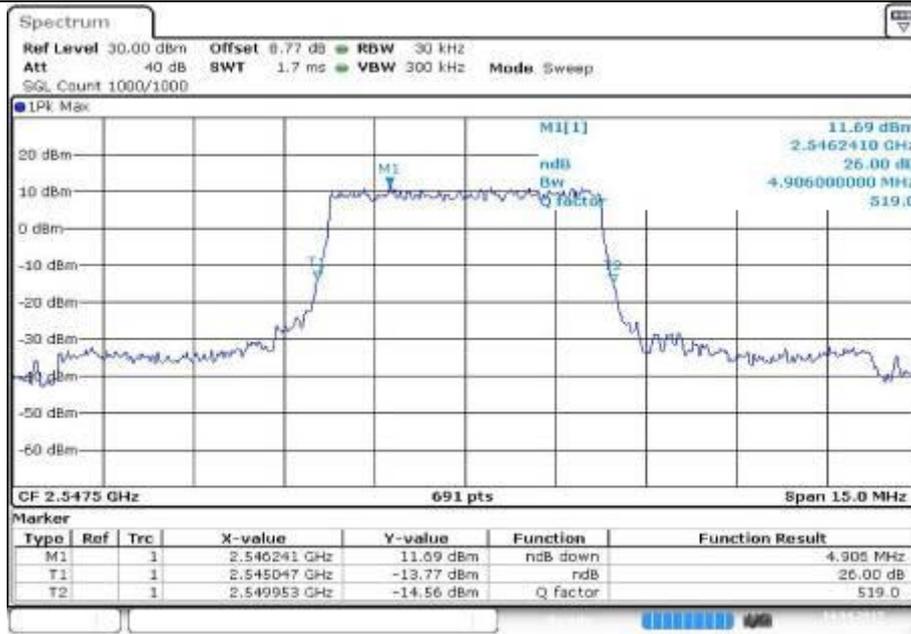
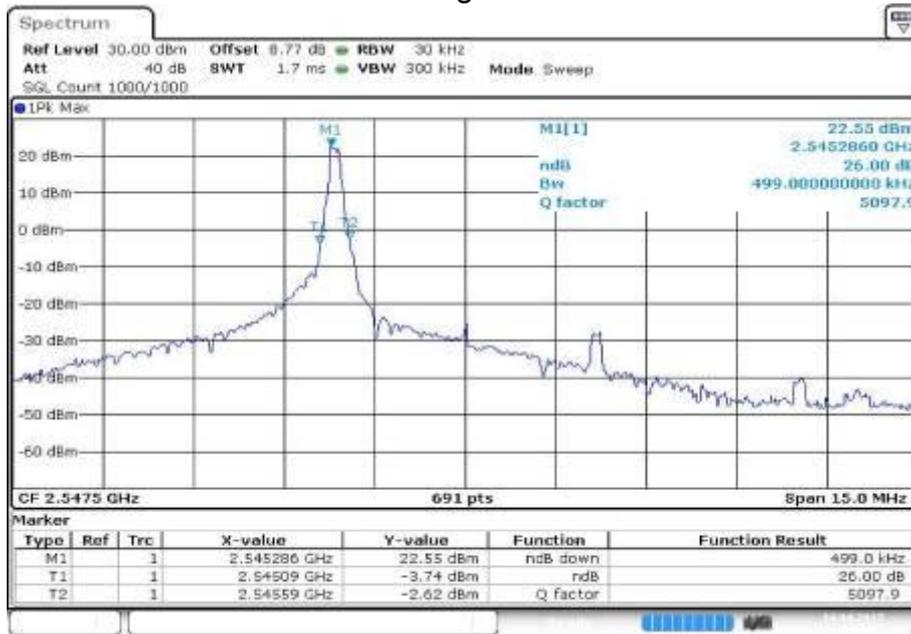


Fig.3



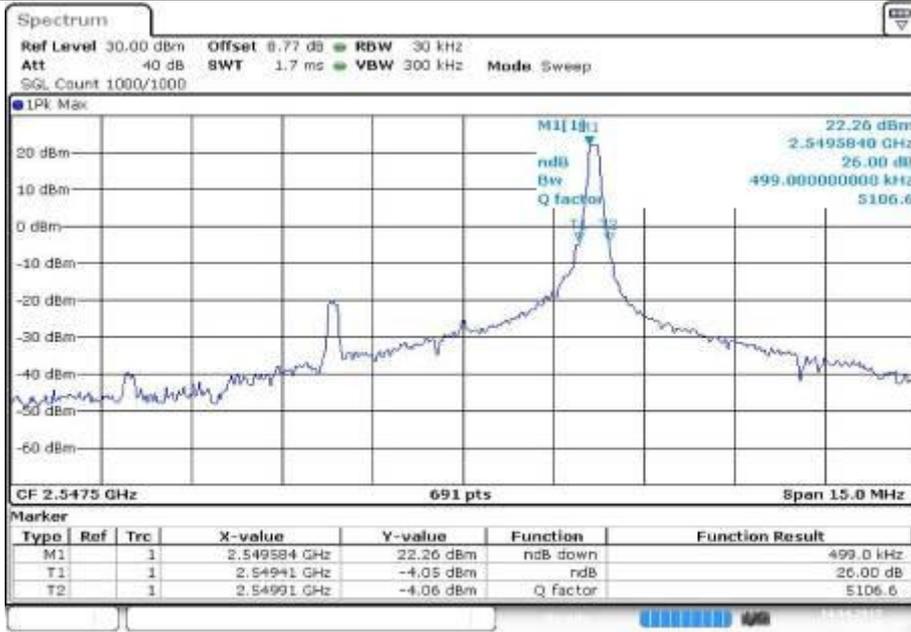
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Fig.4



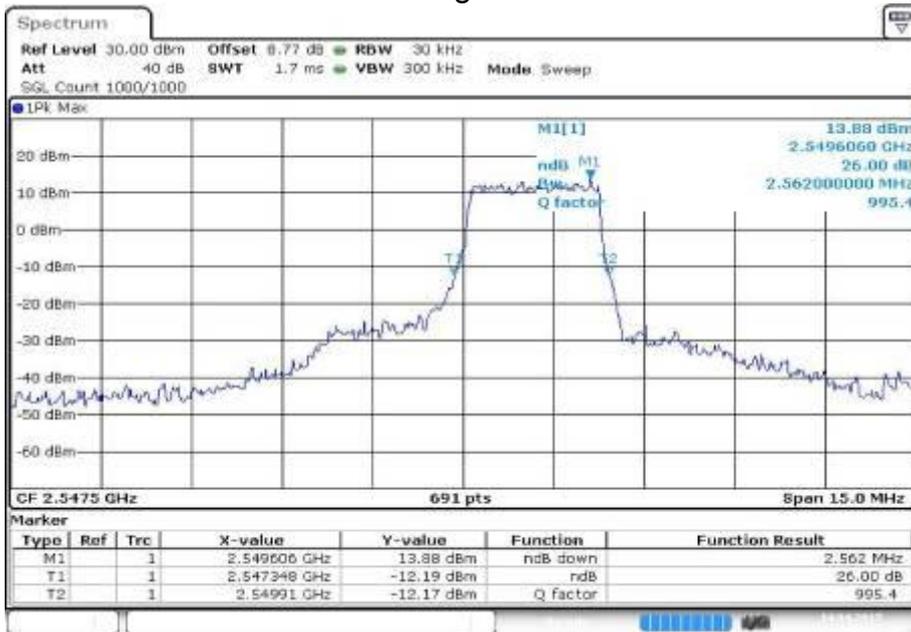
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Fig.5



Date: 14 APR 2017 03:14:48

Fig.6



Date: 14 APR 2017 03:15:31

Fig.7

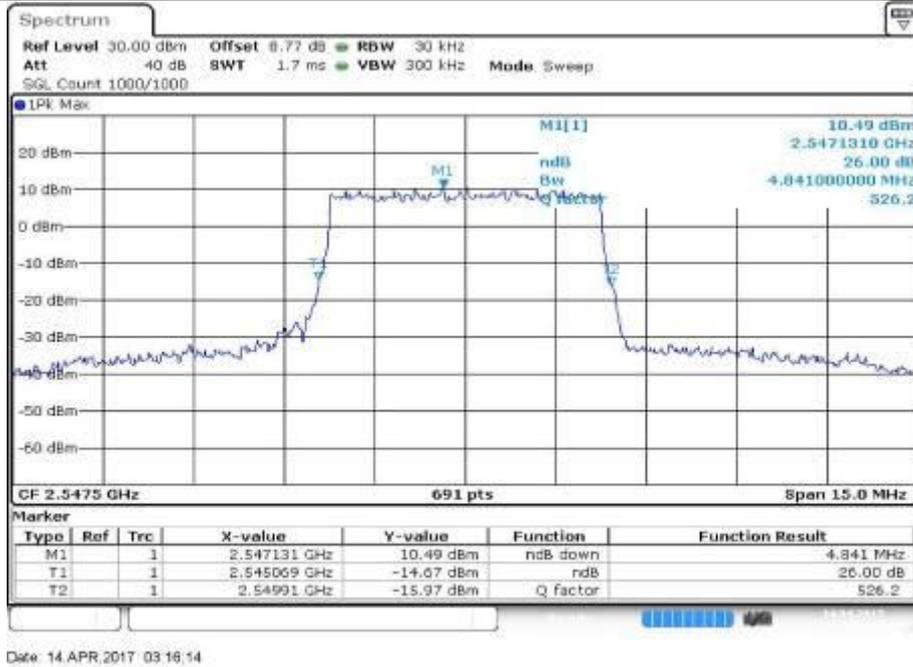


Fig.8

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)			
						QPSK		16-QAM	
41	2570	40390	5	1	0	0.521	Fig.1	0.521	Fig.5
				1	24	0.499	Fig.2	0.521	Fig.6
				12	6	2.583	Fig.3	2.562	Fig.7
				25	0	4.884	Fig.4	4.819	Fig.8

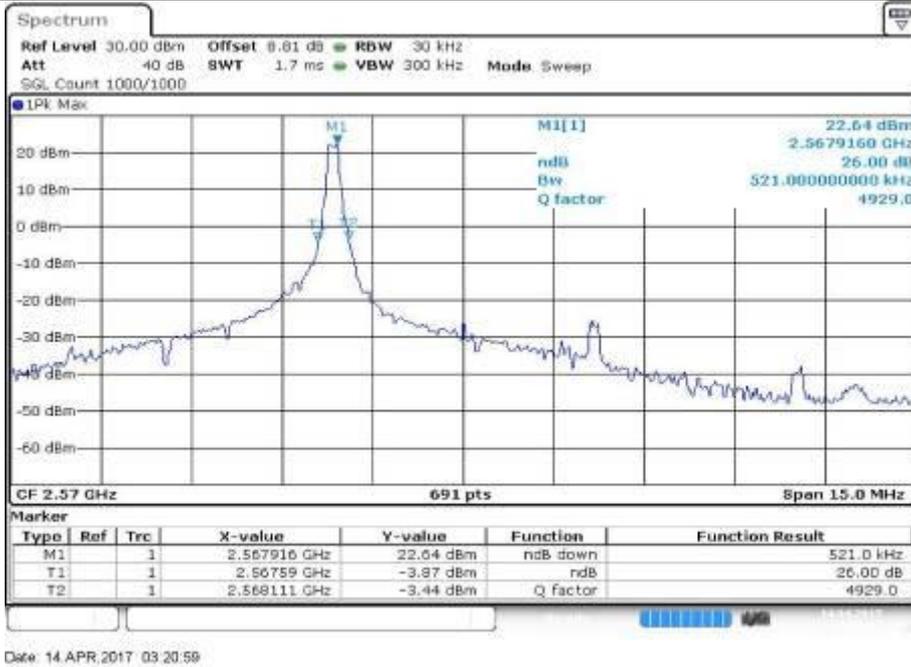


Fig.1

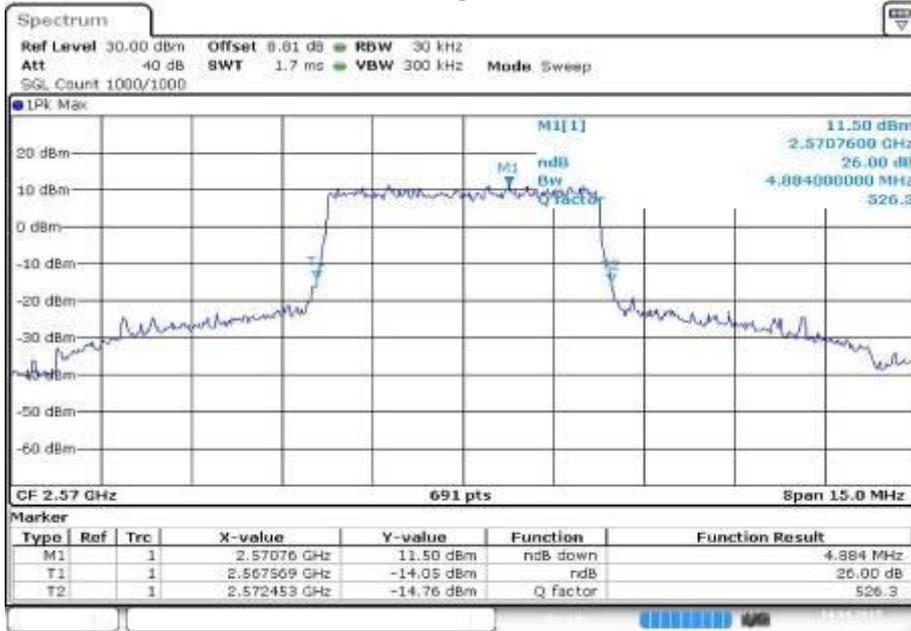


Fig.2



Date: 14 APR 2017 03:22:25

Fig.3



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Fig.4

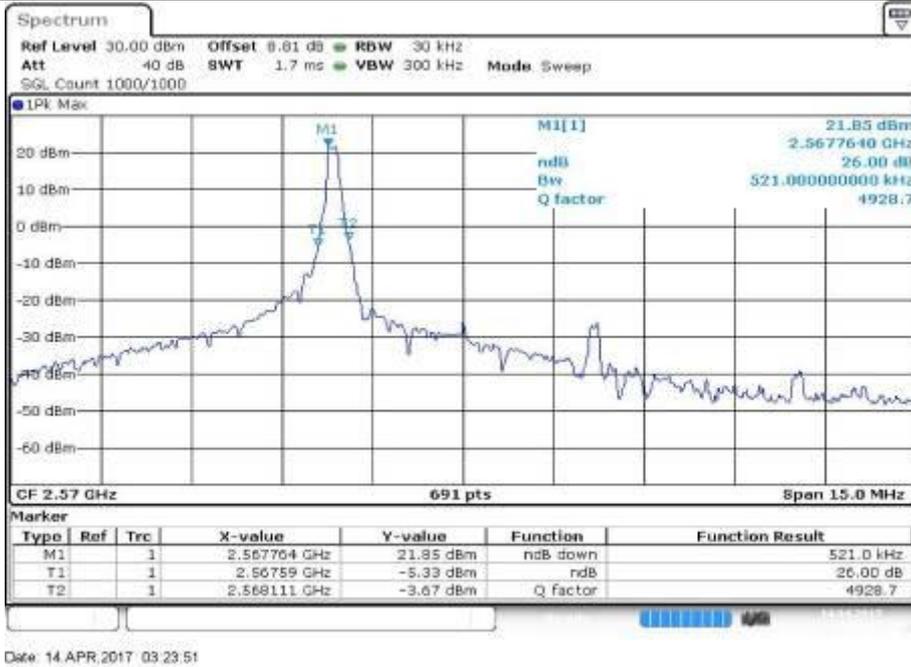


Fig.5



Fig.6



Fig.7

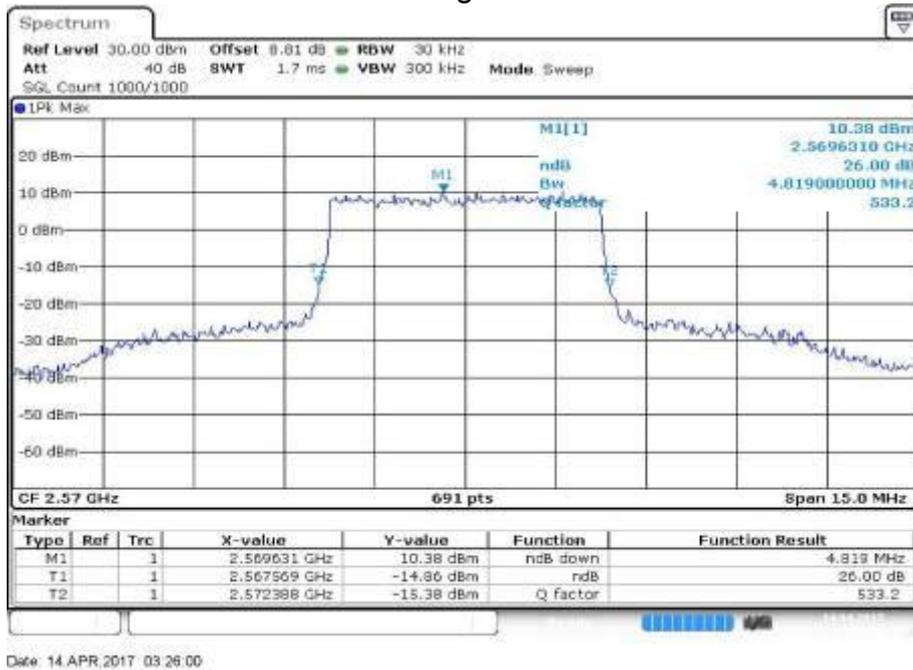


Fig.8

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)			
						QPSK		16-QAM	
41	2592.5	40615	5	1	0	0.499	Fig.1	0.499	Fig.5
				1	24	0.499	Fig.2	0.521	Fig.6
				12	6	2.518	Fig.3	2.540	Fig.7
				25	0	4.863	Fig.4	4.884	Fig.8

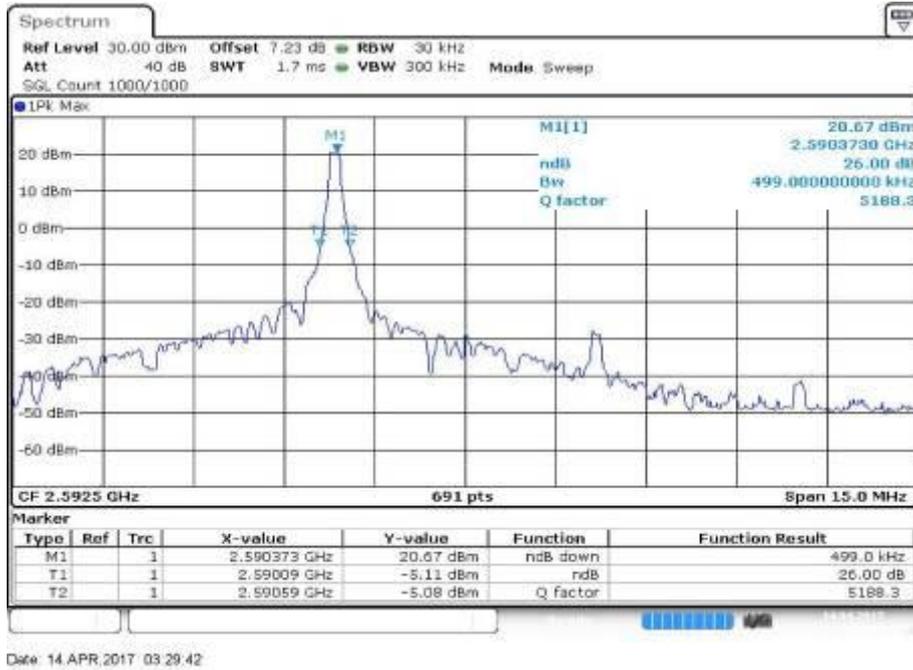


Fig.1

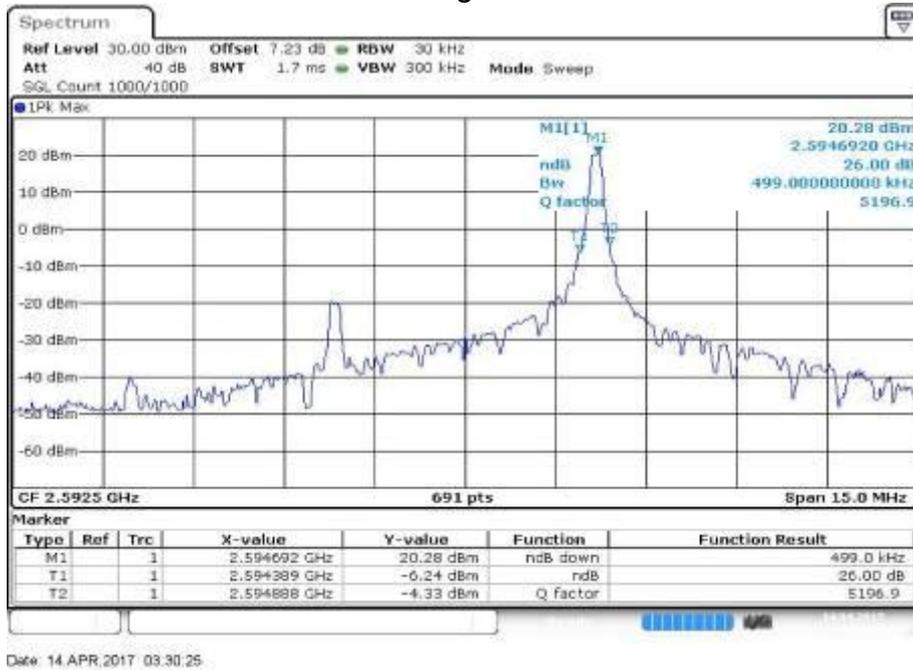


Fig.2



Fig.3

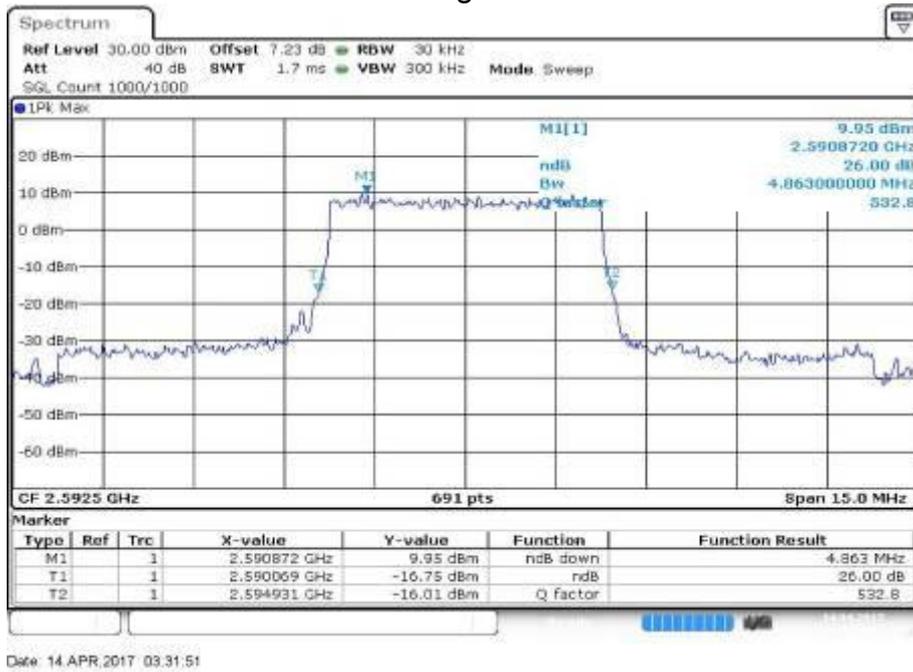
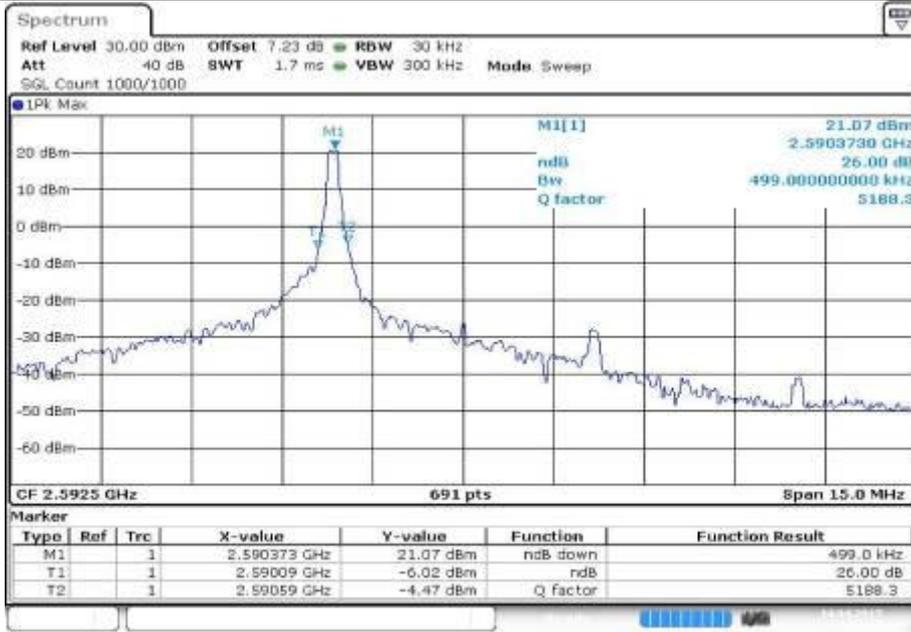
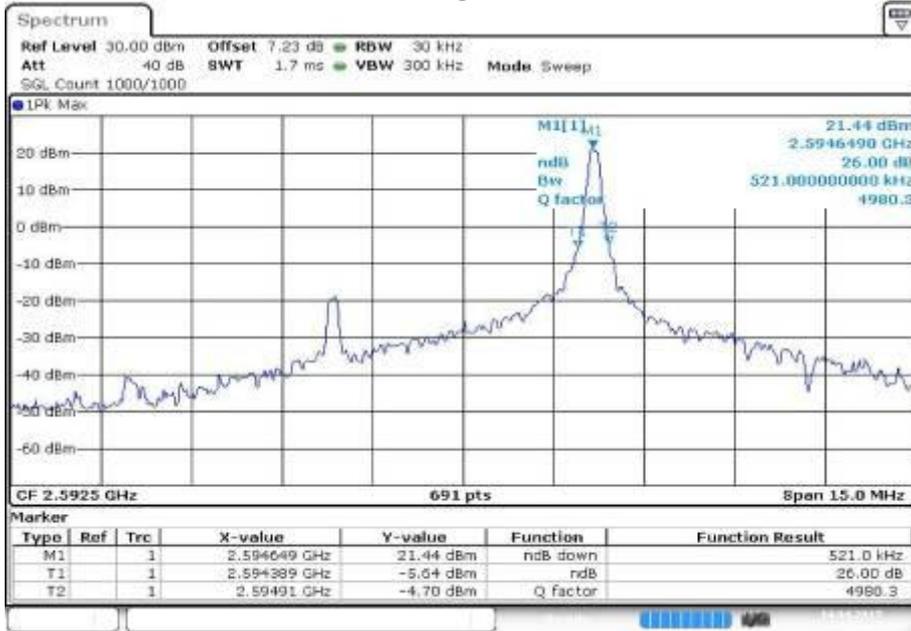


Fig.4



Date: 14 APR 2017 03:32:34

Fig.5



Date: 14 APR 2017 03:33:17

Fig.6



Fig.7

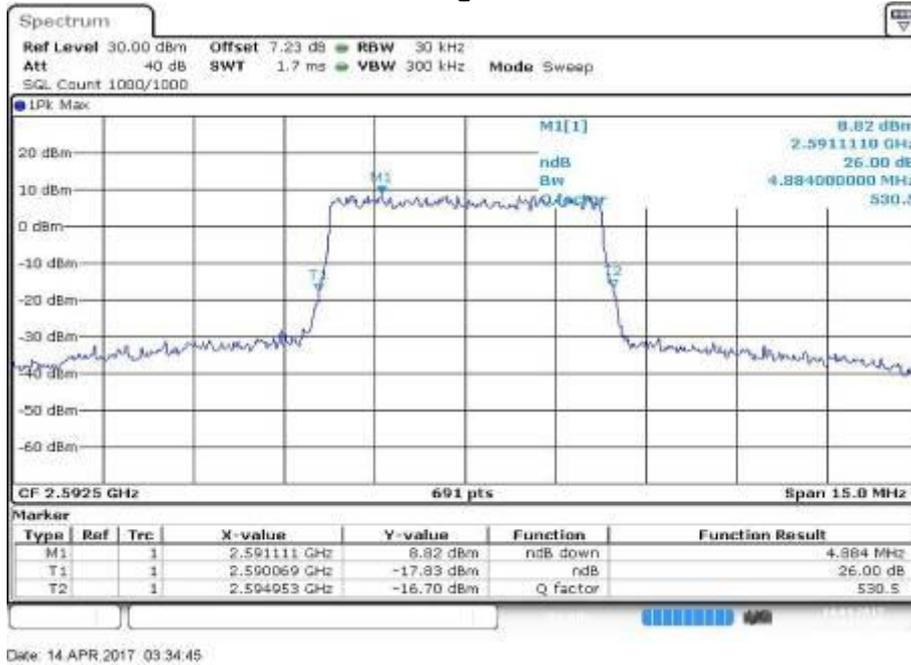


Fig.8

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)			
						QPSK		16-QAM	
41	2550	40190	10	1	0	0.564	Fig.1	0.564	Fig.5
				1	49	0.564	Fig.2	0.564	Fig.6
				24	12	4.819	Fig.3	4.776	Fig.7
				50	0	9.421	Fig.4	9.291	Fig.8

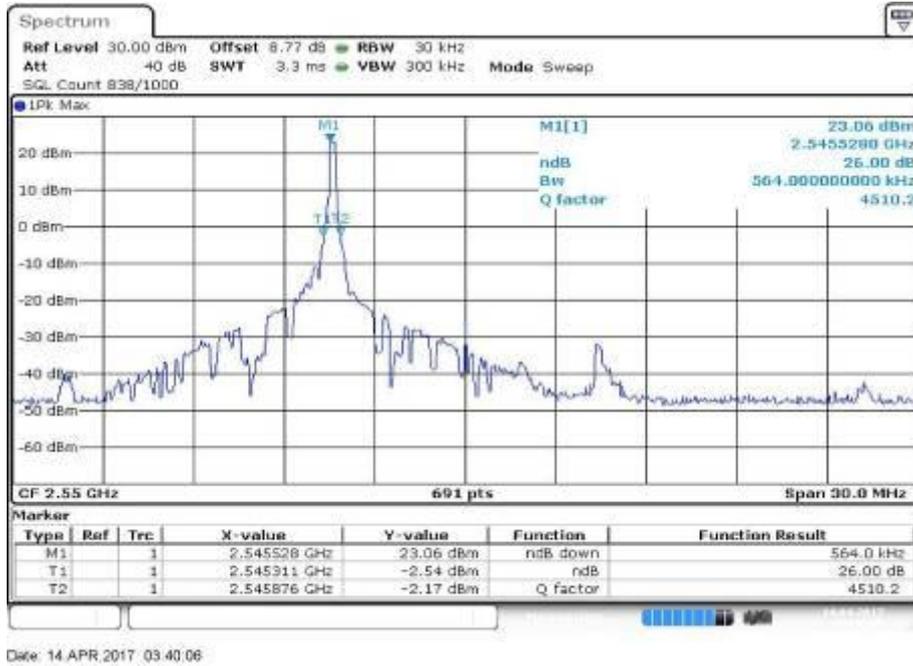


Fig.1

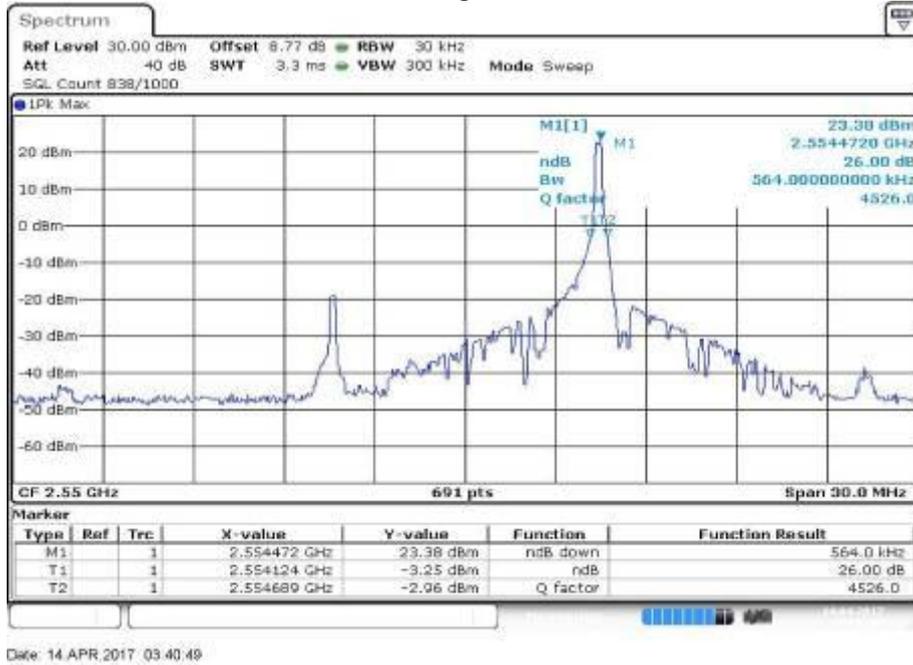


Fig.2



Fig.3

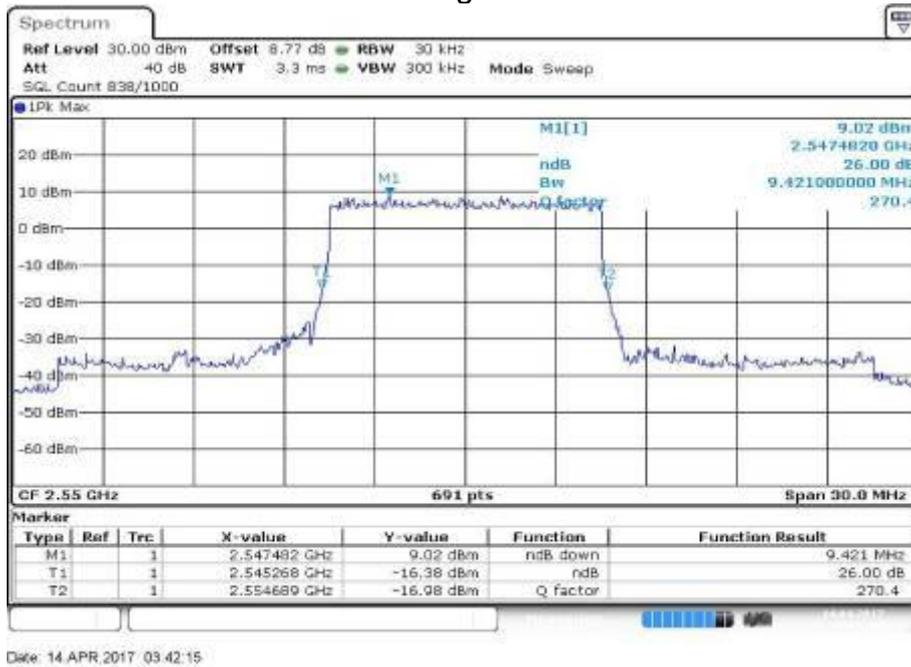


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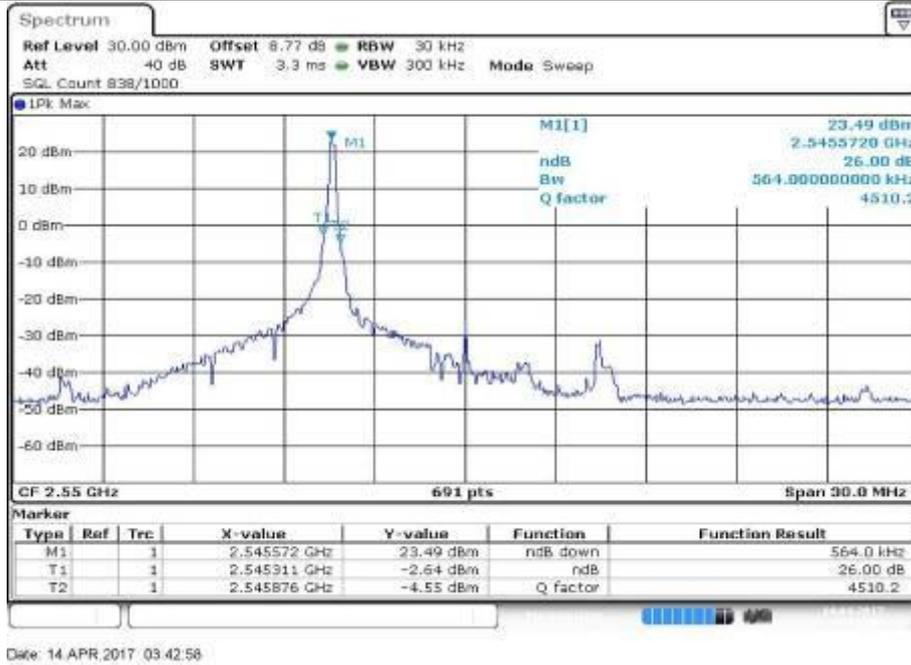


Fig.5

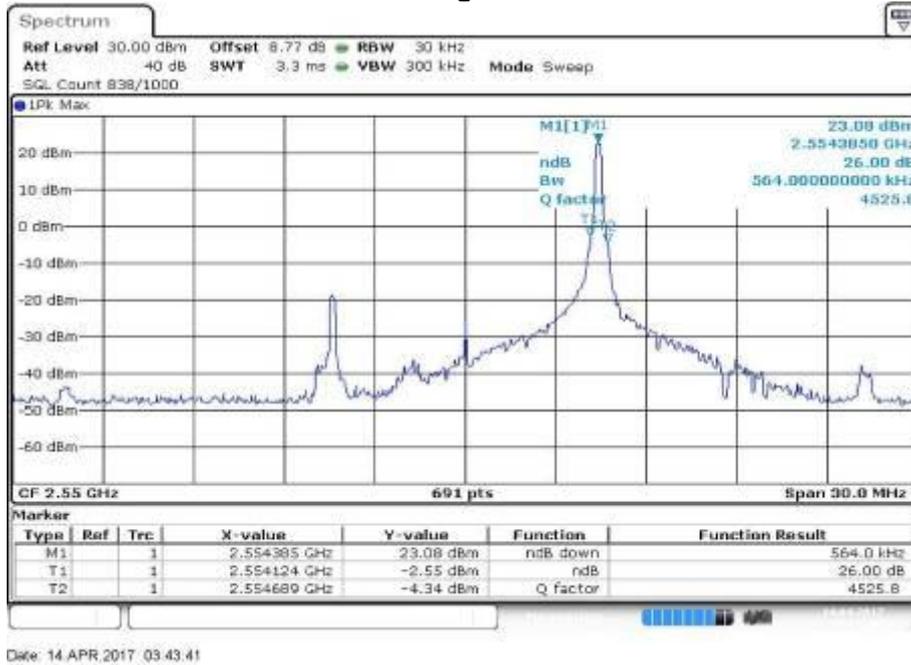


Fig.6

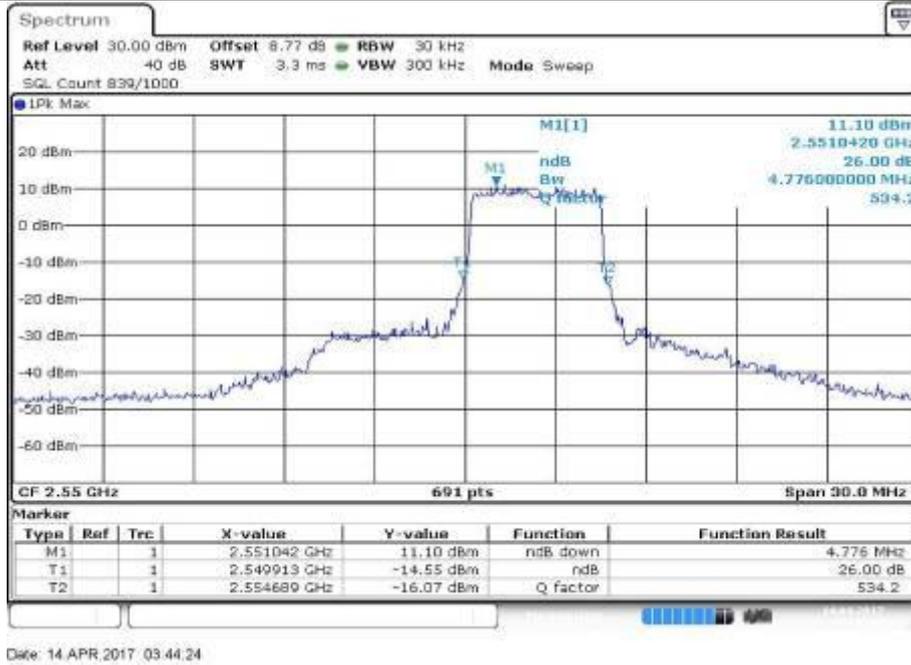


Fig.7

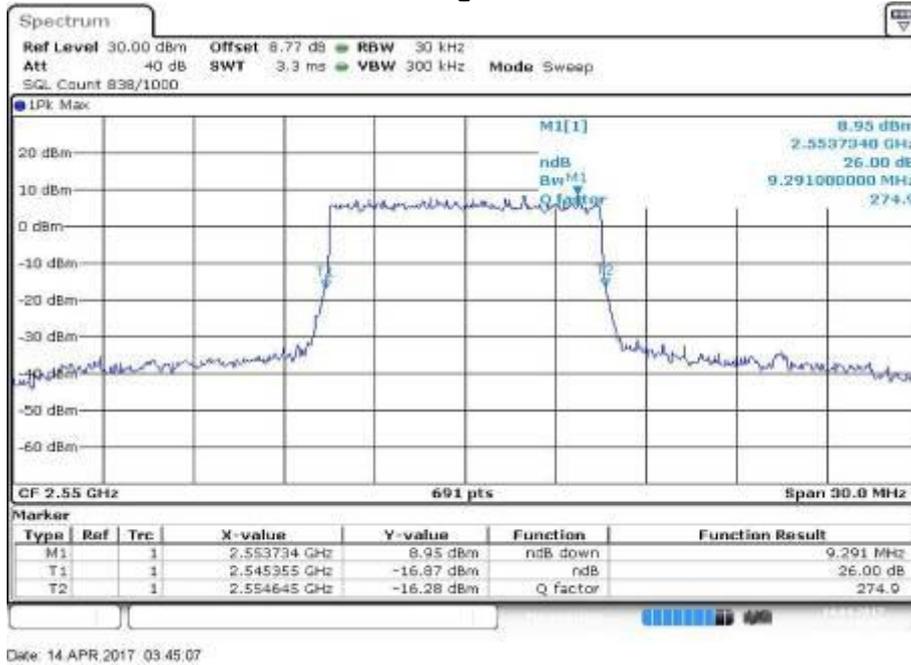


Fig.8

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)			
						QPSK		16-QAM	
41	2570	40390	10	1	0	0.564	Fig.1	0.564	Fig.5
				1	49	0.564	Fig.2	0.564	Fig.6
				24	12	4.732	Fig.3	4.776	Fig.7
				50	0	9.551	Fig.4	9.334	Fig.8

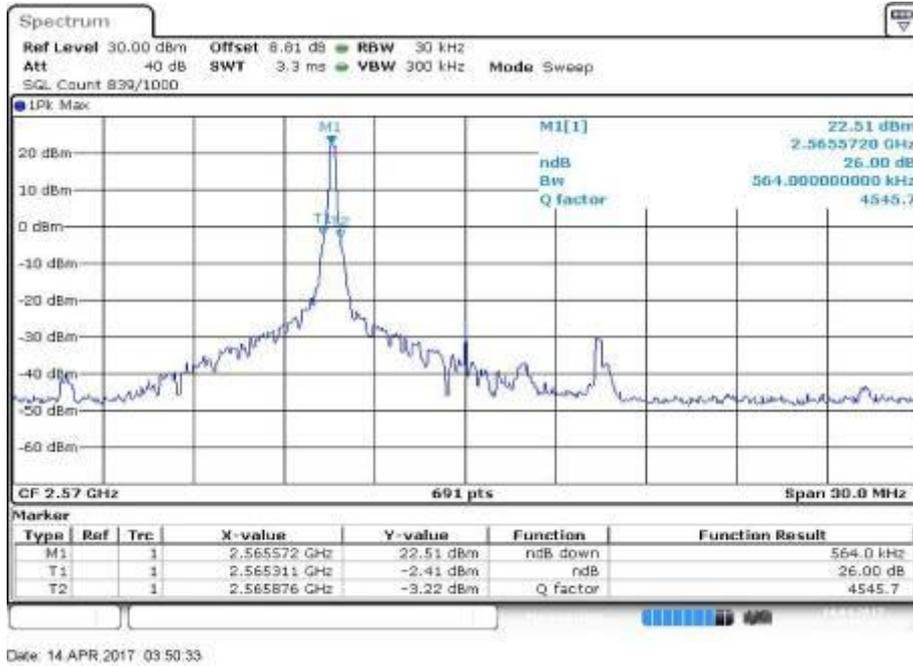


Fig.1



Fig.2



Fig.3

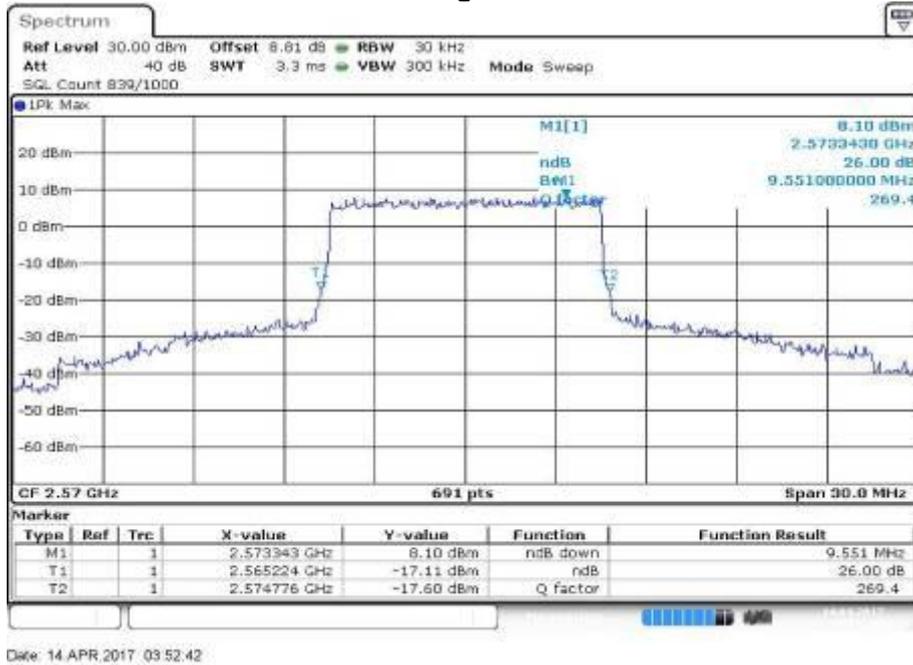


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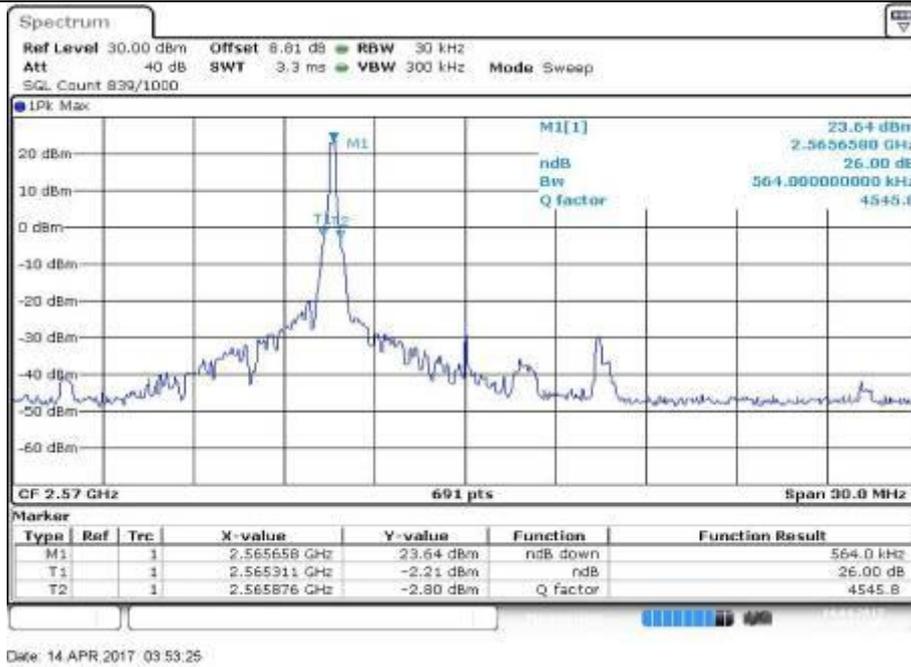


Fig.5

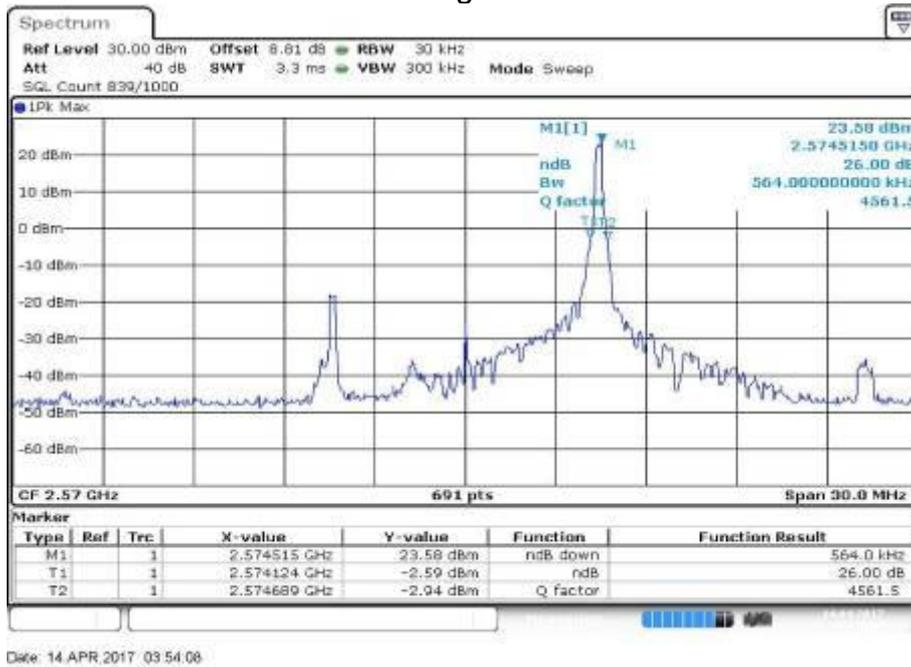


Fig.6

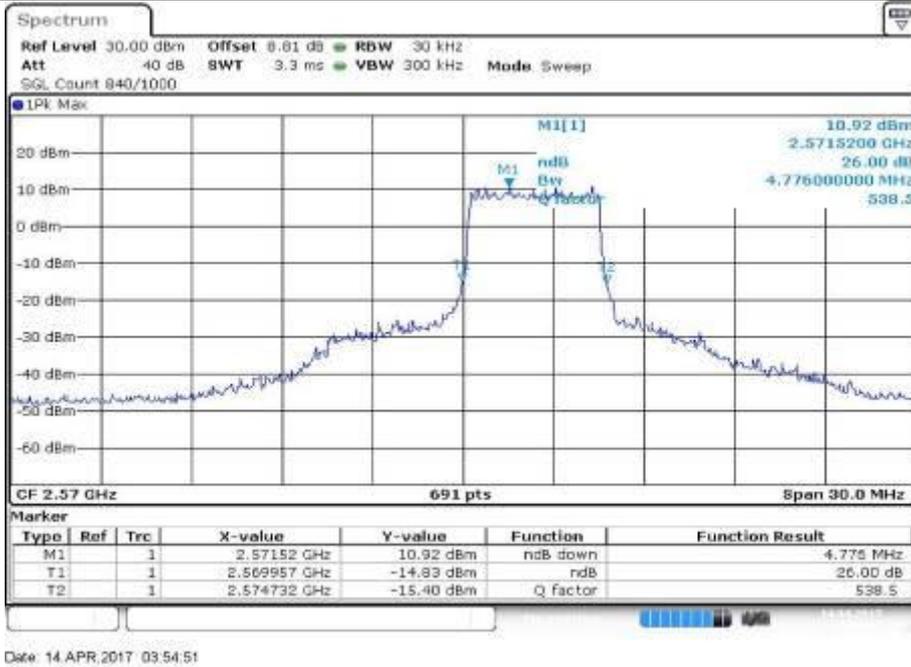


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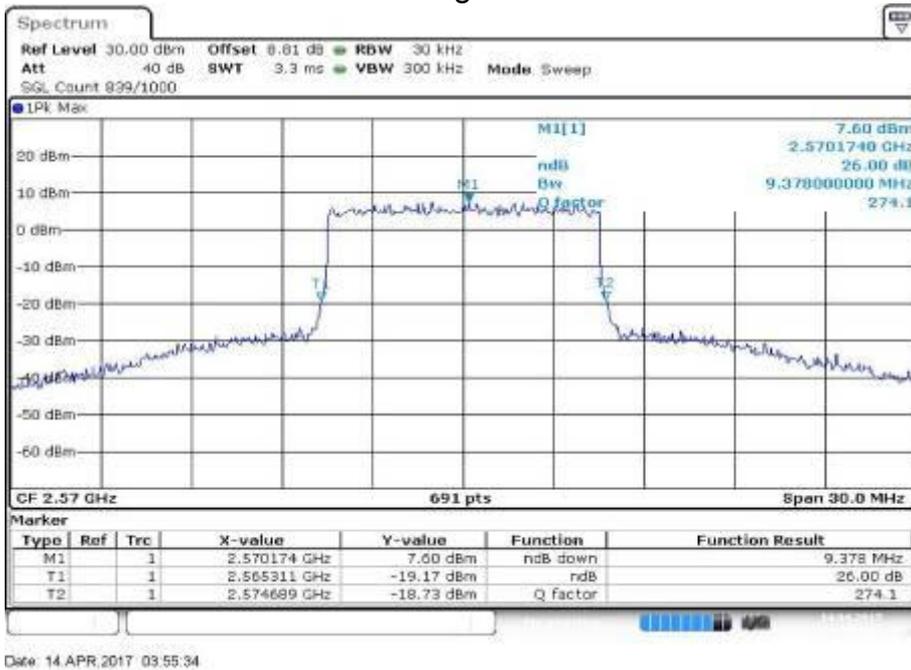


Fig.8

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)			
						QPSK		16-QAM	
41	2590	40590	10	1	0	0.608	Fig.1	0.564	Fig.5
				1	49	0.608	Fig.2	0.608	Fig.6
				24	12	4.732	Fig.3	4.776	Fig.7
				50	0	9.378	Fig.4	9.421	Fig.8

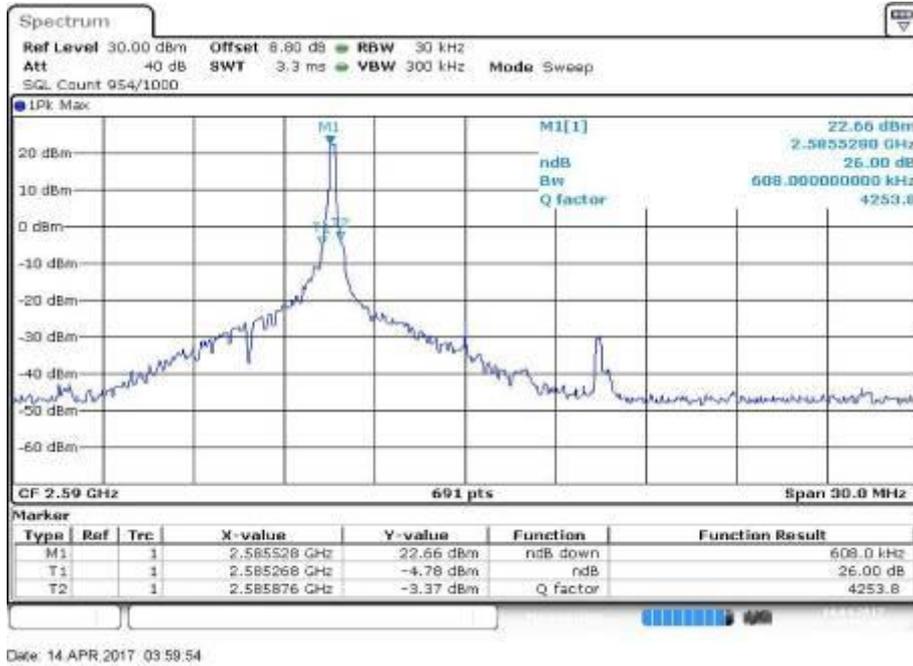


Fig.1

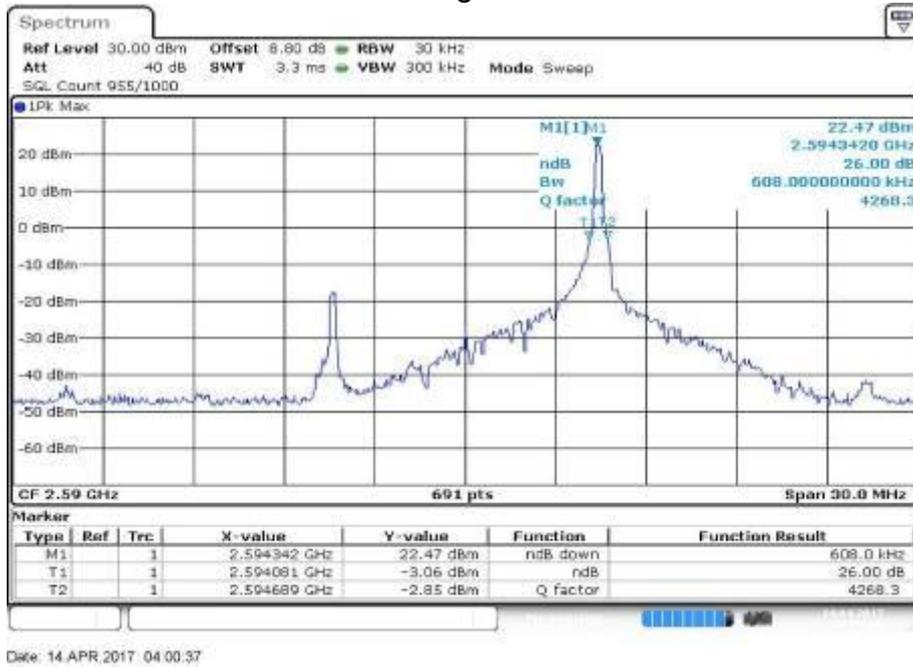


Fig.2



Fig.3

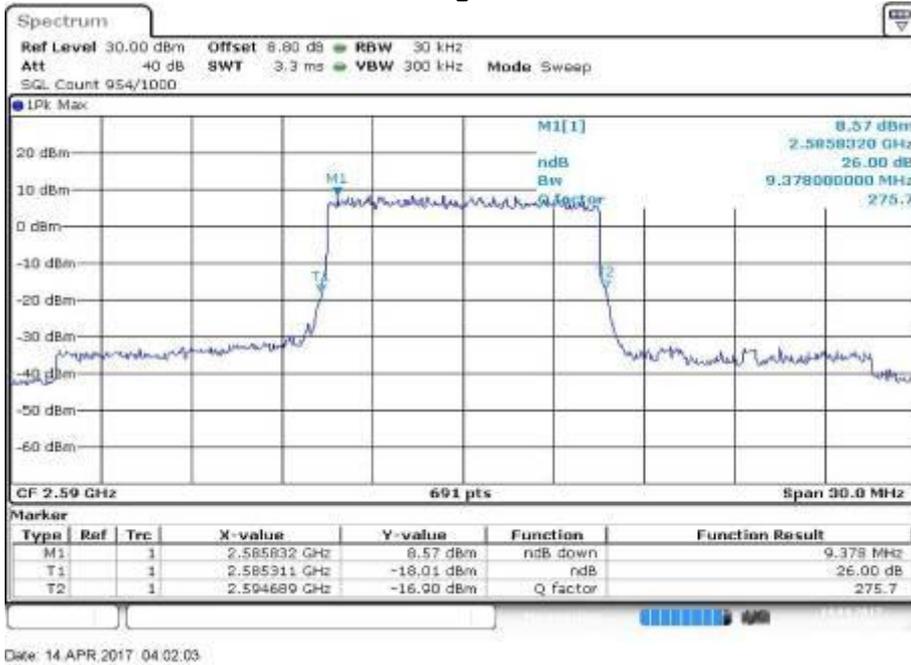


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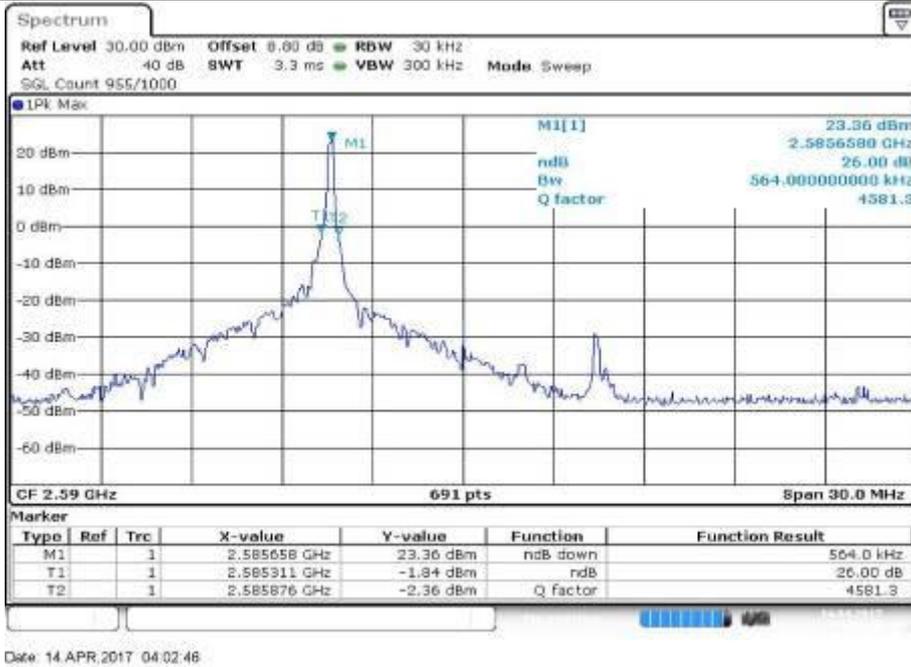


Fig.5

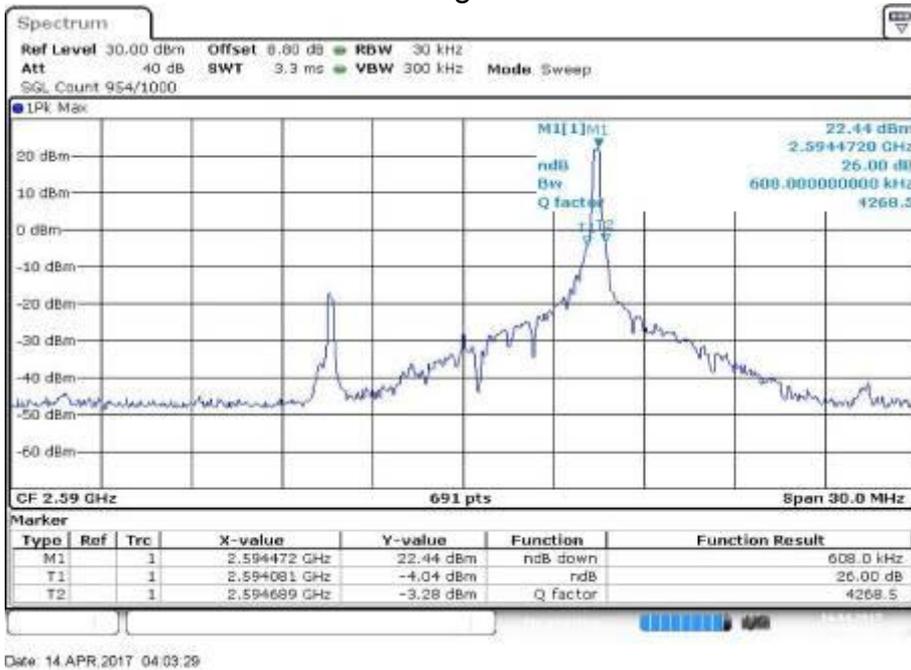


Fig.6



Fig.7

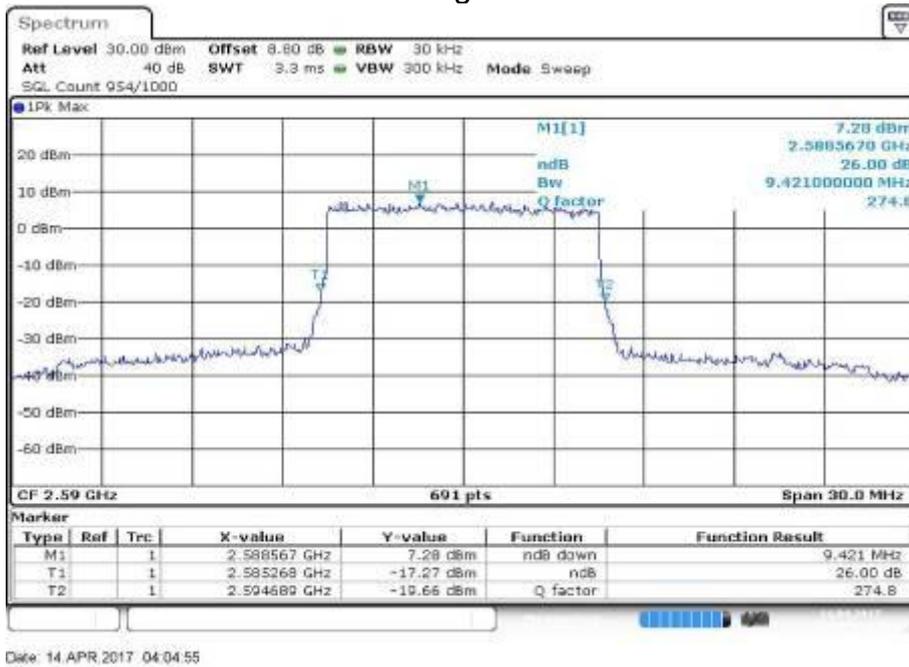


Fig.8

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)			
						QPSK		16-QAM	
41	2552.5	40215	15	1	0	0.651	Fig.1	0.651	Fig.5
				1	74	0.716	Fig.2	0.651	Fig.6
				38	18	0.651	Fig.3	0.651	Fig.7
				75	0	13.936	Fig.4	14.001	Fig.8

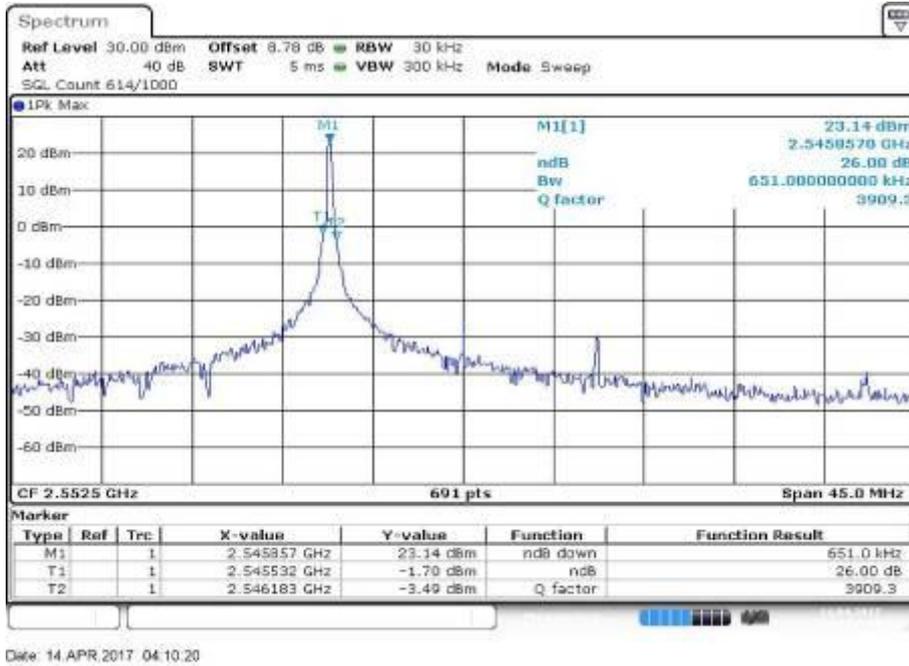


Fig.1

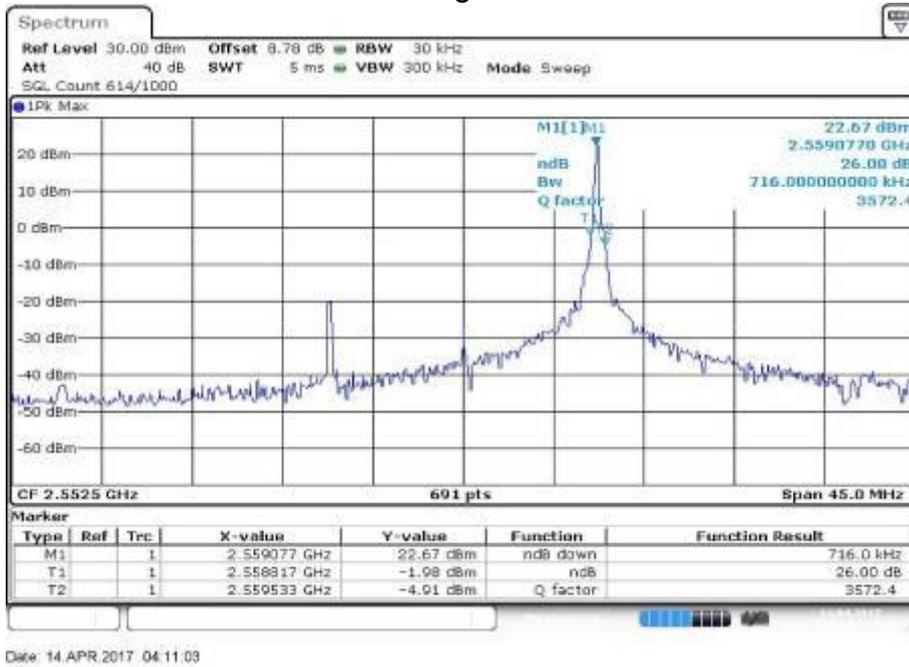
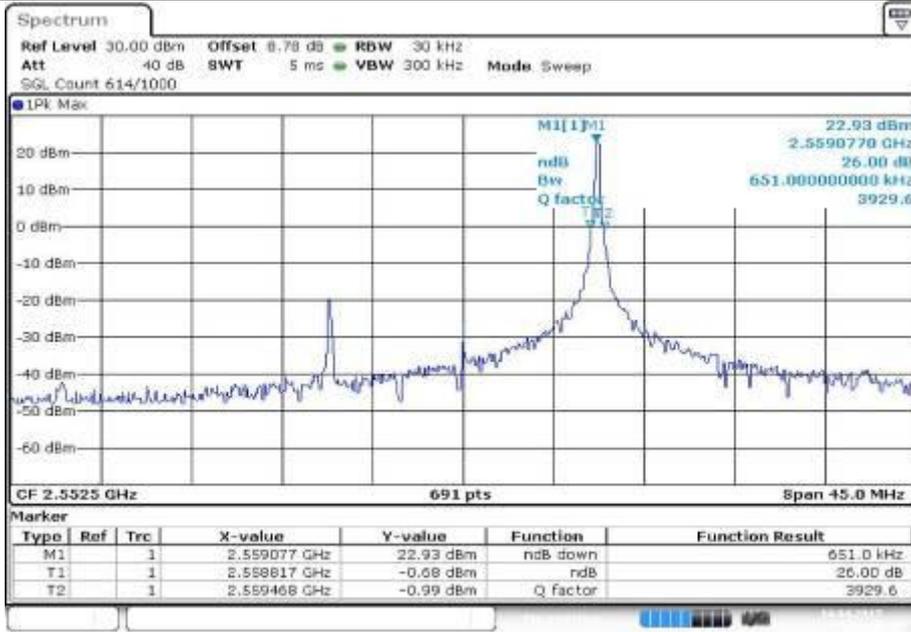
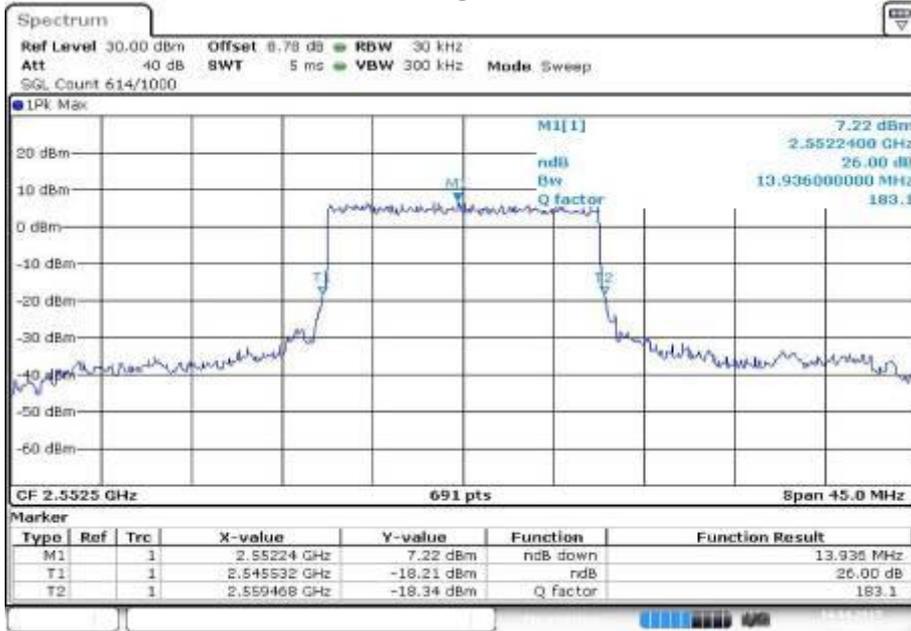


Fig.2



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Fig.3



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Fig.4

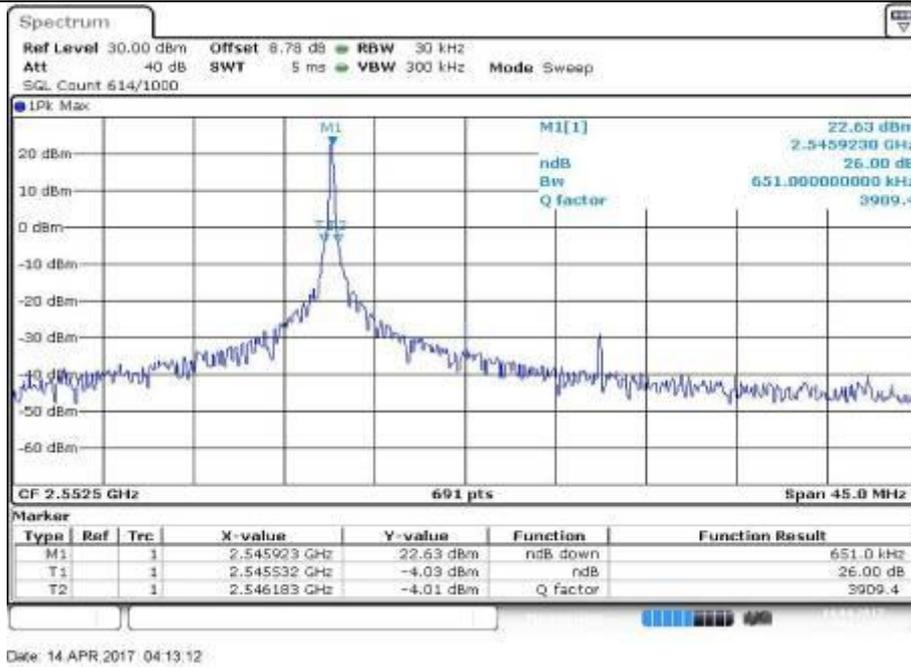


Fig.5

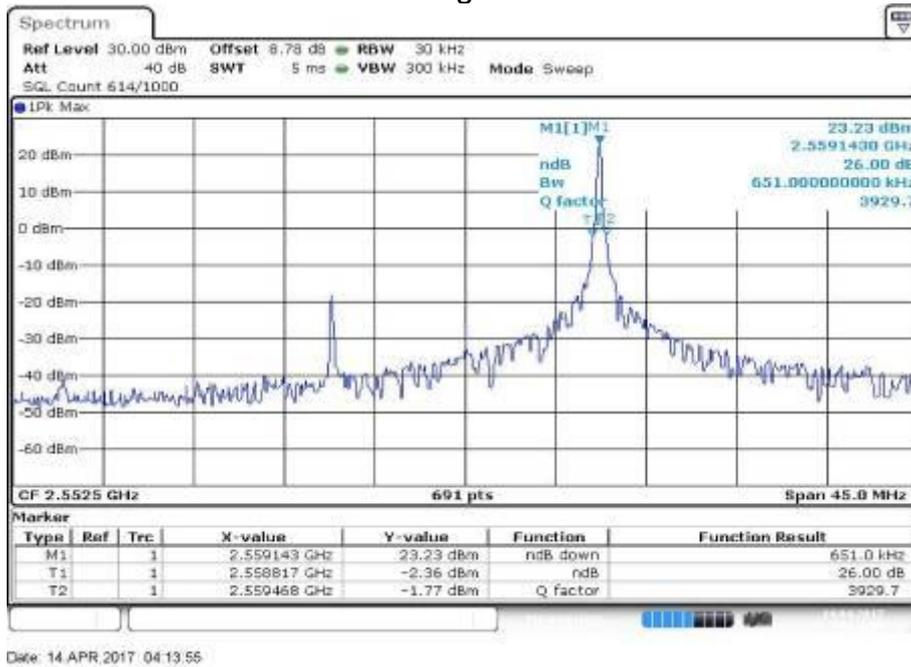


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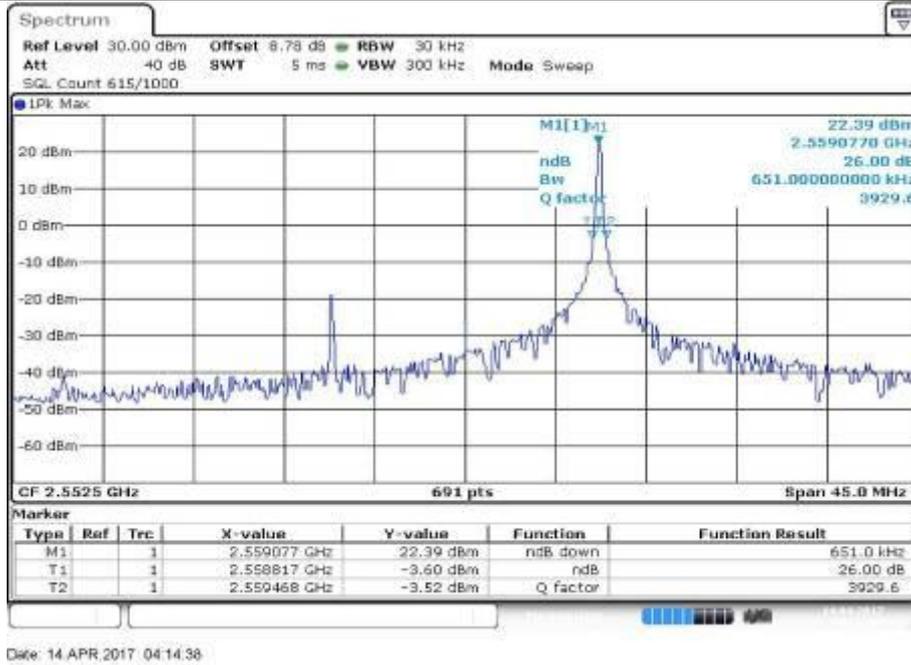


Fig.7

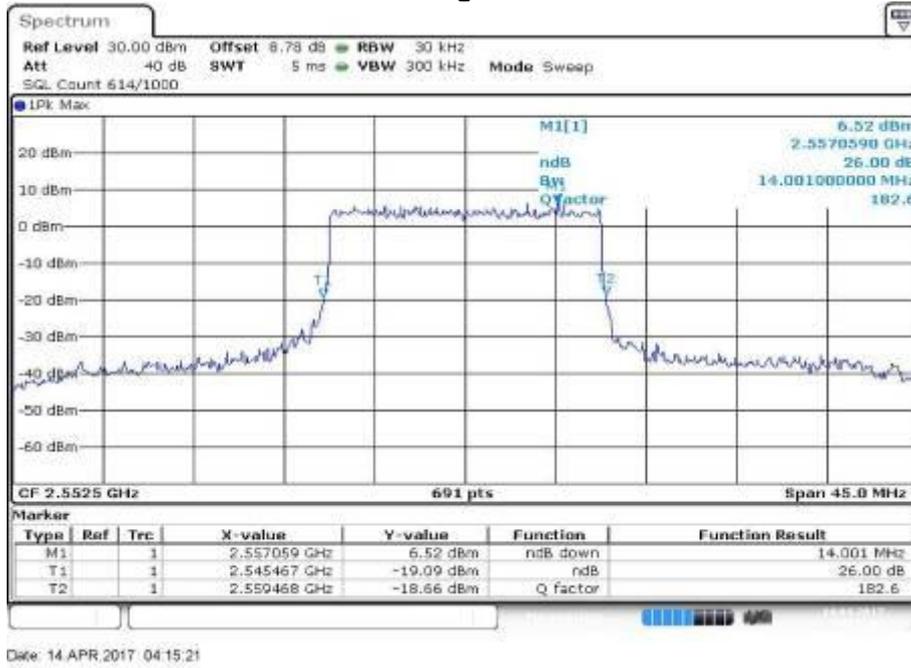


Fig.8

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)			
						QPSK		16-QAM	
41	2570	40390	15	1	0	0.651	Fig.1	0.716	Fig.5
				1	74	0.651	Fig.2	0.716	Fig.6
				38	18	0.651	Fig.3	0.716	Fig.7
				75	0	14.001	Fig.4	14.132	Fig.8

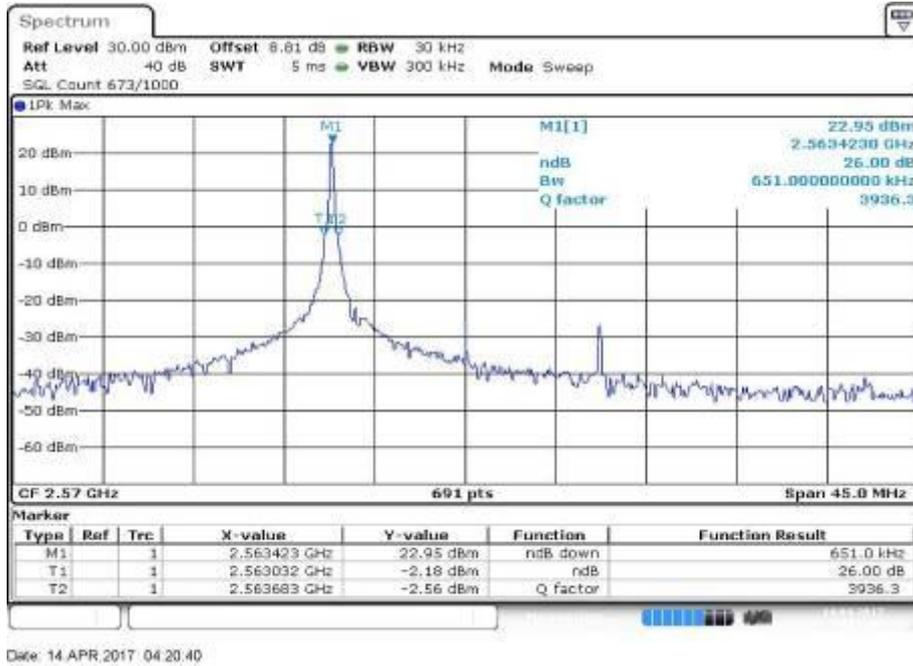


Fig.1

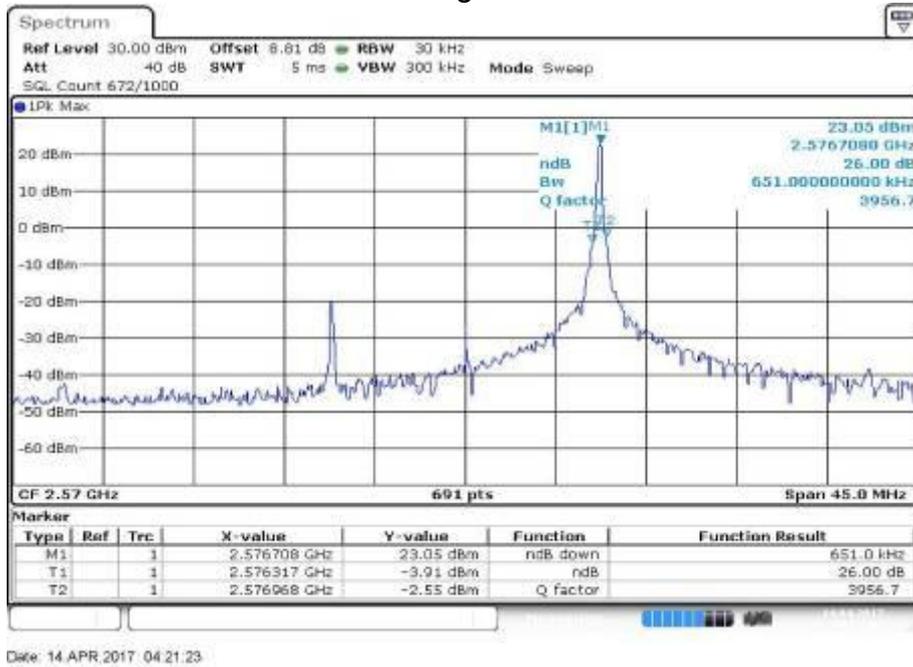


Fig.2

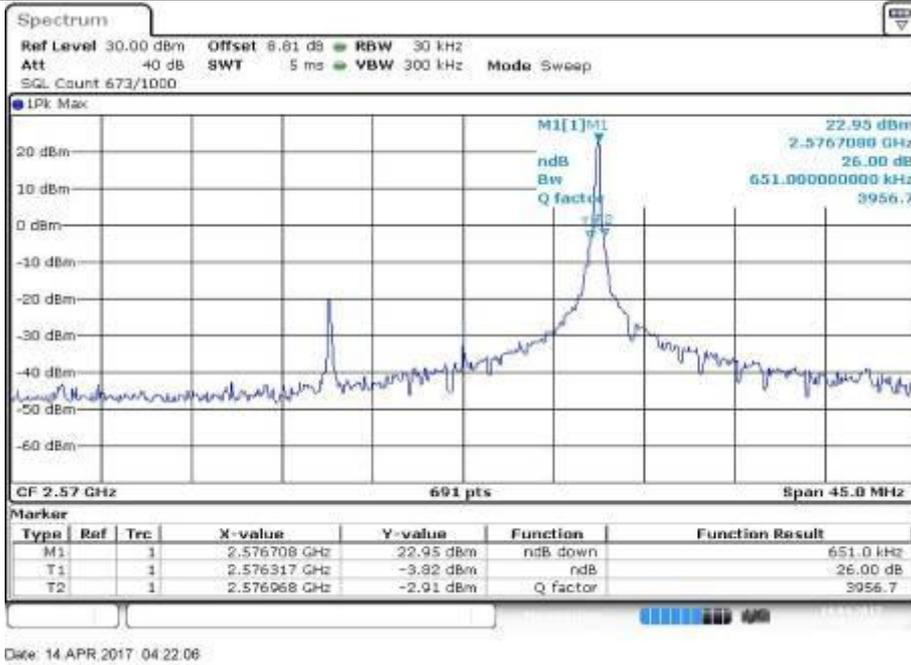


Fig.3

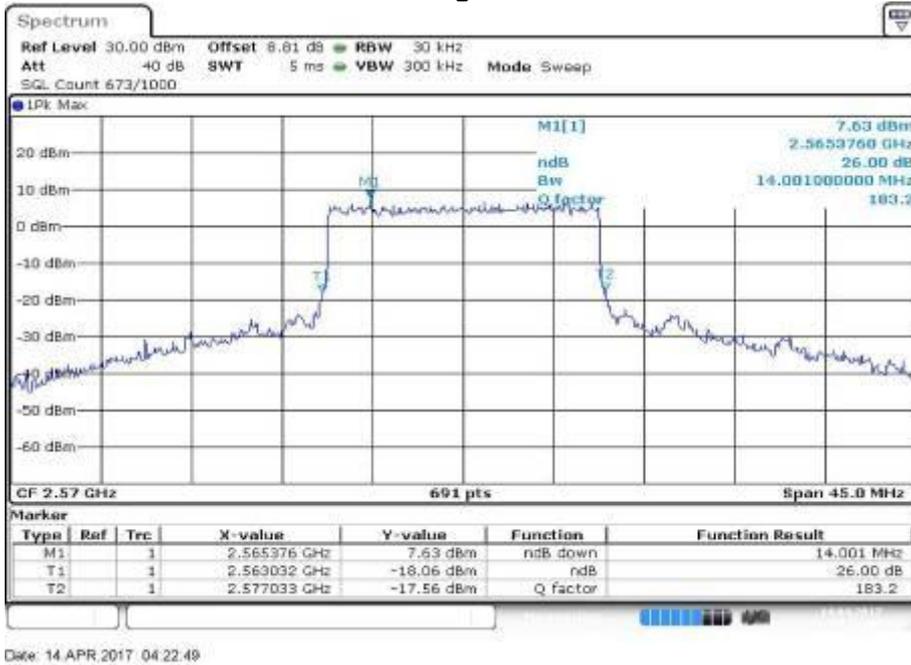


Fig.4

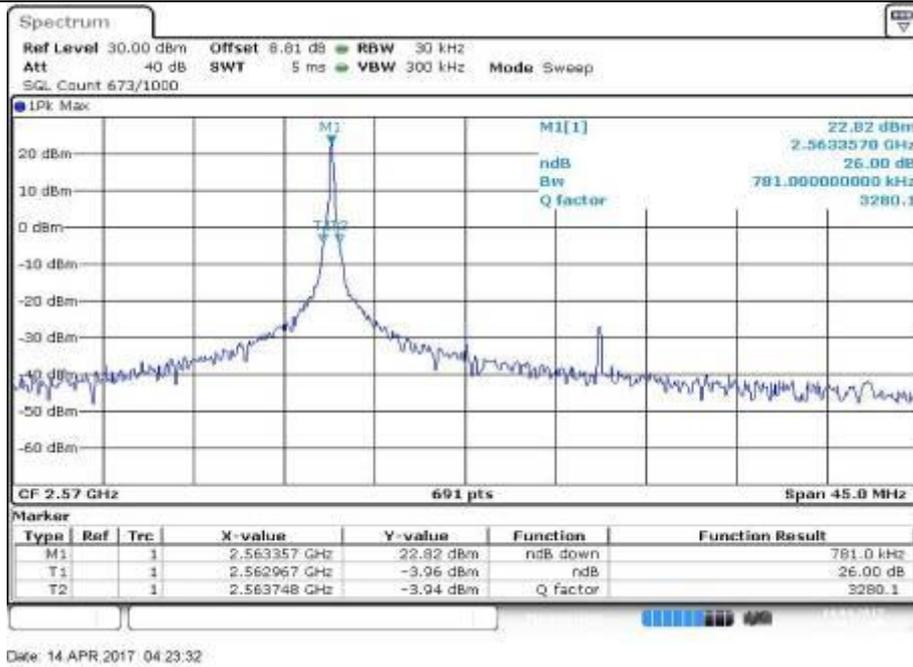


Fig.5

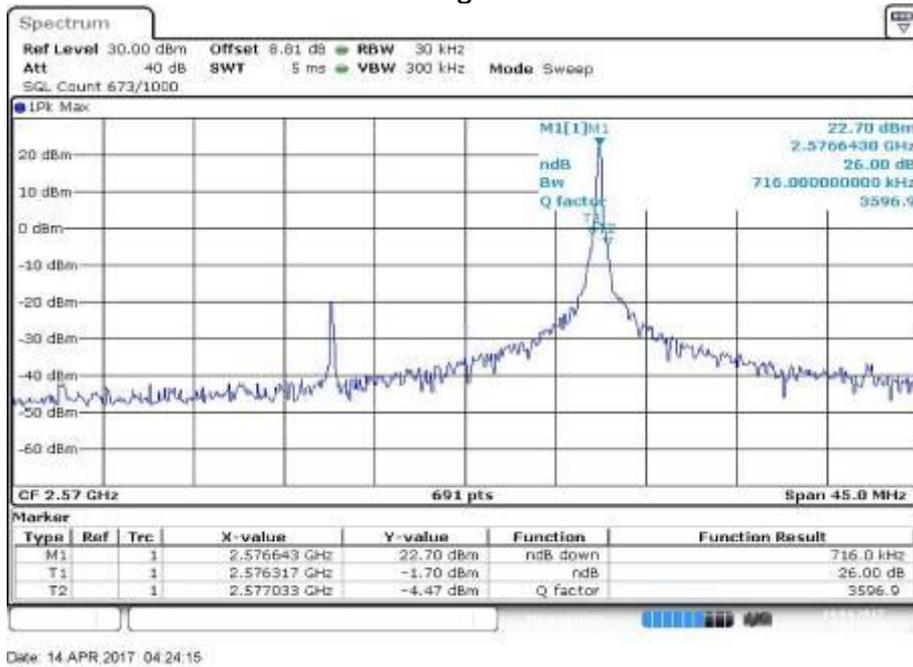


Fig.6

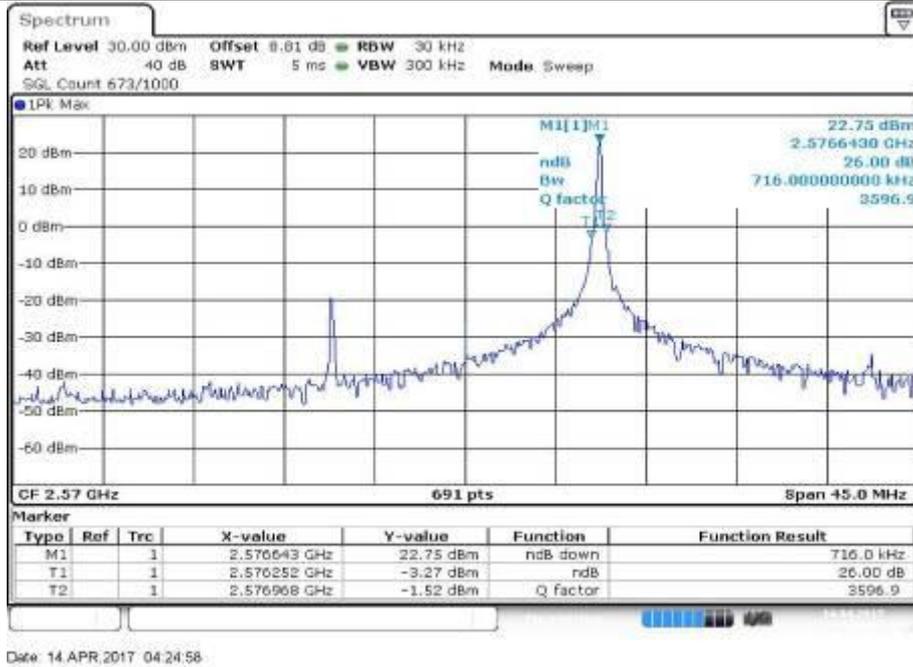
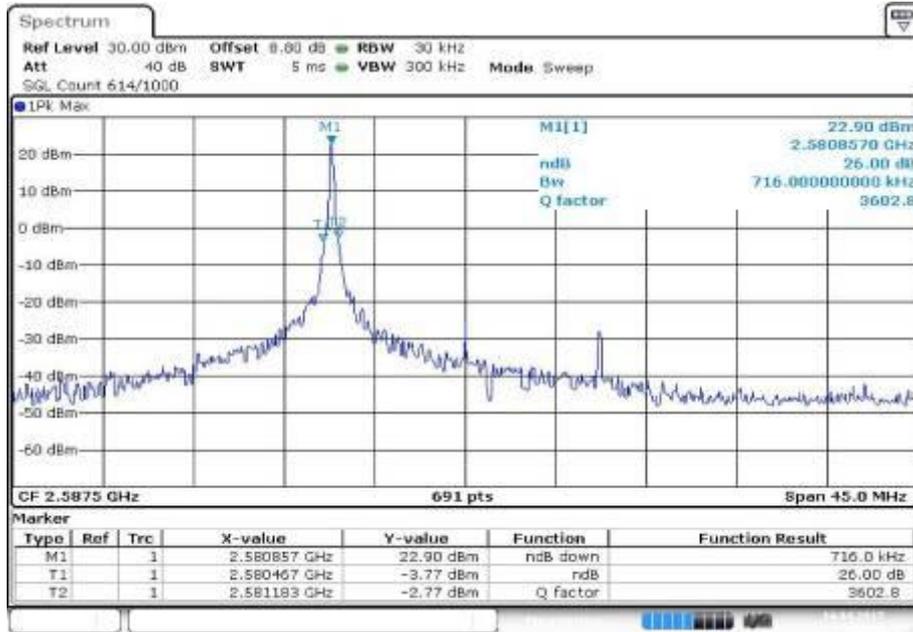


Fig.7



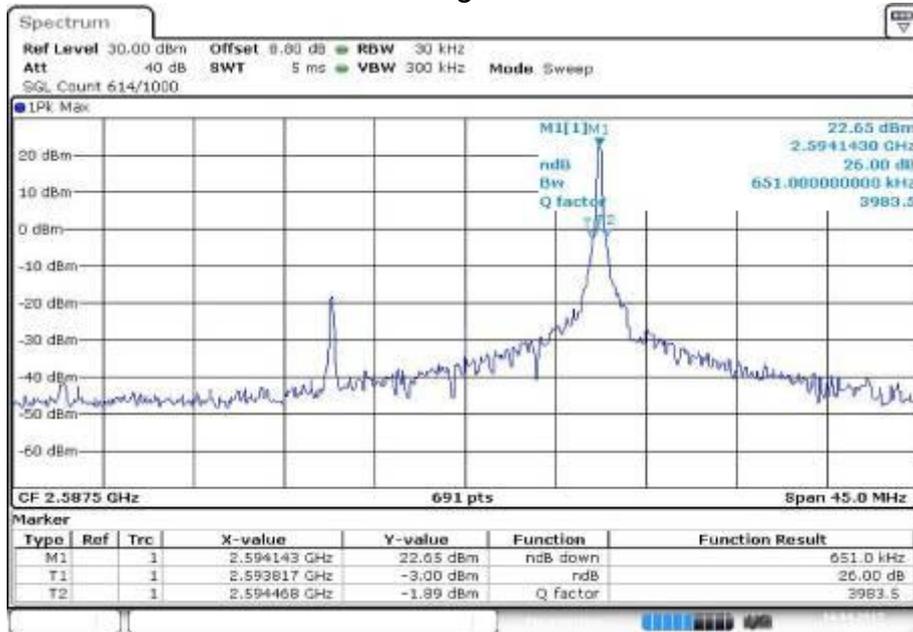
Fig.8

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)			
						QPSK		16-QAM	
41	2587.5	40565	15	1	0	0.716	Fig.1	0.586	Fig.5
				1	74	0.651	Fig.2	0.651	Fig.6
				38	18	0.781	Fig.3	0.651	Fig.7
				75	0	13.936	Fig.4	13.936	Fig.8



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Fig.1



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Fig.2

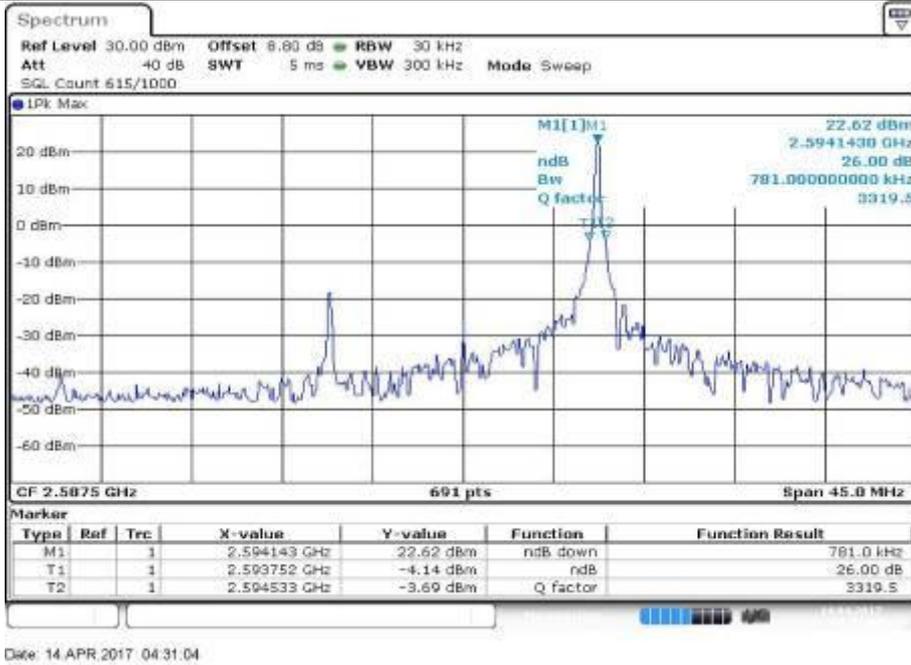


Fig.3



Fig.4

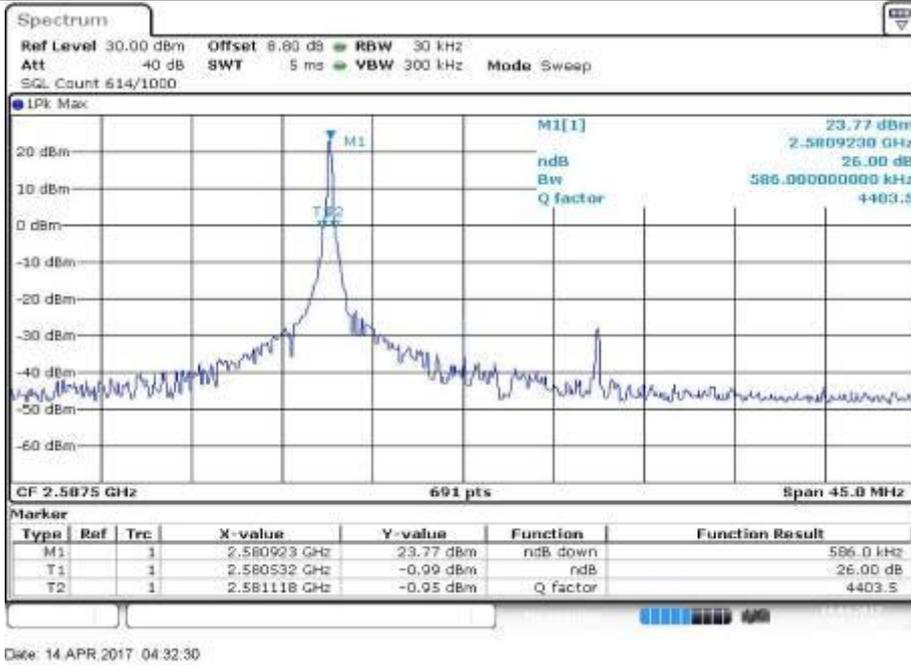


Fig.5

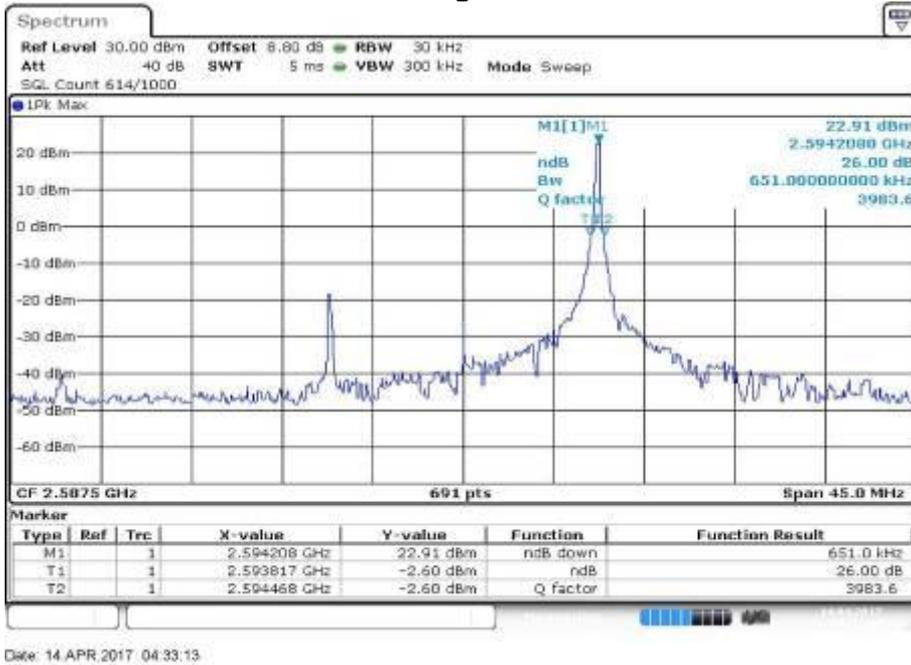


Fig.6