FCC RF Test Report

APPLICANT	:	**Guangdong OPPO Mobile Telecommunications Corp., Ltd.**
EQUIPMENT	:	**Mobile Phone**
BRAND NAME	:	**OPPO**
MODEL NAME	:	**CPH2065**
FCC ID	:	**R9C-CPH2065**
STANDARD	:	**47 CFR Part 2, 22, 27**
CLASSIFICATION	:	**PCS Licensed Transmitter Held to Ear (PCE)**

The product was received on Jun. 01, 2020 and completely tested on Jul. 11, 2020. We, Sporton International (ShenZhen) Inc., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26-2015 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International (ShenZhen) Inc., the test report shall not be reproduced except in full.

Reviewed by: Derreck Chen / Supervisor

Approved by: Eric Shih / Manager

ACCREDITED Cert #5145.01

Sporton International (ShenZhen) Inc.

1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055

People's Republic of China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG060110C	Rev. 01	Initial issue of report	Jul. 30, 2020

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
	§22.913(a)(5)	Effective Radiated Power (5G NR n5)	ERP < 7 Watt		
	§27.50(h)(2)	Equivalent Isotropic Radiated Power (5G NR n7)	EIRP < 2Watt		
3.5	N/A	Peak-to-Average Ratio	<13 dB	PASS	-
3.6	§2.1049	Occupied Bandwidth	Reporting Only	PASS	-
3.7	§2.1051 §22.917(a)	Conducted Band Edge Measurement (5G NR n5)	< 43+10log10(P[Watts])	PASS	-
	§27.53(m)(4)	Conducted Band Edge Measurement (5G NR n7)	§27.53(m)(4)		
3.8	§2.1051 §22.917(a)	Conducted Spurious Emission (5G NR n5)	< 43+10log10(P[Watts])	PASS	-
	§2.1051 §27.53(m)(4)	Conducted Spurious Emission (5G NR n7)	< 55+10log$_{10}$(P[Watts])		
3.9	§2.1055 §22.355	Frequency Stability Temperature & Voltage	< 2.5 ppm for Part 22	PASS	-
	§2.1055 §27.54		Within Authorized Band		
4.4	§2.1053 §22.917(a)	Radiated Spurious Emission (5G NR n5)	< 43+10log$_{10}$(P[Watts])	PASS	Under limit 21.60 dB at 10104.360 MHz
	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (5G NR n7)	< 55+10log$_{10}$(P[Watts])		

1 General Description

1.1 Applicant

Guangdong OPPO Mobile Telecommunications Corp., Ltd.
NO.18 HaiBin Road,Wusha village,Chang An Town,DongGuan City,GuangDong,China

1.2 Manufacturer

Guangdong OPPO Mobile Telecommunications Corp., Ltd.
NO.18 HaiBin Road,Wusha village,Chang An Town,DongGuan City,GuangDong,China

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Phone
Brand Name	OPPO
Model Name	CPH2065
FCC ID	R9C-CPH2065
EUT supports Radios application	GSM/WCDMA/LTE/5G NR WLAN 2.4GHz 802.11b/g/n HT20/HT40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth BR / EDR / LE GNSS / NFC
IMEI Code	Conducted : 863597040018518/863597040018500 Radiation : 863597040018435/863597040018427
HW Version	11
SW Version	ColorOS 7.1
EUT Stage	Identical Prototype

Remark:

1. Only 5G NR bands are tested in this report, all the other RF bands are tested in the other reports separately.
2. 5G NR n5 support NSA; 5G NR n7 support SA.
3. 5G NR supports CP-OFDM and DFT-s-OFDM modulation, for DFT-s-OFDM power is higher than CP-OFDM, so chose DFT-s-OFDM modulation to perform all test.
4. The maximum ERP/EIRP is calculated from max antenna gain and max conducted power, only the maximum ERP/EIRP of bottom antenna is shown on the report.

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	5G NR n5: 826.5 MHz ~ 846.5 MHz 5G NR n7: 2502.5 MHz ~ 2567.5 MHz
Rx Frequency	5G NR n5: 871.5 MHz ~ 891.5 MHz 5G NR n7: 2622.5MHz ~ 2687.5 MHz
Bandwidth	n5, n7: 5MHz / 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	Top Antenna: EN-DC_7A_n5A : 23.01 dBm 5G NR_n7 : 23.26 dBm Bottom Antenna: EN-DC_7A_n5A : 23.29 dBm 5G NR_n7 : 23.52 dBm
Antenna Gain	Top Antenna: n5 : -4.20 dBi n7 : 1.70 dBi Bottom Antenna: n5 : -3.90 dBi n7 : 1.50 dBi
Type of Modulation	CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM

1.5 Modification of EUT

No modifications are made to the EUT during all test items.

1.6 Maximum ERP/EIRP Power, Frequency Tolerance, and Emission Designator

5G NR n5 (EN DC_7A-n5A)		PI/2 BPSK		QPSK	
BW (MHz)	**Frequency Range (MHz)**	**Emission Designator (99%OBW)**	**Maximum EIRP(W)**	**Emission Designator (99%OBW)**	**Maximum EIRP(W)**
5	826.5 ~ 846.5	4M51G7D	0.0530	4M50G7D	0.0518
10	829.0 ~ 844.0	9M17G7D	0.0476	8M99G7D	0.0482
20	834.0 ~ 839.0	17M9G7D	0.0490	18M0G7D	0.0494
Frequency Tolerance (ppm)		0.0023			

5G NR n7		PI/2 BPSK		QPSK	
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)
5	2502.5 ~ 2567.5	4M48G7D	0.3162	4M50G7D	0.3034
10	2505.0 ~ 2565.0	9M05G7D	0.3069	9M07G7D	0.3155
20	2510.0 ~ 2560.0	17M9G7D	0.3177	17M9G7D	0.3041
Frequency Tolerance (ppm)		0.0025			

1.7 Testing Location

Sporton International (Shenzhen) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Test Firm	Sporton International (Shenzhen) Inc.		
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	TH01-SZ	CN1256	421272

Test Firm	Sporton International (Shenzhen) Inc.		
Test Site Location	No. 3 Bldg the third floor of south, Shahe River west, Fengzeyuan Warehouse, Nanshan Shenzhen, 518055 People's Republic of China TEL: +86-755-33202398		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH02-SZ	CN1256	421272

1.8 Test Software

Item	Site	Manufacture	Name	Version
1.	03CH02-SZ	AUDIX	E3	6.2009-8-24a

1.9 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR Part 2, 22, 24, 27
- ANSI C63.26-2015
- FCC KDB 971168 D01 Power Meas License Digital Systems v03r01
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01

Remark:

All test items were verified and recorded according to the standards and without any deviation during the test.

2 Test Configuration of Equipment Under Test

2.1 Test Mode

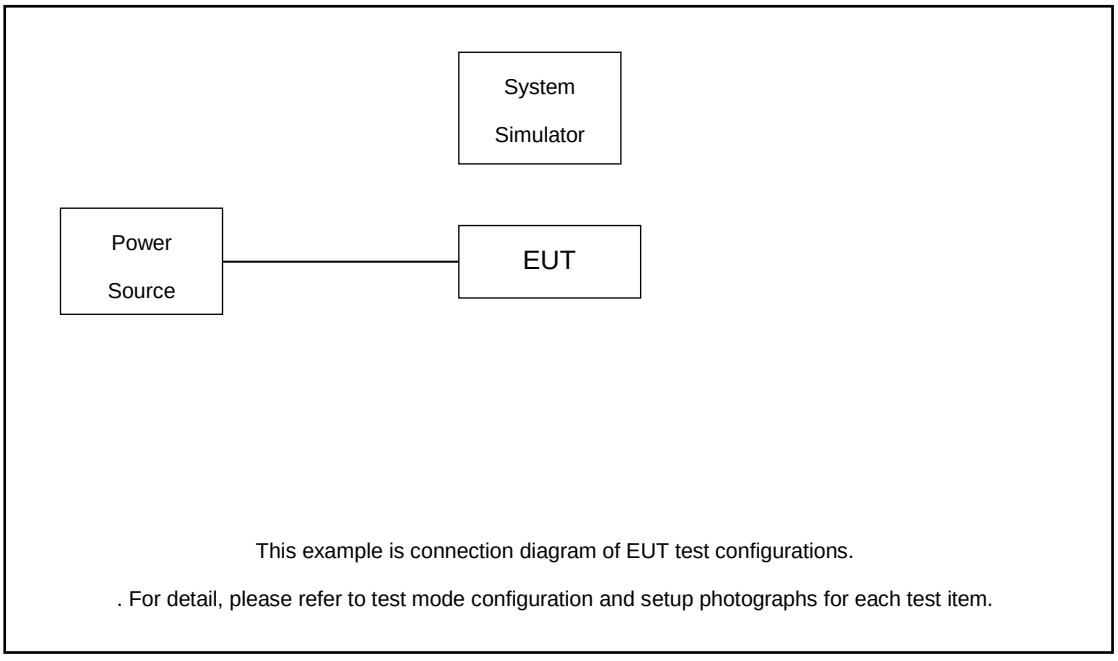
Antenna port conducted and radiated test items are performed according to KDB 971168 D01 Power Meas License Digital Systems v03r01 with maximum output power.

For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Y plane) were recorded in this report.

The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.

	X Plane	Y Plane	Z Plane
Orthogonal Planes of EUT			

2.2 Connection Diagram of Test System



This example is connection diagram of EUT test configurations.

. For detail, please refer to test mode configuration and setup photographs for each test item.

2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	DC Power Supply	GW	GPS-3030D	N/A	N/A	Unshielded, 1.8 m
2.	LTE Base Station	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m
3.	NR Base Station	Anritsu	MT8000A	N/A	N/A	Unshielded, 1.8 m
4.	Fixture	INTEL	NGFF Card Carrier	N/A	N/A	N/A

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss.

Following shows an offset computation example with cable loss 3.7 dB

Example :

Offset(dB) = RF cable loss(dB).

= 3.7 (dB)

2.5 Frequency List of Low/Middle/High Channels

5G NR n5 Channel and Frequency List		
NR Bandwidth (MHz)	**Channel**	**NR Frequncy (MHz)**
20	Low	834
	Mid.	836.5
	High	839
10	Low	829
	Mid.	836.5
	High	844
5	Low	826.5
	Mid.	836.5
	High	846.5

5G NR n7 Channel and Frequency List		
NR Bandwidth (MHz)	**Channel**	**NR Frequncy (MHz)**
20	Low	2510
	Mid.	2535
	High	2560
10	Low	2505
	Mid.	2535
	High	2565
5	Low	2502.5
	Mid.	2535
	High	2567.5

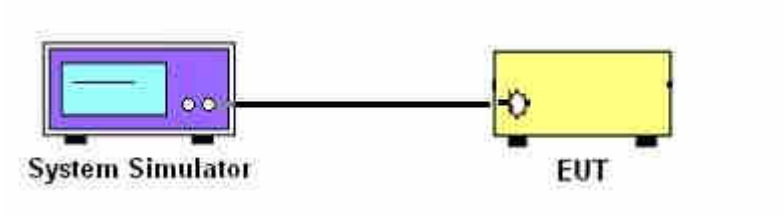
3 Conducted Test Items

3.1 Measuring Instruments

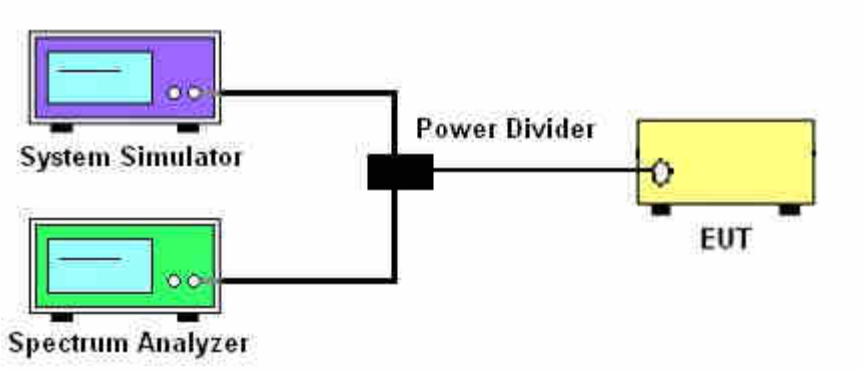
See list of measuring instruments of this test report.

3.2 Test Setup

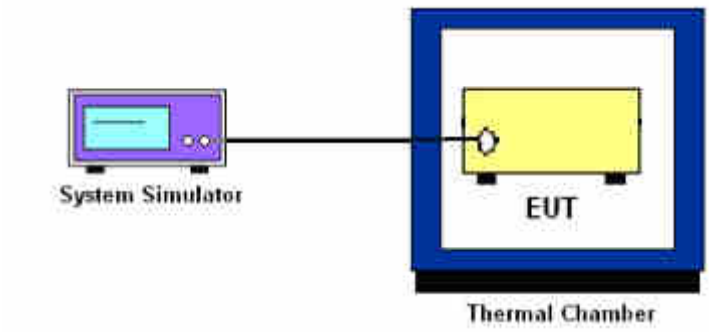
3.2.1 Conducted Output Power



3.2.2 Peak-to-Average Ratio, Occupied Bandwidth ,Conducted Band-Edge and Conducted Spurious Emission



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.

3.4 Conducted Output Power and ERP/EIRP

3.4.1 Description of the Conducted Output Power Measurement and ERP/EIRP Measurement

A system simulator was used to establish communication with the EUT. Its parameters were set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

The ERP of mobile transmitters must not exceed 7 Watts for 5G NR n5.

The EIRP of mobile transmitters must not exceed 2 Watts for 5G NR n7.

According to KDB 412172 D01 Power Approach,

EIRP = $P_T + G_T – L_C$, ERP = EIRP -2.15, where

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB

3.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2
2. The transmitter output port was connected to the system simulator.
3. Set EUT at maximum power through the system simulator.
4. Select lowest, middle, and highest channels for each band and different modulation.
5. Measure and record the power level from the system simulator.

3.5 Peak-to-Average Ratio

3.5.1 Description of the PAR Measurement

Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement instrumentation include the capability to produce CCDF curves for an input signal provided that the instrument's resolution bandwidth can be set wide enough to accommodate the entire input signal bandwidth. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

3.5.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2.3.4 (CCDF).
2. The EUT was connected to spectrum and system simulator via a power divider.
3. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
4. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
5. Record the deviation as Peak to Average Ratio.

3.6 Occupied Bandwidth

3.6.1 Description of Occupied Bandwidth Measurement

The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

3.6.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.4
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
4. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
5. Set the detection mode to peak, and the trace mode to max hold.
6. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace. (this is the reference value)
7. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
8. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “–X dB down amplitude” determined in step 6. If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
9. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

3.7 Conducted Band Edge

3.7.1 Description of Conducted Band Edge Measurement

22.917(a)

For operations in the 824 – 849 MHz band, the FCC limit is 43 + 10log$_{10}$(P[Watts]) dB below the transmitter power P(Watts) in a 100kHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53(m)(4)

For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

3.7.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured.
4. Set RBW >= 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.
6. Set spectrum analyzer with RMS detector.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. Checked that all the results comply with the emission limit line.
   Example:
   The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
   = P(W)- [43 + 10log(P)] (dB)
   = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB) = -13dBm.
9. For 5G NR n7, the other 40 dB, and 55 dB have additionally applied same calculation above.

3.8 Conducted Spurious Emission

3.8.1 Description of Conducted Spurious Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

For 5G NR n7:

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 55 + 10 log (P) dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10^{th} harmonic.

3.8.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
4. The middle channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
7. Set spectrum analyzer with RMS detector.
8. Taking the record of maximum spurious emission.
9. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
10. The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [43 + 10log(P)] (dB)
    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
    = -13dBm.
11. For 5G NR n7
    The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [55+ 10log(P)] (dB)
    = [30+ 10log(P)] (dBm) - [55+ 10log(P)] (dB)
    = -25dBm.

3.9 Frequency Stability

3.9.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency.

3.9.2 Test Procedures for Temperature Variation

1. The testing follows ANSI C63.26 section 5.6.4
2. The EUT was set up in the thermal chamber and connected with the system simulator.
3. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
4. With power OFF, the temperature was raised in 10°C step up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

3.9.3 Test Procedures for Voltage Variation

1. The testing follows ANSI C63.26 section 5.6.5
2. The EUT was placed in a temperature chamber at 20±5°C and connected with the system simulator.
3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value for other than hand carried battery equipment.
4. For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the battery operating end point, which shall be specified by the manufacturer.
5. The variation in frequency was measured for the worst case.

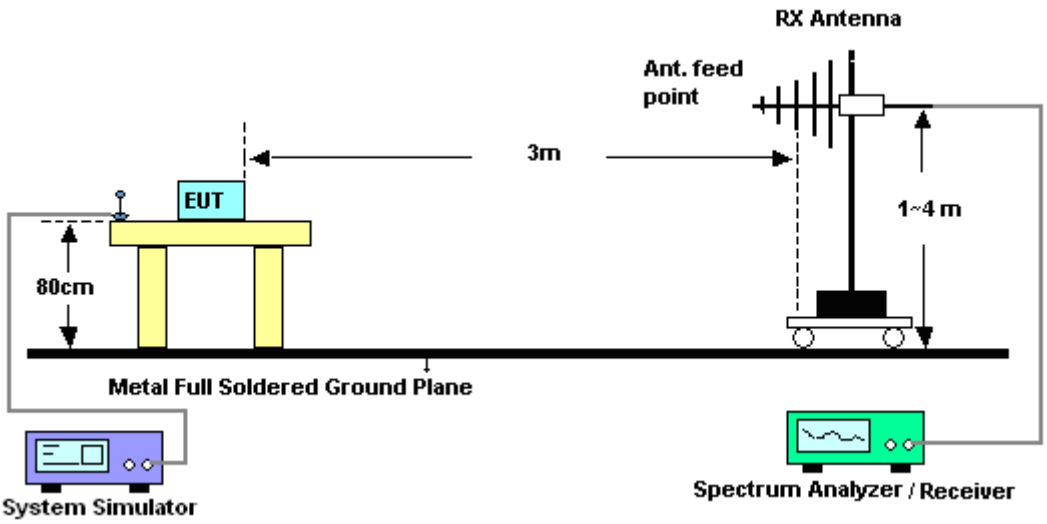
4 Radiated Test Items

4.1 Measuring Instruments

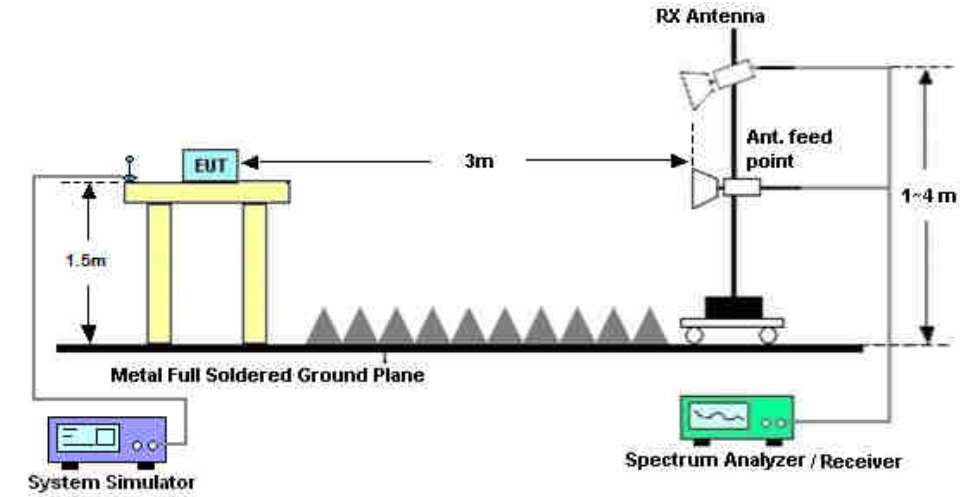
See list of measuring instruments of this test report.

4.2 Test Setup

4.2.1 For radiated test from 30MHz to 1GHz



4.2.2 For radiated test above 1GHz



4.3 Test Result of Radiated Test

Please refer to Appendix B.

4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI C63.26. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

For 5G NR n7

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 55 + 10 log (P) dB.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

4.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.5
2. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
6. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
7. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
8. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
9. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
10. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
11. ERP (dBm) = EIRP - 2.15
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
    The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [43 + 10log(P)] (dB)
    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
    = -13dBm.
13. For 5G NR n7:
    The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 16, 2010	Jun. 09, 2020~ Jul. 11, 2020	Apr. 15, 2021	Conducted (TH01-SZ)
DC Power Supply	GWINSTEK	AnritsuGPS-3030D	EM882636	Max 30V	Apr. 16, 2010	Jun. 09, 2020~ Jul. 11, 2020	Apr. 15, 2021	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Dec. 26, 2019	Jun. 09, 2020~ Jul. 11, 2020	Dec. 25, 2020	Conducted (TH01-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Apr. 17, 2020	Jun. 29, 2020	Apr. 16, 2021	Radiation (03CH02-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Jul. 19, 2019	Jun. 29, 2020	Jul. 18, 2020	Radiation (03CH02-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Aug. 27, 2019	Jun. 29, 2020	Aug. 26, 2020	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 22. 2019	Jun. 29, 2020	Jul. 21. 2020	Radiation (03CH02-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 17, 2020	Jun. 29, 2020	Apr. 16, 2021	Radiation (03CH02-SZ)
LF Amplifier	Burgeon	BPA-530	102211	0.01~3000Mhz	Oct. 18,2019	Jun. 29, 2020	Oct. 17,2020	Radiation (03CH02-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270105	0.5GHz~26.5Ghz	Oct. 18,2019	Jun. 29, 2020	Oct. 17,2020	Radiation (03CH02-SZ)
AC Power Source	Chroma	61601	616010002470	N/A	NCR	Jun. 29, 2020	NCR	Radiation (03CH02-SZ)
Turn Table	Chaintek	T-200	N/A	0~360 degree	NCR	Jun. 29, 2020	NCR	Radiation (03CH02-SZ)
Antenna Mast	Chaintek	MBS-400	N/A	1 m~4 m	NCR	Jun. 29, 2020	NCR	Radiation (03CH02-SZ)

NCR: No Calibration Required

6 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.26-2015. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.47dB**

Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.31dB**

Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.72dB**

Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power and EIRP)

Bottom antenna

EN-DC_7A_n5A											
Combination 20MHz+20MHz(LTE)											
NR Channel	NR Freq.	LTE Channel	LTE Freq.	Modulation	NR		LTE		NR	LTE	Total	EIRP (W)
					RB Size	RB offset	RB Size	RB offset	Measured Power (dBm)	Measured Power (dBm)	Measured Power (dBm)	
166800	834	20850	2510	PI/2 BPSK DFT-s-OFDM	1	1	1	0	22.63	-0.54	22.65	0.0457
					1	104	1	99	22.64	-0.53	22.66	0.0458
					50	25	100	0	22.93	-0.39	22.95	0.049
				QPSK DFT-s-OFDM	1	1	1	0	22.69	-0.45	22.71	0.0464
					1	104	1	99	22.67	-0.47	22.69	0.0461
					50	25	100	0	22.97	-0.43	22.99	0.0494
167300	836.5	21100	2535	PI/2 BPSK DFT-s-OFDM	1	1	1	0	22.69	-0.2	22.71	0.0464
					1	104	1	99	22.61	-0.13	22.63	0.0455
					50	25	100	0	22.89	-0.23	22.91	0.0485
				QPSK DFT-s-OFDM	1	1	1	0	22.65	-0.13	22.67	0.0459
					1	104	1	99	22.58	-0.23	22.60	0.0452
					50	25	100	0	22.84	-0.26	22.86	0.048
167800	839	21350	2560	PI/2 BPSK DFT-s-OFDM	1	1	1	0	22.76	-0.22	22.78	0.0471
					1	104	1	99	22.62	-0.17	22.64	0.0456
					50	25	100	0	22.91	-0.25	22.93	0.0488
				QPSK DFT-s-OFDM	1	1	1	0	22.78	-0.26	22.80	0.0473
					1	104	1	99	22.66	-0.26	22.68	0.046
					50	25	100	0	22.89	-0.25	22.91	0.0485

EN-DC_7A_n5A												
Combination 10MHz+20MHz(LTE)												
NR Channel	NR Freq.	LTE Channel	LTE Freq.	Modulation	NR		LTE		NR	LTE	Total	EIRP (W)
					RB Size	RB offset	RB Size	RB offset	Measured Power (dBm)	Measured Power (dBm)	Measured Power (dBm)	
165800	829	20850	2510	PI/2 BPSK DFT-s-OFDM	1	1	1	0	22.62	-0.44	22.64	0.0456
					1	50	1	99	22.71	-0.46	22.73	0.0466
					25	12	100	0	22.81	-0.47	22.83	0.0476
				QPSK DFT-s-OFDM	1	1	1	0	22.67	-0.45	22.69	0.0461
					1	50	1	99	22.67	-0.46	22.69	0.0461
					25	12	100	0	22.82	-0.48	22.84	0.0478
167300	836.5	21100	2535	PI/2 BPSK DFT-s-OFDM	1	1	1	0	22.79	-0.23	22.81	0.0474
					1	50	1	99	22.58	-0.28	22.60	0.0452
					25	12	100	0	22.74	-0.23	22.76	0.0469
				QPSK DFT-s-OFDM	1	1	1	0	22.84	-0.2	22.86	0.048
					1	50	1	99	22.57	-0.25	22.59	0.0451
					25	12	100	0	22.8	-0.25	22.82	0.0475
168800	844	21350	2560	PI/2 BPSK DFT-s-OFDM	1	1	1	0	22.77	-0.35	22.79	0.0472
					1	50	1	99	22.74	-0.28	22.76	0.0469
					25	12	100	0	22.78	-0.36	22.80	0.0473
				QPSK DFT-s-OFDM	1	1	1	0	22.79	-0.28	22.81	0.0474
					1	50	1	99	22.75	-0.3	22.77	0.047
					25	12	100	0	22.86	-0.17	22.88	0.0482

EN-DC_7A_n5A												
Combination 5MHz+20MHz(LTE)												
NR Channel	NR Freq.	LTE Channel	LTE Freq.	Modulation	NR		LTE		NR	LTE	Total	EIRP (W)
					RB Size	RB offset	RB Size	RB offset	Measured Power (dBm)	Measured Power (dBm)	Measured Power (dBm)	
165300	826.5	20850	2510	PI/2 BPSK DFT-s-OFDM	1	1	1	0	23.02	-0.51	23.04	0.0500
					1	23	1	99	22.92	-0.5	22.94	0.0489
					12	6	100	0	23.01	-0.48	23.03	0.0499
				QPSK DFT-s-OFDM	1	1	1	0	23.03	-0.51	23.05	0.0501
					1	23	1	99	22.86	-0.59	22.88	0.0482
					12	6	100	0	23.07	-0.42	23.09	0.0506
167300	836.5	21100	2535	PI/2 BPSK DFT-s-OFDM	1	1	1	0	23.27	-0.21	23.29	0.053
					1	23	1	99	23.13	-0.23	23.15	0.0513
					12	6	100	0	23.12	-0.24	23.14	0.0512
				QPSK DFT-s-OFDM	1	1	1	0	23.17	-0.36	23.19	0.0518
					1	23	1	99	22.96	-0.23	22.98	0.0493
					12	6	100	0	23.13	-0.29	23.15	0.0513
169300	846.5	21350	2560	PI/2 BPSK DFT-s-OFDM	1	1	1	0	23.02	-0.24	23.04	0.05
					1	23	1	99	22.94	-0.23	22.96	0.0491
					12	6	100	0	23.12	-0.26	23.14	0.0512
				QPSK DFT-s-OFDM	1	1	1	0	23.04	-0.39	23.06	0.0502
					1	23	1	99	22.91	-0.19	22.93	0.0488
					12	6	100	0	23.14	-0.27	23.16	0.0514

5G NR_n7						
20MHz						
NR Channel	NR Freq.	Modulation	NR		NR	EIRP (W)
			RB Size	RB offset	Measured Power (dBm)	
502000	2510	PI/2 BPSK DFT-s-OFDM	1	1	23.1	0.2884
			1	104	23.46	0.3133
			50	25	23.52	0.3177
		QPSK DFT-s-OFDM	1	1	22.98	0.2805
			1	104	23.19	0.2944
			50	25	23.11	0.2891
507000	2535	PI/2 BPSK DFT-s-OFDM	1	1	22.92	0.2767
			1	104	23.4	0.309
			50	25	23.34	0.3048
		QPSK DFT-s-OFDM	1	1	22.93	0.2773
			1	104	23.18	0.2938
			50	25	23.33	0.3041
512000	2560	PI/2 BPSK DFT-s-OFDM	1	1	22.97	0.2799
			1	104	22.57	0.2553
			50	25	23.2	0.2951
		QPSK DFT-s-OFDM	1	1	22.84	0.2716
			1	104	22.49	0.2506
			50	25	23.18	0.2938

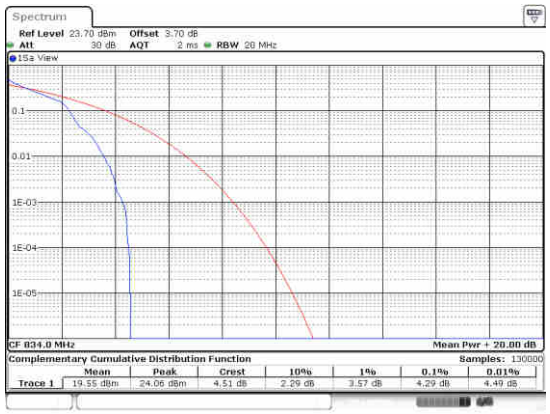
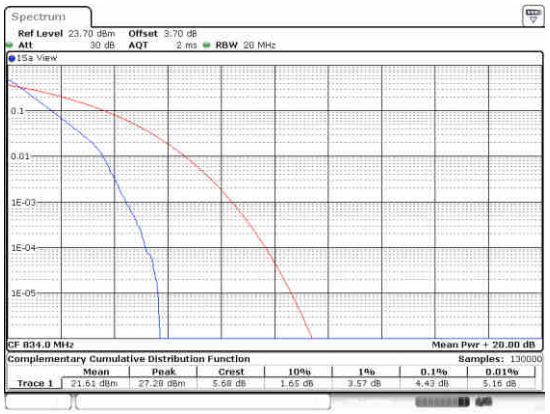
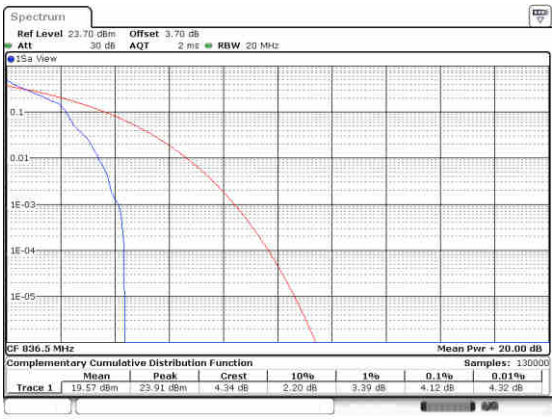
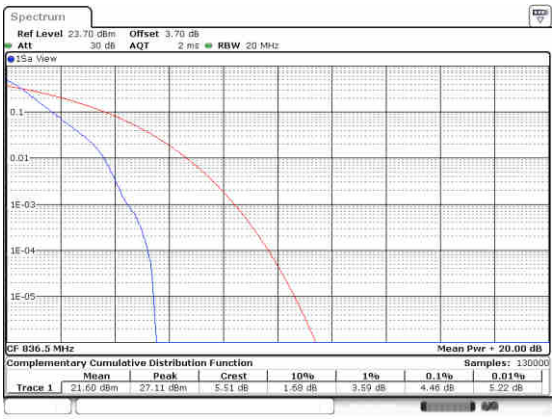
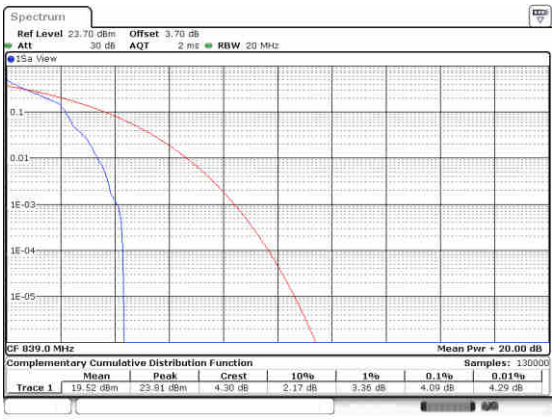
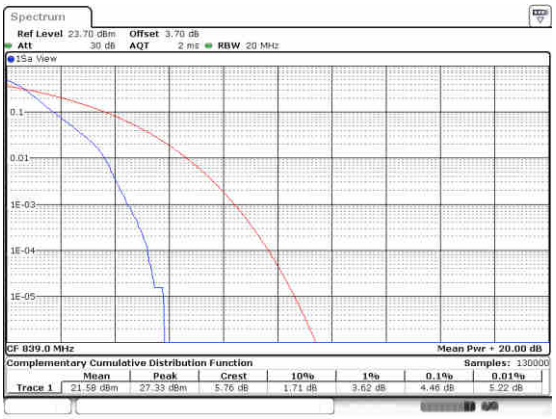
5G NR_n7						
10MHz						
NR Channel	NR Freq.	Modulation	NR		NR	EIRP (W)
			RB Size	RB offset	Measured Power (dBm)	
501000	2505	PI/2 BPSK DFT-s-OFDM	1	1	23	0.2818
			1	50	23.01	0.2825
			25	12	23.37	0.3069
		QPSK DFT-s-OFDM	1	1	23.35	0.3055
			1	50	23.28	0.3006
			25	12	23.49	0.3155
507000	2535	PI/2 BPSK DFT-s-OFDM	1	1	23.13	0.2904
			1	50	23.25	0.2985
			25	12	23.26	0.2992
		QPSK DFT-s-OFDM	1	1	23.19	0.2944
			1	50	23.16	0.2924
			25	12	23.38	0.3076
513000	2565	PI/2 BPSK DFT-s-OFDM	1	1	23.26	0.2992
			1	50	22.75	0.2661
			25	12	23.06	0.2858
		QPSK DFT-s-OFDM	1	1	23.13	0.2904
			1	50	22.56	0.2547
			25	12	23	0.2818

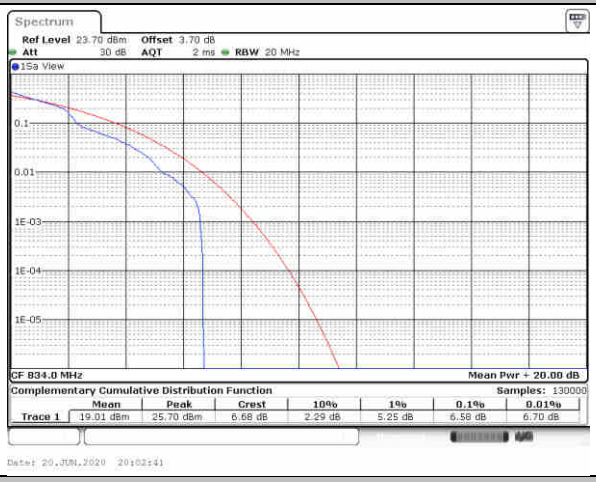
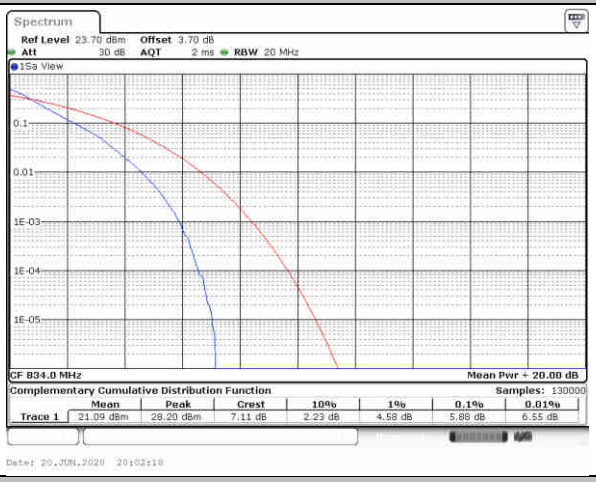
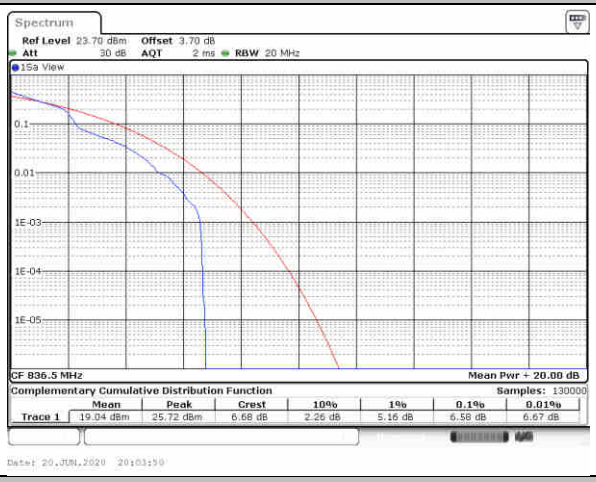
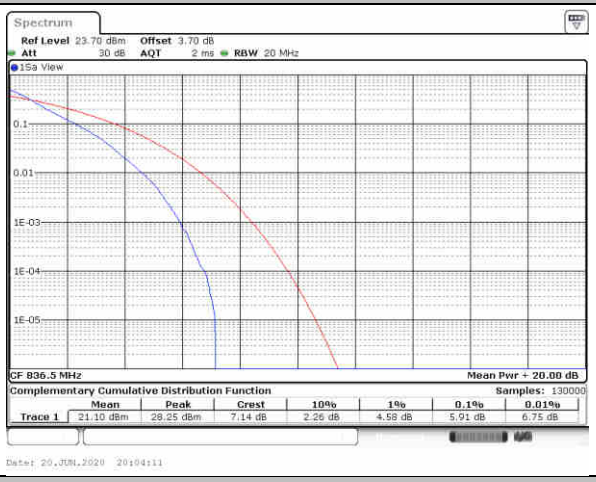
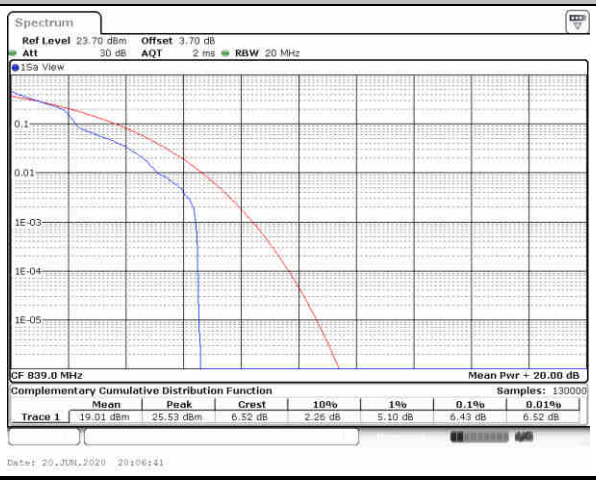
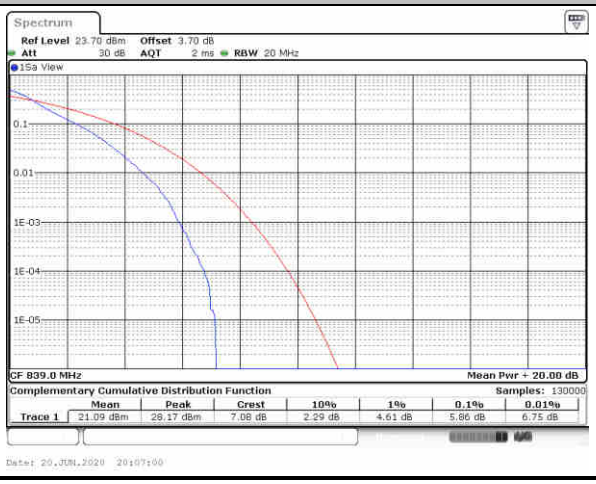
5G NR_n7						
5MHz						
NR Channel	NR Freq.	Modulation	NR		NR	EIRP (W)
			RB Size	RB offset	Measured Power (dBm)	
500500	2502.5	PI/2 BPSK DFT-s-OFDM	1	1	22.76	0.2667
			1	23	22.77	0.2673
			12	6	22.85	0.2723
		QPSK DFT-s-OFDM	1	1	22.62	0.2582
			1	23	22.57	0.2553
			12	6	22.82	0.2704
507000	2535	PI/2 BPSK DFT-s-OFDM	1	1	23.5	0.3162
			1	23	23.4	0.309
			12	6	23.46	0.3133
		QPSK DFT-s-OFDM	1	1	23.32	0.3034
			1	23	23.08	0.2871
			12	6	23.29	0.3013
513500	2567.5	PI/2 BPSK DFT-s-OFDM	1	1	23.01	0.2825
			1	23	22.48	0.25
			12	6	22.79	0.2685
		QPSK DFT-s-OFDM	1	1	22.99	0.2812
			1	23	22.8	0.2692
			12	6	22.96	0.2793

5G NR n5

Peak-to-Average Ratio

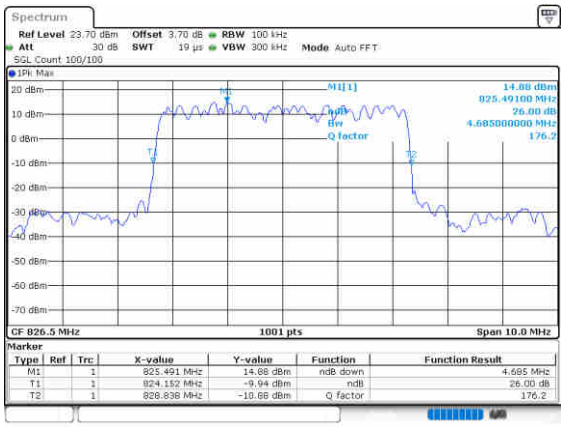
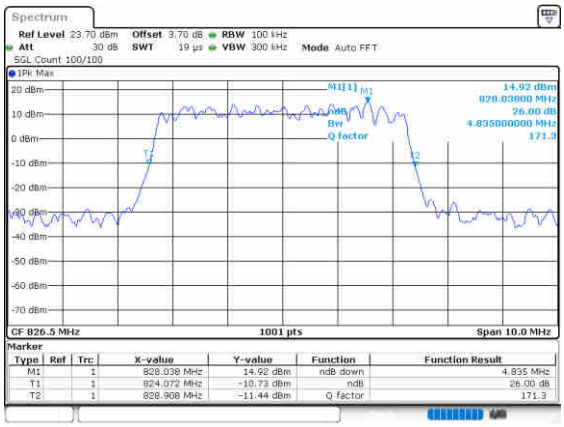
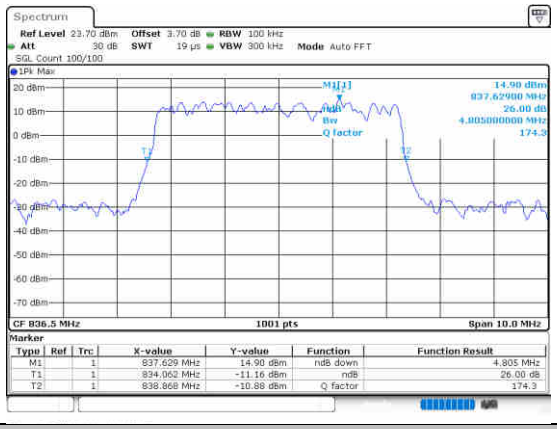
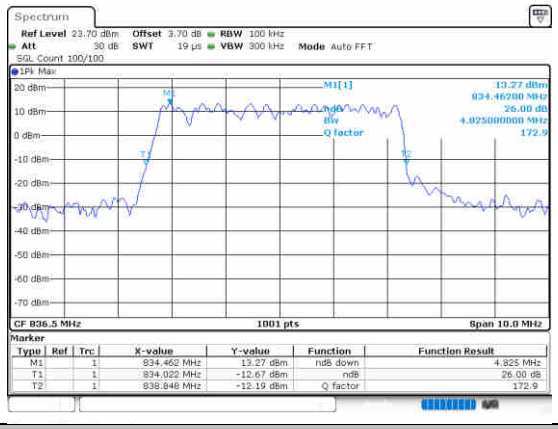
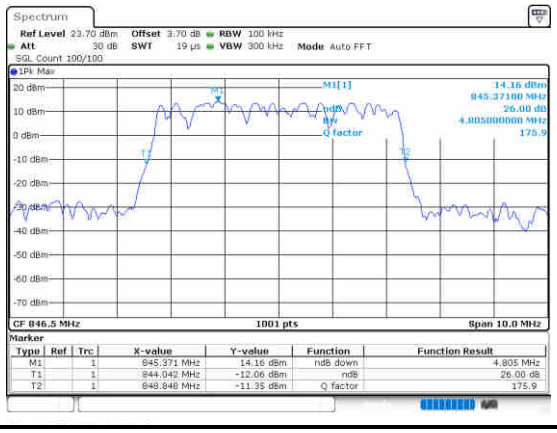
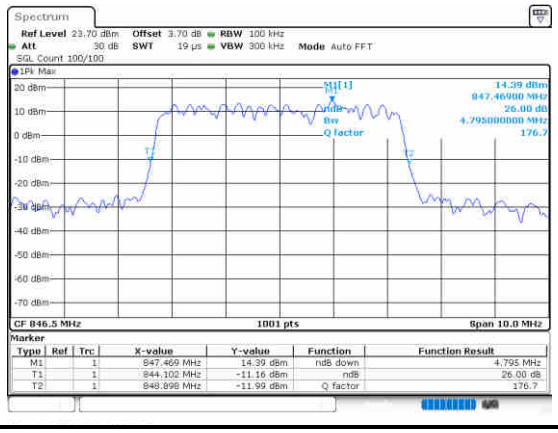
Mode	NR N5+7A / 20MHz				
Mod.	BPSK		QPSK		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.29	4.43	6.58	5.88	PASS
Middle CH	4.12	4.46	6.58	5.91	
Highest CH	4.09	4.46	6.43	5.86	

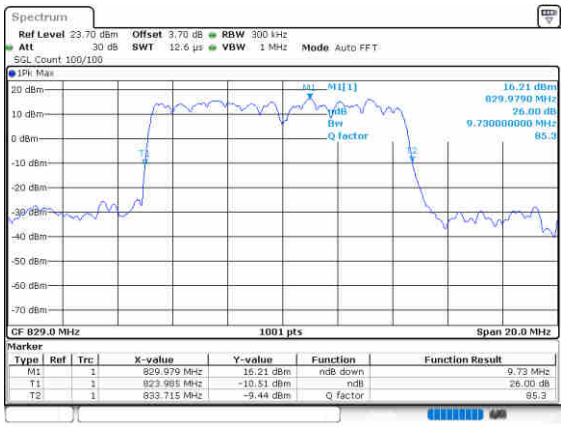
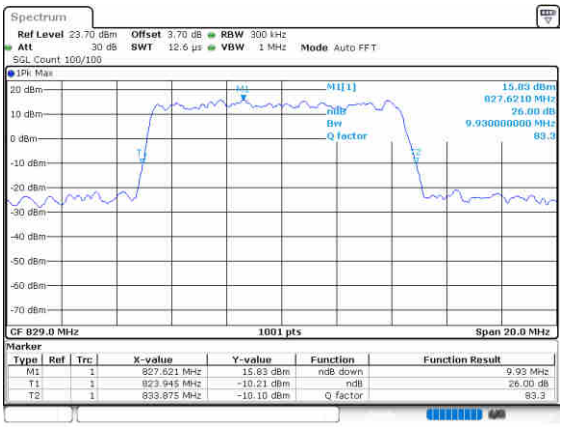
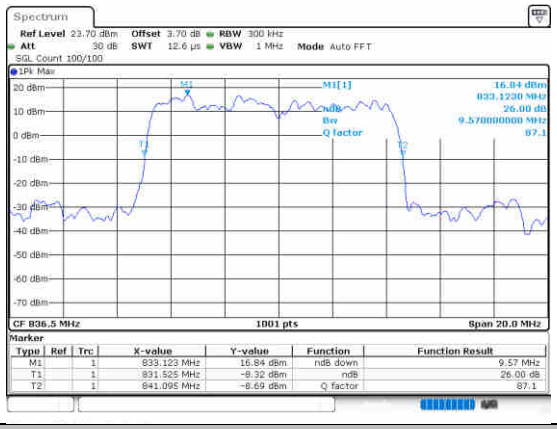
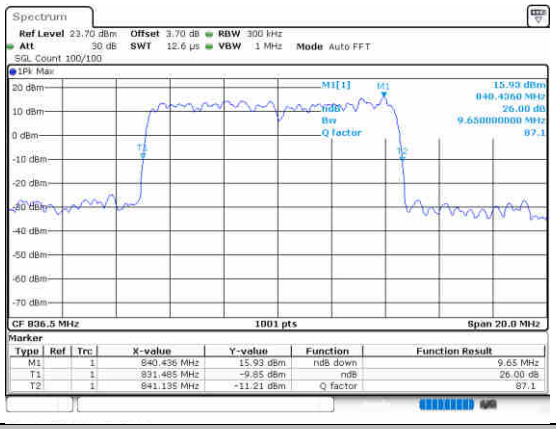
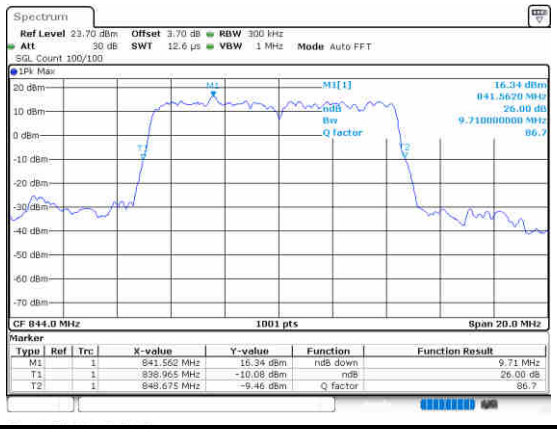
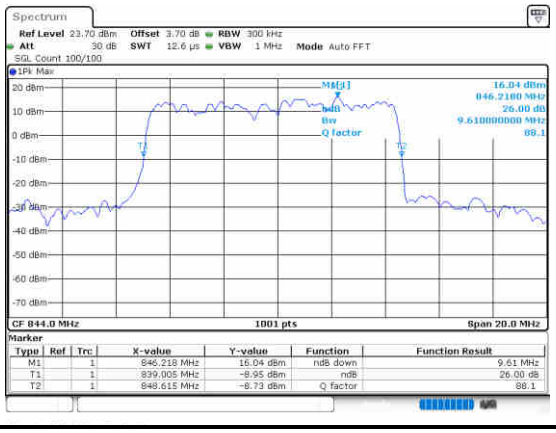
NR N5+7A / 20MHz / BPSK	
Lowest Channel / 1RB	**Lowest Channel / Full RB**
	
Middle Channel / 1RB	**Middle Channel / Full RB**
	
Highest Channel / 1RB	**Highest Channel / Full RB**
	

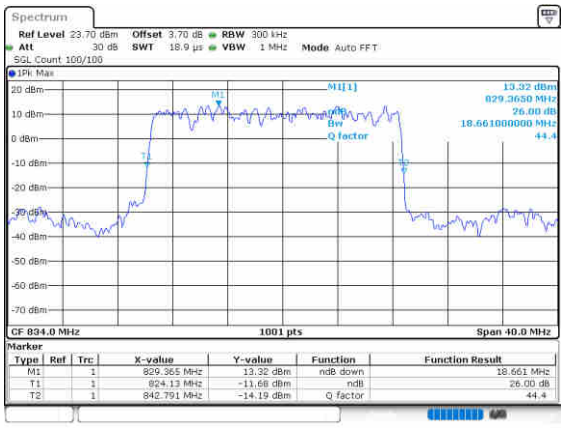
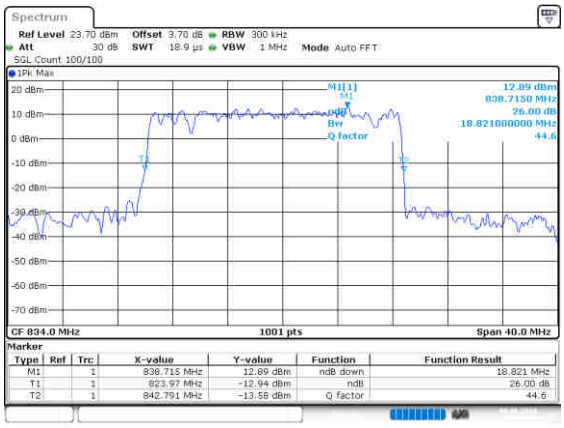
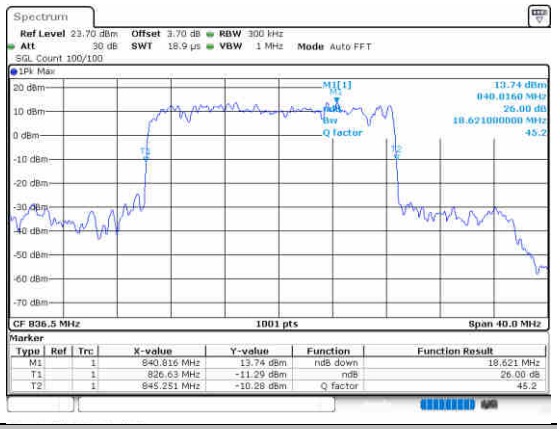
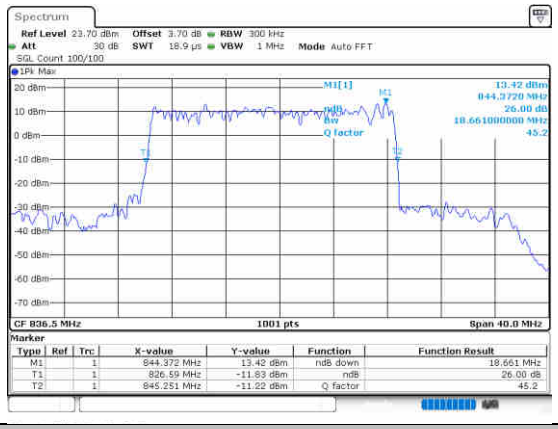
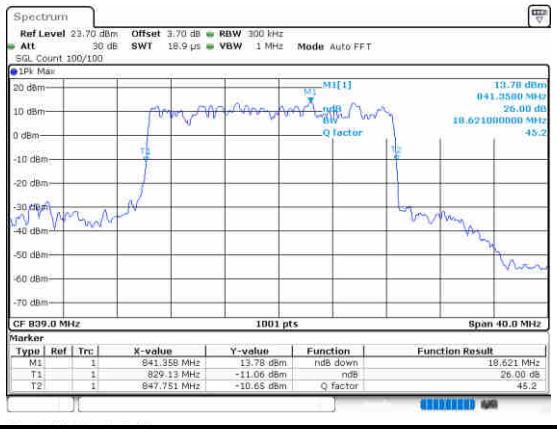
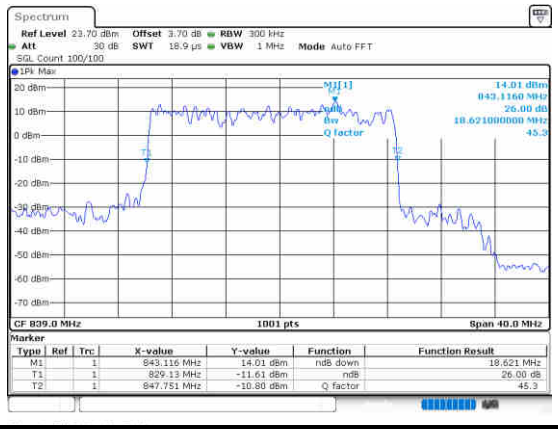
NR N5+7A / 20MHz / QPSK	
Lowest Channel / 1RB	**Lowest Channel / Full RB**
	
Middle Channel / 1RB	**Middle Channel / Full RB**
	
Highest Channel / 1RB	**Highest Channel / Full RB**
	

26dB Bandwidth

Mode	NR N5+7A : 26dB BW(MHz)					
BW	5 MHz		10 MHz		20 MHz	
Mod.	BPSK	QPSK	BPSK	QPSK	BPSK	QPSK
Lowest CH	4.685	4.835	9.73	9.93	18.661	18.821
Middle CH	4.805	4.825	9.57	9.65	18.621	18.661
Highest CH	4.805	4.795	9.71	9.61	18.621	18.621

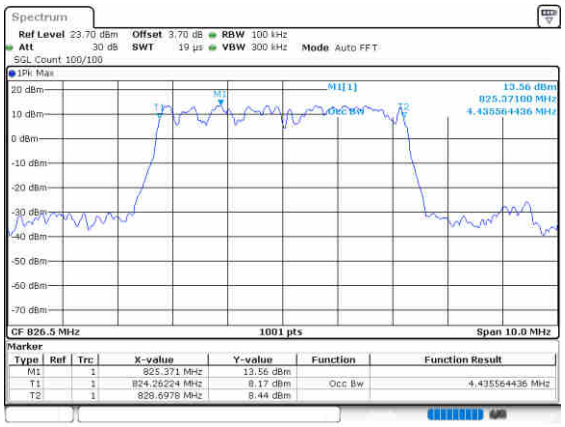
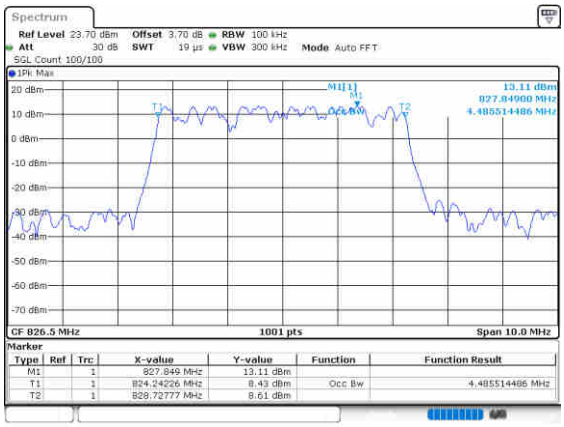
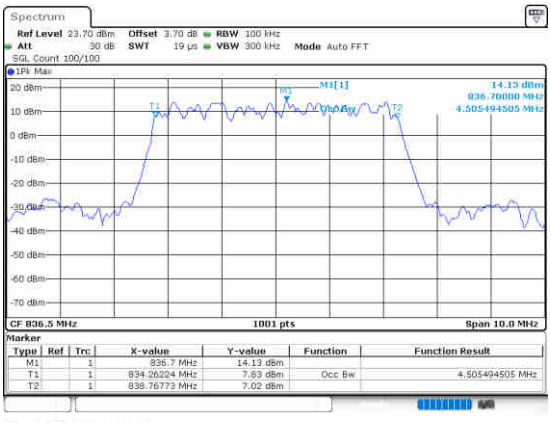
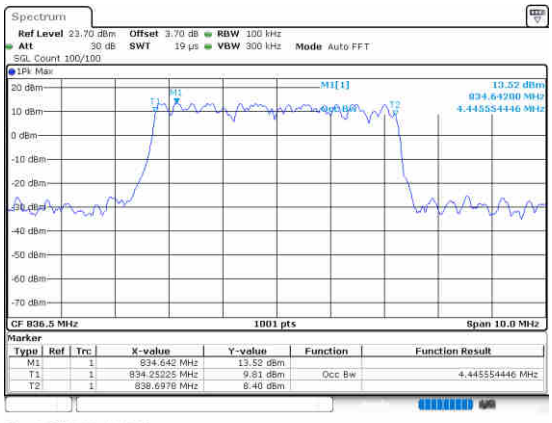
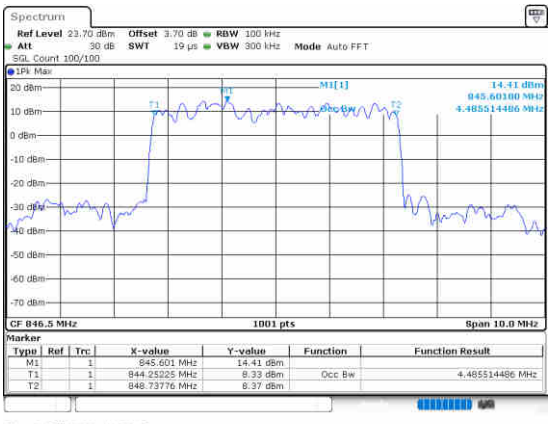
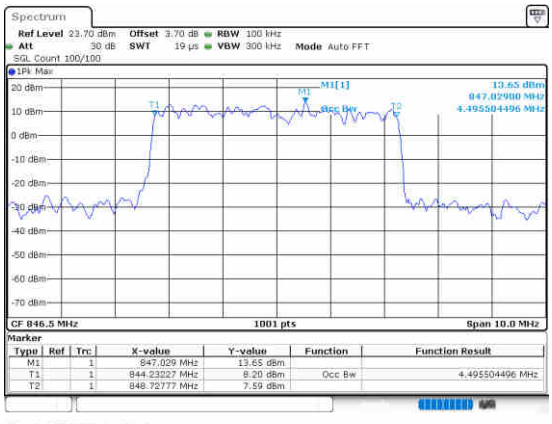
NR N5+7A	
Lowest Channel / 5MHz / BPSK	**Lowest Channel / 5MHz / QPSK**
	
Middle Channel / 5MHz / BPSK	**Middle Channel / 5MHz / QPSK**
	
Highest Channel / 5MHz / BPSK	**Highest Channel / 5MHz / QPSK**
	

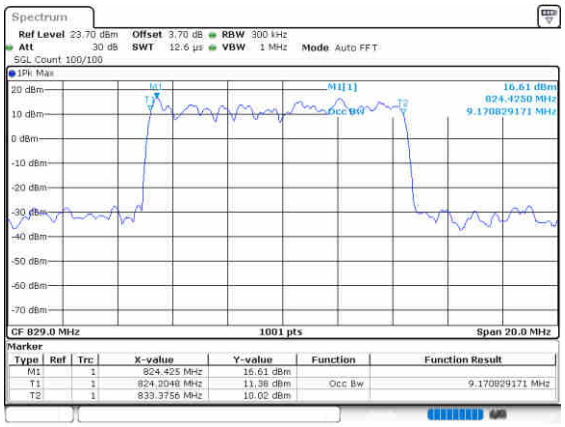
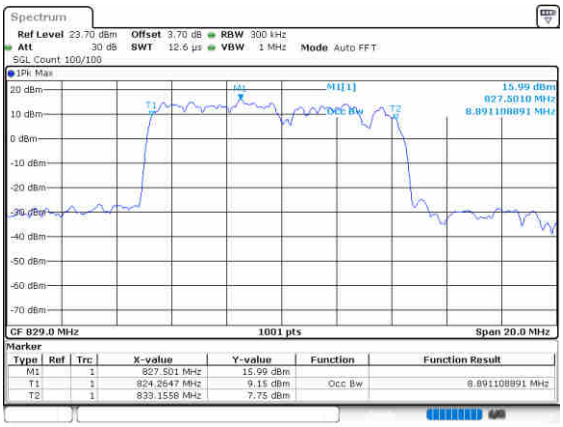
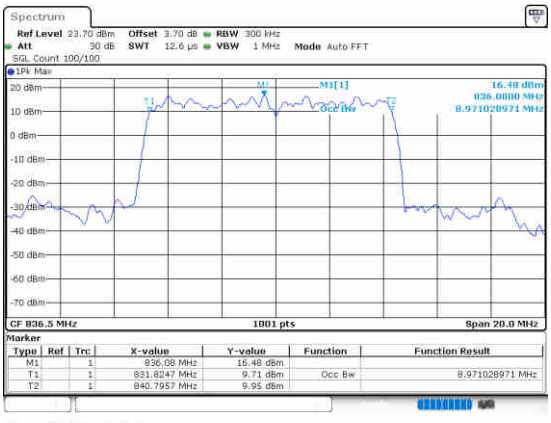
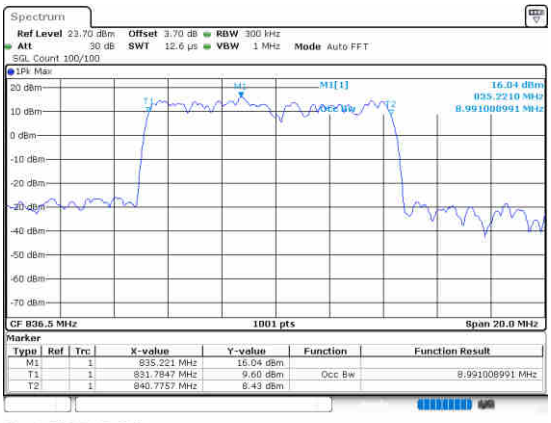
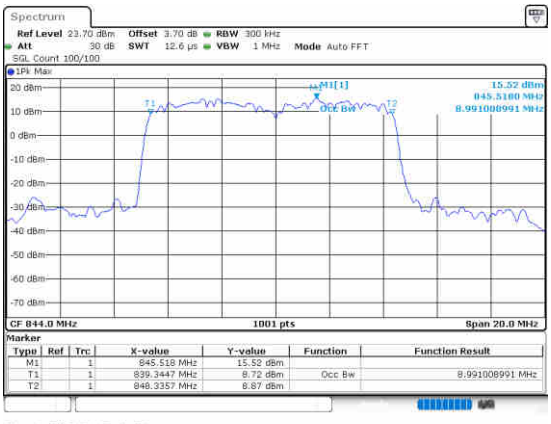
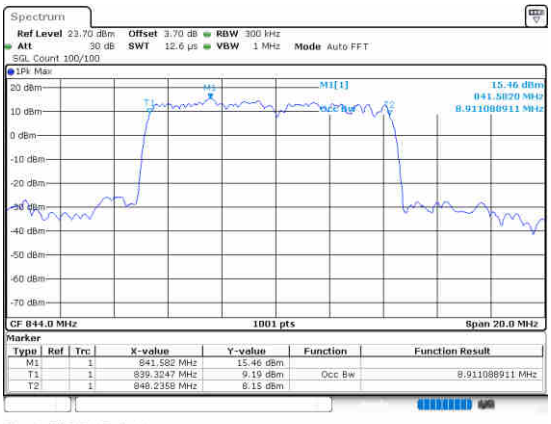
NR N5+7A	
Lowest Channel / 10MHz / BPSK	**Lowest Channel / 10MHz / QPSK**
	
Middle Channel / 10MHz / BPSK	**Middle Channel / 10MHz / QPSK**
	
Highest Channel / 10MHz / BPSK	**Highest Channel / 10MHz / QPSK**
	

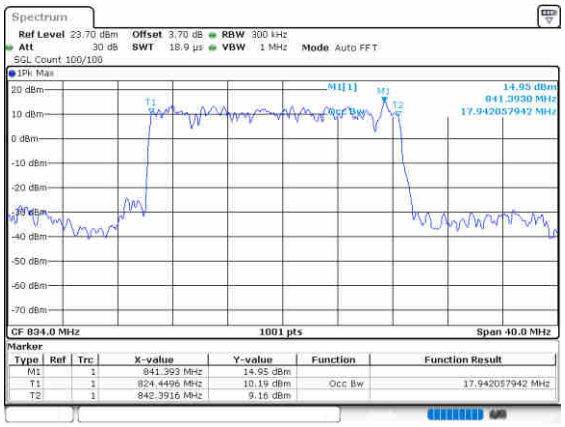
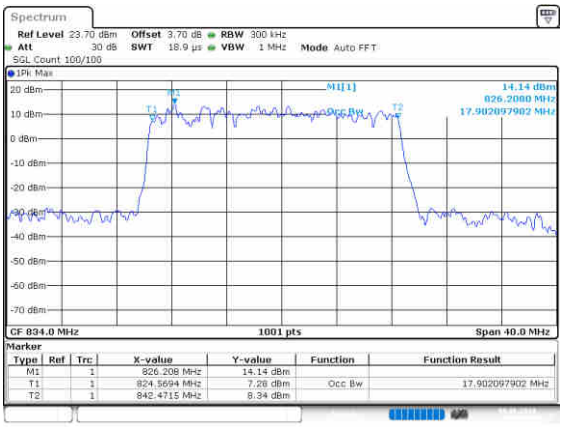
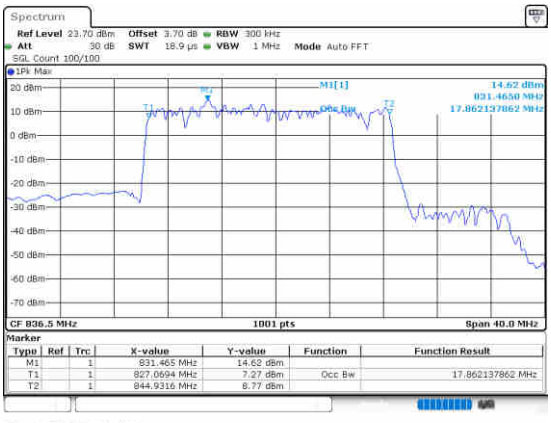
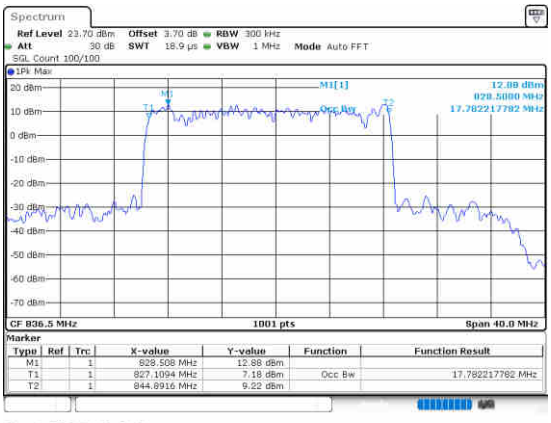
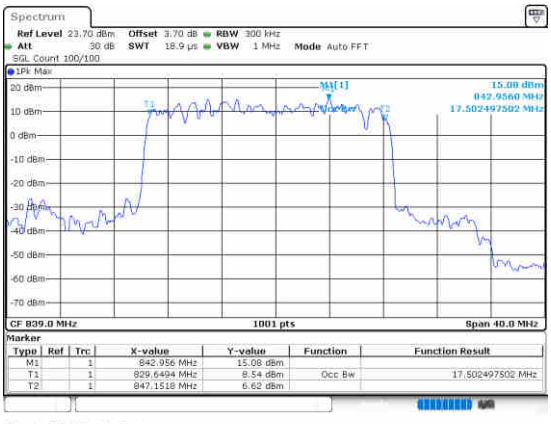
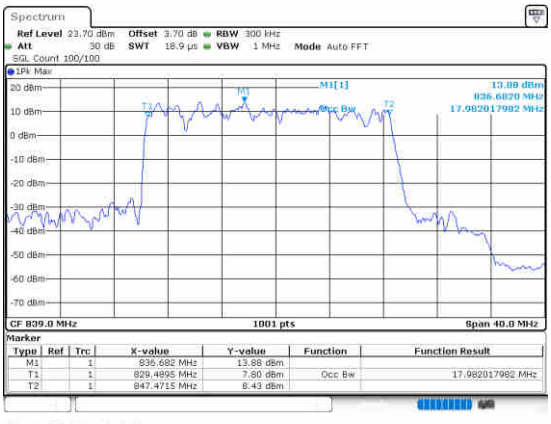
NR N5+7A	
Lowest Channel / 20MHz / BPSK	**Lowest Channel / 20MHz / QPSK**
	
Middle Channel / 20MHz / BPSK	**Middle Channel / 20MHz / QPSK**
	
Highest Channel / 20MHz / BPSK	**Highest Channel / 20MHz / QPSK**
	

Occupied Bandwidth

Mode	NR N5+7A : OB BW(MHz)					
BW	5 MHz		10 MHz		20 MHz	
Mod.	BPSK	QPSK	BPSK	QPSK	BPSK	QPSK
Lowest CH	4.44	4.49	9.17	8.89	17.94	17.90
Middle CH	4.51	4.45	8.97	8.99	17.86	17.78
Highest CH	4.49	4.5	8.99	8.91	17.50	17.98

NR N5+7A	
Lowest Channel / 5MHz / BPSK	**Lowest Channel / 5MHz / QPSK**
	
Middle Channel / 5MHz / BPSK	**Middle Channel / 5MHz / QPSK**
	
Highest Channel / 5MHz / BPSK	**Highest Channel / 5MHz / QPSK**
	

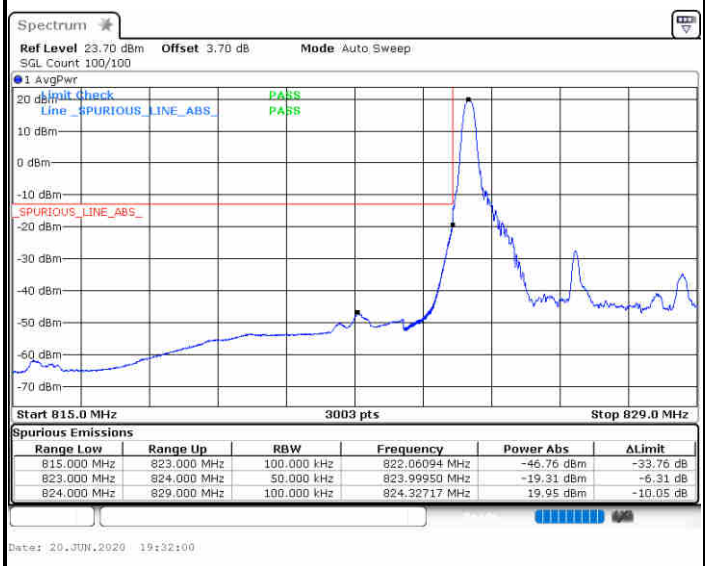
NR N5+7A	
Lowest Channel / 10MHz / BPSK	**Lowest Channel / 10MHz / QPSK**
	
Middle Channel / 10MHz / BPSK	**Middle Channel / 10MHz / QPSK**
	
Highest Channel / 10MHz / BPSK	**Highest Channel / 10MHz / QPSK**
	

NR N5+7A	
Lowest Channel / 20MHz / BPSK	**Lowest Channel / 20MHz / QPSK**
	
Middle Channel / 20MHz / BPSK	**Middle Channel / 20MHz / QPSK**
	
Highest Channel / 20MHz / BPSK	**Highest Channel / 20MHz / QPSK**
	

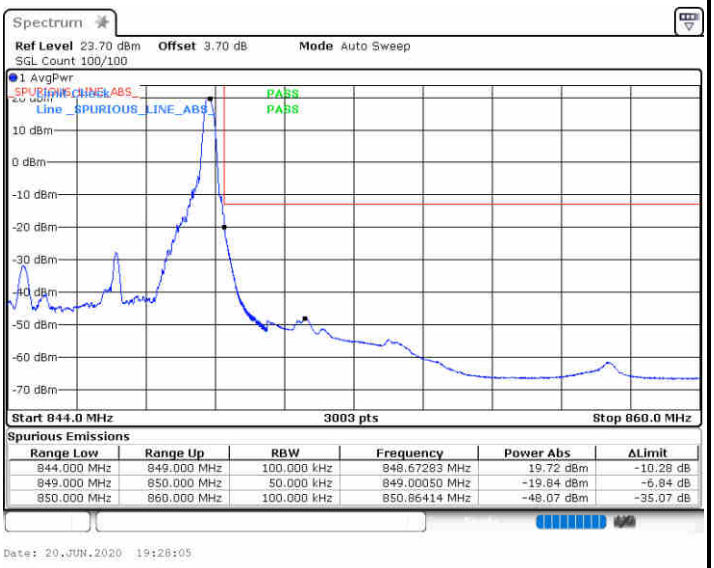
Conducted Band Edge

NR N5+7A / 5MHz / BPSK

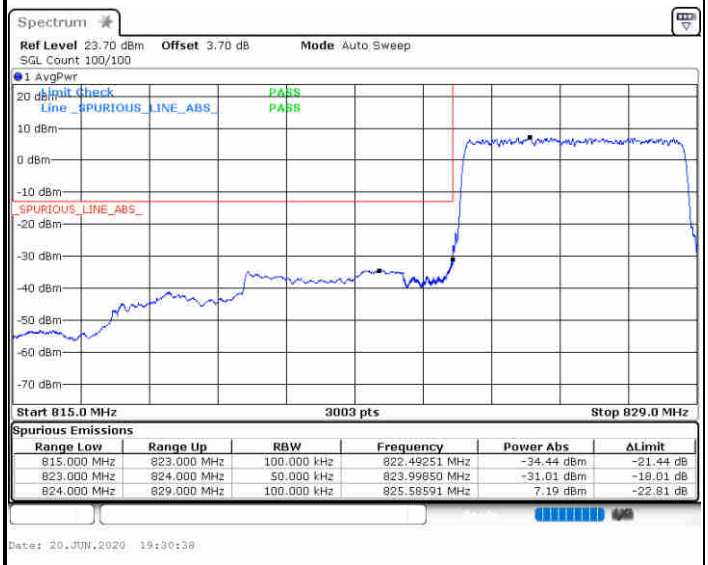
Lowest Band Edge / 1 RB



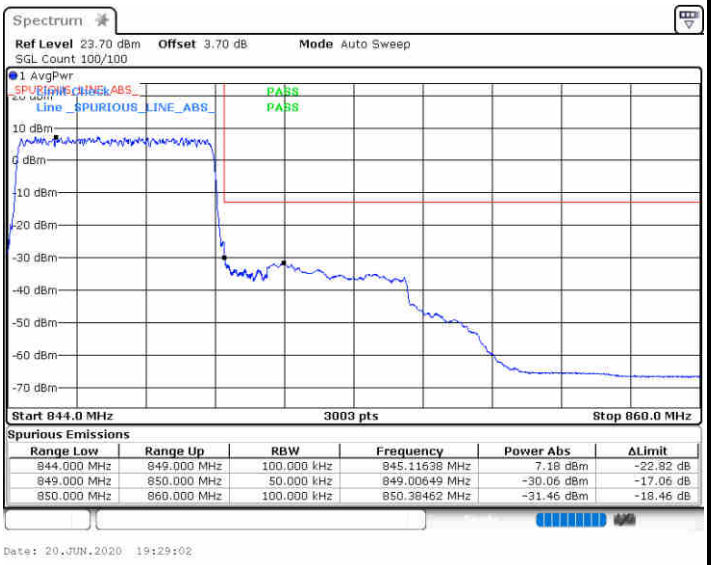
Highest Band Edge / 1 RB

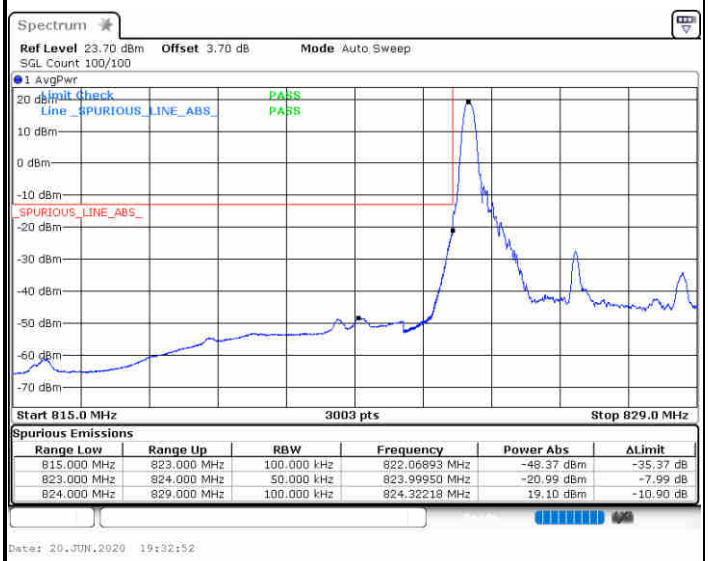
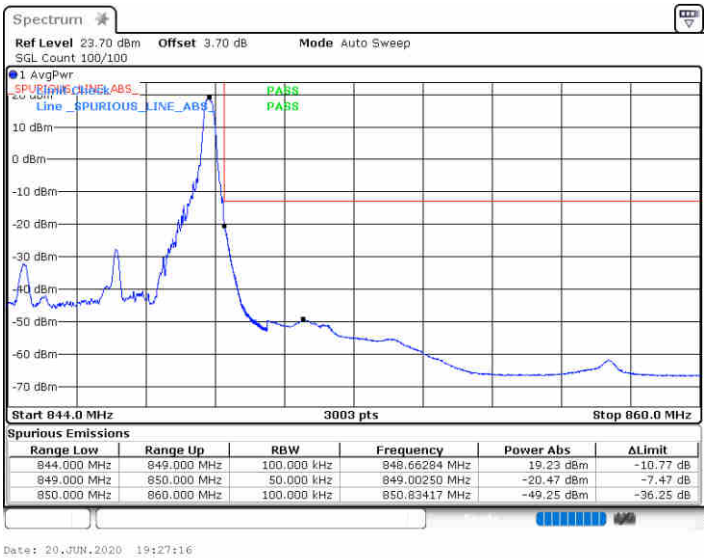
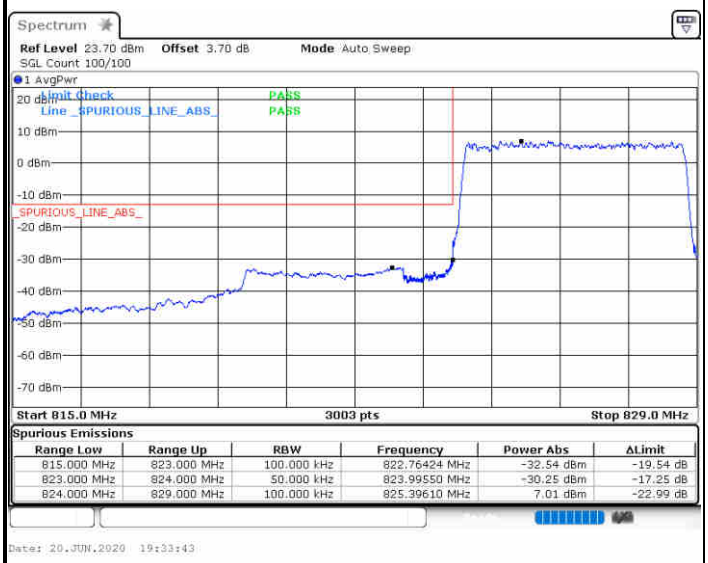
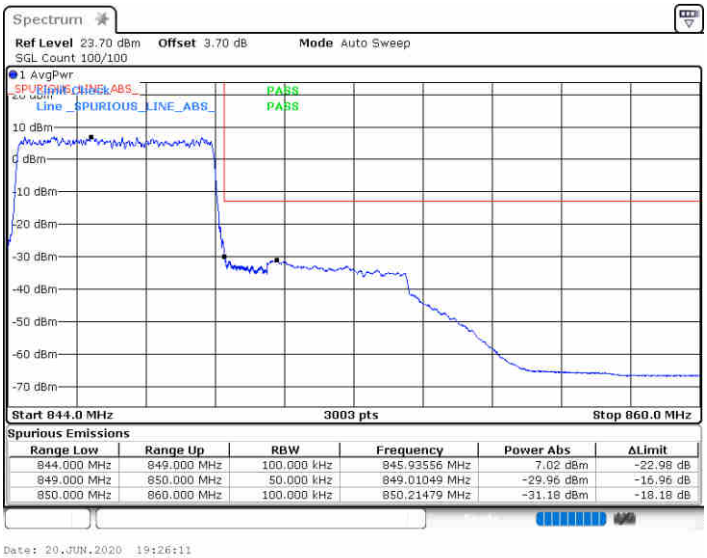


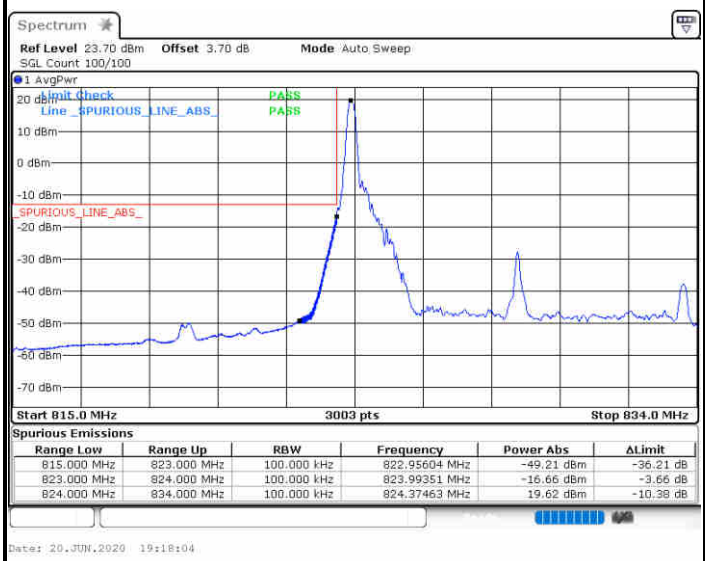
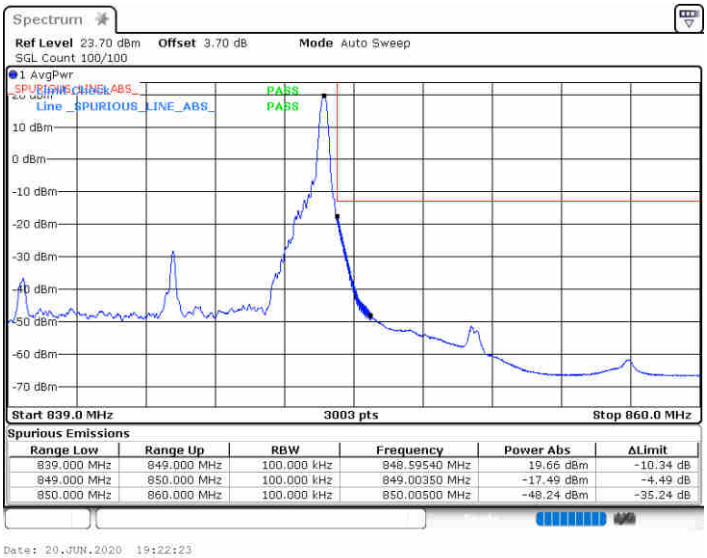
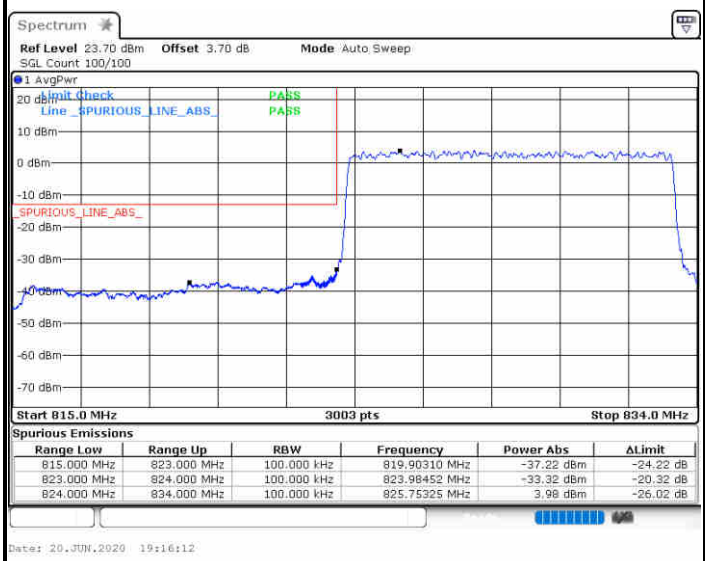
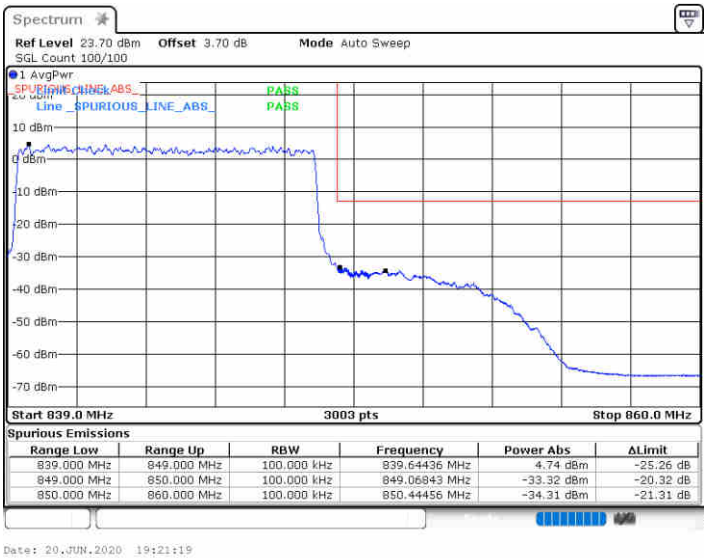
Lowest Band Edge / Full RB

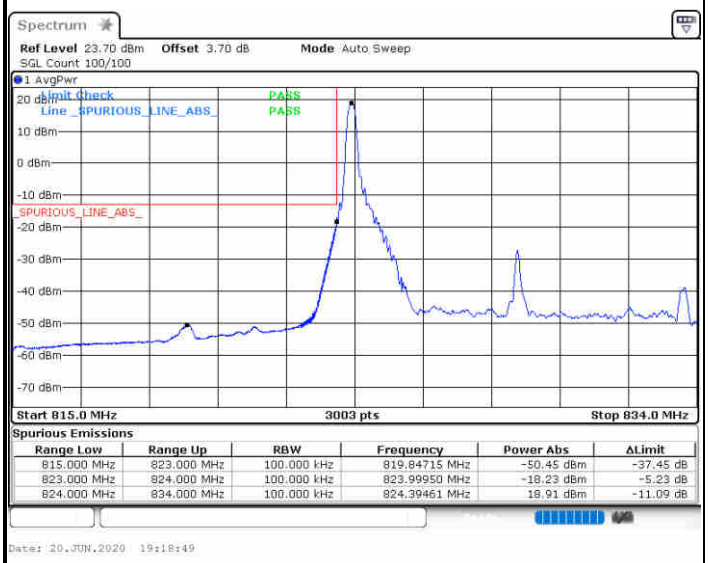
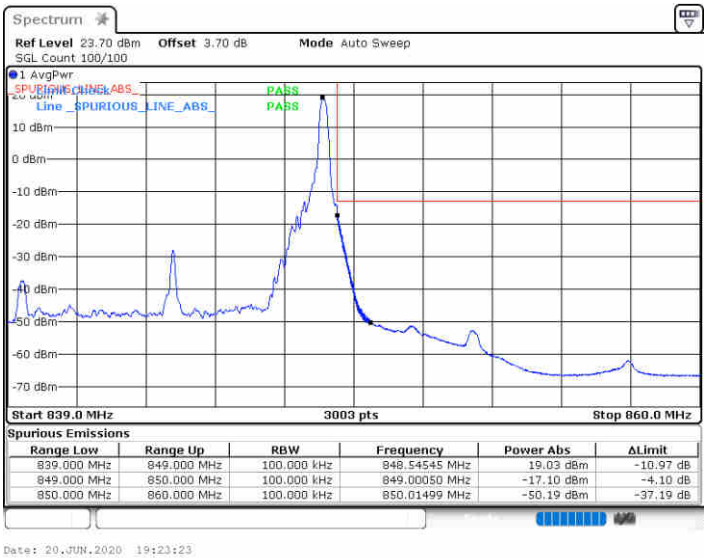
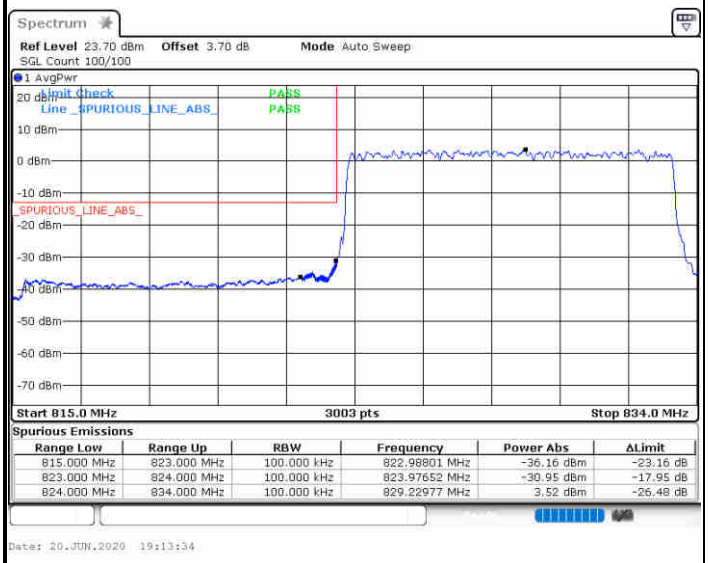
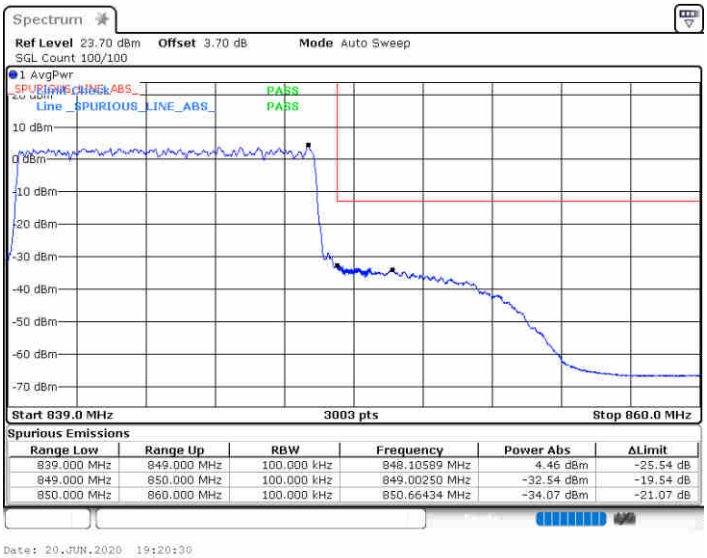


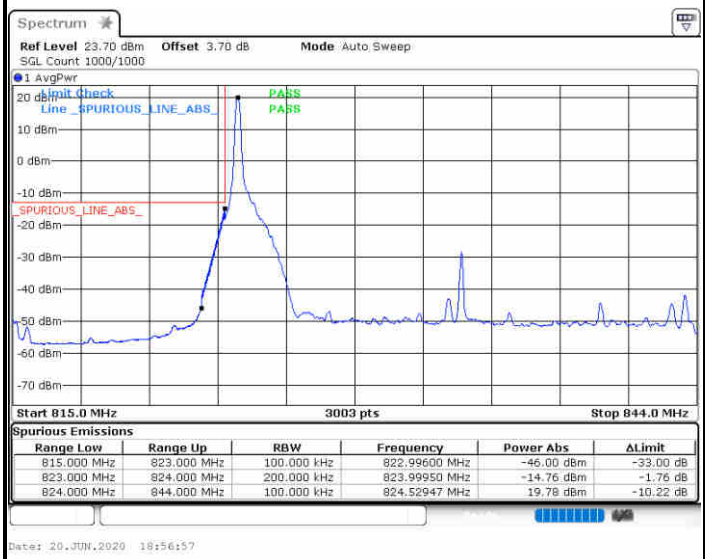
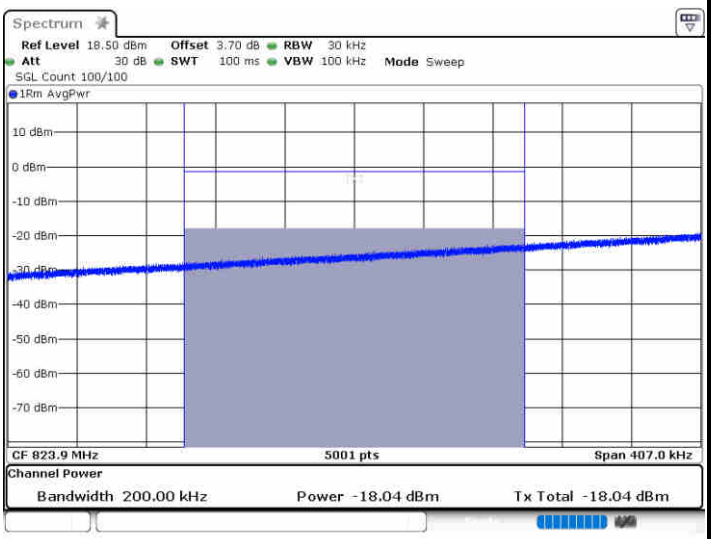
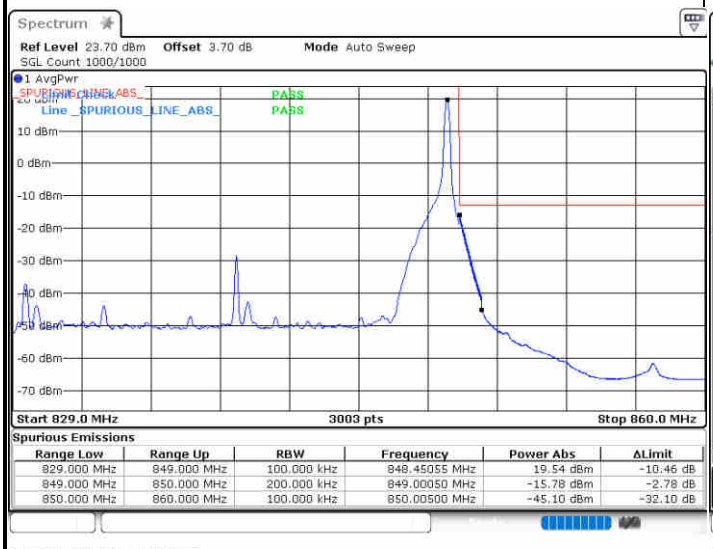
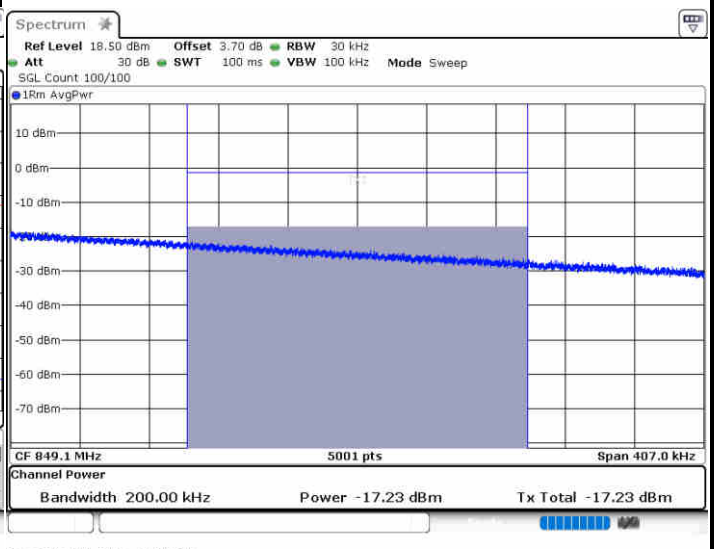
Highest Band Edge / Full RB



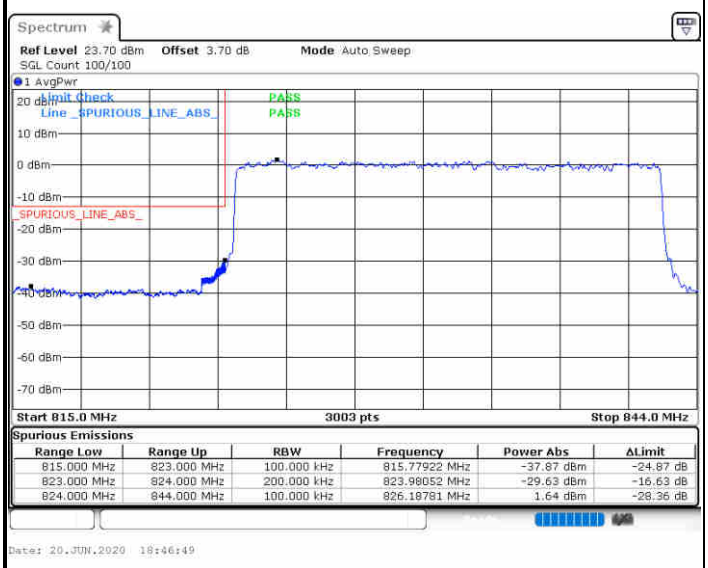
NR N5+7A / 5MHz / QPSK	
Lowest Band Edge / 1 RB	**Highest Band Edge / 1 RB**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

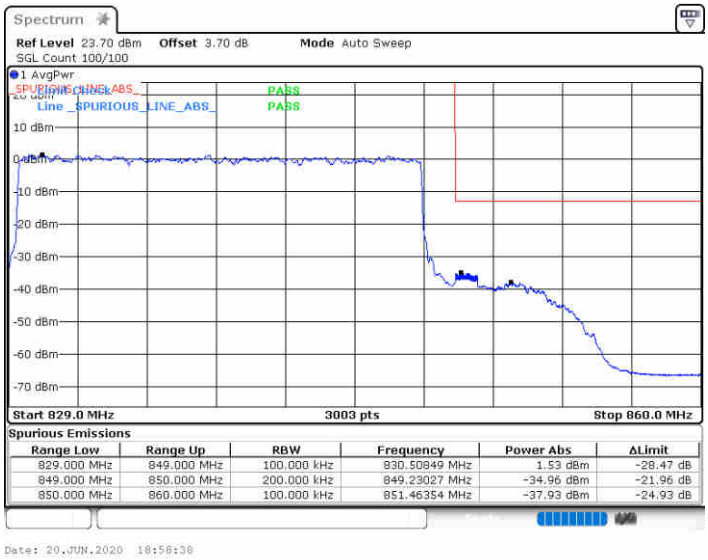
NR N5+7A / 10MHz / BPSK	
Lowest Band Edge / 1 RB	**Highest Band Edge / 1 RB**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

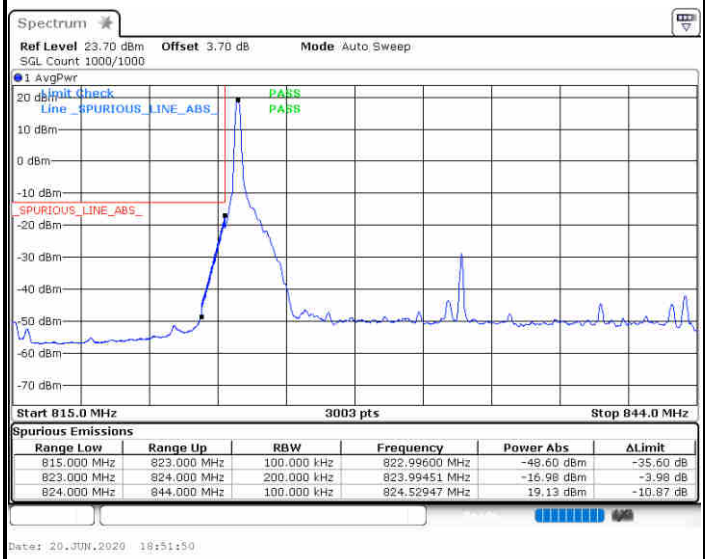
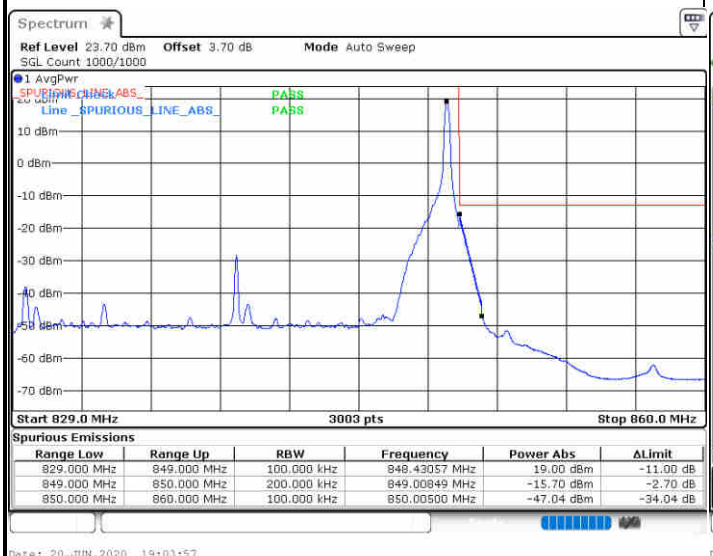
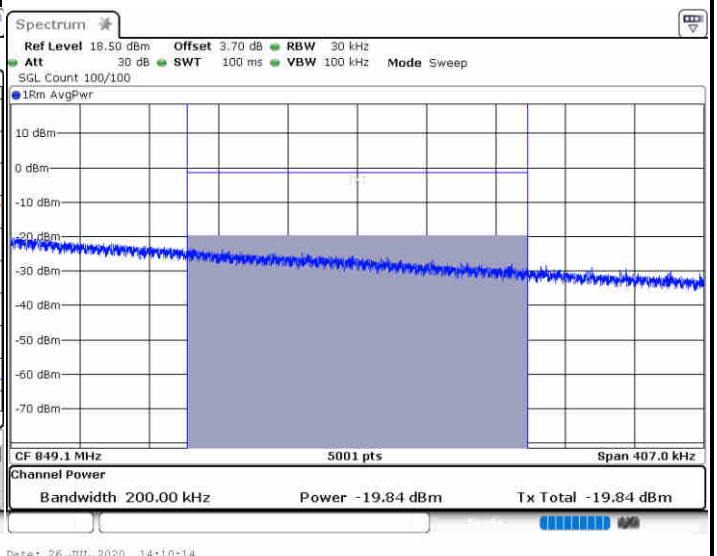
NR N5+7A / 10MHz / QPSK	
Lowest Band Edge / 1 RB	**Highest Band Edge / 1 RB**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

NR N5+7A / 20MHz / BPSK	
Lowest Band Edge / 1 RB	**Channel Power < -13dBm Pass**
	
Lowest Band Edge / 1 RB	**Channel Power < -13dBm Pass**
	

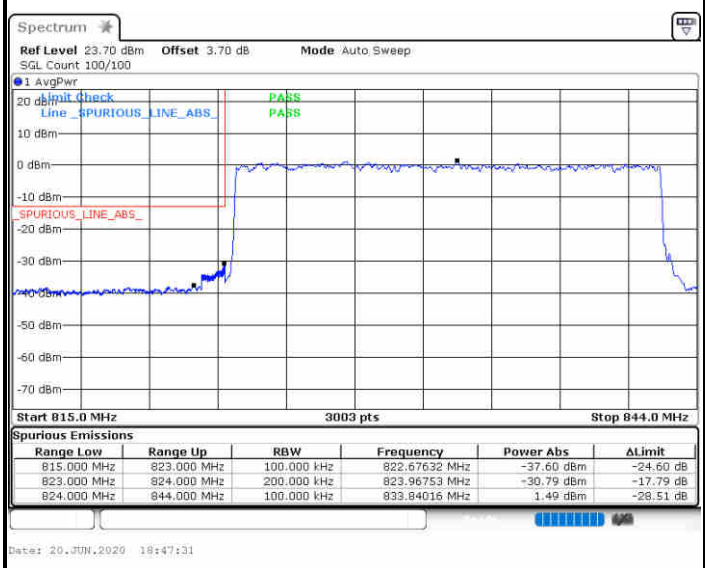
NR N5+7A / 20MHz / BPSK	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**

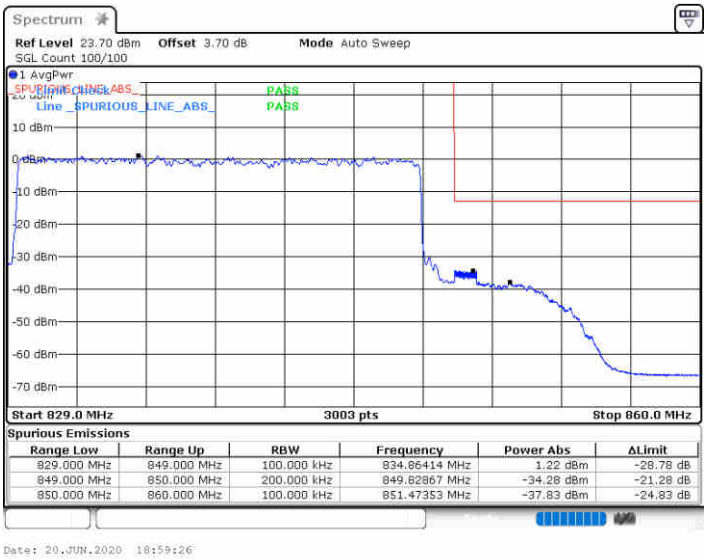




NR N5+7A / 20MHz / QPSK	
Lowest Band Edge / 1 RB	**Channel Power < -13dBm Pass**
	-
Highest Band Edge / 1 RB	**Channel Power < -13dBm Pass**
	

NR N5+7A / 20MHz / QPSK	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**

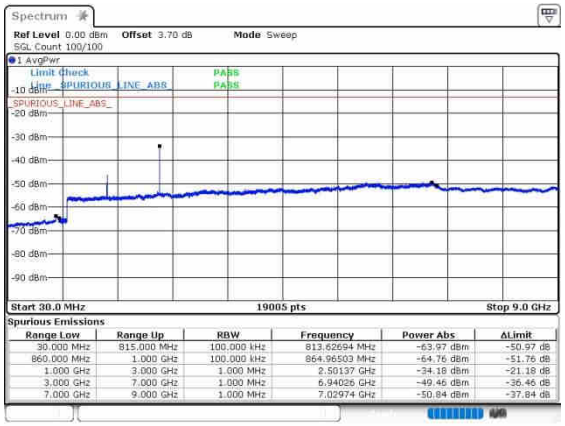




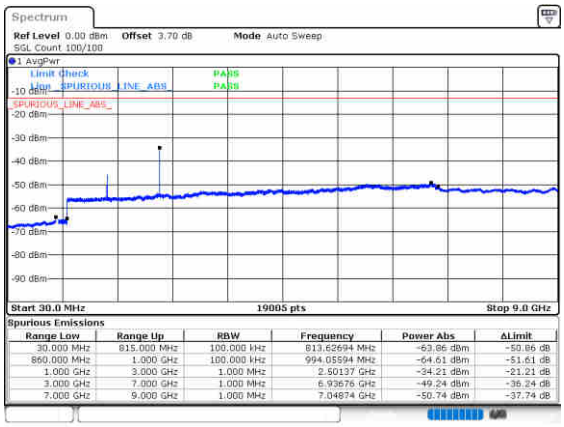
Conducted Spurious Emission

NR N5+7A / 5MHz

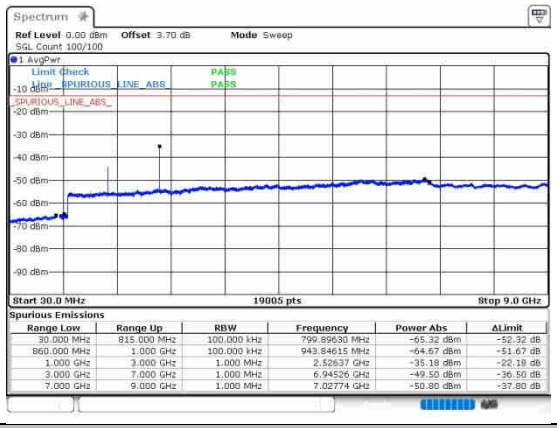
Lowest Channel / BPSK



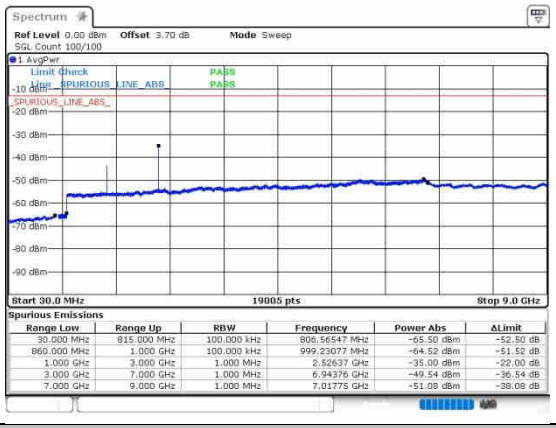
Lowest Channel / QPSK



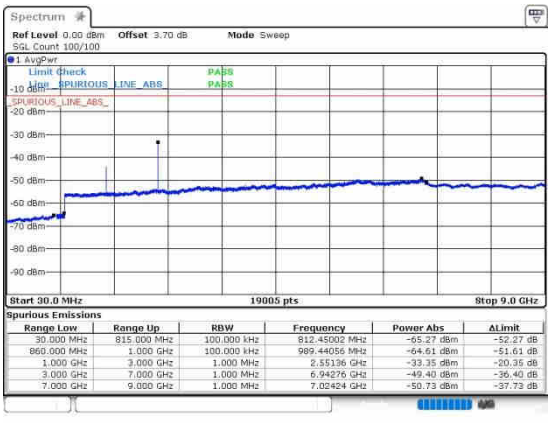
Middle Channel / BPSK



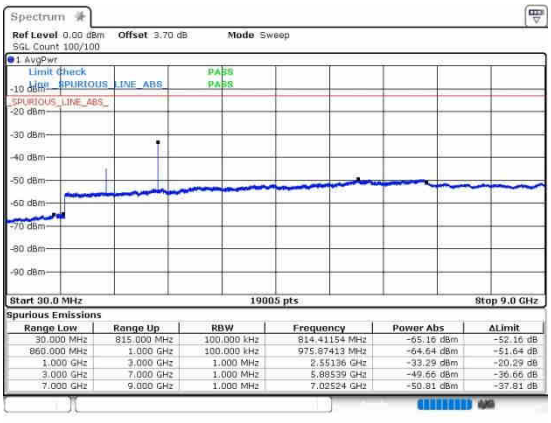
Middle Channel / QPSK

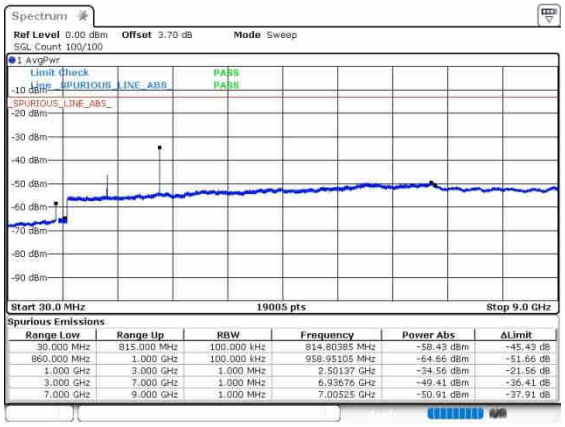
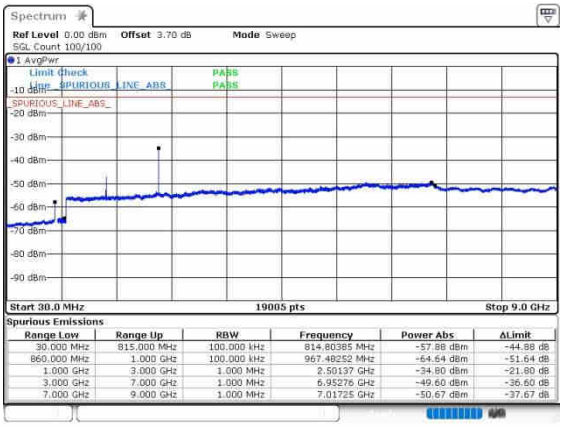
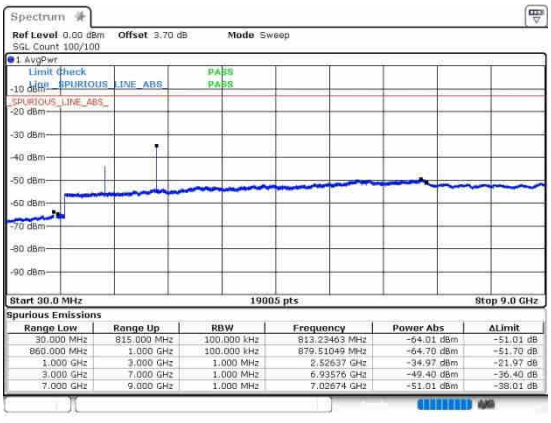
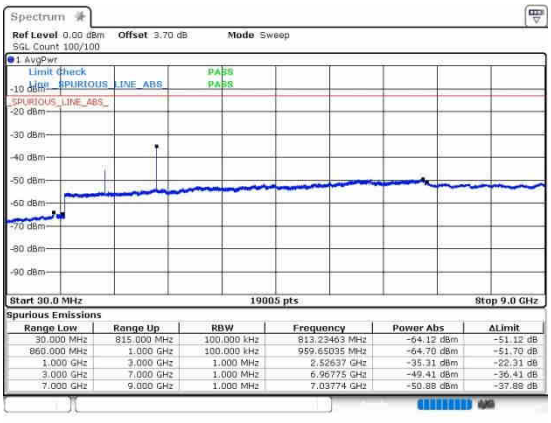
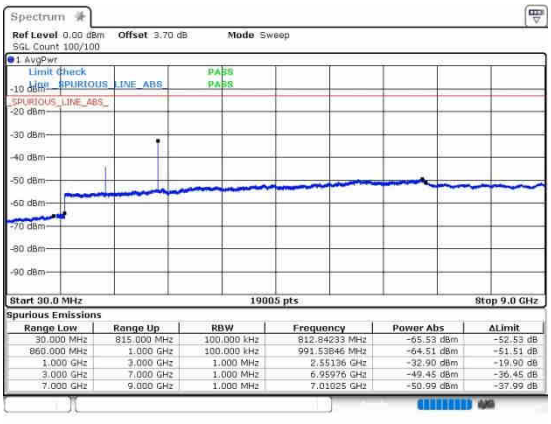
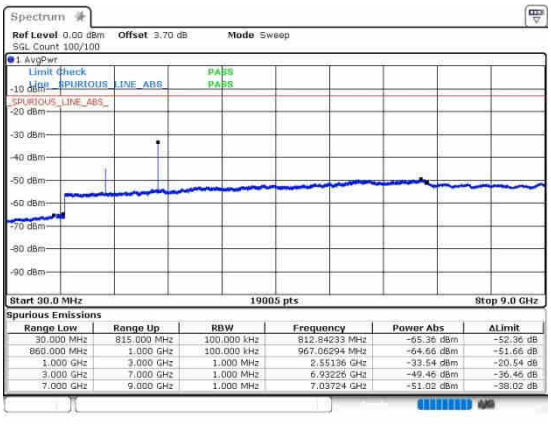


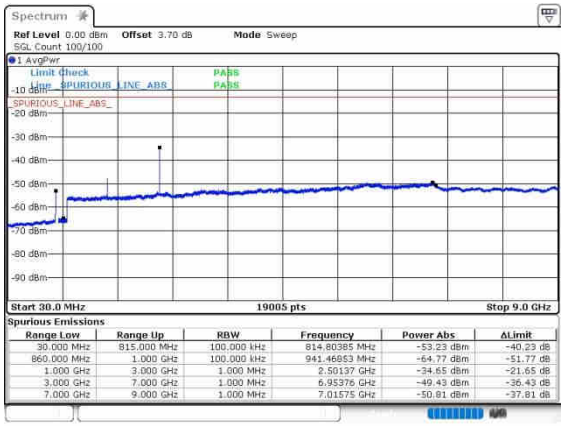
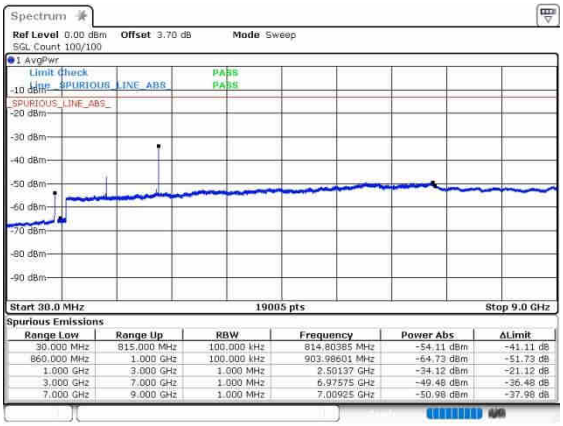
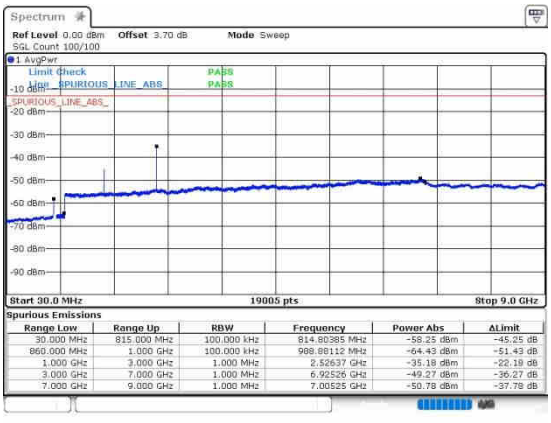
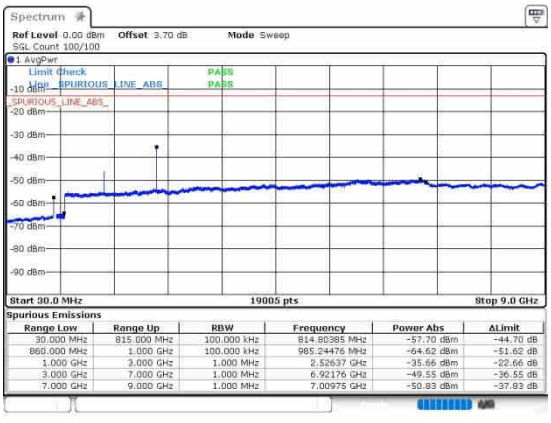
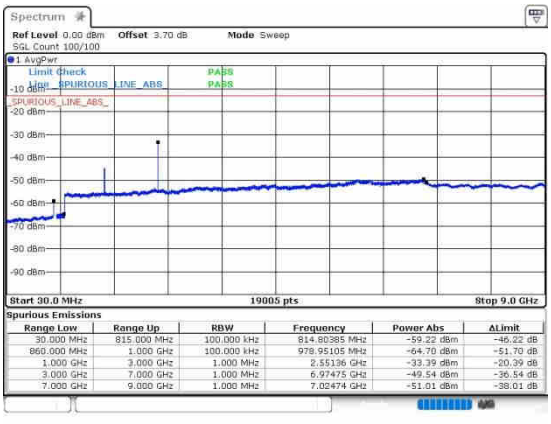
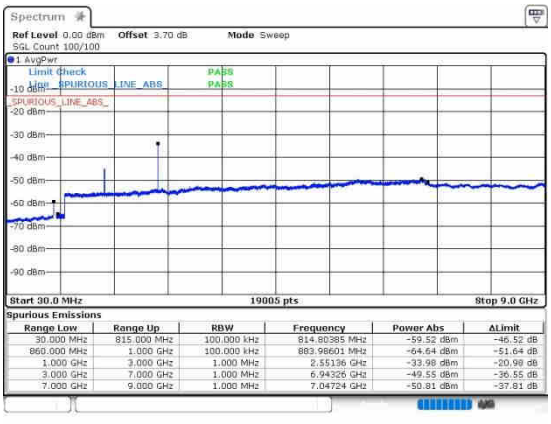
Highest Channel / BPSK



Highest Channel / QPSK



NR N5+7A / 10MHz	
Lowest Channel / BPSK	**Lowest Channel / QPSK**
	
Middle Channel / BPSK	**Middle Channel / QPSK**
	
Highest Channel / BPSK	**Highest Channel / QPSK**
	

NR N5+7A / 20MHz	
Lowest Channel / BPSK	**Lowest Channel / QPSK**
	
Middle Channel / BPSK	**Middle Channel / QPSK**
	
Highest Channel / BPSK	**Highest Channel / QPSK**
	

Frequency Stability

Test Conditions		N5+7A (BPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	NR 20MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0012	PASS
40	Normal Voltage	0.0011	
30	Normal Voltage	0.0012	
20(Ref.)	Normal Voltage	0.0012	
10	Normal Voltage	0.0011	
0	Normal Voltage	0.0016	
-10	Normal Voltage	0.0012	
-20	Normal Voltage	0.0018	
-30	Normal Voltage	0.0013	
20	Maximum Voltage	0.0023	
20	Normal Voltage	0.0015	
20	Battery End Point	0.0012	

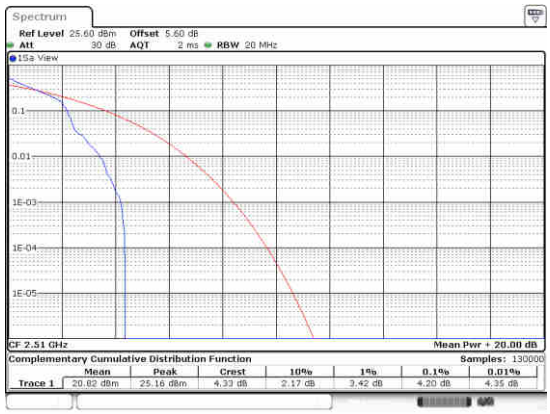
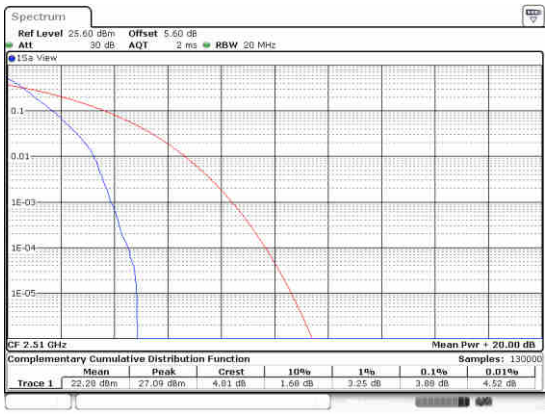
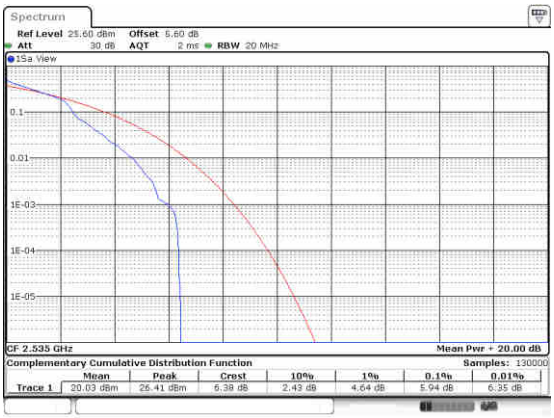
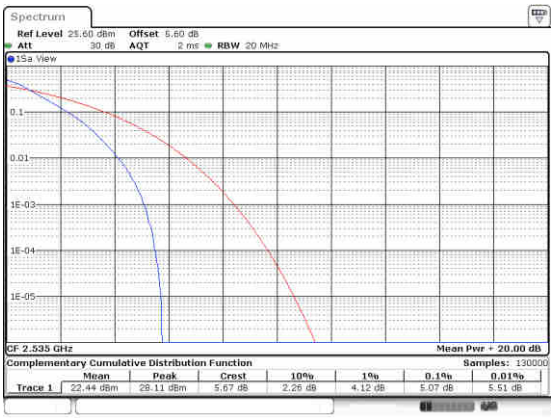
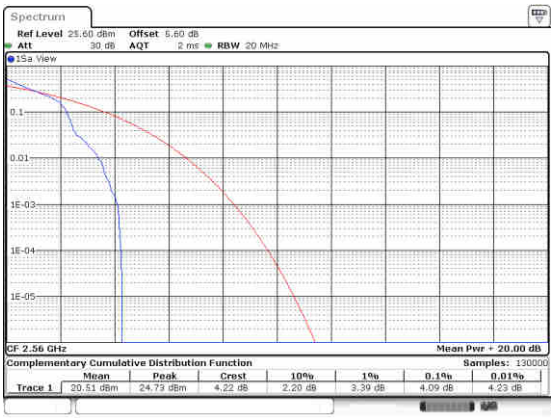
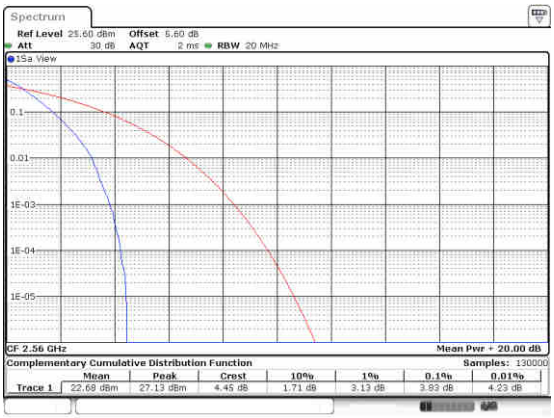
Note:

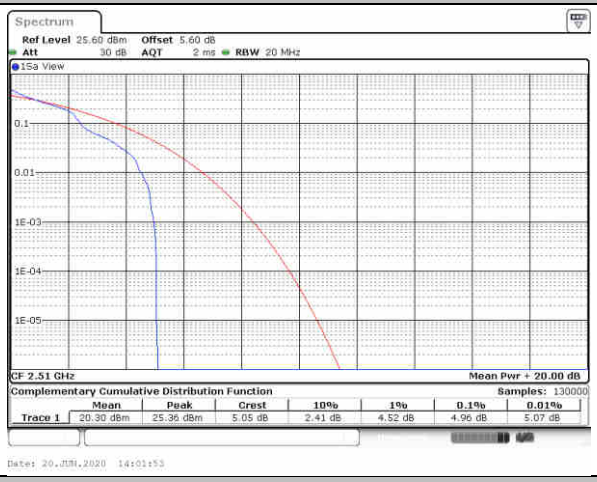
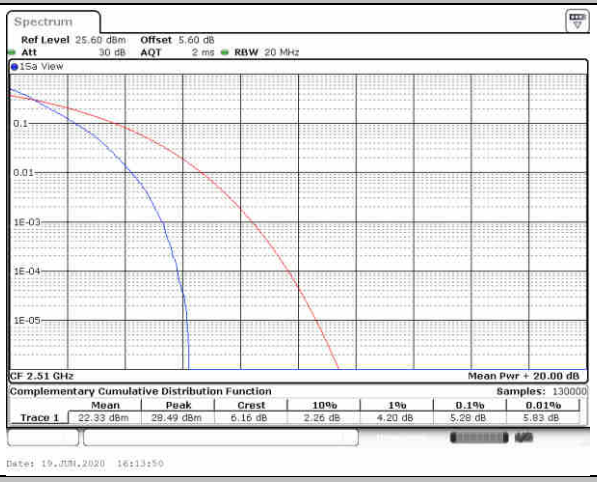
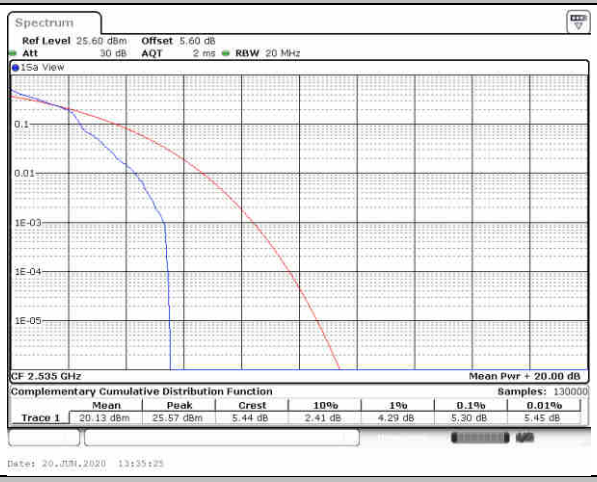
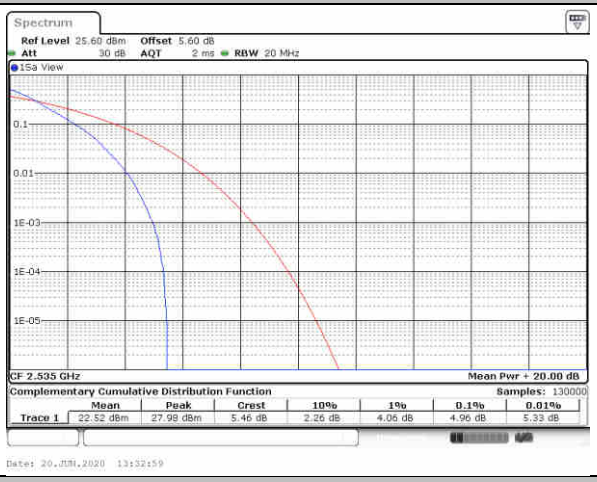
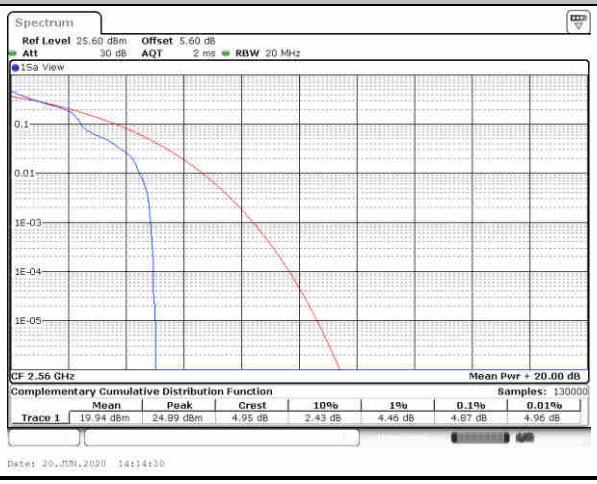
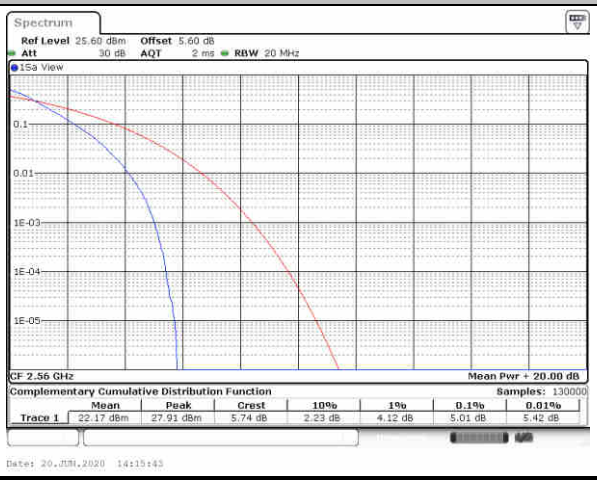
1. Normal Voltage =3.85 V.；Battery End Point (BEP) =3.6 V.；Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

5G NR n7

Peak-to-Average Ratio

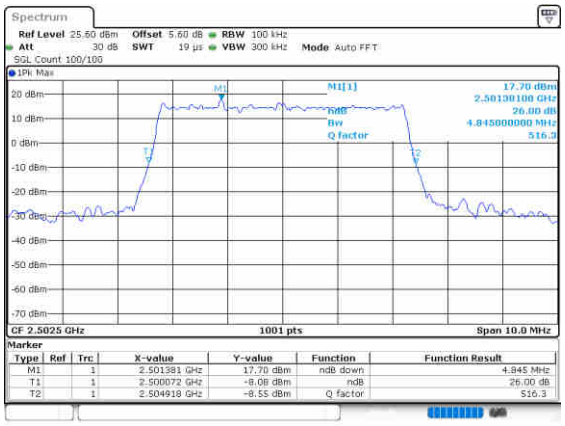
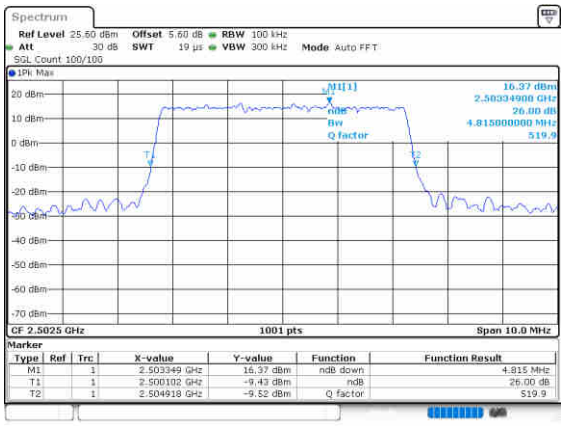
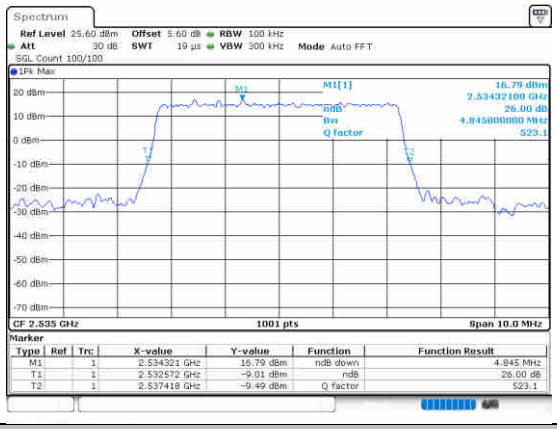
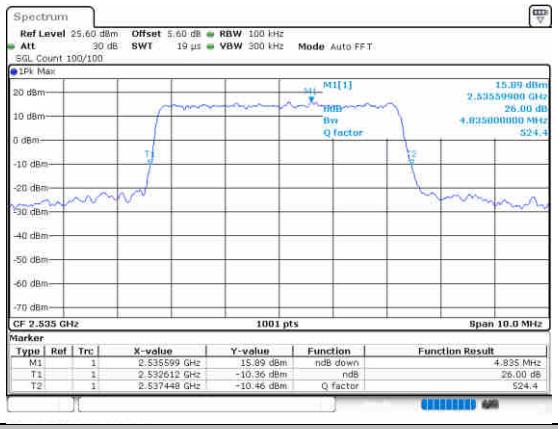
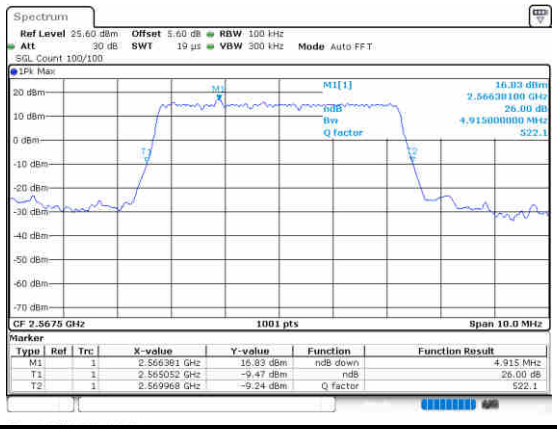
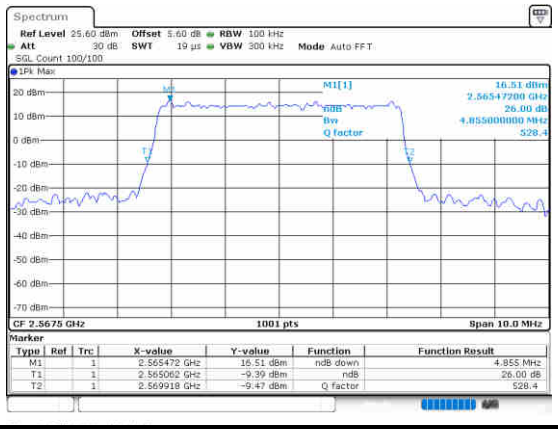
Mode	NR N7 / 20MHz				
Mod.	BPSK		QPSK		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.20	3.88	4.96	5.28	PASS
Middle CH	5.94	5.07	5.30	4.96	
Highest CH	4.09	3.83	4.87	5.01	

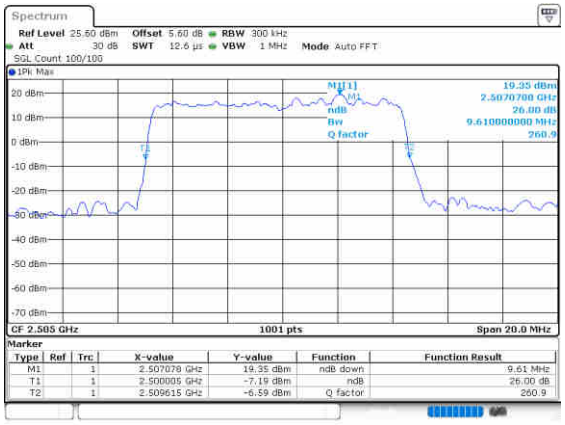
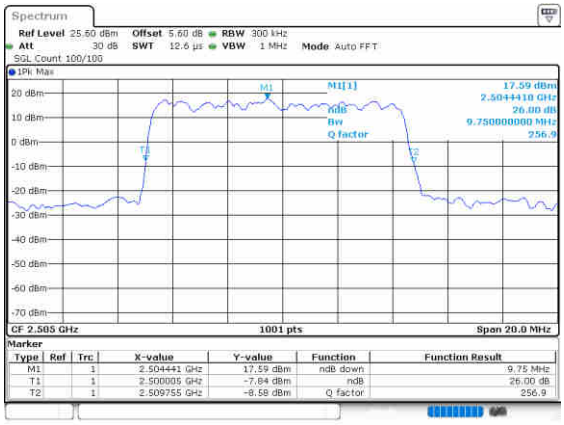
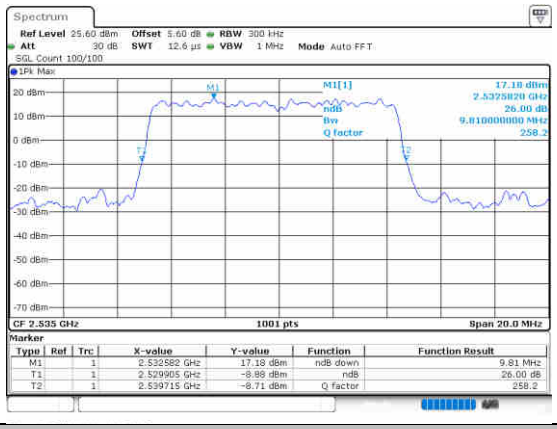
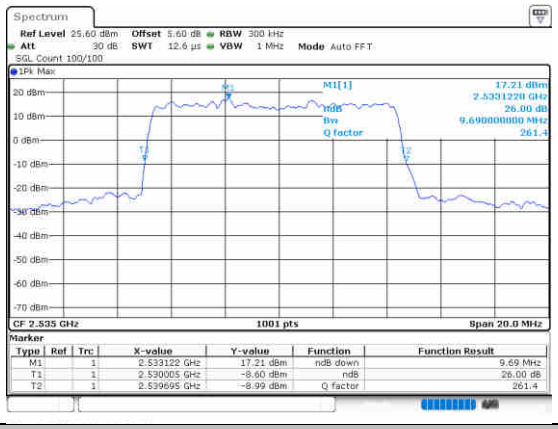
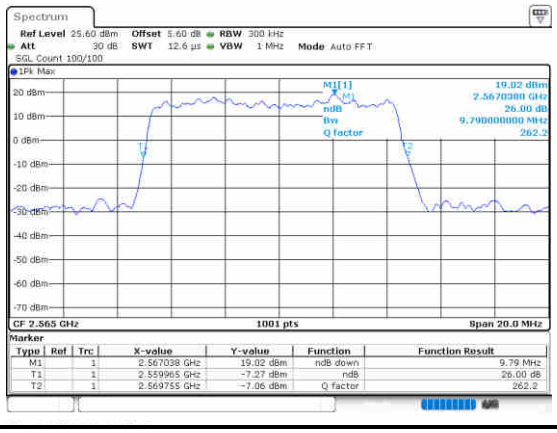
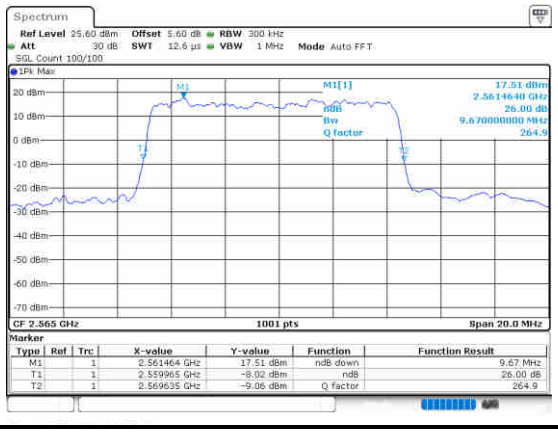
NR N7 / 20MHz / BPSK	
Lowest Channel / 1RB	**Lowest Channel / Full RB**
	
Middle Channel / 1RB	**Middle Channel / Full RB**
	
Highest Channel / 1RB	**Highest Channel / Full RB**
	

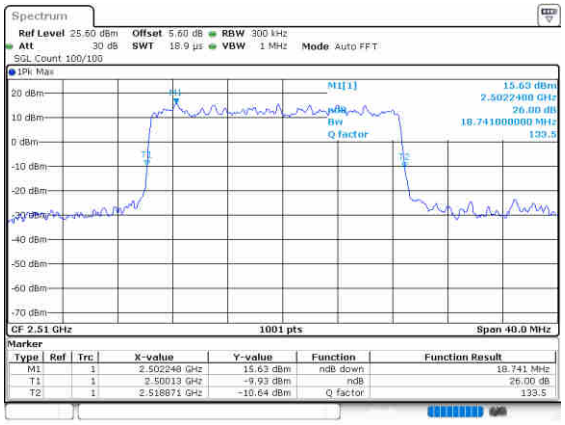
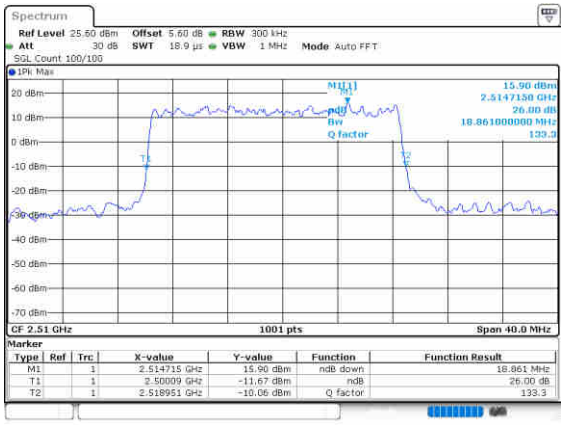
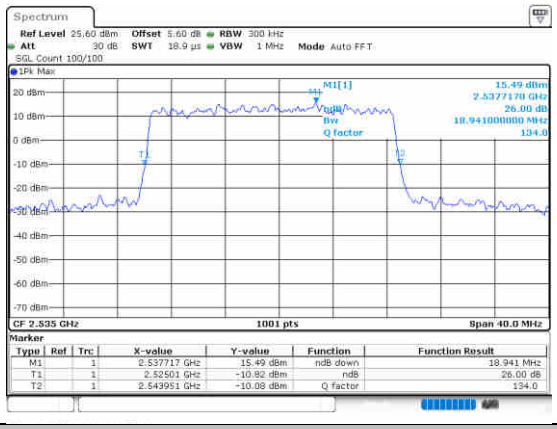
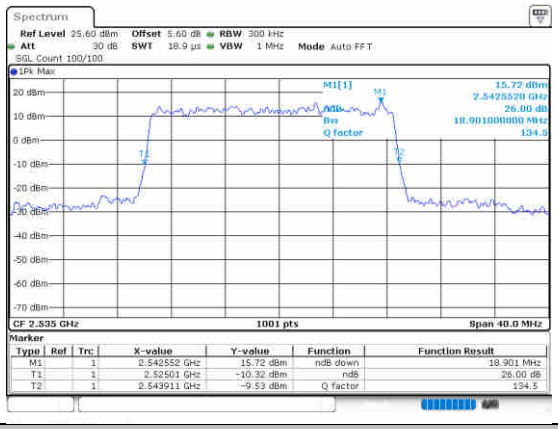
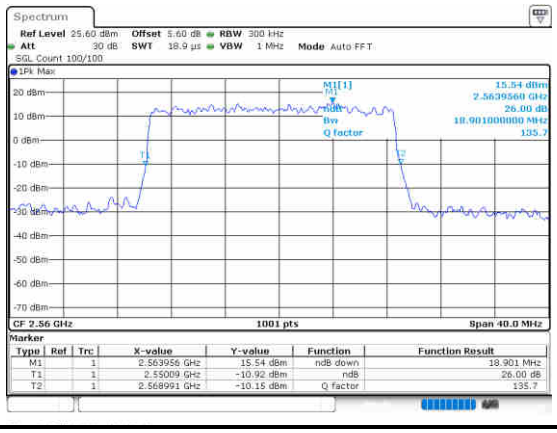
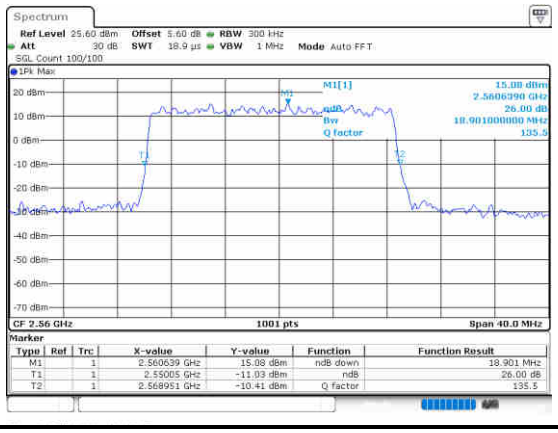
NR N7 / 20MHz / QPSK	
Lowest Channel / 1RB	**Lowest Channel / Full RB**
	
Middle Channel / 1RB	**Middle Channel / Full RB**
	
Highest Channel / 1RB	**Highest Channel / Full RB**
	

26dB Bandwidth

Mode	NR N7 : 26dB BW(MHz)					
BW	5 MHz		10 MHz		20 MHz	
Mod.	BPSK	QPSK	BPSK	QPSK	BPSK	QPSK
Lowest CH	4.845	4.815	9.61	9.75	18.741	18.861
Middle CH	4.845	4.835	9.81	9.69	18.941	18.901
Highest CH	4.915	4.855	9.79	9.67	18.901	18.901

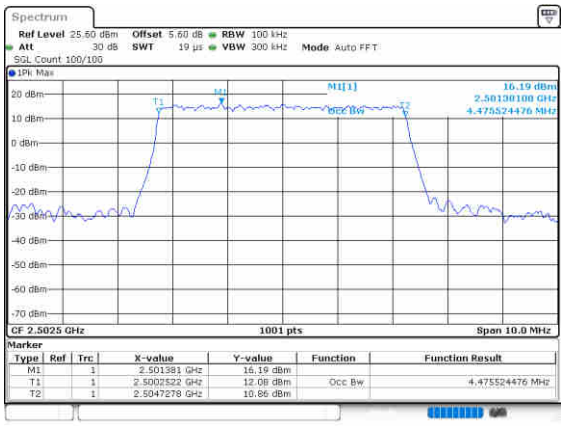
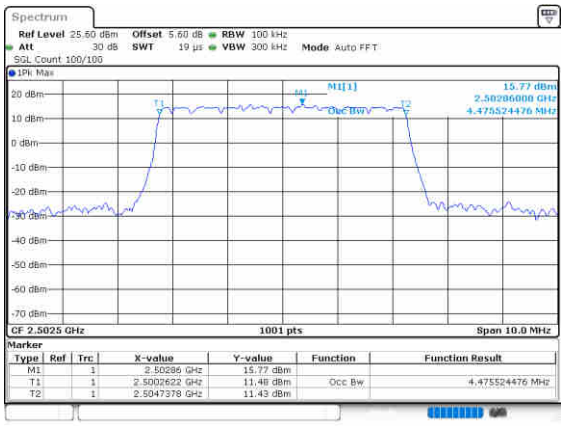
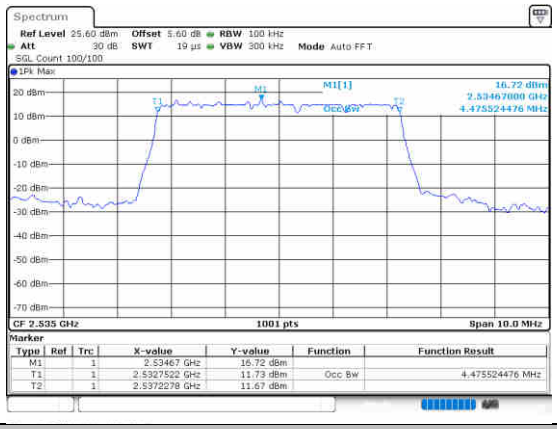
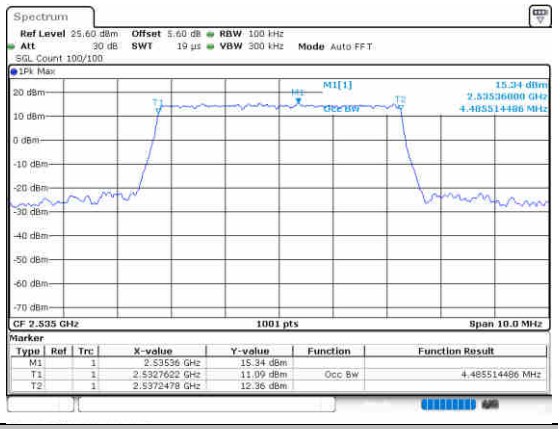
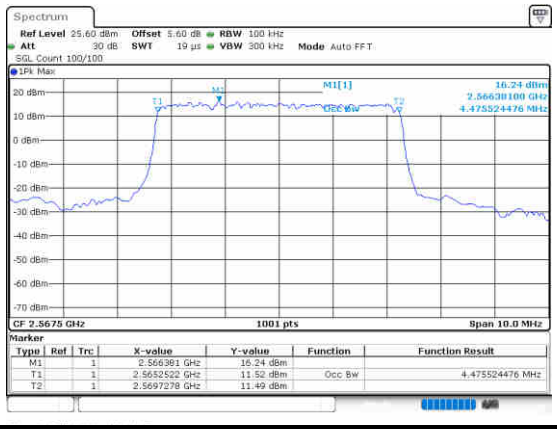
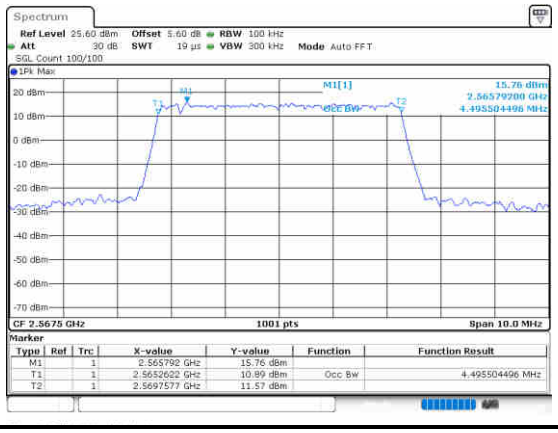
NR N7	
Lowest Channel / 5MHz / BPSK	**Lowest Channel / 5MHz / QPSK**
	
Middle Channel / 5MHz / BPSK	**Middle Channel / 5MHz / QPSK**
	
Highest Channel / 5MHz / BPSK	**Highest Channel / 5MHz / QPSK**
	

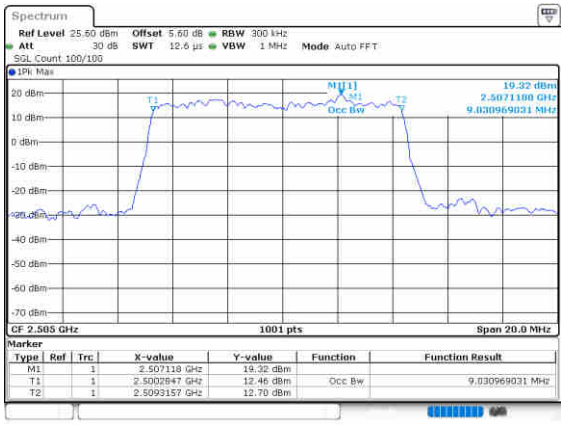
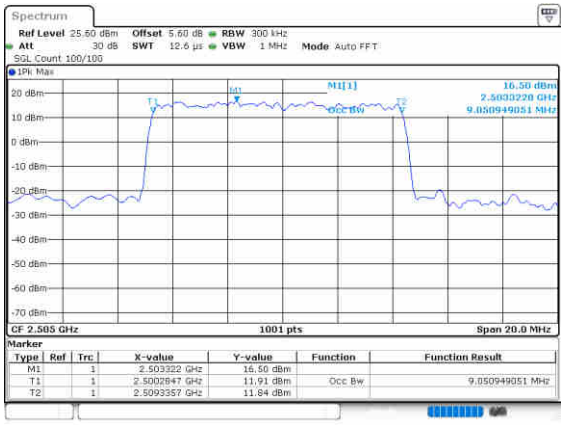
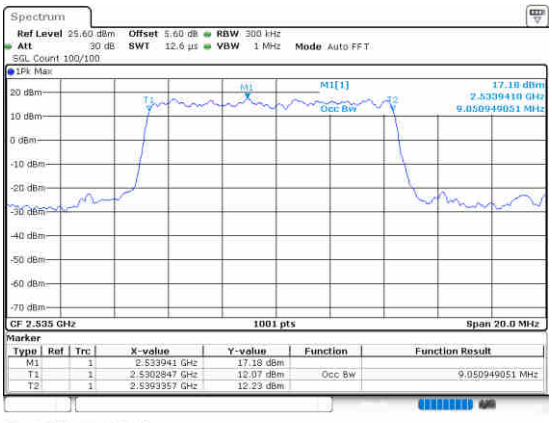
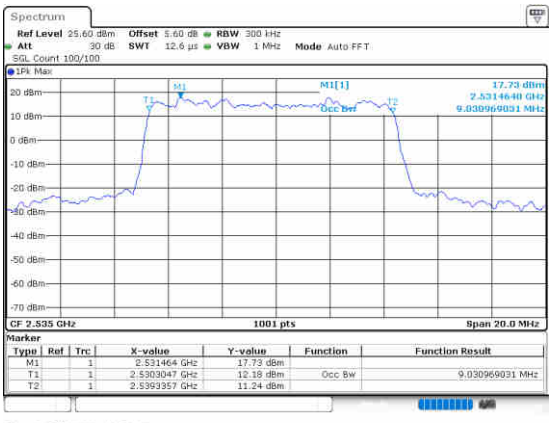
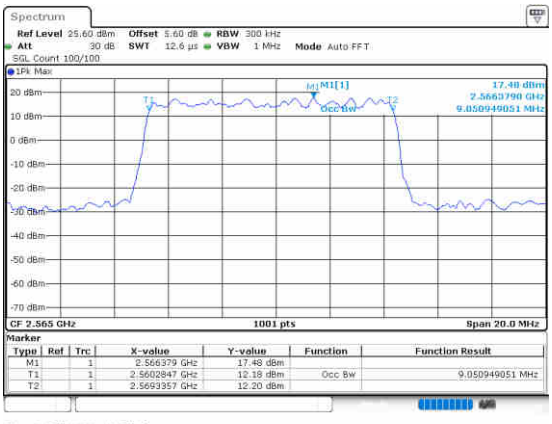
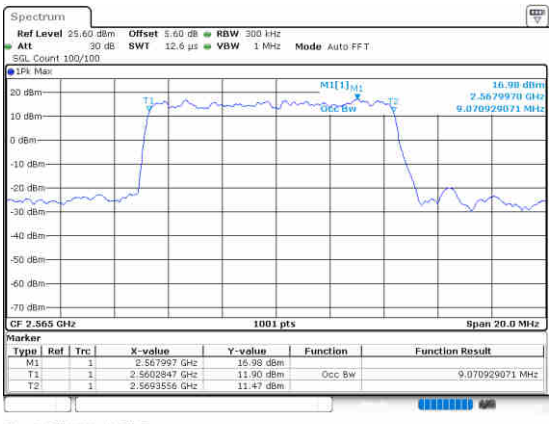
NR N7	
Lowest Channel / 10MHz / BPSK	**Lowest Channel / 10MHz / QPSK**
	
Middle Channel / 10MHz / BPSK	**Middle Channel / 10MHz / QPSK**
	
Highest Channel / 10MHz / BPSK	**Highest Channel / 10MHz / QPSK**
	

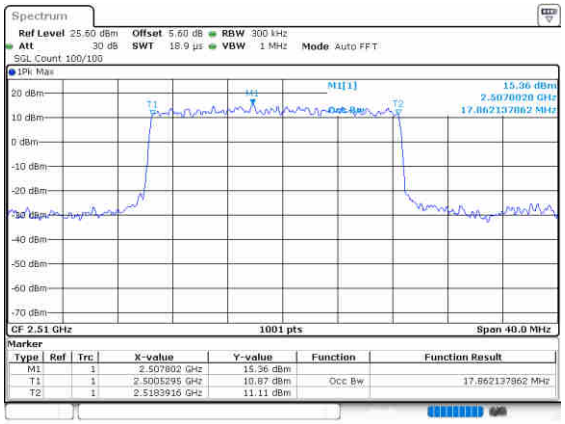
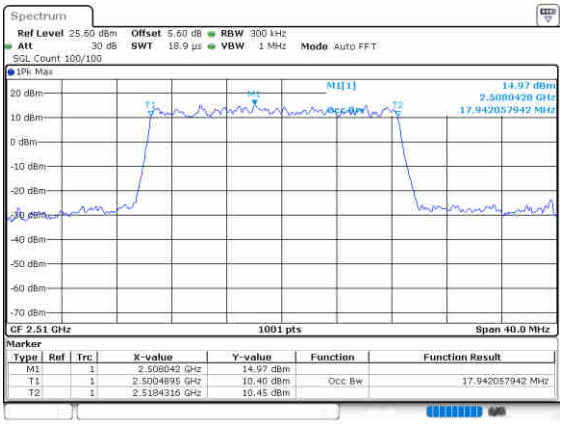
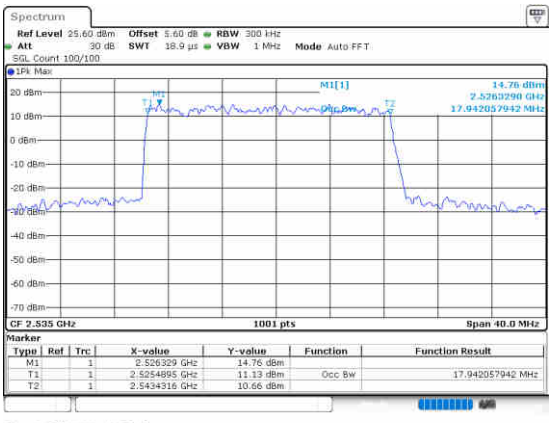
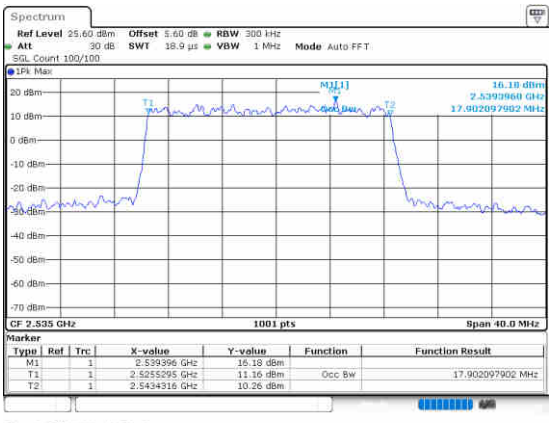
NR N7	
Lowest Channel / 20MHz / BPSK	**Lowest Channel / 20MHz / QPSK**
	
Middle Channel / 20MHz / BPSK	**Middle Channel / 20MHz / QPSK**
	
Highest Channel / 20MHz / BPSK	**Highest Channel / 20MHz / QPSK**
	

Occupied Bandwidth

Mode	NR N7 : OB BW(MHz)					
BW	5 MHz		10 MHz		20 MHz	
Mod.	BPSK	QPSK	BPSK	QPSK	BPSK	QPSK
Lowest CH	4.48	4.48	9.03	9.05	17.86	17.94
Middle CH	4.48	4.49	9.05	9.03	17.94	17.90
Highest CH	4.48	4.50	9.05	9.07	17.86	17.94

NR N7	
Lowest Channel / 5MHz / BPSK	**Lowest Channel / 5MHz / QPSK**
	
Middle Channel / 5MHz / BPSK	**Middle Channel / 5MHz / QPSK**
	
Highest Channel / 5MHz / BPSK	**Highest Channel / 5MHz / QPSK**
	

NR N7	
Lowest Channel / 10MHz / BPSK	**Lowest Channel / 10MHz / QPSK**
	
Middle Channel / 10MHz / BPSK	**Middle Channel / 10MHz / QPSK**
	
Highest Channel / 10MHz / BPSK	**Highest Channel / 10MHz / QPSK**
	

NR N7	
Lowest Channel / 20MHz / BPSK	**Lowest Channel / 20MHz / QPSK**
	
Middle Channel / 20MHz / BPSK	**Middle Channel / 20MHz / QPSK**
	
Highest Channel / 20MHz / BPSK	**Highest Channel / 20MHz / QPSK**