

FCC RF Test Report

APPLICANT : OnePlus Technology (Shenzhen) Co., Ltd
EQUIPMENT : Smart Phone
BRAND NAME : ONEPLUS
MODEL NAME : GM1925
FCC ID : 2ABZ2-GM1925
STANDARD : 47 CFR Part 2, 27
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)

The product was received on Apr. 22, 2019 and completely tested on Jun. 05, 2019. 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.

Derreck Chen

Reviewed by: Derreck Chen / Supervisor

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG942205F	Rev. 01	Initial issue of report	Jun. 10, 2019

SUMMARY OF TEST RESULT

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.4	§2.1046	Conducted Output Power	PASS	-
	§27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 41)	PASS	-
3.5	§2.1049	Occupied Bandwidth	PASS	-
3.6	§2.1051 §27.53(m)(4)	Conducted Band Edge Measurement (Band 41)	PASS	-
3.7	§2.1051 §27.53(m)(4)	Conducted Spurious Emission (Band 41)	PASS	-
3.8	§2.1055 §27.54	Frequency Stability Temperature & Voltage	PASS	-
4.4	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (Band 41)	PASS	Under limit 6.02 dB at 5376.000 MHz



1 General Description

1.1 Applicant

OnePlus Technology (Shenzhen) Co., Ltd

18C02, 18C03, 18C04 and 18C05, Shum Yip Terra Building, Binhe Avenue North, Futian District, Shenzhen

1.2 Product Feature of Equipment Under Test

Product Feature	
Equipment	Smart Phone
Brand Name	ONEPLUS
Model Name	GM1925
FCC ID	2ABZ2-GM1925
EUT supports Radios application	GSM/CDMA/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 NFC/GNSS
HW Version	31
SW Version	9.5.5.GM25CC
EUT Stage	Production Unit

1.3 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	n41: 2516.01 MHz ~ 2670 MHz
Rx Frequency	n41: 2516.01 MHz ~ 2670 MHz
Bandwidth	40MHz, 50MHz, 60MHz, 80MHz, 90MHz, 100MHz
Maximum Output Power to Antenna	EN-DC_n41_41A: 25.37 dBm EN-DC_n41_26A: 24.57 dBm
Antenna Gain	Band 41 : -4.0 dBi
Type of Modulation	CP-OFDM : QPSK/16QAM/64QAM

Remark:

1. There are two antennas (Top or Bottom Antenna) which support LTE Band 26, for RSE test item all of the two antennas are tested, for EIRP test item only the Top Antenna with higher output power is shown on the report.
2. For Conducted Bandedge and Conducted Spurious Emission test items, only the 50M/80M/100MHz NR Bandwidth with higher output power are tested.

1.4 Modification of EUT

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

1.5 Maximum EIRP Power, Frequency Tolerance, and Emission Designator

EN-DC_41A_n41A (QPSK)						
NR Bandwidth [MHz]	LTE Bandwidth [MHz]	NR Frequency [MHz]	LTE Frequency [MHz]	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
40	20	2516.01~2670	2506~2680	38M0G7D	-	0.1366
50	20	2521.02~2664.99	2506~2680	47M7G7D	-	0.1395
60	20	2526~2659.98	2506~2680	57M9G7D	-	0.1343
80	20	2536.02~2649.99	2506~2680	77M2G7D	-	0.1359
90	20	2541~2644.98	2506~2680	87M6G7D	-	0.1339
100	20	2546.01~2640	2506~2680	97M5G7D	-0.16	0.1338
EN-DC_41A_n41A (16QAM)						
NR Bandwidth [MHz]	LTE Bandwidth [MHz]	NR Frequency [MHz]	LTE Frequency [MHz]	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
40	20	2516.01~2670	2506~2680	38M0W7D	-	0.1347
50	20	2521.02~2664.99	2506~2680	47M8W7D	-	0.1371
60	20	2526~2659.98	2506~2680	57M8W7D	-	0.1360
80	20	2536.02~2649.99	2506~2680	77M5W7D	-	0.1346
90	20	2541~2644.98	2506~2680	87M8W7D	-	0.1286
100	20	2546.01~2640	2506~2680	97M3W7D	-	0.1364
EN-DC_41A_n41A (64QAM)						
NR Bandwidth [MHz]	LTE Bandwidth [MHz]	NR Frequency [MHz]	LTE Frequency [MHz]	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
40	20	2516.01~2670	2506~2680	38M0W7D	-	0.1370
50	20	2521.02~2664.99	2506~2680	47M7W7D	-	0.1253
60	20	2526~2659.98	2506~2680	57M9W7D	-	0.1287
80	20	2536.02~2649.99	2506~2680	77M5W7D	-	0.1267
90	20	2541~2644.98	2506~2680	87M8W7D	-	0.1294
100	20	2546.01~2640	2506~2680	97M5W7D	-	0.1286



EN-DC_26A_n41A (QPSK)						
NR Bandwidth [MHz]	LTE Bandwidth [MHz]	NR Frequency [MHz]	LTE Frequency [MHz]	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
40	15	2516.01~2670	821.5~841.5	38M0G7D	-	0.1086
50	15	2521.02~2664.99	821.5~841.5	47M6G7D	-	0.1088
60	15	2526~2659.98	821.5~841.5	57M8G7D	-	0.1080
80	15	2536.02~2649.99	821.5~841.5	77M4G7D	-	0.1151
90	15	2541~2644.98	821.5~841.5	87M4G7D	-	0.1031
100	15	2546.01~2640	821.5~841.5	97M3G7D	-0.13	0.1105
EN-DC_26A_n41A (16QAM)						
NR Bandwidth [MHz]	LTE Bandwidth [MHz]	NR Frequency [MHz]	LTE Frequency [MHz]	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
40	15	2516.01~2670	821.5~841.5	38M0W7D	-	0.1079
50	15	2521.02~2664.99	821.5~841.5	47M5W7D	-	0.1044
60	15	2526~2659.98	821.5~841.5	57M8W7D	-	0.1116
80	15	2536.02~2649.99	821.5~841.5	77M5W7D	-	0.1139
90	15	2541~2644.98	821.5~841.5	87M4W7D	-	0.1059
100	15	2546.01~2640	821.5~841.5	97M3W7D	-	0.1071
EN-DC_26A_n41A (64QAM)						
NR Bandwidth [MHz]	LTE Bandwidth [MHz]	NR Frequency [MHz]	LTE Frequency [MHz]	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
40	15	2516.01~2670	821.5~841.5	38M0W7D	-	0.1093
50	15	2521.02~2664.99	821.5~841.5	47M7W7D	-	0.1061
60	15	2526~2659.98	821.5~841.5	58M0W7D	-	0.1046
80	15	2536.02~2649.99	821.5~841.5	77M5W7D	-	0.1113
90	15	2541~2644.98	821.5~841.5	87M6W7D	-	0.0998
100	15	2546.01~2640	821.5~841.5	97M3W7D	-	0.1040



1.6 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

1.7 Applicable Standards

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

- 47 CFR Part 2, 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:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

2.1 Test Mode

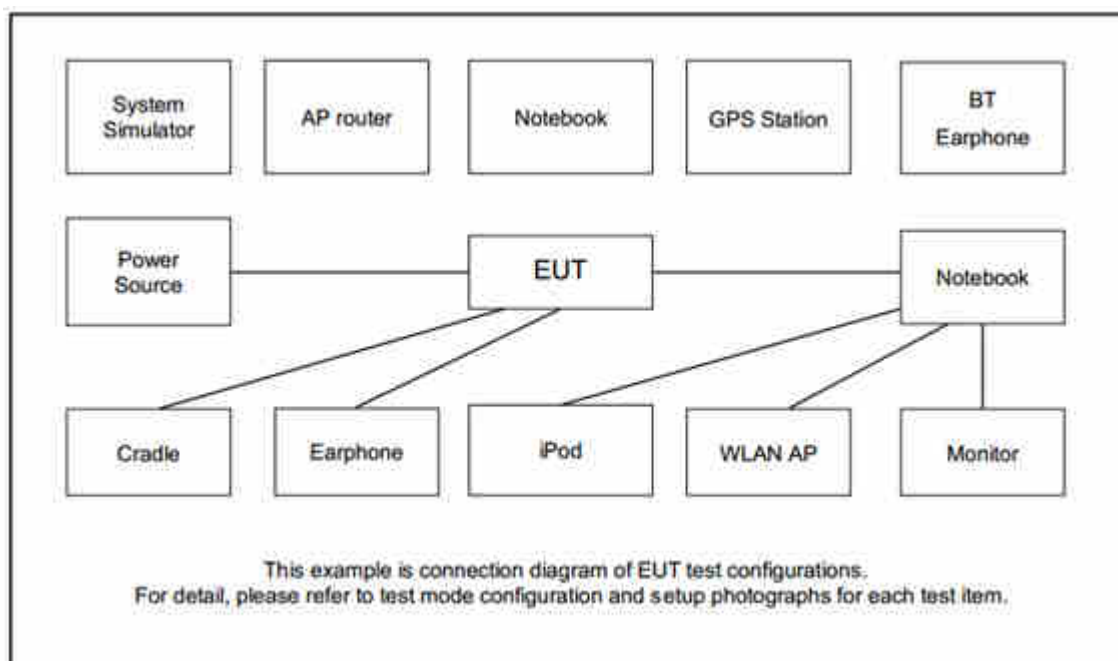
Antenna port conducted and radiated test items are performed according to KDB 971168 D01 Power Meas License Digital Systems v03r01 with maximum output power.

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



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	MT8820C	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 + attenuator factor.

Following shows an offset computation example with cable loss 14.0 dB and 10dB attenuator.

Example :

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)} \\ &= 14.0 + 10 = 24.0 \text{ (dB)}\end{aligned}$$

2.5 Frequency List of Low/Middle/High Channels

EN-DC Band 41 Channel and Frequency List (DC_41A_n41A)				
NR Bandwidth [MHz]	LTE Bandwidth [MHz]	Channel	NR Frequency [MHz]	LTE Frequency [MHz]
40	20	Low	2516.01	2506
		Mid.	2592.99	2593
		High	2670	2680
50	20	Low	2521.02	2506
		Mid.	2592.99	2593
		High	2664.99	2680
60	20	Low	2526	2506
		Mid.	2592.99	2593
		High	2659.98	2680
80	20	Low	2536.02	2506
		Mid.	2592.99	2593
		High	2649.99	2680
90	20	Low	2541	2506
		Mid.	2592.99	2593
		High	2644.98	2680
100	20	Low	2546.01	2506
		Mid.	2592.99	2593
		High	2640	2680



EN-DC Band 41 Channel and Frequency List (DC_26A_n41A)				
NR Bandwidth [MHz]	LTE Bandwidth [MHz]	Channel	NR Frequency [MHz]	LTE Frequency [MHz]
40	20	Low	2516.01	821.5
		Mid.	2592.99	831
		High	2670	841.5
50	20	Low	2521.02	821.5
		Mid.	2592.99	831
		High	2664.99	841.5
60	20	Low	2526	821.5
		Mid.	2592.99	831
		High	2659.98	841.5
80	20	Low	2536.02	821.5
		Mid.	2592.99	831
		High	2649.99	841.5
90	20	Low	2541	821.5
		Mid.	2592.99	831
		High	2644.98	841.5
100	20	Low	2546.01	821.5
		Mid.	2592.99	831
		High	2640	841.5

3 Conducted Test Items

3.1 Measuring Instruments

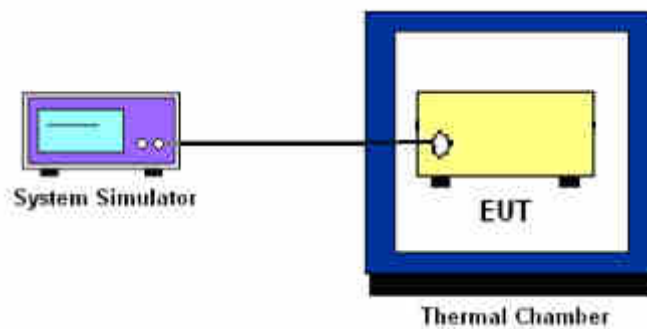
See list of measuring instruments of this test report.

3.2 Test Setup

3.2.1 Conducted Output Power



3.2.2 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 EIRP of mobile transmitters must not exceed 2 Watts for LTE Band 41.

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 Occupied Bandwidth

3.5.1 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.

3.5.2 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.

3.6 Conducted Band Edge

3.6.1 Description of Conducted Band Edge Measurement

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 than $43 + 10 \log (P)$ 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.

3.6.2 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 $\geq 1\%$ 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 $43 + 10\log(P)$ dB below the transmitter power P(Watts)

$$= P(W) - [43 + 10\log(P)] \text{ (dB)}$$

$$= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)} = -13\text{dBm}.$$

9. For LTE Band 41, the other 40 dB, and 55 dB have additionally applied same calculation above.

3.7 Conducted Spurious Emission

3.7.1 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 Band 41:

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 10th harmonic.

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 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 $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[43 + 10\log(P)]$ (dB)
 $= -13\text{dBm}$.
11. For Band 41
The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [55 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[55 + 10\log(P)]$ (dB)
 $= -25\text{dBm}$.

3.8 Frequency Stability

3.8.1 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 $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) of the center frequency.

3.8.2 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.

3.8.3 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 $20\pm 5^{\circ}\text{C}$ 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.

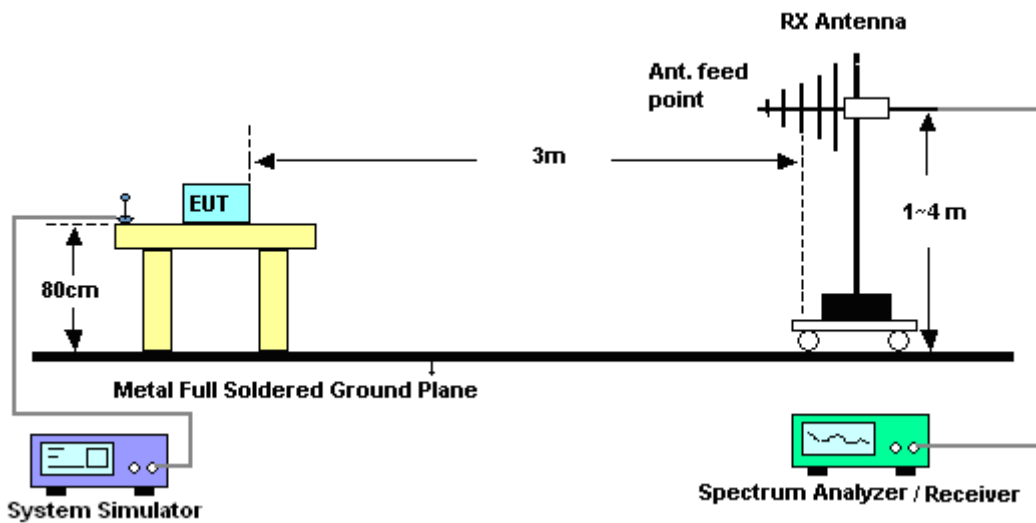
4 Radiated Test Items

4.1 Measuring Instruments

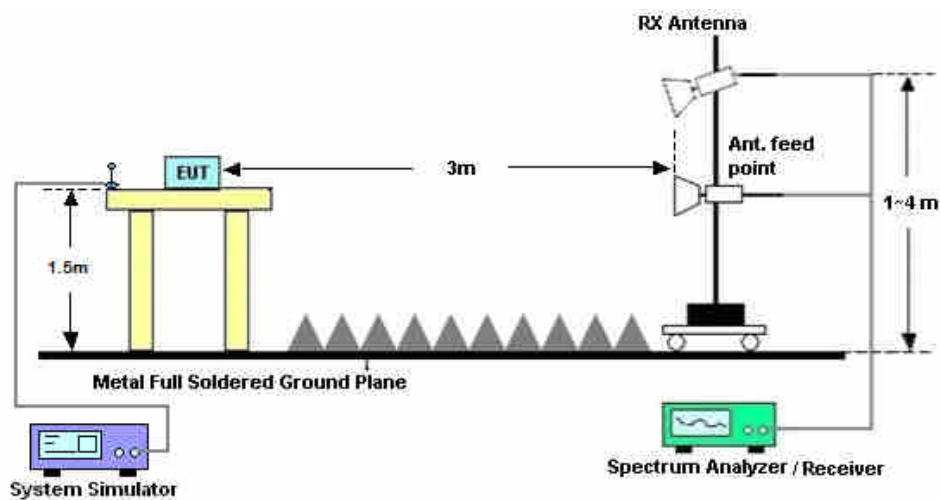
See list of measuring instruments of this test report.

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 Band 41:

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. $EIRP \text{ (dBm)} = S.G. \text{ Power} - Tx \text{ Cable Loss} + Tx \text{ Antenna Gain}$
11. $ERP \text{ (dBm)} = EIRP - 2.15$
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)] \text{ (dB)}$
 $= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$
 $= -13\text{dBm}.$

13. For Band 41:

The limit line is derived from $55 + 10\log(P)$ 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. 18, 2019	May 22, 2019~ Jun. 05, 2019	Apr. 17, 2020	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhonggroup	LP-150U	H2014081803	-40~+150°C	Dec. 22, 2018	May 22, 2019~ Jun. 05, 2019	Dec. 21, 2019	Conducted (TH01-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Apr. 19, 2019	May 27, 2019~ May 29, 2019	Apr. 18, 2020	Radiation (03CH02-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz~2GHz	Jun. 05, 2018	May 27, 2019~ May 29, 2019	Jun. 04, 2019	Radiation (03CH02-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1355	1GHz~18GHz	Jan. 07, 2019	May 27, 2019~ May 29, 2019	Jan. 06, 2020	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 30, 2018	May 27, 2019~ May 29, 2019	Jul. 29, 2019	Radiation (03CH02-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18GHz~40GHz	Mar. 30, 2019	May 27, 2019~ May 29, 2019	Mar. 29, 2020	Radiation (03CH02-SZ)
LF Amplifier	Burgeon	BPA-530	102211	0.01~3000Mhz	Oct. 20, 2018	May 27, 2019~ May 29, 2019	Oct. 19, 2019	Radiation (03CH02-SZ)
HF Amplifier	Agilent	8449B	3008A01023	1GHz~26.5GHz	Oct. 20, 2018	May 27, 2019~ May 29, 2019	Oct. 19, 2019	Radiation (03CH02-SZ)
AC Power Source	Chroma	61601	616010002470	N/A	NCR	May 27, 2019~ May 29, 2019	NCR	Radiation (03CH02-SZ)
Turn Table	Chaintek	T-200	N/A	0~360 degree	NCR	May 27, 2019~ May 29, 2019	NCR	Radiation (03CH02-SZ)
Antenna Mast	Chaintek	MBS-400	N/A	1 m~4 m	NCR	May 21, 2019~ May 22, 2019	NCR	Radiation (03CH02-SZ)

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% ($U = 2Uc(y)$)	2.5 dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.3 dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.7 dB
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Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power) and EIRP

EN-DC n41 + 41A(LTE)													
Combination 40MHz+20MHz(LTE)													
NR Channel	NR Tx Offset	NR Freq.	LTE Channel	LTE Freq.	Modulation	NR		LTE		NR	LTE	Total Measure d Power (dBm)	EIRP (W)
						RB Size	RB offset	RB Size	RB offset	Measure d Power (dBm)	Measure d Power (dBm)		
503202	0	2516.01	39750	2506	QPSK	1	0	1	0	19.93	22.59	24.47	0.1115
						1	105	1	99	21.31	22.31	24.85	0.1216
						106	0	100	0	19.88	20.68	23.31	0.0853
					16QAM	1	0	1	0	20.3	22.73	24.69	0.1173
						1	105	1	99	21.57	22.77	25.22	0.1325
						106	0	100	0	19.87	19.74	22.82	0.0761
					64QAM	1	0	1	0	19.96	22.74	24.58	0.1143
						1	105	1	99	20.93	22.55	24.83	0.1209
						106	0	100	0	19.88	19.76	22.83	0.0764
518598	0	2592.99	40620	2593	QPSK	1	0	1	0	22.1	22.41	25.27	0.1339
						1	105	1	99	20.62	22.33	24.57	0.1140
						106	0	100	0	21.98	22.68	25.35	0.1366
					16QAM	1	0	1	0	21.82	22.6	25.24	0.1330
						1	105	1	99	20.88	22.58	24.82	0.1209
						106	0	100	0	21.94	22.6	25.29	0.1347
					64QAM	1	0	1	0	22.02	22.67	25.37	0.1370
						1	105	1	99	20.68	22.4	24.63	0.1157
						106	0	100	0	21.15	22.71	25.01	0.1262
534000	0	2670	41490	2680	QPSK	1	0	1	0	21.43	22.57	25.05	0.1273
						1	105	1	99	21.06	22.6	24.91	0.1233
						106	0	100	0	21.18	22.73	25.03	0.1269
					16QAM	1	0	1	0	21.44	22.68	25.11	0.1293
						1	105	1	99	21.07	22.73	24.99	0.1256
						106	0	100	0	21.14	22.72	25.01	0.1262
					64QAM	1	0	1	0	20.83	22.52	24.77	0.1193
						1	105	1	99	20.56	22.64	24.73	0.1184
						106	0	100	0	20.75	22.22	24.56	0.1137



EN-DC n41 + 41A(LTE)													
Combination 50MHz+20MHz(LTE)													
NR Channel	NR Tx Offset	NR Freq.	LTE Channel	LTE Freq.	Modulation	NR		LTE		NR	LTE	Total Measure d Power (dBm)	EIRP(W)
						RB Size	RB offset	RB Size	RB offset	Measu red Power (dBm)	Measur ed Power (dBm)		
504204	0	2521.02	39750	2506	QPSK	1	0	1	0	21.34	22.78	25.13	0.1297
						1	132	1	99	21.02	22.59	24.89	0.1226
						133	0	100	0	20.89	20.94	23.93	0.0983
					16QAM	1	0	1	0	20.45	23.04	24.95	0.1243
						1	132	1	99	21.17	22.83	25.09	0.1285
						133	0	100	0	20.23	19.93	23.09	0.0812
					64QAM	1	0	1	0	20.56	22.81	24.84	0.1213
						1	132	1	99	20.43	22.77	24.77	0.1193
						133	0	100	0	20.21	18.92	22.62	0.0728
518598	0	2592.99	40620	2593	QPSK	1	0	1	0	21.19	22.67	25.31	0.1395
						1	132	1	99	21.04	22.61	24.91	0.1232
						133	0	100	0	21.32	22.84	25.16	0.1305
					16QAM	1	0	1	0	21.87	22.8	25.37	0.1371
						1	132	1	99	21.38	22.62	25.05	0.1275
						133	0	100	0	21.25	22.83	25.12	0.1295
					64QAM	1	0	1	0	21.02	22.75	24.98	0.1253
						1	132	1	99	20.47	22.54	24.64	0.1158
						133	0	100	0	20.82	22.79	24.93	0.1238
532998	0	2664.99	41490	2680	QPSK	1	0	1	0	21.17	22.58	24.94	0.1242
						1	132	1	99	20.67	22.65	24.78	0.1197
						133	0	100	0	20.91	22.77	24.95	0.1244
					16QAM	1	0	1	0	21.02	22.81	25.02	0.1264
						1	132	1	99	20.86	22.75	24.92	0.1235
						133	0	100	0	20.83	22.86	24.97	0.1251
					64QAM	1	0	1	0	20.66	22.74	24.83	0.1212
						1	132	1	99	20.18	22.79	24.69	0.1172
						133	0	100	0	20.34	22.4	24.50	0.1122



EN-DC n41 + 41A(LTE)													
Combination 60MHz+20MHz(LTE)													
NR Channel	NR Tx Offset	NR Freq.	LTE Channel	LTE Freq.	Modulation	NR		LTE		NR	LTE	Total Measure d Power (dBm)	EIRP(W)
						RB Size	RB offset	RB Size	RB offset	Measu red Power (dBm)	Measur ed Power (dBm)		
505200	0	2526	39750	2506	QPSK	1	0	1	0	20.17	24.49	24.49	0.1120
						1	161	1	99	21.7	22.24	24.99	0.1256
						162	0	100	0	19.7	20.51	23.13	0.0819
					16QAM	1	0	1	0	20.47	22.7	24.74	0.1185
						1	161	1	99	22.07	22.45	25.27	0.1341
						162	0	100	0	19.59	19.55	22.58	0.0721
					64QAM	1	0	1	0	20.11	22.56	24.52	0.1126
						1	161	1	99	21.27	22.57	24.98	0.1253
						162	0	100	0	19.73	19.57	22.66	0.0735
518598	0	2592.99	40620	2593	QPSK	1	0	1	0	22.15	22.38	25.28	0.1342
						1	161	1	99	21.44	22.22	24.86	0.1218
						162	0	100	0	22.02	22.51	25.28	0.1343
					16QAM	1	0	1	0	22.14	22.5	25.33	0.1360
						1	161	1	99	21.31	22.35	24.87	0.1222
						162	0	100	0	22.03	22.47	25.27	0.1338
					64QAM	1	0	1	0	21.34	22.56	25.00	0.1260
						1	161	1	99	20.83	22.34	24.66	0.1164
						162	0	100	0	21.63	22.5	25.10	0.1287
531996	0	2659.98	41490	2680	QPSK	1	0	1	0	21.7	22.48	25.12	0.1294
						1	161	1	99	21.16	22.58	24.94	0.1241
						162	0	100	0	21.29	22.61	25.01	0.1262
					16QAM	1	0	1	0	21.1	22.62	24.94	0.1241
						1	161	1	99	20.27	22.8	24.73	0.1182
						162	0	100	0	21.35	22.68	25.08	0.1281
					64QAM	1	0	1	0	21.05	22.5	24.85	0.1215
						1	161	1	99	20.48	22.64	24.70	0.1176
						162	0	100	0	20.93	22.22	24.63	0.1157



EN-DC n41 + 41A(LTE)													
Combination 80MHz+20MHz(LTE)													
NR Channel	NR Tx Offset	NR Freq.	LTE Channel	LTE Freq.	Modulation	NR		LTE		NR	LTE	Total Measured Power (dBm)	EIRP(W)
						RB Size	RB offset	RB Size	RB offset	Measured Power (dBm)	Measured Power (dBm)		
507204	0	2536.02	39750	2506	QPSK	1	0	1	0	21.86	22.74	25.33	0.1359
						1	216	1	99	21.74	22.13	24.95	0.1244
						217	0	100	0	20.86	20.47	23.68	0.0929
					16QAM	1	0	1	0	20.6	22.59	24.72	0.1180
						1	216	1	99	20.56	22.56	24.68	0.1171
						217	0	100	0	20.31	19.49	22.93	0.0782
					64QAM	1	0	1	0	20.21	22.44	24.48	0.1116
						1	216	1	99	20.41	22.58	24.64	0.1159
						217	0	100	0	20.03	19.52	22.79	0.0757
518598	0	2592.99	40620	2593	QPSK	1	0	1	0	22.23	22.23	25.14	0.1331
						1	216	1	99	21.52	22.16	24.86	0.1220
						217	0	100	0	21.69	22.44	25.09	0.1286
					16QAM	1	0	1	0	20.09	22.45	24.44	0.1106
						1	216	1	99	21.59	22.33	24.99	0.1255
						217	0	100	0	21.77	22.48	25.15	0.1303
					64QAM	1	0	1	0	21.55	22.35	24.98	0.1253
						1	216	1	99	20.83	22.2	24.58	0.1143
						217	0	100	0	21.36	22.52	24.99	0.1256
529998	0	2649.99	41490	2680	QPSK	1	0	1	0	21.96	22.46	25.23	0.1327
						1	216	1	99	21.2	22.53	24.93	0.1238
						217	0	100	0	21.54	22.61	25.12	0.1294
					16QAM	1	0	1	0	21.34	22.58	25.01	0.1263
						1	216	1	99	21.73	22.77	25.29	0.1346
						217	0	100	0	21.57	22.66	25.16	0.1306
					64QAM	1	0	1	0	21.35	22.58	25.02	0.1264
						1	216	1	99	21.06	22.67	24.95	0.1244
						217	0	100	0	21.09	22.78	25.03	0.1267



EN-DC n41 + 41A(LTE)													
Combination 90MHz+20MHz(LTE)													
NR Channel	NR Tx Offset	NR Freq.	LTE Channel	LTE Freq.	Modulation	NR		LTE		NR	LTE	Total Measure d Power (dBm)	EIRP(W)
						RB Size	RB offset	RB Size	RB offset	Measu red Power (dBm)	Measur ed Power (dBm)		
508200	0	2541	39750	2506	QPSK	1	0	1	0	19.95	22.45	24.39	0.1093
						1	244	1	99	20.4	22.43	24.54	0.1133
						245	0	100	0	19.44	20.59	23.06	0.0806
					16QAM	1	0	1	0	19.68	22.69	24.45	0.1109
						1	244	1	99	20.38	22.52	24.59	0.1146
						245	0	100	0	19.41	19.63	22.53	0.0713
					64QAM	1	0	1	0	19.27	22.49	24.18	0.1043
						1	244	1	99	19.81	22.32	24.25	0.1060
						245	0	100	0	19.44	18.66	22.08	0.0642
518598	0	2592.99	40620	2593	QPSK	1	0	1	0	20.05	22.4	24.39	0.1095
						1	244	1	99	20.27	22.23	24.37	0.1089
						245	0	100	0	21.11	22.58	24.92	0.1235
					16QAM	1	0	1	0	19.86	22.63	24.47	0.1115
						1	244	1	99	20.36	22.37	24.49	0.1120
						245	0	100	0	21.06	22.53	24.87	0.1221
					64QAM	1	0	1	0	19.47	22.43	24.21	0.1049
						1	244	1	99	19.75	22.22	24.17	0.1040
						245	0	100	0	20.73	22.53	24.73	0.1184
528996	0	2644.98	41490	2680	QPSK	1	0	1	0	22.12	22.39	25.27	0.1339
						1	244	1	99	19.69	22.49	24.32	0.1077
						245	0	100	0	21.37	22.61	25.04	0.1272
					16QAM	1	0	1	0	21.36	22.7	25.09	0.1286
						1	244	1	99	19.86	22.78	24.57	0.1141
						245	0	100	0	21.28	22.65	25.03	0.1267
					64QAM	1	0	1	0	21.68	22.5	25.12	0.1294
						1	244	1	99	19.08	22.85	24.37	0.1089
						245	0	100	0	21.14	22.25	24.74	0.1186



EN-DC n41 + 41A(LTE)													
Combination 100MHz+20MHz(LTE)													
NR Channel	NR Tx Offset	NR Freq.	LTE Channel	LTE Freq.	Modulation	NR		LTE		NR	LTE	Total Measured Power (dBm)	EIRP(W)
						RB Size	RB offset	RB Size	RB offset	Measured Power (dBm)	Measured Power (dBm)		
509202	0	2546.01	39750	2506	QPSK	1	0	1	0	21.55	22.63	25.13	0.1298
						1	272	1	99	21.36	22.52	24.99	0.1256
						273	0	100	0	21.09	20.77	23.94	0.0987
					16QAM	1	0	1	0	20.89	22.89	25.01	0.1263
						1	272	1	99	20.34	22.78	24.74	0.1186
						273	0	100	0	20.21	19.76	23.00	0.0795
					64QAM	1	0	1	0	21.56	19.85	23.80	0.0955
						1	272	1	99	20.67	22.51	24.70	0.1174
						273	0	100	0	20.34	18.74	22.62	0.0728
518598	0	2592.99	40620	2593	QPSK	1	0	1	0	22.26	19.68	24.04	0.1040
						1	272	1	99	21.29	22.43	24.91	0.1232
						273	0	100	0	21.54	22.73	25.19	0.1314
					16QAM	1	0	1	0	21.04	22.78	25.01	0.1261
						1	272	1	99	21.51	22.49	25.04	0.1270
						273	0	100	0	21.53	22.68	25.15	0.1304
					64QAM	1	0	1	0	20.89	22.55	24.81	0.1205
						1	272	1	99	20.67	22.45	24.66	0.1164
						273	0	100	0	20.99	22.66	24.92	0.1235
528000	0	2640	41490	2680	QPSK	1	0	1	0	21.97	22.52	25.26	0.1338
						1	272	1	99	21.18	22.56	24.93	0.1240
						273	0	100	0	21.42	22.81	25.18	0.1312
					16QAM	1	0	1	0	21.58	22.77	25.23	0.1326
						1	272	1	99	21.5	23.04	25.35	0.1364
						273	0	100	0	21.51	22.83	25.23	0.1327
					64QAM	1	0	1	0	21.57	22.54	25.09	0.1286
						1	272	1	99	20.99	22.78	24.99	0.1255
						273	0	100	0	21.04	22.32	24.74	0.1185



For LTE Band 26, only the Top antenna with higher output power is shown as below:

EN-DC n41 + 26A(LTE)													
Combination 40MHz+15MHz(LTE)													
NR Channel	NR Tx Offset	NR Freq.	LTE Channel	LTE Freq.	Modulation	NR		LTE		Measured Power (dBm)	Measured Power (dBm)	Total Measured Power (dBm)	EIRP (W)
						RB Size	RB offset	RB Size	RB offset				
503202	0	2516.01	26765	821.5	QPSK	1	0	1	0	22.22	20.26	24.36	0.1086
						1	105	1	74	22.09	20.27	24.28	0.1068
						106	0	75	0	22.1	20.37	24.33	0.1079
					16QAM	1	0	1	0	21.63	20.95	24.31	0.1075
						1	105	1	74	22.13	20.3	24.32	0.1077
						106	0	75	0	22.12	20.26	24.30	0.1071
					64QAM	1	0	1	0	22.04	20.59	24.39	0.1093
						1	105	1	74	21.47	20.37	23.97	0.0992
						106	0	75	0	21.74	20.33	24.10	0.1024
518598	0	2592.99	26865	831	QPSK	1	0	1	0	21.73	20.07	23.99	0.0998
						1	105	1	74	21.37	20.06	23.77	0.0949
						106	0	75	0	21.56	20.3	23.99	0.0997
					16QAM	1	0	1	0	22.05	20.44	24.33	0.1079
						1	105	1	74	21.65	20.73	24.22	0.1053
						106	0	75	0	21.64	20.32	24.04	0.1009
					64QAM	1	0	1	0	21.2	20.48	23.87	0.0969
						1	105	1	74	20.82	20.06	23.47	0.0884
						106	0	75	0	21.13	20.25	23.72	0.0938
534000	0	2670	26965	841.5	QPSK	1	0	1	0	21.26	20.21	23.78	0.0950
						1	105	1	74	21.02	20.03	23.56	0.0904
						106	0	75	0	21.21	20.28	23.78	0.0951
					16QAM	1	0	1	0	21.44	20.36	23.94	0.0987
						1	105	1	74	21.31	20.11	23.76	0.0947
						106	0	75	0	21.19	20.31	23.78	0.0951
					64QAM	1	0	1	0	20.75	20.46	23.62	0.0916
						1	105	1	74	20.39	20.06	23.24	0.0839
						106	0	75	0	20.74	20.27	23.52	0.0896



EN-DC n41 + 26A(LTE)													
Combination 50MHz+15MHz(LTE)													
NR Channel	NR Tx Offset	NR Freq.	LTE Channel	LTE Freq.	Modulation	NR		LTE		NR	LTE	Total Measured Power (dBm)	EIRP (W)
						RB Size	RB offset	RB Size	RB offset	Measur ed Power (dBm)	Measur ed Power (dBm)		
504204	0	2521.02	26765	821.5	QPSK	1	0	1	0	21.16	20.42	23.82	0.0959
						1	132	1	74	21.47	20.11	23.85	0.0967
						133	0	75	0	21.81	20.39	24.17	0.1039
					16QAM	1	0	1	0	21.45	20.38	23.96	0.0990
						1	132	1	74	21.78	20.4	24.15	0.1036
						133	0	75	0	21.83	20.33	24.15	0.1036
					64QAM	1	0	1	0	21.75	20.68	24.26	0.1061
						1	132	1	74	20.95	20.54	23.76	0.0946
						133	0	75	0	21.36	20.29	23.87	0.0970
518598	0	2592.99	26865	831	QPSK	1	0	1	0	21.63	20.31	24.03	0.1007
						1	132	1	74	22.30	20.15	24.18	0.1088
						133	0	75	0	21.31	20.4	23.89	0.0975
					16QAM	1	0	1	0	21.16	20.24	23.73	0.0941
						1	132	1	74	21.4	20.23	23.86	0.0969
						133	0	75	0	21.23	20.36	23.83	0.0961
					64QAM	1	0	1	0	21.02	20.5	23.78	0.0950
						1	132	1	74	20.51	20.3	23.42	0.0874
						133	0	75	0	20.74	20.37	23.57	0.0906
532998	0	2664.99	26965	841.5	QPSK	1	0	1	0	21.21	20.05	23.68	0.0929
						1	132	1	74	20.71	20.18	23.46	0.0884
						133	0	75	0	20.87	20.35	23.63	0.0918
					16QAM	1	0	1	0	21.44	20.9	24.19	0.1044
						1	132	1	74	21.06	20.2	23.66	0.0925
						133	0	75	0	20.84	20.23	23.56	0.0903
					64QAM	1	0	1	0	20.61	20.63	23.63	0.0918
						1	132	1	74	20.14	20.29	23.23	0.0837
						133	0	75	0	20.35	20.25	23.31	0.0853



EN-DC n41 + 26A(LTE)													
Combination 60MHz+15MHz(LTE)													
NR Channel	NR Tx Offset	NR Freq.	LTE Channel	LTE Freq.	Modulation	NR		LTE		NR	LTE	Total Measured Power (dBm)	EIRP(W)
						RB Size	RB offset	RB Size	RB offset	Measur ed Power (dBm)	Measur ed Power (dBm)		
505200	0	2526	26765	821.5	QPSK	1	0	1	0	21.96	20.21	24.18	0.1043
						1	161	1	74	21.64	20.23	24.00	0.1001
						162	0	75	0	22.15	20.3	24.33	0.1080
					16QAM	1	0	1	0	22.29	20.45	24.48	0.1116
						1	161	1	74	21.97	20.27	24.21	0.1050
						162	0	75	0	22.04	20.25	24.25	0.1058
					64QAM	1	0	1	0	21.2	20.65	23.94	0.0987
						1	161	1	74	20.92	20.24	23.60	0.0913
						162	0	75	0	21.77	20.32	24.12	0.1027
518598	0	2592.99	26865	831	QPSK	1	0	1	0	22.16	20.13	24.27	0.1065
						1	161	1	74	20.35	20.19	23.28	0.0847
						162	0	75	0	21.09	20.31	23.73	0.0939
					16QAM	1	0	1	0	22.05	20.32	24.28	0.1067
						1	161	1	74	20.54	20.46	23.51	0.0893
						162	0	75	0	20.99	20.27	23.66	0.0924
					64QAM	1	0	1	0	21.61	20.71	24.19	0.1046
						1	161	1	74	20.86	20.18	23.54	0.0900
						162	0	75	0	21.2	20.32	23.79	0.0953
531996	0	2659.98	26965	841.5	QPSK	1	0	1	0	21.67	20.23	24.02	0.1005
						1	161	1	74	21.26	19.94	23.66	0.0925
						162	0	75	0	21.38	20.28	23.88	0.0972
					16QAM	1	0	1	0	21.89	20.41	24.22	0.1053
						1	161	1	74	21.41	20.15	23.84	0.0963
						162	0	75	0	21.49	20.21	23.91	0.0979
					64QAM	1	0	1	0	21.16	20.52	23.86	0.0969
						1	161	1	74	20.65	19.91	23.31	0.0852
						162	0	75	0	20.92	20.29	23.63	0.0918



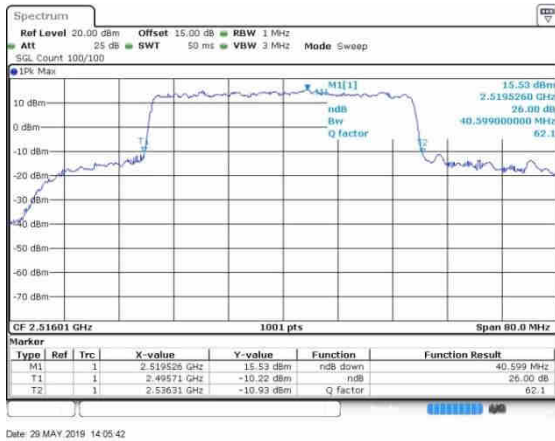
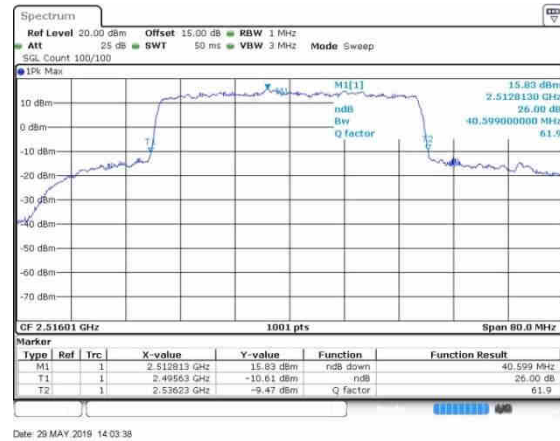
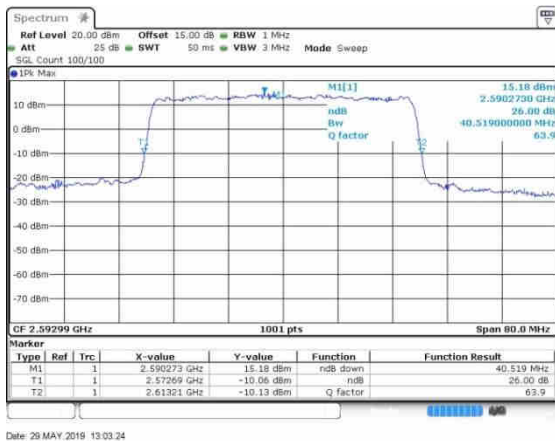
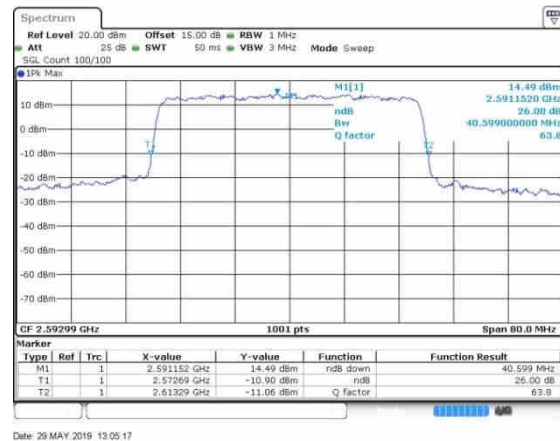
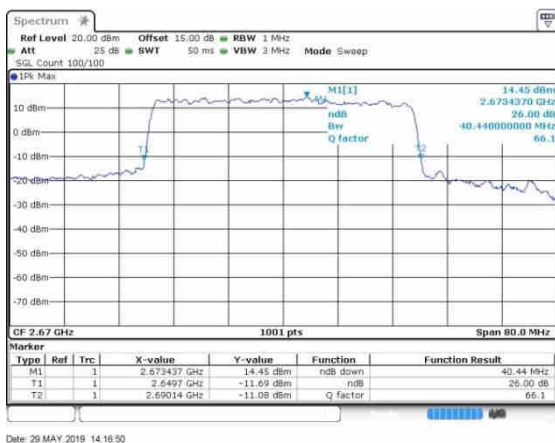
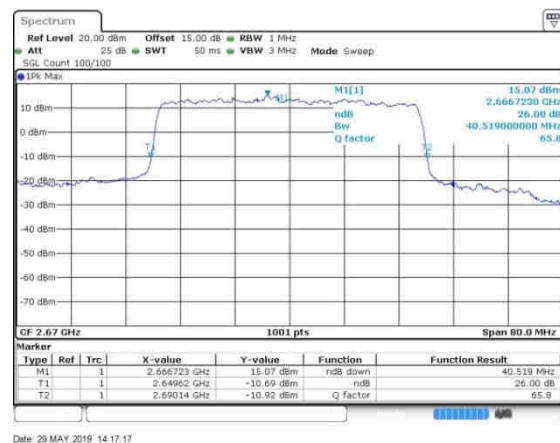
EN-DC n41 + 26A(LTE)													
Combination 80MHz+15MHz(LTE)													
NR Channel	NR Tx Offset	NR Freq.	LTE Channel	LTE Freq.	Modulation	NR		LTE		NR	LTE	Total Measured Power (dBm)	EIRP(W)
						RB Size	RB offset	RB Size	RB offset	Measured Power (dBm)	Measured Power (dBm)		
507204	0	2536.02	26765	821.5	QPSK	1	0	1	0	21.96	20.5	24.30	0.1072
						1	216	1	74	21.49	20.75	24.15	0.1034
						217	0	75	0	21.86	20.79	24.37	0.1088
					16QAM	1	0	1	0	21.78	21.03	24.43	0.1104
						1	216	1	74	21.9	20.99	24.48	0.1117
						217	0	75	0	21.64	20.78	24.24	0.1057
					64QAM	1	0	1	0	21.56	20.54	24.09	0.1021
						1	216	1	74	21.01	20.88	23.96	0.0990
						217	0	75	0	21.72	20.76	24.28	0.1066
518598	0	2592.99	26865	831	QPSK	1	0	1	0	22.35	20.69	24.55	0.1151
						1	216	1	74	20.19	20.53	23.37	0.0866
						217	0	75	0	21.52	20.83	24.20	0.1047
					16QAM	1	0	1	0	20.76	21.98	24.42	0.1102
						1	216	1	74	20.28	21.13	23.74	0.0941
						217	0	75	0	21.51	20.92	24.24	0.1056
					64QAM	1	0	1	0	21.68	20.94	24.34	0.1080
						1	216	1	74	20.86	21.01	23.95	0.0988
						217	0	75	0	22.04	20.78	24.47	0.1113
529998	0	2649.99	26965	841.5	QPSK	1	0	1	0	21.95	20.63	24.35	0.1084
						1	216	1	74	21.4	20.66	24.06	0.1013
						217	0	75	0	21.58	20.77	24.20	0.1048
					16QAM	1	0	1	0	21.85	21.24	24.57	0.1139
						1	216	1	74	20.27	20.7	23.50	0.0891
						217	0	75	0	21.82	20.67	24.29	0.1070
					64QAM	1	0	1	0	21.39	20.68	24.06	0.1014
						1	216	1	74	20.66	20.53	23.61	0.0913
						217	0	75	0	21.01	20.67	23.85	0.0967



EN-DC n41 + 26A(LTE)													
Combination 90MHz+15MHz(LTE)													
NR Channel	NR Tx Offset	NR Freq.	LTE Channel	LTE Freq.	Modulation	NR		LTE		Measured Power (dBm)	Measured Power (dBm)	Total Measured Power (dBm)	EIRP(W)
						RB Size	RB offset	RB Size	RB offset				
508200	0	2541	26765	821.5	QPSK	1	0	1	0	21.33	20.04	23.74	0.0943
						1	244	1	74	20.18	20.12	23.16	0.0824
						245	0	75	0	21.19	20.3	23.78	0.0950
					16QAM	1	0	1	0	21.35	20.42	23.92	0.0982
						1	244	1	74	20.11	20.16	23.15	0.0821
						245	0	75	0	21.13	20.36	23.77	0.0949
					64QAM	1	0	1	0	20.9	20.54	23.73	0.0941
						1	244	1	74	19.67	20.52	23.13	0.0818
						245	0	75	0	20.86	20.43	23.66	0.0925
518598	0	2592.99	26865	831	QPSK	1	0	1	0	22	20.02	24.13	0.1031
						1	244	1	74	19.62	20.21	22.94	0.0783
						245	0	75	0	21	20.29	23.67	0.0927
					16QAM	1	0	1	0	21.85	20.53	24.25	0.1059
						1	244	1	74	19.88	20.37	23.14	0.0821
						245	0	75	0	20.39	20.33	23.37	0.0865
					64QAM	1	0	1	0	21.29	20.65	23.99	0.0998
						1	244	1	74	19.17	20.49	22.89	0.0775
						245	0	75	0	20.74	20.28	23.53	0.0897
528996	0	2644.98	26965	841.5	QPSK	1	0	1	0	21.46	20.28	23.92	0.0982
						1	244	1	74	18.99	19.98	22.52	0.0712
						245	0	75	0	20.78	20.29	23.55	0.0902
					16QAM	1	0	1	0	21.9	20.13	24.11	0.1027
						1	244	1	74	19.55	19.9	22.74	0.0748
						245	0	75	0	20.86	20.26	23.58	0.0908
					64QAM	1	0	1	0	21.35	20.28	23.86	0.0968
						1	244	1	74	18.69	20.19	22.51	0.0710
						245	0	75	0	21.22	20.33	23.81	0.0957



EN-DC n41 + 26A(LTE)													
Combination 100MHz+15MHz(LTE)													
NR Channel	NR Tx Offset	NR Freq.	LTE Channel	LTE Freq.	Modulation	NR		LTE		NR	LTE	Total Measured Power (dBm)	EIRP(W)
						RB Size	RB offset	RB Size	RB offset	Measur ed Power (dBm)	Measur ed Power (dBm)		
509202	0	2546.01	26765	821.5	QPSK	1	0	1	0	21.68	20.23	24.03	0.1006
						1	272	1	74	21.42	20.25	23.88	0.0974
						273	0	75	0	21.85	20.34	24.17	0.1040
					16QAM	1	0	1	0	21.72	20.44	24.14	0.1032
						1	272	1	74	21.45	20.65	24.08	0.1018
						273	0	75	0	21.85	20.35	24.17	0.1041
					64QAM	1	0	1	0	21.23	20.14	23.73	0.0940
						1	272	1	74	20.77	20.37	23.58	0.0909
						273	0	75	0	21.34	20.35	23.88	0.0974
518598	0	2592.99	26865	831	QPSK	1	0	1	0	22.33	20.28	24.31	0.1105
						1	272	1	74	21.46	20.04	23.82	0.0959
						273	0	75	0	21.81	20.3	24.13	0.1031
					16QAM	1	0	1	0	21.76	20.76	24.30	0.1071
						1	272	1	74	21.87	20.34	24.18	0.1043
						273	0	75	0	21.95	20.27	24.20	0.1047
					64QAM	1	0	1	0	21.68	20.57	24.17	0.1040
						1	272	1	74	20.79	20.35	23.59	0.0909
						273	0	75	0	21.31	20.42	23.90	0.0977
528000	0	2640	26965	841.5	QPSK	1	0	1	0	21.62	20.28	24.01	0.1003
						1	272	1	74	21.3	20.03	23.72	0.0938
						273	0	75	0	21.58	20.3	24.00	0.0999
					16QAM	1	0	1	0	21.58	20.59	24.12	0.1029
						1	272	1	74	21.65	20.06	23.94	0.0986
						273	0	75	0	21.53	20.34	23.99	0.0997
					64QAM	1	0	1	0	21.42	20.61	24.04	0.1010
						1	272	1	74	20.84	20.16	23.52	0.0896
						273	0	75	0	21.1	20.39	23.77	0.0948

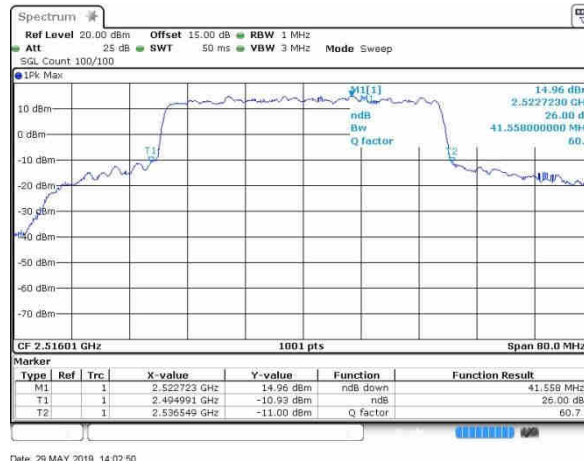
**26dB Bandwidth****EN-DC_41A_n41****LTE 20MHz + NR 40MHz****Lowest Channel_NR(QPSK)****Lowest Channel_NR(16QAM)****Middle Channel_NR(QPSK)****Middle Channel_NR(16QAM)****Highest Channel_NR(QPSK)****Highest Channel_NR(16QAM)**



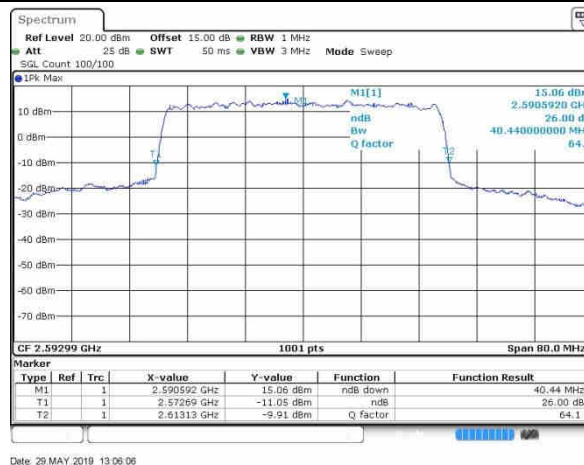
EN-DC_41A_n41

LTE 20MHz + NR 40MHz

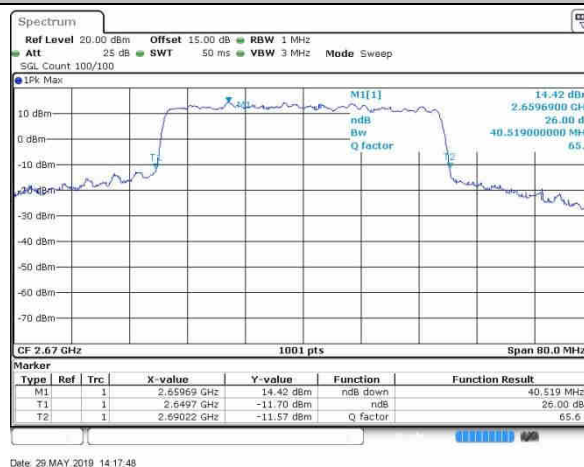
Lowest Channel_NR(64QAM)



Middle Channel_NR(64QAM)



Highest Channel_NR(64QAM)

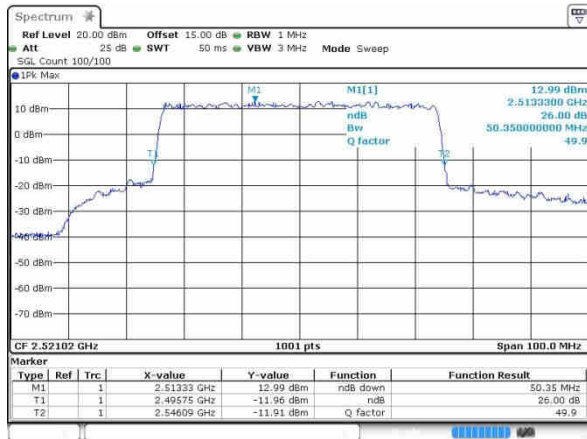




EN-DC_41A_n41

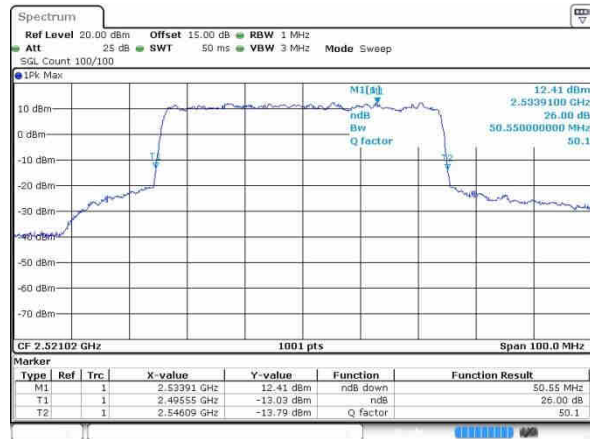
LTE 20MHz + NR 50MHz

Lowest Channel_NR (QPSK)



Date: 22 MAY 2019 15:00:47

Lowest Channel_NR(16QAM)



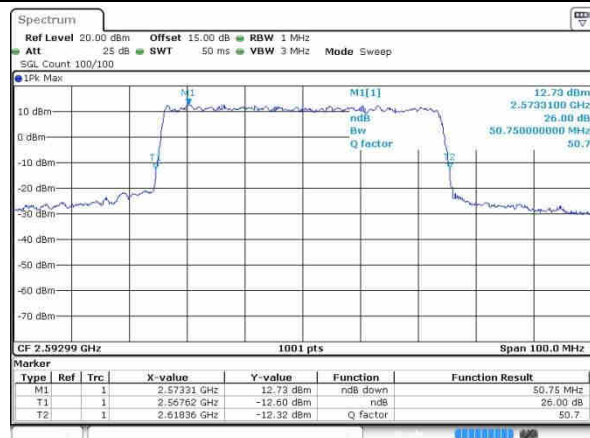
Date: 22 MAY 2019 15:04:14

Middle Channel_NR (QPSK)



Date: 22 MAY 2019 15:36:10

Middle Channel_NR(16QAM)



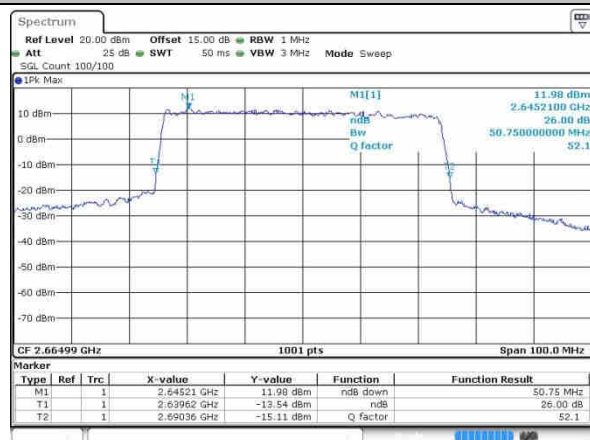
Date: 22 MAY 2019 15:35:37

Highest Channel_NR (QPSK)



Date: 22 MAY 2019 15:38:00

Highest Channel_NR(16QAM)



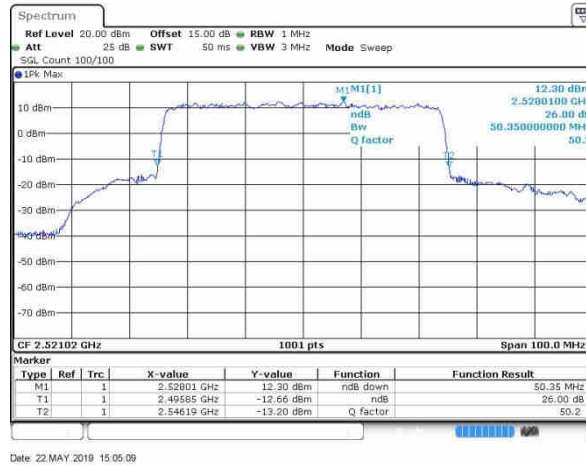
Date: 22 MAY 2019 15:38:36



EN-DC_41A_n41

LTE 20MHz + NR 50MHz

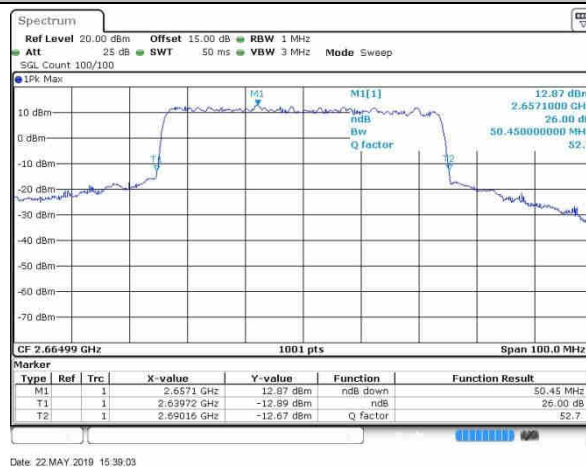
Lowest Channel_NR(64QAM)



Middle Channel_NR(64QAM)



Highest Channel_NR(64QAM)





EN-DC_41A_n41

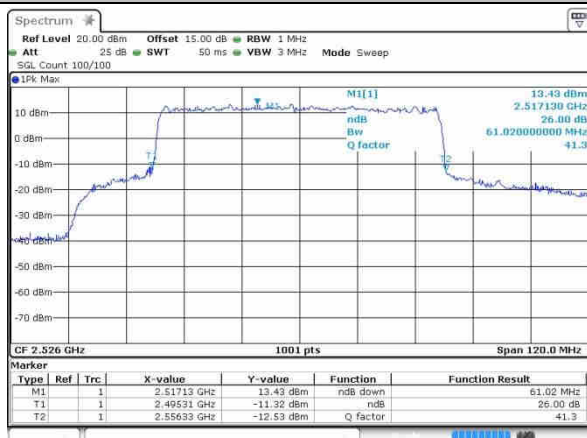
LTE 20MHz + NR 60MHz

Lowest Channel_NR(QPSK)



Date: 29 MAY 2019 14:40:07

Lowest Channel_NR (16QAM)



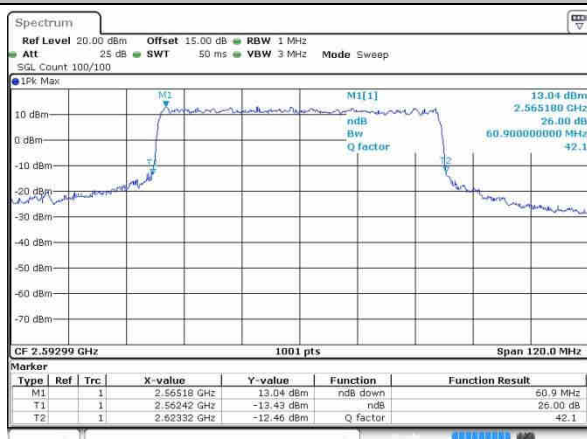
Date: 29 MAY 2019 14:38:55

Middle Channel_NR(QPSK)



Date: 29 MAY 2019 14:23:15

Middle Channel_NR (16QAM)



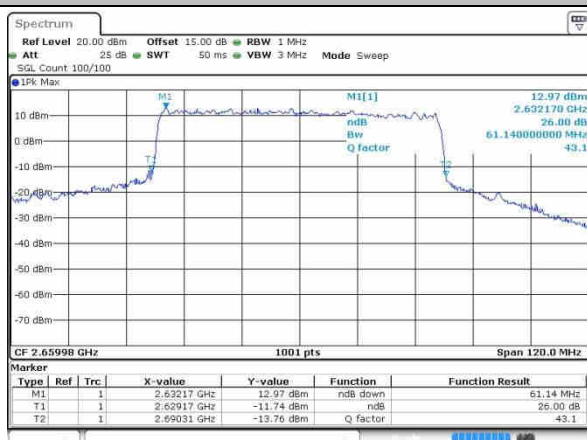
Date: 29 MAY 2019 14:24:22

Highest Channel_NR(QPSK)



Date: 29 MAY 2019 14:43:30

Highest Channel_NR (16QAM)



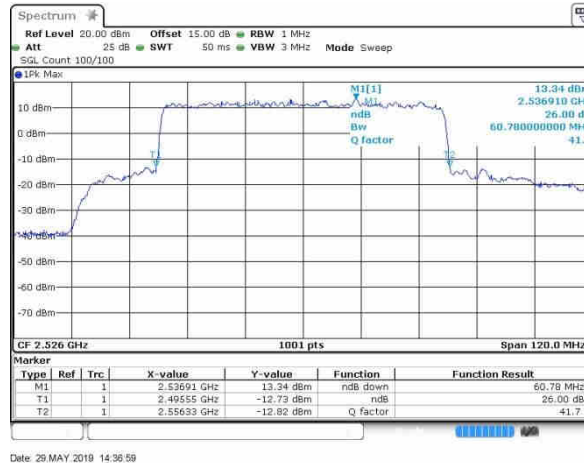
Date: 29 MAY 2019 14:44:18



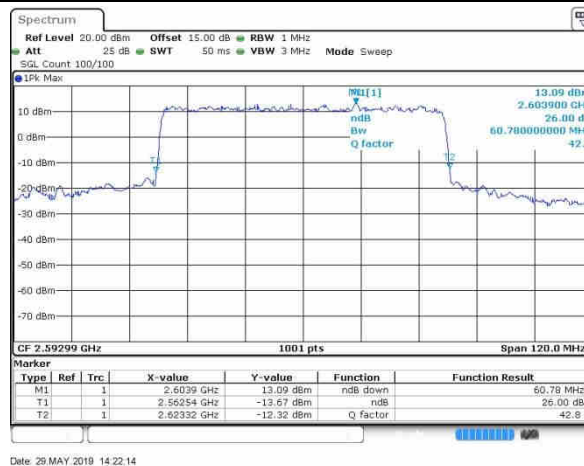
EN-DC_41A_n41

LTE 20MHz + NR 60MHz

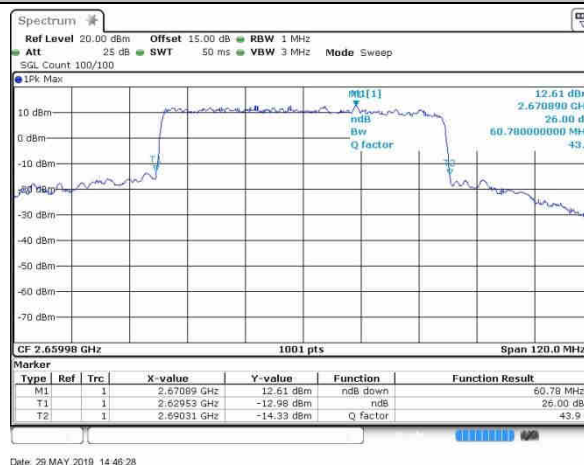
Lowest Channel_NR (64QAM)



Middle Channel_NR (64QAM)



Highest Channel_NR (64QAM)





EN-DC_41A_n41

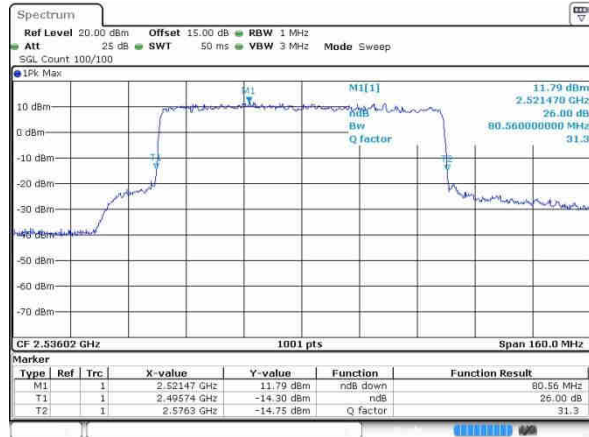
LTE 20MHz + NR 80MHz

Lowest Channel_NR (QPSK)



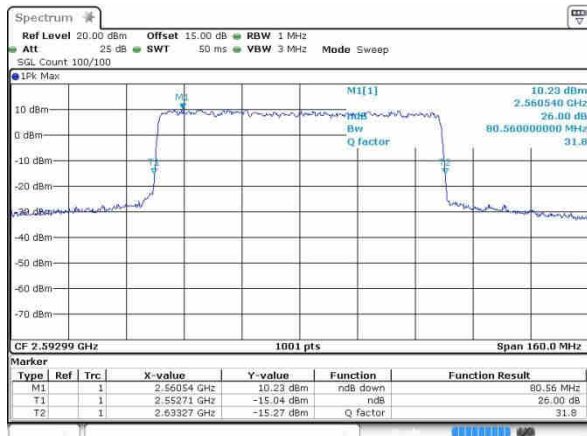
Date: 22 MAY 2019 15:49:58

Lowest Channel_NR (16QAM)



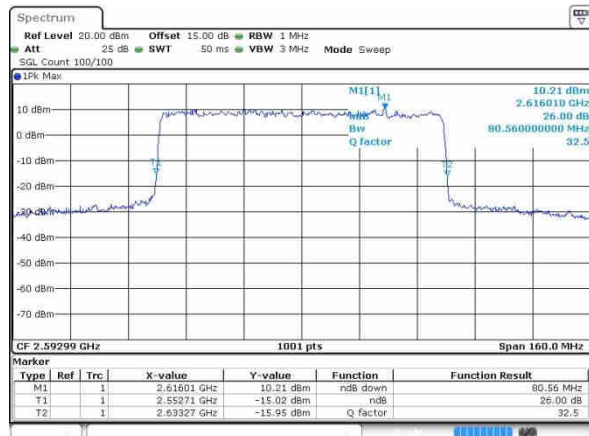
Date: 22 MAY 2019 15:48:45

Middle Channel_NR (QPSK)



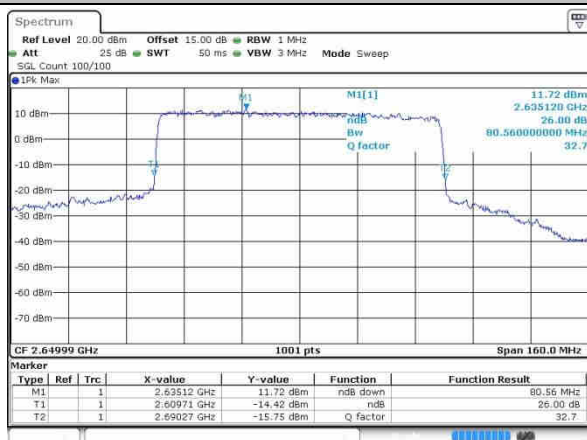
Date: 22 MAY 2019 15:52:01

Middle Channel_NR (16QAM)



Date: 22 MAY 2019 15:52:45

Highest Channel_NR (QPSK)



Date: 22 MAY 2019 16:04:59

Highest Channel_NR (16QAM)



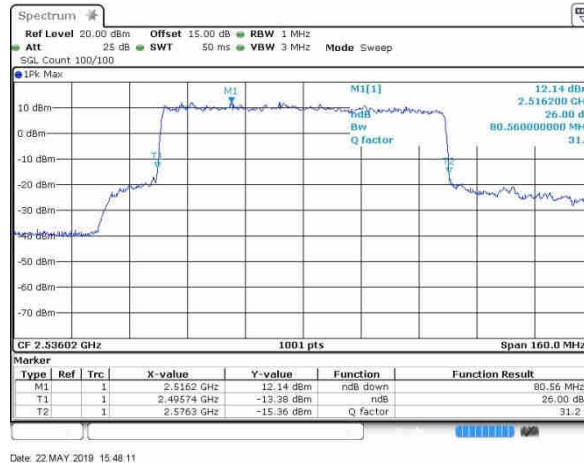
Date: 22 MAY 2019 16:04:24



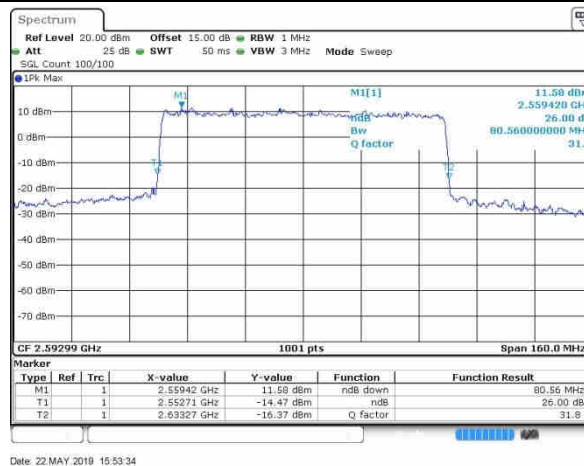
EN-DC_41A_n41

LTE 20MHz + NR 80MHz

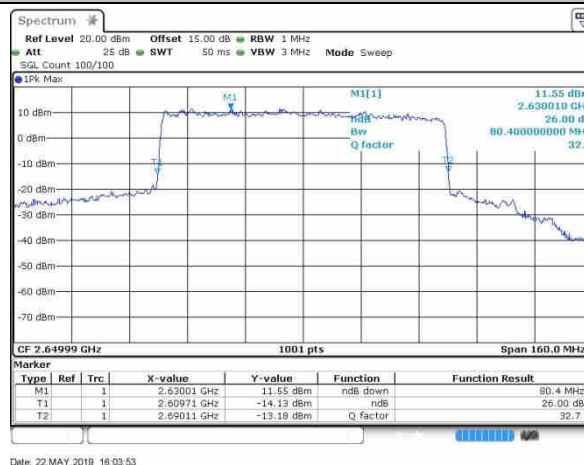
Lowest Channel_NR(64QAM)



Middle Channel_NR(64QAM)



Highest Channel_NR(64QAM)





EN-DC_41A_n41

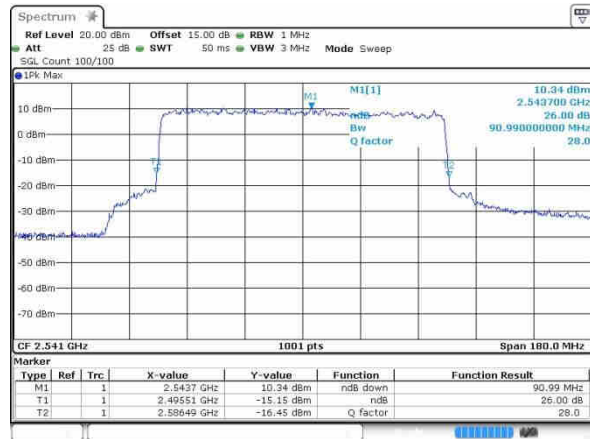
LTE 20MHz + NR 90MHz

Lowest Channel_NR(QPSK)



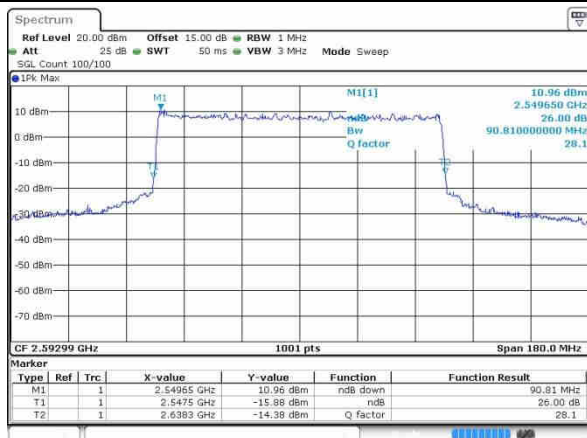
Date: 3 JUN 2019 16:53:18

Lowest Channel_NR(16QAM)



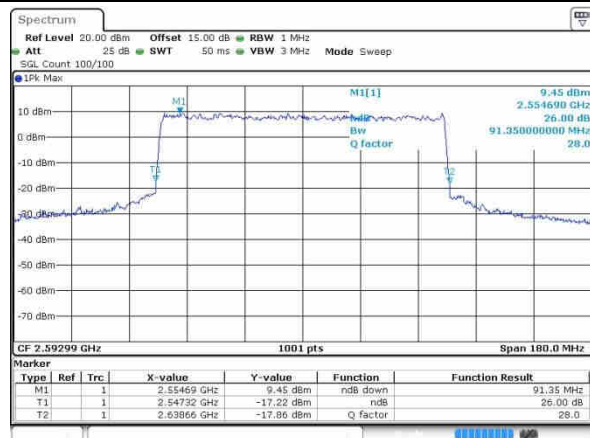
Date: 3 JUN 2019 16:58:45

Middle Channel_NR(QPSK)



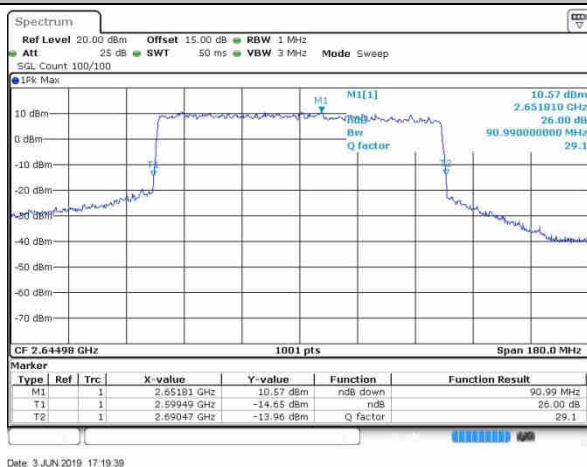
Date: 3 JUN 2019 17:02:26

Middle Channel_NR(16QAM)



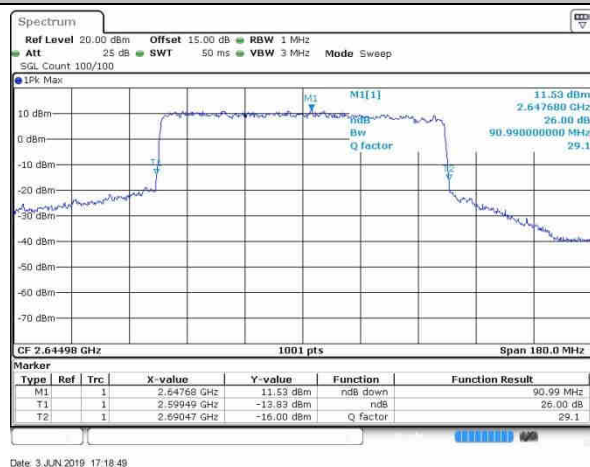
Date: 3 JUN 2019 17:02:02

Highest Channel_NR(QPSK)



Date: 3 JUN 2019 17:19:39

Highest Channel_NR(16QAM)



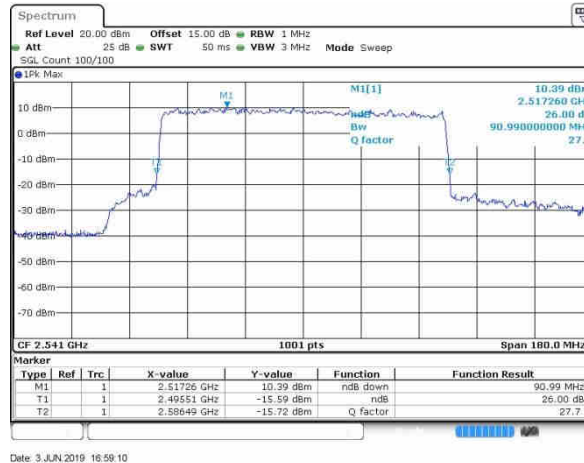
Date: 3 JUN 2019 17:18:48



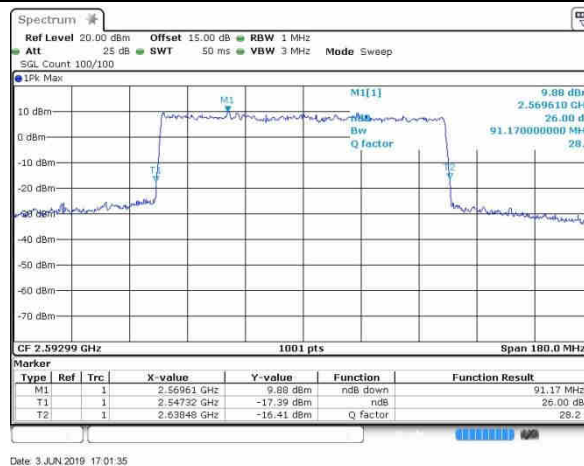
EN-DC_41A_n41

LTE 20MHz + NR 90MHz

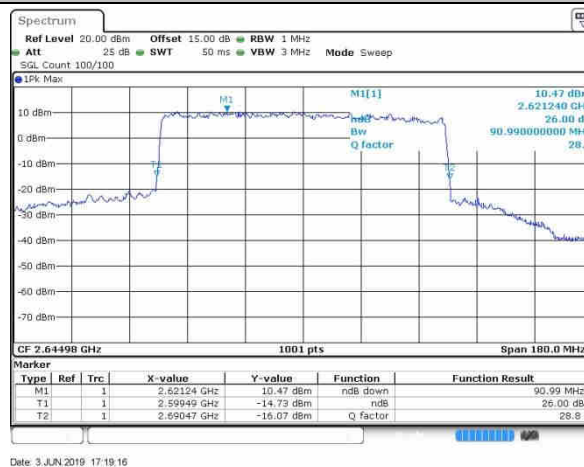
Lowest Channel_NR (64QAM)



Middle Channel_NR (64QAM)



Highest Channel_NR (64QAM)





EN-DC_41A_n41

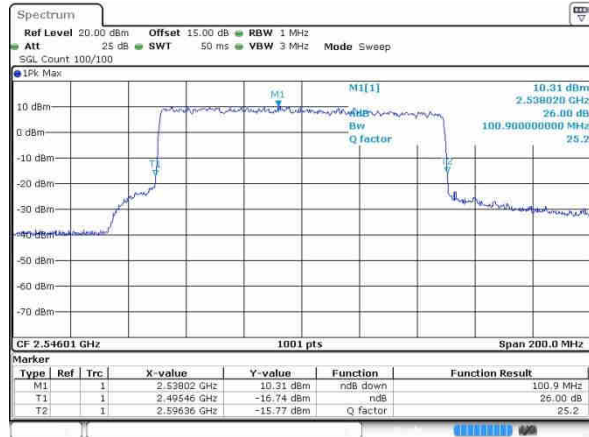
LTE 20MHz + NR 100MHz

Lowest Channel_NR (QPSK)



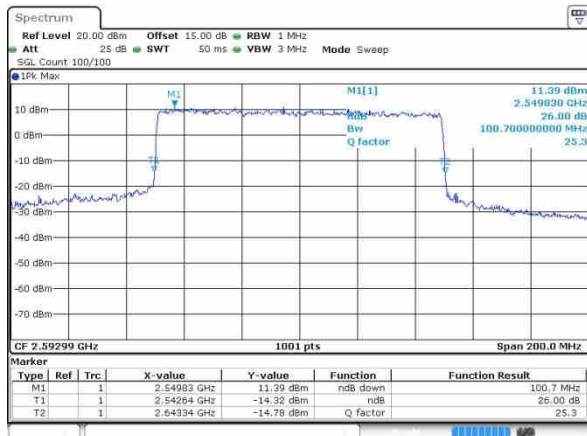
Date: 22 MAY 2019 16:07:48

Lowest Channel_NR (16QAM)



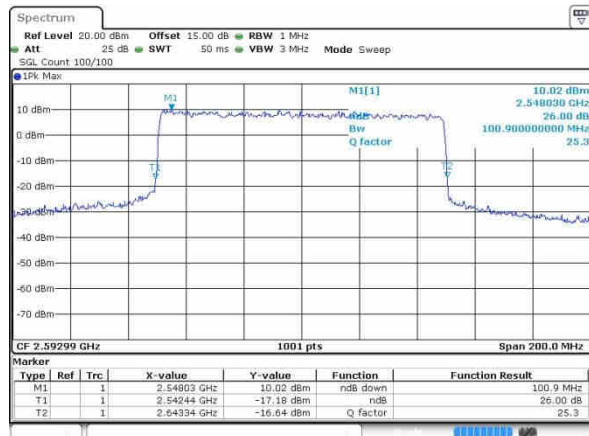
Date: 22 MAY 2019 16:13:18

Middle Channel_NR (QPSK)



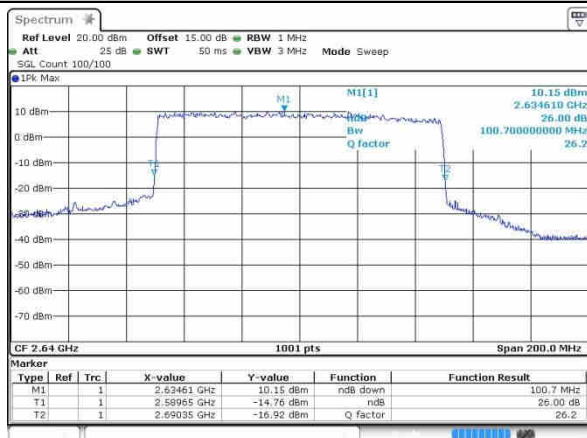
Date: 22 MAY 2019 16:24:21

Middle Channel_NR (16QAM)



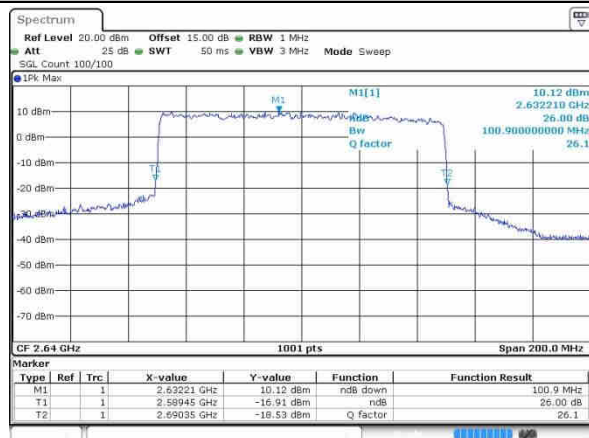
Date: 22 MAY 2019 16:23:56

Highest Channel_NR



Date: 22 MAY 2019 16:27:20

Highest Channel_NR (16QAM)



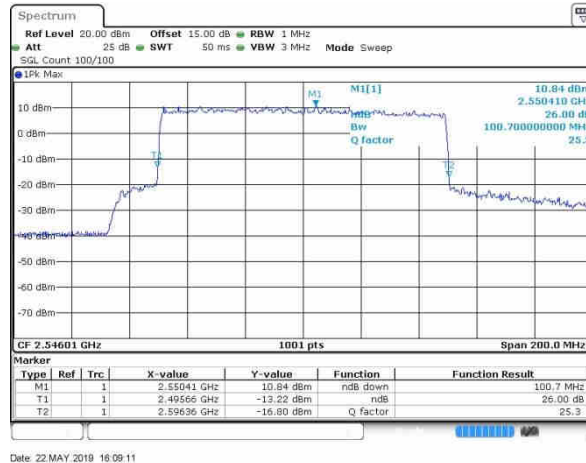
Date: 22 MAY 2019 16:28:03



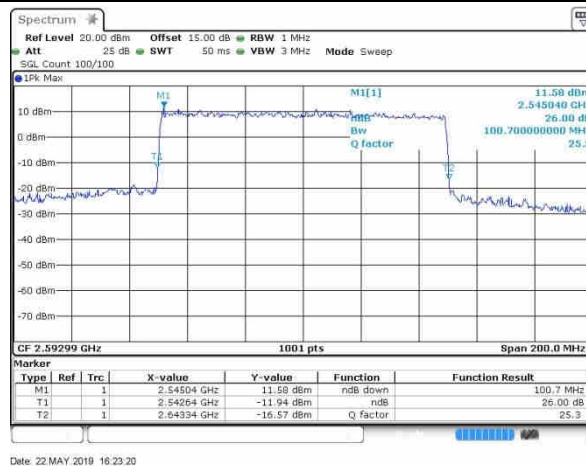
EN-DC_41A_n41

LTE 20MHz + NR 100MHz

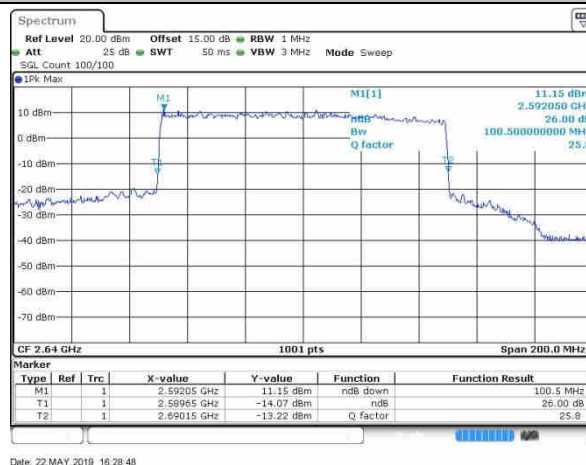
Lowest Channel_NR(64QAM)



Middle Channel_NR(64QAM)



Highest Channel_NR(64QAM)

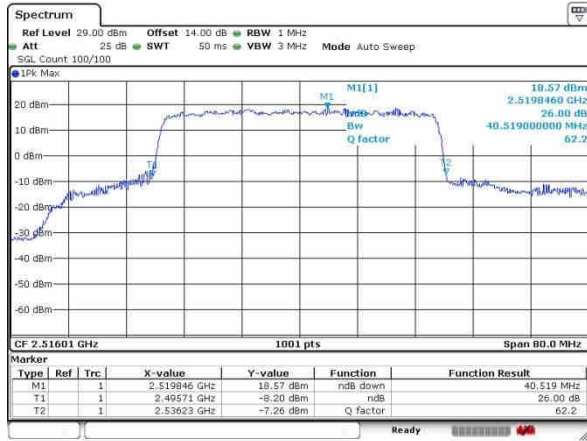




EN-DC_26A_n41

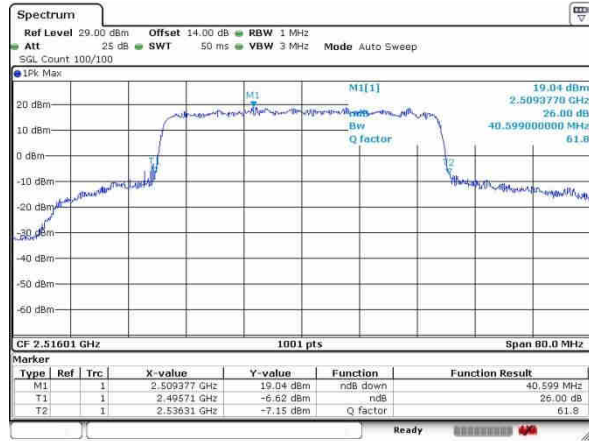
LTE 15MHz + NR 40MHz

Lowest Channel_NR (QPSK)



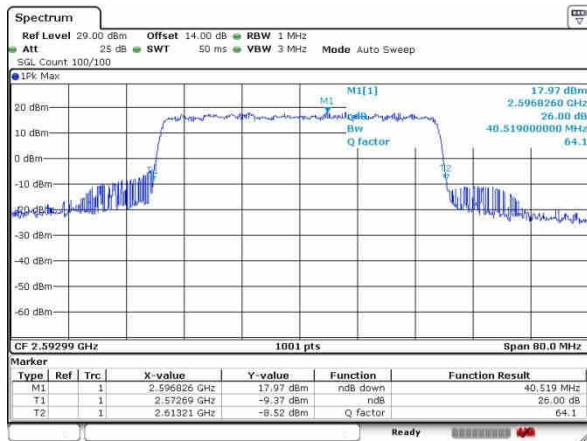
Date: 5 JUN 2019 23:55:37

Lowest Channel_NR (16QAM)



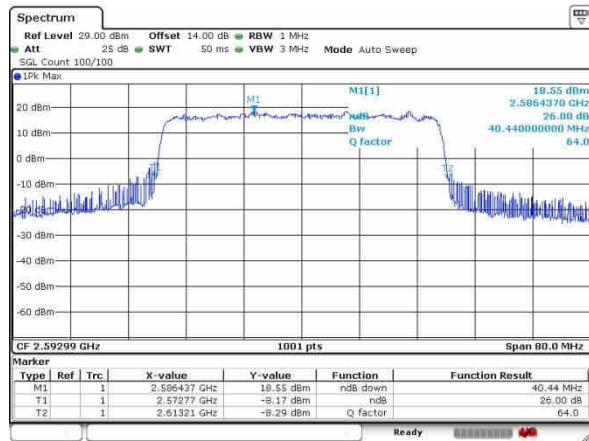
Date: 5 JUN 2019 23:59:00

Middle Channel_NR (QPSK)



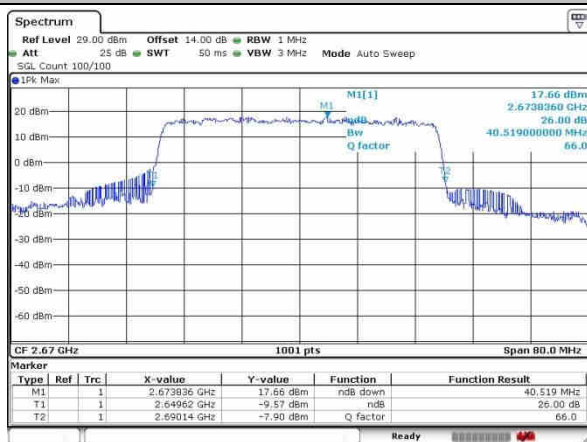
Date: 5 JUN 2019 23:52:48

Middle Channel_NR (16QAM)



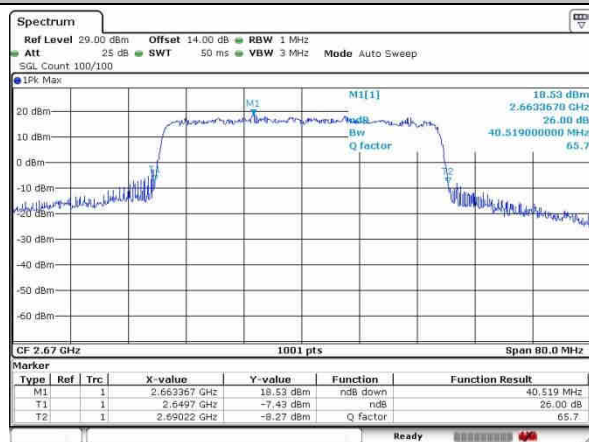
Date: 5 JUN 2019 23:49:41

Highest Channel_NR (QPSK)



Date: 5 JUN 2019 23:32:57

Highest Channel_NR (16QAM)



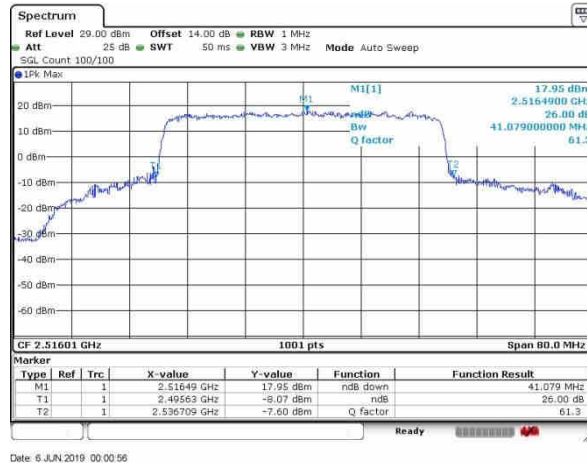
Date: 5 JUN 2019 23:37:17



EN-DC_26A_n41

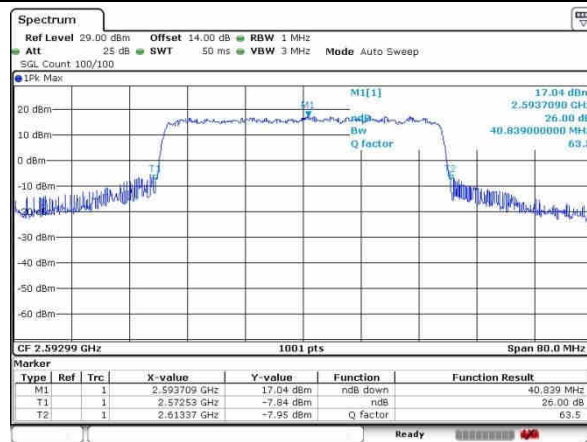
LTE 15MHz + NR 40MHz

Lowest Channel_NR (64QAM)



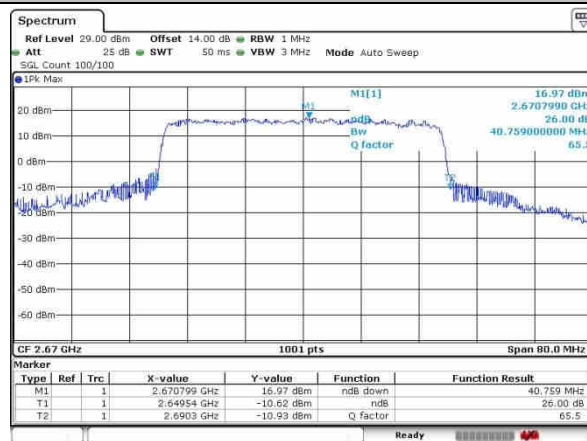
Date: 5 JUN 2019 00:00:56

Middle Channel_NR (64QAM)



Date: 5 JUN 2019 23:45:30

Highest Channel_NR (64QAM)



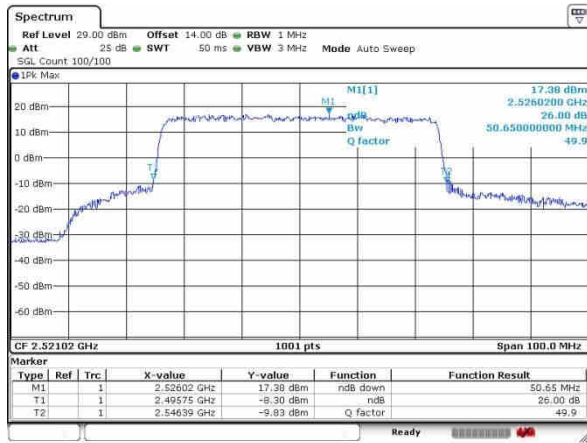
Date: 5 JUN 2019 23:39:14



EN-DC_26A_n41

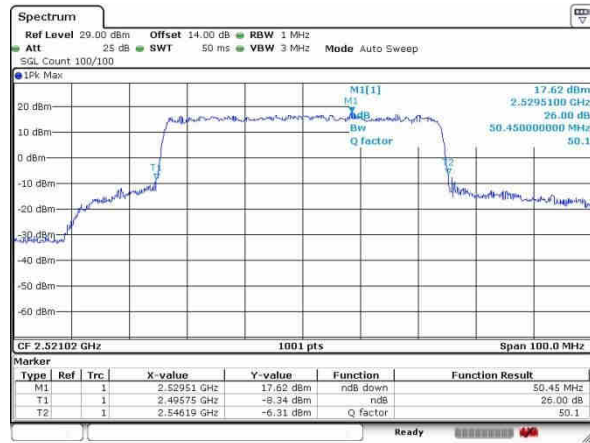
LTE 15MHz + NR 50MHz

Lowest Channel_NR (QPSK)



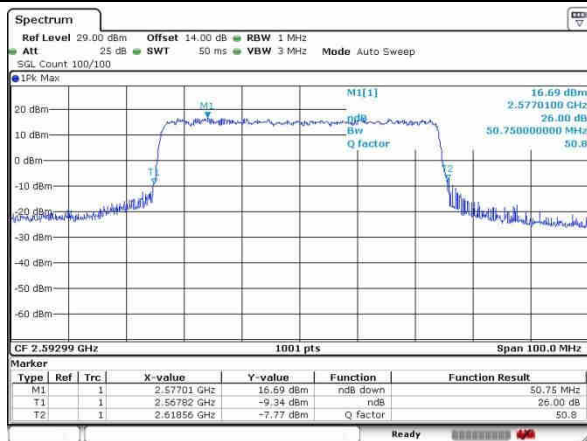
Date: 5 JUN 2019 23:01:33

Lowest Channel_NR (16QAM)



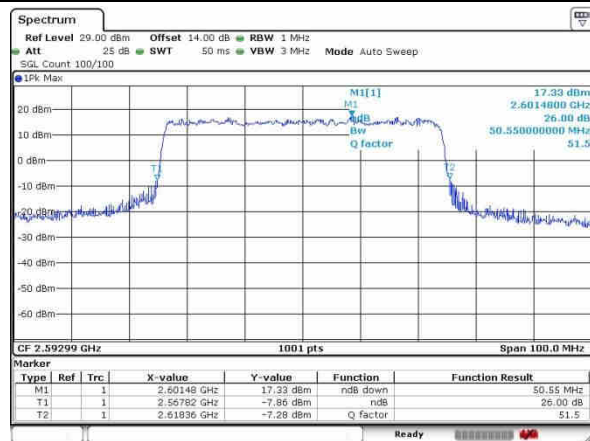
Date: 5 JUN 2019 22:58:02

Middle Channel_NR (QPSK)



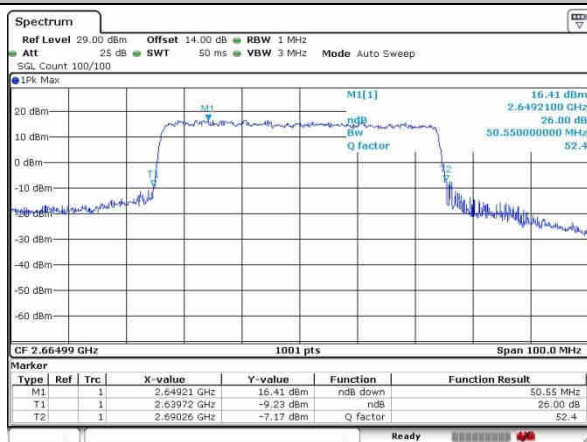
Date: 5 JUN 2019 23:05:37

Middle Channel_NR (16QAM)



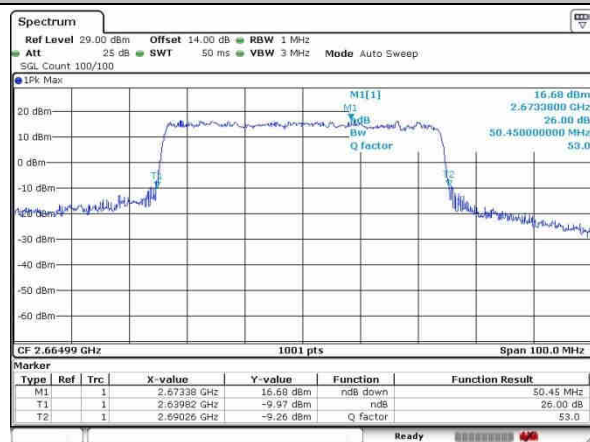
Date: 5 JUN 2019 23:06:45

Highest Channel_NR (QPSK)



Date: 5 JUN 2019 23:23:23

Highest Channel_NR (16QAM)



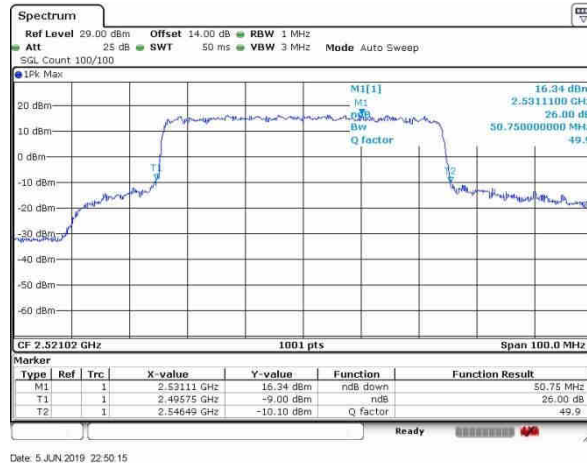
Date: 5 JUN 2019 23:20:32



EN-DC_26A_n41

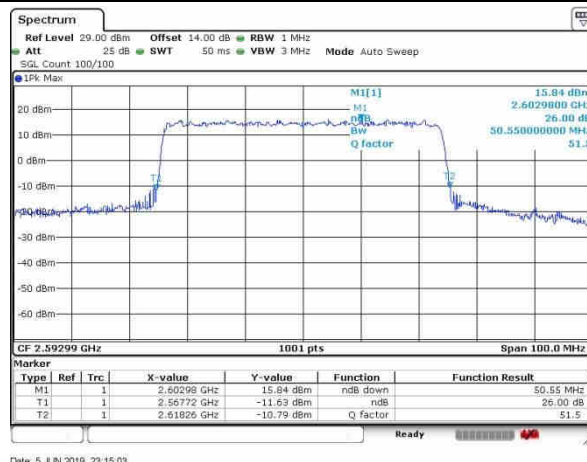
LTE 15MHz + NR 50MHz

Lowest Channel_NR (64QAM)



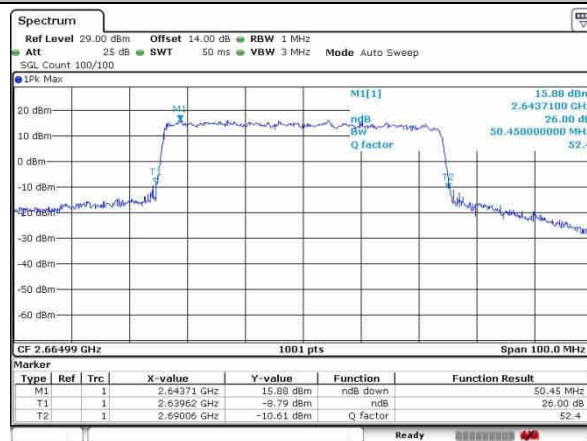
Date: 5 JUN 2019 22:50:15

Middle Channel_NR (64QAM)



Date: 5 JUN 2019 23:15:03

Highest Channel_NR (64QAM)



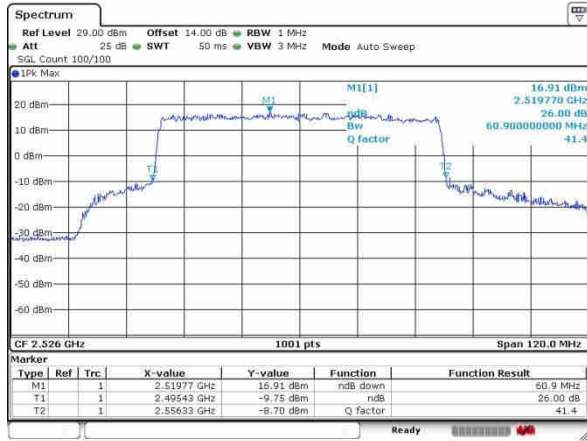
Date: 5 JUN 2019 23:17:09



EN-DC_26A_n41

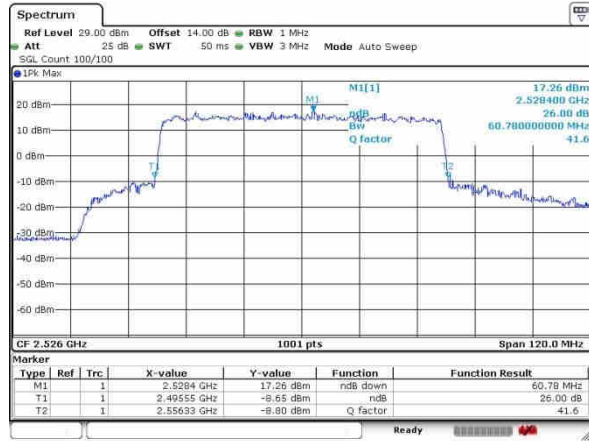
LTE 15MHz + NR 60MHz

Lowest Channel_NR (QPSK)



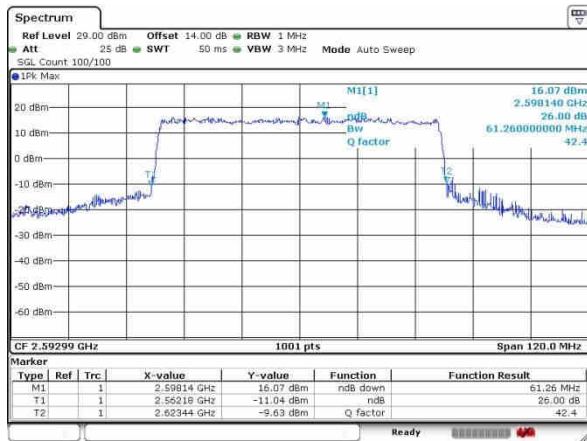
Date: 5 JUN 2019 22:15:58

Lowest Channel_NR (16QAM)



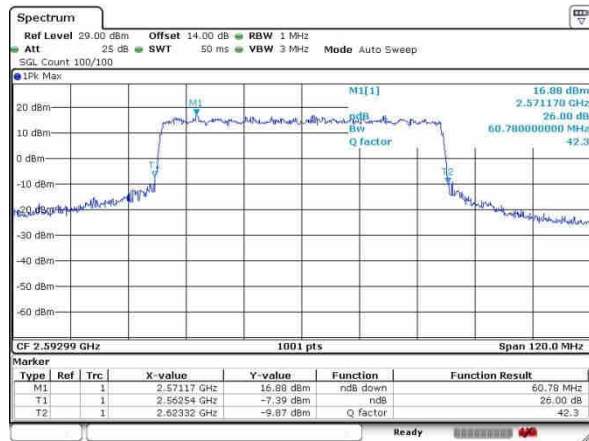
Date: 5 JUN 2019 22:18:48

Middle Channel_NR (QPSK)



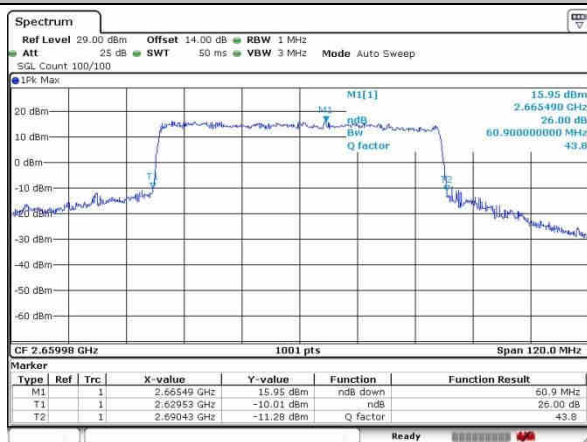
Date: 5 JUN 2019 22:08:43

Middle Channel_NR (16QAM)



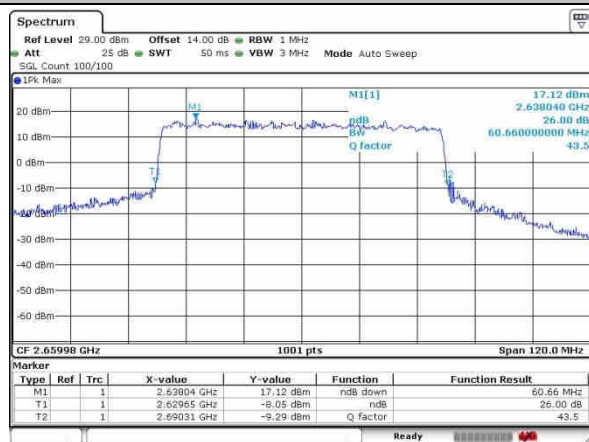
Date: 5 JUN 2019 22:05:34

Highest Channel_NR (QPSK)



Date: 5 JUN 2019 21:53:03

Highest Channel_NR (16QAM)



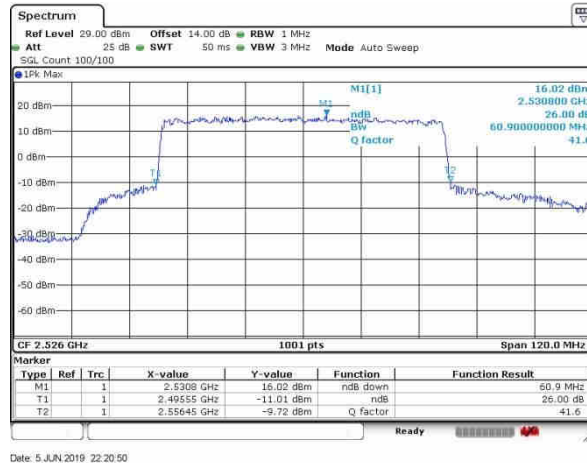
Date: 5 JUN 2019 21:56:43



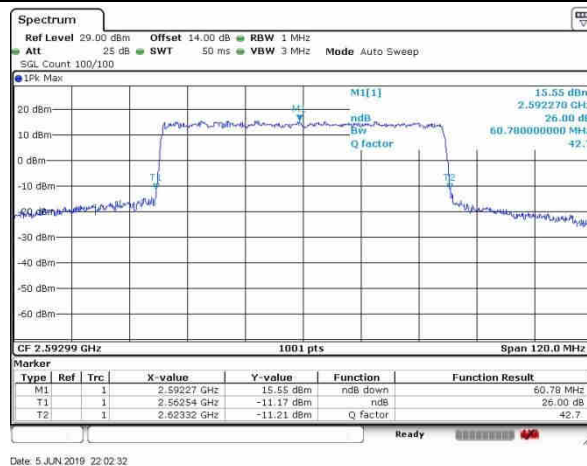
EN-DC_26A_n41

LTE 15MHz + NR 60MHz

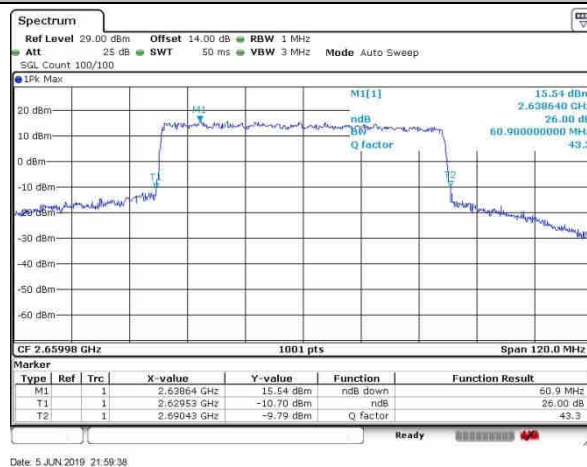
Lowest Channel_NR(64QAM)



Middle Channel_NR(64QAM)



Highest Channel_NR(64QAM)

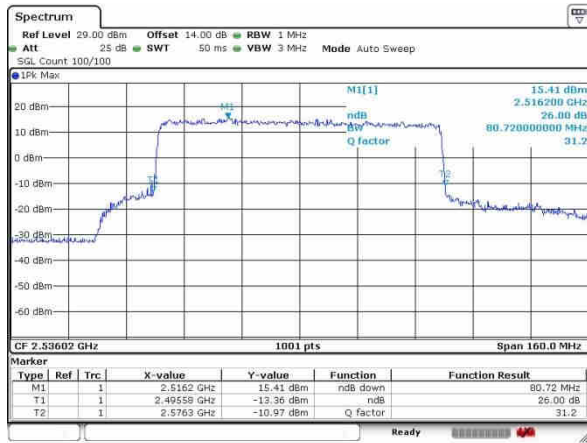




EN-DC_26A_n41

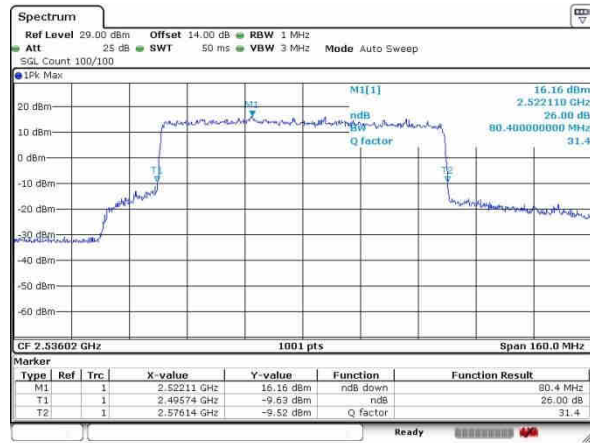
LTE 15MHz + NR 80MHz

Lowest Channel_NR (QPSK)



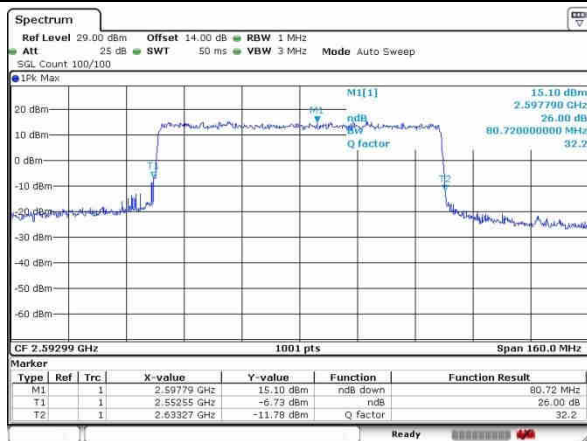
Date: 5 JUN 2019 21:25:15

Lowest Channel_NR (16QAM)



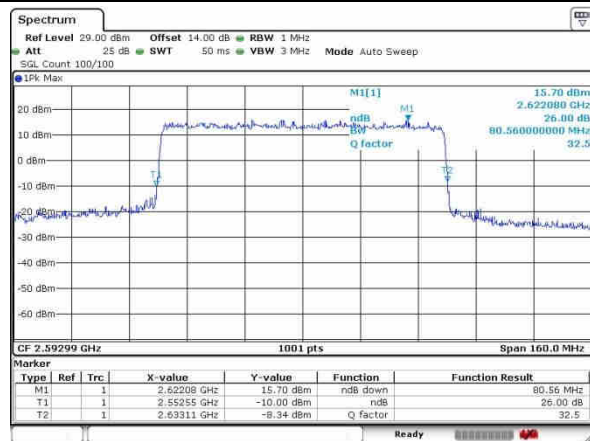
Date: 5 JUN 2019 21:23:22

Middle Channel_NR (QPSK)



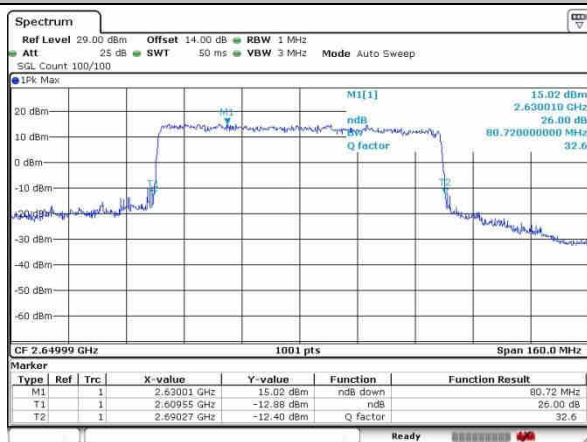
Date: 5 JUN 2019 21:27:45

Middle Channel_NR (16QAM)



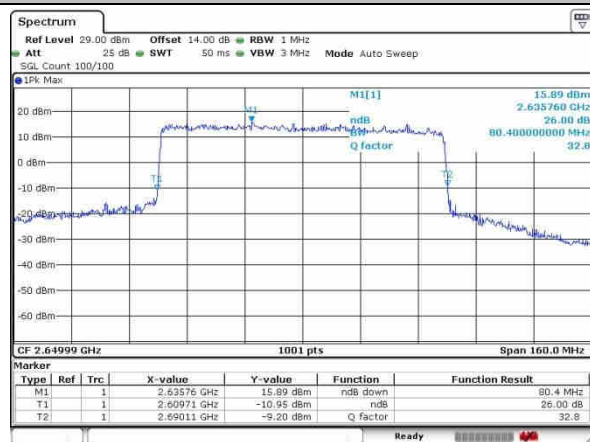
Date: 5 JUN 2019 21:31:11

Highest Channel_NR (QPSK)



Date: 5 JUN 2019 21:43:49

Highest Channel_NR (16QAM)



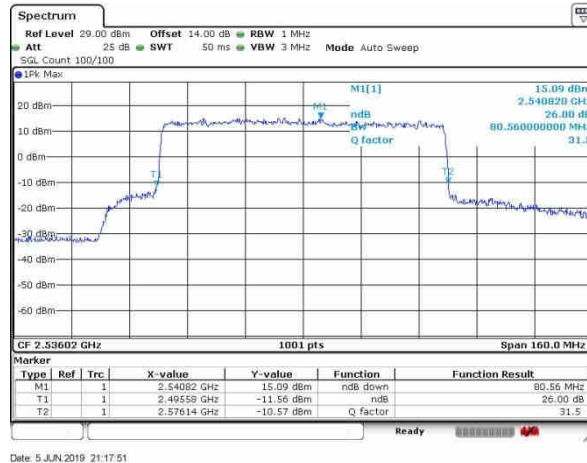
Date: 5 JUN 2019 21:42:19



EN-DC_26A_n41

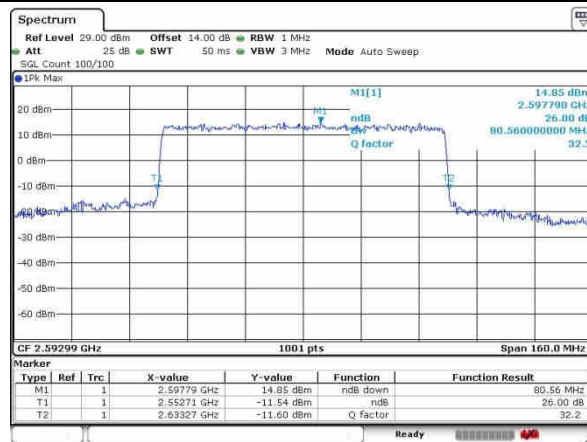
LTE 15MHz + NR 80MHz

Lowest Channel_NR(64QAM)



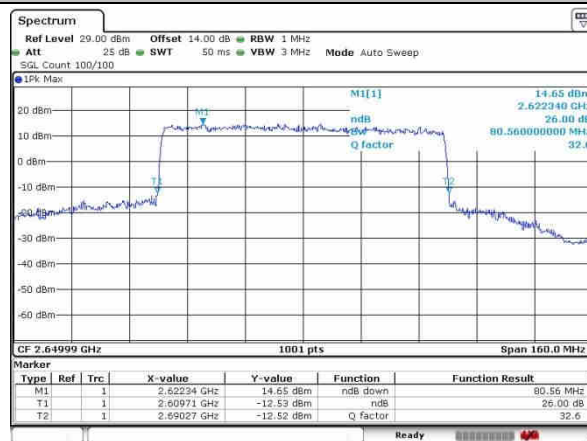
Date: 5 JUN 2019 21:17:51

Middle Channel_NR(64QAM)



Date: 5 JUN 2019 21:34:31

Highest Channel_NR(64QAM)



Date: 5 JUN 2019 21:38:04



EN-DC_26A_n41

LTE 15MHz + NR 90MHz

Lowest Channel_NR (QPSK)



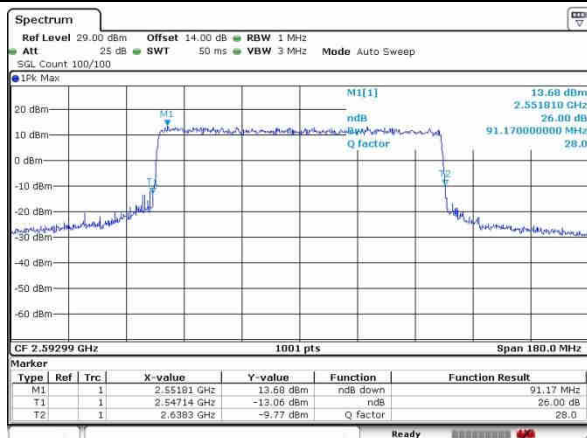
Date: 5 JUN 2019 20:44:11

Lowest Channel_NR (16QAM)



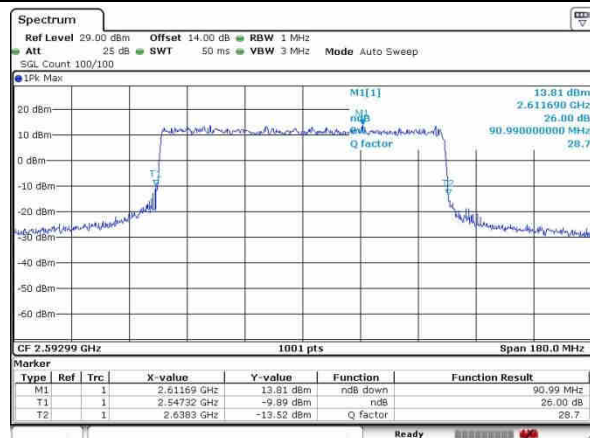
Date: 5 JUN 2019 20:47:17

Middle Channel_NR (QPSK)



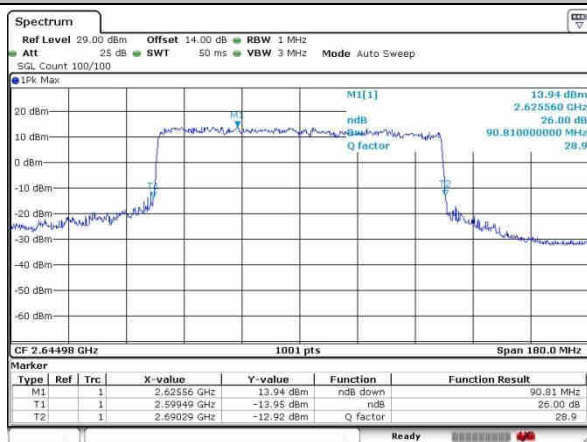
Date: 5 JUN 2019 20:18:00

Middle Channel_NR (16QAM)



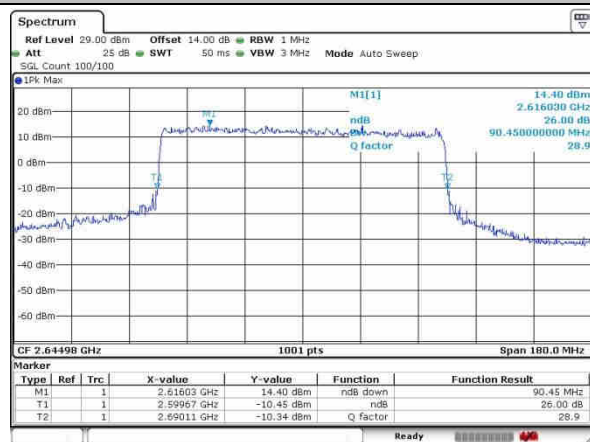
Date: 5 JUN 2019 20:27:54

Highest Channel_NR (QPSK)



Date: 5 JUN 2019 20:41:25

Highest Channel_NR (16QAM)



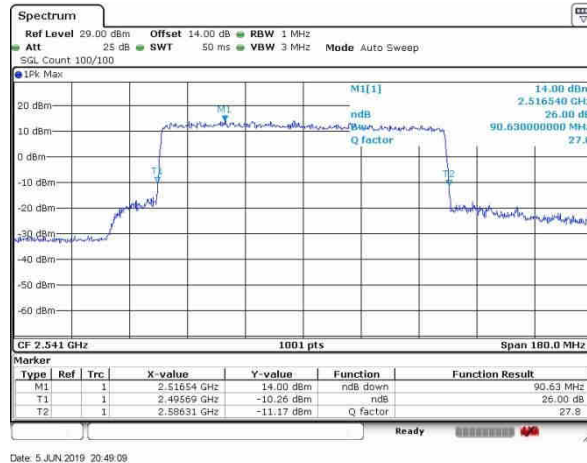
Date: 5 JUN 2019 20:39:31



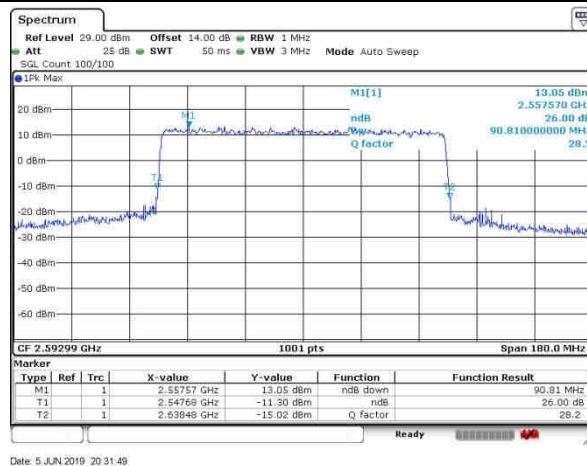
EN-DC_26A_n41

LTE 15MHz + NR 90MHz

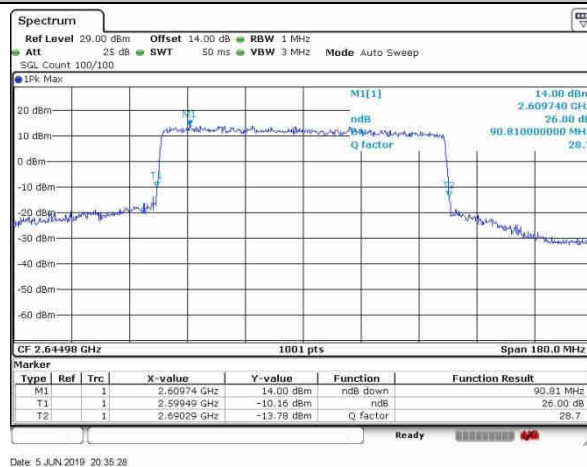
Lowest Channel_NR(64QAM)



Middle Channel_NR(64QAM)



Highest Channel_NR(64QAM)

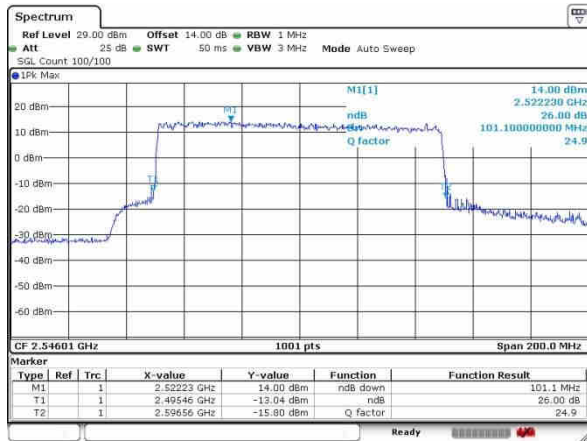




EN-DC_26A_n41

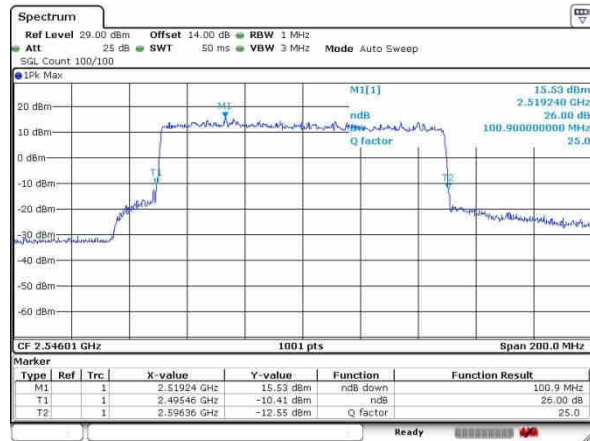
LTE 15MHz + NR 100MHz

Lowest Channel_NR(QPSK)



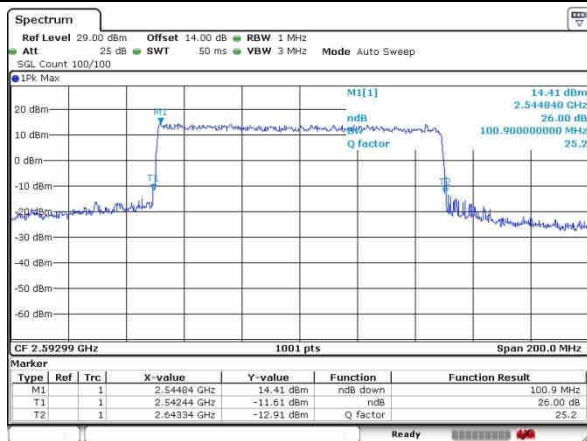
Date: 5 JUN 2019 20:00:48

Lowest Channel_NR (16QAM)



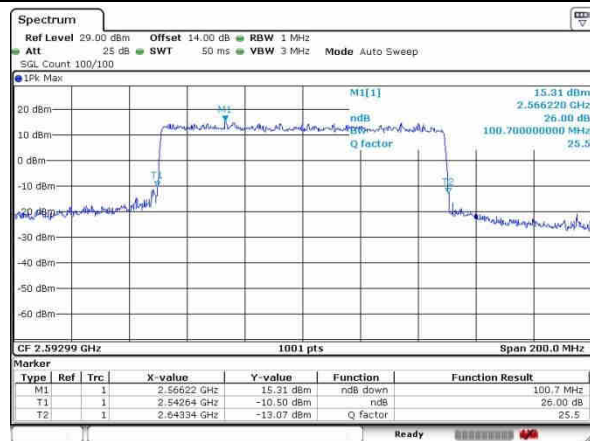
Date: 5 JUN 2019 19:59:13

Middle Channel_NR(QPSK)



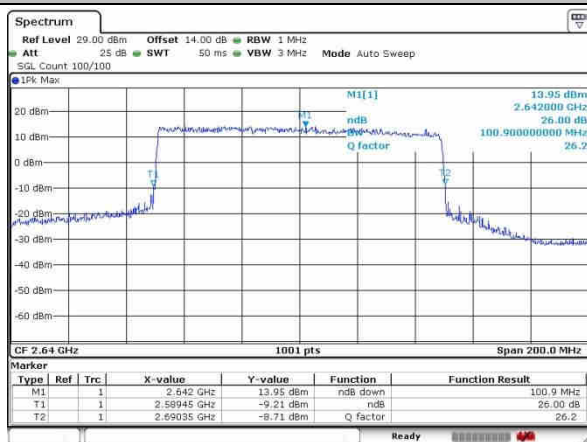
Date: 5 JUN 2019 15:42:31

Middle Channel_NR (16QAM)



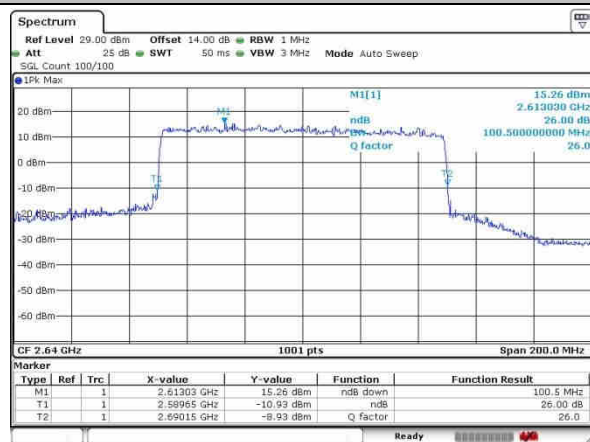
Date: 5 JUN 2019 15:41:57

Highest Channel_NR(QPSK)



Date: 5 JUN 2019 19:43:10

Highest Channel_NR (16QAM)



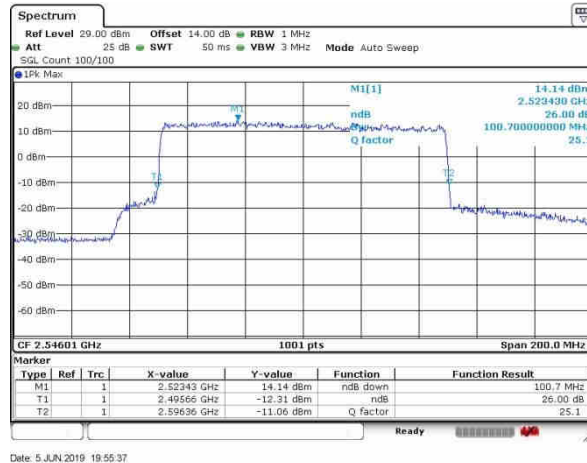
Date: 5 JUN 2019 19:47:09



EN-DC_26A_n41

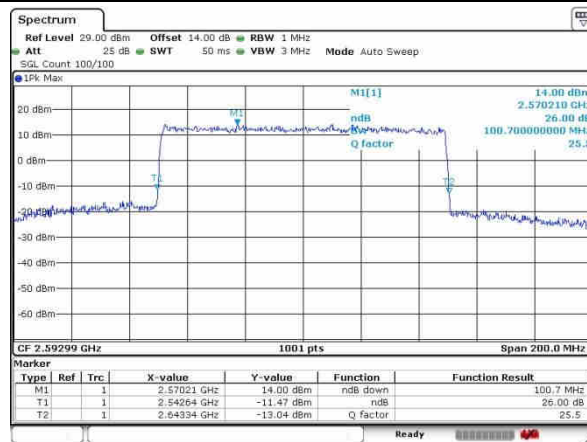
LTE 15MHz + NR 100MHz

Lowest Channel_NR(64QAM)



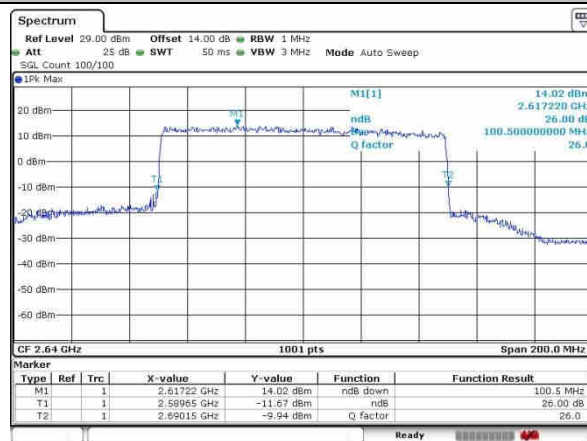
Date: 5 JUN 2019 19:55:37

Middle Channel_NR(64QAM)



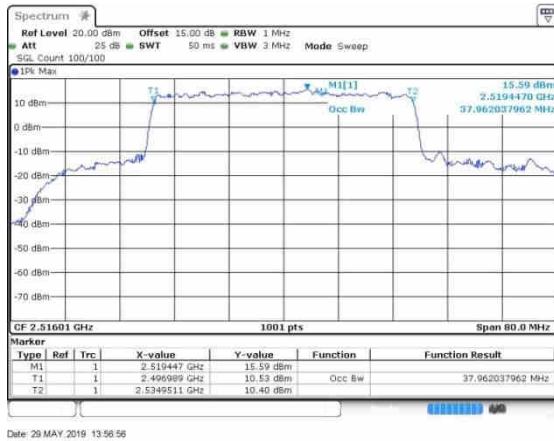
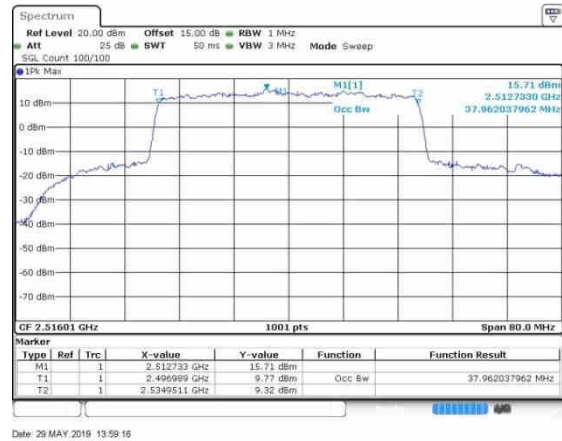
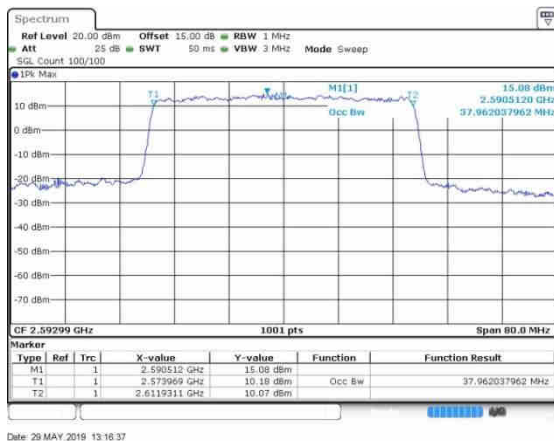
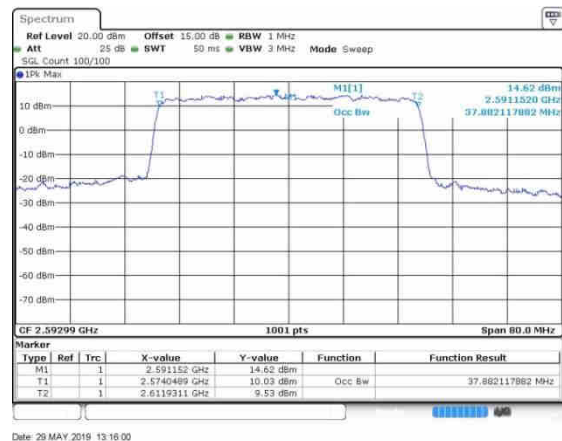
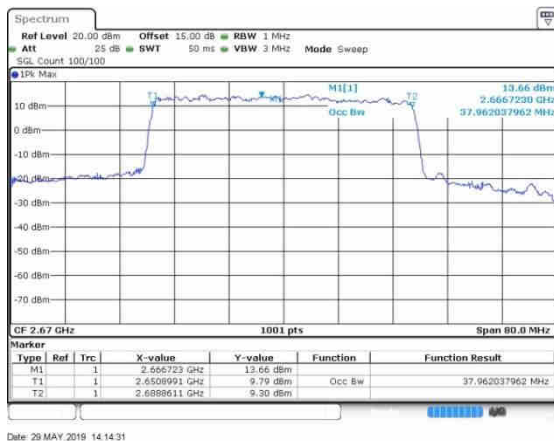
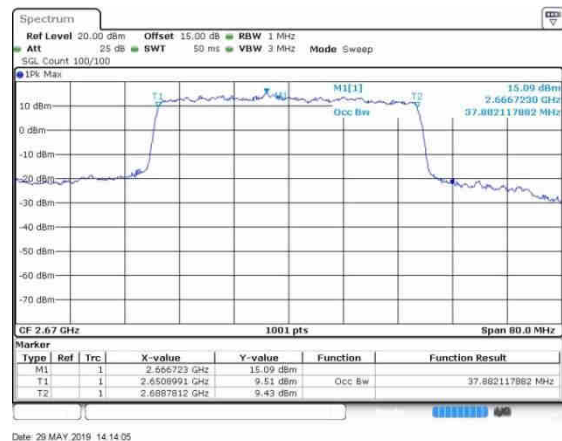
Date: 5 JUN 2019 15:54:41

Highest Channel_NR(64QAM)



Date: 5 JUN 2019 19:51:05

Occupied Bandwidth

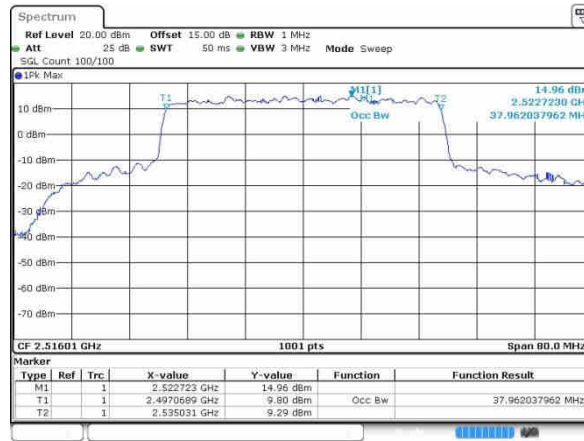
EN-DC_41A_n41
LTE 20MHz + NR 40MHz
Lowest Channel_NR(QPSK)

Lowest Channel_NR(16QAM)

Middle Channel_NR(QPSK)

Middle Channel_NR(16QAM)

Highest Channel_NR(QPSK)

Highest Channel_NR(16QAM)




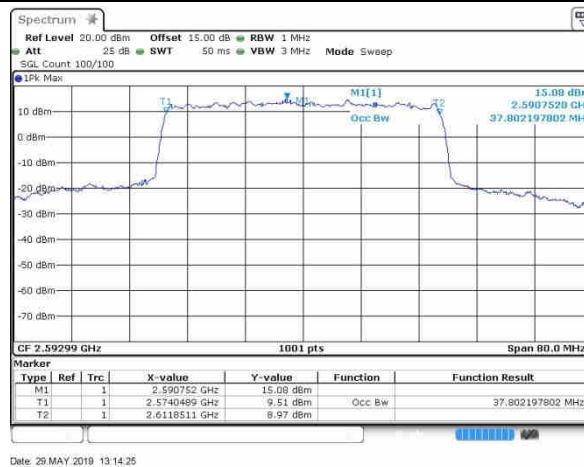
EN-DC_41A_n41

LTE 20MHz + NR 40MHz

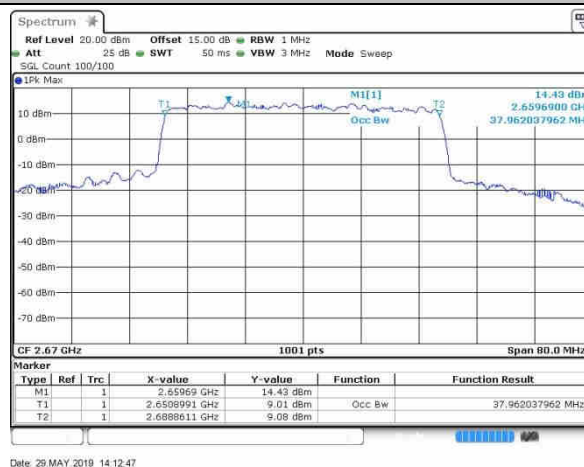
Lowest Channel_NR (64QAM)



Middle Channel_NR (64QAM)



Highest Channel_NR (64QAM)

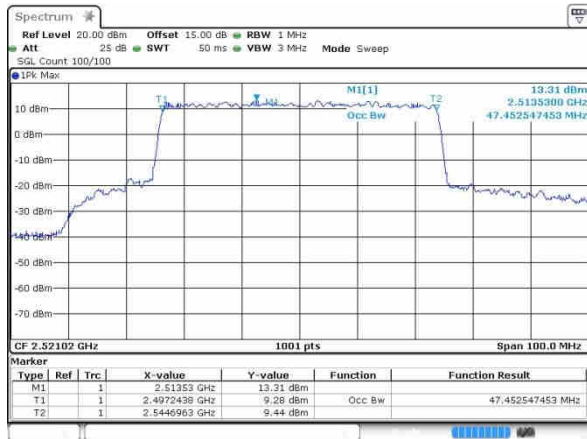




EN-DC_41A_n41

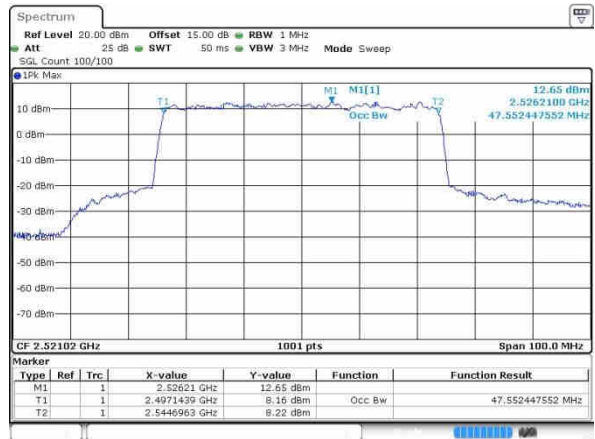
LTE 20MHz + NR 50MHz

Lowest Channel_NR (QPSK)



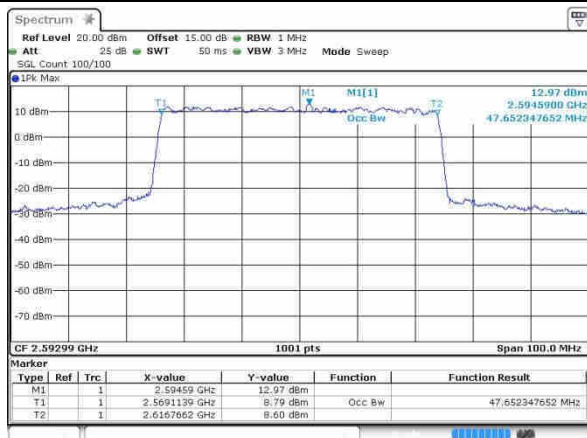
Date: 22 MAY 2019 15:26:55

Lowest Channel_NR (16QAM)



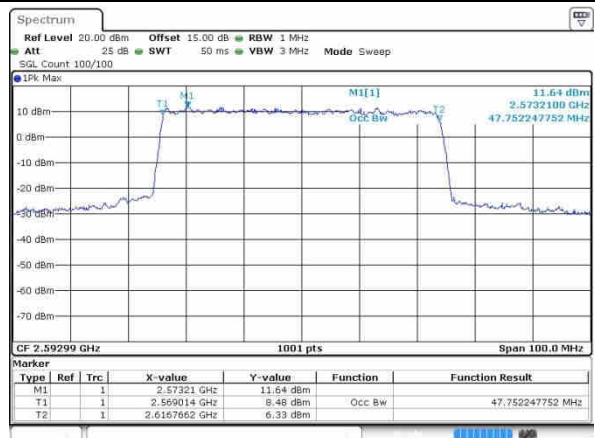
Date: 22 MAY 2019 15:27:40

Middle Channel_NR (QPSK)



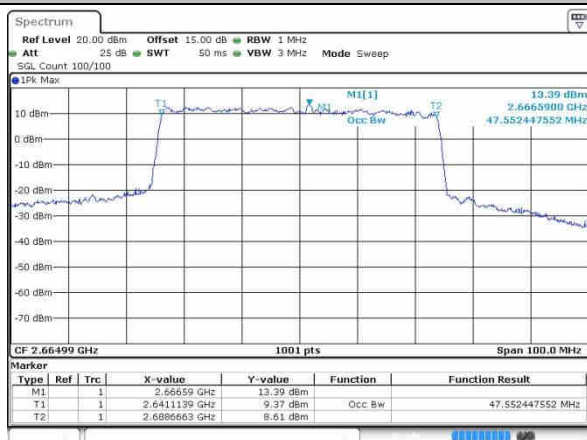
Date: 22 MAY 2019 15:31:21

Middle Channel_NR (16QAM)



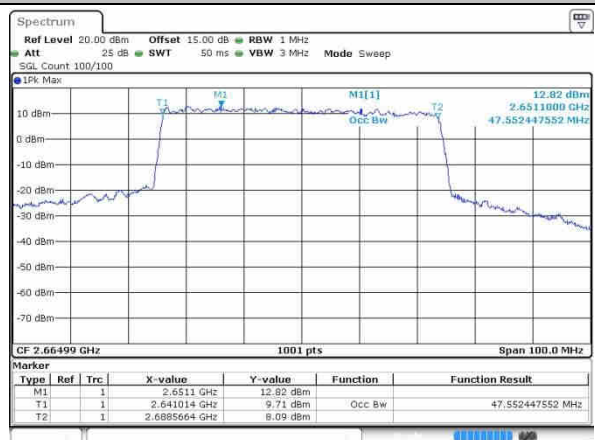
Date: 22 MAY 2019 15:32:12

Highest Channel_NR (QPSK)



Date: 22 MAY 2019 15:42:13

Highest Channel_NR (16QAM)



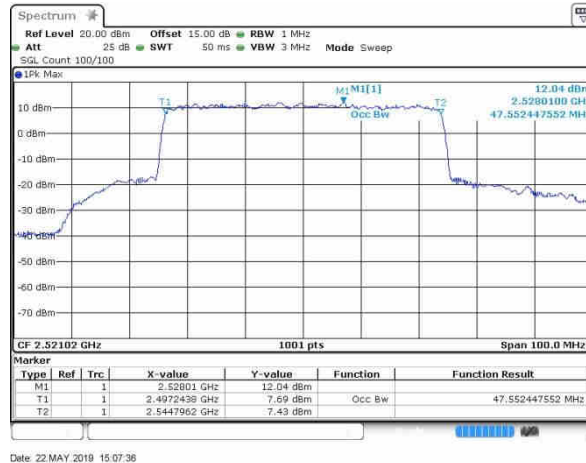
Date: 22 MAY 2019 15:41:40



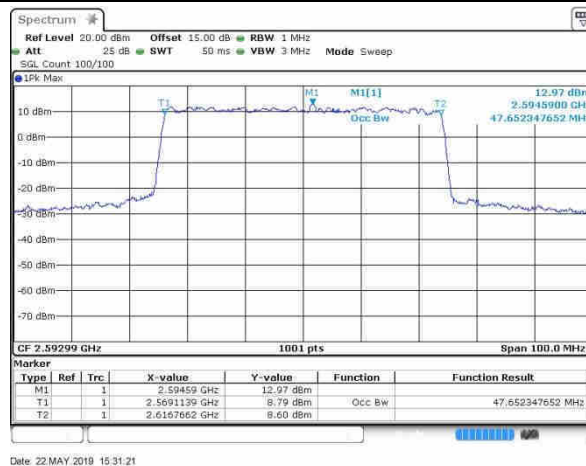
EN-DC_41A_n41

LTE 20MHz + NR 50MHz

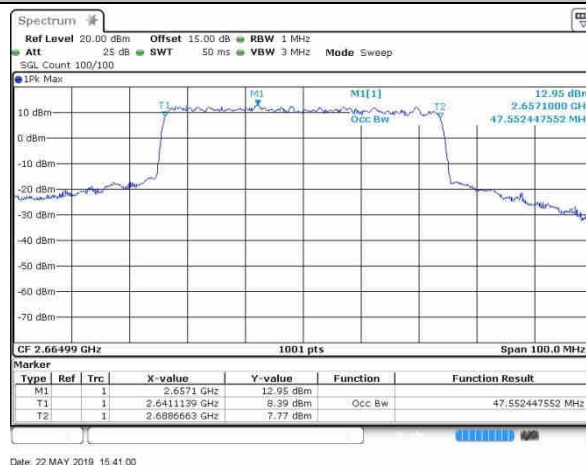
Lowest Channel_NR(64QAM)



Middle Channel_NR(64QAM)



Highest Channel_NR(64QAM)

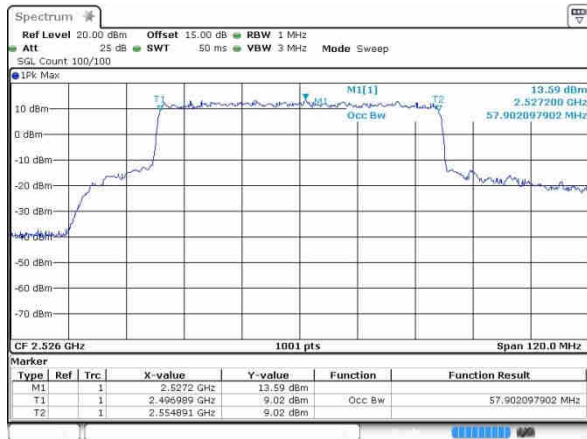




EN-DC_41A_n41

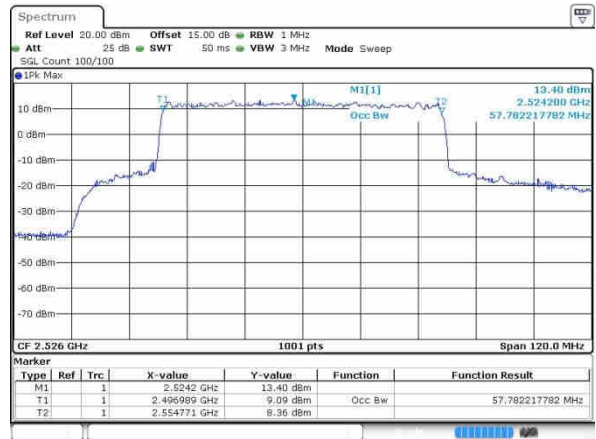
LTE 20MHz + NR 60MHz

Lowest Channel_NR(QPSK)



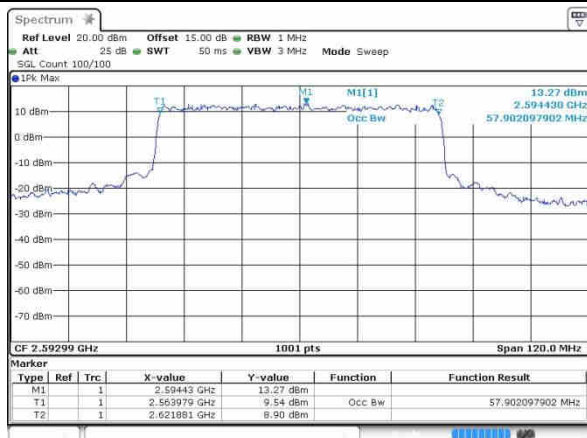
Date: 29 MAY 2019 14:34:12

Lowest Channel_NR(16QAM)



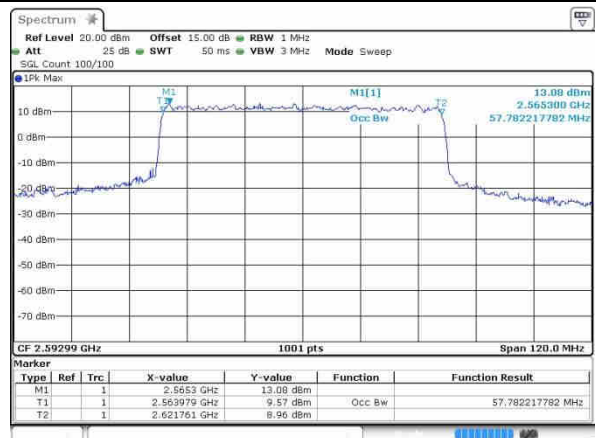
Date: 29 MAY 2019 14:35:10

Middle Channel_NR(QPSK)



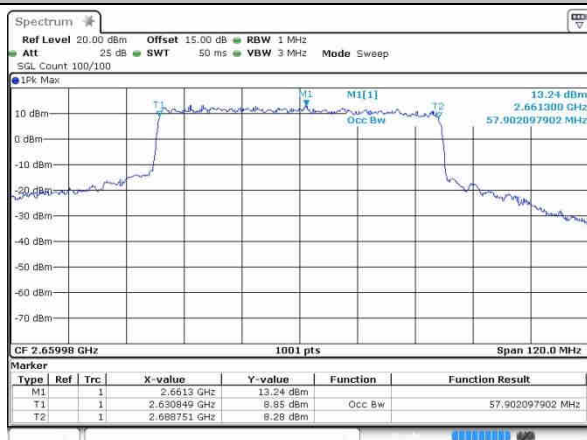
Date: 29 MAY 2019 14:32:02

Middle Channel_NR(16QAM)



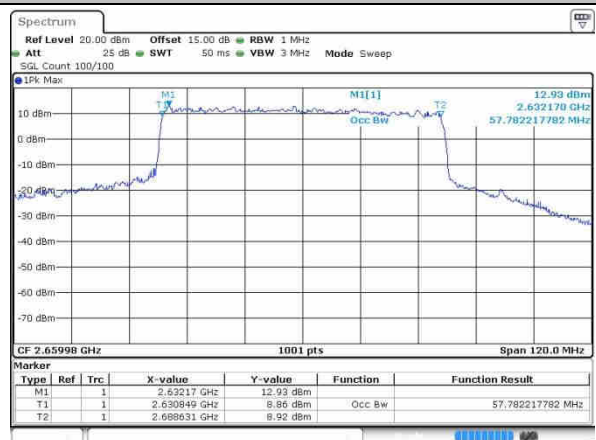
Date: 29 MAY 2019 14:28:16

Highest Channel_NR(QPSK)



Date: 29 MAY 2019 14:52:06

Highest Channel_NR(16QAM)



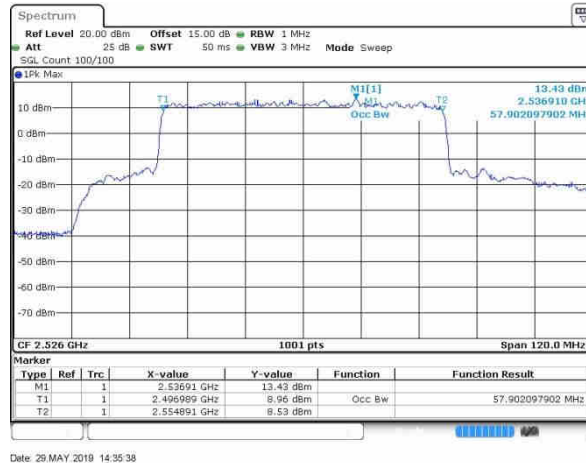
Date: 29 MAY 2019 14:52:36



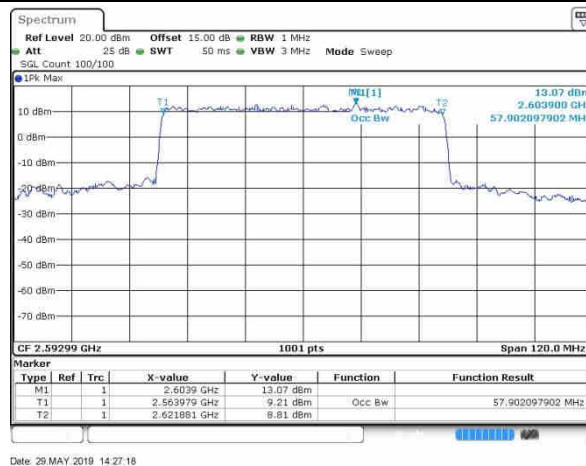
EN-DC_41A_n41

LTE 20MHz + NR 60MHz

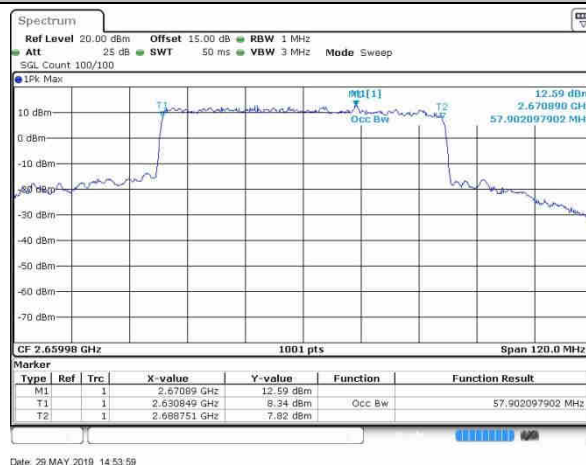
Lowest Channel_NR(64QAM)



Middle Channel_NR(64QAM)



Highest Channel_NR(64QAM)

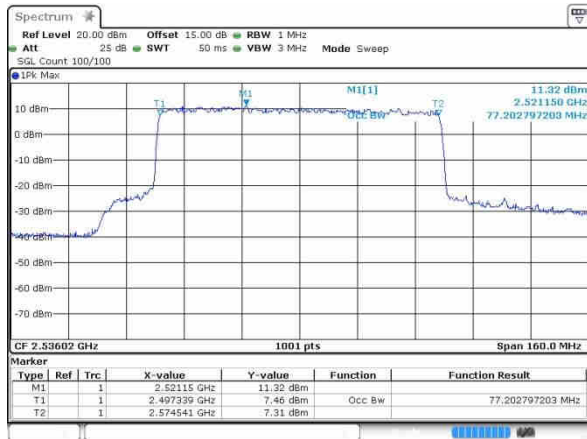




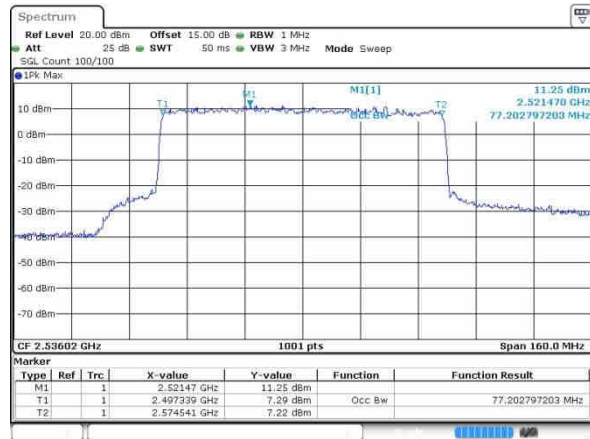
EN-DC_41A_n41

LTE 20MHz + NR 80MHz

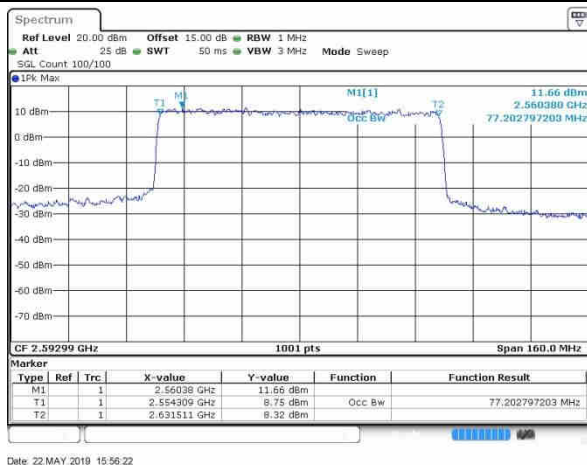
Lowest Channel_NR (QPSK)



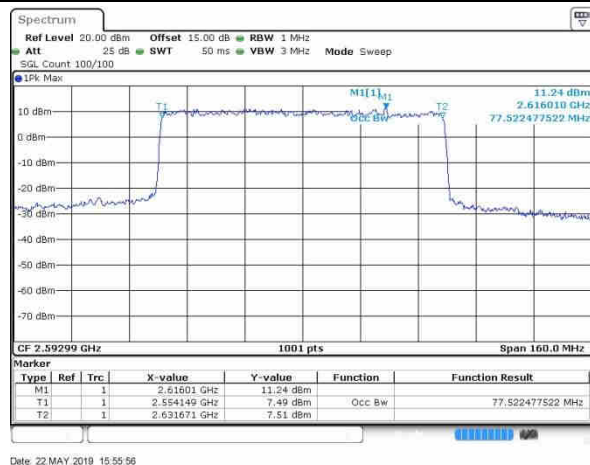
Lowest Channel_NR(16QAM)



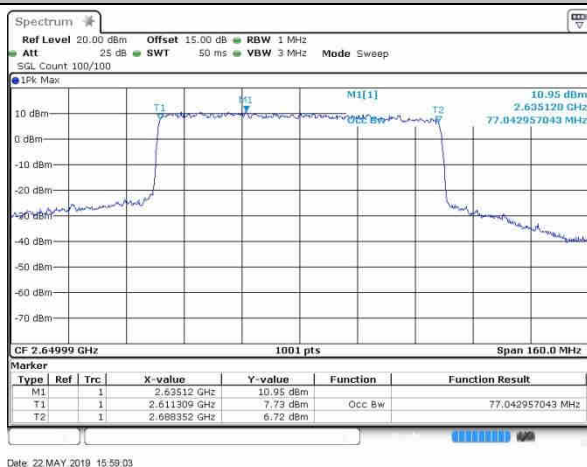
Middle Channel_NR (QPSK)



Middle Channel_NR(16QAM)



Highest Channel_NR (QPSK)



Highest Channel_NR(16QAM)

