FCC RADIO TEST REPORT

FCC ID	:	**PKRISGM1000**
Equipment	:	**Wireless Hotspot Modem**
Brand Name	:	**inseego**
Model Name	:	**M1000**
Marketing Name	:	**5G MiFi M1000**
Applicant	:	**Inseego Corp.** **9605 Scranton Road, Suite 300, San Diego, CA 92121**
Manufacturer	:	**Inseego Corp.** **9605 Scranton Road, Suite 300, San Diego, CA 92121**
Standard	:	**FCC 47 CFR Part 2, and 30**

The product was received on April, 29, 2019 and testing was started from May, 03, 2019 and completed on May 09, 2019. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures ANSI C63.26-2015 and has been in compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Approved by: Ken Chen

Sporton International (USA) Inc.

1175 Montague Expressway, Milpitas, CA 95035

Table of Contents

History of this test report

Report No.	Version	Description	Issued Date
FG190501001A	01	Initial issue of report	May 09, 2019
FG190501001A	02	Add EUT duty cycle test configuration description in report section 2.	May 15, 2019
FG190501001A	03	Add statement for beam investigation and spurious emissions is measured by radiated EIRP in report section 2.	May 16, 2019
FG190501001A	04	Add statement of EIRP worst case in report section 1.2.	May 17, 2019

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Limit	Result (PASS/FAIL)	Remark
3.4	§2.1046 §30.202	EIRP Measurement	+43dBm	Pass	-
3.5	§2.1049	Occupied Bandwidth	Not Applicable	Reporting only	-
3.6	§2.1053 §30.203	Radiated Spurious Emission	-5dBm/MHz -13dBm/MHz	Pass	-
3.7	§2.1055	Frequency Stability for Temperature & Voltage	Within the band	Pass	-

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: William Chen

Report Producer: Jordan Huang

1 General Description

1.1 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	Wireless Hotspot Modem
FCC ID	PKRISGM1000
EUT supports Radios application	UMTS/LTE/NR/WiFi
HW Version	3.0
FW Version	1.17
EUT Stage	Production Unit

Remark: The above EUT's information was declared by manufacturer.

Specification of Accessories	
USB Cable 1	Brand Name : inseego
	Model Name : INSGUSB3.0

1.2 Product Specification of Equipment Under Test

Product Specification subjective to this standard	
Device Category in Part 30	Mobile station
Tx Frequency	NR band n261: 27.5GHz ~ 28.35GHz
Rx Frequency	NR band n261: 27.5GHz ~ 28.35GHz
Support Bandwidth	NR band n261: 50 MHz and 100 MHz
Maximum Number of contiguous CC	4
Maximum Aggregated Bandwidth	400MHz
Maximum Output Power (EIRP)	NR band n261: Module 0: 22.68 dBm Module 1: 22.64 dBm Module 2: 22.50 dBm **Module 3: 23.46 dBm**
Type of Modulation	CP-OFDM: QPSK / 16QAM / 64QAM DFT-s-OFDM: Not supported

Note: Highest EIRP was measured on Module-3/Ant-3, Patch.

1.3 Modification of EUT

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

1.4 Testing Location

Test Site	SPORTON INTERNATIONAL (USA) INC.			
Test Site Location	1175 Montague Expressway Milpitas, CA 95035, United States TEL: 16692729004			
Test Site Information	Site No.	Engineer	Temperature	Humidity
	03CH01-CA	Jordan Huang	19~21℃	41~43 %
	TH01-CA	Jordan Huang	20~22℃	40~42 %

FCC designation No. : US1250

1.5 Applied Standards

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

- FCC 47 CFR Part 2, 30
- ANSI C63.26-2015
- FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- FCC KDB 842590 D01 Upper Microwave Flexible Use Service v01

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

EUT has total 4 millimeter wave antenna modules and up to 2 beams operation for each module.

Any antenna module cannot transmit simultaneously with the other antenna modules.

Preliminary EIRP test was performed for all beam configurations in the anechoic chamber at the manufacturer's facility so the EIRP worst case beam-pair were identified.

EIRP was investigated that the MIMO beam rated maximum EIRP is 3dB lower than the single beam rated maximum EIRP.

EUT configured to transmit a single beam at a rated maximum EIRP.

The NR radio operation is controlled via software tool QRCT.

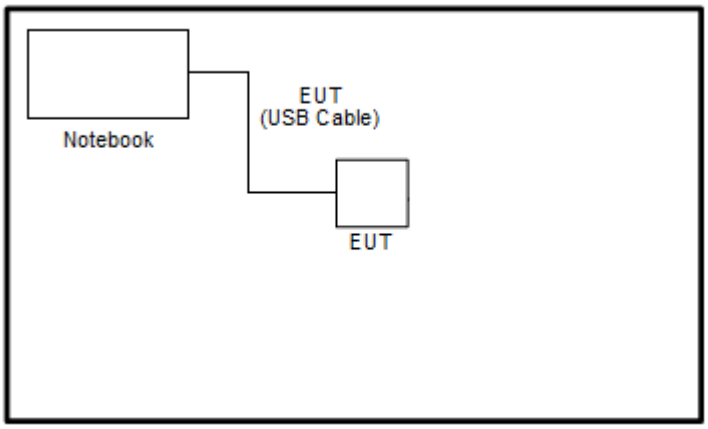
The EUT is forced to operate continuously (100% duty cycle) with maximum output power during the test.

2.1 Test Mode

For radiated measurement, the pre-scan is performed to find the worst cases EUT position.

Test Items	Band	Bandwidth (MHz)			Modulation			RB #			Test Channel		
		50	100	400	QPSK	16QAM	64QAM	1	-	Full	L	M	H
EIRP	n261	v	v	v	v	v	v	v		v	v	v	v
99% Occupied Bandwidth	n261	v	v	v	v	v	v			v	v	v	v
Out of Band Emission	n261	v	v	v	v	v	v			v	v		v
Spurious Emission	n261	v	v	v	v			v			v	v	v
Frequency Stability	n261	CW tone										v	
Remark	1. The mark "**v** " means that this configuration is chosen for testing 2. The device is investigated from 30MHz to 100GHz of fundamental signal for radiated spurious emission test under different RB size and modulations in exploratory test. Subsequently, only the worst case emissions are reported. 3. All the radiated test cases were performed with built-in battery. 4. The out of band emission and spurious emissions were measured radiated EIRP.												

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	Notebook	Dell	N/A	N/A	N/A	N/A

2.4 Measurement Results Explanation Example

According to ANSI C63.26-2015 Section 5.2.7

EIRP (dBm) = E(dBuV/m) + 20log (D) -104.8.

where D is the measurement distance (in the far field region) in m.

E (dBuV/m) = Spectrum Reading Level (dBm) + Antenna Factor (dB/m) + Cable Loss (dB) + 107

Hence, the spectrum analyzer *Offset* is derived including RF cable loss and antenna factor.

Offset = Antenna Factor (dB/m) + Cable Loss (dB) + 107 + 20log (D) – 104.8

The conversion loss of RF mixer is also included by the mixer table of spectrum analyzer when measurement frequency is above 40GHz.

Example :

Offset = Antenna Factor (dB/m) + Cable Loss (dB) + 107 + 20log (D) – 104.8

= 40.1 + 2.4 + 107 + 20log(1) – 104.8

= 44.7 (dB)

2.5 Far Field Condition for Frequency above 18GHz

Horn Antenna	Frequency (GHz)	Antenna Dimension A (mm)	Wavelength (λ) (m)	Far field R (m) >= $2A^2/\lambda$	Measurement Distance (D) (m)	Distance Factor 20log(D) (dB)
BBHA 9170	18	60	0.0167	0.43	1	0.00
	40	60	0.0075	0.96		
QWH-UPRR00	40	48	0.0075	0.61	1	0.00
	60	48	0.0050	0.92		
QWH-EPRR00	60	31	0.0050	0.38	1	0.00
	90	31	0.0033	0.58		
QWH-FPRR00	90	21	0.0033	0.26	1	0.00
	140	21	0.0021	0.41		

2.6 Frequency List of Low/Middle/High Channels

NR Band n261 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
50	Frequency	27525	27925	28325
100	Frequency	27550	27925	28300
400	Frequency 1	27550	27775	28000
	Frequency 2	27650	27875	28100
	Frequency 3	27750	27975	28200
	Frequency 4	27850	28075	28300

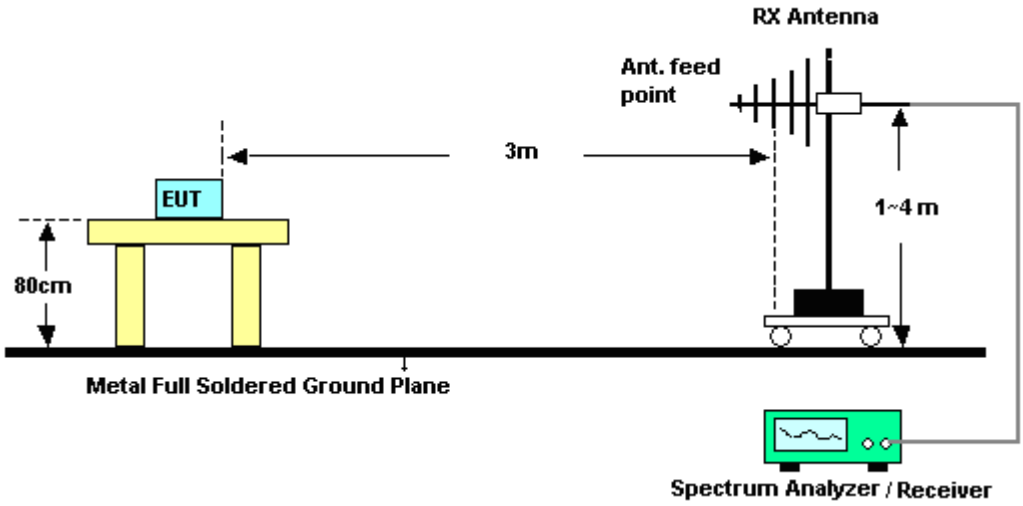
3 Radiated Test Items

3.1 Measuring Instruments

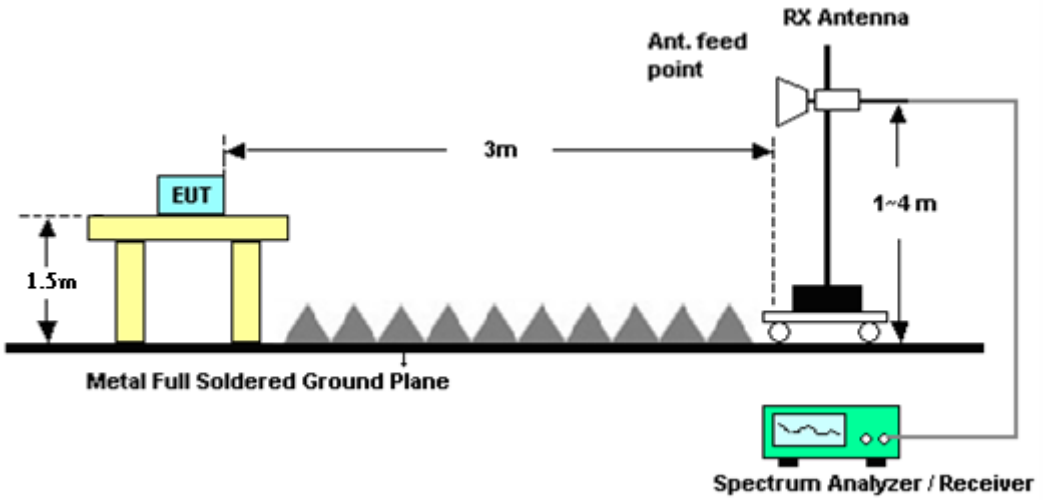
See list of measuring instruments of this test report.

3.2 Test Setup

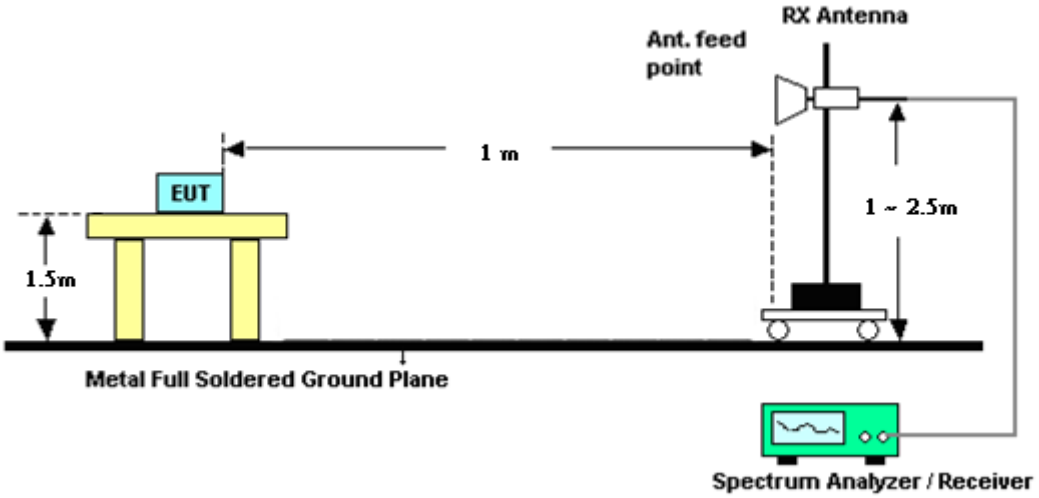
For radiated emissions from 30MHz to 1GHz



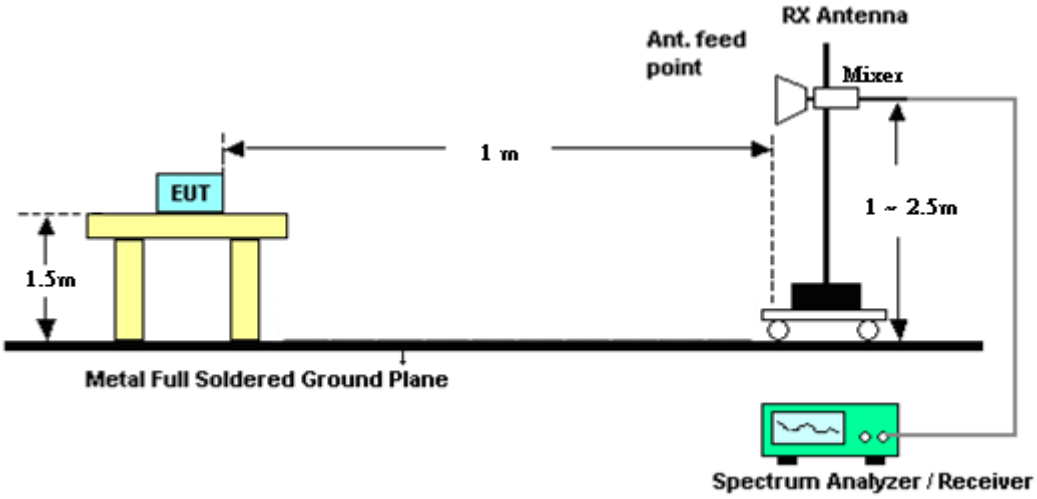
For radiated emissions 1GHz to 18GHz



For radiated emissions above 18GHz



For radiated emissions above 40GHz



3.3 Test Result of Radiated Test

Please refer to Appendix A.

3.4 EIRP Measurement

3.4.1 Description of EIRP Measurement

For mobile stations, the average power of the sum of all antenna elements is limited to a maximum EIRP of +43 dBm.

3.4.2 Test Procedures

1. Set EUT at maximum output power.
2. Select lowest, middle, and highest channels for each band and different modulation.
3. Enable channel power function of spectrum analyzer
4. Set frequency would like to be investigated.
5. Set Detector = RMS
6. Set Trace mode = trace average
7. Set Sweep time = auto couple
8. Set sweep points ≥ 2 x Span/RBW
9. Set sweep count 100 and wait until the trace to be stabilized
10. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
11. Measure and record the power level from the spectrum analyzer.
12. The test result is calculated according to
    ANSI C63.26-2015 Section 5.2.7
    EIRP (dBm) = E(dBuV/m) + 20log (D) -104.8.
    where D is the measurement distance (in the far field region) in m.
    E (dBuV/m) = Spectrum Level (dBm) + Antenna Factor (dB/m) + Cable Loss (dB) + 107
    That is, set the spectrum offset including sum of
    Antenna Factor (dB/m) + Cable Loss (dB) + 107 + 20log (D) – 104.8

3.5 Occupied Bandwidth

3.5.1 Description of Occupied Bandwidth Measurement

This is for reporting only.

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.

3.5.2 Test Procedures

The testing follows ANSI C63.26-2015 Section 5.4.4

1. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be at least 1.5 times the anticipated OBW.
2. 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.
3. Set the detection mode to peak, and the trace mode to max hold.
4. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

3.6 Radiated Spurious Emission Measurement

3.6.1 Description of Radiated Spurious Emission Measurement

The spectrum is scanned from 30 MHz up to 100GHz.

The conductive power or the total radiated power of any emission outside a licensee's frequency block shall be −13 dBm/MHz or lower. However, in the bands immediately outside and adjacent to the licensee's frequency block, having a bandwidth equal to 10 percent of the channel bandwidth, the conductive power or the total radiated power of any emission shall be −5 dBm/MHz or lower.

3.6.2 Test Procedures

1. Set EUT at maximum output power..
2. Select lowest, middle, and highest channels for each band and different modulation.
3. Measure and record the power level from the spectrum analyzer.
4. Set frequency would like to be investigated.
5. Set Detector = RMS
6. Set Trace mode = trace average
7. Set Sweep time = auto couple
8. Set sweep points ≥ 2 x Span/RBW
9. Set sweep count 100 and wait until the trace to be stabilized
10. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
11. For measurement frequency from 30MHz to 18GHz,
    An antenna was substituted in place of the EUT and was driven by a signal generator.
    Tune the output power of signal generator to the same emission level with EUT maximum spurious emission. Take record of output power and repeat for another polarization.
12. For measurement frequency above 18GHz,
    the test result is calculated according to
    ANSI C63.26-2015 Section 5.2.7 and 5.7.3 and 5.7.4
    EIRP (dBm) = E(dBuV/m) + 20log (D) -104.8.
    where D is the measurement distance (in the far field region) in m.
    E (dBuV/m) = Spectrum Level (dBm) + Antenna Factor (dB/m) + Cable Loss (dB) + 107
    That is, set the spectrum offset including sum of
    Antenna Factor (dB/m) + Cable Loss (dB) + 107 + 20log (D) – 104.8
13. The conversion loss of RF mixer is also included in conversion loss table of the spectrum analyzer when measurement frequency is above 40GHz.

3.7 Frequency Stability Measurement

3.7.1 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.

3.7.2 Test Procedures for Temperature Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.

1. The EUT was set up in the thermal chamber.
2. 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.
3. 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.

3.7.3 Test Procedures for Voltage Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.

1. The EUT was placed in a temperature chamber at 20° C.
2. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Amplifier	SONOMA	310N	372241	9kHz~1GHz	Aug. 02, 2018	May. 03,2019~ May. 09, 2019	Aug. 01, 2019	Radiation (03CH01-CA)
Bilog Antenna	TESEQ	6111D	50391	30MHz~1GHz	May. 11, 2018	May. 03,2019~ May. 09, 2019	May. 10, 2019	Radiation (03CH01-CA)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-01894	1GHz ~ 18GHz	Jul. 30, 2018	May. 03,2019~ May. 09, 2019	Jul. 29, 2019	Radiation (03CH01-CA)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	00842	18GHz ~ 40GHz	Jul, 31, 2018	May. 03,2019~ May. 09, 2019	Jul. 30, 2019	Radiation (03CH01-CA)
Hygrometer	TESEO	608-H1	45142559	N/A	Aug. 07, 2018	May. 03,2019~ May. 09, 2019	Aug. 06, 2019	Radiation (03CH01-CA)
Preamplifier	Keysight	83017A	MY53270321	1GHz~26.5GHz	Sep. 27, 2018	May. 03,2019~ May. 09, 2019	Sep. 26, 2019	Radiation (03CH01-CA)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101089	9kHz~40GHz	Aug 23, 2018	May. 03,2019~ May. 09, 2019	Aug 22, 2019	Radiation (03CH01-CA)
Software	Audix	E3 6.2009-8-24	RK-002093	N/A	N/A	May. 03,2019~ May. 09, 2019	N/A	Radiation (03CH01-CA)
Controller	ChainTek	3000-1	N/A	Control Turn table & Ant Mast	N/A	May. 03,2019~ May. 09, 2019	N/A	Radiation (03CH01-CA)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	May. 03,2019~ May. 09, 2019	N/A	Radiation (03CH01-CA)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	May. 03,2019~ May. 09, 2019	N/A	Radiation (03CH01-CA)
*Mixer	Rohde & Schwarz	FS-Z60	100994	40 ~ 60 GHz	Dec. 05, 2018	May. 03,2019~ May. 09, 2019	Dec. 04, 2021	Radiation (03CH01-CA)
*Mixer	Rohde & Schwarz	FS-Z90	101130	60 ~ 90 GHz	Sep. 06, 2018	May. 03,2019~ May. 09, 2019	Sep. 05, 2021	Radiation (03CH01-CA)
*Mixer	Rohde & Schwarz	FS-Z140	101867	90 ~ 140 GHz	Jan. 11, 2018	May. 03,2019~ May. 09, 2019	Jan. 10, 2021	Radiation (03CH01-CA)
Spectrum Analyzer	Rohde & Schwarz	FSW43	104042	9kHz~40GHz	Sep. 26, 2018	May. 03,2019~ May. 09, 2019	Sep. 25, 2019	Radiation (03CH01-CA)
Standard Horn Antenna	Quinstar	QWH-UPRR00	923600006	40 ~ 60 GHz	Aug. 17, 2018	May. 03,2019~ May. 09, 2019	Aug. 16, 2021	Radiation (03CH01-CA)
Standard Horn Antenna	Quinstar	QWH-EPRR00	784600035	60 ~ 90 GHz	Aug. 17, 2018	May. 03,2019~ May. 09, 2019	Aug. 16, 2021	Radiation (03CH01-CA)
Standard Horn Antenna	Quinstar	QWH-FPRR00	923800009	90 ~ 140 GHz	Aug. 17, 2018	May. 03,2019~ May. 09, 2019	Aug. 16, 2021	Radiation (03CH01-CA)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100840	9 kHz~30 MHz	Apr. 03, 2019	May. 03,2019~ May. 09, 2019	Apr. 02, 2020	Radiation (03CH01-CA)
Thermal Chamber	ESPEC	SH-642	93012171	N/A	Aug. 29, 2018	May. 03,2019~ May. 09, 2019	Aug. 28, 2019	Thermal (TH01-CA)

Note:

(*) Equipment manufacturer's Calibration Certificate.

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.36**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.59**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.20**

Uncertainty of Radiated Emission Measurement (40 GHz ~ 100 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.90**

Appendix A. Test Results of EIRP and Radiated Test

EIRP Power(Average power)

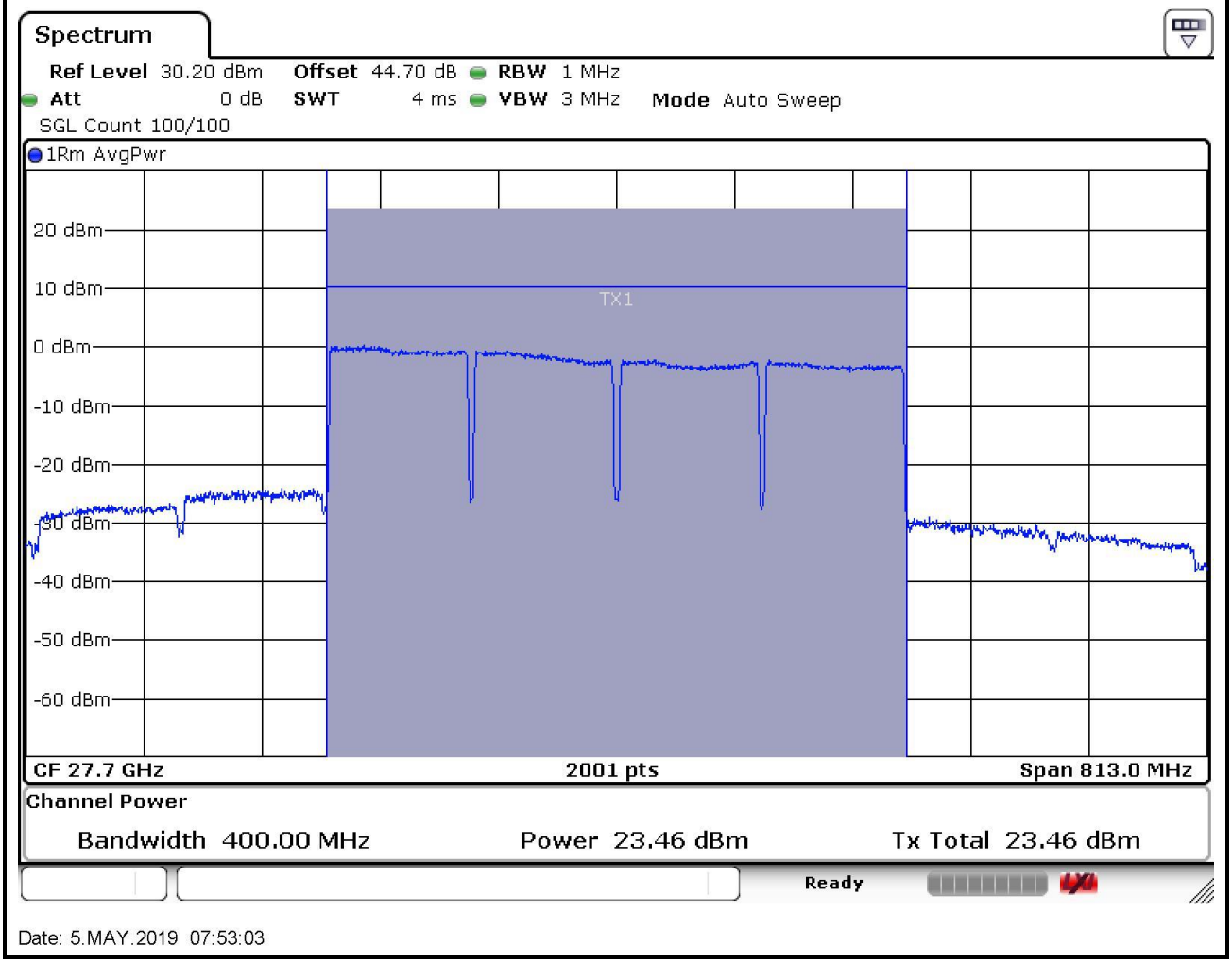
NR Band n261 Module 0 Maximum Average EIRP [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
50	1	0	QPSK	22.14	22.29	22.04
50	32	0		22.54	**22.68**	22.28
50	1	0	16-QAM	21.52	21.16	21.38
50	32	0		21.73	21.55	21.63
50	1	0	64-QAM	19.46	19.38	19.42
50	32	0		19.68	19.69	19.55
100	1	0	QPSK	21.84	22.31	21.94
100	66	0		22.36	22.50	22.46
100	1	0	16-QAM	20.96	21.22	20.88
100	66	0		21.47	21.41	21.74
100	1	0	64-QAM	19.22	19.54	19.02
100	66	0		19.58	19.84	19.14
400	66	0	QPSK	22.64	22.54	22.37
400	66	0	16-QAM	21.28	21.07	21.33
400	66	0	64-QAM	19.19	19.56	19.24

NR Band n261 Module 1 Maximum Average EIRP [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
50	1	0	QPSK	22.28	21.87	22.39
50	32	0		22.47	22.63	**22.64**
50	1	0	16-QAM	20.89	21.42	20.86
50	32	0		21.10	21.68	21.00
50	1	0	64-QAM	18.76	18.73	18.72
50	32	0		18.94	18.96	18.88
100	1	0	QPSK	22.28	22.16	22.22
100	66	0		22.54	22.30	22.50
100	1	0	16-QAM	21.18	21.46	21.22
100	66	0		21.36	21.69	21.48
100	1	0	64-QAM	19.10	19.34	18.58
100	66	0		19.38	19.61	18.71
400	66	0	QPSK	21.19	21.11	21.40
400	66	0	16-QAM	21.02	21.00	20.58
400	66	0	64-QAM	18.89	18.51	18.17

NR Band n261 Module 2 Maximum Average EIRP [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
50	1	0	QPSK	22.02	22.11	22.17
50	32	0		22.12	22.25	22.23
50	1	0	16-QAM	20.84	20.98	20.96
50	32	0		20.99	21.08	21.09
50	1	0	64-QAM	19.02	19.08	19.37
50	32	0		19.12	19.22	19.53
100	1	0	QPSK	22.21	22.10	22.18
100	66	0		**22.50**	22.16	22.32
100	1	0	16-QAM	20.88	21.06	21.07
100	66	0		21.08	21.20	21.18
100	1	0	64-QAM	18.80	19.02	19.10
100	66	0		18.82	19.12	19.27
400	66	0	QPSK	22.13	22.07	22.07
400	66	0	16-QAM	20.77	21.20	20.75
400	66	0	64-QAM	18.24	18.78	18.25

NR Band n261 Module 3 Maximum Average EIRP [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
50	1	0	QPSK	22.86	23.02	23.08
50	32	0		23.19	23.20	23.14
50	1	0	16-QAM	22.07	22.42	22.08
50	32	0		22.19	22.56	22.24
50	1	0	64-QAM	19.86	20.38	20.18
50	32	0		20.01	20.58	20.41
100	1	0	QPSK	22.85	23.21	23.42
100	66	0		23.03	23.38	23.56
100	1	0	16-QAM	21.86	22.04	22.30
100	66	0		22.06	22.17	22.40
100	1	0	64-QAM	20.08	20.46	20.18
100	66	0		20.13	20.62	20.27
400	66	0	QPSK	**23.46**	23.18	23.04
400	66	0	16-QAM	21.96	21.69	22.05
400	66	0	64-QAM	20.52	20.15	20.14

NR Band n261 EIRP Worst Case Plot
Lowest Channel / 400MHz / QPSK / Full RB (Module 3)



Offset = Antenna Factor (dB/m) + Cable Loss (dB) + 107 + 20log (D) – 104.8

= 40.1 + 2.4 + 107 + 20log(1) – 104.8

= 44.7 (dB)

NR Band n261

Occupied Bandwidth

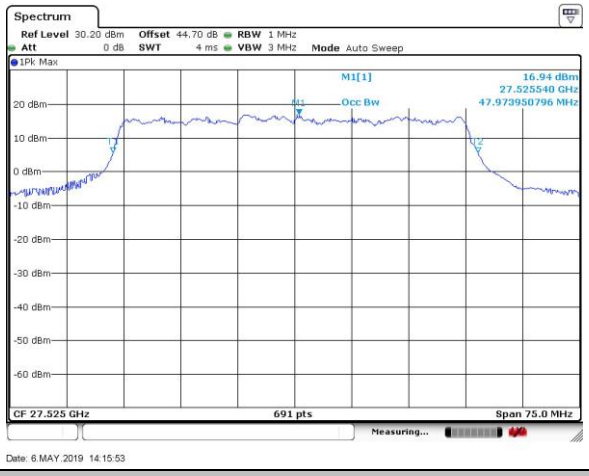
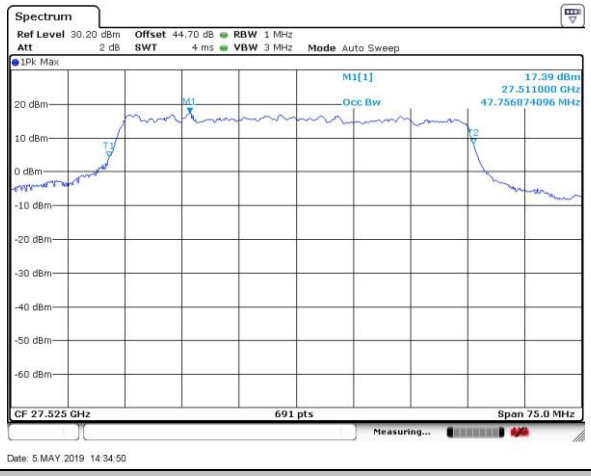
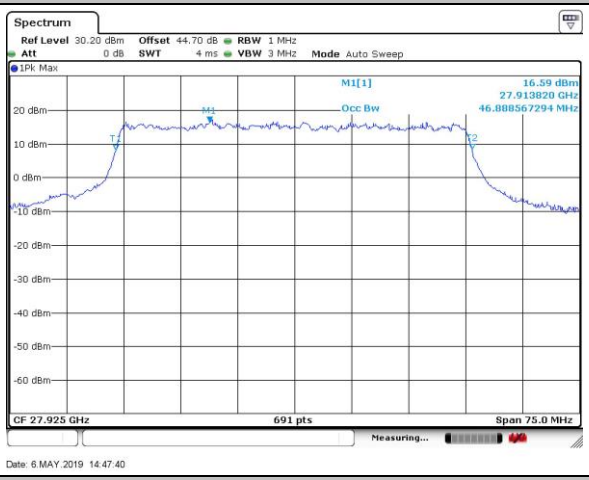
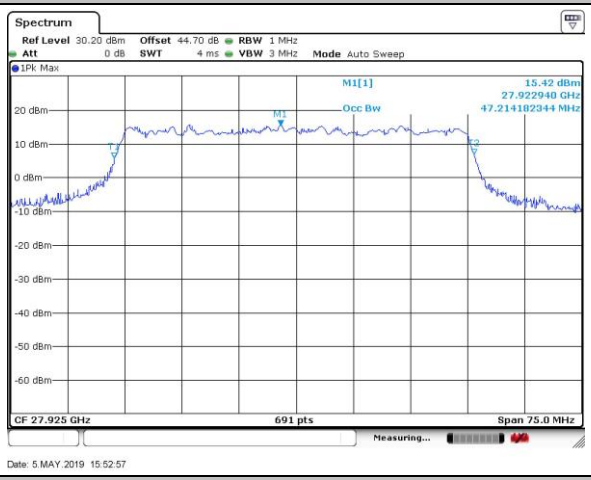
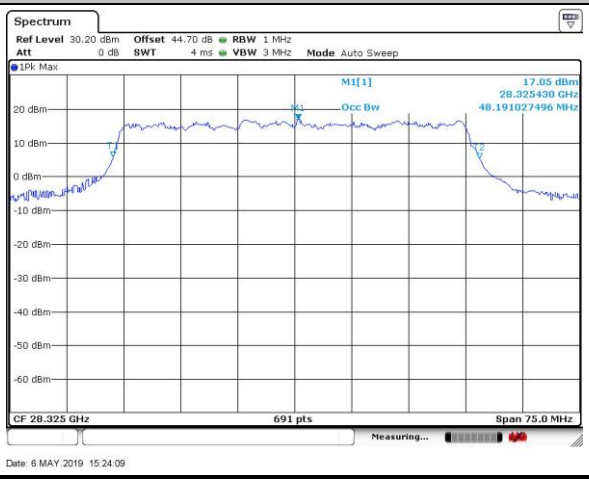
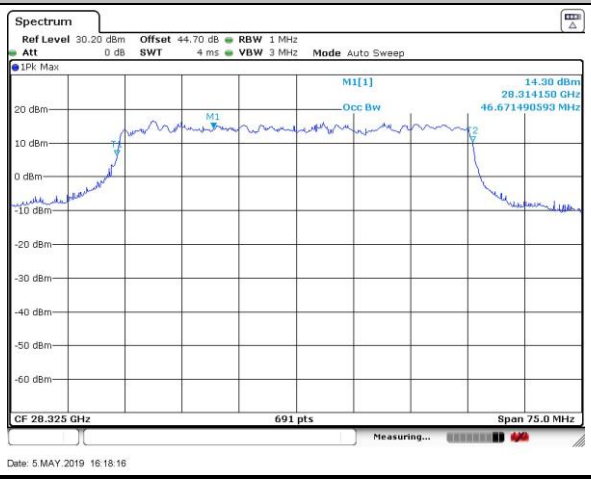
Mode	Module 0 NR Band n261 : 99%OBW(MHz)								
BW	50MHz			100MHz			400MHz		
Mod.	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Lowest CH	47.97	47.75	47.53	94.42	94.21	94.42	394.79	393.63	393.63
Middle CH	47.97	47.21	47.43	94.21	94.21	93.99	393.63	392.47	391.31
Highest CH	46.88	46.67	49.27	94.42	94.42	94.21	393.63	392.47	392.47

Mode	Module 1 NR Band n261 : 99%OBW(MHz)								
BW	50MHz			100MHz			400MHz		
Mod.	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Lowest CH	47.97	46.99	47.32	94.42	94.21	94.42	394.79	394.79	392.47
Middle CH	46.88	46.67	48.95	94.21	94.21	94.21	393.63	393.63	392.47
Highest CH	48.19	47.86	47.32	94.21	94.42	94.42	392.47	391.31	392.47

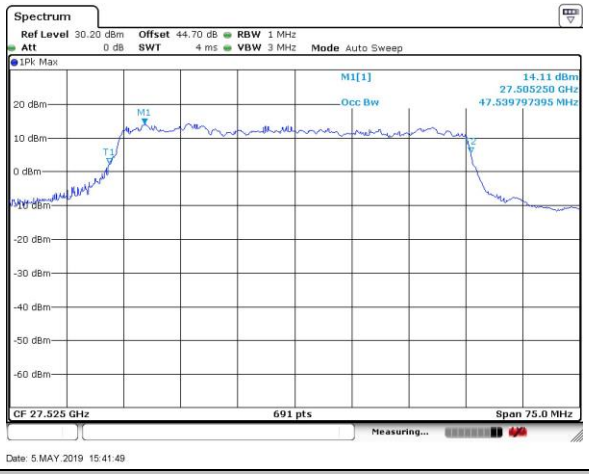
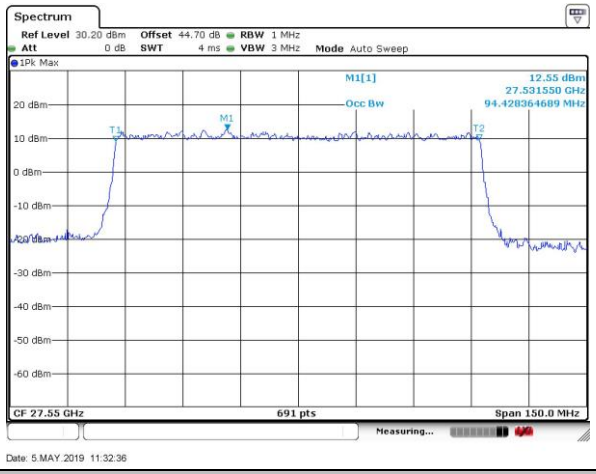
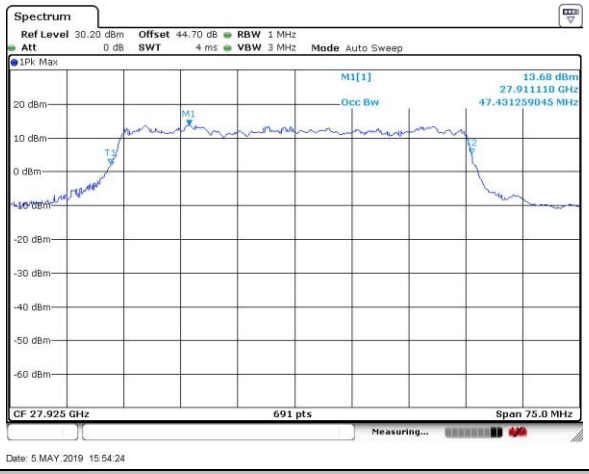
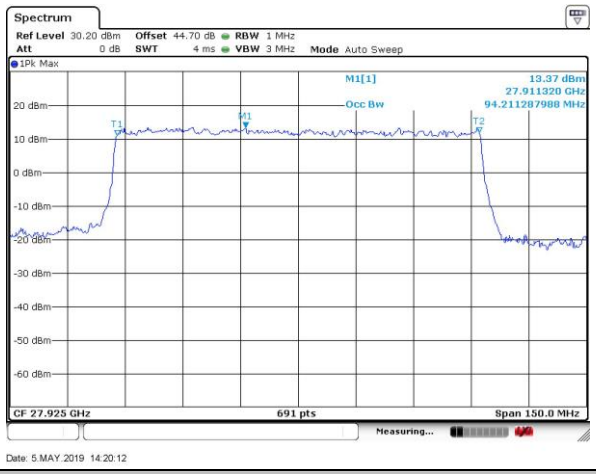
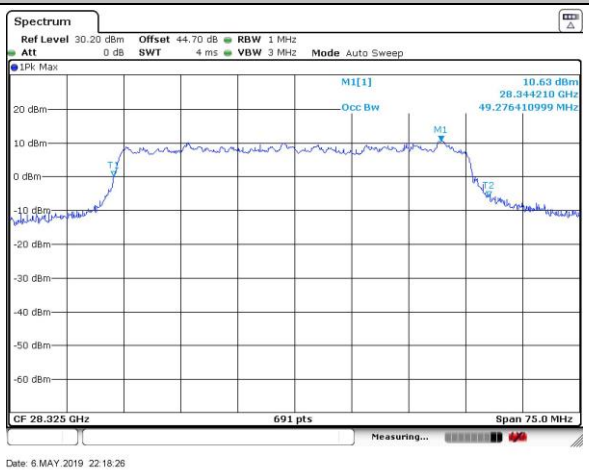
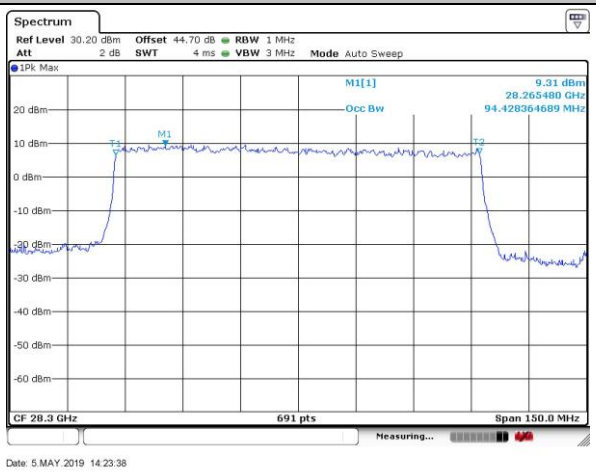
Mode	Module 2 NR Band n261 : 99%OBW(MHz)								
BW	50MHz			100MHz			400MHz		
Mod.	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Lowest CH	46.78	46.67	49.27	94.42	94.21	94.42	394.79	393.63	392.47
Middle CH	46.78	46.67	49.27	94.21	94.21	94.21	393.63	393.63	392.47
Highest CH	46.99	46.88	49.27	94.42	94.21	94.42	393.63	392.47	391.31

Mode	Module 3 NR Band n261 : 99%OBW(MHz)								
BW	50MHz			100MHz			400MHz		
Mod.	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Lowest CH	46.78	49.49	49.38	94.42	94.21	94.42	393.63	393.63	392.47
Middle CH	46.78	46.88	49.38	94.42	94.21	94.21	393.63	393.63	391.31
Highest CH	47.97	48.08	46.89	94.42	94.21	94.21	393.63	392.47	392.47

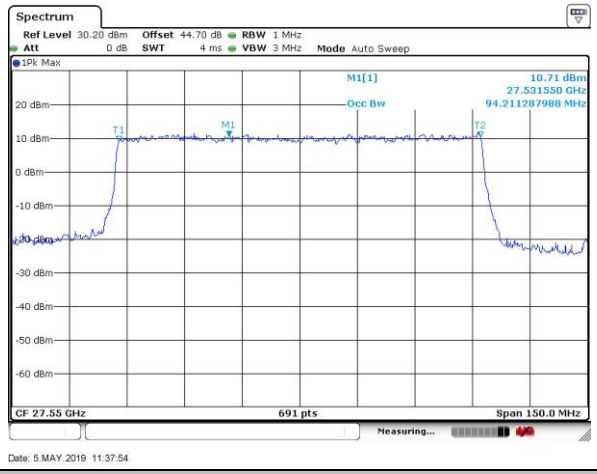
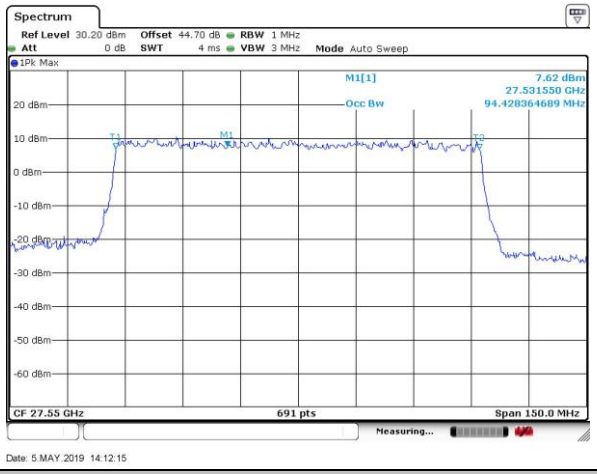
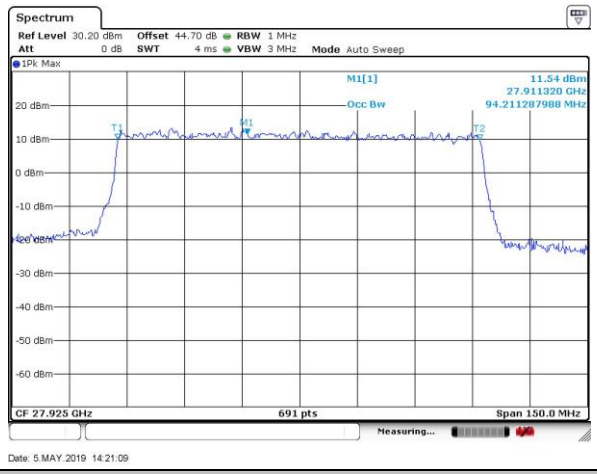
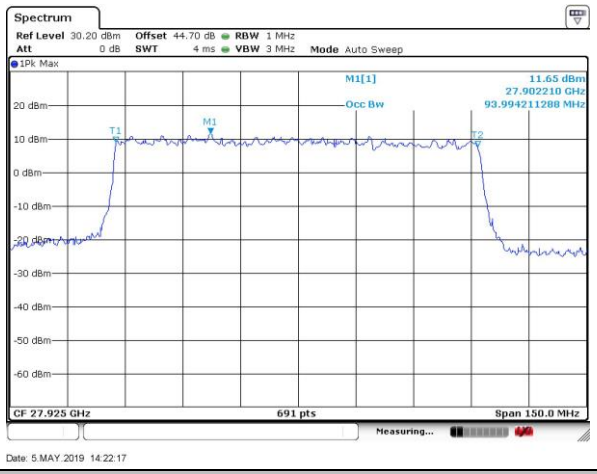
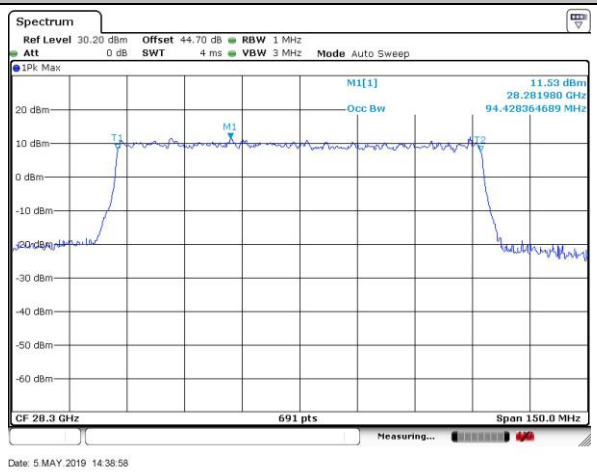
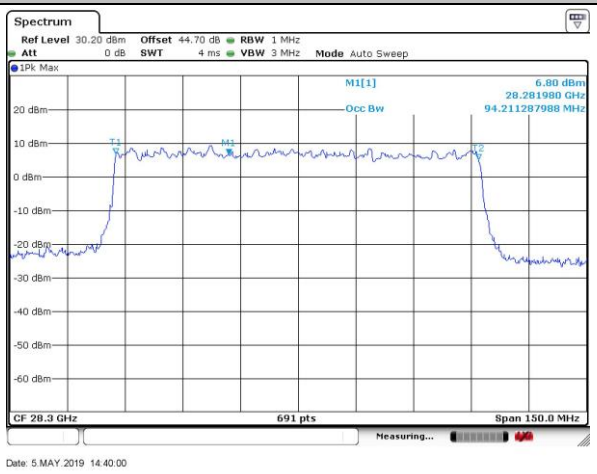
Module 0

NR Band n261	
Lowest Channel / 50MHz / QPSK	**Lowest Channel / 50MHz / 16QAM**
	
Middle Channel / 50MHz / QPSK	**Middle Channel / 50MHz / 16QAM**
	
Highest Channel / 50MHz / QPSK	**Highest Channel / 50MHz / 16QAM**
	

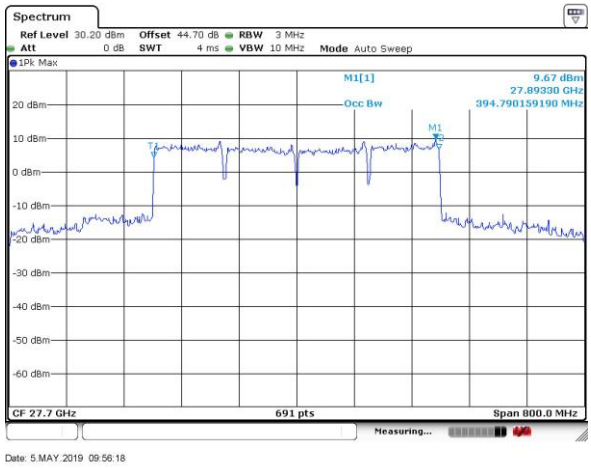
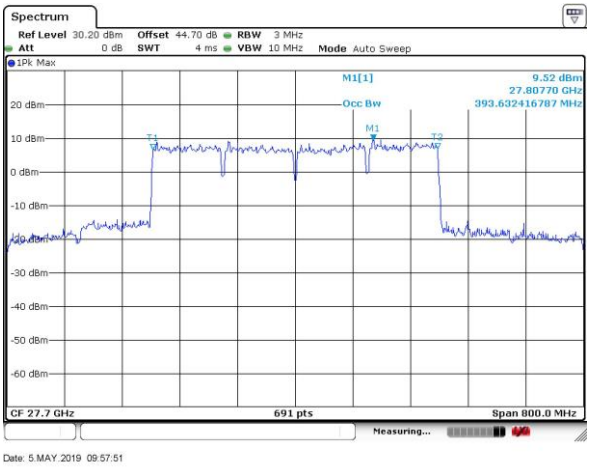
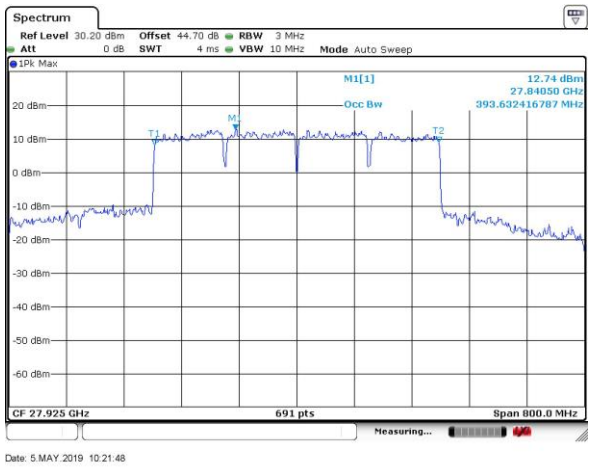
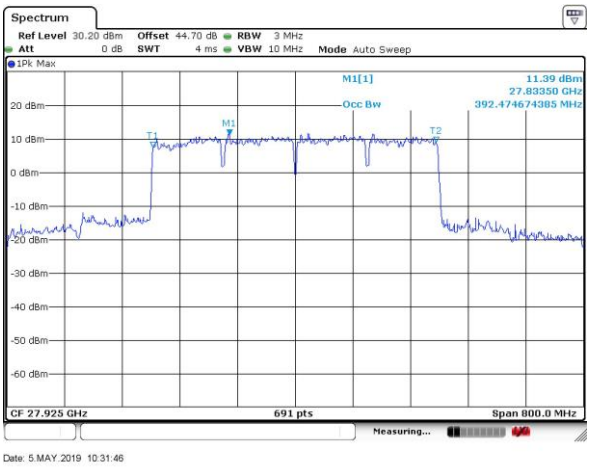
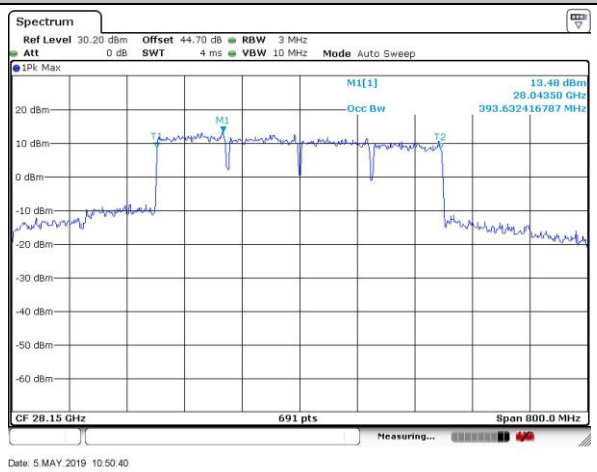
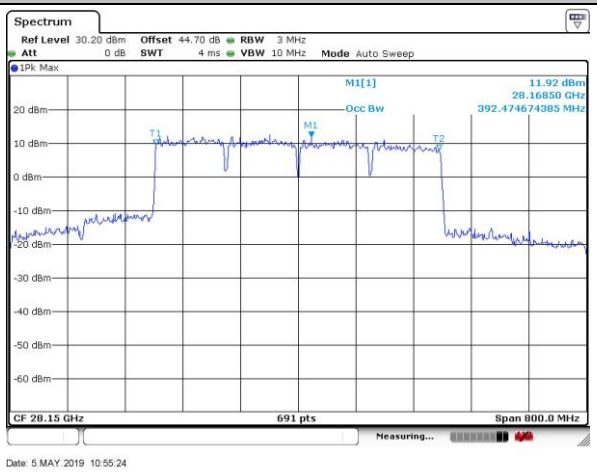
Module 0

NR Band n261	
Lowest Channel / 50MHz / 64QAM	**Lowest Channel / 100MHz / QPSK**
	
Middle Channel / 50MHz / 64QAM	**Middle Channel / 100MHz / QPSK**
	
Highest Channel / 50MHz / 64QAM	**Highest Channel / 100MHz / QPSK**
	

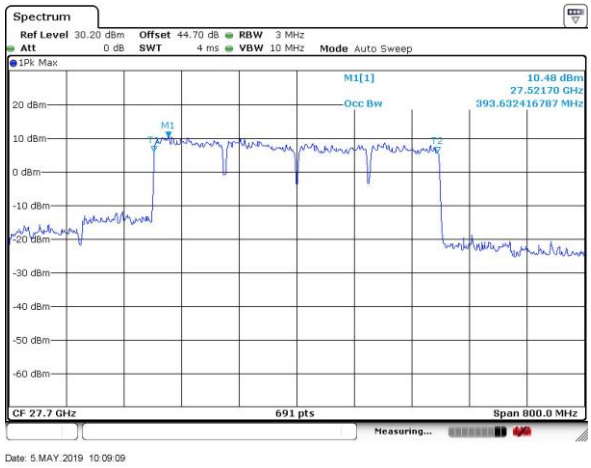
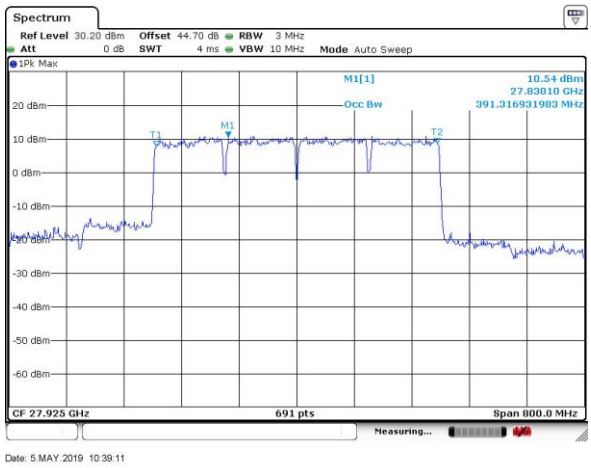
Module 0

NR Band n261	
Lowest Channel / 100MHz / 16QAM	**Lowest Channel / 100MHz / 64QAM**
	
Middle Channel / 100MHz / 16QAM	**Middle Channel / 100MHz / 64QAM**
	
Highest Channel / 100MHz / 16QAM	**Highest Channel / 100MHz / 64QAM**
	

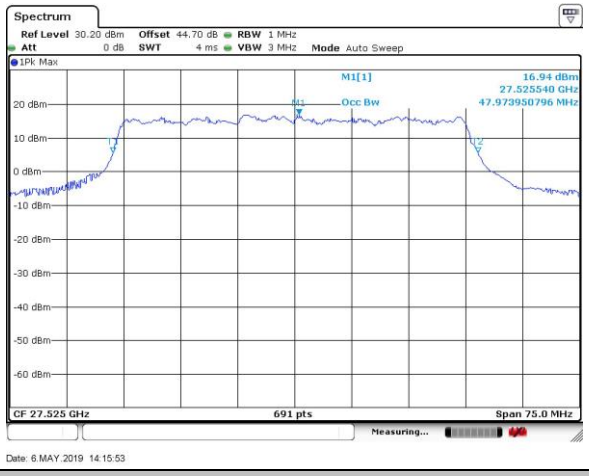
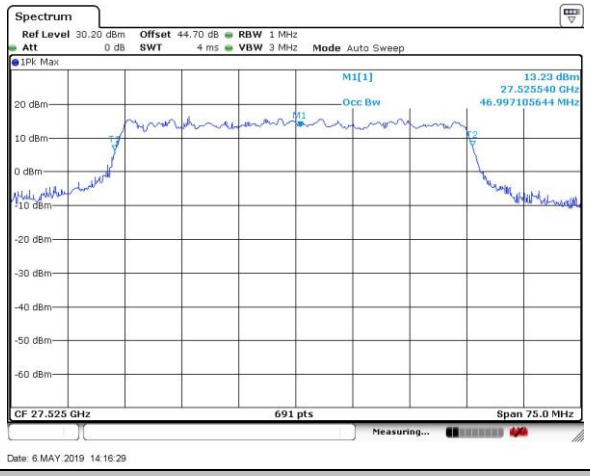
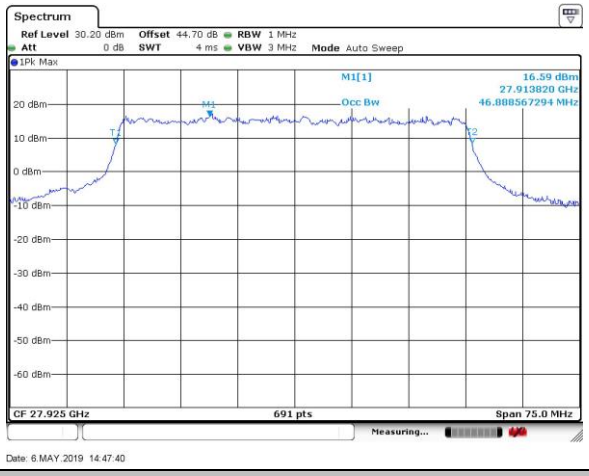
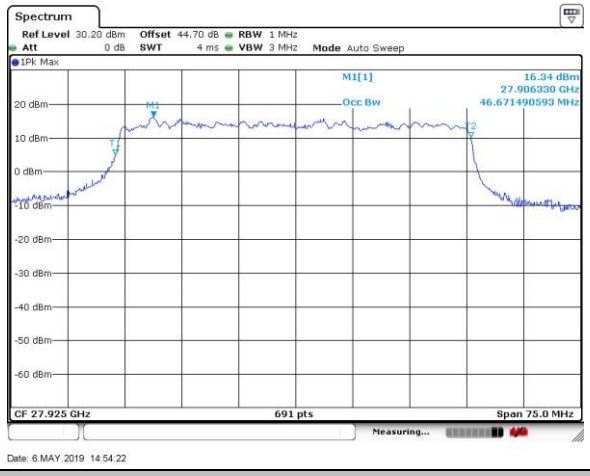
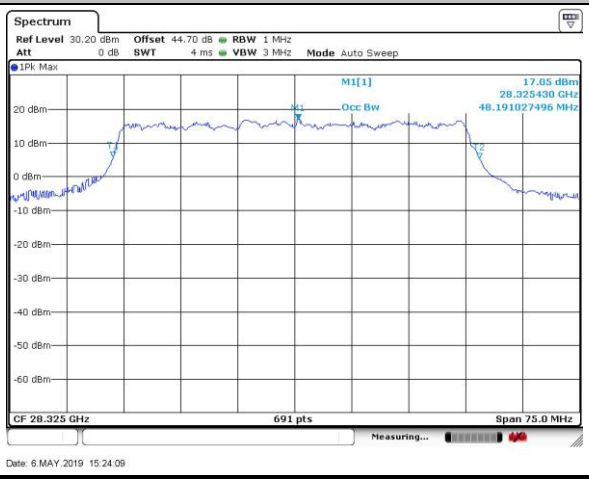
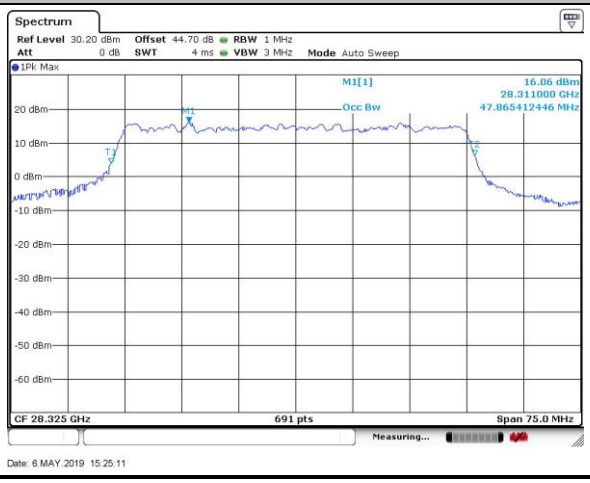
Module 0

NR Band n261	
Lowest Channel / 400MHz / QPSK	**Lowest Channel / 400MHz / 16QAM**
	
Middle Channel / 400MHz / QPSK	**Middle Channel / 400MHz /16QAM**
	
Highest Channel / 400MHz / QPSK	**Highest Channel / 400MHz /16QAM**
	

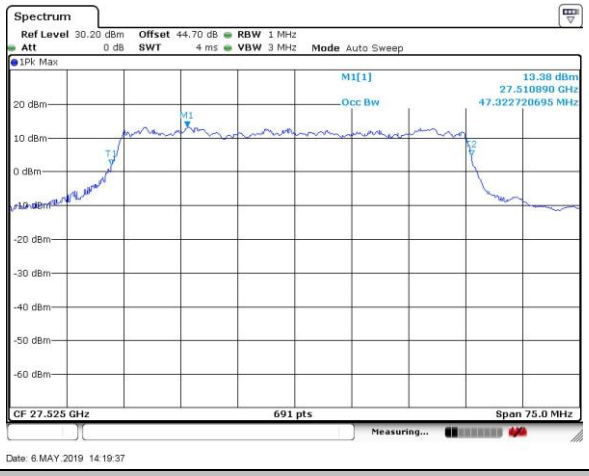
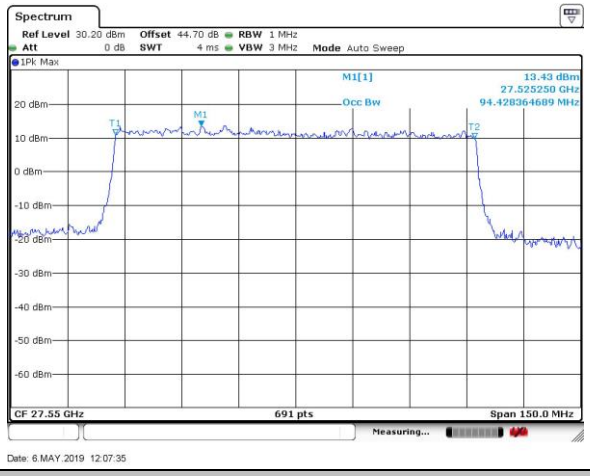
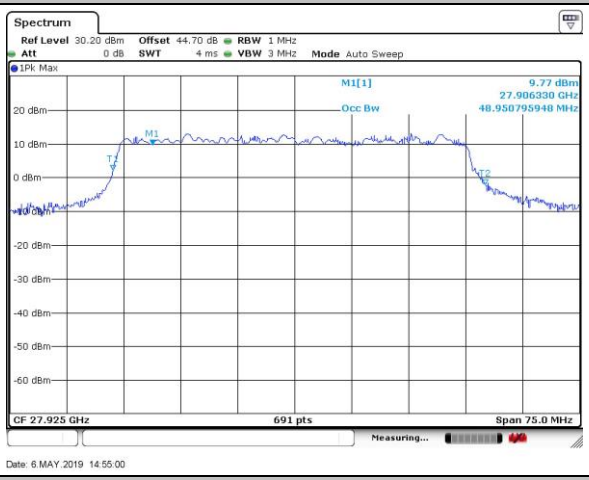
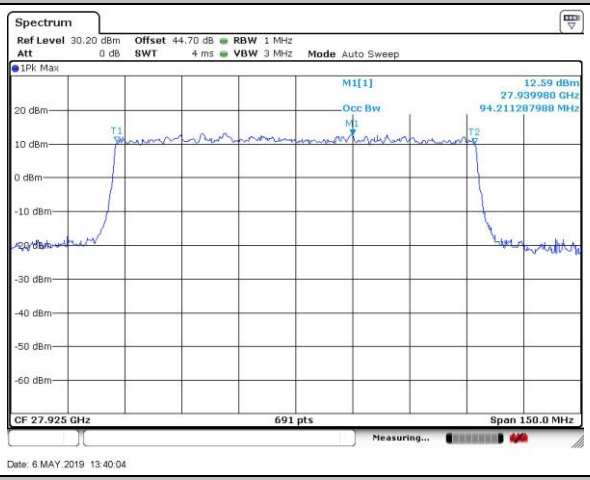
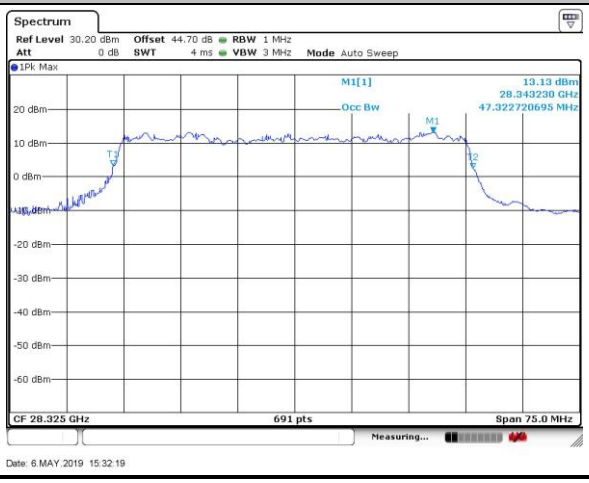
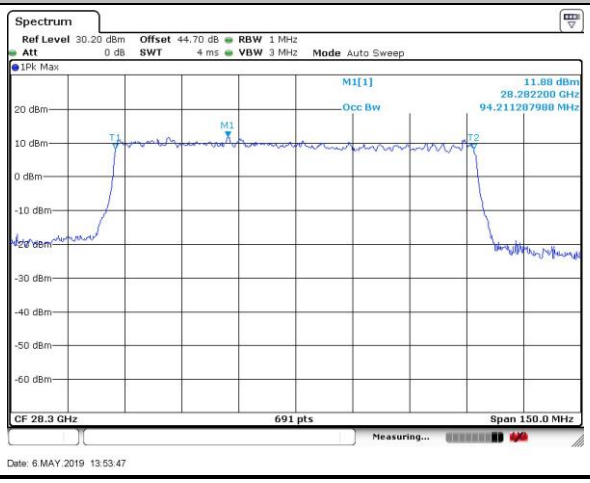
Module 0

NR Band n261	
Lowest Channel / 400MHz / 64QAM	
	**intentionally blank**
Middle Channel / 400MHz / 64QAM	
	**intentionally blank**
Highest Channel / 400MHz / 64QAM	
	**intentionally blank**

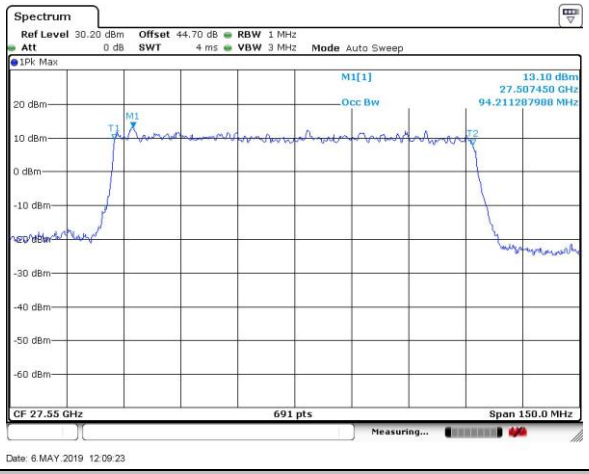
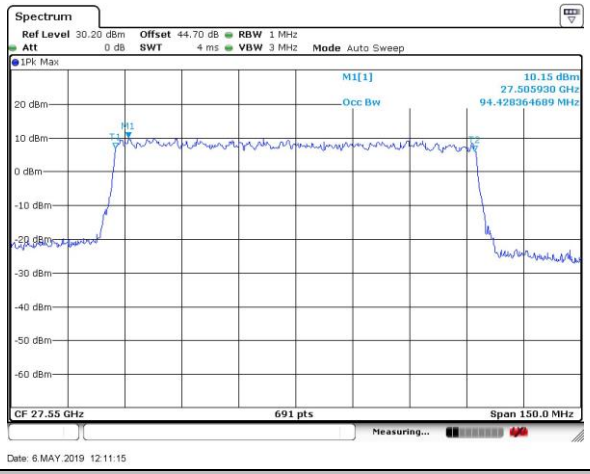
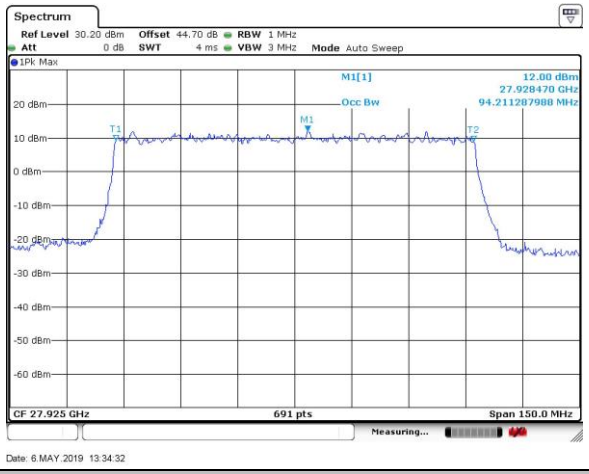
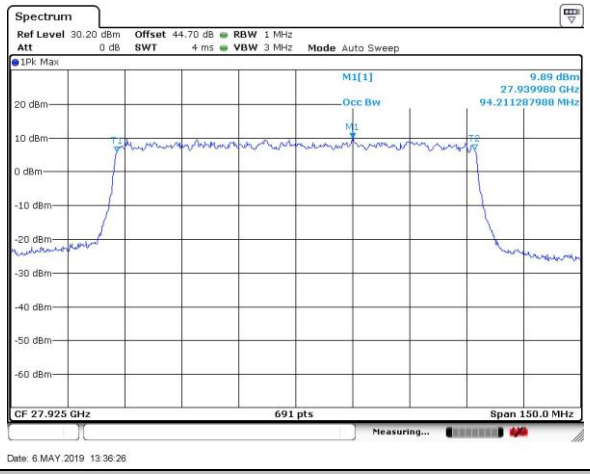
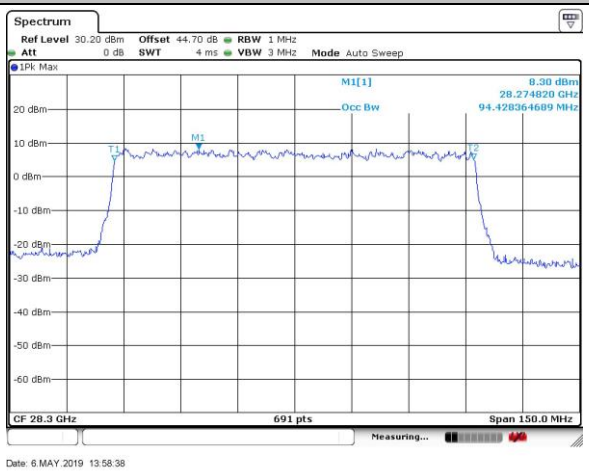
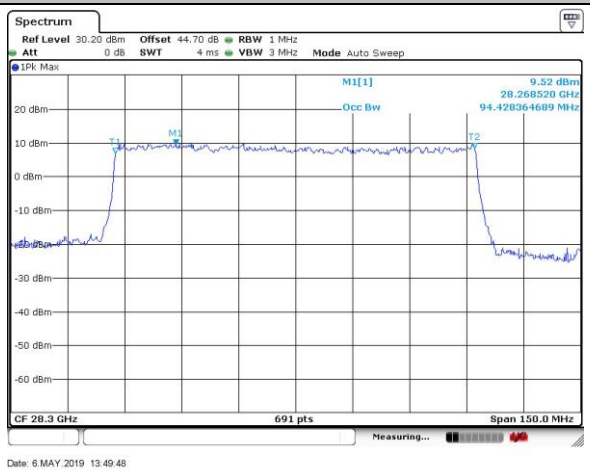
Module 1

NR Band n261	
Lowest Channel / 50MHz / QPSK	**Lowest Channel / 50MHz / 16QAM**
	
Middle Channel / 50MHz / QPSK	**Middle Channel / 50MHz / 16QAM**
	
Highest Channel / 50MHz / QPSK	**Highest Channel / 50MHz / 16QAM**
	

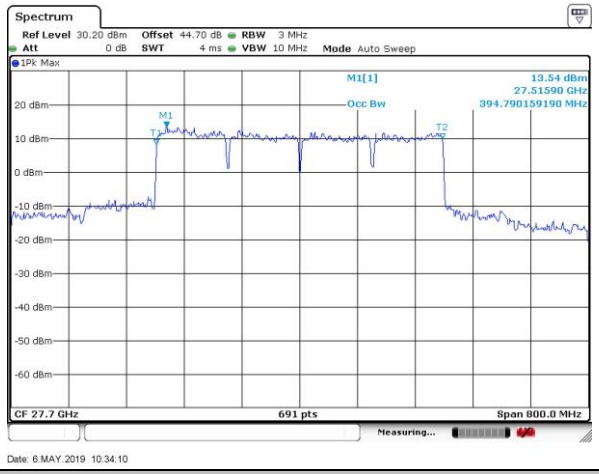
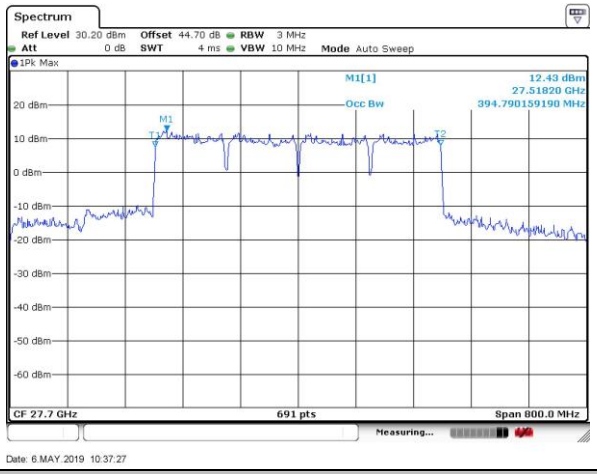
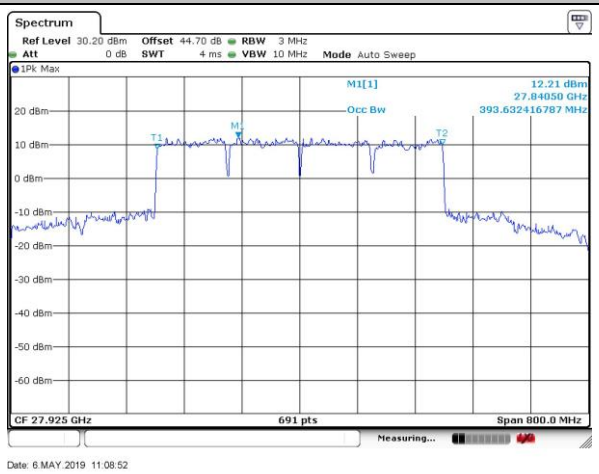
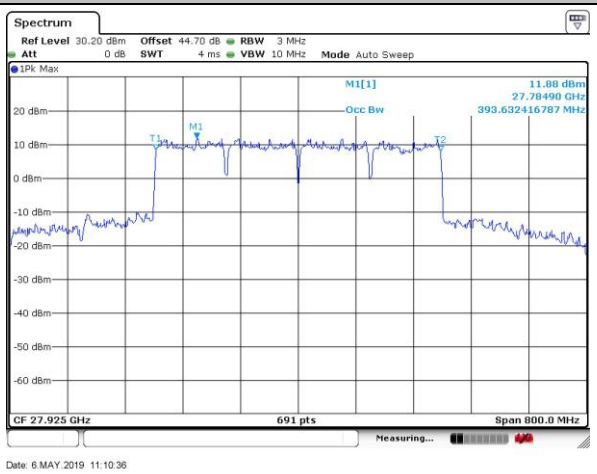
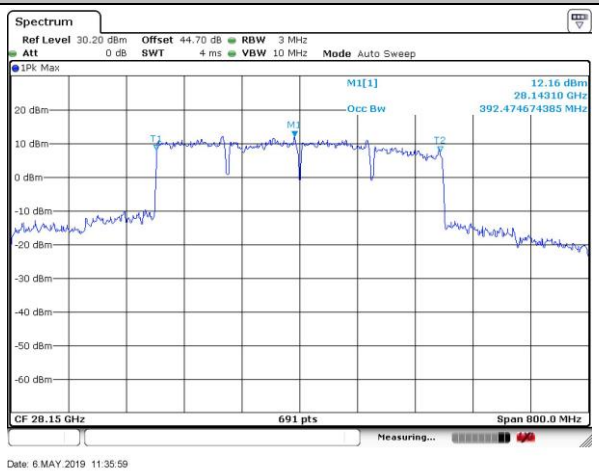
Module 1

NR Band n261	
Lowest Channel / 50MHz / 64QAM	**Lowest Channel / 100MHz / QPSK**
	
Middle Channel / 50MHz / 64QAM	**Middle Channel / 100MHz / QPSK**
	
Highest Channel / 50MHz / 64QAM	**Highest Channel / 100MHz / QPSK**
	

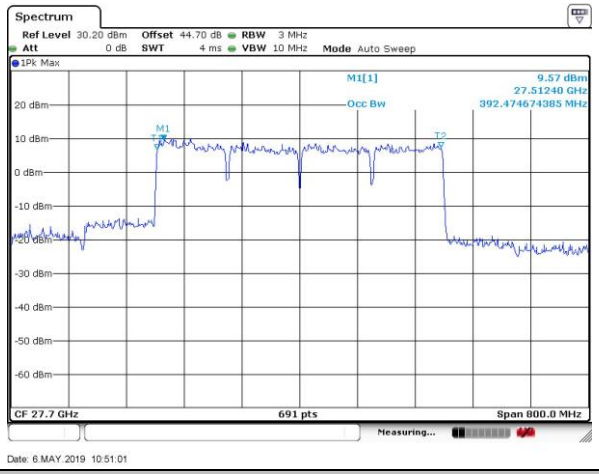
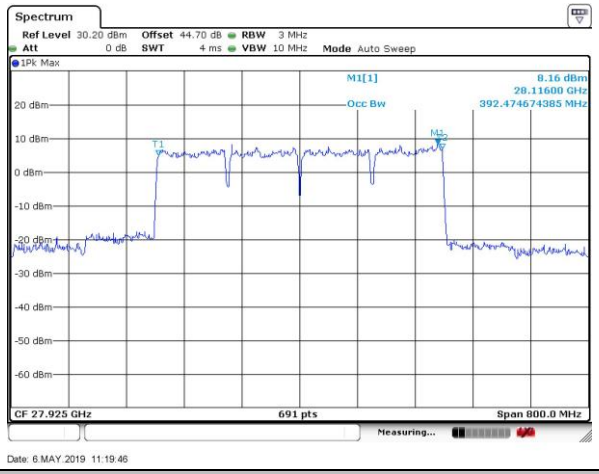
Module 1

NR Band n261	
Lowest Channel / 100MHz / 16QAM	**Lowest Channel / 100MHz / 64QAM**
	
Middle Channel / 100MHz / 16QAM	**Middle Channel / 100MHz / 64QAM**
	
Highest Channel / 100MHz / 16QAM	**Highest Channel / 100MHz / 64QAM**
	

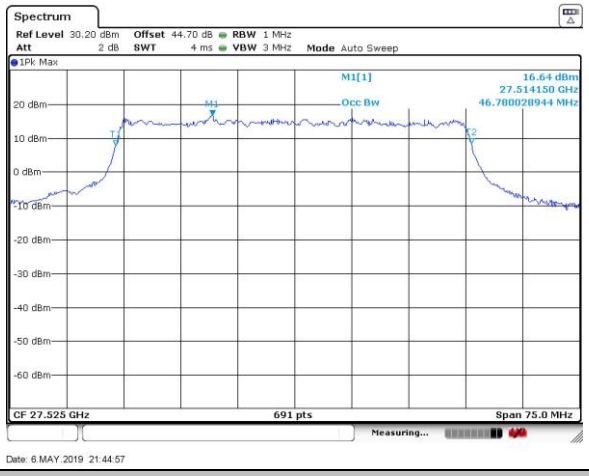
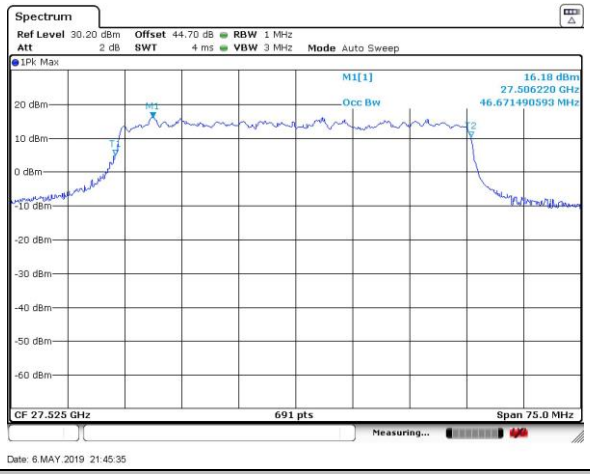
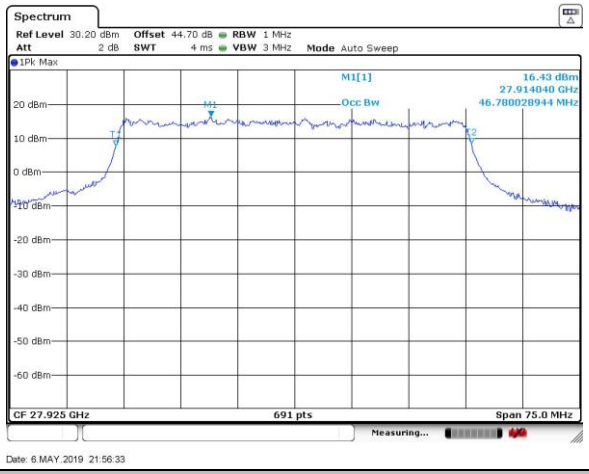
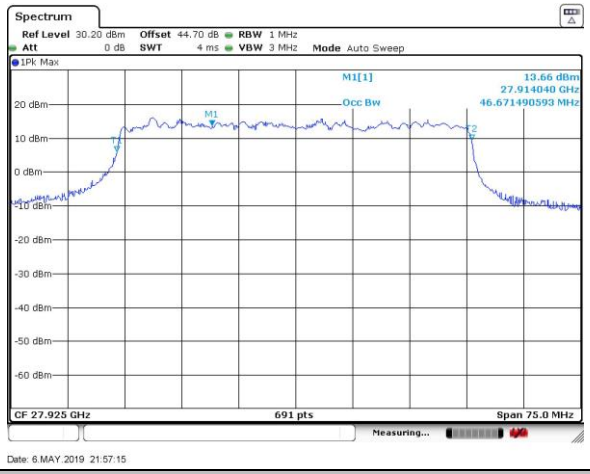
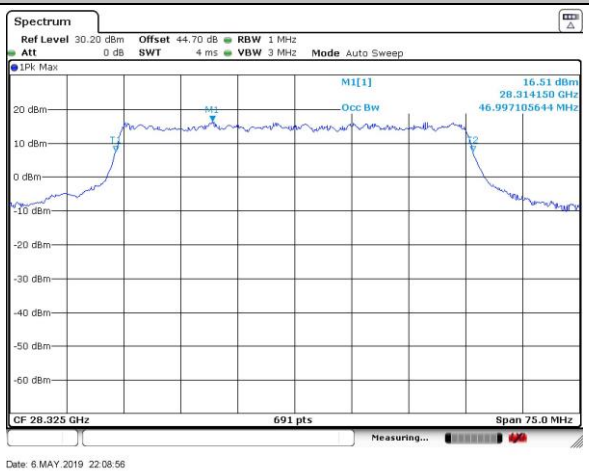
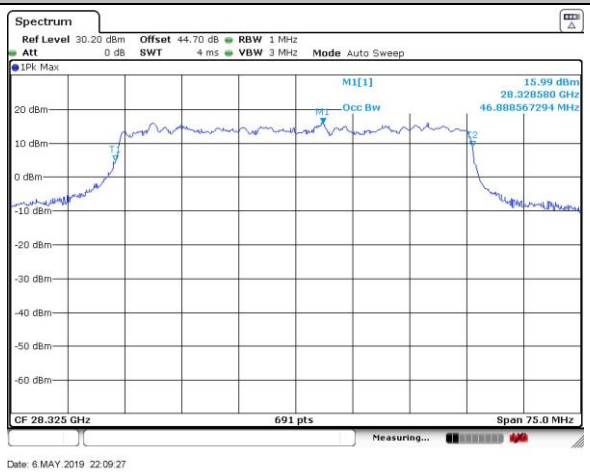
Module 1

NR Band n261	
Lowest Channel / 400MHz / QPSK	**Lowest Channel / 400MHz / 16QAM**
	
Middle Channel / 400MHz / QPSK	**Middle Channel / 400MHz /16QAM**
	
Highest Channel / 400MHz / QPSK	**Highest Channel / 400MHz /16QAM**
	

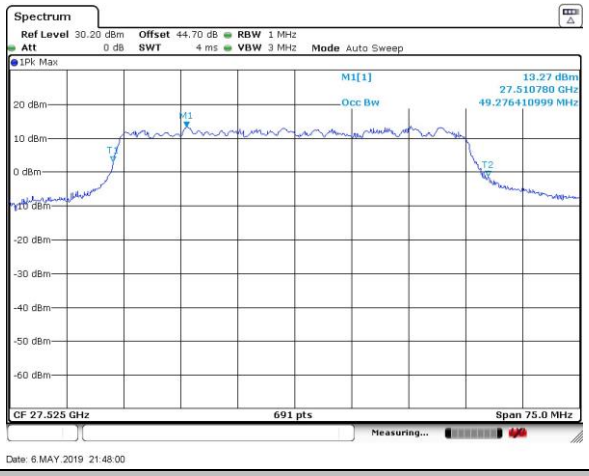
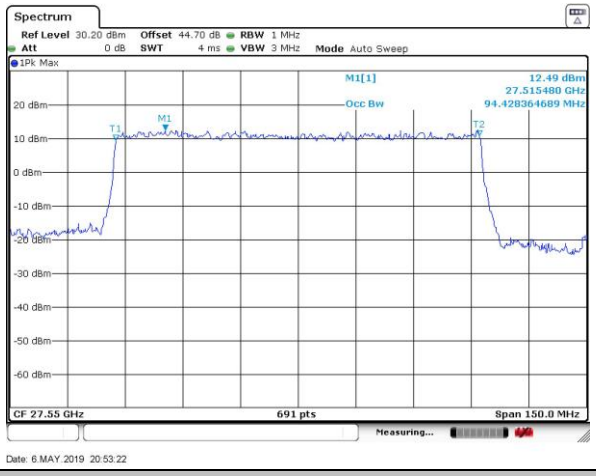
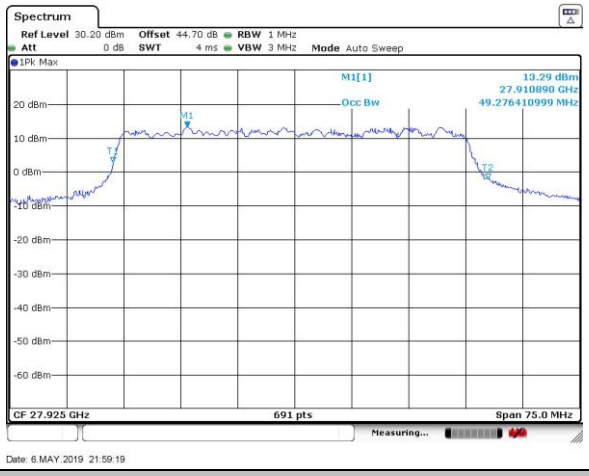
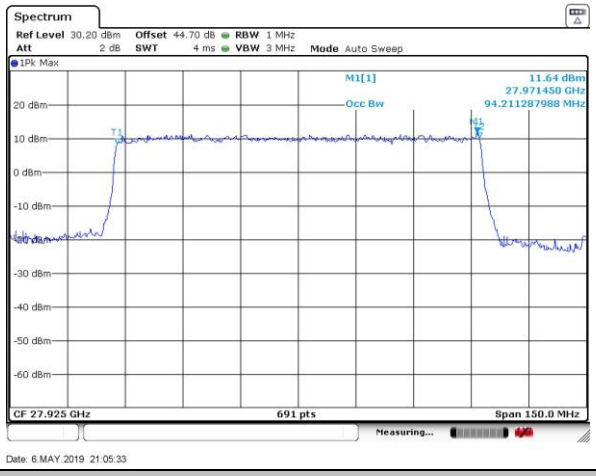
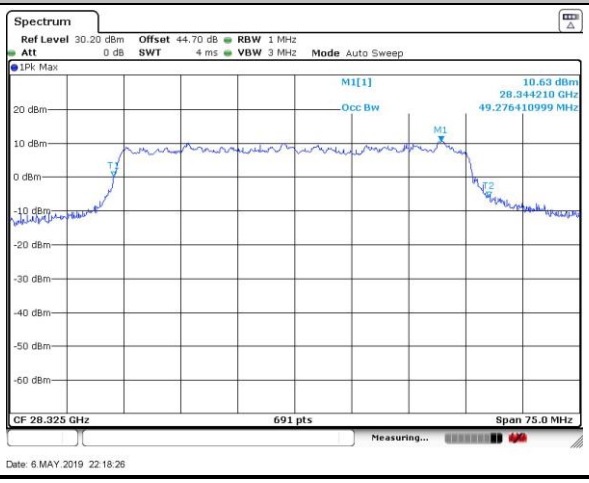
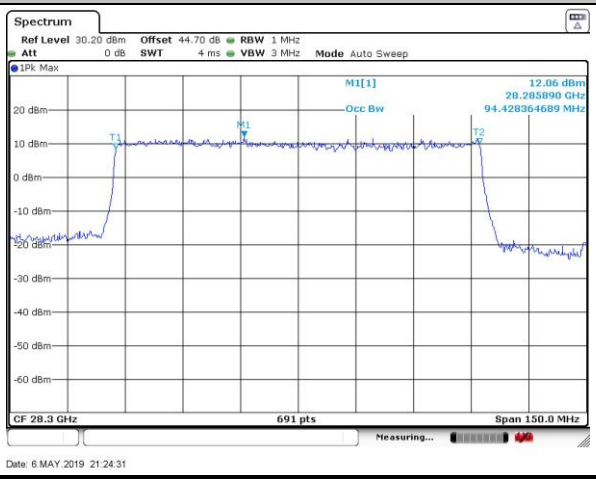
Module 1

NR Band n261	
Lowest Channel / 400MHz / 64QAM	
	**intentionally blank**
Middle Channel / 400MHz / 64QAM	
	**intentionally blank**
Highest Channel / 400MHz / 64QAM	
	**intentionally blank**

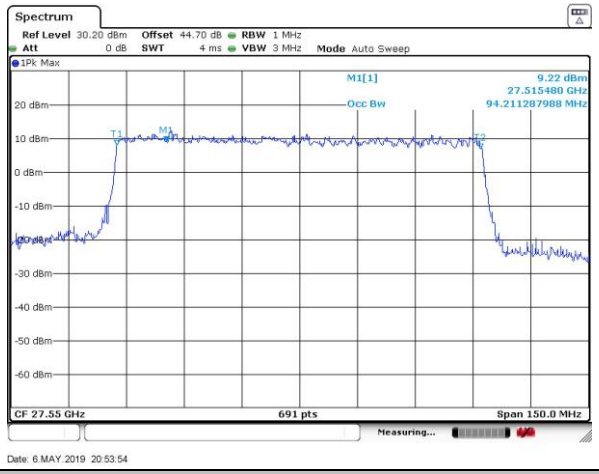
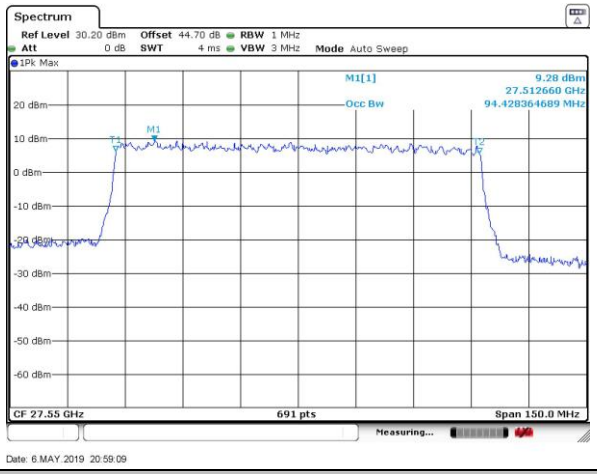
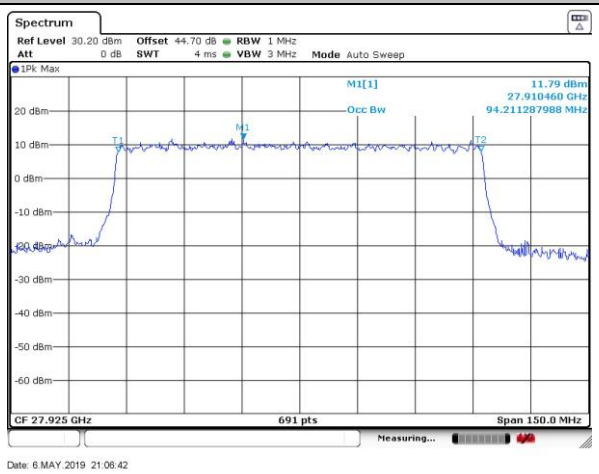
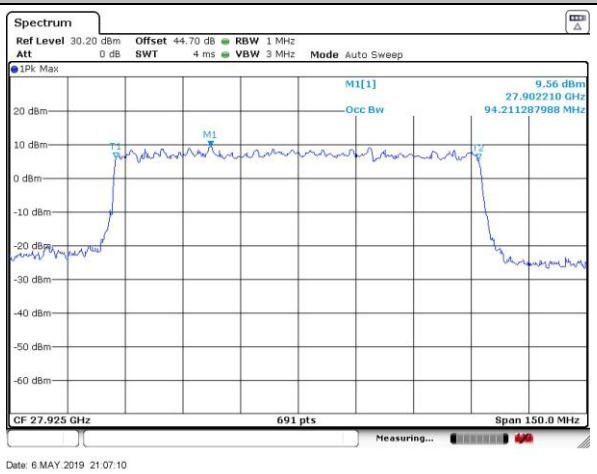
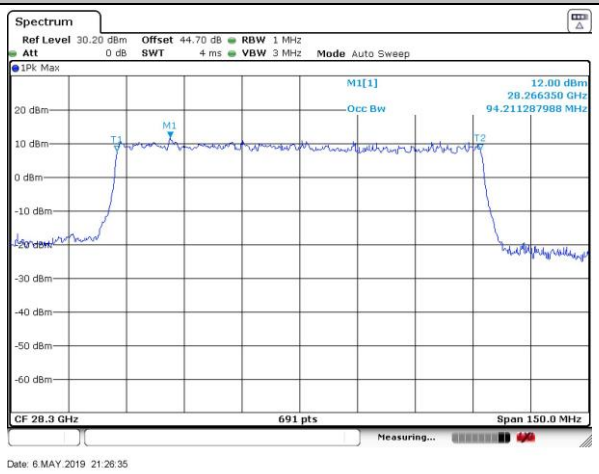
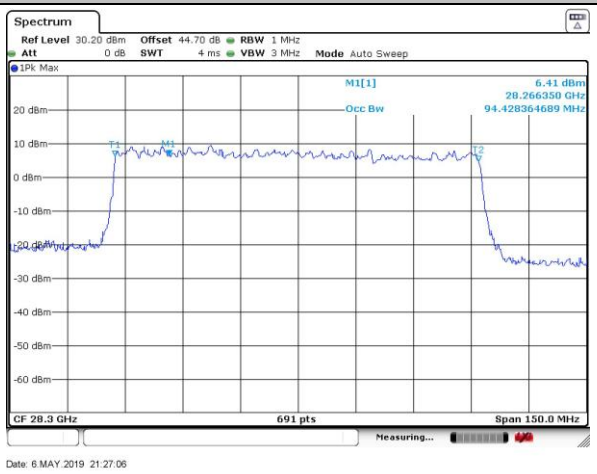
Module 2

NR Band n261	
Lowest Channel / 50MHz / QPSK	**Lowest Channel / 50MHz / 16QAM**
	
Middle Channel / 50MHz / QPSK	**Middle Channel / 50MHz / 16QAM**
	
Highest Channel / 50MHz / QPSK	**Highest Channel / 50MHz / 16QAM**
	

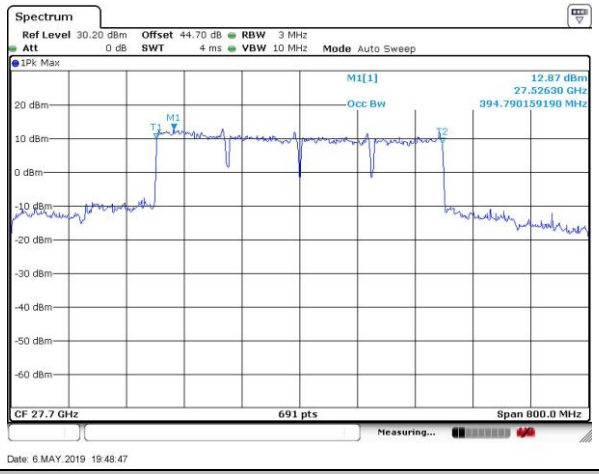
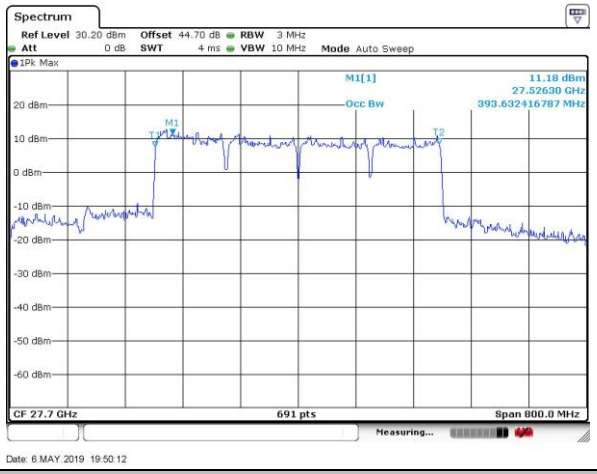
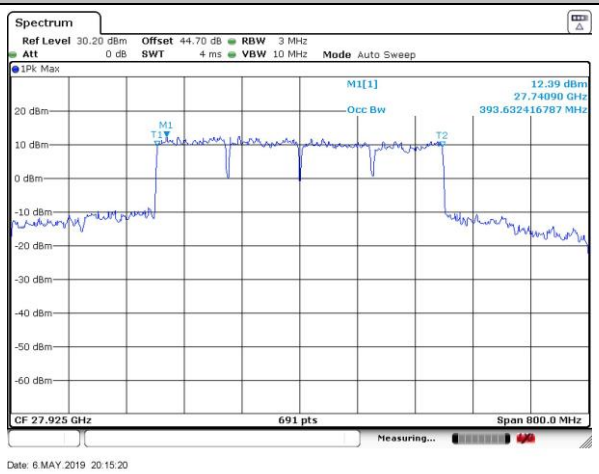
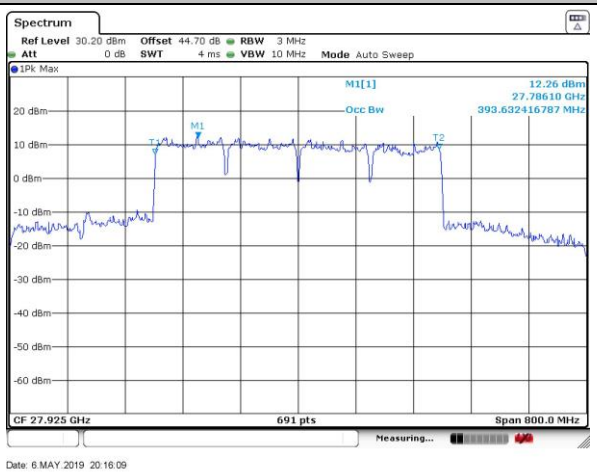
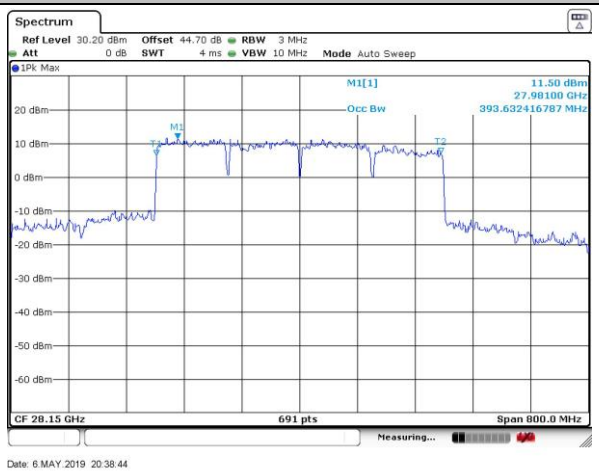
Module 2

NR Band n261	
Lowest Channel / 50MHz / 64QAM	**Lowest Channel / 100MHz / QPSK**
	
Middle Channel / 50MHz / 64QAM	**Middle Channel / 100MHz / QPSK**
	
Highest Channel / 50MHz / 64QAM	**Highest Channel / 100MHz / QPSK**
	

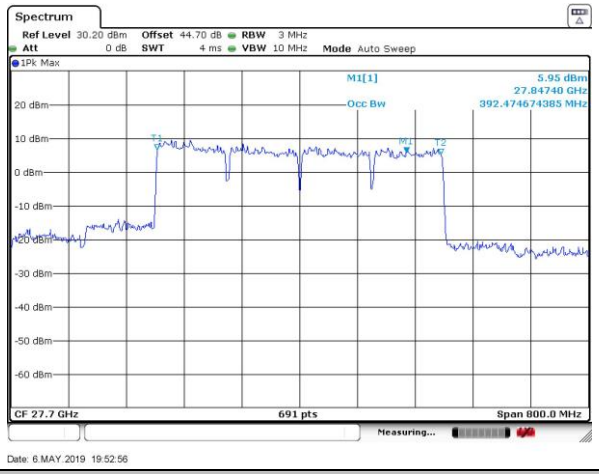
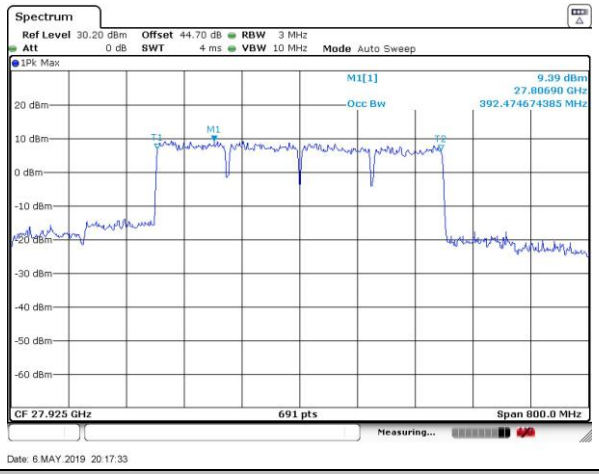
Module 2

NR Band n261	
Lowest Channel / 100MHz / 16QAM	**Lowest Channel / 100MHz / 64QAM**
	
Middle Channel / 100MHz / 16QAM	**Middle Channel / 100MHz / 64QAM**
	
Highest Channel / 100MHz / 16QAM	**Highest Channel / 100MHz / 64QAM**
	

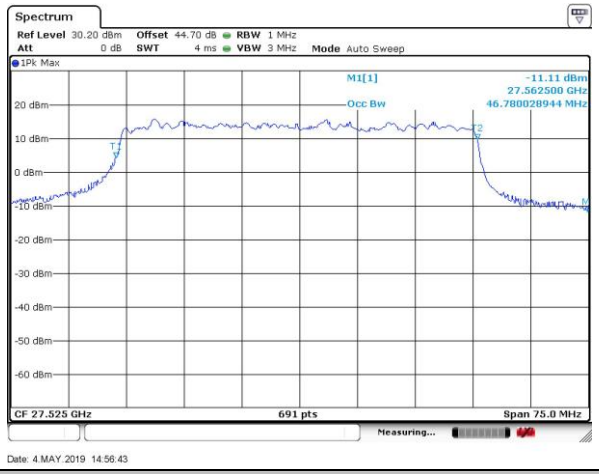
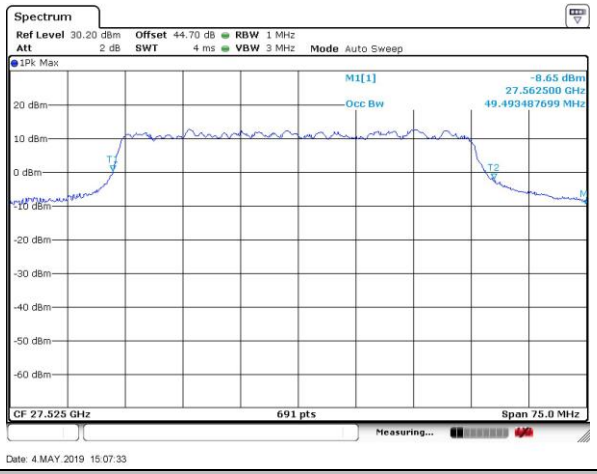
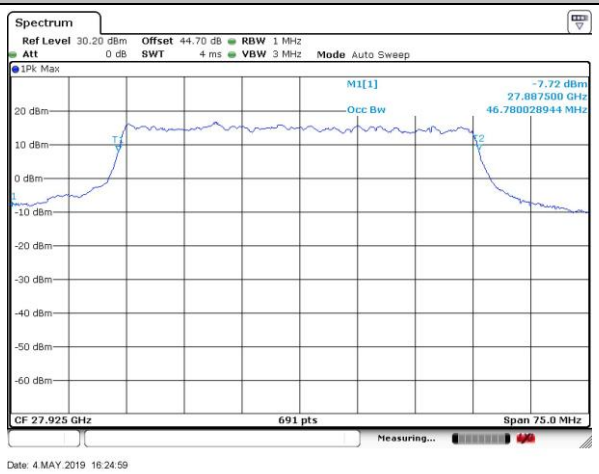
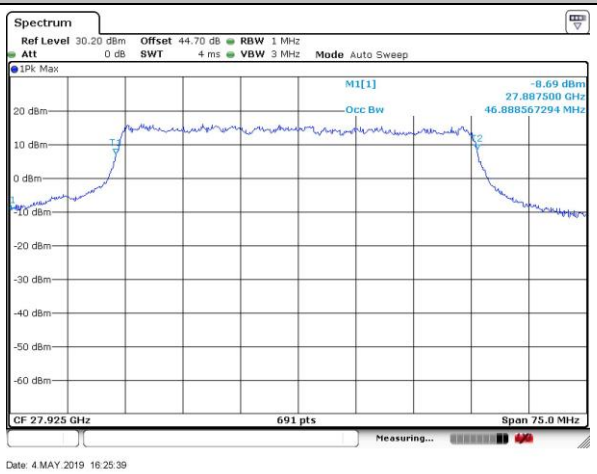
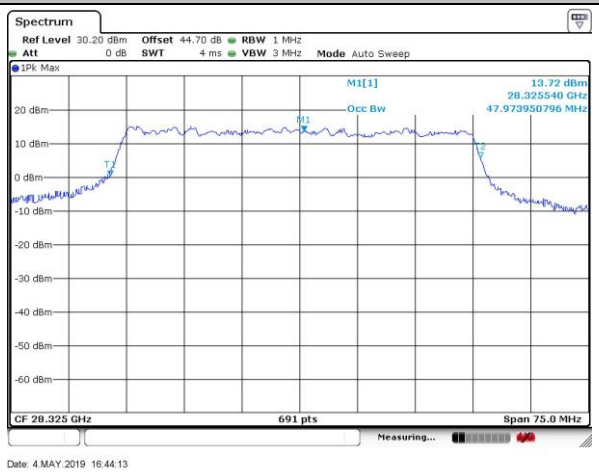
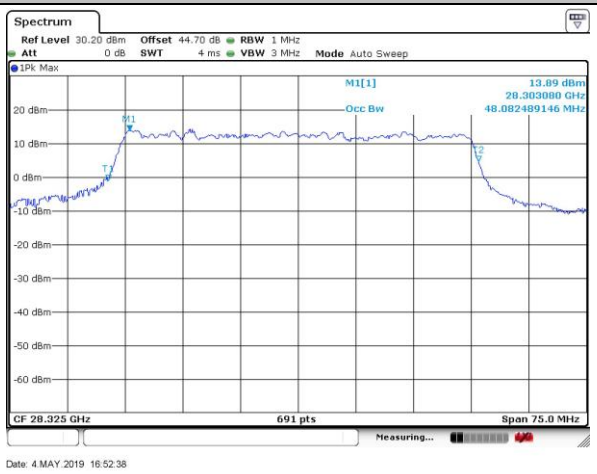
Module 2

NR Band n261	
Lowest Channel / 400MHz / QPSK	**Lowest Channel / 400MHz / 16QAM**
	
Middle Channel / 400MHz / QPSK	**Middle Channel / 400MHz /16QAM**
	
Highest Channel / 400MHz / QPSK	**Highest Channel / 400MHz /16QAM**
	

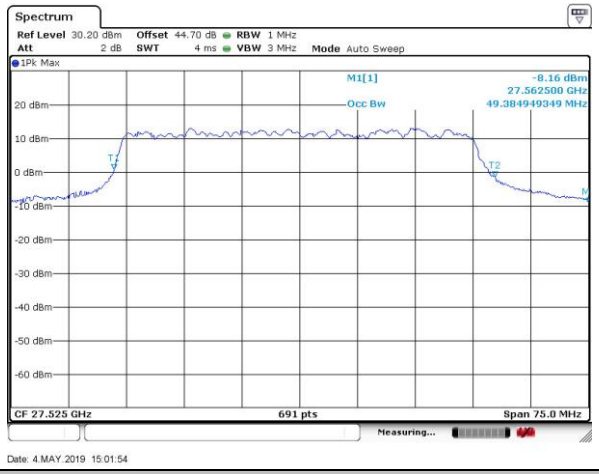
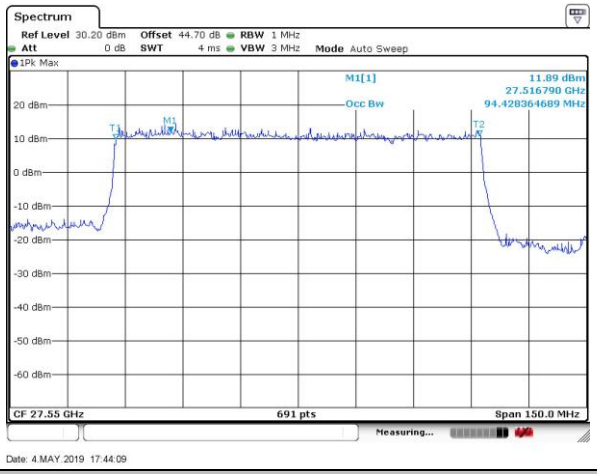
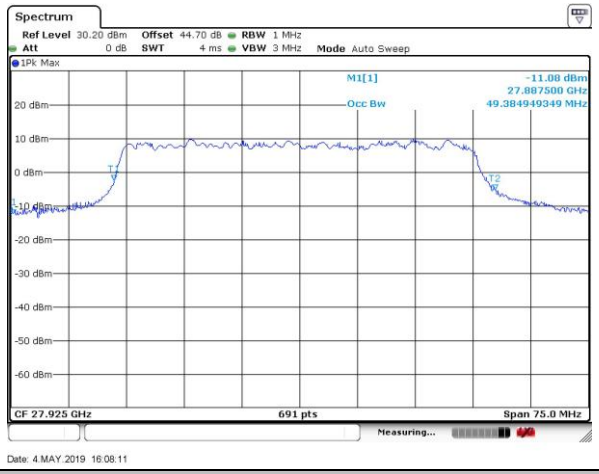
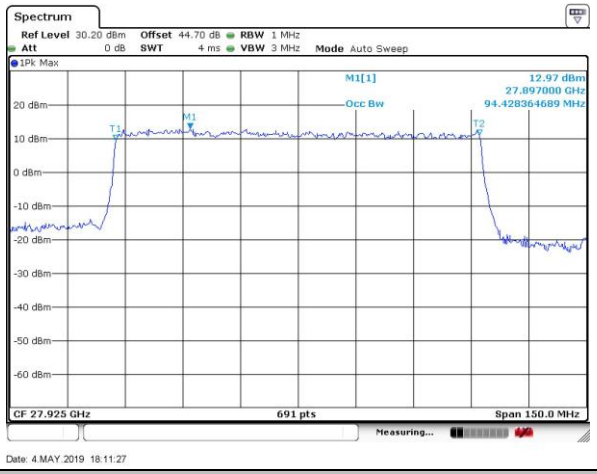
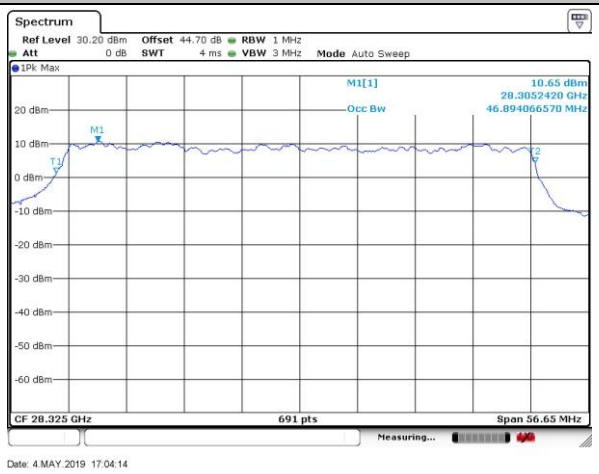
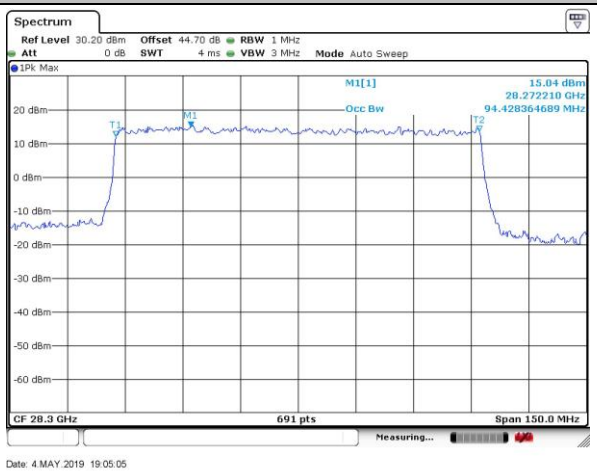
Module 2

NR Band n261	
Lowest Channel / 400MHz / 64QAM	
	**intentionally blank**
Middle Channel / 400MHz / 64QAM	
	**intentionally blank**
Highest Channel / 400MHz / 64QAM	
	**intentionally blank**

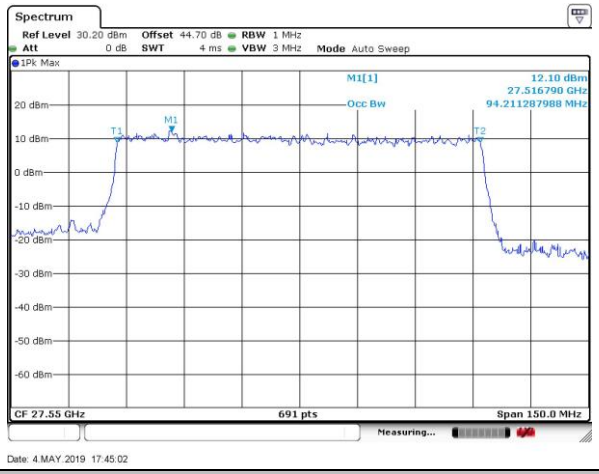
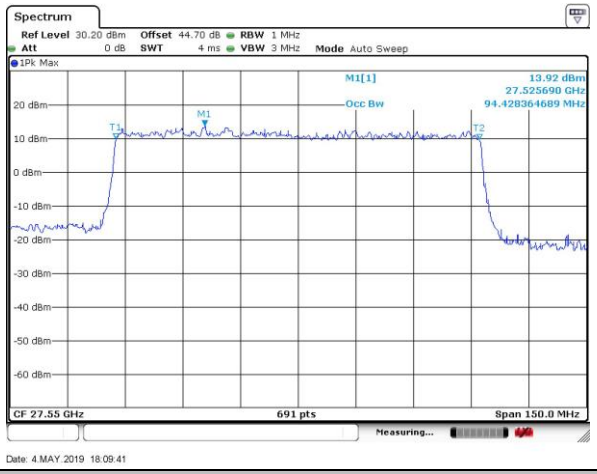
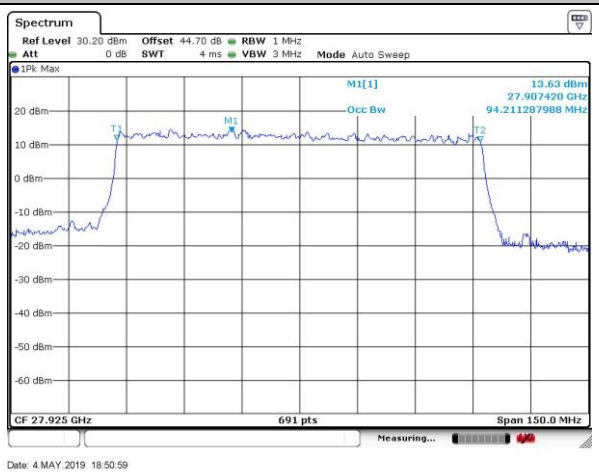
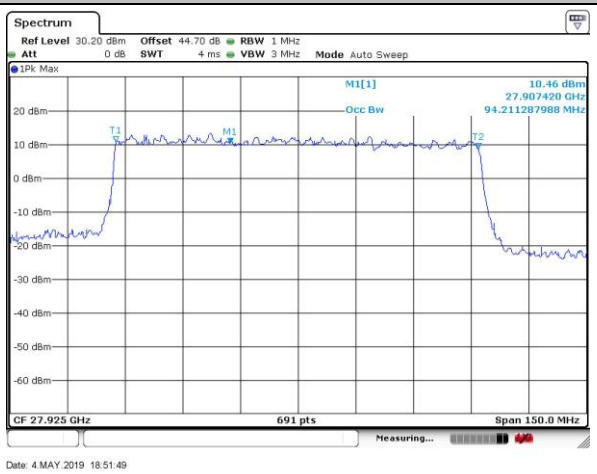
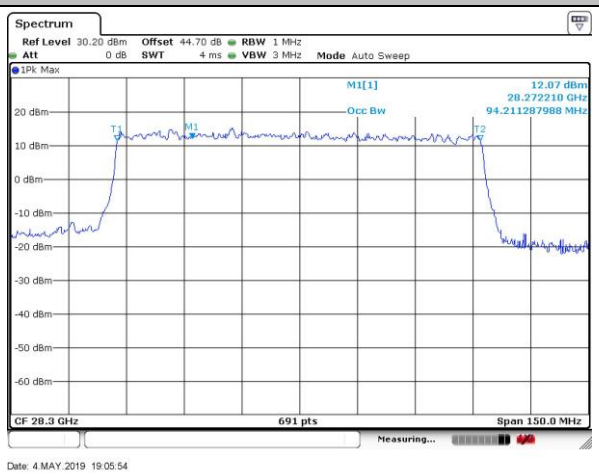
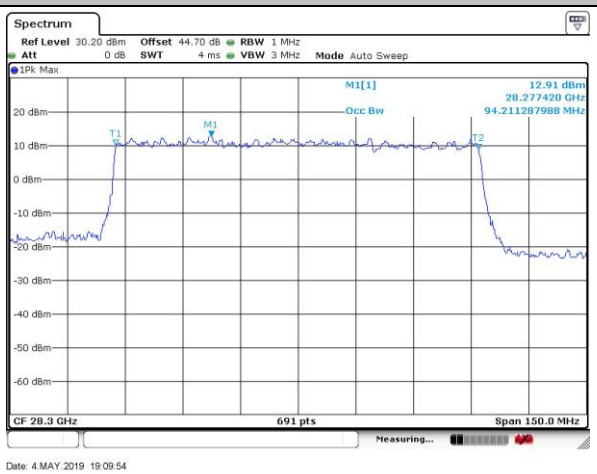
Module 3

NR Band n261	
Lowest Channel / 50MHz / QPSK	**Lowest Channel / 50MHz / 16QAM**
	
Middle Channel / 50MHz / QPSK	**Middle Channel / 50MHz / 16QAM**
	
Highest Channel / 50MHz / QPSK	**Highest Channel / 50MHz / 16QAM**
	

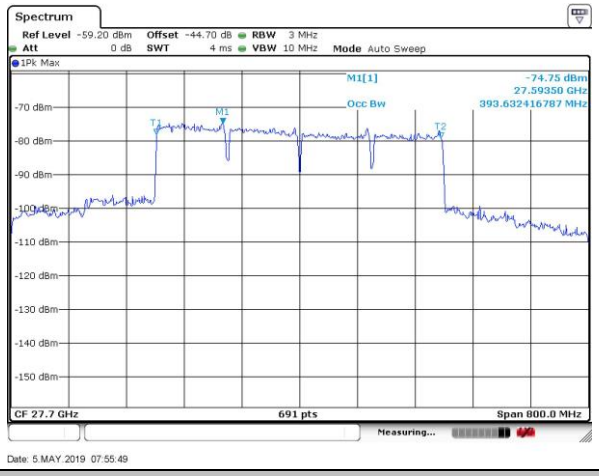
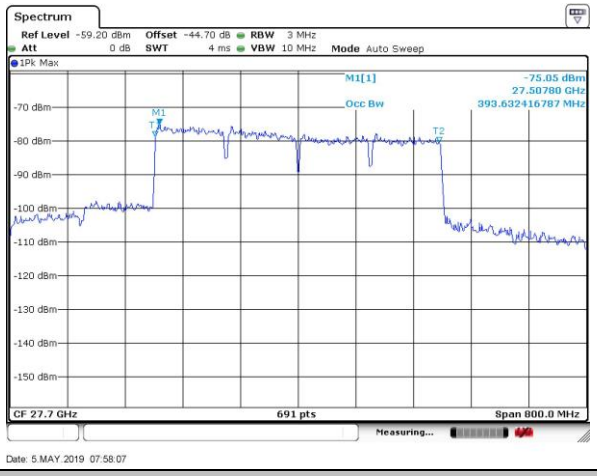
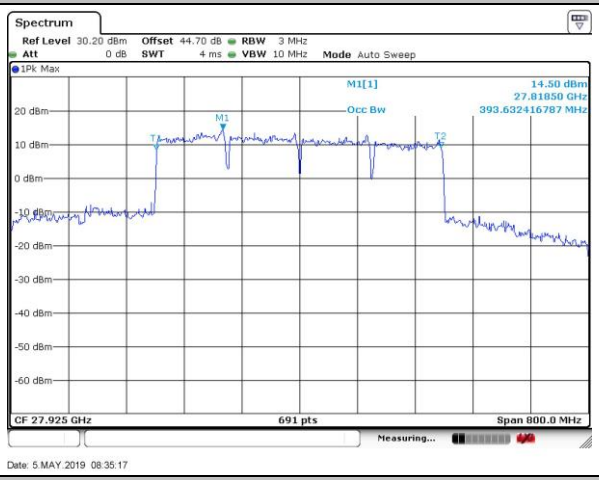
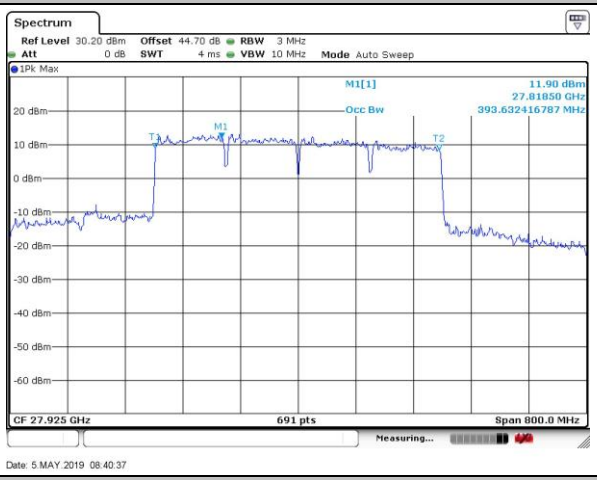
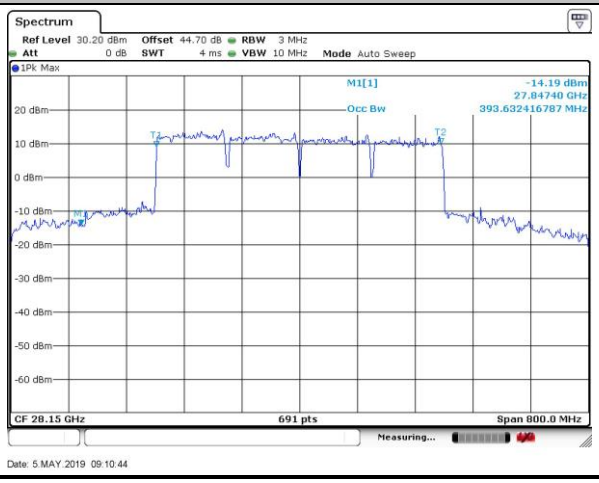
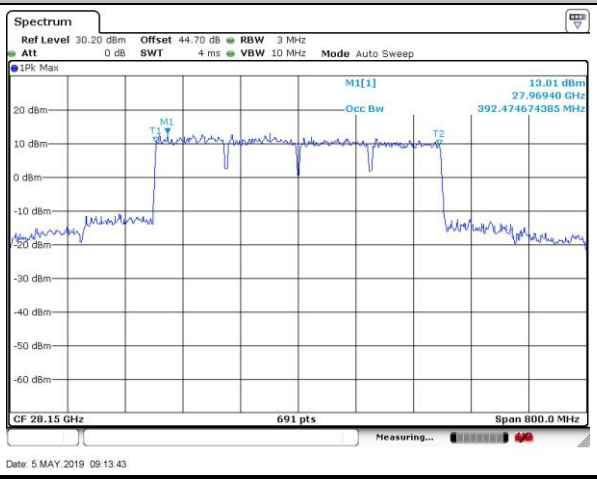
Module 3

NR Band n261	
Lowest Channel / 50MHz / 64QAM	**Lowest Channel / 100MHz / QPSK**
	
Middle Channel / 50MHz / 64QAM	**Middle Channel / 100MHz / QPSK**
	
Highest Channel / 50MHz / 64QAM	**Highest Channel / 100MHz / QPSK**
	

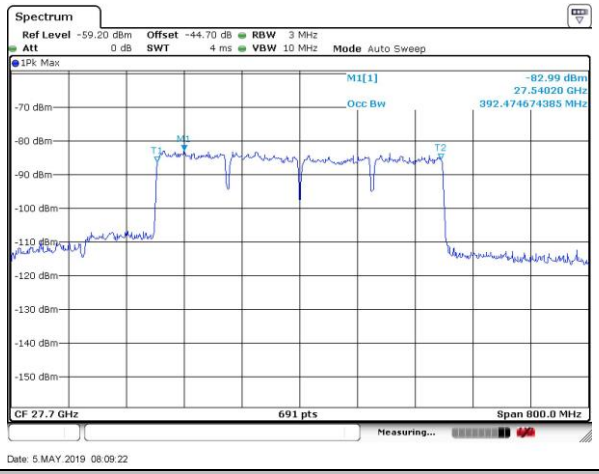
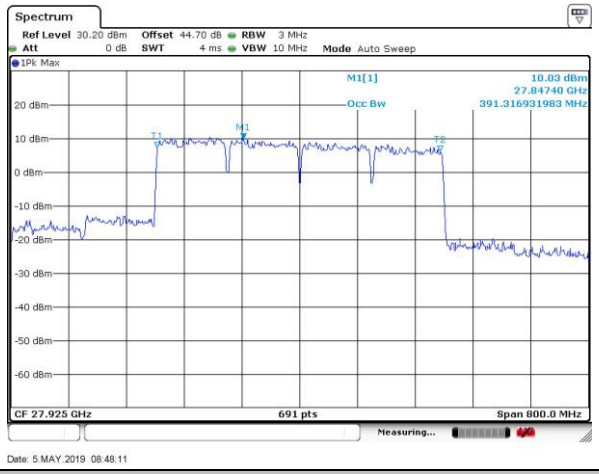
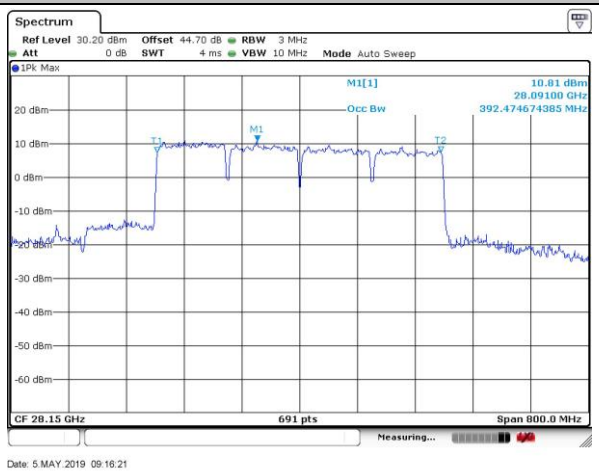
Module 3

NR Band n261	
Lowest Channel / 100MHz / 16QAM	**Lowest Channel / 100MHz / 64QAM**
	
Middle Channel / 100MHz / 16QAM	**Middle Channel / 100MHz / 64QAM**
	
Highest Channel / 100MHz / 16QAM	**Highest Channel / 100MHz / 64QAM**
	

Module 3

NR Band n261	
Lowest Channel / 400MHz / QPSK	**Lowest Channel / 400MHz / 16QAM**
	
Middle Channel / 400MHz / QPSK	**Middle Channel / 400MHz /16QAM**
	
Highest Channel / 400MHz / QPSK	**Highest Channel / 400MHz /16QAM**
	

Module 3

NR Band n261	
Lowest Channel / 400MHz / 64QAM	
	**intentionally blank**
Middle Channel / 400MHz / 64QAM	
	**intentionally blank**
Highest Channel / 400MHz / 64QAM	
	**intentionally blank**

Radiated Out of Band Emissions

Mode			Module 0 NR Band n261 : BE (dBm)								
BW			50MHz			100MHz			400MHz		
Mod.			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Limit (dBm)											
Low CH	0~10%OB	≦-5	-15.89	-15.81	-18.92	-25.25	-25.25	-23.94	-31.32	-32.59	-30.75
	>10%OB	≦-13	-20.55	-20.32	-22.49	-28.27	-28.03	-29.46	-28.31	-30.60	-28.83
High CH	0~10%OB	≦-5	-16.64	-18.41	-18.81	-33.82	-26.96	-29.44	-35.96	-34.57	-36.92
	>10%OB	≦-13	-23.23	-24.78	-25.03	-35.04	-32.31	-33.95	-36.83	-35.60	-37.67
Result			Compliance								

Mode			Module 1 NR Band n261 : BE (dBm)								
BW			50MHz			100MHz			400MHz		
Limit (dBm)			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Low CH	0~10%OB	≦-5	-15.57	-16.89	-19.31	-20.35	-21.15	-22.24	-23.59	-25.43	-28.61
	>10%OB	≦-13	-20.67	-21.11	-24.11	-26.19	-27.34	-29.42	-23.02	-23.64	-22.24
High CH	0~10%OB	≦-5	-14.99	-19.47	-21.60	-27.95	-27.39	-29.56	-29.33	-30.71	-33.77
	>10%OB	≦-13	-24.22	-26.74	-28.57	-32.78	-32.46	-34.82	-30.76	-33.05	-36.33
Result			Compliance								

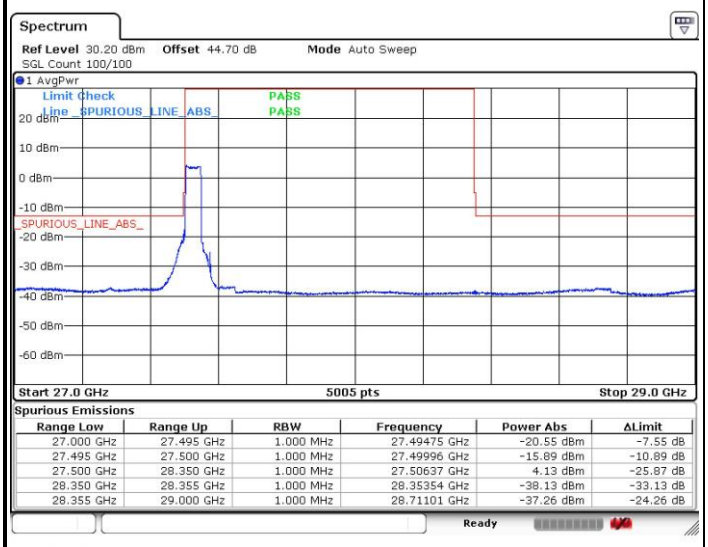
Mode			Module 2 NR Band n261 : BE (dBm)								
BW			50MHz			100MHz			400MHz		
Limit (dBm)			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Low CH	0~10%OB	≦-5	-16.16	-17.19	-17.97	-22.29	-23.09	-23.81	-24.20	-25.94	-29.03
	>10%OB	≦-13	-22.76	-23.10	-24.56	-25.92	-27.03	-29.90	-24.21	-26.22	-29.43
High CH	0~10%OB	≦-5	-16.26	-18.24	-18.05	-26.31	-27.51	-29.12	-28.77	-30.83	-34.12
	>10%OB	≦-13	-24.37	-24.42	-24.29	-31.60	-32.20	-33.67	-30.66	-32.38	-36.31
Result			Compliance								

Mode			Module 3 NR Band n261 : BE (dBm)								
BW			50MHz			100MHz			400MHz		
Limit (dBm)			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Low CH	0~10%OB	≦-5	-21.60	-24.17	-25.40	-28.49	-28.51	-23.92	-25.94	-27.03	-20.40
	>10%OB	≦-13	-22.67	-25.05	-25.36	-23.37	-24.54	-29.23	-24.51	-26.07	-29.02
High CH	0~10%OB	≦-5	-27.41	-27.04	-27.41	-30.91	-31.50	-33.14	-29.39	-31.44	-29.58
	>10%OB	≦-13	-27.03	-26.69	-27.03	-28.56	-30.06	-31.79	-29.48	-32.28	-22.96
Result			Compliance								

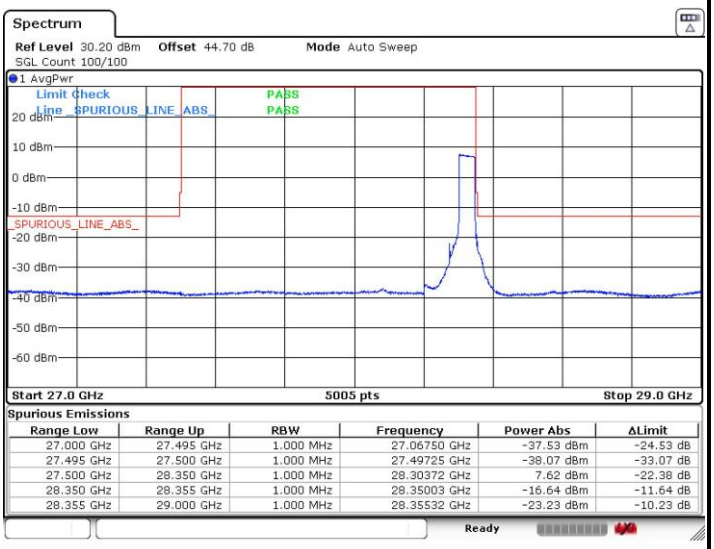
Module 0

NR Band n261 / 50MHz / QPSK

Lowest Band Edge / Full RB

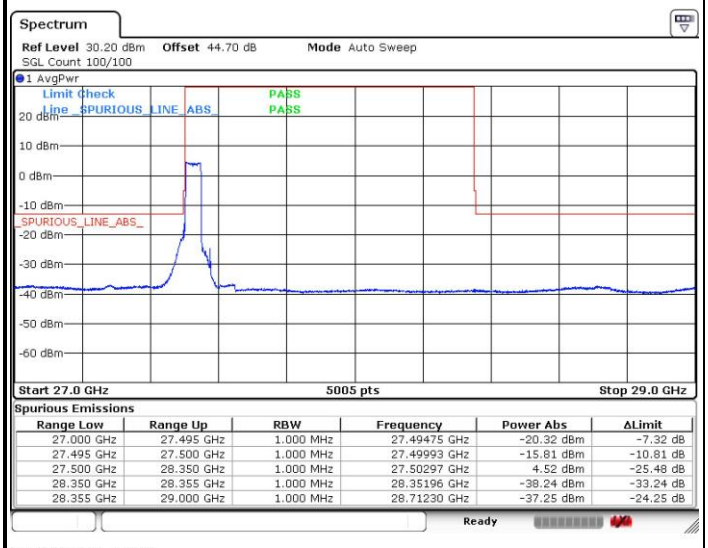


Highest Band Edge / Full RB



NR Band n261 / 50MHz / 16QAM

Lowest Band Edge / Full RB



Highest Band Edge / Full RB