

TEST REPORT

 CTK Co., Ltd. The Prime Leader of Global Regulatory Certification	CTK Co., Ltd. (Ho-dong), 113, Yejik-ro, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea Tel: +82-31-339-9970 Fax: +82-31-624-9501	Report No.: CTK-2023-01878 Page (1) / (420) Pages	
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1. Applicant

- Name : SAMSUNG Electronics Co., Ltd.
- Address : 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, Korea
- Date of Receipt : 2023-07-25

2. Manufacturer

- Name : SAMSUNG Electronics Co., Ltd.
- Address : 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, Korea

3. Use of Report : For FCC Certification

4. Test Sample / Model: MMU (MT6419) / MT6419-41A

5. Date of Test : 2023-07-27 to 2023-08-25

6. Test Standard(method) used : FCC 47 CFR Part 2, 27, ANSI C63.10-2015

7. Testing Environment: refer to 6 page

8. Test Results : Compliance

9. Location of Test : ☒ Permanent Testing Lab ☐ On Site Testing

(Address : 5, Dongbu-ro 221beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea)

The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This report cannot be reproduced or copied without the written consent of CTK.

Approval	Tested by  Bong-jun Jang: (Signature)	Technical Manager  Young-taek Lee: (Signature)
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Remark. This report is not related to KOLAS accreditation and relevant regulation.

2023-08-28

CTK Co., Ltd.

REPORT REVISION HISTORY

Date	Revision	Page No
2023-08-28	Issued (CTK-2023-01878)	all

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1. General Product Description

1.1 Applicant Information

Company	SAMSUNG Electronics Co., Ltd.
Contact Point	129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, Korea
Contact Person	Name : Jongin Kim E-mail : jered.kim@samsung.com Tel : +82-31-279-3096

1.2 Product Information

FCC ID	A3LMT6419-41A		
Product Description	MMU (MT6419)		
Basic model	MT6419-41A		
Power Source	-48 Vdc		
Device Capabilities	LTE, 5G NR		
Duplex Mode	TDD		
FCC Classification	Licensed Non-Broadcast Station Transmitter (TNB)		
Operating Frequency	Band	Tx(Downlink) & Rx(Uplink)	
	LTE Band 41	2496 MHz to 2690 MHz	
	5G NR n41		
Spectrum Operation	Contiguous, Non-Contiguous		
Multiple Carrier Supported	Maximum 3 Carrier		
Channel Bandwidth	Single-RAT LTE Band 41	Single carrier	20 MHz
		Multi carrier	20 MHz + 20 MHz
	Single-RAT 5G NR n41	Single carrier	40 MHz, 50 MHz
	Multi-RAT 5G NR + LTE	40 MHz +20 MHz +20 MHz 50 MHz +20 MHz +20 MHz	
Antenna information	Type	☒ Internal antenna ☐ External antenna	
	Gain	25 dBi	
	Number of ports	64 TX / 64 RX ports	
RF Output Power	Single-RAT LTE Band 41	Single carrier	Bandwidth 20 MHz : 0.78 W/path (Total 64 path: 50 W)
		Multi carrier	Bandwidth 20 MHz + 20 MHz : 1.56 W/path (Total 64 path: 100 W)
	5G NR N41	Single carrier	Bandwidth 40 MHz : 1.56 W/path (Total 64 path: 100 W) Bandwidth 50 MHz : 1.95 W/path (Total 64 path: 125 W)
			Multi-RAT 5G NR + LTE
Type of Modulation	QPSK, 16QAM, 64QAM, 256QAM		

1.3 Peripheral Devices

Device	Manufacturer	Model No.	Serial No.
Notebook Computer	Samsung Electronics Co., Ltd.	NT550P5C-S66S	JATQ91ID500157W
AC/DC Adapter	Chicony Power Technology	CPA09-004A	AD-6019B
Notebook Computer	Samsung Electronics Co., Ltd.	NT-RC510-S55S	ZZQN93MB100069V
AC/DC Adapter	Chicony Power Technology	CPA09-004A	AD-6019R
Notebook Computer	HP	HP ProBook 455G7	5CD0234DX4
AC/DC Adapter	HP	TPN-CA16	L25298-002

2. Accreditations

2.1 Laboratory Accreditations and Listings

Country	Agency	Registration Number
USA	FCC	805871
CANADA	ISED	CN : 8737A CAB ID : KR0025
KOREA	NRRA	KR0025

2.2 Calibration Details of Equipment Used for Measurement

Test equipment and test accessories are calibrated on regular basis. The maximum time between calibrations is one year or what is recommended by the manufacturer, whichever is less. All test equipment calibrations are traceable to the Korea Research Institute of Standards and Science (KRISS), therefore, all test data recorded in this report is traceable to KRISS.

3. Test Specifications

3.1 Standards

Section in FCC	Requirement(s)	Status (Note 1)	Test Condition
2.1046, 27.50(h)	Conducted Power Measurement and EIRP	C	Conducted
2.1049, 27.53(m)	Occupied bandwidth	C	
2.1046, 27.50(h)	Peak-to-average power ratio	C	
2.1051, 27.53(m)	Band Edge Emissions at Antenna Terminal	C	
2.1051, 27.53(m)	Spurious and Harmonic Emissions at Antenna Terminal	C	
2.1053, 27.53(m)	Radiated unwanted emission	C	Radiated
2.1055, 27.54	Frequency Stability	C	Conducted
<u>Note 1:</u> C=Complies NC=Not Complies NT=Not Tested NA=Not Applicable			
<u>Note 2:</u> The data in this test report are traceable to the national or international standards.			
<u>Note 3:</u> The sample was tested according to the following specification: FCC 47 CFR Part 2, 27, ANSI C63.10 2015			
<u>Note 4:</u> The tests were performed according to the method of measurements prescribed in KDB No.662911, No.971168, ANSI C63.10-2015			

3.2 Testing Environment

Test Item		Test Date	Temperature (℃)	Relative Humidity (%)
Conducted Power Measurement and EIRP		2023-07-27 ~ 2023-08-04	23~24	48~66
Occupied bandwidth		2023-07-27 ~ 2023-08-17	23~24	48~66
Peak-to-average power ratio		2023-07-27 ~ 2023-08-17	23~24	48~66
Band Edge Emissions at Antenna Terminal		2023-08-07 ~ 2023-08-09	23~24	48~50
Spurious and Harmonic Emissions at Antenna Terminal		2023-08-11 ~ 2023-08-21	23~24	47~54
Radiated unwanted emission	1) 30 MHz to 1 GHz	2023-08-22	20	58
	2) 1 GHz to 18 GHz	2023-08-24 ~ 2023-08-25	22~23	50~51
	3) 18 GHz to 27GHz			
Frequency Stability		2023-08-14	-30~50	-

3.3 Mode of operation during the test

The EUT is operated in a manner representative of the typical of the equipments. During at testing, system components were manipulated within the confines of typical usage to maximize each emission. All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.

Operating Frequency		
TX (Downlink) & RX (Uplink)	LTE Band 41	2 496 MHz to 2 690 MHz
	5G NR n41	

Description Test Modes					
RF Bandwidth positions			Carrier Configuration		
			1 st Carrier	2 nd Carrier	3 rd Carrier
LTE 1C 20 MHz	-	lowest	2 506 MHz		
		Middle	2 593 MHz		
		highest	2 680 MHz		
LTE 2C 20 MHz + 20 MHz	Contiguous	lowest	2 506 MHz	2 526 MHz	
		Middle	2 583 MHz	2 603 MHz	
		highest	2 670 MHz	2 690 MHz	
5G NR 1C 40 MHz	-	lowest	2 516 MHz		
		Middle	2 593 MHz		
		highest	2 670 MHz		
5G NR 1C 50 MHz	-	lowest	2 521 MHz		
		Middle	2 593 MHz		
		highest	2 665 MHz		
5G NR 1C 40 MHz + LTE 2C 20 MHz + 20 MHz	Contiguous	lowest	2 516 MHz	2 546 MHz	2 566 MHz
		Middle	2 573 MHz	2 603 MHz	2 623 MHz
		highest	2 630 MHz	2 660 MHz	2 680 MHz
	Non-Contiguous	lowest	2 516 MHz	2 546 MHz	2 630 MHz
		highest	2 566 MHz	2 660 MHz	2 680 MHz
5G NR 1C 50 MHz + LTE 2C 20 MHz + 20 MHz	Contiguous	lowest	2 516 MHz	2 551 MHz	2 571 MHz
		Middle	2 568 MHz	2 603 MHz	2 623 MHz
		highest	2 620 MHz	2 655 MHz	2 675 MHz
	Non-Contiguous	lowest	2 521 MHz	2 556 MHz	2 630 MHz
		highest	2 571 MHz	2 660 MHz	2 680 MHz

Test mode Duty		
Mode	Duty Cycle	Duty Cycle Factor
LTE	74.4 %	1.28 dB
5G NR	74.4 %	1.28 dB

10 LOG(1/x), where x is the duty cycle.

EUT Test Overview					
Mode	Operating Frequency	Total Power		Emission Designator	Modulation
		* Max Power (W)	Max Power (dBm)		
LTE 1C 20 MHz	2 496 MHz to 2 690 MHz	50.76	47.06	18M0G7D	QPSK
		49.90	46.98	18M0W7D	16QAM
		51.47	47.12	18M0W7D	64QAM
		52.09	47.17	18M0W7D	256QAM
LTE 2C 20 MHz + 20 MHz		103.56	50.15	37M8G7D	QPSK
		102.58	50.11	37M9W7D	16QAM
		99.41	49.97	37M8W7D	64QAM
		103.77	50.16	37M8W7D	256QAM
5G NR 1C 40 MHz		99.78	49.99	38M0G7D	QPSK
		97.89	49.91	37M9W7D	16QAM
		107.64	50.32	37M9W7D	64QAM
		104.96	50.21	37M9W7D	256QAM
5G NR 1C 50 MHz		135.63	51.32	47M6G7D	QPSK
		127.66	51.06	47M6W7D	16QAM
		135.54	51.32	47M6W7D	64QAM
		142.02	51.52	47M6W7D	256QAM
5G NR 1C 40 MHz + LTE 2C 20 MHz + 20 MHz		203.62	53.09	77M6G7D	QPSK
		200.49	53.02	77M5W7D	16QAM
		199.97	53.01	77M5W7D	64QAM
		205.38	53.13	77M5W7D	256QAM
5G NR 1C 50 MHz + LTE 2C 20 MHz + 20 MHz		235.51	53.72	87M3G7D	QPSK
		228.98	53.60	87M3W7D	16QAM
		234.30	53.70	87M2W7D	64QAM
		238.85	53.78	87M2W7D	256QAM

* The Max Power(W) values shown in the table above are the sum of the output power of all antenna ports MIMO.

3.4 Maximum Measurement Uncertainty

The value of the measurement uncertainty for the measurement of each parameter.
 Coverage factor $k = 2$, Confidence levels of 95 %

Description	Uncertainty
Conducted Power Measurement and EIRP	1.5 dB (C.L. : Approx. 95%, $k = 2$)
Occupied bandwidth	0.1 MHz (C.L. : Approx. 95%, $k = 2$)
Peak-to-average power ratio	1.0 dB (C.L. : Approx. 95%, $k = 2$)
Band Edge Emissions at Antenna Terminal	3.0 dB (C.L. : Approx. 95%, $k = 2$)
Spurious and Harmonic Emissions at Antenna Terminal	3.0 dB (C.L. : Approx. 95%, $k = 2$)
Radiated Emissions ($f \leq 1$ GHz)	3.88 dB (C.L. : Approx. 95%, $k = 2$)
Radiated Emissions ($f > 1$ GHz)	4.50 dB (C.L. : Approx. 95%, $k = 2$)
Frequency Stability	0.1 kHz (C.L. : Approx. 95%, $k = 2$)

3.5 Test Software

Conducted Test	Ics Pro Ver. 7.0.3
Radiated Test	EP5RE Ver. 6.0.1.0, ES10 Ver. 10.001

4. Technical Characteristic Test

4.1 Occupied Bandwidth

Test Overview :

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. Use the 99% power bandwidth function of the instrument and report the measured bandwidth.

Test Procedures :

ANSI C63.26-2015 – Section 5.4.3
 KDB 971168 D01 v03r01 – Section 4.2

Test Settings :

Center frequency = the highest, middle and the lowest channels

- | | |
|--------------------------------------|----------------------------|
| a) RBW = 1 ~ 5 % of the expected OBW | b) VBW $\geq 3 \times$ RBW |
| c) Detector = peak | d) Trace mode = Max hold |
| e) Sweep = auto couple | |
| f) Allow trace to fully stabilize | |

Limit :

N/A

Test Data :

Test mode : LTE 1C 20 MHz

Channel	Port	OBW (MHz)				Port	OBW (MHz)			
		QPSK	16QAM	64QAM	256QAM		QPSK	16QAM	64QAM	256QAM
Middle	1	17.96	17.95	17.95	17.90	33	17.91	17.90	17.93	17.92
	2	17.90	17.92	17.91	17.89	34	17.96	17.89	17.92	17.91
	3	17.94	17.91	17.94	17.89	35	17.92	17.88	17.95	17.89
	4	17.90	17.93	17.90	17.91	36	17.93	17.88	17.90	17.92
	5	17.93	17.90	17.95	17.90	37	17.94	17.90	17.96	17.90
	6	17.92	17.85	17.92	17.90	38	17.90	17.91	17.92	17.92
	7	17.92	17.89	17.94	17.93	39	17.92	17.90	17.97	17.90
	8	17.95	17.92	17.98	17.91	40	17.95	17.88	17.95	17.88
	9	17.95	17.92	17.91	17.91	41	17.95	17.91	17.93	17.92
	10	17.95	17.87	17.92	17.90	42	17.92	17.91	17.93	17.92
	11	17.94	17.91	17.95	17.95	43	17.93	17.88	17.91	17.91
	12	17.96	17.93	17.93	17.92	44	17.92	17.91	17.94	17.93
	13	17.96	17.93	17.94	17.89	45	17.91	17.93	17.92	17.86
	14	17.89	17.91	17.97	17.93	46	17.93	17.96	17.91	17.90
	15	17.90	17.90	17.91	17.92	47	17.89	17.90	17.90	17.89
	16	17.89	17.93	17.96	17.88	48	17.95	17.89	17.94	17.91
	17	17.90	17.88	17.92	17.90	49	17.93	17.91	17.91	17.92
	18	17.94	17.90	17.93	17.92	50	17.92	17.89	17.96	17.90
	19	17.90	17.89	17.96	17.94	51	17.90	17.91	17.95	17.94
	20	17.92	17.92	17.93	17.92	52	17.96	17.90	17.95	17.92
	21	17.93	17.89	17.96	17.91	53	17.93	17.90	17.96	17.91
	22	17.91	17.93	17.96	17.93	54	17.94	17.90	17.92	17.87
	23	17.92	17.91	17.93	17.91	55	17.96	17.90	17.96	17.91
	24	17.95	17.92	17.95	17.94	56	17.91	17.87	17.95	17.94
	25	17.93	17.93	17.90	17.90	57	17.93	17.90	17.93	17.95
	26	17.93	17.91	17.97	17.87	58	17.93	17.88	17.92	17.89
	27	17.96	17.89	17.93	17.94	59	17.92	17.91	17.92	17.91
	28	17.95	17.91	17.96	17.88	60	17.91	17.90	17.94	17.91
	29	17.90	17.91	17.93	17.90	61	17.90	17.91	17.91	17.90
	30	17.90	17.90	17.95	17.91	62	17.90	17.89	17.95	17.93
	31	17.91	17.93	17.98	17.87	63	17.91	17.89	17.91	17.92
	32	17.94	17.92	17.95	17.91	64	17.94	17.93	17.91	17.92

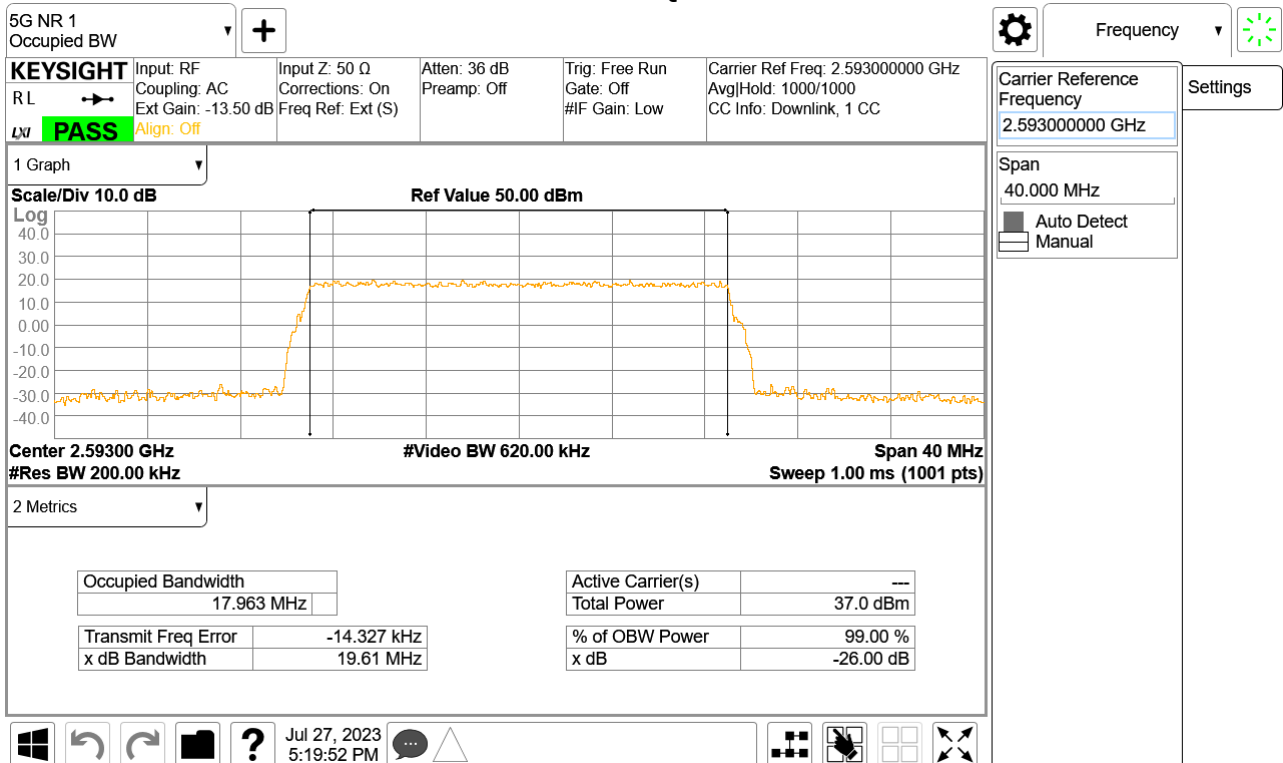
See next pages for actual measured spectrum plots.



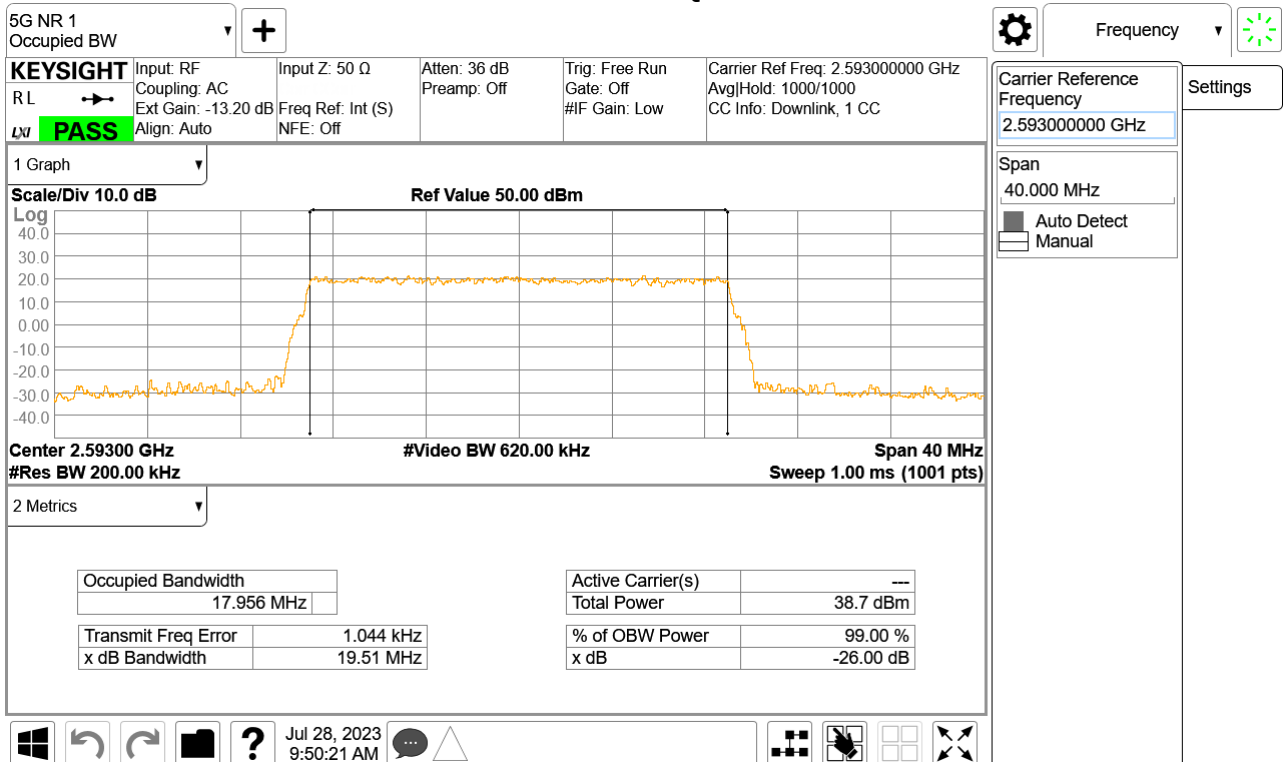
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Middle QPSK



Middle 16QAM

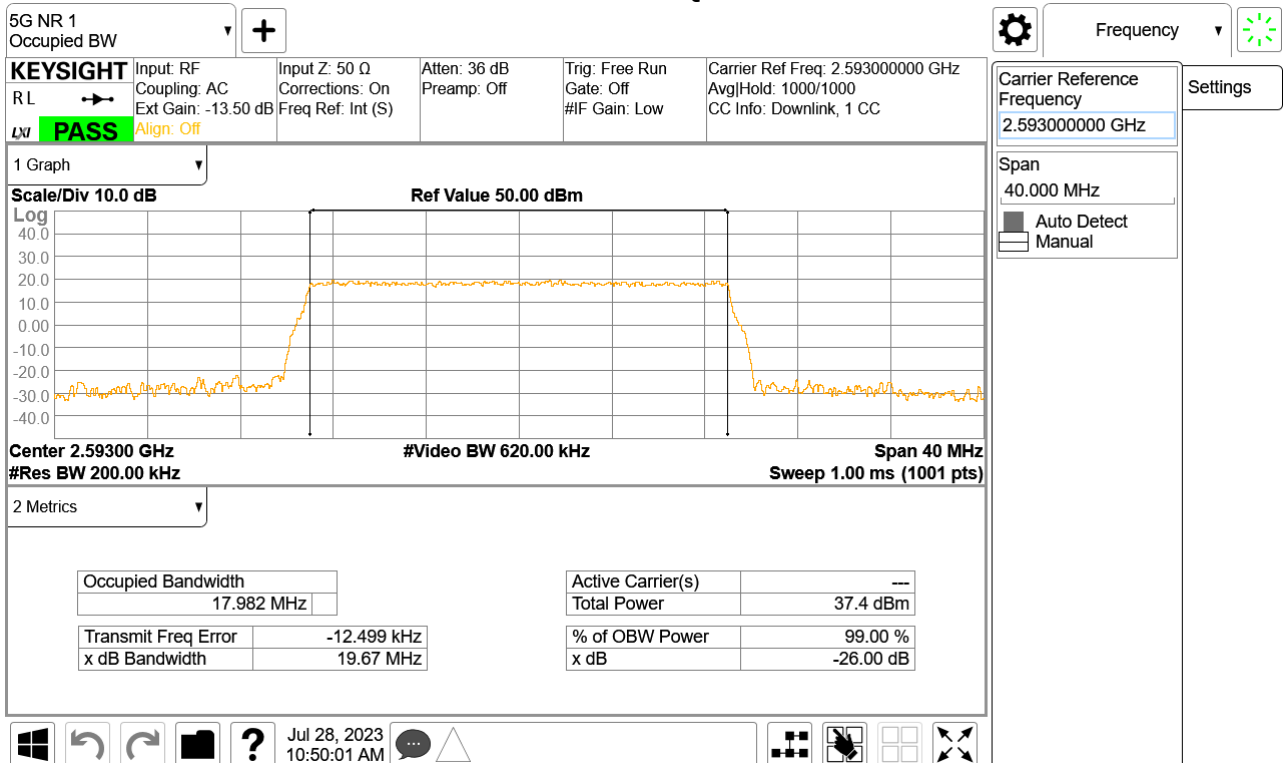




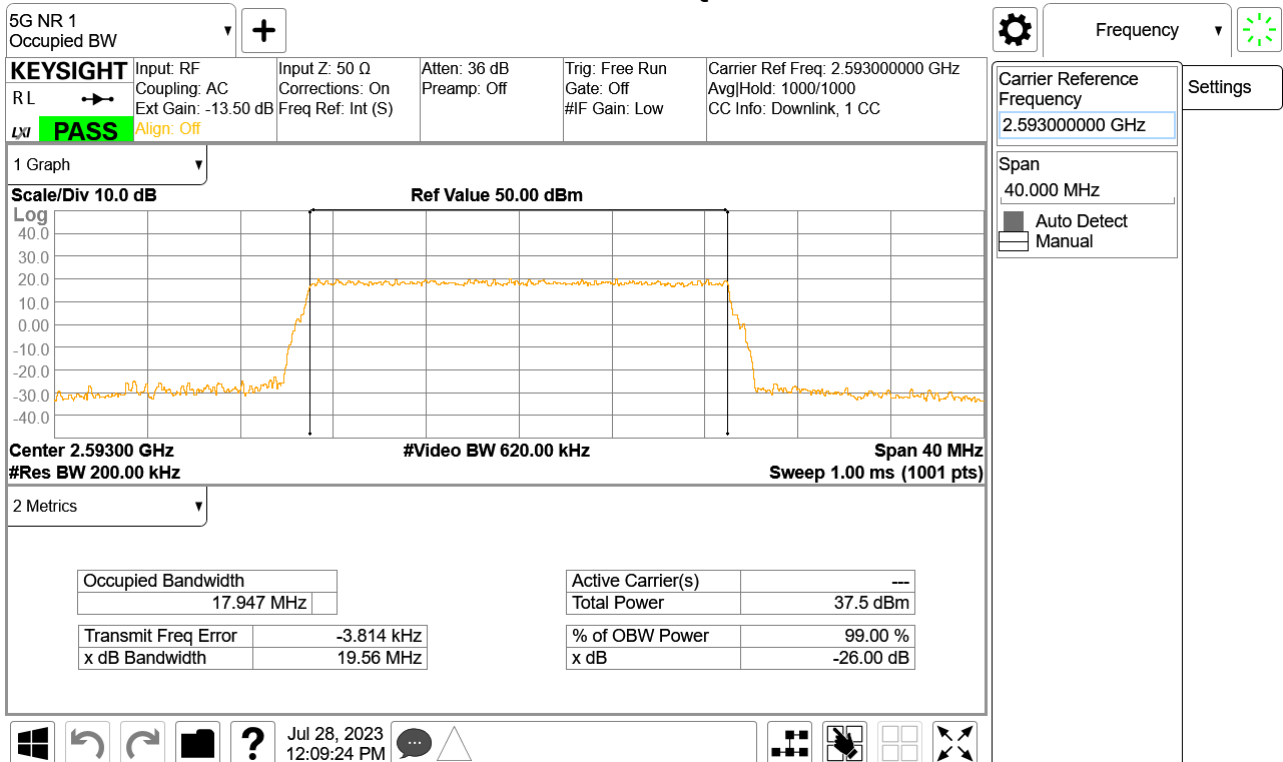
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Middle 64QAM



Middle 256QAM



Test mode : 5G NR 1C 40 MHz

Channel	Port	OBW (MHz)				Port	OBW (MHz)			
		QPSK	16QAM	64QAM	256QAM		QPSK	16QAM	64QAM	256QAM
Middle	1	37.87	37.84	37.89	37.90	33	37.89	37.89	37.91	37.87
	2	37.86	37.81	37.91	37.89	34	37.90	37.84	37.88	37.90
	3	37.84	37.88	37.90	37.83	35	37.89	37.83	37.90	37.85
	4	37.90	37.89	37.84	37.90	36	37.85	37.88	37.90	37.86
	5	37.91	37.87	37.90	37.91	37	37.92	37.87	37.85	37.82
	6	37.86	37.88	37.91	37.88	38	37.92	37.85	37.87	37.84
	7	37.87	37.84	37.89	37.88	39	37.84	37.83	37.87	37.92
	8	37.89	37.87	37.88	37.88	40	37.89	37.82	37.85	37.86
	9	37.88	37.85	37.89	37.87	41	37.84	37.83	37.87	37.84
	10	37.90	37.82	37.89	37.88	42	37.91	37.86	37.92	37.91
	11	37.87	37.87	37.88	37.88	43	37.98	37.87	37.85	37.90
	12	37.82	37.86	37.87	37.88	44	37.91	37.84	37.91	37.85
	13	37.87	37.83	37.86	37.87	45	37.93	37.87	37.88	37.90
	14	37.92	37.83	37.90	37.87	46	37.85	37.86	37.90	37.87
	15	37.89	37.86	37.90	37.89	47	37.90	37.87	37.91	37.93
	16	37.83	37.86	37.88	37.85	48	37.90	37.87	37.86	37.82
	17	37.85	37.85	37.90	37.83	49	37.82	37.90	37.87	37.91
	18	37.82	37.85	37.84	37.87	50	37.86	37.86	37.89	37.88
	19	37.88	37.87	37.85	37.85	51	37.91	37.82	37.89	37.88
	20	37.88	37.83	37.89	37.90	52	37.91	37.88	37.86	37.82
	21	37.91	37.90	37.90	37.85	53	37.88	37.86	37.88	37.82
	22	37.87	37.85	37.87	37.81	54	37.85	37.88	37.87	37.84
	23	37.87	37.88	37.88	37.85	55	37.92	37.85	37.90	37.91
	24	37.86	37.86	37.87	37.84	56	37.86	37.86	37.90	37.88
	25	37.86	37.84	37.86	37.88	57	37.91	37.84	37.88	37.91
	26	37.89	37.85	37.90	37.83	58	37.85	37.85	37.90	37.84
	27	37.89	37.87	37.90	37.86	59	37.86	37.88	37.90	37.83
	28	37.84	37.86	37.90	37.86	60	37.88	37.88	37.87	37.88
	29	37.91	37.81	37.87	37.83	61	37.83	37.83	37.85	37.88
	30	37.87	37.88	37.92	37.88	62	37.88	37.86	37.86	37.85
	31	37.88	37.85	37.86	37.82	63	37.85	37.87	37.87	37.86
	32	37.89	37.82	37.93	37.91	64	37.87	37.86	37.91	37.86

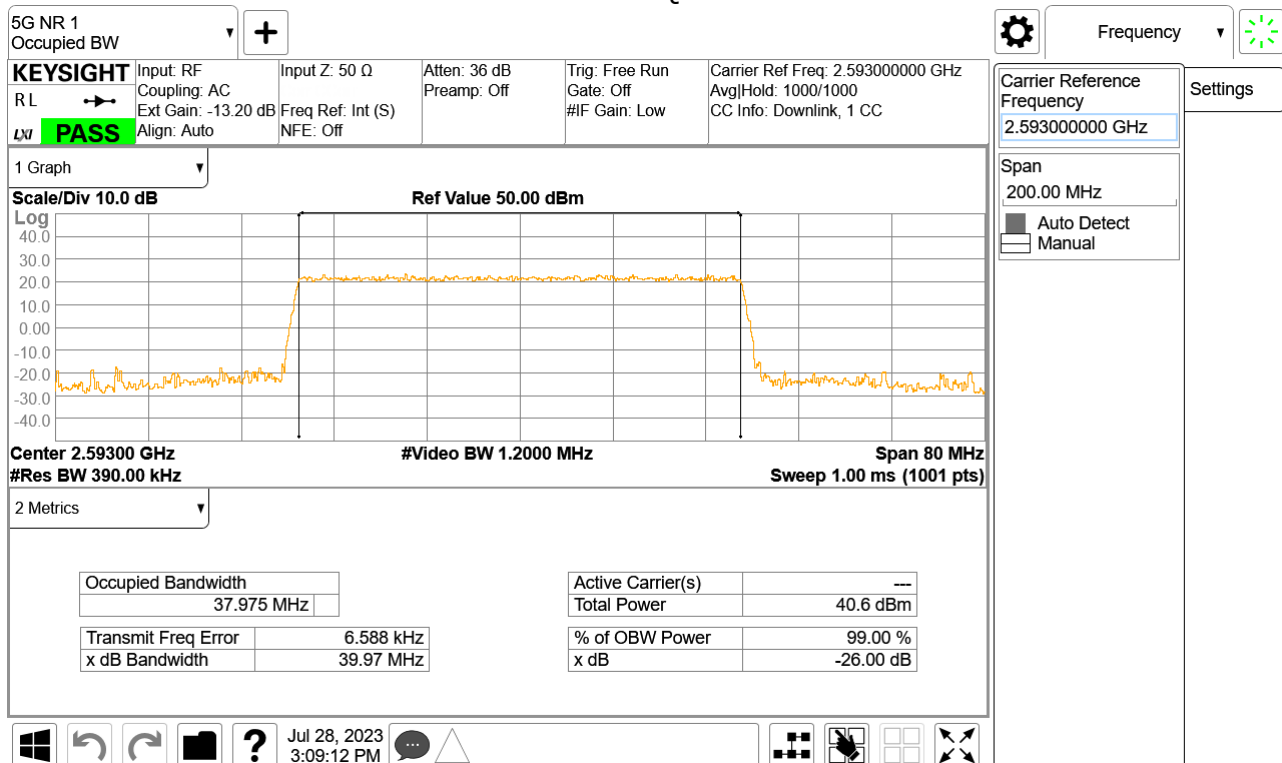
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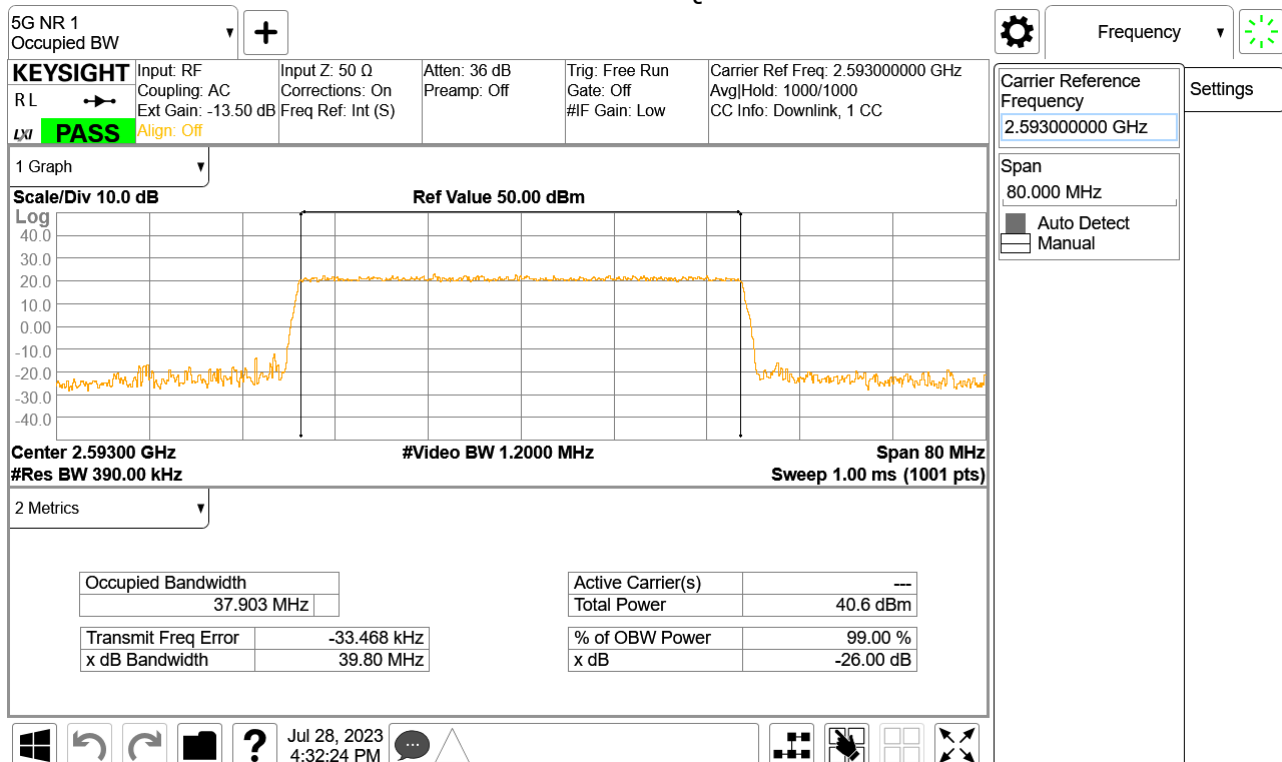
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Middle QPSK



Middle 16QAM

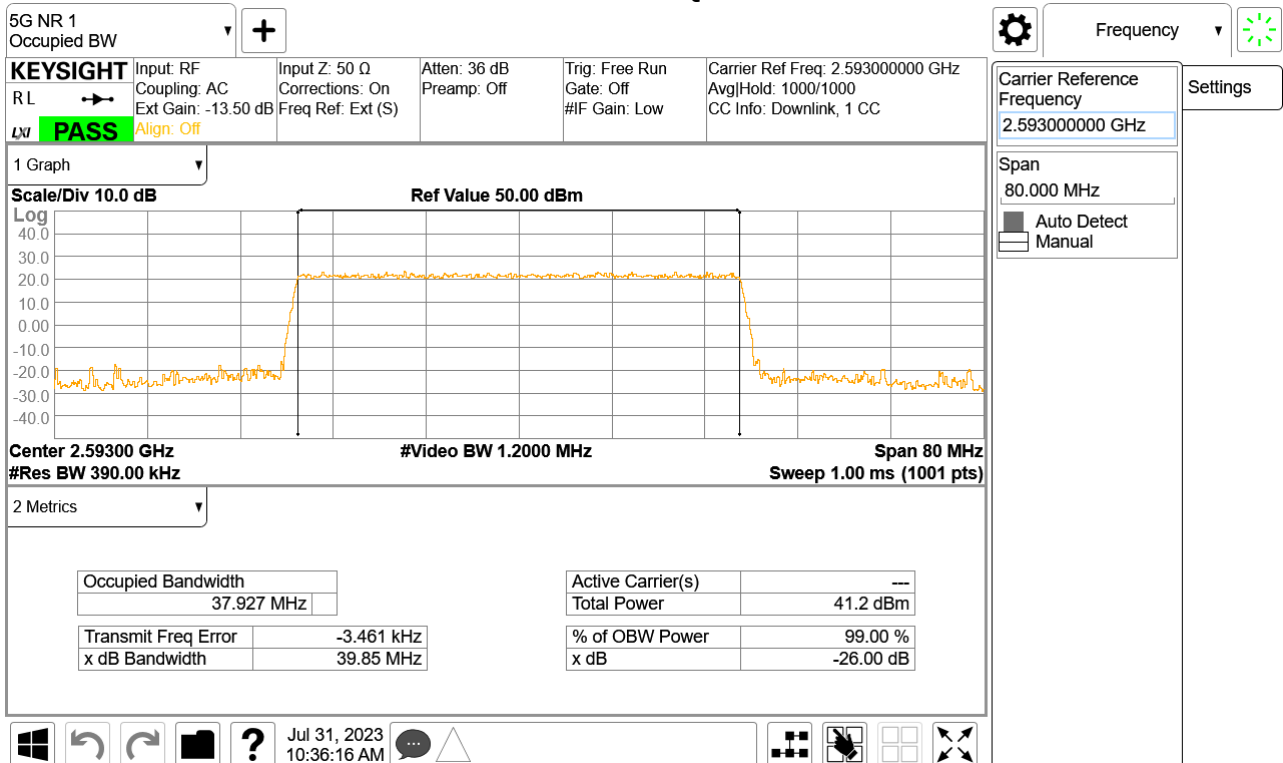




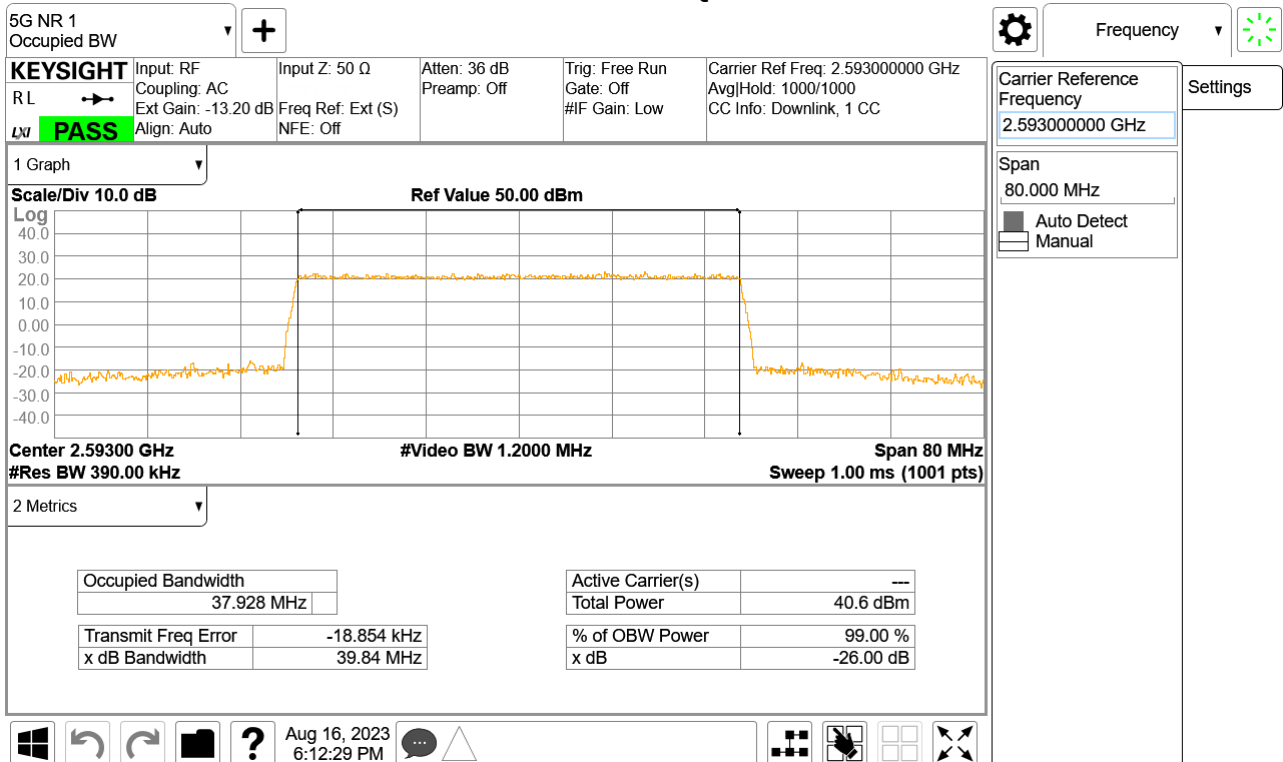
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Middle 64QAM



Middle 256QAM



Test mode : 5G NR 1C 50 MHz

Channel	Port	OBW (MHz)				Port	OBW (MHz)			
		QPSK	16QAM	64QAM	256QAM		QPSK	16QAM	64QAM	256QAM
Middle	1	47.55	47.54	47.54	47.55	33	47.52	47.57	47.54	47.49
	2	47.54	47.46	47.57	47.52	34	47.53	47.55	47.54	47.56
	3	47.51	47.52	47.48	47.53	35	47.51	47.50	47.50	47.53
	4	47.47	47.53	47.55	47.47	36	47.55	47.53	47.57	47.53
	5	47.50	47.50	47.54	47.51	37	47.49	47.51	47.53	47.52
	6	47.42	47.53	47.46	47.49	38	47.50	47.59	47.51	47.51
	7	47.53	47.47	47.53	47.54	39	47.51	47.57	47.53	47.48
	8	47.47	47.47	47.55	47.47	40	47.50	47.48	47.54	47.45
	9	47.50	47.61	47.48	47.50	41	47.49	47.52	47.56	47.53
	10	47.51	47.52	47.50	47.49	42	47.55	47.55	47.54	47.54
	11	47.53	47.61	47.55	47.57	43	47.57	47.47	47.53	47.54
	12	47.52	47.51	47.45	47.52	44	47.45	47.54	47.60	47.50
	13	47.53	47.53	47.55	47.53	45	47.53	47.53	47.46	47.51
	14	47.52	47.52	47.45	47.50	46	47.47	47.53	47.55	47.46
	15	47.49	47.54	47.51	47.51	47	47.52	47.53	47.48	47.50
	16	47.49	47.55	47.48	47.47	48	47.51	47.50	47.50	47.54
	17	47.55	47.58	47.47	47.49	49	47.53	47.52	47.51	47.52
	18	47.46	47.52	47.51	47.54	50	47.49	47.59	47.53	47.53
	19	47.48	47.52	47.56	47.52	51	47.46	47.54	47.45	47.51
	20	47.50	47.51	47.53	47.56	52	47.47	47.56	47.52	47.54
	21	47.54	47.55	47.46	47.49	53	47.52	47.54	47.55	47.50
	22	47.50	47.51	47.51	47.50	54	47.53	47.50	47.52	47.55
	23	47.54	47.58	47.54	47.50	55	47.50	47.61	47.55	47.54
	24	47.57	47.57	47.49	47.54	56	47.55	47.55	47.54	47.51
	25	47.51	47.53	47.55	47.54	57	47.46	47.49	47.47	47.51
	26	47.47	47.57	47.48	47.57	58	47.50	47.57	47.52	47.49
	27	47.47	47.50	47.49	47.53	59	47.54	47.52	47.55	47.51
	28	47.54	47.54	47.50	47.49	60	47.51	47.50	47.58	47.52
	29	47.58	47.51	47.52	47.48	61	47.57	47.52	47.53	47.56
	30	47.45	47.58	47.48	47.50	62	47.52	47.55	47.58	47.52
	31	47.56	47.52	47.60	47.51	63	47.44	47.54	47.52	47.53
	32	47.53	47.47	47.51	47.45	64	47.50	47.55	47.56	47.56

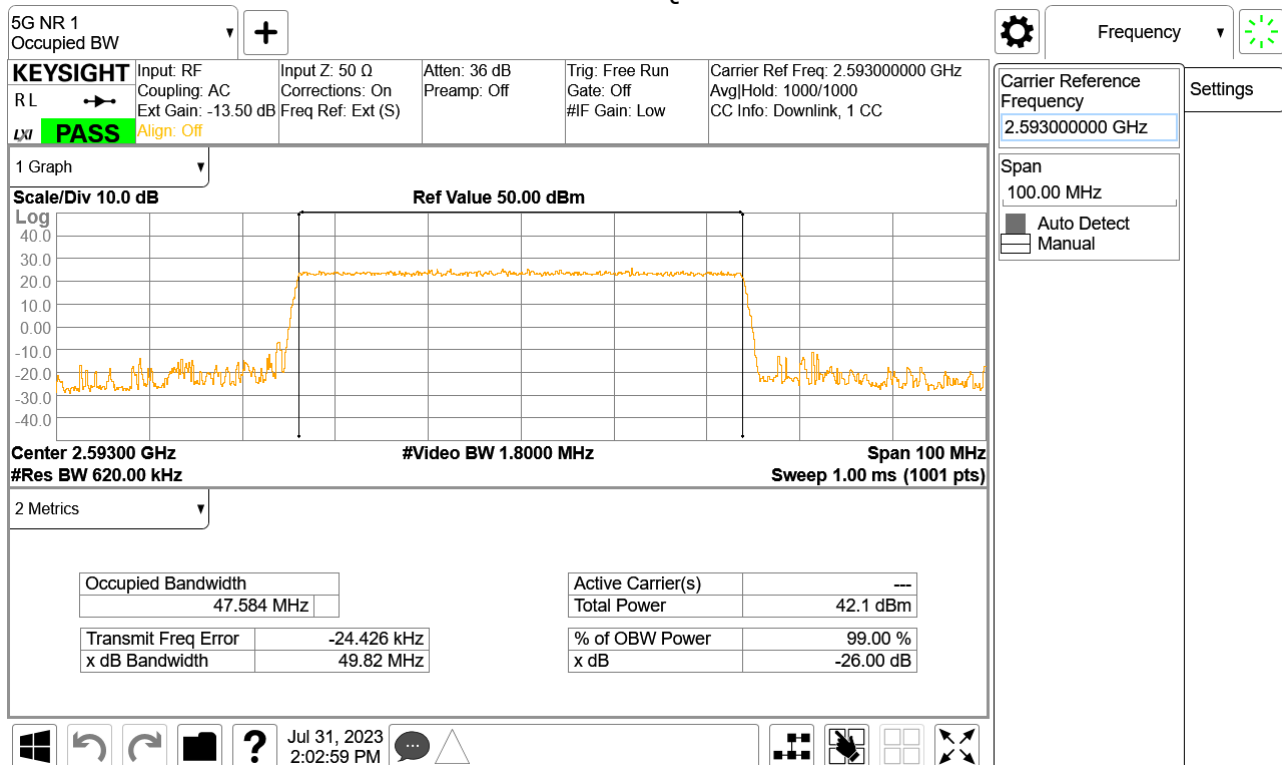
See next pages for actual measured spectrum plots.



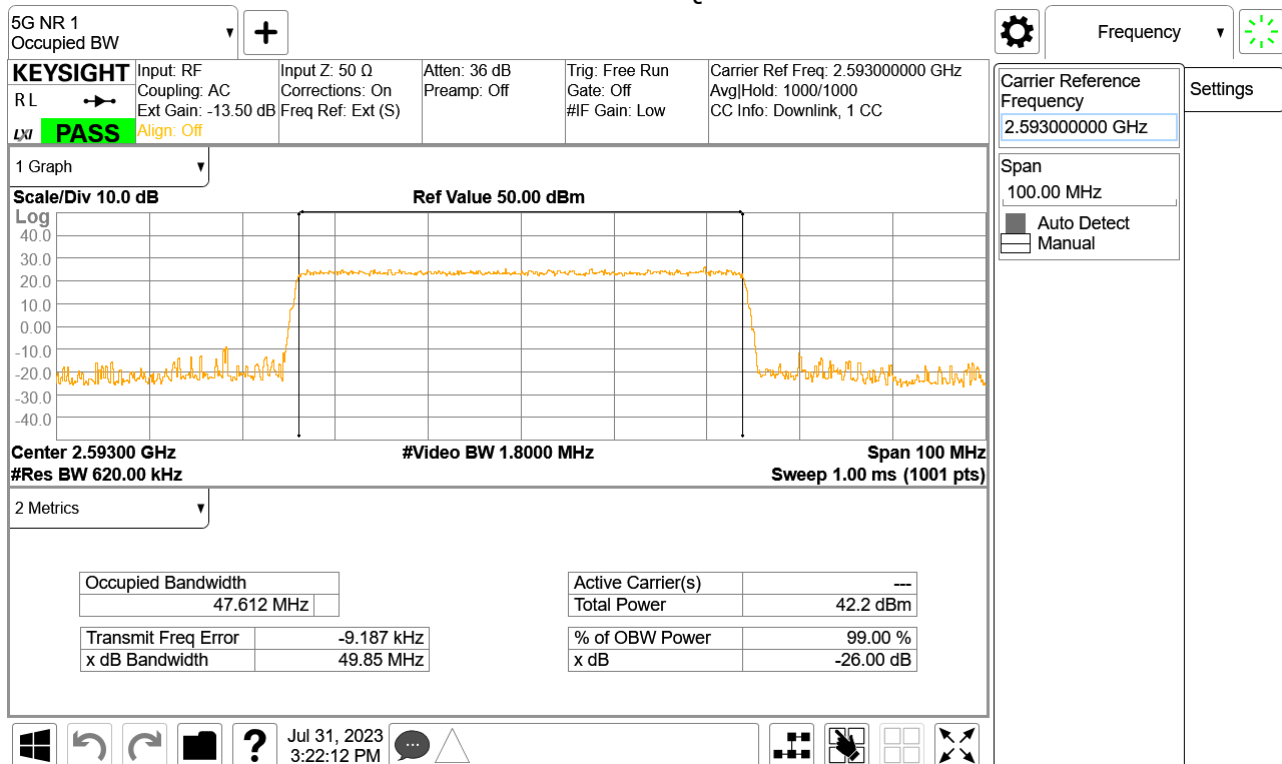
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Middle QPSK



Middle 16QAM

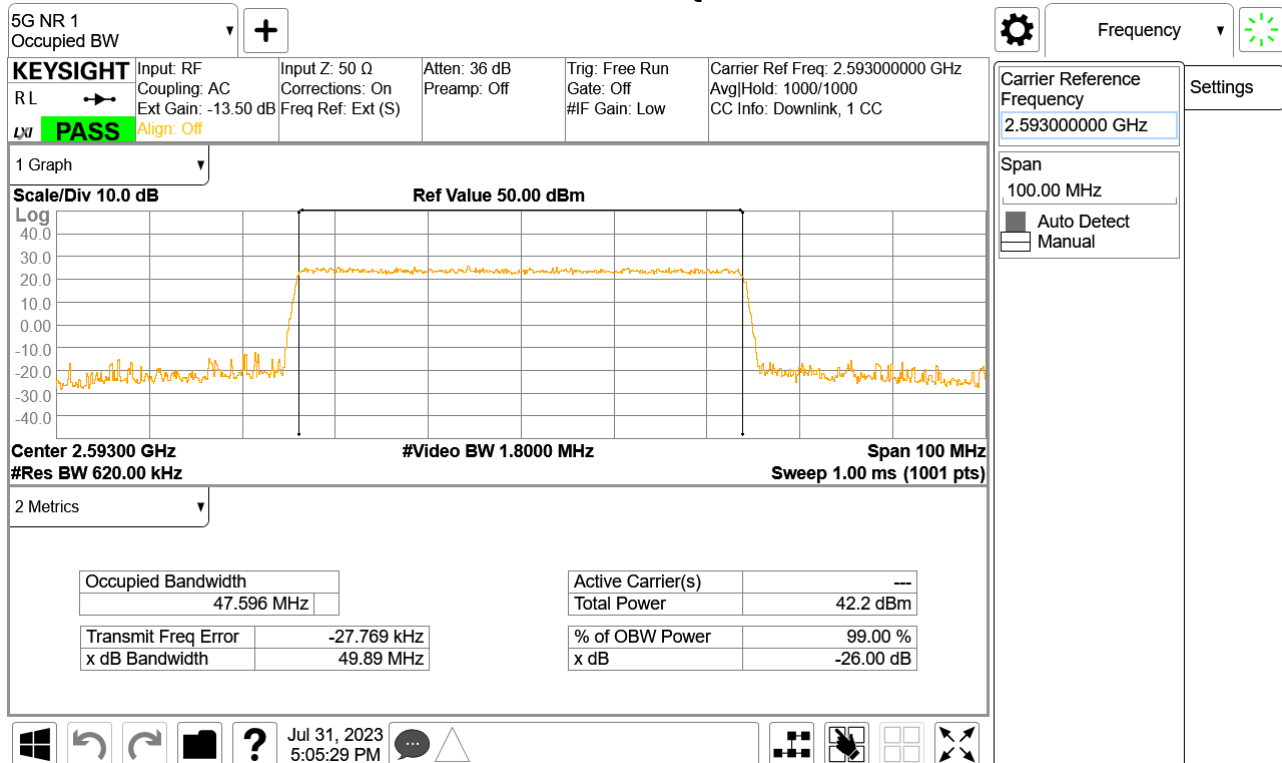




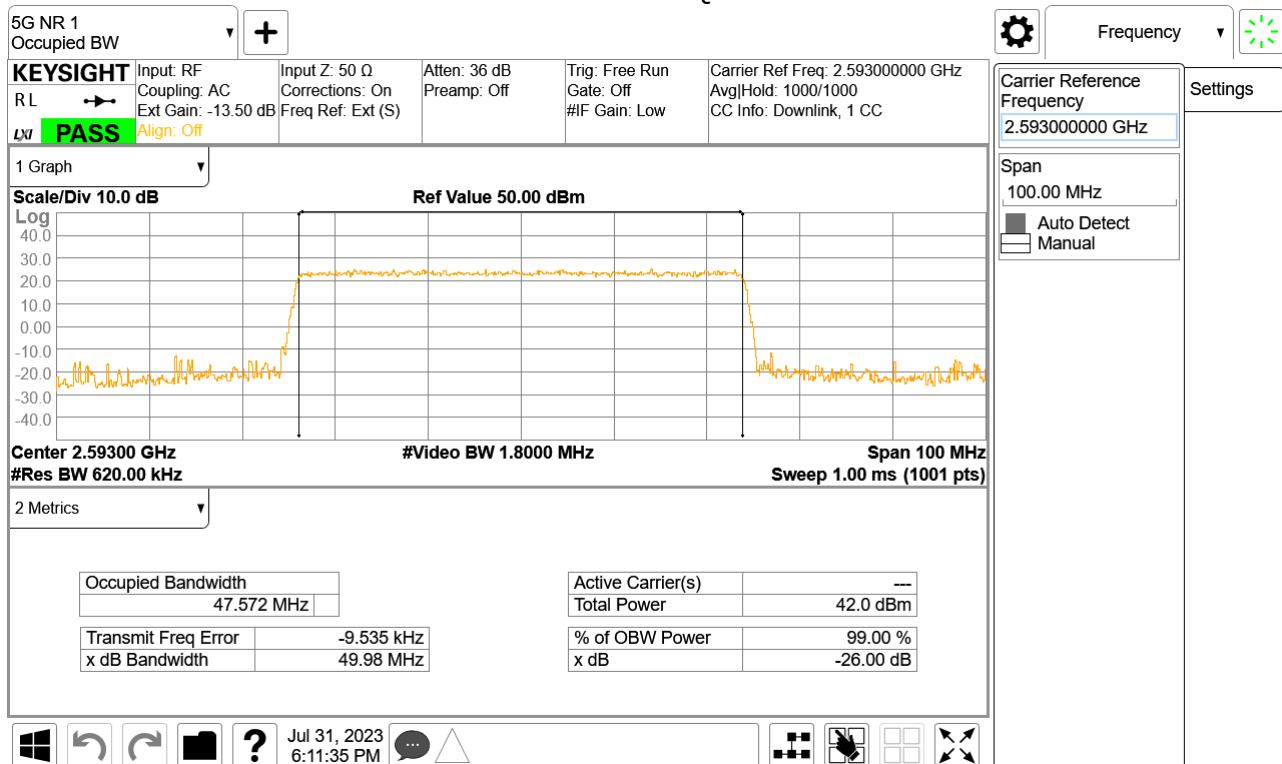
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Middle 64QAM



Middle 256QAM



Test mode : LTE 2C 20+20 MHz Contiguous

Channel	Port	OBW (MHz)				Port	OBW (MHz)			
		QPSK	16QAM	64QAM	256QAM		QPSK	16QAM	64QAM	256QAM
Middle	1	37.75	37.81	37.70	37.77	33	37.84	37.79	37.71	37.80
	2	37.75	37.82	37.76	37.81	34	37.77	37.75	37.74	37.75
	3	37.72	37.86	37.80	37.74	35	37.80	37.75	37.77	37.78
	4	37.80	37.79	37.75	37.78	36	37.79	37.79	37.77	37.77
	5	37.72	37.83	37.77	37.78	37	37.77	37.76	37.76	37.77
	6	37.79	37.80	37.77	37.75	38	37.77	37.82	37.75	37.77
	7	37.78	37.75	37.73	37.74	39	37.76	37.79	37.76	37.76
	8	37.74	37.81	37.74	37.72	40	37.76	37.74	37.72	37.78
	9	37.74	37.72	37.77	37.75	41	37.76	37.77	37.74	37.80
	10	37.75	37.79	37.74	37.80	42	37.74	37.71	37.73	37.74
	11	37.76	37.76	37.71	37.77	43	37.78	37.75	37.76	37.71
	12	37.78	37.72	37.77	37.75	44	37.74	37.76	37.76	37.74
	13	37.70	37.71	37.77	37.75	45	37.78	37.76	37.75	37.79
	14	37.73	37.77	37.76	37.76	46	37.79	37.76	37.75	37.77
	15	37.78	37.75	37.77	37.74	47	37.79	37.82	37.74	37.78
	16	37.78	37.79	37.74	37.78	48	37.77	37.75	37.77	37.77
	17	37.77	37.79	37.73	37.75	49	37.77	37.78	37.73	37.77
	18	37.75	37.69	37.72	37.78	50	37.74	37.73	37.78	37.79
	19	37.82	37.74	37.74	37.72	51	37.75	37.77	37.82	37.76
	20	37.75	37.82	37.75	37.80	52	37.73	37.74	37.76	37.80
	21	37.72	37.76	37.72	37.79	53	37.81	37.73	37.78	37.74
	22	37.77	37.73	37.73	37.76	54	37.70	37.71	37.75	37.77
	23	37.73	37.85	37.76	37.77	55	37.82	37.76	37.75	37.75
	24	37.76	37.80	37.73	37.82	56	37.78	37.75	37.72	37.74
	25	37.74	37.73	37.73	37.76	57	37.80	37.75	37.76	37.79
	26	37.78	37.82	37.77	37.72	58	37.81	37.76	37.77	37.77
	27	37.79	37.79	37.70	37.79	59	37.75	37.72	37.81	37.80
	28	37.73	37.72	37.78	37.81	60	37.77	37.74	37.76	37.78
	29	37.79	37.75	37.78	37.74	61	37.72	37.77	37.76	37.73
	30	37.75	37.76	37.71	37.76	62	37.81	37.74	37.74	37.78
	31	37.79	37.76	37.80	37.75	63	37.78	37.76	37.77	37.75
	32	37.81	37.77	37.76	37.76	64	37.74	37.74	37.76	37.75

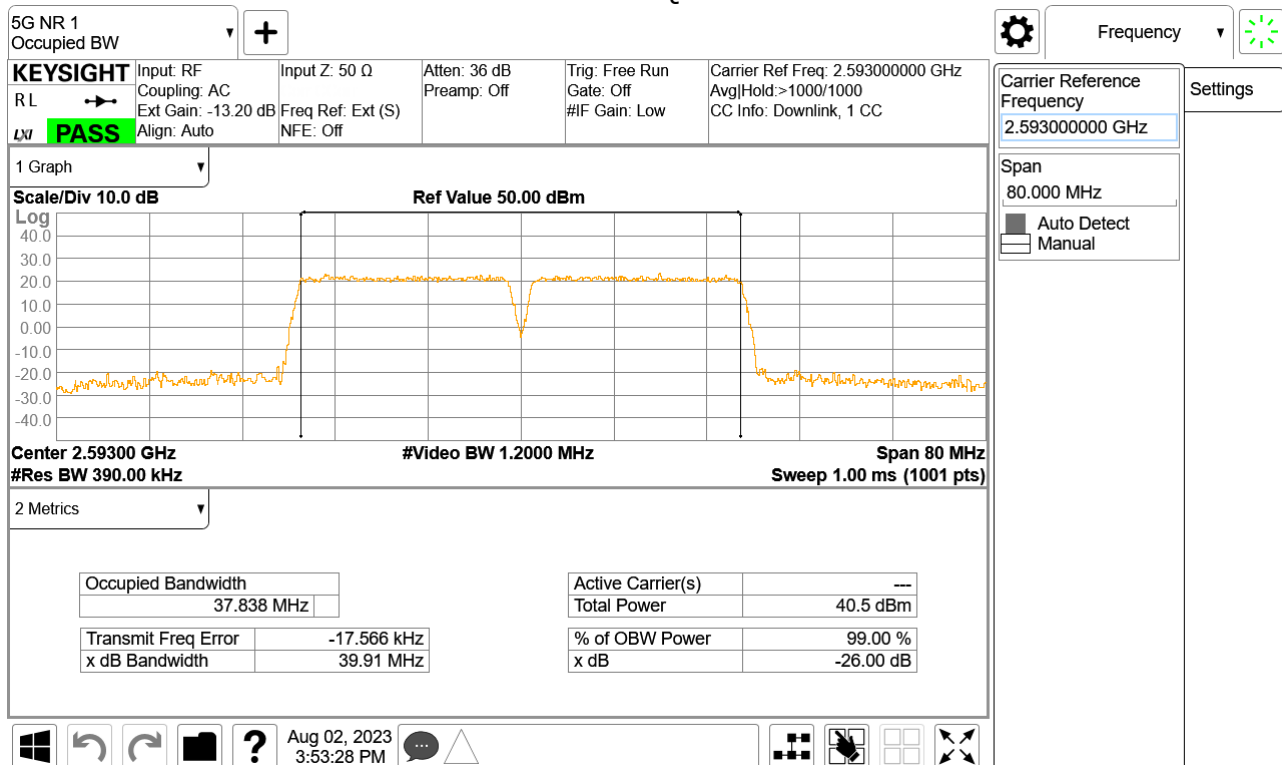
See next pages for actual measured spectrum plots.



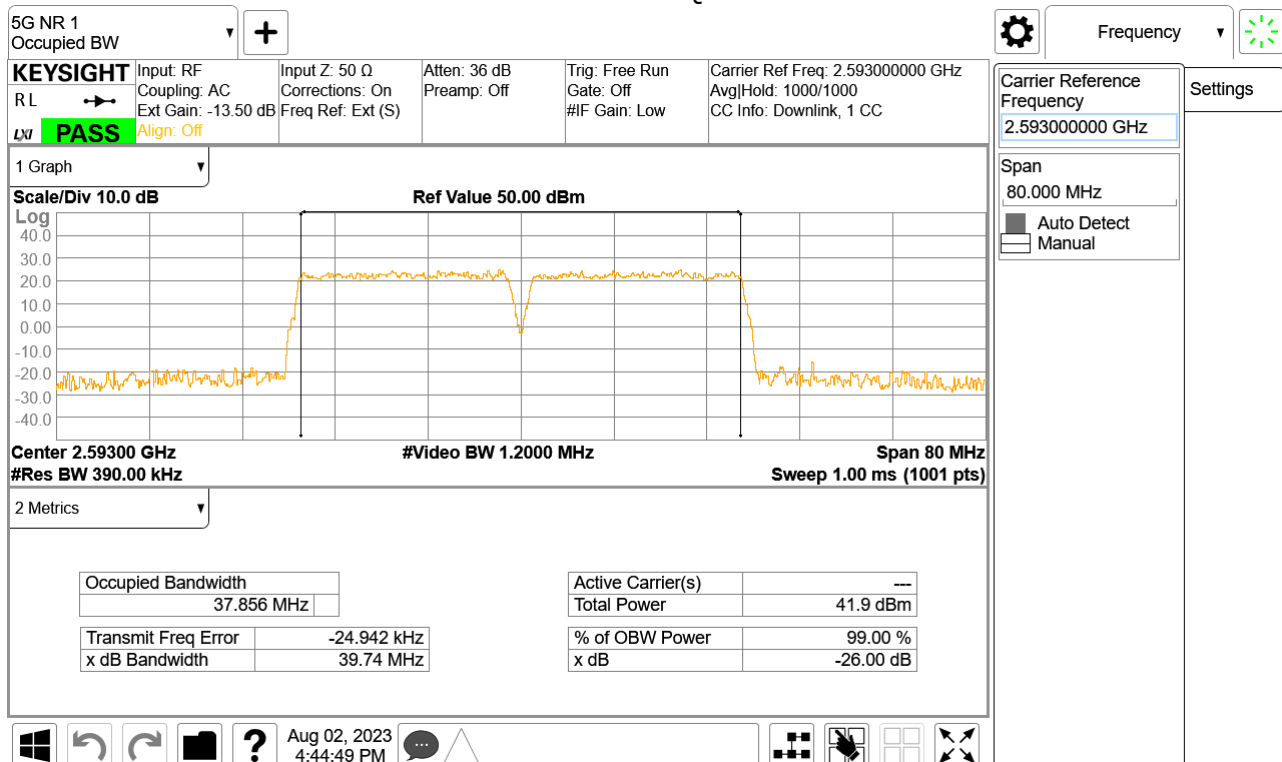
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Middle QPSK



Middle 16QAM

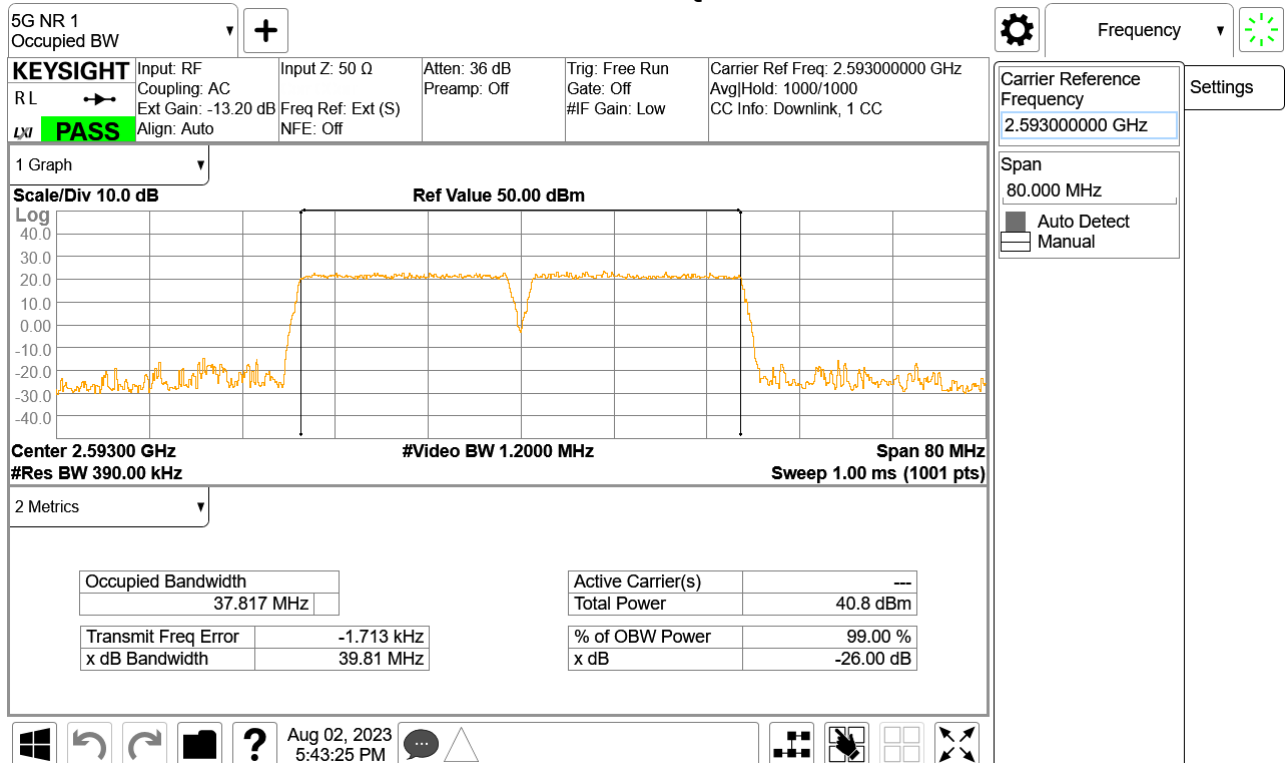




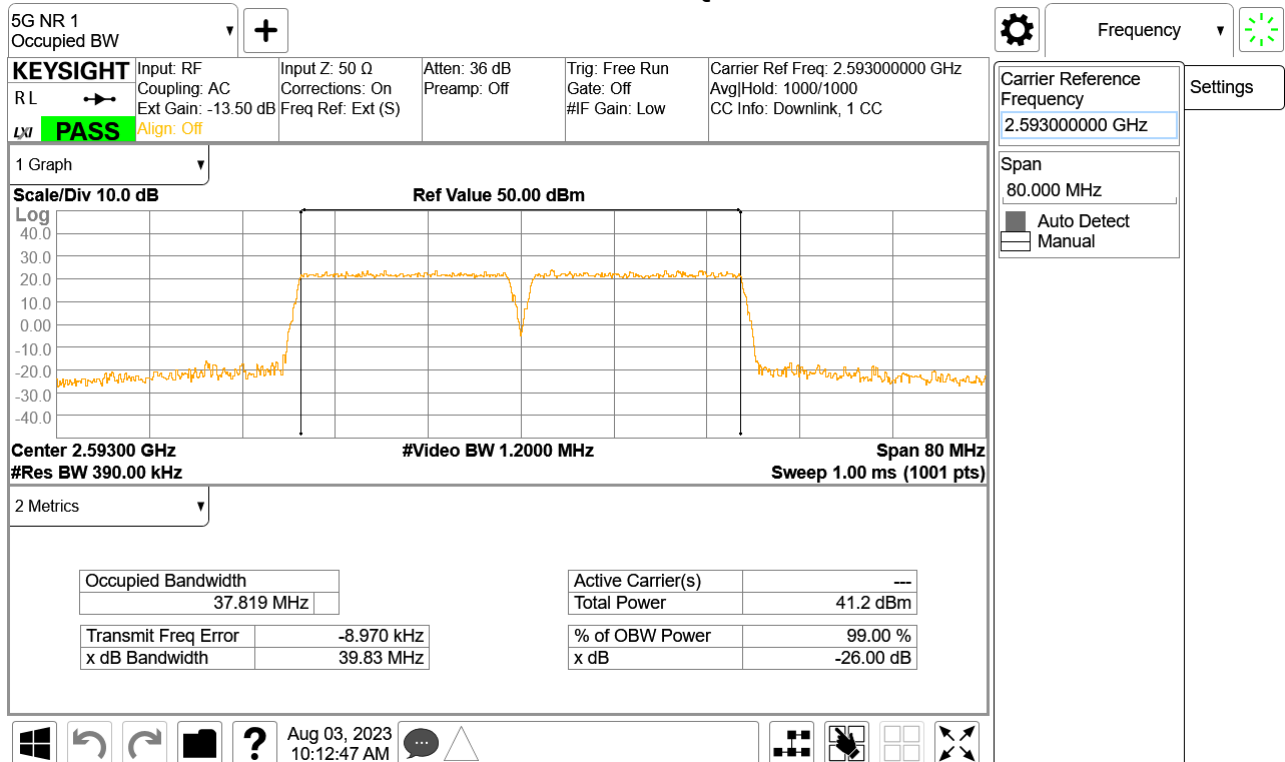
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Middle 64QAM



Middle 256QAM



Test mode : 5G NR 1C 40 MHz+LTE 2C 20+20 MHz Contiguous

Channel	Port	OBW (MHz)				Port	OBW (MHz)			
		QPSK	16QAM	64QAM	256QAM		QPSK	16QAM	64QAM	256QAM
Middle	1	77.37	77.38	77.39	77.36	33	77.31	77.31	77.43	77.36
	2	77.35	77.37	77.41	77.32	34	77.36	77.47	77.42	77.36
	3	77.29	77.51	77.45	77.38	35	77.54	77.39	77.40	77.47
	4	77.35	77.48	77.39	77.39	36	77.38	77.42	77.41	77.44
	5	77.37	77.44	77.42	77.40	37	77.37	77.39	77.43	77.33
	6	77.32	77.39	77.33	77.35	38	77.38	77.42	77.42	77.46
	7	77.31	77.37	77.37	77.37	39	77.39	77.43	77.34	77.38
	8	77.31	77.31	77.40	77.45	40	77.39	77.33	77.44	77.29
	9	77.41	77.32	77.45	77.42	41	77.29	77.50	77.45	77.35
	10	77.33	77.40	77.46	77.38	42	77.43	77.45	77.43	77.36
	11	77.43	77.43	77.34	77.31	43	77.32	77.42	77.37	77.38
	12	77.32	77.45	77.46	77.31	44	77.51	77.54	77.42	77.35
	13	77.32	77.36	77.43	77.44	45	77.32	77.45	77.42	77.29
	14	77.47	77.33	77.32	77.40	46	77.28	77.40	77.40	77.37
	15	77.39	77.34	77.34	77.32	47	77.57	77.52	77.38	77.40
	16	77.45	77.43	77.38	77.35	48	77.40	77.40	77.50	77.29
	17	77.36	77.47	77.40	77.45	49	77.49	77.43	77.39	77.41
	18	77.41	77.42	77.33	77.29	50	77.48	77.38	77.35	77.47
	19	77.36	77.46	77.41	77.39	51	77.42	77.39	77.33	77.37
	20	77.34	77.49	77.37	77.42	52	77.39	77.30	77.36	77.44
	21	77.34	77.36	77.38	77.36	53	77.45	77.39	77.45	77.44
	22	77.46	77.38	77.38	77.35	54	77.44	77.40	77.35	77.35
	23	77.49	77.38	77.32	77.40	55	77.36	77.39	77.40	77.38
	24	77.35	77.33	77.38	77.46	56	77.37	77.50	77.41	77.43
	25	77.40	77.32	77.46	77.42	57	77.42	77.43	77.34	77.45
	26	77.32	77.41	77.36	77.37	58	77.51	77.44	77.40	77.40
	27	77.39	77.45	77.41	77.31	59	77.48	77.38	77.35	77.40
	28	77.30	77.39	77.35	77.42	60	77.36	77.34	77.31	77.29
	29	77.38	77.44	77.44	77.38	61	77.46	77.44	77.40	77.40
	30	77.41	77.42	77.43	77.42	62	77.53	77.45	77.35	77.31
	31	77.39	77.39	77.44	77.39	63	77.40	77.43	77.43	77.39
	32	77.45	77.50	77.37	77.37	64	77.42	77.39	77.45	77.32

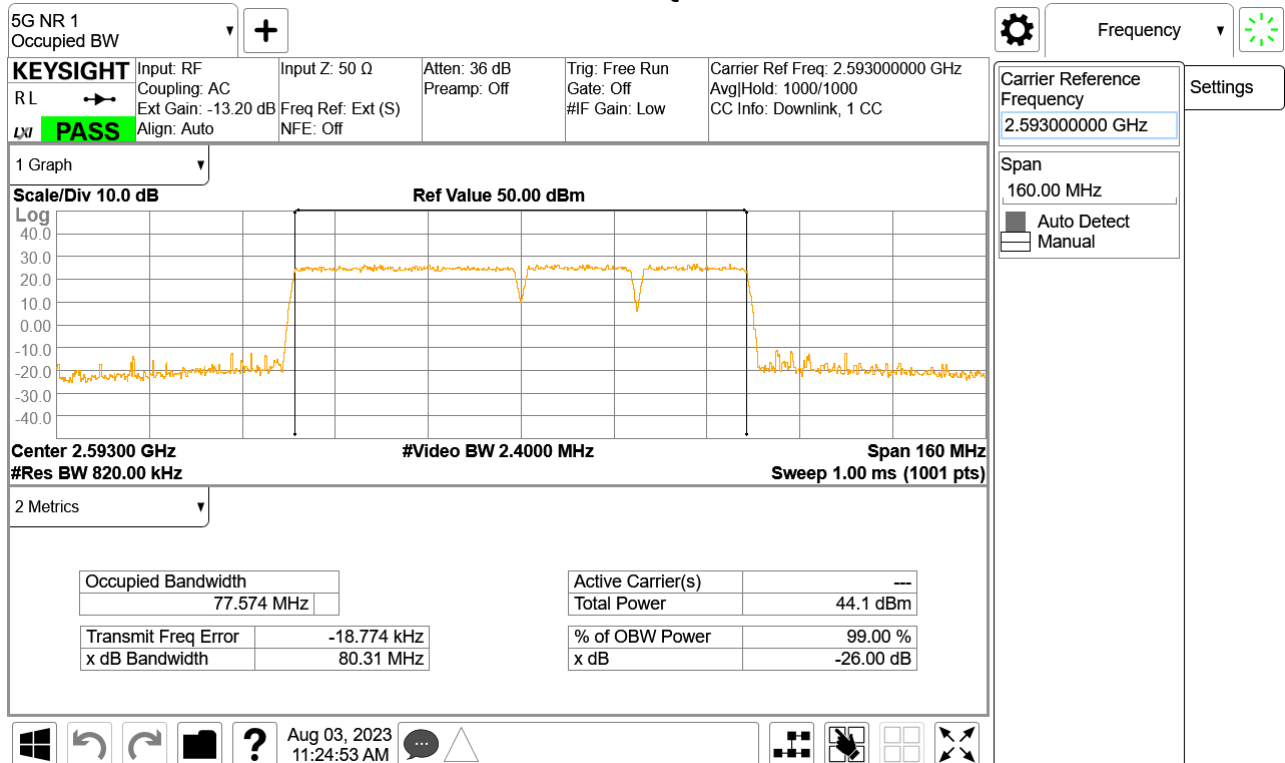
See next pages for actual measured spectrum plots.



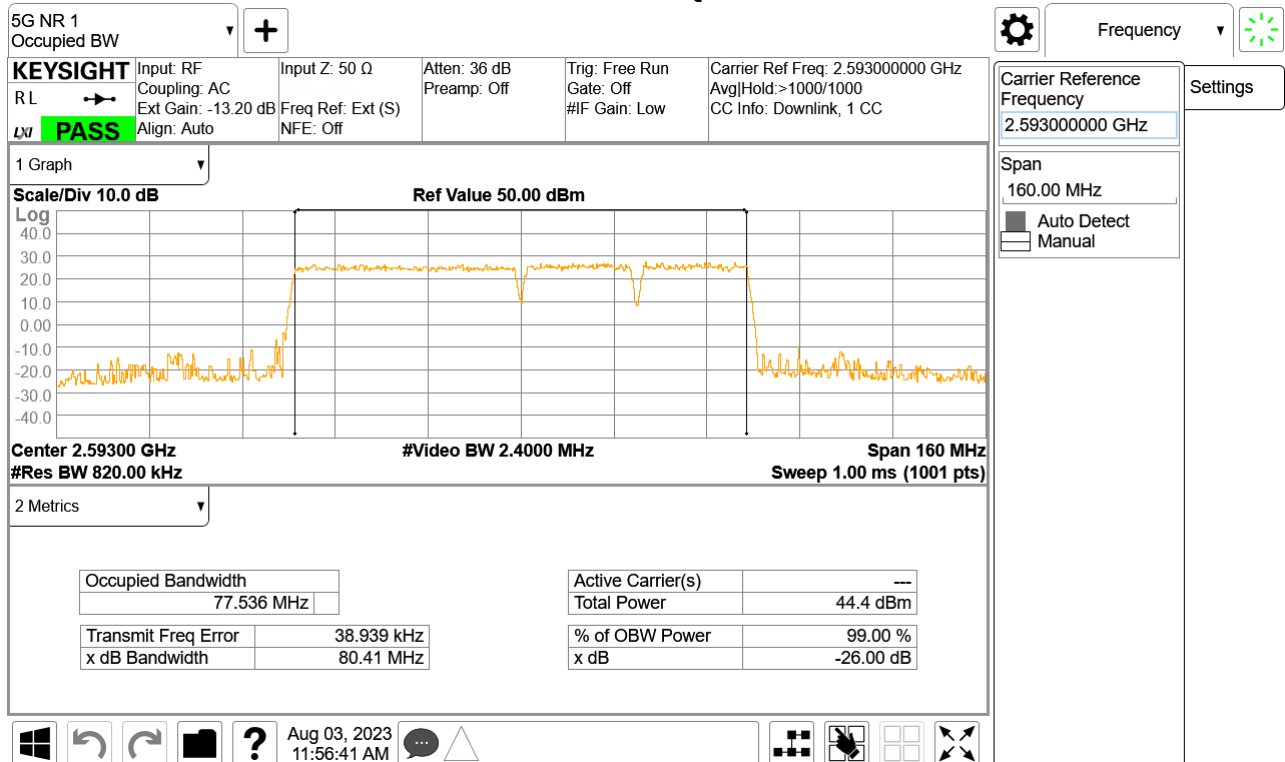
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Middle QPSK



Middle 16QAM

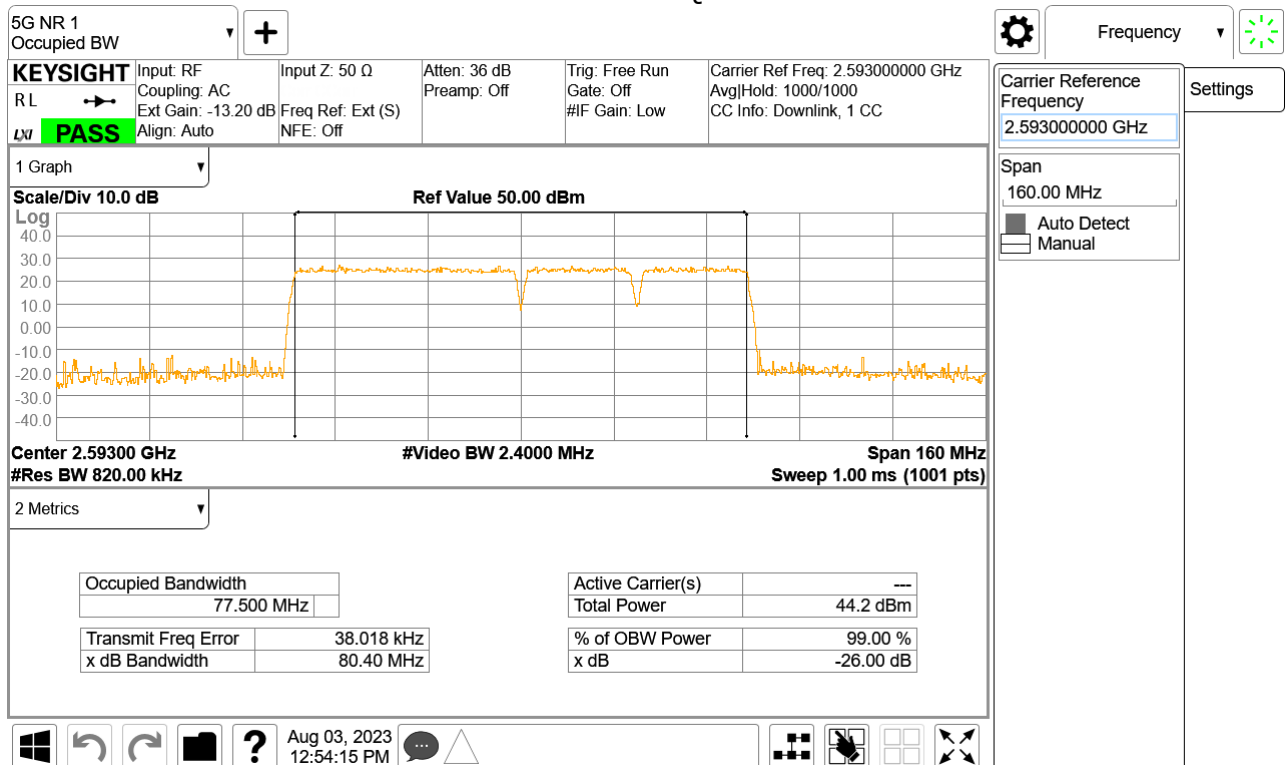




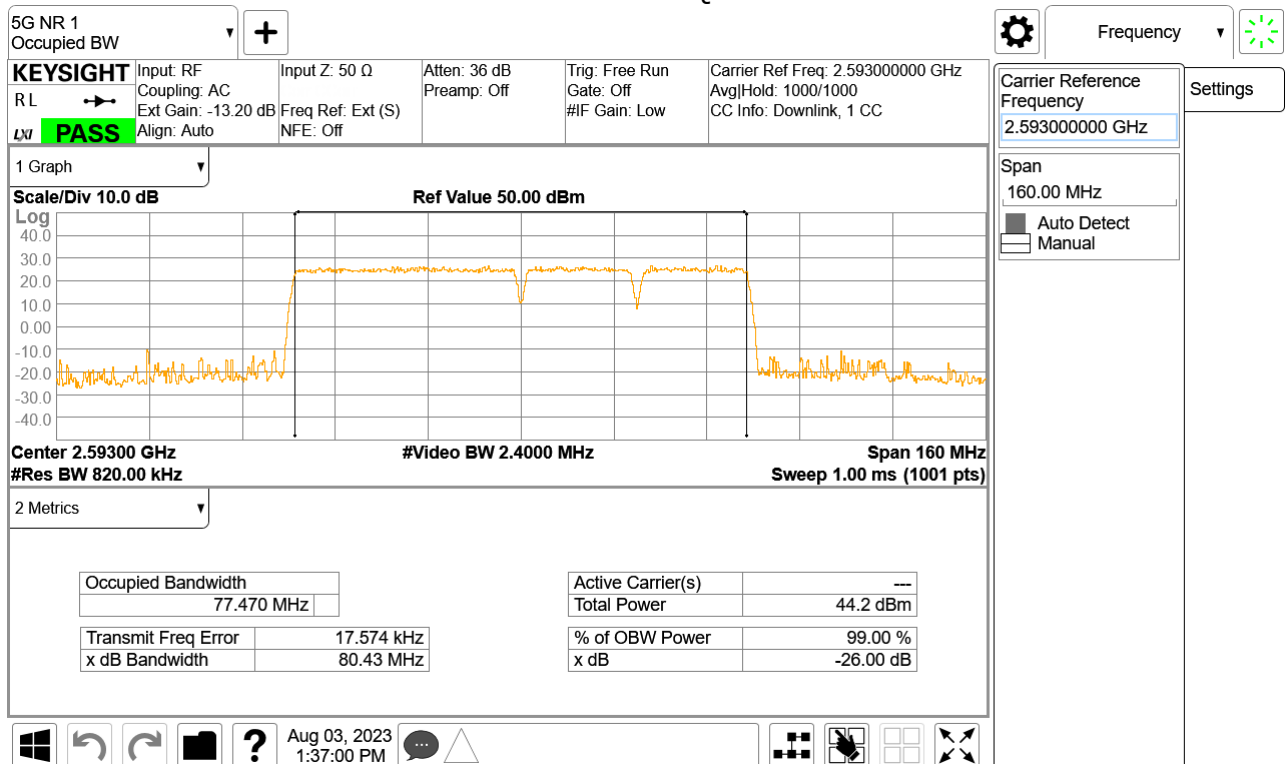
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Middle 64QAM



Middle 256QAM



Test mode : 5G NR 1C 50 MHz+LTE 2C 20+20 MHz Contiguous

Channel	Port	OBW (MHz)				Port	OBW (MHz)			
		QPSK	16QAM	64QAM	256QAM		QPSK	16QAM	64QAM	256QAM
Middle	1	87.15	87.26	87.20	87.20	33	87.26	87.08	87.12	87.15
	2	87.10	87.26	87.07	87.10	34	87.24	87.28	87.15	87.17
	3	87.13	87.16	87.09	87.04	35	87.19	87.30	87.15	87.19
	4	87.20	87.18	87.23	87.02	36	87.16	87.16	87.16	87.08
	5	87.13	87.25	87.18	87.15	37	87.12	87.22	87.13	87.15
	6	87.25	87.10	87.16	87.17	38	87.16	87.21	87.18	87.15
	7	87.15	87.17	87.07	87.10	39	87.24	87.25	87.12	87.16
	8	87.15	87.17	87.11	87.08	40	87.16	87.24	87.11	87.14
	9	87.21	87.18	87.02	87.11	41	87.20	87.27	87.19	87.19
	10	87.19	87.17	87.22	87.13	42	87.27	87.10	87.10	87.20
	11	87.15	87.22	87.10	87.08	43	87.19	87.21	87.16	87.15
	12	87.25	87.34	87.11	87.20	44	87.19	87.27	87.08	87.17
	13	87.24	87.25	87.11	87.10	45	87.20	87.20	87.17	87.18
	14	87.25	87.04	87.22	87.15	46	87.19	87.04	87.18	87.17
	15	87.23	87.21	87.16	87.22	47	87.22	87.19	87.13	87.15
	16	87.16	87.20	87.07	87.13	48	87.18	87.16	87.17	87.22
	17	87.27	87.09	87.10	87.14	49	87.18	87.06	87.21	87.12
	18	87.18	87.14	87.14	87.21	50	87.12	87.12	87.20	87.19
	19	87.15	87.20	87.13	87.16	51	87.10	87.18	87.17	87.08
	20	87.20	87.12	87.08	87.10	52	87.29	87.19	87.21	87.22
	21	87.14	87.22	87.18	87.21	53	87.17	87.24	87.23	87.23
	22	87.18	87.20	87.07	87.17	54	87.26	87.18	87.22	87.17
	23	87.26	87.21	87.14	87.17	55	87.15	87.26	87.21	87.09
	24	87.13	87.20	87.10	87.09	56	87.09	87.30	87.16	87.06
	25	87.06	87.07	87.23	87.07	57	87.15	87.09	87.15	87.14
	26	87.06	87.14	87.14	87.18	58	87.24	87.24	87.15	87.14
	27	87.17	87.24	87.10	87.06	59	87.15	87.19	87.15	87.19
	28	87.27	87.11	87.16	87.09	60	87.18	87.19	87.13	87.08
	29	87.17	87.32	87.17	87.10	61	87.16	87.21	87.14	87.09
	30	87.22	87.12	87.20	87.23	62	87.10	87.30	87.19	87.16
	31	87.10	87.31	87.14	87.17	63	87.26	87.19	87.22	87.13
	32	87.10	87.21	87.16	87.14	64	87.14	87.12	87.23	87.22

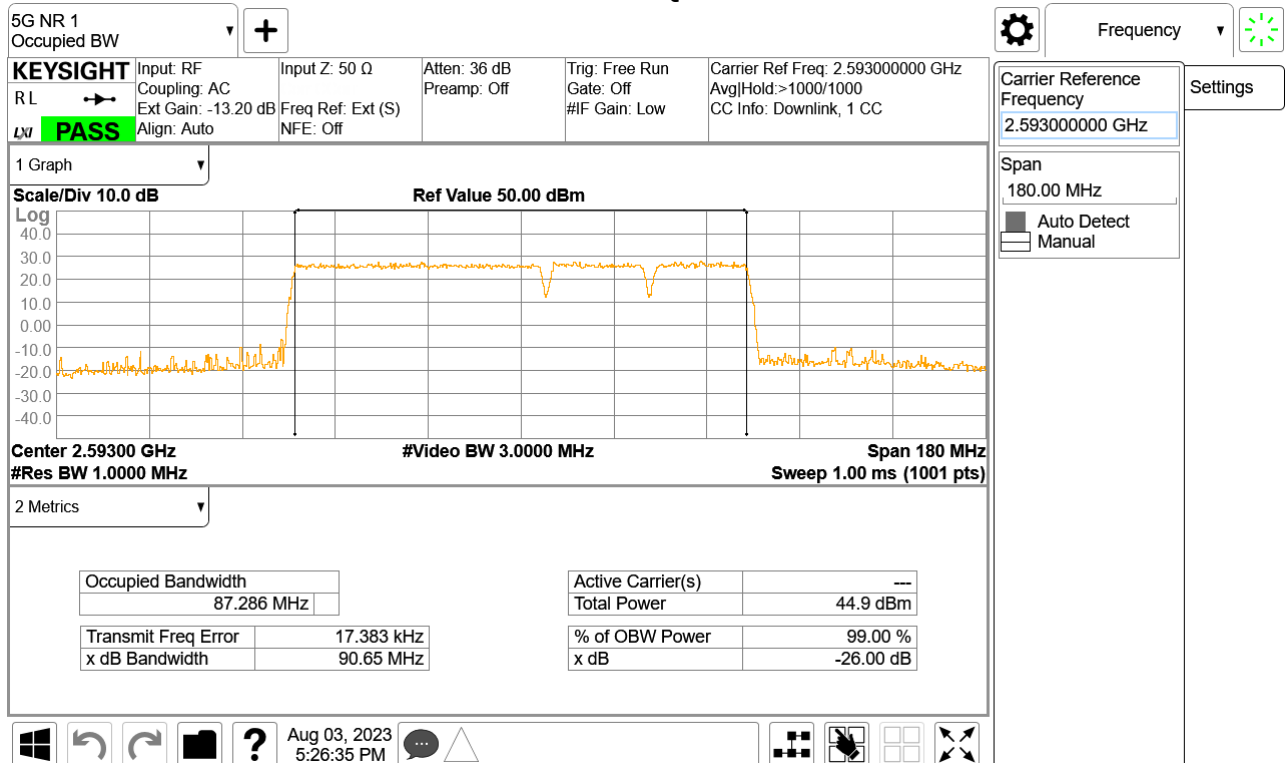
See next pages for actual measured spectrum plots.



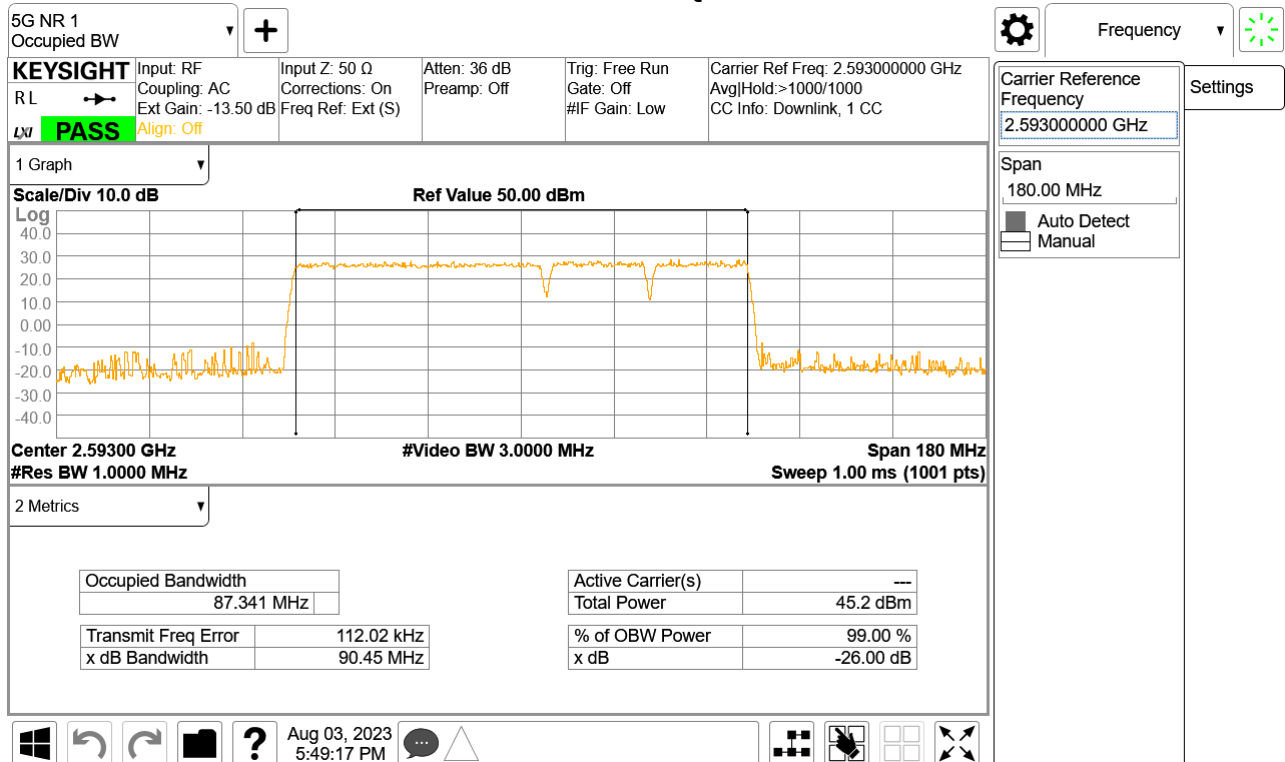
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Middle QPSK



Middle 16QAM

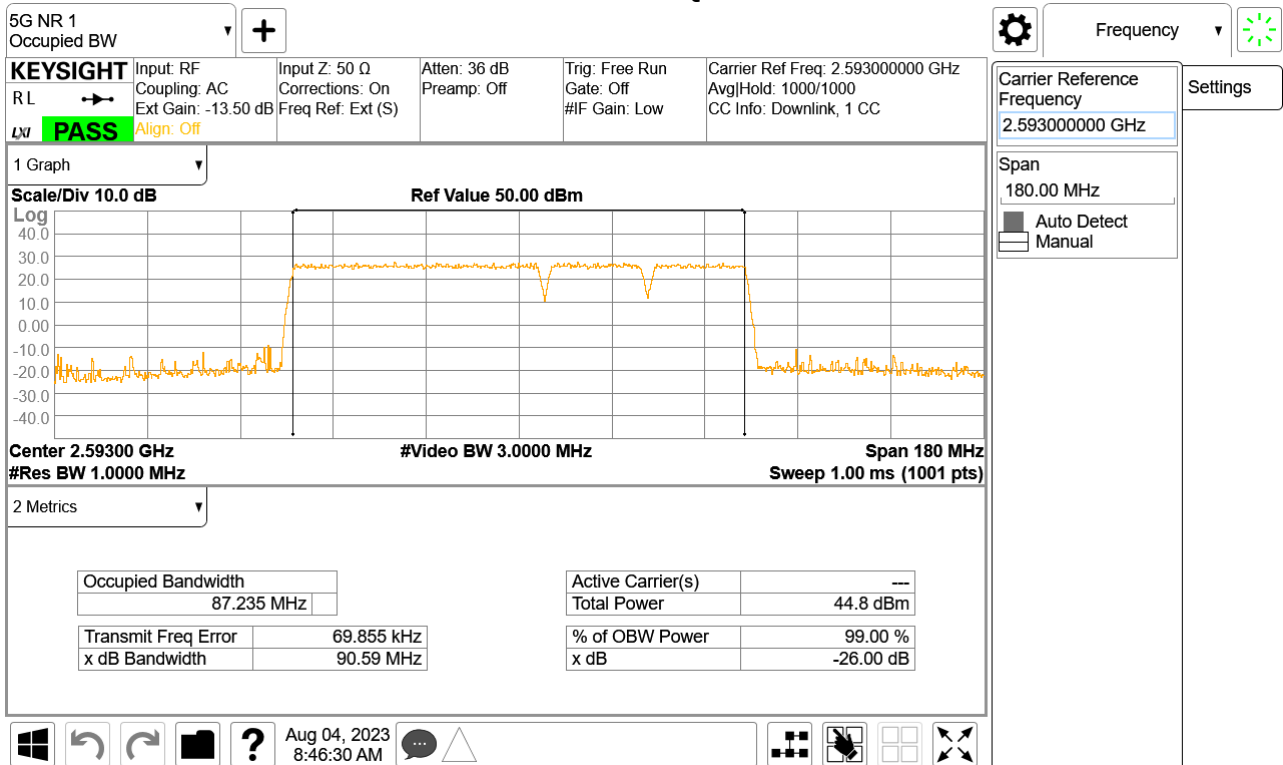




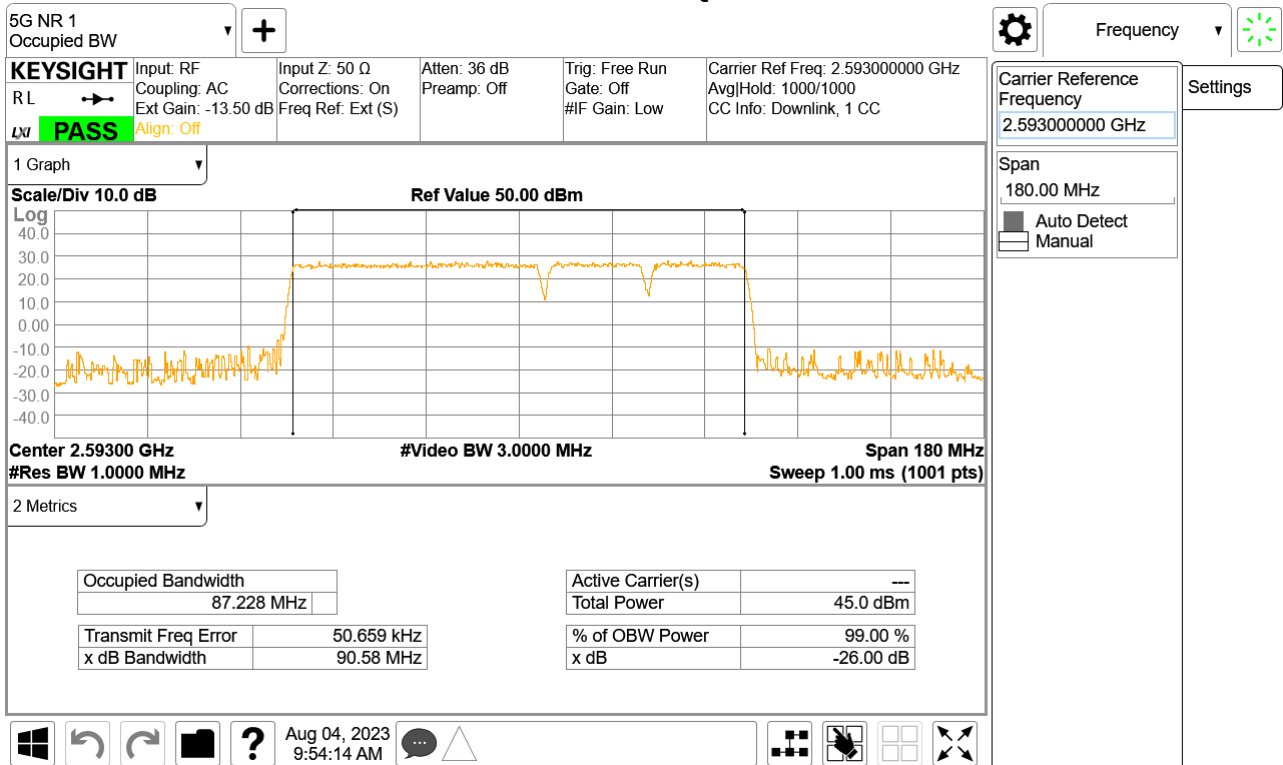
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Middle 64QAM



Middle 256QAM



4.2 Conducted Power Measurement and EIRP

Test Procedures :

KDB 971168 D01 v03r01 – Section 5
 KDB 662911 D01 v02r01 – Section E)
 ANSI C63.26-2015 – Section 5.2.4.4.1

Test Settings :

Conducted power measurements are performed using the "channel power mode" function of the signal analyzer.

Center frequency = the highest, middle and the lowest channels

- | | |
|--------------------------------------|---------------------------------|
| a) RBW = 1 ~ 5 % of the expected OBW | b) VBW ≥ 3 × RBW |
| c) span ≥ 2 to 3 × RBW | d) Sweep time = auto couple |
| e) Detector = power averaging (rms). | f) Trace mode = trace average |
| g) Allow trace to fully stabilize | h) Sweep point ≥ 2 × span / RBW |
- h) Use peak marker function to determine the peak amplitude level.

Test Notes :

- The port with highest power i.e. worst case port per modulation has been highlighted in the following power tables.
- Periodic trigger was used with gating ON. Gate sweep time, Gate delay and gate length were set according to capture ON time of the transmission.
- MIMO calculations are done considering output channel power for all ports and respective are calculated.
- Consider the following factors for MIMO Output Power:
 - Conducted power for each port is measured in dBm.
 - Powers are summed up in linear using the measure-and-sum technique defined in KDB 662911 D01 v02r01-Section D.
 - Conducted power per port dBm is converted to a linear value mW. A summation of linear powers for all ports gives us the total MIMO conducted power in mW.
 We convert this back to logarithmic scale dBm.
 Antenna Gains (dBi) are provided by the client.
- MIMO EIRP = Total MIMO Conducted Power(dBm) + Antenna Gain(Include tolerance)
- Limit Calculation (For example)

$$\begin{aligned} \text{EIRP} &= 33 \text{ dBW} + 10\log(X/Y) \text{ dBW} + 10\log(360/\text{Beamwidth}) \text{ dBW} \\ &= 33 \text{ dBW} + 10\log(20/6) \text{ dBW} + 10\log(360/15) = 52.03 \text{ dBW} \end{aligned}$$

$$\text{EIRP}_{\text{dBm}} = \text{dBW} + 30 = 52.03 \text{ dBW} + 30 = 82.03 \text{ dBm}$$

X is the actual channel width in MHz i.e. LTE 1C 20 MHz

Y is 6 in MBS or 5.5 MHz in LBS and USB (set 6 as the worst case)

Beamwidth = Max. 15° (Horizontal in Minimum Half Power Beamwidth: 13° ± 2°)

Test Data :

Test mode : LTE 1C 20 MHz

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Lowest	1	28.84	28.93	29.00	28.76
	2	28.81	28.44	28.94	28.84
	3	28.95	28.60	29.09	29.03
	4	28.96	28.48	29.07	28.83
	5	28.80	28.75	28.92	28.84
	6	28.62	28.47	28.89	28.94
	7	28.89	28.65	28.98	28.92
	8	28.42	28.73	28.86	28.77
	9	28.45	28.73	28.90	28.85
	10	28.50	28.74	28.98	28.74
	11	28.54	28.73	28.99	28.74
	12	28.65	28.89	29.14	29.05
	13	28.39	28.53	28.83	28.58
	14	29.01	28.51	29.15	29.09
	15	28.54	28.50	29.13	29.06
	16	28.62	28.45	28.94	28.84
	17	29.07	28.98	29.19	29.14
	18	28.82	28.69	28.77	28.66
	19	28.60	28.66	28.89	28.64
	20	29.11	28.97	29.20	29.14
	21	28.51	28.71	28.80	28.91
	22	28.64	28.82	28.91	29.02
	23	29.05	28.83	28.95	29.04
	24	28.66	28.48	29.09	29.04
	25	28.48	28.52	28.71	28.44
	26	28.57	28.45	28.69	28.65
	27	28.46	28.52	28.43	28.27
	28	28.45	28.52	28.40	28.51
	29	28.57	28.75	28.97	28.94
	30	28.80	28.66	28.75	28.87
	31	28.55	28.72	28.84	28.67
	32	29.09	28.96	29.08	28.91

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Lowest	33	29.06	29.28	29.11	29.43
	34	28.91	28.96	28.92	29.26
	35	29.06	29.10	29.09	29.41
	36	29.07	29.15	29.10	29.40
	37	29.22	29.33	29.25	29.55
	38	29.43	29.44	29.45	29.63
	39	28.96	29.02	29.01	29.31
	40	29.15	29.19	29.18	29.48
	41	28.87	28.99	28.90	29.20
	42	29.20	29.28	29.23	29.52
	43	28.90	28.96	28.94	29.22
	44	29.07	29.02	29.10	29.37
	45	29.22	29.26	29.25	29.51
	46	29.35	29.35	29.37	29.54
	47	29.01	29.02	29.05	29.30
	48	29.02	29.03	29.05	29.32
	49	28.94	28.99	29.00	29.25
	50	29.10	29.17	29.17	29.38
	51	28.99	29.07	29.04	29.27
	52	29.11	29.15	29.17	29.39
	53	29.12	29.13	29.13	29.36
	54	28.96	29.02	28.99	29.21
	55	28.88	28.87	28.92	29.13
	56	29.05	29.04	29.07	29.28
	57	28.92	28.86	28.96	29.16
	58	29.05	29.06	29.08	29.29
	59	28.84	28.85	28.88	29.08
	60	29.09	29.06	29.12	29.32
	61	29.01	28.97	29.03	29.23
	62	28.92	28.89	28.95	29.13
	63	29.37	29.32	29.39	29.56
	64	29.21	29.15	29.22	29.39
Total MIMO Conducted Power (mW)		49568.29	49549.05	50994.05	52001.93
Total MIMO Conducted Power (dBm)		46.95	46.95	47.08	47.16
Antenna Gain (dBi)		26	26	26	26
MIMO EIRP (dBm)		72.95	72.95	73.08	73.16
EIRP Limit (dBm)		82.03	82.03	82.03	82.03
Margin (dB)		-9.08	-9.08	-8.96	-8.87

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Middle	1	28.53	28.68	29.11	29.23
	2	28.71	28.92	29.11	28.67
	3	28.53	28.81	29.23	29.36
	4	28.76	29.17	29.17	29.49
	5	28.64	28.60	28.85	29.16
	6	29.03	28.79	29.04	28.77
	7	28.77	28.98	29.06	29.37
	8	28.89	28.85	29.10	28.83
	9	28.95	28.74	28.97	28.72
	10	28.65	28.96	29.02	28.73
	11	28.74	28.83	29.27	29.38
	12	28.55	28.91	29.36	28.89
	13	28.77	28.56	28.83	28.54
	14	28.81	28.99	29.46	28.96
	15	28.98	28.99	29.08	29.35
	16	28.75	28.86	29.11	29.39
	17	28.83	29.10	29.37	29.43
	18	28.93	28.91	29.20	29.26
	19	28.64	28.94	29.02	29.30
	20	28.73	29.02	29.11	28.84
	21	28.69	28.98	29.28	29.35
	22	29.17	29.11	29.42	29.48
	23	29.08	29.00	29.10	29.40
	24	29.10	28.87	29.09	28.85
	25	28.78	28.74	28.82	28.58
	26	28.64	28.64	28.73	29.02
	27	28.19	28.32	28.55	28.85
	28	28.94	28.42	28.74	28.79
	29	28.90	28.81	28.91	29.20
	30	28.99	28.81	29.03	28.81
	31	28.61	28.84	28.96	29.24
	32	28.95	29.14	29.25	29.54

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Middle	33	29.05	28.75	28.84	29.13
	34	28.96	28.61	28.73	29.01
	35	28.93	28.56	28.68	28.97
	36	29.11	28.75	28.84	29.14
	37	29.15	28.79	28.87	29.19
	38	29.45	29.11	29.13	29.49
	39	29.19	28.79	28.87	29.23
	40	29.26	28.97	28.94	29.30
	41	28.79	28.41	28.45	28.83
	42	29.19	28.90	28.84	29.22
	43	28.92	28.55	28.57	28.96
	44	28.99	28.64	28.62	29.03
	45	29.18	28.89	28.81	29.21
	46	29.28	28.95	28.89	29.31
	47	29.01	28.72	28.62	29.03
	48	29.13	28.72	28.75	29.16
	49	28.82	28.49	28.43	28.84
	50	29.07	28.76	28.67	29.09
	51	29.09	28.78	28.68	29.11
	52	29.07	28.81	28.66	29.10
	53	29.11	28.81	28.67	29.14
	54	28.95	28.69	28.49	28.95
	55	28.98	28.75	28.53	28.97
	56	29.03	28.81	28.57	29.03
	57	28.85	28.60	28.38	28.79
	58	28.99	28.76	28.52	28.94
	59	28.84	28.54	28.36	28.78
	60	29.08	28.90	28.59	29.01
	61	28.99	28.78	28.50	28.91
	62	28.96	28.72	28.47	28.89
	63	29.09	28.80	28.60	29.03
	64	29.17	28.92	28.65	29.07
Total MIMO Conducted Power (mW)		49976.7	48611.05	49421.5	51772.29
Total MIMO Conducted Power (dBm)		46.99	46.87	46.94	47.14
Antenna Gain (dBi)		26	26	26	26
MIMO EIRP (dBm)		72.99	72.87	72.94	73.14
EIRP Limit (dBm)		82.03	82.03	82.03	82.03
Margin (dB)		-9.04	-9.16	-9.09	-8.89

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Highest	1	28.53	28.97	28.87	29.09
	2	28.91	29.00	28.92	28.69
	3	28.78	29.16	29.04	28.82
	4	28.77	29.23	29.10	29.28
	5	27.93	28.62	29.03	29.07
	6	28.61	29.04	29.09	29.12
	7	29.00	29.11	29.01	28.76
	8	28.65	29.09	29.16	28.77
	9	28.81	29.15	29.20	29.24
	10	28.68	28.72	29.14	28.75
	11	28.72	29.14	29.19	29.23
	12	28.99	29.31	29.43	28.99
	13	28.87	28.97	29.06	28.63
	14	29.29	29.38	29.47	29.04
	15	29.19	29.24	29.17	29.34
	16	29.20	28.89	29.33	29.34
	17	29.10	29.20	29.13	28.86
	18	28.98	29.02	28.97	28.71
	19	28.95	28.70	29.13	29.18
	20	29.05	29.13	29.05	29.24
	21	29.03	28.81	29.22	29.30
	22	29.08	29.14	29.24	29.34
	23	29.11	28.86	29.13	29.37
	24	29.15	28.87	29.31	29.38
	25	28.62	28.68	29.12	29.21
	26	28.64	28.36	28.62	28.90
	27	28.64	28.38	28.81	29.09
	28	28.52	28.23	28.48	28.75
	29	28.96	29.00	29.10	29.22
	30	28.72	28.79	29.21	28.84
	31	28.71	29.03	28.98	28.75
	32	28.96	29.29	29.39	29.01

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Highest	33	29.05	28.83	28.94	29.07
	34	29.12	28.93	29.01	29.18
	35	29.11	28.88	29.01	29.15
	36	29.08	28.86	29.00	29.16
	37	29.23	29.03	29.13	29.28
	38	29.50	29.31	29.41	29.54
	39	29.17	28.98	29.07	29.21
	40	29.18	28.99	29.10	29.24
	41	28.88	28.67	28.78	28.94
	42	29.22	29.01	29.12	29.26
	43	29.05	28.84	28.92	29.08
	44	29.22	28.95	29.11	29.25
	45	29.19	28.94	29.07	29.21
	46	29.26	28.97	29.13	29.30
	47	29.16	28.90	29.05	29.19
	48	29.17	28.93	29.06	29.19
	49	28.90	28.63	28.81	28.97
	50	29.04	28.76	28.93	29.08
	51	29.23	28.95	29.12	29.27
	52	29.16	28.91	29.02	29.18
	53	29.18	28.92	29.05	29.20
	54	29.13	28.87	28.99	29.15
	55	29.05	28.79	28.90	29.07
	56	29.15	28.91	29.01	29.17
	57	28.99	28.72	28.85	29.01
	58	29.09	28.77	28.95	29.11
	59	28.85	28.51	28.70	28.88
	60	29.12	28.85	28.98	29.16
	61	29.09	28.83	28.94	29.14
	62	29.14	28.84	28.99	29.18
	63	29.09	28.79	28.92	29.12
	64	29.19	28.86	29.04	29.23
Total MIMO Conducted Power (mW)		50760.63	49895.02	51469.73	52088.63
Total MIMO Conducted Power (dBm)		47.06	46.98	47.12	47.17
Antenna Gain (dBi)		26	26	26	26
MIMO EIRP (dBm)		73.06	72.98	73.12	73.17
EIRP Limit (dBm)		82.03	82.03	82.03	82.03
Margin (dB)		-8.98	-9.05	-8.92	-8.86

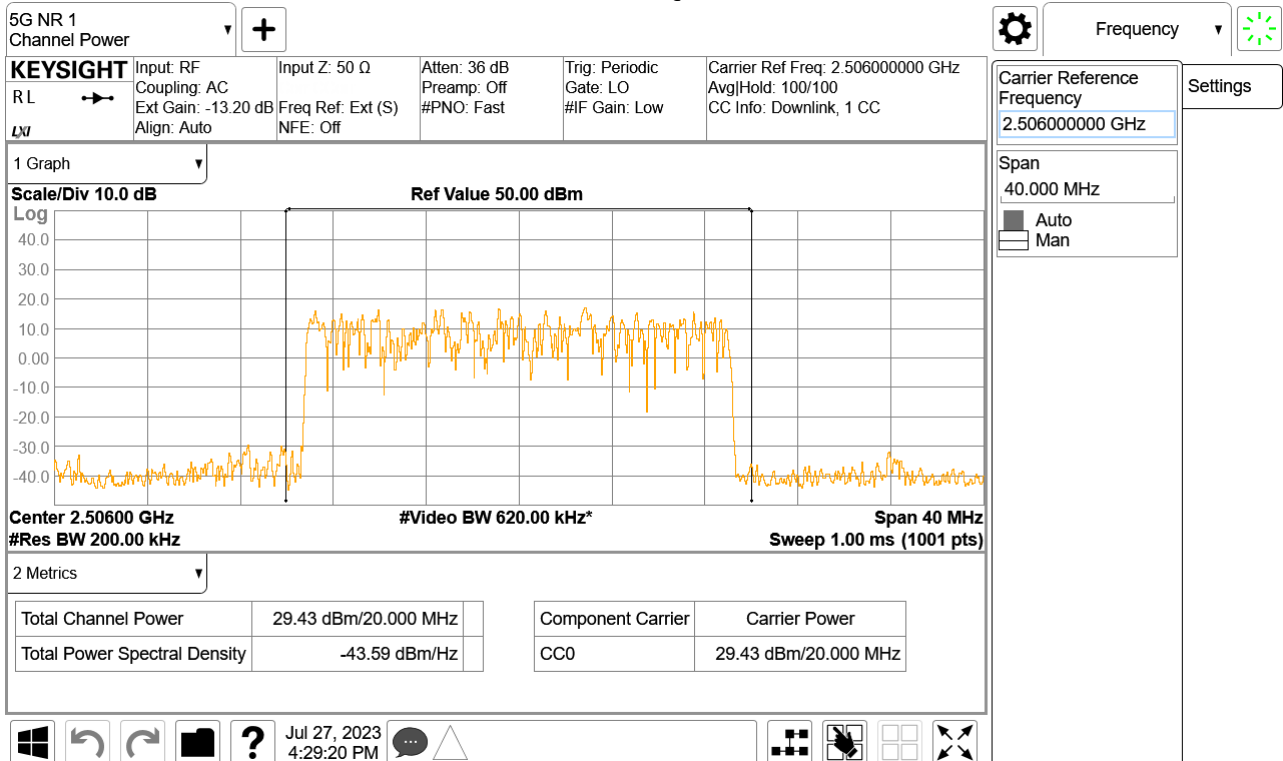
See next pages for actual measured spectrum plots.



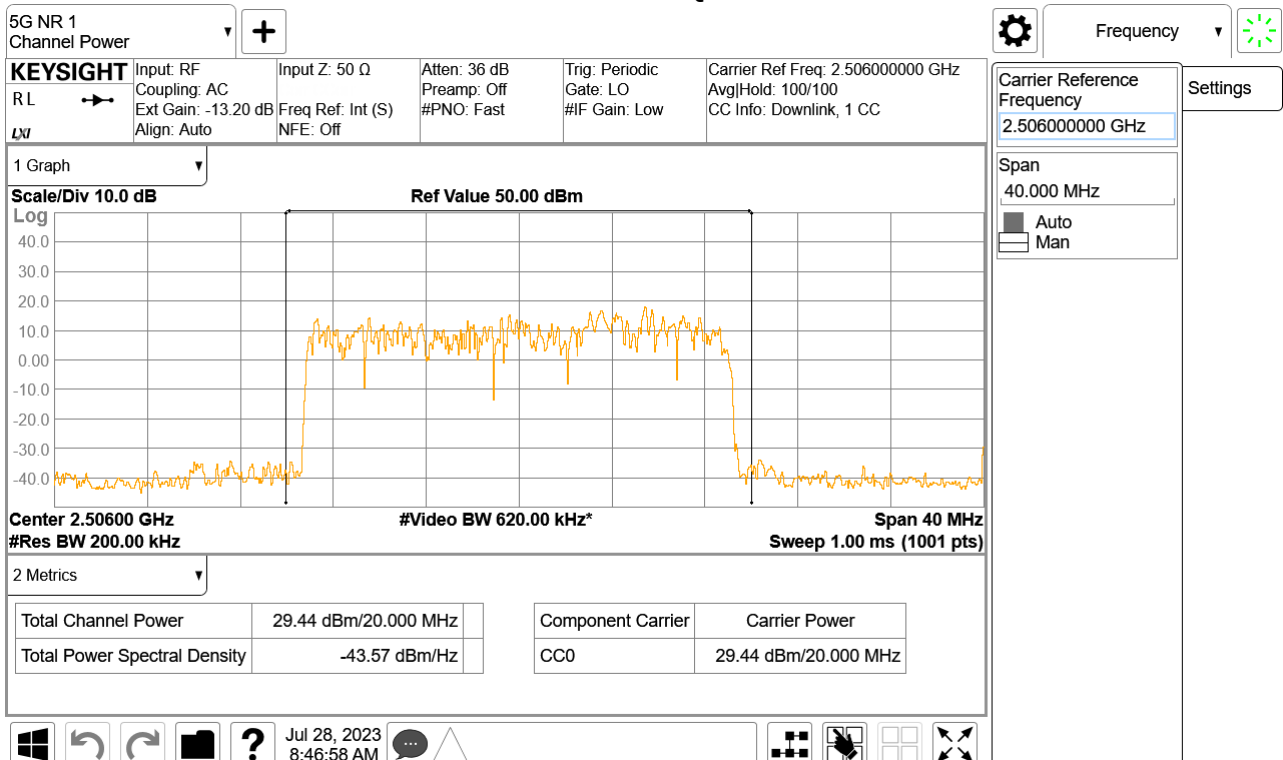
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Lowest QPSK



Lowest 16QAM

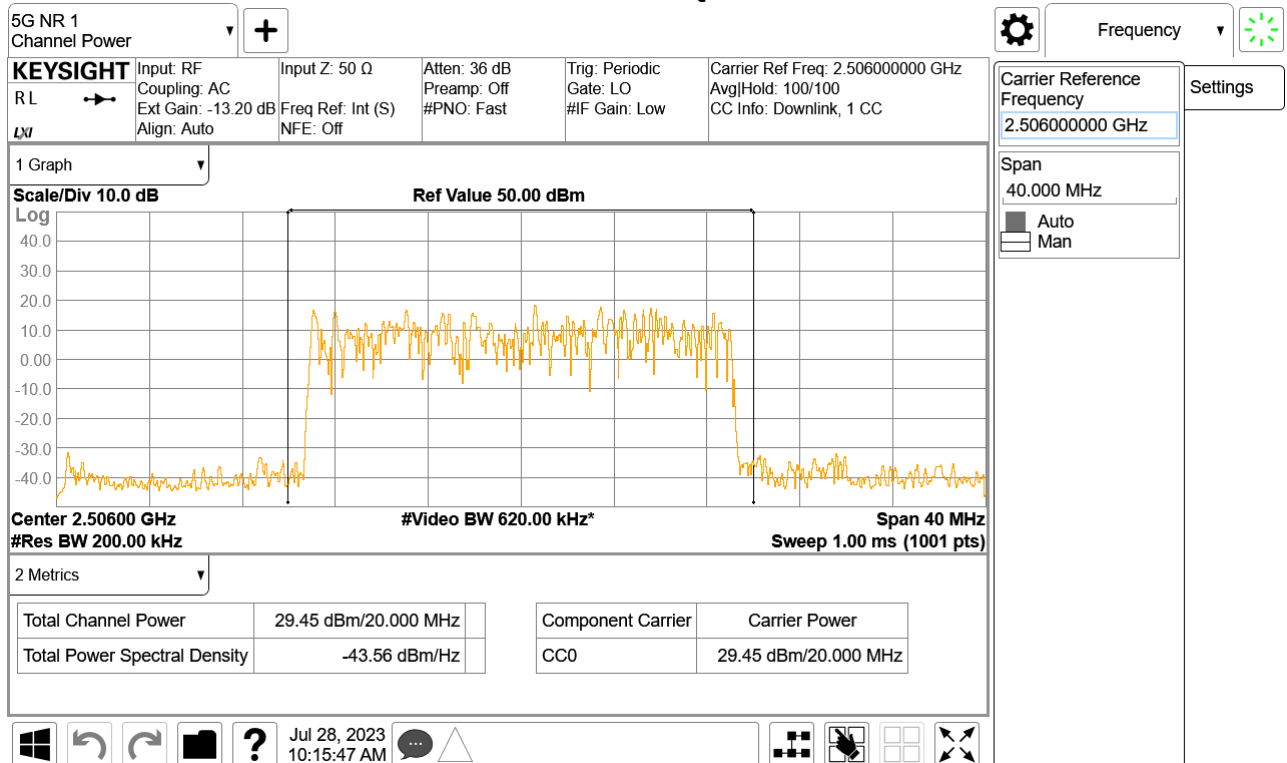




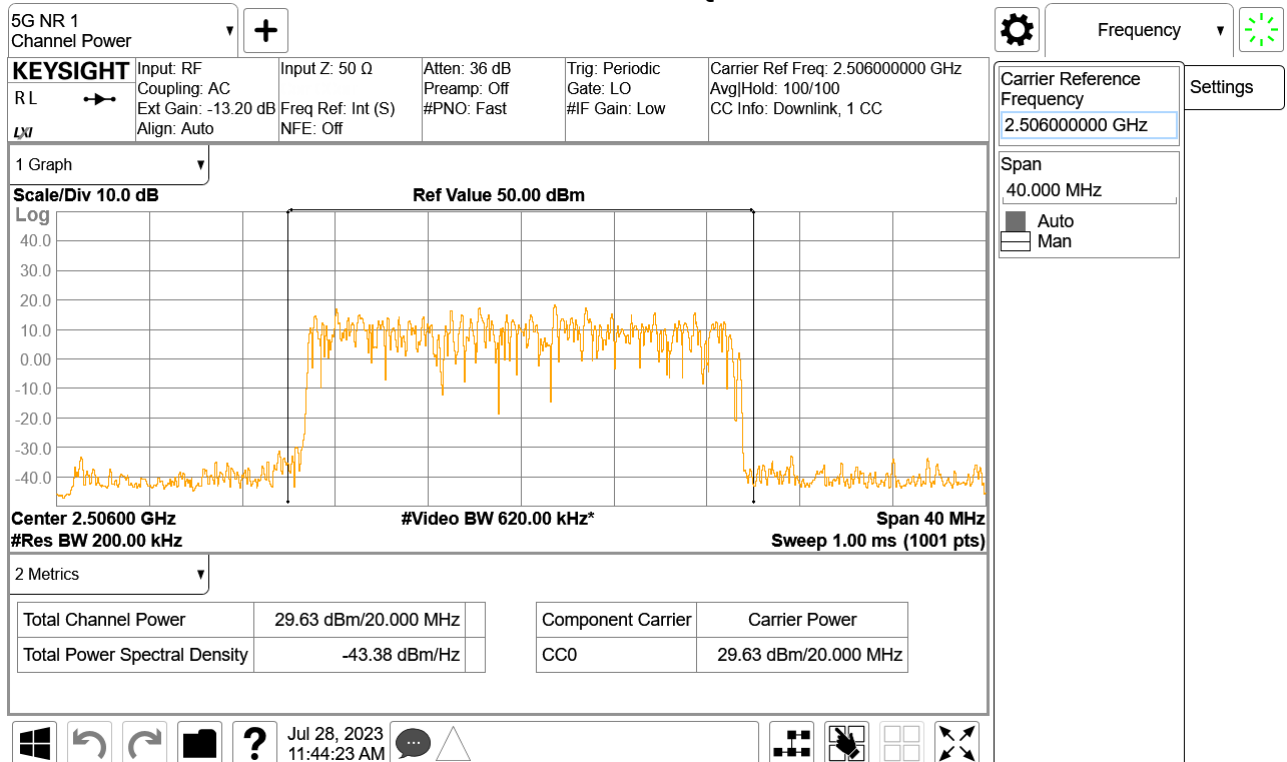
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Lowest 64QAM



Lowest 256QAM

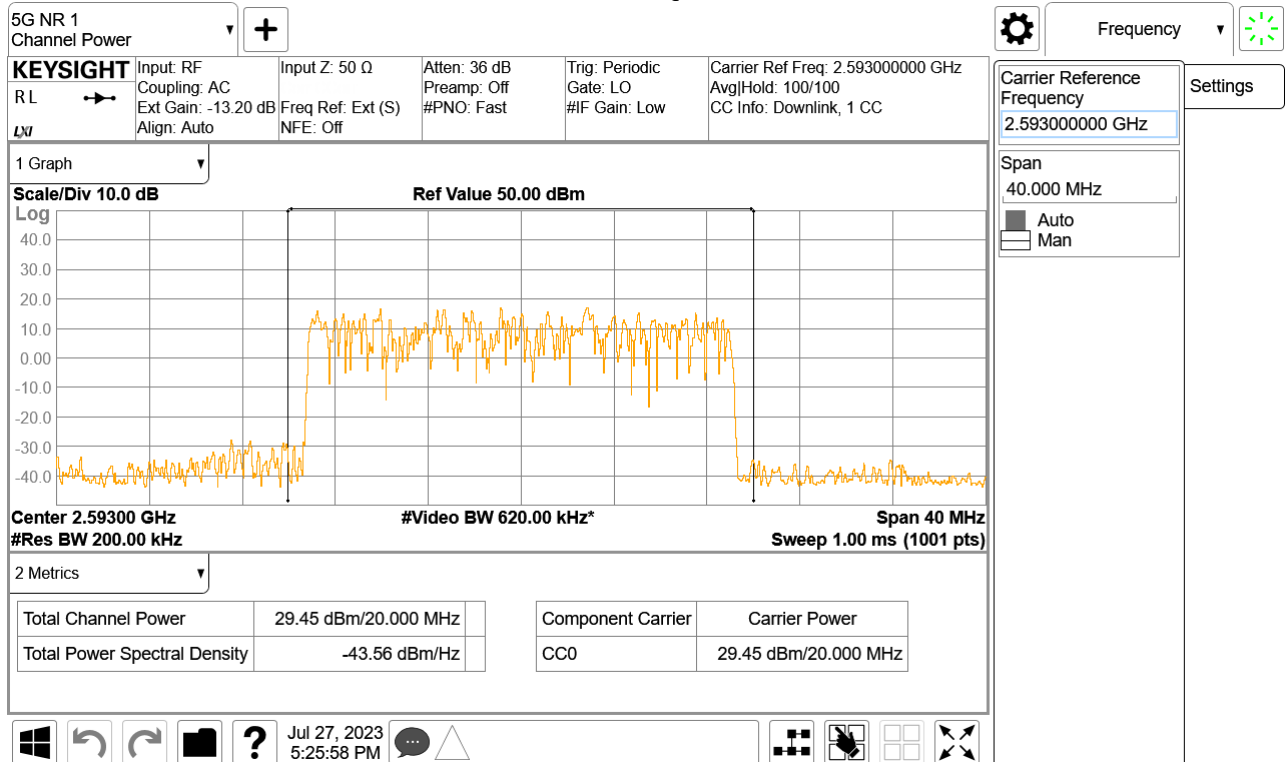




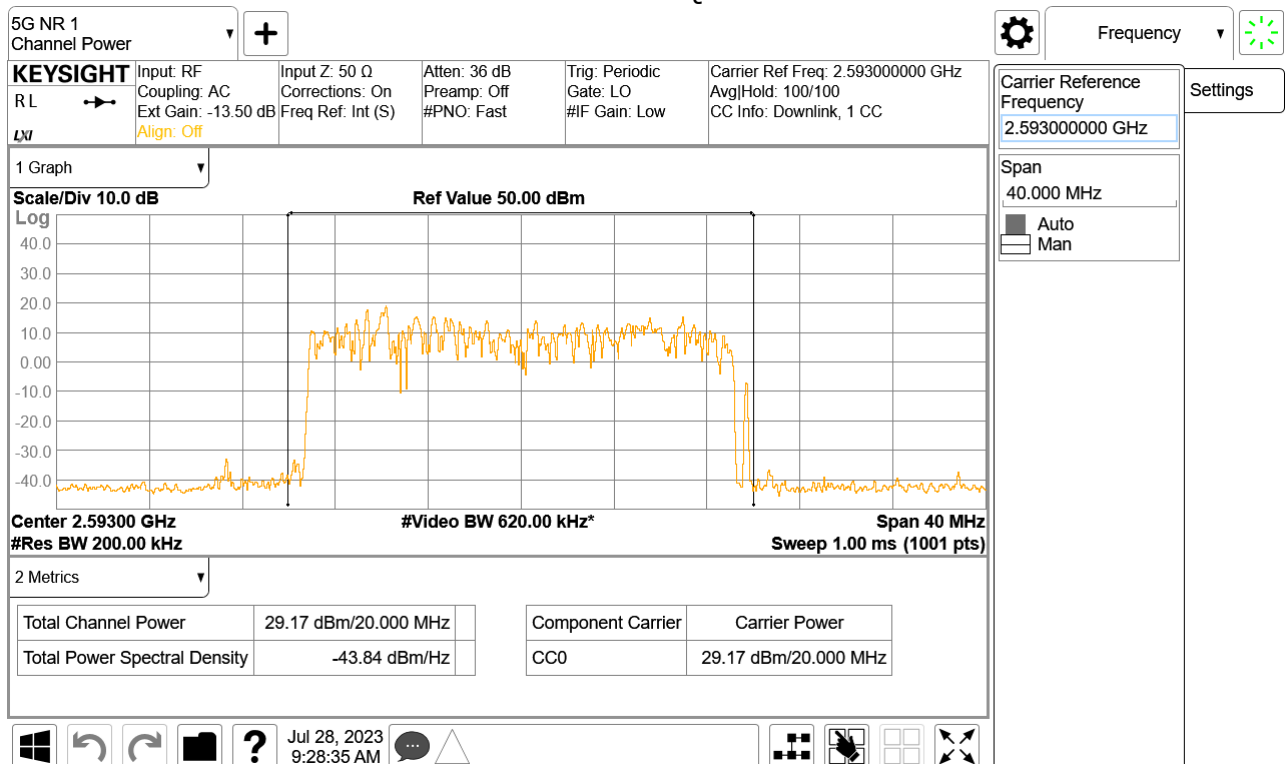
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Middle QPSK



Middle 16QAM

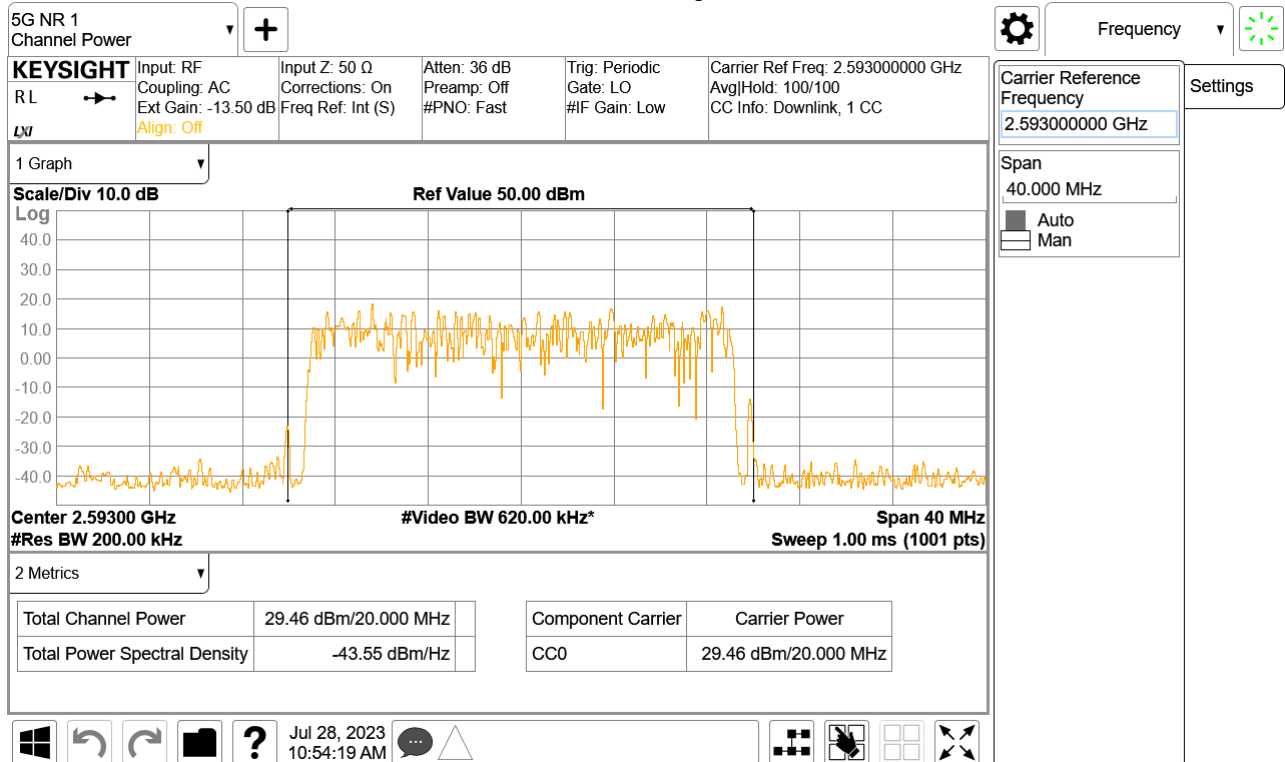




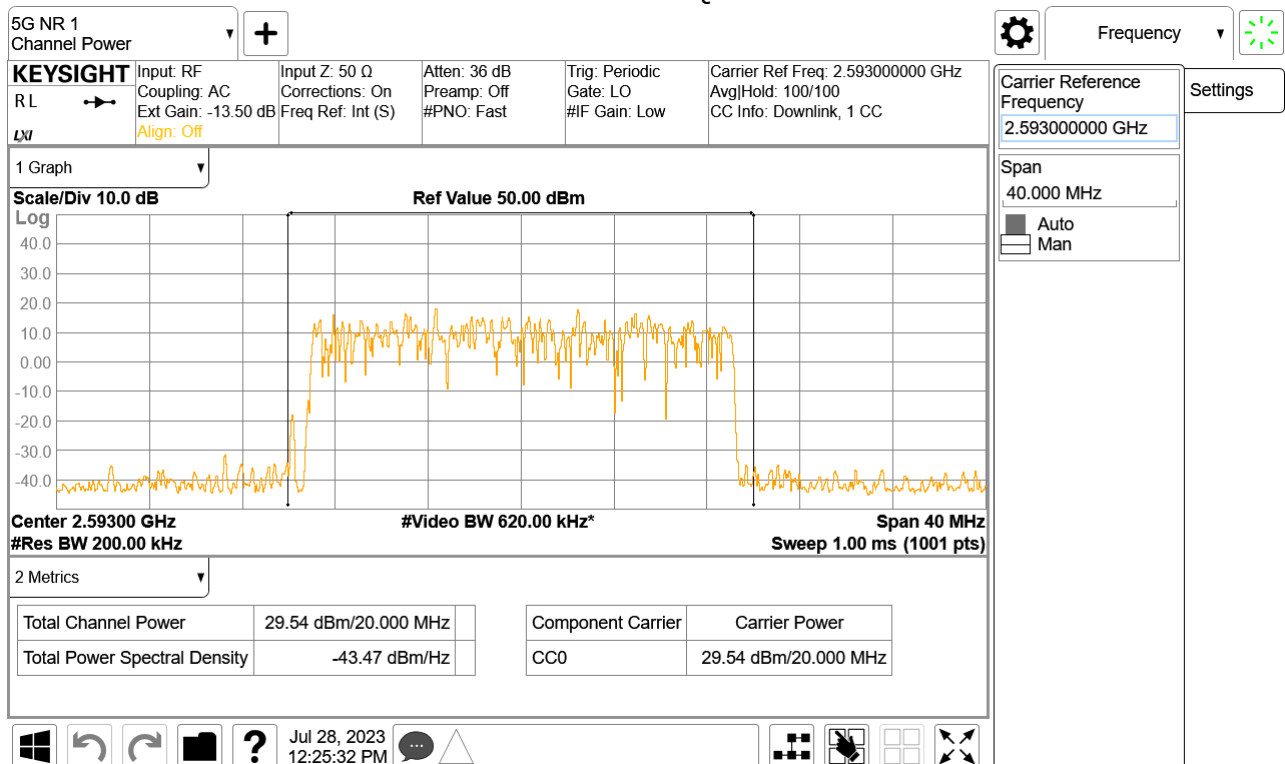
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Middle 64QAM



Middle 256QAM

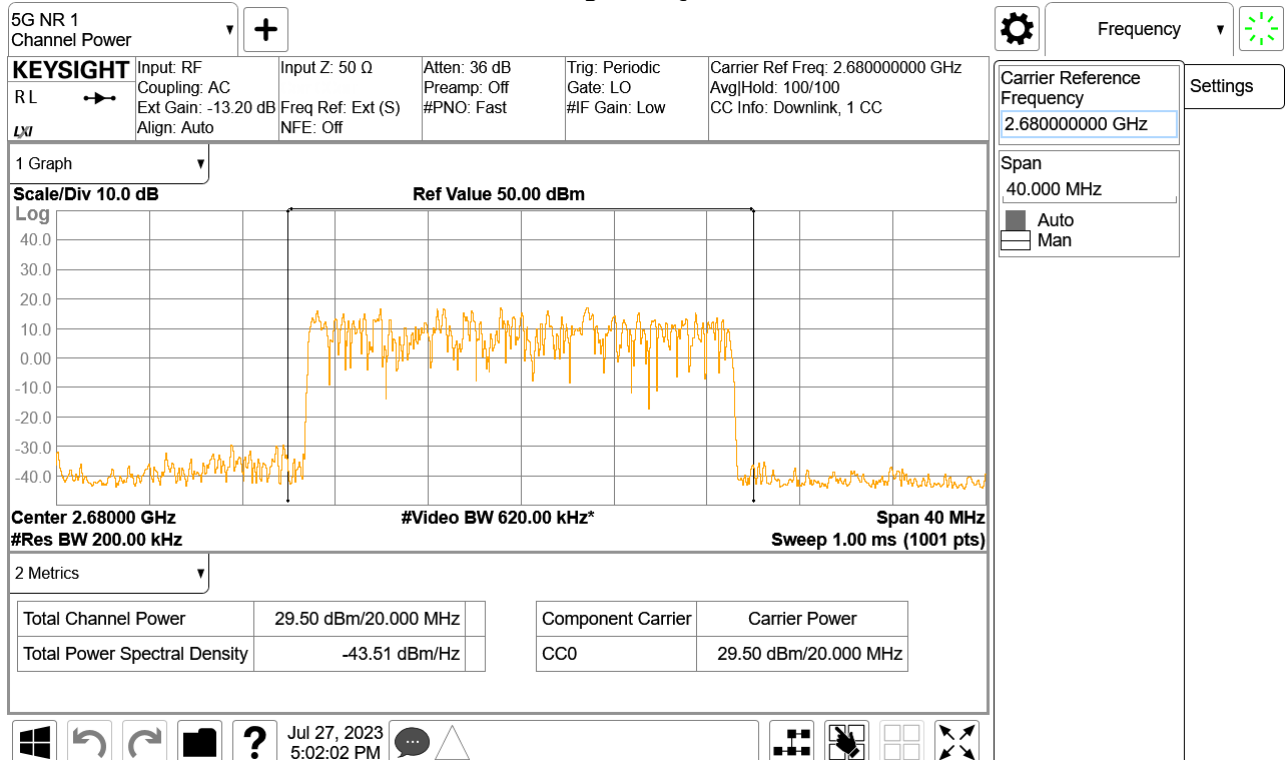




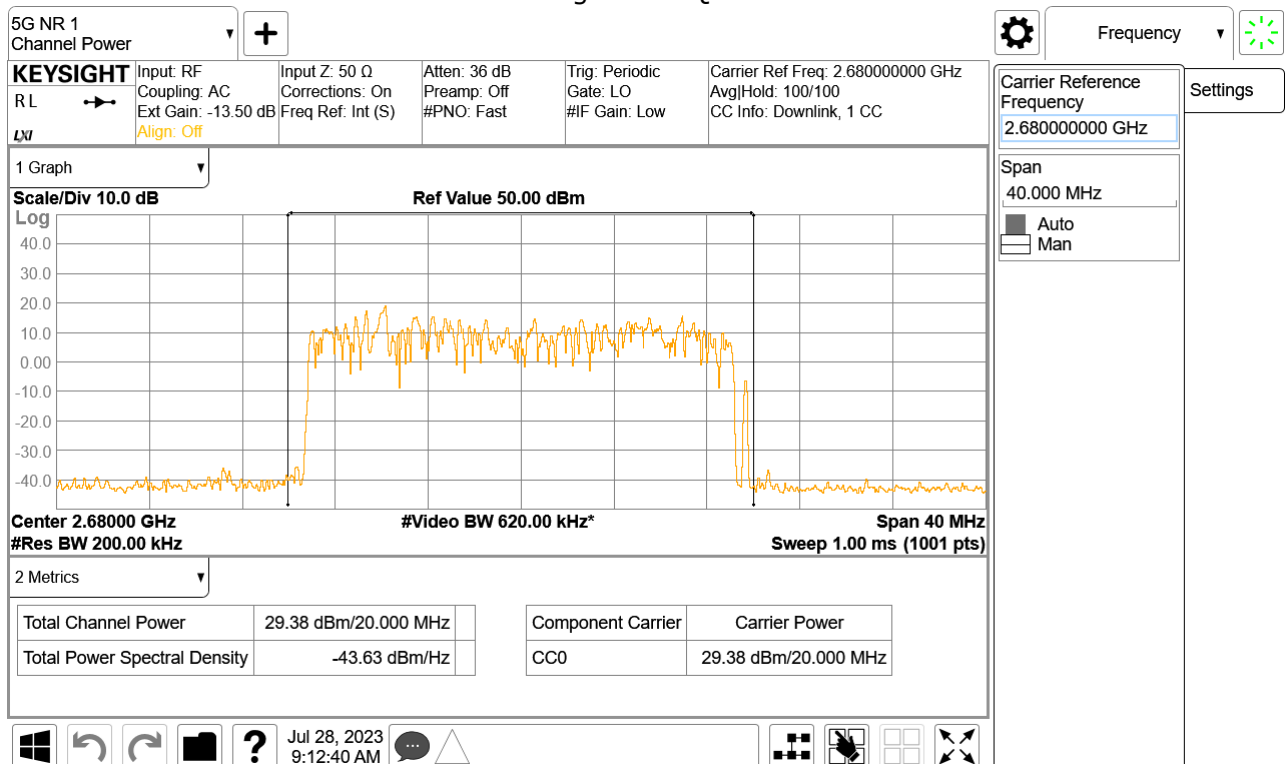
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Highest QPSK



Highest 16QAM

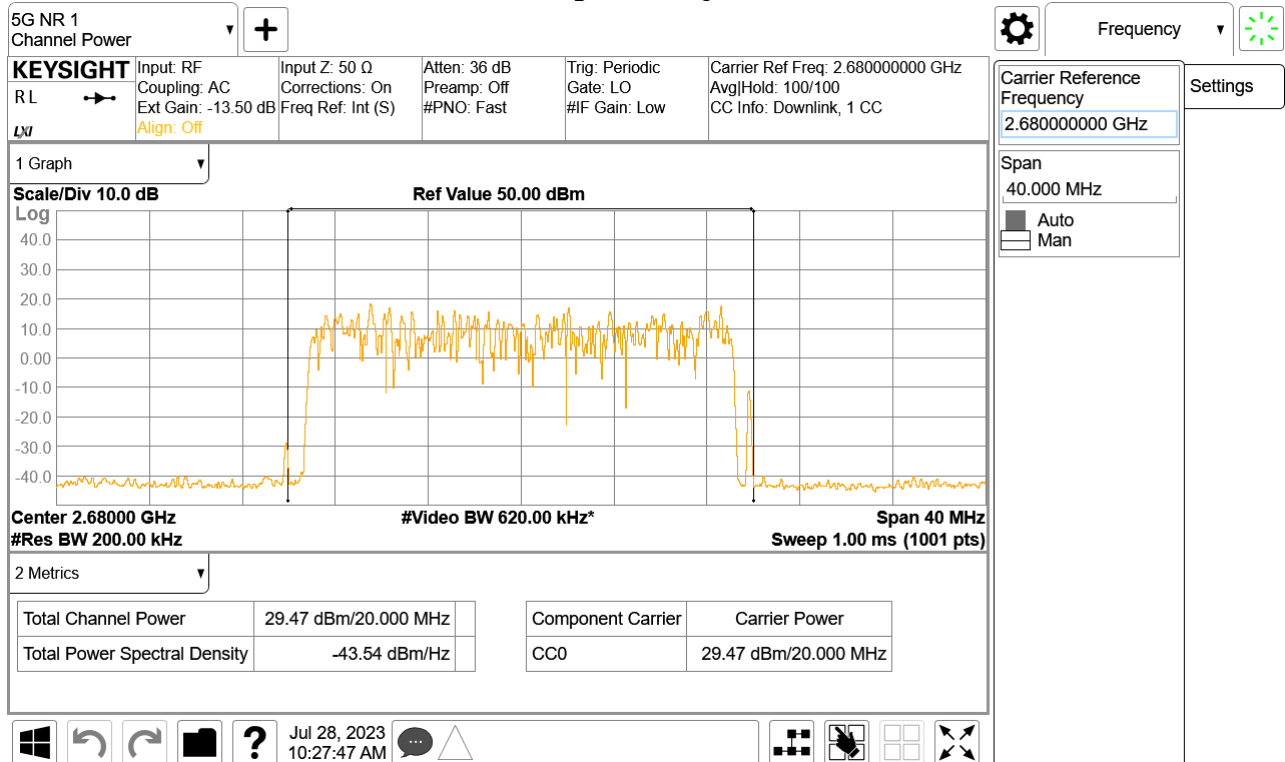




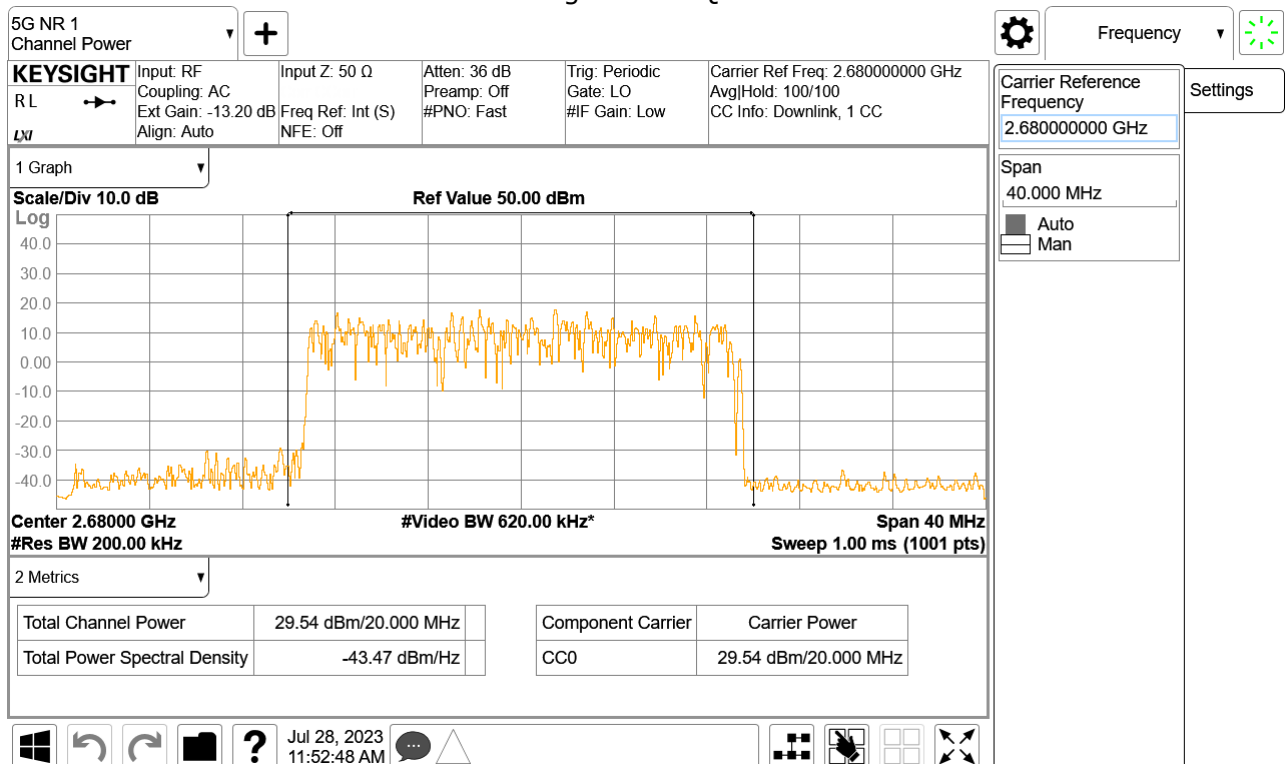
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Highest 64QAM



Highest 256QAM



Test mode : 5G NR 1C 40 MHz

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Lowest	1	31.77	31.74	31.78	31.80
	2	31.77	31.70	31.69	31.78
	3	31.95	31.88	31.92	31.95
	4	31.93	31.85	31.91	31.91
	5	31.75	31.73	31.78	31.81
	6	31.87	31.83	31.88	31.88
	7	31.87	31.83	31.89	31.89
	8	31.87	31.82	31.80	31.86
	9	31.75	31.74	31.80	31.78
	10	31.85	31.80	31.87	31.83
	11	31.88	31.83	31.91	31.88
	12	31.97	31.94	31.99	31.95
	13	31.71	31.65	31.70	31.69
	14	32.02	31.97	32.00	31.98
	15	31.97	31.93	31.95	31.93
	16	31.95	31.89	31.88	31.88
	17	32.04	31.99	31.99	32.01
	18	31.78	31.76	31.72	31.76
	19	31.79	31.78	31.72	31.77
	20	32.02	31.99	31.90	31.97
	21	31.92	31.91	31.82	31.89
	22	32.00	31.99	31.88	31.96
	23	31.99	31.95	31.84	31.92
	24	31.98	31.95	31.84	31.93
	25	31.67	31.66	31.62	31.62
	26	31.58	31.58	31.48	31.51
	27	31.51	31.51	31.42	31.45
	28	31.54	31.50	31.39	31.44
	29	31.89	31.86	31.76	31.81
	30	31.82	31.78	31.69	31.75
	31	31.91	31.85	31.74	31.82
	32	32.13	32.09	31.97	32.05

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Lowest	33	32.06	31.63	32.04	32.43
	34	31.88	31.44	31.84	32.24
	35	31.98	31.56	32.02	32.35
	36	32.07	31.67	32.08	32.45
	37	32.16	31.76	32.17	32.54
	38	32.37	31.96	32.38	32.77
	39	31.97	31.58	31.99	32.38
	40	32.12	31.73	32.14	32.50
	41	31.80	31.42	31.86	32.19
	42	32.12	31.74	32.16	32.49
	43	31.87	31.48	31.88	32.25
	44	31.96	31.60	31.99	32.36
	45	32.14	31.75	32.16	32.53
	46	32.24	31.89	32.30	32.64
	47	31.95	31.57	31.99	32.35
	48	31.94	31.55	31.97	32.33
	49	31.83	31.45	31.87	32.23
	50	32.04	31.65	32.07	32.44
	51	31.98	31.60	32.02	32.38
	52	32.02	31.66	32.07	32.42
	53	32.05	31.67	32.08	32.44
	54	31.85	31.44	31.88	32.21
	55	31.85	31.46	31.89	32.25
	56	31.91	31.53	31.95	32.31
	57	31.85	31.49	31.90	32.26
	58	31.98	31.63	32.09	32.40
	59	31.77	31.41	31.83	32.19
	60	31.98	31.62	32.07	32.39
	61	31.91	31.54	31.98	32.35
	62	31.89	31.52	31.98	32.33
	63	32.18	31.81	32.26	32.46
	64	32.08	31.71	32.17	32.35
Total MIMO Conducted Power (mW)		99778.36	95219.52	99576.09	104160.8
Total MIMO Conducted Power (dBm)		49.99	49.79	49.98	50.18
Antenna Gain (dBi)		26	26	26	26
MIMO EIRP (dBm)		75.99	75.79	75.98	76.18
EIRP Limit (dBm)		85.04	85.04	85.04	85.04
Margin (dB)		-9.05	-9.25	-9.06	-8.86

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Middle	1	31.52	31.90	31.74	31.99
	2	31.50	31.88	32.04	31.98
	3	31.66	32.04	32.21	32.15
	4	31.76	32.10	32.26	32.21
	5	31.50	31.82	32.02	31.97
	6	31.67	31.96	32.14	32.12
	7	31.72	32.00	32.23	32.17
	8	31.73	31.99	32.18	32.16
	9	31.64	31.91	32.13	32.08
	10	31.68	31.93	32.13	32.11
	11	31.72	32.00	32.20	32.15
	12	31.80	32.06	32.24	32.20
	13	31.52	31.76	31.96	31.91
	14	31.92	32.16	32.34	32.29
	15	31.77	32.00	32.15	32.13
	16	31.78	32.00	32.15	32.14
	17	31.84	32.06	32.22	32.21
	18	31.62	31.86	32.00	32.00
	19	31.69	31.92	32.08	32.06
	20	31.77	32.00	32.14	32.15
	21	31.74	31.98	32.13	32.15
	22	31.86	32.07	32.24	32.25
	23	31.81	32.01	32.18	32.19
	24	31.82	32.02	32.18	32.20
	25	31.55	31.76	31.90	31.92
	26	31.47	31.65	31.77	31.79
	27	31.62	31.49	31.62	31.64
	28	31.59	31.44	31.59	31.60
	29	31.71	31.87	31.99	32.02
	30	31.80	31.94	32.06	32.10
	31	31.79	31.90	32.03	32.05
	32	32.05	32.14	32.27	32.30

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Middle	33	31.68	31.69	32.30	32.22
	34	31.60	31.61	32.20	32.12
	35	31.58	31.59	32.16	32.08
	36	31.74	31.76	32.34	32.26
	37	31.80	31.82	32.39	32.32
	38	32.08	32.10	32.70	32.63
	39	31.84	31.87	32.45	32.38
	40	31.83	31.87	32.44	32.40
	41	31.40	31.45	32.03	31.96
	42	31.79	31.84	32.41	32.35
	43	31.50	31.59	32.13	32.08
	44	31.59	31.66	32.21	32.17
	45	31.75	31.84	32.38	32.34
	46	31.83	31.95	32.47	32.44
	47	31.61	31.69	32.22	32.18
	48	31.75	31.81	32.32	32.31
	49	31.39	31.49	31.98	31.99
	50	31.62	31.73	32.21	32.22
	51	31.66	31.78	32.25	32.27
	52	31.66	31.77	32.23	32.25
	53	31.66	31.77	32.21	32.24
	54	31.53	31.65	32.11	32.12
	55	31.56	31.68	32.13	32.13
	56	31.60	31.72	32.17	32.16
	57	31.45	31.60	32.03	32.03
	58	31.55	31.72	32.15	32.14
	59	31.41	31.58	32.01	32.01
	60	31.63	31.79	32.22	32.21
	61	31.58	31.74	32.16	32.18
	62	31.54	31.71	32.13	32.15
	63	31.65	31.81	32.23	32.26
	64	31.70	31.87	32.32	32.31
Total MIMO Conducted Power (mW)		94163.06	97635.58	105323.8	104961.6
Total MIMO Conducted Power (dBm)		49.74	49.90	50.23	50.21
Antenna Gain (dBi)		26	26	26	26
MIMO EIRP (dBm)		75.74	75.90	76.23	76.21
EIRP Limit (dBm)		85.04	85.04	85.04	85.04
Margin (dB)		-9.30	-9.15	-8.82	-8.83

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Highest	1	31.82	31.96	31.96	31.88
	2	31.86	31.98	31.95	31.90
	3	32.00	32.11	32.11	32.03
	4	32.11	32.20	32.18	32.11
	5	31.86	31.98	32.02	31.92
	6	31.95	32.03	32.02	31.96
	7	32.03	32.12	32.15	32.07
	8	31.96	32.10	32.07	32.00
	9	32.00	32.10	32.18	32.06
	10	32.01	32.07	32.04	32.01
	11	32.02	32.10	32.15	32.06
	12	32.18	32.25	32.55	32.19
	13	31.84	31.90	31.99	31.86
	14	32.28	32.32	32.38	32.26
	15	32.15	32.20	32.26	32.16
	16	32.11	32.14	32.23	32.12
	17	32.19	32.19	32.28	32.17
	18	31.94	31.97	32.02	31.94
	19	32.03	32.06	32.16	32.03
	20	32.07	32.10	32.15	32.08
	21	32.10	32.14	32.28	32.15
	22	32.15	32.16	32.27	32.16
	23	32.17	32.16	32.28	32.17
	24	32.17	32.17	32.30	32.17
	25	32.00	31.97	32.15	31.98
	26	31.71	31.69	31.84	31.69
	27	31.70	31.64	31.75	31.61
	28	31.57	31.51	31.62	31.51
	29	31.52	32.00	32.06	31.98
	30	31.60	32.09	32.11	32.07
	31	31.58	32.05	32.12	32.05
	32	31.79	32.27	32.30	32.24

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Highest	33	31.49	31.45	32.24	32.13
	34	31.60	31.56	32.28	32.18
	35	31.57	31.58	32.34	32.23
	36	31.60	31.61	32.33	32.23
	37	31.72	31.70	32.47	32.33
	38	32.02	32.02	32.76	32.68
	39	31.69	31.67	32.46	32.30
	40	31.67	31.64	32.40	32.28
	41	31.37	31.37	32.16	32.02
	42	31.74	31.73	32.53	32.37
	43	31.55	31.53	32.30	32.16
	44	31.71	31.74	32.42	32.36
	45	31.76	31.73	32.53	32.36
	46	31.76	31.76	32.53	32.38
	47	31.67	31.63	32.41	32.27
	48	31.71	31.66	32.42	32.31
	49	31.45	31.40	32.14	32.04
	50	31.59	31.55	32.24	32.19
	51	31.75	31.71	32.51	32.34
	52	31.71	31.66	32.43	32.29
	53	31.71	31.64	32.42	32.28
	54	31.63	31.57	32.33	32.20
	55	31.61	31.56	32.34	32.19
	56	31.68	31.63	32.39	32.29
	57	31.49	31.44	32.23	32.07
	58	31.64	31.57	32.34	32.20
	59	31.44	31.42	32.16	32.02
	60	31.70	31.65	32.38	32.26
	61	31.69	31.65	32.43	32.27
	62	31.69	31.66	32.43	32.29
	63	31.69	31.63	32.42	32.26
	64	31.81	31.75	32.51	32.37
Total MIMO Conducted Power (mW)		97059.7	97888.27	107641.7	104772.5
Total MIMO Conducted Power (dBm)		49.87	49.91	50.32	50.20
Antenna Gain (dBi)		26	26	26	26
MIMO EIRP (dBm)		75.87	75.91	76.32	76.20
EIRP Limit (dBm)		85.04	85.04	85.04	85.04
Margin (dB)		-9.17	-9.13	-8.72	-8.84

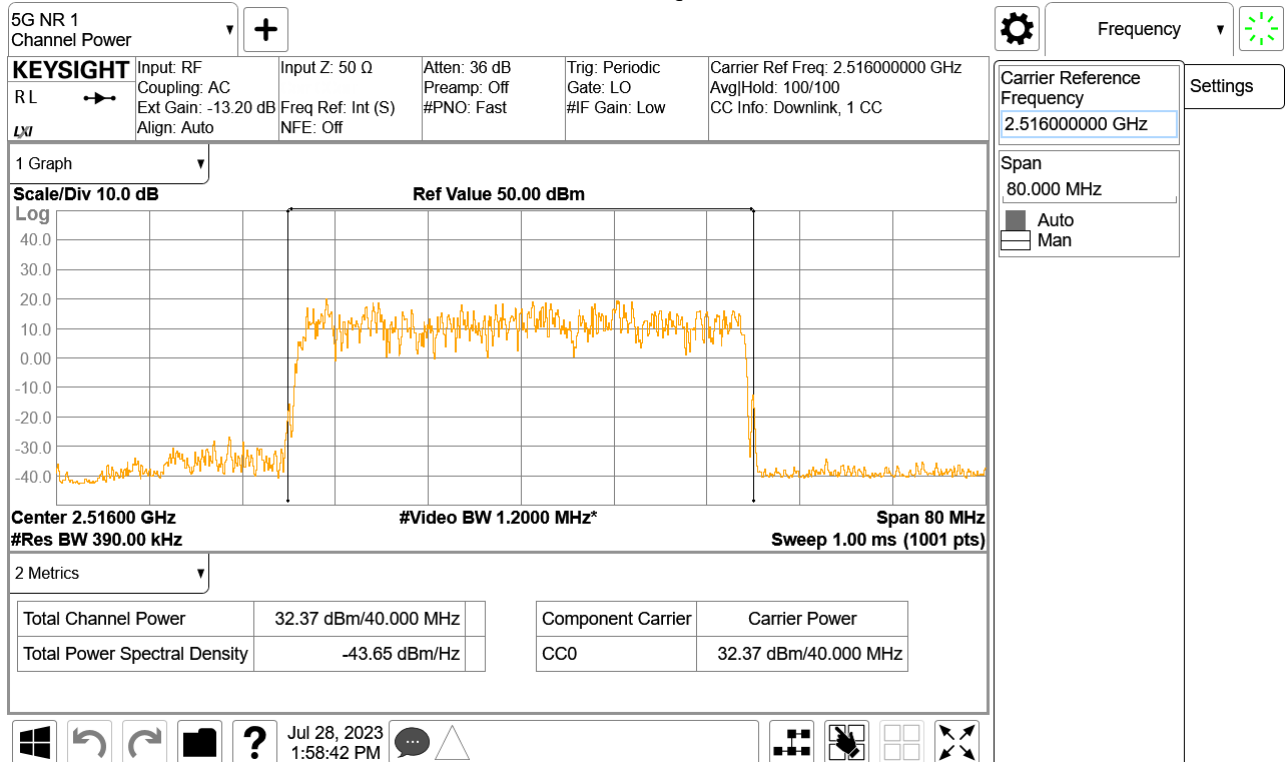
See next pages for actual measured spectrum plots.



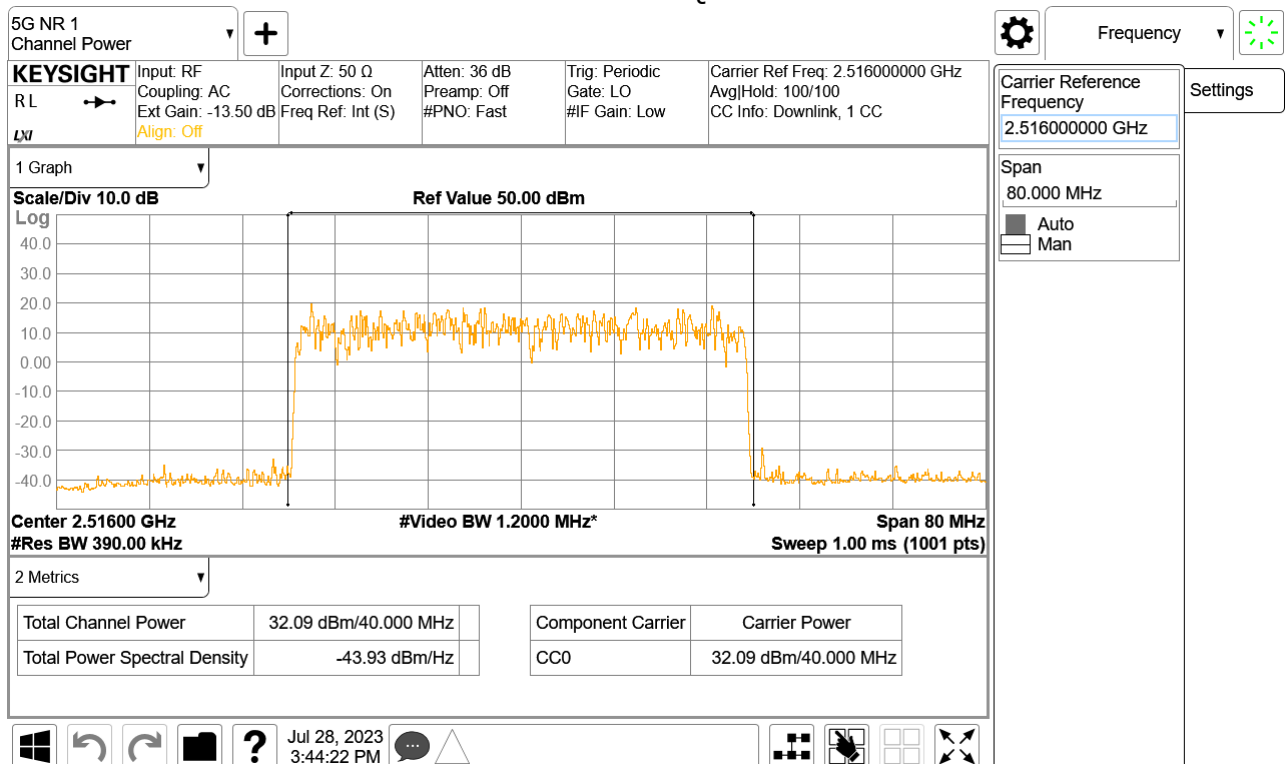
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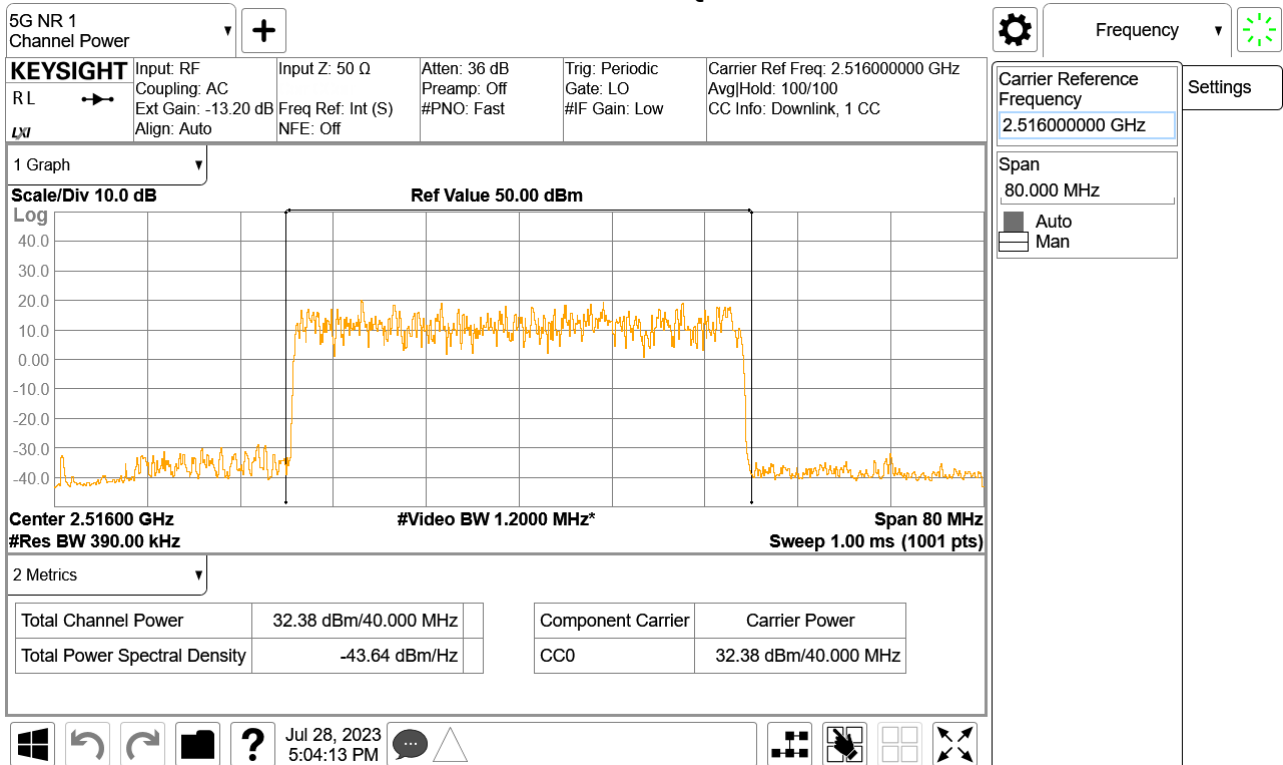
Lowest QPSK



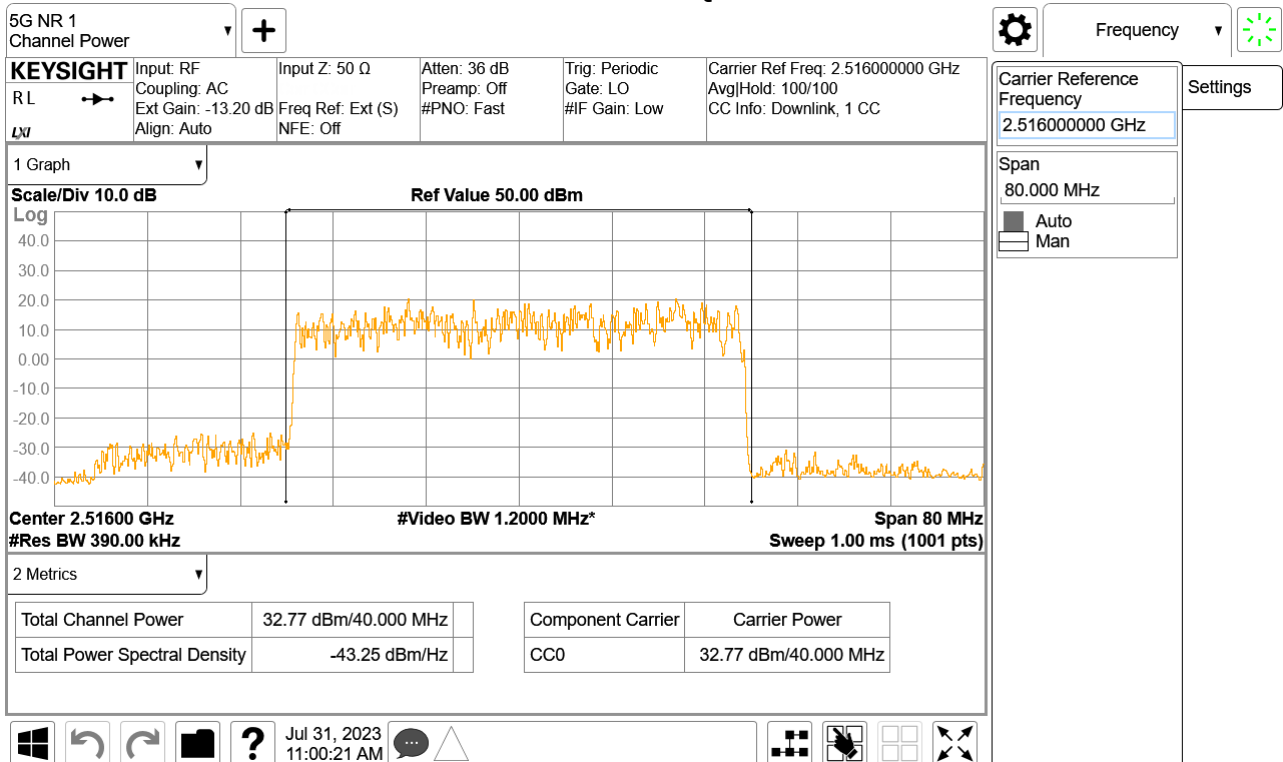
Lowest 16QAM



Lowest 64QAM



Lowest 256QAM

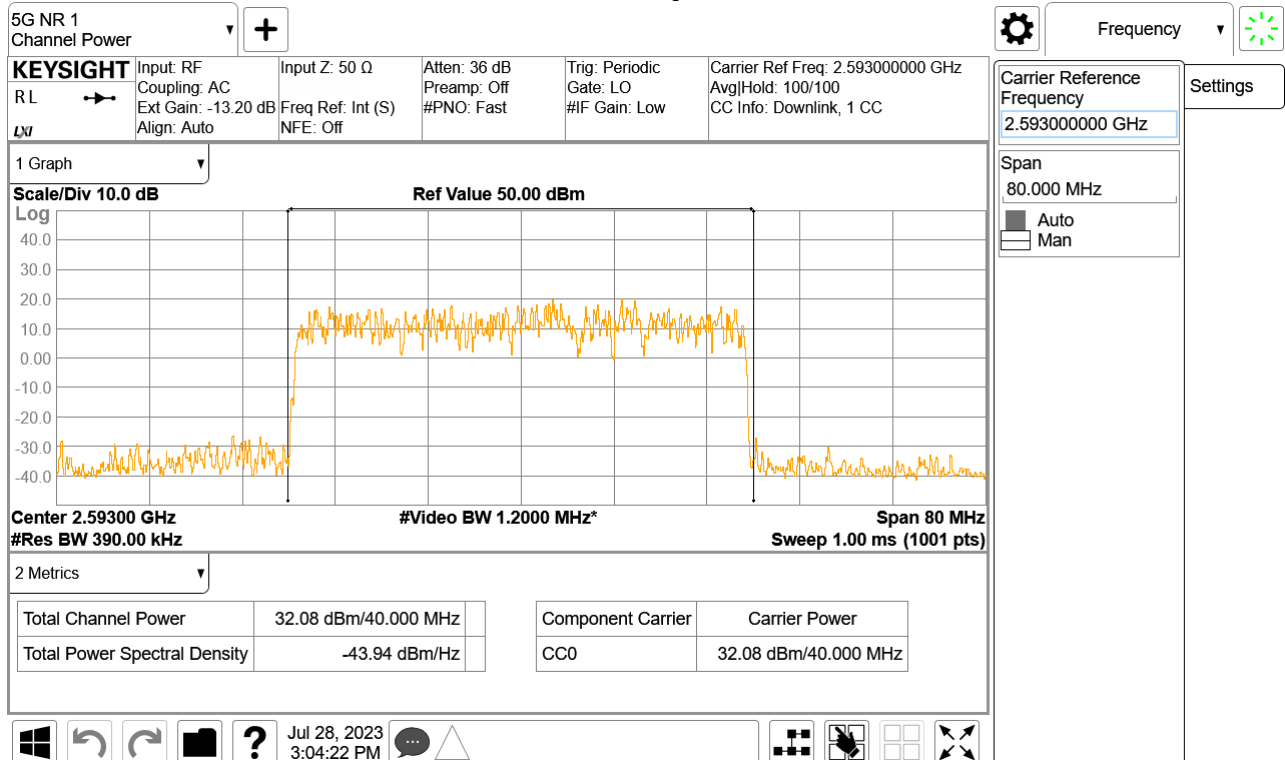




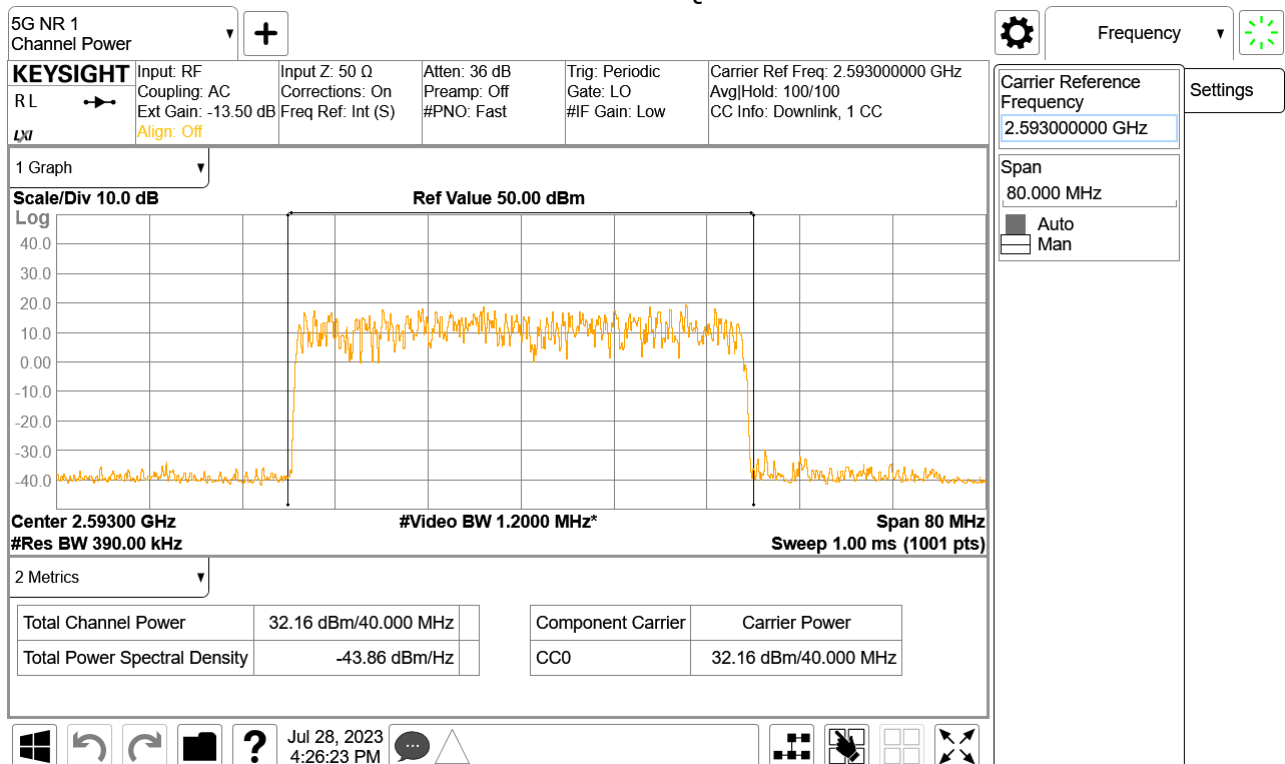
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Middle QPSK



Middle 16QAM

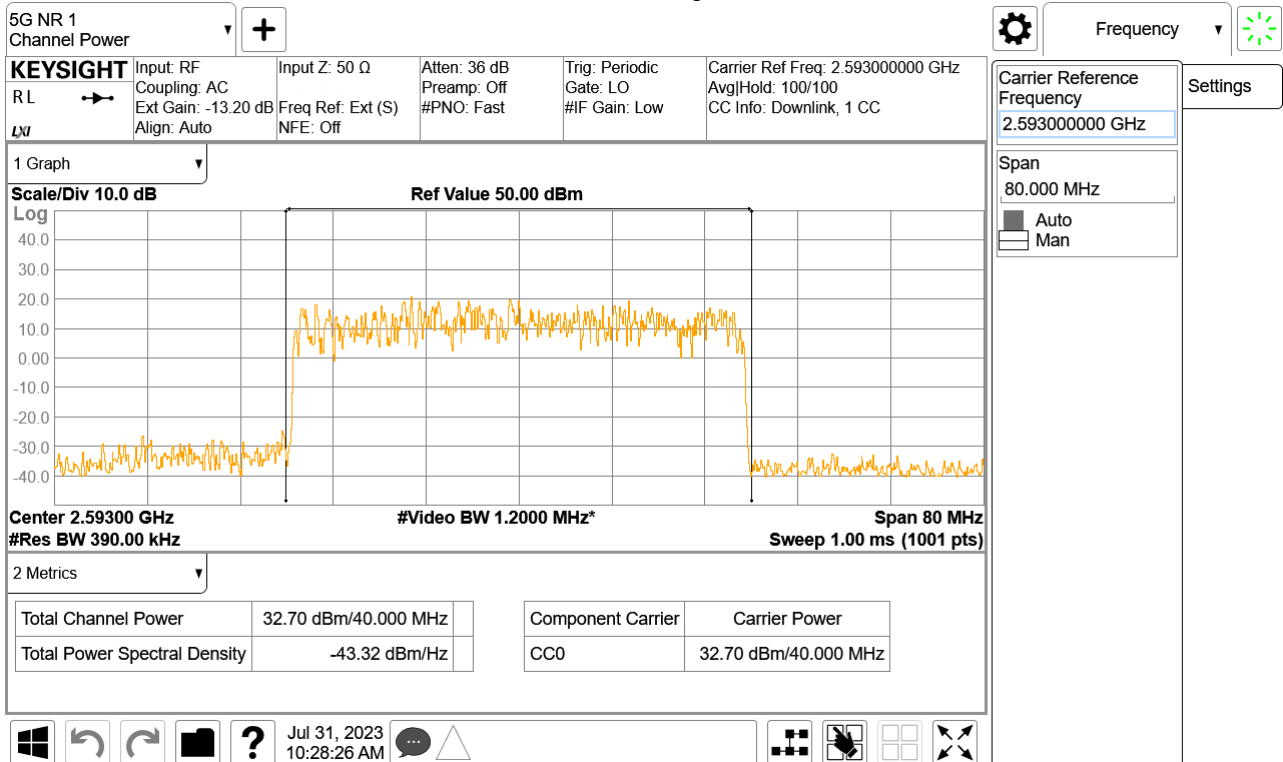




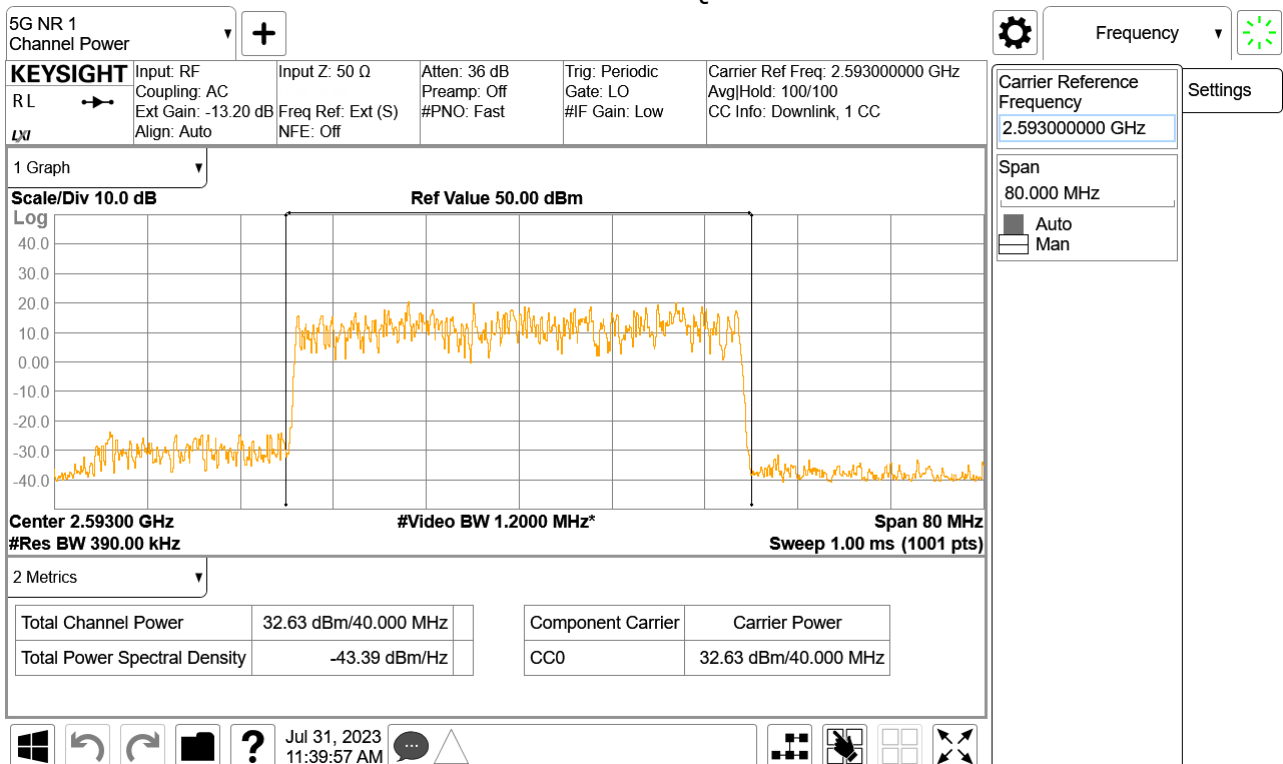
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Middle 64QAM



Middle 256QAM

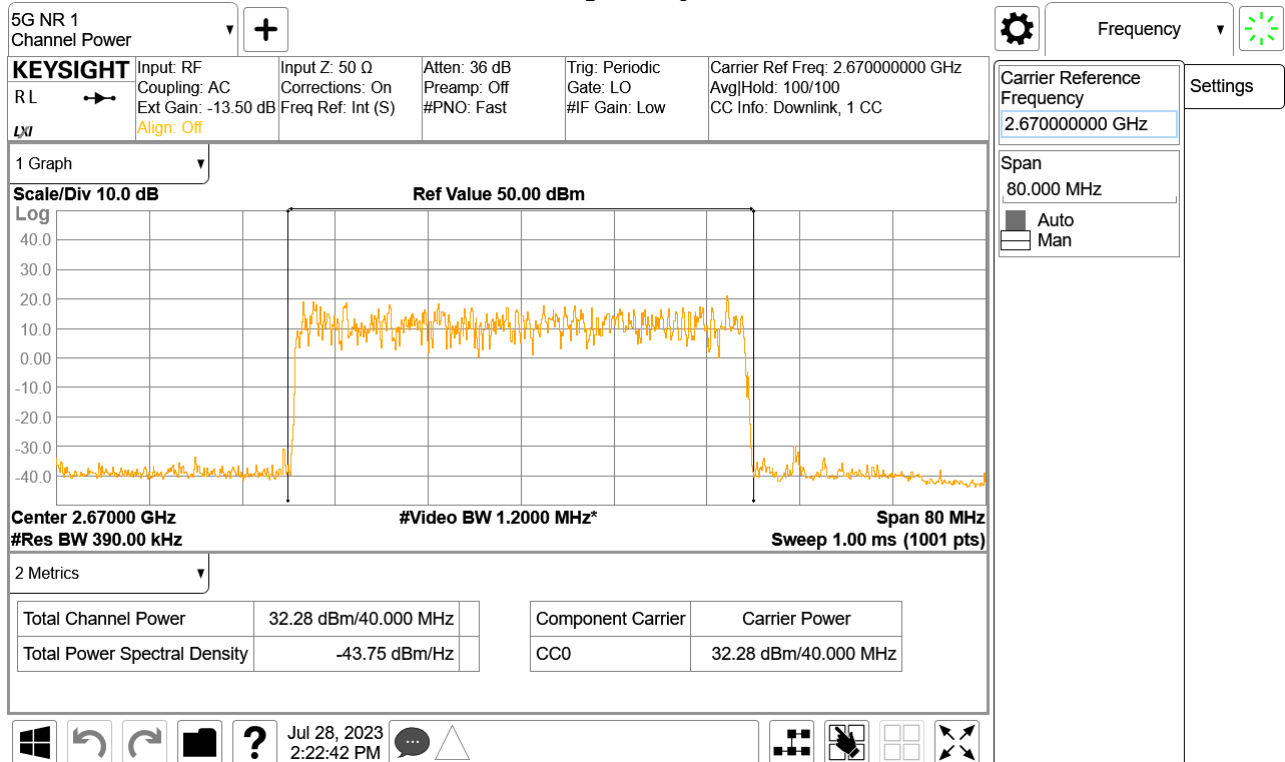




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Highest QPSK



Highest 16QAM

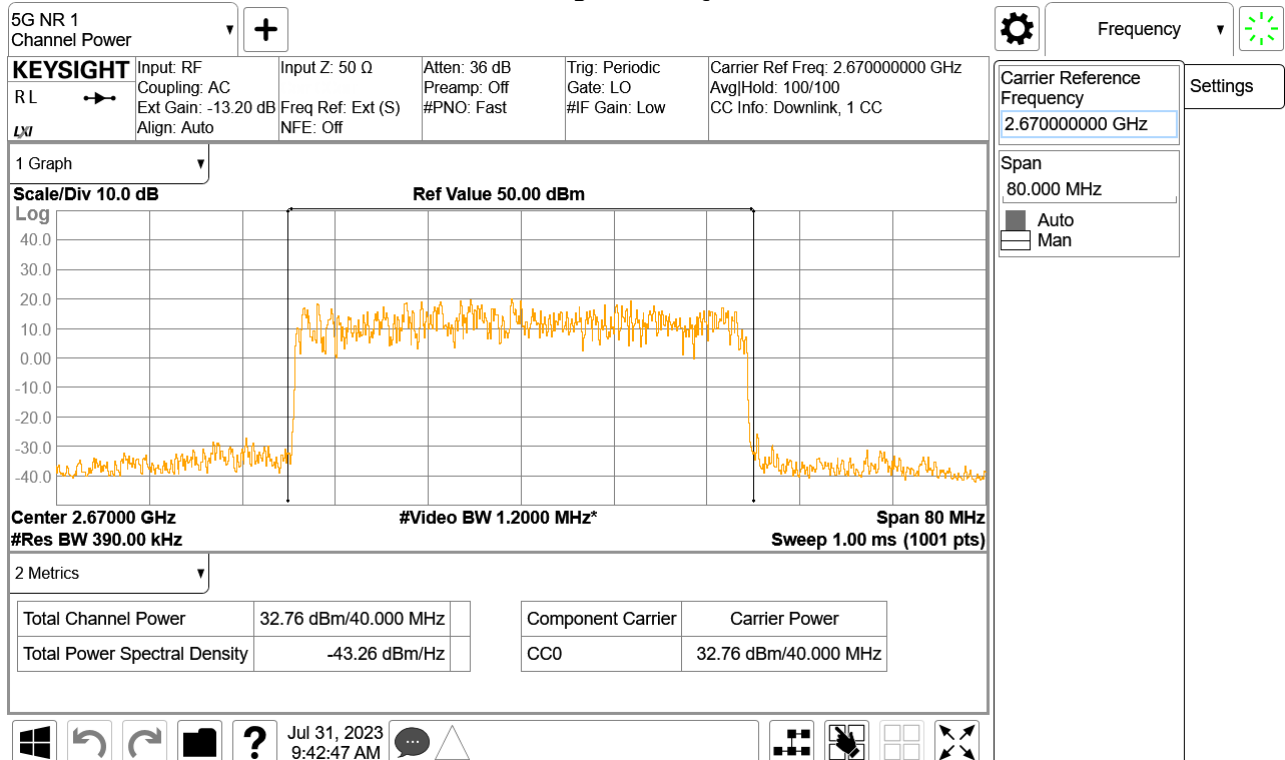




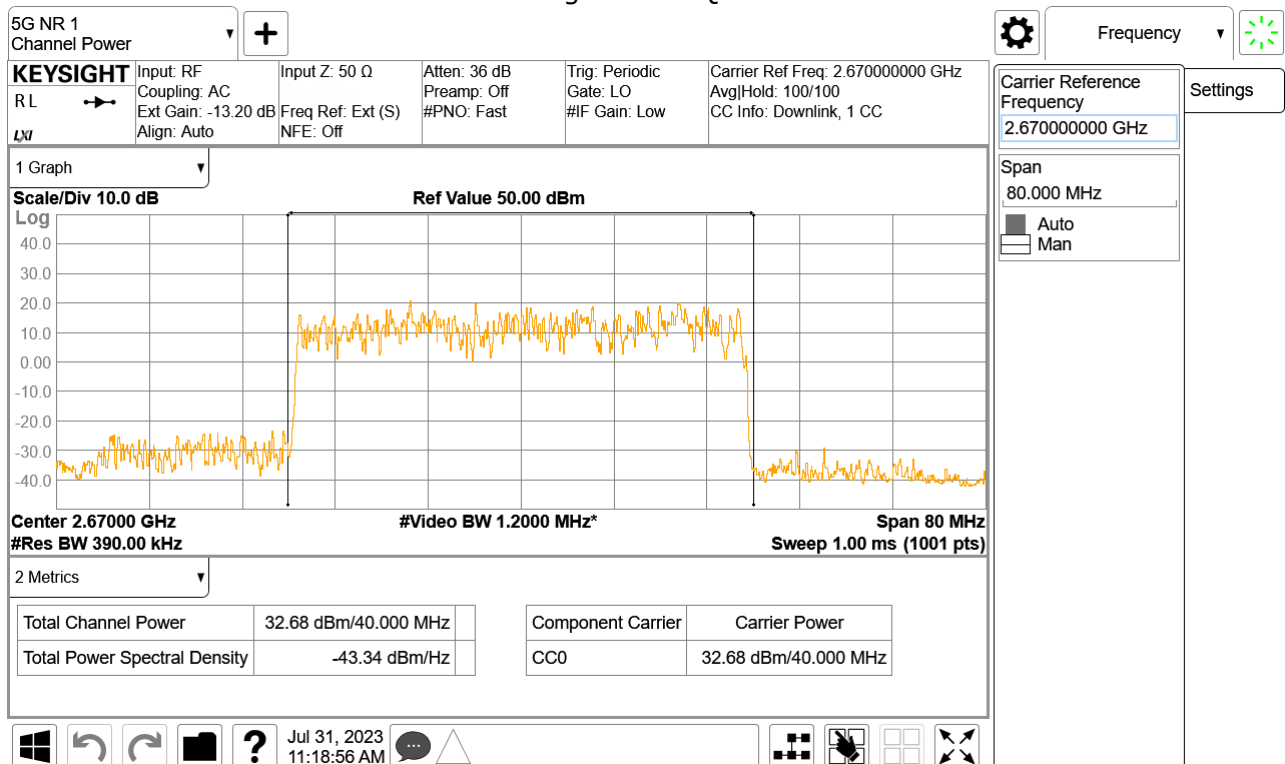
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Highest 64QAM



Highest 256QAM



Test mode : 5G NR 1C 50 MHz

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Lowest	1	32.81	32.77	33.04	33.37
	2	32.74	32.76	32.98	33.33
	3	32.93	32.95	33.14	33.50
	4	32.91	32.91	33.13	33.47
	5	32.76	32.72	32.99	33.32
	6	32.89	32.85	33.11	33.46
	7	32.89	32.87	33.11	33.39
	8	32.88	32.85	33.08	33.40
	9	32.86	32.79	33.04	33.41
	10	32.90	32.82	33.09	33.45
	11	32.91	32.85	33.10	33.46
	12	33.03	32.93	33.18	33.53
	13	32.73	32.67	32.94	33.26
	14	33.02	32.95	33.21	33.59
	15	32.95	32.90	33.15	33.55
	16	32.95	32.87	33.12	33.46
	17	33.04	33.00	33.27	33.58
	18	32.82	32.74	32.99	33.33
	19	32.85	32.76	32.98	33.38
	20	33.00	32.93	33.15	33.53
	21	32.92	32.87	33.10	33.44
	22	33.06	32.95	33.17	33.54
	23	33.01	32.88	33.11	33.48
	24	33.00	32.93	33.14	33.54
	25	32.72	32.64	32.85	33.23
	26	32.57	32.51	32.72	33.14
	27	32.49	32.44	32.66	33.05
	28	32.52	32.42	32.64	33.02
	29	32.84	32.77	32.98	33.35
	30	32.81	32.75	32.96	33.34
	31	32.85	32.83	32.99	33.38
	32	33.09	33.02	33.23	33.63

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Lowest	33	32.83	32.81	33.09	33.29
	34	32.69	32.68	32.92	33.15
	35	32.82	32.77	33.07	33.26
	36	32.90	32.88	33.18	33.39
	37	32.96	32.94	33.24	33.44
	38	33.22	33.18	33.47	33.68
	39	32.84	32.80	33.11	33.32
	40	32.98	32.93	33.22	33.43
	41	32.66	32.60	32.91	33.13
	42	32.97	32.93	33.24	33.45
	43	32.74	32.70	33.01	33.22
	44	32.79	32.79	33.05	33.26
	45	32.98	32.95	33.24	33.44
	46	33.09	33.06	33.35	33.54
	47	32.82	32.78	33.10	33.29
	48	32.77	32.73	33.03	33.23
	49	32.66	32.62	32.89	33.11
	50	32.87	32.84	33.13	33.33
	51	32.83	32.79	33.09	33.27
	52	32.87	32.83	33.11	33.32
	53	32.93	32.87	33.16	33.36
	54	32.68	32.64	32.93	33.13
	55	32.70	32.67	32.96	33.20
	56	32.78	32.74	33.03	33.24
	57	32.74	32.70	32.98	33.21
	58	32.85	32.85	33.15	33.35
	59	32.64	32.62	32.92	33.14
	60	32.87	32.84	33.12	33.35
	61	32.80	32.76	33.04	33.26
	62	32.78	32.77	33.07	33.28
	63	33.01	32.99	33.27	33.50
	64	32.96	32.93	33.22	33.44
Total MIMO Conducted Power (mW)		123593.1	122314.2	129922.7	138749.2
Total MIMO Conducted Power (dBm)		50.92	50.87	51.14	51.42
Antenna Gain (dBi)		26	26	26	26
MIMO EIRP (dBm)		76.92	76.87	77.14	77.42
EIRP Limit (dBm)		86.01	86.01	86.01	86.01
Margin (dB)		-9.09	-9.14	-8.87	-8.59

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Middle	1	33.05	32.98	33.14	33.16
	2	33.05	32.95	33.13	33.11
	3	33.19	33.13	33.33	33.29
	4	33.27	33.19	33.37	33.38
	5	33.06	32.96	33.14	33.10
	6	33.21	33.11	33.29	33.25
	7	33.21	33.14	33.30	33.30
	8	33.21	33.12	33.29	33.29
	9	33.19	33.11	33.25	33.25
	10	33.19	33.06	33.29	33.26
	11	33.26	33.17	33.36	33.35
	12	33.29	33.19	33.38	33.39
	13	33.06	32.94	33.10	33.11
	14	33.42	33.31	33.50	33.50
	15	33.26	33.16	33.37	33.35
	16	33.25	33.15	33.34	33.34
	17	33.32	33.22	33.42	33.41
	18	33.08	32.98	33.18	33.16
	19	33.20	33.11	33.30	33.27
	20	33.24	33.14	33.34	33.32
	21	33.24	33.14	33.34	33.33
	22	33.36	33.23	33.44	33.42
	23	33.31	33.16	33.37	33.35
	24	33.31	33.19	33.38	33.37
	25	33.04	32.94	33.12	33.12
	26	32.94	32.82	33.00	33.00
	27	32.76	32.65	32.83	32.85
	28	32.72	32.61	32.79	32.81
	29	33.14	33.01	33.20	33.23
	30	33.18	33.08	33.26	33.29
	31	33.17	33.07	33.24	33.27
	32	33.37	33.29	33.46	33.48

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Middle	33	33.29	32.70	33.31	33.01
	34	33.20	32.61	33.22	32.93
	35	33.19	32.55	33.16	32.90
	36	33.32	32.72	33.36	33.06
	37	33.44	32.84	33.40	33.13
	38	33.75	33.10	33.69	33.44
	39	33.52	32.87	33.46	33.19
	40	33.51	32.87	33.40	33.15
	41	33.09	32.45	33.01	32.74
	42	33.52	32.88	33.40	33.15
	43	33.25	32.60	33.13	32.87
	44	33.36	32.69	33.22	32.95
	45	33.53	32.86	33.43	33.12
	46	33.52	32.92	33.47	33.23
	47	33.32	32.70	33.23	32.96
	48	33.44	32.84	33.36	33.09
	49	33.12	32.54	33.02	32.76
	50	33.37	32.75	33.24	32.99
	51	33.38	32.80	33.29	33.03
	52	33.35	32.80	33.26	33.02
	53	33.36	32.79	33.26	33.02
	54	33.25	32.65	33.13	32.88
	55	33.28	32.67	33.19	32.92
	56	33.29	32.70	33.18	32.94
	57	33.18	32.58	33.04	32.82
	58	33.28	32.69	33.16	32.97
	59	33.14	32.55	33.01	32.78
	60	33.33	32.76	33.22	33.02
	61	33.32	32.72	33.19	32.94
	62	33.28	32.71	33.16	32.96
	63	33.36	32.80	33.25	33.02
	64	33.45	32.86	33.29	33.09
Total MIMO Conducted Power (mW)		135629.5	125078.7	135538.8	131648.9
Total MIMO Conducted Power (dBm)		51.32	50.97	51.32	51.19
Antenna Gain (dBi)		26	26	26	26
MIMO EIRP (dBm)		77.32	76.97	77.32	77.19
EIRP Limit (dBm)		86.01	86.01	86.01	86.01
Margin (dB)		-8.69	-9.04	-8.69	-8.82

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Highest	1	33.05	33.02	32.91	33.49
	2	33.06	32.97	32.85	33.51
	3	33.16	33.10	32.99	33.61
	4	33.26	33.21	33.09	33.75
	5	33.07	32.97	32.90	33.49
	6	33.11	33.05	32.91	33.57
	7	33.19	33.11	33.03	33.64
	8	33.16	33.07	32.98	33.58
	9	33.18	33.12	32.99	33.63
	10	33.13	33.07	33.00	33.57
	11	33.22	33.12	33.05	33.61
	12	33.34	33.27	33.18	33.75
	13	33.01	32.92	32.84	33.44
	14	33.42	33.35	33.26	33.87
	15	33.30	33.22	33.15	33.75
	16	33.26	33.17	33.14	33.70
	17	33.28	33.22	33.11	33.76
	18	33.07	32.99	32.88	33.51
	19	33.20	33.08	32.99	33.60
	20	33.21	33.11	33.02	33.64
	21	33.28	33.16	33.07	33.69
	22	33.30	33.18	33.09	33.76
	23	33.30	33.18	33.08	33.74
	24	33.36	33.25	33.11	33.76
	25	33.10	33.00	32.91	33.53
	26	32.83	32.74	32.64	33.32
	27	32.73	32.63	32.52	33.17
	28	32.65	32.53	32.41	33.10
	29	33.14	32.98	32.86	33.53
	30	33.22	33.08	32.96	33.64
	31	33.19	33.08	32.96	33.63
	32	33.41	33.30	33.15	33.85

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Highest	33	32.64	32.82	33.12	33.20
	34	32.74	32.88	33.16	33.27
	35	32.72	32.92	33.20	33.28
	36	32.78	32.94	33.22	33.32
	37	32.87	33.02	33.34	33.40
	38	33.19	33.34	33.67	33.74
	39	32.82	32.98	33.28	33.38
	40	32.84	33.00	33.29	33.39
	41	32.53	32.70	32.98	33.05
	42	32.88	33.07	33.39	33.45
	43	32.69	32.85	33.14	33.21
	44	32.87	32.99	33.31	33.39
	45	32.88	33.05	33.39	33.43
	46	32.92	33.03	33.37	33.43
	47	32.79	32.92	33.27	33.31
	48	32.92	32.99	33.31	33.37
	49	32.61	32.67	33.02	33.07
	50	32.77	32.83	33.14	33.26
	51	32.93	32.99	33.30	33.39
	52	32.88	32.96	33.25	33.34
	53	32.86	32.92	33.25	33.33
	54	32.77	32.86	33.16	33.22
	55	32.80	32.85	33.17	33.25
	56	32.86	32.91	33.22	33.31
	57	32.69	32.74	33.05	33.14
	58	32.81	32.85	33.17	33.26
	59	32.64	32.68	33.00	33.10
	60	32.88	32.91	33.23	33.33
	61	32.94	32.96	33.26	33.35
	62	32.89	32.91	33.23	33.33
	63	32.88	32.90	33.21	33.30
	64	32.99	33.01	33.32	33.44
Total MIMO Conducted Power (mW)		127628	127656.6	130837.8	142019.3
Total MIMO Conducted Power (dBm)		51.06	51.06	51.17	51.52
Antenna Gain (dBi)		26	26	26	26
MIMO EIRP (dBm)		77.06	77.06	77.17	77.52
EIRP Limit (dBm)		86.01	86.01	86.01	86.01
Margin (dB)		-8.95	-8.95	-8.84	-8.49

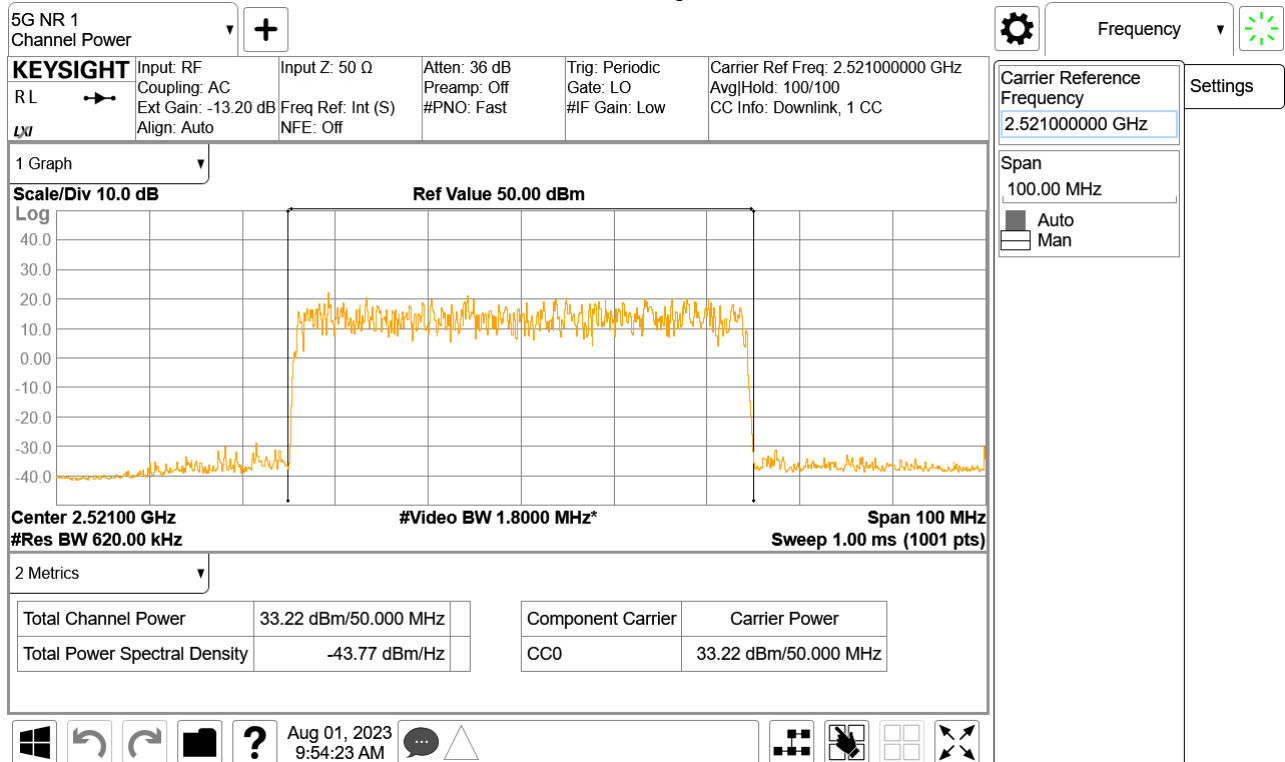
See next pages for actual measured spectrum plots.



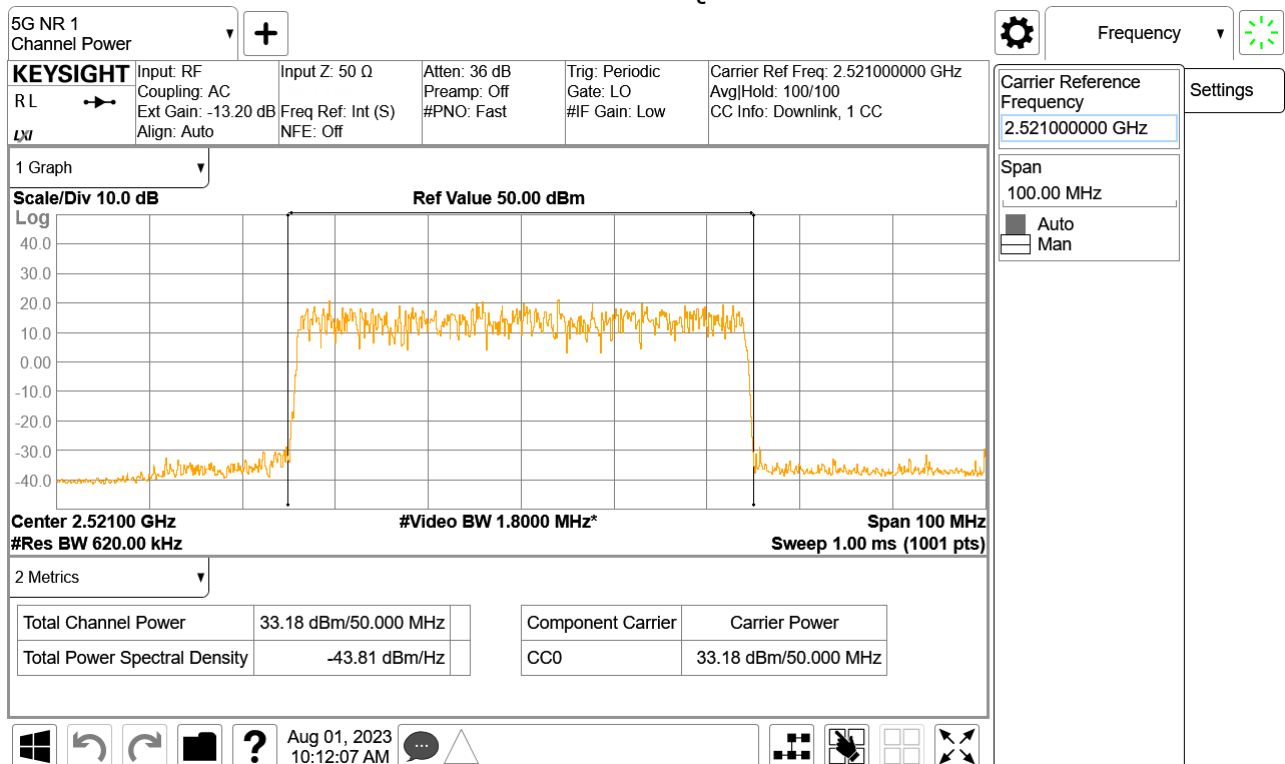
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Lowest QPSK



Lowest 16QAM

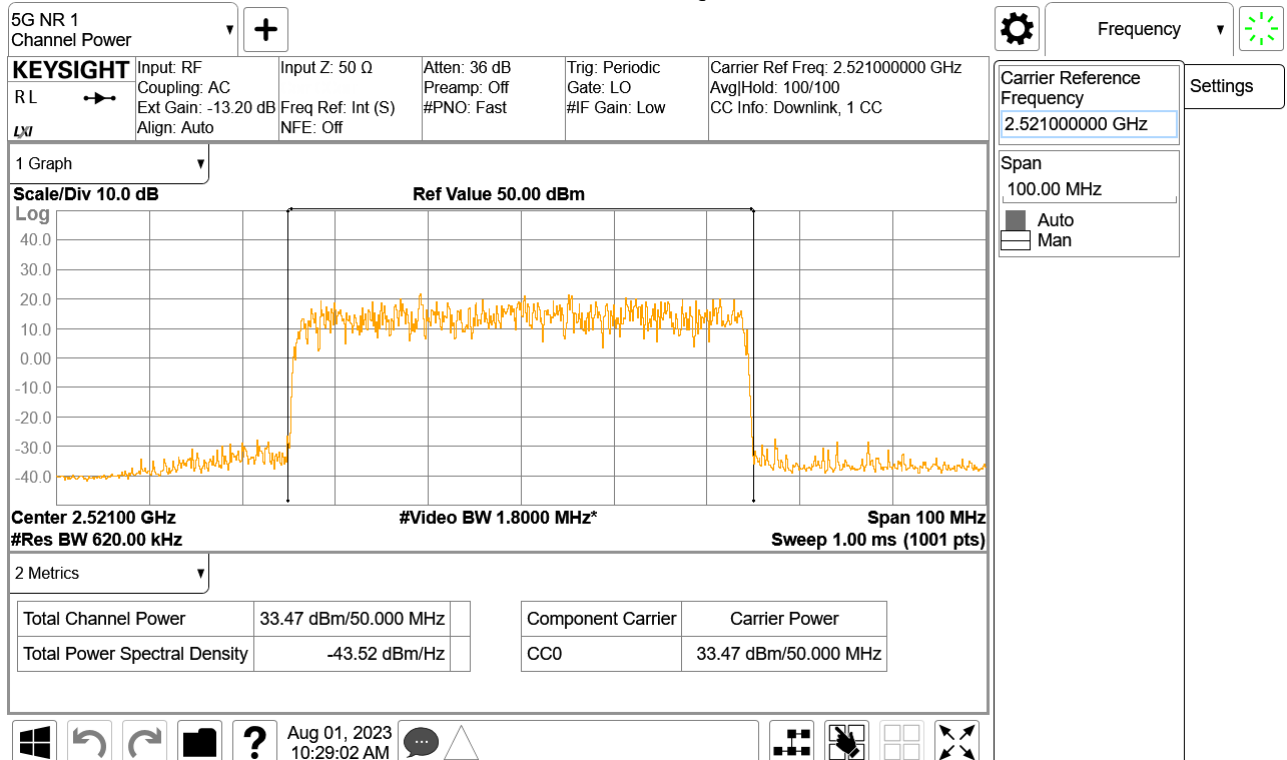




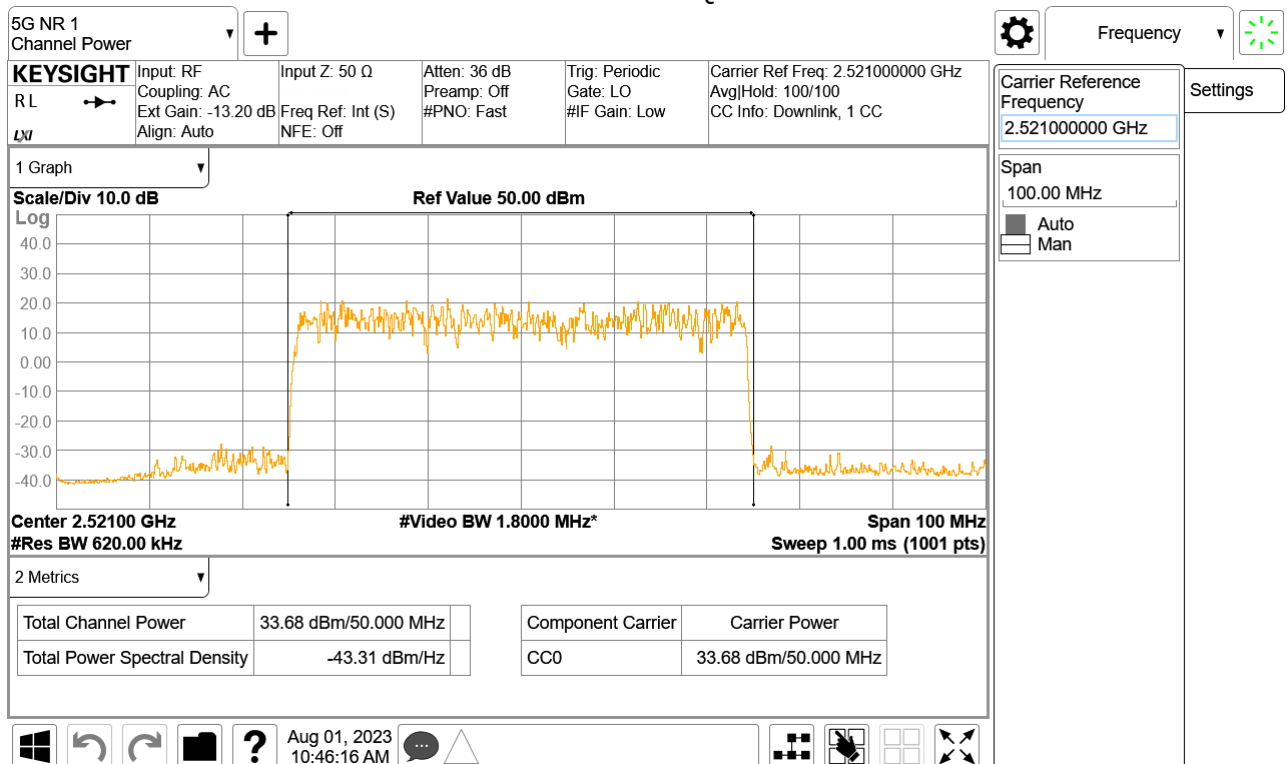
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Lowest 64QAM



Lowest 256QAM

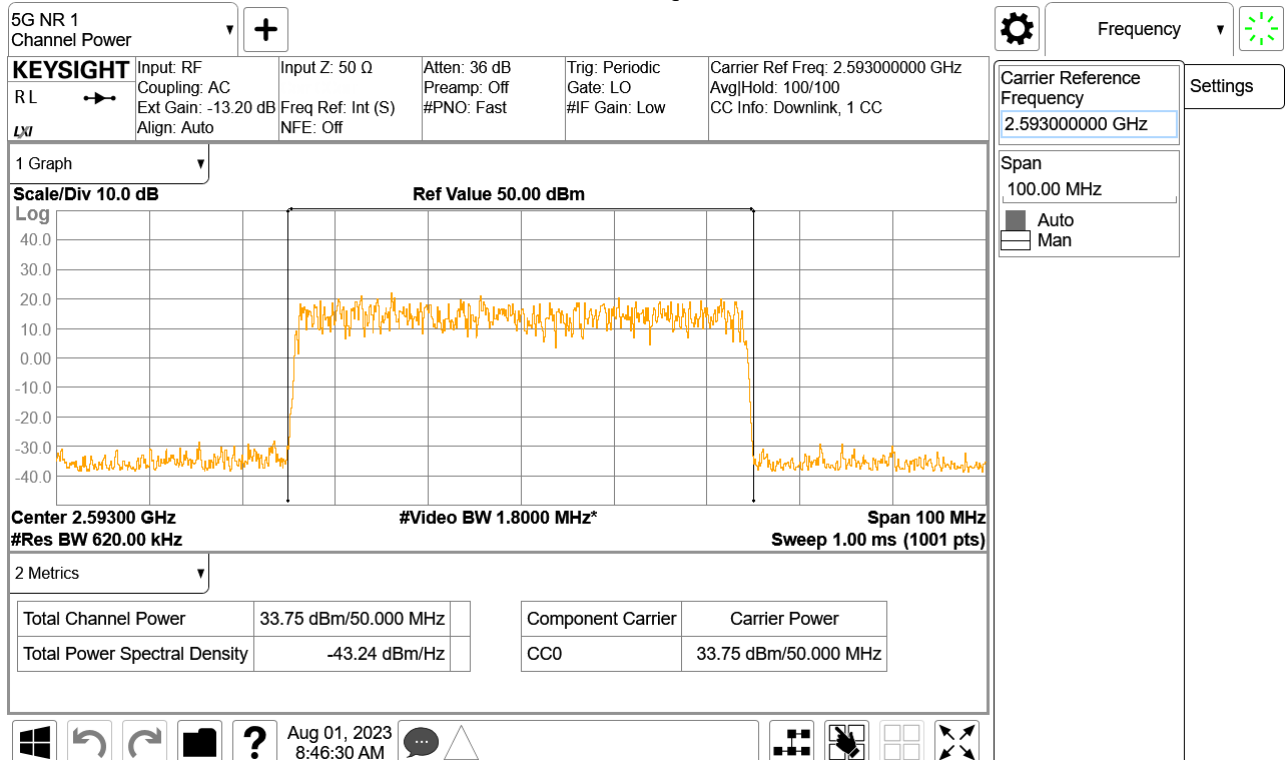




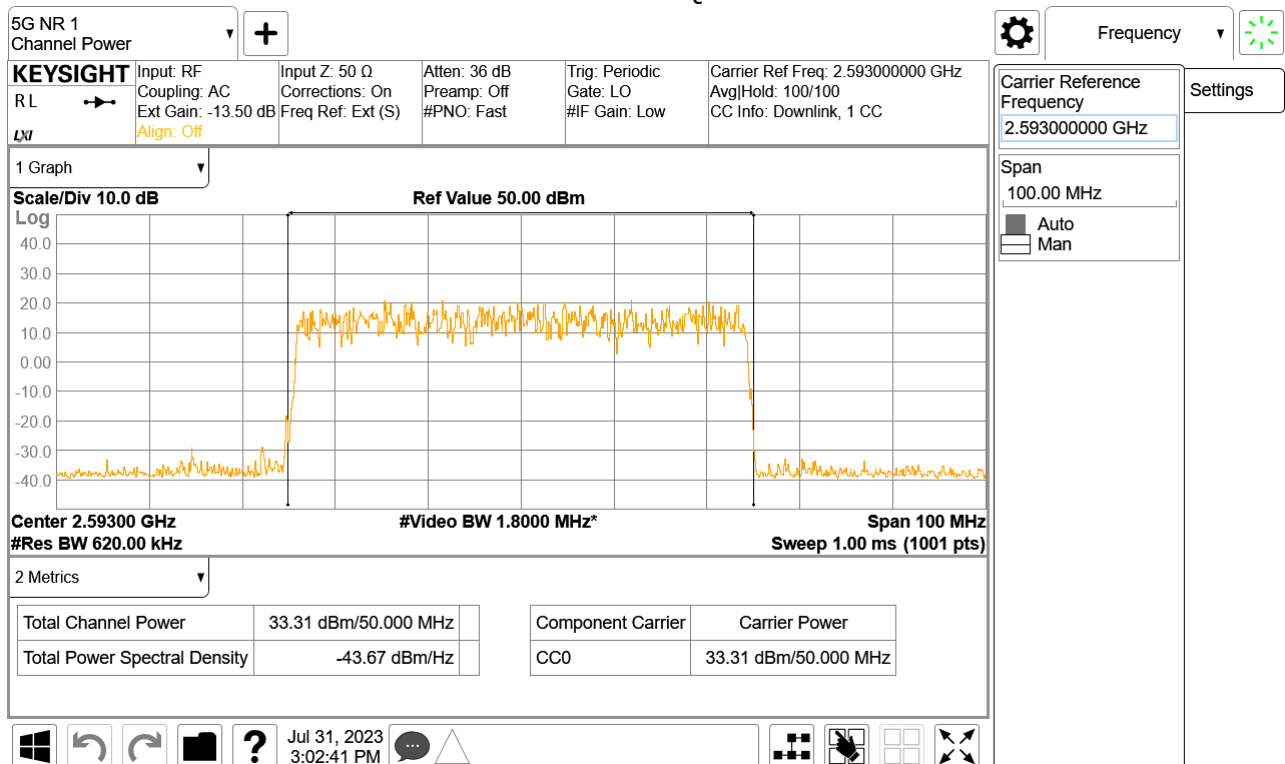
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Middle QPSK



Middle 16QAM

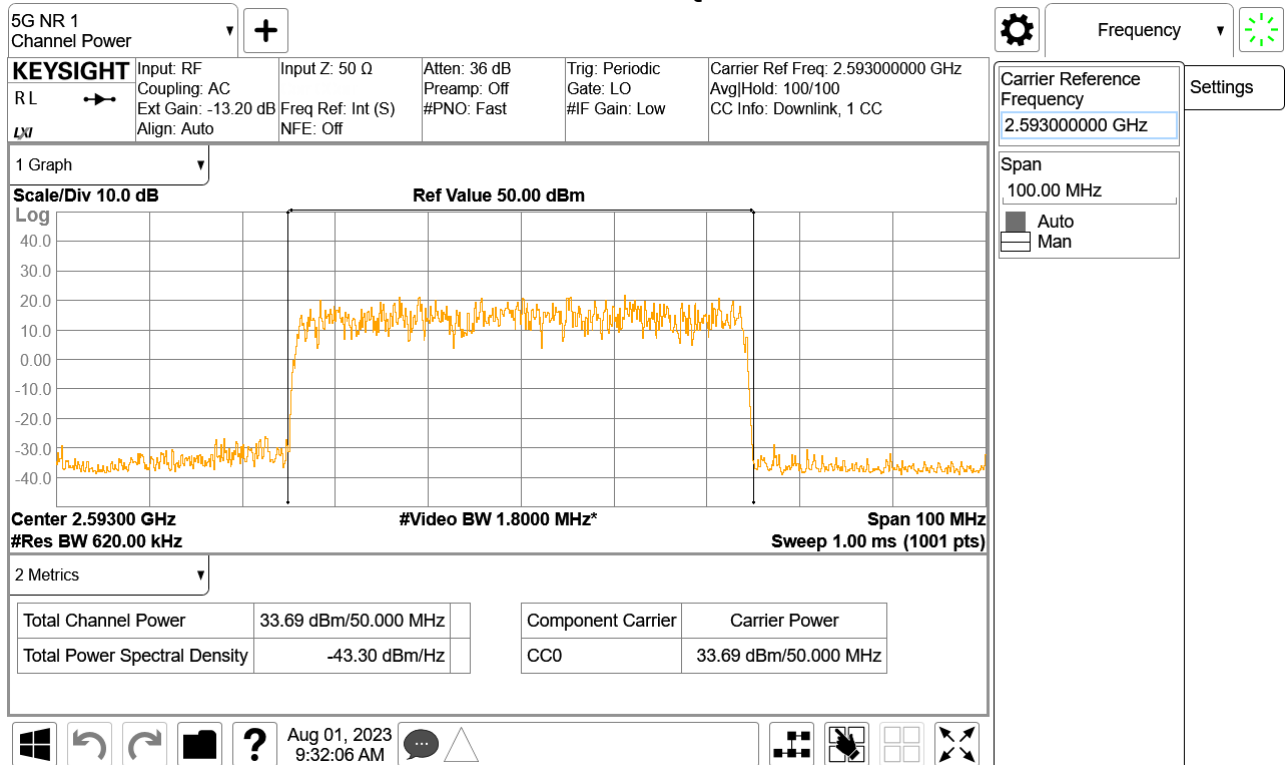




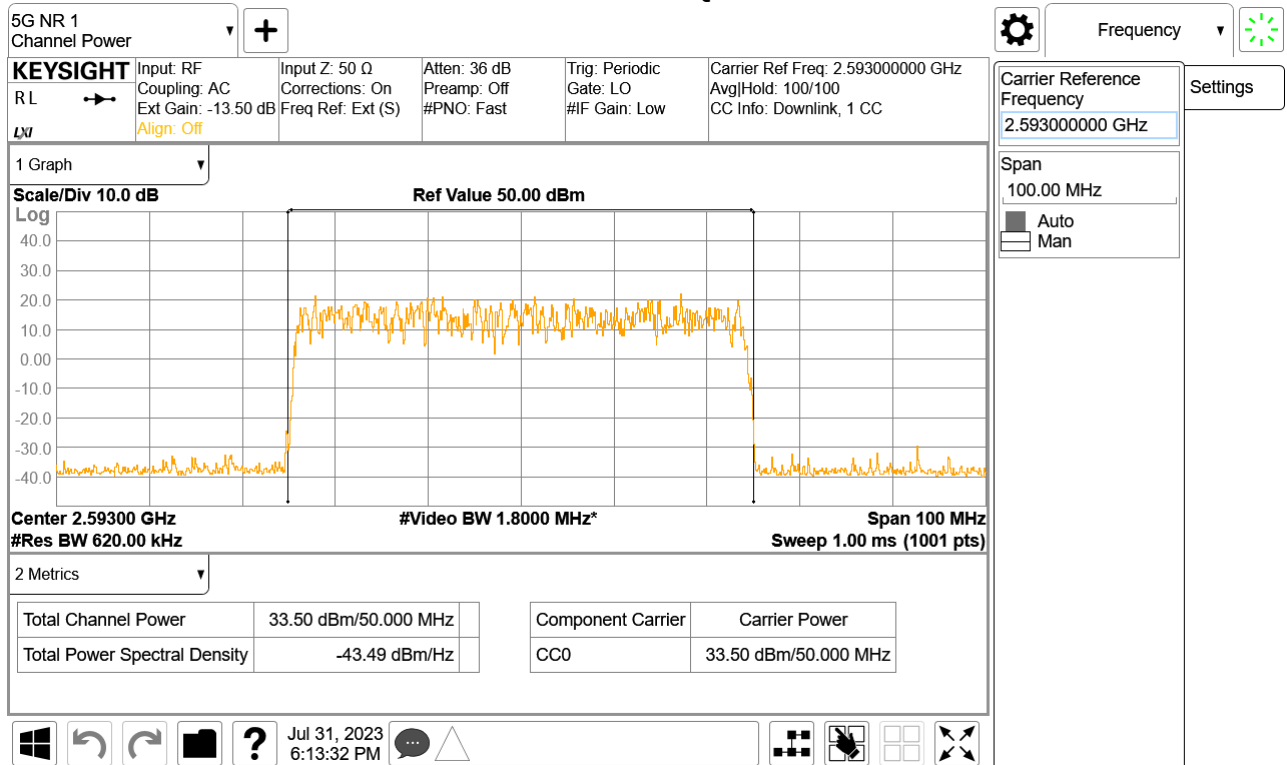
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Middle 64QAM



Middle 256QAM

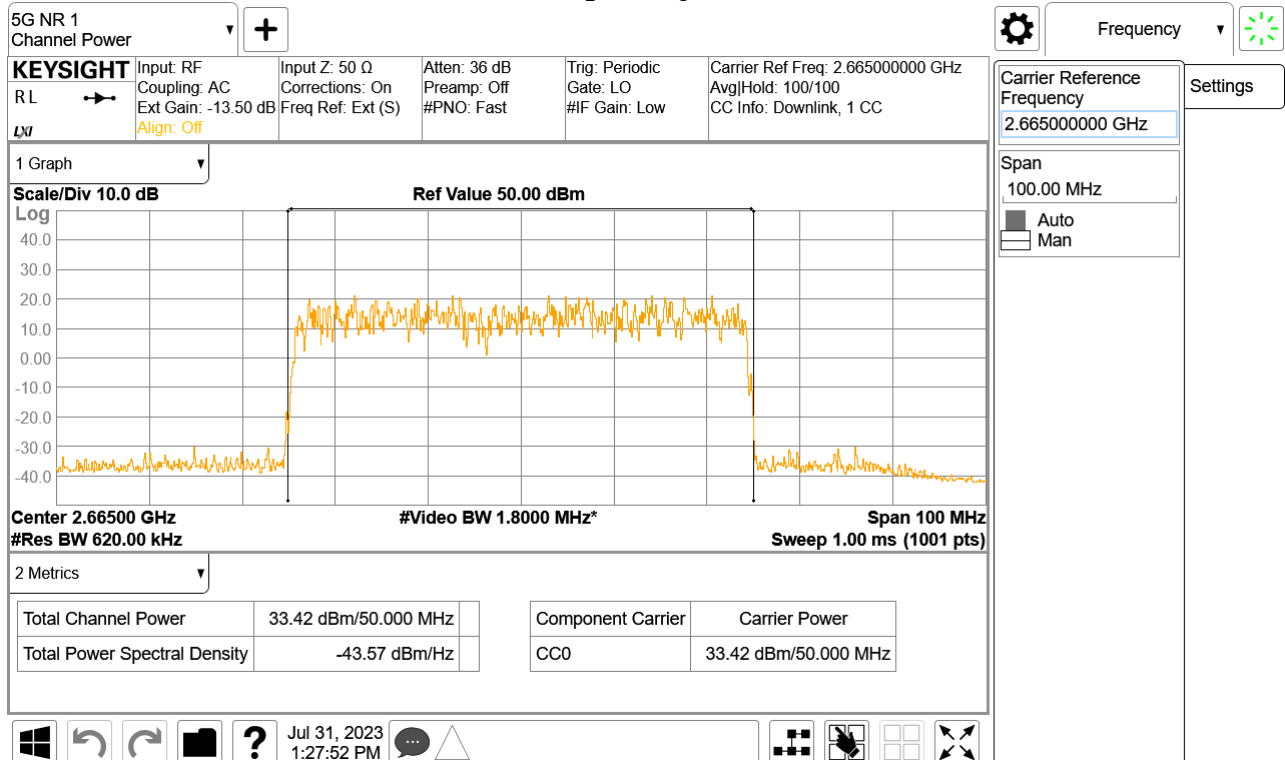




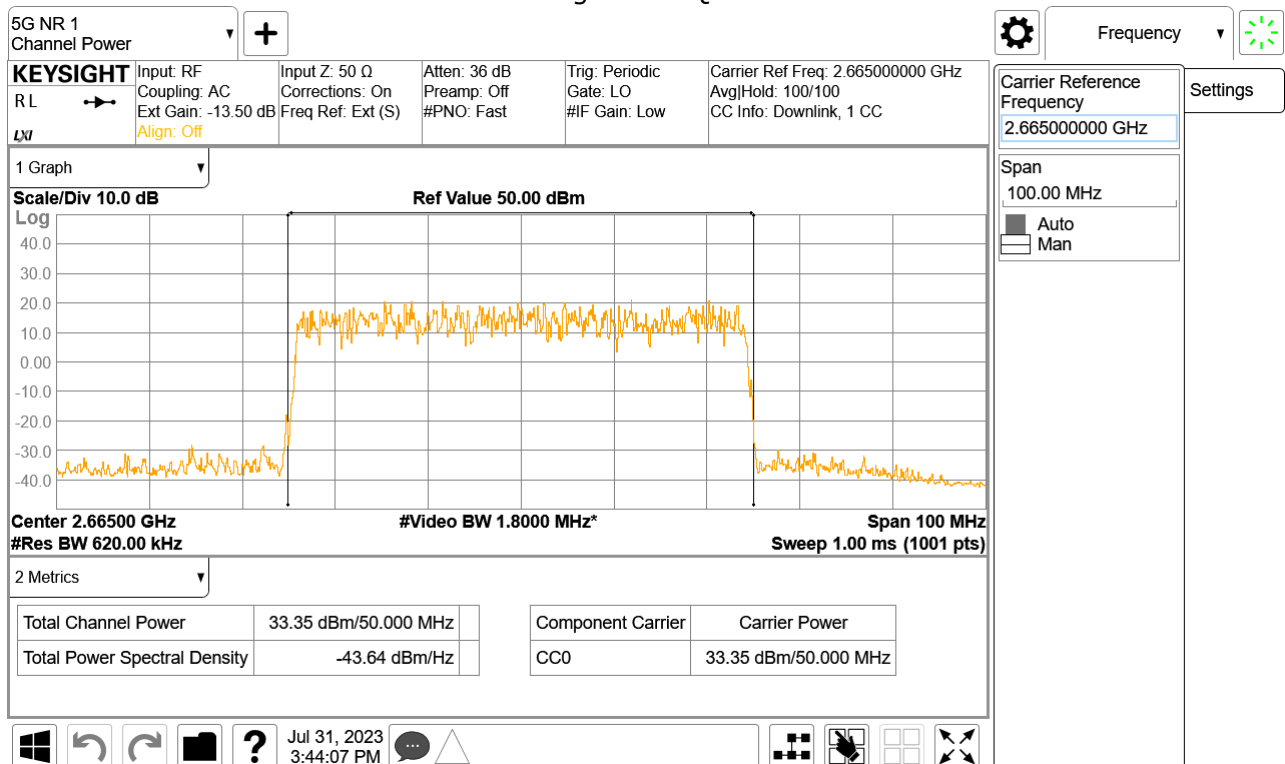
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Highest QPSK



Highest 16QAM

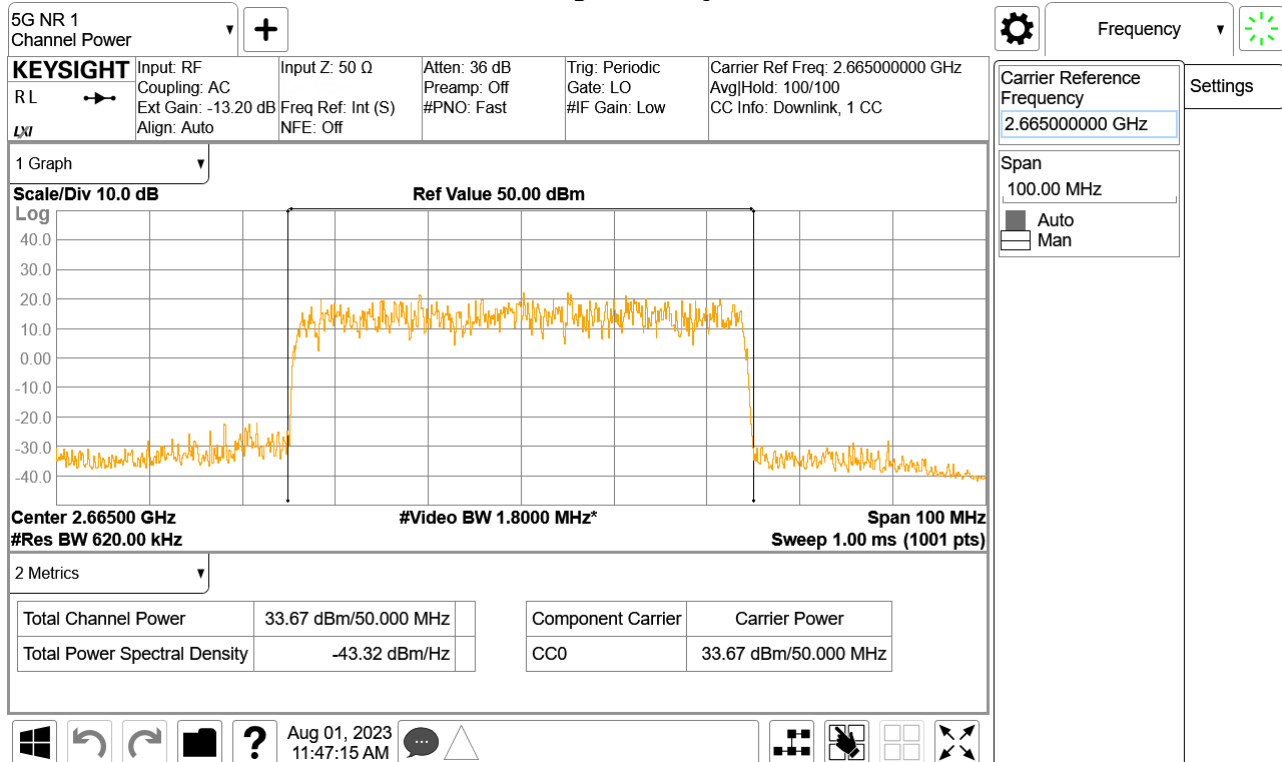




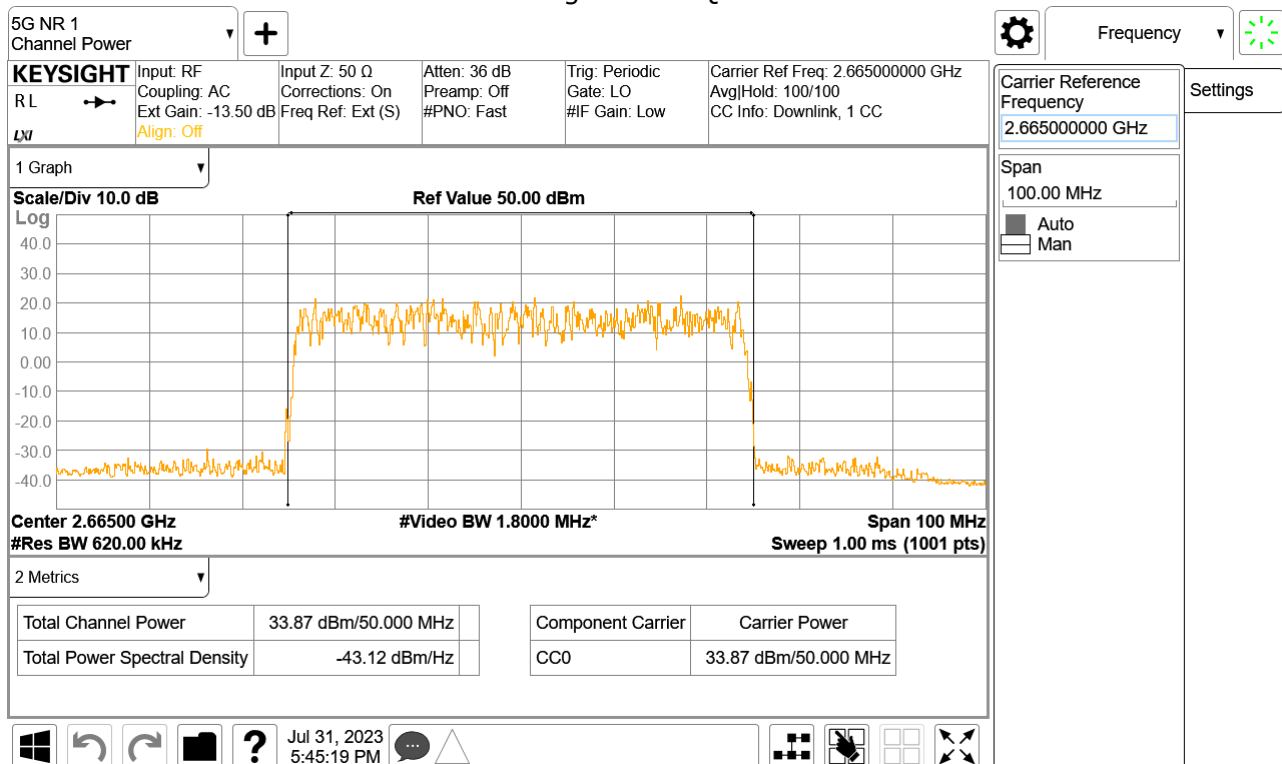
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Highest 64QAM



Highest 256QAM



Test mode : LTE 2C 20+20 MHz Contiguous

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Lowest	1	31.79	31.58	31.69	31.70
	2	31.75	31.56	31.68	31.65
	3	31.92	31.73	31.82	31.85
	4	31.89	31.74	31.81	31.83
	5	31.73	31.57	31.70	31.66
	6	31.84	31.70	31.79	31.79
	7	31.84	31.70	31.79	31.80
	8	31.84	31.72	31.80	31.81
	9	31.75	31.62	31.67	31.75
	10	31.83	31.71	31.78	31.81
	11	31.87	31.75	31.81	31.88
	12	31.93	31.81	31.91	31.94
	13	31.67	31.56	31.64	31.70
	14	31.98	31.91	31.94	32.02
	15	31.91	31.82	31.88	31.98
	16	31.86	31.77	31.84	31.91
	17	32.05	31.99	32.04	32.06
	18	31.79	31.72	31.78	31.85
	19	31.76	31.70	31.79	31.82
	20	32.00	31.95	32.02	32.05
	21	31.89	31.84	31.94	31.94
	22	31.96	31.95	31.99	32.00
	23	31.90	31.86	31.94	31.94
	24	31.92	31.88	31.96	31.97
	25	31.62	31.53	31.69	31.67
	26	31.53	31.49	31.60	31.59
	27	31.44	31.40	31.51	31.51
	28	31.45	31.38	31.50	31.51
	29	31.83	31.77	31.89	31.87
	30	31.75	31.69	31.84	31.79
	31	31.83	31.80	31.93	31.88
	32	32.05	32.02	32.15	32.11

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Lowest	33	31.85	31.48	31.59	31.59
	34	31.65	31.33	31.41	31.41
	35	31.75	31.41	31.48	31.52
	36	31.85	31.58	31.60	31.62
	37	31.96	31.67	31.70	31.72
	38	32.16	31.88	31.91	31.97
	39	31.76	31.54	31.51	31.55
	40	31.95	31.67	31.68	31.72
	41	31.59	31.36	31.34	31.41
	42	31.94	31.73	31.68	31.80
	43	31.68	31.49	31.40	31.51
	44	31.79	31.61	31.54	31.67
	45	31.95	31.82	31.71	31.83
	46	32.07	31.90	31.80	31.95
	47	31.77	31.64	31.54	31.65
	48	31.73	31.59	31.47	31.62
	49	31.72	31.56	31.44	31.59
	50	31.91	31.75	31.67	31.80
	51	31.86	31.71	31.60	31.74
	52	31.90	31.74	31.66	31.80
	53	31.94	31.78	31.69	31.83
	54	31.72	31.56	31.48	31.66
	55	31.72	31.59	31.49	31.63
	56	31.79	31.65	31.55	31.70
	57	31.72	31.59	31.50	31.62
	58	31.85	31.69	31.64	31.75
	59	31.62	31.46	31.41	31.52
	60	31.84	31.67	31.62	31.73
	61	31.76	31.62	31.55	31.67
	62	31.75	31.65	31.54	31.65
	63	32.06	31.91	31.85	31.97
	64	31.95	31.82	31.65	31.87
Total MIMO Conducted Power (mW)		97453.47	94341.01	94752.27	96071.96
Total MIMO Conducted Power (dBm)		49.89	49.75	49.77	49.83
Antenna Gain (dBi)		26	26	26	26
MIMO EIRP (dBm)		75.89	75.75	75.77	75.83
EIRP Limit (dBm)		85.04	85.04	85.04	85.04
Margin (dB)		-9.15	-9.29	-9.28	-9.22

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Middle	1	31.80	31.97	31.80	32.02
	2	31.77	31.95	31.81	32.00
	3	31.93	32.08	31.96	32.15
	4	32.02	32.16	32.05	32.25
	5	31.75	31.91	31.79	31.97
	6	31.89	32.03	31.93	32.11
	7	31.93	32.09	31.96	32.15
	8	31.94	32.10	31.99	32.16
	9	31.83	32.01	31.87	32.07
	10	31.85	32.03	31.90	32.09
	11	31.93	32.10	31.97	32.17
	12	32.01	32.16	32.06	32.23
	13	31.70	31.87	31.75	31.94
	14	32.09	32.25	32.15	32.36
	15	31.93	32.08	31.99	32.18
	16	31.93	32.10	32.00	32.19
	17	32.05	32.21	32.13	32.31
	18	31.86	31.99	31.91	32.09
	19	31.88	32.04	31.96	32.12
	20	31.97	32.14	32.05	32.22
	21	31.97	32.12	32.02	32.19
	22	32.07	32.21	32.11	32.27
	23	31.99	32.13	32.04	32.22
	24	32.20	32.15	32.06	32.23
	25	31.71	31.88	31.79	31.95
	26	31.60	31.77	31.68	31.83
	27	31.45	31.62	31.53	31.69
	28	31.42	31.58	31.50	31.66
	29	31.84	32.00	31.93	32.09
	30	31.90	32.06	32.00	32.17
	31	31.88	32.05	31.98	32.15
	32	32.10	32.26	32.20	32.38

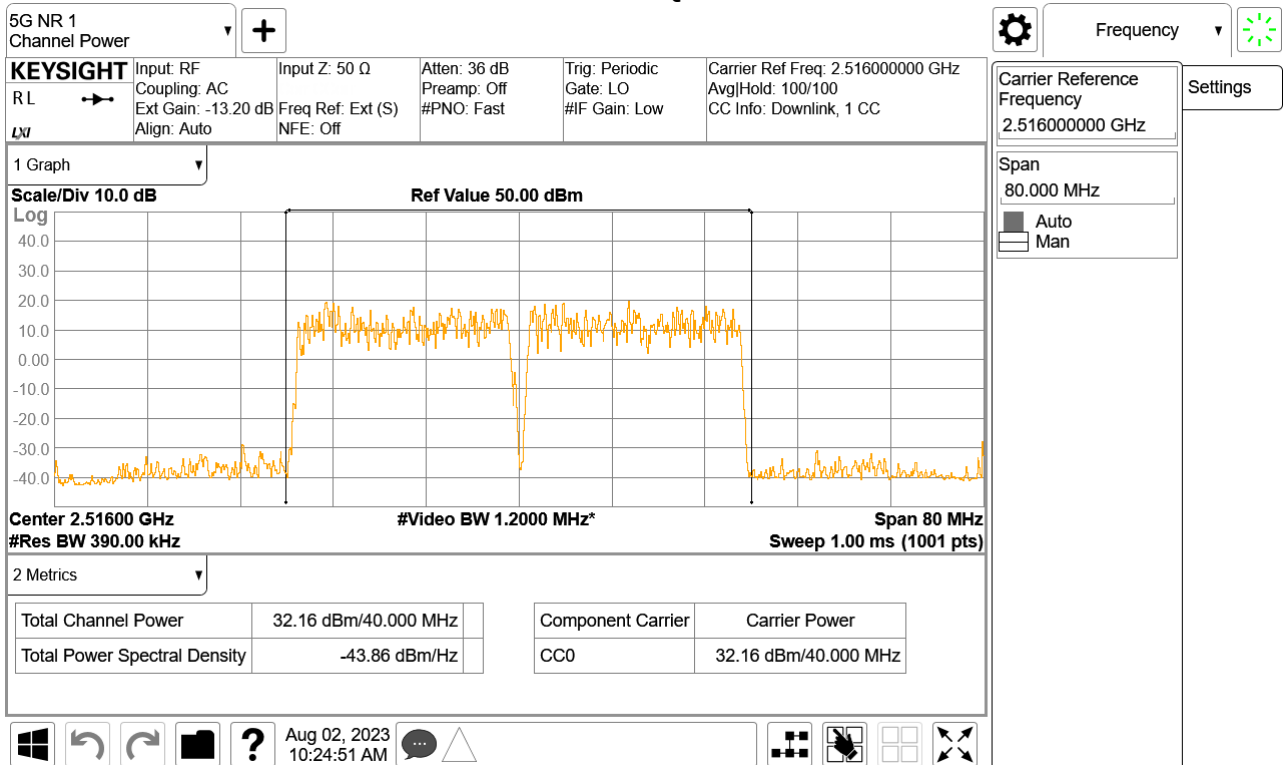
Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Middle	33	32.06	31.77	31.54	31.93
	34	32.01	31.70	31.47	31.81
	35	31.97	31.67	31.41	31.74
	36	32.20	31.83	31.59	31.93
	37	32.28	31.89	31.70	32.01
	38	32.60	32.17	31.96	32.30
	39	32.31	31.98	31.72	32.07
	40	32.37	31.94	31.74	32.06
	41	31.93	31.55	31.28	31.63
	42	32.37	31.97	31.69	32.04
	43	32.13	31.71	31.43	31.78
	44	32.23	31.81	31.54	31.89
	45	32.44	31.94	31.70	32.10
	46	32.49	32.04	31.77	32.13
	47	32.27	31.78	31.54	31.90
	48	32.39	31.90	31.66	32.01
	49	32.15	31.66	31.40	31.74
	50	32.37	31.89	31.63	31.96
	51	32.41	31.92	31.69	32.01
	52	32.40	31.89	31.67	31.98
	53	32.43	31.95	31.68	32.01
	54	32.29	31.77	31.56	31.87
	55	32.30	31.79	31.57	31.89
	56	32.34	31.85	31.59	31.92
	57	32.16	31.63	31.43	31.74
	58	32.28	31.76	31.54	31.85
	59	32.14	31.59	31.41	31.73
	60	32.37	31.85	31.64	31.94
	61	32.31	31.74	31.56	31.90
	62	32.28	31.72	31.54	31.87
	63	32.37	31.84	31.64	31.96
	64	32.45	31.88	31.71	32.02
Total MIMO Conducted Power (mW)		103563.6	99881.65	96187.92	102003.5
Total MIMO Conducted Power (dBm)		50.15	49.99	49.83	50.09
Antenna Gain (dBi)		26	26	26	26
MIMO EIRP (dBm)		76.15	75.99	75.83	76.09
EIRP Limit (dBm)		85.04	85.04	85.04	85.04
Margin (dB)		-8.89	-9.05	-9.21	-8.96

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Highest	1	31.83	31.95	32.05	31.92
	2	31.85	31.98	32.07	31.91
	3	31.98	32.06	32.18	32.03
	4	32.08	32.17	32.29	32.14
	5	31.85	31.99	32.06	31.93
	6	31.91	32.02	32.12	31.98
	7	32.02	32.12	32.20	32.05
	8	31.94	32.07	32.14	31.99
	9	31.98	32.13	32.15	32.00
	10	31.96	32.08	32.13	31.99
	11	32.00	32.12	32.16	32.06
	12	32.17	32.30	32.32	32.18
	13	31.82	31.94	31.97	31.83
	14	32.23	32.36	32.39	32.24
	15	32.11	32.22	32.27	32.18
	16	32.08	32.17	32.25	32.12
	17	32.16	32.27	32.36	32.21
	18	31.94	32.04	32.14	31.97
	19	32.00	32.11	32.20	32.04
	20	32.05	32.15	32.25	32.09
	21	32.08	32.18	32.28	32.11
	22	32.11	32.20	32.32	32.15
	23	32.14	32.20	32.30	32.14
	24	32.13	32.22	32.32	32.16
	25	31.96	32.00	32.13	31.96
	26	31.68	31.72	31.86	31.68
	27	31.57	31.62	31.73	31.57
	28	31.46	31.52	31.63	31.46
	29	31.96	31.99	32.11	31.94
	30	32.05	32.09	32.20	32.05
	31	32.02	32.09	32.18	32.04
	32	32.23	32.30	32.37	32.24

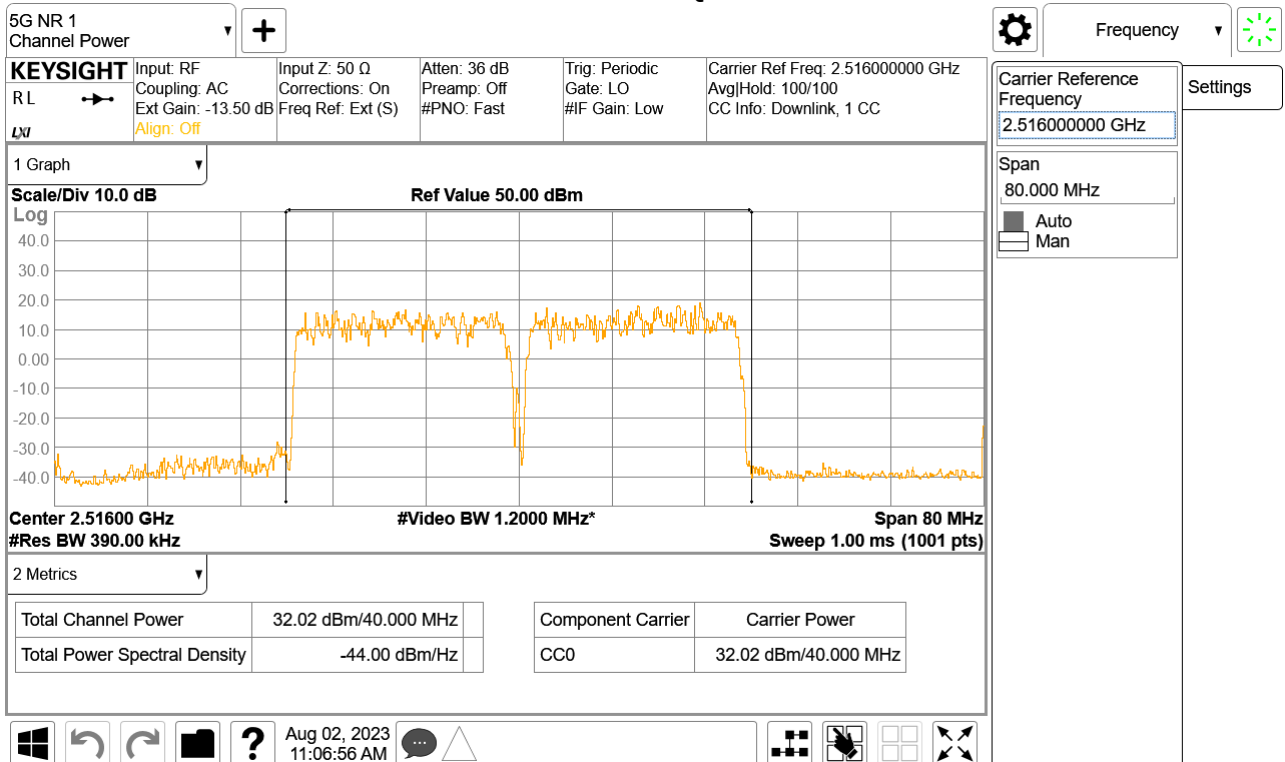
Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Highest	33	31.91	31.88	31.52	32.04
	34	32.01	31.92	31.61	32.12
	35	32.00	31.97	31.60	32.10
	36	32.06	32.00	31.62	32.13
	37	32.14	32.03	31.77	32.23
	38	32.50	32.38	32.08	32.56
	39	32.12	32.10	31.70	32.21
	40	32.11	32.03	31.67	32.19
	41	31.82	31.78	31.34	31.89
	42	32.20	32.10	31.74	32.28
	43	31.98	31.93	31.52	32.06
	44	32.17	32.12	31.70	32.26
	45	32.21	32.11	31.73	32.27
	46	32.22	32.13	31.73	32.28
	47	32.11	32.06	31.63	32.18
	48	32.18	32.03	31.66	32.21
	49	31.95	31.82	31.46	32.00
	50	32.09	32.06	31.61	32.15
	51	32.25	32.18	31.75	32.30
	52	32.20	32.11	31.71	32.29
	53	32.22	32.13	31.70	32.25
	54	32.13	31.97	31.67	32.17
	55	32.11	31.97	31.62	32.17
	56	32.17	32.03	31.67	32.22
	57	31.93	31.79	31.45	31.99
	58	32.09	31.94	31.59	32.14
	59	31.89	31.81	31.40	31.95
	60	32.16	32.02	31.65	32.21
	61	32.15	31.98	31.67	32.20
	62	32.17	32.04	31.68	32.21
	63	32.12	32.02	31.62	32.17
	64	32.24	32.12	31.74	32.31
Total MIMO Conducted Power (mW)		102592.9	102578.2	99409.85	103765.7
Total MIMO Conducted Power (dBm)		50.11	50.11	49.97	50.16
Antenna Gain (dBi)		26	26	26	26
MIMO EIRP (dBm)		76.11	76.11	75.97	76.16
EIRP Limit (dBm)		85.04	85.04	85.04	85.04
Margin (dB)		-8.93	-8.93	-9.07	-8.88

See next pages for actual measured spectrum plots.

Lowest QPSK



Lowest 16QAM





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Lowest 64QAM



Lowest 256QAM

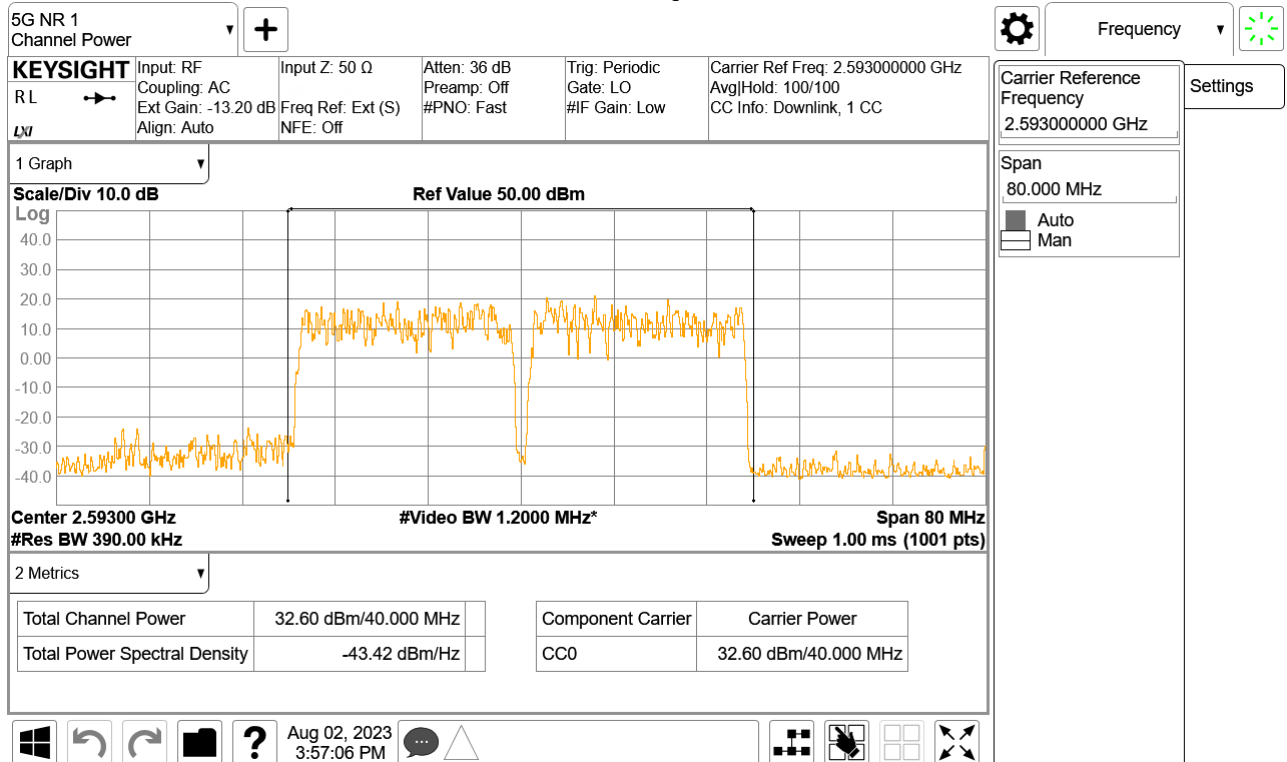




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Middle QPSK



Middle 16QAM

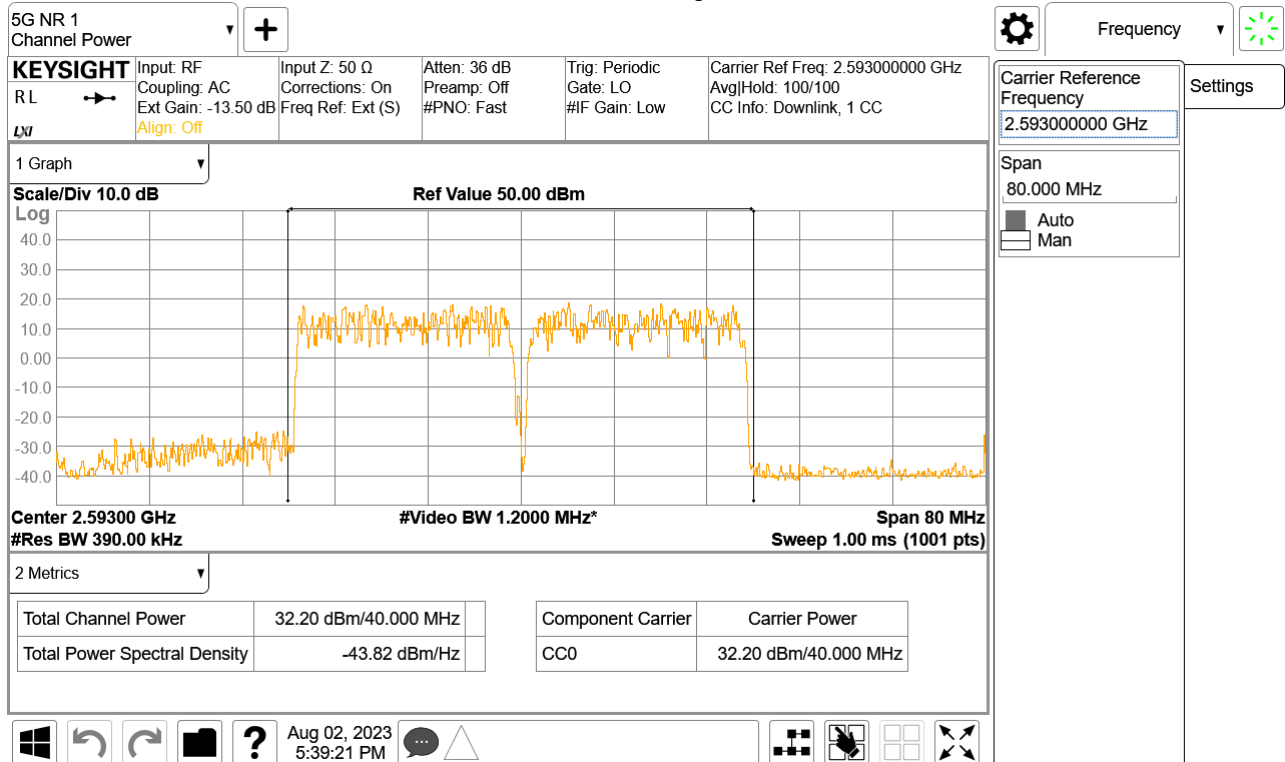




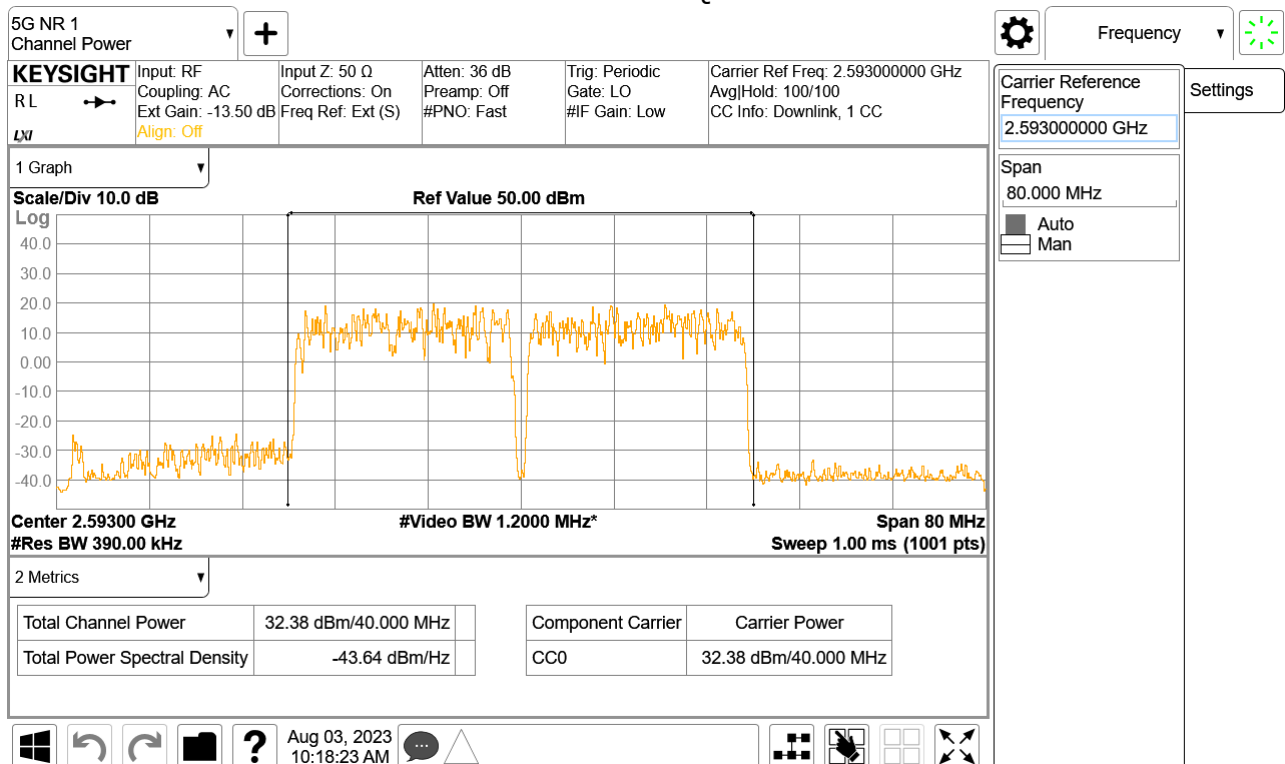
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Middle 64QAM



Middle 256QAM

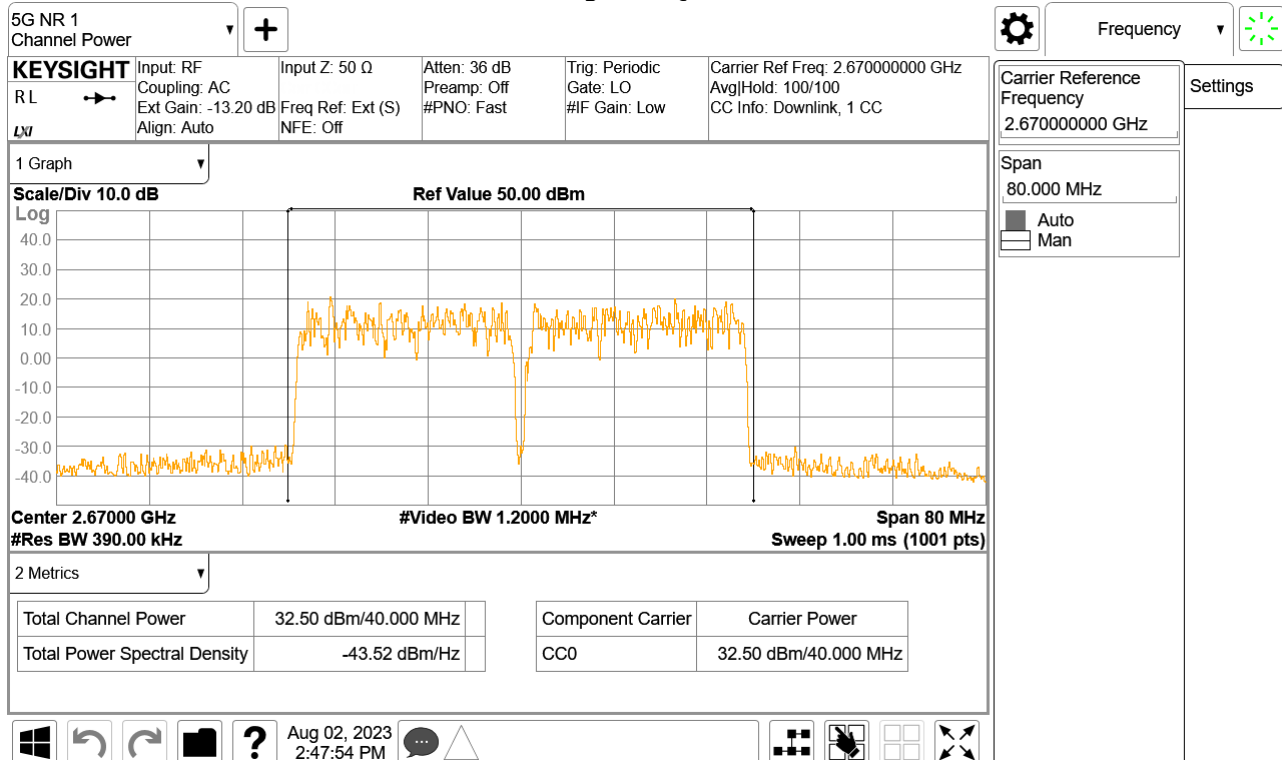




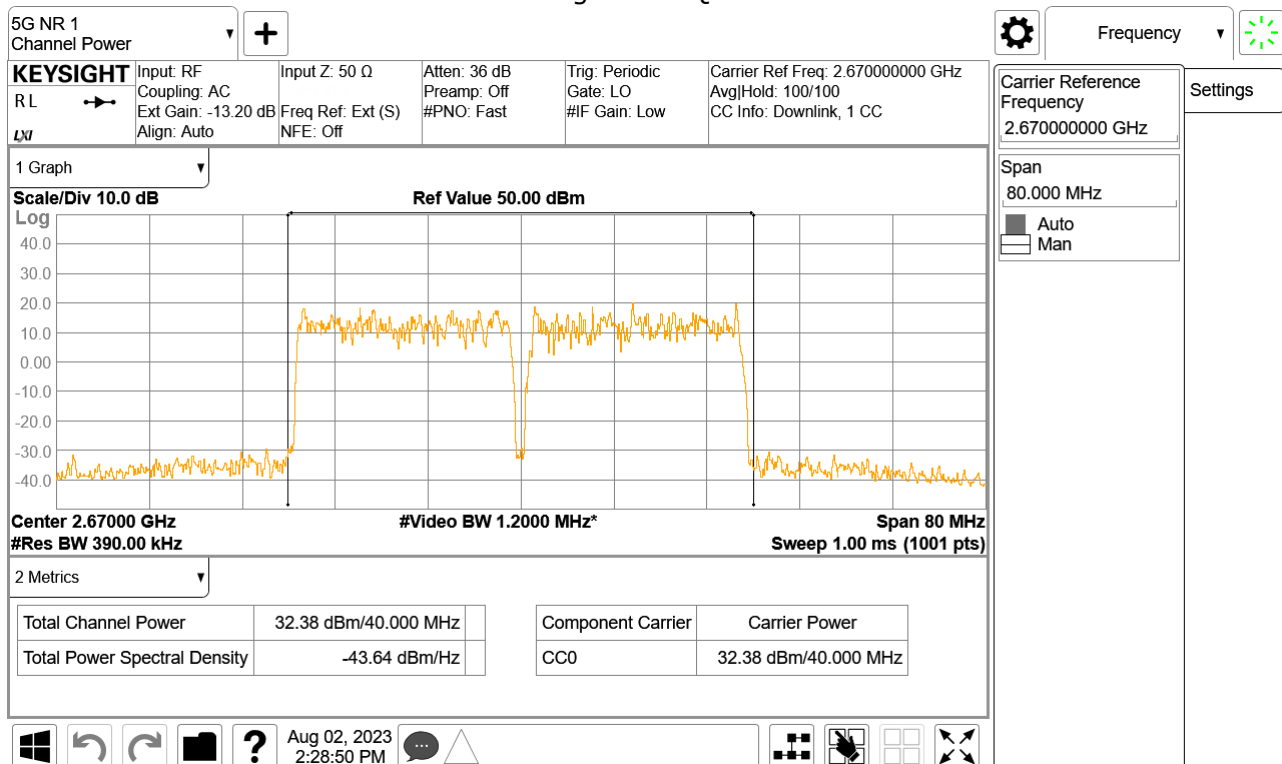
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Highest QPSK



Highest 16QAM

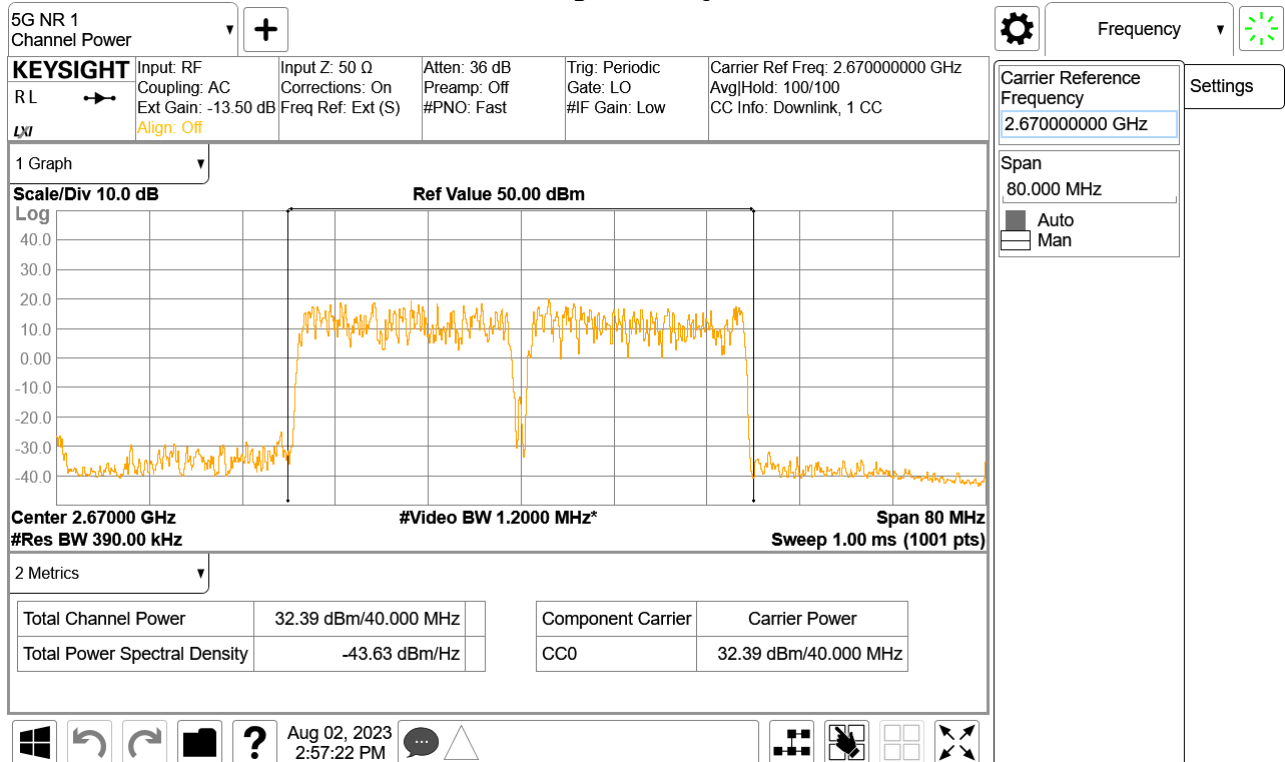




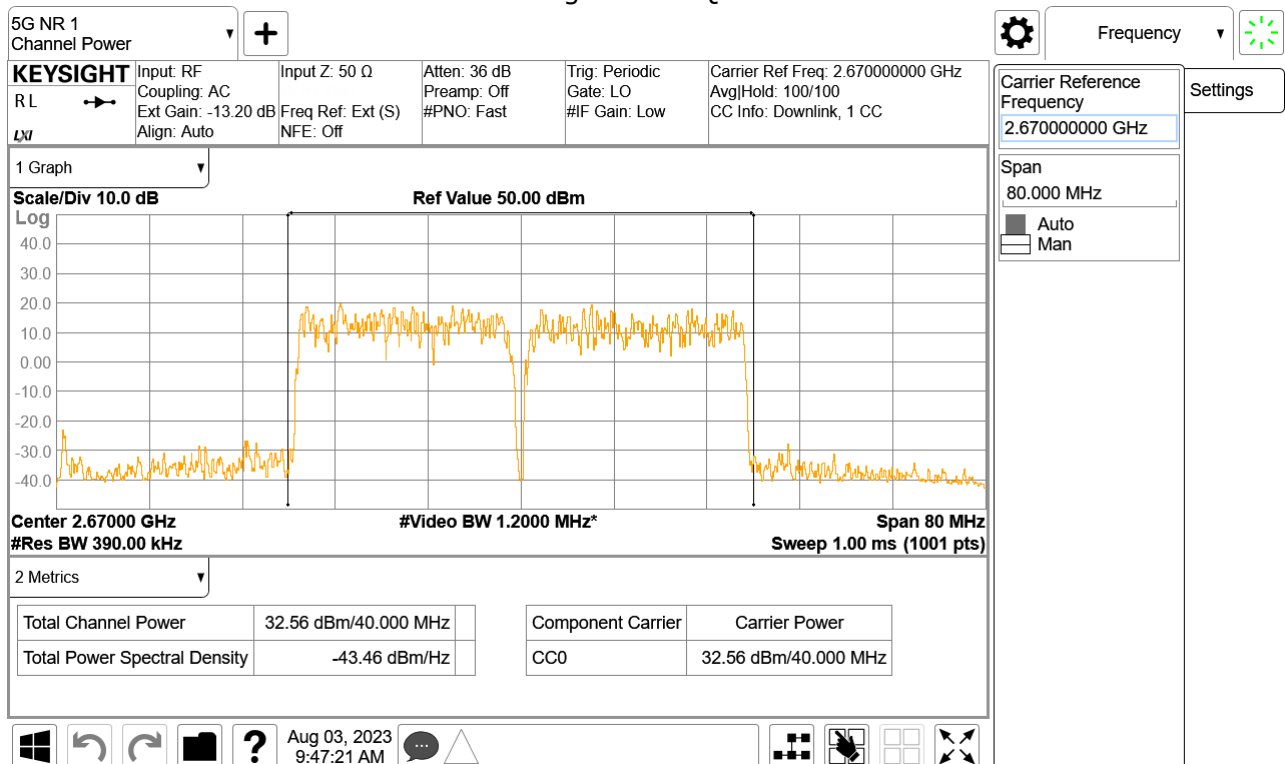
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Highest 64QAM



Highest 256QAM



Test mode : 5G NR 1C 40 MHz+LTE 2C 20+20 MHz Contiguous

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Lowest	1	34.70	34.75	34.78	34.85
	2	34.70	34.70	34.70	34.75
	3	34.95	34.90	34.95	35.00
	4	34.92	34.88	34.93	34.99
	5	34.75	34.74	34.76	34.84
	6	34.88	34.80	34.87	34.87
	7	34.89	34.87	34.87	34.93
	8	34.88	34.80	34.86	34.87
	9	34.81	34.74	34.80	35.07
	10	34.88	34.79	34.89	35.10
	11	34.94	34.86	34.91	35.16
	12	35.07	35.01	35.07	35.32
	13	34.77	34.72	34.71	34.97
	14	35.01	34.94	35.00	35.24
	15	34.97	34.91	34.98	35.22
	16	34.92	34.88	34.91	35.17
	17	35.11	35.04	35.10	35.31
	18	34.80	34.74	34.79	35.02
	19	34.84	34.78	34.85	35.09
	20	34.97	34.92	34.96	35.23
	21	34.96	34.90	34.97	35.18
	22	34.99	34.95	35.00	35.26
	23	34.93	34.89	34.98	35.20
	24	34.96	34.90	35.00	35.22
	25	34.70	34.66	34.75	34.96
	26	34.55	34.51	34.58	34.79
	27	34.51	34.46	34.49	34.73
	28	34.44	34.45	34.45	34.69
	29	34.85	34.80	34.89	35.08
	30	34.81	34.80	34.81	35.04
	31	34.86	34.80	34.86	35.07
	32	35.06	35.03	35.06	35.27

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Lowest	33	34.94	34.89	35.04	35.06
	34	34.83	34.76	34.78	34.87
	35	34.84	34.81	34.85	34.96
	36	35.01	34.98	35.02	35.12
	37	35.08	35.07	35.07	35.20
	38	35.29	35.22	35.27	35.43
	39	34.98	34.95	34.96	35.09
	40	35.05	34.97	35.01	35.12
	41	34.78	34.74	34.75	34.88
	42	35.15	35.06	35.12	35.21
	43	34.86	34.81	34.85	34.95
	44	34.95	34.86	34.92	35.03
	45	35.13	35.08	35.08	35.21
	46	35.20	35.14	35.15	35.27
	47	34.95	34.94	34.92	35.04
	48	34.93	34.90	34.95	35.03
	49	34.82	34.76	34.80	34.95
	50	35.02	34.94	34.98	35.11
	51	35.00	34.93	35.00	35.09
	52	35.03	34.96	35.01	35.12
	53	35.07	34.99	35.05	35.19
	54	34.88	34.86	34.87	34.99
	55	34.87	34.83	34.86	34.99
	56	34.93	34.88	34.91	35.03
	57	34.88	34.84	34.85	34.95
	58	34.99	34.91	34.97	35.05
	59	34.81	34.75	34.77	34.88
	60	34.98	34.91	34.98	35.08
	61	34.95	34.89	34.94	35.05
	62	34.94	34.89	34.93	35.04
	63	35.15	35.09	35.12	35.24
	64	35.09	35.04	35.07	35.19
Total MIMO Conducted Power (mW)		198726.0	196444.4	198445.7	205380.0
Total MIMO Conducted Power (dBm)		52.98	52.93	52.98	53.13
Antenna Gain (dBi)		26	26	26	26
MIMO EIRP (dBm)		78.98	78.93	78.98	79.13
EIRP Limit (dBm)		88.05	88.05	88.05	88.05
Margin (dB)		-9.07	-9.12	-9.08	-8.93

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Middle	1	34.87	34.88	34.92	34.87
	2	34.81	34.85	34.82	34.86
	3	35.02	35.05	35.06	35.06
	4	34.99	35.07	35.05	35.05
	5	34.80	34.87	34.87	34.87
	6	34.90	34.93	34.93	34.93
	7	34.96	35.00	35.00	34.99
	8	34.91	34.95	34.96	34.95
	9	34.93	34.92	34.95	34.94
	10	34.92	34.93	34.92	34.92
	11	35.03	35.03	35.00	35.02
	12	35.11	35.12	35.11	35.12
	13	34.86	34.82	34.79	34.80
	14	35.17	35.17	35.15	35.12
	15	35.11	35.05	35.05	35.06
	16	35.01	35.04	34.97	34.99
	17	35.17	35.15	35.14	35.19
	18	34.89	34.84	34.82	34.86
	19	35.02	34.97	34.95	35.00
	20	35.09	35.04	35.00	35.06
	21	35.09	35.07	35.03	35.12
	22	35.12	35.10	35.08	35.12
	23	35.09	35.07	35.05	35.09
	24	35.09	35.08	35.05	35.09
	25	34.84	34.84	34.79	34.84
	26	34.66	34.66	34.62	34.65
	27	34.57	34.58	34.54	34.56
	28	34.50	34.50	34.47	34.49
	29	34.96	34.96	34.94	34.94
	30	35.00	34.98	34.96	34.97
	31	35.01	34.99	34.98	34.98
	32	35.19	35.18	35.16	35.16

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Middle	33	34.79	34.94	34.98	34.92
	34	34.73	34.83	34.87	34.85
	35	34.69	34.82	34.86	34.85
	36	34.90	35.03	35.07	35.00
	37	35.00	35.06	35.10	35.06
	38	35.25	35.31	35.35	35.32
	39	35.06	35.09	35.12	35.10
	40	34.97	35.02	35.06	35.05
	41	34.67	34.75	34.73	34.69
	42	35.09	35.10	35.10	35.10
	43	34.79	34.81	34.83	34.79
	44	34.92	34.92	34.91	34.91
	45	35.07	35.08	35.06	35.04
	46	35.06	35.12	35.08	35.07
	47	34.91	34.93	34.92	34.93
	48	35.02	35.04	35.03	35.03
	49	34.74	34.77	34.73	34.75
	50	34.91	34.91	34.90	34.93
	51	35.07	35.02	35.00	35.04
	52	35.01	35.02	34.98	35.02
	53	35.05	35.04	35.01	35.05
	54	34.90	34.92	34.87	34.91
	55	34.93	34.91	34.88	34.92
	56	34.94	34.93	34.91	34.94
	57	34.79	34.78	34.77	34.81
	58	34.88	34.85	34.82	34.86
	59	34.76	34.74	34.71	34.74
	60	35.01	34.94	34.93	34.96
	61	34.96	34.93	34.90	34.93
	62	34.95	34.91	34.90	34.91
	63	35.03	34.99	34.97	35.00
	64	35.07	35.04	35.02	35.05
Total MIMO Conducted Power (mW)		200049.3	200491.3	199967.9	200467.1
Total MIMO Conducted Power (dBm)		53.01	53.02	53.01	53.02
Antenna Gain (dBi)		26	26	26	26
MIMO EIRP (dBm)		79.01	79.02	79.01	79.02
EIRP Limit (dBm)		88.05	88.05	88.05	88.05
Margin (dB)		-9.04	-9.03	-9.04	-9.03

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Highest	1	34.95	34.85	34.80	34.93
	2	34.84	34.76	34.76	34.82
	3	35.05	34.99	34.91	35.08
	4	35.08	35.00	34.93	35.07
	5	34.88	34.85	34.75	34.90
	6	34.90	34.81	34.77	34.87
	7	35.13	34.97	34.88	35.02
	8	35.07	34.89	34.83	34.96
	9	35.09	34.91	34.85	34.96
	10	35.06	34.87	34.82	34.92
	11	35.13	34.96	34.90	35.04
	12	35.33	35.13	35.09	35.22
	13	35.04	34.83	34.77	34.85
	14	35.36	35.15	35.12	35.24
	15	35.27	35.06	35.01	35.11
	16	35.19	34.99	34.95	35.06
	17	35.28	35.08	35.06	35.12
	18	34.97	34.78	34.74	34.87
	19	35.13	34.93	34.91	35.00
	20	35.17	34.96	34.94	35.05
	21	35.24	35.01	34.98	35.14
	22	35.24	35.04	35.03	35.12
	23	35.26	35.03	35.00	35.12
	24	35.25	35.02	35.03	35.12
	25	35.04	34.81	34.78	34.92
	26	34.79	34.57	34.56	34.67
	27	34.68	34.48	34.45	34.60
	28	34.64	34.41	34.36	34.53
	29	35.10	34.91	34.84	35.00
	30	35.10	34.94	34.88	35.06
	31	35.12	34.95	34.90	35.04
	32	35.33	35.14	35.08	35.24

Channel	Port	Conducted Average Output Power (dBm)			
		QPSK	16QAM	64QAM	256QAM
Highest	33	34.92	34.86	34.87	34.93
	34	34.90	34.83	34.90	34.91
	35	34.84	34.81	34.83	34.87
	36	34.98	34.88	34.90	34.97
	37	35.08	35.02	35.06	35.09
	38	35.44	35.35	35.38	35.43
	39	35.07	35.00	35.04	35.07
	40	35.01	34.92	35.00	35.00
	41	34.68	34.65	34.68	34.71
	42	35.07	35.03	35.06	35.10
	43	34.85	34.81	34.88	34.86
	44	35.02	34.99	35.03	35.06
	45	35.09	35.06	35.06	35.10
	46	35.07	35.00	35.03	35.03
	47	34.96	34.90	34.97	34.99
	48	35.00	34.94	35.00	35.04
	49	34.76	34.69	34.75	34.74
	50	34.89	34.82	34.88	34.86
	51	35.04	34.98	35.07	35.03
	52	35.07	35.00	35.05	35.05
	53	34.98	34.92	34.97	34.98
	54	34.93	34.86	34.92	34.91
	55	34.94	34.88	34.94	34.98
	56	34.96	34.89	34.95	34.94
	57	34.81	34.76	34.79	34.82
	58	34.84	34.79	34.84	34.84
	59	34.71	34.65	34.70	34.71
	60	34.95	34.91	34.95	34.95
	61	34.97	34.92	34.96	34.98
	62	34.94	34.90	34.94	34.95
	63	34.93	34.89	34.92	34.94
	64	35.06	35.01	35.05	35.07
Total MIMO Conducted Power (mW)		203615.8	198183.7	198227.2	201462.3
Total MIMO Conducted Power (dBm)		53.09	52.97	52.97	53.04
Antenna Gain (dBi)		26	26	26	26
MIMO EIRP (dBm)		79.09	78.97	78.97	79.04
EIRP Limit (dBm)		88.05	88.05	88.05	88.05
Margin (dB)		-8.96	-9.08	-9.08	-9.01

See next pages for actual measured spectrum plots.