



RF TEST REPORT

Applicant ZTE Corporation
FCC ID SRQ-ZTEA2322G
Product 5G Digital Mobile Phone
Model ZTE A2322G
Report No. R2105A0447-R4
Issue Date August 11, 2021

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 2 (2020)/ FCC CFR47 Part 27C (2020)**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

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Summary of Measurement Results

Number	Test Case	Clause in FCC rules	Verdict
1	RF Power Output and Effective Isotropic Radiated Power	2.1046 /27.50(d)(4) /27.50(h)(2)	PASS
2	Occupied Bandwidth	2.1049	PASS
3	Band Edge Compliance	27.53(h) /27.53(m)	PASS
4	Peak-to-Average Power Ratio	27.50(d)/KDB971168 D01(5.7)	PASS
5	Frequency Stability	2.1055 / 27.54	PASS
6	Spurious Emissions at Antenna Terminals	2.1051 /27.53(h) /27.53(m)	PASS
7	Radiates Spurious Emission	2.1053 /27.53(h) /27.53(m)	PASS

Date of Testing: May 26, 2021 ~ July 19, 2021

Date of Sample Received: May 25, 2021

Note: PASS: The EUT complies with the essential requirements in the standard.

FAIL: The EUT does not comply with the essential requirements in the standard.

All indications of Pass/Fail in this report are opinions expressed by TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.



1 Test Laboratory

1.1 Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **TA technology (shanghai) co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein .Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2. Test facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform measurements.

A2LA (Certificate Number: 3857.01)

TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform measurement.

1.3 Testing Location

Company: TA Technology (Shanghai) Co., Ltd.
Address: No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China
City: Shanghai
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2 General Description of Equipment under Test

2.1 Applicant and Manufacturer Information

Applicant	ZTE Corporation
Applicant address	ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China
Manufacturer	ZTE Corporation
Manufacturer address	ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China

2.2 General information

EUT Description			
Model	ZTE A2322G		
IMEI	IMEI 1: 867210050001095 IMEI 2:867210050002697		
Hardware Version	ZTE A2322GHW1.0		
Software Version 1	GEN_NA_A2322G_V1.0		
Software Version 2	TEL_MX_ZTE_A2322G_V1.0		
Power Supply	Battery / AC adapter		
Antenna Type	Internal Antenna		
Antenna Gain	Mode	Gain(dBi)	
	NR n41	-1.4	
	NR n66	-3.1	
NSA Band	DC_66A-n41A, DC_2A-12A_n66A,DC_12A-n66A,DC_2A_n66A		
SA Band	NR n41, NR n66		
Test Modulation	CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM; DFT-s OFDM: PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM		
Maximum E.I.R.P./ E.R.P.	NR n41:	23.28 dBm	
	DC_66A-n41A;	24.81 dBm	
	NR n66	21.85 dBm	
	DC_12A-n66A	21.54 dBm	
Rated Power Supply Voltage	3.87V		
Operating Voltage	Minimum: 3.6V Maximum: 4.2V		
Operating Temperature	Lowest: -10°C Highest: +45°C		
Extreme Temperature	Lowest: -30°C Highest: +50°C		
Operating Frequency Range(s)	Mode	Tx (MHz)	Rx (MHz)
	NR n41	2496~2690	2496~2690



	NR n66	1710~1780	2110~2200
EUT Accessory			
Adapter	Manufacturer: ShenZhen KunXing Technology Co., Ltd. Model: STC-A59152050AC-Z		
Battery	Manufacturer: Ningde Amperex Technology Limited Model: Li3941T44PGh836548		
Earphone 1	Manufacturer: Shen zhen FDC Electronic Co.,Ltd. Model: DEM-9B		
Earphone 2	Manufacturer: JUWEI ELECTRONICS CO.,LTD Model: JWEP1092-Z01		
USB Cable 1	Manufacturer: King Power Electronics Co.,Ltd Model: TC20-TC20-W-100-M-6A-HSF		
USB Cable 2	Manufacturer: Luxshare-ICT Co., Ltd Model: TC20-TC20-W-100-M-6A-HSF		
Type-C to 3.5 mm Headphone Jack Adapter	Manufacture: HUIZHOU JUWEI ELECTRONICS CO. ,LTD Model: JWUB1389-Z01		
<p>Note: 1. The EUT is sent from the applicant to TA and the information of the EUT is declared by the applicant.</p> <p>2. There is more than one SIM /USB cable/ Earphone, each one should be applied throughout the compliance test respectively, and however, only the worst case (USB cable 1/ Earphone 2) will be recorded in this report.</p> <p>3. The two different software versions are for different market requirement.</p>			



3 Applied Standards

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

Test standards:

FCC CFR47 Part 27C (2020)

ANSI C63.26 (2015)

Reference standard:

FCC CFR47 Part 2 (2020)

KDB 971168 D01 Power Meas License Digital Systems v03r01

4 Test Configuration

There is more than one SIM card slot, each one should be applied throughout the compliance test respectively, and however, only the worst case (SIM 1) will be recorded in this report

Radiated measurements are performed by rotating the EUT in three different orthogonal test planes. EUT stand-up position (Z axis), lie-down position (X, Y axis). Receiver antenna polarization (horizontal and vertical), the worst emission was found in position (X axis, horizontal polarization) and the worst case was recorded.

All mode and data rates and positions and RB size and modulations were investigated.

Subsequently, only the worst case emissions are reported.

The following testing in NR is set based on the maximum RF Output Power.

The following testing in different Bandwidth is set to detail in the following table:

Test modes are chosen to be reported as the worst case configuration below:



Test modes are chosen to be reported as the worst case configuration below for NR n41/NR n66:

Test items	Mode	Bandwidth (MHz)							Modulation					RB			Test Channel			
		5	10	15	20	40	60	100	PI/2 BPSK	QPSK	16 QAM	64 QAM	256 QAM	1	50%	100%	L	M	H	
RF Power Output and Effective Isotropic Radiated Power	NR n41	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DC_66A-n41A	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NR n66	0	0	0	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
	DC_12A-n66A	0	0	0	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
Occupied Bandwidth	NR n41	-	-	-	-	-	-	0	0	0	0	0	0	0	-	0	0	0	0	0
	DC_66A-n41A	-	-	-	0	-	-	0	0	0	0	0	0	0	-	0	0	0	0	0
	NR n66	-	-	-	0	-	-	-	0	0	0	0	0	0	-	0	0	0	0	0
	DC_12A-n66A	-	-	-	0	-	-	-	0	0	0	0	0	0	-	0	0	0	0	0
Band Edge Compliance	NR n41	-	-	-	-	-	-	0	0	0	0	0	0	0	-	0	0	0	-	0
	DC_66A-n41A	-	-	-	0	-	-	0	0	0	0	0	0	0	-	0	0	0	-	0
	NR n66	-	-	-	0	-	-	-	0	0	0	0	0	0	-	0	0	0	-	0
	DC_12A-n66A	-	-	-	0	-	-	-	0	0	0	0	0	0	-	0	0	0	-	0
Peak-to-Average Power Ratio	NR n41	-	-	-	-	-	-	0	0	0	0	0	0	-	-	0	0	0	0	0
	DC_66A-n41A	-	-	-	0	-	-	-	0	0	0	0	0	-	-	0	0	0	0	0
	NR n66	-	-	-	0	-	-	-	0	0	0	0	0	-	-	0	0	0	0	0
	DC_12A-n66A	-	-	-	0	-	-	-	0	0	0	0	0	-	-	0	0	0	0	0
Frequency Stability	NR n41	-	-	-	0	0	0	0	-	0	0	0	0	-	-	-	-	0	-	-
	DC_66A-n41A	-	-	-	0	0	0	0	-	0	0	0	0	-	-	-	-	0	-	-
	NR n66	0	0	0	0	-	-	-	-	0	0	0	0	-	-	-	-	0	-	-
	DC_12A-n66A	0	0	0	0	-	-	-	-	0	0	0	0	-	-	-	-	0	-	-
Spurious Emissions at Antenna Terminals	NR n41	-	-	-	-	-	-	0	0	0	0	0	0	-	-	-	0	0	0	0
	DC_66A-n41A	-	-	-	0	-	-	-	0	0	0	0	0	-	-	-	0	0	0	0
	NR n66	-	-	-	0	-	-	-	0	0	0	0	0	-	-	-	0	0	0	0
	DC_12A-n66A	-	-	-	0	-	-	-	0	0	0	0	0	-	-	-	0	0	0	0
Radiates Spurious Emission	NR n41	-	-	-	0	0	-	0	-	0	-	-	-	-	-	-	-	0	-	-
	DC_66A-n41A	-	-	-	0	0	-	0	-	0	-	-	-	-	-	-	-	0	-	-
	NR n66	0	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-
	DC_12A_n6 6A	0	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-
Note	<p>1. The mark "O" means that this configuration is chosen for testing.</p> <p>2. The mark "-" means that this configuration is not testing.</p> <p>3. Sub 6GHz operates using 15kHz Subcarrier Spacing with both CP-OFDM and DFT-s OFDM waveforms. The band supports PI/2 BPSK ,QPSK, 16QAM, 64QAM, and 256QAM modulation. The test data provided in this report represents the worst case configurations.</p>																			

5 Test Case Results

5.1 RF Power Output and Effective Isotropic Radiated Power

Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Methods of Measurement

During the process of the testing, The EUT was connected to the Base Station Simulator with a known loss. The EUT is controlled by the Base Station Simulator test set to ensure max power transmission with proper modulation.

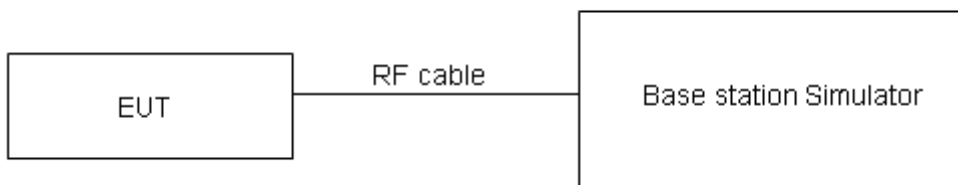
ERP can then be calculated as follows:

$$\text{EIRP (dBm)} = \text{Output Power (dBm)} - \text{Losses (dB)} + \text{Antenna Gain (dBi)}$$

where:dBd refers to gain relative to an ideal dipole.

$$\text{EIRP (dBm)} = \text{ERP (dBm)} + 2.15 \text{ (dB.)}$$

Test Setup



Limits

No specific RF power output requirements in part 2.1046.

Rule Part 27.50(b) (10) specifies that “Portable stations (hand-held devices) transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands are limited to 3 watts ERP”

Rule Part 27.50(c) (10) specifies that “Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP”

Rule Part 27.50(d) (4) specifies that “Fixed, mobile and portable (hand-held) stations operating in the 1710–1755 MHz band are limited to 1 watt EIRP”

Rule Part 27.50(h) (2) specifies that “Mobile and other user stations. Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.”

Rule Part 27.50(a) (3) specifies that “(i) For mobile and portable stations transmitting in the



2305-2315 MHz band or the 2350-2360 MHz band, the average EIRP must not exceed 50 milliwatts within any 1 megahertz of authorized bandwidth, except that for mobile and portable stations compliant with 3GPP LTE standards or another advanced mobile broadband protocol that avoids concentrating energy at the edge of the operating band the average EIRP must not exceed 250 milliwatts within any 5 megahertz of authorized bandwidth but may exceed 50 milliwatts within any 1 megahertz of authorized bandwidth. ”

Part 27.50(d)(4)Limit	$\leq 1 \text{ W}$ (30 dBm)
Part 27.50(h)(2) Limit	$\leq 2 \text{ W}$ (33 dBm)

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U=0.4$ dB for RF power output, $k = 2$, $U= 1.19$ dB for ERP/EIRP.



Test Results

NR n41					Maximum Output Power(dBm)			EIRP(dBm)		
Bandwidth (MHz)	Modulation	SCS(KHz)	RB Allocation	RB Offset	501204	518598	535998	501204	518598	535998
					2506.02	2592.99	2679.99	2506.02	2592.99	2679.99
20	PI/2 BPSK	30	1	0	23.75	23.52	23.74	22.35	22.12	22.34
			1	1	24.27	24.04	24.24	22.87	22.64	22.84
			25	12	24.31	24.12	24.42	22.91	22.72	23.02
			50	0	24.25	24.12	24.36	22.85	22.72	22.96
	QPSK		1	0	23.93	23.81	23.84	22.53	22.41	22.44
			1	1	24.37	24.30	24.23	22.97	22.90	22.83
			25	12	24.36	24.43	24.35	22.96	23.03	22.95
			50	0	24.42	24.41	24.42	23.02	23.01	23.02
	16QAM		1	0	23.95	24.00	23.93	22.55	22.60	22.53
			1	1	24.63	24.43	24.42	23.23	23.03	23.02
			25	12	24.44	24.50	24.45	23.04	23.10	23.05
			50	0	24.41	24.39	24.38	23.01	22.99	22.98
	64QAM		1	0	23.71	23.71	23.71	22.31	22.31	22.31
			1	1	24.15	24.14	24.05	22.75	22.74	22.65
			25	12	24.43	24.51	24.44	23.03	23.11	23.04
			50	0	24.38	24.47	24.40	22.98	23.07	23.00
256QAM	1	0	22.86	22.72	22.74	21.46	21.32	21.34		
	1	1	22.85	22.76	22.67	21.45	21.36	21.27		
	25	12	22.98	22.90	22.89	21.58	21.50	21.49		
	50	0	22.86	22.99	22.88	21.46	21.59	21.48		
Bandwidth(MHz)	Modulation	SCS(KHz)	RB Allocation	RB Offset	Maximum Output Power(dBm)			EIRP(dBm)		
					503202	518598	534000	503202	518598	534000
					2516.01	2592.99	2670	2516.01	2592.99	2670
40	PI/2 BPSK	30	1	0	23.82	23.53	23.85	22.42	22.13	22.45
			1	1	24.21	24.01	24.31	22.81	22.61	22.91
			54	27	24.31	24.09	24.33	22.91	22.69	22.93
			100	0	24.35	24.03	24.35	22.95	22.63	22.95
	QPSK		1	0	23.73	23.92	23.92	22.33	22.52	22.52
			1	1	24.27	24.29	24.28	22.87	22.89	22.98
			54	27	24.21	24.26	24.26	22.81	23.06	22.86
			100	0	24.27	24.25	24.28	22.87	23.05	22.88
	16QAM		1	0	23.97	24.00	24.02	22.57	22.60	22.62
1		1	24.52	24.52	24.45	23.12	23.12	23.05		
54		27	24.29	24.41	24.31	22.89	23.01	22.91		



	64QAM	30	100	0	24.25	24.41	24.35	22.85	23.01	22.95
			1	0	23.30	23.70	23.76	21.90	22.30	22.36
			1	1	23.93	24.24	24.10	22.53	22.84	22.70
			54	27	24.23	24.42	24.40	22.83	23.02	23.00
			100	0	24.33	24.50	24.45	22.93	23.10	23.05
	256QAM		1	0	22.80	22.83	22.84	21.40	21.43	21.44
			1	1	22.70	22.84	22.91	21.30	21.44	21.51
			54	27	22.72	22.90	22.87	21.32	21.50	21.47
			100	0	22.84	22.96	22.93	21.44	21.56	21.53
Bandwidth(MHz)	Modulation	SCS(KHz)	RB Allocation	RB Offset	Maximum Output Power(dBm)			EIRP(dBm)		
					505200	518598	531996	505200	518598	531996
					2526	2592.99	2659.98	2526	2592.99	2659.98
60	PI/2 BPSK	30	1	0	23.59	23.43	23.76	22.19	22.03	22.36
			1	1	24.08	24.11	24.36	22.68	22.71	22.96
			81	40	24.15	24.42	24.40	22.75	23.02	23.00
			162	0	24.13	24.41	24.34	22.73	23.01	22.94
	QPSK		1	0	23.67	23.62	23.96	22.27	22.22	22.56
			1	1	24.23	24.19	24.47	22.83	22.79	23.07
			81	40	24.37	24.24	24.28	22.97	22.84	22.88
			162	0	24.30	24.22	24.36	22.90	22.82	22.96
	16QAM		1	0	23.87	23.91	24.12	22.47	22.51	22.72
			1	1	24.30	24.36	24.62	22.90	22.96	23.22
			81	40	24.36	24.22	24.26	22.96	22.82	22.86
			162	0	24.28	24.27	24.42	22.88	22.87	23.02
	64QAM		1	0	23.62	23.48	23.71	22.22	22.08	22.31
			1	1	24.15	23.96	24.25	22.75	22.56	22.85
			81	40	24.49	24.30	24.30	23.09	22.90	22.90
			162	0	24.40	24.36	24.34	23.00	22.96	22.94
	256QAM		1	0	22.50	22.60	22.91	21.10	21.20	21.51
			1	1	22.60	22.64	22.91	21.20	21.24	21.51
			81	40	22.95	22.92	22.56	21.55	21.52	21.16
			162	0	22.89	22.97	22.84	21.49	21.57	21.44
Bandwidth(MHz)	Modulation	SCS(KHz)	RB Allocation	RB Offset	Maximum Output Power(dBm)			EIRP(dBm)		
					509202	518598	528000	509202	518598	528000
					2546.01	2592.99	2640	2546.01	2592.99	2640
100	PI/2 BPSK	30	1	0	23.68	23.81	23.50	22.28	22.41	22.10
			1	1	24.25	24.42	23.98	22.85	23.02	22.58
			135	67	24.29	24.25	24.05	22.89	22.85	22.65
			270	0	24.23	24.12	24.04	22.83	22.72	22.64



	QPSK	1	0	23.65	23.82	23.53	22.25	22.42	22.13
		1	1	24.25	24.33	24.15	22.85	22.93	22.75
		135	67	24.24	24.14	24.12	22.84	22.74	22.72
		270	0	24.29	24.15	24.03	22.89	22.75	22.63
	16QAM	1	0	23.56	24.00	23.54	22.16	22.60	22.14
		1	1	24.30	24.68	24.01	22.90	23.28	22.61
		135	67	24.20	24.14	24.07	22.80	22.74	22.67
		270	0	24.16	24.15	24.02	22.76	22.75	22.62
	64QAM	1	0	23.15	23.28	23.10	21.75	21.88	21.70
		1	1	23.29	23.81	23.65	21.89	22.41	22.25
		135	67	24.22	24.13	24.07	22.82	22.73	22.67
		270	0	24.16	24.07	24.02	22.76	22.67	22.62
	256QAM	1	0	22.54	22.67	22.42	21.14	21.27	21.02
		1	1	22.65	22.66	22.41	21.25	21.26	21.01
		135	67	22.74	22.61	22.71	21.34	21.21	21.31
		270	0	22.67	22.65	22.41	21.27	21.25	21.01

DC-66A-n41A						Maximum Output Power(dBm)			EIRP(dBm)		
Bandwidth (MHz)	Modulation	Modulation (LTE)	SCS(KHz)	RB Allocation	RB Offset	501204	518598	535998	501204	518598	535998
						2506.02	2592.99	2679.99	2506.02	2592.99	2679.99
20	PI/2 BPSK	LTE-B66 QPSK 10MHz 1745MHz	30	1	0	24.09	24.23	24.83	23.98	24.12	24.72
				1	1	24.11	24.28	24.80	24.00	24.17	24.69
				25	12	24.18	24.36	24.76	24.07	24.25	24.65
				50	0	24.24	24.38	24.78	24.13	24.27	24.67
	QPSK			1	0	24.09	24.34	24.83	23.98	24.23	24.72
				1	1	24.07	24.35	24.76	23.96	24.24	24.65
				25	12	24.21	24.30	24.82	24.10	24.19	24.71
				50	0	24.23	24.37	24.75	24.12	24.26	24.64
	16QAM			1	0	23.46	23.56	24.01	23.35	23.45	23.90
				1	1	24.27	24.60	24.92	24.16	24.49	24.81
				25	12	24.29	24.37	24.79	24.18	24.26	24.68
				50	0	23.15	23.33	23.81	23.04	23.22	23.70
	64QAM			1	0	22.34	22.72	23.24	22.23	22.61	23.13
				1	1	22.35	22.75	23.10	22.24	22.64	22.99
				25	12	22.74	22.92	23.18	22.63	22.81	23.07
				50	0	22.69	22.84	23.16	22.58	22.73	23.05
256QAM	1	0	20.44	20.71	21.06	20.33	20.60	20.95			
	1	1	20.50	20.64	21.18	20.39	20.53	21.07			
	25	12	20.72	20.83	21.31	20.61	20.72	21.20			
	50	0	20.71	20.85	21.30	20.60	20.74	21.19			



Bandwidth (MHz)	Modulation	Modulation (LTE)	SCS(KHz)	RB Allocation	RB Offset	Maximum Output Power(dBm)			EIRP(dBm)		
						503202	518598	534000	503202	518598	534000
						2516.01	2592.99	2670	2516.01	2592.99	2670
40	PI/2 BPSK	LTE-B66 QPSK 10MHz 1745MHz	30	1	0	24.47	24.56	24.66	24.36	24.45	24.55
				1	1	24.43	24.58	24.83	24.32	24.47	24.72
				54	27	24.43	24.48	24.61	24.32	24.37	24.50
				100	0	24.53	24.52	24.72	24.42	24.41	24.61
	QPSK			1	0	24.41	24.45	24.71	24.30	24.34	24.60
				1	1	24.39	24.41	24.64	24.28	24.30	24.53
				54	27	24.47	24.51	24.67	24.36	24.40	24.56
				100	0	24.56	24.54	24.75	24.45	24.43	24.64
	16QAM			1	0	23.26	23.57	23.54	23.15	23.46	23.43
				1	1	24.42	24.66	24.74	24.31	24.55	24.63
				54	27	23.50	23.50	23.65	23.39	23.39	23.54
				100	0	23.72	23.67	23.92	23.61	23.56	23.81
	64QAM			1	0	22.81	22.98	23.12	22.70	22.87	23.01
				1	1	22.73	22.88	23.14	22.62	22.77	23.03
				54	27	23.05	23.04	23.14	22.94	22.93	23.03
				100	0	23.06	23.03	23.27	22.95	22.92	23.16
256QAM	1	0	20.92	21.21	21.22	20.81	21.10	21.11			
	1	1	20.83	21.36	21.10	20.72	21.25	20.99			
	54	27	21.12	21.03	21.05	21.01	20.92	20.94			
	100	0	21.08	21.13	21.31	20.97	21.02	21.20			

Bandwidth (MHz)	Modulation	Modulation (LTE)	SCS(KHz)	RB Allocation	RB Offset	Maximum Output Power(dBm)			EIRP(dBm)		
						505200	518598	531996	505200	518598	531996
						2526	2592.99	2659.98	2526	2592.99	2659.98
60	PI/2 BPSK	LTE-B66 QPSK 10MHz 1745MHz	30	1	0	24.00	23.26	24.36	23.89	23.15	24.25
				1	1	24.06	23.03	24.53	23.95	22.92	24.42
				81	40	24.21	23.19	24.31	24.10	23.08	24.20
				162	0	24.22	23.16	24.33	24.11	23.05	24.22
	QPSK			1	0	24.08	23.12	24.36	23.97	23.01	24.25
				1	1	24.02	23.22	24.35	23.91	23.11	24.24
				81	40	24.15	23.18	24.01	24.04	23.07	23.90
				162	0	24.19	23.15	24.28	24.08	23.04	24.17
	16QAM			1	0	22.81	22.17	23.51	22.70	22.06	23.40
				1	1	23.96	24.29	24.18	23.85	24.18	24.07
				81	40	24.09	23.30	24.19	23.98	23.19	24.08
				162	0	23.04	22.34	23.44	22.93	22.23	23.33
64QAM	1	0	22.31	22.44	22.60	22.20	22.33	22.49			



Bandwidth (MHz)	Modulation	Modulation (LTE)	SCS(KHz)	RB Allocation	RB Offset	Maximum Output Power(dBm)			EIRP(dBm)		
						509202	518598	528000	509202	518598	528000
						2546.01	2592.99	2640	2546.01	2592.99	2640
100	256QAM			1	1	22.24	22.50	23.03	22.13	22.39	22.92
				81	40	22.26	22.30	22.73	22.15	22.19	22.62
				162	0	22.97	22.37	22.78	22.86	22.26	22.67
				1	0	20.53	20.91	20.85	20.42	20.80	20.74
				1	1	20.90	21.01	20.87	20.79	20.90	20.76
				81	40	20.77	20.89	20.80	20.66	20.78	20.69
				162	0	20.79	20.92	20.83	20.68	20.81	20.72
100	PI/2 BPSK	LTE-B66 QPSK 10MHz 1745MHz	30	1	0	22.94	22.86	23.09	22.83	22.75	22.98
				1	1	22.86	22.93	22.95	22.75	22.82	22.84
				135	67	22.73	22.90	22.96	22.62	22.79	22.85
				270	0	22.86	22.94	22.65	22.75	22.83	22.54
	QPSK			1	0	22.92	22.85	23.05	22.81	22.74	22.94
				1	1	22.89	22.94	23.01	22.78	22.83	22.90
				135	67	22.91	22.92	22.83	22.80	22.81	22.72
				270	0	22.96	23.10	22.81	22.85	22.99	22.70
	16QAM			1	0	21.75	21.98	22.18	21.64	21.87	22.07
				1	1	22.69	22.86	23.02	22.58	22.75	22.91
				135	67	22.71	22.89	22.96	22.60	22.78	22.85
				270	0	21.79	21.95	22.20	21.68	21.84	22.09
	64QAM			1	0	21.26	21.21	21.73	21.15	21.10	21.62
				1	1	20.89	21.22	21.74	20.78	21.11	21.63
				135	67	21.37	21.72	21.47	21.26	21.61	21.36
				270	0	21.23	21.64	21.71	21.12	21.53	21.60
	256QAM			1	0	19.38	19.59	19.53	19.27	19.48	19.42
				1	1	19.43	19.64	19.84	19.32	19.53	19.73
				135	67	19.31	19.55	19.45	19.20	19.44	19.34
				270	0	19.39	19.41	19.37	19.28	19.30	19.26



NR n66				Maximum Output Power(dBm)			EIRP(dBm)			
Bandwidth(MHz)	Modulation	SCS(KHz)	RB Allocation	RB Offset	342500	349000.00	355500.00	342500	349000.00	355500.00
					1712.5	1745.00	1777.50	1712.5	1745.00	1777.50
5	PI/2 BPSK	15	1	0	24.63	24.63	24.55	21.53	21.53	21.45
			1	1	24.64	24.61	24.59	21.54	21.51	21.49
			12	6	24.72	24.82	24.61	21.62	21.72	21.51
			24	0	24.71	24.77	24.53	21.61	21.67	21.43
	QPSK		1	0	24.57	24.64	24.58	21.47	21.54	21.48
			1	1	24.63	24.68	24.66	21.53	21.58	21.56
			12	6	24.67	24.68	24.62	21.57	21.58	21.52
	16QAM		24	0	24.63	24.70	24.63	21.53	21.60	21.53
			1	0	23.72	23.79	23.12	20.62	20.69	20.02
			1	1	24.62	24.74	24.62	21.52	21.64	21.52
	64QAM		12	6	24.57	24.75	24.68	21.47	21.65	21.58
			24	0	23.69	23.81	23.65	20.59	20.71	20.55
			1	0	22.95	22.66	22.97	19.85	19.56	19.87
			1	1	22.56	22.71	22.85	19.46	19.61	19.75
	256QAM		12	6	23.18	23.18	23.03	20.08	20.08	19.93
			24	0	23.15	23.30	23.08	20.05	20.20	19.98
1		0	20.91	21.11	20.82	17.81	18.01	17.72		
1		1	20.89	21.02	20.87	17.79	17.92	17.77		
			12	6	21.12	21.11	21.15	18.02	18.01	18.05
			24	0	21.16	21.23	21.13	18.06	18.13	18.03

Bandwidth(MHz)	Modulation	SCS(KHz)	RB Allocation	RB Offset	Maximum Output Power(dBm)			EIRP(dBm)		
					343000	349000.00	355000.00	343000	349000.00	355000.00
					1715.00	1745.00	1775.00	1715.00	1745.00	1775.00
10	PI/2 BPSK	15	1	0	24.70	24.79	24.68	21.60	21.69	21.58
			1	1	24.73	24.76	24.69	21.63	21.66	21.59
			26	13	24.70	24.75	24.65	21.60	21.65	21.55
			52	0	24.75	24.84	24.67	21.65	21.74	21.57
	QPSK		1	0	24.68	24.74	24.71	21.58	21.64	21.61
			1	1	24.73	24.83	24.64	21.63	21.73	21.54
			26	13	24.75	24.84	24.68	21.65	21.74	21.58
	16QAM		52	0	24.72	24.87	24.75	21.62	21.77	21.65
			1	0	23.28	23.30	23.31	20.18	20.20	20.21
			1	1	24.84	24.52	24.38	21.74	21.42	21.28
			26	13	24.75	24.80	24.68	21.65	21.70	21.58
			52	0	23.77	23.79	23.75	20.67	20.69	20.65



Bandwidth(MHz)	Modulation	SCS(KHz)	RB Allocation	RB Offset	Maximum Output Power(dBm)			EIRP(dBm)		
					343500	349000.00	354500.00	343500	349000.00	354500.00
	64QAM		1	0	23.02	23.07	22.95	19.92	19.97	19.85
			1	1	23.05	23.04	23.02	19.95	19.94	19.92
			26	13	23.18	23.26	23.18	20.08	20.16	20.08
			52	0	23.22	23.34	23.31	20.12	20.24	20.21
	256QAM		1	0	20.97	20.98	20.92	17.87	17.88	17.82
			1	1	21.04	21.02	20.89	17.94	17.92	17.79
			26	13	21.18	21.25	21.15	18.08	18.15	18.05
			52	0	21.23	21.31	21.13	18.13	18.21	18.03
					1717.50	1745.00	1772.50	1717.50	1745.00	1772.50
15	PI/2 BPSK	15	1	0	24.67	24.78	24.67	21.57	21.68	21.57
			1	1	24.79	24.78	24.80	21.69	21.68	21.70
			38	19	24.77	24.76	24.78	21.67	21.66	21.68
			78	0	24.67	24.82	24.75	21.57	21.72	21.65
	QPSK		1	0	24.83	24.72	24.76	21.73	21.62	21.66
			1	1	24.85	24.83	24.83	21.75	21.73	21.73
			38	19	24.78	24.88	24.77	21.68	21.78	21.67
			78	0	24.84	24.94	24.78	21.74	21.84	21.68
	16QAM		1	0	23.31	23.55	23.74	20.21	20.45	20.64
			1	1	24.91	24.87	24.83	21.81	21.77	21.73
			38	19	24.72	24.78	24.79	21.62	21.68	21.69
			78	0	23.82	23.82	23.83	20.72	20.72	20.73
	64QAM		1	0	23.03	22.71	23.07	19.93	19.61	19.97
			1	1	23.08	23.10	23.15	19.98	20.00	20.05
			38	19	23.24	23.28	23.28	20.14	20.18	20.18
			78	0	23.31	23.37	23.37	20.21	20.27	20.27
	256QAM		1	0	21.01	21.18	21.05	17.91	18.08	17.95
			1	1	21.03	21.03	21.07	17.93	17.93	17.97
			38	19	21.27	21.33	21.26	18.17	18.23	18.16
			78	0	21.36	21.32	21.37	18.26	18.22	18.27
					344000	349000.00	354000.00	344000	349000.00	354000.00
					1720.00	1745.00	1770.00	1720.00	1745.00	1770.00
20	PI/2 BPSK	15	1	0	24.66	24.74	24.61	21.56	21.64	21.51
			1	1	24.71	24.82	24.72	21.61	21.72	21.62
			53	26	24.75	24.87	24.74	21.65	21.77	21.64
			106	0	24.74	24.84	24.76	21.64	21.74	21.66
	QPSK		1	0	24.72	24.76	24.79	21.62	21.66	21.69



		1	1	24.83	24.88	24.75	21.73	21.78	21.65
		53	26	24.89	24.95	24.88	21.79	21.85	21.78
		106	0	24.89	24.90	24.92	21.79	21.80	21.82
	16QAM	1	0	23.57	23.34	23.34	20.47	20.24	20.24
		1	1	24.86	24.84	24.75	21.76	21.74	21.65
		53	26	24.82	24.90	24.82	21.72	21.80	21.72
	64QAM	106	0	23.91	23.92	23.90	20.81	20.82	20.80
		1	0	22.75	23.11	23.05	19.65	20.01	19.95
		1	1	23.06	23.08	23.08	19.96	19.98	19.98
	256QAM	53	26	23.37	23.46	23.40	20.27	20.36	20.30
		106	0	23.37	23.43	23.34	20.27	20.33	20.24
		1	0	21.02	21.10	21.04	17.92	18.00	17.94
		1	1	21.18	21.15	21.07	18.08	18.05	17.97
		53	26	21.38	21.43	21.35	18.28	18.33	18.25
		106	0	21.31	21.45	21.41	18.21	18.35	18.31



DC-12A-n66A						Maximum Output Power(dBm)			EIRP(dBm)		
Bandwidth (MHz)	Modulation	Modulation (LTE)	SCS(KHz)	RB Allocation	RB Offset	342500	349000	355500	342500	349000	355500
						1712.5	1745	1777.5	1712.5	1745	1777.5
5	PI/2 BPSK	Band12-10MHz-707.5MHz-QPSK	15	1	0	24.05	23.87	23.90	20.95	20.77	20.80
				1	1	24.03	23.84	23.95	20.93	20.74	20.85
				12	6	24.13	24.06	24.10	21.03	20.96	21.00
				25	0	24.20	24.02	24.02	21.10	20.92	20.92
	QPSK			1	0	24.05	23.89	23.89	20.95	20.79	20.79
				1	1	24.06	23.86	23.88	20.96	20.76	20.78
				12	6	24.21	24.04	24.03	21.11	20.94	20.93
				25	0	24.27	24.01	24.05	21.17	20.91	20.95
	16QAM			1	0	23.28	23.14	23.19	20.18	20.04	20.09
				1	1	24.32	24.30	24.23	21.22	21.20	21.13
				12	6	24.08	24.10	24.10	20.98	21.00	21.00
				25	0	23.15	22.95	23.07	20.05	19.85	19.97
	64QAM			1	0	22.63	22.46	22.44	19.53	19.36	19.34
				1	1	22.61	22.51	22.47	19.51	19.41	19.37
				12	6	22.81	22.66	22.71	19.71	19.56	19.61
				25	0	22.74	22.65	22.65	19.64	19.55	19.55
256QAM	1	0	20.46	20.37	19.96	17.36	17.27	16.86			
	1	1	20.50	20.38	20.07	17.40	17.28	16.97			
	12	6	20.70	20.55	20.93	17.60	17.45	17.83			
	25	0	20.61	20.54	20.15	17.51	17.44	17.05			

Bandwidth (MHz)	Modulation	Modulation (LTE)	SCS(KHz)	RB Allocation	RB Offset	Maximum Output Power(dBm)			EIRP(dBm)		
						343000	349000	355000	343000	349000	355000
						1715	1745	1775	1715	1745	1775
10	PI/2 BPSK	Band12-10MHz-707.5MHz-QPSK	15	1	0	24.18	23.90	24.00	21.08	20.80	20.90
				1	1	24.12	23.87	24.02	21.02	20.77	20.92
				25	13	24.33	24.07	24.20	21.23	20.97	21.10
				50	0	24.30	24.13	24.15	21.20	21.03	21.05
	QPSK			1	0	24.20	23.94	24.01	21.10	20.84	20.91
				1	1	24.15	23.89	23.93	21.05	20.79	20.83
				25	13	24.29	24.13	24.15	21.19	21.03	21.05
				50	0	24.33	24.08	24.08	21.23	20.98	20.98
	16QAM			1	0	23.43	23.11	23.19	20.33	20.01	20.09
				1	1	24.45	24.09	24.21	21.35	20.99	21.11
				25	13	24.25	24.24	24.13	21.15	21.14	21.03
				50	0	23.22	23.03	23.05	20.12	19.93	19.95
64QAM	1	0	22.39	22.60	23.01	19.29	19.50	19.91			



Bandwidth (MHz)	Modulation	Modulation (LTE)	SCS(KHz)	RB Allocation	RB Offset	Maximum Output Power(dBm)			EIRP(dBm)		
						343500	349000	354500	343500	349000	354500
						1717.5	1745	1772.5	1717.5	1745	1772.5
256QAM				1	1	23.12	22.65	22.95	20.02	19.55	19.85
				25	13	22.81	22.71	22.78	19.71	19.61	19.68
				50	0	22.80	22.66	22.61	19.70	19.56	19.51
				1	0	20.58	20.07	20.38	17.48	16.97	17.28
				1	1	20.61	20.41	20.42	17.51	17.31	17.32
				25	13	20.71	20.56	20.54	17.61	17.46	17.44
				50	0	20.77	20.52	20.26	17.67	17.42	17.16
15	PI/2 BPSK	Band12-10MHz-707.5MHz-QPSK	15	1	0	24.40	24.19	24.04	21.30	21.09	20.94
				1	1	24.32	24.21	24.05	21.22	21.11	20.95
				36	19	24.34	24.14	24.12	21.24	21.04	21.02
				75	0	24.34	24.17	24.11	21.24	21.07	21.01
	QPSK			1	0	24.29	24.18	24.00	21.19	21.08	20.90
				1	1	24.33	24.19	24.09	21.23	21.09	20.99
				36	19	24.32	24.13	24.11	21.22	21.03	21.01
				75	0	24.28	24.14	24.13	21.18	21.04	21.03
	16QAM			1	0	23.61	23.47	23.33	20.51	20.37	20.23
				1	1	24.53	24.36	24.25	21.43	21.26	21.15
				36	19	24.36	24.11	24.14	21.26	21.01	21.04
				75	0	23.39	23.19	23.10	20.29	20.09	20.00
	64QAM			1	0	23.00	22.81	22.62	19.90	19.71	19.52
				1	1	22.99	22.72	22.73	19.89	19.62	19.63
				36	19	22.87	22.68	22.67	19.77	19.58	19.57
				75	0	22.91	22.73	22.58	19.81	19.63	19.48
	256QAM			1	0	20.41	20.54	20.76	17.31	17.44	17.66
				1	1	20.43	20.21	20.85	17.33	17.11	17.75
				36	19	20.87	20.72	20.61	17.77	17.62	17.51
				75	0	20.82	20.59	20.23	17.72	17.49	17.13
20	PI/2 BPSK	Band12-10MHz-707.5MHz-QPSK	15	1	0	24.25	24.15	24.03	21.15	21.05	20.93
				1	1	24.27	24.13	24.01	21.17	21.03	20.91
50				26	24.38	24.13	24.12	21.28	21.03	21.02	
100				0	24.40	24.17	24.17	21.30	21.07	21.07	
QPSK	1			0	24.24	24.15	24.04	21.14	21.05	20.94	
	1			1	24.26	24.09	24.05	21.16	20.99	20.95	



	16QAM	50	26	24.32	24.20	24.06	21.22	21.10	20.96
		100	0	24.33	24.17	24.08	21.23	21.07	20.98
		1	0	23.56	23.39	23.27	20.46	20.29	20.17
		1	1	24.64	24.39	24.19	21.54	21.29	21.09
		50	26	24.27	24.05	24.10	21.17	20.95	21.00
		100	0	23.34	23.21	23.14	20.24	20.11	20.04
	64QAM	1	0	22.55	23.13	22.26	19.45	20.03	19.16
		1	1	22.58	22.71	22.29	19.48	19.61	19.19
		50	26	22.86	22.71	22.58	19.76	19.61	19.48
		100	0	22.94	22.70	22.62	19.84	19.60	19.52
		1	0	20.68	20.57	20.40	17.58	17.47	17.30
		1	1	20.71	20.49	20.78	17.61	17.39	17.68
256QAM	50	26	20.82	20.58	20.56	17.72	17.48	17.46	
	100	0	21.22	20.70	20.25	18.12	17.60	17.15	

5.2 Occupied Bandwidth

Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

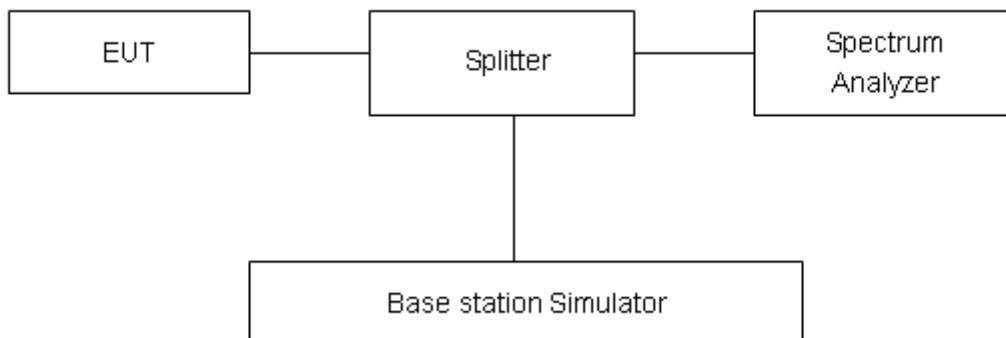
The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The occupied bandwidth is measured using spectrum analyzer.

RBW is set to at least one percent of the emission bandwidth of the fundamental emission of the transmitter for NR n41 (100MHz)/NR n66 (20MHz).

RBW is set to at least one percent of the emission bandwidth of the fundamental emission of the transmitter for DC_66A-n41A (20MHz/100MHz)/DC_12A_n66 (20MHz).

99% power and -26dBc occupied bandwidths are recorded. Spectrum analyzer plots are included on the following pages.

Test Setup



Limits

No specific occupied bandwidth requirements in part 2.1049.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U=624\text{Hz}$.



Test Result

NR n41						
RB	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	99% Power Bandwidth(MHz)	-26dBc Bandwidth(MHz)
1RB	P1/2 BPSK	100	509202	2546.01	0.762	1.314
			518598	2592.99	0.745	1.248
			528000	2640	0.697	1.291
	QPSK		509202	2546.01	0.775	1.308
			518598	2592.99	0.598	1.124
			528000	2640	0.713	1.201
	16QAM		509202	2546.01	0.722	1.216
			518598	2592.99	0.740	1.202
			528000	2640	0.599	1.266
	64QAM		509202	2546.01	0.751	1.191
			518598	2592.99	0.770	1.204
			528000	2640	0.758	1.304
256QAM	509202	2546.01	0.717	1.215		
	518598	2592.99	0.734	1.145		
	528000	2640	0.656	1.172		
100% RB	P1/2 BPSK	509202	2546.01	96.295	101.500	
		518598	2592.99	95.980	101.400	
		528000	2640	96.368	101.700	
	QPSK	509202	2546.01	96.359	101.700	
		518598	2592.99	96.185	101.400	
		528000	2640	96.348	101.500	
	16QAM	509202	2546.01	96.409	101.500	
		518598	2592.99	96.189	101.300	
		528000	2640	96.592	101.500	
	64QAM	509202	2546.01	96.329	101.600	
		518598	2592.99	95.914	101.200	
		528000	2640	96.296	101.600	
256QAM	509202	2546.01	96.546	101.400		
	518598	2592.99	96.333	101.400		
	528000	2640	96.678	101.500		



DC_66A-n41A						
RB	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	99% Power Bandwidth(MHz)	-26dBc Bandwidth(MHz)
1%RB	P1/2 BPSK	20	501204	2506.02	0.473	0.721
			518598	2592.99	0.464	0.712
			535998	2679.99	0.460	0.754
	QPSK		501204	2506.02	0.483	0.701
			518598	2592.99	0.484	0.758
			535998	2679.99	0.459	0.764
	16QAM		501204	2506.02	0.511	0.782
			518598	2592.99	0.482	0.761
			535998	2679.99	0.463	0.762
	64QAM		501204	2506.02	0.497	0.798
			518598	2592.99	0.516	0.839
			535998	2679.99	0.517	0.826
256QAM	501204	2506.02	0.501	0.828		
	518598	2592.99	0.546	0.885		
	535998	2679.99	0.540	0.898		
100% RB	P1/2 BPSK	501204	2506.02	18.243	19.490	
		518598	2592.99	18.192	19.500	
		535998	2679.99	18.192	19.360	
	QPSK	501204	2506.02	18.217	19.470	
		518598	2592.99	18.208	19.330	
		535998	2679.99	18.172	18.850	
	16QAM	501204	2506.02	18.250	19.310	
		518598	2592.99	18.228	19.160	
		535998	2679.99	18.184	19.180	
	64QAM	501204	2506.02	18.207	19.300	
		518598	2592.99	18.221	19.130	
		535998	2679.99	18.203	19.080	
256QAM	501204	2506.02	18.196	19.170		
	518598	2592.99	18.158	19.240		
	535998	2679.99	18.180	19.110		
1%RB	P1/2 BPSK	100	509202	2546.01	0.640	1.228



	QPSK	518598	2592.99	0.717	1.232
		528000	2640	0.855	1.358
		509202	2546.01	0.717	1.286
		518598	2592.99	0.807	1.309
		528000	2640	0.710	1.192
		509202	2546.01	0.711	1.255
	16QAM	518598	2592.99	0.684	1.184
		528000	2640	0.612	1.219
		509202	2546.01	0.878	1.478
		518598	2592.99	0.729	1.332
		528000	2640	0.743	1.258
		509202	2546.01	0.599	1.222
64QAM	518598	2592.99	0.708	1.223	
	528000	2640	0.701	1.232	
	509202	2546.01	98.157	101.500	
	518598	2592.99	97.982	101.500	
	528000	2640	98.091	101.400	
	509202	2546.01	98.219	101.500	
256QAM	518598	2592.99	97.835	101.500	
	528000	2640	98.009	101.500	
	509202	2546.01	98.167	101.400	
	518598	2592.99	97.932	101.300	
	528000	2640	98.153	101.300	
	509202	2546.01	98.084	101.400	
100% RB	P1/2 BPSK	518598	2592.99	97.871	101.300
		528000	2640	97.924	101.300
		509202	2546.01	98.350	101.200
		518598	2592.99	97.997	101.300
		528000	2640	98.106	101.300
		509202	2546.01		

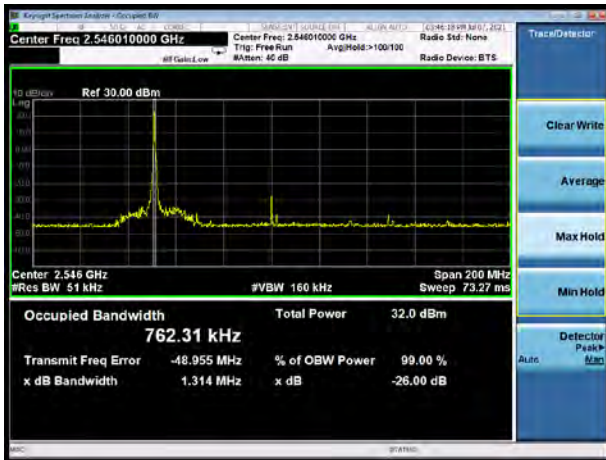


NR n66						
RB	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	99% Power Bandwidth(MHz)	-26dBc Bandwidth(MHz)
1%RB	P1/2 BPSK	20	344000	1720	0.246	0.428
			349000	1745	0.240	0.401
			354000	1770	0.239	0.408
	QPSK		344000	1720	0.246	0.428
			349000	1745	0.240	0.404
			354000	1770	0.239	0.404
	16QAM		344000	1720	0.239	0.385
			349000	1745	0.239	0.387
			354000	1770	0.239	0.382
	64QAM		344000	1720	0.262	0.440
			349000	1745	0.240	0.382
			354000	1770	0.239	0.378
256QAM	344000	1720	0.239	0.392		
	349000	1745	0.244	0.428		
	354000	1770	0.243	0.461		
100% RB	P1/2 BPSK	344000	1720	17.878	19.000	
		349000	1745	17.897	18.970	
		354000	1770	17.853	18.900	
	QPSK	344000	1720	17.895	18.990	
		349000	1745	17.884	18.960	
		354000	1770	17.876	18.980	
	16QAM	344000	1720	17.945	19.110	
		349000	1745	17.950	19.070	
		354000	1770	17.936	19.020	
	64QAM	344000	1720	17.899	18.980	
		349000	1745	17.919	18.990	
		354000	1770	17.878	18.990	
256QAM	344000	1720	17.907	18.990		
	349000	1745	17.902	19.040		
	354000	1770	17.897	18.980		



DC_12A-n66A						
RB	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	99% Power Bandwidth(MHz)	-26dBc Bandwidth(MHz)
1% RB	P1/2 BPSK	20	344000	1720	0.242	0.406
			349000	1745	0.248	0.426
			354000	1770	0.251	0.404
	QPSK		344000	1720	0.240	0.377
			349000	1745	0.250	0.415
			354000	1770	0.240	0.414
	16QAM		344000	1720	0.239	0.402
			349000	1745	0.239	0.399
			354000	1770	0.239	0.399
	64QAM		344000	1720	0.243	0.428
			349000	1745	0.251	0.415
			354000	1770	0.246	0.413
	256QAM		344000	1720	0.240	0.425
			349000	1745	0.241	0.422
			354000	1770	0.243	0.433
100% RB	P1/2 BPSK	344000	1720	17.899	19.020	
		349000	1745	17.905	19.030	
		354000	1770	17.879	18.950	
	QPSK	344000	1720	17.898	19.030	
		349000	1745	17.905	19.010	
		354000	1770	17.879	18.950	
	16QAM	344000	1720	17.935	19.070	
		349000	1745	17.948	19.070	
		354000	1770	17.935	19.030	
	64QAM	344000	1720	17.891	18.990	
		349000	1745	17.907	18.970	
		354000	1770	17.889	19.010	
	256QAM	344000	1720	17.875	19.030	
		349000	1745	17.892	19.050	
		354000	1770	17.896	19.060	

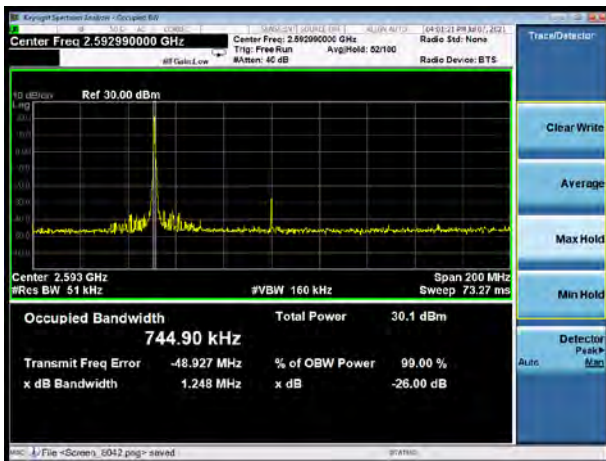
NR n41 P1/2 BPSK 1%RB 100MHz CH-Low



NR n41 P1/2 BPSK 100%RB 100MHz CH-Low



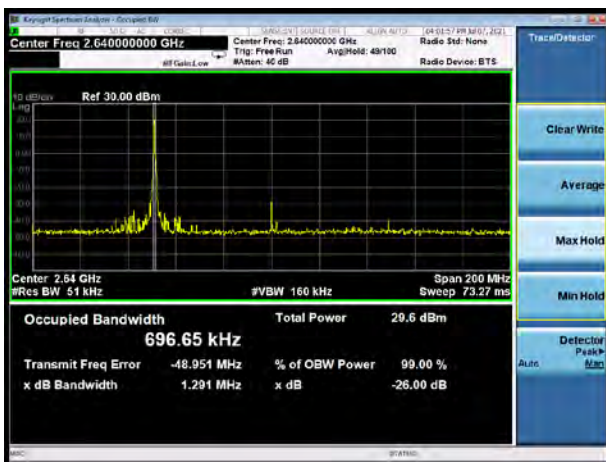
NR n41 P1/2 BPSK 1%RB 100MHz CH-Middle



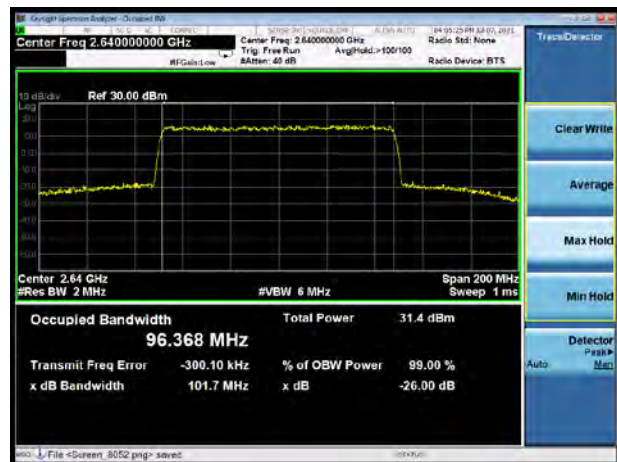
NR n41 P1/2 BPSK 100%RB 100MHz CH-Middle



NR n41 P1/2 BPSK 1%RB 100MHz CH-High

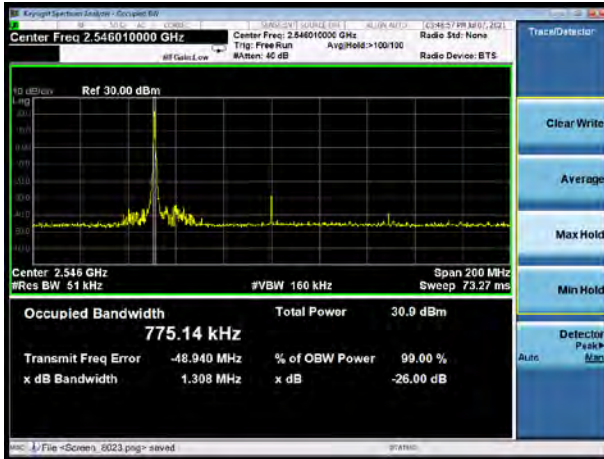


NR n41 P1/2 BPSK 100%RB 100MHz CH-High





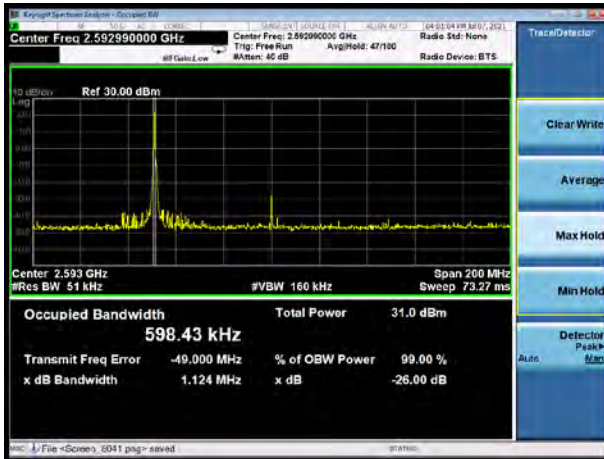
NR n41 QPSK 1%RB 100MHz CH-Low



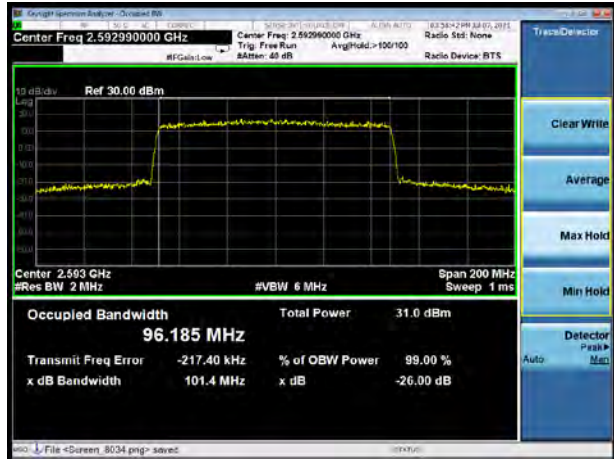
NR n41 QPSK 100%RB 100MHz CH-Low



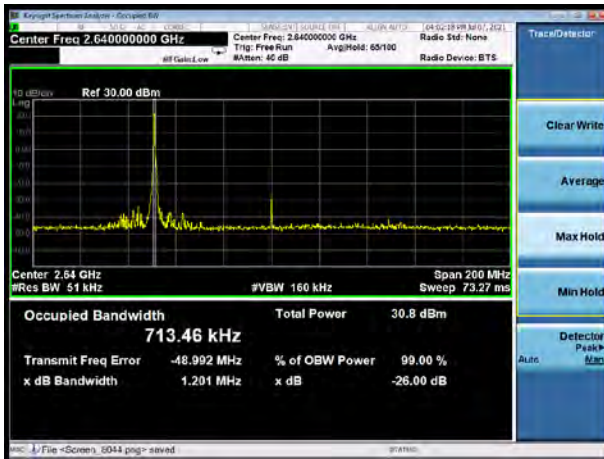
NR n41 QPSK 1%RB 100MHz CH-Middle



NR n41 QPSK 100%RB 100MHz CH-Middle



NR n41 QPSK 1%RB 100MHz CH-High

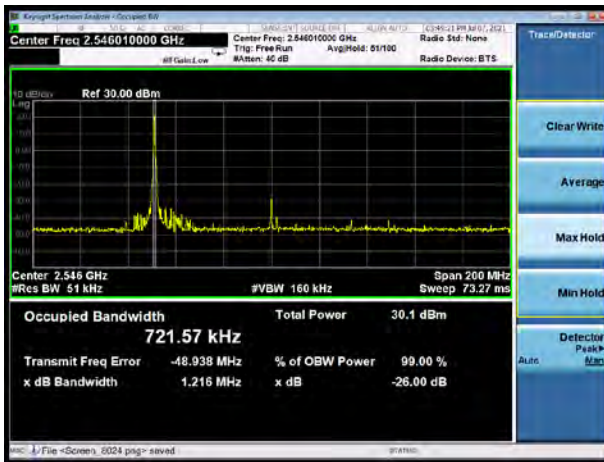


NR n41 QPSK 100%RB 100MHz CH-High





NR n41 16QAM 1%RB 100MHz CH-Low



NR n41 16QAM 100%RB 100MHz CH-Low



NR n41 16QAM 1%RB 100MHz CH-Middle



NR n41 16QAM 100%RB 100MHz CH-Middle



NR n41 16QAM 1%RB 100MHz CH-High

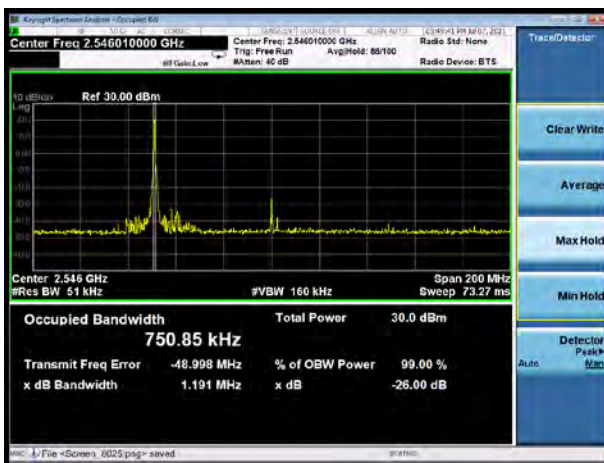


NR n41 16QAM 100%RB 100MHz CH-High

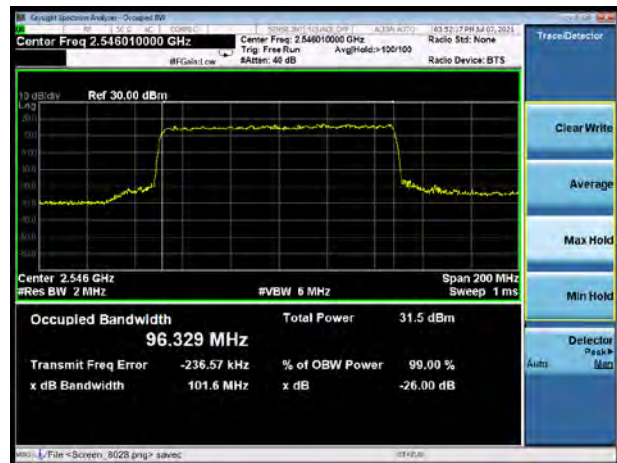




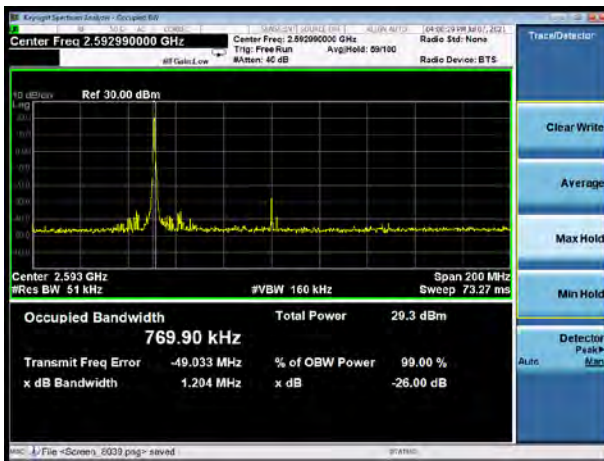
NR n41 64QAM 1%RB 100MHz CH-Low



NR n41 64QAM 100%RB 100MHz CH-Low



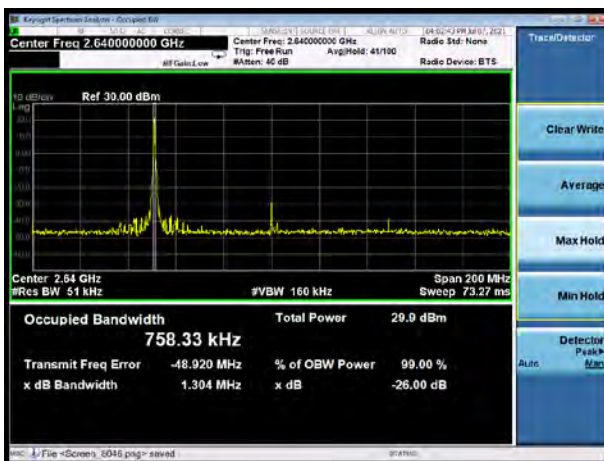
NR n41 64QAM 1%RB 100MHz CH-Middle



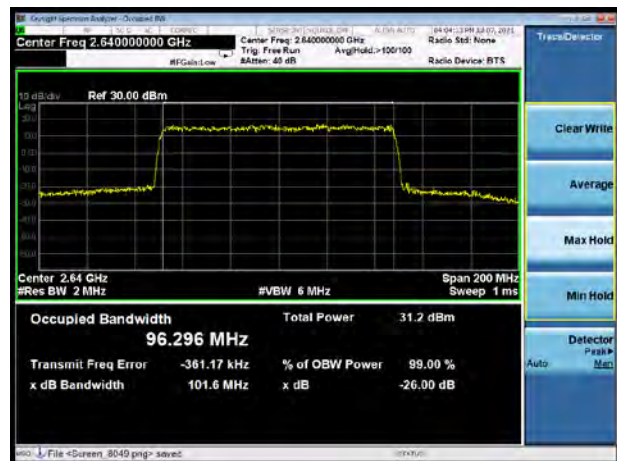
NR n41 64QAM 100%RB 100MHz CH-Middle



NR n41 64QAM 1%RB 100MHz CH-High

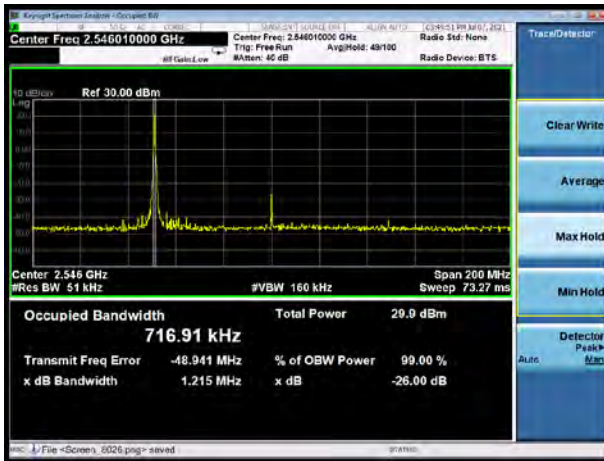


NR n41 64QAM 100%RB 100MHz CH-High

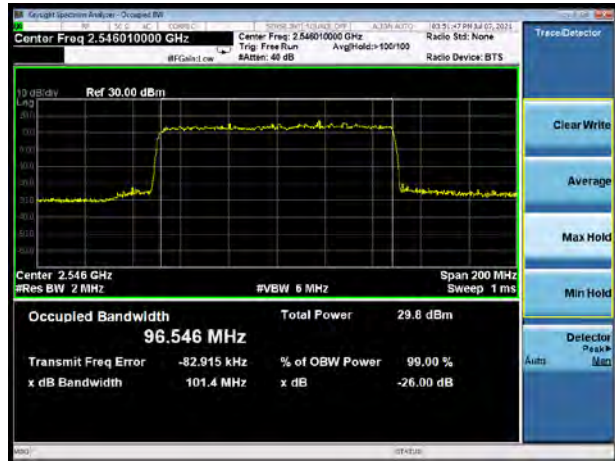




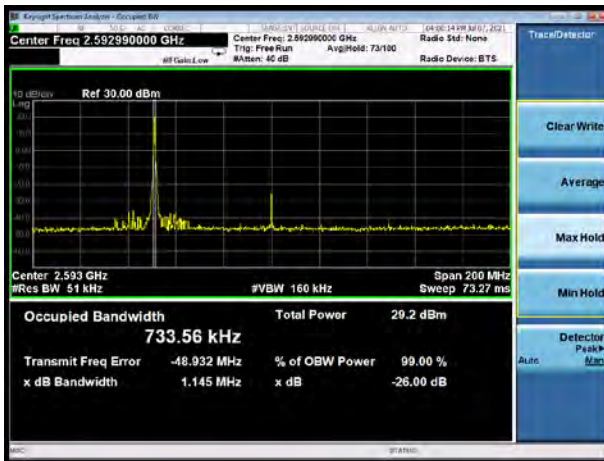
NR n41 256QAM 1%RB 100MHz CH-Low



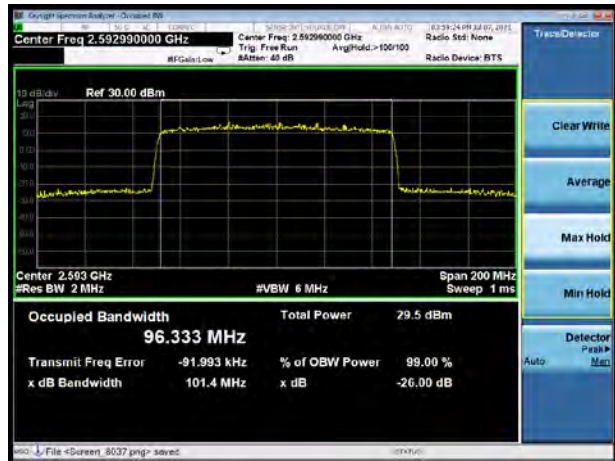
NR n41 256QAM 100%RB 100MHz CH-Low



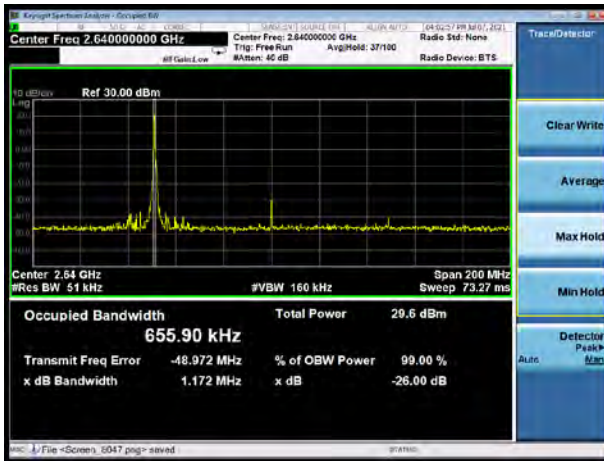
NR n41 256QAM 1%RB 100MHz CH-Middle



NR n41 256QAM 100%RB 100MHz CH-Middle



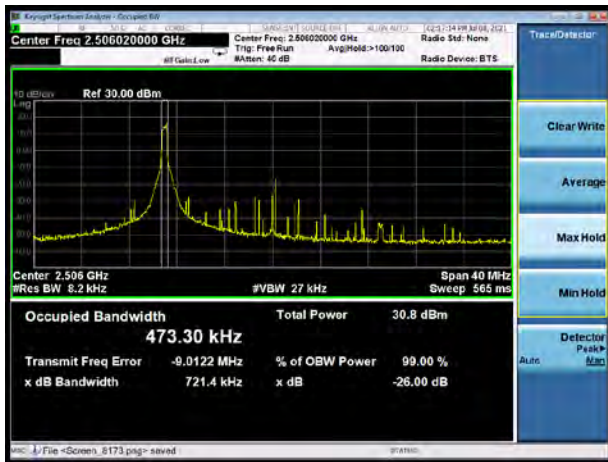
NR n41 256QAM 1%RB 100MHz CH-High



NR n41 256QAM 100%RB 100MHz CH-High



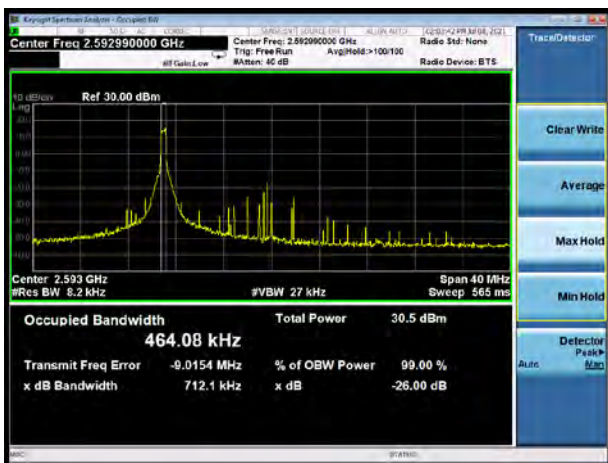
DC_66A-n41A P1/2 BPSK 1 %RB 20MHz
CH-Low



DC_66A-n41A P1/2 BPSK 100%RB 20MHz
CH-Low



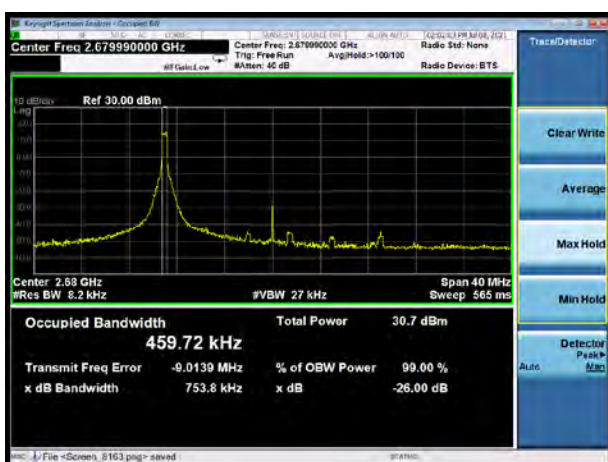
DC_66A-n41A P1/2 BPSK1%RB 20MHz
CH-Middle



DC_66A-n41A P1/2 BPSK100%RB 20MHz
CH-Middle



DC_66A-n41A P1/2 BPSK1%RB 20MHz
CH-High

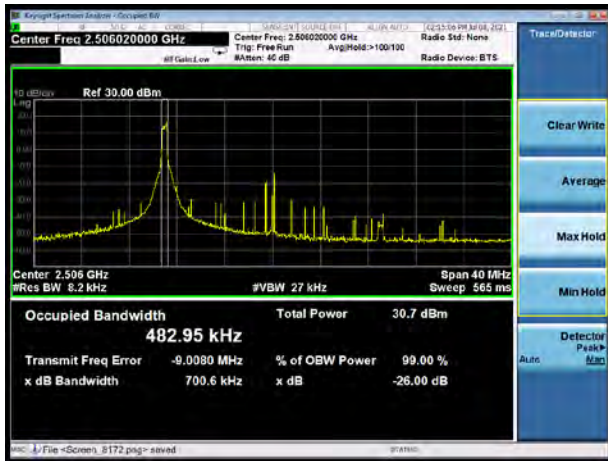


DC_66A-n41A P1/2 BPSK100%RB 20MHz
CH-High





DC_66A-n41A QPSK 1 %RB 20MHz CH-Low



DC_66A-n41A QPSK 100%RB 20MHz CH-Low



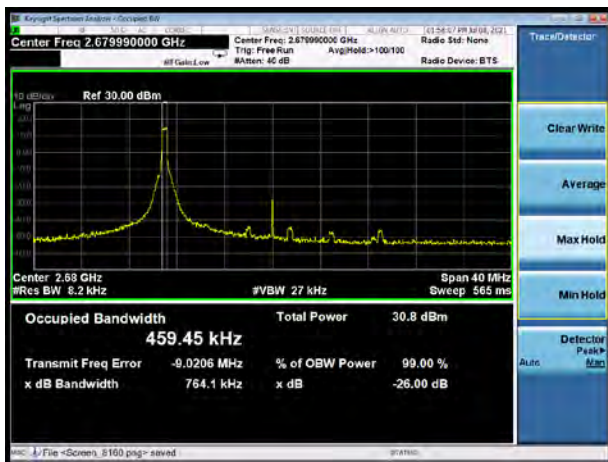
DC_66A-n41A QPSK 1%RB 20MHz CH-Middle



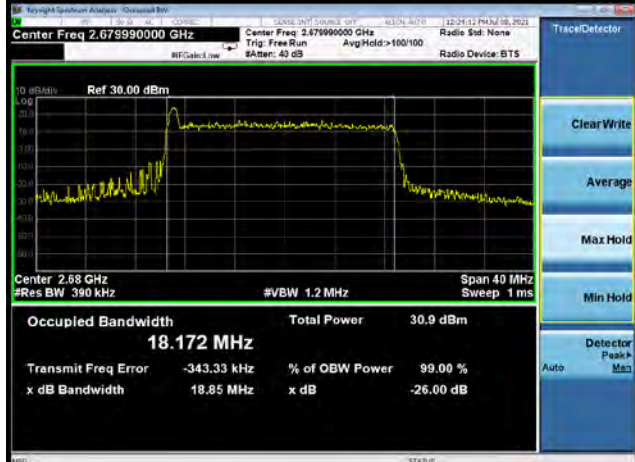
DC_66A-n41A QPSK 100%RB 20MHz CH-Middle



DC_66A-n41A QPSK 1%RB 20MHz CH-High

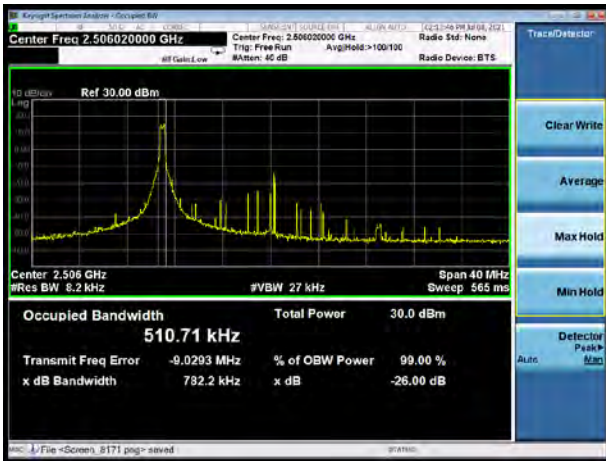


DC_66A-n41A QPSK 100%RB 20MHz CH-High





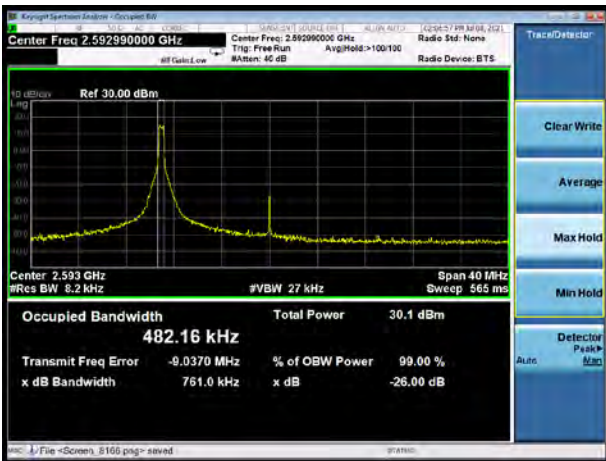
DC_66A-n41A 16QAM 1 %RB 20MHz CH-Low



DC_66A-n41A 16QAM 100%RB 20MHz CH-Low



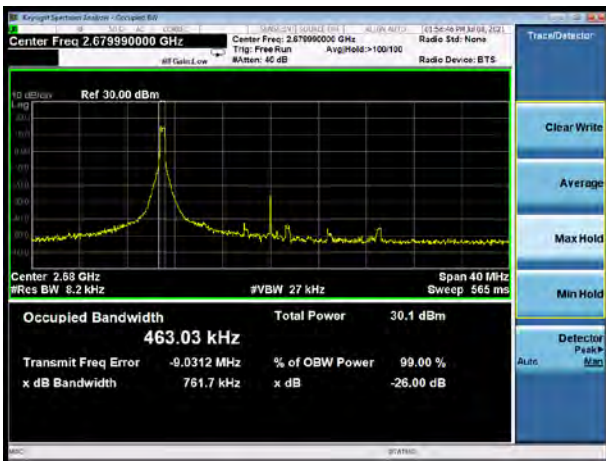
DC_66A-n41A 16QAM 1%RB 20MHz CH-Middle



DC_66A-n41A 16QAM 100%RB 20MHz CH-Middle



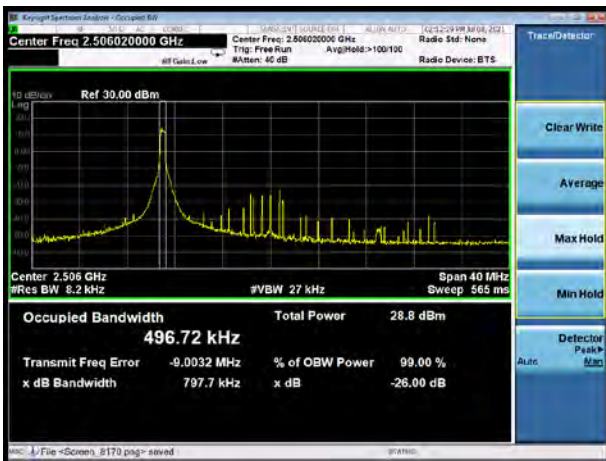
DC_66A-n41A 16QAM 1%RB 20MHz CH-High



DC_66A-n41A 16QAM 100%RB 20MHz CH-High



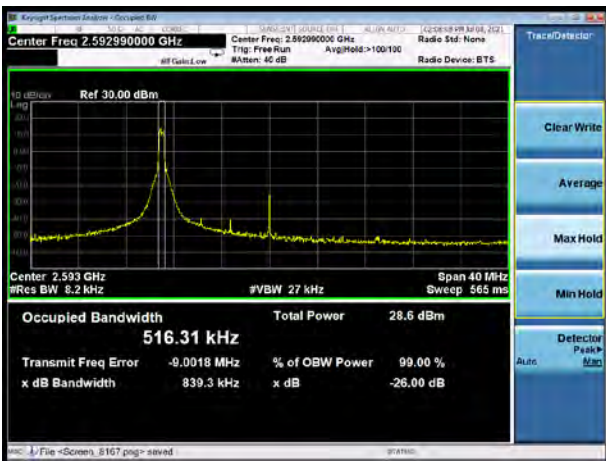
DC_66A-n41A 64QAM 1 %RB 20MHz CH-Low



DC_66A-n41A 64QAM 100%RB 20MHz CH-Low



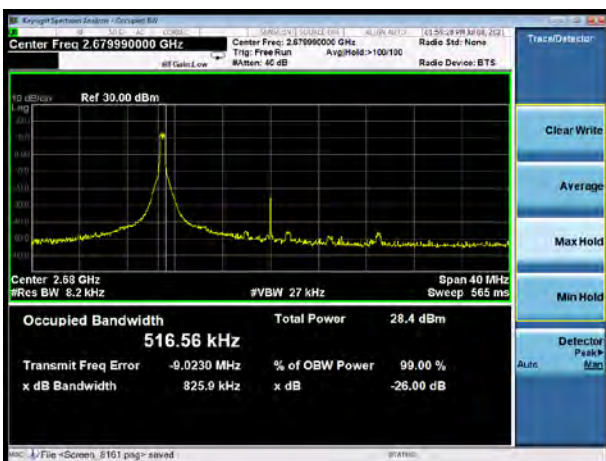
DC_66A-n41A 64QAM 1%RB 20MHz CH-Middle



DC_66A-n41A 64QAM 100%RB 20MHz CH-Middle



DC_66A-n41A 64QAM 1%RB 20MHz CH-High

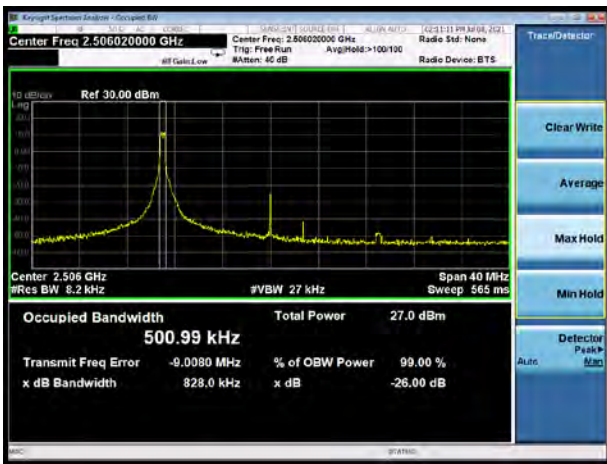


DC_66A-n41A 64QAM 100%RB 20MHz CH-High





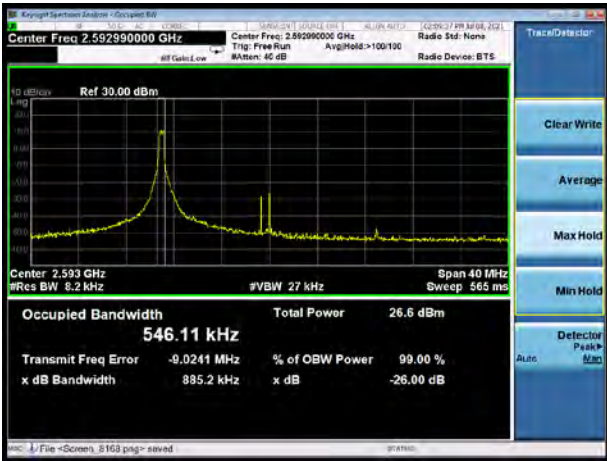
DC_66A-n41A 256QAM 1 %RB 20MHz CH-Low



DC_66A-n41A 256QAM 100%RB 20MHz CH-Low



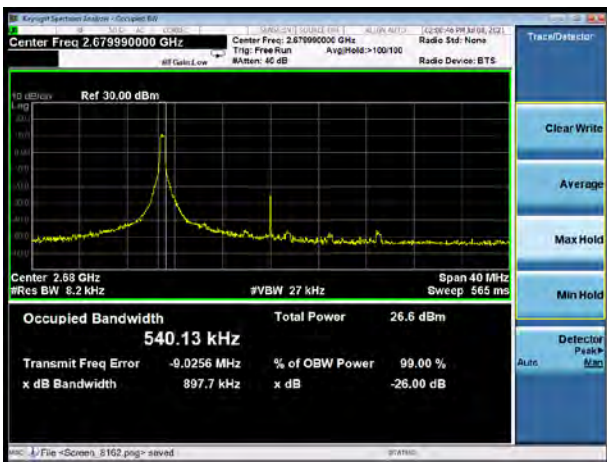
DC_66A-n41A 256QAM 1%RB 20MHz CH-Middle



DC_66A-n41A 256QAM 100%RB 20MHz CH-Middle



DC_66A-n41A 256QAM 1%RB 20MHz CH-High

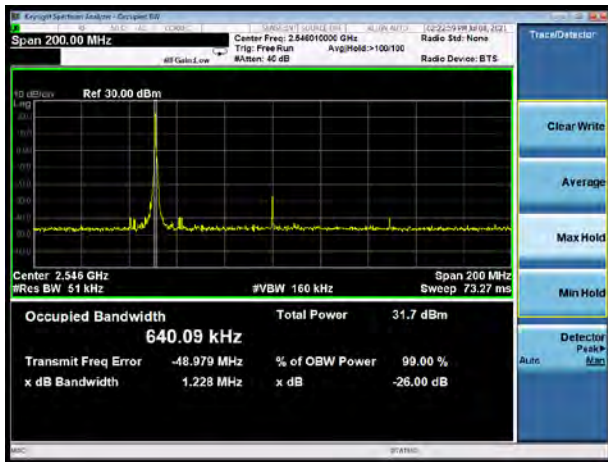


DC_66A-n41A 256QAM 100%RB 20MHz CH-High

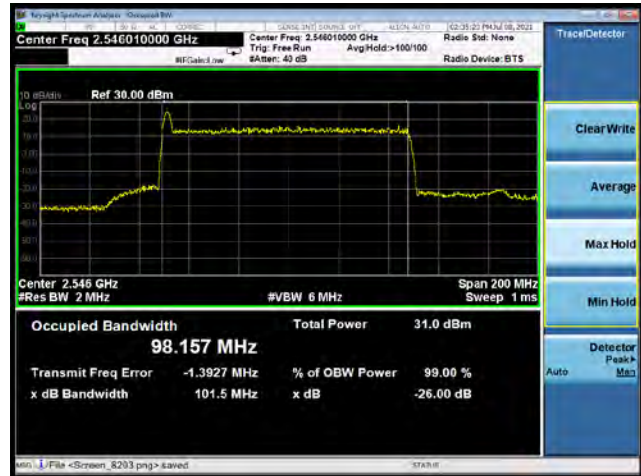




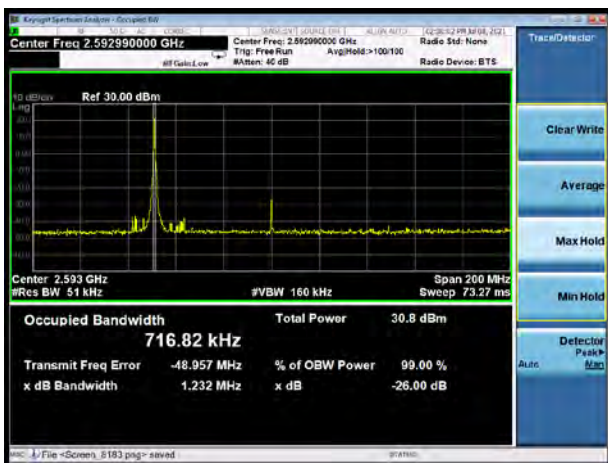
DC_66A-n41A P1/2 BPSK 1 %RB 100MHz
CH-Low



DC_66A-n41A P1/2 BPSK 100%RB 100MHz
CH-Low



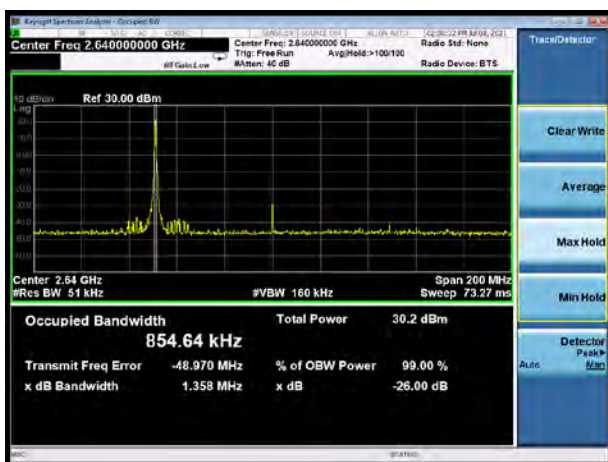
DC_66A-n41A P1/2 BPSK1%RB 100MHz
CH-Middle



DC_66A-n41A P1/2 BPSK100%RB 100MHz
CH-Middle



DC_66A-n41A P1/2 BPSK1%RB 100MHz
CH-High

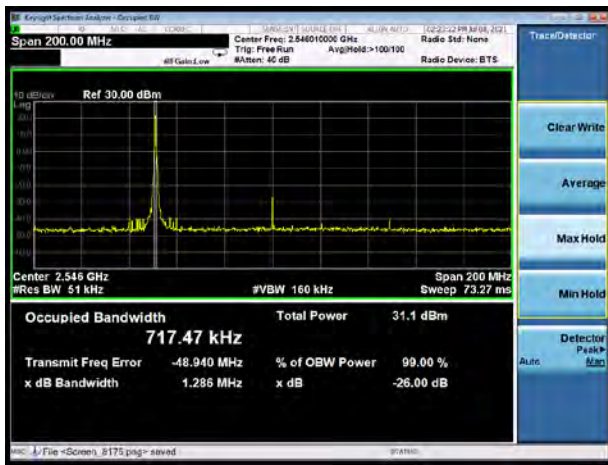


DC_66A-n41A P1/2 BPSK100%RB 100MHz
CH-High

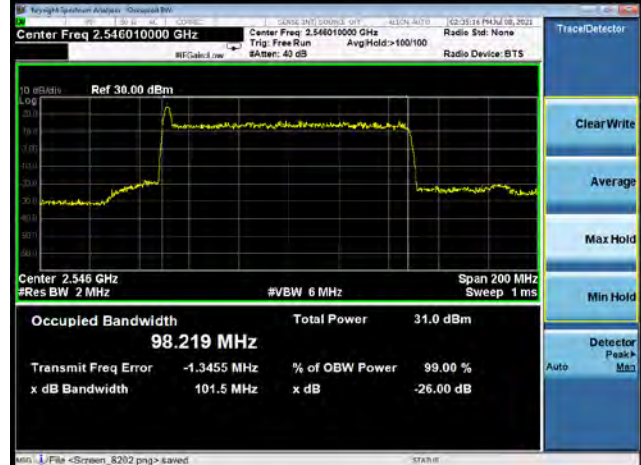




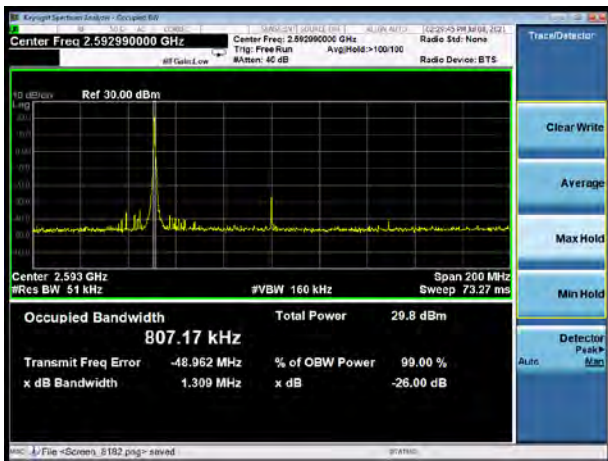
DC_66A-n41A QPSK 1%RB 100MHz CH-Low



DC_66A-n41A QPSK 100%RB 100MHz CH-Low



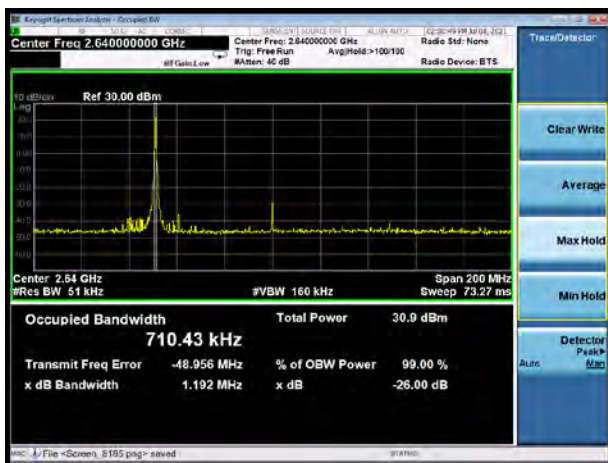
DC_66A-n41A QPSK 1%RB 100MHz CH-Middle



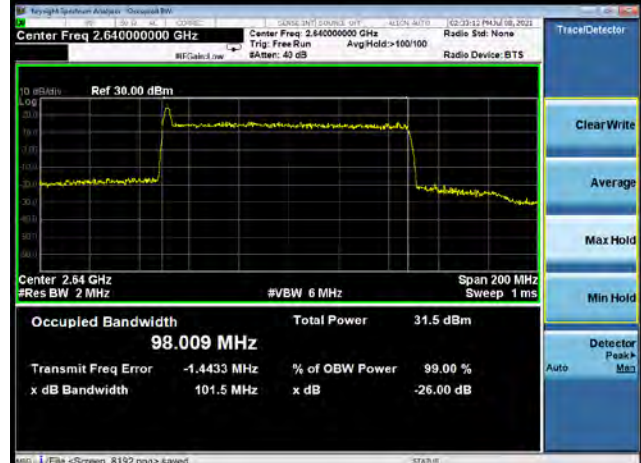
DC_66A-n41A QPSK 100%RB 100MHz CH-Middle



DC_66A-n41A QPSK 1%RB 100MHz CH-High

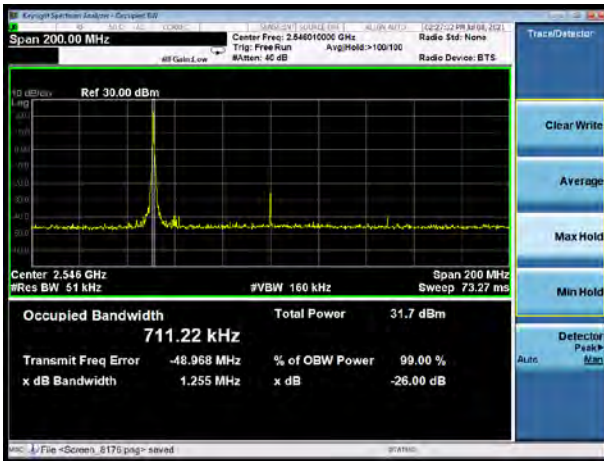


DC_66A-n41A QPSK 100%RB 100MHz CH-High

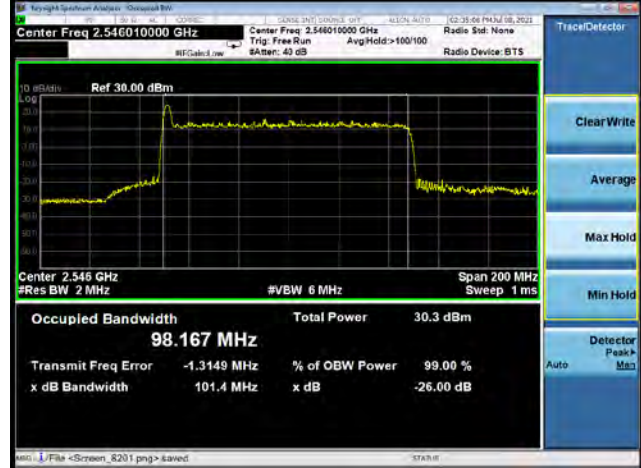




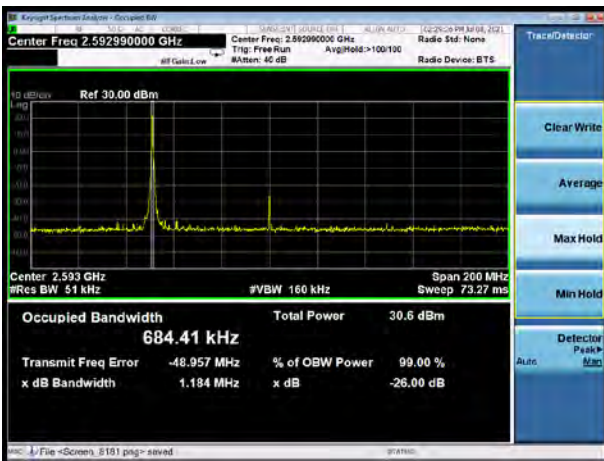
DC_66A-n41A 16QAM 1 %RB 100MHz CH-Low



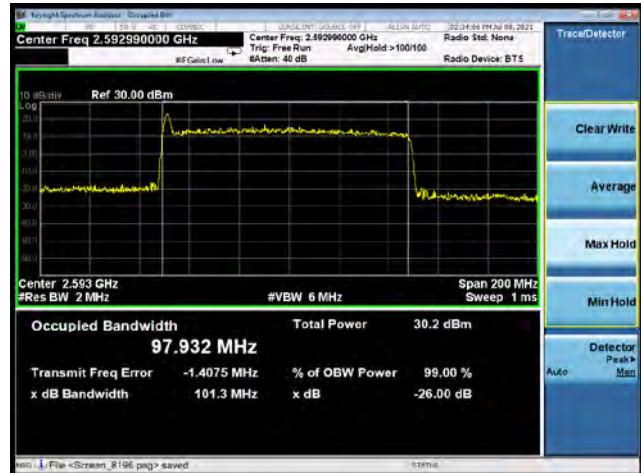
DC_66A-n41A 16QAM 100%RB 100MHz CH-Low



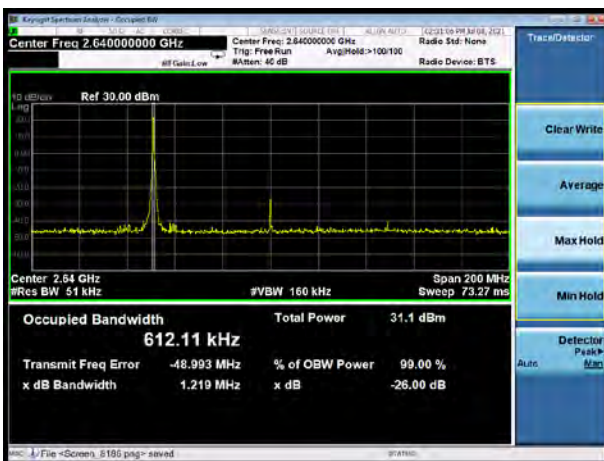
DC_66A-n41A 16QAM 1%RB 100MHz CH-Middle



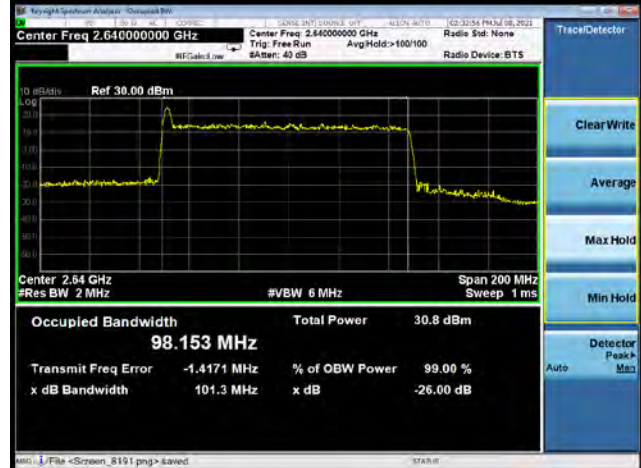
DC_66A-n41A 16QAM 100%RB 100MHz CH-Middle



DC_66A-n41A 16QAM 1%RB 100MHz CH-High



DC_66A-n41A 16QAM 100%RB 100MHz CH-High





DC_66A-n41A 64QAM 1 %RB 100MHz CH-Low



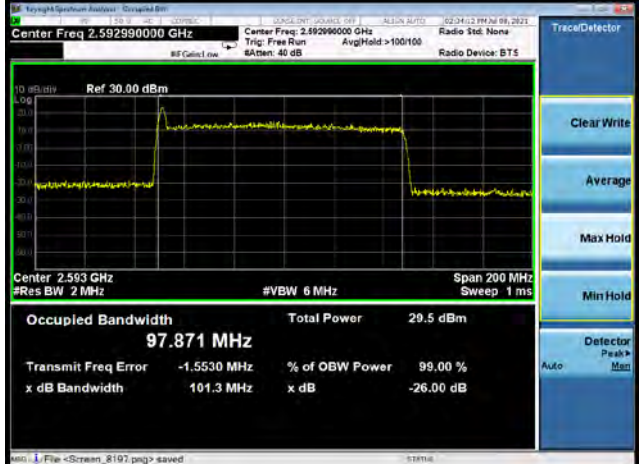
DC_66A-n41A 64QAM 100%RB 100MHz CH-Low



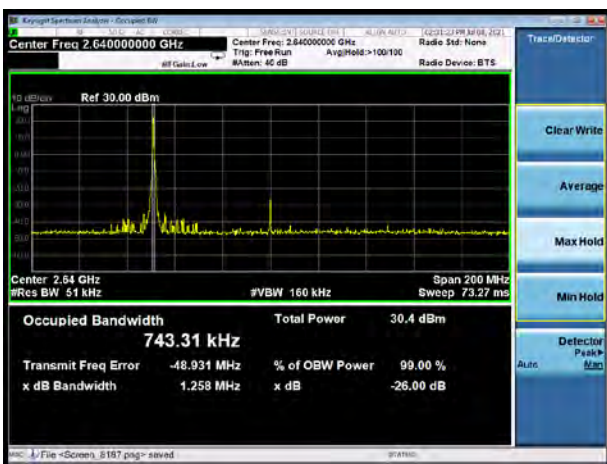
DC_66A-n41A 64QAM 1%RB 100MHz CH-Middle



DC_66A-n41A 64QAM 100%RB 100MHz CH-Middle



DC_66A-n41A 64QAM 1%RB 100MHz CH-High

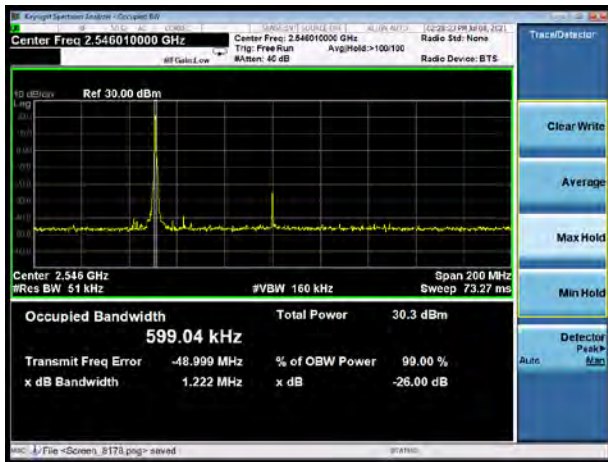


DC_66A-n41A 64QAM 100%RB 100MHz CH-High





DC_66A-n41A 256QAM 1%RB 100MHz
CH-Low



DC_66A-n41A 256QAM 100%RB 100MHz
CH-Low



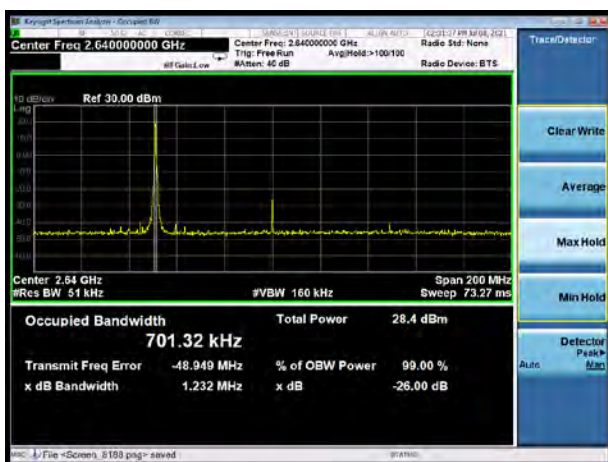
DC_66A-n41A 256QAM 1%RB 100MHz
CH-Middle



DC_66A-n41A 256QAM 100%RB 100MHz
CH-Middle



DC_66A-n41A 256QAM 1%RB 100MHz
CH-High

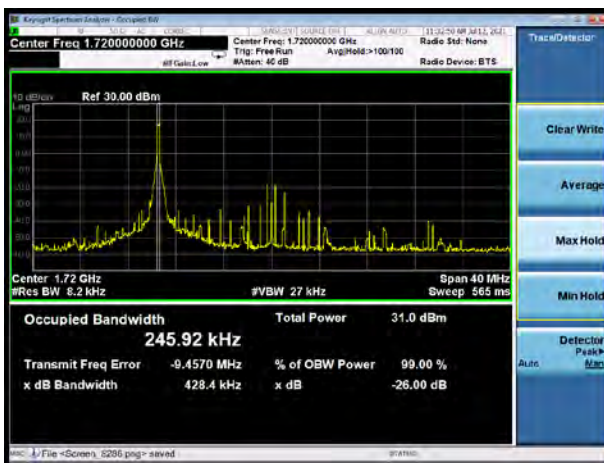


DC_66A-n41A 256QAM 100%RB 100MHz
CH-High





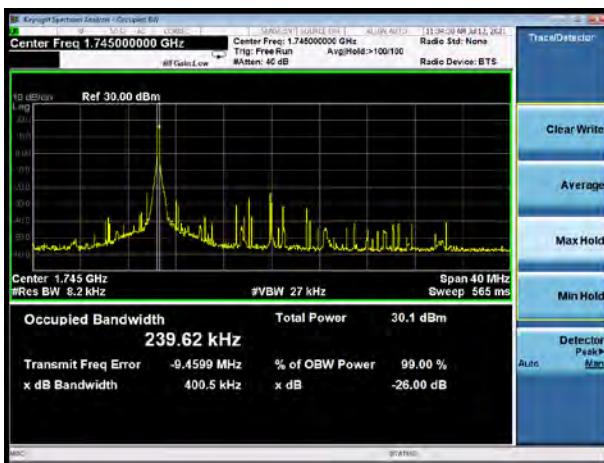
NR n66 P1/2 BPSK 1%RB 20MHz CH-Low



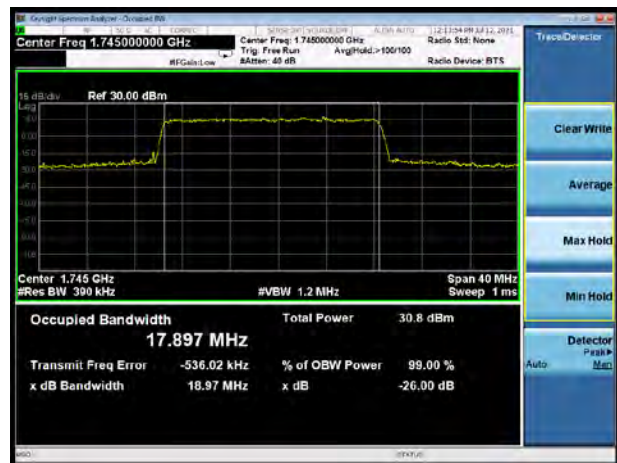
NR n66 P1/2 BPSK 100%RB 20MHz CH-Low



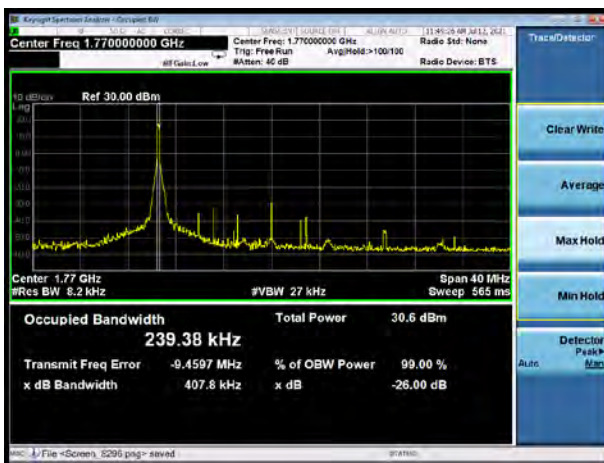
NR n66 P1/2 BPSK 1%RB 20MHz CH-Middle



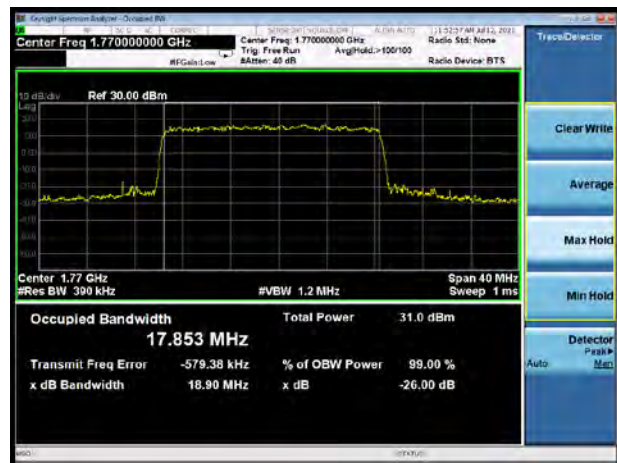
NR n66 P1/2 BPSK 100%RB 20MHz CH-Middle



NR n66 P1/2 BPSK 1%RB 20MHz CH-High

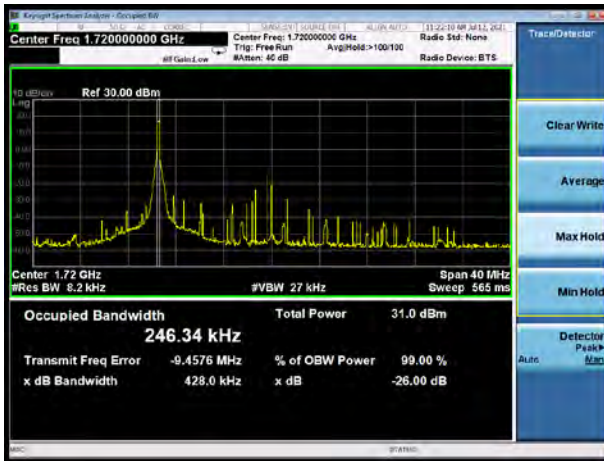


NR n66 P1/2 BPSK 100%RB 20MHz CH-High





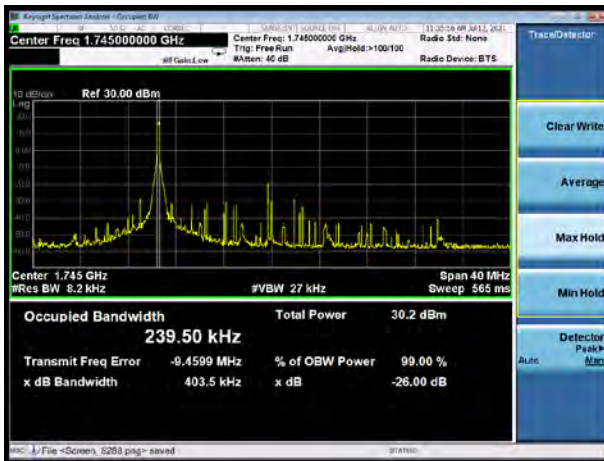
NR n66 QPSK 1%RB 20MHz CH-Low



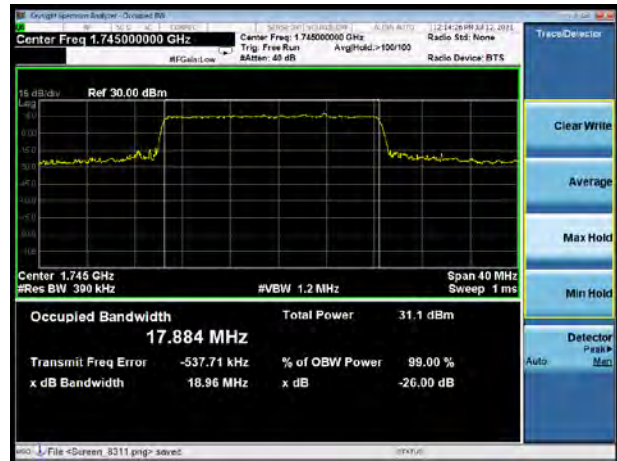
NR n66 QPSK 100%RB 20MHz CH-Low



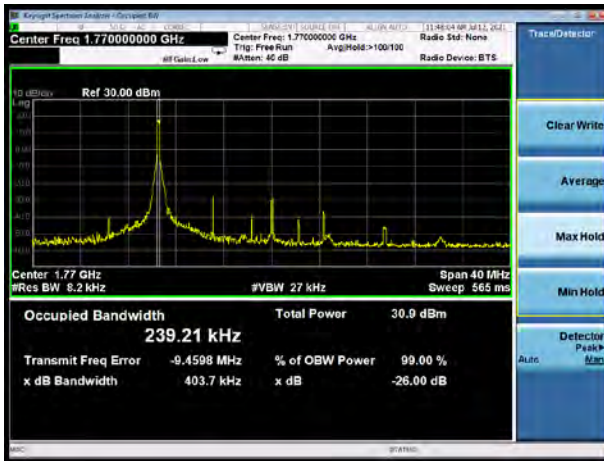
NR n66 QPSK 1%RB 20MHz CH-Middle



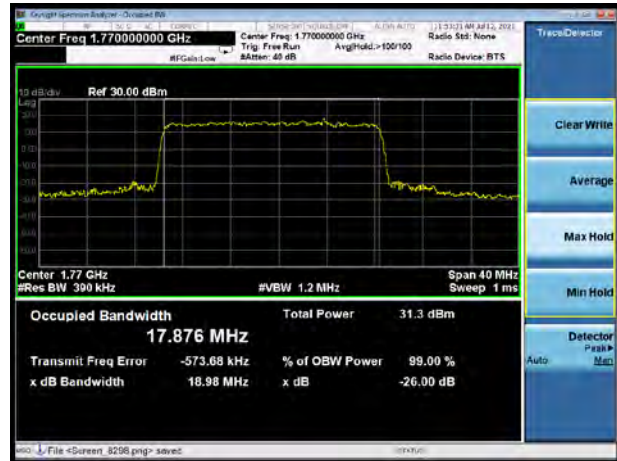
NR n66 QPSK 100%RB 20MHz CH-Middle



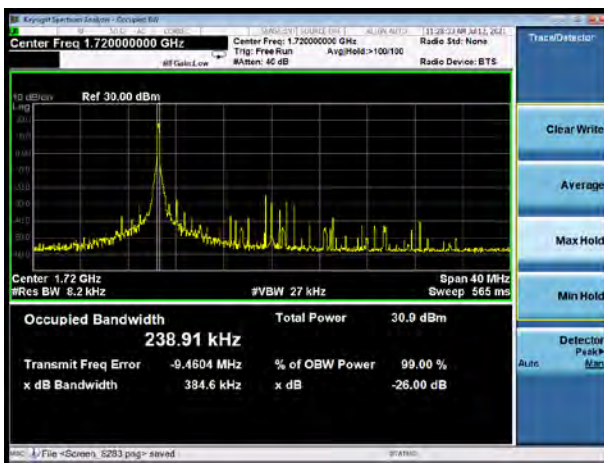
NR n66 QPSK 1%RB 20MHz CH-High



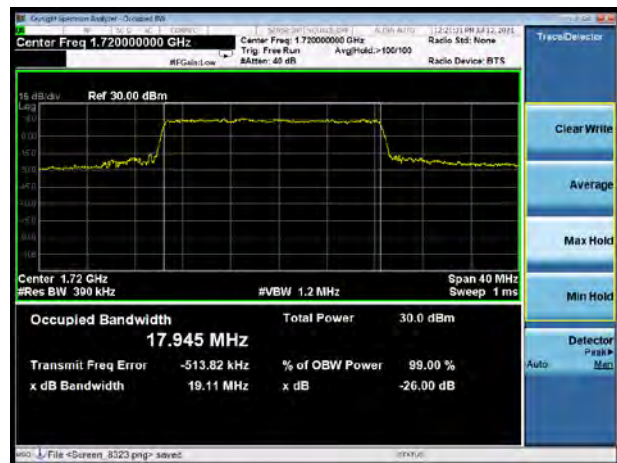
NR n66 QPSK 100%RB 20MHz CH-High



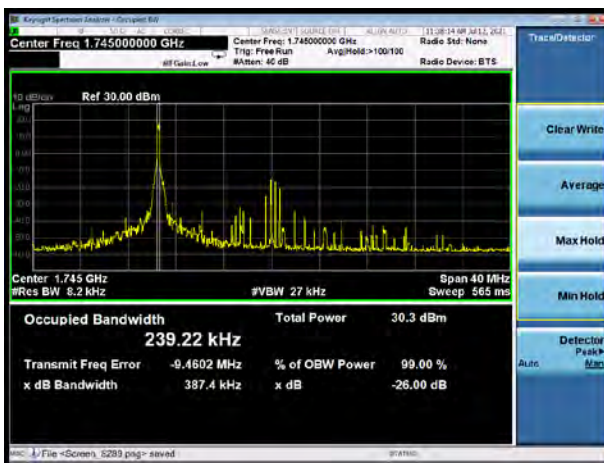
NR n66 16QAM 1%RB 20MHz CH-Low



NR n66 16QAM 100%RB 20MHz CH-Low



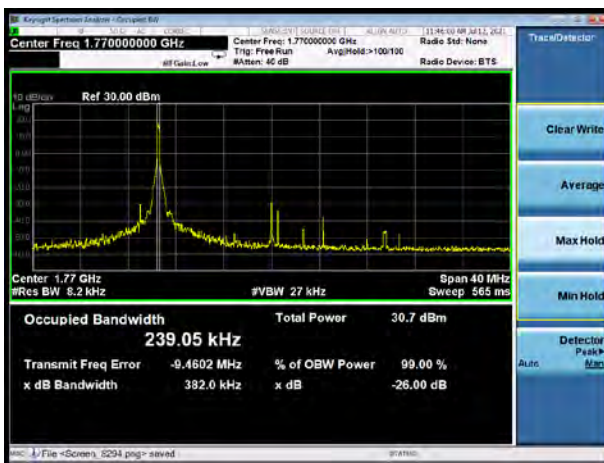
NR n66 16QAM 1%RB 20MHz CH-Middle



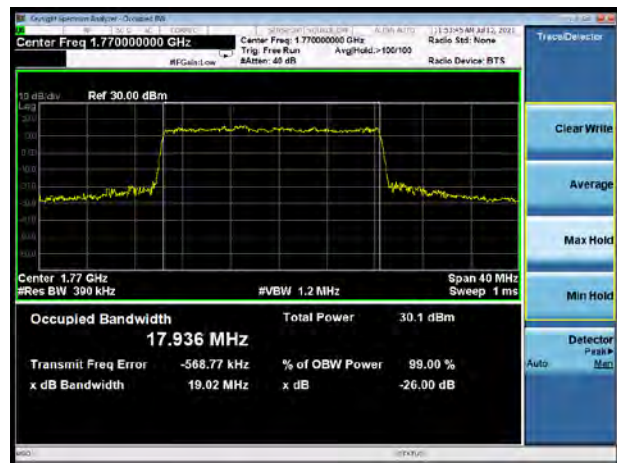
NR n66 16QAM 100%RB 20MHz CH-Middle



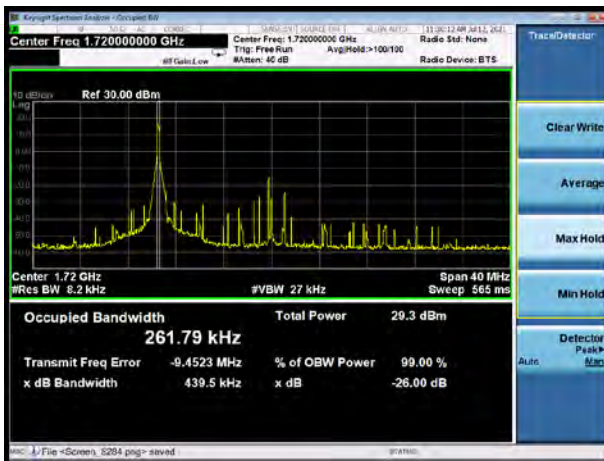
NR n66 16QAM 1%RB 20MHz CH-High



NR n66 16QAM 100%RB 20MHz CH-High



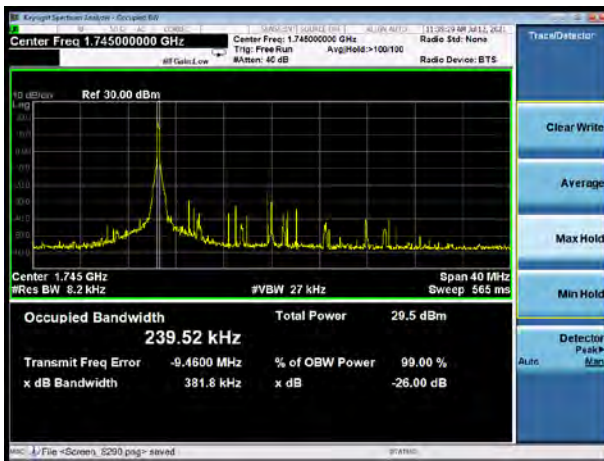
NR n66 64QAM 1%RB 20MHz CH-Low



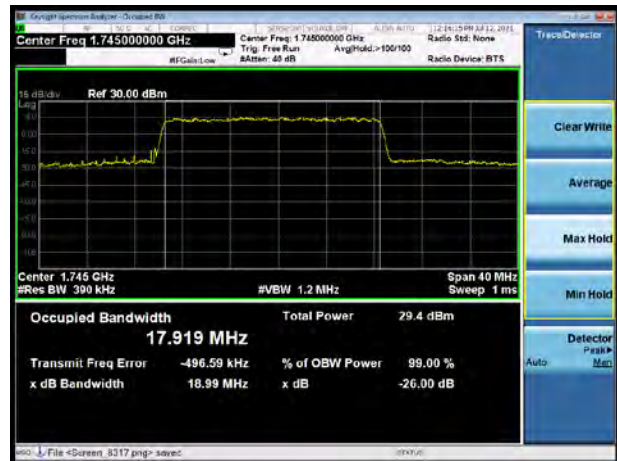
NR n66 64QAM 100%RB 20MHz CH-Low



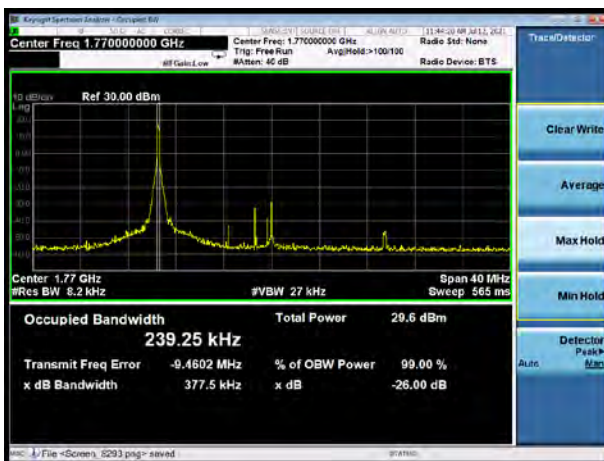
NR n66 64QAM 1%RB 20MHz CH-Middle



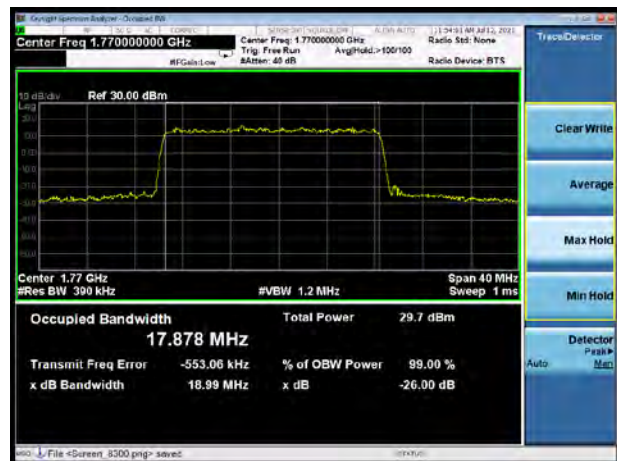
NR n66 64QAM 100%RB 20MHz CH-Middle



NR n66 64QAM 1%RB 20MHz CH-High

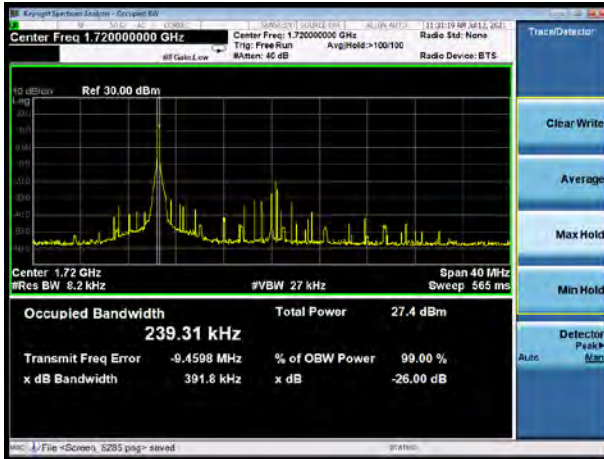


NR n66 64QAM 100%RB 20MHz CH-High





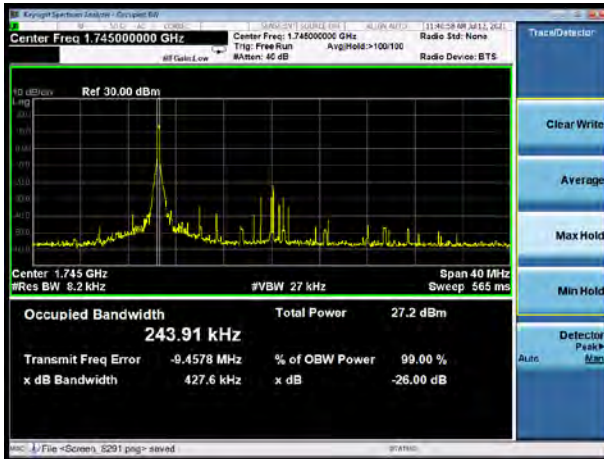
NR n66 256QAM 1%RB 20MHz CH-Low



NR n66 256QAM 100%RB 20MHz CH-Low



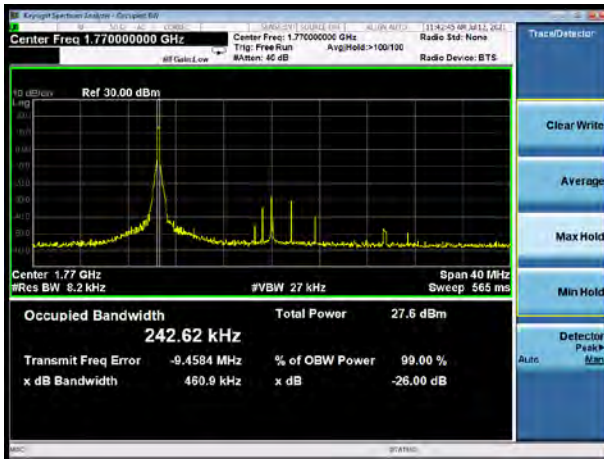
NR n66 256QAM 1%RB 20MHz CH-Middle



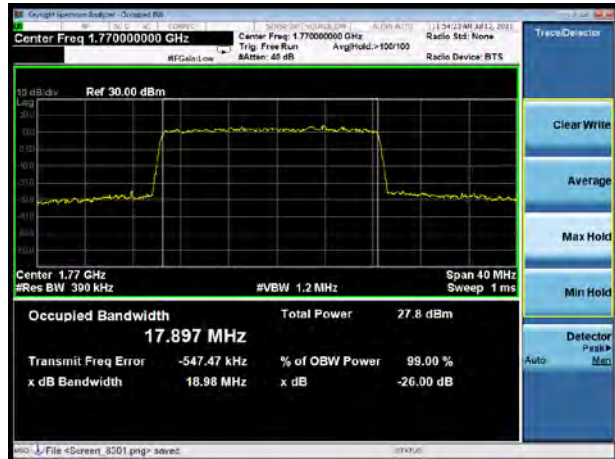
NR n66 256QAM 100%RB 20MHz CH-Middle



NR n66 256QAM 1%RB 20MHz CH-High

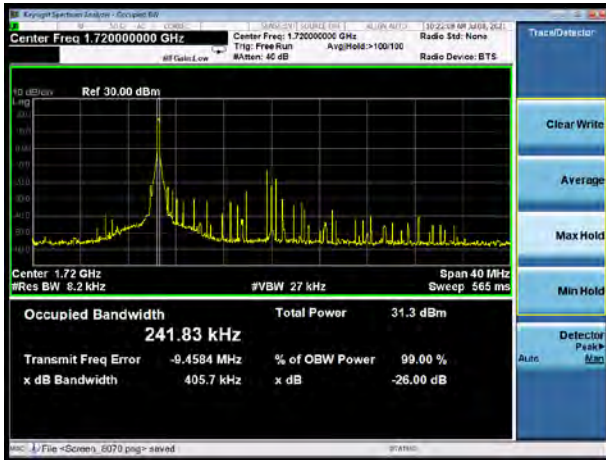


NR n66 256QAM 100%RB 20MHz CH-High





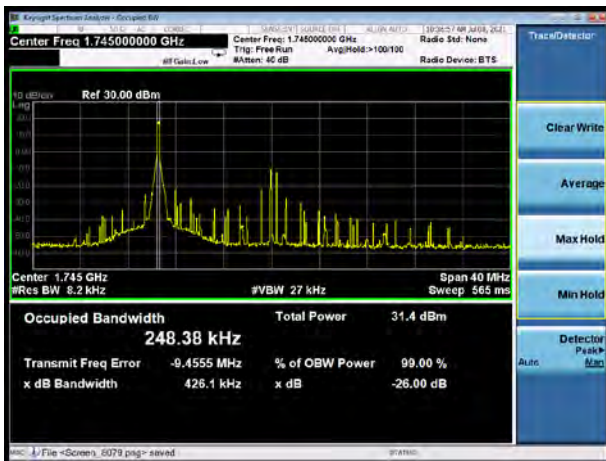
DC_12A-n66A P1/2 BPSK 1%RB 20MHz
CH-Low



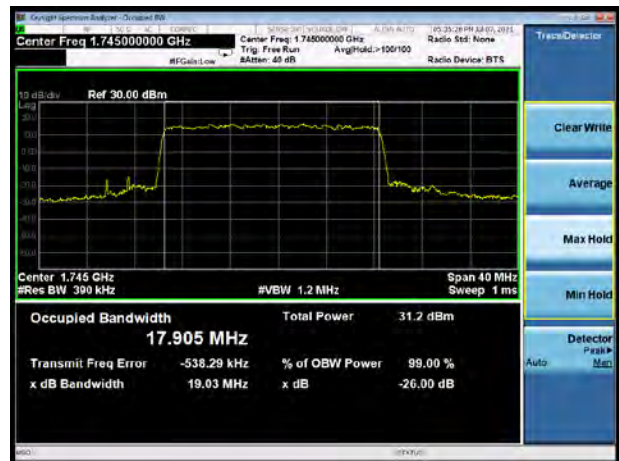
DC_12A-n66A P1/2 BPSK 100%RB 20MHz
CH-Low



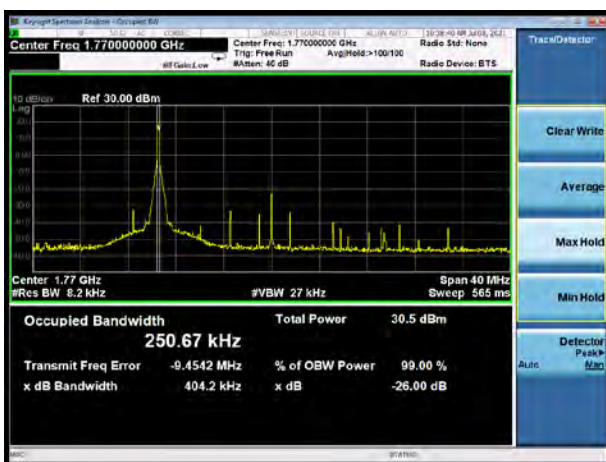
DC_12A-n66A P1/2 BPSK 1%RB 20MHz
CH-Middle



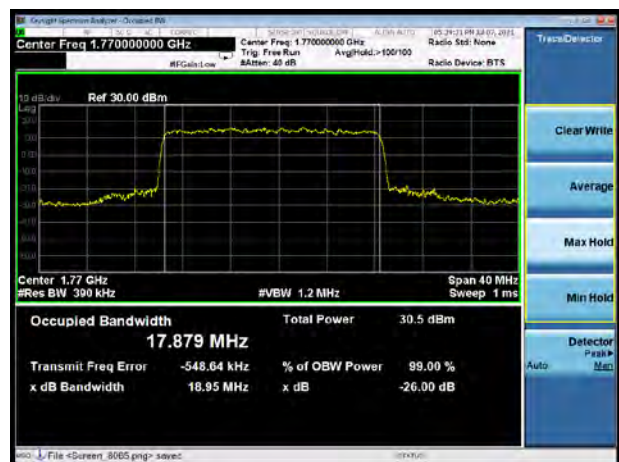
DC_12A-n66A P1/2 BPSK 100%RB 20MHz
CH-Middle



DC_12A-n66A P1/2 BPSK 1%RB 20MHz
CH-High

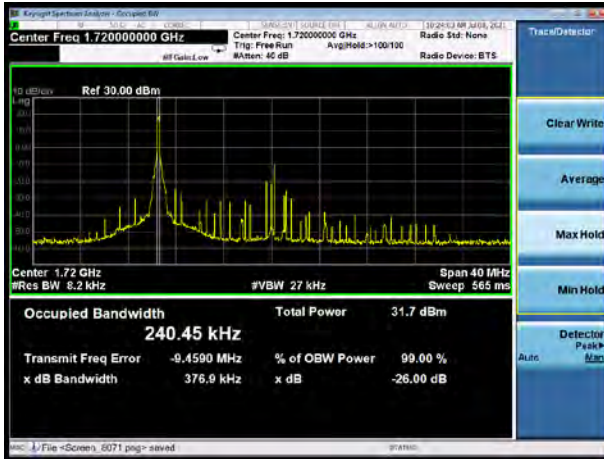


DC_12A-n66A P1/2 BPSK 100%RB 20MHz
CH-High





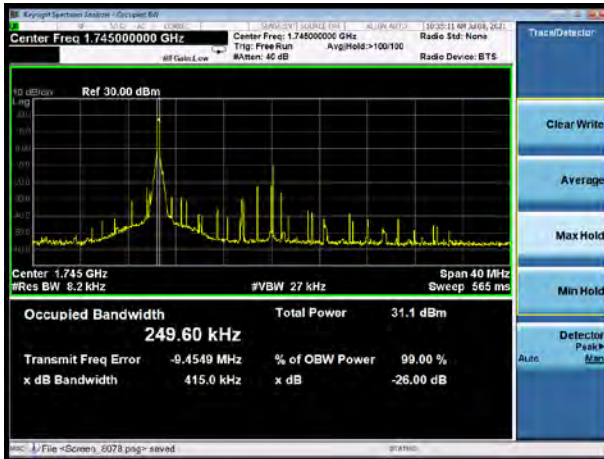
DC_12A-n66A QPSK 1%RB 20MHz CH-Low



DC_12A-n66A QPSK 100%RB 20MHz CH-Low



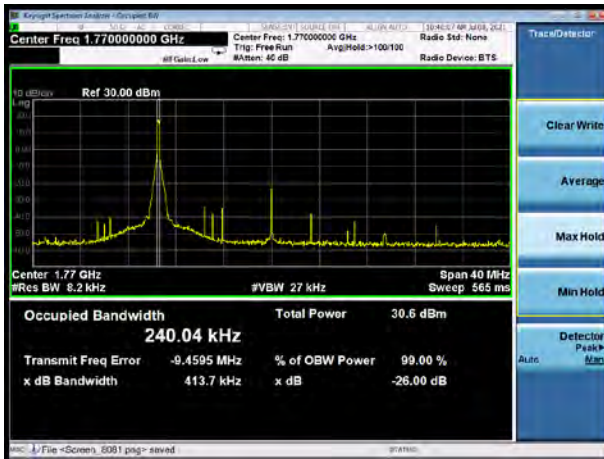
DC_12A-n66A QPSK 1%RB 20MHz CH-Middle



DC_12A-n66A QPSK 100%RB 20MHz CH-Middle



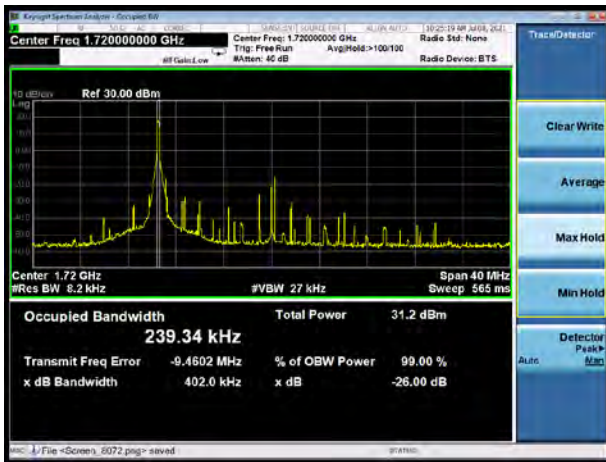
DC_12A-n66A QPSK 1%RB 20MHz CH-High



DC_12A-n66A QPSK 100%RB 20MHz CH-High



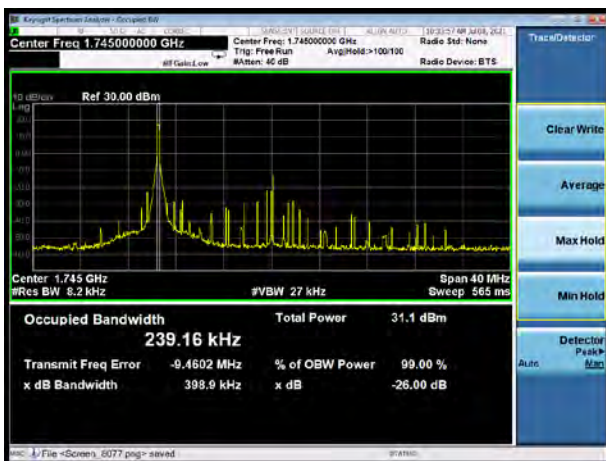
DC_12A-n66A 16QAM 1%RB 20MHz CH-Low



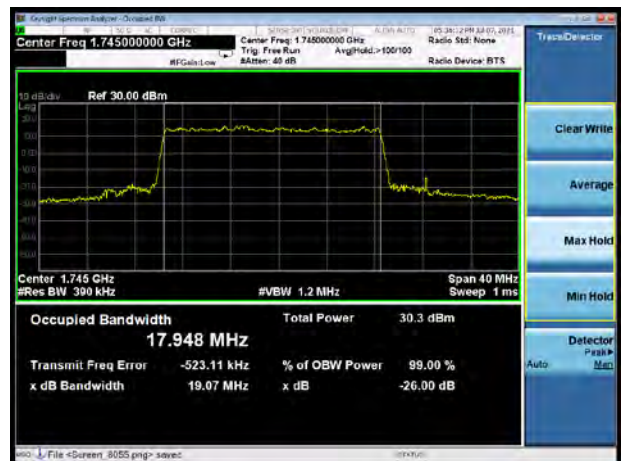
DC_12A-n66A 16QAM 100%RB 20MHz CH-Low



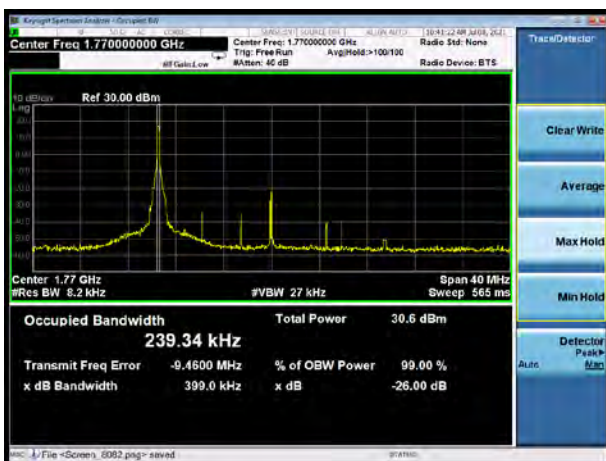
DC_12A-n66A 16QAM 1%RB 20MHz CH-Middle



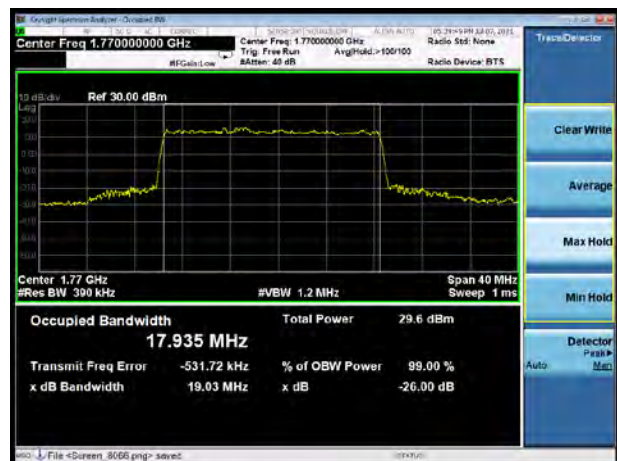
DC_12A-n66A 16QAM 100%RB 20MHz CH-Middle



DC_12A-n66A 16QAM 1%RB 20MHz CH-High

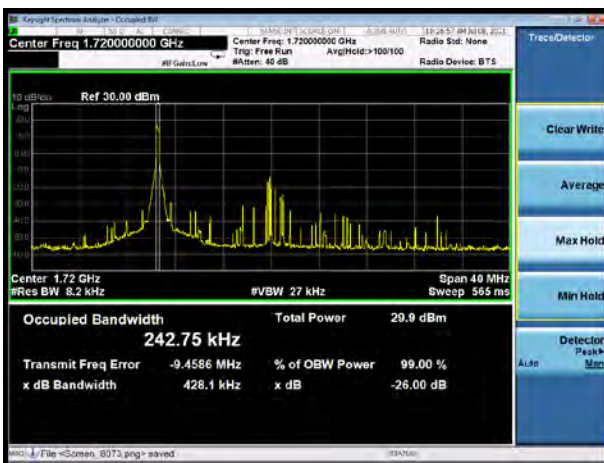


DC_12A-n66A 16QAM 100%RB 20MHz CH-High





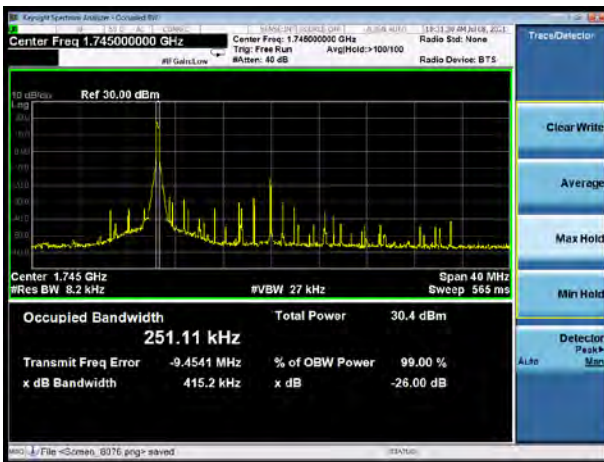
DC_12A-n66A 64QAM 1%RB 20MHz CH-Low



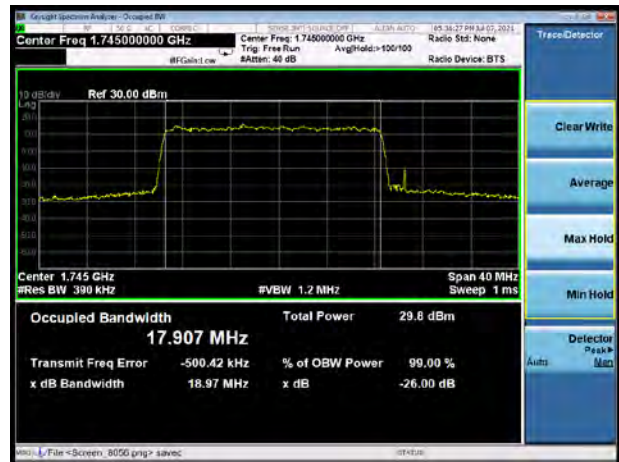
DC_12A-n66A 64QAM 100%RB 20MHz CH-Low



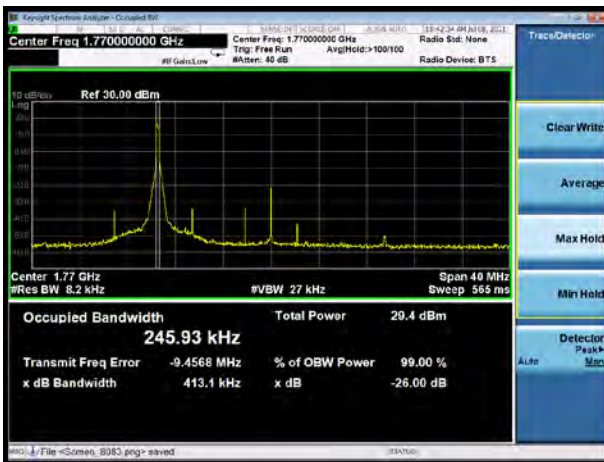
DC_12A-n66A 64QAM 1%RB 20MHz CH-Middle



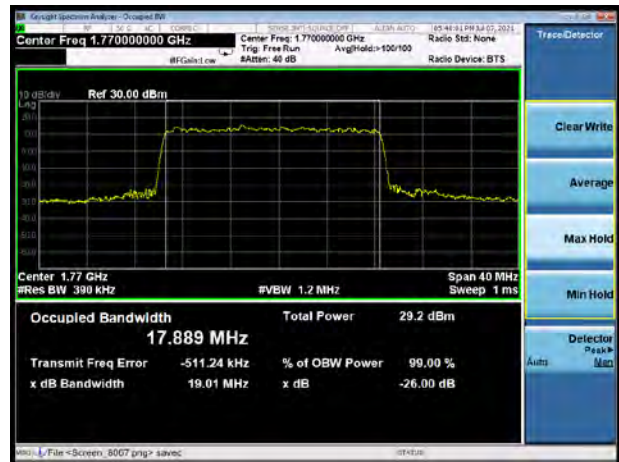
DC_12A-n66A 64QAM 100%RB 20MHz CH-Middle



DC_12A-n66A 64QAM 1%RB 20MHz CH-High

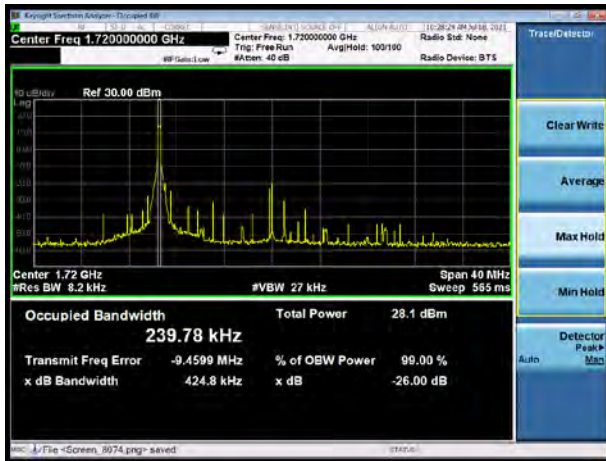


DC_12A-n66A 64QAM 100%RB 20MHz CH-High

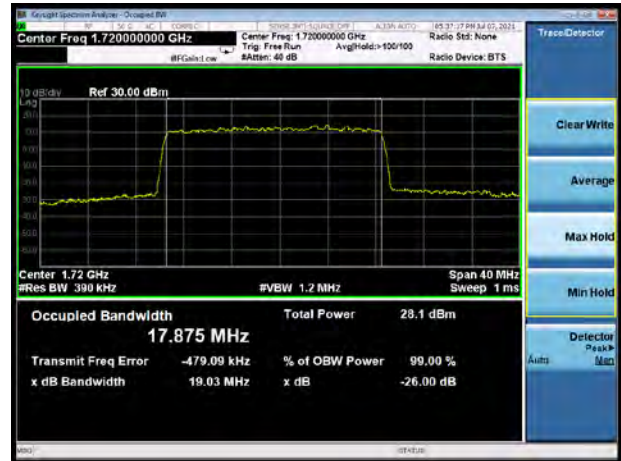




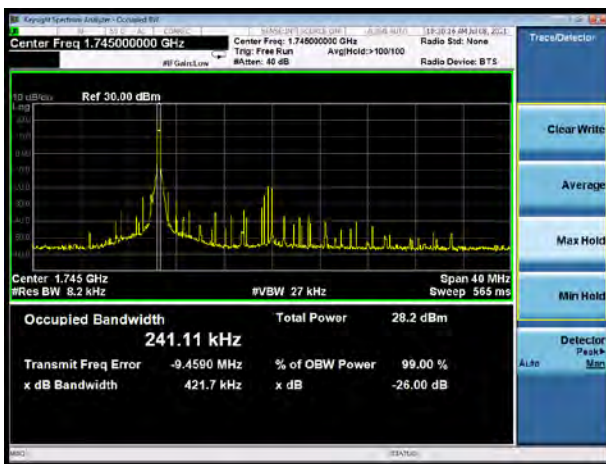
DC_12A-n66A 256QAM 1%RB 20MHz CH-Low



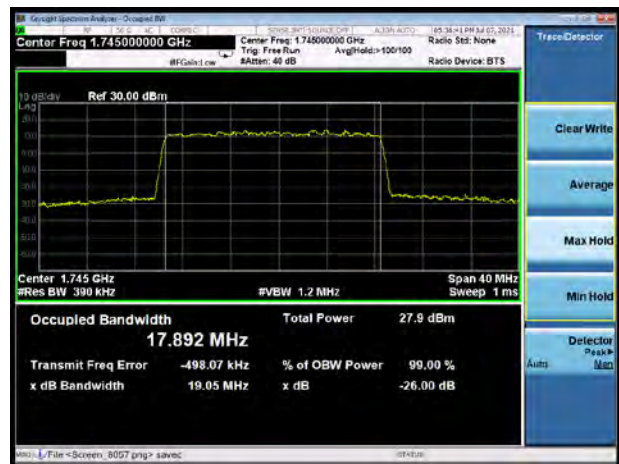
DC_12A-n66A 256QAM 100%RB 20MHz CH-Low



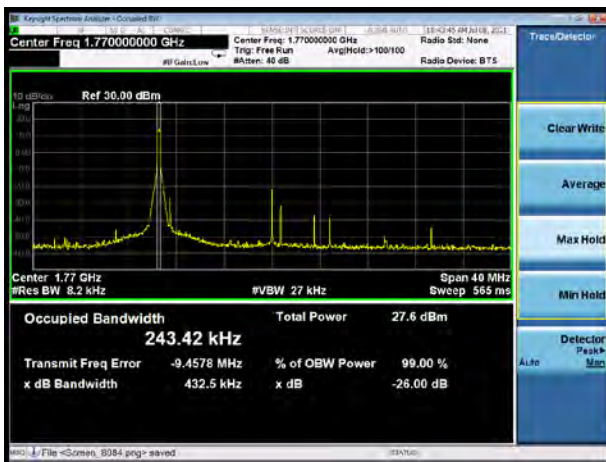
DC_12A-n66A 256QAM 1%RB 20MHz CH-Middle



DC_12A-n66A 256QAM 100%RB 20MHz CH-Middle



DC_12A-n66A 256QAM 1%RB 20MHz CH-High



DC_12A-n66A 256QAM 100%RB 20MHz CH-High



5.3 Band Edge Compliance

Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The band edge of the lowest and highest channels were measured.

The testing follows KDB 971168 D01 v03r01 Section 6.0

The EUT was connected to spectrum analyzer and system simulator via a power divider.

The band edges of low and high channels for the highest RF powers were measured.

RBW is set to at least one percent of the emission bandwidth of the fundamental emission of the transmitter for NR n41 (100MHz)/NR n66 (20MHz).

RBW is set to at least one percent of the emission bandwidth of the fundamental emission of the transmitter for DC_66A-n41A (20MHz)/DC_12A-n66A (20MHz).

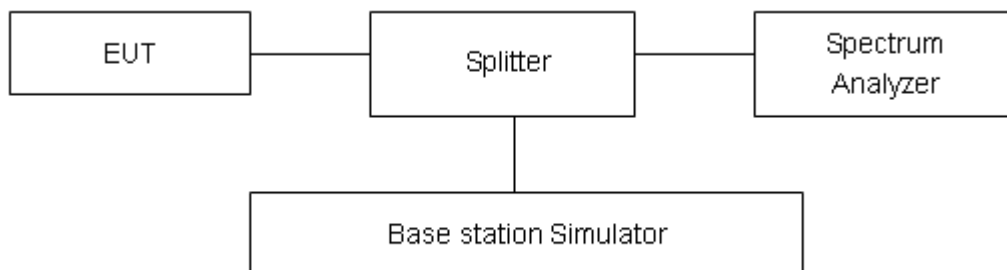
on spectrum analyzer.

Set spectrum analyzer with RMS detector.

The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

Checked that all the results comply with the emission limit line.

Test Setup



Limits

Rule Part 27.53(i) By a factor of not less than $43 + 10 \log(P)$ dB on all frequencies between 2305 and 2320 MHz.

Rule Part 27.53(h) specifies that “for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB”



Rule Part 27.53(m) (4) specifies that “for BRS and EBS stations. For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(4) of this section. In addition, the attenuation factor shall not be less that $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

Example:

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

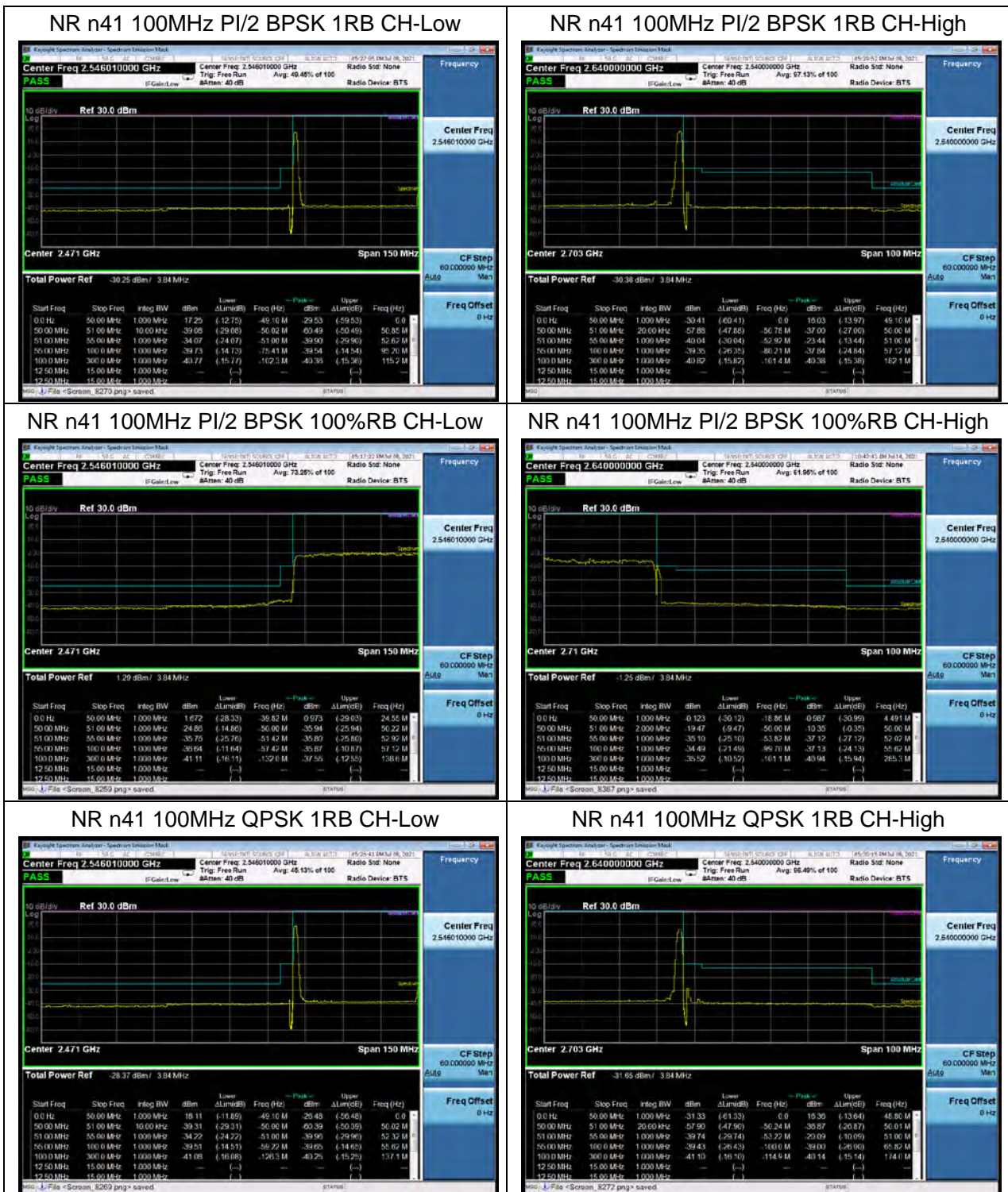
Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$, $U=0.684$ dB.



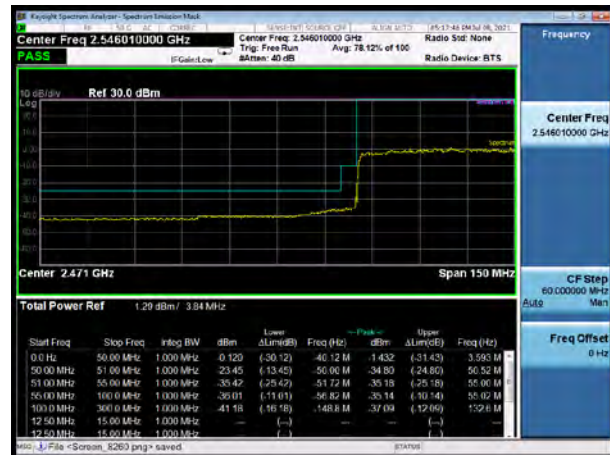
Test Result

All the test traces in the plots shows the test results clearly.

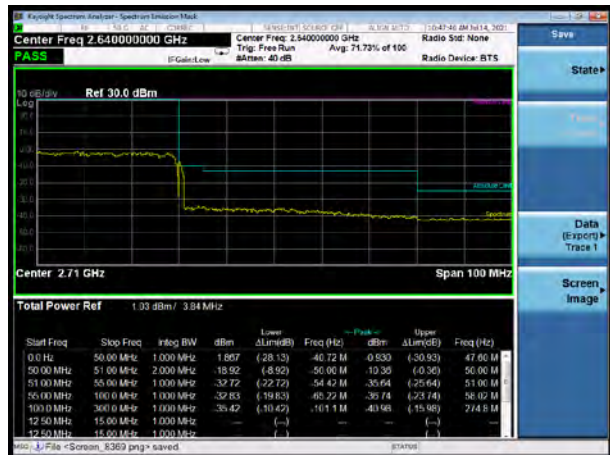




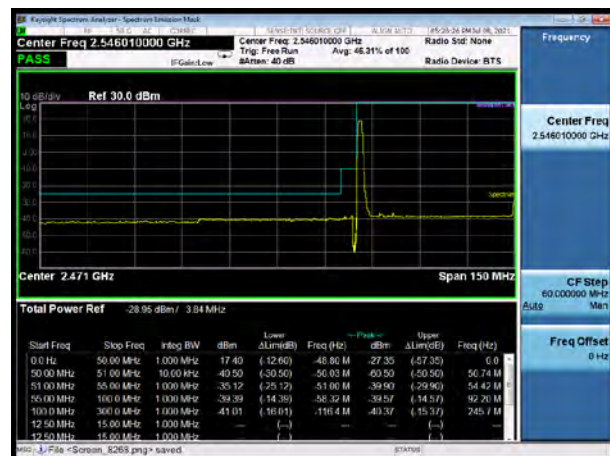
NR n41 100MHz QPSK 100%RB CH-Low



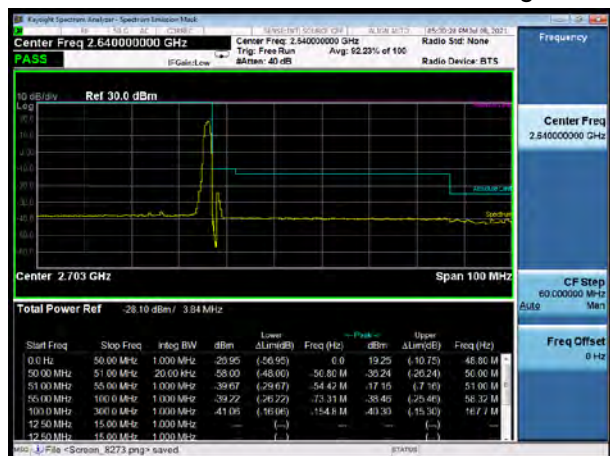
NR n41 100MHz QPSK 100%RB CH-High



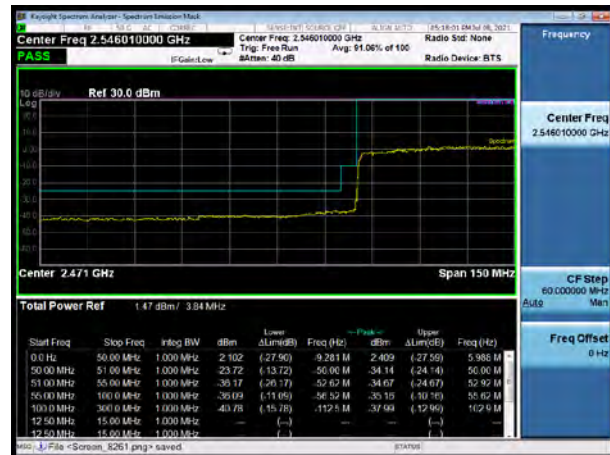
NR n41 100MHz 16QAM 1RB CH-Low



NR n41 100MHz 16QAM 1RB CH-High



NR n41 100MHz 16QAM 100%RB CH-Low



NR n41 100MHz 16QAM 100%RB CH-High

