

TEST REPORT

**CTK Co., Ltd.**

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Report No.:

CTK-2025-03272

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1. Applicant

- Name : Samsung Electronics Co., Ltd.
- Address : 129, Samsung-ro, Yeongtong-gu, Suwon-si Gyeonggi-do, 16677, Korea
- Date of Receipt : 2025-10-27

2. Manufacturer

- Name : Samsung Electronics Co., Ltd.
- Address : 129, Samsung-ro, Yeongtong-gu, Suwon-si Gyeonggi-do, 16677, Korea

3. Use of Report : For FCC Class II permissive change**4. Test Sample / Model:** RRU (RFV01U) / RFV01U-D1A**5. Date of Test :** 2025-10-27 to 2025-11-21**6. Test Standard(method) used :** FCC 47 CFR Part 24E, Part 27, ANSI C63.26-2015**7. Testing Environment:** refer to 9 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	Technical Manager
	Won-Jae Jang: (Signature)	Byung-Kwon In: (Signature)

2025-11-24

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MEASUREMENT REPORT

FCC Rule Part 24E & 27

Mode	Tx Frequency (MHz)	Total Conducted output power		Max Emission Designator	Modulation
		Max. Power (dBm)	Max. Power (W)		
NR_n66_1C_25M_4T	2 110 MHz to 2 180 MHz	54.24	265.70	24M0G7D	QPSK
		54.23	265.12	24M0W7D	QAM
NR_n66_1C_30M_4T		54.24	265.24	28M9G7D	QPSK
		54.23	265.12	28M9W7D	QAM
NR_n66_2C_5M+25M_4T		53.57	227.71	29M3G7D	QPSK
		53.65	231.73	29M7W7D	QAM
NR_n66_3C_5M+5M+25M_4T		53.78	239.05	34M4G7D	QPSK
		53.80	240.07	34M4W7D	QAM
MSR_B/n66_2C_NR 25M+LTE 5M_4T		53.61	229.50	29M3G7D	QPSK
		53.60	229.20	29M3W7D	QAM
MSR_B/n66_3C_NR 5M+NR 25M+LTE 5M_4T		53.57	227.32	34M6G7D	QPSK
		53.57	227.47	34M6W7D	QAM
MSR_B/n66_2C_DSS 10M+NR 25M_4T		53.45	221.18	34M2G7D	QPSK
		53.40	218.76	34M2W7D	QAM
NR_n66_1C_25M_2T		52.21	166.17	24M0G7D	QPSK
		52.21	166.36	24M0W7D	QAM
NR_n66_1C_30M_2T		52.05	160.34	28M8G7D	QPSK
		52.03	159.42	28M9W7D	QAM
NR_n66_2C_5M+25M_2T		52.09	161.64	29M3G7D	QPSK
		51.99	158.14	29M3W7D	QAM
NR_n66_3C_5M+5M+25M_2T		52.14	163.70	34M4G7D	QPSK
		52.14	163.54	34M4W7D	QAM
MSR_B/n66_2C_NR 25M+LTE 5M_2T		52.10	162.02	29M3G7D	QPSK
		52.09	161.84	29M3W7D	QAM
MSR_B/n66_3C_NR 5M+NR 25M+LTE 5M_2T		51.98	157.81	34M6G7D	QPSK
		51.94	156.40	34M6W7D	QAM
MSR_B/n66_2C_DSS 10M+NR 25M_2T		51.78	150.67	34M2G7D	QPSK
		51.79	151.04	34M2W7D	QAM
NR_n2_1C_25M_4T	1 930 MHz to 1 990 MHz	52.60	182.12	24M0G7D	QPSK
		52.57	180.76	24M0W7D	QAM
NR_n2_1C_25M_2T		50.88	122.49	24M0G7D	QPSK
		50.87	122.05	24M0W7D	QAM

EUT Overview

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1.0 REVISION RECORD

Issue Number	Issued Date	Revision History
CTK-2025-03272	11/24/2025	Initial Issue

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2.0 INTRODUCTION

2.1 Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Innovation, Science and Economic Development Canada.

2.2 Laboratory Accreditations and Listings

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

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3.0 PRODUCT INFORMATION

3.1 Equipment Description

The Equipment Under Test (EUT) is the **Samsung RRU (RFV01U) FCC ID: A3LRFV01U-D1A**. The test data contained in this report pertains only to the emissions due to the EUT's licensed transmitters that operate under the provisions of Part 24E and 27. A class II permissive change on the original filing is being pursued to enable Channel Bandwidth without hardware modification.

3.2 Device Capabilities

This device supports the following conditional features and filter information:

FCC ID:	A3LRFV01U-D1A		
FCC Classification	PCS Licensed Transmitter		
EUT Type:	RRU (RFV01U)		
Model Name:	RFV01U-D1A		
Test Device Serial No:	S525215083		
Device Capabilities:	LTE, 5G NR, DSS		
Operating Band/Frequency Range:	Band	Tx (Downlink)	Rx (Uplink)
	B/n2:	1 930 MHz to 1 990 MHz	1 850 MHz to 1 910 MHz
	B/n66:	2 110 MHz to 2 180 MHz	1 710 MHz to 1 780 MHz
Supported Modulation:	QPSK, 16QAM, 64QAM, 256QAM		
B/n2_Supported Number of Carriers and Channel Bandwidth:	LTE supports 5/10/15/20 MHz bandwidth modes with up to 2CC max aggregated BW of 25 MHz NR supports 5/10/15/20/25 MHz bandwidth modes with up to 2CC max aggregated BW of 25 MHz DSS supports 10/15/20 MHz bandwidth modes with up to 2CC max aggregated BW of 25 MHz LTE, NR and DSS supports Multi-Standard Radio (MSR)		
B/n66_Supported Number of Carriers and Channel Bandwidth:	LTE supports 5/10/15/20 MHz bandwidth modes with up to 3CC max aggregated BW of 35 MHz NR supports 5/10/15/20/25/30 MHz bandwidth modes with up to 3CC max aggregated BW of 35 MHz DSS supports bandwidths of 10/15/20 MHz modes with up to 3CC max aggregated BW of 35 MHz LTE, NR and DSS supports Multi-Standard Radio (MSR)		
Supported Configurations:	Single carrier, Multi carrier		
Maximum Output Power	B/n2: 120W/Unit for 2Tx, 160W/Unit for 4Tx B/n66: 180W/Unit for 2Tx, 240W/Unit for 4Tx		
RF Chain:	2TRX, 4TRX Configuration		
Antenna Gain:	Antenna is not provided by manufacture.		
Input Voltage:	DC -48V		

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3.3 Test Configuration

The setup is as follows:

- The EUT ("RRU (RFV01U)") and a Data Unit (DU) are each powered by -48V DC power supply.
- The DU is connected to a test laptop via an ethernet cable acting as backhaul.
- DU connects to the EUT through a fiber optic cable.
- An RF cable connects the signal analyzer and the EUT Ports for respective measurement.

The EUT was tested per the guidance of ANSI C63.26-2015 and KDB 971168 D01 v03r01. See Section 8.0 of this test report for a description of the radiated and antenna port conducted emissions tests.

Distribution unit (DU) which were used in test, that authorized under the SDoC procedure.

The following information is about configurations of carrier frequency and output power per port declared by the manufacturer.

* Abbreviations:

- 1C: Single carrier
- 2C: Contiguous 2 carriers in multi-carrier operation
- 2NC: Non-Contiguous 2 carriers in multi-carrier operation
- 3C: Contiguous 3 carriers in multi-carrier operation
- 3NC: Non-Contiguous 3 carriers in multi-carrier operation

Configuration	No. of Carriers	Total Bandwidth (MHz)	Carrier Frequency Configuration (MHz)			Rated Power (W/Unit)	
			Lowest	Middle	Highest	2Tx	4Tx
NR_n66_1C_25M	1	25	2 122.5	2 145.0	2 167.5	180	240
NR_n66_1C_30M	1	30	2 125.0	2 145.0	2 165.0		
NR_n66_2C_5M+25M	2	30 (5+25)	2 125.0	2 145.0	2 165.0		
NR_n66_2NC_5M+25M			2 112.5 + 2 167.5				
NR_n66_3C_5M+5M+25M	3	35 (5+5+25)	2 127.5	2 145.0	2 162.5		
NR_n66_3NC_5M+5M+25M			2 112.5 + 2 145.0 + 2 167.5				
MSR_B/n66_2C_NR 25M+ LTE 5M	2	30 (25+5)	2 125.0	2 145.0	2 165.0		
MSR_B/n66_2NC_NR 25M+ LTE 5M			2 122.5 + 2 177.5				
MSR_B/n66_3C_NR 5M+NR 25M+LTE 5M	3	35 (5+25+5)	2127.5	2145.0	2162.5		
MSR_B/n66_3NC_NR 5M+NR 25M+LTE 5M			2112.5 + 2140.0 + 2177.5				
MSR_B/n66_2C_DSS 10M+NR 25M	2	35 (10+25)	2127.5	2145.0	2162.5		
MSR_B/n66_2NC_DSS 10M+NR 25M			2 115.0 + 2 167.5				
NR_n2_1C_25M	1	25	1 942.5	1 962.5	1 977.5	120	160

3.4 EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added, and no modifications were made during testing.

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4.0 DESCRIPTION OF TESTS

4.1 Measurement Procedure

The measurement procedures described in the document titled “American National Standard for Compliance Testing of Transmitter Used in Licensed Radio Service” (ANSI C63.26-2015) and the guidance provided in KDB 971168 D01 v03r01, and KDB 662911 D01 v02r01 and KDB 940660 D01 v03 were used in the measurement of the EUT.

Occupied Bandwidth:

KDB 971168 D01 v03r01 – Section 4.3
ANSI C63.26-2015 – Section 5.4.4

Modulation Characteristics:

ANSI C63.26 - Section 5.3

Conducted Power Measurement and EIRP and PSD

KDB 971168 D01 v03r01 – Section 5.3
KDB 971168 D01 v03r01 – Section 5.4
KDB 662911 D01 v02r01 – Section E)1) In-Band Power Measurements
ANSI C63.26-2015 – Section 5.2.5
ANSI C63.26-2015 – Section 5.2.4

Peak-to-Average Power Ratio:

KDB 971168 D01 v03r01 – Section 5.7
ANSI C63.26-2015 – Section 5.2.3.4

Channel Edge Emissions at Antenna Terminal

KDB 971168 D01 v03r01 – Section 6
KDB 662911 D01 v02r01 – Section E)3) Out-of-Band and Spurious Emission Measurements
a) Absolute Emission Limits
iii) Measure and add $10 \log(N_{ANT})$ dB
ANSI C63.26-2015 – Section 5.7

Spurious and Harmonic Emissions at Antenna Terminal

KDB 971168 D01 v03r01 – Section 6
KDB 662911 D01 v02r01 – Section E)3) Out-of-Band and Spurious Emission Measurements
a) Absolute Emission Limits
iii) Measure and add $10 \log(N_{ANT})$ dB
ANSI C63.26-2015 – Section 5.7

Radiated unwanted emission

KDB 971168 D01 v03r01 – Section 7
ANSI C63.26-2015 – Section 5.8

Frequency Stability / Temperature Variation

KDB 971168 D01 v03r01 – Section 9
ANSI C63.26-2015 – Section 5.6

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4.2 Measurement Software

Test item	Name	Version
Conducted Measurement	Node B automation	1.0
Radiated Measurement	EP5RE	6.0.1.0
	ES10	10.001

4.3 Enviromental Conditions

The temperature is controlled within the range of 15°C to 35°C. The relative humidity is controlled within the range of 10% to 75%. The atmospheric pressure is monitored within the range 86-106kPa (860-1060mbar).

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5.0 MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4-2014. All measurement uncertainty values are shown with a coverage factor of $k = 2$ to indicate a 95% level of confidence. The measurement uncertainty shown below meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

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)	4.11 dB (C.L. : Approx. 95%, $k = 2$)
Radiated Emissions ($f > 1$ GHz)	4.64 dB (C.L. : Approx. 95%, $k = 2$)
Frequency Stability	0.1 kHz (C.L. : Approx. 95%, $k = 2$)

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6.0 TEST EQUIPMENT CALIBRATION DATA

Test Equipment Calibration is traceable to the National Institute of Standards and Technology (NIST).
Measurement antennas used during testing were calibrated in accordance to the requirements of ANSI C63.5-2017.

Manufacture	Model	Description	Cal Date	Cal interval	Cal Due	Serial Number
Rohde & Schwarz	FSV30	Signal Analyzer	2024-11-26	Annual	2025-11-26	100925
Rohde & Schwarz	FSV40	Spectrum Analyzer	2025-01-10	Annual	2026-01-10	101574
Rohde & Schwarz	ESW44	EMI TEST RECEIVER	2025-04-28	Annual	2026-04-28	102039
TESEQ	CBL6111D	Bilog Antenna	2025-08-21	Annual	2027-08-21	60654
PASTERNAK	PE7AP006-06	Attenuator	2026-07-28	Annual	2026-07-28	L20210504000 023
SONOMA	310N	AMPLIFIER	2025-07-28	Annual	2026-07-28	411011
Agilent	8449B	Preamplifier	2025-03-11	Annual	2026-03-11	3008A00620
ETS-Lindgren	3115	Double Ridged Guide Antenna	2025-03-13	Annual	2026-03-13	00078895
Keysight	N9020B	Signal Analyzer	2025-01-10	Annual	2026-01-10	MY58100015
REACHLINE	250W18NN-40	Attenuator	2025-03-13	Annual	2026-03-13	ey40db001
REACHLINE	250W18NN-40	Attenuator	2025-03-13	Annual	2026-03-13	ey40db005
REACHLINE	250W18NN-40	Attenuator	2025-03-13	Annual	2026-03-13	ey40db008
REACHLINE	250W18NN-40	Attenuator	2025-10-02	Annual	2026-10-02	ey40db009
REACHLINE	250W18NN-40	Attenuator	2025-10-02	Annual	2026-10-02	ey40db010
REACHLINE	250W18NN-40	Attenuator	2025-10-02	Annual	2026-10-02	ey40db011
REACHLINE	250W18NN-40	Attenuator	2025-10-02	Annual	2026-10-02	ey40db012
REACHLINE	250W18NN-40	Attenuator	2025-10-02	Annual	2026-10-02	ey40db018
WAINWRIGHT	WHW-13000-18000-40000-40CC	High Pass Filter	2025-03-14	Annual	2026-03-14	0002
Wainwright Instruments	WHKX3.0/18G-10SS	High Pass Filter	2025-11-10	Annual	2026-11-10	78
EMTEST	Attenuator	RLA29210010-40-F	2025-08-08	Annual	2026-08-08	RLA29210010-40-F-0003
T&M System	TMX81D	RF Switch System	2025-11-11	Annual	2026-11-11	TMX81D
AGILENT	System DC Power Supply	6674A	2025-03-13	Annual	2026-03-13	US36372372

Table 6-1. Test Equipment

Notes:

1. For equipment listed above that has a calibration date or calibration due date that falls within the test date range, care was taken to ensure that this equipment was used after the calibration date and before the calibration due date.
2. All testing was performed before the calibration due date.

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7.0 SAMPLE CALCULATIONS

Emission Designator

QPSK Modulation

Emission Designator = 24M0G7D

Occupied Bandwidth = 24.04 MHz

G = Phase Modulation

7 = Quantized/Digital Info

D = Data transmission, telemetry, telecommand

QAM Modulation

Emission Designator = 24M0W7D

Occupied Bandwidth = 24.01 MHz

W = Amplitude/Angle Modulated

7 = Quantized/Digital Info

D = Data transmission, telemetry, telecommand

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8.0 TEST RESULTS

8.1 Summary

Company Name: SAMSUNG Electronics Co., Ltd.
FCC ID: A3LRFV01U-D1A
FCC Classification: PCS Licensed Transmitter
Mode(s): LTE, NR, DSS

FCC Part Section(s)	Test Description	Limit	Test Condition	Test Result	Reference
§ 2.1046	Conducted Average Output Power	N/A	CONDUCTED	PASS	Annex A
§ 2.1049	Occupied Bandwidth	N/A		PASS	Section 8.2
§ 2.1046, § 24.232, § 27.50(d)	Equivalent Isotropic Radiated Power	< 1640 W/MHz		PASS	Section 8.3 (Note 4)
§ 2.1046, § 24.232, § 27.50(d)	Peak-to-average ratio	≤ 13 dB		PASS	Section 8.4
§ 2.1051, § 24.238, § 27.53(h)	Band Edge Emissions at Antenna Terminal	< 43 + log10(P[Watts]) at Band Edge and all out-of-band emissions		PASS	Section 8.5
§ 2.1051, § 24.238, § 27.53(h)	Spurious and Harmonic Emissions at Antenna Terminal			PASS	Section 8.6
§ 2.1055 § 24.235 § 27.54	Frequency Stability	Fundamental emissions stay within authorized frequency block		N/A	(Note 5)
§ 2.1055, § 24.238, § 27.53(h)	Radiated unwanted emission	< 43 + log10(P[Watts]) at Band Edge and all out-of-band emissions	RADIATED	PASS	Section 8.8

Table 8-1. Summary of Test Results

Notes:

- 1) All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.
- 2) The analyzer plots were all taken with a correction table loaded into the analyzer.
- 3) All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables and attenuators.
- 4) The maximum antenna gain and Limit are determined at the time of licensing depending on the Geographical Location of the base station
- 5) This is a variant report for enabling the channel bandwidth by software without any hardware modification. Frequency Stability test is not affected by this change item, and it was already performed in the original report.

8.2 Occupied Bandwidth

Test Overview

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured. All modes of operation were investigated and the worst case configuration results are reported in this section.

Test Procedures Used

KDB 971168 D01 v03r01 – Section 4.3

ANSI C63.26-2015 – Section 5.4.4

Test Setting

The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The spectrum analyzer settings were as follows:

1. The signal analyzer's automatic bandwidth measurement capability was used to perform the 99% occupied bandwidth and the 26dB bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. RBW = 1 – 5% of the expected OBW
3. VBW $\geq 3 \times$ RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. The trace was allowed to stabilize
8. If necessary, steps 2 – 7 were repeated after changing the RBW such that it would be within 1 – 5% of the 99% occupied bandwidth observed in Step 7

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

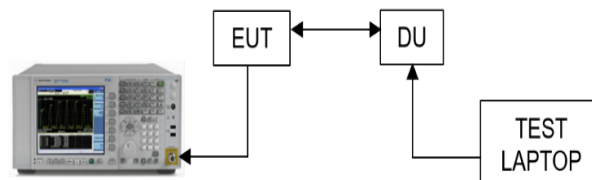


Figure 8-1. Test Instrument & Measurement Setup

Test Notes

None

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Channel	Port	OBW (MHz)			
		QPSK	16QAM	64QAM	256QAM
Low	0	23.96	23.93	23.93	23.88
	1	23.95	23.91	23.90	23.92
	2	23.94	23.91	23.93	23.88
	3	23.91	23.96	23.94	23.90
Middle	0	23.94	23.91	23.94	23.94
	1	23.92	23.95	23.96	23.94
	2	23.99	23.93	23.99	23.96
	3	24.04	23.95	23.95	23.92
High	0	23.94	23.95	23.92	23.98
	1	23.96	23.98	24.01	23.93
	2	23.99	23.95	23.94	23.94
	3	23.93	23.94	23.95	23.96

Table 8-2. Occupied Bandwidth Summary Data (NR_n66_1C_25M_4T)

Channel	Port	OBW (MHz)			
		QPSK	16QAM	64QAM	256QAM
Low	0	28.79	28.78	28.79	28.73
	1	28.76	28.72	28.78	28.79
	2	28.79	28.78	28.81	28.76
	3	28.79	28.74	28.79	28.74
Middle	0	28.78	28.76	28.81	28.82
	1	28.77	28.74	28.88	28.78
	2	28.86	28.76	28.86	28.75
	3	28.77	28.79	28.80	28.83
High	0	28.86	28.81	28.80	28.78
	1	28.83	28.73	28.84	28.86
	2	28.74	28.81	28.84	28.77
	3	28.79	28.78	28.81	28.84

Table 8-3. Occupied Bandwidth Summary Data (NR_n66_1C_30M_4T)

Channel	Port	OBW (MHz)			
		NR_n66_2C_5M+25M		NR_n66_3C_5M+5M+25M	
		QPSK	16QAM	QPSK	16QAM
Low	0	29.18	29.26	34.20	34.21
	1	29.18	29.21	34.27	34.20
	2	29.23	29.16	34.20	34.22
	3	29.17	29.23	34.16	34.25
Middle	0	29.31	29.27	34.29	34.33
	1	29.34	29.31	34.41	34.25
	2	29.20	29.31	34.32	34.30
	3	29.27	29.25	34.32	34.35
High	0	29.22	29.22	34.27	34.40
	1	29.24	29.24	34.30	34.32
	2	29.26	29.26	34.22	34.33
	3	29.29	29.26	34.32	34.43

Table 8-4. Occupied Bandwidth Summary Data (AWS_n66_Multi carrier_4T)



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Channel	Port	OBW (MHz)					
		MSR_B/n66_2C_NR 25M+LTE 5M		MSR_B/n66_3C_NR 5M+NR 25M+LTE 5M		MSR_B/n66_2C_DSS 10M+NR 25M	
		QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Low	0	29.25	29.23	34.53	34.51	34.08	34.07
	1	29.21	29.16	34.51	34.56	34.12	34.14
	2	29.17	29.18	34.47	34.51	34.09	34.11
	3	29.20	29.21	34.50	34.53	34.21	34.05
Middle	0	29.22	29.22	34.61	34.50	34.14	34.09
	1	29.21	29.23	34.57	34.61	34.19	34.15
	2	29.26	29.18	34.60	34.62	34.22	34.15
	3	29.21	29.22	34.59	34.53	34.17	34.20
High	0	29.23	29.25	34.57	34.53	34.16	34.10
	1	29.19	29.22	34.55	34.53	34.11	34.18
	2	29.28	29.16	34.61	34.58	34.18	34.14
	3	29.21	29.23	34.60	34.54	34.10	34.17

Table 8-5. Occupied Bandwidth Summary Data (AWS_B/n66_MSR Multi carrier_4T)



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Channel	Port	OBW (MHz)			
		QPSK	16QAM	64QAM	256QAM
Low	0	23.93	23.94	23.92	23.91
	1	23.94	23.91	23.93	23.87
Middle	0	23.95	23.93	23.95	23.95
	1	23.96	23.96	23.90	23.96
High	0	23.93	23.94	23.92	23.91
	1	23.94	23.91	23.93	23.87

Table 8-6. Occupied Bandwidth Summary Data (NR_n66_1C_25M_2T)

Channel	Port	OBW (MHz)			
		QPSK	16QAM	64QAM	256QAM
Low	0	28.79	28.76	28.79	28.82
	1	28.80	28.72	28.80	28.76
Middle	0	28.82	28.76	28.84	28.81
	1	28.78	28.80	28.87	28.78
High	0	28.82	28.74	28.81	28.78
	1	28.81	28.74	28.82	28.80

Table 8-7. Occupied Bandwidth Summary Data (NR_n66_1C_30M_2T)

Channel	Port	OBW (MHz)			
		NR_n66_2C_5M+25M		NR_n66_3C_5M+5M+25M	
		QPSK	16QAM	QPSK	16QAM
Low	0	29.20	29.18	34.30	34.23
	1	29.25	29.24	34.23	34.22
Middle	0	29.30	29.24	34.33	34.36
	1	29.24	29.28	34.37	34.33
High	0	29.23	29.30	34.29	34.22
	1	29.31	29.24	34.30	34.25

Table 8-8. Occupied Bandwidth Summary Data (NR_n66_Multi carrier_2T)

Channel	Port	OBW (MHz)					
		MSR_B/n66_2C_NR 25M+LTE 5M		MSR_B/n66_3C_NR 5M+NR 25M+LTE 5M		MSR_B/n66_2C_DSS 10M+NR 25M	
		QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Low	0	29.18	29.21	34.55	34.60	34.11	34.11
	1	29.15	29.17	34.55	34.43	34.09	34.04
Middle	0	29.24	29.18	34.55	34.52	34.19	34.14
	1	29.27	29.19	34.58	34.64	34.14	34.14
High	0	29.23	29.19	34.50	34.54	34.12	34.19
	1	29.20	29.25	34.59	34.53	34.16	34.18

Table 8-9. Occupied Bandwidth Summary Data (MSR_B/n66_Multi carrier_2T)



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Channel	Port	OBW (MHz)			
		QPSK	16QAM	64QAM	256QAM
Low	4	23.96	23.92	23.98	23.94
	5	23.96	23.91	23.93	23.93
	6	23.94	23.93	23.88	23.92
	7	23.93	23.92	23.91	23.97
Middle	4	23.98	23.91	23.95	23.92
	5	23.97	23.95	23.98	23.97
	6	23.95	23.93	23.89	23.96
	7	23.98	23.97	23.96	23.95
High	4	23.93	23.98	23.89	23.91
	5	23.93	23.91	23.96	23.96
	6	23.97	23.96	23.92	23.92
	7	23.91	23.89	23.93	23.94

Table 8-10. Occupied Bandwidth Summary Data (NR_n2_1C_25M_4T)

Channel	Port	OBW (MHz)			
		QPSK	16QAM	64QAM	256QAM
Low	4	23.92	23.90	23.90	23.91
	5	23.95	23.88	23.97	23.89
Middle	4	23.95	23.92	23.96	23.94
	5	23.98	23.99	23.93	23.93
High	4	23.99	23.95	23.94	23.95
	5	23.92	23.95	23.92	23.92

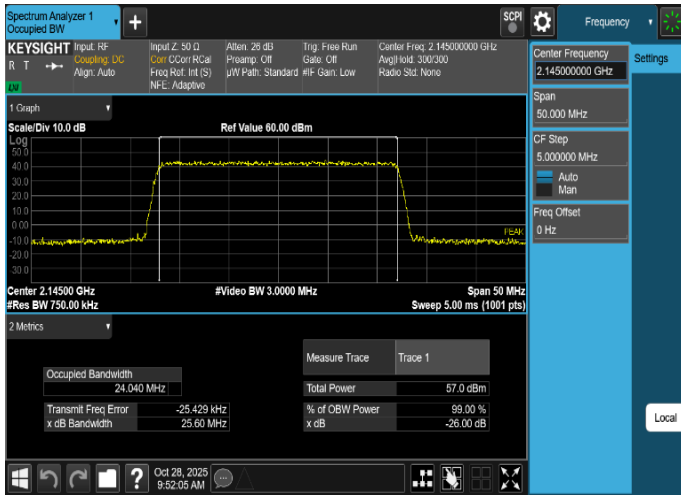
Table 8-11. Occupied Bandwidth Summary Data (NR_n2_1C_25M_2T)



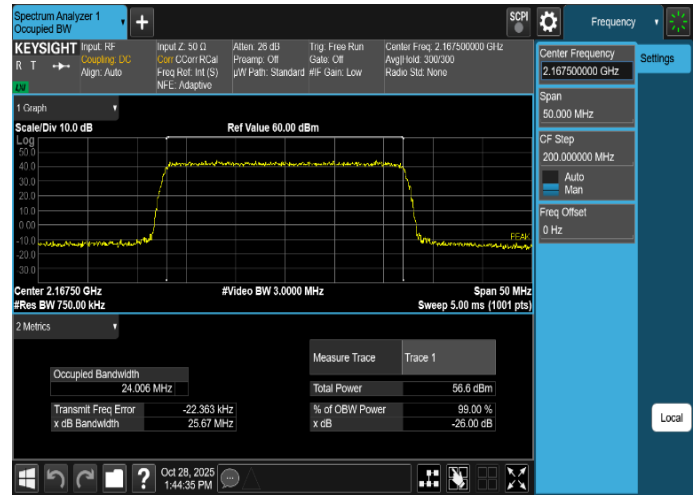
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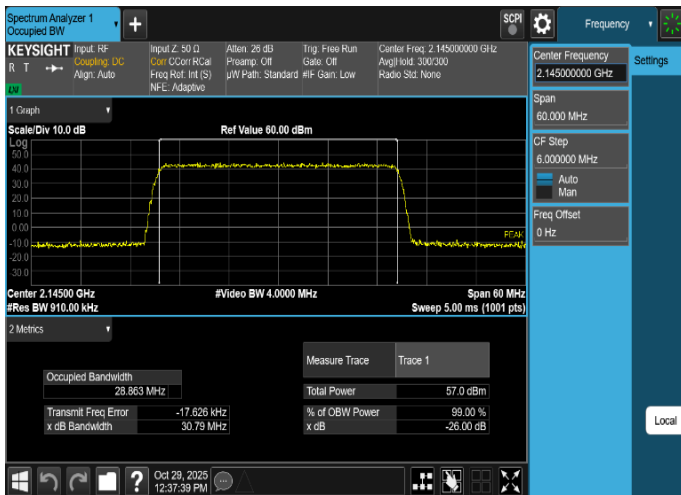
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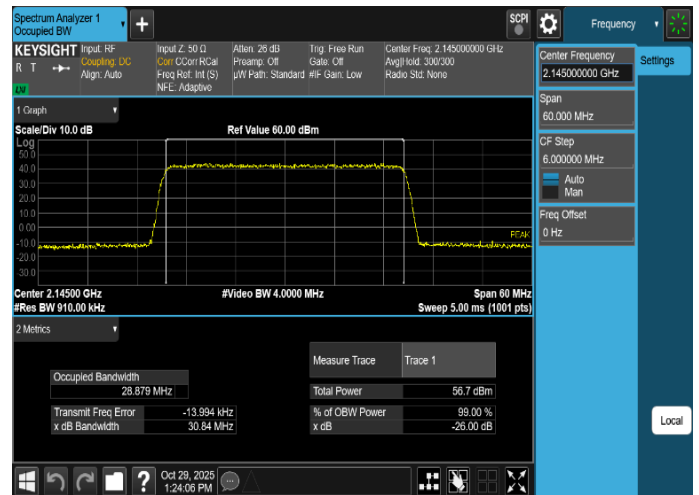
Plot 8-1. Occupied Bandwidth Plot
(NR_n66_1C_25M_4T_QPSK - Mid Channel, Port 3)



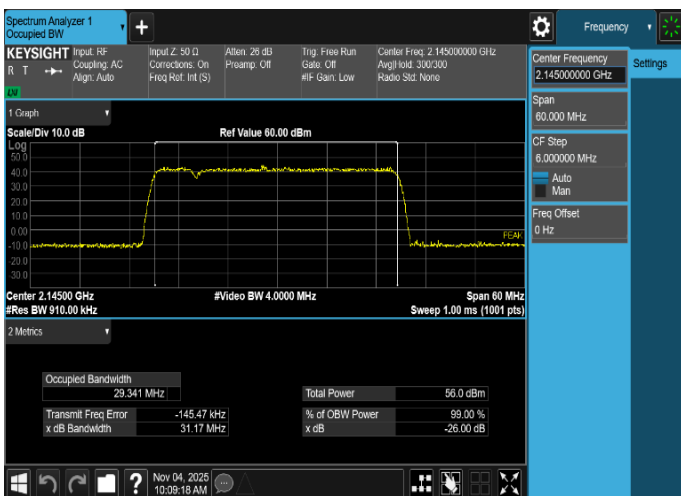
Plot 8-2. Occupied Bandwidth Plot
(NR_n66_1C_25M_4T_64QAM - High Channel, Port 1)



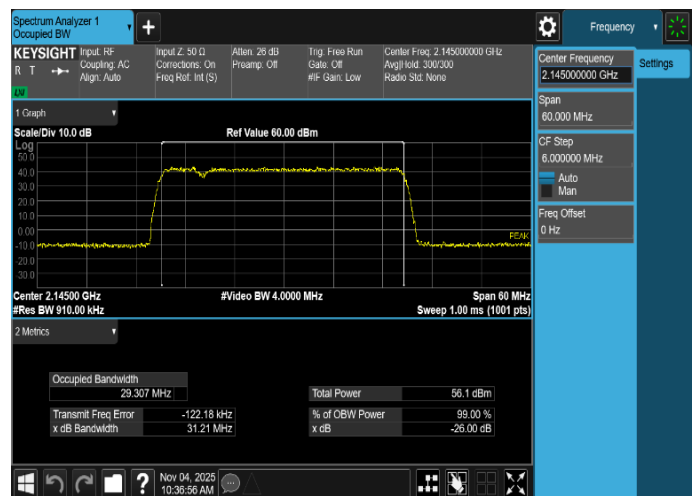
Plot 8-3. Occupied Bandwidth Plot
(NR_n66_1C_30M_4T_QPSK - Mid Channel, Port 2)



Plot 8-4. Occupied Bandwidth Plot
(NR_n66_1C_30M_4T_64QAM - Mid Channel, Port 1)



Plot 8-5. Occupied Bandwidth Plot
(NR_n66_2C_5M+25M_4T_QPSK - Mid Channel, Port 1)



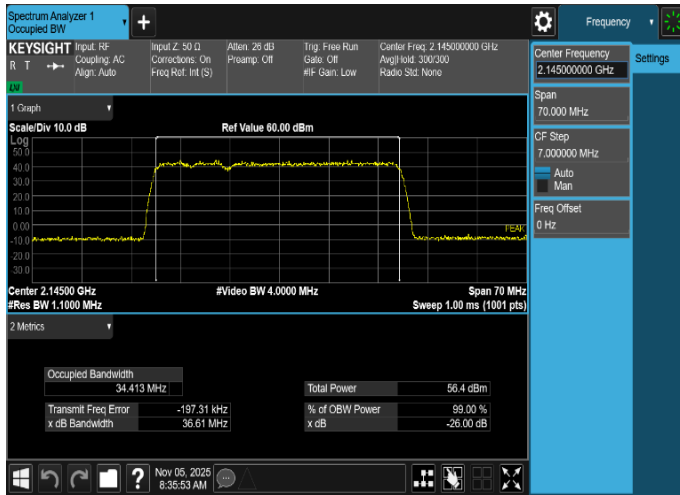
Plot 8-6. Occupied Bandwidth Plot
(NR_n66_2C_5M+25M_4T_16QAM - Mid Channel, Port 1)



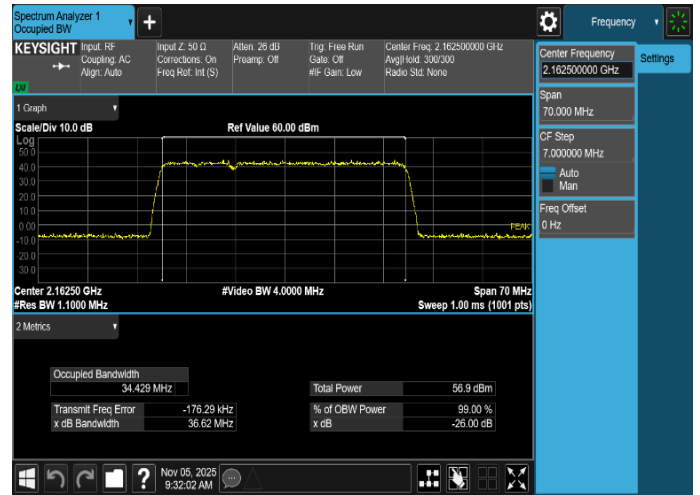
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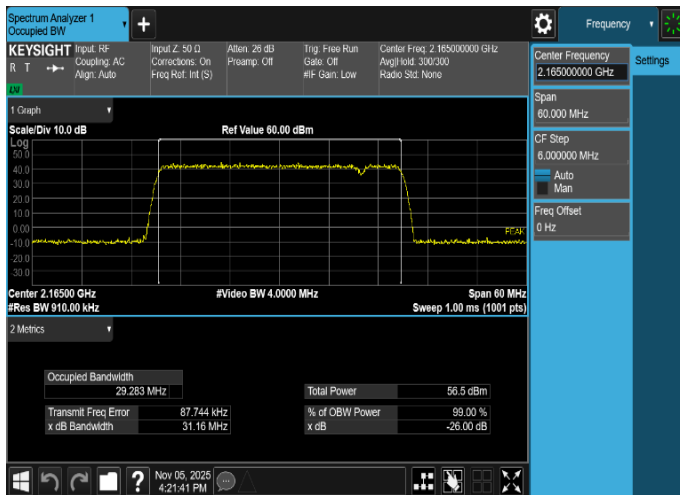
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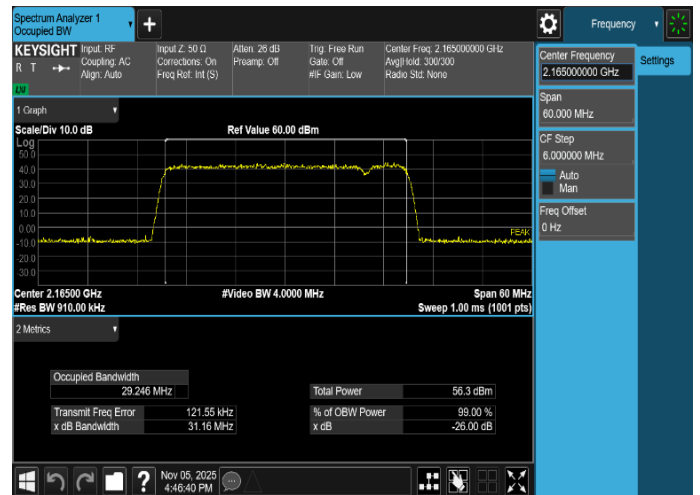
Plot 8-7. Occupied Bandwidth Plot
(NR_n66_3C_5M+5M+25M_4T_QPSK - Mid Channel, Port 1)



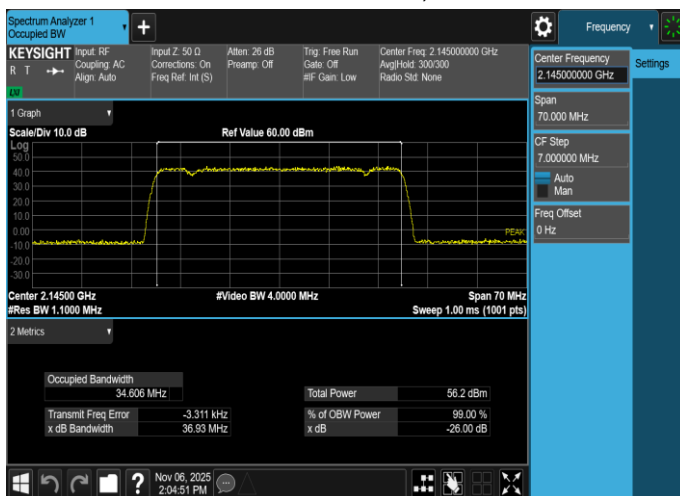
Plot 8-8. Occupied Bandwidth Plot
(NR_n66_3C_5M+5M+25M_4T_16QAM - High Channel, Port 3)



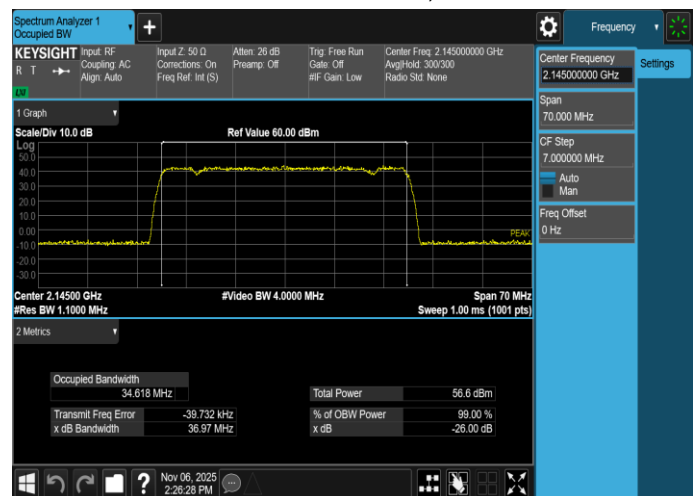
Plot 8-9. Occupied Bandwidth Plot
(MSR_B/n66_2C_NR 25M+LTE 5M_4T_QPSK - High Channel, Port 2)



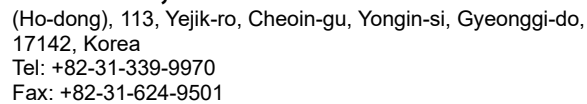
Plot 8-10. Occupied Bandwidth Plot
(MSR_B/n66_2C_NR 25M+LTE 5M_4T_16QAM - High Channel, Port 0)



Plot 8-11. Occupied Bandwidth Plot
(MSR_B/n66_3C_NR 5M+NR 25M+LTE 5M_4T_QPSK - Mid Channel, Port 0)



Plot 8-12. Occupied Bandwidth Plot
(MSR_B/n66_3C_NR 5M+NR 25M+LTE 5M_4T_16QAM - Mid Channel, Port 2)

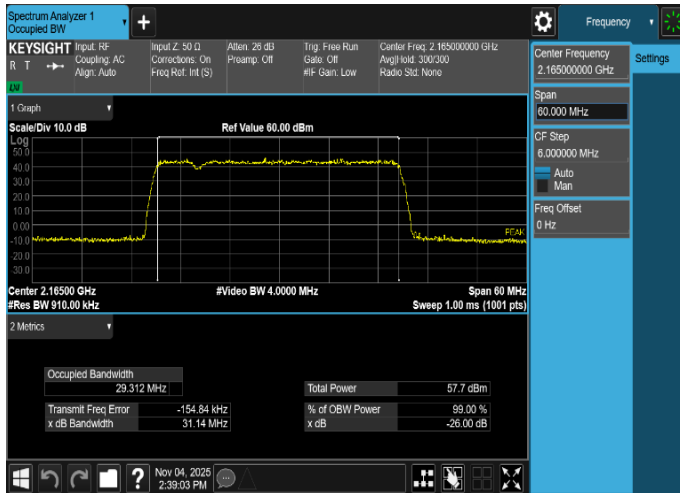




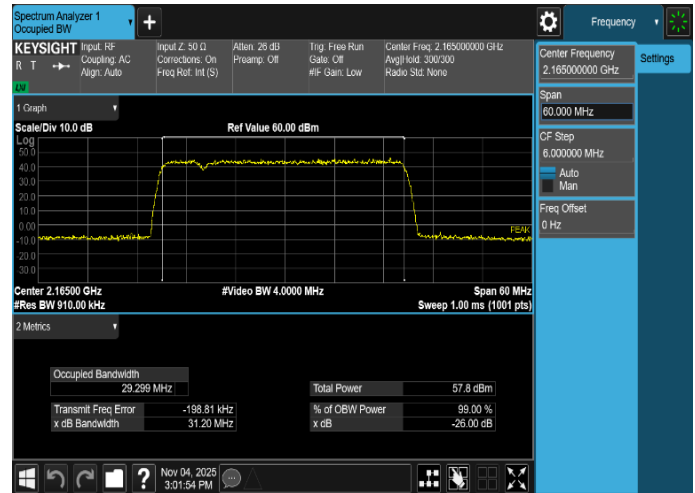
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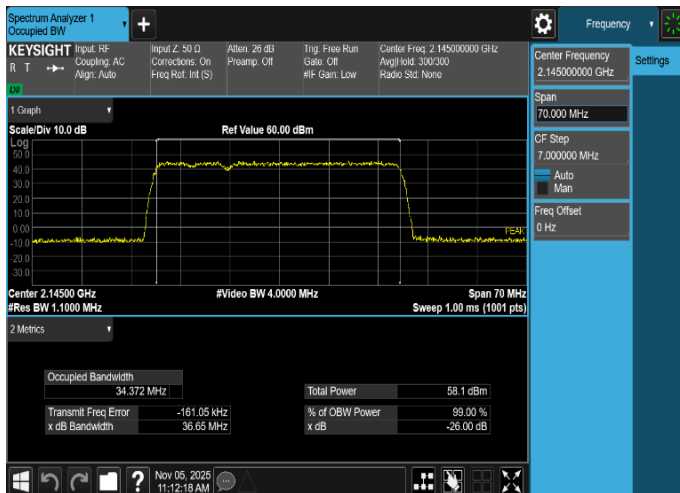
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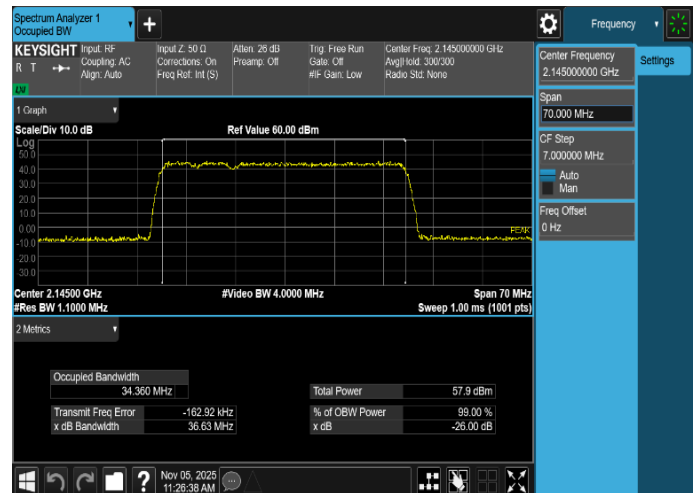
Plot 8-19. Occupied Bandwidth Plot
(NR_n66_2C_5M+25M_2T_QPSK - High Channel, Port 1)



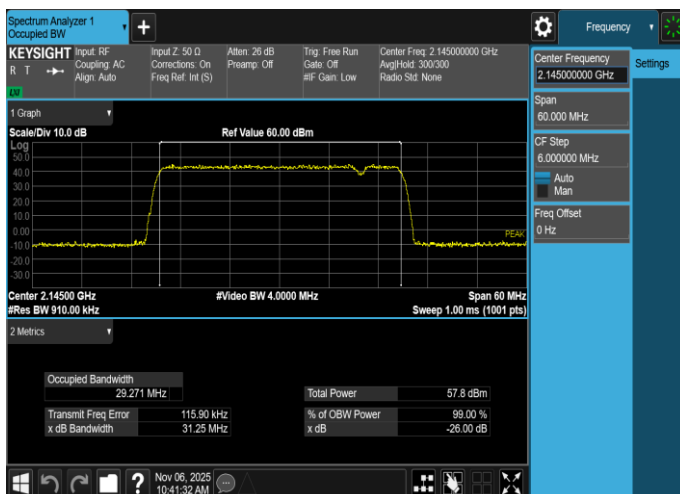
Plot 8-20. Occupied Bandwidth Plot
(NR_n66_2C_5M+25M_2T_16QAM - High Channel, Port 0)



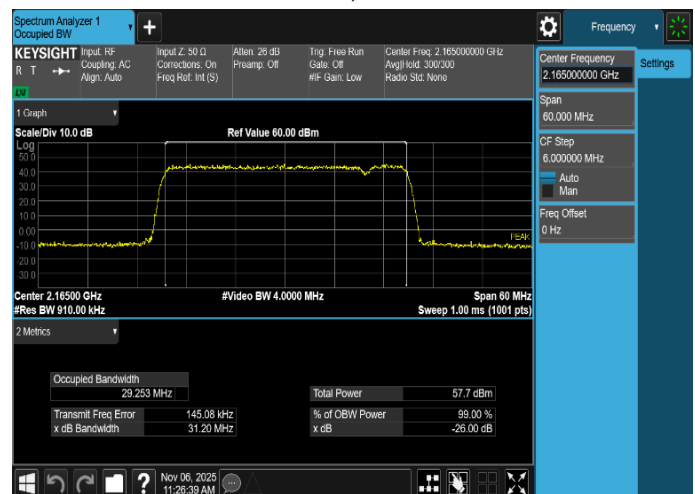
Plot 8-21. Occupied Bandwidth Plot
(NR_n66_3C_5M+5M+25M_2T_QPSK - Mid Channel, Port 1)



Plot 8-22. Occupied Bandwidth Plot
(NR_n66_3C_5M+5M+25M_2T_16QAM - Mid Channel, Port 0)



Plot 8-23. Occupied Bandwidth Plot
(MSR_B/n66_2C_NR 25M+LTE 5M_2T_QPSK - Mid Channel, Port 1)



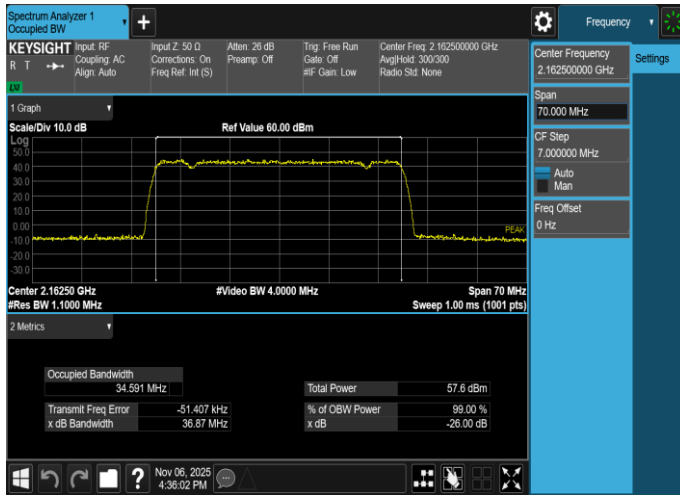
Plot 8-24. Occupied Bandwidth Plot
(MSR_B/n66_2C_NR 25M+LTE 5M_2T_16QAM - High Channel, Port 1)



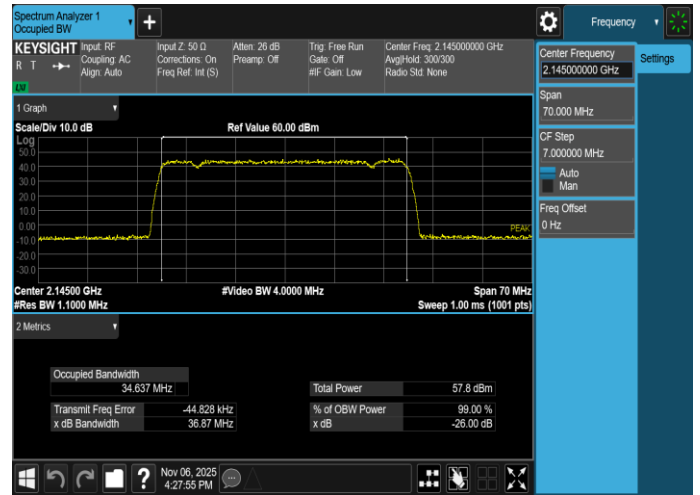
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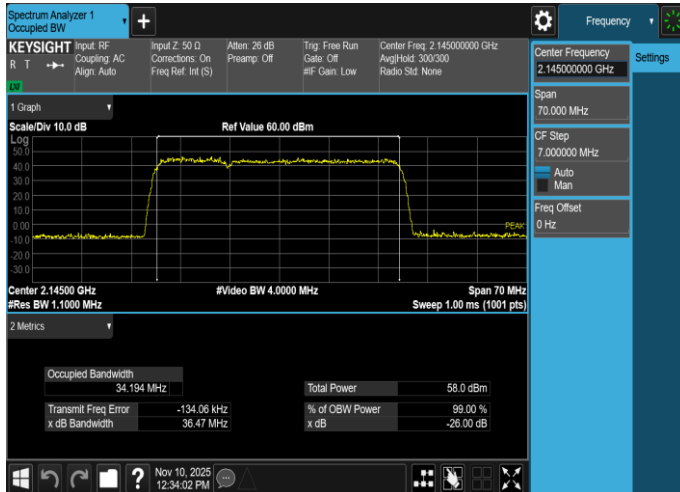
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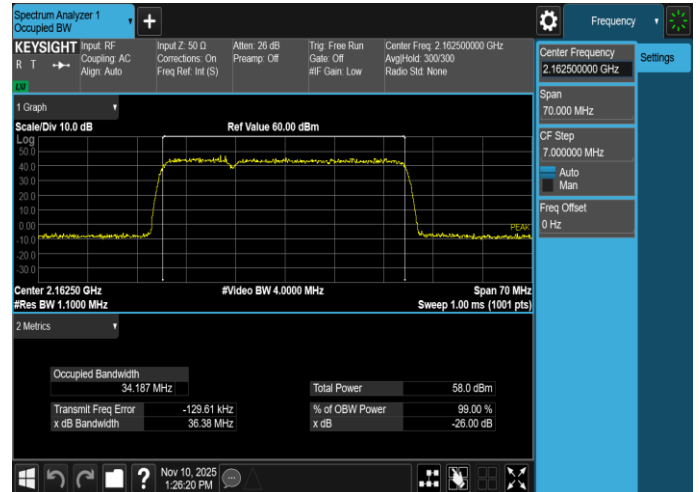
Plot 8-25. Occupied Bandwidth Plot
(MSR_B/n66_3C_NR 5M+NR 25M+LTE 5M_2T_QPSK - High Channel, Port 1)



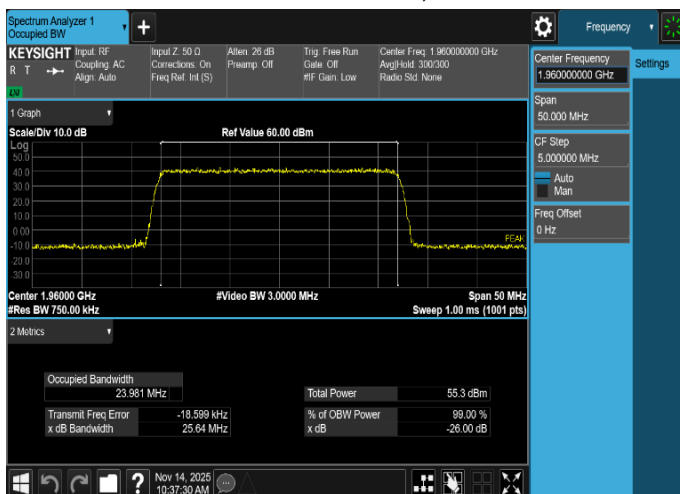
Plot 8-26. Occupied Bandwidth Plot
(MSR_B/n66_3C_NR 5M+NR 25M+LTE 5M_2T_16QAM - Mid Channel, Port 1)



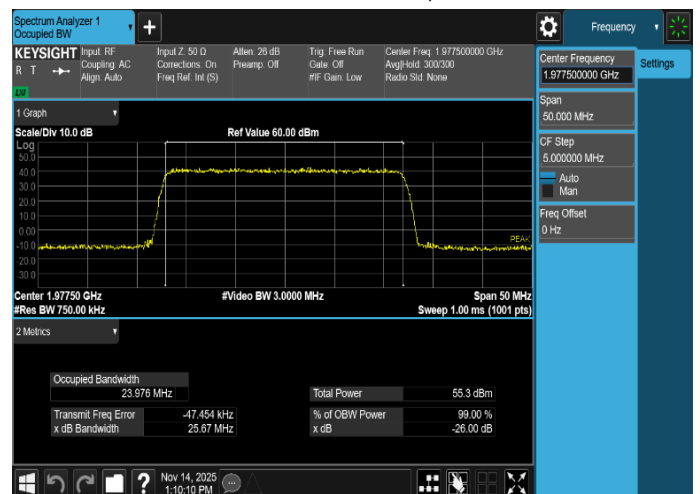
Plot 8-27. Occupied Bandwidth Plot
(MSR_B/n66_2C_DSS 10M+NR 25M_2T_QPSK - Mid Channel, Port 0)



Plot 8-28. Occupied Bandwidth Plot
(MSR_B/n66_2C_DSS 10M+NR 25M_2T_16QAM - High Channel, Port 0)



Plot 8-29. Occupied Bandwidth Plot
(NR_n2_1C_25M_4T_QPSK - Mid Channel, Port 4)



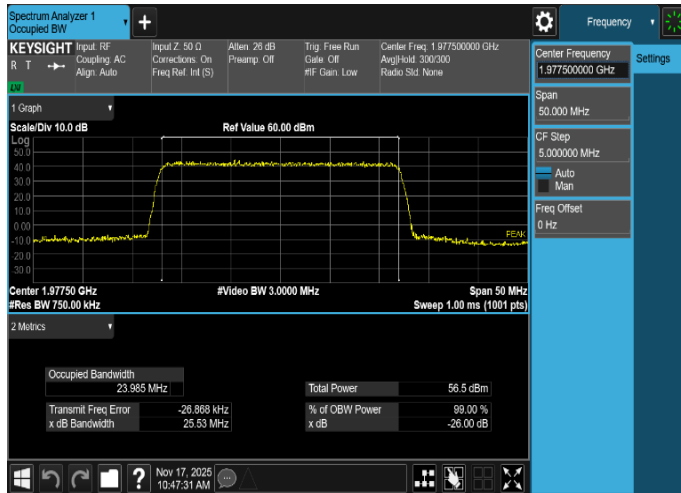
Plot 8-30. Occupied Bandwidth Plot
(NR_n2_1C_25M_4T_16QAM - High Channel, Port 4)



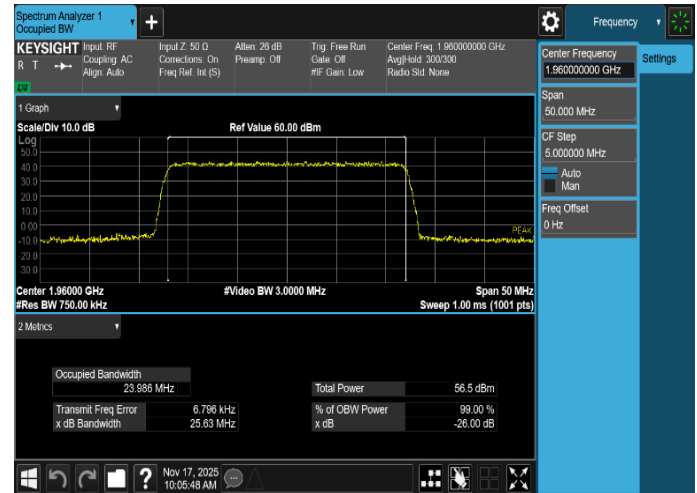
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Plot 8-31. Occupied Bandwidth Plot
(NR_n2_1C_25M_2T_QPSK - High Channel, Port 4)



Plot 8-32. Occupied Bandwidth Plot
(NR_n2_1C_25M_2T_16QAM - Mid Channel, Port 5)

8.3 Equivalent Isotropically Radiated Power

Test Overview

A transmitter port of EUT is connected to the input of a signal analyzer. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

Test Description

KDB 971168 D01 v03r01 – Section 5

KDB 662911 D01 v02r01 – Section E)1) In-Band Power Measurements

ANSI C63.26-2015 – Section 5.2.4.4.1

The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The spectrum analyzer settings were as follows:

1. Conducted power measurements are performed using the signal analyzer's "SA" measurement capability for signals with continuous operation.
2. Set span to $2 \times$ to $3 \times$ the OBW.
3. Set RBW = 1 MHz (the reference bandwidth)
4. Set VBW $\geq 3 \times$ RBW.
5. Set number of measurement points in sweep $\geq 2 \times$ span / RBW.
6. Sweep time:
 - a) Set $\geq$ auto-couple, and enable trace averaging, or
 - b) Set $\geq [10 \times (\text{number of points in sweep}) \times (\text{transmission symbol period})]$ and enable a single sweep (automation-compatible) measurement. The sweep time should never be faster than the auto-coupled sweep time.
7. Detector = power averaging (rms).
8. The trace was allowed to stabilize
9. Use the peak marker function to determine the maximum amplitude level. ($=P_{\text{Meas}}$)
10. The relevant equation for determining the maximum EIRP from the measured RF output power is given in Equation as follows:

$$\text{EIRP} = P_{\text{Meas}} + G_T$$
 where
 GT: gain of the transmitting antenna, in dBi (EIRP).

Test Setup

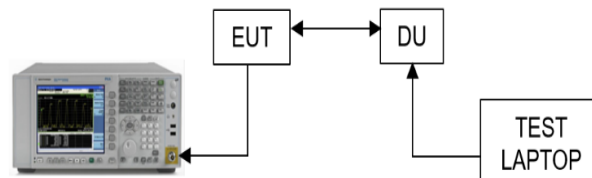


Figure 8-2. Test Instrument & Measurement Setup

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Limit**§ 24.232(a) (2)**

Base stations with an emission bandwidth greater than 1 MHz are limited to 1640 watts/MHz equivalent isotropically radiated power (EIRP) with an antenna height up to 300 meters HAAT, except as described in paragraph (b) below.

§ 27.50(d) (2) (ii)

An EIRP of 1640 watts/MHz when transmitting with an emission bandwidth greater than 1 MHz.

Note: The maximum antenna gain and EIRP limit are determined at the time of licensing depending on the geographical location of the base station.

Test Notes

1. For test results, an estimated calculated maximum permissible conducted output power is reported. The required reduction measurements will be performed after the installation.
2. Consider the following factors for MIMO:
The output power per each port is measured as dBm/MHz or dBm, the output powers are summed up in linear using the measure-and-sum technique defined in KDB 971168 D01 v03r01 - Section E) 2).
3. The output power per port (dBm/MHz or dBm) is converted to a linear value (mW). A summation of linear powers for all ports gives us the total MIMO Conducted Power (mW). We convert this back to logarithmic scale for further output power calculations.
4. Sample Calculation for NR_n66_1C_25M_4T_QPSK - Low Channel:
Let us assume the following numbers:
 - a) Total MIMO Conducted Power as 13186.27 milliWatts
 - b)

Factors		Value	Unit
Summed MIMO Conducted Power (linear sum)		13186.27	mW/
Summed MIMO Conducted Power (dBm)	$= 10 * \log (13186.27) =$	41.20	dBm



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Low Channel	Port	QPSK	16QAM	64QAM	256QAM
Power Spectral Density(dBm/MHz)	0	35.12	35.15	34.72	34.94
	1	35.12	35.10	34.67	35.01
	2	35.30	35.14	34.84	35.16
	3	35.19	35.02	34.88	35.20
Total MIMO PSD (mW/MHz)		13186.27	12955.79	12019.65	12881.54
Total MIMO PSD (dBm/MHz)		41.20	41.12	40.80	41.10
Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
Power Spectral Density(dBm/MHz)	0	35.12	34.81	34.76	34.79
	1	34.98	34.86	34.79	34.76
	2	35.15	34.99	34.99	35.14
	3	35.20	35.13	35.23	35.25
Total MIMO PSD (mW/MHz)		12983.41	12502.91	12491.27	12612.55
Total MIMO PSD (dBm/MHz)		41.13	40.97	40.97	41.01
High Channel	Port	QPSK	16QAM	64QAM	256QAM
Power Spectral Density(dBm/MHz)	0	34.64	34.52	34.86	35.11
	1	34.66	34.72	34.74	34.96
	2	34.94	35.07	35.11	35.22
	3	35.15	35.27	35.27	35.36
Total MIMO PSD (mW/MHz)		12233.55	12371.64	12648.21	13137.44
Total MIMO PSD (dBm/MHz)		40.88	40.92	41.02	41.19

Table 8-12. Equivalent Isotropically Radiated PowerTable (NR_n66_1C_25M_4T)

Low Channel	Port	QPSK	16QAM	64QAM	256QAM
Power Spectral Density (dBm/MHz)	0	33.45	33.75	33.65	33.99
	1	33.65	33.84	33.96	34.11
	2	33.90	33.99	34.06	34.17
	3	33.90	34.26	34.27	34.37
Total MIMO PSD (mW/MHz)		9432.31	9965.44	10027.40	10423.15
Total MIMO PSD (dBm/MHz)		39.75	39.98	40.01	40.18
Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
Power Spectral Density (dBm/MHz)	0	34.15	34.14	33.99	34.24
	1	34.18	34.06	34.02	34.14
	2	34.35	34.29	34.43	34.41
	3	34.62	34.43	34.42	34.49
Total MIMO PSD (mW/MHz)		10840.20	10602.54	10564.46	10821.35
Total MIMO PSD (dBm/MHz)		40.35	40.25	40.24	40.34
High Channel	Port	QPSK	16QAM	64QAM	256QAM
Power Spectral Density(dBm/MHz)	0	33.32	33.41	33.46	33.45
	1	33.40	33.52	33.65	33.59
	2	33.80	33.75	33.84	33.92
	3	33.89	33.90	33.93	34.04
Total MIMO PSD (mW/MHz)		9185.23	9269.85	9423.41	9496.72
Total MIMO PSD (dBm/MHz)		39.63	39.67	39.74	39.78

Table 8-13. Equivalent Isotropically Radiated PowerTable (NR_n66_1C_30M_4T)

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Low Channel	Port	NR_n66_2C_5M+25M		NR_n66_3C_5M+5M+25M	
		QPSK	16QAM	QPSK	16QAM
Power Spectral Density(dBm/MHz)	0	33.44	33.49	32.93	32.89
	1	33.29	33.27	32.81	32.70
	2	33.80	33.87	33.36	33.11
	3	34.07	34.10	33.56	33.35
Total MIMO PSD (mW/MHz)		9289.07	9362.90	8305.20	8017.92
Total MIMO PSD (dBm/MHz)		39.68	39.71	39.19	39.04
Middle Channel	Port	QPSK	16QAM	QPSK	16QAM
Power Spectral Density(dBm/MHz)	0	33.60	33.69	33.24	33.37
	1	33.42	33.54	33.21	33.12
	2	34.01	34.50	33.52	33.70
	3	34.19	34.35	33.70	33.72
Total MIMO PSD (mW/MHz)		9630.94	10141.10	8795.96	8923.90
Total MIMO PSD (dBm/MHz)		39.84	40.06	39.44	39.51
High Channel	Port	QPSK	16QAM	QPSK	16QAM
Power Spectral Density(dBm/MHz)	0	33.43	33.28	33.25	33.09
	1	33.49	33.34	33.04	33.12
	2	33.93	33.81	33.57	33.41
	3	34.17	34.08	33.72	33.55
Total MIMO PSD (mW/MHz)		9515.88	9247.18	8751.88	8542.49
Total MIMO PSD (dBm/MHz)		39.78	39.66	39.42	39.32

Table 8-14. Equivalent Isotropically Radiated PowerTable (NR_n66_Multi carrier_4T)

Low Channel	Port	MSR_B/n66_2C_NR 25M+LTE 5M		MSR_B/n66_3C_NR 5M+NR 25M+LTE 5M		MSR_B/n66_2C_DSS 10M+NR 25M	
		QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Power Spectral Density(dBm/MHz)	0	33.69	33.75	32.95	33.19	32.64	32.88
	1	33.59	33.38	32.73	33.04	32.33	32.25
	2	34.07	33.87	33.42	33.40	33.13	33.35
	3	34.18	34.16	33.75	34.15	33.50	33.60
Total MIMO PSD (mW/MHz)		9791.68	9592.24	8417.07	8885.37	7844.86	8071.13
Total MIMO PSD(dBm/MHz)		39.91	39.82	39.25	39.49	38.95	39.07
Middle Channel	Port	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Power Spectral Density(dBm/MHz)	0	33.63	33.87	33.12	33.18	32.53	32.97
	1	33.48	33.78	32.73	32.83	32.24	32.61
	2	33.76	34.09	33.49	33.49	33.16	33.55
	3	34.04	34.34	33.64	33.75	33.48	33.60
Total MIMO PSD (mW/MHz)		9446.10	10102.44	8471.31	8606.51	7763.69	8361.34
Total MIMO PSD(dBm/MHz)		39.75	40.04	39.28	39.35	38.90	39.22
High Channel	Port	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Power Spectral Density(dBm/MHz)	0	33.73	33.70	32.78	33.17	32.69	32.66
	1	33.37	33.57	32.59	33.02	32.31	32.35
	2	33.72	33.96	33.19	33.34	32.95	32.98
	3	34.14	34.41	33.75	33.81	33.37	33.58
Total MIMO PSD (mW/MHz)		9485.43	9867.64	8168.69	8642.23	7702.63	7830.10
Total MIMO PSD(dBm/MHz)		39.77	39.94	39.12	39.37	38.87	38.94

Table 8-15. Equivalent Isotropically Radiated PowerTable (MSR_B/n66_Multi carrier_4T)



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Low Channel	Port	QPSK	16QAM	64QAM	256QAM
Power Spectral Density(dBm/MHz)	0	35.99	36.06	35.93	36.06
	1	35.92	35.82	35.84	35.91
Total MIMO PSD (mW/MHz)		7875.80	7852.28	7755.34	7934.18
Total MIMO PSD (dBm/MHz)		38.96	38.95	38.90	39.00
Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
Power Spectral Density (dBm/MHz)	0	36.09	36.15	36.02	36.13
	1	36.01	36.21	36.00	36.00
Total MIMO PSD (mW/MHz)		8055.58	8295.43	7985.12	8087.78
Total MIMO PSD (dBm/MHz)		39.06	39.19	39.02	39.08
High Channel	Port	QPSK	16QAM	64QAM	256QAM
Power Spectral Density (dBm/MHz)	0	35.85	35.85	35.93	36.00
	1	36.00	35.85	35.95	36.02
Total MIMO PSD (mW/MHz)		7825.28	7686.52	7855.64	7984.20
Total MIMO PSD (dBm/MHz)		38.94	38.86	38.95	39.02

Table 8-16. Equivalent Isotropically Radiated PowerTable (NR_n66_1C_25M_2T)

Low Channel	Port	QPSK	16QAM	64QAM	256QAM
Power Spectral Density(dBm/MHz)	0	34.95	35.02	34.98	34.95
	1	34.93	35.16	35.14	34.99
Total MIMO PSD (mW/MHz)		6239.96	6458.53	6409.90	6283.25
Total MIMO PSD (dBm/MHz)		37.95	38.10	38.07	37.98
Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
Power Spectral Density (dBm/MHz)	0	35.08	35.16	35.16	35.27
	1	35.15	35.11	34.97	35.00
Total MIMO PSD (mW/MHz)		6491.46	6521.32	6421.37	6525.75
Total MIMO PSD (dBm/MHz)		38.12	38.14	38.08	38.15
High Channel	Port	QPSK	16QAM	64QAM	256QAM
Power Spectral Density (dBm/MHz)	0	34.96	34.90	34.87	35.06
	1	34.96	35.04	34.90	34.97
Total MIMO PSD (mW/MHz)		6268.01	6281.01	6164.29	6346.04
Total MIMO PSD (dBm/MHz)		37.97	37.98	37.90	38.03

Table 8-17. Equivalent Isotropically Radiated PowerTable (NR_n66_1C_30M_2T)

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Low Channel	Port	NR_n66_2C_5M+25M		NR_n66_3C_5M+5M+25M	
		QPSK	16QAM	QPSK	16QAM
Power Spectral Density(dBm/MHz)	0	35.33	35.10	34.59	34.81
	1	35.21	35.14	34.42	34.56
Total MIMO PSD (mW/MHz)		6728.58	6498.09	5646.97	5881.18
Total MIMO PSD (dBm/MHz)		38.28	38.13	37.52	37.69
Middle Channel	Port	QPSK	16QAM	QPSK	16QAM
Power Spectral Density(dBm/MHz)	0	35.44	35.40	34.76	34.72
	1	35.20	35.16	34.73	34.66
Total MIMO PSD (mW/MHz)		6809.11	6749.21	5965.31	5887.66
Total MIMO PSD (dBm/MHz)		38.33	38.29	37.76	37.70
High Channel	Port	QPSK	16QAM	QPSK	16QAM
Power Spectral Density(dBm/MHz)	0	35.03	35.12	34.46	34.62
	1	35.09	35.30	34.55	34.50
Total MIMO PSD (mW/MHz)		6411.91	6638.63	5640.99	5715.66
Total MIMO PSD (dBm/MHz)		38.07	38.22	37.51	37.57

Table 8-18. Equivalent Isotropically Radiated PowerTable (NR_n66_Multi carrier_2T)

Low Channel	Port	MSR_B/n66_2C_NR 25M+LTE 5M		MSR_B/n66_3C_NR 5M+NR 25M+LTE 5M		MSR_B/n66_2C_DSS 10M+NR 25M	
		QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Power Spectral Density(dBm/MHz)	0	35.46	35.80	34.74	34.94	34.33	34.50
	1	35.25	35.46	34.41	34.75	34.09	34.44
Total MIMO PSD (mW/MHz)		6864.60	7321.61	5739.78	6102.06	5274.05	5592.30
Total MIMO PSD(dBm/MHz)		38.37	38.65	37.59	37.85	37.22	37.48
Middle Channel	Port	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Power Spectral Density(dBm/MHz)	0	35.38	35.82	34.90	35.06	34.38	34.72
	1	35.21	35.58	34.52	34.72	34.28	34.42
Total MIMO PSD (mW/MHz)		6769.65	7428.31	5921.87	6174.74	5422.62	5731.00
Total MIMO PSD(dBm/MHz)		38.31	38.71	37.72	37.91	37.34	37.58
High Channel	Port	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Power Spectral Density(dBm/MHz)	0	35.12	35.51	34.50	34.55	34.35	34.41
	1	35.01	35.23	34.41	34.62	34.09	34.23
Total MIMO PSD (mW/MHz)		6415.28	6889.15	5582.83	5748.35	5288.92	5409.10
Total MIMO PSD(dBm/MHz)		38.07	38.38	37.47	37.60	37.23	37.33

Table 8-19. Equivalent Isotropically Radiated PowerTable (MSR_B/n66_Multi carrier_2T)



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Low Channel	Port	QPSK	16QAM	64QAM	256QAM
Power Spectral Density(dBm/MHz)	4	33.67	33.75	33.52	33.58
	5	33.69	33.34	33.24	33.16
	6	33.33	33.45	33.16	33.26
	7	33.39	33.24	33.13	33.23
Total MIMO PSD (mW/MHz)		9000.49	8847.91	8482.56	8571.09
Total MIMO PSD (dBm/MHz)		39.54	39.47	39.29	39.33
Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
Power Spectral Density(dBm/MHz)	4	33.51	33.32	33.44	33.38
	5	32.96	32.95	32.88	32.88
	6	33.15	33.02	33.08	32.97
	7	32.89	32.76	32.88	32.75
Total MIMO PSD (mW/MHz)		8226.38	8012.47	8119.35	7983.58
Total MIMO PSD (dBm/MHz)		39.15	39.04	39.10	39.02
High Channel	Port	QPSK	16QAM	64QAM	256QAM
Power Spectral Density(dBm/MHz)	4	33.46	33.49	33.48	33.40
	5	32.95	33.10	33.01	32.97
	6	32.90	32.92	33.05	32.94
	7	32.82	32.72	32.91	32.78
Total MIMO PSD (mW/MHz)		8054.91	8107.67	8198.43	8034.19
Total MIMO PSD (dBm/MHz)		39.06	39.09	39.14	39.05

Table 8-20. Equivalent Isotropically Radiated PowerTable (NR_n2_1C_25M_4T)

Low Channel	Port	QPSK	16QAM	64QAM	256QAM
Power Spectral Density(dBm/MHz)	4	34.85	34.57	34.61	34.65
	5	34.92	34.76	34.81	34.90
Total MIMO PSD (mW/MHz)		6159.50	5855.18	5918.32	6006.89
Total MIMO PSD (dBm/MHz)		37.90	37.68	37.72	37.79
Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
Power Spectral Density(dBm/MHz)	4	34.80	34.66	34.52	34.83
	5	34.68	34.73	34.68	34.66
Total MIMO PSD (mW/MHz)		5953.45	5895.86	5766.31	5968.51
Total MIMO PSD (dBm/MHz)		37.75	37.71	37.61	37.76
High Channel	Port	QPSK	16QAM	64QAM	256QAM
Power Spectral Density(dBm/MHz)	4	34.71	34.66	34.83	34.92
	5	34.96	34.71	34.84	34.88
Total MIMO PSD (mW/MHz)		6091.14	5877.42	6092.28	6179.24
Total MIMO PSD (dBm/MHz)		37.85	37.69	37.85	37.91

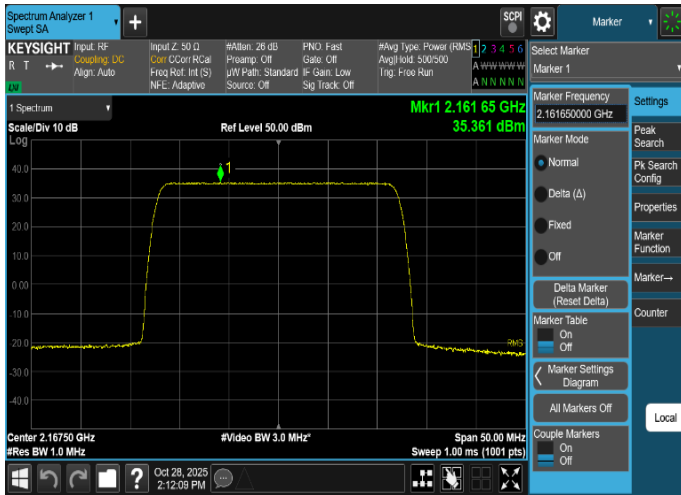
Table 8-21. Equivalent Isotropically Radiated PowerTable (NR_n2_1C_25M_2T)



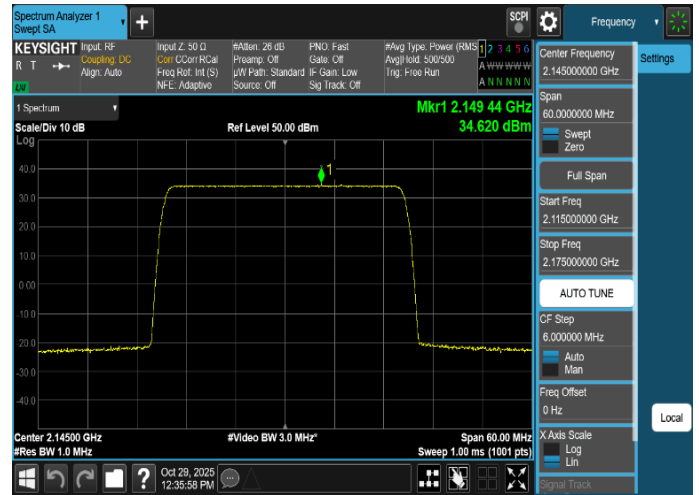
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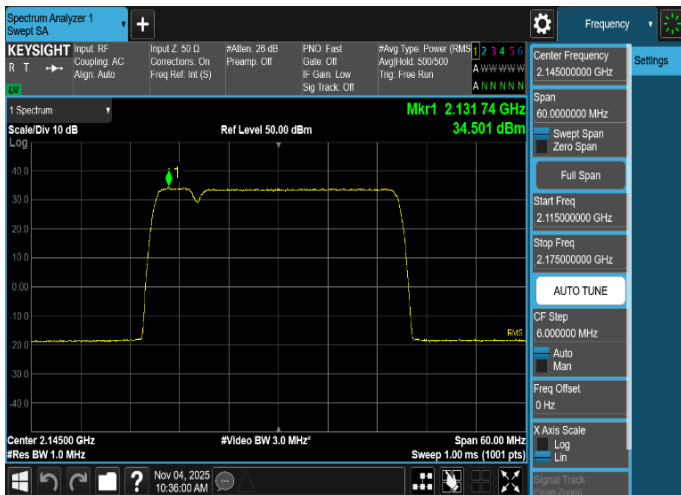
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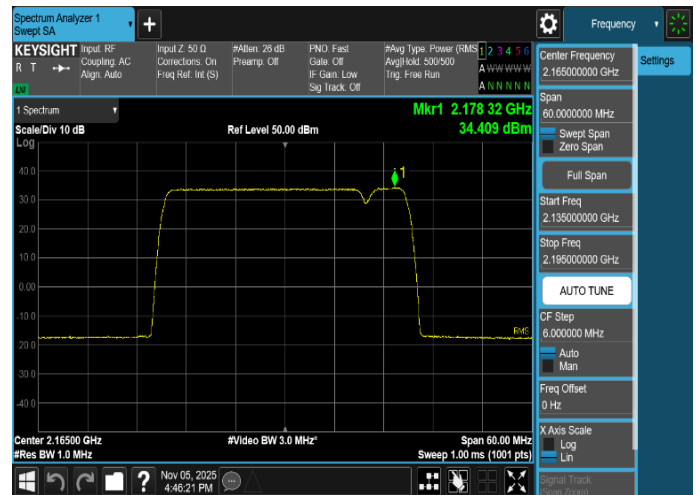
Plot 8-33. Equivalent Isotropically Radiated Power Plot
(NR_n66_1C_25M_4T_256QAM - High Channel, Port 3)



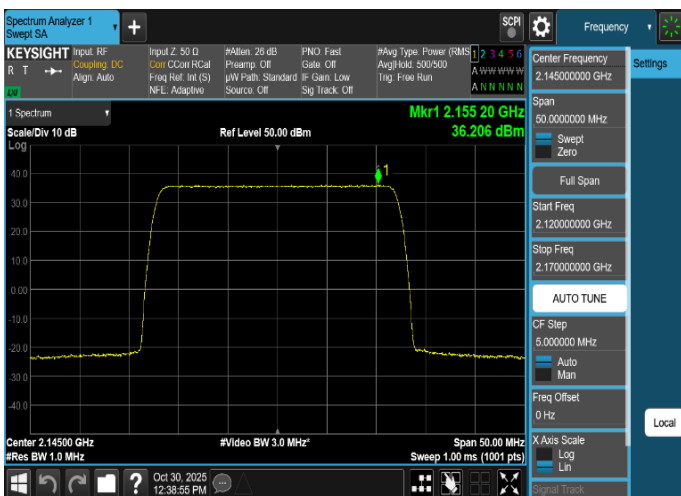
Plot 8-34. Equivalent Isotropically Radiated Power Plot
(NR_n66_1C_30M_4T_QPSK - Mid Channel, Port 3)



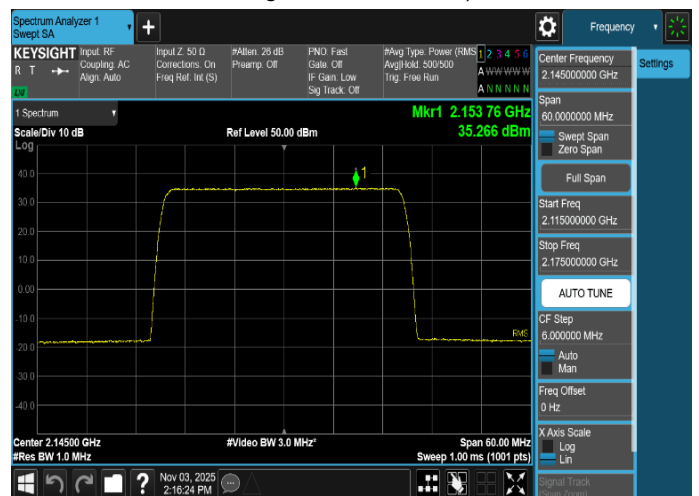
Plot 8-35. Equivalent Isotropically Radiated Power Plot
(NR_n66_2C_5M+25M_4T_16QAM - Mid Channel, Port 2)



Plot 8-36. Equivalent Isotropically Radiated Power Plot
(MSR_B/n66_2C_NR 25M+LTE 5M_4T_16QAM
- High Channel, Port 3)



Plot 8-37. Equivalent Isotropically Radiated Power Plot
(NR_n66_1C_25M_2T_16QAM - Mid Channel, Port 1)



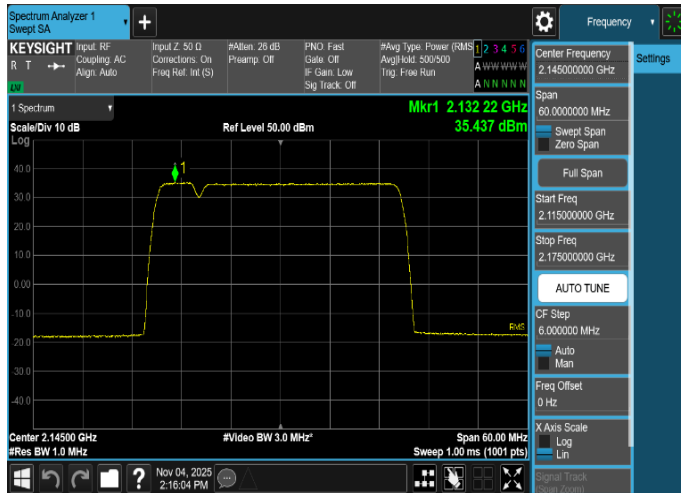
Plot 8-38. Equivalent Isotropically Radiated Power Plot
(NR_n66_1C_30M_2T_256QAM - Mid Channel, Port 0)



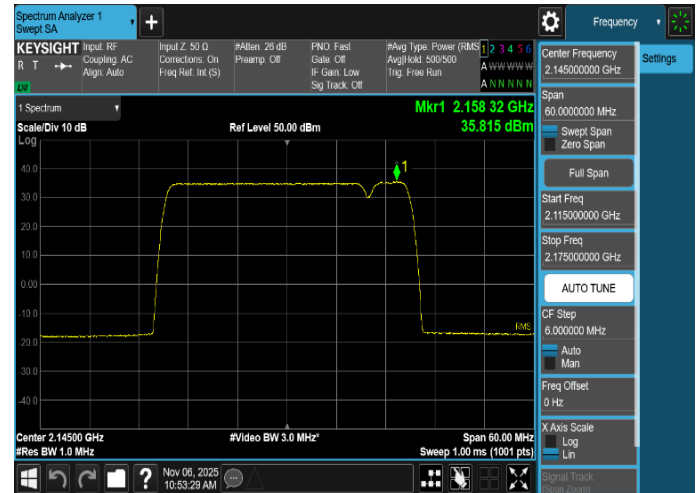
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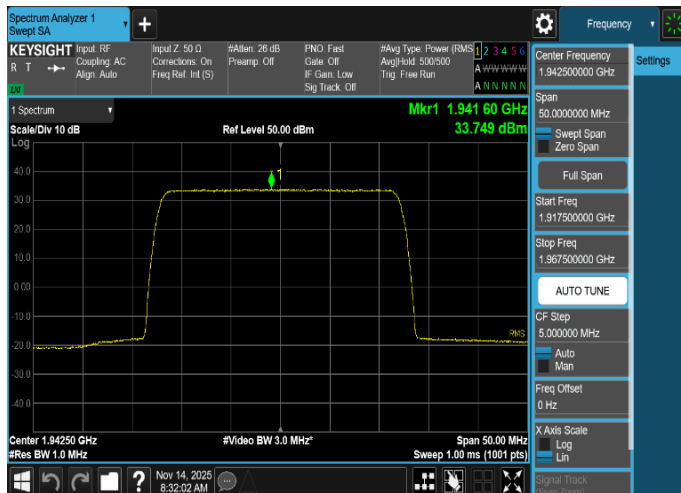
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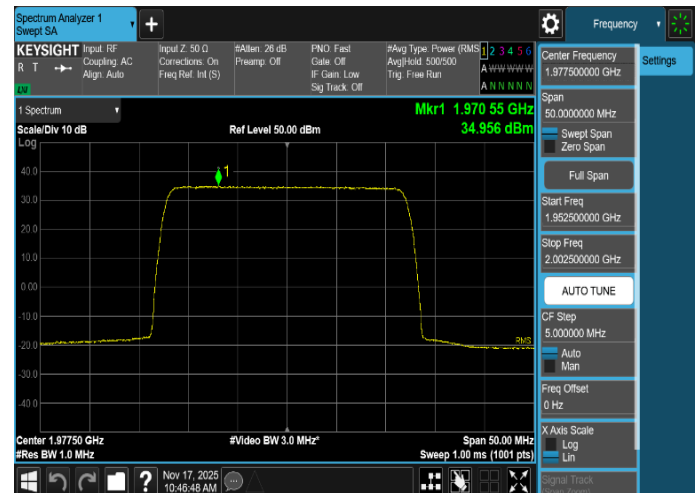
Plot 8-39. Equivalent Isotropically Radiated Power Plot
(NR_n66_2C_5M+25M_2T_QPSK - Mid Channel, Port 0)



Plot 8-40. Equivalent Isotropically Radiated Power Plot
(MSR_B/n66_2C_NR 25M+LTE 5M_2T_16QAM
- Mid Channel, Port 0)



Plot 8-41. Equivalent Isotropically Radiated Power Plot
(NR_n2_1C_25M_4T_16QAM - Low Channel, Port 4)



Plot 8-42. Equivalent Isotropically Radiated Power Plot
(NR_n2_1C_25M_2T_QPSK - High Channel, Port 5)

8.4 Peak To Average Ratio

Test Overview

The peak to average ratio measurement is performed at the conducted port of the EUT. The spectrum analyzers Complementary Cumulative Distribution Function (CCDF) measurement profile is used to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth. The CCDF curve shows how much time the peak waveform spends at or above a given average power level. The percent of time the signal spends at or above the level defines the probability for that particular power level.

Test Procedure Used

KDB 971168 D01 v03r01 – Section 5.7

ANSI C63.26-2015 – Section 5.2.3.4

Test Setting

The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The spectrum analyzer settings were as follows:

1. The signal analyzer's CCDF function is enabled.
2. Frequency = carrier center frequency
3. Measurement BW $\geq$ OBW or specified reference bandwidth
4. The signal analyzer was set to collect one million samples to generate the CCDF curve
5. The measurement interval was set depending on the type of signal analyzed. For continuous signals (>98% duty cycle), the measurement interval was set to 1ms.

Test Setup

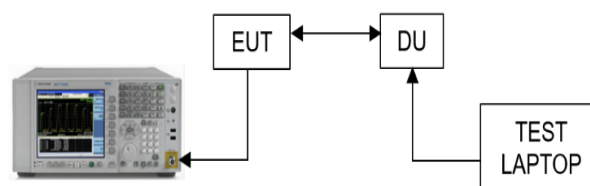


Figure 8-3. Test Instrument & Measurement Setup

Limit

§ 24.232,
 § 27.50(d)

The peak-to-average power ratio (PAPR) limit shall not exceed 13 dB for more than 0.1% of the time.

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Channel	Port	Peak To Average Power Ratio (PAPR) (dB)			
		QPSK	16QAM	64QAM	256QAM
Low	0	7.72	7.75	7.76	7.74
	1	7.77	7.80	7.77	7.78
	2	7.76	7.77	7.81	7.74
	3	7.76	7.80	7.73	7.74
Middle	0	7.54	7.54	7.54	7.55
	1	7.54	7.53	7.55	7.54
	2	7.52	7.51	7.53	7.51
	3	7.53	7.51	7.52	7.51
High	0	7.54	7.55	7.55	7.55
	1	7.53	7.54	7.55	7.53
	2	7.52	7.51	7.51	7.52
	3	7.51	7.50	7.52	7.52

Table 8-22. Peak To Average Power Ratio Summary Data (NR_n66_1C_25M_4T)

Channel	Port	Peak To Average Power Ratio (PAPR) (dB)			
		QPSK	16QAM	64QAM	256QAM
Low	0	7.79	7.78	7.77	7.78
	1	7.83	7.76	7.77	7.81
	2	7.79	7.76	7.79	7.79
	3	7.81	7.74	7.74	7.77
Middle	0	7.54	7.53	7.53	7.54
	1	7.53	7.53	7.53	7.54
	2	7.53	7.49	7.50	7.51
	3	7.52	7.51	7.50	7.49
High	0	7.53	7.54	7.53	7.53
	1	7.54	7.53	7.52	7.53
	2	7.53	7.51	7.51	7.51
	3	7.53	7.52	7.51	7.53

Table 8-23. Peak To Average Power Ratio Summary Data (NR_n66_1C_30M_4T)

Channel	Port	Peak To Average Power Ratio (PAPR) (dB)	
		NR_n66_2C_5M+25M	NR_n66_3C_5M+5M+25M
		QPSK	QPSK
Low	0	7.95	7.75
	1	7.98	7.77
	2	8.03	7.73
	3	7.95	7.73
Middle	0	7.91	7.45
	1	7.89	7.43
	2	7.89	7.41
	3	7.89	7.41
High	0	7.88	7.42
	1	7.88	7.44
	2	7.84	7.40
	3	7.87	7.42

Table 8-24. Peak To Average Power Ratio Summary Data (NR_n66_Multi carrier_4T)



Channel	Port	Peak To Average Power Ratio (PAPR) (dB)		
		MSR_B/n66_2C_NR 25M+LTE 5M	MSR_B/n66_3C_NR 5M+NR 25M+LTE	MSR_B/n66_2C_DSS 10M+NR 25M
		QPSK	QPSK	QPSK
Low	0	7.99	7.74	7.76
	1	7.94	7.80	7.75
	2	7.94	7.74	7.75
	3	7.97	7.78	7.75
Middle	0	7.86	7.41	7.46
	1	7.84	7.39	7.43
	2	7.80	7.35	7.41
	3	7.83	7.37	7.39
High	0	7.82	7.40	7.42
	1	7.85	7.42	7.45
	2	7.82	7.37	7.42
	3	7.81	7.39	7.42

Table 8-25. Peak To Average Power Ratio Summary Data (MSR_B/n66_Multi carrier_4T)

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Channel	Port	Peak To Average Power Ratio (PAPR) (dB)			
		QPSK	16QAM	64QAM	256QAM
Low	0	7.73	7.77	7.73	7.76
	1	7.80	7.75	7.77	7.74
Middle	0	7.53	7.55	7.54	7.55
	1	7.55	7.53	7.56	7.54
High	0	7.54	7.53	7.53	7.56
	1	7.53	7.54	7.55	7.53

Table 8-26. Peak To Average Power Ratio Summary Data (NR_n66_1C_25M_2T)

Channel	Port	Peak To Average Power Ratio (PAPR) (dB)			
		QPSK	16QAM	64QAM	256QAM
Low	0	7.81	7.78	7.76	7.80
	1	7.84	7.76	7.79	7.79
Middle	0	7.55	7.53	7.54	7.53
	1	7.55	7.54	7.53	7.55
High	0	7.55	7.55	7.53	7.54
	1	7.55	7.56	7.53	7.54

Table 8-27. Peak To Average Power Ratio Summary Data (NR_n66_1C_30M_2T)

Channel	Port	Peak To Average Power Ratio (PAPR) (dB)	
		NR_n66_2C_5M+25M	NR_n66_3C_5M+5M+25M
		QPSK	QPSK
Low	0	7.95	7.74
	1	7.98	7.77
Middle	0	7.90	7.46
	1	7.88	7.43
High	0	7.81	7.40
	1	7.85	7.42

Table 8-28. Peak To Average Power Ratio Summary Data (NR_n66_Multi carrier_2T)

Channel	Port	Peak To Average Power Ratio (PAPR) (dB)		
		MSR_B/n66_2C_NR 25M+LTE 5M	MSR_B/n66_3C_NR 5M+NR 25M+LTE	MSR_B/n66_2C_DSS 10M+NR 25M
		QPSK	QPSK	QPSK
Low	0	7.95	7.77	7.72
	1	7.98	7.80	7.74
Middle	0	7.83	7.39	7.42
	1	7.79	7.37	7.42
High	0	7.79	7.36	7.40
	1	7.83	7.41	7.43

Table 8-29. Peak To Average Power Ratio Summary Data (MSR_B/n66_Multi carrier_2T)



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Channel	Port	Peak To Average Power Ratio (PAPR) (dB)			
		QPSK	16QAM	64QAM	256QAM
Low	4	7.59	7.65	7.67	7.63
	5	7.57	7.63	7.64	7.64
	6	7.64	7.66	7.65	7.66
	7	7.63	7.65	7.67	7.62
Middle	4	7.52	7.53	7.55	7.52
	5	7.51	7.53	7.55	7.53
	6	7.57	7.55	7.59	7.56
	7	7.57	7.56	7.57	7.57
High	4	7.54	7.57	7.55	7.55
	5	7.55	7.57	7.57	7.57
	6	7.60	7.59	7.62	7.61
	7	7.59	7.61	7.59	7.59

Table 8-30. Peak To Average Power Ratio Summary Data (NR_n2_1C_25M_4T)

Channel	Port	Peak To Average Power Ratio (PAPR) (dB)			
		QPSK	16QAM	64QAM	256QAM
Low	4	7.58	7.61	7.62	7.58
	5	7.59	7.61	7.64	7.58
Middle	4	7.50	7.51	7.54	7.50
	5	7.51	7.50	7.53	7.51
High	4	7.50	7.55	7.56	7.53
	5	7.49	7.56	7.55	7.54

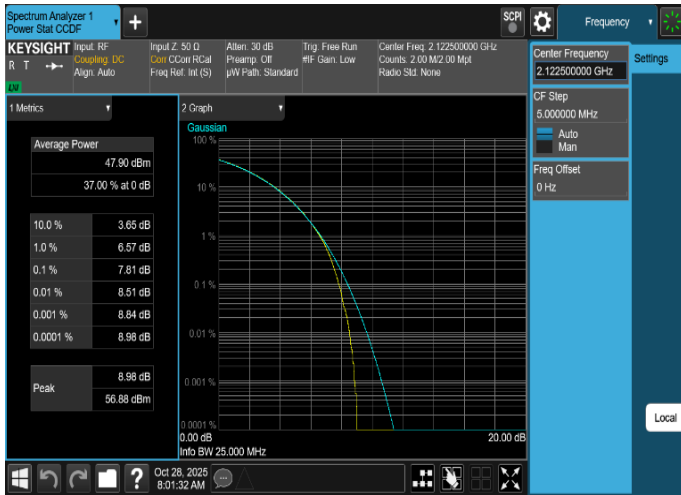
Table 8-31. Peak To Average Power Ratio Summary Data (NR_n2_1C_25M_2T)



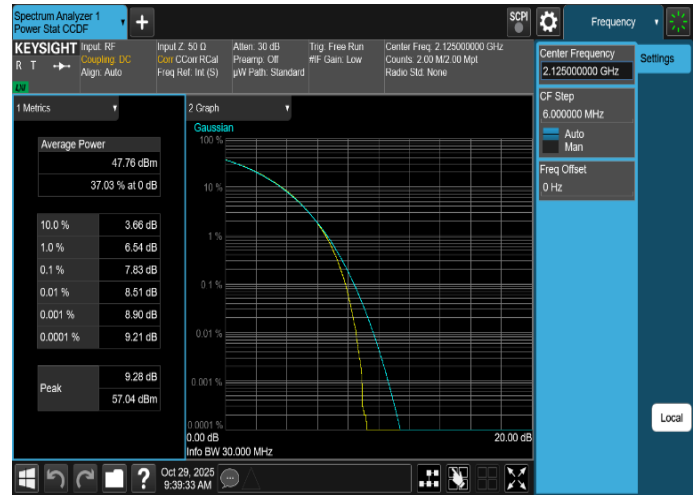
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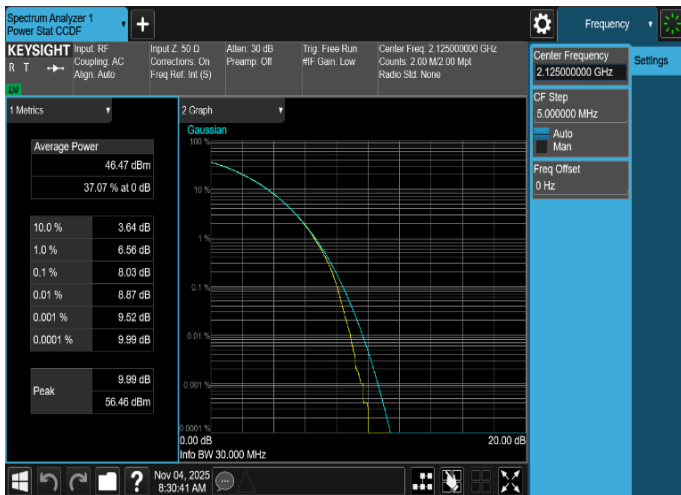
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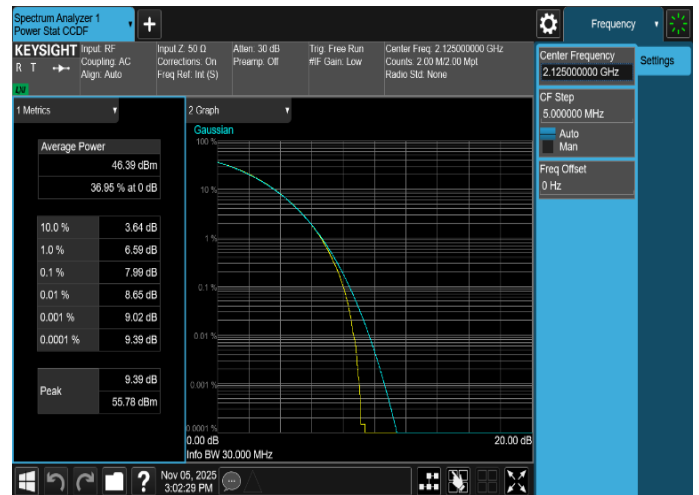
Plot 8-43. Peak To Average Power Ratio Plot
(NR_n66_1C_25M_4T_64QAM - Low Channel, Port 2)



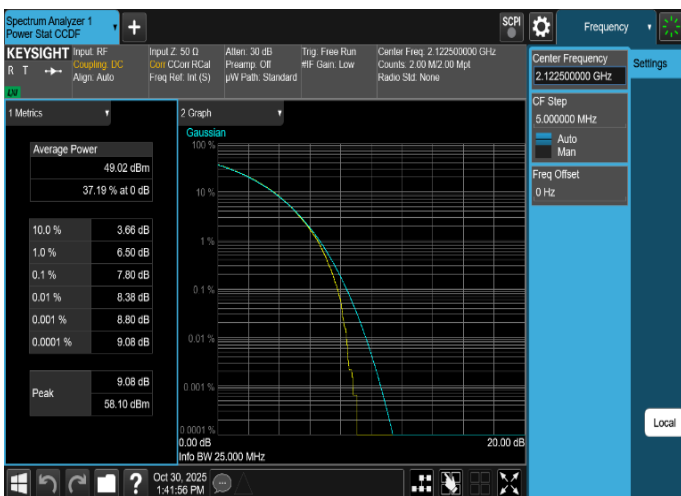
Plot 8-44. Peak To Average Power Ratio Plot
(NR_n66_1C_30M_4T_QPSK - Low Channel, Port 1)



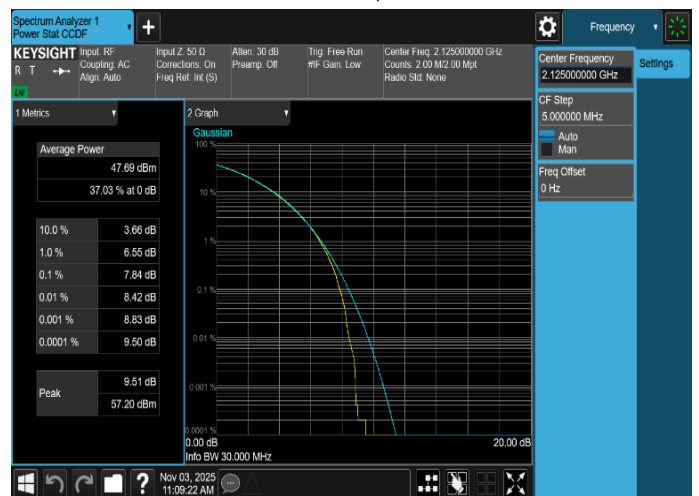
Plot 8-45. Peak To Average Power Ratio Plot
(NR_n66_2C_5M+25M_4T_QPSK - Low Channel, Port 2)



Plot 8-46. Peak To Average Power Ratio Plot
(MSR_B/n66_2C_NR 25M+LTE 5M_4T_QPSK - Low Channel, Port 0)



Plot 8-47. Peak To Average Power Ratio Plot
(NR_n66_1C_25M_2T_QPSK - Low Channel, Port 1)



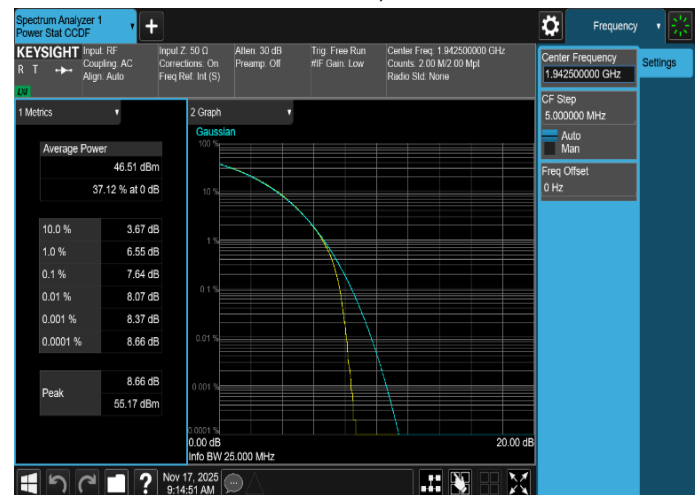
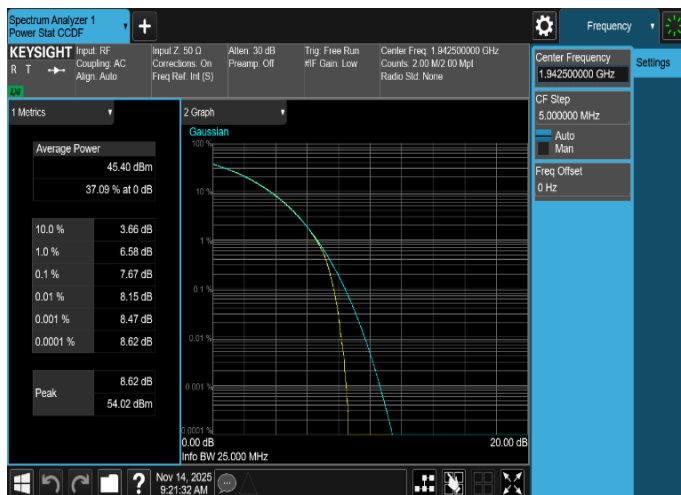
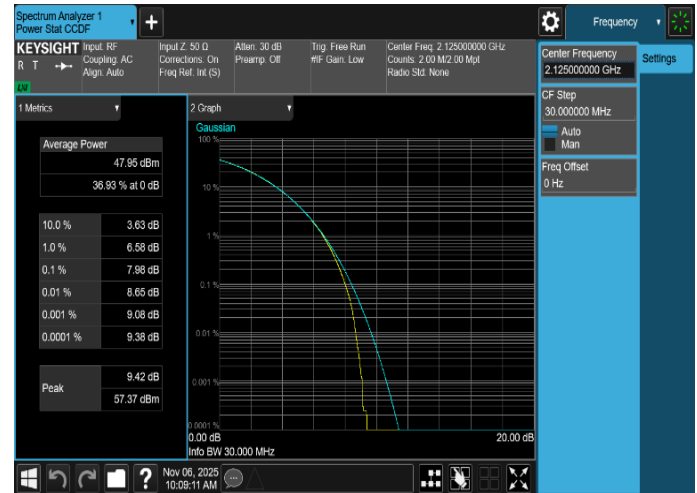
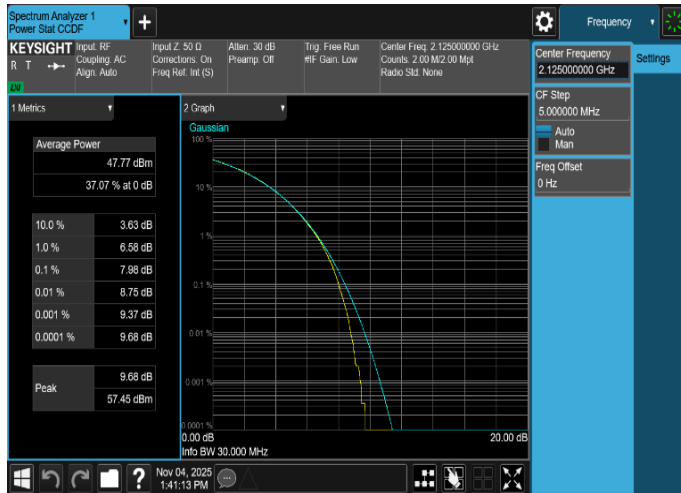
Plot 8-48. Peak To Average Power Ratio Plot
(NR_n66_1C_30M_2T_QPSK - Low Channel, Port 1)



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8.5 Band Edge Emissions at Antenna Terminal

Test Overview

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

Test Procedure Used

KDB 971168 D01 v03r01 – Section 6

KDB 662911 D01 v02r01 – Section E)3) Out-of-Band and Spurious Emission Measurements

a) Absolute Emission Limits

iii) Measure and add $10 \log(N_{ANT})$ dB

ANSI C63.26-2015 – Section 5.7.3

Test Setting

1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. RBW: Please see test notes below.
4. VBW $\geq 3 \times$ RBW
5. Detector = RMS
6. Number of sweep points $\geq 2 \times$ Span/RBW
7. Trace mode = trace average
8. Sweep time = auto couple
9. The trace was allowed to stabilize

Test Setup

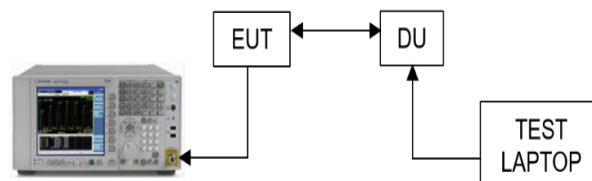


Figure 8-4. Test Instrument & Measurement Setup

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Limit**§ 24.238**

(a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

§ 27.53

(1) General protection levels. Except as otherwise specified below, 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.

Test Notes

1. Per Part 24, Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.
2. Per Part 27, Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.
3. Detect with a margin of under 1dB to limit, the integration method was performed using the spectrum analyzer's band power functions according to ANSI C63.26-2015 – Section 5.7 and using the method KDB 971168 D01 v03r01 - Section E) 3) ii). The integration value was set to a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter.
4. The limits were adjusted by a factor of $[-10 \cdot \log(4)]$ dB to account for the device operation as a 4 port MIMO transmitter, and factor of $[-10 \cdot \log(2)]$ dB to account for the device operation as a 2 port MIMO transmitter as per FCC KDB 622911. MIMO Factor calculation as below:
MIMO Factor = $10 \cdot \log(4) = 6.02$ dB
MIMO Factor = $10 \cdot \log(2) = 3.01$ dB

Frequency range	Basic Limit (dBm/MHz)	MIMO Factor (dB)	RBW Factor (dB)	Adjusted limit (dBm)
4T_Low band edge – 1MHz	-13.00	6.02	0	-19.02
4T_High band edge + 1MHz	-13.00	6.02	0	-19.02
2T_Low band edge – 1MHz	-13.00	3.01	0	-16.01
2T_High band edge + 1MHz	-13.00	3.01	0	-16.01

Note: Adjusted limit (dBm/MHz) = Basic limit (dBm/1MHz) - MIMO Factor - RBW Factor

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Edge	Port	Measured Range	Max. Value (dBm)				Limit (dBm)	Worst Margin (dB)
			QPSK	16QAM	64QAM	256QAM		
Low	0	2109 to 2110 MHz	-23.49	-22.94	-24.28	-22.95	-19.02	-3.92
	1		-26.35	-26.67	-27.96	-26.32		-7.30
	2		-24.11	-24.56	-25.58	-24.06		-5.04
	3		-24.21	-24.46	-25.84	-24.59		-5.19
High	0	2180 to 2181 MHz	-20.03	-20.20	-20.33	-20.26		-1.01
	1		-20.14	-20.29	-20.37	-20.26		-1.12
	2		-20.05	-20.40	-20.18	-20.24		-1.03
	3		-20.30	-20.05	-20.09	-20.12		-1.03

Table 8-32. Band Edge Emission Summary Data (NR_n66_1C_25M_4T)

Edge	Port	Measured Range	Max. Value (dBm)				Limit (dBm)	Worst Margin (dB)
			QPSK	16QAM	64QAM	256QAM		
Low	0	2109 to 2110 MHz	-28.74	-29.54	-29.16	-28.69	-19.02	-9.67
	1		-32.97	-33.57	-33.18	-32.74		-13.72
	2		-30.38	-31.73	-31.29	-30.79		-11.36
	3		-30.36	-31.47	-30.68	-30.00		-10.98
High	0	2180 to 2181 MHz	-25.82	-25.63	-25.67	-25.60		-6.58
	1		-25.35	-25.33	-25.19	-25.29		-6.17
	2		-25.63	-25.31	-25.27	-25.84		-6.25
	3		-25.26	-25.29	-25.25	-25.66		-6.23

Table 8-33. Band Edge Emission Summary Data (NR_n66_1C_30M_4T)

Edge	Port	Measured Range	Max. Value (dBm)		Limit (dBm)	Worst Margin (dB)
			NR_n66_2C_5M+25M	NR_n66_3C_5M+5M+25M		
			QPSK	QPSK		
Low	0	2109 to 2110 MHz	-22.70	-23.56	-19.02	-3.68
	1		-25.82	-25.14		-6.12
	2		-22.99	-24.16		-3.97
	3		-24.05	-23.74		-4.72
High	0	2180 to 2181 MHz	-20.33	-20.79		-1.30
	1		-21.48	-21.43		-2.41
	2		-20.29	-21.69		-1.27
	3		-20.48	-21.12		-1.46

Table 8-34. Band Edge Emission Summary Data (NR_n66_Multi carrier_4T)

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Edge	Port	Measured Range	Max. Value (dBm)		Limit (dBm)	Worst Margin (dB)
			NR_n66_2NC_5M+25M	NR_n66_3NC_5M+5M+25M		
			QPSK	QPSK		
Low	0	2109 to 2110 MHz	-23.06	-22.73	-19.02	-3.71
	1		-25.54	-25.17		-6.15
	2		-23.97	-26.14		-4.94
	3		-22.76	-24.59		-3.74
High	0	2180 to 2181 MHz	-20.31	-21.40		-1.29
	1		-21.62	-21.42		-2.40
	2		-20.33	-20.51		-1.31
	3		-20.24	-20.91		-1.22

Table 8-35. Band Edge Emission Summary Data (NR_n66_Multi carrier_Non-Contiguous_4T)

Edge	Port	Measured Range	Max. Value (dBm)			Limit (dBm)	Worst Margin (dB)
			MSR_B/n66_2C_NR 25M+LTE 5M	MSR_B/n66_3C_NR 5M+NR 25M+LTE	MSR_B/n66_2C_DSS 10M+NR 25M		
			QPSK	QPSK	QPSK		
Low	0	2109 to 2110 MHz	-23.30	-22.11	-23.94	-19.02	-3.09
	1		-26.00	-25.86	-28.55		-6.84
	2		-27.26	-24.53	-25.91		-5.51
	3		-25.06	-24.50	-24.58		-5.48
High	0	2180 to 2181 MHz	-21.15	-21.18	-21.18		-2.13
	1		-20.15	-21.02	-20.86		-1.13
	2		-20.08	-21.09	-21.30		-1.06
	3		-20.56	-20.90	-21.03		-1.54

Table 8-36. Band Edge Emission Summary Data (MSR_B/n66_Multi carrier_4T)

Edge	Port	Measured Range	Max. Value (dBm)			Limit (dBm)	Worst Margin (dB)
			MSR_B/n66_2NC_NR 25M+LTE 5M	MSR_B/n66_3NC_NR 5M+NR 25M+LTE	MSR_B/n66_2NC_DSS 10M+NR 25M		
			QPSK	QPSK	QPSK		
Low	0	2109 to 2110 MHz	-24.30	-23.30	-27.72	-19.02	-4.28
	1		-26.24	-26.69	-31.15		-7.22
	2		-25.81	-26.82	-29.79		-6.79
	3		-25.82	-23.94	-28.62		-4.92
High	0	2180 to 2181 MHz	-21.00	-20.20	-20.12		-1.10
	1		-21.70	-21.22	-20.86		-1.84
	2		-20.95	-20.20	-20.83		-1.18
	3		-20.30	-20.69	-20.15		-1.13

Table 8-37. Band Edge Emission Summary Data (MSR_B/n66_Multi carrier_Non-Contiguous_4T)

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Edge	Port	Measured Range	Max. Value (dBm)				Limit (dBm)	Worst Margin (dB)
			QPSK	16QAM	64QAM	256QAM		
Low	0	2109 to 2110 MHz	-22.27	-22.01	-22.88	-21.78	-16.01	-5.77
	1		-26.03	-25.75	-26.67	-24.95		-8.94
High	0	2180 to 2181 MHz	-18.91	-18.55	-18.51	-19.60		-2.50
	1		-19.09	-18.74	-18.33	-19.33		-2.32

Table 8-38. Band Edge Emission Summary Data (NR_n66_1C_25M_2T)

Edge	Port	Measured Range	Max. Value (dBm)				Limit (dBm)	Worst Margin (dB)
			QPSK	16QAM	64QAM	256QAM		
Low	0	2109 to 2110 MHz	-26.59	-27.02	-26.84	-27.52	-16.01	-10.58
	1		-30.10	-30.33	-29.65	-30.17		-13.64
High	0	2180 to 2181 MHz	-22.57	-22.87	-23.79	-22.08		-6.06
	1		-22.66	-23.23	-23.69	-24.28		-6.65

Table 8-39. Band Edge Emission Summary Data (NR_n66_1C_30M_2T)

Edge	Port	Measured Range	Max. Value (dBm)		Limit (dBm)	Worst Margin (dB)
			NR_n66_2C_5M+25M	NR_n66_3C_5M+5M+25M		
			QPSK	QPSK		
Low	0	2109 to 2110 MHz	-20.89	-21.89	-16.01	-4.88
	1		-24.92	-23.60		-7.59
High	0	2180 to 2181 MHz	-19.68	-19.48		-3.47
	1		-18.60	-19.11		-2.59

Table 8-40. Band Edge Emission Summary Data (NR_n66_Multi carrier_2T)

Edge	Port	Measured Range	Max. Value (dBm)		Limit (dBm)	Worst Margin (dB)
			NR_n66_2NC_5M+25M	NR_n66_3NC_5M+5M+25M		
			QPSK	QPSK		
Low	0	2109 to 2110 MHz	-21.00	-20.00	-16.01	-3.99
	1		-22.31	-24.67		-6.30
High	0	2180 to 2181 MHz	-20.37	-20.03		-4.02
	1		-18.55	-20.04		-2.54

Table 8-41. Band Edge Emission Summary Data (NR_n66_Multi carrier_Non-Contiguous_2T)

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Edge	Port	Measured Range	Max. Value (dBm)			Limit (dBm)	Worst Margin (dB)
			MSR_B/n66_2C_NR 25M+LTE 5M	MSR_B/n66_3C_NR 5M+NR 25M+LTE	MSR_B/n66_2C_DSS 10M+NR 25M		
			QPSK	QPSK	QPSK		
Low	0	2109 to 2110 MHz	-23.02	-20.94	-26.48	-16.01	-4.93
	1		-26.81	-25.00	-29.93		-8.99
High	0	2180 to 2181 MHz	-17.73	-19.12	-19.86		-1.72
	1		-17.71	-18.86	-19.01		-1.7

Table 8-42. Band Edge Emission Summary Data (MSR_B/n66_Multi carrier_2T)

Edge	Port	Measured Range	Max. Value (dBm)			Limit (dBm)	Worst Margin (dB)
			MSR_B/n66_2NC_NR 25M+LTE 5M	MSR_B/n66_3NC_NR 5M+NR 25M+LTE	MSR_B/n66_2NC_DSS 10M+NR 25M		
			QPSK	QPSK	QPSK		
Low	0	2109 to 2110 MHz	-21.60	-21.32	-27.73	-16.01	-5.3
	1		-25.50	-25.00	-30.25		-8.99
High	0	2180 to 2181 MHz	-18.29	-18.55	-20.14		-2.28
	1		-18.97	-19.10	-20.05		-2.96

Table 8-43. Band Edge Emission Summary Data (MSR_B/n66_Multi carrier_ Non-Contiguous_2T)

Edge	Port	Measured Range	Max. Value (dBm)				Limit (dBm)	Worst Margin (dB)
			QPSK	16QAM	64QAM	256QAM		
Low	4	2109 to 2110 MHz	-20.75	-20.53	-21.16	-20.58	-19.02	-1.51
	5		-21.60	-23.42	-23.40	-21.65		-2.58
	6		-21.03	-21.59	-22.01	-22.20		-2.01
	7		-20.90	-21.47	-21.57	-21.69		-1.87
High	4	2180 to 2181 MHz	-20.96	-20.63	-21.43	-22.25		-1.61
	5		-22.21	-22.03	-21.98	-22.36		-2.95
	6		-21.94	-20.63	-21.58	-23.01		-1.61
	7		-21.67	-20.48	-22.20	-21.85		-1.46

Table 8-44. Band Edge Emission Summary Data (NR_n2_1C_25M_4T)

Edge	Port	Measured Range	Max. Value (dBm)				Limit (dBm)	Worst Margin (dB)
			QPSK	16QAM	64QAM	256QAM		
Low	4	2109 to 2110 MHz	-18.33	-18.27	-18.89	-17.84	-16.01	-1.83
	5		-18.94	-19.12	-19.20	-19.45		-2.93
High	4	2180 to 2181 MHz	-19.66	-19.59	-19.60	-21.33		-3.58
	5		-20.05	-19.63	-20.09	-21.38		-3.62

Table 8-45. Band Edge Emission Summary Data (NR_n2_1C_25M_2T)