

# MEASUREMENT REPORT

## FCC PART 22 & 27

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**FCC ID:** XIA-CFW2591  
**Applicant:** NetComm Wireless Pty Ltd  
**Application Type:** Certification  
**Product:** 5G High Power mmWave Outdoor CPE  
**Model No.:** CFW-2591  
**Brand Name:** Casa Systems  
**FCC Rule Part(s):** Part 22, 27  
**Test Procedure(s):** ANSI C63.26: 2015  
**Test Date:** October 25 ~ November 26, 2021

**Reviewed By:**

\_\_\_\_\_  
Sunny Sun

**Approved By:**

\_\_\_\_\_  
Robin Wu



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.26-2015. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

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## Revision History

Report No.	Version	Description	Issue Date	Note
2110RSU037-U6	Rev. 01	Initial Report	12-08-2021	Valid

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## 1. GENERAL INFORMATION

### 1.1. Applicant

NetComm Wireless Pty Ltd

Level 5, 18-20 Orion Road, Lane Cove, NSW, 2066, Australia

### 1.2. Manufacturer

CASA SYSTEMS, INC.

100 Old River Road, Andover MA 01810 USA

### 1.3. Testing Facility

<input checked="" type="checkbox"/>	<b>Test Site - MRT Suzhou Laboratory</b>
	<b>Laboratory Location (Suzhou - Wuzhong)</b>
	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China
	<b>Laboratory Location (Suzhou - SIP)</b>
	4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China
	<b>Laboratory Accreditations</b>
	A2LA: 3628.01 <span style="float: right;">CNAS: L10551</span>
	FCC: CN1166 <span style="float: right;">ISED: CN0001</span>
	VCCI: R-20025, G-20034, C-20020, T-20020
<input type="checkbox"/>	<b>Test Site - MRT Shenzhen Laboratory</b>
	<b>Laboratory Location (Shenzhen)</b>
	1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China
	<b>Laboratory Accreditations</b>
	A2LA: 3628.02 <span style="float: right;">CNAS: L10551</span>
	FCC: CN1284 <span style="float: right;">ISED: CN0105</span>
<input type="checkbox"/>	<b>Test Site - MRT Taiwan Laboratory</b>
	<b>Laboratory Location (Taiwan)</b>
	No. 38, Fuxing 2 <sup>nd</sup> Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)
	<b>Laboratory Accreditations</b>
	TAF: L3261-190725
	FCC: 291082, TW3261 <span style="float: right;">ISED: TW3261</span>

#### 1.4. Product Information

Product Name	5G High Power mmWave Outdoor CPE
Model No.	CFW-2591
Brand Name	Casa Systems
IMEI	Conducted Measurement: 354796430000971 Radiated Measurement: 35479630001250
E-UTRA Band	Band 4, 5, 12, 17, 41, 48, 66
FR1 NR Band	n66
FR2 NR Band	n261
Bluetooth Specification	V4.1 BLE only
Antenna Information	Refer to section 1.6
Operating Temperature	-40 ~ 55 °C
Remark:	
1. The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

#### 1.5. Radio Specification under Test

FDD T <sub>x</sub> Frequency Range	Band 5: 824 ~ 849 MHz; Band 66: 1710 ~ 1780 MHz
FDD R <sub>x</sub> Frequency Range	Band 5: 869 ~ 894 MHz; Band 66: 2110 ~ 2200 MHz
Modulation	up to 256QAM

#### 1.6. Description of Available Antennas

Technology	Frequency Range (MHz)	Antenna Type	Max Peak Gain (dBi)
LTE Band 4	1710 ~ 1755	Dipole	4.4
LTE Band 5	824 ~ 849		2.1
LTE Band 12	699 ~ 716		1.6
LTE Band 17	704 ~ 716		1.6
LTE Band 41	2496 ~ 2690		5.1
LTE Band 48	3550 ~ 3700		4.3
LTE/NR Band 66	1710 ~ 1780		4.4
Bluetooth	2402 ~ 2480		3.0

### 1.7. Test Methodology

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

- ANSI C63.26:2015
- FCC CFR 47 Part 22, Part 27
- FCC KDB 971168 D01 v03r01: Power Meas License Digital Systems
- FCC KDB 971168 D02 v02r01: Misc Rev Approv License Devices
- FCC KDB 412172 D01 v01r01: Determining ERP and EIRP

### 1.8. EMI Suppression Device(s)/Modifications

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

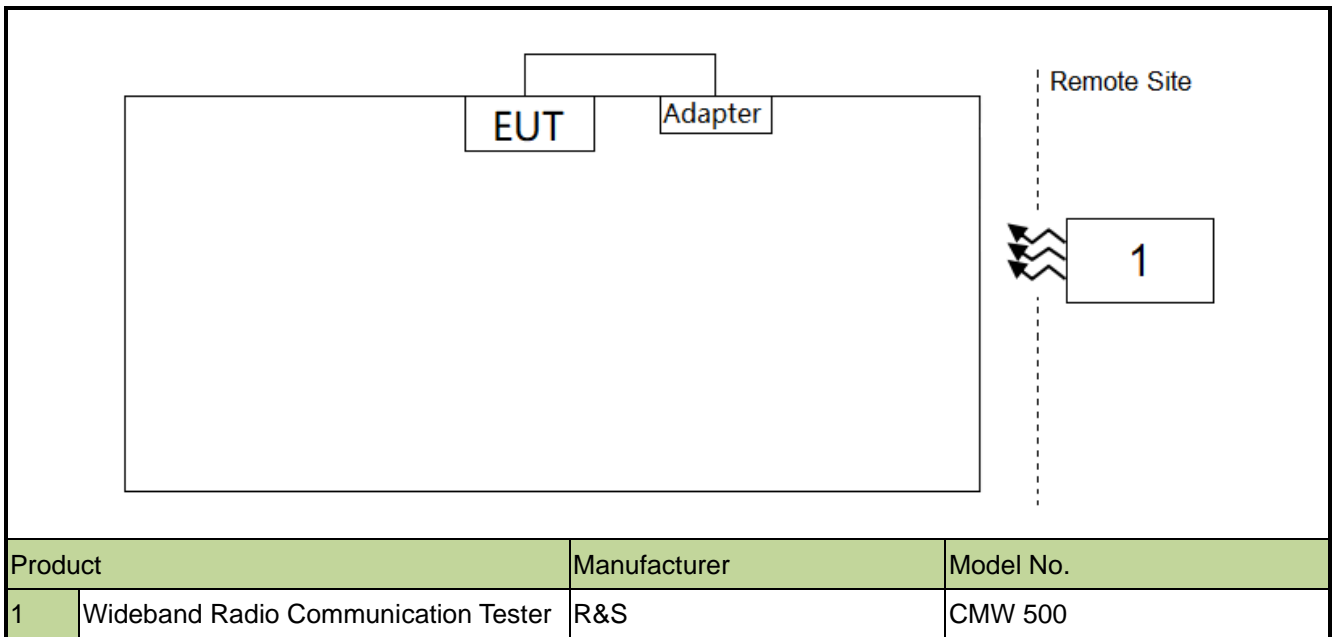
### 1.9. Maximum Power, Frequency Tolerance, and Emission Designator

LTE Band 5B	QPSK			16QAM		
BW (MHz)	Designator	Tolerance (ppm)	Max Power(W)	Designator	Tolerance (ppm)	Max Power (W)
3 + 5MHz	7M39G7D	-	0.1718	7M37W7D	-	0.1845
5 + 3MHz	7M42G7D	-	0.1698	7M39W7D	-	0.1758
5 + 10MHz	13M7G7D	-	0.1600	13M7W7D	-	0.1422
10 + 5MHz	13M8G7D	-	0.1637	13M8W7D	-	0.1462
10 + 10MHz	18M6G7D	-	0.1637	18M6W7D	-	0.1390
LTE Band 5B	64QAM			256QAM		
BW (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
5 + 10MHz	7M36W7D	-	0.1611	7M40W7D	-	0.1245
10 + 5MHz	7M40W7D	-	0.1626	7M39W7D	-	0.1324
5 + 10MHz	13M7W7D	-	0.1151	13M6W7D	-	0.0538
10 + 5MHz	13M8W7D	-	0.1122	13M8W7D	-	0.0565
10 + 10MHz	18M6W7D	-	0.1153	18M5W7D	-	0.0564

LTE Band 66C	QPSK			16QAM		
BW (MHz)	Designator	Tolerance (ppm)	BW (MHz)	Designator	Tolerance (ppm)	BW (MHz)
5 + 20MHz	22M6G7D	-	0.5346	22M5W7D	-	0.4571
10 + 15MHz	22M8G7D	-	0.4742	22M8W7D	-	0.4159
10 + 20MHz	27M4G7D	-	0.4887	27M2W7D	-	0.4046
15 + 10MHz	22M9G7D	-	0.4764	22M9W7D	-	0.4074
15 + 15MHz	27M9G7D	-	0.4677	27M9W7D	-	0.3954
15 + 20MHz	32M1G7D	-	0.4753	32M2W7D	-	0.3945
20 + 5MHz	22M7G7D	-	0.4898	22M8W7D	-	0.3936
20 + 10MHz	27M5G7D	-	0.4887	27M5W7D	-	0.3954
20 + 15MHz	32M3G7D	-	0.4581	32M3W7D	-	0.4046
20 + 20MHz	37M0G7D	-	0.4645	37M0W7D	-	0.3972
LTE Band 66C	64QAM			256QAM		
BW (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
5 + 20MHz	22M4W7D	-	0.3784	22M5W7D	-	0.1820
10 + 15MHz	22M8W7D	-	0.3428	22M9W7D	-	0.1858
10 + 20MHz	27M3W7D	-	0.3236	27M3W7D	-	0.1722
15 + 10MHz	23M0W7D	-	0.3126	22M9W7D	-	0.1782
15 + 15MHz	28M1W7D	-	0.2992	28M0W7D	-	0.1592
15 + 20MHz	32M2W7D	-	0.3177	32M2W7D	-	0.1694
20 + 5MHz	22M7W7D	-	0.3327	22M7W7D	-	0.1578
20 + 10MHz	27M5W7D	-	0.3199	27M6W7D	-	0.1698
20 + 15MHz	32M4W7D	-	0.3097	32M2W7D	-	0.1600
20 + 20MHz	37M0W7D	-	0.3133	37M0W7D	-	0.1574



### 1.10. Configuration of Tested System



### 1.11. Test Environment Condition

Ambient Temperature	15 ~ 35°C
Relative Humidity	20% ~ 75%RH

## 2. TEST EQUIPMENT CALIBRATION DATE

### Radiated Emission (WZ- AC1)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2022/01/04
Wideband Radio Communication Tester	R&S	CMW 500	MRTSUE06243	1 year	2022/10/10
PXA Signal Analyzer	Keysight	9030B	MRTSUE06395	1 year	2022/08/08
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2022/10/28
Bilog Period Antenna	Schwarzbeck	VULB 9168	MRTSUE06172	1 year	2022/08/05
Broad Band Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06023	1 year	2022/09/16
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06597	1 year	2021/12/14
Microwave System Amplifier	Agilent	83017A	MRTSUE06076	1 year	2022/11/14
Preamplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2022/06/09
Thermohygrometer	Testo	608-H1	MRTSUE06403	1 year	2022/06/28
Anechoic Chamber	TDK	Chamber-AC1	MRTSUE06212	1 year	2022/04/29

### Radiated Emission (WZ-AC2)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Spectrum Analyzer	Keysight	N9038A	MRTSUE06125	1 year	2022/06/24
Wideband Radio Communication Tester	R&S	CMW 500	MRTSUE06243	1 year	2022/10/10
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2022/10/28
Bilog Period Antenna	Schwarzbeck	VULB 9162	MRTSUE06022	1 year	2022/05/24
Horn Antenna	Schwarzbeck	BBHA9120D	MRTSUE06171	1 year	2022/10/21
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06597	1 year	2021/12/14
Broad Band Coaxial Preamplifier	Schwarzbeck	BBV 9718	MRTSUE06176	1 year	2022/11/14
Preamplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2022/06/09
Temperature/Humidity Meter	Minggao	ETH529	MRTSUE06170	1 year	2021/12/15
Anechoic Chamber	RIKEN	Chamber-AC2	MRTSUE06213	1 year	2022/04/29

## Conducted Test Equipment (WZ-SR6, WZ-TR3, SIP-SR1)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	Agilent	N9020A	MRTSUE06106	1 year	2022/04/13
EXA Signal Analyzer	Keysight	N9010B	MRTSUE06457	1 year	2022/06/24
Signal Analyzer	R&S	FSV40	MRTSUE06218	1 year	2022/04/13
Wideband Radio Communication Tester	R&S	CMW 500	MRTSUE06243	1 year	2022/10/10
Power Meter	Agilent	U2021XA	MRTSUE06030	1 year	2022/10/10
DC Power Supply	GWINSTEK	DPS-3303C	MRTSUE06064	N/A	N/A
True RMS Clamp Meter	Fluke	319	MRTSUE06947	1 year	2022/05/05
Directional Coupler	Agilent	87301D	MRTSUE06082	1 year	2022/03/08
Dual Directional Coupler	Agilent	7778D	MRTSUE06083	1 year	2022/03/24
Attenuator	MVE	6dB	MRTSUE06534	N/A	N/A
Attenuator	MVE	10dB	MRTSUE06543	N/A	N/A
Temperature & Humidity Chamber	BAOYT	BYH-150CL	MRTSUE06051	1 year	2022/10/10
Thermohygrometer	testo	608-H1	MRTSUE06401	1 year	2022/06/28

Software	Version	Function
EMI Software	V3	EMI Test Software

### 3. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

<b>Radiated Spurious Emissions</b>
Measurement Uncertainty for a Level of Confidence of 95% ( $U=2Uc(y)$ ): Horizontal: 9kHz ~ 300MHz: 5.04dB 300MHz ~ 1GHz: 4.95dB 1GHz ~ 40GHz: 6.40dB Vertical: 9kHz ~ 300MHz: 5.24dB 300MHz ~ 1GHz: 6.03dB 1GHz ~ 40GHz: 6.40dB
<b>Conducted Spurious Emissions</b>
Measuring Uncertainty for a Level of Confidence of 95% ( $U=2Uc(y)$ ): 0.78dB
<b>Output Power</b>
Measuring Uncertainty for a Level of Confidence of 95% ( $U=2Uc(y)$ ): 1.13dB
<b>Occupied Bandwidth</b>
Measuring Uncertainty for a Level of Confidence of 95% ( $U=2Uc(y)$ ): 0.28%
<b>Frequency Stability</b>
Measuring Uncertainty for a Level of Confidence of 95% ( $U=2Uc(y)$ ): 76.2Hz

## 4. TEST RESULT

### 4.1. Summary

FCC Part Section(s)	Test Description	Test Condition	Test Result	Reference
2.1049	Occupied Bandwidth	Conducted	Pass	Section 4.2
22.913(a)(5)	Equivalent Radiated Power (Band 5B)		Pass	Section 4.3
27.50(d)(4)	Equivalent Isotropic Radiated Power (Band 66C)		Pass	Section 4.4, 4.5
2.1051, 22.917(a) 27.53(g)	Band Edge (Band 66C, 5B) Spurious Emission (Band 66C, 5B)		Pass	

#### Notes:

- 1) The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
- 2) All supported modulation types were evaluated. The worst-case emission of modulation was selected. Therefore, Channel Band Edge, Conducted Spurious Emission (include the Intr-Band CA Mode) were presented the worst-case in the test report.

## 4.2. Occupied Bandwidth

### 4.2.1. Test Limit

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.

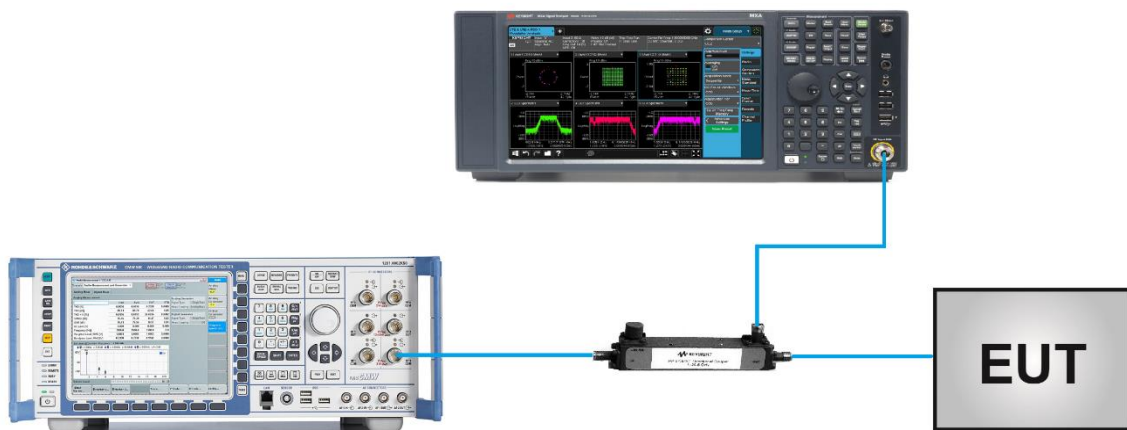
### 4.2.2. Test Procedure

ANSI C63.26-2015 - Section 5.4

### 4.2.3. Test Setting

1. Set center frequency to the nominal EUT channel center frequency
2. RBW = The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW
3. VBW  $\geq 3 \times$  RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. Allow the trace to stabilize
8. Use the 99% power bandwidth function of the instrument and report the measured bandwidth.

### 4.2.4. Test Setup



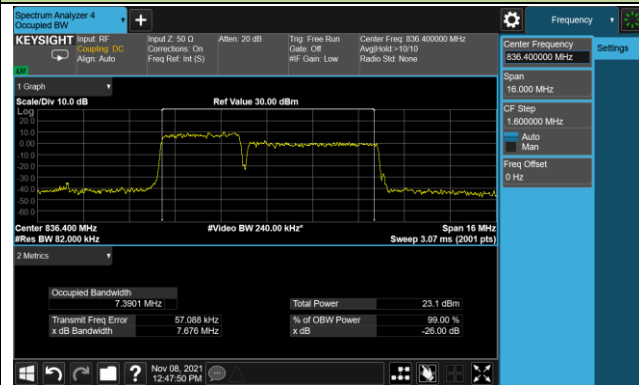
#### 4.2.5. Test Result

Test Engineer	Candy Luo	Test Site	SIP-SR1
Test Band	LTE Band CA_5B	Test Date	2021/11/08

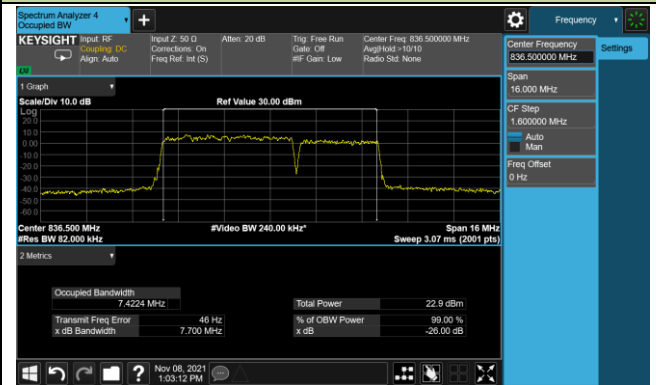
Modulation	Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)
QPSK	831.8 + 839.0	3+5	7.39
	834.0 + 841.2	5+3	7.42
	831.8 + 839.0	5+10	13.67
	834.0 + 841.2	10+5	13.81
	831.6 + 841.5	10+10	18.57
16QAM	831.8 + 839.0	3+5	7.37
	834.0 + 841.2	5+3	7.39
	831.8 + 839.0	5+10	13.73
	834.0 + 841.2	10+5	13.78
	831.6 + 841.5	10+10	18.58
64QAM	831.8 + 839.0	3+5	7.36
	834.0 + 841.2	5+3	7.40
	831.8 + 839.0	5+10	13.72
	834.0 + 841.2	10+5	13.82
	831.6 + 841.5	10+10	18.55
256QAM	831.8 + 839.0	3+5	7.40
	834.0 + 841.2	5+3	7.39
	831.8 + 839.0	5+10	13.63
	834.0 + 841.2	10+5	13.80
	831.6 + 841.5	10+10	18.48

## 99% Bandwidth - QPSK

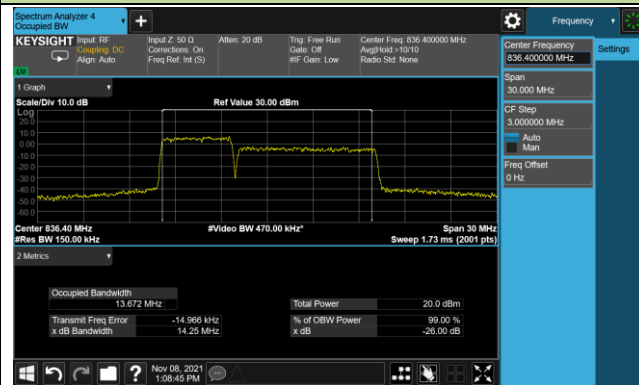
## 3+5MHz Channel Bandwidth



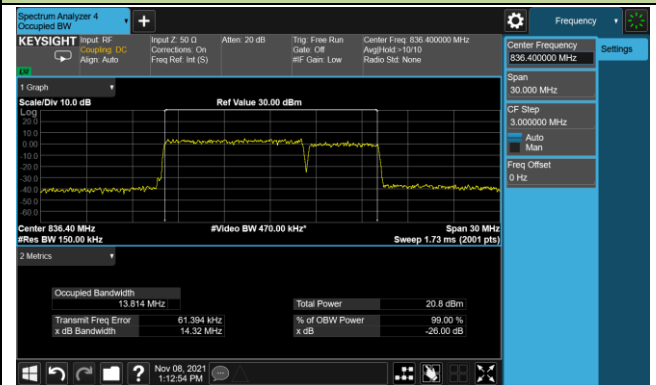
## 5+3MHz Channel Bandwidth



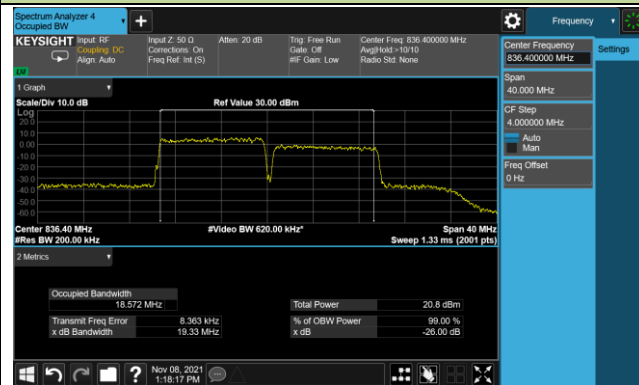
## 5+10MHz Channel Bandwidth



## 10+5MHz Channel Bandwidth



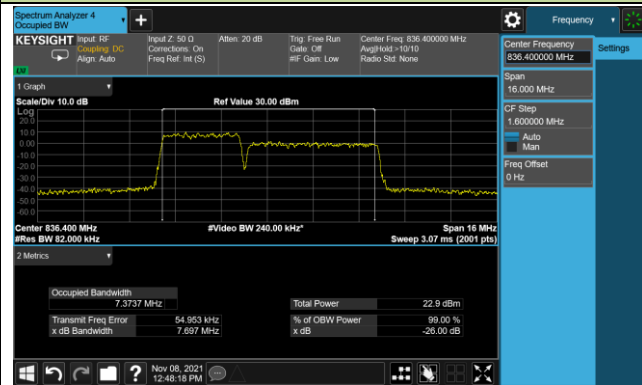
## 10+10MHz Channel Bandwidth



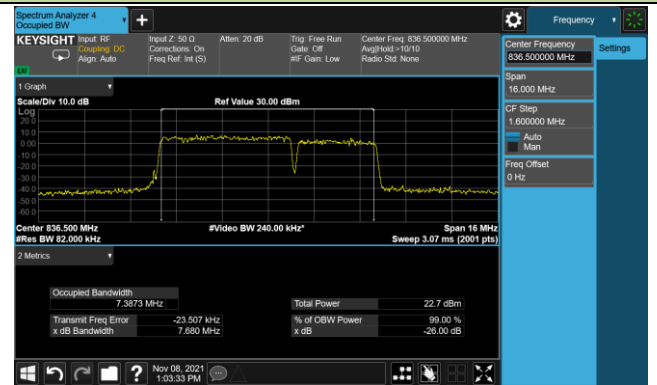


## 99% Bandwidth - 16QAM

## 3+5MHz Channel Bandwidth



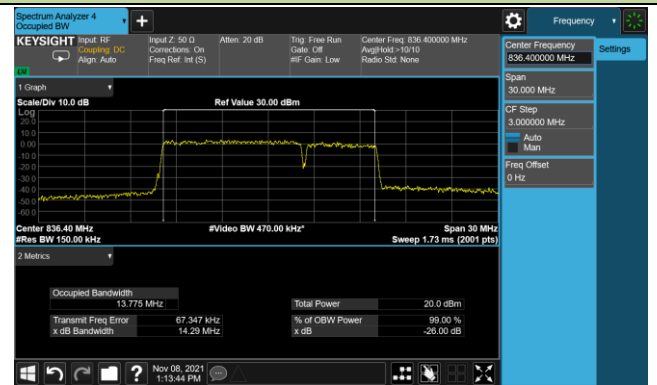
## 5+3MHz Channel Bandwidth



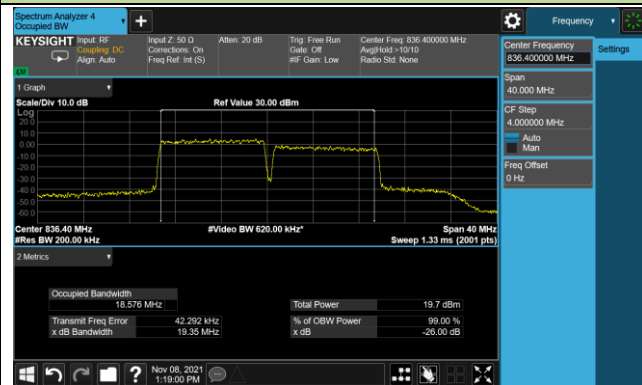
## 5+10MHz Channel Bandwidth



## 10+5MHz Channel Bandwidth

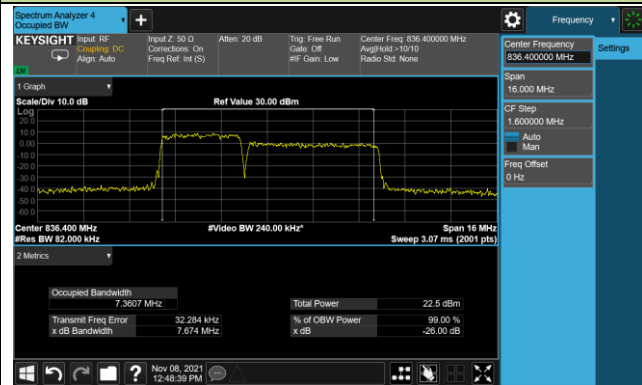


## 10+10MHz Channel Bandwidth

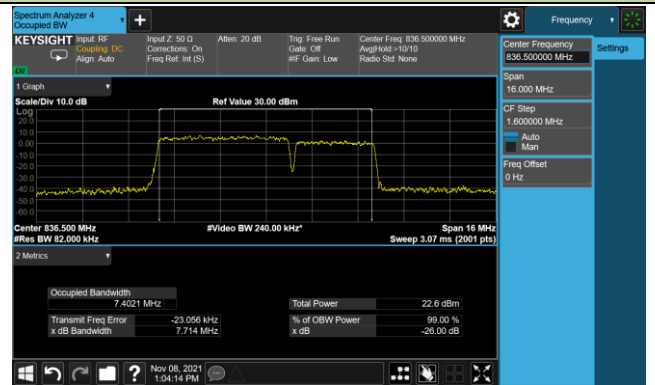


## 99% Bandwidth - 64QAM

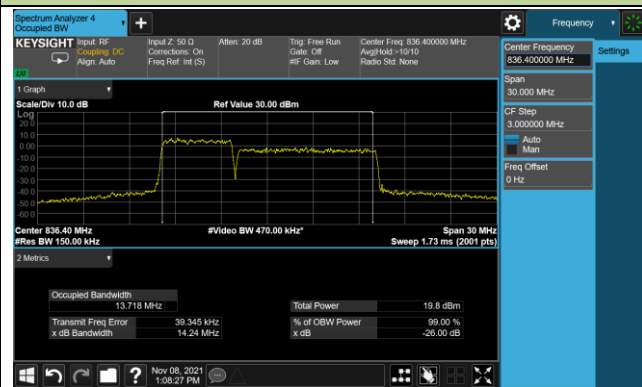
## 3+5MHz Channel Bandwidth



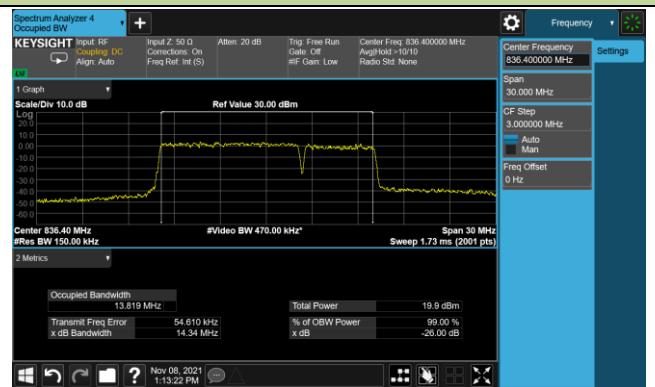
## 5+10MHz Channel Bandwidth



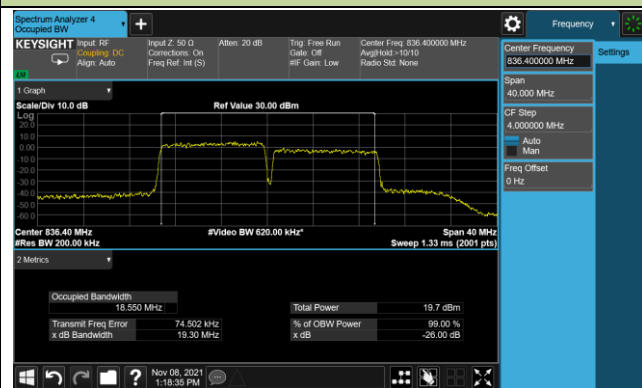
## 5+10MHz Channel Bandwidth

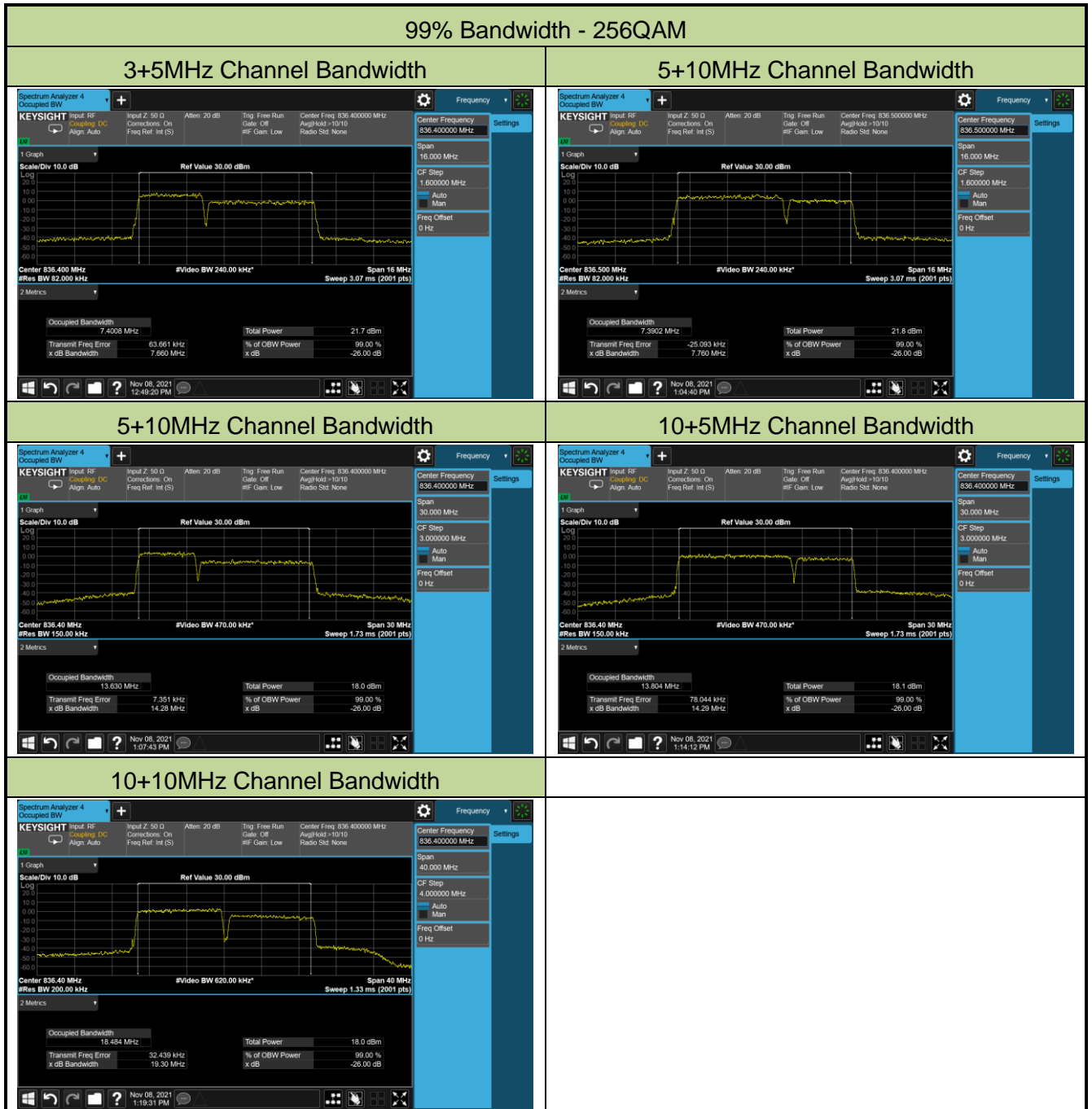


## 10+5MHz Channel Bandwidth



## 10+10MHz Channel Bandwidth





Test Engineer	Candy Luo	Test Site	SIP-SR1
Test Band	LTE Band CA_66C	Test Date	2021/11/08

Modulation	Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)
QPSK	1745.8 + 1757.5	5+20	22.57
	1747.9 + 1759.9	10+15	22.81
	1745.6 + 1760.0	10+20	27.43
	1750.1 + 1762.1	15+10	22.88
	1747.5 + 1762.5	15+15	27.89
	1745.3 + 1762.4	15+20	32.12
	1752.5 + 1764.2	20+5	22.73
	1750.1 + 1764.5	20+10	27.48
	1747.6 + 1764.7	20+15	32.32
	1745.1 + 1764.9	20+20	36.95
16QAM	1745.8 + 1757.5	5+20	22.48
	1747.9 + 1759.9	10+15	22.79
	1745.6 + 1760.0	10+20	27.20
	1750.1 + 1762.1	15+10	22.93
	1747.5 + 1762.5	15+15	27.89
	1745.3 + 1762.4	15+20	32.18
	1752.5 + 1764.2	20+5	22.75
	1750.1 + 1764.5	20+10	27.52
	1747.6 + 1764.7	20+15	32.33
	1745.1 + 1764.9	20+20	36.98
64QAM	1745.8 + 1757.5	5+20	22.39
	1747.9 + 1759.9	10+15	22.76
	1745.6 + 1760.0	10+20	27.26
	1750.1 + 1762.1	15+10	22.97
	1747.5 + 1762.5	15+15	28.05
	1745.3 + 1762.4	15+20	32.24
	1752.5 + 1764.2	20+5	22.72
	1750.1 + 1764.5	20+10	27.54
	1747.6 + 1764.7	20+15	32.35
	1745.1 + 1764.9	20+20	37.03

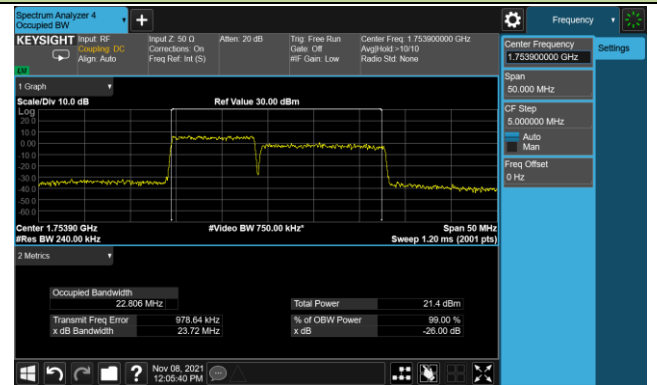
Modulation	Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)
256QAM	1745.8 + 1757.5	5+20	22.48
	1747.9 + 1759.9	10+15	22.85
	1745.6 + 1760.0	10+20	27.29
	1750.1 + 1762.1	15+10	22.93
	1747.5 + 1762.5	15+15	27.96
	1745.3 + 1762.4	15+20	32.16
	1752.5 + 1764.2	20+5	22.70
	1750.1 + 1764.5	20+10	27.56
	1747.6 + 1764.7	20+15	32.23
	1745.1 + 1764.9	20+20	37.04

## 99% Bandwidth - QPSK

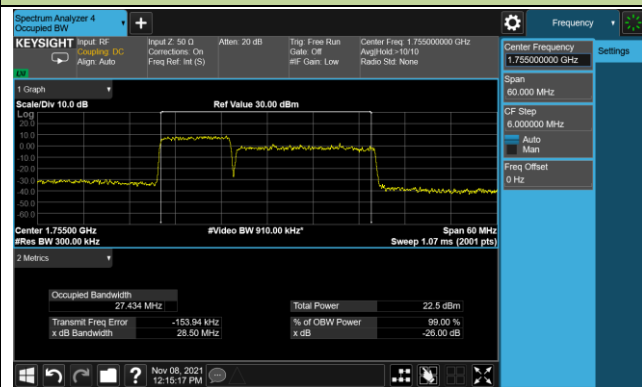
## 5+20MHz Channel Bandwidth



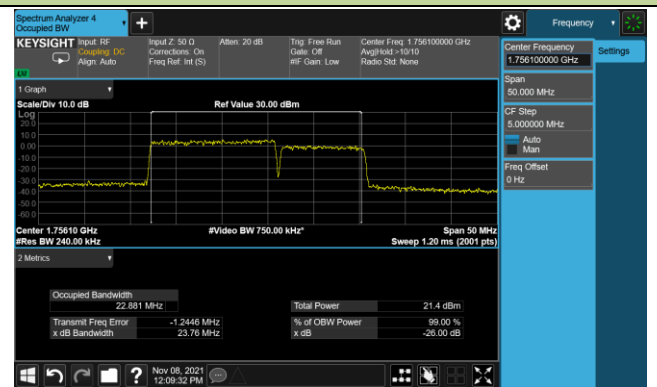
## 10+15MHz Channel Bandwidth



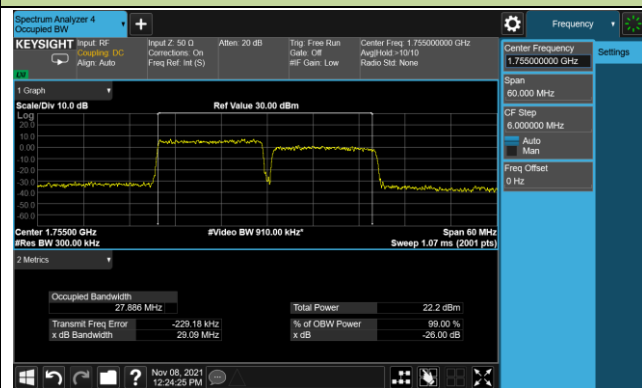
## 10+20MHz Channel Bandwidth



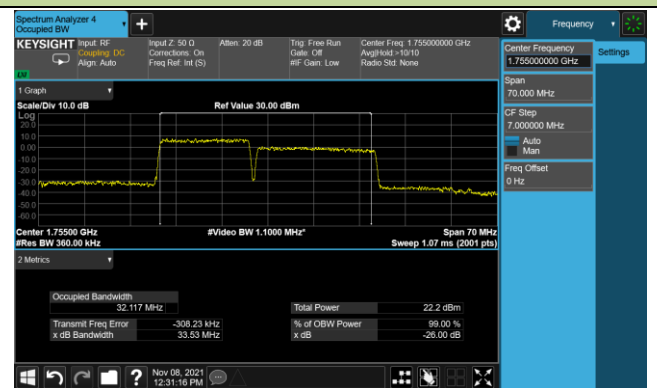
## 15+10MHz Channel Bandwidth

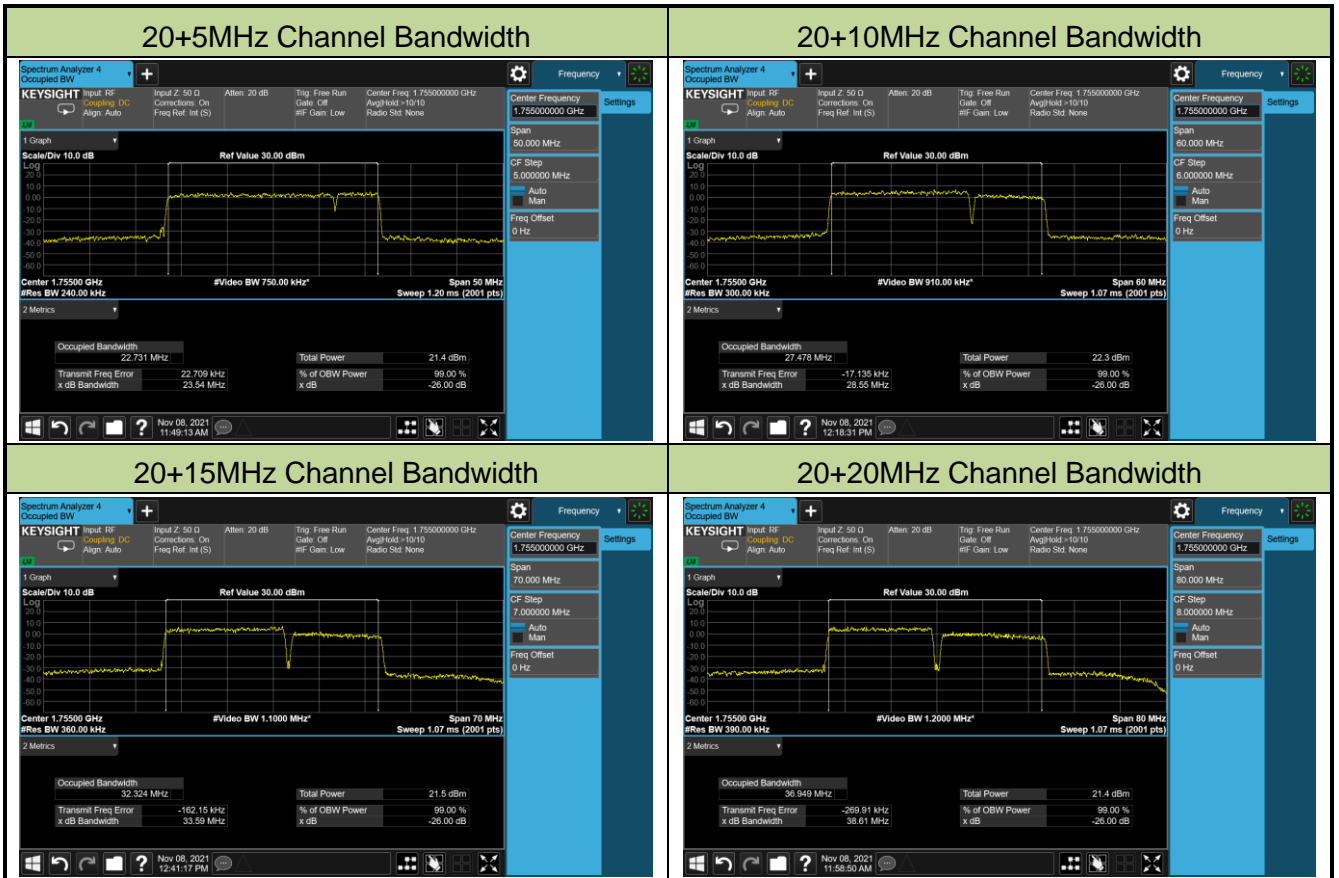


## 15+15MHz Channel Bandwidth



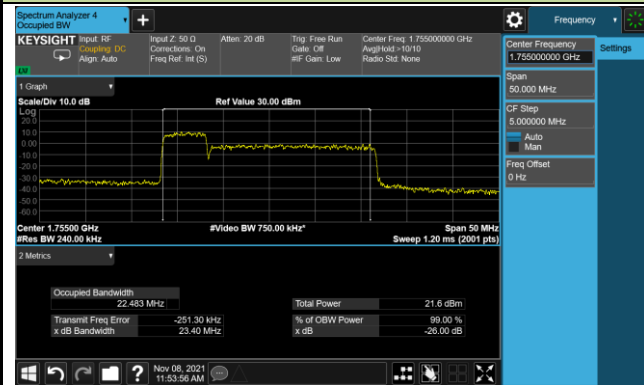
## 15+20MHz Channel Bandwidth



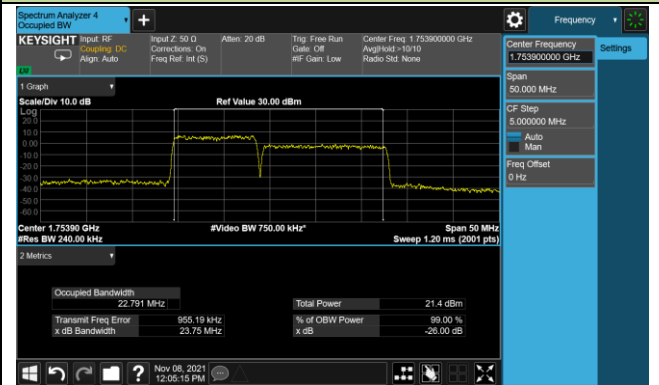


## 99% Bandwidth - 16QAM

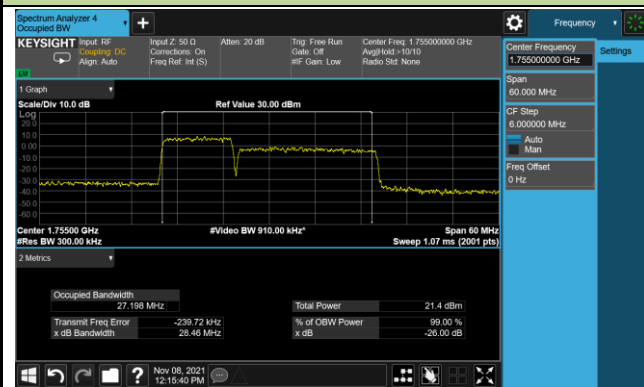
## 5+20MHz Channel Bandwidth



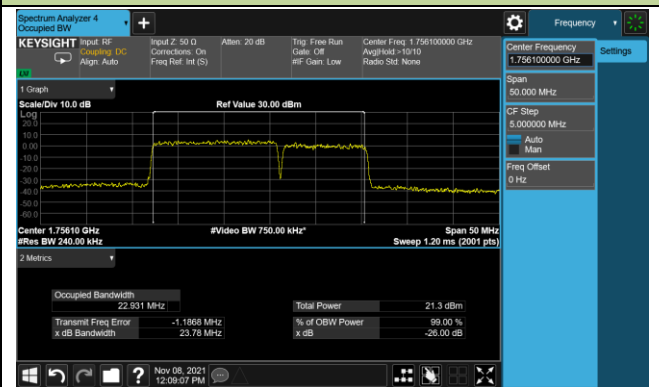
## 10+15MHz Channel Bandwidth



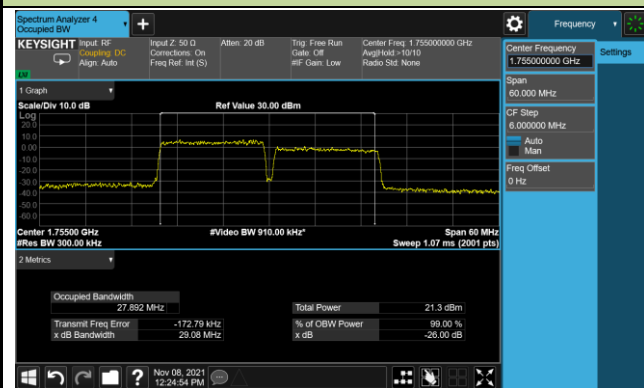
## 10+20MHz Channel Bandwidth



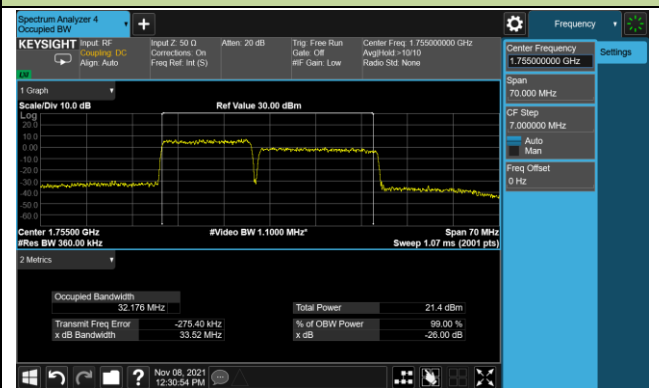
## 15+10MHz Channel Bandwidth



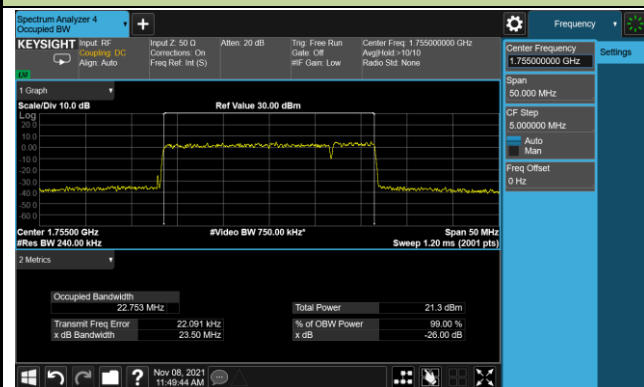
## 15+15MHz Channel Bandwidth



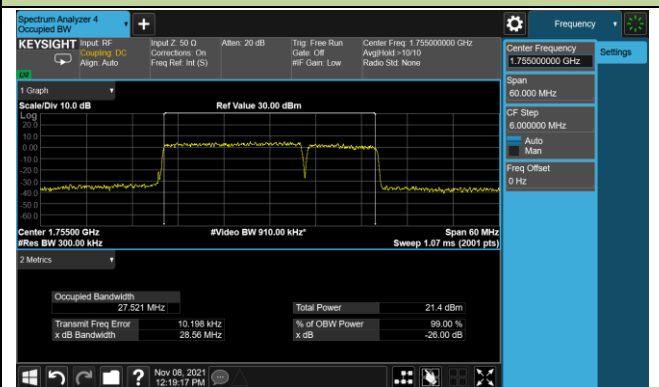
## 15+20MHz Channel Bandwidth



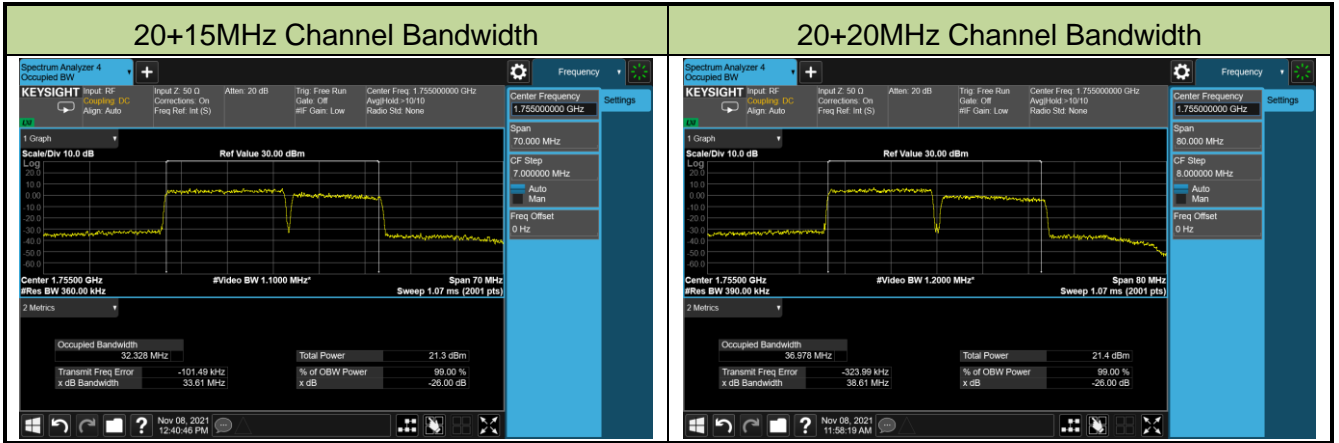
## 20+5MHz Channel Bandwidth



## 20+10MHz Channel Bandwidth





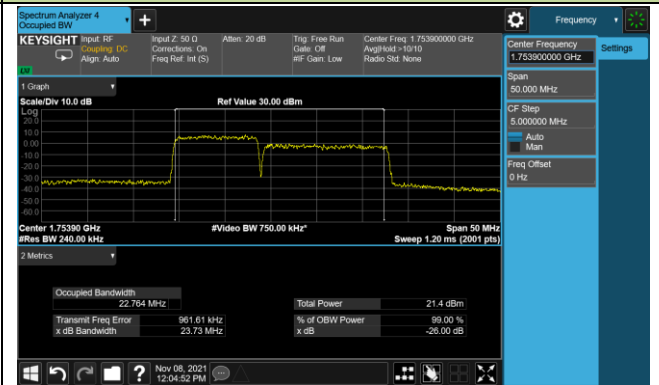


## 99% Bandwidth - 64QAM

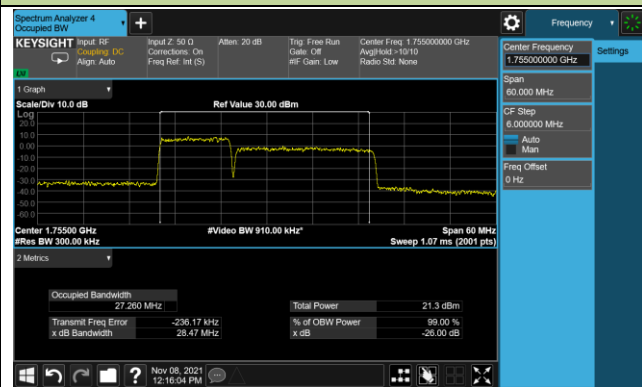
## 5+20MHz Channel Bandwidth



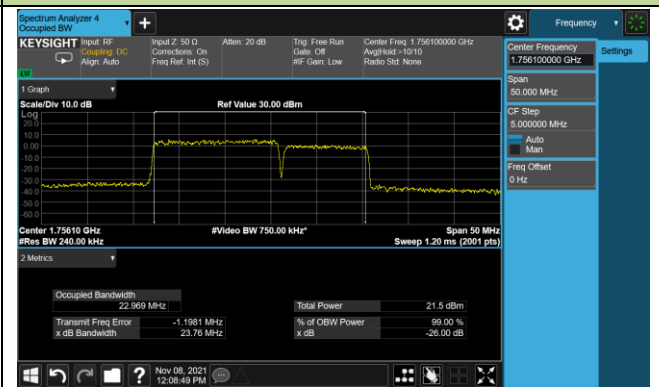
## 10+15MHz Channel Bandwidth



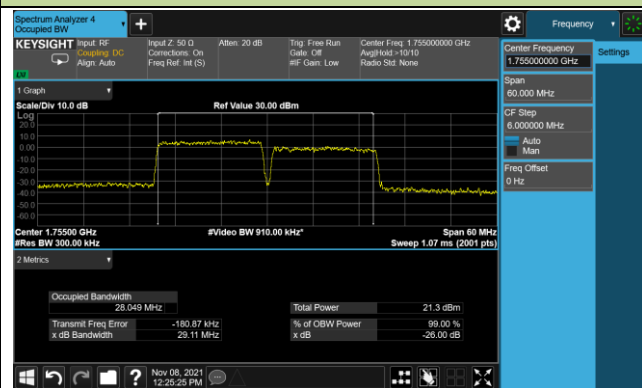
## 10+20MHz Channel Bandwidth



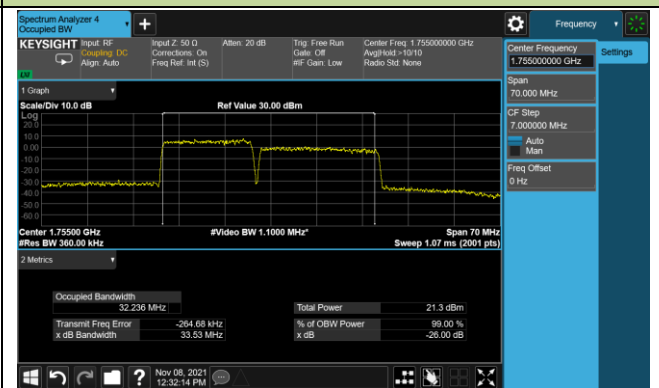
## 15+10MHz Channel Bandwidth



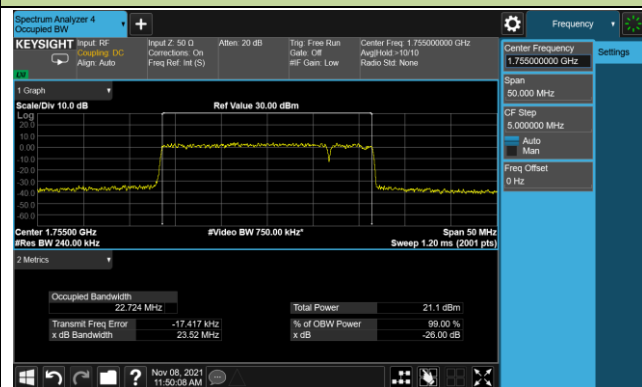
## 15+15MHz Channel Bandwidth



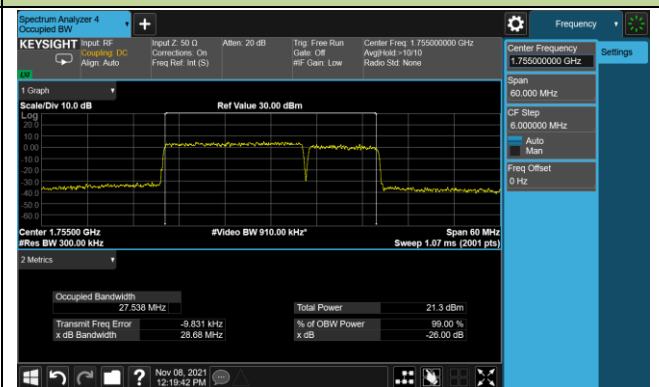
## 15+20MHz Channel Bandwidth

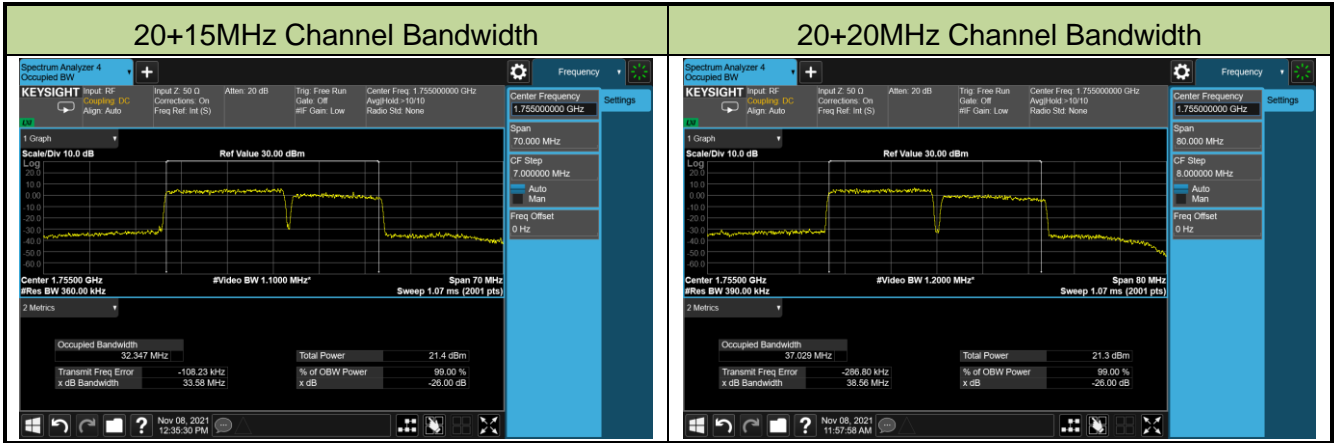


## 20+5MHz Channel Bandwidth



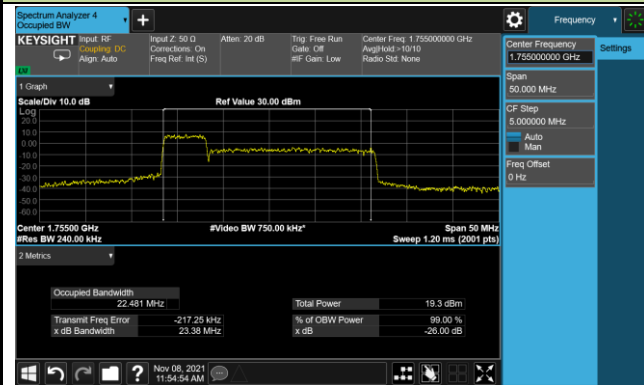
## 20+10MHz Channel Bandwidth



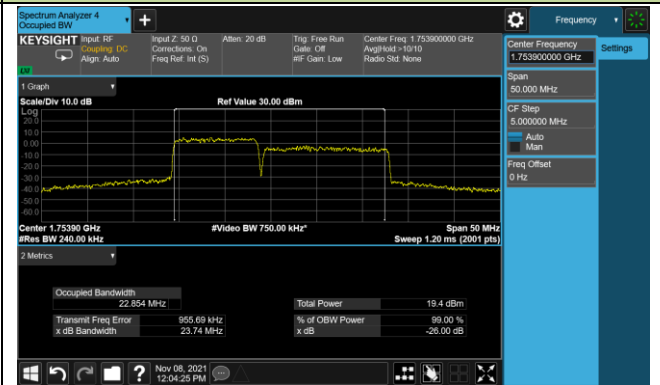


## 99% Bandwidth - 256QAM

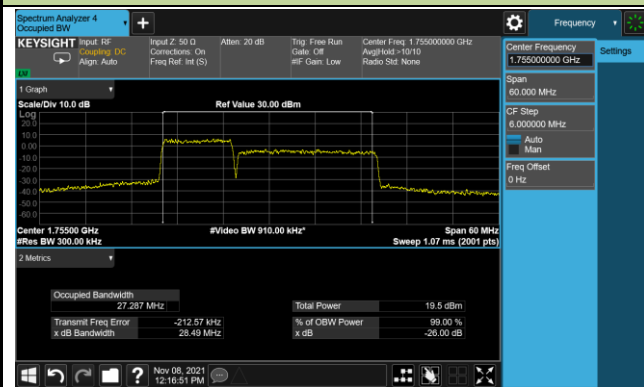
## 5+20MHz Channel Bandwidth



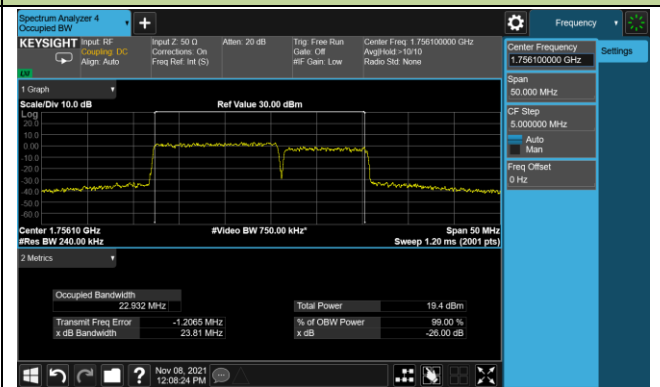
## 10+15MHz Channel Bandwidth



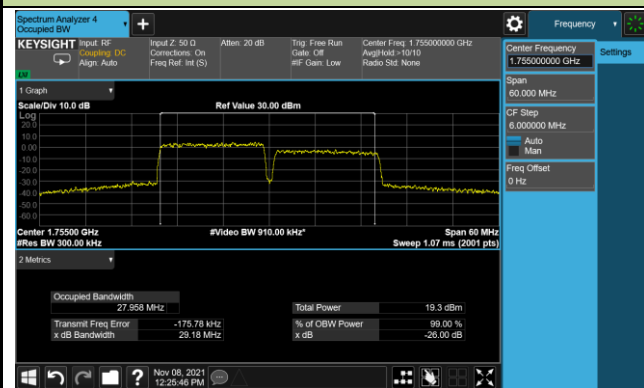
## 10+20MHz Channel Bandwidth



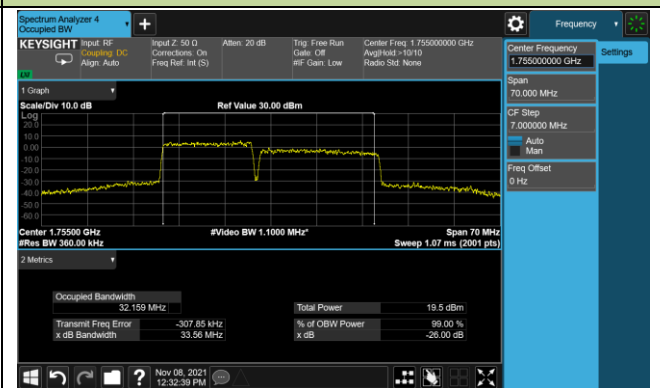
## 15+10MHz Channel Bandwidth



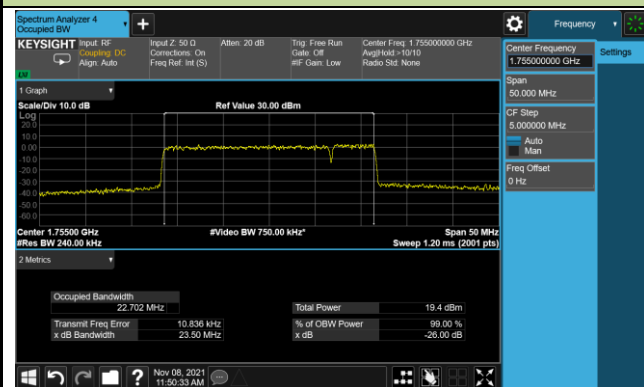
## 15+15MHz Channel Bandwidth



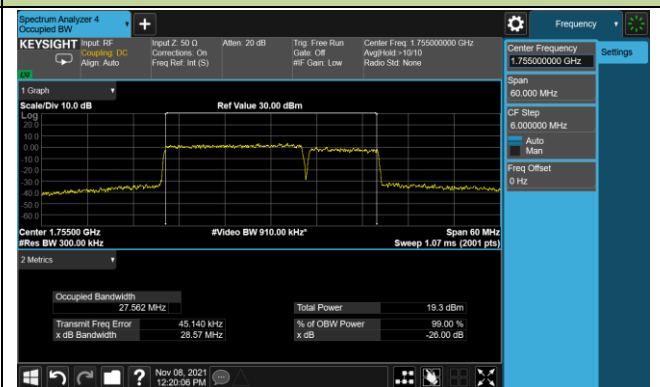
## 15+20MHz Channel Bandwidth

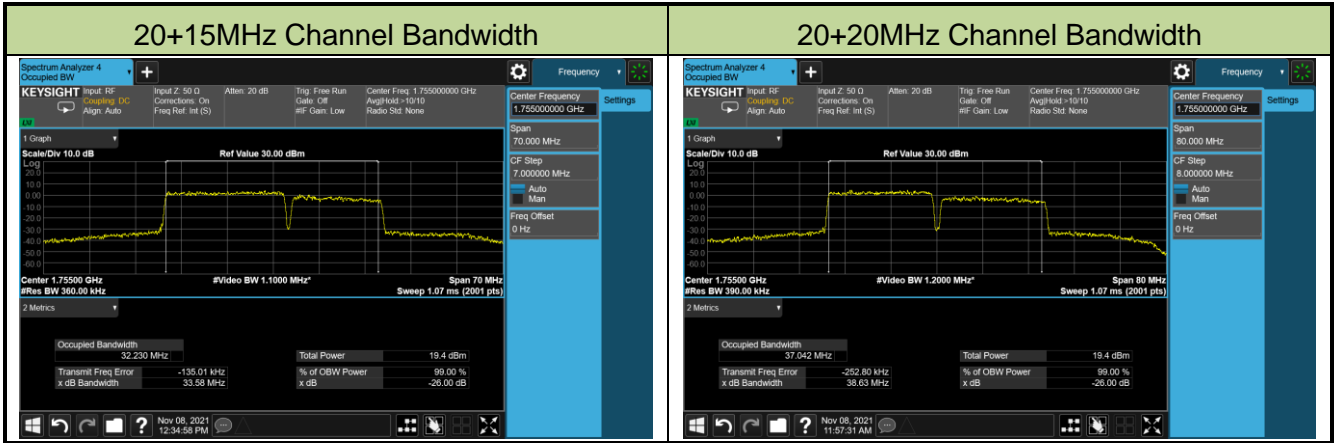


## 20+5MHz Channel Bandwidth



## 20+10MHz Channel Bandwidth





### **4.3. Equivalent Isotropically Radiated Power Measurement**

#### **4.3.1. Test Limit**

##### Band 5B

The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

##### Band 66C:

Fixed, mobile stations operating in the 1710-1755 MHz band and mobile in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

#### **4.3.2. Test Procedures Used**

ANSI C63.26-2015 - Section 5.2

#### **4.3.3. Test Setting**

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.

The relevant equation for determining the maximum ERP or EIRP from the measured RF output power is given in Equation (1) as follows:

$$\text{ERP or EIRP} = P_{\text{Meas}} + G_{\text{T}}$$

where

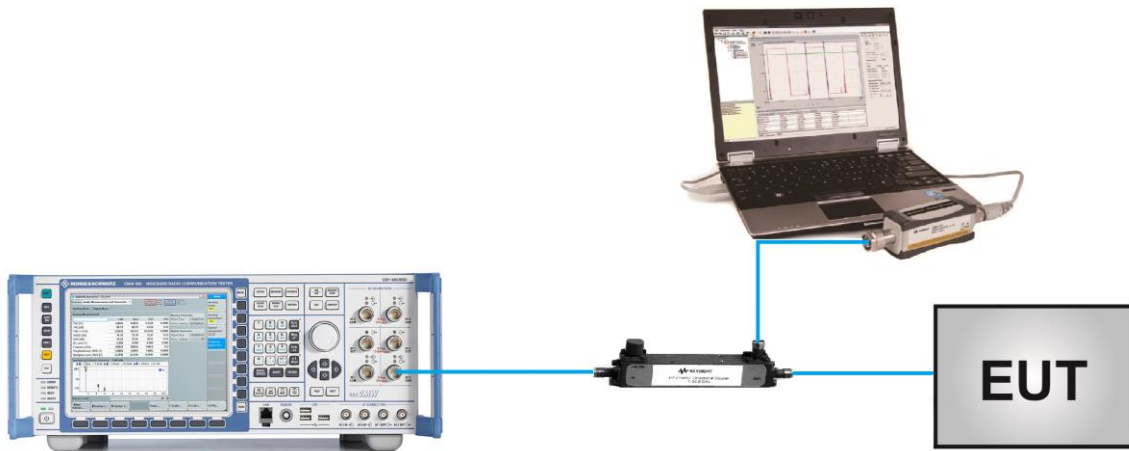
ERP or EIRP effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as  $P_{\text{Meas}}$ , e.g., dBm or dBW)

$P_{\text{Meas}}$  measured transmitter output power or PSD, in dBm or dBW

$G_{\text{T}}$  gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)

$$\text{ERP} = \text{EIRP} - 2.15$$

#### 4.3.4. Test Setup



### 4.3.5. Test Result

Test Engineer	Candy Luo	Test Site	SIP-SR1
Test Band	LTE Band CA_5B	Test Date	2021/11/06 ~ 2021/11/09

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	ERP (dBm)	Limit (dBm)
PCC	SCC						
QPSK							
825.6	829.5	3+5	P_1@0	S_1@24	10.78	10.73	< 38.45
834.1	838				11.52	11.47	< 38.45
842.6	846.5				11.40	11.35	< 38.45
825.6	829.5		P_1@7	S_0@0	21.64	21.59	< 38.45
834.1	838				21.66	21.61	< 38.45
842.6	846.5				21.55	21.50	< 38.45
825.6	829.5		P_1@14	S_1@0	22.21	22.16	< 38.45
834.1	838				22.23	22.18	< 38.45
842.6	846.5				22.10	22.05	< 38.45
825.6	829.5		P_15@0	S_25@0	22.33	22.28	< 38.45
834.1	838				22.40	22.35	< 38.45
842.6	846.5				22.23	22.18	< 38.45
826.5	830.4	5+3	P_1@0	S_1@14	10.01	9.96	< 38.45
835	838.9				10.74	10.69	< 38.45
843.5	847.4				10.91	10.86	< 38.45
826.5	830.4		P_1@7	S_0@0	21.34	21.29	< 38.45
835	838.9				21.35	21.30	< 38.45
843.5	847.4				21.21	21.16	< 38.45
826.5	830.4		P_1@24	S_1@0	22.27	22.22	< 38.45
835	838.9				22.16	22.11	< 38.45
843.5	847.4				21.50	21.45	< 38.45
826.5	830.4		P_25@0	S_15@0	22.35	22.30	< 38.45
835	838.9				22.33	22.28	< 38.45
843.5	847.4				22.12	22.07	< 38.45

Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15



Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	ERP (dBm)	Limit (dBm)
PCC	SCC						
QPSK							
826.8	834.0	5+10	P_1@0	S_1@49	10.62	10.57	< 38.45
831.8	839.0				11.31	11.26	< 38.45
836.8	844.0				11.34	11.29	< 38.45
826.8	834.0		P_1@13	S_0@0	21.21	21.16	< 38.45
831.8	839.0				21.30	21.25	< 38.45
836.8	844.0				21.36	21.31	< 38.45
826.8	834.0		P_1@24	S_1@0	22.07	22.02	< 38.45
831.8	839.0				22.09	22.04	< 38.45
836.8	844.0				22.05	22.00	< 38.45
826.8	834.0		P_25@0	S_50@0	20.26	20.21	< 38.45
831.8	839.0				20.23	20.18	< 38.45
836.8	844.0				20.25	20.20	< 38.45
829.0	836.2	10+5	P_1@0	S_1@24	10.60	10.55	< 38.45
834.0	841.2				11.04	10.99	< 38.45
839.0	846.2				11.39	11.34	< 38.45
829.0	836.2		P_1@25	S_0@0	21.39	21.34	< 38.45
834.0	841.2				21.26	21.21	< 38.45
839.0	846.2				21.35	21.30	< 38.45
829.0	836.2		P_1@49	S_1@0	22.08	22.03	< 38.45
834.0	841.2				22.19	22.14	< 38.45
839.0	846.2				22.09	22.04	< 38.45
829.0	836.2		P_50@0	S_25@0	20.22	20.17	< 38.45
834.0	841.2				20.25	20.20	< 38.45
839.0	846.2				20.27	20.22	< 38.45

Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	ERP (dBm)	Limit (dBm)
PCC	SCC						
QPSK							
829.0	838.9	10+10	P_1@0	S_1@49	10.00	9.95	< 38.45
831.6	841.5				10.24	10.19	< 38.45
834.1	844.0				10.21	10.16	< 38.45
829.0	838.9		P_1@25	S_0@0	21.48	21.43	< 38.45
831.6	841.5				21.41	21.36	< 38.45
834.1	844.0				21.20	21.15	< 38.45
829.0	838.9		P_1@49	S_1@0	22.14	22.09	< 38.45
831.6	841.5				22.19	22.14	< 38.45
834.1	844.0				21.99	21.94	< 38.45
829.0	838.9		P_50@0	S_50@0	20.28	20.23	< 38.45
831.6	841.5				20.28	20.23	< 38.45
834.1	844.0				20.23	20.18	< 38.45

Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	ERP (dBm)	Limit (dBm)
PCC	SCC						
16QAM							
825.6	829.5	3+5	P_1@0	S_1@24	11.34	11.29	< 38.45
834.1	838				11.81	11.76	< 38.45
842.6	846.5				12.03	11.98	< 38.45
825.6	829.5		P_1@7	S_0@0	21.84	21.79	< 38.45
834.1	838				21.92	21.87	< 38.45
842.6	846.5				21.97	21.92	< 38.45
825.6	829.5		P_1@14	S_1@0	22.37	22.32	< 38.45
834.1	838				22.71	22.66	< 38.45
842.6	846.5				22.13	22.08	< 38.45
825.6	829.5		P_15@0	S_25@0	22.44	22.39	< 38.45
834.1	838				22.42	22.37	< 38.45
842.6	846.5				22.26	22.21	< 38.45
826.5	830.4	5+3	P_1@0	S_1@14	10.55	10.50	< 38.45
835	838.9				11.15	11.10	< 38.45
843.5	847.4				11.07	11.02	< 38.45
826.5	830.4		P_1@7	S_0@0	21.70	21.65	< 38.45
835	838.9				21.87	21.82	< 38.45
843.5	847.4				21.49	21.44	< 38.45
826.5	830.4		P_1@24	S_1@0	22.50	22.45	< 38.45
835	838.9				22.46	22.41	< 38.45
843.5	847.4				21.65	21.60	< 38.45
826.5	830.4		P_25@0	S_15@0	22.41	22.36	< 38.45
835	838.9				22.33	22.28	< 38.45
843.5	847.4				22.19	22.14	< 38.45
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15							

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	ERP (dBm)	Limit (dBm)
PCC	SCC						
QPSK							
826.8	834.0	5+10	P_1@0	S_1@49	10.99	10.94	< 38.45
831.8	839.0				11.54	11.49	< 38.45
836.8	844.0				11.58	11.53	< 38.45
826.8	834.0		P_1@13	S_0@0	20.76	20.71	< 38.45
831.8	839.0				20.67	20.62	< 38.45
836.8	844.0				20.51	20.46	< 38.45
826.8	834.0		P_1@24	S_1@0	21.58	21.53	< 38.45
831.8	839.0				21.29	21.24	< 38.45
836.8	844.0				21.55	21.50	< 38.45
826.8	834.0		P_25@0	S_50@0	19.33	19.28	< 38.45
831.8	839.0				19.37	19.32	< 38.45
836.8	844.0				19.33	19.28	< 38.45
829.0	836.2	10+5	P_1@0	S_1@24	10.84	10.79	< 38.45
834.0	841.2				11.31	11.26	< 38.45
839.0	846.2				11.41	11.36	< 38.45
829.0	836.2		P_1@25	S_0@0	20.98	20.93	< 38.45
834.0	841.2				20.80	20.75	< 38.45
839.0	846.2				20.96	20.91	< 38.45
829.0	836.2		P_1@49	S_1@0	21.45	21.40	< 38.45
834.0	841.2				21.70	21.65	< 38.45
839.0	846.2				21.34	21.29	< 38.45
829.0	836.2		P_50@0	S_25@0	19.28	19.23	< 38.45
834.0	841.2				19.25	19.20	< 38.45
839.0	846.2				19.22	19.17	< 38.45

Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	ERP (dBm)	Limit (dBm)
PCC	SCC						
16QAM							
829.0	838.9	10+10	P_1@0	S_1@49	10.33	10.28	< 38.45
831.6	841.5				10.60	10.55	< 38.45
834.1	844.0				10.94	10.89	< 38.45
829.0	838.9		P_1@25	S_0@0	20.76	20.71	< 38.45
831.6	841.5				20.89	20.84	< 38.45
834.1	844.0				20.60	20.55	< 38.45
829.0	838.9		P_1@49	S_1@0	21.39	21.34	< 38.45
831.6	841.5				21.48	21.43	< 38.45
834.1	844.0				21.43	21.38	< 38.45
829.0	838.9		P_50@0	S_50@0	19.34	19.29	< 38.45
831.6	841.5				19.32	19.27	< 38.45
834.1	844.0				19.27	19.22	< 38.45

Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	ERP (dBm)	Limit (dBm)
PCC	SCC						
64QAM							
825.6	829.5	3+5	P_1@0	S_1@24	10.12	10.07	< 38.45
834.1	838				10.39	10.34	< 38.45
842.6	846.5				11.21	11.16	< 38.45
825.6	829.5		P_1@7	S_0@0	9.94	9.89	< 38.45
834.1	838				10.82	10.77	< 38.45
842.6	846.5				10.86	10.81	< 38.45
825.6	829.5		P_1@14	S_1@0	21.98	21.93	< 38.45
834.1	838				22.12	22.07	< 38.45
842.6	846.5				20.58	20.53	< 38.45
825.6	829.5		P_15@0	S_25@0	22.04	21.99	< 38.45
834.1	838				21.91	21.86	< 38.45
842.6	846.5				20.57	20.52	< 38.45
826.5	830.4	5+3	P_1@0	S_1@14	10.16	10.11	< 38.45
835	838.9				11.10	11.05	< 38.45
843.5	847.4				10.75	10.70	< 38.45
826.5	830.4		P_1@7	S_0@0	10.31	10.26	< 38.45
835	838.9				10.85	10.80	< 38.45
843.5	847.4				10.18	10.13	< 38.45
826.5	830.4		P_1@24	S_1@0	22.16	22.11	< 38.45
835	838.9				21.77	21.72	< 38.45
843.5	847.4				20.53	20.48	< 38.45
826.5	830.4		P_25@0	S_15@0	21.77	21.72	< 38.45
835	838.9				22.07	22.02	< 38.45
843.5	847.4				21.06	21.01	< 38.45
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15							

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	ERP (dBm)	Limit (dBm)
PCC	SCC						
64QAM							
826.8	834.0	5+10	P_1@0	S_1@49	10.74	10.69	< 38.45
831.8	839.0				11.41	11.36	< 38.45
836.8	844.0				11.00	10.95	< 38.45
826.8	834.0		P_1@13	S_0@0	19.74	19.69	< 38.45
831.8	839.0				19.09	19.04	< 38.45
836.8	844.0				19.61	19.56	< 38.45
826.8	834.0		P_1@24	S_1@0	20.15	20.10	< 38.45
831.8	839.0				20.66	20.61	< 38.45
836.8	844.0				20.27	20.22	< 38.45
826.8	834.0		P_25@0	S_50@0	19.31	19.26	< 38.45
831.8	839.0				19.35	19.30	< 38.45
836.8	844.0				19.17	19.12	< 38.45
829.0	836.2	10+5	P_1@0	S_1@24	10.75	10.70	< 38.45
834.0	841.2				11.38	11.33	< 38.45
839.0	846.2				11.00	10.95	< 38.45
829.0	836.2		P_1@25	S_0@0	19.03	18.98	< 38.45
834.0	841.2				18.94	18.89	< 38.45
839.0	846.2				18.42	18.37	< 38.45
829.0	836.2		P_1@49	S_1@0	20.55	20.50	< 38.45
834.0	841.2				19.98	19.93	< 38.45
839.0	846.2				20.10	20.05	< 38.45
829.0	836.2		P_50@0	S_25@0	19.25	19.20	< 38.45
834.0	841.2				19.30	19.25	< 38.45
839.0	846.2				19.17	19.12	< 38.45
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15							

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	ERP (dBm)	Limit (dBm)
PCC	SCC						
64QAM							
829.0	838.9	10+10	P_1@0	S_1@49	10.32	10.27	< 38.45
831.6	841.5				10.07	10.02	< 38.45
834.1	844.0				10.74	10.69	< 38.45
829.0	838.9		P_1@25	S_0@0	18.99	18.94	< 38.45
831.6	841.5				19.63	19.58	< 38.45
834.1	844.0				19.62	19.57	< 38.45
829.0	838.9		P_1@49	S_1@0	20.67	20.62	< 38.45
831.6	841.5				20.38	20.33	< 38.45
834.1	844.0				20.50	20.45	< 38.45
829.0	838.9		P_50@0	S_50@0	19.28	19.23	< 38.45
831.6	841.5				19.31	19.26	< 38.45
834.1	844.0				19.28	19.23	< 38.45

Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15



Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	ERP (dBm)	Limit (dBm)
PCC	SCC						
256QAM							
825.6	829.5	3+5	P_1@0	S_1@24	9.14	9.09	< 38.45
834.1	838				9.98	9.93	< 38.45
842.6	846.5				10.02	9.97	< 38.45
825.6	829.5		P_1@7	S_0@0	9.50	9.45	< 38.45
834.1	838				9.59	9.54	< 38.45
842.6	846.5				9.71	9.66	< 38.45
825.6	829.5		P_1@14	S_1@0	21.00	20.95	< 38.45
834.1	838				20.94	20.89	< 38.45
842.6	846.5				20.14	20.09	< 38.45
825.6	829.5		P_15@0	S_25@0	20.95	20.90	< 38.45
834.1	838				20.98	20.93	< 38.45
842.6	846.5				20.34	20.29	< 38.45
826.5	830.4	5+3	P_1@0	S_1@14	8.94	8.89	< 38.45
835	838.9				9.74	9.69	< 38.45
843.5	847.4				9.25	9.20	< 38.45
826.5	830.4		P_1@7	S_0@0	9.00	8.95	< 38.45
835	838.9				9.81	9.76	< 38.45
843.5	847.4				9.00	8.95	< 38.45
826.5	830.4		P_1@24	S_1@0	20.77	20.72	< 38.45
835	838.9				20.53	20.48	< 38.45
843.5	847.4				19.08	19.03	< 38.45
826.5	830.4		P_25@0	S_15@0	20.73	20.68	< 38.45
835	838.9				21.27	21.22	< 38.45
843.5	847.4				20.09	20.04	< 38.45
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15							

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	ERP (dBm)	Limit (dBm)		
PCC	SCC								
256QAM									
826.8	834.0	5+10	P_1@0	S_1@49	9.66	9.61	< 38.45		
831.8	839.0				10.15	10.10	< 38.45		
836.8	844.0				9.60	9.55	< 38.45		
826.8	834.0				P_1@13	S_0@0	16.57	16.52	< 38.45
831.8	839.0						16.71	16.66	< 38.45
836.8	844.0						16.49	16.44	< 38.45
826.8	834.0		P_1@24	S_1@0	16.73	16.68	< 38.45		
831.8	839.0				17.36	17.31	< 38.45		
836.8	844.0				17.22	17.17	< 38.45		
826.8	834.0				P_25@0	S_50@0	17.30	17.25	< 38.45
831.8	839.0						17.28	17.23	< 38.45
836.8	844.0						17.23	17.18	< 38.45
829.0	836.2	10+5	P_1@0	S_1@24	9.95	9.90	< 38.45		
834.0	841.2				10.22	10.17	< 38.45		
839.0	846.2				9.94	9.89	< 38.45		
829.0	836.2		P_1@25	S_0@0	16.84	16.79	< 38.45		
834.0	841.2				16.86	16.81	< 38.45		
839.0	846.2				16.71	16.66	< 38.45		
829.0	836.2		P_1@49	S_1@0	17.56	17.51	< 38.45		
834.0	841.2				17.57	17.52	< 38.45		
839.0	846.2				17.09	17.04	< 38.45		
829.0	836.2		P_50@0	S_25@0	17.24	17.19	< 38.45		
834.0	841.2				17.18	17.13	< 38.45		
839.0	846.2				17.22	17.17	< 38.45		

Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	ERP (dBm)	Limit (dBm)
PCC	SCC						
256QAM							
829.0	838.9	10+10	P_1@0	S_1@49	9.07	9.02	< 38.45
831.6	841.5				9.61	9.56	< 38.45
834.1	844.0				9.57	9.52	< 38.45
829.0	838.9		P_1@25	S_0@0	16.43	16.38	< 38.45
831.6	841.5				16.90	16.85	< 38.45
834.1	844.0				16.31	16.26	< 38.45
829.0	838.9		P_1@49	S_1@0	17.56	17.51	< 38.45
831.6	841.5				17.55	17.50	< 38.45
834.1	844.0				17.43	17.38	< 38.45
829.0	838.9		P_50@0	S_50@0	17.20	17.15	< 38.45
831.6	841.5				17.19	17.14	< 38.45
834.1	844.0				17.24	17.19	< 38.45
Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15							

Test Engineer	Candy Luo	Test Site	SIP-SR1
Test Band	LTE Band CA_66C	Test Date	2021/11/06 ~ 2021/11/09

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
PCC	SCC						
QPSK							
1715.3	1727.3	10+15	P_1@0	S_1@74	13.30	17.70	< 30.00
1747.9	1759.9				13.74	18.14	< 30.00
1760.5	1772.5				14.03	18.43	< 30.00
1715.3	1727.3		P_1@25	S_0@0	21.34	25.74	< 30.00
1747.9	1759.9				21.58	25.98	< 30.00
1760.5	1772.5				21.41	25.81	< 30.00
1715.3	1727.3		P_1@49	S_1@0	21.96	26.36	< 30.00
1747.9	1759.9				22.34	26.74	< 30.00
1760.5	1772.5				22.36	26.76	< 30.00
1715.3	1727.3		P_50@0	S_75@0	20.27	24.67	< 30.00
1747.9	1759.9				20.69	25.09	< 30.00
1760.5	1772.5				20.57	24.97	< 30.00
1717.5	1729.5	15+10	P_1@0	S_1@49	13.20	17.60	< 30.00
1750.1	1762.1				13.71	18.11	< 30.00
1762.7	1774.7				14.06	18.46	< 30.00
1717.5	1729.5		P_1@38	S_0@0	21.39	25.79	< 30.00
1750.1	1762.1				21.44	25.84	< 30.00
1762.7	1774.7				21.51	25.91	< 30.00
1717.5	1729.5		P_1@74	S_1@0	22.12	26.52	< 30.00
1750.1	1762.1				22.38	26.78	< 30.00
1762.7	1774.7				22.19	26.59	< 30.00
1717.5	1729.5		P_75@0	S_50@0	20.19	24.59	< 30.00
1750.1	1762.1				20.42	24.82	< 30.00
1762.7	1774.7				15.04	19.44	< 30.00

Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
PCC	SCC						
QPSK							
1715.5	1729.9	10+20	P_1@0	S_1@99	13.27	17.67	< 30.00
1745.6	1760				13.76	18.16	< 30.00
1755.6	1770				13.81	18.21	< 30.00
1715.5	1729.9		P_1@25	S_0@0	21.38	25.78	< 30.00
1745.6	1760				21.68	26.08	< 30.00
1755.6	1770				21.84	26.24	< 30.00
1715.5	1729.9		P_1@49	S_1@0	22.13	26.53	< 30.00
1745.6	1760				22.32	26.72	< 30.00
1755.6	1770				22.49	26.89	< 30.00
1715.5	1729.9		P_50@0	S_100@0	20.36	24.76	< 30.00
1745.6	1760				20.69	25.09	< 30.00
1755.6	1770				20.57	24.97	< 30.00
1720	1734.4	20+10	P_1@0	S_1@49	13.28	17.68	< 30.00
1750.1	1764.5				13.72	18.12	< 30.00
1760.1	1774.5				13.94	18.34	< 30.00
1720	1734.4		P_1@49	S_0@0	21.37	25.77	< 30.00
1750.1	1764.5				21.61	26.01	< 30.00
1760.1	1774.5				21.42	25.82	< 30.00
1720	1734.4		P_1@99	S_1@0	22.14	26.54	< 30.00
1750.1	1764.5				22.24	26.64	< 30.00
1760.1	1774.5				22.49	26.89	< 30.00
1720	1734.4		P_100@0	S_50@0	20.44	24.84	< 30.00
1750.1	1764.5				20.50	24.90	< 30.00
1760.1	1774.5				15.21	19.61	< 30.00

Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
PCC	SCC						
QPSK							
1717.8	1734.9	15+20	P_1@0	S_1@99	13.31	17.71	< 30.00
1745.3	1762.4				13.72	18.12	< 30.00
1752.9	1770.0				13.52	17.92	< 30.00
1717.8	1734.9		P_1@38	S_0@0	21.26	25.66	< 30.00
1745.3	1762.4				21.46	25.86	< 30.00
1752.9	1770.0				21.45	25.85	< 30.00
1717.8	1734.9		P_1@74	S_1@0	22.14	26.54	< 30.00
1745.3	1762.4				22.37	26.77	< 30.00
1752.9	1770.0				22.34	26.74	< 30.00
1717.8	1734.9		P_75@0	S_100@0	20.38	24.78	< 30.00
1745.3	1762.4				20.48	24.88	< 30.00
1752.9	1770.0				20.51	24.91	< 30.00
1720.0	1737.1	20+15	P_1@0	S_1@74	12.92	17.32	< 30.00
1747.6	1764.7				13.35	17.75	< 30.00
1755.1	1772.2				13.32	17.72	< 30.00
1720.0	1737.1		P_1@49	S_0@0	21.40	25.80	< 30.00
1747.6	1764.7				21.47	25.87	< 30.00
1755.1	1772.2				21.26	25.66	< 30.00
1720.0	1737.1		P_1@99	S_1@0	22.14	26.54	< 30.00
1747.6	1764.7				22.21	26.61	< 30.00
1755.1	1772.2				22.20	26.60	< 30.00
1720.0	1737.1		P_100@	S_75@0	20.31	24.71	< 30.00
1747.6	1764.7				20.48	24.88	< 30.00
1755.1	1772.2				20.04	24.44	< 30.00

Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
PCC	SCC						
QPSK							
1720.0	1731.7	20+5	P_1@0	S_1@24	13.11	17.51	< 30.00
1752.5	1764.2				13.60	18.00	< 30.00
1765.0	1776.7				13.92	18.32	< 30.00
1720.0	1731.7		P_1@49	S_0@0	21.53	25.93	< 30.00
1752.5	1764.2				21.60	26.00	< 30.00
1765.0	1776.7				21.56	25.96	< 30.00
1720.0	1731.7		P_1@99	S_1@0	22.37	26.77	< 30.00
1752.5	1764.2				22.50	26.90	< 30.00
1765.0	1776.7				21.49	25.89	< 30.00
1720.0	1731.7		P_100@0	S_25@0	20.19	24.59	< 30.00
1752.5	1764.2				20.37	24.77	< 30.00
1765.0	1776.7				14.27	18.67	< 30.00
1713.3	1725.0	5+20	P_1@0	S_1@99	13.23	17.63	< 30.00
1745.8	1757.5				13.71	18.11	< 30.00
1758.3	1770.0				14.01	18.41	< 30.00
1713.3	1725.0		P_1@13	S_0@0	21.26	25.66	< 30.00
1745.8	1757.5				21.68	26.08	< 30.00
1758.3	1770.0				21.80	26.20	< 30.00
1713.3	1725.0		P_1@24	S_1@0	22.61	27.01	< 30.00
1745.8	1757.5				22.88	27.28	< 30.00
1758.3	1770.0				22.81	27.21	< 30.00
1713.3	1725.0		P_25@0	S_100@0	20.23	24.63	< 30.00
1745.8	1757.5				20.59	24.99	< 30.00
1758.3	1770.0				20.49	24.89	< 30.00

Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
PCC	SCC						
QPSK							
1713.3	1725.0	15+15	P_1@0	S_1@74	13.27	17.67	< 30.00
1745.8	1757.5				13.58	17.98	< 30.00
1758.3	1770.0				13.77	18.17	< 30.00
1713.3	1725.0		P_1@38	S_0@0	21.38	25.78	< 30.00
1745.8	1757.5				21.58	25.98	< 30.00
1758.3	1770.0				21.41	25.81	< 30.00
1713.3	1725.0		P_1@74	S_1@0	22.02	26.42	< 30.00
1745.8	1757.5				22.30	26.70	< 30.00
1758.3	1770.0				22.22	26.62	< 30.00
1713.3	1725.0		P_75@0	S_75@0	20.25	24.65	< 30.00
1745.8	1757.5				20.38	24.78	< 30.00
1758.3	1770.0				16.21	20.61	< 30.00
1720.0	1739.8	20+20	P_1@0	S_1@99	12.60	17.00	< 30.00
1745.1	1764.9				13.18	17.58	< 30.00
1750.2	1770.0				13.09	17.49	< 30.00
1720.0	1739.8		P_1@49	S_0@0	21.48	25.88	< 30.00
1745.1	1764.9				21.42	25.82	< 30.00
1750.2	1770.0				21.38	25.78	< 30.00
1720.0	1739.8		P_1@99	S_1@0	22.18	26.58	< 30.00
1745.1	1764.9				22.27	26.67	< 30.00
1750.2	1770.0				22.08	26.48	< 30.00
1720.0	1739.8		P_100@0	S_100@0	20.26	24.66	< 30.00
1745.1	1764.9				20.47	24.87	< 30.00
1750.2	1770.0				20.59	24.99	< 30.00

Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)



Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
PCC	SCC						
16QAM							
1715.3	1727.3	10+15	P_1@0	S_1@74	13.65	18.05	< 30.00
1747.9	1759.9				14.56	18.96	< 30.00
1760.5	1772.5				14.43	18.83	< 30.00
1715.3	1727.3		P_1@25	S_0@0	20.87	25.27	< 30.00
1747.9	1759.9				21.10	25.50	< 30.00
1760.5	1772.5				21.35	25.75	< 30.00
1715.3	1727.3		P_1@49	S_1@0	21.50	25.90	< 30.00
1747.9	1759.9				21.70	26.10	< 30.00
1760.5	1772.5				21.79	26.19	< 30.00
1715.3	1727.3		P_50@0	S_75@0	19.29	23.69	< 30.00
1747.9	1759.9				19.57	23.97	< 30.00
1760.5	1772.5				19.63	24.03	< 30.00
1717.5	1729.5	15+10	P_1@0	S_1@49	13.16	17.56	< 30.00
1750.1	1762.1				14.17	18.57	< 30.00
1762.7	1774.7				14.22	18.62	< 30.00
1717.5	1729.5		P_1@38	S_0@0	21.28	25.68	< 30.00
1750.1	1762.1				20.76	25.16	< 30.00
1762.7	1774.7				21.10	25.50	< 30.00
1717.5	1729.5		P_1@74	S_1@0	21.39	25.79	< 30.00
1750.1	1762.1				21.45	25.85	< 30.00
1762.7	1774.7				21.70	26.10	< 30.00
1717.5	1729.5		P_75@0	S_50@0	19.34	23.74	< 30.00
1750.1	1762.1				19.40	23.80	< 30.00
1762.7	1774.7				19.50	23.90	< 30.00

Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
PCC	SCC						
16QAM							
1715.5	1729.9	10+20	P_1@0	S_1@99	13.93	18.33	< 30.00
1745.6	1760				13.80	18.20	< 30.00
1755.6	1770				14.28	18.68	< 30.00
1715.5	1729.9		P_1@25	S_0@0	20.78	25.18	< 30.00
1745.6	1760				20.91	25.31	< 30.00
1755.6	1770				20.96	25.36	< 30.00
1715.5	1729.9		P_1@49	S_1@0	21.52	25.92	< 30.00
1745.6	1760				21.67	26.07	< 30.00
1755.6	1770				21.61	26.01	< 30.00
1715.5	1729.9		P_50@0	S_100@0	19.39	23.79	< 30.00
1745.6	1760				19.62	24.02	< 30.00
1755.6	1770				19.55	23.95	< 30.00
1720	1734.4	20+10	P_1@0	S_1@49	13.59	17.99	< 30.00
1750.1	1764.5				13.88	18.28	< 30.00
1760.1	1774.5				14.37	18.77	< 30.00
1720	1734.4		P_1@49	S_0@0	20.98	25.38	< 30.00
1750.1	1764.5				20.93	25.33	< 30.00
1760.1	1774.5				21.00	25.40	< 30.00
1720	1734.4		P_1@99	S_1@0	21.43	25.83	< 30.00
1750.1	1764.5				21.57	25.97	< 30.00
1760.1	1774.5				21.48	25.88	< 30.00
1720	1734.4		P_100@0	S_50@0	19.34	23.74	< 30.00
1750.1	1764.5				19.55	23.95	< 30.00
1760.1	1774.5				19.55	23.95	< 30.00

Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
PCC	SCC						
16QAM							
1717.8	1734.9	15+20	P_1@0	S_1@99	13.50	17.90	< 30.00
1745.3	1762.4				13.89	18.29	< 30.00
1752.9	1770.0				13.99	18.39	< 30.00
1717.8	1734.9		P_1@38	S_0@0	20.52	24.92	< 30.00
1745.3	1762.4				20.80	25.20	< 30.00
1752.9	1770.0				20.96	25.36	< 30.00
1717.8	1734.9		P_1@74	S_1@0	21.22	25.62	< 30.00
1745.3	1762.4				21.56	25.96	< 30.00
1752.9	1770.0				21.54	25.94	< 30.00
1717.8	1734.9		P_75@0	S_100@0	19.33	23.73	< 30.00
1745.3	1762.4				19.50	23.90	< 30.00
1752.9	1770.0				19.56	23.96	< 30.00
1720.0	1737.1	20+15	P_1@0	S_1@74	13.17	17.57	< 30.00
1747.6	1764.7				13.64	18.04	< 30.00
1755.1	1772.2				13.68	18.08	< 30.00
1720.0	1737.1		P_1@49	S_0@0	20.56	24.96	< 30.00
1747.6	1764.7				20.79	25.19	< 30.00
1755.1	1772.2				20.70	25.10	< 30.00
1720.0	1737.1		P_1@99	S_1@0	21.47	25.87	< 30.00
1747.6	1764.7				21.67	26.07	< 30.00
1755.1	1772.2				21.14	25.54	< 30.00
1720.0	1737.1		P_100@	S_75@0	19.51	23.91	< 30.00
1747.6	1764.7				19.46	23.86	< 30.00
1755.1	1772.2				14.65	19.05	< 30.00

Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
PCC	SCC						
16QAM							
1720.0	1731.7	20+5	P_1@0	S_1@24	13.34	17.74	< 30.00
1752.5	1764.2				14.27	18.67	< 30.00
1765.0	1776.7				14.04	18.44	< 30.00
1720.0	1731.7		P_1@49	S_0@0	20.89	25.29	< 30.00
1752.5	1764.2				20.98	25.38	< 30.00
1765.0	1776.7				20.82	25.22	< 30.00
1720.0	1731.7		P_1@99	S_1@0	21.55	25.95	< 30.00
1752.5	1764.2				21.45	25.85	< 30.00
1765.0	1776.7				20.96	25.36	< 30.00
1720.0	1731.7		P_100@0	S_25@0	19.17	23.57	< 30.00
1752.5	1764.2				19.42	23.82	< 30.00
1765.0	1776.7				19.37	23.77	< 30.00
1713.3	1725.0	5+20	P_1@0	S_1@99	13.40	17.80	< 30.00
1745.8	1757.5				14.21	18.61	< 30.00
1758.3	1770.0				14.06	18.46	< 30.00
1713.3	1725.0		P_1@13	S_0@0	20.85	25.25	< 30.00
1745.8	1757.5				21.09	25.49	< 30.00
1758.3	1770.0				20.72	25.12	< 30.00
1713.3	1725.0		P_1@24	S_1@0	22.07	26.47	< 30.00
1745.8	1757.5				21.94	26.34	< 30.00
1758.3	1770.0				22.20	26.60	< 30.00
1713.3	1725.0		P_25@0	S_100@0	19.23	23.63	< 30.00
1745.8	1757.5				19.49	23.89	< 30.00
1758.3	1770.0				19.51	23.91	< 30.00

Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
PCC	SCC						
16QAM							
1713.3	1725.0	15+15	P_1@0	S_1@74	13.50	17.90	< 30.00
1745.8	1757.5				13.89	18.29	< 30.00
1758.3	1770.0				14.02	18.42	< 30.00
1713.3	1725.0		P_1@38	S_0@0	20.70	25.10	< 30.00
1745.8	1757.5				20.71	25.11	< 30.00
1758.3	1770.0				20.63	25.03	< 30.00
1713.3	1725.0		P_1@74	S_1@0	21.51	25.91	< 30.00
1745.8	1757.5				21.46	25.86	< 30.00
1758.3	1770.0				21.57	25.97	< 30.00
1713.3	1725.0		P_75@0	S_75@0	19.26	23.66	< 30.00
1745.8	1757.5				19.40	23.80	< 30.00
1758.3	1770.0				19.43	23.83	< 30.00
1720.0	1739.8	20+20	P_1@0	S_1@99	12.47	16.87	< 30.00
1745.1	1764.9				13.29	17.69	< 30.00
1750.2	1770.0				13.18	17.58	< 30.00
1720.0	1739.8		P_1@49	S_0@0	20.47	24.87	< 30.00
1745.1	1764.9				20.66	25.06	< 30.00
1750.2	1770.0				20.70	25.10	< 30.00
1720.0	1739.8		P_1@99	S_1@0	21.59	25.99	< 30.00
1745.1	1764.9				21.50	25.90	< 30.00
1750.2	1770.0				21.56	25.96	< 30.00
1720.0	1739.8		P_100@0	S_100@0	19.39	23.79	< 30.00
1745.1	1764.9				19.45	23.85	< 30.00
1750.2	1770.0				19.50	23.90	< 30.00

Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
PCC	SCC						
64QAM							
1715.3	1727.3	10+15	P_1@0	S_1@74	13.51	17.91	< 30.00
1747.9	1759.9				14.33	18.73	< 30.00
1760.5	1772.5				14.59	18.99	< 30.00
1715.3	1727.3		P_1@25	S_0@0	18.95	23.35	< 30.00
1747.9	1759.9				19.33	23.73	< 30.00
1760.5	1772.5				19.41	23.81	< 30.00
1715.3	1727.3		P_1@49	S_1@0	20.46	24.86	< 30.00
1747.9	1759.9				20.95	25.35	< 30.00
1760.5	1772.5				20.17	24.57	< 30.00
1715.3	1727.3		P_50@0	S_75@0	19.73	24.13	< 30.00
1747.9	1759.9				20.00	24.40	< 30.00
1760.5	1772.5				19.92	24.32	< 30.00
1717.5	1729.5	15+10	P_1@0	S_1@49	19.75	24.15	< 30.00
1750.1	1762.1				19.94	24.34	< 30.00
1762.7	1774.7				19.87	24.27	< 30.00
1717.5	1729.5		P_1@38	S_0@0	19.24	23.64	< 30.00
1750.1	1762.1				19.29	23.69	< 30.00
1762.7	1774.7				19.10	23.50	< 30.00
1717.5	1729.5		P_1@74	S_1@0	20.52	24.92	< 30.00
1750.1	1762.1				20.55	24.95	< 30.00
1762.7	1774.7				18.82	23.22	< 30.00
1717.5	1729.5		P_75@0	S_50@0	19.40	23.80	< 30.00
1750.1	1762.1				20.47	24.87	< 30.00
1762.7	1774.7				19.59	23.99	< 30.00

Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
PCC	SCC						
64QAM							
1715.5	1729.9	10+20	P_1@0	S_1@99	14.17	18.57	< 30.00
1745.6	1760				14.31	18.71	< 30.00
1755.6	1770				14.13	18.53	< 30.00
1715.5	1729.9		P_1@25	S_0@0	18.75	23.15	< 30.00
1745.6	1760				19.19	23.59	< 30.00
1755.6	1770				19.87	24.27	< 30.00
1715.5	1729.9		P_1@49	S_1@0	20.54	24.94	< 30.00
1745.6	1760				20.70	25.10	< 30.00
1755.6	1770				20.65	25.05	< 30.00
1715.5	1729.9		P_50@0	S_100@0	20.51	24.91	< 30.00
1745.6	1760				19.65	24.05	< 30.00
1755.6	1770				19.66	24.06	< 30.00
1720	1734.4	20+10	P_1@0	S_1@49	13.61	18.01	< 30.00
1750.1	1764.5				14.17	18.57	< 30.00
1760.1	1774.5				14.60	19.00	< 30.00
1720	1734.4		P_1@49	S_0@0	19.71	24.11	< 30.00
1750.1	1764.5				19.06	23.46	< 30.00
1760.1	1774.5				19.28	23.68	< 30.00
1720	1734.4		P_1@99	S_1@0	19.78	24.18	< 30.00
1750.1	1764.5				20.50	24.90	< 30.00
1760.1	1774.5				18.88	23.28	< 30.00
1720	1734.4		P_100@0	S_50@0	19.51	23.91	< 30.00
1750.1	1764.5				20.65	25.05	< 30.00
1760.1	1774.5				19.57	23.97	< 30.00

Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
PCC	SCC						
64QAM							
1717.8	1734.9	15+20	P_1@0	S_1@99	13.29	17.69	< 30.00
1745.3	1762.4				14.12	18.52	< 30.00
1752.9	1770.0				14.19	18.59	< 30.00
1717.8	1734.9		P_1@38	S_0@0	19.38	23.78	< 30.00
1745.3	1762.4				19.78	24.18	< 30.00
1752.9	1770.0				19.16	23.56	< 30.00
1717.8	1734.9		P_1@74	S_1@0	19.85	24.25	< 30.00
1745.3	1762.4				20.44	24.84	< 30.00
1752.9	1770.0				20.62	25.02	< 30.00
1717.8	1734.9		P_75@0	S_100@0	19.67	24.07	< 30.00
1745.3	1762.4				19.66	24.06	< 30.00
1752.9	1770.0				19.70	24.10	< 30.00
1720.0	1737.1	20+15	P_1@0	S_1@74	13.64	18.04	< 30.00
1747.6	1764.7				14.19	18.59	< 30.00
1755.1	1772.2				14.04	18.44	< 30.00
1720.0	1737.1		P_1@49	S_0@0	19.86	24.26	< 30.00
1747.6	1764.7				19.38	23.78	< 30.00
1755.1	1772.2				19.79	24.19	< 30.00
1720.0	1737.1		P_1@99	S_1@0	20.33	24.73	< 30.00
1747.6	1764.7				20.49	24.89	< 30.00
1755.1	1772.2				20.51	24.91	< 30.00
1720.0	1737.1		P_100@	S_75@0	19.40	23.80	< 30.00
1747.6	1764.7				19.50	23.90	< 30.00
1755.1	1772.2				19.56	23.96	< 30.00

Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)



Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
PCC	SCC						
64QAM							
1720.0	1731.7	20+5	P_1@0	S_1@24	14.40	18.80	< 30.00
1752.5	1764.2				14.24	18.64	< 30.00
1765.0	1776.7				14.26	18.66	< 30.00
1720.0	1731.7		P_1@49	S_0@0	20.08	24.48	< 30.00
1752.5	1764.2				20.19	24.59	< 30.00
1765.0	1776.7				20.36	24.76	< 30.00
1720.0	1731.7		P_1@99	S_1@0	20.50	24.90	< 30.00
1752.5	1764.2				20.82	25.22	< 30.00
1765.0	1776.7				19.03	23.43	< 30.00
1720.0	1731.7		P_100@0	S_25@0	19.38	23.78	< 30.00
1752.5	1764.2				19.53	23.93	< 30.00
1765.0	1776.7				19.54	23.94	< 30.00
1713.3	1725.0	5+20	P_1@0	S_1@99	14.09	18.49	< 30.00
1745.8	1757.5				14.50	18.90	< 30.00
1758.3	1770.0				14.28	18.68	< 30.00
1713.3	1725.0		P_1@13	S_0@0	19.21	23.61	< 30.00
1745.8	1757.5				20.01	24.41	< 30.00
1758.3	1770.0				19.89	24.29	< 30.00
1713.3	1725.0		P_1@24	S_1@0	20.96	25.36	< 30.00
1745.8	1757.5				21.32	25.72	< 30.00
1758.3	1770.0				21.38	25.78	< 30.00
1713.3	1725.0		P_25@0	S_100@0	19.86	24.26	< 30.00
1745.8	1757.5				19.98	24.38	< 30.00
1758.3	1770.0				20.10	24.50	< 30.00
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)							

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
PCC	SCC						
64QAM							
1713.3	1725.0	15+15	P_1@0	S_1@74	13.79	18.19	< 30.00
1745.8	1757.5				14.50	18.90	< 30.00
1758.3	1770.0				14.31	18.71	< 30.00
1713.3	1725.0		P_1@38	S_0@0	19.57	23.97	< 30.00
1745.8	1757.5				19.47	23.87	< 30.00
1758.3	1770.0				19.74	24.14	< 30.00
1713.3	1725.0		P_1@74	S_1@0	19.72	24.12	< 30.00
1745.8	1757.5				20.36	24.76	< 30.00
1758.3	1770.0				20.32	24.72	< 30.00
1713.3	1725.0		P_75@0	S_75@0	14.33	18.73	< 30.00
1745.8	1757.5				14.52	18.92	< 30.00
1758.3	1770.0				14.37	18.77	< 30.00
1720.0	1739.8	20+20	P_1@0	S_1@99	13.50	17.90	< 30.00
1745.1	1764.9				14.55	18.95	< 30.00
1750.2	1770.0				14.20	18.60	< 30.00
1720.0	1739.8		P_1@49	S_0@0	19.96	24.36	< 30.00
1745.1	1764.9				19.00	23.40	< 30.00
1750.2	1770.0				20.12	24.52	< 30.00
1720.0	1739.8		P_1@99	S_1@0	20.28	24.68	< 30.00
1745.1	1764.9				20.56	24.96	< 30.00
1750.2	1770.0				20.03	24.43	< 30.00
1720.0	1739.8		P_100@0	S_100@0	19.43	23.83	< 30.00
1745.1	1764.9				19.60	24.00	< 30.00
1750.2	1770.0				19.53	23.93	< 30.00

Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
PCC	SCC						
256QAM							
1715.3	1727.3	10+15	P_1@0	S_1@74	12.79	17.19	< 30.00
1747.9	1759.9				13.02	17.42	< 30.00
1760.5	1772.5				13.27	17.67	< 30.00
1715.3	1727.3		P_1@25	S_0@0	17.02	21.42	< 30.00
1747.9	1759.9				17.11	21.51	< 30.00
1760.5	1772.5				17.70	22.10	< 30.00
1715.3	1727.3		P_1@49	S_1@0	17.59	21.99	< 30.00
1747.9	1759.9				18.29	22.69	< 30.00
1760.5	1772.5				18.05	22.45	< 30.00
1715.3	1727.3		P_50@0	S_75@0	17.67	22.07	< 30.00
1747.9	1759.9				17.86	22.26	< 30.00
1760.5	1772.5				17.95	22.35	< 30.00
1717.5	1729.5	15+10	P_1@0	S_1@49	17.68	22.08	< 30.00
1750.1	1762.1				17.92	22.32	< 30.00
1762.7	1774.7				17.85	22.25	< 30.00
1717.5	1729.5		P_1@38	S_0@0	17.56	21.96	< 30.00
1750.1	1762.1				16.97	21.37	< 30.00
1762.7	1774.7				17.19	21.59	< 30.00
1717.5	1729.5		P_1@74	S_1@0	17.12	21.52	< 30.00
1750.1	1762.1				18.11	22.51	< 30.00
1762.7	1774.7				17.98	22.38	< 30.00
1717.5	1729.5		P_75@0	S_50@0	17.38	21.78	< 30.00
1750.1	1762.1				17.63	22.03	< 30.00
1762.7	1774.7				17.57	21.97	< 30.00

Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
PCC	SCC						
256QAM							
1715.5	1729.9	10+20	P_1@0	S_1@99	12.77	17.17	< 30.00
1745.6	1760				13.42	17.82	< 30.00
1755.6	1770				13.56	17.96	< 30.00
1715.5	1729.9		P_1@25	S_0@0	16.76	21.16	< 30.00
1745.6	1760				17.45	21.85	< 30.00
1755.6	1770				16.73	21.13	< 30.00
1715.5	1729.9		P_1@49	S_1@0	17.40	21.80	< 30.00
1745.6	1760				17.57	21.97	< 30.00
1755.6	1770				17.96	22.36	< 30.00
1715.5	1729.9		P_50@0	S_100@0	17.38	21.78	< 30.00
1745.6	1760				17.61	22.01	< 30.00
1755.6	1770				17.72	22.12	< 30.00
1720	1734.4	20+10	P_1@0	S_1@49	12.29	16.69	< 30.00
1750.1	1764.5				12.95	17.35	< 30.00
1760.1	1774.5				12.87	17.27	< 30.00
1720	1734.4		P_1@49	S_0@0	16.92	21.32	< 30.00
1750.1	1764.5				17.33	21.73	< 30.00
1760.1	1774.5				17.31	21.71	< 30.00
1720	1734.4		P_1@99	S_1@0	17.90	22.30	< 30.00
1750.1	1764.5				17.90	22.30	< 30.00
1760.1	1774.5				17.76	22.16	< 30.00
1720	1734.4		P_100@0	S_50@0	17.30	21.70	< 30.00
1750.1	1764.5				17.59	21.99	< 30.00
1760.1	1774.5				17.34	21.74	< 30.00

Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
PCC	SCC						
256QAM							
1717.8	1734.9	15+20	P_1@0	S_1@99	12.29	16.69	< 30.00
1745.3	1762.4				12.49	16.89	< 30.00
1752.9	1770.0				12.29	16.69	< 30.00
1717.8	1734.9		P_1@38	S_0@0	16.98	21.38	< 30.00
1745.3	1762.4				16.44	20.84	< 30.00
1752.9	1770.0				16.54	20.94	< 30.00
1717.8	1734.9		P_1@74	S_1@0	17.39	21.79	< 30.00
1745.3	1762.4				17.89	22.29	< 30.00
1752.9	1770.0				17.82	22.22	< 30.00
1717.8	1734.9		P_75@0	S_100@0	17.52	21.92	< 30.00
1745.3	1762.4				17.73	22.13	< 30.00
1752.9	1770.0				17.35	21.75	< 30.00
1720.0	1737.1	20+15	P_1@0	S_1@74	12.25	16.65	< 30.00
1747.6	1764.7				12.43	16.83	< 30.00
1755.1	1772.2				12.08	16.48	< 30.00
1720.0	1737.1		P_1@49	S_0@0	17.11	21.51	< 30.00
1747.6	1764.7				17.02	21.42	< 30.00
1755.1	1772.2				17.39	21.79	< 30.00
1720.0	1737.1		P_1@99	S_1@0	17.37	21.77	< 30.00
1747.6	1764.7				17.55	21.95	< 30.00
1755.1	1772.2				17.34	21.74	< 30.00
1720.0	1737.1		P_100@	S_75@0	17.30	21.70	< 30.00
1747.6	1764.7				17.55	21.95	< 30.00
1755.1	1772.2				17.64	22.04	< 30.00

Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
PCC	SCC						
256QAM							
1720.0	1731.7	20+5	P_1@0	S_1@24	13.30	17.70	< 30.00
1752.5	1764.2				13.53	17.93	< 30.00
1765.0	1776.7				13.86	18.26	< 30.00
1720.0	1731.7		P_1@49	S_0@0	16.68	21.08	< 30.00
1752.5	1764.2				16.66	21.06	< 30.00
1765.0	1776.7				16.97	21.37	< 30.00
1720.0	1731.7		P_1@99	S_1@0	17.30	21.70	< 30.00
1752.5	1764.2				17.33	21.73	< 30.00
1765.0	1776.7				17.04	21.44	< 30.00
1720.0	1731.7		P_100@0	S_25@0	17.15	21.55	< 30.00
1752.5	1764.2				17.30	21.70	< 30.00
1765.0	1776.7				17.58	21.98	< 30.00
1713.3	1725.0	5+20	P_1@0	S_1@99	12.67	17.07	< 30.00
1745.8	1757.5				13.16	17.56	< 30.00
1758.3	1770.0				13.10	17.50	< 30.00
1713.3	1725.0		P_1@13	S_0@0	16.91	21.31	< 30.00
1745.8	1757.5				16.83	21.23	< 30.00
1758.3	1770.0				16.65	21.05	< 30.00
1713.3	1725.0		P_1@24	S_1@0	18.12	22.52	< 30.00
1745.8	1757.5				18.11	22.51	< 30.00
1758.3	1770.0				18.20	22.60	< 30.00
1713.3	1725.0		P_25@0	S_100@0	17.52	21.92	< 30.00
1745.8	1757.5				17.33	21.73	< 30.00
1758.3	1770.0				17.39	21.79	< 30.00
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)							

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	EIRP (dBm)	Limit (dBm)	
PCC	SCC							
256QAM								
1713.3	1725.0	15+15	P_1@0	S_1@74	12.45	16.85	< 30.00	
1745.8	1757.5				12.64	17.04	< 30.00	
1758.3	1770.0				12.49	16.89	< 30.00	
1713.3	1725.0		P_1@38	S_0@0	16.86	21.26	< 30.00	
1745.8	1757.5				17.18	21.58	< 30.00	
1758.3	1770.0				16.97	21.37	< 30.00	
1713.3	1725.0		P_1@74	S_1@0	17.46	21.86	< 30.00	
1745.8	1757.5				17.62	22.02	< 30.00	
1758.3	1770.0				17.50	21.90	< 30.00	
1713.3	1725.0		20+20	P_75@0	S_75@0	12.56	16.96	< 30.00
1745.8	1757.5					12.79	17.19	< 30.00
1758.3	1770.0					12.93	17.33	< 30.00
1720.0	1739.8	P_1@0		S_1@99	12.12	16.52	< 30.00	
1745.1	1764.9				12.66	17.06	< 30.00	
1750.2	1770.0				12.40	16.80	< 30.00	
1720.0	1739.8	P_1@49	S_0@0	16.63	21.03	< 30.00		
1745.1	1764.9			16.35	20.75	< 30.00		
1750.2	1770.0			16.68	21.08	< 30.00		
1720.0	1739.8	P_1@99	S_1@0	17.42	21.82	< 30.00		
1745.1	1764.9			17.32	21.72	< 30.00		
1750.2	1770.0			17.27	21.67	< 30.00		
1720.0	1739.8	P_100@0	S_100@0	17.22	21.62	< 30.00		
1745.1	1764.9			17.57	21.97	< 30.00		
1750.2	1770.0			17.56	21.96	< 30.00		

Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)

## 4.4. Band Edge Measurement

### 4.4.1. Test Limit

#### 22.917(a), 27.53 (h)

For operations in the 824 ~ 849 MHz and 1710 ~ 1780 MHz, the FCC limit is  $43 + 10\log_{10}(P_{\text{Watts}})$  dB below the transmitter power  $P$  (Watts) in a 1 MHz bandwidth. However, in the 1 MHz 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.

### 4.4.2. Test Procedure Used

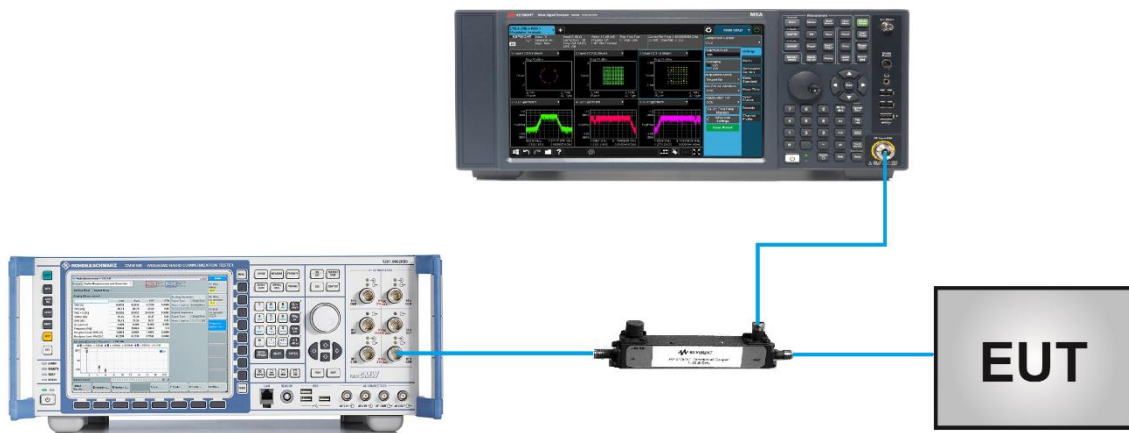
ANSI C63.26-2015 - Section 5.7

### 4.4.3. Test Setting

1. Set the analyzer frequency to low or high channel
2.  $RBW \geq$  The nominal RBW shall be in the range of 1% of the anticipated OBW (in the 1 MHz band immediately outside and adjacent to the band edge). For improvement of the accuracy in the measurement of the average power of a noise-like emission, a RBW narrower than the specified reference bandwidth can be used (generally limited to no less than 1% of the OBW), provided that a subsequent integration is performed over the full required measurement bandwidth. This integration should be performed using the spectrum analyzer's band power functions.
3.  $VBW \geq 3 * RBW$
4. Sweep time = auto
5. Detector = power averaging (rms)
6. Set sweep trigger to "free run."
7. User gate triggered such that the analyzer only sweeps when the device is transmitting at full power
8. Trace average at least 100 traces in power averaging (rms) mode if sweep is set to auto-couple. To accurately determine the average power over the on and off time of the transmitter, it can be necessary to increase the number of traces to be averaged above 100, or if using a manually configured sweep time, increase the sweep time.



#### 4.4.4. Test Setup



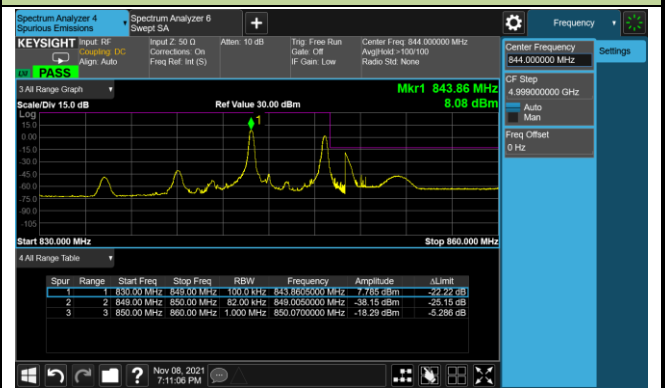
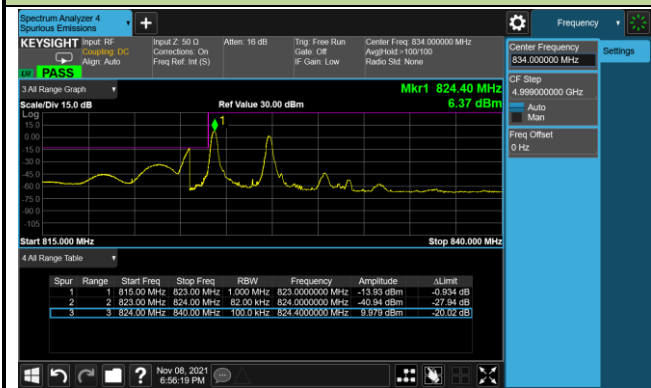
### 4.4.5. Test Result

Test Engineer	Candy Luo	Test Site	SIP-SR1
Test Band	LTE Band CA_5B_QPSK	Test Date	2021/11/08

### 3+5MHz Channel Bandwidth

#### Lower Band Edge RB = 0 & 0

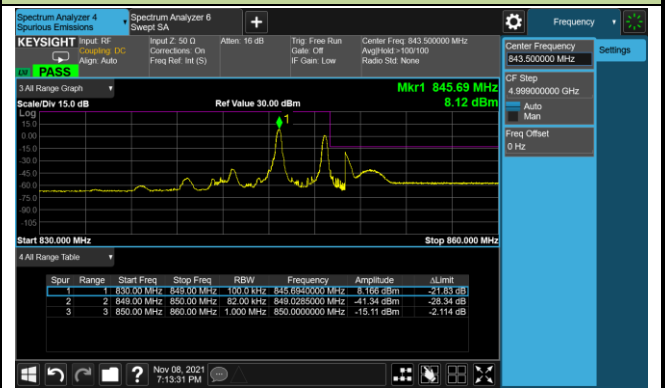
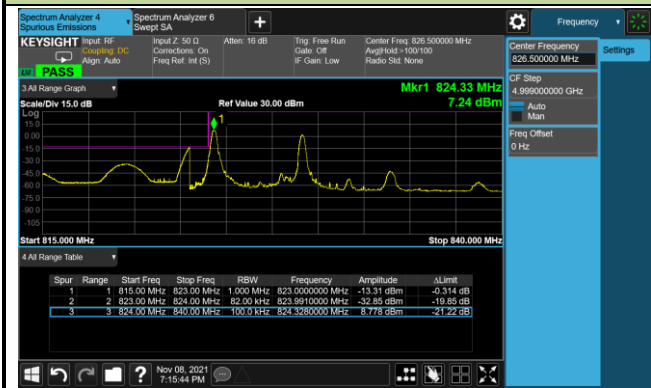
#### Upper Band Edge RB = 14 & 24



### 5+3MHz Channel Bandwidth

#### Lower Band Edge RB = 0 & 0

#### Upper Band Edge RB = 24 & 14



### 10+5MHz Channel Bandwidth

#### Lower Band Edge RB = 0 & 0

#### Upper Band Edge RB = 49 & 24

