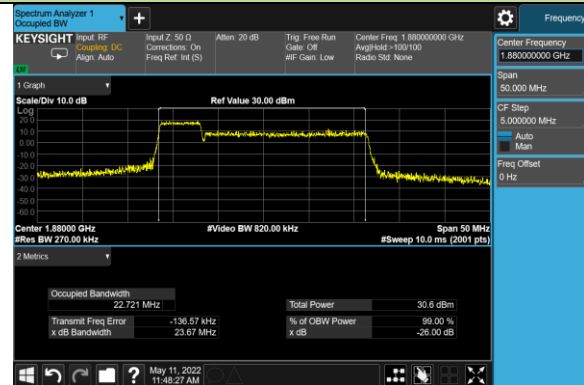
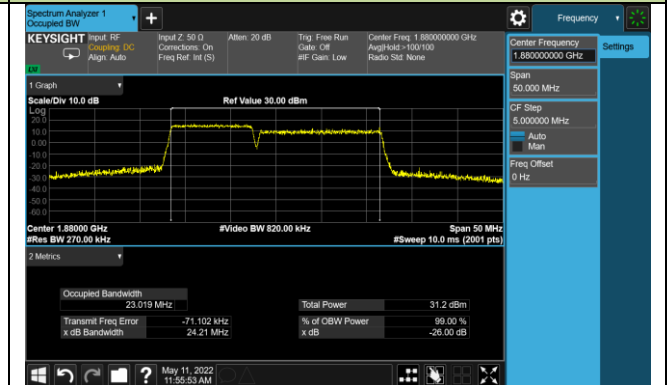


## 99% Bandwidth - 16QAM

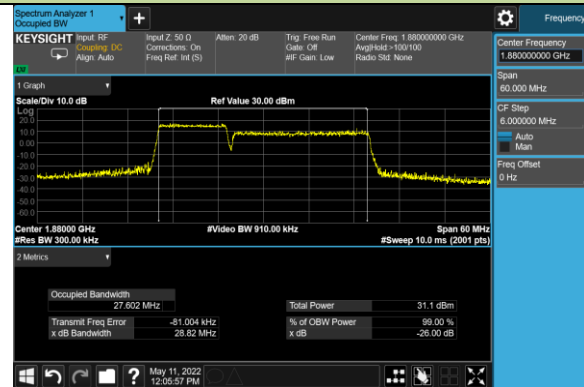
## 5+20MHz Channel Bandwidth



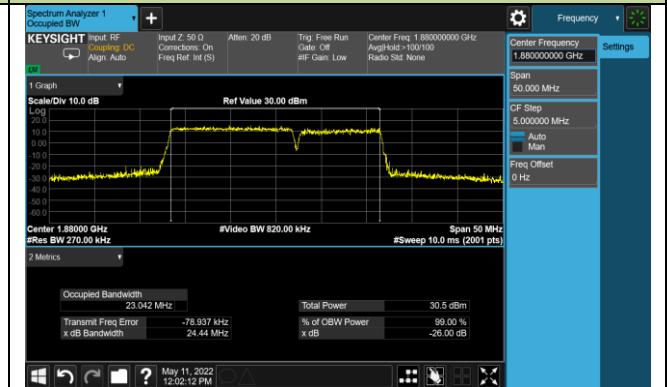
## 10+15MHz Channel Bandwidth



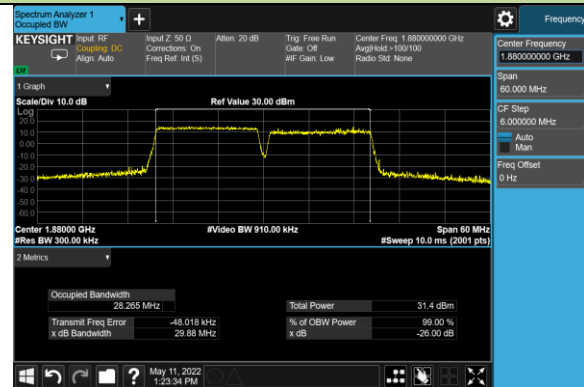
## 10+20MHz Channel Bandwidth



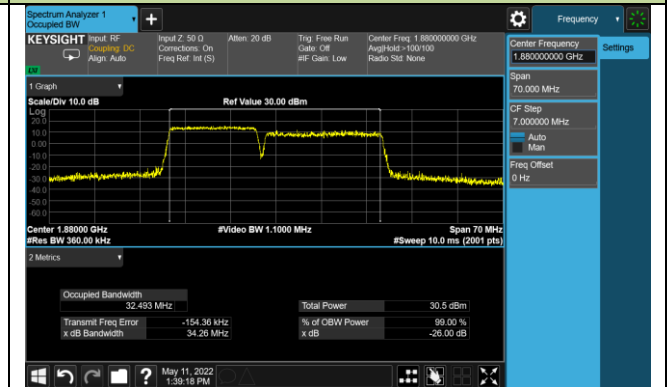
## 15+10MHz Channel Bandwidth



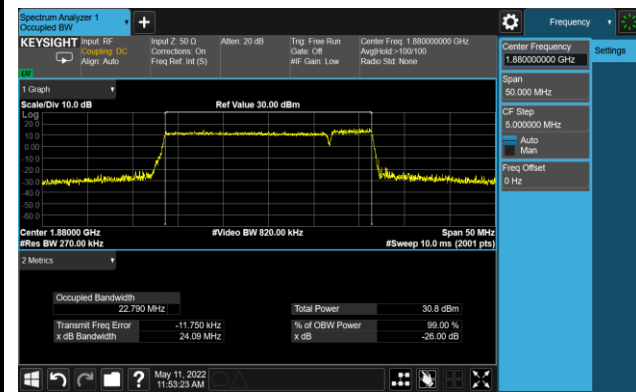
## 15+15MHz Channel Bandwidth



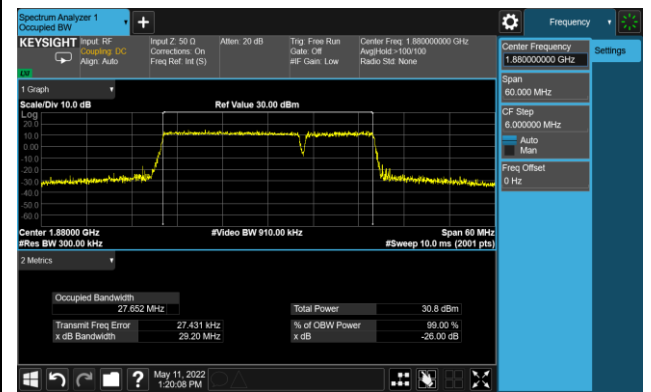
## 15+20MHz Channel Bandwidth



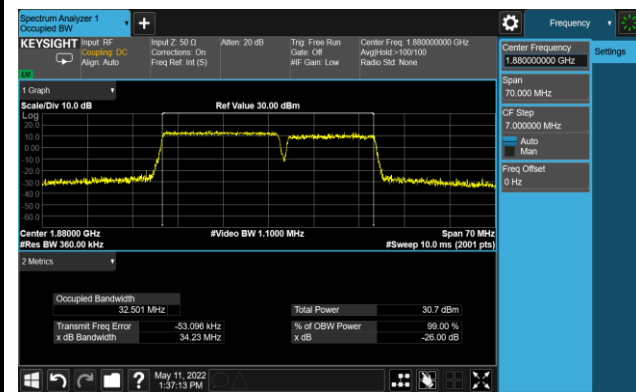
### 20+5MHz Channel Bandwidth



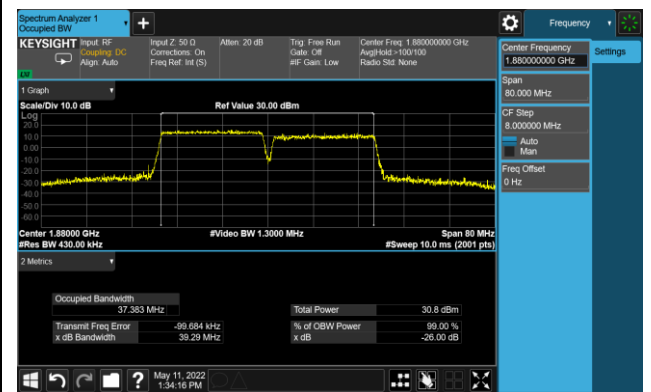
### 20+10MHz Channel Bandwidth



### 20+15MHz Channel Bandwidth

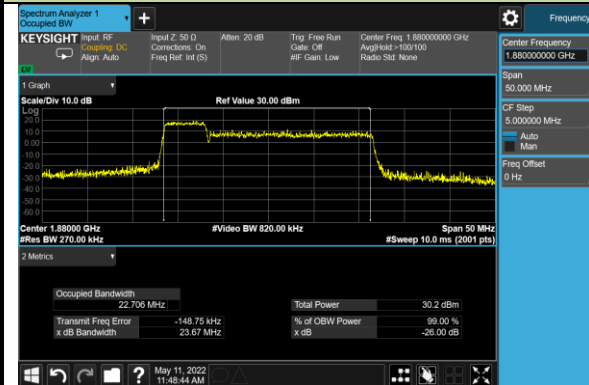


### 20+20MHz Channel Bandwidth

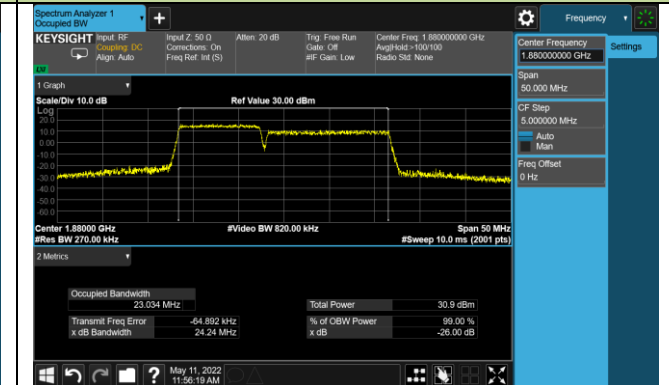


99% Bandwidth - 64QAM

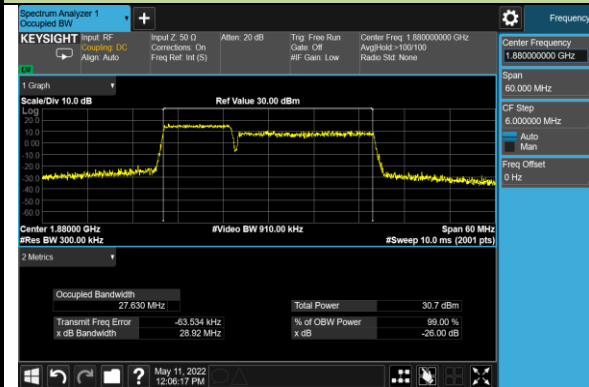
5+20MHz Channel Bandwidth



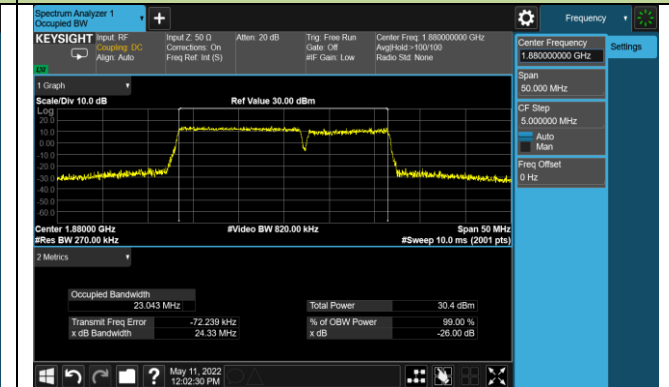
10+15MHz Channel Bandwidth



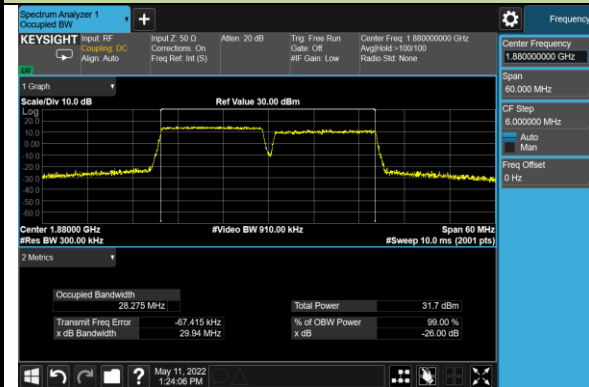
10+20MHz Channel Bandwidth



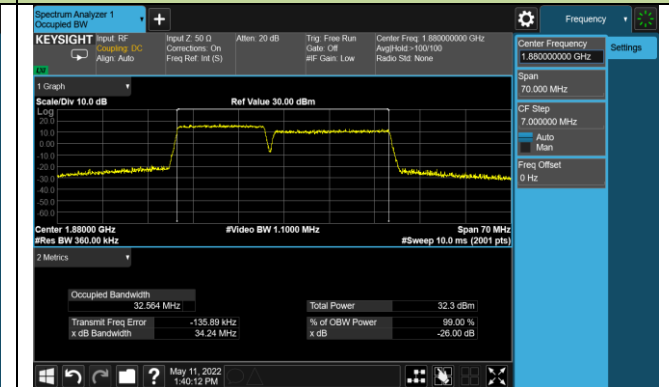
15+10MHz Channel Bandwidth



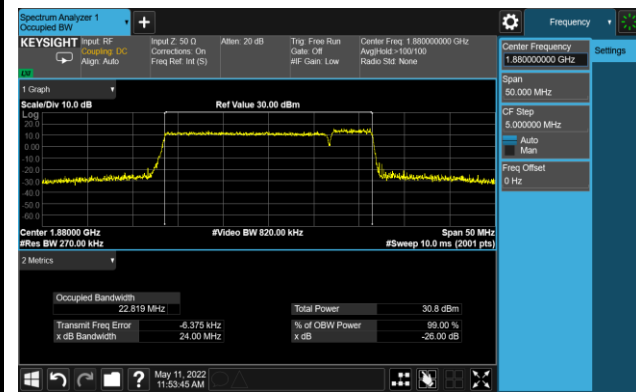
15+15MHz Channel Bandwidth



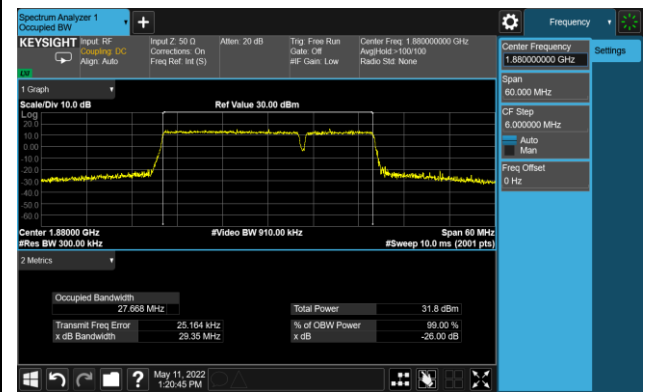
15+20MHz Channel Bandwidth



### 20+5MHz Channel Bandwidth



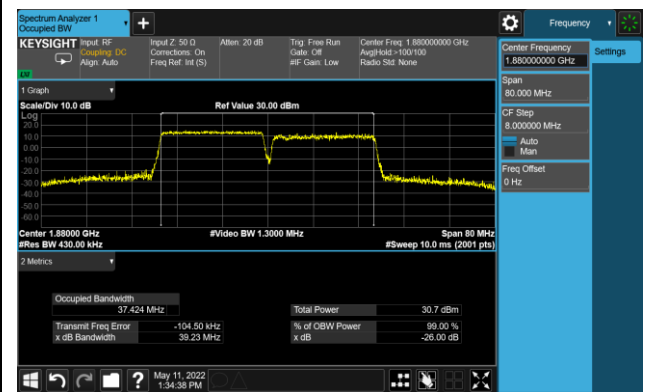
### 20+10MHz Channel Bandwidth



### 20+15MHz Channel Bandwidth

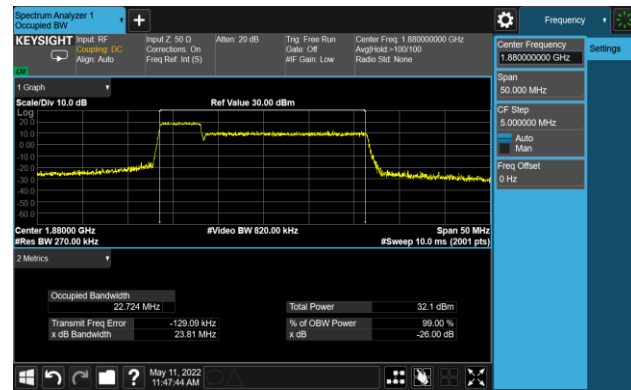


### 20+20MHz Channel Bandwidth

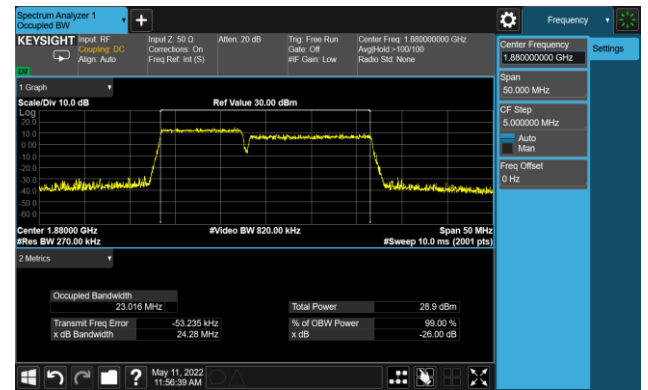


## 99% Bandwidth - 256QAM

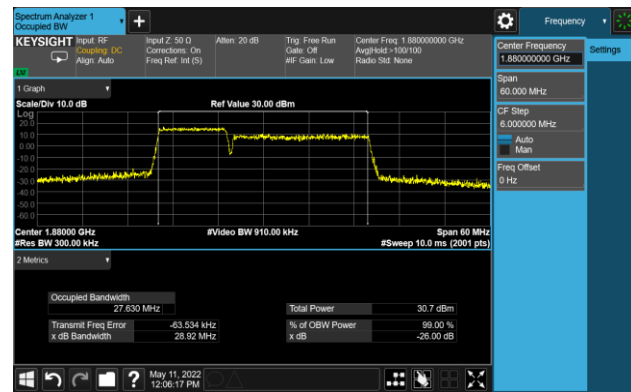
## 5+20MHz Channel Bandwidth



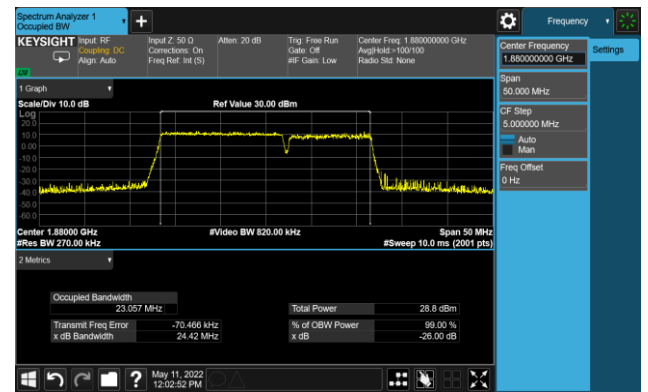
## 10+15MHz Channel Bandwidth



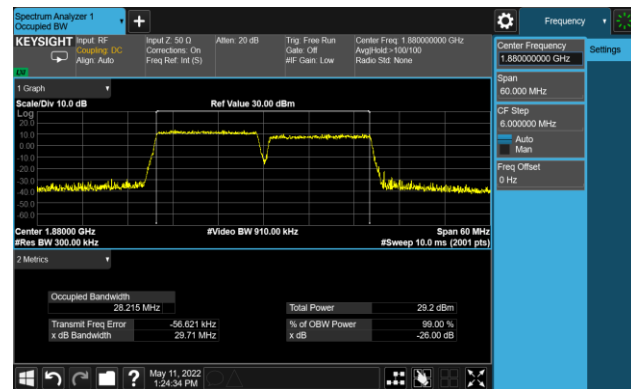
## 10+20MHz Channel Bandwidth



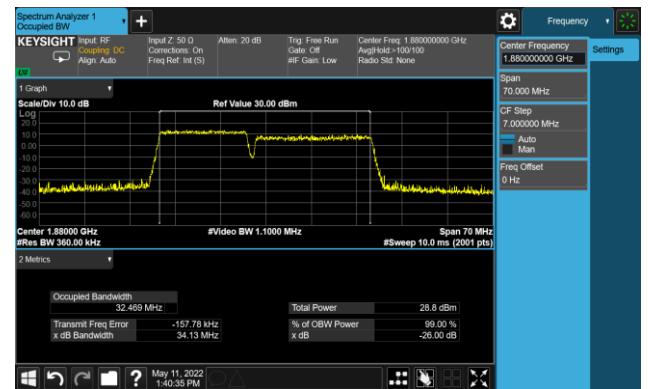
## 15+10MHz Channel Bandwidth



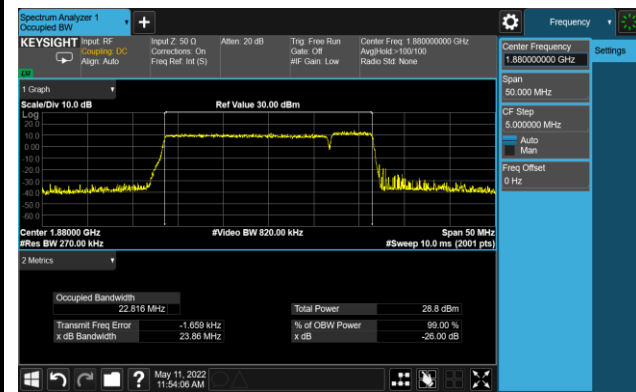
## 15+15MHz Channel Bandwidth



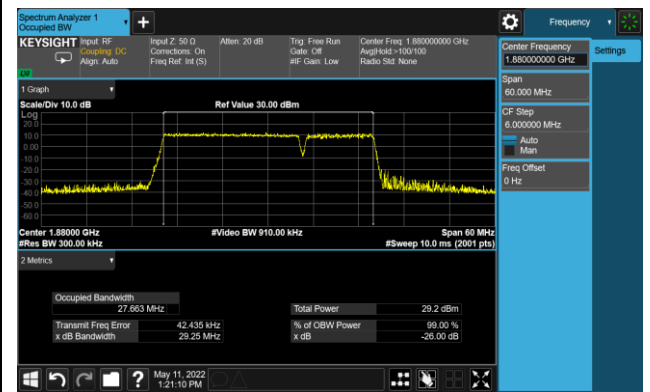
## 15+20MHz Channel Bandwidth



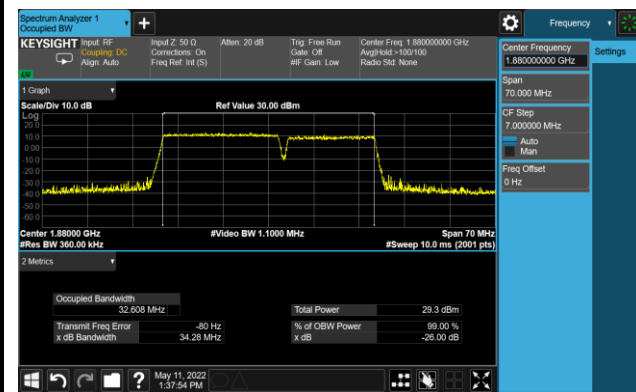
### 20+5MHz Channel Bandwidth



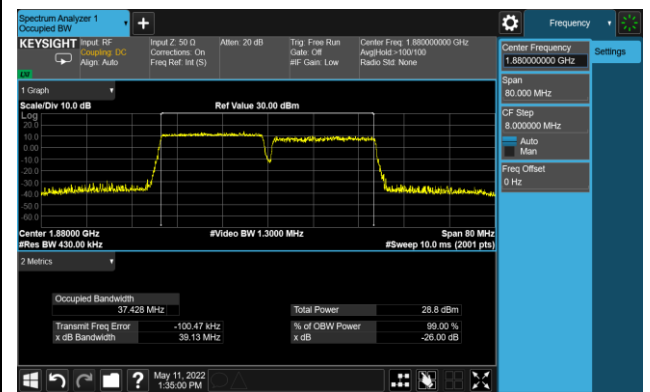
### 20+10MHz Channel Bandwidth



### 20+15MHz Channel Bandwidth

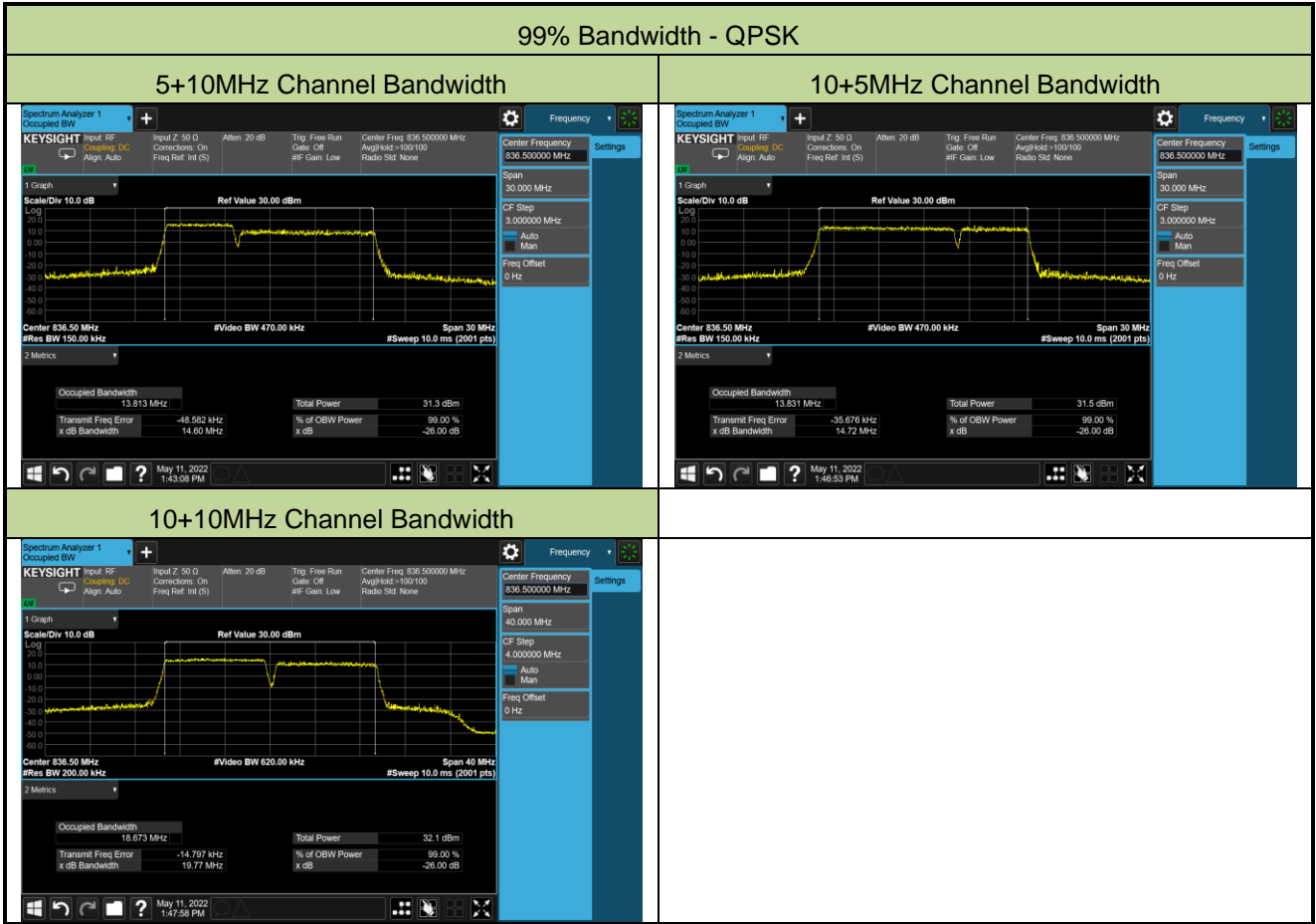


### 20+20MHz Channel Bandwidth



Test Site	SIP-SR1	Test Engineer	Allen Zou
Test Date	2022/05/11	Test Band	Intra-Band CA_5B

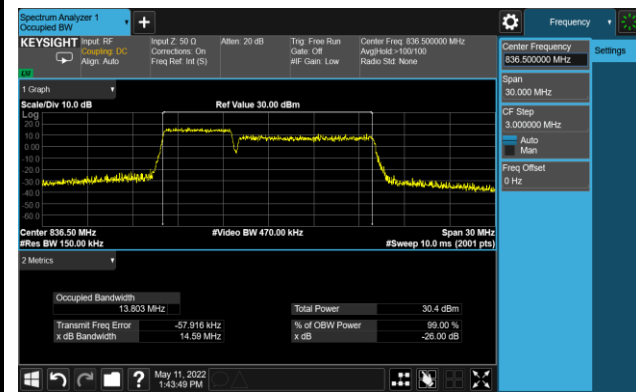
Modulation	Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)
QPSK	831.8 + 839.0	5+10	13.81
	834.0 + 841.2	10+5	13.83
	831.6 + 841.5	10+10	18.67
16QAM	831.8 + 839.0	5+10	13.80
	834.0 + 841.2	10+5	13.82
	831.6 + 841.5	10+10	18.67
64QAM	831.8 + 839.0	5+10	13.76
	834.0 + 841.2	10+5	13.84
	831.6 + 841.5	10+10	18.64
256QAM	831.8 + 839.0	5+10	13.83
	834.0 + 841.2	10+5	13.84
	831.6 + 841.5	10+10	18.67



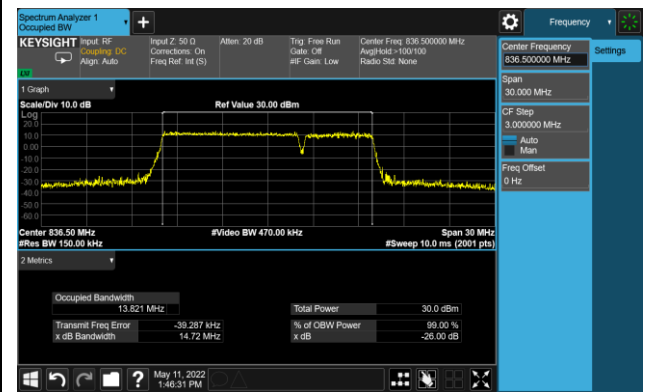


99% Bandwidth - 16QAM

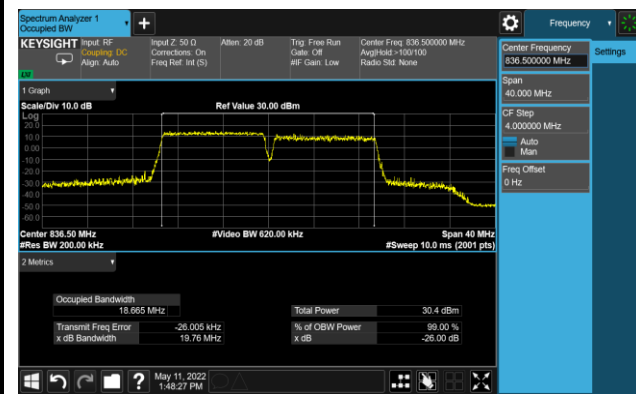
5+10MHz Channel Bandwidth



10+5MHz Channel Bandwidth

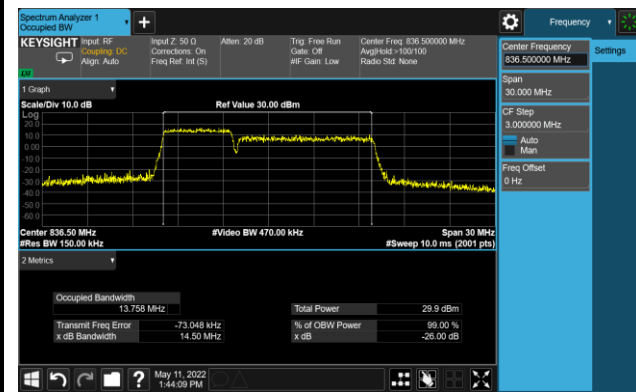


10+10MHz Channel Bandwidth

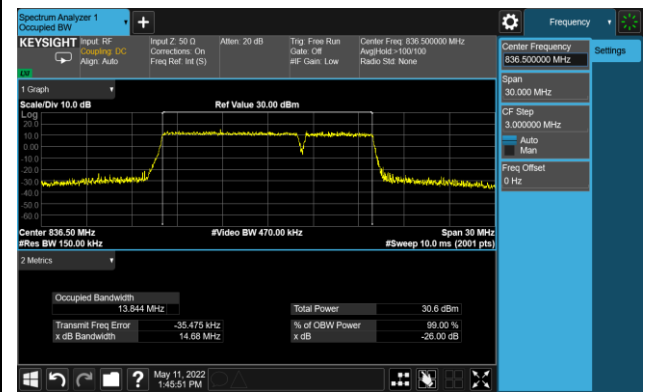


99% Bandwidth - 64QAM

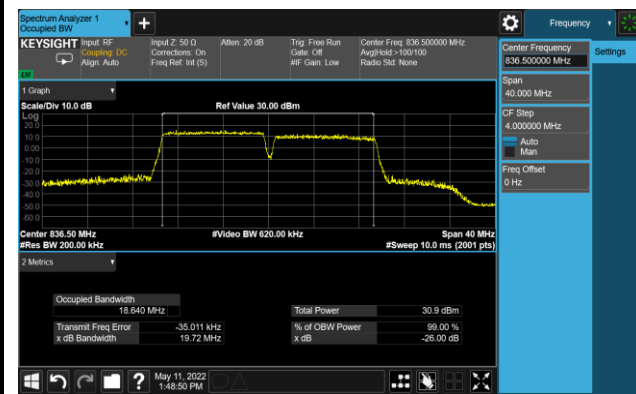
5+10MHz Channel Bandwidth



10+5MHz Channel Bandwidth

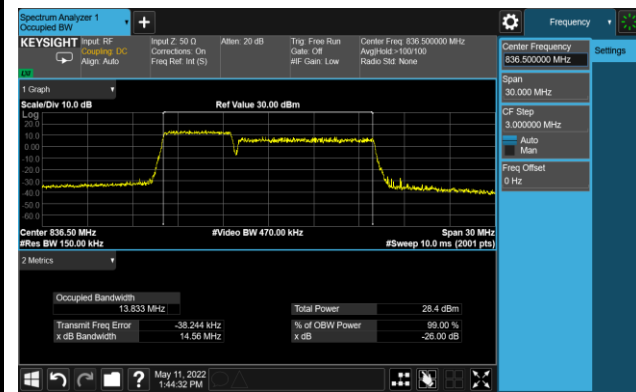


10+10MHz Channel Bandwidth

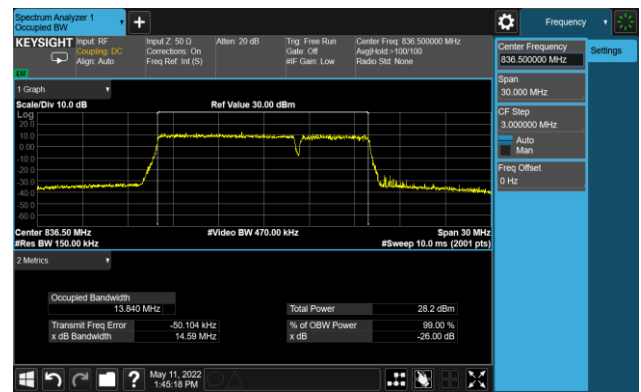


99% Bandwidth - 256QAM

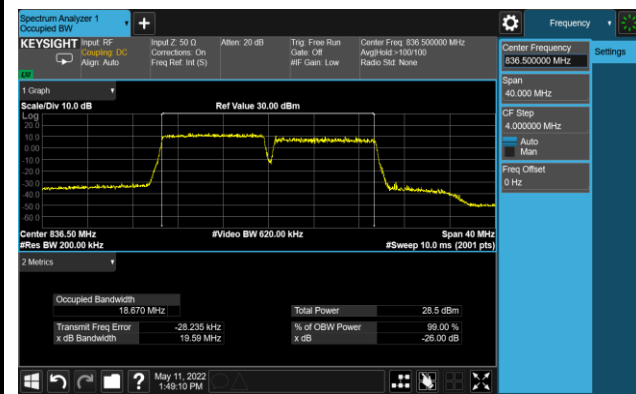
5+10MHz Channel Bandwidth



10+5MHz Channel Bandwidth



10+10MHz Channel Bandwidth

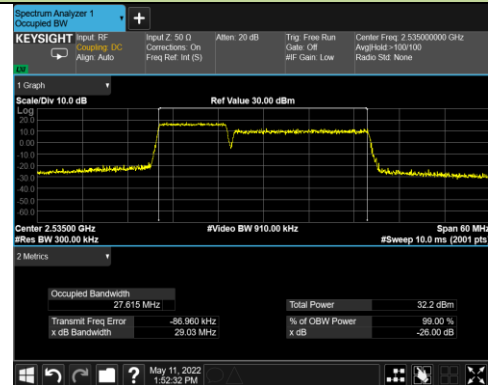


Test Site	SIP-SR1	Test Engineer	Allen Zou
Test Date	2022/05/11	Test Band	Intra-Band CA_7C

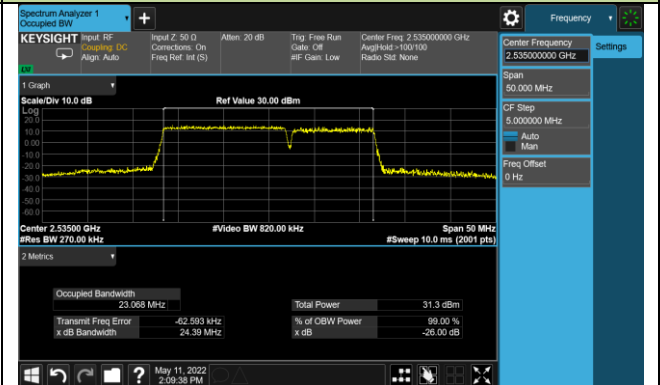
Modulation	Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)
QPSK	2525.6 + 2540.0	10+20	27.62
	2530.1 + 2542.1	15+10	23.07
	2527.5 + 2542.5	15+15	28.28
	2525.3 + 2542.4	15+20	32.55
	2530.1 + 2544.5	20+10	27.66
	2527.6 + 2544.7	20+15	32.53
	2525.1 + 2544.9	20+20	37.54
16QAM	2525.6 + 2540.0	10+20	27.63
	2530.1 + 2542.1	15+10	23.05
	2527.5 + 2542.5	15+15	28.23
	2525.3 + 2542.4	15+20	32.58
	2530.1 + 2544.5	20+10	27.66
	2527.6 + 2544.7	20+15	32.54
	2525.1 + 2544.9	20+20	37.47
64QAM	2525.6 + 2540.0	10+20	27.57
	2530.1 + 2542.1	15+10	23.03
	2527.5 + 2542.5	15+15	28.21
	2525.3 + 2542.4	15+20	32.51
	2530.1 + 2544.5	20+10	27.71
	2527.6 + 2544.7	20+15	32.49
	2525.1 + 2544.9	20+20	37.39
256QAM	2525.6 + 2540.0	10+20	27.53
	2530.1 + 2542.1	15+10	23.01
	2527.5 + 2542.5	15+15	28.23
	2525.3 + 2542.4	15+20	32.50
	2530.1 + 2544.5	20+10	27.66
	2527.6 + 2544.7	20+15	32.58
	2525.1 + 2544.9	20+20	37.40

## 99% Bandwidth - QPSK

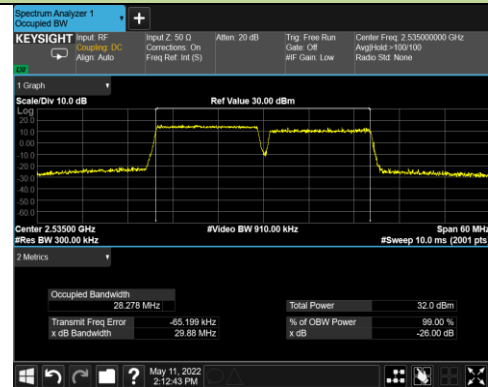
## 10+20MHz Channel Bandwidth



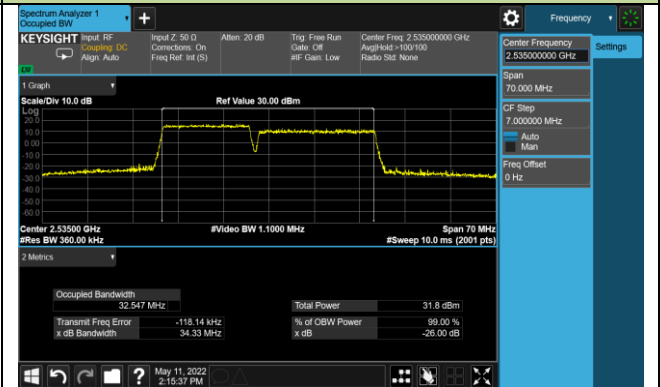
## 15+10MHz Channel Bandwidth



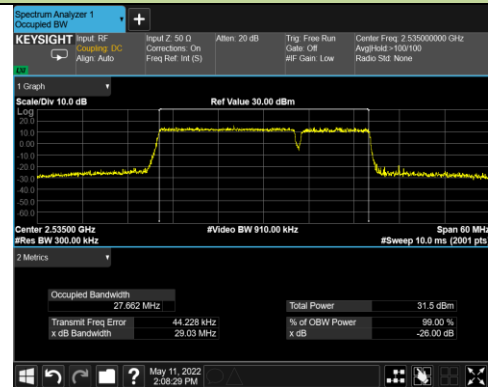
## 15+15MHz Channel Bandwidth



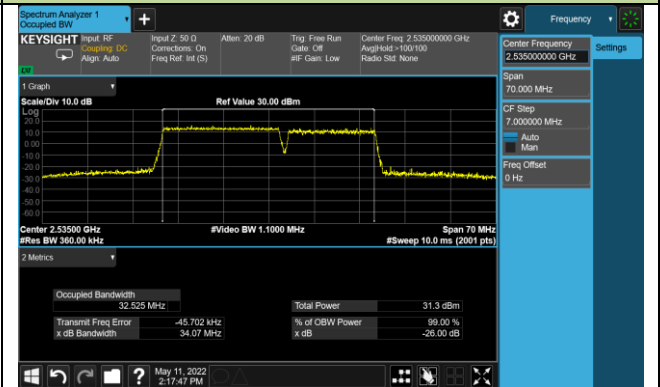
## 15+20MHz Channel Bandwidth



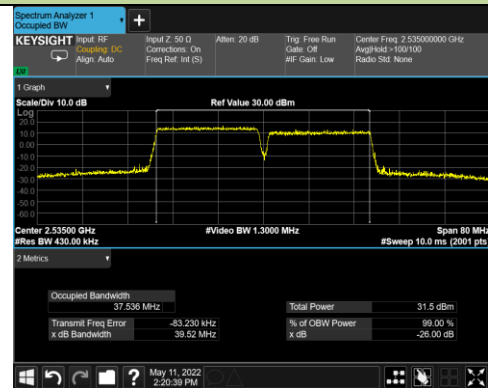
## 20+10MHz Channel Bandwidth



## 20+15MHz Channel Bandwidth

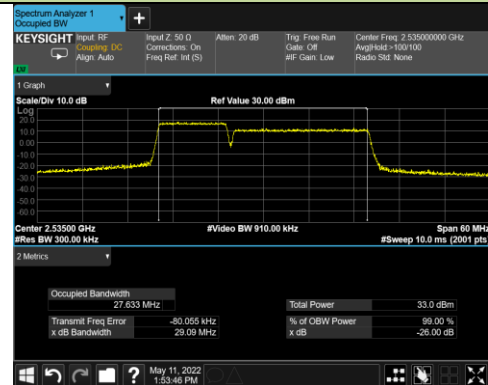


## 20+20MHz Channel Bandwidth

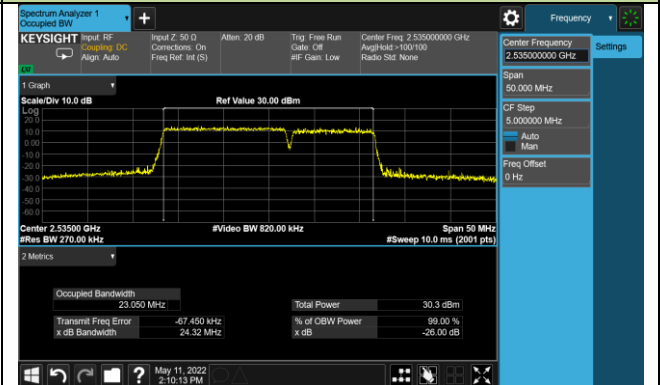


## 99% Bandwidth - 16QAM

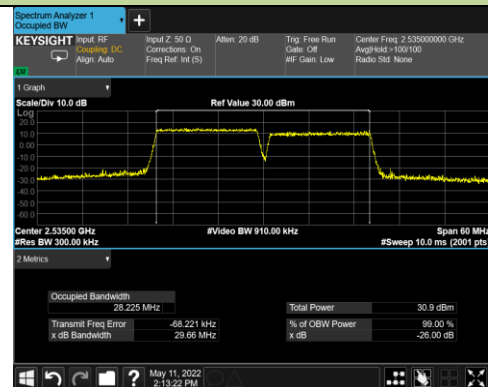
## 10+20MHz Channel Bandwidth



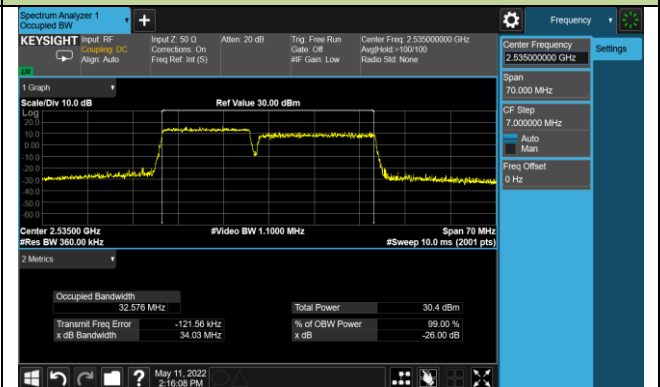
## 15+10MHz Channel Bandwidth



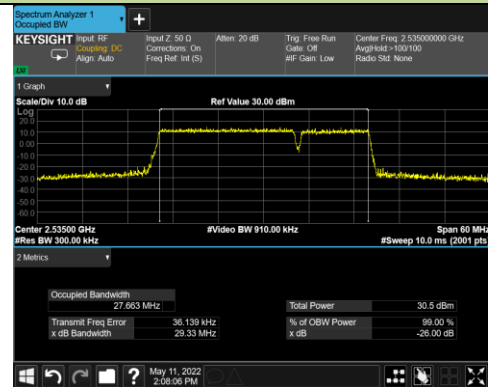
## 15+15MHz Channel Bandwidth



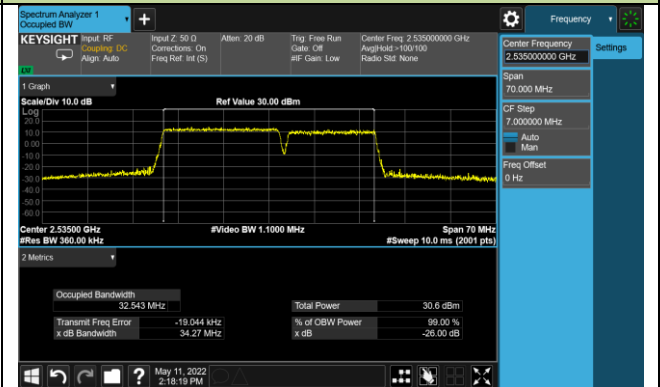
## 15+20MHz Channel Bandwidth



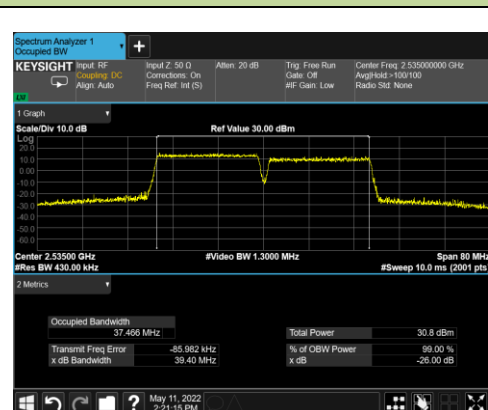
## 20+10MHz Channel Bandwidth



## 20+15MHz Channel Bandwidth



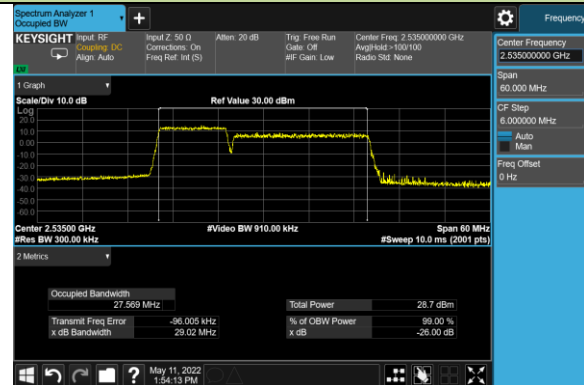
## 20+20MHz Channel Bandwidth



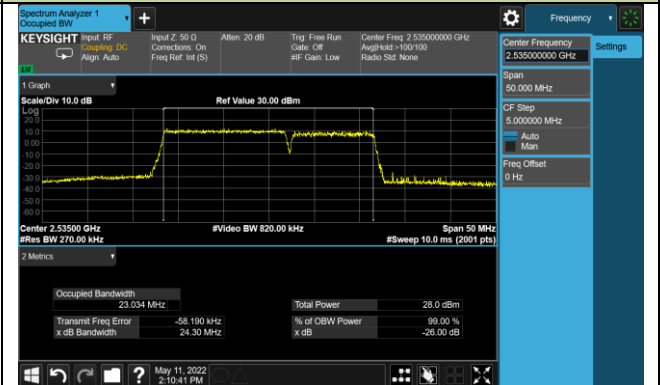


## 99% Bandwidth - 64QAM

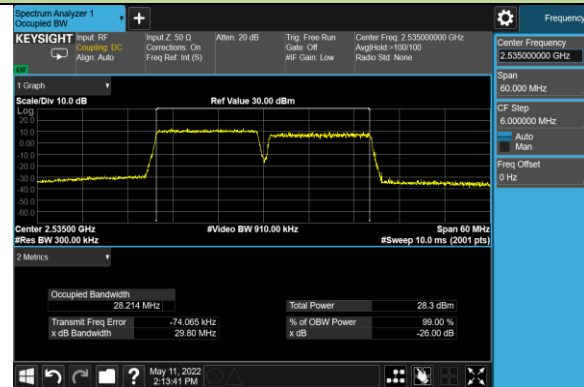
## 10+20MHz Channel Bandwidth



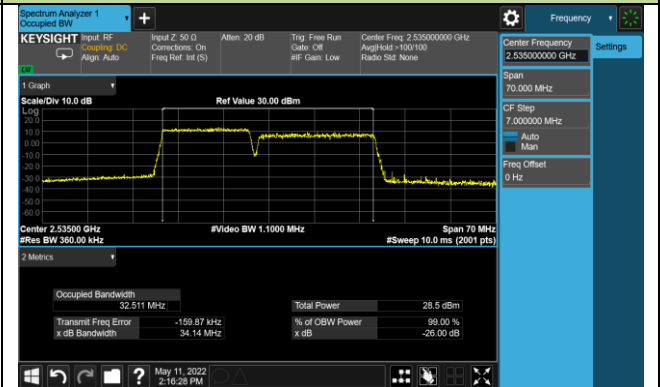
## 15+10MHz Channel Bandwidth



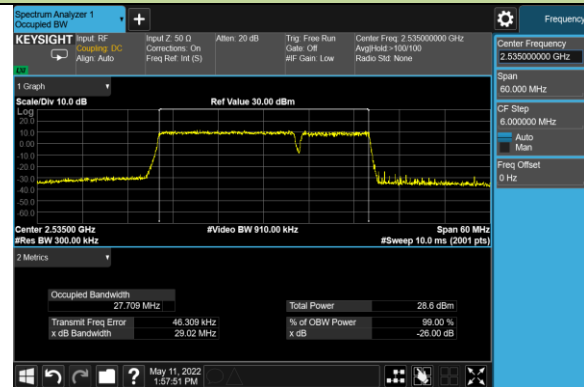
## 15+15MHz Channel Bandwidth



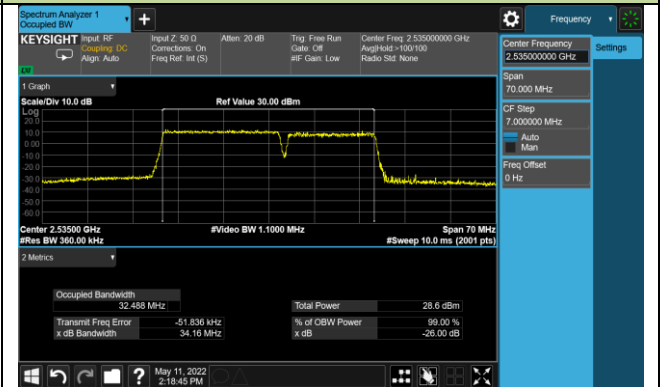
## 15+20MHz Channel Bandwidth



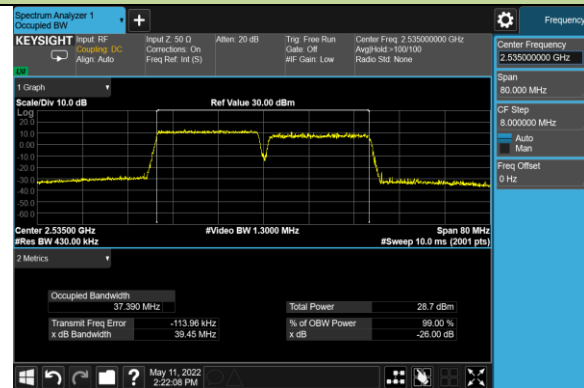
## 20+10MHz Channel Bandwidth



## 20+15MHz Channel Bandwidth



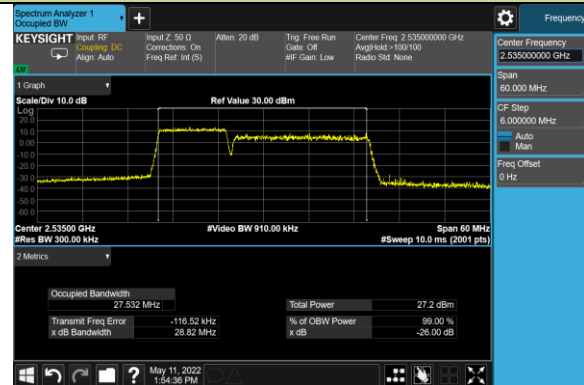
## 20+20MHz Channel Bandwidth



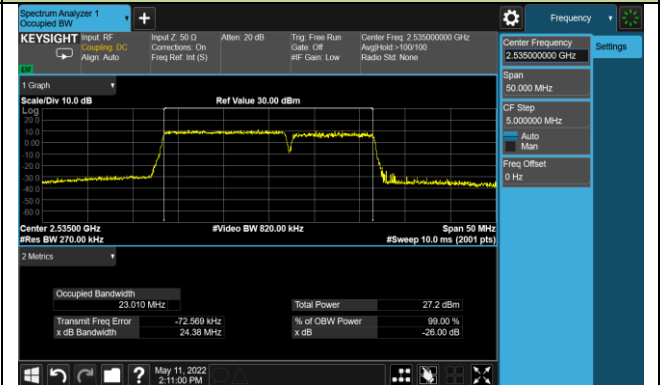


## 99% Bandwidth - 256QAM

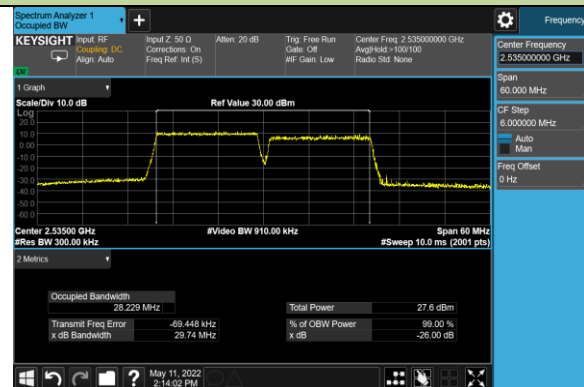
## 10+20MHz Channel Bandwidth



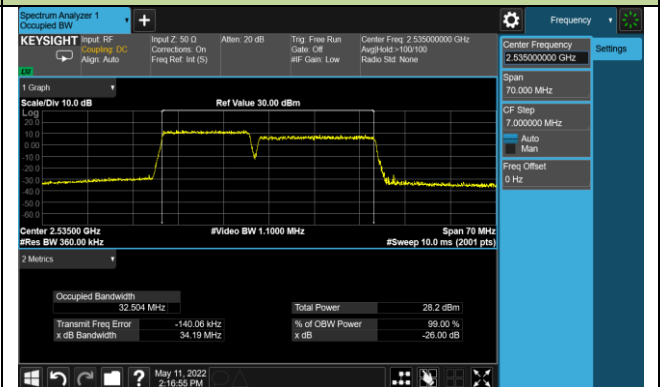
## 15+10MHz Channel Bandwidth



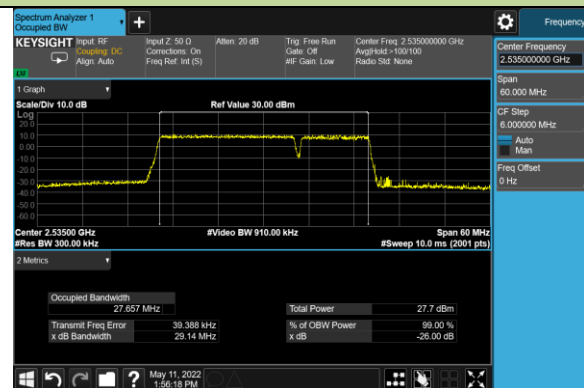
## 15+15MHz Channel Bandwidth



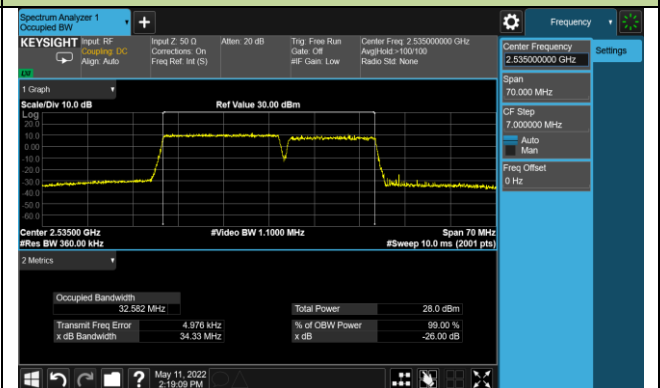
## 15+20MHz Channel Bandwidth



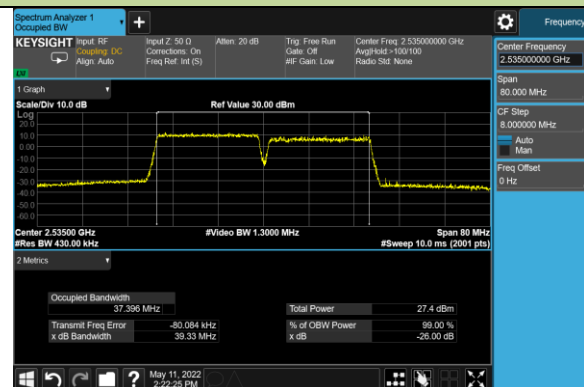
## 20+10MHz Channel Bandwidth



## 20+15MHz Channel Bandwidth



## 20+20MHz Channel Bandwidth

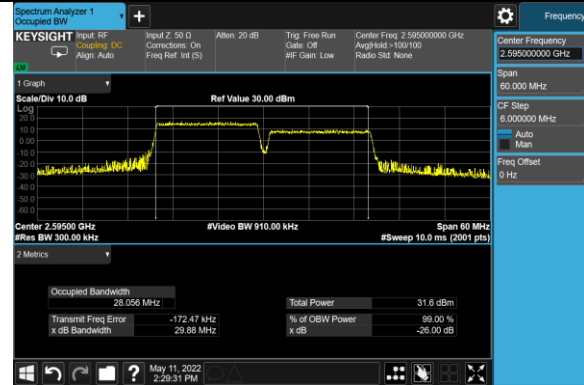


Test Site	SIP-SR1	Test Engineer	Allen Zou
Test Date	2022/05/11	Test Band	Intra-Band CA_38C

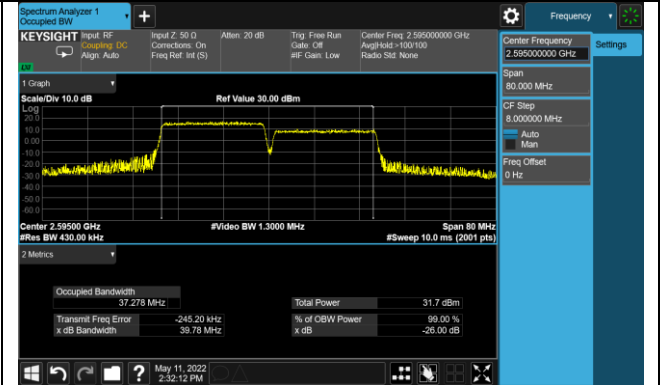
Modulation	Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)
QPSK	2587.5 + 2602.5	15+15	28.06
	2585.1 + 2604.9	20+20	37.28
16QAM	2587.5 + 2602.5	15+15	28.06
	2585.1 + 2604.9	20+20	37.21
64QAM	2587.5 + 2602.5	15+15	28.06
	2585.1 + 2604.9	20+20	37.22
256QAM	2587.5 + 2602.5	15+15	28.08
	2585.1 + 2604.9	20+20	37.17

## 99% Bandwidth - QPSK

## 15+15MHz Channel Bandwidth

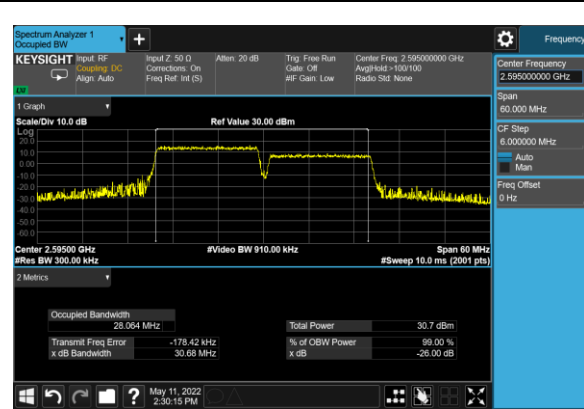


## 20+20MHz Channel Bandwidth

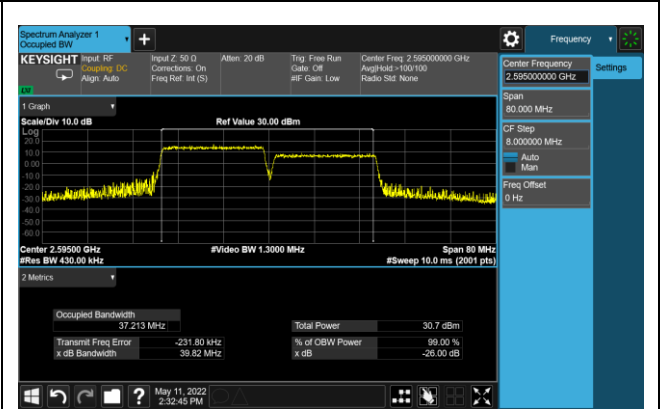


## 99% Bandwidth - 16QAM

## 15+15MHz Channel Bandwidth

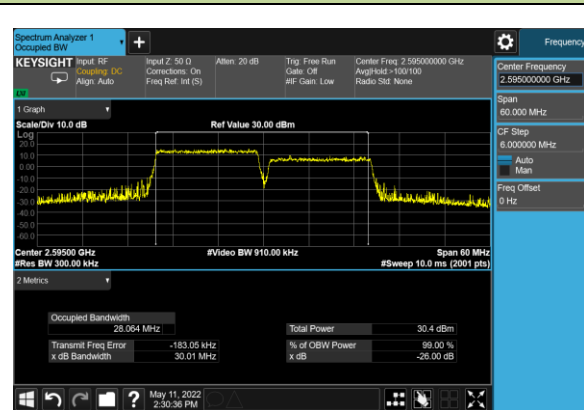


## 20+20MHz Channel Bandwidth

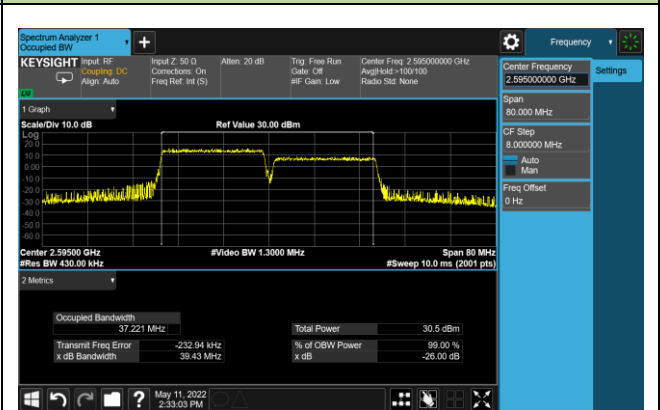


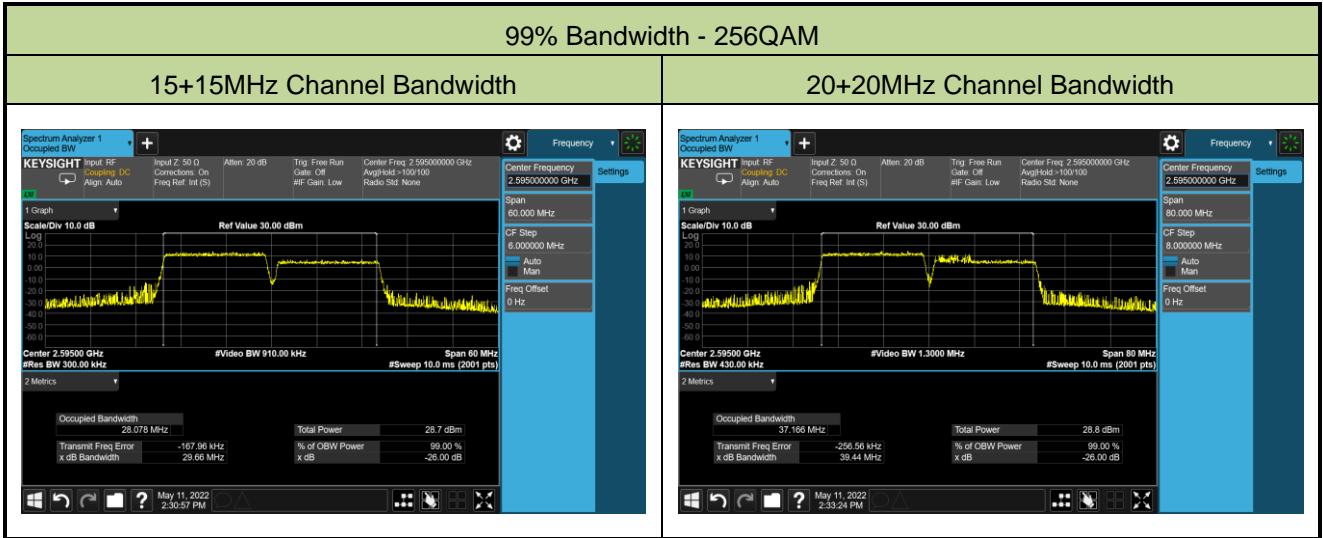
## 99% Bandwidth - 64QAM

## 15+15MHz Channel Bandwidth



## 20+20MHz Channel Bandwidth





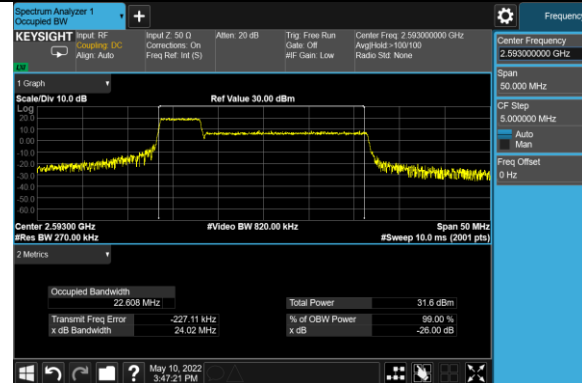
Test Site	SIP-SR1	Test Engineer	Allen Zou
Test Date	2022/05/10	Test Band	Intra-Band CA_41C

Modulation	Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)
QPSK	2583.8 + 2595.5	5+20	22.61
	2585.9 + 2597.9	10+15	22.90
	2583.6 + 2598.0	10+20	27.40
	2588.1 + 2600.1	15+10	22.94
	2585.5 + 2600.5	15+15	28.07
	2583.3 + 2600.4	15+20	32.30
	2590.5 + 2602.2	20+5	22.78
	2588.1 + 2602.5	20+10	27.58
	2585.6 + 2602.7	20+15	32.37
	2583.1 + 2602.9	20+20	37.35
16QAM	2583.8 + 2595.5	5+20	22.58
	2585.9 + 2597.9	10+15	22.86
	2583.6 + 2598.0	10+20	27.39
	2588.1 + 2600.1	15+10	22.96
	2585.5 + 2600.5	15+15	28.10
	2583.3 + 2600.4	15+20	32.37
	2590.5 + 2602.2	20+5	22.76
	2588.1 + 2602.5	20+10	27.57
	2585.6 + 2602.7	20+15	32.35
	2583.1 + 2602.9	20+20	37.26
64QAM	2583.8 + 2595.5	5+20	22.53
	2585.9 + 2597.9	10+15	22.86
	2583.6 + 2598.0	10+20	27.41
	2588.1 + 2600.1	15+10	22.94
	2585.5 + 2600.5	15+15	28.04
	2583.3 + 2600.4	15+20	32.30
	2590.5 + 2602.2	20+5	22.76
	2588.1 + 2602.5	20+10	27.54
	2585.6 + 2602.7	20+15	32.43
	2583.1 + 2602.9	20+20	37.27

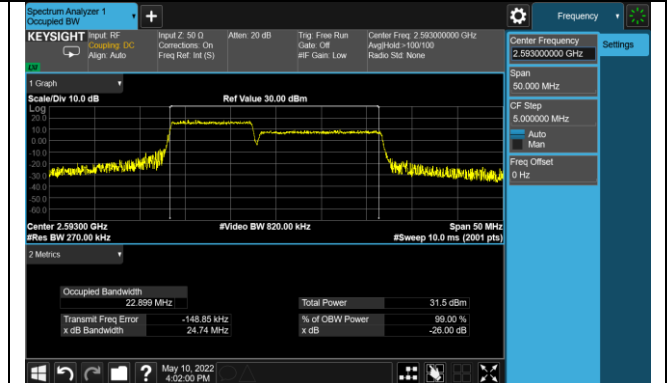
Modulation	Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)
256QAM	2583.8 + 2595.5	5+20	22.55
	2585.9 + 2597.9	10+15	22.89
	2583.6 + 2598.0	10+20	27.41
	2588.1 + 2600.1	15+10	22.95
	2585.5 + 2600.5	15+15	28.08
	2583.3 + 2600.4	15+20	32.35
	2590.5 + 2602.2	20+5	22.73
	2588.1 + 2602.5	20+10	27.62
	2585.6 + 2602.7	20+15	32.39
	2583.1 + 2602.9	20+20	37.29

## 99% Bandwidth - QPSK

## 5+20MHz Channel Bandwidth



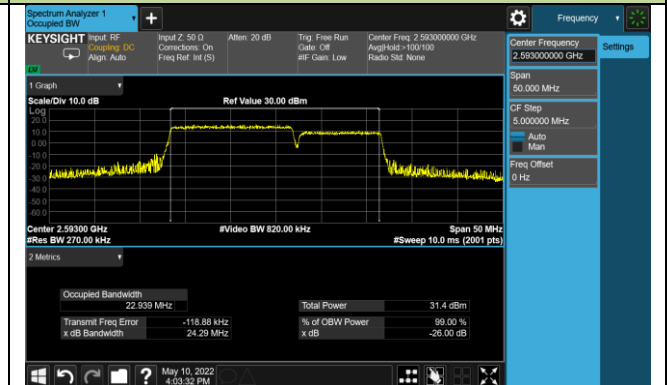
## 10+15MHz Channel Bandwidth



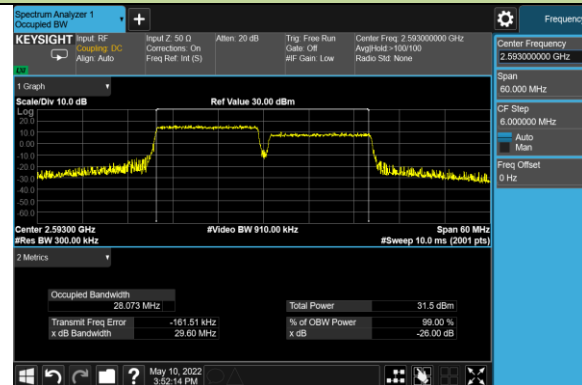
## 10+20MHz Channel Bandwidth



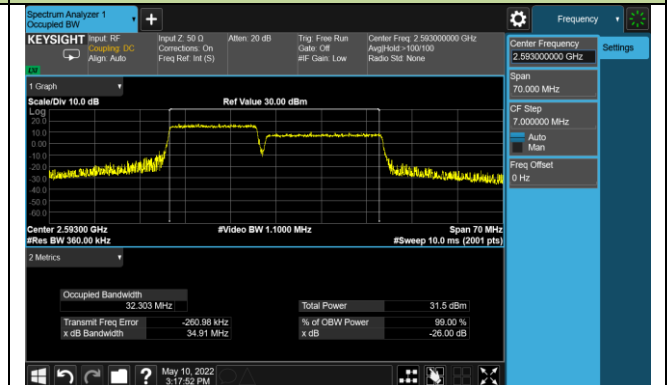
## 15+10MHz Channel Bandwidth

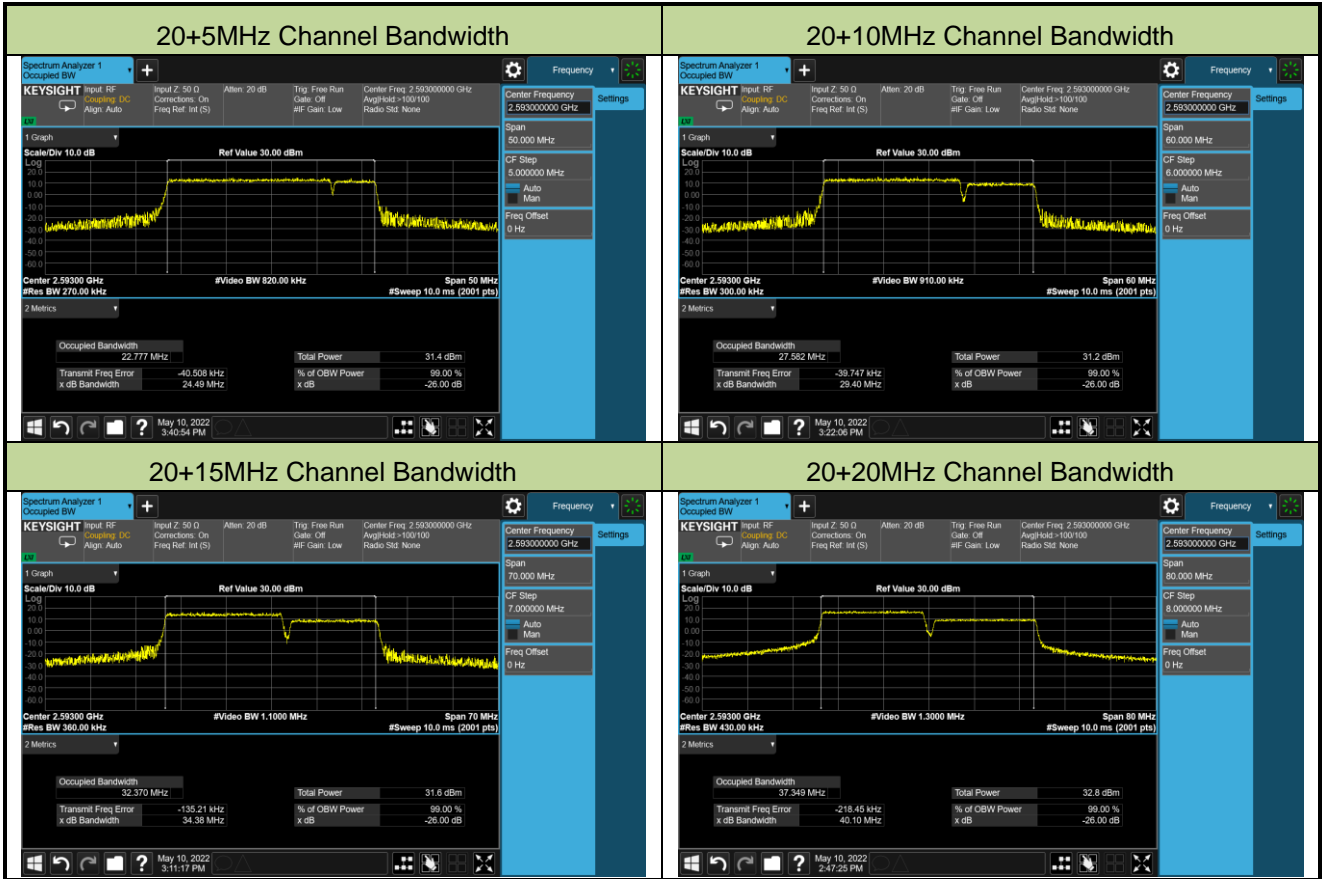


## 15+15MHz Channel Bandwidth



## 15+20MHz Channel Bandwidth

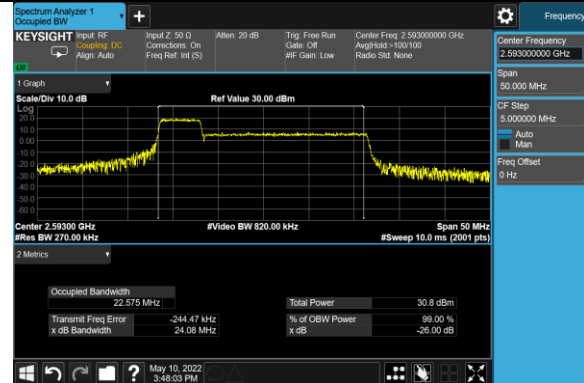




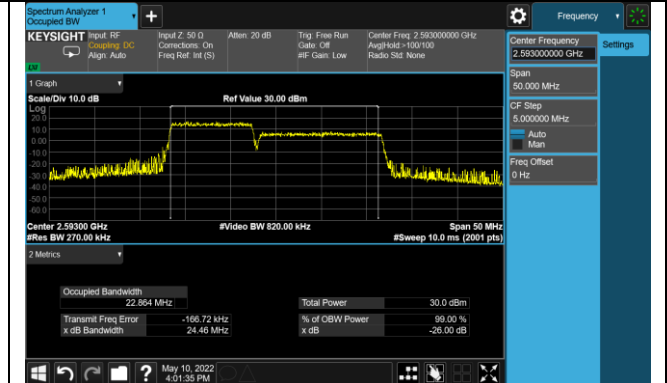


## 99% Bandwidth - 16QAM

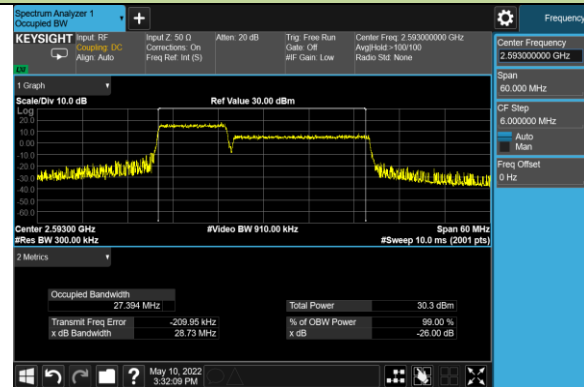
## 5+20MHz Channel Bandwidth



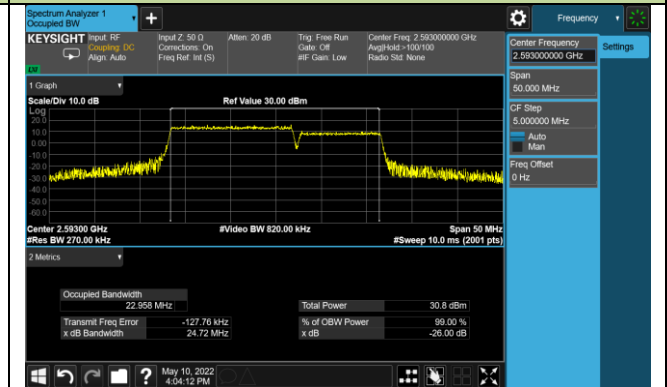
## 10+15MHz Channel Bandwidth



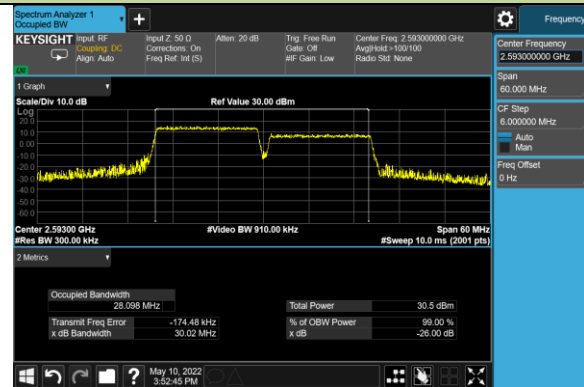
## 10+20MHz Channel Bandwidth



## 15+10MHz Channel Bandwidth



## 15+15MHz Channel Bandwidth



## 15+20MHz Channel Bandwidth

