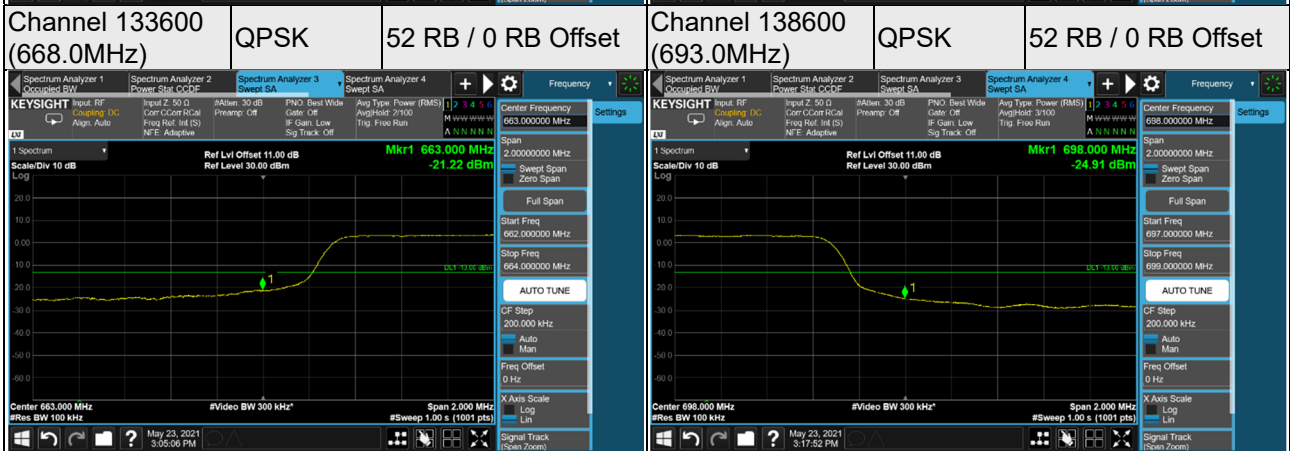
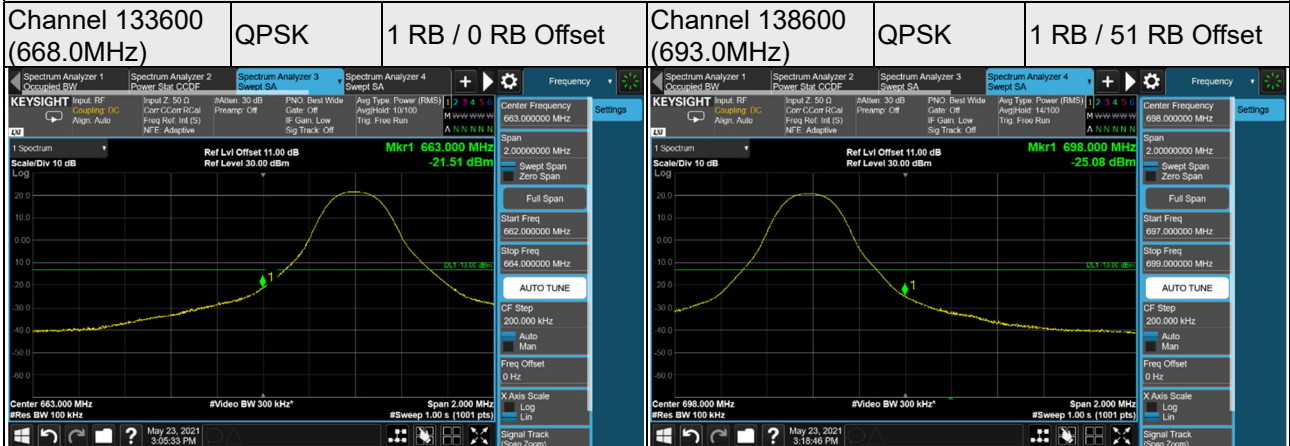
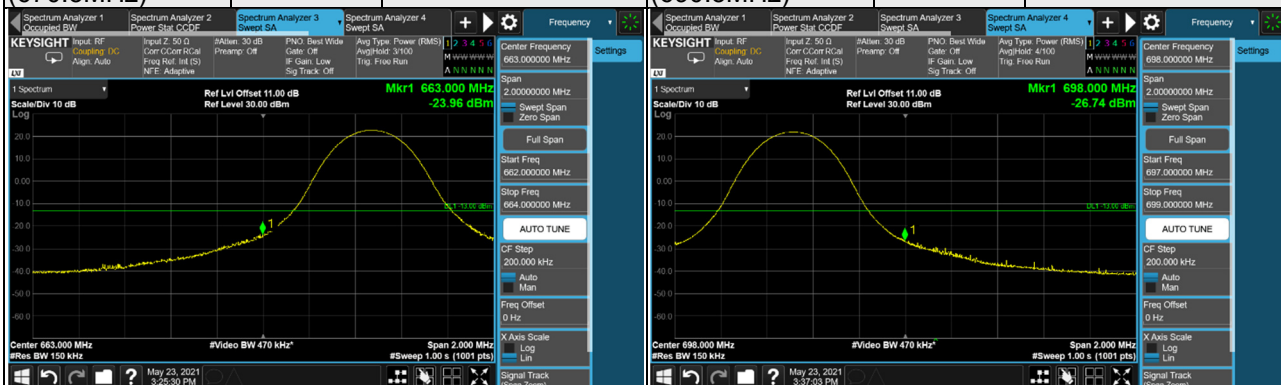


n71, Channel Bandwidth 10MHz

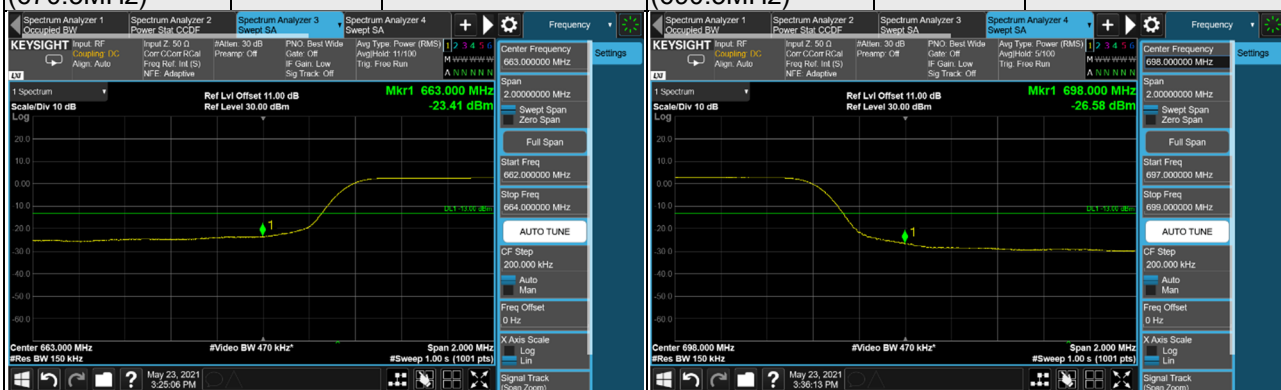


n71, Channel Bandwidth 15MHz

Channel 134100 (670.5MHz)	QPSK	1 RB / 0 RB Offset	Channel 138100 (690.5MHz)	QPSK	1 RB / 78 RB Offset
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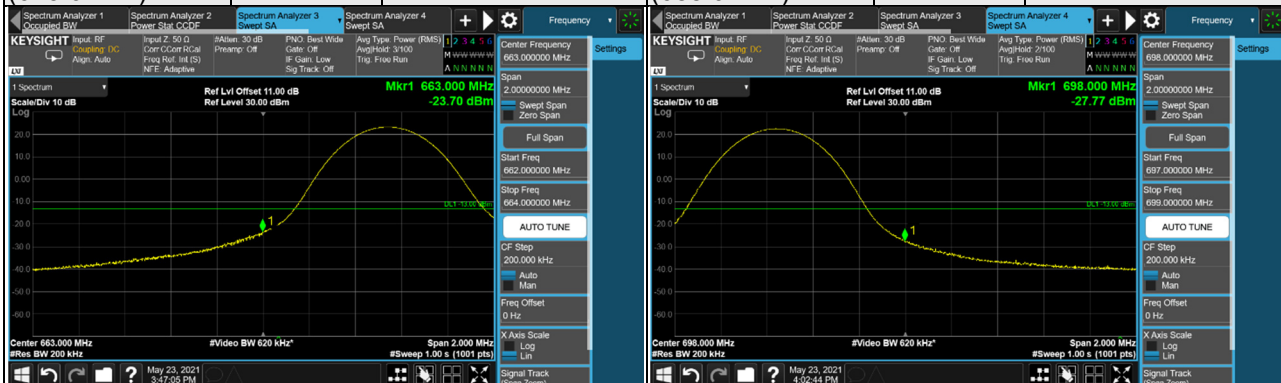


Channel 134100 (670.5MHz)	QPSK	79 RB / 0 RB Offset	Channel 138100 (690.5MHz)	QPSK	79 RB / 0 RB Offset
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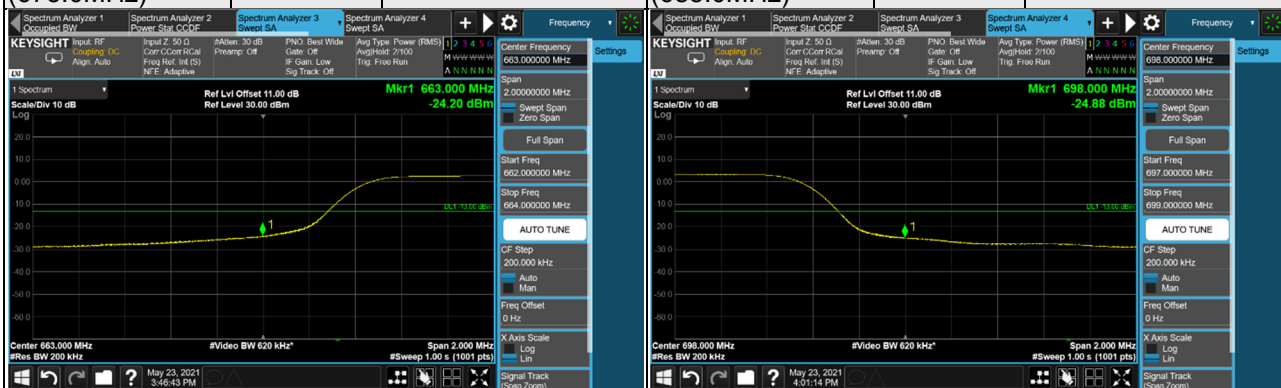


n71, Channel Bandwidth 20MHz

Channel 134600 (673.0MHz)	QPSK	1 RB / 0 RB Offset	Channel 137600 (688.0MHz)	QPSK	1 RB / 105 RB Offset
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Channel 134600 (673.0MHz)	QPSK	106 RB / 0 RB Offset	Channel 137600 (688.0MHz)	QPSK	106 RB / 0 RB Offset
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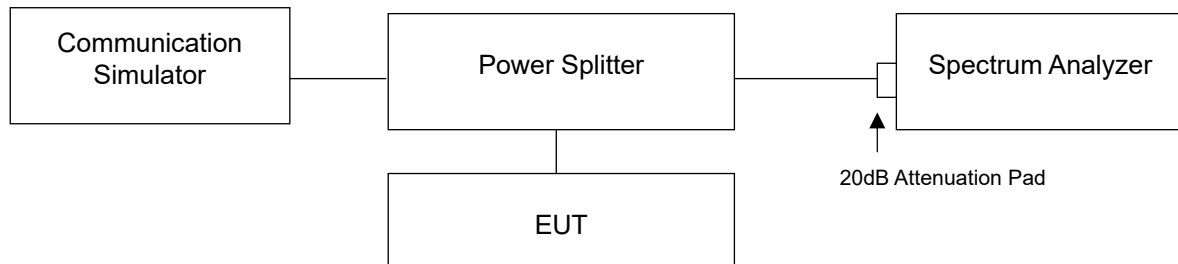


## 4.6 Peak to Average Ratio

### 4.6.1 Limits of Peak to Average Ratio Measurement

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB

### 4.6.2 Test Setup



### 4.6.3 Test Procedures

- Set resolution/measurement bandwidth  $\geq$  signal's occupied bandwidth;
- Set the number of counts to a value that stabilizes the measured CCDF curve;
- Record the maximum PAPR level associated with a probability of 0.1%.

#### 4.6.4 Test Results

n41, Channel Bandwidth: 10MHz						
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
500202	2501.01	6.77	7.68	7.30	6.39	8.09
518598	2592.99	7.00	7.97	7.37	6.40	8.16
537000	2685.00	6.98	7.92	7.32	6.37	8.09
n41, Channel Bandwidth: 15MHz						
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
500700	2503.50	6.68	7.58	7.29	6.37	8.07
518598	2592.99	6.99	7.94	7.38	6.39	7.91
536496	2682.48	6.96	7.90	7.32	6.36	8.09
n41, Channel Bandwidth 20MHz						
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
501204	2506.02	6.65	7.57	7.21	6.34	8.04
518598	2592.99	6.96	7.94	7.31	6.37	8.05
535998	2679.99	6.92	7.88	7.24	6.33	8.04
n41, Channel Bandwidth 40MHz						
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
503202	2516.01	6.74	7.66	7.28	6.34	8.12
518598	2592.99	6.98	7.93	7.35	6.34	8.18
534000	2670.00	6.91	7.85	7.27	6.31	8.08
n41, Channel Bandwidth 50MHz						
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
504204	2521.02	6.77	7.74	7.26	6.41	8.10
518598	2592.99	6.97	7.99	7.31	6.40	8.16
532998	2664.99	6.90	7.88	7.23	6.35	8.06

## n41, Channel Bandwidth 60MHz

Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
505200	2526.00	6.78	7.74	7.33	6.39	8.15
518598	2592.99	6.99	7.99	7.38	6.40	8.22
531996	2659.98	6.93	7.91	7.32	6.36	8.14

## n41, Channel Bandwidth 80MHz

Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
507204	2536.02	6.76	7.76	7.29	6.31	8.11
518598	2592.99	7.01	8.08	7.35	6.32	8.19
529998	2649.99	6.99	8.05	7.33	6.28	8.13

## n41, Channel Bandwidth 90MHz

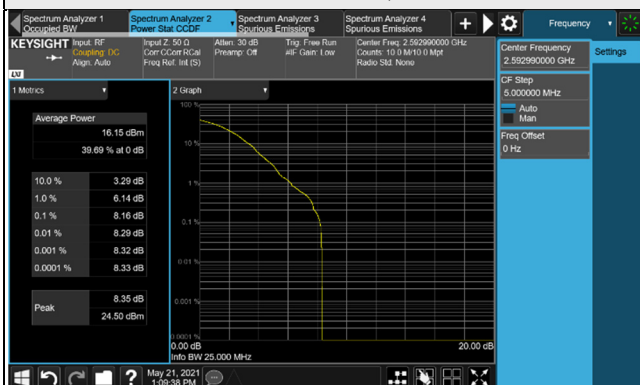
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
508200	2541.00	6.74	7.72	7.30	6.31	8.11
518598	2592.99	7.01	8.07	7.37	6.32	8.18
528996	2644.98	7.00	8.07	7.35	6.30	8.14

## n41, Channel Bandwidth 100MHz

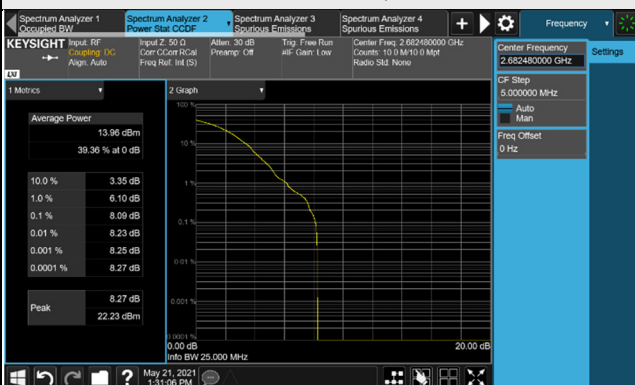
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
509202	2546.01	6.66	7.61	7.23	6.37	8.07
518598	2592.99	7.00	8.02	7.31	6.39	8.17
528000	2640.00	7.01	8.03	7.30	6.37	8.14

### Spectrum Plot of Worst Value

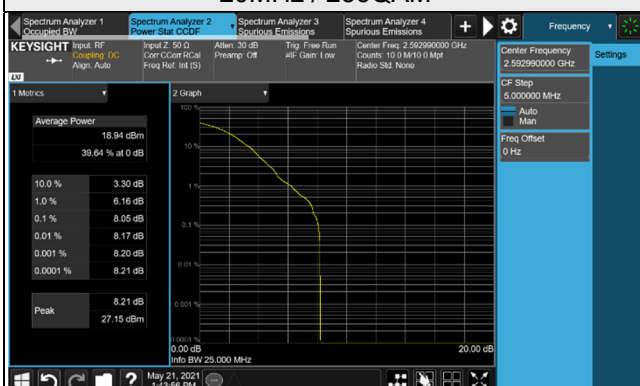
#### 10MHz / 256QAM



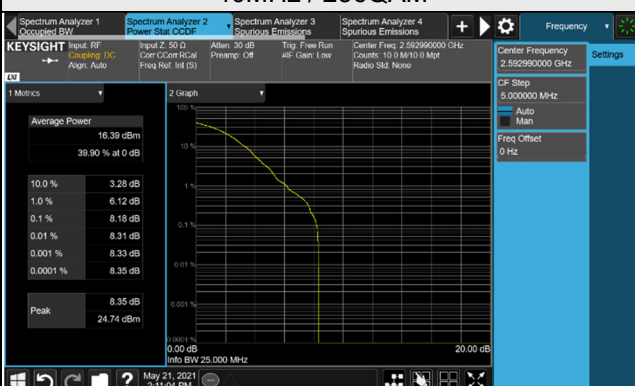
#### 15MHz / 256QAM



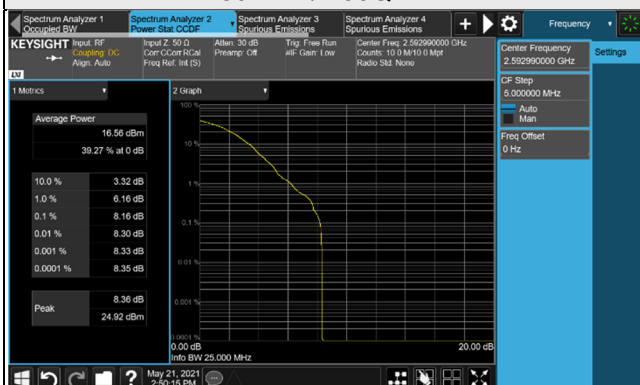
#### 20MHz / 256QAM



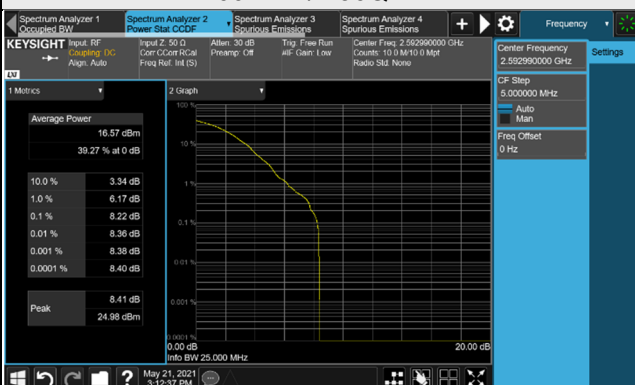
#### 40MHz / 256QAM



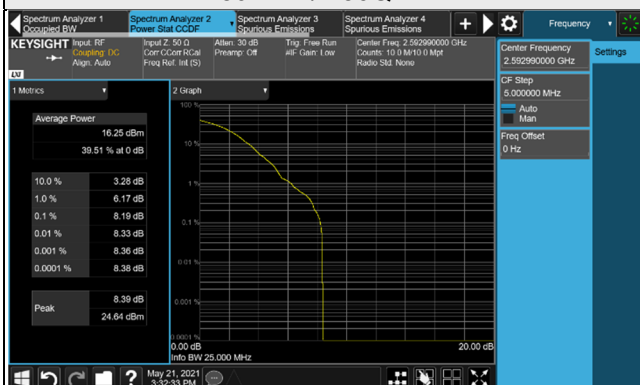
#### 50MHz / 256QAM



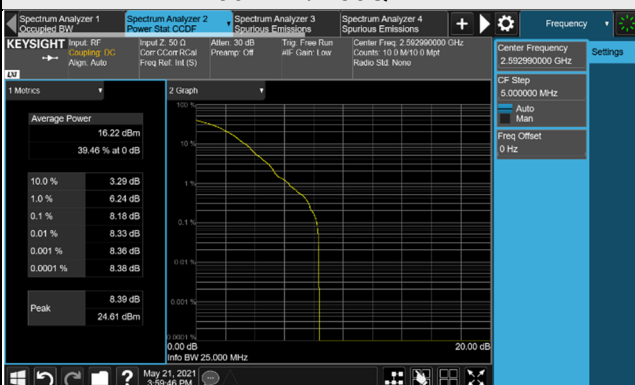
#### 60MHz / 256QAM

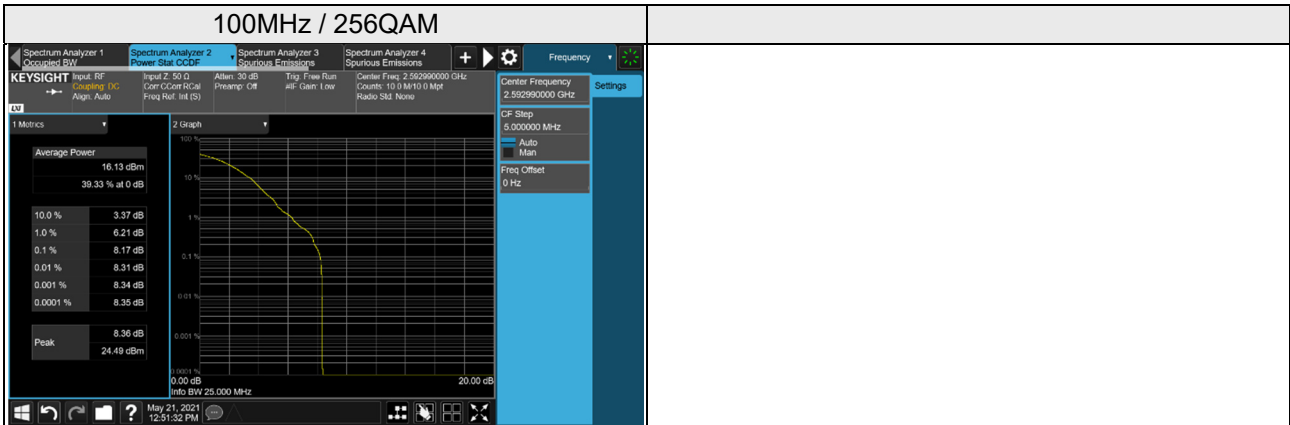


#### 80MHz / 256QAM



#### 90MHz / 256QAM



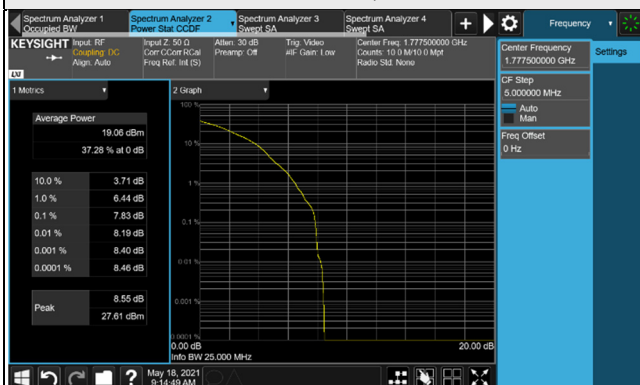




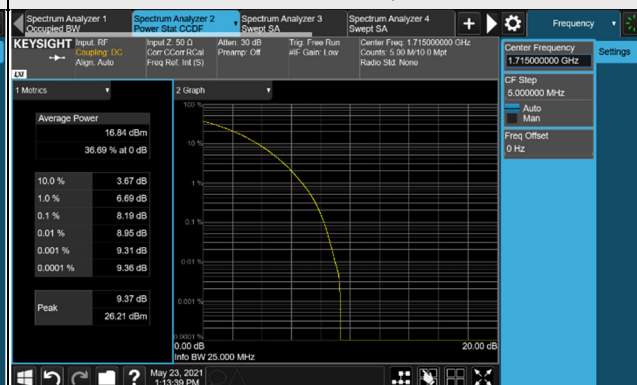
n66, Channel Bandwidth 5MHz						
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
342500	1712.5	6.67	7.01	7.05	7.67	7.72
349000	1745.0	6.74	6.10	6.40	7.17	6.96
355500	1777.5	6.21	7.31	7.17	7.83	7.46
n66, Channel Bandwidth 10MHz						
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
343000	1715.0	6.95	7.86	7.83	7.83	8.19
349000	1745.0	6.71	7.83	7.81	7.75	8.12
355000	1775.0	6.38	7.77	7.76	7.81	7.94
n66, Channel Bandwidth 15MHz						
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
343500	1717.5	6.89	7.71	7.74	7.83	8.22
349000	1745.0	6.63	7.56	7.58	7.56	8.13
354500	1772.5	6.37	7.53	7.55	7.70	8.02
n66, Channel Bandwidth 20MHz						
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
344000	1720.0	7.01	7.83	7.86	7.96	8.20
349000	1745.0	6.82	7.70	7.74	7.75	8.14
354000	1770.0	6.66	7.76	7.78	7.95	8.07
n66, Channel Bandwidth 40MHz						
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
346000	1730.0	4.95	5.76	6.13	5.92	6.60
349000	1745.0	5.79	6.94	7.30	7.34	7.18
352000	1760.0	5.92	6.96	7.19	7.22	7.24

### Spectrum Plot of Worst Value

#### 5MHz / 64QAM



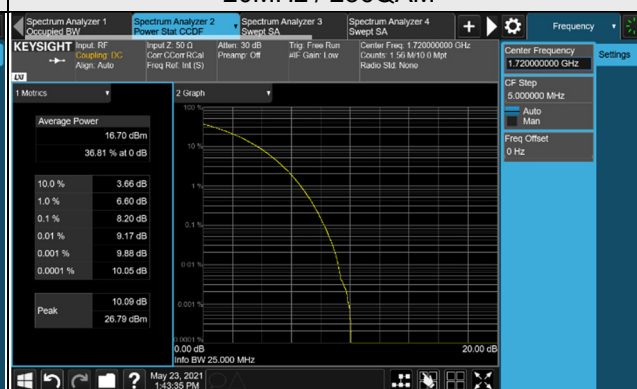
#### 10MHz / 256QAM



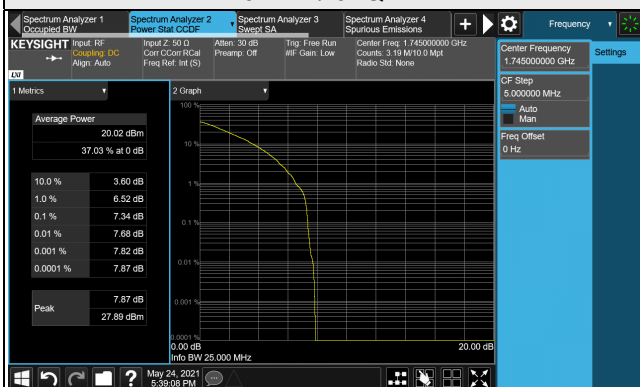
#### 15MHz / 256QAM



#### 20MHz / 256QAM



#### 40MHz / 64QAM



n71, Channel Bandwidth 5MHz						
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
133100	665.5	6.08	7.78	7.77	7.57	8.32
136100	680.5	7.53	7.77	7.76	7.63	8.64
139100	695.5	7.66	8.11	8.12	7.90	8.53
n71, Channel Bandwidth 10MHz						
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
133600	668.0	6.78	7.75	7.71	7.56	8.46
136100	680.5	7.52	8.07	8.06	7.87	8.64
138600	693.0	7.77	7.94	7.92	7.81	8.58
n71 Channel Bandwidth 15MHz						
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
134100	670.5	7.16	7.70	7.71	7.63	8.46
136100	680.5	7.51	8.10	8.14	7.94	8.60
138100	690.5	7.89	8.10	8.11	8.00	8.60
n71, Channel Bandwidth 20MHz						
Channel	Frequency (MHz)	Peak To Average Ratio (dB)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
134600	673.0	7.34	8.17	8.17	8.07	8.52
136100	680.5	7.55	8.33	8.35	8.26	8.57
137600	688.0	7.90	8.23	8.25	8.14	8.56

### Spectrum Plot of Worst Value

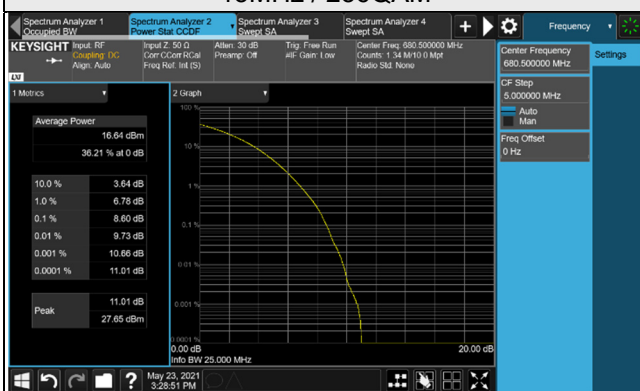
#### 5MHz / 256QAM



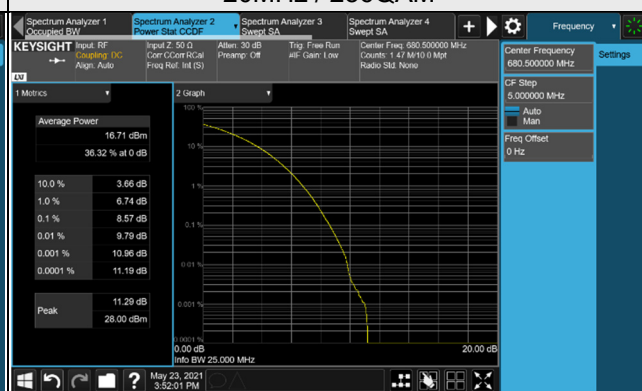
#### 10MHz / 256QAM



#### 15MHz / 256QAM



#### 20MHz / 256QAM



## 4.7 Conducted Spurious Emissions

### 4.7.1 Limits of Conducted Spurious Emissions Measurement

For n41:

In the FCC 27.53(m)(4), On any frequency outside a licensee's frequency block, The power of any emission shall be attenuated below the transmitter power (P) by at least  $55 + 10 \log (P)$  dB. The emission limit equal to  $-25\text{dBm}$ .

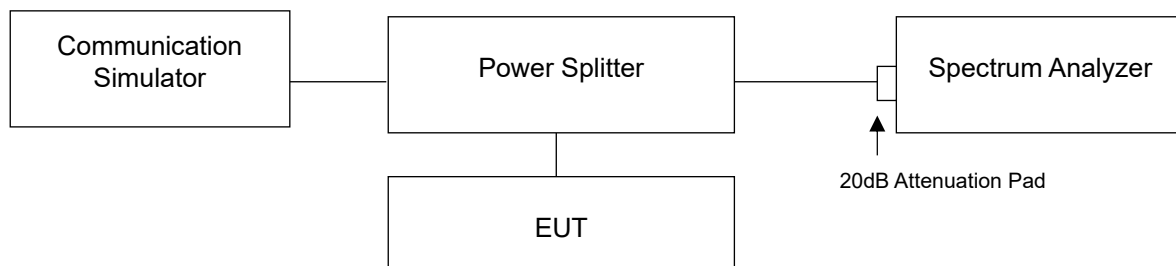
For n66:

In the FCC 27.53(h), On any frequency outside a licensee's frequency block, The power of any emission shall be attenuated below the transmitter power (P) by at least  $43 + 10 \log (P)$  dB. The emission limit equal to  $-13\text{dBm}$ .

For n71:

According to FCC 27.53(g) for operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least  $43 + 10 \log (P)$  dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater.

### 4.7.2 Test Setup



### 4.7.3 Test Procedure

- All measurements were done at low and high channels operational frequency range.
- Measuring frequency range is from 9kHz to 10GHz / 20GHz / 30GHz. 20dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz are used for conducted emission measurement