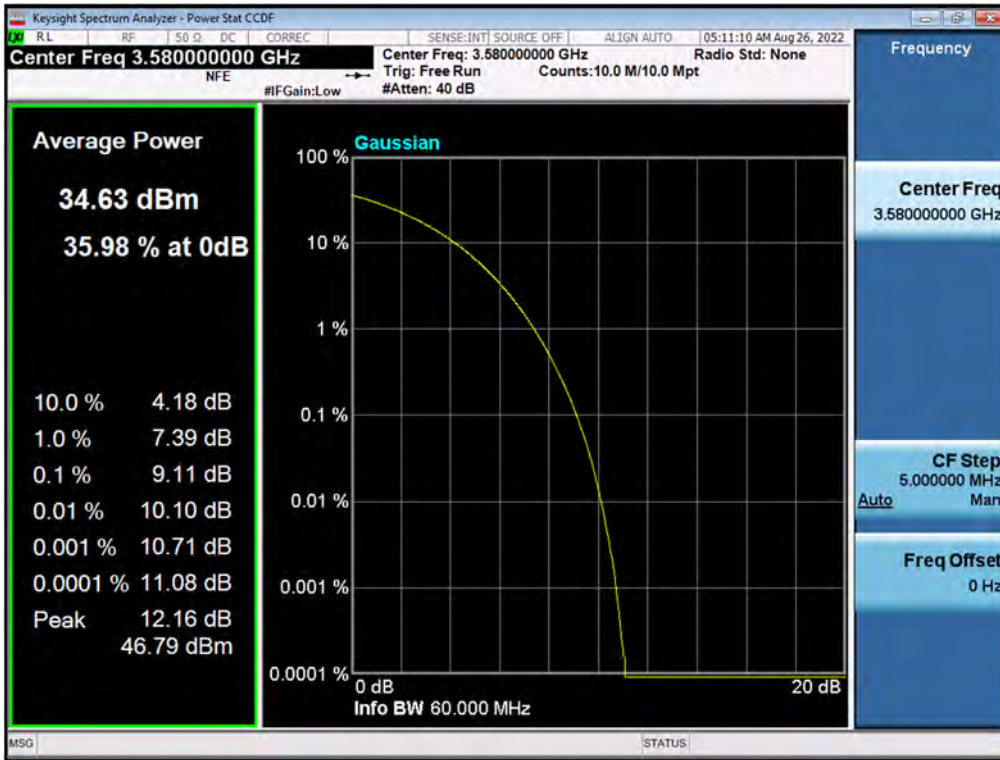
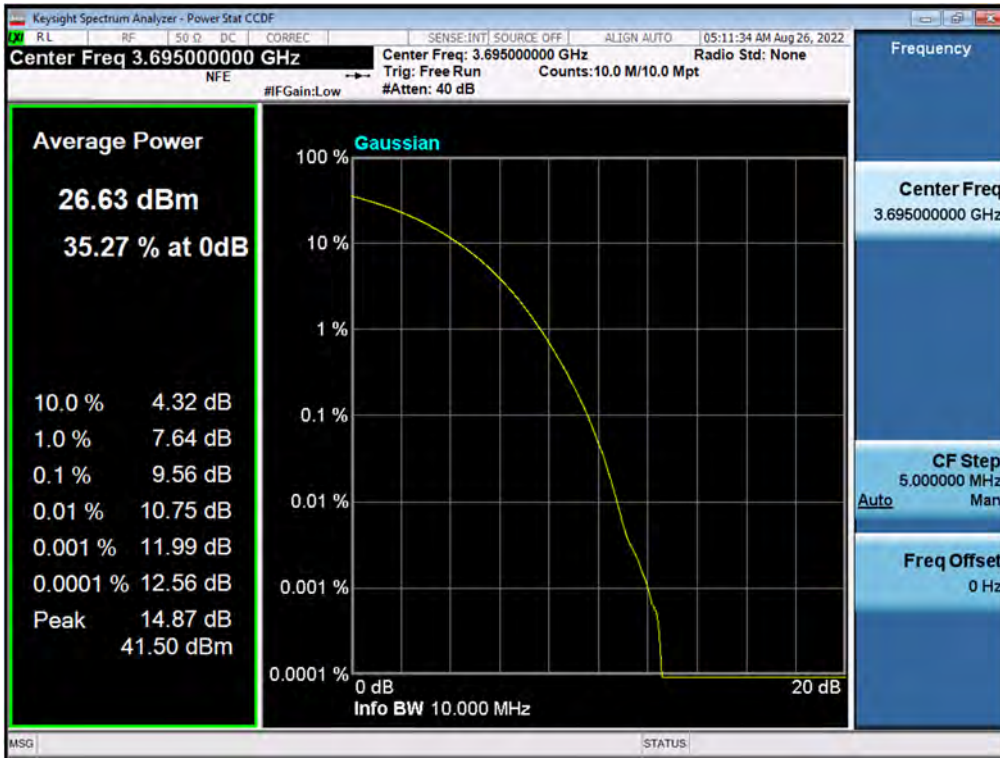


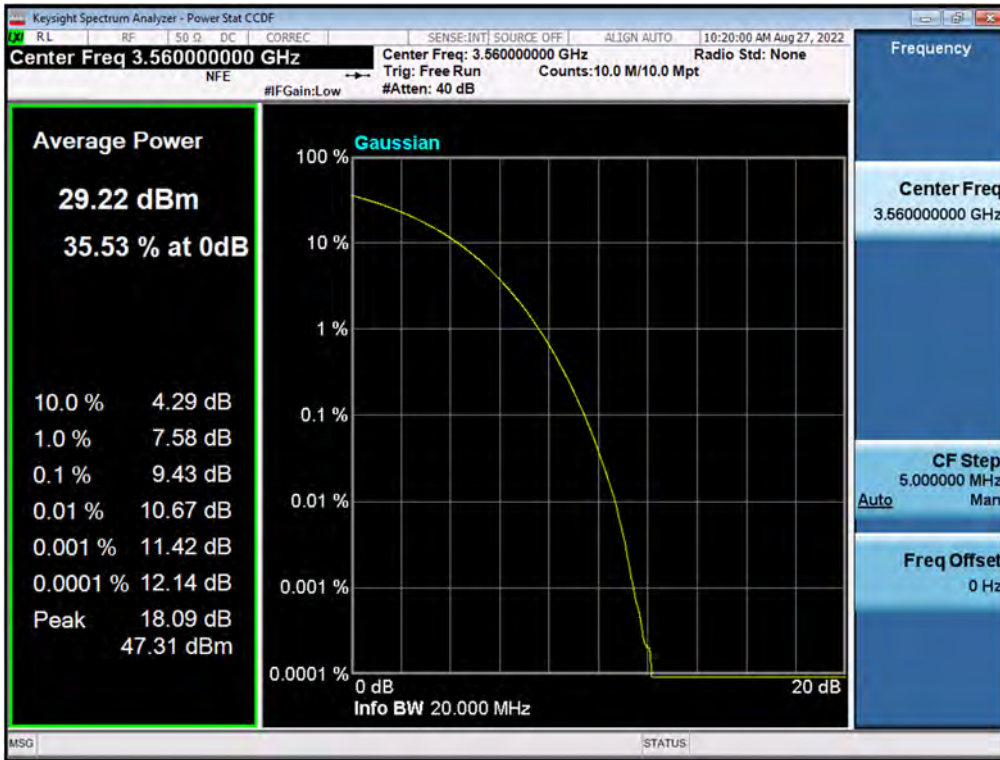
Antenna 3 / CBRS LTE[(15 MHz 1C + 15 MHz 1C + 15 MHz 1C + 15 MHz 1C) + 10 MHz 1C][5C(4C+1C)] / LTE 15 MHz 1C + LTE 15 MHz 1C + LTE 15 MHz 1C + LTE 15 MHz 1C / Non-Contiguous / 64QAM / Low



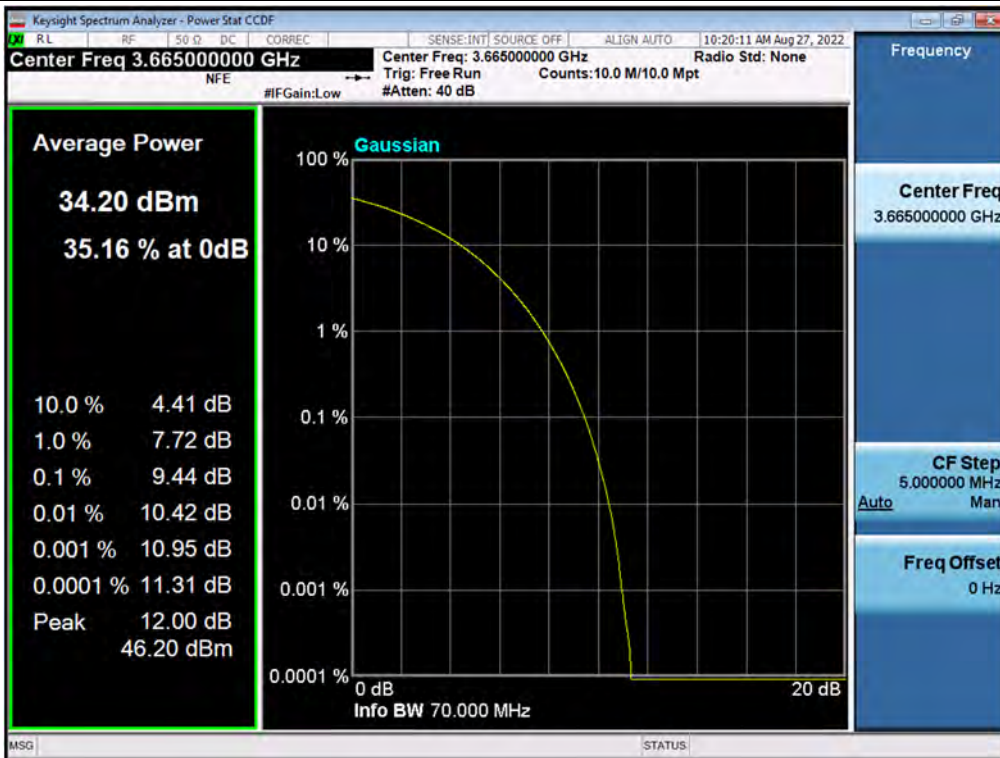
Antenna 3 / CBRS LTE[(15 MHz 1C + 15 MHz 1C + 15 MHz 1C + 15 MHz 1C) + 10 MHz 1C][5C(4C+1C)] / LTE 10 MHz 1C / Non-Contiguous / 64QAM / High



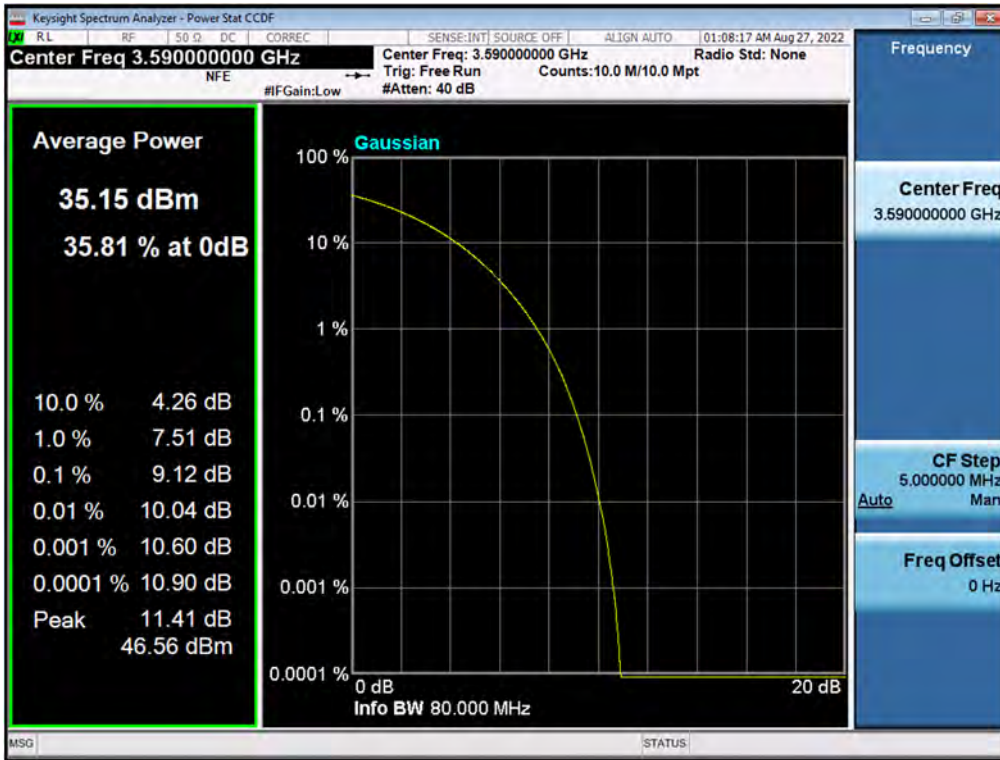
Antenna 3 / CBRS LTE[20 MHz 1C + (20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 10 MHz 1C)][5C(1C+4C)] / LTE 20 MHz 1C / Non-Contiguous / 256QAM / Low



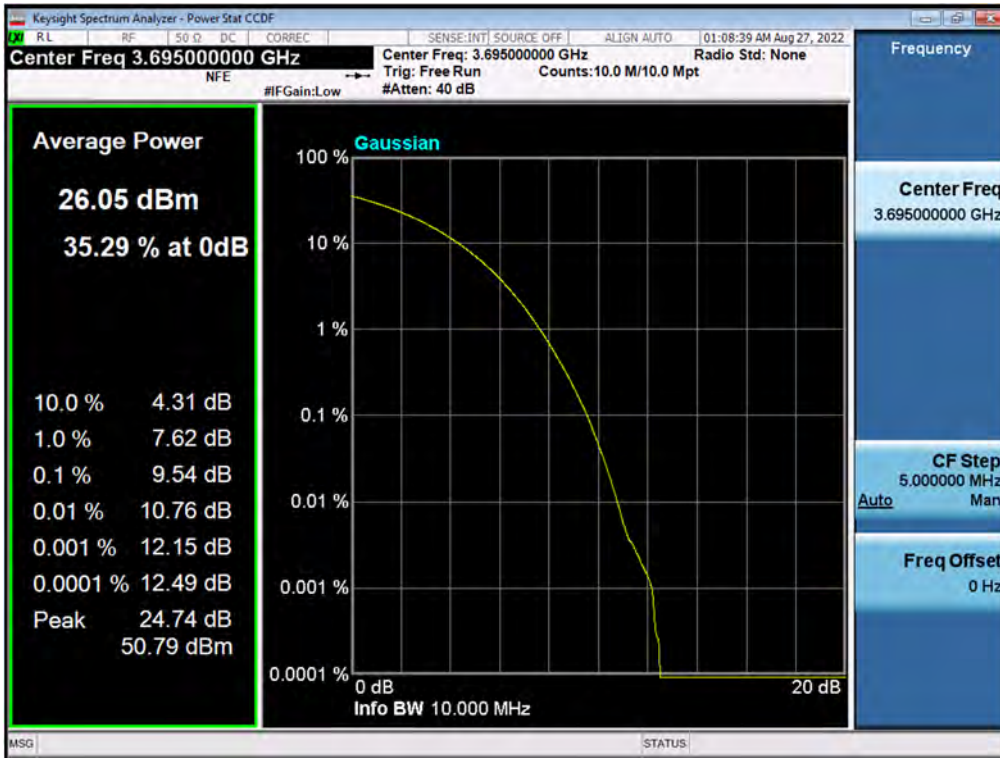
Antenna 3 / CBRS LTE[20 MHz 1C + (20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 10 MHz 1C)][5C(1C+4C)] / LTE 20 MHz 1C + LTE 20 MHz 1C + LTE 20 MHz 1C + LTE 10 MHz 1C / Non-Contiguous / 256QAM / High



Antenna 3 / CBRS LTE[(20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C) + 10 MHz 1C][5C(4C+1C)] / LTE 20 MHz 1C + LTE 20 MHz 1C + LTE 20 MHz 1C + LTE 20 MHz 1C / Non-Contiguous / 64QAM / Low

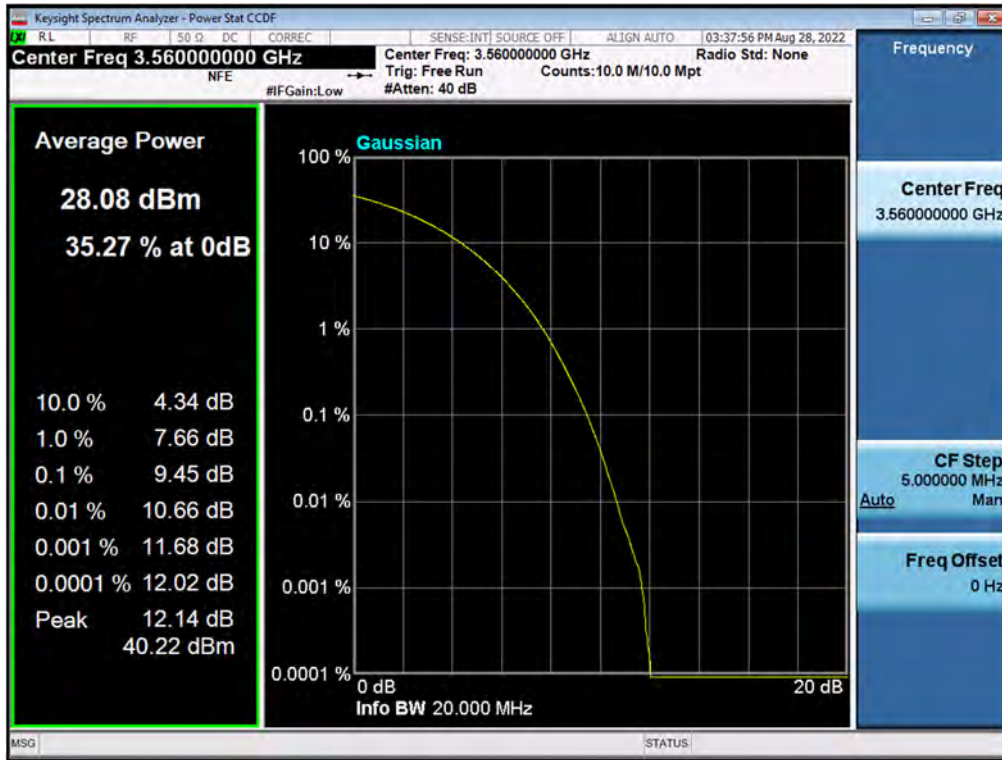


Antenna 3 / CBRS LTE[(20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C) + 10 MHz 1C][5C(4C+1C)] / LTE 10 MHz 1C / Non-Contiguous / 64QAM / High

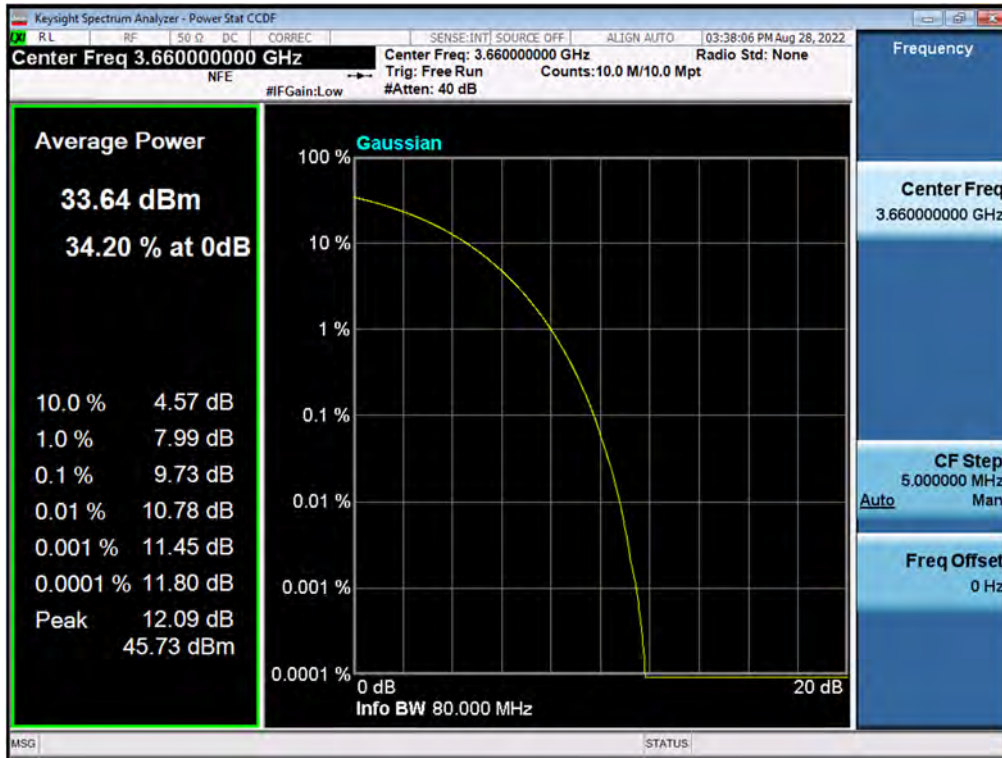




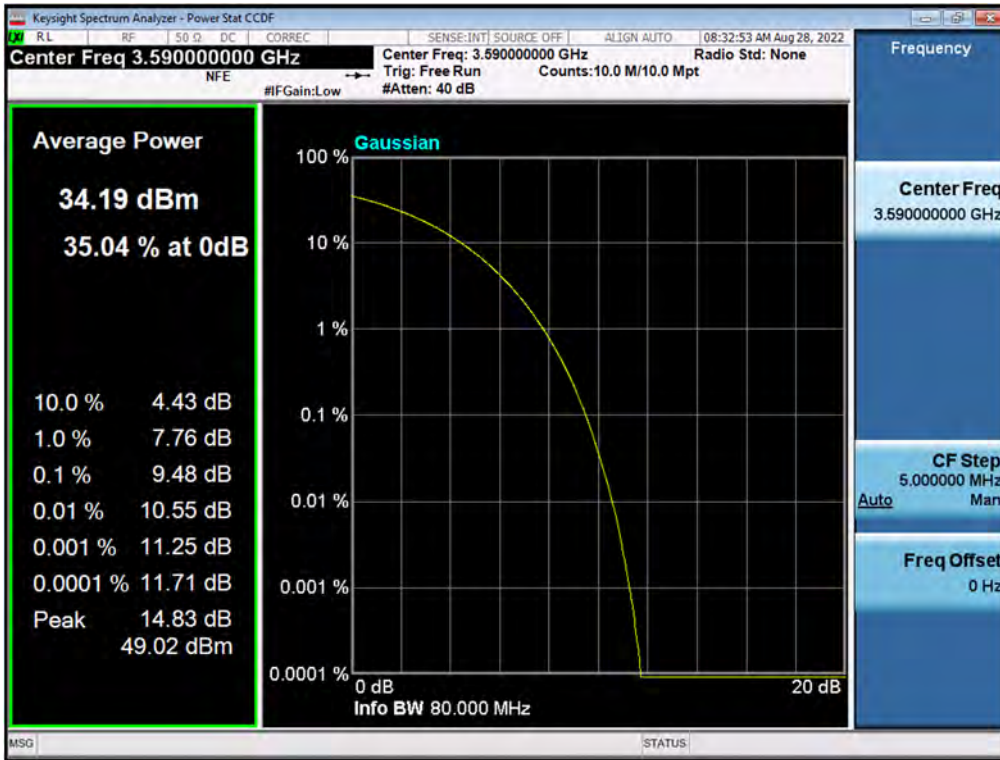
Antenna 0 / CBRS LTE[20 MHz 1C + (20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C)][5C(1C+4C)] / LTE 20 MHz 1C / Non-Contiguous / QPSK / Low



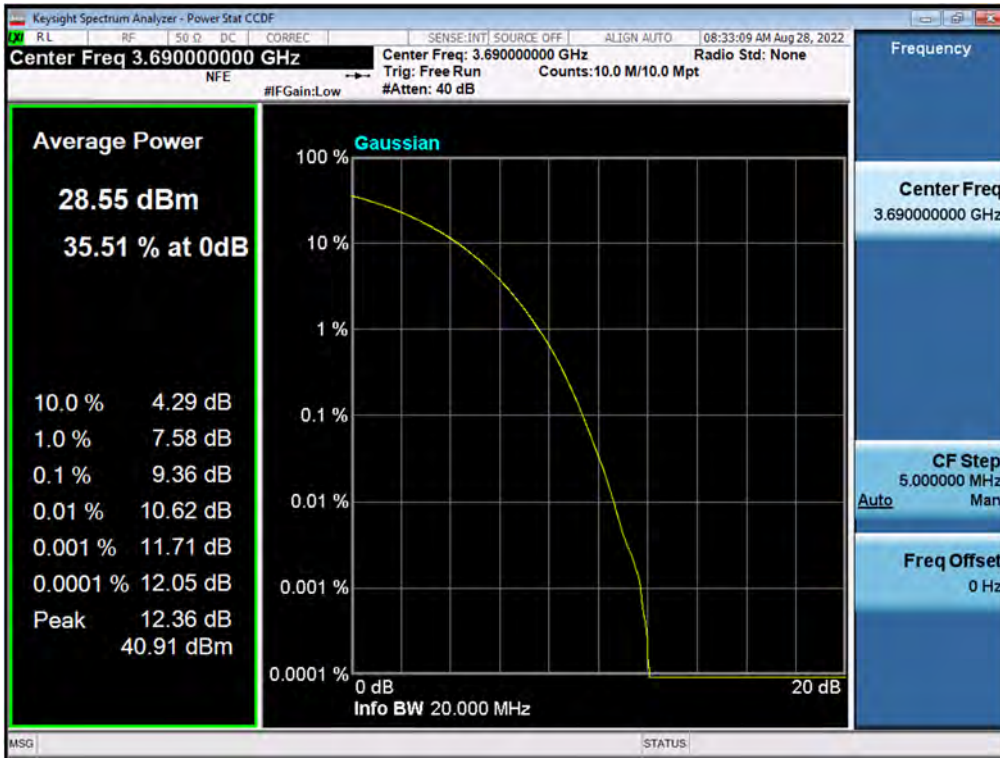
Antenna 0 / CBRS LTE[20 MHz 1C + (20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C)][5C(1C+4C)] / LTE 20 MHz 1C + LTE 20 MHz 1C + LTE 20 MHz 1C + LTE 20 MHz 1C / Non-Contiguous / QPSK / High



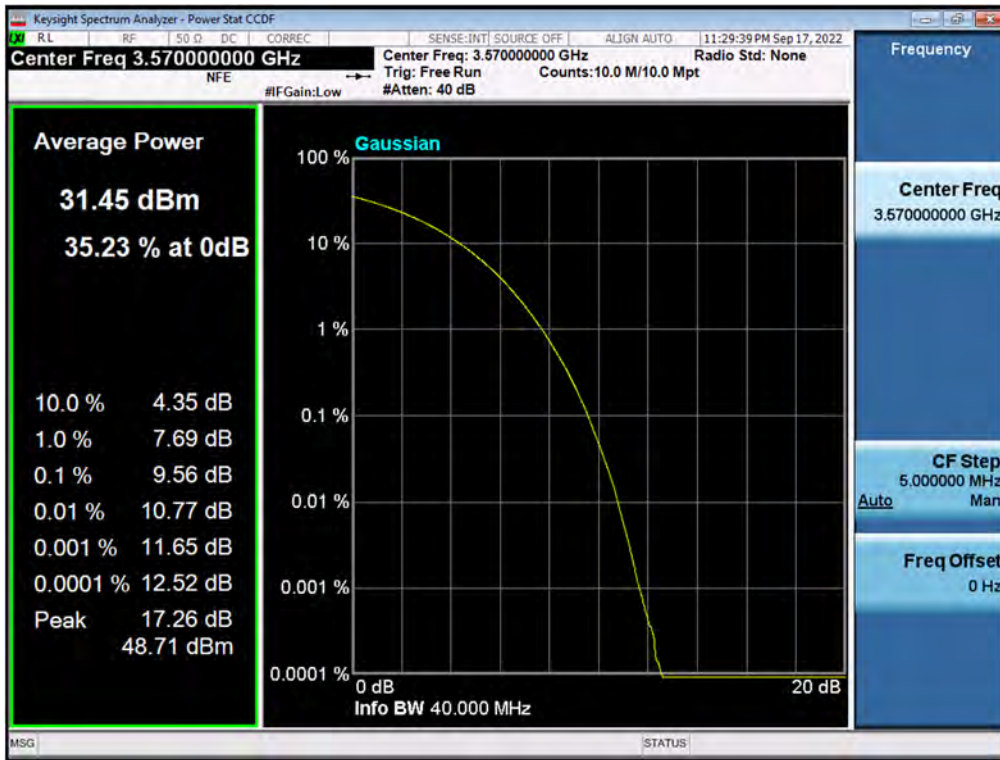
Antenna 1 / CBRS LTE[(20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C) + 20 MHz 1C][5C(4C+1C)] / LTE 20 MHz 1C + LTE 20 MHz 1C + LTE 20 MHz 1C + LTE 20 MHz 1C / Non-Contiguous / QPSK / Low



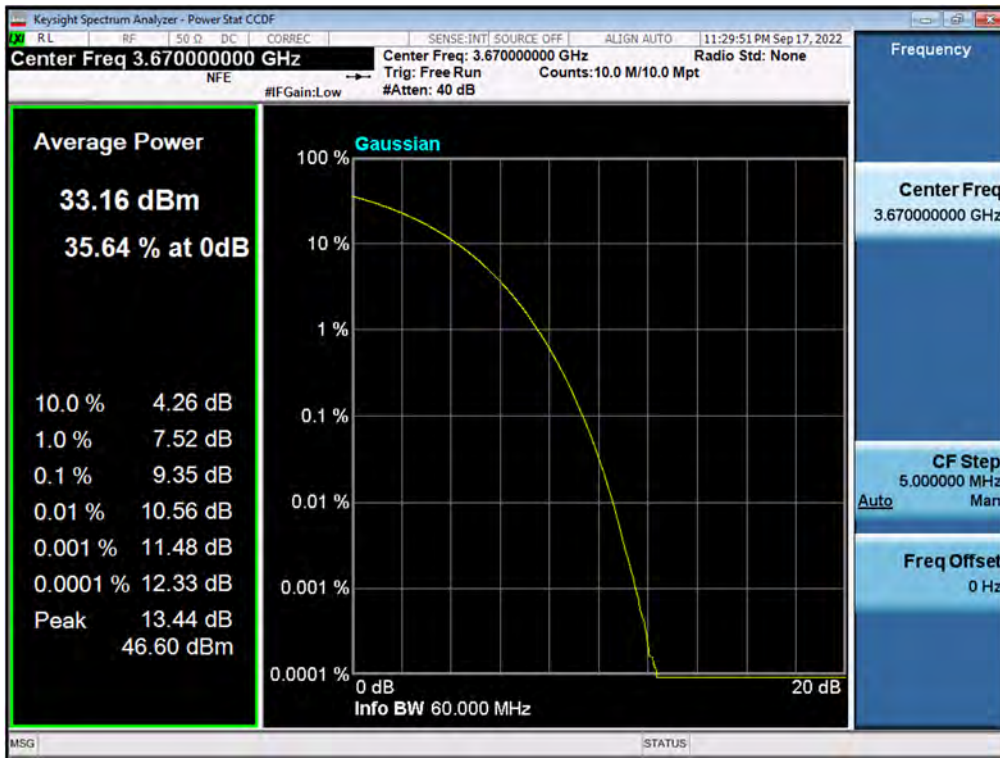
Antenna 1 / CBRS LTE[(20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C) + 20 MHz 1C][5C(4C+1C)] / LTE 20 MHz 1C / Non-Contiguous / QPSK / High



Antenna 3 / CBRS NR 40 MHz 1C + (NR 20 MHz 1C + NR 20 MHz 1C + LTE 10 MHz 1C + LTE 10 MHz 1C)[5C(1C+4C)] / NR 40 MHz 1C / Non-Contiguous / 16QAM / Low

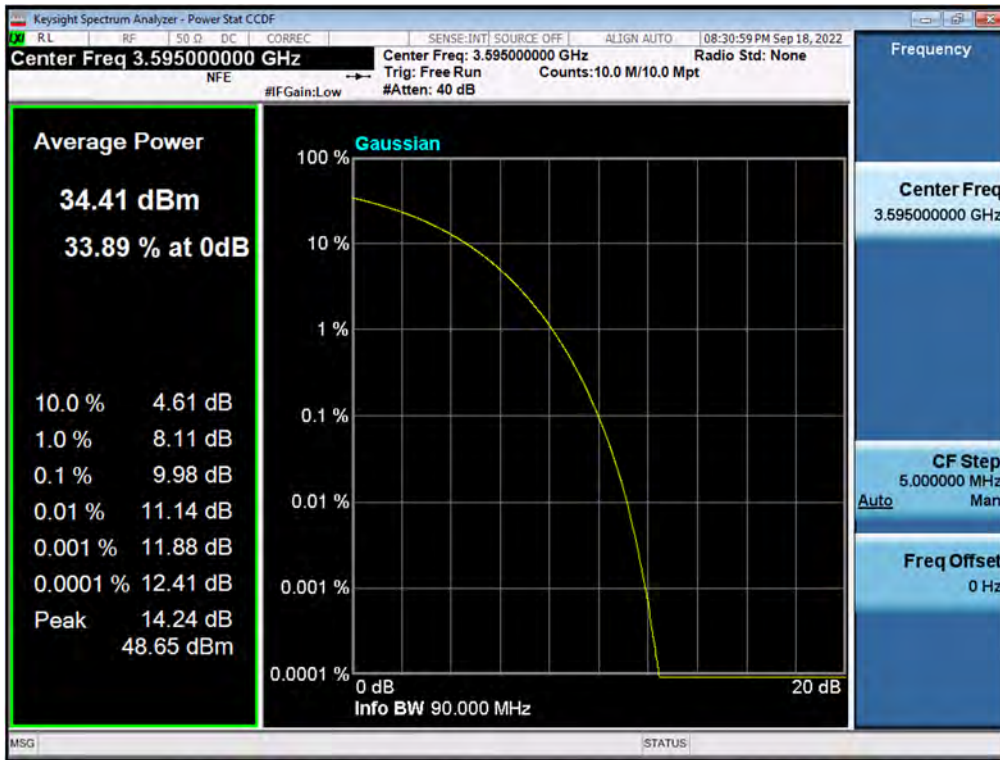


Antenna 3 / CBRS NR 40 MHz 1C + (NR 20 MHz 1C + NR 20 MHz 1C + LTE 10 MHz 1C + LTE 10 MHz 1C)[5C(1C+4C)] / NR 20 MHz 1C + NR 20 MHz 1C + LTE 10 MHz 1C + LTE 10 MHz 1C / Non-Contiguous / 16QAM / High

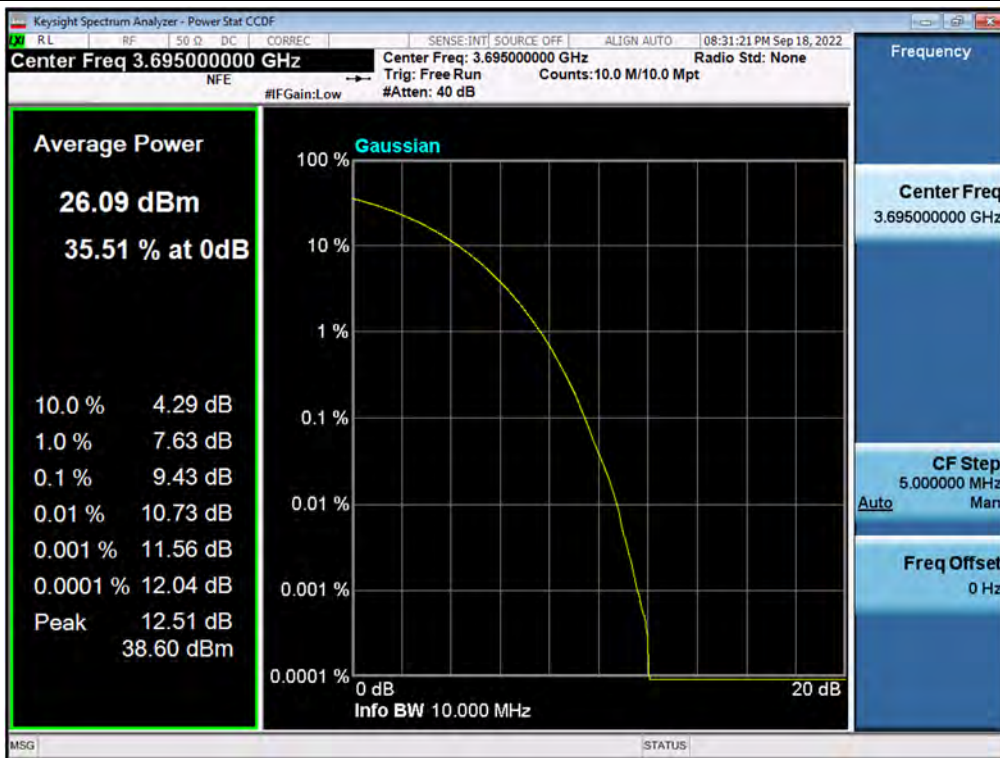




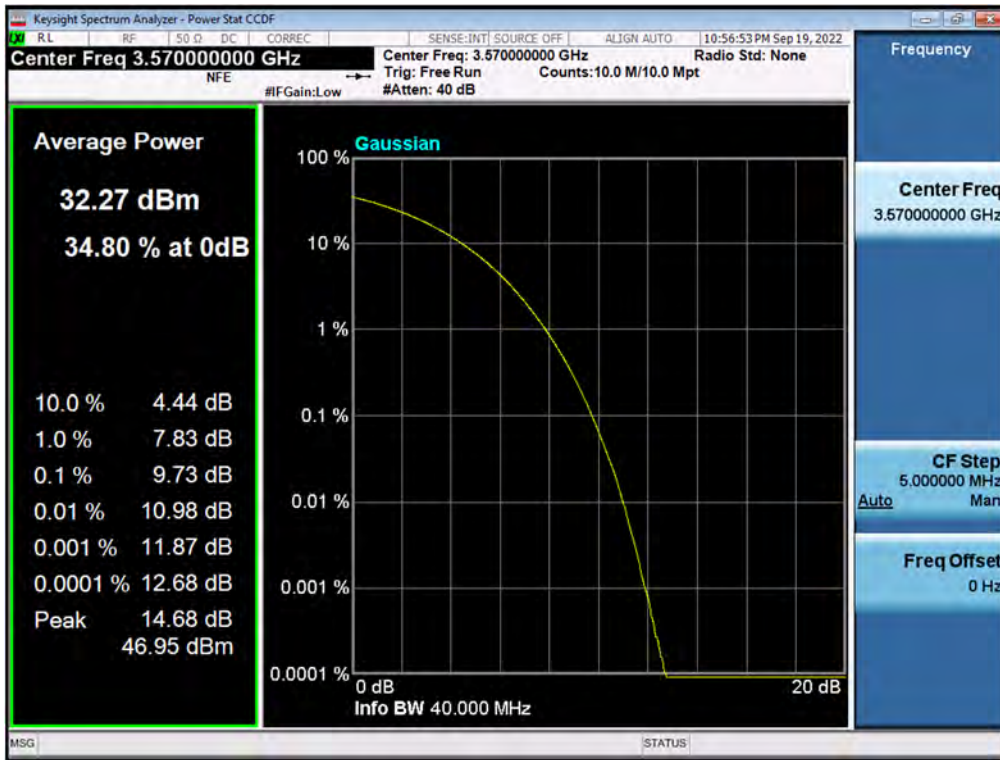
Antenna 3 / CBRS (NR 40 MHz 1C + NR 20 MHz 1C + NR 20 MHz 1C + LTE 10 MHz 1C) + LTE 10 MHz 1C[5C(4C+1C)] / NR 40 MHz 1C + NR 20 MHz 1C + NR 20 MHz 1C + LTE 10 MHz 1C / Non-Contiguous / 16QAM / Low



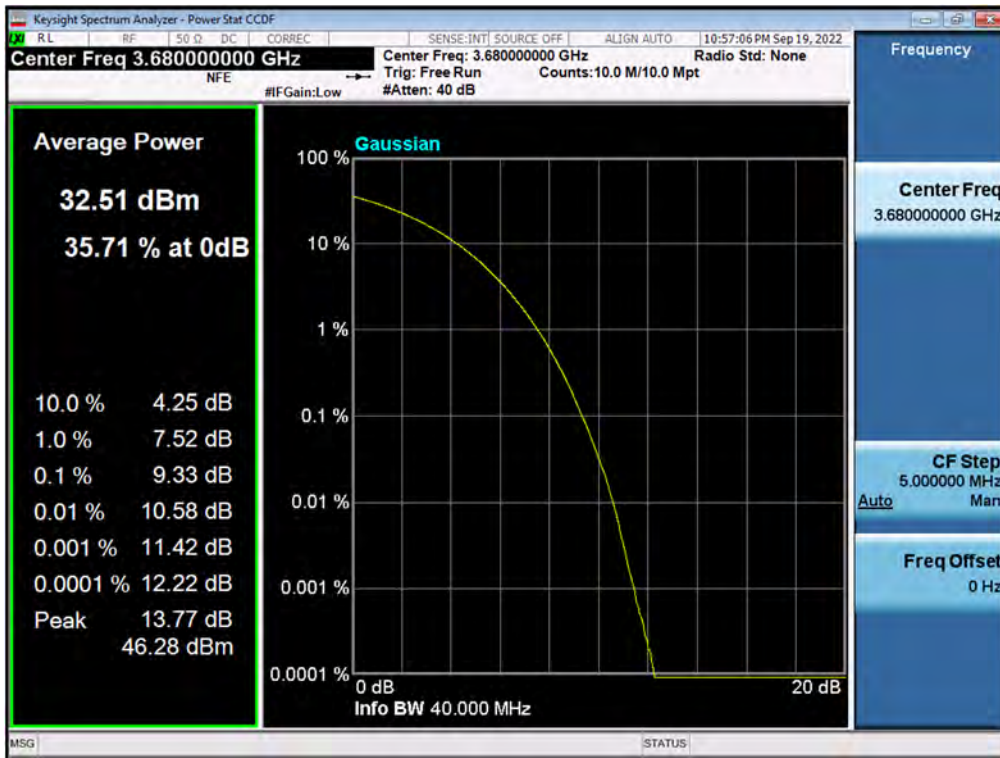
Antenna 3 / CBRS CBRS (NR 40 MHz 1C + NR 20 MHz 1C + NR 20 MHz 1C + LTE 10 MHz 1C) + LTE 10 MHz 1C[5C(4C+1C)] / LTE 10 MHz 1C / Non-Contiguous / 16QAM / High



Antenna 3 / CBRS NR 40 MHz 1C + (NR 10 MHz 1C + LTE 20 MHz 1C + LTE 5 MHz 1C + LTE 5 MHz 1C)[5C(1C+4C)] / NR 40 MHz 1C / Non-Contiguous / 16QAM / Low

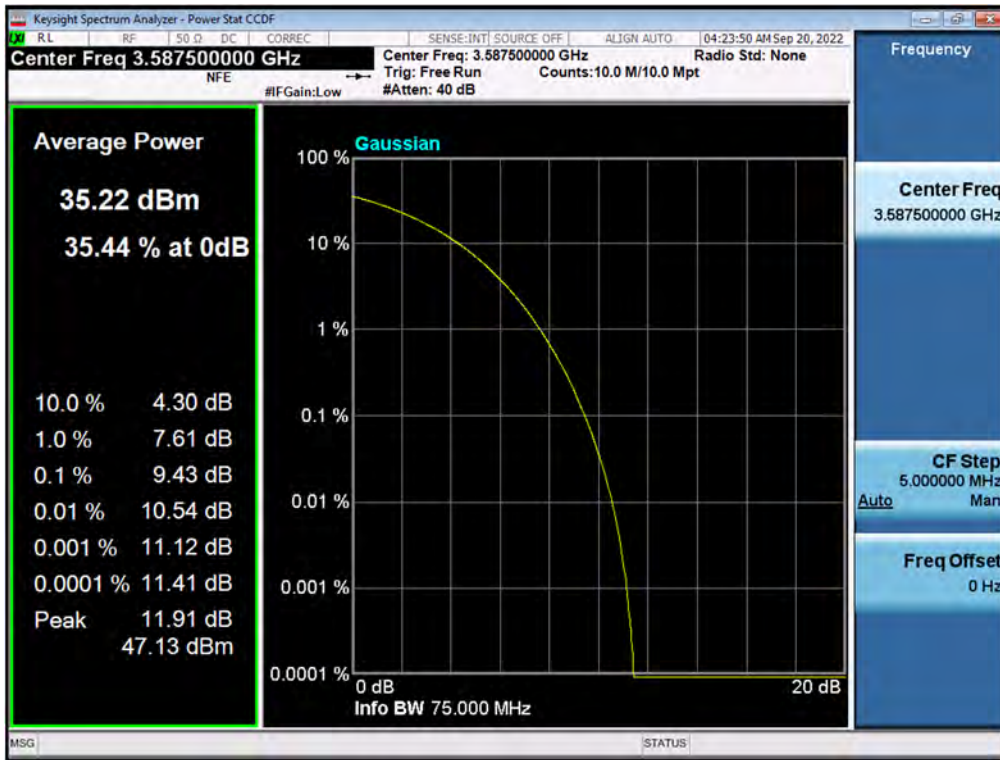


Antenna 3 / CBRS CBRS NR 40 MHz 1C + (NR 10 MHz 1C + LTE 20 MHz 1C + LTE 5 MHz 1C + LTE 5 MHz 1C)[5C(1C+4C)] / NR 10 MHz 1C + LTE 20 MHz 1C + LTE 5 MHz 1C + LTE 5 MHz 1C / Non-Contiguous / 16QAM / High

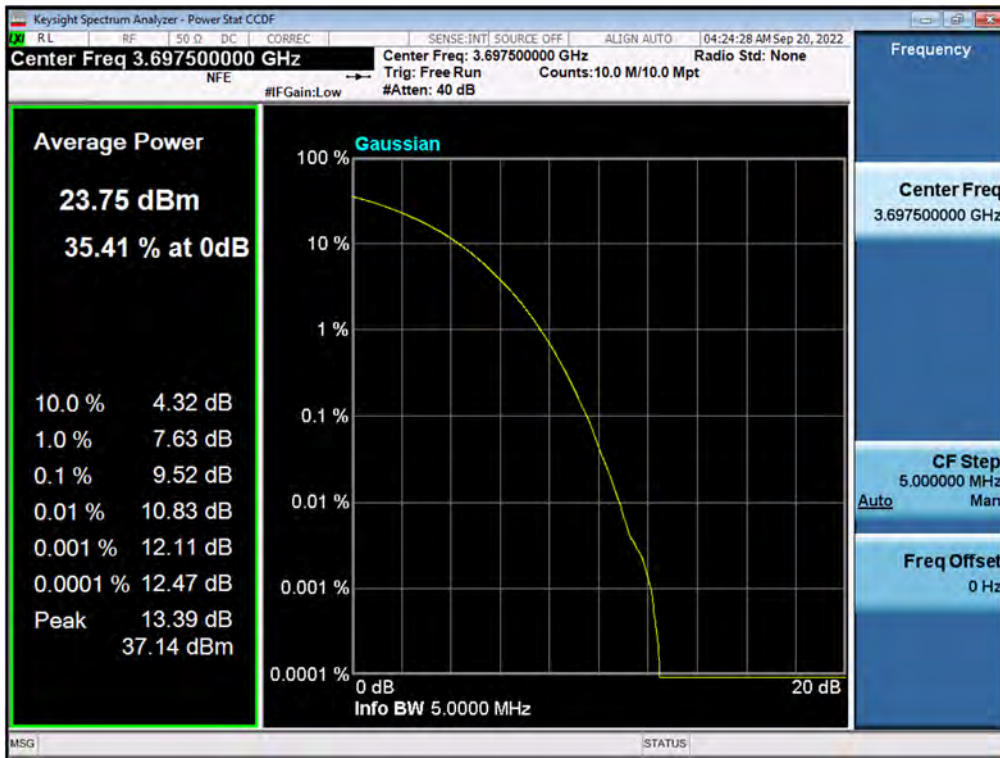




Antenna 3 / CBRS (NR 40 MHz 1C + NR 10 MHz 1C + LTE 20 MHz 1C + LTE 5 MHz 1C) + LTE 5 MHz 1C[5C(4C+1C)] / NR 40 MHz 1C + NR 10 MHz 1C + LTE 20 MHz 1C + LTE 5 MHz 1C / Non-Contiguous / QPSK / Low



Antenna 3 / CBRS (NR 40 MHz 1C + NR 10 MHz 1C + LTE 20 MHz 1C + LTE 5 MHz 1C) + LTE 5 MHz 1C[5C(4C+1C)] / LTE 5 MHz 1C / Non-Contiguous / QPSK / High



### 5.3. OCCUPIED BANDWIDTH

#### Test Requirements:

##### § 2.1049 Measurements required: Occupied bandwidth.

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 under the specified conditions of § 2.1049 (a) through (i) as applicable.

#### Test Procedures:

The measurement is performed in accordance with Section 5.4.3 and 5.4.4 of ANSI C63.26.

##### 5.4.3 Occupied bandwidth—Relative measurement procedure

The OBW is measured as the width of the spectral envelope of the modulated signal, at an amplitude level reduced from a reference value by a specified ratio (or in decibels, a specified number of dB down from the reference value). The typical ratio for transmitters is  $-26$  dB, corresponding to the 26 dB BW; however, other ratios can be specified. In this subclause, the ratio is designated by “ $-X$  dB.”

- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be wide enough to see sufficient roll off of the signal to make the measurement.
- b) The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set  $\geq 3 \times$  RBW.
- c) Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation. See guidance provided in 4.2.3.  
NOTE—Step a), step b), and step c) may require iteration to adjust within the specified tolerances.
- d) The dynamic range of the spectrum analyzer at the selected RBW shall be more than 10 dB below the target “ $-X$  dB” requirement, i.e., if the requirement calls for measuring the  $-26$  dB OBW, the spectrum analyzer noise floor at the selected RBW shall be at least 36 dB below the reference level.
- e) Set spectrum analyzer detection mode to peak, and the trace mode to max hold.
- f) Determine the reference value by either of the following:
  - 1) Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the Highest level of the displayed trace (this is the reference value).
  - 2) Set the EUT to transmit an unmodulated carrier. Set the spectrum analyzer marker to the level of the carrier.
- g) Determine the “ $-X$  dB amplitude” as equal to (Reference Value  $- X$ ). Alternatively, this calculation can be performed on the spectrum analyzer using the delta-marker measurement function.
- h) If the reference value was determined using an unmodulated carrier, turn the EUT modulation on, then either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise the trace from step f) shall be used for step i).
- i) Place two markers, one at the lowest and the other at the Highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “ $-X$  dB amplitude” determined in step f). If a marker is below this “ $-X$  dB amplitude” value it should be as close as possible to this value. The OBW is the positive frequency difference between the two markers. The spectral envelope can cross the “ $-X$  dB amplitude” at multiple points. The lowest or Highest frequency

shall be selected as the frequencies that are the farthest away from the center frequency at which the spectral envelope crosses the “-X dB amplitude.”

- j) The OBW shall be reported by providing plot(s) of the measuring instrument display, to include markers depicting the relevant frequency and amplitude information (e.g., marker table). The frequency and amplitude axis and scale shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

#### 5.4.4 Occupied bandwidth—Power bandwidth (99%) measurement procedure

The OBW is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission.

The following procedure shall be used for measuring (99%) power bandwidth:

- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be set wide enough to capture all modulation products including the emission skirts (typically a span of  $1.5 \times \text{OBW}$  is sufficient).
- b) The nominal IF filter 3 dB bandwidth (RBW) shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set  $\geq 3 \times \text{RBW}$ .
- c) Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation. See guidance provided in 4.2.3.  
NOTE—Step a), step b), and step c) may require iteration to adjust within the specified tolerances.
- d) Set the detection mode to peak, and the trace mode to max-hold.
- e) If the instrument does not have a 99% OBW function, recover the trace data points and sum directly in linear power terms. Place the recovered amplitude data points, beginning at the lowest frequency, in a running sum until 0.5% of the total is reached. Record that frequency as the lower OBW frequency. Repeat the process until 99.5% of the total is reached and record that frequency as the upper OBW frequency. The 99% power OBW can be determined by computing the difference these two frequencies.
- f) The OBW shall be reported and plot(s) of the measuring instrument display shall be provided with the test report. The frequency and amplitude axis and scale shall be clearly labeled. Tabular data can be reported in addition to the plot(s).

**Note:** The results of the Occupied Bandwidth test shown below the frequency measured values are very small and similar trend for each port, so we are attached only the worst case plot.



**Test Results:  
Tabular Data of Occupied Bandwidth**
**CBRS NR 10 MHz 1 Carrier**

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 555.00	8.6453
		Middle	3 625.00	8.6920
		High	3 695.00	8.6305
	16QAM	Low	3 555.00	8.6475
		Middle	3 625.00	8.6462
		High	3 695.00	8.6371
	64QAM	Low	3 555.00	8.6848
		Middle	3 625.00	8.6570
		High	3 695.00	8.6696
	256QAM	Low	3 555.00	8.6454
		Middle	3 625.00	8.6463
		High	3 695.00	8.6395
1	QPSK	Low	3 555.00	8.6494
		Middle	3 625.00	8.6446
		High	3 695.00	8.6521
	16QAM	Low	3 555.00	8.6657
		Middle	3 625.00	8.6473
		High	3 695.00	8.6559
	64QAM	Low	3 555.00	8.6670
		Middle	3 625.00	8.6869
		High	3 695.00	8.6146
	256QAM	Low	3 555.00	8.6814
		Middle	3 625.00	8.6668
		High	3 695.00	8.6630

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
2	QPSK	Low	3 555.00	8.6527
		Middle	3 625.00	8.6646
		High	3 695.00	8.6315
	16QAM	Low	3 555.00	8.6610
		Middle	3 625.00	8.6564
		High	3 695.00	8.6724
	64QAM	Low	3 555.00	8.6342
		Middle	3 625.00	8.6635
		High	3 695.00	8.6533
256QAM	Low	3 555.00	8.6404	
	Middle	3 625.00	8.6531	
	High	3 695.00	8.6592	
3	QPSK	Low	3 555.00	8.6484
		Middle	3 625.00	8.6276
		High	3 695.00	8.6249
	16QAM	Low	3 555.00	8.6392
		Middle	3 625.00	8.6330
		High	3 695.00	8.6721
	64QAM	Low	3 555.00	8.6609
		Middle	3 625.00	8.6705
		High	3 695.00	8.6326
256QAM	Low	3 555.00	8.6627	
	Middle	3 625.00	8.6805	
	High	3 695.00	8.6606	

CBRS NR 20 MHz 1 Carrier

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 560.00	18.289
		Middle	3 625.00	18.308
		High	3 690.00	18.254
	16QAM	Low	3 560.00	18.349
		Middle	3 625.00	18.340
		High	3 690.00	18.319
	64QAM	Low	3 560.00	18.308
		Middle	3 625.00	18.312
		High	3 690.00	18.293
	256QAM	Low	3 560.00	18.336
		Middle	3 625.00	18.287
		High	3 690.00	18.334
1	QPSK	Low	3 560.00	18.289
		Middle	3 625.00	18.322
		High	3 690.00	18.302
	16QAM	Low	3 560.00	18.288
		Middle	3 625.00	18.350
		High	3 690.00	18.303
	64QAM	Low	3 560.00	18.276
		Middle	3 625.00	18.282
		High	3 690.00	18.268
	256QAM	Low	3 560.00	18.269
		Middle	3 625.00	18.295
		High	3 690.00	18.296



Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
2	QPSK	Low	3 560.00	18.273
		Middle	3 625.00	18.236
		High	3 690.00	18.251
	16QAM	Low	3 560.00	18.304
		Middle	3 625.00	18.349
		High	3 690.00	18.343
	64QAM	Low	3 560.00	18.293
		Middle	3 625.00	18.286
		High	3 690.00	18.283
256QAM	Low	3 560.00	18.375	
	Middle	3 625.00	18.301	
	High	3 690.00	18.319	
3	QPSK	Low	3 560.00	18.285
		Middle	3 625.00	18.293
		High	3 690.00	18.287
	16QAM	Low	3 560.00	18.295
		Middle	3 625.00	18.309
		High	3 690.00	18.312
	64QAM	Low	3 560.00	18.295
		Middle	3 625.00	18.300
		High	3 690.00	18.340
256QAM	Low	3 560.00	18.319	
	Middle	3 625.00	18.309	
	High	3 690.00	18.276	

CBRS NR 30 MHz 1 Carrier

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 565.00	27.947
		Middle	3 625.00	27.949
		High	3 685.00	27.975
	16QAM	Low	3 565.00	27.905
		Middle	3 625.00	27.952
		High	3 685.00	27.871
	64QAM	Low	3 565.00	27.956
		Middle	3 625.00	27.882
		High	3 685.00	27.954
	256QAM	Low	3 565.00	27.992
		Middle	3 625.00	27.911
		High	3 685.00	27.944
1	QPSK	Low	3 565.00	27.912
		Middle	3 625.00	27.958
		High	3 685.00	27.877
	16QAM	Low	3 565.00	27.887
		Middle	3 625.00	27.948
		High	3 685.00	27.886
	64QAM	Low	3 565.00	27.966
		Middle	3 625.00	27.930
		High	3 685.00	27.924
	256QAM	Low	3 565.00	28.013
		Middle	3 625.00	27.991
		High	3 685.00	27.972

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
2	QPSK	Low	3 565.00	27.926
		Middle	3 625.00	27.933
		High	3 685.00	27.889
	16QAM	Low	3 565.00	27.935
		Middle	3 625.00	27.914
		High	3 685.00	27.873
	64QAM	Low	3 565.00	27.955
		Middle	3 625.00	27.957
		High	3 685.00	27.909
256QAM	Low	3 565.00	27.948	
	Middle	3 625.00	27.974	
	High	3 685.00	27.939	
3	QPSK	Low	3 565.00	27.879
		Middle	3 625.00	27.908
		High	3 685.00	27.955
	16QAM	Low	3 565.00	27.879
		Middle	3 625.00	27.948
		High	3 685.00	27.897
	64QAM	Low	3 565.00	27.966
		Middle	3 625.00	27.993
		High	3 685.00	27.839
256QAM	Low	3 565.00	27.953	
	Middle	3 625.00	27.943	
	High	3 685.00	27.890	



## CBRS NR 40 MHz 1 Carrier

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 570.00	38.026
		Middle	3 625.00	38.000
		High	3 680.00	37.922
	16QAM	Low	3 570.00	37.856
		Middle	3 625.00	37.977
		High	3 680.00	37.934
	64QAM	Low	3 570.00	38.011
		Middle	3 625.00	37.974
		High	3 680.00	37.952
	256QAM	Low	3 570.00	37.994
		Middle	3 625.00	37.969
		High	3 680.00	37.974
1	QPSK	Low	3 570.00	37.967
		Middle	3 625.00	38.018
		High	3 680.00	37.936
	16QAM	Low	3 570.00	38.022
		Middle	3 625.00	37.912
		High	3 680.00	37.932
	64QAM	Low	3 570.00	37.866
		Middle	3 625.00	37.861
		High	3 680.00	37.866
	256QAM	Low	3 570.00	38.015
		Middle	3 625.00	37.966
		High	3 680.00	37.941

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
2	QPSK	Low	3 570.00	37.935
		Middle	3 625.00	37.947
		High	3 680.00	37.928
	16QAM	Low	3 570.00	38.025
		Middle	3 625.00	37.894
		High	3 680.00	37.942
	64QAM	Low	3 570.00	37.918
		Middle	3 625.00	37.920
		High	3 680.00	37.991
256QAM	Low	3 570.00	37.907	
	Middle	3 625.00	38.006	
	High	3 680.00	37.924	
3	QPSK	Low	3 570.00	37.970
		Middle	3 625.00	37.983
		High	3 680.00	37.878
	16QAM	Low	3 570.00	37.891
		Middle	3 625.00	37.924
		High	3 680.00	37.928
	64QAM	Low	3 570.00	37.964
		Middle	3 625.00	37.979
		High	3 680.00	37.929
256QAM	Low	3 570.00	37.877	
	Middle	3 625.00	37.882	
	High	3 680.00	37.981	

CBRS NR 60 MHz 1 Carrier

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 580.00	57.893
		Middle	3 625.00	57.884
		High	3 670.00	57.895
	16QAM	Low	3 580.00	57.944
		Middle	3 625.00	57.974
		High	3 670.00	57.922
	64QAM	Low	3 580.00	58.089
		Middle	3 625.00	57.949
		High	3 670.00	57.896
	256QAM	Low	3 580.00	57.946
		Middle	3 625.00	57.974
		High	3 670.00	57.823
1	QPSK	Low	3 580.00	57.885
		Middle	3 625.00	58.028
		High	3 670.00	57.921
	16QAM	Low	3 580.00	57.940
		Middle	3 625.00	57.956
		High	3 670.00	57.994
	64QAM	Low	3 580.00	58.088
		Middle	3 625.00	58.089
		High	3 670.00	57.930
	256QAM	Low	3 580.00	58.007
		Middle	3 625.00	57.913
		High	3 670.00	57.833

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
2	QPSK	Low	3 580.00	57.962
		Middle	3 625.00	57.960
		High	3 670.00	58.031
	16QAM	Low	3 580.00	57.941
		Middle	3 625.00	57.978
		High	3 670.00	57.834
	64QAM	Low	3 580.00	57.970
		Middle	3 625.00	57.934
		High	3 670.00	58.064
256QAM	Low	3 580.00	57.901	
	Middle	3 625.00	57.950	
	High	3 670.00	57.916	
3	QPSK	Low	3 580.00	57.965
		Middle	3 625.00	57.923
		High	3 670.00	57.985
	16QAM	Low	3 580.00	58.033
		Middle	3 625.00	57.980
		High	3 670.00	57.880
	64QAM	Low	3 580.00	58.020
		Middle	3 625.00	58.017
		High	3 670.00	57.867
256QAM	Low	3 580.00	57.996	
	Middle	3 625.00	57.953	
	High	3 670.00	57.947	

## CBRS NR 80 MHz 1 Carrier

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 590.00	77.540
		Middle	3 625.00	77.588
		High	3 660.00	77.529
	16QAM	Low	3 590.00	77.555
		Middle	3 625.00	77.637
		High	3 660.00	77.668
	64QAM	Low	3 590.00	77.648
		Middle	3 625.00	77.655
		High	3 660.00	77.619
	256QAM	Low	3 590.00	77.495
		Middle	3 625.00	77.576
		High	3 660.00	77.522
1	QPSK	Low	3 590.00	77.553
		Middle	3 625.00	77.642
		High	3 660.00	77.637
	16QAM	Low	3 590.00	77.708
		Middle	3 625.00	77.748
		High	3 660.00	77.606
	64QAM	Low	3 590.00	77.511
		Middle	3 625.00	77.659
		High	3 660.00	77.581
	256QAM	Low	3 590.00	77.570
		Middle	3 625.00	77.670
		High	3 660.00	77.477



Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
2	QPSK	Low	3 590.00	77.594
		Middle	3 625.00	77.743
		High	3 660.00	77.470
	16QAM	Low	3 590.00	77.554
		Middle	3 625.00	77.563
		High	3 660.00	77.679
	64QAM	Low	3 590.00	77.433
		Middle	3 625.00	77.517
		High	3 660.00	77.417
256QAM	Low	3 590.00	77.592	
	Middle	3 625.00	77.568	
	High	3 660.00	77.588	
3	QPSK	Low	3 590.00	77.581
		Middle	3 625.00	77.662
		High	3 660.00	77.490
	16QAM	Low	3 590.00	77.685
		Middle	3 625.00	77.619
		High	3 660.00	77.564
	64QAM	Low	3 590.00	77.628
		Middle	3 625.00	77.531
		High	3 660.00	77.627
256QAM	Low	3 590.00	77.548	
	Middle	3 625.00	77.782	
	High	3 660.00	77.495	

CBRS NR 100 MHz 1 Carrier

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 600.00	97.635
		Middle	3 625.00	97.775
		High	3 650.00	97.606
	16QAM	Low	3 600.00	97.452
		Middle	3 625.00	97.752
		High	3 650.00	97.679
	64QAM	Low	3 600.00	97.531
		Middle	3 625.00	97.815
		High	3 650.00	97.709
	256QAM	Low	3 600.00	97.666
		Middle	3 625.00	97.727
		High	3 650.00	97.824
1	QPSK	Low	3 600.00	97.648
		Middle	3 625.00	97.523
		High	3 650.00	97.583
	16QAM	Low	3 600.00	97.547
		Middle	3 625.00	97.482
		High	3 650.00	97.646
	64QAM	Low	3 600.00	97.494
		Middle	3 625.00	97.584
		High	3 650.00	97.623
	256QAM	Low	3 600.00	97.557
		Middle	3 625.00	97.586
		High	3 650.00	97.536

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
2	QPSK	Low	3 600.00	97.527
		Middle	3 625.00	97.426
		High	3 650.00	97.624
	16QAM	Low	3 600.00	97.621
		Middle	3 625.00	97.465
		High	3 650.00	97.643
	64QAM	Low	3 600.00	97.493
		Middle	3 625.00	97.496
		High	3 650.00	97.536
256QAM	Low	3 600.00	97.449	
	Middle	3 625.00	97.605	
	High	3 650.00	97.591	
3	QPSK	Low	3 600.00	97.383
		Middle	3 625.00	97.722
		High	3 650.00	97.430
	16QAM	Low	3 600.00	97.502
		Middle	3 625.00	97.672
		High	3 650.00	97.470
	64QAM	Low	3 600.00	97.636
		Middle	3 625.00	97.654
		High	3 650.00	97.597
256QAM	Low	3 600.00	97.600	
	Middle	3 625.00	97.602	
	High	3 650.00	97.586	

## CBRS LTE 5 MHz 1 Carrier

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 552.50	4.4957
		Middle	3 625.00	4.5036
		High	3 697.50	4.5020
	16QAM	Low	3 552.50	4.4995
		Middle	3 625.00	4.4995
		High	3 697.50	4.5033
	64QAM	Low	3 552.50	4.4963
		Middle	3 625.00	4.5083
		High	3 697.50	4.5003
	256QAM	Low	3 552.50	4.4993
		Middle	3 625.00	4.4954
		High	3 697.50	4.4954
1	QPSK	Low	3 552.50	4.4935
		Middle	3 625.00	4.4931
		High	3 697.50	4.4958
	16QAM	Low	3 552.50	4.5165
		Middle	3 625.00	4.5058
		High	3 697.50	4.4976
	64QAM	Low	3 552.50	4.5087
		Middle	3 625.00	4.5007
		High	3 697.50	4.4939
	256QAM	Low	3 552.50	4.4994
		Middle	3 625.00	4.4964
		High	3 697.50	4.5080

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
2	QPSK	Low	3 552.50	4.4925
		Middle	3 625.00	4.4934
		High	3 697.50	4.4954
	16QAM	Low	3 552.50	4.5064
		Middle	3 625.00	4.5019
		High	3 697.50	4.5011
	64QAM	Low	3 552.50	4.4999
		Middle	3 625.00	4.4958
		High	3 697.50	4.5004
256QAM	Low	3 552.50	4.5019	
	Middle	3 625.00	4.4931	
	High	3 697.50	4.5011	
3	QPSK	Low	3 552.50	4.4861
		Middle	3 625.00	4.4891
		High	3 697.50	4.4927
	16QAM	Low	3 552.50	4.4997
		Middle	3 625.00	4.5067
		High	3 697.50	4.4995
	64QAM	Low	3 552.50	4.5002
		Middle	3 625.00	4.5030
		High	3 697.50	4.4914
256QAM	Low	3 552.50	4.4945	
	Middle	3 625.00	4.4964	
	High	3 697.50	4.4977	



**CBRS LTE 10 MHz 1 Carrier**

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 555.00	8.9506
		Middle	3 625.00	8.9782
		High	3 695.00	8.9757
	16QAM	Low	3 555.00	8.9928
		Middle	3 625.00	9.0345
		High	3 695.00	8.9810
	64QAM	Low	3 555.00	9.0067
		Middle	3 625.00	8.9676
		High	3 695.00	8.9846
	256QAM	Low	3 555.00	8.9652
		Middle	3 625.00	8.9933
		High	3 695.00	8.9751
1	QPSK	Low	3 555.00	8.9955
		Middle	3 625.00	8.9588
		High	3 695.00	8.9904
	16QAM	Low	3 555.00	9.0100
		Middle	3 625.00	8.9766
		High	3 695.00	8.9907
	64QAM	Low	3 555.00	8.9896
		Middle	3 625.00	9.0019
		High	3 695.00	9.0023
	256QAM	Low	3 555.00	8.9706
		Middle	3 625.00	8.9800
		High	3 695.00	8.9675

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
2	QPSK	Low	3 555.00	8.9654
		Middle	3 625.00	8.9677
		High	3 695.00	8.9634
	16QAM	Low	3 555.00	8.9987
		Middle	3 625.00	9.0043
		High	3 695.00	9.0257
	64QAM	Low	3 555.00	8.9964
		Middle	3 625.00	9.0092
		High	3 695.00	8.9945
256QAM	Low	3 555.00	8.9772	
	Middle	3 625.00	8.9824	
	High	3 695.00	9.0003	
3	QPSK	Low	3 555.00	8.9791
		Middle	3 625.00	8.9626
		High	3 695.00	8.9771
	16QAM	Low	3 555.00	9.0123
		Middle	3 625.00	8.9885
		High	3 695.00	9.0277
	64QAM	Low	3 555.00	9.0171
		Middle	3 625.00	8.9801
		High	3 695.00	8.9758
256QAM	Low	3 555.00	8.9628	
	Middle	3 625.00	8.9879	
	High	3 695.00	9.0019	

CBRS LTE 15 MHz 1 Carrier

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 557.50	13.454
		Middle	3 625.00	13.415
		High	3 692.50	13.462
	16QAM	Low	3 557.50	13.444
		Middle	3 625.00	13.446
		High	3 692.50	13.489
	64QAM	Low	3 557.50	13.461
		Middle	3 625.00	13.460
		High	3 692.50	13.479
	256QAM	Low	3 557.50	13.466
		Middle	3 625.00	13.478
		High	3 692.50	13.462
1	QPSK	Low	3 557.50	13.444
		Middle	3 625.00	13.418
		High	3 692.50	13.418
	16QAM	Low	3 557.50	13.451
		Middle	3 625.00	13.488
		High	3 692.50	13.494
	64QAM	Low	3 557.50	13.488
		Middle	3 625.00	13.476
		High	3 692.50	13.428
	256QAM	Low	3 557.50	13.462
		Middle	3 625.00	13.450
		High	3 692.50	13.471

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
2	QPSK	Low	3 557.50	13.461
		Middle	3 625.00	13.478
		High	3 692.50	13.460
	16QAM	Low	3 557.50	13.464
		Middle	3 625.00	13.445
		High	3 692.50	13.451
	64QAM	Low	3 557.50	13.467
		Middle	3 625.00	13.463
		High	3 692.50	13.450
256QAM	Low	3 557.50	13.489	
	Middle	3 625.00	13.459	
	High	3 692.50	13.426	
3	QPSK	Low	3 557.50	13.445
		Middle	3 625.00	13.418
		High	3 692.50	13.447
	16QAM	Low	3 557.50	13.454
		Middle	3 625.00	13.457
		High	3 692.50	13.449
	64QAM	Low	3 557.50	13.471
		Middle	3 625.00	13.462
		High	3 692.50	13.431
256QAM	Low	3 557.50	13.454	
	Middle	3 625.00	13.409	
	High	3 692.50	13.467	

**CBRS LTE 20 MHz 1 Carrier**

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 560.00	17.933
		Middle	3 625.00	17.944
		High	3 690.00	17.932
	16QAM	Low	3 560.00	17.951
		Middle	3 625.00	17.955
		High	3 690.00	17.907
	64QAM	Low	3 560.00	17.939
		Middle	3 625.00	17.941
		High	3 690.00	17.970
	256QAM	Low	3 560.00	17.946
		Middle	3 625.00	17.969
		High	3 690.00	17.908
1	QPSK	Low	3 560.00	17.899
		Middle	3 625.00	17.952
		High	3 690.00	17.969
	16QAM	Low	3 560.00	17.971
		Middle	3 625.00	17.933
		High	3 690.00	17.923
	64QAM	Low	3 560.00	18.009
		Middle	3 625.00	17.926
		High	3 690.00	18.004
	256QAM	Low	3 560.00	17.951
		Middle	3 625.00	17.939
		High	3 690.00	17.890



Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
2	QPSK	Low	3 560.00	17.950
		Middle	3 625.00	17.953
		High	3 690.00	17.950
	16QAM	Low	3 560.00	17.929
		Middle	3 625.00	17.929
		High	3 690.00	17.953
	64QAM	Low	3 560.00	17.972
		Middle	3 625.00	18.006
		High	3 690.00	17.960
256QAM	Low	3 560.00	17.934	
	Middle	3 625.00	17.962	
	High	3 690.00	17.995	
3	QPSK	Low	3 560.00	17.904
		Middle	3 625.00	17.947
		High	3 690.00	17.945
	16QAM	Low	3 560.00	17.971
		Middle	3 625.00	17.965
		High	3 690.00	17.890
	64QAM	Low	3 560.00	17.959
		Middle	3 625.00	17.942
		High	3 690.00	17.929
256QAM	Low	3 560.00	17.926	
	Middle	3 625.00	17.957	
	High	3 690.00	17.942	

Tabular Data of RF Contiguous Occupied Bandwidth

CBRS NR(60 MHz 1C + 30 MHz 1C)[2C]

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 595.00	87.498
		Middle	3 625.00	87.629
		High	3 655.00	87.483
	16QAM	Low	3 595.00	87.622
		Middle	3 625.00	87.559
		High	3 655.00	87.611
	64QAM	Low	3 595.00	87.634
		Middle	3 625.00	87.666
		High	3 655.00	87.642
	256QAM	Low	3 595.00	87.655
		Middle	3 625.00	87.767
		High	3 655.00	87.831
1	QPSK	Low	3 595.00	87.550
		Middle	3 625.00	87.646
		High	3 655.00	87.608
	16QAM	Low	3 595.00	87.730
		Middle	3 625.00	87.684
		High	3 655.00	87.735
	64QAM	Low	3 595.00	87.469
		Middle	3 625.00	87.827
		High	3 655.00	87.790
	256QAM	Low	3 595.00	87.772
		Middle	3 625.00	87.821
		High	3 655.00	87.640

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
2	QPSK	Low	3 595.00	87.675
		Middle	3 625.00	87.759
		High	3 655.00	87.707
	16QAM	Low	3 595.00	87.564
		Middle	3 625.00	87.656
		High	3 655.00	87.622
	64QAM	Low	3 595.00	87.665
		Middle	3 625.00	87.644
		High	3 655.00	87.702
256QAM	Low	3 595.00	87.504	
	Middle	3 625.00	87.616	
	High	3 655.00	87.785	
3	QPSK	Low	3 595.00	87.599
		Middle	3 625.00	87.606
		High	3 655.00	87.753
	16QAM	Low	3 595.00	87.569
		Middle	3 625.00	87.714
		High	3 655.00	87.602
	64QAM	Low	3 595.00	87.457
		Middle	3 625.00	87.628
		High	3 655.00	87.625
256QAM	Low	3 595.00	87.685	
	Middle	3 625.00	87.610	
	High	3 655.00	87.779	

Note: 1C: 1 Carrier, 2C: 2 Carrier

**CBRS LTE(15 MHz 1C + 15 MHz 1C)[2C]**

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 565.00	28.380
		Middle	3 625.00	28.452
		High	3 685.00	28.374
	16QAM	Low	3 565.00	28.450
		Middle	3 625.00	28.402
		High	3 685.00	28.381
	64QAM	Low	3 565.00	28.417
		Middle	3 625.00	28.393
		High	3 685.00	28.421
	256QAM	Low	3 565.00	28.404
		Middle	3 625.00	28.413
		High	3 685.00	28.397
1	QPSK	Low	3 565.00	28.367
		Middle	3 625.00	28.383
		High	3 685.00	28.442
	16QAM	Low	3 565.00	28.431
		Middle	3 625.00	28.346
		High	3 685.00	28.355
	64QAM	Low	3 565.00	28.335
		Middle	3 625.00	28.369
		High	3 685.00	28.402
	256QAM	Low	3 565.00	28.359
		Middle	3 625.00	28.375
		High	3 685.00	28.394

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
2	QPSK	Low	3 565.00	28.343
		Middle	3 625.00	28.396
		High	3 685.00	28.327
	16QAM	Low	3 565.00	28.397
		Middle	3 625.00	28.386
		High	3 685.00	28.360
	64QAM	Low	3 565.00	28.398
		Middle	3 625.00	28.412
		High	3 685.00	28.376
256QAM	Low	3 565.00	28.378	
	Middle	3 625.00	28.343	
	High	3 685.00	28.365	
3	QPSK	Low	3 565.00	28.455
		Middle	3 625.00	28.371
		High	3 685.00	28.352
	16QAM	Low	3 565.00	28.438
		Middle	3 625.00	28.352
		High	3 685.00	28.418
	64QAM	Low	3 565.00	28.349
		Middle	3 625.00	28.361
		High	3 685.00	28.380
256QAM	Low	3 565.00	28.423	
	Middle	3 625.00	28.461	
	High	3 685.00	28.416	

Note: 1C: 1 Carrier, 2C: 2 Carrier

## CBRS LTE 5 MHz 1C + NR 10 MHz 1C[2C]

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 557.50	14.005
		Middle	3 625.00	14.027
		High	3 692.50	13.966
	16QAM	Low	3 557.50	14.015
		Middle	3 625.00	14.038
		High	3 692.50	14.027
	64QAM	Low	3 557.50	14.007
		Middle	3 625.00	14.058
		High	3 692.50	14.061
	256QAM	Low	3 557.50	14.037
		Middle	3 625.00	13.999
		High	3 692.50	13.966
1	QPSK	Low	3 557.50	14.013
		Middle	3 625.00	14.043
		High	3 692.50	14.001
	16QAM	Low	3 557.50	14.002
		Middle	3 625.00	14.017
		High	3 692.50	14.014
	64QAM	Low	3 557.50	14.038
		Middle	3 625.00	14.035
		High	3 692.50	14.038
	256QAM	Low	3 557.50	14.042
		Middle	3 625.00	14.029
		High	3 692.50	14.005

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
2	QPSK	Low	3 557.50	14.005
		Middle	3 625.00	14.019
		High	3 692.50	14.064
	16QAM	Low	3 557.50	14.025
		Middle	3 625.00	14.019
		High	3 692.50	14.015
	64QAM	Low	3 557.50	14.013
		Middle	3 625.00	14.015
		High	3 692.50	14.005
256QAM	Low	3 557.50	14.001	
	Middle	3 625.00	13.992	
	High	3 692.50	14.026	
3	QPSK	Low	3 557.50	13.984
		Middle	3 625.00	14.019
		High	3 692.50	14.001
	16QAM	Low	3 557.50	14.058
		Middle	3 625.00	14.005
		High	3 692.50	13.998
	64QAM	Low	3 557.50	14.020
		Middle	3 625.00	14.012
		High	3 692.50	14.047
256QAM	Low	3 557.50	14.005	
	Middle	3 625.00	14.028	
	High	3 692.50	13.990	

Note: 1C: 1 Carrier, 2C: 2 Carrier

**CBRS NR(20 MHz 1C + 20 MHz 1C + 10 MHz 1C)[3C]**

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 575.00	48.213
		Middle	3 625.00	48.255
		High	3 675.00	48.252
	16QAM	Low	3 575.00	48.290
		Middle	3 625.00	48.289
		High	3 675.00	48.285
	64QAM	Low	3 575.00	48.299
		Middle	3 625.00	48.258
		High	3 675.00	48.265
	256QAM	Low	3 575.00	48.230
		Middle	3 625.00	48.244
		High	3 675.00	48.254
1	QPSK	Low	3 575.00	48.228
		Middle	3 625.00	48.241
		High	3 675.00	48.212
	16QAM	Low	3 575.00	48.287
		Middle	3 625.00	48.247
		High	3 675.00	48.256
	64QAM	Low	3 575.00	48.212
		Middle	3 625.00	48.265
		High	3 675.00	48.317
	256QAM	Low	3 575.00	48.212
		Middle	3 625.00	48.238
		High	3 675.00	48.369



Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
2	QPSK	Low	3 575.00	48.219
		Middle	3 625.00	48.267
		High	3 675.00	48.326
	16QAM	Low	3 575.00	48.263
		Middle	3 625.00	48.269
		High	3 675.00	48.325
	64QAM	Low	3 575.00	48.212
		Middle	3 625.00	48.255
		High	3 675.00	48.285
256QAM	Low	3 575.00	48.191	
	Middle	3 625.00	48.302	
	High	3 675.00	48.250	
3	QPSK	Low	3 575.00	48.274
		Middle	3 625.00	48.297
		High	3 675.00	48.298
	16QAM	Low	3 575.00	48.236
		Middle	3 625.00	48.324
		High	3 675.00	48.340
	64QAM	Low	3 575.00	48.338
		Middle	3 625.00	48.239
		High	3 675.00	48.220
256QAM	Low	3 575.00	48.261	
	Middle	3 625.00	48.270	
	High	3 675.00	48.324	

Note: 1C: 1 Carrier, 3C: 3 Carrier

## CBRS NR(30 MHz 1C + 30 MHz 1C + 10 MHz 1C)[3C]

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 585.00	68.017
		Middle	3 625.00	67.950
		High	3 665.00	67.991
	16QAM	Low	3 585.00	68.006
		Middle	3 625.00	67.999
		High	3 665.00	68.061
	64QAM	Low	3 585.00	67.972
		Middle	3 625.00	68.048
		High	3 665.00	67.980
	256QAM	Low	3 585.00	68.092
		Middle	3 625.00	68.074
		High	3 665.00	67.948
1	QPSK	Low	3 585.00	67.878
		Middle	3 625.00	67.933
		High	3 665.00	67.990
	16QAM	Low	3 585.00	68.125
		Middle	3 625.00	68.073
		High	3 665.00	68.055
	64QAM	Low	3 585.00	68.006
		Middle	3 625.00	67.964
		High	3 665.00	68.063
	256QAM	Low	3 585.00	68.021
		Middle	3 625.00	68.131
		High	3 665.00	68.107

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
2	QPSK	Low	3 585.00	68.185
		Middle	3 625.00	68.168
		High	3 665.00	68.122
	16QAM	Low	3 585.00	68.026
		Middle	3 625.00	68.012
		High	3 665.00	67.950
	64QAM	Low	3 585.00	67.987
		Middle	3 625.00	68.044
		High	3 665.00	68.039
256QAM	Low	3 585.00	68.020	
	Middle	3 625.00	68.142	
	High	3 665.00	68.165	
3	QPSK	Low	3 585.00	68.127
		Middle	3 625.00	67.990
		High	3 665.00	68.012
	16QAM	Low	3 585.00	68.003
		Middle	3 625.00	68.074
		High	3 665.00	68.073
	64QAM	Low	3 585.00	68.083
		Middle	3 625.00	68.002
		High	3 665.00	67.991
256QAM	Low	3 585.00	68.165	
	Middle	3 625.00	68.083	
	High	3 665.00	68.156	

Note: 1C: 1 Carrier, 3C: 3 Carrier

**CBRS LTE(15 MHz 1C + 15 MHz 1C + 10 MHz 1C)[3C]**

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 570.00	38.591
		Middle	3 625.00	38.614
		High	3 680.00	38.565
	16QAM	Low	3 570.00	38.623
		Middle	3 625.00	38.583
		High	3 680.00	38.571
	64QAM	Low	3 570.00	38.532
		Middle	3 625.00	38.483
		High	3 680.00	38.600
	256QAM	Low	3 570.00	38.590
		Middle	3 625.00	38.557
		High	3 680.00	38.609
1	QPSK	Low	3 570.00	38.634
		Middle	3 625.00	38.585
		High	3 680.00	38.596
	16QAM	Low	3 570.00	38.622
		Middle	3 625.00	38.610
		High	3 680.00	38.592
	64QAM	Low	3 570.00	38.646
		Middle	3 625.00	38.579
		High	3 680.00	38.635
	256QAM	Low	3 570.00	38.570
		Middle	3 625.00	38.606
		High	3 680.00	38.551

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
2	QPSK	Low	3 570.00	38.533
		Middle	3 625.00	38.585
		High	3 680.00	38.544
	16QAM	Low	3 570.00	38.652
		Middle	3 625.00	38.678
		High	3 680.00	38.567
	64QAM	Low	3 570.00	38.557
		Middle	3 625.00	38.596
		High	3 680.00	38.579
256QAM	Low	3 570.00	38.629	
	Middle	3 625.00	38.509	
	High	3 680.00	38.566	
3	QPSK	Low	3 570.00	38.512
		Middle	3 625.00	38.588
		High	3 680.00	38.587
	16QAM	Low	3 570.00	38.511
		Middle	3 625.00	38.644
		High	3 680.00	38.590
	64QAM	Low	3 570.00	38.507
		Middle	3 625.00	38.645
		High	3 680.00	38.554
256QAM	Low	3 570.00	38.524	
	Middle	3 625.00	38.579	
	High	3 680.00	38.631	

Note: 1C: 1 Carrier, 3C: 3 Carrier

**CBRS LTE(20 MHz 1C + 15 MHz 1C + 15 MHz 1C)[3C]**

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 575.00	48.035
		Middle	3 625.00	48.000
		High	3 675.00	48.047
	16QAM	Low	3 575.00	47.944
		Middle	3 625.00	48.039
		High	3 675.00	48.101
	64QAM	Low	3 575.00	48.018
		Middle	3 625.00	47.993
		High	3 675.00	48.033
	256QAM	Low	3 575.00	48.056
		Middle	3 625.00	47.986
		High	3 675.00	48.021
1	QPSK	Low	3 575.00	48.027
		Middle	3 625.00	47.942
		High	3 675.00	48.049
	16QAM	Low	3 575.00	48.056
		Middle	3 625.00	48.051
		High	3 675.00	48.095
	64QAM	Low	3 575.00	47.919
		Middle	3 625.00	48.035
		High	3 675.00	48.072
	256QAM	Low	3 575.00	47.871
		Middle	3 625.00	48.029
		High	3 675.00	48.018

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
2	QPSK	Low	3 575.00	48.053
		Middle	3 625.00	48.043
		High	3 675.00	48.017
	16QAM	Low	3 575.00	47.975
		Middle	3 625.00	47.992
		High	3 675.00	48.109
	64QAM	Low	3 575.00	48.025
		Middle	3 625.00	48.124
		High	3 675.00	48.078
	256QAM	Low	3 575.00	48.004
		Middle	3 625.00	47.956
		High	3 675.00	47.948
3	QPSK	Low	3 575.00	47.997
		Middle	3 625.00	47.979
		High	3 675.00	48.008
	16QAM	Low	3 575.00	47.990
		Middle	3 625.00	48.027
		High	3 675.00	48.010
	64QAM	Low	3 575.00	47.923
		Middle	3 625.00	47.997
		High	3 675.00	48.052
	256QAM	Low	3 575.00	47.930
		Middle	3 625.00	48.004
		High	3 675.00	47.999

Note: 1C: 1 Carrier, 3C: 3 Carrier

**CBRS LTE(20 MHz 1C + 20 MHz 1C + 20 MHz 1C)[3C]**

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 580.00	57.663
		Middle	3 625.00	57.778
		High	3 670.00	57.719
	16QAM	Low	3 580.00	57.683
		Middle	3 625.00	57.732
		High	3 670.00	57.782
	64QAM	Low	3 580.00	57.628
		Middle	3 625.00	57.785
		High	3 670.00	57.656
256QAM	Low	3 580.00	57.668	
	Middle	3 625.00	57.981	
	High	3 670.00	57.570	
1	QPSK	Low	3 580.00	57.715
		Middle	3 625.00	57.732
		High	3 670.00	57.680
	16QAM	Low	3 580.00	57.669
		Middle	3 625.00	57.700
		High	3 670.00	57.687
	64QAM	Low	3 580.00	57.685
		Middle	3 625.00	57.711
		High	3 670.00	57.702
256QAM	Low	3 580.00	57.600	
	Middle	3 625.00	57.740	
	High	3 670.00	57.713	



Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
2	QPSK	Low	3 580.00	57.656
		Middle	3 625.00	57.679
		High	3 670.00	57.680
	16QAM	Low	3 580.00	57.691
		Middle	3 625.00	57.772
		High	3 670.00	57.659
	64QAM	Low	3 580.00	57.582
		Middle	3 625.00	57.729
		High	3 670.00	57.626
256QAM	Low	3 580.00	57.676	
	Middle	3 625.00	57.854	
	High	3 670.00	57.708	
3	QPSK	Low	3 580.00	57.679
		Middle	3 625.00	57.684
		High	3 670.00	57.696
	16QAM	Low	3 580.00	57.728
		Middle	3 625.00	57.831
		High	3 670.00	57.727
	64QAM	Low	3 580.00	57.667
		Middle	3 625.00	57.684
		High	3 670.00	57.717
256QAM	Low	3 580.00	57.731	
	Middle	3 625.00	57.753	
	High	3 670.00	57.739	

Note: 1C: 1 Carrier, 3C: 3 Carrier

## CBRS LTE(20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C)[4C]

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 590.00	77.673
		Middle	3 625.00	77.586
		High	3 660.00	77.599
	16QAM	Low	3 590.00	77.676
		Middle	3 625.00	77.684
		High	3 660.00	77.564
	64QAM	Low	3 590.00	77.555
		Middle	3 625.00	77.612
		High	3 660.00	77.491
	256QAM	Low	3 590.00	77.551
		Middle	3 625.00	77.591
		High	3 660.00	77.813
1	QPSK	Low	3 590.00	77.629
		Middle	3 625.00	77.572
		High	3 660.00	77.659
	16QAM	Low	3 590.00	77.561
		Middle	3 625.00	77.623
		High	3 660.00	77.671
	64QAM	Low	3 590.00	77.588
		Middle	3 625.00	77.596
		High	3 660.00	77.568
	256QAM	Low	3 590.00	77.665
		Middle	3 625.00	77.639
		High	3 660.00	77.629

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
2	QPSK	Low	3 590.00	77.518
		Middle	3 625.00	77.480
		High	3 660.00	77.744
	16QAM	Low	3 590.00	77.586
		Middle	3 625.00	77.656
		High	3 660.00	77.588
	64QAM	Low	3 590.00	77.627
		Middle	3 625.00	77.795
		High	3 660.00	77.625
256QAM	Low	3 590.00	77.633	
	Middle	3 625.00	77.766	
	High	3 660.00	77.655	
3	QPSK	Low	3 590.00	77.578
		Middle	3 625.00	77.605
		High	3 660.00	77.629
	16QAM	Low	3 590.00	77.617
		Middle	3 625.00	77.567
		High	3 660.00	77.635
	64QAM	Low	3 590.00	77.604
		Middle	3 625.00	77.606
		High	3 660.00	77.622
256QAM	Low	3 590.00	77.552	
	Middle	3 625.00	77.554	
	High	3 660.00	77.577	

Note: 1C: 1 Carrier, 4C: 4 Carrier

**CBRS LTE(15 MHz 1C + 15 MHz 1C + 15 MHz 1C + 15 MHz 1C + 10 MHz 1C)[5C]**

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 585.00	68.446
		Middle	3 625.00	68.520
		High	3 665.00	68.412
	16QAM	Low	3 585.00	68.430
		Middle	3 625.00	68.472
		High	3 665.00	68.432
	64QAM	Low	3 585.00	68.417
		Middle	3 625.00	68.414
		High	3 665.00	68.456
	256QAM	Low	3 585.00	68.453
		Middle	3 625.00	68.364
		High	3 665.00	68.528
1	QPSK	Low	3 585.00	68.409
		Middle	3 625.00	68.409
		High	3 665.00	68.330
	16QAM	Low	3 585.00	68.462
		Middle	3 625.00	68.471
		High	3 665.00	68.432
	64QAM	Low	3 585.00	68.550
		Middle	3 625.00	68.524
		High	3 665.00	68.379
	256QAM	Low	3 585.00	68.456
		Middle	3 625.00	68.445
		High	3 665.00	68.363

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
2	QPSK	Low	3 585.00	68.408
		Middle	3 625.00	68.334
		High	3 665.00	68.381
	16QAM	Low	3 585.00	68.366
		Middle	3 625.00	68.534
		High	3 665.00	68.604
	64QAM	Low	3 585.00	68.498
		Middle	3 625.00	68.410
		High	3 665.00	68.440
	256QAM	Low	3 585.00	68.409
		Middle	3 625.00	68.402
		High	3 665.00	68.458
3	QPSK	Low	3 585.00	68.364
		Middle	3 625.00	68.451
		High	3 665.00	68.412
	16QAM	Low	3 585.00	68.395
		Middle	3 625.00	68.477
		High	3 665.00	68.488
	64QAM	Low	3 585.00	68.476
		Middle	3 625.00	68.392
		High	3 665.00	68.580
	256QAM	Low	3 585.00	68.430
		Middle	3 625.00	68.484
		High	3 665.00	68.536

Note: 1C: 1 Carrier, 5C: 5 Carrier

## CBRS LTE(20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 10 MHz 1C)[5C]

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 595.00	88.281
		Middle	3 625.00	87.976
		High	3 655.00	88.089
	16QAM	Low	3 595.00	87.853
		Middle	3 625.00	88.230
		High	3 655.00	88.070
	64QAM	Low	3 595.00	88.058
		Middle	3 625.00	88.017
		High	3 655.00	87.991
	256QAM	Low	3 595.00	88.197
		Middle	3 625.00	88.107
		High	3 655.00	88.110
1	QPSK	Low	3 595.00	88.330
		Middle	3 625.00	88.019
		High	3 655.00	88.182
	16QAM	Low	3 595.00	88.056
		Middle	3 625.00	88.230
		High	3 655.00	87.907
	64QAM	Low	3 595.00	88.140
		Middle	3 625.00	88.227
		High	3 655.00	87.986
	256QAM	Low	3 595.00	87.967
		Middle	3 625.00	88.149
		High	3 655.00	88.219

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
2	QPSK	Low	3 595.00	88.178
		Middle	3 625.00	88.161
		High	3 655.00	88.139
	16QAM	Low	3 595.00	87.970
		Middle	3 625.00	88.215
		High	3 655.00	88.078
	64QAM	Low	3 595.00	87.979
		Middle	3 625.00	87.939
		High	3 655.00	88.111
256QAM	Low	3 595.00	87.956	
	Middle	3 625.00	88.190	
	High	3 655.00	88.110	
3	QPSK	Low	3 595.00	88.177
		Middle	3 625.00	87.984
		High	3 655.00	88.079
	16QAM	Low	3 595.00	88.159
		Middle	3 625.00	88.138
		High	3 655.00	88.135
	64QAM	Low	3 595.00	88.067
		Middle	3 625.00	88.037
		High	3 655.00	88.114
256QAM	Low	3 595.00	87.969	
	Middle	3 625.00	88.012	
	High	3 655.00	87.984	

Note: 1C: 1 Carrier, 5C: 5 Carrier

## CBRS LTE(20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C)[5C]

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 600.00	97.381
		Middle	3 625.00	97.608
		High	3 650.00	97.384
	16QAM	Low	3 600.00	97.717
		Middle	3 625.00	97.550
		High	3 650.00	97.483
	64QAM	Low	3 600.00	97.483
		Middle	3 625.00	97.408
		High	3 650.00	97.411
	256QAM	Low	3 600.00	97.546
		Middle	3 625.00	97.562
		High	3 650.00	97.516
1	QPSK	Low	3 600.00	97.487
		Middle	3 625.00	97.513
		High	3 650.00	97.522
	16QAM	Low	3 600.00	97.516
		Middle	3 625.00	97.492
		High	3 650.00	97.657
	64QAM	Low	3 600.00	97.433
		Middle	3 625.00	97.635
		High	3 650.00	97.462
	256QAM	Low	3 600.00	97.428
		Middle	3 625.00	97.405
		High	3 650.00	97.633



Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
2	QPSK	Low	3 600.00	97.508
		Middle	3 625.00	97.523
		High	3 650.00	97.567
	16QAM	Low	3 600.00	97.451
		Middle	3 625.00	97.556
		High	3 650.00	97.608
	64QAM	Low	3 600.00	97.353
		Middle	3 625.00	97.449
		High	3 650.00	97.581
256QAM	Low	3 600.00	97.448	
	Middle	3 625.00	97.730	
	High	3 650.00	97.548	
3	QPSK	Low	3 600.00	97.458
		Middle	3 625.00	97.688
		High	3 650.00	97.641
	16QAM	Low	3 600.00	97.499
		Middle	3 625.00	97.513
		High	3 650.00	97.638
	64QAM	Low	3 600.00	97.437
		Middle	3 625.00	97.419
		High	3 650.00	97.370
256QAM	Low	3 600.00	97.362	
	Middle	3 625.00	97.625	
	High	3 650.00	97.563	

Note: 1C: 1 Carrier, 5C: 5 Carrier

**CBRS NR 40 MHz 1C + NR 20 MHz 1C + NR 20 MHz 1C + LTE 10 MHz 1C + LTE 10 MHz 1C[5C]**

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 600.00	97.962
		Middle	3 625.00	98.077
		High	3 650.00	97.996
	16QAM	Low	3 600.00	98.090
		Middle	3 625.00	98.147
		High	3 650.00	98.063
	64QAM	Low	3 600.00	97.991
		Middle	3 625.00	97.967
		High	3 650.00	97.987
	256QAM	Low	3 600.00	98.096
		Middle	3 625.00	98.066
		High	3 650.00	98.159
1	QPSK	Low	3 600.00	98.102
		Middle	3 625.00	98.173
		High	3 650.00	98.121
	16QAM	Low	3 600.00	98.187
		Middle	3 625.00	97.959
		High	3 650.00	98.228
	64QAM	Low	3 600.00	98.005
		Middle	3 625.00	98.160
		High	3 650.00	98.060
	256QAM	Low	3 600.00	98.094
		Middle	3 625.00	98.038
		High	3 650.00	98.168

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
2	QPSK	Low	3 600.00	98.000
		Middle	3 625.00	98.034
		High	3 650.00	98.168
	16QAM	Low	3 600.00	98.043
		Middle	3 625.00	98.145
		High	3 650.00	98.074
	64QAM	Low	3 600.00	97.975
		Middle	3 625.00	98.025
		High	3 650.00	98.080
256QAM	Low	3 600.00	97.982	
	Middle	3 625.00	98.198	
	High	3 650.00	98.140	
3	QPSK	Low	3 600.00	98.070
		Middle	3 625.00	98.072
		High	3 650.00	98.074
	16QAM	Low	3 600.00	98.159
		Middle	3 625.00	98.129
		High	3 650.00	97.987
	64QAM	Low	3 600.00	97.870
		Middle	3 625.00	98.090
		High	3 650.00	98.126
256QAM	Low	3 600.00	98.064	
	Middle	3 625.00	98.067	
	High	3 650.00	98.057	

Note: 1C: 1 Carrier, 5C: 5 Carrier

**CBRS NR 40 MHz 1C + NR 10 MHz 1C + LTE 20 MHz 1C + LTE 5 MHz 1C + LTE 5 MHz 1C[5C]**

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 590.00	78.383
		Middle	3 625.00	78.394
		High	3 660.00	78.462
	16QAM	Low	3 590.00	78.338
		Middle	3 625.00	78.402
		High	3 660.00	78.470
	64QAM	Low	3 590.00	78.437
		Middle	3 625.00	78.329
		High	3 660.00	78.439
	256QAM	Low	3 590.00	78.428
		Middle	3 625.00	78.278
		High	3 660.00	78.503
1	QPSK	Low	3 590.00	78.420
		Middle	3 625.00	78.505
		High	3 660.00	78.514
	16QAM	Low	3 590.00	78.410
		Middle	3 625.00	78.380
		High	3 660.00	78.451
	64QAM	Low	3 590.00	78.299
		Middle	3 625.00	78.409
		High	3 660.00	78.528
	256QAM	Low	3 590.00	78.406
		Middle	3 625.00	78.413
		High	3 660.00	78.461

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
2	QPSK	Low	3 590.00	78.416
		Middle	3 625.00	78.593
		High	3 660.00	78.444
	16QAM	Low	3 590.00	78.400
		Middle	3 625.00	78.469
		High	3 660.00	78.396
	64QAM	Low	3 590.00	78.503
		Middle	3 625.00	78.454
		High	3 660.00	78.475
	256QAM	Low	3 590.00	78.459
		Middle	3 625.00	78.304
		High	3 660.00	78.455
3	QPSK	Low	3 590.00	78.474
		Middle	3 625.00	78.471
		High	3 660.00	78.272
	16QAM	Low	3 590.00	78.244
		Middle	3 625.00	78.285
		High	3 660.00	78.518
	64QAM	Low	3 590.00	78.29
		Middle	3 625.00	78.346
		High	3 660.00	78.423
	256QAM	Low	3 590.00	78.479
		Middle	3 625.00	78.461
		High	3 660.00	78.383

Note: 1C: 1 Carrier, 5C: 5 Carrier

**Tabular Data of Non-Contiguous Occupied Bandwidth**
**CBRS NR(60 MHz 1C + 30 MHz 1C)[2C]**

Ant	Mod	NR 60 MHz		NR 30 MHz		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	3 580.00	57.924	3 685.00	27.913	85.837
	16QAM	3 580.00	57.923	3 685.00	27.932	85.855
	64QAM	3 580.00	57.897	3 685.00	27.939	85.836
	256QAM	3 580.00	57.905	3 685.00	27.956	85.862
1	QPSK	3 580.00	57.921	3 685.00	27.923	85.844
	16QAM	3 580.00	57.926	3 685.00	27.996	85.922
	64QAM	3 580.00	57.880	3 685.00	27.869	85.749
	256QAM	3 580.00	57.943	3 685.00	27.972	85.915
2	QPSK	3 580.00	57.915	3 685.00	27.896	85.811
	16QAM	3 580.00	57.857	3 685.00	27.985	85.842
	64QAM	3 580.00	58.041	3 685.00	27.877	85.918
	256QAM	3 580.00	57.912	3 685.00	27.957	85.869
3	QPSK	3 580.00	57.910	3 685.00	27.931	85.841
	16QAM	3 580.00	57.838	3 685.00	27.893	85.731
	64QAM	3 580.00	57.969	3 685.00	27.918	85.887
	256QAM	3 580.00	58.013	3 685.00	27.956	85.968

Note: 1C: 1 Carrier, 2C: 2 Carrier

**CBRS LTE(15 MHz 1C + 15 MHz 1C)[2C]**

Ant	Mod	LTE 15 MHz		LTE 15 MHz		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	3 557.50	13.413	3 692.50	13.452	26.866
	16QAM	3 557.50	13.450	3 692.50	13.484	26.934
	64QAM	3 557.50	13.465	3 692.50	13.452	26.917
	256QAM	3 557.50	13.432	3 692.50	13.441	26.872
1	QPSK	3 557.50	13.487	3 692.50	13.476	26.963
	16QAM	3 557.50	13.470	3 692.50	13.452	26.922
	64QAM	3 557.50	13.446	3 692.50	13.476	26.922
	256QAM	3 557.50	13.453	3 692.50	13.409	26.862
2	QPSK	3 557.50	13.477	3 692.50	13.449	26.927
	16QAM	3 557.50	13.445	3 692.50	13.499	26.944
	64QAM	3 557.50	13.487	3 692.50	13.484	26.971
	256QAM	3 557.50	13.459	3 692.50	13.514	26.973
3	QPSK	3 557.50	13.480	3 692.50	13.466	26.946
	16QAM	3 557.50	13.478	3 692.50	13.463	26.941
	64QAM	3 557.50	13.453	3 692.50	13.459	26.913
	256QAM	3 557.50	13.455	3 692.50	13.449	26.904

Note: 1C: 1 Carrier, 2C: 2 Carrier

**CBRS LTE 5 MHz 1C + NR 10 MHz 1C[2C]**

Ant	Mod	LTE 5 MHz		NR 10 MHz		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	3 552.50	4.4932	3 695.00	8.6981	13.191
	16QAM	3 552.50	4.5013	3 695.00	8.6551	13.156
	64QAM	3 552.50	4.4993	3 695.00	8.6601	13.159
	256QAM	3 552.50	4.4923	3 695.00	8.6525	13.145
1	QPSK	3 552.50	4.4974	3 695.00	8.6983	13.196
	16QAM	3 552.50	4.5189	3 695.00	8.6874	13.206
	64QAM	3 552.50	4.5090	3 695.00	8.6478	13.157
	256QAM	3 552.50	4.5035	3 695.00	8.6921	13.196
2	QPSK	3 552.50	4.4941	3 695.00	8.6622	13.156
	16QAM	3 552.50	4.5096	3 695.00	8.6594	13.169
	64QAM	3 552.50	4.5042	3 695.00	8.6181	13.122
	256QAM	3 552.50	4.4985	3 695.00	8.6449	13.143
3	QPSK	3 552.50	4.4984	3 695.00	8.6570	13.155
	16QAM	3 552.50	4.5002	3 695.00	8.6409	13.141
	64QAM	3 552.50	4.5054	3 695.00	8.6431	13.149
	256QAM	3 552.50	4.5015	3 695.00	8.6243	13.126

Note: 1C: 1 Carrier, 2C: 2 Carrier



**CBRS NR[20 MHz 1C + (20 MHz 1C + 10 MHz 1C)][3C(1C+2C)]**

Ant	Mod	NR 20 MHz		NR 20 MHz + NR 10 MHz		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	3 560.00	18.279	3 685.00	28.397	46.675
	16QAM	3 560.00	18.287	3 685.00	28.381	46.668
	64QAM	3 560.00	18.286	3 685.00	28.416	46.702
	256QAM	3 560.00	18.287	3 685.00	28.388	46.675
1	QPSK	3 560.00	18.287	3 685.00	28.427	46.714
	16QAM	3 560.00	18.259	3 685.00	28.395	46.654
	64QAM	3 560.00	18.306	3 685.00	28.393	46.699
	256QAM	3 560.00	18.337	3 685.00	28.366	46.703
2	QPSK	3 560.00	18.264	3 685.00	28.377	46.641
	16QAM	3 560.00	18.264	3 685.00	28.439	46.702
	64QAM	3 560.00	18.312	3 685.00	28.345	46.657
	256QAM	3 560.00	18.288	3 685.00	28.474	46.761
3	QPSK	3 560.00	18.323	3 685.00	28.389	46.712
	16QAM	3 560.00	18.325	3 685.00	28.408	46.734
	64QAM	3 560.00	18.292	3 685.00	28.432	46.724
	256QAM	3 560.00	18.278	3 685.00	28.479	46.757

Note: 1C: 1 Carrier, 2C: 2 Carrier, 3C: 3 Carrier

**CBRS NR[(20 MHz 1C + 20 MHz 1C) + 10 MHz 1C][3C(2C+1C)]**

Ant	Mod	NR 20 MHz + NR 20 MHz		NR 10 MHz		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	3 570.00	38.181	3 695.00	8.6604	46.842
	16QAM	3 570.00	38.223	3 695.00	8.6567	46.879
	64QAM	3 570.00	38.177	3 695.00	8.6334	46.810
	256QAM	3 570.00	38.162	3 695.00	8.6629	46.825
1	QPSK	3 570.00	38.186	3 695.00	8.6761	46.863
	16QAM	3 570.00	38.125	3 695.00	8.6681	46.794
	64QAM	3 570.00	38.153	3 695.00	8.6635	46.817
	256QAM	3 570.00	38.183	3 695.00	8.6385	46.822
2	QPSK	3 570.00	38.164	3 695.00	8.6793	46.843
	16QAM	3 570.00	38.165	3 695.00	8.6303	46.795
	64QAM	3 570.00	38.134	3 695.00	8.6647	46.799
	256QAM	3 570.00	38.191	3 695.00	8.6618	46.853
3	QPSK	3 570.00	38.134	3 695.00	8.6858	46.819
	16QAM	3 560.00	38.054	3 685.00	8.6642	46.718
	64QAM	3 570.00	38.180	3 695.00	8.6536	46.834
	256QAM	3 570.00	38.199	3 695.00	8.6382	46.837

Note: 1C: 1 Carrier, 2C: 2 Carrier, 3C: 3 Carrier

**CBRS NR[30 MHz 1C + (30 MHz 1C + 10 MHz 1C)][3C(1C+2C)]**

Ant	Mod	NR 30 MHz		NR 30 MHz + NR 10 MHz		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	3 565.00	27.923	3 680.00	38.152	66.075
	16QAM	3 565.00	27.949	3 680.00	38.199	66.148
	64QAM	3 565.00	27.974	3 680.00	38.185	66.159
	256QAM	3 565.00	27.986	3 680.00	38.174	66.161
1	QPSK	3 565.00	27.889	3 680.00	38.227	66.116
	16QAM	3 565.00	27.935	3 680.00	38.197	66.133
	64QAM	3 565.00	27.989	3 680.00	38.184	66.173
	256QAM	3 565.00	27.956	3 680.00	38.254	66.211
2	QPSK	3 565.00	27.915	3 680.00	38.167	66.082
	16QAM	3 565.00	27.883	3 680.00	38.170	66.052
	64QAM	3 565.00	27.930	3 680.00	38.147	66.077
	256QAM	3 565.00	27.957	3 680.00	38.191	66.148
3	QPSK	3 565.00	27.897	3 680.00	38.143	66.040
	16QAM	3 565.00	27.915	3 680.00	38.123	66.039
	64QAM	3 565.00	27.950	3 680.00	38.269	66.219
	256QAM	3 565.00	27.927	3 680.00	38.184	66.111

Note: 1C: 1 Carrier, 2C: 2 Carrier, 3C: 3 Carrier

**CBRS NR[(30 MHz 1C + 30 MHz 1C) + 10 MHz 1C][3C(2C+1C)]**

Ant	Mod	NR 30 MHz + NR 30 MHz		NR 10 MHz		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	3 580.00	57.691	3 695.00	8.6780	66.369
	16QAM	3 580.00	57.639	3 695.00	8.6449	66.284
	64QAM	3 580.00	57.732	3 695.00	8.6867	66.419
	256QAM	3 580.00	57.716	3 695.00	8.6734	66.389
1	QPSK	3 580.00	57.787	3 695.00	8.6533	66.440
	16QAM	3 580.00	57.821	3 695.00	8.6864	66.507
	64QAM	3 580.00	57.762	3 695.00	8.6949	66.457
	256QAM	3 580.00	57.851	3 695.00	8.6961	66.547
2	QPSK	3 580.00	57.679	3 695.00	8.6786	66.357
	16QAM	3 580.00	57.754	3 695.00	8.6759	66.430
	64QAM	3 580.00	57.730	3 695.00	8.6533	66.384
	256QAM	3 580.00	57.686	3 695.00	8.6906	66.376
3	QPSK	3 580.00	57.732	3 695.00	8.6750	66.407
	16QAM	3 580.00	57.683	3 695.00	8.6603	66.343
	64QAM	3 580.00	57.588	3 695.00	8.6909	66.279
	256QAM	3 580.00	57.832	3 695.00	8.6555	66.487

Note: 1C: 1 Carrier, 2C: 2 Carrier, 3C: 3 Carrier

**CBRS LTE[15 MHz 1C + (15 MHz 1C + 10 MHz 1C)][3C(1C+2C)]**

Ant	Mod	LTE 15 MHz		LTE 15 MHz + LTE 10 MHz		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	3 557.50	13.456	3 687.50	23.692	37.148
	16QAM	3 557.50	13.461	3 687.50	23.635	37.096
	64QAM	3 557.50	13.448	3 687.50	23.639	37.087
	256QAM	3 557.50	13.482	3 687.50	23.661	37.143
1	QPSK	3 557.50	13.415	3 687.50	23.703	37.117
	16QAM	3 557.50	13.469	3 687.50	23.698	37.167
	64QAM	3 557.50	13.473	3 687.50	23.671	37.144
	256QAM	3 557.50	13.453	3 687.50	23.686	37.139
2	QPSK	3 557.50	13.458	3 687.50	23.676	37.134
	16QAM	3 557.50	13.486	3 687.50	23.659	37.145
	64QAM	3 557.50	13.452	3 687.50	23.640	37.091
	256QAM	3 557.50	13.469	3 687.50	23.592	37.062
3	QPSK	3 557.50	13.485	3 687.50	23.704	37.189
	16QAM	3 557.50	13.456	3 687.50	23.653	37.109
	64QAM	3 557.50	13.457	3 687.50	23.648	37.105
	256QAM	3 557.50	13.477	3 687.50	23.636	37.113

Note: 1C: 1 Carrier, 2C: 2 Carrier, 3C: 3 Carrier

**CBRS LTE[(15 MHz 1C + 15 MHz 1C) + 10 MHz 1C][3C(2C+1C)]**

Ant	Mod	LTE 15 MHz + LTE 15 MHz		LTE 10 MHz		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	3 565.00	28.358	3 695.00	9.0068	37.365
	16QAM	3 565.00	28.391	3 695.00	8.9957	37.387
	64QAM	3 565.00	28.391	3 695.00	8.9808	37.372
	256QAM	3 565.00	28.413	3 695.00	8.9465	37.359
1	QPSK	3 565.00	28.429	3 695.00	9.0081	37.437
	16QAM	3 565.00	28.459	3 695.00	8.9842	37.443
	64QAM	3 565.00	28.344	3 695.00	8.9566	37.301
	256QAM	3 565.00	28.386	3 695.00	8.9823	37.368
2	QPSK	3 565.00	28.371	3 695.00	8.9921	37.363
	16QAM	3 565.00	28.412	3 695.00	9.0132	37.425
	64QAM	3 565.00	28.401	3 695.00	8.9928	37.394
	256QAM	3 565.00	28.452	3 695.00	8.9906	37.442
3	QPSK	3 565.00	28.382	3 695.00	8.9842	37.366
	16QAM	3 565.00	28.304	3 695.00	9.0092	37.313
	64QAM	3 565.00	28.471	3 695.00	8.9660	37.437
	256QAM	3 565.00	28.465	3 695.00	9.0451	37.510

Note: 1C: 1 Carrier, 2C: 2 Carrier, 3C: 3 Carrier

**CBRS LTE[20 MHz 1C + (15 MHz 1C + 15 MHz 1C)][3C(1C+2C)]**

Ant	Mod	LTE 20 MHz		LTE 15 MHz + LTE 15 MHz		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	3 560.00	17.905	3 685.00	28.361	46.267
	16QAM	3 560.00	17.971	3 685.00	28.406	46.377
	64QAM	3 560.00	17.959	3 685.00	28.377	46.336
	256QAM	3 560.00	17.954	3 685.00	28.415	46.370
1	QPSK	3 560.00	17.926	3 685.00	28.379	46.304
	16QAM	3 560.00	17.914	3 685.00	28.391	46.305
	64QAM	3 560.00	17.944	3 685.00	28.373	46.317
	256QAM	3 560.00	17.970	3 685.00	28.418	46.388
2	QPSK	3 560.00	17.954	3 685.00	28.371	46.325
	16QAM	3 560.00	17.948	3 685.00	28.407	46.355
	64QAM	3 560.00	17.961	3 685.00	28.355	46.316
	256QAM	3 560.00	17.961	3 685.00	28.341	46.302
3	QPSK	3 560.00	17.957	3 685.00	28.369	46.326
	16QAM	3 560.00	17.906	3 685.00	28.429	46.335
	64QAM	3 560.00	17.909	3 685.00	28.380	46.289
	256QAM	3 560.00	17.927	3 685.00	28.340	46.268

Note: 1C: 1 Carrier, 2C: 2 Carrier, 3C: 3 Carrier

**CBRS LTE[(20 MHz 1C + 15 MHz 1C) + 15 MHz 1C][3C(2C+1C)]**

Ant	Mod	LTE 20 MHz + LTE 15 MHz		LTE 15 MHz		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	3 567.50	33.090	3 692.50	13.445	46.536
	16QAM	3 567.50	33.112	3 692.50	13.467	46.580
	64QAM	3 567.50	33.130	3 692.50	13.445	46.575
	256QAM	3 567.50	33.091	3 692.50	13.469	46.560
1	QPSK	3 567.50	33.103	3 692.50	13.484	46.587
	16QAM	3 567.50	33.116	3 692.50	13.497	46.613
	64QAM	3 567.50	33.141	3 692.50	13.434	46.575
	256QAM	3 567.50	33.030	3 692.50	13.501	46.531
2	QPSK	3 567.50	33.053	3 692.50	13.464	46.517
	16QAM	3 567.50	33.061	3 692.50	13.467	46.528
	64QAM	3 567.50	33.122	3 692.50	13.439	46.561
	256QAM	3 567.50	33.122	3 692.50	13.448	46.570
3	QPSK	3 567.50	33.085	3 692.50	13.451	46.535
	16QAM	3 567.50	33.117	3 692.50	13.464	46.581
	64QAM	3 567.50	33.165	3 692.50	13.465	46.630
	256QAM	3 567.50	33.085	3 692.50	13.435	46.520

Note: 1C: 1 Carrier, 2C: 2 Carrier, 3C: 3 Carrier



**CBRS LTE[20 MHz 1C + (20 MHz 1C + 20 MHz 1C)][3C(1C+2C)]**

Ant	Mod	LTE 20 MHz		LTE 20 MHz + LTE 20 MHz		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	3 560.00	17.939	3 680.00	37.851	55.790
	16QAM	3 560.00	17.967	3 680.00	37.822	55.789
	64QAM	3 560.00	17.955	3 680.00	37.825	55.780
	256QAM	3 560.00	17.937	3 680.00	37.829	55.766
1	QPSK	3 560.00	17.969	3 680.00	37.809	55.778
	16QAM	3 560.00	17.985	3 680.00	37.785	55.770
	64QAM	3 560.00	17.957	3 680.00	37.792	55.749
	256QAM	3 560.00	17.951	3 680.00	37.850	55.800
2	QPSK	3 560.00	17.929	3 680.00	37.907	55.836
	16QAM	3 560.00	17.939	3 680.00	37.862	55.801
	64QAM	3 560.00	17.934	3 680.00	37.871	55.805
	256QAM	3 560.00	17.951	3 680.00	37.769	55.720
3	QPSK	3 560.00	17.952	3 680.00	37.786	55.738
	16QAM	3 560.00	17.937	3 680.00	37.820	55.757
	64QAM	3 560.00	17.945	3 680.00	37.857	55.802
	256QAM	3 560.00	17.928	3 680.00	37.874	55.801

Note: 1C: 1 Carrier, 2C: 2 Carrier, 3C: 3 Carrier

**CBRS LTE[(20 MHz 1C + 20 MHz 1C) + 20 MHz 1C][3C(2C+1C)]**

Ant	Mod	LTE 20 MHz + LTE 20 MHz		LTE 20 MHz		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	3 570.00	37.869	3 690.00	17.956	55.825
	16QAM	3 570.00	37.829	3 690.00	17.954	55.783
	64QAM	3 570.00	37.869	3 690.00	17.892	55.761
	256QAM	3 570.00	37.872	3 690.00	17.955	55.827
1	QPSK	3 570.00	37.887	3 690.00	17.914	55.802
	16QAM	3 570.00	37.816	3 690.00	17.947	55.763
	64QAM	3 570.00	37.879	3 690.00	17.953	55.832
	256QAM	3 570.00	37.915	3 690.00	17.945	55.860
2	QPSK	3 570.00	37.830	3 690.00	17.990	55.820
	16QAM	3 570.00	37.794	3 690.00	17.966	55.761
	64QAM	3 570.00	37.852	3 690.00	17.916	55.767
	256QAM	3 570.00	37.923	3 690.00	17.956	55.879
3	QPSK	3 570.00	37.871	3 690.00	17.944	55.814
	16QAM	3 570.00	37.749	3 690.00	17.920	55.669
	64QAM	3 570.00	37.772	3 690.00	17.904	55.676
	256QAM	3 570.00	37.880	3 690.00	17.944	55.824

Note: 1C: 1 Carrier, 2C: 2 Carrier, 3C: 3 Carrier

**CBRS LTE[20 MHz 1C + (20 MHz 1C + 20 MHz 1C + 20 MHz 1C)][4C(1C+3C)]**

Ant	Mod	LTE 20 MHz		LTE 20 MHz + LTE 20 MHz + LTE 20 MHz		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	3 560.00	17.934	3 670.00	57.674	75.607
	16QAM	3 560.00	17.953	3 670.00	57.692	75.645
	64QAM	3 560.00	17.974	3 670.00	57.767	75.741
	256QAM	3 560.00	17.915	3 670.00	57.808	75.723
1	QPSK	3 560.00	17.926	3 670.00	57.622	75.548
	16QAM	3 560.00	17.945	3 670.00	57.790	75.734
	64QAM	3 560.00	17.988	3 670.00	57.763	75.751
	256QAM	3 560.00	17.940	3 670.00	57.801	75.741
2	QPSK	3 560.00	17.920	3 670.00	57.709	75.630
	16QAM	3 560.00	17.950	3 670.00	57.639	75.589
	64QAM	3 560.00	18.045	3 670.00	57.733	75.778
	256QAM	3 560.00	17.908	3 670.00	57.757	75.665
3	QPSK	3 560.00	17.964	3 670.00	57.778	75.742
	16QAM	3 560.00	17.947	3 670.00	57.699	75.645
	64QAM	3 560.00	17.925	3 670.00	57.655	75.580
	256QAM	3 560.00	17.926	3 670.00	57.707	75.634

Note: 1C: 1 Carrier, 3C: 3 Carrier, 4C: 4 Carrier

**CBRS LTE[(20 MHz 1C + 20 MHz 1C + 20 MHz 1C) + 20 MHz 1C][4C(3C+1C)]**

Ant	Mod	LTE 20 MHz +		LTE 20 MHz		Total OBW (MHz)
		LTE 20 MHz + LTE 20 MHz		Frequency (MHz)	Measured Value (MHz)	
		Frequency (MHz)	Measured Value (MHz)			
0	QPSK	3 580.00	57.630	3 690.00	17.902	75.532
	16QAM	3 580.00	57.565	3 690.00	17.903	75.467
	64QAM	3 580.00	57.732	3 690.00	17.966	75.698
	256QAM	3 580.00	57.728	3 690.00	17.942	75.670
1	QPSK	3 580.00	57.664	3 690.00	17.939	75.603
	16QAM	3 580.00	57.761	3 690.00	17.952	75.713
	64QAM	3 580.00	57.721	3 690.00	17.958	75.679
	256QAM	3 580.00	57.708	3 690.00	17.927	75.634
2	QPSK	3 580.00	57.684	3 690.00	17.904	75.588
	16QAM	3 580.00	57.556	3 690.00	17.949	75.505
	64QAM	3 580.00	57.562	3 690.00	17.979	75.541
	256QAM	3 580.00	57.752	3 690.00	17.889	75.641
3	QPSK	3 580.00	57.688	3 690.00	17.929	75.617
	16QAM	3 580.00	57.753	3 690.00	17.973	75.726
	64QAM	3 580.00	57.615	3 690.00	17.960	75.575
	256QAM	3 580.00	57.696	3 690.00	17.941	75.637

Note: 1C: 1 Carrier, 3C: 3 Carrier, 4C: 4 Carrier

**CBRS LTE[15 MHz 1C + (15 MHz 1C + 15 MHz 1C + 15 MHz 1C + 10 MHz 1C)][5C(1C+4C)]**

Ant	Mod	LTE 15 MHz		LTE 15 MHz + LTE 15 MHz + LTE 15 MHz + LTE 10 MHz		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	3 557.50	13.466	3 672.50	53.496	66.963
	16QAM	3 557.50	13.474	3 672.50	53.502	66.977
	64QAM	3 557.50	13.475	3 672.50	53.558	67.033
	256QAM	3 557.50	13.474	3 672.50	53.527	67.001
1	QPSK	3 557.50	13.479	3 672.50	53.397	66.876
	16QAM	3 557.50	13.495	3 672.50	53.514	67.010
	64QAM	3 557.50	13.490	3 672.50	53.483	66.973
	256QAM	3 557.50	13.467	3 672.50	53.478	66.945
2	QPSK	3 557.50	13.455	3 672.50	53.569	67.024
	16QAM	3 557.50	13.421	3 672.50	53.537	66.958
	64QAM	3 557.50	13.446	3 672.50	53.525	66.970
	256QAM	3 557.50	13.461	3 672.50	53.370	66.831
3	QPSK	3 557.50	13.469	3 672.50	53.503	66.972
	16QAM	3 557.50	13.428	3 672.50	53.469	66.897
	64QAM	3 557.50	13.461	3 672.50	53.502	66.962
	256QAM	3 557.50	13.492	3 672.50	53.480	66.972

Note: 1C: 1 Carrier, 4C: 4 Carrier, 5C: 5 Carrier

**CBRS LTE[(15 MHz 1C + 15 MHz 1C + 15 MHz 1C + 15 MHz 1C) + 10 MHz 1C][5C(4C+1C)]**

Ant	Mod	LTE 15 MHz + LTE 15 MHz + LTE 15 MHz + LTE 15 MHz		LTE 10 MHz		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	3 580.00	58.288	3 695.00	8.9774	67.265
	16QAM	3 580.00	58.211	3 695.00	8.9689	67.180
	64QAM	3 580.00	58.302	3 695.00	8.9707	67.272
	256QAM	3 580.00	58.250	3 695.00	8.9985	67.249
1	QPSK	3 580.00	58.255	3 695.00	9.0058	67.261
	16QAM	3 580.00	58.184	3 695.00	8.9943	67.178
	64QAM	3 580.00	58.296	3 695.00	8.9718	67.268
	256QAM	3 580.00	58.236	3 695.00	8.9882	67.224
2	QPSK	3 580.00	58.261	3 695.00	8.9896	67.251
	16QAM	3 580.00	58.230	3 695.00	8.9668	67.197
	64QAM	3 580.00	58.164	3 695.00	8.9721	67.137
	256QAM	3 580.00	58.253	3 695.00	9.0445	67.297
3	QPSK	3 580.00	58.229	3 695.00	9.0027	67.232
	16QAM	3 580.00	58.161	3 695.00	9.0114	67.172
	64QAM	3 580.00	58.134	3 695.00	8.9801	67.114
	256QAM	3 580.00	58.202	3 695.00	9.0198	67.222

Note: 1C: 1 Carrier, 4C: 4 Carrier, 5C: 5 Carrier

**CBRS LTE[20 MHz 1C + (20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 10 MHz 1C)][5C(1C+4C)]**

Ant	Mod	LTE 20 MHz		LTE 20 MHz + LTE 20 MHz + LTE 20 MHz + LTE 10 MHz		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	3 560.00	17.927	3 665.00	68.383	86.310
	16QAM	3 560.00	17.988	3 665.00	68.278	86.266
	64QAM	3 560.00	17.974	3 665.00	68.236	86.210
	256QAM	3 560.00	17.904	3 665.00	68.286	86.190
1	QPSK	3 560.00	17.936	3 665.00	68.221	86.156
	16QAM	3 560.00	17.921	3 665.00	68.277	86.198
	64QAM	3 560.00	17.988	3 665.00	68.272	86.260
	256QAM	3 560.00	17.934	3 665.00	68.276	86.210
2	QPSK	3 560.00	17.907	3 665.00	68.227	86.134
	16QAM	3 560.00	17.940	3 665.00	68.359	86.298
	64QAM	3 560.00	17.963	3 665.00	68.286	86.249
	256QAM	3 560.00	17.912	3 665.00	68.097	86.009
3	QPSK	3 560.00	17.922	3 665.00	68.221	86.143
	16QAM	3 560.00	17.965	3 665.00	68.286	86.250
	64QAM	3 560.00	17.959	3 665.00	68.223	86.182
	256QAM	3 560.00	17.957	3 665.00	68.235	86.192

Note: 1C: 1 Carrier, 4C: 4 Carrier, 5C: 5 Carrier

**CBRS LTE[(20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C) + 10 MHz 1C][5C(4C+1C)]**

Ant	Mod	LTE 20 MHz + LTE 20 MHz + LTE 20 MHz + LTE 20 MHz		LTE 10 MHz		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	3 590.00	77.540	3 695.00	9.0034	86.544
	16QAM	3 590.00	77.531	3 695.00	8.9805	86.511
	64QAM	3 590.00	77.512	3 695.00	8.9770	86.489
	256QAM	3 590.00	77.684	3 695.00	8.9785	86.662
1	QPSK	3 590.00	77.512	3 695.00	8.9750	86.487
	16QAM	3 590.00	77.570	3 695.00	8.9924	86.562
	64QAM	3 590.00	77.678	3 695.00	9.0013	86.679
	256QAM	3 590.00	77.702	3 695.00	8.9888	86.690
2	QPSK	3 590.00	77.527	3 695.00	8.9675	86.494
	16QAM	3 590.00	77.497	3 695.00	9.0092	86.506
	64QAM	3 590.00	77.601	3 695.00	9.0000	86.601
	256QAM	3 590.00	77.666	3 695.00	8.9940	86.660
3	QPSK	3 590.00	77.639	3 695.00	8.9766	86.615
	16QAM	3 590.00	77.553	3 695.00	9.0027	86.556
	64QAM	3 590.00	77.526	3 695.00	8.9866	86.513
	256QAM	3 590.00	77.508	3 695.00	8.9970	86.505

Note: 1C: 1 Carrier, 4C: 4 Carrier, 5C: 5 Carrier



**CBRS LTE[20 MHz 1C + (20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C)][5C(1C+4C)]**

Ant	Mod	LTE 20 MHz		LTE 20 MHz + LTE 20 MHz + LTE 20 MHz + LTE 20 MHz		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	3 560.00	17.925	3 660.00	77.544	95.469
	16QAM	3 560.00	17.920	3 660.00	77.789	95.708
	64QAM	3 560.00	17.949	3 660.00	77.472	95.421
	256QAM	3 560.00	17.941	3 660.00	77.604	95.545
1	QPSK	3 560.00	17.922	3 660.00	77.635	95.557
	16QAM	3 560.00	17.992	3 660.00	77.726	95.718
	64QAM	3 560.00	17.926	3 660.00	77.567	95.493
	256QAM	3 560.00	17.985	3 660.00	77.610	95.594
2	QPSK	3 560.00	17.919	3 660.00	77.644	95.563
	16QAM	3 560.00	17.882	3 660.00	77.652	95.534
	64QAM	3 560.00	17.979	3 660.00	77.589	95.569
	256QAM	3 560.00	17.936	3 660.00	77.549	95.485
3	QPSK	3 560.00	17.942	3 660.00	77.659	95.601
	16QAM	3 560.00	17.909	3 660.00	77.706	95.614
	64QAM	3 560.00	17.971	3 660.00	77.660	95.631
	256QAM	3 560.00	17.948	3 660.00	77.566	95.515

Note: 1C: 1 Carrier, 4C: 4 Carrier, 5C: 5 Carrier

**CBRS LTE[(20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C) + 20 MHz 1C][5C(4C+1C)]**

Ant	Mod	LTE 20 MHz + LTE 20 MHz + LTE 20 MHz + LTE 20 MHz		LTE 20 MHz		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	3 590.00	77.559	3 690.00	17.930	95.488
	16QAM	3 590.00	77.704	3 690.00	17.948	95.651
	64QAM	3 590.00	77.690	3 690.00	17.957	95.648
	256QAM	3 590.00	77.588	3 690.00	17.985	95.573
1	QPSK	3 590.00	77.467	3 690.00	17.946	95.413
	16QAM	3 590.00	77.582	3 690.00	17.958	95.539
	64QAM	3 590.00	77.405	3 690.00	17.995	95.400
	256QAM	3 590.00	77.672	3 690.00	17.944	95.616
2	QPSK	3 590.00	77.584	3 690.00	17.895	95.479
	16QAM	3 590.00	77.531	3 690.00	17.935	95.466
	64QAM	3 590.00	77.659	3 690.00	17.903	95.562
	256QAM	3 590.00	77.611	3 690.00	17.976	95.586
3	QPSK	3 590.00	77.581	3 690.00	17.934	95.515
	16QAM	3 590.00	77.669	3 690.00	17.901	95.570
	64QAM	3 590.00	77.612	3 690.00	17.933	95.546
	256QAM	3 590.00	77.692	3 690.00	17.891	95.582

Note: 1C: 1 Carrier, 4C: 4 Carrier, 5C: 5 Carrier

**CBRS NR 40 MHz 1C + (NR 20 MHz 1C + NR 20 MHz 1C + LTE 10 MHz 1C + LTE 10 MHz 1C)[5C(1C+4C)]**

Ant	Mod	NR 40 MHz		NR 20 MHz + NR 20 MHz + LTE 10 MHz + LTE 10 MHz		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	3 570.00	37.947	3 670.00	58.434	96.380
	16QAM	3 570.00	37.977	3 670.00	58.486	96.463
	64QAM	3 570.00	37.933	3 670.00	58.408	96.341
	256QAM	3 570.00	38.022	3 670.00	58.464	96.486
1	QPSK	3 570.00	37.913	3 670.00	58.427	96.340
	16QAM	3 570.00	37.902	3 670.00	58.345	96.247
	64QAM	3 570.00	37.946	3 670.00	58.490	96.435
	256QAM	3 570.00	37.934	3 670.00	58.446	96.380
2	QPSK	3 570.00	37.983	3 670.00	58.402	96.385
	16QAM	3 570.00	37.952	3 670.00	58.370	96.323
	64QAM	3 570.00	37.906	3 670.00	58.374	96.281
	256QAM	3 570.00	37.998	3 670.00	58.367	96.366
3	QPSK	3 570.00	38.011	3 670.00	58.498	96.509
	16QAM	3 570.00	37.937	3 670.00	58.444	96.381
	64QAM	3 570.00	37.938	3 670.00	58.378	96.316
	256QAM	3 570.00	37.859	3 670.00	58.420	96.279

Note: 1C: 1 Carrier, 4C: 4 Carrier, 5C: 5 Carrier

**CBRS (NR 40 MHz 1C + NR 20 MHz 1C + NR 20 MHz 1C + LTE 10 MHz 1C) + LTE 10 MHz 1C[5C(4C+1C)]**

Ant	Mod	NR 40 MHz + NR 20 MHz + NR 20 MHz + LTE 10 MHz		LTE 10 MHz		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	3 595.00	88.219	3 695.00	8.987	97.206
	16QAM	3 595.00	88.160	3 695.00	8.966	97.126
	64QAM	3 595.00	88.064	3 695.00	8.991	97.054
	256QAM	3 595.00	88.005	3 695.00	9.008	97.013
1	QPSK	3 595.00	88.109	3 695.00	8.998	97.107
	16QAM	3 595.00	88.097	3 695.00	8.987	97.085
	64QAM	3 595.00	88.040	3 695.00	9.003	97.043
	256QAM	3 595.00	88.211	3 695.00	9.000	97.211
2	QPSK	3 595.00	88.133	3 695.00	8.993	97.126
	16QAM	3 595.00	88.016	3 695.00	9.013	97.029
	64QAM	3 595.00	88.005	3 695.00	8.995	97.000
	256QAM	3 595.00	87.930	3 695.00	8.968	96.898
3	QPSK	3 595.00	88.083	3 695.00	8.987	97.071
	16QAM	3 595.00	88.147	3 695.00	8.997	97.144
	64QAM	3 595.00	88.001	3 695.00	8.973	96.974
	256QAM	3 595.00	88.141	3 695.00	8.978	97.119

Note: 1C: 1 Carrier, 4C: 4 Carrier, 5C: 5 Carrier

**CBRS NR 40 MHz 1C + (NR 10 MHz 1C + LTE 20 MHz 1C + LTE 5 MHz 1C + LTE 5 MHz 1C)5C(1C+4C)]**

Ant	Mod	NR 40 MHz		NR 10 MHz + LTE 20 MHz + LTE 5 MHz + LTE 5 MHz		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	3 570.00	37.974	3 680.00	38.886	76.860
	16QAM	3 570.00	37.982	3 680.00	38.977	76.959
	64QAM	3 570.00	37.919	3 680.00	39.011	76.930
	256QAM	3 570.00	38.064	3 680.00	38.965	77.030
1	QPSK	3 570.00	37.976	3 680.00	38.948	76.924
	16QAM	3 570.00	37.958	3 680.00	38.902	76.860
	64QAM	3 570.00	37.971	3 680.00	38.892	76.863
	256QAM	3 570.00	37.908	3 680.00	38.918	76.826
2	QPSK	3 570.00	37.956	3 680.00	39.009	76.965
	16QAM	3 570.00	37.993	3 680.00	38.966	76.960
	64QAM	3 570.00	37.976	3 680.00	38.878	76.854
	256QAM	3 570.00	37.965	3 680.00	39.011	76.977
3	QPSK	3 570.00	37.970	3 680.00	39.011	76.981
	16QAM	3 570.00	38.024	3 680.00	38.768	76.792
	64QAM	3 570.00	37.915	3 680.00	38.910	76.825
	256QAM	3 570.00	37.965	3 680.00	38.918	76.883

Note: 1C: 1 Carrier, 4C: 4 Carrier, 5C: 5 Carrier

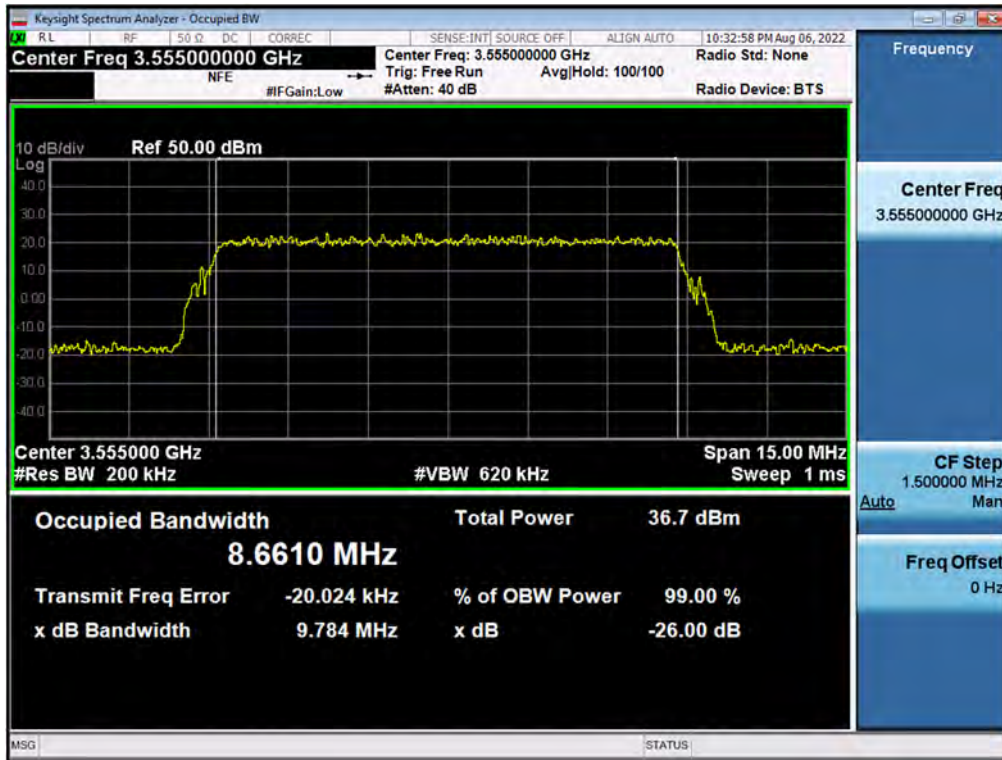
**CBRS (NR 40 MHz 1C + NR 10 MHz 1C + LTE 20 MHz 1C + LTE 5 MHz 1C) + LTE 5 MHz 1C[5C(4C+1C)]**

Ant	Mod	NR 40 MHz + NR 10 MHz + LTE 20 MHz + LTE 5 MHz		LTE 5 MHz		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	3 587.50	73.490	3 697.50	4.498	77.988
	16QAM	3 587.50	73.349	3 697.50	4.495	77.844
	64QAM	3 587.50	73.450	3 697.50	4.508	77.958
	256QAM	3 587.50	73.540	3 697.50	4.505	78.044
1	QPSK	3 587.50	73.416	3 697.50	4.505	77.921
	16QAM	3 587.50	73.300	3 697.50	4.500	77.801
	64QAM	3 587.50	73.392	3 697.50	4.512	77.903
	256QAM	3 587.50	73.417	3 697.50	4.506	77.922
2	QPSK	3 587.50	73.463	3 697.50	4.507	77.970
	16QAM	3 587.50	73.429	3 697.50	4.493	77.923
	64QAM	3 587.50	73.351	3 697.50	4.516	77.866
	256QAM	3 587.50	73.457	3 697.50	4.501	77.958
3	QPSK	3 587.50	73.381	3 697.50	4.500	77.880
	16QAM	3 587.50	73.541	3 697.50	4.493	78.035
	64QAM	3 587.50	73.394	3 697.50	4.506	77.900
	256QAM	3 587.50	73.424	3 697.50	4.502	77.926

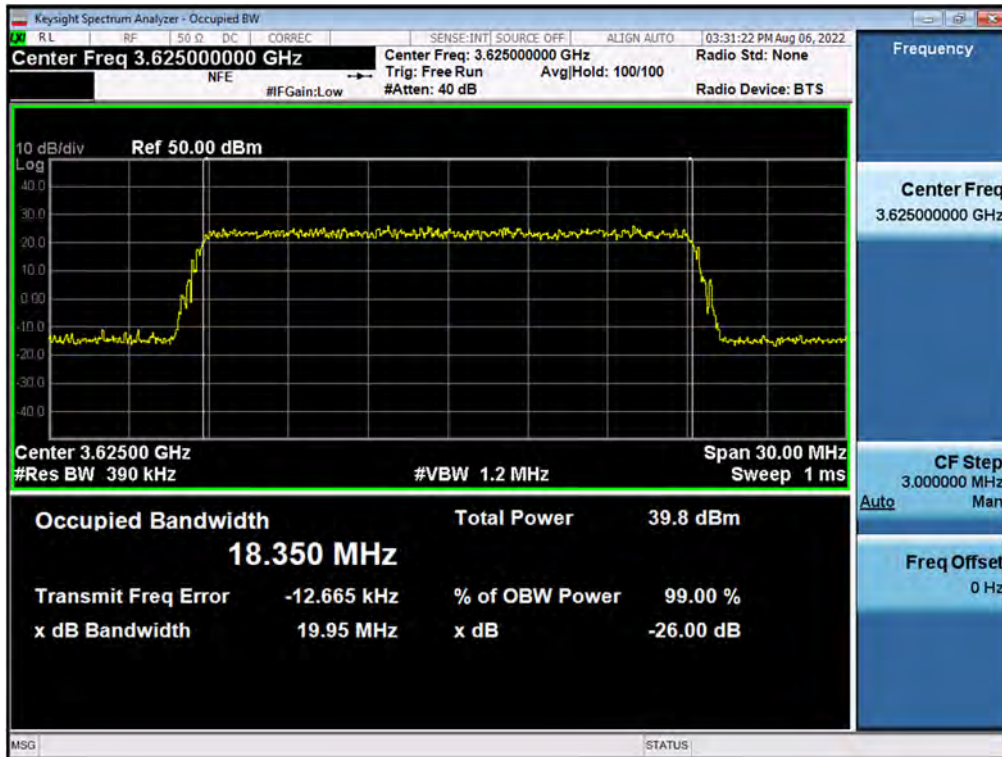
Note: 1C: 1 Carrier, 4C: 4 Carrier, 5C: 5 Carrier

## Plot Data of Occupied bandwidth

## Antenna 2 / CBRS NR 10 MHz 1 Carrier / 16QAM / Low

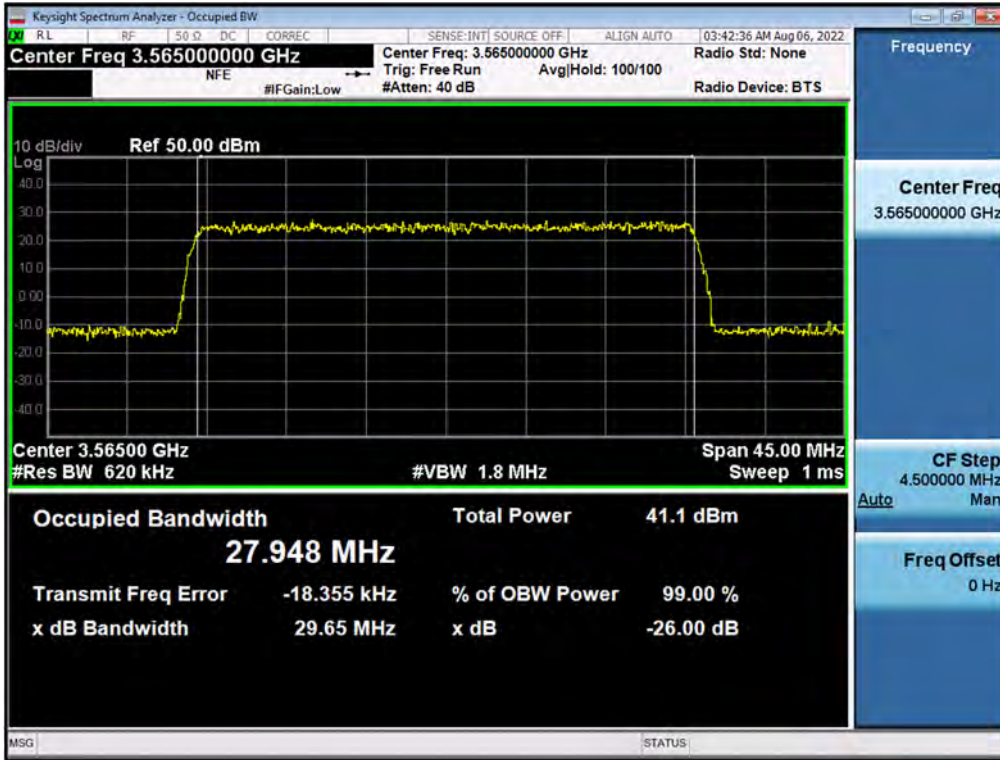


## Antenna 1 / CBRS NR 20 MHz 1 Carrier / 16QAM / Middle

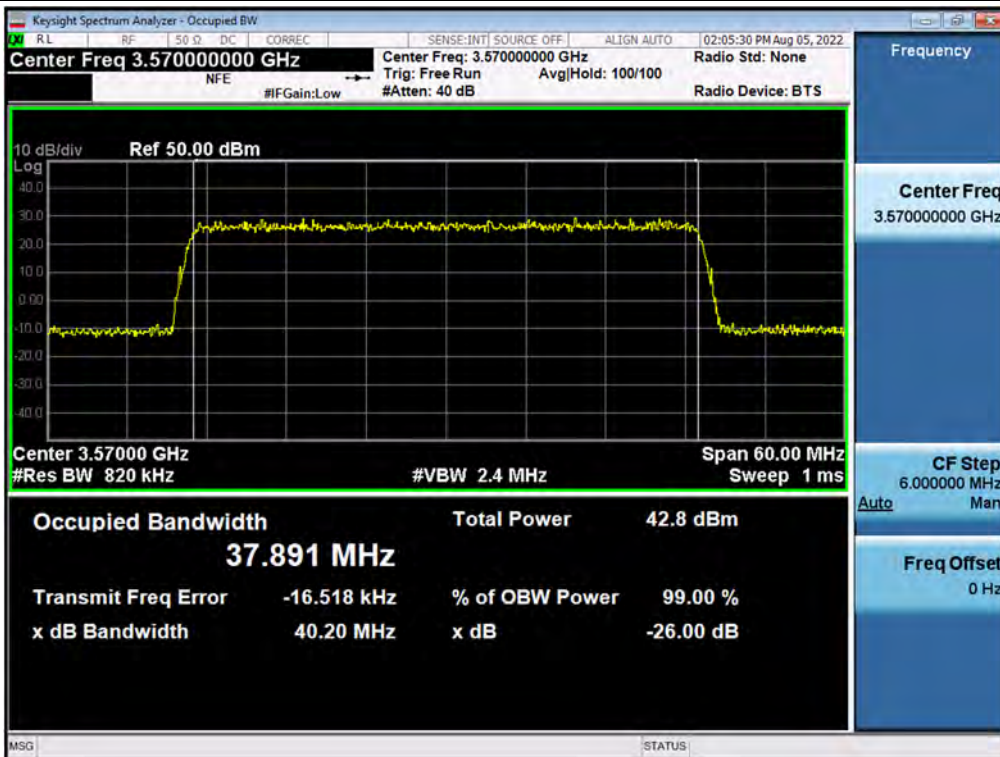




Antenna 2 / CBRS NR 30 MHz 1 Carrier / 256QAM / Low

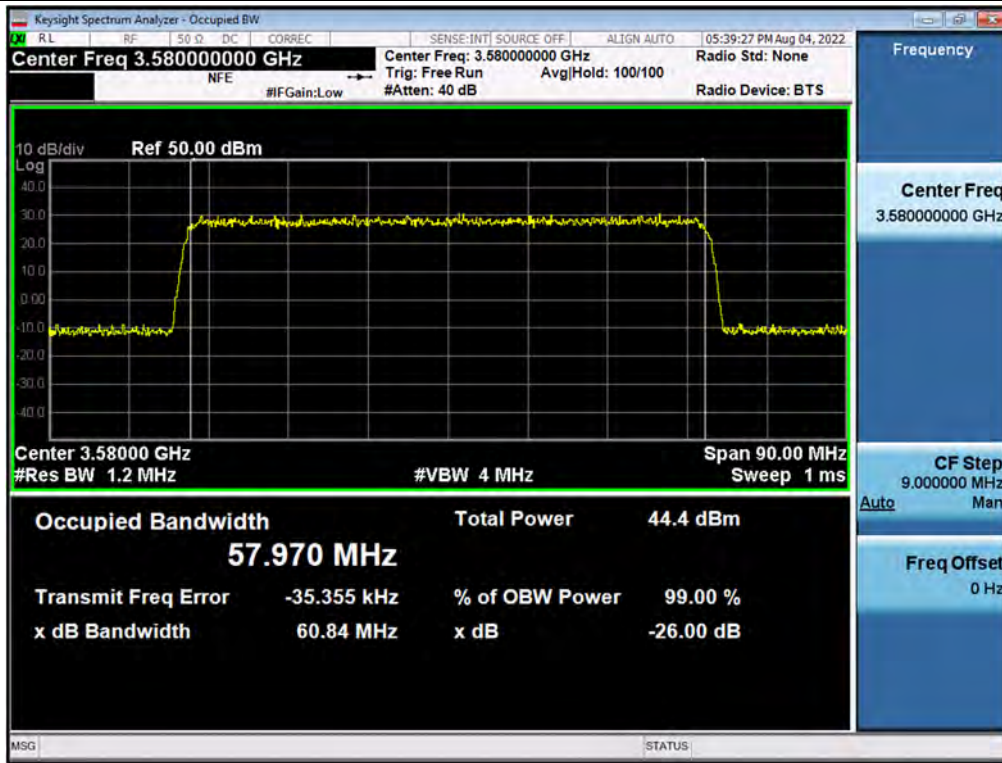


Antenna 3 / CBRS NR 40 MHz 1 Carrier / 16QAM / Low

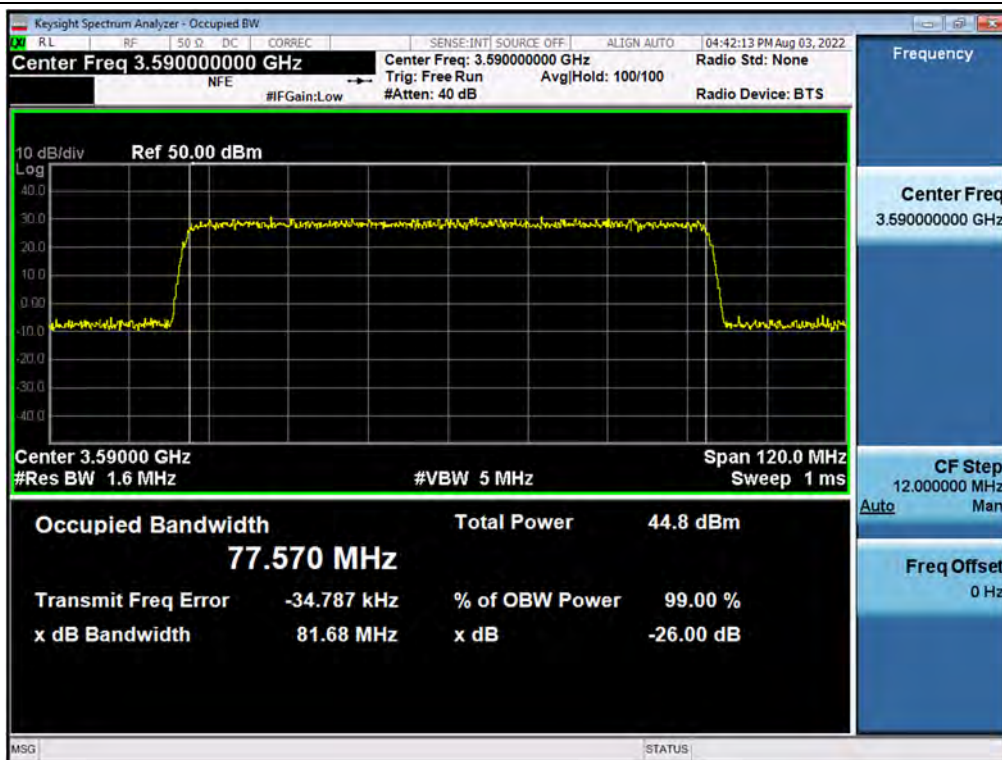




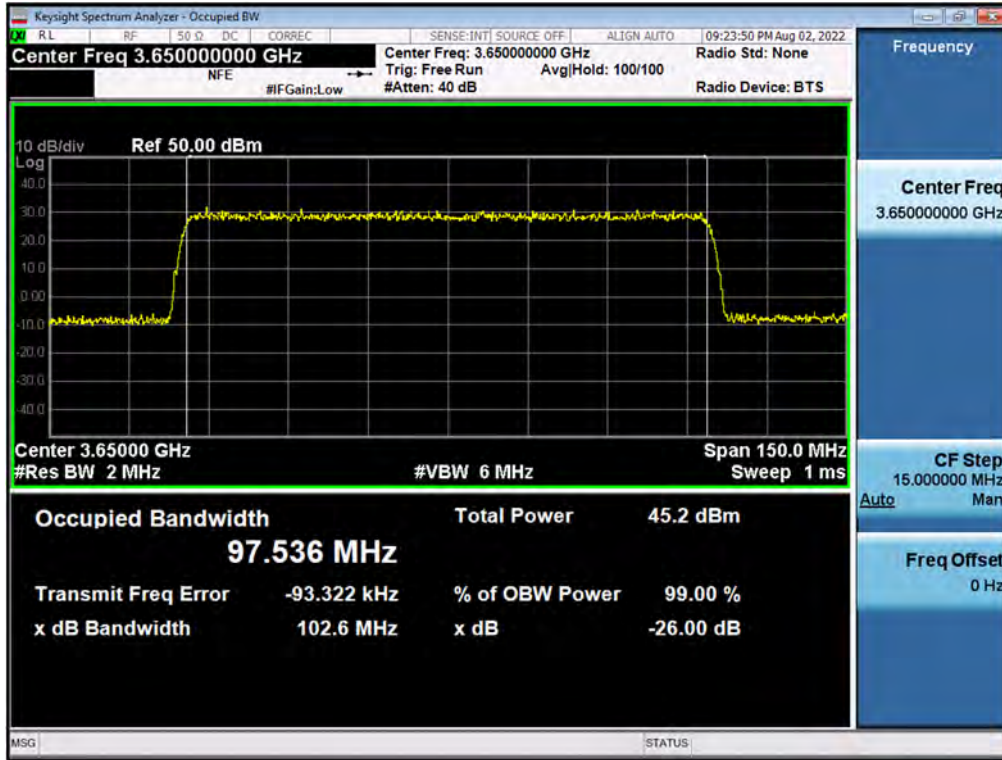
## Antenna 2 / CBRS NR 60 MHz 1 Carrier / 64QAM / Low



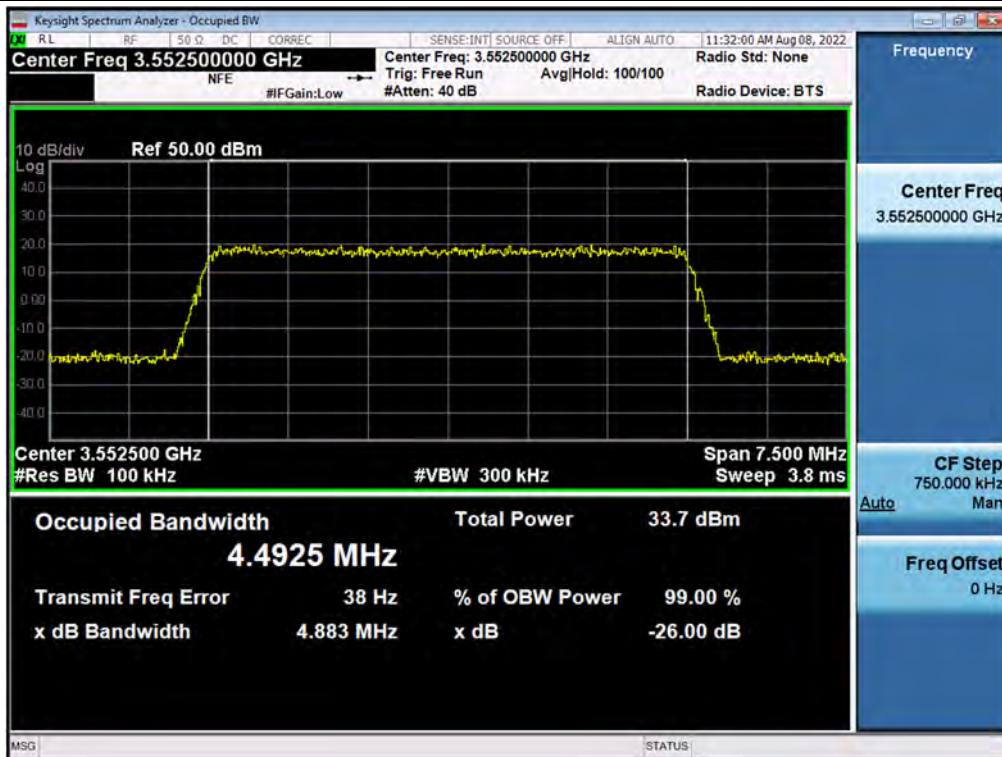
## Antenna 1 / CBRS NR 80 MHz 1 Carrier / 256QAM / Low



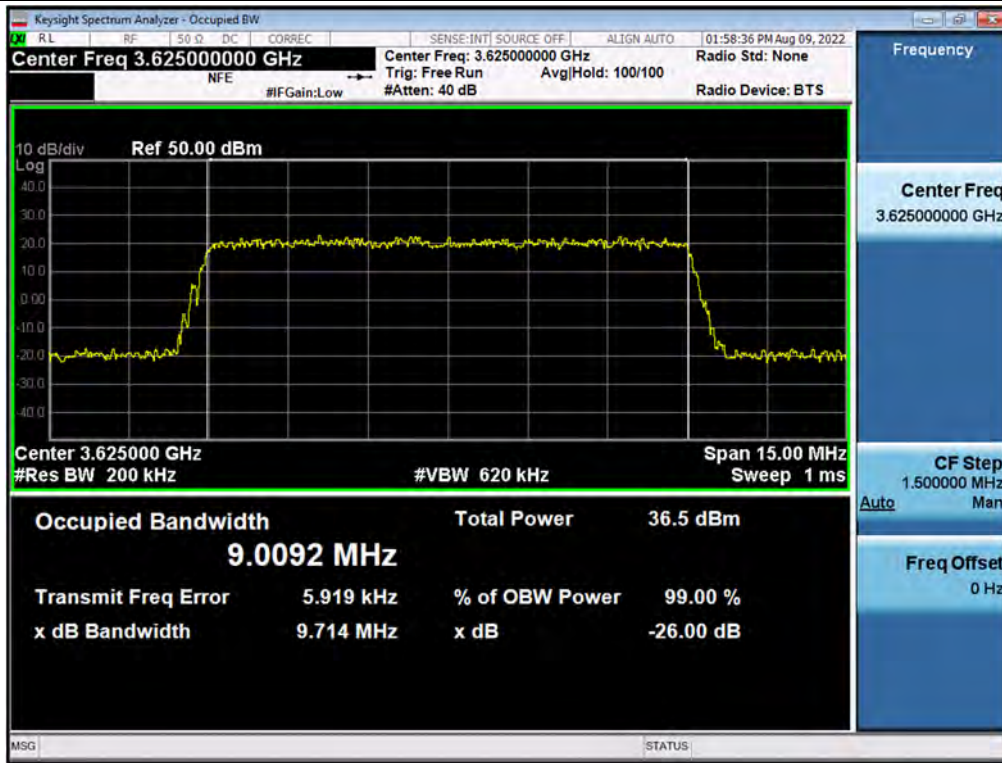
## Antenna 2 / CBRS NR 100 MHz 1 Carrier / 64QAM / High



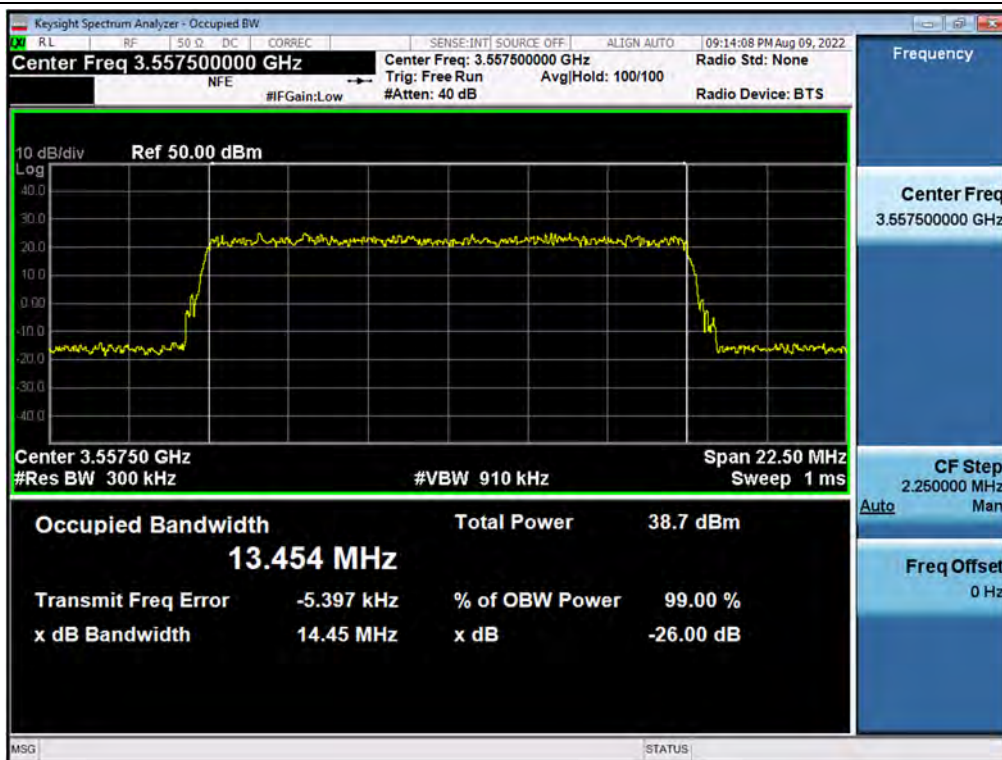
## Antenna 2 / CBRS LTE 5 MHz 1 Carrier / QPSK / Low



## Antenna 2 / CBRS LTE 10 MHz 1 Carrier / 64QAM / Middle

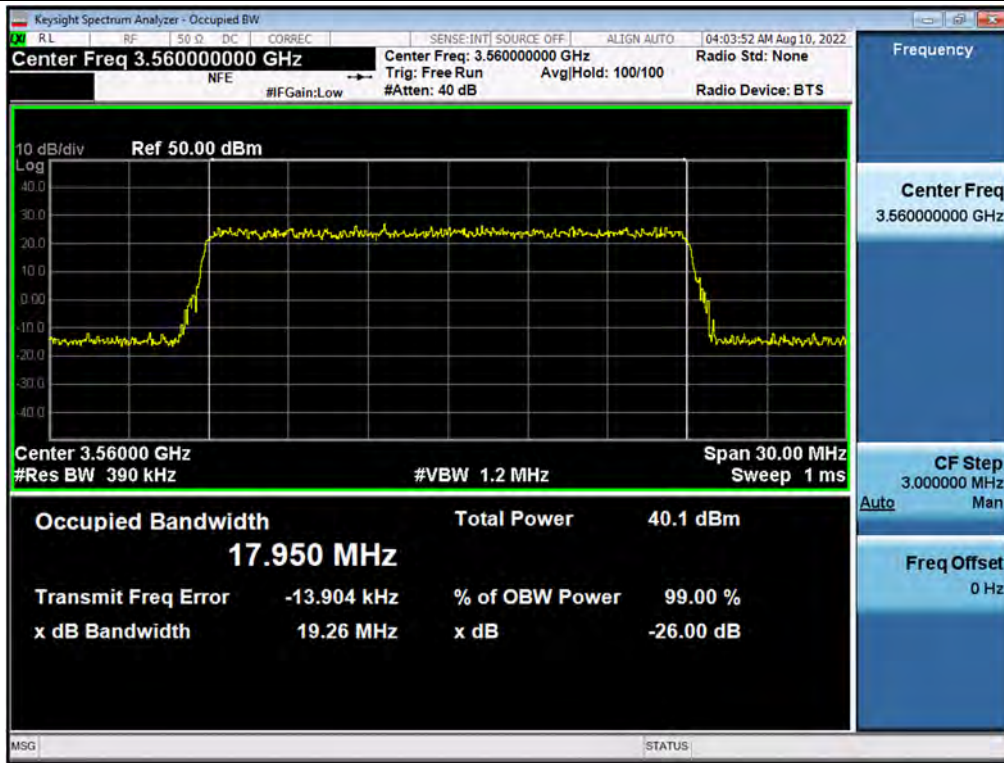


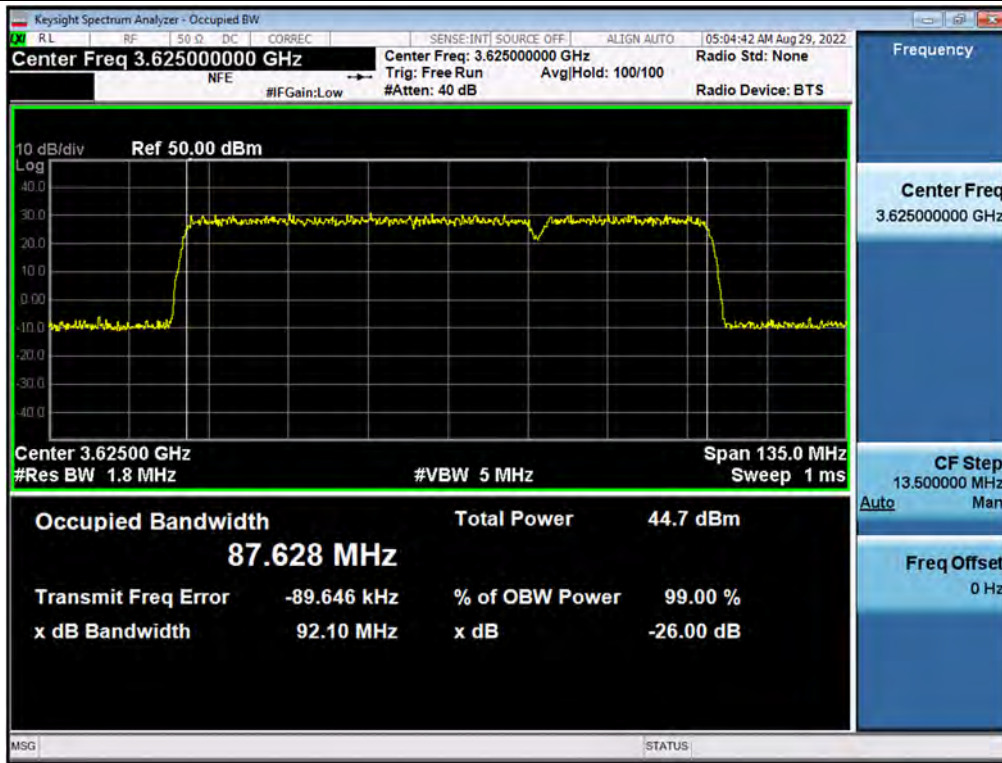
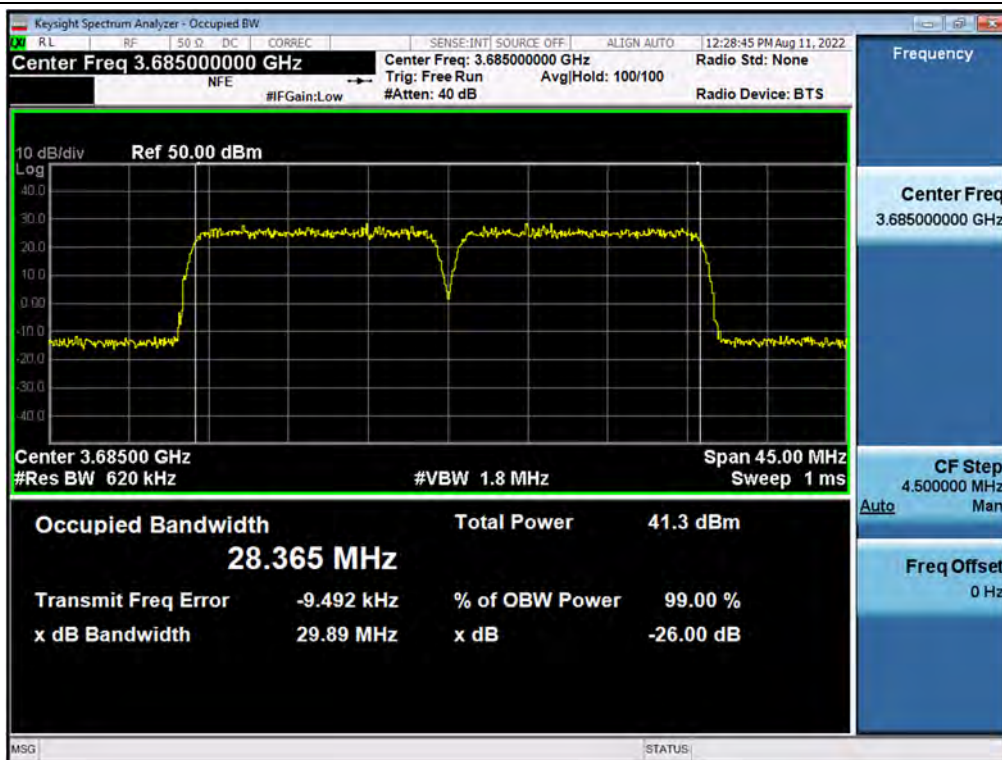
## Antenna 3 / CBRS LTE 15 MHz 1 Carrier / 256QAM / Low

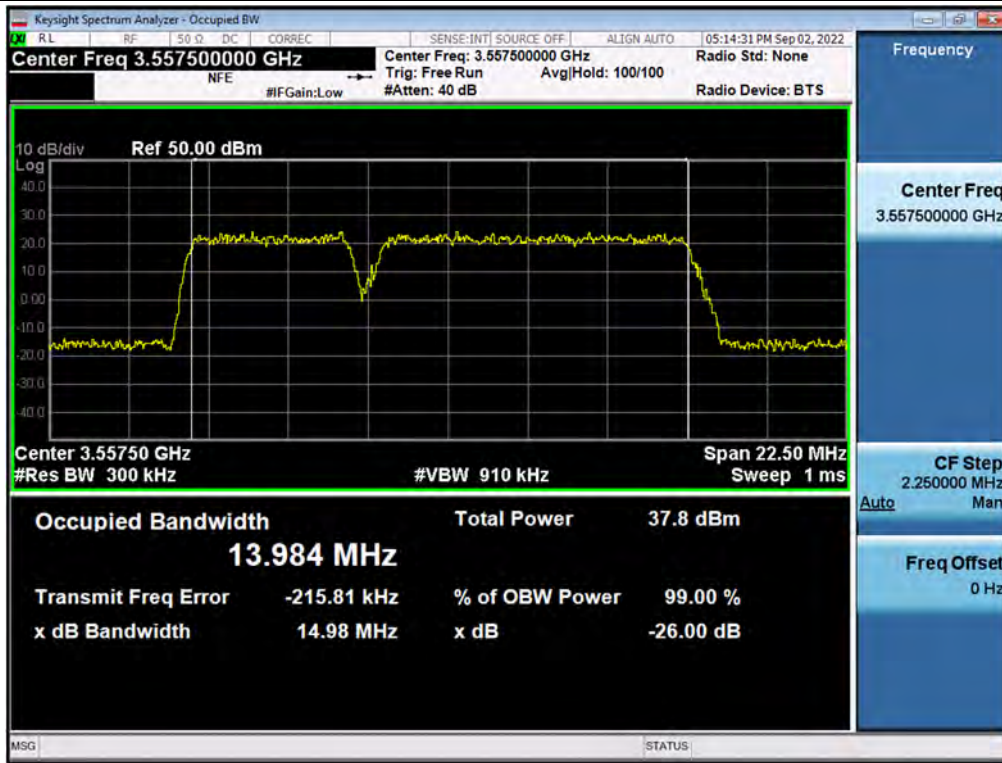
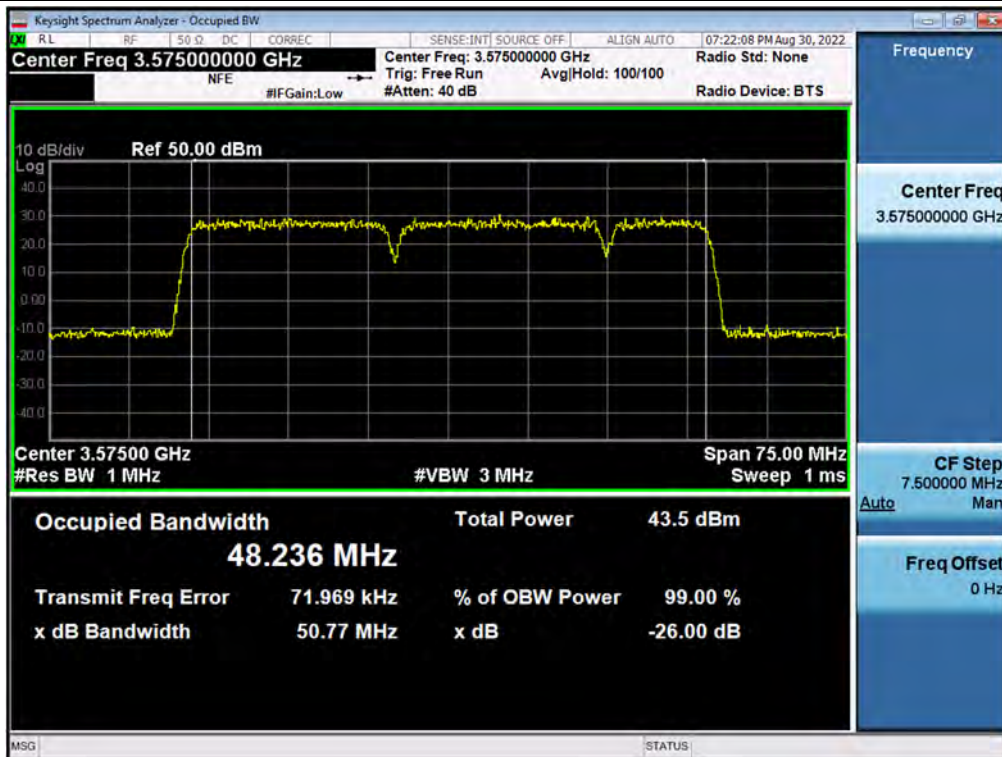




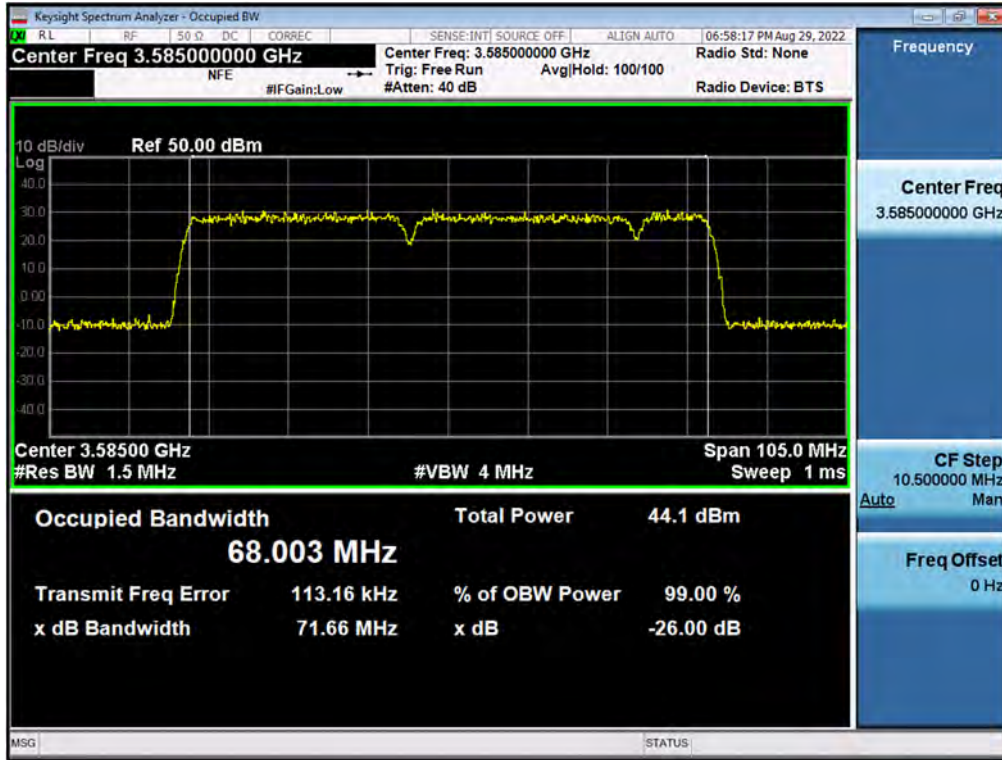
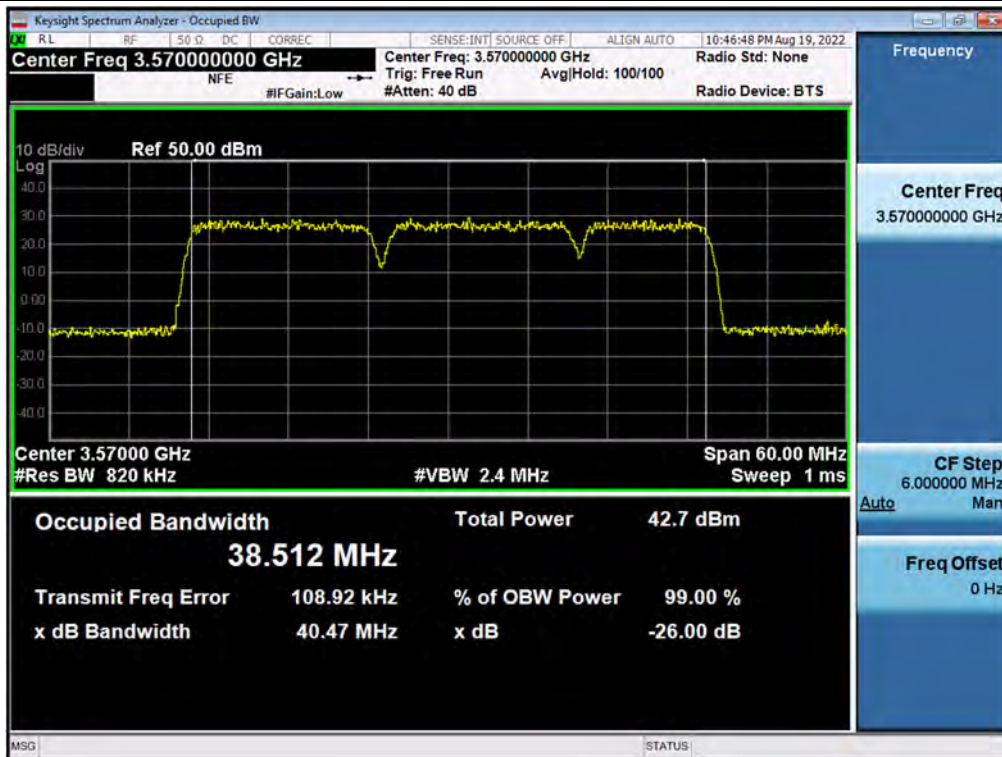
Antenna 2 / CBRs LTE 20 MHz 1 Carrier / QPSK / Low



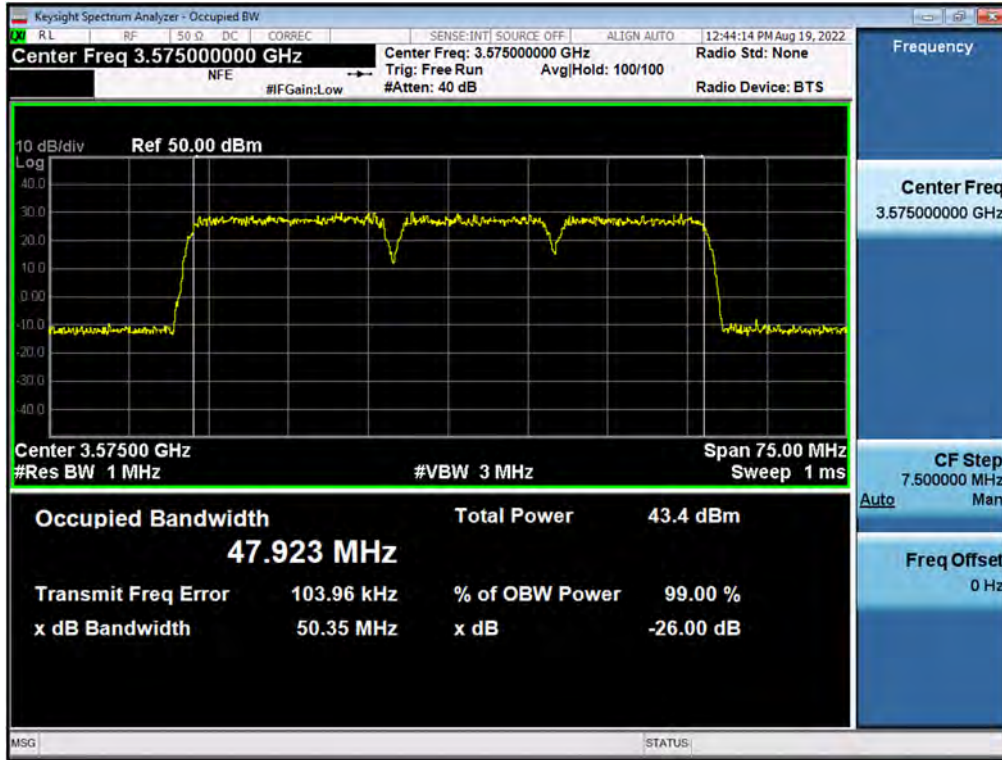
**Antenna 3 / CBRS NR(60 MHz 1C + 30 MHz 1C)[2C] / Contiguous / 64QAM / Middle**

**Antenna 2 / CBRS LTE(15 MHz 1C + 15 MHz 1C)[2C] / Contiguous / 256QAM / High**


**Antenna 3 / CBRS LTE 5 MHz 1C + NR 10 MHz 1C[2C] / Contiguous / QPSK / Low**

**Antenna 3 / CBRS NR(20 MHz 1C + 20 MHz 1C + 10 MHz 1C)[3C] / Contiguous / 16QAM / Low**


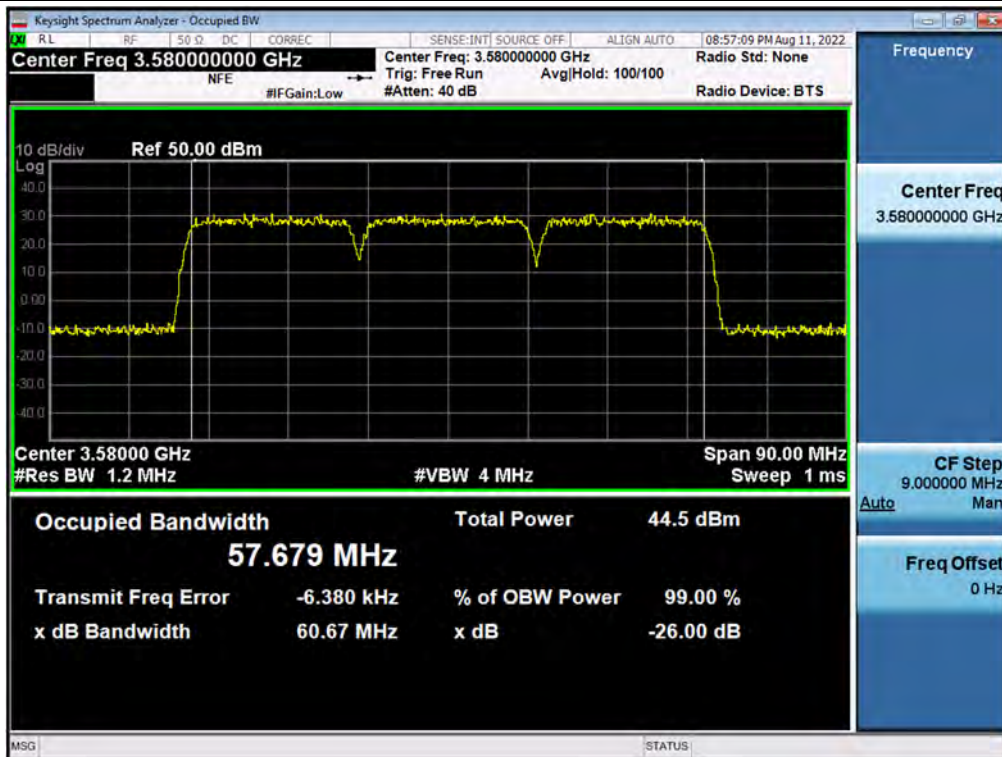


**Antenna 3 / CBRs NR(30 MHz 1C + 30 MHz 1C + 10 MHz 1C)[3C] / Contiguous / 16QAM / Low**

**Antenna 3 / CBRs LTE(15 MHz 1C + 15 MHz 1C + 10 MHz 1C)[3C] / Contiguous / QPSK / Low**


## Antenna 3 / CBRS LTE(20 MHz 1C + 15 MHz 1C + 15 MHz 1C)[3C] / Contiguous / 64QAM / Low

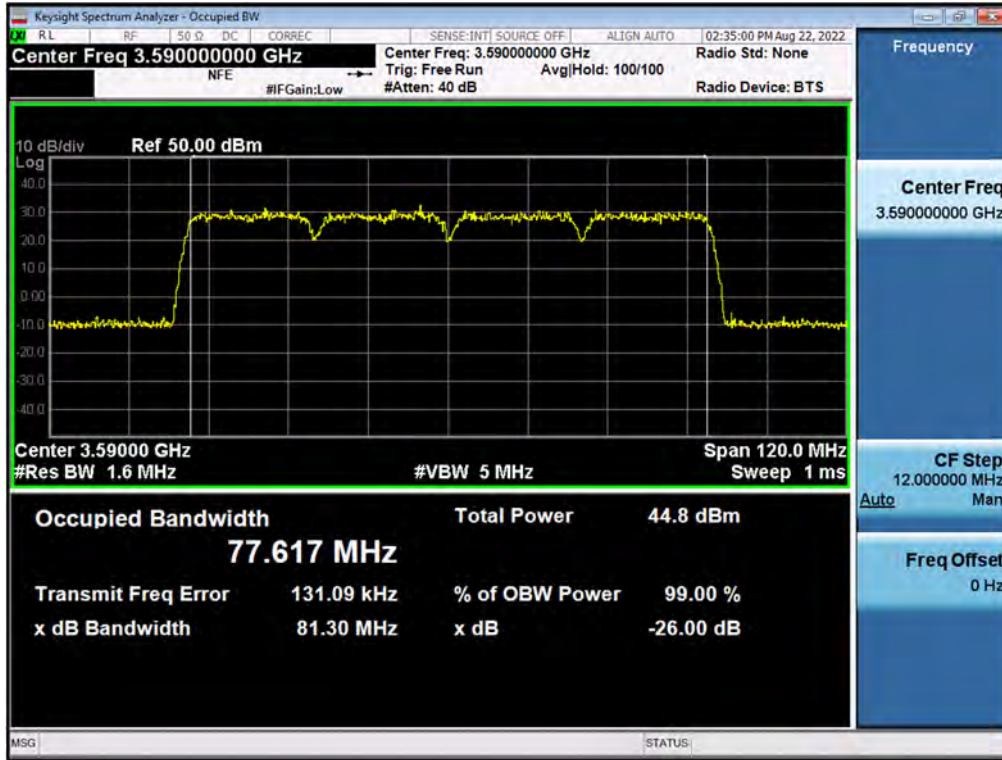


## Antenna 3 / CBRS LTE(20 MHz 1C + 20 MHz 1C + 20 MHz 1C)[3C] / Contiguous / QPSK / Low

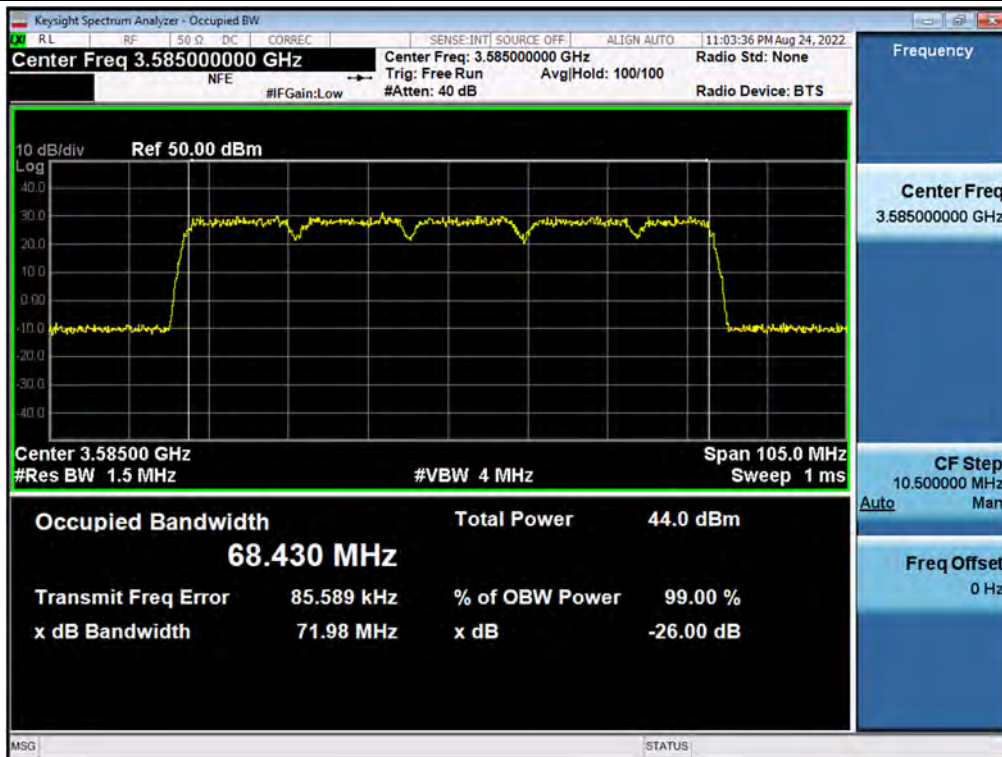


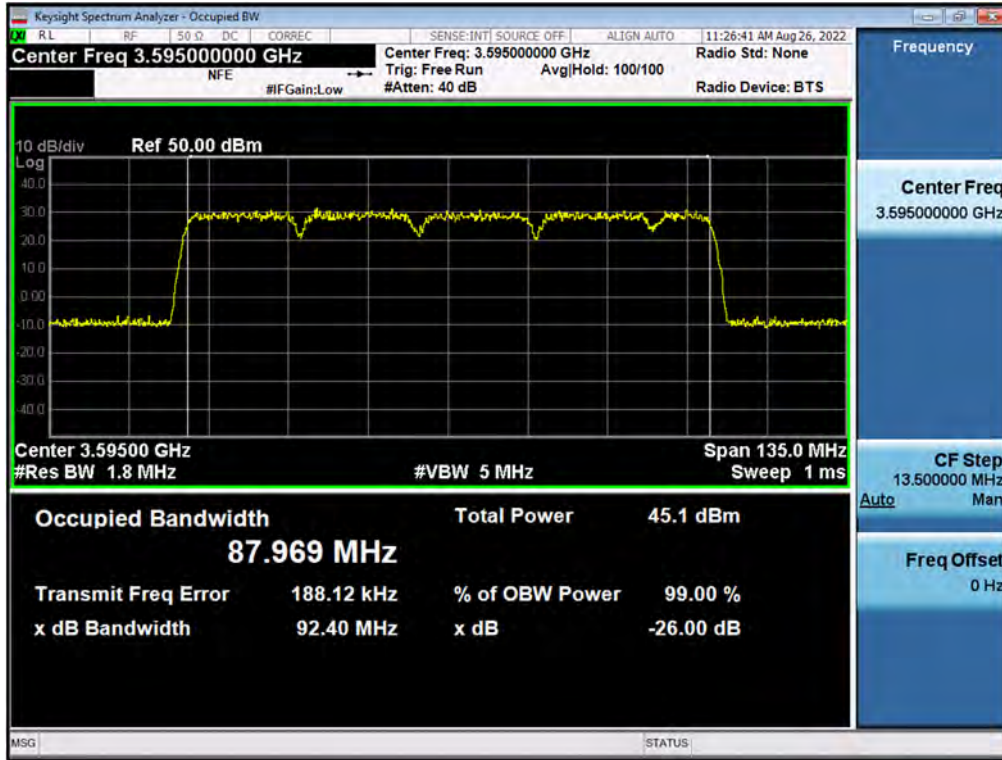
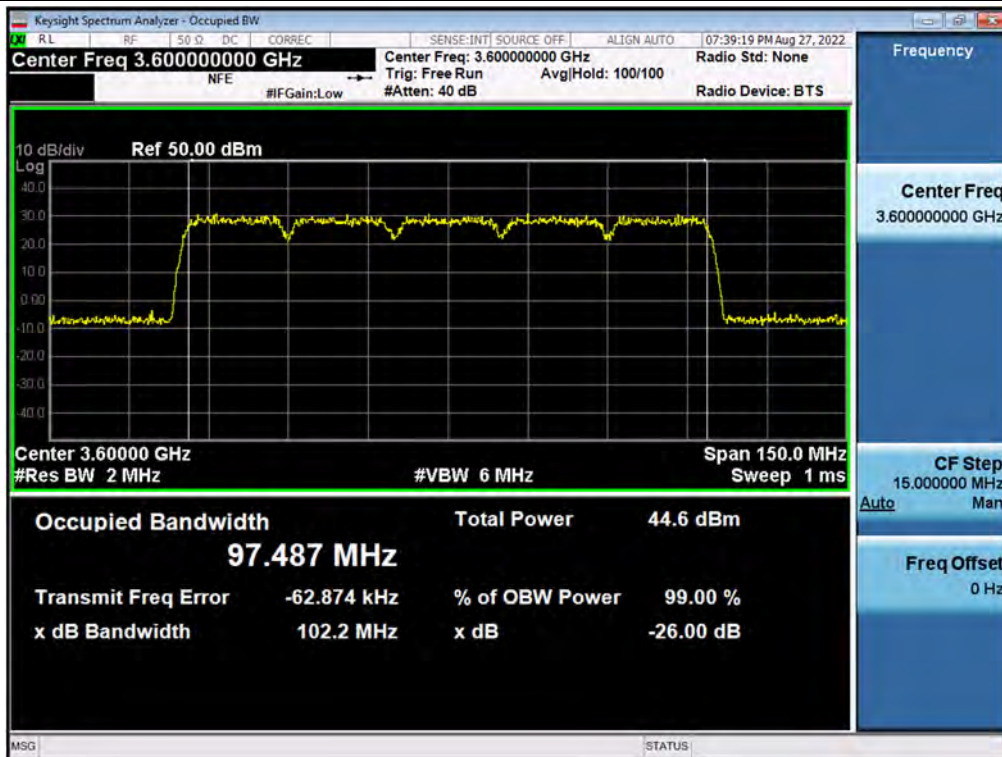


## Antenna 3 / CBRS LTE(20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C)[4C] / Contiguous / 16QAM / Low

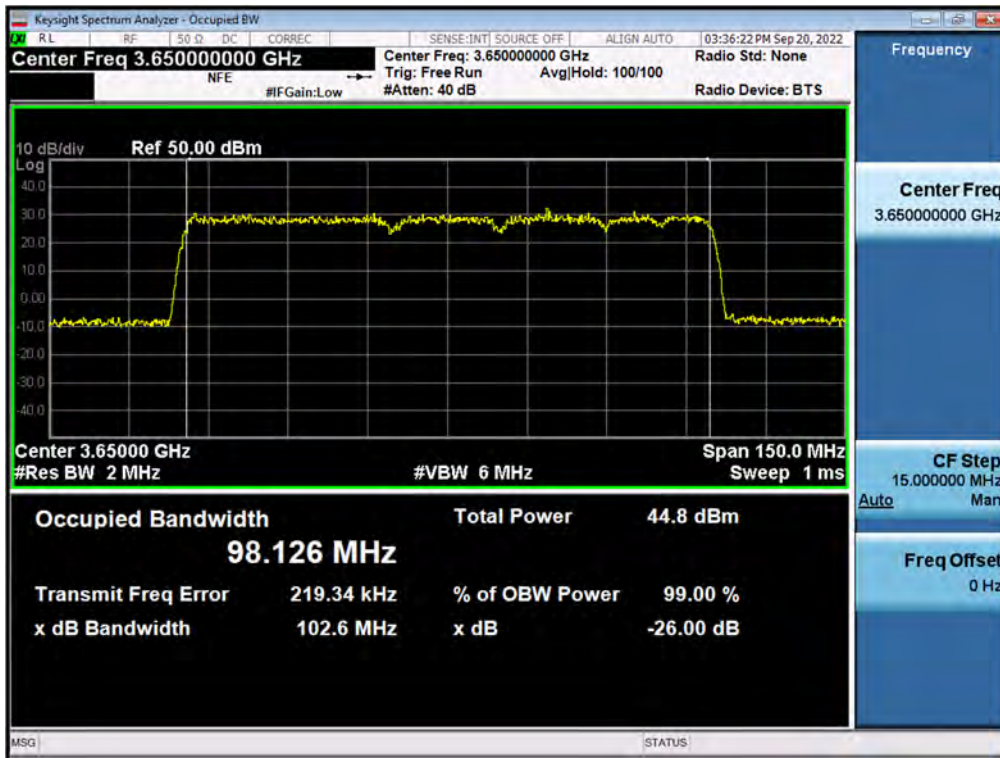


## Antenna 3 / CBRS LTE(15 MHz 1C + 15 MHz 1C + 15 MHz 1C + 15 MHz 1C + 10 MHz 1C)[5C] / Contiguous / 256QAM / Low

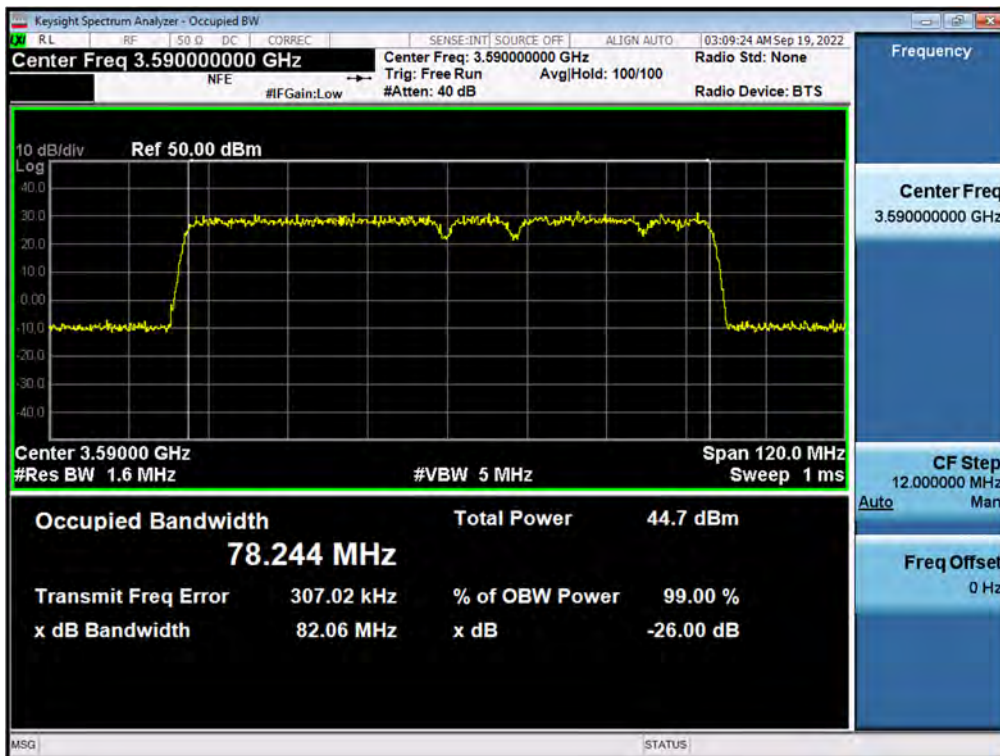


**Antenna 3 / CBRs LTE(20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 10 MHz 1C)[5C] / Contiguous / 256QAM / Low**

**Antenna 1 / CBRs LTE(20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C)[5C] / Contiguous / QPSK / Low**


Antenna 3 / CBRS R 40 MHz 1C + NR 20 MHz 1C + NR 20 MHz 1C + LTE 10 MHz 1C + LTE 10 MHz 1C[5C] / Contiguous / 64QAM / High

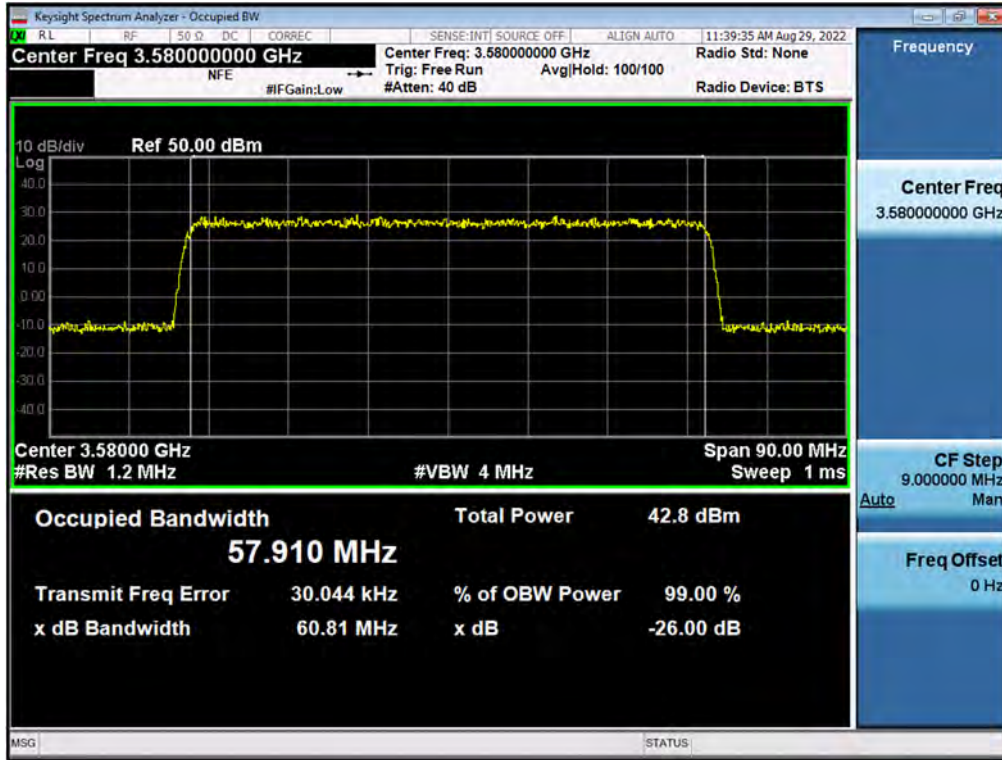


Antenna 3 / CBRS NR 40 MHz 1C + NR 10 MHz 1C + LTE 20 MHz 1C + LTE 5 MHz 1C + LTE 5 MHz 1C[5C] / Contiguous / 16QAM / Low

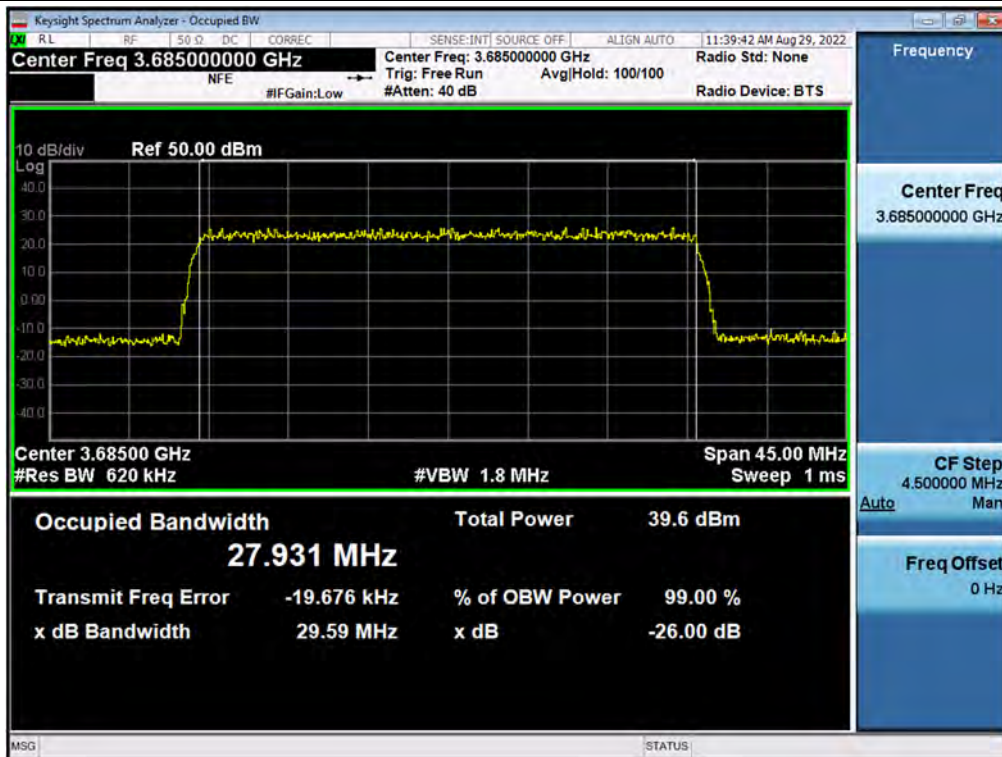




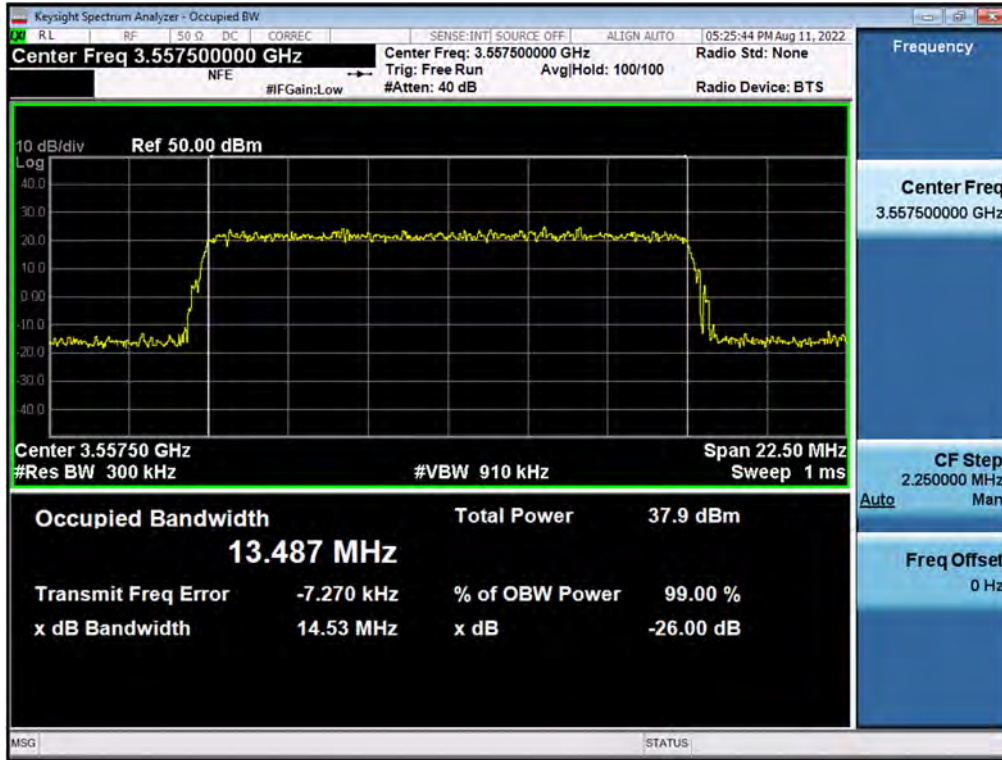
## Antenna 3 / CBRS NR(60 MHz 1C + 30 MHz 1C)[2C] / NR 60 MHz 1C / Non-Contiguous / QPSK / Low



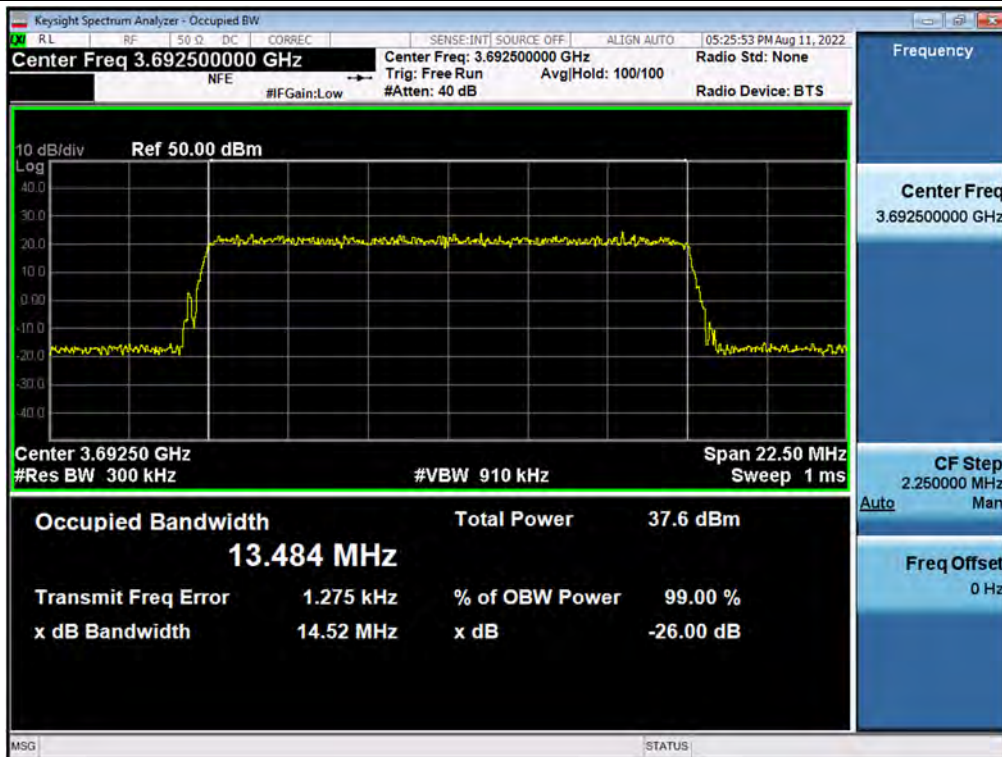
## Antenna 3 / CBRS NR(60 MHz 1C + 30 MHz 1C)[2C] / NR 30 MHz 1C / Non-Contiguous / QPSK / High

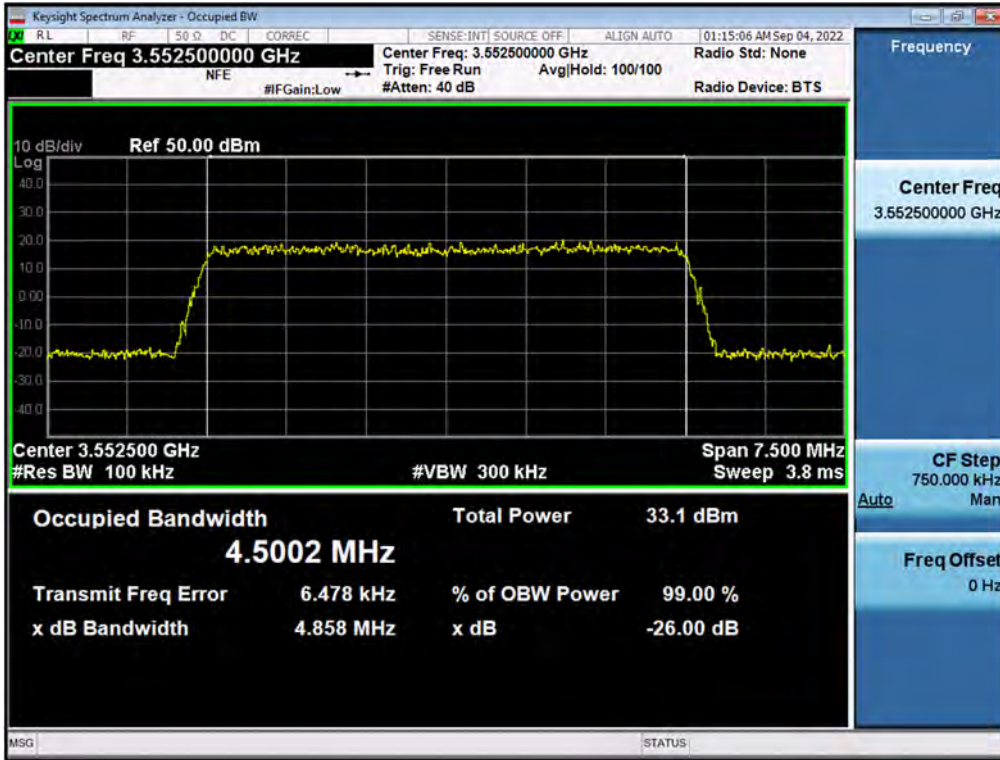
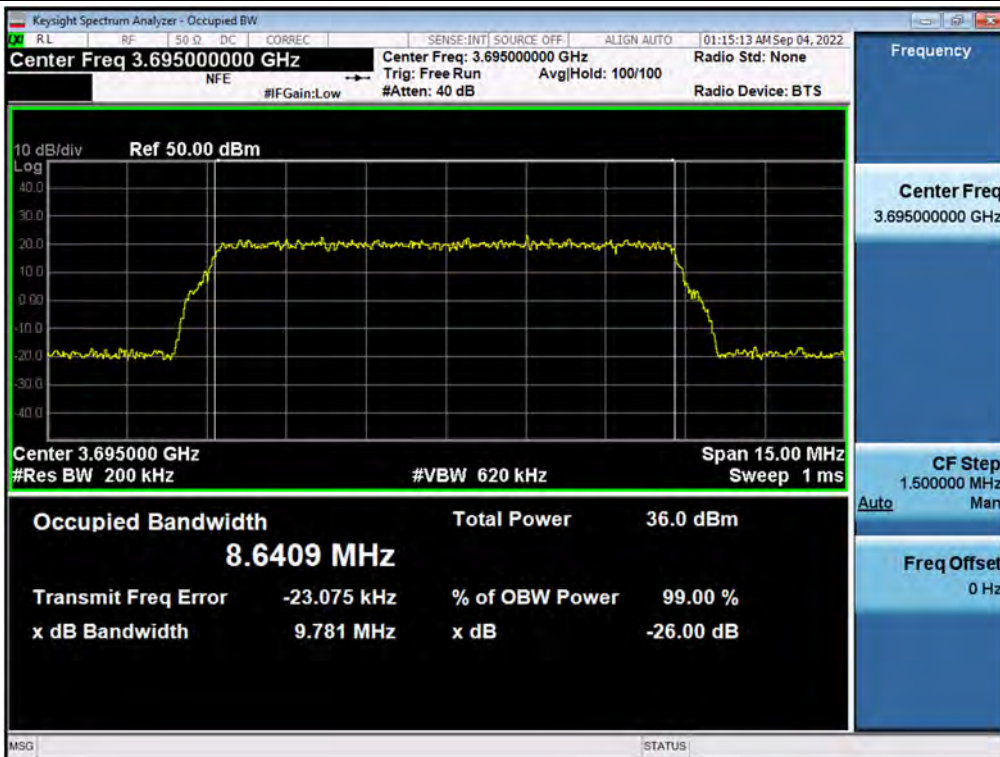


## Antenna 2 / CBRS LTE(15 MHz 1C + 15 MHz 1C)[2C] / LTE 15 MHz 1C / Non-Contiguous / 64QAM / Low



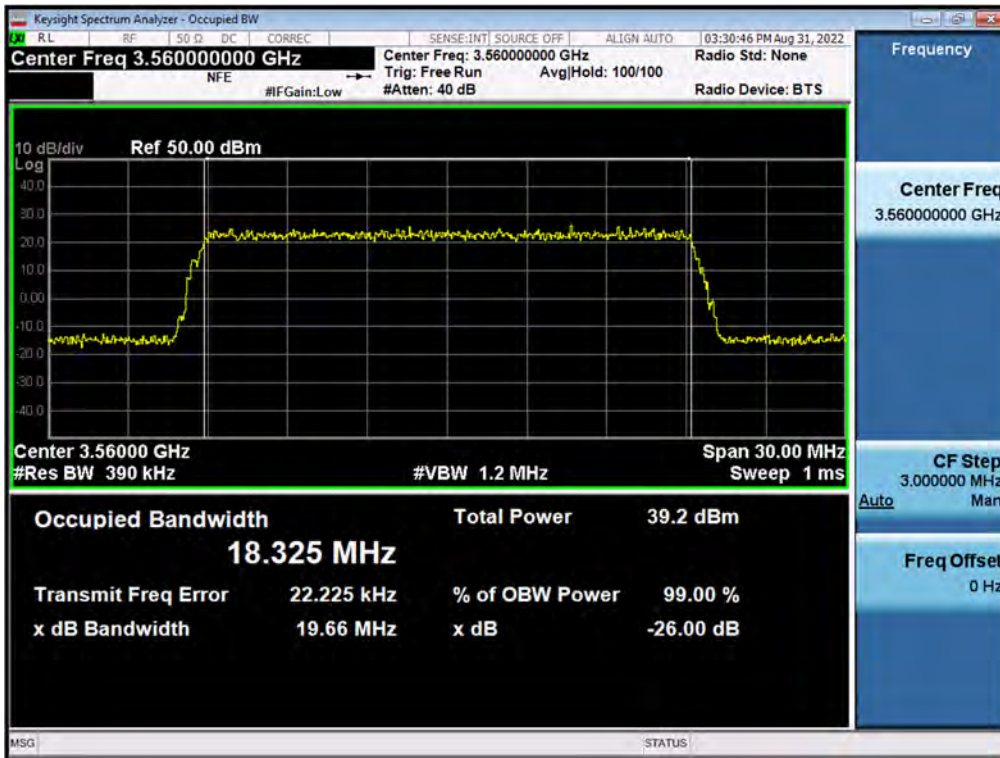
## Antenna 2 / CBRS LTE(15 MHz 1C + 15 MHz 1C)[2C] / LTE 15 MHz 1C / Non-Contiguous / 64QAM / High



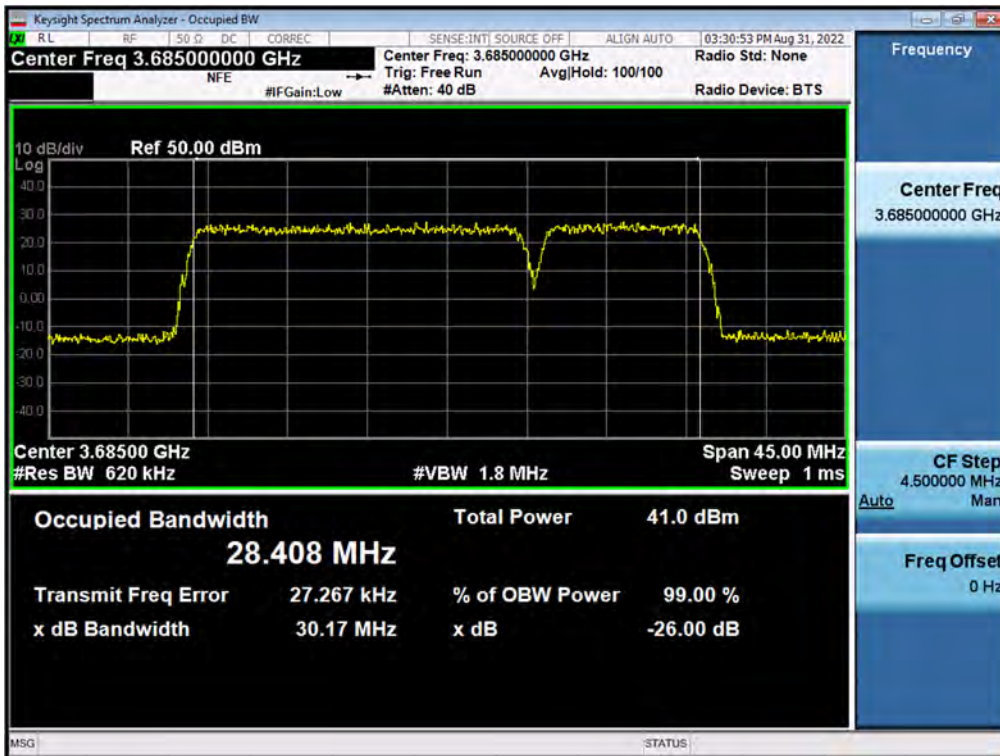
**Antenna 3 / CBRS LTE 5 MHz 1C + NR 10 MHz 1C[2C] / LTE 5 MHz 1C / Non-Contiguous / 16QAM / Low**

**Antenna 3 / CBRS LTE 5 MHz 1C + NR 10 MHz 1C[2C] / NR 10 MHz 1C / Non-Contiguous / 16QAM / High**




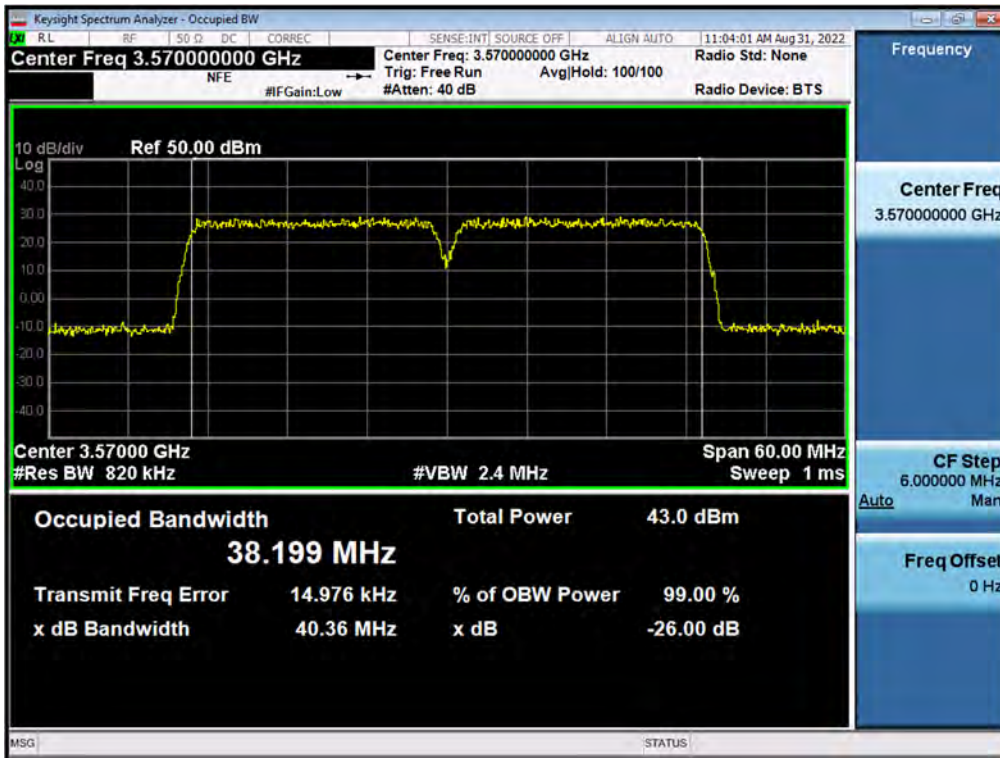
Antenna 3 / CBRS NR[20 MHz 1C + (20 MHz 1C + 10 MHz 1C)][3C(1C+2C)] / NR 20 MHz 1C / Non-Contiguous / 16QAM / Low



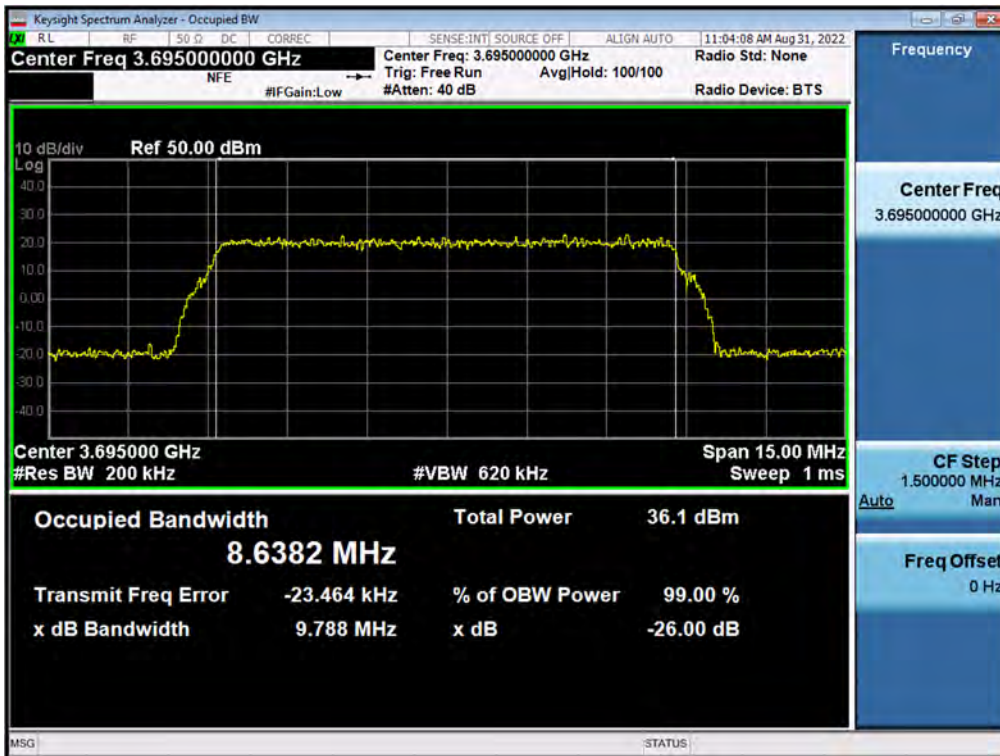
Antenna 3 / CBRS NR[20 MHz 1C + (20 MHz 1C + 10 MHz 1C)][3C(1C+2C)] / NR 20 MHz 1C + NR 10 MHz 1C / Non-Contiguous / 16QAM / High



Antenna 3 / CBRS NR[(20 MHz 1C + 20 MHz 1C) + 10 MHz 1C][3C(2C+1C)] / NR 20 MHz 1C + NR 20 MHz 1C / Non-Contiguous / 256QAM / Low

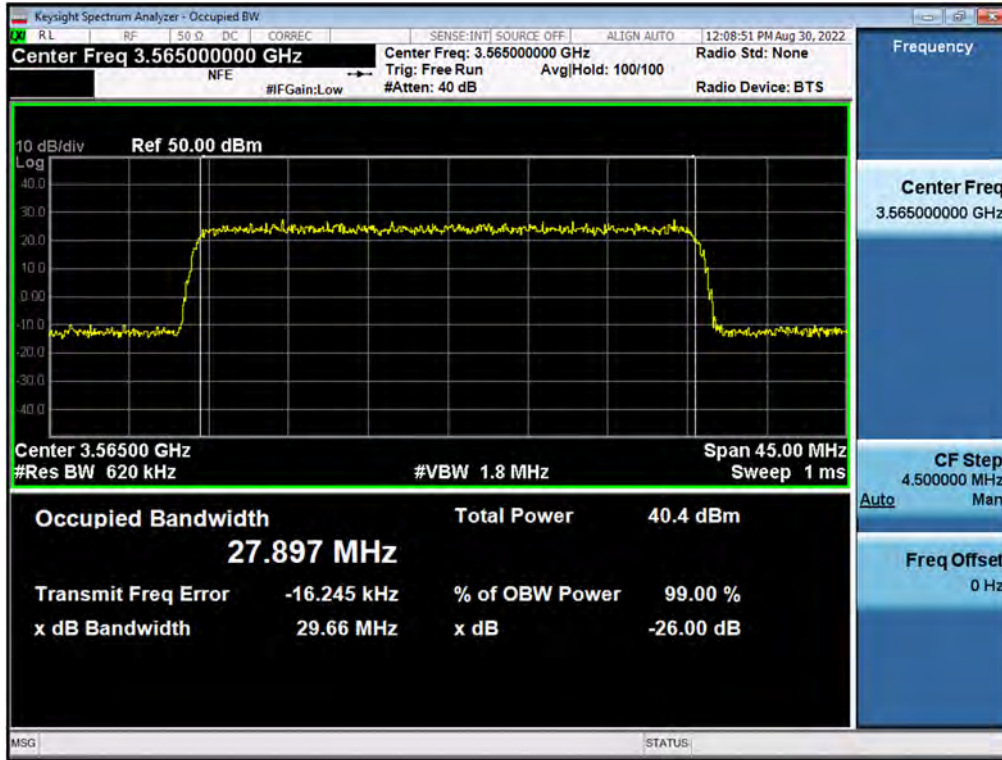


Antenna 3 / CBRS NR[(20 MHz 1C + 20 MHz 1C) + 10 MHz 1C][3C(2C+1C)] / NR 10 MHz 1C / Non-Contiguous / 256QAM / High

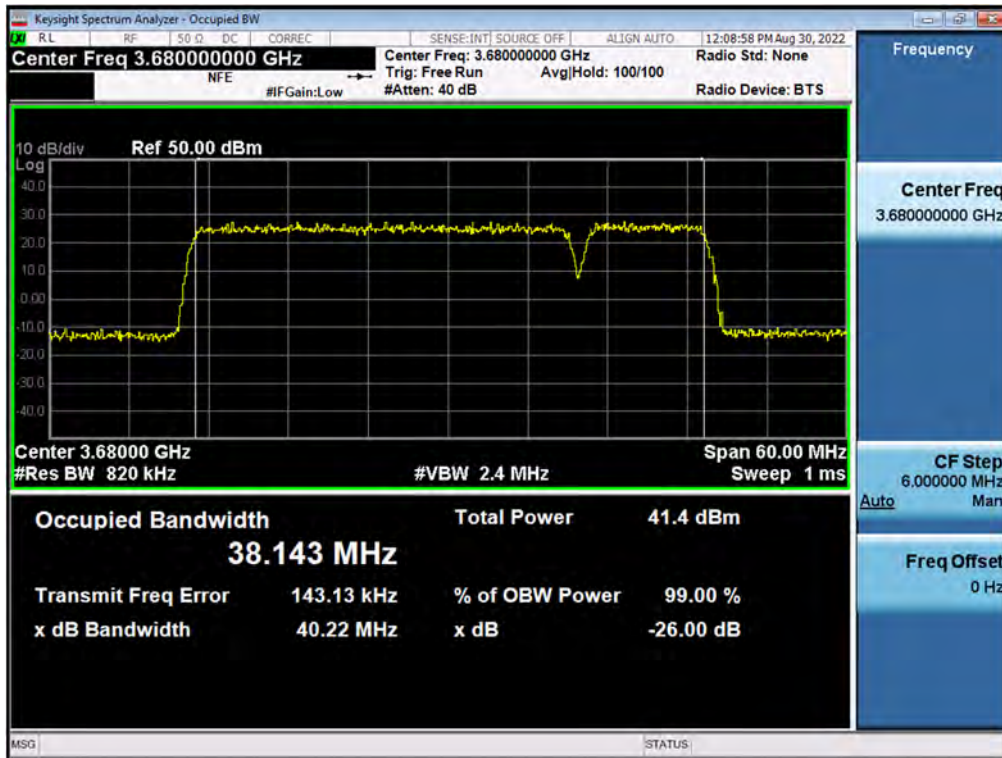




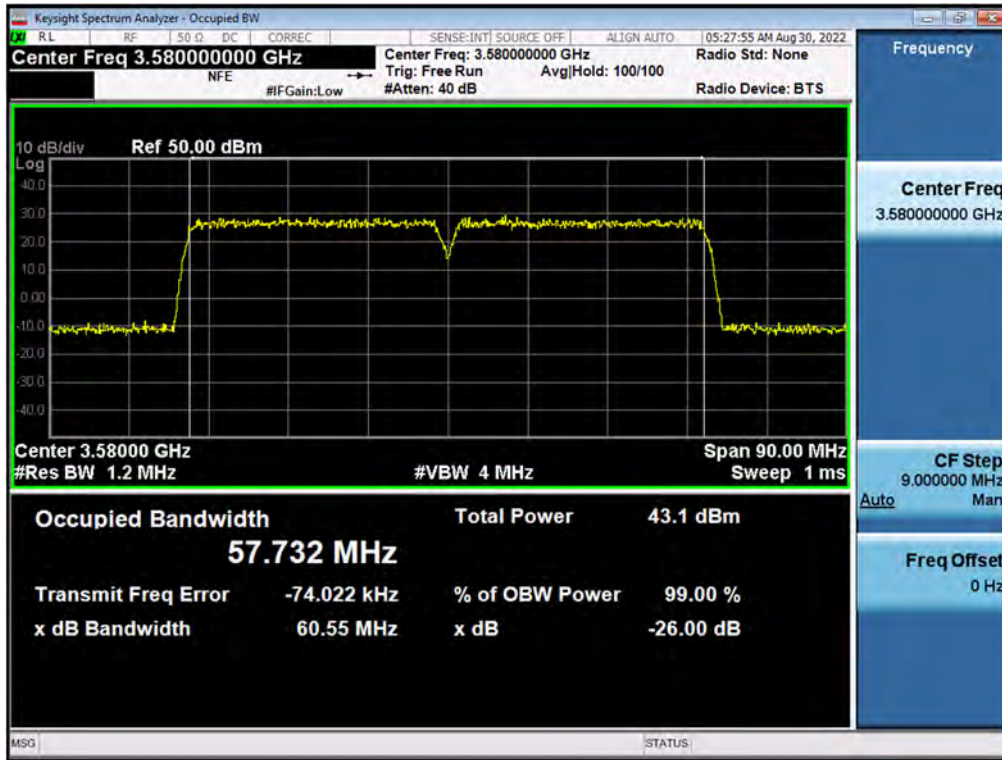
Antenna 3 / CBRS NR[30 MHz 1C + (30 MHz 1C + 10 MHz 1C)][3C(1C+2C)] / NR 30 MHz 1C / Non-Contiguous / QPSK / Low



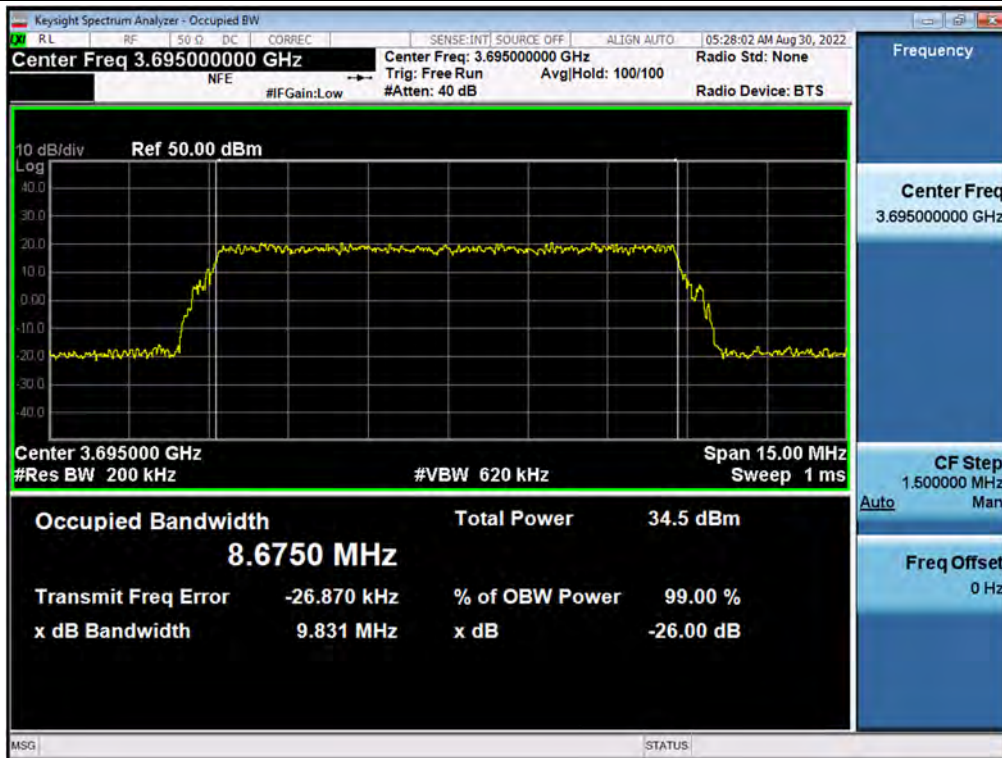
Antenna 3 / CBRS NR[30 MHz 1C + (30 MHz 1C + 10 MHz 1C)][3C(1C+2C)] / NR 30 MHz 1C + NR 10 MHz 1C / Non-Contiguous / QPSK / High



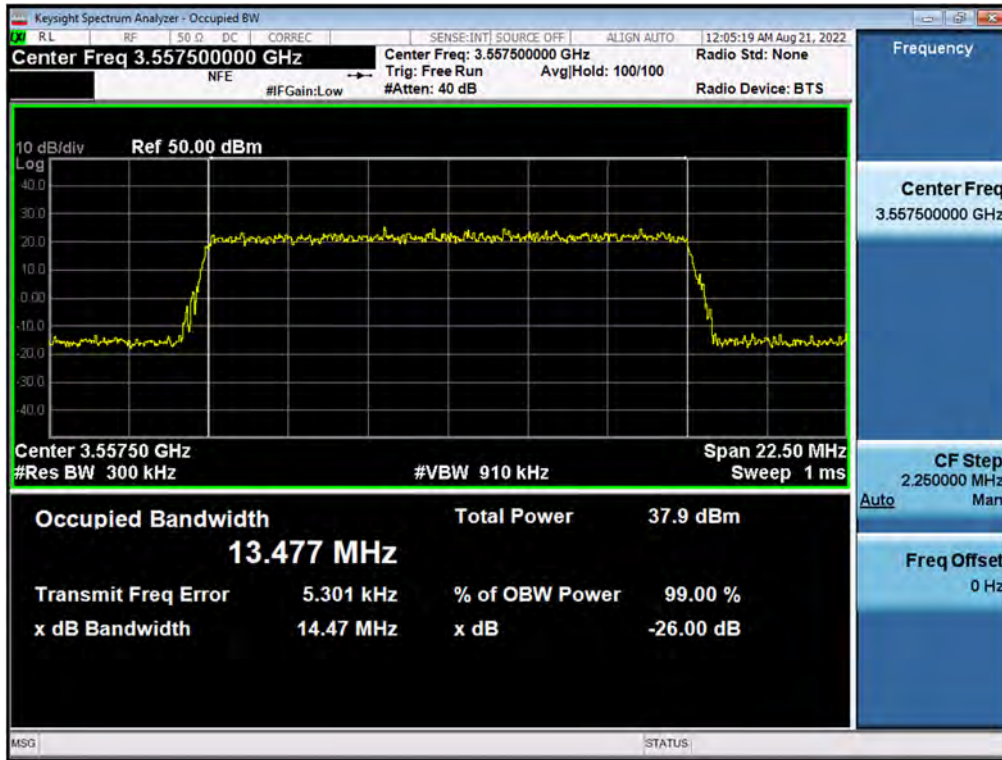
Antenna 3 / CBRS NR[(30 MHz 1C + 30 MHz 1C) + 10 MHz 1C][3C(2C+1C)] / NR 30 MHz 1C + NR 30 MHz 1C / Non-Contiguous / QPSK / Low



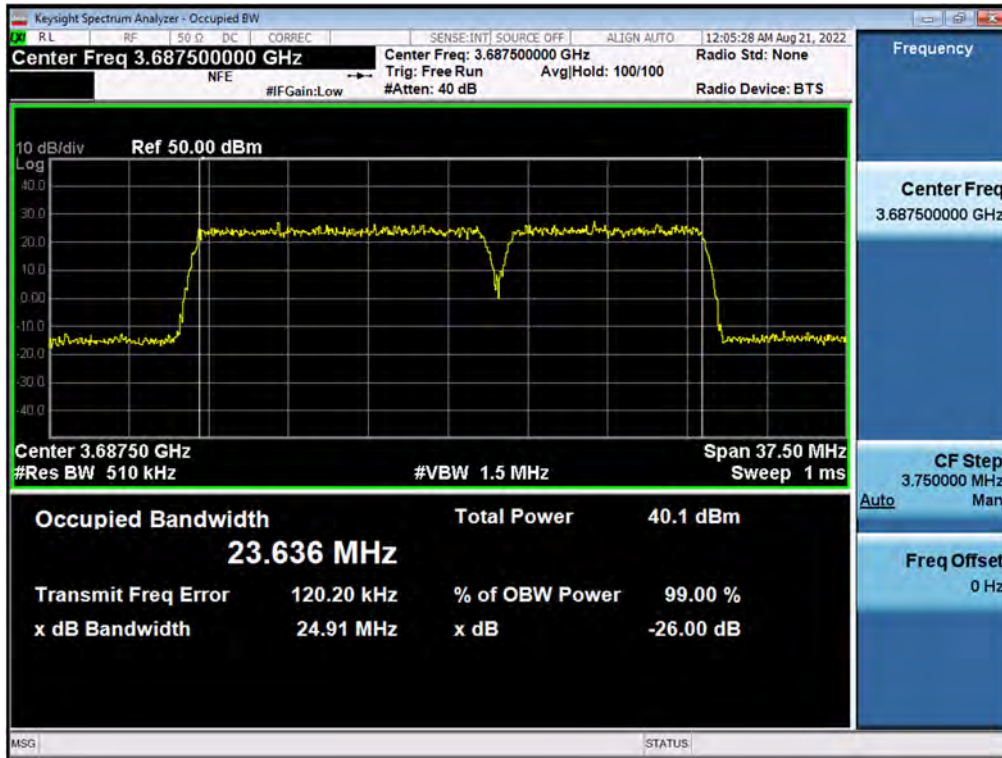
Antenna 3 / CBRS NR[(30 MHz 1C + 30 MHz 1C) + 10 MHz 1C][3C(2C+1C)] / NR 10 MHz 1C / Non-Contiguous / QPSK / High



Antenna 3 / CBRS LTE[15 MHz 1C + (15 MHz 1C + 10 MHz 1C)][3C(1C+2C)] / LTE 15 MHz 1C / Non-Contiguous / 256QAM / Low

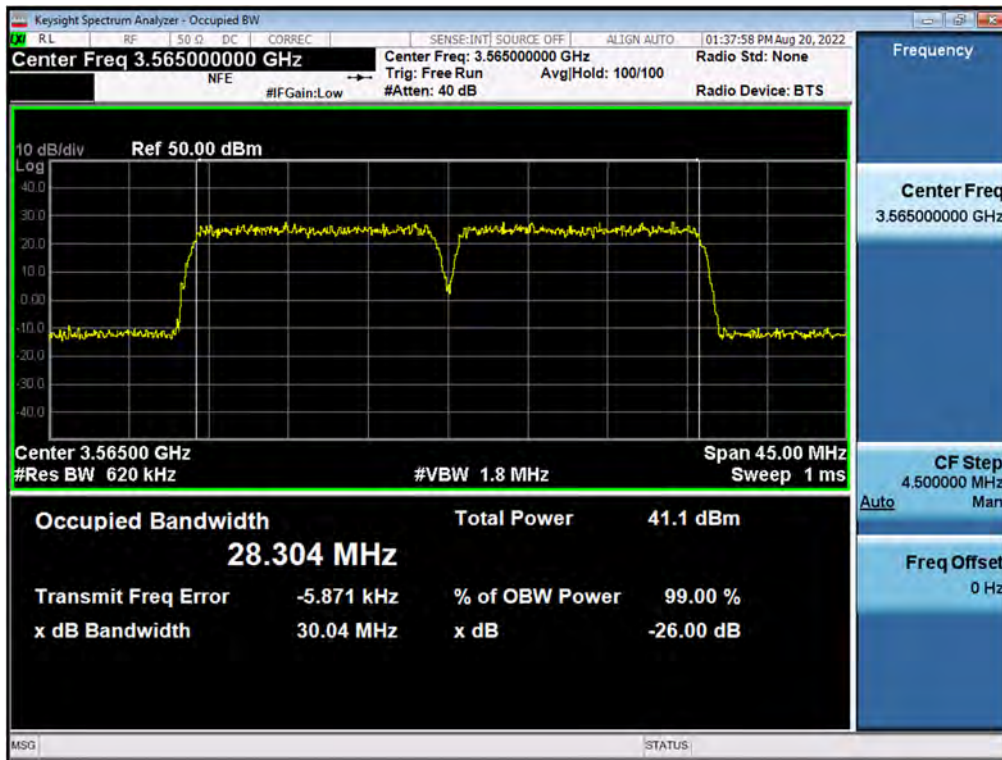


Antenna 3 / CBRS LTE[15 MHz 1C + (15 MHz 1C + 10 MHz 1C)][3C(1C+2C)] / LTE 15 MHz 1C + LTE 10 MHz 1C / Non-Contiguous / 256QAM / High

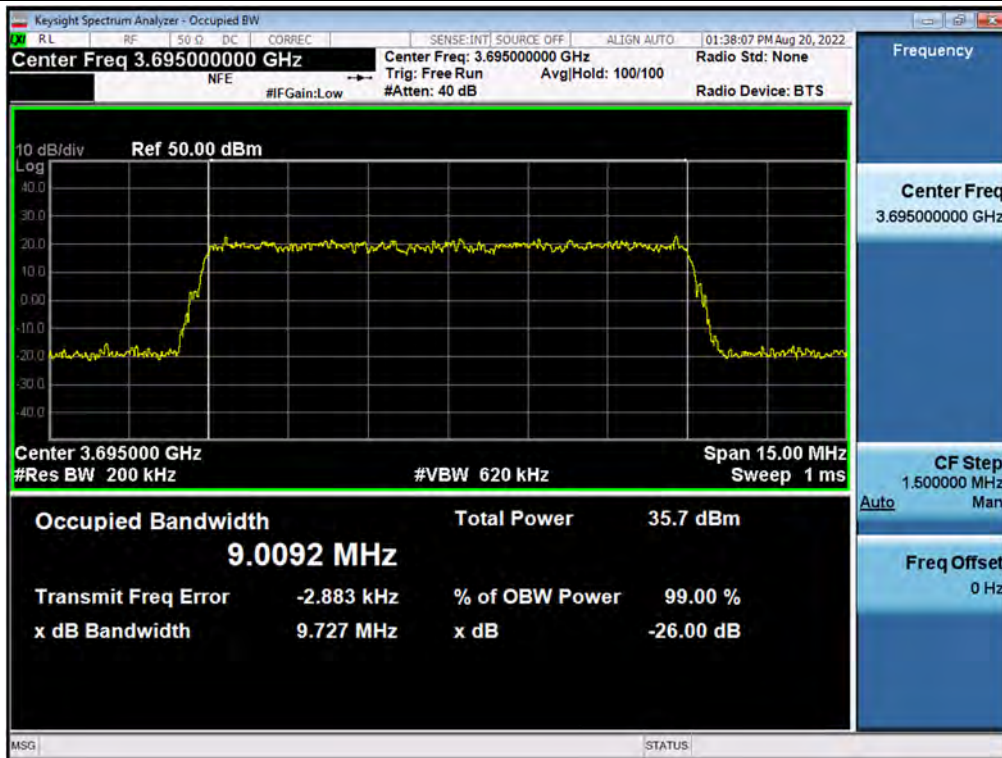




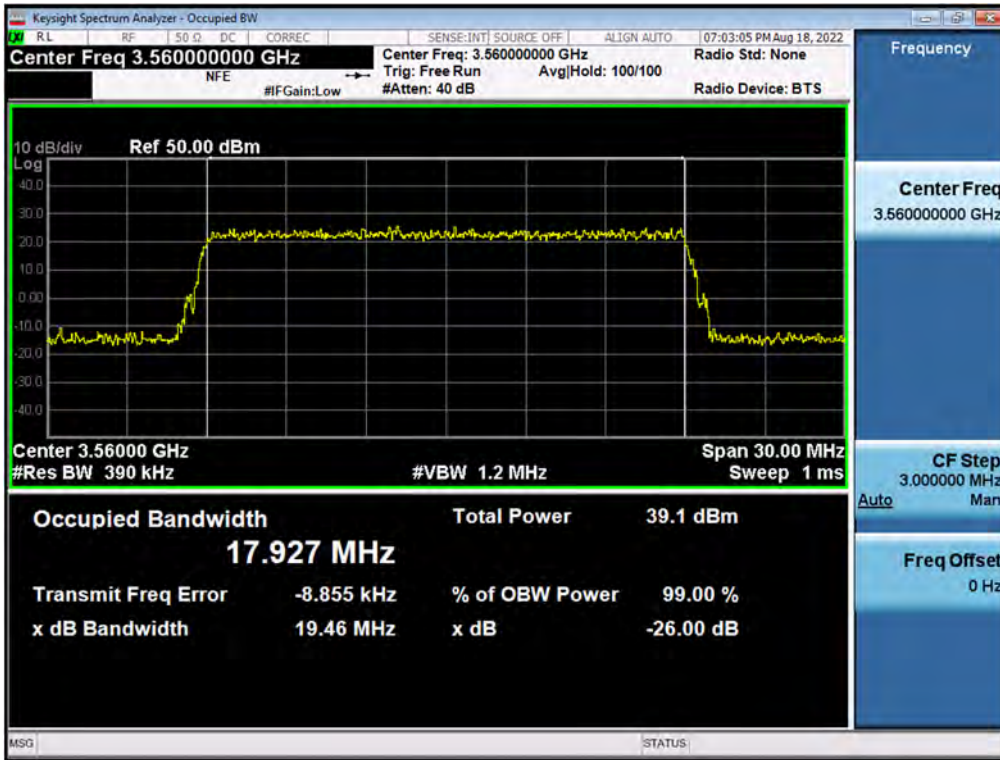
Antenna 3 / CBRS LTE[(15 MHz 1C + 15 MHz 1C) + 10 MHz 1C][3C(2C+1C)] / LTE 15 MHz 1C + LTE 15 MHz 1C / Non-Contiguous / 16QAM / Low



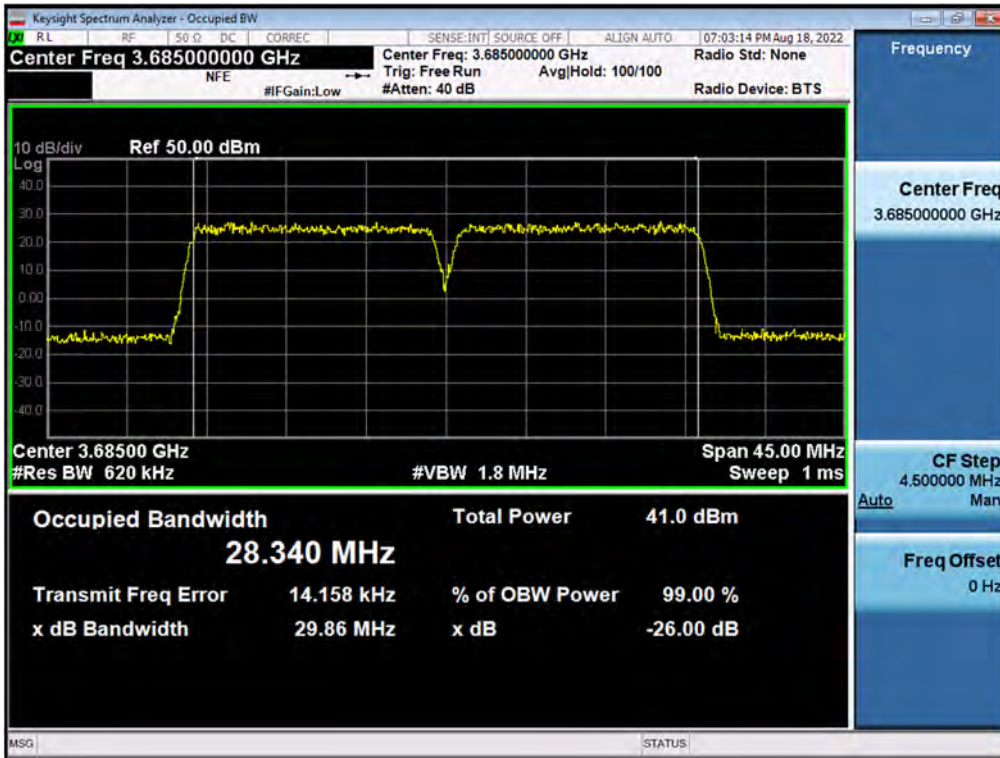
Antenna 3 / CBRS LTE[(15 MHz 1C + 15 MHz 1C) + 10 MHz 1C][3C(2C+1C)] / LTE 10 MHz 1C / Non-Contiguous / 16QAM / High



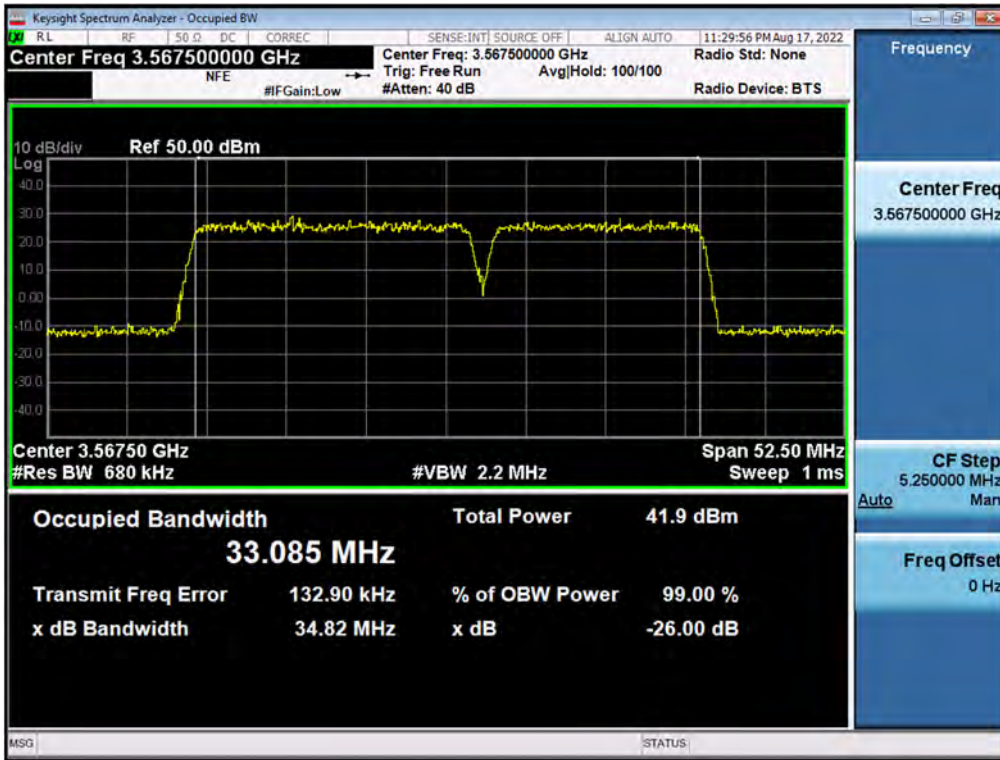
Antenna 3 / CBRS LTE[20 MHz 1C + (15 MHz 1C + 15 MHz 1C)][3C(1C+2C)] / LTE 20 MHz 1C / Non-Contiguous / 256QAM / Low



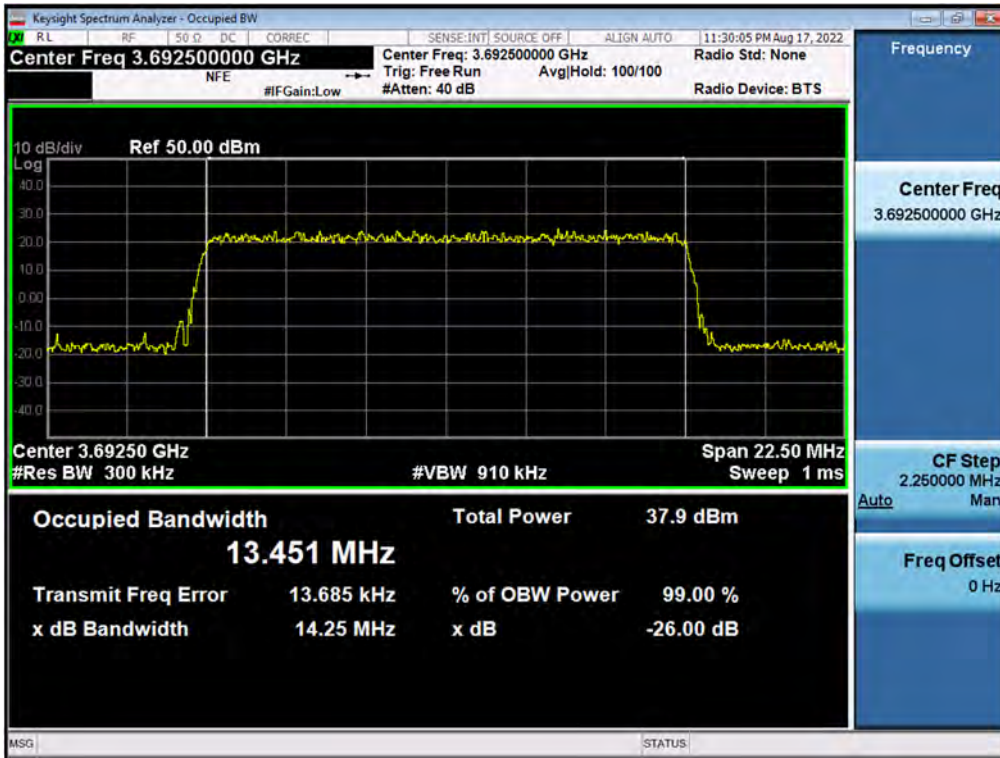
Antenna 3 / CBRS LTE[20 MHz 1C + (15 MHz 1C + 15 MHz 1C)][3C(1C+2C)] / LTE 15 MHz 1C + LTE 15 MHz 1C / Non-Contiguous / 256QAM / High



Antenna 3 / CBRS LTE[(20 MHz 1C + 15 MHz 1C) + 15 MHz 1C][3C(2C+1C)] / LTE 20 MHz 1C + LTE 15 MHz 1C / Non-Contiguous / QPSK / Low

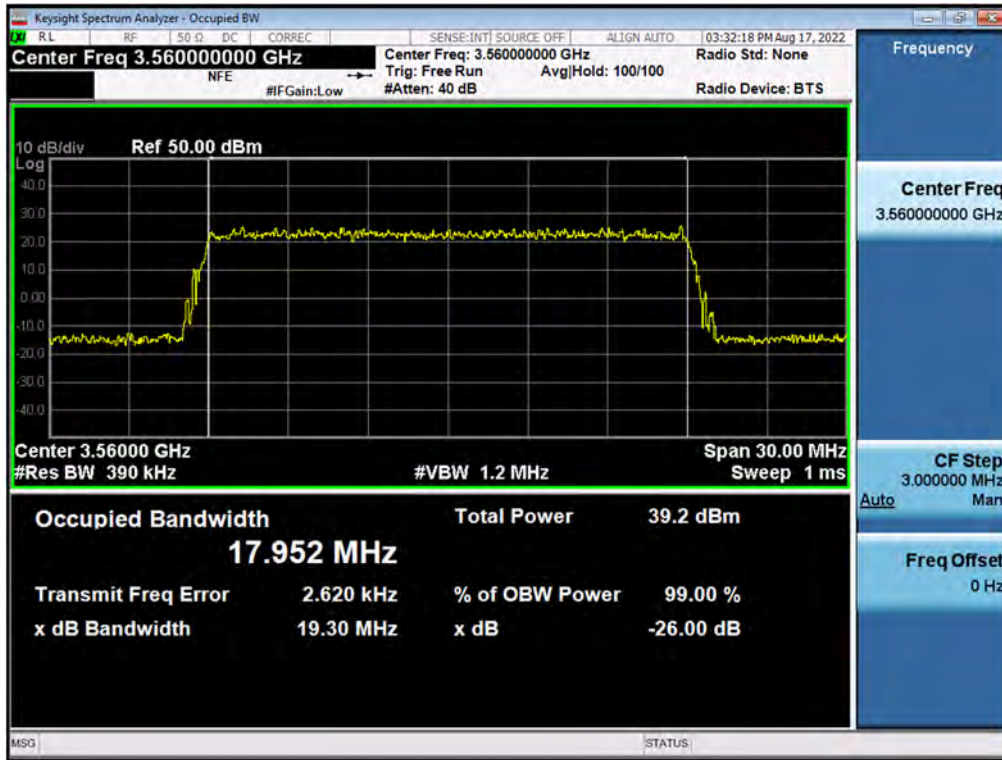


Antenna 3 / CBRS LTE[(20 MHz 1C + 15 MHz 1C) + 15 MHz 1C][3C(2C+1C)] / LTE 15 MHz 1C / Non-Contiguous / QPSK / High

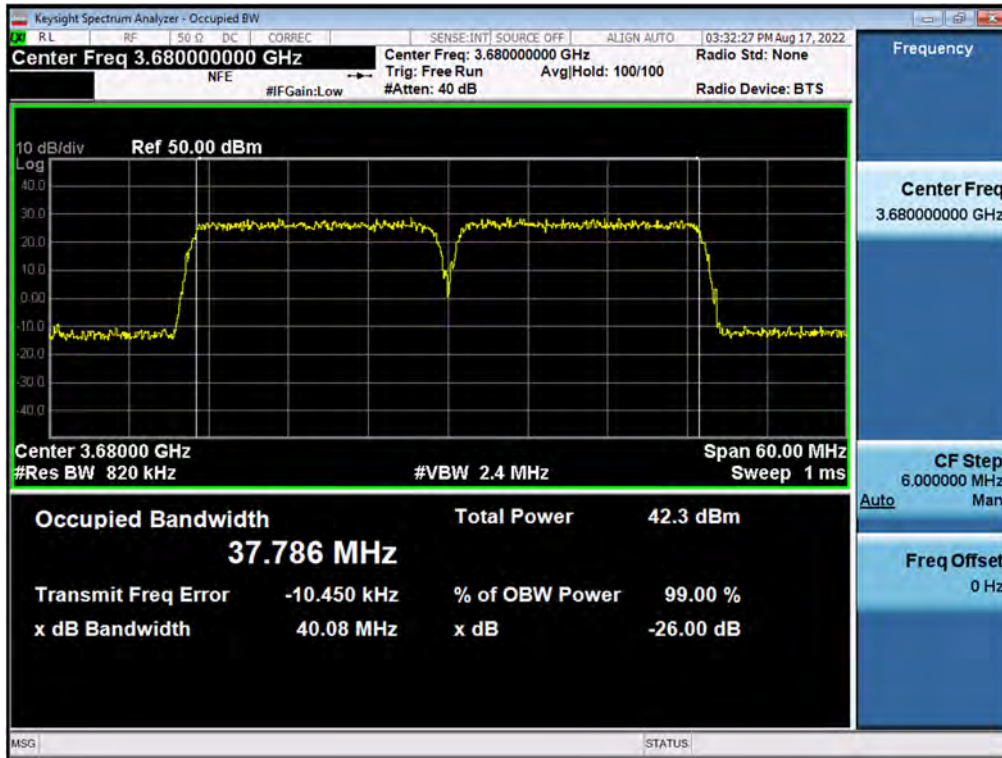




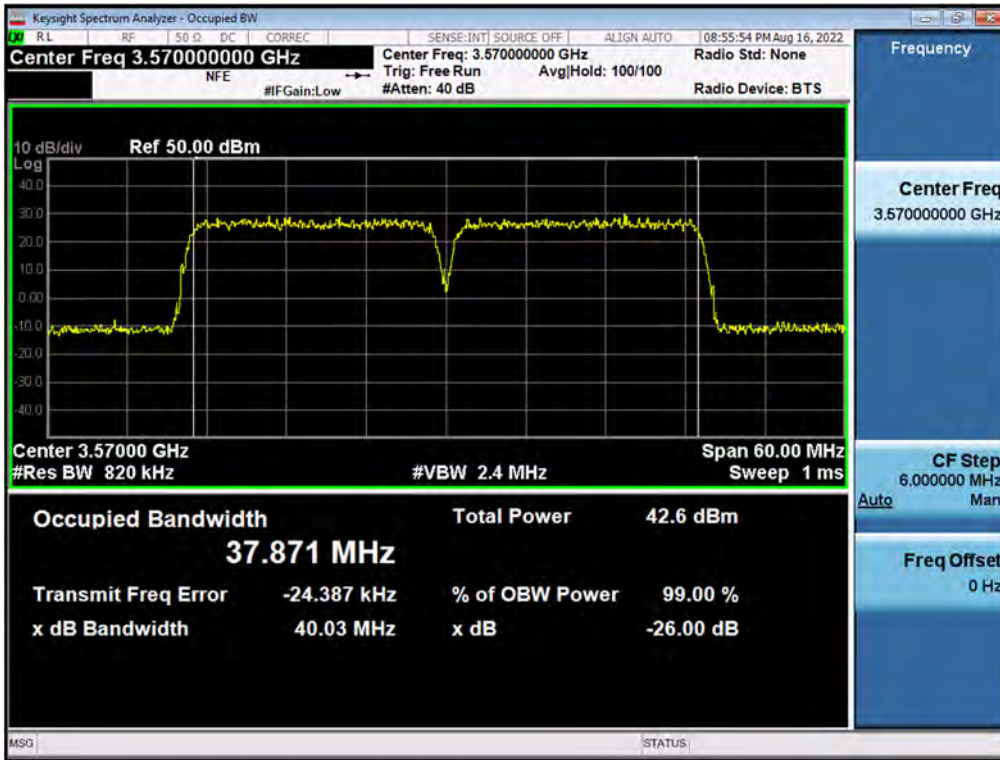
Antenna 3 / CBRS LTE[20 MHz 1C + (20 MHz 1C + 20 MHz 1C)][3C(1C+2C)] / LTE 20 MHz 1C / Non-Contiguous / QPSK / Low



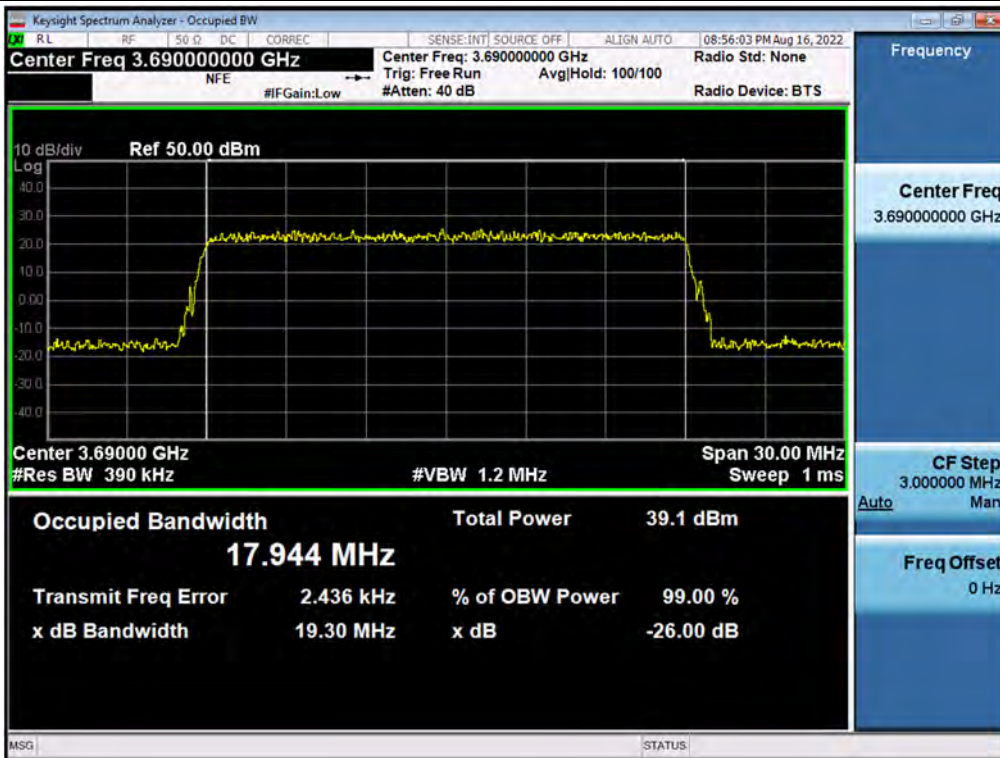
Antenna 3 / CBRS LTE[20 MHz 1C + (20 MHz 1C + 20 MHz 1C)][3C(1C+2C)] / LTE 20 MHz 1C + LTE 20 MHz 1C / Non-Contiguous / QPSK / High



Antenna 3 / CBRS LTE[(20 MHz 1C + 20 MHz 1C) + 20 MHz 1C][3C(2C+1C)] / LTE 20 MHz 1C + LTE 20 MHz 1C / Non-Contiguous / QPSK / Low

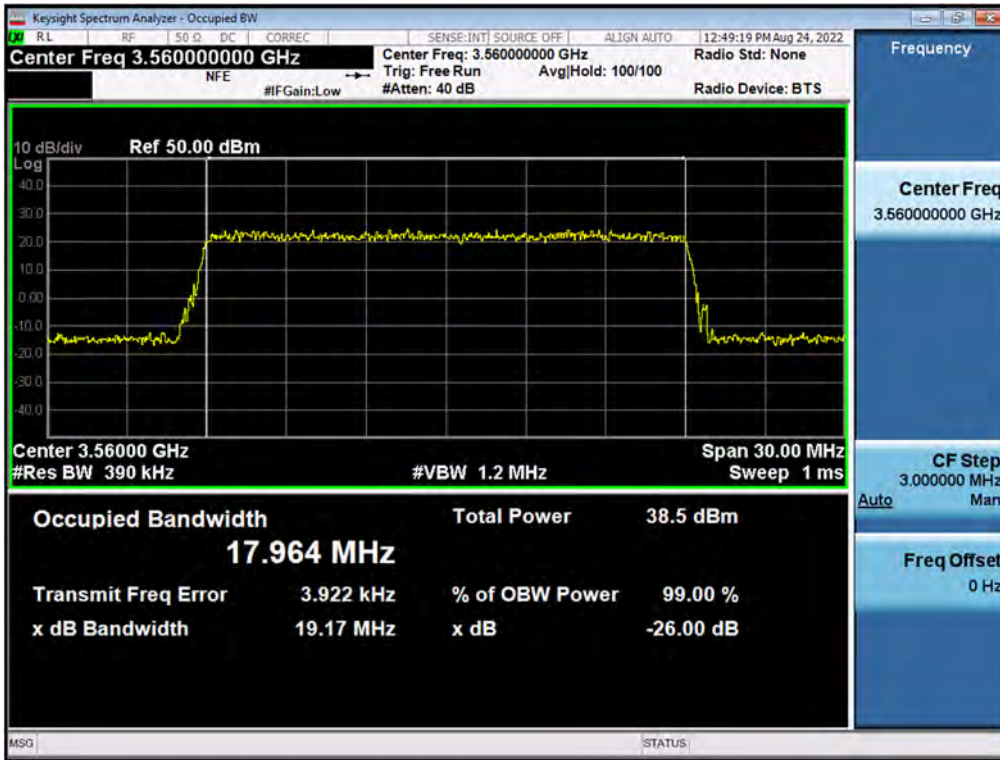


Antenna 3 / CBRS LTE[(20 MHz 1C + 20 MHz 1C) + 20 MHz 1C][3C(2C+1C)] / LTE 20 MHz 1C / Non-Contiguous / QPSK / High

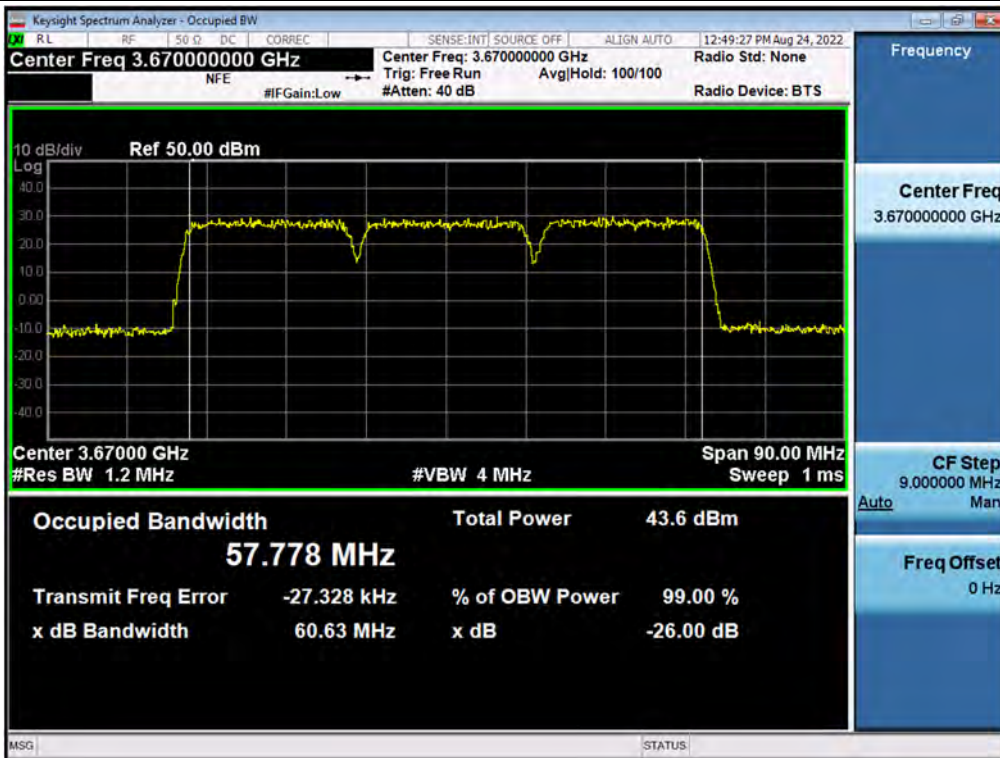




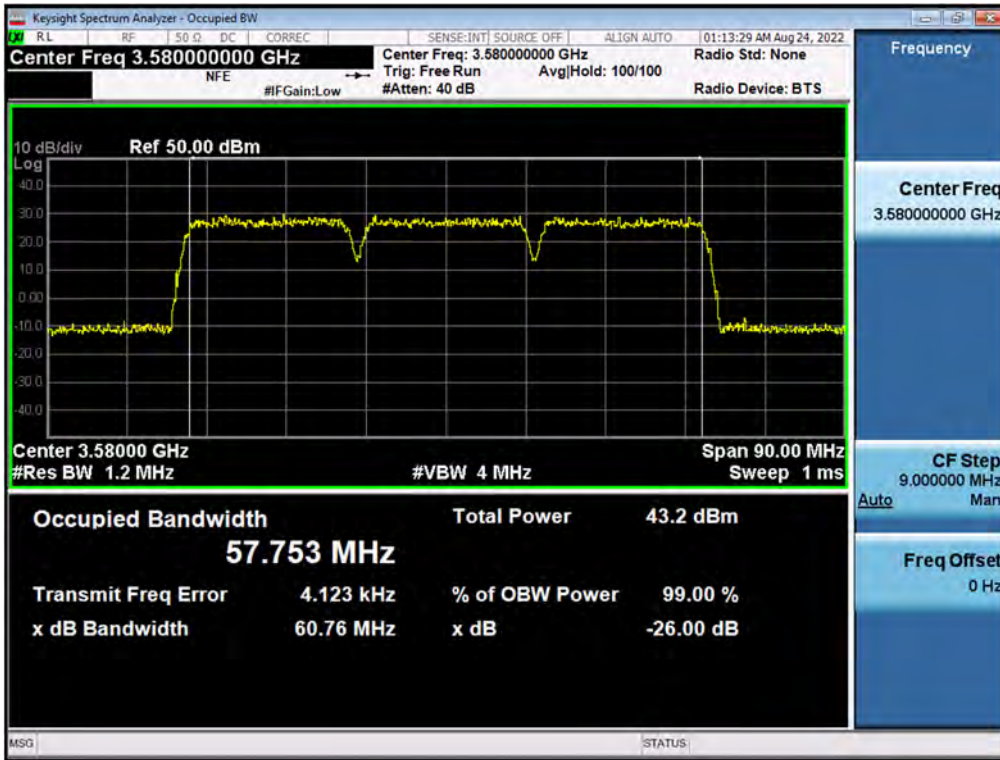
Antenna 3 / CBRS LTE[20 MHz 1C + (20 MHz 1C + 20 MHz 1C + 20 MHz 1C)][4C(1C+3C)] / LTE 20 MHz 1C / Non-Contiguous / QPSK / Low



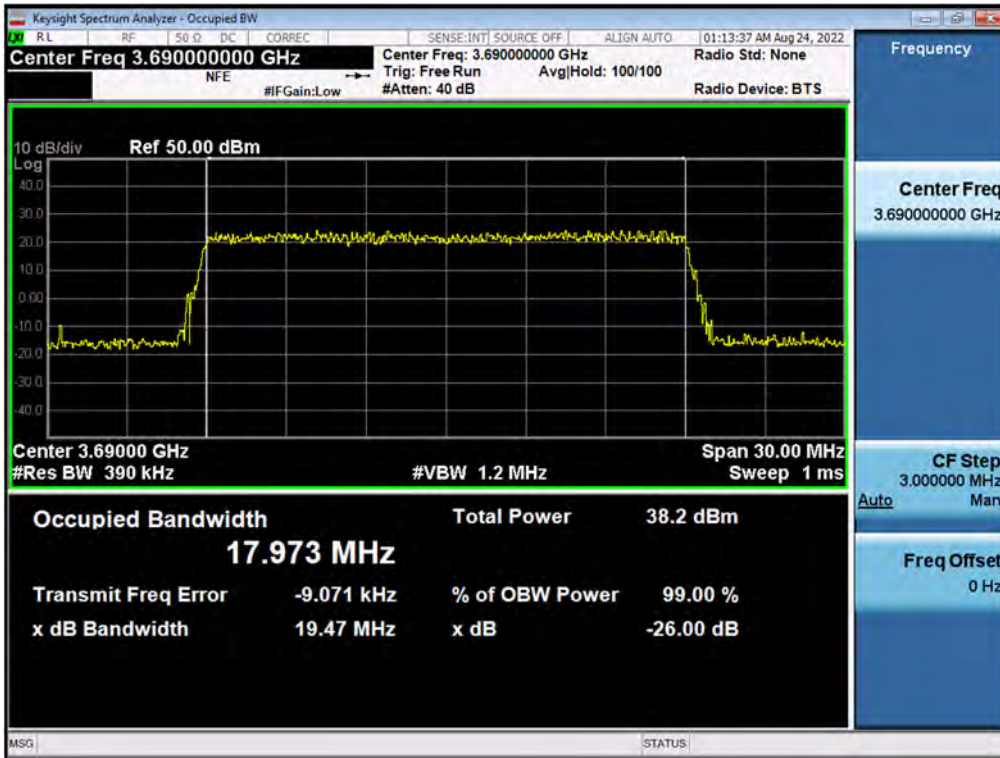
Antenna 3 / CBRS LTE[20 MHz 1C + (20 MHz 1C + 20 MHz 1C + 20 MHz 1C)][4C(1C+3C)] / LTE 20 MHz 1C + LTE 20 MHz 1C + LTE 20 MHz 1C / Non-Contiguous / QPSK / High



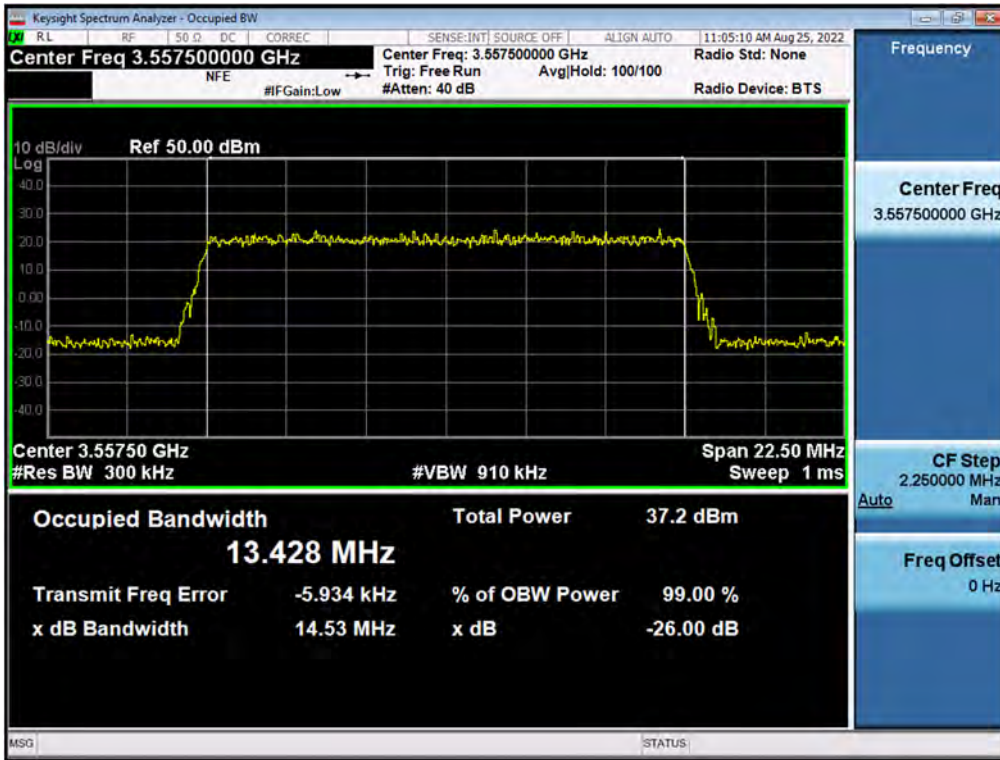
Antenna 3 / CBRS LTE[(20 MHz 1C + 20 MHz 1C + 20 MHz 1C) + 20 MHz 1C][4C(3C+1C)] / LTE 20 MHz 1C + LTE 20 MHz 1C + LTE 20 MHz 1C / Non-Contiguous / 16QAM / Low



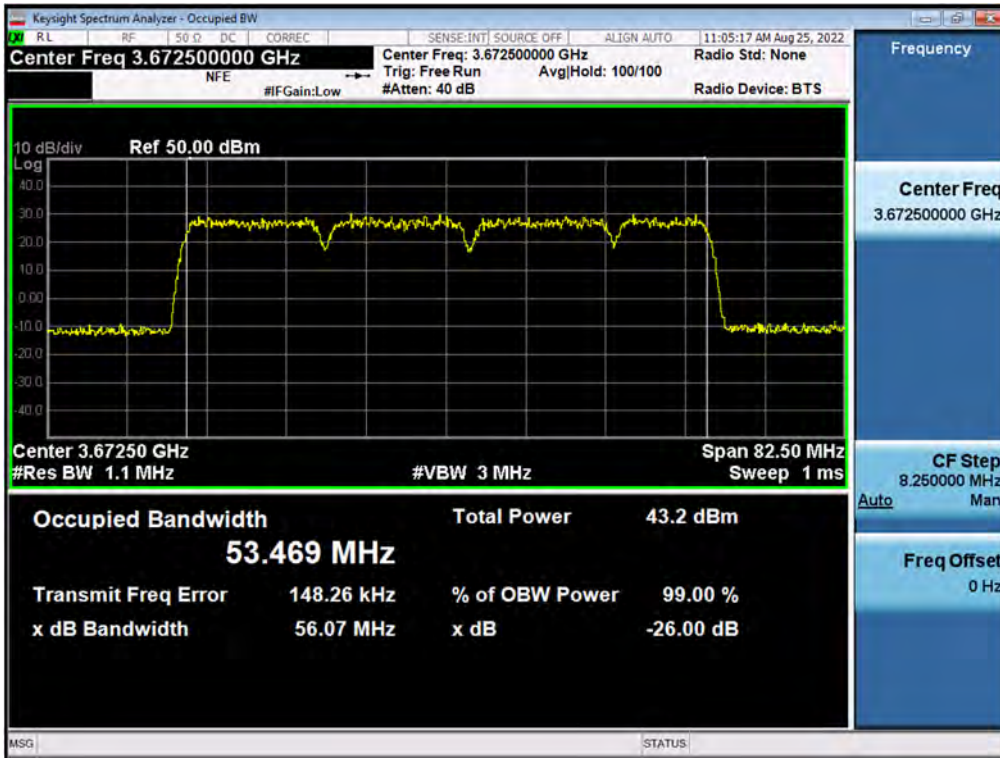
Antenna 3 / CBRS LTE[(20 MHz 1C + 20 MHz 1C + 20 MHz 1C) + 20 MHz 1C][4C(3C+1C)] / LTE 20 MHz 1C / Non-Contiguous / 16QAM / High



Antenna 3 / CBRS LTE[15 MHz 1C + (15 MHz 1C + 15 MHz 1C + 15 MHz 1C + 10 MHz 1C)][5C(1C+4C)] / LTE 15 MHz 1C / Non-Contiguous / 16QAM / Low

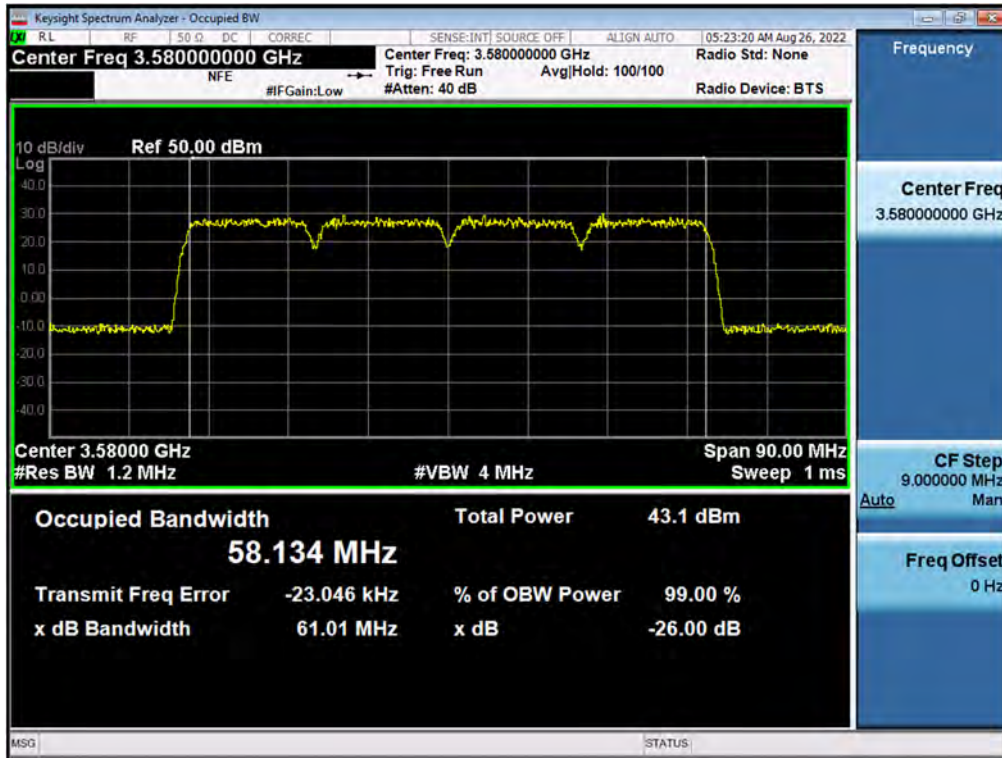


Antenna 3 / CBRS LTE[15 MHz 1C + (15 MHz 1C + 15 MHz 1C + 15 MHz 1C + 10 MHz 1C)][5C(1C+4C)] / LTE 15 MHz 1C + LTE 15 MHz 1C + LTE 15 MHz 1C + LTE 10 MHz 1C / Non-Contiguous / 16QAM / High

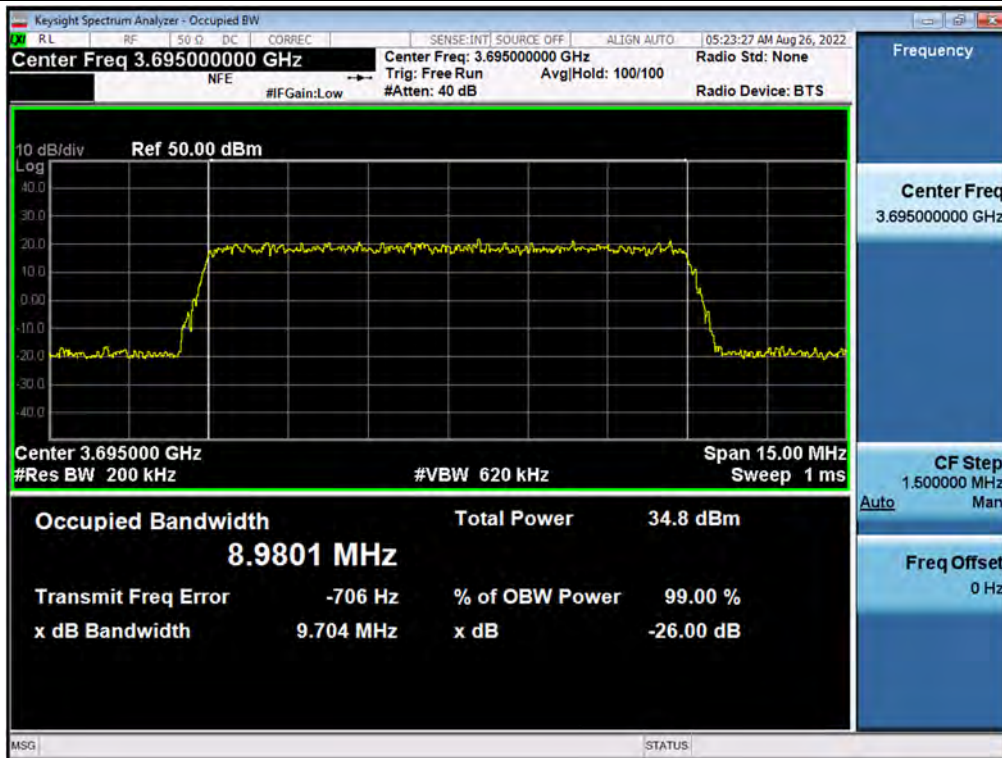




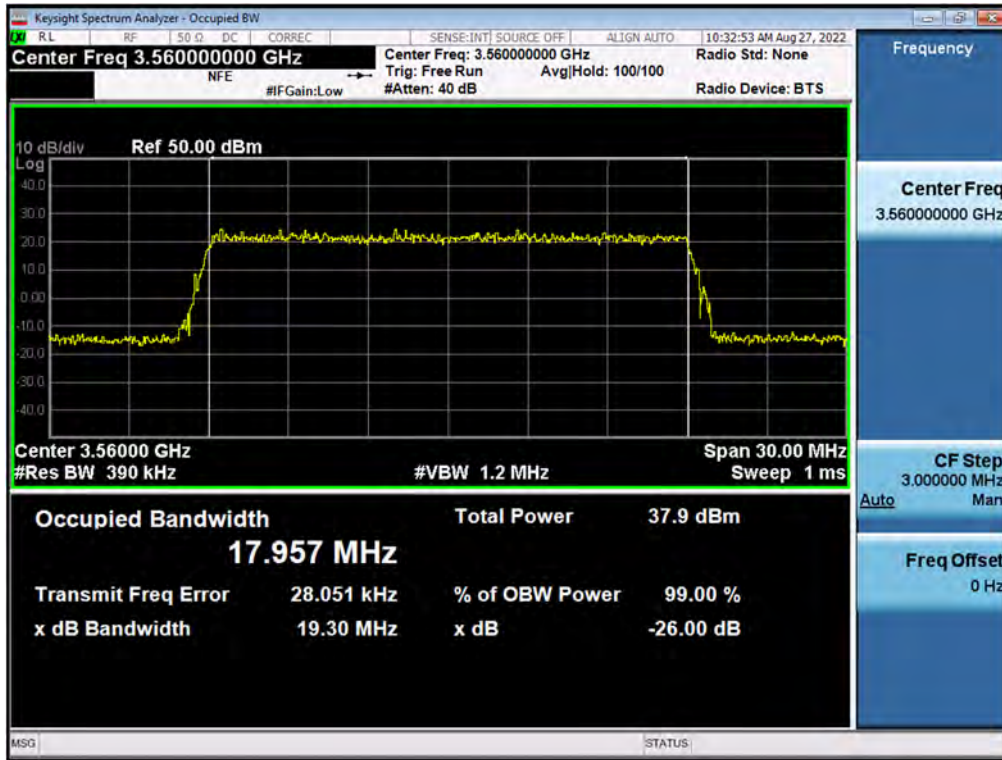
Antenna 3 / CBRS LTE[(15 MHz 1C + 15 MHz 1C + 15 MHz 1C + 15 MHz 1C) + 10 MHz 1C][5C(4C+1C)] / LTE 15 MHz 1C + LTE 15 MHz 1C + LTE 15 MHz 1C + LTE 15 MHz 1C / Non-Contiguous / 64QAM / Low



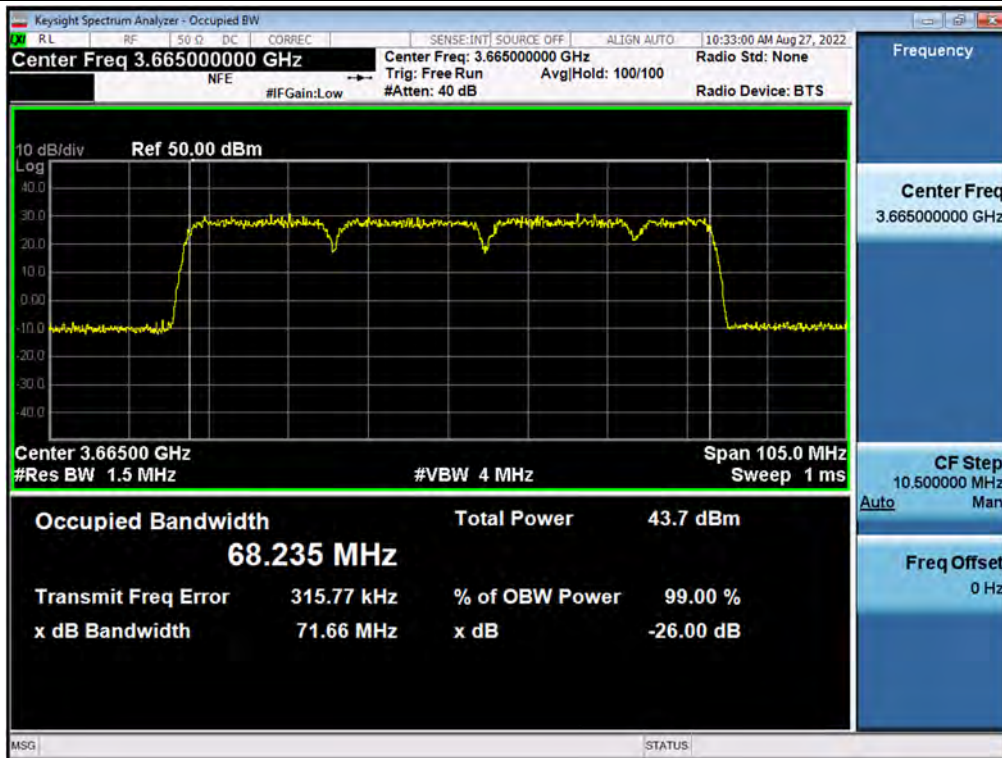
Antenna 3 / CBRS LTE[(15 MHz 1C + 15 MHz 1C + 15 MHz 1C + 15 MHz 1C) + 10 MHz 1C][5C(4C+1C)] / LTE 10 MHz 1C / Non-Contiguous / 64QAM / High



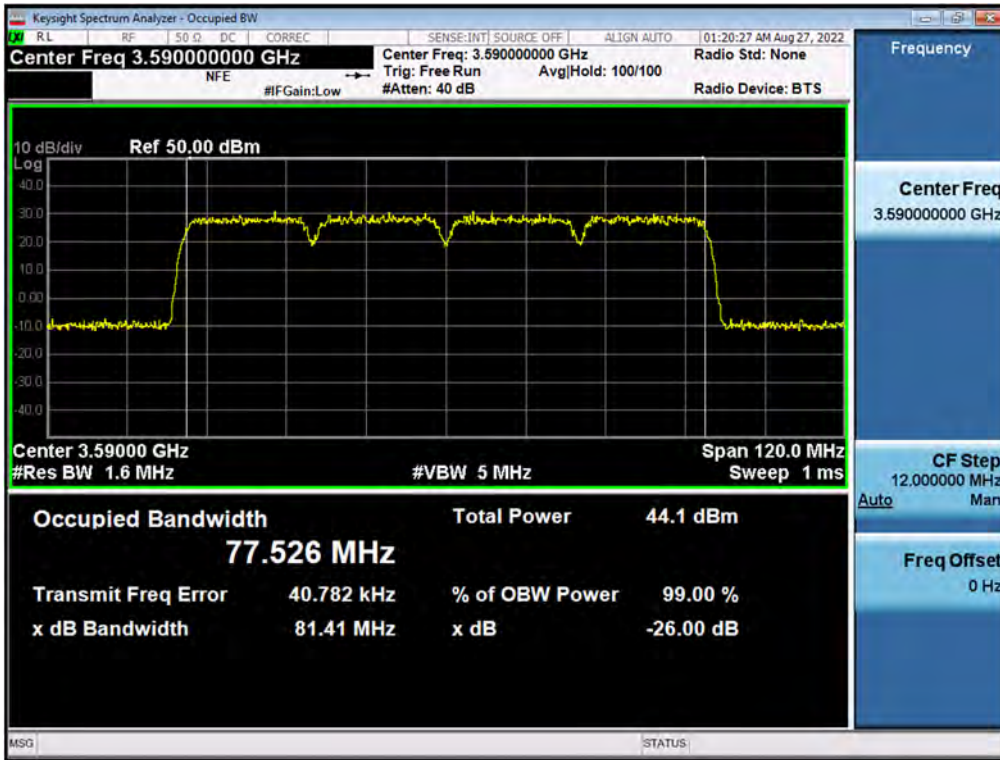
Antenna 3 / CBRS LTE[20 MHz 1C + (20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 10 MHz 1C)][5C(1C+4C)] / LTE 20 MHz 1C / Non-Contiguous / 256QAM / Low



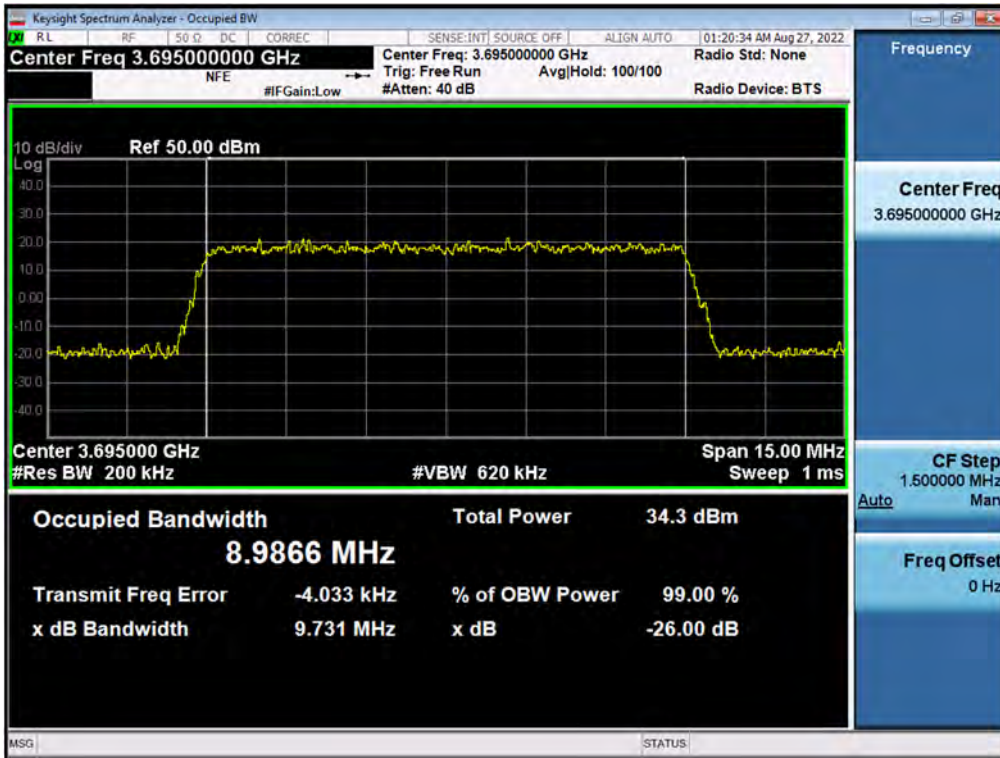
Antenna 3 / CBRS LTE[20 MHz 1C + (20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 10 MHz 1C)][5C(1C+4C)] / LTE 20 MHz 1C + LTE 20 MHz 1C + LTE 20 MHz 1C + LTE 10 MHz 1C / Non-Contiguous / 256QAM / High



Antenna 3 / CBRS LTE[(20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C) + 10 MHz 1C][5C(4C+1C)] / LTE 20 MHz 1C + LTE 20 MHz 1C + LTE 20 MHz 1C + LTE 20 MHz 1C / Non-Contiguous / 64QAM / Low

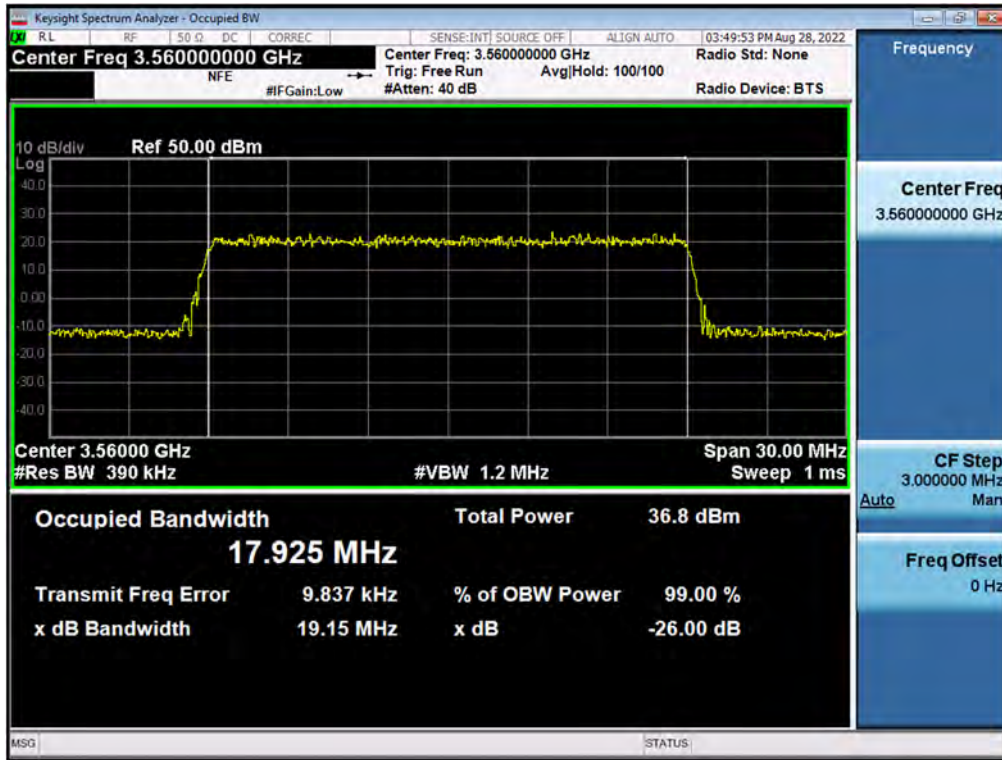


Antenna 3 / CBRS LTE[(20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C) + 10 MHz 1C][5C(4C+1C)] / LTE 10 MHz 1C / Non-Contiguous / 64QAM / High

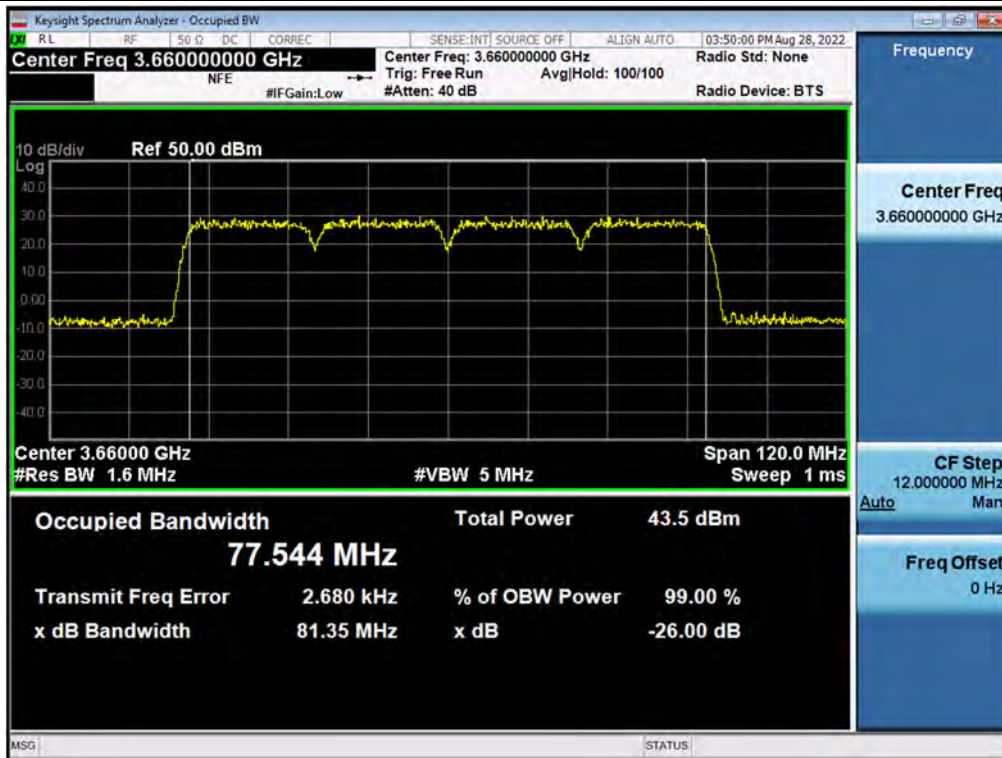




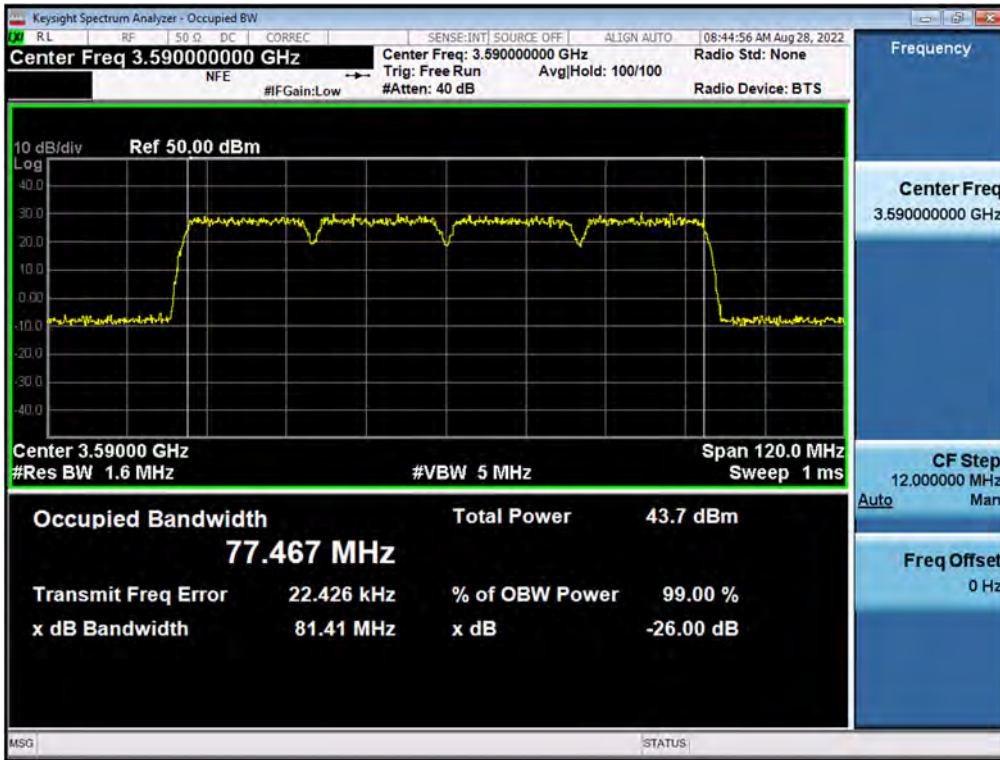
Antenna 0 / CBRS LTE[20 MHz 1C + (20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C)][5C(1C+4C)] / LTE 20 MHz 1C / Non-Contiguous / QPSK / Low



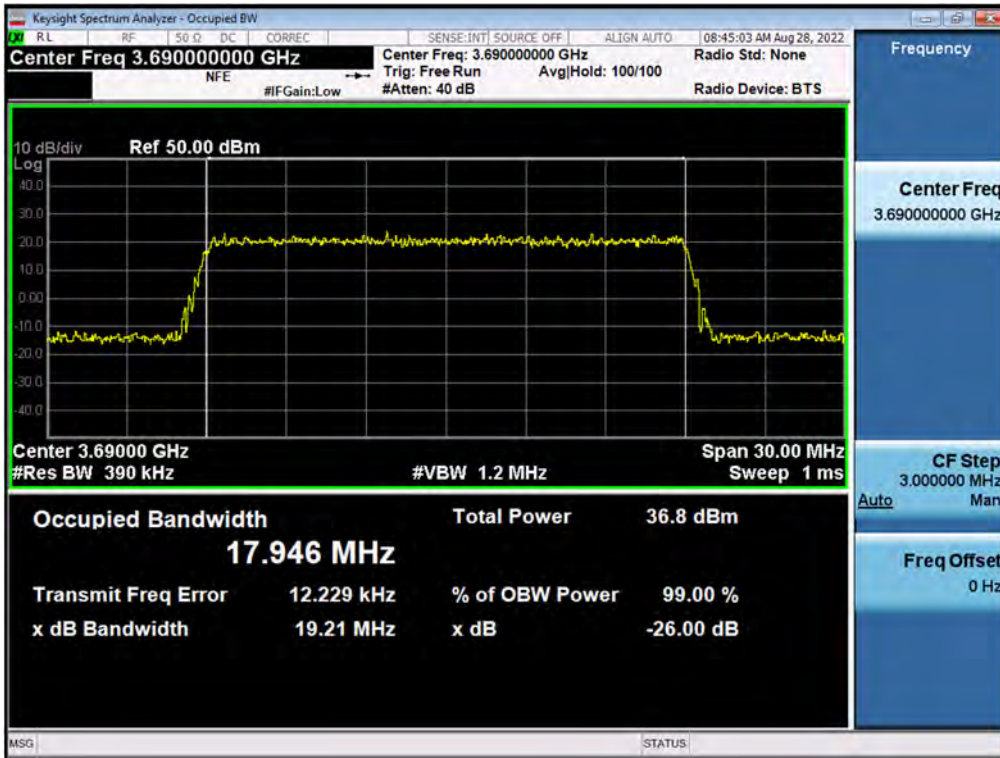
Antenna 0 / CBRS LTE[20 MHz 1C + (20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C)][5C(1C+4C)] / LTE 20 MHz 1C + LTE 20 MHz 1C + LTE 20 MHz 1C / Non-Contiguous / QPSK / High



Antenna 1 / CBRS LTE[(20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C) + 20 MHz 1C][5C(4C+1C)] / LTE 20 MHz 1C + LTE 20 MHz 1C + LTE 20 MHz 1C + LTE 20 MHz 1C / Non-Contiguous / QPSK / Low

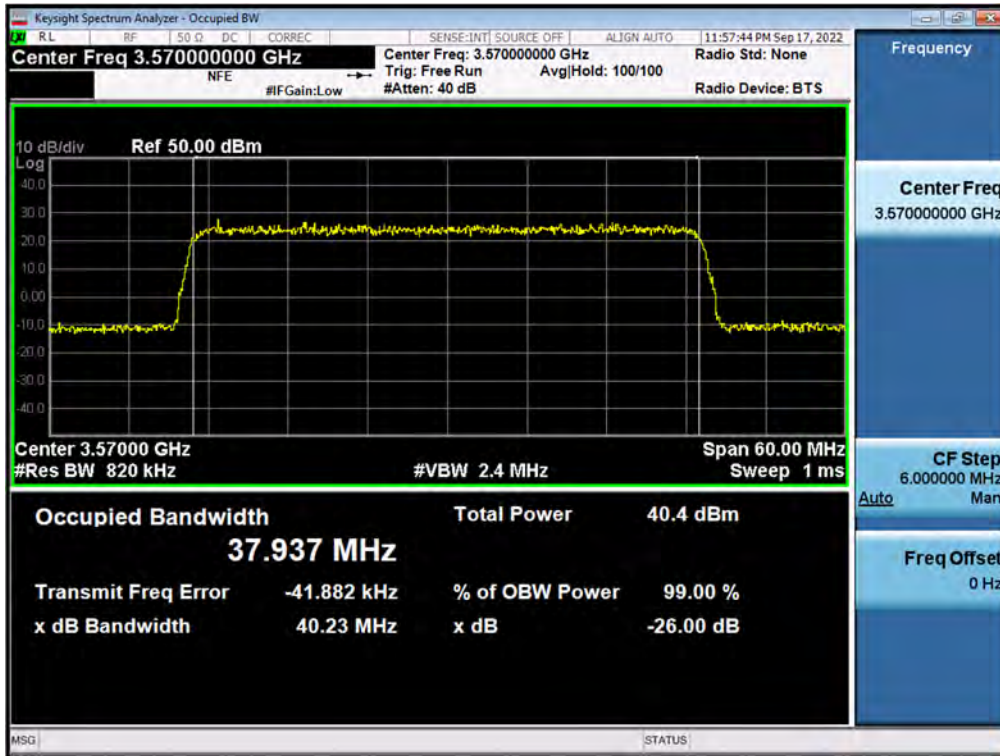


Antenna 1 / CBRS LTE[(20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C) + 20 MHz 1C][5C(4C+1C)] / LTE 20 MHz 1C / Non-Contiguous / QPSK / High

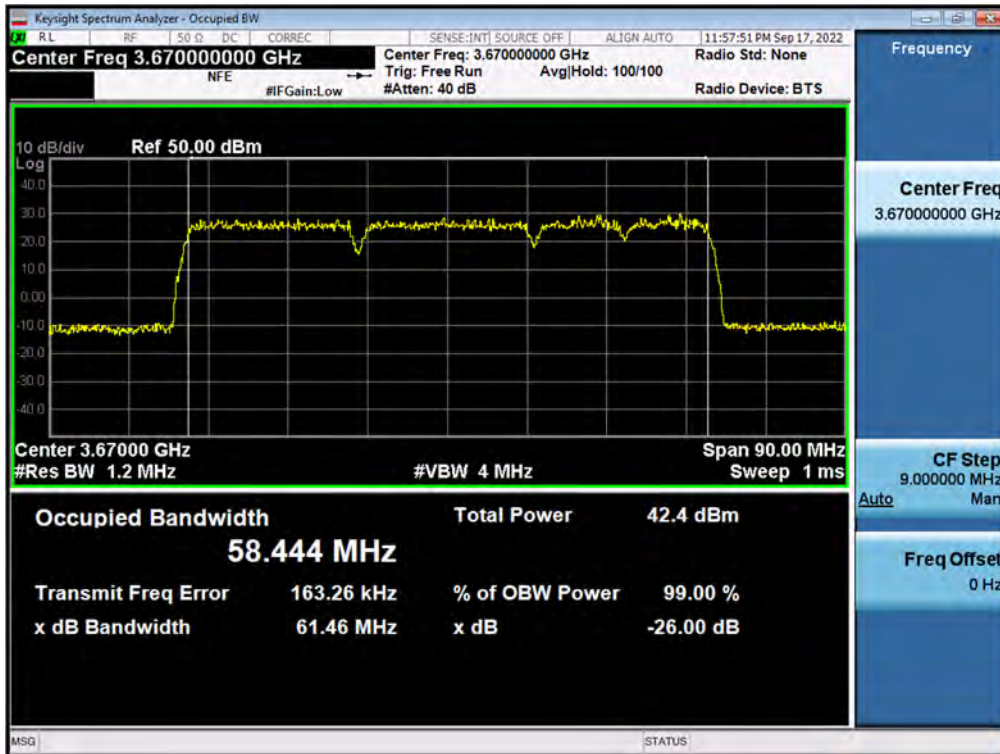




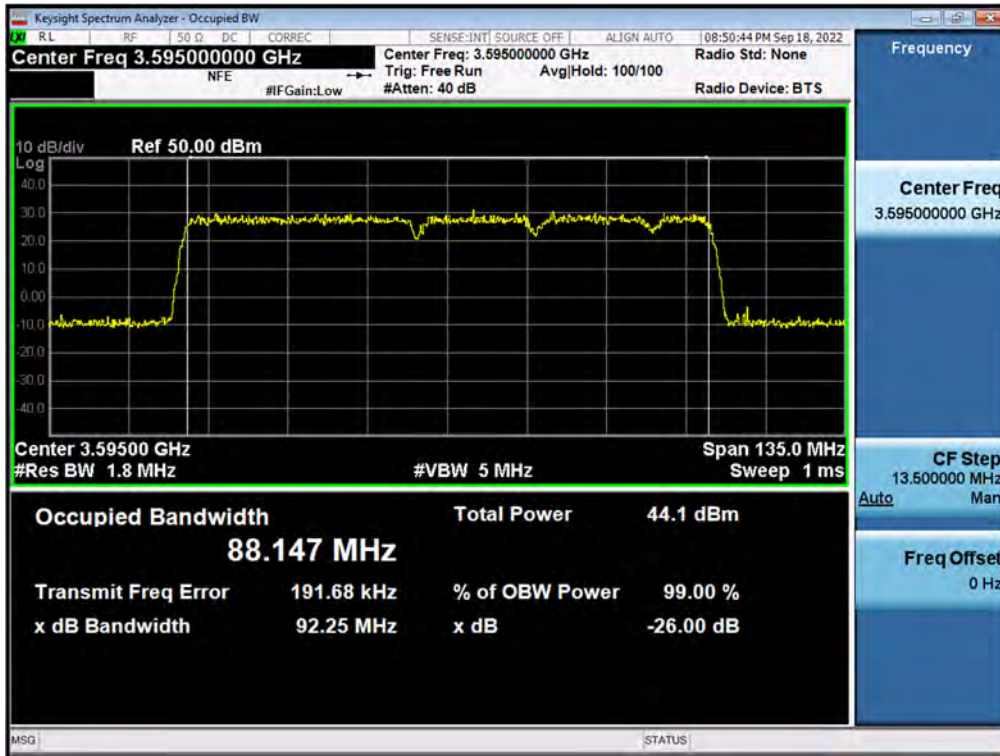
Antenna 3 / CBRS NR 40 MHz 1C + (NR 20 MHz 1C + NR 20 MHz 1C + LTE 10 MHz 1C + LTE 10 MHz 1C)5C(1C+4C) / NR 40 MHz 1C / Non-Contiguous / 16QAM / Low



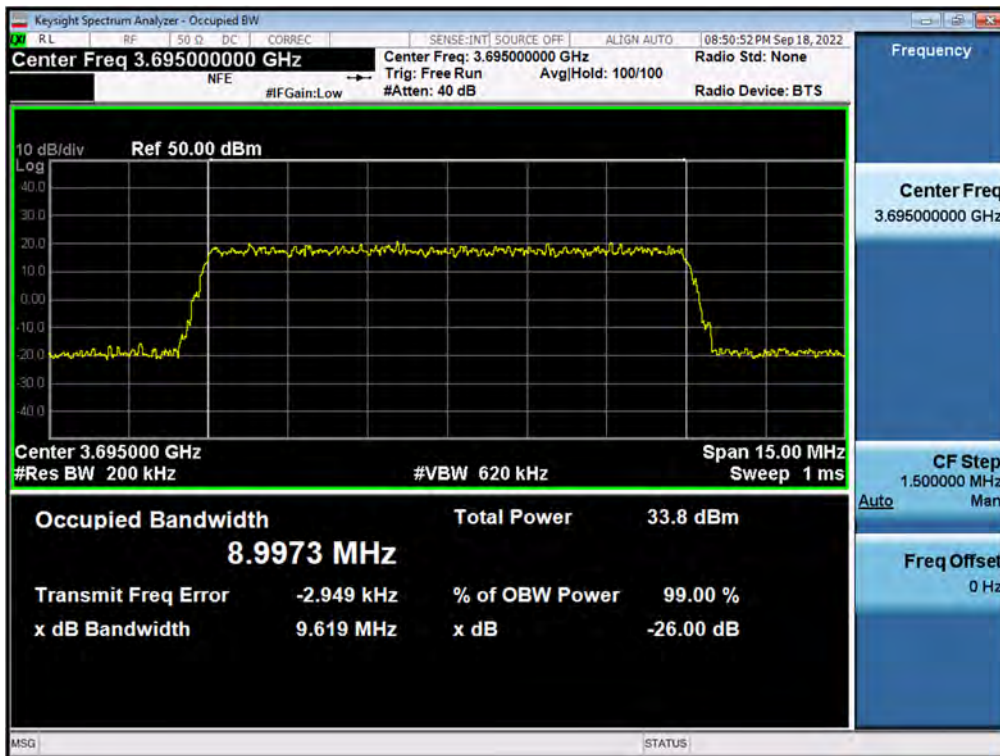
Antenna 3 / CBRS NR 40 MHz 1C + (NR 20 MHz 1C + NR 20 MHz 1C + LTE 10 MHz 1C + LTE 10 MHz 1C)5C(1C+4C) / NR 20 MHz 1C + NR 20 MHz 1C + LTE 10 MHz 1C + LTE 10 MHz 1C / Non-Contiguous / 16QAM / High



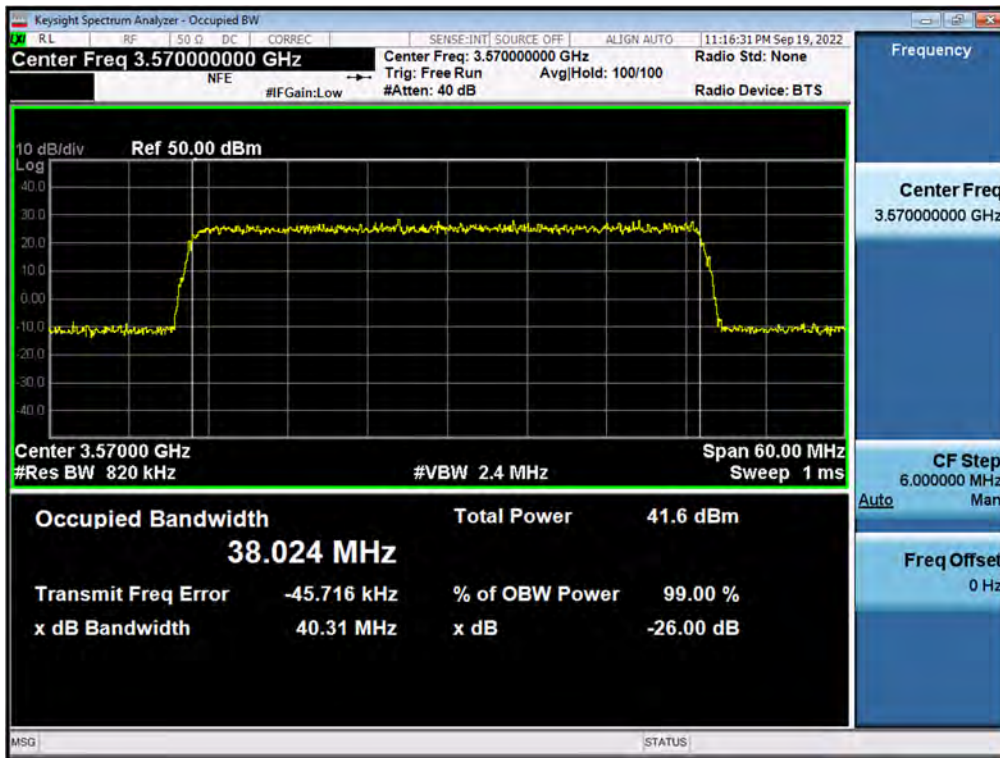
Antenna 3 / CBRS (NR 40 MHz 1C + NR 20 MHz 1C + NR 20 MHz 1C + LTE 10 MHz 1C) + LTE 10 MHz 1C[5C(4C+1C)] / NR 40 MHz 1C + NR 20 MHz 1C + NR 20 MHz 1C + LTE 10 MHz 1C / Non-Contiguous / 16QAM / Low



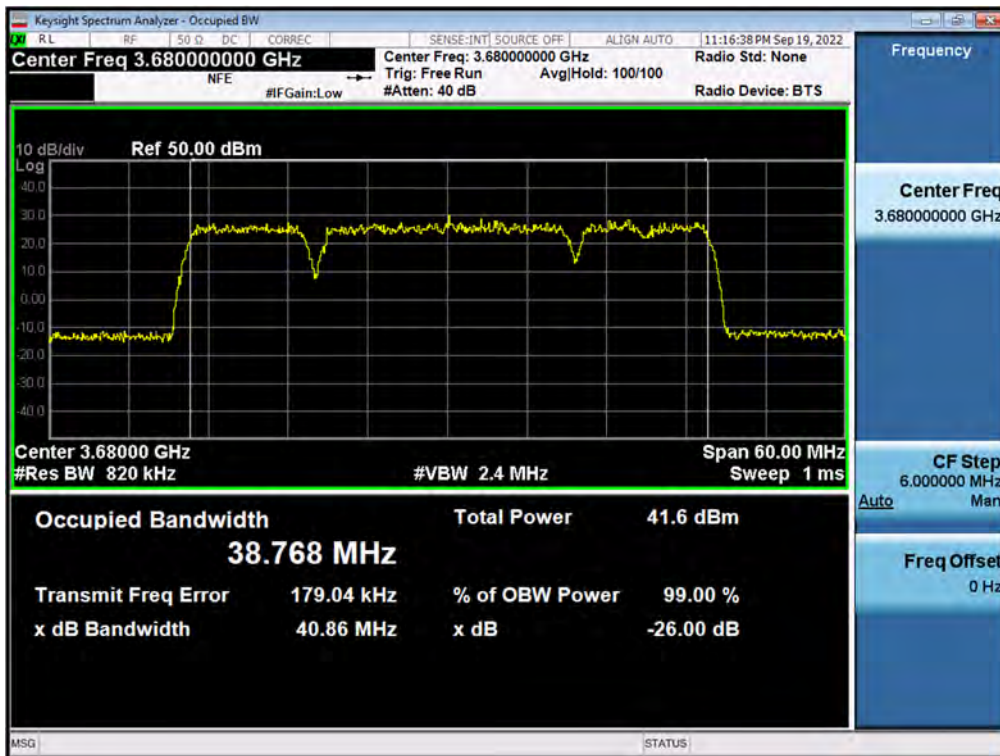
Antenna 3 / CBRS (NR 40 MHz 1C + NR 20 MHz 1C + NR 20 MHz 1C + LTE 10 MHz 1C) + LTE 10 MHz 1C[5C(4C+1C)] / LTE 10 MHz 1C / Non-Contiguous / 16QAM / High



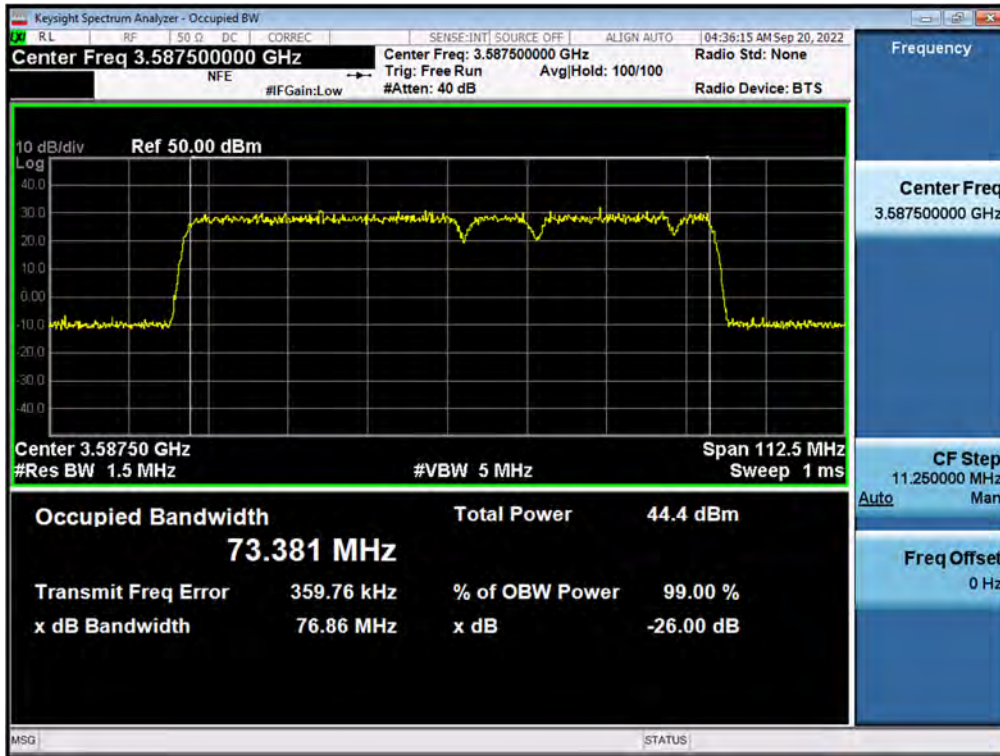
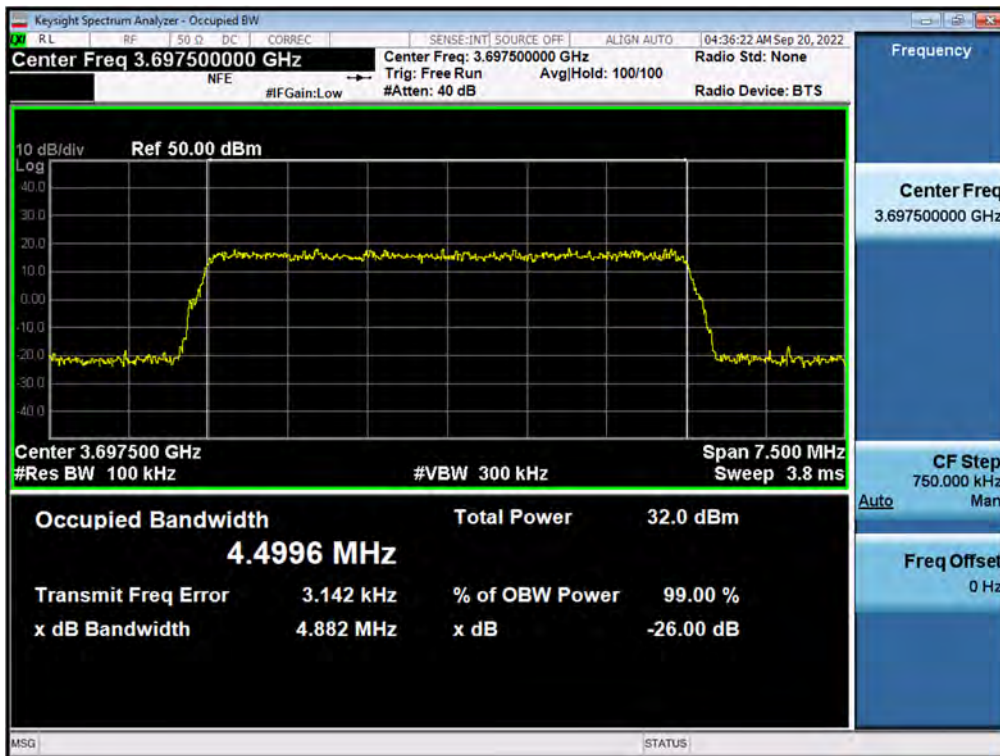
Antenna 3 / CBRS NR 40 MHz 1C + (NR 10 MHz 1C + LTE 20 MHz 1C + LTE 5 MHz 1C + LTE 5 MHz 1C)[5C(1C+4C)] / NR 40 MHz 1C / Non-Contiguous / 16QAM / Low



Antenna 3 / CBRS NR 40 MHz 1C + (NR 10 MHz 1C + LTE 20 MHz 1C + LTE 5 MHz 1C + LTE 5 MHz 1C)[5C(1C+4C)] / NR 10 MHz 1C + LTE 20 MHz 1C + LTE 5 MHz 1C + LTE 5 MHz 1C / Non-Contiguous / 16QAM / High





**Antenna 1 / CBRS (NR 40 MHz 1C + NR 10 MHz 1C + LTE 20 MHz 1C + LTE 5 MHz 1C) + LTE 5 MHz 1C[5C(4C+1C)] / NR 40 MHz 1C + NR 10 MHz 1C + LTE 20 MHz 1C + LTE 5 MHz 1C / Non-Contiguous / QPSK / Low**

**Antenna 1 / CBRS (NR 40 MHz 1C + NR 10 MHz 1C + LTE 20 MHz 1C + LTE 5 MHz 1C) + LTE 5 MHz 1C[5C(4C+1C)] / LTE 5 MHz 1C / Non-Contiguous / QPSK / High**


### 5.4. OUT-OF-BAND UNWANTED EMISSIONS

**Test Requirements:**

**§ 2.1051 Measurements required: Spurious emissions at antenna terminals.**

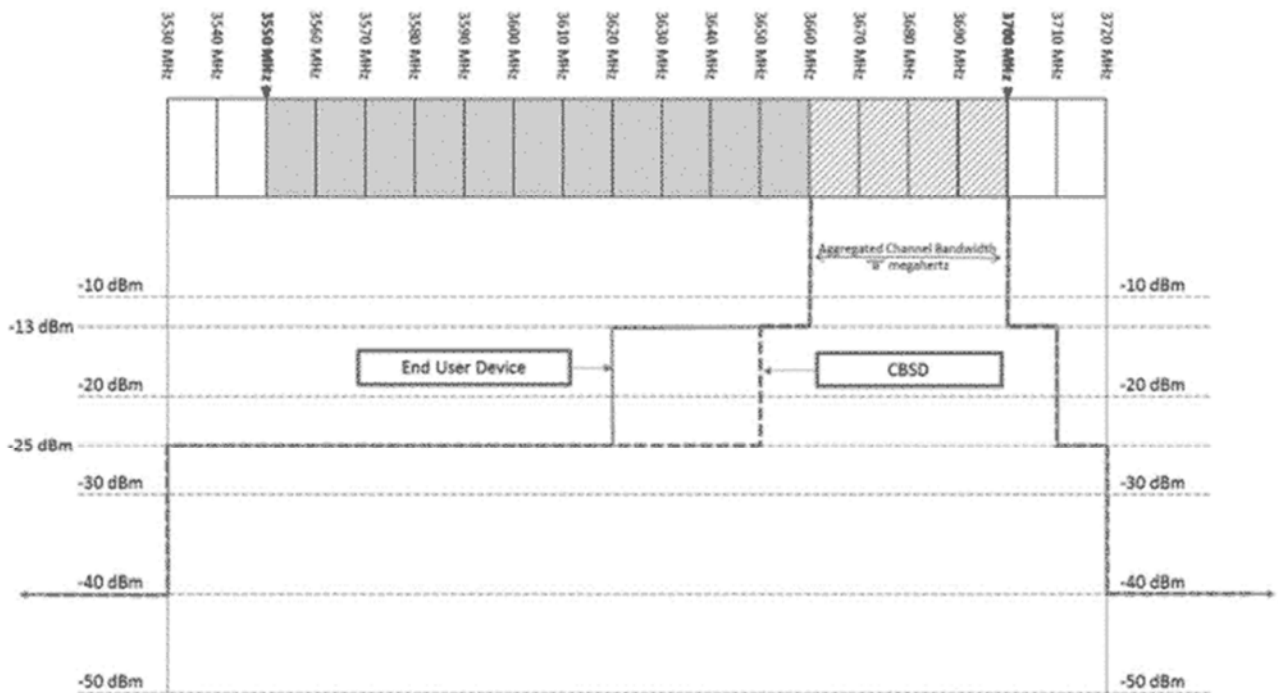
The radio frequency voltage or powers generated within the equipment and appearing on a spurious frequency shall be checked at the equipment output terminals when properly loaded with a suitable artificial antenna. Curves or equivalent data shall show the magnitude of each harmonic and other spurious emission that can be detected when the equipment is operated under the conditions specified in § 2.1049 as appropriate. The magnitude of spurious emissions which are attenuated more than 20 dB below the permissible value need not be specified.

**96.41 General radio requirement.**

**(e) 3.5 GHz Emissions and Interference Limits -**

**(1) General protection levels.**

Figure 1 to paragraph (e) – Protection levels



- (i) Except as otherwise specified in paragraph (e)(2) of this section, for channel and frequency assignments made by the SAS to CBSDs, the conducted power of any CBSD emission outside the fundamental emission bandwidth as specified in paragraph (e)(3) of this section (whether the emission is inside or outside of the authorized band) shall not exceed  $-13 \text{ dBm/MHz}$  within 0-10 megahertz above the upper SAS-assigned channel edge and within 0-10 megahertz below the lower SAS-assigned channel edge. At all frequencies greater than 10 megahertz above the upper SAS assigned channel edge and less than 10 MHz below the lower SAS assigned channel edge, the conducted power of any CBSD emission shall not exceed  $-25 \text{ dBm/MHz}$ . The upper and lower SAS assigned channel edges are the upper and lower limits of any channel assigned to a CBSD by an SAS, or in the case of multiple contiguous channels, the upper and lower limits of the combined contiguous channels.

- (ii) Except as otherwise specified in paragraph (e)(2) of this section, for channel and frequency assignments made by a CBSD to End User Devices, the conducted power of any End User Device emission outside the fundamental emission (whether in or outside of the authorized band) shall not exceed  $-13$  dBm/MHz within 0 to B megahertz (where B is the bandwidth in megahertz of the assigned channel or multiple contiguous channels of the End User Device) above the upper CBSD-assigned channel edge and within 0 to B megahertz below the lower CBSD-assigned channel edge. At all frequencies greater than B megahertz above the upper CBSD assigned channel edge and less than B megahertz below the lower CBSD-assigned channel edge, the conducted power of any End User Device emission shall not exceed  $-25$  dBm/MHz. Notwithstanding the emission limits in this paragraph, the Adjacent Channel Leakage Ratio for End User Devices shall be at least 30 dB.
- (2) **Additional protection levels.** Notwithstanding paragraph (e)(1) of this section, for CBSDs and End User Devices, the conducted power of emissions below 3540 MHz or above 3710 MHz shall not exceed  $-25$  dBm/MHz, and the conducted power of emissions below 3530 MHz or above 3720 MHz shall not exceed  $-40$  dBm/MHz.
- (3) **Measurement procedure.**
  - (i) Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's authorized frequency channel, a resolution bandwidth of no less than one percent of the fundamental emission bandwidth may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full reference bandwidth (i.e., 1 MHz or 1 percent of emission bandwidth, as specified). The fundamental emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.
  - (ii) When measuring unwanted emissions to demonstrate compliance with the limits, the CBSD and End User Device nominal carrier frequency/channel shall be adjusted as close to the licensee's authorized frequency block edges, both upper and lower, as the design permits.
  - (iii) Compliance with emission limits shall be demonstrated using either average (RMS)-detected or peak-detected power measurement techniques.
- (4) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

### Test Procedures:

The measurement is performed in accordance with Section 5.7.3 of ANSI C63.26.

#### 5.7.3 Out-of-band unwanted emissions measurements

- a) Set the spectrum analyzer center frequency to the block, band, or channel edge frequency.
- b) Set the span wide enough to capture the fundamental emission closest to the authorized block or band edge, and to include all modulation products that spill into the immediately adjacent frequency band. In some cases, it may be possible to set the center frequency and span so as to encompass the fundamental emission and the unwanted out-of-band (band-edge) emissions on either side of the authorized block, band, or channel. This can be accomplished with a single (slow) sweep, if adequate overload protection and sufficient dynamic range can be maintained.



- c) Set the number of points in sweep  $\geq 2 \times \text{span} / \text{RBW}$ .
- d) Sweep time should be auto for peak detection. For rms detection the sweep time should be set as follows:
  - 1) If the device can be configured to transmit continuously (duty cycle  $\geq 98\%$ ), set the (sweep time)  $>$  (number of points in sweep)  $\times$  (symbol period) (e.g., by a factor of  $10 \times \text{symbol period} \times \text{number of points}$ ). Increasing the sweep time (i.e., slowing the sweep speed) will allow for averaging over multiple symbols
  - 2) If the device cannot be configured to transmit continuously (duty cycle  $< 98\%$ ) and a freerunning sweep must be used, set the sweep time so that the averaging is performed over multiple on/off cycles by setting the sweep time  $>$  (number of points in sweep)  $\times$  (transmitter period) (i.e., the transmit on-time + the off-time). The spectrum analyzer readings shall subsequently be corrected by  $[10 \log (1/\text{duty cycle})]$ . This assumes that the transmission period and duty cycle is relatively constant (duty cycle variation  $\leq \pm 2\%$ ).
  - 3) If the device cannot be configured to transmit continuously (duty cycle  $< 98\%$ ) and a freerunning sweep must be used, set the sweep time so that the averaging is performed over multiple on/off cycles by setting the sweep time  $>$  (number of points in sweep)  $\times$  (transmitter period) (i.e., the transmit on-time + the off-time). The spectrum analyzer readings shall subsequently be corrected by  $[10 \log (1/\text{duty cycle})]$ . This assumes that the transmission period and duty cycle is relatively constant (duty cycle variation  $\leq \pm 2\%$ ).
  - 4) If the device cannot be configured to transmit continuously and a free-running sweep must be used, and if the transmissions exhibit a non-constant duty cycle (duty cycle variations  $> \pm 2\%$ ), set the sweep time so that the averaging is performed over the on-period by setting the sweep time  $>$  (symbol period)  $\times$  (number of points), while also maintaining the sweep time  $<$  (transmitter on-time). The trace mode shall be set to max hold, since not every display point will be averaged only over just the on-time. Thus, multiple sweeps (e.g., 100) in maximum hold are necessary to ensure that the maximum power is measured.
- e) The test report shall include the plots of the measuring instrument display and the measured data.
- f) See Annex I for example emission mask plots.

**Note:**

1. Due to MIMO operations, a correction has been added to the limit according to KDB 662911 D01 v02r01.  
The EUT have multiple antennas transmitting correlated signals with the equal antenna gains and two outputs driving a cross-polarized antennas with  $N_{ant}= 2$ .  
MIMO correction:  $10 \log(N_{ANT}) = 10 \log(2) = 3.01 \text{ dB} // -13 \text{ dBm} - 10 \cdot \log(2) = -16.01 \text{ dBm}$
2. The results of the Out-of-band Unwanted Emissions test shown below the frequency measured values are very small and similar trend for each port, so we are attached only the worst case plot.

**Test Results:**
**Tabular Data of Out-of-band Unwanted Emissions**
**CBRS NR 10 MHz 1 Carrier**

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	Left	3 549.34	-37.37
			Right	3 560.54	-38.40
		Middle	Left	3 619.04	-37.52
			Right	3 630.05	-36.01
		High	Left	3 689.18	-37.39
			Right	3 700.91	-38.34
	16QAM	Low	Left	3 549.95	-35.03
			Right	3 560.05	-37.01
		Middle	Left	3 619.95	-36.75
			Right	3 630.05	-36.94
		High	Left	3 689.95	-36.11
			Right	3 700.05	-37.06
	64QAM	Low	Left	3 549.95	-36.42
			Right	3 560.05	-38.70
		Middle	Left	3 619.55	-37.82
			Right	3 630.78	-37.50
		High	Left	3 689.08	-37.99
			Right	3 700.92	-37.99
	256QAM	Low	Left	3 549.95	-37.09
			Right	3 560.43	-36.71
		Middle	Left	3 619.51	-37.15
			Right	3 630.05	-37.92
		High	Left	3 689.95	-36.10
			Right	3 700.05	-37.30

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
1	QPSK	Low	Left	3 549.95	-36.23
			Right	3 560.76	-37.81
		Middle	Left	3 619.95	-37.53
			Right	3 630.05	-35.66
		High	Left	3 689.89	-37.45
			Right	3 700.05	-37.28
	16QAM	Low	Left	3 549.14	-37.78
			Right	3 560.05	-38.46
		Middle	Left	3 619.22	-38.75
			Right	3 630.05	-36.85
		High	Left	3 689.95	-35.19
			Right	3 700.05	-36.36
	64QAM	Low	Left	3 549.95	-36.49
			Right	3 560.05	-37.59
		Middle	Left	3 619.95	-38.24
			Right	3 630.05	-37.75
		High	Left	3 689.95	-37.44
			Right	3 700.05	-35.75
	256QAM	Low	Left	3 549.94	-36.36
			Right	3 560.05	-36.50
		Middle	Left	3 619.95	-37.05
			Right	3 630.05	-37.43
		High	Left	3 689.95	-38.35
			Right	3 700.05	-36.79

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low	Left	3 549.95	-38.07
			Right	3 560.23	-39.40
		Middle	Left	3 619.77	-40.01
			Right	3 630.05	-36.98
		High	Left	3 689.95	-36.30
			Right	3 700.05	-37.39
	16QAM	Low	Left	3 549.75	-40.37
			Right	3 560.05	-36.55
		Middle	Left	3 619.95	-37.71
			Right	3 630.05	-36.97
		High	Left	3 689.95	-35.49
			Right	3 700.05	-38.33
	64QAM	Low	Left	3 549.95	-38.17
			Right	3 560.05	-36.93
		Middle	Left	3 619.95	-38.24
			Right	3 630.05	-37.97
		High	Left	3 689.95	-37.53
			Right	3 700.05	-37.62
	256QAM	Low	Left	3 549.41	-38.33
			Right	3 560.05	-37.78
		Middle	Left	3 619.95	-37.83
			Right	3 630.05	-38.73
		High	Left	3 689.95	-36.89
			Right	3 700.30	-38.34

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
3	QPSK	Low	Left	3 549.95	-39.27
			Right	3 560.05	-37.79
		Middle	Left	3 619.95	-38.38
			Right	3 630.05	-38.02
		High	Left	3 689.95	-36.44
			Right	3 700.05	-37.85
	16QAM	Low	Left	3 549.95	-37.65
			Right	3 560.05	-38.72
		Middle	Left	3 619.95	-37.89
			Right	3 630.05	-37.84
		High	Left	3 689.95	-35.57
			Right	3 700.96	-38.00
	64QAM	Low	Left	3 549.95	-38.67
			Right	3 560.05	-37.98
		Middle	Left	3 619.95	-38.88
			Right	3 630.05	-37.98
		High	Left	3 689.95	-37.60
			Right	3 700.05	-35.88
	256QAM	Low	Left	3 549.95	-37.96
			Right	3 560.05	-36.83
		Middle	Left	3 619.95	-38.24
			Right	3 630.05	-37.85
		High	Left	3 689.95	-36.61
			Right	3 700.05	-35.77

**CBRS NR 20 MHz 1 Carrier**

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	Left	3 549.76	-32.36
			Right	3 570.10	-32.72
		Middle	Left	3 614.69	-32.95
			Right	3 635.10	-32.95
		High	Left	3 679.71	-31.63
			Right	3 700.48	-33.06
	16QAM	Low	Left	3 549.90	-32.29
			Right	3 570.10	-33.02
		Middle	Left	3 614.90	-31.91
			Right	3 635.10	-33.45
		High	Left	3 679.65	-32.44
			Right	3 700.10	-31.99
	64QAM	Low	Left	3 549.90	-31.57
			Right	3 570.10	-33.26
		Middle	Left	3 614.90	-30.06
			Right	3 635.10	-31.75
		High	Left	3 679.90	-31.26
			Right	3 700.10	-31.87
	256QAM	Low	Left	3 549.53	-28.57
			Right	3 570.10	-30.31
		Middle	Left	3 614.90	-29.93
			Right	3 635.39	-32.60
		High	Left	3 679.42	-30.94
			Right	3 700.77	-32.18



Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
1	QPSK	Low	Left	3 549.00	-33.79
			Right	3 570.12	-34.16
		Middle	Left	3 614.90	-33.29
			Right	3 635.71	-34.03
		High	Left	3 679.86	-33.19
			Right	3 700.10	-32.63
	16QAM	Low	Left	3 549.90	-32.22
			Right	3 570.10	-31.36
		Middle	Left	3 614.90	-32.77
			Right	3 635.10	-32.68
		High	Left	3 679.90	-30.84
			Right	3 700.96	-31.82
	64QAM	Low	Left	3 549.86	-33.35
			Right	3 570.10	-31.78
		Middle	Left	3 614.90	-33.90
			Right	3 635.10	-32.12
		High	Left	3 679.90	-32.98
			Right	3 700.10	-32.02
	256QAM	Low	Left	3 549.48	-34.50
			Right	3 570.10	-32.42
		Middle	Left	3 614.90	-31.86
			Right	3 635.35	-33.74
		High	Left	3 679.90	-31.69
			Right	3 700.10	-32.13

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low	Left	3 549.34	-34.62
			Right	3 570.10	-35.01
		Middle	Left	3 614.88	-36.06
			Right	3 635.14	-36.33
		High	Left	3 679.84	-35.40
			Right	3 700.10	-34.96
	16QAM	Low	Left	3 549.90	-34.32
			Right	3 570.10	-35.16
		Middle	Left	3 614.90	-36.08
			Right	3 635.10	-33.20
		High	Left	3 679.90	-34.14
			Right	3 700.10	-35.46
	64QAM	Low	Left	3 549.90	-35.20
			Right	3 570.10	-31.65
		Middle	Left	3 614.40	-34.82
			Right	3 635.10	-34.58
		High	Left	3 679.90	-33.85
			Right	3 700.10	-35.00
	256QAM	Low	Left	3 549.55	-35.69
			Right	3 570.10	-33.12
		Middle	Left	3 614.90	-34.18
			Right	3 635.10	-35.41
		High	Left	3 679.50	-35.30
			Right	3 700.10	-33.53

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
3	QPSK	Low	Left	3 549.48	-35.34
			Right	3 570.10	-35.74
		Middle	Left	3 614.90	-36.34
			Right	3 635.10	-35.38
		High	Left	3 679.90	-34.22
			Right	3 700.10	-33.79
	16QAM	Low	Left	3 549.19	-36.75
			Right	3 570.10	-34.26
		Middle	Left	3 614.90	-33.61
			Right	3 635.10	-33.27
		High	Left	3 679.90	-33.36
			Right	3 700.10	-33.86
	64QAM	Low	Left	3 549.71	-37.71
			Right	3 570.10	-33.99
		Middle	Left	3 614.76	-36.20
			Right	3 635.10	-35.31
		High	Left	3 679.90	-32.05
			Right	3 700.43	-35.23
	256QAM	Low	Left	3 549.76	-37.78
			Right	3 570.10	-35.12
		Middle	Left	3 614.90	-34.11
			Right	3 635.10	-33.36
		High	Left	3 679.90	-32.05
			Right	3 700.10	-33.65

**CBRS NR 30 MHz 1 Carrier**

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	Left	3 549.28	-29.08
			Right	3 580.81	-31.38
		Middle	Left	3 609.65	-30.82
			Right	3 640.88	-32.17
		High	Left	3 669.34	-30.58
			Right	3 700.15	-30.86
	16QAM	Low	Left	3 549.37	-31.63
			Right	3 580.81	-32.63
		Middle	Left	3 609.74	-28.83
			Right	3 640.97	-30.43
		High	Left	3 669.25	-28.87
			Right	3 700.26	-29.26
	64QAM	Low	Left	3 549.31	-29.77
			Right	3 580.66	-31.99
		Middle	Left	3 609.62	-26.57
			Right	3 640.23	-29.25
		High	Left	3 669.37	-28.88
			Right	3 700.44	-30.23
	256QAM	Low	Left	3 549.74	-28.05
			Right	3 580.29	-30.03
		Middle	Left	3 609.65	-28.51
			Right	3 640.72	-28.97
		High	Left	3 669.09	-36.08
			Right	3 700.38	-33.95

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
1	QPSK	Low	Left	3 549.53	-31.34
			Right	3 580.60	-32.46
		Middle	Left	3 609.37	-30.00
			Right	3 640.41	-31.81
		High	Left	3 669.47	-30.13
			Right	3 700.29	-31.09
	16QAM	Low	Left	3 549.62	-30.72
			Right	3 580.57	-32.68
		Middle	Left	3 609.65	-29.81
			Right	3 640.94	-31.96
		High	Left	3 669.31	-28.89
			Right	3 700.88	-30.65
	64QAM	Low	Left	3 549.00	-28.93
			Right	3 580.44	-30.70
		Middle	Left	3 609.06	-30.72
			Right	3 640.81	-32.06
		High	Left	3 669.09	-30.42
			Right	3 700.26	-31.49
	256QAM	Low	Left	3 549.50	-31.40
			Right	3 580.26	-32.31
		Middle	Left	3 609.43	-32.14
			Right	3 640.15	-33.17
		High	Left	3 669.09	-33.81
			Right	3 700.47	-33.07

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low	Left	3 549.31	-32.99
			Right	3 580.32	-34.52
		Middle	Left	3 609.00	-33.63
			Right	3 640.88	-34.16
		High	Left	3 669.19	-34.39
			Right	3 700.81	-32.92
	16QAM	Low	Left	3 549.09	-33.54
			Right	3 580.23	-33.54
		Middle	Left	3 609.47	-34.19
			Right	3 640.47	-34.59
		High	Left	3 669.81	-33.67
			Right	3 700.69	-33.92
	64QAM	Low	Left	3 549.59	-31.82
			Right	3 580.47	-32.38
		Middle	Left	3 609.00	-32.99
			Right	3 640.15	-33.69
		High	Left	3 669.56	-33.21
			Right	3 700.19	-33.58
	256QAM	Low	Left	3 549.65	-32.53
			Right	3 580.81	-33.37
		Middle	Left	3 609.81	-33.43
			Right	3 640.32	-34.91
		High	Left	3 669.34	-34.96
			Right	3 700.32	-35.57



Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
3	QPSK	Low	Left	3 549.43	-36.07
			Right	3 580.26	-35.53
		Middle	Left	3 609.68	-35.41
			Right	3 640.26	-35.39
		High	Left	3 669.68	-34.16
			Right	3 700.54	-33.86
	16QAM	Low	Left	3 549.74	-34.93
			Right	3 580.32	-35.88
		Middle	Left	3 609.09	-34.09
			Right	3 640.91	-34.73
		High	Left	3 669.53	-32.90
			Right	3 700.15	-32.80
	64QAM	Low	Left	3 549.22	-34.47
			Right	3 580.81	-34.23
		Middle	Left	3 609.68	-35.30
			Right	3 640.60	-35.35
		High	Left	3 669.62	-34.13
			Right	3 700.19	-33.76
	256QAM	Low	Left	3 549.22	-36.49
			Right	3 580.29	-34.68
		Middle	Left	3 609.74	-34.38
			Right	3 640.54	-35.47
		High	Left	3 669.78	-35.39
			Right	3 700.94	-34.87

**CBRS NR 40 MHz 1 Carrier**

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	Left	3 549.78	-26.96
			Right	3 590.20	-27.31
		Middle	Left	3 604.80	-25.66
			Right	3 645.20	-26.73
		High	Left	3 659.29	-25.59
			Right	3 700.20	-26.82
	16QAM	Low	Left	3 549.80	-25.43
			Right	3 590.20	-27.17
		Middle	Left	3 604.80	-25.19
			Right	3 645.22	-28.42
		High	Left	3 659.78	-25.24
			Right	3 700.51	-26.33
	64QAM	Low	Left	3 549.80	-23.62
			Right	3 590.20	-25.12
		Middle	Left	3 604.78	-24.93
			Right	3 645.88	-28.62
		High	Left	3 659.53	-23.46
			Right	3 700.47	-24.66
	256QAM	Low	Left	3 549.21	-24.84
			Right	3 590.26	-28.05
		Middle	Left	3 604.80	-29.33
			Right	3 645.20	-31.22
		High	Left	3 659.62	-25.54
			Right	3 700.20	-26.72

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
1	QPSK	Low	Left	3 549.80	-25.92
			Right	3 590.20	-28.15
		Middle	Left	3 604.41	-26.84
			Right	3 645.20	-26.43
		High	Left	3 659.16	-26.43
			Right	3 700.71	-28.08
	16QAM	Low	Left	3 549.80	-24.19
			Right	3 590.20	-27.37
		Middle	Left	3 604.80	-25.84
			Right	3 645.26	-28.62
		High	Left	3 659.21	-25.12
			Right	3 700.20	-26.40
	64QAM	Low	Left	3 549.80	-27.79
			Right	3 590.30	-30.00
		Middle	Left	3 604.80	-27.31
			Right	3 645.26	-29.72
		High	Left	3 659.80	-25.49
			Right	3 700.20	-28.25
	256QAM	Low	Left	3 549.80	-26.87
			Right	3 590.20	-28.74
		Middle	Left	3 604.80	-31.56
			Right	3 645.20	-29.74
		High	Left	3 659.80	-25.59
			Right	3 700.20	-26.66

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low	Left	3 549.80	-28.53
			Right	3 590.20	-30.48
		Middle	Left	3 604.80	-30.27
			Right	3 645.20	-31.14
		High	Left	3 659.70	-31.14
			Right	3 700.63	-31.88
	16QAM	Low	Left	3 549.80	-28.30
			Right	3 590.20	-29.06
		Middle	Left	3 604.80	-28.00
			Right	3 645.20	-29.08
		High	Left	3 659.80	-28.00
			Right	3 700.20	-28.87
	64QAM	Low	Left	3 549.80	-28.66
			Right	3 590.20	-28.44
		Middle	Left	3 604.80	-29.62
			Right	3 645.20	-32.93
		High	Left	3 659.74	-29.32
			Right	3 700.20	-27.73
	256QAM	Low	Left	3 549.80	-27.09
			Right	3 590.34	-33.63
		Middle	Left	3 604.80	-30.48
			Right	3 645.20	-32.59
		High	Left	3 659.80	-27.57
			Right	3 700.20	-29.31

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
3	QPSK	Low	Left	3 549.70	-31.13
			Right	3 590.20	-32.84
		Middle	Left	3 604.80	-30.78
			Right	3 645.20	-29.96
		High	Left	3 659.80	-29.78
			Right	3 700.20	-29.11
	16QAM	Low	Left	3 549.80	-29.98
			Right	3 590.20	-30.56
		Middle	Left	3 604.80	-28.98
			Right	3 645.20	-29.45
		High	Left	3 659.80	-27.57
			Right	3 700.20	-30.88
	64QAM	Low	Left	3 549.80	-28.01
			Right	3 590.22	-29.99
		Middle	Left	3 604.80	-29.49
			Right	3 645.20	-29.02
		High	Left	3 659.80	-31.47
			Right	3 700.20	-30.23
	256QAM	Low	Left	3 549.80	-31.61
			Right	3 590.20	-29.58
		Middle	Left	3 604.80	-27.88
			Right	3 645.26	-31.95
		High	Left	3 659.80	-28.62
			Right	3 700.20	-28.09

**CBRS NR 60 MHz 1 Carrier**

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	Left	3 549.18	-22.72
			Right	3 610.63	-25.26
		Middle	Left	3 594.70	-21.72
			Right	3 655.88	-24.53
		High	Left	3 639.70	-23.11
			Right	3 700.88	-25.39
	16QAM	Low	Left	3 549.49	-21.37
			Right	3 610.30	-24.45
		Middle	Left	3 594.43	-24.39
			Right	3 655.30	-27.11
		High	Left	3 639.06	-21.80
			Right	3 700.88	-24.49
	64QAM	Low	Left	3 549.70	-27.11
			Right	3 610.63	-27.78
		Middle	Left	3 594.70	-22.96
			Right	3 655.45	-25.96
		High	Left	3 639.70	-25.87
			Right	3 701.00	-26.12
	256QAM	Low	Left	3 549.37	-22.90
			Right	3 610.51	-25.20
		Middle	Left	3 594.70	-21.94
			Right	3 655.39	-24.82
		High	Left	3 639.61	-24.30
			Right	3 700.94	-24.98



Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
1	QPSK	Low	Left	3 549.55	-22.27
			Right	3 610.51	-26.39
		Middle	Left	3 594.43	-21.50
			Right	3 655.63	-25.33
		High	Left	3 639.12	-21.73
			Right	3 700.39	-23.93
	16QAM	Low	Left	3 549.24	-21.88
			Right	3 610.63	-25.66
		Middle	Left	3 594.24	-24.04
			Right	3 655.94	-27.05
		High	Left	3 639.70	-23.52
			Right	3 700.88	-25.11
	64QAM	Low	Left	3 549.70	-27.78
			Right	3 610.39	-28.46
		Middle	Left	3 594.00	-24.64
			Right	3 655.76	-28.15
		High	Left	3 639.12	-25.80
			Right	3 700.30	-26.42
	256QAM	Low	Left	3 549.18	-25.23
			Right	3 610.39	-26.96
		Middle	Left	3 594.31	-24.12
			Right	3 655.70	-27.12
		High	Left	3 639.00	-24.52
			Right	3 700.39	-26.45

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low	Left	3 549.61	-26.40
			Right	3 610.30	-28.05
		Middle	Left	3 594.70	-25.75
			Right	3 655.70	-27.99
		High	Left	3 639.70	-27.64
			Right	3 700.45	-27.80
	16QAM	Low	Left	3 549.61	-24.98
			Right	3 610.30	-28.25
		Middle	Left	3 594.49	-26.73
			Right	3 655.39	-28.65
		High	Left	3 639.43	-27.15
			Right	3 701.00	-28.19
	64QAM	Low	Left	3 549.24	-29.43
			Right	3 610.51	-30.06
		Middle	Left	3 594.70	-27.87
			Right	3 655.30	-29.79
		High	Left	3 639.49	-28.88
			Right	3 700.45	-29.84
	256QAM	Low	Left	3 549.70	-27.51
			Right	3 610.30	-30.10
		Middle	Left	3 594.70	-27.81
			Right	3 656.00	-28.84
		High	Left	3 639.55	-28.53
			Right	3 700.30	-28.62

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
3	QPSK	Low	Left	3 549.61	-29.67
			Right	3 610.94	-30.88
		Middle	Left	3 594.55	-29.99
			Right	3 655.70	-28.53
		High	Left	3 639.37	-28.97
			Right	3 700.70	-28.11
	16QAM	Low	Left	3 549.00	-28.52
			Right	3 610.30	-28.75
		Middle	Left	3 594.24	-28.89
			Right	3 655.45	-29.57
		High	Left	3 639.70	-27.84
			Right	3 700.30	-28.66
	64QAM	Low	Left	3 549.70	-31.81
			Right	3 610.30	-30.34
		Middle	Left	3 594.70	-29.94
			Right	3 655.94	-30.91
		High	Left	3 639.70	-29.33
			Right	3 700.51	-30.01
	256QAM	Low	Left	3 549.12	-30.36
			Right	3 610.88	-31.89
		Middle	Left	3 594.70	-28.46
			Right	3 655.30	-29.86
		High	Left	3 639.70	-30.67
			Right	3 700.30	-29.36

**CBRS NR 80 MHz 1 Carrier**

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	Left	3 549.60	-24.48
			Right	3 630.40	-27.01
		Middle	Left	3 584.60	-26.97
			Right	3 665.40	-24.30
		High	Left	3 619.60	-30.44
			Right	3 700.40	-22.09
	16QAM	Low	Left	3 549.60	-25.71
			Right	3 630.40	-23.99
		Middle	Left	3 584.60	-25.34
			Right	3 665.40	-28.31
		High	Left	3 619.60	-24.68
			Right	3 700.40	-24.41
	64QAM	Low	Left	3 549.60	-25.78
			Right	3 630.40	-26.10
		Middle	Left	3 584.60	-27.27
			Right	3 665.40	-28.56
		High	Left	3 619.60	-29.32
			Right	3 700.40	-28.01
	256QAM	Low	Left	3 549.60	-24.89
			Right	3 630.40	-29.04
		Middle	Left	3 584.60	-27.23
			Right	3 665.40	-25.03
		High	Left	3 619.60	-24.52
			Right	3 700.40	-29.29

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
1	QPSK	Low	Left	3 549.60	-28.80
			Right	3 630.40	-27.92
		Middle	Left	3 584.60	-24.73
			Right	3 665.40	-25.77
		High	Left	3 619.60	-30.95
			Right	3 700.40	-20.78
	16QAM	Low	Left	3 549.60	-28.56
			Right	3 630.40	-27.49
		Middle	Left	3 584.60	-25.02
			Right	3 665.40	-24.68
		High	Left	3 619.60	-27.00
			Right	3 700.40	-27.32
	64QAM	Low	Left	3 549.60	-27.81
			Right	3 630.40	-28.57
		Middle	Left	3 584.60	-24.53
			Right	3 665.40	-25.75
		High	Left	3 619.60	-25.57
			Right	3 700.40	-26.09
	256QAM	Low	Left	3 549.60	-25.10
			Right	3 630.40	-29.16
		Middle	Left	3 584.60	-25.61
			Right	3 665.40	-27.44
		High	Left	3 619.60	-23.29
			Right	3 700.51	-27.57

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low	Left	3 549.49	-28.50
			Right	3 630.40	-28.08
		Middle	Left	3 584.60	-27.29
			Right	3 665.40	-27.30
		High	Left	3 619.60	-26.82
			Right	3 700.40	-25.87
	16QAM	Low	Left	3 549.60	-23.82
			Right	3 630.40	-26.34
		Middle	Left	3 584.60	-26.12
			Right	3 665.40	-28.07
		High	Left	3 619.60	-23.46
			Right	3 700.40	-28.66
	64QAM	Low	Left	3 549.60	-25.26
			Right	3 630.40	-26.05
		Middle	Left	3 584.60	-26.33
			Right	3 665.40	-27.87
		High	Left	3 619.60	-24.21
			Right	3 700.40	-26.03
	256QAM	Low	Left	3 549.60	-26.85
			Right	3 630.40	-25.35
Middle		Left	3 584.60	-24.69	
		Right	3 665.40	-27.24	
High		Left	3 619.60	-27.91	
		Right	3 700.51	-28.17	

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
3	QPSK	Low	Left	3 549.49	-28.77
			Right	3 630.40	-28.34
		Middle	Left	3 584.60	-30.04
			Right	3 665.40	-23.78
		High	Left	3 619.60	-26.68
			Right	3 700.40	-27.31
	16QAM	Low	Left	3 549.60	-25.30
			Right	3 630.40	-29.05
		Middle	Left	3 584.60	-29.55
			Right	3 665.40	-23.22
		High	Left	3 619.60	-25.09
			Right	3 700.40	-26.91
	64QAM	Low	Left	3 549.60	-28.02
			Right	3 630.40	-24.57
		Middle	Left	3 584.60	-28.76
			Right	3 665.40	-20.98
		High	Left	3 619.60	-24.78
			Right	3 700.40	-27.59
	256QAM	Low	Left	3 549.60	-26.14
			Right	3 630.40	-27.06
		Middle	Left	3 584.60	-25.74
			Right	3 665.40	-26.20
		High	Left	3 619.60	-24.73
			Right	3 700.51	-28.95



**CBRS NR 100 MHz 1 Carrier**

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	Left	3 549.50	-36.35
			Right	3 650.50	-35.87
		Middle	Left	3 574.50	-35.79
			Right	3 675.50	-34.99
		High	Left	3 599.50	-35.59
			Right	3 700.50	-35.30
	16QAM	Low	Left	3 549.50	-36.35
			Right	3 650.50	-36.75
		Middle	Left	3 574.50	-35.67
			Right	3 675.50	-34.96
		High	Left	3 599.50	-35.62
			Right	3 700.50	-35.38
	64QAM	Low	Left	3 549.50	-36.58
			Right	3 650.50	-36.30
		Middle	Left	3 574.50	-35.58
			Right	3 675.50	-34.95
		High	Left	3 599.50	-35.36
			Right	3 700.50	-34.94
	256QAM	Low	Left	3 549.50	-36.32
			Right	3 650.50	-36.15
		Middle	Left	3 574.50	-35.98
			Right	3 675.50	-35.21
		High	Left	3 599.50	-35.30
			Right	3 700.50	-34.99

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
1	QPSK	Low	Left	3 549.50	-35.52
			Right	3 650.50	-35.41
		Middle	Left	3 574.50	-34.37
			Right	3 675.50	-33.77
		High	Left	3 599.50	-34.62
			Right	3 700.50	-33.87
	16QAM	Low	Left	3 549.50	-35.33
			Right	3 650.50	-35.30
		Middle	Left	3 574.50	-34.45
			Right	3 675.50	-33.79
		High	Left	3 599.50	-34.64
			Right	3 700.50	-33.65
	64QAM	Low	Left	3 549.50	-35.65
			Right	3 650.50	-35.16
		Middle	Left	3 574.50	-34.69
			Right	3 675.50	-34.05
		High	Left	3 599.50	-34.54
			Right	3 700.50	-33.73
	256QAM	Low	Left	3 549.50	-35.71
			Right	3 650.50	-34.99
		Middle	Left	3 574.50	-34.81
			Right	3 675.50	-34.21
		High	Left	3 599.50	-34.38
			Right	3 700.50	-33.34

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low	Left	3 549.50	-35.42
			Right	3 650.50	-34.53
		Middle	Left	3 574.50	-34.60
			Right	3 675.50	-34.18
		High	Left	3 599.50	-34.45
			Right	3 700.50	-33.96
	16QAM	Low	Left	3 549.50	-35.28
			Right	3 650.50	-34.58
		Middle	Left	3 574.50	-34.46
			Right	3 675.50	-33.99
		High	Left	3 599.50	-34.22
			Right	3 700.50	-34.04
	64QAM	Low	Left	3 549.50	-35.20
			Right	3 650.50	-34.75
		Middle	Left	3 574.50	-34.64
			Right	3 675.50	-34.41
		High	Left	3 599.50	-34.55
			Right	3 700.50	-33.97
	256QAM	Low	Left	3 549.50	-35.26
			Right	3 650.50	-34.48
		Middle	Left	3 574.50	-34.70
			Right	3 675.50	-34.42
		High	Left	3 599.50	-34.54
			Right	3 700.50	-33.85

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
3	QPSK	Low	Left	3 549.50	-35.55
			Right	3 650.50	-34.49
		Middle	Left	3 574.50	-34.31
			Right	3 675.50	-33.46
		High	Left	3 599.50	-34.40
			Right	3 700.50	-33.41
	16QAM	Low	Left	3 549.50	-35.34
			Right	3 650.50	-34.36
		Middle	Left	3 574.50	-34.22
			Right	3 675.50	-33.42
		High	Left	3 599.50	-34.36
			Right	3 700.50	-33.05
	64QAM	Low	Left	3 549.50	-35.32
			Right	3 650.50	-34.39
		Middle	Left	3 574.50	-34.55
			Right	3 675.50	-33.67
		High	Left	3 599.50	-34.31
			Right	3 700.50	-33.04
	256QAM	Low	Left	3 549.50	-35.36
			Right	3 650.50	-34.18
		Middle	Left	3 574.50	-34.54
			Right	3 675.50	-33.78
		High	Left	3 599.50	-34.27
			Right	3 700.50	-33.01

**CBRS LTE 5 MHz 1 Carrier**

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	Left	3 549.98	-37.85
			Right	3 555.03	-38.19
		Middle	Left	3 622.48	-38.85
			Right	3 627.74	-40.20
		High	Left	3 694.98	-38.54
			Right	3 700.03	-39.08
	16QAM	Low	Left	3 549.98	-37.85
			Right	3 555.03	-39.20
		Middle	Left	3 622.48	-39.05
			Right	3 627.53	-39.08
		High	Left	3 694.98	-37.64
			Right	3 700.03	-38.64
	64QAM	Low	Left	3 549.49	-40.06
			Right	3 555.03	-38.70
		Middle	Left	3 622.47	-37.33
			Right	3 627.53	-38.88
		High	Left	3 694.98	-39.21
			Right	3 700.03	-38.68
	256QAM	Low	Left	3 549.96	-38.58
			Right	3 555.04	-39.29
		Middle	Left	3 622.48	-39.10
			Right	3 627.60	-38.56
		High	Left	3 694.97	-38.45
			Right	3 700.75	-40.27

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
1	QPSK	Low	Left	3 549.98	-38.00
			Right	3 555.03	-38.29
		Middle	Left	3 622.43	-40.16
			Right	3 628.44	-40.91
		High	Left	3 694.98	-38.42
			Right	3 700.03	-38.97
	16QAM	Low	Left	3 549.98	-39.22
			Right	3 555.03	-38.06
		Middle	Left	3 622.48	-39.24
			Right	3 627.53	-37.49
		High	Left	3 694.56	-38.99
			Right	3 700.03	-39.80
	64QAM	Low	Left	3 549.56	-40.09
			Right	3 555.10	-39.35
		Middle	Left	3 622.48	-39.98
			Right	3 627.53	-38.05
		High	Left	3 694.98	-38.55
			Right	3 700.11	-39.23
	256QAM	Low	Left	3 549.98	-39.24
			Right	3 555.05	-39.00
		Middle	Left	3 622.48	-38.45
			Right	3 627.53	-37.66
		High	Left	3 694.97	-40.55
			Right	3 700.03	-39.22

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low	Left	3 549.98	-39.83
			Right	3 555.03	-39.44
		Middle	Left	3 622.45	-39.30
			Right	3 627.56	-40.77
		High	Left	3 694.98	-39.10
			Right	3 700.03	-38.14
	16QAM	Low	Left	3 549.98	-37.64
			Right	3 555.03	-39.51
		Middle	Left	3 622.48	-38.97
			Right	3 627.53	-38.69
		High	Left	3 694.98	-38.97
			Right	3 700.03	-39.45
	64QAM	Low	Left	3 549.98	-39.21
			Right	3 555.03	-39.37
		Middle	Left	3 622.48	-39.36
			Right	3 627.53	-40.78
		High	Left	3 694.98	-38.64
			Right	3 700.03	-38.38
	256QAM	Low	Left	3 549.98	-39.21
			Right	3 555.03	-38.52
		Middle	Left	3 622.48	-40.06
			Right	3 627.55	-39.49
		High	Left	3 694.98	-38.34
			Right	3 700.03	-41.45



Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
3	QPSK	Low	Left	3 549.98	-39.70
			Right	3 555.03	-41.54
		Middle	Left	3 622.48	-36.96
			Right	3 627.53	-39.40
		High	Left	3 694.98	-36.98
			Right	3 700.03	-38.37
	16QAM	Low	Left	3 549.98	-40.03
			Right	3 555.03	-39.71
		Middle	Left	3 622.48	-36.80
			Right	3 627.53	-39.01
		High	Left	3 694.98	-38.26
			Right	3 700.03	-39.24
	64QAM	Low	Left	3 549.90	-41.31
			Right	3 555.03	-38.49
		Middle	Left	3 622.48	-36.66
			Right	3 627.53	-38.76
		High	Left	3 694.98	-39.47
			Right	3 700.32	-40.39
	256QAM	Low	Left	3 549.98	-40.44
			Right	3 555.03	-38.44
		Middle	Left	3 622.48	-37.85
			Right	3 627.53	-39.77
		High	Left	3 694.98	-39.11
			Right	3 700.03	-38.19

**CBRS LTE 10 MHz 1 Carrier**

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	Left	3 549.81	-39.62
			Right	3 560.18	-39.20
		Middle	Left	3 619.95	-37.07
			Right	3 630.05	-38.03
		High	Left	3 689.95	-38.70
			Right	3 700.11	-37.84
	16QAM	Low	Left	3 549.70	-39.29
			Right	3 560.12	-36.89
		Middle	Left	3 619.51	-38.35
			Right	3 630.05	-36.69
		High	Left	3 689.08	-38.62
			Right	3 700.05	-38.10
	64QAM	Low	Left	3 549.84	-38.08
			Right	3 560.49	-37.51
		Middle	Left	3 619.95	-37.36
			Right	3 630.05	-37.89
		High	Left	3 689.00	-37.94
			Right	3 700.05	-36.38
	256QAM	Low	Left	3 549.95	-39.34
			Right	3 560.75	-39.38
		Middle	Left	3 619.95	-38.40
			Right	3 630.05	-37.02
		High	Left	3 689.77	-38.78
			Right	3 700.05	-37.21

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
1	QPSK	Low	Left	3 549.74	-38.06
			Right	3 560.45	-38.83
		Middle	Left	3 619.90	-38.09
			Right	3 630.14	-37.42
		High	Left	3 689.39	-38.04
			Right	3 700.05	-37.79
	16QAM	Low	Left	3 549.95	-37.93
			Right	3 560.05	-39.77
		Middle	Left	3 619.95	-37.52
			Right	3 630.05	-38.75
		High	Left	3 689.11	-38.79
			Right	3 700.05	-36.76
	64QAM	Low	Left	3 549.95	-40.99
			Right	3 560.10	-37.19
		Middle	Left	3 619.25	-38.71
			Right	3 630.63	-38.09
		High	Left	3 689.31	-38.63
			Right	3 700.05	-38.49
	256QAM	Low	Left	3 549.02	-40.32
			Right	3 560.05	-36.61
		Middle	Left	3 619.17	-39.00
			Right	3 630.05	-38.39
		High	Left	3 689.95	-37.73
			Right	3 700.05	-37.60

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low	Left	3 549.93	-37.94
			Right	3 565.92	-37.70
		Middle	Left	3 619.95	-38.67
			Right	3 630.05	-37.37
		High	Left	3 689.54	-39.55
			Right	3 700.05	-38.69
	16QAM	Low	Left	3 549.09	-39.12
			Right	3 560.05	-37.71
		Middle	Left	3 619.95	-37.79
			Right	3 630.05	-38.85
		High	Left	3 689.95	-37.00
			Right	3 700.41	-39.49
	64QAM	Low	Left	3 549.84	-39.95
			Right	3 560.05	-37.40
		Middle	Left	3 619.95	-37.82
			Right	3 630.05	-38.26
		High	Left	3 689.69	-38.59
			Right	3 700.05	-37.30
	256QAM	Low	Left	3 549.95	-38.32
			Right	3 560.05	-38.50
		Middle	Left	3 619.95	-38.43
			Right	3 630.05	-38.05
		High	Left	3 689.95	-38.89
			Right	3 700.05	-37.60

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
3	QPSK	Low	Left	3 549.94	-39.06
			Right	3 560.10	-38.13
		Middle	Left	3 619.95	-38.35
			Right	3 630.05	-37.46
		High	Left	3 689.95	-38.13
			Right	3 700.74	-39.14
	16QAM	Low	Left	3 549.08	-38.13
			Right	3 560.57	-40.06
		Middle	Left	3 619.36	-39.11
			Right	3 630.05	-37.78
		High	Left	3 689.75	-38.75
			Right	3 700.44	-39.03
	64QAM	Low	Left	3 549.95	-37.64
			Right	3 560.05	-37.24
		Middle	Left	3 619.95	-39.36
			Right	3 630.05	-36.63
		High	Left	3 689.53	-39.34
			Right	3 700.16	-39.38
	256QAM	Low	Left	3 549.87	-39.83
			Right	3 560.05	-38.38
		Middle	Left	3 619.95	-37.85
			Right	3 630.05	-39.06
		High	Left	3 689.95	-37.37
			Right	3 700.13	-38.32

**CBRS LTE 15 MHz 1 Carrier**

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	Left	3 549.67	-38.18
			Right	3 565.78	-34.59
		Middle	Left	3 617.08	-32.80
			Right	3 632.83	-34.09
		High	Left	3 684.14	-36.51
			Right	3 700.36	-36.52
	16QAM	Low	Left	3 549.34	-38.10
			Right	3 565.38	-37.32
		Middle	Left	3 617.43	-36.30
			Right	3 632.58	-36.95
		High	Left	3 684.88	-36.90
			Right	3 700.08	-36.39
	64QAM	Low	Left	3 549.88	-36.61
			Right	3 565.09	-35.66
		Middle	Left	3 617.43	-36.51
			Right	3 632.97	-36.53
		High	Left	3 684.93	-35.89
			Right	3 700.09	-35.97
	256QAM	Low	Left	3 549.46	-37.10
			Right	3 565.65	-36.27
		Middle	Left	3 617.43	-36.57
			Right	3 632.58	-36.99
		High	Left	3 684.42	-37.08
			Right	3 700.08	-35.42

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
1	QPSK	Low	Left	3 549.00	-36.70
			Right	3 565.09	-36.13
		Middle	Left	3 617.25	-31.76
			Right	3 632.58	-36.59
		High	Left	3 684.34	-30.79
			Right	3 701.00	-37.54
	16QAM	Low	Left	3 549.91	-35.12
			Right	3 565.54	-37.54
		Middle	Left	3 617.43	-36.81
			Right	3 633.31	-36.94
		High	Left	3 684.86	-36.65
			Right	3 700.08	-36.24
	64QAM	Low	Left	3 549.93	-38.36
			Right	3 565.14	-37.23
		Middle	Left	3 616.80	-37.31
			Right	3 633.28	-37.75
		High	Left	3 684.22	-37.13
			Right	3 700.33	-36.89
	256QAM	Low	Left	3 549.08	-39.57
			Right	3 565.22	-36.73
		Middle	Left	3 617.43	-36.39
			Right	3 632.60	-37.77
		High	Left	3 684.82	-36.44
			Right	3 700.34	-36.37



Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low	Left	3 549.93	-37.94
			Right	3 565.92	-37.70
		Middle	Left	3 617.43	-37.01
			Right	3 633.45	-34.22
		High	Left	3 684.75	-37.61
			Right	3 700.09	-37.65
	16QAM	Low	Left	3 549.93	-37.43
			Right	3 565.08	-36.03
		Middle	Left	3 617.43	-37.89
			Right	3 632.76	-38.34
		High	Left	3 684.11	-39.17
			Right	3 700.08	-37.26
	64QAM	Low	Left	3 549.93	-36.86
			Right	3 565.08	-36.38
		Middle	Left	3 616.72	-38.18
			Right	3 632.75	-38.33
		High	Left	3 684.91	-36.72
			Right	3 700.08	-37.67
	256QAM	Low	Left	3 549.93	-35.59
			Right	3 565.25	-38.59
		Middle	Left	3 617.43	-37.19
			Right	3 632.62	-37.95
		High	Left	3 684.88	-37.71
			Right	3 700.08	-36.22

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
3	QPSK	Low	Left	3 549.22	-34.30
			Right	3 565.09	-39.06
		Middle	Left	3 616.80	-38.58
			Right	3 632.99	-33.20
		High	Left	3 684.93	-37.51
			Right	3 700.79	-38.67
	16QAM	Low	Left	3 549.93	-37.54
			Right	3 565.09	-38.47
		Middle	Left	3 617.43	-37.36
			Right	3 632.73	-38.24
		High	Left	3 684.93	-38.29
			Right	3 700.08	-37.88
	64QAM	Low	Left	3 549.93	-37.58
			Right	3 565.09	-37.41
		Middle	Left	3 617.43	-36.76
			Right	3 632.96	-38.32
		High	Left	3 684.82	-38.29
			Right	3 700.15	-37.93
	256QAM	Low	Left	3 549.37	-38.98
			Right	3 565.08	-36.10
		Middle	Left	3 617.43	-37.96
			Right	3 632.58	-35.55
		High	Left	3 684.93	-37.44
			Right	3 700.08	-36.86

**CBRS LTE 20 MHz 1 Carrier**

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	Left	3 549.71	-36.89
			Right	3 570.56	-36.24
		Middle	Left	3 614.42	-37.45
			Right	3 635.75	-37.05
		High	Left	3 679.53	-37.24
			Right	3 700.98	-36.39
	16QAM	Low	Left	3 549.86	-35.96
			Right	3 570.12	-35.85
		Middle	Left	3 614.29	-37.59
			Right	3 635.24	-36.26
		High	Left	3 679.65	-37.96
			Right	3 700.22	-35.50
	64QAM	Low	Left	3 549.82	-35.96
			Right	3 570.22	-36.95
		Middle	Left	3 614.63	-37.11
			Right	3 635.79	-36.28
		High	Left	3 679.08	-36.90
			Right	3 700.90	-34.93
	256QAM	Low	Left	3 549.25	-37.46
			Right	3 570.12	-35.73
		Middle	Left	3 614.53	-36.03
			Right	3 635.56	-37.09
		High	Left	3 679.82	-36.37
			Right	3 700.20	-35.48

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
1	QPSK	Low	Left	3 549.15	-35.58
			Right	3 570.10	-36.31
		Middle	Left	3 614.90	-36.70
			Right	3 635.98	-37.77
		High	Left	3 679.88	-36.44
			Right	3 700.50	-36.62
	16QAM	Low	Left	3 549.02	-36.30
			Right	3 570.92	-36.35
		Middle	Left	3 614.90	-35.62
			Right	3 635.92	-38.06
		High	Left	3 679.86	-35.14
			Right	3 700.33	-35.36
	64QAM	Low	Left	3 549.40	-36.71
			Right	3 570.20	-36.61
		Middle	Left	3 614.90	-36.45
			Right	3 635.37	-37.34
		High	Left	3 679.38	-36.44
			Right	3 700.79	-36.24
	256QAM	Low	Left	3 549.88	-37.17
			Right	3 570.20	-35.93
		Middle	Left	3 614.88	-35.41
			Right	3 635.81	-35.96
		High	Left	3 679.82	-36.48
			Right	3 700.35	-36.15

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low	Left	3 549.90	-36.78
			Right	3 570.10	-34.91
		Middle	Left	3 614.90	-36.63
			Right	3 635.10	-36.08
		High	Left	3 679.78	-37.88
			Right	3 700.48	-37.94
	16QAM	Low	Left	3 549.08	-38.07
			Right	3 570.14	-36.25
		Middle	Left	3 614.90	-37.70
			Right	3 635.16	-38.03
		High	Left	3 679.42	-37.73
			Right	3 700.10	-37.97
	64QAM	Low	Left	3 549.38	-39.14
			Right	3 570.75	-37.70
		Middle	Left	3 614.76	-38.51
			Right	3 635.10	-35.65
		High	Left	3 679.21	-38.15
			Right	3 700.12	-35.94
	256QAM	Low	Left	3 549.88	-35.54
			Right	3 570.71	-37.74
		Middle	Left	3 614.90	-35.94
			Right	3 635.14	-38.18
		High	Left	3 679.27	-36.96
			Right	3 700.41	-37.61

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
3	QPSK	Low	Left	3 549.80	-37.32
			Right	3 570.48	-36.82
		Middle	Left	3 614.46	-37.90
			Right	3 636.00	-37.61
		High	Left	3 679.46	-37.44
			Right	3 700.45	-37.76
	16QAM	Low	Left	3 549.65	-37.16
			Right	3 570.10	-37.36
		Middle	Left	3 614.90	-35.35
			Right	3 635.10	-37.66
		High	Left	3 679.74	-38.68
			Right	3 700.85	-36.36
	64QAM	Low	Left	3 549.90	-36.96
			Right	3 570.12	-36.26
		Middle	Left	3 614.90	-37.24
			Right	3 635.87	-38.00
		High	Left	3 679.57	-37.81
			Right	3 700.20	-36.71
	256QAM	Low	Left	3 549.80	-37.26
			Right	3 570.14	-36.88
		Middle	Left	3 614.90	-37.18
			Right	3 635.87	-37.23
		High	Left	3 679.84	-36.35
			Right	3 700.39	-36.16

**Tabular Data of Contiguous Out-of-band Unwanted Emissions**
**CBRS NR(60 MHz 1C + 30 MHz 1C)[2C]**

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	Left	3 549.37	-33.73
			Right	3 640.66	-35.75
		Middle	Left	3 579.00	-32.86
			Right	3 670.66	-35.01
		High	Left	3 609.61	-32.45
			Right	3 700.81	-34.77
	16QAM	Low	Left	3 549.61	-33.27
			Right	3 640.44	-36.34
		Middle	Left	3 579.00	-33.43
			Right	3 670.47	-36.64
		High	Left	3 609.18	-32.93
			Right	3 701.00	-36.54
	64QAM	Low	Left	3 549.31	-32.99
			Right	3 640.94	-36.28
		Middle	Left	3 579.31	-32.55
			Right	3 670.44	-34.59
		High	Left	3 609.43	-31.75
			Right	3 700.32	-35.00
	256QAM	Low	Left	3 549.70	-31.92
			Right	3 640.66	-36.97
		Middle	Left	3 579.37	-33.61
			Right	3 670.54	-35.57
		High	Left	3 609.70	-33.14
			Right	3 700.15	-35.68



Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
1	QPSK	Low	Left	3 549.37	-33.32
			Right	3 640.60	-36.34
		Middle	Left	3 579.18	-34.65
			Right	3 670.81	-35.50
		High	Left	3 609.12	-31.26
			Right	3 700.35	-34.01
	16QAM	Low	Left	3 549.70	-31.57
			Right	3 640.78	-35.63
		Middle	Left	3 579.70	-33.30
			Right	3 670.66	-35.74
		High	Left	3 609.06	-32.88
			Right	3 700.88	-34.67
	64QAM	Low	Left	3 549.31	-33.47
			Right	3 640.50	-35.83
		Middle	Left	3 579.70	-32.79
			Right	3 670.57	-36.25
		High	Left	3 609.61	-31.39
			Right	3 700.44	-34.90
	256QAM	Low	Left	3 549.70	-32.25
			Right	3 640.91	-37.59
		Middle	Left	3 579.70	-31.14
			Right	3 670.91	-33.96
		High	Left	3 609.70	-32.00
			Right	3 700.23	-35.42

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low	Left	3 549.61	-33.86
			Right	3 640.60	-37.84
		Middle	Left	3 579.70	-34.01
			Right	3 670.88	-36.53
		High	Left	3 609.12	-33.92
			Right	3 700.91	-35.97
	16QAM	Low	Left	3 549.00	-33.99
			Right	3 640.72	-38.07
		Middle	Left	3 579.61	-33.32
			Right	3 670.35	-37.26
		High	Left	3 609.70	-32.76
			Right	3 700.26	-36.16
	64QAM	Low	Left	3 549.49	-33.76
			Right	3 640.15	-37.65
		Middle	Left	3 579.49	-33.60
			Right	3 670.72	-37.21
		High	Left	3 609.70	-33.23
			Right	3 700.35	-36.02
	256QAM	Low	Left	3 549.70	-33.61
			Right	3 640.26	-37.53
		Middle	Left	3 579.61	-33.44
			Right	3 670.78	-36.48
		High	Left	3 609.70	-31.95
			Right	3 700.60	-35.49

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
3	QPSK	Low	Left	3 549.18	-33.36
			Right	3 641.00	-38.22
		Middle	Left	3 579.70	-32.91
			Right	3 670.63	-37.08
		High	Left	3 609.61	-33.51
			Right	3 700.72	-35.62
	16QAM	Low	Left	3 549.06	-35.20
			Right	3 640.85	-36.46
		Middle	Left	3 579.37	-33.34
			Right	3 670.66	-35.19
		High	Left	3 609.70	-32.83
			Right	3 701.00	-36.17
	64QAM	Low	Left	3 549.00	-34.14
			Right	3 640.72	-37.79
		Middle	Left	3 579.43	-33.33
			Right	3 670.44	-36.14
		High	Left	3 609.70	-32.15
			Right	3 700.85	-34.65
	256QAM	Low	Left	3 549.70	-34.45
			Right	3 640.75	-37.76
		Middle	Left	3 579.55	-33.38
			Right	3 670.44	-37.29
		High	Left	3 609.70	-32.17
			Right	3 700.75	-35.85

Note: 1C: 1 Carrier, 2C: 2 Carrier

**CBRS LTE(15 MHz 1C + 15 MHz 1C)[2C]**

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	Left	3 549.22	-37.58
			Right	3 580.08	-38.05
		Middle	Left	3 609.64	-37.29
			Right	3 640.08	-36.18
		High	Left	3 669.91	-37.35
			Right	3 700.86	-36.15
	16QAM	Low	Left	3 549.61	-37.10
			Right	3 580.15	-37.45
		Middle	Left	3 609.74	-37.47
			Right	3 640.15	-36.62
		High	Left	3 669.40	-37.10
			Right	3 700.14	-37.21
	64QAM	Low	Left	3 549.37	-37.63
			Right	3 580.89	-38.44
		Middle	Left	3 609.08	-36.58
			Right	3 640.31	-37.44
		High	Left	3 669.93	-37.58
			Right	3 700.90	-35.80
	256QAM	Low	Left	3 549.56	-39.37
			Right	3 581.00	-36.71
		Middle	Left	3 609.70	-38.08
			Right	3 640.14	-38.32
		High	Left	3 669.82	-37.34
			Right	3 700.97	-37.91

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
1	QPSK	Low	Left	3 549.93	-39.59
			Right	3 580.25	-37.55
		Middle	Left	3 609.30	-37.96
			Right	3 640.98	-37.57
		High	Left	3 669.21	-36.09
			Right	3 700.44	-36.67
	16QAM	Low	Left	3 549.82	-38.07
			Right	3 580.47	-36.63
		Middle	Left	3 609.50	-36.85
			Right	3 640.44	-37.07
		High	Left	3 669.93	-36.71
			Right	3 700.20	-36.68
	64QAM	Low	Left	3 549.56	-38.55
			Right	3 580.60	-37.23
		Middle	Left	3 609.37	-37.94
			Right	3 640.15	-36.59
		High	Left	3 669.82	-36.09
			Right	3 700.08	-36.09
	256QAM	Low	Left	3 549.40	-37.55
			Right	3 580.15	-36.31
		Middle	Left	3 609.90	-37.63
			Right	3 640.08	-36.40
		High	Left	3 669.14	-35.95
			Right	3 700.09	-36.03

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low	Left	3 549.72	-38.50
			Right	3 580.15	-38.45
		Middle	Left	3 609.86	-37.82
			Right	3 640.74	-37.93
		High	Left	3 669.93	-36.24
			Right	3 700.36	-38.03
	16QAM	Low	Left	3 549.06	-38.58
			Right	3 580.09	-37.76
		Middle	Left	3 609.93	-37.63
			Right	3 640.60	-38.29
		High	Left	3 669.93	-37.61
			Right	3 700.46	-37.35
	64QAM	Low	Left	3 549.93	-36.99
			Right	3 580.08	-37.03
		Middle	Left	3 609.53	-37.47
			Right	3 640.57	-37.04
		High	Left	3 669.45	-36.97
			Right	3 700.08	-36.93
	256QAM	Low	Left	3 549.46	-38.42
			Right	3 580.08	-37.25
		Middle	Left	3 609.93	-36.62
			Right	3 640.08	-37.38
		High	Left	3 669.72	-37.98
			Right	3 700.55	-36.94

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
3	QPSK	Low	Left	3 549.91	-39.40
			Right	3 580.47	-37.94
		Middle	Left	3 609.93	-38.10
			Right	3 640.82	-37.55
		High	Left	3 669.30	-37.81
			Right	3 700.87	-37.30
	16QAM	Low	Left	3 549.93	-37.89
			Right	3 580.10	-40.76
		Middle	Left	3 609.82	-37.51
			Right	3 640.34	-38.98
		High	Left	3 669.88	-36.93
			Right	3 700.08	-36.97
	64QAM	Low	Left	3 549.24	-38.93
			Right	3 580.74	-38.31
		Middle	Left	3 609.93	-36.54
			Right	3 640.41	-37.23
		High	Left	3 669.88	-37.17
			Right	3 700.41	-38.47
	256QAM	Low	Left	3 549.54	-38.98
			Right	3 580.60	-39.41
		Middle	Left	3 609.93	-38.12
			Right	3 640.08	-36.63
		High	Left	3 669.93	-36.98
			Right	3 700.08	-36.46

Note: 1C: 1 Carrier, 2C: 2 Carrier



**CBRS LTE 5 MHz 1C + NR 10 MHz 1C[2C]**

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	Left	3 549.98	-38.46
			Right	3 565.11	-39.41
		Middle	Left	3 617.39	-40.87
			Right	3 633.13	-39.96
		High	Left	3 684.98	-40.00
			Right	3 700.05	-37.13
	16QAM	Low	Left	3 549.98	-38.58
			Right	3 565.05	-39.70
		Middle	Left	3 617.48	-41.24
			Right	3 632.58	-37.61
		High	Left	3 684.98	-39.40
			Right	3 700.05	-38.43
	64QAM	Low	Left	3 549.54	-41.52
			Right	3 565.19	-38.50
		Middle	Left	3 617.48	-40.51
			Right	3 632.55	-38.16
		High	Left	3 684.97	-38.57
			Right	3 700.05	-37.69
	256QAM	Low	Left	3 549.98	-40.80
			Right	3 565.80	-38.22
		Middle	Left	3 617.48	-38.28
			Right	3 632.55	-37.81
		High	Left	3 684.09	-41.67
			Right	3 700.80	-38.24

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
1	QPSK	Low	Left	3 549.65	-41.07
			Right	3 565.98	-40.68
		Middle	Left	3 617.48	-38.97
			Right	3 632.55	-38.47
		High	Left	3 684.98	-39.64
			Right	3 700.05	-38.12
	16QAM	Low	Left	3 549.75	-41.87
			Right	3 565.05	-38.48
		Middle	Left	3 617.48	-40.03
			Right	3 632.87	-39.20
		High	Left	3 684.97	-39.06
			Right	3 700.77	-37.30
	64QAM	Low	Left	3 549.93	-40.75
			Right	3 565.05	-38.95
		Middle	Left	3 617.48	-39.97
			Right	3 633.36	-38.96
		High	Left	3 684.95	-40.68
			Right	3 700.05	-38.19
	256QAM	Low	Left	3 549.98	-39.83
			Right	3 565.05	-37.63
		Middle	Left	3 617.45	-40.83
			Right	3 632.55	-39.68
		High	Left	3 684.83	-40.05
			Right	3 700.34	-38.23

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low	Left	3 549.98	-39.84
			Right	3 565.66	-40.16
		Middle	Left	3 617.48	-39.00
			Right	3 632.55	-38.62
		High	Left	3 684.98	-40.04
			Right	3 700.05	-37.01
	16QAM	Low	Left	3 549.98	-40.93
			Right	3 565.49	-38.75
		Middle	Left	3 617.48	-39.15
			Right	3 632.82	-39.51
		High	Left	3 684.98	-39.28
			Right	3 700.05	-39.66
	64QAM	Low	Left	3 549.98	-38.27
			Right	3 565.05	-39.01
		Middle	Left	3 617.48	-39.64
			Right	3 632.55	-39.35
		High	Left	3 684.98	-38.18
			Right	3 700.05	-38.30
	256QAM	Low	Left	3 549.98	-41.41
			Right	3 565.05	-39.25
		Middle	Left	3 617.48	-39.76
			Right	3 632.55	-39.56
		High	Left	3 684.98	-40.03
			Right	3 700.05	-38.88

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
3	QPSK	Low	Left	3 549.97	-39.05
			Right	3 565.05	-39.68
		Middle	Left	3 617.48	-39.92
			Right	3 633.06	-39.23
		High	Left	3 684.98	-39.27
			Right	3 700.25	-39.64
	16QAM	Low	Left	3 549.98	-41.92
			Right	3 565.77	-40.35
		Middle	Left	3 617.48	-40.64
			Right	3 633.24	-40.23
		High	Left	3 684.98	-40.22
			Right	3 700.05	-38.61
	64QAM	Low	Left	3 549.95	-41.90
			Right	3 565.05	-39.68
		Middle	Left	3 617.48	-39.45
			Right	3 632.55	-39.40
		High	Left	3 684.98	-38.21
			Right	3 700.05	-38.59
	256QAM	Low	Left	3 549.98	-39.71
			Right	3 565.14	-39.00
		Middle	Left	3 617.48	-40.29
			Right	3 632.55	-38.03
		High	Left	3 684.98	-39.97
			Right	3 700.05	-37.30

Note: 1C: 1 Carrier, 2C: 2 Carrier

**CBRS NR(20 MHz 1C + 20 MHz 1C + 10 MHz 1C)[3C]**

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	Left	3 549.32	-38.32
			Right	3 600.05	-38.79
		Middle	Left	3 599.88	-34.86
			Right	3 650.05	-38.05
		High	Left	3 649.90	-36.20
			Right	3 700.12	-37.69
	16QAM	Low	Left	3 549.44	-37.27
			Right	3 600.05	-37.37
		Middle	Left	3 599.88	-36.08
			Right	3 650.05	-37.83
		High	Left	3 649.88	-35.10
			Right	3 700.10	-38.05
	64QAM	Low	Left	3 549.90	-36.20
			Right	3 600.05	-38.52
		Middle	Left	3 599.50	-36.80
			Right	3 650.22	-38.33
		High	Left	3 649.27	-37.80
			Right	3 700.05	-36.50
	256QAM	Low	Left	3 549.42	-35.68
			Right	3 600.05	-37.81
		Middle	Left	3 599.90	-35.83
			Right	3 650.14	-40.04
		High	Left	3 649.90	-33.54
			Right	3 700.30	-40.56

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
1	QPSK	Low	Left	3 549.23	-36.73
			Right	3 600.05	-37.01
		Middle	Left	3 599.90	-34.49
			Right	3 650.05	-38.80
		High	Left	3 649.90	-35.15
			Right	3 700.59	-38.18
	16QAM	Low	Left	3 549.78	-36.99
			Right	3 600.05	-36.82
		Middle	Left	3 599.90	-35.31
			Right	3 650.05	-39.02
		High	Left	3 649.86	-36.69
			Right	3 700.05	-37.54
	64QAM	Low	Left	3 549.80	-38.44
			Right	3 600.08	-38.41
		Middle	Left	3 599.90	-35.86
			Right	3 650.05	-36.21
		High	Left	3 649.76	-36.50
			Right	3 700.05	-38.14
	256QAM	Low	Left	3 549.53	-37.85
			Right	3 600.05	-37.15
		Middle	Left	3 599.59	-36.49
			Right	3 650.86	-39.26
		High	Left	3 649.90	-34.23
			Right	3 700.27	-38.33

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low	Left	3 549.90	-37.63
			Right	3 600.05	-38.28
		Middle	Left	3 599.90	-34.39
			Right	3 650.05	-38.08
		High	Left	3 649.90	-36.60
			Right	3 700.52	-40.95
	16QAM	Low	Left	3 549.76	-39.10
			Right	3 600.05	-37.31
		Middle	Left	3 599.11	-37.93
			Right	3 650.05	-39.36
		High	Left	3 649.90	-36.70
			Right	3 700.16	-38.94
	64QAM	Low	Left	3 549.90	-39.07
			Right	3 600.05	-37.04
		Middle	Left	3 599.90	-35.22
			Right	3 650.05	-39.89
		High	Left	3 649.90	-36.76
			Right	3 700.05	-37.70
	256QAM	Low	Left	3 549.90	-36.88
			Right	3 600.05	-38.50
		Middle	Left	3 599.90	-36.51
			Right	3 650.05	-40.25
		High	Left	3 649.90	-35.69
			Right	3 700.05	-39.21

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
3	QPSK	Low	Left	3 549.90	-34.02
			Right	3 600.05	-37.67
		Middle	Left	3 599.90	-37.95
			Right	3 650.05	-36.23
		High	Left	3 649.90	-35.40
			Right	3 700.35	-38.49
	16QAM	Low	Left	3 549.90	-37.90
			Right	3 600.05	-36.93
		Middle	Left	3 599.90	-35.87
			Right	3 650.05	-39.66
		High	Left	3 649.90	-34.02
			Right	3 700.05	-37.23
	64QAM	Low	Left	3 549.90	-34.70
			Right	3 600.05	-37.76
		Middle	Left	3 599.90	-36.91
			Right	3 650.11	-39.02
		High	Left	3 649.90	-35.35
			Right	3 700.64	-38.30
	256QAM	Low	Left	3 549.90	-36.55
			Right	3 600.05	-37.65
		Middle	Left	3 599.90	-35.93
			Right	3 650.05	-38.77
		High	Left	3 649.90	-33.64
			Right	3 700.05	-38.69

Note: 1C: 1 Carrier, 3C: 3 Carrier



**CBRS NR(30 MHz 1C + 30 MHz 1C + 10 MHz 1C)[3C]**

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	Left	3 549.37	-35.65
			Right	3 620.05	-36.80
		Middle	Left	3 589.00	-35.78
			Right	3 660.57	-39.69
		High	Left	3 629.03	-35.09
			Right	3 700.75	-39.19
	16QAM	Low	Left	3 549.68	-34.67
			Right	3 620.05	-38.32
		Middle	Left	3 589.00	-36.14
			Right	3 660.44	-38.84
		High	Left	3 629.71	-35.47
			Right	3 700.96	-39.22
	64QAM	Low	Left	3 549.71	-35.35
			Right	3 620.25	-38.45
		Middle	Left	3 589.31	-35.31
			Right	3 660.70	-38.86
		High	Left	3 629.71	-37.21
			Right	3 700.69	-38.12
	256QAM	Low	Left	3 549.31	-36.67
			Right	3 620.05	-40.21
		Middle	Left	3 589.31	-34.98
			Right	3 660.05	-37.47
		High	Left	3 629.34	-35.05
			Right	3 700.07	-38.77

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
1	QPSK	Low	Left	3 549.19	-35.75
			Right	3 620.71	-38.00
		Middle	Left	3 589.09	-36.45
			Right	3 660.60	-40.14
		High	Left	3 629.59	-35.10
			Right	3 700.79	-38.41
	16QAM	Low	Left	3 549.53	-36.09
			Right	3 620.10	-37.01
		Middle	Left	3 589.25	-35.84
			Right	3 660.77	-38.28
		High	Left	3 629.19	-34.41
			Right	3 700.43	-37.59
	64QAM	Low	Left	3 549.40	-35.88
			Right	3 620.96	-38.50
		Middle	Left	3 589.85	-34.91
			Right	3 660.05	-38.61
		High	Left	3 629.16	-34.50
			Right	3 700.05	-38.14
	256QAM	Low	Left	3 549.25	-35.37
			Right	3 620.82	-40.34
		Middle	Left	3 589.03	-34.73
			Right	3 660.05	-38.87
		High	Left	3 629.19	-35.97
			Right	3 700.12	-39.04

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low	Left	3 549.56	-36.42
			Right	3 620.69	-40.85
		Middle	Left	3 589.50	-35.30
			Right	3 660.05	-40.35
		High	Left	3 629.85	-36.23
			Right	3 700.18	-40.00
	16QAM	Low	Left	3 549.40	-36.01
			Right	3 620.05	-38.57
		Middle	Left	3 589.06	-36.49
			Right	3 660.73	-40.62
		High	Left	3 629.09	-37.03
			Right	3 700.25	-38.34
	64QAM	Low	Left	3 549.22	-37.73
			Right	3 620.05	-38.98
		Middle	Left	3 589.22	-37.23
			Right	3 660.55	-40.83
		High	Left	3 629.25	-36.93
			Right	3 700.25	-39.53
	256QAM	Low	Left	3 549.59	-37.56
			Right	3 620.05	-37.73
		Middle	Left	3 589.28	-36.08
			Right	3 660.05	-39.25
		High	Left	3 629.34	-36.52
			Right	3 700.05	-39.38

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
3	QPSK	Low	Left	3 549.68	-36.11
			Right	3 620.81	-40.00
		Middle	Left	3 589.16	-36.58
			Right	3 660.05	-39.97
		High	Left	3 629.50	-35.51
			Right	3 700.05	-39.07
	16QAM	Low	Left	3 549.78	-34.96
			Right	3 620.05	-38.58
		Middle	Left	3 589.47	-36.05
			Right	3 660.05	-38.50
		High	Left	3 629.78	-36.16
			Right	3 700.43	-39.16
	64QAM	Low	Left	3 549.16	-37.45
			Right	3 620.05	-37.78
		Middle	Left	3 589.06	-34.63
			Right	3 660.23	-40.31
		High	Left	3 629.34	-36.51
			Right	3 700.05	-38.03
	256QAM	Low	Left	3 549.85	-36.45
			Right	3 620.05	-38.11
		Middle	Left	3 589.65	-35.44
			Right	3 660.05	-36.82
		High	Left	3 629.81	-36.10
			Right	3 700.05	-37.29

Note: 1C: 1 Carrier, 3C: 3 Carrier

**CBRS LTE(15 MHz 1C + 15 MHz 1C + 10 MHz 1C)[3C]**

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	Left	3 549.45	-36.89
			Right	3 590.12	-39.70
		Middle	Left	3 604.86	-37.20
			Right	3 645.05	-39.40
		High	Left	3 659.00	-36.93
			Right	3 700.21	-37.81
	16QAM	Low	Left	3 549.00	-37.88
			Right	3 590.11	-37.70
		Middle	Left	3 604.93	-36.64
			Right	3 645.14	-39.67
		High	Left	3 659.10	-37.28
			Right	3 700.31	-39.18
	64QAM	Low	Left	3 549.90	-37.61
			Right	3 590.05	-39.18
		Middle	Left	3 604.93	-38.17
			Right	3 645.08	-37.48
		High	Left	3 659.35	-37.37
			Right	3 700.05	-38.30
	256QAM	Low	Left	3 549.34	-36.54
			Right	3 590.10	-39.08
		Middle	Left	3 604.67	-37.48
			Right	3 645.05	-39.15
		High	Left	3 659.48	-37.43
			Right	3 700.46	-39.73

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
1	QPSK	Low	Left	3 549.85	-38.51
			Right	3 590.07	-38.40
		Middle	Left	3 604.93	-36.54
			Right	3 645.41	-38.93
		High	Left	3 659.69	-37.41
			Right	3 700.05	-38.16
	16QAM	Low	Left	3 549.88	-36.82
			Right	3 590.64	-37.17
		Middle	Left	3 604.93	-37.18
			Right	3 645.16	-39.31
		High	Left	3 659.18	-37.49
			Right	3 700.47	-39.24
	64QAM	Low	Left	3 549.80	-37.18
			Right	3 590.59	-39.67
		Middle	Left	3 604.45	-37.10
			Right	3 645.05	-38.01
		High	Left	3 659.45	-37.19
			Right	3 700.05	-38.01
	256QAM	Low	Left	3 549.93	-37.47
			Right	3 590.05	-38.70
		Middle	Left	3 604.93	-38.29
			Right	3 645.34	-39.26
		High	Left	3 659.72	-36.61
			Right	3 700.05	-38.54

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low	Left	3 549.26	-39.58
			Right	3 590.32	-40.01
		Middle	Left	3 604.93	-38.06
			Right	3 645.05	-39.78
		High	Left	3 659.83	-39.30
			Right	3 700.67	-39.88
	16QAM	Low	Left	3 549.59	-38.21
			Right	3 590.05	-39.75
		Middle	Left	3 604.93	-38.57
			Right	3 645.16	-40.19
		High	Left	3 659.93	-38.73
			Right	3 700.05	-39.25
	64QAM	Low	Left	3 549.16	-38.89
			Right	3 590.87	-38.85
		Middle	Left	3 604.93	-37.74
			Right	3 645.14	-40.91
		High	Left	3 659.59	-38.85
			Right	3 700.15	-39.85
	256QAM	Low	Left	3 549.93	-38.79
			Right	3 590.55	-40.71
		Middle	Left	3 604.02	-39.35
			Right	3 645.59	-41.05
		High	Left	3 659.74	-38.81
			Right	3 700.05	-39.68

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
3	QPSK	Low	Left	3 549.30	-40.12
			Right	3 590.10	-40.11
		Middle	Left	3 604.62	-38.66
			Right	3 645.05	-38.08
		High	Left	3 659.13	-37.18
			Right	3 700.75	-38.16
	16QAM	Low	Left	3 549.13	-38.59
			Right	3 590.99	-38.25
		Middle	Left	3 604.90	-37.67
			Right	3 645.05	-37.60
		High	Left	3 659.90	-37.55
			Right	3 700.16	-38.99
	64QAM	Low	Left	3 549.58	-39.48
			Right	3 590.05	-37.81
		Middle	Left	3 604.58	-39.24
			Right	3 645.10	-40.36
		High	Left	3 659.00	-38.21
			Right	3 700.05	-38.69
	256QAM	Low	Left	3 549.11	-38.80
			Right	3 590.08	-38.24
		Middle	Left	3 604.93	-38.08
			Right	3 645.05	-39.23
		High	Left	3 659.75	-39.29
			Right	3 700.05	-38.01

Note: 1C: 1 Carrier, 3C: 3 Carrier



**CBRS LTE(20 MHz 1C + 15 MHz 1C + 15 MHz 1C)[3C]**

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	Left	3 549.17	-36.77
			Right	3 600.33	-37.05
		Middle	Left	3 599.36	-37.09
			Right	3 650.20	-36.84
		High	Left	3 649.84	-35.90
			Right	3 700.62	-36.03
	16QAM	Low	Left	3 549.32	-37.68
			Right	3 600.60	-38.27
		Middle	Left	3 599.90	-36.27
			Right	3 650.17	-37.12
		High	Left	3 649.90	-37.64
			Right	3 700.84	-37.46
	64QAM	Low	Left	3 549.17	-37.23
			Right	3 600.28	-36.99
		Middle	Left	3 599.76	-36.78
			Right	3 650.09	-36.01
		High	Left	3 649.90	-37.60
			Right	3 700.09	-35.25
	256QAM	Low	Left	3 549.36	-37.41
			Right	3 600.20	-37.01
		Middle	Left	3 599.86	-34.84
			Right	3 650.10	-37.45
		High	Left	3 649.32	-37.82
			Right	3 700.58	-37.18

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
1	QPSK	Low	Left	3 549.25	-39.92
			Right	3 600.25	-37.20
		Middle	Left	3 599.48	-36.59
			Right	3 650.57	-37.37
		High	Left	3 649.78	-35.50
			Right	3 700.58	-37.45
	16QAM	Low	Left	3 549.00	-35.85
			Right	3 600.08	-36.18
		Middle	Left	3 599.57	-35.51
			Right	3 650.08	-36.61
		High	Left	3 649.86	-34.79
			Right	3 700.38	-35.19
	64QAM	Low	Left	3 549.86	-36.57
			Right	3 600.33	-36.63
		Middle	Left	3 599.34	-35.79
			Right	3 650.84	-36.97
		High	Left	3 649.90	-35.88
			Right	3 700.25	-35.53
	256QAM	Low	Left	3 549.53	-36.82
			Right	3 600.55	-36.21
		Middle	Left	3 599.15	-36.38
			Right	3 650.28	-36.39
		High	Left	3 649.11	-35.97
			Right	3 700.63	-36.22

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low	Left	3 549.06	-38.63
			Right	3 600.08	-37.76
		Middle	Left	3 599.15	-37.42
			Right	3 650.08	-37.99
		High	Left	3 649.61	-37.44
			Right	3 700.22	-38.07
	16QAM	Low	Left	3 549.02	-37.92
			Right	3 600.09	-37.50
		Middle	Left	3 599.46	-37.95
			Right	3 650.28	-38.51
		High	Left	3 649.86	-37.59
			Right	3 700.36	-38.08
	64QAM	Low	Left	3 549.74	-39.64
			Right	3 600.70	-38.15
		Middle	Left	3 599.90	-37.74
			Right	3 650.08	-38.26
		High	Left	3 649.46	-38.68
			Right	3 700.10	-38.34
	256QAM	Low	Left	3 549.90	-38.91
			Right	3 600.95	-38.64
		Middle	Left	3 599.40	-37.07
			Right	3 650.62	-37.45
		High	Left	3 649.90	-37.94
			Right	3 700.08	-37.58

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
3	QPSK	Low	Left	3 549.76	-35.99
			Right	3 600.41	-37.84
		Middle	Left	3 599.82	-37.21
			Right	3 650.08	-37.43
		High	Left	3 649.90	-36.21
			Right	3 700.14	-36.32
	16QAM	Low	Left	3 549.74	-39.02
			Right	3 600.10	-37.23
		Middle	Left	3 599.48	-37.59
			Right	3 650.44	-38.19
		High	Left	3 649.23	-36.73
			Right	3 700.17	-35.87
	64QAM	Low	Left	3 549.59	-38.31
			Right	3 600.08	-36.17
		Middle	Left	3 599.86	-36.03
			Right	3 650.08	-38.17
		High	Left	3 649.88	-37.69
			Right	3 700.60	-36.71
	256QAM	Low	Left	3 549.69	-39.16
			Right	3 600.33	-37.48
		Middle	Left	3 599.23	-37.80
			Right	3 650.14	-38.10
		High	Left	3 649.23	-37.29
			Right	3 700.95	-37.03

Note: 1C: 1 Carrier, 3C: 3 Carrier

**CBRS LTE(20 MHz 1C + 20 MHz 1C + 20 MHz 1C)[3C]**

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	Left	3 549.42	-36.22
			Right	3 610.33	-37.02
		Middle	Left	3 594.08	-36.08
			Right	3 655.79	-34.93
		High	Left	3 639.82	-36.17
			Right	3 700.16	-35.54
	16QAM	Low	Left	3 549.48	-35.93
			Right	3 610.58	-35.95
		Middle	Left	3 594.90	-36.72
			Right	3 655.29	-36.83
		High	Left	3 639.69	-36.88
			Right	3 700.69	-36.36
	64QAM	Low	Left	3 549.36	-37.50
			Right	3 610.16	-36.95
		Middle	Left	3 594.50	-37.09
			Right	3 655.14	-35.92
		High	Left	3 639.78	-36.98
			Right	3 700.56	-35.50
	256QAM	Low	Left	3 549.71	-36.20
			Right	3 610.10	-36.19
		Middle	Left	3 594.63	-37.18
			Right	3 655.45	-36.41
		High	Left	3 639.06	-36.57
			Right	3 700.77	-37.40

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
1	QPSK	Low	Left	3 549.71	-35.45
			Right	3 610.41	-35.06
		Middle	Left	3 594.57	-36.24
			Right	3 655.66	-36.58
		High	Left	3 639.44	-35.71
			Right	3 700.10	-34.88
	16QAM	Low	Left	3 549.53	-35.19
			Right	3 610.71	-34.76
		Middle	Left	3 594.65	-35.38
			Right	3 655.27	-35.88
		High	Left	3 639.36	-36.62
			Right	3 700.10	-34.24
	64QAM	Low	Left	3 549.71	-36.38
			Right	3 610.56	-34.95
		Middle	Left	3 594.84	-35.71
			Right	3 655.83	-36.44
		High	Left	3 639.90	-36.59
			Right	3 700.52	-35.60
	256QAM	Low	Left	3 549.63	-36.17
			Right	3 610.41	-35.69
		Middle	Left	3 594.90	-35.25
			Right	3 655.71	-37.72
		High	Left	3 639.90	-36.25
			Right	3 700.12	-33.67

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low	Left	3 549.90	-37.25
			Right	3 610.10	-36.20
		Middle	Left	3 594.90	-36.51
			Right	3 655.43	-37.77
		High	Left	3 639.82	-38.66
			Right	3 700.45	-37.18
	16QAM	Low	Left	3 549.76	-38.96
			Right	3 610.77	-36.86
		Middle	Left	3 594.90	-36.75
			Right	3 655.10	-38.13
		High	Left	3 639.90	-37.53
			Right	3 700.10	-36.40
	64QAM	Low	Left	3 549.42	-38.42
			Right	3 610.14	-36.57
		Middle	Left	3 594.86	-37.93
			Right	3 655.62	-38.96
		High	Left	3 639.90	-38.40
			Right	3 700.96	-36.05
	256QAM	Low	Left	3 549.06	-39.92
			Right	3 610.83	-37.61
		Middle	Left	3 594.59	-37.63
			Right	3 655.10	-36.11
		High	Left	3 639.76	-38.39
			Right	3 700.92	-36.02

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
3	QPSK	Low	Left	3 549.90	-38.11
			Right	3 610.54	-35.58
		Middle	Left	3 594.90	-36.89
			Right	3 655.10	-36.30
		High	Left	3 639.86	-36.64
			Right	3 700.62	-36.51
	16QAM	Low	Left	3 549.46	-38.54
			Right	3 610.14	-37.36
		Middle	Left	3 594.38	-36.98
			Right	3 655.12	-36.20
		High	Left	3 639.46	-37.30
			Right	3 700.10	-36.59
	64QAM	Low	Left	3 549.80	-36.83
			Right	3 610.50	-37.47
		Middle	Left	3 594.86	-36.61
			Right	3 655.10	-36.65
		High	Left	3 639.53	-36.40
			Right	3 700.45	-36.38
	256QAM	Low	Left	3 549.13	-38.09
			Right	3 610.10	-33.14
		Middle	Left	3 594.36	-37.40
			Right	3 655.66	-37.16
		High	Left	3 639.90	-35.70
			Right	3 700.58	-36.62

Note: 1C: 1 Carrier, 3C: 3 Carrier



**CBRS LTE(20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C)[4C]**

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	Left	3 549.44	-36.00
			Right	3 630.66	-35.00
		Middle	Left	3 584.53	-35.87
			Right	3 665.12	-36.75
		High	Left	3 619.40	-36.42
			Right	3 700.69	-35.45
	16QAM	Low	Left	3 549.08	-36.37
			Right	3 630.27	-35.98
		Middle	Left	3 584.29	-35.74
			Right	3 665.24	-36.74
		High	Left	3 619.90	-35.97
			Right	3 700.87	-34.54
	64QAM	Low	Left	3 549.90	-37.08
			Right	3 630.81	-36.06
		Middle	Left	3 584.55	-36.43
			Right	3 665.12	-35.56
		High	Left	3 619.86	-36.32
			Right	3 700.43	-34.97
	256QAM	Low	Left	3 549.61	-38.25
			Right	3 630.12	-36.44
		Middle	Left	3 584.82	-34.89
			Right	3 665.39	-35.72
		High	Left	3 619.86	-35.64
			Right	3 700.94	-36.55

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
1	QPSK	Low	Left	3 549.32	-38.51
			Right	3 630.79	-35.31
		Middle	Left	3 584.84	-36.15
			Right	3 665.33	-36.82
		High	Left	3 619.78	-36.72
			Right	3 700.20	-34.54
	16QAM	Low	Left	3 549.17	-37.00
			Right	3 630.50	-36.58
		Middle	Left	3 584.90	-36.04
			Right	3 665.41	-35.03
		High	Left	3 619.02	-35.48
			Right	3 700.20	-36.19
	64QAM	Low	Left	3 549.04	-35.47
			Right	3 630.79	-36.17
		Middle	Left	3 584.11	-35.77
			Right	3 665.87	-35.88
		High	Left	3 619.90	-36.09
			Right	3 700.73	-35.87
	256QAM	Low	Left	3 549.40	-37.46
			Right	3 630.12	-34.94
		Middle	Left	3 584.82	-34.83
			Right	3 665.29	-35.73
		High	Left	3 619.11	-34.86
			Right	3 700.10	-35.39

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low	Left	3 549.55	-36.99
			Right	3 630.14	-37.92
		Middle	Left	3 584.84	-38.16
			Right	3 665.56	-37.89
		High	Left	3 619.90	-29.46
			Right	3 700.22	-31.42
	16QAM	Low	Left	3 549.78	-38.27
			Right	3 630.77	-37.82
		Middle	Left	3 584.74	-37.97
			Right	3 665.75	-37.56
		High	Left	3 619.48	-37.91
			Right	3 700.33	-37.93
	64QAM	Low	Left	3 549.69	-35.26
			Right	3 630.48	-38.34
		Middle	Left	3 584.90	-35.84
			Right	3 665.27	-38.82
		High	Left	3 619.38	-37.14
			Right	3 700.79	-36.88
	256QAM	Low	Left	3 549.88	-37.39
			Right	3 630.18	-37.91
		Middle	Left	3 584.34	-36.99
			Right	3 665.10	-38.35
		High	Left	3 619.27	-37.56
			Right	3 700.62	-37.40

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
3	QPSK	Low	Left	3 549.48	-37.80
			Right	3 630.16	-37.04
		Middle	Left	3 584.82	-36.87
			Right	3 665.33	-37.32
		High	Left	3 619.57	-36.90
			Right	3 700.43	-35.60
	16QAM	Low	Left	3 549.53	-37.03
			Right	3 630.12	-35.90
		Middle	Left	3 584.42	-37.64
			Right	3 665.10	-36.86
		High	Left	3 619.11	-36.38
			Right	3 700.14	-36.38
	64QAM	Low	Left	3 549.88	-35.45
			Right	3 630.96	-37.27
		Middle	Left	3 584.23	-37.82
			Right	3 665.22	-37.28
		High	Left	3 619.36	-36.99
			Right	3 700.73	-35.82
	256QAM	Low	Left	3 549.13	-38.46
			Right	3 630.33	-38.00
		Middle	Left	3 584.15	-37.05
			Right	3 665.14	-37.98
		High	Left	3 619.80	-37.10
			Right	3 700.10	-35.35

Note: 1C: 1 Carrier, 4C: 4 Carrier

**CBRS LTE(15 MHz 1C + 15 MHz 1C + 15 MHz 1C + 15 MHz 1C + 10 MHz 1C)[5C]**

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	Left	3 549.43	-38.02
			Right	3 620.05	-38.22
		Middle	Left	3 589.54	-37.14
			Right	3 660.05	-37.36
		High	Left	3 629.88	-37.74
			Right	3 700.05	-39.41
	16QAM	Low	Left	3 549.90	-36.51
			Right	3 620.13	-38.97
		Middle	Left	3 589.83	-37.28
			Right	3 660.65	-39.60
		High	Left	3 629.93	-38.39
			Right	3 700.05	-38.40
	64QAM	Low	Left	3 549.32	-37.75
			Right	3 620.07	-37.47
		Middle	Left	3 589.83	-36.99
			Right	3 660.05	-38.85
		High	Left	3 629.59	-37.67
			Right	3 700.95	-38.82
	256QAM	Low	Left	3 549.06	-40.29
			Right	3 620.12	-38.94
		Middle	Left	3 589.22	-36.83
			Right	3 660.12	-39.26
		High	Left	3 629.91	-36.79
			Right	3 700.05	-38.31

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
1	QPSK	Low	Left	3 549.37	-38.02
			Right	3 620.70	-38.18
		Middle	Left	3 589.74	-37.87
			Right	3 660.44	-38.88
		High	Left	3 629.24	-36.59
			Right	3 700.92	-38.22
	16QAM	Low	Left	3 549.78	-36.88
			Right	3 620.05	-36.98
		Middle	Left	3 589.93	-35.54
			Right	3 660.05	-39.31
		High	Left	3 629.88	-37.15
			Right	3 700.05	-38.21
	64QAM	Low	Left	3 549.18	-36.54
			Right	3 620.80	-37.91
		Middle	Left	3 589.59	-36.50
			Right	3 660.84	-39.96
		High	Left	3 629.93	-38.12
			Right	3 700.79	-38.59
	256QAM	Low	Left	3 549.90	-39.02
			Right	3 620.05	-38.88
		Middle	Left	3 589.83	-37.04
			Right	3 660.08	-37.59
		High	Left	3 629.88	-37.61
			Right	3 700.97	-38.76

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low	Left	3 549.85	-38.68
			Right	3 620.10	-39.36
		Middle	Left	3 589.38	-39.29
			Right	3 660.86	-40.60
		High	Left	3 629.93	-39.76
			Right	3 701.00	-39.68
	16QAM	Low	Left	3 549.14	-39.11
			Right	3 620.05	-39.65
		Middle	Left	3 589.37	-39.54
			Right	3 660.88	-40.98
		High	Left	3 629.86	-40.25
			Right	3 700.05	-40.55
	64QAM	Low	Left	3 549.93	-39.43
			Right	3 620.11	-39.39
		Middle	Left	3 589.93	-38.29
			Right	3 660.33	-40.16
		High	Left	3 629.90	-39.63
			Right	3 700.47	-40.73
	256QAM	Low	Left	3 549.42	-37.87
			Right	3 620.05	-38.27
		Middle	Left	3 589.72	-38.27
			Right	3 660.16	-41.09
		High	Left	3 629.06	-39.40
			Right	3 700.12	-38.48

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
3	QPSK	Low	Left	3 549.05	-38.93
			Right	3 620.08	-39.76
		Middle	Left	3 589.83	-38.78
			Right	3 660.10	-41.23
		High	Left	3 629.45	-39.00
			Right	3 700.56	-39.97
	16QAM	Low	Left	3 549.80	-39.85
			Right	3 620.05	-37.14
		Middle	Left	3 589.37	-38.58
			Right	3 660.05	-39.70
		High	Left	3 629.93	-37.31
			Right	3 700.05	-37.71
	64QAM	Low	Left	3 549.61	-39.85
			Right	3 620.33	-39.85
		Middle	Left	3 589.38	-38.13
			Right	3 660.05	-38.69
		High	Left	3 629.93	-37.91
			Right	3 700.05	-37.91
	256QAM	Low	Left	3 549.56	-39.36
			Right	3 620.08	-40.03
		Middle	Left	3 589.14	-38.49
			Right	3 660.05	-39.92
		High	Left	3 629.93	-39.44
			Right	3 700.05	-36.23

Note: 1C: 1 Carrier, 5C: 5 Carrier



**CBRS LTE(20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 10 MHz 1C)[5C]**

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	Left	3 549.71	-38.85
			Right	3 640.95	-39.91
		Middle	Left	3 579.90	-35.99
			Right	3 670.05	-39.11
		High	Left	3 609.15	-36.51
			Right	3 700.08	-39.09
	16QAM	Low	Left	3 549.67	-37.97
			Right	3 640.60	-40.18
		Middle	Left	3 579.65	-37.30
			Right	3 670.60	-40.25
		High	Left	3 609.48	-36.87
			Right	3 701.00	-38.22
	64QAM	Low	Left	3 549.32	-38.32
			Right	3 640.60	-39.78
		Middle	Left	3 579.76	-36.95
			Right	3 670.05	-39.07
		High	Left	3 609.13	-36.62
			Right	3 700.09	-37.77
	256QAM	Low	Left	3 549.32	-37.29
			Right	3 640.77	-38.58
		Middle	Left	3 579.44	-38.40
			Right	3 670.05	-38.46
		High	Left	3 609.71	-36.21
			Right	3 700.05	-37.95

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
1	QPSK	Low	Left	3 549.08	-37.17
			Right	3 640.09	-38.96
		Middle	Left	3 579.48	-36.10
			Right	3 670.09	-39.92
		High	Left	3 609.42	-36.05
			Right	3 700.63	-38.48
	16QAM	Low	Left	3 549.86	-35.94
			Right	3 640.75	-40.63
		Middle	Left	3 579.11	-36.09
			Right	3 670.97	-38.48
		High	Left	3 609.84	-35.98
			Right	3 700.07	-36.11
	64QAM	Low	Left	3 549.63	-39.95
			Right	3 640.05	-37.93
		Middle	Left	3 579.34	-37.38
			Right	3 670.75	-38.66
		High	Left	3 609.04	-36.06
			Right	3 700.21	-37.69
	256QAM	Low	Left	3 549.90	-36.80
			Right	3 640.05	-38.69
		Middle	Left	3 579.34	-37.51
			Right	3 670.75	-39.14
		High	Left	3 609.90	-34.33
			Right	3 700.62	-38.32

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low	Left	3 549.21	-38.36
			Right	3 640.20	-42.32
		Middle	Left	3 579.25	-38.27
			Right	3 670.05	-38.64
		High	Left	3 609.82	-37.68
			Right	3 700.10	-39.53
	16QAM	Low	Left	3 549.53	-38.70
			Right	3 640.05	-40.22
		Middle	Left	3 579.08	-36.71
			Right	3 670.05	-39.41
		High	Left	3 609.90	-37.54
			Right	3 700.15	-39.99
	64QAM	Low	Left	3 549.84	-36.81
			Right	3 640.34	-40.07
		Middle	Left	3 579.90	-39.09
			Right	3 670.05	-40.67
		High	Left	3 609.90	-37.93
			Right	3 700.05	-38.32
	256QAM	Low	Left	3 549.67	-38.01
			Right	3 640.55	-39.84
		Middle	Left	3 579.86	-37.97
			Right	3 670.51	-39.47
		High	Left	3 609.86	-37.76
			Right	3 700.58	-40.72

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
3	QPSK	Low	Left	3 549.88	-37.98
			Right	3 640.21	-41.40
		Middle	Left	3 579.84	-37.22
			Right	3 670.95	-40.13
		High	Left	3 609.48	-37.84
			Right	3 700.11	-38.91
	16QAM	Low	Left	3 549.55	-39.67
			Right	3 640.79	-39.69
		Middle	Left	3 579.25	-37.38
			Right	3 670.09	-37.91
		High	Left	3 609.90	-37.02
			Right	3 700.55	-39.40
	64QAM	Low	Left	3 549.23	-36.58
			Right	3 640.21	-39.72
		Middle	Left	3 579.90	-36.20
			Right	3 670.05	-38.41
		High	Left	3 609.63	-37.04
			Right	3 700.92	-39.04
	256QAM	Low	Left	3 549.11	-38.00
			Right	3 640.23	-38.57
		Middle	Left	3 579.71	-39.26
			Right	3 670.53	-39.08
		High	Left	3 609.46	-37.24
			Right	3 700.97	-39.49

Note: 1C: 1 Carrier, 5C: 5 Carrier

**CBRS LTE(20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C)[5C]**

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	Left	3 549.71	-38.18
			Right	3 651.00	-37.10
		Middle	Left	3 574.17	-36.31
			Right	3 675.41	-37.59
		High	Left	3 599.69	-37.63
			Right	3 700.39	-36.80
	16QAM	Low	Left	3 549.90	-36.02
			Right	3 650.16	-36.53
		Middle	Left	3 574.90	-36.64
			Right	3 675.45	-38.19
		High	Left	3 599.00	-37.04
			Right	3 700.41	-36.30
	64QAM	Low	Left	3 549.55	-37.32
			Right	3 650.92	-37.68
		Middle	Left	3 574.00	-37.24
			Right	3 675.62	-36.08
		High	Left	3 599.42	-37.90
			Right	3 700.75	-37.32
	256QAM	Low	Left	3 549.44	-36.93
			Right	3 650.79	-36.84
		Middle	Left	3 574.74	-36.21
			Right	3 675.14	-36.22
		High	Left	3 599.15	-38.57
			Right	3 700.20	-38.45

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
1	QPSK	Low	Left	3 549.34	-36.79
			Right	3 651.00	-36.65
		Middle	Left	3 574.82	-36.51
			Right	3 675.66	-36.55
		High	Left	3 599.76	-39.17
			Right	3 700.60	-38.52
	16QAM	Low	Left	3 549.19	-36.81
			Right	3 650.45	-37.72
		Middle	Left	3 574.86	-36.43
			Right	3 675.22	-38.18
		High	Left	3 599.27	-37.31
			Right	3 700.81	-37.49
	64QAM	Low	Left	3 549.90	-36.57
			Right	3 651.00	-37.25
		Middle	Left	3 574.76	-38.38
			Right	3 675.41	-36.58
		High	Left	3 599.50	-36.75
			Right	3 700.79	-35.89
	256QAM	Low	Left	3 549.21	-37.11
			Right	3 650.10	-34.69
		Middle	Left	3 574.78	-36.90
			Right	3 675.52	-35.98
		High	Left	3 599.44	-37.12
			Right	3 700.37	-37.32

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low	Left	3 549.11	-29.77
			Right	3 650.22	-32.32
		Middle	Left	3 574.02	-38.11
			Right	3 675.56	-39.48
		High	Left	3 599.38	-38.87
			Right	3 700.66	-37.88
	16QAM	Low	Left	3 549.40	-38.18
			Right	3 650.10	-39.20
		Middle	Left	3 574.53	-38.65
			Right	3 675.12	-38.71
		High	Left	3 599.90	-38.20
			Right	3 700.10	-38.00
	64QAM	Low	Left	3 549.44	-37.54
			Right	3 650.87	-38.48
		Middle	Left	3 574.21	-39.71
			Right	3 675.69	-41.20
		High	Left	3 599.65	-39.03
			Right	3 700.31	-38.73
	256QAM	Low	Left	3 549.23	-38.09
			Right	3 650.45	-38.56
		Middle	Left	3 574.23	-39.54
			Right	3 675.10	-37.77
		High	Left	3 599.90	-36.33
			Right	3 700.31	-37.44

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
3	QPSK	Low	Left	3 549.78	-39.10
			Right	3 650.31	-37.43
		Middle	Left	3 574.88	-36.34
			Right	3 675.10	-38.12
		High	Left	3 599.27	-37.89
			Right	3 700.98	-37.60
	16QAM	Low	Left	3 549.61	-39.35
			Right	3 650.73	-38.07
		Middle	Left	3 574.57	-39.05
			Right	3 675.12	-38.66
		High	Left	3 599.15	-37.12
			Right	3 700.98	-38.20
	64QAM	Low	Left	3 549.02	-38.01
			Right	3 650.75	-38.30
		Middle	Left	3 574.36	-37.87
			Right	3 675.20	-37.62
		High	Left	3 599.88	-37.91
			Right	3 700.54	-36.76
	256QAM	Low	Left	3 549.15	-38.72
			Right	3 650.10	-38.54
		Middle	Left	3 574.53	-40.34
			Right	3 675.10	-39.07
		High	Left	3 599.11	-39.40
			Right	3 700.62	-37.11

Note: 1C: 1 Carrier, 5C: 5 Carrier



**CBRS NR 40 MHz 1C + NR 20 MHz 1C + NR 20 MHz 1C + LTE 10 MHz 1C + LTE 10 MHz 1C[5C]**

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	Left	3 549.80	-30.05
			Right	3 650.73	-38.80
		Middle	Left	3 574.74	-33.84
			Right	3 675.05	-39.94
		High	Left	3 599.80	-30.27
			Right	3 700.29	-38.67
	16QAM	Low	Left	3 549.45	-34.20
			Right	3 650.07	-37.55
		Middle	Left	3 574.80	-31.17
			Right	3 675.45	-38.36
		High	Left	3 599.80	-33.97
			Right	3 700.05	-38.17
	64QAM	Low	Left	3 549.57	-34.87
			Right	3 650.07	-39.15
		Middle	Left	3 574.80	-29.94
			Right	3 675.31	-38.08
		High	Left	3 599.78	-33.19
			Right	3 700.05	-37.90
	256QAM	Low	Left	3 549.80	-31.95
			Right	3 650.05	-38.81
		Middle	Left	3 574.80	-29.42
			Right	3 675.11	-38.88
		High	Left	3 599.33	-32.60
			Right	3 700.42	-38.32

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
1	QPSK	Low	Left	3 549.62	-33.93
			Right	3 650.51	-38.77
		Middle	Left	3 574.80	-29.94
			Right	3 675.69	-39.37
		High	Left	3 599.80	-30.14
			Right	3 700.08	-38.77
	16QAM	Low	Left	3 549.45	-36.80
			Right	3 650.43	-38.42
		Middle	Left	3 574.80	-30.92
			Right	3 675.37	-37.52
		High	Left	3 599.80	-31.49
			Right	3 700.73	-38.10
	64QAM	Low	Left	3 549.80	-31.81
			Right	3 650.93	-39.78
		Middle	Left	3 574.80	-30.76
			Right	3 675.12	-39.06
		High	Left	3 599.80	-32.40
			Right	3 700.67	-36.89
	256QAM	Low	Left	3 549.80	-29.96
			Right	3 650.74	-38.71
		Middle	Left	3 574.66	-32.10
			Right	3 675.57	-39.29
		High	Left	3 599.80	-30.47
			Right	3 700.11	-38.54

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low	Left	3 549.80	-35.10
			Right	3 650.13	-39.57
		Middle	Left	3 574.80	-31.56
			Right	3 675.46	-39.27
		High	Left	3 599.80	-30.82
			Right	3 700.05	-38.89
	16QAM	Low	Left	3 549.80	-29.66
			Right	3 650.05	-39.76
		Middle	Left	3 574.80	-33.24
			Right	3 675.10	-40.49
		High	Left	3 599.80	-31.75
			Right	3 700.05	-39.05
	64QAM	Low	Left	3 549.80	-33.30
			Right	3 650.05	-40.53
		Middle	Left	3 574.80	-32.43
			Right	3 675.05	-40.66
		High	Left	3 599.80	-29.98
			Right	3 700.05	-39.48
	256QAM	Low	Left	3 549.80	-30.99
			Right	3 650.27	-41.35
		Middle	Left	3 574.80	-32.36
			Right	3 675.86	-40.77
		High	Left	3 599.80	-30.78
			Right	3 700.35	-39.36

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
3	QPSK	Low	Left	3 549.80	-30.79
			Right	3 650.32	-39.83
		Middle	Left	3 574.80	-30.87
			Right	3 675.59	-40.08
		High	Left	3 599.80	-32.46
			Right	3 700.68	-39.43
	16QAM	Low	Left	3 549.80	-31.10
			Right	3 650.70	-40.06
		Middle	Left	3 574.80	-29.99
			Right	3 675.88	-39.81
		High	Left	3 599.80	-28.09
			Right	3 700.07	-39.02
	64QAM	Low	Left	3 549.78	-32.09
			Right	3 650.44	-39.84
		Middle	Left	3 574.80	-30.95
			Right	3 675.14	-40.20
		High	Left	3 599.80	-32.03
			Right	3 700.05	-38.85
	256QAM	Low	Left	3 549.80	-32.17
			Right	3 650.05	-39.51
		Middle	Left	3 574.49	-33.33
			Right	3 675.88	-39.94
		High	Left	3 599.78	-30.71
			Right	3 700.58	-38.54

Note: 1C: 1 Carrier, 5C: 5 Carrier

**CBRS NR 40 MHz 1C + NR 10 MHz 1C + LTE 20 MHz 1C + LTE 5 MHz 1C + LTE 5 MHz 1C[5C]**

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	Left	3 549.80	-32.28
			Right	3 630.03	-39.32
		Middle	Left	3 584.80	-30.43
			Right	3 665.03	-40.89
		High	Left	3 619.53	-32.56
			Right	3 700.03	-39.98
	16QAM	Low	Left	3 549.80	-31.22
			Right	3 630.17	-40.91
		Middle	Left	3 584.80	-32.24
			Right	3 665.05	-40.17
		High	Left	3 619.80	-32.22
			Right	3 700.03	-39.07
	64QAM	Low	Left	3 549.80	-33.00
			Right	3 630.03	-39.87
		Middle	Left	3 584.80	-33.50
			Right	3 665.08	-41.07
		High	Left	3 619.80	-31.47
			Right	3 700.50	-41.72
	256QAM	Low	Left	3 549.80	-33.41
			Right	3 630.03	-40.45
		Middle	Left	3 584.04	-32.39
			Right	3 665.03	-40.79
		High	Left	3 619.80	-30.12
			Right	3 700.14	-40.28

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
1	QPSK	Low	Left	3 549.70	-33.11
			Right	3 630.03	-39.69
		Middle	Left	3 584.80	-28.00
			Right	3 665.17	-41.53
		High	Left	3 619.80	-32.10
			Right	3 700.03	-39.57
	16QAM	Low	Left	3 549.80	-29.66
			Right	3 630.03	-40.06
		Middle	Left	3 584.78	-32.50
			Right	3 665.03	-38.36
		High	Left	3 619.80	-31.64
			Right	3 700.03	-40.27
	64QAM	Low	Left	3 549.80	-32.68
			Right	3 630.07	-40.28
		Middle	Left	3 584.80	-30.70
			Right	3 665.23	-41.19
		High	Left	3 619.80	-31.54
			Right	3 700.03	-40.44
	256QAM	Low	Left	3 549.80	-30.05
			Right	3 630.03	-39.90
		Middle	Left	3 584.80	-30.34
			Right	3 665.03	-39.59
		High	Left	3 619.78	-32.12
			Right	3 700.29	-39.94

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low	Left	3 549.12	-35.49
			Right	3 630.03	-39.93
		Middle	Left	3 584.80	-31.55
			Right	3 665.03	-42.22
		High	Left	3 619.70	-33.83
			Right	3 700.03	-39.51
	16QAM	Low	Left	3 549.80	-31.62
			Right	3 630.03	-40.55
		Middle	Left	3 584.80	-28.89
			Right	3 665.03	-41.01
		High	Left	3 619.80	-34.34
			Right	3 700.03	-40.18
	64QAM	Low	Left	3 549.80	-35.75
			Right	3 630.05	-40.08
		Middle	Left	3 584.80	-31.05
			Right	3 665.03	-39.96
		High	Left	3 619.80	-31.40
			Right	3 700.03	-41.65
	256QAM	Low	Left	3 549.74	-32.14
			Right	3 630.03	-41.96
		Middle	Left	3 584.80	-31.22
			Right	3 665.03	-41.50
		High	Left	3 619.80	-31.97
			Right	3 700.04	-40.30

Ant	Modulation	Channel	Edge Position	Frequency (MHz)	Measured Value (dBm)
3	QPSK	Low	Left	3 549.80	-30.96
			Right	3 630.03	-40.74
		Middle	Left	3 584.80	-32.75
			Right	3 665.64	-41.73
		High	Left	3 619.80	-31.76
			Right	3 700.03	-39.99
	16QAM	Low	Left	3 549.80	-31.18
			Right	3 630.03	-41.84
		Middle	Left	3 584.80	-31.40
			Right	3 665.05	-42.23
		High	Left	3 619.80	-30.16
			Right	3 700.03	-40.71
	64QAM	Low	Left	3 549.80	-29.91
			Right	3 630.03	-41.41
		Middle	Left	3 584.80	-32.17
			Right	3 665.22	-41.72
		High	Left	3 619.80	-32.19
			Right	3 700.03	-38.12
	256QAM	Low	Left	3 549.80	-33.23
			Right	3 630.03	-42.42
		Middle	Left	3 584.53	-35.54
			Right	3 665.03	-40.29
		High	Left	3 619.80	-30.53
			Right	3 700.09	-40.64

Note: 1C: 1 Carrier, 5C: 5 Carrier



**Tabular Data of Non-Contiguous Out-of-band Unwanted Emissions**
**CBRS NR(60 MHz 1C + 30 MHz 1C)[2C]**

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low Edge Carrier	Left	3 549.31	-32.58
			Right	3 610.76	-32.21
		High Edge Carrier	Left	3 669.62	-36.64
			Right	3 700.91	-35.81
	16QAM	Low Edge Carrier	Left	3 549.70	-31.09
			Right	3 610.57	-33.63
		High Edge Carrier	Left	3 669.31	-34.59
			Right	3 700.69	-34.31
	64QAM	Low Edge Carrier	Left	3 549.00	-32.01
			Right	3 610.57	-31.44
		High Edge Carrier	Left	3 669.85	-35.54
			Right	3 700.97	-35.25
256QAM	Low Edge Carrier	Left	3 549.31	-32.21	
		Right	3 610.30	-32.11	
	High Edge Carrier	Left	3 669.85	-35.82	
		Right	3 700.75	-34.76	
1	QPSK	Low Edge Carrier	Left	3 549.70	-31.81
			Right	3 610.30	-31.35
		High Edge Carrier	Left	3 669.71	-35.64
			Right	3 700.38	-34.20
	16QAM	Low Edge Carrier	Left	3 549.31	-31.33
			Right	3 610.30	-32.15
		High Edge Carrier	Left	3 669.37	-34.83
			Right	3 700.97	-34.87
	64QAM	Low Edge Carrier	Left	3 549.61	-32.86
			Right	3 610.45	-31.61
		High Edge Carrier	Left	3 669.19	-34.66
			Right	3 700.19	-33.74
256QAM	Low Edge Carrier	Left	3 549.70	-31.67	
		Right	3 610.76	-32.37	
	High Edge Carrier	Left	3 669.34	-34.81	
		Right	3 700.60	-34.58	

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low Edge Carrier	Left	3 549.70	-33.53
			Right	3 610.39	-32.46
		High Edge Carrier	Left	3 669.65	-37.10
			Right	3 700.50	-35.38
	16QAM	Low Edge Carrier	Left	3 549.70	-32.99
			Right	3 610.45	-34.06
		High Edge Carrier	Left	3 669.28	-37.15
			Right	3 700.35	-36.15
	64QAM	Low Edge Carrier	Left	3 549.70	-33.66
			Right	3 610.51	-33.61
		High Edge Carrier	Left	3 669.00	-36.35
			Right	3 700.69	-36.14
256QAM	Low Edge Carrier	Left	3 549.70	-33.06	
		Right	3 610.30	-33.37	
	High Edge Carrier	Left	3 669.78	-37.10	
		Right	3 700.81	-35.95	
3	QPSK	Low Edge Carrier	Left	3 549.49	-33.75
			Right	3 610.63	-32.64
		High Edge Carrier	Left	3 669.74	-35.70
			Right	3 700.81	-35.83
	16QAM	Low Edge Carrier	Left	3 549.12	-33.87
			Right	3 610.30	-32.41
		High Edge Carrier	Left	3 669.85	-36.50
			Right	3 700.35	-35.30
	64QAM	Low Edge Carrier	Left	3 549.70	-32.84
			Right	3 610.45	-33.45
		High Edge Carrier	Left	3 669.85	-36.12
			Right	3 700.47	-35.19
256QAM	Low Edge Carrier	Left	3 549.70	-34.04	
		Right	3 610.30	-33.47	
	High Edge Carrier	Left	3 669.56	-36.32	
		Right	3 700.26	-33.74	

Note: 1C: 1 Carrier, 2C: 2 Carrier

**CBRS LTE(15 MHz 1C + 15 MHz 1C)[2C]**

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low Edge Carrier	Left	3 549.14	-37.34
			Right	3 565.34	-36.93
		High Edge Carrier	Left	3 684.88	-37.51
			Right	3 700.84	-37.81
	16QAM	Low Edge Carrier	Left	3 549.35	-37.51
			Right	3 565.25	-38.41
		High Edge Carrier	Left	3 684.78	-37.50
			Right	3 700.26	-36.45
	64QAM	Low Edge Carrier	Left	3 549.66	-38.20
			Right	3 565.89	-35.33
		High Edge Carrier	Left	3 684.72	-37.03
			Right	3 700.57	-37.81
256QAM	Low Edge Carrier	Left	3 549.19	-37.60	
		Right	3 565.08	-37.10	
	High Edge Carrier	Left	3 684.93	-36.10	
		Right	3 700.12	-36.37	
1	QPSK	Low Edge Carrier	Left	3 549.43	-38.76
			Right	3 565.62	-37.17
		High Edge Carrier	Left	3 684.38	-36.09
			Right	3 700.60	-35.65
	16QAM	Low Edge Carrier	Left	3 549.34	-38.49
			Right	3 565.89	-38.64
		High Edge Carrier	Left	3 684.66	-36.63
			Right	3 700.79	-36.46
	64QAM	Low Edge Carrier	Left	3 549.93	-39.85
			Right	3 565.89	-38.45
		High Edge Carrier	Left	3 684.90	-36.19
			Right	3 700.68	-35.82
256QAM	Low Edge Carrier	Left	3 549.02	-37.89	
		Right	3 565.78	-38.32	
	High Edge Carrier	Left	3 684.00	-36.03	
		Right	3 700.74	-35.85	

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low Edge Carrier	Left	3 549.93	-37.25
			Right	3 565.41	-37.97
		High Edge Carrier	Left	3 684.85	-38.41
			Right	3 700.38	-37.89
	16QAM	Low Edge Carrier	Left	3 549.90	-38.65
			Right	3 565.08	-37.89
		High Edge Carrier	Left	3 684.91	-37.09
			Right	3 700.14	-38.38
	64QAM	Low Edge Carrier	Left	3 549.54	-39.45
			Right	3 565.81	-38.67
		High Edge Carrier	Left	3 684.14	-37.99
			Right	3 700.84	-38.17
256QAM	Low Edge Carrier	Left	3 549.19	-38.96	
		Right	3 565.08	-37.46	
	High Edge Carrier	Left	3 684.93	-37.49	
		Right	3 700.09	-36.78	
3	QPSK	Low Edge Carrier	Left	3 549.56	-39.90
			Right	3 565.08	-38.42
		High Edge Carrier	Left	3 684.35	-37.48
			Right	3 700.08	-38.38
	16QAM	Low Edge Carrier	Left	3 549.08	-38.22
			Right	3 565.12	-38.67
		High Edge Carrier	Left	3 684.42	-37.86
			Right	3 701.00	-36.68
	64QAM	Low Edge Carrier	Left	3 549.67	-38.39
			Right	3 565.54	-38.62
		High Edge Carrier	Left	3 684.93	-36.69
			Right	3 700.41	-37.12
256QAM	Low Edge Carrier	Left	3 549.21	-38.10	
		Right	3 565.14	-39.34	
	High Edge Carrier	Left	3 684.21	-36.60	
		Right	3 700.10	-37.92	

Note: 1C: 1 Carrier, 2C: 2 Carrier

**CBRS LTE 5 MHz 1C + NR 10 MHz 1C[2C]**

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low Edge Carrier	Left	3 549.98	-40.35
			Right	3 555.05	-39.83
		High Edge Carrier	Left	3 689.95	-35.98
			Right	3 700.27	-38.23
	16QAM	Low Edge Carrier	Left	3 549.98	-39.15
			Right	3 555.41	-40.90
		High Edge Carrier	Left	3 689.95	-38.02
			Right	3 700.60	-38.57
	64QAM	Low Edge Carrier	Left	3 549.29	-42.05
			Right	3 555.24	-41.05
		High Edge Carrier	Left	3 689.95	-37.53
			Right	3 700.05	-38.40
256QAM	Low Edge Carrier	Left	3 549.98	-39.73	
		Right	3 555.03	-40.28	
	High Edge Carrier	Left	3 689.86	-38.17	
		Right	3 700.76	-38.86	
1	QPSK	Low Edge Carrier	Left	3 549.98	-39.37
			Right	3 555.14	-40.85
		High Edge Carrier	Left	3 689.73	-38.66
			Right	3 700.05	-39.26
	16QAM	Low Edge Carrier	Left	3 549.97	-39.66
			Right	3 555.06	-40.08
		High Edge Carrier	Left	3 689.95	-37.84
			Right	3 700.60	-38.45
	64QAM	Low Edge Carrier	Left	3 549.98	-41.98
			Right	3 555.03	-40.55
		High Edge Carrier	Left	3 689.95	-37.39
			Right	3 700.05	-38.74
256QAM	Low Edge Carrier	Left	3 549.98	-41.45	
		Right	3 555.89	-41.02	
	High Edge Carrier	Left	3 689.95	-35.99	
		Right	3 700.20	-39.16	

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low Edge Carrier	Left	3 549.98	-38.20
			Right	3 555.27	-42.83
		High Edge Carrier	Left	3 689.03	-39.44
			Right	3 700.48	-39.39
	16QAM	Low Edge Carrier	Left	3 549.98	-41.46
			Right	3 555.03	-40.10
		High Edge Carrier	Left	3 689.95	-36.99
			Right	3 700.05	-40.11
	64QAM	Low Edge Carrier	Left	3 549.97	-41.37
			Right	3 555.07	-42.28
		High Edge Carrier	Left	3 689.95	-38.40
			Right	3 700.05	-40.51
256QAM	Low Edge Carrier	Left	3 549.98	-38.18	
		Right	3 555.03	-41.44	
	High Edge Carrier	Left	3 689.32	-39.86	
		Right	3 700.05	-38.82	
3	QPSK	Low Edge Carrier	Left	3 549.97	-39.51
			Right	3 555.04	-40.91
		High Edge Carrier	Left	3 689.63	-38.44
			Right	3 700.38	-39.35
	16QAM	Low Edge Carrier	Left	3 549.97	-40.99
			Right	3 555.03	-38.01
		High Edge Carrier	Left	3 689.95	-34.22
			Right	3 700.05	-35.55
	64QAM	Low Edge Carrier	Left	3 549.98	-39.43
			Right	3 555.03	-39.27
		High Edge Carrier	Left	3 689.54	-38.77
			Right	3 700.05	-37.21
256QAM	Low Edge Carrier	Left	3 549.97	-41.02	
		Right	3 555.03	-39.74	
	High Edge Carrier	Left	3 689.95	-38.17	
		Right	3 700.05	-39.07	

Note: 1C: 1 Carrier, 2C: 2 Carrier

**CBRS NR[20 MHz 1C + (20 MHz 1C + 10 MHz 1C)][3C(1C+2C)]**

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low Edge Carrier	Left	3 549.84	-37.43
			Right	3 570.10	-34.82
		High Edge Carrier	Left	3 669.44	-36.68
			Right	3 700.22	-38.62
	16QAM	Low Edge Carrier	Left	3 549.90	-35.30
			Right	3 570.14	-37.62
		High Edge Carrier	Left	3 669.90	-33.51
			Right	3 700.44	-40.02
	64QAM	Low Edge Carrier	Left	3 549.88	-36.67
			Right	3 570.10	-34.62
		High Edge Carrier	Left	3 669.90	-34.83
			Right	3 700.68	-39.11
256QAM	Low Edge Carrier	Left	3 549.90	-36.85	
		Right	3 570.83	-39.28	
	High Edge Carrier	Left	3 669.90	-33.05	
		Right	3 700.23	-38.26	
1	QPSK	Low Edge Carrier	Left	3 549.90	-35.24
			Right	3 570.10	-33.83
		High Edge Carrier	Left	3 669.29	-35.95
			Right	3 700.05	-36.67
	16QAM	Low Edge Carrier	Left	3 549.42	-36.56
			Right	3 570.10	-32.88
		High Edge Carrier	Left	3 669.90	-34.16
			Right	3 700.05	-37.97
	64QAM	Low Edge Carrier	Left	3 549.84	-36.32
			Right	3 570.10	-33.05
		High Edge Carrier	Left	3 669.90	-34.29
			Right	3 700.13	-37.93
256QAM	Low Edge Carrier	Left	3 549.90	-35.65	
		Right	3 570.10	-36.22	
	High Edge Carrier	Left	3 669.90	-32.28	
		Right	3 700.34	-38.47	

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low Edge Carrier	Left	3 549.38	-38.15
			Right	3 570.10	-32.29
		High Edge Carrier	Left	3 669.90	-36.45
			Right	3 700.05	-36.88
	16QAM	Low Edge Carrier	Left	3 549.88	-37.83
			Right	3 570.10	-34.35
		High Edge Carrier	Left	3 669.90	-35.90
			Right	3 700.05	-37.76
	64QAM	Low Edge Carrier	Left	3 549.90	-37.83
			Right	3 571.00	-38.11
		High Edge Carrier	Left	3 669.90	-36.14
			Right	3 700.05	-40.08
256QAM	Low Edge Carrier	Left	3 549.90	-32.77	
		Right	3 570.10	-36.93	
	High Edge Carrier	Left	3 669.90	-35.45	
		Right	3 700.05	-39.14	
3	QPSK	Low Edge Carrier	Left	3 549.19	-38.56
			Right	3 570.10	-33.95
		High Edge Carrier	Left	3 669.90	-35.82
			Right	3 700.05	-38.45
	16QAM	Low Edge Carrier	Left	3 549.90	-35.06
			Right	3 570.10	-33.48
		High Edge Carrier	Left	3 669.84	-36.00
			Right	3 700.05	-37.45
	64QAM	Low Edge Carrier	Left	3 549.90	-36.28
			Right	3 570.10	-35.87
		High Edge Carrier	Left	3 669.90	-34.05
			Right	3 700.05	-37.09
256QAM	Low Edge Carrier	Left	3 549.90	-38.13	
		Right	3 570.10	-37.10	
	High Edge Carrier	Left	3 669.90	-34.15	
		Right	3 700.05	-37.79	

Note: 1C: 1 Carrier, 2C: 2 Carrier, 3C: 3 Carrier



**CBRS NR[(20 MHz 1C + 20 MHz 1C) + 10 MHz 1C][3C(2C+1C)]**

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low Edge Carrier	Left	3 549.65	-37.64
			Right	3 590.10	-34.61
		High Edge Carrier	Left	3 689.95	-38.76
			Right	3 700.60	-38.48
	16QAM	Low Edge Carrier	Left	3 549.21	-36.09
			Right	3 590.77	-36.90
		High Edge Carrier	Left	3 689.90	-40.15
			Right	3 700.05	-38.86
	64QAM	Low Edge Carrier	Left	3 549.90	-35.99
			Right	3 590.10	-35.22
		High Edge Carrier	Left	3 689.95	-39.20
			Right	3 700.73	-39.46
256QAM	Low Edge Carrier	Left	3 549.11	-39.18	
		Right	3 590.10	-34.44	
	High Edge Carrier	Left	3 689.95	-41.14	
		Right	3 700.91	-38.72	
1	QPSK	Low Edge Carrier	Left	3 549.29	-36.49
			Right	3 590.10	-35.29
		High Edge Carrier	Left	3 689.84	-38.22
			Right	3 700.05	-36.51
	16QAM	Low Edge Carrier	Left	3 549.19	-37.72
			Right	3 590.90	-35.97
		High Edge Carrier	Left	3 689.83	-38.48
			Right	3 700.05	-38.55
	64QAM	Low Edge Carrier	Left	3 549.90	-36.36
			Right	3 590.54	-37.83
		High Edge Carrier	Left	3 689.95	-39.48
			Right	3 700.86	-37.51
256QAM	Low Edge Carrier	Left	3 549.57	-38.53	
		Right	3 590.24	-38.29	
	High Edge Carrier	Left	3 689.45	-41.06	
		Right	3 700.98	-41.15	

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low Edge Carrier	Left	3 549.90	-37.16
			Right	3 590.10	-35.59
		High Edge Carrier	Left	3 689.95	-38.42
			Right	3 700.58	-39.58
	16QAM	Low Edge Carrier	Left	3 549.34	-39.22
			Right	3 590.45	-36.80
		High Edge Carrier	Left	3 689.95	-38.75
			Right	3 700.05	-38.03
	64QAM	Low Edge Carrier	Left	3 549.90	-36.86
			Right	3 590.10	-35.96
		High Edge Carrier	Left	3 689.95	-40.36
			Right	3 700.70	-39.40
256QAM	Low Edge Carrier	Left	3 549.90	-35.31	
		Right	3 590.10	-34.80	
	High Edge Carrier	Left	3 689.95	-38.57	
		Right	3 700.40	-39.42	
3	QPSK	Low Edge Carrier	Left	3 549.88	-36.82
			Right	3 590.10	-33.48
		High Edge Carrier	Left	3 689.95	-38.32
			Right	3 700.05	-39.18
	16QAM	Low Edge Carrier	Left	3 549.90	-38.12
			Right	3 570.10	-36.23
		High Edge Carrier	Left	3 689.59	-38.69
			Right	3 700.20	-39.30
	64QAM	Low Edge Carrier	Left	3 549.86	-37.58
			Right	3 590.10	-35.66
		High Edge Carrier	Left	3 689.95	-39.25
			Right	3 700.05	-39.32
256QAM	Low Edge Carrier	Left	3 549.90	-35.73	
		Right	3 590.75	-38.10	
	High Edge Carrier	Left	3 689.95	-37.85	
		Right	3 700.73	-40.16	

Note: 1C: 1 Carrier, 2C: 2 Carrier, 3C: 3 Carrier

**CBRS NR[30 MHz 1C + (30 MHz 1C + 10 MHz 1C)][3C(1C+2C)]**

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low Edge Carrier	Left	3 549.85	-35.33
			Right	3 580.91	-35.45
		High Edge Carrier	Left	3 659.65	-34.85
			Right	3 700.05	-38.31
	16QAM	Low Edge Carrier	Left	3 549.74	-36.70
			Right	3 580.78	-34.91
		High Edge Carrier	Left	3 659.50	-35.28
			Right	3 700.79	-39.20
	64QAM	Low Edge Carrier	Left	3 549.12	-33.54
			Right	3 580.50	-35.98
		High Edge Carrier	Left	3 659.59	-35.45
			Right	3 700.05	-38.68
256QAM	Low Edge Carrier	Left	3 549.81	-36.25	
		Right	3 580.75	-35.82	
	High Edge Carrier	Left	3 659.34	-36.05	
		Right	3 700.31	-39.08	
1	QPSK	Low Edge Carrier	Left	3 549.81	-36.18
			Right	3 580.41	-33.88
		High Edge Carrier	Left	3 659.00	-35.44
			Right	3 700.79	-38.07
	16QAM	Low Edge Carrier	Left	3 549.53	-35.89
			Right	3 580.81	-33.90
		High Edge Carrier	Left	3 659.68	-35.00
			Right	3 700.49	-38.82
	64QAM	Low Edge Carrier	Left	3 549.40	-34.92
			Right	3 580.94	-35.35
		High Edge Carrier	Left	3 659.43	-35.27
			Right	3 700.05	-38.07
256QAM	Low Edge Carrier	Left	3 549.81	-33.99	
		Right	3 580.63	-34.98	
	High Edge Carrier	Left	3 659.00	-36.23	
		Right	3 700.05	-37.92	

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low Edge Carrier	Left	3 549.06	-36.24
			Right	3 580.78	-35.99
		High Edge Carrier	Left	3 659.81	-36.60
			Right	3 700.05	-39.45
	16QAM	Low Edge Carrier	Left	3 549.71	-32.85
			Right	3 580.85	-38.06
		High Edge Carrier	Left	3 659.06	-35.73
			Right	3 700.05	-37.29
	64QAM	Low Edge Carrier	Left	3 549.81	-36.55
			Right	3 580.23	-35.35
		High Edge Carrier	Left	3 659.12	-36.39
			Right	3 700.25	-39.84
256QAM	Low Edge Carrier	Left	3 549.25	-37.09	
		Right	3 580.57	-35.61	
	High Edge Carrier	Left	3 659.37	-36.07	
		Right	3 700.10	-38.97	
3	QPSK	Low Edge Carrier	Left	3 549.06	-35.07
			Right	3 580.57	-34.94
		High Edge Carrier	Left	3 659.50	-36.36
			Right	3 700.99	-39.26
	16QAM	Low Edge Carrier	Left	3 549.06	-33.49
			Right	3 580.88	-35.02
		High Edge Carrier	Left	3 659.71	-36.41
			Right	3 700.77	-39.98
	64QAM	Low Edge Carrier	Left	3 549.81	-37.36
			Right	3 580.66	-36.71
		High Edge Carrier	Left	3 659.50	-36.78
			Right	3 700.48	-39.27
256QAM	Low Edge Carrier	Left	3 549.40	-36.67	
		Right	3 580.32	-37.07	
	High Edge Carrier	Left	3 659.50	-35.68	
		Right	3 700.05	-38.75	

Note: 1C: 1 Carrier, 2C: 2 Carrier, 3C: 3 Carrier

**CBRS NR[(30 MHz 1C + 30 MHz 1C) + 10 MHz 1C][3C(2C+1C)]**

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low Edge Carrier	Left	3 549.85	-35.96
			Right	3 610.38	-35.97
		High Edge Carrier	Left	3 689.92	-39.21
			Right	3 700.05	-38.77
	16QAM	Low Edge Carrier	Left	3 549.25	-35.41
			Right	3 610.41	-34.84
		High Edge Carrier	Left	3 689.34	-39.05
			Right	3 700.26	-38.63
	64QAM	Low Edge Carrier	Left	3 549.12	-36.54
			Right	3 610.91	-36.19
		High Edge Carrier	Left	3 689.95	-38.38
			Right	3 700.27	-38.33
256QAM	Low Edge Carrier	Left	3 549.81	-36.88	
		Right	3 610.78	-34.96	
	High Edge Carrier	Left	3 689.21	-39.33	
		Right	3 700.56	-39.51	
1	QPSK	Low Edge Carrier	Left	3 549.19	-36.85
			Right	3 610.23	-33.59
		High Edge Carrier	Left	3 689.75	-38.94
			Right	3 700.07	-39.74
	16QAM	Low Edge Carrier	Left	3 549.06	-35.97
			Right	3 610.54	-35.29
		High Edge Carrier	Left	3 689.20	-38.45
			Right	3 700.87	-38.37
	64QAM	Low Edge Carrier	Left	3 549.65	-36.42
			Right	3 610.94	-34.48
		High Edge Carrier	Left	3 689.80	-38.23
			Right	3 700.05	-38.87
256QAM	Low Edge Carrier	Left	3 549.71	-37.96	
		Right	3 610.50	-34.72	
	High Edge Carrier	Left	3 689.95	-37.74	
		Right	3 700.60	-38.67	

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low Edge Carrier	Left	3 549.03	-38.11
			Right	3 610.38	-37.08
		High Edge Carrier	Left	3 689.95	-39.22
			Right	3 700.41	-41.20
	16QAM	Low Edge Carrier	Left	3 549.81	-37.67
			Right	3 610.66	-37.79
		High Edge Carrier	Left	3 689.00	-41.26
			Right	3 700.64	-40.14
	64QAM	Low Edge Carrier	Left	3 549.68	-39.90
			Right	3 610.94	-36.81
		High Edge Carrier	Left	3 689.95	-39.34
			Right	3 700.15	-39.94
256QAM	Low Edge Carrier	Left	3 549.34	-38.48	
		Right	3 610.41	-36.75	
	High Edge Carrier	Left	3 689.95	-39.47	
		Right	3 700.64	-41.40	
3	QPSK	Low Edge Carrier	Left	3 549.19	-36.64
			Right	3 610.69	-37.64
		High Edge Carrier	Left	3 689.41	-40.59
			Right	3 700.05	-39.54
	16QAM	Low Edge Carrier	Left	3 549.28	-37.97
			Right	3 610.26	-35.74
		High Edge Carrier	Left	3 689.17	-39.14
			Right	3 700.05	-40.26
	64QAM	Low Edge Carrier	Left	3 549.28	-37.05
			Right	3 610.66	-36.72
		High Edge Carrier	Left	3 689.68	-39.61
			Right	3 700.87	-37.48
256QAM	Low Edge Carrier	Left	3 549.22	-36.92	
		Right	3 610.44	-35.86	
	High Edge Carrier	Left	3 689.67	-38.89	
		Right	3 700.33	-38.99	

Note: 1C: 1 Carrier, 2C: 2 Carrier, 3C: 3 Carrier

**CBRS LTE[15 MHz 1C + (15 MHz 1C + 10 MHz 1C)][3C(1C+2C)]**

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low Edge Carrier	Left	3 689.95	-37.50
			Right	3 700.97	-38.61
		High Edge Carrier	Left	3 674.91	-36.65
			Right	3 700.57	-38.63
	16QAM	Low Edge Carrier	Left	3 689.54	-39.19
			Right	3 700.44	-38.38
		High Edge Carrier	Left	3 674.72	-39.06
			Right	3 700.05	-39.61
	64QAM	Low Edge Carrier	Left	3 689.95	-37.82
			Right	3 700.14	-38.80
		High Edge Carrier	Left	3 674.93	-36.54
			Right	3 700.05	-37.62
256QAM	Low Edge Carrier	Left	3 689.57	-39.45	
		Right	3 700.89	-39.69	
	High Edge Carrier	Left	3 674.86	-37.18	
		Right	3 700.49	-39.24	
1	QPSK	Low Edge Carrier	Left	3 689.95	-38.02
			Right	3 700.05	-37.76
		High Edge Carrier	Left	3 674.72	-38.67
			Right	3 700.05	-36.92
	16QAM	Low Edge Carrier	Left	3 689.29	-38.50
			Right	3 700.37	-38.74
		High Edge Carrier	Left	3 674.85	-37.52
			Right	3 700.16	-37.73
	64QAM	Low Edge Carrier	Left	3 689.95	-37.03
			Right	3 700.35	-39.25
		High Edge Carrier	Left	3 674.86	-38.38
			Right	3 700.05	-37.07
256QAM	Low Edge Carrier	Left	3 689.14	-37.98	
		Right	3 700.05	-38.23	
	High Edge Carrier	Left	3 674.85	-37.36	
		Right	3 700.05	-36.07	

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low Edge Carrier	Left	3 689.95	-39.09
			Right	3 700.05	-39.00
		High Edge Carrier	Left	3 674.93	-39.08
			Right	3 700.05	-38.80
	16QAM	Low Edge Carrier	Left	3 689.95	-39.88
			Right	3 700.29	-39.91
		High Edge Carrier	Left	3 674.93	-38.82
			Right	3 700.05	-39.86
	64QAM	Low Edge Carrier	Left	3 689.95	-41.24
			Right	3 700.05	-38.03
		High Edge Carrier	Left	3 674.93	-38.40
			Right	3 700.07	-39.99
256QAM	Low Edge Carrier	Left	3 689.95	-40.09	
		Right	3 700.05	-39.13	
	High Edge Carrier	Left	3 674.86	-38.77	
		Right	3 700.05	-39.19	
3	QPSK	Low Edge Carrier	Left	3 689.29	-39.63
			Right	3 700.47	-38.35
		High Edge Carrier	Left	3 674.46	-39.47
			Right	3 700.11	-39.61
	16QAM	Low Edge Carrier	Left	3 689.95	-36.47
			Right	3 700.05	-38.05
		High Edge Carrier	Left	3 674.45	-39.30
			Right	3 700.12	-40.35
	64QAM	Low Edge Carrier	Left	3 689.90	-40.17
			Right	3 700.86	-39.68
		High Edge Carrier	Left	3 674.58	-37.75
			Right	3 700.18	-39.06
256QAM	Low Edge Carrier	Left	3 689.00	-39.51	
		Right	3 700.84	-38.07	
	High Edge Carrier	Left	3 674.93	-38.63	
		Right	3 700.05	-36.46	

Note: 1C: 1 Carrier, 2C: 2 Carrier, 3C: 3 Carrier



**CBRS LTE[(15 MHz 1C + 15 MHz 1C) + 10 MHz 1C][3C(2C+1C)]**

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low Edge Carrier	Left	3 549.67	-36.88
			Right	3 580.60	-38.61
		High Edge Carrier	Left	3 549.82	-38.09
			Right	3 565.25	-36.28
	16QAM	Low Edge Carrier	Left	3 549.05	-38.15
			Right	3 580.89	-37.51
		High Edge Carrier	Left	3 549.72	-39.13
			Right	3 565.42	-38.05
	64QAM	Low Edge Carrier	Left	3 549.02	-36.62
			Right	3 581.00	-37.25
		High Edge Carrier	Left	3 549.77	-39.12
			Right	3 565.10	-35.44
256QAM	Low Edge Carrier	Left	3 549.11	-37.77	
		Right	3 580.54	-38.03	
	High Edge Carrier	Left	3 549.64	-38.12	
		Right	3 565.62	-38.70	
1	QPSK	Low Edge Carrier	Left	3 549.43	-38.40
			Right	3 580.74	-36.99
		High Edge Carrier	Left	3 549.38	-37.64
			Right	3 565.20	-37.75
	16QAM	Low Edge Carrier	Left	3 549.61	-36.96
			Right	3 580.57	-36.58
		High Edge Carrier	Left	3 549.82	-37.26
			Right	3 565.08	-34.66
	64QAM	Low Edge Carrier	Left	3 549.58	-37.77
			Right	3 580.28	-38.68
		High Edge Carrier	Left	3 549.78	-38.79
			Right	3 565.08	-35.57
256QAM	Low Edge Carrier	Left	3 549.22	-37.14	
		Right	3 580.10	-37.37	
	High Edge Carrier	Left	3 549.56	-38.01	
		Right	3 565.23	-38.66	

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low Edge Carrier	Left	3 549.90	-37.74
			Right	3 580.09	-37.53
		High Edge Carrier	Left	3 549.34	-38.67
			Right	3 565.08	-39.46
	16QAM	Low Edge Carrier	Left	3 549.80	-38.02
			Right	3 580.17	-37.48
		High Edge Carrier	Left	3 549.93	-38.08
			Right	3 565.94	-39.10
	64QAM	Low Edge Carrier	Left	3 549.66	-38.38
			Right	3 580.10	-37.93
		High Edge Carrier	Left	3 549.70	-39.44
			Right	3 565.98	-39.36
256QAM	Low Edge Carrier	Left	3 549.29	-39.48	
		Right	3 580.28	-38.71	
	High Edge Carrier	Left	3 549.22	-39.90	
		Right	3 565.08	-37.85	
3	QPSK	Low Edge Carrier	Left	3 549.93	-36.84
			Right	3 580.08	-37.11
		High Edge Carrier	Left	3 549.70	-40.52
			Right	3 565.46	-38.31
	16QAM	Low Edge Carrier	Left	3 549.83	-39.78
			Right	3 580.30	-38.63
		High Edge Carrier	Left	3 549.18	-39.03
			Right	3 565.36	-37.52
	64QAM	Low Edge Carrier	Left	3 549.91	-39.21
			Right	3 580.90	-38.42
		High Edge Carrier	Left	3 549.46	-38.52
			Right	3 565.62	-38.02
256QAM	Low Edge Carrier	Left	3 549.93	-36.95	
		Right	3 580.08	-37.90	
	High Edge Carrier	Left	3 549.88	-38.71	
		Right	3 565.08	-37.43	

Note: 1C: 1 Carrier, 2C: 2 Carrier, 3C: 3 Carrier

**CBRS LTE[20 MHz 1C + (15 MHz 1C + 15 MHz 1C)][3C(1C+2C)]**

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low Edge Carrier	Left	3 684.93	-36.78
			Right	3 700.22	-37.77
		High Edge Carrier	Left	3 669.86	-37.05
			Right	3 700.47	-35.64
	16QAM	Low Edge Carrier	Left	3 684.21	-38.07
			Right	3 700.62	-37.38
		High Edge Carrier	Left	3 669.32	-37.30
			Right	3 700.08	-37.09
	64QAM	Low Edge Carrier	Left	3 684.85	-37.15
			Right	3 700.86	-36.88
		High Edge Carrier	Left	3 669.37	-37.50
			Right	3 700.17	-36.28
256QAM	Low Edge Carrier	Left	3 684.30	-36.42	
		Right	3 700.55	-36.21	
	High Edge Carrier	Left	3 669.85	-37.65	
		Right	3 700.23	-37.88	
1	QPSK	Low Edge Carrier	Left	3 684.93	-36.93
			Right	3 700.58	-35.58
		High Edge Carrier	Left	3 669.86	-36.69
			Right	3 700.08	-35.36
	16QAM	Low Edge Carrier	Left	3 684.93	-34.89
			Right	3 700.57	-34.50
		High Edge Carrier	Left	3 669.69	-37.65
			Right	3 700.38	-35.62
	64QAM	Low Edge Carrier	Left	3 684.93	-36.23
			Right	3 700.44	-31.76
		High Edge Carrier	Left	3 669.46	-35.79
			Right	3 700.74	-36.16
256QAM	Low Edge Carrier	Left	3 684.93	-36.00	
		Right	3 700.08	-33.80	
	High Edge Carrier	Left	3 669.05	-36.90	
		Right	3 700.86	-36.65	

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low Edge Carrier	Left	3 684.46	-37.75
			Right	3 700.08	-37.34
		High Edge Carrier	Left	3 669.93	-39.22
			Right	3 700.41	-38.79
	16QAM	Low Edge Carrier	Left	3 684.88	-37.67
			Right	3 700.47	-37.78
		High Edge Carrier	Left	3 669.90	-38.48
			Right	3 700.08	-36.59
	64QAM	Low Edge Carrier	Left	3 684.35	-37.64
			Right	3 700.20	-35.61
		High Edge Carrier	Left	3 669.19	-38.55
			Right	3 701.00	-37.58
256QAM	Low Edge Carrier	Left	3 684.53	-38.28	
		Right	3 700.26	-37.85	
	High Edge Carrier	Left	3 669.91	-38.32	
		Right	3 700.79	-39.22	
3	QPSK	Low Edge Carrier	Left	3 684.83	-36.09
			Right	3 700.08	-36.46
		High Edge Carrier	Left	3 669.93	-34.62
			Right	3 700.08	-37.54
	16QAM	Low Edge Carrier	Left	3 684.70	-37.42
			Right	3 700.14	-36.41
		High Edge Carrier	Left	3 669.93	-38.11
			Right	3 700.82	-37.52
	64QAM	Low Edge Carrier	Left	3 684.93	-38.01
			Right	3 700.08	-37.17
		High Edge Carrier	Left	3 669.29	-38.18
			Right	3 700.98	-38.01
256QAM	Low Edge Carrier	Left	3 684.10	-36.08	
		Right	3 700.08	-35.86	
	High Edge Carrier	Left	3 669.93	-36.25	
		Right	3 700.08	-38.31	

Note: 1C: 1 Carrier, 2C: 2 Carrier, 3C: 3 Carrier

**CBRS LTE[(20 MHz 1C + 15 MHz 1C) + 15 MHz 1C][3C(2C+1C)]**

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low Edge Carrier	Left	3 549.19	-36.43
			Right	3 585.58	-36.85
		High Edge Carrier	Left	3 549.82	-36.58
			Right	3 570.71	-35.69
	16QAM	Low Edge Carrier	Left	3 549.90	-36.25
			Right	3 585.15	-37.77
		High Edge Carrier	Left	3 549.15	-37.89
			Right	3 570.94	-36.67
	64QAM	Low Edge Carrier	Left	3 549.90	-35.88
			Right	3 585.73	-38.02
		High Edge Carrier	Left	3 549.74	-35.91
			Right	3 570.98	-35.42
256QAM	Low Edge Carrier	Left	3 549.42	-38.03	
		Right	3 585.89	-36.57	
	High Edge Carrier	Left	3 549.90	-36.85	
		Right	3 570.98	-37.86	
1	QPSK	Low Edge Carrier	Left	3 549.88	-38.47
			Right	3 585.95	-35.34
		High Edge Carrier	Left	3 549.11	-37.60
			Right	3 570.75	-38.45
	16QAM	Low Edge Carrier	Left	3 549.44	-36.86
			Right	3 585.14	-37.39
		High Edge Carrier	Left	3 549.15	-37.56
			Right	3 570.50	-37.24
	64QAM	Low Edge Carrier	Left	3 549.29	-37.72
			Right	3 585.26	-37.11
		High Edge Carrier	Left	3 549.90	-35.25
			Right	3 570.12	-35.44
256QAM	Low Edge Carrier	Left	3 549.06	-36.18	
		Right	3 585.36	-35.11	
	High Edge Carrier	Left	3 549.08	-36.62	
		Right	3 570.27	-37.16	

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low Edge Carrier	Left	3 549.90	-37.75
			Right	3 585.08	-37.73
		High Edge Carrier	Left	3 549.48	-38.78
			Right	3 570.77	-37.91
	16QAM	Low Edge Carrier	Left	3 549.27	-37.09
			Right	3 585.28	-38.87
		High Edge Carrier	Left	3 549.90	-39.12
			Right	3 570.12	-38.35
	64QAM	Low Edge Carrier	Left	3 549.04	-38.86
			Right	3 585.58	-38.24
		High Edge Carrier	Left	3 549.38	-38.08
			Right	3 570.96	-38.89
256QAM	Low Edge Carrier	Left	3 549.08	-38.08	
		Right	3 585.49	-37.77	
	High Edge Carrier	Left	3 549.86	-37.70	
		Right	3 570.14	-36.01	
3	QPSK	Low Edge Carrier	Left	3 549.74	-37.79
			Right	3 585.08	-34.72
		High Edge Carrier	Left	3 549.80	-37.68
			Right	3 570.52	-38.14
	16QAM	Low Edge Carrier	Left	3 549.19	-39.39
			Right	3 585.36	-36.66
		High Edge Carrier	Left	3 549.13	-37.53
			Right	3 570.58	-37.62
	64QAM	Low Edge Carrier	Left	3 549.82	-37.83
			Right	3 585.08	-39.23
		High Edge Carrier	Left	3 549.23	-37.16
			Right	3 570.12	-38.02
256QAM	Low Edge Carrier	Left	3 549.53	-35.72	
		Right	3 585.08	-37.74	
	High Edge Carrier	Left	3 549.02	-37.69	
		Right	3 570.81	-38.77	

Note: 1C: 1 Carrier, 2C: 2 Carrier, 3C: 3 Carrier

**CBRS LTE[20 MHz 1C + (20 MHz 1C + 20 MHz 1C)][3C(1C+2C)]**

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low Edge Carrier	Left	3 679.21	-37.01
			Right	3 700.56	-37.82
		High Edge Carrier	Left	3 659.86	-36.77
			Right	3 700.92	-36.61
	16QAM	Low Edge Carrier	Left	3 679.90	-35.56
			Right	3 700.10	-35.63
		High Edge Carrier	Left	3 659.90	-37.07
			Right	3 700.10	-36.96
	64QAM	Low Edge Carrier	Left	3 679.55	-36.24
			Right	3 700.39	-36.12
		High Edge Carrier	Left	3 659.23	-36.97
			Right	3 700.12	-37.38
256QAM	Low Edge Carrier	Left	3 679.90	-36.64	
		Right	3 700.87	-35.34	
	High Edge Carrier	Left	3 659.90	-35.79	
		Right	3 700.10	-36.60	
1	QPSK	Low Edge Carrier	Left	3 679.82	-36.46
			Right	3 700.27	-35.50
		High Edge Carrier	Left	3 659.04	-36.91
			Right	3 700.62	-36.82
	16QAM	Low Edge Carrier	Left	3 679.84	-37.13
			Right	3 700.62	-31.91
		High Edge Carrier	Left	3 659.38	-36.23
			Right	3 700.98	-35.54
	64QAM	Low Edge Carrier	Left	3 679.40	-37.35
			Right	3 700.10	-34.87
		High Edge Carrier	Left	3 659.88	-35.99
			Right	3 700.92	-34.67
256QAM	Low Edge Carrier	Left	3 679.74	-36.52	
		Right	3 700.66	-34.26	
	High Edge Carrier	Left	3 659.04	-36.54	
		Right	3 700.10	-36.10	

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low Edge Carrier	Left	3 679.74	-38.48
			Right	3 700.10	-37.30
		High Edge Carrier	Left	3 659.86	-36.96
			Right	3 700.71	-37.82
	16QAM	Low Edge Carrier	Left	3 679.15	-36.11
			Right	3 700.12	-36.84
		High Edge Carrier	Left	3 659.74	-38.55
			Right	3 700.18	-37.26
	64QAM	Low Edge Carrier	Left	3 679.86	-35.72
			Right	3 700.37	-37.42
		High Edge Carrier	Left	3 659.90	-36.46
			Right	3 700.12	-35.96
256QAM	Low Edge Carrier	Left	3 679.90	-37.61	
		Right	3 700.14	-36.16	
	High Edge Carrier	Left	3 659.82	-37.28	
		Right	3 700.45	-38.15	
3	QPSK	Low Edge Carrier	Left	3 679.90	-36.79
			Right	3 700.10	-36.29
		High Edge Carrier	Left	3 659.65	-36.92
			Right	3 700.14	-37.22
	16QAM	Low Edge Carrier	Left	3 679.71	-35.03
			Right	3 700.31	-35.86
		High Edge Carrier	Left	3 659.57	-37.71
			Right	3 700.10	-35.43
	64QAM	Low Edge Carrier	Left	3 679.25	-34.20
			Right	3 700.31	-36.62
		High Edge Carrier	Left	3 659.50	-38.10
			Right	3 700.92	-37.20
256QAM	Low Edge Carrier	Left	3 679.13	-37.15	
		Right	3 700.52	-34.92	
	High Edge Carrier	Left	3 659.40	-37.88	
		Right	3 700.10	-35.84	

Note: 1C: 1 Carrier, 2C: 2 Carrier, 3C: 3 Carrier



**CBRS LTE[(20 MHz 1C + 20 MHz 1C) + 20 MHz 1C][3C(2C+1C)]**

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low Edge Carrier	Left	3 549.36	-36.50
			Right	3 590.10	-36.78
		High Edge Carrier	Left	3 549.78	-38.36
			Right	3 570.10	-38.32
	16QAM	Low Edge Carrier	Left	3 549.90	-37.03
			Right	3 590.98	-37.24
		High Edge Carrier	Left	3 549.84	-35.00
			Right	3 570.22	-36.57
	64QAM	Low Edge Carrier	Left	3 549.57	-37.27
			Right	3 590.22	-37.14
		High Edge Carrier	Left	3 549.76	-37.07
			Right	3 570.50	-35.78
256QAM	Low Edge Carrier	Left	3 549.15	-36.69	
		Right	3 590.12	-35.78	
	High Edge Carrier	Left	3 549.06	-36.07	
		Right	3 570.75	-37.64	
1	QPSK	Low Edge Carrier	Left	3 549.86	-34.54
			Right	3 590.29	-35.54
		High Edge Carrier	Left	3 549.82	-37.15
			Right	3 570.71	-35.51
	16QAM	Low Edge Carrier	Left	3 549.48	-38.94
			Right	3 590.77	-37.20
		High Edge Carrier	Left	3 549.23	-35.63
			Right	3 570.98	-35.90
	64QAM	Low Edge Carrier	Left	3 549.08	-35.96
			Right	3 590.52	-36.75
		High Edge Carrier	Left	3 549.71	-37.53
			Right	3 571.00	-35.52
256QAM	Low Edge Carrier	Left	3 549.67	-38.23	
		Right	3 590.12	-34.11	
	High Edge Carrier	Left	3 549.90	-36.06	
		Right	3 570.69	-36.45	

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low Edge Carrier	Left	3 549.48	-37.59
			Right	3 590.10	-38.60
		High Edge Carrier	Left	3 549.88	-39.35
			Right	3 570.10	-36.31
	16QAM	Low Edge Carrier	Left	3 549.48	-37.72
			Right	3 590.20	-36.20
		High Edge Carrier	Left	3 549.57	-38.54
			Right	3 570.37	-37.17
	64QAM	Low Edge Carrier	Left	3 549.50	-38.04
			Right	3 590.10	-36.50
		High Edge Carrier	Left	3 549.13	-36.34
			Right	3 570.27	-37.76
256QAM	Low Edge Carrier	Left	3 549.21	-37.18	
		Right	3 590.10	-38.32	
	High Edge Carrier	Left	3 549.78	-37.92	
		Right	3 570.79	-36.99	
3	QPSK	Low Edge Carrier	Left	3 549.48	-36.83
			Right	3 590.54	-38.93
		High Edge Carrier	Left	3 549.61	-37.98
			Right	3 570.98	-38.39
	16QAM	Low Edge Carrier	Left	3 549.27	-38.49
			Right	3 590.10	-36.45
		High Edge Carrier	Left	3 549.88	-36.55
			Right	3 570.12	-35.55
	64QAM	Low Edge Carrier	Left	3 549.90	-37.53
			Right	3 590.10	-36.86
		High Edge Carrier	Left	3 549.69	-37.41
			Right	3 570.18	-37.65
256QAM	Low Edge Carrier	Left	3 549.84	-37.18	
		Right	3 590.10	-36.76	
	High Edge Carrier	Left	3 549.78	-38.12	
		Right	3 570.12	-36.41	

Note: 1C: 1 Carrier, 2C: 2 Carrier, 3C: 3 Carrier

**CBRS LTE[20 MHz 1C + (20 MHz 1C + 20 MHz 1C + 20 MHz 1C)][4C(1C+3C)]**

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low Edge Carrier	Left	3 549.17	-38.23
			Right	3 570.41	-36.27
		High Edge Carrier	Left	3 639.63	-37.30
			Right	3 700.10	-35.73
	16QAM	Low Edge Carrier	Left	3 549.82	-35.73
			Right	3 570.71	-36.19
		High Edge Carrier	Left	3 639.19	-36.52
			Right	3 700.64	-36.73
	64QAM	Low Edge Carrier	Left	3 549.55	-35.68
			Right	3 570.10	-36.75
		High Edge Carrier	Left	3 639.90	-34.48
			Right	3 700.24	-36.95
256QAM	Low Edge Carrier	Left	3 549.36	-36.64	
		Right	3 570.62	-36.93	
	High Edge Carrier	Left	3 639.61	-36.88	
		Right	3 700.10	-34.61	
1	QPSK	Low Edge Carrier	Left	3 549.44	-37.80
			Right	3 570.87	-38.71
		High Edge Carrier	Left	3 639.71	-35.96
			Right	3 700.10	-34.73
	16QAM	Low Edge Carrier	Left	3 549.90	-35.00
			Right	3 570.90	-35.96
		High Edge Carrier	Left	3 639.17	-35.36
			Right	3 700.45	-35.77
	64QAM	Low Edge Carrier	Left	3 549.48	-35.97
			Right	3 570.75	-36.01
		High Edge Carrier	Left	3 639.80	-37.10
			Right	3 700.27	-34.83
256QAM	Low Edge Carrier	Left	3 549.32	-36.15	
		Right	3 570.27	-36.20	
	High Edge Carrier	Left	3 639.50	-35.68	
		Right	3 700.96	-35.33	

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low Edge Carrier	Left	3 549.50	-40.15
			Right	3 570.79	-37.44
		High Edge Carrier	Left	3 639.02	-38.40
			Right	3 700.27	-37.46
	16QAM	Low Edge Carrier	Left	3 549.53	-37.39
			Right	3 570.81	-37.76
		High Edge Carrier	Left	3 639.90	-37.22
			Right	3 700.83	-36.75
	64QAM	Low Edge Carrier	Left	3 549.80	-36.70
			Right	3 570.27	-37.24
		High Edge Carrier	Left	3 639.19	-36.87
			Right	3 700.73	-37.86
256QAM	Low Edge Carrier	Left	3 549.88	-37.79	
		Right	3 570.31	-38.50	
	High Edge Carrier	Left	3 639.90	-37.95	
		Right	3 700.48	-38.10	
3	QPSK	Low Edge Carrier	Left	3 549.90	-38.23
			Right	3 570.12	-38.53
		High Edge Carrier	Left	3 639.90	-37.53
			Right	3 700.56	-36.97
	16QAM	Low Edge Carrier	Left	3 549.90	-37.99
			Right	3 570.64	-37.95
		High Edge Carrier	Left	3 639.36	-37.17
			Right	3 700.10	-36.31
	64QAM	Low Edge Carrier	Left	3 549.90	-37.58
			Right	3 570.14	-35.14
		High Edge Carrier	Left	3 639.71	-36.64
			Right	3 700.50	-35.92
256QAM	Low Edge Carrier	Left	3 549.65	-37.52	
		Right	3 570.16	-37.54	
	High Edge Carrier	Left	3 639.88	-37.66	
		Right	3 700.45	-36.71	

Note: 1C: 1 Carrier, 3C: 3 Carrier, 4C: 4 Carrier

**CBRS LTE[(20 MHz 1C + 20 MHz 1C + 20 MHz 1C) + 20 MHz 1C][4C(3C+1C)]**

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low Edge Carrier	Left	3 549.74	-36.66
			Right	3 610.98	-35.87
		High Edge Carrier	Left	3 679.90	-36.11
			Right	3 700.41	-36.26
	16QAM	Low Edge Carrier	Left	3 549.21	-39.65
			Right	3 610.33	-35.95
		High Edge Carrier	Left	3 679.74	-37.04
			Right	3 700.79	-36.97
	64QAM	Low Edge Carrier	Left	3 549.90	-36.80
			Right	3 610.79	-38.29
		High Edge Carrier	Left	3 679.57	-37.38
			Right	3 700.90	-36.67
256QAM	Low Edge Carrier	Left	3 549.53	-37.36	
		Right	3 610.94	-37.39	
	High Edge Carrier	Left	3 679.67	-38.36	
		Right	3 700.10	-36.58	
1	QPSK	Low Edge Carrier	Left	3 549.69	-36.25
			Right	3 610.50	-37.24
		High Edge Carrier	Left	3 679.08	-36.01
			Right	3 700.24	-33.26
	16QAM	Low Edge Carrier	Left	3 549.67	-37.56
			Right	3 610.10	-34.30
		High Edge Carrier	Left	3 679.88	-37.24
			Right	3 700.98	-36.60
	64QAM	Low Edge Carrier	Left	3 549.50	-39.01
			Right	3 610.66	-35.98
		High Edge Carrier	Left	3 679.88	-34.69
			Right	3 700.66	-37.46
256QAM	Low Edge Carrier	Left	3 549.34	-37.28	
		Right	3 610.58	-37.50	
	High Edge Carrier	Left	3 679.78	-37.64	
		Right	3 700.35	-36.67	

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low Edge Carrier	Left	3 549.36	-38.52
			Right	3 610.20	-37.15
		High Edge Carrier	Left	3 679.55	-37.77
			Right	3 700.12	-37.08
	16QAM	Low Edge Carrier	Left	3 549.50	-39.69
			Right	3 610.81	-38.88
		High Edge Carrier	Left	3 679.63	-39.78
			Right	3 700.10	-38.44
	64QAM	Low Edge Carrier	Left	3 549.80	-36.47
			Right	3 610.10	-38.54
		High Edge Carrier	Left	3 679.46	-39.36
			Right	3 700.31	-37.07
256QAM	Low Edge Carrier	Left	3 549.23	-39.76	
		Right	3 610.27	-38.66	
	High Edge Carrier	Left	3 679.61	-38.41	
		Right	3 700.27	-37.91	
3	QPSK	Low Edge Carrier	Left	3 549.78	-39.46
			Right	3 610.20	-37.85
		High Edge Carrier	Left	3 679.90	-36.58
			Right	3 700.37	-33.18
	16QAM	Low Edge Carrier	Left	3 549.57	-38.31
			Right	3 610.29	-38.55
		High Edge Carrier	Left	3 679.48	-36.43
			Right	3 700.96	-36.18
	64QAM	Low Edge Carrier	Left	3 549.36	-39.60
			Right	3 610.10	-37.20
		High Edge Carrier	Left	3 679.63	-36.64
			Right	3 700.10	-35.66
256QAM	Low Edge Carrier	Left	3 549.08	-37.36	
		Right	3 610.45	-37.24	
	High Edge Carrier	Left	3 679.88	-38.52	
		Right	3 700.29	-38.11	

Note: 1C: 1 Carrier, 3C: 3 Carrier, 4C: 4 Carrier

**CBRS LTE[15 MHz 1C + (15 MHz 1C + 15 MHz 1C + 15 MHz 1C + 10 MHz 1C)][5C(1C+4C)]**

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low Edge Carrier	Left	3 549.46	-38.77
			Right	3 565.89	-38.86
		High Edge Carrier	Left	3 644.59	-38.03
			Right	3 700.78	-39.87
	16QAM	Low Edge Carrier	Left	3 549.93	-38.87
			Right	3 565.78	-36.57
		High Edge Carrier	Left	3 644.93	-37.21
			Right	3 700.92	-39.93
	64QAM	Low Edge Carrier	Left	3 549.42	-38.79
			Right	3 565.76	-38.40
		High Edge Carrier	Left	3 644.91	-36.62
			Right	3 700.59	-38.23
256QAM	Low Edge Carrier	Left	3 549.46	-38.86	
		Right	3 565.73	-38.23	
	High Edge Carrier	Left	3 644.85	-36.59	
		Right	3 700.29	-38.91	
1	QPSK	Low Edge Carrier	Left	3 549.85	-38.27
			Right	3 565.10	-36.80
		High Edge Carrier	Left	3 644.43	-38.60
			Right	3 700.58	-38.50
	16QAM	Low Edge Carrier	Left	3 549.32	-37.43
			Right	3 565.33	-35.13
		High Edge Carrier	Left	3 644.10	-37.54
			Right	3 700.13	-39.45
	64QAM	Low Edge Carrier	Left	3 549.45	-36.60
			Right	3 565.12	-37.45
		High Edge Carrier	Left	3 644.85	-36.77
			Right	3 700.05	-36.89
256QAM	Low Edge Carrier	Left	3 549.77	-37.74	
		Right	3 565.17	-38.15	
	High Edge Carrier	Left	3 644.93	-35.14	
		Right	3 700.69	-38.47	

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low Edge Carrier	Left	3 549.45	-39.39
			Right	3 565.36	-40.16
		High Edge Carrier	Left	3 644.16	-39.08
			Right	3 700.32	-40.80
	16QAM	Low Edge Carrier	Left	3 549.93	-36.29
			Right	3 565.42	-37.50
		High Edge Carrier	Left	3 644.50	-38.18
			Right	3 700.05	-39.05
	64QAM	Low Edge Carrier	Left	3 549.93	-37.82
			Right	3 565.30	-38.25
		High Edge Carrier	Left	3 644.19	-38.51
			Right	3 700.05	-38.85
256QAM	Low Edge Carrier	Left	3 549.91	-37.15	
		Right	3 565.54	-38.80	
	High Edge Carrier	Left	3 644.54	-37.77	
		Right	3 700.95	-39.01	
3	QPSK	Low Edge Carrier	Left	3 549.86	-38.23
			Right	3 565.09	-39.52
		High Edge Carrier	Left	3 644.75	-38.99
			Right	3 700.80	-39.12
	16QAM	Low Edge Carrier	Left	3 549.80	-37.64
			Right	3 565.08	-37.68
		High Edge Carrier	Left	3 644.30	-37.73
			Right	3 700.30	-37.64
	64QAM	Low Edge Carrier	Left	3 549.74	-40.37
			Right	3 565.55	-38.58
		High Edge Carrier	Left	3 644.46	-38.64
			Right	3 700.05	-38.13
256QAM	Low Edge Carrier	Left	3 549.21	-38.42	
		Right	3 565.09	-38.31	
	High Edge Carrier	Left	3 644.11	-37.75	
		Right	3 700.05	-37.86	

Note: 1C: 1 Carrier, 4C: 4 Carrier, 5C: 5 Carrier



**CBRS LTE[(15 MHz 1C + 15 MHz 1C + 15 MHz 1C + 15 MHz 1C) + 10 MHz 1C][5C(4C+1C)]**

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low Edge Carrier	Left	3 549.00	-40.52
			Right	3 610.08	-38.08
		High Edge Carrier	Left	3 689.22	-39.41
			Right	3 700.05	-38.15
	16QAM	Low Edge Carrier	Left	3 549.22	-37.05
			Right	3 610.10	-37.40
		High Edge Carrier	Left	3 689.95	-37.95
			Right	3 700.05	-36.42
	64QAM	Low Edge Carrier	Left	3 549.93	-38.92
			Right	3 610.84	-36.86
		High Edge Carrier	Left	3 689.95	-39.03
			Right	3 700.21	-39.02
256QAM	Low Edge Carrier	Left	3 549.70	-38.81	
		Right	3 610.12	-37.62	
	High Edge Carrier	Left	3 689.61	-39.53	
		Right	3 700.34	-39.00	
1	QPSK	Low Edge Carrier	Left	3 549.77	-39.28
			Right	3 610.08	-37.07
		High Edge Carrier	Left	3 689.59	-39.02
			Right	3 700.18	-36.66
	16QAM	Low Edge Carrier	Left	3 549.19	-36.91
			Right	3 610.33	-35.46
		High Edge Carrier	Left	3 689.42	-40.06
			Right	3 700.20	-38.10
	64QAM	Low Edge Carrier	Left	3 549.08	-36.98
			Right	3 610.58	-37.71
		High Edge Carrier	Left	3 689.00	-38.81
			Right	3 700.81	-37.32
256QAM	Low Edge Carrier	Left	3 549.42	-37.04	
		Right	3 610.08	-36.83	
	High Edge Carrier	Left	3 689.18	-39.10	
		Right	3 700.74	-38.37	

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low Edge Carrier	Left	3 549.32	-39.80
			Right	3 610.52	-38.89
		High Edge Carrier	Left	3 689.95	-40.85
			Right	3 700.05	-39.88
	16QAM	Low Edge Carrier	Left	3 549.93	-38.39
			Right	3 610.08	-37.57
		High Edge Carrier	Left	3 689.42	-39.73
			Right	3 700.33	-40.64
	64QAM	Low Edge Carrier	Left	3 549.90	-39.19
			Right	3 610.12	-39.02
		High Edge Carrier	Left	3 689.95	-38.11
			Right	3 701.00	-40.39
256QAM	Low Edge Carrier	Left	3 549.91	-38.99	
		Right	3 610.82	-38.18	
	High Edge Carrier	Left	3 689.95	-41.22	
		Right	3 700.05	-39.27	
3	QPSK	Low Edge Carrier	Left	3 549.53	-40.15
			Right	3 610.98	-38.75
		High Edge Carrier	Left	3 689.08	-40.25
			Right	3 700.05	-38.12
	16QAM	Low Edge Carrier	Left	3 549.75	-39.01
			Right	3 610.82	-38.65
		High Edge Carrier	Left	3 689.95	-37.89
			Right	3 700.05	-39.81
	64QAM	Low Edge Carrier	Left	3 549.11	-39.46
			Right	3 610.09	-36.71
		High Edge Carrier	Left	3 689.87	-39.37
			Right	3 700.08	-38.99
256QAM	Low Edge Carrier	Left	3 549.77	-37.70	
		Right	3 610.71	-39.01	
	High Edge Carrier	Left	3 689.83	-39.54	
		Right	3 700.62	-36.57	

Note: 1C: 1 Carrier, 4C: 4 Carrier, 5C: 5 Carrier

**CBRS LTE[20 MHz 1C + (20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 10 MHz 1C)][5C(1C+4C)]**

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low Edge Carrier	Left	3 549.25	-38.81
			Right	3 570.66	-37.76
		High Edge Carrier	Left	3 629.53	-38.32
			Right	3 700.60	-38.52
	16QAM	Low Edge Carrier	Left	3 549.42	-38.58
			Right	3 570.79	-36.82
		High Edge Carrier	Left	3 629.36	-38.12
			Right	3 700.05	-38.79
	64QAM	Low Edge Carrier	Left	3 549.59	-37.67
			Right	3 570.81	-39.40
		High Edge Carrier	Left	3 629.15	-38.98
			Right	3 700.12	-40.29
256QAM	Low Edge Carrier	Left	3 549.59	-39.29	
		Right	3 570.90	-37.90	
	High Edge Carrier	Left	3 629.88	-37.57	
		Right	3 700.91	-40.03	
1	QPSK	Low Edge Carrier	Left	3 549.90	-37.83
			Right	3 570.31	-35.31
		High Edge Carrier	Left	3 629.42	-35.55
			Right	3 700.47	-39.67
	16QAM	Low Edge Carrier	Left	3 549.08	-36.18
			Right	3 570.77	-36.60
		High Edge Carrier	Left	3 629.74	-36.35
			Right	3 700.43	-39.66
	64QAM	Low Edge Carrier	Left	3 549.23	-36.32
			Right	3 570.41	-36.31
		High Edge Carrier	Left	3 629.84	-37.35
			Right	3 700.58	-38.33
256QAM	Low Edge Carrier	Left	3 549.59	-39.29	
		Right	3 570.16	-37.12	
	High Edge Carrier	Left	3 629.76	-37.03	
		Right	3 700.05	-37.69	

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low Edge Carrier	Left	3 549.71	-40.81
			Right	3 570.10	-37.08
		High Edge Carrier	Left	3 629.82	-37.61
			Right	3 700.05	-41.61
	16QAM	Low Edge Carrier	Left	3 549.15	-39.06
			Right	3 570.12	-38.10
		High Edge Carrier	Left	3 629.17	-39.52
			Right	3 700.10	-41.27
	64QAM	Low Edge Carrier	Left	3 549.11	-39.67
			Right	3 570.52	-37.34
		High Edge Carrier	Left	3 629.78	-39.30
			Right	3 700.51	-40.47
256QAM	Low Edge Carrier	Left	3 549.21	-38.63	
		Right	3 570.18	-37.81	
	High Edge Carrier	Left	3 629.04	-38.13	
		Right	3 700.05	-38.82	
3	QPSK	Low Edge Carrier	Left	3 549.02	-37.93
			Right	3 570.66	-39.27
		High Edge Carrier	Left	3 629.57	-39.09
			Right	3 700.59	-38.83
	16QAM	Low Edge Carrier	Left	3 549.90	-37.81
			Right	3 570.56	-39.24
		High Edge Carrier	Left	3 629.40	-37.49
			Right	3 700.63	-40.00
	64QAM	Low Edge Carrier	Left	3 549.88	-38.97
			Right	3 570.75	-38.07
		High Edge Carrier	Left	3 629.04	-39.25
			Right	3 700.64	-39.81
256QAM	Low Edge Carrier	Left	3 549.90	-39.08	
		Right	3 570.39	-38.09	
	High Edge Carrier	Left	3 629.86	-37.05	
		Right	3 700.43	-40.02	

Note: 1C: 1 Carrier, 4C: 4 Carrier, 5C: 5 Carrier

**CBRS LTE[(20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C) + 10 MHz 1C][5C(4C+1C)]**

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low Edge Carrier	Left	3 549.55	-37.79
			Right	3 630.43	-35.74
		High Edge Carrier	Left	3 689.42	-39.31
			Right	3 700.56	-38.29
	16QAM	Low Edge Carrier	Left	3 549.08	-35.70
			Right	3 630.10	-34.65
		High Edge Carrier	Left	3 689.24	-39.73
			Right	3 700.05	-39.74
	64QAM	Low Edge Carrier	Left	3 549.00	-38.20
			Right	3 630.90	-37.19
		High Edge Carrier	Left	3 689.26	-41.02
			Right	3 700.52	-39.74
256QAM	Low Edge Carrier	Left	3 549.19	-39.09	
		Right	3 630.64	-37.35	
	High Edge Carrier	Left	3 689.95	-39.10	
		Right	3 700.20	-37.74	
1	QPSK	Low Edge Carrier	Left	3 549.48	-37.49
			Right	3 630.69	-36.28
		High Edge Carrier	Left	3 689.84	-38.21
			Right	3 700.58	-39.21
	16QAM	Low Edge Carrier	Left	3 549.06	-35.52
			Right	3 630.43	-36.34
		High Edge Carrier	Left	3 689.95	-38.09
			Right	3 700.21	-38.06
	64QAM	Low Edge Carrier	Left	3 549.44	-35.97
			Right	3 631.00	-36.09
		High Edge Carrier	Left	3 689.94	-39.13
			Right	3 700.54	-39.65
256QAM	Low Edge Carrier	Left	3 549.13	-37.74	
		Right	3 630.69	-37.40	
	High Edge Carrier	Left	3 689.34	-39.17	
		Right	3 700.09	-38.98	

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low Edge Carrier	Left	3 549.86	-38.11
			Right	3 630.81	-38.54
		High Edge Carrier	Left	3 689.86	-41.03
			Right	3 700.05	-39.47
	16QAM	Low Edge Carrier	Left	3 549.44	-39.11
			Right	3 630.10	-38.59
		High Edge Carrier	Left	3 689.36	-41.03
			Right	3 700.05	-39.35
	64QAM	Low Edge Carrier	Left	3 549.90	-40.08
			Right	3 630.48	-39.86
		High Edge Carrier	Left	3 689.95	-38.31
			Right	3 700.05	-39.83
256QAM	Low Edge Carrier	Left	3 549.90	-38.49	
		Right	3 630.27	-39.46	
	High Edge Carrier	Left	3 689.35	-42.11	
		Right	3 700.69	-40.81	
3	QPSK	Low Edge Carrier	Left	3 549.63	-38.31
			Right	3 630.24	-37.09
		High Edge Carrier	Left	3 689.66	-39.07
			Right	3 700.05	-38.97
	16QAM	Low Edge Carrier	Left	3 549.27	-39.21
			Right	3 630.29	-38.47
		High Edge Carrier	Left	3 689.65	-39.31
			Right	3 700.73	-39.51
	64QAM	Low Edge Carrier	Left	3 549.74	-39.75
			Right	3 630.41	-37.15
		High Edge Carrier	Left	3 689.45	-40.00
			Right	3 700.16	-39.62
256QAM	Low Edge Carrier	Left	3 549.02	-38.11	
		Right	3 630.10	-37.38	
	High Edge Carrier	Left	3 689.95	-40.18	
		Right	3 700.05	-38.81	

Note: 1C: 1 Carrier, 4C: 4 Carrier, 5C: 5 Carrier

**CBRS LTE[20 MHz 1C + (20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C)][5C(1C+4C)]**

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low Edge Carrier	Left	3 549.34	-37.99
			Right	3 570.48	-37.08
		High Edge Carrier	Left	3 619.27	-38.38
			Right	3 700.18	-37.14
	16QAM	Low Edge Carrier	Left	3 549.86	-37.78
			Right	3 570.22	-35.86
		High Edge Carrier	Left	3 619.76	-37.62
			Right	3 700.62	-38.29
	64QAM	Low Edge Carrier	Left	3 549.25	-38.12
			Right	3 570.27	-36.42
		High Edge Carrier	Left	3 619.23	-38.77
			Right	3 700.87	-38.04
256QAM	Low Edge Carrier	Left	3 549.57	-38.35	
		Right	3 571.00	-37.63	
	High Edge Carrier	Left	3 619.69	-37.84	
		Right	3 700.98	-36.89	
1	QPSK	Low Edge Carrier	Left	3 549.44	-37.53
			Right	3 570.83	-37.06
		High Edge Carrier	Left	3 619.84	-38.16
			Right	3 700.22	-38.28
	16QAM	Low Edge Carrier	Left	3 549.53	-36.56
			Right	3 570.14	-36.78
		High Edge Carrier	Left	3 619.40	-37.03
			Right	3 700.81	-37.14
	64QAM	Low Edge Carrier	Left	3 549.13	-36.85
			Right	3 570.87	-39.37
		High Edge Carrier	Left	3 619.71	-38.05
			Right	3 700.33	-38.33
256QAM	Low Edge Carrier	Left	3 549.61	-38.28	
		Right	3 570.43	-36.45	
	High Edge Carrier	Left	3 619.78	-37.68	
		Right	3 700.48	-35.40	

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low Edge Carrier	Left	3 549.46	-40.35
			Right	3 570.24	-40.28
		High Edge Carrier	Left	3 619.86	-37.55
			Right	3 700.33	-39.99
	16QAM	Low Edge Carrier	Left	3 549.84	-38.86
			Right	3 570.66	-38.11
		High Edge Carrier	Left	3 619.78	-37.79
			Right	3 700.22	-38.60
	64QAM	Low Edge Carrier	Left	3 549.44	-38.24
			Right	3 570.10	-39.16
		High Edge Carrier	Left	3 619.78	-38.88
			Right	3 700.16	-39.07
256QAM	Low Edge Carrier	Left	3 549.50	-37.78	
		Right	3 570.81	-39.08	
	High Edge Carrier	Left	3 619.88	-39.15	
		Right	3 700.79	-38.25	
3	QPSK	Low Edge Carrier	Left	3 549.90	-39.67
			Right	3 570.12	-37.57
		High Edge Carrier	Left	3 619.90	-37.89
			Right	3 700.20	-37.02
	16QAM	Low Edge Carrier	Left	3 549.42	-39.31
			Right	3 570.16	-37.86
		High Edge Carrier	Left	3 619.46	-38.32
			Right	3 700.12	-37.95
	64QAM	Low Edge Carrier	Left	3 549.80	-40.30
			Right	3 570.18	-39.70
		High Edge Carrier	Left	3 619.78	-38.61
			Right	3 700.10	-37.21
256QAM	Low Edge Carrier	Left	3 549.90	-39.25	
		Right	3 570.31	-37.93	
	High Edge Carrier	Left	3 619.86	-39.61	
		Right	3 700.94	-37.92	

Note: 1C: 1 Carrier, 4C: 4 Carrier, 5C: 5 Carrier



**CBRS LTE[(20 MHz 1C + 20 MHz 1C + 20 MHz 1C + 20 MHz 1C) + 20 MHz 1C][5C(4C+1C)]**

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low Edge Carrier	Left	3 549.76	-35.83
			Right	3 630.43	-36.08
		High Edge Carrier	Left	3 679.90	-37.03
			Right	3 700.33	-36.60
	16QAM	Low Edge Carrier	Left	3 549.90	-37.78
			Right	3 630.14	-37.39
		High Edge Carrier	Left	3 679.21	-37.09
			Right	3 700.52	-36.96
	64QAM	Low Edge Carrier	Left	3 549.69	-36.95
			Right	3 630.10	-37.49
		High Edge Carrier	Left	3 679.88	-37.22
			Right	3 700.45	-36.21
256QAM	Low Edge Carrier	Left	3 549.46	-37.36	
		Right	3 630.58	-36.81	
	High Edge Carrier	Left	3 679.21	-37.37	
		Right	3 700.41	-37.84	
1	QPSK	Low Edge Carrier	Left	3 549.42	-37.17
			Right	3 630.20	-36.86
		High Edge Carrier	Left	3 679.90	-37.58
			Right	3 700.39	-35.35
	16QAM	Low Edge Carrier	Left	3 549.74	-37.20
			Right	3 630.27	-37.21
		High Edge Carrier	Left	3 679.11	-38.42
			Right	3 700.98	-33.91
	64QAM	Low Edge Carrier	Left	3 549.44	-35.87
			Right	3 630.10	-37.27
		High Edge Carrier	Left	3 679.61	-38.50
			Right	3 700.54	-37.12
256QAM	Low Edge Carrier	Left	3 549.59	-36.28	
		Right	3 630.58	-36.59	
	High Edge Carrier	Left	3 679.29	-37.71	
		Right	3 700.18	-36.97	

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low Edge Carrier	Left	3 549.90	-37.50
			Right	3 630.98	-37.76
		High Edge Carrier	Left	3 679.00	-39.87
			Right	3 700.18	-37.97
	16QAM	Low Edge Carrier	Left	3 549.34	-36.93
			Right	3 630.73	-39.22
		High Edge Carrier	Left	3 679.29	-38.85
			Right	3 700.41	-38.36
	64QAM	Low Edge Carrier	Left	3 549.15	-39.51
			Right	3 630.18	-39.85
		High Edge Carrier	Left	3 679.36	-39.40
			Right	3 700.10	-39.13
256QAM	Low Edge Carrier	Left	3 549.40	-38.99	
		Right	3 630.10	-37.83	
	High Edge Carrier	Left	3 679.44	-39.19	
		Right	3 700.18	-38.10	
3	QPSK	Low Edge Carrier	Left	3 549.29	-37.68
			Right	3 630.48	-37.59
		High Edge Carrier	Left	3 679.34	-38.22
			Right	3 700.43	-37.56
	16QAM	Low Edge Carrier	Left	3 549.88	-37.53
			Right	3 630.12	-38.57
		High Edge Carrier	Left	3 679.00	-37.73
			Right	3 700.22	-36.03
	64QAM	Low Edge Carrier	Left	3 549.71	-39.60
			Right	3 630.10	-36.19
		High Edge Carrier	Left	3 679.86	-36.80
			Right	3 700.75	-38.37
256QAM	Low Edge Carrier	Left	3 549.74	-40.87	
		Right	3 630.83	-37.28	
	High Edge Carrier	Left	3 679.42	-38.53	
		Right	3 700.16	-37.50	

Note: 1C: 1 Carrier, 4C: 4 Carrier, 5C: 5 Carrier

**CBRS NR 40 MHz 1C + (NR 20 MHz 1C + NR 20 MHz 1C + LTE 10 MHz 1C + LTE 10 MHz 1C)5C(1C+4C)]**

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low Edge Carrier	Left	3 549.80	-33.29
			Right	3 590.80	-34.36
		High Edge Carrier	Left	3 639.90	-35.84
			Right	3 700.18	-38.68
	16QAM	Low Edge Carrier	Left	3 549.57	-35.57
			Right	3 590.51	-34.81
		High Edge Carrier	Left	3 639.90	-36.00
			Right	3 700.05	-38.25
	64QAM	Low Edge Carrier	Left	3 549.80	-32.12
			Right	3 590.26	-33.22
		High Edge Carrier	Left	3 639.90	-33.38
			Right	3 700.41	-39.68
256QAM	Low Edge Carrier	Left	3 549.80	-32.20	
		Right	3 590.20	-32.33	
	High Edge Carrier	Left	3 639.65	-37.51	
		Right	3 700.05	-37.49	
1	QPSK	Low Edge Carrier	Left	3 549.74	-33.45
			Right	3 590.20	-30.77
		High Edge Carrier	Left	3 639.90	-35.66
			Right	3 700.63	-39.64
	16QAM	Low Edge Carrier	Left	3 549.21	-34.29
			Right	3 590.20	-32.47
		High Edge Carrier	Left	3 639.88	-37.47
			Right	3 700.48	-38.39
	64QAM	Low Edge Carrier	Left	3 549.80	-31.88
			Right	3 590.20	-33.00
		High Edge Carrier	Left	3 639.42	-38.80
			Right	3 700.70	-37.76
256QAM	Low Edge Carrier	Left	3 549.80	-34.63	
		Right	3 590.47	-33.99	
	High Edge Carrier	Left	3 639.90	-36.99	
		Right	3 700.07	-37.36	

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low Edge Carrier	Left	3 549.80	-32.19
			Right	3 590.20	-29.77
		High Edge Carrier	Left	3 639.88	-36.84
			Right	3 700.10	-40.16
	16QAM	Low Edge Carrier	Left	3 549.80	-33.96
			Right	3 590.20	-31.60
		High Edge Carrier	Left	3 639.44	-37.82
			Right	3 700.21	-38.78
	64QAM	Low Edge Carrier	Left	3 549.80	-35.51
			Right	3 590.30	-35.45
		High Edge Carrier	Left	3 639.90	-36.32
			Right	3 700.22	-40.04
256QAM	Low Edge Carrier	Left	3 549.80	-30.90	
		Right	3 590.63	-35.04	
	High Edge Carrier	Left	3 639.90	-36.55	
		Right	3 700.22	-40.16	
3	QPSK	Low Edge Carrier	Left	3 549.80	-31.69
			Right	3 590.22	-32.95
		High Edge Carrier	Left	3 639.90	-35.77
			Right	3 700.05	-38.44
	16QAM	Low Edge Carrier	Left	3 549.80	-32.59
			Right	3 590.20	-29.42
		High Edge Carrier	Left	3 639.90	-35.53
			Right	3 700.86	-38.49
	64QAM	Low Edge Carrier	Left	3 549.80	-33.68
			Right	3 590.22	-32.43
		High Edge Carrier	Left	3 639.90	-36.73
			Right	3 700.08	-37.70
256QAM	Low Edge Carrier	Left	3 549.04	-35.30	
		Right	3 590.20	-32.00	
	High Edge Carrier	Left	3 639.90	-37.19	
		Right	3 700.05	-37.29	

Note: 1C: 1 Carrier, 4C: 4 Carrier, 5C: 5 Carrier

**CBRS (NR 40 MHz 1C + NR 20 MHz 1C + NR 20 MHz 1C + LTE 10 MHz 1C) + LTE 10 MHz 1C[5C(4C+1C)]**

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low Edge Carrier	Left	3 549.80	-29.09
			Right	3 640.05	-37.97
		High Edge Carrier	Left	3 689.91	-37.99
			Right	3 700.59	-38.77
	16QAM	Low Edge Carrier	Left	3 549.74	-33.56
			Right	3 640.05	-39.83
		High Edge Carrier	Left	3 689.95	-38.22
			Right	3 700.05	-39.42
	64QAM	Low Edge Carrier	Left	3 549.80	-28.57
			Right	3 640.05	-38.59
		High Edge Carrier	Left	3 689.11	-38.63
			Right	3 700.34	-38.83
256QAM	Low Edge Carrier	Left	3 549.80	-32.31	
		Right	3 640.05	-39.01	
	High Edge Carrier	Left	3 689.90	-38.82	
		Right	3 700.59	-39.49	
1	QPSK	Low Edge Carrier	Left	3 549.80	-28.46
			Right	3 640.55	-38.83
		High Edge Carrier	Left	3 689.76	-38.88
			Right	3 700.59	-39.39
	16QAM	Low Edge Carrier	Left	3 549.80	-34.22
			Right	3 640.88	-39.38
		High Edge Carrier	Left	3 689.89	-38.16
			Right	3 700.13	-39.39
	64QAM	Low Edge Carrier	Left	3 549.80	-31.44
			Right	3 640.62	-38.57
		High Edge Carrier	Left	3 689.67	-39.21
			Right	3 700.92	-38.45
256QAM	Low Edge Carrier	Left	3 549.80	-30.84	
		Right	3 640.32	-38.71	
	High Edge Carrier	Left	3 689.70	-39.17	
		Right	3 701.00	-38.34	

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low Edge Carrier	Left	3 549.80	-34.02
			Right	3 640.87	-40.52
		High Edge Carrier	Left	3 689.87	-39.20
			Right	3 700.81	-39.12
	16QAM	Low Edge Carrier	Left	3 549.80	-32.08
			Right	3 640.05	-40.01
		High Edge Carrier	Left	3 689.83	-40.79
			Right	3 700.52	-40.13
	64QAM	Low Edge Carrier	Left	3 549.80	-32.08
			Right	3 640.05	-39.37
		High Edge Carrier	Left	3 689.52	-41.15
			Right	3 700.26	-38.71
256QAM	Low Edge Carrier	Left	3 549.80	-31.79	
		Right	3 640.05	-40.02	
	High Edge Carrier	Left	3 689.95	-39.20	
		Right	3 700.09	-39.23	
3	QPSK	Low Edge Carrier	Left	3 549.80	-31.59
			Right	3 640.13	-40.20
		High Edge Carrier	Left	3 689.95	-38.37
			Right	3 700.11	-39.32
	16QAM	Low Edge Carrier	Left	3 549.80	-31.95
			Right	3 640.95	-39.87
		High Edge Carrier	Left	3 689.95	-40.15
			Right	3 700.36	-38.99
	64QAM	Low Edge Carrier	Left	3 549.80	-33.39
			Right	3 640.45	-39.84
		High Edge Carrier	Left	3 689.95	-40.48
			Right	3 700.29	-39.90
256QAM	Low Edge Carrier	Left	3 549.80	-33.79	
		Right	3 640.38	-40.41	
	High Edge Carrier	Left	3 689.89	-38.77	
		Right	3 700.13	-38.17	

Note: 1C: 1 Carrier, 4C: 4 Carrier, 5C: 5 Carrier

**CBRS NR 40 MHz 1C + (NR 10 MHz 1C + LTE 20 MHz 1C + LTE 5 MHz 1C + LTE 5 MHz 1C)[5C(1C+4C)]**

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low Edge Carrier	Left	3 549.70	-32.71
			Right	3 590.20	-31.89
		High Edge Carrier	Left	3 659.46	-38.85
			Right	3 700.03	-40.34
	16QAM	Low Edge Carrier	Left	3 549.80	-33.83
			Right	3 590.20	-30.06
		High Edge Carrier	Left	3 659.84	-38.43
			Right	3 700.03	-38.51
	64QAM	Low Edge Carrier	Left	3 549.80	-30.13
			Right	3 590.20	-29.70
		High Edge Carrier	Left	3 659.95	-38.30
			Right	3 700.32	-40.28
256QAM	Low Edge Carrier	Left	3 549.80	-30.93	
		Right	3 590.47	-33.97	
	High Edge Carrier	Left	3 659.95	-38.61	
		Right	3 700.03	-40.30	
1	QPSK	Low Edge Carrier	Left	3 549.80	-33.63
			Right	3 590.22	-32.04
		High Edge Carrier	Left	3 659.92	-38.72
			Right	3 700.03	-39.55
	16QAM	Low Edge Carrier	Left	3 549.74	-36.23
			Right	3 590.20	-28.38
		High Edge Carrier	Left	3 659.95	-37.67
			Right	3 700.03	-40.35
	64QAM	Low Edge Carrier	Left	3 549.80	-31.92
			Right	3 590.51	-32.43
		High Edge Carrier	Left	3 659.70	-37.49
			Right	3 700.03	-40.22
256QAM	Low Edge Carrier	Left	3 549.78	-33.67	
		Right	3 590.20	-29.25	
	High Edge Carrier	Left	3 659.89	-38.40	
		Right	3 700.32	-41.12	

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low Edge Carrier	Left	3 549.80	-31.60
			Right	3 590.20	-29.27
		High Edge Carrier	Left	3 659.43	-40.22
			Right	3 700.03	-38.91
	16QAM	Low Edge Carrier	Left	3 549.80	-32.22
			Right	3 590.20	-31.13
		High Edge Carrier	Left	3 659.66	-39.85
			Right	3 700.03	-41.06
	64QAM	Low Edge Carrier	Left	3 549.80	-31.16
			Right	3 590.20	-29.74
		High Edge Carrier	Left	3 659.94	-38.75
			Right	3 700.34	-42.49
256QAM	Low Edge Carrier	Left	3 549.80	-32.68	
		Right	3 590.20	-29.71	
	High Edge Carrier	Left	3 659.95	-38.31	
		Right	3 700.03	-39.89	
3	QPSK	Low Edge Carrier	Left	3 549.80	-30.34
			Right	3 590.20	-32.42
		High Edge Carrier	Left	3 659.95	-38.68
			Right	3 700.03	-40.30
	16QAM	Low Edge Carrier	Left	3 549.57	-32.98
			Right	3 590.20	-29.61
		High Edge Carrier	Left	3 659.95	-38.48
			Right	3 700.04	-41.16
	64QAM	Low Edge Carrier	Left	3 549.80	-32.60
			Right	3 590.20	-32.57
		High Edge Carrier	Left	3 659.95	-39.48
			Right	3 700.08	-41.01
256QAM	Low Edge Carrier	Left	3 549.74	-30.30	
		Right	3 590.20	-27.16	
	High Edge Carrier	Left	3 659.95	-34.94	
		Right	3 700.03	-37.80	

Note: 1C: 1 Carrier, 4C: 4 Carrier, 5C: 5 Carrier



**CBRS (NR 40 MHz 1C + NR 10 MHz 1C + LTE 20 MHz 1C + LTE 5 MHz 1C) + LTE 5 MHz 1C[5C(4C+1C)]**

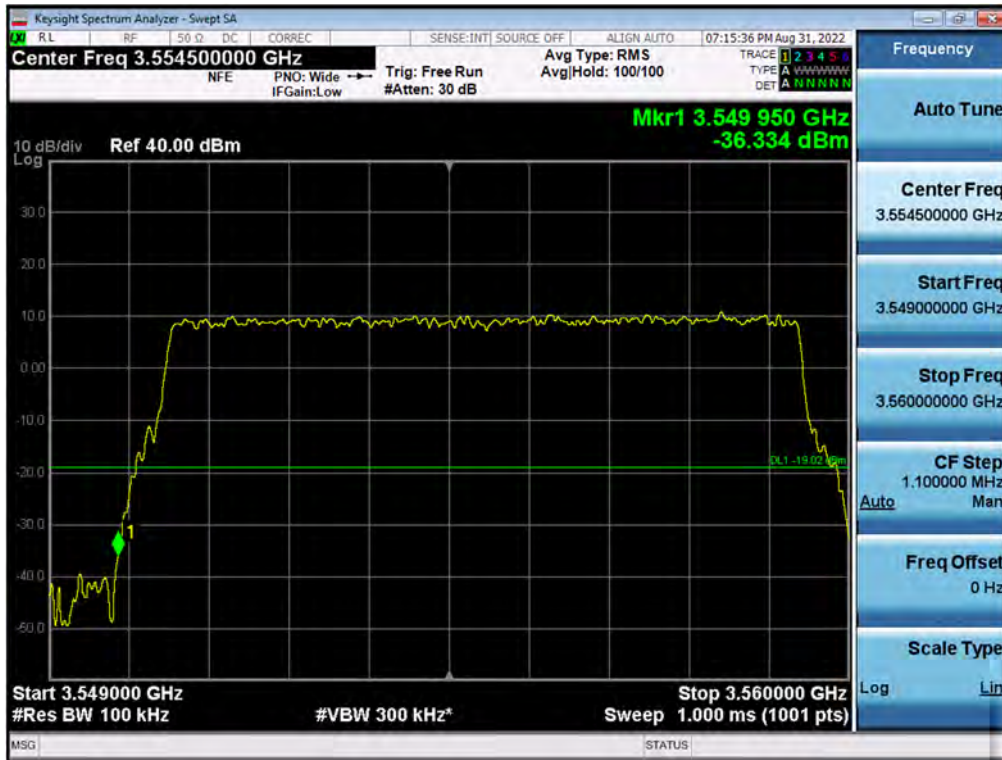
Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low Edge Carrier	Left	3 549.80	-29.82
			Right	3 625.04	-41.35
		High Edge Carrier	Left	3 694.98	-40.16
			Right	3 700.03	-40.51
	16QAM	Low Edge Carrier	Left	3 549.80	-32.74
			Right	3 625.03	-38.78
		High Edge Carrier	Left	3 694.94	-40.81
			Right	3 700.68	-41.37
	64QAM	Low Edge Carrier	Left	3 549.12	-33.43
			Right	3 625.08	-40.04
		High Edge Carrier	Left	3 694.62	-41.54
			Right	3 700.05	-41.33
256QAM	Low Edge Carrier	Left	3 549.80	-32.12	
		Right	3 625.03	-41.03	
	High Edge Carrier	Left	3 694.98	-40.97	
		Right	3 700.03	-40.58	
1	QPSK	Low Edge Carrier	Left	3 549.80	-31.25
			Right	3 625.03	-40.78
		High Edge Carrier	Left	3 694.98	-38.23
			Right	3 700.28	-37.76
	16QAM	Low Edge Carrier	Left	3 549.41	-33.17
			Right	3 625.23	-40.80
		High Edge Carrier	Left	3 694.91	-40.87
			Right	3 700.03	-40.44
	64QAM	Low Edge Carrier	Left	3 549.80	-30.45
			Right	3 625.03	-41.08
		High Edge Carrier	Left	3 694.98	-40.91
			Right	3 700.03	-39.18
256QAM	Low Edge Carrier	Left	3 549.80	-30.51	
		Right	3 625.03	-41.32	
	High Edge Carrier	Left	3 694.98	-39.19	
		Right	3 700.03	-39.43	

Ant	Modulation	Carrier	Edge Position	Frequency (MHz)	Measured Value (dBm)
2	QPSK	Low Edge Carrier	Left	3 549.80	-28.39
			Right	3 625.03	-41.19
		High Edge Carrier	Left	3 694.98	-40.06
			Right	3 700.03	-40.29
	16QAM	Low Edge Carrier	Left	3 549.80	-30.27
			Right	3 625.03	-42.30
		High Edge Carrier	Left	3 694.83	-42.29
			Right	3 700.03	-40.52
	64QAM	Low Edge Carrier	Left	3 549.80	-30.59
			Right	3 625.03	-39.67
		High Edge Carrier	Left	3 694.97	-39.67
			Right	3 700.03	-39.48
256QAM	Low Edge Carrier	Left	3 549.80	-28.36	
		Right	3 625.03	-42.91	
	High Edge Carrier	Left	3 694.98	-39.52	
		Right	3 700.03	-38.92	
3	QPSK	Low Edge Carrier	Left	3 549.80	-28.13
			Right	3 625.13	-41.85
		High Edge Carrier	Left	3 694.51	-40.71
			Right	3 700.03	-40.50
	16QAM	Low Edge Carrier	Left	3 549.80	-31.66
			Right	3 625.03	-41.90
		High Edge Carrier	Left	3 694.98	-40.23
			Right	3 700.04	-40.60
	64QAM	Low Edge Carrier	Left	3 549.80	-30.73
			Right	3 625.03	-40.72
		High Edge Carrier	Left	3 694.97	-40.97
			Right	3 700.03	-39.42
256QAM	Low Edge Carrier	Left	3 549.80	-32.47	
		Right	3 625.03	-40.42	
	High Edge Carrier	Left	3 694.96	-39.35	
		Right	3 700.23	-39.73	

Note: 1C: 1 Carrier, 4C: 4 Carrier, 5C: 5 Carrier

Plot Data of Out-of-band Unwanted Emissions

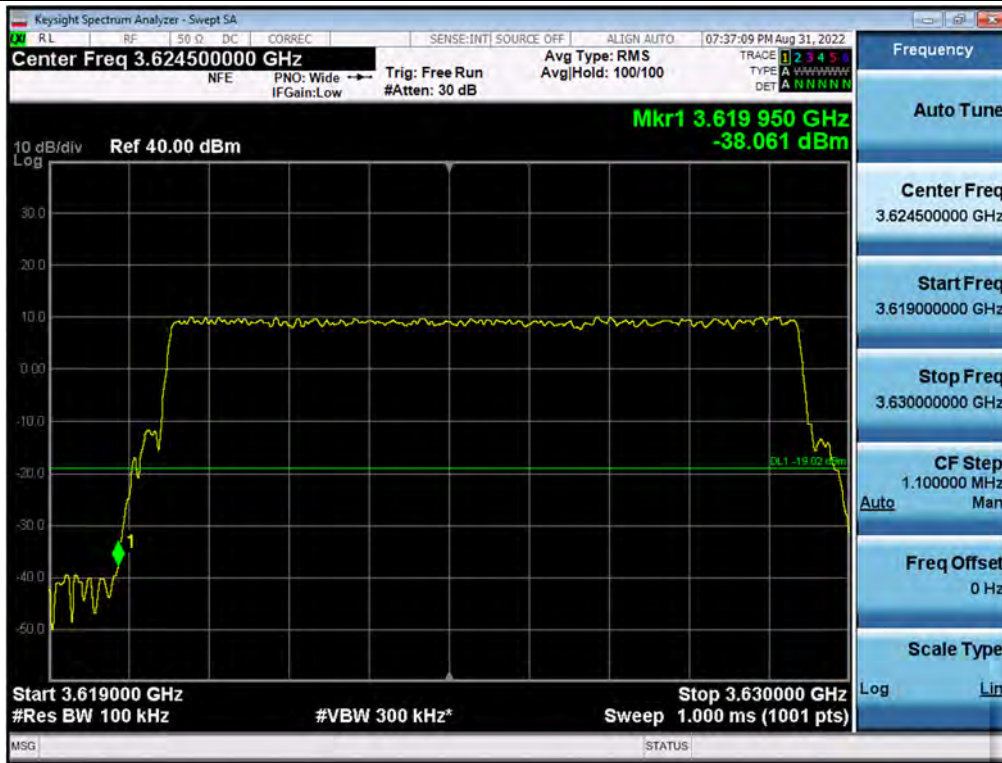
Antenna 0 / CBRS NR 10 MHz 1 Carrier / 16QAM / Low Left



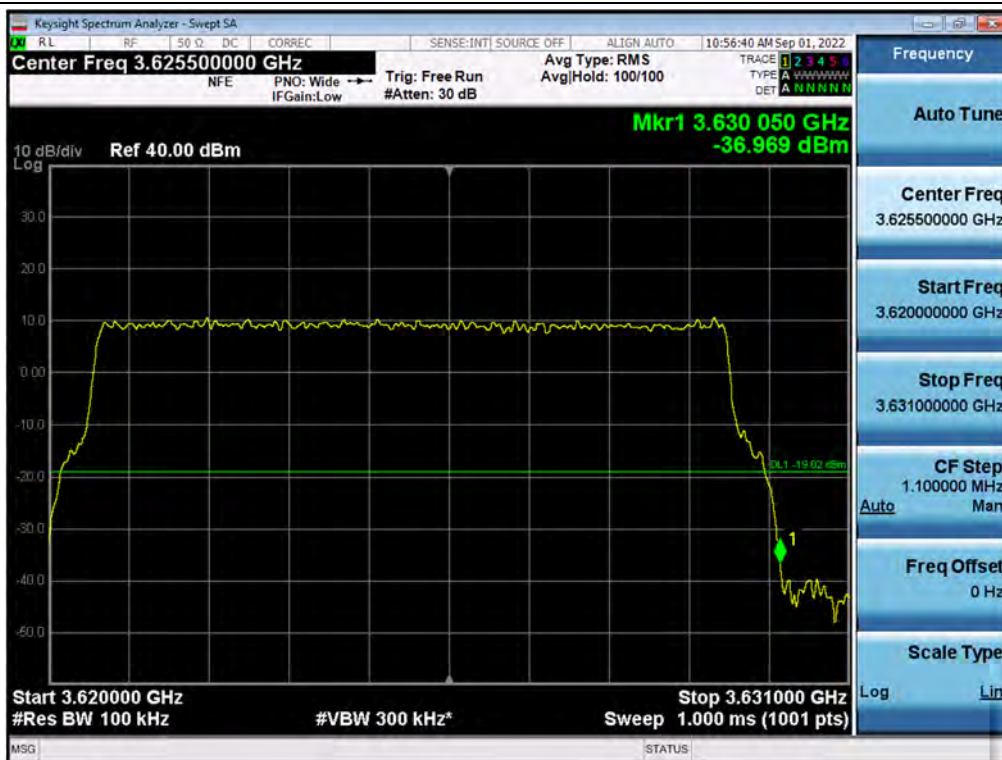
Antenna 1 / CBRS NR 10 MHz 1 Carrier / 256QAM / Low Right



Antenna 0 / CBRS NR 10 MHz 1 Carrier / 16QAM / Middle Left

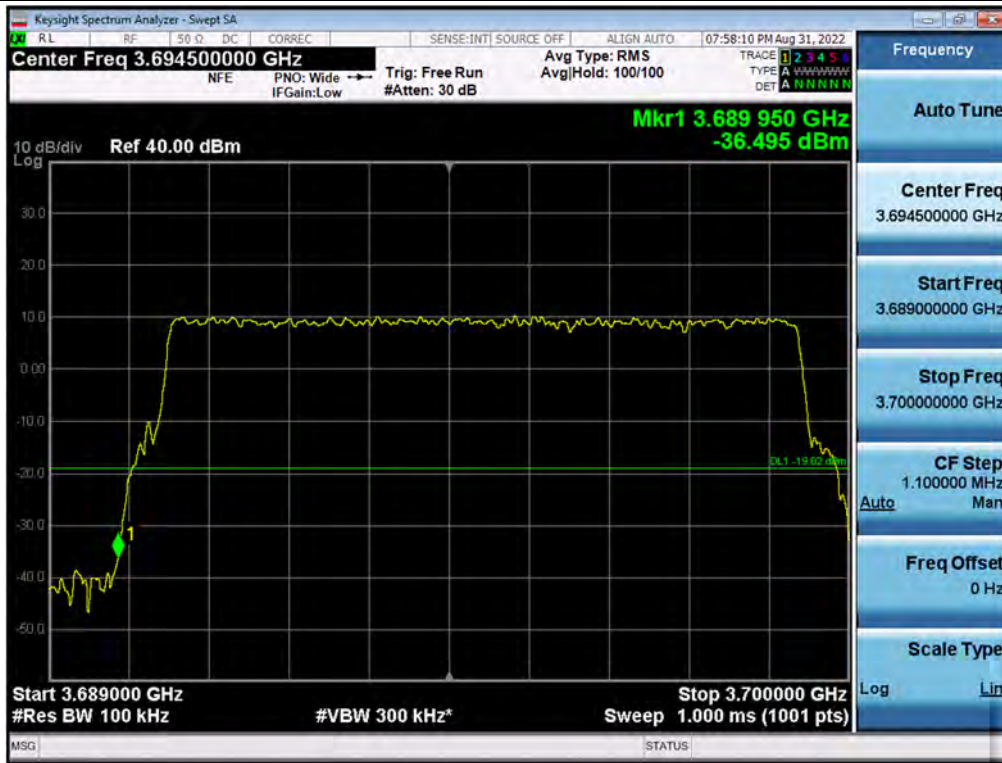


Antenna 1 / CBRS NR 10 MHz 1 Carrier / QPSK / Middle Right





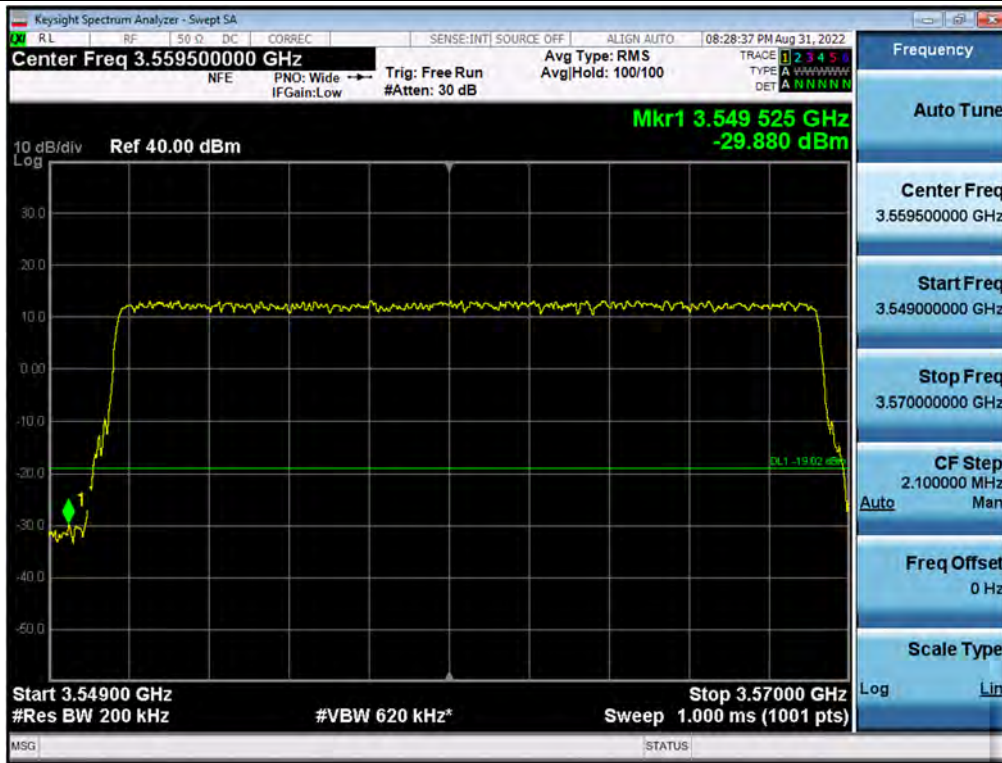
Antenna 1 / CBRS NR 10 MHz 1 Carrier / 16QAM / High Left



Antenna 1 / CBRS NR 10 MHz 1 Carrier / 64QAM / High Right



Antenna 0 / CBRS NR 20 MHz 1 Carrier / 256QAM / Low Left



Antenna 0 / CBRS NR 20 MHz 1 Carrier / 256QAM / Low Right

