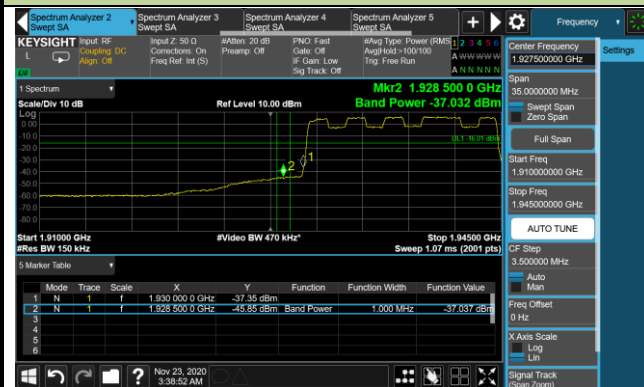
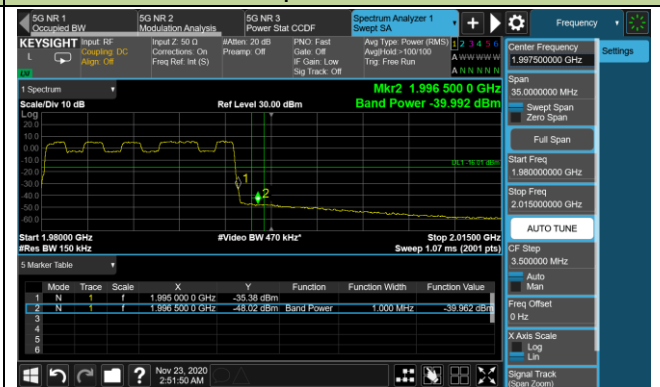


## 15MHz Channel Bandwidth - Ant 0

## Bottom Channel

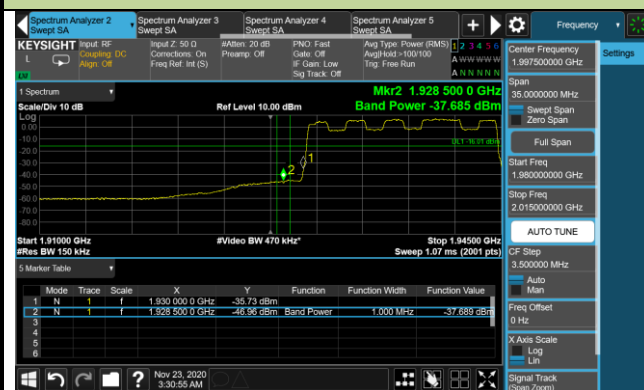


## Top Channel

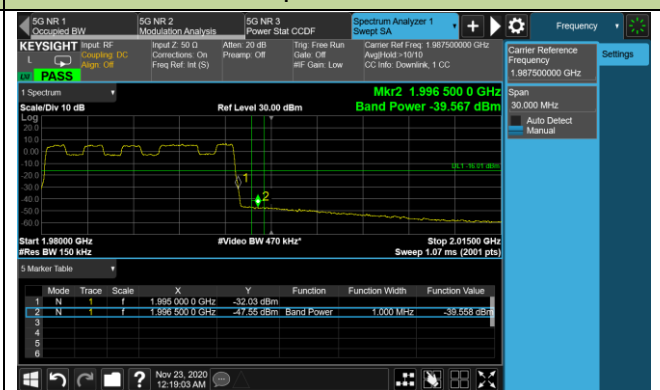


## 15MHz Channel Bandwidth - Ant 1

## Bottom Channel

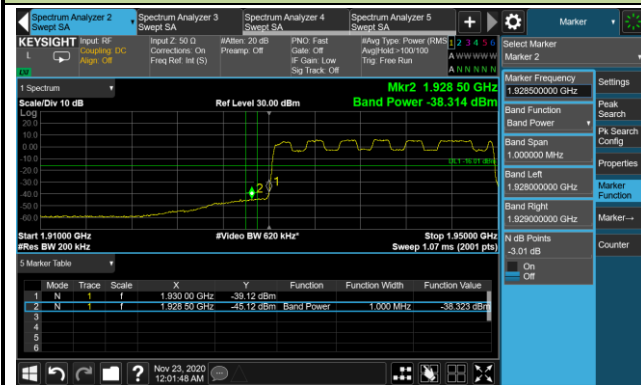


## Top Channel



## 20MHz Channel Bandwidth - Ant 0

## Bottom Channel

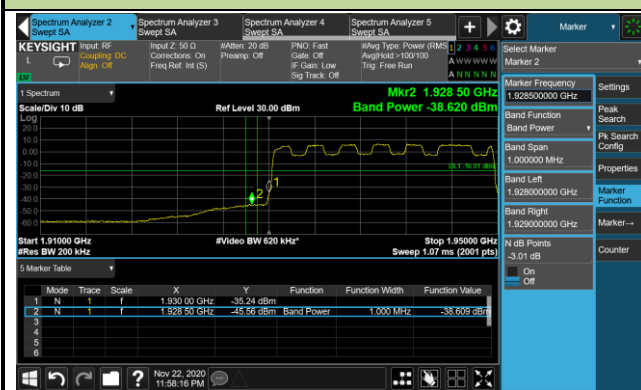


## Top Channel

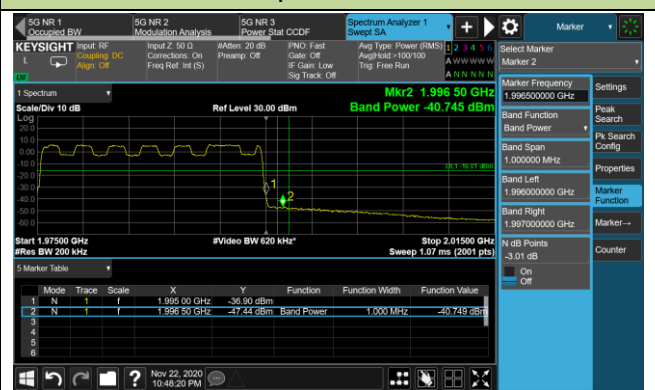


## 20MHz Channel Bandwidth - Ant 1

## Bottom Channel



## Top Channel

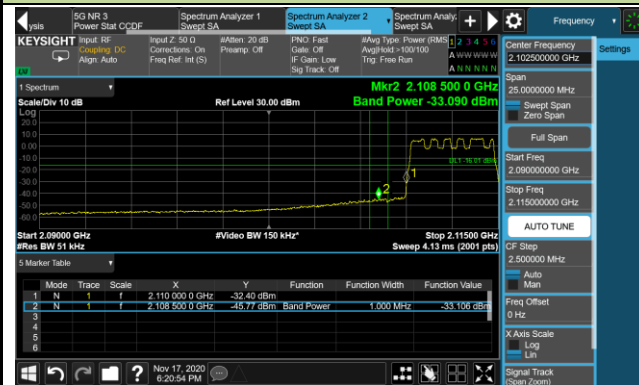


|                    |                                    |               |                         |
|--------------------|------------------------------------|---------------|-------------------------|
| Product            | AirScale Indoor Radio<br>ASiR-pRRH | Test Engineer | Peter Xu                |
| Test Site          | SR2                                | Test Date     | 2020/11/17 ~ 2020/12/30 |
| Test Configuration | n66, QPSK                          |               |                         |

| Frequency<br>(MHz) | Channel Bandwidth<br>(MHz) | Max Band Edge (dBm) |        | Limit<br>(dBm) | Result |
|--------------------|----------------------------|---------------------|--------|----------------|--------|
|                    |                            | Ant 0               | Ant 1  |                |        |
| 2112.5             | 5                          | -32.40              | -31.82 | ≤ -16.01       | Pass   |
| 2177.5             | 5                          | -29.36              | -29.16 | ≤ -16.01       | Pass   |
| 2115.0             | 10                         | -33.38              | -36.29 | ≤ -16.01       | Pass   |
| 2175.0             | 10                         | -33.59              | -35.41 | ≤ -16.01       | Pass   |
| 2117.5             | 15                         | -34.14              | -34.27 | ≤ -16.01       | Pass   |
| 2172.5             | 15                         | -30.23              | -34.61 | ≤ -16.01       | Pass   |
| 2120.0             | 20                         | -34.51              | -32.54 | ≤ -16.01       | Pass   |
| 2170.0             | 20                         | -33.02              | -33.91 | ≤ -16.01       | Pass   |
| 2112.5 + 2117.5    | 5 + 5                      | -29.16              | -37.26 | ≤ -16.01       | Pass   |
| 2172.5 + 2177.5    | 5 + 5                      | -29.06              | -35.29 | ≤ -16.01       | Pass   |
| 2115.0 + 2125.0    | 10 + 10                    | -31.50              | -38.12 | ≤ -16.01       | Pass   |
| 2165.0 + 2175.0    | 10 + 10                    | -29.15              | -37.80 | ≤ -16.01       | Pass   |
| 2117.5 + 2132.5    | 15 + 15                    | -34.22              | -39.02 | ≤ -16.01       | Pass   |
| 2157.5 + 2172.5    | 15 + 15                    | -25.83              | -26.43 | ≤ -16.01       | Pass   |
| 2120.0 + 2140.0    | 20 + 20                    | -19.28              | -19.66 | ≤ -16.01       | Pass   |
| 2150.0 + 2170.0    | 20 + 20                    | -36.17              | -38.59 | ≤ -16.01       | Pass   |

### 5MHz Channel Bandwidth - Ant 0

#### Bottom Channel

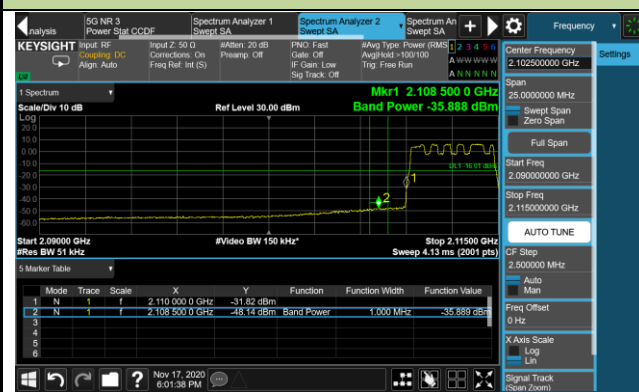


#### Top Channel

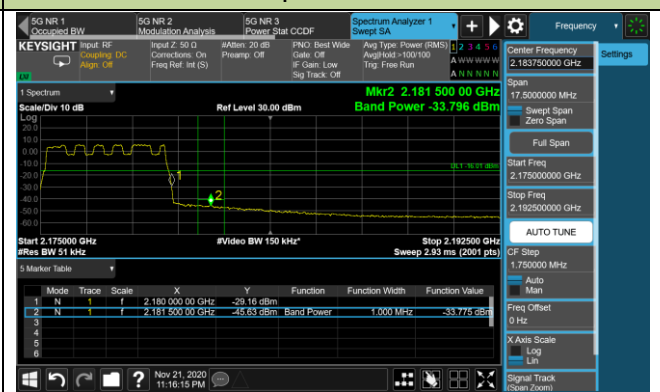


### 5MHz Channel Bandwidth - Ant 1

#### Bottom Channel

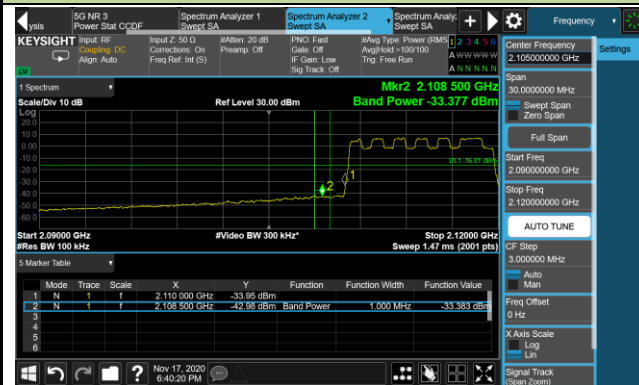


#### Top Channel

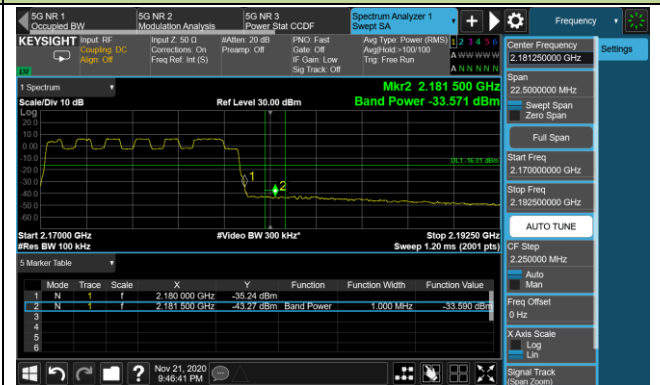


## 10MHz Channel Bandwidth - Ant 0

## Bottom Channel

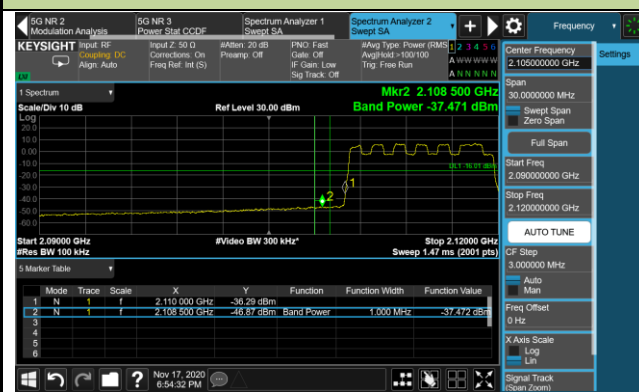


## Top Channel

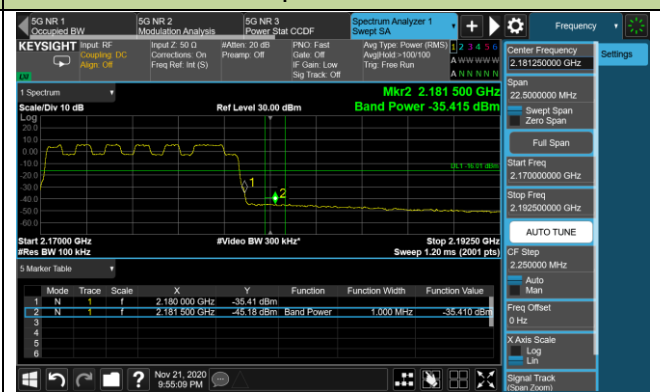


## 10MHz Channel Bandwidth - Ant 1

## Bottom Channel

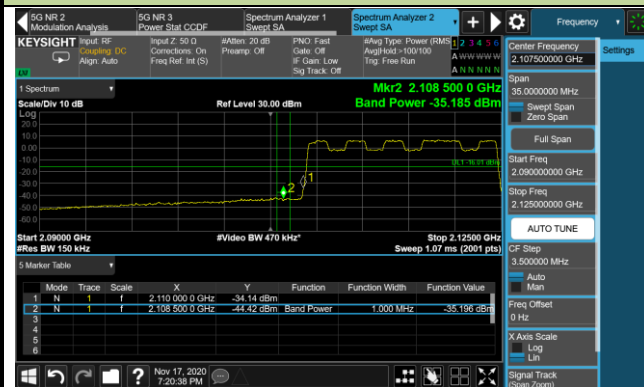


## Top Channel

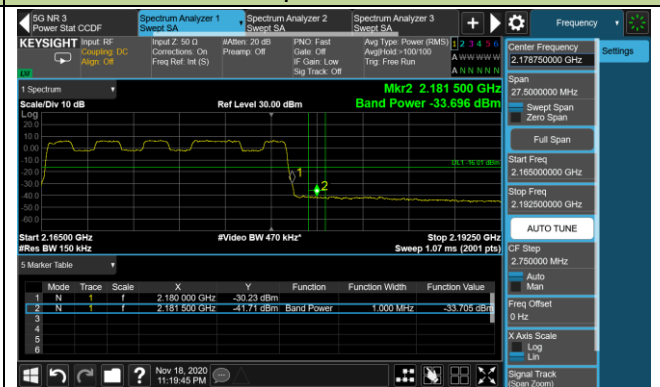


## 15MHz Channel Bandwidth - Ant 0

## Bottom Channel

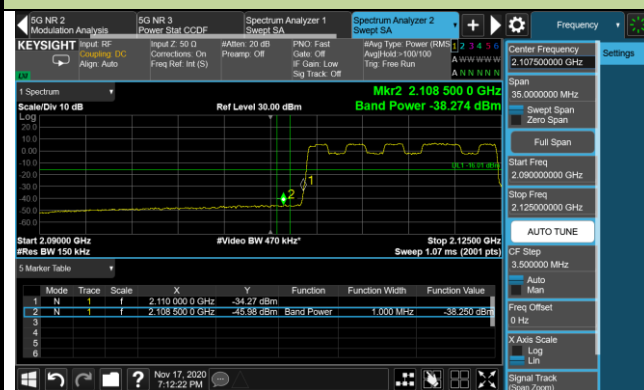


## Top Channel

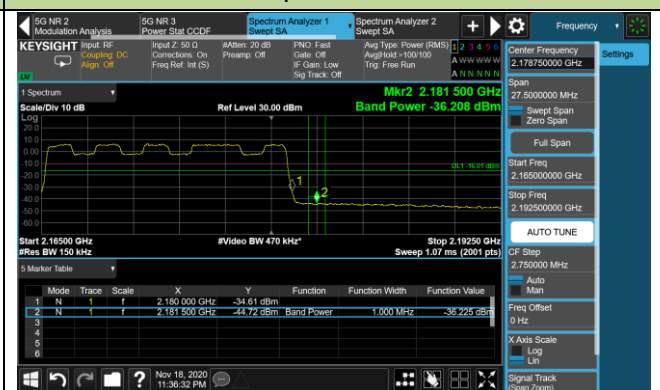


## 15MHz Channel Bandwidth - Ant 1

## Bottom Channel

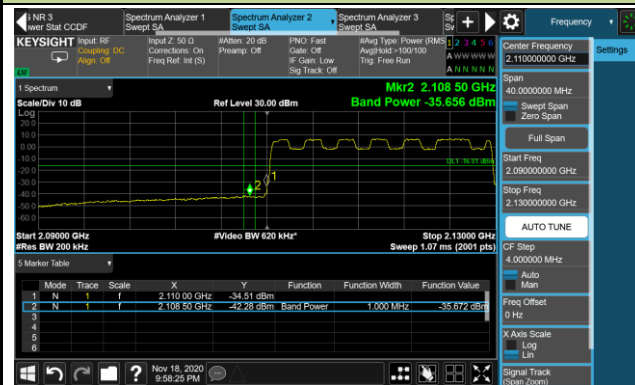


## Top Channel

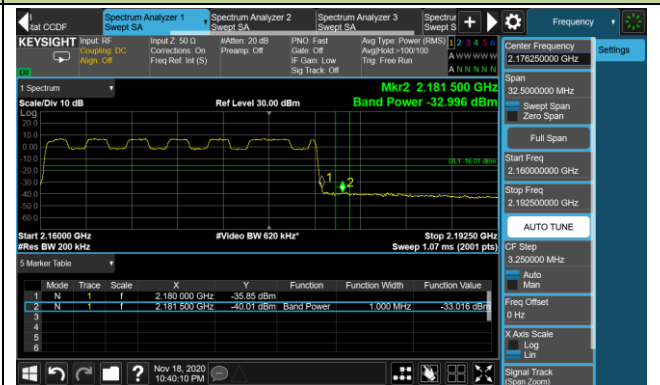


## 20MHz Channel Bandwidth - Ant 0

## Bottom Channel

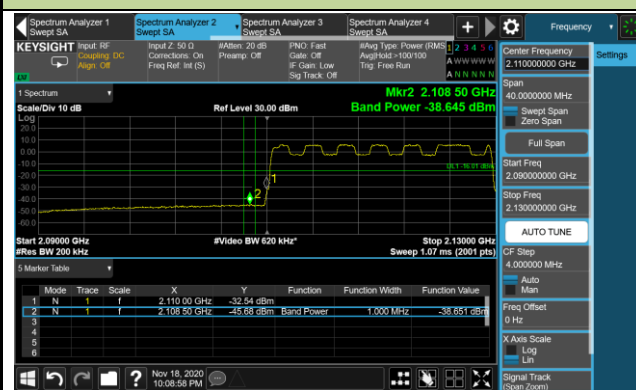


## Top Channel

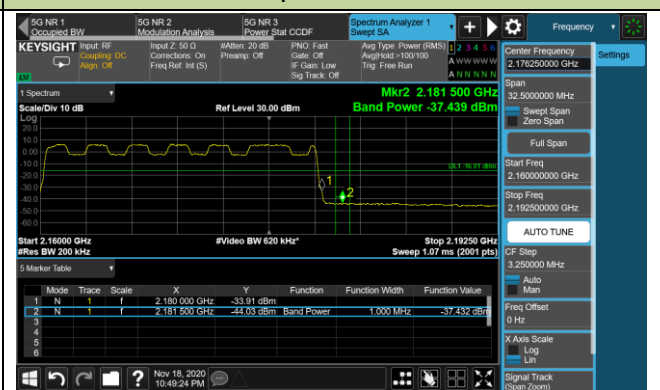


## 20MHz Channel Bandwidth - Ant 1

## Bottom Channel

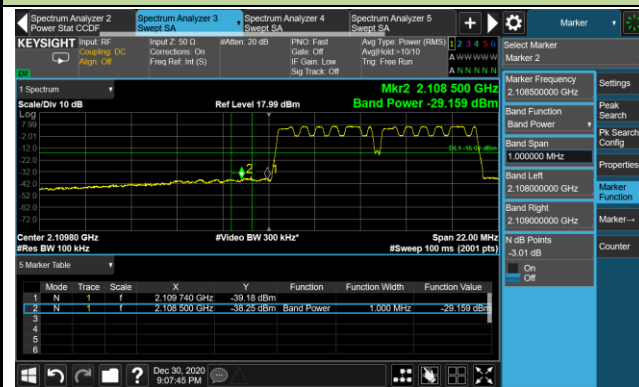


## Top Channel



## 5 + 5MHz Channel Bandwidth - Ant 0

### Bottom Channel

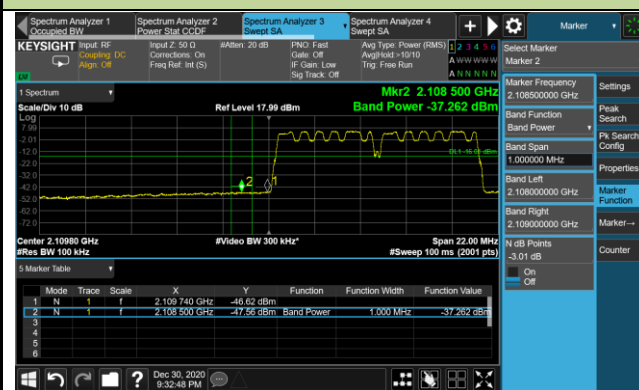


### Top Channel

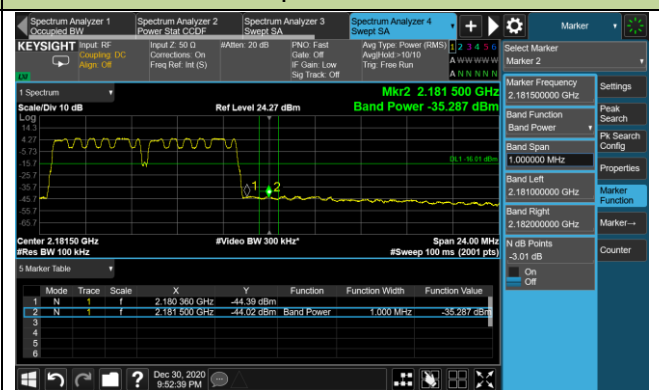


## 5 + 5MHz Channel Bandwidth - Ant 1

### Bottom Channel

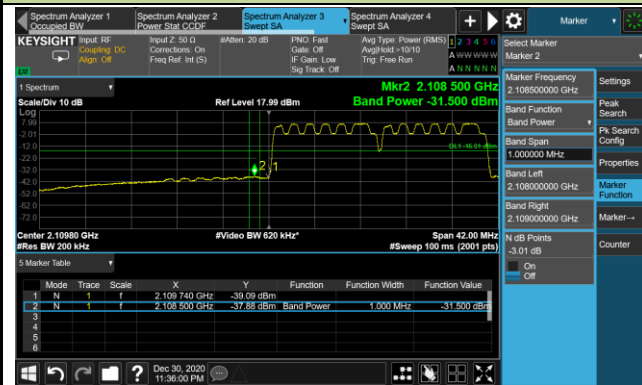


### Top Channel

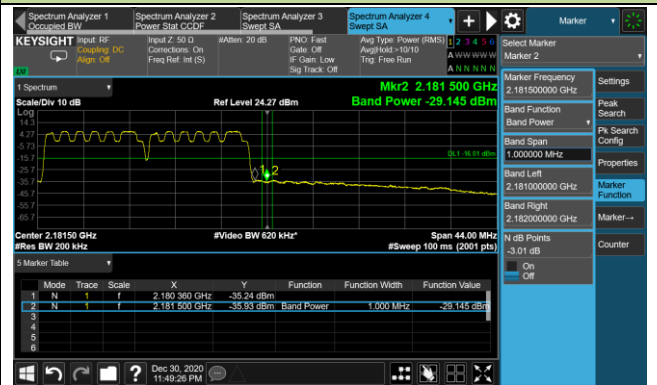


## 10 + 10MHz Channel Bandwidth - Ant 0

### Bottom Channel

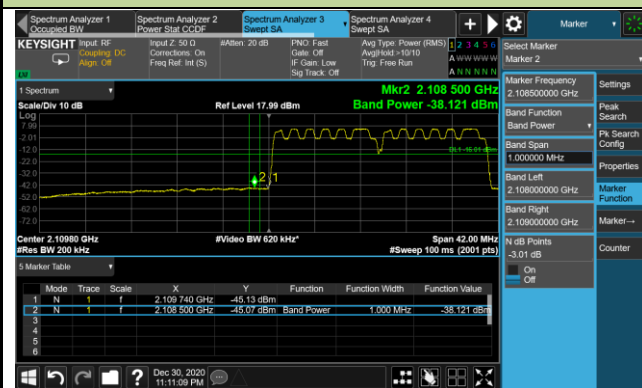


### Top Channel

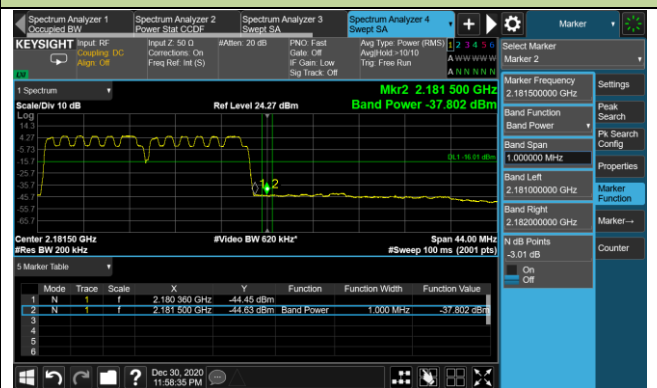


## 10 + 10MHz Channel Bandwidth - Ant 1

### Bottom Channel

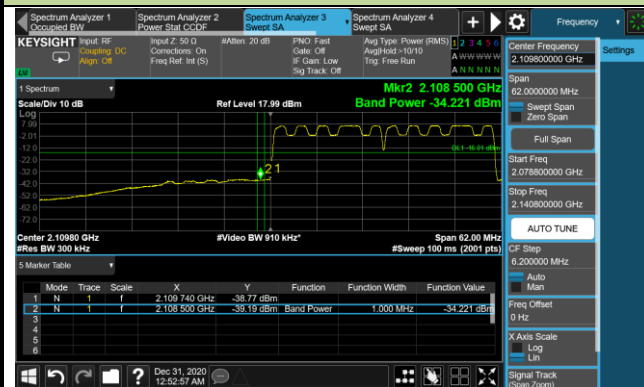


### Top Channel

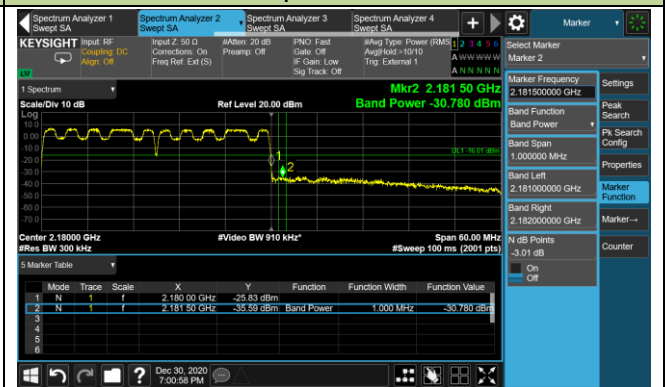


## 15 + 15MHz Channel Bandwidth - Ant 0

## Bottom Channel

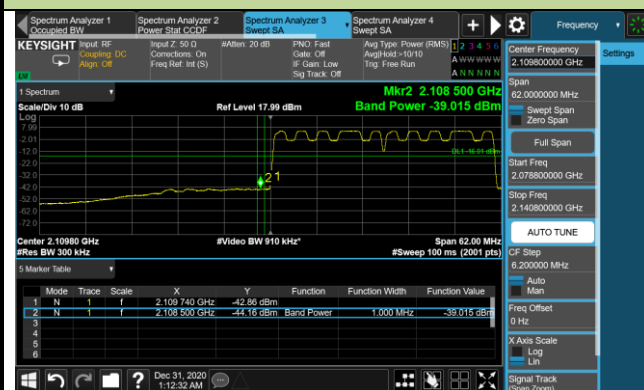


## Top Channel

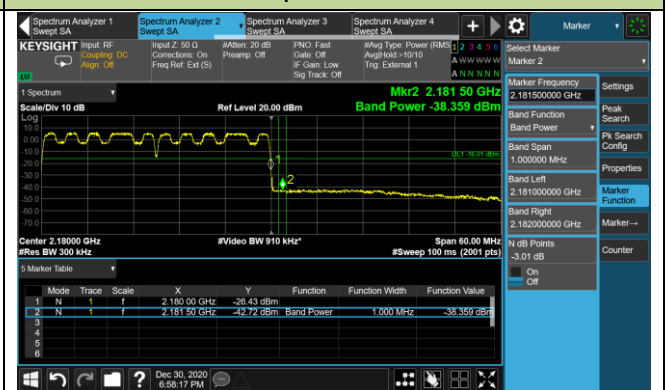


## 15 + 15MHz Channel Bandwidth - Ant 1

## Bottom Channel

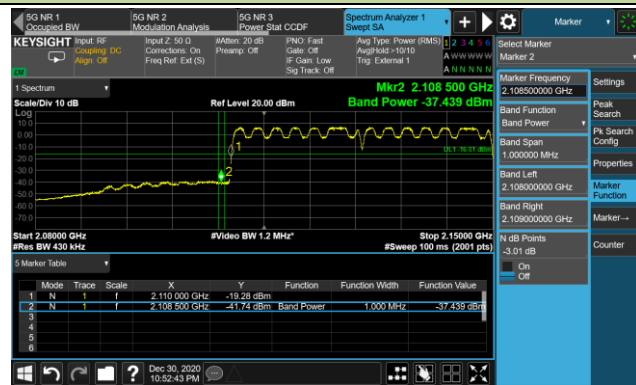


## Top Channel

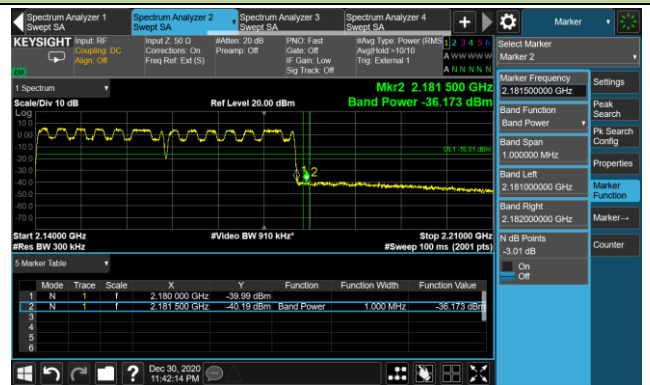


## 20 + 20MHz Channel Bandwidth - Ant 0

## Bottom Channel

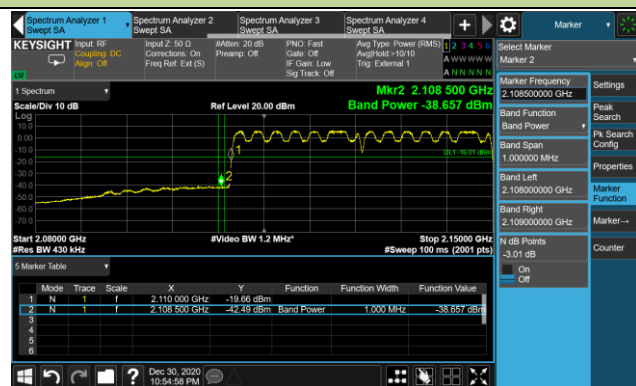


## Top Channel

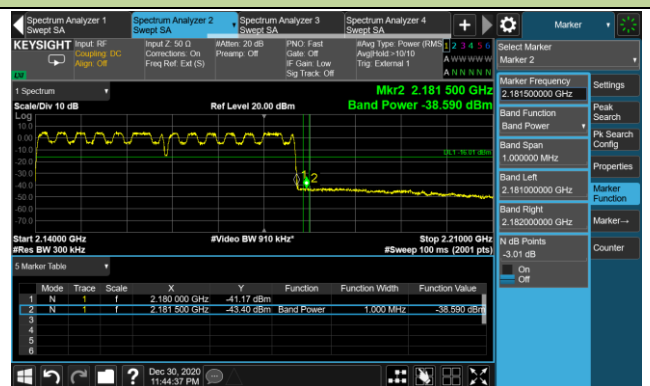


## 20 + 20MHz Channel Bandwidth - Ant 1

## Bottom Channel



## Top Channel



## 6.6. Peak to Average Ratio

### 6.6.1. Test Limit

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

### 6.6.2. Test Procedure Used

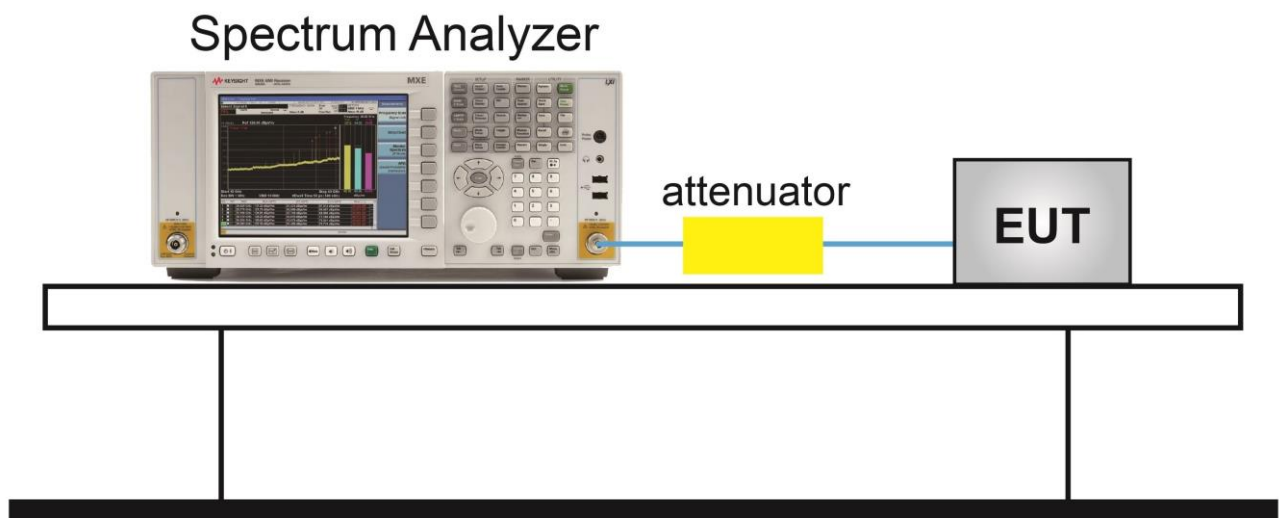
KDB 971168 D01v03r01 - Section 5.7

ANSI C63.26-2015 - Section 5.2.6

### 6.6.3. Test Setting

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

### 6.6.4. Test Setup



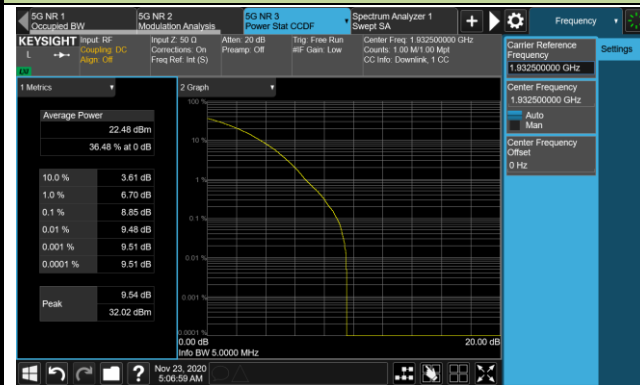
### 6.6.5. Test Result

|                    |                                    |               |            |
|--------------------|------------------------------------|---------------|------------|
| Product            | AirScale Indoor Radio<br>ASiR-pRRH | Test Engineer | Peter Xu   |
| Test Site          | SR2                                | Test Date     | 2020/11/23 |
| Test Configuration | n25 (Single Carrier), QPSK         |               |            |

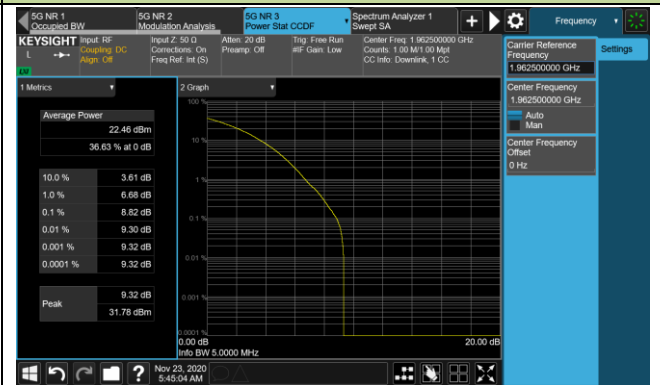
| Frequency<br>(MHz) | Bandwidth<br>(MHz) | Peak to Average<br>Ratio (dB) | Limit<br>(dB) | Result |
|--------------------|--------------------|-------------------------------|---------------|--------|
| 1932.5             | 5                  | 8.85                          | ≤ 13.00       | Pass   |
| 1962.5             | 5                  | 8.82                          | ≤ 13.00       | Pass   |
| 1992.5             | 5                  | 8.72                          | ≤ 13.00       | Pass   |
| 1935.0             | 10                 | 8.55                          | ≤ 13.00       | Pass   |
| 1962.5             | 10                 | 8.57                          | ≤ 13.00       | Pass   |
| 1990.0             | 10                 | 8.46                          | ≤ 13.00       | Pass   |
| 1937.5             | 15                 | 8.50                          | ≤ 13.00       | Pass   |
| 1962.5             | 15                 | 8.56                          | ≤ 13.00       | Pass   |
| 1987.5             | 15                 | 8.43                          | ≤ 13.00       | Pass   |
| 1940.0             | 20                 | 8.47                          | ≤ 13.00       | Pass   |
| 1962.5             | 20                 | 8.48                          | ≤ 13.00       | Pass   |
| 1985.0             | 20                 | 8.34                          | ≤ 13.00       | Pass   |

## 5MHz Channel Bandwidth

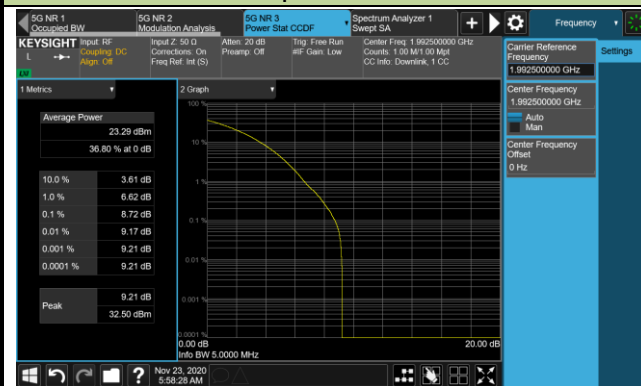
### Bottom Channel



### Middle Channel

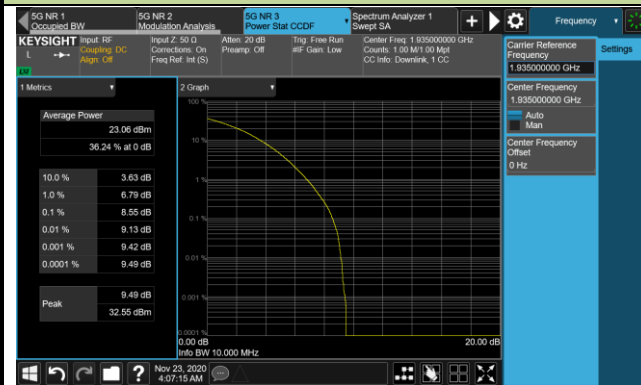


### Top Channel

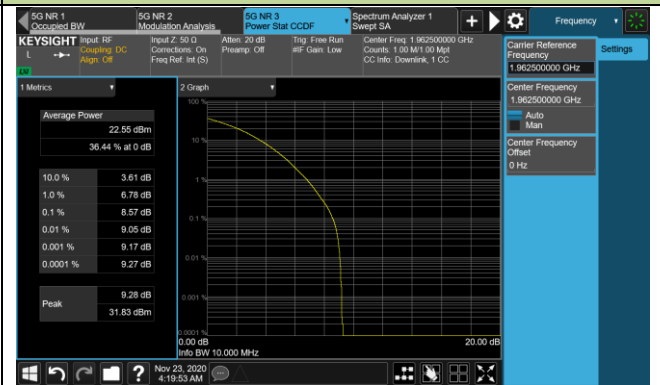


## 10MHz Channel Bandwidth

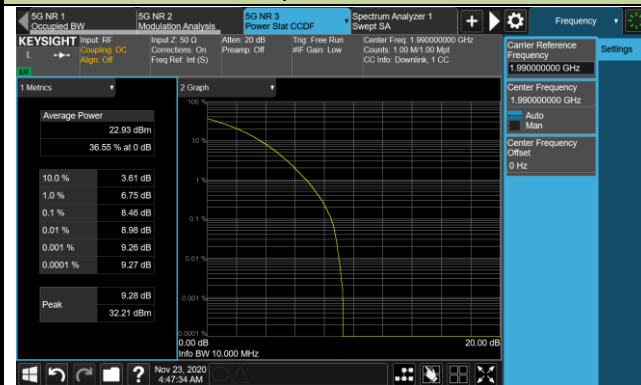
### Bottom Channel



### Middle Channel

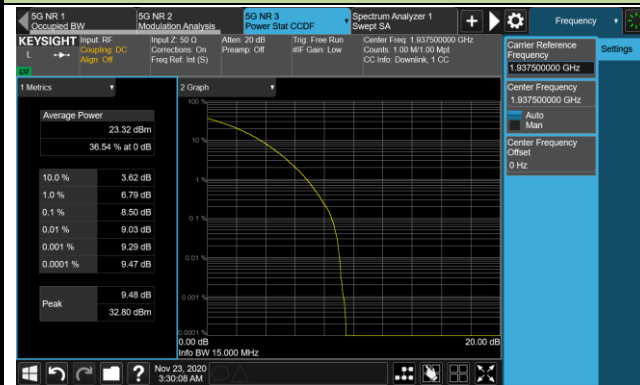


### Top Channel

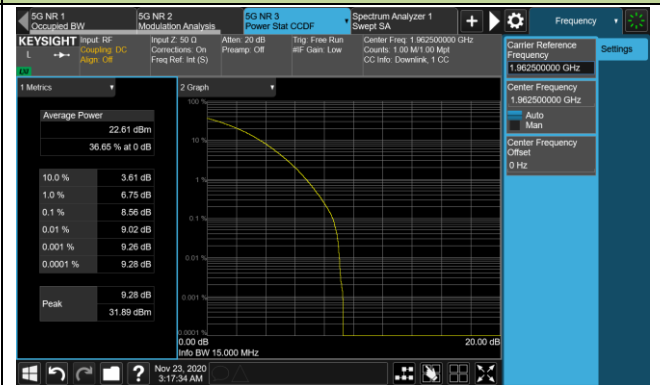


## 15MHz Channel Bandwidth

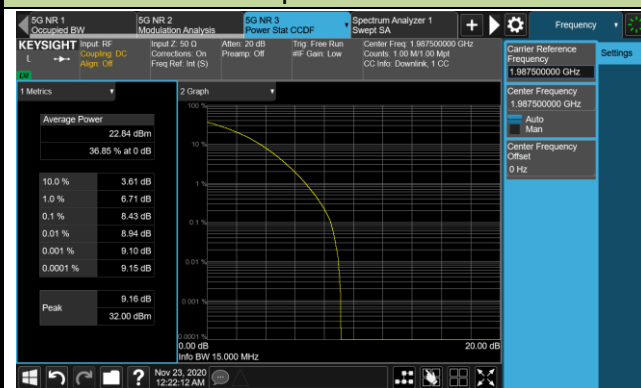
### Bottom Channel



### Middle Channel

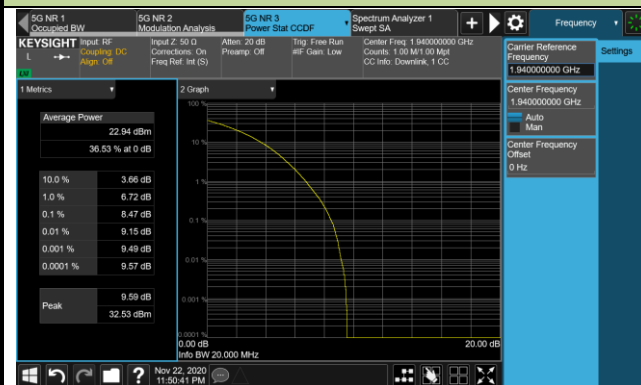


### Top Channel

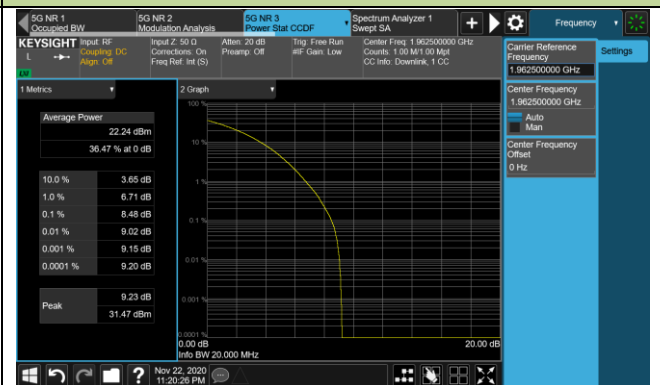


## 20MHz Channel Bandwidth

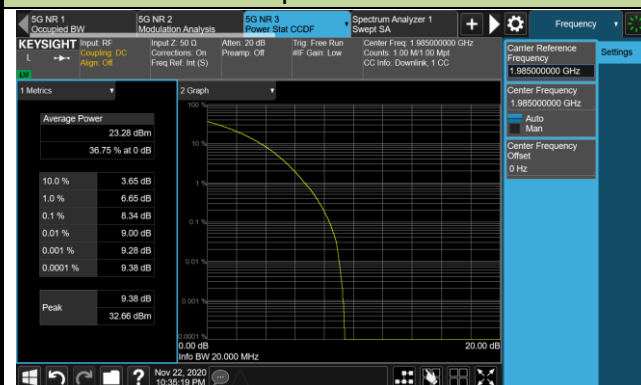
### Bottom Channel



### Middle Channel



### Top Channel

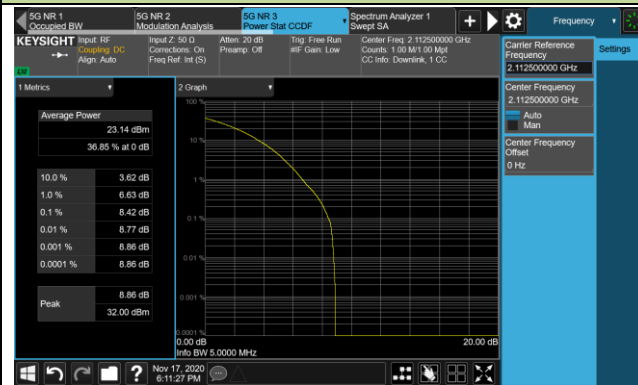


|                    |                                    |               |                         |
|--------------------|------------------------------------|---------------|-------------------------|
| Product            | AirScale Indoor Radio<br>ASiR-pRRH | Test Engineer | Peter Xu                |
| Test Site          | SR2                                | Test Date     | 2020/11/17 ~ 2020/12/30 |
| Test Configuration | n66 (Single Carrier), QPSK         |               |                         |

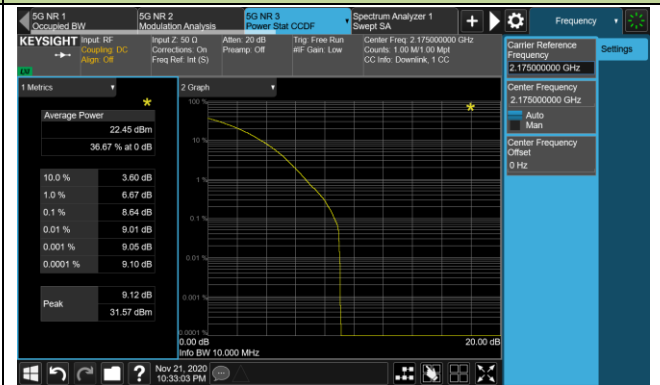
| Frequency<br>(MHz) | Bandwidth<br>(MHz) | Peak to Average<br>Ratio (dB) | Limit<br>(dB) | Result |
|--------------------|--------------------|-------------------------------|---------------|--------|
| 2112.5             | 5                  | 8.42                          | ≤ 13.00       | Pass   |
| 2145.0             | 5                  | 8.64                          | ≤ 13.00       | Pass   |
| 2177.5             | 5                  | 8.46                          | ≤ 13.00       | Pass   |
| 2115.0             | 10                 | 8.31                          | ≤ 13.00       | Pass   |
| 2145.0             | 10                 | 8.41                          | ≤ 13.00       | Pass   |
| 2175.0             | 10                 | 8.26                          | ≤ 13.00       | Pass   |
| 2117.5             | 15                 | 8.22                          | ≤ 13.00       | Pass   |
| 2145.0             | 15                 | 8.49                          | ≤ 13.00       | Pass   |
| 2172.5             | 15                 | 8.16                          | ≤ 13.00       | Pass   |
| 2120.0             | 20                 | 8.32                          | ≤ 13.00       | Pass   |
| 2145.0             | 20                 | 8.45                          | ≤ 13.00       | Pass   |
| 2170.0             | 20                 | 8.10                          | ≤ 13.00       | Pass   |

## 5MHz Channel Bandwidth

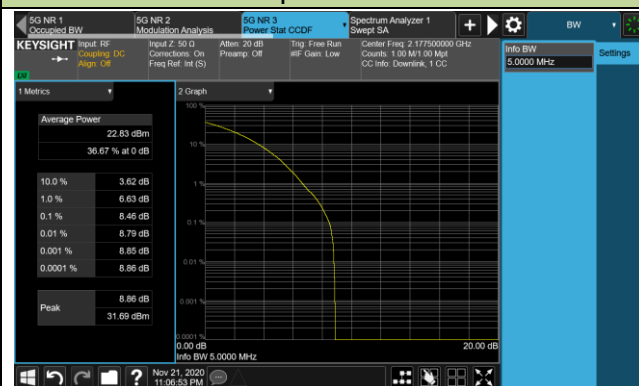
### Bottom Channel



### Middle Channel

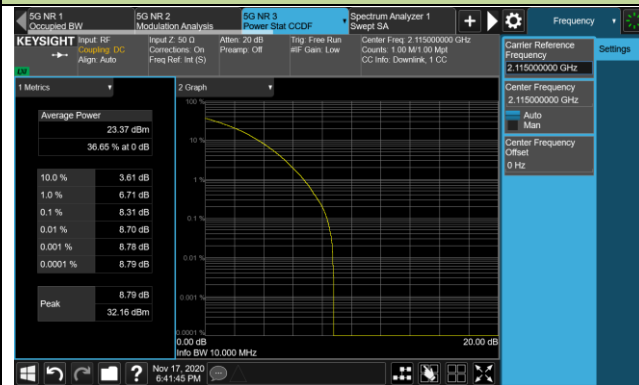


### Top Channel

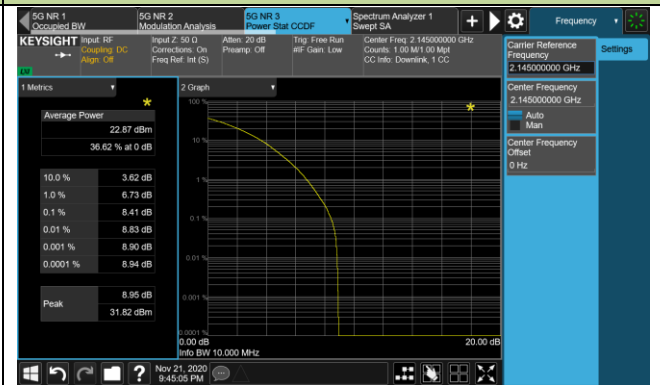


## 10MHz Channel Bandwidth

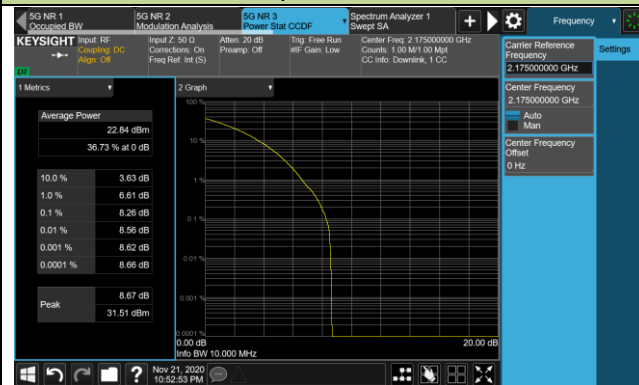
### Bottom Channel



### Middle Channel

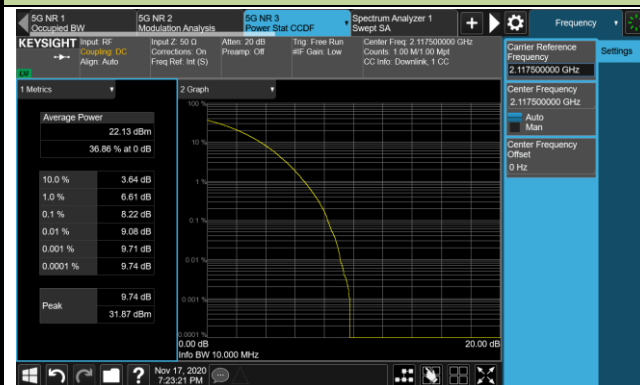


### Top Channel

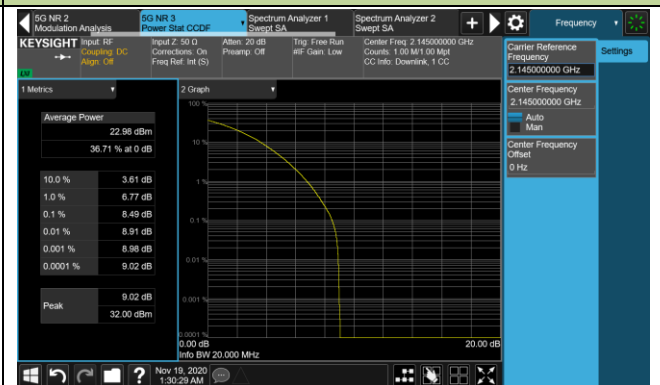


## 15MHz Channel Bandwidth

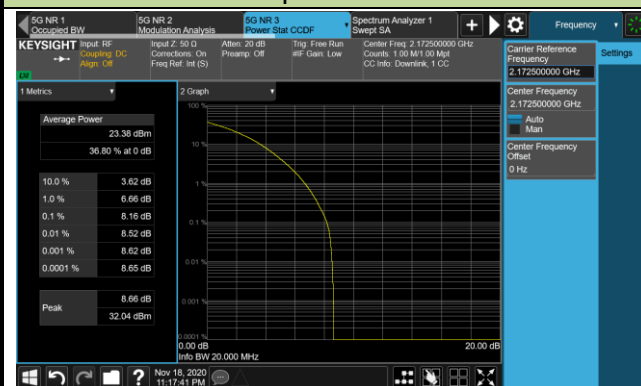
### Bottom Channel



### Middle Channel

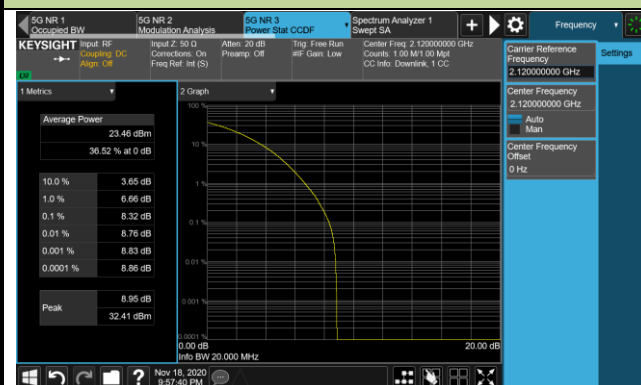


### Top Channel

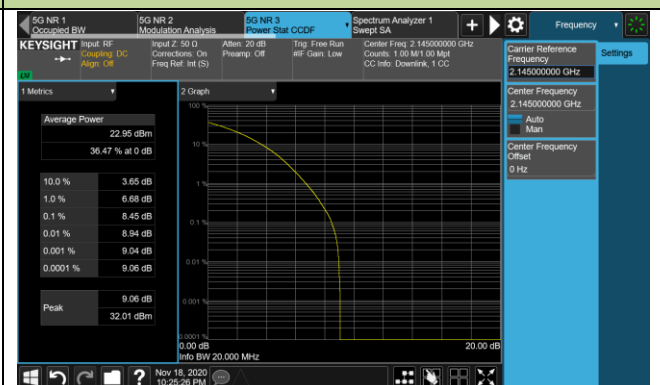


## 20MHz Channel Bandwidth

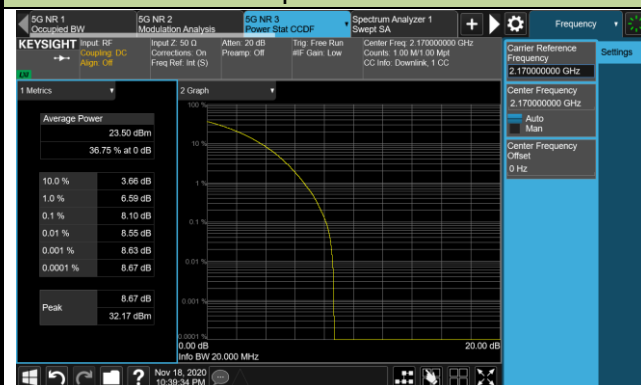
### Bottom Channel



### Middle Channel



### Top Channel



## **6.7. Conducted Spurious Emissions**

### **6.7.1. Test Limit**

In the FCC 24.238, on any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) at least  $43 + 10 \cdot \log(P)$  dB, the emission limit equal to -13dBm.

Note: This device can be implement MIMO function, so the limit os spurious emissions needs to be reduced  $10 \cdot \log(\text{Numbers}_{\text{Ant}})$  according to FCC KDB 662911 D01 guidance.

The limit is adjusted to  $-13\text{dBm} - 10 \cdot \log(2) = -16.01\text{dBm}$

### **6.7.2. Test Procedure Used**

KDB 971168 D01v03r01 - Section 6

ANSI C63.26-2015 - Section 6.4.4.2

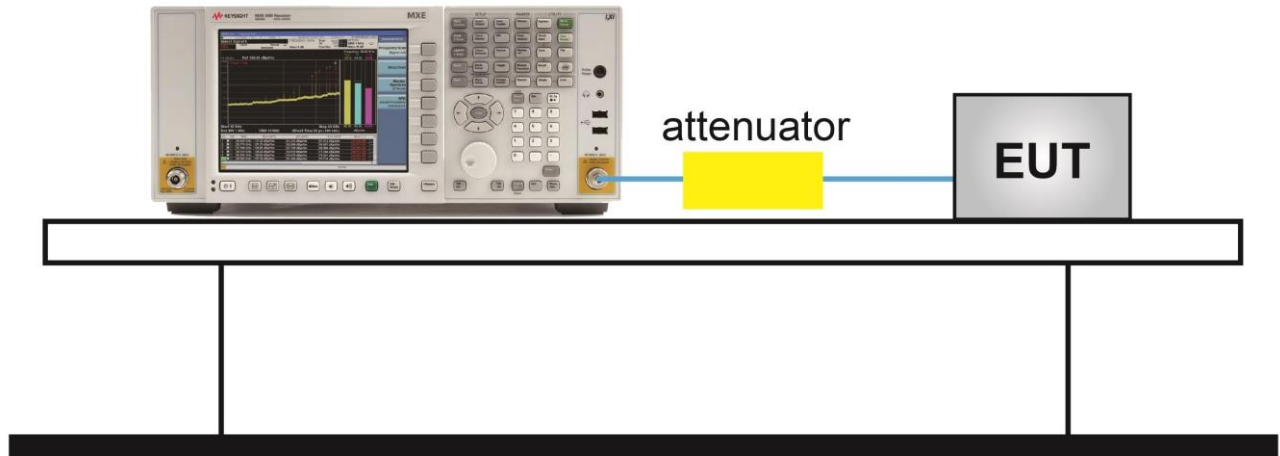
### **6.7.3. Test Setting**

1. Set the analyzer frequency to low or high channel.
2. RBW = 100kHz or 1MHz
3. VBW  $\geq 3 \cdot \text{RBW}$
4. Sweep time = auto
5. Detector = power averaging (rms)
6. Set sweep trigger to "free run."
7. Trace average at least 100 traces in power averaging (rms) mode if sweep is set to auto-couple.

To accurately determine the average power over the on and off time of the transmitter, it can be necessary to increase the number of traces to be averaged above 100, or if using a manually configured sweep time, increase the sweep time.

#### 6.7.4. Test Setup

### Spectrum Analyzer



### 6.7.5. Test Result

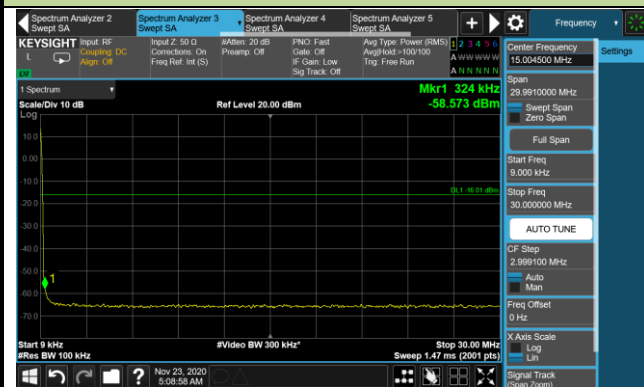
|                    |                                 |               |            |
|--------------------|---------------------------------|---------------|------------|
| Product            | AirScale Indoor Radio ASiR-pRRH | Test Engineer | Peter Xu   |
| Test Site          | SR2                             | Test Date     | 2020/11/23 |
| Test Configuration | n25 (Single Carrier), QPSK      |               |            |

| Frequency (MHz) | Channel Bandwidth (MHz) | Frequency Range (MHz) | Max Spurious Emissions (dBm) | Limit (dBm)   | Result |
|-----------------|-------------------------|-----------------------|------------------------------|---------------|--------|
| 1932.5          | 5                       | 0.009 ~ 30            | -58.573                      | $\leq -16.01$ | Pass   |
|                 |                         | 30 ~ 27000            | -31.040                      | $\leq -16.01$ | Pass   |
| 1962.5          | 5                       | 0.009 ~ 30            | -58.584                      | $\leq -16.01$ | Pass   |
|                 |                         | 30 ~ 27000            | -30.854                      | $\leq -16.01$ | Pass   |
| 1992.5          | 5                       | 0.009 ~ 30            | -58.574                      | $\leq -16.01$ | Pass   |
|                 |                         | 30 ~ 27000            | -29.367                      | $\leq -16.01$ | Pass   |
| 1935.0          | 10                      | 0.009 ~ 30            | -65.457                      | $\leq -16.01$ | Pass   |
|                 |                         | 30 ~ 27000            | -31.525                      | $\leq -16.01$ | Pass   |
| 1962.5          | 10                      | 0.009 ~ 30            | -58.666                      | $\leq -16.01$ | Pass   |
|                 |                         | 30 ~ 27000            | -30.427                      | $\leq -16.01$ | Pass   |
| 1990.0          | 10                      | 0.009 ~ 30            | -57.437                      | $\leq -16.01$ | Pass   |
|                 |                         | 30 ~ 27000            | -30.451                      | $\leq -16.01$ | Pass   |
| 1937.5          | 15                      | 0.009 ~ 30            | -65.827                      | $\leq -16.01$ | Pass   |
|                 |                         | 30 ~ 27000            | -30.666                      | $\leq -16.01$ | Pass   |
| 1962.5          | 15                      | 0.009 ~ 30            | -58.947                      | $\leq -16.01$ | Pass   |
|                 |                         | 30 ~ 27000            | -31.497                      | $\leq -16.01$ | Pass   |
| 1987.5          | 15                      | 0.009 ~ 30            | -59.066                      | $\leq -16.01$ | Pass   |
|                 |                         | 30 ~ 27000            | -31.618                      | $\leq -16.01$ | Pass   |
| 1940.0          | 20                      | 0.009 ~ 30            | -58.860                      | $\leq -16.01$ | Pass   |
|                 |                         | 30 ~ 27000            | -31.979                      | $\leq -16.01$ | Pass   |
| 1962.5          | 20                      | 0.009 ~ 30            | -58.932                      | $\leq -16.01$ | Pass   |
|                 |                         | 30 ~ 27000            | -31.056                      | $\leq -16.01$ | Pass   |
| 1985.0          | 20                      | 0.009 ~ 30            | -59.110                      | $\leq -16.01$ | Pass   |
|                 |                         | 30 ~ 27000            | -31.741                      | $\leq -16.01$ | Pass   |

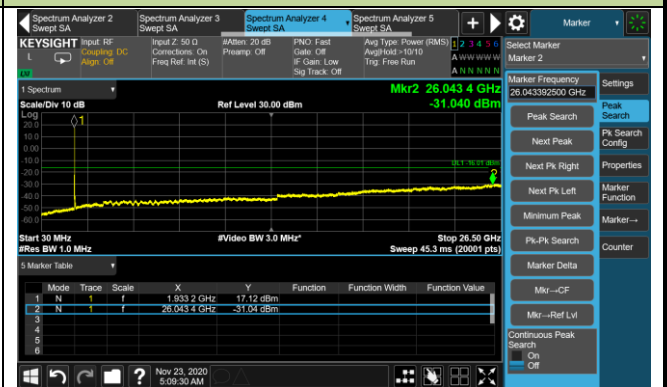
## 5MHz Channel Bandwidth

## Bottom Channel

## 9kHz ~ 30MHz

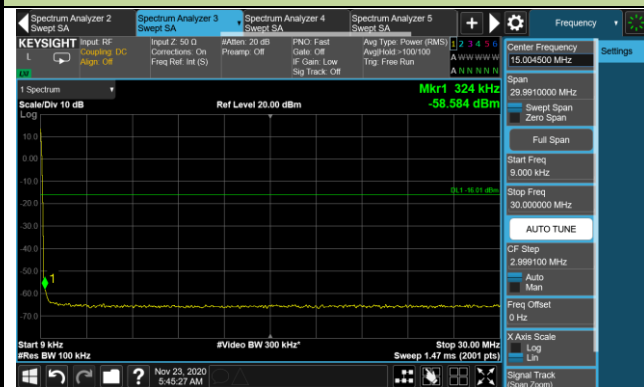


## 30MHz ~ 27.0GHz

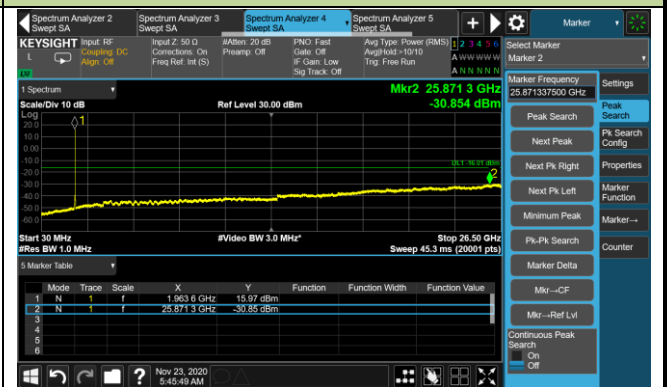


## Middle Channel

## 9kHz ~ 30MHz

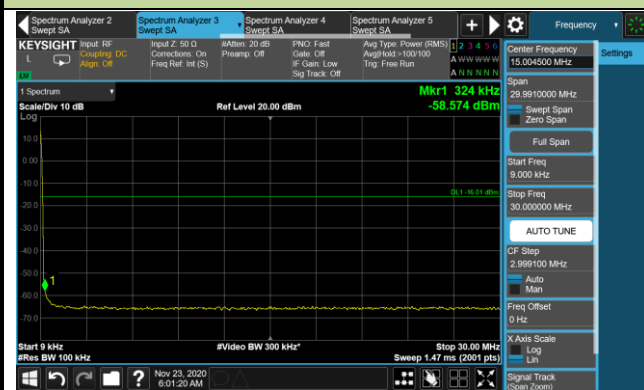


## 30MHz ~ 27.0GHz



## Top Channel

## 9kHz ~ 30MHz



## 30MHz ~ 27.0GHz

