



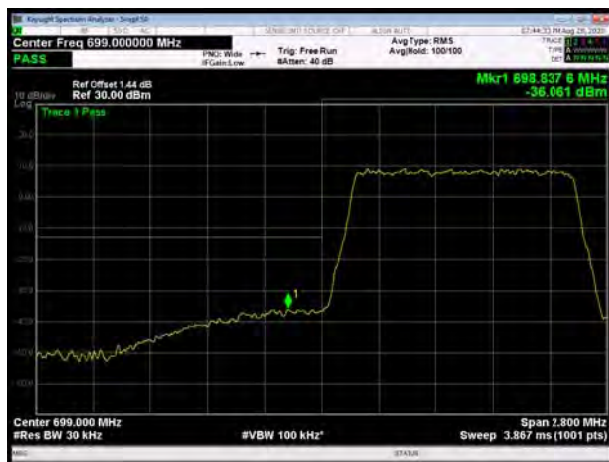
## LTE Band 12 QPSK 1.4MHz CH-Low, 1 RB



## LTE Band 12 QPSK 1.4MHz CH-High, 1 RB



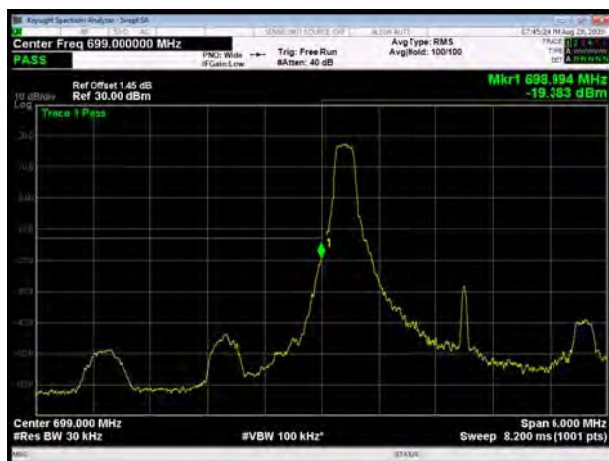
## LTE Band 12 QPSK 1.4MHz CH-Low, 100%RB



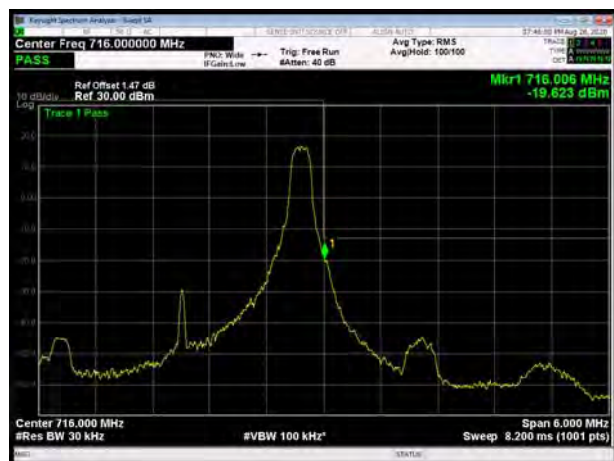
## LTE Band 12 QPSK 1.4MHz CH-High, 100%RB



## LTE Band 12 QPSK 3MHz CH-Low, 1 RB

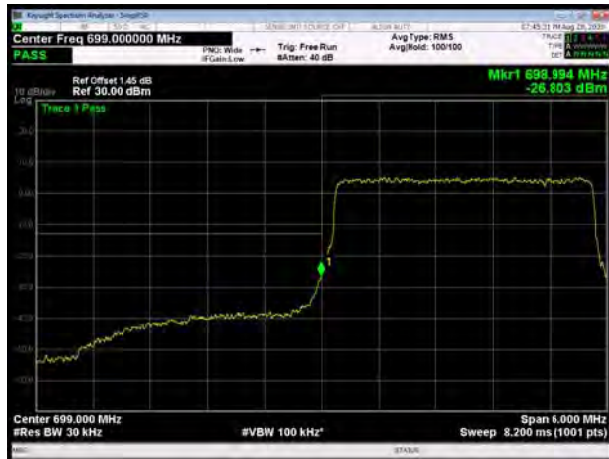


## LTE Band 12 QPSK 3MHz CH-High, 1 RB





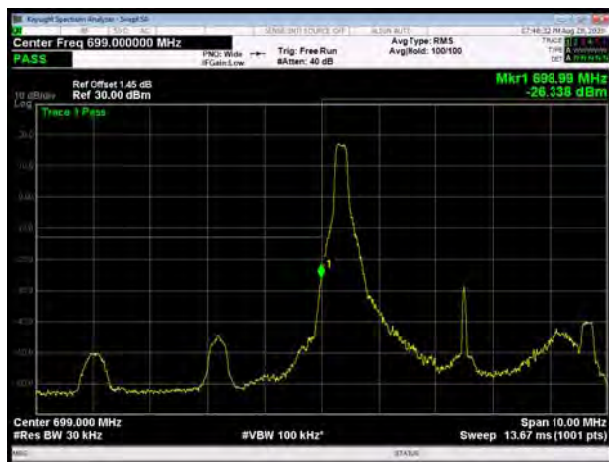
## LTE Band 12 QPSK 3MHz CH-Low, 100%RB



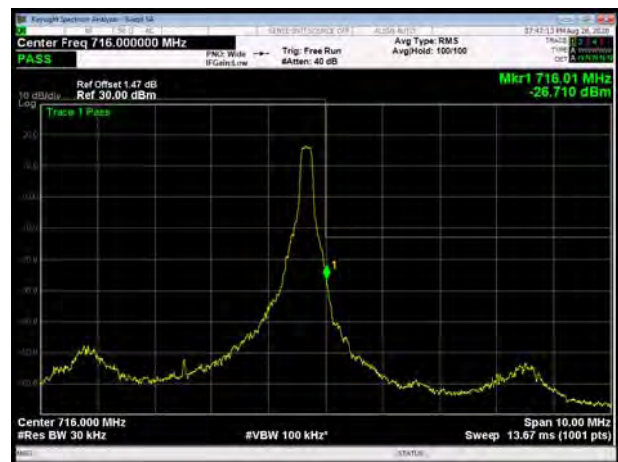
## LTE Band 12 QPSK 3MHz CH-High, 100%RB



## LTE Band 12 QPSK 5MHz CH-Low, 1 RB



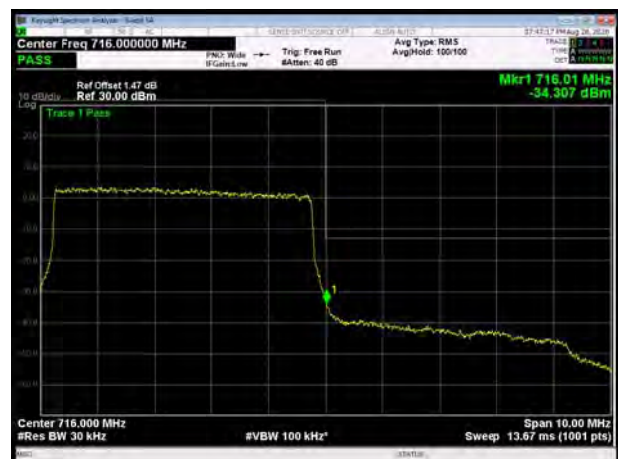
## LTE Band 12 QPSK 5MHz CH-High, 1 RB



## LTE Band 12 QPSK 5MHz CH-Low, 100%RB

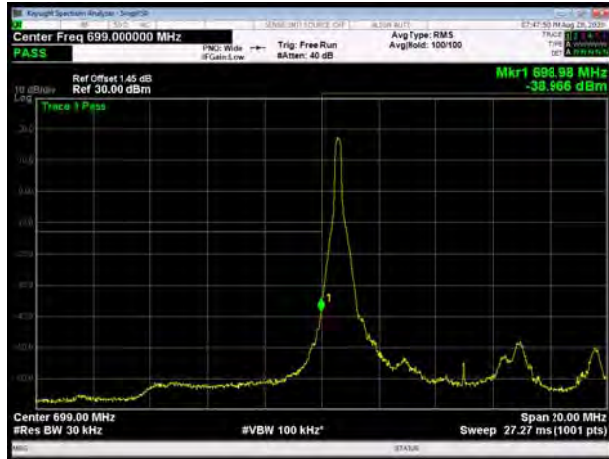


## LTE Band 12 QPSK 5MHz CH-High, 100%RB

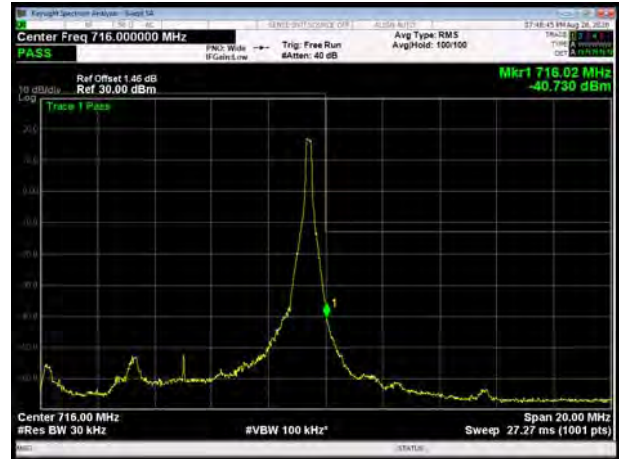




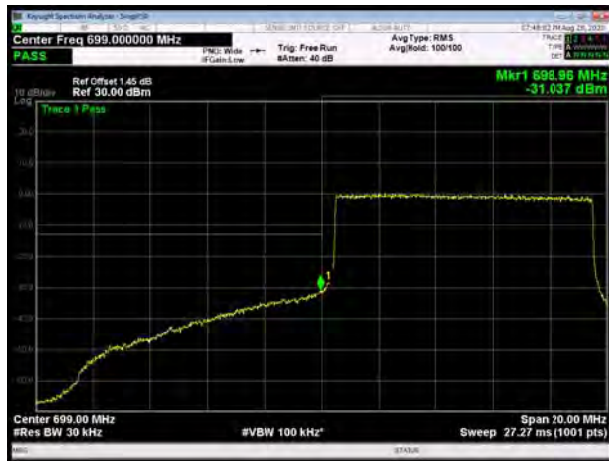
## LTE Band 12 QPSK 10MHz CH-Low, 1 RB



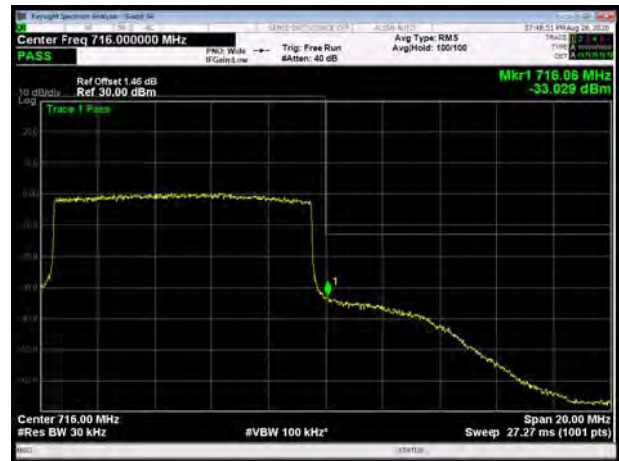
## LTE Band 12 QPSK 10MHz CH-High, 1 RB



## LTE Band 12 QPSK 10MHz CH-Low, 100%RB



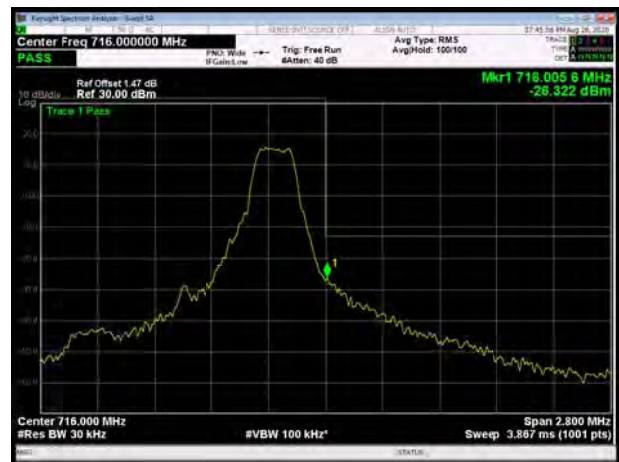
## LTE Band 12 QPSK 10MHz CH-High, 100%RB



## LTE Band 12 16QAM 1.4MHz CH-Low, 1 RB

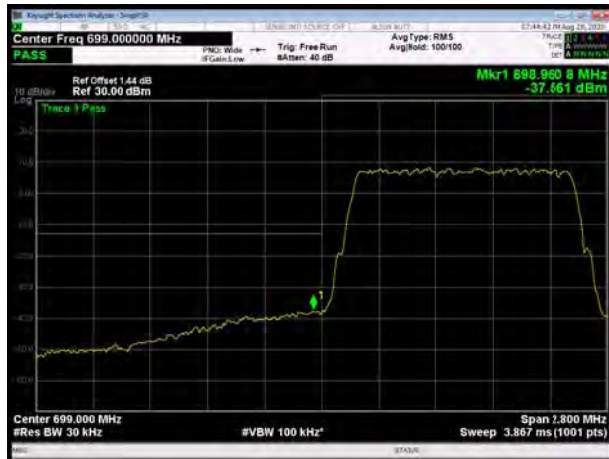


## LTE Band 12 16QAM 1.4MHz CH-High, 1 RB

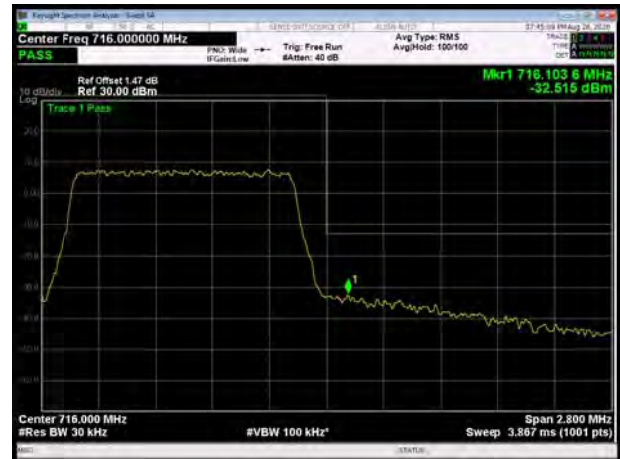




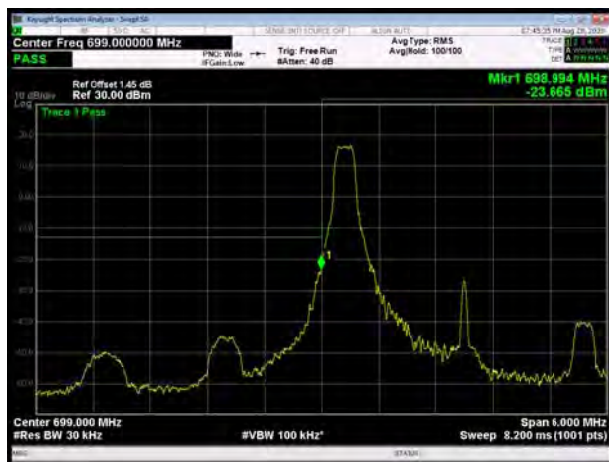
LTE Band 12 16QAM 1.4MHz CH-Low, 100%RB



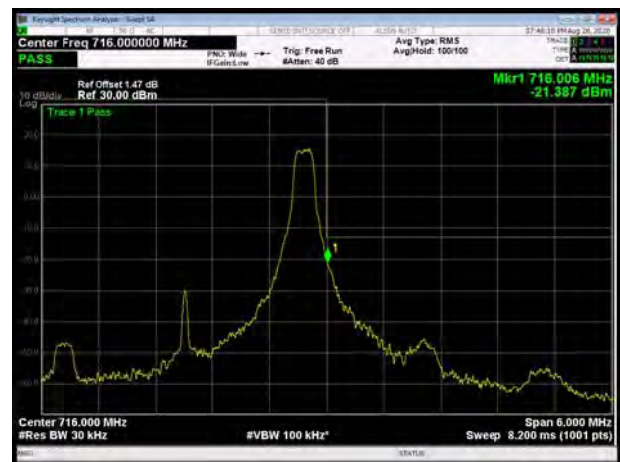
LTE Band 12 16QAM 1.4MHz CH-High, 100%RB



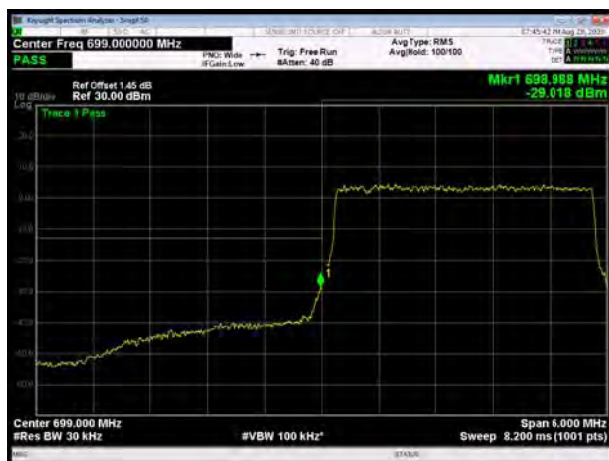
LTE Band 12 16QAM 3MHz CH-Low, 1 RB



LTE Band 12 16QAM 3MHz CH-High, 1 RB



LTE Band 12 16QAM 3MHz CH-Low, 100%RB

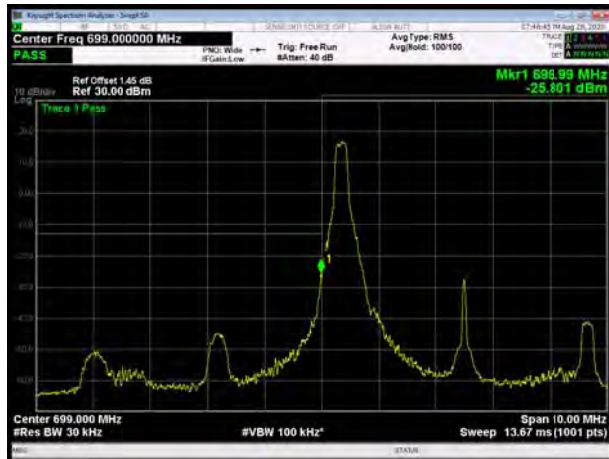


LTE Band 12 16QAM 3MHz CH-High, 100%RB

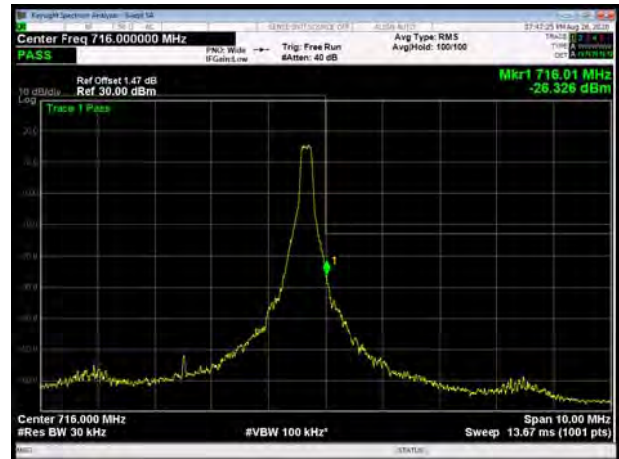




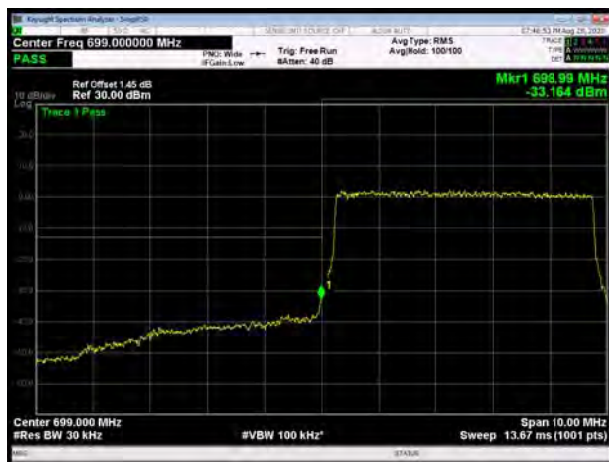
LTE Band 12 16QAM 5MHz CH-Low, 1 RB



LTE Band 12 16QAM 5MHz CH-High, 1 RB



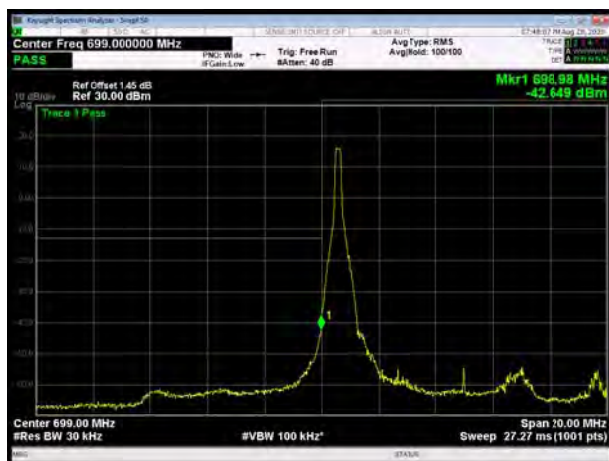
LTE Band 12 16QAM 5MHz CH-Low, 100%RB



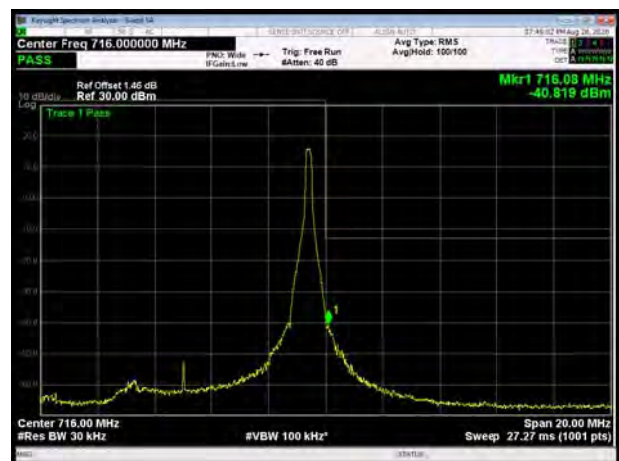
LTE Band 12 16QAM 5MHz CH-High, 100%RB



LTE Band 12 16QAM 10MHz CH-Low, 1 RB

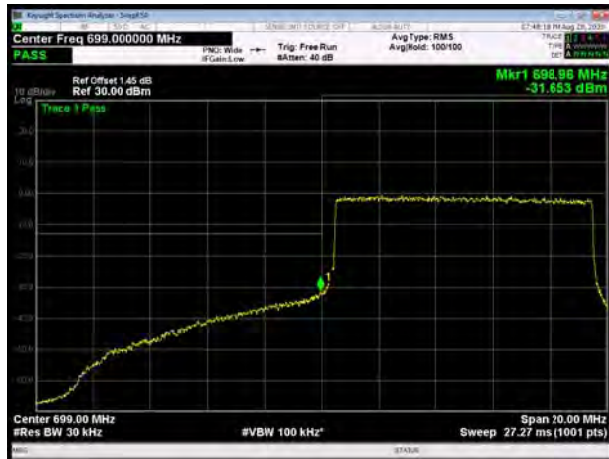


LTE Band 12 16QAM 10MHz CH-High, 1 RB





LTE Band 12 16QAM 10MHz CH-Low, 100%RB



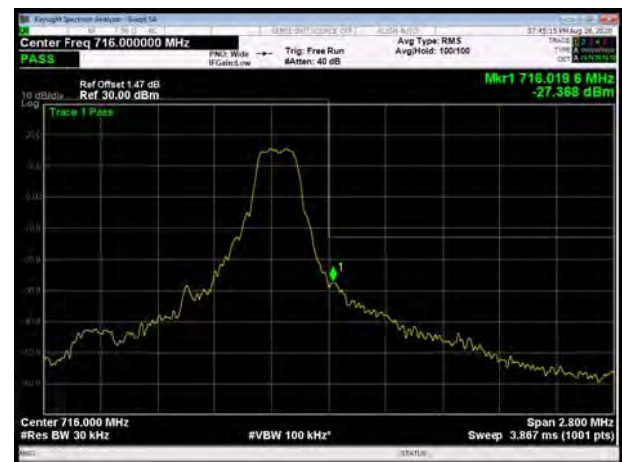
LTE Band 12 16QAM 10MHz CH-High, 100%RB



LTE Band 12 64QAM 1.4MHz CH-Low, 1 RB



LTE Band 12 64QAM 1.4MHz CH-High, 1 RB



LTE Band 12 64QAM 1.4MHz CH-Low, 100%RB

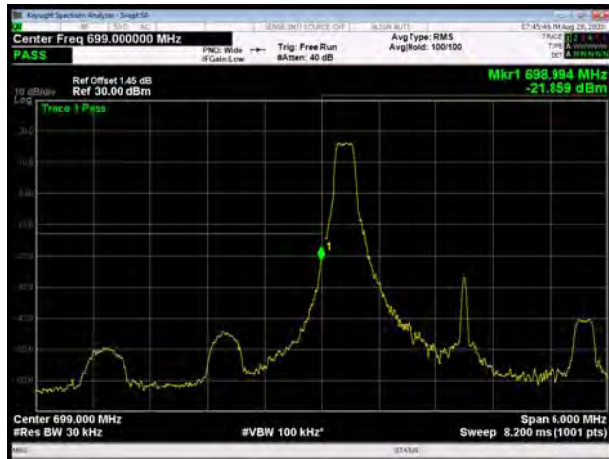


LTE Band 12 64QAM 1.4MHz CH-High, 100%RB

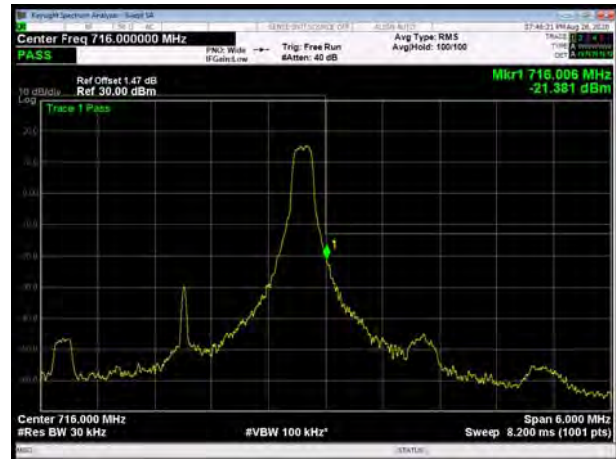




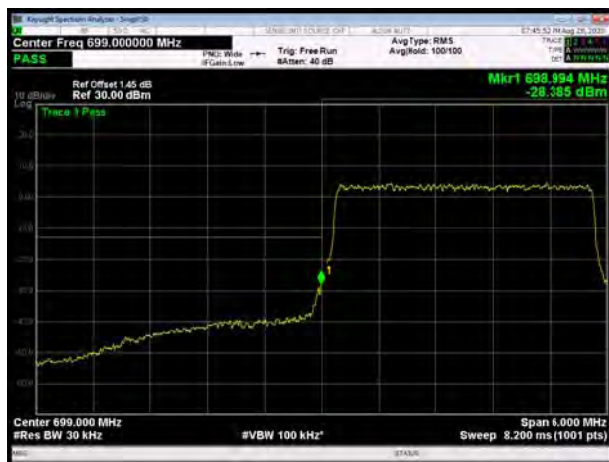
LTE Band 12 64QAM 3MHz CH-Low, 1 RB



LTE Band 12 64QAM 3MHz CH-High, 1 RB



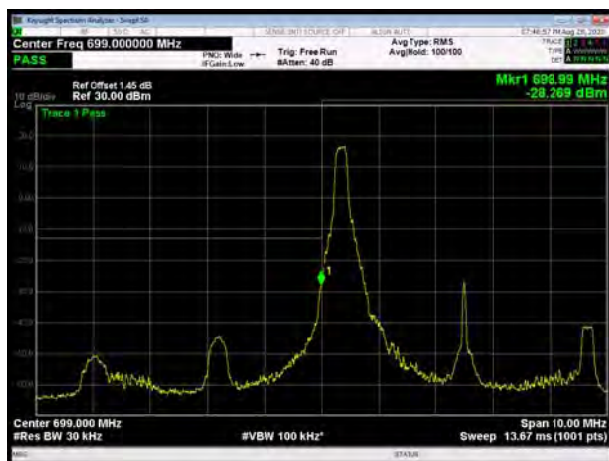
LTE Band 12 64QAM 3MHz CH-Low, 100%RB



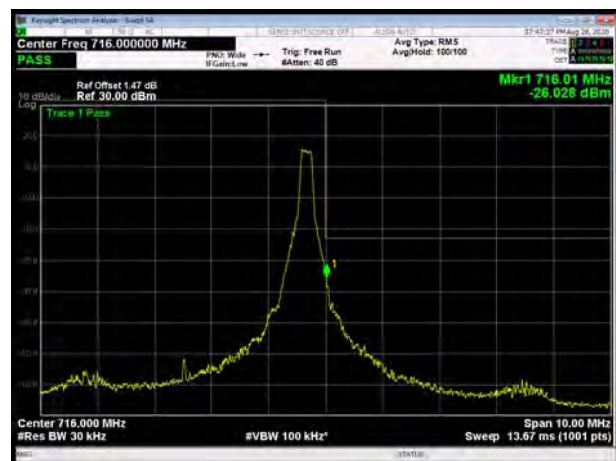
LTE Band 12 64QAM 3MHz CH-High, 100%RB



LTE Band 12 64QAM 5MHz CH-Low, 1 RB

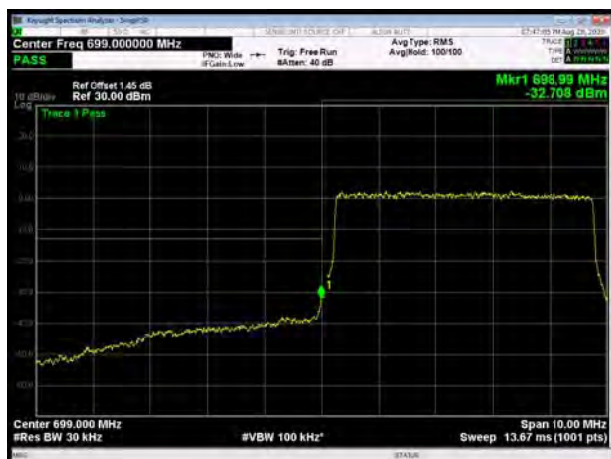


LTE Band 12 64QAM 5MHz CH-High, 1 RB





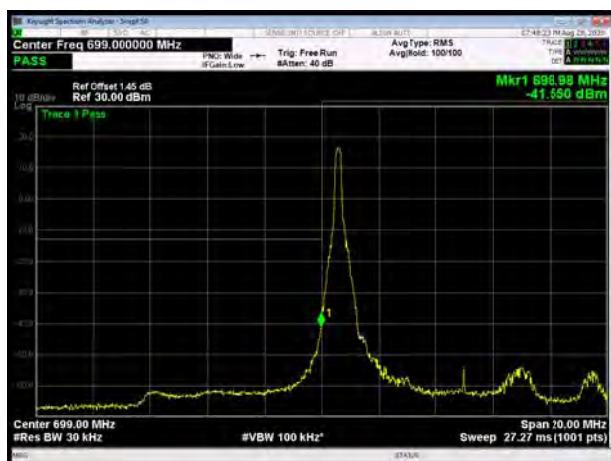
LTE Band 12 64QAM 5MHz CH-Low, 100%RB



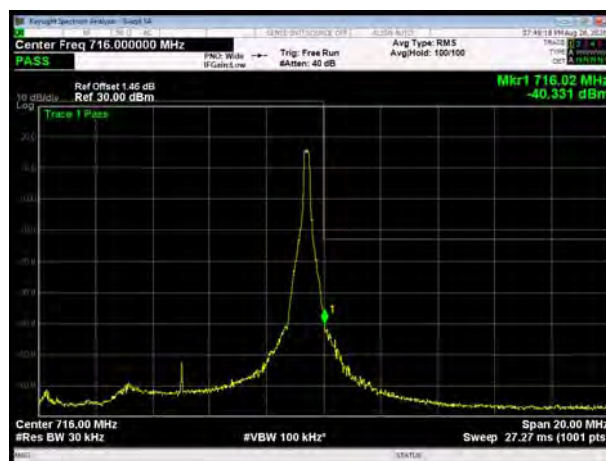
LTE Band 12 64QAM 5MHz CH-High, 100%RB



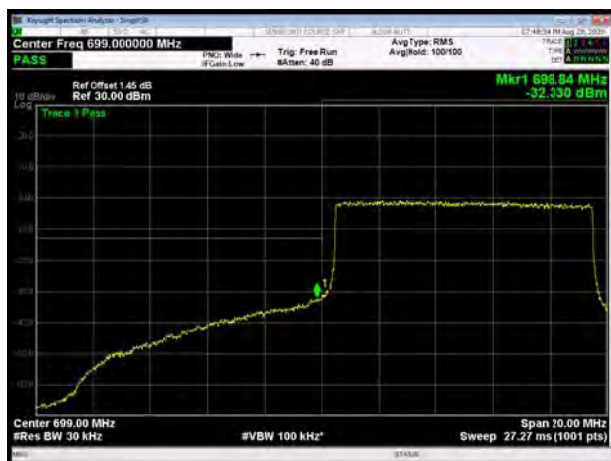
LTE Band 12 64QAM 10MHz CH-Low, 1 RB



LTE Band 12 64QAM 10MHz CH-High, 1 RB



LTE Band 12 64QAM 10MHz CH-Low, 100%RB

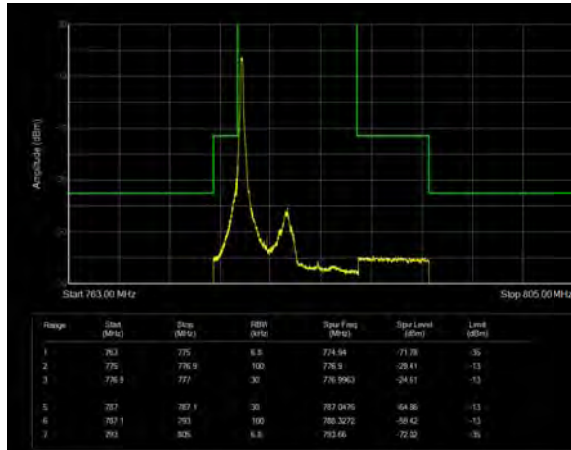


LTE Band 12 64QAM 10MHz CH-High, 100%RB

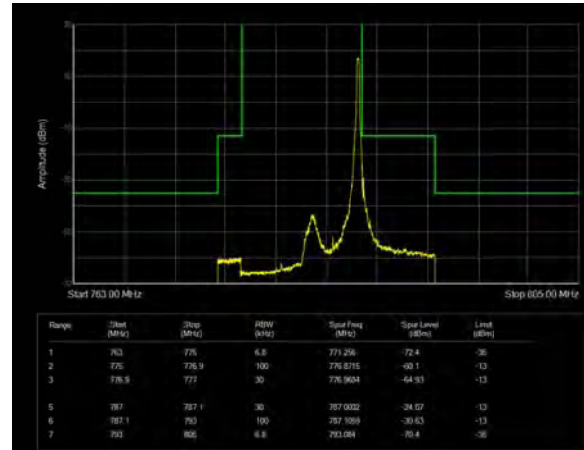




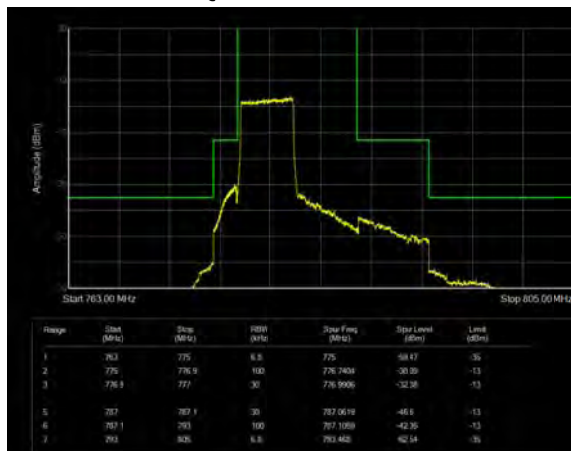
## LTE Band 13 QPSK 5MHz CH-Low, 1 RB



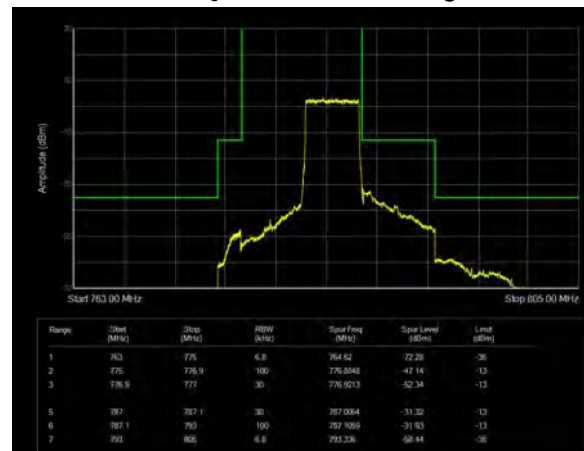
## LTE Band 13 QPSK 5MHz CH-High, 1 RB



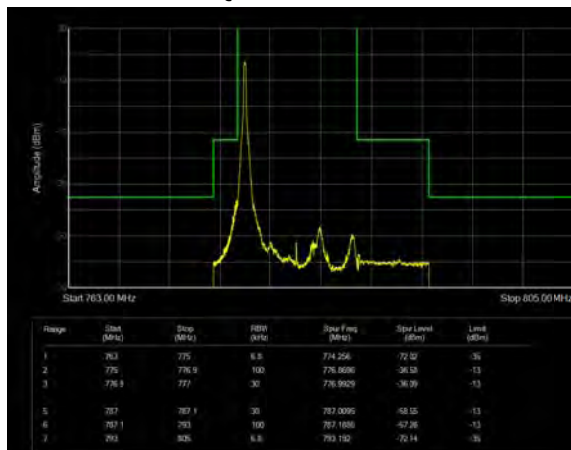
## LTE Band 13 QPSK 5MHz CH-Low, 100%RB



## LTE Band 13 QPSK 5MHz CH-High, 100%RB



## LTE Band 13 QPSK 10MHz CH-Low, 1 RB

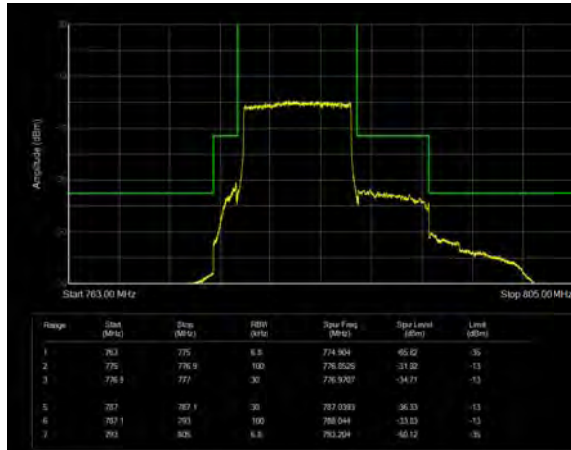


## LTE Band 13 QPSK 10MHz CH-High, 1 RB

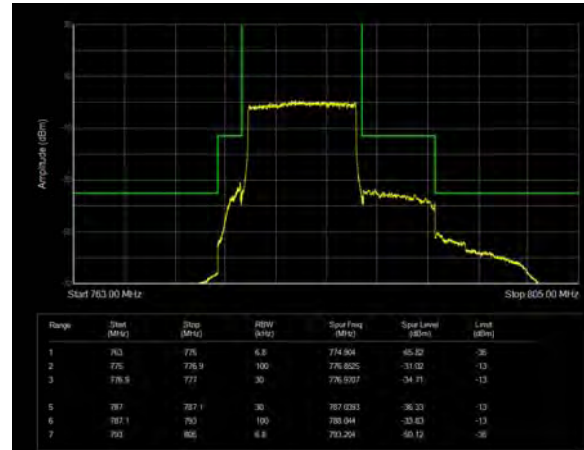




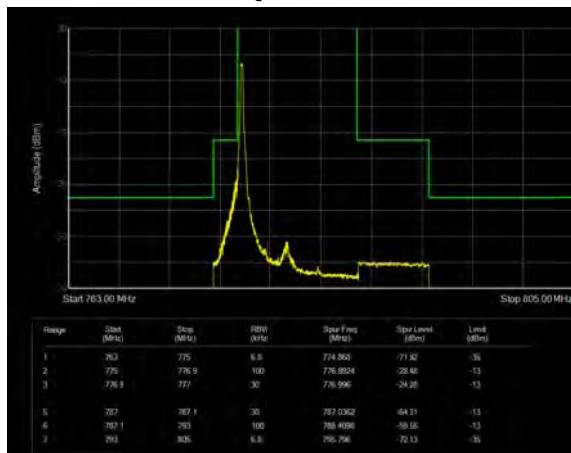
## LTE Band 13 QPSK 10MHz CH-Low, 100%RB



## LTE Band 13 QPSK 10MHz CH-High, 100%RB



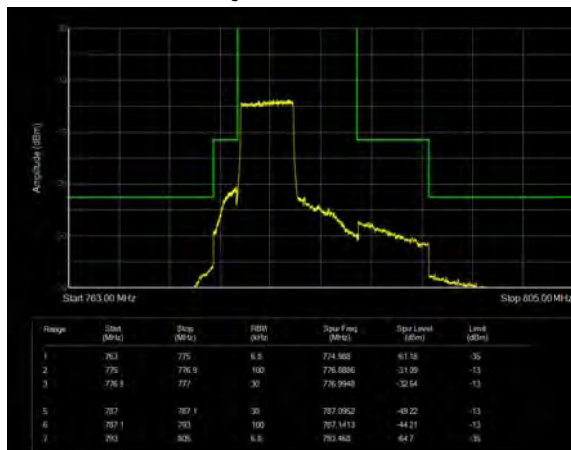
## LTE Band 13 16QAM 5MHz CH-Low, 1 RB



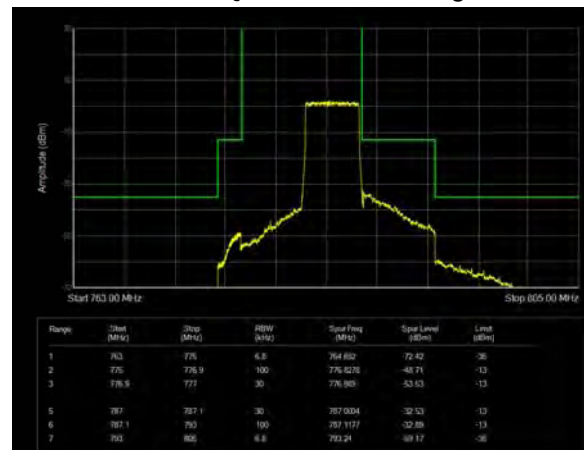
## LTE Band 13 16QAM 5MHz CH-High, 1 RB



## LTE Band 13 16QAM 5MHz CH-Low, 100%RB

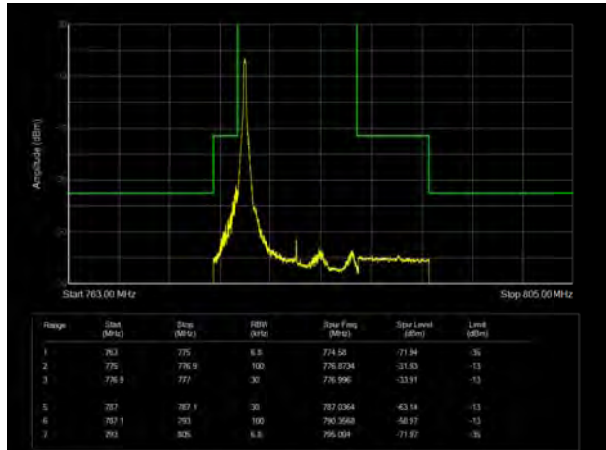


## LTE Band 13 16QAM 5MHz CH-High, 100%RB

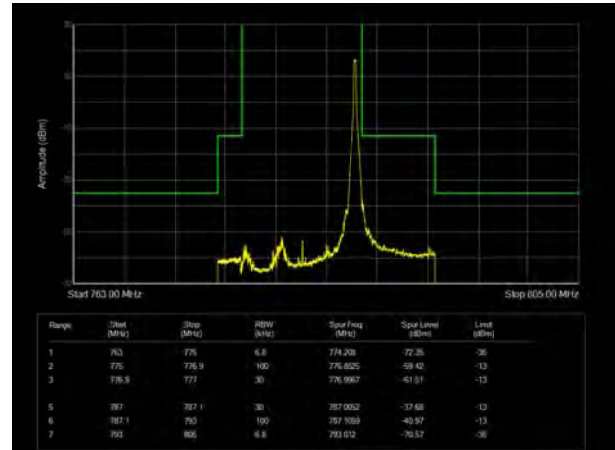




LTE Band 13 16QAM 10MHz CH-Low, 1 RB



LTE Band 13 16QAM 10MHz CH-High, 1 RB



LTE Band 13 16QAM 10MHz CH-Low, 100%RB



LTE Band 13 16QAM 10MHz CH-High, 100%RB



LTE Band 13 64QAM 5MHz CH-Low, 1 RB

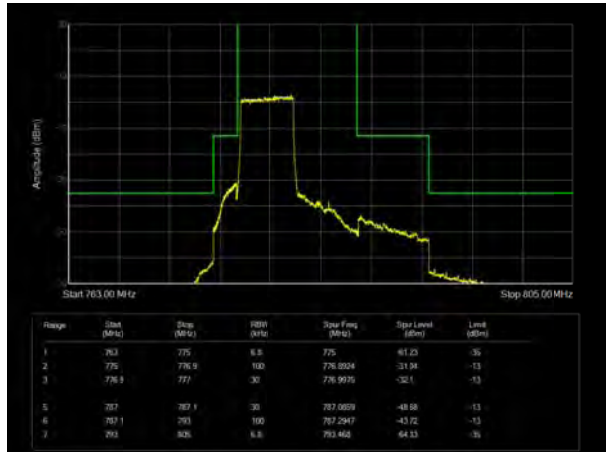


LTE Band 13 64QAM 5MHz CH-High, 1 RB

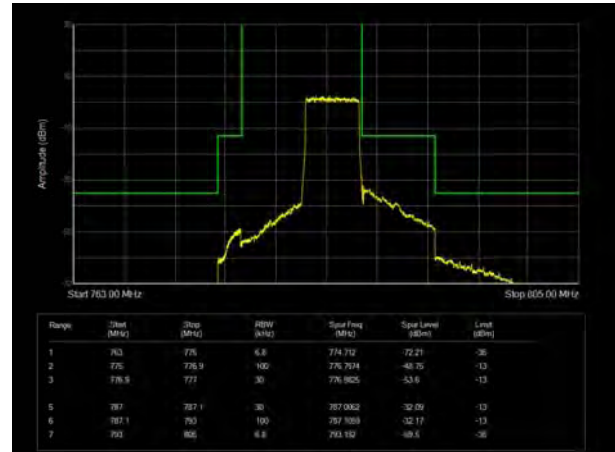




LTE Band 13 64QAM 5MHz CH-Low, 100%RB



LTE Band 13 64QAM 5MHz CH-High, 100%RB



LTE Band 13 64QAM 10MHz CH-Low, 1 RB



LTE Band 13 64QAM 10MHz CH-High, 1 RB



LTE Band 13 64QAM 10MHz CH-Low, 100%RB

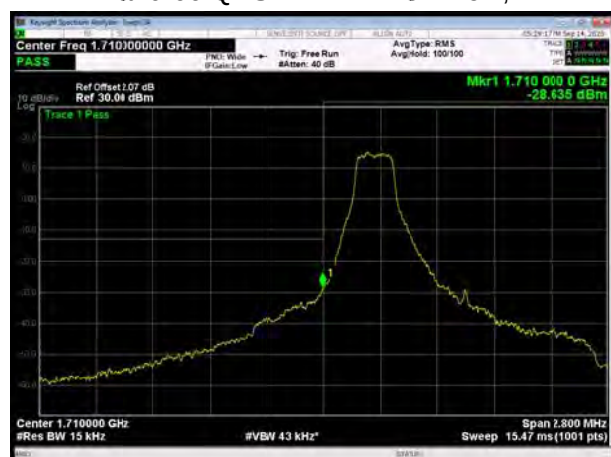


LTE Band 13 64QAM 10MHz CH-High, 100%RB

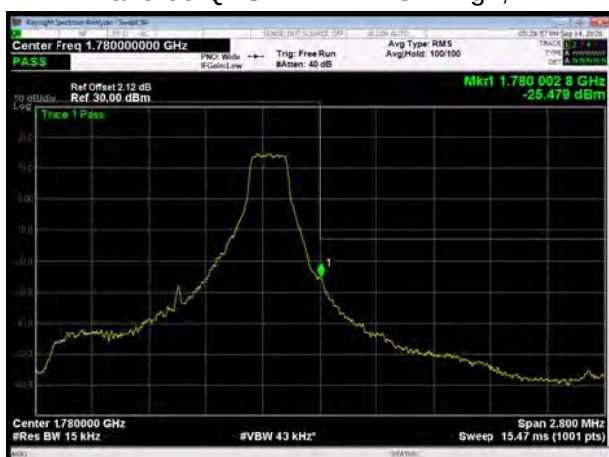




## LTE Band 66 QPSK 1.4MHz CH-Low, 1 RB



## LTE Band 66 QPSK 1.4MHz CH-High, 1 RB



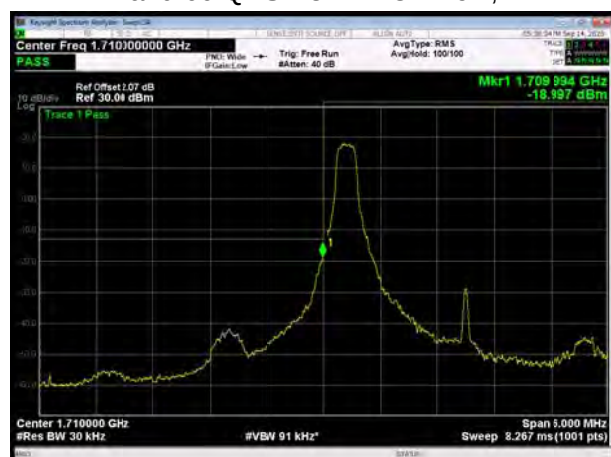
## LTE Band 66 QPSK 1.4MHz CH-Low, 100%RB



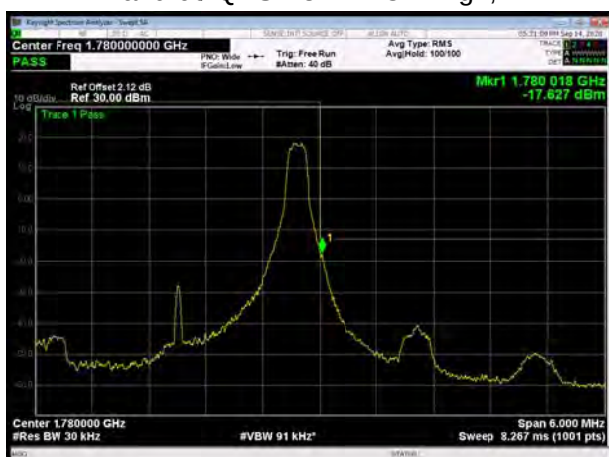
## LTE Band 66 QPSK 1.4MHz CH-High, 100%RB



## LTE Band 66 QPSK 3MHz CH-Low, 1 RB



## LTE Band 66 QPSK 3MHz CH-High, 1 RB





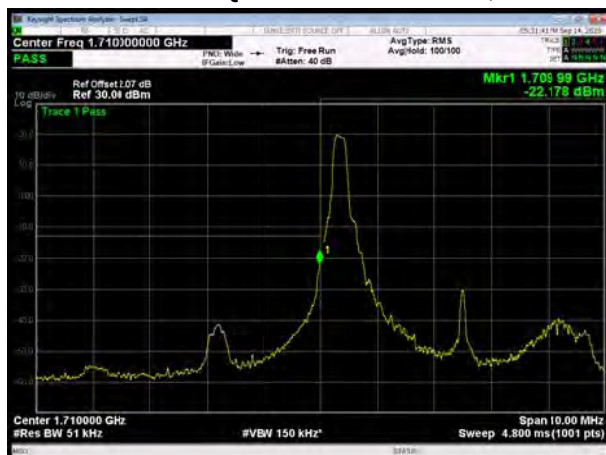
## LTE Band 66 QPSK 3MHz CH-Low, 100%RB



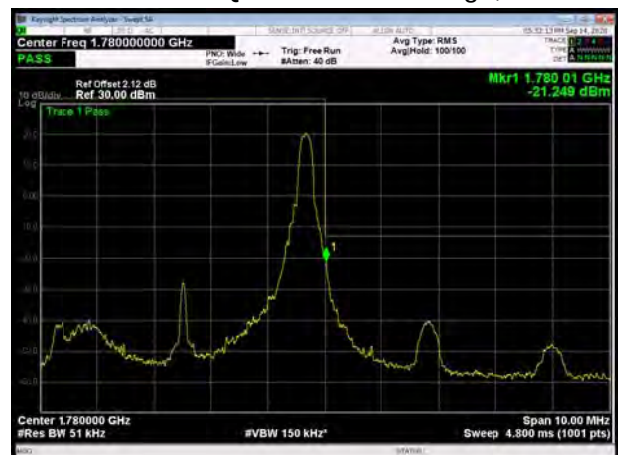
## LTE Band 66 QPSK 3MHz CH-High, 100%RB



## LTE Band 66 QPSK 5MHz CH-Low, 1 RB



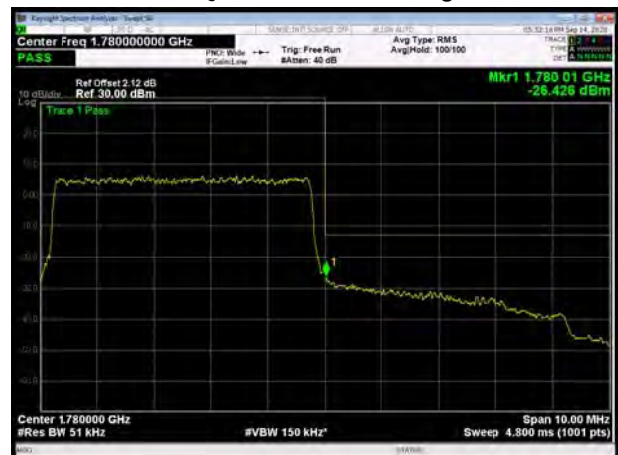
## LTE Band 66 QPSK 5MHz CH-High, 1 RB



## LTE Band 66 QPSK 5MHz CH-Low, 100%RB

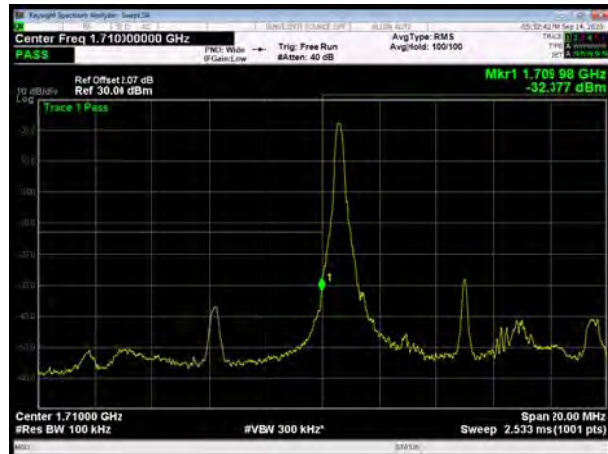


## LTE Band 66 QPSK 5MHz CH-High, 100%RB

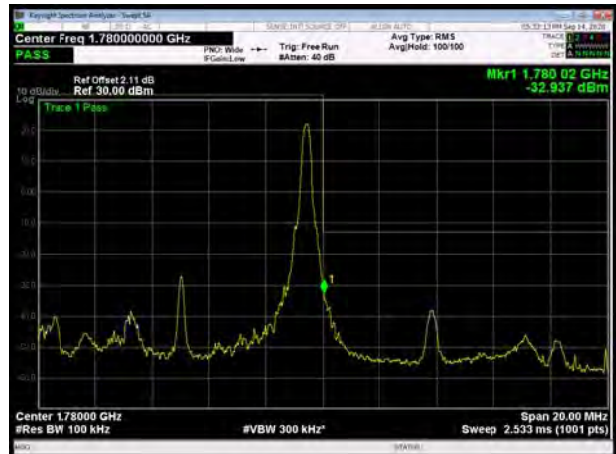




## LTE Band 66 QPSK 10MHz CH-Low, 1 RB



## LTE Band 66 QPSK 10MHz CH-High, 1 RB



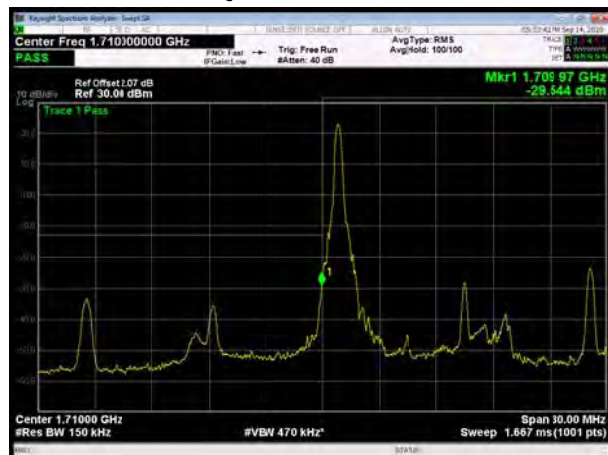
## LTE Band 66 QPSK 10MHz CH-Low, 100%RB



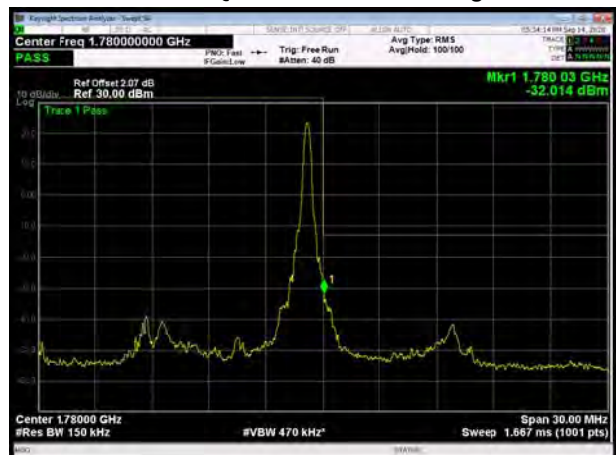
## LTE Band 66 QPSK 10MHz CH-High, 100%RB



## LTE Band 66 QPSK 15MHz CH-Low, 1 RB

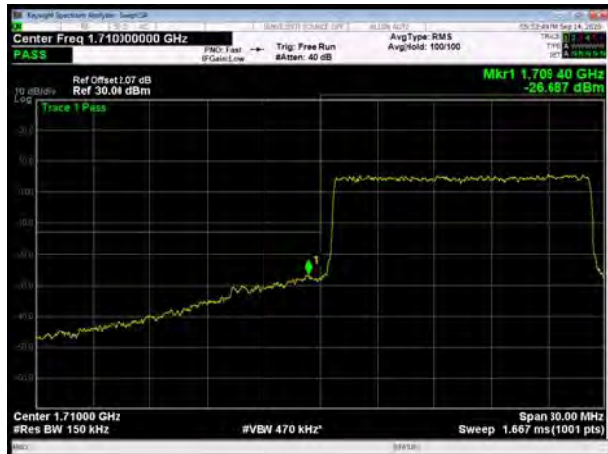


## LTE Band 66 QPSK 15MHz CH-High, 1 RB





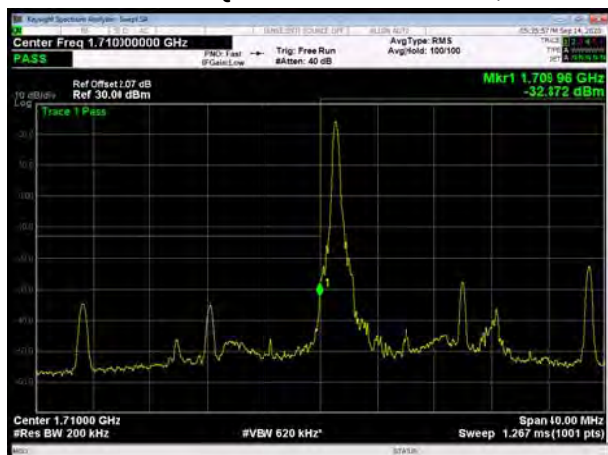
## LTE Band 66 QPSK 15MHz CH-Low, 100%RB



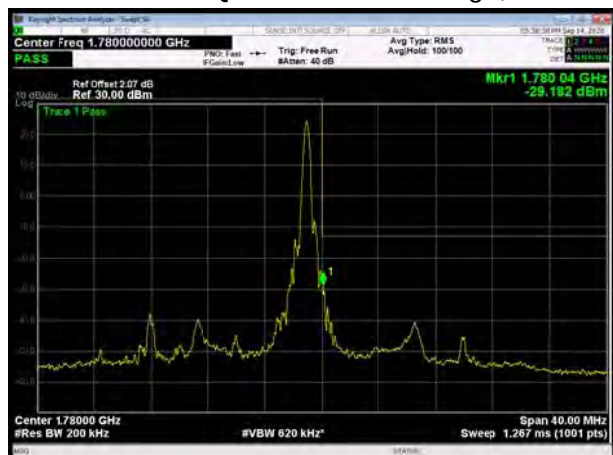
## LTE Band 66 QPSK 15MHz CH-High, 100%RB



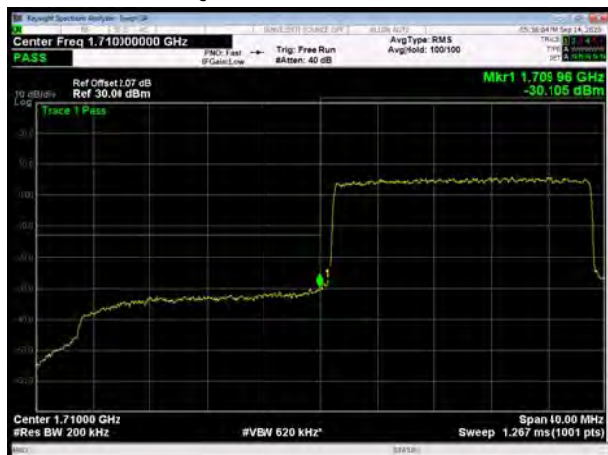
## LTE Band 66 QPSK 20MHz CH-Low, 1 RB



## LTE Band 66 QPSK 20MHz CH-High, 1 RB



## LTE Band 66 QPSK 20MHz CH-Low, 100%RB



## LTE Band 66 QPSK 20MHz CH-High, 100%RB

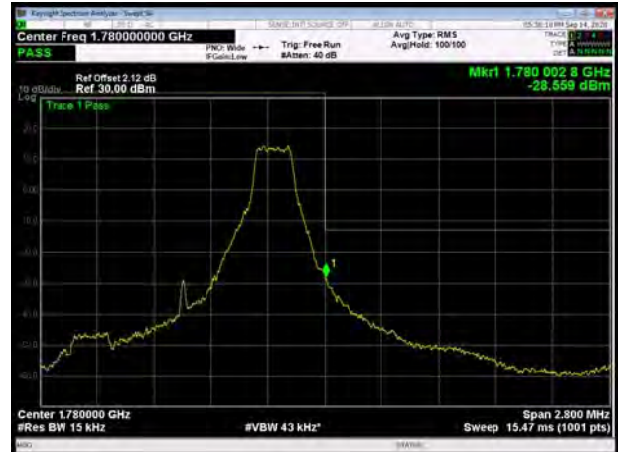




LTE Band 66 16QAM 1.4MHz CH-Low, 1 RB



LTE Band 66 16QAM 1.4MHz CH-High, 1 RB



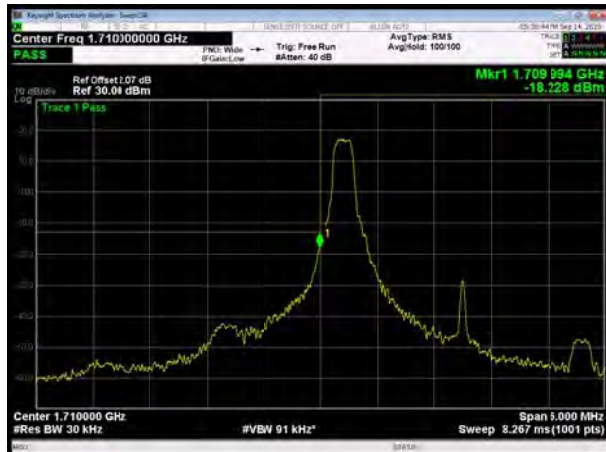
LTE Band 66 16QAM 1.4MHz CH-Low, 100%RB



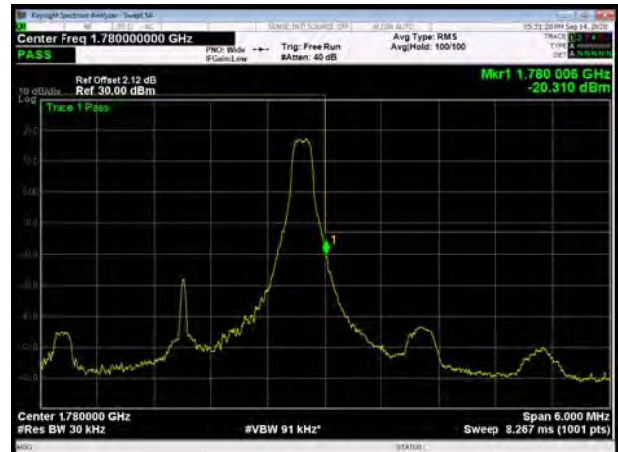
LTE Band 66 16QAM 1.4MHz CH-High, 100%RB



LTE Band 66 16QAM 3MHz CH-Low, 1 RB

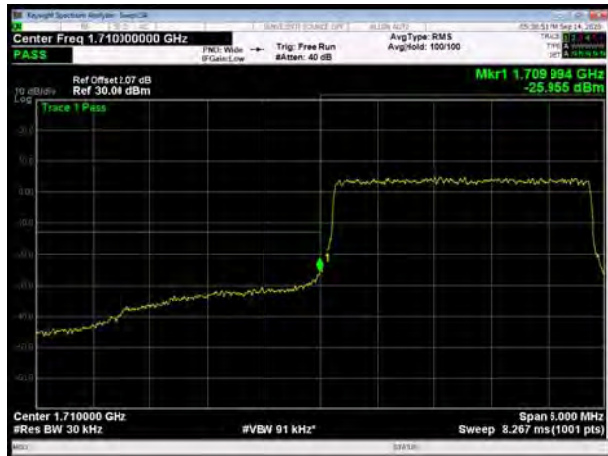


LTE Band 66 16QAM 3MHz CH-High, 1 RB





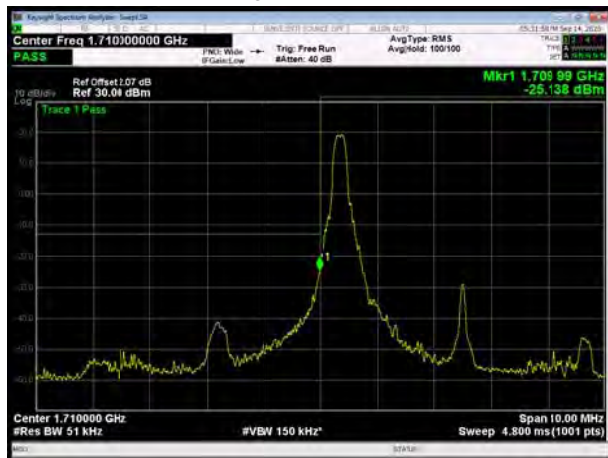
## LTE Band 66 16QAM 3MHz CH-Low, 100%RB



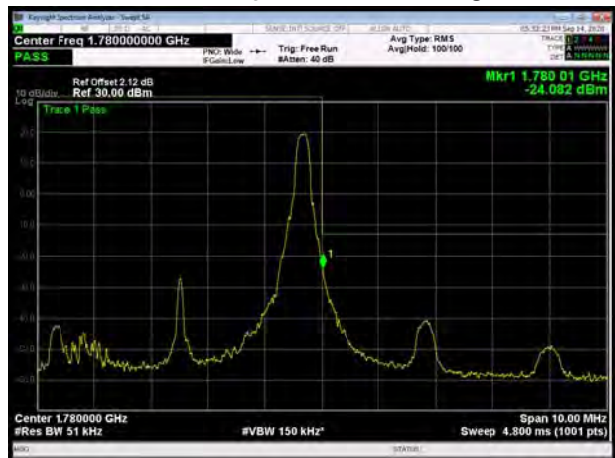
## LTE Band 66 16QAM 3MHz CH-High, 100%RB



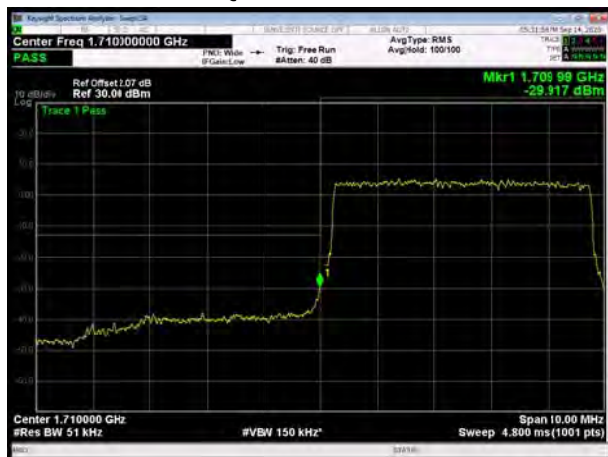
## LTE Band 66 16QAM 5MHz CH-Low, 1 RB



## LTE Band 66 16QAM 5MHz CH-High, 1 RB



## LTE Band 66 16QAM 5MHz CH-Low, 100%RB

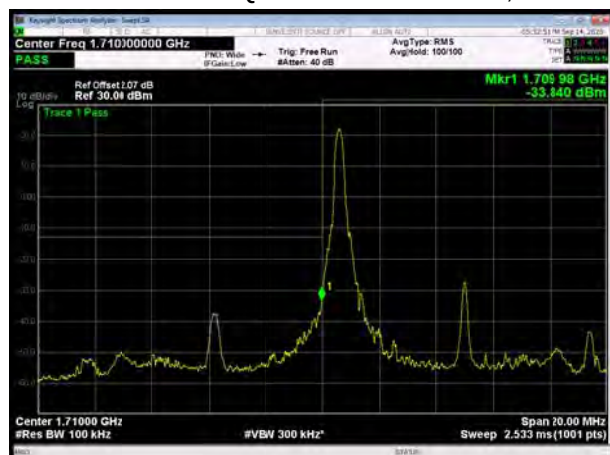


## LTE Band 66 16QAM 5MHz CH-High, 100%RB

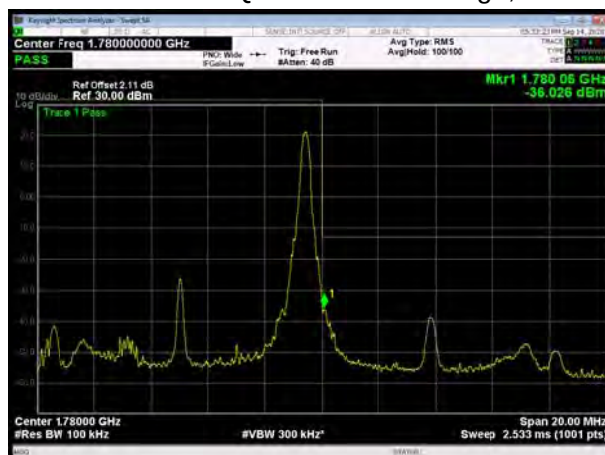




## LTE Band 66 16QAM 10MHz CH-Low, 1 RB



## LTE Band 66 16QAM 10MHz CH-High, 1 RB



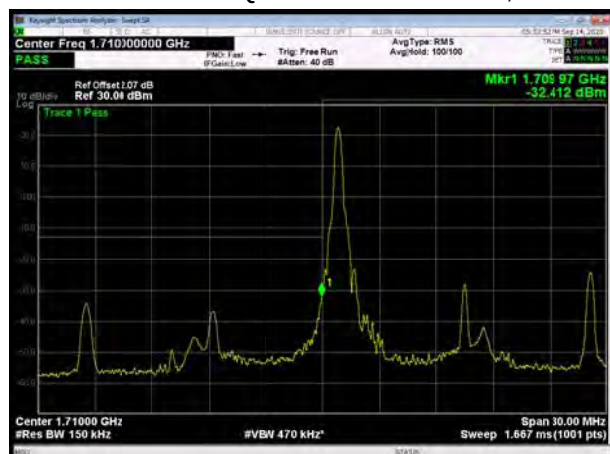
## LTE Band 66 16QAM 10MHz CH-Low, 100%RB



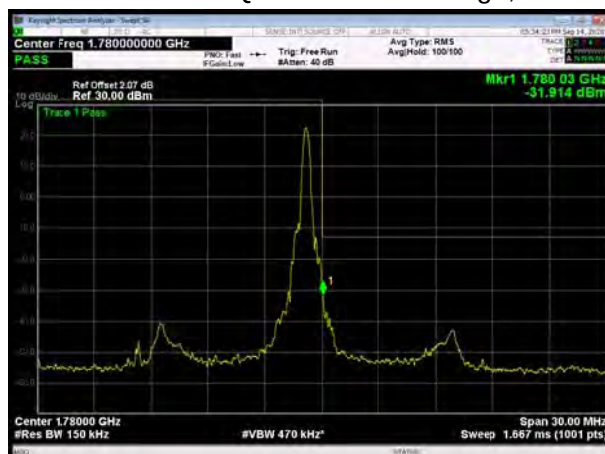
## LTE Band 66 16QAM 10MHz CH-High, 100%RB



## LTE Band 66 16QAM 15MHz CH-Low, 1 RB



## LTE Band 66 16QAM 15MHz CH-High, 1 RB





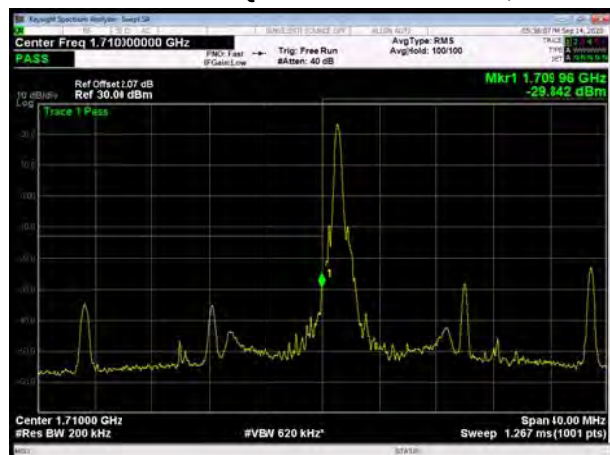
LTE Band 66 16QAM 15MHz CH-Low, 100%RB



LTE Band 66 16QAM 15MHz CH-High, 100%RB



LTE Band 66 16QAM 20MHz CH-Low, 1 RB



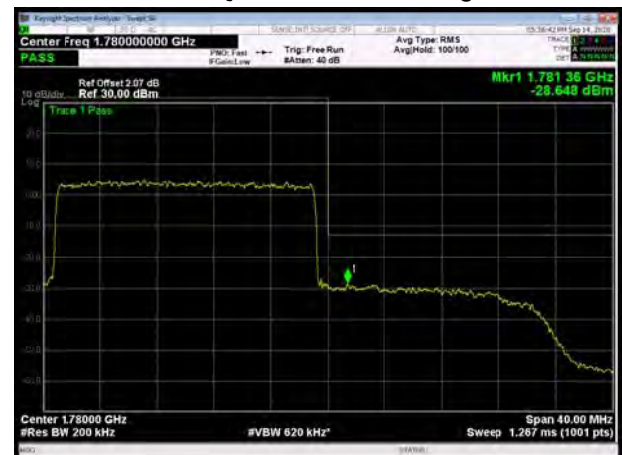
LTE Band 66 16QAM 20MHz CH-High, 1 RB



LTE Band 66 16QAM 20MHz CH-Low, 100%RB

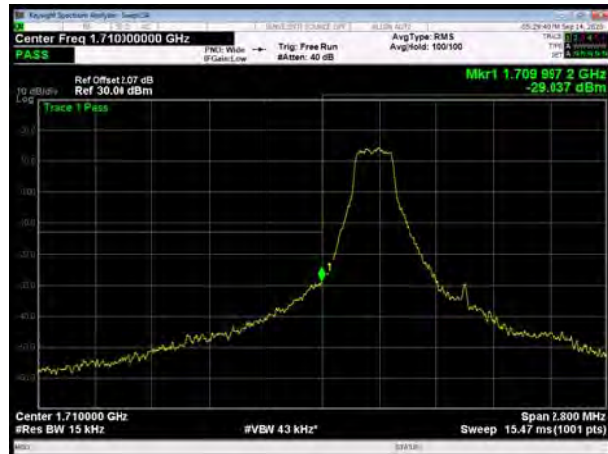


LTE Band 66 16QAM 20MHz CH-High, 100%RB

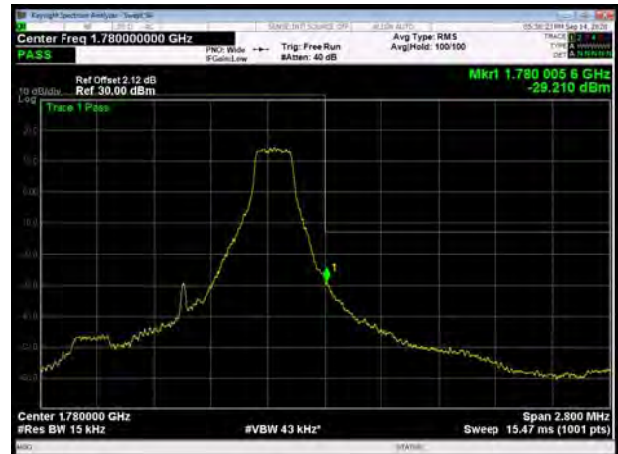




LTE Band 66 64QAM 1.4MHz CH-Low, 1 RB



LTE Band 66 64QAM 1.4MHz CH-High, 1 RB



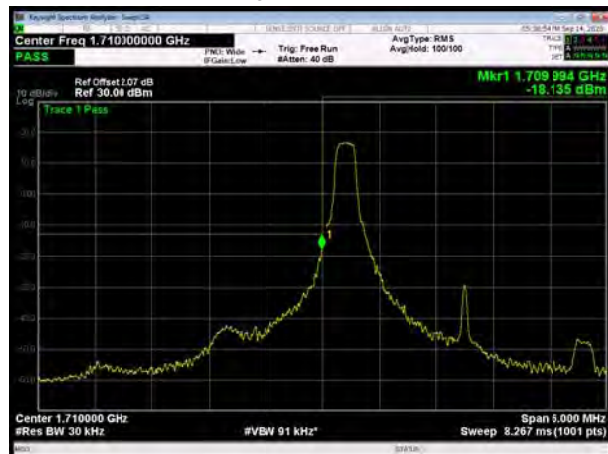
LTE Band 66 64QAM 1.4MHz CH-Low, 100%RB



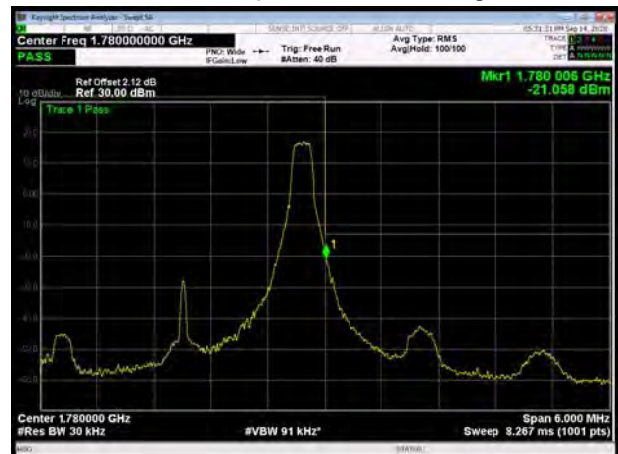
LTE Band 66 64QAM 1.4MHz CH-High, 100%RB



LTE Band 66 64QAM 3MHz CH-Low, 1 RB

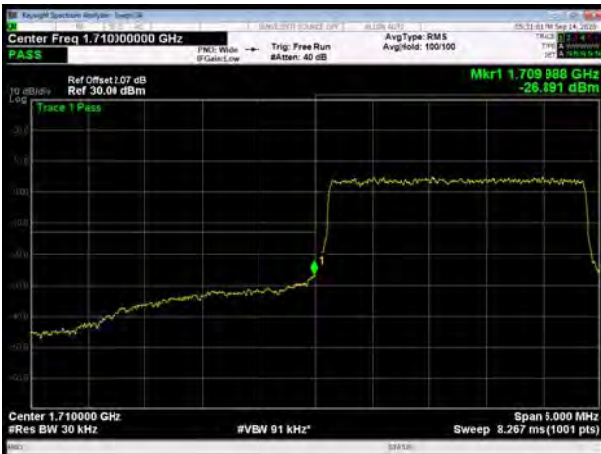


LTE Band 66 64QAM 3MHz CH-High, 1 RB





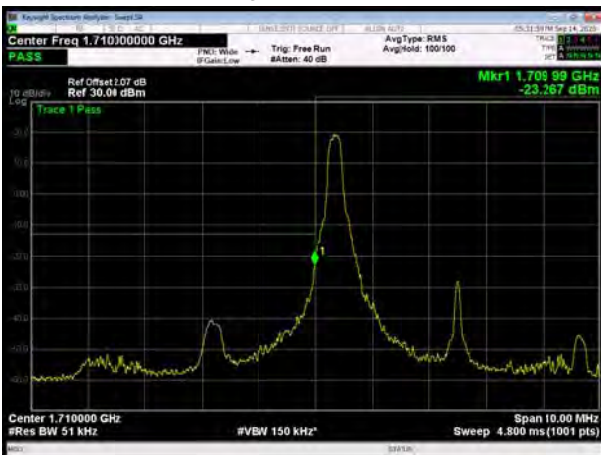
## LTE Band 66 64QAM 3MHz CH-Low, 100%RB



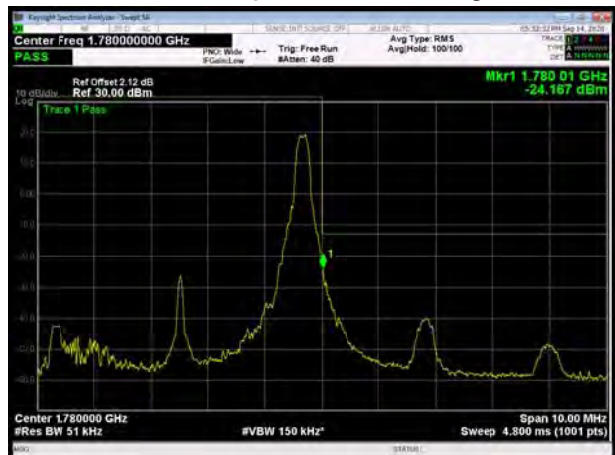
## LTE Band 66 64QAM 3MHz CH-High, 100%RB



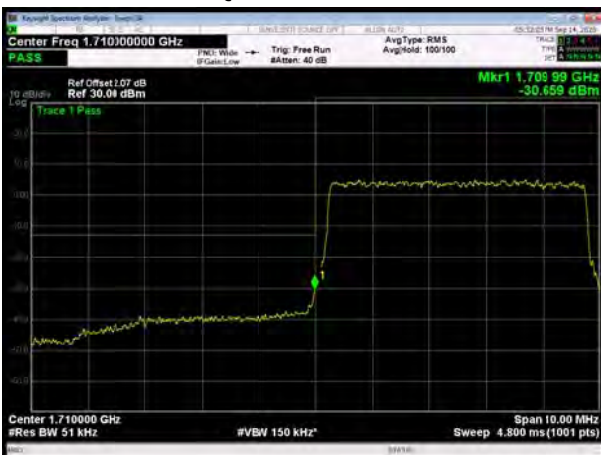
## LTE Band 66 64QAM 5MHz CH-Low, 1 RB



## LTE Band 66 64QAM 5MHz CH-High, 1 RB



## LTE Band 66 64QAM 5MHz CH-Low, 100%RB

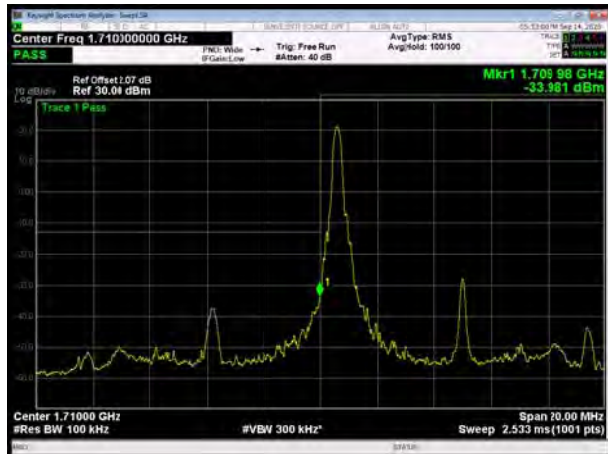


## LTE Band 66 64QAM 5MHz CH-High, 100%RB

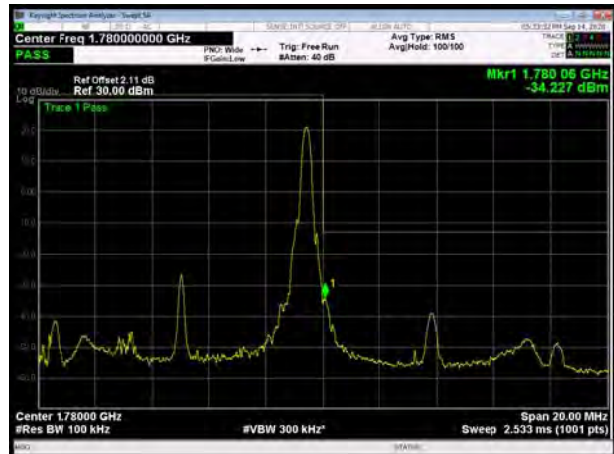




LTE Band 66 64QAM 10MHz CH-Low, 1 RB



LTE Band 66 64QAM 10MHz CH-High, 1 RB



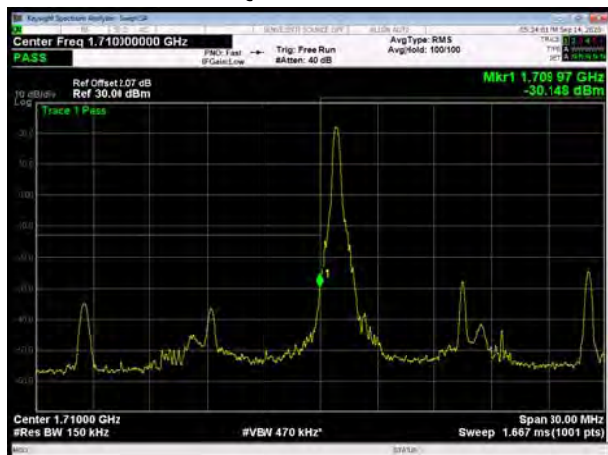
LTE Band 66 64QAM 10MHz CH-Low, 100%RB



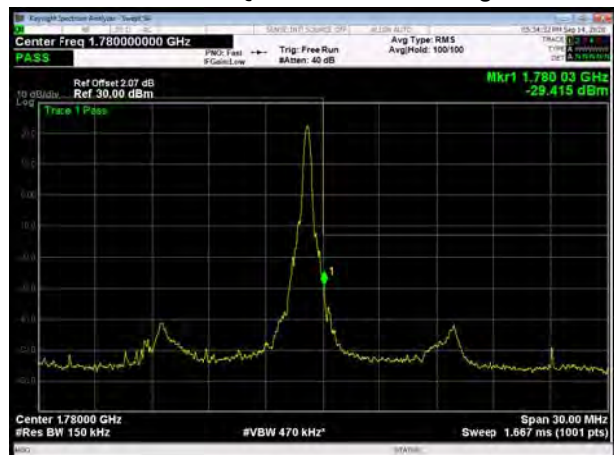
LTE Band 66 64QAM 10MHz CH-High, 100%RB



LTE Band 66 64QAM 15MHz CH-Low, 1 RB



LTE Band 66 64QAM 15MHz CH-High, 1 RB





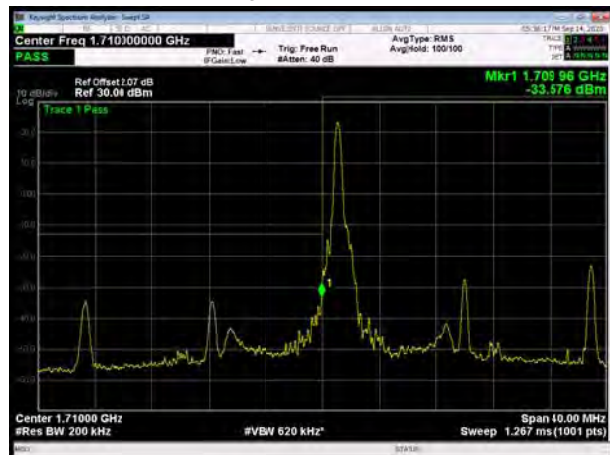
LTE Band 66 64QAM 15MHz CH-Low, 100%RB



LTE Band 66 64QAM 15MHz CH-High, 100%RB



LTE Band 66 64QAM 20MHz CH-Low, 1 RB



LTE Band 66 64QAM 20MHz CH-High, 1 RB



LTE Band 66 64QAM 20MHz CH-Low, 100%RB

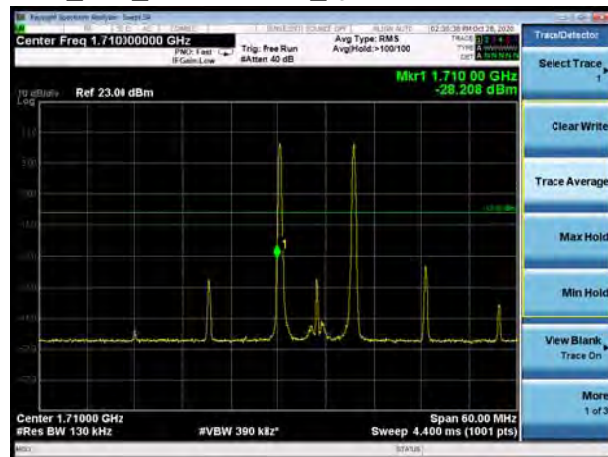


LTE Band 66 64QAM 20MHz CH-High, 100%RB

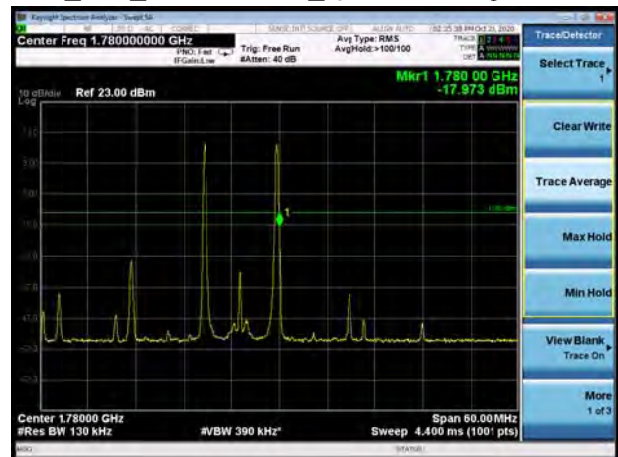




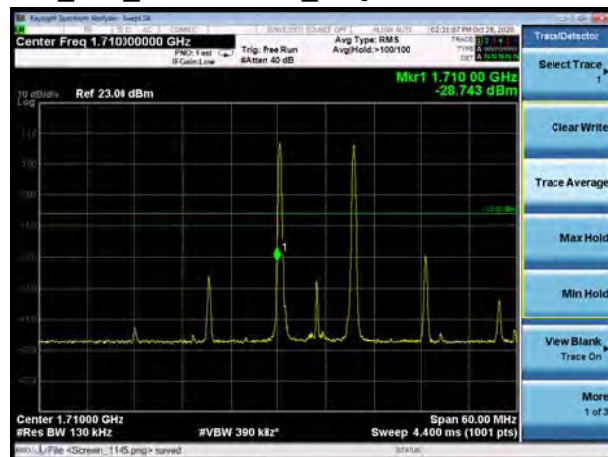
CA\_66B\_5MHz+5MHz\_QPSK CH-Low, 1 RB



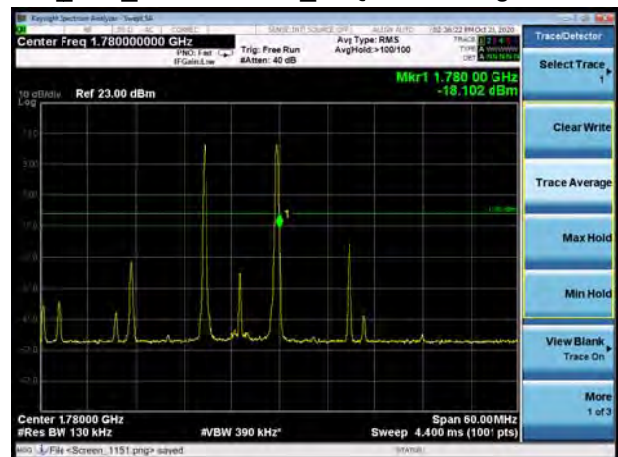
CA\_66B\_5MHz+5MHz\_QPSK CH-High, 1 RB

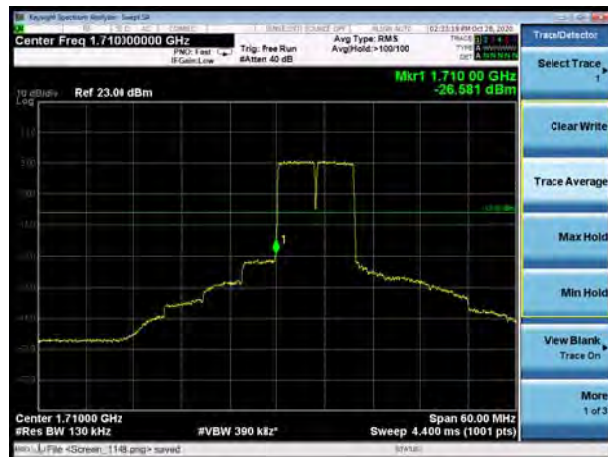
CA\_66B\_5MHz+5MHz\_QPSK CH-Low,  
100%RBCA\_66B\_5MHz+5MHz\_QPSK CH-High,  
100%RB

CA\_66B\_5MHz+5MHz\_16QAM CH-Low, 1 RB

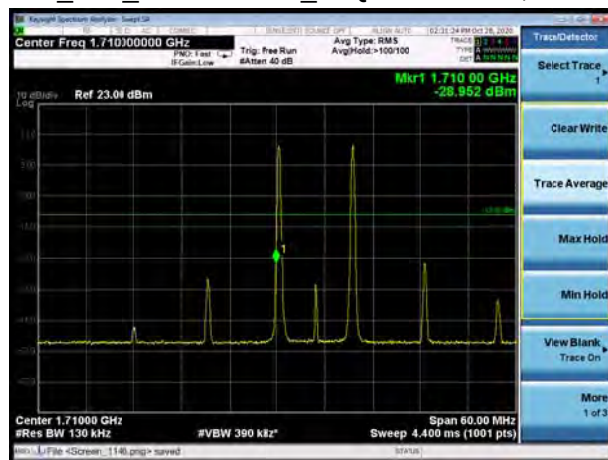
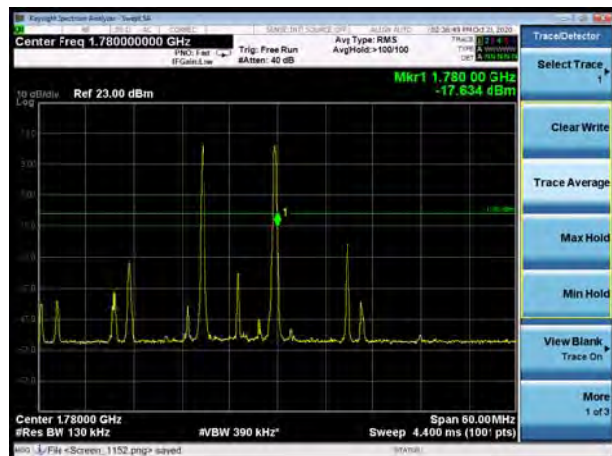
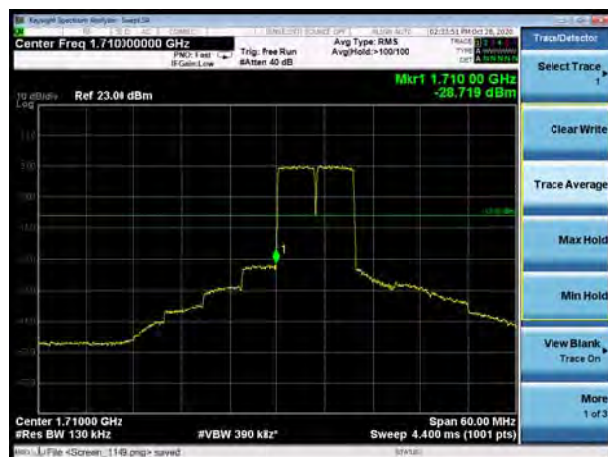


CA\_66B\_5MHz+5MHz\_16QAM CH-High, 1 RB



CA\_66B\_5MHz+5MHz\_16QAM CH-Low,  
100%RBCA\_66B\_5MHz+5MHz\_16QAM CH-High,  
100%RB

## CA\_66B\_5MHz+5MHz\_64QAM CH-Low, 1 RB

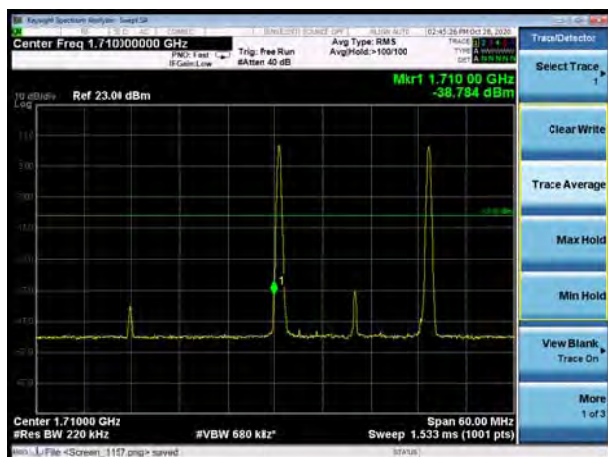
CA\_66B\_5MHz+5MHz\_64QAM CH-High, 1  
RBCA\_66B\_5MHz+5MHz\_64QAM CH-Low,  
100%RBCA\_66B\_5MHz+5MHz\_64QAM CH-High,  
100%RB

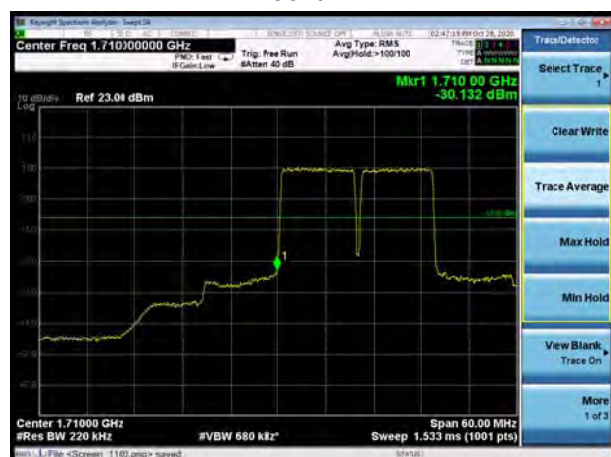
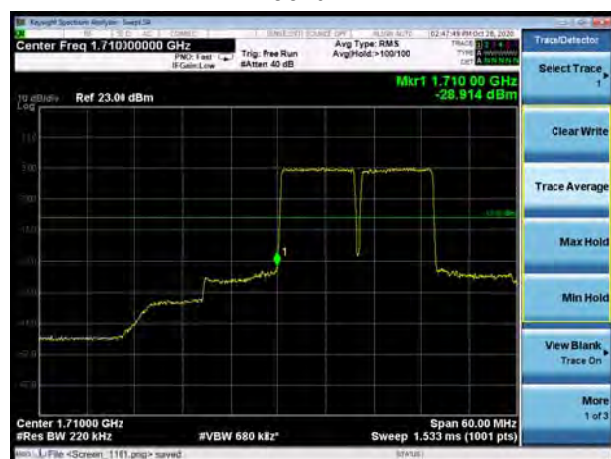


CA\_66B\_10MHz+10MHz\_QPSK CH-Low, 1 RB

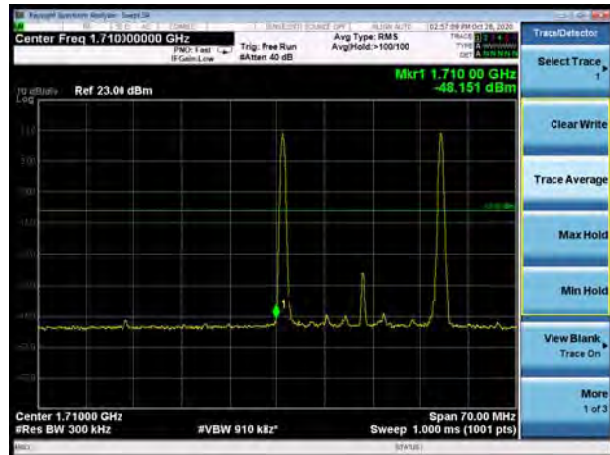


CA\_66B\_10MHz+10MHz\_QPSK CH-High, 1 RB

CA\_66B\_10MHz+10MHz\_QPSK CH-Low,  
100%RBCA\_66B\_10MHz+10MHz\_QPSK CH-High,  
100%RBCA\_66B\_10MHz+10MHz\_16QAM CH-Low, 1  
RBCA\_66B\_10MHz+10MHz\_16QAM CH-High, 1  
RB

CA\_66B\_10MHz+10MHz\_16QAM CH-Low,  
100%RBCA\_66B\_10MHz+10MHz\_16QAM CH-High,  
100%RBCA\_66B\_10MHz+10MHz\_64QAM CH-Low, 1  
RBCA\_66B\_10MHz+10MHz\_64QAM CH-High, 1  
RBCA\_66B\_10MHz+10MHz\_64QAM CH-Low,  
100%RBCA\_66B\_10MHz+10MHz\_64QAM CH-High,  
100%RB

CA\_66C\_10MHz+15MHz\_QPSK CH-Low, 1 RB



CA\_66C\_10MHz+15MHz\_QPSK CH-High, 1 RB



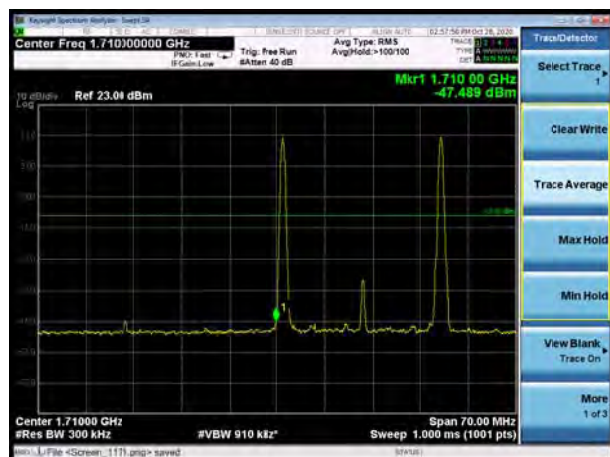
CA\_66C\_10MHz+15MHz\_QPSK CH-Low,  
100%RB



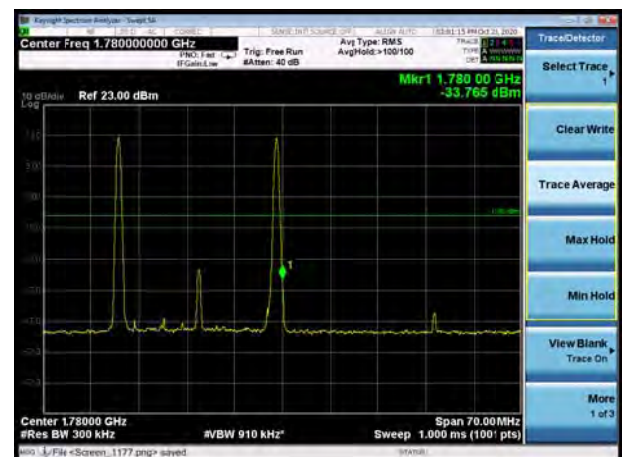
CA\_66C\_10MHz+15MHz\_QPSK CH-High,  
100%RB

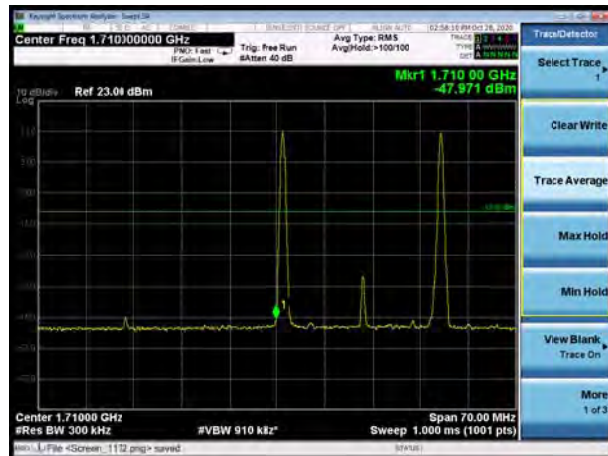


CA\_66C\_10MHz+15MHz\_16QAM CH-Low,  
1 RB



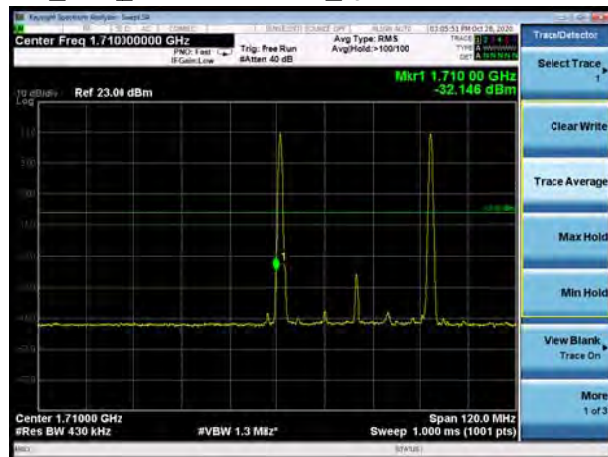
CA\_66C\_10MHz+15MHz\_16QAM CH-High, 1  
RB



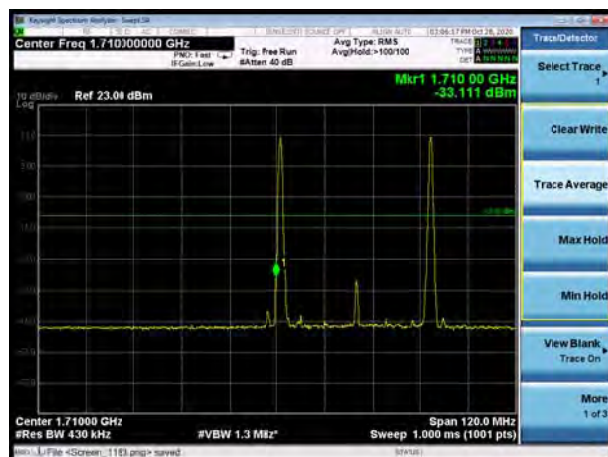
CA\_66C\_10MHz+15MHz\_16QAM CH-Low,  
100%RBCA\_66C\_10MHz+15MHz\_16QAM CH-High,  
100%RBCA\_66C\_10MHz+15MHz\_64QAM CH-Low, 1  
RBCA\_66C\_10MHz+15MHz\_64QAM CH-High, 1  
RBCA\_66C\_10MHz+15MHz\_64QAM CH-Low,  
100%RBCA\_66C\_10MHz+15MHz\_64QAM CH-High,  
100%RB

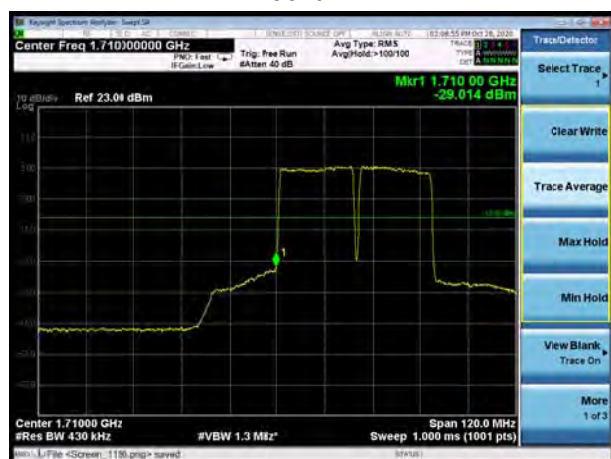
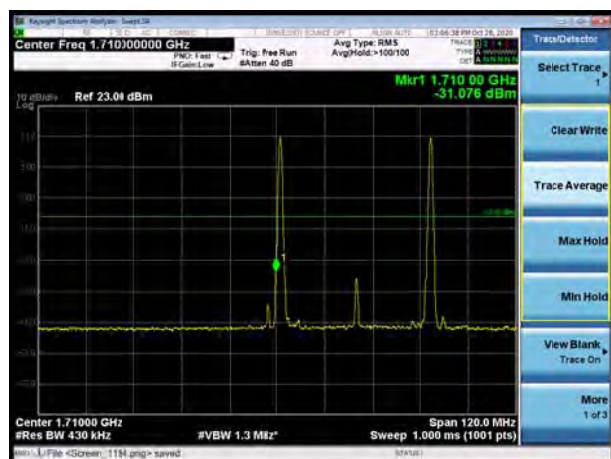


CA\_66C\_20MHz+20MHz\_QPSK CH-Low, 1 RB



CA\_66C\_20MHz+20MHz\_QPSK CH-High, 1 RB

CA\_66C\_20MHz+20MHz\_QPSK CH-Low,  
100%RBCA\_66C\_20MHz+20MHz\_QPSK CH-High,  
100%RBCA\_66C\_20MHz+20MHz\_16QAM CH-Low, 1  
RBCA\_66C\_20MHz+20MHz\_16QAM CH-High, 1  
RB

CA\_66C\_20MHz+20MHz\_16QAM CH-Low,  
100%RBCA\_66C\_20MHz+20MHz\_16QAM CH-High,  
100%RBCA\_66C\_20MHz+20MHz\_64QAM CH-Low, 1  
RBCA\_66C\_20MHz+20MHz\_64QAM CH-High, 1  
RBCA\_66C\_20MHz+20MHz\_64QAM CH-Low,  
100%RBCA\_66C\_20MHz+20MHz\_64QAM CH-High,  
100%RB

## 5.4 Peak-to-Average Power Ratio (PAPR)

### Ambient condition

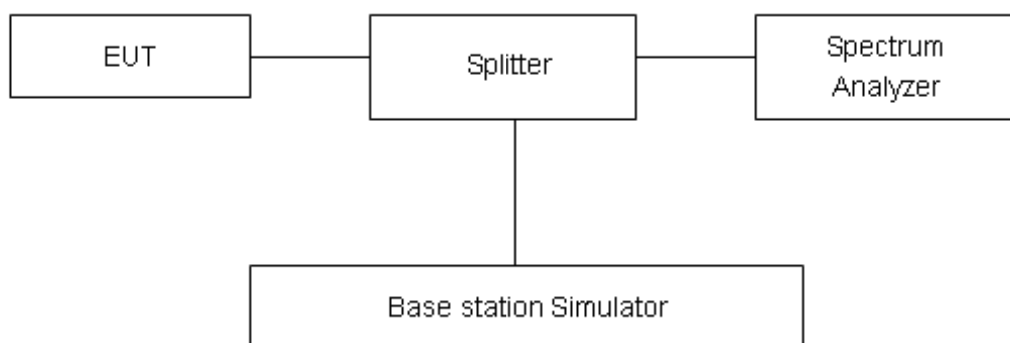
| Temperature | Relative humidity | Pressure |
|-------------|-------------------|----------|
| 23°C ~25°C  | 45%~50%           | 101.5kPa |

### Methods of Measurement

Measure the total peak power and record as PPK. And measure the total average power and record as PAvg. Both the peak and average power levels must be expressed in the same logarithmic units (e.g., dBm). Determine the PAPR from:

$$\text{PAPR (dB)} = \text{PPk (dBm)} - \text{PAvg (dBm)}.$$

### Test Setup



### Limits

Rule Part 27.50(d)(5) Equipment employed must be authorized in accordance with the provisions of 24.51. Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (d)(6) of this section. 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.

### Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor  $k = 2$ ,  $U = 0.4$  dB.



## Test Results

| LTE Band 4 |                 |         |                 |            |           |           |            |            |
|------------|-----------------|---------|-----------------|------------|-----------|-----------|------------|------------|
| Modulation | Bandwidth (MHz) | Channel | Frequency (MHz) | Peak (dBm) | Avg (dBm) | PAPR (dB) | Limit (dB) | Conclusion |
| QPSK       | 1.4             | 19957   | 1710.7          | 28.27      | 23.40     | 4.87      | ≤13        | PASS       |
|            |                 | 20175   | 1732.5          | 28.69      | 23.39     | 5.30      | ≤13        | PASS       |
|            |                 | 20393   | 1754.3          | 28.87      | 23.49     | 5.38      | ≤13        | PASS       |
|            | 3               | 19965   | 1711.5          | 27.53      | 23.27     | 4.26      | ≤13        | PASS       |
|            |                 | 20175   | 1732.5          | 28.66      | 23.50     | 5.16      | ≤13        | PASS       |
|            |                 | 20385   | 1753.5          | 28.82      | 23.57     | 5.25      | ≤13        | PASS       |
|            | 5               | 19975   | 1712.5          | 27.96      | 23.44     | 4.52      | ≤13        | PASS       |
|            |                 | 20175   | 1732.5          | 28.71      | 23.49     | 5.22      | ≤13        | PASS       |
|            |                 | 20375   | 1752.5          | 28.92      | 23.53     | 5.39      | ≤13        | PASS       |
|            | 10              | 20000   | 1715            | 27.97      | 23.48     | 4.49      | ≤13        | PASS       |
|            |                 | 20175   | 1732.5          | 28.65      | 23.46     | 5.19      | ≤13        | PASS       |
|            |                 | 20350   | 1750            | 28.66      | 23.56     | 5.10      | ≤13        | PASS       |
|            | 15              | 20025   | 1717.5          | 28.72      | 23.47     | 5.25      | ≤13        | PASS       |
|            |                 | 20175   | 1732.5          | 28.80      | 23.43     | 5.37      | ≤13        | PASS       |
|            |                 | 20325   | 1747.5          | 28.99      | 23.51     | 5.48      | ≤13        | PASS       |
|            | 20              | 20050   | 1720            | 28.65      | 23.51     | 5.14      | ≤13        | PASS       |
|            |                 | 20175   | 1732.5          | 28.59      | 23.47     | 5.12      | ≤13        | PASS       |
|            |                 | 20300   | 1745            | 28.87      | 23.54     | 5.33      | ≤13        | PASS       |
| 16QAM      | 1.4             | 19957   | 1710.7          | 28.27      | 22.43     | 5.84      | ≤13        | PASS       |
|            |                 | 20175   | 1732.5          | 28.59      | 22.44     | 6.15      | ≤13        | PASS       |
|            |                 | 20393   | 1754.3          | 28.56      | 22.48     | 6.08      | ≤13        | PASS       |
|            | 3               | 19965   | 1711.5          | 27.48      | 22.25     | 5.23      | ≤13        | PASS       |
|            |                 | 20175   | 1732.5          | 28.53      | 22.51     | 6.02      | ≤13        | PASS       |
|            |                 | 20385   | 1753.5          | 28.57      | 22.54     | 6.03      | ≤13        | PASS       |
|            | 5               | 19975   | 1712.5          | 28.01      | 22.49     | 5.52      | ≤13        | PASS       |
|            |                 | 20175   | 1732.5          | 28.53      | 22.52     | 6.01      | ≤13        | PASS       |
|            |                 | 20375   | 1752.5          | 28.70      | 22.63     | 6.07      | ≤13        | PASS       |
|            | 10              | 20000   | 1715            | 28.28      | 22.47     | 5.81      | ≤13        | PASS       |
|            |                 | 20175   | 1732.5          | 28.44      | 22.49     | 5.95      | ≤13        | PASS       |
|            |                 | 20350   | 1750            | 28.66      | 22.59     | 6.07      | ≤13        | PASS       |
|            | 15              | 20025   | 1717.5          | 28.47      | 22.47     | 6.00      | ≤13        | PASS       |
|            |                 | 20175   | 1732.5          | 28.47      | 22.45     | 6.02      | ≤13        | PASS       |
|            |                 | 20325   | 1747.5          | 28.55      | 22.56     | 5.99      | ≤13        | PASS       |
|            | 20              | 20050   | 1720            | 28.49      | 22.51     | 5.98      | ≤13        | PASS       |
|            |                 | 20175   | 1732.5          | 28.39      | 22.47     | 5.92      | ≤13        | PASS       |
|            |                 | 20300   | 1745            | 28.61      | 22.54     | 6.07      | ≤13        | PASS       |



|       |     |       |        |       |       |      |     |      |
|-------|-----|-------|--------|-------|-------|------|-----|------|
| 64QAM | 1.4 | 19957 | 1710.7 | 28.28 | 22.41 | 5.87 | ≤13 | PASS |
|       |     | 20175 | 1732.5 | 28.60 | 22.46 | 6.14 | ≤13 | PASS |
|       |     | 20393 | 1754.3 | 28.71 | 22.51 | 6.20 | ≤13 | PASS |
|       | 3   | 19965 | 1711.5 | 27.48 | 22.26 | 5.22 | ≤13 | PASS |
|       |     | 20175 | 1732.5 | 28.52 | 22.52 | 6.00 | ≤13 | PASS |
|       |     | 20385 | 1753.5 | 28.65 | 22.61 | 6.04 | ≤13 | PASS |
|       | 5   | 19975 | 1712.5 | 28.00 | 22.50 | 5.50 | ≤13 | PASS |
|       |     | 20175 | 1732.5 | 28.52 | 22.52 | 6.00 | ≤13 | PASS |
|       |     | 20375 | 1752.5 | 28.58 | 22.57 | 6.01 | ≤13 | PASS |
|       | 10  | 20000 | 1715   | 28.29 | 22.49 | 5.80 | ≤13 | PASS |
|       |     | 20175 | 1732.5 | 28.46 | 22.50 | 5.96 | ≤13 | PASS |
|       |     | 20350 | 1750   | 28.66 | 22.60 | 6.06 | ≤13 | PASS |
|       | 15  | 20025 | 1717.5 | 28.48 | 22.48 | 6.00 | ≤13 | PASS |
|       |     | 20175 | 1732.5 | 28.53 | 22.48 | 6.05 | ≤13 | PASS |
|       |     | 20325 | 1747.5 | 28.68 | 22.53 | 6.15 | ≤13 | PASS |
|       | 20  | 20050 | 1720   | 28.44 | 22.50 | 5.94 | ≤13 | PASS |
|       |     | 20175 | 1732.5 | 28.38 | 22.47 | 5.91 | ≤13 | PASS |
|       |     | 20300 | 1745   | 28.62 | 22.54 | 6.08 | ≤13 | PASS |

| LTE Band 12 |                 |         |                 |            |           |           |            |            |
|-------------|-----------------|---------|-----------------|------------|-----------|-----------|------------|------------|
| Modulation  | Bandwidth (MHz) | Channel | Frequency (MHz) | Peak (dBm) | Avg (dBm) | PAPR (dB) | Limit (dB) | Conclusion |
| QPSK        | 1.4             | 23017   | 699.7           | 28.58      | 23.23     | 5.35      | ≤13        | PASS       |
|             |                 | 23095   | 707.5           | 28.50      | 23.22     | 5.28      | ≤13        | PASS       |
|             |                 | 23173   | 715.3           | 27.05      | 22.75     | 4.30      | ≤13        | PASS       |
|             | 3               | 23025   | 700.5           | 28.43      | 23.41     | 5.02      | ≤13        | PASS       |
|             |                 | 23095   | 707.5           | 28.47      | 23.35     | 5.12      | ≤13        | PASS       |
|             |                 | 23165   | 714.5           | 27.40      | 23.10     | 4.30      | ≤13        | PASS       |
|             | 5               | 23035   | 701.5           | 28.19      | 23.40     | 4.79      | ≤13        | PASS       |
|             |                 | 23095   | 707.5           | 28.52      | 23.31     | 5.21      | ≤13        | PASS       |
|             |                 | 23155   | 713.5           | 28.01      | 23.39     | 4.62      | ≤13        | PASS       |
|             | 10              | 23060   | 704             | 28.45      | 23.43     | 5.02      | ≤13        | PASS       |
|             |                 | 23095   | 707.5           | 28.47      | 23.34     | 5.13      | ≤13        | PASS       |
|             |                 | 23130   | 711             | 28.15      | 23.30     | 4.85      | ≤13        | PASS       |
| 16QAM       | 1.4             | 23017   | 699.7           | 28.34      | 22.30     | 6.04      | ≤13        | PASS       |
|             |                 | 23095   | 707.5           | 28.29      | 22.27     | 6.02      | ≤13        | PASS       |
|             |                 | 23173   | 715.3           | 27.11      | 21.91     | 5.20      | ≤13        | PASS       |
|             | 3               | 23025   | 700.5           | 28.40      | 22.43     | 5.97      | ≤13        | PASS       |



|       |     |       |       |       |       |      |     |      |
|-------|-----|-------|-------|-------|-------|------|-----|------|
|       |     | 23095 | 707.5 | 28.35 | 22.37 | 5.98 | ≤13 | PASS |
|       |     | 23165 | 714.5 | 27.47 | 22.28 | 5.19 | ≤13 | PASS |
|       | 5   | 23035 | 701.5 | 28.13 | 22.41 | 5.72 | ≤13 | PASS |
|       |     | 23095 | 707.5 | 28.34 | 22.34 | 6.00 | ≤13 | PASS |
|       |     | 23155 | 713.5 | 27.95 | 22.31 | 5.64 | ≤13 | PASS |
|       | 10  | 23060 | 704   | 28.30 | 22.42 | 5.88 | ≤13 | PASS |
|       |     | 23095 | 707.5 | 28.39 | 22.37 | 6.02 | ≤13 | PASS |
|       |     | 23130 | 711   | 28.05 | 22.30 | 5.75 | ≤13 | PASS |
| 64QAM | 1.4 | 23017 | 699.7 | 28.28 | 22.31 | 5.97 | ≤13 | PASS |
|       |     | 23095 | 707.5 | 28.27 | 22.27 | 6.00 | ≤13 | PASS |
|       |     | 23173 | 715.3 | 27.12 | 21.90 | 5.22 | ≤13 | PASS |
|       | 3   | 23025 | 700.5 | 28.42 | 22.42 | 6.00 | ≤13 | PASS |
|       |     | 23095 | 707.5 | 28.31 | 22.36 | 5.95 | ≤13 | PASS |
|       |     | 23165 | 714.5 | 27.42 | 22.20 | 5.22 | ≤13 | PASS |
|       | 5   | 23035 | 701.5 | 28.18 | 22.42 | 5.76 | ≤13 | PASS |
|       |     | 23095 | 707.5 | 28.35 | 22.35 | 6.00 | ≤13 | PASS |
|       |     | 23155 | 713.5 | 27.95 | 22.31 | 5.64 | ≤13 | PASS |
|       | 10  | 23060 | 704   | 28.29 | 22.43 | 5.86 | ≤13 | PASS |
|       |     | 23095 | 707.5 | 28.36 | 22.37 | 5.99 | ≤13 | PASS |
|       |     | 23130 | 711   | 28.07 | 22.32 | 5.75 | ≤13 | PASS |

| LTE Band 13 |                 |         |                 |            |           |           |            |            |
|-------------|-----------------|---------|-----------------|------------|-----------|-----------|------------|------------|
| Modulation  | Bandwidth (MHz) | Channel | Frequency (MHz) | Peak (dBm) | Avg (dBm) | PAPR (dB) | Limit (dB) | Conclusion |
| QPSK        | 5               | 23205   | 779.5           | 28.66      | 23.58     | 5.08      | ≤13        | PASS       |
|             |                 | 23230   | 782             | 28.68      | 23.58     | 5.10      | ≤13        | PASS       |
|             |                 | 23255   | 784.5           | 28.81      | 23.54     | 5.27      | ≤13        | PASS       |
|             | 10              | 23230   | 782             | 28.65      | 23.59     | 5.06      | ≤13        | PASS       |
| 16QAM       | 5               | 23205   | 779.5           | 28.55      | 22.59     | 5.96      | ≤13        | PASS       |
|             |                 | 23230   | 782             | 28.49      | 22.60     | 5.89      | ≤13        | PASS       |
|             |                 | 23255   | 784.5           | 28.57      | 22.57     | 6.00      | ≤13        | PASS       |
|             | 10              | 23230   | 782             | 28.57      | 22.61     | 5.96      | ≤13        | PASS       |
| 64QAM       | 5               | 23205   | 779.5           | 28.62      | 22.64     | 5.98      | ≤13        | PASS       |
|             |                 | 23230   | 782             | 28.51      | 22.60     | 5.91      | ≤13        | PASS       |
|             |                 | 23255   | 784.5           | 28.62      | 22.60     | 6.02      | ≤13        | PASS       |
|             | 10              | 23230   | 782             | 28.50      | 22.56     | 5.94      | ≤13        | PASS       |

## LTE Band 66



| Modulation | Bandwidth (MHz) | Channel | Frequency (MHz) | Peak (dBm) | Avg (dBm) | PAPR (dB) | Limit (dB) | Conclusion |
|------------|-----------------|---------|-----------------|------------|-----------|-----------|------------|------------|
| QPSK       | 1.4             | 131979  | 1710.7          | 28.31      | 23.75     | 4.56      | ≤13        | PASS       |
|            |                 | 132322  | 1745            | 28.99      | 23.65     | 5.34      | ≤13        | PASS       |
|            |                 | 132665  | 1779.3          | 29.19      | 23.78     | 5.41      | ≤13        | PASS       |
|            | 3               | 131987  | 1711.5          | 28.85      | 23.87     | 4.98      | ≤13        | PASS       |
|            |                 | 132322  | 1745            | 28.98      | 23.74     | 5.24      | ≤13        | PASS       |
|            |                 | 132657  | 1778.5          | 29.09      | 23.85     | 5.24      | ≤13        | PASS       |
|            | 5               | 131997  | 1712.5          | 28.87      | 23.82     | 5.05      | ≤13        | PASS       |
|            |                 | 132322  | 1745            | 29.03      | 23.73     | 5.30      | ≤13        | PASS       |
|            |                 | 132647  | 1777.5          | 29.25      | 23.90     | 5.35      | ≤13        | PASS       |
|            | 10              | 132022  | 1715            | 28.90      | 23.85     | 5.05      | ≤13        | PASS       |
|            |                 | 132322  | 1745            | 29.04      | 23.74     | 5.30      | ≤13        | PASS       |
|            |                 | 132622  | 1775            | 29.12      | 23.82     | 5.30      | ≤13        | PASS       |
|            | 15              | 132047  | 1717.5          | 29.34      | 23.85     | 5.49      | ≤13        | PASS       |
|            |                 | 132322  | 1745            | 29.32      | 23.75     | 5.57      | ≤13        | PASS       |
|            |                 | 132597  | 1772.5          | 29.36      | 23.80     | 5.56      | ≤13        | PASS       |
|            | 20              | 132072  | 1720            | 29.00      | 23.85     | 5.15      | ≤13        | PASS       |
|            |                 | 132322  | 1745            | 29.09      | 23.75     | 5.34      | ≤13        | PASS       |
|            |                 | 132572  | 1770            | 29.11      | 23.76     | 5.35      | ≤13        | PASS       |
| 16QAM      | 1.4             | 131979  | 1710.7          | 28.40      | 22.75     | 5.65      | ≤13        | PASS       |
|            |                 | 132322  | 1745            | 28.80      | 22.65     | 6.15      | ≤13        | PASS       |
|            |                 | 132665  | 1779.3          | 28.99      | 22.80     | 6.19      | ≤13        | PASS       |
|            | 3               | 131987  | 1711.5          | 28.62      | 22.86     | 5.76      | ≤13        | PASS       |
|            |                 | 132322  | 1745            | 28.81      | 22.76     | 6.05      | ≤13        | PASS       |
|            |                 | 132657  | 1778.5          | 28.95      | 22.87     | 6.08      | ≤13        | PASS       |
|            | 5               | 131997  | 1712.5          | 28.80      | 22.89     | 5.91      | ≤13        | PASS       |
|            |                 | 132322  | 1745            | 28.80      | 22.73     | 6.07      | ≤13        | PASS       |
|            |                 | 132647  | 1777.5          | 28.97      | 22.93     | 6.04      | ≤13        | PASS       |
|            | 10              | 132022  | 1715            | 28.76      | 22.86     | 5.90      | ≤13        | PASS       |
|            |                 | 132322  | 1745            | 28.80      | 22.75     | 6.05      | ≤13        | PASS       |
|            |                 | 132622  | 1775            | 28.90      | 22.83     | 6.07      | ≤13        | PASS       |
|            | 15              | 132047  | 1717.5          | 29.01      | 22.90     | 6.11      | ≤13        | PASS       |
|            |                 | 132322  | 1745            | 28.97      | 22.77     | 6.20      | ≤13        | PASS       |
|            |                 | 132597  | 1772.5          | 28.93      | 22.78     | 6.15      | ≤13        | PASS       |
|            | 20              | 132072  | 1720            | 28.82      | 22.88     | 5.94      | ≤13        | PASS       |
|            |                 | 132322  | 1745            | 28.82      | 22.77     | 6.05      | ≤13        | PASS       |
|            |                 | 132572  | 1770            | 28.84      | 22.78     | 6.06      | ≤13        | PASS       |
| 64QAM      | 1.4             | 131979  | 1710.7          | 28.41      | 22.76     | 5.65      | ≤13        | PASS       |
|            |                 | 132322  | 1745            | 28.83      | 22.72     | 6.11      | ≤13        | PASS       |