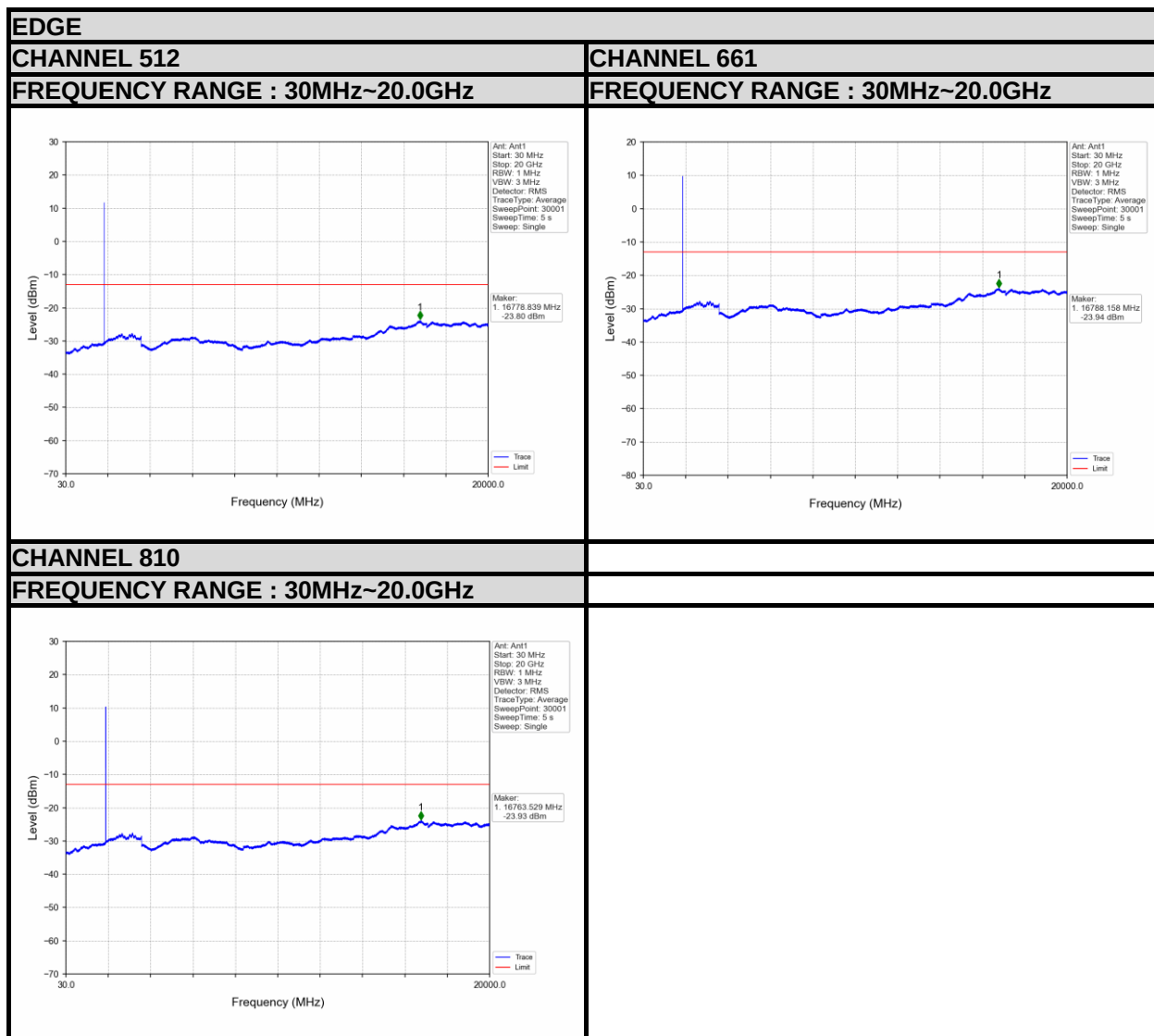






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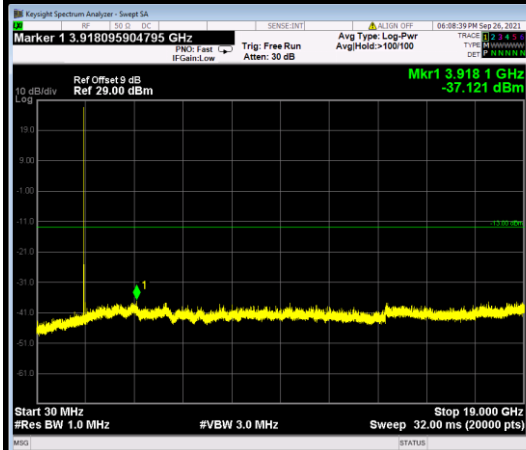
Test Report No.: W7L-P21090017RF01

## LTE BAND 2

1.4MHz / QPSK

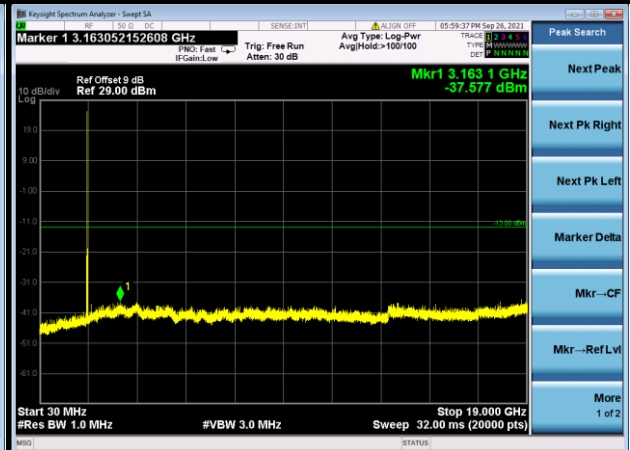
CHANNEL 18607

FREQUENCY RANGE : 30MHz~19.0GHz



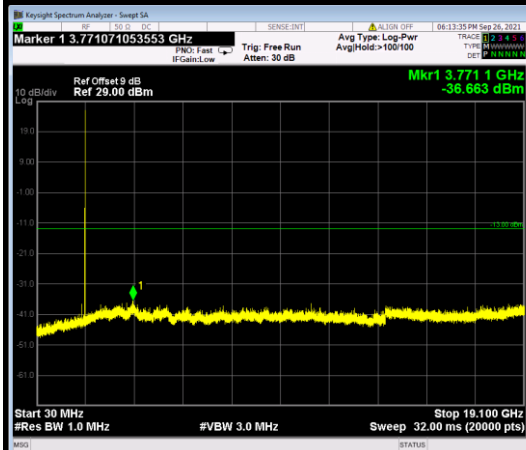
CHANNEL 18900

FREQUENCY RANGE : 30MHz~19.0GHz



CHANNEL 19193

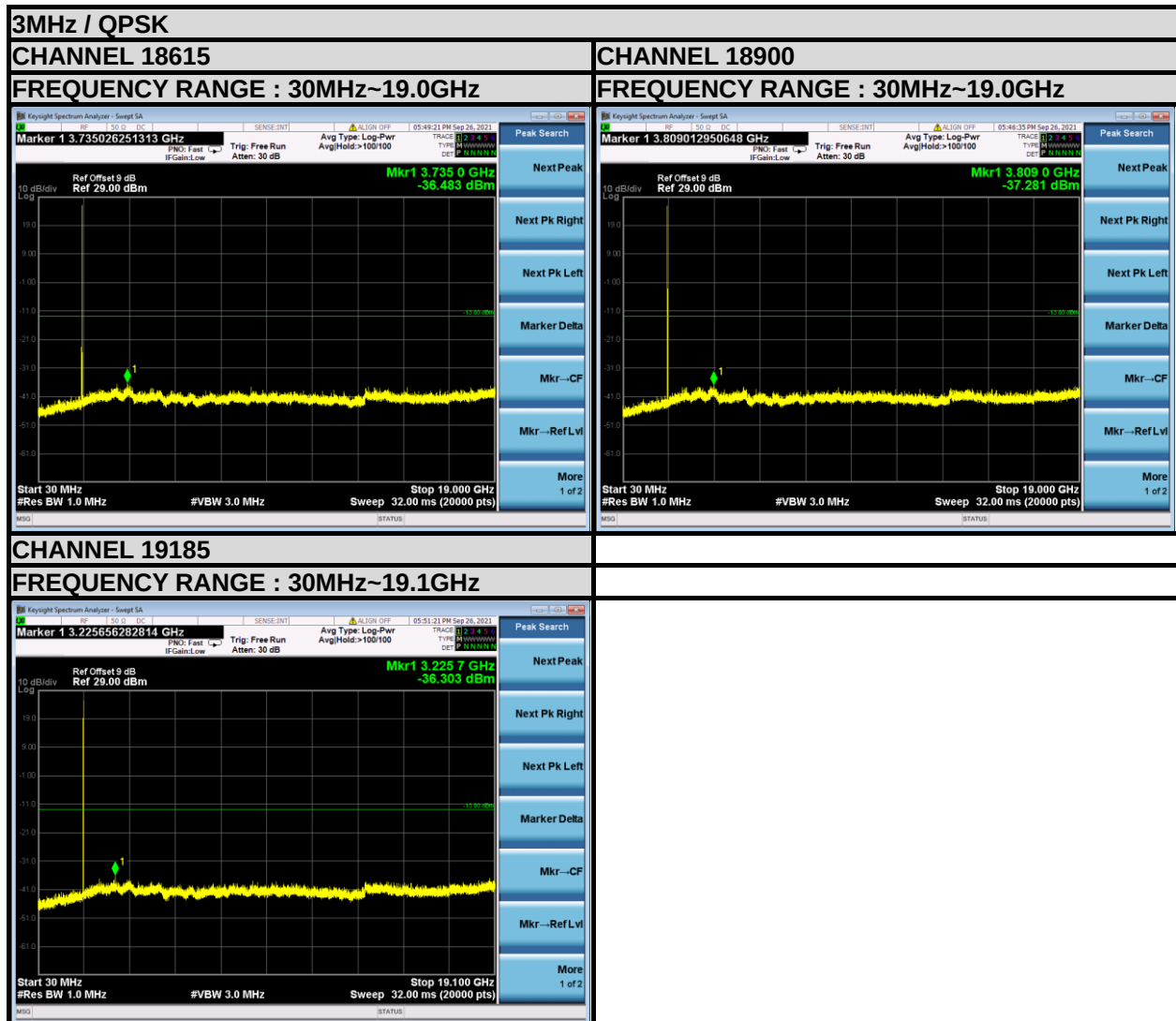
FREQUENCY RANGE : 30MHz~19.1GHz





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VERITAS

Test Report No.: W7L-P21090017RF01





BUREAU  
VERITAS

Test Report No.: W7L-P21090017RF01





BUREAU  
VERITAS

Test Report No.: W7L-P21090017RF01





BUREAU  
VERITAS

Test Report No.: W7L-P21090017RF01





BUREAU  
VERITAS

Test Report No.: W7L-P21090017RF01



### 3.6 RADIATED EMISSION MEASUREMENT

#### 3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB. The emission limit equal to  $-13\text{dBm}$ .

#### 3.6.2 TEST PROCEDURES

- a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step a. Record the power level of S.G
- c.  $\text{EIRP} = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$ .

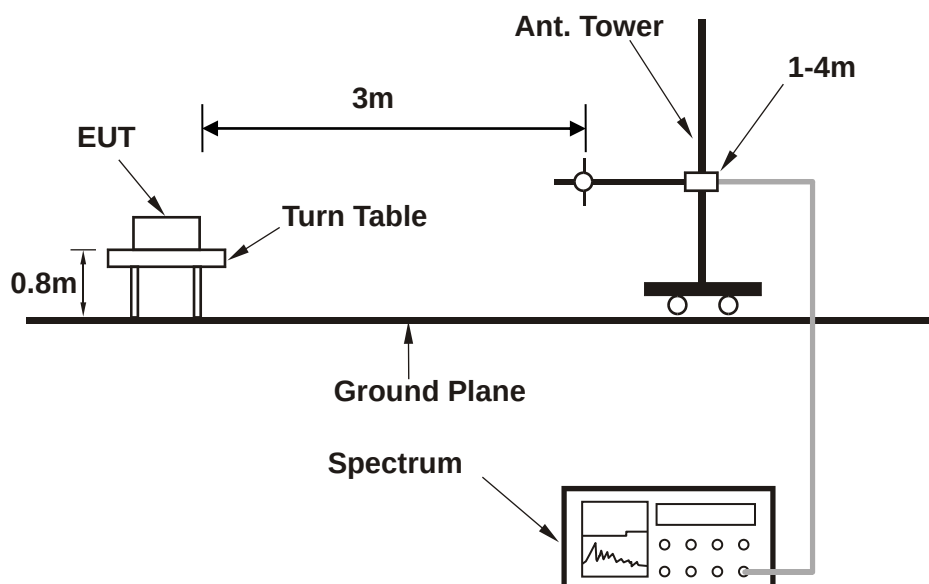
**NOTE:** The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

#### 3.6.3 DEVIATION FROM TEST STANDARD

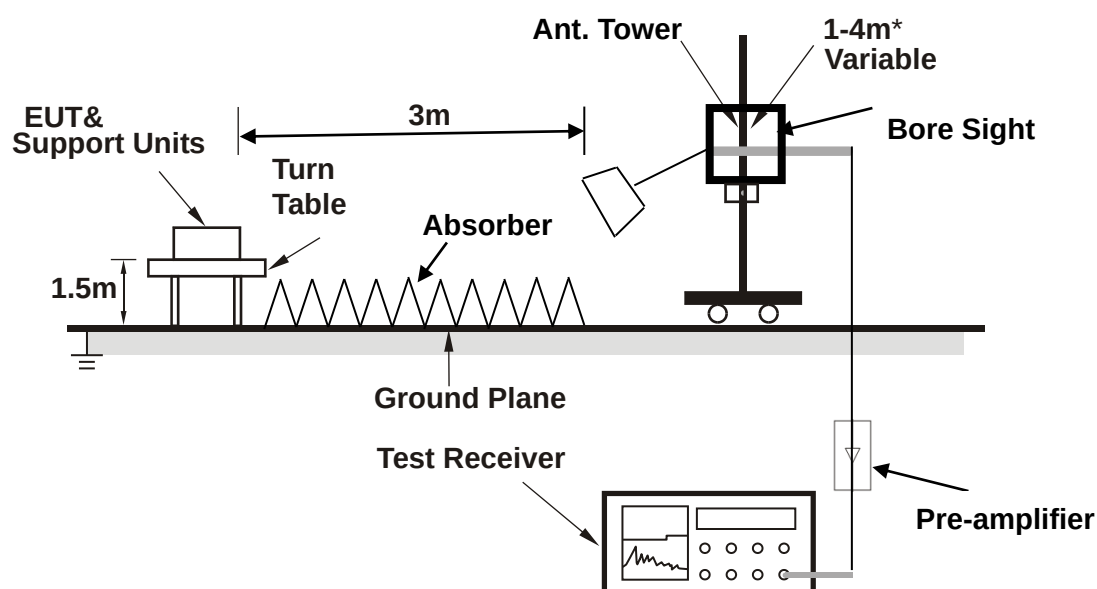
No deviation

### 3.6.4 TEST SETUP

#### < Frequency Range 30MHz~1GHz >



#### <Frequency Range above 1GHz>



**Note:** Above 1G is a directional antenna

Depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

For the actual test configuration, please refer to the attached file (Test Setup Photo).



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VERITAS**

Test Report No.: W7L-P21090017RF01

### 3.6.5 TEST RESULTS

#### BELOW 1GHz WORST-CASE DATA

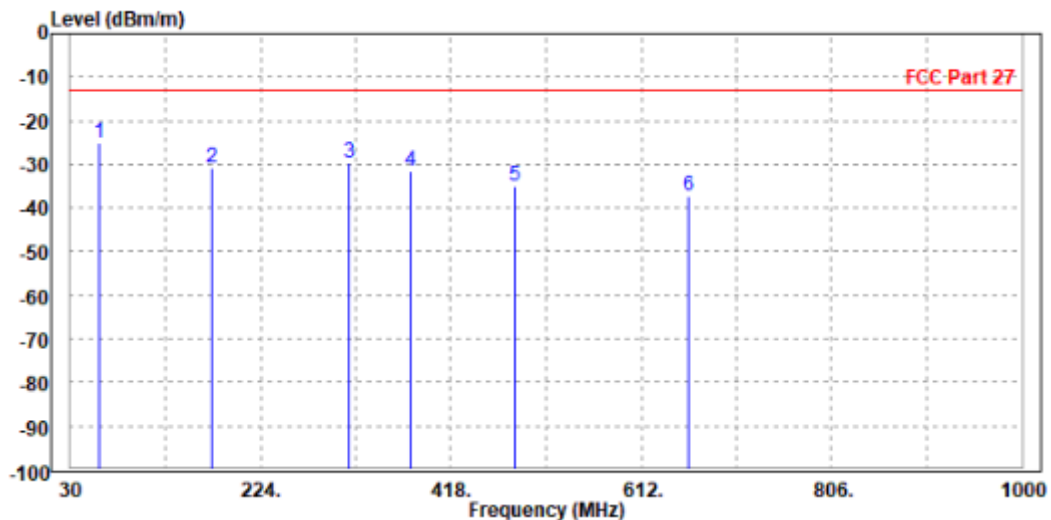
30 MHz – 1GHz data:

LTE Band 2

CHANNEL BANDWIDTH: 5MHz / QPSK

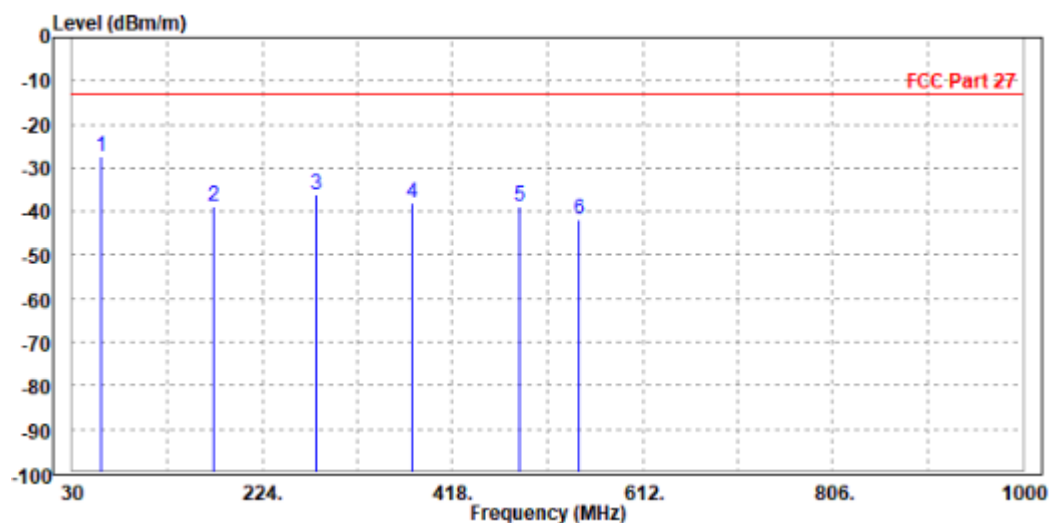
|                                                     |                  |                 |               |
|-----------------------------------------------------|------------------|-----------------|---------------|
| MODE                                                | TX channel 19175 | FREQUENCY RANGE | Below 1000MHz |
| ENVIRONMENTAL CONDITIONS                            | 23deg. C, 70%RH  | INPUT POWER     | DC 13.7V      |
| TESTED BY                                           | Jace Hu          |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                  |                 |               |

|   |    | Freq    | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase  |
|---|----|---------|--------|------------|------------|------------|--------|--------|------------|
|   |    | MHz     | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |            |
| 1 | PP | 60.070  | -25.12 | -32.72     | -13.00     | -12.12     | 7.60   | Peak   | Horizontal |
| 2 |    | 174.530 | -30.92 | -41.31     | -13.00     | -17.92     | 10.39  | Peak   | Horizontal |
| 3 |    | 314.210 | -29.78 | -44.19     | -13.00     | -16.78     | 14.41  | Peak   | Horizontal |
| 4 |    | 377.260 | -31.38 | -47.62     | -13.00     | -18.38     | 16.24  | Peak   | Horizontal |
| 5 |    | 482.990 | -34.85 | -53.24     | -13.00     | -21.85     | 18.39  | Peak   | Horizontal |
| 6 |    | 660.500 | -37.41 | -59.32     | -13.00     | -24.41     | 21.91  | Peak   | Horizontal |



|                                                   |                  |                 |               |
|---------------------------------------------------|------------------|-----------------|---------------|
| MODE                                              | TX channel 19175 | FREQUENCY RANGE | Below 1000MHz |
| ENVIRONMENTAL CONDITIONS                          | 23deg. C, 70%RH  | INPUT POWER     | DC 13.7V      |
| TESTED BY                                         | Jace Hu          |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M |                  |                 |               |

|      | Freq    | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase |
|------|---------|--------|------------|------------|------------|--------|--------|-----------|
|      | MHz     | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |           |
| 1 PP | 60.070  | -27.24 | -35.14     | -13.00     | -14.24     | 7.90   | Peak   | Vertical  |
| 2    | 174.530 | -38.74 | -49.37     | -13.00     | -25.74     | 10.63  | Peak   | Vertical  |
| 3    | 278.320 | -36.07 | -50.55     | -13.00     | -23.07     | 14.48  | Peak   | Vertical  |
| 4    | 376.290 | -38.14 | -54.82     | -13.00     | -25.14     | 16.68  | Peak   | Vertical  |
| 5    | 485.900 | -38.60 | -57.43     | -13.00     | -25.60     | 18.83  | Peak   | Vertical  |
| 6    | 547.010 | -41.73 | -61.68     | -13.00     | -28.73     | 19.95  | Peak   | Vertical  |





**BUREAU  
VERITAS**

Test Report No.: W7L-P21090017RF01

#### ABOVE 1GHz DATA

**Note:** For higher frequency, the emission is too low to be detected.

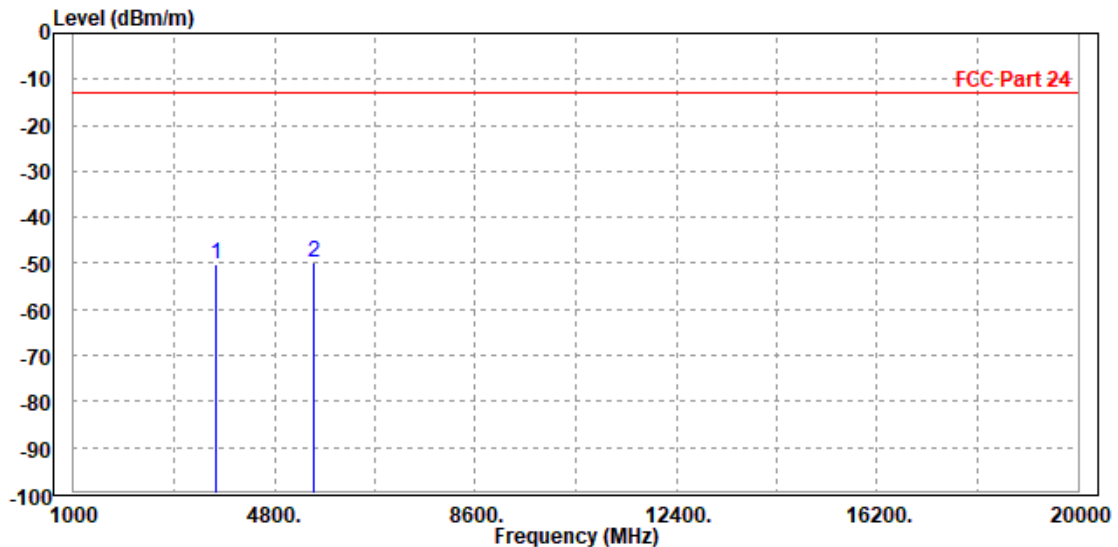
#### WORST-CASE DATA

**GSM 1900:**

**CH 512**

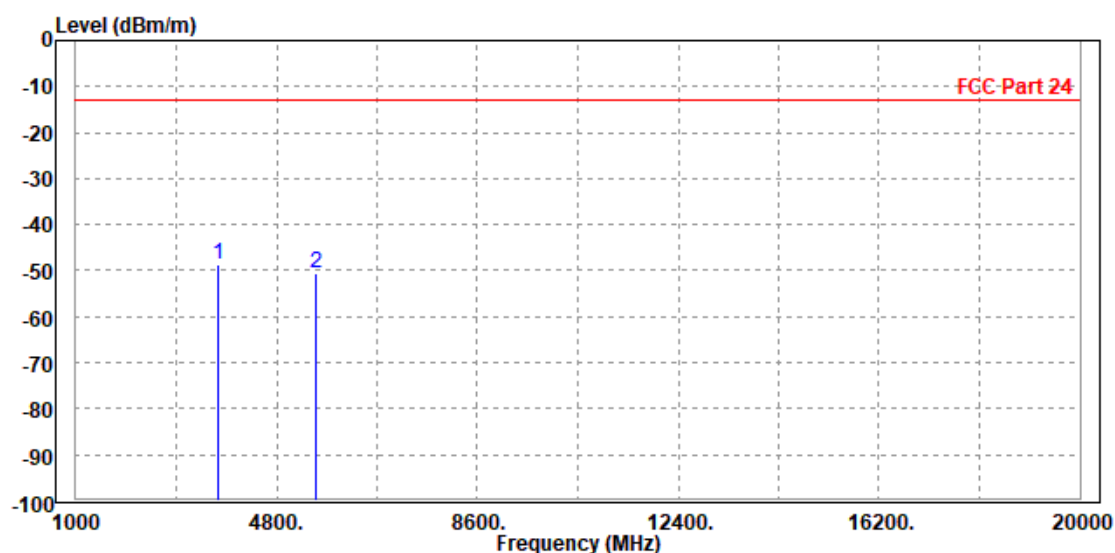
|                                                     |                 |                 |               |
|-----------------------------------------------------|-----------------|-----------------|---------------|
| MODE                                                | TX channel 512  | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                            | 23deg. C, 70%RH | INPUT POWER     | AC 120V/60Hz  |
| TESTED BY                                           | Jace Hu         |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                 |                 |               |

|      | Freq     | Level  | Read<br>Level | Limit<br>Line | Over<br>Limit | Factor | Remark | Pol/Phase  |
|------|----------|--------|---------------|---------------|---------------|--------|--------|------------|
|      | MHz      | dBm/m  | dBm           | dBm/m         | dB            | dB/m   |        |            |
| 1    | 3698.000 | -50.16 | -58.94        | -13.00        | -37.16        | 8.78   | Peak   | Horizontal |
| 2 PP | 5550.600 | -49.70 | -59.89        | -13.00        | -36.70        | 10.19  | Peak   | Horizontal |



|                                                   |                 |                 |               |
|---------------------------------------------------|-----------------|-----------------|---------------|
| MODE                                              | TX channel 512  | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                          | 23deg. C, 70%RH | INPUT POWER     | AC 120V/60Hz  |
| TESTED BY                                         | Jace Hu         |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M |                 |                 |               |

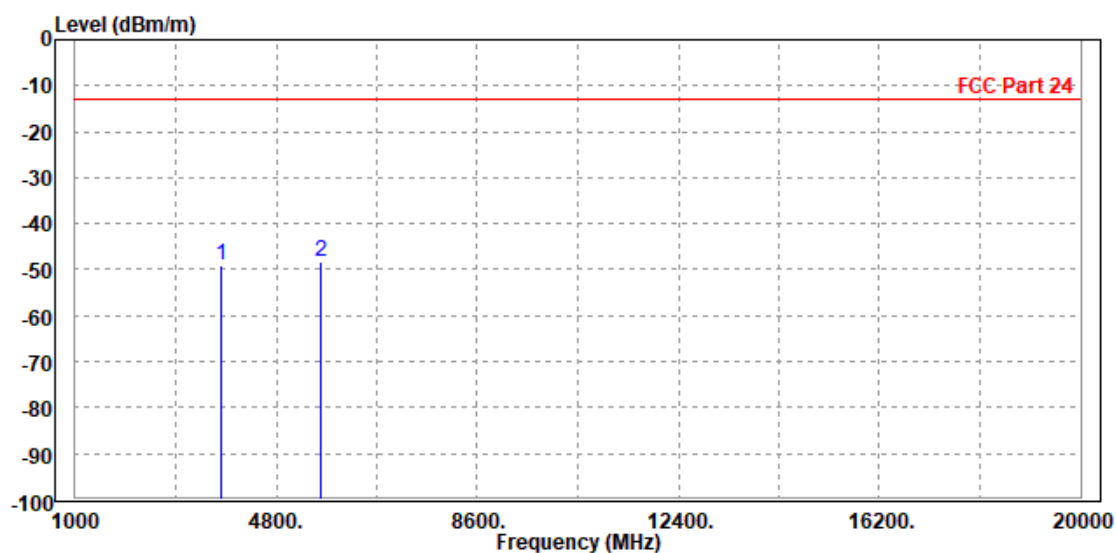
|   |    | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase |
|---|----|----------|--------|------------|------------|------------|--------|--------|-----------|
|   |    | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |           |
| 1 | PP | 3700.400 | -48.60 | -57.85     | -13.00     | -35.60     | 9.25   | Peak   | Vertical  |
| 2 |    | 5560.000 | -50.60 | -60.54     | -13.00     | -37.60     | 9.94   | Peak   | Vertical  |



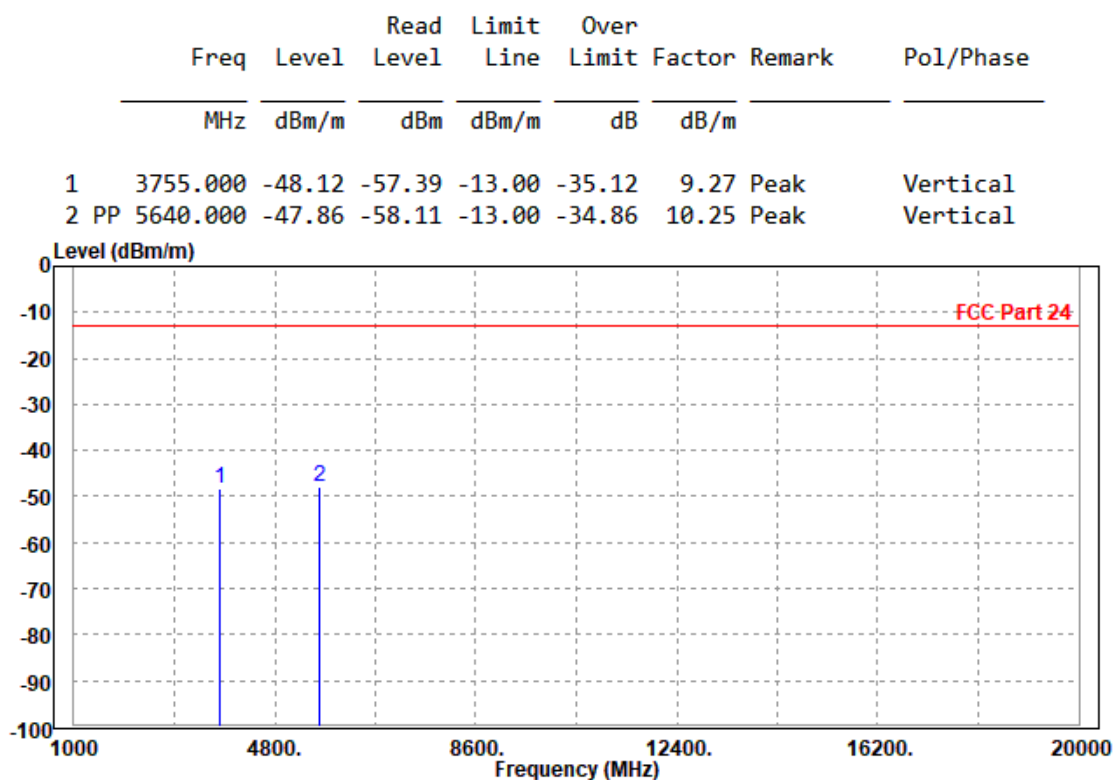
CH 661

|                                                     |                 |                 |               |
|-----------------------------------------------------|-----------------|-----------------|---------------|
| MODE                                                | TX channel 661  | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                            | 23deg. C, 70%RH | INPUT POWER     | AC 120V/60Hz  |
| TESTED BY                                           | Jace Hu         |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                 |                 |               |

|      | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase  |
|------|----------|--------|------------|------------|------------|--------|--------|------------|
|      | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |            |
| 1    | 3760.000 | -48.93 | -57.78     | -13.00     | -35.93     | 8.85   | Peak   | Horizontal |
| 2 PP | 5636.000 | -48.43 | -58.90     | -13.00     | -35.43     | 10.47  | Peak   | Horizontal |



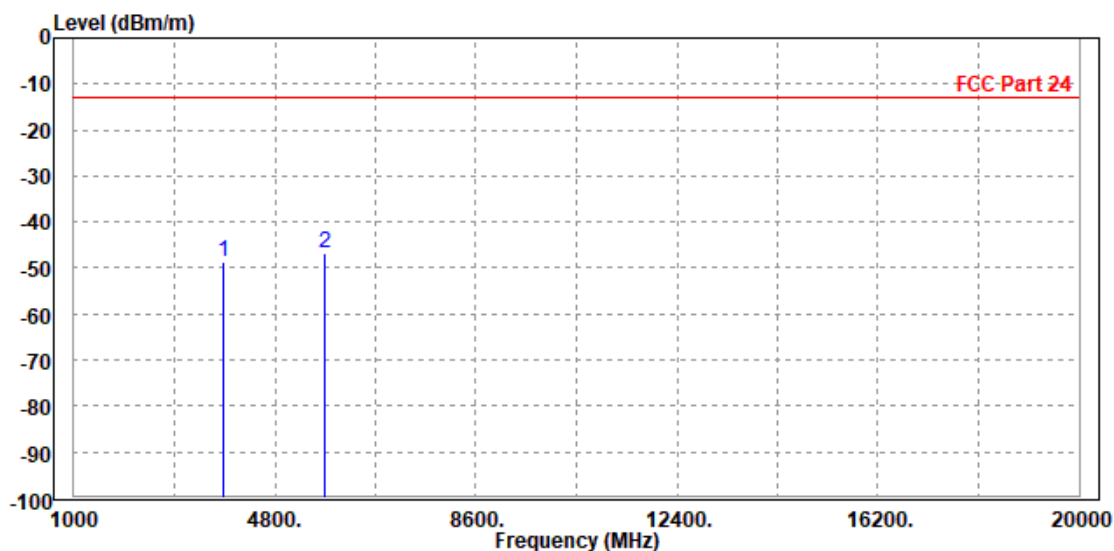
|                                                   |                 |                 |               |
|---------------------------------------------------|-----------------|-----------------|---------------|
| MODE                                              | TX channel 661  | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                          | 23deg. C, 70%RH | INPUT POWER     | AC 120V/60Hz  |
| TESTED BY                                         | Jace Hu         |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M |                 |                 |               |



CH 810

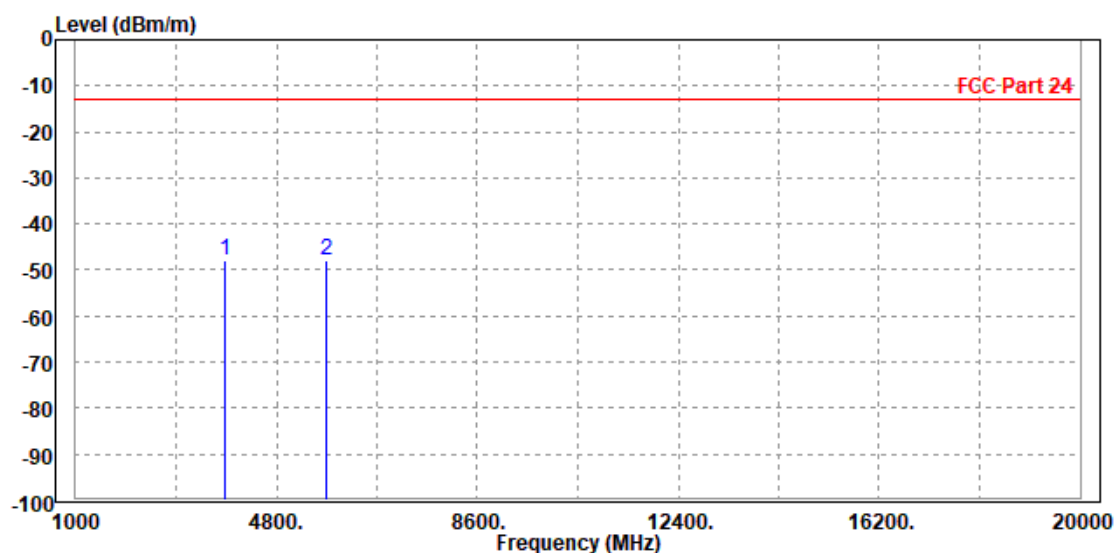
|                                                     |                 |                 |               |
|-----------------------------------------------------|-----------------|-----------------|---------------|
| MODE                                                | TX channel 810  | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                            | 23deg. C, 70%RH | INPUT POWER     | AC 120V/60Hz  |
| TESTED BY                                           | Jace Hu         |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                 |                 |               |

|      | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase  |
|------|----------|--------|------------|------------|------------|--------|--------|------------|
|      | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |            |
| 1    | 3819.600 | -48.67 | -57.58     | -13.00     | -35.67     | 8.91   | Peak   | Horizontal |
| 2 PP | 5731.000 | -46.93 | -57.71     | -13.00     | -33.93     | 10.78  | Peak   | Horizontal |



|                                                   |                 |                 |               |
|---------------------------------------------------|-----------------|-----------------|---------------|
| MODE                                              | TX channel 810  | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                          | 23deg. C, 70%RH | INPUT POWER     | AC 120V/60Hz  |
| TESTED BY                                         | Jace Hu         |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M |                 |                 |               |

|      | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase |
|------|----------|--------|------------|------------|------------|--------|--------|-----------|
|      | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |           |
| 1 PP | 3812.000 | -47.85 | -57.14     | -13.00     | -34.85     | 9.29   | Peak   | Vertical  |
| 2    | 5729.400 | -47.95 | -58.54     | -13.00     | -34.95     | 10.59  | Peak   | Vertical  |

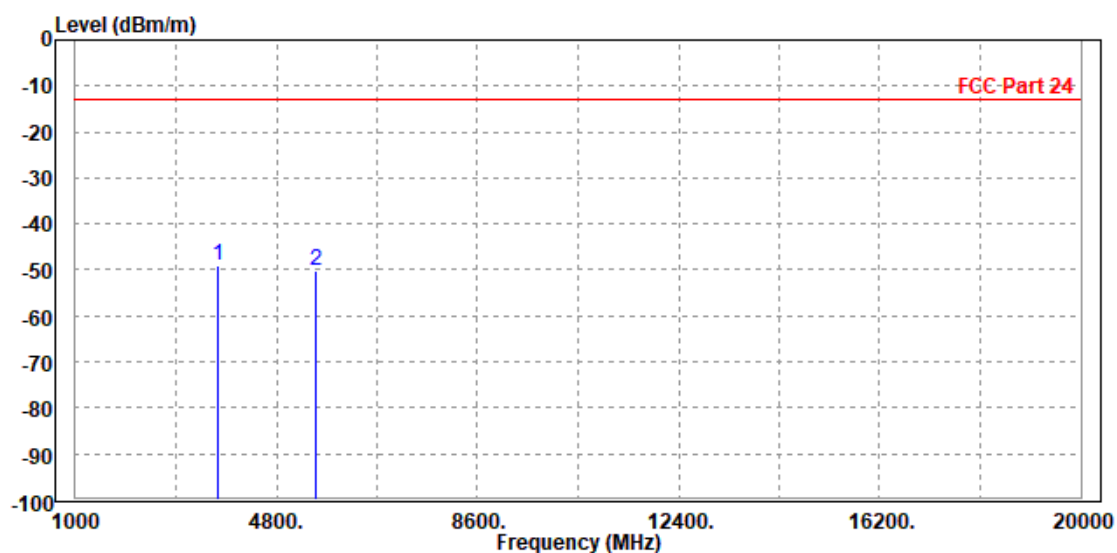


EDGE 1900:

CH 512

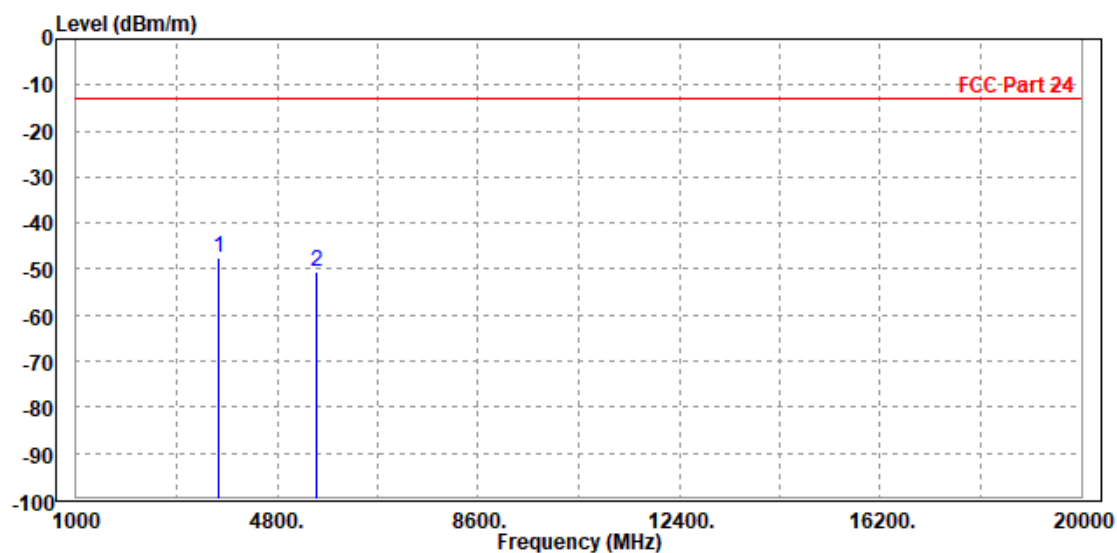
|                                                     |                 |                 |               |
|-----------------------------------------------------|-----------------|-----------------|---------------|
| MODE                                                | TX channel 512  | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                            | 23deg. C, 70%RH | INPUT POWER     | AC 120V/60Hz  |
| TESTED BY                                           | Jace Hu         |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                 |                 |               |

|   |    | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase  |
|---|----|----------|--------|------------|------------|------------|--------|--------|------------|
|   |    | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |            |
| 1 | PP | 3700.400 | -48.96 | -57.75     | -13.00     | -35.96     | 8.79   | Peak   | Horizontal |
| 2 |    | 5560.000 | -50.06 | -60.28     | -13.00     | -37.06     | 10.22  | Peak   | Horizontal |



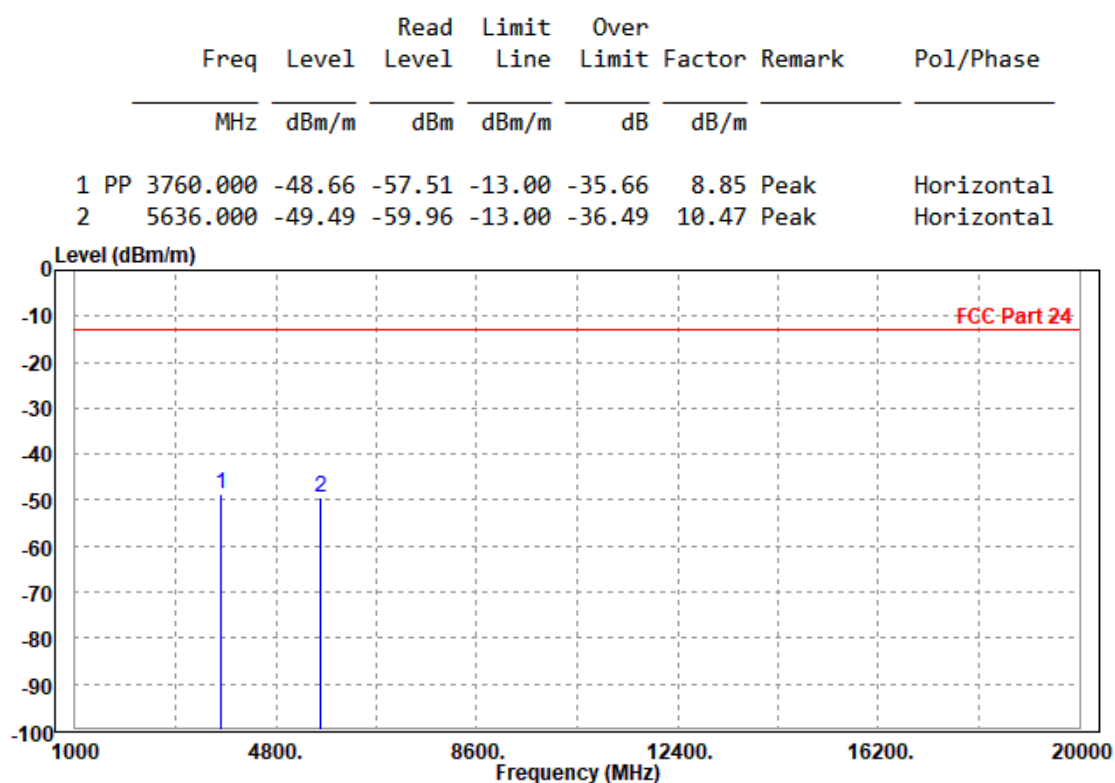
|                                                   |                 |                 |               |
|---------------------------------------------------|-----------------|-----------------|---------------|
| MODE                                              | TX channel 512  | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                          | 23deg. C, 70%RH | INPUT POWER     | AC 120V/60Hz  |
| TESTED BY                                         | Jace Hu         |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M |                 |                 |               |

|   |    | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase |
|---|----|----------|--------|------------|------------|------------|--------|--------|-----------|
|   |    | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |           |
| 1 | PP | 3698.000 | -47.66 | -56.91     | -13.00     | -34.66     | 9.25   | Peak   | Vertical  |
| 2 |    | 5550.600 | -50.42 | -60.32     | -13.00     | -37.42     | 9.90   | Peak   | Vertical  |

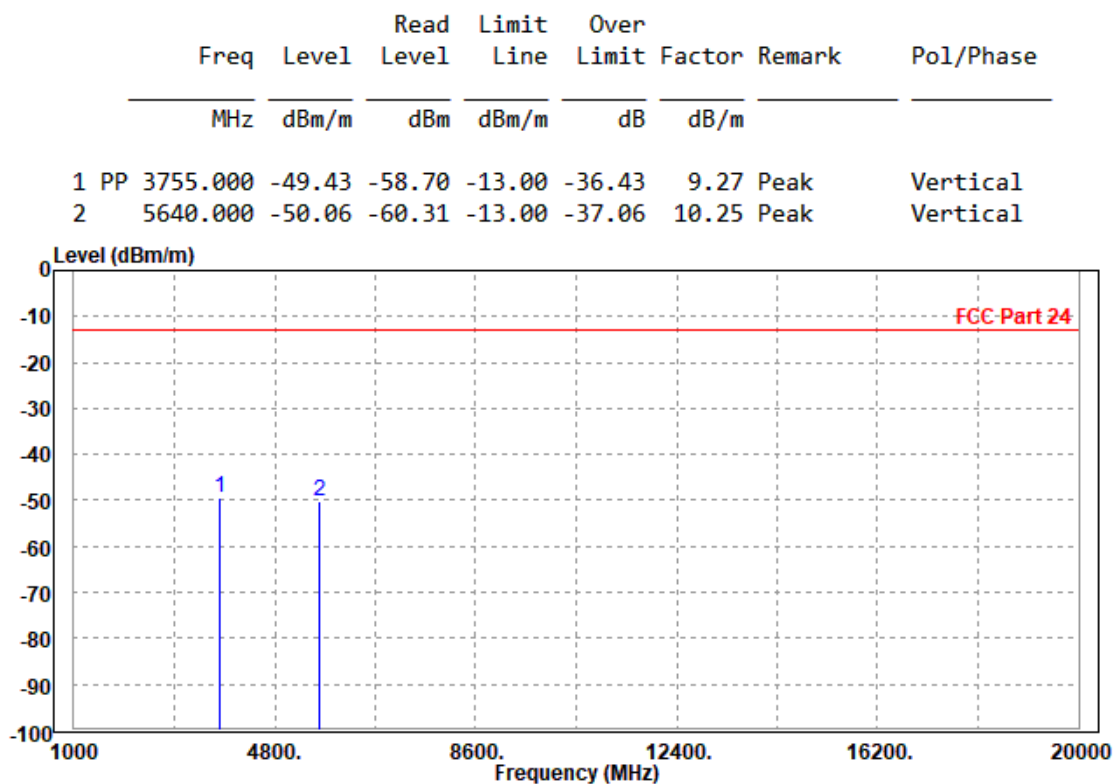


CH 661

|                                                     |                 |                 |               |
|-----------------------------------------------------|-----------------|-----------------|---------------|
| MODE                                                | TX channel 661  | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                            | 23deg. C, 70%RH | INPUT POWER     | AC 120V/60Hz  |
| TESTED BY                                           | Jace Hu         |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                 |                 |               |



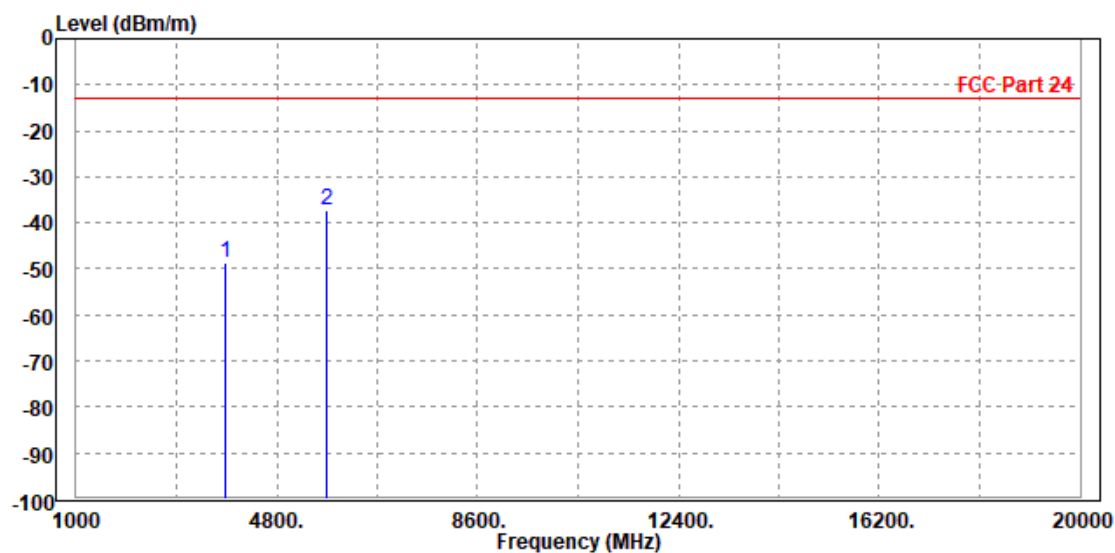
|                                                   |                 |                 |               |
|---------------------------------------------------|-----------------|-----------------|---------------|
| MODE                                              | TX channel 661  | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                          | 23deg. C, 70%RH | INPUT POWER     | AC 120V/60Hz  |
| TESTED BY                                         | Jace Hu         |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M |                 |                 |               |



CH 810

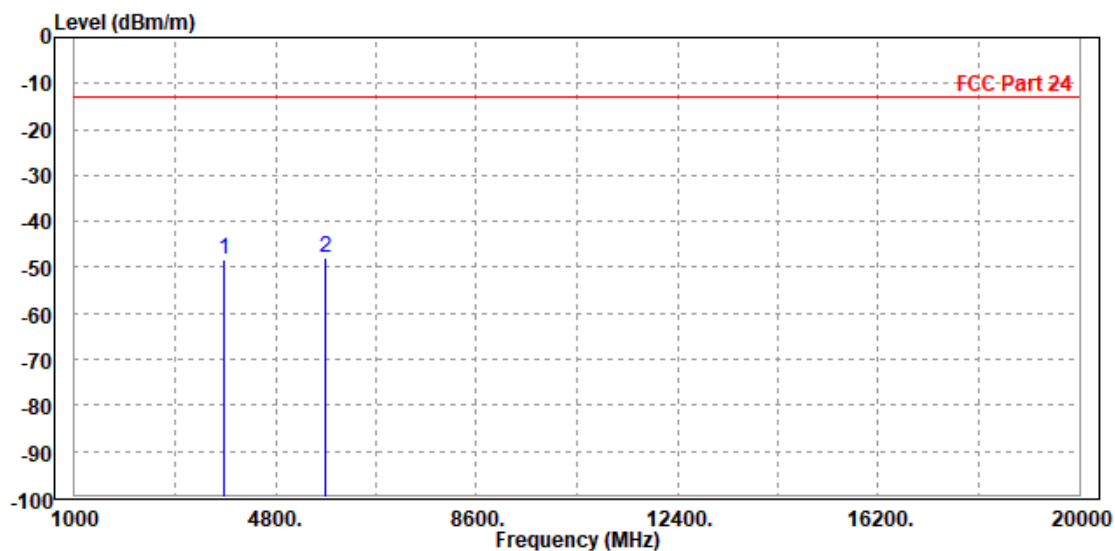
|                                                     |                 |                 |               |
|-----------------------------------------------------|-----------------|-----------------|---------------|
| MODE                                                | TX channel 810  | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                            | 23deg. C, 70%RH | INPUT POWER     | AC 120V/60Hz  |
| TESTED BY                                           | Jace Hu         |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                 |                 |               |

|      | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase  |
|------|----------|--------|------------|------------|------------|--------|--------|------------|
|      | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |            |
| 1    | 3812.000 | -48.50 | -57.41     | -13.00     | -35.50     | 8.91   | Peak   | Horizontal |
| 2 PP | 5729.400 | -37.32 | -48.10     | -13.00     | -24.32     | 10.78  | Peak   | Horizontal |



|                                                   |                 |                 |               |
|---------------------------------------------------|-----------------|-----------------|---------------|
| MODE                                              | TX channel 810  | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                          | 23deg. C, 70%RH | INPUT POWER     | AC 120V/60Hz  |
| TESTED BY                                         | Jace Hu         |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M |                 |                 |               |

|      | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase |
|------|----------|--------|------------|------------|------------|--------|--------|-----------|
|      | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |           |
| 1    | 3812.000 | -48.37 | -57.66     | -13.00     | -35.37     | 9.29   | Peak   | Vertical  |
| 2 PP | 5729.400 | -47.95 | -58.54     | -13.00     | -34.95     | 10.59  | Peak   | Vertical  |

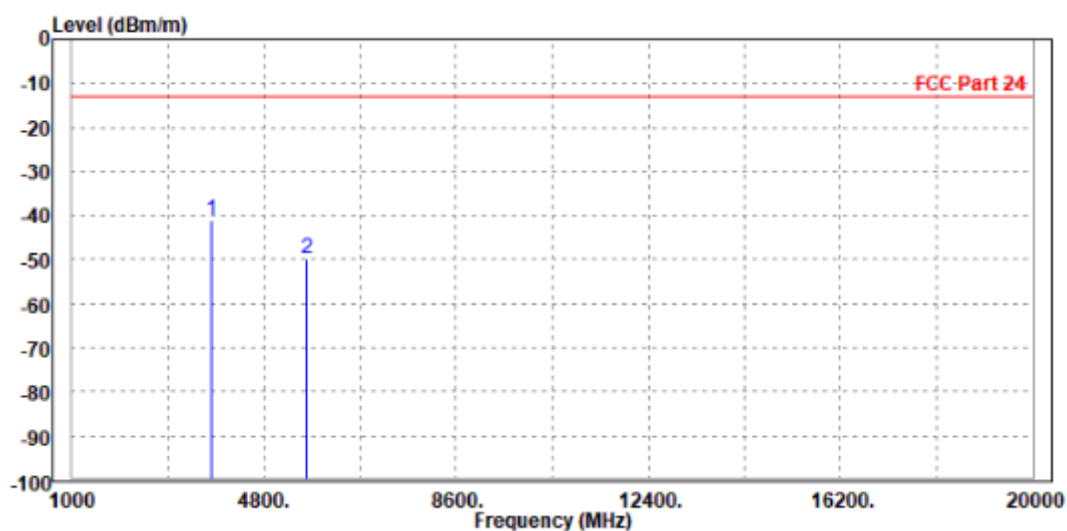


## LTE Band 2

CHANNEL BANDWIDTH: 1.4MHz / QPSK

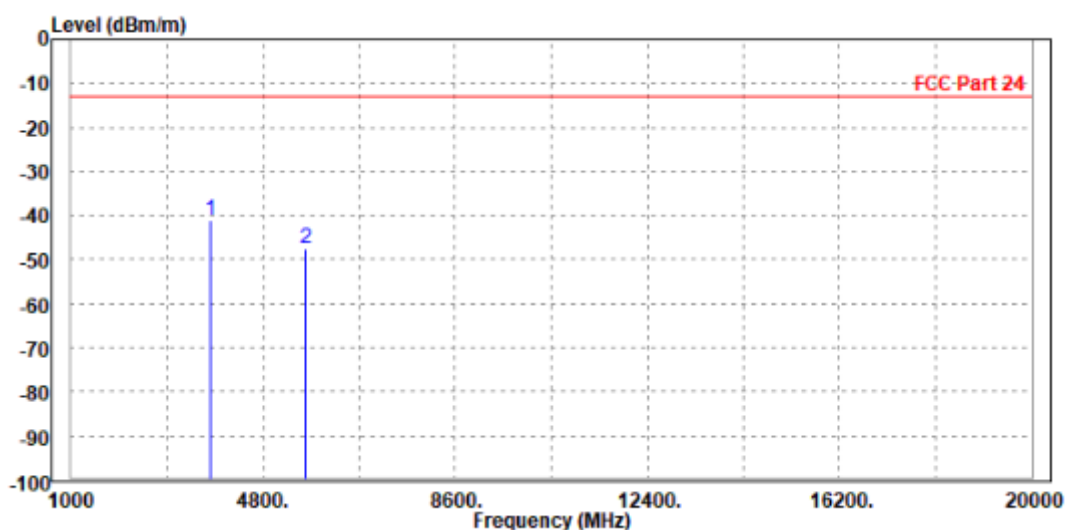
|                                                     |                  |                 |               |
|-----------------------------------------------------|------------------|-----------------|---------------|
| MODE                                                | TX channel 18900 | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                            | 23deg. C, 70%RH  | INPUT POWER     | DC 13.7V      |
| TESTED BY                                           | Jace Hu          |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                  |                 |               |

|   |    | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase  |
|---|----|----------|--------|------------|------------|------------|--------|--------|------------|
|   |    | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |            |
| 1 | PP | 3755.000 | -41.02 | -49.87     | -13.00     | -28.02     | 8.85   | Peak   | Horizontal |
| 2 |    | 5640.000 | -49.67 | -60.15     | -13.00     | -36.67     | 10.48  | Peak   | Horizontal |



|                                                   |                  |                 |               |
|---------------------------------------------------|------------------|-----------------|---------------|
| MODE                                              | TX channel 18900 | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                          | 23deg. C, 70%RH  | INPUT POWER     | DC 13.7V      |
| TESTED BY                                         | Jace Hu          |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M |                  |                 |               |

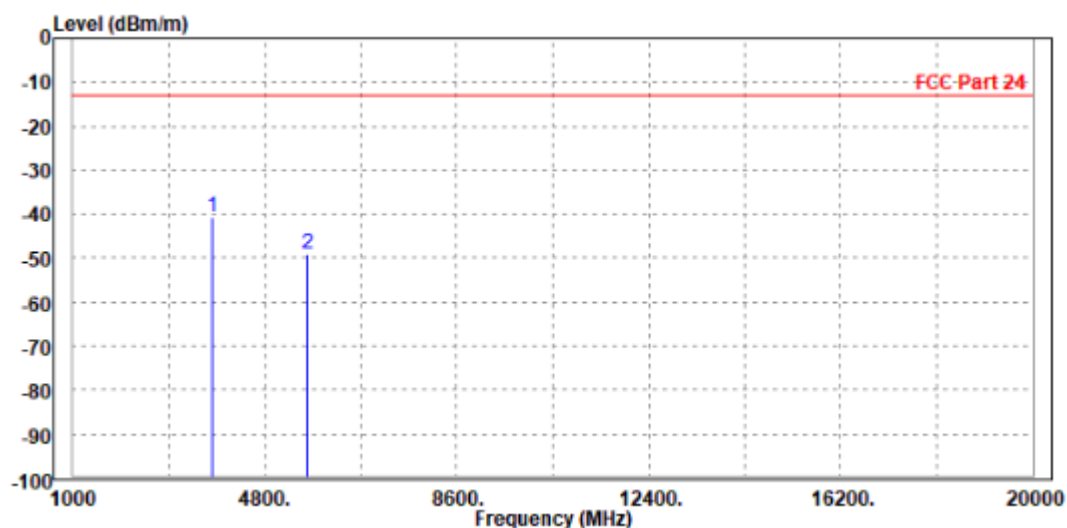
|      | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase |
|------|----------|--------|------------|------------|------------|--------|--------|-----------|
|      | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |           |
| 1 PP | 3755.000 | -41.12 | -50.39     | -13.00     | -28.12     | 9.27   | Peak   | Vertical  |
| 2    | 5640.000 | -47.41 | -57.66     | -13.00     | -34.41     | 10.25  | Peak   | Vertical  |



CHANNEL BANDWIDTH: 3MHz / QPSK

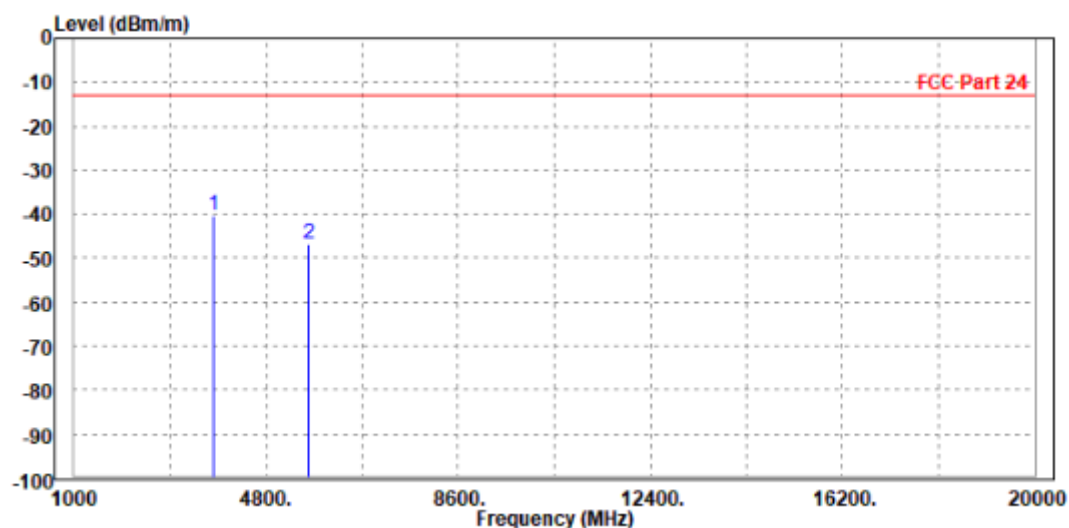
|                                                     |                  |                 |               |
|-----------------------------------------------------|------------------|-----------------|---------------|
| MODE                                                | TX channel 18900 | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                            | 23deg. C, 70%RH  | INPUT POWER     | DC 13.7V      |
| TESTED BY                                           | Jace Hu          |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                  |                 |               |

|   | Freq        | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase  |
|---|-------------|--------|------------|------------|------------|--------|--------|------------|
|   | MHz         | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |            |
| 1 | PP 3755.000 | -40.69 | -49.54     | -13.00     | -27.69     | 8.85   | Peak   | Horizontal |
| 2 | 5640.000    | -48.97 | -59.45     | -13.00     | -35.97     | 10.48  | Peak   | Horizontal |



|                                                   |                  |                 |               |
|---------------------------------------------------|------------------|-----------------|---------------|
| MODE                                              | TX channel 18900 | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                          | 23deg. C, 70%RH  | INPUT POWER     | DC 13.7V      |
| TESTED BY                                         | Jace Hu          |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M |                  |                 |               |

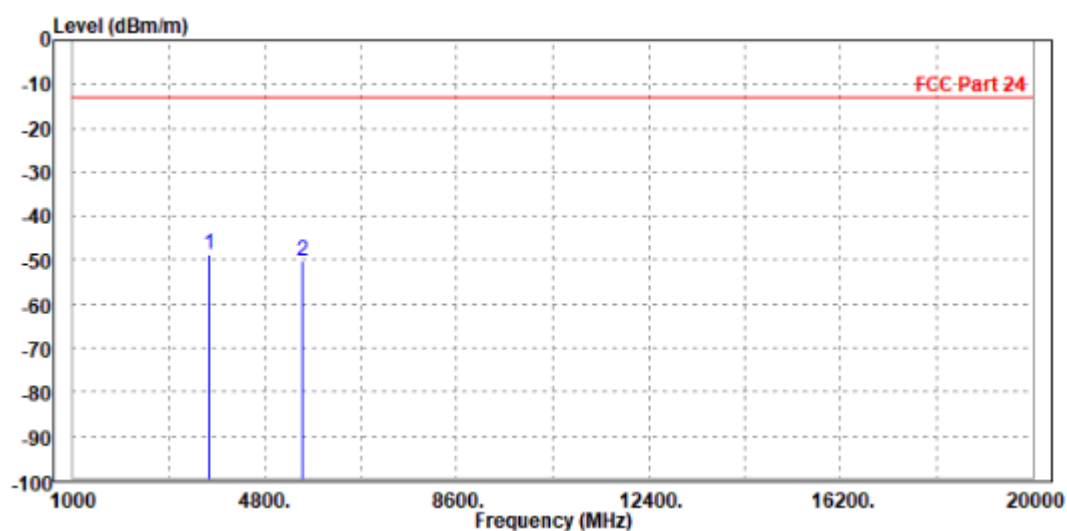
|   |    | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase |
|---|----|----------|--------|------------|------------|------------|--------|--------|-----------|
|   |    | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |           |
| 1 | PP | 3755.000 | -40.39 | -49.66     | -13.00     | -27.39     | 9.27   | Peak   | Vertical  |
| 2 |    | 5640.000 | -46.67 | -56.92     | -13.00     | -33.67     | 10.25  | Peak   | Vertical  |



**CHANNEL BANDWIDTH: 5MHz / QPSK**

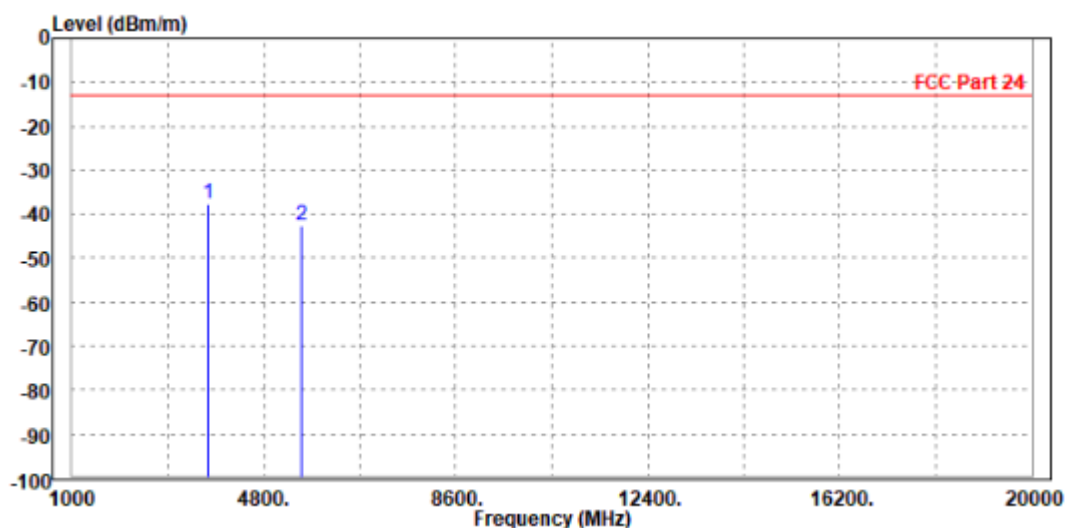
|                                                     |                  |                 |               |
|-----------------------------------------------------|------------------|-----------------|---------------|
| MODE                                                | TX channel 18625 | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                            | 23deg. C, 70%RH  | INPUT POWER     | DC 13.7V      |
| TESTED BY                                           | Jace Hu          |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                  |                 |               |

|   |    | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase  |
|---|----|----------|--------|------------|------------|------------|--------|--------|------------|
|   |    | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |            |
| 1 | PP | 3698.000 | -48.48 | -57.26     | -13.00     | -35.48     | 8.78   | Peak   | Horizontal |
| 2 |    | 5557.500 | -50.00 | -60.21     | -13.00     | -37.00     | 10.21  | Peak   | Horizontal |



|                                                   |                  |                 |               |
|---------------------------------------------------|------------------|-----------------|---------------|
| MODE                                              | TX channel 18625 | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                          | 23deg. C, 70%RH  | INPUT POWER     | DC 13.7V      |
| TESTED BY                                         | Jace Hu          |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M |                  |                 |               |

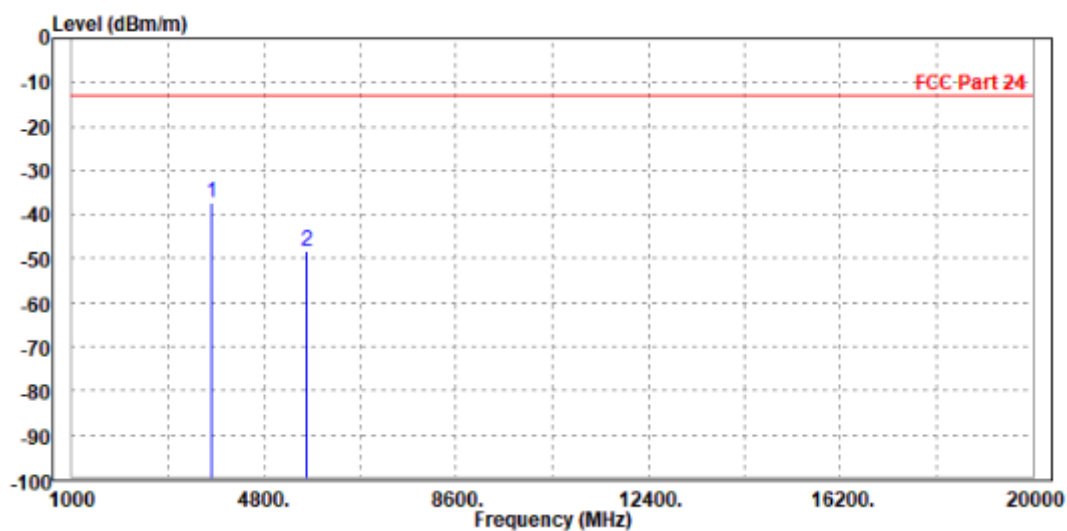
|      | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase |
|------|----------|--------|------------|------------|------------|--------|--------|-----------|
|      | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |           |
| 1 PP | 3698.000 | -37.54 | -46.79     | -13.00     | -24.54     | 9.25   | Peak   | Vertical  |
| 2    | 5557.500 | -42.65 | -52.58     | -13.00     | -29.65     | 9.93   | Peak   | Vertical  |



CH18900

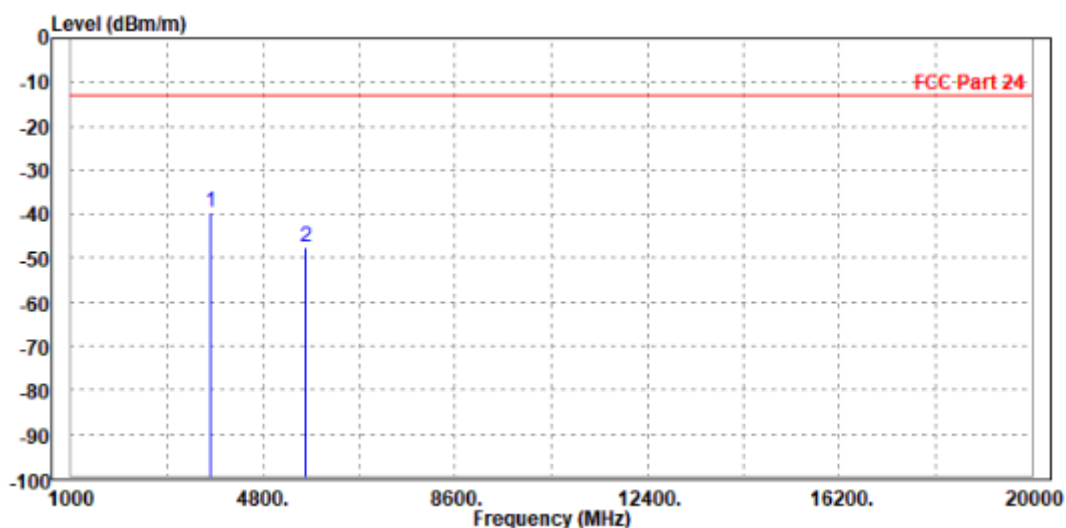
|                                                     |                  |                 |               |
|-----------------------------------------------------|------------------|-----------------|---------------|
| MODE                                                | TX channel 18900 | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                            | 23deg. C, 70%RH  | INPUT POWER     | DC 13.7V      |
| TESTED BY                                           | Jace Hu          |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                  |                 |               |

|   |    | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase  |
|---|----|----------|--------|------------|------------|------------|--------|--------|------------|
|   |    | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |            |
| 1 | PP | 3755.000 | -37.20 | -46.05     | -13.00     | -24.20     | 8.85   | Peak   | Horizontal |
| 2 |    | 5640.000 | -48.43 | -58.91     | -13.00     | -35.43     | 10.48  | Peak   | Horizontal |



|                                                   |                  |                 |               |
|---------------------------------------------------|------------------|-----------------|---------------|
| MODE                                              | TX channel 18900 | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                          | 23deg. C, 70%RH  | INPUT POWER     | DC 13.7V      |
| TESTED BY                                         | Jace Hu          |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M |                  |                 |               |

|      | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase |
|------|----------|--------|------------|------------|------------|--------|--------|-----------|
|      | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |           |
| 1 PP | 3755.000 | -39.67 | -48.94     | -13.00     | -26.67     | 9.27   | Peak   | Vertical  |
| 2    | 5640.000 | -47.49 | -57.74     | -13.00     | -34.49     | 10.25  | Peak   | Vertical  |





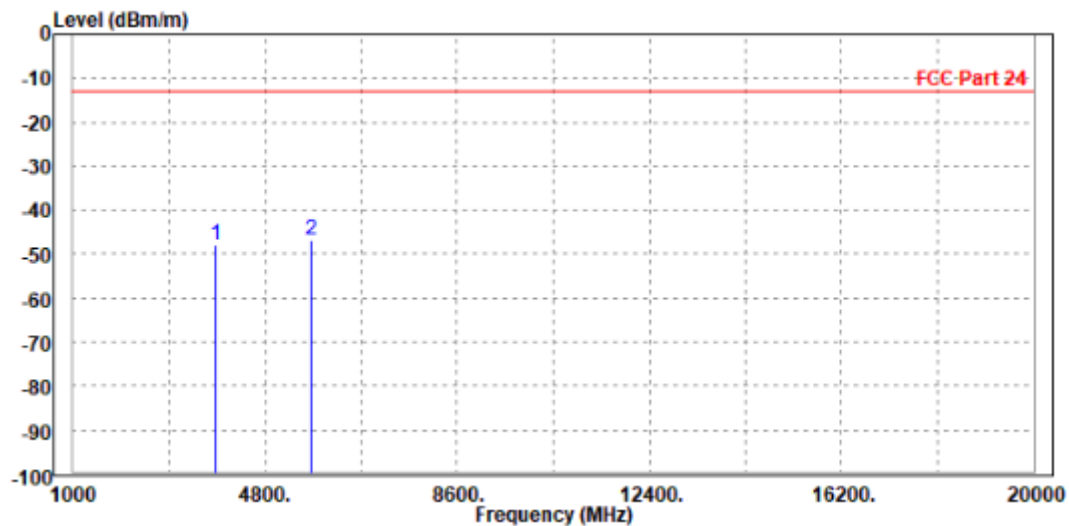
BUREAU  
VERITAS

Test Report No.: W7L-P21090017RF01

CH19175

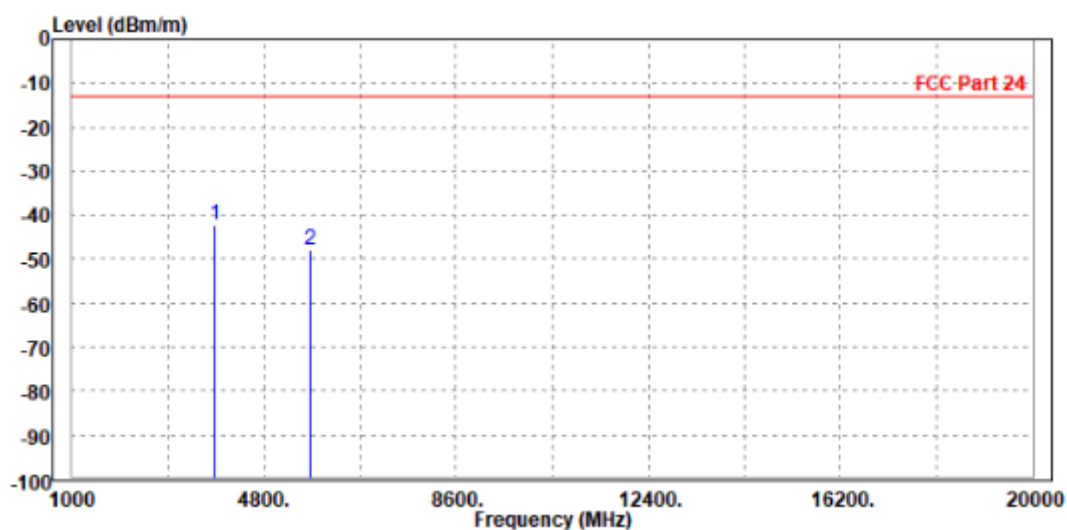
|                                                     |                  |                 |               |
|-----------------------------------------------------|------------------|-----------------|---------------|
| MODE                                                | TX channel 19175 | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                            | 23deg. C, 70%RH  | INPUT POWER     | DC 13.7V      |
| TESTED BY                                           | Jace Hu          |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                  |                 |               |

|      | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase  |
|------|----------|--------|------------|------------|------------|--------|--------|------------|
|      | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |            |
| 1    | 3812.000 | -47.80 | -56.71     | -13.00     | -34.80     | 8.91   | Peak   | Horizontal |
| 2 PP | 5722.500 | -46.85 | -57.61     | -13.00     | -33.85     | 10.76  | Peak   | Horizontal |



|                                                   |                  |                 |               |
|---------------------------------------------------|------------------|-----------------|---------------|
| MODE                                              | TX channel 19175 | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                          | 23deg. C, 70%RH  | INPUT POWER     | DC 13.7V      |
| TESTED BY                                         | Jace Hu          |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M |                  |                 |               |

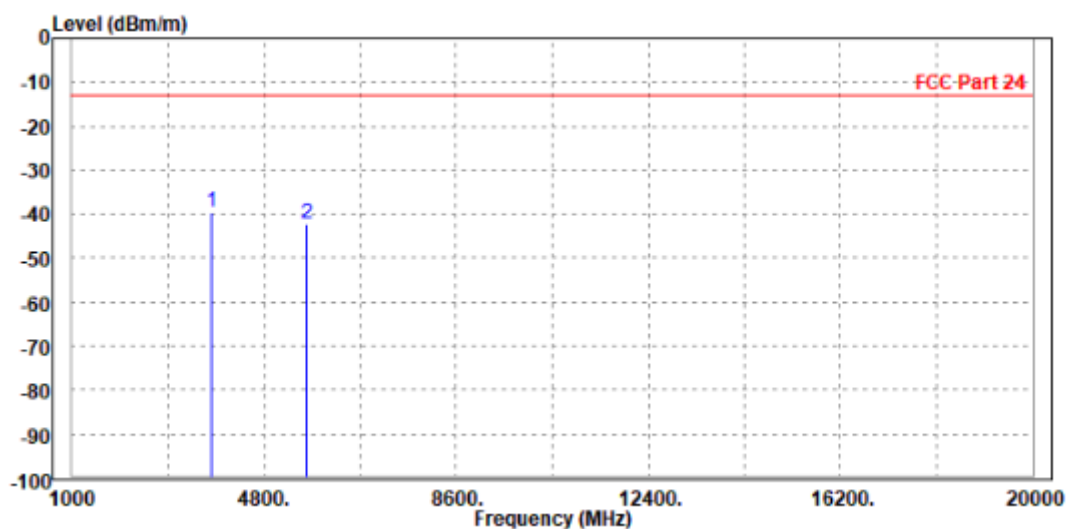
|      | Freq     | Level  | Read<br>Level | Limit<br>Line | Over<br>Limit | Factor | Remark | Pol/Phase |
|------|----------|--------|---------------|---------------|---------------|--------|--------|-----------|
|      | MHz      | dBm/m  | dBm           | dBm/m         | dB            | dB/m   |        |           |
| 1 PP | 3812.000 | -42.20 | -51.49        | -13.00        | -29.20        | 9.29   | Peak   | Vertical  |
| 2    | 5722.500 | -47.98 | -58.55        | -13.00        | -34.98        | 10.57  | Peak   | Vertical  |



CHANNEL BANDWIDTH: 10MHz / QPSK

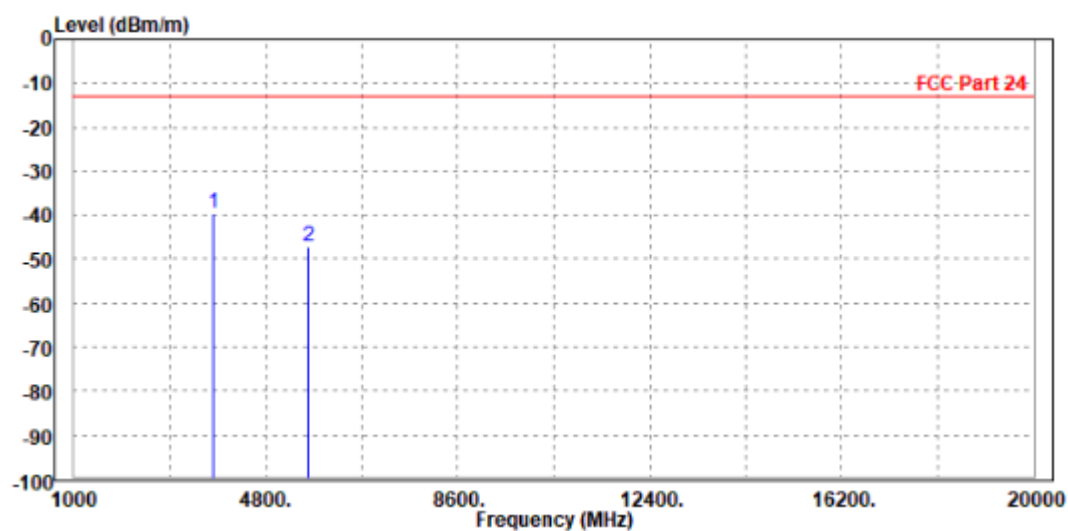
|                                                     |                  |                 |               |
|-----------------------------------------------------|------------------|-----------------|---------------|
| MODE                                                | TX channel 18900 | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                            | 23deg. C, 70%RH  | INPUT POWER     | DC 13.7V      |
| TESTED BY                                           | Jace Hu          |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                  |                 |               |

|      | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase  |
|------|----------|--------|------------|------------|------------|--------|--------|------------|
|      | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |            |
| 1 PP | 3755.000 | -39.38 | -48.23     | -13.00     | -26.38     | 8.85   | Peak   | Horizontal |
| 2    | 5640.000 | -42.39 | -52.87     | -13.00     | -29.39     | 10.48  | Peak   | Horizontal |



|                                                   |                  |                 |               |
|---------------------------------------------------|------------------|-----------------|---------------|
| MODE                                              | TX channel 18900 | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                          | 23deg. C, 70%RH  | INPUT POWER     | DC 13.7V      |
| TESTED BY                                         | Jace Hu          |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M |                  |                 |               |

|      | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase |
|------|----------|--------|------------|------------|------------|--------|--------|-----------|
|      | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |           |
| 1 PP | 3755.000 | -39.62 | -48.89     | -13.00     | -26.62     | 9.27   | Peak   | Vertical  |
| 2    | 5640.000 | -47.21 | -57.46     | -13.00     | -34.21     | 10.25  | Peak   | Vertical  |

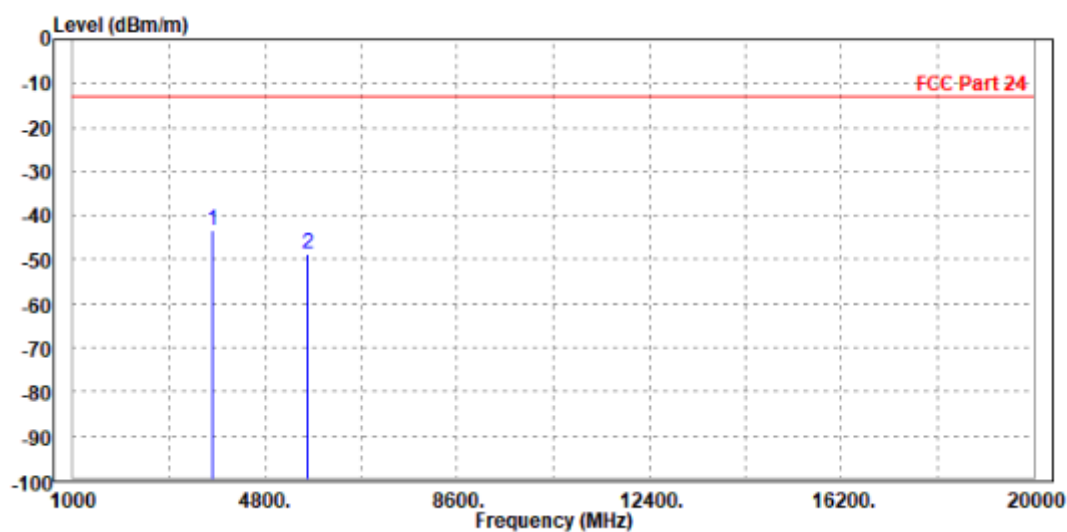


CHANNEL BANDWIDTH: 15MHz / QPSK

CH18675

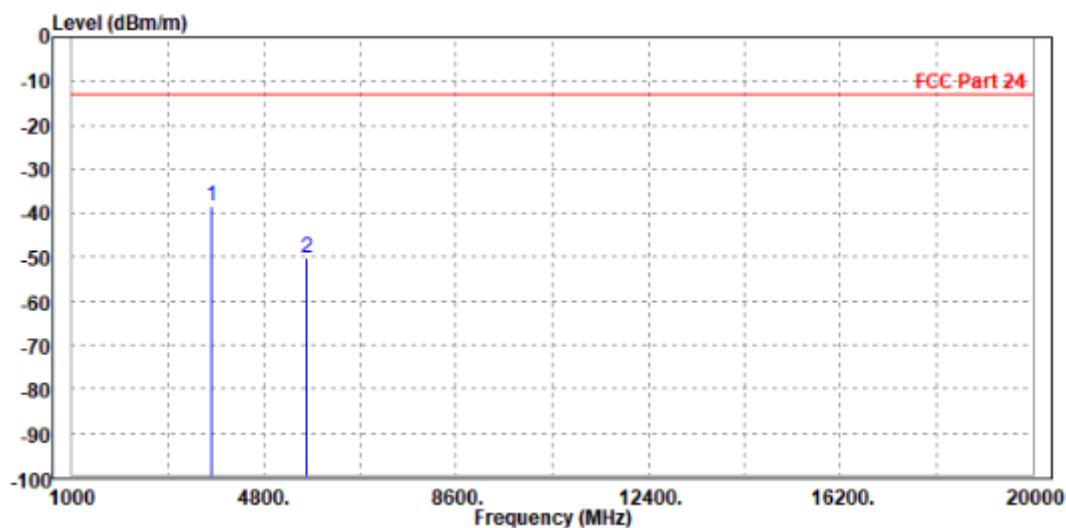
|                                                     |                  |                 |               |
|-----------------------------------------------------|------------------|-----------------|---------------|
| MODE                                                | TX channel 18675 | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                            | 23deg. C, 70%RH  | INPUT POWER     | DC 13.7V      |
| TESTED BY                                           | Jace Hu          |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                  |                 |               |

|   |    | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase  |
|---|----|----------|--------|------------|------------|------------|--------|--------|------------|
|   |    | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |            |
| 1 | PP | 3755.000 | -43.43 | -52.28     | -13.00     | -30.43     | 8.85   | Peak   | Horizontal |
| 2 |    | 5640.000 | -48.63 | -59.11     | -13.00     | -35.63     | 10.48  | Peak   | Horizontal |



|                                                   |                  |                 |               |
|---------------------------------------------------|------------------|-----------------|---------------|
| MODE                                              | TX channel 18675 | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                          | 23deg. C, 70%RH  | INPUT POWER     | DC 13.7V      |
| TESTED BY                                         | Jace Hu          |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M |                  |                 |               |

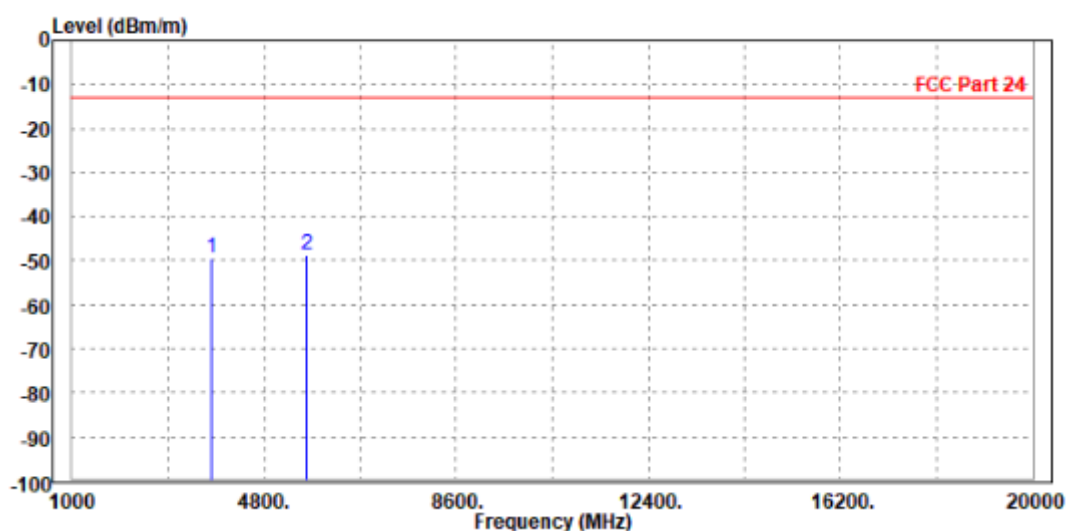
|   | Freq        | Level  | Read<br>Level | Limit<br>Line | Over<br>Limit | Factor | Remark | Pol/Phase |
|---|-------------|--------|---------------|---------------|---------------|--------|--------|-----------|
|   | MHz         | dBm/m  | dBm           | dBm/m         | dB            | dB/m   |        |           |
| 1 | PP 3755.000 | -38.30 | -47.57        | -13.00        | -25.30        | 9.27   | Peak   | Vertical  |
| 2 | 5640.000    | -50.02 | -60.27        | -13.00        | -37.02        | 10.25  | Peak   | Vertical  |



**CHANNEL BANDWIDTH: 20MHz / QPSK**

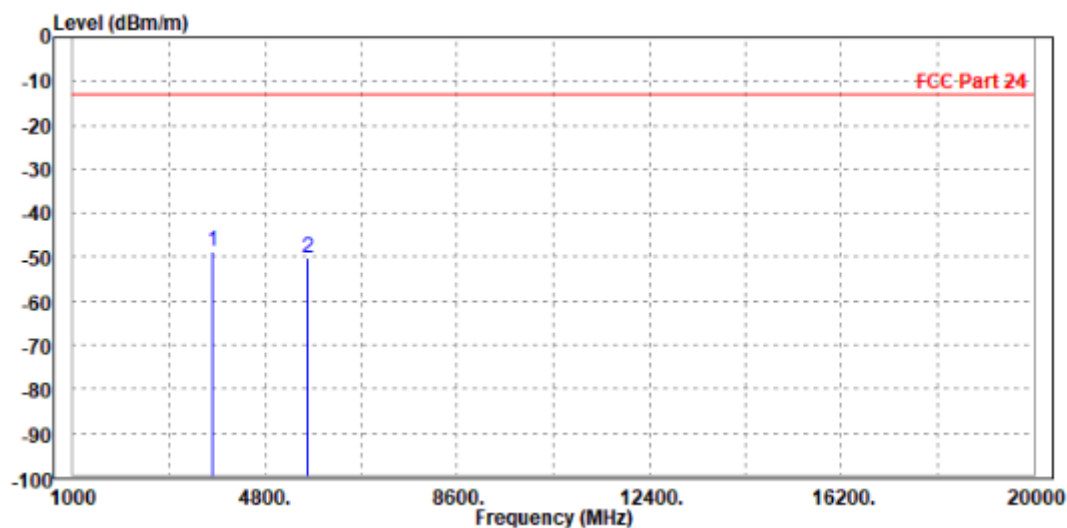
|                                                                |                  |                        |               |
|----------------------------------------------------------------|------------------|------------------------|---------------|
| <b>MODE</b>                                                    | TX channel 18900 | <b>FREQUENCY RANGE</b> | Above 1000MHz |
| <b>ENVIRONMENTAL CONDITIONS</b>                                | 23deg. C, 70%RH  | <b>INPUT POWER</b>     | DC 13.7V      |
| <b>TESTED BY</b>                                               | Jace Hu          |                        |               |
| <b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b> |                  |                        |               |

|      | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase  |
|------|----------|--------|------------|------------|------------|--------|--------|------------|
|      | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |            |
| 1    | 3755.000 | -49.43 | -58.28     | -13.00     | -36.43     | 8.85   | Peak   | Horizontal |
| 2 PP | 5640.000 | -48.79 | -59.27     | -13.00     | -35.79     | 10.48  | Peak   | Horizontal |



|                                                   |                  |                 |               |
|---------------------------------------------------|------------------|-----------------|---------------|
| MODE                                              | TX channel 18900 | FREQUENCY RANGE | Above 1000MHz |
| ENVIRONMENTAL CONDITIONS                          | 23deg. C, 70%RH  | INPUT POWER     | DC 13.7V      |
| TESTED BY                                         | Jace Hu          |                 |               |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M |                  |                 |               |

|      | Freq     | Level  | Read Level | Limit Line | Over Limit | Factor | Remark | Pol/Phase |
|------|----------|--------|------------|------------|------------|--------|--------|-----------|
|      | MHz      | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |           |
| 1 PP | 3755.000 | -48.50 | -57.77     | -13.00     | -35.50     | 9.27   | Peak   | Vertical  |
| 2    | 5640.000 | -50.22 | -60.47     | -13.00     | -37.22     | 10.25  | Peak   | Vertical  |

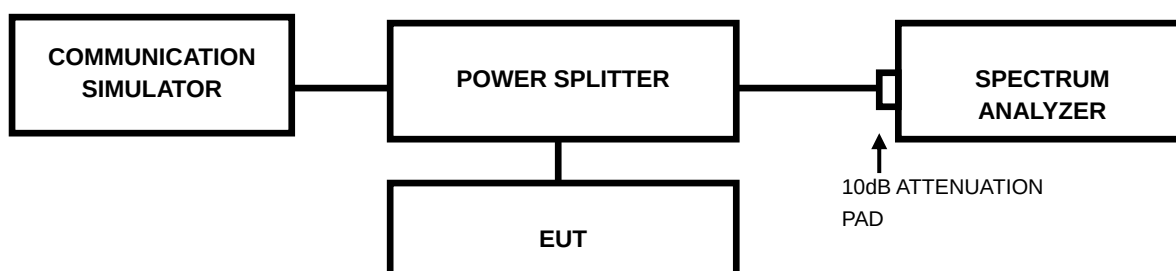


### 3.7 PEAK TO AVERAGE RATIO

#### 3.7.1 LIMITS OF PEAK TO AVERAGE RATIO MEASUREMENT

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

#### 3.7.2 TEST SETUP



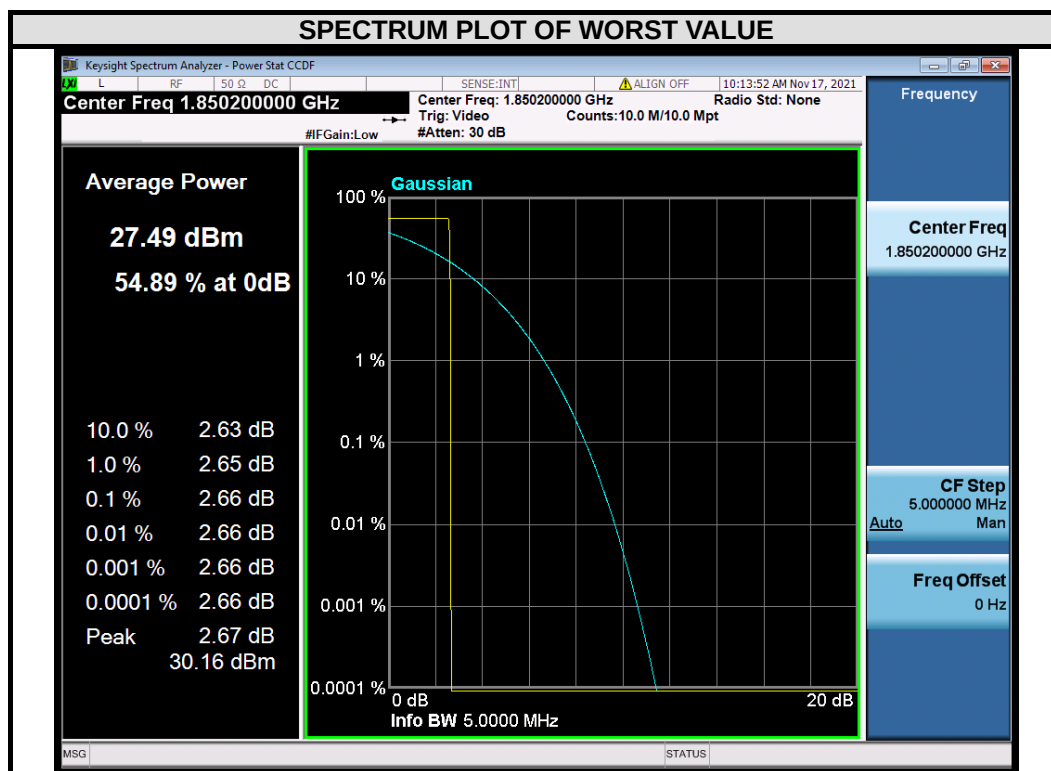
#### 3.7.3 TEST PROCEDURES

1. Set 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 PAR level associated with a probability of 0.1%.

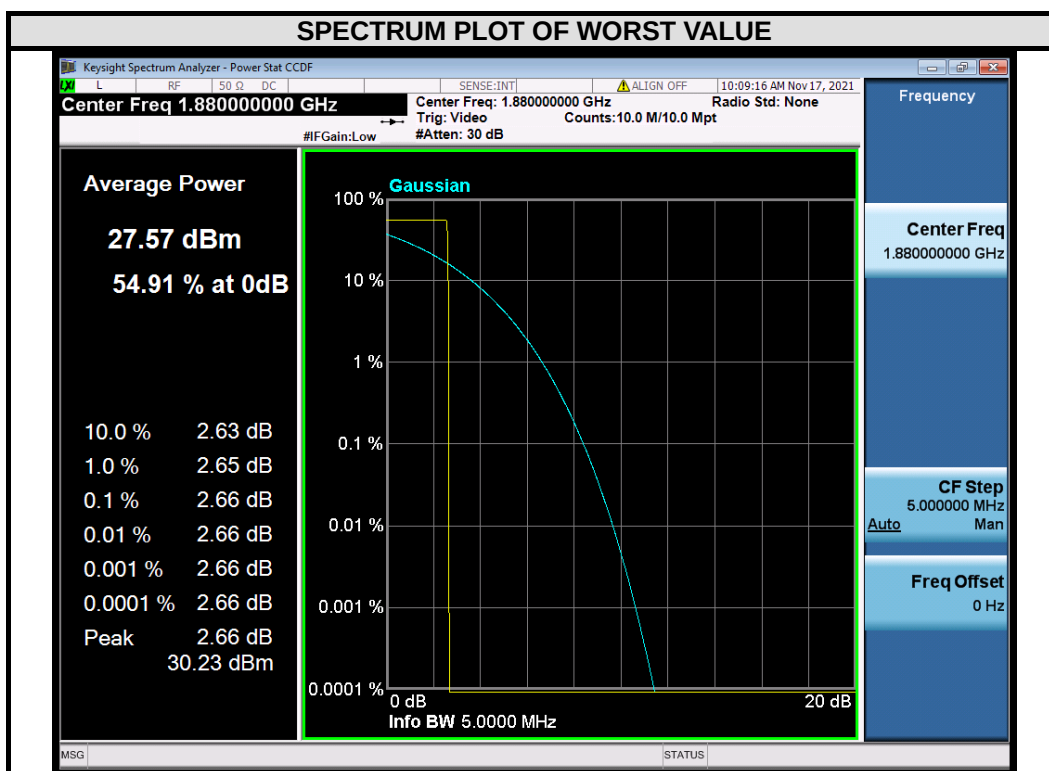
### 3.7.4 TEST RESULTS

#### GSM

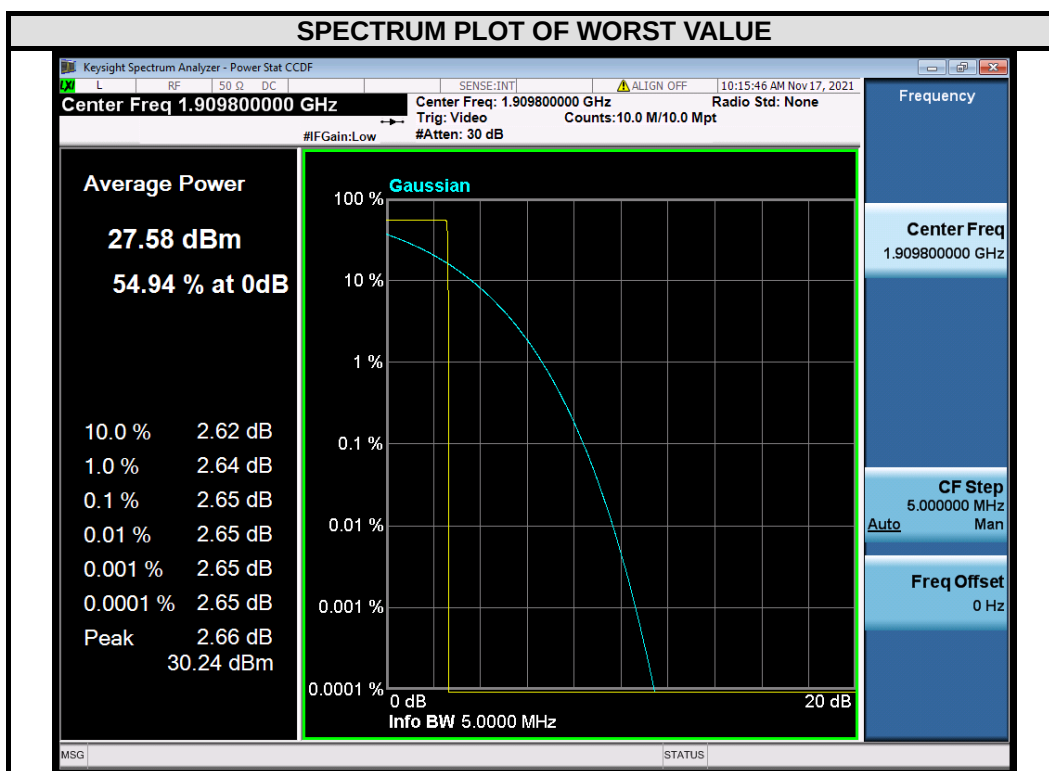
| CHANNEL | FREQUENCY (MHz) | PEAK TO AVERAGE RATIO (dB) |
|---------|-----------------|----------------------------|
| 512     | 1850.2          | 2.66                       |



| CHANNEL | FREQUENCY (MHz) | PEAK TO AVERAGE RATIO (dB) |
|---------|-----------------|----------------------------|
| 661     | 1880            | 2.66                       |

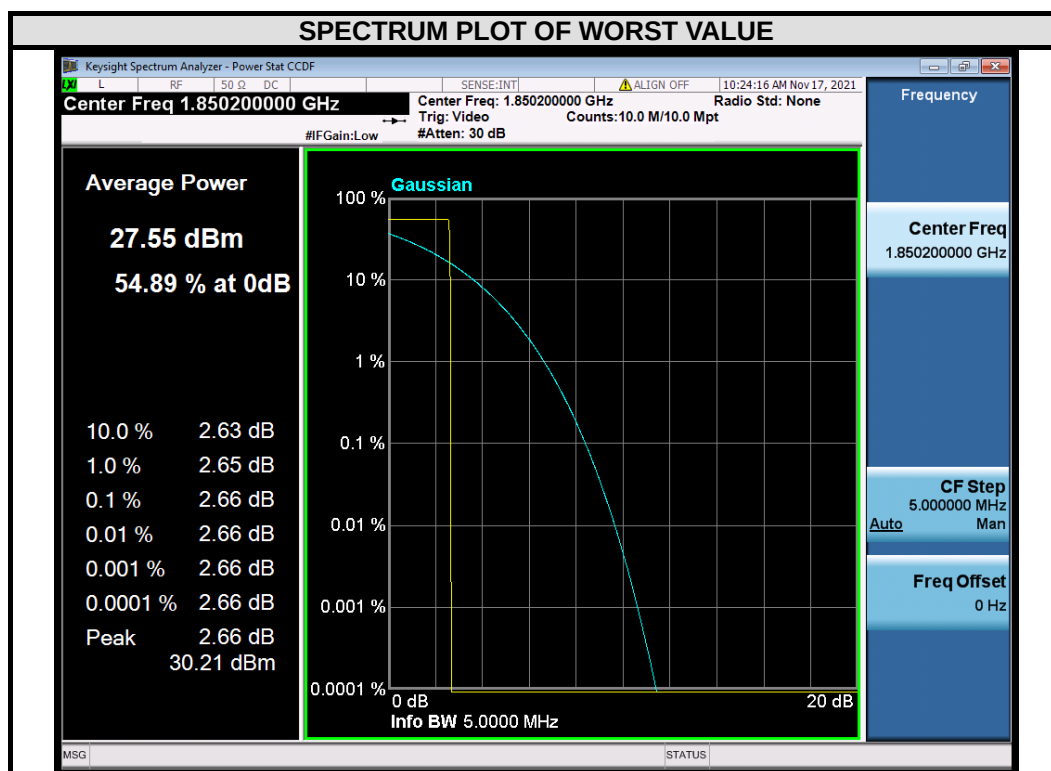


| CHANNEL | FREQUENCY (MHz) | PEAK TO AVERAGE RATIO (dB) |
|---------|-----------------|----------------------------|
| 810     | 1909.8          | 2.65                       |

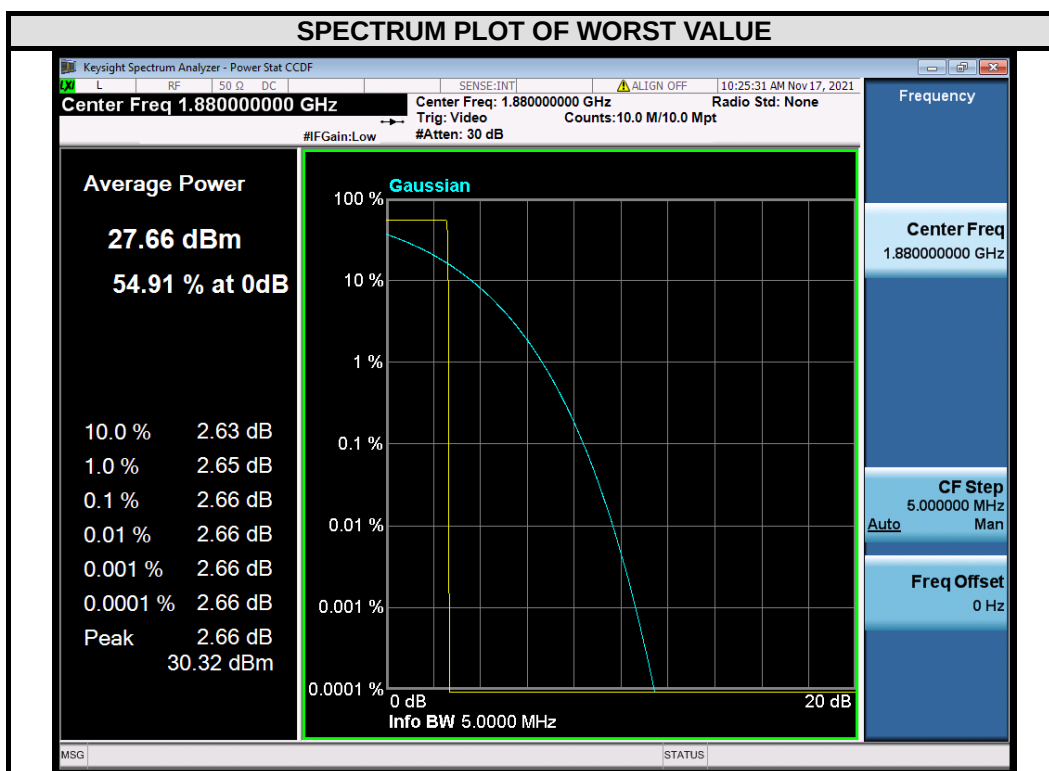


EDGE

| CHANNEL | FREQUENCY (MHz) | PEAK TO AVERAGE RATIO (dB) |
|---------|-----------------|----------------------------|
| 512     | 1850.2          | 2.66                       |



| CHANNEL | FREQUENCY (MHz) | PEAK TO AVERAGE RATIO (dB) |
|---------|-----------------|----------------------------|
| 661     | 1880            | 2.66                       |



| CHANNEL | FREQUENCY (MHz) | PEAK TO AVERAGE RATIO (dB) |
|---------|-----------------|----------------------------|
| 810     | 1909.8          | 2.65                       |

