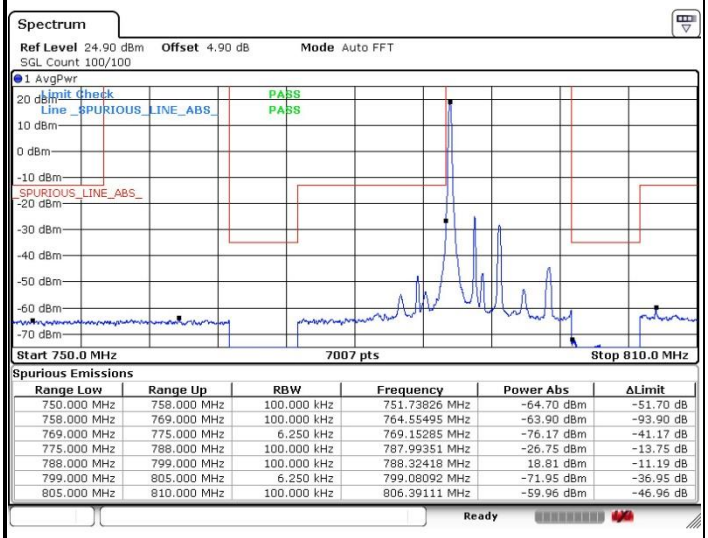
## LTE Band 14 / 5MHz / 64QAM

### Lowest Band Edge / 1 RB

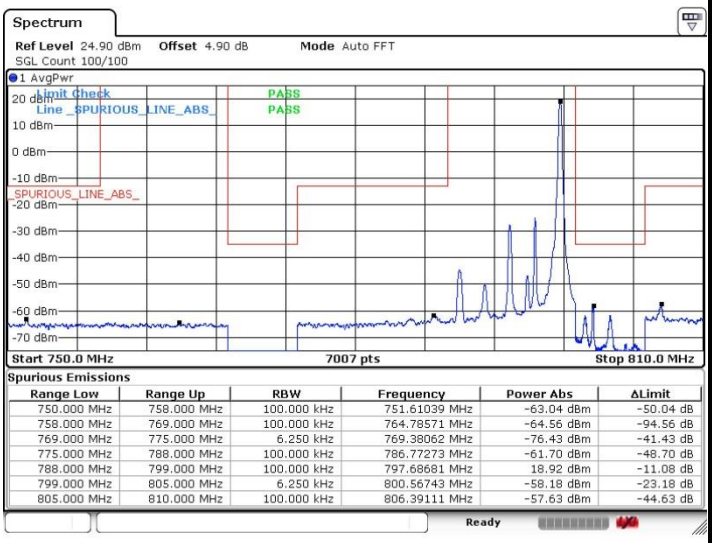



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 750.000 MHz | 758.000 MHz | 100.000 kHz | 751.73826 MHz | -64.70 dBm | -51.70 dB |
| 758.000 MHz | 769.000 MHz | 100.000 kHz | 764.55495 MHz | -63.90 dBm | -93.90 dB |
| 769.000 MHz | 775.000 MHz | 6.250 kHz | 769.15285 MHz | -76.17 dBm | -41.17 dB |
| 775.000 MHz | 788.000 MHz | 100.000 kHz | 787.99351 MHz | -26.75 dBm | -13.75 dB |
| 788.000 MHz | 799.000 MHz | 100.000 kHz | 788.32418 MHz | 18.81 dBm | -11.19 dB |
| 799.000 MHz | 805.000 MHz | 6.250 kHz | 799.08092 MHz | -71.95 dBm | -36.95 dB |
| 805.000 MHz | 810.000 MHz | 100.000 kHz | 806.39111 MHz | -59.96 dBm | -46.96 dB |

Date: 30.OCT.2019 21:50:56

### Highest Band Edge / 1 RB

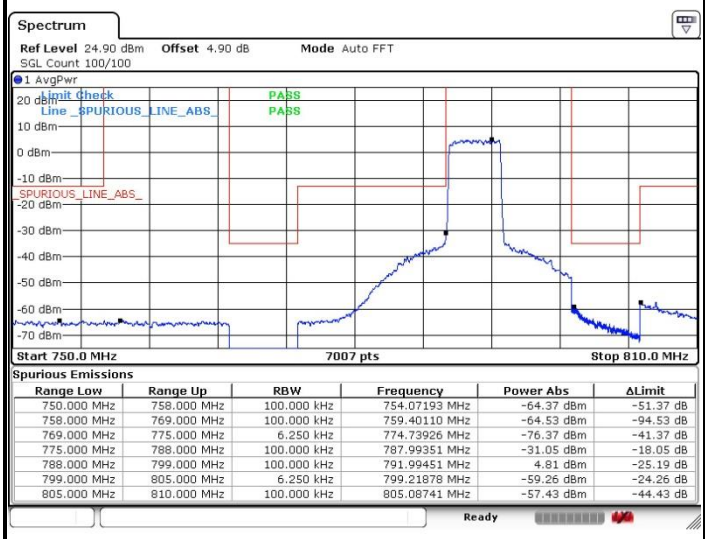



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 750.000 MHz | 758.000 MHz | 100.000 kHz | 751.61039 MHz | -63.04 dBm | -50.04 dB |
| 758.000 MHz | 769.000 MHz | 100.000 kHz | 764.78571 MHz | -64.56 dBm | -94.56 dB |
| 769.000 MHz | 775.000 MHz | 6.250 kHz | 769.38062 MHz | -76.43 dBm | -41.43 dB |
| 775.000 MHz | 788.000 MHz | 100.000 kHz | 786.77273 MHz | -61.70 dBm | -48.70 dB |
| 788.000 MHz | 799.000 MHz | 100.000 kHz | 797.68681 MHz | 18.92 dBm | -11.08 dB |
| 799.000 MHz | 805.000 MHz | 6.250 kHz | 800.56743 MHz | -58.18 dBm | -23.18 dB |
| 805.000 MHz | 810.000 MHz | 100.000 kHz | 806.39111 MHz | -57.63 dBm | -44.63 dB |

Date: 30.OCT.2019 21:51:53

### Lowest Band Edge / Full RB

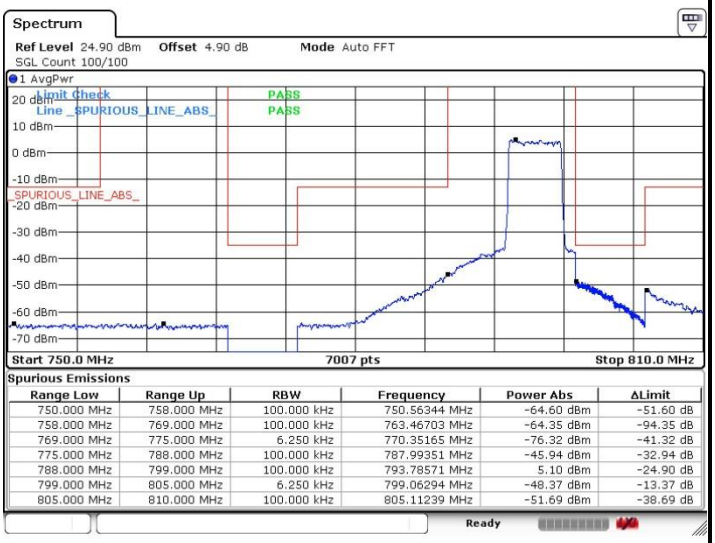



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 750.000 MHz | 758.000 MHz | 100.000 kHz | 754.07193 MHz | -64.37 dBm | -51.37 dB |
| 758.000 MHz | 769.000 MHz | 100.000 kHz | 759.40110 MHz | -64.53 dBm | -94.53 dB |
| 769.000 MHz | 775.000 MHz | 6.250 kHz | 774.73926 MHz | -76.37 dBm | -41.37 dB |
| 775.000 MHz | 788.000 MHz | 100.000 kHz | 787.99351 MHz | -31.05 dBm | -18.05 dB |
| 788.000 MHz | 799.000 MHz | 100.000 kHz | 791.99451 MHz | 4.81 dBm | -25.19 dB |
| 799.000 MHz | 805.000 MHz | 6.250 kHz | 799.21878 MHz | -59.26 dBm | -24.26 dB |
| 805.000 MHz | 810.000 MHz | 100.000 kHz | 805.08741 MHz | -57.43 dBm | -44.43 dB |

Date: 30.OCT.2019 21:49:12

### Highest Band Edge / Full RB



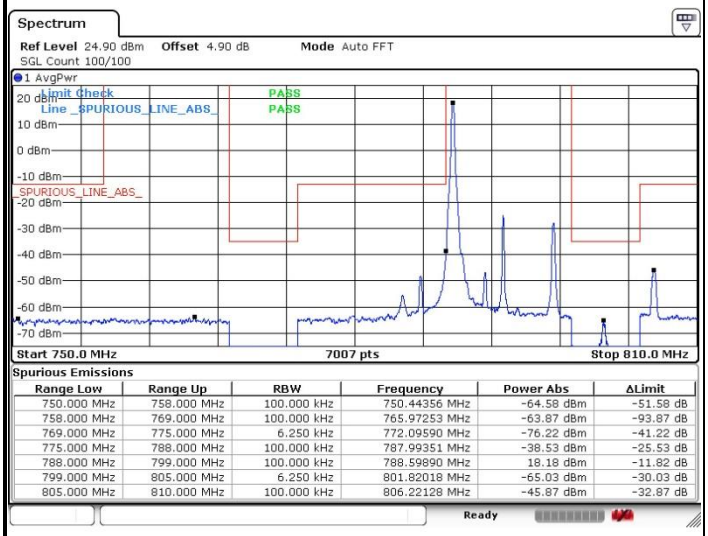

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 750.000 MHz | 758.000 MHz | 100.000 kHz | 750.56344 MHz | -64.60 dBm | -51.60 dB |
| 758.000 MHz | 769.000 MHz | 100.000 kHz | 763.46703 MHz | -64.35 dBm | -94.35 dB |
| 769.000 MHz | 775.000 MHz | 6.250 kHz | 770.35165 MHz | -76.32 dBm | -41.32 dB |
| 775.000 MHz | 788.000 MHz | 100.000 kHz | 787.99351 MHz | -45.94 dBm | -32.94 dB |
| 788.000 MHz | 799.000 MHz | 100.000 kHz | 793.78571 MHz | 5.10 dBm | -24.90 dB |
| 799.000 MHz | 805.000 MHz | 6.250 kHz | 799.06294 MHz | -48.37 dBm | -13.37 dB |
| 805.000 MHz | 810.000 MHz | 100.000 kHz | 805.11239 MHz | -51.69 dBm | -38.69 dB |

Date: 30.OCT.2019 21:53:35

## LTE Band 14 / 10MHz / 64QAM

### Lowest Band Edge / 1 RB

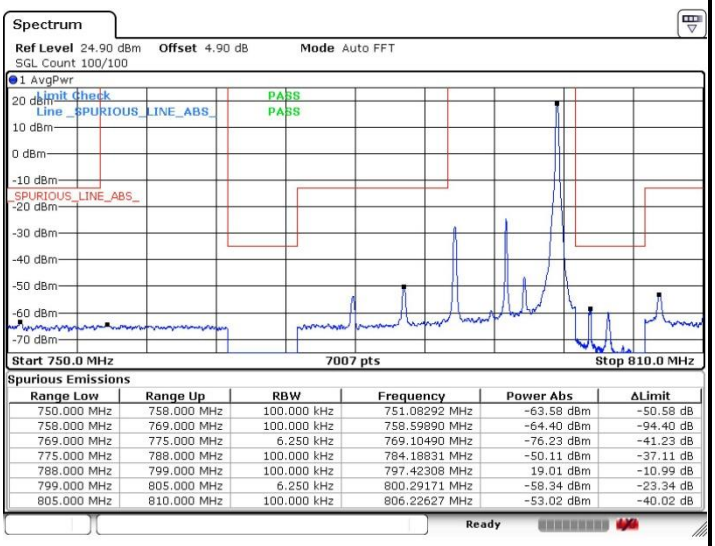



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 750.000 MHz | 758.000 MHz | 100.000 kHz | 750.44356 MHz | -64.58 dBm | -51.58 dB |
| 758.000 MHz | 769.000 MHz | 100.000 kHz | 765.97253 MHz | -63.87 dBm | -93.87 dB |
| 769.000 MHz | 775.000 MHz | 6.250 kHz | 772.09590 MHz | -76.22 dBm | -41.22 dB |
| 775.000 MHz | 788.000 MHz | 100.000 kHz | 787.99351 MHz | -38.53 dBm | -25.53 dB |
| 788.000 MHz | 799.000 MHz | 100.000 kHz | 788.59890 MHz | 18.18 dBm | -11.82 dB |
| 799.000 MHz | 805.000 MHz | 6.250 kHz | 801.82018 MHz | -65.03 dBm | -30.03 dB |
| 805.000 MHz | 810.000 MHz | 100.000 kHz | 806.22128 MHz | -45.87 dBm | -32.87 dB |

Date: 30.OCT.2019 21:45:52

### Highest Band Edge / 1 RB

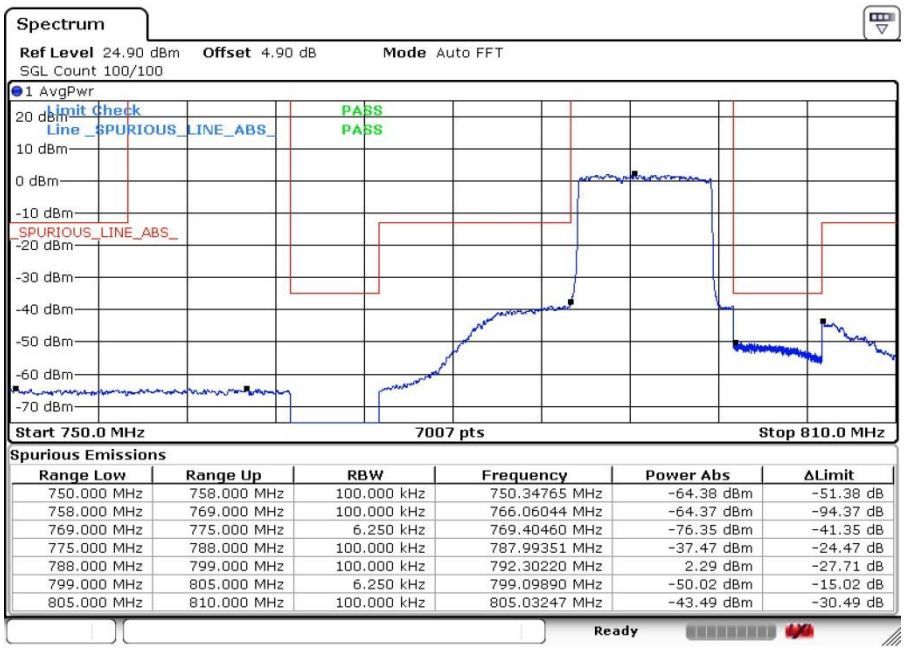



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 750.000 MHz | 758.000 MHz | 100.000 kHz | 751.08292 MHz | -63.58 dBm | -50.58 dB |
| 758.000 MHz | 769.000 MHz | 100.000 kHz | 758.59890 MHz | -64.40 dBm | -94.40 dB |
| 769.000 MHz | 775.000 MHz | 6.250 kHz | 769.10490 MHz | -76.23 dBm | -41.23 dB |
| 775.000 MHz | 788.000 MHz | 100.000 kHz | 784.18831 MHz | -50.11 dBm | -37.11 dB |
| 788.000 MHz | 799.000 MHz | 100.000 kHz | 797.42308 MHz | 19.01 dBm | -10.99 dB |
| 799.000 MHz | 805.000 MHz | 6.250 kHz | 800.29171 MHz | -58.34 dBm | -23.34 dB |
| 805.000 MHz | 810.000 MHz | 100.000 kHz | 806.22627 MHz | -53.02 dBm | -40.02 dB |

Date: 30.OCT.2019 21:47:55

### Band Edge / Full RB




Spurious Emissions

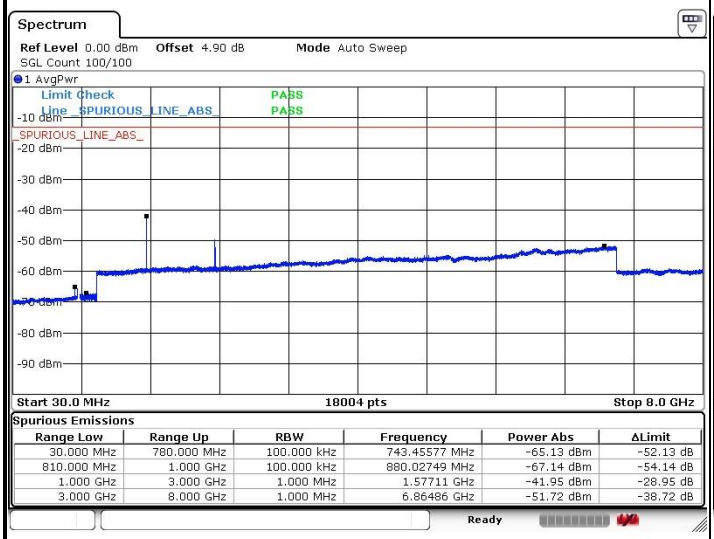
| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 750.000 MHz | 758.000 MHz | 100.000 kHz | 750.34765 MHz | -64.38 dBm | -51.38 dB |
| 758.000 MHz | 769.000 MHz | 100.000 kHz | 766.06044 MHz | -64.37 dBm | -94.37 dB |
| 769.000 MHz | 775.000 MHz | 6.250 kHz | 769.40460 MHz | -76.35 dBm | -41.35 dB |
| 775.000 MHz | 788.000 MHz | 100.000 kHz | 787.99351 MHz | -37.47 dBm | -24.47 dB |
| 788.000 MHz | 799.000 MHz | 100.000 kHz | 792.30220 MHz | 2.29 dBm | -27.71 dB |
| 799.000 MHz | 805.000 MHz | 6.250 kHz | 799.09890 MHz | -50.02 dBm | -15.02 dB |
| 805.000 MHz | 810.000 MHz | 100.000 kHz | 805.03247 MHz | -43.49 dBm | -30.49 dB |

Date: 30.OCT.2019 21:45:33

# Conducted Spurious Emission

## LTE Band 14 / 5MHz

### Lowest Channel / QPSK

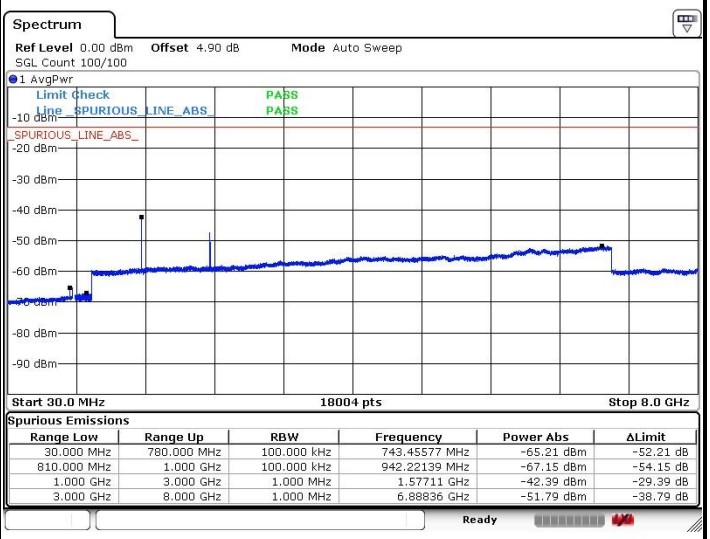



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 780.000 MHz | 100.000 kHz | 743.45577 MHz | -65.13 dBm | -52.13 dB |
| 810.000 MHz | 1.000 GHz | 100.000 kHz | 880.02749 MHz | -67.14 dBm | -54.14 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.57711 GHz | -41.95 dBm | -28.95 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.86486 GHz | -51.72 dBm | -38.72 dB |

Date: 30.OCT.2019 21:59:41

### Lowest Channel / 16QAM

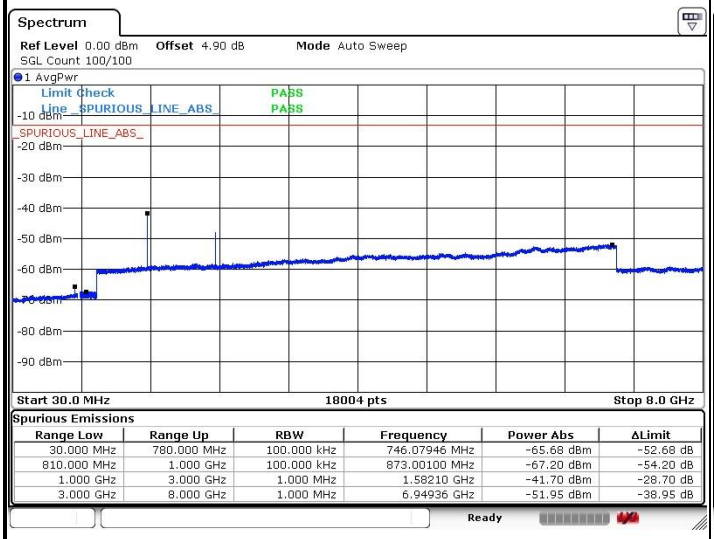



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 780.000 MHz | 100.000 kHz | 743.45577 MHz | -65.21 dBm | -52.21 dB |
| 810.000 MHz | 1.000 GHz | 100.000 kHz | 942.22139 MHz | -67.15 dBm | -54.15 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.57711 GHz | -42.39 dBm | -29.39 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.88836 GHz | -51.79 dBm | -38.79 dB |

Date: 30.OCT.2019 22:00:06

### Middle Channel / QPSK

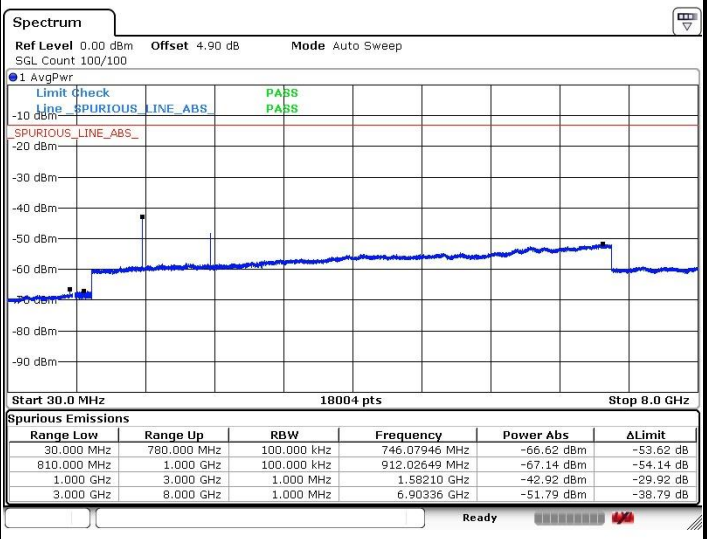



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 780.000 MHz | 100.000 kHz | 746.07946 MHz | -65.68 dBm | -52.68 dB |
| 810.000 MHz | 1.000 GHz | 100.000 kHz | 873.00100 MHz | -67.20 dBm | -54.20 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.58210 GHz | -41.70 dBm | -28.70 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.94936 GHz | -51.95 dBm | -38.95 dB |

Date: 30.OCT.2019 22:01:53

### Middle Channel / 16QAM



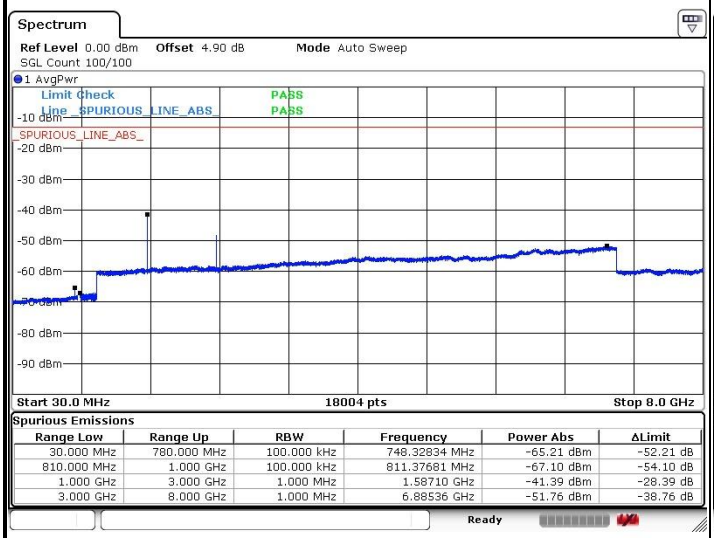

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 780.000 MHz | 100.000 kHz | 746.07946 MHz | -66.62 dBm | -53.62 dB |
| 810.000 MHz | 1.000 GHz | 100.000 kHz | 912.02649 MHz | -67.14 dBm | -54.14 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.58210 GHz | -42.92 dBm | -29.92 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.90336 GHz | -51.79 dBm | -38.79 dB |

Date: 30.OCT.2019 22:01:25

## LTE Band 14 / 5MHz

### Highest Channel / QPSK

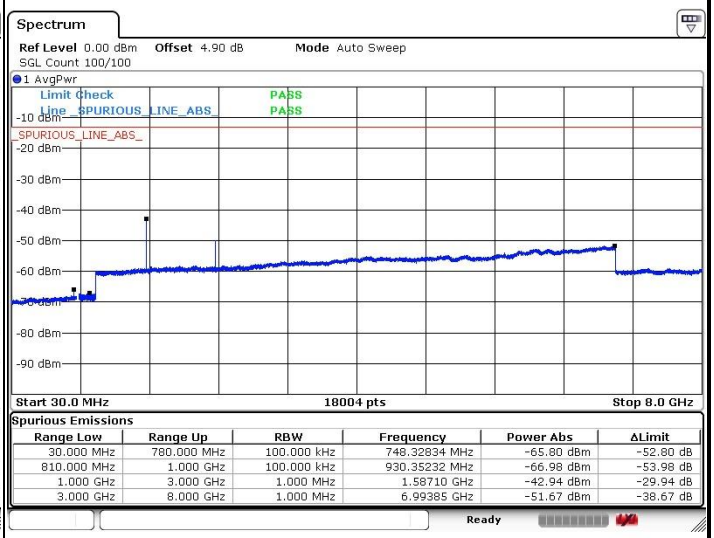



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 780.000 MHz | 100.000 kHz | 748.32834 MHz | -65.21 dBm | -52.21 dB |
| 810.000 MHz | 1.000 GHz | 100.000 kHz | 811.37681 MHz | -67.10 dBm | -54.10 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.58710 GHz | -41.39 dBm | -28.39 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.88536 GHz | -51.76 dBm | -38.76 dB |

Date: 30.OCT.2019 21:59:07

### Highest Channel / 16QAM



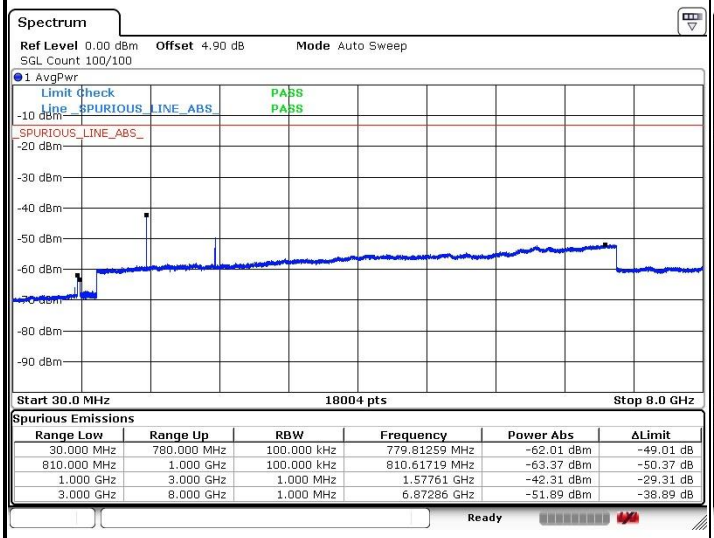

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 780.000 MHz | 100.000 kHz | 748.32834 MHz | -65.80 dBm | -52.80 dB |
| 810.000 MHz | 1.000 GHz | 100.000 kHz | 930.35232 MHz | -66.98 dBm | -53.98 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.58710 GHz | -42.94 dBm | -29.94 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.99385 GHz | -51.67 dBm | -38.67 dB |

Date: 30.OCT.2019 21:58:42

## LTE Band 14 / 10MHz

### Middle Channel / QPSK

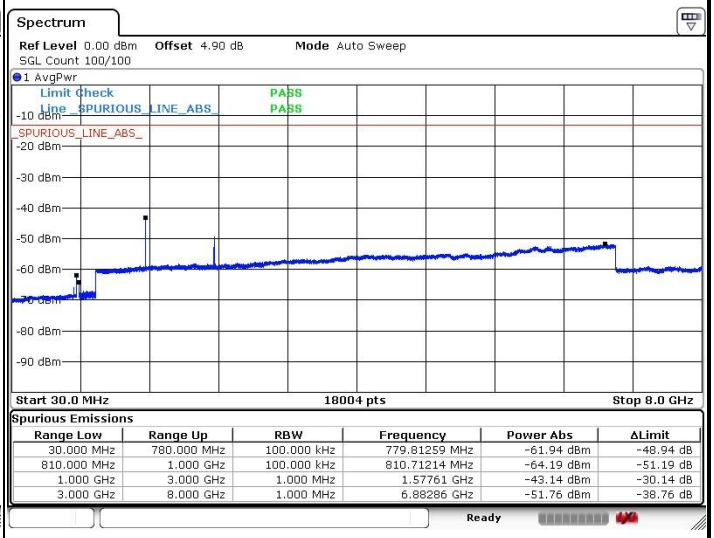



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 780.000 MHz | 100.000 kHz | 779.81259 MHz | -62.01 dBm | -49.01 dB |
| 810.000 MHz | 1.000 GHz | 100.000 kHz | 810.61719 MHz | -63.37 dBm | -50.37 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.57761 GHz | -42.31 dBm | -29.31 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.87286 GHz | -51.89 dBm | -38.89 dB |

Date: 30.OCT.2019 22:03:09

### Middle Channel / 16QAM



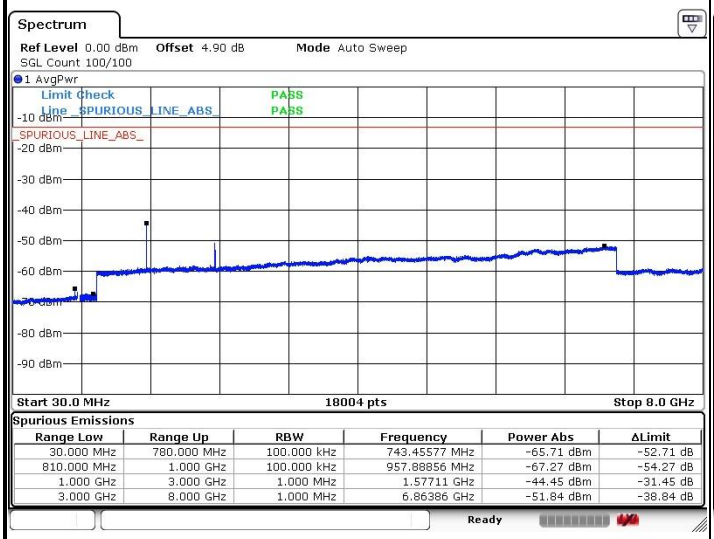

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 780.000 MHz | 100.000 kHz | 779.81259 MHz | -61.94 dBm | -48.94 dB |
| 810.000 MHz | 1.000 GHz | 100.000 kHz | 810.71214 MHz | -64.19 dBm | -51.19 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.57761 GHz | -43.14 dBm | -30.14 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.88286 GHz | -51.76 dBm | -38.76 dB |

Date: 30.OCT.2019 22:03:36

## LTE Band 14 / 5MHz

### Lowest Channel / 64QAM

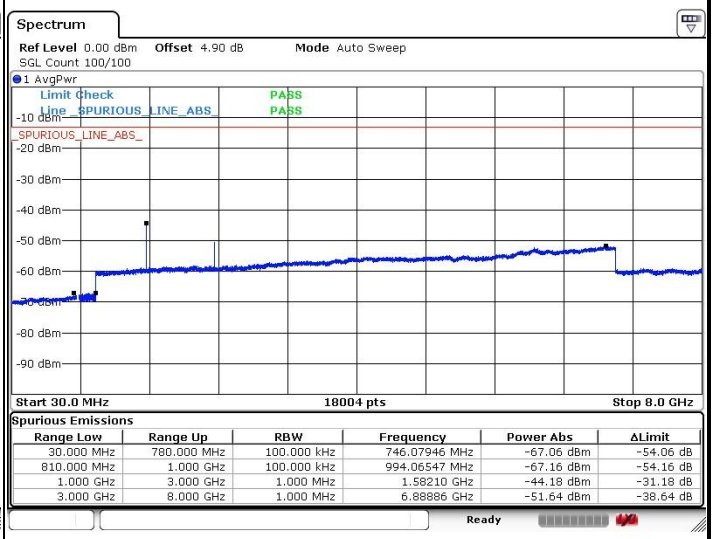



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 780.000 MHz | 100.000 kHz | 743.45577 MHz | -65.71 dBm | -52.71 dB |
| 810.000 MHz | 1.000 GHz | 100.000 kHz | 957.88856 MHz | -67.27 dBm | -54.27 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.57711 GHz | -44.45 dBm | -31.45 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.86386 GHz | -51.84 dBm | -38.84 dB |

Date: 30.OCT.2019 22:00:29

### Middle Channel / 64QAM

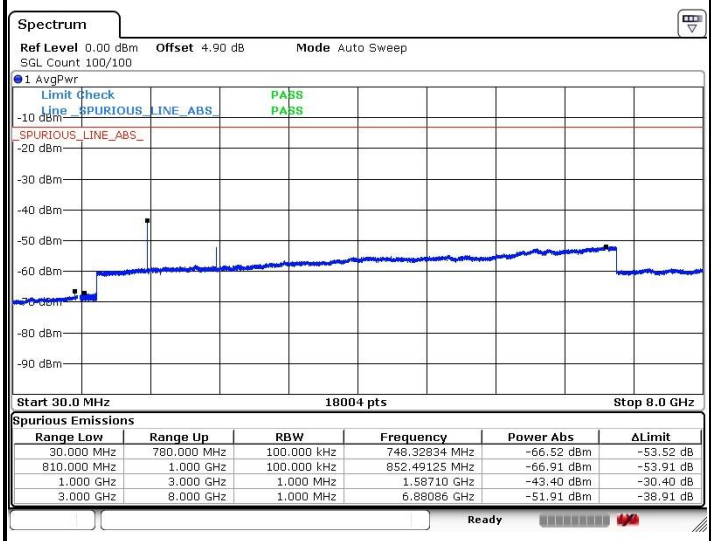



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 780.000 MHz | 100.000 kHz | 746.07946 MHz | -67.06 dBm | -54.06 dB |
| 810.000 MHz | 1.000 GHz | 100.000 kHz | 994.06547 MHz | -67.16 dBm | -54.16 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.58210 GHz | -44.18 dBm | -31.18 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.88886 GHz | -51.64 dBm | -38.64 dB |

Date: 30.OCT.2019 22:00:58

### Highest Channel / 64QAM

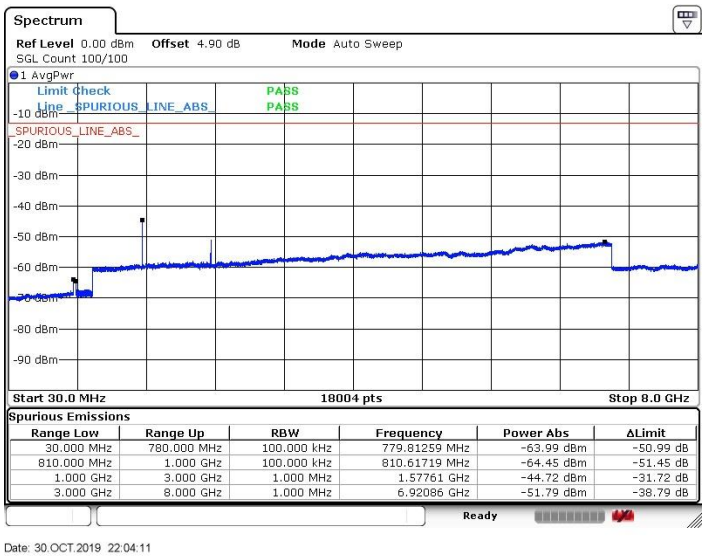



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 780.000 MHz | 100.000 kHz | 748.32834 MHz | -66.52 dBm | -53.52 dB |
| 810.000 MHz | 1.000 GHz | 100.000 kHz | 852.49125 MHz | -66.91 dBm | -53.91 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.58710 GHz | -43.40 dBm | -30.40 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.88086 GHz | -51.91 dBm | -38.91 dB |

Date: 30.OCT.2019 21:58:07

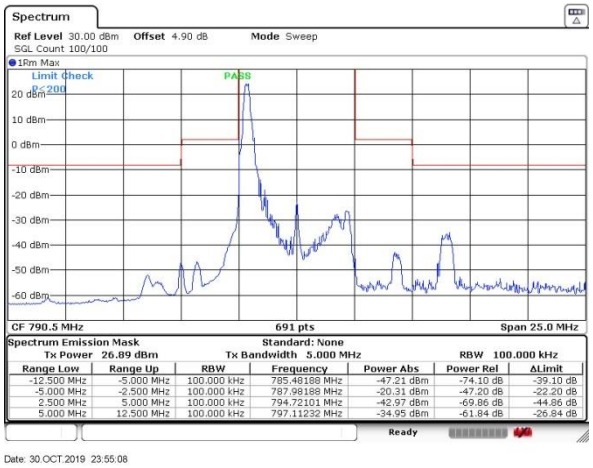
| LTE Band 14 / 10MHz |
|---|
| Middle Channel / 64QAM |



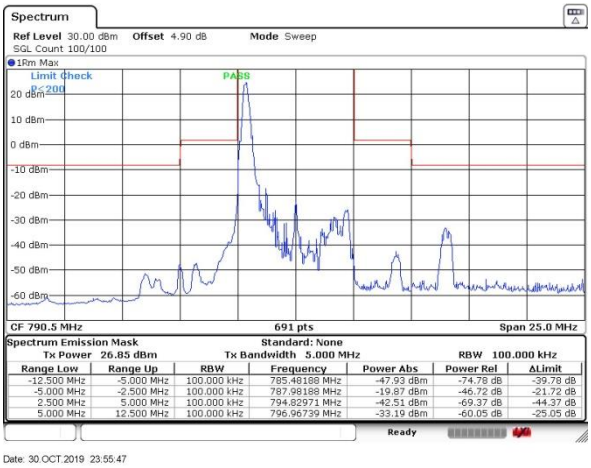
# Emission Mask

## LTE Band 14/ 5M(1RB0)

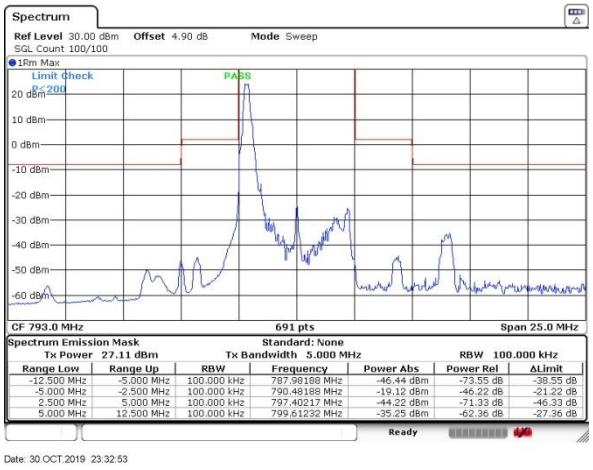
### Lowest Channel / 5MHz / QPSK



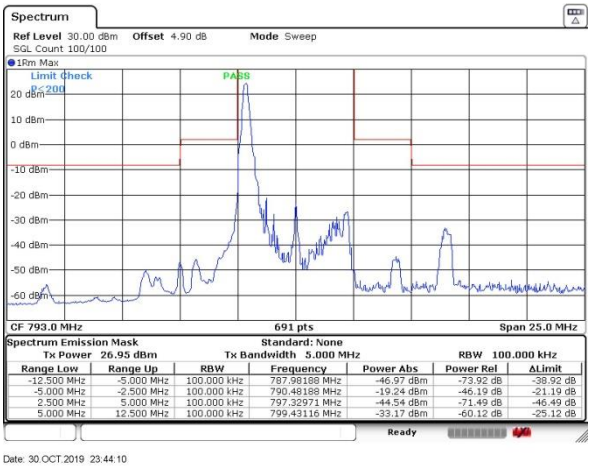

### Lowest Channel / 5MHz / 16QAM



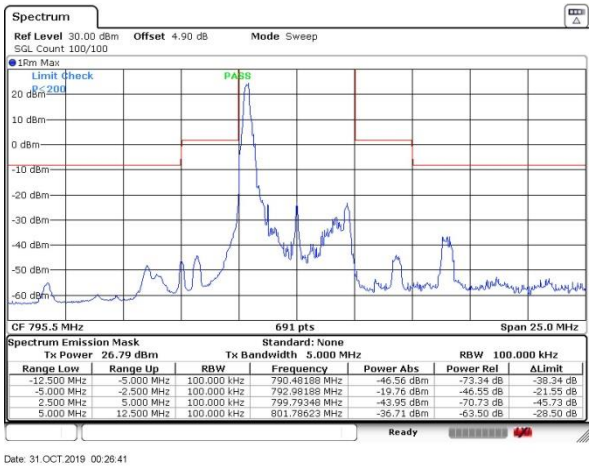

### Middle Channel / 5MHz / QPSK



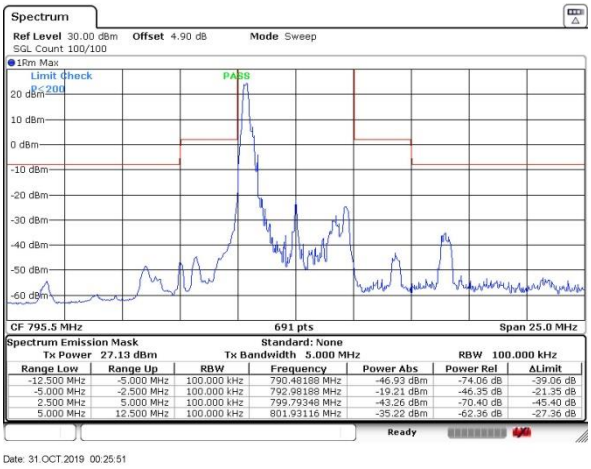

### Middle Channel / 5MHz / 16QAM




### Highest Channel / 5MHz / QPSK

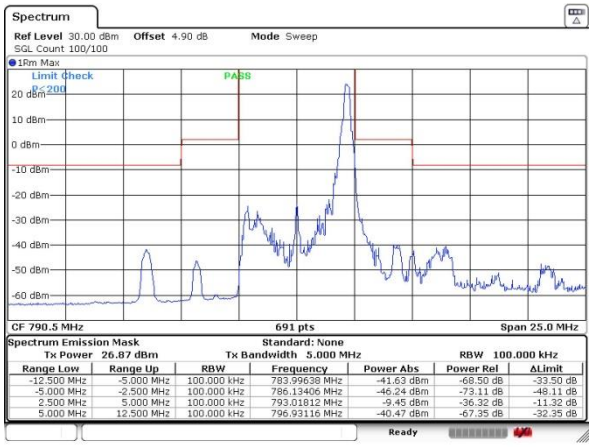



### Highest Channel / 5MHz / 16QAM

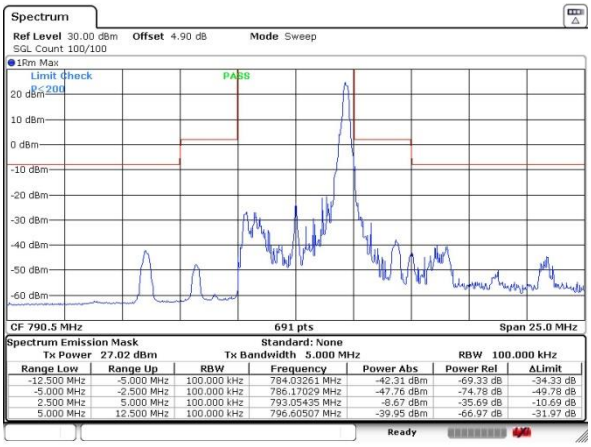


## LTE Band 14/ 5M(1RBmax)

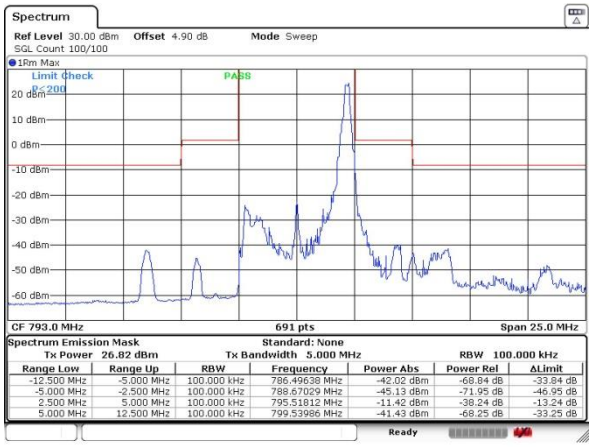
### Lowest Channel / 5MHz / QPSK



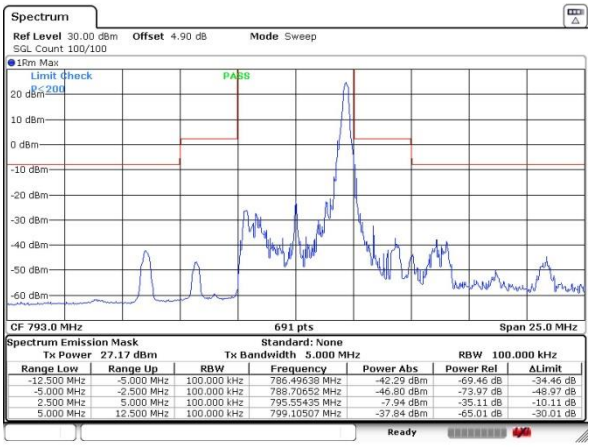

### Lowest Channel / 5MHz / 16QAM



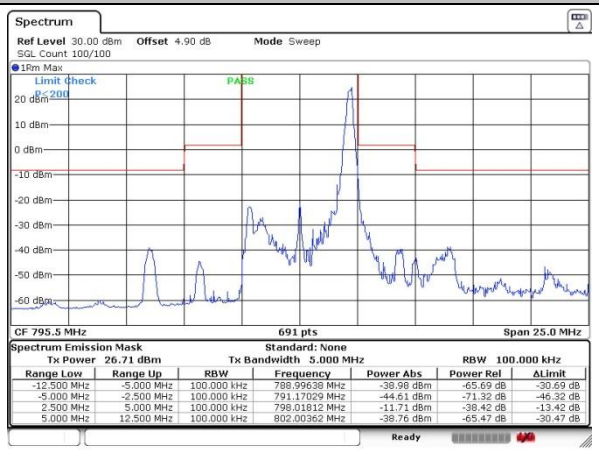

### Middle Channel / 5MHz / QPSK



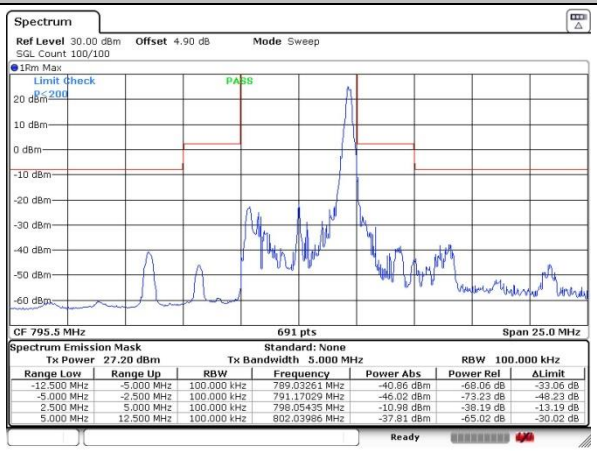

### Middle Channel / 5MHz / 16QAM




### Highest Channel / 5MHz / QPSK

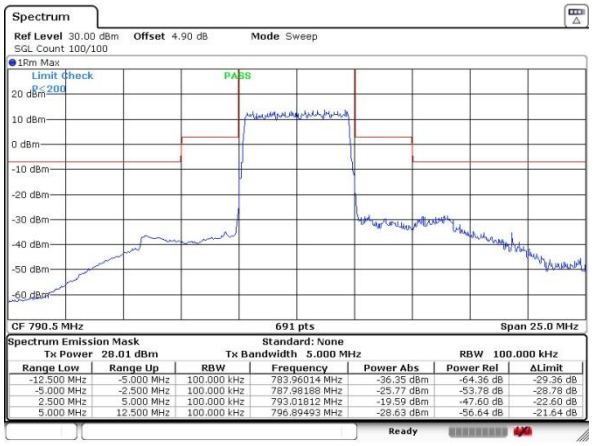



### Highest Channel / 5MHz / 16QAM

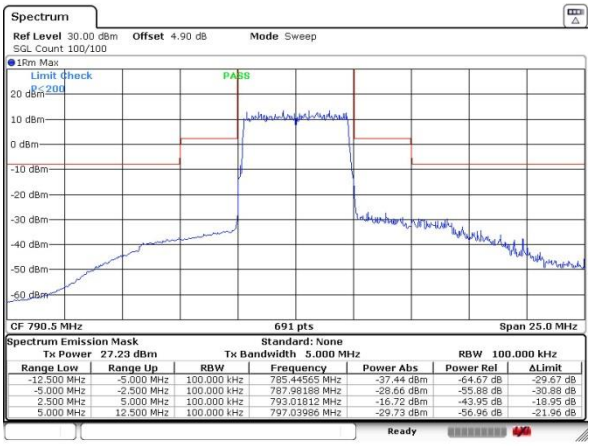


## LTE Band 14/ 5M(fullRB0)

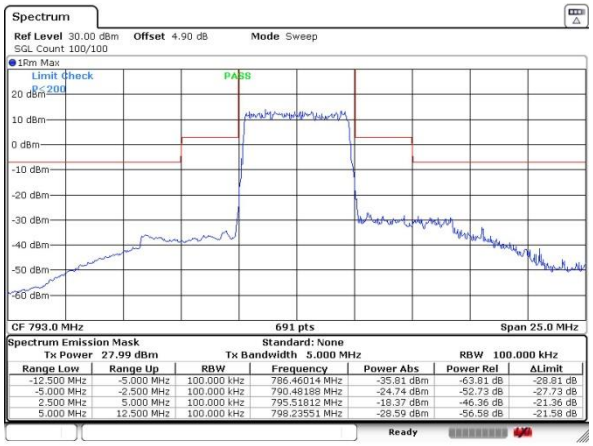
### Lowest Channel / 5MHz / QPSK



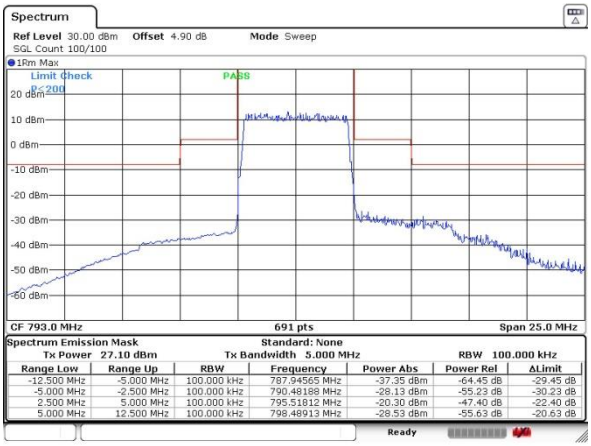

### Lowest Channel / 5MHz / 16QAM



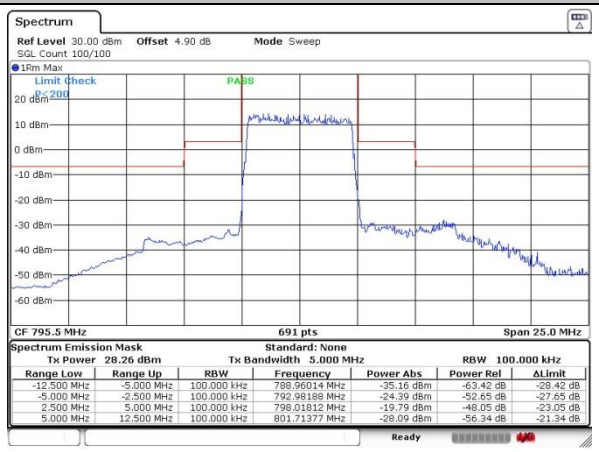

### Middle Channel / 5MHz / QPSK



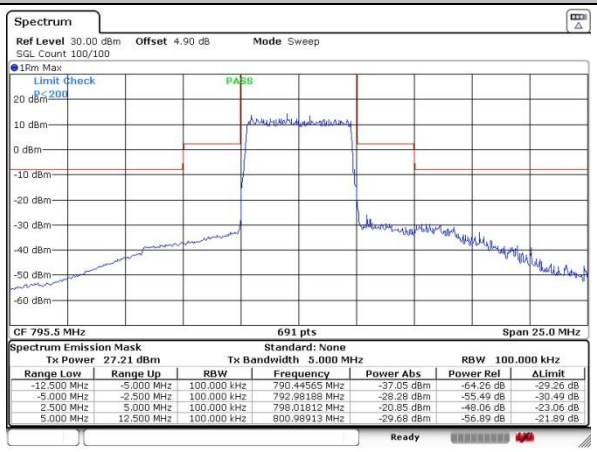

### Middle Channel / 5MHz / 16QAM




### Highest Channel / 5MHz / QPSK

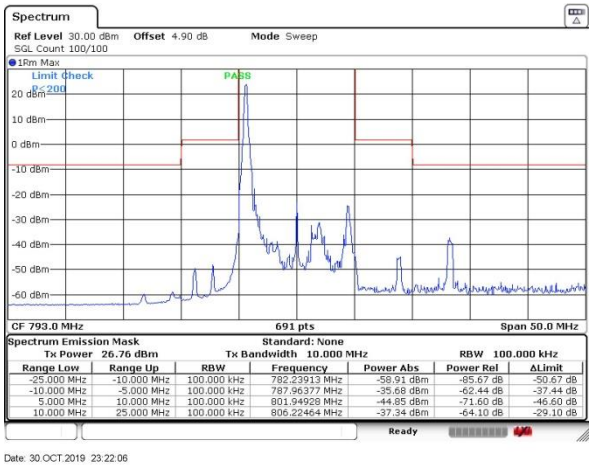



### Highest Channel / 5MHz / 16QAM

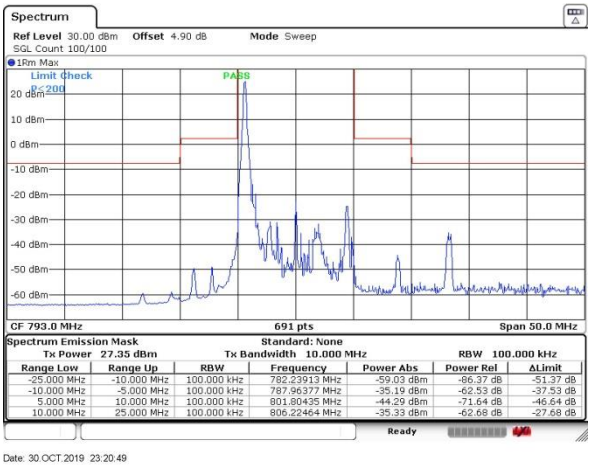


## LTE Band 14/ 10MHz

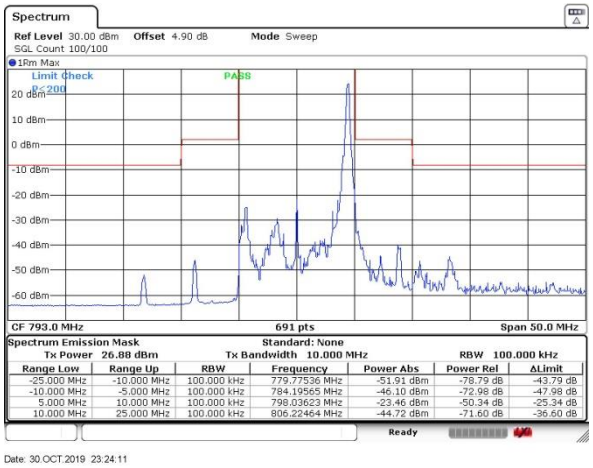
### Middle Channel / 1RB0 / QPSK



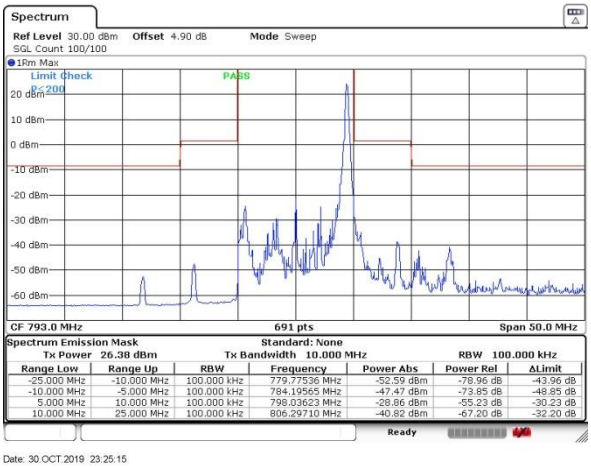

### Middle Channel / 1RB0 / 16QAM



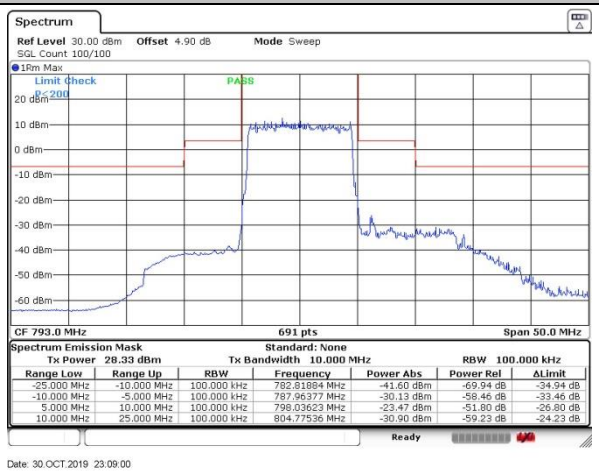

### Middle Channel / 1RBmax / QPSK



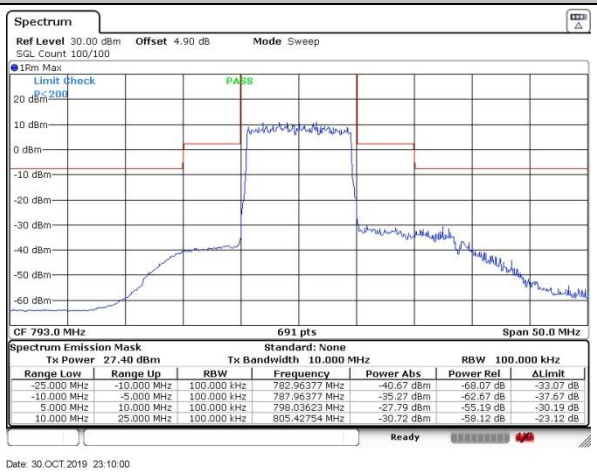

### Middle Channel / 1RBmax / 16QAM




### Middle Channel / fullRB0 / QPSK

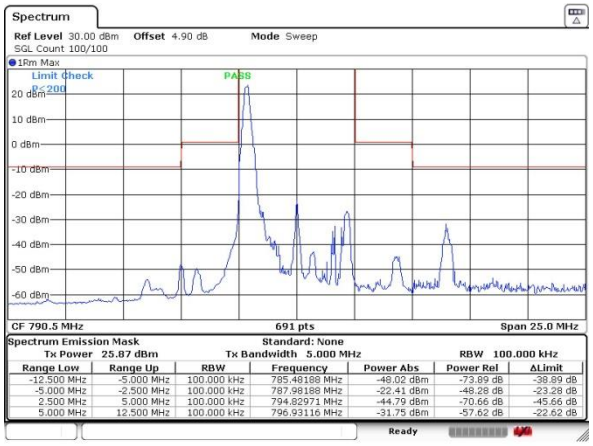



### Middle Channel / fullRB0 / 16QAM

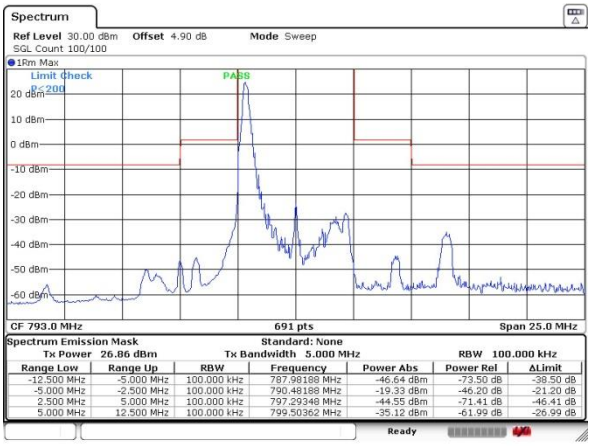


## LTE Band 14/ 5MHz

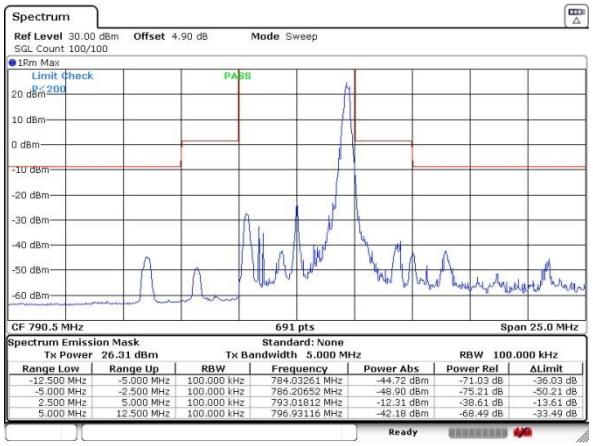
### Lowest Channel / 1RB0 / 64QAM



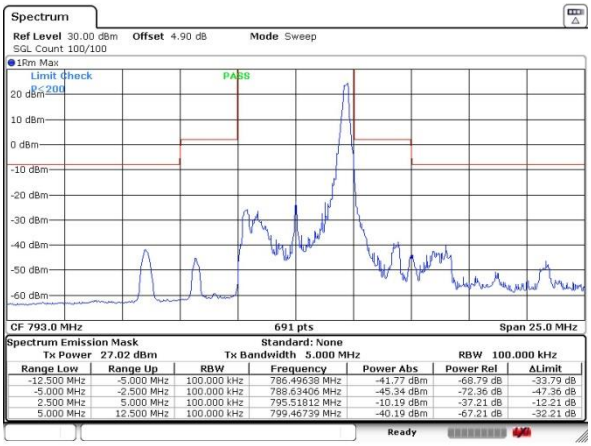

### Middle Channel / 1RB0 / 64QAM



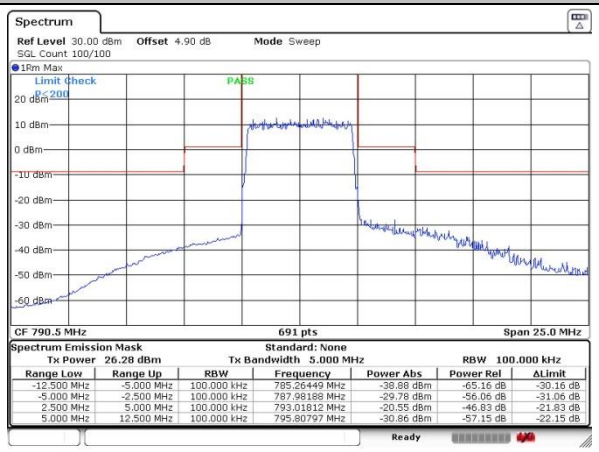

### Lowest Channel / 1RBmax / 64QAM



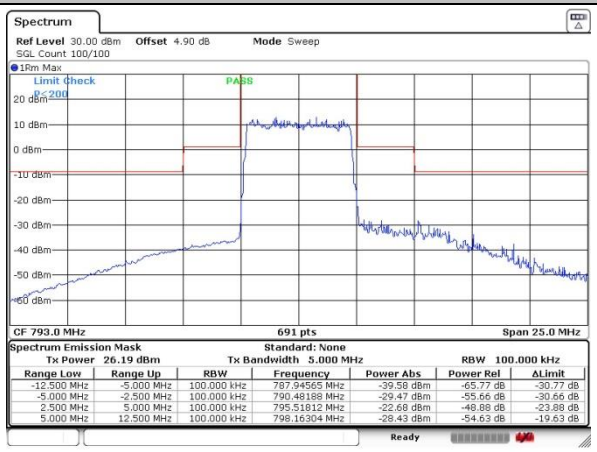

### Middle Channel / 1RBmax / 64QAM




### Lowest Channel / fullRB0 / 64QAM

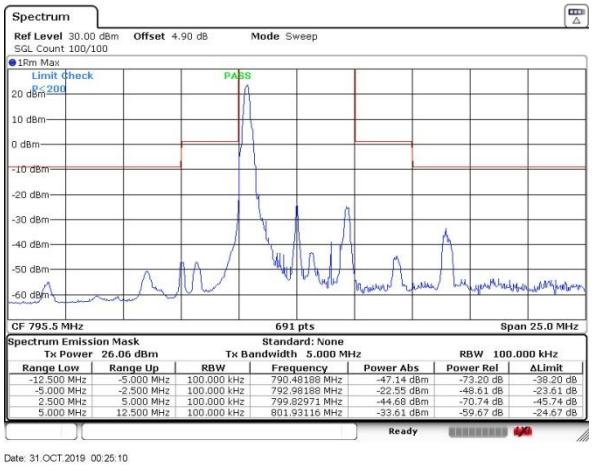



### Middle Channel / fullRB0 / 64QAM

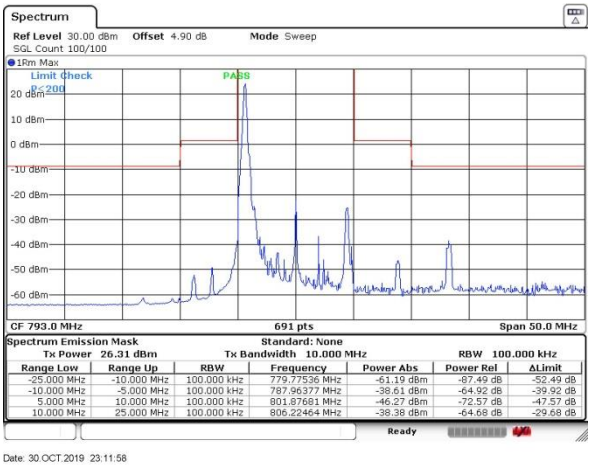


## LTE Band 14/ 5MHz

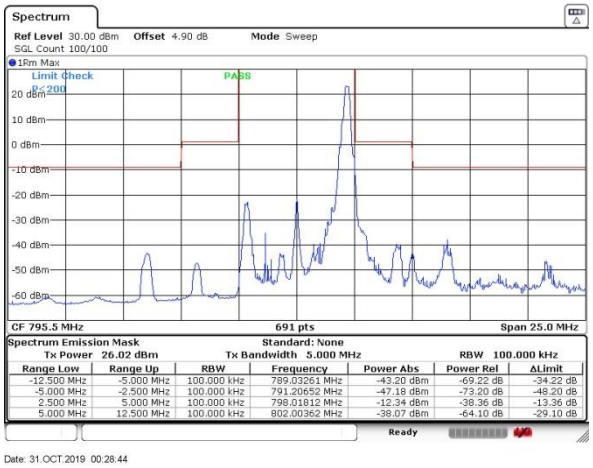
### Highest Channel / 1RB0 / 64QAM



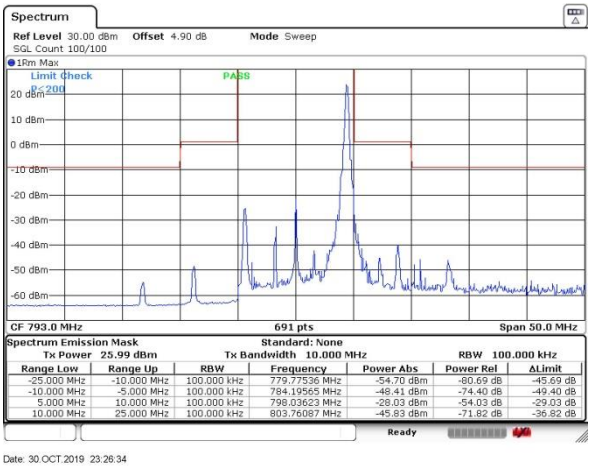

### Middle Channel / 1RB0 / 64QAM



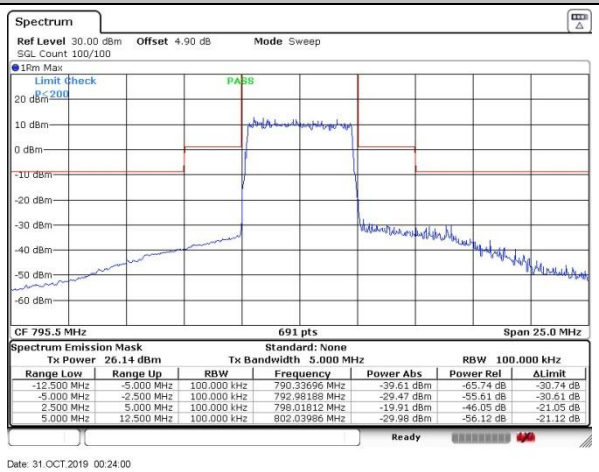

### Highest Channel / 1RBmax / 64QAM



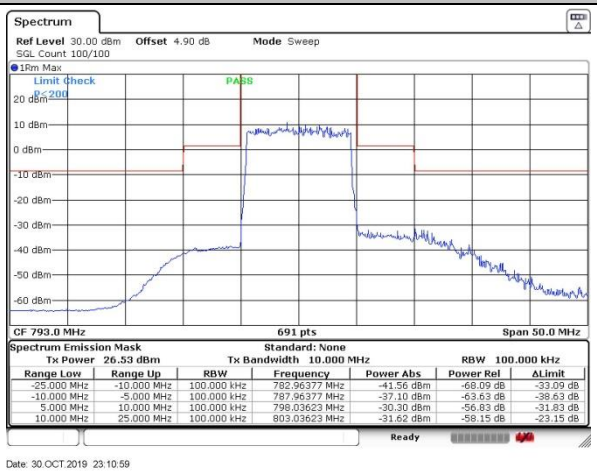

### Middle Channel / 1RBmax / 64QAM




### Highest Channel / fullRB0 / 64QAM




### Middle Channel / fullRB0 / 64QAM



# Frequency Stability

| Test Conditions | | LTE Band 14 (QPSK) / Middle Channel | Limit |
|---|---|---|---|
| Temperature (°C) | Voltage (Volt) | BW 10MHz | Note 2. |
| | | Deviation (ppm) | Result |
| 50 | Normal Voltage | 0.0033 | PASS |
| 40 | Normal Voltage | 0.0026 | |
| 30 | Normal Voltage | 0.0015 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0026 | |
| 0 | Normal Voltage | 0.0040 | |
| -10 | Normal Voltage | 0.0010 | |
| -20 | Normal Voltage | 0.0024 | |
| -30 | Normal Voltage | 0.0003 | |
| 20 | Maximum Voltage | 0.0037 | |
| 20 | Normal Voltage | 0.0025 | |
| 20 | Battery End Point | 0.0016 | |

**Note:**

1. Normal Voltage =3.8V.；Battery End Point (BEP) =3.6V.；Maximum Voltage =4.4V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

# Appendix B. Test Results of Radiated Test

## Field Strength of Spurious Radiated

| LTE Band 14 / QPSK / RB Size 1 Offset 0 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Bandwidth | Frequency ( MHz ) | ERP ( dBm ) | Limit ( dBm ) | Over Limit ( dB ) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| 5MHz (Lowest) | 1576 | -68.25 | -42.15 | -26.10 | -70.88 | 1.09 | 5.87 | H |
| | 2366 | -65.37 | -13 | -52.37 | -67.77 | 1.37 | 5.92 | H |
| | 3156 | -63.33 | -13 | -50.33 | -67.22 | 1.64 | 7.68 | H |
| | 1576 | -68.31 | -42.15 | -26.16 | -70.94 | 1.09 | 5.87 | V |
| | 2366 | -65.12 | -13 | -52.12 | -67.52 | 1.37 | 5.92 | V |
| | 3156 | -63.49 | -13 | -50.49 | -67.38 | 1.64 | 7.68 | V |
| 5MHz (Middle) | 1582 | -67.59 | -42.15 | -25.44 | -70.22 | 1.09 | 5.87 | H |
| | 2372 | -64.73 | -13 | -51.73 | -67.13 | 1.37 | 5.92 | H |
| | 3162 | -63.49 | -13 | -50.49 | -67.38 | 1.64 | 7.68 | H |
| | 1582 | -67.71 | -42.15 | -25.56 | -70.34 | 1.09 | 5.87 | V |
| | 2372 | -64.61 | -13 | -51.61 | -67.01 | 1.37 | 5.92 | V |
| | 3162 | -63.31 | -13 | -50.31 | -67.20 | 1.64 | 7.68 | V |
| 5MHz (Highest) | 1586 | -68.31 | -42.15 | -26.16 | -70.94 | 1.09 | 5.87 | H |
| | 2380 | -64.39 | -13 | -51.39 | -66.79 | 1.37 | 5.92 | H |
| | 3174 | -63.22 | -13 | -50.22 | -67.11 | 1.64 | 7.68 | H |
| | 1586.68 | -67.10 | -42.15 | -24.95 | -69.73 | 1.09 | 5.87 | V |
| | 2380 | -55.32 | -13 | -42.32 | -57.72 | 1.37 | 5.92 | V |
| | 3174 | -63.01 | -13 | -50.01 | -66.90 | 1.64 | 7.68 | V |
| 10MHz | 1578 | -67.82 | -42.15 | -25.67 | -70.45 | 1.09 | 5.87 | H |
| | 2366 | -58.90 | -13 | -45.90 | -61.30 | 1.37 | 5.92 | H |
| | 3156 | -63.27 | -13 | -50.27 | -67.16 | 1.64 | 7.68 | H |
| | 1578 | -67.38 | -42.15 | -25.23 | -70.01 | 1.09 | 5.87 | V |
| | 2366 | -57.49 | -13 | -44.49 | -59.89 | 1.37 | 5.92 | V |
| | 3156 | -62.86 | -13 | -49.86 | -66.75 | 1.64 | 7.68 | V |
| | Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line. | | | | | | | |
| Test Result | PASS | | | | | | | |