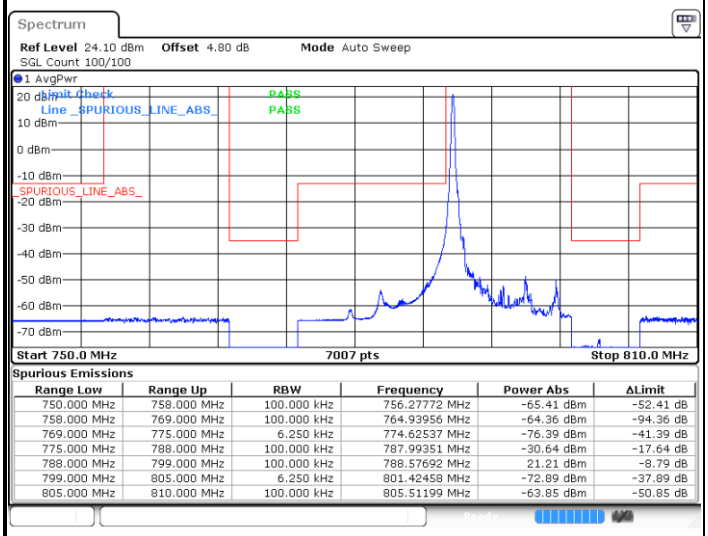
## LTE Band 14 / 10MHz /16QAM

### Lowest Band Edge / 1RB0

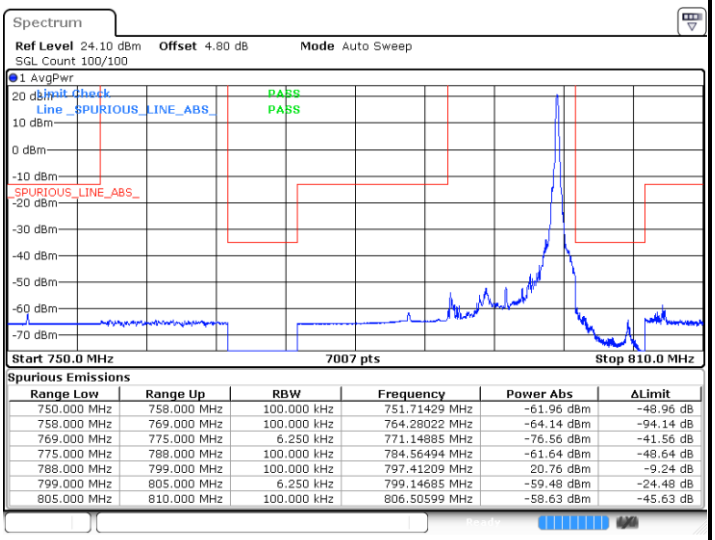



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 750.000 MHz | 758.000 MHz | 100.000 kHz | 756.27772 MHz | -65.41 dBm | -52.41 dB |
| 758.000 MHz | 769.000 MHz | 100.000 kHz | 764.93956 MHz | -64.36 dBm | -94.36 dB |
| 769.000 MHz | 775.000 MHz | 6.250 kHz | 774.62537 MHz | -76.39 dBm | -41.39 dB |
| 775.000 MHz | 788.000 MHz | 100.000 kHz | 787.99351 MHz | -30.64 dBm | -17.64 dB |
| 788.000 MHz | 799.000 MHz | 100.000 kHz | 788.57692 MHz | 21.21 dBm | -8.79 dB |
| 799.000 MHz | 805.000 MHz | 6.250 kHz | 801.42458 MHz | -72.89 dBm | -37.89 dB |
| 805.000 MHz | 810.000 MHz | 100.000 kHz | 805.51199 MHz | -63.85 dBm | -50.85 dB |

Date: 7.SEP.2020 21:19:07

### Highest Band Edge / 1RB Max

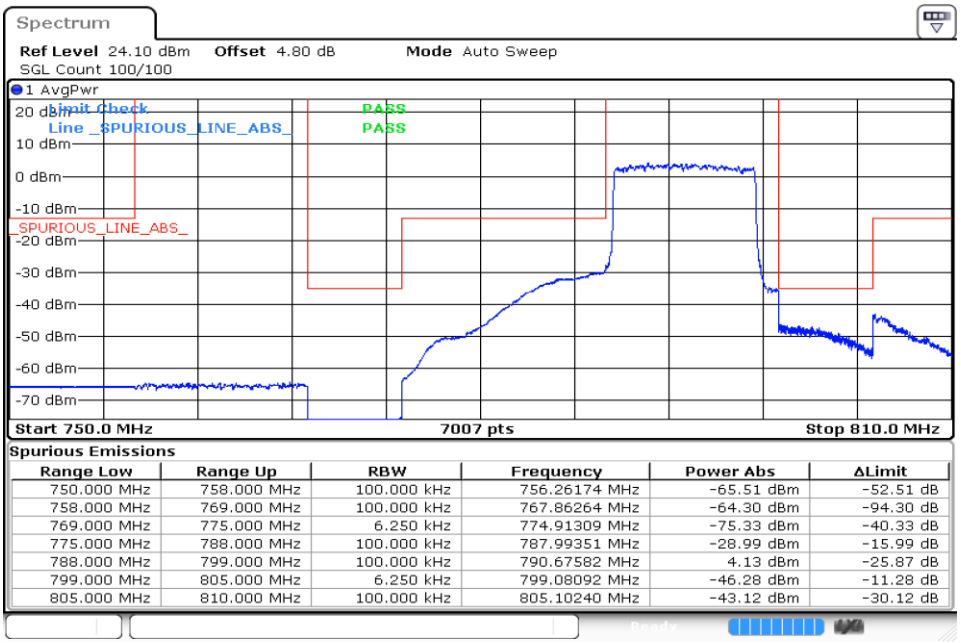



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 750.000 MHz | 758.000 MHz | 100.000 kHz | 751.71429 MHz | -61.96 dBm | -48.96 dB |
| 758.000 MHz | 769.000 MHz | 100.000 kHz | 764.28022 MHz | -64.14 dBm | -94.14 dB |
| 769.000 MHz | 775.000 MHz | 6.250 kHz | 771.14885 MHz | -76.56 dBm | -41.56 dB |
| 775.000 MHz | 788.000 MHz | 100.000 kHz | 784.56494 MHz | -61.64 dBm | -48.64 dB |
| 788.000 MHz | 799.000 MHz | 100.000 kHz | 797.41209 MHz | 20.76 dBm | -9.24 dB |
| 799.000 MHz | 805.000 MHz | 6.250 kHz | 799.14685 MHz | -59.48 dBm | -24.48 dB |
| 805.000 MHz | 810.000 MHz | 100.000 kHz | 806.50599 MHz | -58.63 dBm | -45.63 dB |

Date: 7.SEP.2020 21:23:22

### Full RB



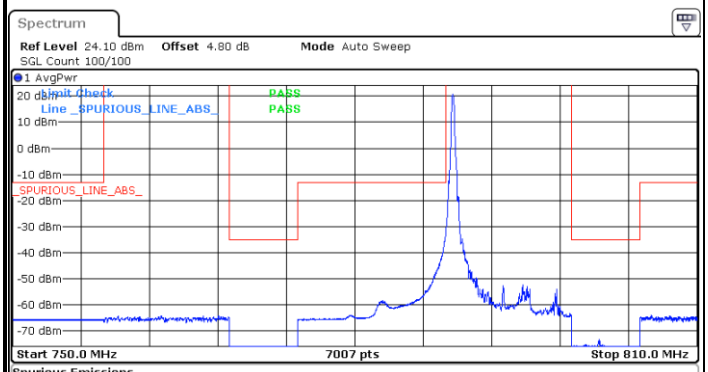

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 750.000 MHz | 758.000 MHz | 100.000 kHz | 756.26174 MHz | -65.51 dBm | -52.51 dB |
| 758.000 MHz | 769.000 MHz | 100.000 kHz | 767.86264 MHz | -64.30 dBm | -94.30 dB |
| 769.000 MHz | 775.000 MHz | 6.250 kHz | 774.91309 MHz | -75.33 dBm | -40.33 dB |
| 775.000 MHz | 788.000 MHz | 100.000 kHz | 787.99351 MHz | -28.99 dBm | -15.99 dB |
| 788.000 MHz | 799.000 MHz | 100.000 kHz | 790.67582 MHz | 4.13 dBm | -25.87 dB |
| 799.000 MHz | 805.000 MHz | 6.250 kHz | 799.08092 MHz | -46.28 dBm | -11.28 dB |
| 805.000 MHz | 810.000 MHz | 100.000 kHz | 805.10240 MHz | -43.12 dBm | -30.12 dB |

Date: 7.SEP.2020 21:15:26

## LTE Band 14 / 10MHz / 64QAM

### Lowest Band Edge / 1RB0

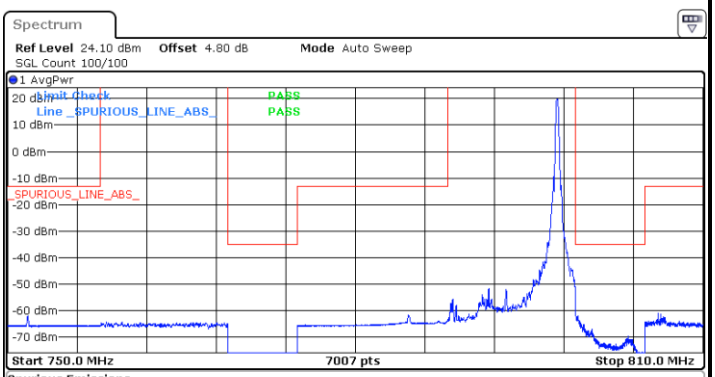



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 750.000 MHz | 758.000 MHz | 100.000 kHz | 756.75724 MHz | -65.44 dBm | -52.44 dB |
| 758.000 MHz | 769.000 MHz | 100.000 kHz | 768.02747 MHz | -64.11 dBm | -94.11 dB |
| 769.000 MHz | 775.000 MHz | 6.250 kHz | 771.47852 MHz | -76.48 dBm | -41.48 dB |
| 775.000 MHz | 788.000 MHz | 100.000 kHz | 787.99351 MHz | -31.95 dBm | -18.95 dB |
| 788.000 MHz | 799.000 MHz | 100.000 kHz | 788.55495 MHz | 20.79 dBm | -9.21 dB |
| 799.000 MHz | 805.000 MHz | 6.250 kHz | 801.44855 MHz | -73.32 dBm | -38.32 dB |
| 805.000 MHz | 810.000 MHz | 100.000 kHz | 805.94655 MHz | -63.88 dBm | -50.88 dB |

Date: 7.SEP.2020 21:17:59

### Highest Band Edge / 1RB Max

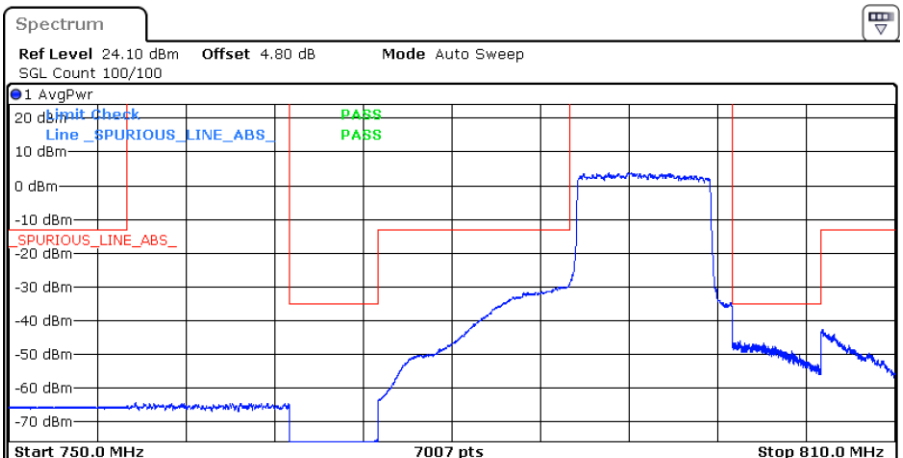



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 750.000 MHz | 758.000 MHz | 100.000 kHz | 751.72228 MHz | -62.10 dBm | -49.10 dB |
| 758.000 MHz | 769.000 MHz | 100.000 kHz | 759.85165 MHz | -64.26 dBm | -94.26 dB |
| 769.000 MHz | 775.000 MHz | 6.250 kHz | 770.45355 MHz | -76.29 dBm | -41.29 dB |
| 775.000 MHz | 788.000 MHz | 100.000 kHz | 784.56494 MHz | -61.72 dBm | -48.72 dB |
| 788.000 MHz | 799.000 MHz | 100.000 kHz | 797.36813 MHz | 19.79 dBm | -10.21 dB |
| 799.000 MHz | 805.000 MHz | 6.250 kHz | 799.00300 MHz | -60.41 dBm | -25.41 dB |
| 805.000 MHz | 810.000 MHz | 100.000 kHz | 806.10639 MHz | -61.08 dBm | -48.08 dB |

Date: 7.SEP.2020 21:41:53

### Full RB




Spurious Emissions

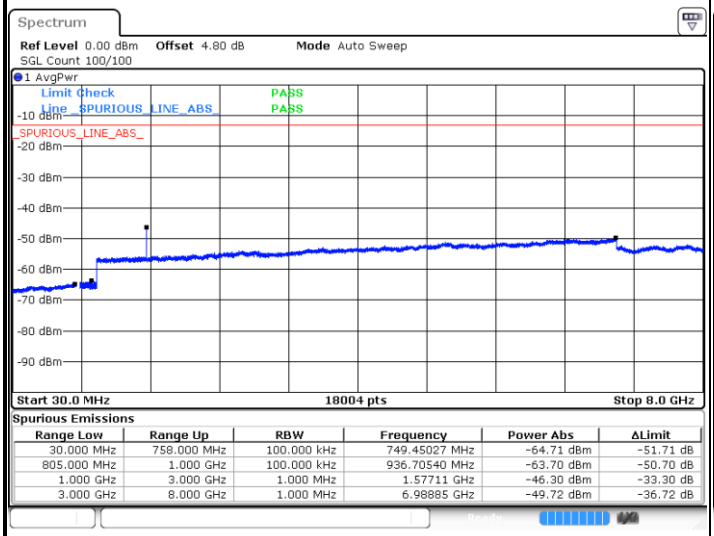
| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 750.000 MHz | 758.000 MHz | 100.000 kHz | 756.70130 MHz | -65.48 dBm | -52.48 dB |
| 758.000 MHz | 769.000 MHz | 100.000 kHz | 758.56593 MHz | -64.41 dBm | -94.41 dB |
| 769.000 MHz | 775.000 MHz | 6.250 kHz | 774.91309 MHz | -75.25 dBm | -40.25 dB |
| 775.000 MHz | 788.000 MHz | 100.000 kHz | 787.98052 MHz | -29.18 dBm | -16.18 dB |
| 788.000 MHz | 799.000 MHz | 100.000 kHz | 790.59890 MHz | 3.81 dBm | -26.19 dB |
| 799.000 MHz | 805.000 MHz | 6.250 kHz | 799.48851 MHz | -46.15 dBm | -11.15 dB |
| 805.000 MHz | 810.000 MHz | 100.000 kHz | 805.09740 MHz | -42.67 dBm | -29.67 dB |

Date: 7.SEP.2020 21:16:37

# Conducted Spurious Emission

## LTE Band 14 / 5MHz

### Lowest Channel / QPSK

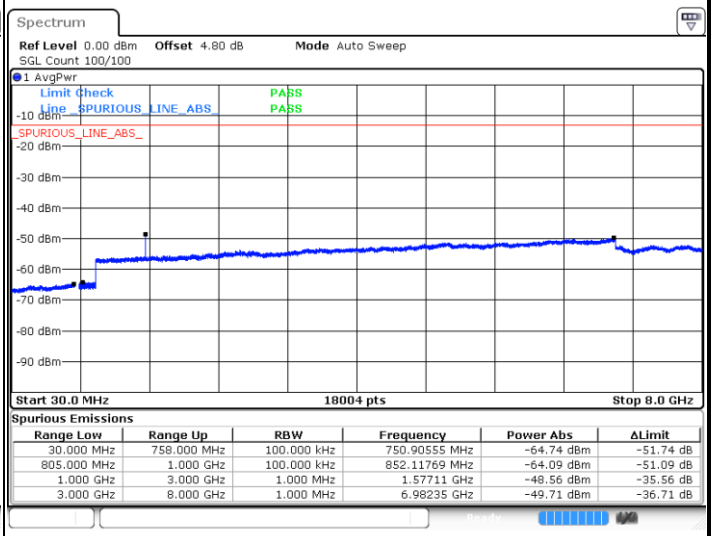



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 758.000 MHz | 100.000 kHz | 749.45027 MHz | -64.71 dBm | -51.71 dB |
| 805.000 MHz | 1.000 GHz | 100.000 kHz | 936.70540 MHz | -63.70 dBm | -50.70 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.57711 GHz | -46.30 dBm | -33.30 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.98885 GHz | -49.72 dBm | -36.72 dB |

Date: 2.SEP.2020 10:21:19

### Lowest Channel / 16QAM

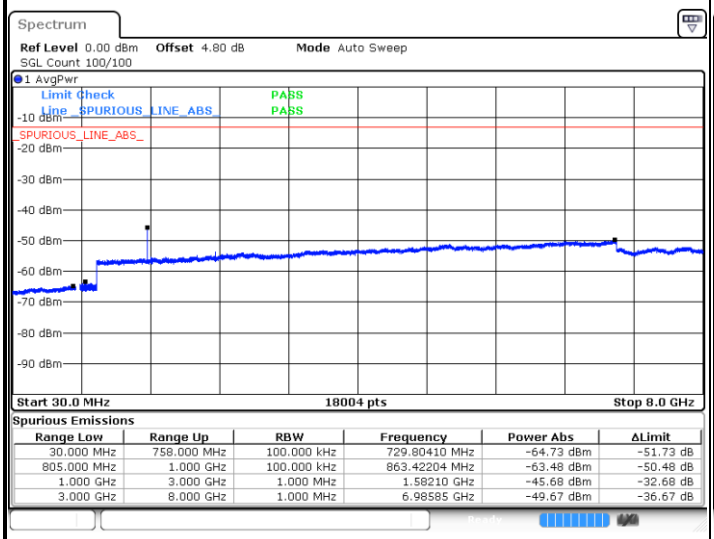



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 758.000 MHz | 100.000 kHz | 750.90555 MHz | -64.74 dBm | -51.74 dB |
| 805.000 MHz | 1.000 GHz | 100.000 kHz | 852.11769 MHz | -64.09 dBm | -51.09 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.57711 GHz | -48.56 dBm | -35.56 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.98235 GHz | -49.71 dBm | -36.71 dB |

Date: 2.SEP.2020 10:18:34

### Middle Channel / QPSK

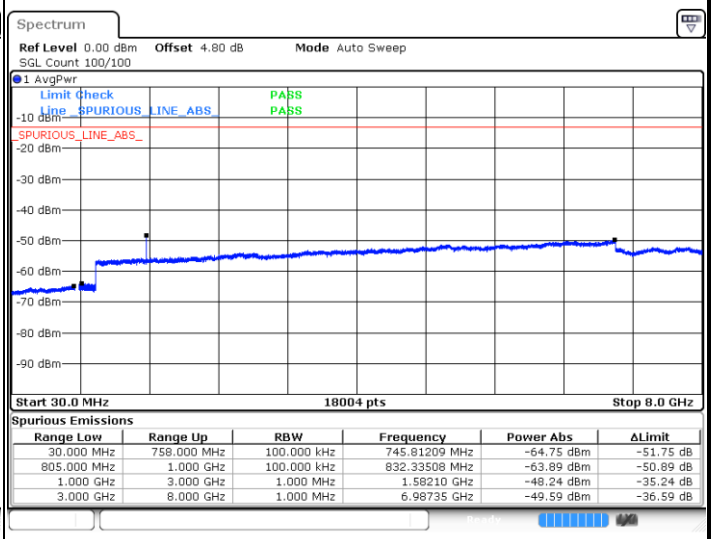



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 758.000 MHz | 100.000 kHz | 729.80410 MHz | -64.73 dBm | -51.73 dB |
| 805.000 MHz | 1.000 GHz | 100.000 kHz | 863.42204 MHz | -63.48 dBm | -50.48 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.58210 GHz | -45.68 dBm | -32.68 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.98585 GHz | -49.67 dBm | -36.67 dB |

Date: 2.SEP.2020 10:03:06

### Middle Channel / 16QAM



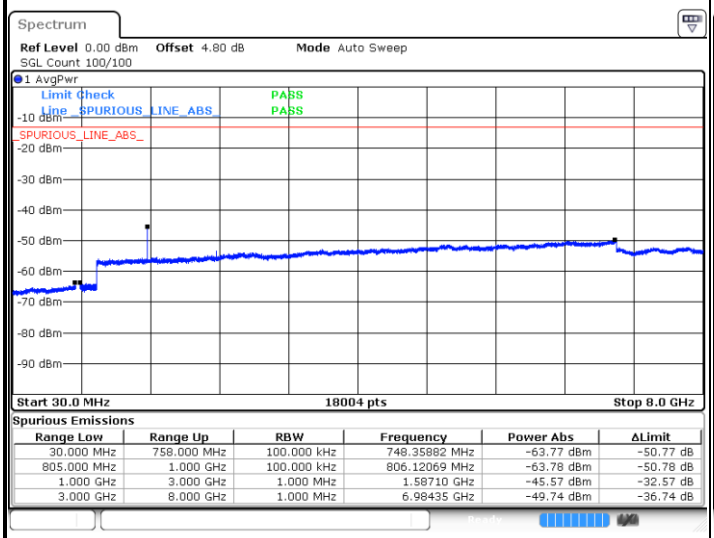

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 758.000 MHz | 100.000 kHz | 745.81209 MHz | -64.75 dBm | -51.75 dB |
| 805.000 MHz | 1.000 GHz | 100.000 kHz | 832.33508 MHz | -63.89 dBm | -50.89 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.58210 GHz | -48.24 dBm | -35.24 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.98735 GHz | -49.59 dBm | -36.59 dB |

Date: 2.SEP.2020 10:01:47

## LTE Band 14 / 5MHz

### Highest Channel / QPSK

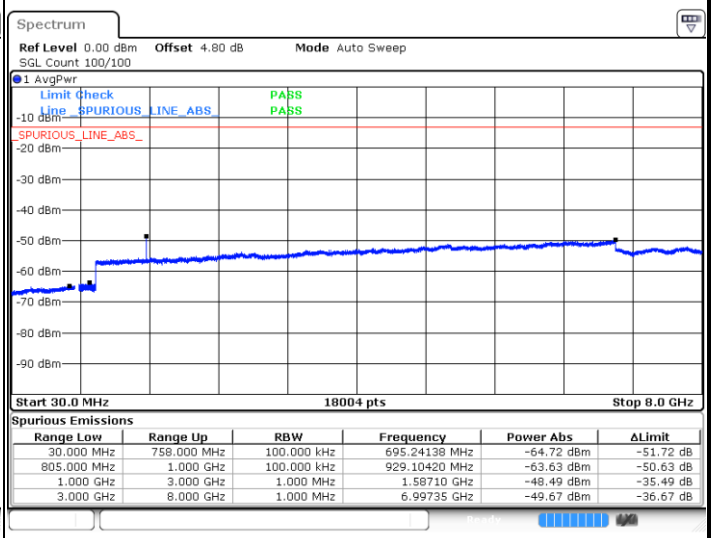



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 758.000 MHz | 100.000 kHz | 748.35882 MHz | -63.77 dBm | -50.77 dB |
| 805.000 MHz | 1.000 GHz | 100.000 kHz | 806.12069 MHz | -63.78 dBm | -50.78 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.58710 GHz | -45.57 dBm | -32.57 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.98435 GHz | -49.74 dBm | -36.74 dB |

Date: 2.SEP.2020 10:40:09

### Highest Channel / 16QAM



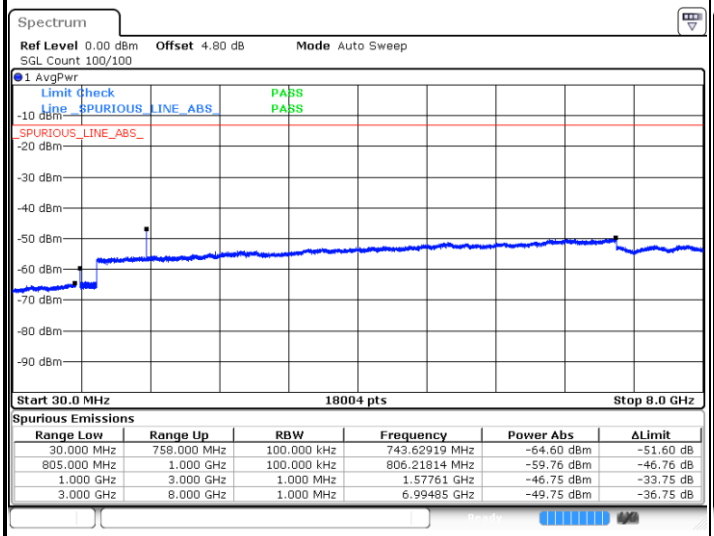

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 758.000 MHz | 100.000 kHz | 695.24138 MHz | -64.72 dBm | -51.72 dB |
| 805.000 MHz | 1.000 GHz | 100.000 kHz | 929.10420 MHz | -63.63 dBm | -50.63 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.58710 GHz | -48.49 dBm | -35.49 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.99735 GHz | -49.67 dBm | -36.67 dB |

Date: 2.SEP.2020 10:39:09

## LTE Band 14 / 10MHz

### Middle Channel / QPSK

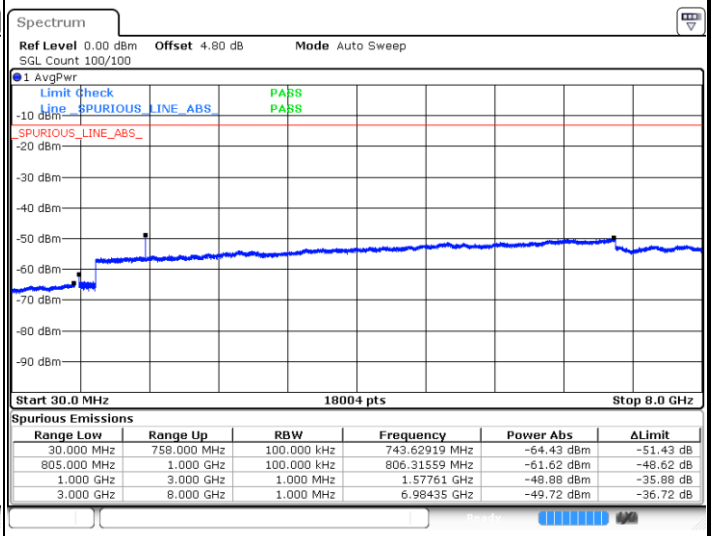



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 758.000 MHz | 100.000 kHz | 743.62919 MHz | -64.60 dBm | -51.60 dB |
| 805.000 MHz | 1.000 GHz | 100.000 kHz | 806.21814 MHz | -59.76 dBm | -46.76 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.57761 GHz | -46.75 dBm | -33.75 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.99485 GHz | -49.75 dBm | -36.75 dB |

Date: 2.SEP.2020 11:02:45

### Middle Channel / 16QAM



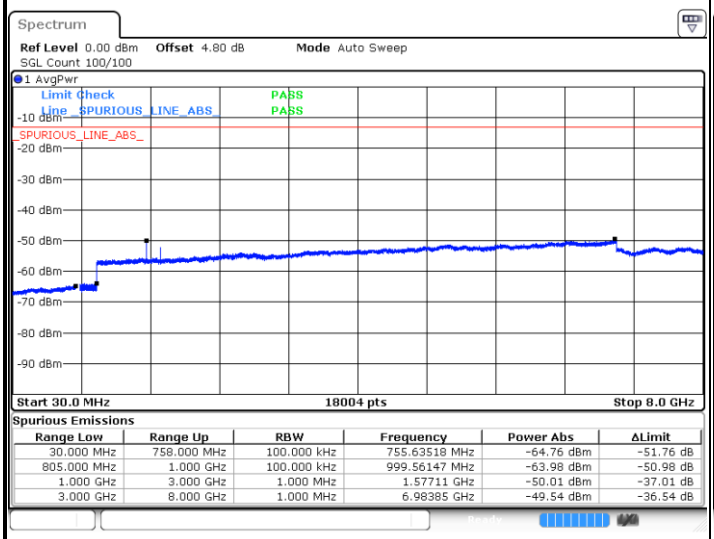

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 758.000 MHz | 100.000 kHz | 743.62919 MHz | -64.43 dBm | -51.43 dB |
| 805.000 MHz | 1.000 GHz | 100.000 kHz | 806.31559 MHz | -61.62 dBm | -48.62 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.57761 GHz | -48.88 dBm | -35.88 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.98435 GHz | -49.72 dBm | -36.72 dB |

Date: 2.SEP.2020 10:59:56

## LTE Band 14 / 5MHz

### Lowest Channel / 64QAM

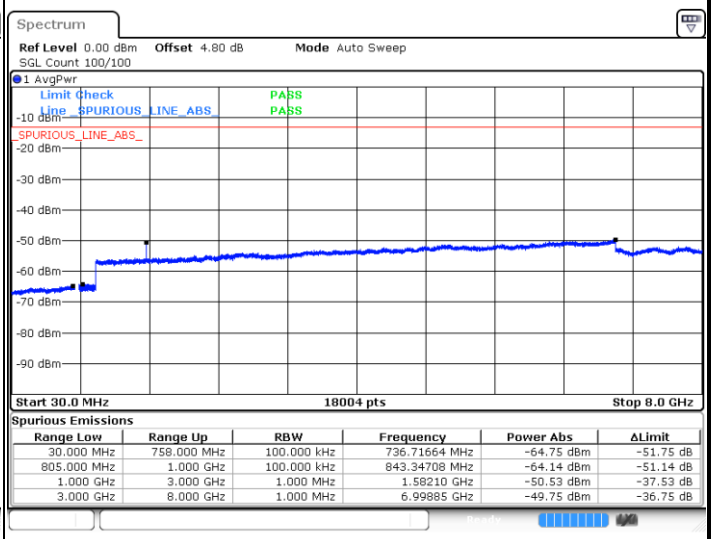



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 758.000 MHz | 100.000 kHz | 755.63518 MHz | -64.76 dBm | -51.76 dB |
| 805.000 MHz | 1.000 GHz | 100.000 kHz | 999.56147 MHz | -63.98 dBm | -50.98 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.57711 GHz | -50.01 dBm | -37.01 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.98385 GHz | -49.54 dBm | -36.54 dB |

Date: 2.SEP.2020 10:13:16

### Middle Channel / 64QAM

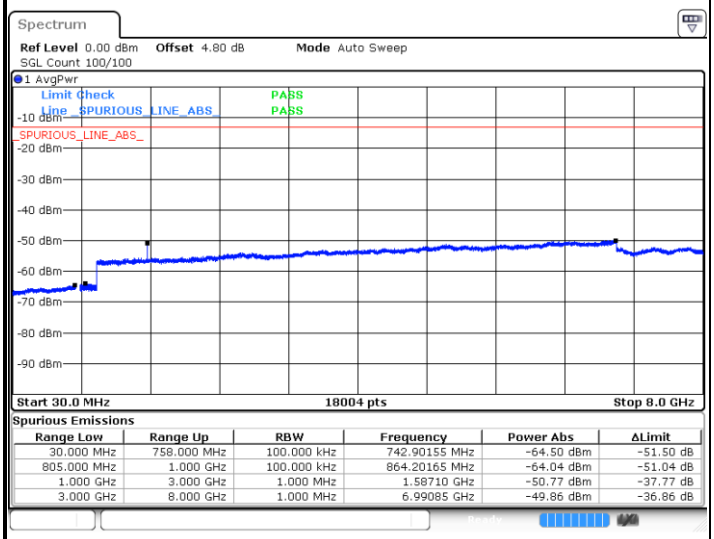



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 758.000 MHz | 100.000 kHz | 736.71664 MHz | -64.75 dBm | -51.75 dB |
| 805.000 MHz | 1.000 GHz | 100.000 kHz | 843.34708 MHz | -64.14 dBm | -51.14 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.58210 GHz | -50.53 dBm | -37.53 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.99885 GHz | -49.75 dBm | -36.75 dB |

Date: 2.SEP.2020 10:00:41

### Highest Channel / 64QAM

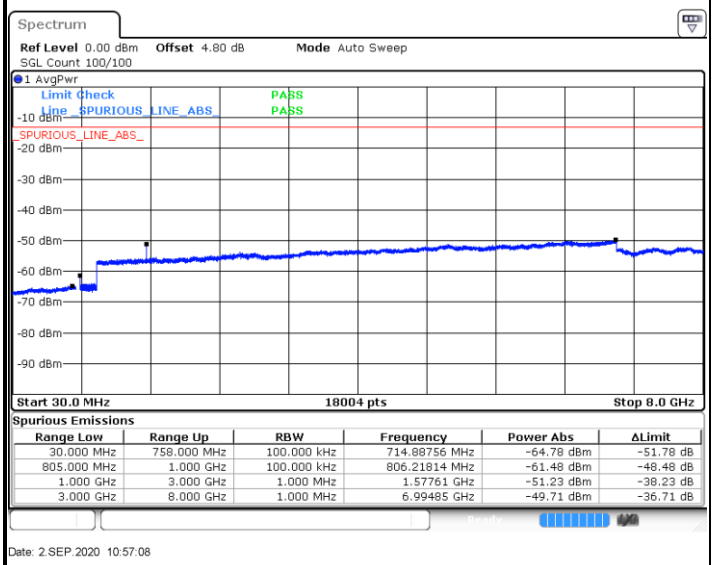



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 758.000 MHz | 100.000 kHz | 742.90155 MHz | -64.50 dBm | -51.50 dB |
| 805.000 MHz | 1.000 GHz | 100.000 kHz | 864.20165 MHz | -64.04 dBm | -51.04 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.58710 GHz | -50.77 dBm | -37.77 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.99085 GHz | -49.86 dBm | -36.86 dB |

Date: 2.SEP.2020 10:38:09

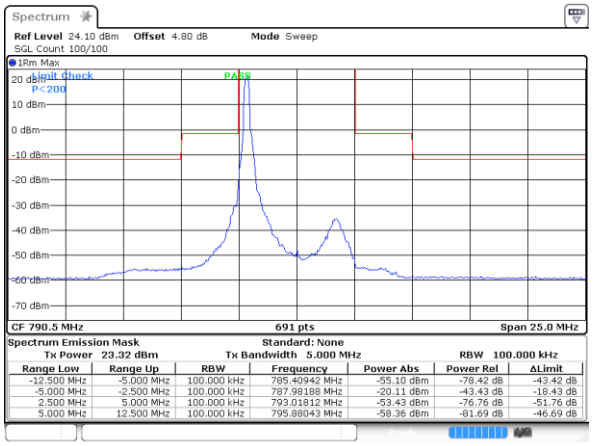
| LTE Band 14 / 10MHz | |
|---|---|
| **Middle Channel / 64QAM** | |

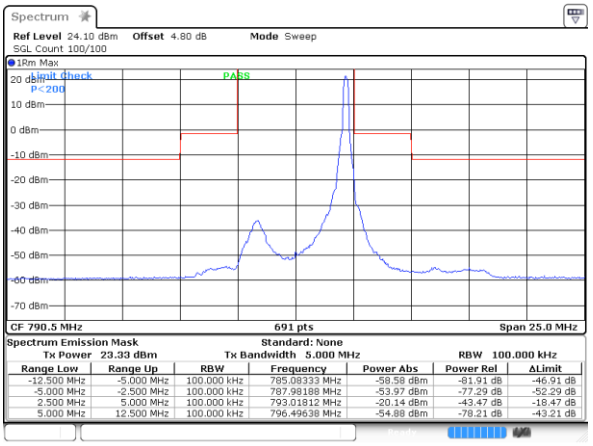


# Mask

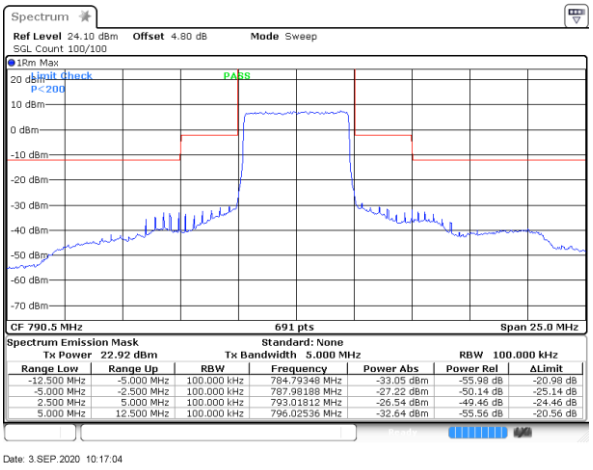
## LTE Band 14 / 5MHz / QPSK

### Lowest Channel / 1RB



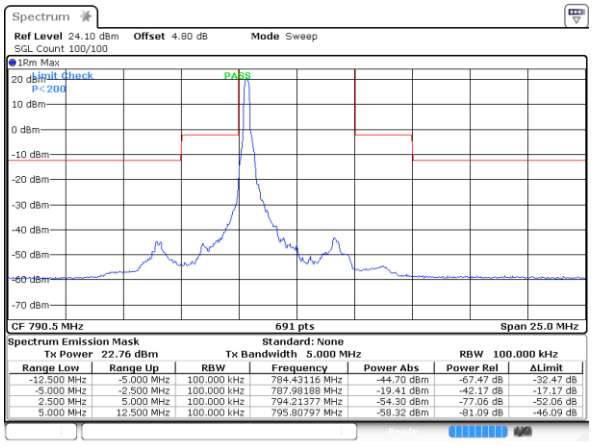



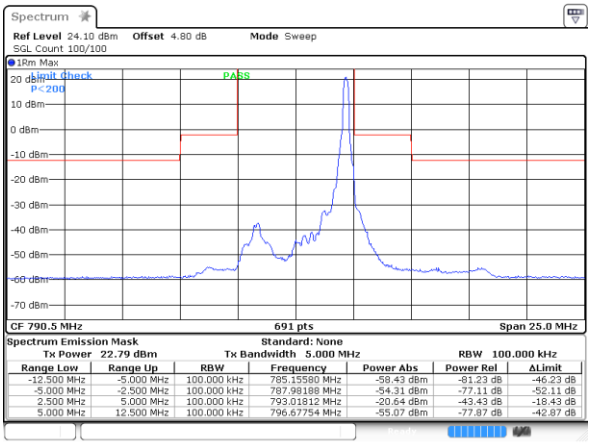

### Lowest Channel / Full RB



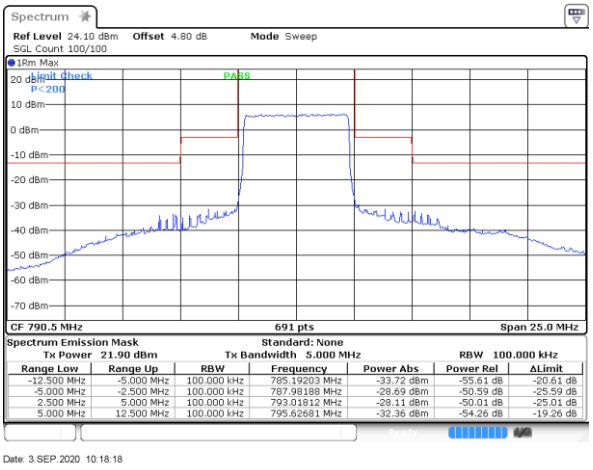
## LTE Band 14 / 5MHz / 16QAM

### Lowest Channel / 1RB



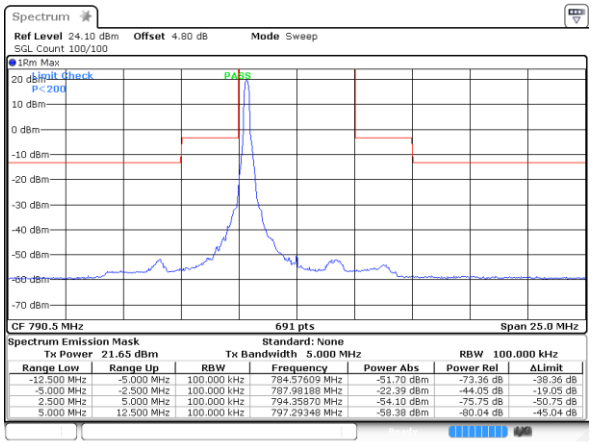



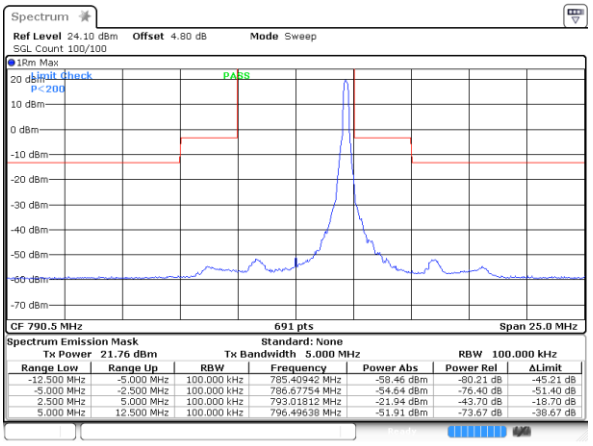

### Lowest Channel / Full RB



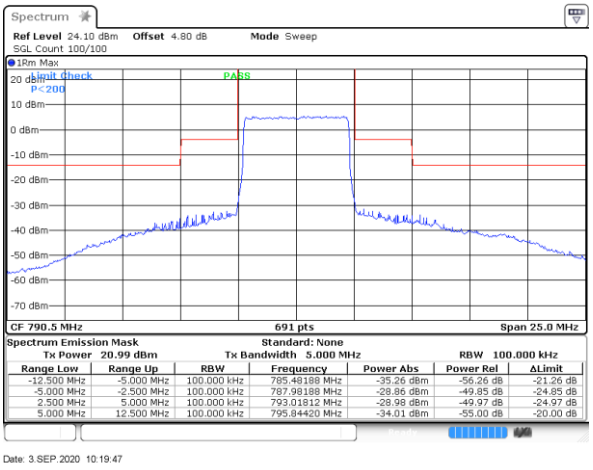
## LTE Band 14 / 5MHz / 64QAM

### Lowest Channel / 1RB



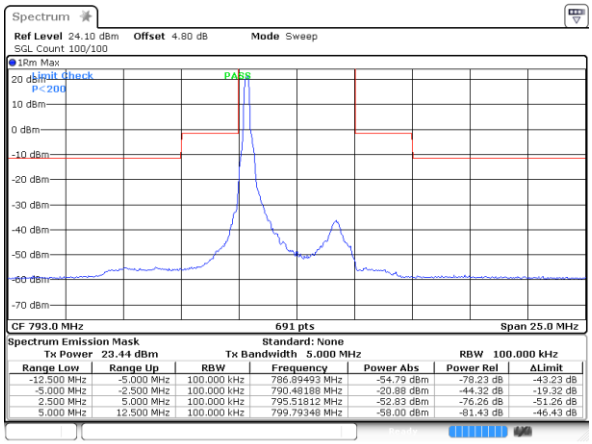



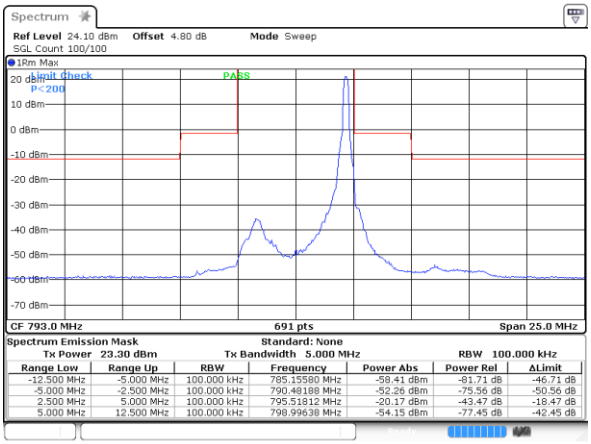

### Lowest Channel / Full RB



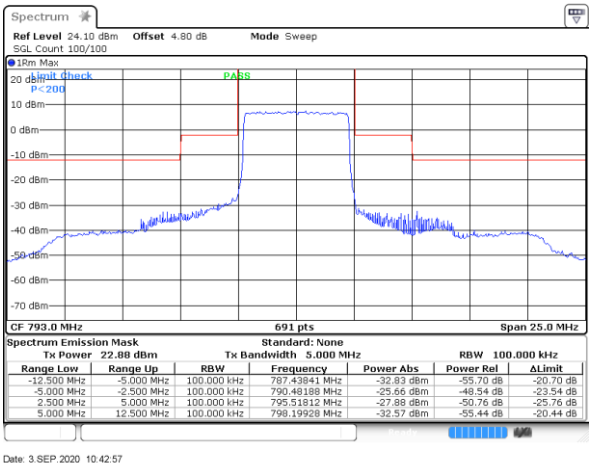
## LTE Band 14 / 5MHz / QPSK

### Middle Channel / 1RB



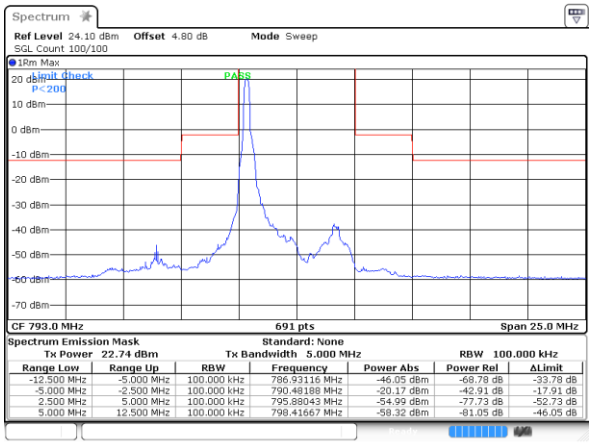



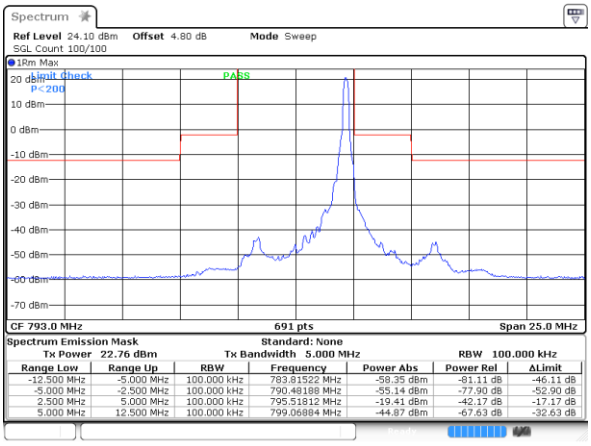

### Middle Channel / Full RB



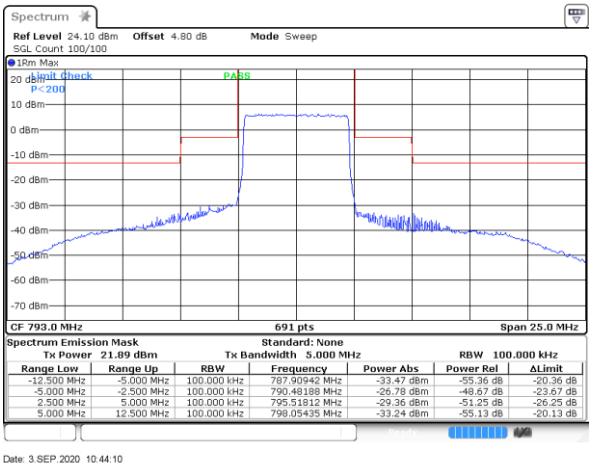
## LTE Band 14 / 5MHz / 16QAM

### Middle Channel / 1RB



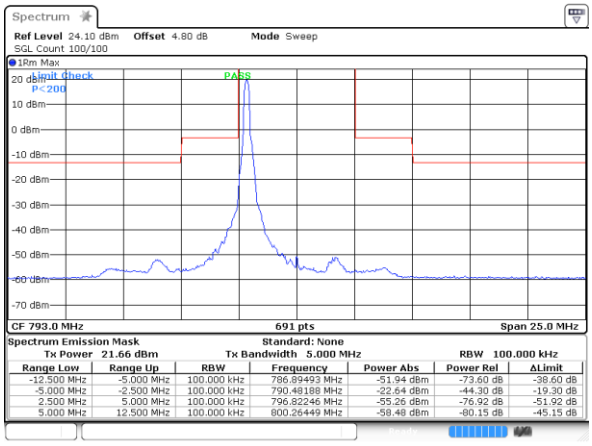



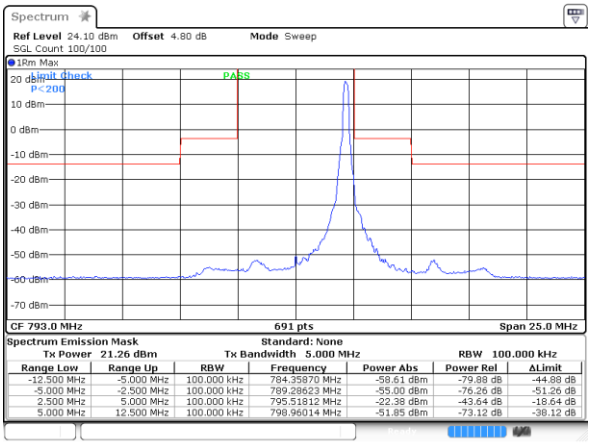

### Middle Channel / Full RB



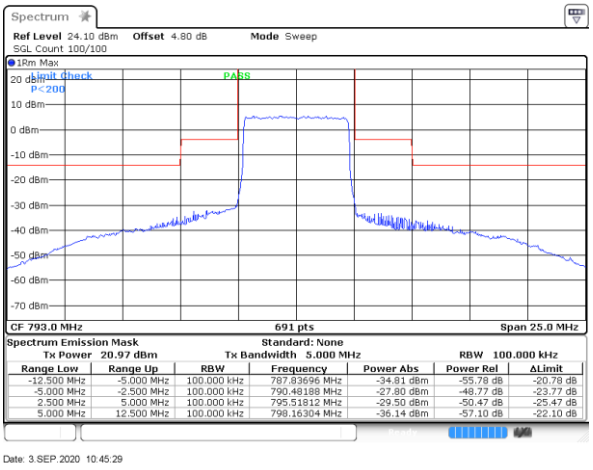
## LTE Band 14 / 5MHz / 64QAM

### Middle Channel / 1RB



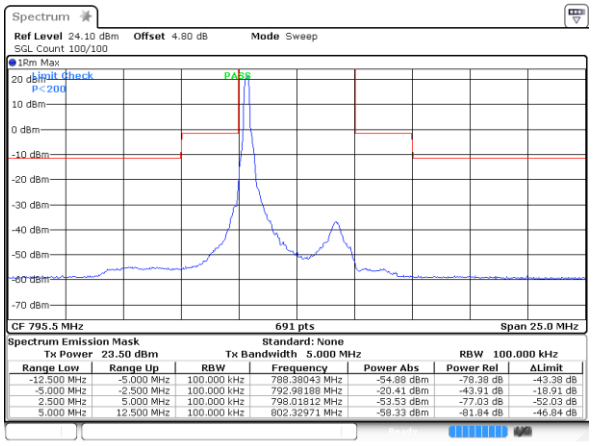



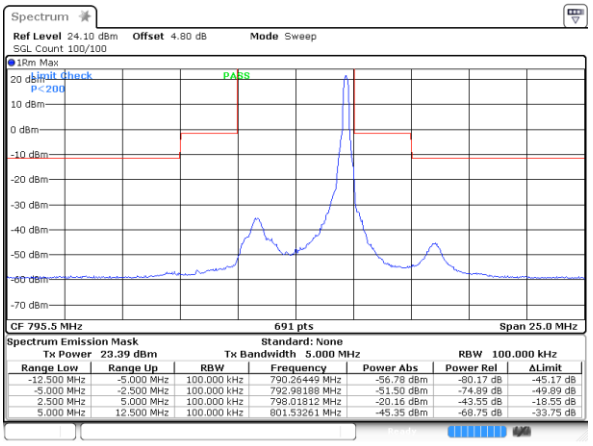

### Middle Channel / Full RB



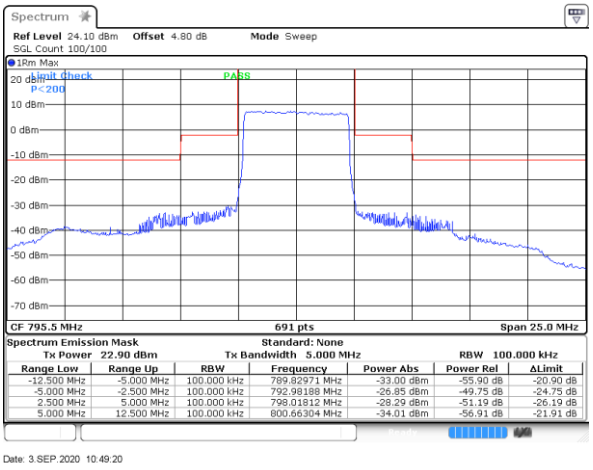
## LTE Band 14 / 5MHz / QPSK

### Highest Channel / 1RB



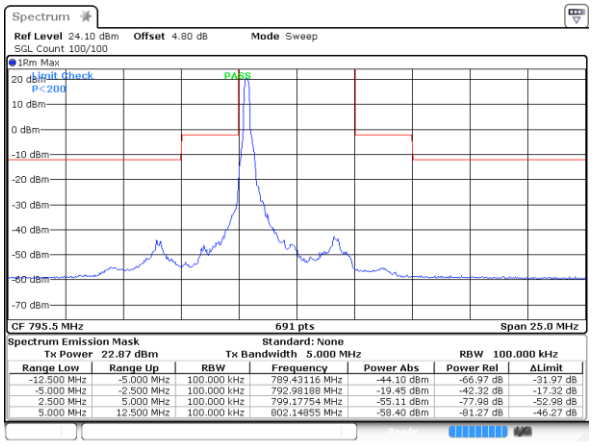



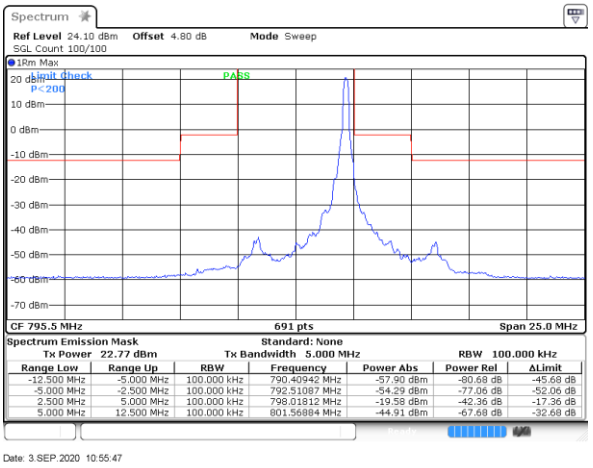

### Highest Channel / Full RB



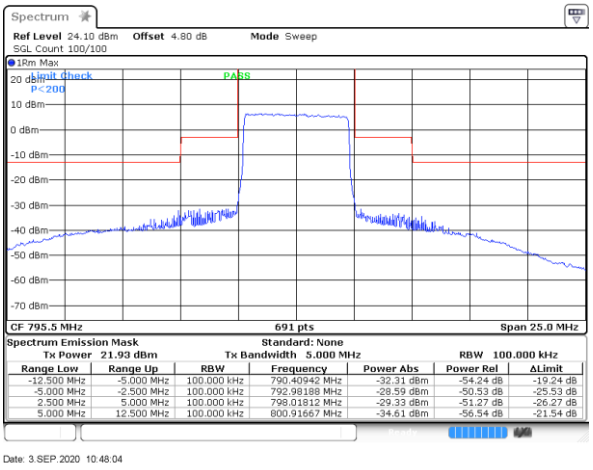
## LTE Band 14 / 5MHz / 16QAM

### Highest Channel / 1RB



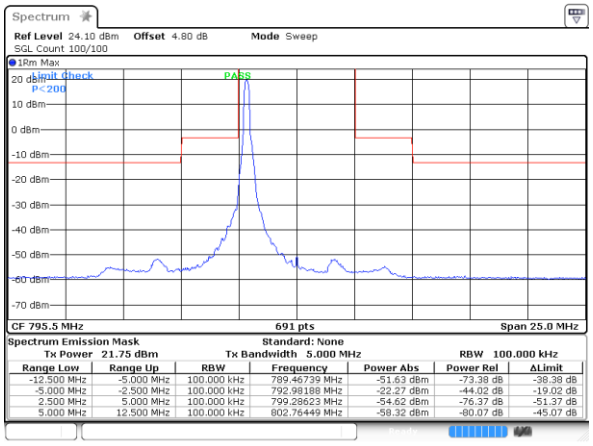



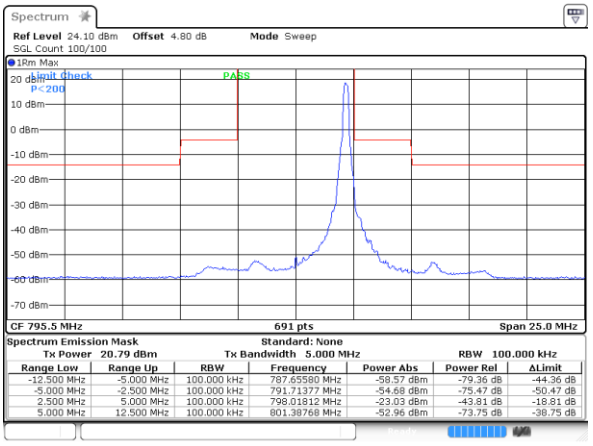

### Highest Channel / Full RB



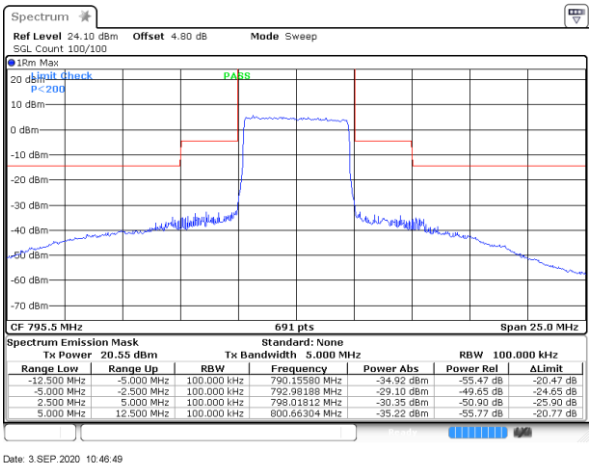
## LTE Band 14 / 5MHz / 64QAM

### Highest Channel / 1RB



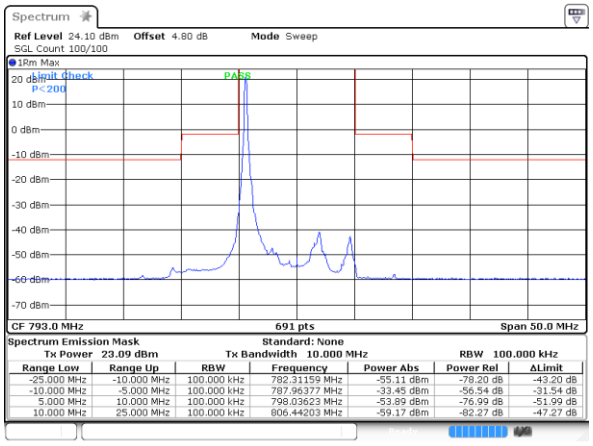



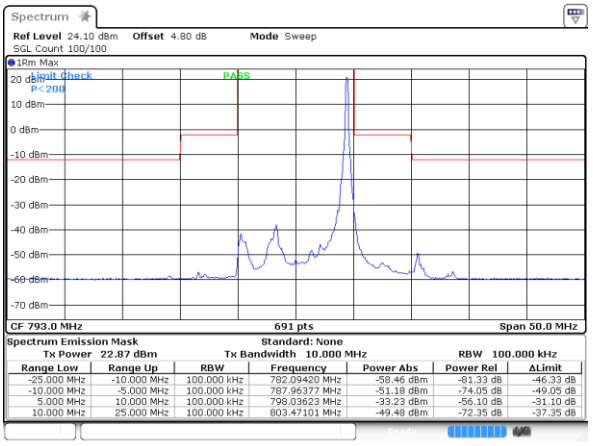

### Highest Channel / Full RB



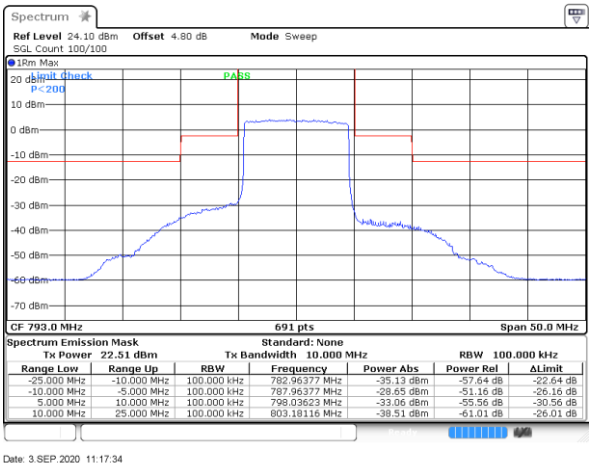
## LTE Band 14 / 10MHz / QPSK

### Middle Channel / 1RB



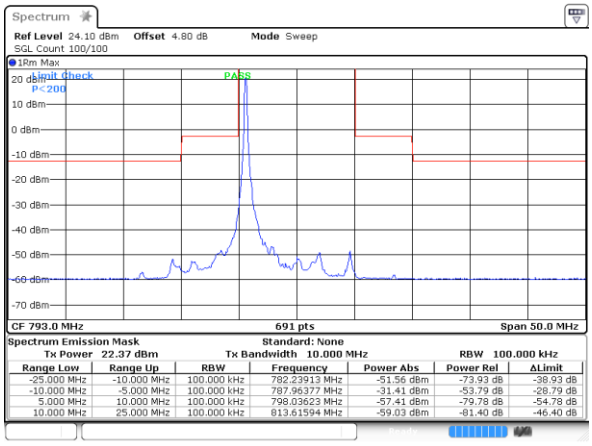



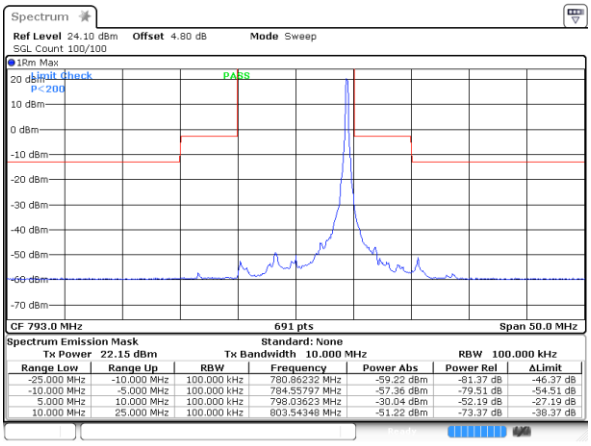

### Middle Channel / Full RB



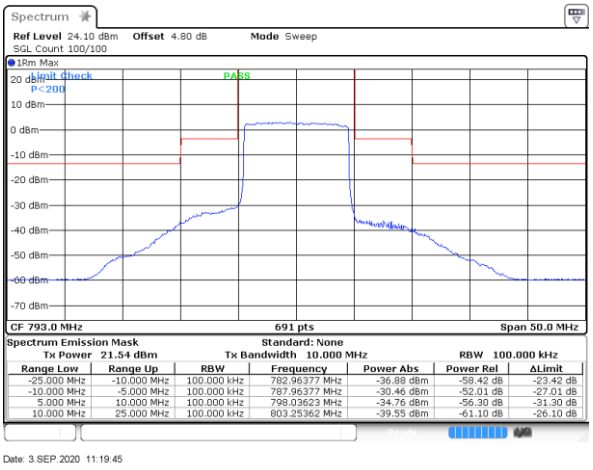
## LTE Band 14 / 10MHz / 16QAM

### Middle Channel / 1RB



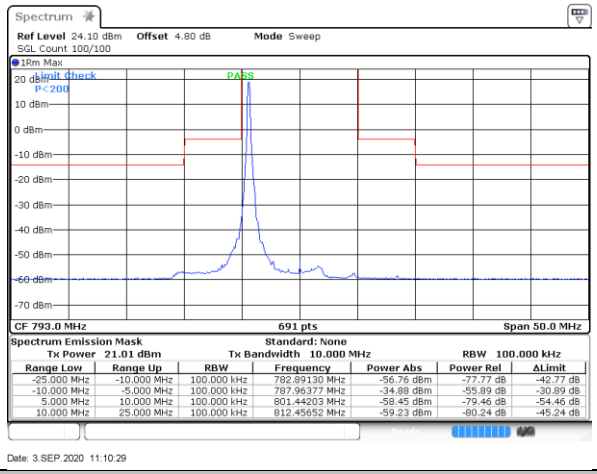



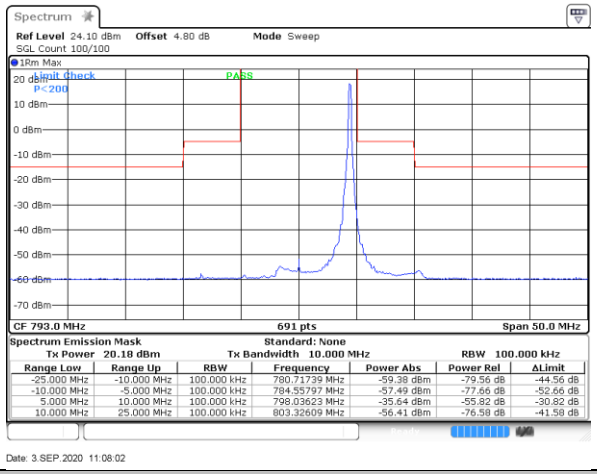

### Middle Channel / Full RB



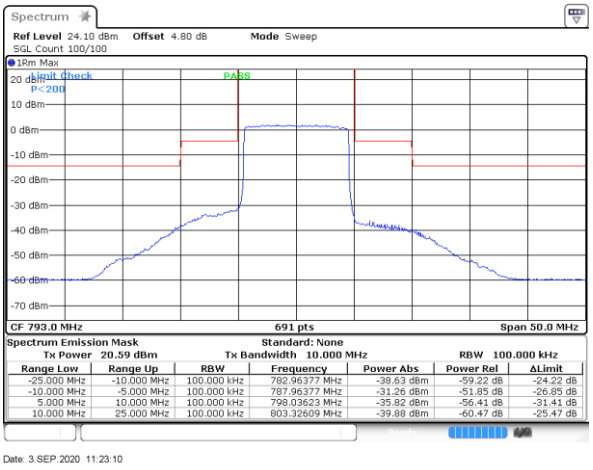
## LTE Band 14 / 10MHz / 64QAM

### Middle Channel / 1RB




### Middle Channel / Full RB



# 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 | 0.0044 | PASS |
| 40 | Normal Voltage | 0.0035 | |
| 30 | Normal Voltage | 0.0005 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0026 | |
| 0 | Normal Voltage | 0.0040 | |
| -10 | Normal Voltage | 0.0011 | |
| -20 | Normal Voltage | 0.0044 | |
| -30 | Normal Voltage | 0.0006 | |
| 20 | Maximum Voltage | 0.0037 | |
| 20 | Normal Voltage | 0.0006 | |
| 20 | Battery End Point | 0.0026 | |

**Note:**

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.4 V.
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 / 5MHz / QPSK / RB Size 1 Offset 0 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Channel | Frequency ( MHz ) | ERP ( dBm ) | Limit ( dBm ) | Over Limit ( dB ) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Lowest | 1554.68 | -67.33 | -42.15 | -25.18 | -69.96 | 1.09 | 5.87 | H |
| | 2332 | -65.81 | -13 | -52.81 | -68.21 | 1.37 | 5.92 | H |
| | 3108 | -64.45 | -13 | -51.45 | -68.34 | 1.64 | 7.68 | H |
| | 1554 | -67.08 | -42.15 | -24.93 | -69.71 | 1.09 | 5.87 | V |
| | 2332 | -65.99 | -13 | -52.99 | -68.39 | 1.37 | 5.92 | V |
| | 3108 | -64.71 | -13 | -51.71 | -68.60 | 1.64 | 7.68 | V |
| Middle | 1559.68 | -67.48 | -42.15 | -25.33 | -70.11 | 1.09 | 5.87 | H |
| | 2340 | -65.12 | -13 | -52.12 | -67.52 | 1.37 | 5.92 | H |
| | 3120 | -64.58 | -13 | -51.58 | -68.47 | 1.64 | 7.68 | H |
| | 1560 | -67.25 | -42.15 | -25.10 | -69.88 | 1.09 | 5.87 | V |
| | 2340 | -66.31 | -13 | -53.31 | -68.71 | 1.37 | 5.92 | V |
| | 3120 | -64.43 | -13 | -51.43 | -68.32 | 1.64 | 7.68 | V |
| Highest | 1564.68 | -68.06 | -42.15 | -25.91 | -70.69 | 1.09 | 5.87 | H |
| | 2346 | -65.77 | -13 | -52.77 | -68.17 | 1.37 | 5.92 | H |
| | 3132 | -64.66 | -13 | -51.66 | -68.55 | 1.64 | 7.68 | H |
| | 1564 | -67.42 | -42.15 | -25.27 | -70.05 | 1.09 | 5.87 | V |
| | 2347.02 | -66.71 | -13 | -53.71 | -69.11 | 1.37 | 5.92 | V |
| | 3132 | -64.53 | -13 | -51.53 | -68.42 | 1.64 | 7.68 | V |

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

| LTE Band 14 / 10MHz / QPSK / RB Size 1 Offset 0 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Channel | Frequency ( MHz ) | EIRP ( dBm ) | Limit ( dBm ) | Over Limit ( dB ) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Middle | 1578 | -67.39 | -42.15 | -25.24 | -70.02 | 1.09 | 5.87 | H |
| | 2366 | -65.27 | -13 | -52.27 | -67.67 | 1.37 | 5.92 | H |
| | 3156 | -64.47 | -13 | -51.47 | -68.36 | 1.64 | 7.68 | H |
| | 1578 | -67.16 | -42.15 | -25.01 | -69.79 | 1.09 | 5.87 | V |
| | 2366 | -65.79 | -13 | -52.79 | -68.19 | 1.37 | 5.92 | V |
| | 3156 | -64.55 | -13 | -51.55 | -68.44 | 1.64 | 7.68 | V |

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.