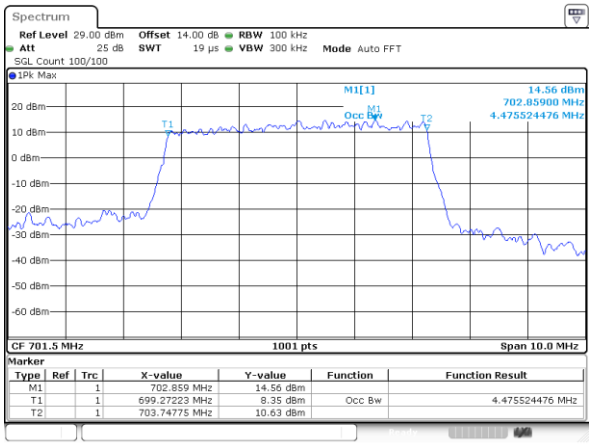
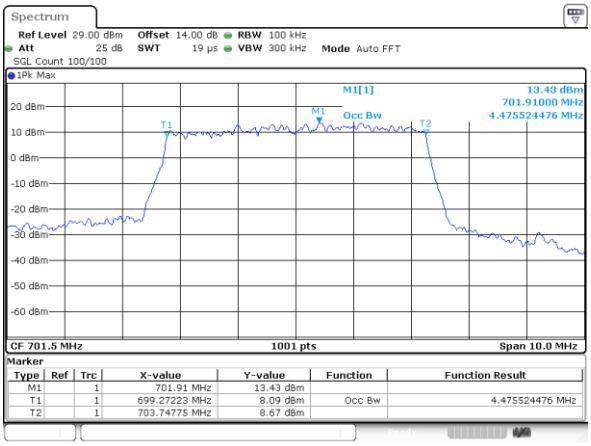
## LTE Band 12

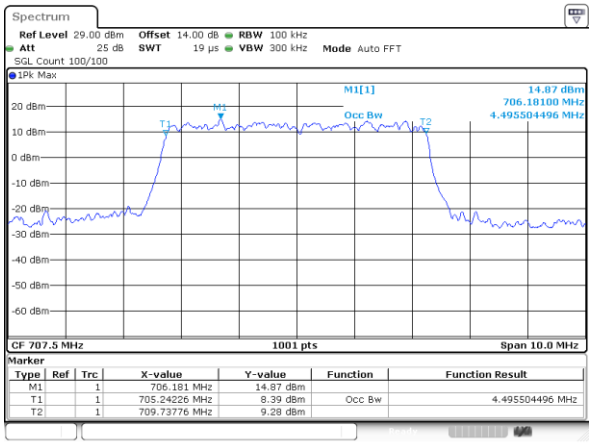
### Lowest Channel / 5MHz / QPSK



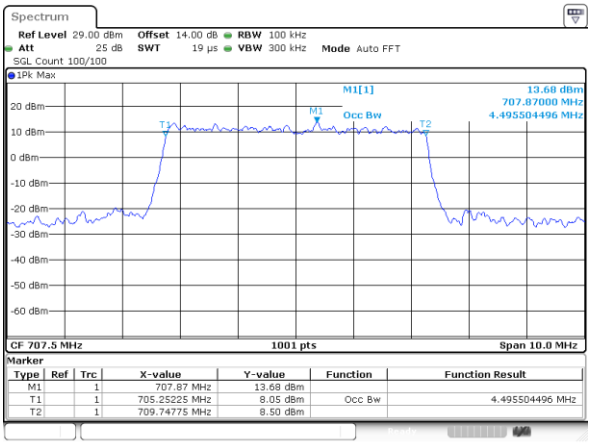

### Lowest Channel / 5MHz / 16QAM



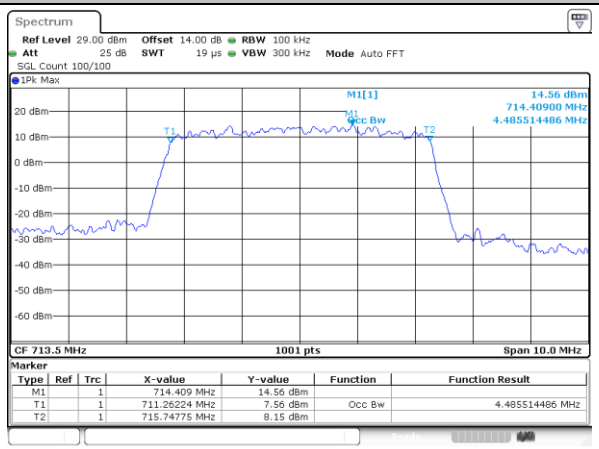

### Middle Channel / 5MHz / QPSK



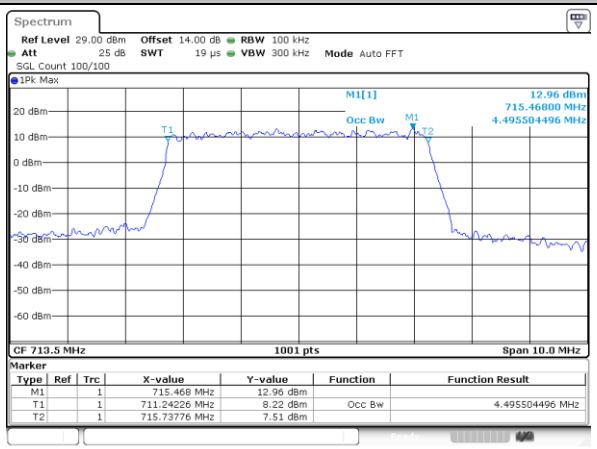

### Middle Channel / 5MHz / 16QAM




### Highest Channel / 5MHz / QPSK

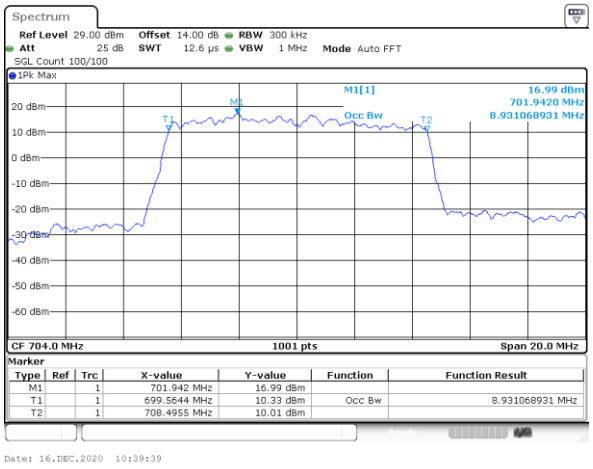



### Highest Channel / 5MHz / 16QAM

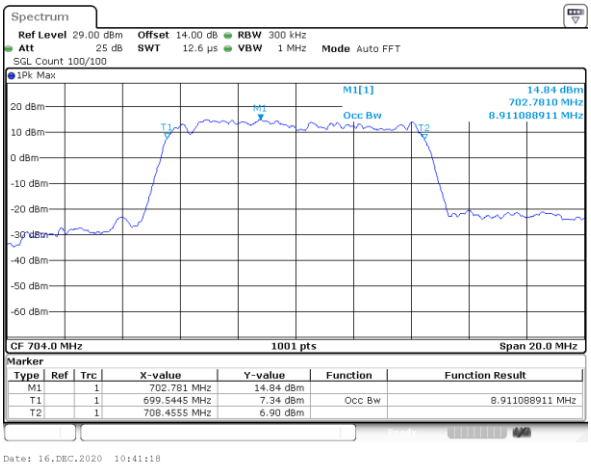


## LTE Band 12

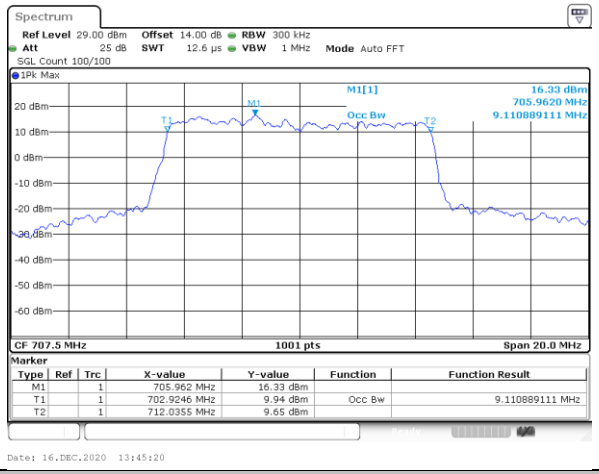
### Lowest Channel / 10MHz / QPSK



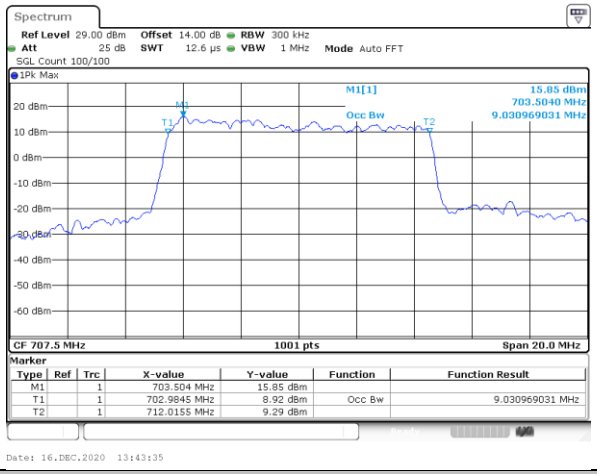

### Lowest Channel / 10MHz / 16QAM



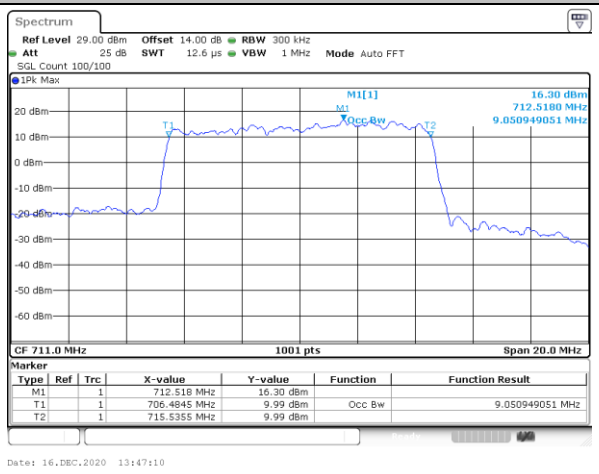

### Middle Channel / 10MHz / QPSK



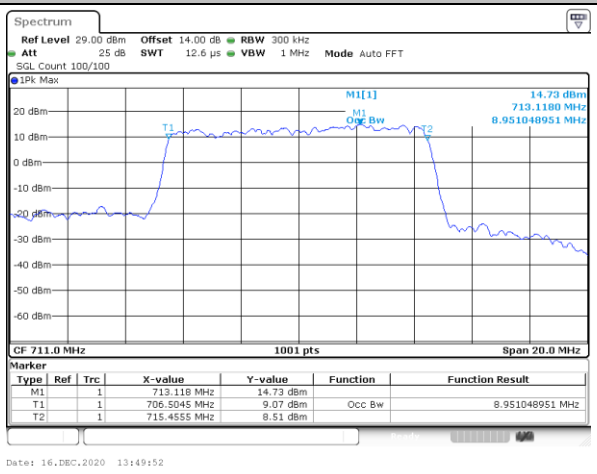

### Middle Channel / 10MHz / 16QAM




### Highest Channel / 10MHz / QPSK



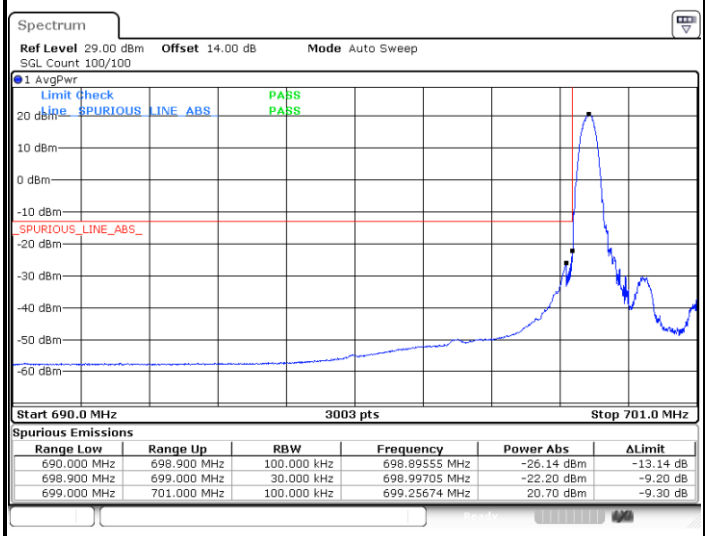

### Highest Channel / 10MHz / 16QAM



# Conducted Band Edge

## LTE Band 12 / 1.4MHz / QPSK

### Lowest Band Edge / 1 RB

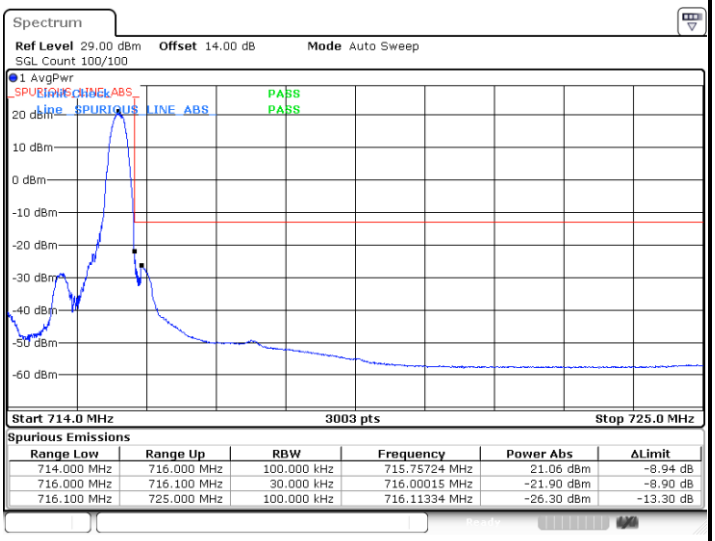



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 698.900 MHz | 100.000 kHz | 698.89555 MHz | -26.14 dBm | -13.14 dB |
| 698.900 MHz | 699.000 MHz | 30.000 kHz | 698.99705 MHz | -22.20 dBm | -9.20 dB |
| 699.000 MHz | 701.000 MHz | 100.000 kHz | 699.25674 MHz | 20.70 dBm | -9.30 dB |

Date: 14.DEC.2020 17:23:41

### Highest Band Edge / 1RB

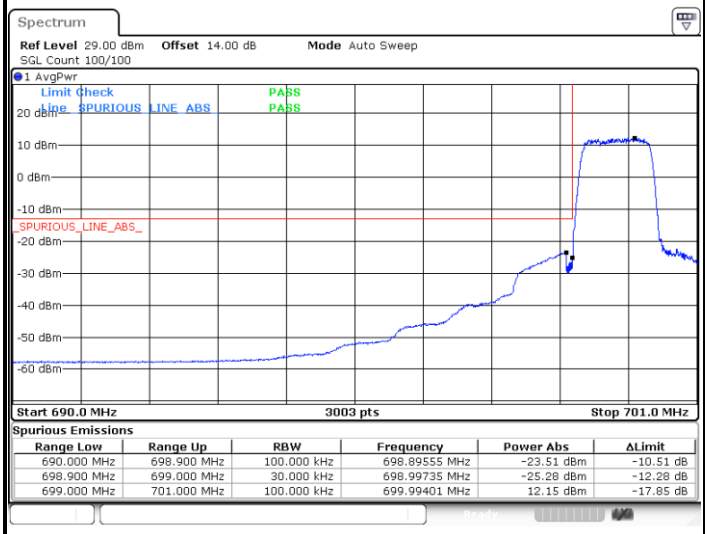



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 714.000 MHz | 716.000 MHz | 100.000 kHz | 715.75724 MHz | 21.06 dBm | -8.94 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.00015 MHz | -21.90 dBm | -8.90 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.11334 MHz | -26.30 dBm | -13.30 dB |

Date: 14.DEC.2020 17:31:10

### Lowest Band Edge / Full RB

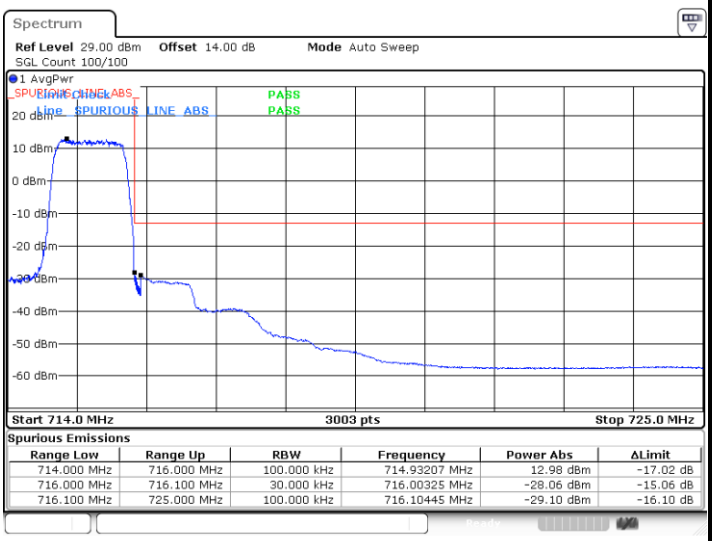



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 698.900 MHz | 100.000 kHz | 698.89555 MHz | -23.51 dBm | -10.51 dB |
| 698.900 MHz | 699.000 MHz | 30.000 kHz | 698.99735 MHz | -25.28 dBm | -12.28 dB |
| 699.000 MHz | 701.000 MHz | 100.000 kHz | 699.99401 MHz | 12.15 dBm | -17.85 dB |

Date: 14.DEC.2020 17:21:28

### Highest Band Edge / Full RB



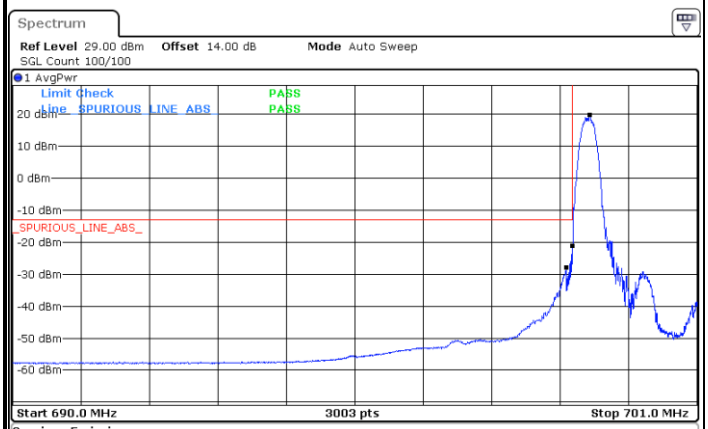

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 714.000 MHz | 716.000 MHz | 100.000 kHz | 714.93207 MHz | 12.98 dBm | -17.02 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.00325 MHz | -28.06 dBm | -15.06 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.10445 MHz | -29.10 dBm | -16.10 dB |

Date: 14.DEC.2020 17:28:58

## LTE Band 12 / 1.4MHz / 16QAM

### Lowest Band Edge / 1 RB

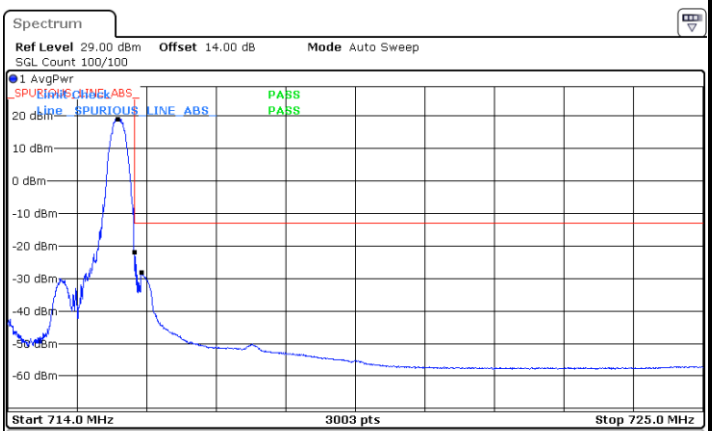



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 698.900 MHz | 100.000 kHz | 698.89555 MHz | -27.81 dBm | -14.81 dB |
| 698.900 MHz | 699.000 MHz | 30.000 kHz | 698.99725 MHz | -21.27 dBm | -8.27 dB |
| 699.000 MHz | 701.000 MHz | 100.000 kHz | 699.27273 MHz | 19.69 dBm | -10.31 dB |

Date: 14.DEC.2020 17:22:57

### Highest Band Edge / 1 RB

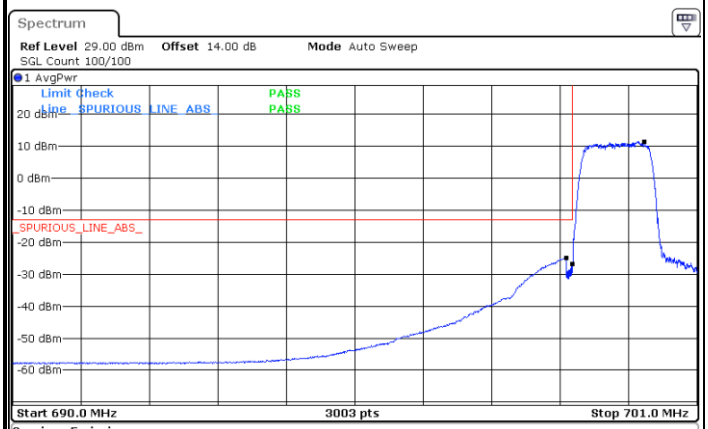



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 714.000 MHz | 716.000 MHz | 100.000 kHz | 715.73926 MHz | 19.04 dBm | -10.96 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.00095 MHz | -21.90 dBm | -8.90 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.11334 MHz | -28.28 dBm | -15.28 dB |

Date: 14.DEC.2020 17:30:26

### Lowest Band Edge / Full RB

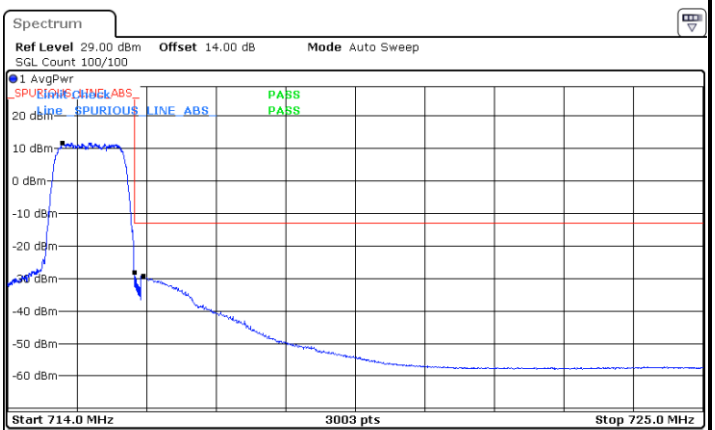



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 698.900 MHz | 100.000 kHz | 698.89555 MHz | -24.82 dBm | -11.82 dB |
| 698.900 MHz | 699.000 MHz | 30.000 kHz | 698.99835 MHz | -26.89 dBm | -13.89 dB |
| 699.000 MHz | 701.000 MHz | 100.000 kHz | 700.15385 MHz | 11.47 dBm | -18.53 dB |

Date: 14.DEC.2020 17:22:12

### Highest Band Edge / Full RB



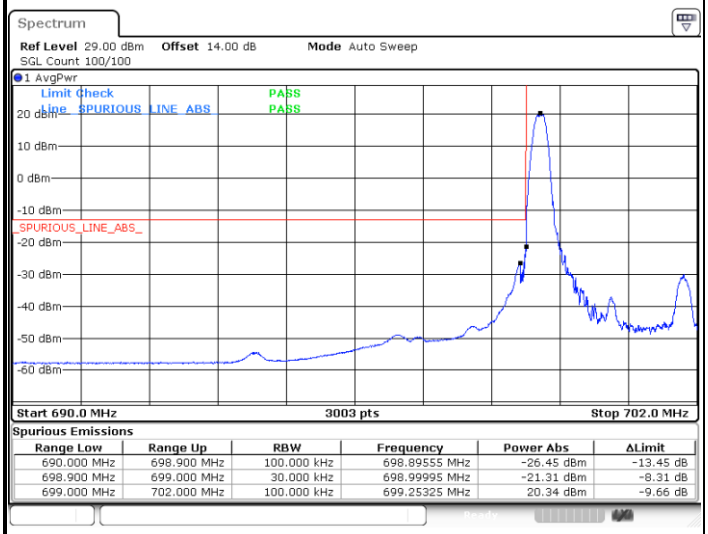

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 714.000 MHz | 716.000 MHz | 100.000 kHz | 714.86613 MHz | 11.77 dBm | -18.23 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.00265 MHz | -28.26 dBm | -15.26 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.14890 MHz | -29.24 dBm | -16.24 dB |

Date: 14.DEC.2020 17:29:41

## LTE Band 12 / 3MHz / QPSK

### Lowest Band Edge / 1RB

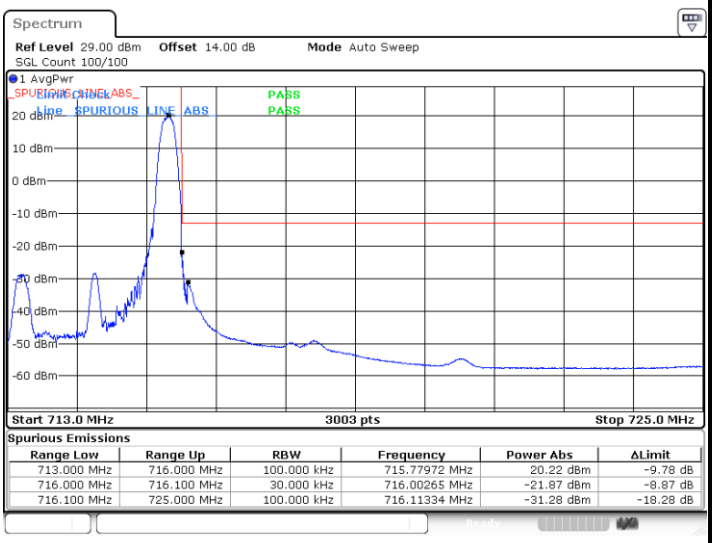



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 698.900 MHz | 100.000 kHz | 698.89555 MHz | -26.45 dBm | -13.45 dB |
| 698.900 MHz | 699.000 MHz | 30.000 kHz | 698.99995 MHz | -21.31 dBm | -8.31 dB |
| 699.000 MHz | 702.000 MHz | 100.000 kHz | 699.25325 MHz | 20.34 dBm | -9.66 dB |

Date: 14.DEC.2020 18:00:43

### Highest Band Edge / 1 RB

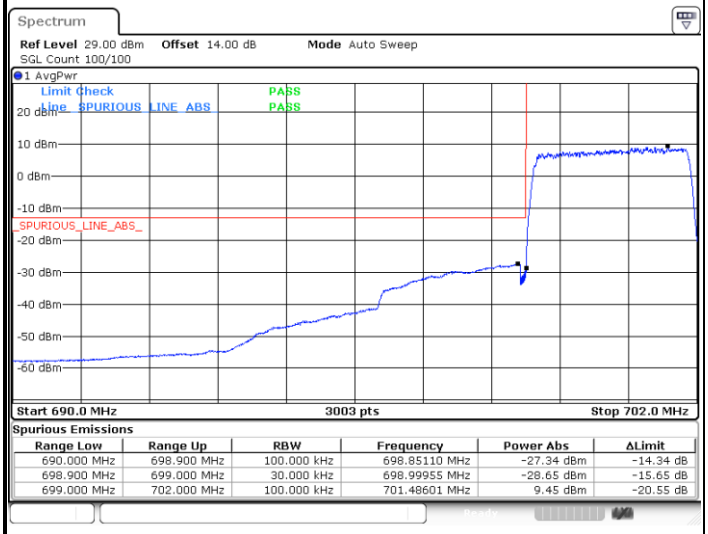



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 713.000 MHz | 716.000 MHz | 100.000 kHz | 715.77972 MHz | 20.22 dBm | -9.78 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.00265 MHz | -21.87 dBm | -8.87 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.11334 MHz | -31.28 dBm | -18.28 dB |

Date: 14.DEC.2020 18:08:25

### Lowest Band Edge / Full RB

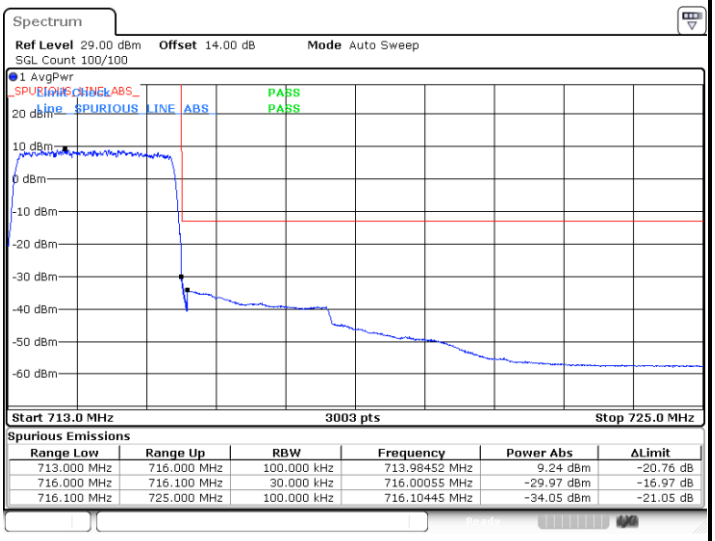



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 698.900 MHz | 100.000 kHz | 698.85110 MHz | -27.34 dBm | -14.34 dB |
| 698.900 MHz | 699.000 MHz | 30.000 kHz | 698.99955 MHz | -28.65 dBm | -15.65 dB |
| 699.000 MHz | 702.000 MHz | 100.000 kHz | 701.48601 MHz | 9.45 dBm | -20.55 dB |

Date: 14.DEC.2020 17:55:54

### Highest Band Edge / Full RB



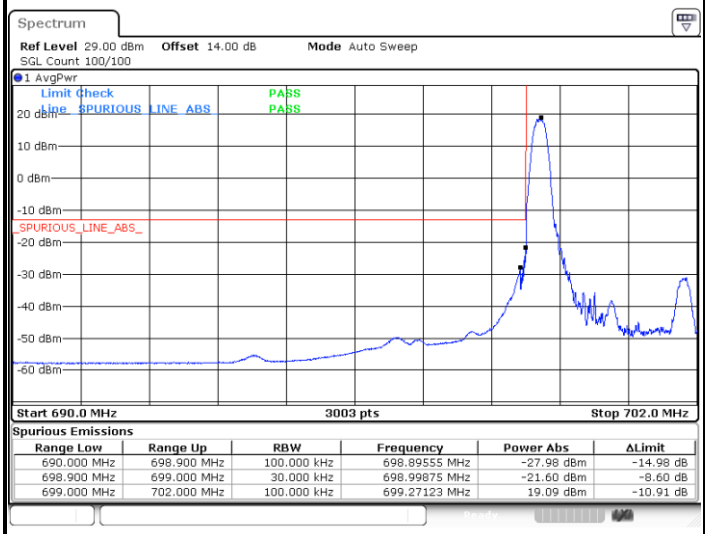

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 713.000 MHz | 716.000 MHz | 100.000 kHz | 713.98452 MHz | 9.24 dBm | -20.76 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.00055 MHz | -29.97 dBm | -16.97 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.10445 MHz | -34.05 dBm | -21.05 dB |

Date: 14.DEC.2020 18:06:22

## LTE Band 12 / 3MHz / 16QAM

### Lowest Band Edge / 1 RB

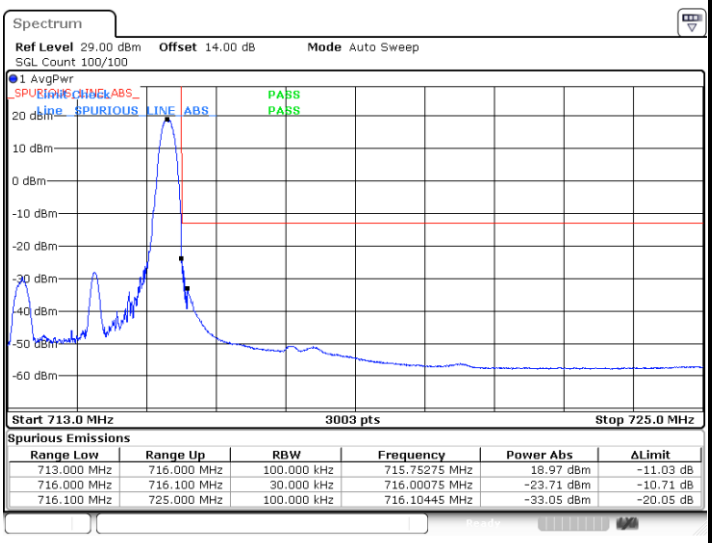



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 698.900 MHz | 100.000 kHz | 698.89555 MHz | -27.98 dBm | -14.98 dB |
| 698.900 MHz | 699.000 MHz | 30.000 kHz | 698.99875 MHz | -21.60 dBm | -8.60 dB |
| 699.000 MHz | 702.000 MHz | 100.000 kHz | 699.27123 MHz | 19.09 dBm | -10.91 dB |

Date: 14.DEC.2020 18:00:08

### Highest Band Edge / 1 RB

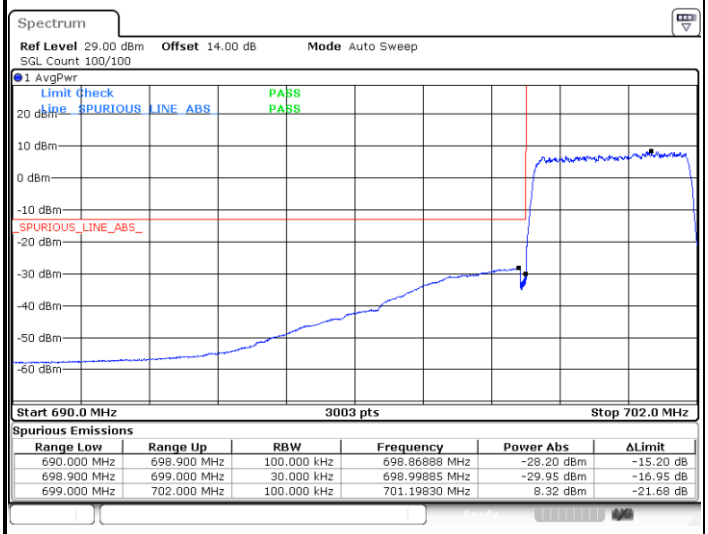



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 713.000 MHz | 716.000 MHz | 100.000 kHz | 715.75275 MHz | 18.97 dBm | -11.03 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.00075 MHz | -23.71 dBm | -10.71 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.10445 MHz | -33.05 dBm | -20.05 dB |

Date: 14.DEC.2020 18:07:48

### Lowest Band Edge / Full RB

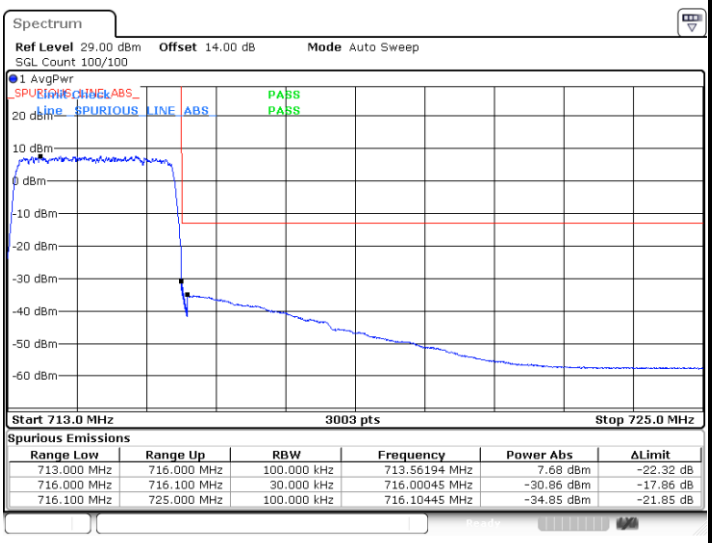



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 698.900 MHz | 100.000 kHz | 698.86888 MHz | -28.20 dBm | -15.20 dB |
| 698.900 MHz | 699.000 MHz | 30.000 kHz | 698.99885 MHz | -29.95 dBm | -16.95 dB |
| 699.000 MHz | 702.000 MHz | 100.000 kHz | 701.19830 MHz | 8.32 dBm | -21.68 dB |

Date: 14.DEC.2020 18:24:03

### Highest Band Edge / Full RB



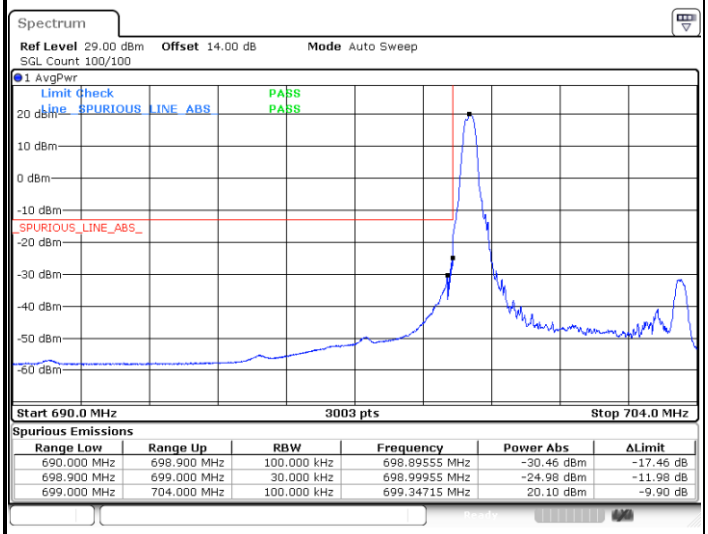

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 713.000 MHz | 716.000 MHz | 100.000 kHz | 713.56194 MHz | 7.68 dBm | -22.32 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.00045 MHz | -30.86 dBm | -17.86 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.10445 MHz | -34.85 dBm | -21.85 dB |

Date: 14.DEC.2020 18:07:06

## LTE Band 12 / 5MHz / QPSK

### Lowest Band Edge / 1 RB

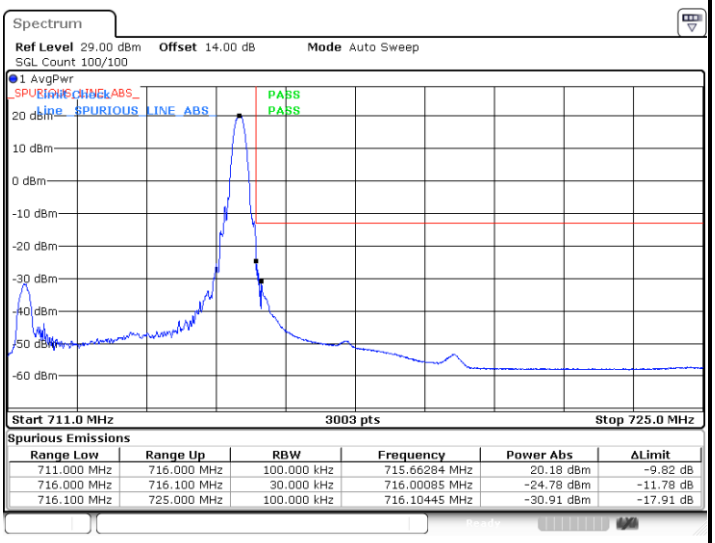



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 698.900 MHz | 100.000 kHz | 698.89555 MHz | -30.46 dBm | -17.46 dB |
| 698.900 MHz | 699.000 MHz | 30.000 kHz | 698.99955 MHz | -24.98 dBm | -11.98 dB |
| 699.000 MHz | 704.000 MHz | 100.000 kHz | 699.34715 MHz | 20.10 dBm | -9.90 dB |

Date: 16.DEC.2020 10:09:39

### Highest Band Edge / 1 RB

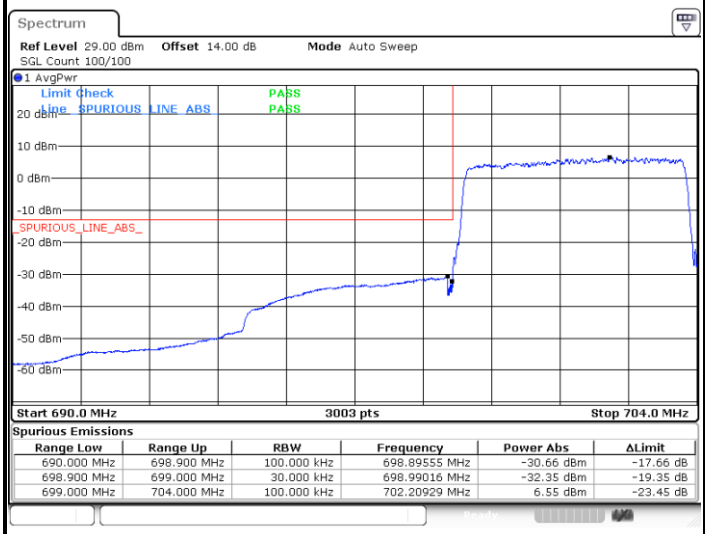



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 711.000 MHz | 716.000 MHz | 100.000 kHz | 715.66284 MHz | 20.18 dBm | -9.82 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.00085 MHz | -24.78 dBm | -11.78 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.10445 MHz | -30.91 dBm | -17.91 dB |

Date: 16.DEC.2020 10:29:55

### Lowest Band Edge / Full RB

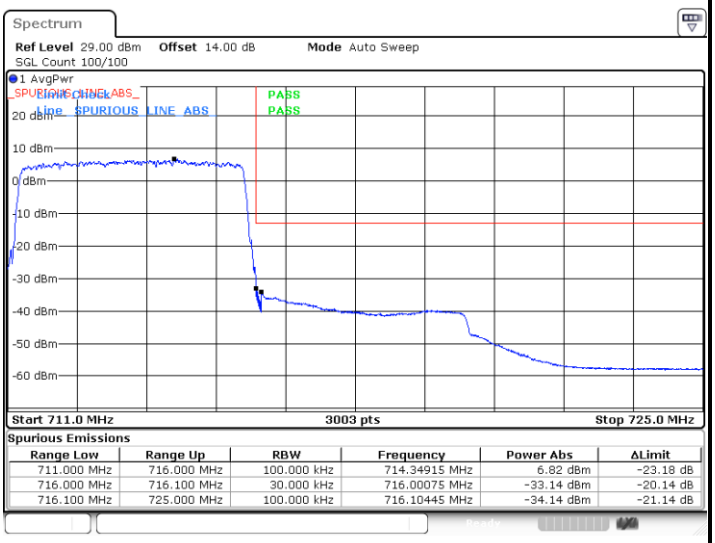



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 698.900 MHz | 100.000 kHz | 698.89555 MHz | -30.66 dBm | -17.66 dB |
| 698.900 MHz | 699.000 MHz | 30.000 kHz | 698.99016 MHz | -32.35 dBm | -19.35 dB |
| 699.000 MHz | 704.000 MHz | 100.000 kHz | 702.20929 MHz | 6.55 dBm | -23.45 dB |

Date: 16.DEC.2020 09:59:45

### Highest Band Edge / Full RB



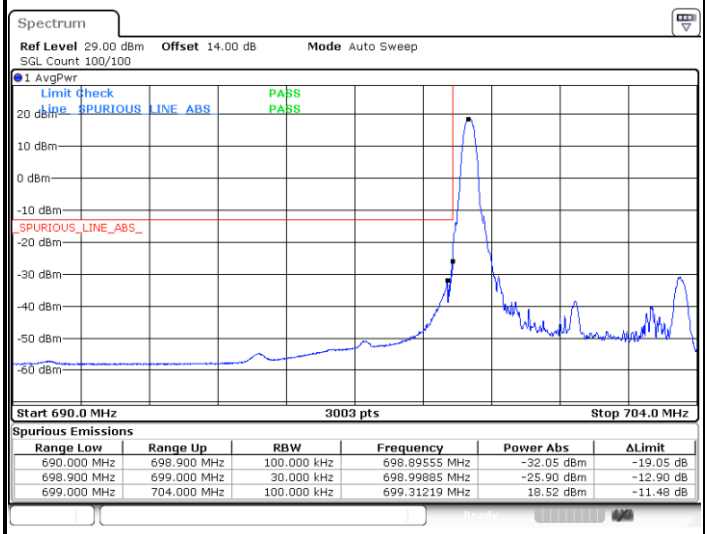

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 711.000 MHz | 716.000 MHz | 100.000 kHz | 714.34915 MHz | 6.82 dBm | -23.18 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.00075 MHz | -33.14 dBm | -20.14 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.10445 MHz | -34.14 dBm | -21.14 dB |

Date: 16.DEC.2020 10:35:17

## LTE Band 12 / 5MHz / 16QAM

### Lowest Band Edge / 1RB

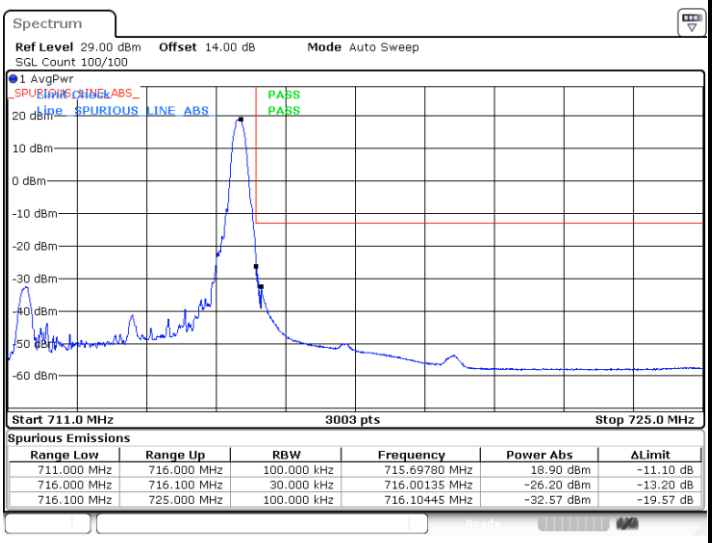



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 698.900 MHz | 100.000 kHz | 698.89555 MHz | -32.05 dBm | -19.05 dB |
| 698.900 MHz | 699.000 MHz | 30.000 kHz | 698.99885 MHz | -25.90 dBm | -12.90 dB |
| 699.000 MHz | 704.000 MHz | 100.000 kHz | 699.31219 MHz | 18.52 dBm | -11.48 dB |

Date: 16.DEC.2020 10:05:10

### Highest Band Edge / 1 RB

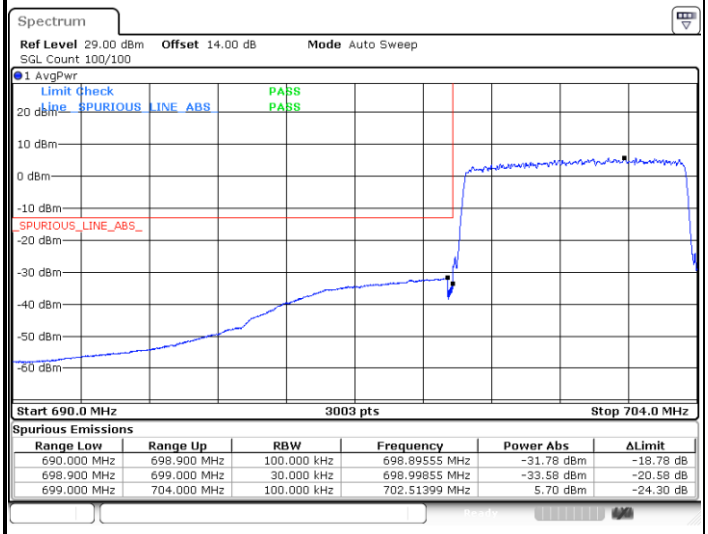



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 711.000 MHz | 716.000 MHz | 100.000 kHz | 715.69780 MHz | 18.90 dBm | -11.10 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.00135 MHz | -26.20 dBm | -13.20 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.10445 MHz | -32.57 dBm | -19.57 dB |

Date: 16.DEC.2020 10:30:36

### Lowest Band Edge / Full RB

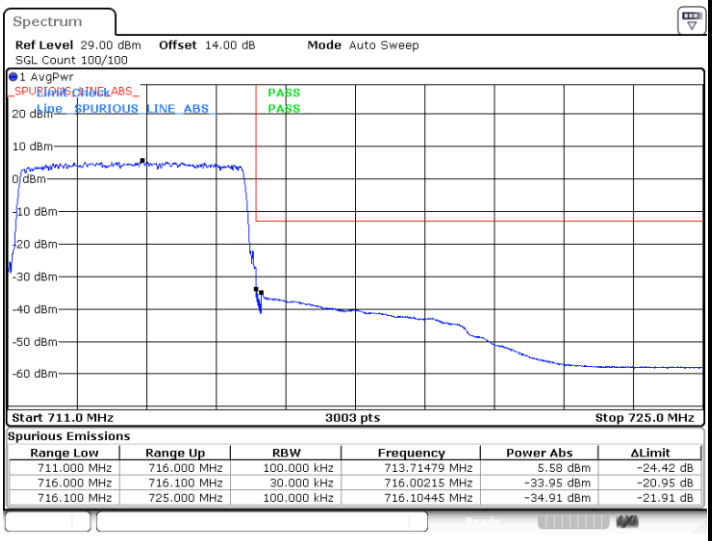



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 698.900 MHz | 100.000 kHz | 698.89555 MHz | -31.78 dBm | -18.78 dB |
| 698.900 MHz | 699.000 MHz | 30.000 kHz | 698.99855 MHz | -33.58 dBm | -20.58 dB |
| 699.000 MHz | 704.000 MHz | 100.000 kHz | 702.51399 MHz | 5.70 dBm | -24.30 dB |

Date: 16.DEC.2020 10:01:06

### Highest Band Edge / Full RB



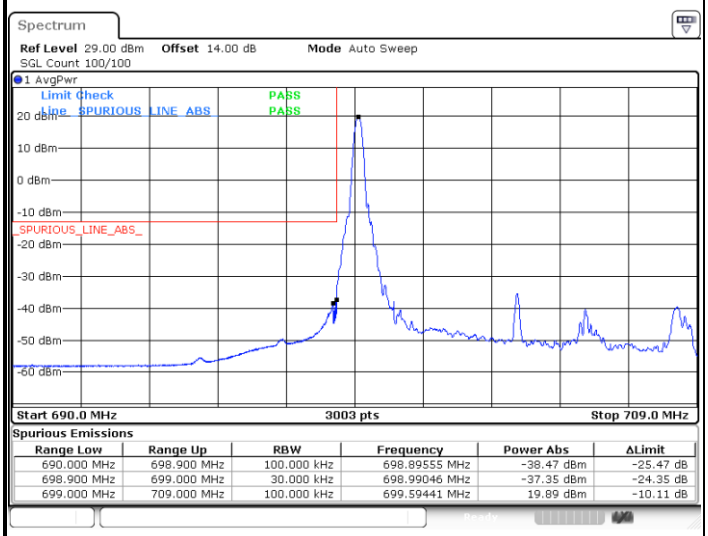

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 711.000 MHz | 716.000 MHz | 100.000 kHz | 713.71479 MHz | 5.58 dBm | -24.42 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.00215 MHz | -33.95 dBm | -20.95 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.10445 MHz | -34.91 dBm | -21.91 dB |

Date: 16.DEC.2020 10:36:25

## LTE Band 12 / 10MHz / QPSK

### Lowest Band Edge / 1 RB

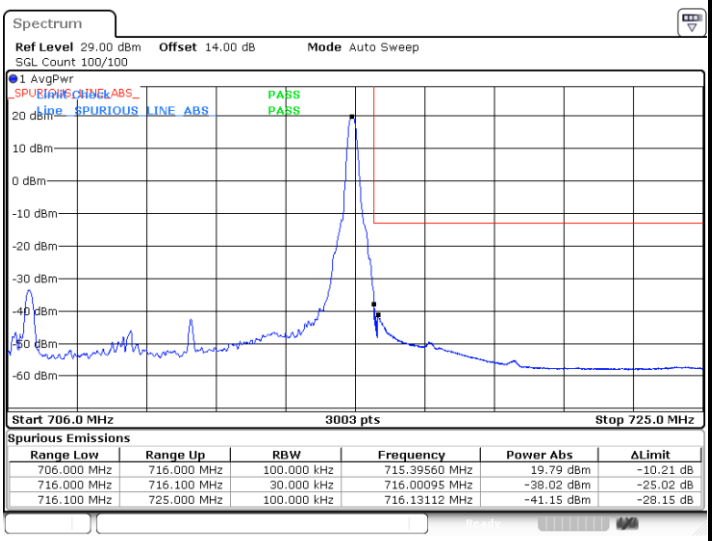



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 698.900 MHz | 100.000 kHz | 698.89555 MHz | -38.47 dBm | -25.47 dB |
| 698.900 MHz | 699.000 MHz | 30.000 kHz | 698.99046 MHz | -37.35 dBm | -24.35 dB |
| 699.000 MHz | 709.000 MHz | 100.000 kHz | 699.59441 MHz | 19.89 dBm | -10.11 dB |

Date: 16.DEC.2020 11:54:34

### Highest Band Edge / 1 RB

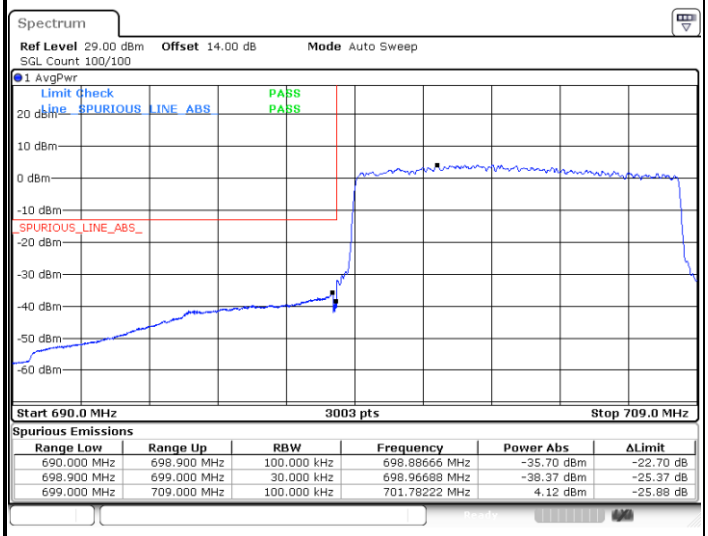



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 706.000 MHz | 716.000 MHz | 100.000 kHz | 715.39560 MHz | 19.79 dBm | -10.21 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.00095 MHz | -38.02 dBm | -25.02 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.13112 MHz | -41.15 dBm | -28.15 dB |

Date: 16.DEC.2020 20:07:54

### Lowest Band Edge / Full RB

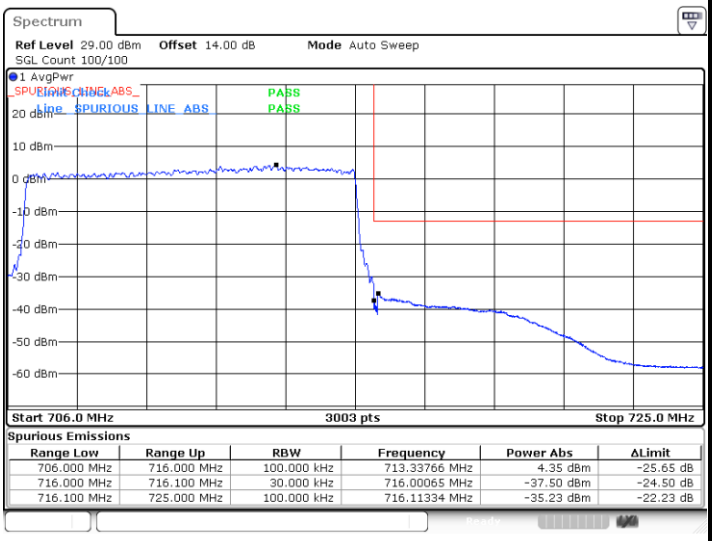



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 698.900 MHz | 100.000 kHz | 698.88666 MHz | -35.70 dBm | -22.70 dB |
| 698.900 MHz | 699.000 MHz | 30.000 kHz | 698.96688 MHz | -38.37 dBm | -25.37 dB |
| 699.000 MHz | 709.000 MHz | 100.000 kHz | 701.78222 MHz | 4.12 dBm | -25.88 dB |

Date: 16.DEC.2020 10:40:36

### Highest Band Edge / Full RB



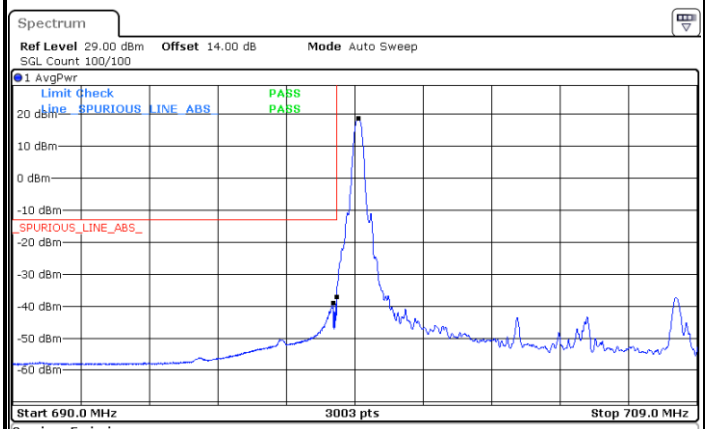

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 706.000 MHz | 716.000 MHz | 100.000 kHz | 713.33766 MHz | 4.35 dBm | -25.65 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.00065 MHz | -37.50 dBm | -24.50 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.11334 MHz | -35.23 dBm | -22.23 dB |

Date: 16.DEC.2020 13:49:15

## LTE Band 12 / 10MHz / 16QAM

### Lowest Band Edge / 1 RB

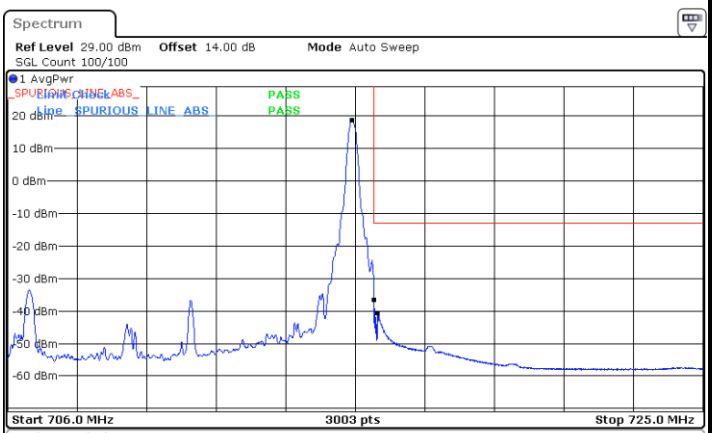



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 698.900 MHz | 100.000 kHz | 698.89555 MHz | -39.00 dBm | -26.00 dB |
| 698.900 MHz | 699.000 MHz | 30.000 kHz | 698.99975 MHz | -37.16 dBm | -24.16 dB |
| 699.000 MHz | 709.000 MHz | 100.000 kHz | 699.58442 MHz | 18.67 dBm | -11.33 dB |

Date: 16.DEC.2020 10:47:11

### Highest Band Edge / 1 RB

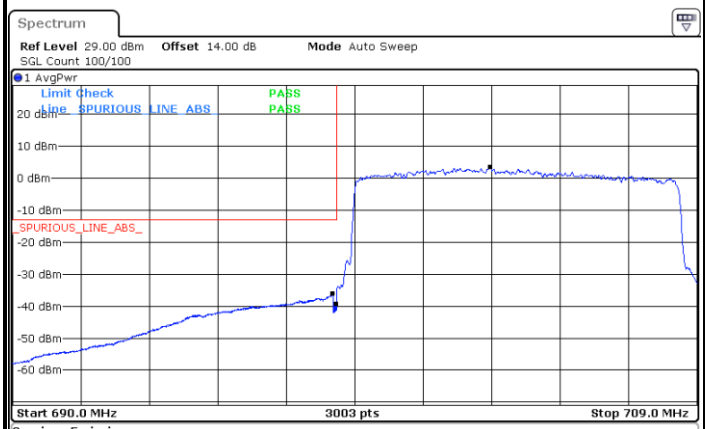



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 706.000 MHz | 716.000 MHz | 100.000 kHz | 715.39560 MHz | 18.73 dBm | -11.27 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.00455 MHz | -36.66 dBm | -23.66 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.10445 MHz | -40.56 dBm | -27.56 dB |

Date: 16.DEC.2020 20:08:43

### Lowest Band Edge / Full RB

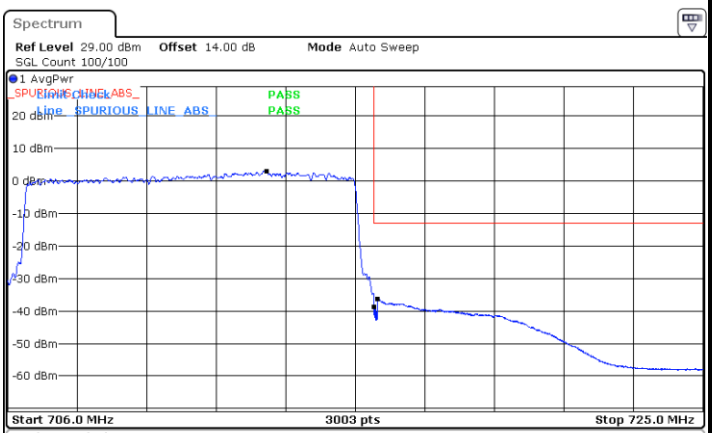



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 698.900 MHz | 100.000 kHz | 698.88666 MHz | -36.06 dBm | -23.06 dB |
| 698.900 MHz | 699.000 MHz | 30.000 kHz | 698.97118 MHz | -39.33 dBm | -26.33 dB |
| 699.000 MHz | 709.000 MHz | 100.000 kHz | 703.26074 MHz | 3.40 dBm | -26.60 dB |

Date: 16.DEC.2020 10:42:12

### Highest Band Edge / Full RB




Spurious Emissions

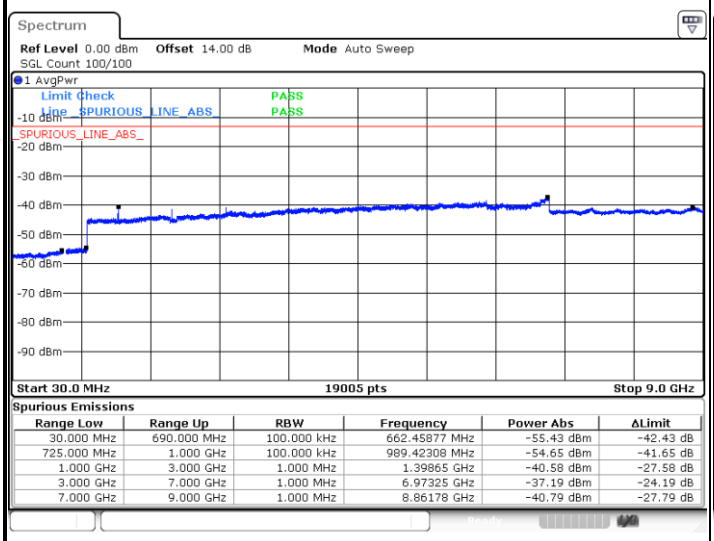
| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 706.000 MHz | 716.000 MHz | 100.000 kHz | 713.07792 MHz | 2.97 dBm | -27.03 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.00005 MHz | -38.71 dBm | -25.71 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.10445 MHz | -36.28 dBm | -23.28 dB |

Date: 16.DEC.2020 13:50:36

# Conducted Spurious Emission

## LTE Band 12 / 1.4MHz

### Lowest Channel / QPSK

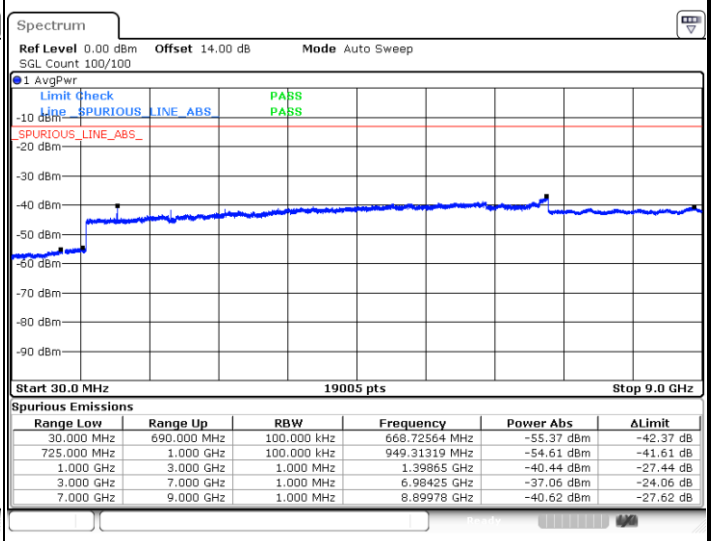



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 662.45877 MHz | -55.43 dBm | -42.43 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 989.42308 MHz | -54.65 dBm | -41.65 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.39865 GHz | -40.58 dBm | -27.58 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.97325 GHz | -37.19 dBm | -24.19 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 8.86178 GHz | -40.79 dBm | -27.79 dB |

Date: 14.DEC.2020 17:24:27

### Lowest Channel / 16QAM

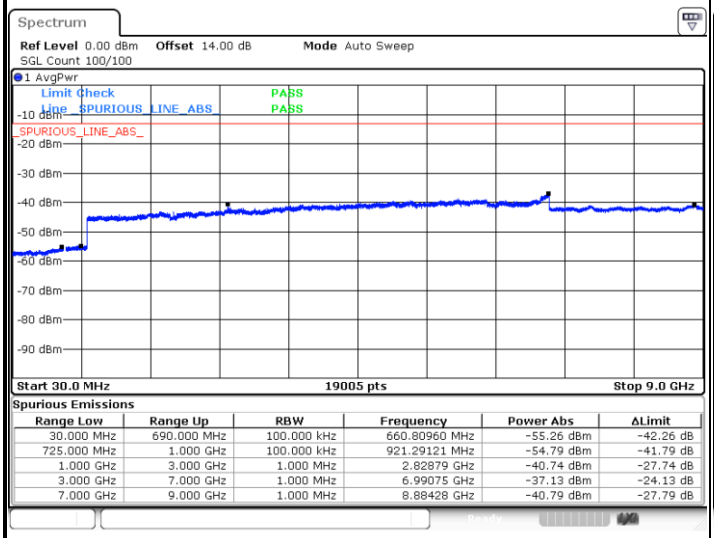



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 668.72564 MHz | -55.37 dBm | -42.37 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 949.31319 MHz | -54.61 dBm | -41.61 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.39865 GHz | -40.44 dBm | -27.44 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.98425 GHz | -37.06 dBm | -24.06 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 8.89978 GHz | -40.62 dBm | -27.62 dB |

Date: 14.DEC.2020 17:25:12

### Middle Channel / QPSK

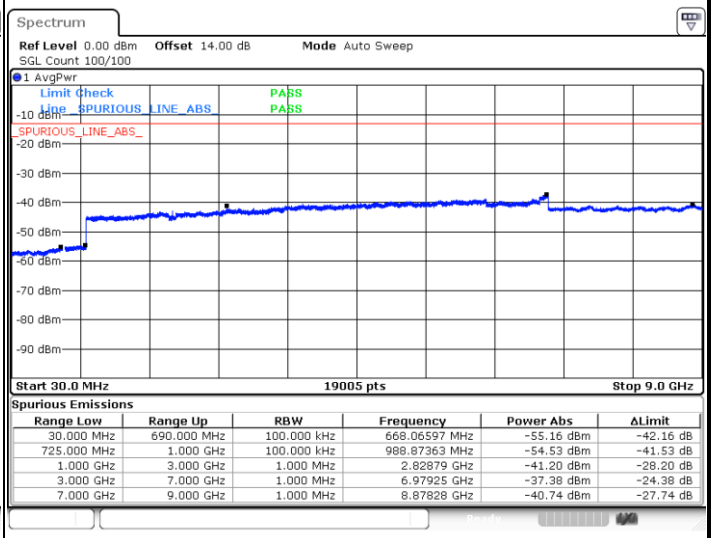



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 660.80960 MHz | -55.26 dBm | -42.26 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 921.29121 MHz | -54.79 dBm | -41.79 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.82879 GHz | -40.74 dBm | -27.74 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.99075 GHz | -37.13 dBm | -24.13 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 8.88428 GHz | -40.79 dBm | -27.79 dB |

Date: 14.DEC.2020 17:27:29

### Middle Channel / 16QAM



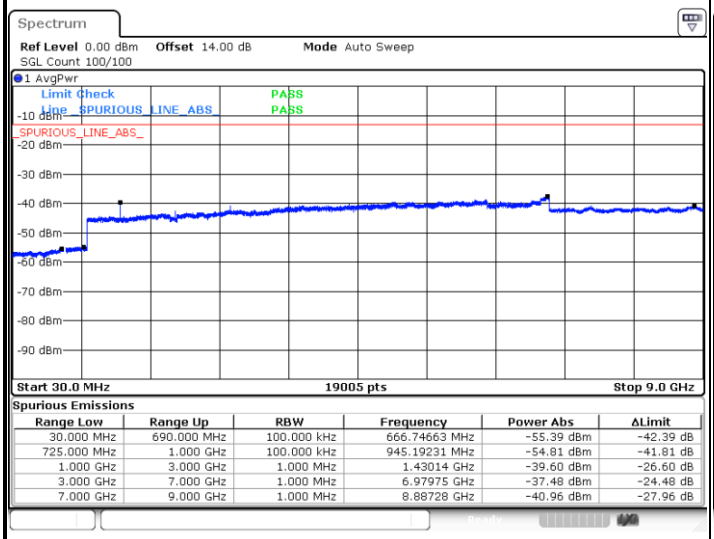

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 668.06597 MHz | -55.16 dBm | -42.16 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 988.87363 MHz | -54.53 dBm | -41.53 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.82879 GHz | -41.20 dBm | -28.20 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.97925 GHz | -37.38 dBm | -24.38 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 8.87828 GHz | -40.74 dBm | -27.74 dB |

Date: 14.DEC.2020 17:26:43

## LTE Band 12 / 1.4MHz

### Highest Channel / QPSK

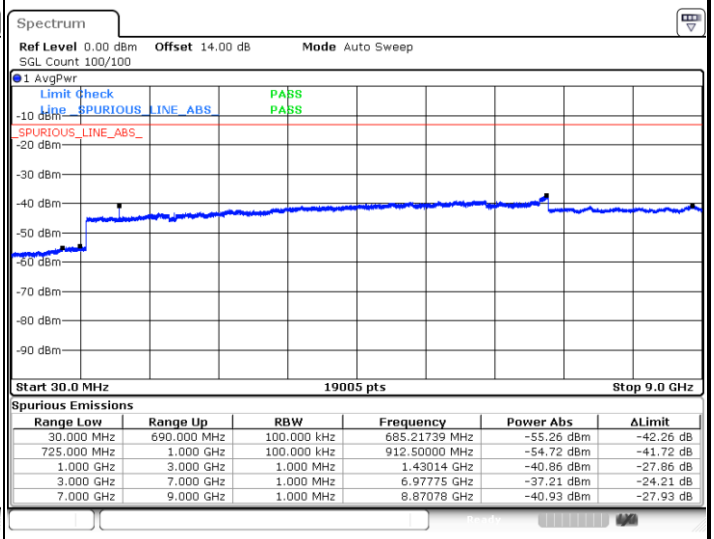



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 666.74663 MHz | -55.39 dBm | -42.39 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 945.19231 MHz | -54.81 dBm | -41.81 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.43014 GHz | -39.60 dBm | -26.60 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.97975 GHz | -37.48 dBm | -24.48 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 8.88728 GHz | -40.96 dBm | -27.96 dB |

Date: 14.DEC.2020 17:31:57

### Highest Channel / 16QAM



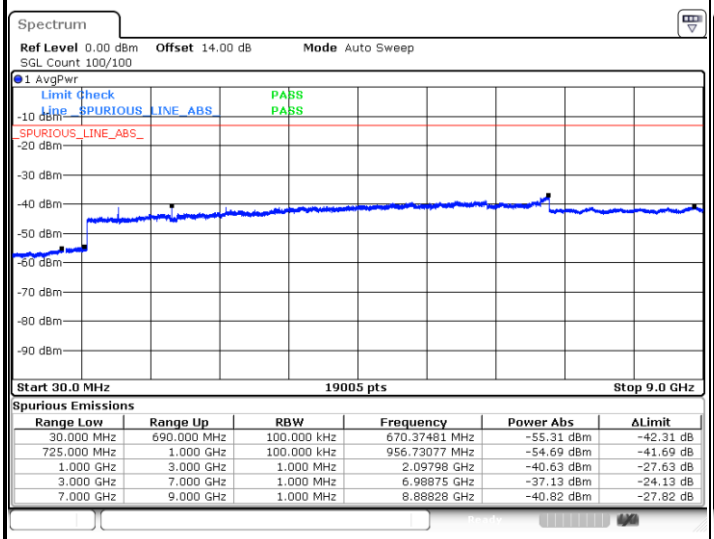

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 685.21739 MHz | -55.26 dBm | -42.26 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 912.50000 MHz | -54.72 dBm | -41.72 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.43014 GHz | -40.86 dBm | -27.86 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.97775 GHz | -37.21 dBm | -24.21 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 8.87078 GHz | -40.93 dBm | -27.93 dB |

Date: 14.DEC.2020 17:32:42

## LTE Band 12 / 3MHz

### Lowest Channel / QPSK

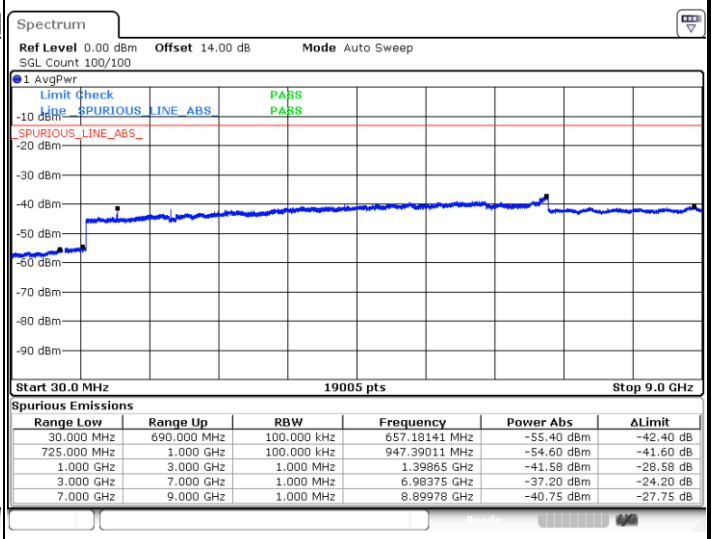



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 670.37481 MHz | -55.31 dBm | -42.31 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 956.73077 MHz | -54.69 dBm | -41.69 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.09798 GHz | -40.63 dBm | -27.63 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.98875 GHz | -37.13 dBm | -24.13 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 8.88828 GHz | -40.82 dBm | -27.82 dB |

Date: 14.DEC.2020 18:01:30

### Lowest Channel / 16QAM



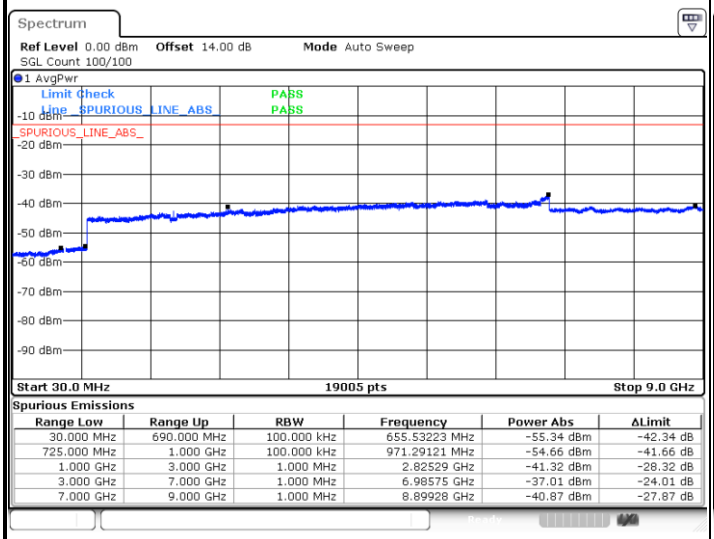

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 657.18141 MHz | -55.40 dBm | -42.40 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 947.39011 MHz | -54.60 dBm | -41.60 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.39865 GHz | -41.58 dBm | -28.58 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.98375 GHz | -37.20 dBm | -24.20 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 8.89978 GHz | -40.75 dBm | -27.75 dB |

Date: 14.DEC.2020 18:02:17

## LTE Band 12 / 3MHz

### Middle Channel / QPSK

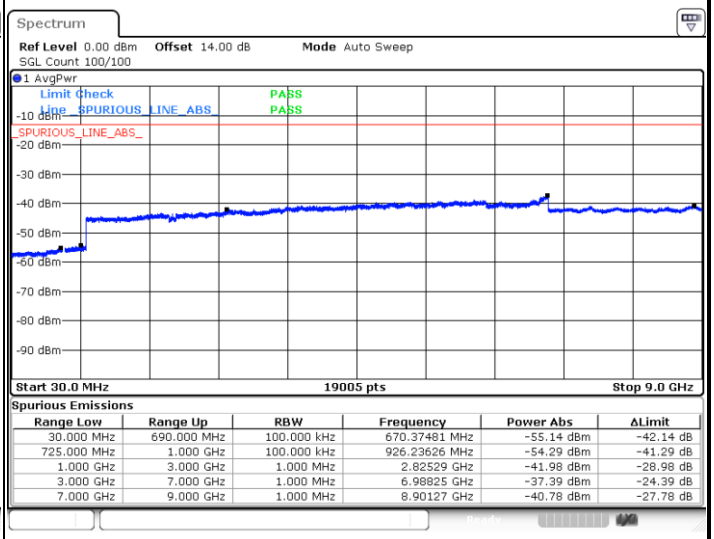



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 655.53223 MHz | -55.34 dBm | -42.34 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 971.29121 MHz | -54.66 dBm | -41.66 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.82529 GHz | -41.32 dBm | -28.32 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.98575 GHz | -37.01 dBm | -24.01 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 8.89928 GHz | -40.87 dBm | -27.87 dB |

Date: 14.DEC.2020 18:04:44

### Middle Channel / 16QAM

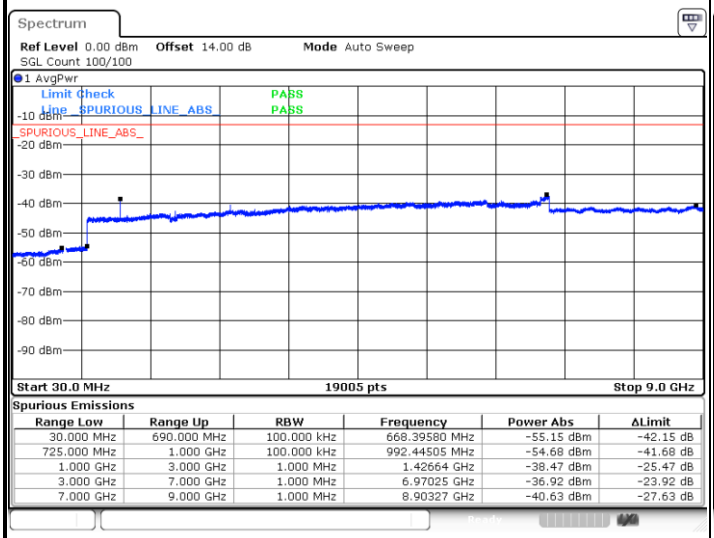



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 670.37481 MHz | -55.14 dBm | -42.14 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 926.23626 MHz | -54.29 dBm | -41.29 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.82529 GHz | -41.98 dBm | -28.98 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.98825 GHz | -37.39 dBm | -24.39 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 8.90127 GHz | -40.78 dBm | -27.78 dB |

Date: 14.DEC.2020 18:03:56

### Highest Channel / QPSK

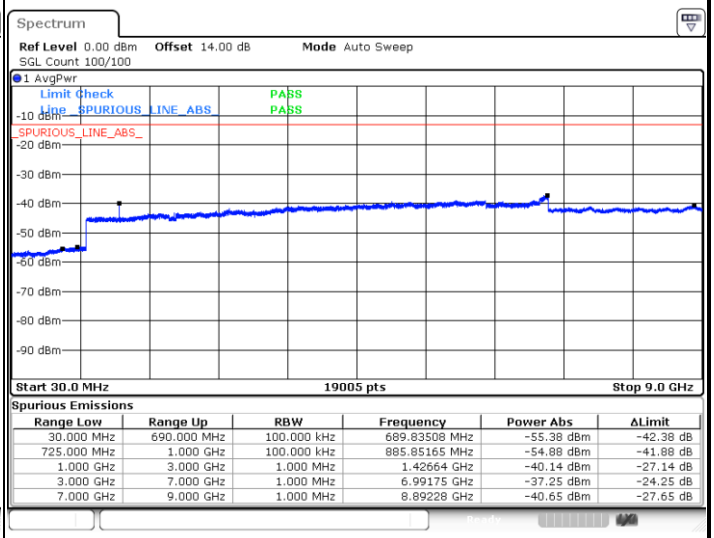



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 668.39580 MHz | -55.15 dBm | -42.15 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 992.44505 MHz | -54.68 dBm | -41.68 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.42664 GHz | -38.47 dBm | -25.47 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.97025 GHz | -36.92 dBm | -23.92 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 8.90327 GHz | -40.63 dBm | -27.63 dB |

Date: 14.DEC.2020 18:09:15

### Highest Channel / 16QAM



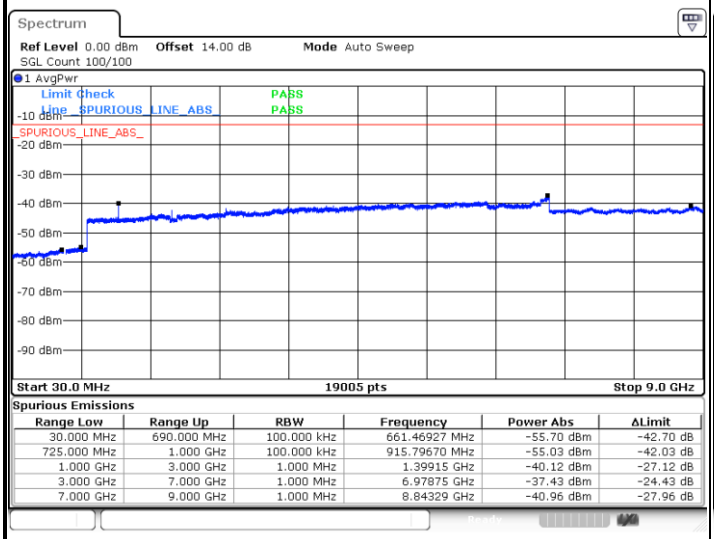

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 689.83508 MHz | -55.38 dBm | -42.38 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 885.85165 MHz | -54.88 dBm | -41.88 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.42664 GHz | -40.14 dBm | -27.14 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.99175 GHz | -37.25 dBm | -24.25 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 8.89228 GHz | -40.65 dBm | -27.65 dB |

Date: 14.DEC.2020 18:10:03

## LTE Band 12 / 5MHz

### Lowest Channel / QPSK

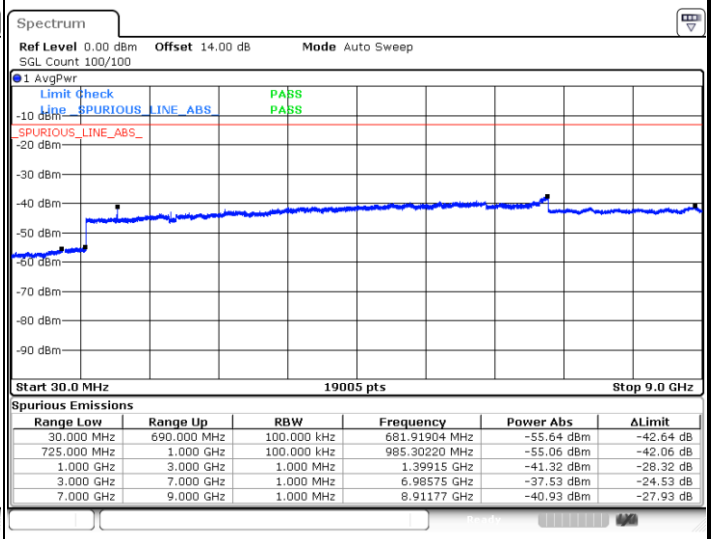



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 661.46927 MHz | -55.70 dBm | -42.70 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 915.79670 MHz | -55.03 dBm | -42.03 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.39915 GHz | -40.12 dBm | -27.12 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.97875 GHz | -37.43 dBm | -24.43 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 8.84329 GHz | -40.96 dBm | -27.96 dB |

Date: 16.DEC.2020 10:10:38

### Lowest Channel / 16QAM

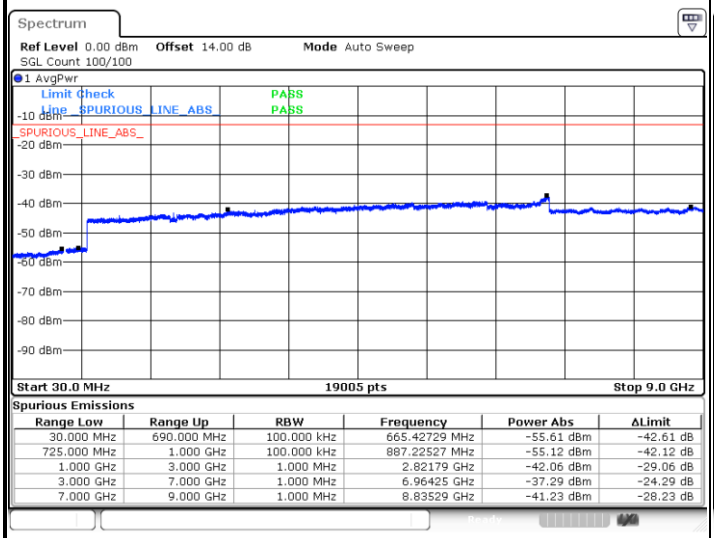



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 681.91904 MHz | -55.64 dBm | -42.64 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 985.30220 MHz | -55.06 dBm | -42.06 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.39915 GHz | -41.32 dBm | -28.32 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.98575 GHz | -37.53 dBm | -24.53 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 8.91177 GHz | -40.93 dBm | -27.93 dB |

Date: 16.DEC.2020 10:08:10

### Middle Channel / QPSK

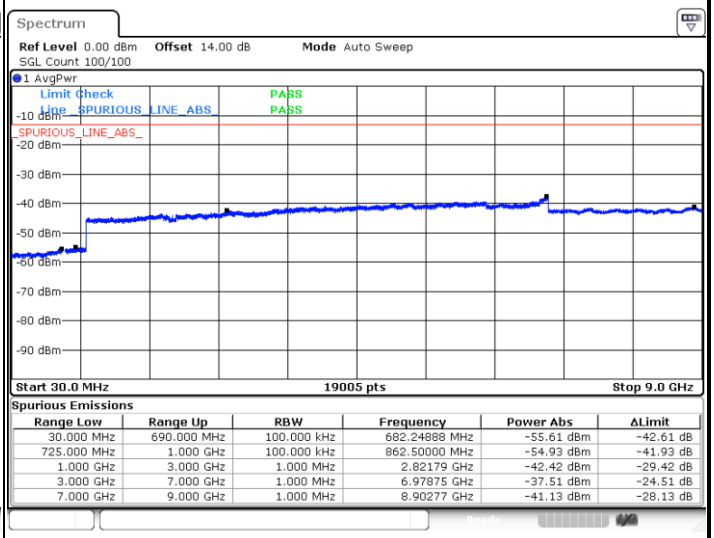



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 665.42729 MHz | -55.61 dBm | -42.61 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 887.22527 MHz | -55.12 dBm | -42.12 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.82179 GHz | -42.06 dBm | -29.06 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.96425 GHz | -37.29 dBm | -24.29 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 8.83529 GHz | -41.23 dBm | -28.23 dB |

Date: 16.DEC.2020 10:14:39

### Middle Channel / 16QAM



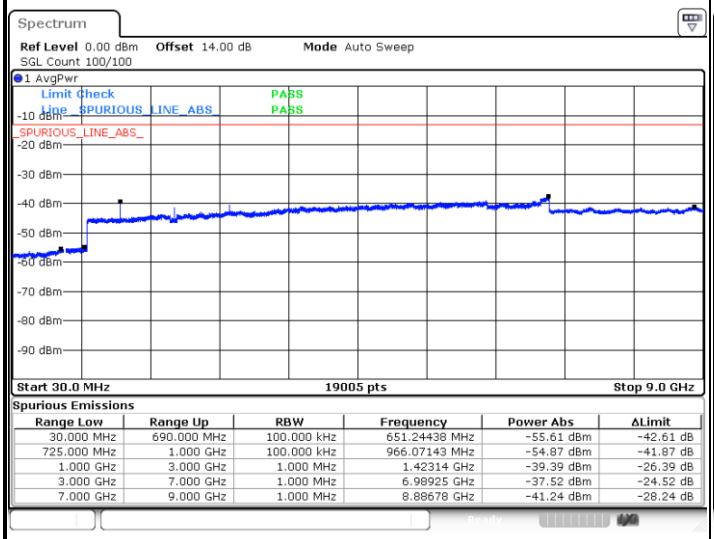

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 682.24888 MHz | -55.61 dBm | -42.61 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 862.50000 MHz | -54.93 dBm | -41.93 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.82179 GHz | -42.42 dBm | -29.42 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.97875 GHz | -37.51 dBm | -24.51 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 8.90277 GHz | -41.13 dBm | -28.13 dB |

Date: 16.DEC.2020 10:16:36

## LTE Band 12 / 5MHz

### Highest Channel / QPSK

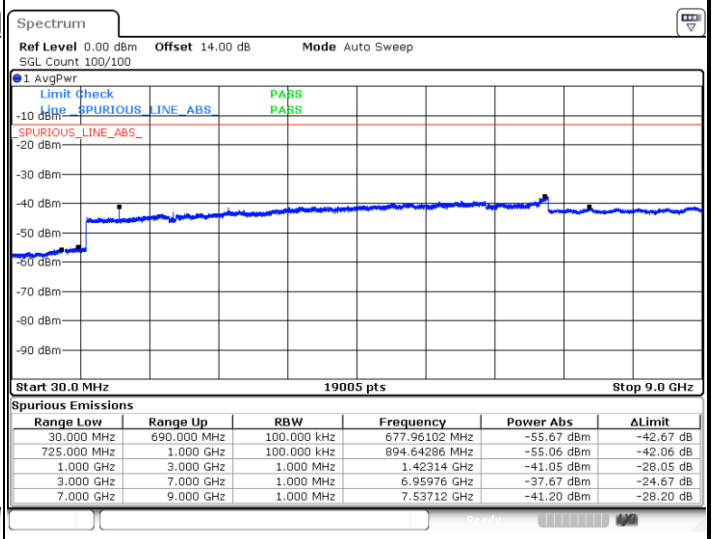



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 651.24438 MHz | -55.61 dBm | -42.61 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 966.07143 MHz | -54.87 dBm | -41.87 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.42314 GHz | -39.39 dBm | -26.39 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.98925 GHz | -37.52 dBm | -24.52 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 8.88678 GHz | -41.24 dBm | -28.24 dB |

Date: 16.DEC.2020 10:23:00

### Highest Channel / 16QAM



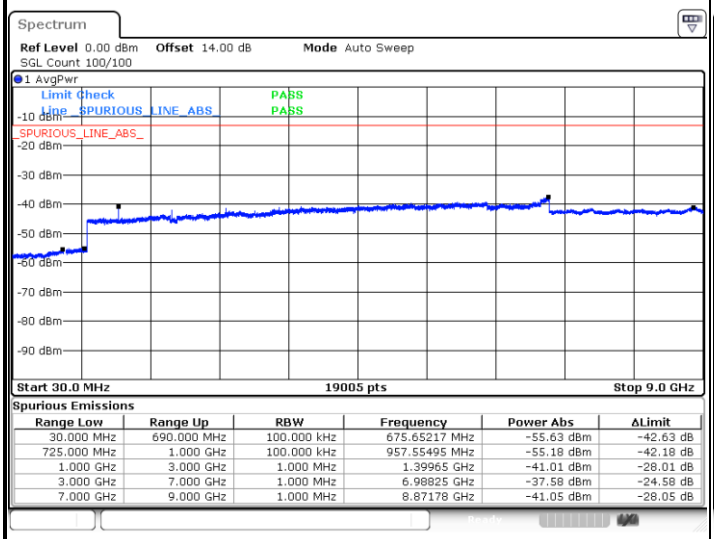

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 677.96102 MHz | -55.67 dBm | -42.67 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 894.64286 MHz | -55.06 dBm | -42.06 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.42314 GHz | -41.05 dBm | -28.05 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.95976 GHz | -37.67 dBm | -24.67 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 7.53712 GHz | -41.20 dBm | -28.20 dB |

Date: 16.DEC.2020 10:21:30

## LTE Band 12 / 10MHz

### Lowest Channel / QPSK

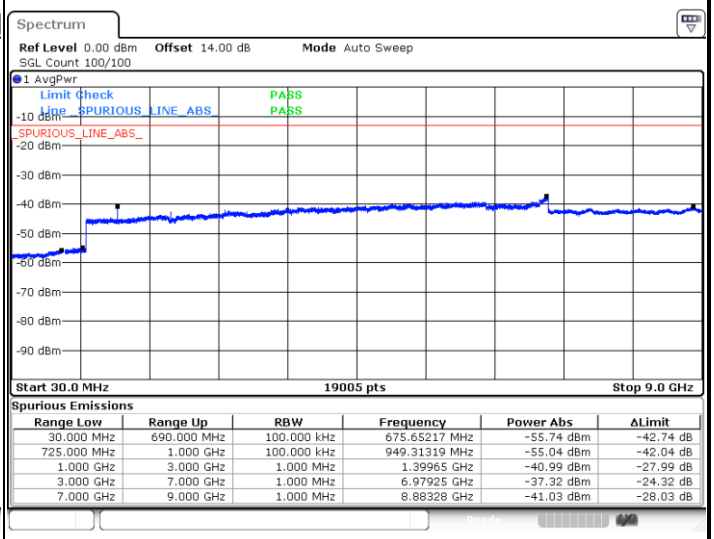



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 675.65217 MHz | -55.63 dBm | -42.63 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 957.55495 MHz | -55.18 dBm | -42.18 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.39965 GHz | -41.01 dBm | -28.01 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.98825 GHz | -37.58 dBm | -24.58 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 8.87178 GHz | -41.05 dBm | -28.05 dB |

Date: 16.DEC.2020 11:55:22

### Lowest Channel / 16QAM



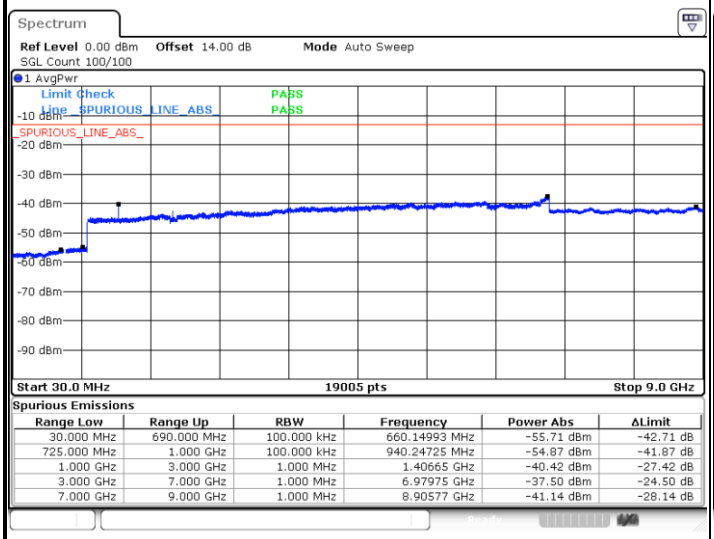

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 675.65217 MHz | -55.74 dBm | -42.74 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 949.31319 MHz | -55.04 dBm | -42.04 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.39965 GHz | -40.99 dBm | -27.99 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.97925 GHz | -37.32 dBm | -24.32 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 8.88328 GHz | -41.03 dBm | -28.03 dB |

Date: 16.DEC.2020 10:47:59

## LTE Band 12 / 10MHz

### Middle Channel / QPSK

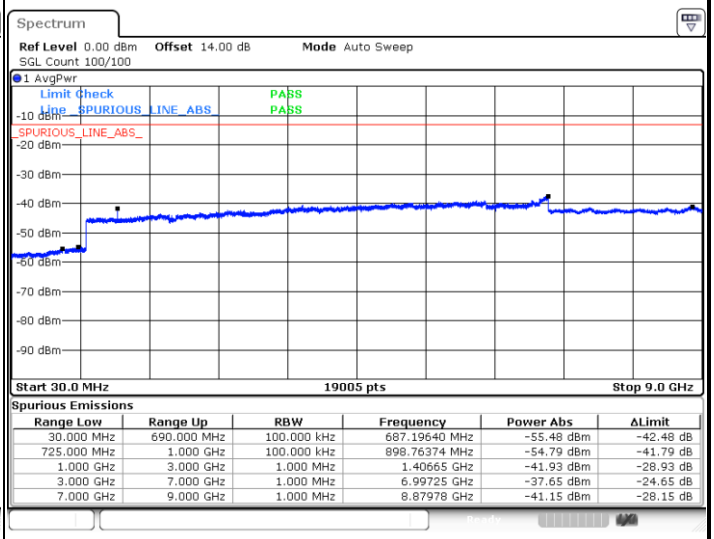



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 660.14993 MHz | -55.71 dBm | -42.71 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 940.24725 MHz | -54.87 dBm | -41.87 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.40665 GHz | -40.42 dBm | -27.42 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.97975 GHz | -37.50 dBm | -24.50 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 8.90577 GHz | -41.14 dBm | -28.14 dB |

Date: 16.DEC.2020 11:56:57

### Middle Channel / 16QAM

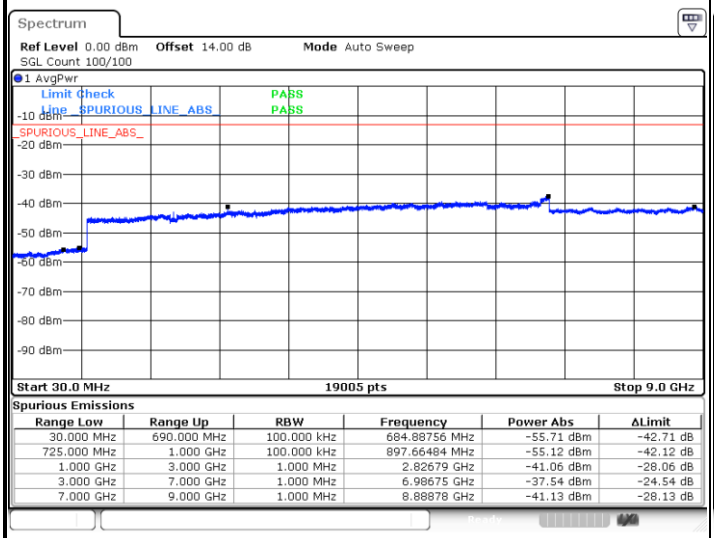



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 687.19640 MHz | -55.48 dBm | -42.48 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 898.76374 MHz | -54.79 dBm | -41.79 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.40665 GHz | -41.93 dBm | -28.93 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.99725 GHz | -37.65 dBm | -24.65 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 8.87978 GHz | -41.15 dBm | -28.15 dB |

Date: 16.DEC.2020 11:59:06

### Highest Channel / QPSK

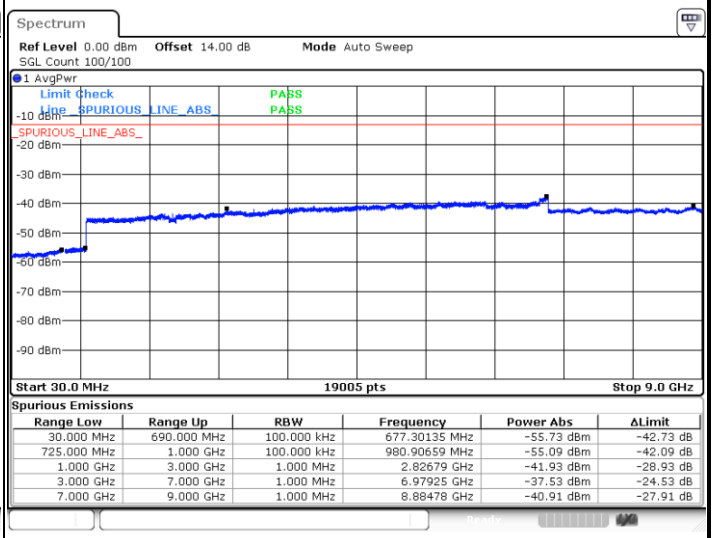



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 684.88756 MHz | -55.71 dBm | -42.71 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 897.66484 MHz | -55.12 dBm | -42.12 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.82679 GHz | -41.06 dBm | -28.06 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.98675 GHz | -37.54 dBm | -24.54 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 8.88878 GHz | -41.13 dBm | -28.13 dB |

Date: 16.DEC.2020 20:11:00

### Highest Channel / 16QAM




Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 677.30135 MHz | -55.73 dBm | -42.73 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 980.90659 MHz | -55.09 dBm | -42.09 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.82679 GHz | -41.93 dBm | -28.93 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.97925 GHz | -37.53 dBm | -24.53 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 8.88478 GHz | -40.91 dBm | -27.91 dB |

Date: 16.DEC.2020 14:02:36

# Frequency Stability

| Test Conditions | | LTE Band 12 (QPSK) / Middle Channel | Limit |
|---|---|---|---|
| Temperature (°C) | Voltage (Volt) | BW 10MHz | Note 2. |
| | | Deviation (ppm) | Result |
| 50 | Normal Voltage | 0.0092 | PASS |
| 40 | Normal Voltage | 0.0110 | |
| 30 | Normal Voltage | 0.0004 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0085 | |
| 0 | Normal Voltage | 0.0011 | |
| -10 | Normal Voltage | 0.0082 | |
| -20 | Normal Voltage | 0.0004 | |
| -30 | Normal Voltage | 0.0003 | |
| 20 | Maximum Voltage | 0.0016 | |
| 20 | Normal Voltage | 0.0000 | |
| 20 | Battery End Point | 0.0011 | |

**Note:**

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.2 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

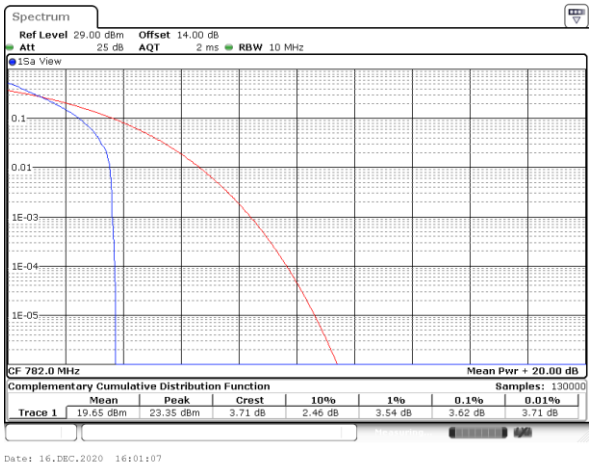
# LTE Band 13

## Peak-to-Average Ratio

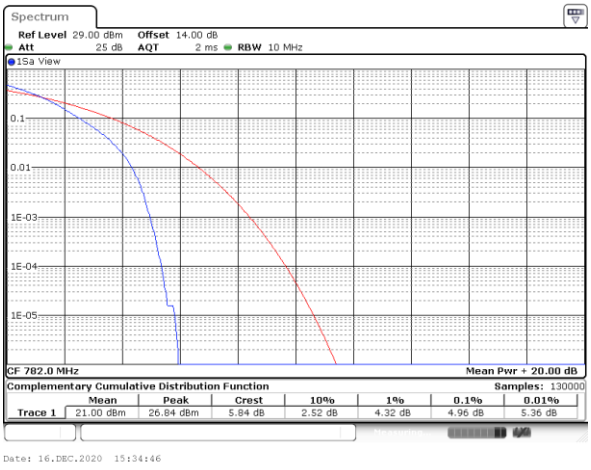
| Mode | LTE Band 13 / 10MHz | | | | |
|---|---|---|---|---|---|
| Mod. | QPSK | | 16QAM | | Limit: 13dB |
| RB Size | 1RB | Full RB | 1RB | Full RB | Result |
| Lowest CH | - | - | - | - | PASS |
| Middle CH | 3.62 | 4.96 | 4.35 | 6.12 | |
| Highest CH | - | - | - | - | |

## LTE Band 13 / 10MHz / QPSK

### Middle Channel / 1RB

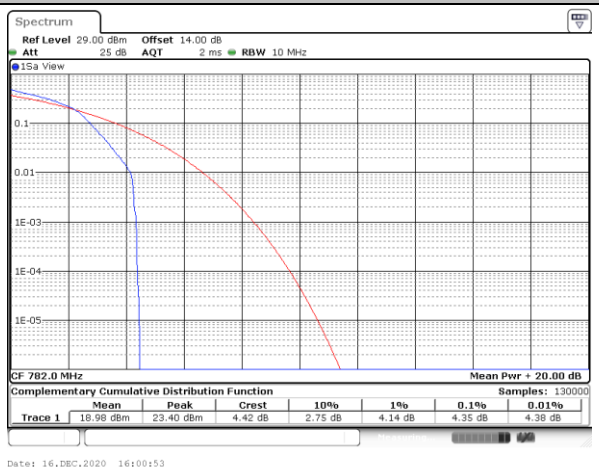



### Middle Channel / Full RB

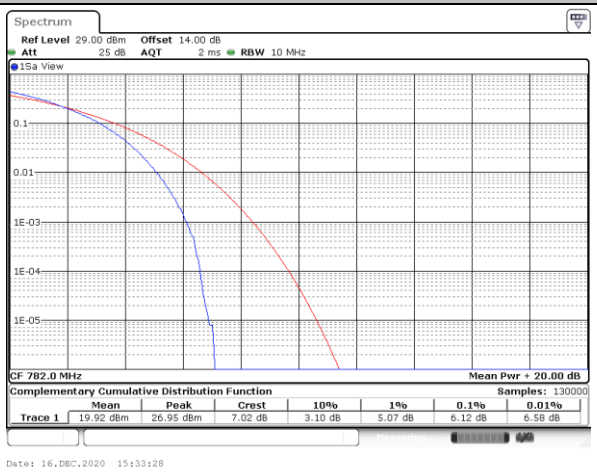



## LTE Band 13 / 10MHz / 16QAM

### Middle Channel / 1RB




### Middle Channel / Full RB

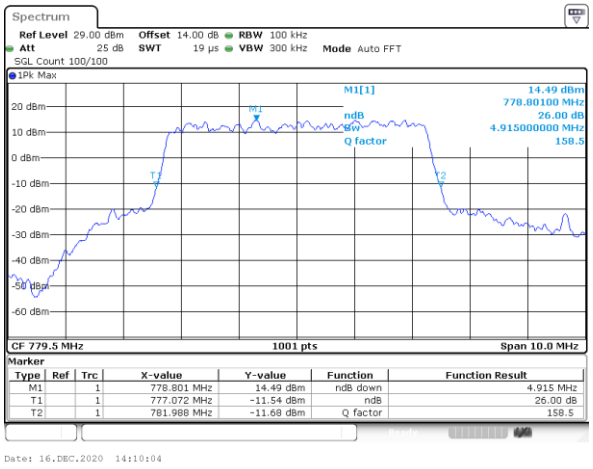


# 26dB Bandwidth

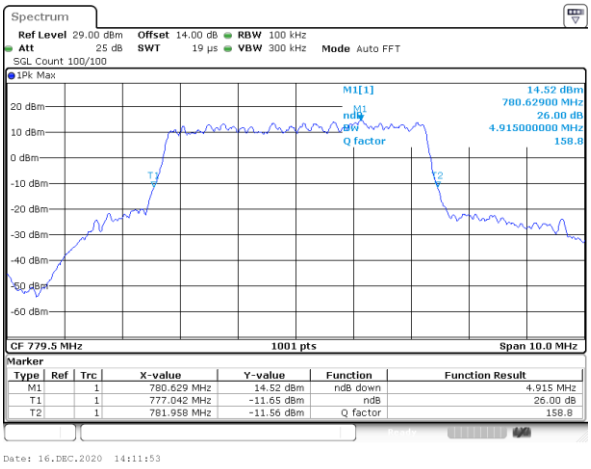
| Mode | LTE Band 13 : 26dB BW(MHz) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM |
| Lowest CH | - | - | - | - | 4.92 | 4.92 | - | - | - | - | - | - |
| Middle CH | - | - | - | - | 4.89 | 4.87 | 9.67 | 9.89 | - | - | - | - |
| Highest CH | - | - | - | - | 4.96 | 4.94 | - | - | - | - | - | - |

## LTE Band 13

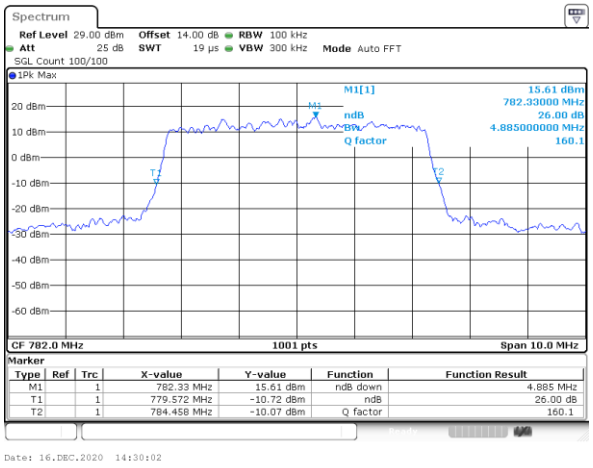
### Lowest Channel / 5MHz / QPSK



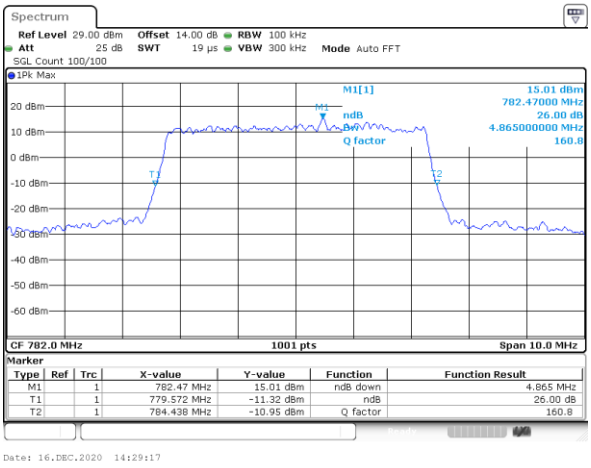

### Lowest Channel / 5MHz / 16QAM



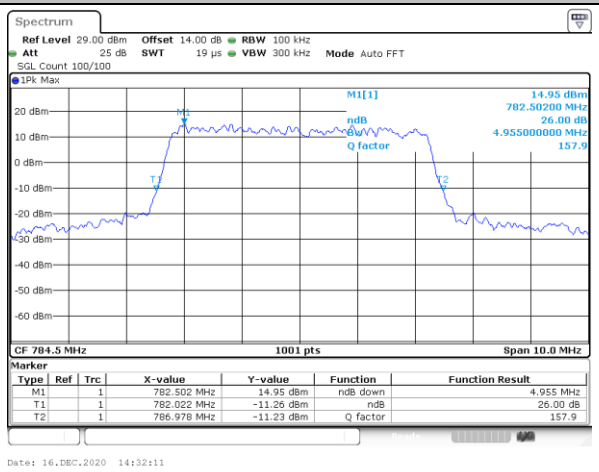

### Middle Channel / 5MHz / QPSK



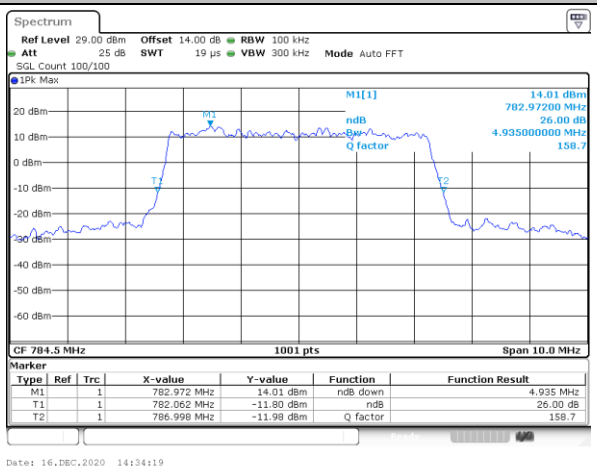

### Middle Channel / 5MHz / 16QAM

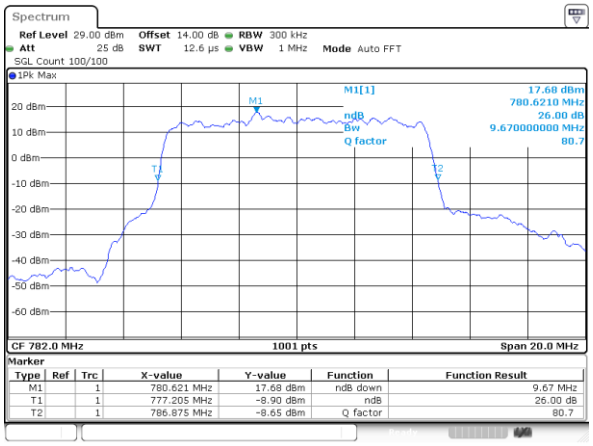
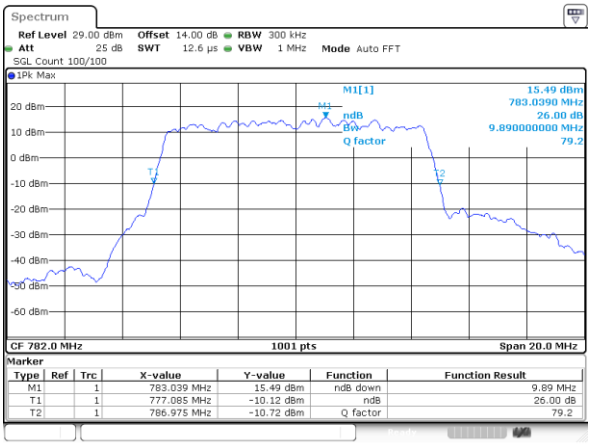



### Highest Channel / 5MHz / QPSK




### Highest Channel / 5MHz / 16QAM



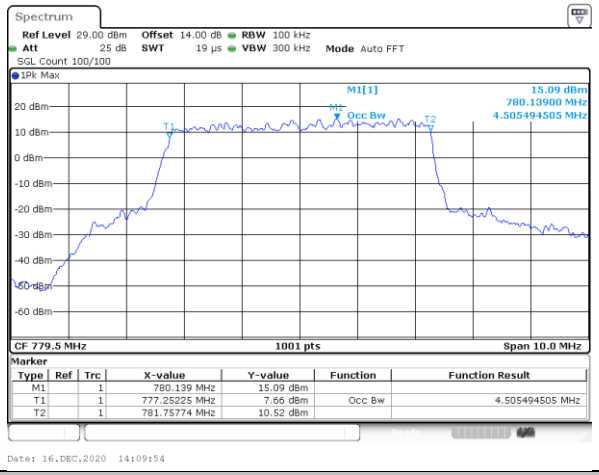
| LTE Band 13 | |
|---|---|
| **Middle Channel / 10MHz / QPSK** | **Middle Channel / 10MHz / 16QAM** |
|  |  |

# Occupied Bandwidth

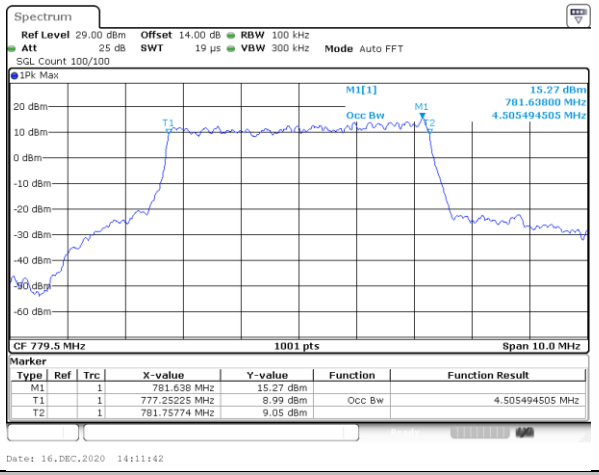
| Mode | LTE Band 13 : 99%OBW(MHz) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM |
| Lowest CH | - | - | - | - | 4.51 | 4.51 | - | - | - | - | - | - |
| Middle CH | - | - | - | - | 4.47 | 4.48 | 9.01 | 8.99 | - | - | - | - |
| Highest CH | - | - | - | - | 4.51 | 4.48 | - | - | - | - | - | - |

## LTE Band 13

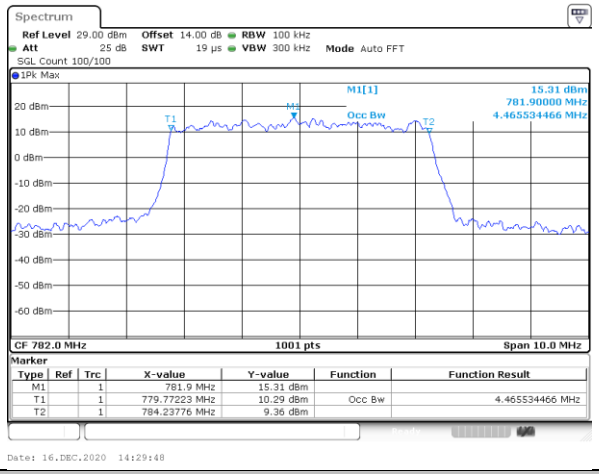
### Lowest Channel / 5MHz / QPSK



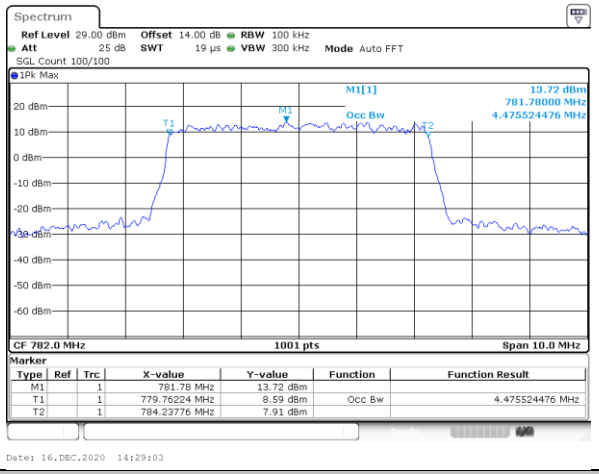

### Lowest Channel / 5MHz / 16QAM



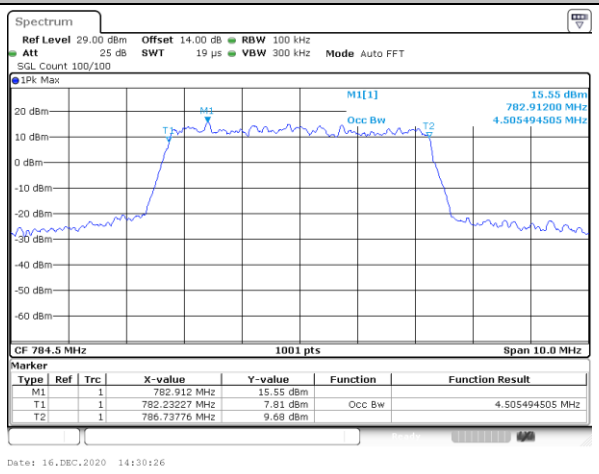

### Middle Channel / 5MHz / QPSK



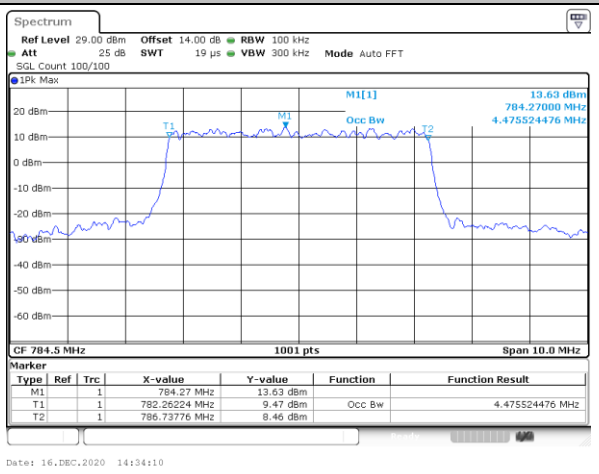

### Middle Channel / 5MHz / 16QAM



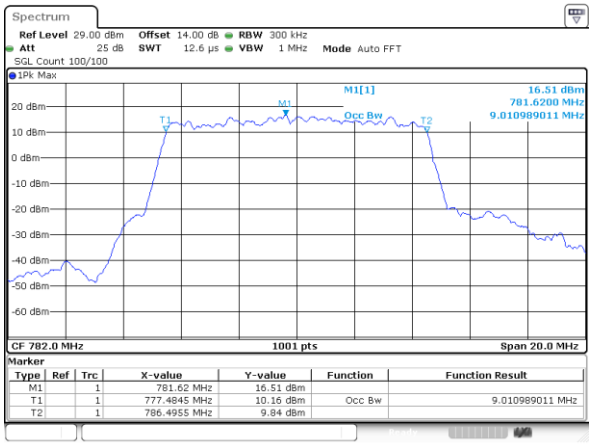

### Highest Channel / 5MHz / QPSK

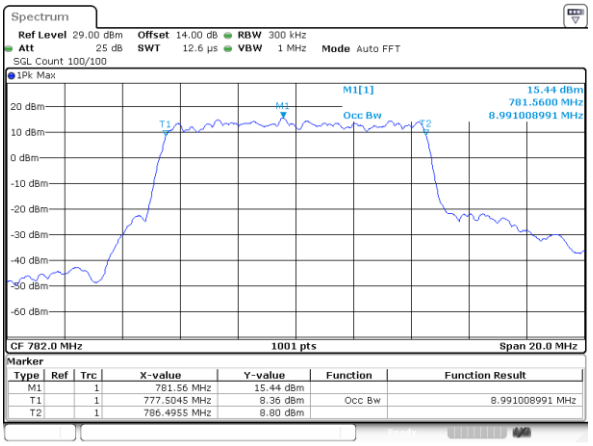



### Highest Channel / 5MHz / 16QAM



| LTE Band 13 | |
|---|---|
| **Middle Channel / 10MHz / QPSK** | **Middle Channel / 10MHz / 16QAM** |

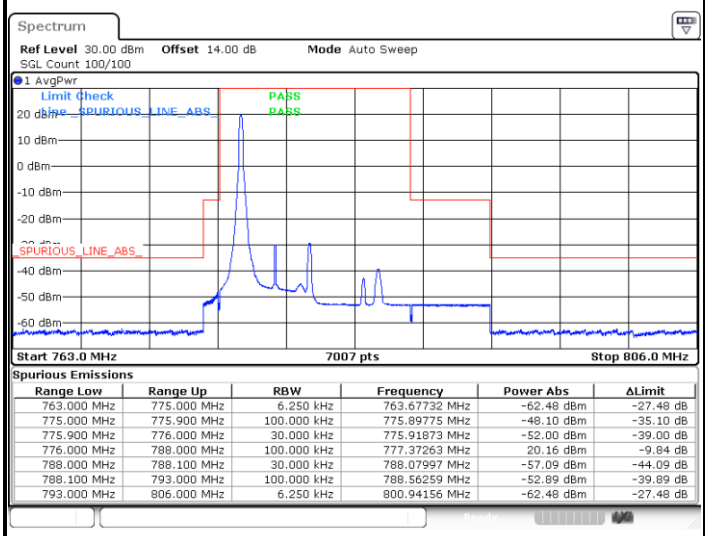


# Conducted Band Edge

## LTE Band 13 / 5MHz / QPSK

### Lowest Band Edge / 1 RB

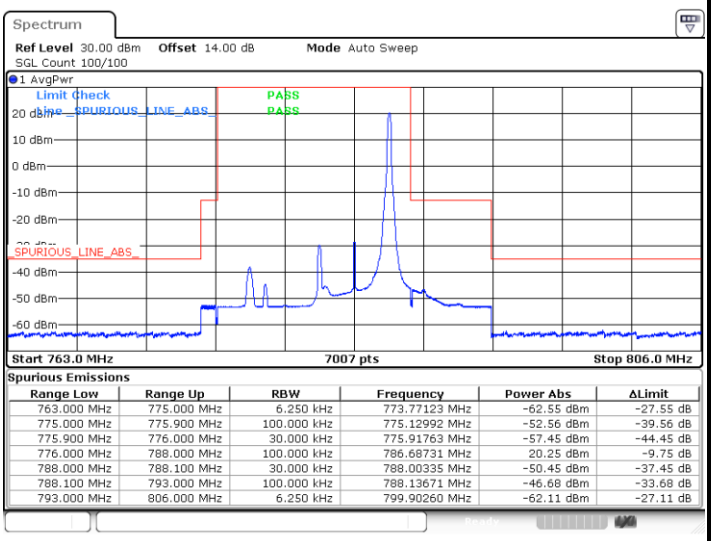



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 763.67732 MHz | -62.48 dBm | -27.48 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.89775 MHz | -48.10 dBm | -35.10 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.91873 MHz | -52.00 dBm | -39.00 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 777.37263 MHz | 20.16 dBm | -9.84 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.07997 MHz | -57.09 dBm | -44.09 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 788.56259 MHz | -52.89 dBm | -39.89 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 800.94156 MHz | -62.48 dBm | -27.48 dB |

Date: 16.DEC.2020 14:23:09

### Highest Band Edge / 1 RB

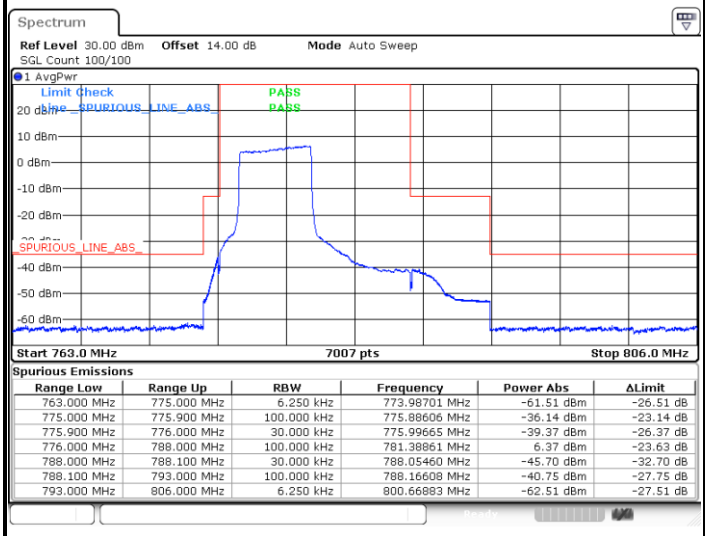



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 773.77123 MHz | -62.55 dBm | -27.55 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.12992 MHz | -52.56 dBm | -39.56 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.91763 MHz | -57.45 dBm | -44.45 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 786.68731 MHz | 20.25 dBm | -9.75 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.00335 MHz | -50.45 dBm | -37.45 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 788.13671 MHz | -46.68 dBm | -33.68 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 799.90260 MHz | -62.11 dBm | -27.11 dB |

Date: 16.DEC.2020 15:10:47

### Lowest Band Edge / Full RB

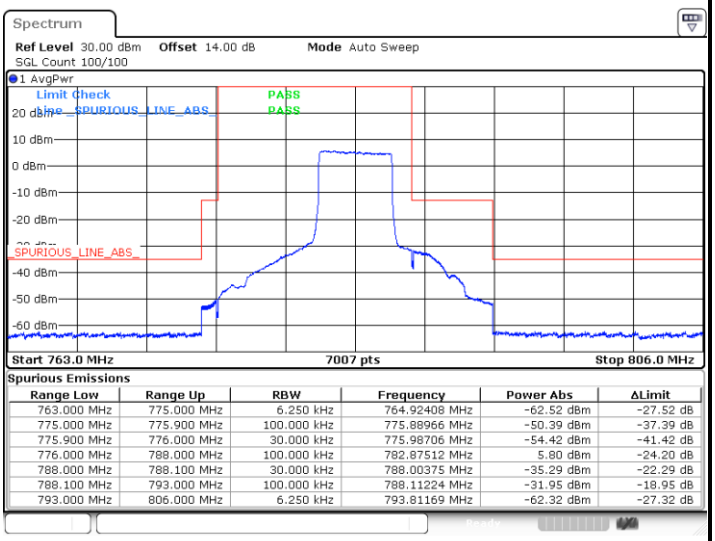



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 773.98701 MHz | -61.51 dBm | -26.51 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.88606 MHz | -36.14 dBm | -23.14 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.99665 MHz | -39.37 dBm | -26.37 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 781.38861 MHz | 6.37 dBm | -23.63 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.05460 MHz | -45.70 dBm | -32.70 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 788.16608 MHz | -40.75 dBm | -27.75 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 800.66883 MHz | -62.51 dBm | -27.51 dB |

Date: 16.DEC.2020 14:11:25

### Highest Band Edge / Full RB



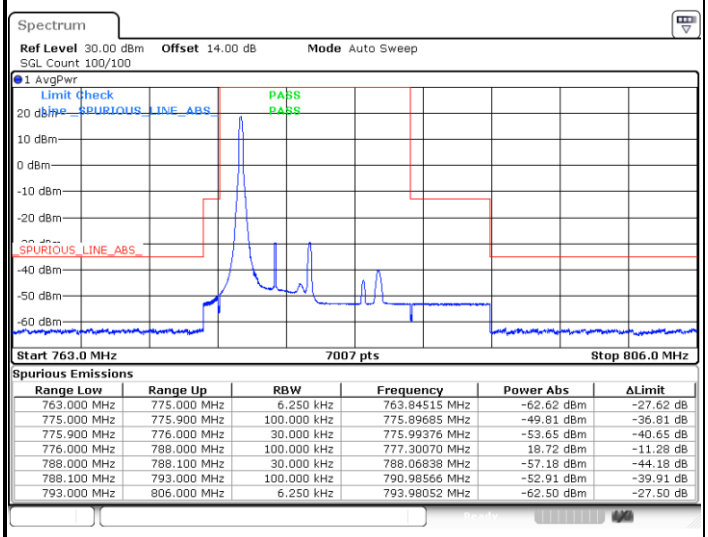

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 764.92408 MHz | -62.52 dBm | -27.52 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.88966 MHz | -50.39 dBm | -37.39 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.98706 MHz | -54.42 dBm | -41.42 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 782.87512 MHz | 5.80 dBm | -24.20 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.00375 MHz | -35.29 dBm | -22.29 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 788.11224 MHz | -31.95 dBm | -18.95 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 793.81169 MHz | -62.32 dBm | -27.32 dB |

Date: 16.DEC.2020 14:33:25

## LTE Band 13 / 5MHz / 16QAM

### Lowest Band Edge / 1 RB

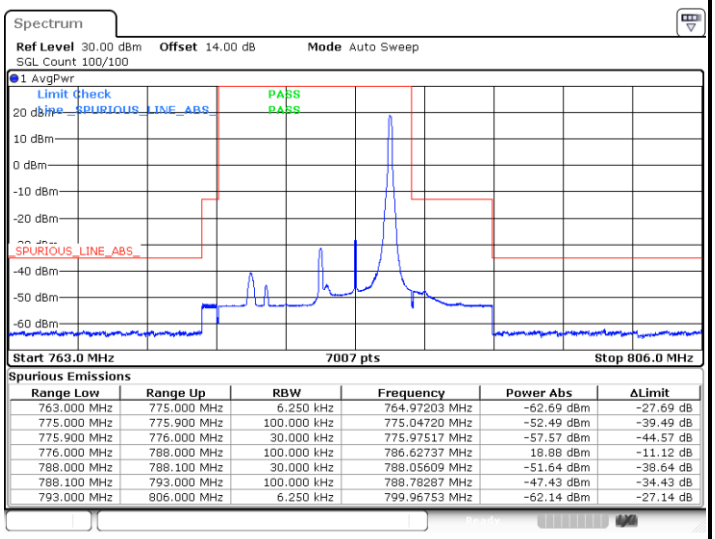



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 763.84515 MHz | -62.62 dBm | -27.62 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.89685 MHz | -49.81 dBm | -36.81 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.99376 MHz | -53.65 dBm | -40.65 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 777.30070 MHz | 18.72 dBm | -11.28 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.06838 MHz | -57.18 dBm | -44.18 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 790.98566 MHz | -52.91 dBm | -39.91 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 793.98052 MHz | -62.50 dBm | -27.50 dB |

Date: 16.DEC.2020 14:20:30

### Highest Band Edge / 1 RB

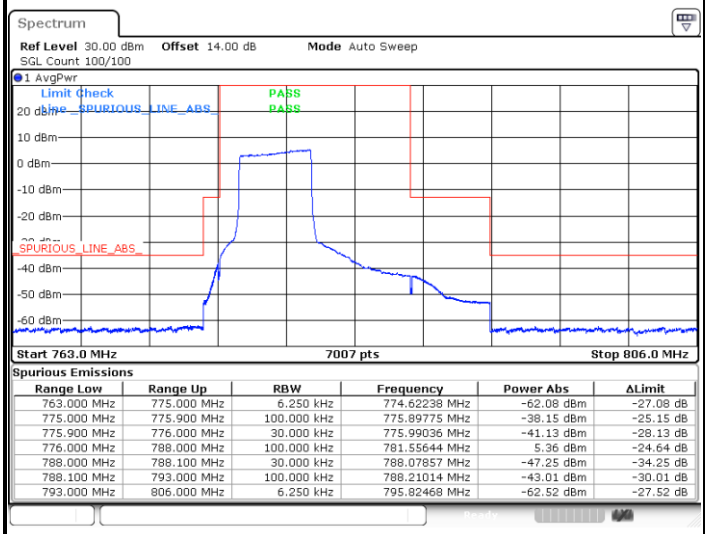



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 764.97203 MHz | -62.69 dBm | -27.69 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.04720 MHz | -52.49 dBm | -39.49 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.97517 MHz | -57.57 dBm | -44.57 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 786.62737 MHz | 18.88 dBm | -11.12 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.05609 MHz | -51.64 dBm | -38.64 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 788.78287 MHz | -47.43 dBm | -34.43 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 799.96753 MHz | -62.14 dBm | -27.14 dB |

Date: 16.DEC.2020 15:13:39

### Lowest Band Edge / Full RB

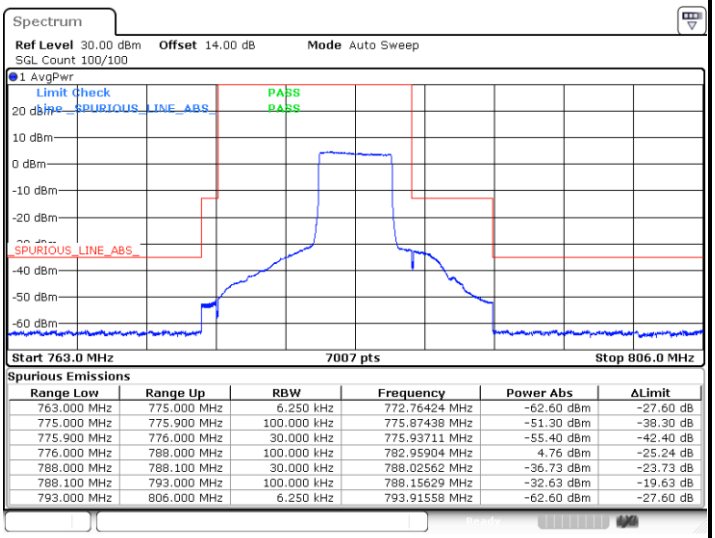



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 774.62238 MHz | -62.08 dBm | -27.08 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.89775 MHz | -38.15 dBm | -25.15 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.99036 MHz | -41.13 dBm | -28.13 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 781.55644 MHz | 5.36 dBm | -24.64 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.07857 MHz | -47.25 dBm | -34.25 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 788.21014 MHz | -43.01 dBm | -30.01 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 795.82468 MHz | -62.52 dBm | -27.52 dB |

Date: 16.DEC.2020 14:13:05

### Highest Band Edge / Full RB



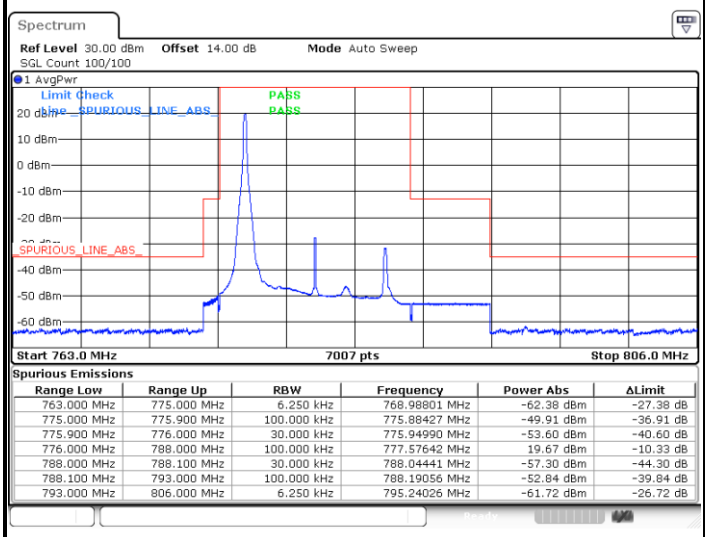

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 772.76424 MHz | -62.60 dBm | -27.60 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.87438 MHz | -51.30 dBm | -38.30 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.93711 MHz | -55.40 dBm | -42.40 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 782.95904 MHz | 4.76 dBm | -25.24 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.02562 MHz | -36.73 dBm | -23.73 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 788.15629 MHz | -32.63 dBm | -19.63 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 793.91558 MHz | -62.60 dBm | -27.60 dB |

Date: 16.DEC.2020 14:35:54

## LTE Band 13 / 10MHz / QPSK

### Lowest Band Edge / 1 RB

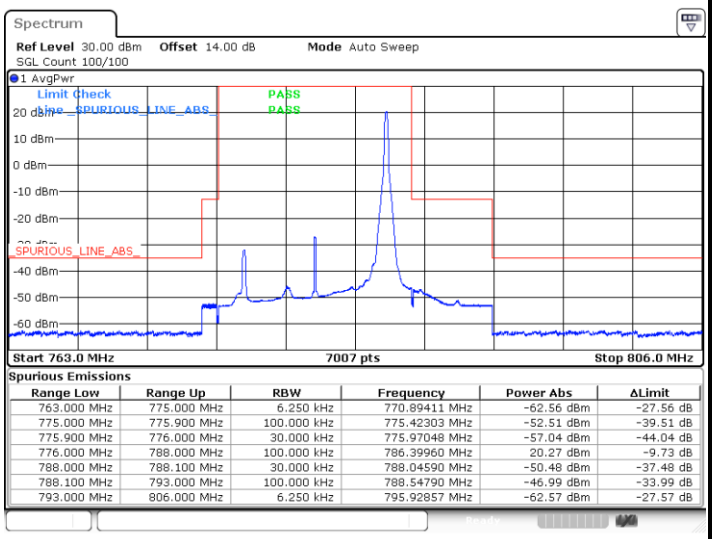



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 768.98801 MHz | -62.38 dBm | -27.38 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.88427 MHz | -49.91 dBm | -36.91 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.94990 MHz | -53.60 dBm | -40.60 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 777.57642 MHz | 19.67 dBm | -10.33 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.04441 MHz | -57.30 dBm | -44.30 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 788.19056 MHz | -52.84 dBm | -39.84 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 795.24026 MHz | -61.72 dBm | -26.72 dB |

Date: 16.DEC.2020 15:57:04

### Highest Band Edge / 1 RB

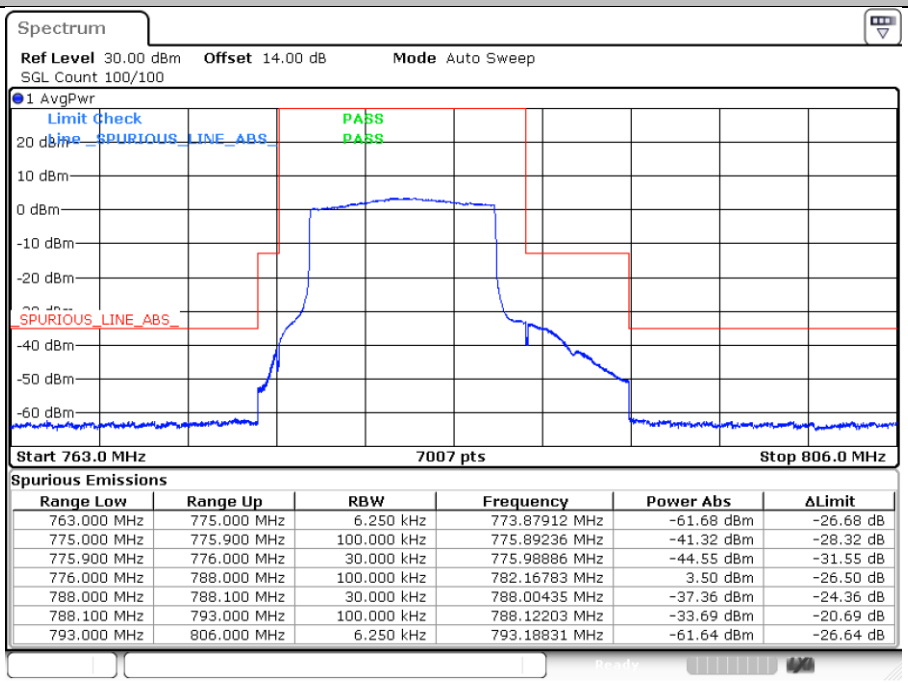



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 770.89411 MHz | -62.56 dBm | -27.56 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.42303 MHz | -52.51 dBm | -39.51 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.97048 MHz | -57.04 dBm | -44.04 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 786.39960 MHz | 20.27 dBm | -9.73 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.04590 MHz | -50.48 dBm | -37.48 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 788.54790 MHz | -46.99 dBm | -33.99 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 795.92857 MHz | -62.57 dBm | -27.57 dB |

Date: 16.DEC.2020 15:55:09

### Band Edge / Full RB



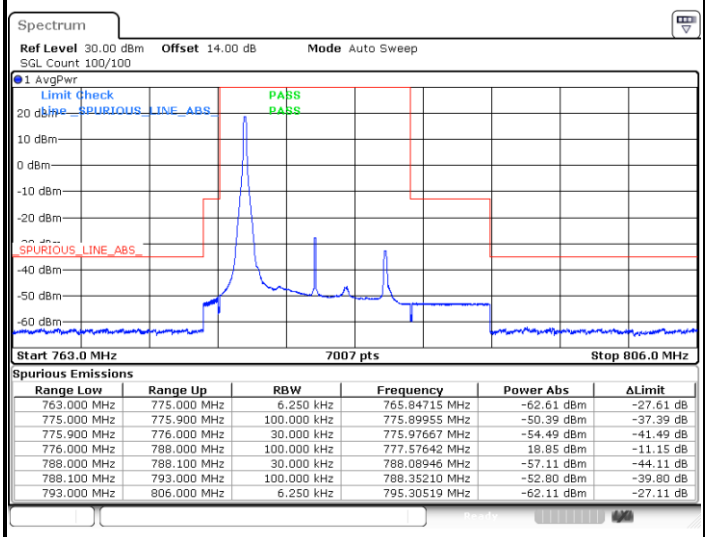

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 773.87912 MHz | -61.68 dBm | -26.68 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.89236 MHz | -41.32 dBm | -28.32 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.98886 MHz | -44.55 dBm | -31.55 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 782.16783 MHz | 3.50 dBm | -26.50 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.00435 MHz | -37.36 dBm | -24.36 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 788.12203 MHz | -33.69 dBm | -20.69 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 793.18831 MHz | -61.64 dBm | -26.64 dB |

Date: 16.DEC.2020 15:36:30

## LTE Band 13 / 10MHz / 16QAM

### Lowest Band Edge / 1 RB

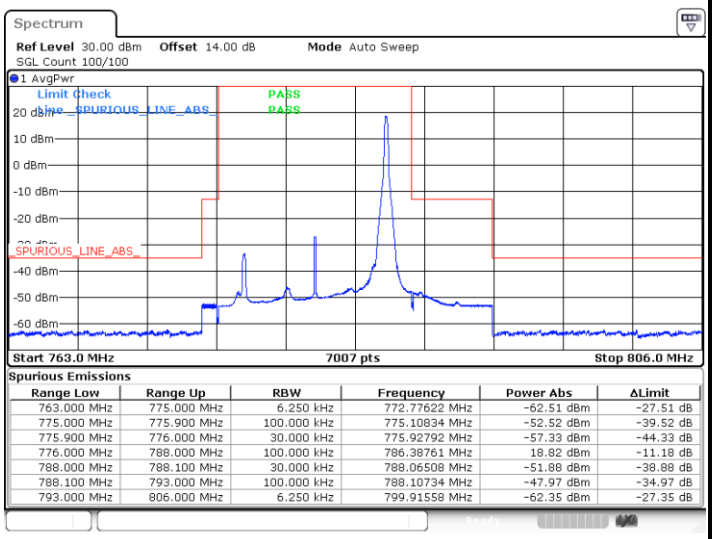



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 765.84715 MHz | -62.61 dBm | -27.61 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.89955 MHz | -50.39 dBm | -37.39 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.97667 MHz | -54.49 dBm | -41.49 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 777.57642 MHz | 18.85 dBm | -11.15 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.08946 MHz | -57.11 dBm | -44.11 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 788.35210 MHz | -52.80 dBm | -39.80 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 795.30519 MHz | -62.11 dBm | -27.11 dB |

Date: 16.DEC.2020 15:58:42

### Highest Band Edge / 1 RB

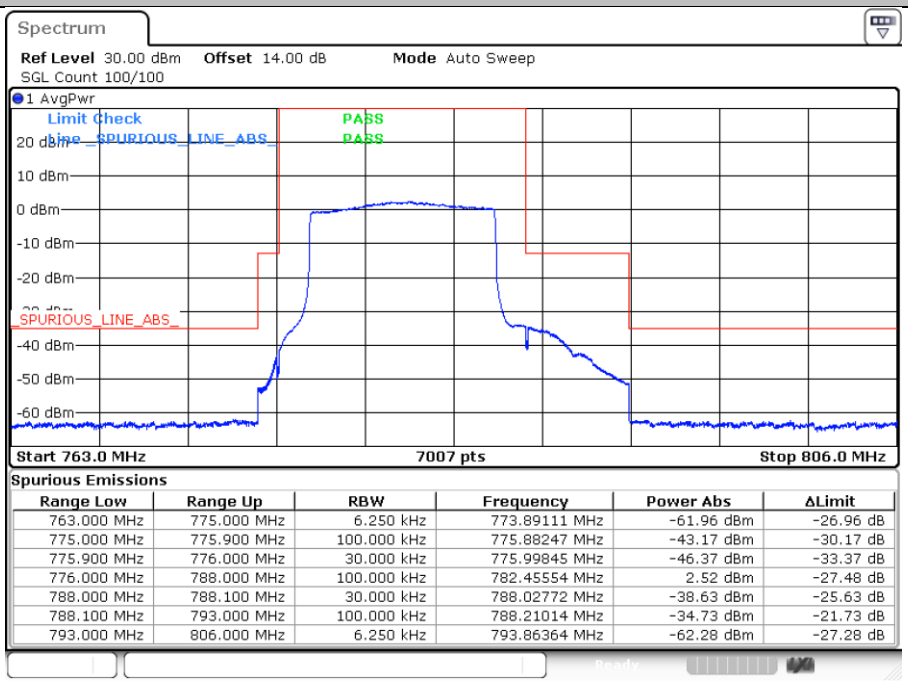



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 772.77622 MHz | -62.51 dBm | -27.51 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.10834 MHz | -52.52 dBm | -39.52 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.92792 MHz | -57.33 dBm | -44.33 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 786.38761 MHz | 18.82 dBm | -11.18 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.06508 MHz | -51.88 dBm | -38.88 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 788.10734 MHz | -47.97 dBm | -34.97 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 799.91558 MHz | -62.35 dBm | -27.35 dB |

Date: 16.DEC.2020 15:53:33

### Band Edge / Full RB




Spurious Emissions

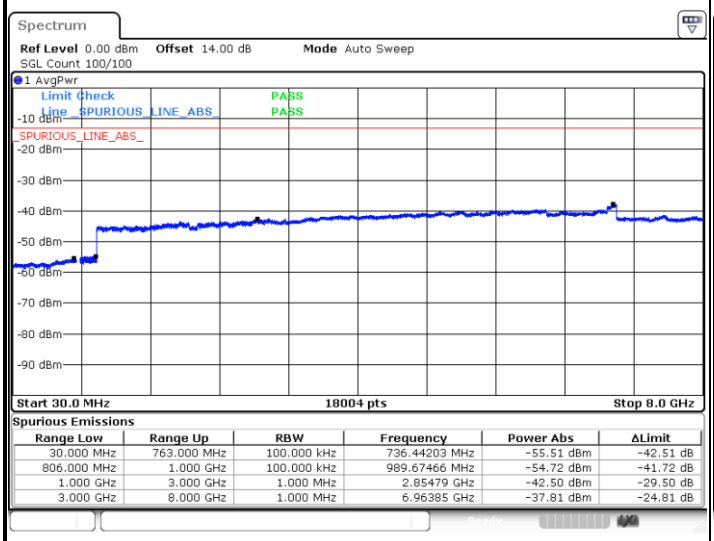
| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 773.89111 MHz | -61.96 dBm | -26.96 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.88247 MHz | -43.17 dBm | -30.17 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.99845 MHz | -46.37 dBm | -33.37 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 782.45554 MHz | 2.52 dBm | -27.48 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.02772 MHz | -38.63 dBm | -25.63 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 788.21014 MHz | -34.73 dBm | -21.73 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 793.86364 MHz | -62.28 dBm | -27.28 dB |

Date: 16.DEC.2020 15:32:55

# Conducted Spurious Emission

## LTE Band 13 / 5MHz

### Lowest Channel / QPSK

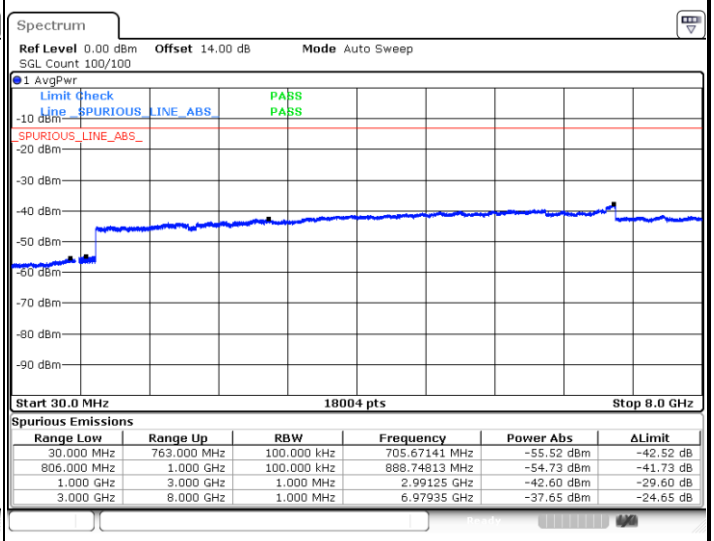



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 763.000 MHz | 100.000 kHz | 736.44203 MHz | -55.51 dBm | -42.51 dB |
| 806.000 MHz | 1.000 GHz | 100.000 kHz | 989.67466 MHz | -54.72 dBm | -41.72 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.85479 GHz | -42.50 dBm | -29.50 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.96385 GHz | -37.81 dBm | -24.81 dB |

Date: 16.DEC.2020 14:24:15

### Lowest Channel / 16QAM

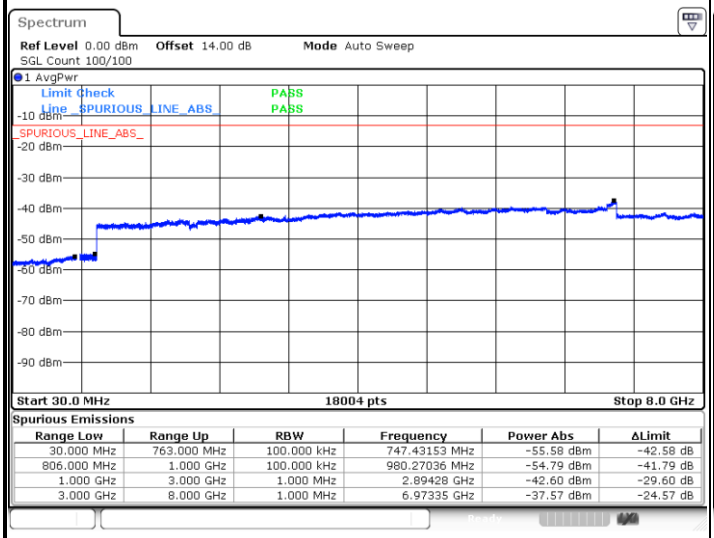



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 763.000 MHz | 100.000 kHz | 705.67141 MHz | -55.52 dBm | -42.52 dB |
| 806.000 MHz | 1.000 GHz | 100.000 kHz | 888.74813 MHz | -54.73 dBm | -41.73 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.99125 GHz | -42.60 dBm | -29.60 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.97935 GHz | -37.65 dBm | -24.65 dB |

Date: 16.DEC.2020 14:21:34

### Middle Channel / QPSK

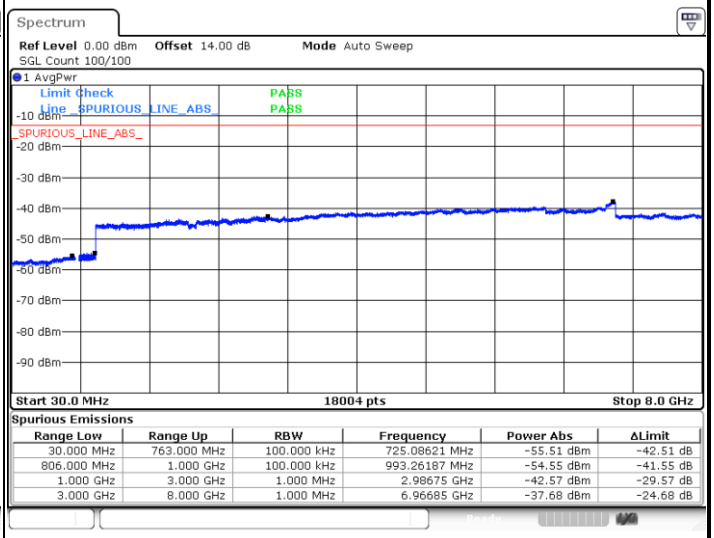



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 763.000 MHz | 100.000 kHz | 747.43153 MHz | -55.58 dBm | -42.58 dB |
| 806.000 MHz | 1.000 GHz | 100.000 kHz | 980.27036 MHz | -54.79 dBm | -41.79 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.89428 GHz | -42.60 dBm | -29.60 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.97335 GHz | -37.57 dBm | -24.57 dB |

Date: 16.DEC.2020 14:25:47

### Middle Channel / 16QAM



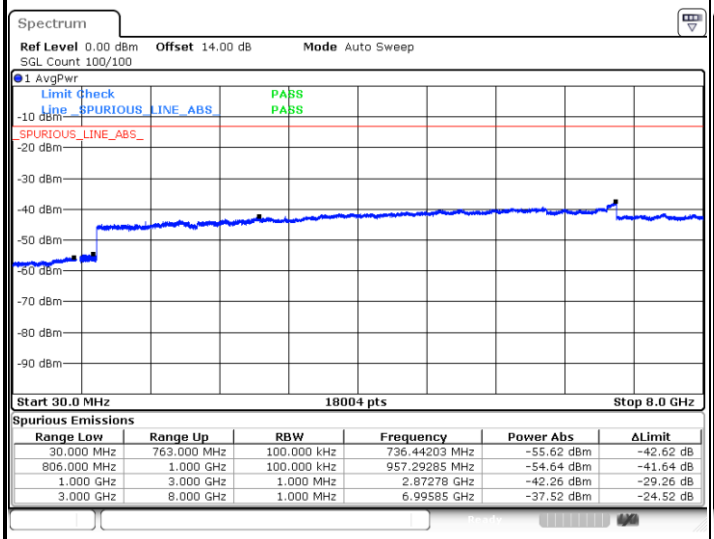

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 763.000 MHz | 100.000 kHz | 725.08621 MHz | -55.51 dBm | -42.51 dB |
| 806.000 MHz | 1.000 GHz | 100.000 kHz | 993.26187 MHz | -54.55 dBm | -41.55 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.98675 GHz | -42.57 dBm | -29.57 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.96685 GHz | -37.68 dBm | -24.68 dB |

Date: 16.DEC.2020 14:26:28

## LTE Band 13 / 5MHz

### Highest Channel / QPSK




Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 763.000 MHz | 100.000 kHz | 736.44203 MHz | -55.62 dBm | -42.62 dB |
| 806.000 MHz | 1.000 GHz | 100.000 kHz | 957.29285 MHz | -54.64 dBm | -41.64 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.87278 GHz | -42.26 dBm | -29.26 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.99585 GHz | -37.52 dBm | -24.52 dB |

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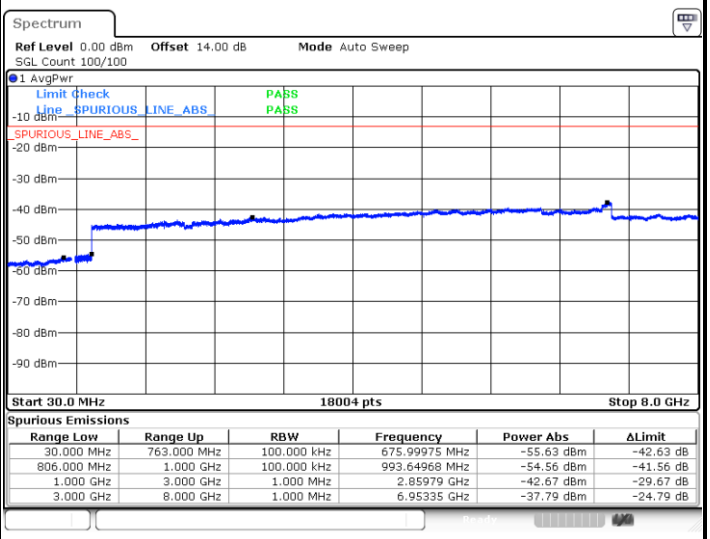
### Highest Channel / 16QAM



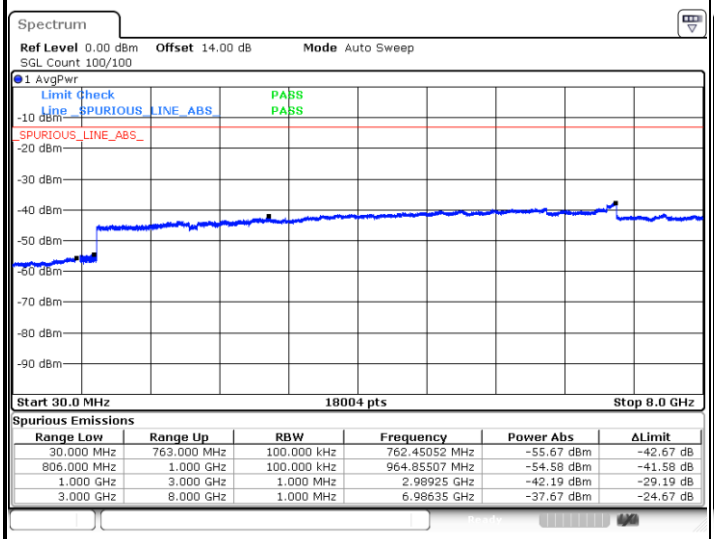

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 763.000 MHz | 100.000 kHz | 675.99975 MHz | -55.63 dBm | -42.63 dB |
| 806.000 MHz | 1.000 GHz | 100.000 kHz | 993.64968 MHz | -54.56 dBm | -41.56 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.85979 GHz | -42.67 dBm | -29.67 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.95335 GHz | -37.79 dBm | -24.79 dB |

Date: 16.DEC.2020 14:41:26

## LTE Band 13 / 10MHz

### Middle Channel / QPSK

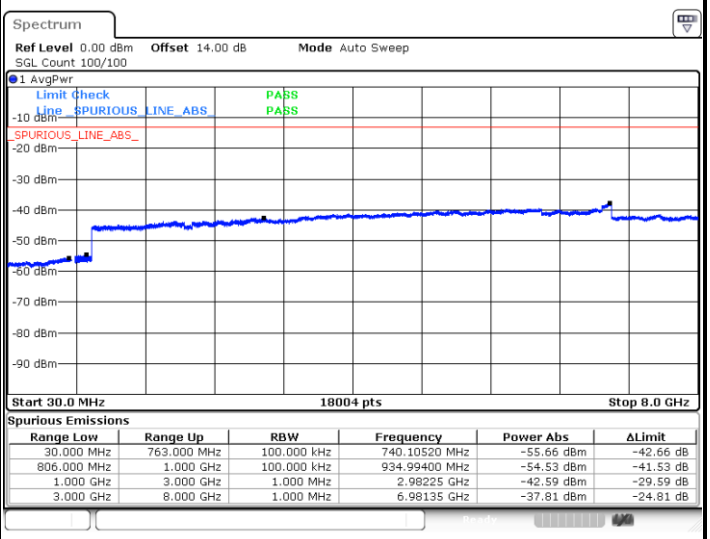



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 763.000 MHz | 100.000 kHz | 762.45052 MHz | -55.67 dBm | -42.67 dB |
| 806.000 MHz | 1.000 GHz | 100.000 kHz | 964.85507 MHz | -54.58 dBm | -41.58 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.98925 GHz | -42.19 dBm | -29.19 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.98635 GHz | -37.67 dBm | -24.67 dB |

Date: 16.DEC.2020 15:45:56

### Middle Channel / 16QAM




Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 763.000 MHz | 100.000 kHz | 740.10520 MHz | -55.66 dBm | -42.66 dB |
| 806.000 MHz | 1.000 GHz | 100.000 kHz | 934.99400 MHz | -54.53 dBm | -41.53 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.98225 GHz | -42.59 dBm | -29.59 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 6.98135 GHz | -37.81 dBm | -24.81 dB |

Date: 16.DEC.2020 15:46:43

# Frequency Stability

| Test Conditions | | LTE Band 13 (QPSK) / Middle Channel | Limit |
|---|---|---|---|
| Temperature (°C) | Voltage (Volt) | BW 10MHz | Note 2. |
| | | Deviation (ppm) | Result |
| 50 | Normal Voltage | 0.0036 | PASS |
| 40 | Normal Voltage | 0.0020 | |
| 30 | Normal Voltage | 0.0029 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0023 | |
| 0 | Normal Voltage | 0.0001 | |
| -10 | Normal Voltage | 0.0020 | |
| -20 | Normal Voltage | 0.0012 | |
| -30 | Normal Voltage | 0.0098 | |
| 20 | Maximum Voltage | 0.0090 | |
| 20 | Normal Voltage | 0.0000 | |
| 20 | Battery End Point | 0.0036 | |

**Note:**

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.2 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

# LTE Band 25

## Peak-to-Average Ratio

| Mode | LTE Band 25 / 20MHz | | | | |
|---|---|---|---|---|---|
| Mod. | QPSK | | 16QAM | | Limit: 13dB |
| RB Size | 1RB | Full RB | 1RB | Full RB | Result |
| Lowest CH | 4.09 | 4.67 | 5.28 | 5.68 | PASS |
| Middle CH | 4.17 | 4.75 | 5.30 | 5.80 | |
| Highest CH | 3.94 | 4.58 | 4.70 | 5.59 | |