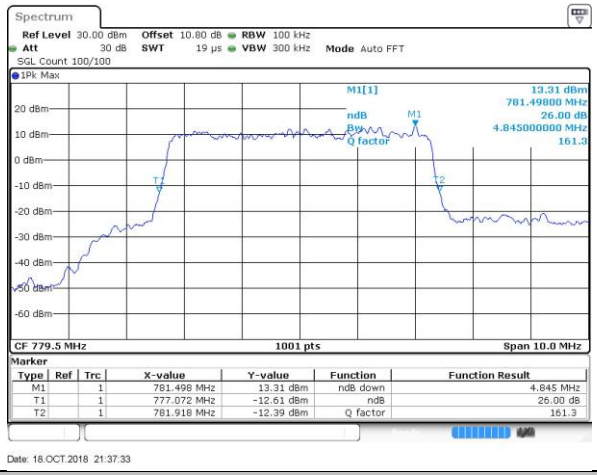
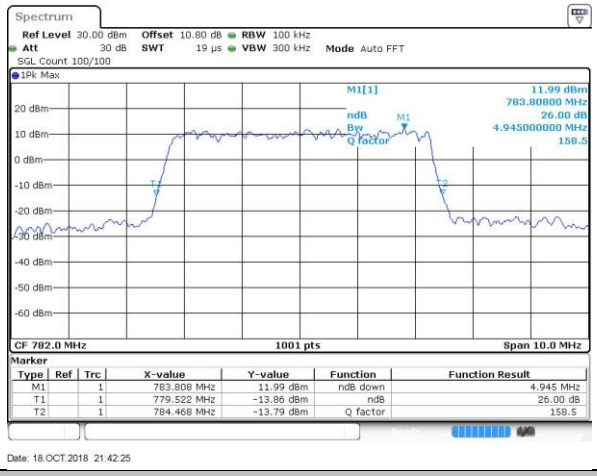
## LTE Band 13

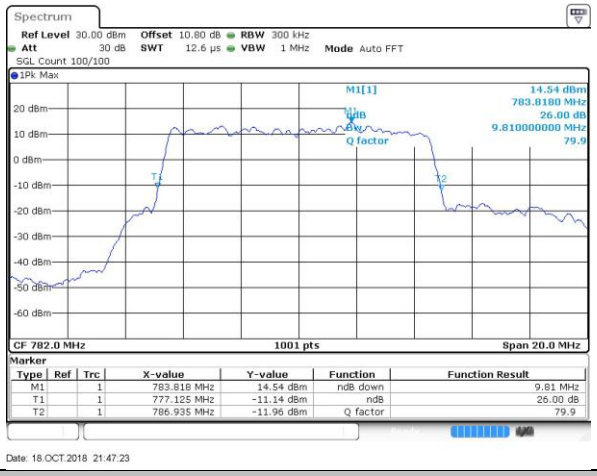
### Lowest Channel / 5MHz / 64QAM



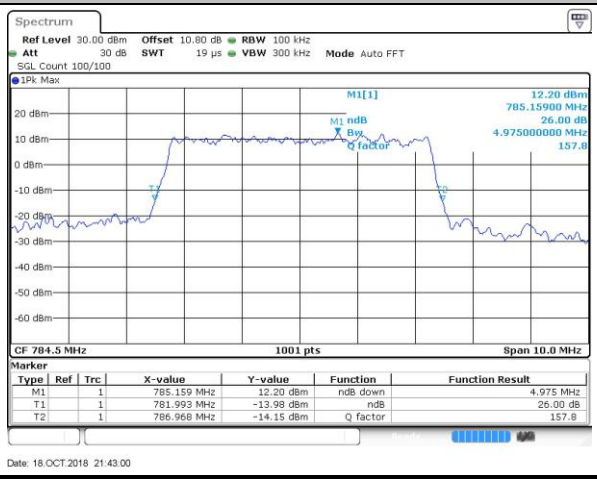

### Middle Channel / 5MHz / 64QAM




### Middle Channel / 10MHz / 64QAM




### Highest Channel / 5MHz / 64QAM

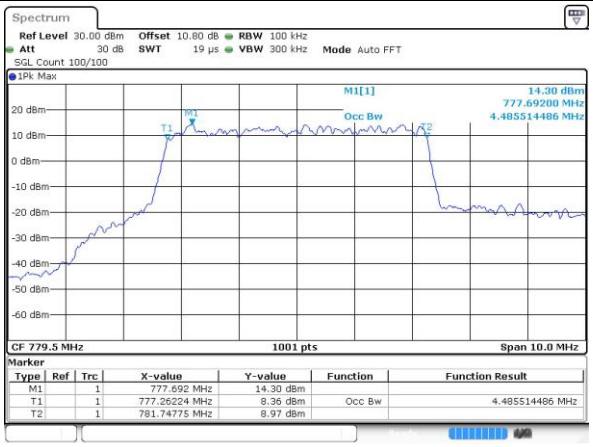


# Occupied Bandwidth

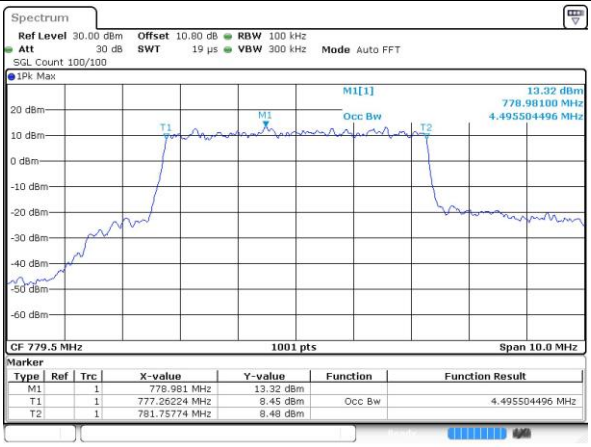
| Mode | LTE Band 13 : 99%OBW(MHz) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM |
| Lowest CH | - | - | - | - | 4.49 | 4.5 | - | - | - | - | - | - |
| Middle CH | - | - | - | - | 4.5 | 4.5 | 8.99 | 9.05 | - | - | - | - |
| Highest CH | - | - | - | - | 4.49 | 4.49 | - | - | - | - | - | - |
| Mode | LTE Band 13 : 99%OBW(MHz) | | | | | | | | | | | |
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | 64QAM | | 64QAM | | 64QAM | | 64QAM | | 64QAM | | 64QAM | |
| Lowest CH | - | - | - | - | 4.49 | - | - | - | - | - | - | - |
| Middle CH | - | - | - | - | 4.49 | - | 9.05 | - | - | - | - | - |
| Highest CH | - | - | - | - | 4.50 | - | - | - | - | - | - | - |

## LTE Band 13

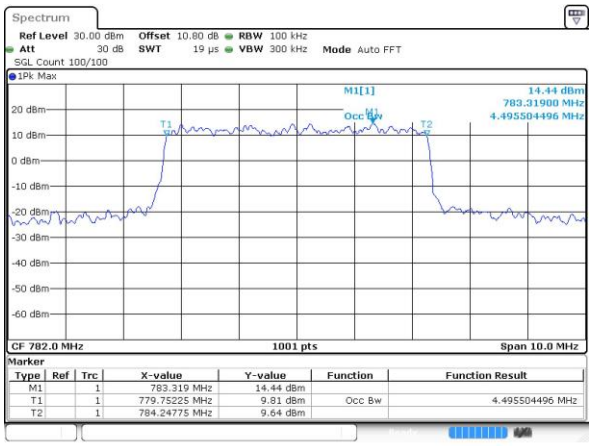
### Lowest Channel / 5MHz / QPSK



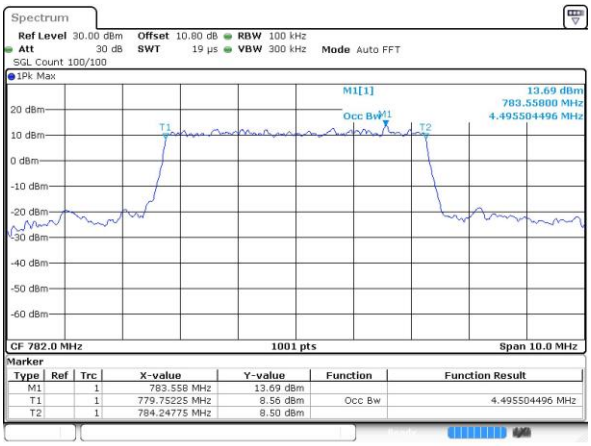

### Lowest Channel / 5MHz / 16QAM



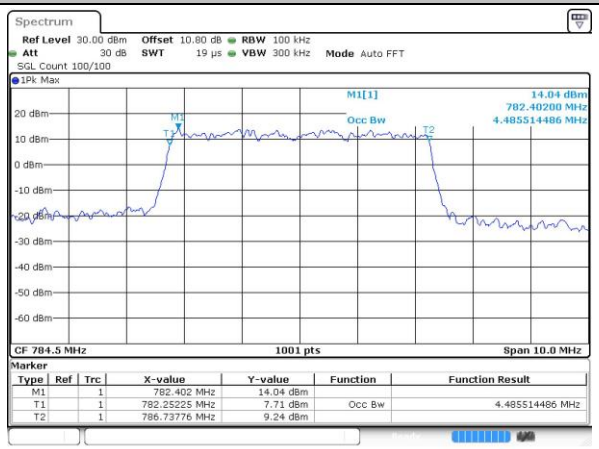

### Middle Channel / 5MHz / QPSK



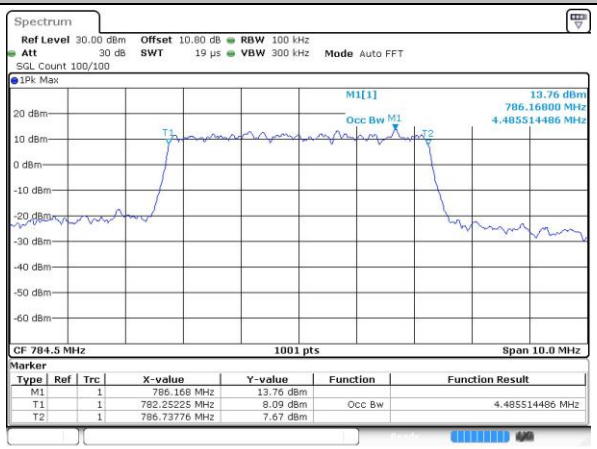

### Middle Channel / 5MHz / 16QAM

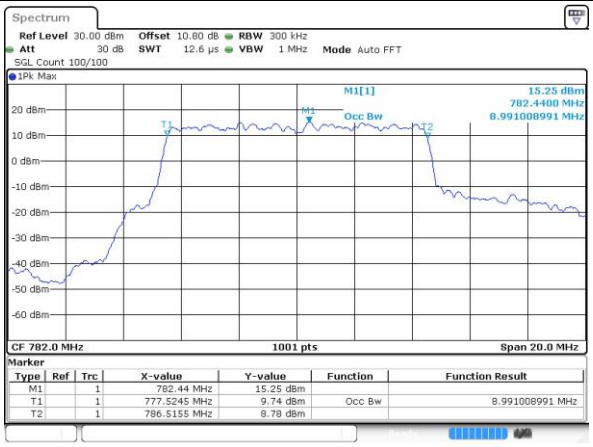
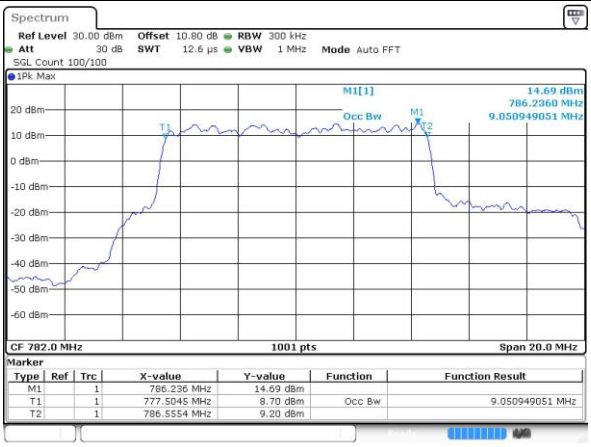



### Highest Channel / 5MHz / QPSK



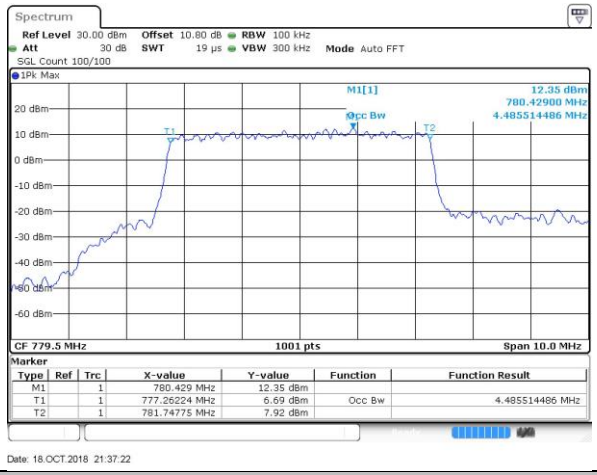

### Highest Channel / 5MHz / 16QAM



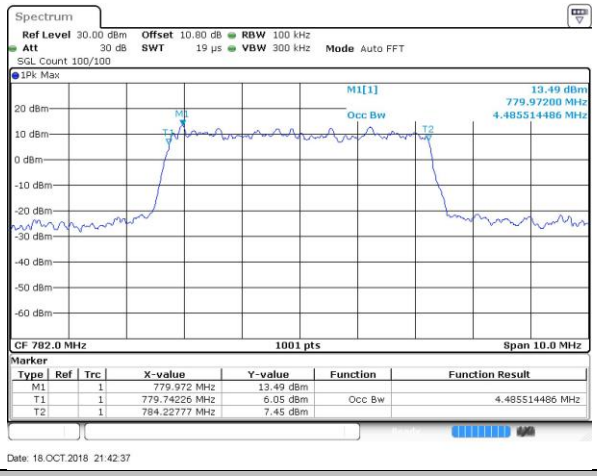
| LTE Band 13 | |
|---|---|
| **Middle Channel / 10MHz / QPSK** | **Middle Channel / 10MHz / 16QAM** |
|  |  |

## LTE Band 13

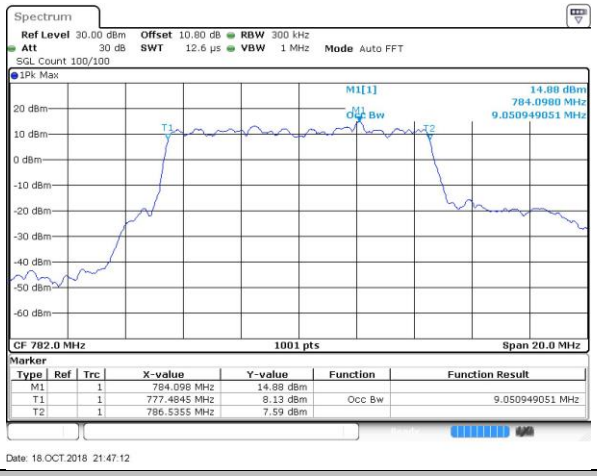
### Lowest Channel / 5MHz / 64QAM



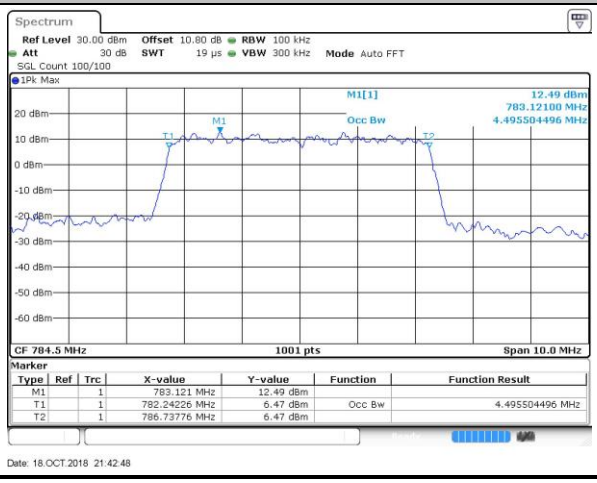

### Middle Channel / 5MHz / 64QAM




### Middle Channel / 10MHz / 64QAM




### Highest Channel / 5MHz / 64QAM



# Conducted Band Edge

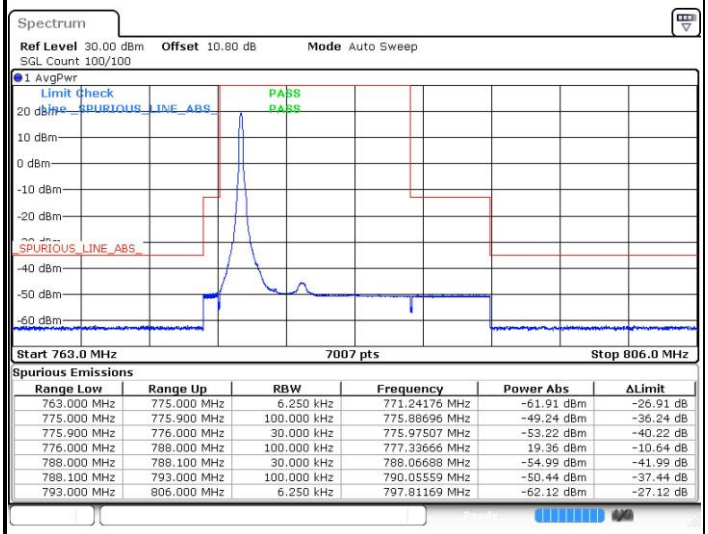
| Mode | | | LTE Band 13 / 5MHz | | | | | |
|---|---|---|---|---|---|---|---|---|
| Mod. | | | QPSK | | 16QAM | | 64QAM | |
| Limit (dBm) | | RB Size | 1RB | Full RB | 1RB | Full RB | 1RB | Full RB |
| Lowest CH | ≦-13 | 0~100kHz | -53.22 | -41.81 | -53.34 | -42.32 | -54.14 | -43.86 |
| | ≦-13 | >100kHz | -49.24 | -37.05 | -49.57 | -38.3 | -49.97 | -39.75 |
| | ≦-35 | 763~775MHz | -61.91 | -60.26 | -62.06 | -61.2 | -61.89 | -61.58 |
| | ≦-35 | 793~805MHz | -62.12 | -61.45 | -61.96 | -61.75 | -62.02 | -62.14 |
| Highest CH | ≦-13 | 0~100kHz | -52.66 | -35.32 | -53.49 | -36.38 | -52.95 | -38.05 |
| | ≦-13 | >100kHz | -27.87 | -31.22 | -29.18 | -32.51 | -30.09 | -21.06 |
| | ≦-35 | 763~775MHz | -61.95 | -62.08 | -62.05 | -61.88 | -62.33 | -62.14 |
| | ≦-35 | 793~805MHz | -62.06 | -61.18 | -61.65 | -60.4 | -62.2 | -60.55 |
| Result | | | Compliance | | | | | |

| Mode | | | LTE Band 13 / 10MHz | | | | | |
|---|---|---|---|---|---|---|---|---|
| Mod. | | | QPSK | | 16QAM | | 64QAM | |
| Limit (dBm) | | RB Size | 1RB | Full RB | 1RB | Full RB | 1RB | Full RB |
| Middle CH | ≦-13 | 0~100kHz | -54.32 | -30.42 | -54.25 | -32.77 | -54.33 | -34.75 |
| | ≦-13 | >100kHz | -49.82 | -26.62 | -49.68 | -28.84 | -49.98 | -30.73 |
| | ≦-35 | 763~775MHz | -61.94 | -59.54 | -61.97 | -60.67 | -62.39 | -61.25 |
| | ≦-35 | 793~805MHz | -61.9 | -52.01 | -61.93 | -55.47 | -62.19 | -56.85 |
| Result | | | Compliance | | | | | |

| Mode | | | LTE Band 13 / 10MHz | | |
|---|---|---|---|---|---|
| Mod. | | | QPSK | 16QAM | 64QAM |
| Limit (dBm) | | RB Size | 1RB Max | 1RB Max | 1RB Max |
| Middle CH | ≦-13 | 0~100kHz | -52.9 | -52.7 | -54.14 |
| | ≦-13 | >100kHz | -29.2 | -30.43 | -31 |
| | ≦-35 | 763~775MHz | -61.86 | -61.88 | -62.28 |
| | ≦-35 | 793~805MHz | -61.99 | -62.04 | -62.13 |
| Result | | | Compliance | | |

## LTE Band 13 / 5MHz / QPSK

### Lowest Band Edge / 1 RB

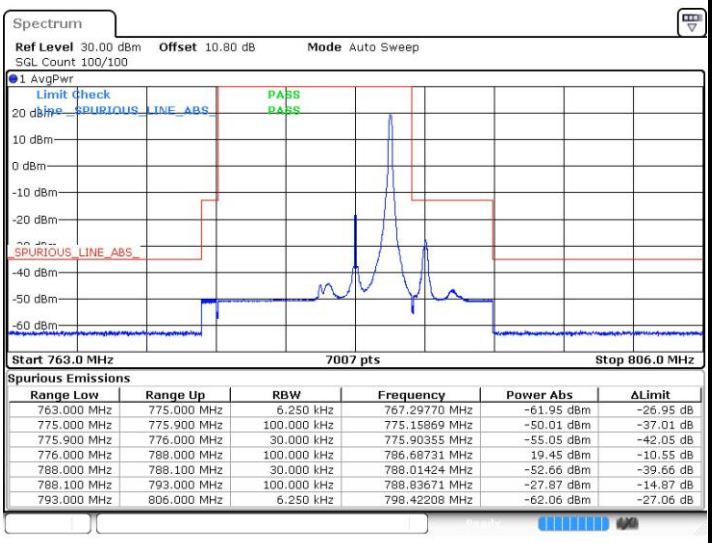



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 771.24176 MHz | -61.91 dBm | -26.91 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.88696 MHz | -49.24 dBm | -36.24 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.97507 MHz | -53.22 dBm | -40.22 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 777.33666 MHz | 19.36 dBm | -10.64 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.06688 MHz | -54.99 dBm | -41.99 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 790.05559 MHz | -50.44 dBm | -37.44 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 797.81169 MHz | -62.12 dBm | -27.12 dB |

Date: 16.OCT.2018 09:21:52

### Highest Band Edge / 1 RB

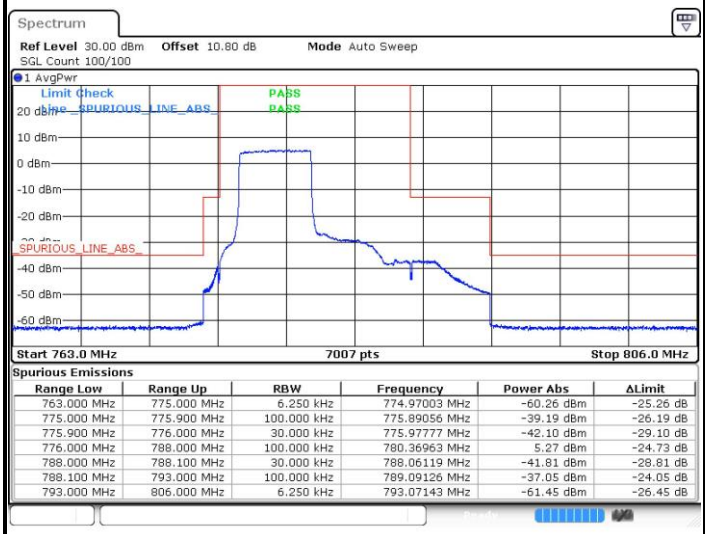



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 767.29770 MHz | -61.95 dBm | -26.95 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.15869 MHz | -50.01 dBm | -37.01 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.90355 MHz | -55.05 dBm | -42.05 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 786.68731 MHz | 19.45 dBm | -10.55 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.01424 MHz | -52.66 dBm | -39.66 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 788.83671 MHz | -27.87 dBm | -14.87 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 798.42208 MHz | -62.06 dBm | -27.06 dB |

Date: 16.OCT.2018 09:33:24

### Lowest Band Edge / Full RB

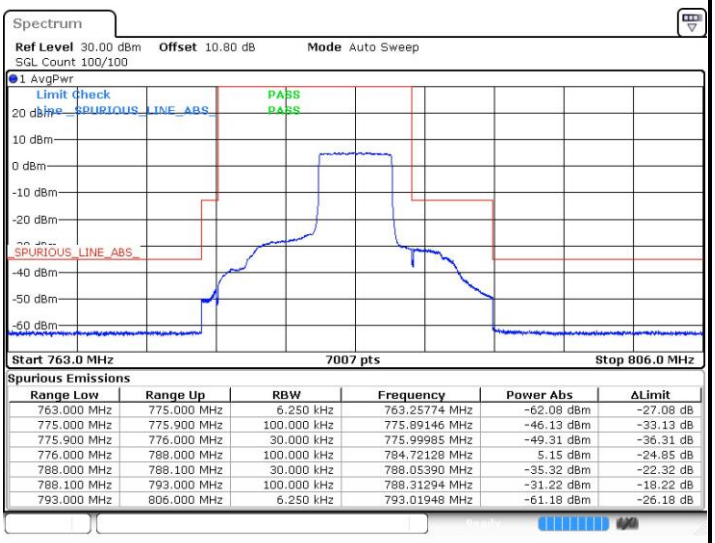



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 774.97003 MHz | -60.26 dBm | -25.26 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.89056 MHz | -39.19 dBm | -26.19 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.97777 MHz | -42.10 dBm | -29.10 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 780.36963 MHz | 5.27 dBm | -24.73 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.06119 MHz | -41.81 dBm | -28.81 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 789.09126 MHz | -37.05 dBm | -24.05 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 793.07143 MHz | -61.45 dBm | -26.45 dB |

Date: 16.OCT.2018 09:16:51

### Highest Band Edge / Full RB



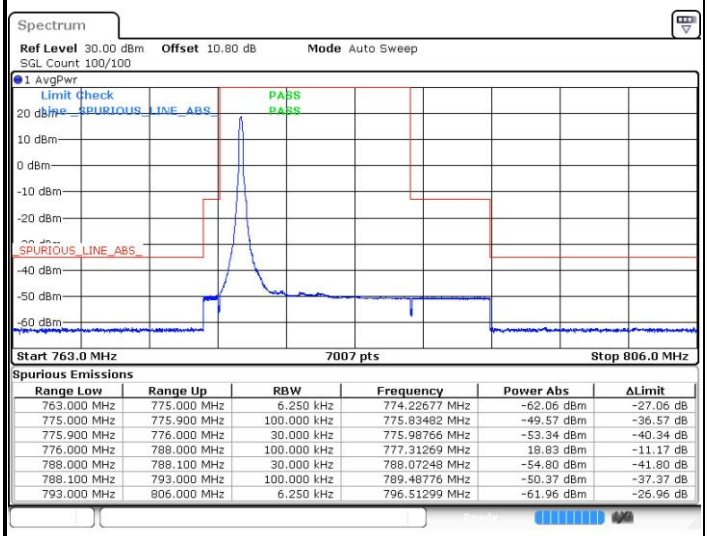

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 763.25774 MHz | -62.08 dBm | -27.08 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.89146 MHz | -46.13 dBm | -33.13 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.99985 MHz | -49.31 dBm | -36.31 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 784.72128 MHz | 5.15 dBm | -24.85 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.05390 MHz | -35.32 dBm | -22.32 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 788.31294 MHz | -31.22 dBm | -18.22 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 793.01948 MHz | -61.18 dBm | -26.18 dB |

Date: 16.OCT.2018 09:28:23

## LTE Band 13 / 5MHz / 16QAM

### Lowest Band Edge / 1 RB

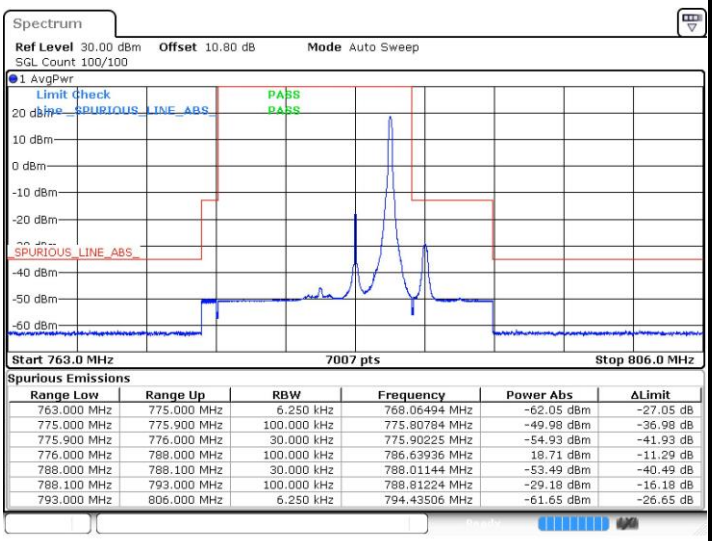



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 774.22677 MHz | -62.06 dBm | -27.06 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.83482 MHz | -49.57 dBm | -36.57 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.98766 MHz | -53.34 dBm | -40.34 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 777.31269 MHz | 18.83 dBm | -11.17 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.07248 MHz | -54.80 dBm | -41.80 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 789.48776 MHz | -50.37 dBm | -37.37 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 796.51299 MHz | -61.96 dBm | -26.96 dB |

Date: 16.OCT.2018 09:20:12

### Highest Band Edge / 1 RB

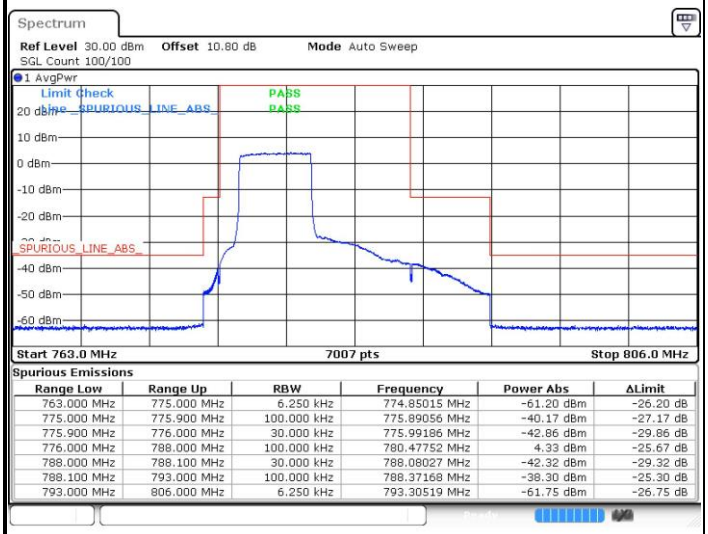



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 768.06494 MHz | -62.05 dBm | -27.05 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.80784 MHz | -49.98 dBm | -36.98 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.90225 MHz | -54.93 dBm | -41.93 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 786.63936 MHz | 18.71 dBm | -11.29 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.01144 MHz | -53.49 dBm | -40.49 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 788.81224 MHz | -29.18 dBm | -16.18 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 794.43506 MHz | -61.65 dBm | -26.65 dB |

Date: 16.OCT.2018 09:31:44

### Lowest Band Edge / Full RB

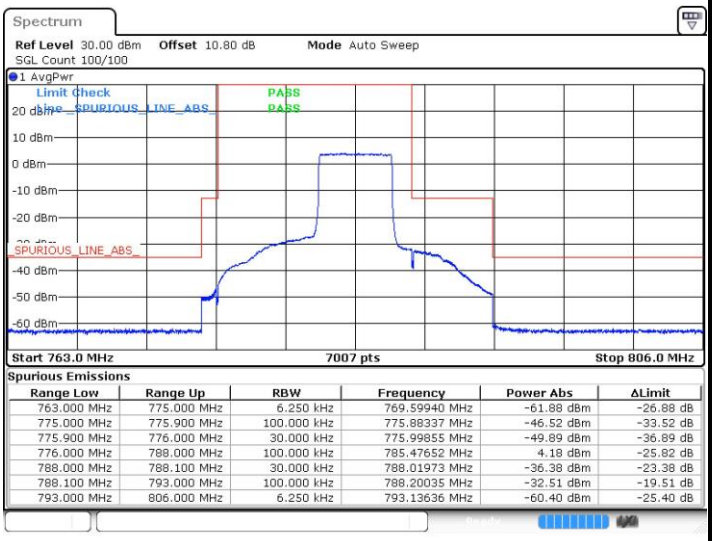



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 774.85015 MHz | -61.20 dBm | -26.20 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.89056 MHz | -40.17 dBm | -27.17 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.99186 MHz | -42.86 dBm | -29.86 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 780.47752 MHz | 4.33 dBm | -25.67 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.08027 MHz | -42.32 dBm | -29.32 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 788.37168 MHz | -38.30 dBm | -25.30 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 793.30519 MHz | -61.75 dBm | -26.75 dB |

Date: 16.OCT.2018 09:18:32

### Highest Band Edge / Full RB



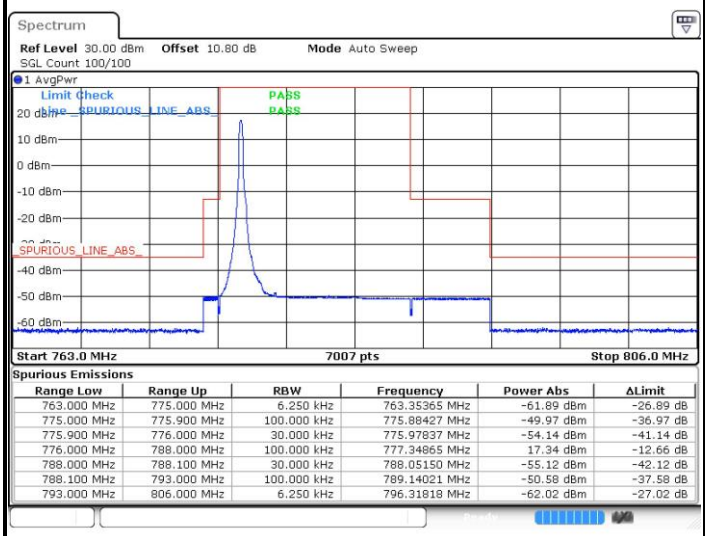

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 769.59940 MHz | -61.88 dBm | -26.88 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.88337 MHz | -46.52 dBm | -33.52 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.99855 MHz | -49.89 dBm | -36.89 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 785.47652 MHz | 4.18 dBm | -25.82 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.01973 MHz | -36.38 dBm | -23.38 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 788.20035 MHz | -32.51 dBm | -19.51 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 793.13636 MHz | -60.40 dBm | -25.40 dB |

Date: 16.OCT.2018 09:30:04

## LTE Band 13 / 5MHz / 64QAM

### Lowest Band Edge / 1 RB

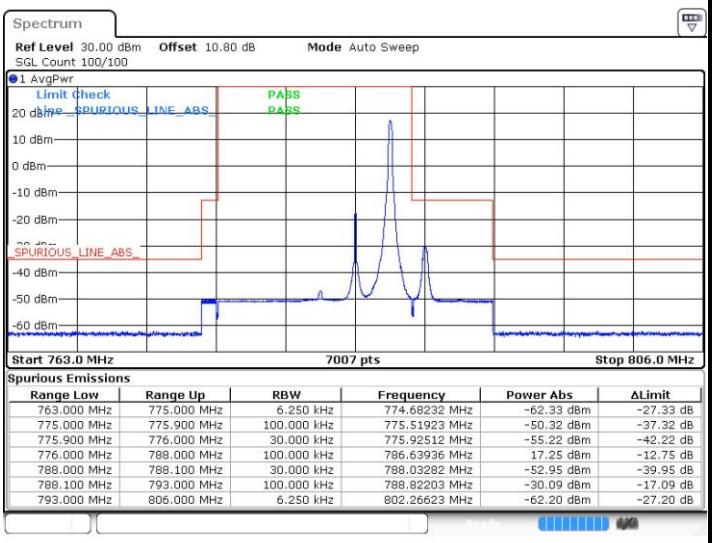



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 763.35365 MHz | -61.89 dBm | -26.89 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.88427 MHz | -49.97 dBm | -36.97 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.97837 MHz | -54.14 dBm | -41.14 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 777.34865 MHz | 17.34 dBm | -12.66 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.05150 MHz | -55.12 dBm | -42.12 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 789.14021 MHz | -50.58 dBm | -37.58 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 796.31818 MHz | -62.02 dBm | -27.02 dB |

Date: 18.OCT.2018 21:40:54

### Highest Band Edge / 1 RB

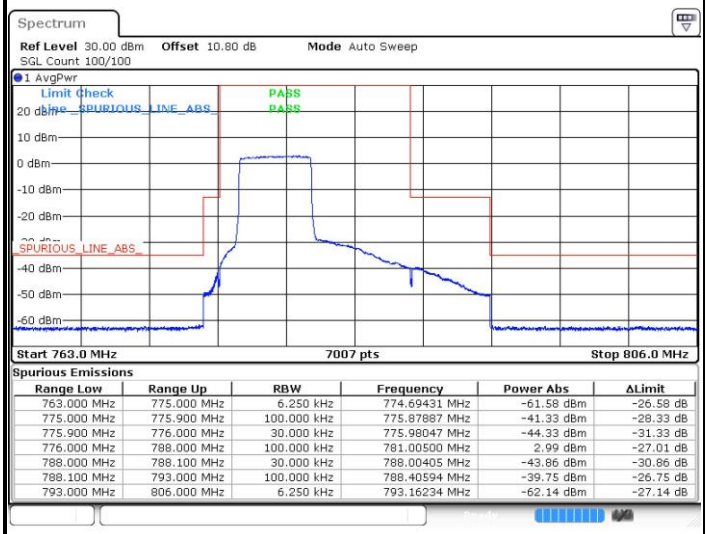



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 774.68232 MHz | -62.33 dBm | -27.33 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.51923 MHz | -50.32 dBm | -37.32 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.92512 MHz | -55.22 dBm | -42.22 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 786.63936 MHz | 17.25 dBm | -12.75 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.03282 MHz | -52.95 dBm | -39.95 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 788.82203 MHz | -30.09 dBm | -17.09 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 802.26623 MHz | -62.20 dBm | -27.20 dB |

Date: 18.OCT.2018 21:46:20

### Lowest Band Edge / Full RB

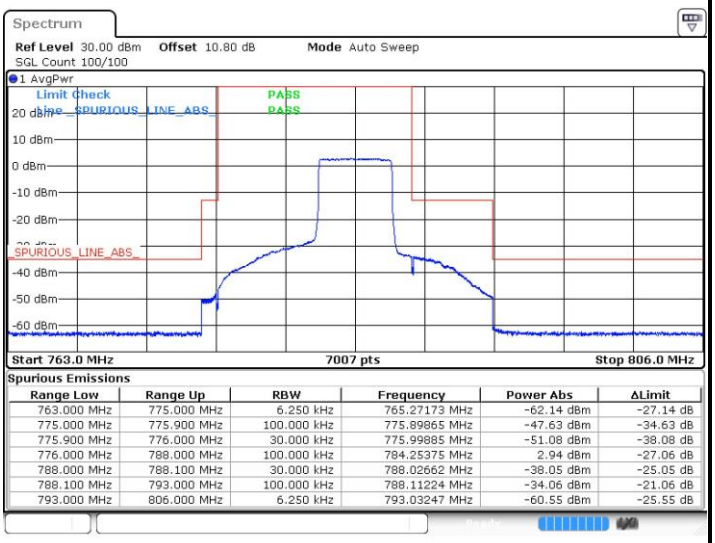



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 774.69431 MHz | -61.58 dBm | -26.58 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.87887 MHz | -41.33 dBm | -28.33 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.98047 MHz | -44.33 dBm | -31.33 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 781.00500 MHz | 2.99 dBm | -27.01 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.00405 MHz | -43.86 dBm | -30.86 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 788.40594 MHz | -39.75 dBm | -26.75 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 793.16234 MHz | -62.14 dBm | -27.14 dB |

Date: 18.OCT.2018 21:39:13

### Highest Band Edge / Full RB



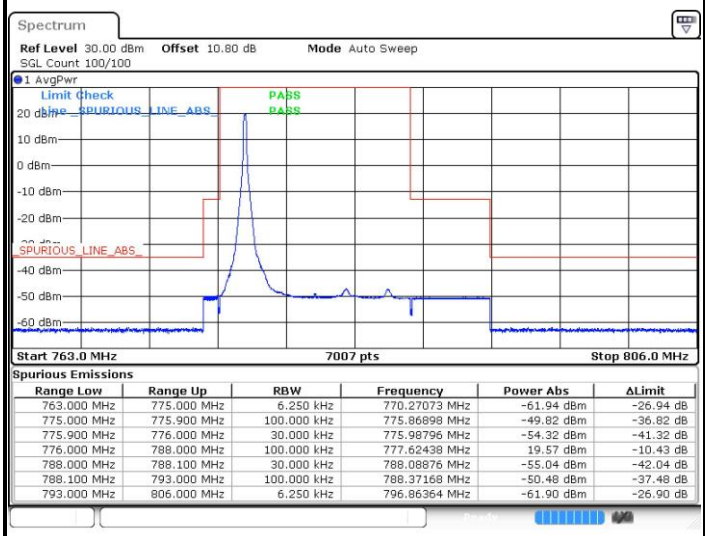

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 765.27173 MHz | -62.14 dBm | -27.14 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.89865 MHz | -47.63 dBm | -34.63 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.99885 MHz | -51.08 dBm | -38.08 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 784.25375 MHz | 2.94 dBm | -27.06 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.02662 MHz | -38.05 dBm | -25.05 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 788.11224 MHz | -34.06 dBm | -21.06 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 793.03247 MHz | -60.55 dBm | -25.55 dB |

Date: 18.OCT.2018 21:44:39

## LTE Band 13 / 10MHz / QPSK

### Lowest Band Edge / 1 RB

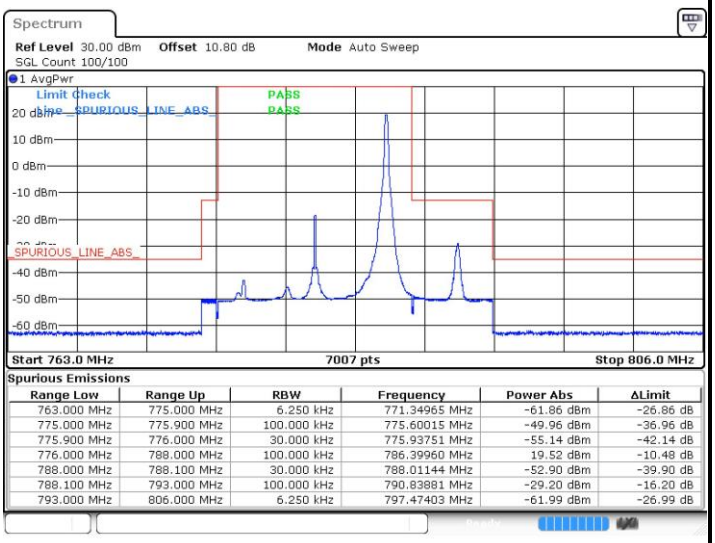



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 770.27073 MHz | -61.94 dBm | -26.94 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.86898 MHz | -49.82 dBm | -36.82 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.98796 MHz | -54.32 dBm | -41.32 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 777.62438 MHz | 19.57 dBm | -10.43 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.08876 MHz | -55.04 dBm | -42.04 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 788.37168 MHz | -50.48 dBm | -37.48 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 796.86364 MHz | -61.90 dBm | -26.90 dB |

Date: 16.OCT.2018 09:42:30

### Highest Band Edge / 1 RB

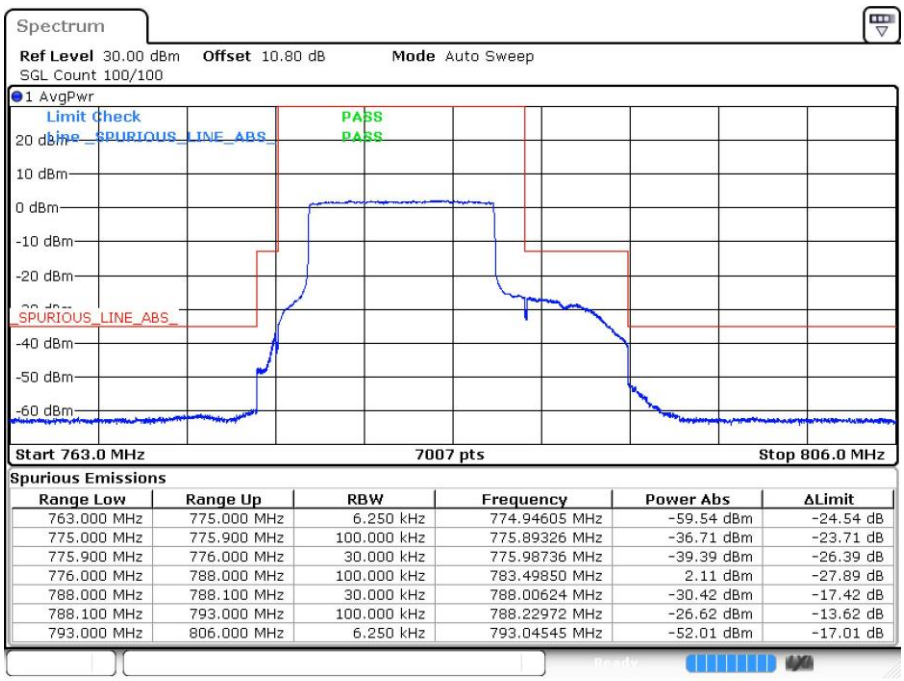



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 771.34965 MHz | -61.86 dBm | -26.86 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.60015 MHz | -49.96 dBm | -36.96 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.93751 MHz | -55.14 dBm | -42.14 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 786.39960 MHz | 19.52 dBm | -10.48 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.01144 MHz | -52.90 dBm | -39.90 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 790.83881 MHz | -29.20 dBm | -16.20 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 797.47403 MHz | -61.99 dBm | -26.99 dB |

Date: 16.OCT.2018 09:44:11

### Band Edge / Full RB



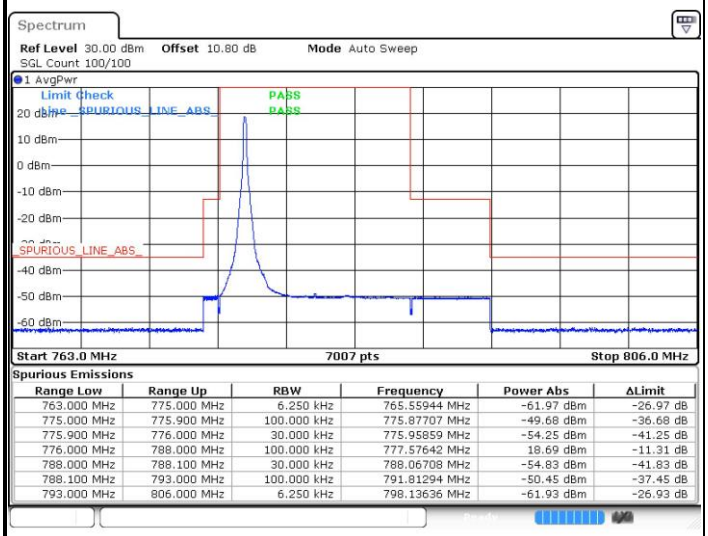

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 774.94605 MHz | -59.54 dBm | -24.54 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.89326 MHz | -36.71 dBm | -23.71 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.98736 MHz | -39.39 dBm | -26.39 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 783.49850 MHz | 2.11 dBm | -27.89 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.00624 MHz | -30.42 dBm | -17.42 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 788.22972 MHz | -26.62 dBm | -13.62 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 793.04545 MHz | -52.01 dBm | -17.01 dB |

Date: 16.OCT.2018 09:37:30

## LTE Band 13 / 10MHz / 16QAM

### Lowest Band Edge / 1 RB

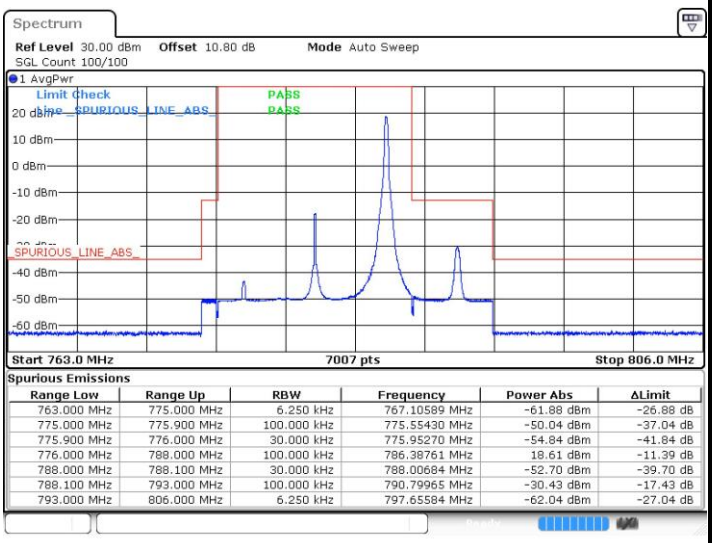



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 765.55944 MHz | -61.97 dBm | -26.97 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.87707 MHz | -49.68 dBm | -36.68 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.95859 MHz | -54.25 dBm | -41.25 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 777.57642 MHz | 18.69 dBm | -11.31 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.06708 MHz | -54.83 dBm | -41.83 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 791.81294 MHz | -50.45 dBm | -37.45 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 798.13636 MHz | -61.93 dBm | -26.93 dB |

Date: 16.OCT.2018 09:40:50

### Highest Band Edge / 1 RB

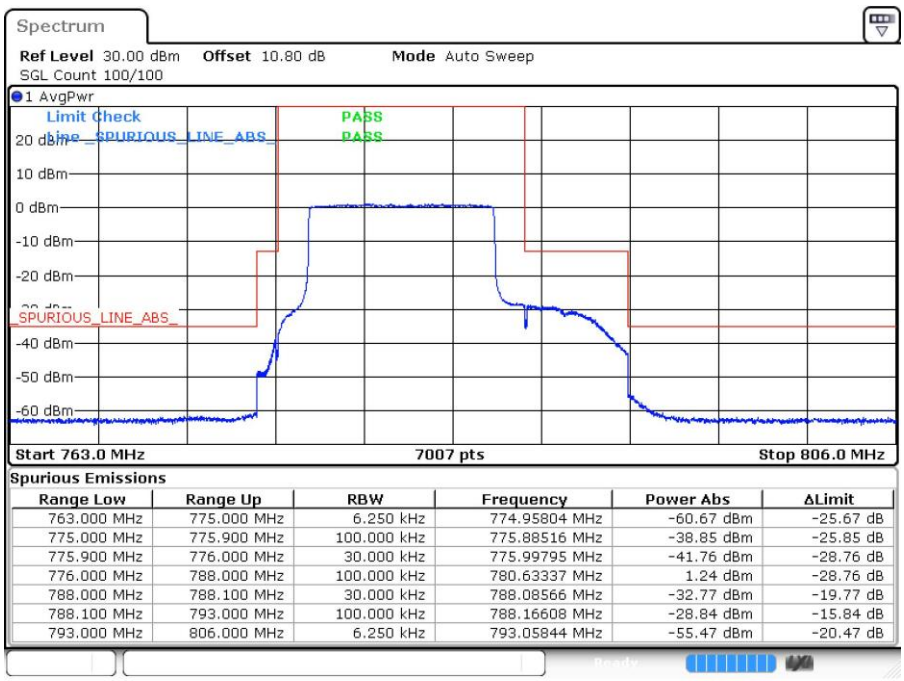



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 767.10589 MHz | -61.88 dBm | -26.88 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.55430 MHz | -50.04 dBm | -37.04 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.95270 MHz | -54.84 dBm | -41.84 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 786.38761 MHz | 18.61 dBm | -11.39 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.00684 MHz | -52.70 dBm | -39.70 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 790.79965 MHz | -30.43 dBm | -17.43 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 797.65584 MHz | -62.04 dBm | -27.04 dB |

Date: 16.OCT.2018 09:45:51

### Band Edge / Full RB



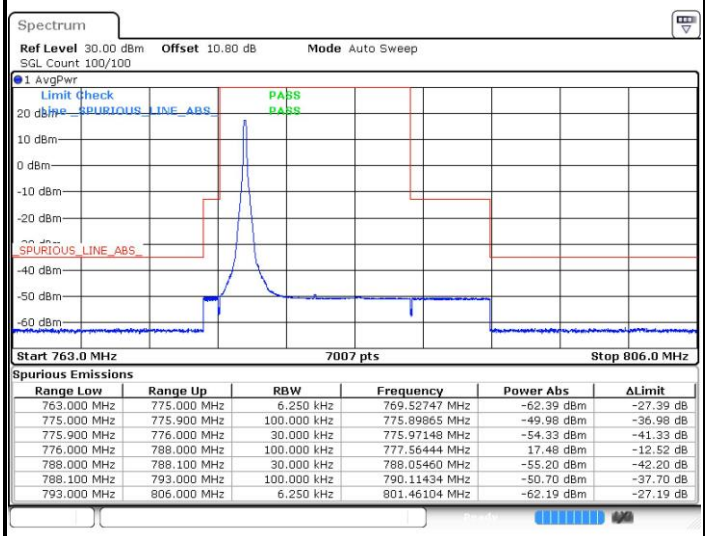

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 774.95804 MHz | -60.67 dBm | -25.67 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.88516 MHz | -38.85 dBm | -25.85 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.99795 MHz | -41.76 dBm | -28.76 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 780.63337 MHz | 1.24 dBm | -28.76 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.08566 MHz | -32.77 dBm | -19.77 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 788.16608 MHz | -28.84 dBm | -15.84 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 793.05844 MHz | -55.47 dBm | -20.47 dB |

Date: 16.OCT.2018 09:39:10

## LTE Band 13 / 10MHz / 64QAM

### Lowest Band Edge / 1 RB

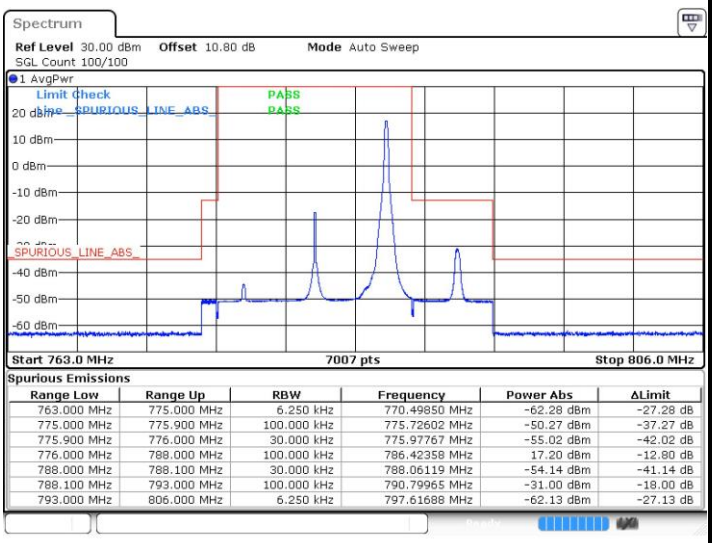



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 769.52747 MHz | -62.39 dBm | -27.39 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.89865 MHz | -49.98 dBm | -36.98 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.97148 MHz | -54.33 dBm | -41.33 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 777.56444 MHz | 17.48 dBm | -12.52 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.05460 MHz | -55.20 dBm | -42.20 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 790.11434 MHz | -50.70 dBm | -37.70 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 801.46104 MHz | -62.19 dBm | -27.19 dB |

Date: 18.OCT.2018 21:50:43

### Highest Band Edge / 1 RB

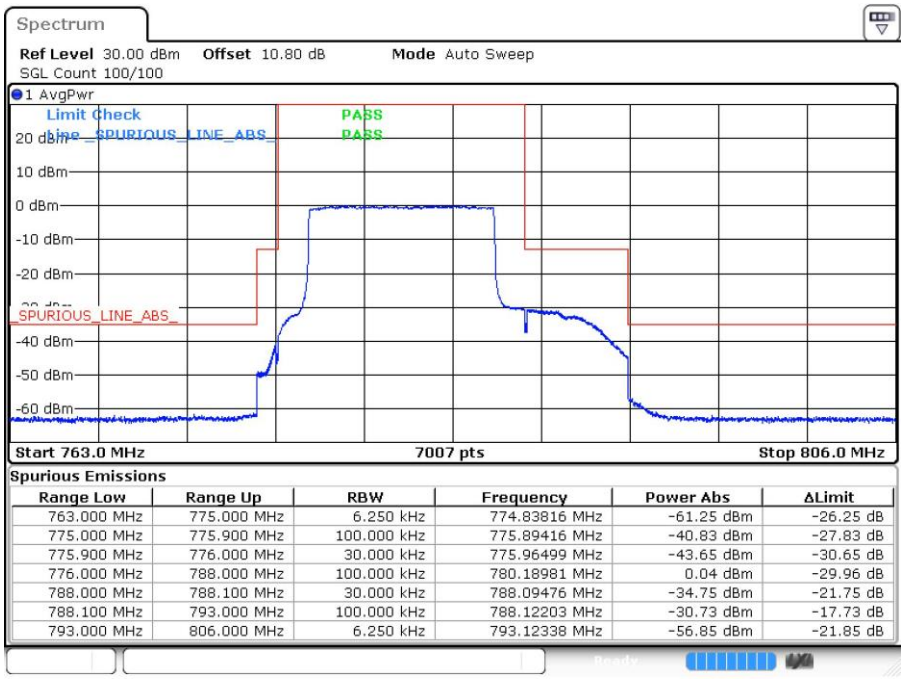



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 770.49850 MHz | -62.28 dBm | -27.28 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.72602 MHz | -50.27 dBm | -37.27 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.97767 MHz | -55.02 dBm | -42.02 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 786.42358 MHz | 17.20 dBm | -12.80 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.06119 MHz | -54.14 dBm | -41.14 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 790.79965 MHz | -31.00 dBm | -18.00 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 797.61688 MHz | -62.13 dBm | -27.13 dB |

Date: 18.OCT.2018 21:52:23

### Band Edge / Full RB




Spurious Emissions

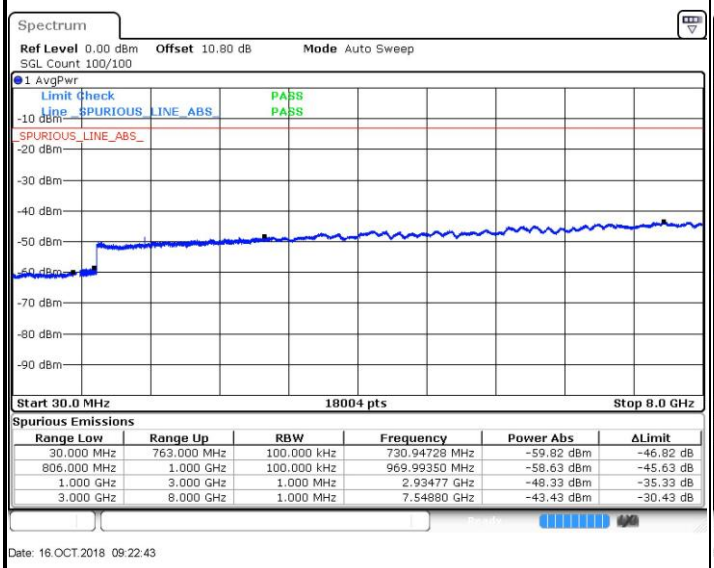
| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 763.000 MHz | 775.000 MHz | 6.250 kHz | 774.83816 MHz | -61.25 dBm | -26.25 dB |
| 775.000 MHz | 775.900 MHz | 100.000 kHz | 775.89416 MHz | -40.83 dBm | -27.83 dB |
| 775.900 MHz | 776.000 MHz | 30.000 kHz | 775.96499 MHz | -43.65 dBm | -30.65 dB |
| 776.000 MHz | 788.000 MHz | 100.000 kHz | 780.18981 MHz | 0.04 dBm | -29.96 dB |
| 788.000 MHz | 788.100 MHz | 30.000 kHz | 788.09476 MHz | -34.75 dBm | -21.75 dB |
| 788.100 MHz | 793.000 MHz | 100.000 kHz | 788.12203 MHz | -30.73 dBm | -17.73 dB |
| 793.000 MHz | 806.000 MHz | 6.250 kHz | 793.12338 MHz | -56.85 dBm | -21.85 dB |

Date: 18.OCT.2018 21:49:03

# Conducted Spurious Emission

## LTE Band 13 / 5MHz

### Lowest Channel / QPSK

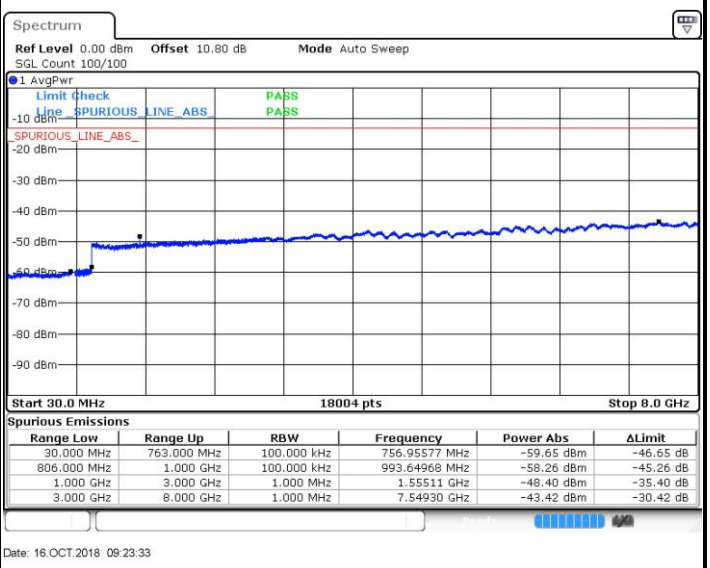



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 763.000 MHz | 100.000 kHz | 730.94728 MHz | -59.82 dBm | -46.82 dB |
| 806.000 MHz | 1.000 GHz | 100.000 kHz | 969.99350 MHz | -58.63 dBm | -45.63 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.93477 GHz | -48.33 dBm | -35.33 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 7.54880 GHz | -43.43 dBm | -30.43 dB |

Date: 16.OCT.2018 09:22:43

### Lowest Channel / 16QAM

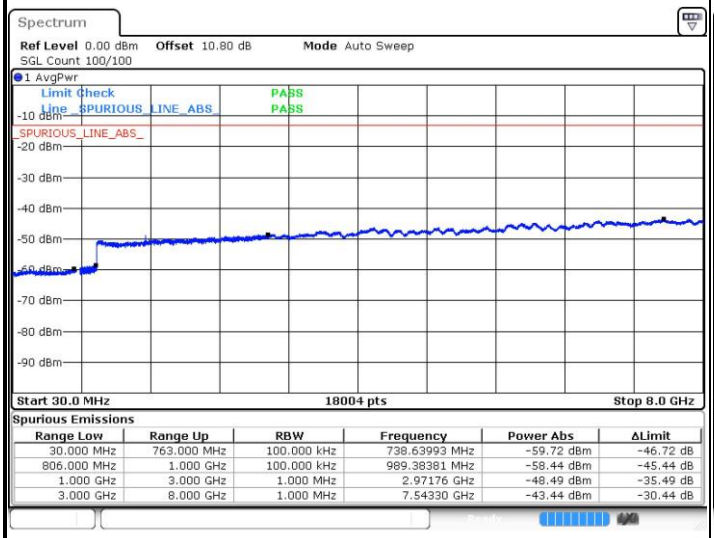



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 763.000 MHz | 100.000 kHz | 756.95577 MHz | -59.65 dBm | -46.65 dB |
| 806.000 MHz | 1.000 GHz | 100.000 kHz | 993.64968 MHz | -58.26 dBm | -45.26 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 1.55511 GHz | -48.40 dBm | -35.40 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 7.54930 GHz | -43.42 dBm | -30.42 dB |

Date: 16.OCT.2018 09:23:33

### Middle Channel / QPSK

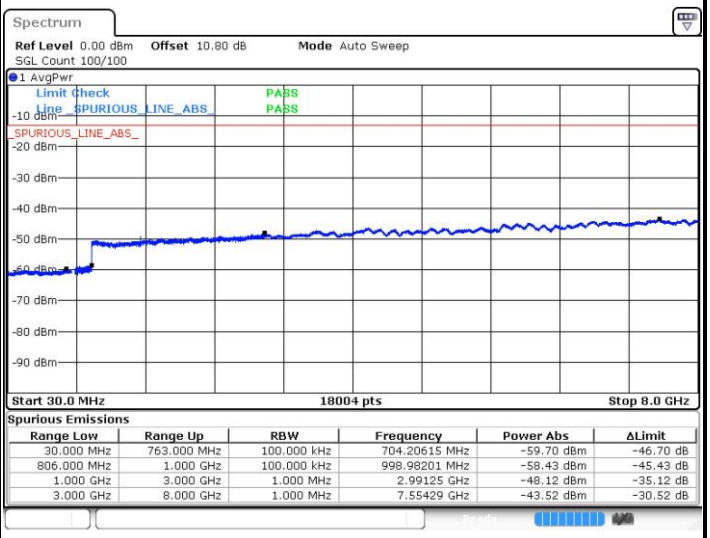



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 763.000 MHz | 100.000 kHz | 738.63993 MHz | -59.72 dBm | -46.72 dB |
| 806.000 MHz | 1.000 GHz | 100.000 kHz | 989.38381 MHz | -58.44 dBm | -45.44 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.97176 GHz | -48.49 dBm | -35.49 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 7.54330 GHz | -43.44 dBm | -30.44 dB |

Date: 16.OCT.2018 09:25:13

### Middle Channel / 16QAM



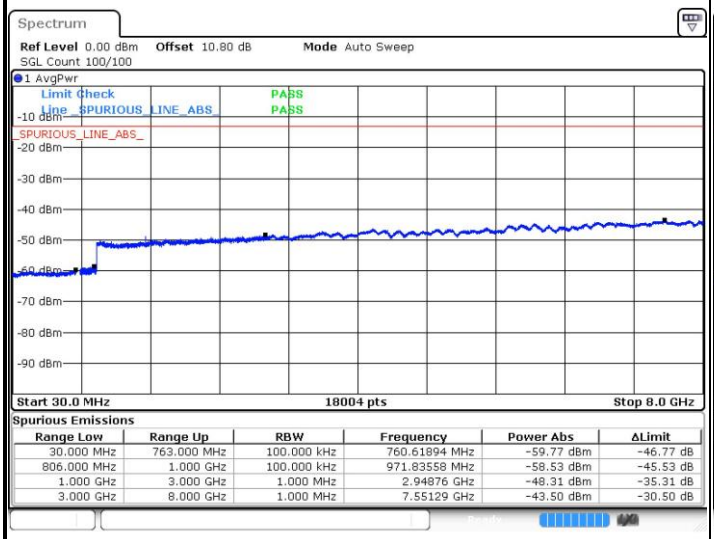

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 763.000 MHz | 100.000 kHz | 704.20615 MHz | -59.70 dBm | -46.70 dB |
| 806.000 MHz | 1.000 GHz | 100.000 kHz | 998.98201 MHz | -58.43 dBm | -45.43 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.99125 GHz | -48.12 dBm | -35.12 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 7.55429 GHz | -43.52 dBm | -30.52 dB |

Date: 16.OCT.2018 09:24:23

## LTE Band 13 / 5MHz

### Highest Channel / QPSK

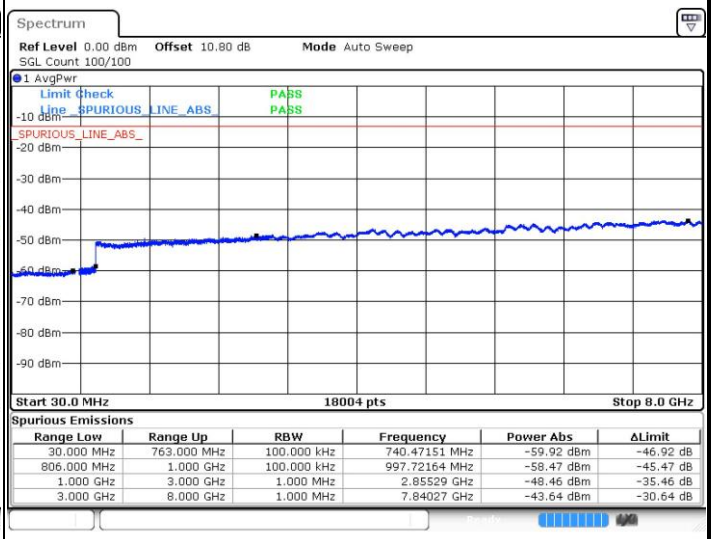



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 763.000 MHz | 100.000 kHz | 760.61894 MHz | -59.77 dBm | -46.77 dB |
| 806.000 MHz | 1.000 GHz | 100.000 kHz | 971.83558 MHz | -58.53 dBm | -45.53 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.94876 GHz | -48.31 dBm | -35.31 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 7.55129 GHz | -43.50 dBm | -30.50 dB |

Date: 16.OCT.2018 09:34:15

### Highest Channel / 16QAM



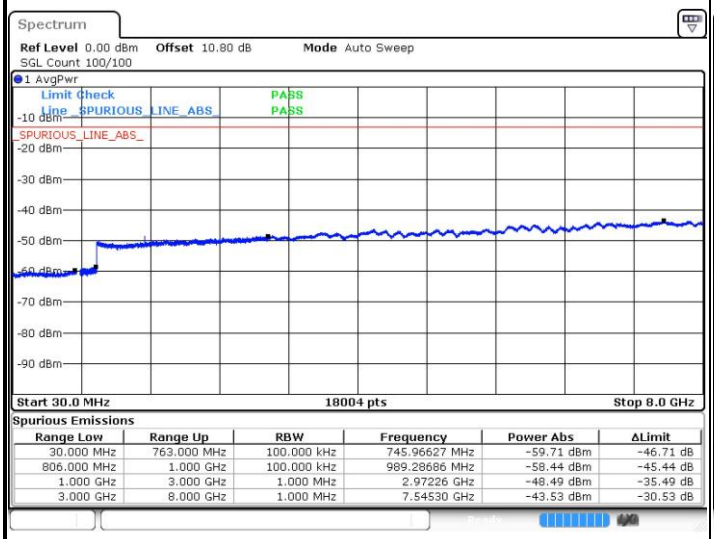

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 763.000 MHz | 100.000 kHz | 740.47151 MHz | -59.92 dBm | -46.92 dB |
| 806.000 MHz | 1.000 GHz | 100.000 kHz | 997.72164 MHz | -58.47 dBm | -45.47 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.85529 GHz | -48.46 dBm | -35.46 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 7.84027 GHz | -43.64 dBm | -30.64 dB |

Date: 16.OCT.2018 09:35:05

## LTE Band 13 / 10MHz

### Middle Channel / QPSK

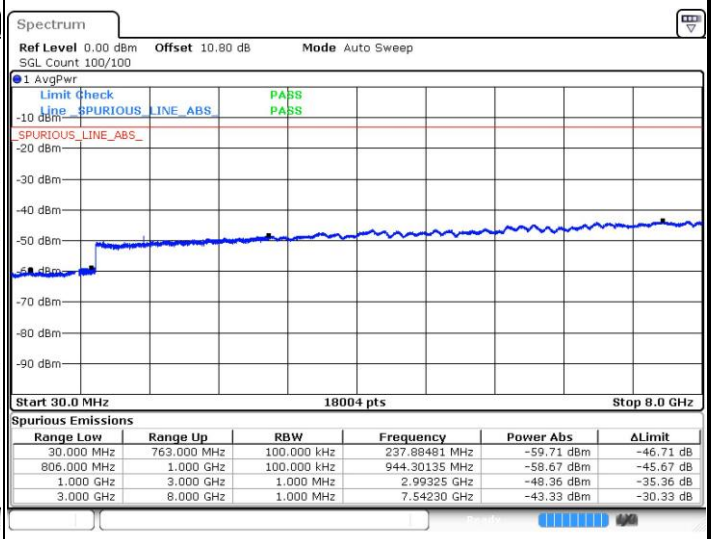



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 763.000 MHz | 100.000 kHz | 745.96627 MHz | -59.71 dBm | -46.71 dB |
| 806.000 MHz | 1.000 GHz | 100.000 kHz | 989.28686 MHz | -58.44 dBm | -45.44 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.97226 GHz | -48.49 dBm | -35.49 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 7.54530 GHz | -43.53 dBm | -30.53 dB |

Date: 16.OCT.2018 09:47:31

### Middle Channel / 16QAM



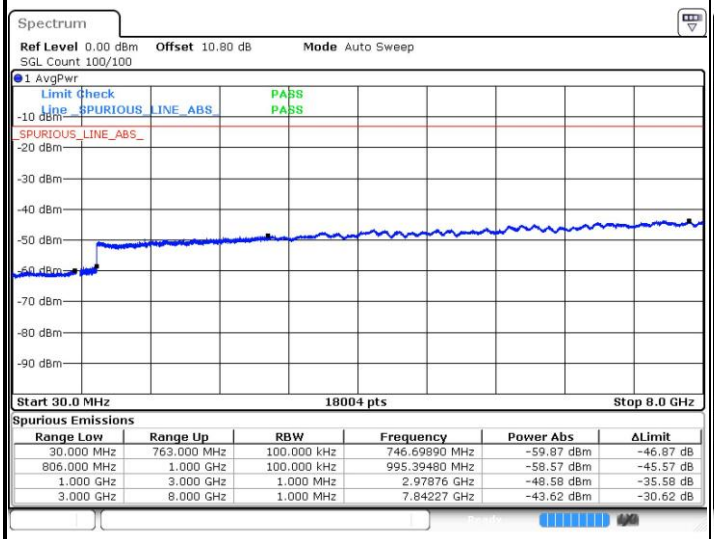

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 763.000 MHz | 100.000 kHz | 237.88481 MHz | -59.71 dBm | -46.71 dB |
| 806.000 MHz | 1.000 GHz | 100.000 kHz | 944.30135 MHz | -58.67 dBm | -45.67 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.99325 GHz | -48.36 dBm | -35.36 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 7.54230 GHz | -43.33 dBm | -30.33 dB |

Date: 16.OCT.2018 09:46:41

## LTE Band 13 / 5MHz

### Lowest Channel / 64QAM

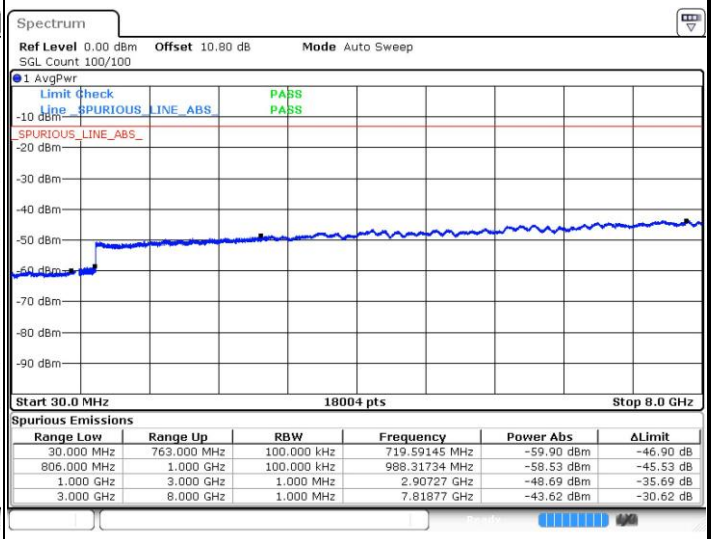



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 763.000 MHz | 100.000 kHz | 746.69890 MHz | -59.87 dBm | -46.87 dB |
| 806.000 MHz | 1.000 GHz | 100.000 kHz | 995.39480 MHz | -58.57 dBm | -45.57 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.97876 GHz | -48.58 dBm | -35.58 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 7.84227 GHz | -43.62 dBm | -30.62 dB |

Date: 18.OCT.2018 21:41:34

### Middle Channel / 64QAM

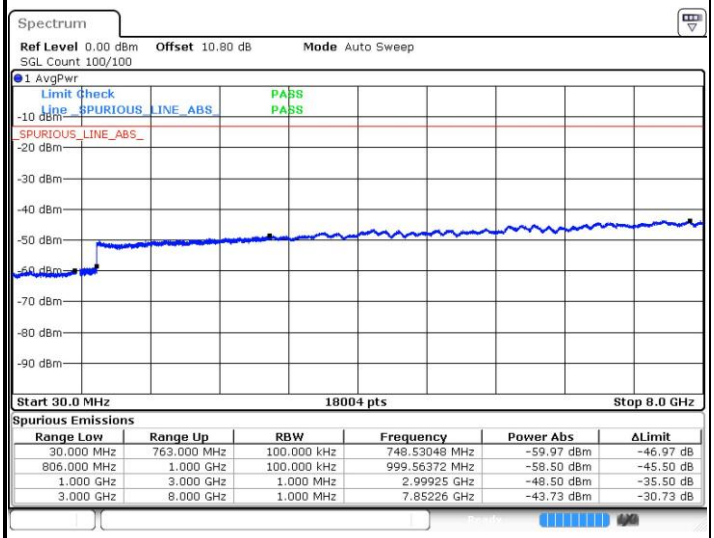



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 763.000 MHz | 100.000 kHz | 719.59145 MHz | -59.90 dBm | -46.90 dB |
| 806.000 MHz | 1.000 GHz | 100.000 kHz | 988.31734 MHz | -58.53 dBm | -45.53 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.90727 GHz | -48.69 dBm | -35.69 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 7.81877 GHz | -43.62 dBm | -30.62 dB |

Date: 18.OCT.2018 21:42:14

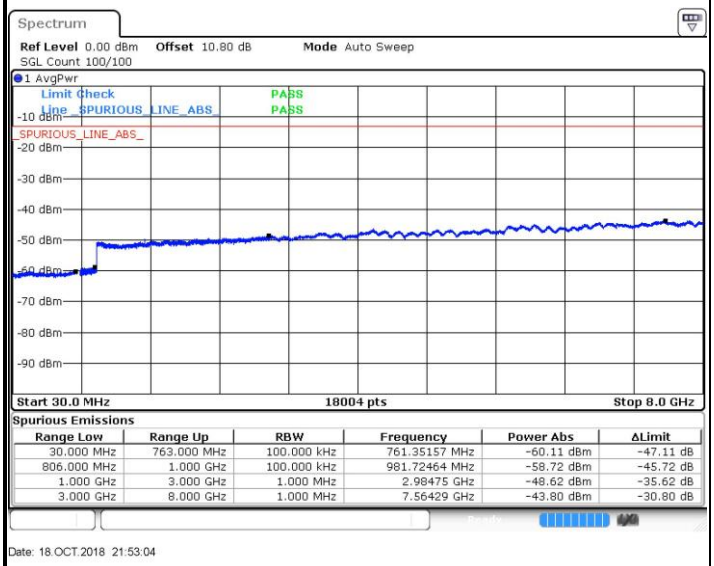
### Highest Channel / 64QAM




Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 763.000 MHz | 100.000 kHz | 748.53048 MHz | -59.97 dBm | -46.97 dB |
| 806.000 MHz | 1.000 GHz | 100.000 kHz | 999.56372 MHz | -58.50 dBm | -45.50 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.99925 GHz | -48.50 dBm | -35.50 dB |
| 3.000 GHz | 8.000 GHz | 1.000 MHz | 7.85226 GHz | -43.73 dBm | -30.73 dB |

Date: 18.OCT.2018 21:47:00

| LTE Band 13 / 10MHz | |
|---|---|
| **Middle Channel / 64QAM** | |
|  | |

# 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 | 0.0155 | PASS |
| 40 | Normal Voltage | 0.0075 | |
| 30 | Normal Voltage | 0.0022 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0009 | |
| 0 | Normal Voltage | 0.0171 | |
| -10 | Normal Voltage | 0.0155 | |
| -20 | Normal Voltage | 0.0180 | |
| -30 | Normal Voltage | 0.0000 | |
| 20 | Maximum Voltage | 0.0155 | |
| 20 | Normal Voltage | 0.0000 | |
| 20 | Battery End Point | 0.0173 | |

**Note:**

1. Normal Voltage =3.9 V.；Battery End Point (BEP) =3.4 V.；Maximum Voltage =4.45 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

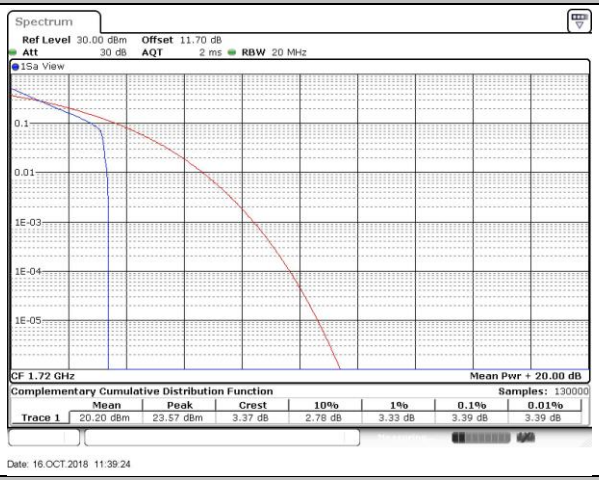
# LTE Band 66

## Peak-to-Average Ratio

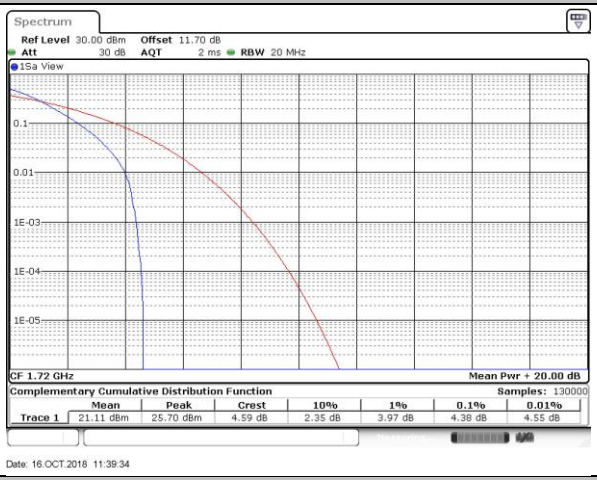
| Mode | LTE Band 66 / 20MHz | | | | |
|---|---|---|---|---|---|
| Mod. | QPSK | | 16QAM | | Limit: 13dB |
| RB Size | 1RB | Full RB | 1RB | Full RB | Result |
| Lowest CH | 3.39 | 4.38 | 4.26 | 5.39 | PASS |
| Middle CH | 3.25 | 4.52 | 4.09 | 5.45 | |
| Highest CH | 3.33 | 4.43 | 4.06 | 5.57 | |
| Mode | LTE Band 66 / 20MHz | | | | |
| Mod. | 64QAM | | | | Limit: 13dB |
| RB Size | 1RB | Full RB | | | Result |
| Lowest CH | 5.10 | 6.03 | - | - | PASS |
| Middle CH | 6.23 | 6.12 | - | - | |
| Highest CH | 4.90 | 6.06 | - | - | |

## LTE Band 66 / 20MHz / QPSK

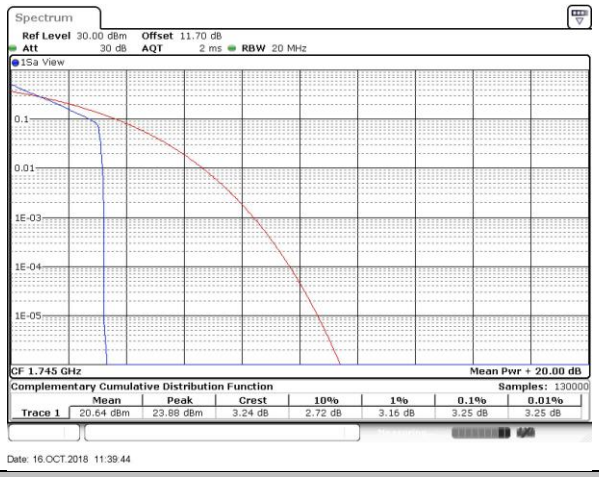
### Lowest Channel / 1RB



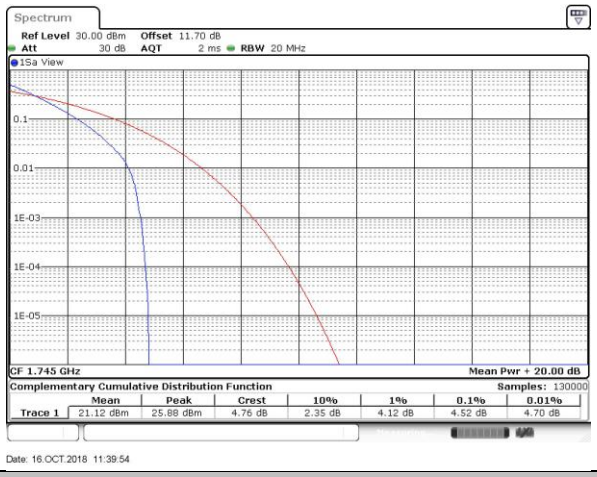

### Lowest Channel / Full RB




### Middle Channel / 1RB

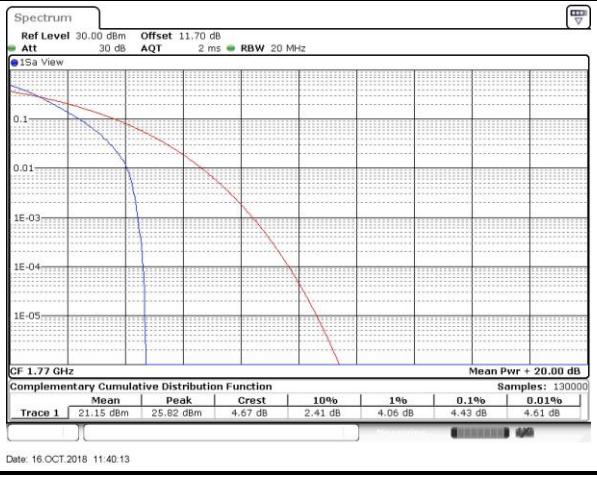



### Middle Channel / Full RB



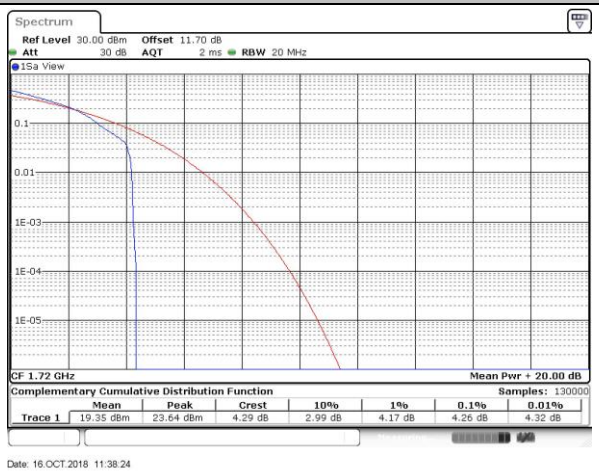

### Highest Channel / 1RB

### Highest Channel / Full RB

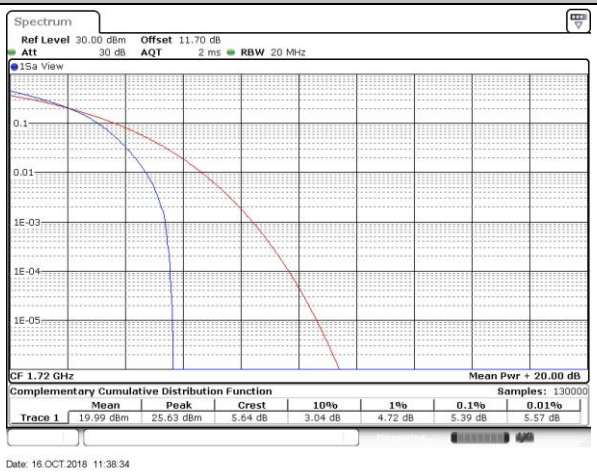


## LTE Band 66 / 20MHz / 16QAM

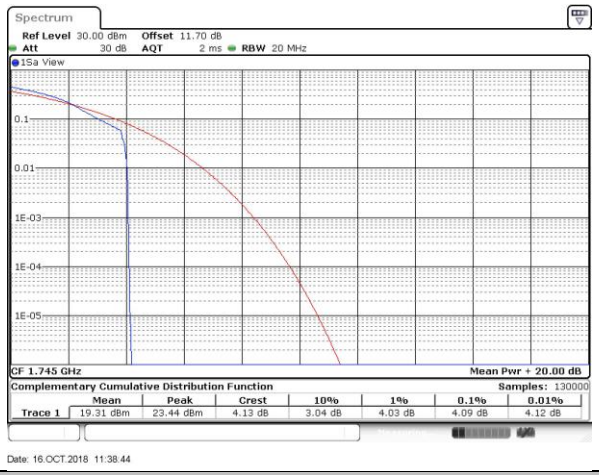
### Lowest Channel / 1RB



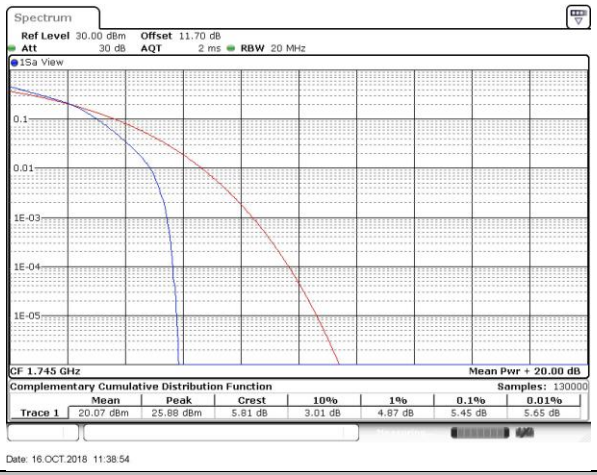

### Lowest Channel / Full RB



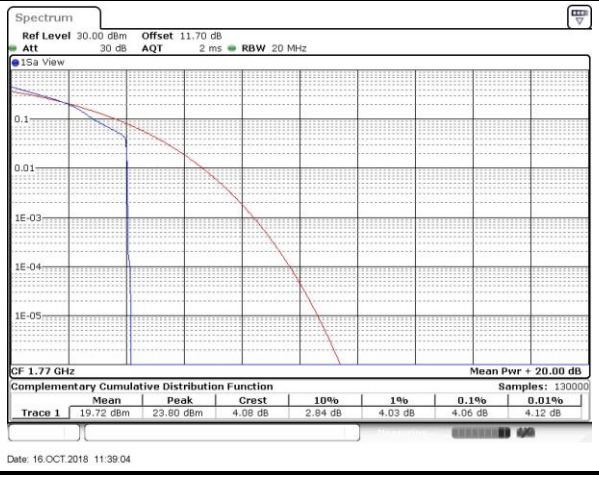

### Middle Channel / 1RB



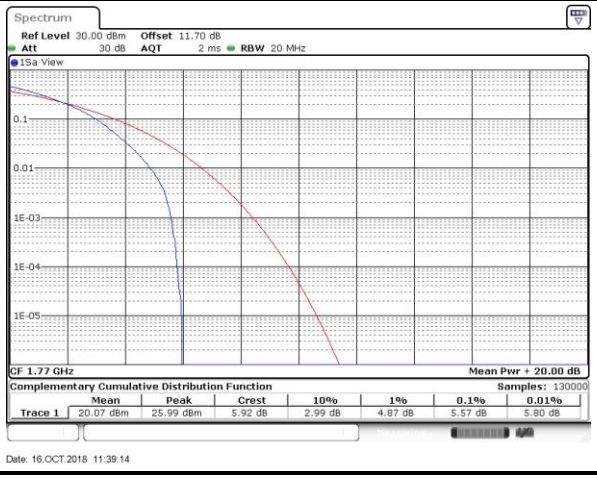

### Middle Channel / Full RB




### Highest Channel / 1RB

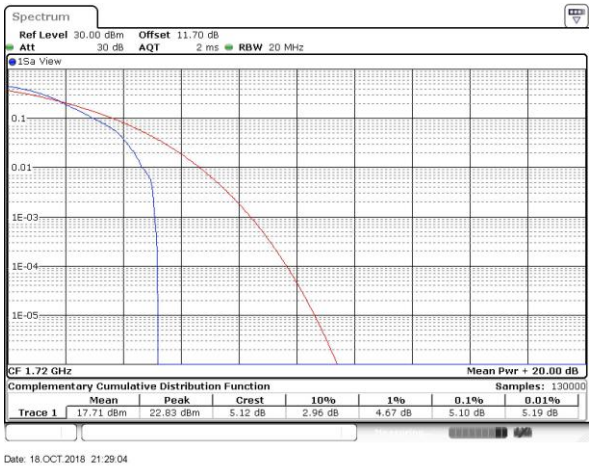



### Highest Channel / Full RB

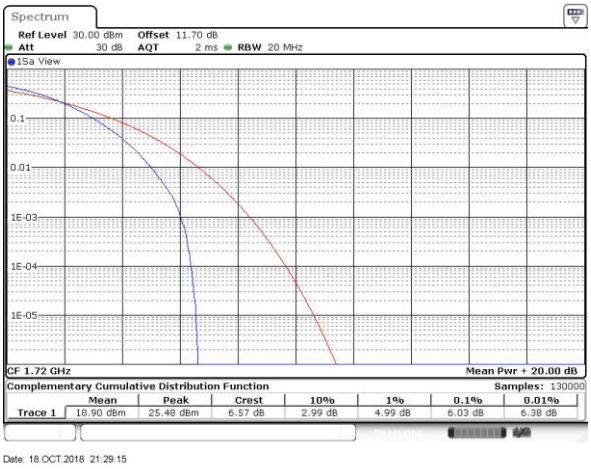


## LTE Band 66 / 20MHz / 64QAM

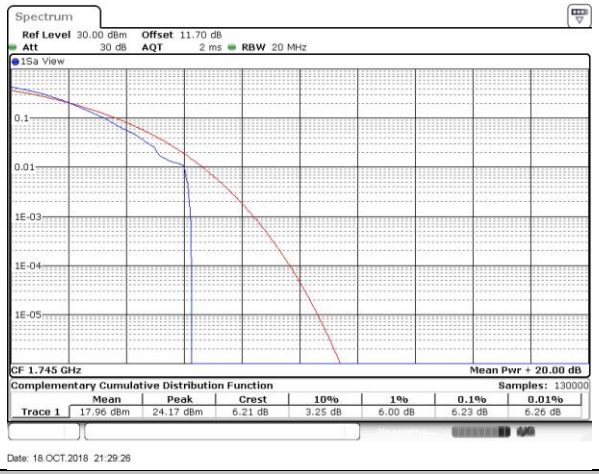
### Lowest Channel / 1RB



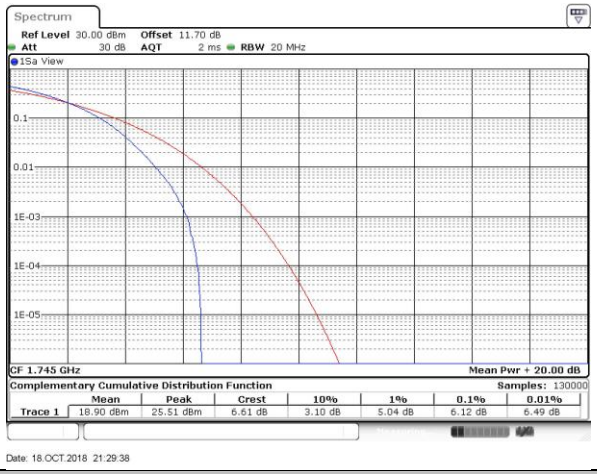

### Lowest Channel / Full RB



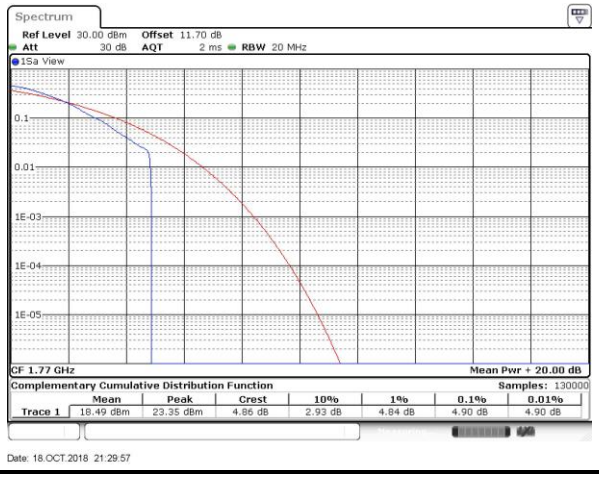

### Middle Channel / 1RB



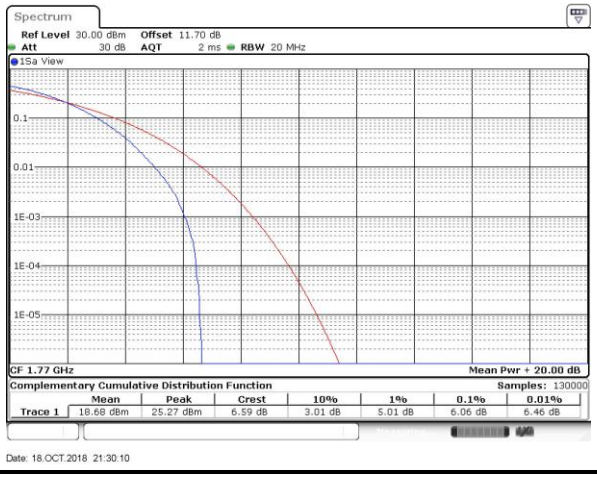

### Middle Channel / Full RB




### Highest Channel / 1RB




### Highest Channel / Full RB

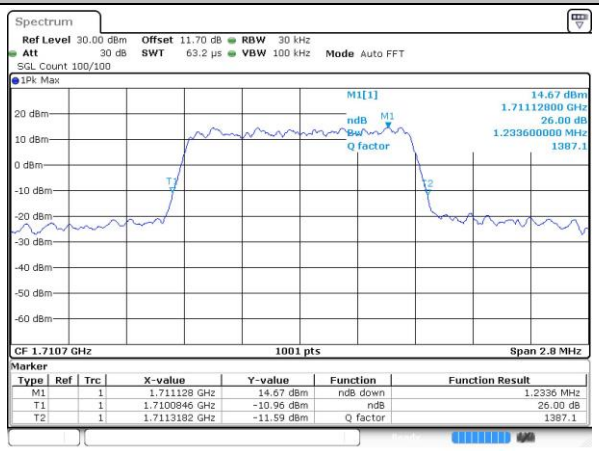


# 26dB Bandwidth

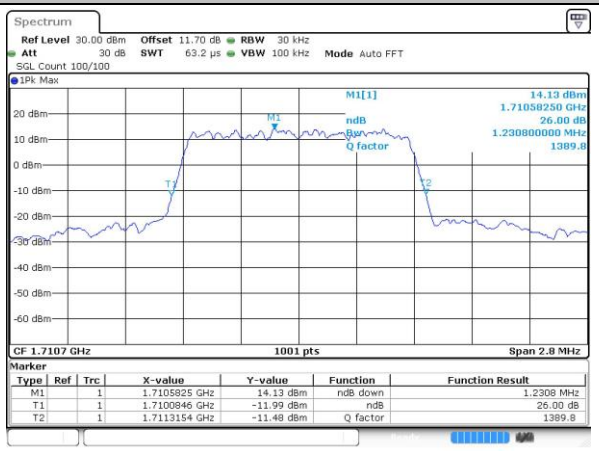
| Mode | LTE Band 66 : 26dB BW(MHz) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM |
| Lowest CH | 1.23 | 1.23 | 3.01 | 2.99 | 4.93 | 4.89 | 9.83 | 9.87 | 14.39 | 14.42 | 20.26 | 20.06 |
| Middle CH | 1.22 | 1.23 | 3.05 | 2.97 | 4.95 | 4.87 | 9.81 | 9.81 | 14.33 | 14.27 | 20.46 | 20.38 |
| Highest CH | 1.24 | 1.24 | 3.02 | 3.02 | 4.96 | 4.81 | 9.77 | 9.71 | 14.63 | 14.30 | 20.14 | 20.10 |
| Mode | LTE Band 66 : 26dB BW(MHz) | | | | | | | | | | | |
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | 64QAM | | 64QAM | | 64QAM | | 64QAM | | 64QAM | | 64QAM | |
| Lowest CH | 1.22 | - | 2.99 | - | 4.94 | - | 9.89 | - | 14.36 | - | 20.26 | - |
| Middle CH | 1.23 | - | 3.05 | - | 4.73 | - | 9.81 | - | 14.63 | - | 20.22 | - |
| Highest CH | 1.23 | - | 2.99 | - | 4.83 | - | 9.81 | - | 14.45 | - | 20.22 | - |

## LTE Band 66

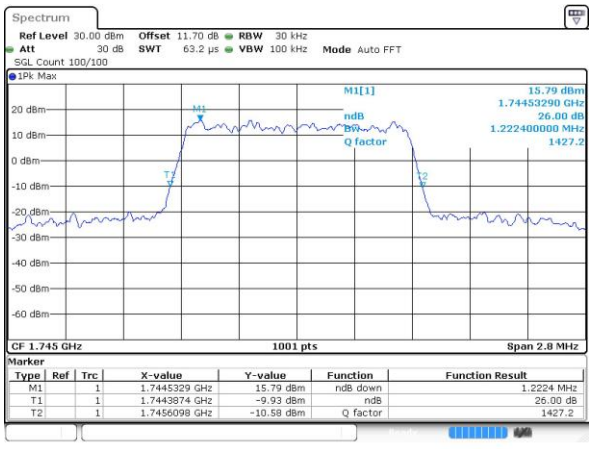
### Lowest Channel / 1.4MHz / QPSK



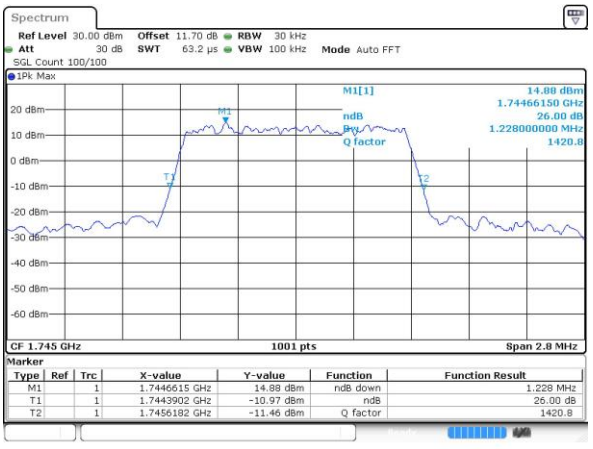

### Lowest Channel / 1.4MHz / 16QAM



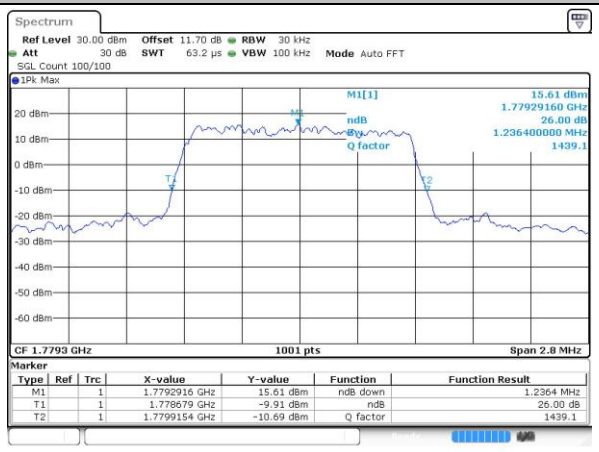

### Middle Channel / 1.4MHz / QPSK



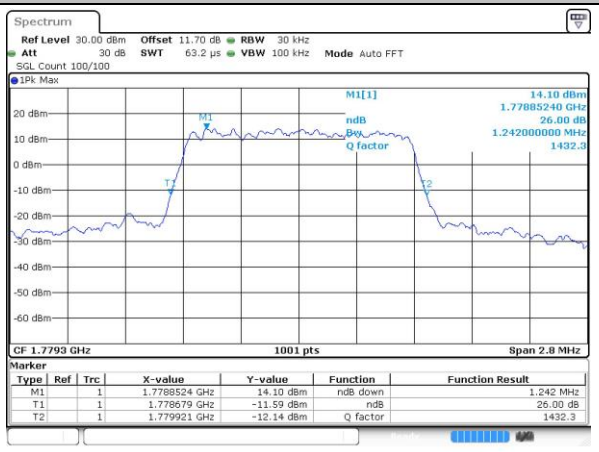

### Middle Channel / 1.4MHz / 16QAM




### Highest Channel / 1.4MHz / QPSK

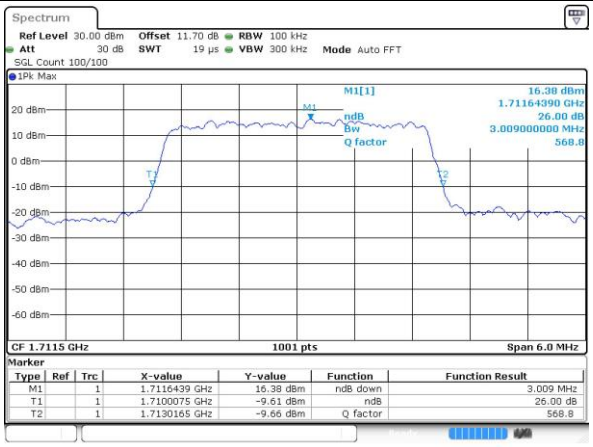



### Highest Channel / 1.4MHz / 16QAM

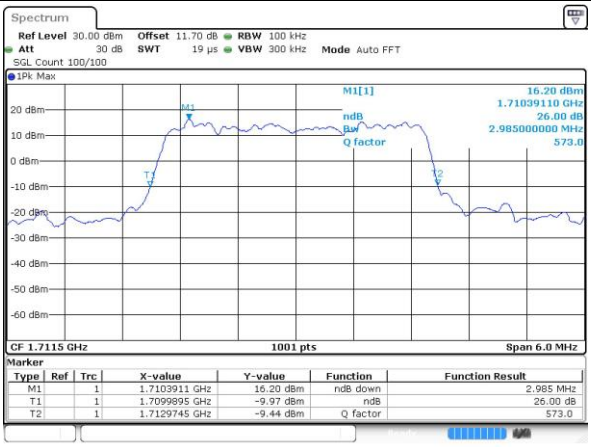


## LTE Band 66

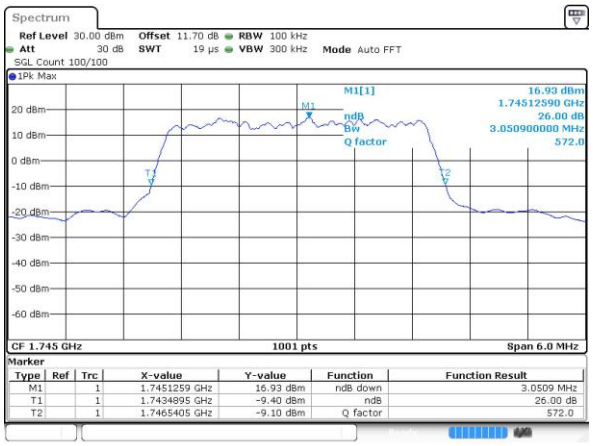
### Lowest Channel / 3MHz / QPSK



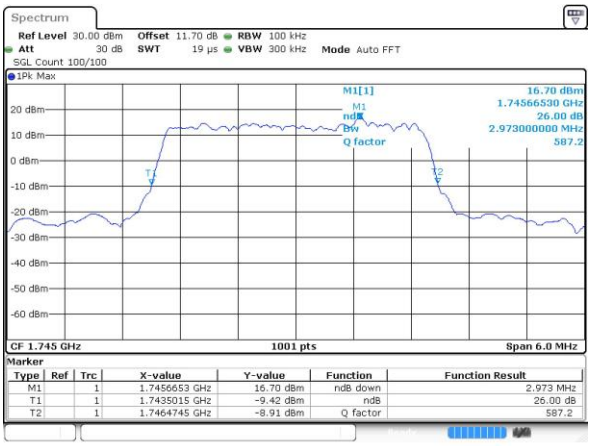

### Lowest Channel / 3MHz / 16QAM



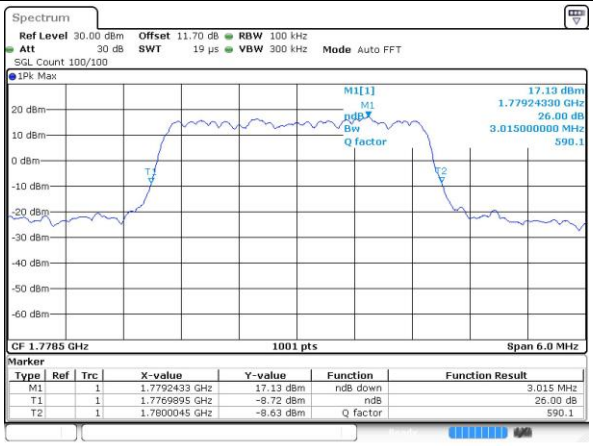

### Middle Channel / 3MHz / QPSK



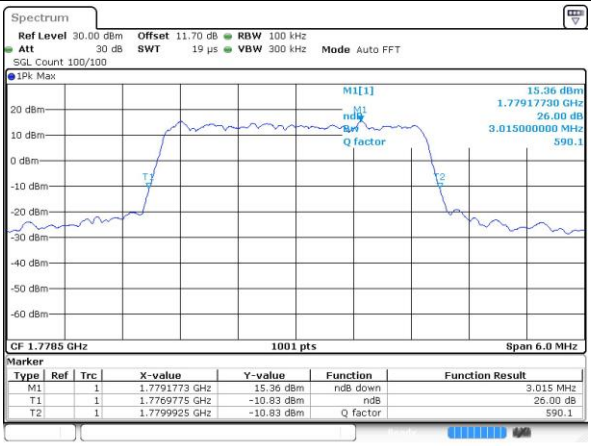

### Middle Channel / 3MHz / 16QAM




### Highest Channel / 3MHz / QPSK

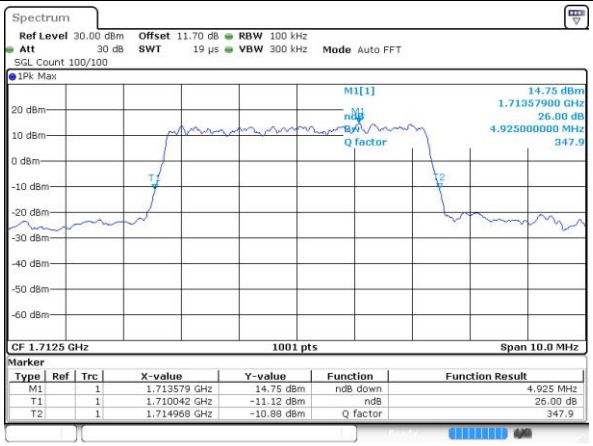



### Highest Channel / 3MHz / 16QAM

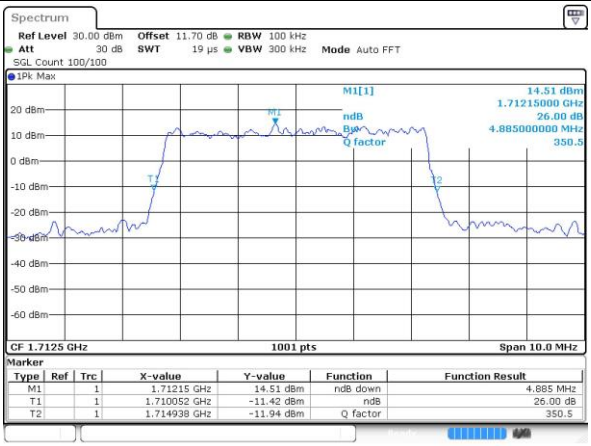


## LTE Band 66

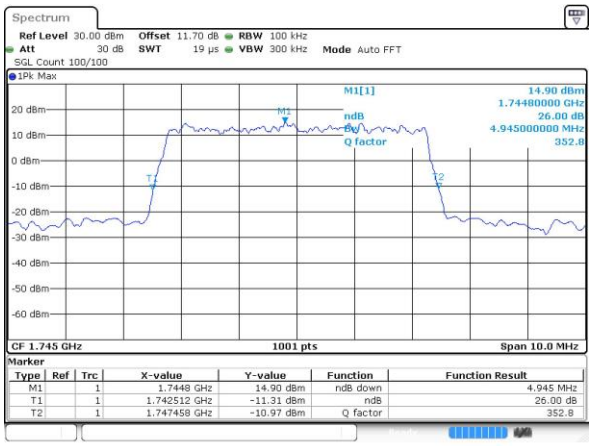
### Lowest Channel / 5MHz / QPSK



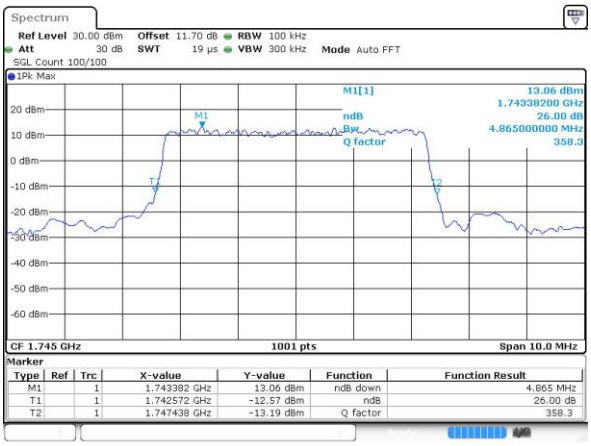

### Lowest Channel / 5MHz / 16QAM



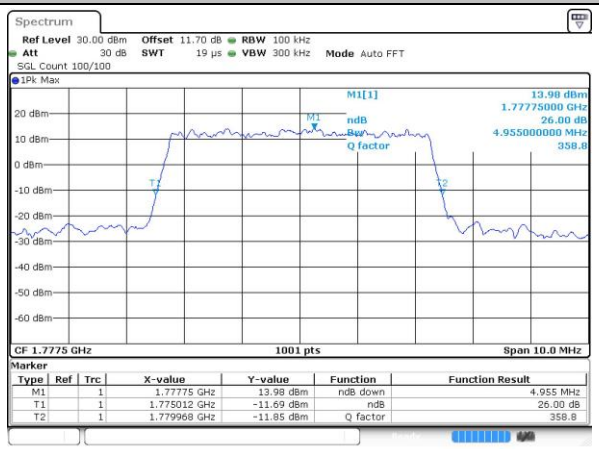

### Middle Channel / 5MHz / QPSK

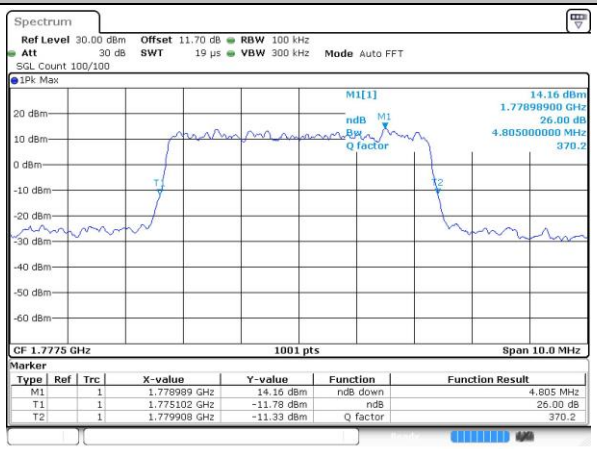



### Middle Channel / 5MHz / 16QAM




### Highest Channel / 5MHz / QPSK




### Highest Channel / 5MHz / 16QAM