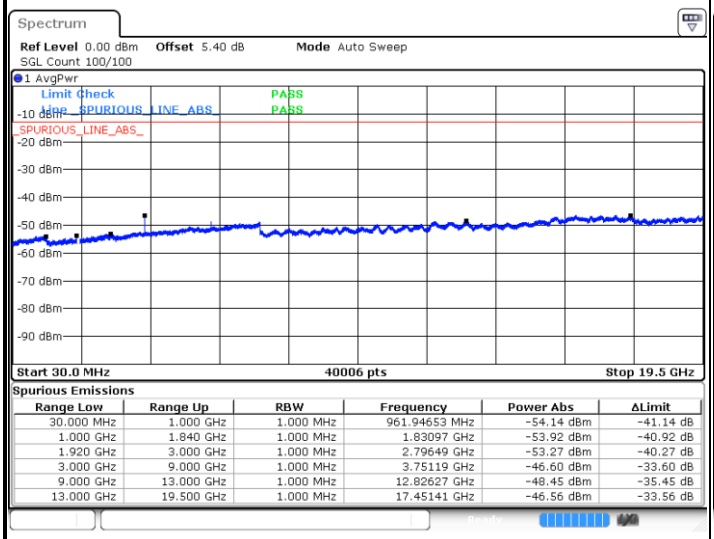
## LTE Band 2 / 10MHz

### Middle Channel / QPSK

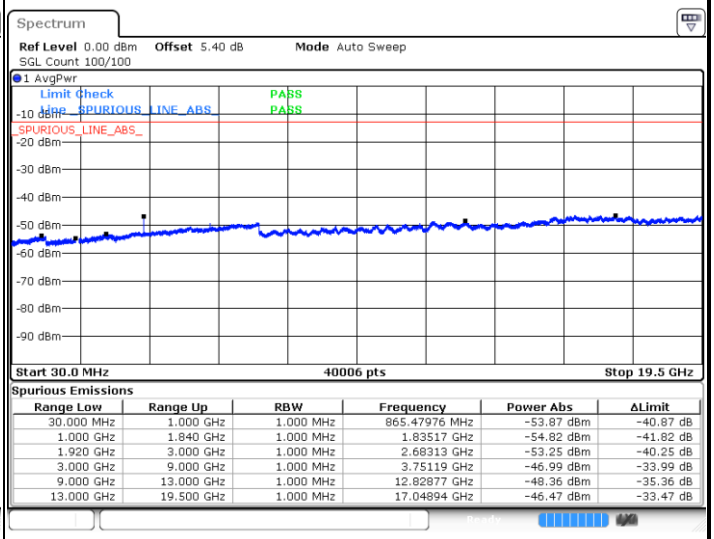



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 961.94653 MHz | -54.14 dBm | -41.14 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.83097 GHz | -53.92 dBm | -40.92 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.79649 GHz | -53.27 dBm | -40.27 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 3.75119 GHz | -46.60 dBm | -33.60 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 12.82627 GHz | -48.45 dBm | -35.45 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 17.45141 GHz | -46.56 dBm | -33.56 dB |

Date: 14.FEB.2020 12:34:45

### Middle Channel / 16QAM

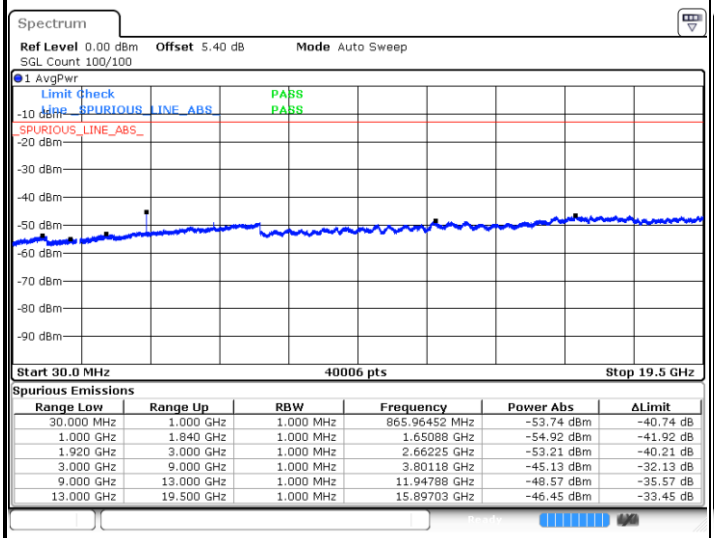



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 865.47976 MHz | -53.87 dBm | -40.87 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.83517 GHz | -54.82 dBm | -41.82 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.68313 GHz | -53.25 dBm | -40.25 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 3.75119 GHz | -46.99 dBm | -33.99 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 12.82877 GHz | -48.36 dBm | -35.36 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 17.04894 GHz | -46.47 dBm | -33.47 dB |

Date: 14.FEB.2020 12:35:39

### Highest Channel / QPSK

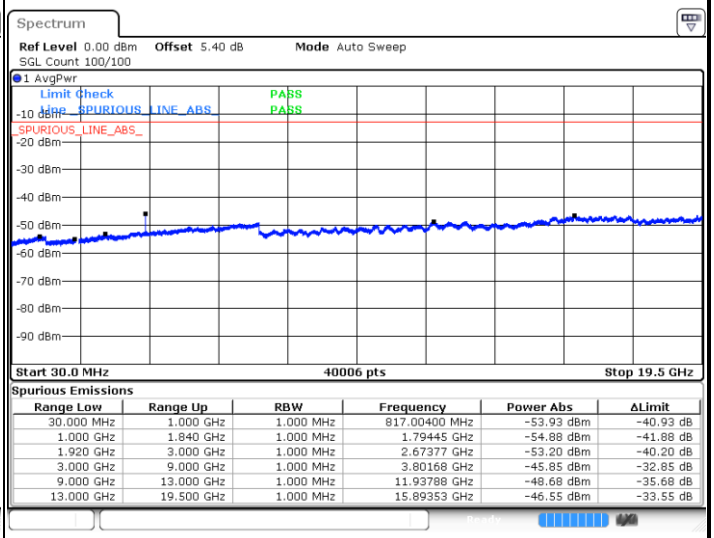



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 865.96452 MHz | -53.74 dBm | -40.74 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.65088 GHz | -54.92 dBm | -41.92 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.66225 GHz | -53.21 dBm | -40.21 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 3.80118 GHz | -45.13 dBm | -32.13 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 11.94788 GHz | -48.57 dBm | -35.57 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 15.89703 GHz | -46.45 dBm | -33.45 dB |

Date: 14.FEB.2020 12:41:44

### Highest Channel / 16QAM



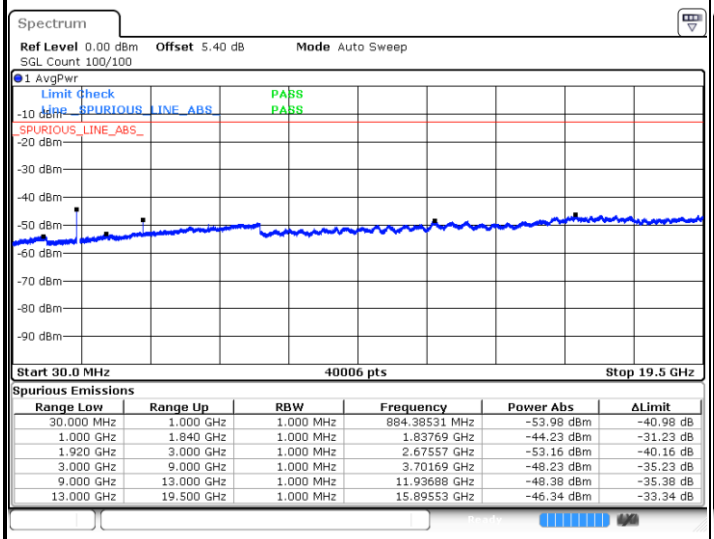

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 817.00400 MHz | -53.93 dBm | -40.93 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.79445 GHz | -54.88 dBm | -41.88 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.67377 GHz | -53.20 dBm | -40.20 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 3.80168 GHz | -45.85 dBm | -32.85 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 11.93788 GHz | -48.68 dBm | -35.68 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 15.89353 GHz | -46.55 dBm | -33.55 dB |

Date: 14.FEB.2020 12:42:39

## LTE Band 2 / 15MHz

### Lowest Channel / QPSK

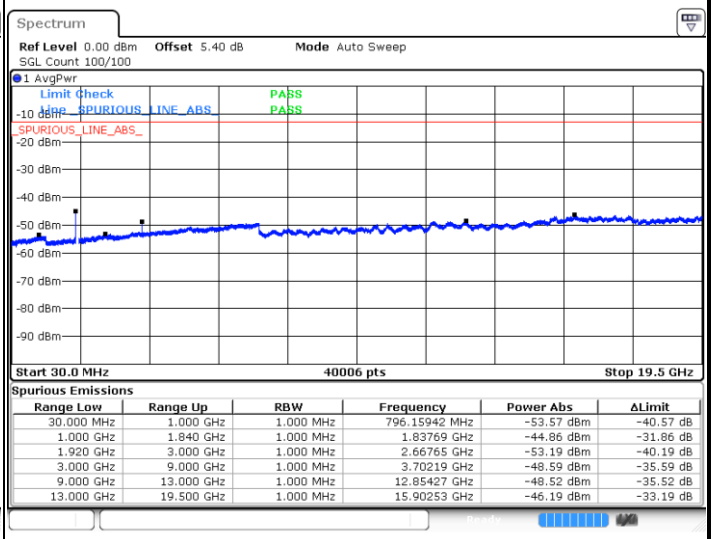



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 884.38531 MHz | -53.98 dBm | -40.98 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.83769 GHz | -44.23 dBm | -31.23 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.67557 GHz | -53.16 dBm | -40.16 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 3.70169 GHz | -48.23 dBm | -35.23 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 11.93688 GHz | -48.38 dBm | -35.38 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 15.89553 GHz | -46.34 dBm | -33.34 dB |

Date: 14.FEB.2020 12:48:43

### Lowest Channel / 16QAM

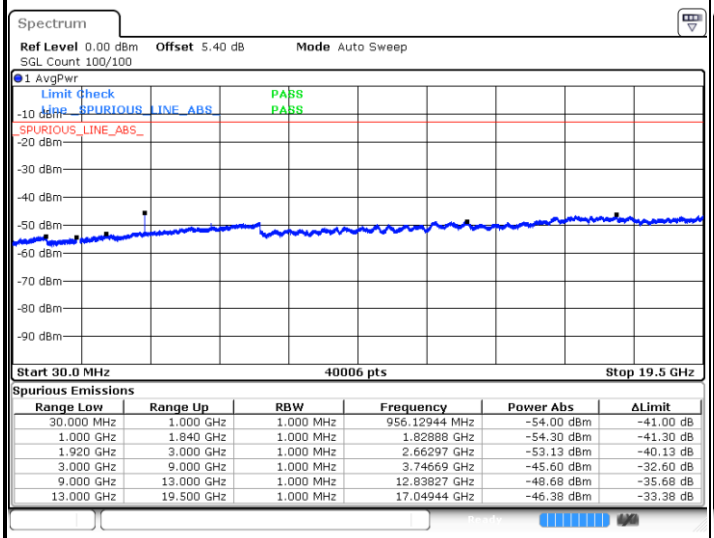



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 796.15942 MHz | -53.57 dBm | -40.57 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.83769 GHz | -44.86 dBm | -31.86 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.66765 GHz | -53.19 dBm | -40.19 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 3.70219 GHz | -48.59 dBm | -35.59 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 12.85427 GHz | -48.52 dBm | -35.52 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 15.90253 GHz | -46.19 dBm | -33.19 dB |

Date: 14.FEB.2020 12:49:38

### Middle Channel / QPSK

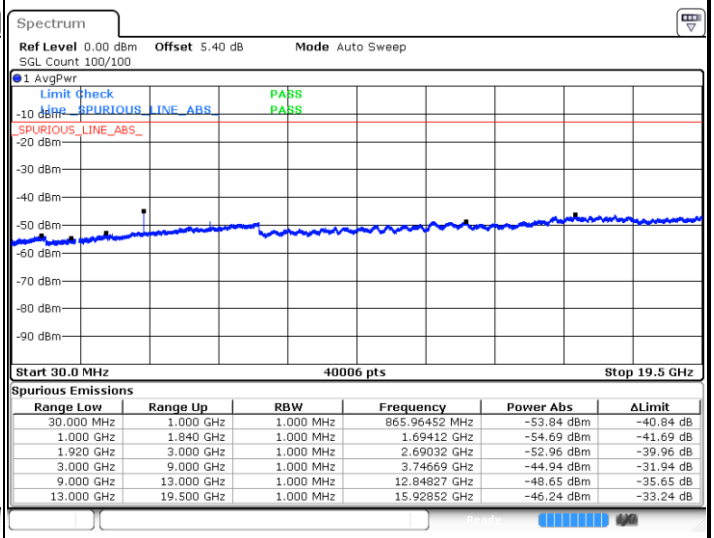



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 956.12944 MHz | -54.00 dBm | -41.00 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.82888 GHz | -54.30 dBm | -41.30 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.66297 GHz | -53.13 dBm | -40.13 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 3.74669 GHz | -45.60 dBm | -32.60 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 12.83827 GHz | -48.68 dBm | -35.68 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 17.04944 GHz | -46.38 dBm | -33.38 dB |

Date: 14.FEB.2020 12:51:12

### Middle Channel / 16QAM



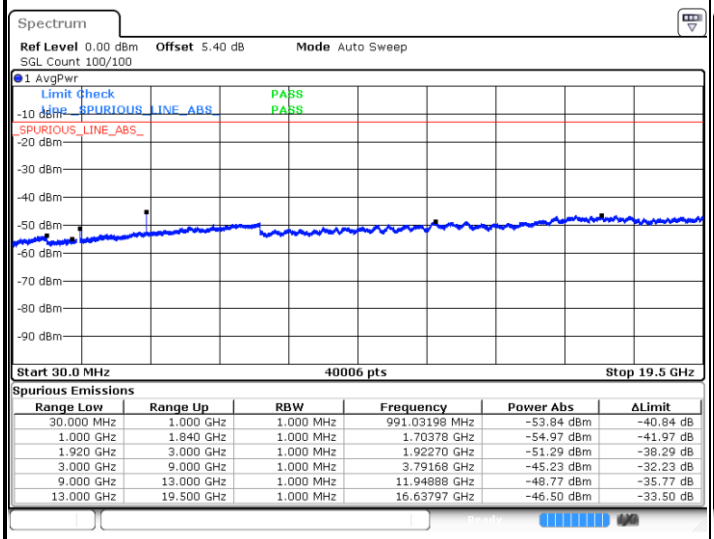

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 865.96452 MHz | -53.84 dBm | -40.84 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.69412 GHz | -54.69 dBm | -41.69 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.69032 GHz | -52.96 dBm | -39.96 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 3.74669 GHz | -44.94 dBm | -31.94 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 12.84827 GHz | -48.65 dBm | -35.65 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 15.92852 GHz | -46.24 dBm | -33.24 dB |

Date: 14.FEB.2020 12:52:07

## LTE Band 2 / 15MHz

### Highest Channel / QPSK

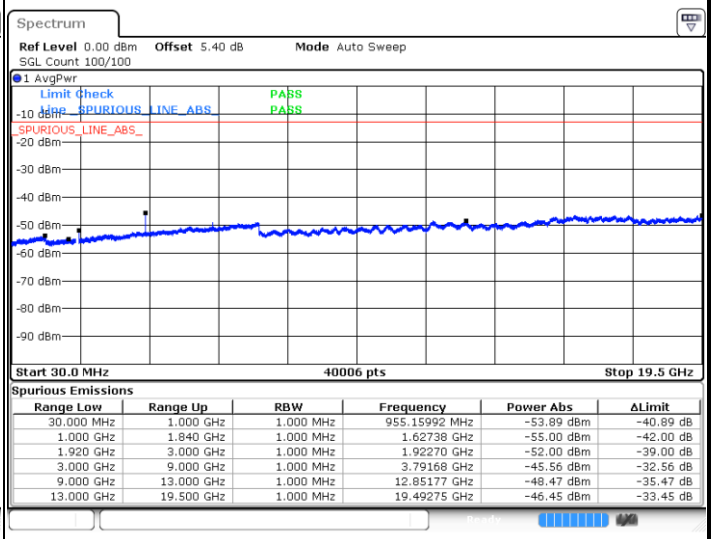



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 991.03198 MHz | -53.84 dBm | -40.84 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.70378 GHz | -54.97 dBm | -41.97 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 1.92270 GHz | -51.29 dBm | -38.29 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 3.79168 GHz | -45.23 dBm | -32.23 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 11.94888 GHz | -48.77 dBm | -35.77 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 16.63797 GHz | -46.50 dBm | -33.50 dB |

Date: 14.FEB.2020 12:58:11

### Highest Channel / 16QAM



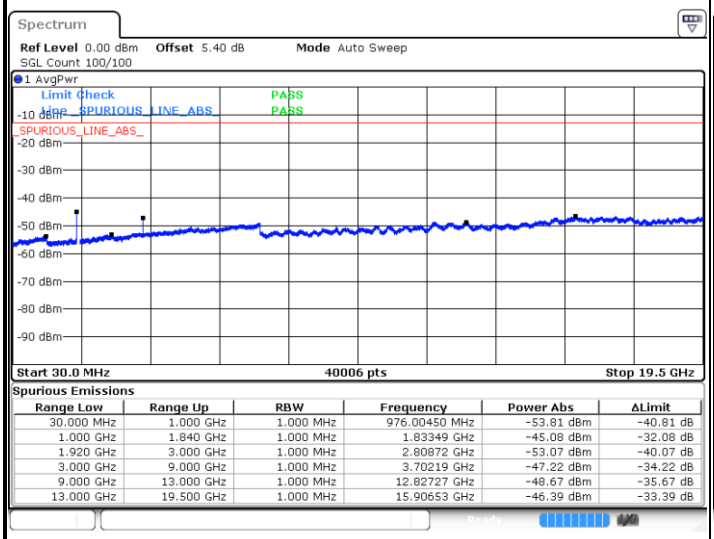

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 955.15992 MHz | -53.89 dBm | -40.89 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.62738 GHz | -55.00 dBm | -42.00 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 1.92270 GHz | -52.00 dBm | -39.00 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 3.79168 GHz | -45.56 dBm | -32.56 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 12.85177 GHz | -48.47 dBm | -35.47 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 19.49275 GHz | -46.45 dBm | -33.45 dB |

Date: 14.FEB.2020 12:59:06

## LTE Band 2 / 20MHz

### Lowest Channel / QPSK

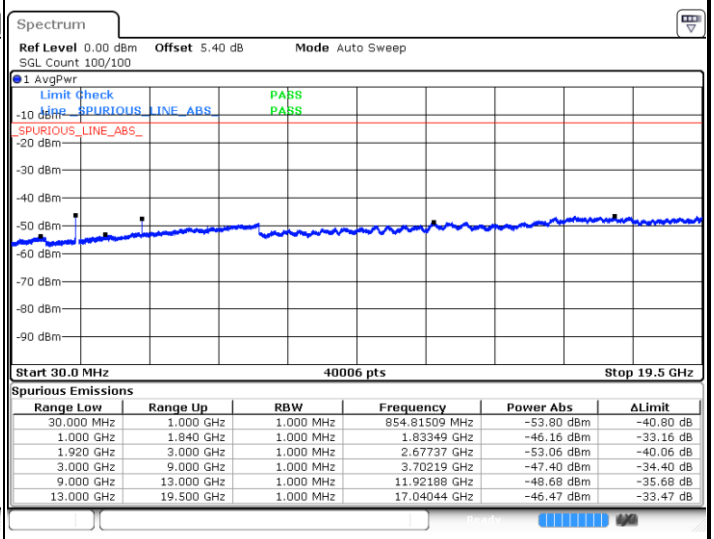



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 976.00450 MHz | -53.81 dBm | -40.81 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.83349 GHz | -45.08 dBm | -32.08 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.80872 GHz | -53.07 dBm | -40.07 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 3.70219 GHz | -47.22 dBm | -34.22 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 12.82727 GHz | -48.67 dBm | -35.67 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 15.90653 GHz | -46.39 dBm | -33.39 dB |

Date: 14.FEB.2020 13:05:11

### Lowest Channel / 16QAM



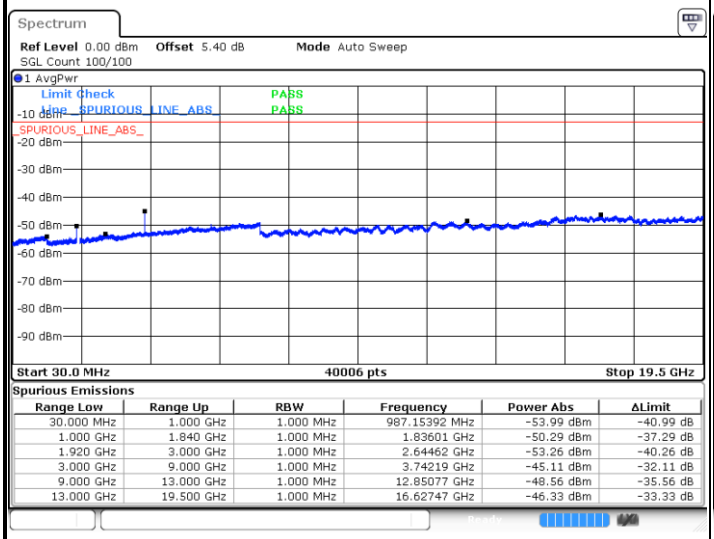

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 854.81509 MHz | -53.80 dBm | -40.80 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.83349 GHz | -46.16 dBm | -33.16 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.67737 GHz | -53.06 dBm | -40.06 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 3.70219 GHz | -47.40 dBm | -34.40 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 11.92188 GHz | -48.68 dBm | -35.68 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 17.04044 GHz | -46.47 dBm | -33.47 dB |

Date: 14.FEB.2020 13:06:06

## LTE Band 2 / 20MHz

### Middle Channel / QPSK

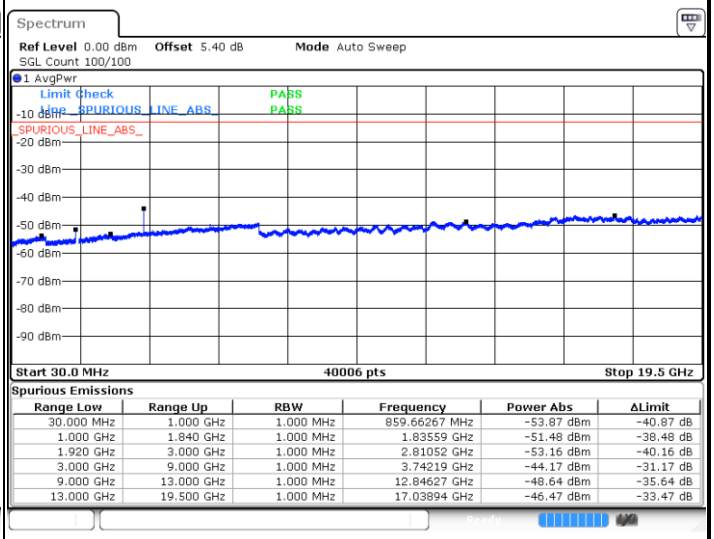



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 987.15392 MHz | -53.99 dBm | -40.99 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.83601 GHz | -50.29 dBm | -37.29 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.64462 GHz | -53.26 dBm | -40.26 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 3.74219 GHz | -45.11 dBm | -32.11 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 12.85077 GHz | -48.56 dBm | -35.56 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 16.62747 GHz | -46.33 dBm | -33.33 dB |

Date: 14.FEB.2020 13:07:40

### Middle Channel / 16QAM

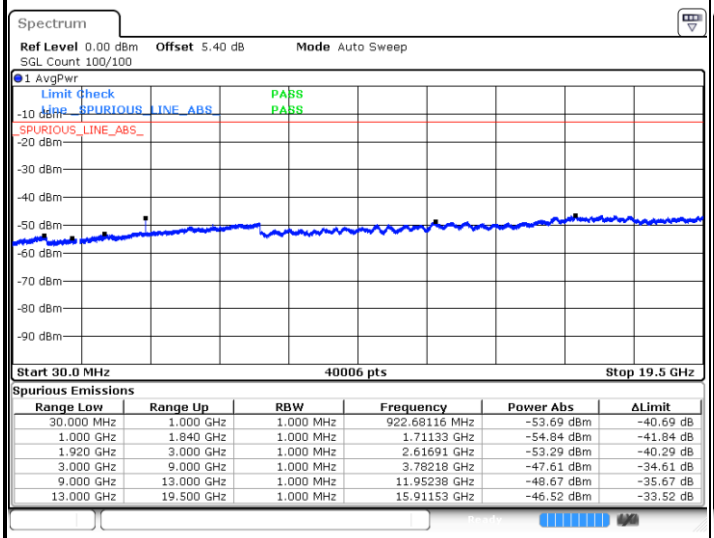



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 859.66267 MHz | -53.87 dBm | -40.87 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.83559 GHz | -51.48 dBm | -38.48 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.81052 GHz | -53.16 dBm | -40.16 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 3.74219 GHz | -44.17 dBm | -31.17 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 12.84627 GHz | -48.64 dBm | -35.64 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 17.03894 GHz | -46.47 dBm | -33.47 dB |

Date: 14.FEB.2020 13:08:35

### Highest Channel / QPSK

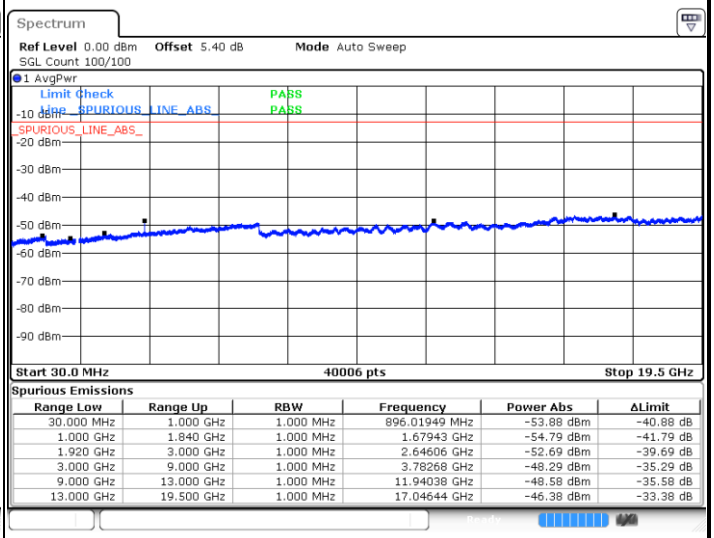



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 922.68116 MHz | -53.69 dBm | -40.69 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.71133 GHz | -54.84 dBm | -41.84 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.61691 GHz | -53.29 dBm | -40.29 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 3.78218 GHz | -47.61 dBm | -34.61 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 11.95238 GHz | -48.67 dBm | -35.67 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 15.91153 GHz | -46.52 dBm | -33.52 dB |

Date: 14.FEB.2020 13:14:39

### Highest Channel / 16QAM



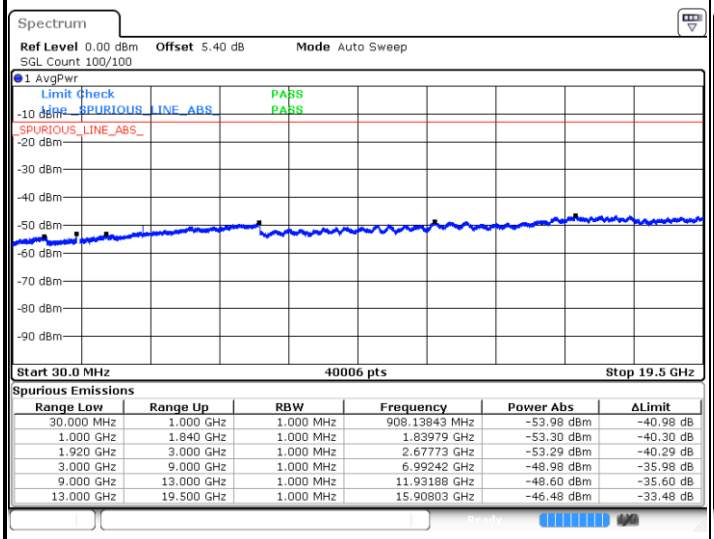

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 896.01949 MHz | -53.88 dBm | -40.88 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.67943 GHz | -54.79 dBm | -41.79 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.64606 GHz | -52.69 dBm | -39.69 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 3.78268 GHz | -48.29 dBm | -35.29 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 11.94038 GHz | -48.58 dBm | -35.58 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 17.04644 GHz | -46.38 dBm | -33.38 dB |

Date: 14.FEB.2020 13:15:34

## LTE Band 2 / 1.4MHz

### Lowest Channel / 64QAM

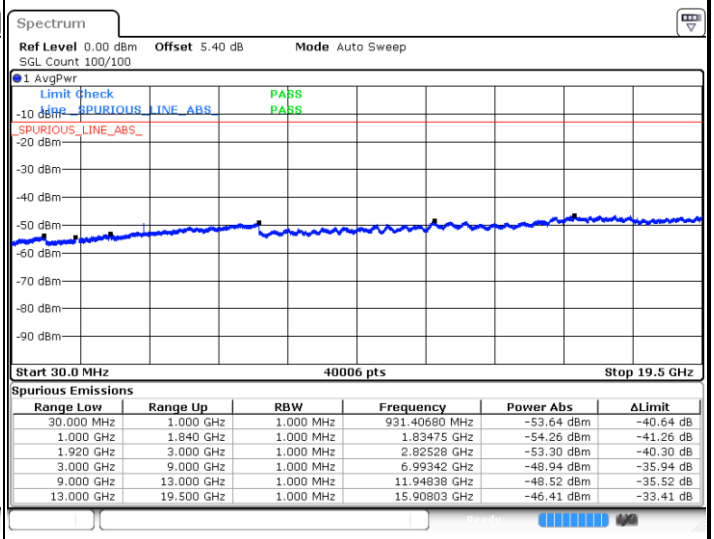



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 908.13843 MHz | -53.98 dBm | -40.98 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.83979 GHz | -53.30 dBm | -40.30 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.67773 GHz | -53.29 dBm | -40.29 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 6.99242 GHz | -48.98 dBm | -35.98 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 11.93188 GHz | -48.60 dBm | -35.60 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 15.90803 GHz | -46.48 dBm | -33.48 dB |

Date: 14.FEB.2020 14:21:56

### Middle Channel / 64QAM

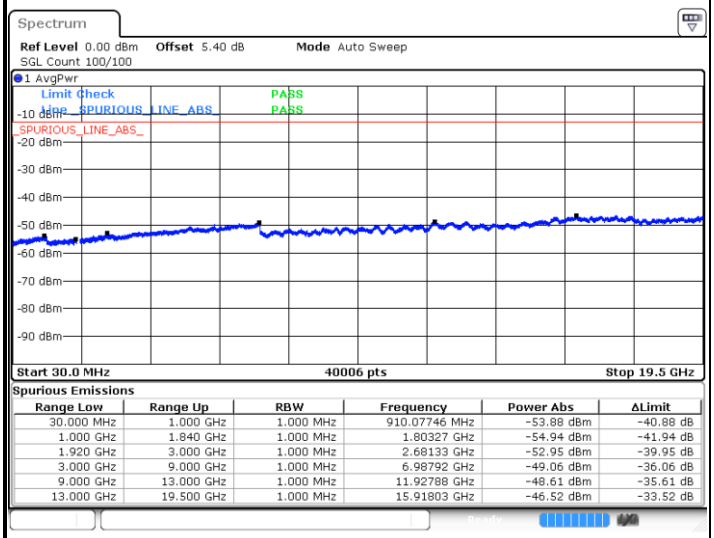



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 931.40680 MHz | -53.64 dBm | -40.64 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.83475 GHz | -54.26 dBm | -41.26 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.82528 GHz | -53.30 dBm | -40.30 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 6.99342 GHz | -48.94 dBm | -35.94 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 11.94838 GHz | -48.52 dBm | -35.52 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 15.90803 GHz | -46.41 dBm | -33.41 dB |

Date: 14.FEB.2020 14:22:51

### Highest Channel / 64QAM



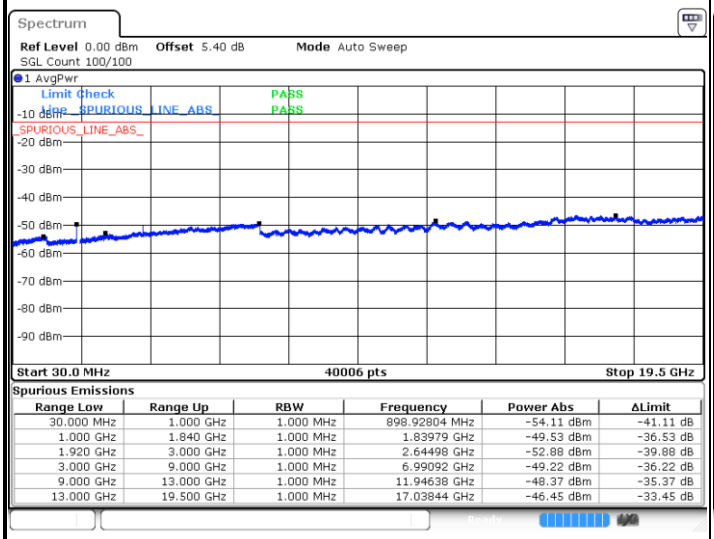

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 910.07746 MHz | -53.88 dBm | -40.88 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.80327 GHz | -54.94 dBm | -41.94 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.68133 GHz | -52.95 dBm | -39.95 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 6.98792 GHz | -49.06 dBm | -36.06 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 11.92788 GHz | -48.61 dBm | -35.61 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 15.91803 GHz | -46.52 dBm | -33.52 dB |

Date: 14.FEB.2020 14:23:46

## LTE Band 2 / 3MHz

### Lowest Channel / 64QAM

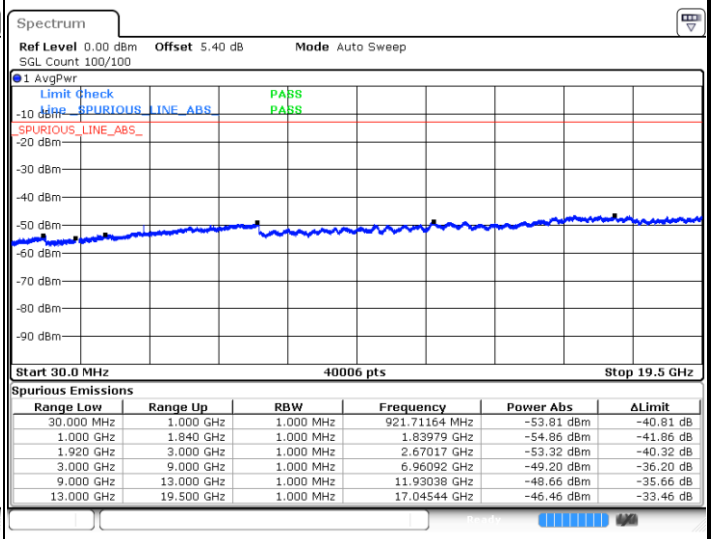



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 898.92804 MHz | -54.11 dBm | -41.11 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.83979 GHz | -49.53 dBm | -36.53 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.64498 GHz | -52.88 dBm | -39.88 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 6.99092 GHz | -49.22 dBm | -36.22 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 11.94638 GHz | -48.37 dBm | -35.37 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 17.03844 GHz | -46.45 dBm | -33.45 dB |

Date: 14.FEB.2020 14:24:40

### Middle Channel / 64QAM

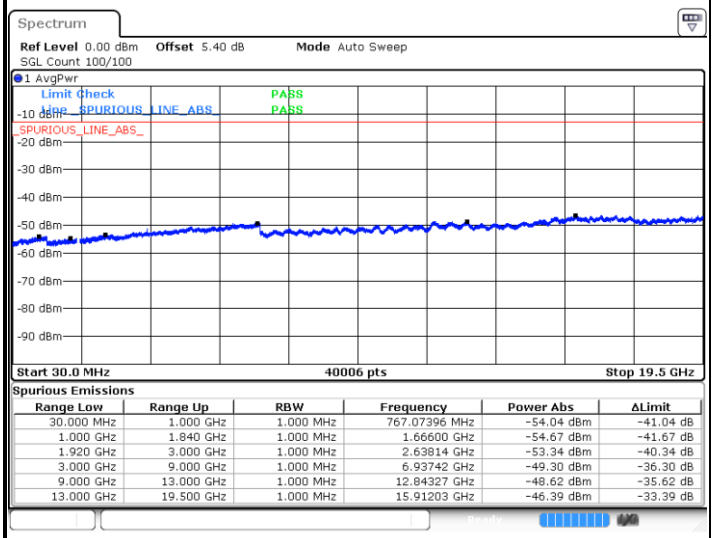



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 921.71164 MHz | -53.81 dBm | -40.81 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.83979 GHz | -54.86 dBm | -41.86 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.67017 GHz | -53.32 dBm | -40.32 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 6.96092 GHz | -49.20 dBm | -36.20 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 11.93038 GHz | -48.66 dBm | -35.66 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 17.04544 GHz | -46.46 dBm | -33.46 dB |

Date: 14.FEB.2020 14:25:35

### Highest Channel / 64QAM



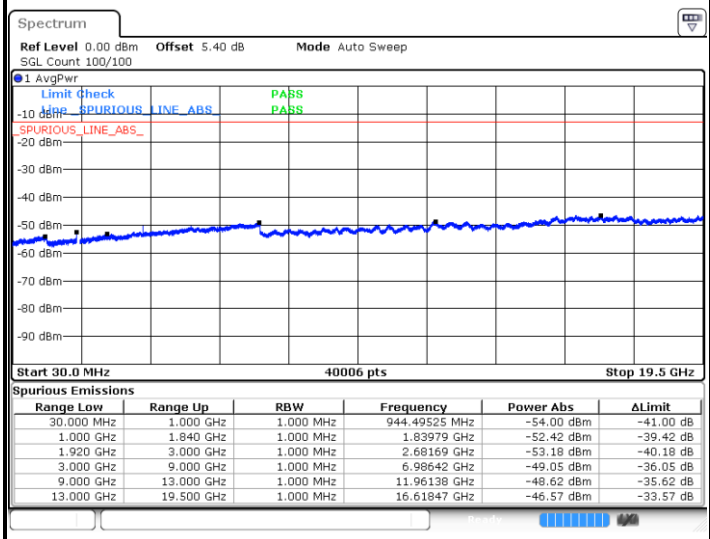

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 767.07396 MHz | -54.04 dBm | -41.04 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.66600 GHz | -54.67 dBm | -41.67 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.63814 GHz | -53.34 dBm | -40.34 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 6.93742 GHz | -49.30 dBm | -36.30 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 12.84327 GHz | -48.62 dBm | -35.62 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 15.91203 GHz | -46.39 dBm | -33.39 dB |

Date: 14.FEB.2020 14:26:29

## LTE Band 2 / 5MHz

### Lowest Channel / 64QAM

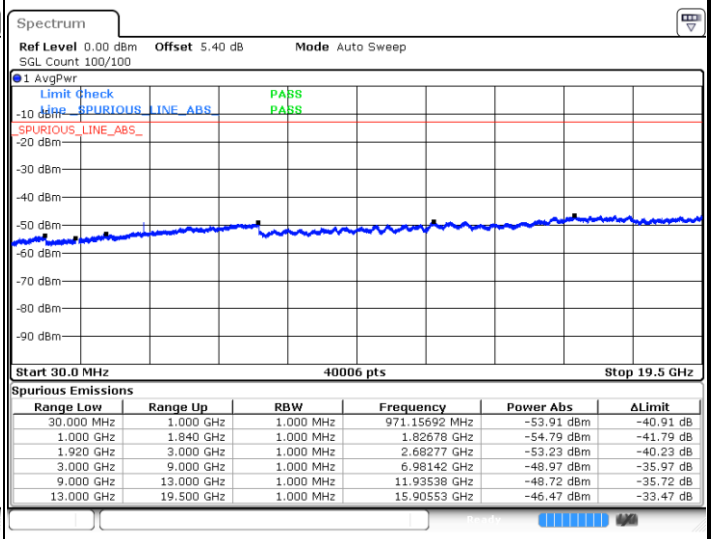



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 944.49525 MHz | -54.00 dBm | -41.00 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.83979 GHz | -52.42 dBm | -39.42 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.68169 GHz | -53.18 dBm | -40.18 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 6.98642 GHz | -49.05 dBm | -36.05 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 11.96138 GHz | -48.62 dBm | -35.62 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 16.61847 GHz | -46.57 dBm | -33.57 dB |

Date: 14.FEB.2020 14:27:24

### Middle Channel / 64QAM

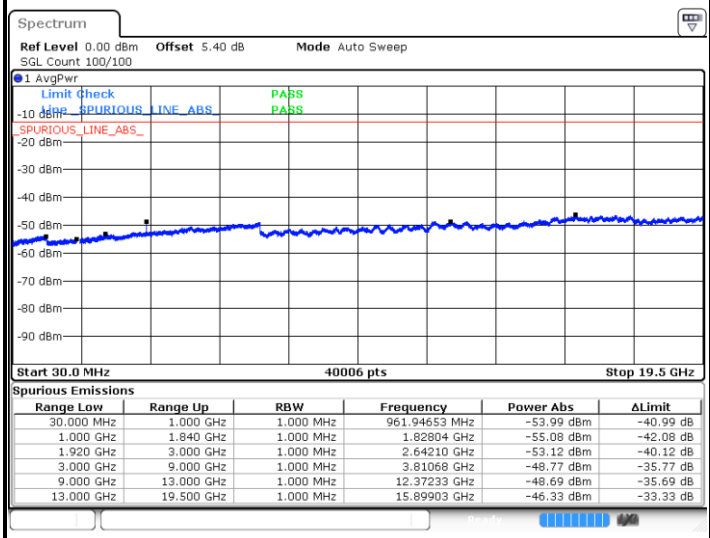



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 971.15692 MHz | -53.91 dBm | -40.91 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.82678 GHz | -54.79 dBm | -41.79 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.68277 GHz | -53.23 dBm | -40.23 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 6.98142 GHz | -48.97 dBm | -35.97 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 11.93538 GHz | -48.72 dBm | -35.72 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 15.90553 GHz | -46.47 dBm | -33.47 dB |

Date: 14.FEB.2020 14:28:19

### Highest Channel / 64QAM



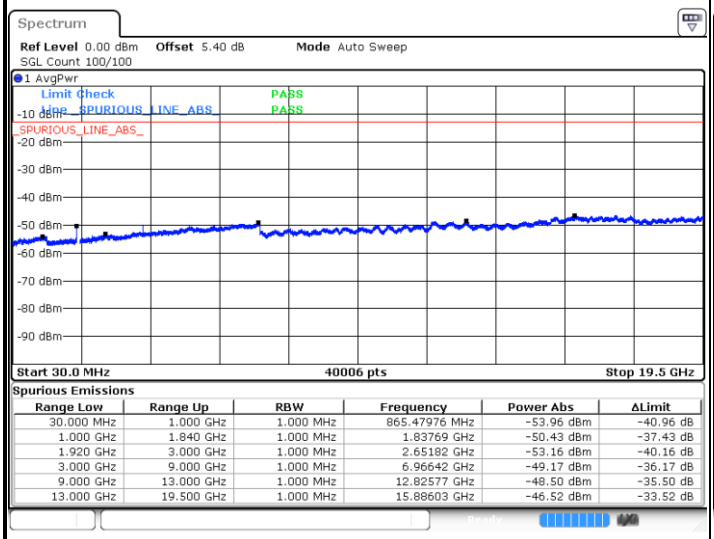

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 961.94653 MHz | -53.99 dBm | -40.99 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.82804 GHz | -55.08 dBm | -42.08 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.64210 GHz | -53.12 dBm | -40.12 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 3.81068 GHz | -48.77 dBm | -35.77 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 12.37233 GHz | -48.69 dBm | -35.69 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 15.89903 GHz | -46.33 dBm | -33.33 dB |

Date: 14.FEB.2020 14:29:13

## LTE Band 2 / 10MHz

### Lowest Channel / 64QAM

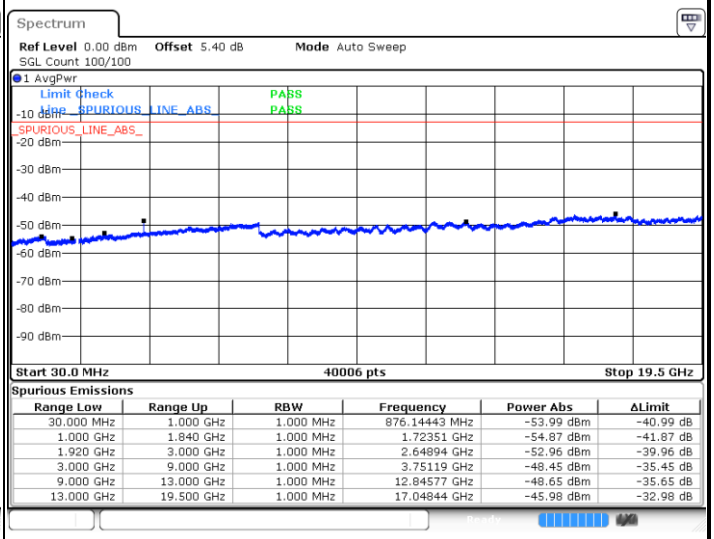



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 865.47976 MHz | -53.96 dBm | -40.96 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.83769 GHz | -50.43 dBm | -37.43 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.65182 GHz | -53.16 dBm | -40.16 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 6.96642 GHz | -49.17 dBm | -36.17 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 12.82577 GHz | -48.50 dBm | -35.50 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 15.88603 GHz | -46.52 dBm | -33.52 dB |

Date: 14.FEB.2020 14:30:08

### Middle Channel / 64QAM

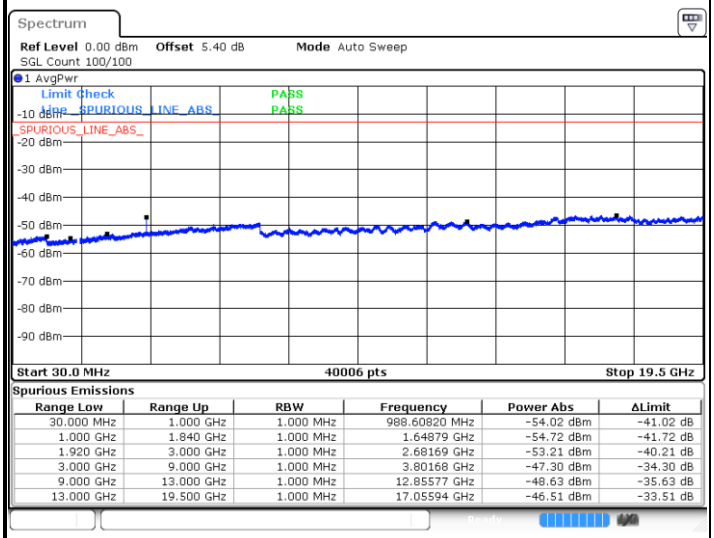



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 876.14443 MHz | -53.99 dBm | -40.99 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.72351 GHz | -54.87 dBm | -41.87 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.64894 GHz | -52.96 dBm | -39.96 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 3.75119 GHz | -48.45 dBm | -35.45 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 12.84577 GHz | -48.65 dBm | -35.65 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 17.04844 GHz | -45.98 dBm | -32.98 dB |

Date: 14.FEB.2020 14:31:02

### Highest Channel / 64QAM



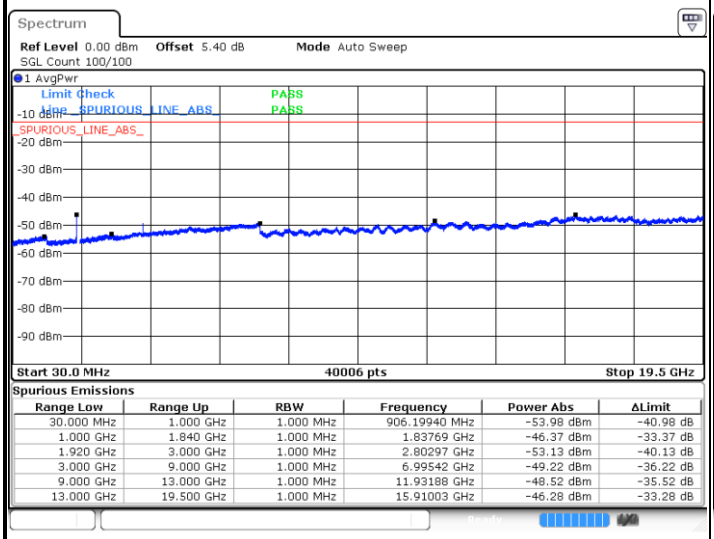

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 988.60820 MHz | -54.02 dBm | -41.02 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.64879 GHz | -54.72 dBm | -41.72 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.68169 GHz | -53.21 dBm | -40.21 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 3.80168 GHz | -47.30 dBm | -34.30 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 12.85577 GHz | -48.63 dBm | -35.63 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 17.05594 GHz | -46.51 dBm | -33.51 dB |

Date: 14.FEB.2020 14:31:57

## LTE Band 2 / 15MHz

### Lowest Channel / 64QAM

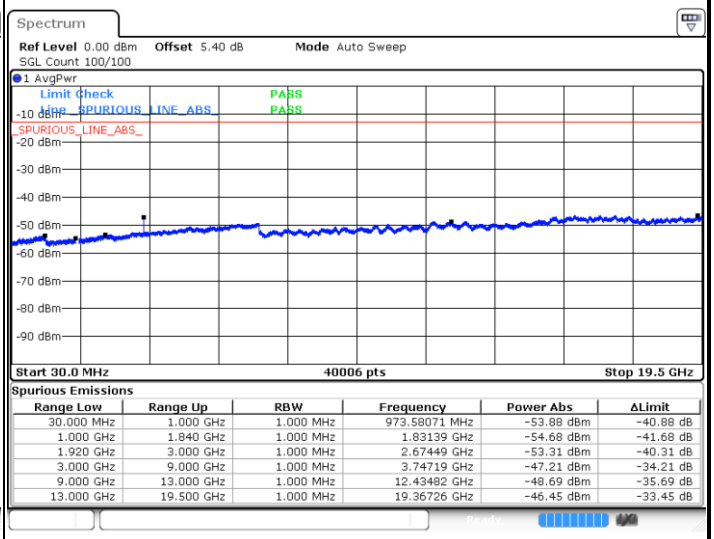



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 906.19940 MHz | -53.98 dBm | -40.98 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.83769 GHz | -46.37 dBm | -33.37 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.80297 GHz | -53.13 dBm | -40.13 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 6.99542 GHz | -49.22 dBm | -36.22 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 11.93188 GHz | -48.52 dBm | -35.52 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 15.91003 GHz | -46.28 dBm | -33.28 dB |

Date: 14.FEB.2020 14:32:51

### Middle Channel / 64QAM

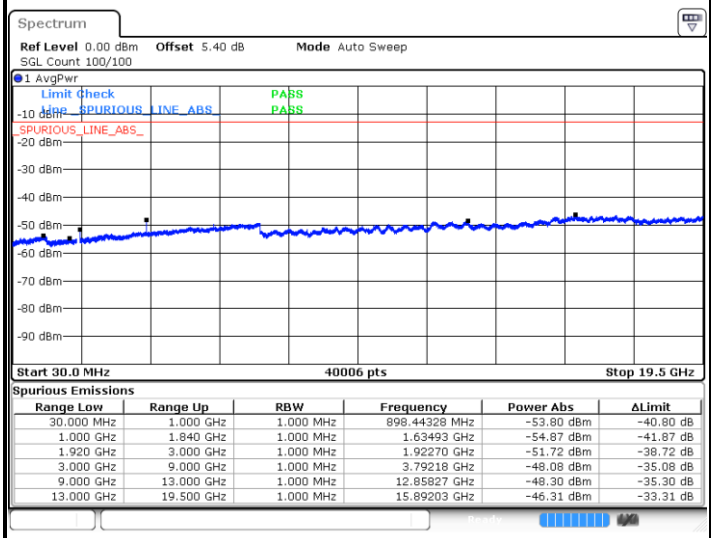



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 973.58071 MHz | -53.88 dBm | -40.88 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.83139 GHz | -54.68 dBm | -41.68 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.67449 GHz | -53.31 dBm | -40.31 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 3.74719 GHz | -47.21 dBm | -34.21 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 12.43482 GHz | -48.69 dBm | -35.69 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 19.36726 GHz | -46.45 dBm | -33.45 dB |

Date: 14.FEB.2020 14:33:46

### Highest Channel / 64QAM



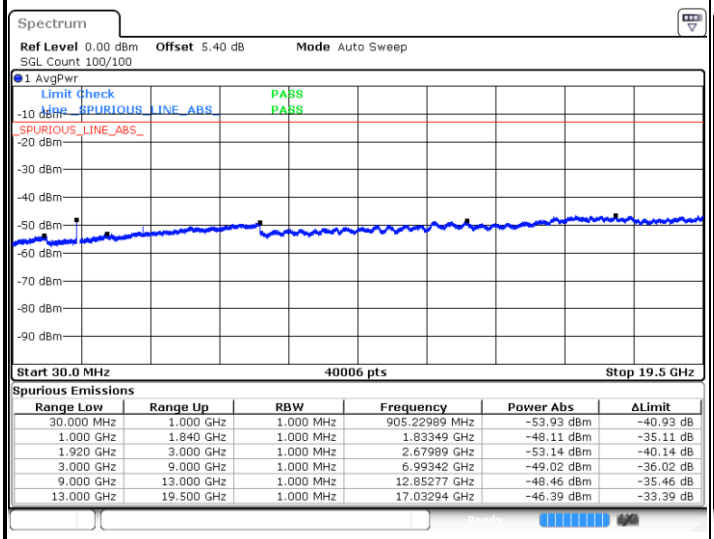

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 898.44328 MHz | -53.80 dBm | -40.80 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.63493 GHz | -54.87 dBm | -41.87 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 1.92270 GHz | -51.72 dBm | -38.72 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 3.79218 GHz | -48.08 dBm | -35.08 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 12.85827 GHz | -48.30 dBm | -35.30 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 15.89203 GHz | -46.31 dBm | -33.31 dB |

Date: 14.FEB.2020 14:34:41

## LTE Band 2 / 20MHz

### Lowest Channel / 64QAM

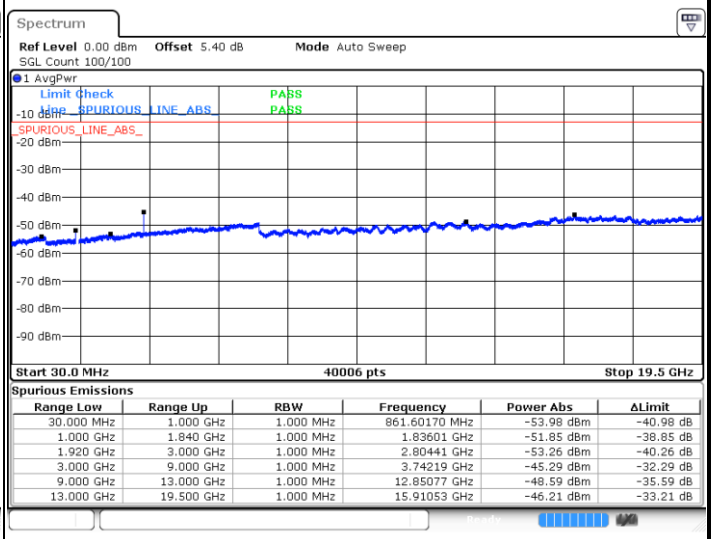



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 905.22989 MHz | -53.93 dBm | -40.93 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.83349 GHz | -48.11 dBm | -35.11 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.67989 GHz | -53.14 dBm | -40.14 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 6.99342 GHz | -49.02 dBm | -36.02 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 12.85277 GHz | -48.46 dBm | -35.46 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 17.03294 GHz | -46.39 dBm | -33.39 dB |

Date: 14.FEB.2020 14:35:35

### Middle Channel / 64QAM

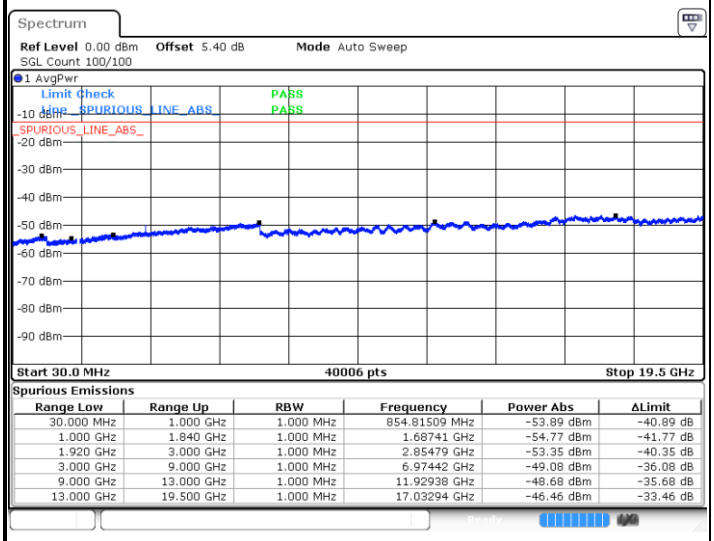



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 861.60170 MHz | -53.98 dBm | -40.98 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.83601 GHz | -51.85 dBm | -38.85 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.80441 GHz | -53.26 dBm | -40.26 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 3.74219 GHz | -45.29 dBm | -32.29 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 12.85077 GHz | -48.59 dBm | -35.59 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 15.91053 GHz | -46.21 dBm | -33.21 dB |

Date: 14.FEB.2020 14:36:30

### Highest Channel / 64QAM




Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 854.81509 MHz | -53.89 dBm | -40.89 dB |
| 1.000 GHz | 1.840 GHz | 1.000 MHz | 1.68741 GHz | -54.77 dBm | -41.77 dB |
| 1.920 GHz | 3.000 GHz | 1.000 MHz | 2.85479 GHz | -53.35 dBm | -40.35 dB |
| 3.000 GHz | 9.000 GHz | 1.000 MHz | 6.97442 GHz | -49.08 dBm | -36.08 dB |
| 9.000 GHz | 13.000 GHz | 1.000 MHz | 11.92938 GHz | -48.68 dBm | -35.68 dB |
| 13.000 GHz | 19.500 GHz | 1.000 MHz | 17.03294 GHz | -46.46 dBm | -33.46 dB |

Date: 14.FEB.2020 14:37:25

# Frequency Stability

| Test Conditions | | LTE Band 2 (QPSK) / Middle Channel | Limit |
|---|---|---|---|
| Temperature (°C) | Voltage (Volt) | BW 10MHz | Note 2. |
| | | Deviation (ppm) | Result |
| 50 | Normal Voltage | 0.0021 | PASS |
| 40 | Normal Voltage | 0.0020 | |
| 30 | Normal Voltage | 0.0010 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0022 | |
| 0 | Normal Voltage | 0.0019 | |
| -10 | Normal Voltage | 0.0007 | |
| -20 | Normal Voltage | 0.0024 | |
| -30 | Normal Voltage | 0.0024 | |
| 20 | Maximum Voltage | 0.0011 | |
| 20 | Normal Voltage | 0.0000 | |
| 20 | Battery End Point | 0.0004 | |

**Note:**

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

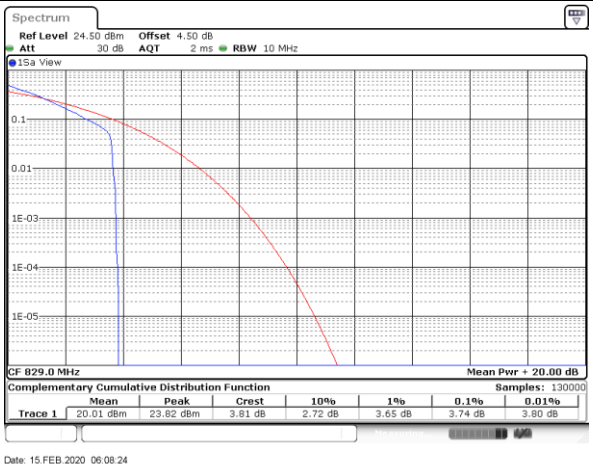
# LTE Band 5

## Peak-to-Average Ratio

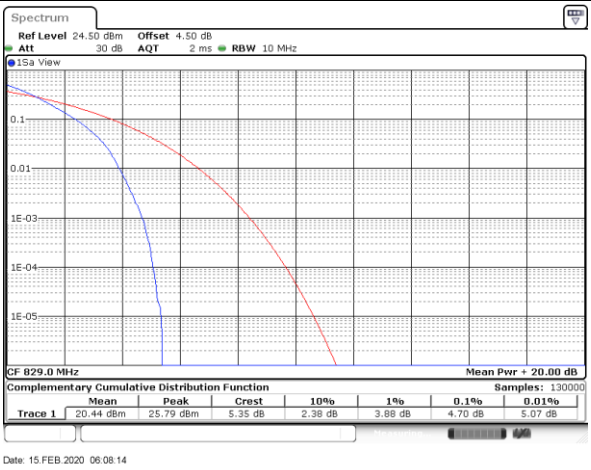
| Mode | LTE Band 5 / 10MHz | | | | |
|---|---|---|---|---|---|
| Mod. | QPSK | | 16QAM | | Limit: 13dB |
| RB Size | 1RB | Full RB | 1RB | Full RB | Result |
| Lowest CH | 3.74 | 4.70 | 5.71 | 6.06 | PASS |
| Middle CH | 3.74 | 4.72 | 5.22 | 6.09 | |
| Highest CH | 3.68 | 4.81 | 5.30 | 6.06 | |
| Mode | LTE Band 5 / 10MHz | | | | |
| Mod. | 64QAM | | | | Limit: 13dB |
| RB Size | 1RB | Full RB | | | Result |
| Lowest CH | 5.54 | 6.09 | - | - | PASS |
| Middle CH | 5.33 | 6.06 | - | - | |
| Highest CH | 5.39 | 6.12 | - | - | |

## LTE Band 5 / 10MHz / QPSK

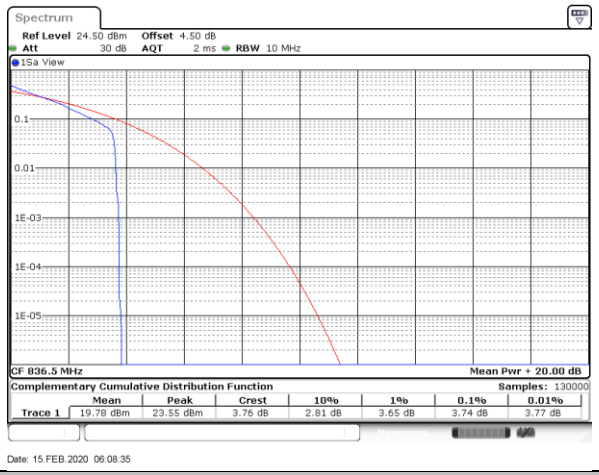
### Lowest Channel / 1RB



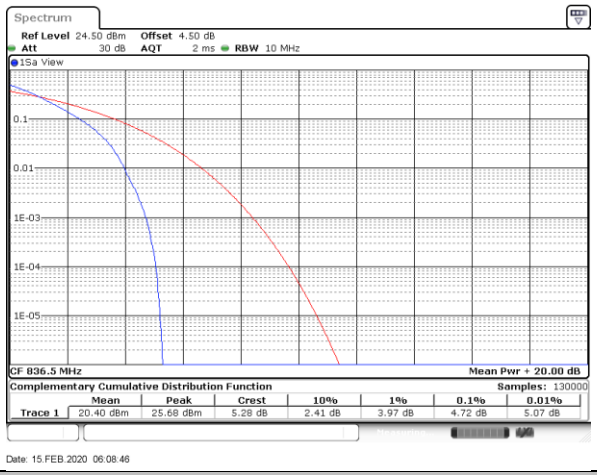

### Lowest Channel / Full RB



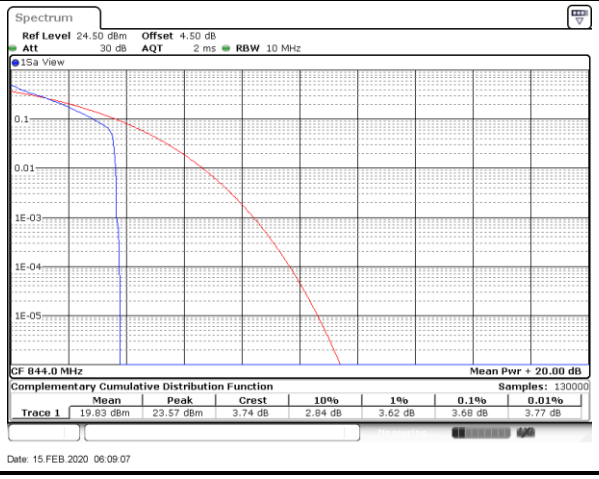

### Middle Channel / 1RB



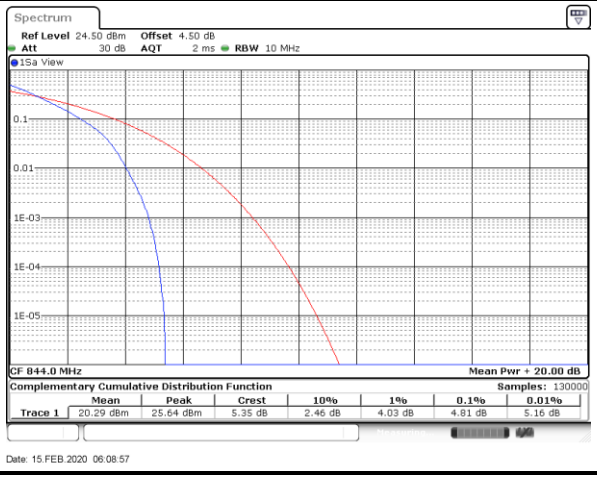

### Middle Channel / Full RB




### Highest Channel / 1RB

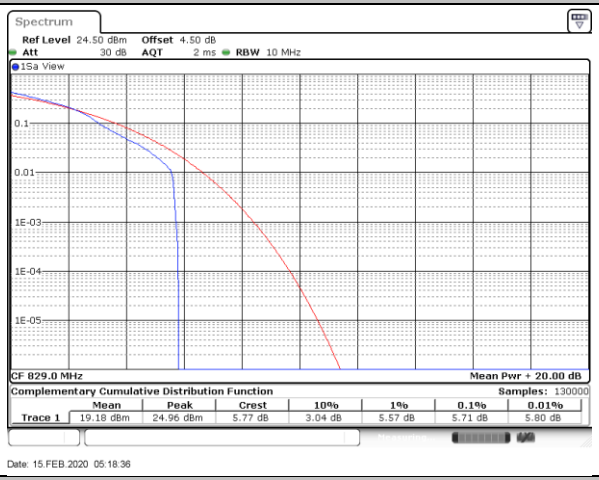



### Highest Channel / Full RB

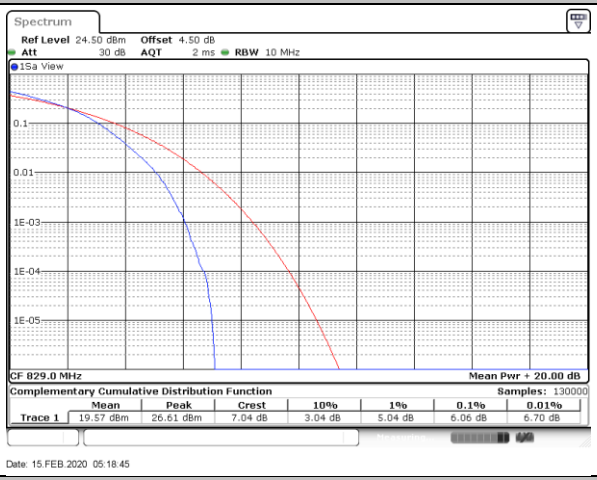


## LTE Band 5 / 10MHz / 16QAM

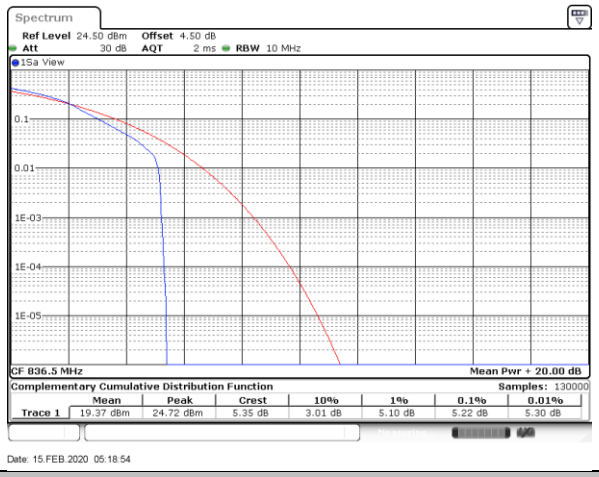
### Lowest Channel / 1RB



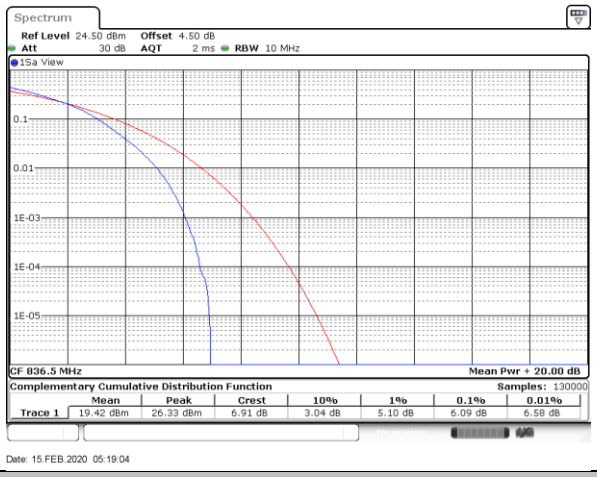

### Lowest Channel / Full RB



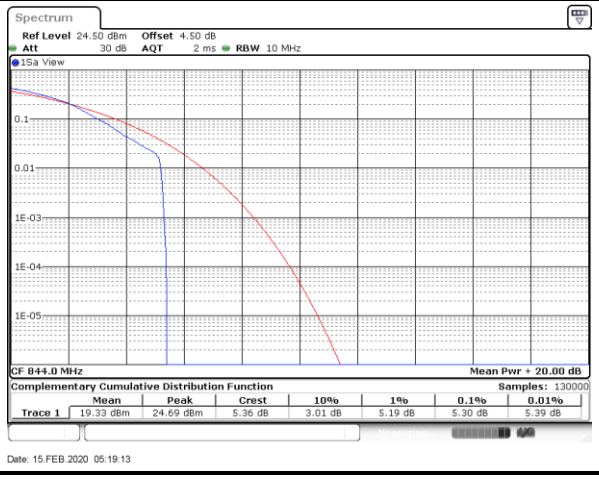

### Middle Channel / 1RB



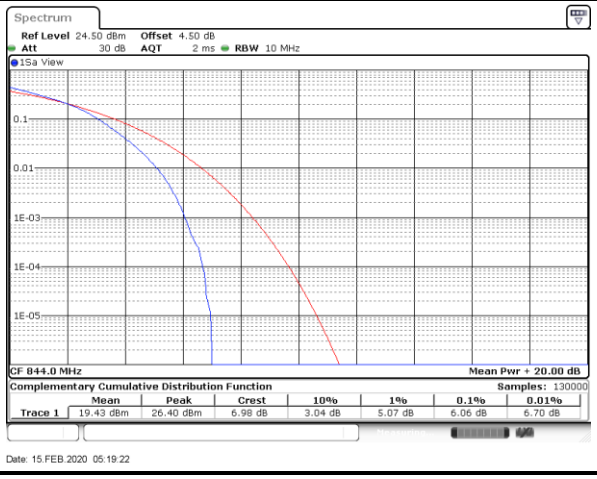

### Middle Channel / Full RB




### Highest Channel / 1RB



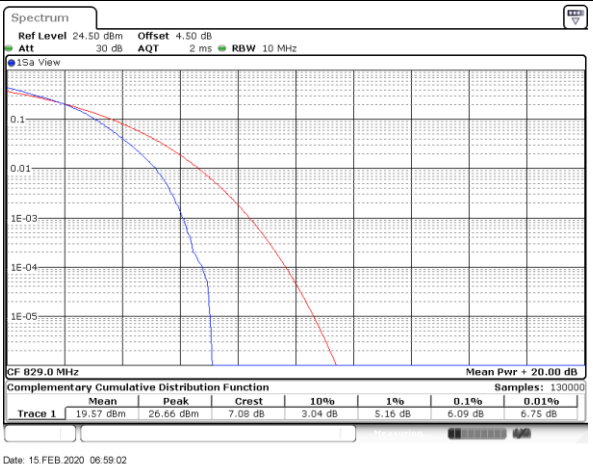

### Highest Channel / Full RB



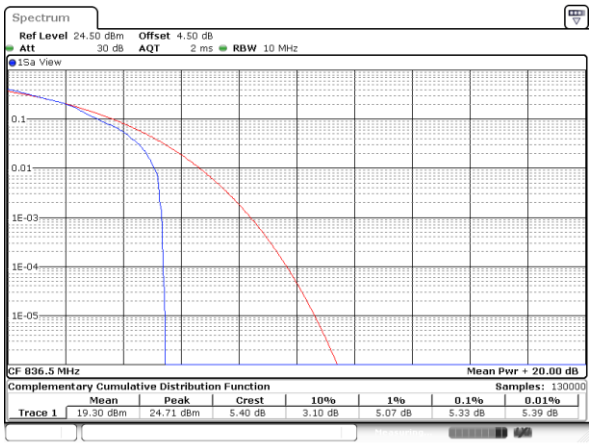
## LTE Band 5 / 10MHz / 64QAM

### Lowest Channel / 1RB

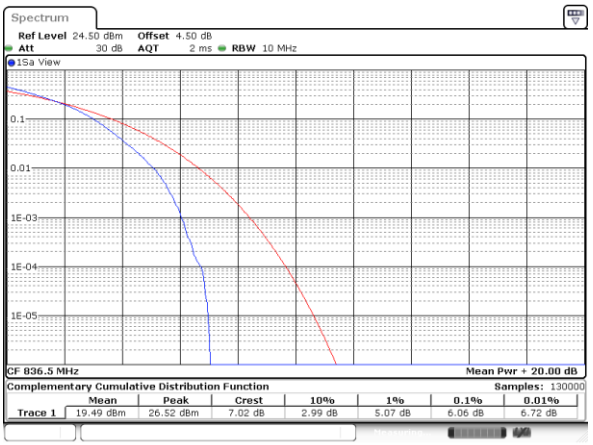
### Lowest Channel / Full RB



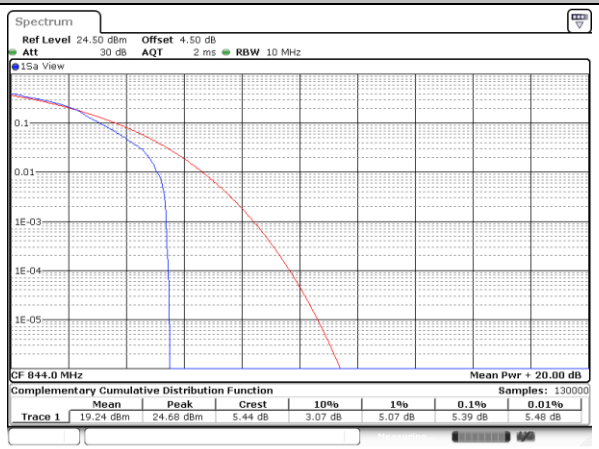

### Middle Channel / 1RB



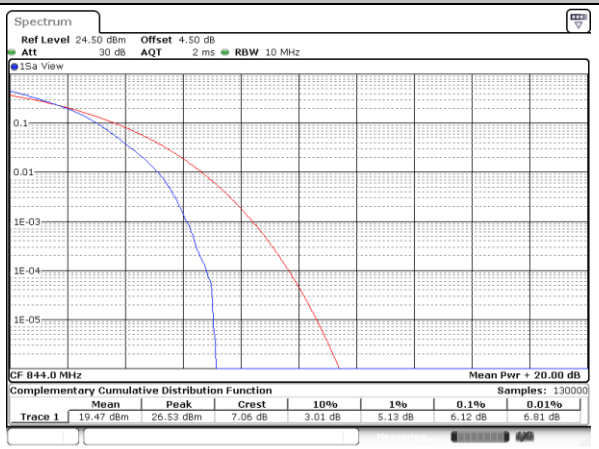

### Middle Channel / Full RB




### Highest Channel / 1RB




### Highest Channel / Full RB

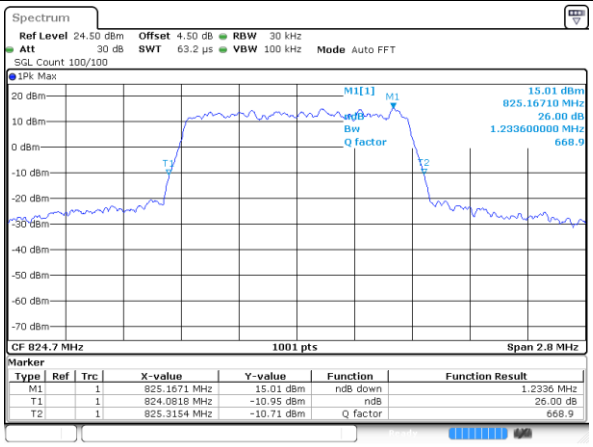


# 26dB Bandwidth

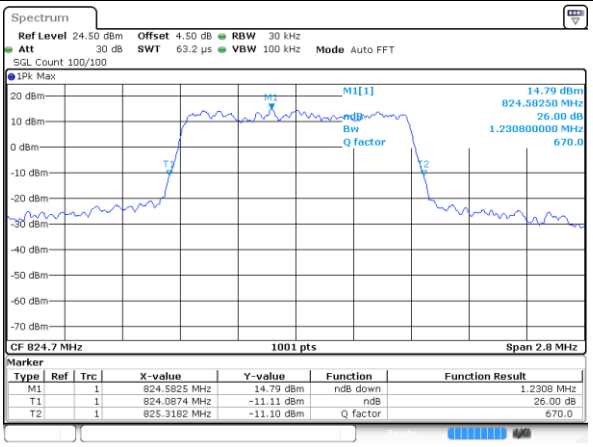
| Mode | LTE Band 5 : 26dB BW(MHz) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM |
| Lowest CH | 1.23 | 1.23 | 3.06 | 3.02 | 4.84 | 4.90 | 9.85 | 9.89 | - | - | - | - |
| Middle CH | 1.23 | 1.23 | 3.05 | 3.03 | 4.90 | 4.86 | 9.83 | 9.67 | - | - | - | - |
| Highest CH | 1.22 | 1.24 | 2.97 | 3.01 | 4.97 | 4.97 | 9.79 | 9.87 | - | - | - | - |
| Mode | LTE Band 5 : 26dB BW(MHz) | | | | | | | | | | | |
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | 64QAM | | 64QAM | | 64QAM | | 64QAM | | 64QAM | | 64QAM | |
| Lowest CH | 1.24 | - | 3.05 | - | 4.87 | - | 9.73 | - | - | - | - | - |
| Middle CH | 1.24 | - | 3.00 | - | 4.91 | - | 9.71 | - | - | - | - | - |
| Highest CH | 1.23 | - | 3.03 | - | 4.88 | - | 9.79 | - | - | - | - | - |

## LTE Band 5

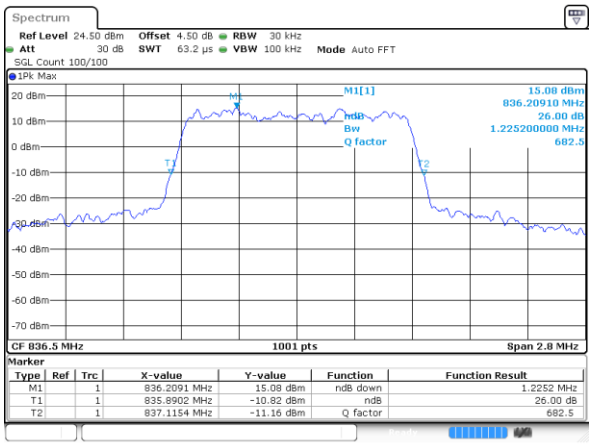
### Lowest Channel / 1.4MHz / QPSK



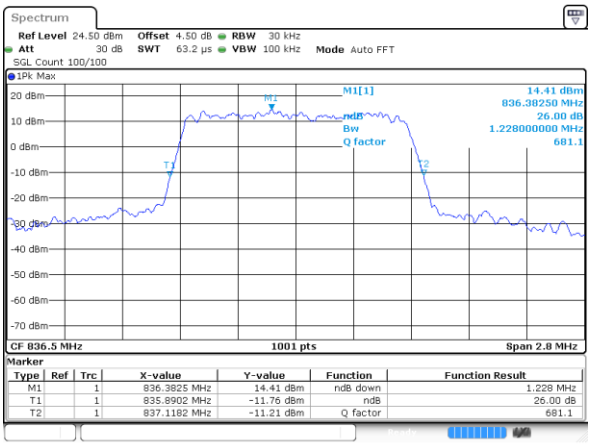

### Lowest Channel / 1.4MHz / 16QAM



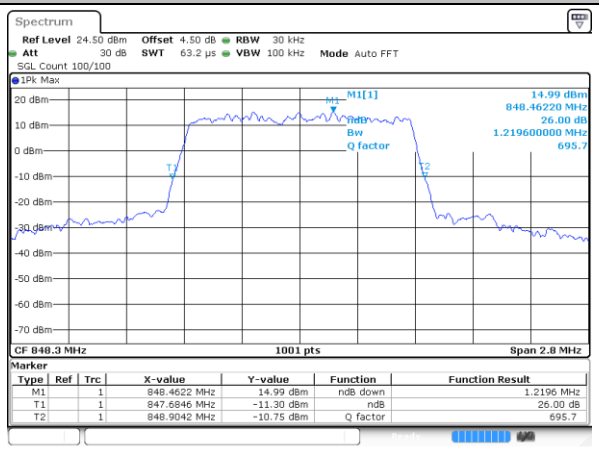

### Middle Channel / 1.4MHz / QPSK



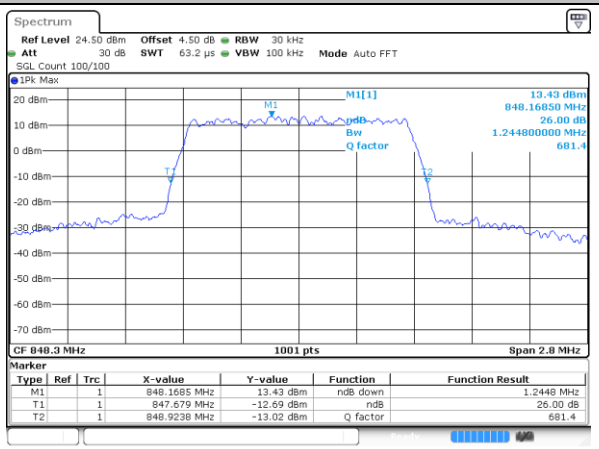

### Middle Channel / 1.4MHz / 16QAM




### Highest Channel / 1.4MHz / QPSK

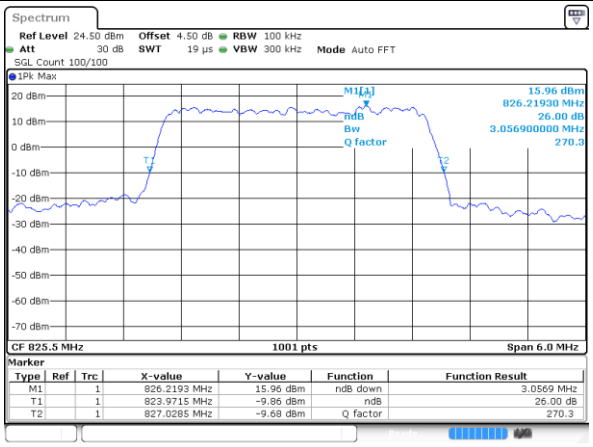



### Highest Channel / 1.4MHz / 16QAM

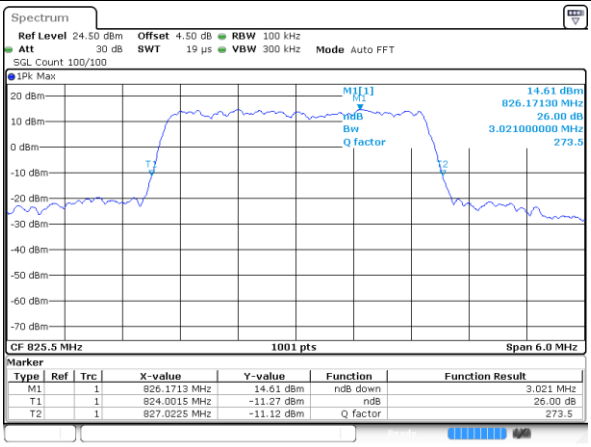


## LTE Band 5

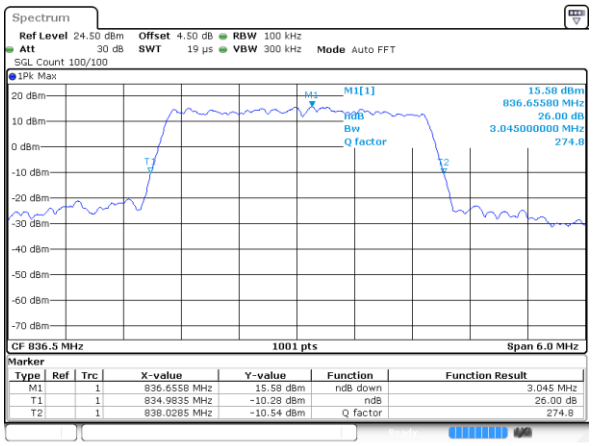
### Lowest Channel / 3MHz / QPSK



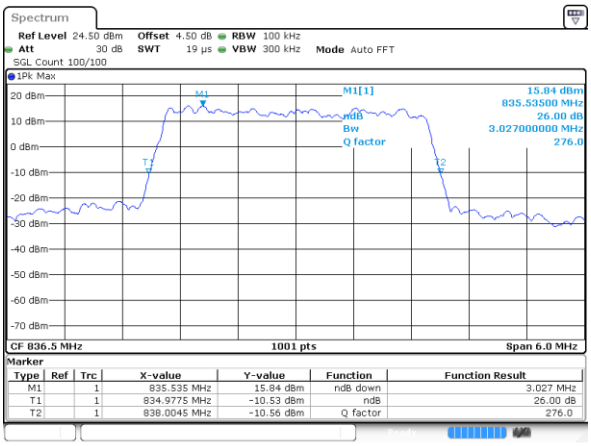

### Lowest Channel / 3MHz / 16QAM



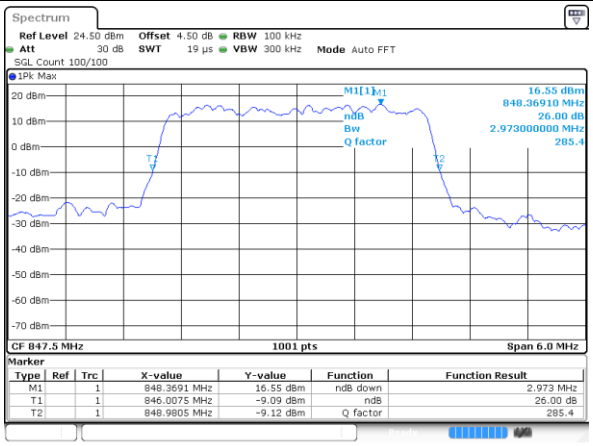

### Middle Channel / 3MHz / QPSK



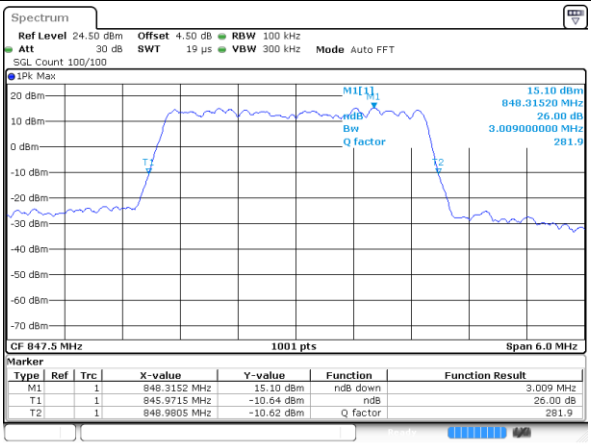

### Middle Channel / 3MHz / 16QAM




### Highest Channel / 3MHz / QPSK

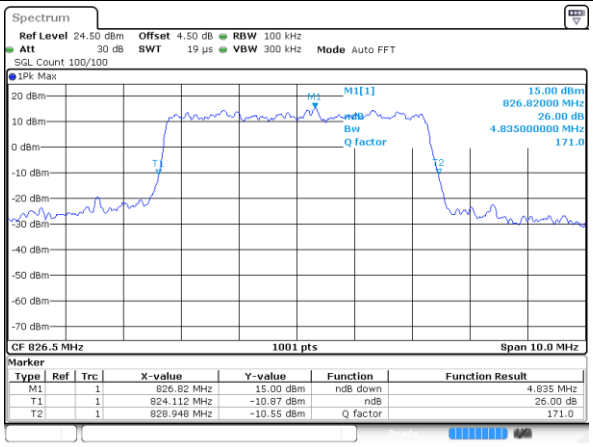



### Highest Channel / 3MHz / 16QAM

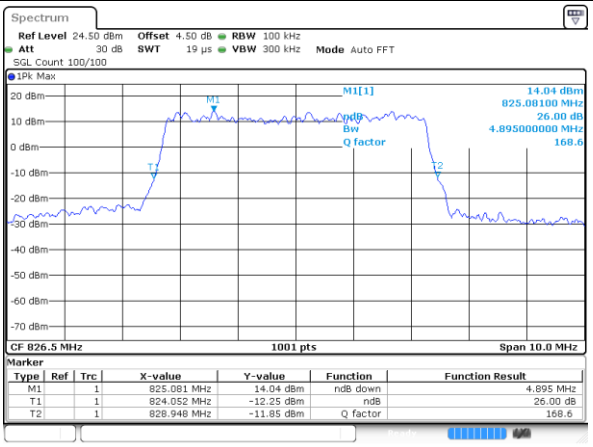


## LTE Band 5

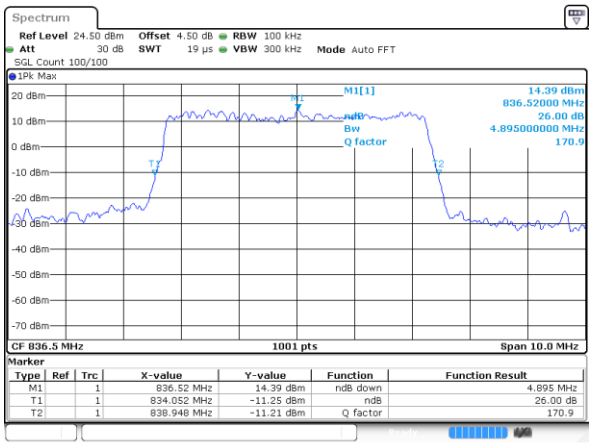
### Lowest Channel / 5MHz / QPSK



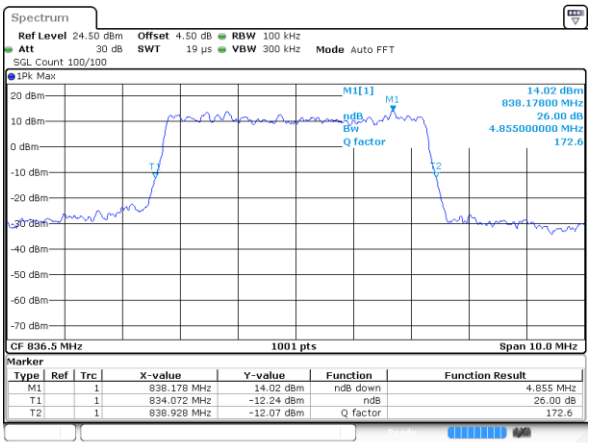

### Lowest Channel / 5MHz / 16QAM



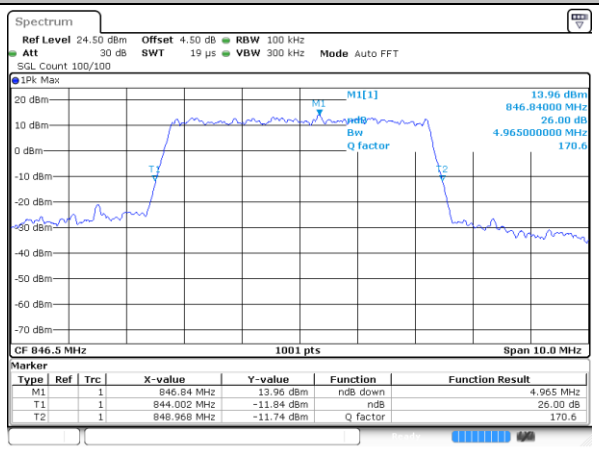

### Middle Channel / 5MHz / QPSK



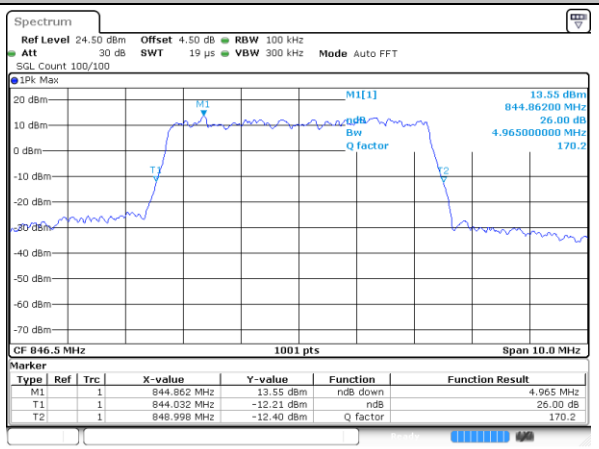

### Middle Channel / 5MHz / 16QAM




### Highest Channel / 5MHz / QPSK

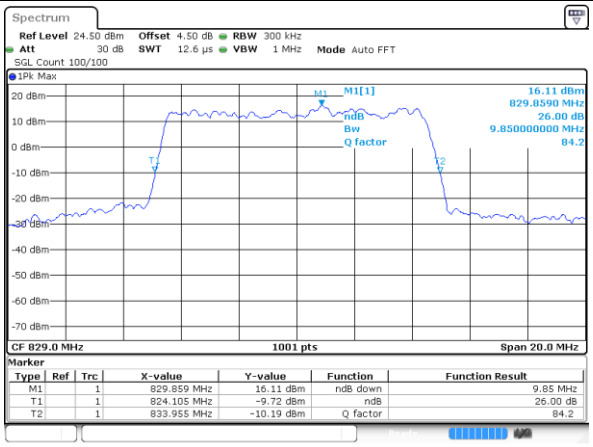



### Highest Channel / 5MHz / 16QAM

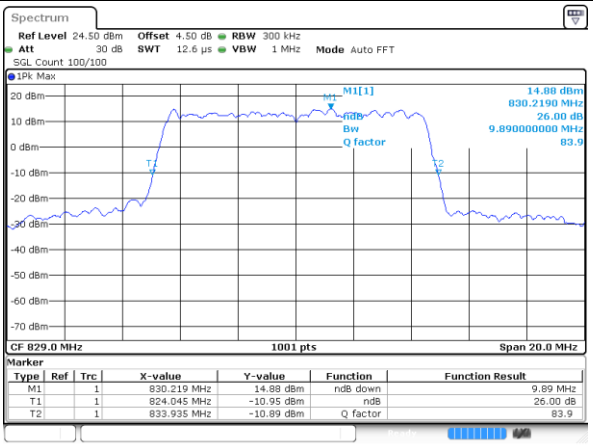


## LTE Band 5

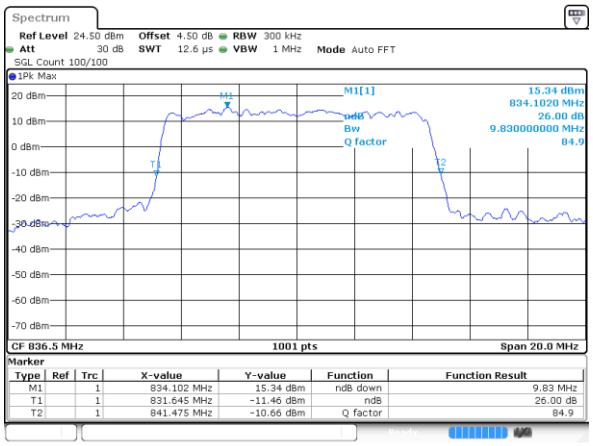
### Lowest Channel / 10MHz / QPSK



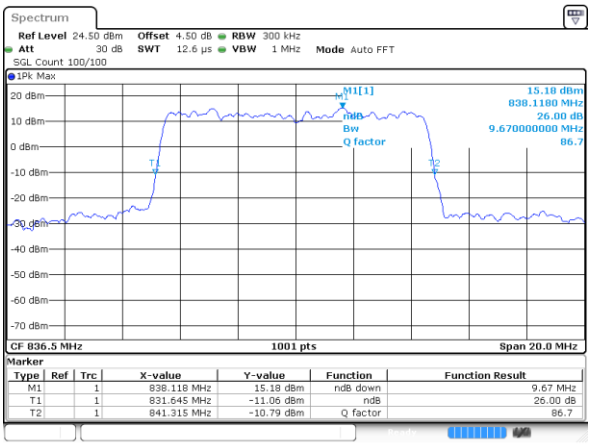

### Lowest Channel / 10MHz / 16QAM



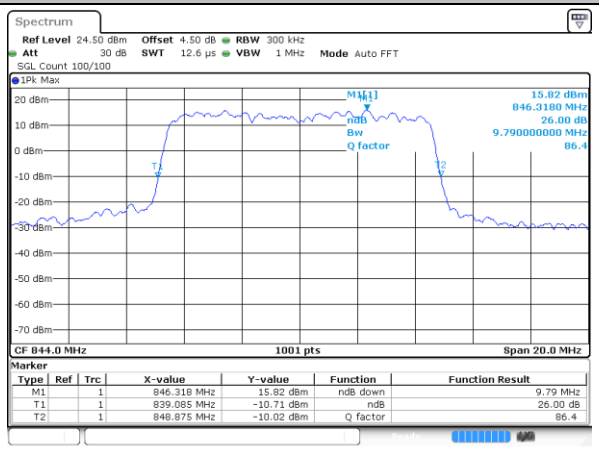

### Middle Channel / 10MHz / QPSK



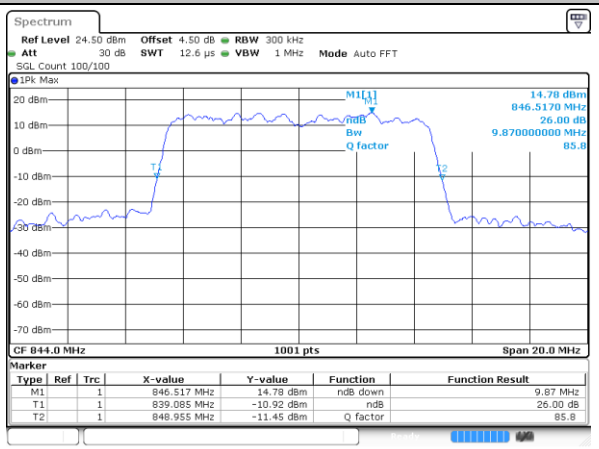

### Middle Channel / 10MHz / 16QAM




### Highest Channel / 10MHz / QPSK

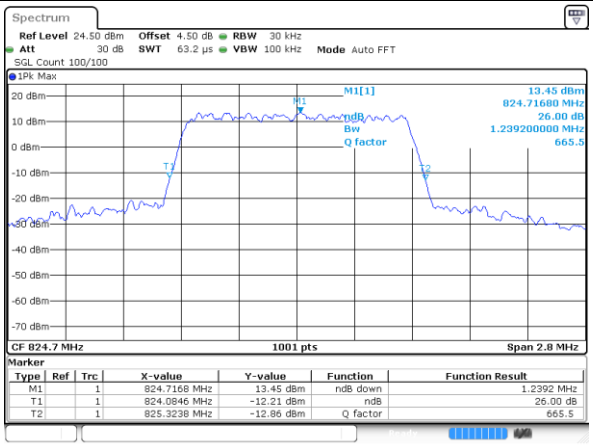



### Highest Channel / 10MHz / 16QAM

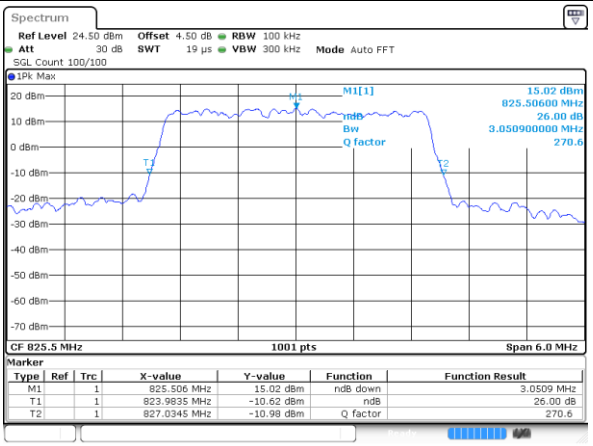


## LTE Band 5

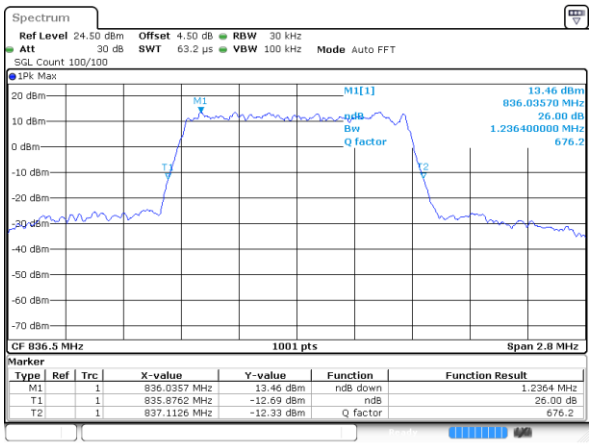
### Lowest Channel / 1.4MHz / 64QAM



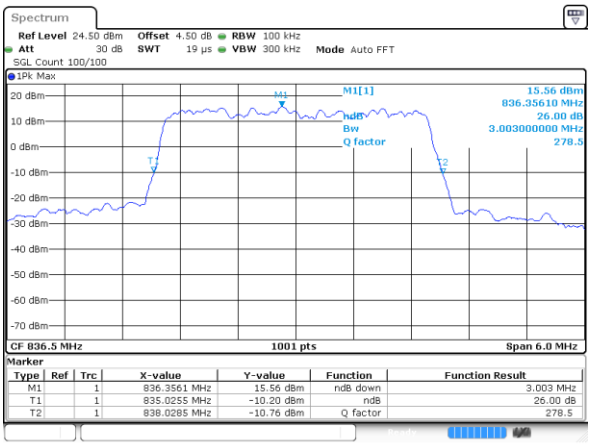

### Lowest Channel / 3MHz / 64QAM



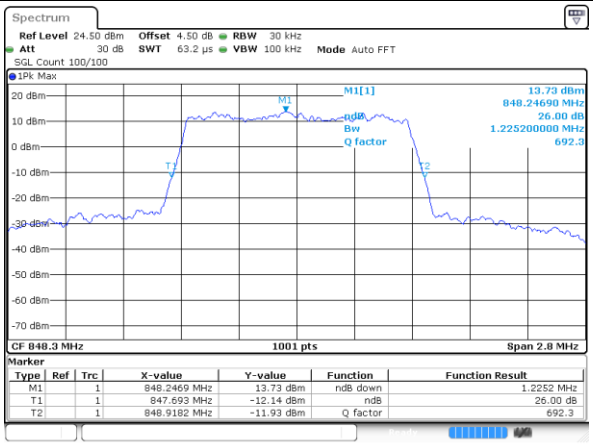

### Middle Channel / 1.4MHz / 64QAM



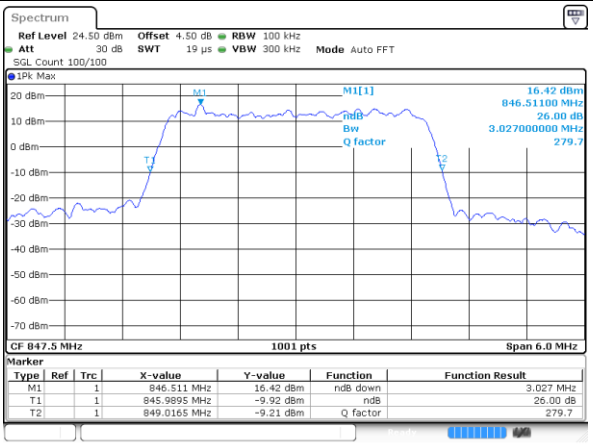

### Middle Channel / 3MHz / 64QAM




### Highest Channel / 1.4MHz / 64QAM

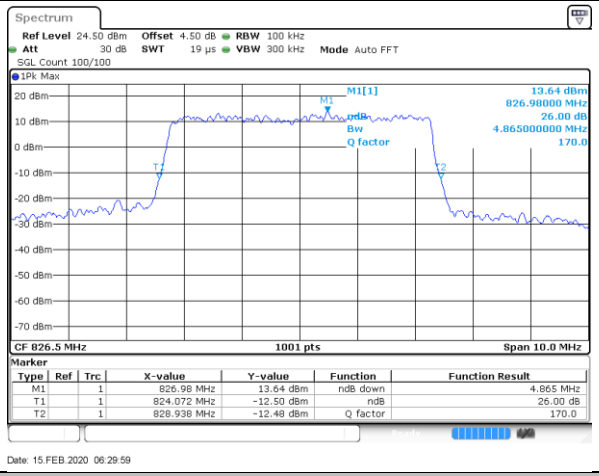



### Highest Channel / 3MHz / 64QAM

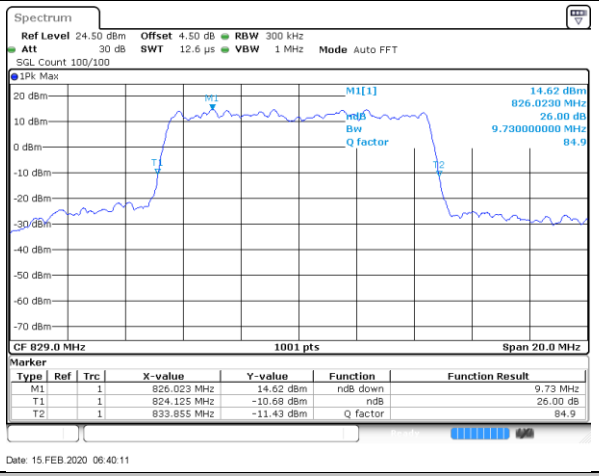


## LTE Band 5

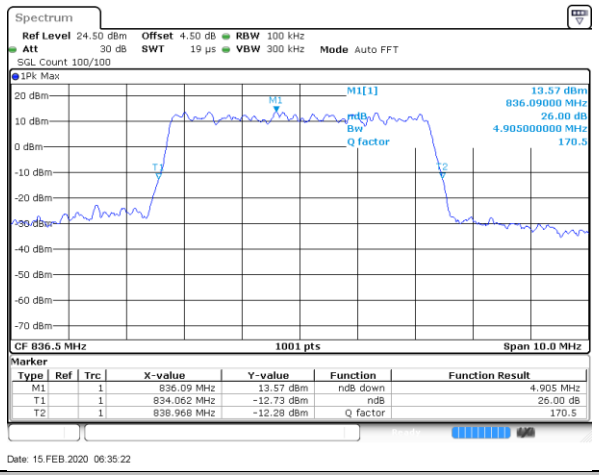
### Lowest Channel / 5MHz / 64QAM



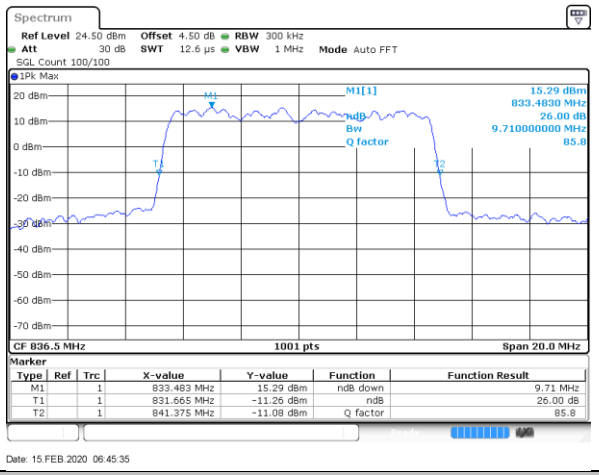

### Lowest Channel / 10MHz / 64QAM



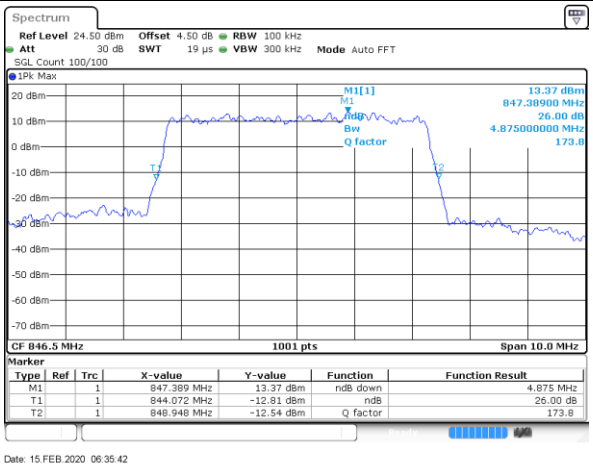

### Middle Channel / 5MHz / 64QAM



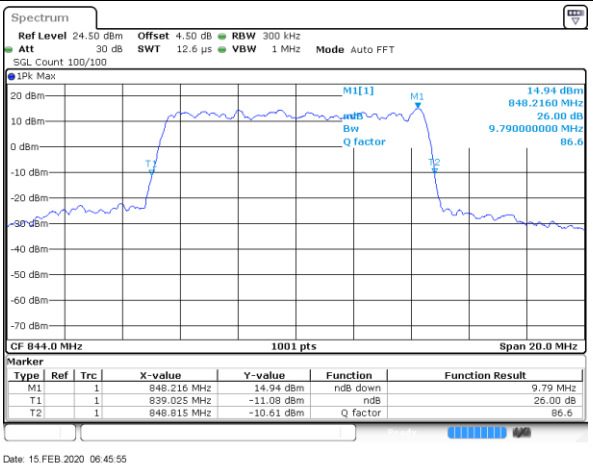

### Middle Channel / 10MHz / 64QAM




### Highest Channel / 5MHz / 64QAM




### Highest Channel / 10MHz / 64QAM

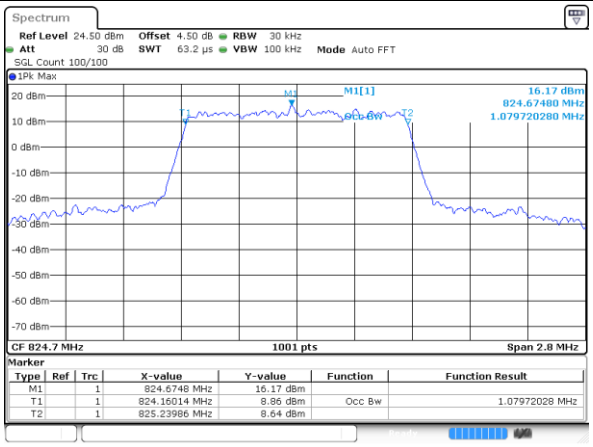


# Occupied Bandwidth

| Mode | LTE Band 5 : 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 | 1.08 | 1.10 | 2.71 | 2.72 | 4.48 | 4.50 | 9.09 | 9.01 | - | - | - | - |
| Middle CH | 1.09 | 1.09 | 2.72 | 2.73 | 4.49 | 4.50 | 9.03 | 9.01 | - | - | - | - |
| Highest CH | 1.09 | 1.10 | 2.72 | 2.73 | 4.50 | 4.49 | 9.03 | 9.07 | - | - | - | - |
| Mode | LTE Band 5 : 99%OBW(MHz) | | | | | | | | | | | |
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | 64QAM | | 64QAM | | 64QAM | | 64QAM | | 64QAM | | 64QAM | |
| Lowest CH | 1.08 | - | 2.72 | - | 4.50 | - | 9.03 | - | - | - | - | - |
| Middle CH | 1.08 | - | 2.73 | - | 4.49 | - | 9.05 | - | - | - | - | - |
| Highest CH | 1.09 | - | 2.74 | - | 4.50 | - | 9.01 | - | - | - | - | - |

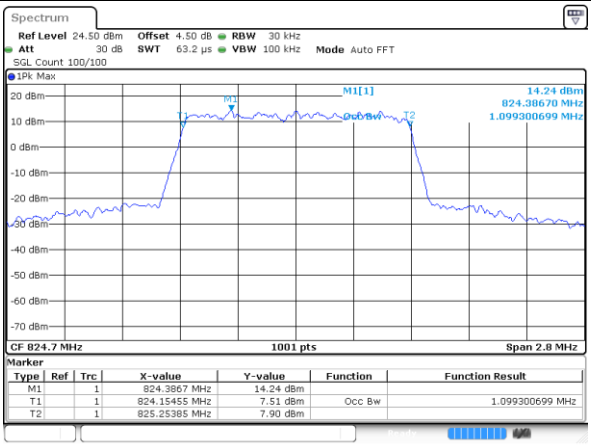
## LTE Band 5

### Lowest Channel / 1.4MHz / QPSK



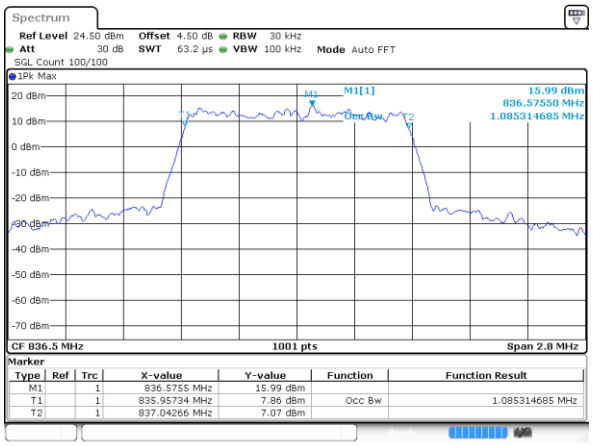

Date: 15.FEB.2020 04:36:07

### Lowest Channel / 1.4MHz / 16QAM



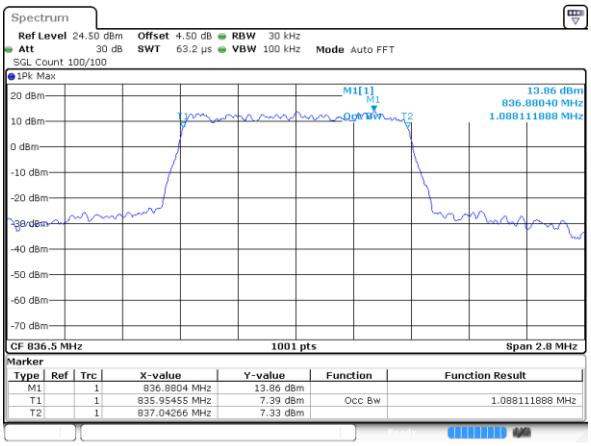

Date: 15.FEB.2020 04:36:17

### Middle Channel / 1.4MHz / QPSK



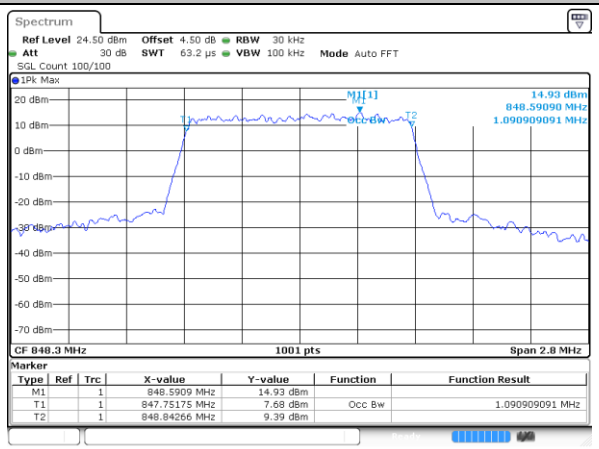

Date: 15.FEB.2020 04:45:07

### Middle Channel / 1.4MHz / 16QAM



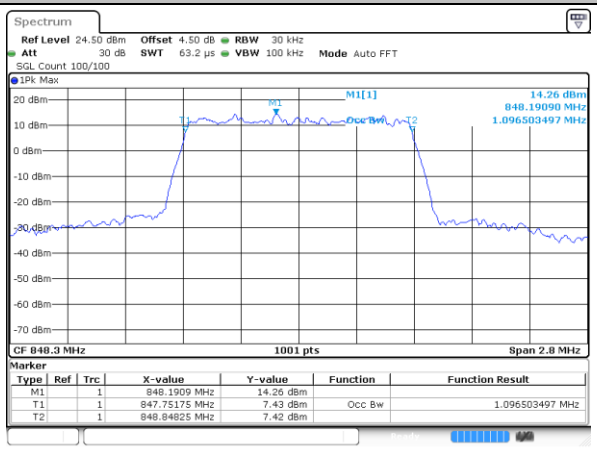

Date: 15.FEB.2020 04:45:17

### Highest Channel / 1.4MHz / QPSK




Date: 15.FEB.2020 04:47:35

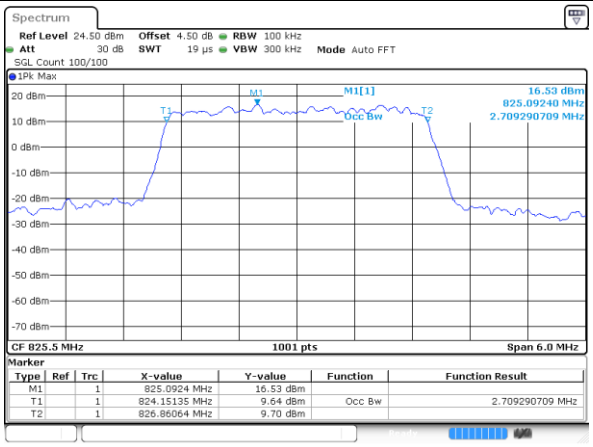
### Highest Channel / 1.4MHz / 16QAM



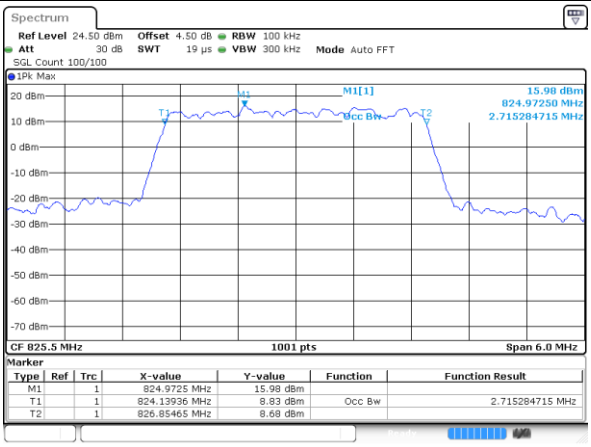

Date: 15.FEB.2020 04:47:45

## LTE Band 5

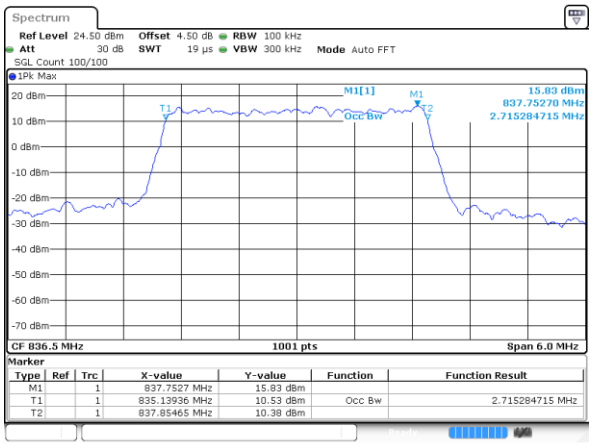
### Lowest Channel / 3MHz / QPSK



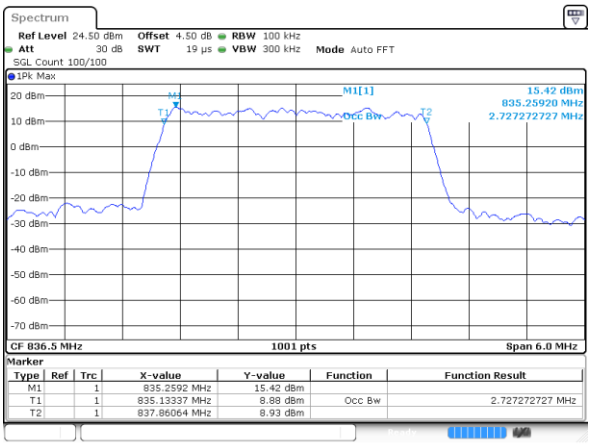

### Lowest Channel / 3MHz / 16QAM



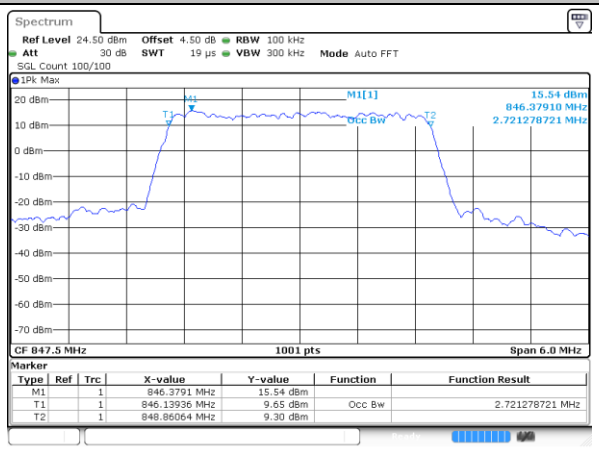

### Middle Channel / 3MHz / QPSK



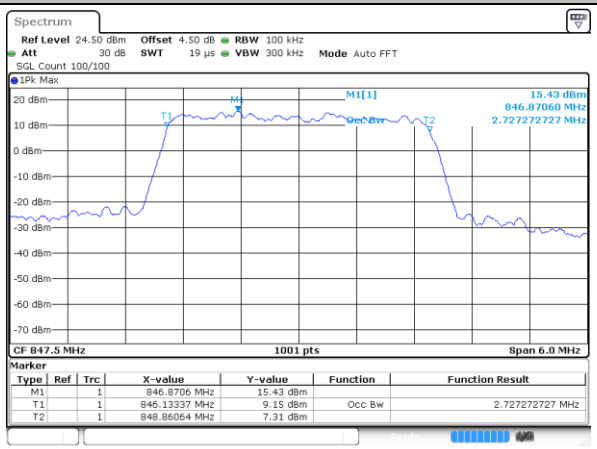

### Middle Channel / 3MHz / 16QAM




### Highest Channel / 3MHz / QPSK

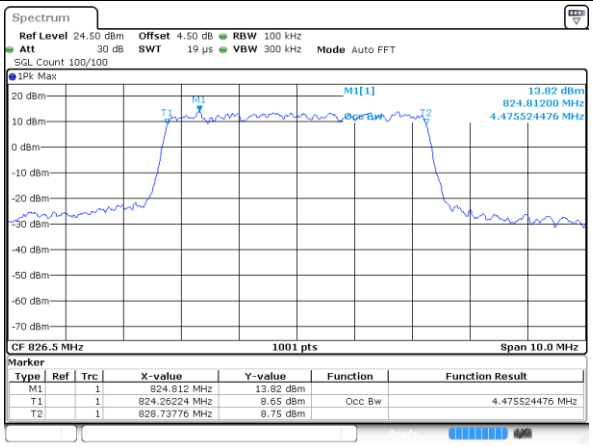



### Highest Channel / 3MHz / 16QAM

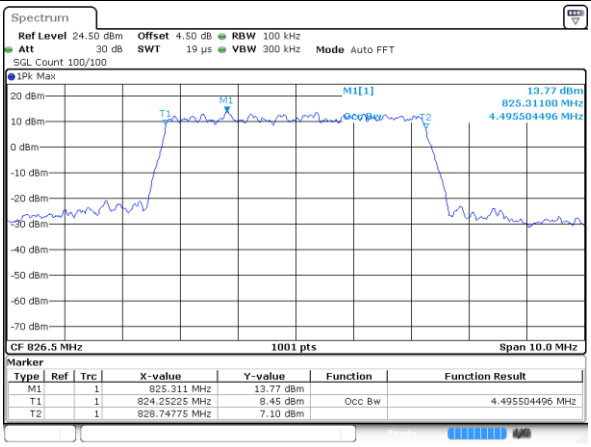


## LTE Band 5

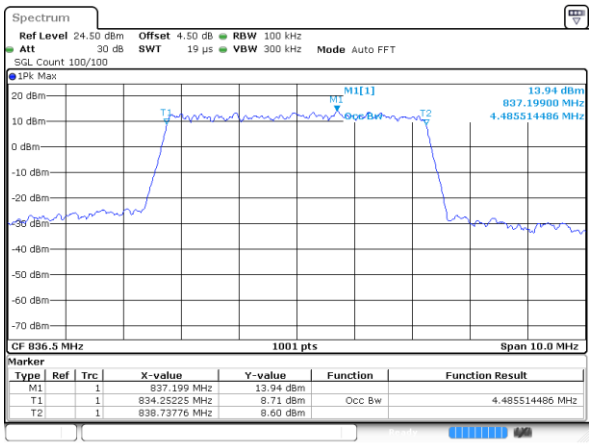
### Lowest Channel / 5MHz / QPSK



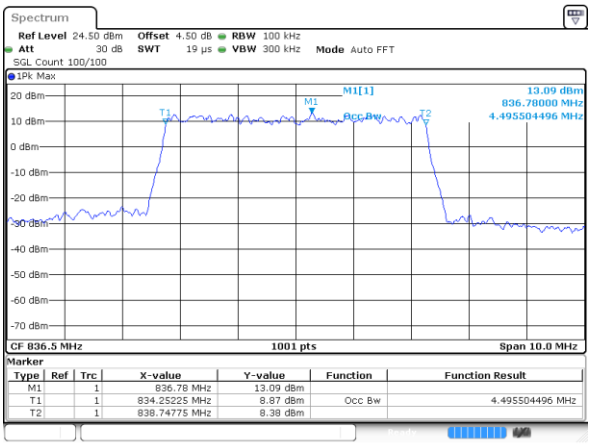

### Lowest Channel / 5MHz / 16QAM



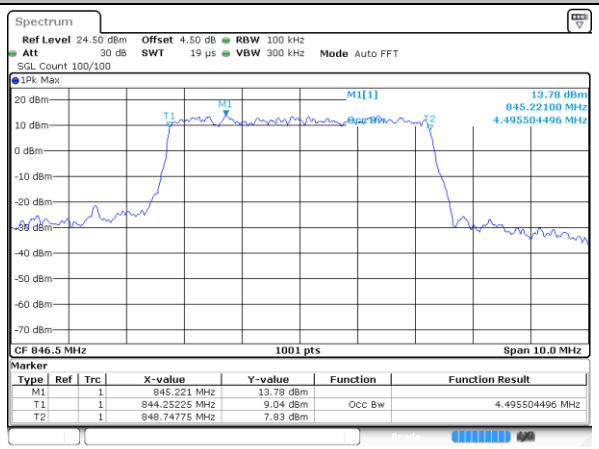

### Middle Channel / 5MHz / QPSK



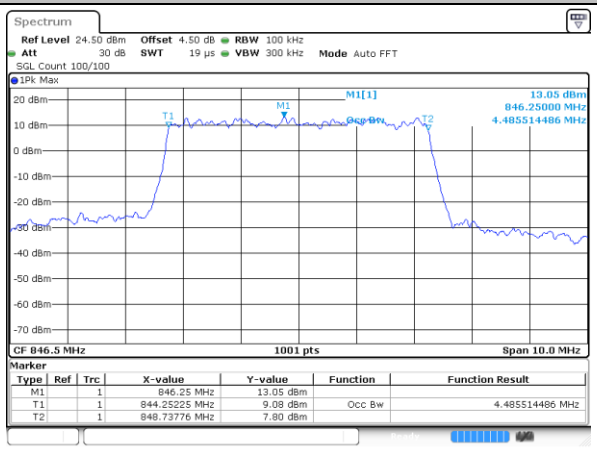

### Middle Channel / 5MHz / 16QAM




### Highest Channel / 5MHz / QPSK

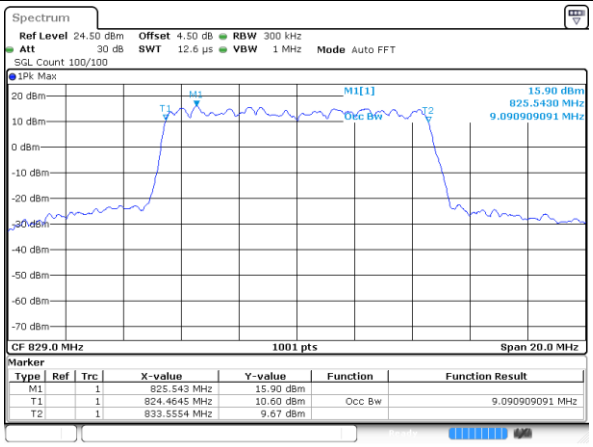



### Highest Channel / 5MHz / 16QAM

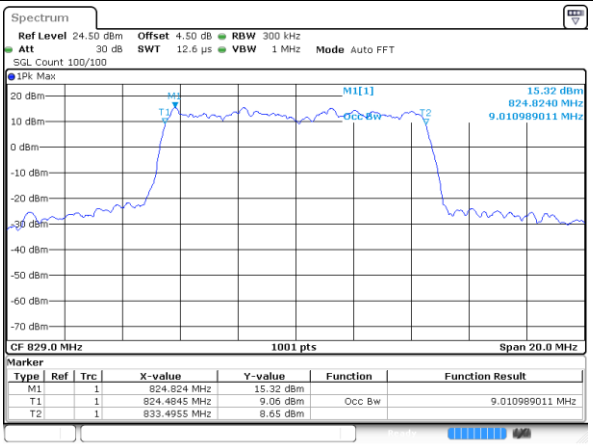


## LTE Band 5

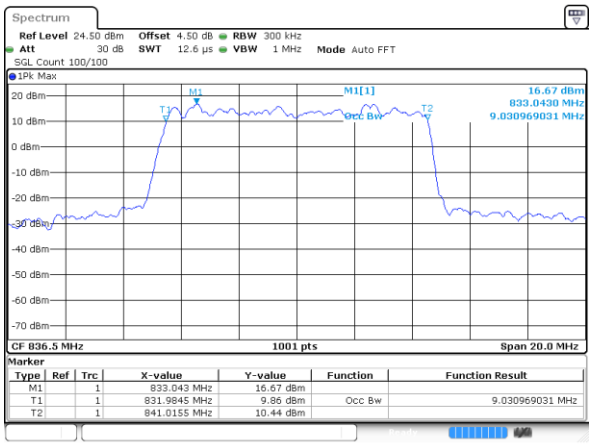
### Lowest Channel / 10MHz / QPSK



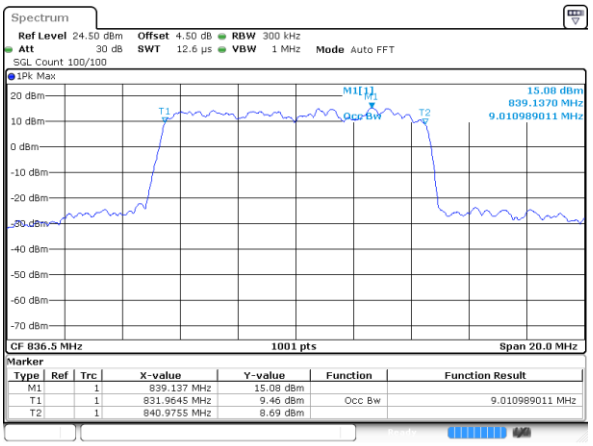

### Lowest Channel / 10MHz / 16QAM



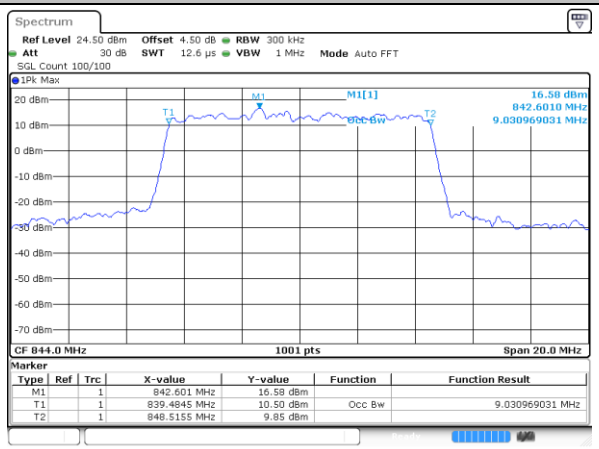

### Middle Channel / 10MHz / QPSK



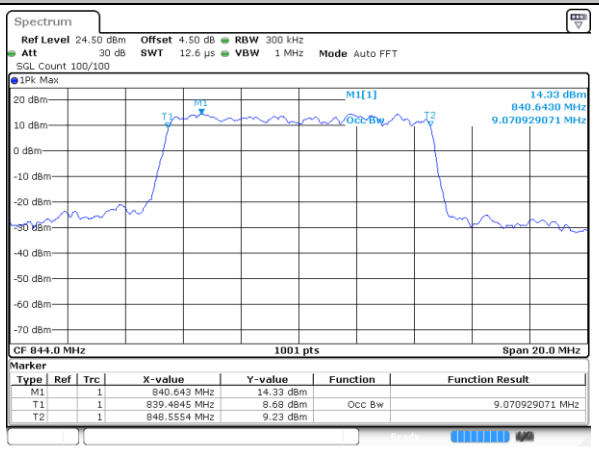

### Middle Channel / 10MHz / 16QAM




### Highest Channel / 10MHz / QPSK

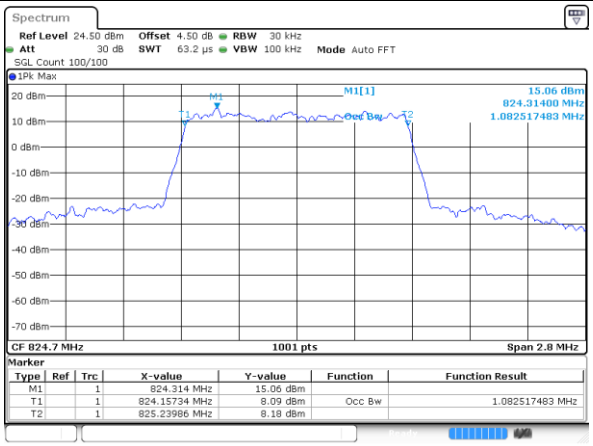



### Highest Channel / 10MHz / 16QAM



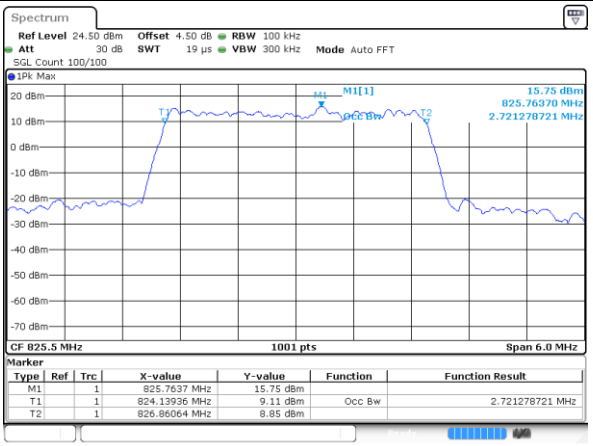
## LTE Band 5

### Lowest Channel / 1.4MHz / 64QAM



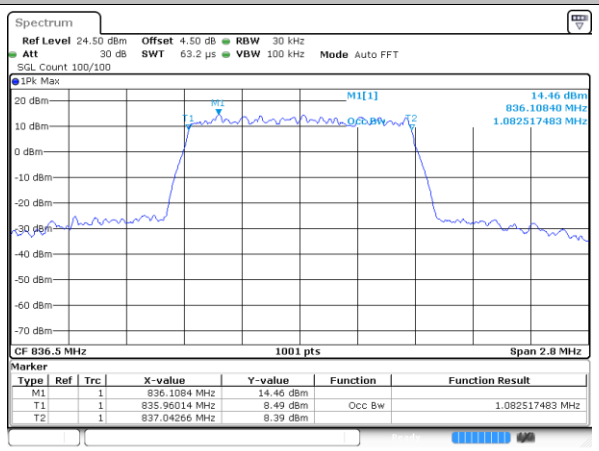

Date: 15.FEB.2020 06:09:26

### Lowest Channel / 3MHz / 64QAM



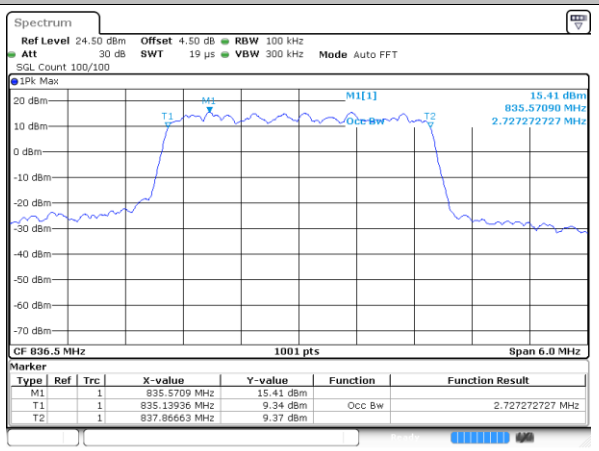

Date: 15.FEB.2020 06:19:37

### Middle Channel / 1.4MHz / 64QAM



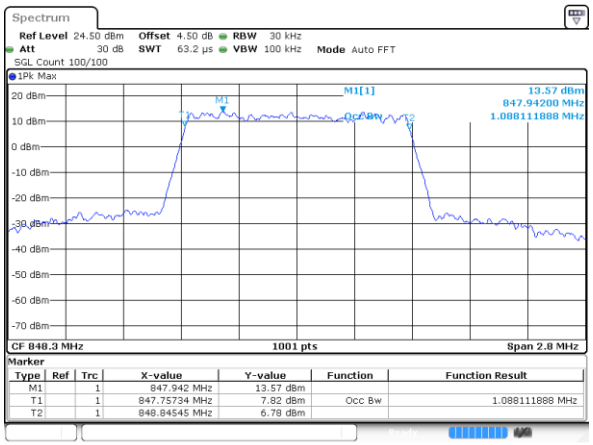

Date: 15.FEB.2020 06:14:49

### Middle Channel / 3MHz / 64QAM




Date: 15.FEB.2020 06:25:01

### Highest Channel / 1.4MHz / 64QAM

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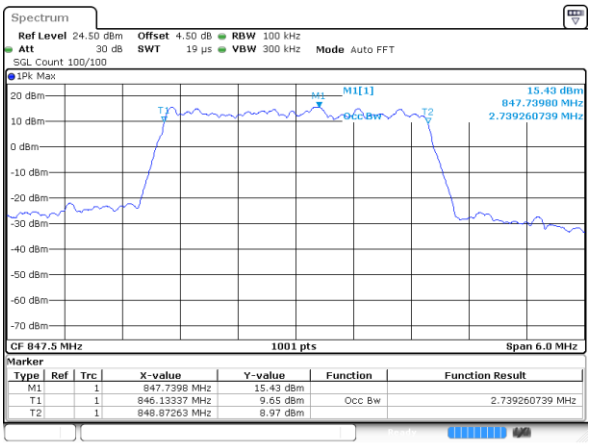
### Highest Channel / 3MHz / 64QAM

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