

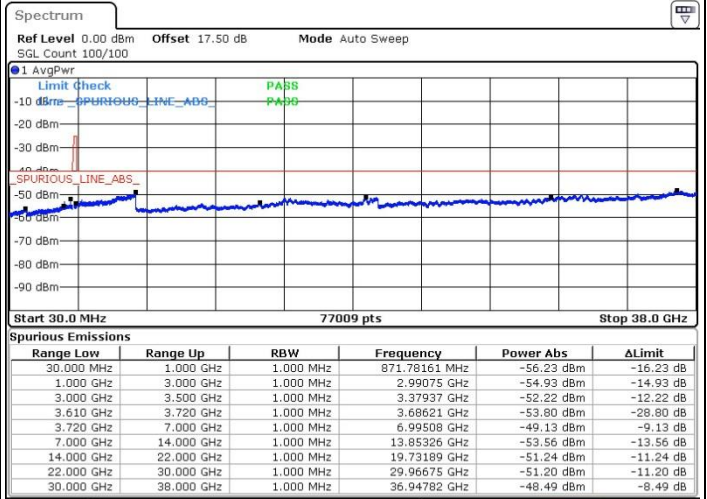
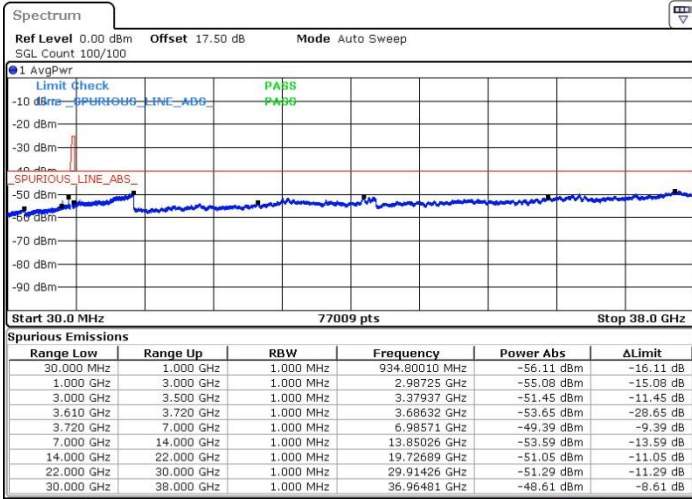


LTE Band 48 / 5MHz

64QAM

Lowest Channel / 1RB0

Lowest Channel / 1RBmax

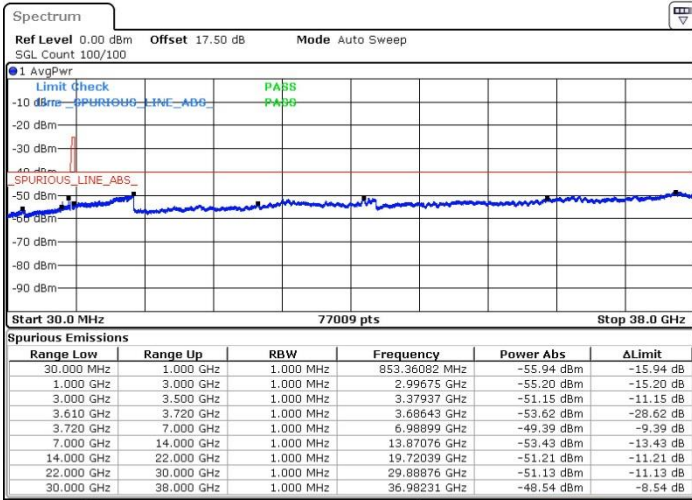


Date: 18 JUL 2019 23:42:03

Date: 19 JUL 2019 00:03:11

Lowest Channel / FullIRB

N/A



Date: 18 JUL 2019 23:54:06

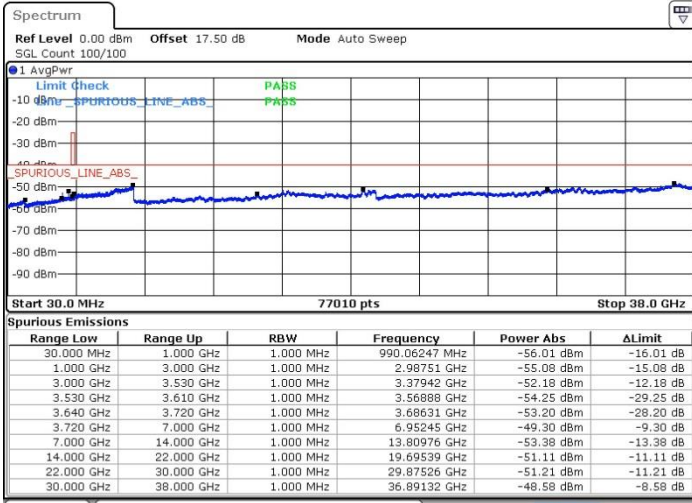


LTE Band 48 / 5MHz

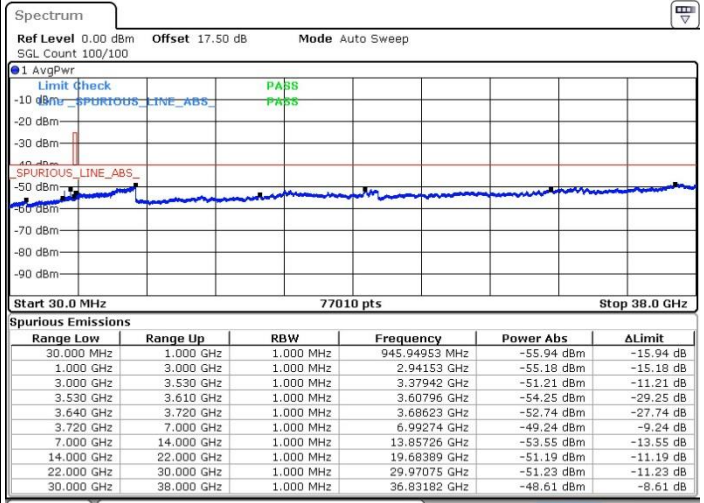
64QAM

Middle Channel / 1RB0

Middle Channel / 1RBmax



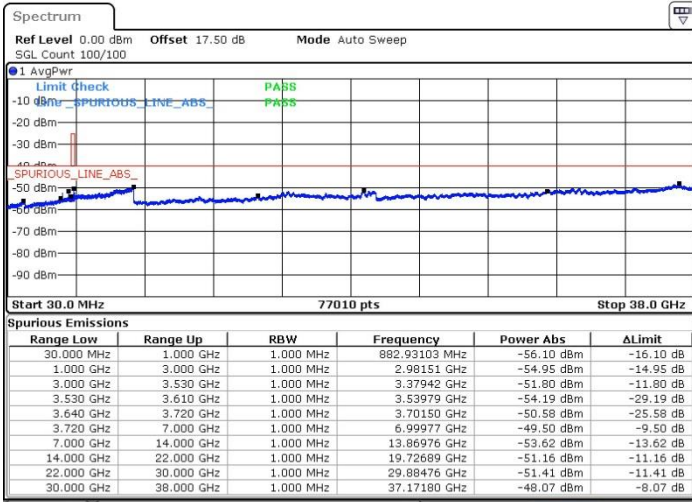
Date: 18 JUL 2019 23:46:01



Date: 19 JUL 2019 00:04:11

Middle Channel / FullRB

N/A



Date: 18 JUL 2019 23:55:06

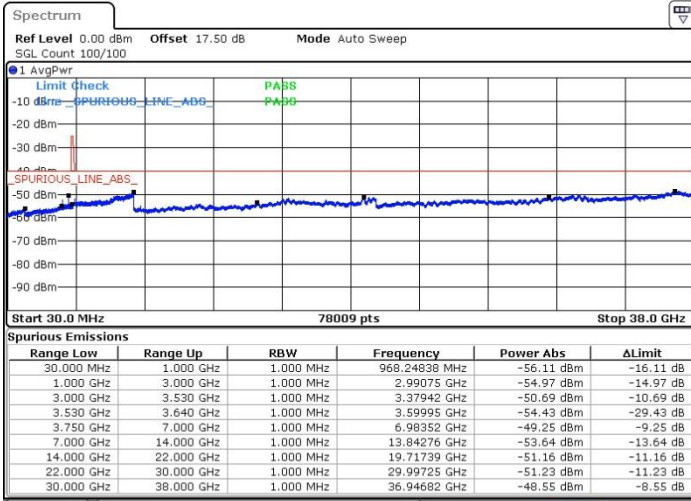


LTE Band 48 / 5MHz

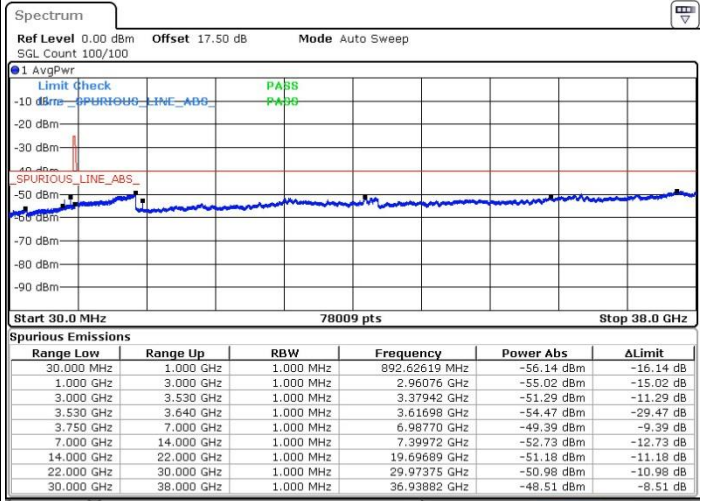
64QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax



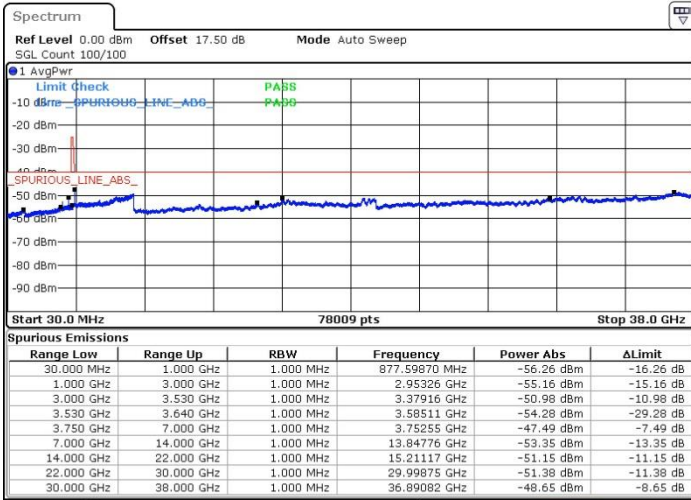
Date: 18.JUL.2019 23:51:03



Date: 19.JUL.2019 00:09:14

Highest Channel / FullIRB

N/A



Date: 19.JUL.2019 00:00:08

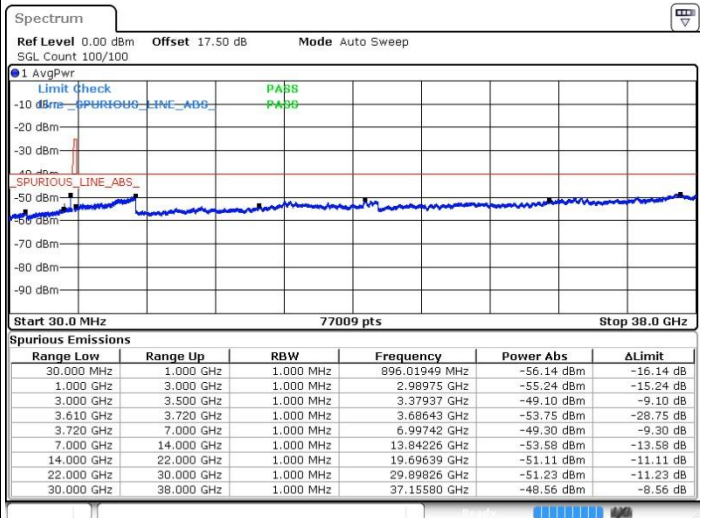
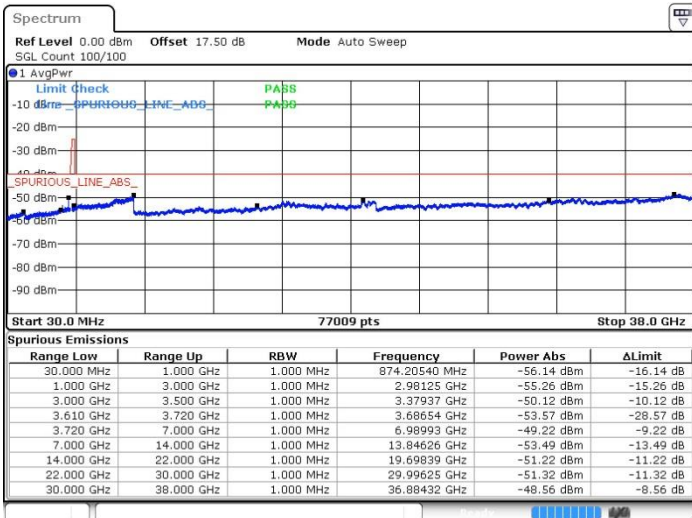


LTE Band 48 / 10MHz

64QAM

Lowest Channel / 1RB0

Lowest Channel / 1RBmax

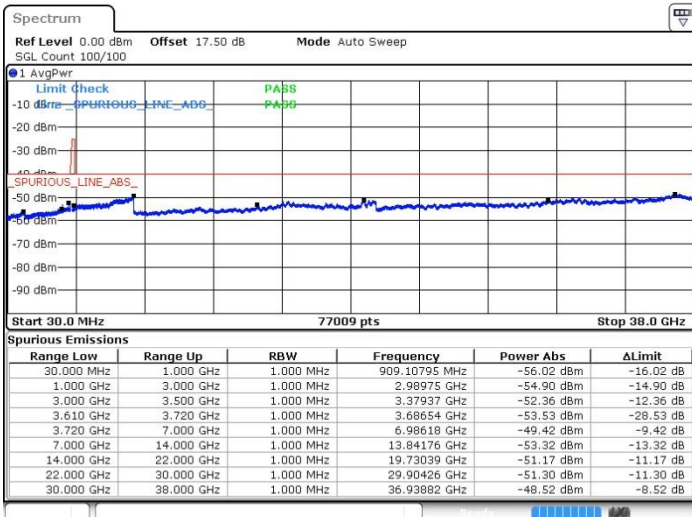


Date: 19.JUL.2019 00:10:15

Date: 19.JUL.2019 00:28:57

Lowest Channel / FullRB

N/A



Date: 19.JUL.2019 00:19:20

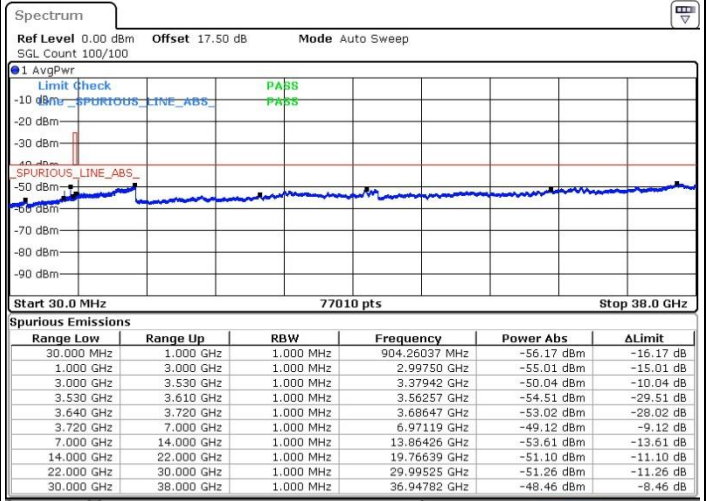
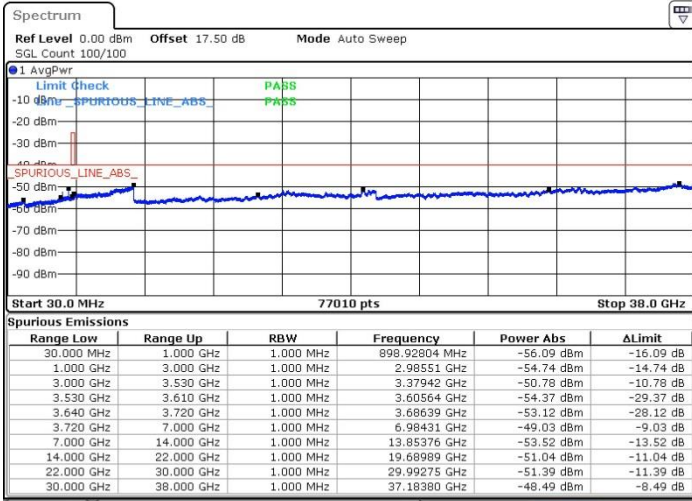


LTE Band 48 / 10MHz

64QAM

MiddleChannel / 1RB0

Middle Channel / 1RBmax

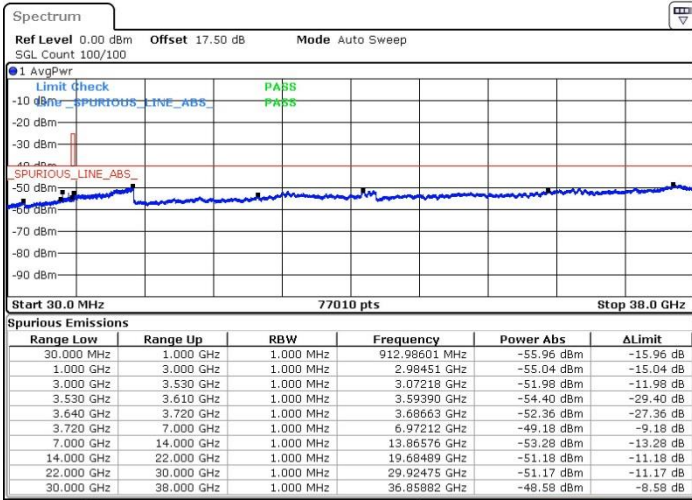


Date: 19.JUL.2019 00:15:17

Date: 19.JUL.2019 00:34:00

Middle Channel / FullIRB

N/A



Date: 19.JUL.2019 00:24:54

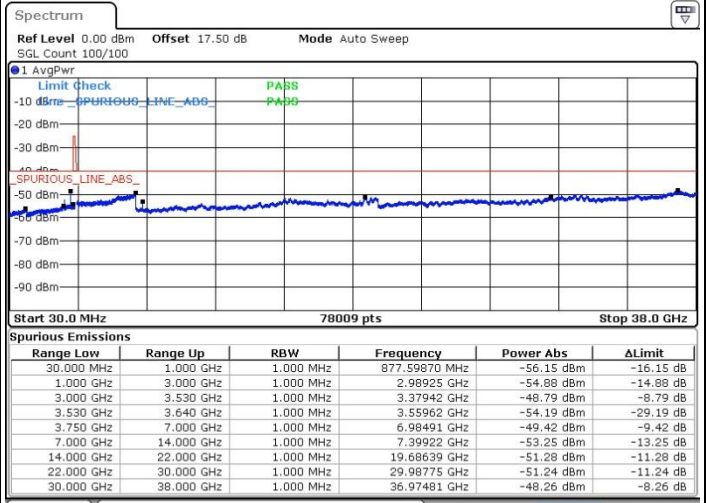
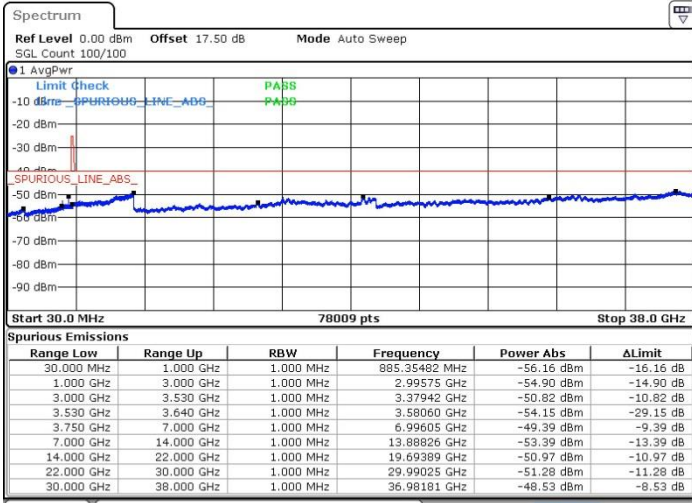


LTE Band 48 / 10MHz

64QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax

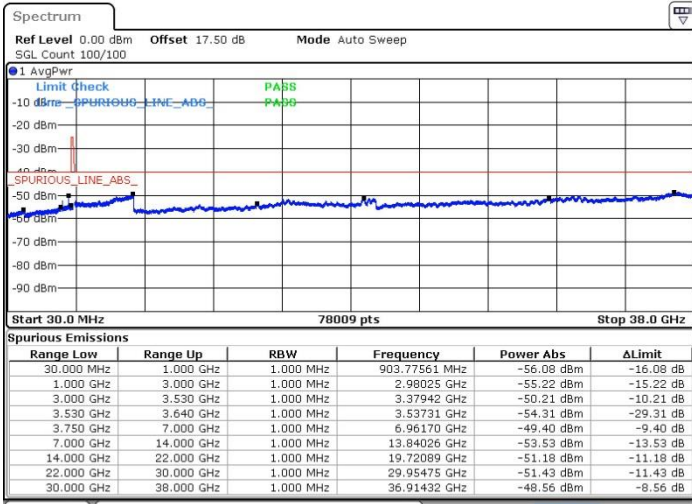


Date: 19.JUL.2019 00:16:17

Date: 19.JUL.2019 00:35:00

Highest Channel / FullIRB

N/A



Date: 19.JUL.2019 00:25:55

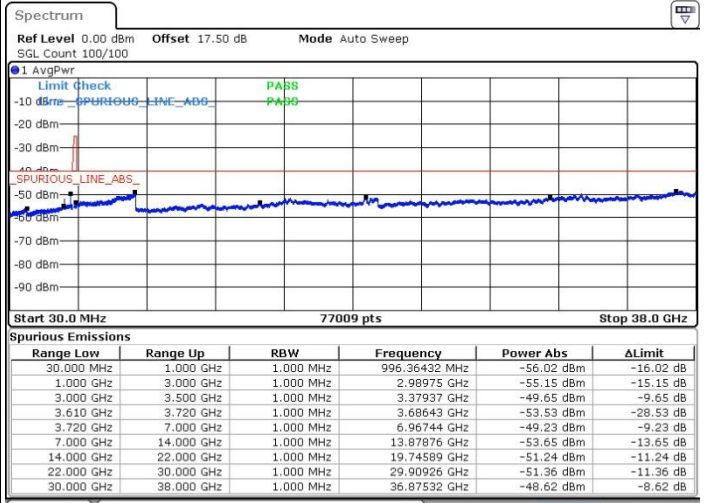
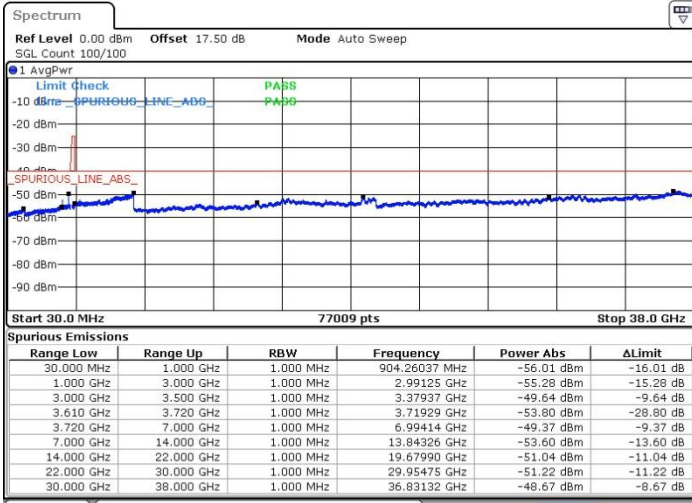


LTE Band 48 / 15MHz

64QAM

Lowest Channel / 1RB0

Lowest Channel / 1RBmax

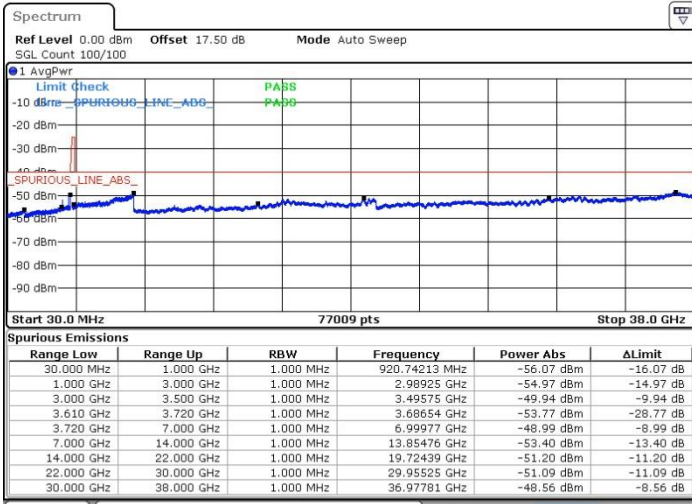


Date: 19.JUL.2019 00:40:05

Date: 19.JUL.2019 00:58:15

Lowest Channel / FullIRB

N/A



Date: 19.JUL.2019 00:49:10

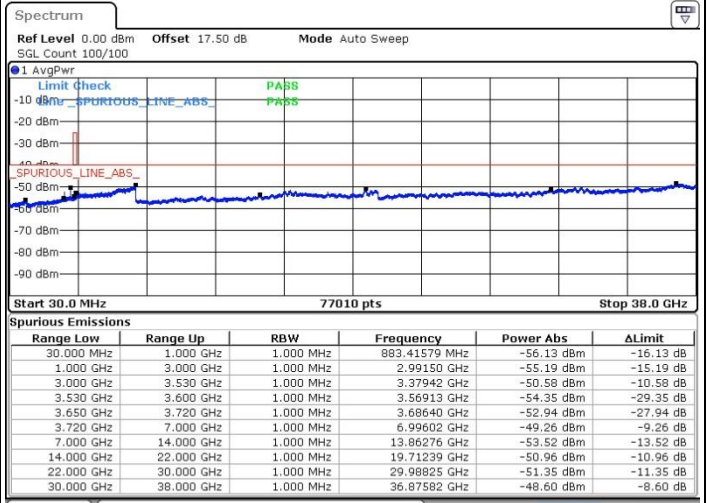
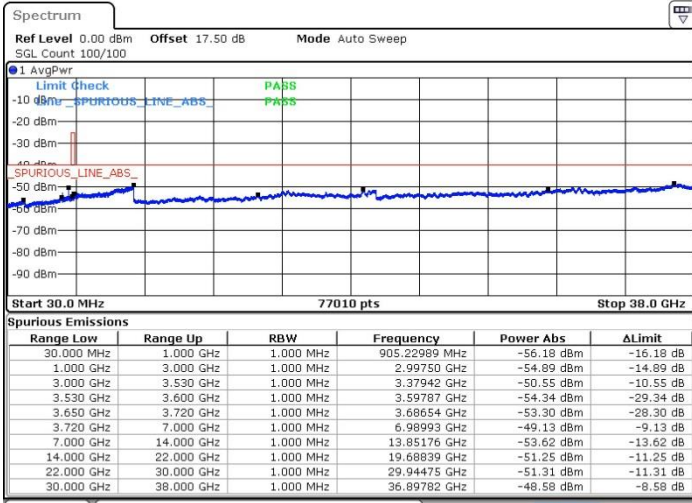


LTE Band 48 / 15MHz

64QAM

Middle Channel / 1RB0

Middle Channel / 1RBmax

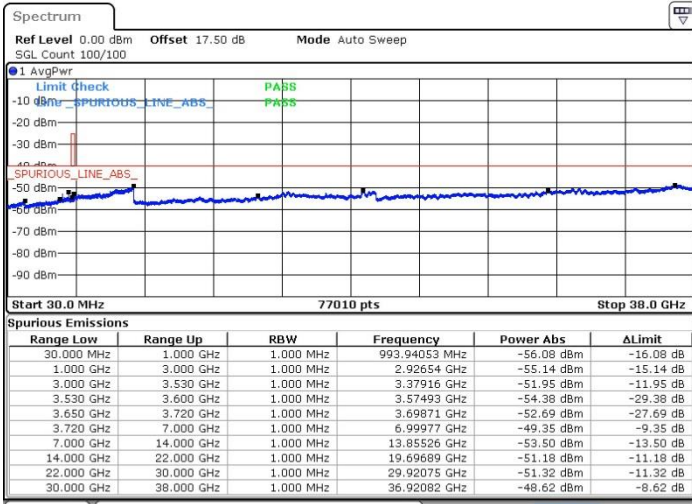


Date: 19.JUL.2019 00:41:05

Date: 19.JUL.2019 00:59:16

Middle Channel / FullRB

N/A



Date: 19.JUL.2019 00:50:11

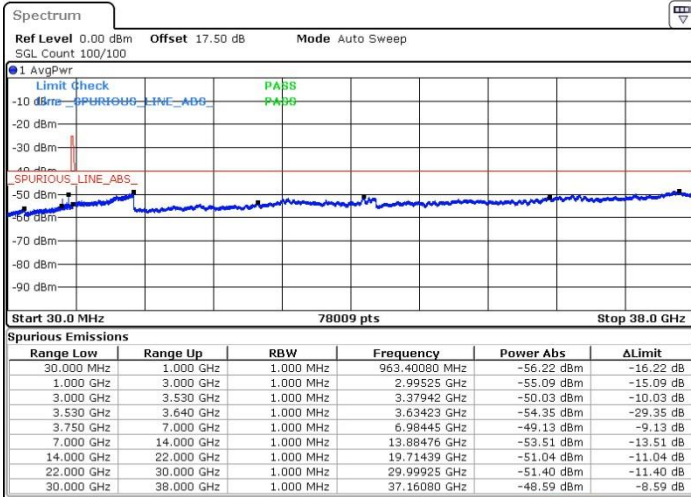


LTE Band 48 / 15MHz

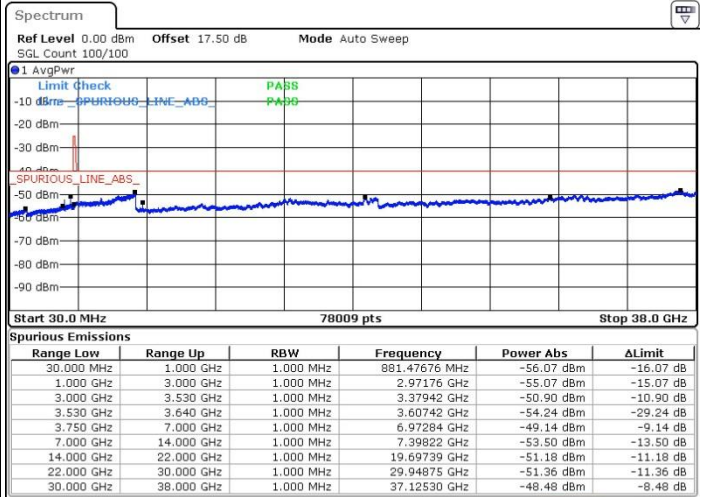
64QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax



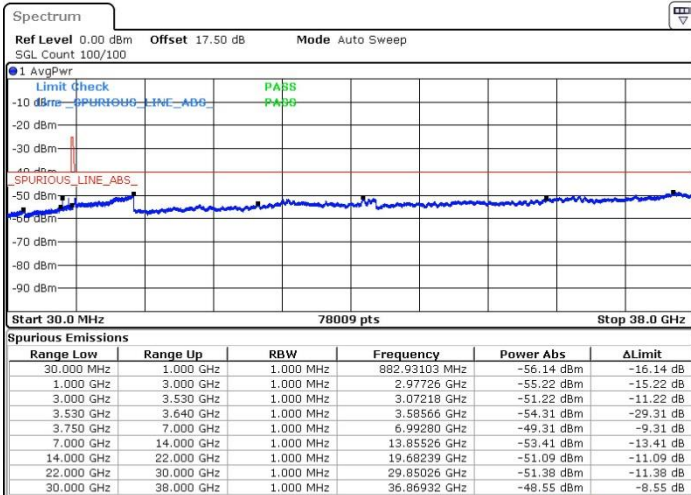
Date: 19.JUL.2019 00:46:08



Date: 19.JUL.2019 01:04:18

Highest Channel / FullIRB

N/A



Date: 19.JUL.2019 00:55:13

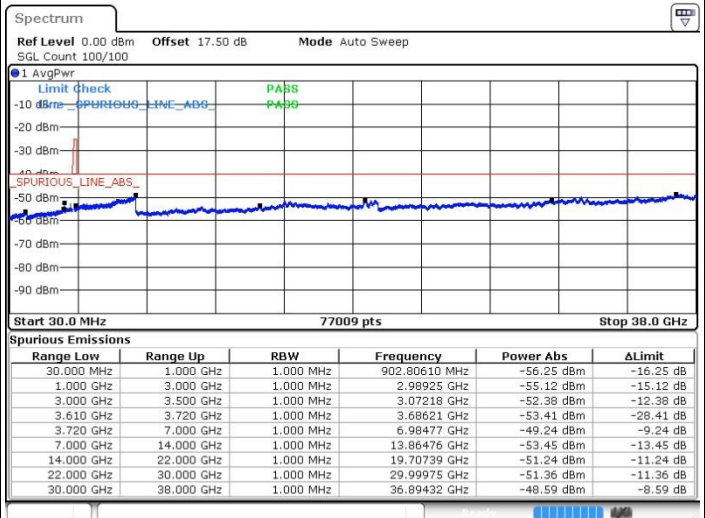
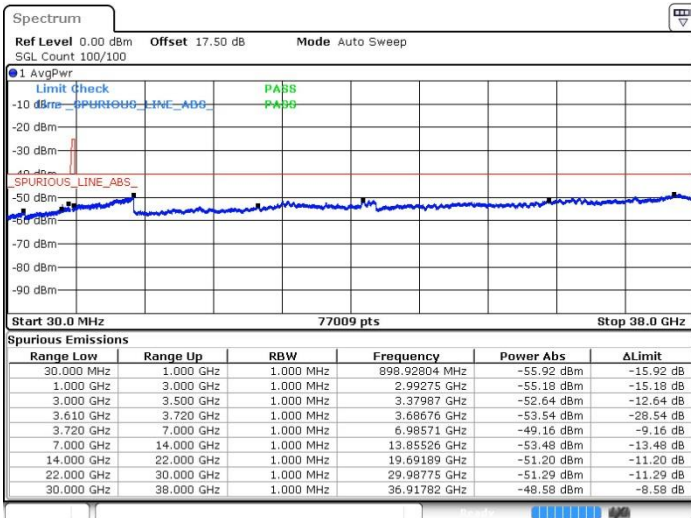


LTE Band 48 / 20MHz

64QAM

Lowest Channel / 1RB0

Lowest Channel / 1RBmax

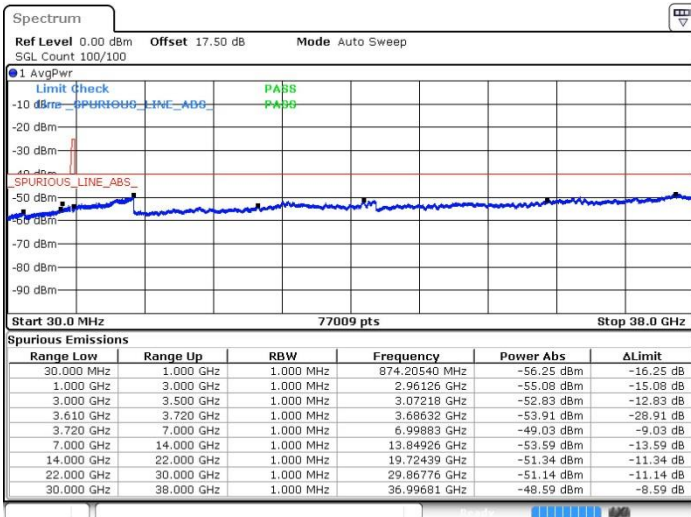


Date: 18 JUL 2019 23:15:23

Date: 18 JUL 2019 23:24:29

Lowest Channel / FullIRB

N/A



Date: 18 JUL 2019 23:06:18

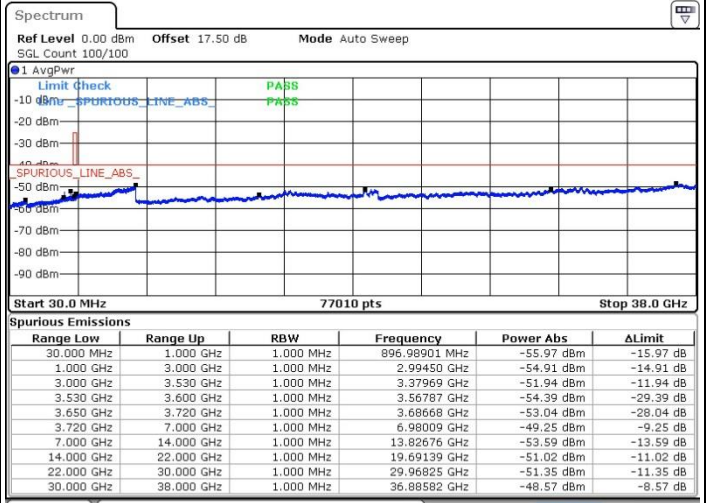
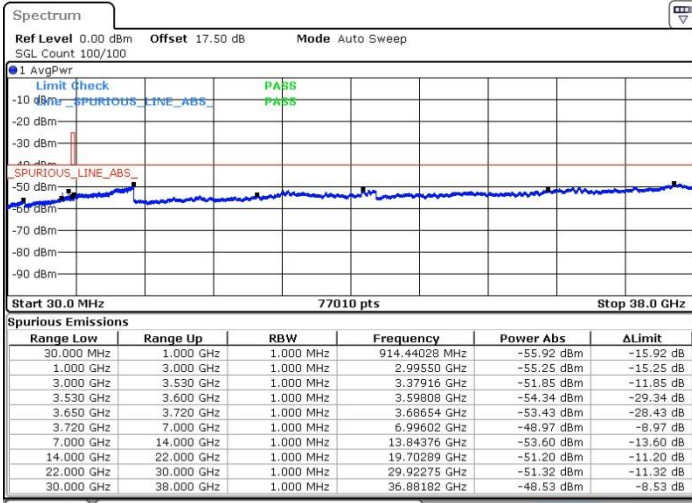


LTE Band 48 / 20MHz

64QAM

Middle Channel / 1RB0

Middle Channel / 1RBmax

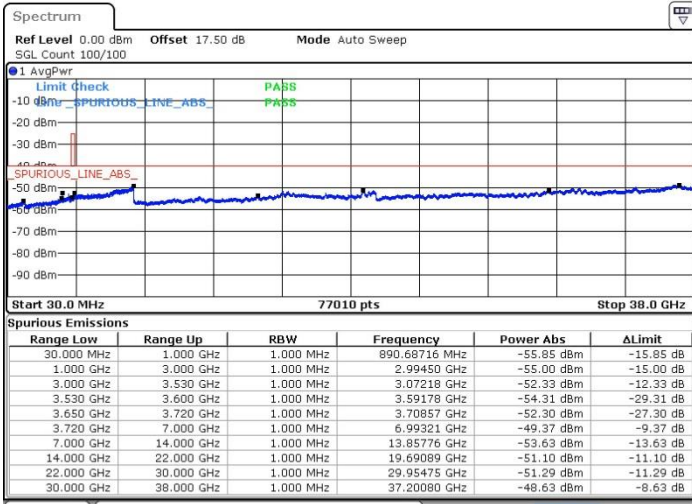


Date: 18 JUL 2019 23:20:26

Date: 18 JUL 2019 23:29:31

Middle Channel / FullIRB

N/A



Date: 18 JUL 2019 23:11:21

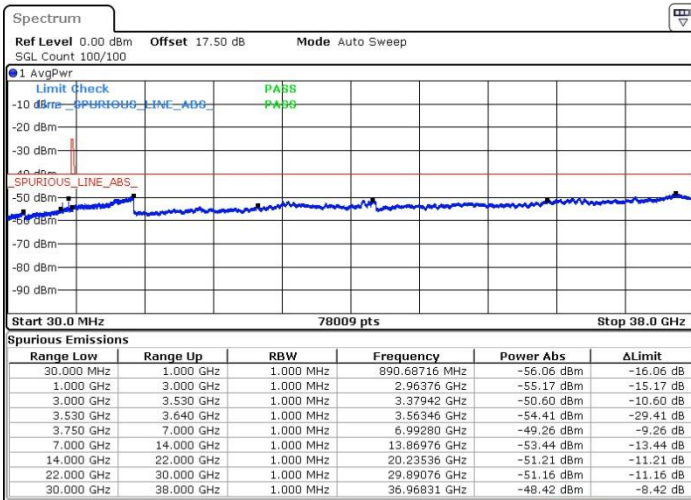


LTE Band 48 / 20MHz

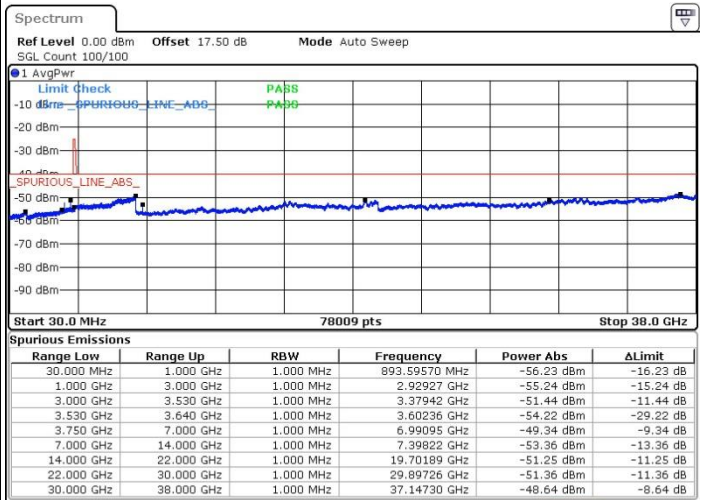
64QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax



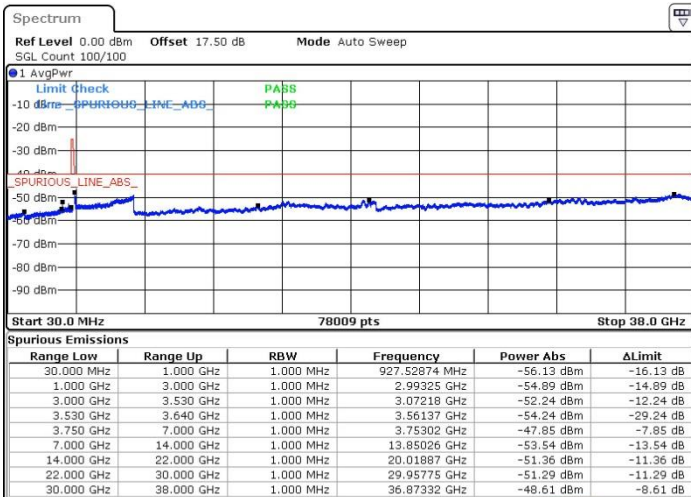
Date: 18 JUL 2019 23:21:26



Date: 18 JUL 2019 23:30:31

Highest Channel / FullIRB

N/A



Date: 18 JUL 2019 23:12:21



Frequency Stability

| Test Conditions | | LTE Band 48 (QPSK) / Middle Channel | Limit |
|------------------|-------------------|-------------------------------------|---------|
| Temperature (°C) | Voltage (Volt) | BW 10MHz | Note 2. |
| | | Deviation (ppm) | Result |
| 50 | Normal Voltage | 0.0023 | PASS |
| 40 | Normal Voltage | 0.0021 | |
| 30 | Normal Voltage | 0.0008 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0001 | |
| 0 | Normal Voltage | 0.0003 | |
| -10 | Normal Voltage | 0.0010 | |
| -20 | Normal Voltage | 0.0014 | |
| -30 | Normal Voltage | 0.0001 | |
| 20 | Maximum Voltage | 0.0017 | |
| 20 | Normal Voltage | 0.0000 | |
| 20 | Battery End Point | 0.0013 | |

Note:

1. Normal Voltage =3.87 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.45 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



Appendix B. Test Results of EIRP and Radiated Test

EIRP

<Reporting Only>

| LTE Band 48 / 5MHz (Average) (GT - LC = -1 dB) | | | | | | | |
|--|-------|------|--------|-------------|---------------|-----------|---------|
| Channel | Mode | RB | | Conducted | | EIRP | |
| | | Size | Offset | Power (dBm) | Power (Watts) | EIRP(dBm) | EIRP(W) |
| Lowest | QPSK | 1 | 12 | 23.07 | 0.2028 | 22.07 | 0.1611 |
| Middle | | 1 | 12 | 23.41 | 0.2193 | 22.41 | 0.1742 |
| Highest | | 1 | 12 | 23.29 | 0.2133 | 22.29 | 0.1694 |
| Lowest | 16QAM | 1 | 12 | 22.31 | 0.1702 | 21.31 | 0.1352 |
| Middle | | 1 | 12 | 22.54 | 0.1795 | 21.54 | 0.1426 |
| Highest | | 1 | 12 | 22.36 | 0.1722 | 21.36 | 0.1368 |
| Lowest | 64QAM | 1 | 12 | 21.27 | 0.1340 | 20.27 | 0.1064 |
| Middle | | 1 | 12 | 21.65 | 0.1462 | 20.65 | 0.1161 |
| Highest | | 1 | 12 | 21.33 | 0.1358 | 20.33 | 0.1079 |

| LTE Band 48 / 10MHz (Average) (GT - LC = -1 dB) | | | | | | | |
|---|-------|------|--------|-------------|---------------|-----------|---------|
| Channel | Mode | RB | | Conducted | | EIRP | |
| | | Size | Offset | Power (dBm) | Power (Watts) | EIRP(dBm) | EIRP(W) |
| Lowest | QPSK | 1 | 49 | 23.10 | 0.2042 | 22.10 | 0.1622 |
| Middle | | 1 | 49 | 23.40 | 0.2188 | 22.40 | 0.1738 |
| Highest | | 1 | 49 | 23.30 | 0.2138 | 22.30 | 0.1698 |
| Lowest | 16QAM | 1 | 49 | 22.36 | 0.1722 | 21.36 | 0.1368 |
| Middle | | 1 | 49 | 22.54 | 0.1795 | 21.54 | 0.1426 |
| Highest | | 1 | 49 | 22.51 | 0.1782 | 21.51 | 0.1416 |
| Lowest | 64QAM | 1 | 25 | 21.30 | 0.1349 | 20.30 | 0.1072 |
| Middle | | 1 | 25 | 21.64 | 0.1459 | 20.64 | 0.1159 |
| Highest | | 1 | 25 | 21.37 | 0.1371 | 20.37 | 0.1089 |

| LTE Band 48 / 15MHz (Average) (GT - LC = -1 dB) | | | | | | | |
|---|-------|------|--------|-------------|---------------|-----------|---------|
| Channel | Mode | RB | | Conducted | | EIRP | |
| | | Size | Offset | Power (dBm) | Power (Watts) | EIRP(dBm) | EIRP(W) |
| Lowest | QPSK | 1 | 74 | 23.23 | 0.2104 | 22.23 | 0.1671 |
| Middle | | 1 | 74 | 23.51 | 0.2244 | 22.51 | 0.1782 |
| Highest | | 1 | 74 | 23.41 | 0.2193 | 22.41 | 0.1742 |
| Lowest | 16QAM | 1 | 37 | 22.49 | 0.1774 | 21.49 | 0.1409 |
| Middle | | 1 | 37 | 22.78 | 0.1897 | 21.78 | 0.1507 |
| Highest | | 1 | 37 | 22.60 | 0.1820 | 21.60 | 0.1445 |
| Lowest | 64QAM | 1 | 74 | 21.47 | 0.1403 | 20.47 | 0.1114 |
| Middle | | 1 | 74 | 21.78 | 0.1507 | 20.78 | 0.1197 |
| Highest | | 1 | 74 | 21.51 | 0.1416 | 20.51 | 0.1125 |



| LTE Band 48 / 20MHz (Average) (GT - LC = -1 dB) | | | | | | | |
|---|-------|------|--------|-------------|---------------|-----------|---------|
| Channel | Mode | RB | | Conducted | | EIRP | |
| | | Size | Offset | Power (dBm) | Power (Watts) | EIRP(dBm) | EIRP(W) |
| Lowest | QPSK | 1 | 49 | 23.32 | 0.2148 | 22.32 | 0.1706 |
| Middle | | 1 | 49 | 23.48 | 0.2228 | 22.48 | 0.1770 |
| Highest | | 1 | 49 | 23.34 | 0.2158 | 22.34 | 0.1714 |
| Lowest | 16QAM | 1 | 99 | 22.53 | 0.1791 | 21.53 | 0.1422 |
| Middle | | 1 | 99 | 22.69 | 0.1858 | 21.69 | 0.1476 |
| Highest | | 1 | 99 | 22.69 | 0.1858 | 21.69 | 0.1476 |
| Lowest | 64QAM | 1 | 99 | 21.53 | 0.1422 | 20.53 | 0.1130 |
| Middle | | 1 | 99 | 21.76 | 0.1500 | 20.76 | 0.1191 |
| Highest | | 1 | 99 | 21.59 | 0.1442 | 20.59 | 0.1146 |



EIRP Power

| LTE Band 48 / Conducted Power (dBm/10MHz) | | | | | | | | | |
|---|--------|-------|-------|------|-------|-------|-------|-------|-------|
| BW | 1.4MHz | | | 3MHz | | | 5MHz | | |
| Mod. | QPSK | 16QAM | 64QAM | QPSK | 16QAM | 64QAM | QPSK | 16QAM | 64QAM |
| Lowest CH | - | - | - | - | - | - | 23.07 | 22.31 | 21.27 |
| Middle CH | - | - | - | - | - | - | 23.41 | 22.54 | 21.65 |
| Highest CH | - | - | - | - | - | - | 23.29 | 22.36 | 21.33 |

| LTE Band 48 / Conducted Power (dBm/10MHz) | | | | | | | | | |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| BW | 10MHz | | | 15MHz | | | 20MHz | | |
| Mod. | QPSK | 16QAM | 64QAM | QPSK | 16QAM | 64QAM | QPSK | 16QAM | 64QAM |
| Lowest CH | 23.1 | 22.36 | 21.3 | 21.47 | 20.73 | 19.71 | 20.31 | 19.52 | 18.52 |
| Middle CH | 23.4 | 22.54 | 21.64 | 21.75 | 21.02 | 20.02 | 20.47 | 19.68 | 18.75 |
| Highest CH | 23.3 | 22.51 | 21.37 | 21.65 | 20.84 | 19.75 | 20.33 | 19.68 | 18.58 |

| LTE Band 48 / EIRP Power (dBm/10MHz) | | | | | | | | | |
|--------------------------------------|--------|-------|-------|------|-------|-------|-------|-------|-------|
| BW | 1.4MHz | | | 3MHz | | | 5MHz | | |
| Mod. | QPSK | 16QAM | 64QAM | QPSK | 16QAM | 64QAM | QPSK | 16QAM | 64QAM |
| Lowest CH | - | - | - | - | - | - | 22.07 | 21.31 | 20.27 |
| Middle CH | - | - | - | - | - | - | 22.41 | 21.54 | 20.65 |
| Highest CH | - | - | - | - | - | - | 22.29 | 21.36 | 20.33 |

| LTE Band 48 / EIRP Power (dBm/10MHz) | | | | | | | | | |
|--------------------------------------|---------------|-------|-------|-------|-------|-------|-------|-------|-------|
| BW | 10MHz | | | 15MHz | | | 20MHz | | |
| Mod. | QPSK | 16QAM | 64QAM | QPSK | 16QAM | 64QAM | QPSK | 16QAM | 64QAM |
| Lowest CH | 22.1 | 21.36 | 20.3 | 20.47 | 19.73 | 18.71 | 19.31 | 18.52 | 17.52 |
| Middle CH | 22.4 | 21.54 | 20.64 | 20.75 | 20.02 | 19.02 | 19.47 | 18.68 | 17.75 |
| Highest CH | 22.3 | 21.51 | 20.37 | 20.65 | 19.84 | 18.75 | 19.33 | 18.68 | 17.58 |
| Antenna Gain | -1 dBi | | | | | | | | |
| Limit | 23dBm / 10MHz | | | | | | | | |
| Result | Pass | | | | | | | | |



Radiated Spurious Emission

LTE Band 48

| LTE Band 48 / 20MHz / QPSK | | | | | | | | | |
|----------------------------|-------------------|--------------|---------------|-------------------|-------------------|--------------------|----------------------|-----------------------|--------------------|
| Channel | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Lowest | 7120 | -57.11 | -40 | -17.11 | -61.2 | -67.03 | 1.78 | 11.71 | H |
| | 10680 | -59.17 | -40 | -19.17 | -66.98 | -67.59 | 2.48 | 10.90 | H |
| | 14240 | -56.22 | -40 | -16.22 | -68.41 | -64.98 | 2.87 | 11.62 | H |
| | 21360 | -48.42 | -40 | -8.42 | -74.64 | -65.16 | 1.96 | 18.70 | H |
| | 24920 | -49.07 | -40 | -9.07 | -75.36 | -65.17 | 2.07 | 18.17 | H |
| | 28480 | -47.54 | -40 | -7.54 | -75.83 | -64.83 | 2.30 | 19.59 | H |
| | | | | | | | | | H |
| | 7120 | -60.19 | -40 | -20.19 | -63.91 | -70.11 | 1.78 | 11.71 | V |
| | 10680 | -59.71 | -40 | -19.71 | -67.28 | -68.13 | 2.48 | 10.90 | V |
| | 14240 | -56.76 | -40 | -16.76 | -68.6 | -65.52 | 2.87 | 11.62 | V |
| | 21360 | -55.95 | -40 | -15.95 | -75.07 | -72.69 | 1.96 | 18.70 | V |
| | 24920 | -49.73 | -40 | -9.73 | -72.41 | -65.83 | 2.07 | 18.17 | V |
| | 28480 | -50.64 | -40 | -10.64 | -75.67 | -67.93 | 2.30 | 19.59 | V |
| | | | | | | | | | V |



| | | | | | | | | | |
|---------|-------|--------|-----|--------|--------|--------|------|-------|---|
| Middle | 7250 | -48.11 | -40 | -8.11 | -52.2 | -57.76 | 1.86 | 11.50 | H |
| | 10875 | -58.79 | -40 | -18.79 | -66.89 | -67.11 | 2.59 | 10.90 | H |
| | 14500 | -57.77 | -40 | -17.77 | -69.92 | -65.92 | 2.85 | 11.00 | H |
| | 18124 | -51.82 | -40 | -11.82 | -71.26 | -68.02 | 1.77 | 17.98 | H |
| | 21750 | -50.10 | -40 | -10.10 | -75.46 | -66.89 | 2.01 | 18.80 | H |
| | 25375 | -46.67 | -40 | -6.67 | -75.13 | -63.35 | 2.15 | 18.83 | H |
| | | | | | | | | | H |
| | 7250 | -54.82 | -40 | -14.82 | -58.66 | -64.47 | 1.86 | 11.50 | V |
| | 10875 | -59.33 | -40 | -19.33 | -67.23 | -67.65 | 2.59 | 10.90 | V |
| | 14500 | -58.69 | -40 | -18.69 | -69.94 | -66.84 | 2.85 | 11.00 | V |
| | 18124 | -58.50 | -40 | -18.50 | -71.52 | -74.70 | 1.77 | 17.98 | V |
| | 21750 | -56.96 | -40 | -16.96 | -75.63 | -73.75 | 2.01 | 18.80 | V |
| | 25375 | -47.72 | -40 | -7.72 | -72.43 | -64.40 | 2.15 | 18.83 | V |
| | | | | | | | | | V |
| Highest | 7380 | -53.15 | -40 | -13.15 | -57.08 | -62.52 | 1.93 | 11.29 | H |
| | 11070 | -59.36 | -40 | -19.36 | -67.81 | -67.72 | 2.62 | 10.98 | H |
| | 14760 | -55.94 | -40 | -15.94 | -69.52 | -64.85 | 2.92 | 11.83 | H |
| | 18450 | -52.75 | -40 | -12.75 | -72.59 | -68.78 | 1.88 | 17.91 | H |
| | 22140 | -49.98 | -40 | -9.98 | -74.67 | -66.76 | 2.06 | 18.84 | H |
| | 25830 | -46.42 | -40 | -6.42 | -75.01 | -63.49 | 2.00 | 19.07 | H |
| | | | | | | | | | H |
| | 7380 | -59.87 | -40 | -19.87 | -63.63 | -69.24 | 1.93 | 11.29 | V |
| | 11070 | -59.18 | -40 | -19.18 | -67.46 | -67.54 | 2.62 | 10.98 | V |
| | 14760 | -57.71 | -40 | -17.71 | -69.51 | -66.62 | 2.92 | 11.83 | V |
| | 18450 | -60.52 | -40 | -20.52 | -72.84 | -76.55 | 1.88 | 17.91 | V |
| | 22140 | -56.71 | -40 | -16.71 | -75.14 | -73.49 | 2.06 | 18.84 | V |
| | 25830 | -46.76 | -40 | -6.76 | -71.82 | -63.83 | 2.00 | 19.07 | V |
| | | | | | | | | | V |

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