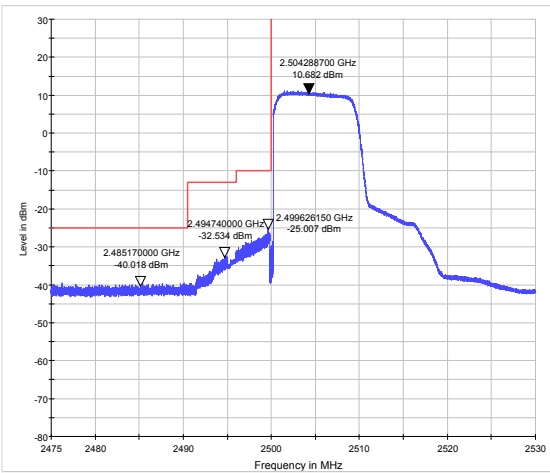
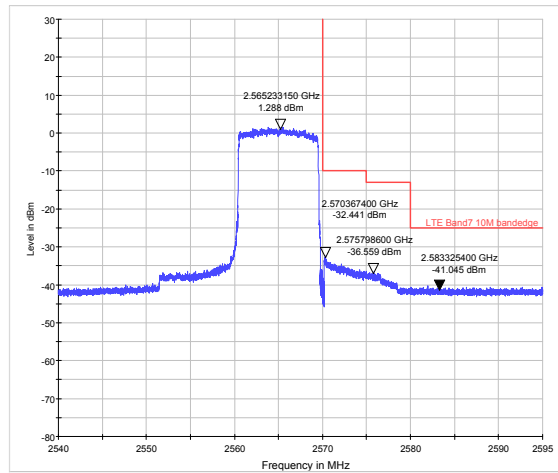




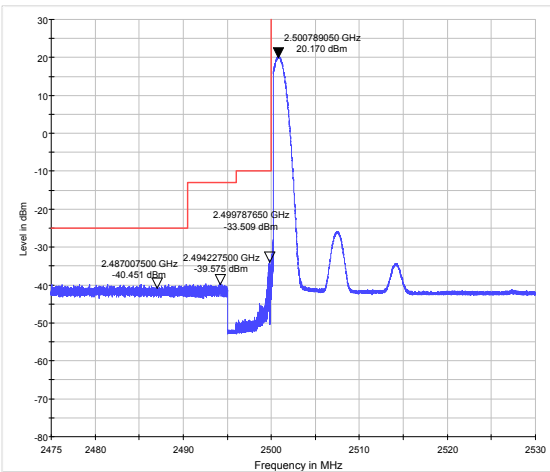
LTE Band 7 QPSK 10MHz CH-Low, 100%RB



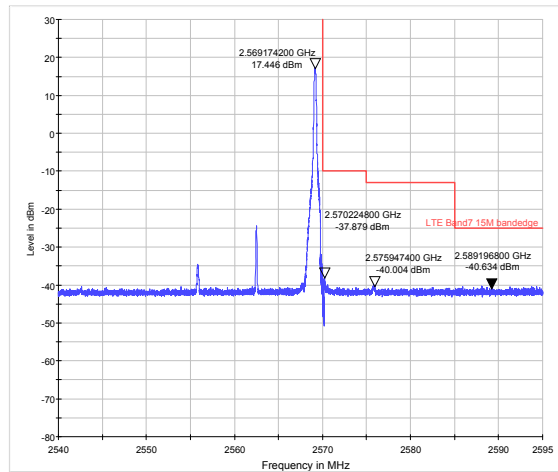
LTE Band 7 QPSK 10MHz CH-High, 100%RB



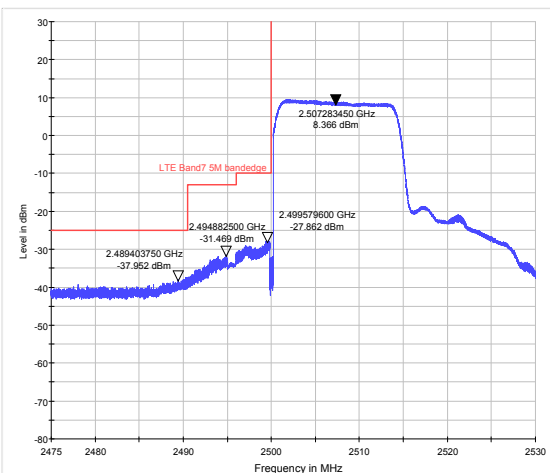
LTE Band 7 QPSK 15MHz CH-Low, 1 RB



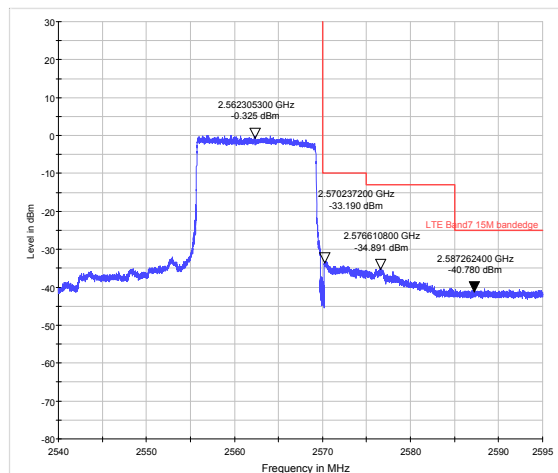
LTE Band 7 QPSK 15MHz CH-High, 1 RB



LTE Band 7 QPSK 15MHz CH-Low, 100%RB

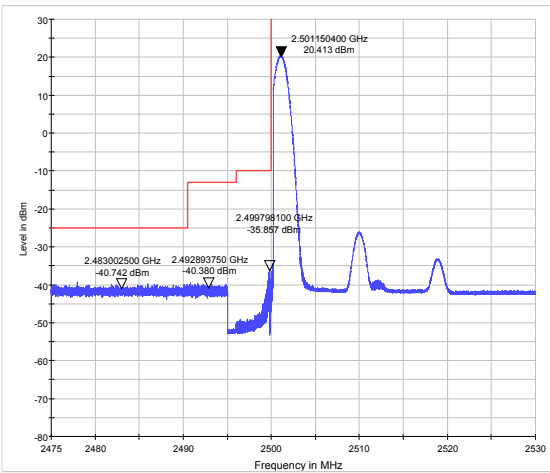


LTE Band 7 QPSK 15MHz CH-High, 100%RB

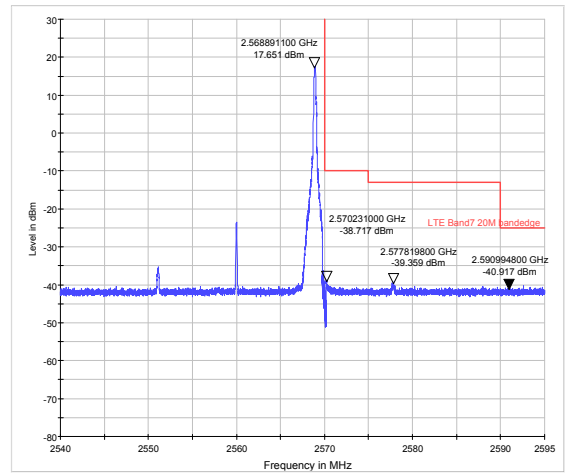




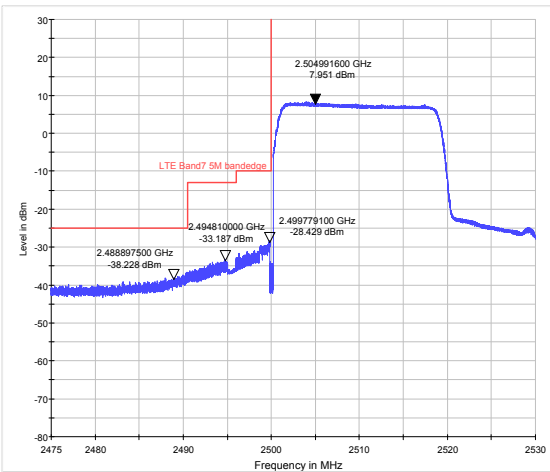
LTE Band 7 QPSK 20MHz CH-Low, 1 RB



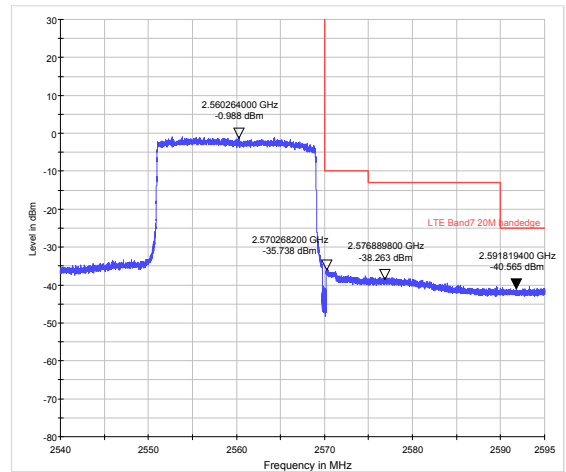
LTE Band 7 QPSK 20MHz CH-High, 1 RB



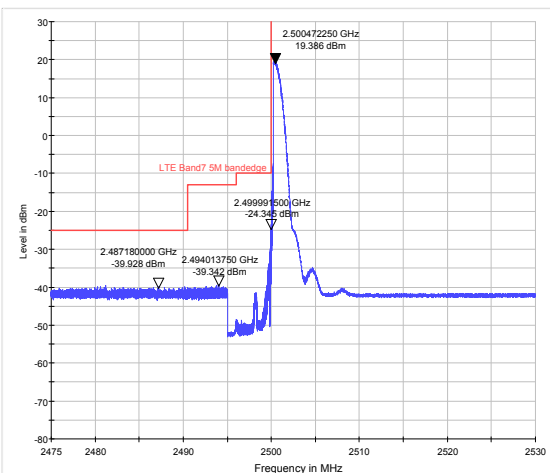
LTE Band 7 QPSK 20MHz CH-Low, 100%RB



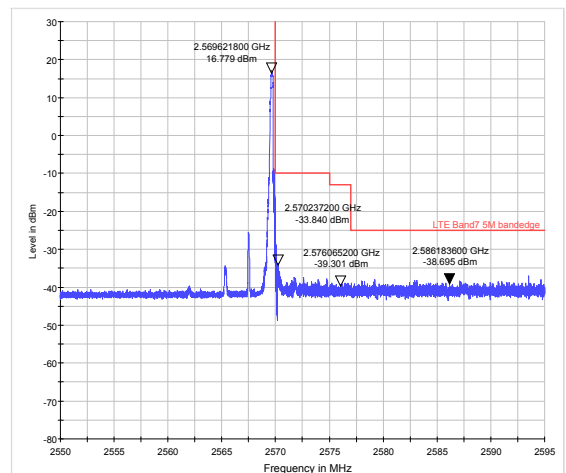
LTE Band 7 QPSK 20MHz CH-High, 100%RB



LTE Band 7 16QAM 5MHz CH-Low, 1 RB

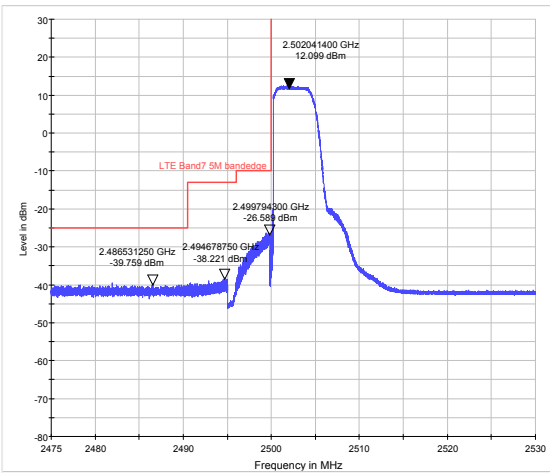


LTE Band 7 16QAM 5MHz CH-High, 1 RB

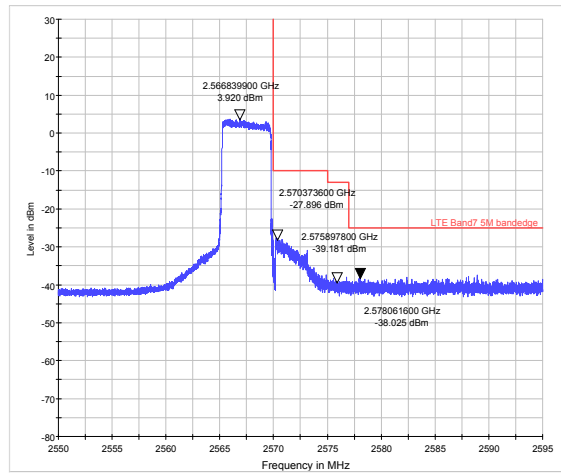




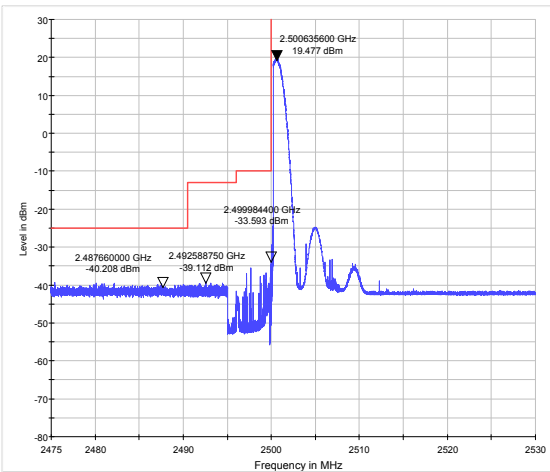
LTE Band 7 16QAM 5MHz CH-Low, 100%RB



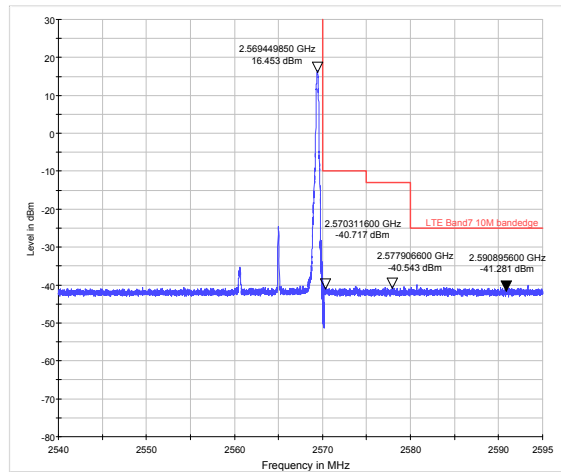
LTE Band 7 16QAM 5MHz CH-High, 100%RB



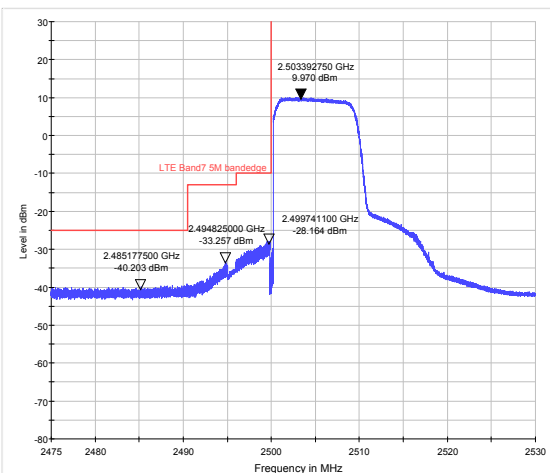
LTE Band 7 16QAM 10MHz CH-Low, 1 RB



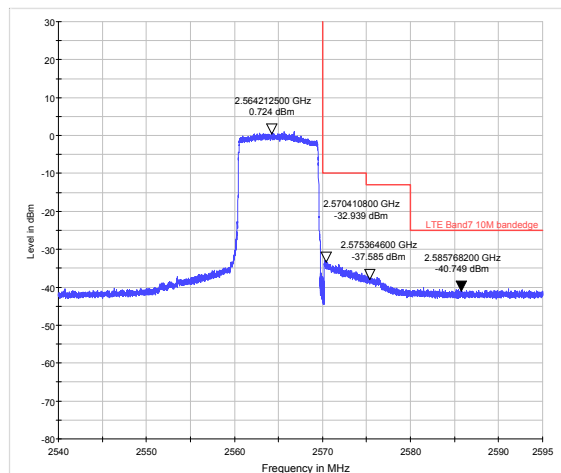
LTE Band 7 16QAM 10MHz CH-High, 1 RB



LTE Band 7 16QAM 10MHz CH-Low, 100%RB

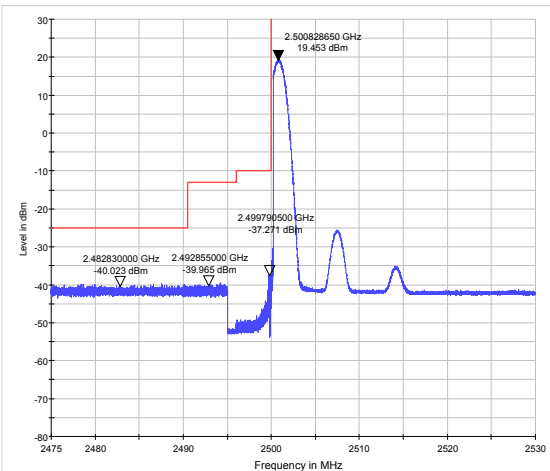


LTE Band 7 16QAM 10MHz CH-High, 100%RB

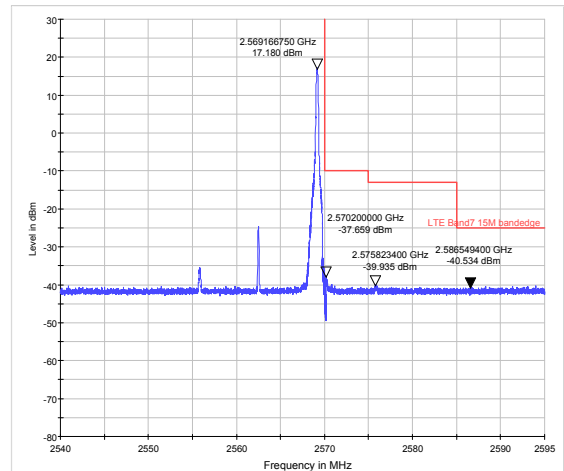




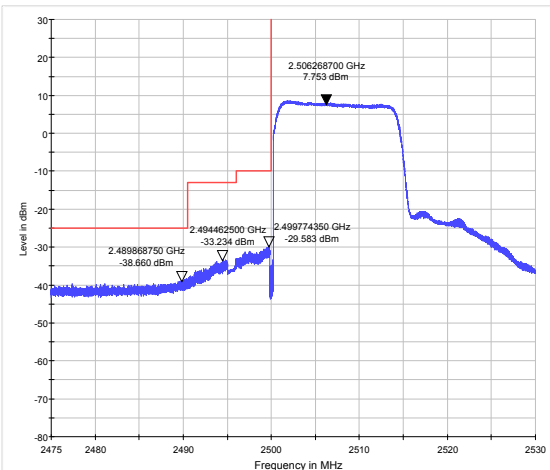
LTE Band 7 16QAM 15MHz CH-Low, 1 RB



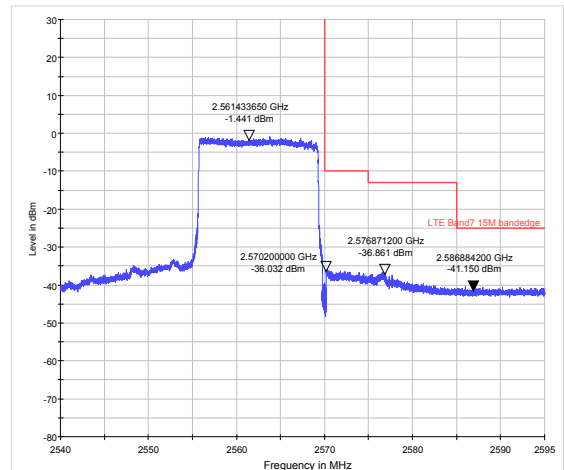
LTE Band 7 16QAM 15MHz CH-High, 1 RB



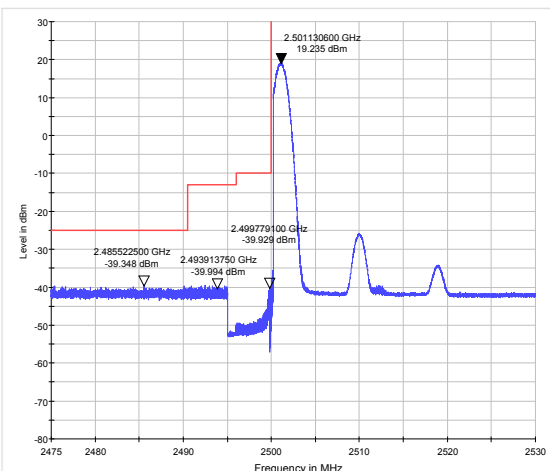
LTE Band 7 16QAM 15MHz CH-Low, 100%RB



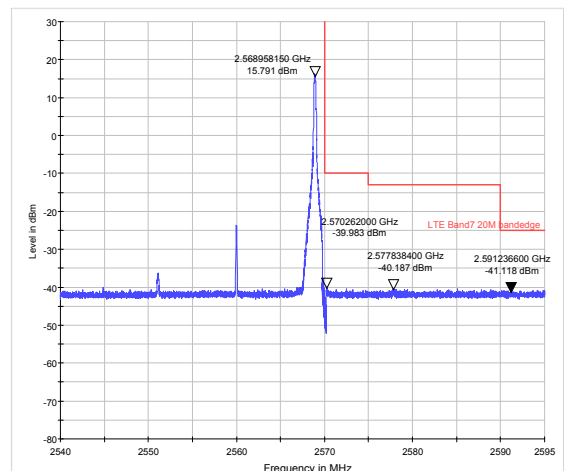
LTE Band 7 16QAM 15MHz CH-High, 100%RB



LTE Band 7 16QAM 20MHz CH-Low, 1 RB

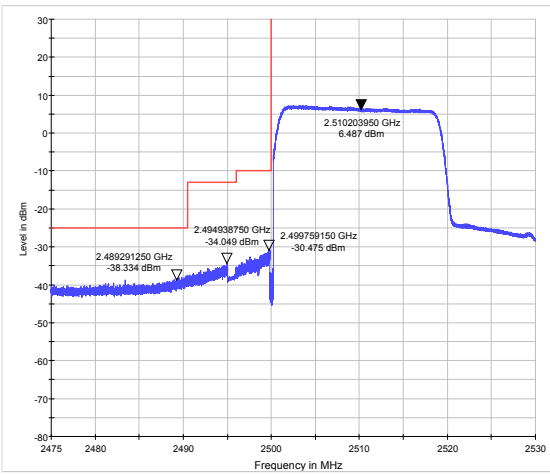


LTE Band 7 16QAM 20MHz CH-High, 1 RB

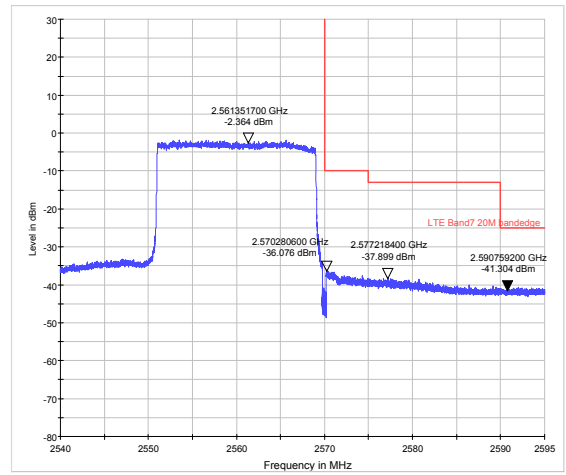


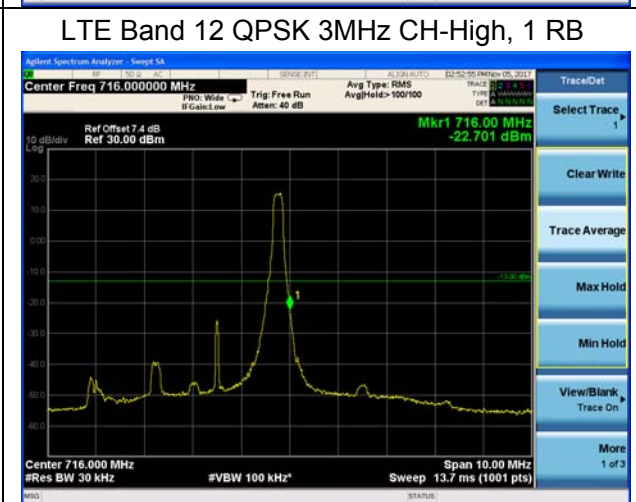
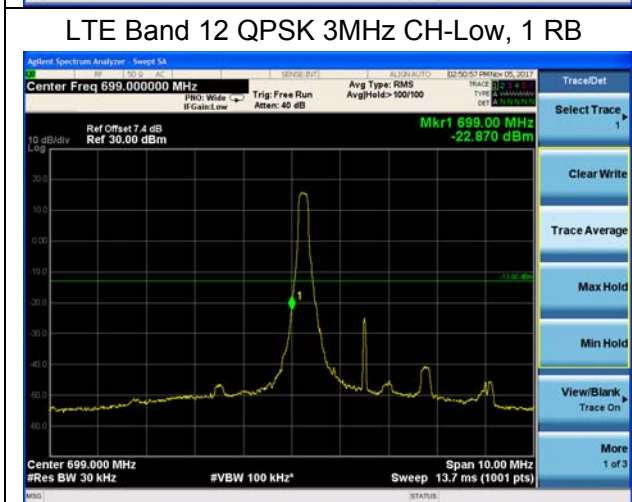
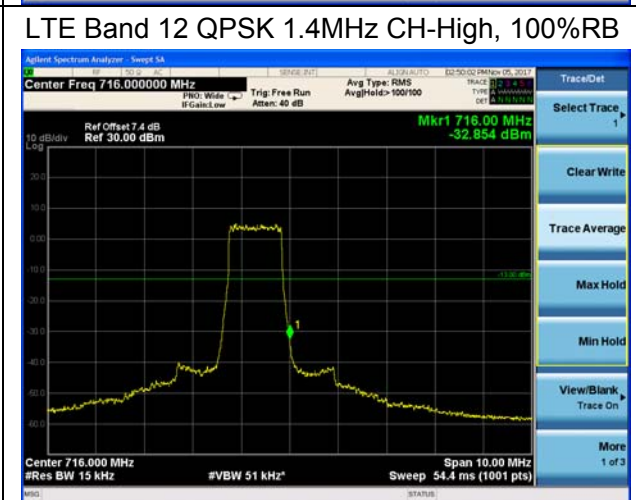
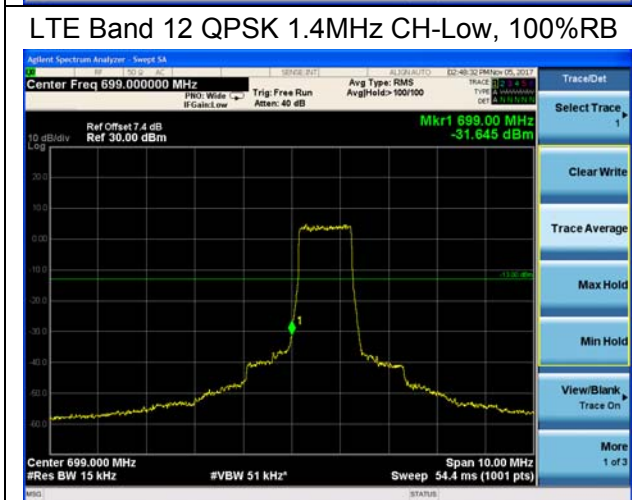
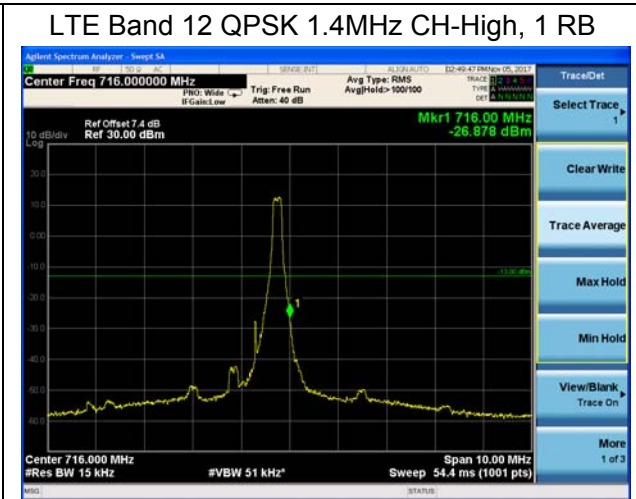
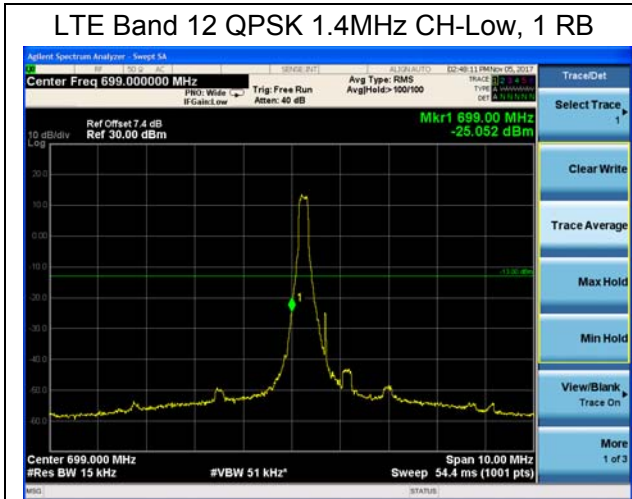


LTE Band 7 16QAM 20MHz CH-Low, 100%RB



LTE Band 7 16QAM 20MHz CH-High, 100%RB







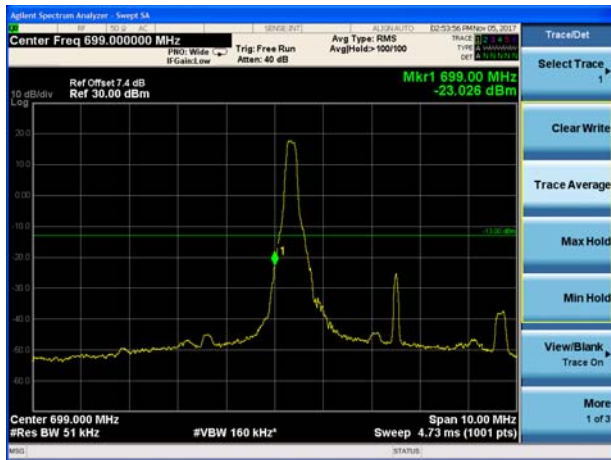
LTE Band 12 QPSK 3MHz CH-Low, 100%RB



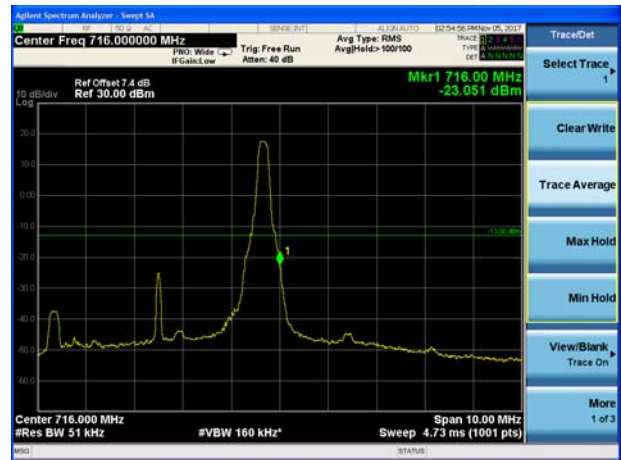
LTE Band 12 QPSK 3MHz CH-High, 100%RB



LTE Band 12 QPSK 5MHz CH-Low, 1 RB



LTE Band 12 QPSK 5MHz CH-High, 1 RB



LTE Band 12 QPSK 5MHz CH-Low, 100%RB

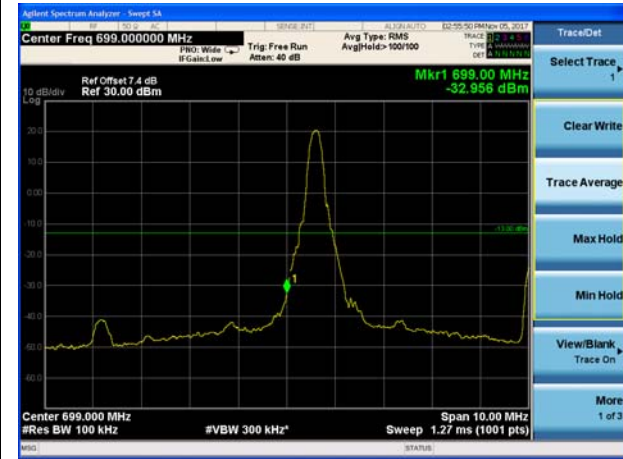


LTE Band 12 QPSK 5MHz CH-High, 100%RB

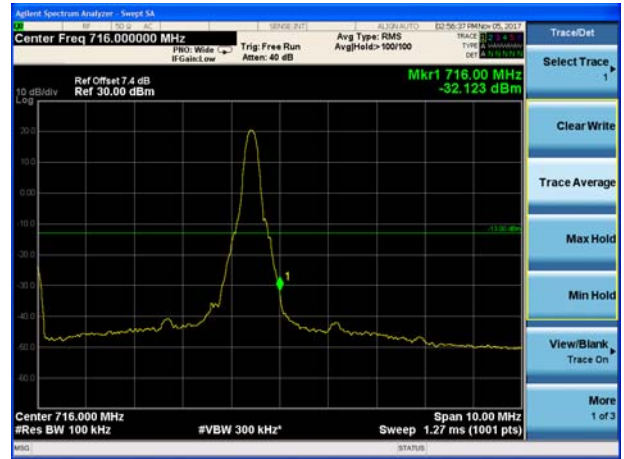




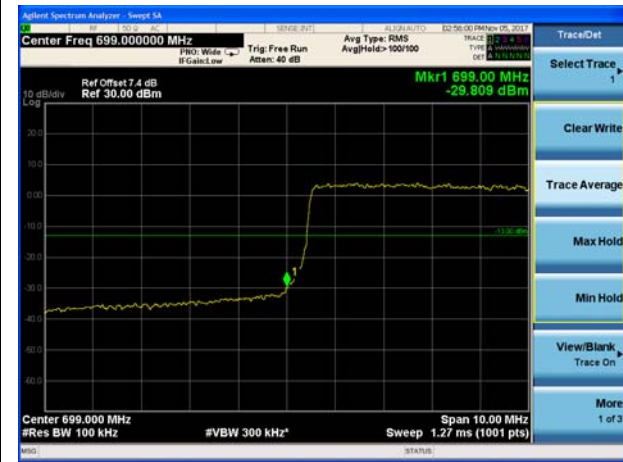
LTE Band 12 QPSK 10MHz CH-Low, 1 RB



LTE Band 12 QPSK 10MHz CH-High, 1 RB



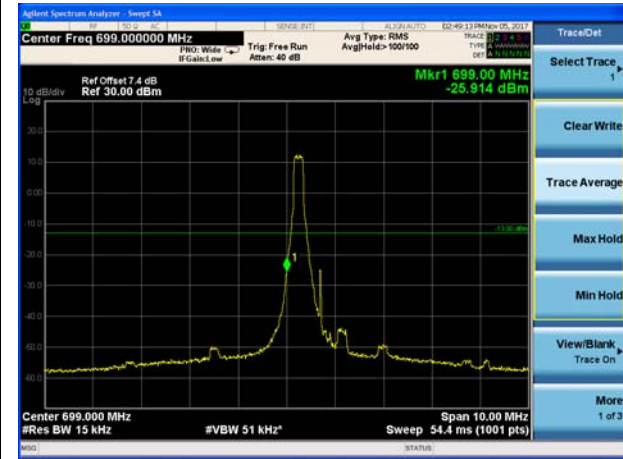
LTE Band 12 QPSK 10MHz CH-Low, 100%RB



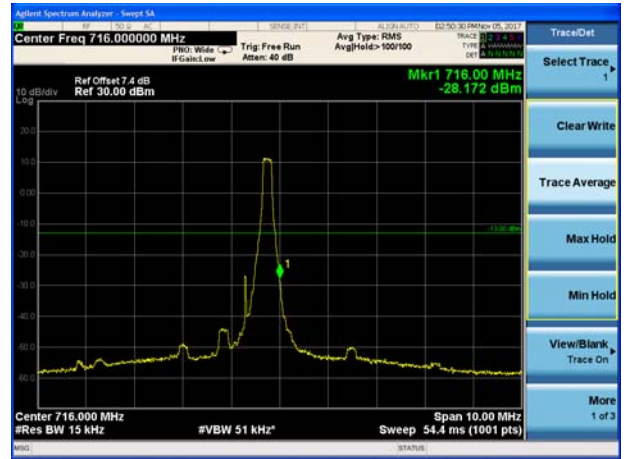
LTE Band 12 QPSK 10MHz CH-High, 100%RB



LTE Band 12 16QAM 1.4MHz CH-Low, 1 RB

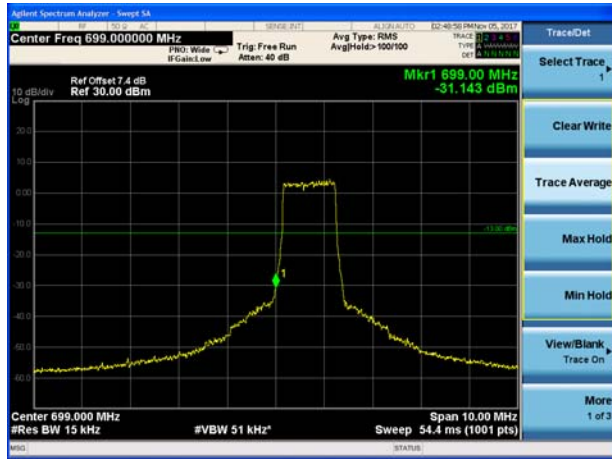


LTE Band 12 16QAM 1.4MHz CH-High, 1 RB

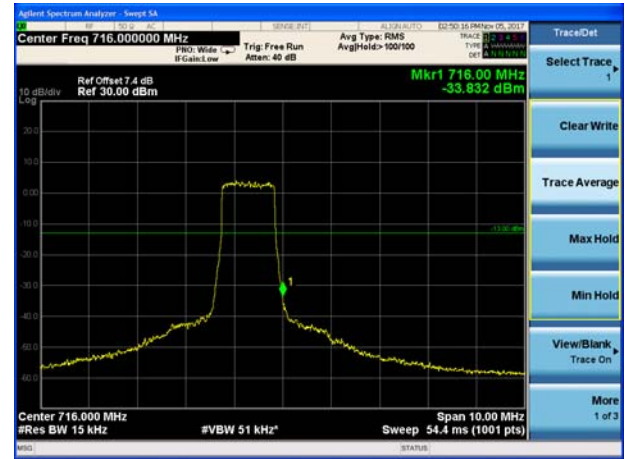




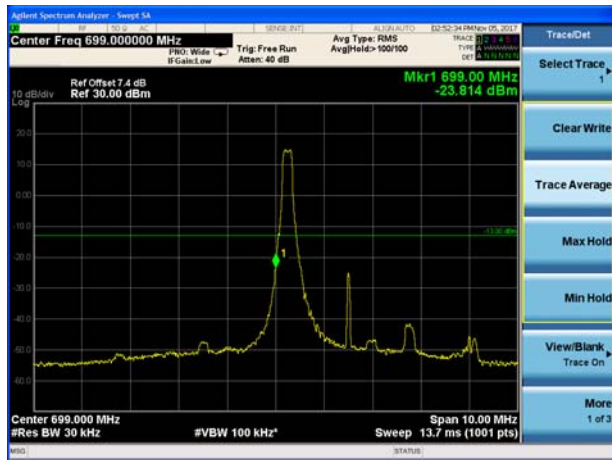
LTE Band 12 16QAM 1.4MHz CH-Low, 100%RB



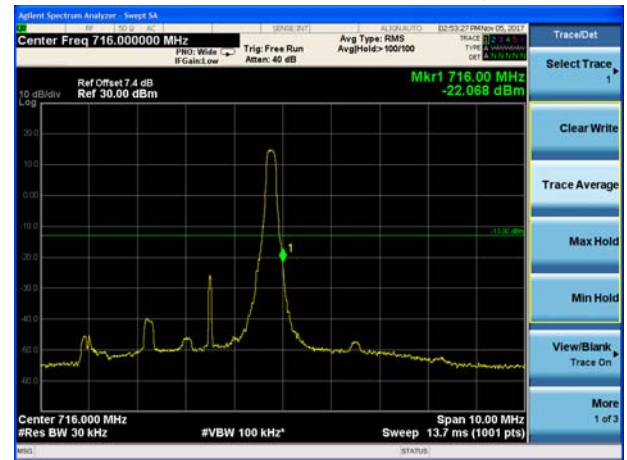
LTE Band 12 16QAM 1.4MHz CH-High, 100%RB



LTE Band 12 16QAM 3MHz CH-Low, 1 RB



LTE Band 12 16QAM 3MHz CH-High, 1 RB



LTE Band 12 16QAM 3MHz CH-Low, 100%RB

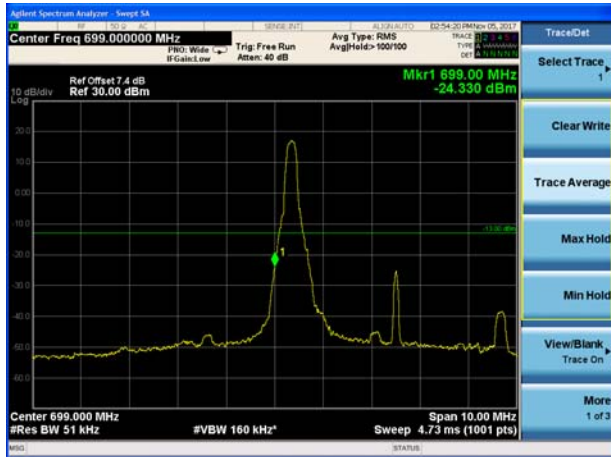


LTE Band 12 16QAM 3MHz CH-High, 100%RB

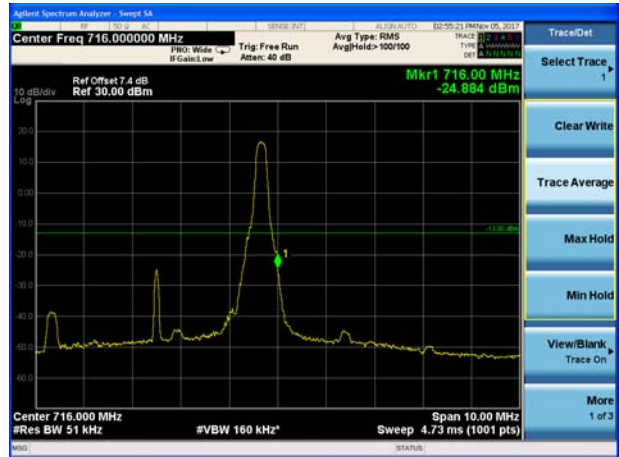




LTE Band 12 16QAM 5MHz CH-Low, 1 RB



LTE Band 12 16QAM 5MHz CH-High, 1 RB



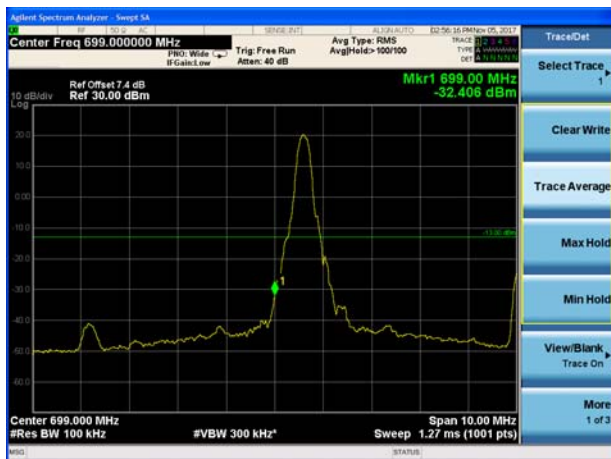
LTE Band 12 16QAM 5MHz CH-Low, 100%RB



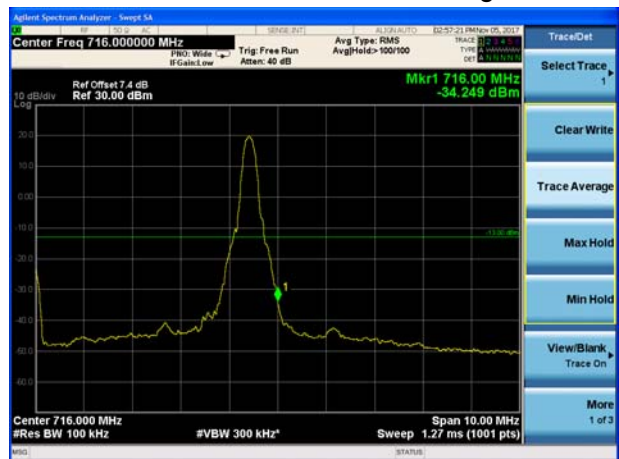
LTE Band 12 16QAM 5MHz CH-High, 100%RB



LTE Band 12 16QAM 10MHz CH-Low, 1 RB

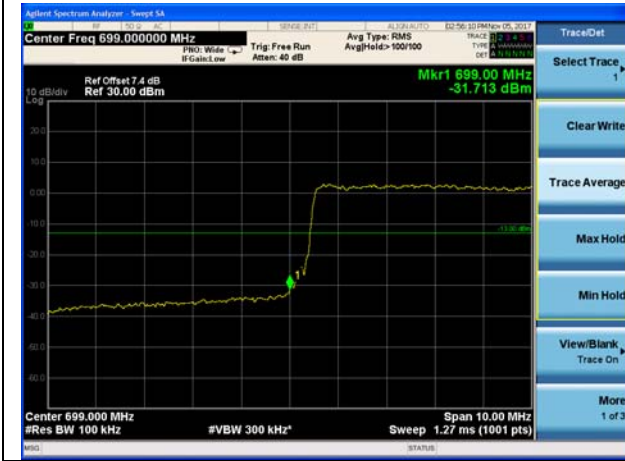


LTE Band 12 16QAM 10MHz CH-High, 1 RB





LTE Band 12 16QAM 10MHz CH-Low, 100%RB



LTE Band 12 16QAM 10MHz CH-High, 100%RB



5.5 Peak-to-Average Power Ratio (PAPR)

Ambient condition

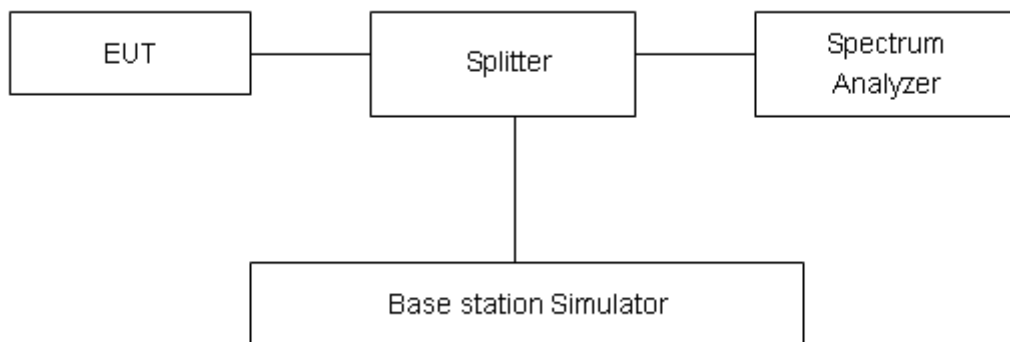
| Temperature | Relative humidity | Pressure |
|-------------|-------------------|----------|
| 23°C ~25°C | 45%~50% | 101.5kPa |

Methods of Measurement

Measure the total peak power and record as Ppk. And measure the total average power and record as PAvg. Both the peak and average power levels must be expressed in the same logarithmic units (e.g., dBm). Determine the PAPR from:

$$PAPR (dB) = Ppk (dBm) - PAvg (dBm).$$

Test Setup



Limits

Rule Part 27.50(d)(5) Equipment employed must be authorized in accordance with the provisions of 24.51. Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (d)(6) of this section. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 0.4 dB.

Test Results

| WCDMA Band IV | Channel | Frequency (MHz) | Peak (dBm) | Avg (dBm) | PAPR (dB) | Limit (dB) | Conclusion |
|---------------|---------|-----------------|------------|-----------|-----------|------------|------------|
| RMC | 1312 | 1712.4 | 26.31 | 23.34 | 2.97 | ≤13 | PASS |
| | 1413 | 1732.6 | 26.35 | 23.47 | 2.88 | ≤13 | PASS |
| | 1513 | 1752.6 | 26.41 | 23.43 | 2.98 | ≤13 | PASS |

| LTE Band 4 | | | | | | | | |
|------------|-----------------|---------|-----------------|------------|-----------|-----------|------------|------------|
| Modulation | Bandwidth (MHz) | Channel | Frequency (MHz) | Peak (dBm) | Avg (dBm) | PAPR (dB) | Limit (dB) | Conclusion |
| QPSK | 1.4 | 19957 | 1710.7 | 27.13 | 21.87 | 5.26 | ≤13 | PASS |
| | | 20175 | 1732.5 | 27.14 | 22.00 | 5.14 | ≤13 | PASS |
| | | 20393 | 1754.3 | 27.09 | 21.95 | 5.14 | ≤13 | PASS |
| | 3 | 19965 | 1711.5 | 27.20 | 21.90 | 5.30 | ≤13 | PASS |
| | | 20175 | 1732.5 | 27.24 | 22.04 | 5.20 | ≤13 | PASS |
| | | 20385 | 1753.5 | 27.19 | 21.98 | 5.21 | ≤13 | PASS |
| | 5 | 19975 | 1712.5 | 27.23 | 21.88 | 5.35 | ≤13 | PASS |
| | | 20175 | 1732.5 | 27.26 | 22.03 | 5.23 | ≤13 | PASS |
| | | 20375 | 1752.5 | 27.17 | 21.96 | 5.21 | ≤13 | PASS |
| | 10 | 20000 | 1715 | 27.21 | 21.96 | 5.25 | ≤13 | PASS |
| | | 20175 | 1732.5 | 27.19 | 22.05 | 5.14 | ≤13 | PASS |
| | | 20350 | 1750 | 27.14 | 22.00 | 5.14 | ≤13 | PASS |
| | 15 | 20025 | 1717.5 | 27.41 | 21.94 | 5.47 | ≤13 | PASS |
| | | 20175 | 1732.5 | 27.31 | 22.01 | 5.30 | ≤13 | PASS |
| | | 20325 | 1747.5 | 27.25 | 21.95 | 5.30 | ≤13 | PASS |
| | 20 | 20050 | 1720 | 27.13 | 21.91 | 5.22 | ≤13 | PASS |
| | | 20175 | 1732.5 | 27.10 | 21.96 | 5.14 | ≤13 | PASS |
| | | 20300 | 1745 | 27.07 | 21.91 | 5.16 | ≤13 | PASS |
| 16QAM | 1.4 | 19957 | 1710.7 | 26.99 | 20.91 | 6.08 | ≤13 | PASS |
| | | 20175 | 1732.5 | 26.92 | 20.91 | 6.01 | ≤13 | PASS |
| | | 20393 | 1754.3 | 27.09 | 21.09 | 6.00 | ≤13 | PASS |
| | 3 | 19965 | 1711.5 | 27.09 | 20.94 | 6.15 | ≤13 | PASS |
| | | 20175 | 1732.5 | 27.00 | 20.95 | 6.05 | ≤13 | PASS |
| | | 20385 | 1753.5 | 27.14 | 21.12 | 6.02 | ≤13 | PASS |
| | 5 | 19975 | 1712.5 | 27.02 | 20.92 | 6.10 | ≤13 | PASS |
| | | 20175 | 1732.5 | 26.90 | 20.91 | 5.99 | ≤13 | PASS |
| | | 20375 | 1752.5 | 27.05 | 21.07 | 5.98 | ≤13 | PASS |
| | 10 | 20000 | 1715 | 26.96 | 20.95 | 6.01 | ≤13 | PASS |
| | | 20175 | 1732.5 | 26.90 | 20.96 | 5.94 | ≤13 | PASS |
| | | 20350 | 1750 | 27.04 | 21.11 | 5.93 | ≤13 | PASS |

| | | | | | | | | |
|--|----|-------|--------|-------|-------|------|-----|------|
| | 15 | 20025 | 1717.5 | 27.05 | 20.92 | 6.13 | ≤13 | PASS |
| | | 20175 | 1732.5 | 26.91 | 20.91 | 6.00 | ≤13 | PASS |
| | | 20325 | 1747.5 | 27.04 | 21.07 | 5.97 | ≤13 | PASS |
| | 20 | 20050 | 1720 | 26.91 | 20.90 | 6.01 | ≤13 | PASS |
| | | 20175 | 1732.5 | 26.79 | 20.87 | 5.92 | ≤13 | PASS |
| | | 20300 | 1745 | 26.94 | 21.04 | 5.90 | ≤13 | PASS |

| LTE Band 7 | | | | | | | | |
|------------|-----------------|---------|-----------------|------------|-----------|-----------|------------|------------|
| Modulation | Bandwidth (MHz) | Channel | Frequency (MHz) | Peak (dBm) | Avg (dBm) | PAPR (dB) | Limit (dB) | Conclusion |
| QPSK | 5 | 20775 | 2502.5 | 26.59 | 21.84 | 4.75 | ≤13 | PASS |
| | | 21100 | 2535 | 26.82 | 21.89 | 4.93 | ≤13 | PASS |
| | | 21425 | 2567.5 | 26.82 | 21.98 | 4.84 | ≤13 | PASS |
| | 10 | 20800 | 2505 | 26.73 | 21.92 | 4.81 | ≤13 | PASS |
| | | 21100 | 2535 | 26.82 | 21.91 | 4.91 | ≤13 | PASS |
| | | 21400 | 2565 | 26.84 | 22.02 | 4.82 | ≤13 | PASS |
| | 15 | 20825 | 2507.5 | 26.84 | 21.90 | 4.94 | ≤13 | PASS |
| | | 21100 | 2535 | 26.89 | 21.87 | 5.02 | ≤13 | PASS |
| | | 21375 | 2562.5 | 26.97 | 21.97 | 5.00 | ≤13 | PASS |
| | 20 | 20850 | 2510 | 26.71 | 21.87 | 4.84 | ≤13 | PASS |
| | | 21100 | 2535 | 26.74 | 21.82 | 4.92 | ≤13 | PASS |
| | | 21350 | 2560 | 26.82 | 21.93 | 4.89 | ≤13 | PASS |
| 16QAM | 5 | 20775 | 2502.5 | 26.42 | 20.95 | 5.47 | ≤13 | PASS |
| | | 21100 | 2535 | 26.62 | 20.94 | 5.68 | ≤13 | PASS |
| | | 21425 | 2567.5 | 26.69 | 21.08 | 5.61 | ≤13 | PASS |
| | 10 | 20800 | 2505 | 26.51 | 20.98 | 5.53 | ≤13 | PASS |
| | | 21100 | 2535 | 26.63 | 20.99 | 5.64 | ≤13 | PASS |
| | | 21400 | 2565 | 26.71 | 21.12 | 5.59 | ≤13 | PASS |
| | 15 | 20825 | 2507.5 | 26.56 | 20.95 | 5.61 | ≤13 | PASS |
| | | 21100 | 2535 | 26.63 | 20.94 | 5.69 | ≤13 | PASS |
| | | 21375 | 2562.5 | 26.06 | 21.08 | 4.98 | ≤13 | PASS |
| | 20 | 20850 | 2510 | 26.55 | 20.93 | 5.62 | ≤13 | PASS |
| | | 21100 | 2535 | 26.55 | 20.90 | 5.65 | ≤13 | PASS |
| | | 21350 | 2560 | 26.74 | 21.05 | 5.69 | ≤13 | PASS |

| LTE Band 12 | | | | | | | | |
|-------------|-----------------|---------|-----------------|------------|-----------|-----------|------------|------------|
| Modulation | Bandwidth (MHz) | Channel | Frequency (MHz) | Peak (dBm) | Avg (dBm) | PAPR (dB) | Limit (dB) | Conclusion |
| QPSK | 1.4 | 23017 | 699.7 | 26.51 | 21.23 | 5.28 | ≤13 | PASS |
| | | 23095 | 707.5 | 26.67 | 21.20 | 5.47 | ≤13 | PASS |
| | | 23173 | 715.3 | 26.31 | 21.26 | 5.05 | ≤13 | PASS |
| | 3 | 23025 | 700.5 | 26.58 | 21.26 | 5.32 | ≤13 | PASS |
| | | 23095 | 707.5 | 26.77 | 21.24 | 5.53 | ≤13 | PASS |
| | | 23165 | 714.5 | 26.55 | 21.29 | 5.26 | ≤13 | PASS |
| | 5 | 23035 | 701.5 | 26.62 | 21.24 | 5.38 | ≤13 | PASS |
| | | 23095 | 707.5 | 26.81 | 21.23 | 5.58 | ≤13 | PASS |
| | | 23155 | 713.5 | 26.46 | 21.27 | 5.19 | ≤13 | PASS |
| | 10 | 23060 | 704 | 26.75 | 21.27 | 5.48 | ≤13 | PASS |
| | | 23095 | 707.5 | 26.64 | 21.16 | 5.48 | ≤13 | PASS |
| | | 23130 | 711 | 26.37 | 21.22 | 5.15 | ≤13 | PASS |
| 16QAM | 1.4 | 23017 | 699.7 | 26.45 | 20.40 | 6.05 | ≤13 | PASS |
| | | 23095 | 707.5 | 26.64 | 20.25 | 6.39 | ≤13 | PASS |
| | | 23173 | 715.3 | 26.13 | 20.30 | 5.83 | ≤13 | PASS |
| | 3 | 23025 | 700.5 | 26.61 | 20.43 | 6.18 | ≤13 | PASS |
| | | 23095 | 707.5 | 26.70 | 20.29 | 6.41 | ≤13 | PASS |
| | | 23165 | 714.5 | 26.31 | 20.33 | 5.98 | ≤13 | PASS |
| | 5 | 23035 | 701.5 | 26.56 | 20.41 | 6.15 | ≤13 | PASS |
| | | 23095 | 707.5 | 26.61 | 20.25 | 6.36 | ≤13 | PASS |
| | | 23155 | 713.5 | 26.26 | 20.28 | 5.98 | ≤13 | PASS |
| | 10 | 23060 | 704 | 26.65 | 20.39 | 6.26 | ≤13 | PASS |
| | | 23095 | 707.5 | 26.50 | 20.21 | 6.29 | ≤13 | PASS |
| | | 23130 | 711 | 26.28 | 20.25 | 6.03 | ≤13 | PASS |

5.6 Frequency Stability

Ambient condition

| Temperature | Relative humidity | Pressure |
|-------------|-------------------|----------|
| 23°C ~25°C | 45%~50% | 101.5kPa |

Method of Measurement

1. Frequency Stability (Temperature Variation)

The temperature inside the climate chamber is varied from -30°C to +55°C in 10°C step size.

(1)With all power removed, the temperature was decreased to -10°C and permitted to stabilize for three hours.

(2)Measure the carrier frequency with the test equipment in a “call mode”. These measurements should be made within 1 minute of powering up the mobile station, to prevent significant self warming.

(3) Repeat the above measurements at 10°C increments from -30°C to +55°C. Allow at least 1.5 hours at each temperature, un-powered, before making measurements.

2. Frequency Stability (Voltage Variation)

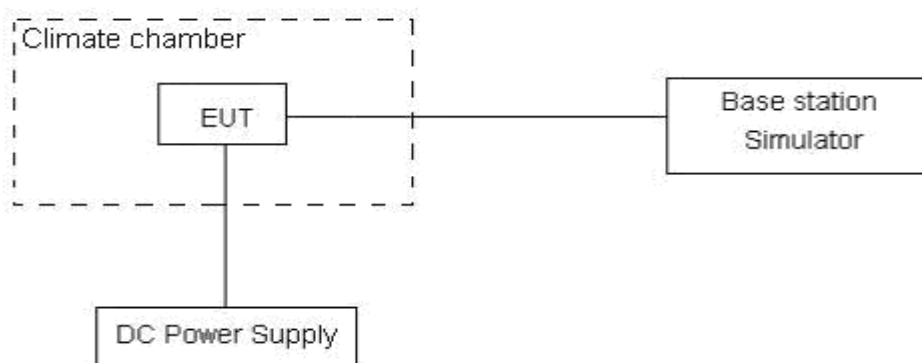
The frequency stability shall be measured with variation of primary supply voltage as follows:

(1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment.

(2) For hand carried, battery powered equipment, reduce primary supply voltage to the battery-operating end point which shall be specified by the manufacturer.

This transceiver is specified to operate with an input voltage of between 3.6 V and 4.4 V, with a nominal voltage of 3.85V.

Test setup



Limits

No specific frequency stability requirements in part 27.54

Measurement Uncertainty

The assessed measurement uncertainty to ensure 99.75% confidence level for the normal distribution is with the coverage factor $k = 3, U=0.01\text{ppm}$.

Test Result

WCDMA Band IV

| Test status | WCDMA Band IV Channel 1413 RMC |
|----------------------|--------------------------------|
| | Test Results (ppm) |
| -30°C/Normal Voltage | -0.000284 |
| -20°C/Normal Voltage | 0.000075 |
| -10°C/Normal Voltage | -0.000009 |
| 0°C/Normal Voltage | -0.000313 |
| 10°C/Normal Voltage | 0.000093 |
| 20°C/Normal Voltage | 0.000147 |
| 30°C/Normal Voltage | -0.000401 |
| 40°C/Normal Voltage | 0.000262 |
| 50°C/Normal Voltage | 0.000102 |
| 55°C/Normal Voltage | 0.000519 |
| 20°C/Min Voltage | 0.000359 |
| 20°C/Max Voltage | 0.000268 |

| Bandwidth | Test status | LTE Band 4 Channel 20175 Test Results (ppm) | |
|-----------|----------------------|---|----------|
| | | QPSK | 16QAM |
| 1.4MHz | -30°C/Normal Voltage | -0.00083 | 0.00240 |
| | -20°C/Normal Voltage | -0.00021 | 0.00119 |
| | -10°C/Normal Voltage | 0.00180 | 0.00199 |
| | 0°C/Normal Voltage | 0.00089 | -0.00186 |
| | 10°C/Normal Voltage | 0.00067 | -0.00079 |
| | 20°C/Normal Voltage | 0.00107 | -0.00083 |
| | 30°C/Normal Voltage | -0.00068 | 0.00125 |
| | 40°C/Normal Voltage | 0.00062 | 0.00188 |
| | 50°C/Normal Voltage | -0.00170 | -0.00095 |
| | 55°C/Normal Voltage | -0.00104 | -0.00013 |
| | 20°C/Min Voltage | 0.00096 | 0.00040 |
| | 20°C/Max Voltage | -0.00118 | 0.00042 |
| 3MHz | -30°C/Normal Voltage | -0.00023 | 0.00077 |
| | -20°C/Normal Voltage | 0.00051 | 0.00186 |
| | -10°C/Normal Voltage | -0.00191 | 0.00075 |
| | 0°C/Normal Voltage | -0.00084 | -0.00032 |
| | 10°C/Normal Voltage | 0.00048 | 0.00119 |
| | 20°C/Normal Voltage | -0.00046 | 0.00061 |
| | 30°C/Normal Voltage | 0.00012 | 0.00331 |



| | | | |
|-------|----------------------|----------|----------|
| | 40°C/Normal Voltage | -0.00154 | 0.00084 |
| | 50°C/Normal Voltage | 0.00168 | 0.00245 |
| | 55°C/Normal Voltage | -0.00052 | -0.00150 |
| | 20°C/Min Voltage | -0.00088 | 0.00058 |
| | 20°C/Max Voltage | -0.00148 | 0.00089 |
| 5MHz | -30°C/Normal Voltage | -0.00073 | 0.00249 |
| | -20°C/Normal Voltage | -0.00012 | 0.00129 |
| | -10°C/Normal Voltage | 0.00190 | 0.00209 |
| | 0°C/Normal Voltage | 0.00099 | -0.00176 |
| | 10°C/Normal Voltage | 0.00077 | -0.00069 |
| | 20°C/Normal Voltage | 0.00117 | -0.00073 |
| | 30°C/Normal Voltage | -0.00058 | 0.00135 |
| | 40°C/Normal Voltage | 0.00072 | 0.00198 |
| | 50°C/Normal Voltage | -0.00160 | -0.00085 |
| | 55°C/Normal Voltage | -0.00094 | -0.00003 |
| | 20°C/Min Voltage | 0.00106 | 0.00050 |
| | 20°C/Max Voltage | -0.00109 | 0.00052 |
| 10MHz | -30°C/Normal Voltage | -0.00033 | 0.00068 |
| | -20°C/Normal Voltage | 0.00041 | 0.00177 |
| | -10°C/Normal Voltage | -0.00201 | 0.00065 |
| | 0°C/Normal Voltage | -0.00094 | -0.00042 |
| | 10°C/Normal Voltage | 0.00039 | 0.00110 |
| | 20°C/Normal Voltage | -0.00056 | 0.00051 |
| | 30°C/Normal Voltage | 0.00002 | 0.00322 |
| | 40°C/Normal Voltage | -0.00163 | 0.00074 |
| | 50°C/Normal Voltage | 0.00158 | 0.00235 |
| | 55°C/Normal Voltage | -0.00062 | -0.00160 |
| | 20°C/Min Voltage | -0.00098 | 0.00048 |
| | 20°C/Max Voltage | -0.00158 | 0.00079 |
| 15MHz | -30°C/Normal Voltage | 0.00255 | -0.00018 |
| | -20°C/Normal Voltage | 0.00134 | 0.00056 |
| | -10°C/Normal Voltage | 0.00214 | -0.00186 |
| | 0°C/Normal Voltage | -0.00171 | -0.00078 |
| | 10°C/Normal Voltage | -0.00064 | 0.00054 |
| | 20°C/Normal Voltage | -0.00068 | -0.00041 |
| | 30°C/Normal Voltage | 0.00140 | 0.00017 |
| | 40°C/Normal Voltage | 0.00203 | -0.00148 |
| | 50°C/Normal Voltage | -0.00080 | 0.00173 |
| | 55°C/Normal Voltage | 0.00002 | -0.00047 |
| | 20°C/Min Voltage | 0.00055 | -0.00083 |



| | | | |
|-------|----------------------|----------|----------|
| | 20°C/Max Voltage | 0.00057 | -0.00143 |
| 20MHz | -30°C/Normal Voltage | -0.00068 | 0.00083 |
| | -20°C/Normal Voltage | -0.00006 | 0.00192 |
| | -10°C/Normal Voltage | 0.00195 | 0.00080 |
| | 0°C/Normal Voltage | 0.00104 | -0.00027 |
| | 10°C/Normal Voltage | 0.00082 | 0.00125 |
| | 20°C/Normal Voltage | 0.00122 | 0.00066 |
| | 30°C/Normal Voltage | -0.00053 | 0.00337 |
| | 40°C/Normal Voltage | 0.00077 | 0.00089 |
| | 50°C/Normal Voltage | -0.00155 | 0.00251 |
| | 55°C/Normal Voltage | -0.00089 | -0.00145 |
| | 20°C/Min Voltage | 0.00111 | 0.00063 |
| | 20°C/Max Voltage | -0.00103 | 0.00094 |

| Bandwidth | Test status | LTE Band 7 Channel 21100 Test Results (ppm) | |
|-----------|----------------------|---|----------|
| | | QPSK | 16QAM |
| 5MHz | -30°C/Normal Voltage | -0.00277 | -0.00168 |
| | -20°C/Normal Voltage | 0.00035 | 0.00090 |
| | -10°C/Normal Voltage | -0.00182 | -0.00301 |
| | 0°C/Normal Voltage | -0.00371 | -0.00259 |
| | 10°C/Normal Voltage | 0.00055 | -0.00134 |
| | 20°C/Normal Voltage | -0.00422 | -0.00257 |
| | 30°C/Normal Voltage | -0.00172 | -0.00059 |
| | 40°C/Normal Voltage | -0.00084 | -0.00113 |
| | 50°C/Normal Voltage | -0.00121 | -0.00215 |
| | 55°C/Normal Voltage | -0.00178 | 0.00064 |
| | 20°C/Min Voltage | -0.00258 | -0.00127 |
| | 20°C/Max Voltage | -0.00134 | -0.00329 |
| 10MHz | -30°C/Normal Voltage | -0.00165 | -0.00158 |
| | -20°C/Normal Voltage | 0.00093 | -0.00260 |
| | -10°C/Normal Voltage | -0.00297 | -0.00244 |
| | 0°C/Normal Voltage | -0.00256 | 0.00076 |
| | 10°C/Normal Voltage | -0.00131 | 0.00064 |
| | 20°C/Normal Voltage | -0.00254 | -0.00162 |
| | 30°C/Normal Voltage | -0.00056 | -0.00277 |
| | 40°C/Normal Voltage | -0.00110 | 0.00189 |
| | 50°C/Normal Voltage | -0.00211 | 0.00072 |
| | 55°C/Normal Voltage | 0.00067 | -0.00075 |
| | 20°C/Min Voltage | -0.00124 | -0.00216 |
| | 20°C/Max Voltage | -0.00326 | 0.00045 |



| | | | |
|-------|----------------------|----------|----------|
| 15MHz | -30°C/Normal Voltage | -0.00161 | -0.00344 |
| | -20°C/Normal Voltage | -0.00263 | -0.00095 |
| | -10°C/Normal Voltage | -0.00247 | 0.00033 |
| | 0°C/Normal Voltage | 0.00073 | -0.00191 |
| | 10°C/Normal Voltage | 0.00060 | 0.00099 |
| | 20°C/Normal Voltage | -0.00165 | -0.00326 |
| | 30°C/Normal Voltage | -0.00280 | -0.00132 |
| | 40°C/Normal Voltage | 0.00186 | -0.00096 |
| | 50°C/Normal Voltage | 0.00069 | 0.00036 |
| | 55°C/Normal Voltage | -0.00078 | 0.00120 |
| | 20°C/Min Voltage | -0.00219 | -0.00273 |
| | 20°C/Max Voltage | 0.00042 | 0.00037 |
| 20MHz | -30°C/Normal Voltage | -0.00274 | -0.00341 |
| | -20°C/Normal Voltage | 0.00038 | -0.00092 |
| | -10°C/Normal Voltage | -0.00179 | 0.00036 |
| | 0°C/Normal Voltage | -0.00368 | -0.00188 |
| | 10°C/Normal Voltage | 0.00058 | 0.00102 |
| | 20°C/Normal Voltage | -0.00419 | -0.00323 |
| | 30°C/Normal Voltage | -0.00169 | -0.00129 |
| | 40°C/Normal Voltage | -0.00081 | -0.00093 |
| | 50°C/Normal Voltage | -0.00118 | 0.00039 |
| | 55°C/Normal Voltage | -0.00175 | 0.00123 |
| | 20°C/Min Voltage | -0.00255 | -0.00269 |
| | 20°C/Max Voltage | -0.00131 | 0.00040 |

| Bandwidth | Test status | LTE Band 12 Channel 23095 Test Results (ppm) | |
|-----------|----------------------|--|----------|
| | | QPSK | 16QAM |
| 1.4M | -30°C/Normal Voltage | -0.00287 | -0.00277 |
| | -20°C/Normal Voltage | -0.00401 | -0.00061 |
| | -10°C/Normal Voltage | -0.00531 | 0.00011 |
| | 0°C/Normal Voltage | -0.00324 | -0.00478 |
| | 10°C/Normal Voltage | -0.00510 | 0.00105 |
| | 20°C/Normal Voltage | -0.00307 | -0.00413 |
| | 30°C/Normal Voltage | -0.00455 | -0.00237 |
| | 40°C/Normal Voltage | -0.00464 | -0.00049 |
| | 50°C/Normal Voltage | -0.00609 | -0.00031 |
| | 55°C/Normal Voltage | -0.00421 | -0.00253 |
| | 20°C/Min Voltage | -0.00455 | 0.00114 |
| | 20°C/Max Voltage | -0.00085 | -0.00277 |



| | | | |
|----------------------|----------------------|----------------------|----------|
| 3M | -30°C/Normal Voltage | -0.00254 | 0.00295 |
| | -20°C/Normal Voltage | -0.00038 | 0.00127 |
| | -10°C/Normal Voltage | 0.00034 | 0.00021 |
| | 0°C/Normal Voltage | -0.00455 | -0.00222 |
| | 10°C/Normal Voltage | 0.00127 | 0.00172 |
| | 20°C/Normal Voltage | -0.00390 | -0.00307 |
| | 30°C/Normal Voltage | -0.00215 | 0.00030 |
| | 40°C/Normal Voltage | -0.00027 | -0.00250 |
| | 50°C/Normal Voltage | -0.00008 | -0.00098 |
| | 55°C/Normal Voltage | -0.00230 | 0.00235 |
| | 20°C/Min Voltage | 0.00137 | -0.00204 |
| | 20°C/Max Voltage | -0.00254 | 0.00059 |
| | 5MHz | -30°C/Normal Voltage | 0.00273 |
| -20°C/Normal Voltage | | 0.00105 | -0.00526 |
| -10°C/Normal Voltage | | -0.00001 | -0.00773 |
| 0°C/Normal Voltage | | -0.00245 | -0.00553 |
| 10°C/Normal Voltage | | 0.00150 | -0.00383 |
| 20°C/Normal Voltage | | -0.00329 | -0.00300 |
| 30°C/Normal Voltage | | 0.00007 | 0.00047 |
| 40°C/Normal Voltage | | -0.00273 | -0.00314 |
| 50°C/Normal Voltage | | -0.00120 | -0.00509 |
| 55°C/Normal Voltage | | 0.00212 | -0.00317 |
| 20°C/Min Voltage | | -0.00226 | -0.00797 |
| 20°C/Max Voltage | | 0.00037 | -0.00425 |
| 10MHz | | -30°C/Normal Voltage | -0.00427 |
| | -20°C/Normal Voltage | -0.00503 | -0.00379 |
| | -10°C/Normal Voltage | -0.00751 | -0.00509 |
| | 0°C/Normal Voltage | -0.00530 | -0.00301 |
| | 10°C/Normal Voltage | -0.00360 | -0.00488 |
| | 20°C/Normal Voltage | -0.00277 | -0.00284 |
| | 30°C/Normal Voltage | 0.00069 | -0.00433 |
| | 40°C/Normal Voltage | -0.00291 | -0.00441 |
| | 50°C/Normal Voltage | -0.00486 | -0.00587 |
| | 55°C/Normal Voltage | -0.00294 | -0.00399 |
| | 20°C/Min Voltage | -0.00775 | -0.00433 |
| | 20°C/Max Voltage | -0.00403 | -0.00062 |

5.7 Spurious Emissions at Antenna Terminals

Ambient condition

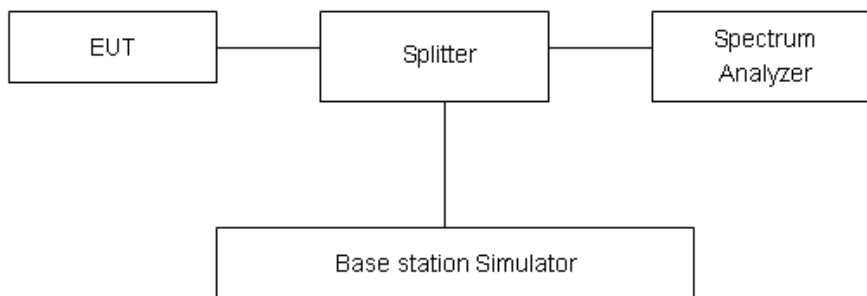
| Temperature | Relative humidity | Pressure |
|-------------|-------------------|----------|
| 23°C ~25°C | 45%~50% | 101.5kPa |

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The measurement is carried out using a spectrum analyzer. The spectrum analyzer scans from 30MHz to the 10th harmonic of the carrier. The peak detector is used. Set RBW 1MHz and VBW3MHz, Sweep is set to ATUO.

Of those disturbances below (limit – 20 dB), the mark is not required for the EUT.

Test setup



Limits

LTE -4 Rule Part 27.53(h) specifies that “for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10} (P)$ dB..”

LTE -12 Rule Part 27.53 (g) For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

LTE -7 Rule Part 27.53(m) $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(4) of this section.



| | |
|-----------------|---------|
| LTE B4/12 Limit | -13 dBm |
| LTE -7 Limit | -25 dBm |

Measurement Uncertainty

The assessed measurement uncertainty to ensure 99.75% confidence level for the normal distribution is with the coverage factor $k = 1.96$.

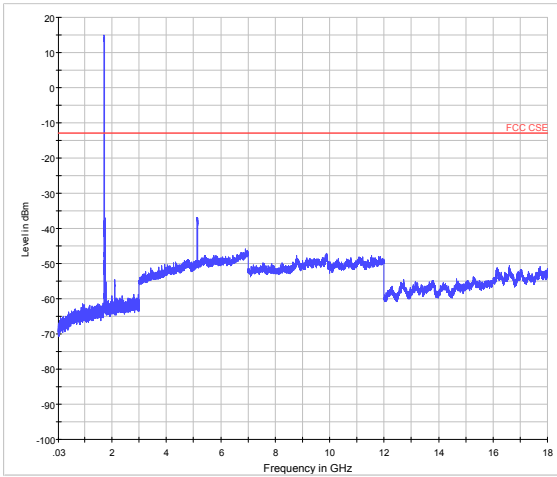
| Frequency | Uncertainty |
|-------------|-------------|
| 100kHz-2GHz | 0.684 dB |
| 2GHz-18GHz | 1.407 dB |

Test Result

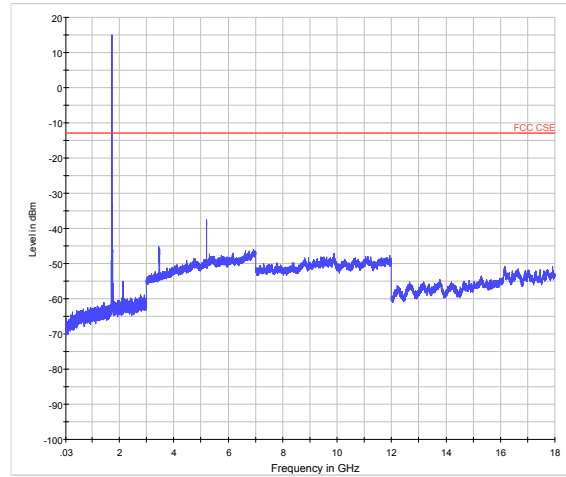
Sweep from 9 kHz to 30MHz, and the emissions more than 20 dB below the permissible value are not reported.

If disturbances were found more than 20dB below limit line, the mark is not required for the EUT. The signal beyond the limit is carrier.

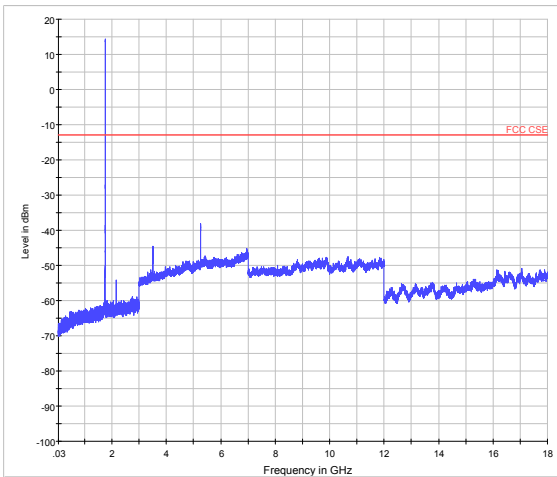
WCDMA Band IV CH-Low 30MHz~18GHz



WCDMA Band IV CH-Middle 30MHz~18GHz

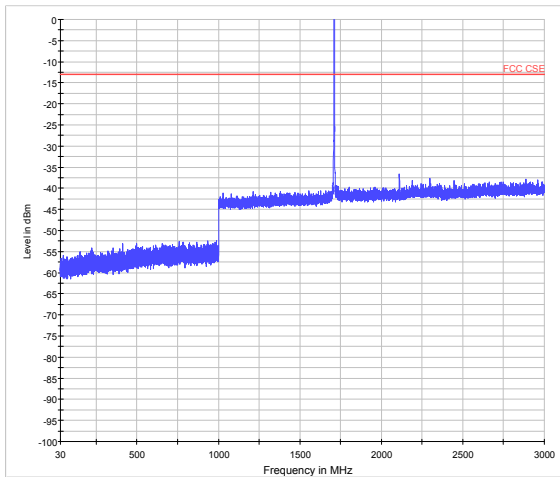


WCDMA Band IV CH-High 30MHz~18GHz

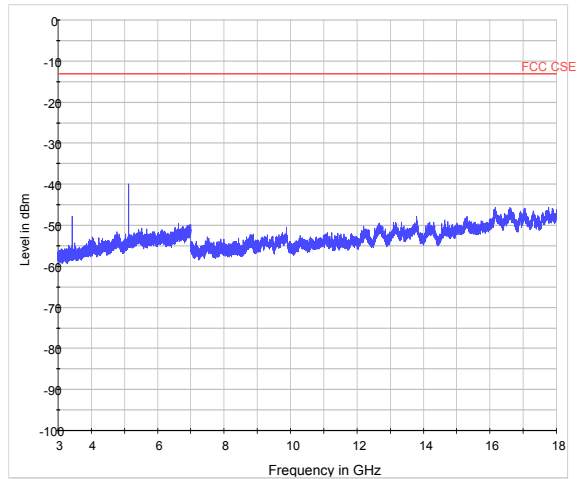




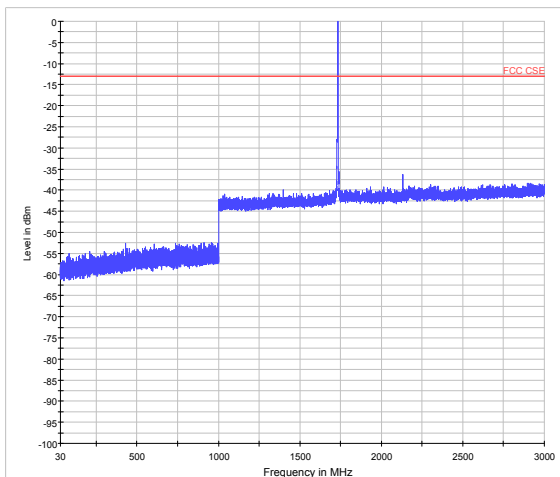
LTE Band 4 1.4MHz CH-Low 30MHz~3GHz



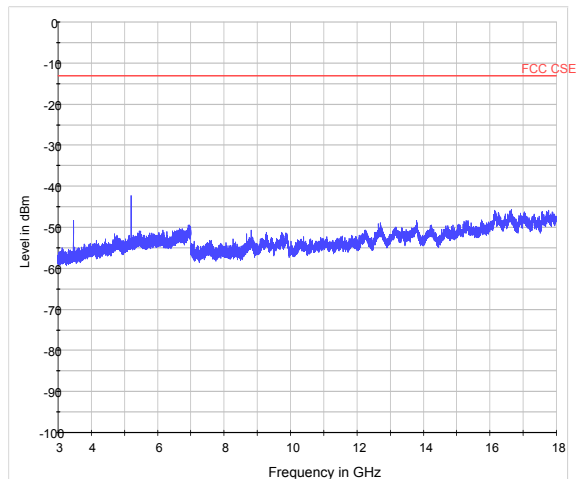
LTE Band 4 1.4MHz CH-Low 3GHz~18GHz



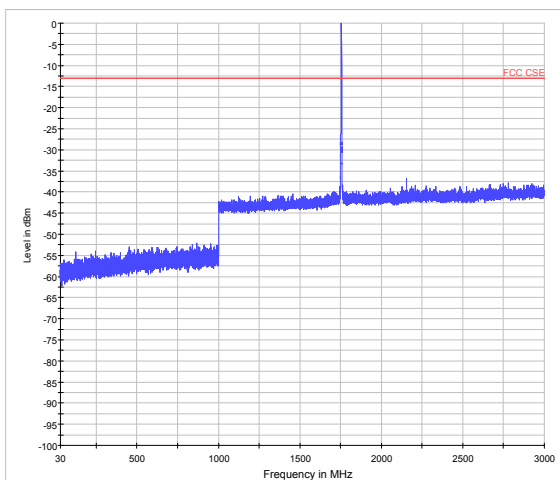
LTE Band 4 1.4MHz CH-Middle 30MHz~3GHz



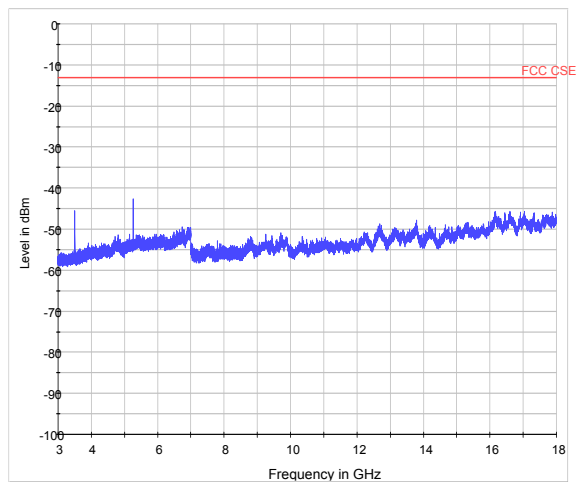
LTE Band 4 1.4MHz CH-Middle 3GHz~18GHz



LTE Band 4 1.4MHz CH-High 30MHz~3GHz

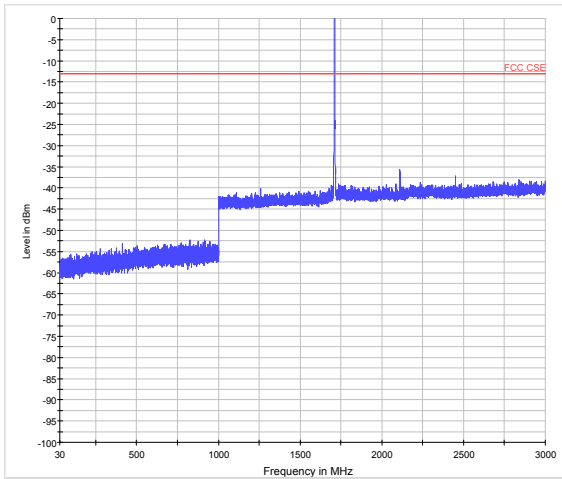


LTE Band 4 1.4MHz CH-High 3GHz~18GHz

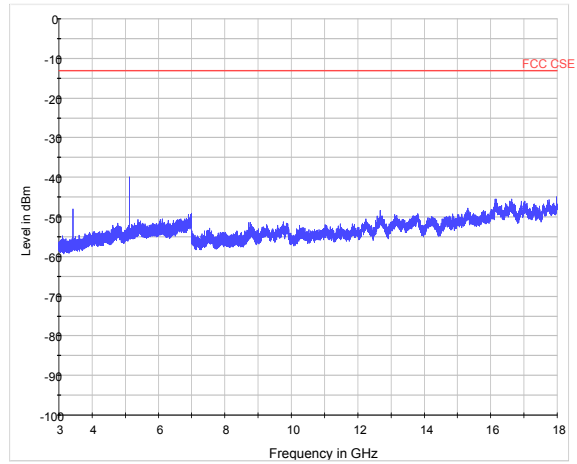




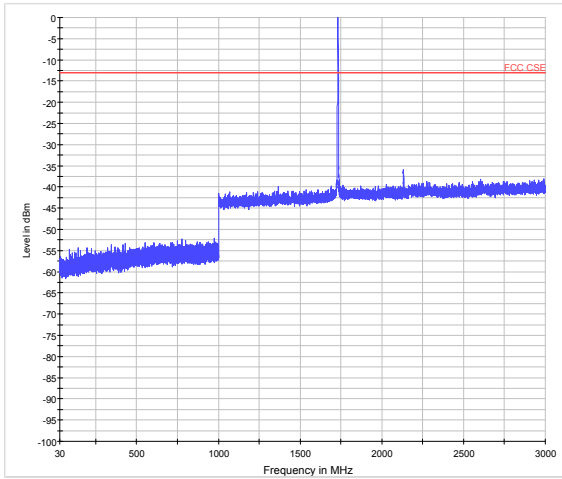
LTE Band 4 3MHz CH-Low 30MHz~3GHz



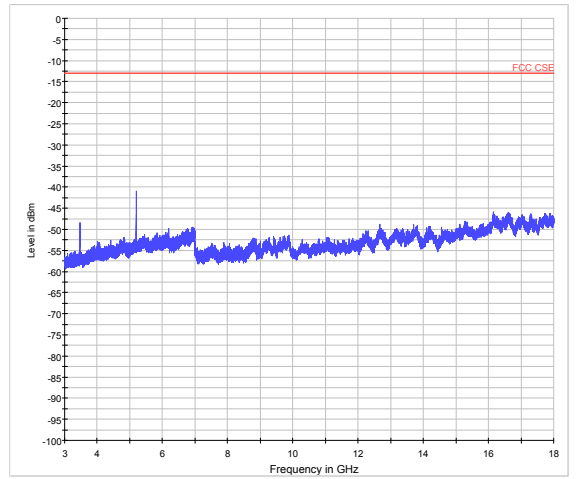
LTE Band 4 3MHz CH-Low 3GHz~18GHz



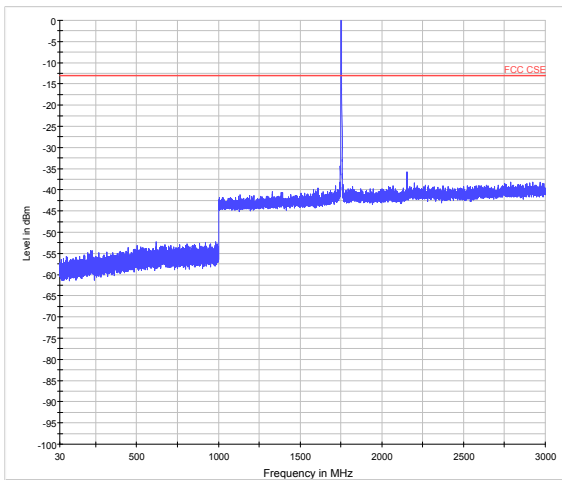
LTE Band 4 3MHz CH-Middle 30MHz~3GHz



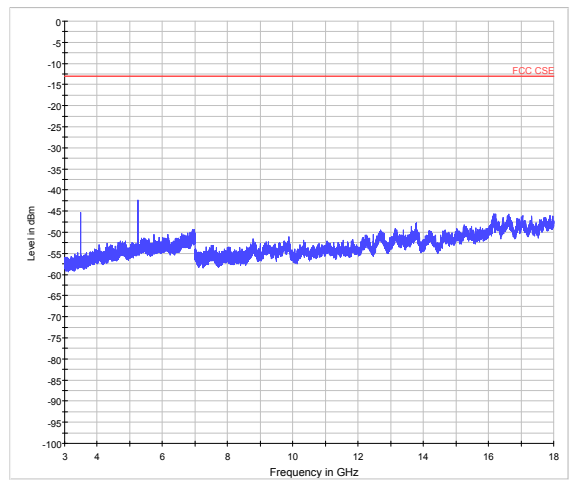
LTE Band 4 3MHz CH-Middle 3GHz~18GHz



LTE Band 4 3MHz CH-High 30MHz~3GHz

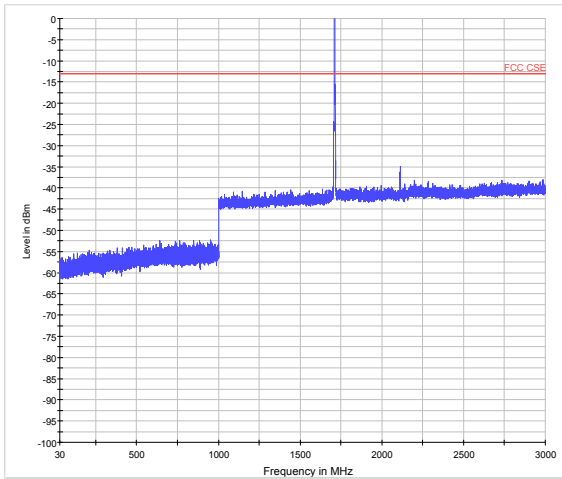


LTE Band 4 3MHz CH-High 3GHz~18GHz

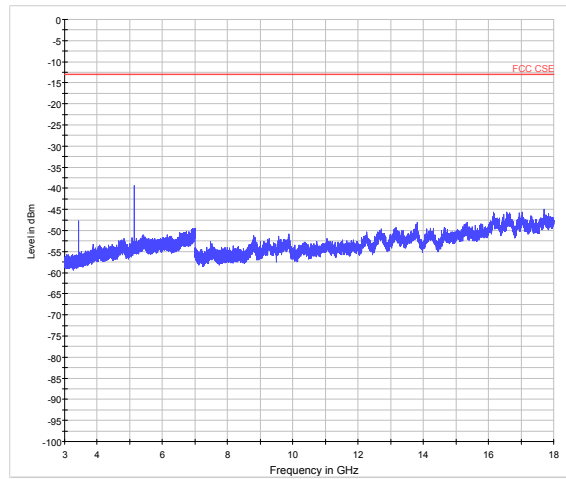




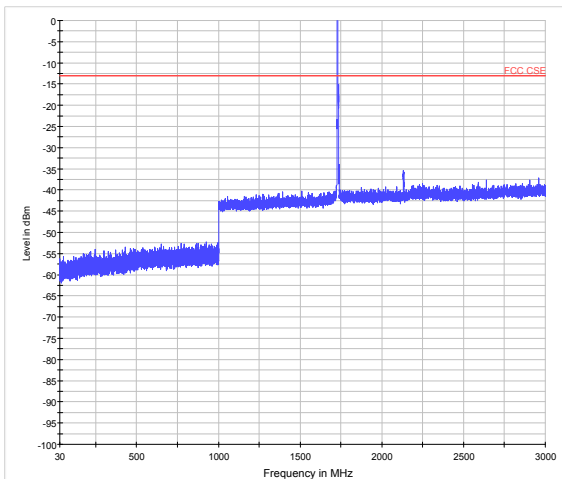
LTE Band 4 5MHz CH-Low 30MHz~3GHz



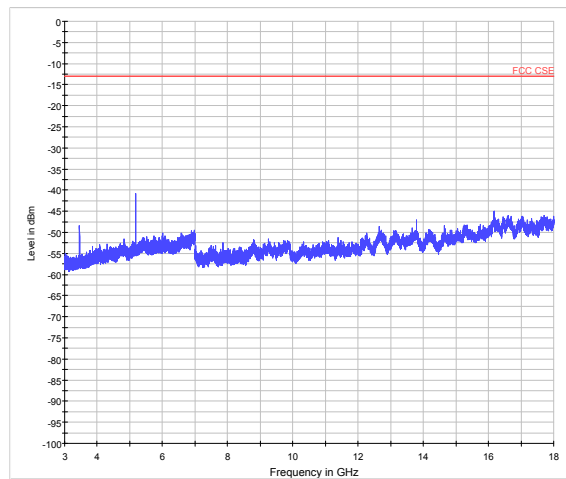
LTE Band 4 5MHz CH-Low 3GHz~18GHz



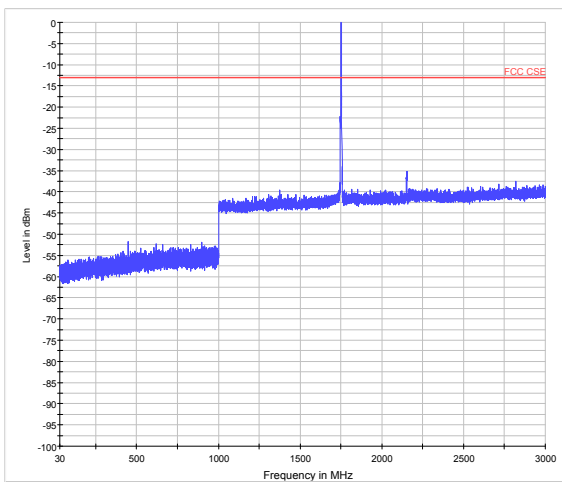
LTE Band 4 5MHz CH-Middle 30MHz~3GHz



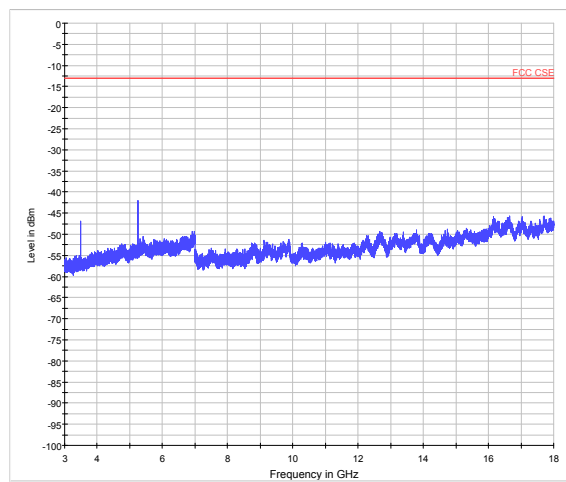
LTE Band 4 5MHz CH-Middle 3GHz~18GHz



LTE Band 4 5MHz CH-High 30MHz~3GHz

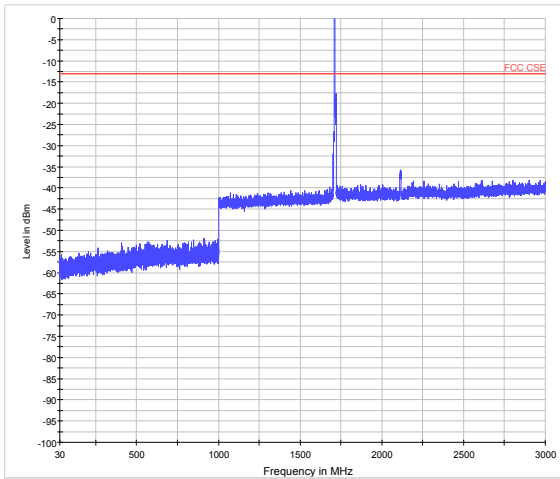


LTE Band 4 5MHz CH-High 3GHz~18GHz

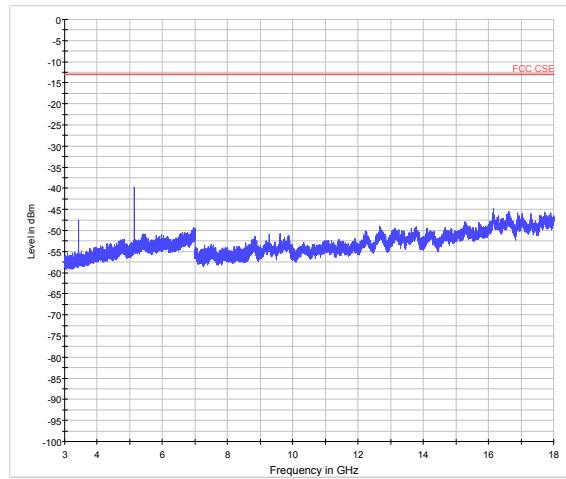




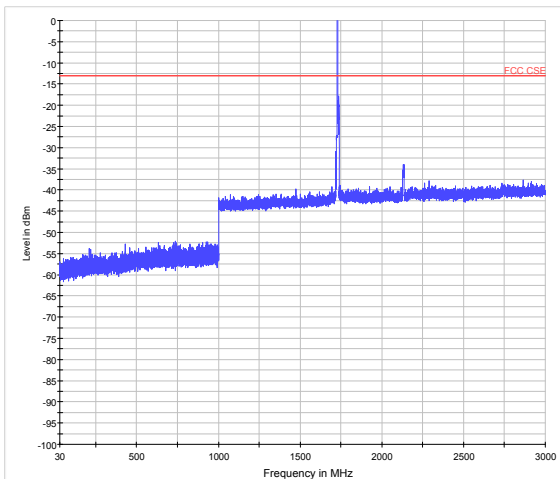
LTE Band 4 10MHz CH-Low 30MHz~3GHz



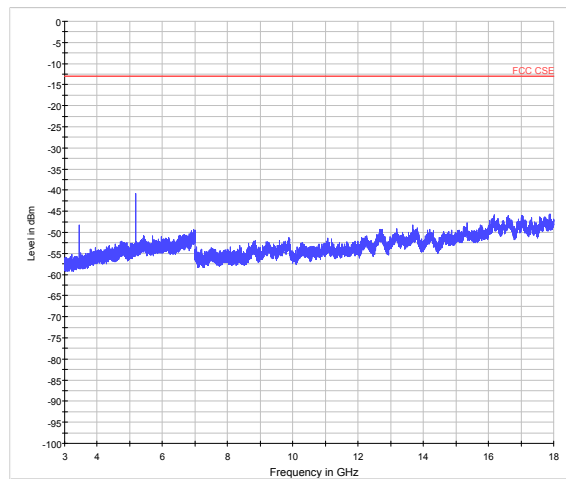
LTE Band 4 10MHz CH-Low 3GHz~18GHz



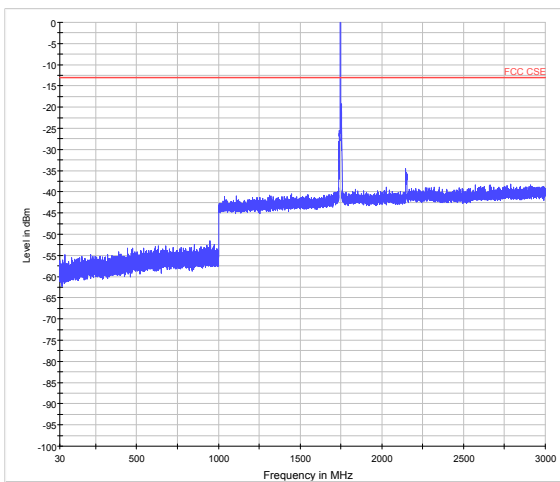
LTE Band 4 10MHz CH-Middle 30MHz~3GHz



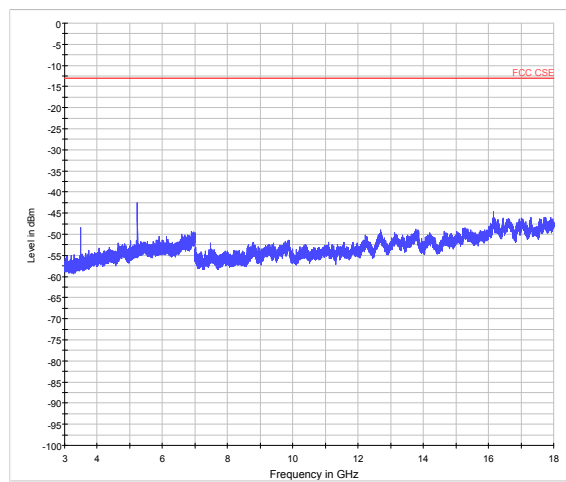
LTE Band 4 10MHz CH-Middle 3GHz~18GHz



LTE Band 4 10MHz CH-High 30MHz~3GHz

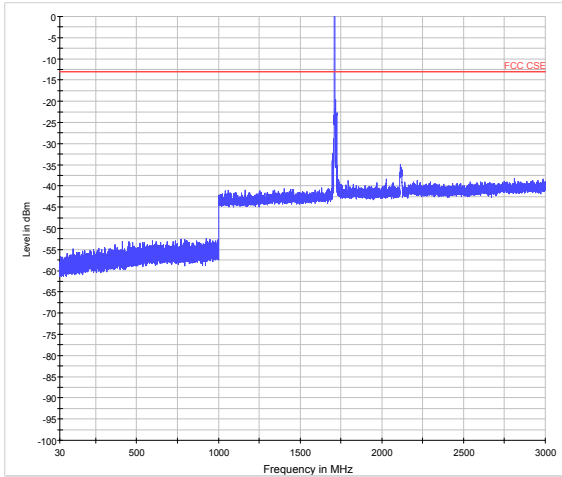


LTE Band 4 10MHz CH-High 3GHz~18GHz

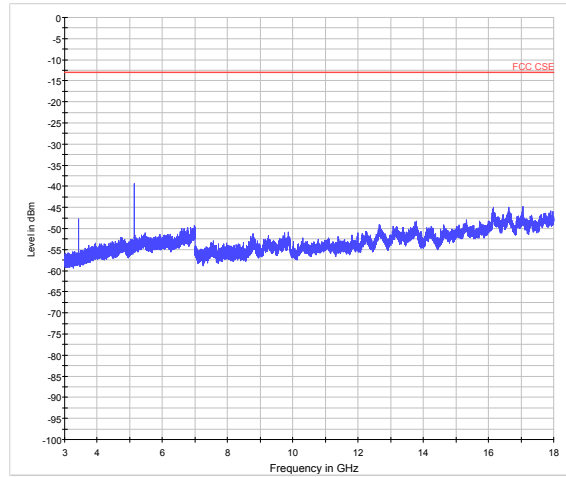




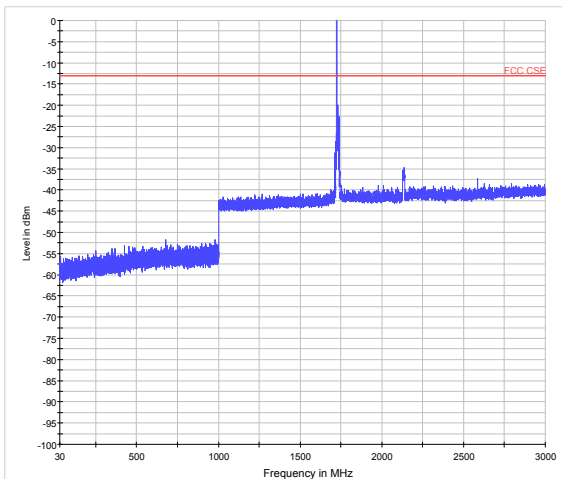
LTE Band 4 15MHz CH-Low 30MHz~3GHz



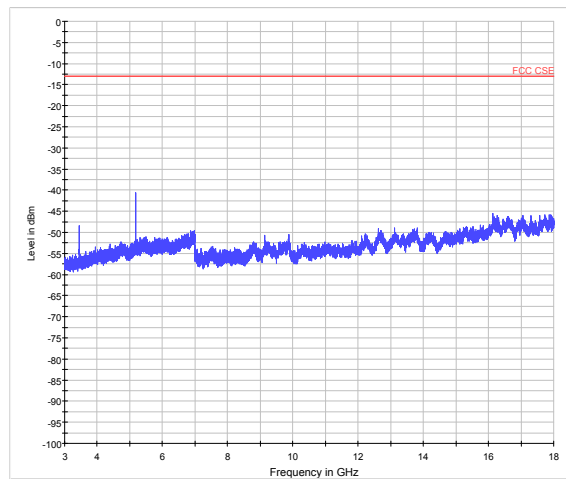
LTE Band 4 15MHz CH-Low 3GHz~18GHz



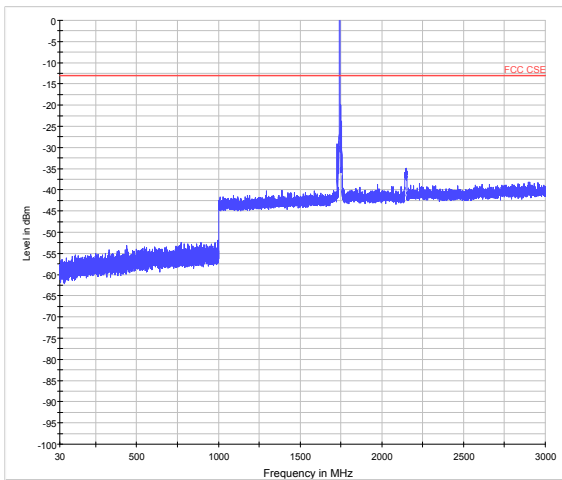
LTE Band 4 15MHz CH-Middle 30MHz~3GHz



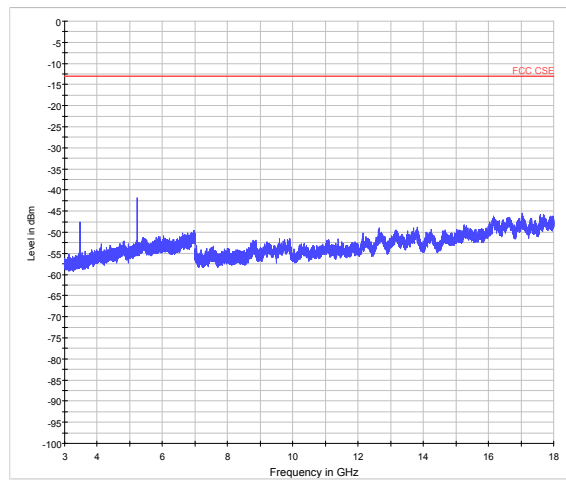
LTE Band 4 15MHz CH-Middle 3GHz~18GHz



LTE Band 4 15MHz CH-High 30MHz~3GHz

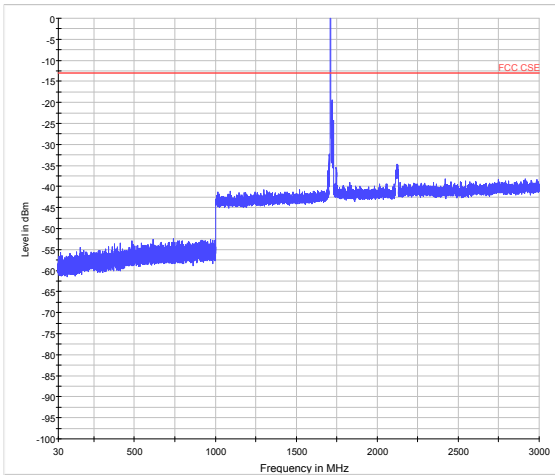


LTE Band 4 15MHz CH-High 3GHz~18GHz

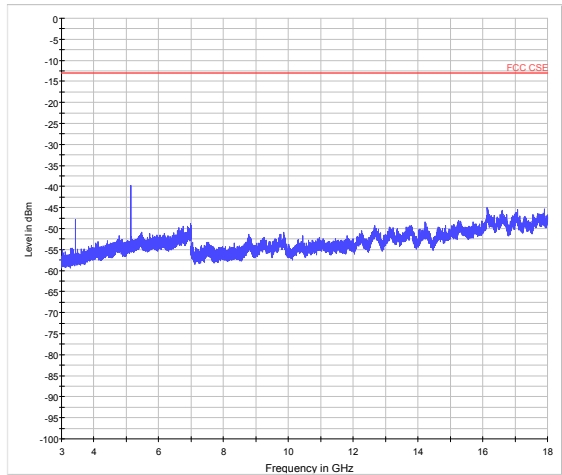




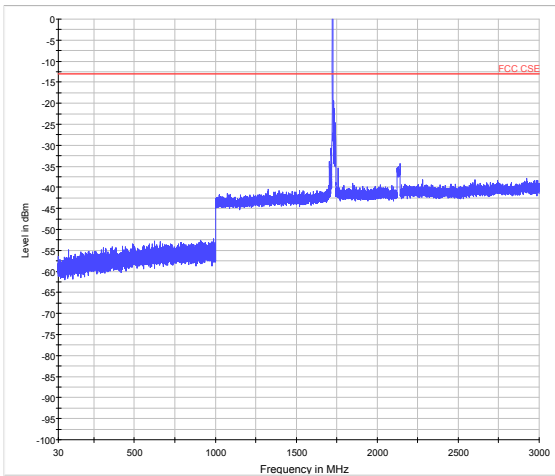
LTE Band 4 20MHz CH-Low 30MHz~3GHz



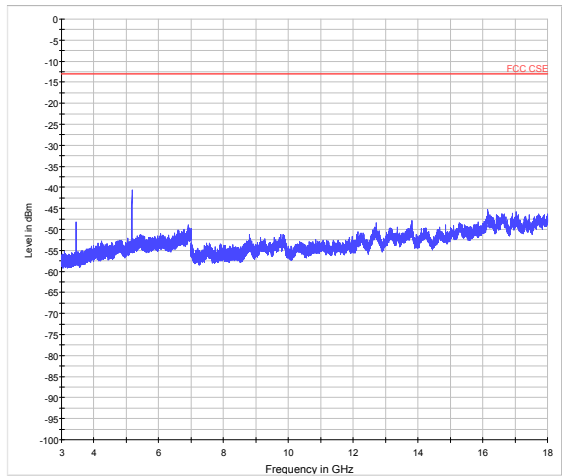
LTE Band 4 20MHz CH-Low 3GHz~18GHz



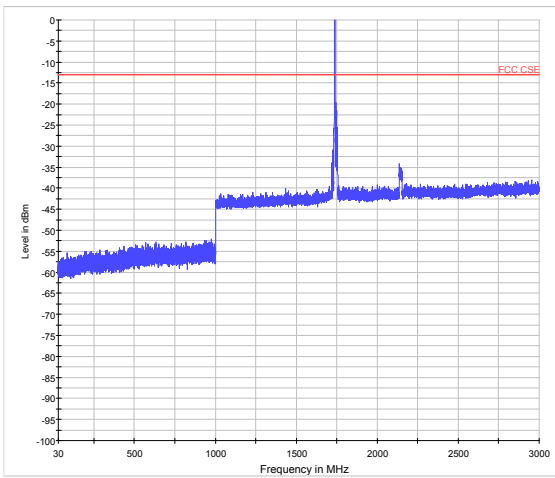
LTE Band 4 20MHz CH-Middle 30MHz~3GHz



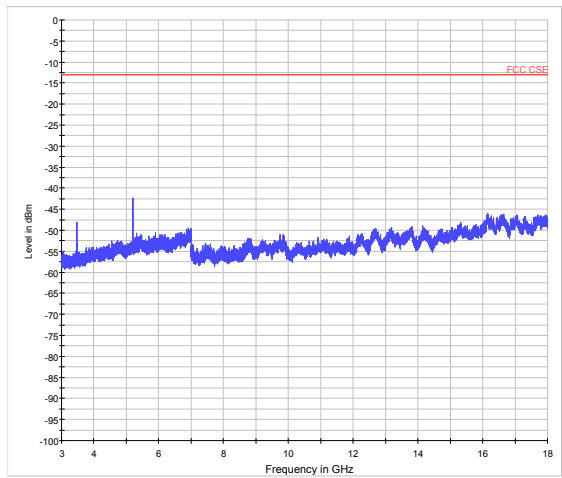
LTE Band 4 20MHz CH-Middle 3GHz~18GHz



LTE Band 4 20MHz CH-High 30MHz~3GHz

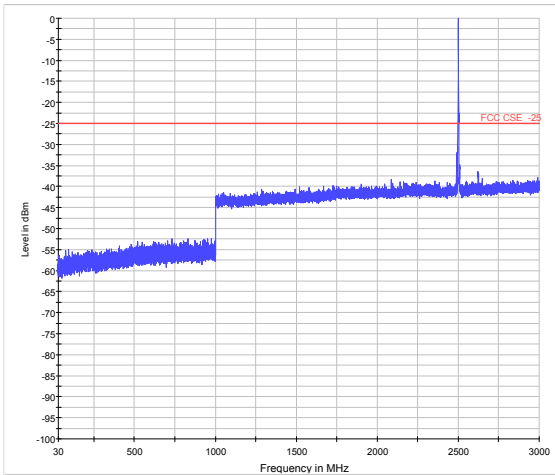


LTE Band 4 20MHz CH-High 3GHz~18GHz

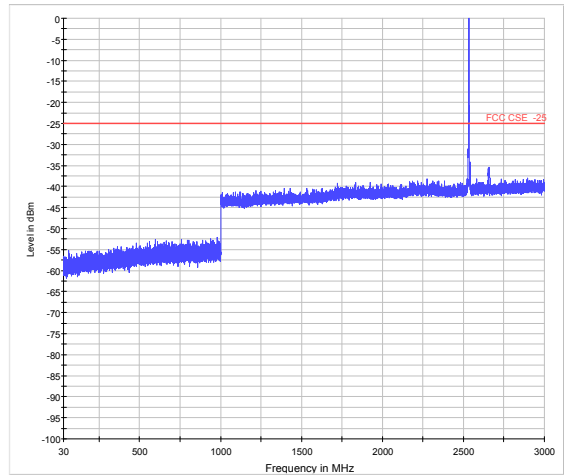




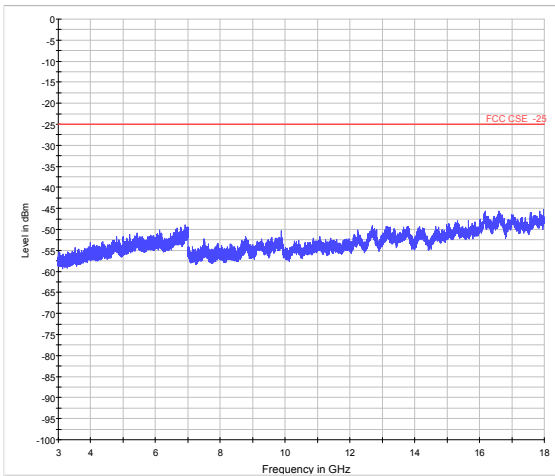
LTE Band 7 5MHz CH-Low 30MHz~3GHz



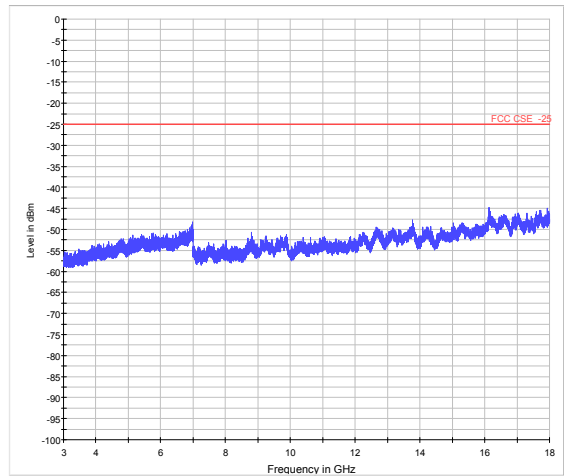
LTE Band 7 5MHz CH-Middle 30MHz~3GHz



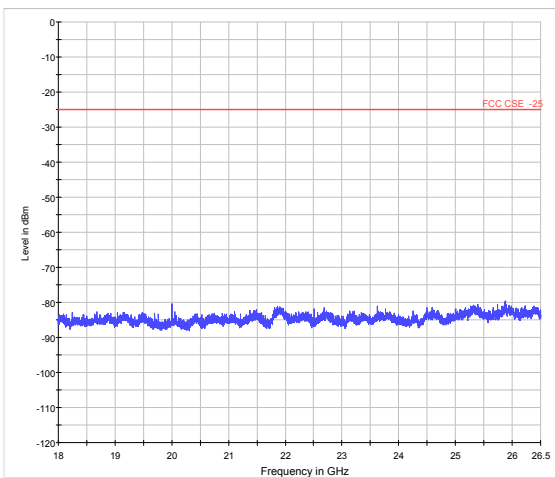
LTE Band 7 5MHz CH-Low 3GHz~18GHz



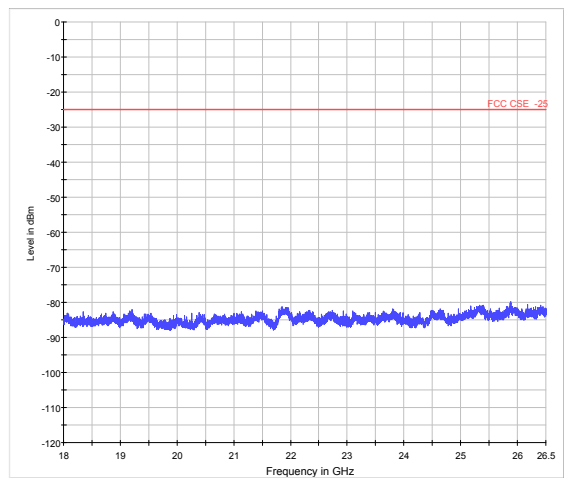
LTE Band 7 5MHz CH-Middle 3GHz~18GHz



LTE Band 7 5MHz CH-Low 18GHz~26.5GHz

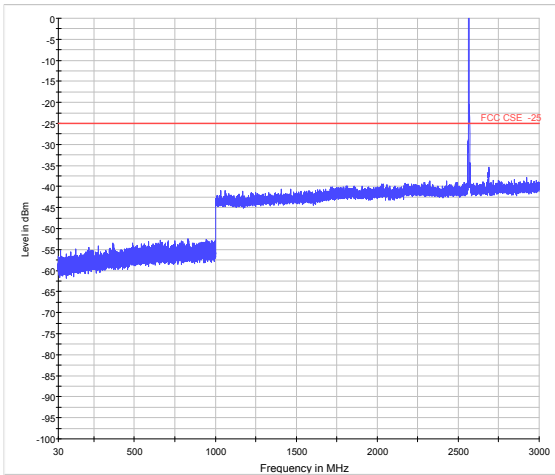


LTE Band 7 5MHz CH-Middle 18GHz~26.5GHz

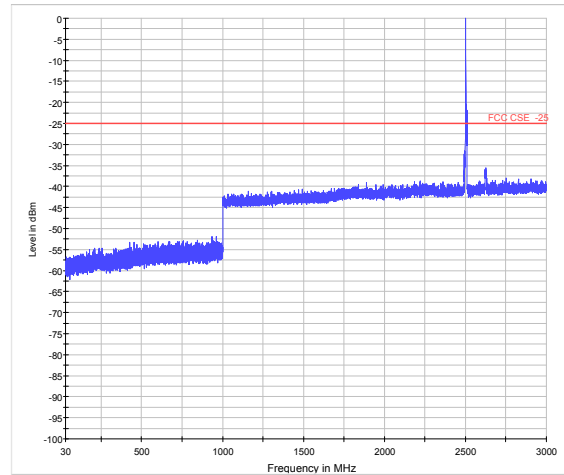




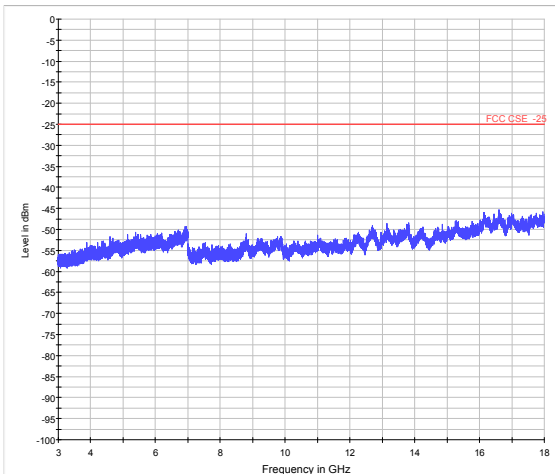
LTE Band 7 5MHz CH-High 30MHz~3GHz



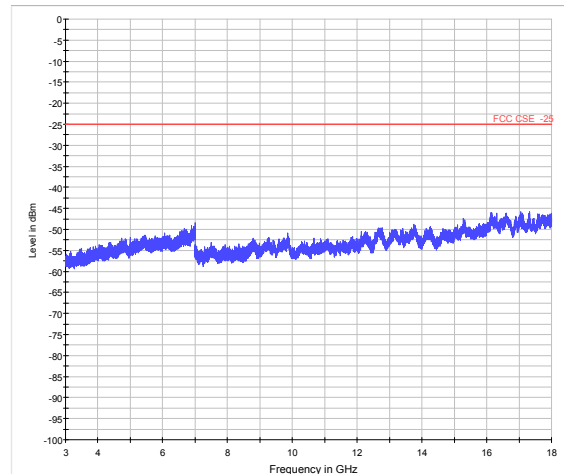
LTE Band 7 10MHz CH-Low 30MHz~3GHz



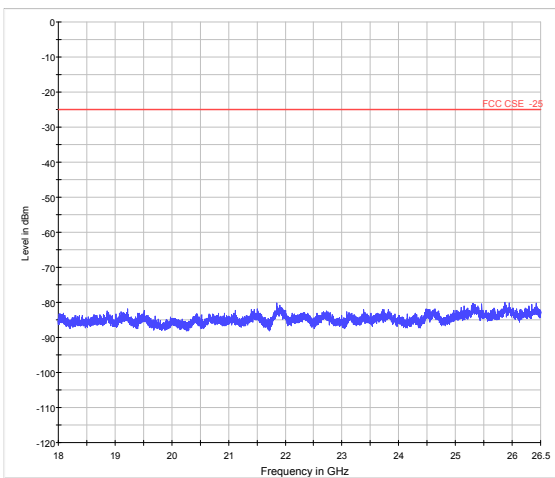
LTE Band 7 5MHz CH-High 3GHz~18GHz



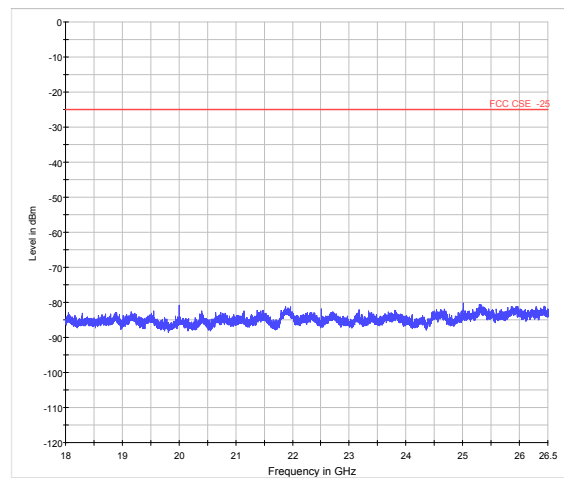
LTE Band 7 10MHz CH-Low 3GHz~18GHz



LTE Band 7 5MHz CH-High 18GHz~26.5GHz

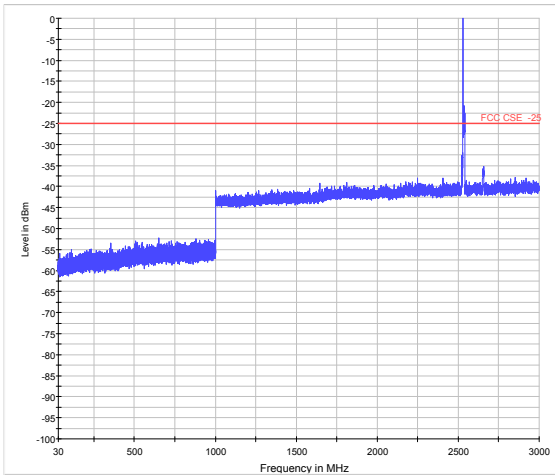


LTE Band 7 10MHz C CH-Low 18GHz~26.5GHz

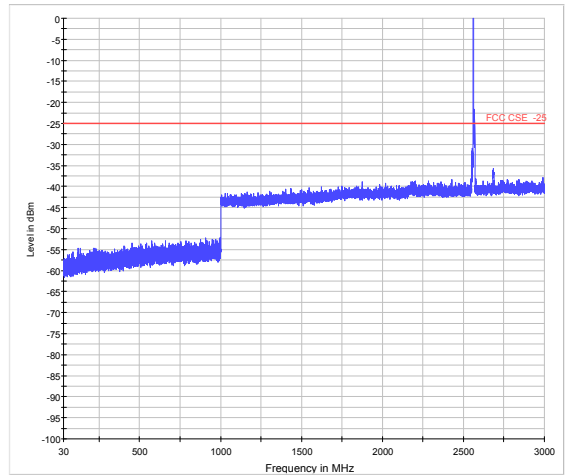




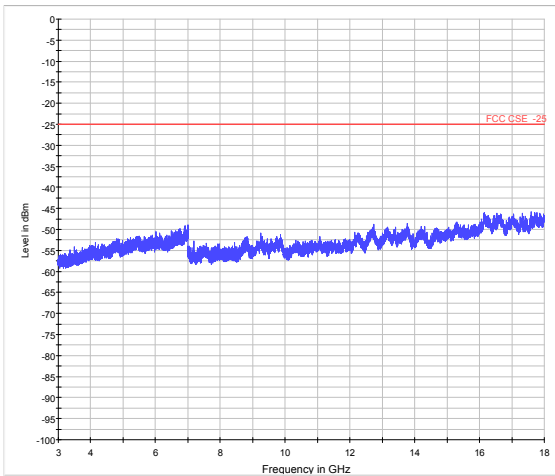
LTE Band 7 10MHz CH-Middle 30MHz~3GHz



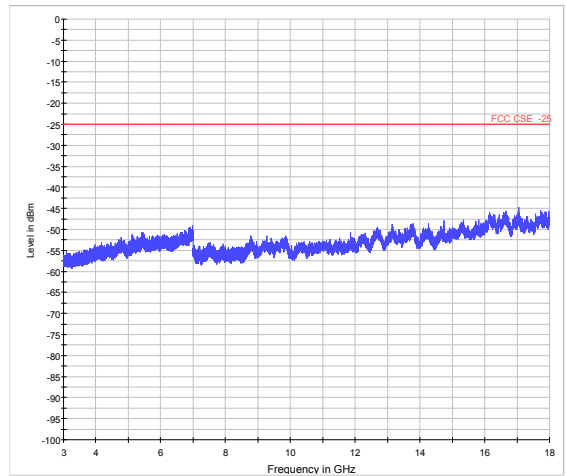
LTE Band 7 10MHz CH-High 30MHz~3GHz



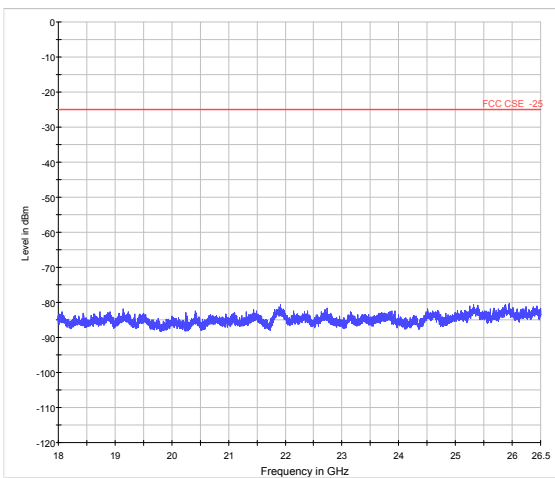
LTE Band 7 10MHz CH-Middle 3GHz~18GHz



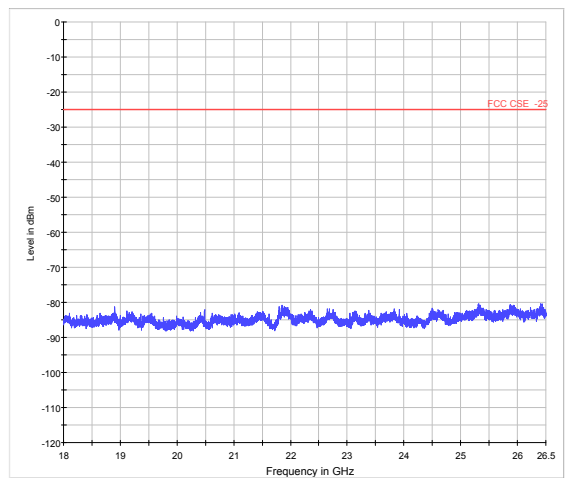
LTE Band 7 10MHz CH-High 3GHz~18GHz



LTE Band 7 10MHz CH-Middle 18GHz~26.5GHz

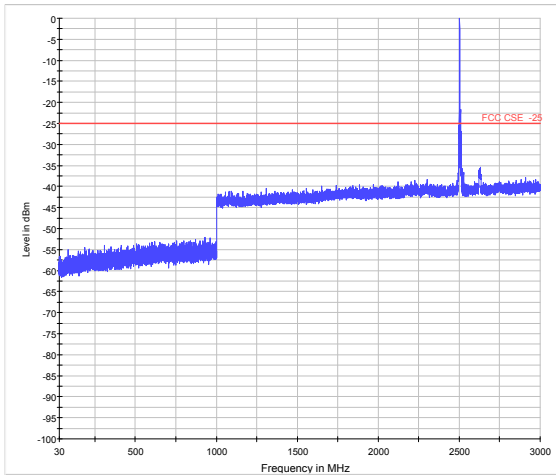


LTE Band 7 10MHz CH-High 18GHz~26.5GHz

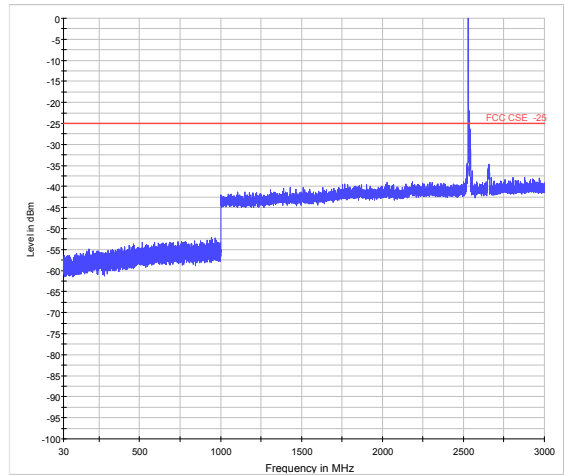




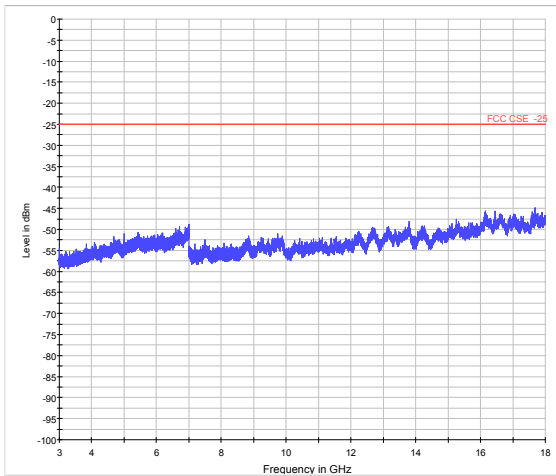
LTE Band 7 15MHz CH-Low 30MHz~3GHz



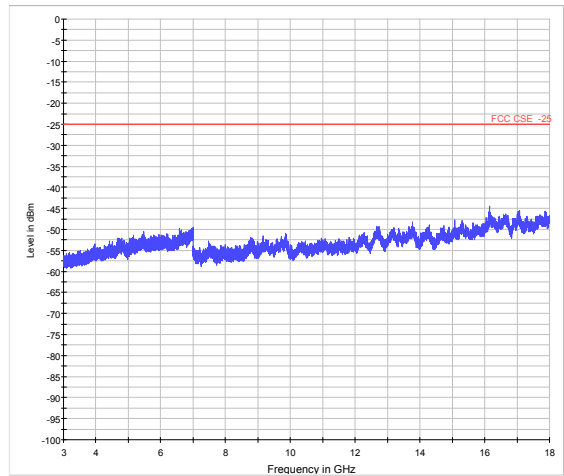
LTE Band 7 15MHz CH-Middle 30MHz~3GHz



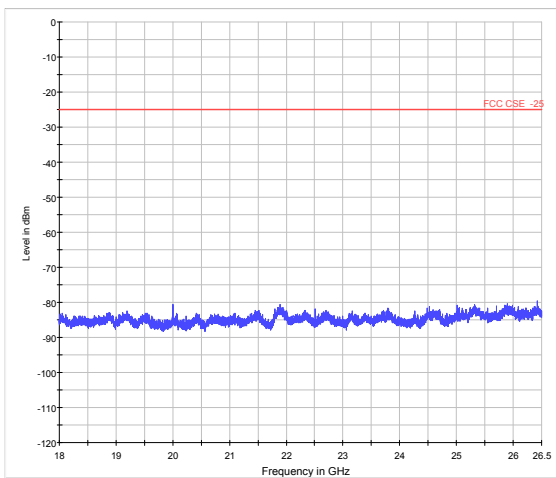
LTE Band 7 15MHz CH-Low 3GHz~18GHz



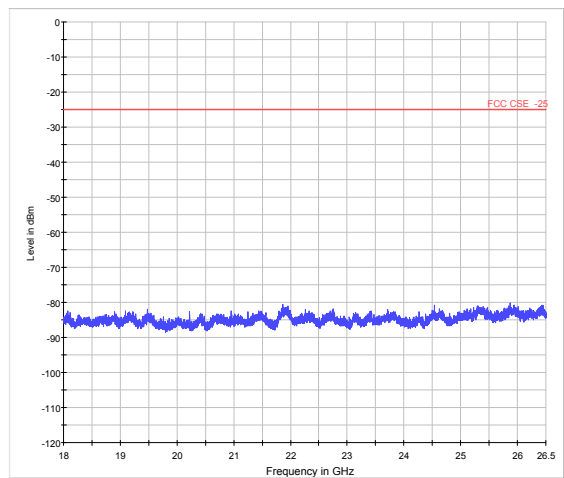
LTE Band 7 15MHz CH-Middle 3GHz~18GHz



LTE Band 7 15MHz CH-Low 18GHz~26.5GHz

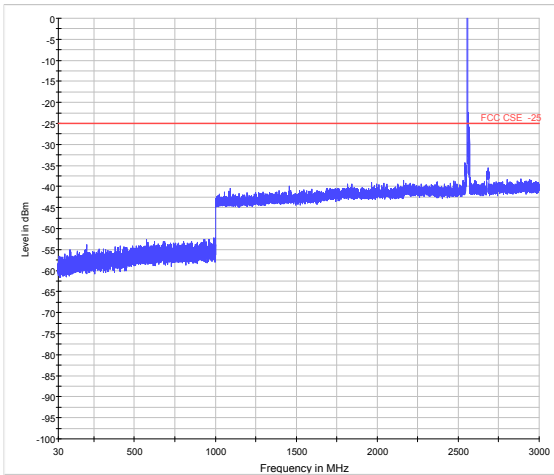


LTE Band 7 15MHz CH-Middle 18GHz~26.5GHz

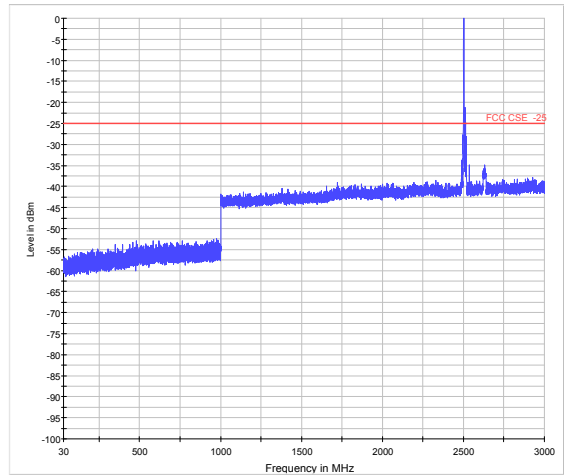




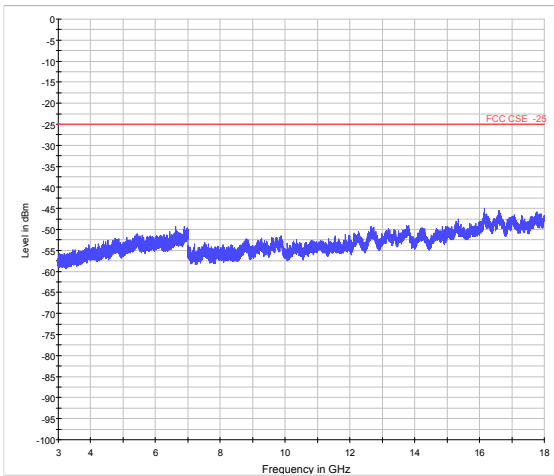
LTE Band 7 15MHz CH-High 30MHz~3GHz



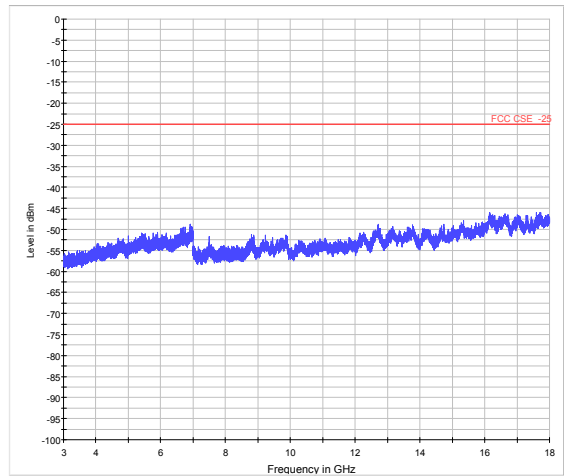
LTE Band 7 20MHz CH-Low 30MHz~3GHz



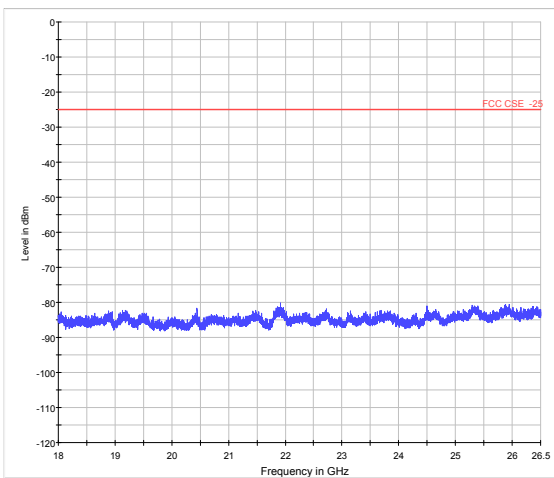
LTE Band 7 15MHz CH-High 3GHz~18GHz



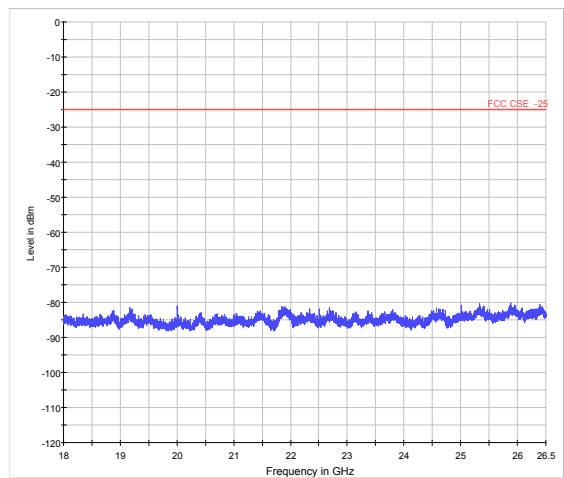
LTE Band 7 20MHz CH-Low 3GHz~18GHz



LTE Band 7 15MHz CH-High 18GHz~26.5GHz

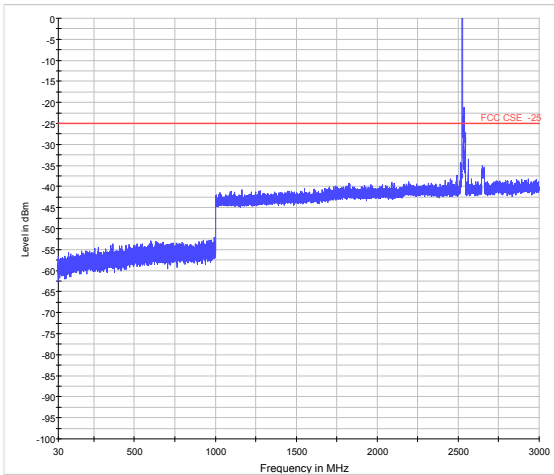


LTE Band 7 20MHz CH-Low 18GHz~26.5GHz

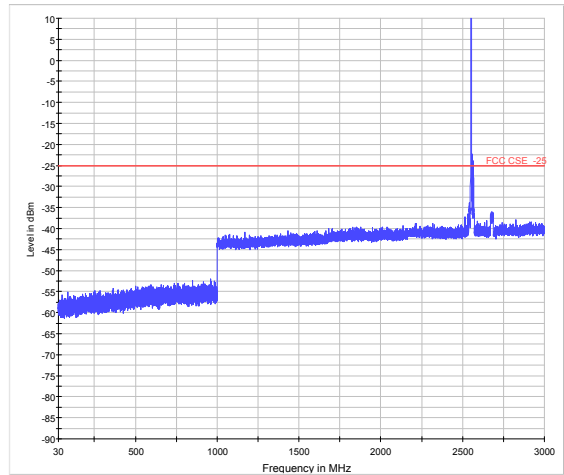




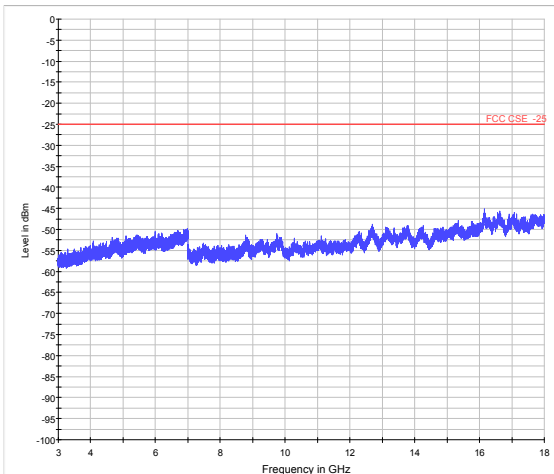
LTE Band 7 20MHz CH-Middle 30MHz~3GHz



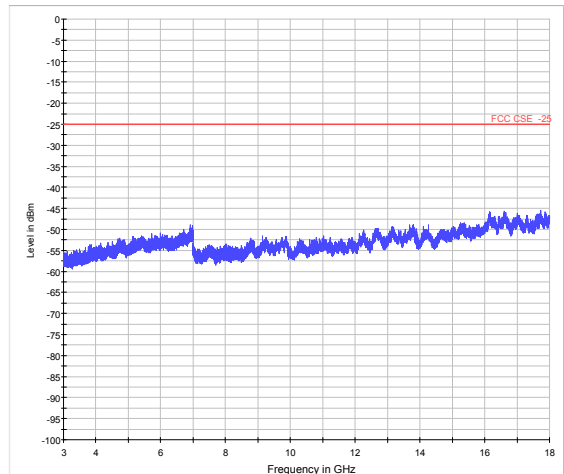
LTE Band 7 20MHz CH-High 30MHz~3GHz



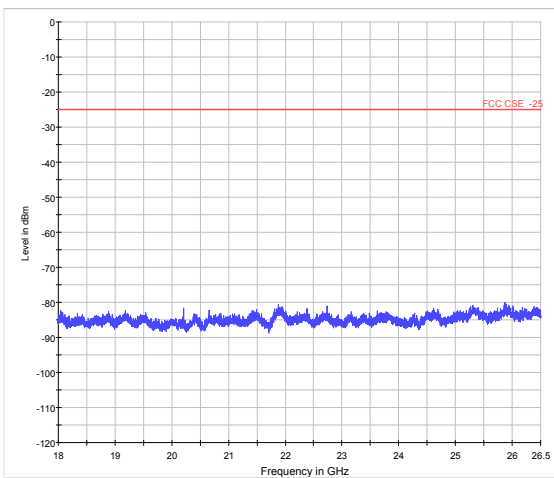
LTE Band 7 20MHz CH-Middle 3GHz~18GHz



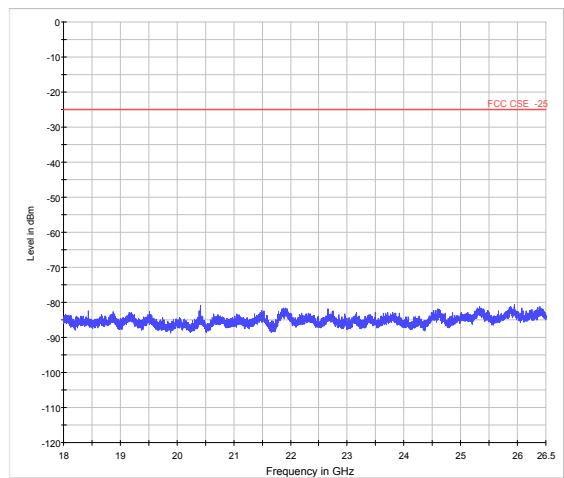
LTE Band 7 20MHz CH-High 3GHz~18GHz



LTE Band 7 20MHz CH-Middle 18GHz~26.5GHz

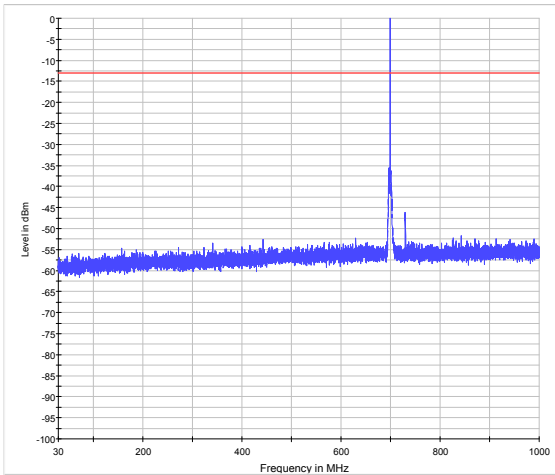


LTE Band 7 20MHz CH-High 18GHz~26.5GHz

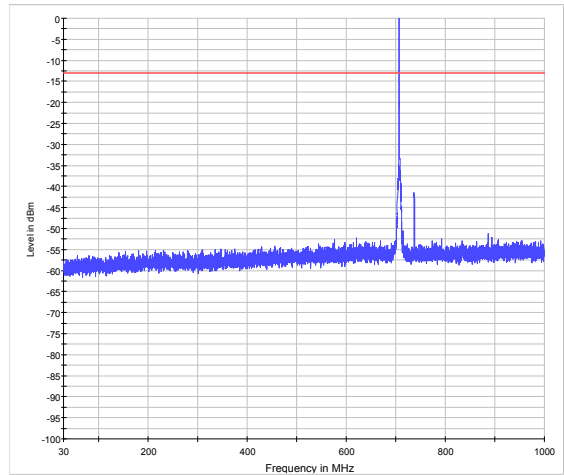




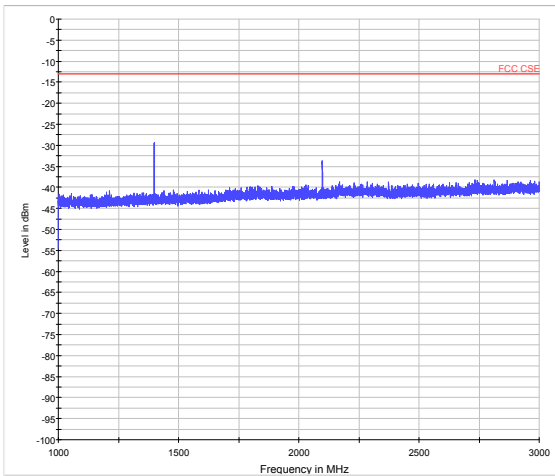
LTE Band 12 1.4MHz CH-Low 30MHz~1GHz



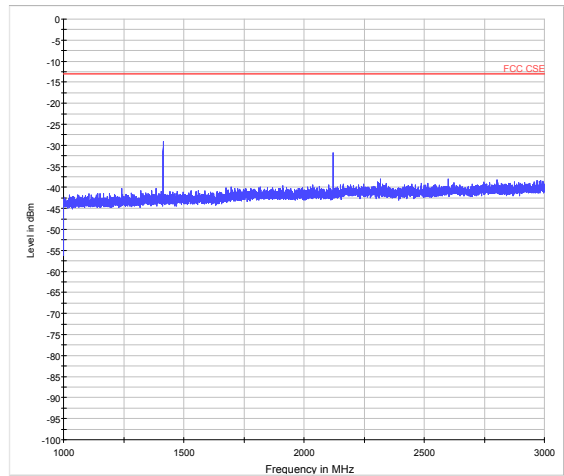
LTE Band 12 1.4MHz CH-Middle 30MHz~1GHz



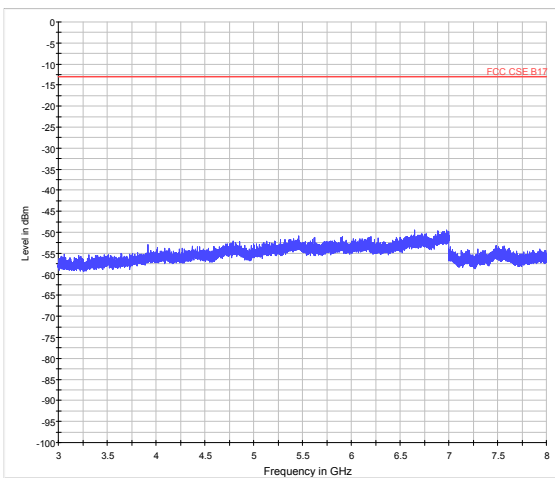
LTE Band 12 1.4MHz CH-Low 1GHz~3GHz



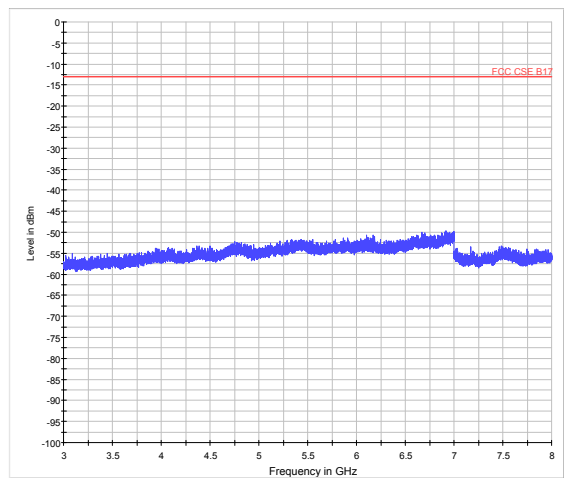
LTE Band 12 1.4MHz CH-Middle 1GHz~3GHz



LTE Band 12 1.4MHz CH-Low 3GHz~8GHz

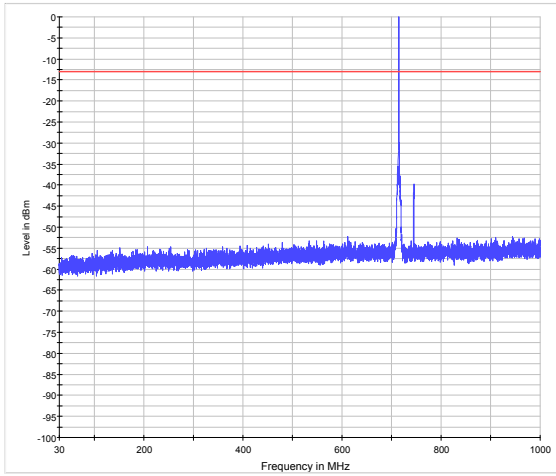


LTE Band 12 1.4MHz CH-Middle 3GHz~8GHz

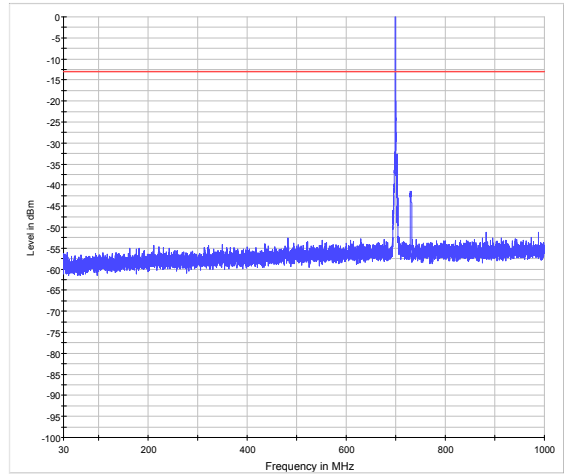




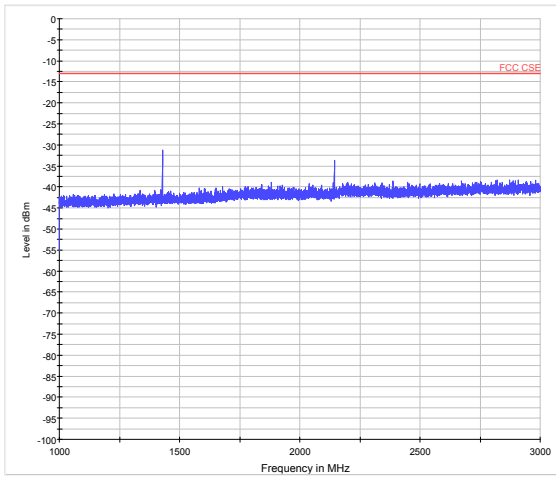
LTE Band 12 1.4MHz CH-High 30MHz~1GHz



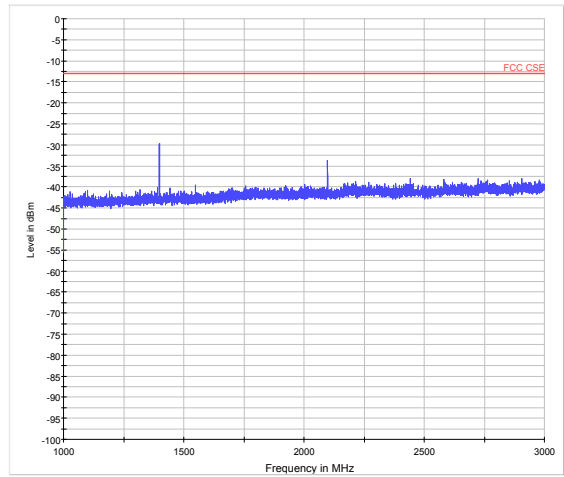
LTE Band 12 3MHz CH-Low 30MHz~1GHz



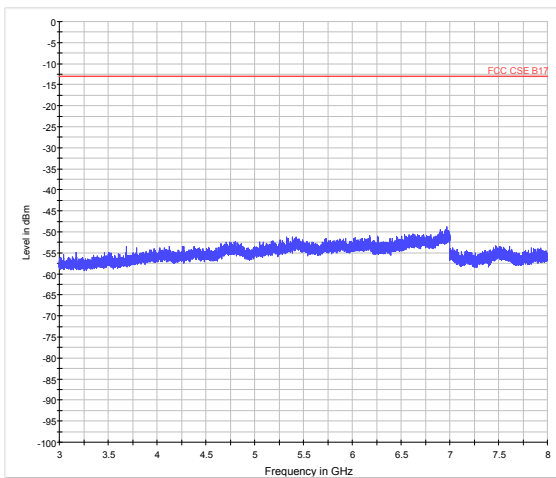
LTE Band 12 1.4MHz CH-High 1GHz~3GHz



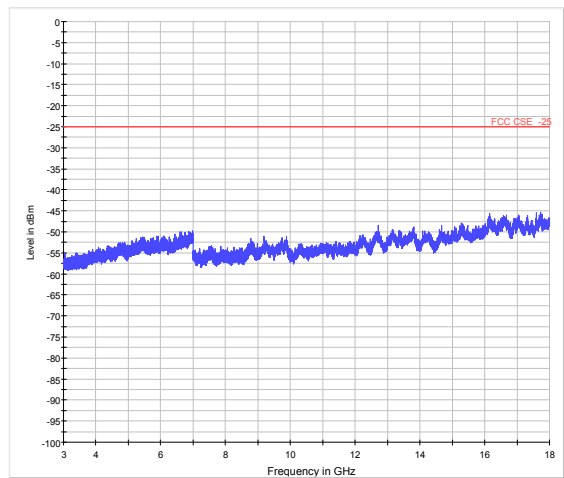
LTE Band 12 3MHz CH-Low 1GHz~3GHz



LTE Band 12 1.4MHz CH-High 3GHz~8GHz

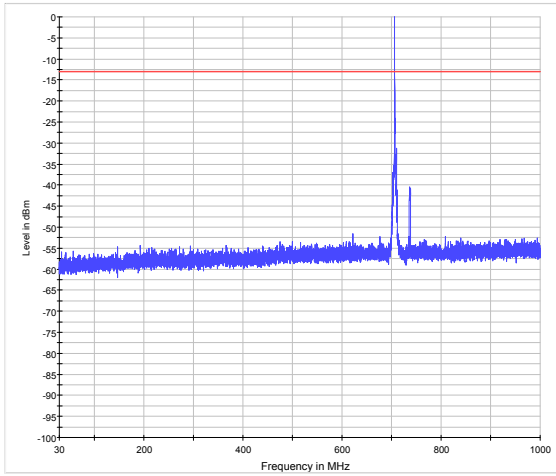


LTE Band 12 3MHz CH-Low 3GHz~8GHz

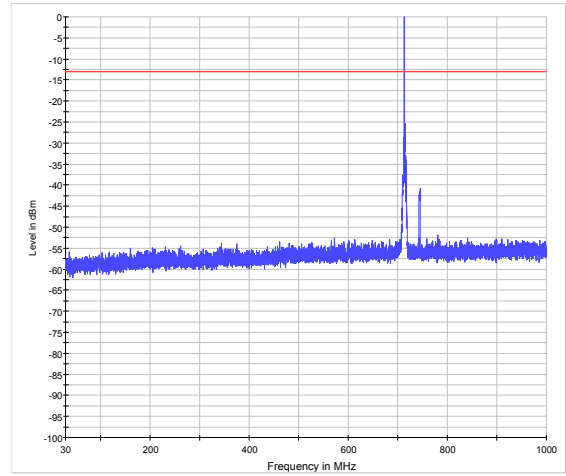




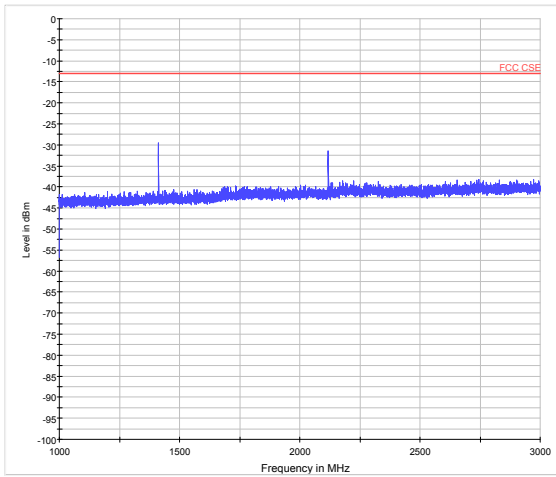
LTE Band 12 3MHz CH-Middle 30MHz~1GHz



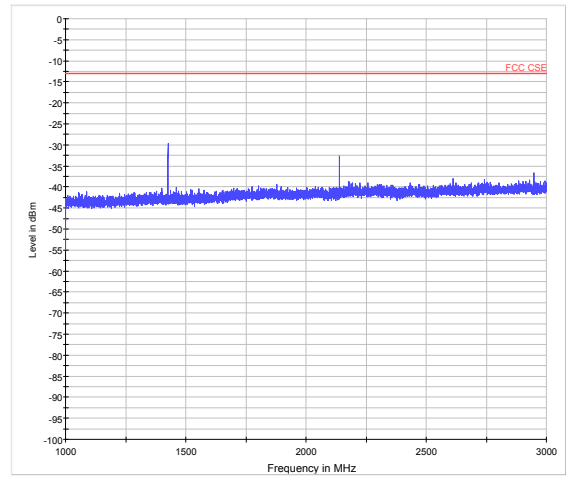
LTE Band 12 3MHz CH-High 30MHz~1GHz



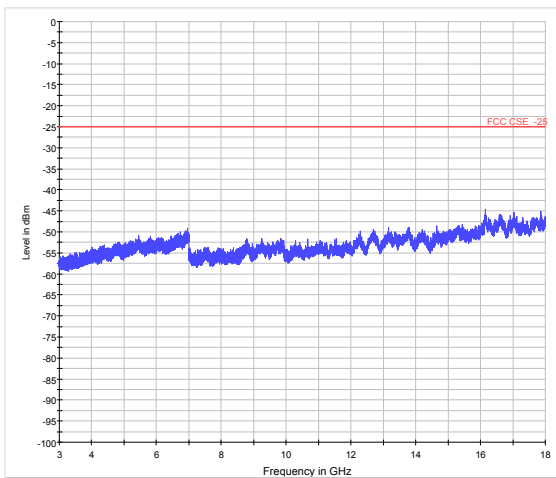
LTE Band 12 3MHz CH-Middle 1GHz~3GHz



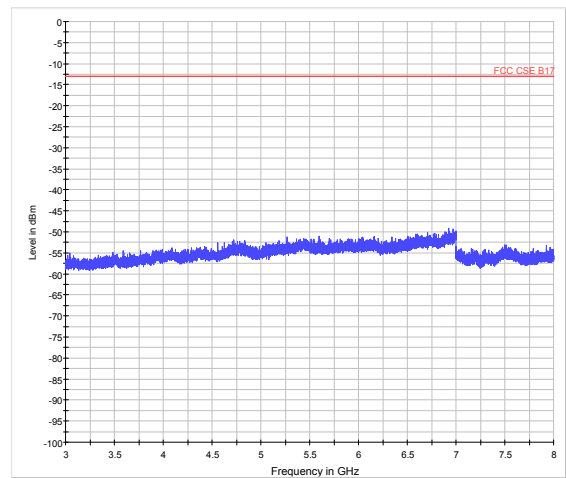
LTE Band 12 3MHz CH-High 1GHz~3GHz



LTE Band 12 3MHz CH-Middle 3GHz~8GHz

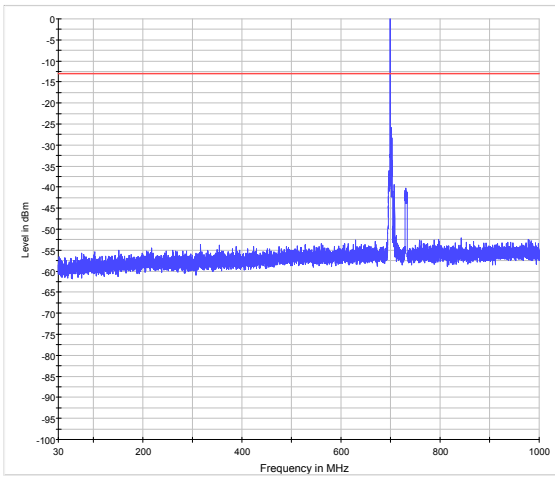


LTE Band 12 3MHz CH-High 3GHz~8GHz

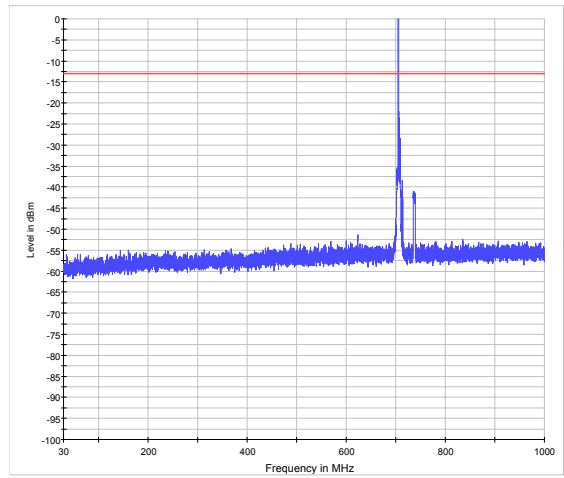




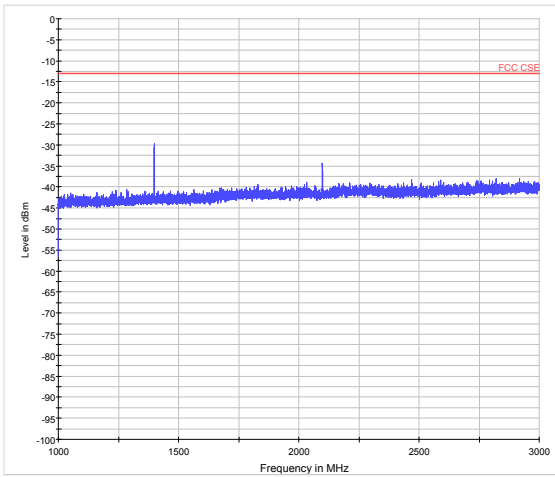
LTE Band 12 5MHz CH-Low 30MHz~1GHz



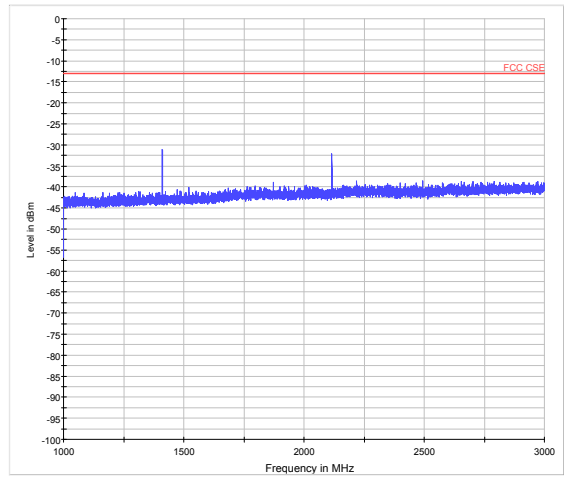
LTE Band 12 5MHz CH-Middle 30MHz~1GHz



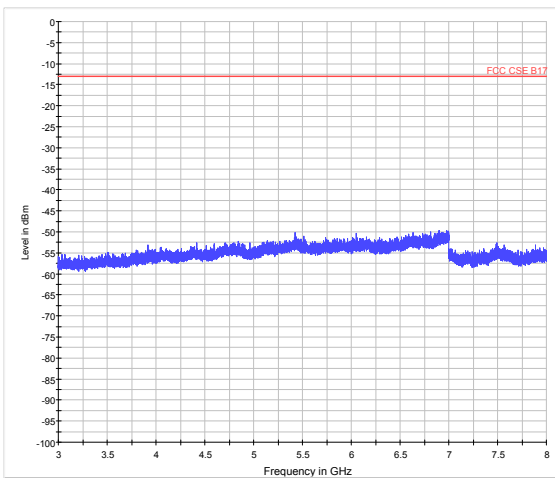
LTE Band 12 5MHz CH-Low 1GHz~3GHz



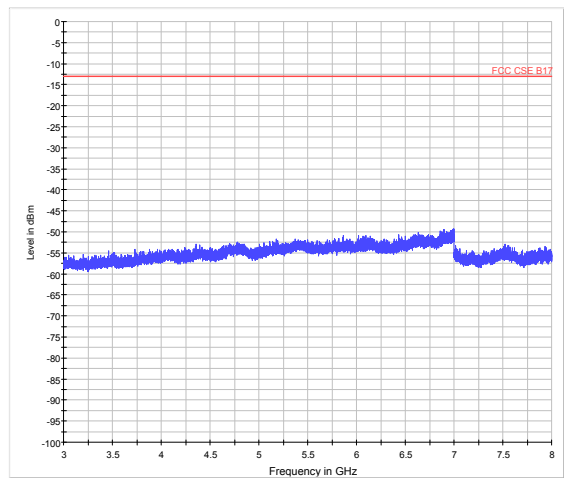
LTE Band 12 5MHz CH-Middle 1GHz~3GHz



LTE Band 12 5MHz CH-Low 3GHz~8GHz

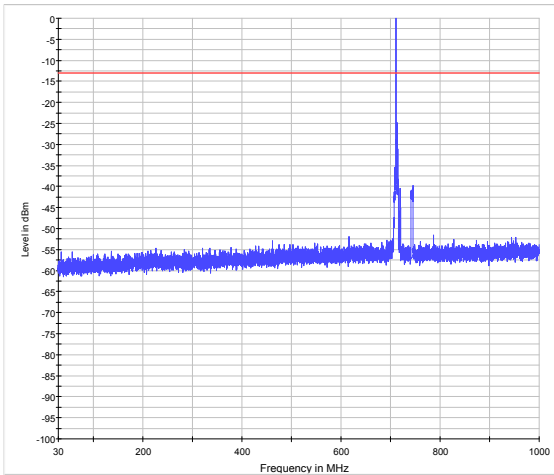


LTE Band 12 5MHz CH-Middle 3GHz~8GHz

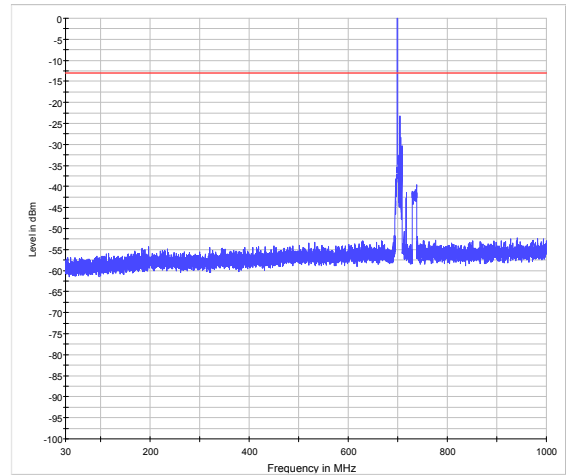




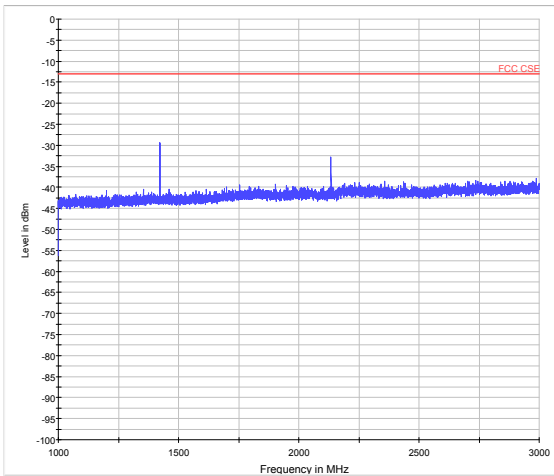
LTE Band 12 5MHz CH-High 30MHz~1GHz



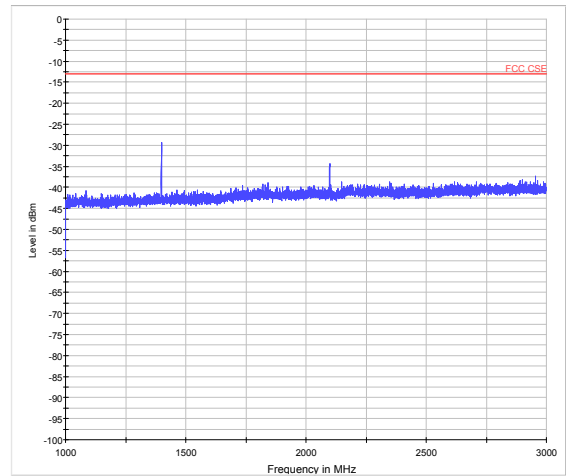
LTE Band 12 10MHz CH-Low 30MHz~1GHz



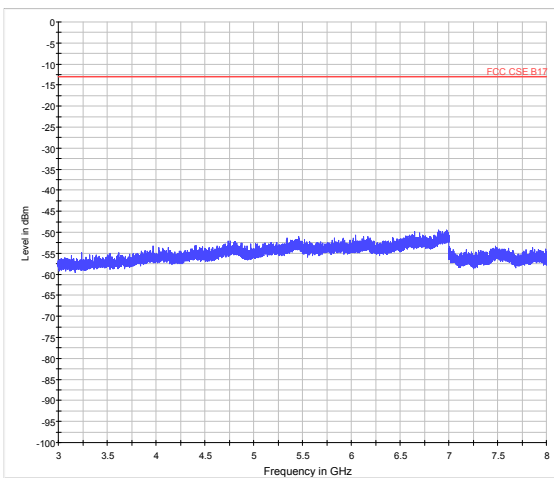
LTE Band 12 5MHz CH-High 1GHz~3GHz



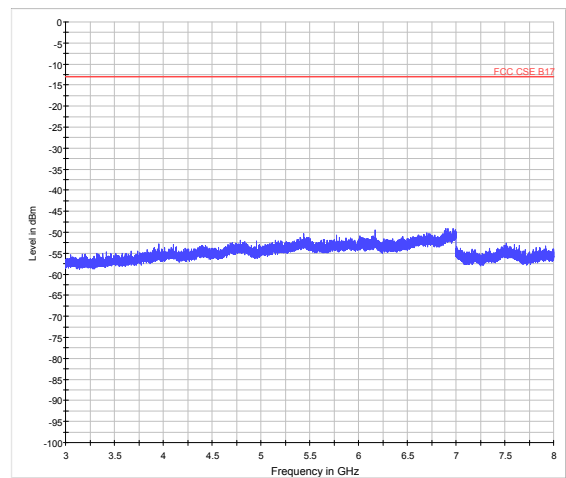
LTE Band 12 10MHz CH-Low 1GHz~3GHz



LTE Band 12 5MHz CH-High 3GHz~8GHz

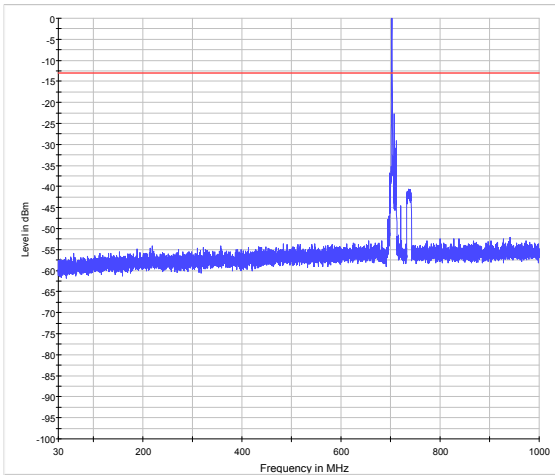


LTE Band 12 10MHz CH-Low 3GHz~8GHz

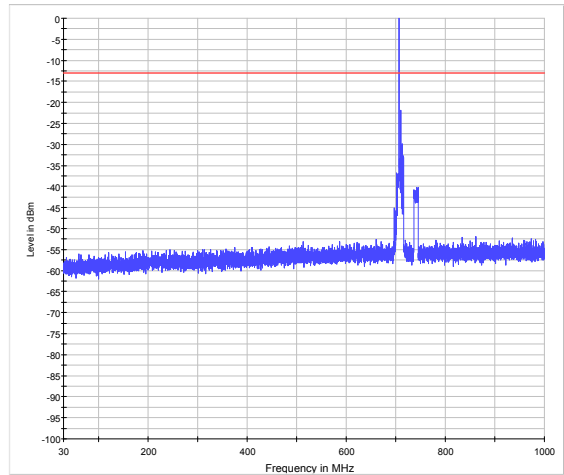




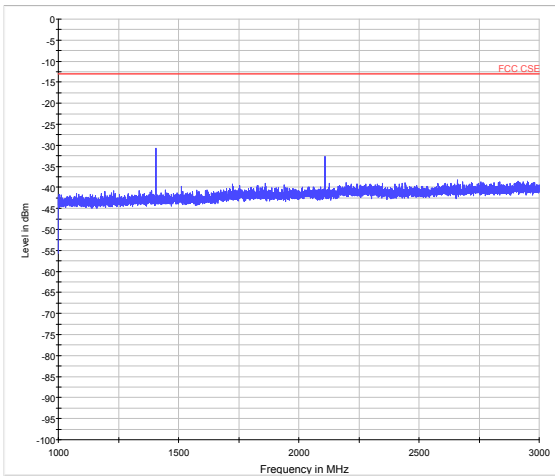
LTE Band 12 10MHz CH-Middle 30MHz~1GHz



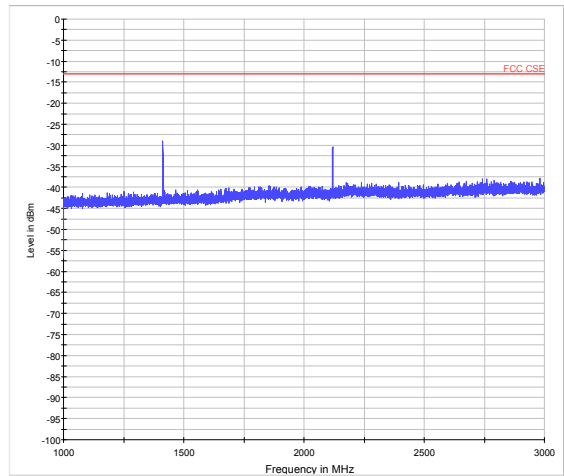
LTE Band 12 10MHz CH-High 30MHz~1GHz



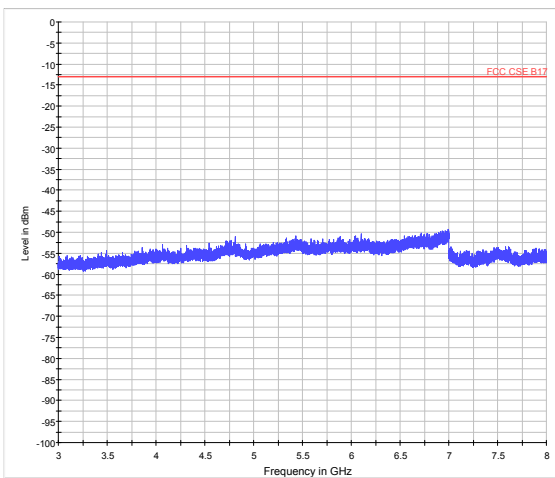
LTE Band 12 10MHz CH-Middle 1GHz~3GHz



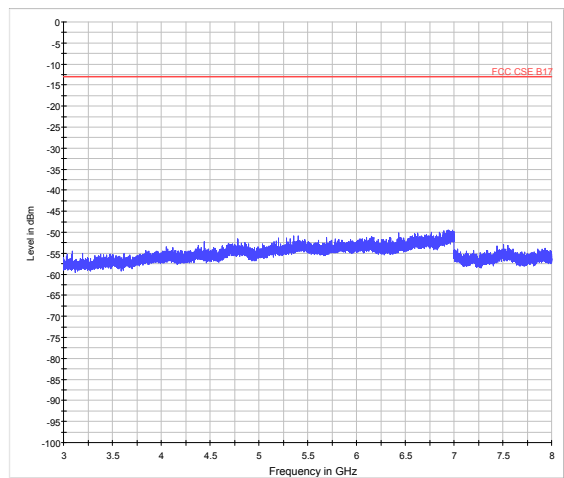
LTE Band 12 10MHz CH-High 1GHz~3GHz



LTE Band 12 10MHz CH-Middle 3GHz~8GHz



LTE Band 12 10MHz CH-High 3GHz~8GHz



If disturbances were found more than 20dB below limit line, the mark is not required for the EUT.
The signal beyond the limit is carrier in the following plots.

| Test Data File Name | Frequency (MHz) | Level (dBm) | Limit (dBm) | Margin (dB) |
|------------------------------------|------------------------|--------------------|--------------------|--------------------|
| CSE_LTE B12_CHMID_1.4M_RB1_1-3GHz | 1414.0 | -29.24 | -13.00 | 16.24 |
| CSE_LTE B12_CHHIGH_1.4M_RB1_1-3GHz | 1429.5 | -31.59 | -13.00 | 18.59 |
| CSE_LTE B12_CHLOW_3M_RB1_1-3GHz | 1398.5 | -29.60 | -13.00 | 16.60 |
| CSE_LTE B12_CHMID_3M_RB1_1-3GHz | 1412.3 | -29.56 | -13.00 | 16.56 |
| CSE_LTE B12_CHHIGH_3M_RB1_1-3GHz | 1426.5 | -29.66 | -13.00 | 16.66 |
| CSE_LTE B12_CHLOW_5M_RB1_1-3GHz | 1398.5 | -29.77 | -13.00 | 16.77 |
| CSE_LTE B12_CHMID_5M_RB1_1-3GHz | 1410.5 | -30.99 | -13.00 | 17.99 |
| CSE_LTE B12_CHHIGH_5M_RB1_1-3GHz | 1422.5 | -29.27 | -13.00 | 16.27 |
| CSE_LTE B12_CHLOW_10M_RB1_1-3GHz | 1399.3 | -29.34 | -13.00 | 16.34 |
| CSE_LTE B12_CHMID_10M_RB1_1-3GHz | 1406.0 | -30.66 | -13.00 | 17.66 |
| CSE_LTE B12_CHHIGH_10M_RB1_1-3GHz | 1413.3 | -28.95 | -13.00 | 15.95 |

5.8 Radiates Spurious Emission

Ambient condition

| Temperature | Relative humidity | Pressure |
|-------------|-------------------|----------|
| 23°C ~25°C | 45%~50% | 101.5kPa |

Method of Measurement

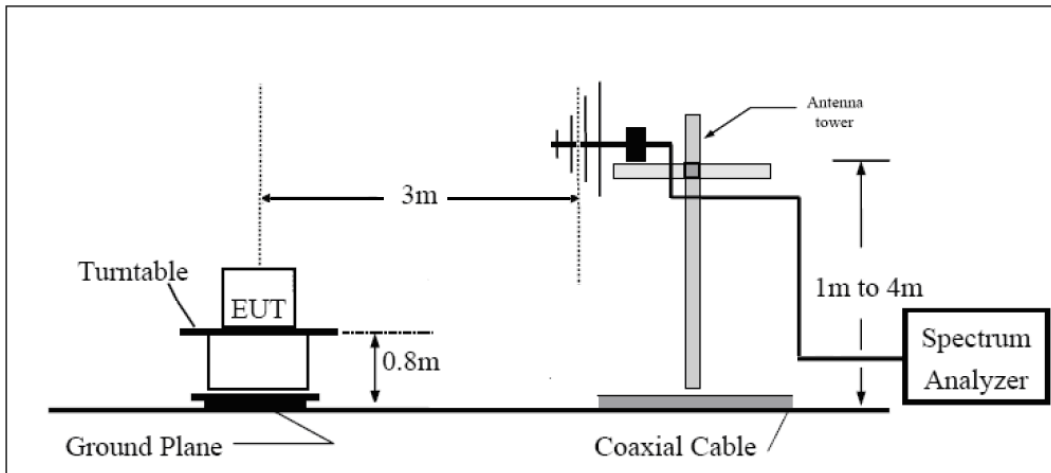
1. The testing follows FCC KDB 971168 v02r02 Section 5.8 and ANSI/TIA-603-D-2010.
2. The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).
3. A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
4. The EUT is then put into continuously transmitting mode at its maximum power level during the test. Set Test Receiver or Spectrum RBW=1MHz, VBW=3MHz, And the maximum value of the receiver should be recorded as (Pr).
5. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
6. A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (Pcl) ,the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.
7. The measurement results are obtained as described below:

$$\text{Power(EIRP)} = \text{PMea} - \text{PAg} - \text{Pcl} + \text{Ga}$$
 The measurement results are amend as described below:

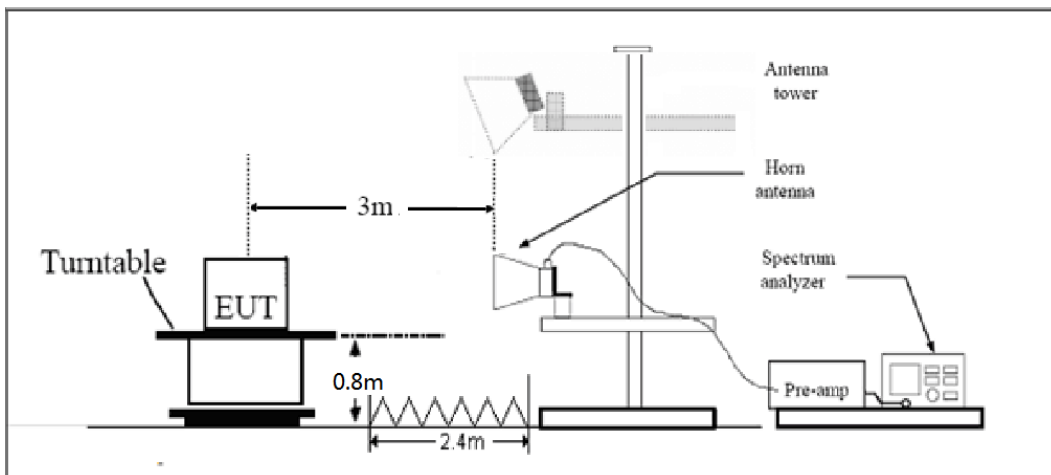
$$\text{Power(EIRP)} = \text{PMea} - \text{Pcl} + \text{Ga}$$
8. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole, $\text{ERP} = \text{EIRP} - 2.15\text{dBi}$.

Test setup

30MHz~~~ 1GHz



Above 1GHz



Note: Area side:2.4mX3.6m

The radiated emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in stand-up position (Z axis) and the worst case was recorded.

Limits

LTE -4 Rule Part 27.53(h) specifies that “for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log₁₀ (P) dB..”

LTE -12 Rule Part 27.53 (g) For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands



immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

LTE -7 Rule Part 27.53(m) $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(4) of this section.

| | |
|-----------------|---------|
| LTE B4/12 Limit | -13 dBm |
| LTE -7 Limit | -25 dBm |

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = \pm 1.96$, $U = \pm 3.55$ dB.

Test Result
WCDMA Band IV CH-Low

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 3424.8 | -59.69 | 2.6 | 10.15 | Horizontal | -52.14 | -13.00 | 39.14 | 180 |
| 3 | 5137.2 | -55.36 | 2.4 | 11.35 | Horizontal | -46.41 | -13.00 | 33.41 | 270 |
| 4 | 6849.6 | -50.26 | 4.5 | 10.85 | Horizontal | -43.91 | -13.00 | 30.91 | 135 |
| 5 | 8562.0 | -49.36 | 5.1 | 11.35 | Horizontal | -43.11 | -13.00 | 30.11 | 45 |
| 6 | 10274.4 | -47.63 | 5.3 | 11.95 | Horizontal | -40.98 | -13.00 | 27.98 | 270 |
| 7 | 11986.8 | -47.43 | 5.5 | 13.55 | Horizontal | -39.38 | -13.00 | 26.38 | 180 |
| 8 | 13699.2 | -43.66 | 6.3 | 13.75 | Horizontal | -36.21 | -13.00 | 23.21 | 270 |
| 9 | 15411.6 | -46.37 | 6.7 | 13.85 | Horizontal | -39.22 | -13.00 | 26.22 | 135 |
| 10 | 17124.0 | -42.13 | 6.8 | 14.25 | Horizontal | -34.68 | -13.00 | 21.68 | 180 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

WCDMA Band IV CH-Middle

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 3465.2 | -60.53 | 2.6 | 10.75 | Horizontal | -52.38 | -13.00 | 39.38 | 180 |
| 3 | 5197.8 | -56.18 | 2.4 | 11.05 | Horizontal | -47.53 | -13.00 | 34.53 | 270 |
| 4 | 6930.4 | -51.09 | 4.5 | 11.15 | Horizontal | -44.44 | -13.00 | 31.44 | 135 |
| 5 | 8663.0 | -48.31 | 5.1 | 11.35 | Horizontal | -42.06 | -13.00 | 29.06 | 45 |
| 6 | 10395.6 | -46.35 | 5.3 | 11.95 | Horizontal | -39.70 | -13.00 | 26.70 | 180 |
| 7 | 12128.2 | -46.15 | 5.5 | 13.55 | Horizontal | -38.10 | -13.00 | 25.10 | 270 |
| 8 | 13860.8 | -44.15 | 6.3 | 13.75 | Horizontal | -36.70 | -13.00 | 23.70 | 135 |
| 9 | 15593.4 | -46.85 | 6.7 | 13.85 | Horizontal | -39.70 | -13.00 | 26.70 | 45 |
| 10 | 17326.0 | -43.85 | 6.8 | 14.25 | Horizontal | -36.40 | -13.00 | 23.40 | 180 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

WCDMA Band IV CH-High

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 3505.2 | -58.81 | 2.6 | 10.15 | Horizontal | -51.26 | -13.00 | 38.26 | 180 |
| 3 | 5254.1 | -57.23 | 2.4 | 11.05 | Horizontal | -48.58 | -13.00 | 35.58 | 270 |
| 4 | 7010.4 | -49.71 | 4.5 | 11.15 | Horizontal | -43.06 | -13.00 | 30.06 | 135 |
| 5 | 8763.0 | -48.46 | 5.1 | 11.35 | Horizontal | -42.21 | -13.00 | 29.21 | 45 |
| 6 | 10515.6 | -45.53 | 5.3 | 11.95 | Horizontal | -38.88 | -13.00 | 25.88 | 180 |
| 7 | 12268.2 | -46.25 | 5.5 | 13.55 | Horizontal | -38.20 | -13.00 | 25.20 | 270 |
| 8 | 14020.8 | -43.01 | 6.3 | 13.75 | Horizontal | -35.56 | -13.00 | 22.56 | 135 |
| 9 | 15773.4 | -45.77 | 6.7 | 13.85 | Horizontal | -38.62 | -13.00 | 25.62 | 45 |
| 10 | 17526.0 | -43.90 | 6.8 | 14.25 | Horizontal | -36.45 | -13.00 | 23.45 | 270 |

Note: 1. The other Spurious RF Radiated emissions level is no more than noise floor.
 2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 1.4MHz CH-Low, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 3421.4 | -60.15 | 2.6 | 10.15 | Horizontal | -52.60 | -13.00 | 39.60 | 315 |
| 3 | 5132.1 | -56.65 | 2.4 | 11.35 | Horizontal | -47.70 | -13.00 | 34.70 | 270 |
| 4 | 6842.8 | -51.15 | 4.5 | 10.85 | Horizontal | -44.80 | -13.00 | 31.80 | 135 |
| 5 | 8553.5 | -78.35 | 5.1 | 11.35 | Horizontal | -72.10 | -13.00 | 59.10 | 225 |
| 6 | 10264.2 | -47.85 | 5.3 | 11.95 | Horizontal | -41.20 | -13.00 | 28.20 | 180 |
| 7 | 11974.9 | -47.25 | 5.5 | 13.55 | Horizontal | -39.20 | -13.00 | 26.20 | 45 |
| 8 | 13685.6 | -44.75 | 6.3 | 13.75 | Horizontal | -37.30 | -13.00 | 24.30 | 315 |
| 9 | 15396.3 | -46.75 | 6.7 | 13.85 | Horizontal | -39.60 | -13.00 | 26.60 | 270 |
| 10 | 17107.0 | -43.55 | 6.8 | 14.25 | Horizontal | -36.10 | -13.00 | 23.10 | 135 |

Note: 1. The other Spurious RF Radiated emissions level is no more than noise floor.
 2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 1.4MHz CH-Middle, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 3465.0 | -60.05 | 2.6 | 10.75 | Horizontal | -51.90 | -13.00 | 38.90 | 90 |
| 3 | 5197.5 | -56.35 | 2.4 | 11.05 | Horizontal | -47.70 | -13.00 | 34.70 | 225 |
| 4 | 6930.0 | -50.05 | 4.5 | 11.15 | Horizontal | -43.40 | -13.00 | 30.40 | 180 |
| 5 | 8662.5 | -47.65 | 5.1 | 11.35 | Horizontal | -41.40 | -13.00 | 28.40 | 225 |
| 6 | 10395.0 | -46.25 | 5.3 | 11.95 | Horizontal | -39.60 | -13.00 | 26.60 | 180 |
| 7 | 12127.5 | -48.05 | 5.5 | 13.55 | Horizontal | -40.00 | -13.00 | 27.00 | 45 |
| 8 | 13860.0 | -43.75 | 6.3 | 13.75 | Horizontal | -36.30 | -13.00 | 23.30 | 270 |
| 9 | 15592.5 | -46.85 | 6.7 | 13.85 | Horizontal | -39.70 | -13.00 | 26.70 | 90 |
| 10 | 17325.0 | -42.75 | 6.8 | 14.25 | Horizontal | -35.30 | -13.00 | 22.30 | 180 |

Note: 1. The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 1.4MHz CH-High, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 3508.6 | -57.55 | 2.6 | 10.15 | Horizontal | -50.00 | -13.00 | 37.00 | 315 |
| 3 | 5262.9 | -57.05 | 2.4 | 11.05 | Horizontal | -48.40 | -13.00 | 35.40 | 270 |
| 4 | 7017.2 | 38.35 | 4.5 | 11.15 | Horizontal | 45.00 | -13.00 | -58.00 | 135 |
| 5 | 8771.5 | -47.95 | 5.1 | 11.35 | Horizontal | -41.70 | -13.00 | 28.70 | 225 |
| 6 | 10525.8 | -45.75 | 5.3 | 11.95 | Horizontal | -39.10 | -13.00 | 26.10 | 180 |
| 7 | 12280.1 | -47.65 | 5.5 | 13.55 | Horizontal | -39.60 | -13.00 | 26.60 | 45 |
| 8 | 14034.4 | -44.05 | 6.3 | 13.75 | Horizontal | -36.60 | -13.00 | 23.60 | 315 |
| 9 | 15788.7 | -45.55 | 6.7 | 13.85 | Horizontal | -38.40 | -13.00 | 25.40 | 270 |
| 10 | 17543.0 | -44.55 | 6.8 | 14.25 | Horizontal | -37.10 | -13.00 | 24.10 | 135 |

Note: 1. The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 3MHz CH-Low, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 3423.0 | -59.35 | 2.6 | 10.15 | Horizontal | -51.80 | -13.00 | 38.80 | 90 |
| 3 | 5134.5 | -57.15 | 2.4 | 11.35 | Horizontal | -48.20 | -13.00 | 35.20 | 225 |
| 4 | 6846.0 | -51.55 | 4.5 | 10.85 | Horizontal | -45.20 | -13.00 | 32.20 | 315 |
| 5 | 8557.5 | -48.25 | 5.1 | 11.35 | Horizontal | -42.00 | -13.00 | 29.00 | 270 |
| 6 | 10269.0 | -47.95 | 5.3 | 11.95 | Horizontal | -41.30 | -13.00 | 28.30 | 135 |
| 7 | 11980.5 | -47.55 | 5.5 | 13.55 | Horizontal | -39.50 | -13.00 | 26.50 | 225 |
| 8 | 13692.0 | -44.95 | 6.3 | 13.75 | Horizontal | -37.50 | -13.00 | 24.50 | 180 |
| 9 | 15403.5 | -46.75 | 6.7 | 13.85 | Horizontal | -39.60 | -13.00 | 26.60 | 45 |
| 10 | 17115.0 | -45.25 | 6.8 | 14.25 | Horizontal | -37.80 | -13.00 | 24.80 | 315 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 3MHz CH-Middle, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 3465.0 | -58.95 | 2.6 | 10.75 | Horizontal | -50.80 | -13.00 | 37.80 | 270 |
| 3 | 5197.5 | -56.35 | 2.4 | 11.05 | Horizontal | -47.70 | -13.00 | 34.70 | 135 |
| 4 | 6930.0 | -51.65 | 4.5 | 11.15 | Horizontal | -45.00 | -13.00 | 32.00 | 90 |
| 5 | 8662.5 | -47.35 | 5.1 | 11.35 | Horizontal | -41.10 | -13.00 | 28.10 | 225 |
| 6 | 10395.0 | -47.15 | 5.3 | 11.95 | Horizontal | -40.50 | -13.00 | 27.50 | 180 |
| 7 | 12127.5 | -46.85 | 5.5 | 13.55 | Horizontal | -38.80 | -13.00 | 25.80 | 225 |
| 8 | 13860.0 | -44.85 | 6.3 | 13.75 | Horizontal | -37.40 | -13.00 | 24.40 | 180 |
| 9 | 15592.5 | -47.85 | 6.7 | 13.85 | Horizontal | -40.70 | -13.00 | 27.70 | 45 |
| 10 | 17325.0 | -44.25 | 6.8 | 14.25 | Horizontal | -36.80 | -13.00 | 23.80 | 315 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 3MHz CH-High, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 3507.0 | -58.35 | 2.6 | 10.15 | Horizontal | -50.80 | -13.00 | 37.80 | 45 |
| 3 | 5260.5 | -58.65 | 2.4 | 11.05 | Horizontal | -50.00 | -13.00 | 37.00 | 315 |
| 4 | 7014.0 | -52.55 | 4.5 | 11.15 | Horizontal | -45.90 | -13.00 | 32.90 | 90 |
| 5 | 8767.5 | -48.65 | 5.1 | 11.35 | Horizontal | -42.40 | -13.00 | 29.40 | 180 |
| 6 | 10521.0 | -46.55 | 5.3 | 11.95 | Horizontal | -39.90 | -13.00 | 26.90 | 225 |
| 7 | 12274.5 | -48.05 | 5.5 | 13.55 | Horizontal | -40.00 | -13.00 | 27.00 | 90 |
| 8 | 14028.0 | -44.15 | 6.3 | 13.75 | Horizontal | -36.70 | -13.00 | 23.70 | 270 |
| 9 | 15781.5 | -46.25 | 6.7 | 13.85 | Horizontal | -39.10 | -13.00 | 26.10 | 135 |
| 10 | 17535.0 | -44.55 | 6.8 | 14.25 | Horizontal | -37.10 | -13.00 | 24.10 | 270 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 5MHz CH-Low, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 3425.0 | -60.65 | 2.6 | 10.15 | Horizontal | -53.10 | -13.00 | 40.10 | 180 |
| 3 | 5137.5 | -57.15 | 2.4 | 11.35 | Horizontal | -48.20 | -13.00 | 35.20 | 270 |
| 4 | 6850.0 | -49.85 | 4.5 | 10.85 | Horizontal | -43.50 | -13.00 | 30.50 | 45 |
| 5 | 8562.5 | -49.05 | 5.1 | 11.35 | Horizontal | -42.80 | -13.00 | 29.80 | 225 |
| 6 | 10275.0 | -47.55 | 5.3 | 11.95 | Horizontal | -40.90 | -13.00 | 27.90 | 315 |
| 7 | 11987.5 | -47.05 | 5.5 | 13.55 | Horizontal | -39.00 | -13.00 | 26.00 | 90 |
| 8 | 13700.0 | -45.65 | 6.3 | 13.75 | Horizontal | -38.20 | -13.00 | 25.20 | 45 |
| 9 | 15412.5 | -46.75 | 6.7 | 13.85 | Horizontal | -39.60 | -13.00 | 26.60 | 315 |
| 10 | 17125.0 | -44.45 | 6.8 | 14.25 | Horizontal | -37.00 | -13.00 | 24.00 | 180 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 5MHz CH-Middle, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 3465.0 | -63.05 | 2.6 | 10.75 | Horizontal | -54.90 | -13.00 | 41.90 | 45 |
| 3 | 5197.5 | -55.25 | 2.4 | 11.05 | Horizontal | -46.60 | -13.00 | 33.60 | 315 |
| 4 | 6930.0 | -52.05 | 4.5 | 11.15 | Horizontal | -45.40 | -13.00 | 32.40 | 90 |
| 5 | 8662.5 | -47.15 | 5.1 | 11.35 | Horizontal | -40.90 | -13.00 | 27.90 | 180 |
| 6 | 10395.0 | -46.85 | 5.3 | 11.95 | Horizontal | -40.20 | -13.00 | 27.20 | 270 |
| 7 | 12127.5 | -47.05 | 5.5 | 13.55 | Horizontal | -39.00 | -13.00 | 26.00 | 315 |
| 8 | 13860.0 | -44.45 | 6.3 | 13.75 | Horizontal | -37.00 | -13.00 | 24.00 | 225 |
| 9 | 15592.5 | -47.35 | 6.7 | 13.85 | Horizontal | -40.20 | -13.00 | 27.20 | 45 |
| 10 | 17325.0 | -43.75 | 6.8 | 14.25 | Horizontal | -36.30 | -13.00 | 23.30 | 180 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 5MHz CH-High, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 3505.0 | -59.85 | 2.6 | 10.15 | Horizontal | -52.30 | -13.00 | 39.30 | 90 |
| 3 | 5257.5 | -58.25 | 2.4 | 11.05 | Horizontal | -49.60 | -13.00 | 36.60 | 315 |
| 4 | 7010.0 | -52.35 | 4.5 | 11.15 | Horizontal | -45.70 | -13.00 | 32.70 | 270 |
| 5 | 8762.5 | -48.55 | 5.1 | 11.35 | Horizontal | -42.30 | -13.00 | 29.30 | 45 |
| 6 | 10515.0 | -46.55 | 5.3 | 11.95 | Horizontal | -39.90 | -13.00 | 26.90 | 180 |
| 7 | 12267.5 | -46.85 | 5.5 | 13.55 | Horizontal | -38.80 | -13.00 | 25.80 | 90 |
| 8 | 14020.0 | -44.25 | 6.3 | 13.75 | Horizontal | -36.80 | -13.00 | 23.80 | 225 |
| 9 | 15772.5 | -45.55 | 6.7 | 13.85 | Horizontal | -38.40 | -13.00 | 25.40 | 270 |
| 10 | 17525.0 | -44.75 | 6.8 | 14.25 | Horizontal | -37.30 | -13.00 | 24.30 | 315 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 10MHz CH-Low, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 3430.0 | -59.95 | 2.6 | 10.15 | Horizontal | -52.40 | -13.00 | 39.40 | 270 |
| 3 | 5145.0 | -55.65 | 2.4 | 11.35 | Horizontal | -46.70 | -13.00 | 33.70 | 180 |
| 4 | 6860.0 | -51.25 | 4.5 | 10.85 | Horizontal | -44.90 | -13.00 | 31.90 | 45 |
| 5 | 8575.0 | -48.05 | 5.1 | 11.35 | Horizontal | -41.80 | -13.00 | 28.80 | 225 |
| 6 | 10290.0 | -47.65 | 5.3 | 11.95 | Horizontal | -41.00 | -13.00 | 28.00 | 180 |
| 7 | 12005.0 | -47.25 | 5.5 | 13.55 | Horizontal | -39.20 | -13.00 | 26.20 | 315 |
| 8 | 13720.0 | -44.85 | 6.3 | 13.75 | Horizontal | -37.40 | -13.00 | 24.40 | 45 |
| 9 | 15435.0 | -46.35 | 6.7 | 13.85 | Horizontal | -39.20 | -13.00 | 26.20 | 225 |
| 10 | 17150.0 | -43.95 | 6.8 | 14.25 | Horizontal | -36.50 | -13.00 | 23.50 | 90 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 10MHz CH-Middle, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 3465.0 | -60.25 | 2.6 | 10.75 | Horizontal | -52.10 | -13.00 | 39.10 | 225 |
| 3 | 5197.5 | -55.65 | 2.4 | 11.05 | Horizontal | -47.00 | -13.00 | 34.00 | 180 |
| 4 | 6930.0 | -52.15 | 4.5 | 11.15 | Horizontal | -45.50 | -13.00 | 32.50 | 90 |
| 5 | 8662.5 | -49.15 | 5.1 | 11.35 | Horizontal | -42.90 | -13.00 | 29.90 | 270 |
| 6 | 10395.0 | -46.65 | 5.3 | 11.95 | Horizontal | -40.00 | -13.00 | 27.00 | 45 |
| 7 | 12127.5 | -45.65 | 5.5 | 13.55 | Horizontal | -37.60 | -13.00 | 24.60 | 225 |
| 8 | 13860.0 | -45.45 | 6.3 | 13.75 | Horizontal | -38.00 | -13.00 | 25.00 | 315 |
| 9 | 15592.5 | -47.55 | 6.7 | 13.85 | Horizontal | -40.40 | -13.00 | 27.40 | 180 |
| 10 | 17325.0 | -43.55 | 6.8 | 14.25 | Horizontal | -36.10 | -13.00 | 23.10 | 135 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 10MHz CH-High, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 3500.0 | -59.05 | 2.6 | 10.15 | Horizontal | -51.50 | -13.00 | 38.50 | 315 |
| 3 | 5250.0 | -57.35 | 2.4 | 11.05 | Horizontal | -48.70 | -13.00 | 35.70 | 90 |
| 4 | 7000.0 | -51.95 | 4.5 | 11.15 | Horizontal | -45.30 | -13.00 | 32.30 | 270 |
| 5 | 8750.0 | -47.55 | 5.1 | 11.35 | Horizontal | -41.30 | -13.00 | 28.30 | 45 |
| 6 | 10500.0 | -46.45 | 5.3 | 11.95 | Horizontal | -39.80 | -13.00 | 26.80 | 225 |
| 7 | 12250.0 | -46.55 | 5.5 | 13.55 | Horizontal | -38.50 | -13.00 | 25.50 | 180 |
| 8 | 14000.0 | -45.58 | 6.3 | 13.75 | Horizontal | -38.13 | -13.00 | 25.13 | 270 |
| 9 | 15750.0 | -46.95 | 6.7 | 13.85 | Horizontal | -39.80 | -13.00 | 26.80 | 315 |
| 10 | 17500.0 | -44.75 | 6.8 | 14.25 | Horizontal | -37.30 | -13.00 | 24.30 | 180 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 15MHz CH Low, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 3435.0 | -58.95 | 2.6 | 10.15 | Horizontal | -51.40 | -13.00 | 38.40 | 225 |
| 3 | 5152.5 | -56.55 | 2.4 | 11.35 | Horizontal | -47.60 | -13.00 | 34.60 | 180 |
| 4 | 6870.0 | -51.25 | 4.5 | 10.85 | Horizontal | -44.90 | -13.00 | 31.90 | 270 |
| 5 | 8587.5 | -48.95 | 5.1 | 11.35 | Horizontal | -42.70 | -13.00 | 29.70 | 45 |
| 6 | 10305.0 | -47.75 | 5.3 | 11.95 | Horizontal | -41.10 | -13.00 | 28.10 | 135 |
| 7 | 12022.5 | -48.55 | 5.5 | 13.55 | Horizontal | -40.50 | -13.00 | 27.50 | 90 |
| 8 | 13740.0 | -45.65 | 6.3 | 13.75 | Horizontal | -38.20 | -13.00 | 25.20 | 135 |
| 9 | 15457.5 | -47.15 | 6.7 | 13.85 | Horizontal | -40.00 | -13.00 | 27.00 | 225 |
| 10 | 17175.0 | -44.85 | 6.8 | 14.25 | Horizontal | -37.40 | -13.00 | 24.40 | 315 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 15MHz CH-Middle, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 3465.0 | -59.95 | 2.6 | 10.75 | Horizontal | -51.80 | -13.00 | 38.80 | 180 |
| 3 | 5197.5 | -55.55 | 2.4 | 11.05 | Horizontal | -46.90 | -13.00 | 33.90 | 315 |
| 4 | 6930.0 | -51.85 | 4.5 | 11.15 | Horizontal | -45.20 | -13.00 | 32.20 | 90 |
| 5 | 8662.5 | -48.05 | 5.1 | 11.35 | Horizontal | -41.80 | -13.00 | 28.80 | 225 |
| 6 | 10395.0 | -46.05 | 5.3 | 11.95 | Horizontal | -39.40 | -13.00 | 26.40 | 270 |
| 7 | 12127.5 | -47.75 | 5.5 | 13.55 | Horizontal | -39.70 | -13.00 | 26.70 | 45 |
| 8 | 13860.0 | -44.35 | 6.3 | 13.75 | Horizontal | -36.90 | -13.00 | 23.90 | 180 |
| 9 | 15592.5 | -45.95 | 6.7 | 13.85 | Horizontal | -38.80 | -13.00 | 25.80 | 90 |
| 10 | 17325.0 | -43.95 | 6.8 | 14.25 | Horizontal | -36.50 | -13.00 | 23.50 | 135 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 15MHz CH-High, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 3495.0 | -59.25 | 2.6 | 10.15 | Horizontal | -51.70 | -13.00 | 38.70 | 225 |
| 3 | 5242.5 | -57.65 | 2.4 | 11.05 | Horizontal | -49.00 | -13.00 | 36.00 | 45 |
| 4 | 6990.0 | -52.55 | 4.5 | 11.15 | Horizontal | -45.90 | -13.00 | 32.90 | 270 |
| 5 | 8737.5 | -49.35 | 5.1 | 11.35 | Horizontal | -43.10 | -13.00 | 30.10 | 315 |
| 6 | 10485.0 | -47.05 | 5.3 | 11.95 | Horizontal | -40.40 | -13.00 | 27.40 | 90 |
| 7 | 12232.5 | -47.65 | 5.5 | 13.55 | Horizontal | -39.60 | -13.00 | 26.60 | 225 |
| 8 | 13980.0 | -45.85 | 6.3 | 13.75 | Horizontal | -38.40 | -13.00 | 25.40 | 45 |
| 9 | 15727.5 | -46.65 | 6.7 | 13.85 | Horizontal | -39.50 | -13.00 | 26.50 | 180 |
| 10 | 17475.0 | -45.05 | 6.8 | 14.25 | Horizontal | -37.60 | -13.00 | 24.60 | 90 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 20MHz CH-Low, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 3440.0 | -60.55 | 2.6 | 10.15 | Horizontal | -53.00 | -13.00 | 40.00 | 315 |
| 3 | 5160.0 | -56.15 | 2.4 | 11.35 | Horizontal | -47.20 | -13.00 | 34.20 | 270 |
| 4 | 6880.0 | -51.85 | 4.5 | 10.85 | Horizontal | -45.50 | -13.00 | 32.50 | 45 |
| 5 | 8600.0 | -48.65 | 5.1 | 11.35 | Horizontal | -42.40 | -13.00 | 29.40 | 225 |
| 6 | 10320.0 | -47.75 | 5.3 | 11.95 | Horizontal | -41.10 | -13.00 | 28.10 | 180 |
| 7 | 12040.0 | -46.95 | 5.5 | 13.55 | Horizontal | -38.90 | -13.00 | 25.90 | 270 |
| 8 | 13760.0 | -44.85 | 6.3 | 13.75 | Horizontal | -37.40 | -13.00 | 24.40 | 90 |
| 9 | 15480.0 | -47.55 | 6.7 | 13.85 | Horizontal | -40.40 | -13.00 | 27.40 | 90 |
| 10 | 17200.0 | -44.35 | 6.8 | 14.25 | Horizontal | -36.90 | -13.00 | 23.90 | 225 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 20MHz CH-Middle, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 3465.0 | -60.65 | 2.6 | 10.75 | Horizontal | -52.50 | -13.00 | 39.50 | 45 |
| 3 | 5197.5 | -56.05 | 2.4 | 11.05 | Horizontal | -47.40 | -13.00 | 34.40 | 225 |
| 4 | 6930.0 | -52.45 | 4.5 | 11.15 | Horizontal | -45.80 | -13.00 | 32.80 | 270 |
| 5 | 8662.5 | -48.65 | 5.1 | 11.35 | Horizontal | -42.40 | -13.00 | 29.40 | 90 |
| 6 | 10395.0 | -46.55 | 5.3 | 11.95 | Horizontal | -39.90 | -13.00 | 26.90 | 225 |
| 7 | 12127.5 | -46.95 | 5.5 | 13.55 | Horizontal | -38.90 | -13.00 | 25.90 | 315 |
| 8 | 13860.0 | -44.55 | 6.3 | 13.75 | Horizontal | -37.10 | -13.00 | 24.10 | 180 |
| 9 | 15592.5 | -46.95 | 6.7 | 13.85 | Horizontal | -39.80 | -13.00 | 26.80 | 45 |
| 10 | 17325.0 | -44.95 | 6.8 | 14.25 | Horizontal | -37.50 | -13.00 | 24.50 | 180 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 20MHz CH-High, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 3490.0 | -58.25 | 2.6 | 10.15 | Horizontal | -50.70 | -13.00 | 37.70 | 315 |
| 3 | 5235.0 | -56.85 | 2.4 | 11.05 | Horizontal | -48.20 | -13.00 | 35.20 | 225 |
| 4 | 6980.0 | -52.05 | 4.5 | 11.15 | Horizontal | -45.40 | -13.00 | 32.40 | 45 |
| 5 | 8725.0 | -48.85 | 5.1 | 11.35 | Horizontal | -42.60 | -13.00 | 29.60 | 180 |
| 6 | 10470.0 | -45.65 | 5.3 | 11.95 | Horizontal | -39.00 | -13.00 | 26.00 | 270 |
| 7 | 12215.0 | -47.55 | 5.5 | 13.55 | Horizontal | -39.50 | -13.00 | 26.50 | 315 |
| 8 | 13960.0 | -44.75 | 6.3 | 13.75 | Horizontal | -37.30 | -13.00 | 24.30 | 90 |
| 9 | 15705.0 | -45.85 | 6.7 | 13.85 | Horizontal | -38.70 | -13.00 | 25.70 | 180 |
| 10 | 17450.0 | -44.45 | 6.8 | 14.25 | Horizontal | -37.00 | -13.00 | 24.00 | 135 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 7 QPSK 5MHz CH-Low, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 5005.0 | -54.15 | 2.00 | 9.15 | Horizontal | -47.00 | -25.00 | 22.00 | 180 |
| 3 | 7507.5 | -51.45 | 2.50 | 11.35 | Horizontal | -42.60 | -25.00 | 17.60 | 225 |
| 4 | 10010.0 | -49.05 | 4.20 | 12.05 | Horizontal | -41.20 | -25.00 | 16.20 | 45 |
| 5 | 12512.5 | -48.45 | 5.20 | 12.85 | Horizontal | -40.80 | -25.00 | 15.80 | 180 |
| 6 | 15015.0 | -46.83 | 5.50 | 14.23 | Horizontal | -38.10 | -25.00 | 13.10 | 270 |
| 7 | 17517.5 | -46.15 | 5.70 | 14.15 | Horizontal | -37.70 | -25.00 | 12.70 | 135 |
| 8 | 20020.0 | -44.06 | 6.30 | 13.76 | Horizontal | -36.60 | -25.00 | 11.60 | 180 |
| 9 | 22522.5 | -43.35 | 6.80 | 14.05 | Horizontal | -36.10 | -25.00 | 11.10 | 225 |
| 10 | 25025.0 | -43.44 | 6.90 | 14.84 | Horizontal | -35.50 | -25.00 | 10.50 | 90 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 7 QPSK 5MHz CH-Middle, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 5070.0 | -53.25 | 2.00 | 9.15 | Horizontal | -46.10 | -25.00 | 21.10 | 135 |
| 3 | 7605.0 | -52.15 | 2.50 | 11.35 | Horizontal | -43.30 | -25.00 | 18.30 | 180 |
| 4 | 10140.0 | -47.55 | 4.20 | 12.05 | Horizontal | -39.70 | -25.00 | 14.70 | 90 |
| 5 | 12675.0 | -47.65 | 5.20 | 12.85 | Horizontal | -40.00 | -25.00 | 15.00 | 45 |
| 6 | 15210.0 | -47.03 | 5.50 | 14.23 | Horizontal | -38.30 | -25.00 | 13.30 | 180 |
| 7 | 17745.0 | -45.65 | 5.70 | 14.15 | Horizontal | -37.20 | -25.00 | 12.20 | 270 |
| 8 | 20280.0 | -43.96 | 6.30 | 13.76 | Horizontal | -36.50 | -25.00 | 11.50 | 45 |
| 9 | 22815.0 | -43.45 | 6.80 | 14.05 | Horizontal | -36.20 | -25.00 | 11.20 | 180 |
| 10 | 25350.0 | -42.54 | 6.90 | 14.84 | Horizontal | -34.60 | -25.00 | 9.60 | 225 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 7 QPSK 5MHz CH-High, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 5135.0 | -55.45 | 2.00 | 9.15 | Horizontal | -48.30 | -25.00 | 23.30 | 225 |
| 3 | 7702.5 | -52.05 | 2.50 | 11.35 | Horizontal | -43.20 | -25.00 | 18.20 | 45 |
| 4 | 10270.0 | -47.55 | 4.20 | 12.05 | Horizontal | -39.70 | -25.00 | 14.70 | 90 |
| 5 | 12837.5 | -46.15 | 5.20 | 12.85 | Horizontal | -38.50 | -25.00 | 13.50 | 180 |
| 6 | 15405.0 | -48.93 | 5.50 | 14.23 | Horizontal | -40.20 | -25.00 | 15.20 | 180 |
| 7 | 17972.5 | -46.25 | 5.70 | 14.15 | Horizontal | -37.80 | -25.00 | 12.80 | 270 |
| 8 | 20540.0 | -43.66 | 6.30 | 13.76 | Horizontal | -36.20 | -25.00 | 11.20 | 135 |
| 9 | 23107.5 | -43.05 | 6.80 | 14.05 | Horizontal | -35.80 | -25.00 | 10.80 | 180 |
| 10 | 25675.0 | -43.54 | 6.90 | 14.84 | Horizontal | -35.60 | -25.00 | 10.60 | 225 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 7 QPSK 10MHz CH-Low, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 5010.0 | -55.35 | 2.00 | 9.15 | Horizontal | -48.20 | -25.00 | 23.20 | 225 |
| 3 | 7515.0 | -52.35 | 2.50 | 11.35 | Horizontal | -43.50 | -25.00 | 18.50 | 45 |
| 4 | 10020.0 | -49.05 | 4.20 | 12.05 | Horizontal | -41.20 | -25.00 | 16.20 | 180 |
| 5 | 12525.0 | -47.45 | 5.20 | 12.85 | Horizontal | -39.80 | -25.00 | 14.80 | 270 |
| 6 | 15030.0 | -46.93 | 5.50 | 14.23 | Horizontal | -38.20 | -25.00 | 13.20 | 135 |
| 7 | 17535.0 | -46.85 | 5.70 | 14.15 | Horizontal | -38.40 | -25.00 | 13.40 | 180 |
| 8 | 20040.0 | -45.06 | 6.30 | 13.76 | Horizontal | -37.60 | -25.00 | 12.60 | 225 |
| 9 | 22545.0 | -44.05 | 6.80 | 14.05 | Horizontal | -36.80 | -25.00 | 11.80 | 90 |
| 10 | 25050.0 | -43.84 | 6.90 | 14.84 | Horizontal | -35.90 | -25.00 | 10.90 | 135 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 7 QPSK 10MHz CH-Middle, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 5070.0 | -54.65 | 2.00 | 9.15 | Horizontal | -47.50 | -25.00 | 22.50 | 45 |
| 3 | 7605.0 | -52.35 | 2.50 | 11.35 | Horizontal | -43.50 | -25.00 | 18.50 | 180 |
| 4 | 10140.0 | -48.55 | 4.20 | 12.05 | Horizontal | -40.70 | -25.00 | 15.70 | 270 |
| 5 | 12675.0 | -47.15 | 5.20 | 12.85 | Horizontal | -39.50 | -25.00 | 14.50 | 135 |
| 6 | 15210.0 | -46.03 | 5.50 | 14.23 | Horizontal | -37.30 | -25.00 | 12.30 | 180 |
| 7 | 17745.0 | -45.05 | 5.70 | 14.15 | Horizontal | -36.60 | -25.00 | 11.60 | 225 |
| 8 | 20280.0 | -42.56 | 6.30 | 13.76 | Horizontal | -35.10 | -25.00 | 10.10 | 45 |
| 9 | 22815.0 | -42.15 | 6.80 | 14.05 | Horizontal | -34.90 | -25.00 | 9.90 | 90 |
| 10 | 25350.0 | -41.04 | 6.90 | 14.84 | Horizontal | -33.10 | -25.00 | 8.10 | 180 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 7 QPSK 10MHz CH-High, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 5130.0 | -54.55 | 2.00 | 10.15 | Horizontal | -46.40 | -25.00 | 21.40 | 45 |
| 3 | 7695.0 | -51.05 | 2.50 | 11.35 | Horizontal | -42.20 | -25.00 | 17.20 | 180 |
| 4 | 10260.0 | -48.55 | 4.20 | 12.05 | Horizontal | -40.70 | -25.00 | 15.70 | 225 |
| 5 | 12825.0 | -46.65 | 5.20 | 14.85 | Horizontal | -37.00 | -25.00 | 12.00 | 45 |
| 6 | 15390.0 | -47.53 | 5.50 | 13.23 | Horizontal | -39.80 | -25.00 | 14.80 | 90 |
| 7 | 17955.0 | -43.35 | 5.70 | 12.15 | Horizontal | -36.90 | -25.00 | 11.90 | 180 |
| 8 | 20520.0 | -43.46 | 6.30 | 13.76 | Horizontal | -36.00 | -25.00 | 11.00 | 270 |
| 9 | 23085.0 | -42.65 | 6.80 | 14.05 | Horizontal | -35.40 | -25.00 | 10.40 | 180 |
| 10 | 25650.0 | -42.14 | 6.90 | 14.84 | Horizontal | -34.20 | -25.00 | 9.20 | 270 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 7 QPSK 15MHz CH-Low, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 5015.0 | -56.75 | 2.00 | 10.15 | Horizontal | -48.60 | -25.00 | 23.60 | 270 |
| 3 | 7522.5 | -51.65 | 2.50 | 11.35 | Horizontal | -42.80 | -25.00 | 17.80 | 135 |
| 4 | 10030.0 | -48.75 | 4.20 | 12.05 | Horizontal | -40.90 | -25.00 | 15.90 | 180 |
| 5 | 12537.5 | -49.55 | 5.20 | 14.85 | Horizontal | -39.90 | -25.00 | 14.90 | 225 |
| 6 | 15045.0 | -47.03 | 5.50 | 13.23 | Horizontal | -39.30 | -25.00 | 14.30 | 45 |
| 7 | 17552.5 | -44.35 | 5.70 | 12.15 | Horizontal | -37.90 | -25.00 | 12.90 | 90 |
| 8 | 20060.0 | -43.96 | 6.30 | 13.76 | Horizontal | -36.50 | -25.00 | 11.50 | 180 |
| 9 | 22567.5 | -42.55 | 6.80 | 14.05 | Horizontal | -35.30 | -25.00 | 10.30 | 270 |
| 10 | 25075.0 | -42.14 | 6.90 | 14.84 | Horizontal | -34.20 | -25.00 | 9.20 | 135 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 7 QPSK 15MHz CH-Middle, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 5070.0 | -55.55 | 2.00 | 10.15 | Horizontal | -47.40 | -25.00 | 22.40 | 180 |
| 3 | 7605.0 | -51.55 | 2.50 | 11.35 | Horizontal | -42.70 | -25.00 | 17.70 | 270 |
| 4 | 10140.0 | -48.05 | 4.20 | 12.05 | Horizontal | -40.20 | -25.00 | 15.20 | 135 |
| 5 | 12675.0 | -48.85 | 5.20 | 14.85 | Horizontal | -39.20 | -25.00 | 14.20 | 180 |
| 6 | 15210.0 | -44.83 | 5.50 | 13.23 | Horizontal | -37.10 | -25.00 | 12.10 | 225 |
| 7 | 17745.0 | -43.35 | 5.70 | 12.15 | Horizontal | -36.90 | -25.00 | 11.90 | 45 |
| 8 | 20280.0 | -43.36 | 6.30 | 13.76 | Horizontal | -35.90 | -25.00 | 10.90 | 180 |
| 9 | 22815.0 | -41.75 | 6.80 | 14.05 | Horizontal | -34.50 | -25.00 | 9.50 | 270 |
| 10 | 25350.0 | -41.74 | 6.90 | 14.84 | Horizontal | -33.80 | -25.00 | 8.80 | 135 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 7 QPSK 15MHz CH-High, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 5125.0 | -54.55 | 2.00 | 10.15 | Horizontal | -46.40 | -25.00 | 21.40 | 270 |
| 3 | 7687.5 | -51.65 | 2.50 | 11.35 | Horizontal | -42.80 | -25.00 | 17.80 | 135 |
| 4 | 10250.0 | -47.75 | 4.20 | 12.05 | Horizontal | -39.90 | -25.00 | 14.90 | 45 |
| 5 | 12812.5 | -47.95 | 5.20 | 14.85 | Horizontal | -38.30 | -25.00 | 13.30 | 270 |
| 6 | 15375.0 | -45.83 | 5.50 | 13.23 | Horizontal | -38.10 | -25.00 | 13.10 | 180 |
| 7 | 17937.5 | -43.95 | 5.70 | 12.15 | Horizontal | -37.50 | -25.00 | 12.50 | 270 |
| 8 | 20500.0 | -44.26 | 6.30 | 13.76 | Horizontal | -36.80 | -25.00 | 11.80 | 135 |
| 9 | 23062.5 | -43.15 | 6.80 | 14.05 | Horizontal | -35.90 | -25.00 | 10.90 | 180 |
| 10 | 25625.0 | -42.54 | 6.90 | 14.84 | Horizontal | -34.60 | -25.00 | 9.60 | 270 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 7 QPSK 20MHz CH-Low, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 5020.0 | -54.15 | 2.00 | 10.15 | Horizontal | -46.00 | -25.00 | 21.00 | 270 |
| 3 | 7530.0 | -52.55 | 2.50 | 11.35 | Horizontal | -43.70 | -25.00 | 18.70 | 180 |
| 4 | 10040.0 | -47.65 | 4.20 | 12.05 | Horizontal | -39.80 | -25.00 | 14.80 | 270 |
| 5 | 12550.0 | -50.35 | 5.20 | 14.85 | Horizontal | -40.70 | -25.00 | 15.70 | 135 |
| 6 | 15060.0 | -45.83 | 5.50 | 13.23 | Horizontal | -38.10 | -25.00 | 13.10 | 180 |
| 7 | 17570.0 | -43.75 | 5.70 | 12.15 | Horizontal | -37.30 | -25.00 | 12.30 | 270 |
| 8 | 20080.0 | -43.96 | 6.30 | 13.76 | Horizontal | -36.50 | -25.00 | 11.50 | 135 |
| 9 | 22590.0 | -43.05 | 6.80 | 14.05 | Horizontal | -35.80 | -25.00 | 10.80 | 45 |
| 10 | 25100.0 | -42.84 | 6.90 | 14.84 | Horizontal | -34.90 | -25.00 | 9.90 | 270 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 7 QPSK 20MHz CH-Middle, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 5070.0 | -55.65 | 2.00 | 10.15 | Horizontal | -47.50 | -25.00 | 22.50 | 270 |
| 3 | 7605.0 | -51.35 | 2.50 | 11.35 | Horizontal | -42.50 | -25.00 | 17.50 | 135 |
| 4 | 10140.0 | -48.35 | 4.20 | 12.05 | Horizontal | -40.50 | -25.00 | 15.50 | 45 |
| 5 | 12675.0 | -50.25 | 5.20 | 14.85 | Horizontal | -40.60 | -25.00 | 15.60 | 270 |
| 6 | 15210.0 | -44.93 | 5.50 | 13.23 | Horizontal | -37.20 | -25.00 | 12.20 | 180 |
| 7 | 17745.0 | -43.85 | 5.70 | 12.15 | Horizontal | -37.40 | -25.00 | 12.40 | 270 |
| 8 | 20280.0 | -43.56 | 6.30 | 13.76 | Horizontal | -36.10 | -25.00 | 11.10 | 135 |
| 9 | 22815.0 | -42.75 | 6.80 | 14.05 | Horizontal | -35.50 | -25.00 | 10.50 | 45 |
| 10 | 25350.0 | -42.64 | 6.90 | 14.84 | Horizontal | -34.70 | -25.00 | 9.70 | 180 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 7 QPSK 20MHz CH-High, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | EIRP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|------------------|-------------|-------------|---------------|
| 2 | 5120.0 | -55.05 | 2.00 | 10.15 | Horizontal | -46.90 | -25.00 | 21.90 | 45 |
| 3 | 7680.0 | -52.35 | 2.50 | 11.35 | Horizontal | -43.50 | -25.00 | 18.50 | 180 |
| 4 | 10240.0 | -47.85 | 4.20 | 12.05 | Horizontal | -40.00 | -25.00 | 15.00 | 270 |
| 5 | 12800.0 | -47.35 | 5.20 | 14.85 | Horizontal | -37.70 | -25.00 | 12.70 | 135 |
| 6 | 15360.0 | -46.83 | 5.50 | 13.23 | Horizontal | -39.10 | -25.00 | 14.10 | 45 |
| 7 | 17920.0 | -43.65 | 5.70 | 12.15 | Horizontal | -37.20 | -25.00 | 12.20 | 270 |
| 8 | 20480.0 | -43.86 | 6.30 | 13.76 | Horizontal | -36.40 | -25.00 | 11.40 | 180 |
| 9 | 23040.0 | -42.95 | 6.80 | 14.05 | Horizontal | -35.70 | -25.00 | 10.70 | 270 |
| 10 | 25600.0 | -42.84 | 6.90 | 14.84 | Horizontal | -34.90 | -25.00 | 9.90 | 135 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 12 QPSK 1.4MHz CH-Low, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | ERP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|-----------------|-------------|-------------|---------------|
| 2 | 1399.4 | -60.85 | 2.00 | 10.15 | Horizontal | -52.70 | -13.00 | 39.70 | 45 |
| 3 | 2099.1 | -58.95 | 2.50 | 11.35 | Horizontal | -50.10 | -13.00 | 37.10 | 270 |
| 4 | 2798.8 | -56.15 | 4.20 | 10.85 | Horizontal | -49.50 | -13.00 | 36.50 | 45 |
| 5 | 3498.5 | -56.85 | 5.20 | 11.35 | Horizontal | -50.70 | -13.00 | 37.70 | 180 |
| 6 | 4198.2 | -56.15 | 5.50 | 11.95 | Horizontal | -49.70 | -13.00 | 36.70 | 270 |
| 7 | 4897.9 | -56.95 | 5.70 | 13.55 | Horizontal | -49.10 | -13.00 | 36.10 | 135 |
| 8 | 5597.6 | -55.25 | 6.30 | 13.75 | Horizontal | -47.80 | -13.00 | 34.80 | 45 |
| 9 | 6297.3 | -53.95 | 6.80 | 13.85 | Horizontal | -46.90 | -13.00 | 33.90 | 270 |
| 10 | 6997.0 | -53.25 | 6.90 | 14.25 | Horizontal | -45.90 | -13.00 | 32.90 | 180 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 12 QPSK 1.4MHz CH-Middle, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | ERP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|-----------------|-------------|-------------|---------------|
| 2 | 1415.0 | -61.65 | 2.00 | 10.75 | Horizontal | -52.90 | -13.00 | 39.90 | 270 |
| 3 | 2122.5 | -58.54 | 2.51 | 11.05 | Horizontal | -50.00 | -13.00 | 37.00 | 180 |
| 4 | 2830.0 | -56.45 | 4.20 | 11.15 | Horizontal | -49.50 | -13.00 | 36.50 | 270 |
| 5 | 3537.5 | -58.95 | 5.20 | 11.15 | Horizontal | -53.00 | -13.00 | 40.00 | 270 |
| 6 | 4245.0 | -56.05 | 5.50 | 11.95 | Horizontal | -49.60 | -13.00 | 36.60 | 270 |
| 7 | 4952.5 | -56.25 | 5.70 | 13.55 | Horizontal | -48.40 | -13.00 | 35.40 | 135 |
| 8 | 5660.0 | -55.65 | 6.30 | 13.75 | Horizontal | -48.20 | -13.00 | 35.20 | 45 |
| 9 | 6367.5 | -52.65 | 6.80 | 13.85 | Horizontal | -45.60 | -13.00 | 32.60 | 270 |
| 10 | 7075.0 | -50.85 | 6.90 | 14.25 | Horizontal | -43.50 | -13.00 | 30.50 | 180 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 12 QPSK 1.4MHz CH-High, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | ERP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|-----------------|-------------|-------------|---------------|
| 2 | 1430.6 | -61.15 | 2.00 | 10.15 | Horizontal | -53.00 | -13.00 | 40.00 | 135 |
| 3 | 2145.9 | -58.94 | 2.51 | 11.05 | Horizontal | -50.40 | -13.00 | 37.40 | 45 |
| 4 | 2861.2 | -56.45 | 4.20 | 11.15 | Horizontal | -49.50 | -13.00 | 36.50 | 180 |
| 5 | 3576.5 | -58.95 | 5.20 | 11.15 | Horizontal | -53.00 | -13.00 | 40.00 | 270 |
| 6 | 4291.8 | -56.05 | 5.50 | 11.95 | Horizontal | -49.60 | -13.00 | 36.60 | 135 |
| 7 | 5007.1 | -55.05 | 5.70 | 13.55 | Horizontal | -47.20 | -13.00 | 34.20 | 180 |
| 8 | 5722.4 | -55.25 | 6.30 | 13.75 | Horizontal | -47.80 | -13.00 | 34.80 | 270 |
| 9 | 6437.7 | -52.95 | 6.80 | 13.85 | Horizontal | -45.90 | -13.00 | 32.90 | 135 |
| 10 | 7153.0 | -50.65 | 6.90 | 14.25 | Horizontal | -43.30 | -13.00 | 30.30 | 45 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 12 QPSK 3MHz CH-Low, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | ERP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|-----------------|-------------|-------------|---------------|
| 2 | 1401.0 | -61.65 | 2.00 | 10.15 | Horizontal | -53.50 | -13.00 | 40.50 | 45 |
| 3 | 2101.5 | -59.04 | 2.51 | 11.35 | Horizontal | -50.20 | -13.00 | 37.20 | 270 |
| 4 | 2802.0 | -56.35 | 4.20 | 10.85 | Horizontal | -49.70 | -13.00 | 36.70 | 180 |
| 5 | 3502.5 | -57.45 | 5.20 | 11.35 | Horizontal | -51.30 | -13.00 | 38.30 | 270 |
| 6 | 4203.0 | -56.15 | 5.50 | 11.95 | Horizontal | -49.70 | -13.00 | 36.70 | 180 |
| 7 | 4903.5 | -58.15 | 5.70 | 13.55 | Horizontal | -50.30 | -13.00 | 37.30 | 270 |
| 8 | 5604.0 | -55.85 | 6.30 | 13.75 | Horizontal | -48.40 | -13.00 | 35.40 | 135 |
| 9 | 6304.5 | -53.45 | 6.80 | 13.85 | Horizontal | -46.40 | -13.00 | 33.40 | 90 |
| 10 | 7005.0 | -52.75 | 6.90 | 14.25 | Horizontal | -45.40 | -13.00 | 32.40 | 225 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 12 QPSK 3MHz CH-Middle, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | ERP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|-----------------|-------------|-------------|---------------|
| 2 | 1415.0 | -61.65 | 2.00 | 10.75 | Horizontal | -52.90 | -13.00 | 39.90 | 270 |
| 3 | 2122.5 | -58.34 | 2.51 | 11.05 | Horizontal | -49.80 | -13.00 | 36.80 | 135 |
| 4 | 2830.0 | -57.25 | 4.20 | 11.15 | Horizontal | -50.30 | -13.00 | 37.30 | 45 |
| 5 | 3537.5 | -57.55 | 5.20 | 11.15 | Horizontal | -51.60 | -13.00 | 38.60 | 90 |
| 6 | 4245.0 | -56.65 | 5.50 | 11.95 | Horizontal | -50.20 | -13.00 | 37.20 | 135 |
| 7 | 4952.5 | -55.45 | 5.70 | 13.55 | Horizontal | -47.60 | -13.00 | 34.60 | 225 |
| 8 | 5660.0 | -55.55 | 6.30 | 13.75 | Horizontal | -48.10 | -13.00 | 35.10 | 225 |
| 9 | 6367.5 | -52.45 | 6.80 | 13.85 | Horizontal | -45.40 | -13.00 | 32.40 | 180 |
| 10 | 7075.0 | -50.75 | 6.90 | 14.25 | Horizontal | -43.40 | -13.00 | 30.40 | 45 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 12 QPSK 3MHz CH-High, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | ERP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|-----------------|-------------|-------------|---------------|
| 2 | 1429.0 | -61.25 | 2.00 | 10.15 | Horizontal | -53.10 | -13.00 | 40.10 | 180 |
| 3 | 2143.5 | -58.34 | 2.51 | 11.05 | Horizontal | -49.80 | -13.00 | 36.80 | 45 |
| 4 | 2858.0 | -56.85 | 4.20 | 11.15 | Horizontal | -49.90 | -13.00 | 36.90 | 180 |
| 5 | 3572.5 | -57.95 | 5.20 | 11.15 | Horizontal | -52.00 | -13.00 | 39.00 | 225 |
| 6 | 4287.0 | -55.75 | 5.50 | 11.95 | Horizontal | -49.30 | -13.00 | 36.30 | 180 |
| 7 | 5001.5 | -54.65 | 5.70 | 13.55 | Horizontal | -46.80 | -13.00 | 33.80 | 45 |
| 8 | 5716.0 | -55.25 | 6.30 | 13.75 | Horizontal | -47.80 | -13.00 | 34.80 | 315 |
| 9 | 6430.5 | -52.75 | 6.80 | 13.85 | Horizontal | -45.70 | -13.00 | 32.70 | 270 |
| 10 | 7145.0 | -50.45 | 6.90 | 14.25 | Horizontal | -43.10 | -13.00 | 30.10 | 315 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 12 QPSK 5MHz CH-Low, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | ERP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|-----------------|-------------|-------------|---------------|
| 2 | 1403.0 | -61.45 | 2.00 | 10.15 | Horizontal | -53.30 | -13.00 | 40.30 | 45 |
| 3 | 2104.5 | -58.75 | 2.50 | 11.35 | Horizontal | -49.90 | -13.00 | 36.90 | 270 |
| 4 | 2806.0 | -56.15 | 4.20 | 10.85 | Horizontal | -49.50 | -13.00 | 36.50 | 180 |
| 5 | 3507.5 | -56.55 | 5.20 | 11.35 | Horizontal | -50.40 | -13.00 | 37.40 | 270 |
| 6 | 4209.0 | -56.35 | 5.50 | 11.95 | Horizontal | -49.90 | -13.00 | 36.90 | 135 |
| 7 | 4910.5 | -56.25 | 5.70 | 13.55 | Horizontal | -48.40 | -13.00 | 35.40 | 90 |
| 8 | 5612.0 | -53.65 | 6.30 | 13.75 | Horizontal | -46.20 | -13.00 | 33.20 | 225 |
| 9 | 6313.5 | -53.35 | 6.80 | 13.85 | Horizontal | -46.30 | -13.00 | 33.30 | 180 |
| 10 | 7015.0 | -52.65 | 6.90 | 14.25 | Horizontal | -45.30 | -13.00 | 32.30 | 45 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 12 QPSK 5MHz CH-Middle, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | ERP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|-----------------|-------------|-------------|---------------|
| 2 | 1415.0 | -61.45 | 2.00 | 10.75 | Horizontal | -52.70 | -13.00 | 39.70 | 270 |
| 3 | 2122.5 | -58.74 | 2.51 | 11.05 | Horizontal | -50.20 | -13.00 | 37.20 | 135 |
| 4 | 2830.0 | -56.45 | 4.20 | 11.15 | Horizontal | -49.50 | -13.00 | 36.50 | 45 |
| 5 | 3537.5 | -58.15 | 5.20 | 11.15 | Horizontal | -52.20 | -13.00 | 39.20 | 225 |
| 6 | 4245.0 | -56.35 | 5.50 | 11.95 | Horizontal | -49.90 | -13.00 | 36.90 | 180 |
| 7 | 4952.5 | -57.55 | 5.70 | 13.55 | Horizontal | -49.70 | -13.00 | 36.70 | 45 |
| 8 | 5660.0 | -55.75 | 6.30 | 13.75 | Horizontal | -48.30 | -13.00 | 35.30 | 315 |
| 9 | 6367.5 | -50.05 | 6.80 | 13.85 | Horizontal | -43.00 | -13.00 | 30.00 | 270 |
| 10 | 7075.0 | -50.35 | 6.90 | 14.25 | Horizontal | -43.00 | -13.00 | 30.00 | 135 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 12 QPSK 5MHz CH-High, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | ERP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|-----------------|-------------|-------------|---------------|
| 2 | 1427.0 | -61.25 | 2.00 | 10.15 | Horizontal | -53.10 | -13.00 | 40.10 | 180 |
| 3 | 2140.5 | -58.24 | 2.51 | 11.05 | Horizontal | -49.70 | -13.00 | 36.70 | 45 |
| 4 | 2854.0 | -56.85 | 4.20 | 11.15 | Horizontal | -49.90 | -13.00 | 36.90 | 180 |
| 5 | 3567.5 | -57.35 | 5.20 | 11.15 | Horizontal | -51.40 | -13.00 | 38.40 | 90 |
| 6 | 4281.0 | -56.25 | 5.50 | 11.95 | Horizontal | -49.80 | -13.00 | 36.80 | 225 |
| 7 | 4994.5 | -53.65 | 5.70 | 13.55 | Horizontal | -45.80 | -13.00 | 32.80 | 180 |
| 8 | 5708.0 | -55.15 | 6.30 | 13.75 | Horizontal | -47.70 | -13.00 | 34.70 | 45 |
| 9 | 6421.5 | -53.45 | 6.80 | 13.85 | Horizontal | -46.40 | -13.00 | 33.40 | 225 |
| 10 | 7135.0 | -51.05 | 6.90 | 14.25 | Horizontal | -43.70 | -13.00 | 30.70 | 180 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 12 QPSK 10MHz CH-Low, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | ERP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|-----------------|-------------|-------------|---------------|
| 2 | 1408.0 | -60.55 | 2.00 | 10.15 | Horizontal | -52.40 | -13.00 | 39.40 | 270 |
| 3 | 2112.0 | -59.14 | 2.51 | 11.35 | Horizontal | -50.30 | -13.00 | 37.30 | 135 |
| 4 | 2816.0 | -56.75 | 4.20 | 10.85 | Horizontal | -50.10 | -13.00 | 37.10 | 45 |
| 5 | 3520.0 | -58.35 | 5.20 | 11.35 | Horizontal | -52.20 | -13.00 | 39.20 | 135 |
| 6 | 4224.0 | -55.15 | 5.50 | 11.95 | Horizontal | -48.70 | -13.00 | 35.70 | 0 |
| 7 | 4928.0 | -57.25 | 5.70 | 13.55 | Horizontal | -49.40 | -13.00 | 36.40 | 90 |
| 8 | 5632.0 | -55.85 | 6.30 | 13.75 | Horizontal | -48.40 | -13.00 | 35.40 | 135 |
| 9 | 6336.0 | -53.85 | 6.80 | 13.85 | Horizontal | -46.80 | -13.00 | 33.80 | 270 |
| 10 | 7040.0 | -50.95 | 6.90 | 14.25 | Horizontal | -43.60 | -13.00 | 30.60 | 225 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 12 QPSK 10MHz CH-Middle, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | ERP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|-----------------|-------------|-------------|---------------|
| 2 | 1415.0 | -61.25 | 2.00 | 10.75 | Horizontal | -52.50 | -13.00 | 39.50 | 270 |
| 3 | 2122.5 | -58.64 | 2.51 | 11.05 | Horizontal | -50.10 | -13.00 | 37.10 | 180 |
| 4 | 2830.0 | -57.15 | 4.20 | 11.15 | Horizontal | -50.20 | -13.00 | 37.20 | 270 |
| 5 | 3537.5 | -57.45 | 5.20 | 11.15 | Horizontal | -51.50 | -13.00 | 38.50 | 135 |
| 6 | 4245.0 | -56.25 | 5.50 | 11.95 | Horizontal | -49.80 | -13.00 | 36.80 | 225 |
| 7 | 4952.5 | -57.25 | 5.70 | 13.55 | Horizontal | -49.40 | -13.00 | 36.40 | 135 |
| 8 | 5660.0 | -55.35 | 6.30 | 13.75 | Horizontal | -47.90 | -13.00 | 34.90 | 0 |
| 9 | 6367.5 | -52.35 | 6.80 | 13.85 | Horizontal | -45.30 | -13.00 | 32.30 | 45 |
| 10 | 7075.0 | -51.75 | 6.90 | 14.25 | Horizontal | -44.40 | -13.00 | 31.40 | 135 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 12 QPSK 10MHz CH-High, RB 1

| Harmonic | Frequency (MHz) | SG (dBm) | Cable Loss (dB) | Gain (dBi) | Antenna Polarization | ERP Level (dBm) | Limit (dBm) | Margin (dB) | Azimuth (deg) |
|----------|-----------------|----------|-----------------|------------|----------------------|-----------------|-------------|-------------|---------------|
| 2 | 1422.0 | -60.65 | 2.00 | 10.15 | Horizontal | -52.50 | -13.00 | 39.50 | 135 |
| 3 | 2133.0 | -58.64 | 2.51 | 11.05 | Horizontal | -50.10 | -13.00 | 37.10 | 45 |
| 4 | 2844.0 | -56.35 | 4.20 | 11.15 | Horizontal | -49.40 | -13.00 | 36.40 | 180 |
| 5 | 3555.0 | -57.55 | 5.20 | 11.15 | Horizontal | -51.60 | -13.00 | 38.60 | 0 |
| 6 | 4266.0 | -57.15 | 5.50 | 11.95 | Horizontal | -50.70 | -13.00 | 37.70 | 90 |
| 7 | 4977.0 | -56.55 | 5.70 | 13.55 | Horizontal | -48.70 | -13.00 | 35.70 | 135 |
| 8 | 5688.0 | -54.95 | 6.30 | 13.75 | Horizontal | -47.50 | -13.00 | 34.50 | 270 |
| 9 | 6399.0 | -54.15 | 6.80 | 13.85 | Horizontal | -47.10 | -13.00 | 34.10 | 225 |
| 10 | 7110.0 | -51.25 | 6.90 | 14.25 | Horizontal | -43.90 | -13.00 | 30.90 | 135 |

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

6 Main Test Instruments

| Name | Manufacturer | Type | Serial Number | Calibration Date | Expiration Date |
|--------------------------------------|--------------|--------------|---------------|------------------|-----------------|
| Base Station Simulator | R&S | CMW500 | 113645 | 2017-05-14 | 2018-05-13 |
| Power Splitter | Hua Xiang | SHX-GF2-2-13 | 10120101 | 2017-05-14 | 2018-05-13 |
| Universal Radio Communication Tester | Agilent | E5515C | MY48367192 | 2017-05-14 | 2018-05-13 |
| Spectrum Analyzer | Agilent | N9010A | MY47191109 | 2017-05-14 | 2018-05-13 |
| Signal Analyzer | R&S | FSV30 | 100815 | 2016-12-16 | 2017-12-15 |
| Signal generator | R&S | SMB 100A | 102594 | 2017-05-14 | 2018-05-13 |
| EMI Test Receiver | R&S | ESCI | 100948 | 2017-05-20 | 2018-05-19 |
| Trilog Antenna | SCHWARZBECK | VUBL 9163 | 9163-201 | 2014-12-06 | 2017-12-05 |
| Horn Antenna | R&S | HF907 | 100126 | 2014-12-06 | 2017-12-05 |
| Horn Antenna | ETS-Lindgren | 3160-09 | 00102643 | 2015-01-30 | 2018-01-29 |
| Climatic Chamber | Re Ce | PT-30B | 20101891 | 2015-07-18 | 2018-07-17 |
| RF Cable | Agilent | SMA 15cm | 0001 | 2017-08-04 | 2018-02-03 |
| Preamplifier | R&S | SCU18 | 102327 | 2017-06-18 | 2018-06-17 |
| Software | R&S | EMC32 | V 8.52.0 | NA | NA |

ANNEX A: EUT Appearance and Test Setup

A.1 EUT Appearance



Front Side



Back Side

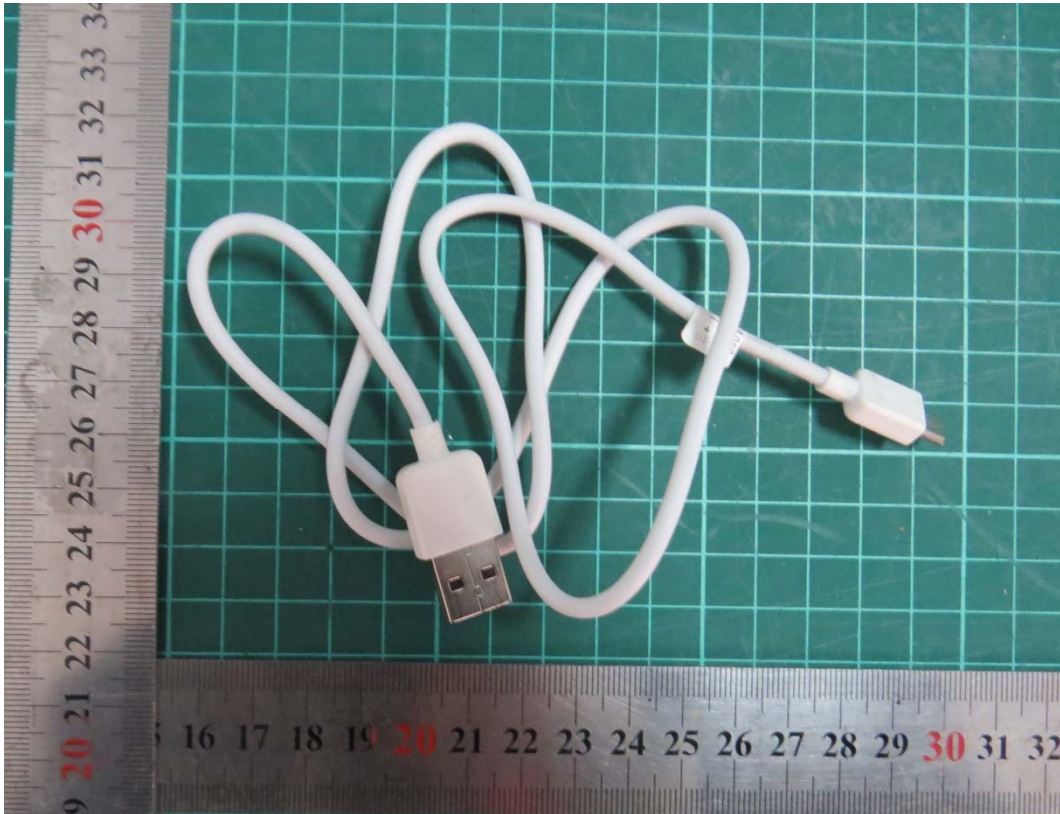
a: EUT



b: Adapter



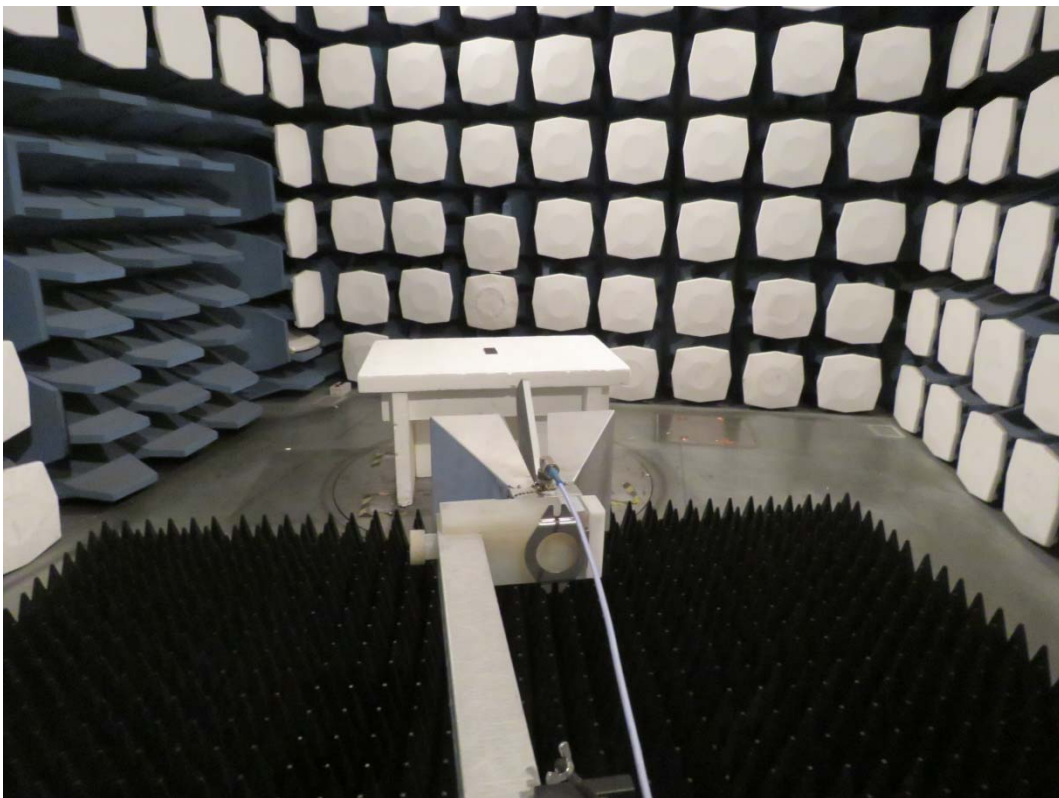
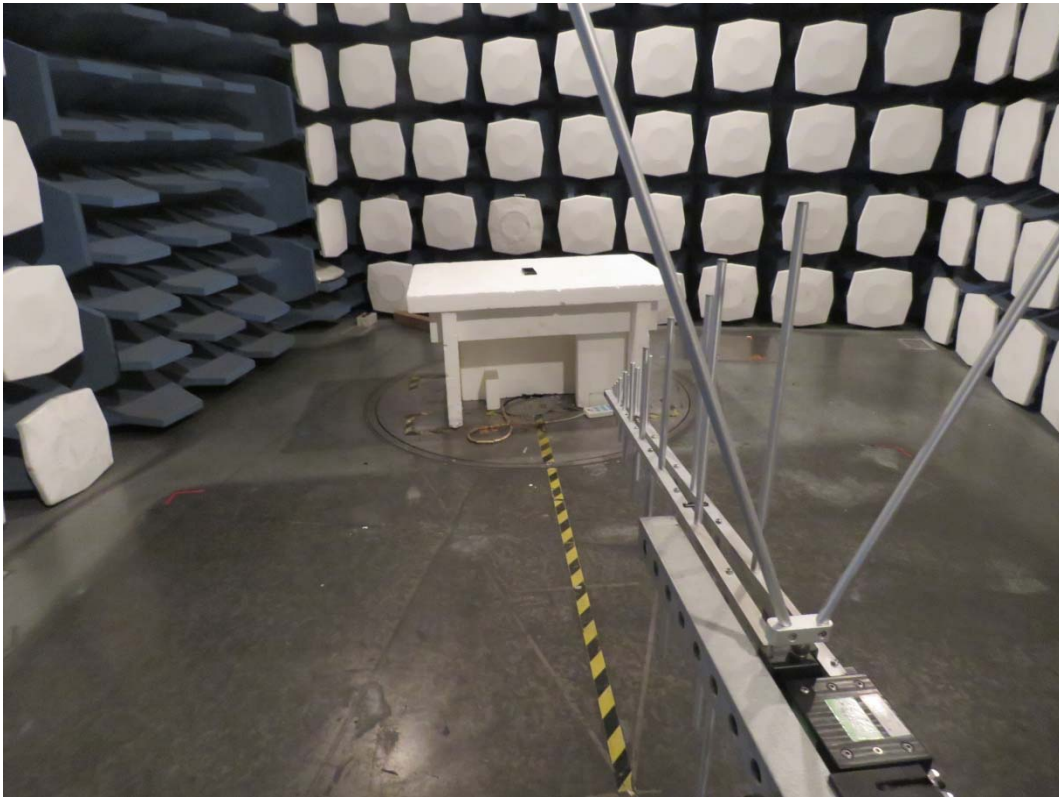
c :Earphone



d : USB Cable

Picture 1 EUT and Accessory

A.2 Test Setup



Picture 2: Radiated Spurious Emissions Test setup