

Figure 8.2-301: Conducted spurious emissions within 30–3600 MHz, Port C, WCDMA, low channel, QPSK

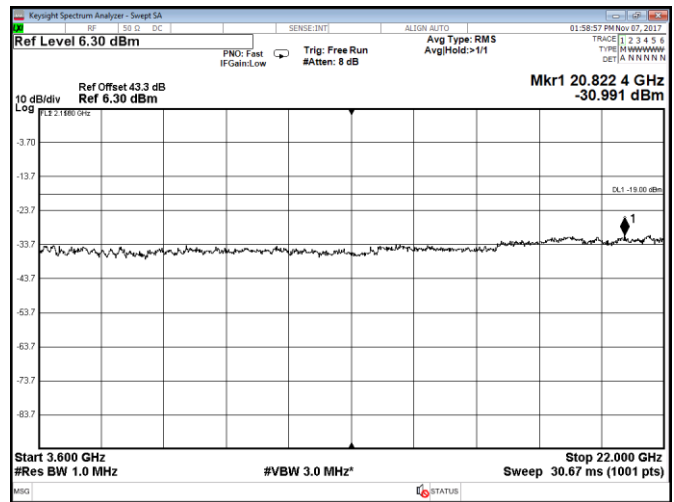


Figure 8.2-302: Conducted spurious emissions within 3600–22000 MHz, Port C, WCDMA, low channel, QPSK

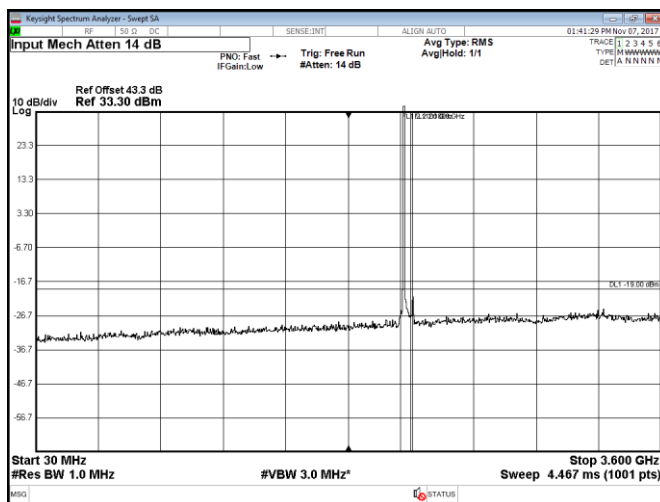


Figure 8.2-303: Conducted spurious emissions within 30–3600 MHz, Port C, WCDMA, mid channel, QPSK

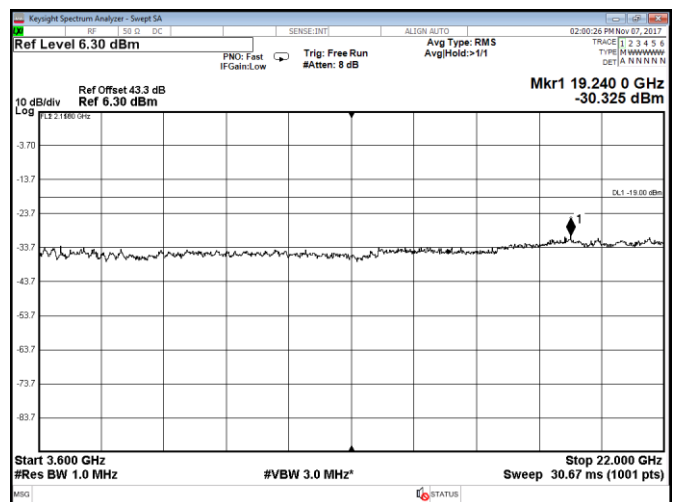


Figure 8.2-304: Conducted spurious emissions within 3600–22000 MHz, Port C, WCDMA, mid channel, QPSK

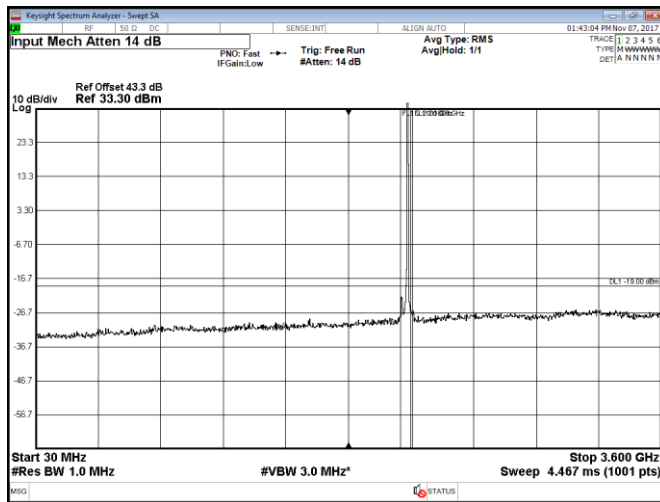


Figure 8.2-305: Conducted spurious emissions within 30–3600 MHz, Port C, WCDMA, high channel, QPSK

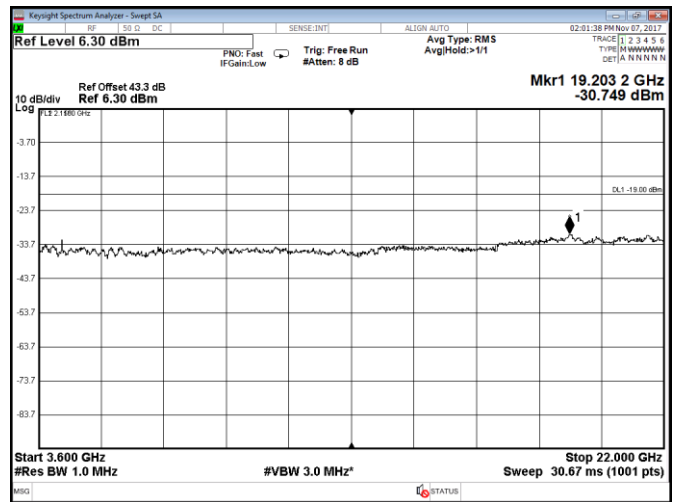


Figure 8.2-306: Conducted spurious emissions within 3600–22000 MHz, Port C, WCDMA, high channel, QPSK

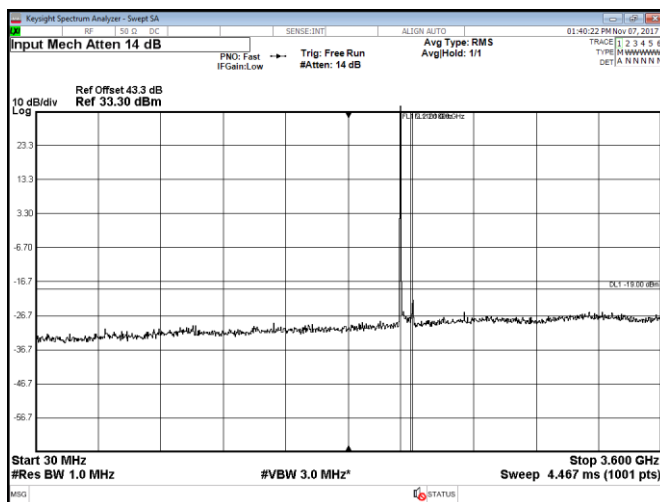


Figure 8.2-307: Conducted spurious emissions within 30–3600 MHz, Port D, WCDMA, low channel, QPSK

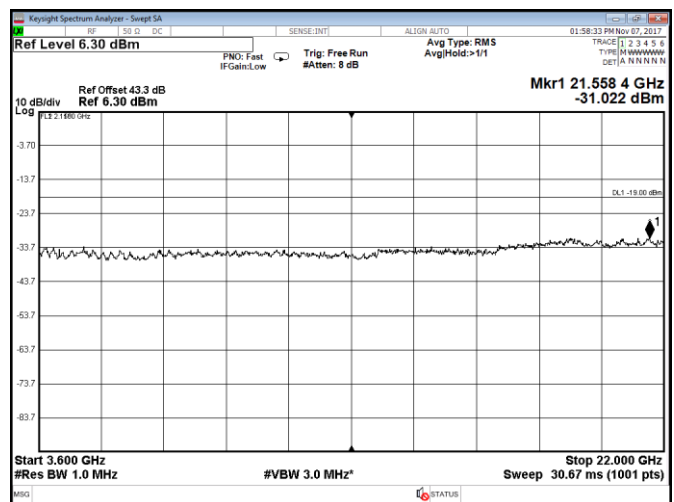


Figure 8.2-308: Conducted spurious emissions within 3600–22000 MHz, Port D, WCDMA, low channel, QPSK

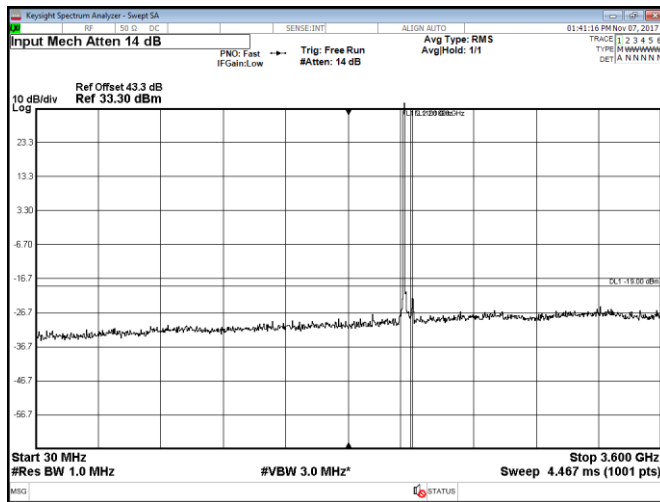


Figure 8.2-309: Conducted spurious emissions within 30–3600 MHz, Port D, WCDMA, mid channel, QPSK

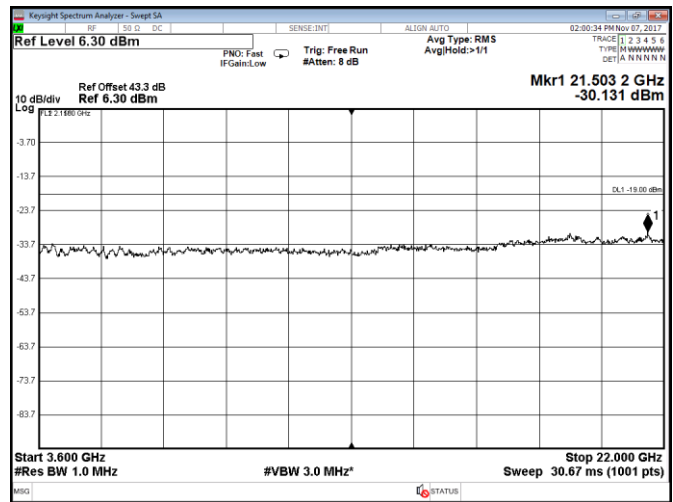


Figure 8.2-310: Conducted spurious emissions within 3600–22000 MHz, Port D, WCDMA, mid channel, QPSK

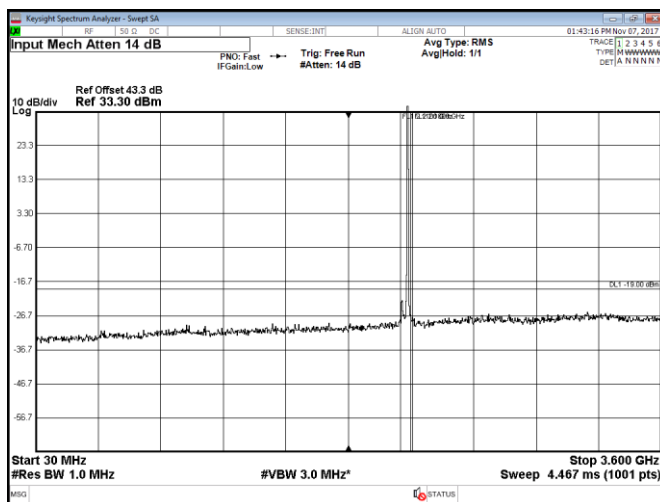


Figure 8.2-311: Conducted spurious emissions within 30–3600 MHz, Port D, WCDMA, high channel, QPSK

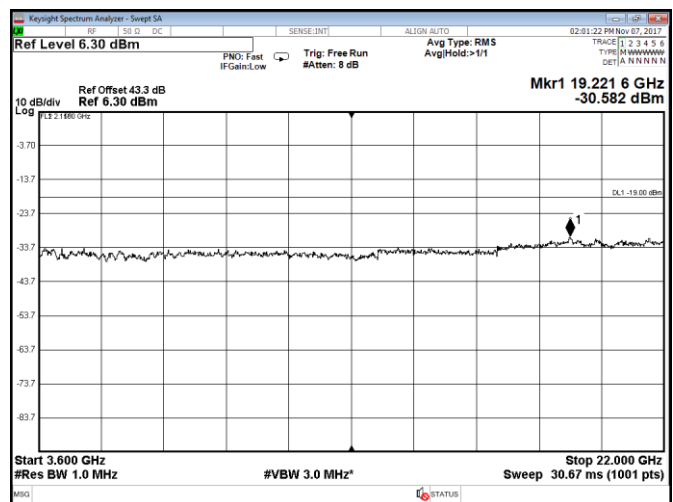


Figure 8.2-312: Conducted spurious emissions within 3600–22000 MHz, Port D, WCDMA, high channel, QPSK

Section 8
Test name
Specification

Testing data
 Clause 27.53 and RSS-139, 6.6 Spurious emissions at RF antenna connector
 FCC Part 27, RSS-139, Issue 3

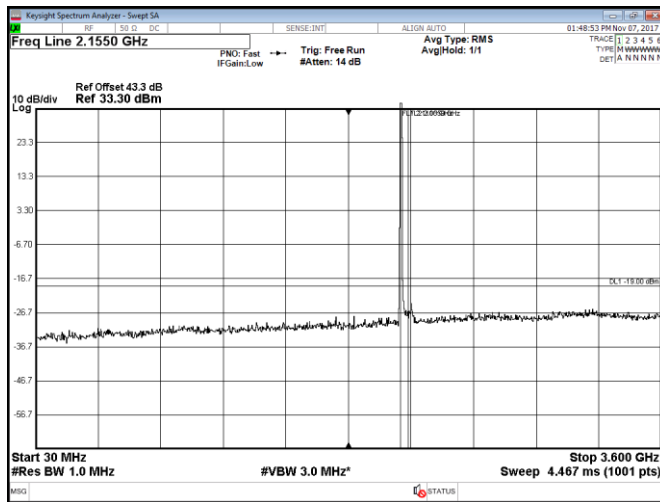


Figure 8.2-313: Conducted spurious emissions within 30–3600 MHz, Port A, WCDMA, 2 bottom channels, QPSK

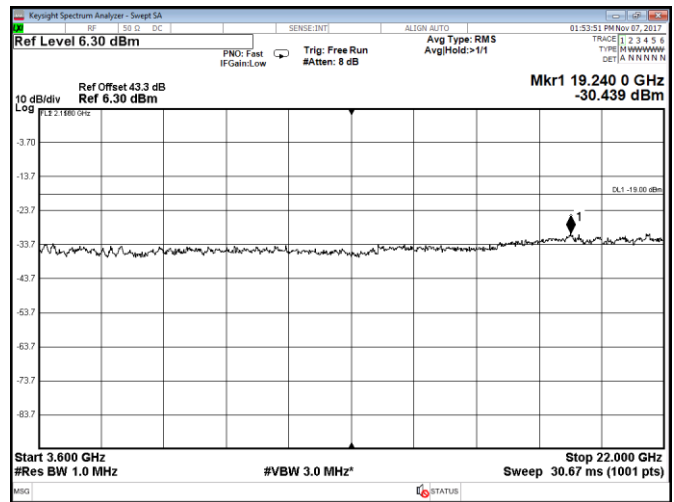


Figure 8.2-314: Conducted spurious emissions within 3600–22000 MHz, Port A, WCDMA, 2 bottom channels, QPSK

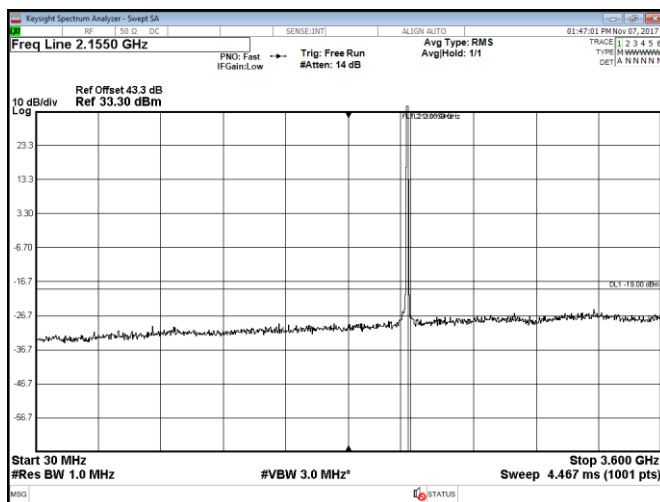


Figure 8.2-315: Conducted spurious emissions within 30–3600 MHz, Port A, WCDMA, 2 top channels, QPSK

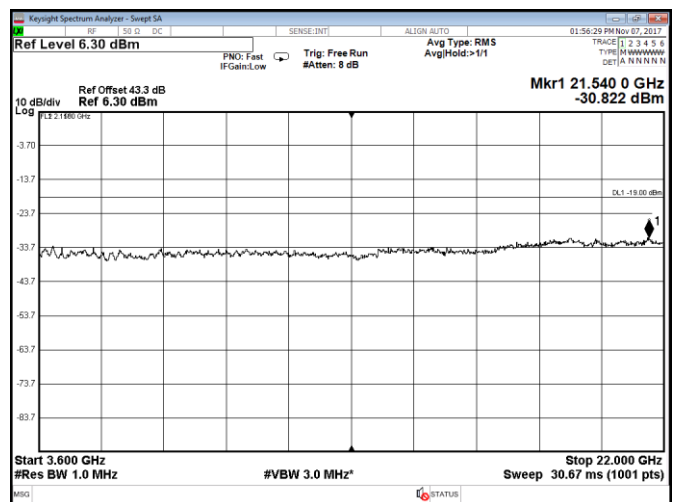


Figure 8.2-316: Conducted spurious emissions within 3600–22000 MHz, Port A, WCDMA, 2 top channels, QPSK

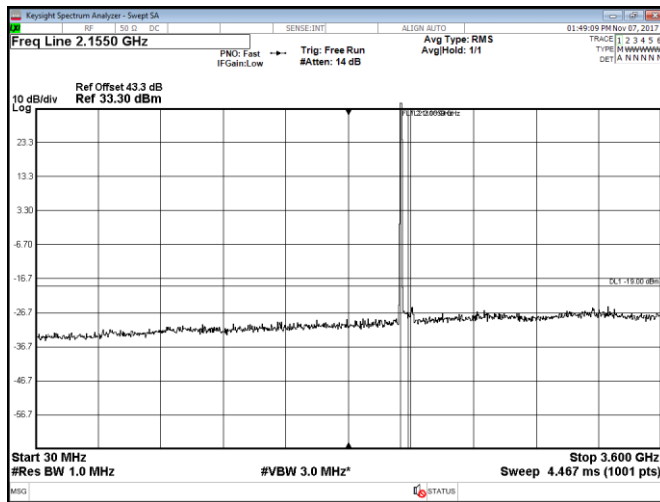


Figure 8.2-317: Conducted spurious emissions within 30–3600 MHz, Port B, WCDMA, 2 bottom channels, QPSK

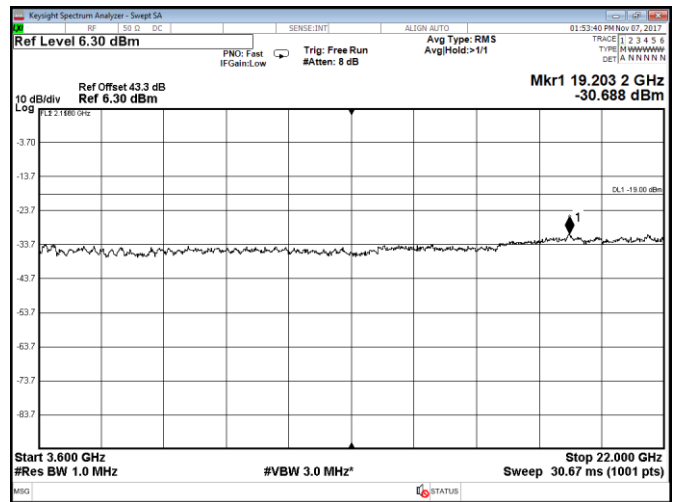


Figure 8.2-318: Conducted spurious emissions within 3600–22000 MHz, Port B, WCDMA, 2 bottom channels, QPSK

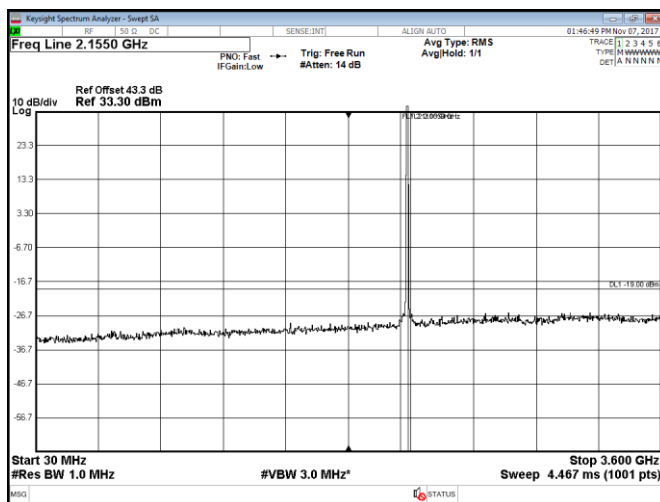


Figure 8.2-319: Conducted spurious emissions within 30–3600 MHz, Port B, WCDMA, 2 top channels, QPSK

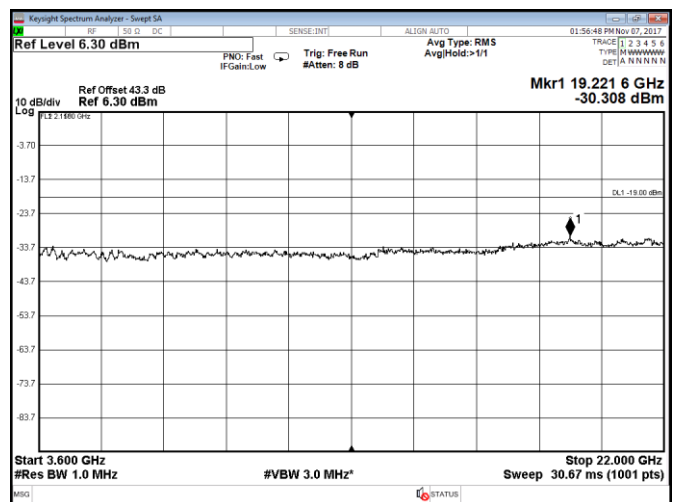


Figure 8.2-320: Conducted spurious emissions within 3600–22000 MHz, Port B, WCDMA, 2 top channels, QPSK

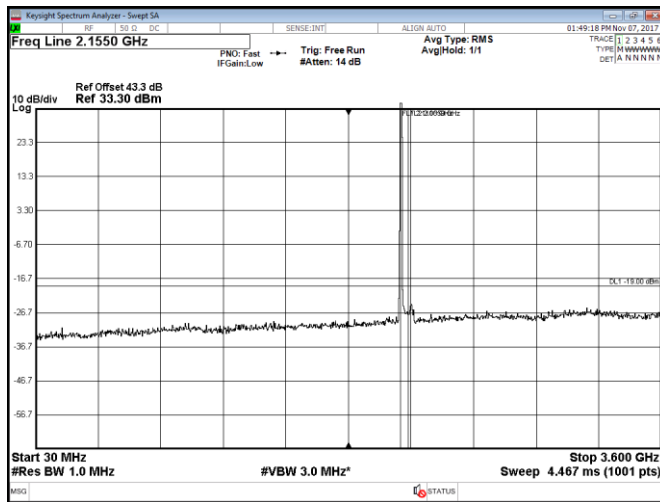


Figure 8.2-321: Conducted spurious emissions within 30–3600 MHz, Port C, WCDMA, 2 bottom channels, QPSK

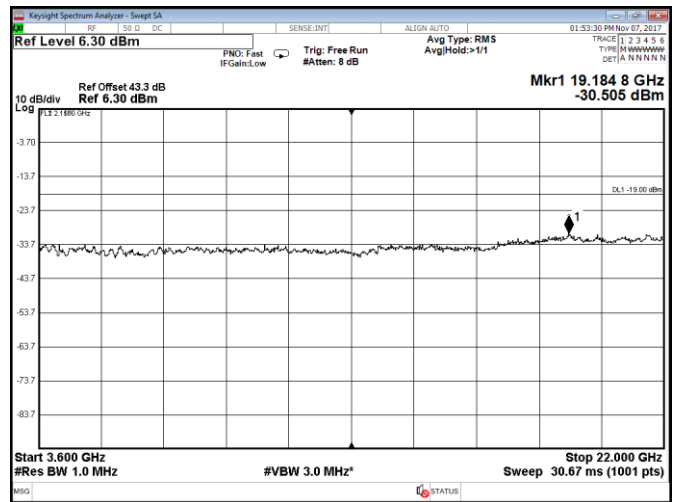


Figure 8.2-322: Conducted spurious emissions within 3600–22000 MHz, Port C, WCDMA, 2 bottom channels, QPSK

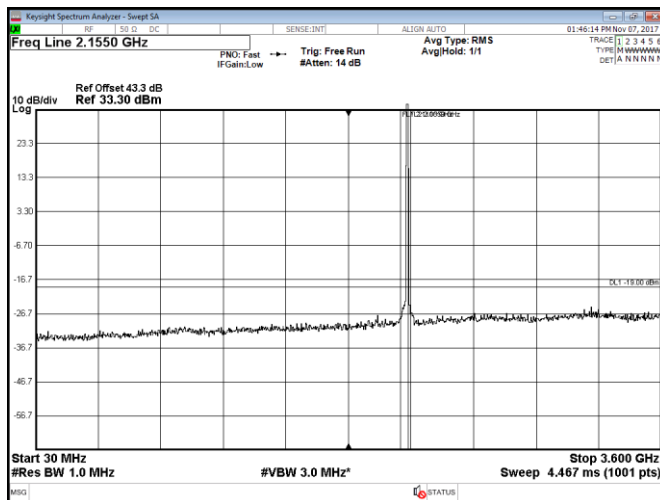


Figure 8.2-323: Conducted spurious emissions within 30–3600 MHz, Port C, WCDMA, 2 top channels, QPSK

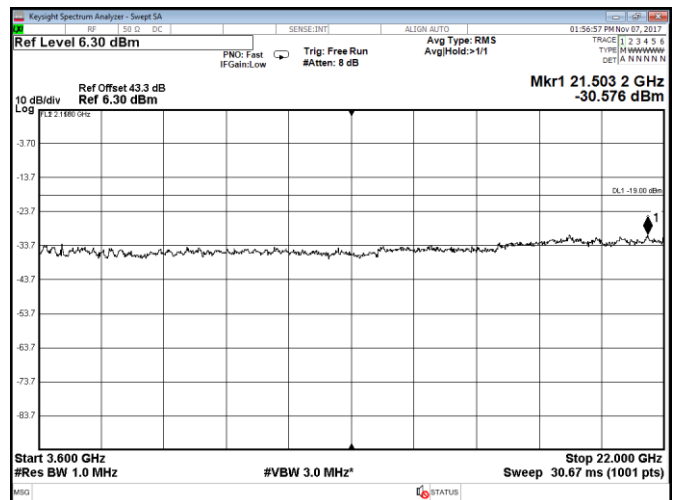


Figure 8.2-324: Conducted spurious emissions within 3600–22000 MHz, Port C, WCDMA, 2 top channels, QPSK

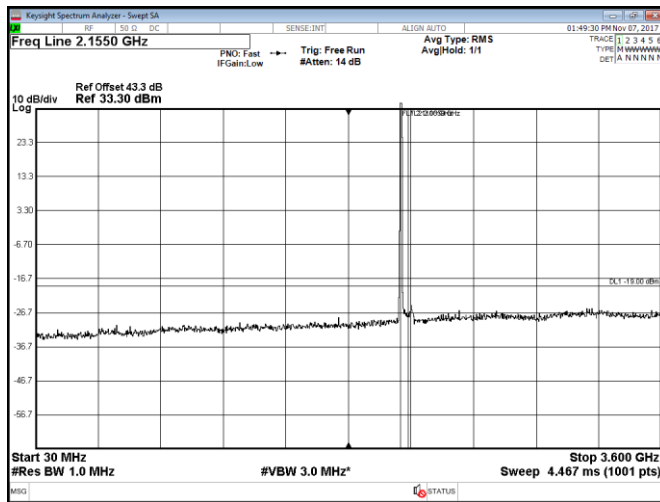


Figure 8.2-325: Conducted spurious emissions within 30–3600 MHz, Port D, WCDMA, 2 bottom channels, QPSK

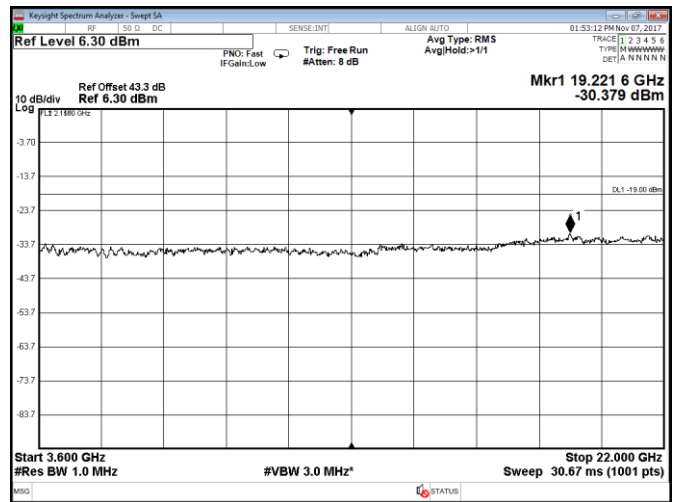


Figure 8.2-326: Conducted spurious emissions within 3600–22000 MHz, Port C, WCDMA, 2 bottom channels, QPSK

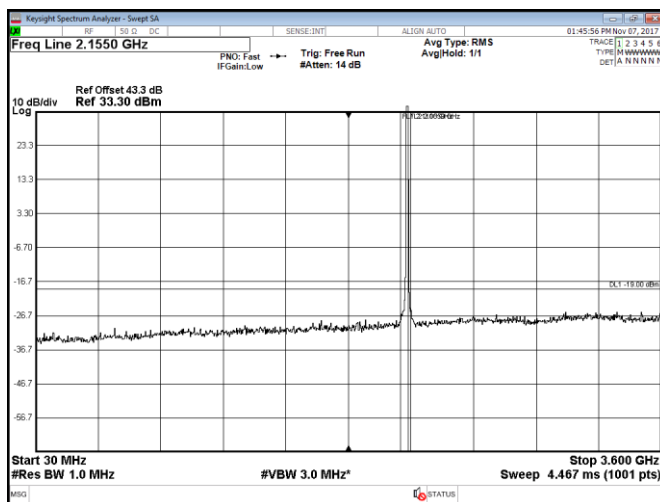


Figure 8.2-327: Conducted spurious emissions within 30–3600 MHz, Port D, WCDMA, 2 top channels, QPSK

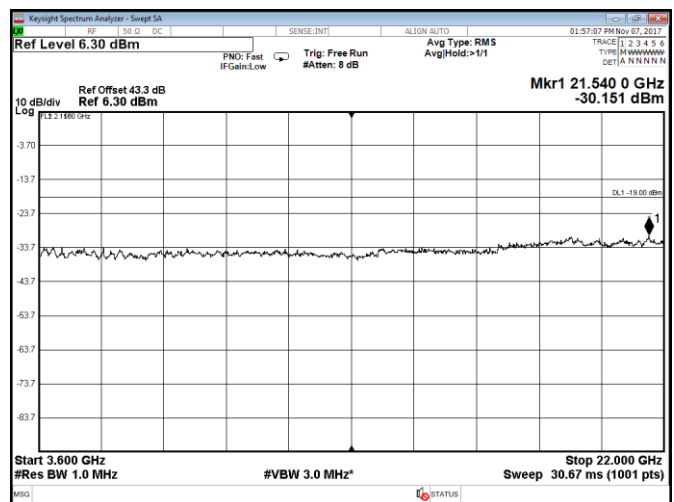


Figure 8.2-328: Conducted spurious emissions within 3600–22000 MHz, Port C, WCDMA, 2 top channels, QPSK

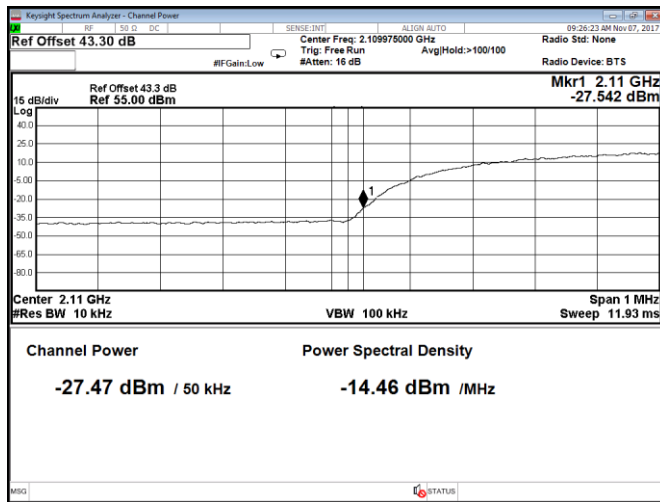


Figure 8.2-329: Conducted band edge emission at 2110 MHz, Port A, WCDMA low channel, QPSK (RBW = 1% of EBW)

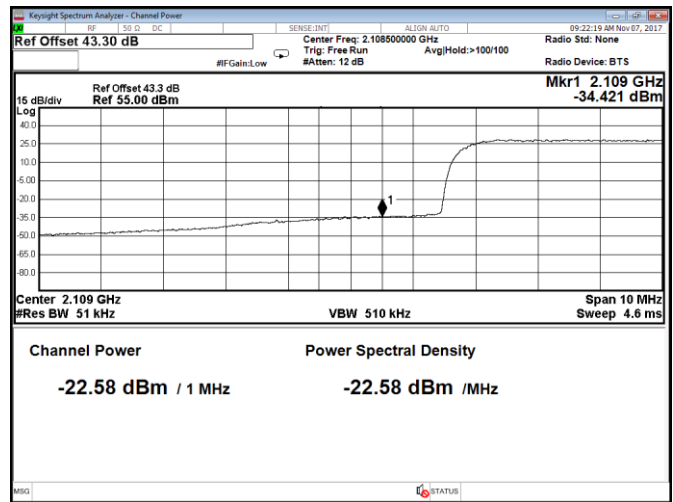


Figure 8.2-330: Conducted band edge emission at 2109 MHz, Port A, WCDMA low channel, QPSK (RBW = 1 MHz)

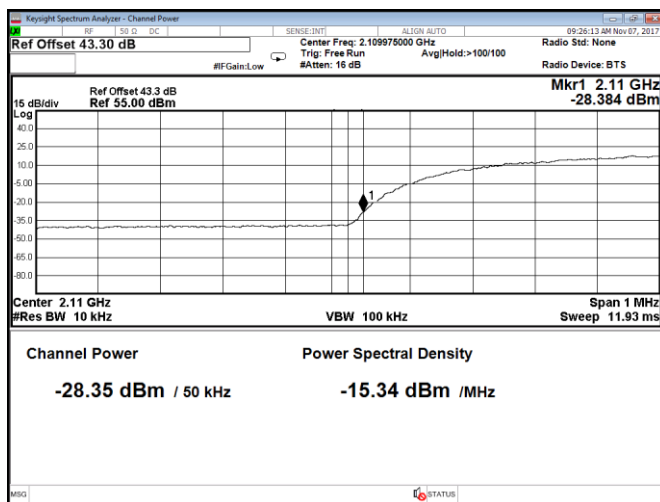


Figure 8.2-331: Conducted band edge emission at 2110 MHz, Port B, WCDMA low channel, QPSK (RBW = 1% of EBW)

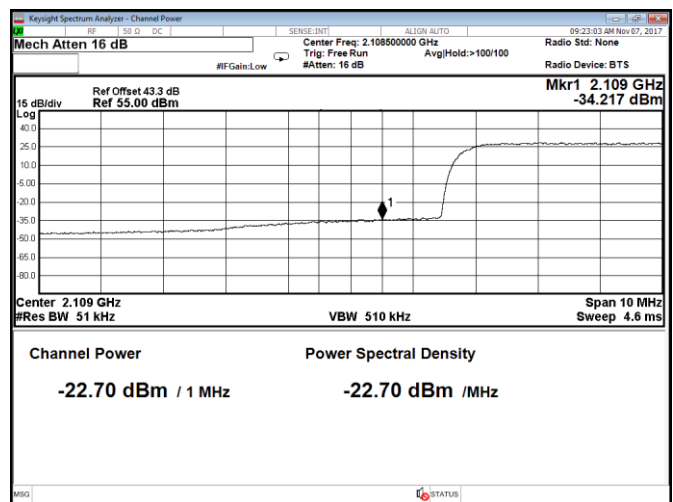


Figure 8.2-332: Conducted band edge emission at 2109 MHz, Port B, WCDMA low channel, QPSK (RBW = 1 MHz)

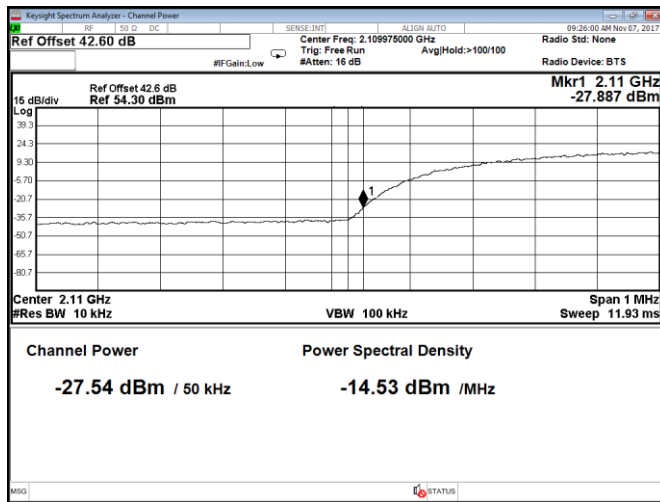


Figure 8.2-333: Conducted band edge emission at 2110 MHz, Port C, WCDMA low channel, QPSK (RBW = 1% of EBW)

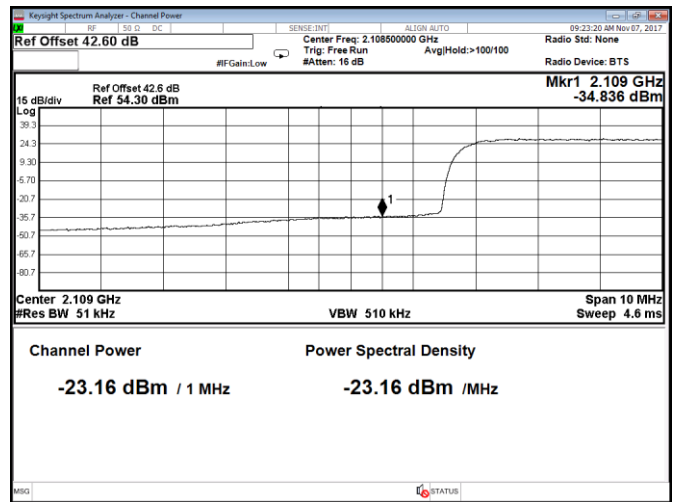


Figure 8.2-334: Conducted band edge emission at 2109 MHz, Port C, WCDMA low channel, QPSK (RBW = 1 MHz)

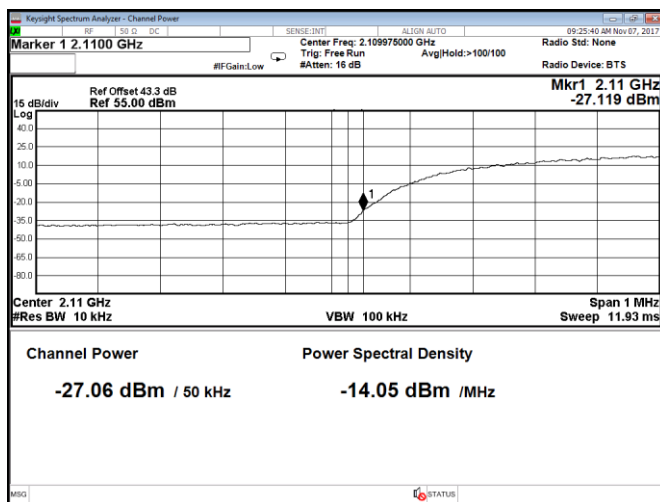


Figure 8.2-335: Conducted band edge emission at 2110 MHz, Port D, WCDMA low channel, QPSK (RBW = 1% of EBW)

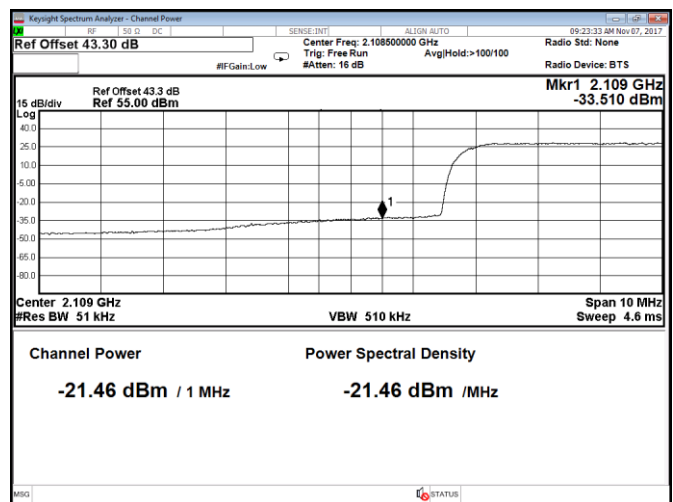


Figure 8.2-336: Conducted band edge emission at 2109 MHz, Port D, WCDMA low channel, QPSK (RBW = 1 MHz)

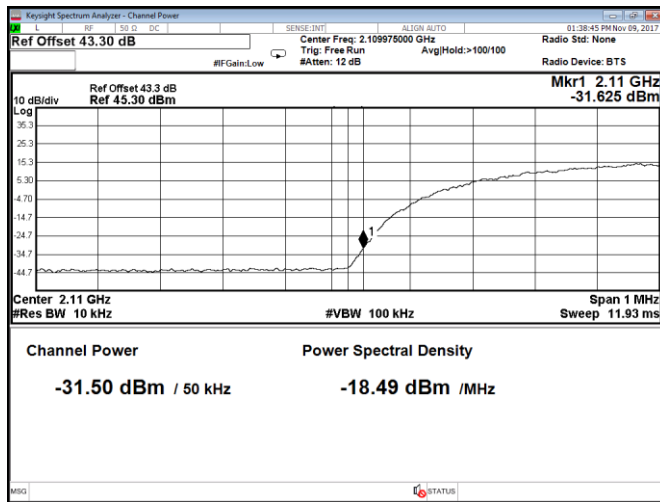


Figure 8.2-337: Conducted band edge emission at 2110 MHz, Port A, WCDMA 2 bottom channels, QPSK (RBW = 1% of EBW)

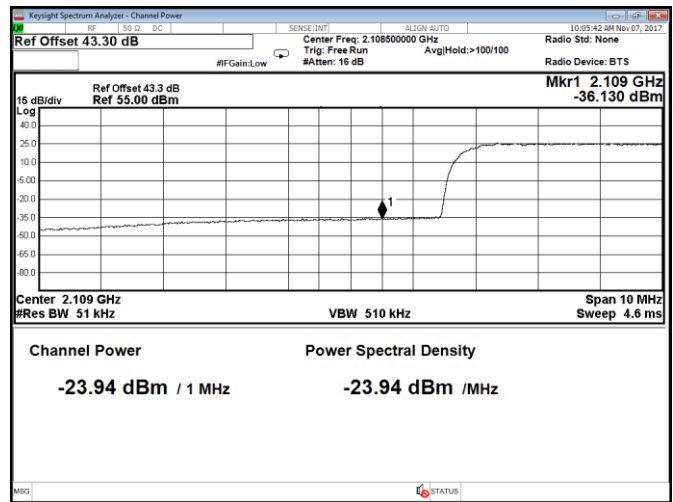


Figure 8.2-338: Conducted band edge emission at 2109 MHz, Port A, WCDMA 2 bottom channels, QPSK (RBW = 1 MHz)

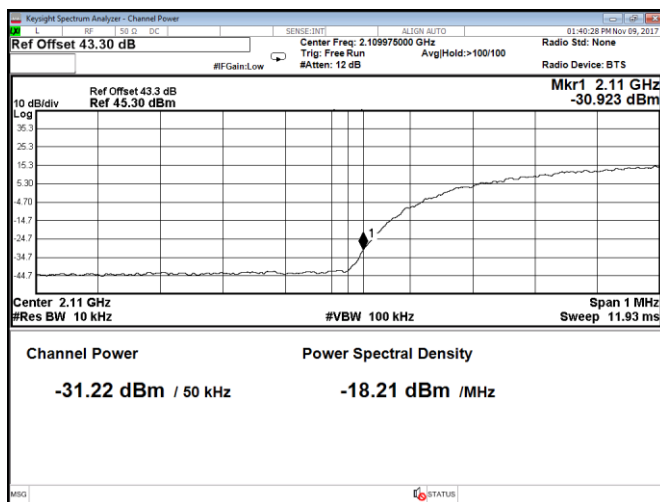


Figure 8.2-339: Conducted band edge emission at 2110 MHz, Port B, WCDMA 2 bottom channels, QPSK (RBW = 1% of EBW)

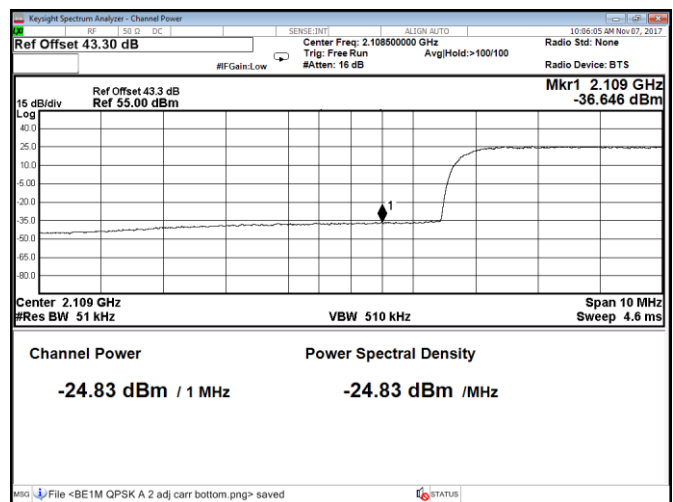


Figure 8.2-340: Conducted band edge emission at 2109 MHz, Port B, WCDMA 2 bottom channels, QPSK (RBW = 1 MHz)

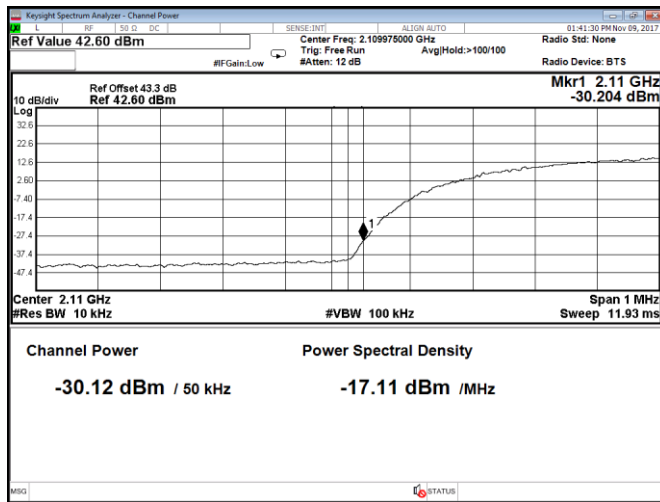


Figure 8.2-341: Conducted band edge emission at 2110 MHz, Port C, WCDMA 2 bottom channels, QPSK (RBW = 1% of EBW)

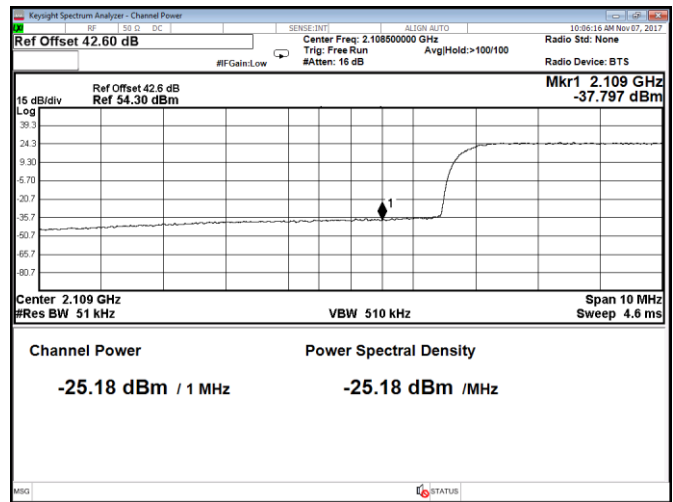


Figure 8.2-342: Conducted band edge emission at 2109 MHz, Port C, WCDMA 2 bottom channels, QPSK (RBW = 1 MHz)

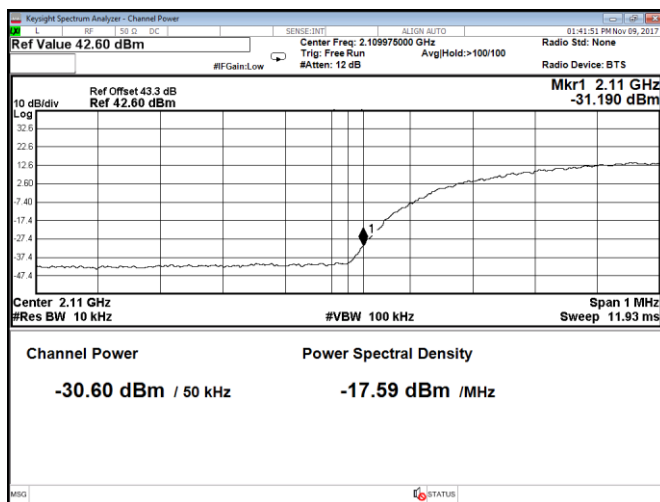


Figure 8.2-343: Conducted band edge emission at 2110 MHz, Port D, WCDMA 2 bottom channels, QPSK (RBW = 1% of EBW)

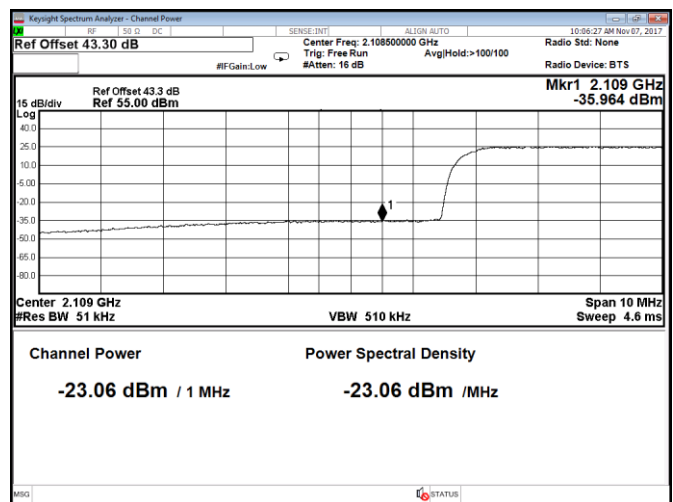


Figure 8.2-344: Conducted band edge emission at 2109 MHz, Port D, WCDMA 2 bottom channels, QPSK (RBW = 1 MHz)

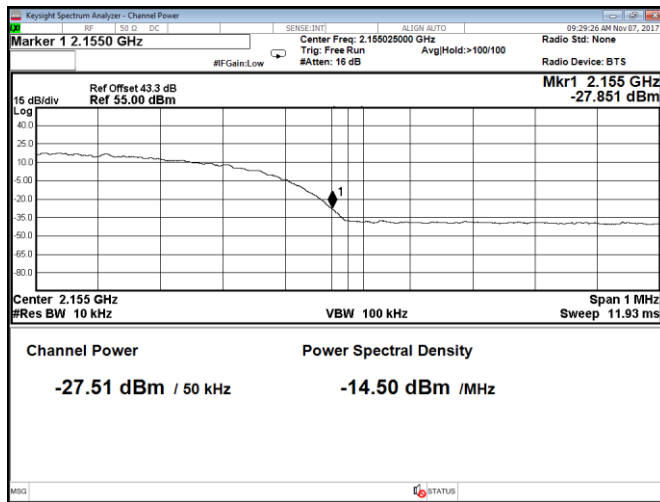


Figure 8.2-345: Conducted band edge emission at 2155 MHz, Port A, WCDMA high channel, QPSK (RBW = 1% of EBW)

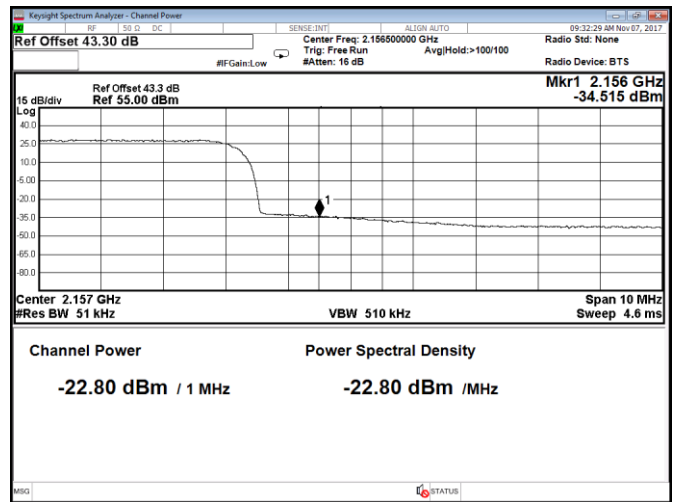


Figure 8.2-346: Conducted band edge emission at 2156 MHz, Port A, WCDMA high channel, QPSK (RBW = 1 MHz)

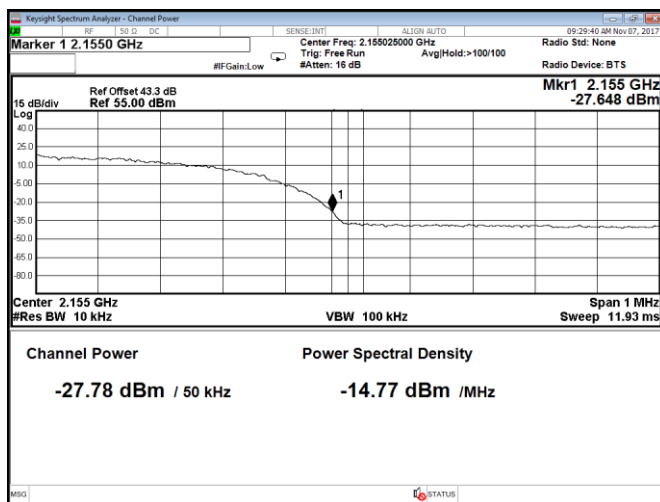


Figure 8.2-347: Conducted band edge emission at 2155 MHz, Port B, WCDMA high channel, QPSK (RBW = 1% of EBW)

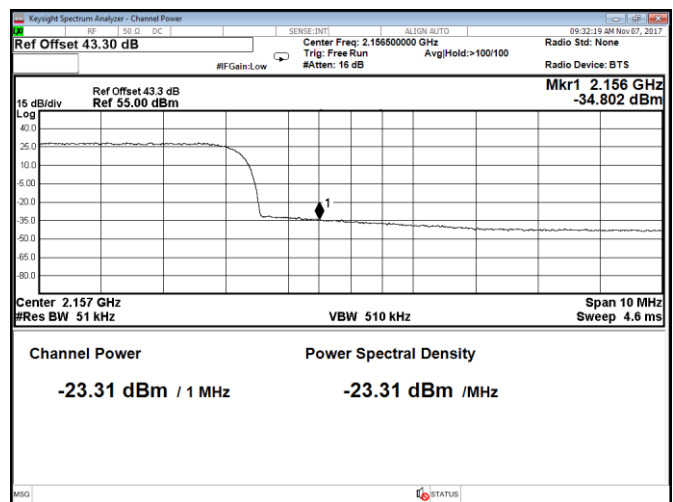


Figure 8.2-348: Conducted band edge emission at 2156 MHz, Port B, WCDMA high channel, QPSK (RBW = 1 MHz)

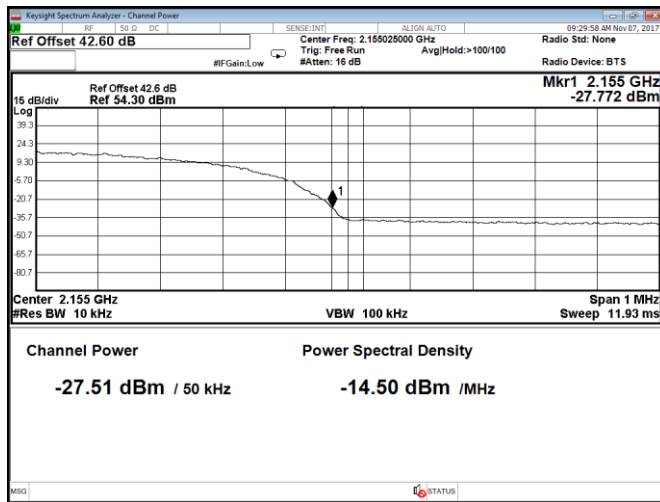


Figure 8.2-349: Conducted band edge emission at 2155 MHz, Port C, WCDMA high channel, QPSK (RBW = 1% of EBW)

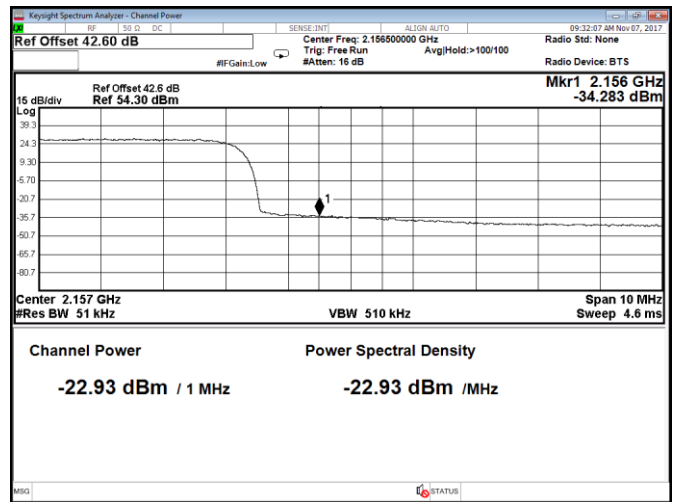


Figure 8.2-350: Conducted band edge emission at 2156 MHz, Port C, WCDMA high channel, QPSK (RBW = 1 MHz)

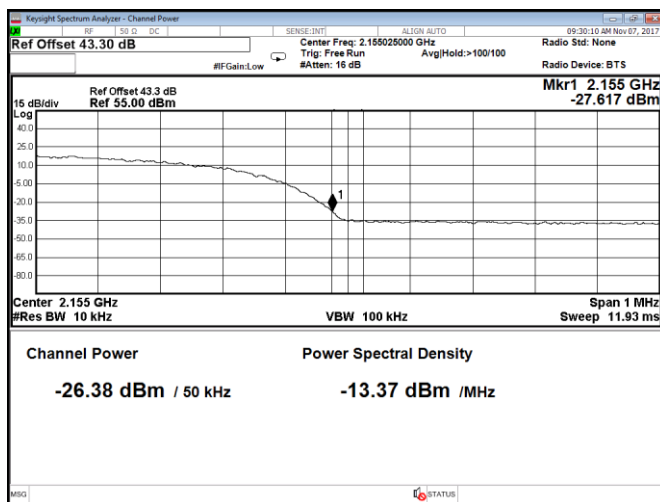


Figure 8.2-351: Conducted band edge emission at 2155 MHz, Port D, WCDMA high channel, QPSK (RBW = 1% of EBW)

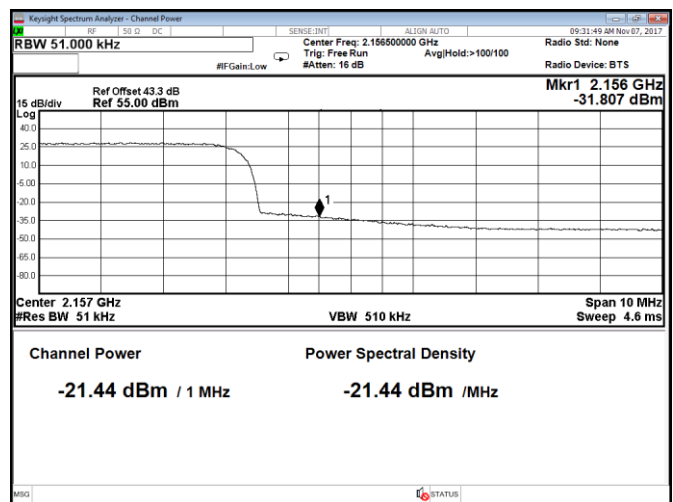


Figure 8.2-352: Conducted band edge emission at 2156 MHz, Port D, WCDMA high channel, QPSK (RBW = 1 MHz)

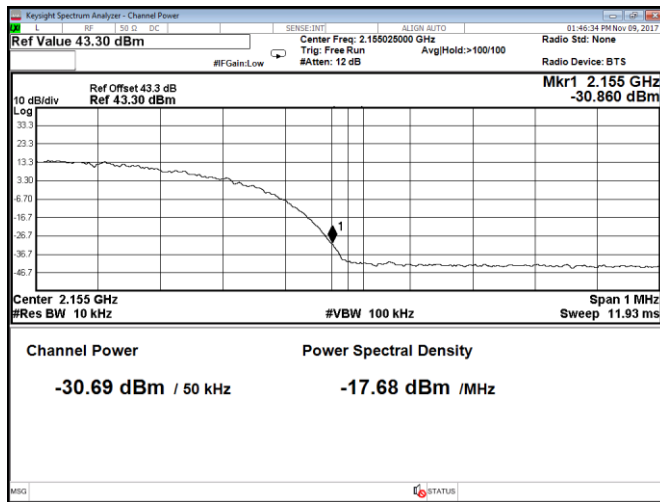


Figure 8.2-353: Conducted band edge emission at 2155 MHz, Port A, WCDMA 2 top channels, QPSK (RBW = 1% of EBW)

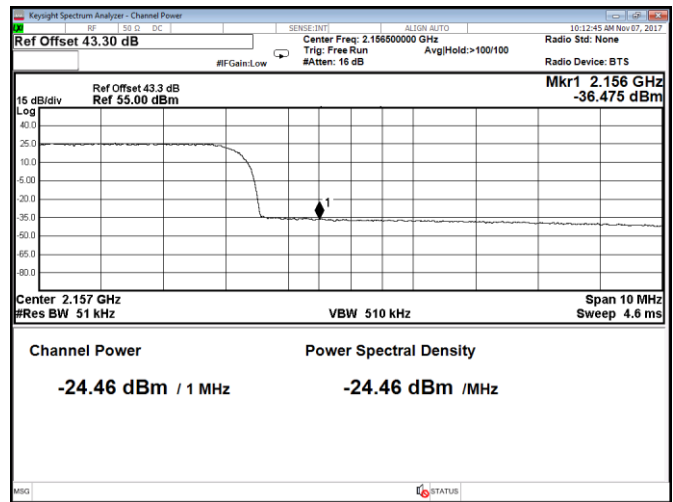


Figure 8.2-354: Conducted band edge emission at 2156 MHz, Port A, WCDMA 2 top channels, QPSK (RBW = 1 MHz)

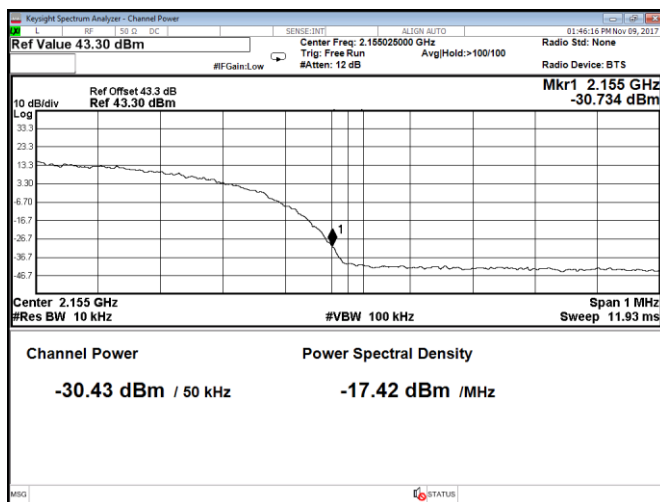


Figure 8.2-355: Conducted band edge emission at 2155 MHz, Port B, WCDMA 2 top channels, QPSK (RBW = 1% of EBW)

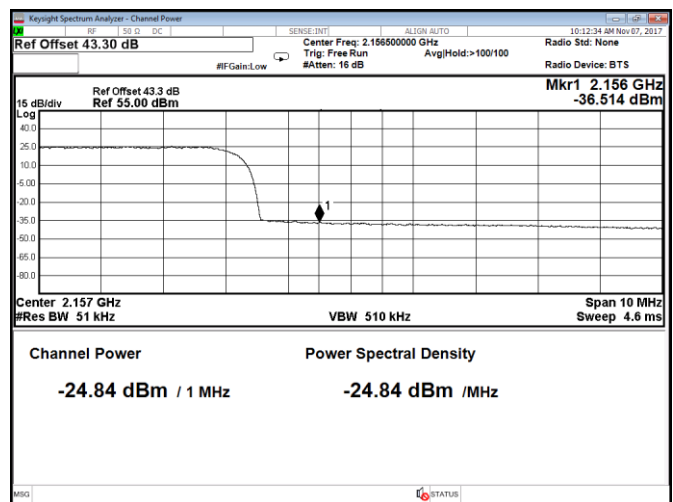


Figure 8.2-356: Conducted band edge emission at 2156 MHz, Port B, WCDMA 2 top channels, QPSK (RBW = 1 MHz)

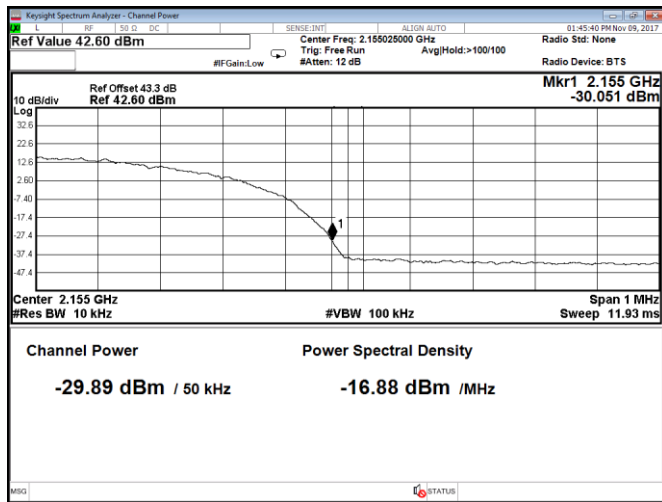


Figure 8.2-357: Conducted band edge emission at 2155 MHz, Port C, WCDMA 2 top channels, QPSK (RBW = 1% of EBW)

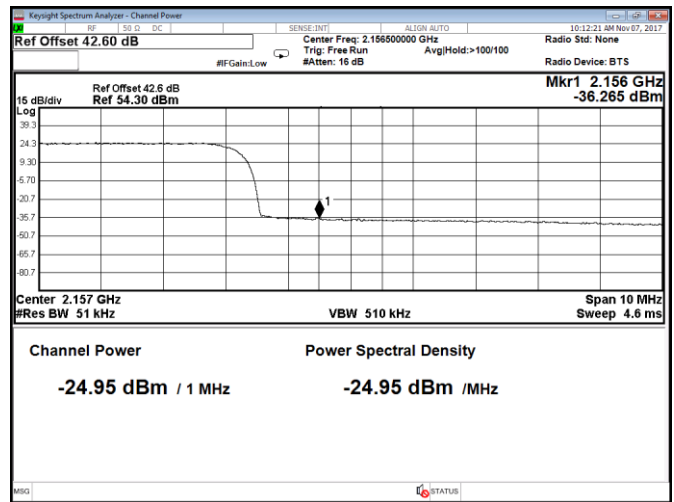


Figure 8.2-358: Conducted band edge emission at 2156 MHz, Port C, WCDMA 2 top channels, QPSK (RBW = 1 MHz)

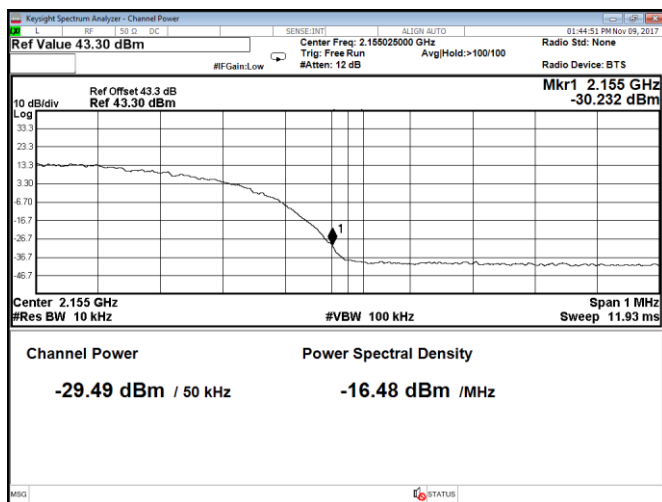


Figure 8.2-359: Conducted band edge emission at 2155 MHz, Port D, WCDMA 2 top channels, QPSK (RBW = 1% of EBW)

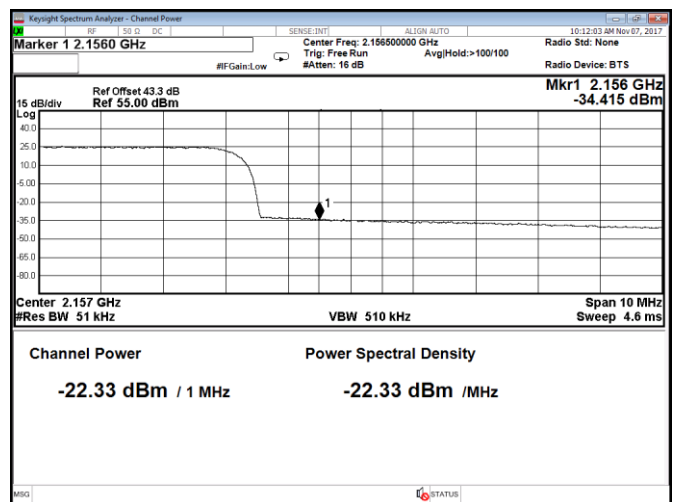


Figure 8.2-360: Conducted band edge emission at 2156 MHz, Port D, WCDMA 2 top channels, QPSK (RBW = 1 MHz)

8.3 FCC 27.53 and RSS-139, 6.6 Radiated spurious emissions

8.3.1 Definitions and limits

FCC:

(h) AWS emission limits

(1) General protection levels. Except as otherwise specified below, 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.

(3) Measurement procedure.

(i) Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

(ii) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the licensee's frequency block edges, both upper and lower, as the design permits.

(iii) The measurements of emission power can be expressed in peak or average values, provided they are expressed in the same parameters as the transmitter power.

RSS-139, Section 6.6:

i. In the first 1.0 MHz bands immediately outside and adjacent to the equipment's smallest operating frequency block, which can contain the equipment's occupied bandwidth, the emission power per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in dBW) by at least $43 + 10 \log_{10} p$ (watts) dB.

ii. After the first 1.0 MHz outside the equipment's smallest operating frequency block, which can contain the equipment's occupied bandwidth, the emission power in any 1 MHz bandwidth shall be attenuated below the transmitter output power P (in dBW) by at least $43 + 10 \log_{10} p$ (watts) dB.

8.3.2 Test summary

| | | | |
|---------------|------------------|-------------------|-----------|
| Test date | November 6, 2017 | Temperature | 22 °C |
| Test engineer | Predrag Golic | Air pressure | 1004 mbar |
| Verdict | Pass | Relative humidity | 32 % |

8.3.3 Observations, settings and special notes

The spectrum was searched from 30 MHz to the 10th harmonic.

All measurements were performed using a peak detector.

RBW within 30–1000 MHz was 100 kHz and 1 MHz above 1 GHz. VBW was wider than RBW.

Testing was performed with all 4 RF ports terminated with 50-Ohm loads.

8.3.4 Test data

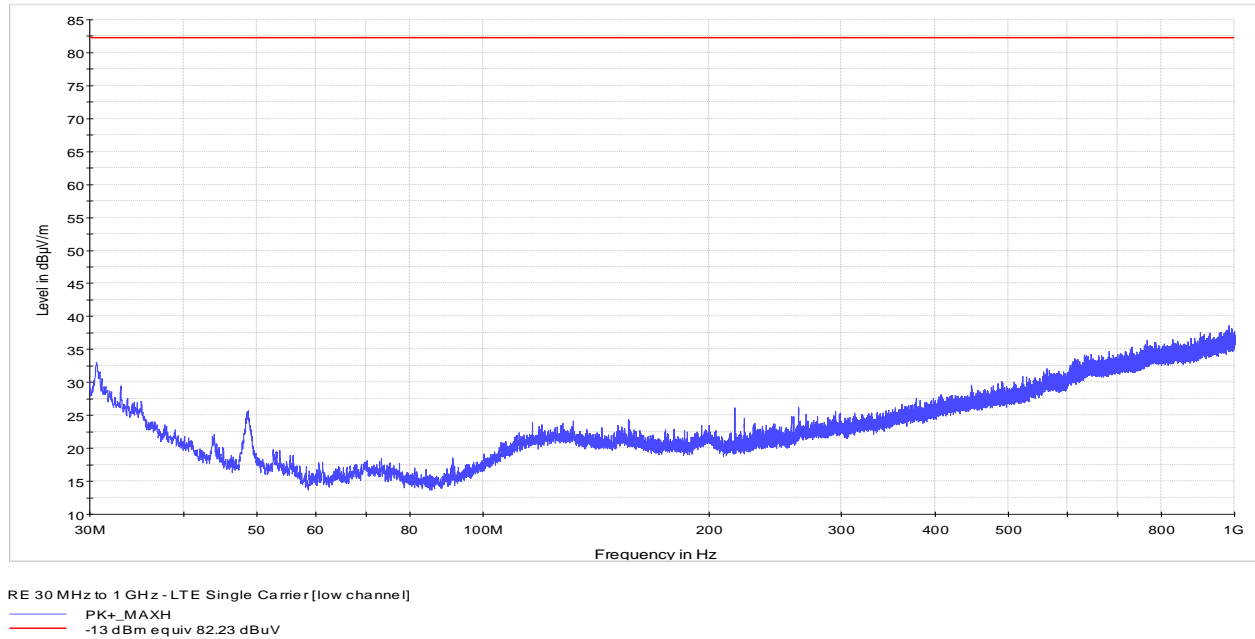


Figure 8.3-1: Radiated emissions spectral plot, LTE, low channel (30 to 1000 MHz)

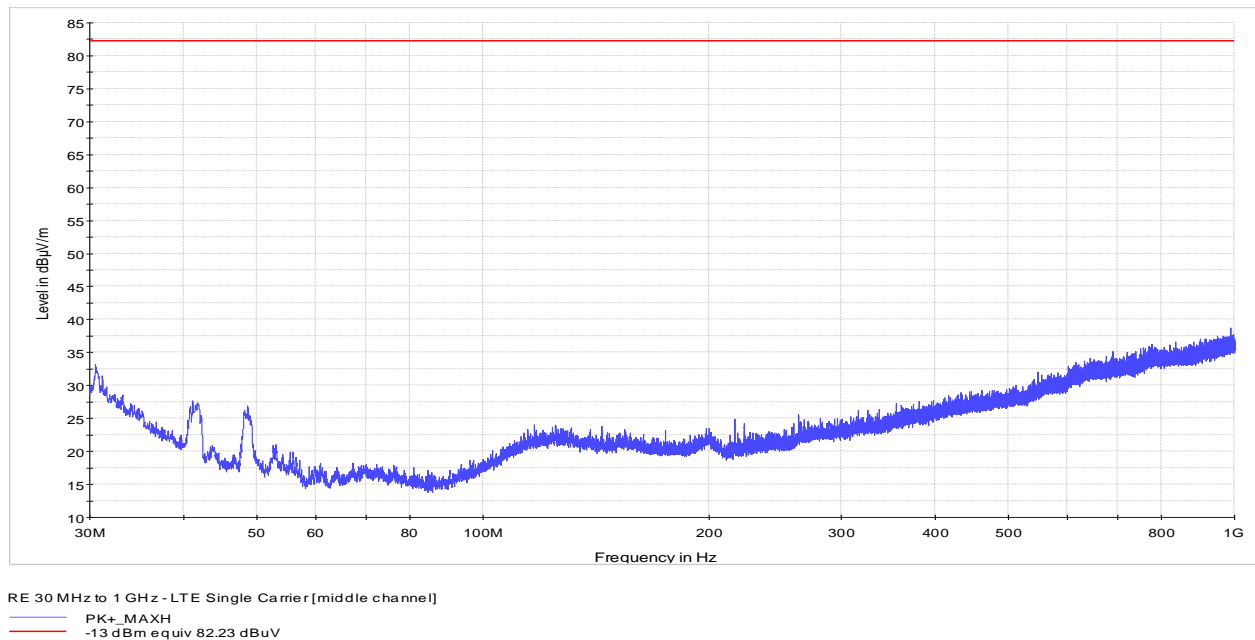


Figure 8.3-2: Radiated emissions spectral plot, LTE, mid channel (30 to 1000 MHz)

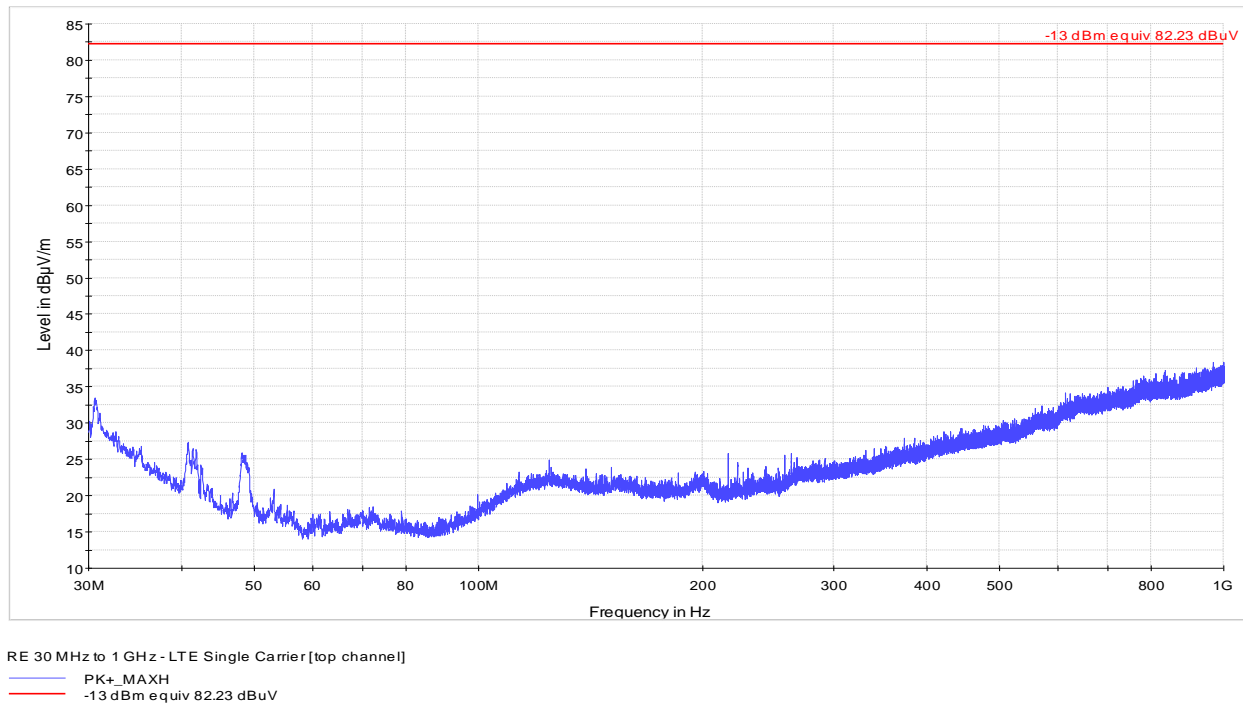


Figure 8.3-3: Radiated emissions spectral plot, LTE, high channel (30 to 1000 MHz)

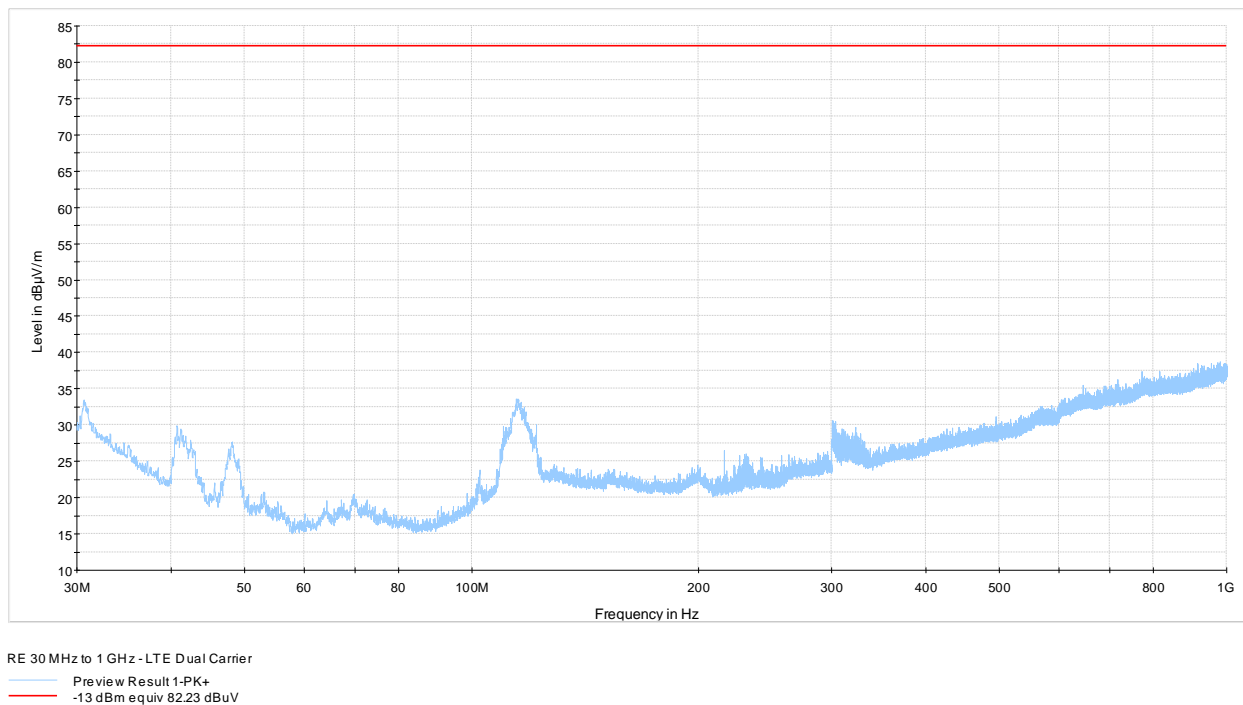
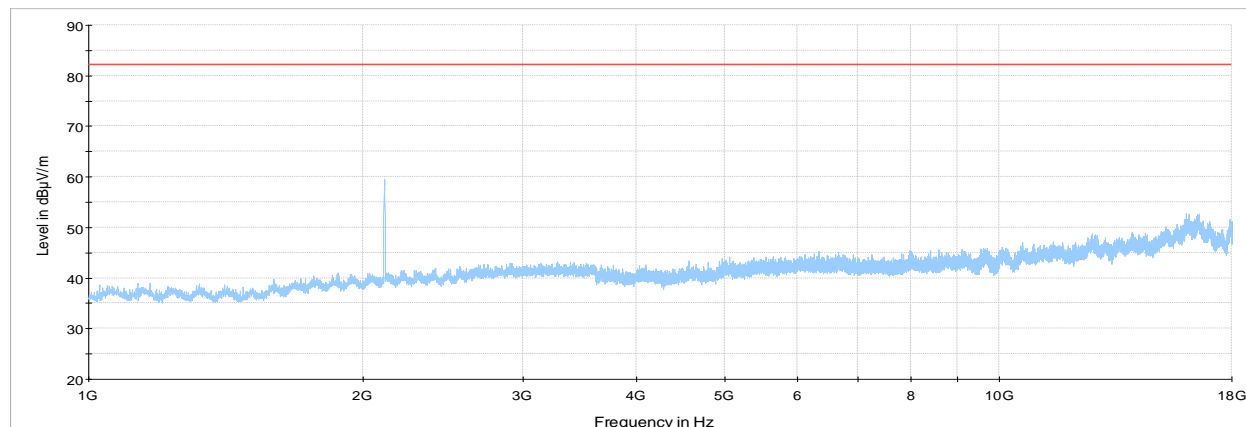


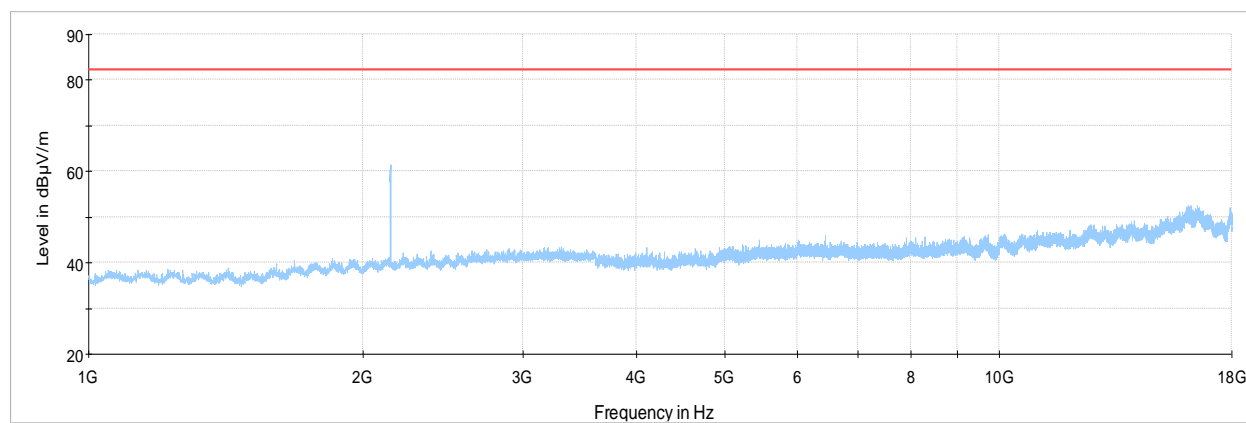
Figure 8.3-4: Radiated emissions spectral plot, LTE, two carriers (30 to 1000 MHz)



RE 1 GHz to 18 GHz - LTE Single Carrier Low channel

Preview Result 1-PK+
MaxPeak-PK+
Average-AVG
-13 dBm equiv 82.23 dBuV
Final_Result PK+
Final_Result CAV

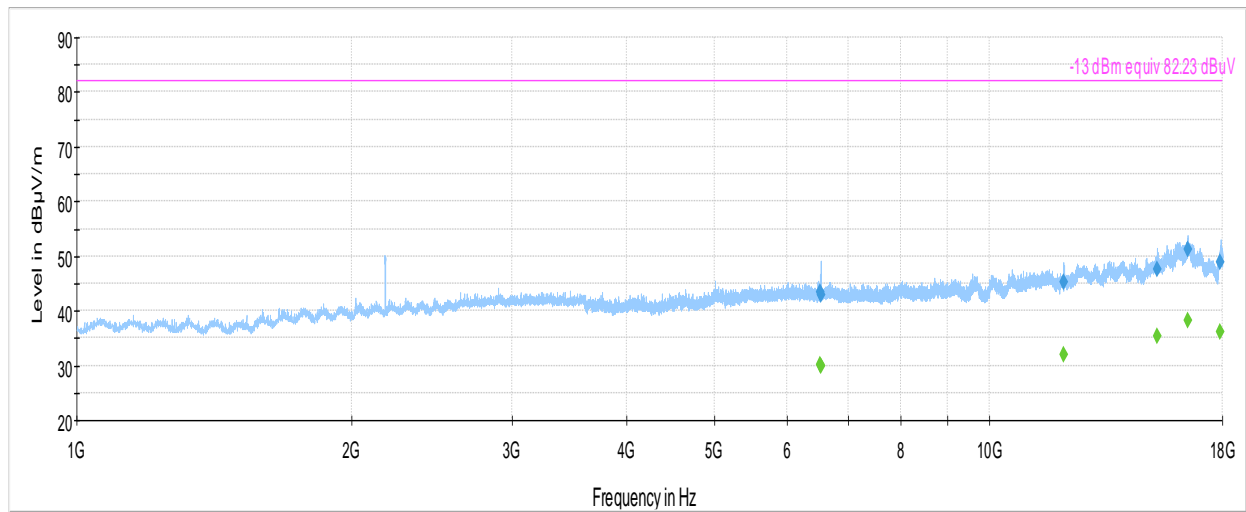
Figure 8.3-5: Radiated emissions spectral plot, LTE, low channel (1–18 GHz)



RE 1 GHz to 18 GHz - LTE Single Carrier Mid channel

Preview Result 1-PK+
-13 dBm equiv 82.23 dBuV
Final_Result PK+
Final_Result CAV

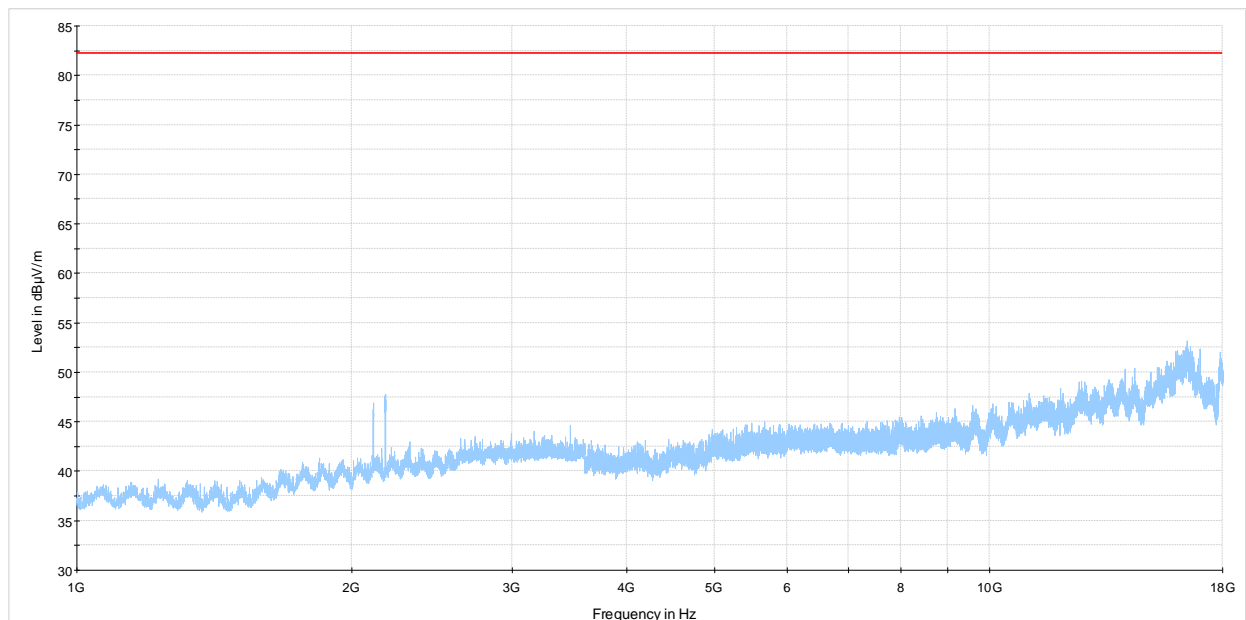
Figure 8.3-6: Radiated emissions spectral plot, LTE, mid channel (1–18 GHz)



RE 1 GHz to 18 GHz - LTE Single Carrier High channel

- Preview Result 1-PK+
- -13 dBm equiv 82.23 dBµV
- ◆ Final_Result PK+
- ◆ Final_Result CAV

Figure 8.3-7: Radiated emissions spectral plot, LTE, high channel (1–18 GHz)



RE 1 GHz to 18 GHz - LTE Dual Carrier

- Preview Result 1-PK+
- -13 dBm equiv 82.23 dBµV

Figure 8.3-8: Radiated emissions spectral plot, LTE, two carriers (1–18 GHz)

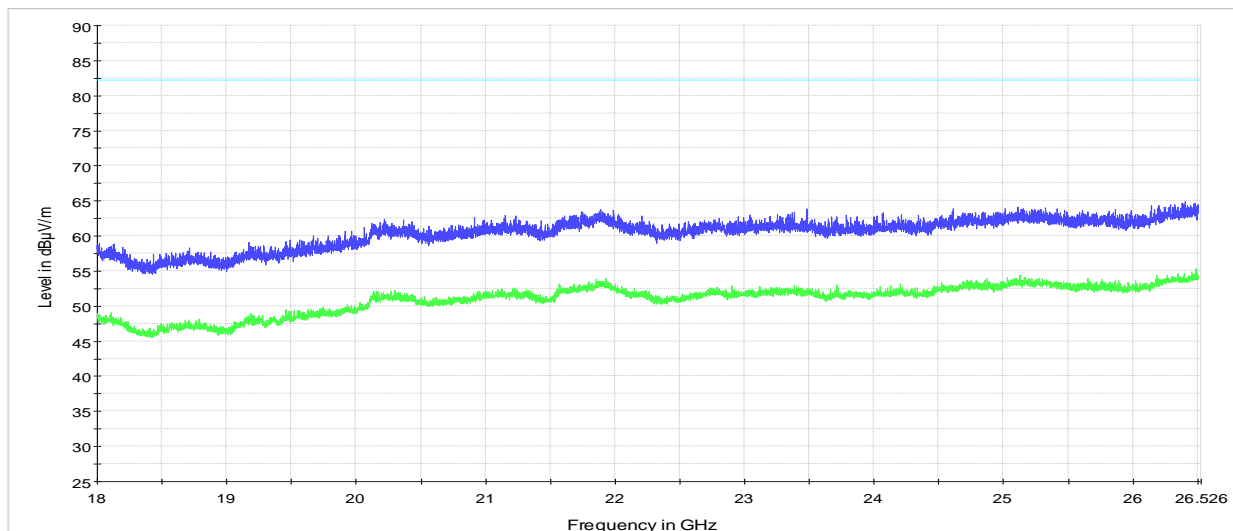


Figure 8.3-1: Radiated emissions spectral plot, LTE, low channel (18–26 GHz)

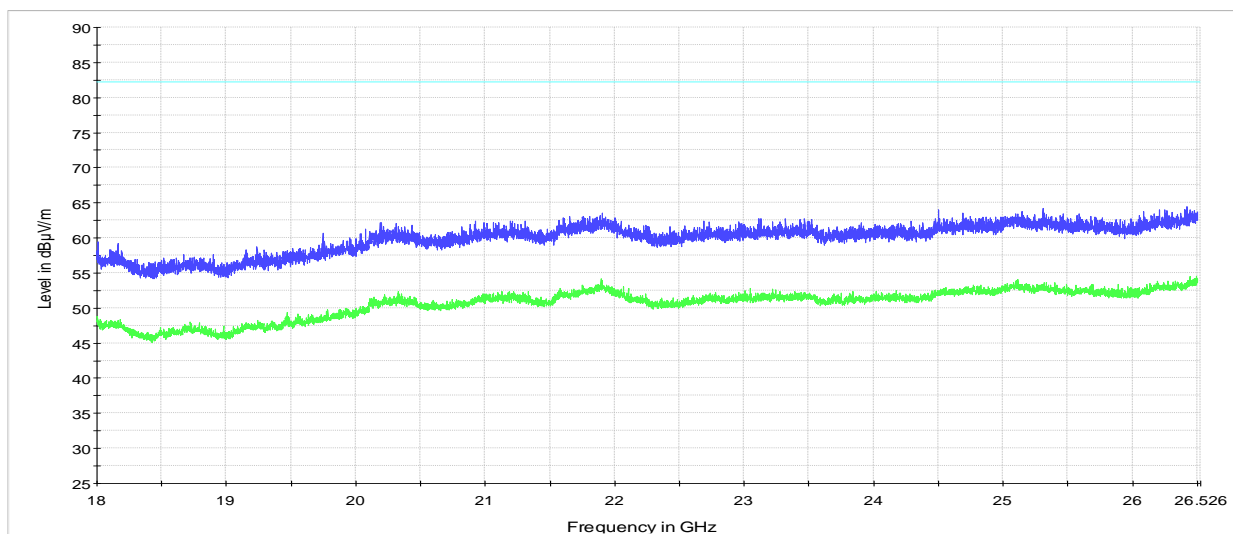
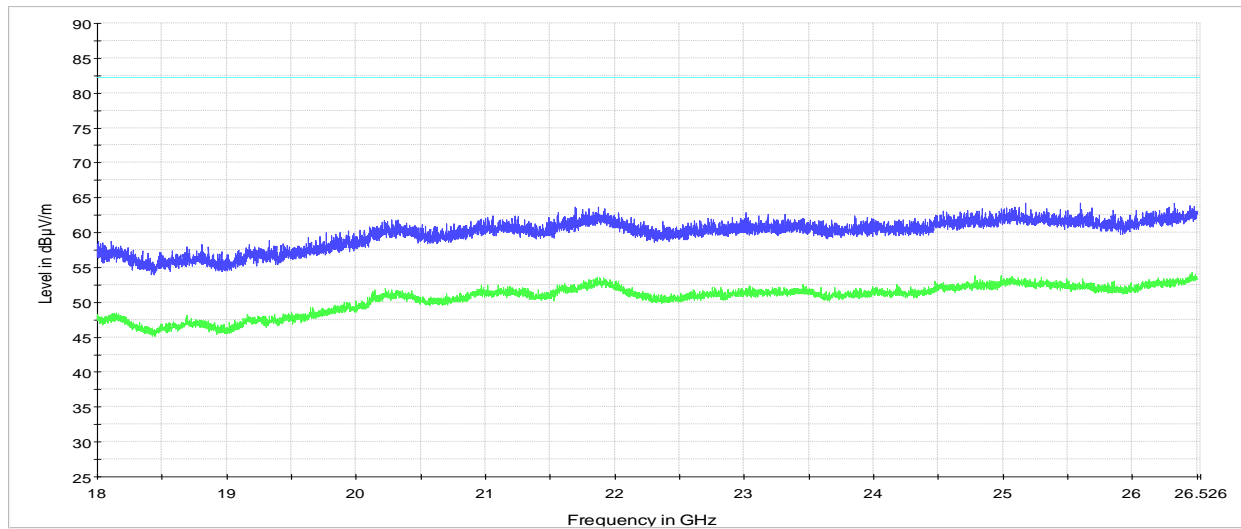


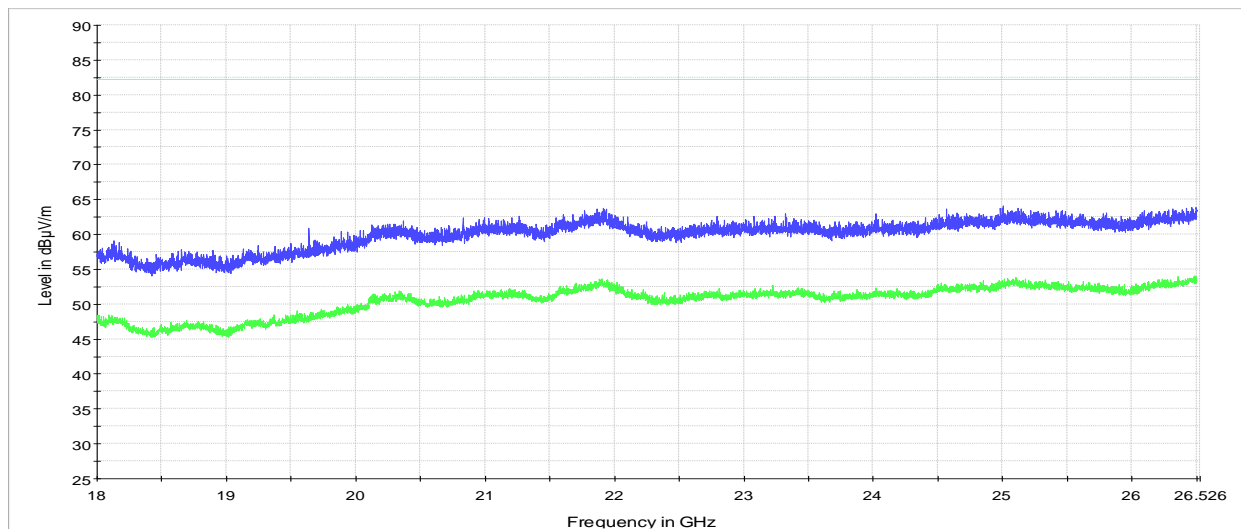
Figure 8.3-2: Radiated emissions spectral plot, LTE, mid channel (18–26 GHz)



RE 18-26.5 GHz - LTE Single Carrier High channel

— AVG_MAXH
— PK+ MAXH
— -13 dBm in dBuV
— -13 dBm equiv 82.23 dBuV

Figure 8.3-3: Radiated emissions spectral plot, LTE, high channel (18–26 GHz)



RE 18-26.5 GHz - LTE Two Carrier

— AVG_MAXH
— PK+ MAXH
— -13 dBm in dBuV
— -13 dBm equiv 82.23 dBuV

Figure 8.3-4: Radiated emissions spectral plot, LTE, two carriers (18–26 GHz)

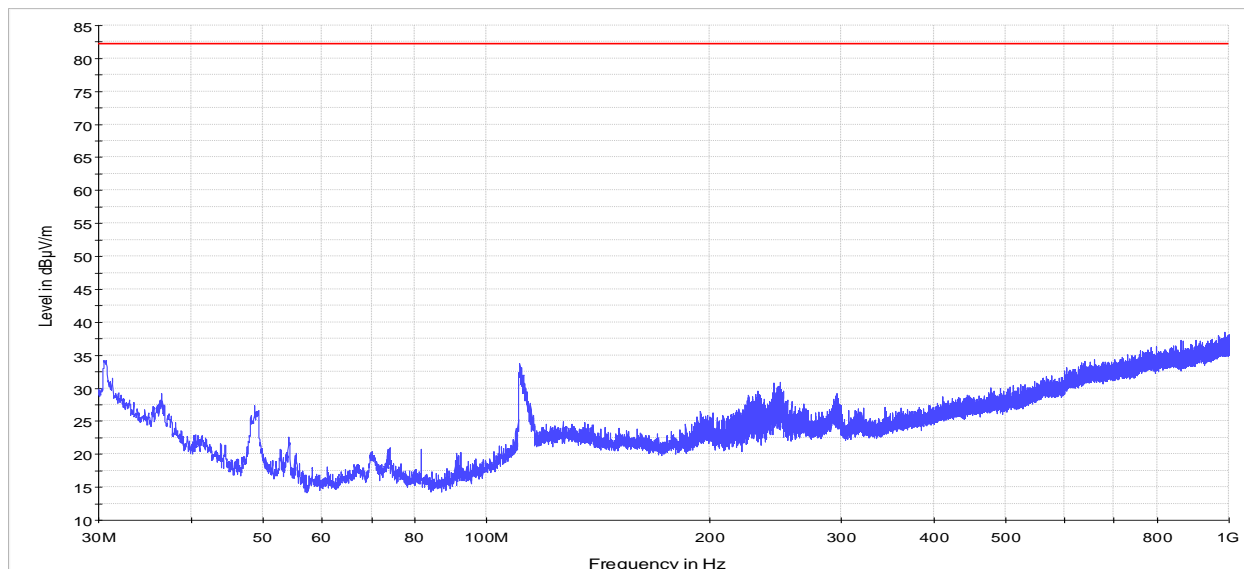


Figure 8.3-9: Radiated emissions spectral plot, WCDMA, low channel (30 to 1000 MHz)

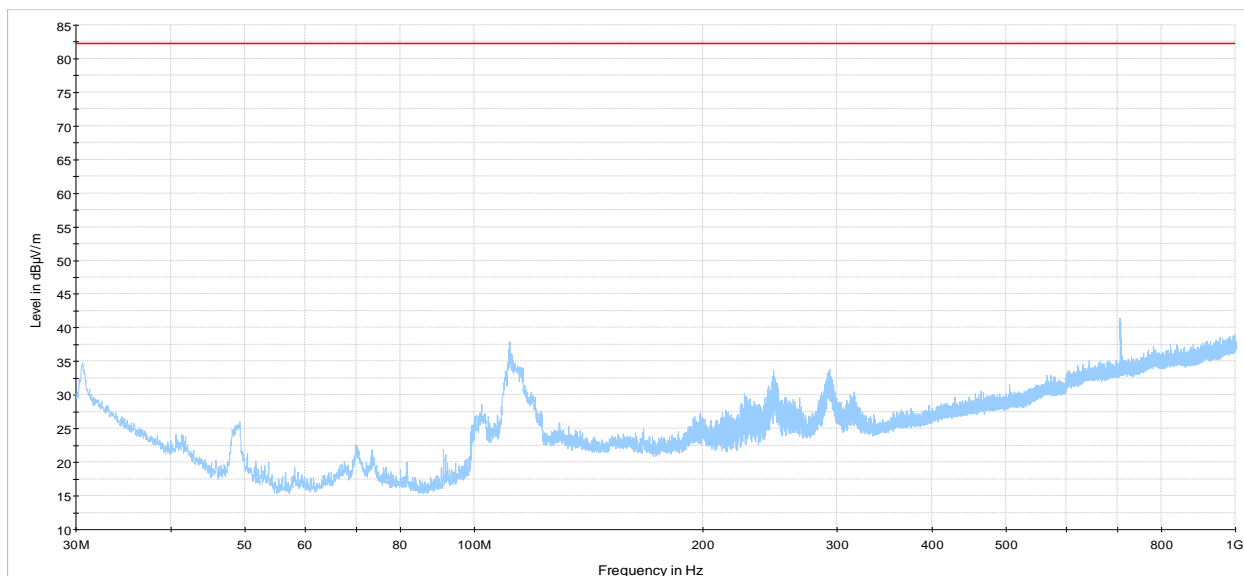


Figure 8.3-10: Radiated emissions spectral plot, WCDMA, high channel (30 to 1000 MHz)

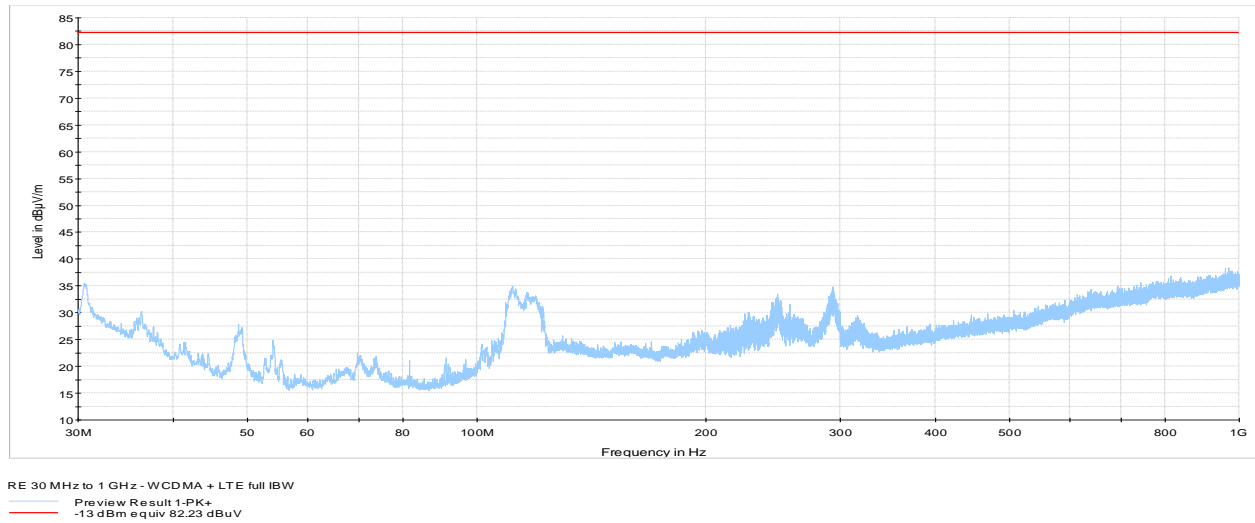


Figure 8.3-11: Radiated emissions spectral plot, WCDMA and LTE mix mode (30 to 1000 MHz)

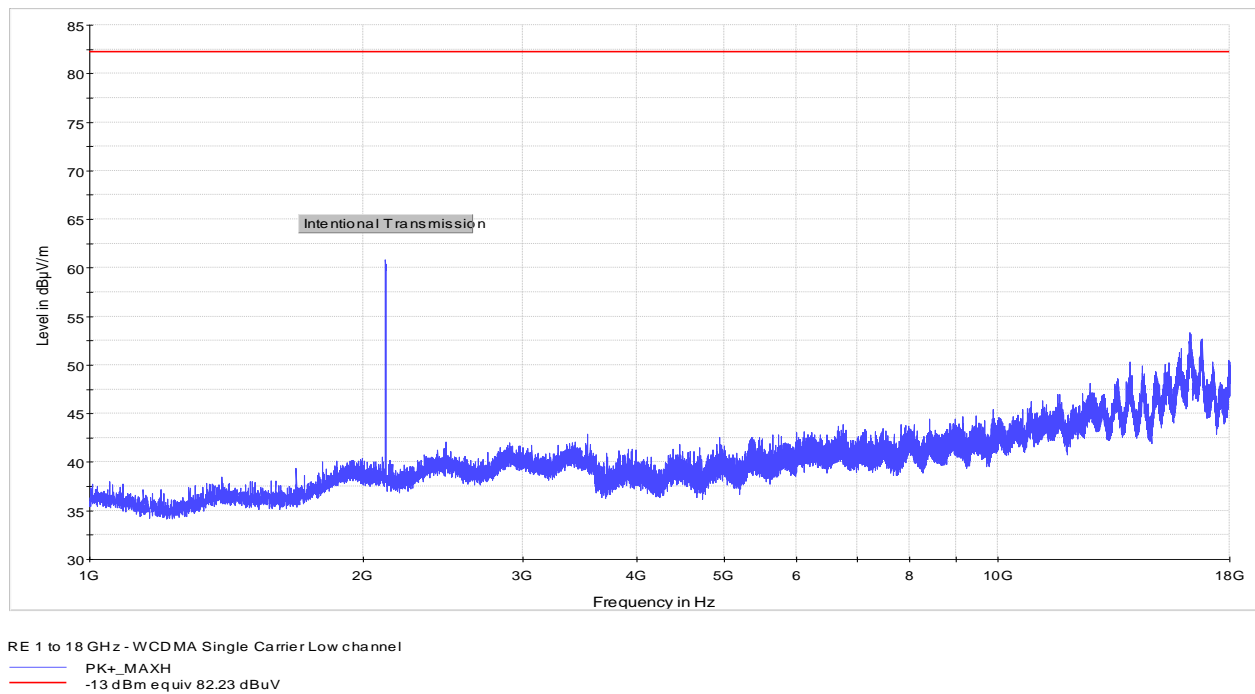


Figure 8.3-12: Radiated emissions spectral plot, WCDMA, low channel (1-18 GHz)

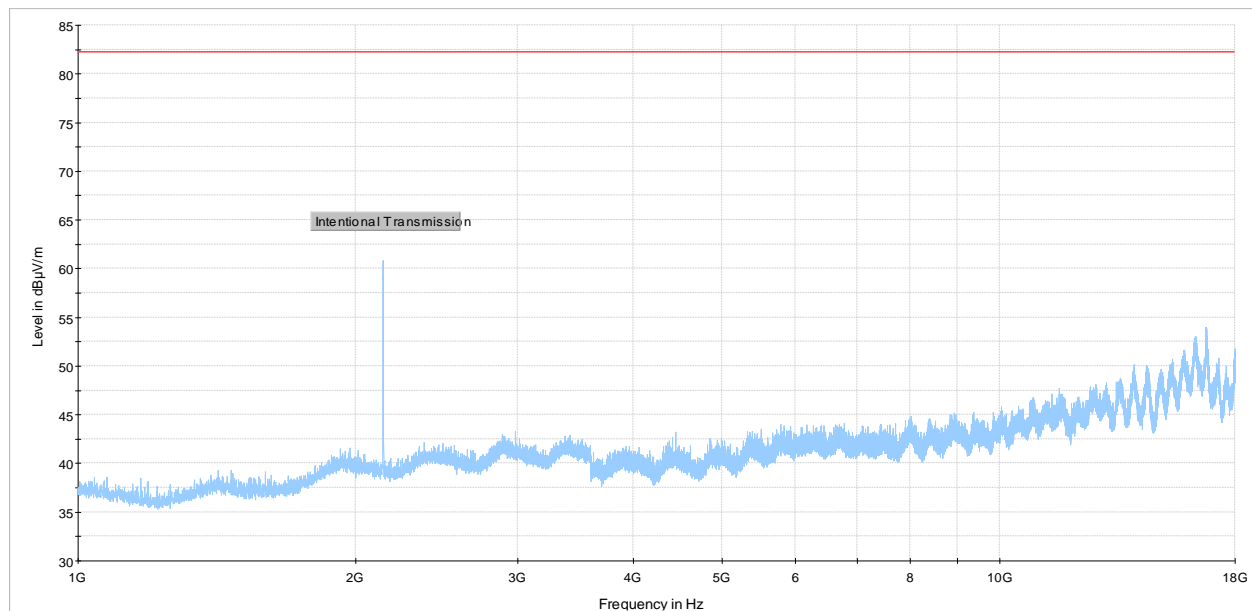


Figure 8.3-13: Radiated emissions spectral plot, WCDMA, high channel (1–18 GHz)

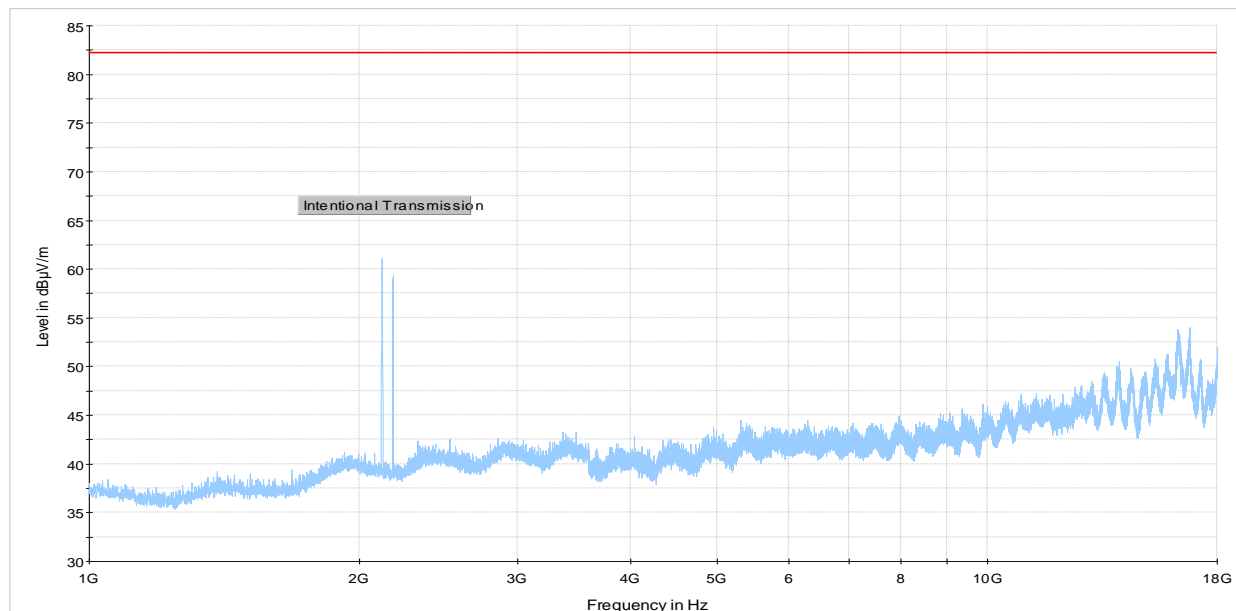


Figure 8.3-14: Radiated emissions spectral plot, WCDMA, two carriers (1–18 GHz)

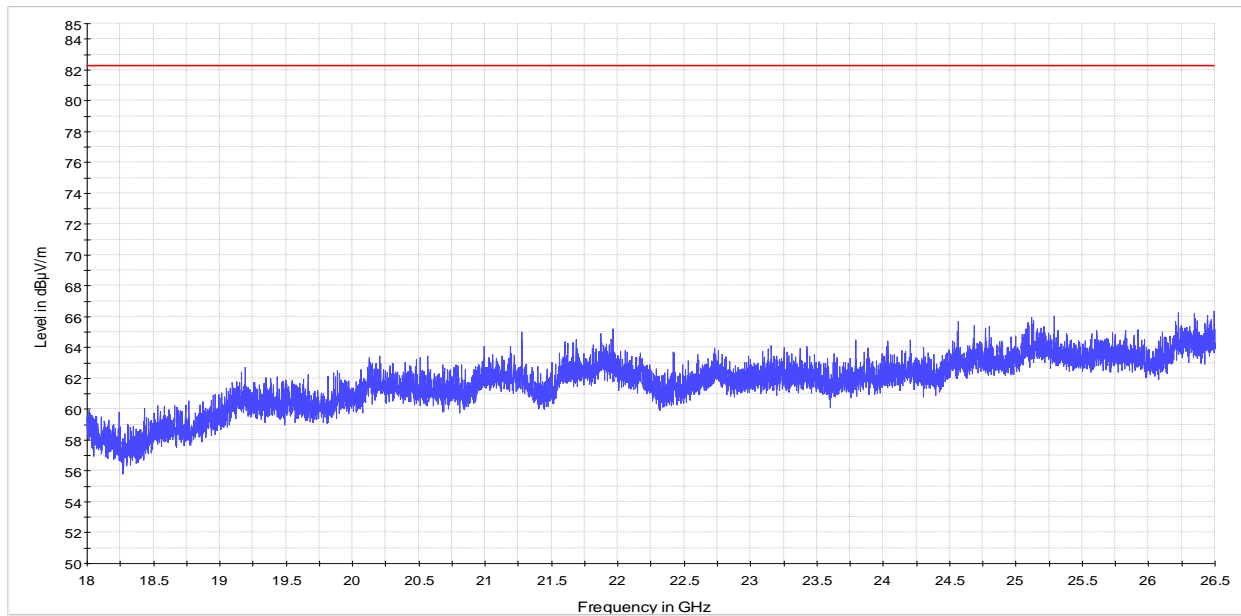


Figure 8.3-5: Radiated emissions spectral plot, WCDMA, low channel (18–26 GHz)

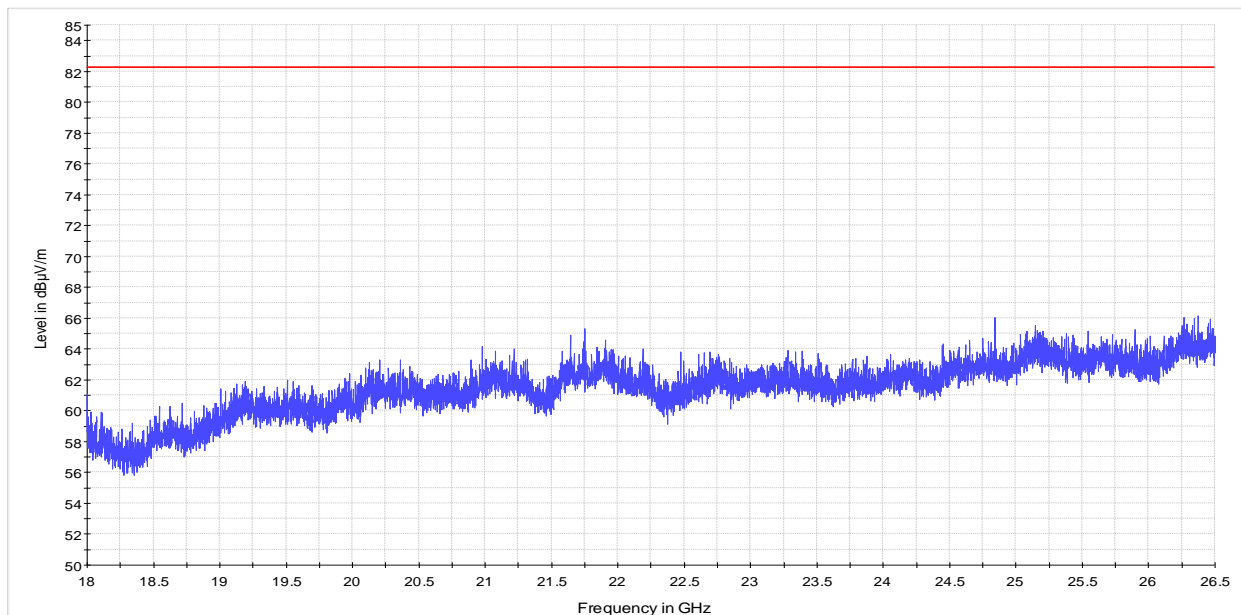


Figure 8.3-6: Radiated emissions spectral plot, WCDMA, high channel (18–26 GHz)

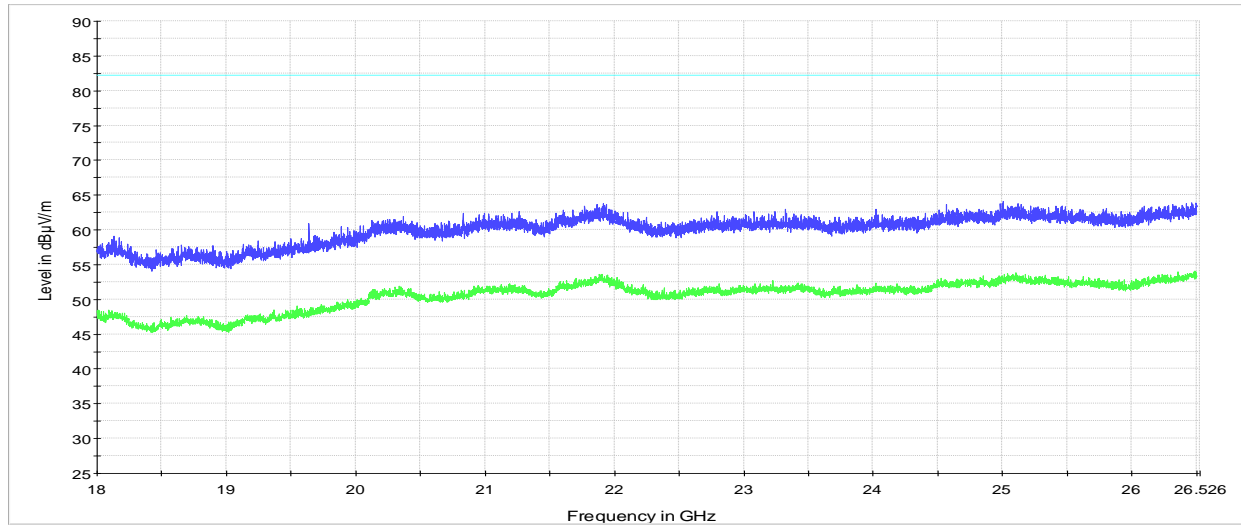


Figure 8.3-7: Radiated emissions spectral plot, WCDMA, two carriers (18–26 GHz)

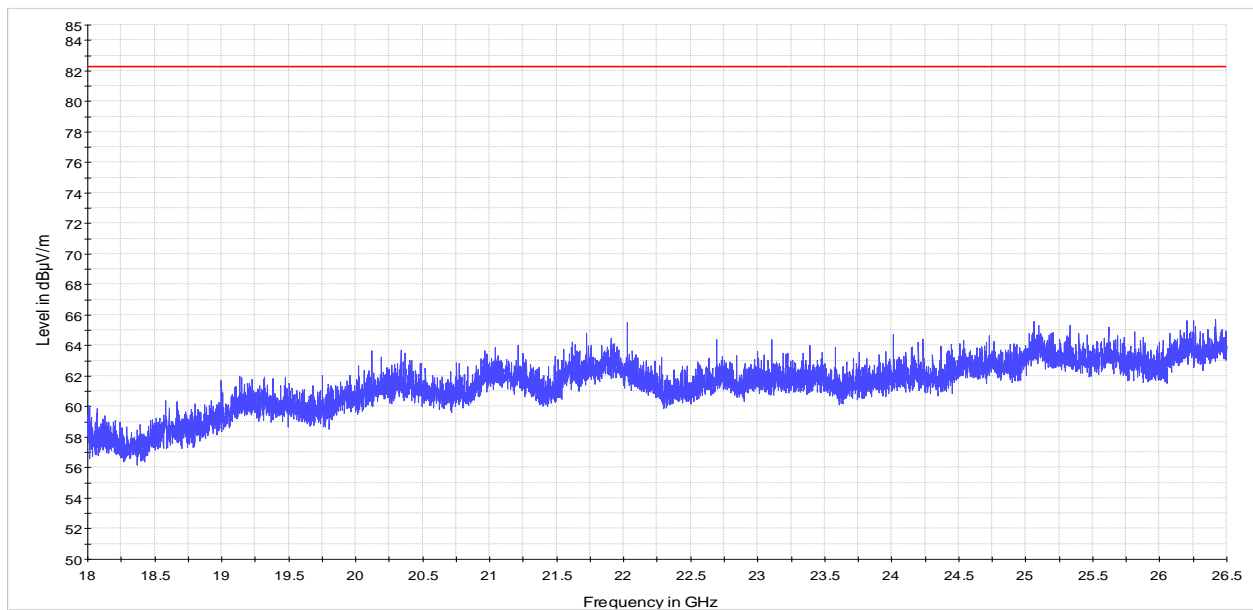


Figure 8.3-8: Radiated emissions spectral plot, WCDMA and LTE mix mode (18–26 GHz)

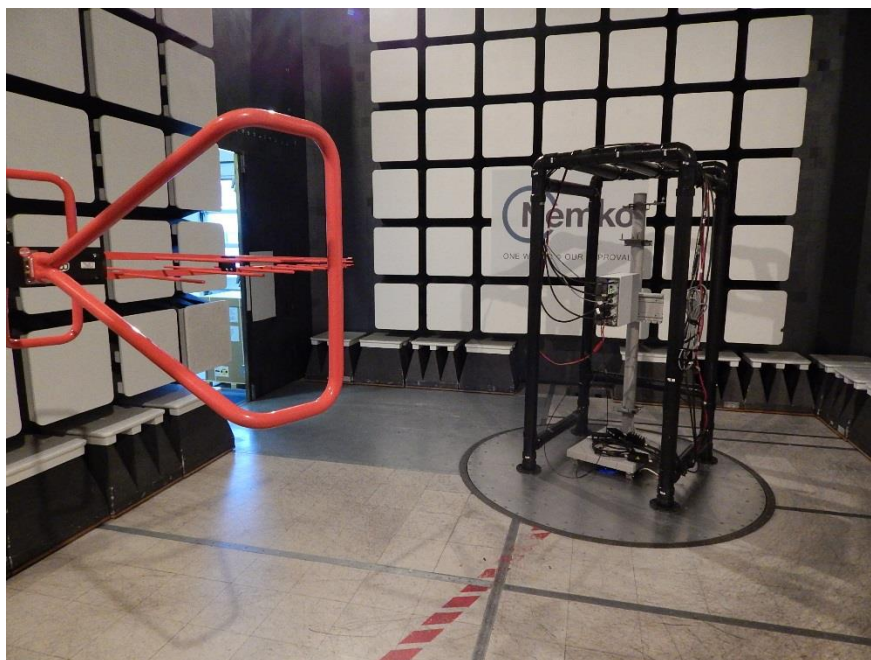


Figure 8.3-9: Set-up for Radiated Spurious Emission

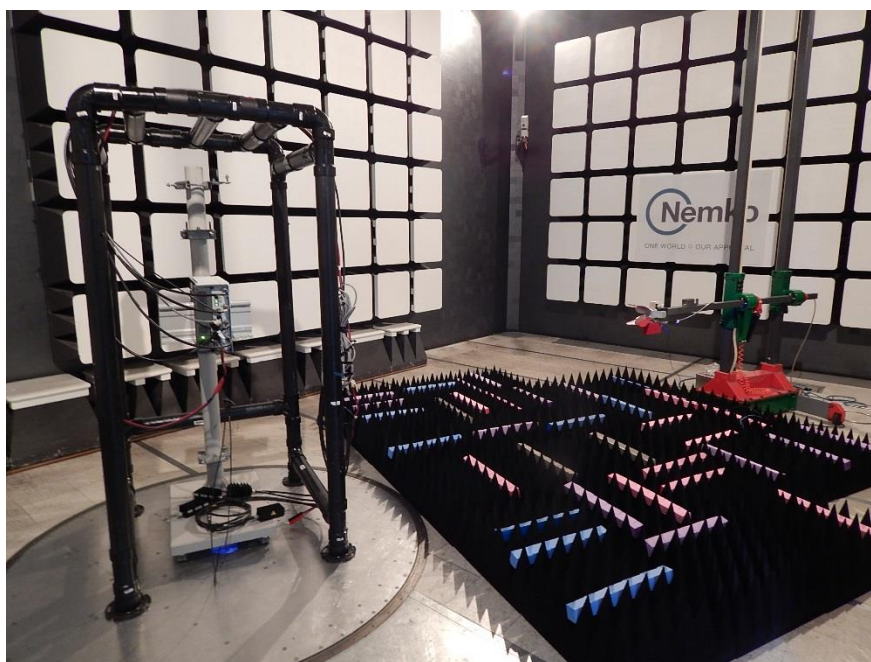


Figure 8.3-10: Set-up for Radiated Spurious Emission

8.4 FCC 27.54 and RSS-139, Section 6.4 Frequency stability

8.4.1 Definitions and limits

FCC:

The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

RSS-139, Section 6.4:

The frequency stability shall be sufficient to ensure that the occupied bandwidth stays within the operating frequency block when tested to the temperature and supply voltage variations specified in RSS-Gen.

8.4.2 Test summary

| | | | |
|---------------|------------------|-------------------|-----------|
| Test date | November 7, 2017 | Temperature | 23 °C |
| Test engineer | Andrey Adelberg | Air pressure | 1010 mbar |
| Verdict | Pass | Relative humidity | 33 % |

8.4.3 Observations, settings and special notes

26 dBc points including frequency tolerance were assessed to remain within assigned band.

Spectrum analyzer settings:

| | |
|----------------------|----------|
| Detector mode | Peak |
| Resolution bandwidth | 300 Hz |
| Video bandwidth | RBW × 3 |
| Trace mode | Max Hold |

8.4.4 Test data

Table 8.4-1: Frequency error results

| Temperature, °C | Voltage, V _{DC} | Frequency error, Hz |
|-----------------|--------------------------|---------------------|
| +50 | 48.0 | -1.59 |
| +40 | 48.0 | -7.11 |
| +30 | 48.0 | 2.60 |
| +20 | 55.2 | 1.65 |
| +20 | 48.0 | -3.92 |
| +20 | 40.8 | -2.53 |
| +10 | 48.0 | -5.58 |
| 0 | 48.0 | -5.07 |
| -10 | 48.0 | -4.21 |
| -20 | 48.0 | -3.33 |
| -30 | 48.0 | -6.39 |

Max negative drift: 7.11 Hz, Max positive drift: 2.60 Hz

The measured frequency error was not sufficient to make fundamental emission to drift outside the authorized bands of operation.

8.5 FCC Part 2.1049 and RSS-Gen, 6.6 Occupied bandwidth

8.5.1 Definitions and limits

FCC:

The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

RSS-Gen, 6.6

The emission bandwidth (×dB) is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated × dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3× the resolution bandwidth.

When the occupied bandwidth limit is not stated in the applicable RSS or reference measurement method, the transmitted signal bandwidth shall be reported as the 99% emission bandwidth, as calculated or measured.

The transmitter shall be operated at its maximum carrier power measured under normal test conditions.

The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts.

The resolution bandwidth (RBW) shall be in the range of 1% to 5% of the occupied bandwidth (OBW) and video bandwidth (VBW) shall be approximately 3×RBW.

The trace data points are recovered and are directly summed in linear power level terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached and that frequency recorded. The process is repeated for the highest frequency data points (starting at the highest frequency, at the right side of the span, and going down in frequency). This frequency is then recorded.

The difference between the two recorded frequencies is the 99% occupied bandwidth.

8.5.2 Test summary

| | | | |
|---------------|------------------|-------------------|-----------|
| Test date | November 6, 2017 | Temperature | 22 °C |
| Test engineer | Andrey Adelberg | Air pressure | 1009 mbar |
| Verdict | Pass | Relative humidity | 33 % |

8.5.3 Observations, settings and special notes

Spectrum analyzer settings:

| | |
|----------------------|--------------|
| Detector mode | Peak |
| Resolution bandwidth | ≥1 % of span |
| Video bandwidth | RBW × 3 |
| Trace mode | Max Hold |

8.5.4 Test data

Table 8.5-1: Occupied bandwidth, LTE results

| Remarks | Frequency, MHz | 99% OBW, MHz | 26 dB BW, MHz |
|------------------------------------|----------------|--------------|---------------|
| 5 MHz, QPSK, Port A, low channel | 2112.5 | 4.478 | 4.797 |
| 5 MHz, QPSK, Port A, mid channel | 2145.0 | 4.480 | 4.793 |
| 5 MHz, QPSK, Port A, high channel | 2177.5 | 4.475 | 4.804 |
| 5 MHz, QPSK, Port B, low channel | 2112.5 | 4.481 | 4.801 |
| 5 MHz, QPSK, Port B, mid channel | 2145.0 | 4.479 | 4.795 |
| 5 MHz, QPSK, Port B, high channel | 2177.5 | 4.479 | 4.796 |
| 5 MHz, QPSK, Port C, low channel | 2112.5 | 4.493 | 4.796 |
| 5 MHz, QPSK, Port C, mid channel | 2145.0 | 4.485 | 4.794 |
| 5 MHz, QPSK, Port C, high channel | 2177.5 | 4.486 | 4.783 |
| 5 MHz, QPSK, Port D, low channel | 2112.5 | 4.479 | 4.802 |
| 5 MHz, QPSK, Port D, mid channel | 2145.0 | 4.482 | 4.797 |
| 5 MHz, QPSK, Port D, high channel | 2177.5 | 4.481 | 4.805 |
| 10 MHz, QPSK, Port A, low channel | 2115.0 | 8.946 | 9.527 |
| 10 MHz, QPSK, Port A, mid channel | 2145.0 | 8.934 | 9.539 |
| 10 MHz, QPSK, Port A, high channel | 2175.0 | 8.934 | 9.511 |
| 10 MHz, QPSK, Port B, low channel | 2115.0 | 8.933 | 9.543 |
| 10 MHz, QPSK, Port B, mid channel | 2145.0 | 8.936 | 9.523 |
| 10 MHz, QPSK, Port B, high channel | 2175.0 | 8.936 | 9.552 |
| 10 MHz, QPSK, Port C, low channel | 2115.0 | 8.931 | 9.496 |
| 10 MHz, QPSK, Port C, mid channel | 2145.0 | 8.930 | 9.519 |
| 10 MHz, QPSK, Port C, high channel | 2175.0 | 8.934 | 9.494 |
| 10 MHz, QPSK, Port D, low channel | 2115.0 | 8.944 | 9.502 |
| 10 MHz, QPSK, Port D, mid channel | 2145.0 | 8.935 | 9.507 |
| 10 MHz, QPSK, Port D, high channel | 2175.0 | 8.934 | 9.527 |
| 15 MHz, QPSK, Port A, low channel | 2117.5 | 13.389 | 14.16 |
| 15 MHz, QPSK, Port A, mid channel | 2145.0 | 13.389 | 14.21 |
| 15 MHz, QPSK, Port A, high channel | 2172.5 | 13.397 | 14.17 |
| 15 MHz, QPSK, Port B, low channel | 2117.5 | 13.401 | 14.16 |
| 15 MHz, QPSK, Port B, mid channel | 2145.0 | 13.391 | 14.19 |
| 15 MHz, QPSK, Port B, high channel | 2172.5 | 13.388 | 14.25 |
| 15 MHz, QPSK, Port C, low channel | 2117.5 | 13.390 | 14.15 |
| 15 MHz, QPSK, Port C, mid channel | 2145.0 | 13.393 | 14.20 |
| 15 MHz, QPSK, Port C, high channel | 2172.5 | 13.383 | 14.14 |
| 15 MHz, QPSK, Port D, low channel | 2117.5 | 13.401 | 14.15 |
| 15 MHz, QPSK, Port D, mid channel | 2145.0 | 13.393 | 14.16 |
| 15 MHz, QPSK, Port D, high channel | 2172.5 | 13.391 | 14.16 |
| 20 MHz, QPSK, Port A, low channel | 2120.0 | 17.837 | 18.78 |
| 20 MHz, QPSK, Port A, mid channel | 2145.0 | 17.845 | 18.78 |
| 20 MHz, QPSK, Port A, high channel | 2170.0 | 17.842 | 18.77 |
| 20 MHz, QPSK, Port B, low channel | 2120.0 | 17.834 | 18.63 |
| 20 MHz, QPSK, Port B, mid channel | 2145.0 | 17.856 | 18.73 |
| 20 MHz, QPSK, Port B, high channel | 2170.0 | 17.881 | 18.81 |
| 20 MHz, QPSK, Port C, low channel | 2120.0 | 17.835 | 18.74 |
| 20 MHz, QPSK, Port C, mid channel | 2145.0 | 17.864 | 18.71 |
| 20 MHz, QPSK, Port C, high channel | 2170.0 | 17.846 | 18.85 |
| 20 MHz, QPSK, Port D, low channel | 2120.0 | 17.852 | 18.83 |
| 20 MHz, QPSK, Port D, mid channel | 2145.0 | 17.845 | 18.77 |
| 20 MHz, QPSK, Port D, high channel | 2170.0 | 17.839 | 18.78 |

Table 8.5-2: Occupied bandwidth, WCDMA results

| Remarks | Frequency, MHz | 99% OBW, MHz | 26 dB BW, MHz |
|----------------------------|----------------|--------------|---------------|
| QPSK, Port A, low channel | 2112.5 | 4.167 | 4.642 |
| QPSK, Port A, mid channel | 2132.5 | 4.166 | 4.639 |
| QPSK, Port A, high channel | 2152.5 | 4.164 | 4.653 |
| QPSK, Port B, low channel | 2112.5 | 4.162 | 4.635 |
| QPSK, Port B, mid channel | 2132.5 | 4.169 | 4.640 |
| QPSK, Port B, high channel | 2152.5 | 4.168 | 4.641 |
| QPSK, Port C, low channel | 2112.5 | 4.155 | 4.636 |
| QPSK, Port C, mid channel | 2132.5 | 4.166 | 4.632 |
| QPSK, Port C, high channel | 2152.5 | 4.159 | 4.646 |
| QPSK, Port D, low channel | 2112.5 | 4.159 | 4.649 |
| QPSK, Port D, mid channel | 2132.5 | 4.152 | 4.627 |
| QPSK, Port D, high channel | 2152.5 | 4.165 | 4.639 |

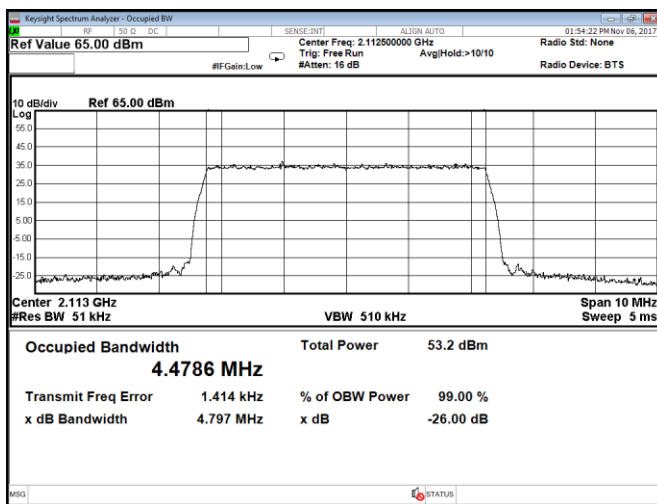


Figure 8.5-1: Occupied bandwidth, QPSK, LTE, 5 MHz, Port A, low channel

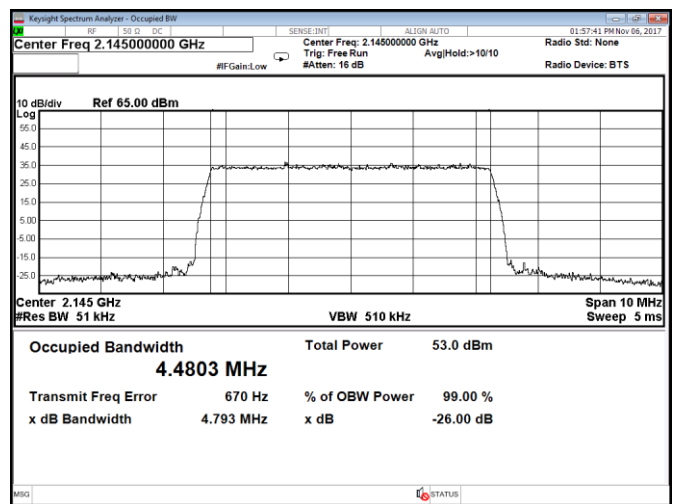


Figure 8.5-2: Occupied bandwidth, QPSK, LTE, 5 MHz, Port A, mid channel

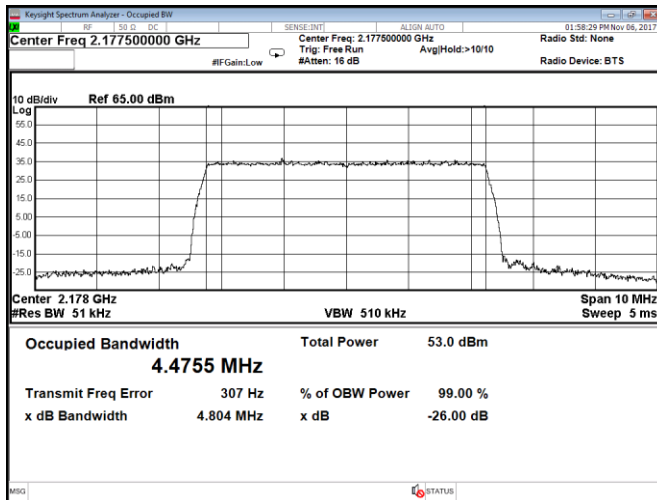


Figure 8.5-3: Occupied bandwidth, QPSK, LTE, 5 MHz, Port A, high channel

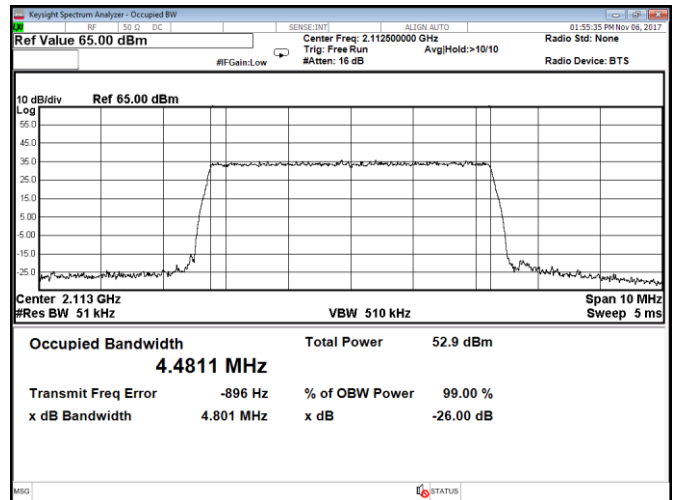


Figure 8.5-4: Occupied bandwidth, QPSK, LTE, 5 MHz, Port B, low channel

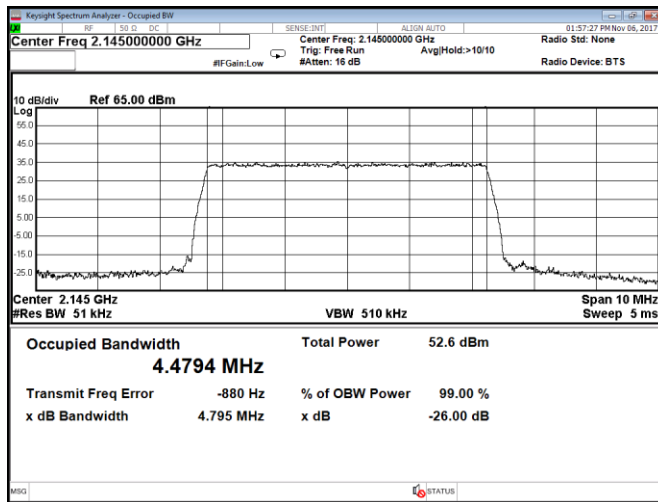


Figure 8.5-5: Occupied bandwidth, QPSK, LTE, 5 MHz, Port B, mid channel

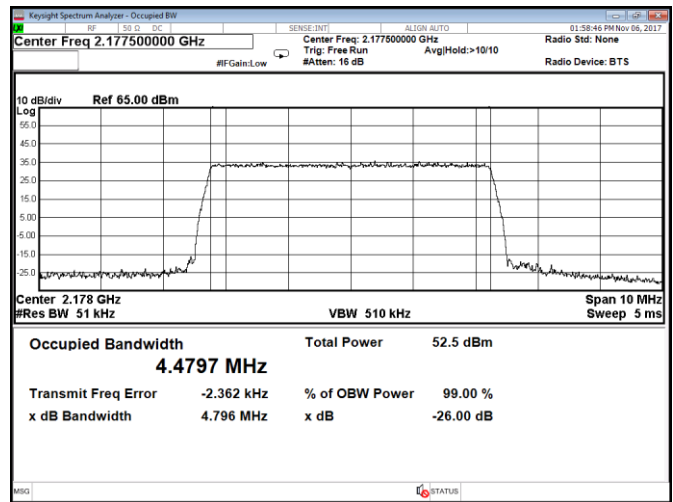


Figure 8.5-6: Occupied bandwidth, QPSK, LTE, 5 MHz, Port B, high channel

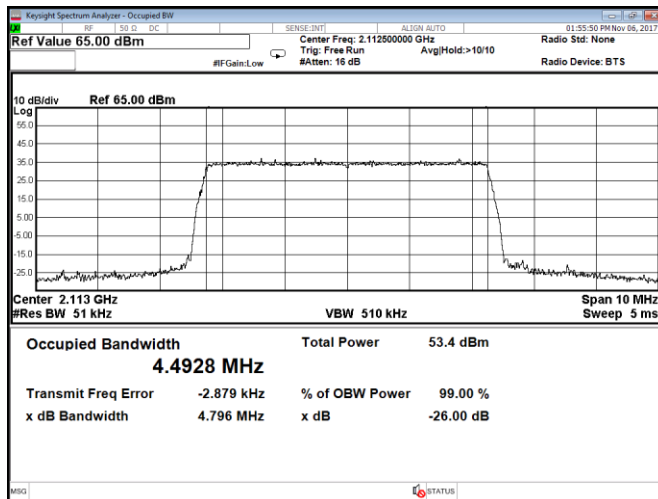


Figure 8.5-7: Occupied bandwidth, QPSK, LTE, 5 MHz, Port C, low channel

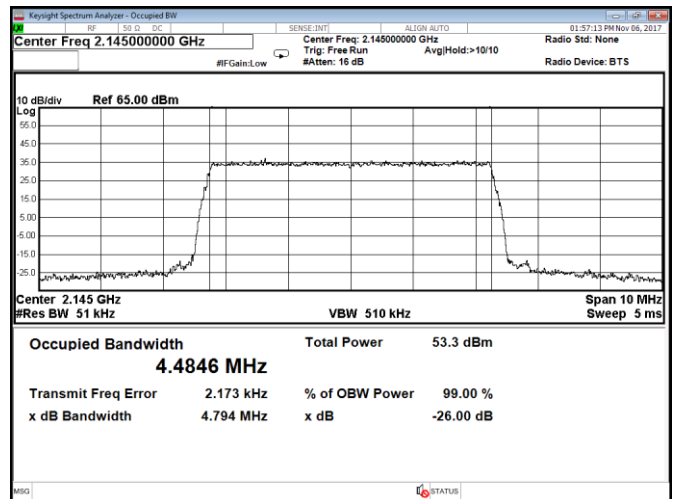


Figure 8.5-8: Occupied bandwidth, QPSK, LTE, 5 MHz, Port C, mid channel

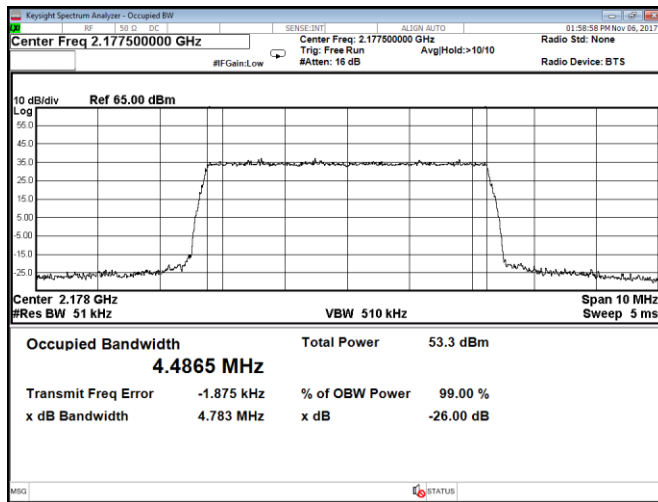


Figure 8.5-9: Occupied bandwidth, QPSK, LTE, 5 MHz, Port C, high channel

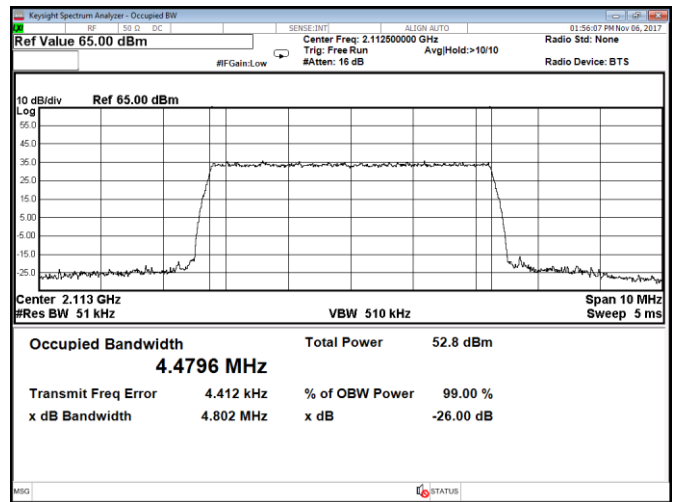


Figure 8.5-10: Occupied bandwidth, QPSK, LTE, 5 MHz, Port D, low channel

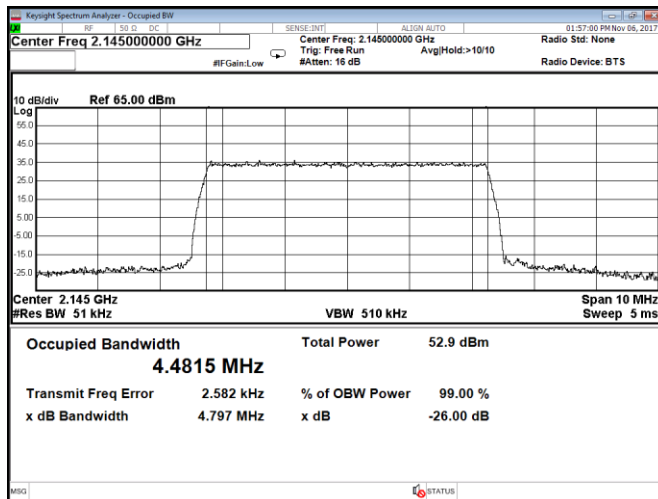


Figure 8.5-11: Occupied bandwidth, QPSK, LTE, 5 MHz, Port D, mid channel

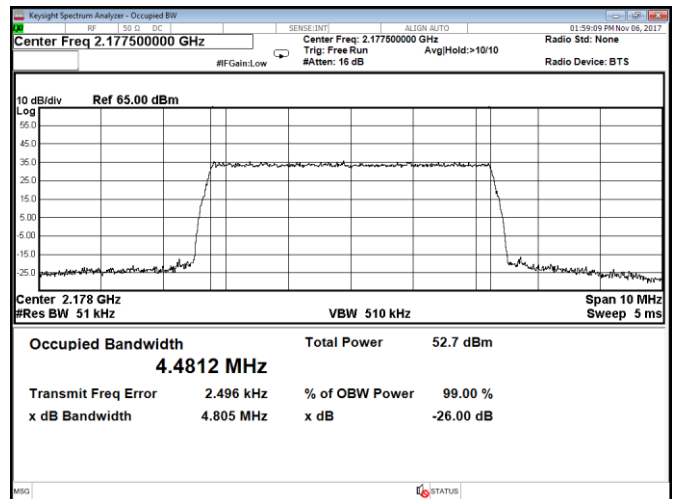


Figure 8.5-12: Occupied bandwidth, QPSK, LTE, 5 MHz, Port D, high channel

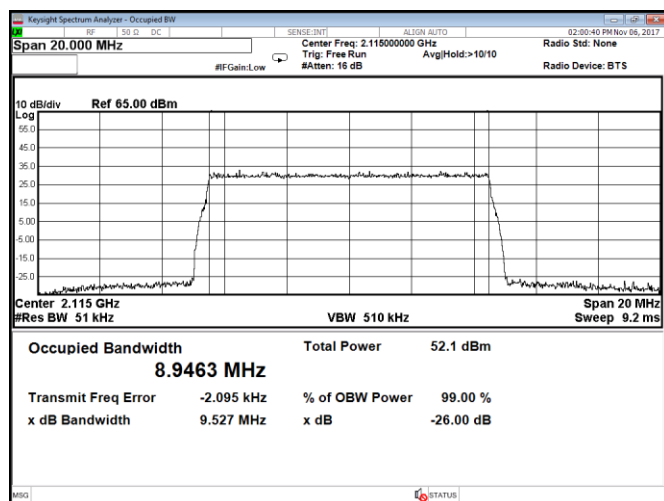


Figure 8.5-13: Occupied bandwidth, QPSK, LTE, 10 MHz, Port A, low channel

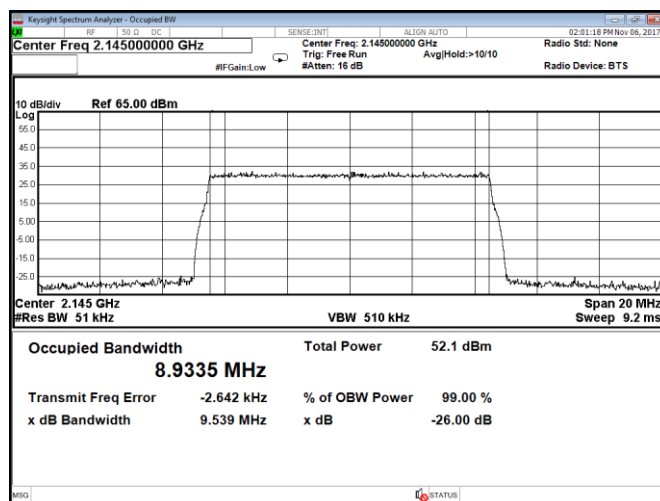


Figure 8.5-14: Occupied bandwidth, QPSK, LTE, 10 MHz, Port A, mid channel

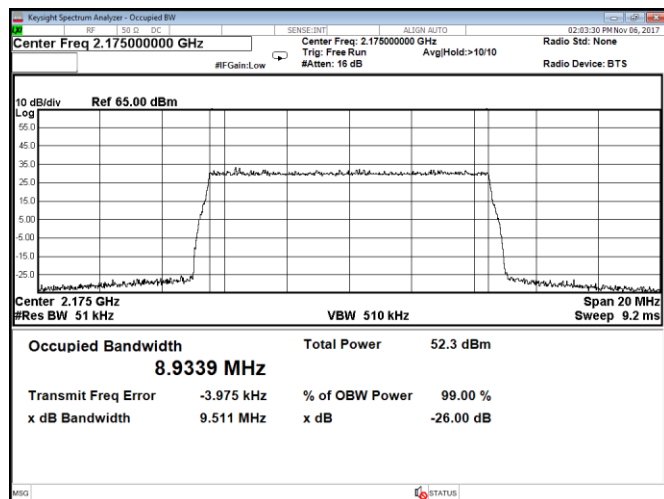


Figure 8.5-15: Occupied bandwidth, QPSK, LTE, 10 MHz, Port A, high channel

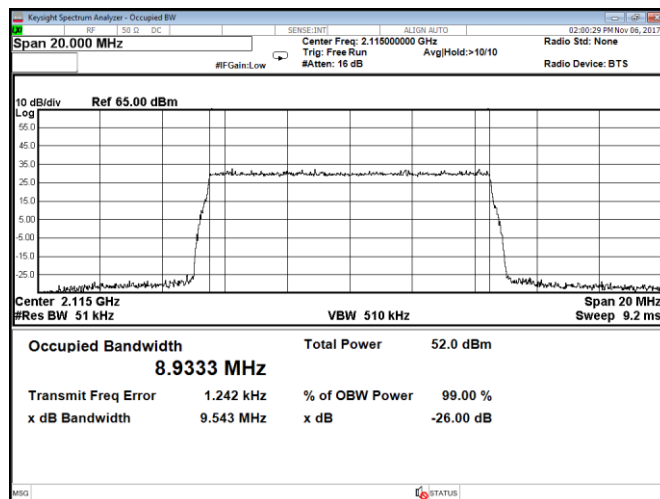


Figure 8.5-16: Occupied bandwidth, QPSK, LTE, 10 MHz, Port B, low channel