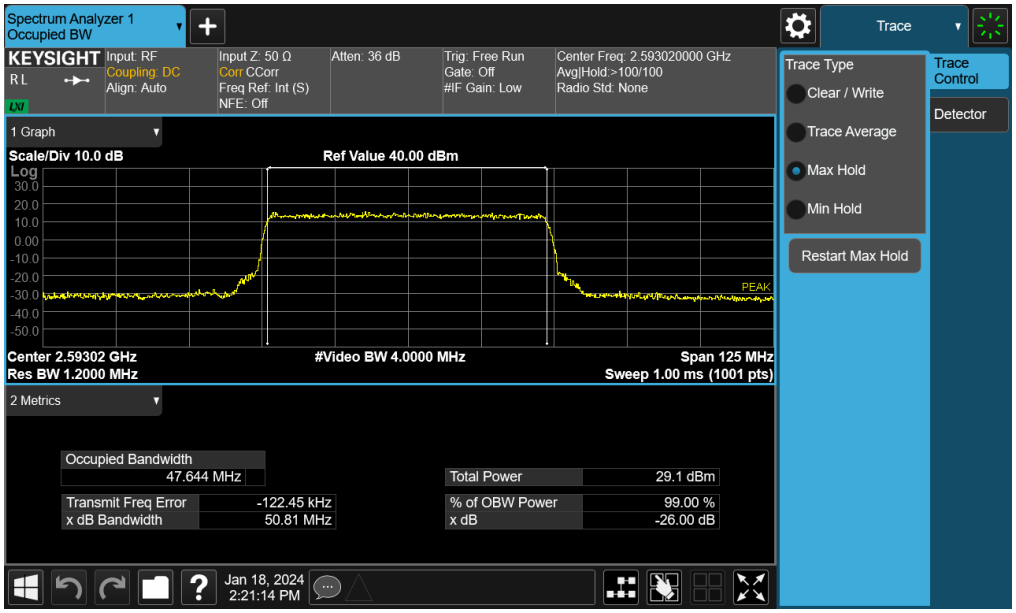
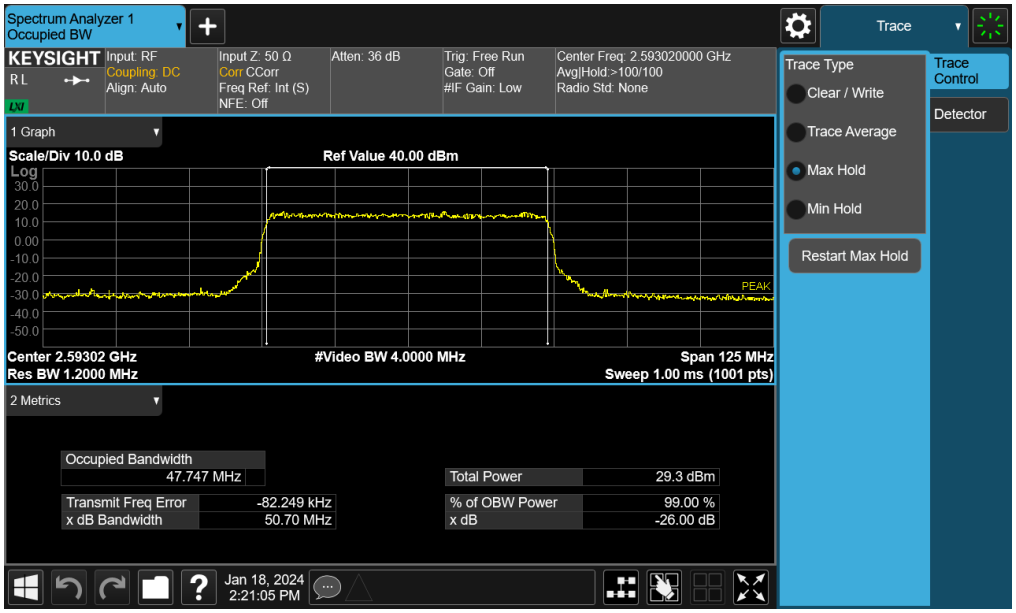
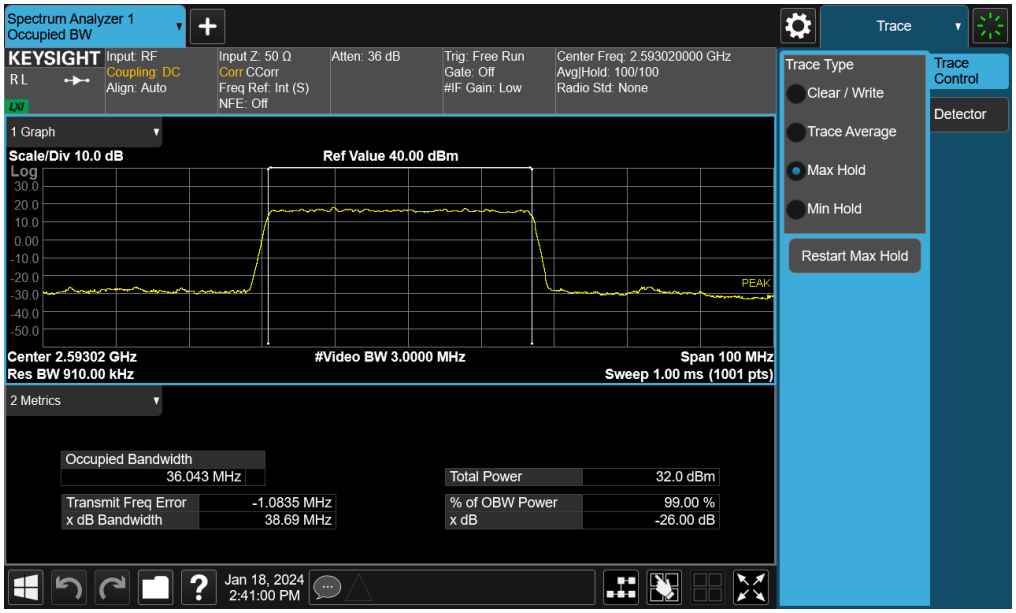


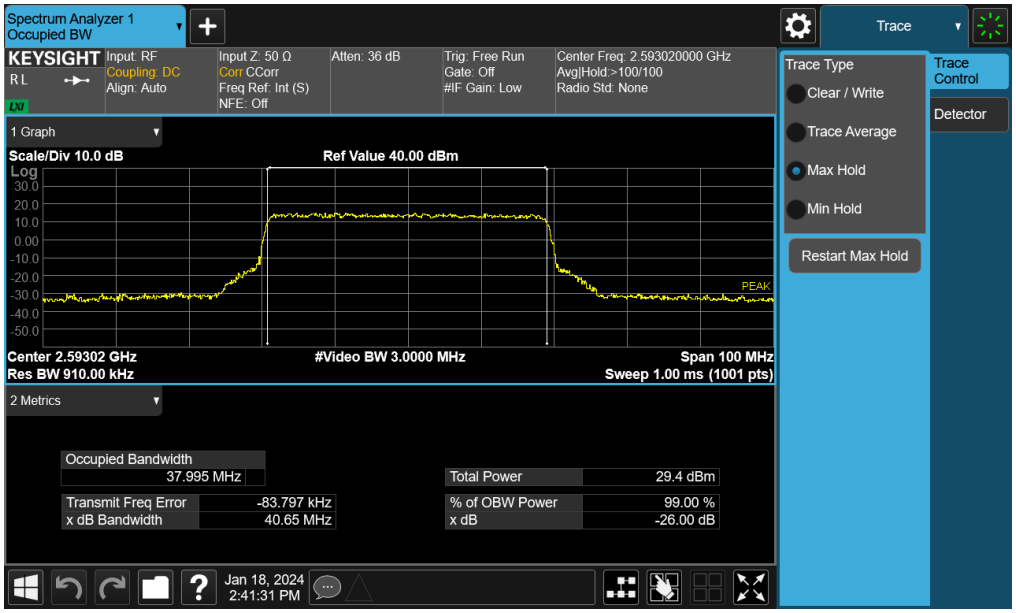
Plot 7-69. Occupied Bandwidth Plot (NR Band n41 - 50MHz QPSK - Full RB Configuration – Ant2)



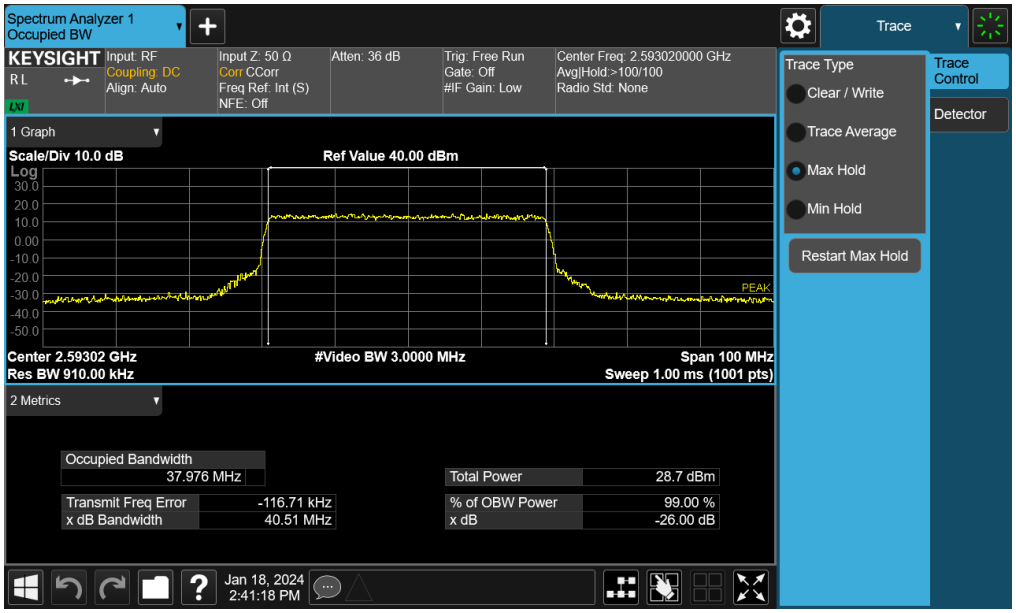
Plot 7-70. Occupied Bandwidth Plot (NR Band n41 - 50MHz 16-QAM - Full RB Configuration – Ant2)



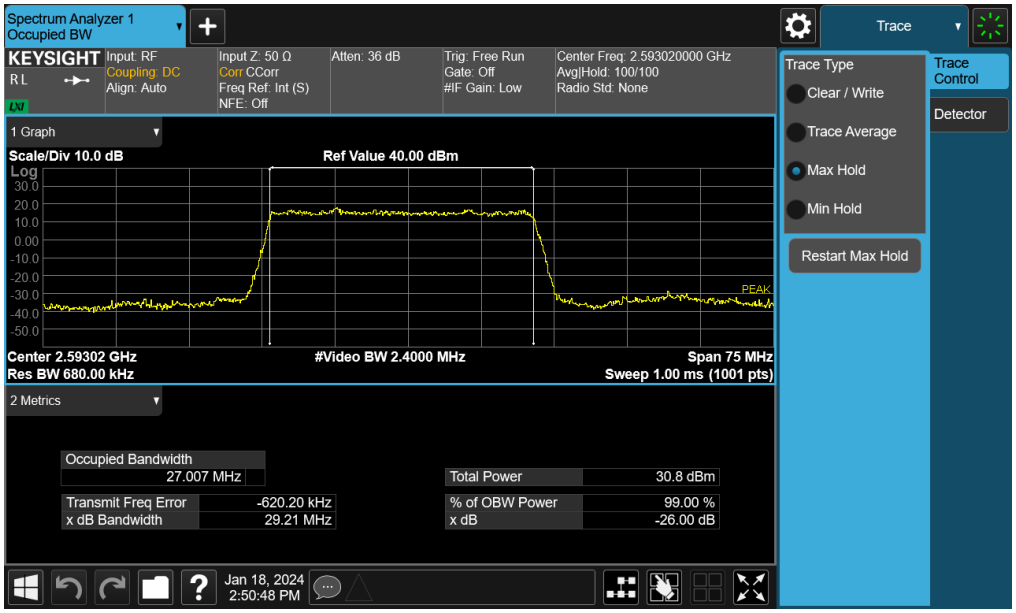
Plot 7-71. Occupied Bandwidth Plot (NR Band n41 - 40MHz π/2 BPSK - Full RB Configuration – Ant2)



Plot 7-72. Occupied Bandwidth Plot (NR Band n41 - 40MHz QPSK - Full RB Configuration – Ant2)



Plot 7-73. Occupied Bandwidth Plot (NR Band n41 - 40MHz 16-QAM - Full RB Configuration – Ant2)

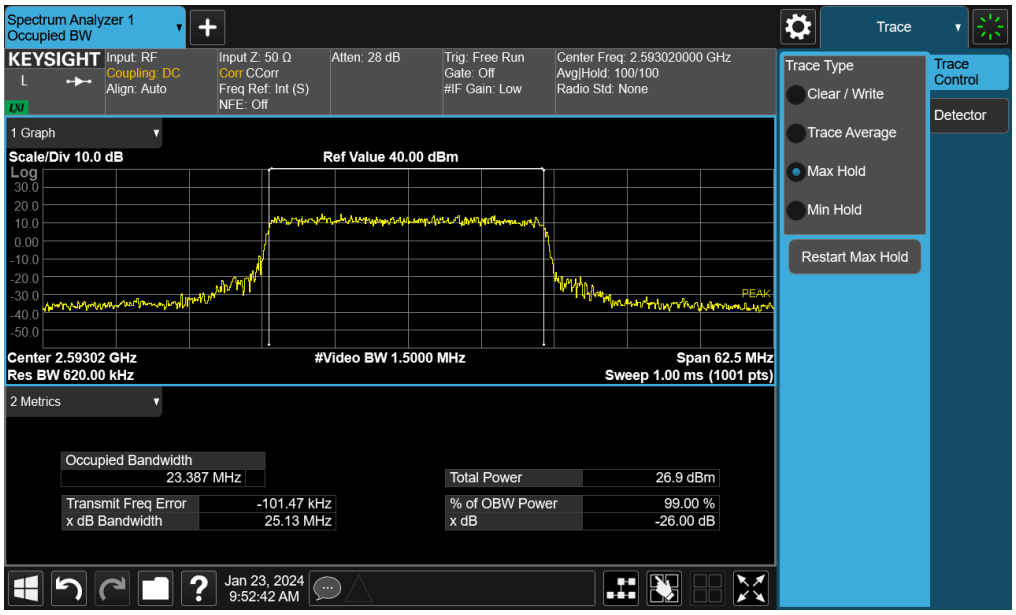


Plot 7-74. Occupied Bandwidth Plot (NR Band n41 - 30MHz π/2 BPSK - Full RB Configuration – Ant2)

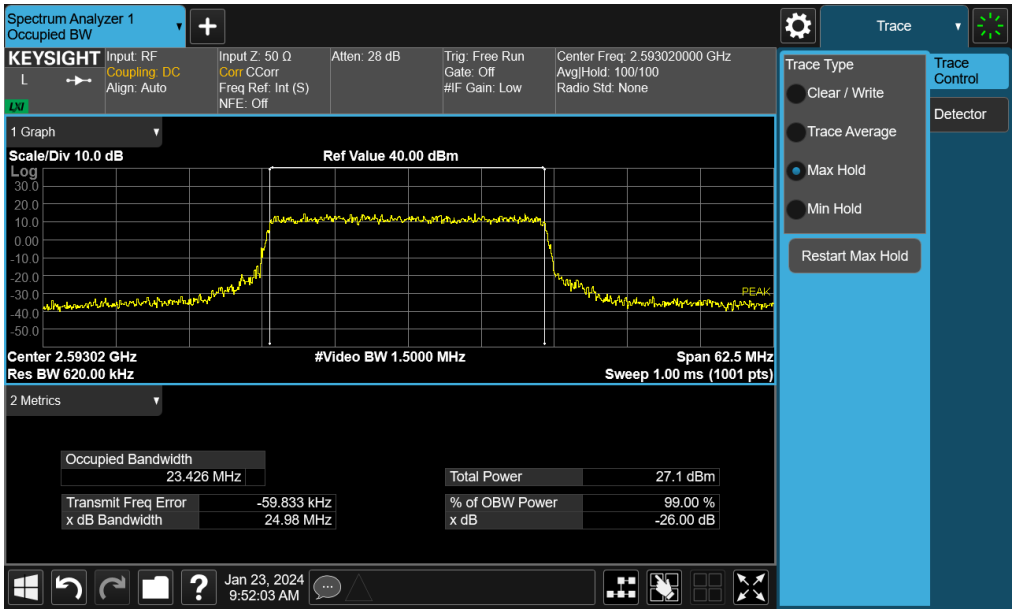
Plot 7-75. Occupied Bandwidth Plot (NR Band n41 - 30MHz QPSK - Full RB Configuration – Ant2)

Plot 7-76. Occupied Bandwidth Plot (NR Band n41 - 30MHz 16-QAM - Full RB Configuration – Ant2)

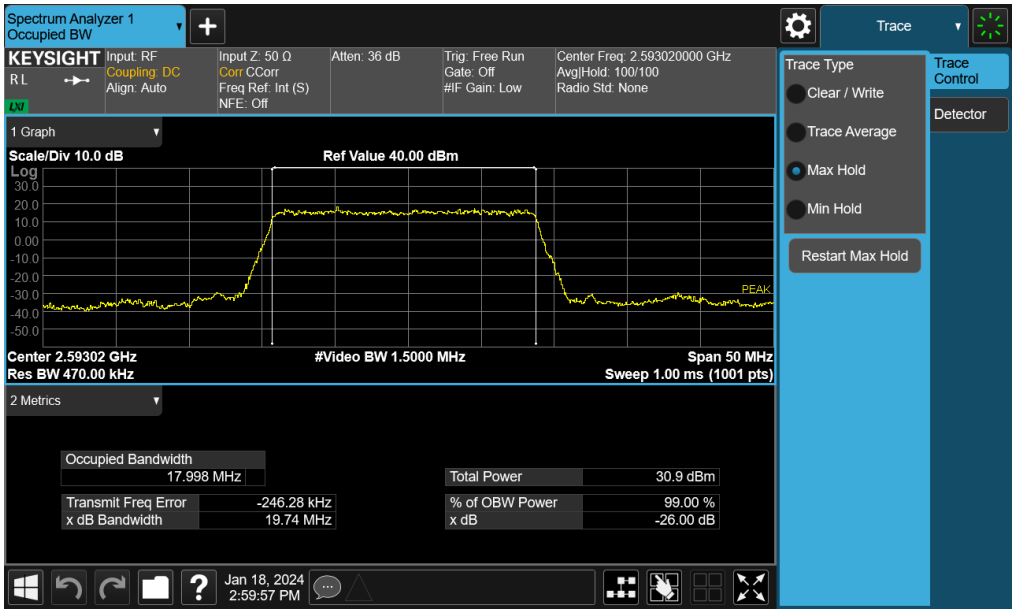
Plot 7-77. Occupied Bandwidth Plot (NR Band n41 - 25MHz π/2 BPSK - Full RB Configuration – Ant2)



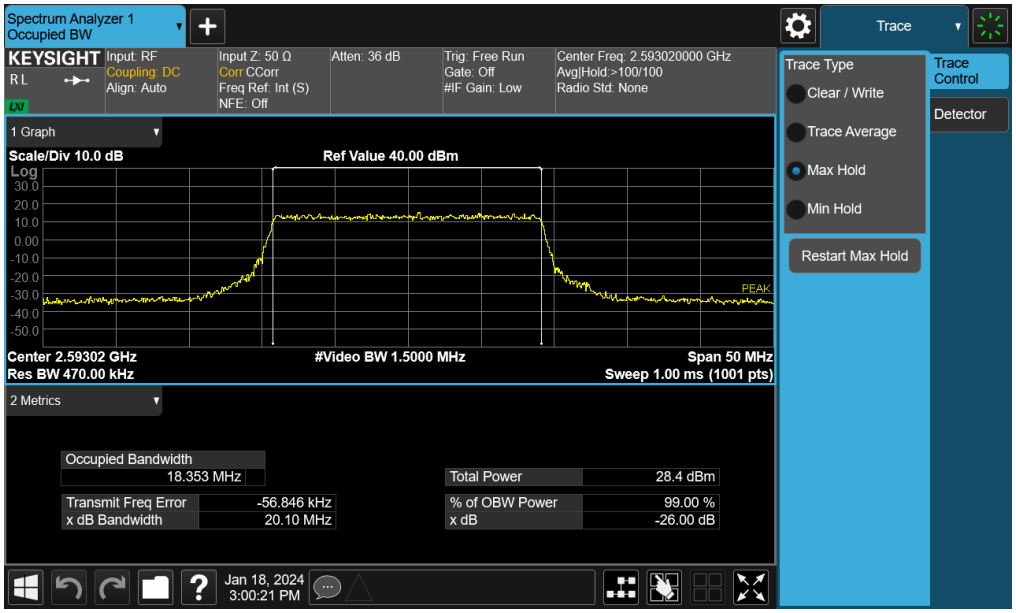
Plot 7-78. Occupied Bandwidth Plot (NR Band n41 - 25MHz QPSK - Full RB Configuration – Ant2)



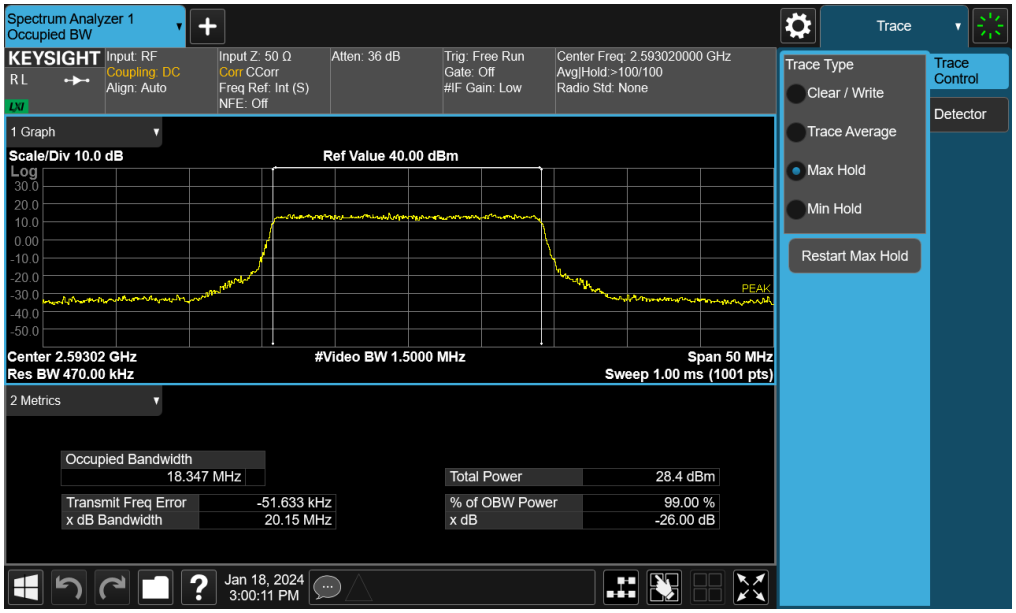
Plot 7-79. Occupied Bandwidth Plot (NR Band n41 - 25MHz 16-QAM - Full RB Configuration – Ant2)



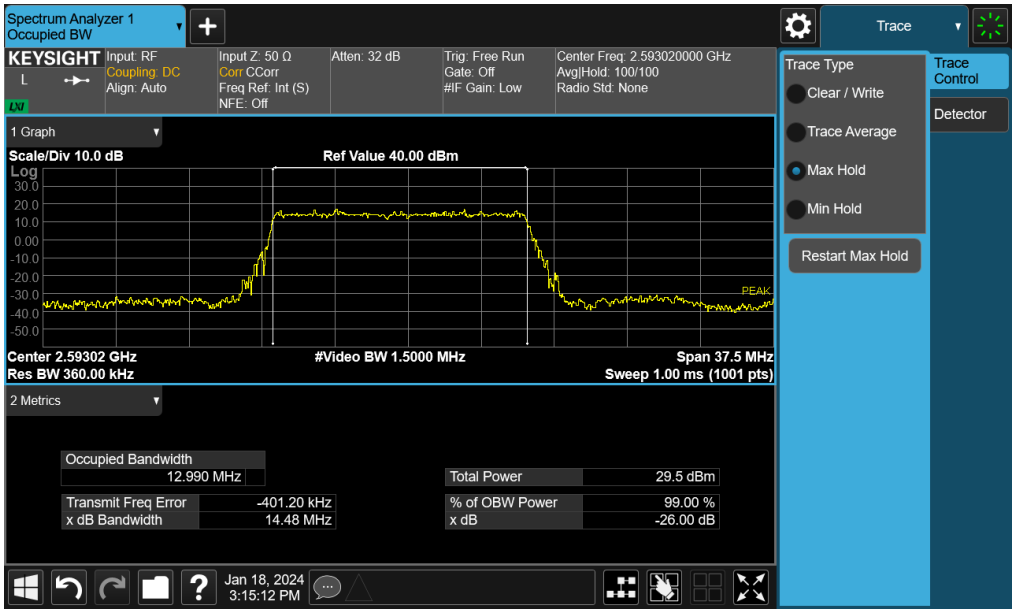
Plot 7-80. Occupied Bandwidth Plot (NR Band n41 - 20MHz π/2 BPSK - Full RB Configuration – Ant2)



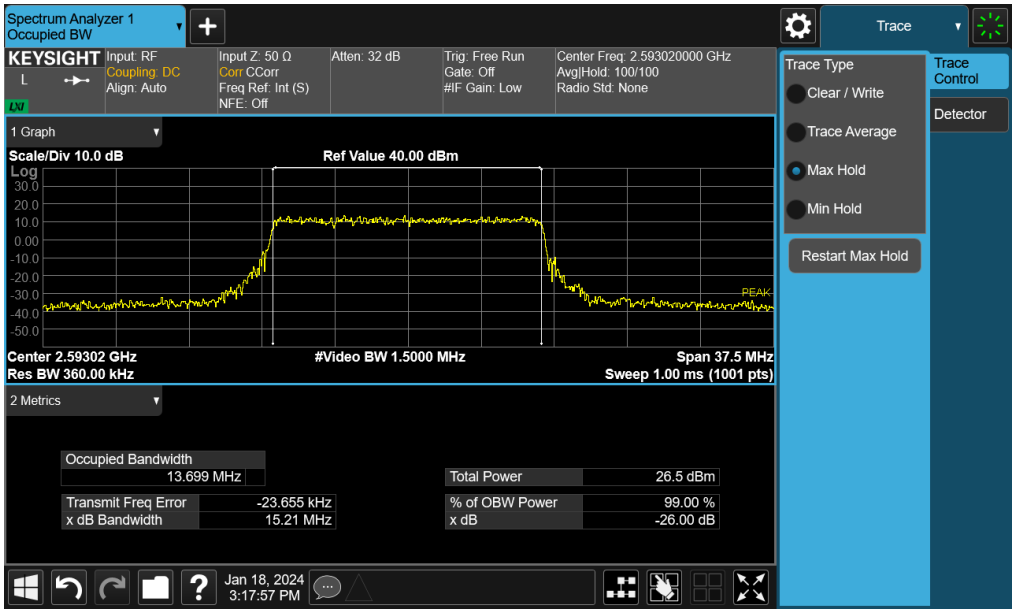
Plot 7-81. Occupied Bandwidth Plot (NR Band n41 - 20MHz QPSK - Full RB Configuration – Ant2)



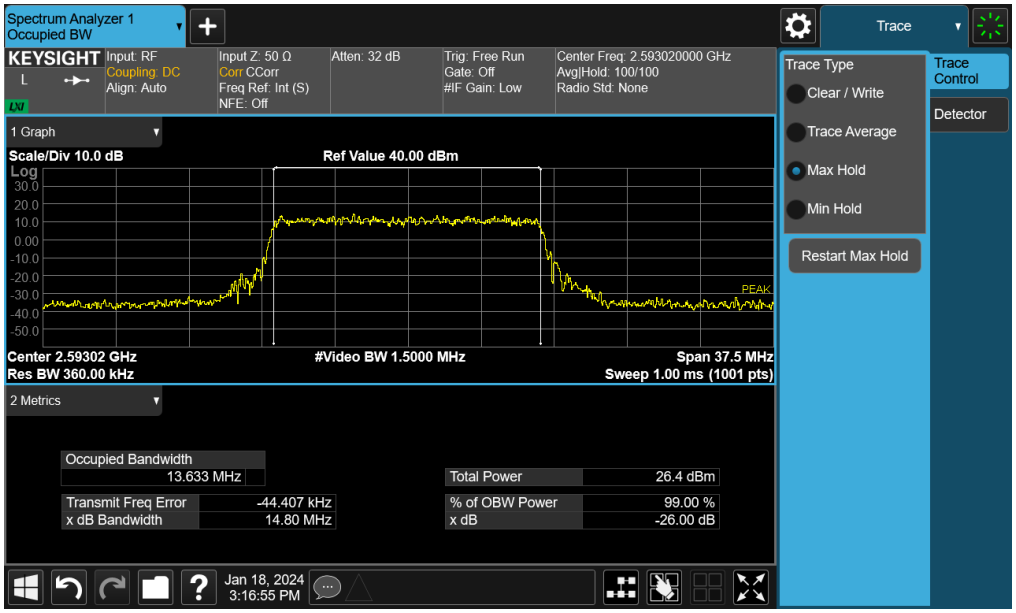
Plot 7-82. Occupied Bandwidth Plot (NR Band n41 - 20MHz 16-QAM - Full RB Configuration – Ant2)



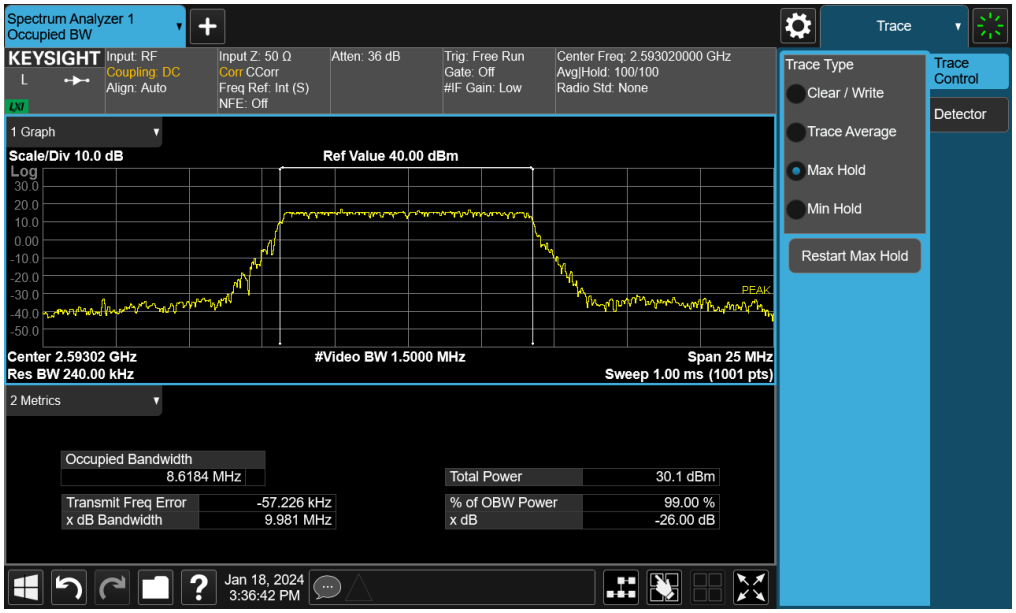
Plot 7-83. Occupied Bandwidth Plot (NR Band n41 - 15MHz π/2 BPSK - Full RB Configuration – Ant2)



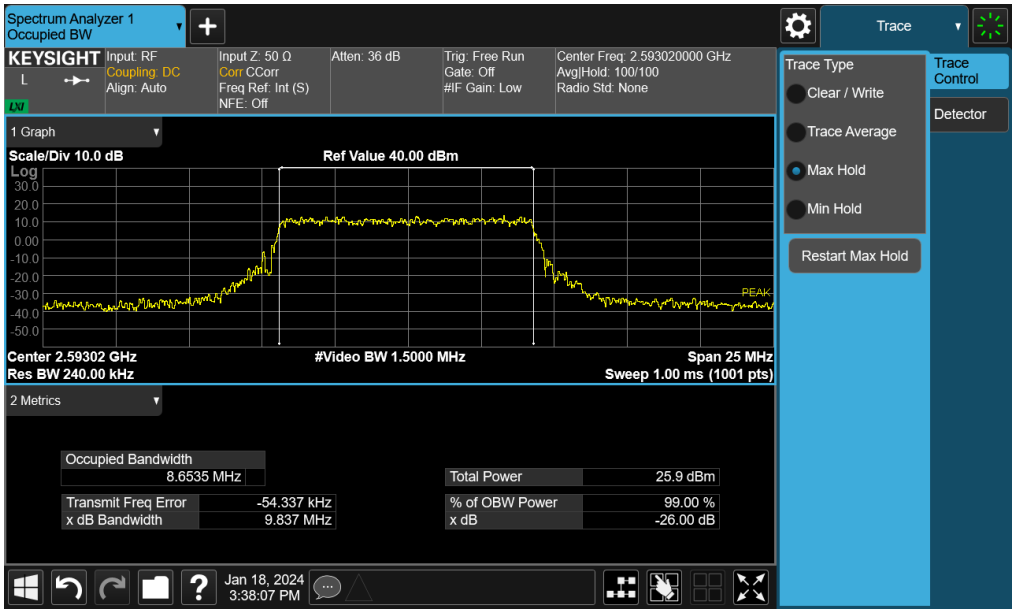
Plot 7-84. Occupied Bandwidth Plot (NR Band n41 - 15MHz QPSK - Full RB Configuration – Ant2)



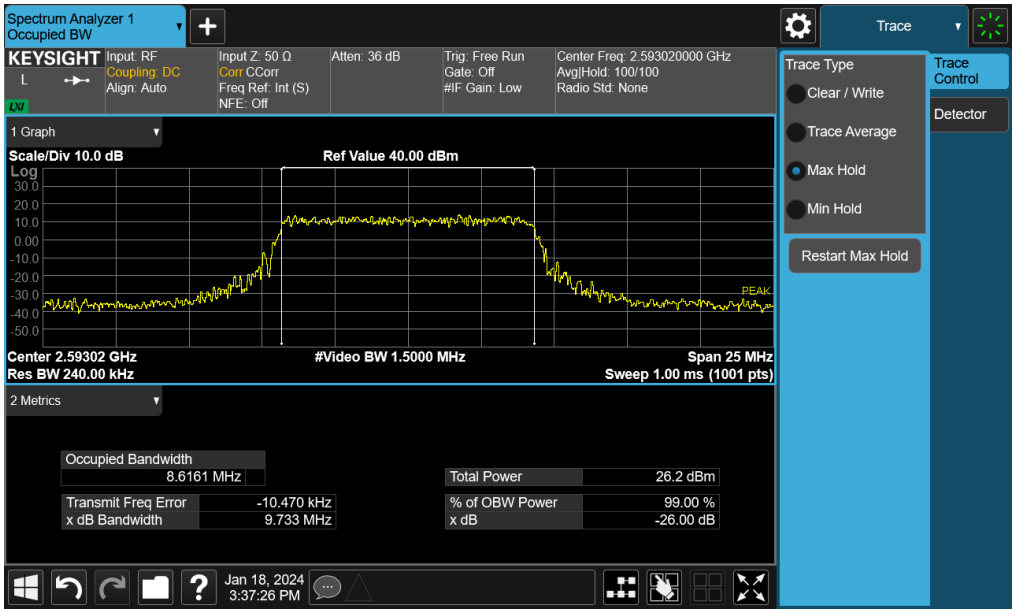
Plot 7-85. Occupied Bandwidth Plot (NR Band n41 - 15MHz 16-QAM - Full RB Configuration – Ant2)



Plot 7-86. Occupied Bandwidth Plot (NR Band n41 - 10MHz π/2 BPSK - Full RB Configuration – Ant2)



Plot 7-87. Occupied Bandwidth Plot (NR Band n41 - 10MHz QPSK - Full RB Configuration – Ant2)



Plot 7-88. Occupied Bandwidth Plot (NR Band n41 - 10MHz 16-QAM - Full RB Configuration – Ant2)

7.4 Spurious and Harmonic Emissions at Antenna Terminal

Test Overview

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst-case configuration. All modes of operation were investigated and the worst-case configuration results are reported in this section.

The minimum permissible attenuation level of any spurious emission is 43 + 10 $log_{10}(P_{[Watts]})$, where P is the transmitter power in Watts.

For Band 41, the minimum permissible attenuation level of any spurious emission is 55 + 10$log_{10}(P_{[Watts]})$.

Test Procedure Used

ANSI C63.26-2015 – Section 5.7.4

Test Settings

1. Start frequency was set to 30MHz and stop frequency was set to 10GHz (separated into at least two plots per channel)
2. Detector = RMS
3. Trace mode = trace average for continuous emissions, max hold for pulse emissions
4. Sweep time = auto couple
5. The trace was allowed to stabilize
6. Please see test notes below for RBW and VBW settings

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

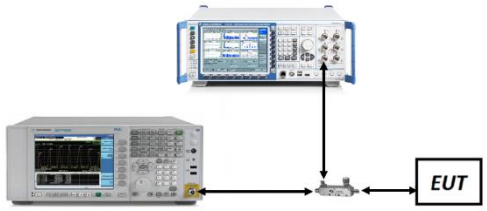


Figure 7-3. Test Instrument & Measurement Setup

Test Notes

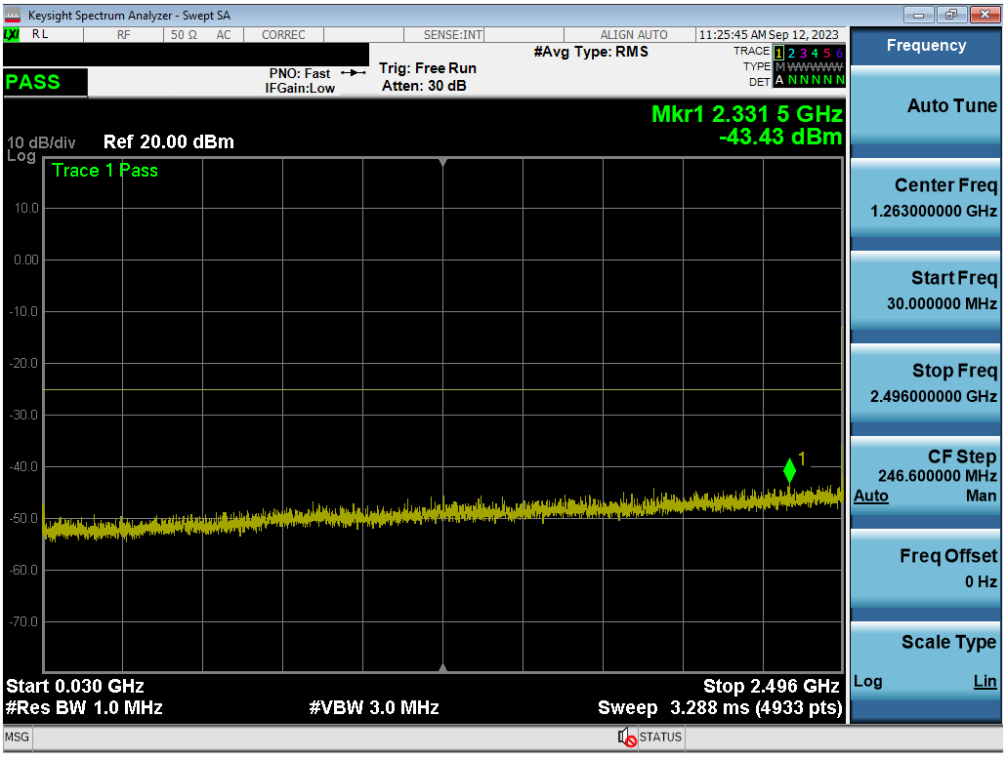
1. Per Part 27, compliance with the applicable limits is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz.

2. For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst-case configuration. All modes of operation were investigated and the worst-case configuration results are reported in this section.

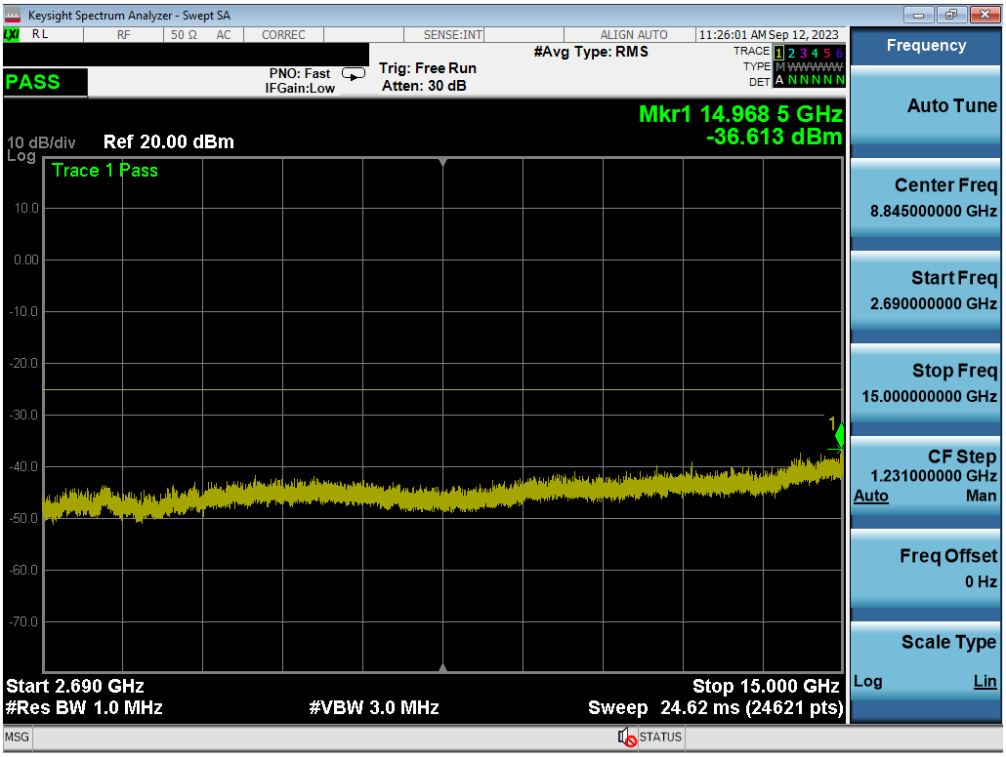
Mode	Bandwidth	Channel	Range [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]
LTE-B41 PC3	20MHz	Low	30.0 - 2475.0	-40.15	-25	-15.15
		Low	2690.0 - 15000.0	-40.85	-25	-15.85
		Low	15000.0 - 27000.0	-48.99	-25	-23.99
		Mid	30.0 - 2500.0	-43.43	-25	-18.43
		Mid	2690.0 - 15000.0	-36.61	-25	-11.61
		Mid	15000.0 - 27000.0	-47.21	-25	-22.21
		High	30.0 - 2500.0	-47.64	-25	-22.64
		High	2690.0 - 15000.0	-40.78	-25	-15.78
		High	15000.0 - 27000.0	-49.89	-25	-24.89
LTE-B41 PC3 ULCA	20+20MHz	Low	30.0 - 2475.0	-43.03	-25	-18.03
		Low	2496.0 - 2690.0	15.84	-	-
		Low	2690.0 - 15000.0	-37.12	-25	-12.12
		Low	15000.0 - 27000.0	-51.80	-25	-26.80
		Mid	30.0 - 2496.0	-41.97	-25	-16.97
		Mid	2496.0 - 2690.0	15.70	-	-
		Mid	2690.0 - 15000.0	-38.43	-25	-13.43
		Mid	15000.0 - 27000.0	-52.03	-25	-27.03
		High	30.0 - 2496.0	-43.61	-25	-18.61
		High	2496.0 - 2690.0	14.92	-	-
		High	2715.0 - 15000.0	-38.61	-25	-13.61
		High	2690.0 - 15000.0	-52.05	-25	-27.05

Table 7-9. Conducted Spurious Emission Results – LTE – Ant1

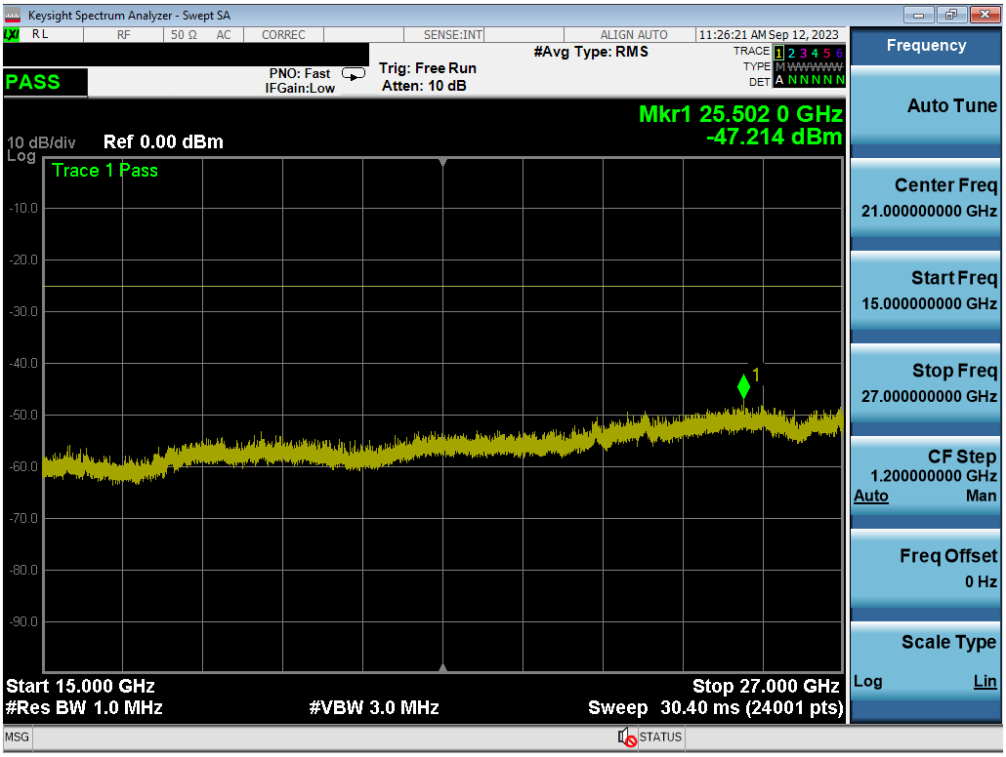
LTE Band 41(PC3) – Ant1



Plot 7-89. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel - Ant1)

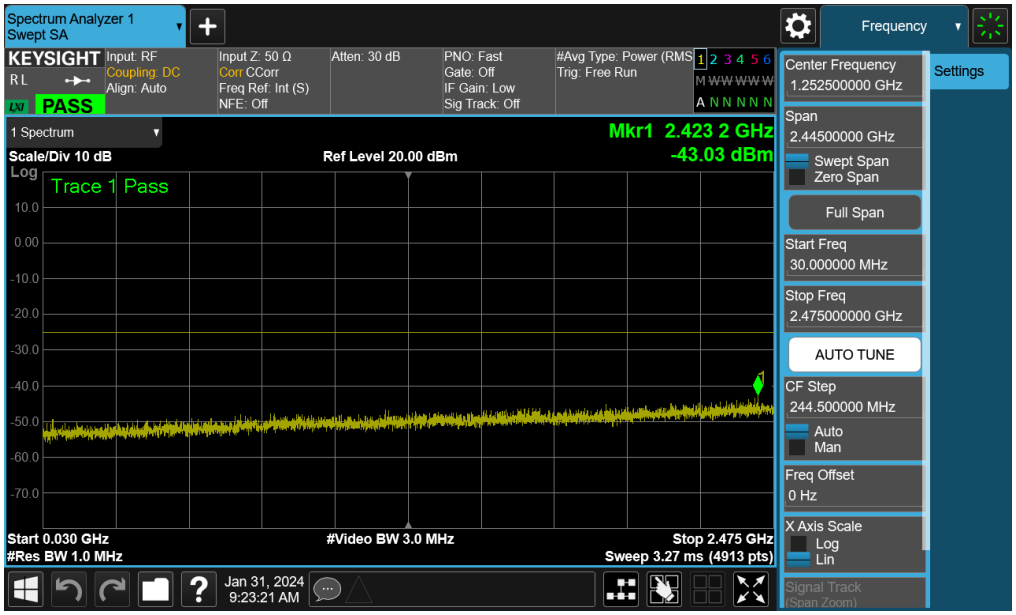


Plot 7-90. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel - Ant1)

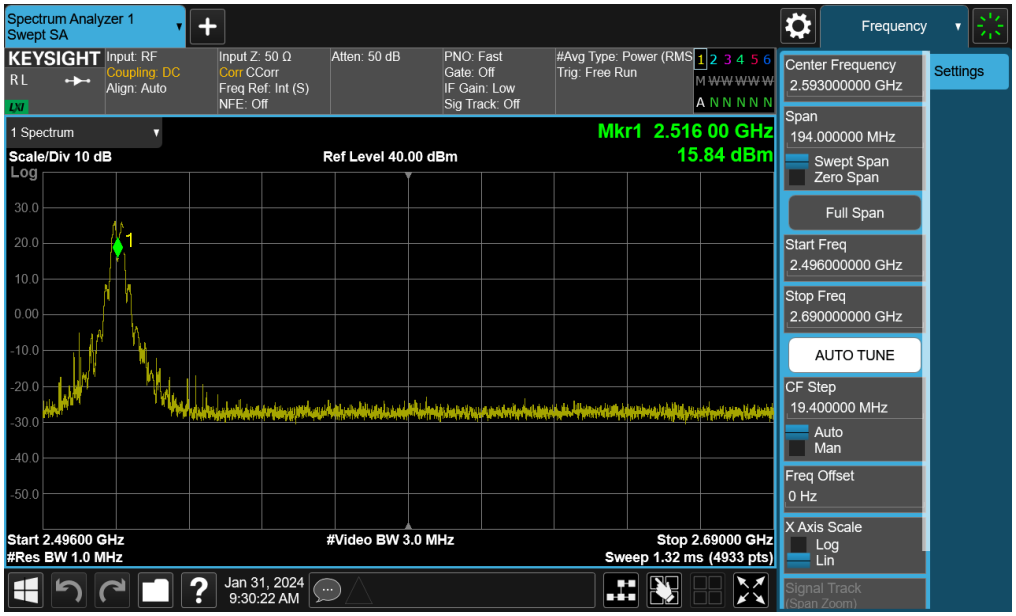


Plot 7-91. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel - Ant1)

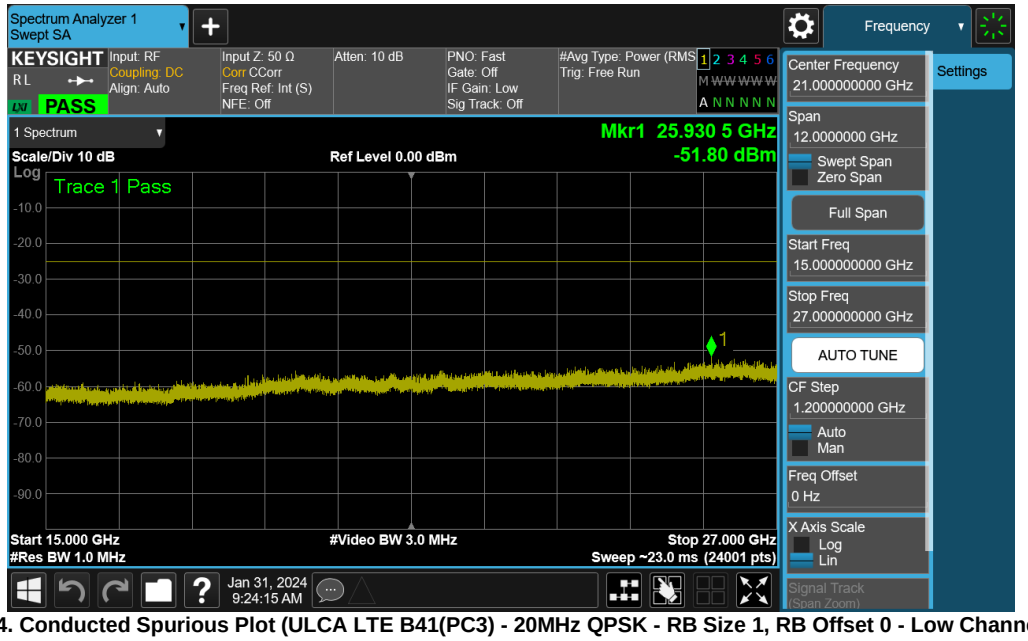
ULCA - LTE B41(PC3) – Ant1



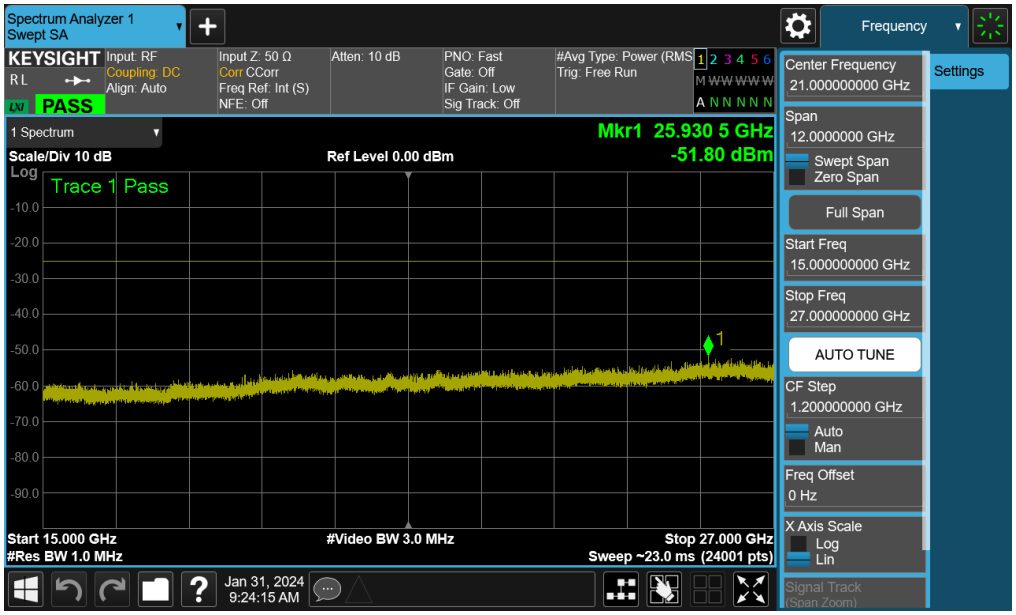
Plot 7-92. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel Ant1)



Plot 7-93. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel Ant1)



Plot 7-94. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel Ant1)

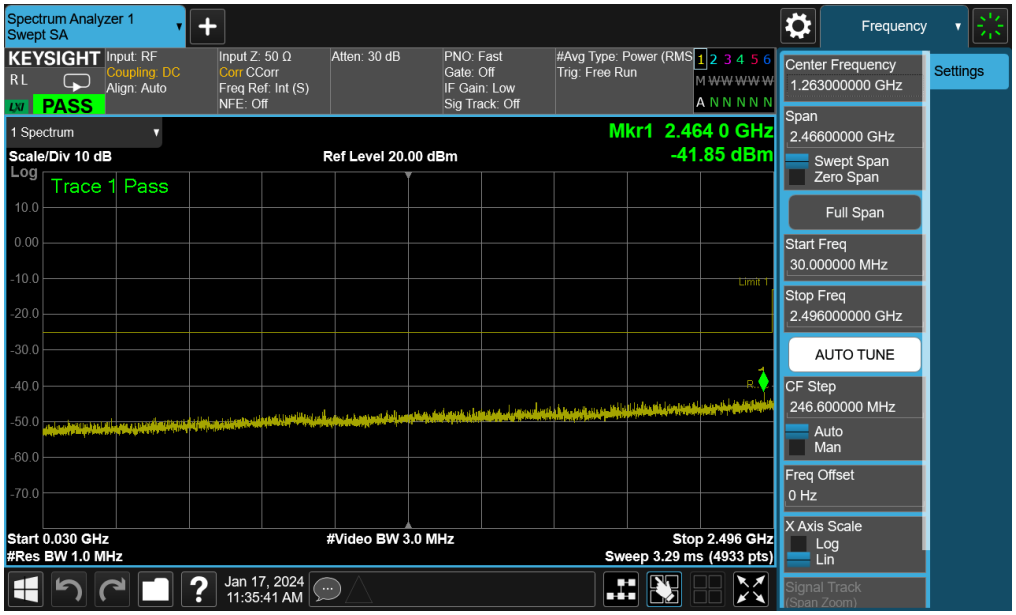


Plot 7-95. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel Ant1)

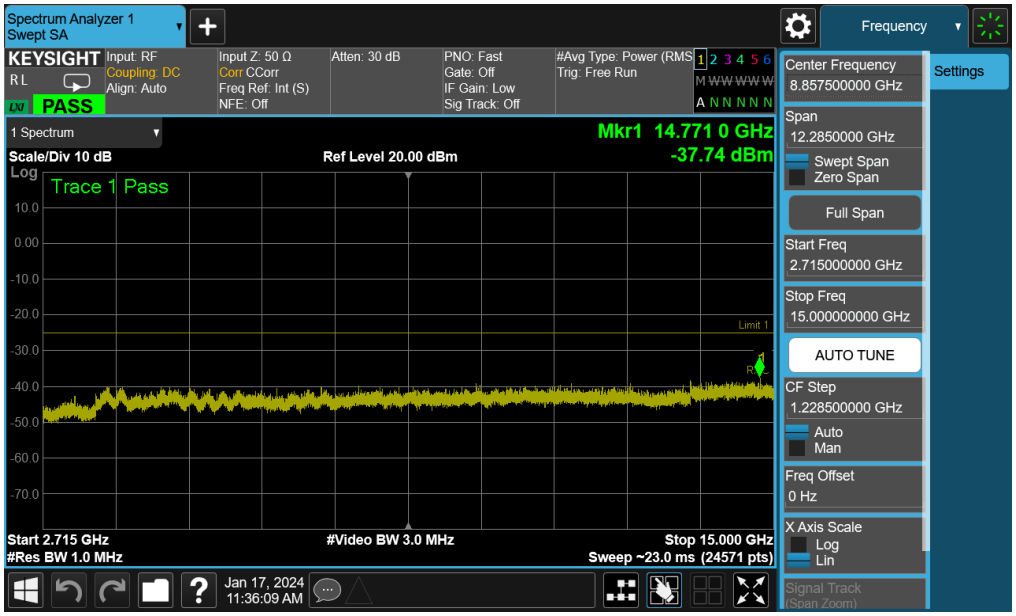
Mode	Bandwidth	Channel	Range [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]
NR-n41PC3	100MHz	Low	30.0 - 2470.0	-39.98	-25	-14.98
		Low	2690.0 - 15000.0	-37.85	-25	-12.85
		Low	15000.0 - 27000.0	-51.64	-25	-26.64
		Mid	30.0 - 2496.0	-43.45	-25	-18.45
		Mid	2690.0 - 15000.0	-38.25	-25	-13.25
		Mid	15000.0 - 27000.0	-51.05	-25	-26.05
		High	30.0 - 2496.0	-41.85	-25	-16.85
		High	2715.0 - 15000.0	-37.74	-25	-12.74
		High	15000.0 - 27000.0	-51.01	-25	-26.01

Table 7 23. Conducted Spurious Emission Results – NR – Ant1

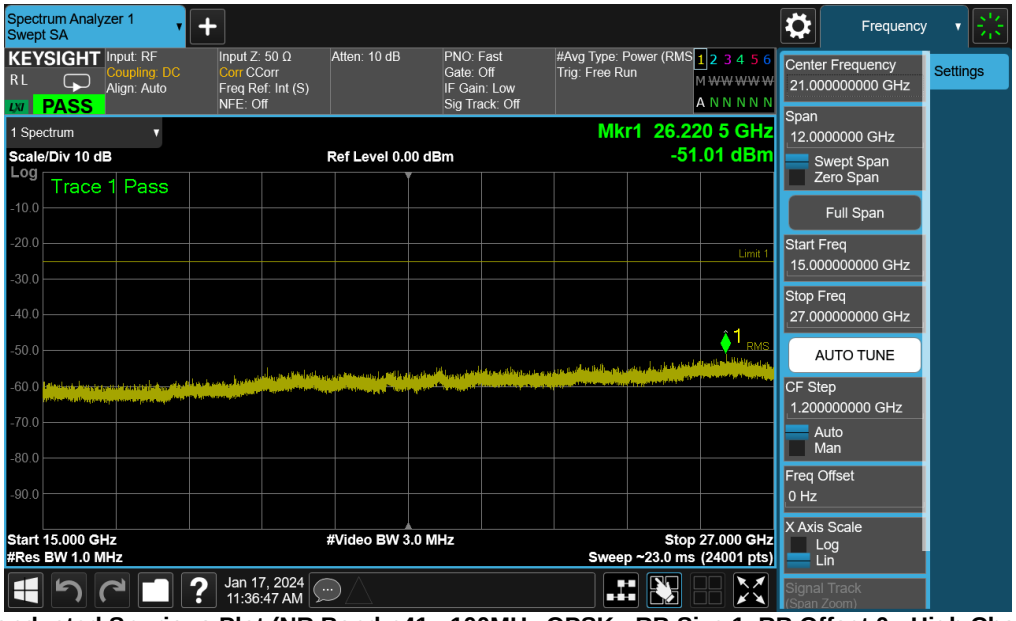
NR Band n41 – Ant1



Plot 7-96. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - High Channel – Ant1)



Plot 7-97. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - High Channel – Ant1)

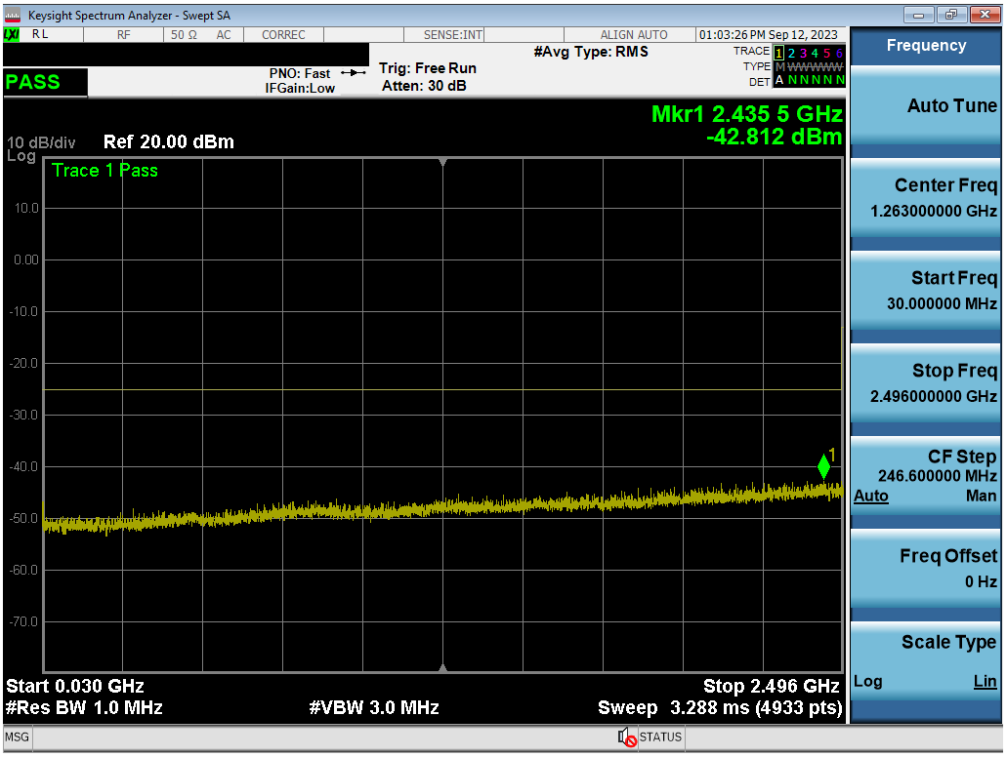


Plot 7-98. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - High Channel – Ant1)

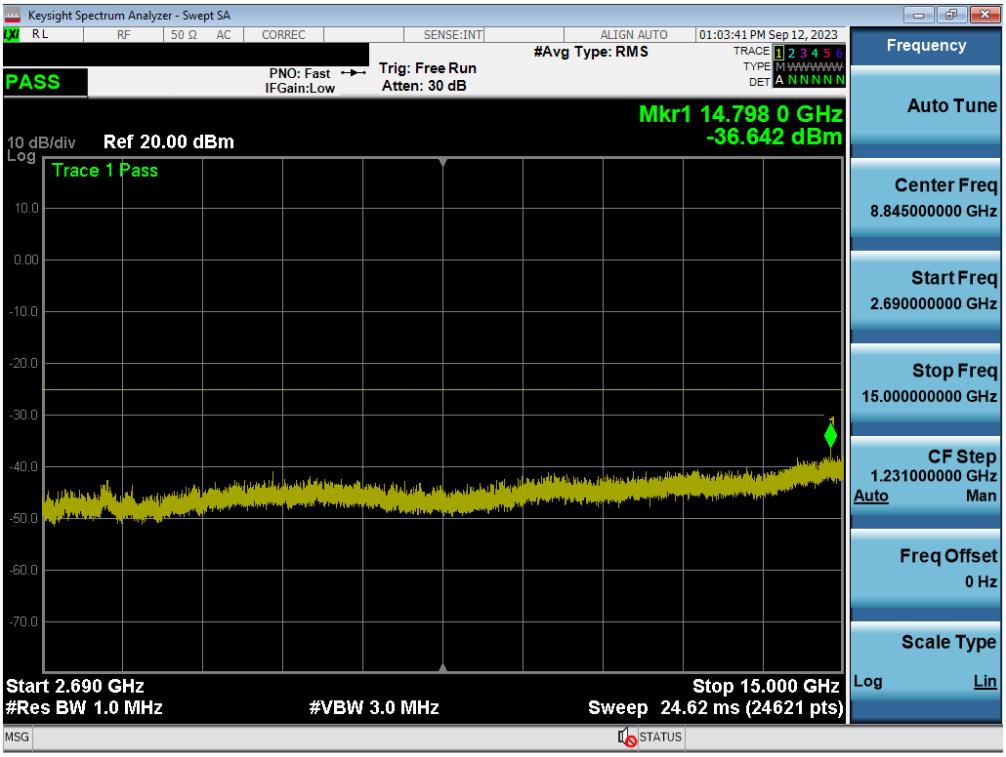
Mode	Bandwidth	Channel	Range [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]
LTE-B41 PC3	20MHz	Low	30.0 - 2475.0	-44.37	-25	-19.37
		Low	2690.0 - 15000.0	-40.72	-25	-15.72
		Low	15000.0 - 27000.0	-49.41	-25	-24.41
		Mid	30.0 - 2500.0	-42.81	-25	-17.81
		Mid	2690.0 - 15000.0	-36.64	-25	-11.64
		Mid	15000.0 - 27000.0	-47.20	-25	-22.20
		High	30.0 - 2500.0	-39.80	-25	-14.80
		High	2690.0 - 15000.0	-40.70	-25	-15.70
		High	15000.0 - 27000.0	-49.73	-25	-24.73
LTE-B41 PC3 ULCA	20+20MHz	Low	30.0 - 2475.0	-42.74	-25	-17.74
		Low	2496.0 - 2690.0	15.44	-	-
		Low	2690.0 - 15000.0	-38.20	-25	-13.20
		Low	15000.0 - 27000.0	-51.33	-25	-26.33
		Mid	30.0 - 2496.0	-42.56	-25	-17.56
		Mid	2496.0 - 2690.0	16.49	-	-
		Mid	2690.0 - 15000.0	-38.00	-25	-13.00
		Mid	15000.0 - 27000.0	-51.53	-25	-26.53
		High	30.0 - 2496.0	-42.51	-25	-17.51
		High	2496.0 - 2690.0	15.26	-	-
		High	2715.0 - 15000.0	-37.50	-25	-12.50
		High	2690.0 - 15000.0	-51.16	-25	-26.16

Table 7-10. Conducted Spurious Emission Results – LTE – Ant2

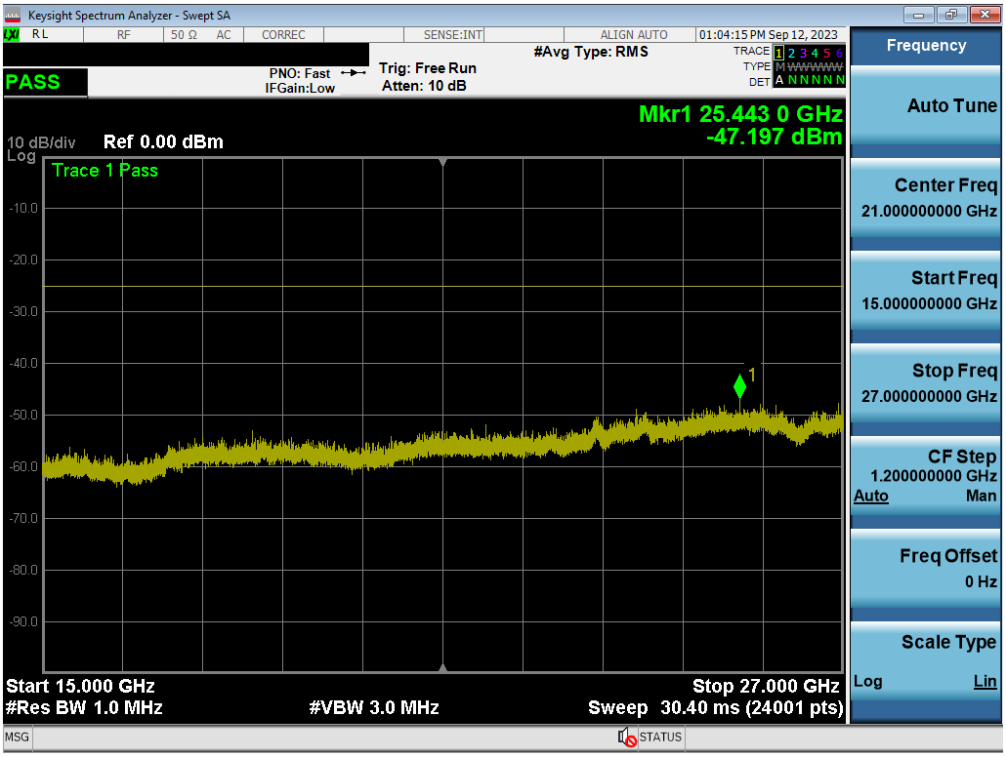
LTE Band 41(PC3) – Ant2



Plot 7-99. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel – Ant2)

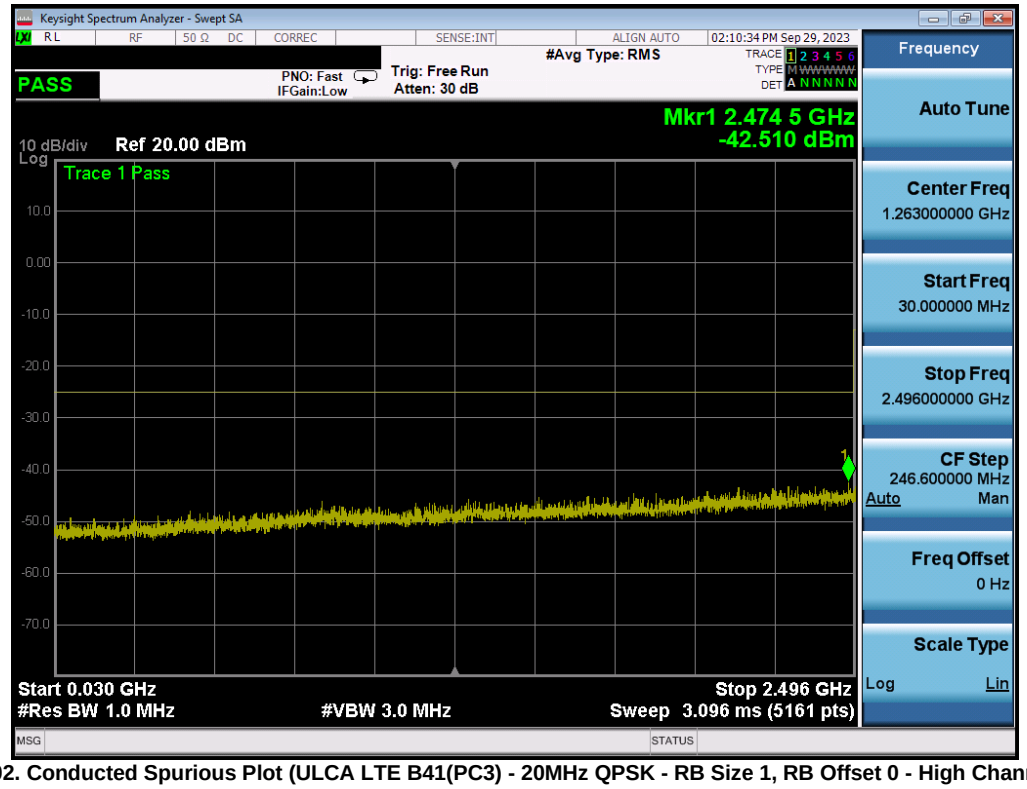


Plot 7-100. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel – Ant2)

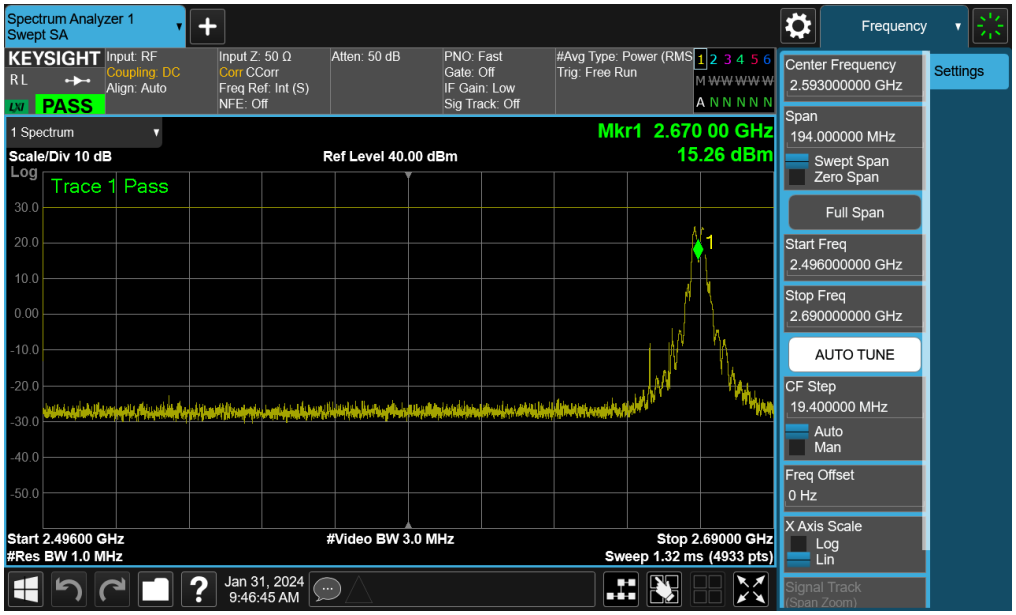


Plot 7-101. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel – Ant2)

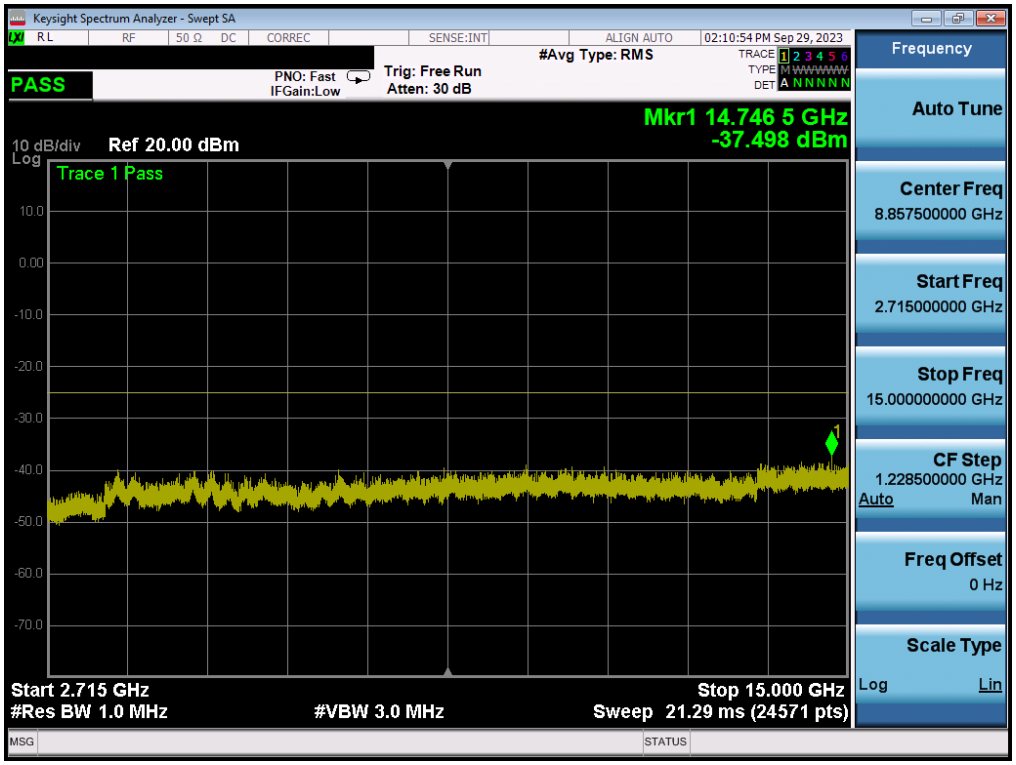
ULCA - LTE B41(PC3) – Ant2



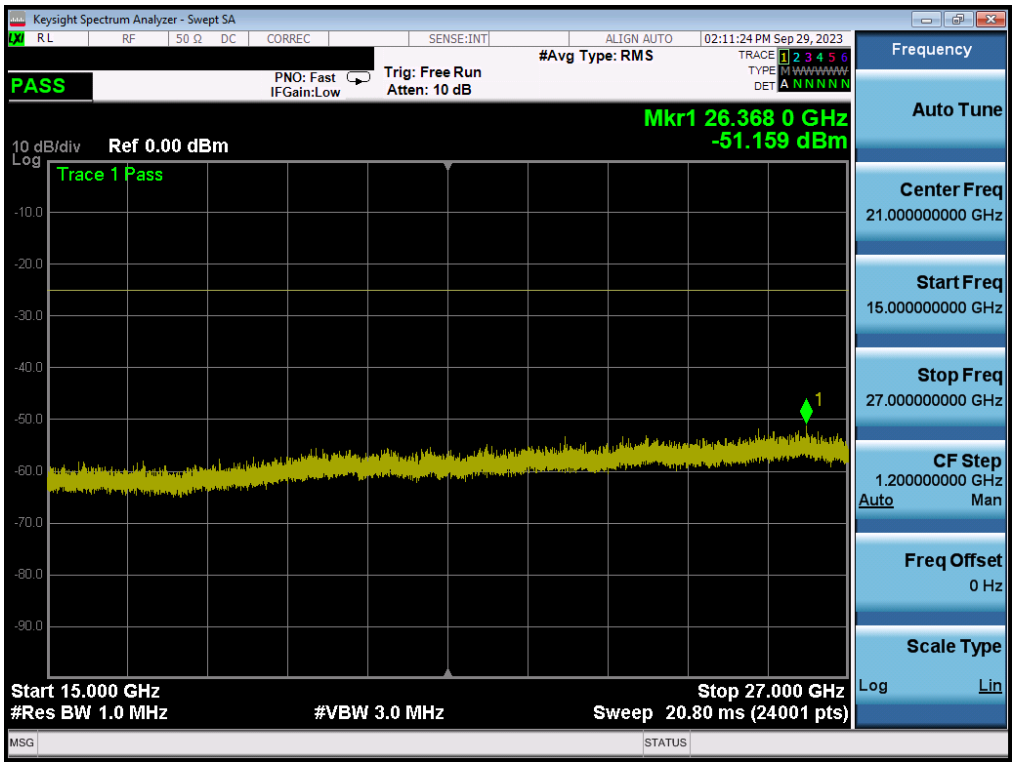
Plot 7-102. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel Ant2)



Plot 7-103. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel Ant2)



Plot 7-104. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel Ant2)

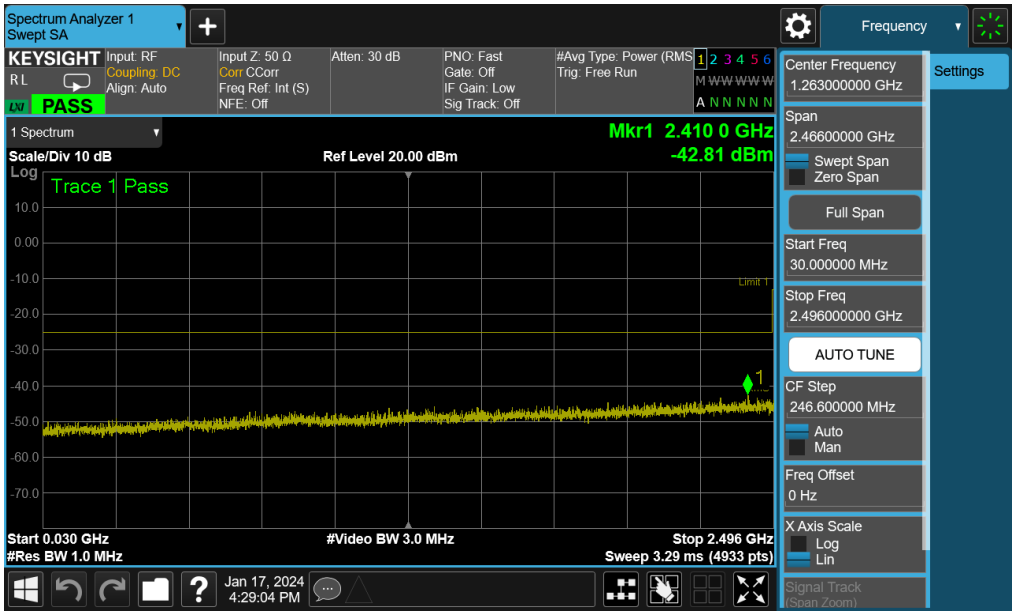


Plot 7-105. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel Ant2)

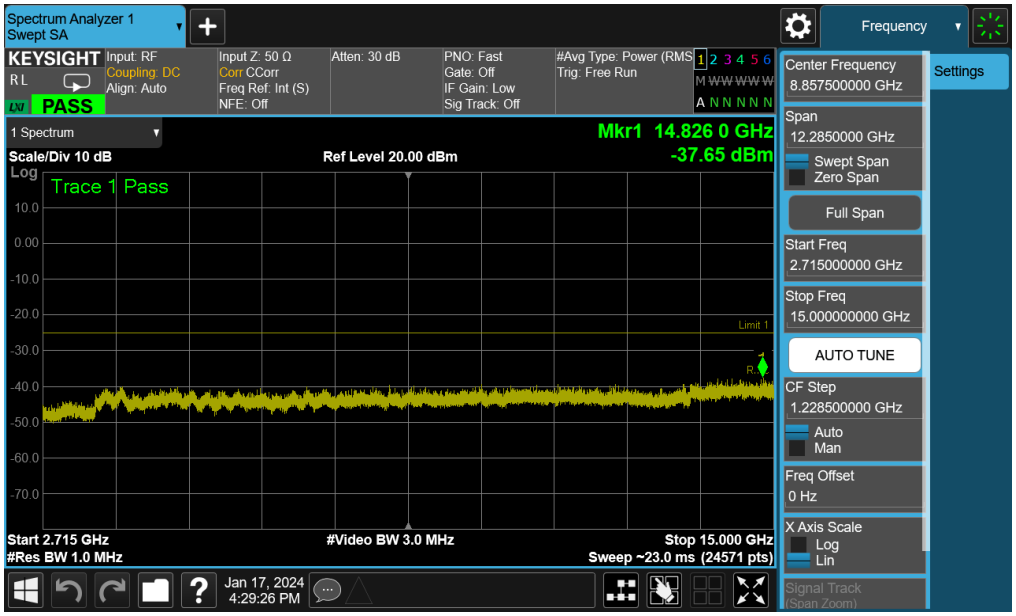
Mode	Bandwidth	Channel	Range [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]
NR-n41PC3	100MHz	Low	30.0 - 2470.0	-43.17	-25	-18.17
		Low	2690.0 - 15000.0	-37.99	-25	-12.99
		Low	15000.0 - 27000.0	-52.32	-25	-27.32
		Mid	30.0 - 2496.0	-43.14	-25	-18.14
		Mid	2690.0 - 15000.0	-38.06	-25	-13.06
		Mid	15000.0 - 27000.0	-51.49	-25	-26.49
		High	30.0 - 2496.0	-42.81	-25	-17.81
		High	2715.0 - 15000.0	-37.65	-25	-12.65
		High	15000.0 - 27000.0	-52.01	-25	-27.01

Table 7 23. Conducted Spurious Emission Results – NR – Ant2

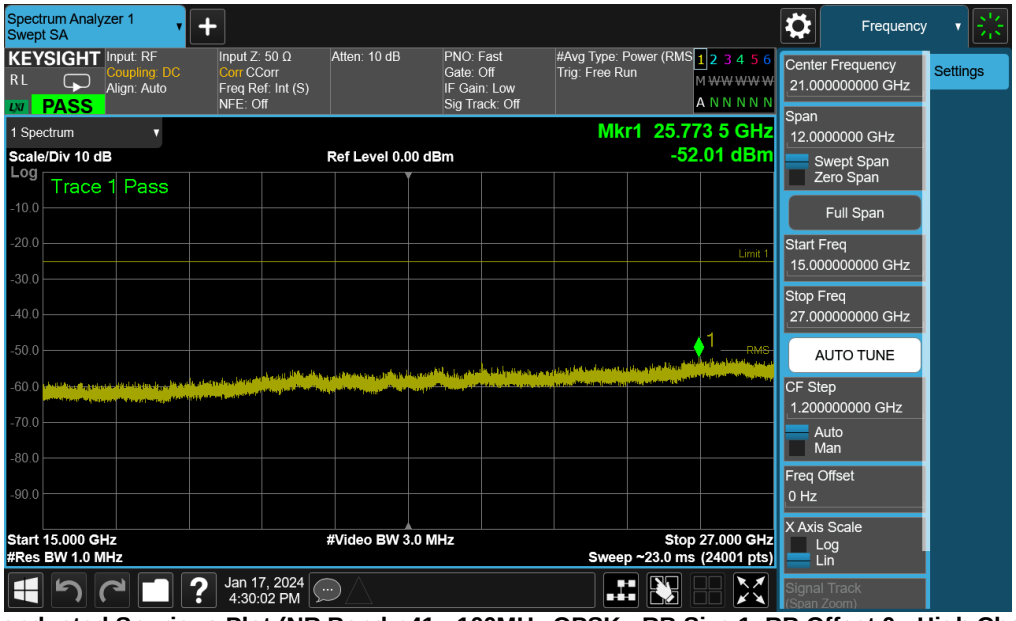
NR Band n41 – Ant2



Plot 7-106. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - High Channel – Ant2)



Plot 7-107. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - High Channel – Ant2)



Plot 7-108. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - High Channel – Ant2)

7.5 Band Edge Emissions at Antenna Terminal

Test Overview

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst-case configuration. All modes of operation were investigated and the worst-case configuration results are reported in this section.

The minimum permissible attenuation level for Band 30 is > 43 + 10 log10 (P[Watts] at 2300-2305MHz & 2345-2360MHz, > 55 + 10 log10 (P[Watts]) at 2320-2324MHz & 2341-2345MHz, > 61 + 10 log10 (P[Watts]) at 2324-2328MHz & 2337-2341MHz, > 67 + 10 log10 (P[Watts]) at 2288-2292MHz & 2328-2337MHz, and > 70 + 10 log10 (P[Watts]) at frequencies < 2288MHz & >2365MHz.

The minimum permissible attenuation level for Band 41 is as noted in the Test Notes on the following page.

Test Procedure Used

ANSI C63.26-2015 – Section 5.7.3

Test Settings

1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. RBW ≥ 1% of the emission bandwidth
4. VBW ≥ 3 x RBW
5. Detector = RMS
6. Number of sweep points ≥ 2 x Span/RBW
7. Trace mode = trace average for continuous emissions, max hold for pulse emissions
8. Sweep time = auto couple
9. The trace was allowed to stabilize

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

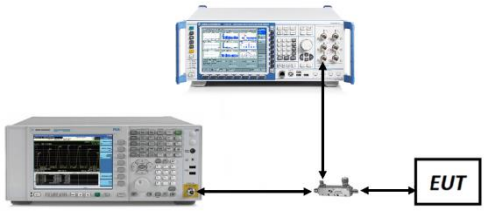


Figure 7-4. Test Instrument & Measurement Setup

Test Notes

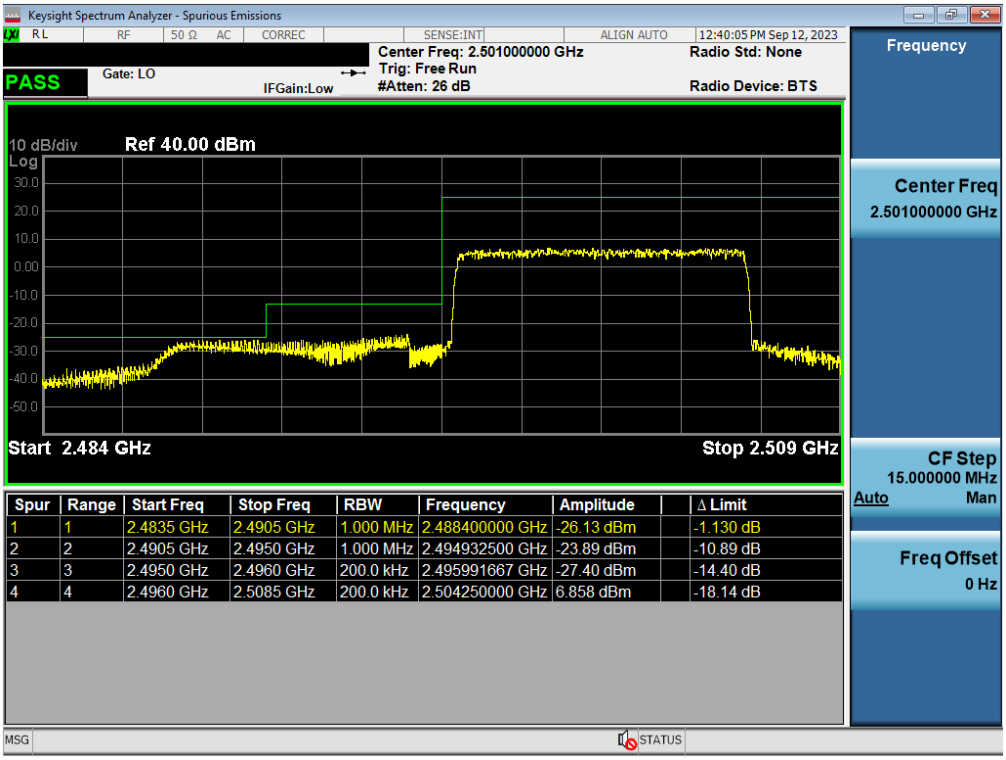
1. Per 27.53(m) for operations in the BRS/EBS bands, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 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. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz.

2. For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst-case configuration. All modes of operation were investigated and the worst-case configuration results are reported in this section.

Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
LTE B41 PC3	20 MHz	Low	Band Edge	-28.90	-25	-3.90
		High	Band Edge	-41.05	-25	-16.05
	15 MHz	Low	Band Edge	-27.39	-25	-2.39
		High	Band Edge	-39.54	-25	-14.54
	10 MHz	Low	Band Edge	-26.13	-25	-1.13
		High	Band Edge	-37.01	-25	-12.01
	5 MHz	Low	Band Edge	-19.90	-13	-6.90
		High	Band Edge	-18.80	-10	-8.80
LTE-B41 PC3 ULCA	20+20MHz	Low	Band Edge	-33.38	-25	-8.38
		High	Band Edge	-21.58	-13	-8.58

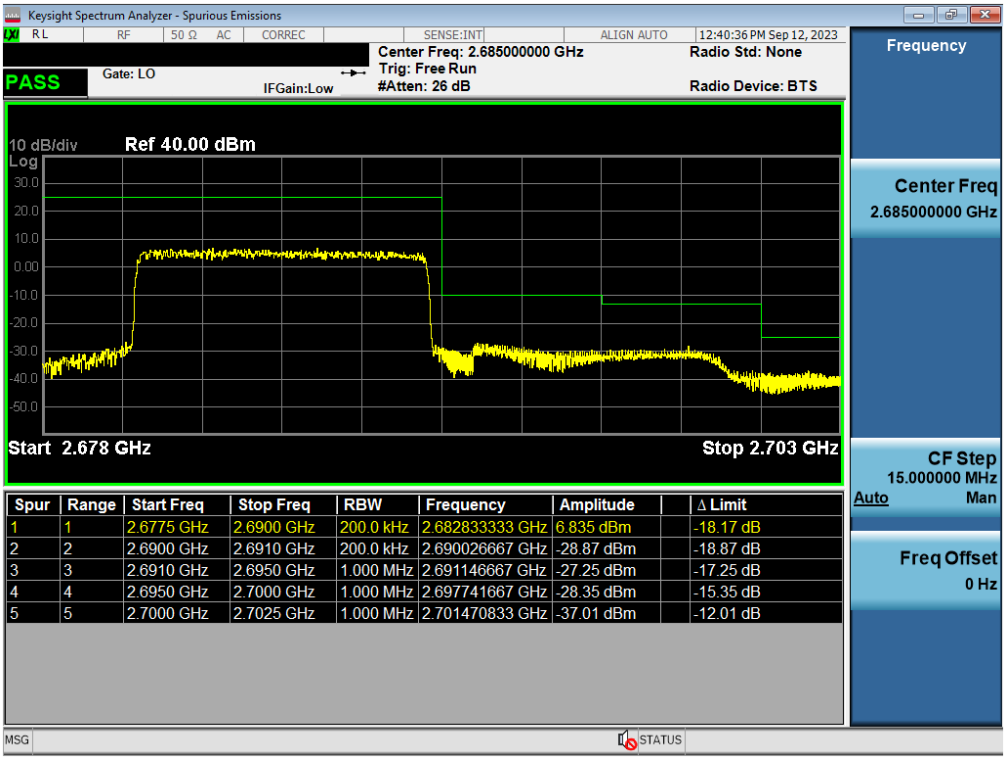
Table 7-11. Conducted Band Edge Test Results – LTE – Ant1

LTE Band 41(PC3) – Ant1



Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.4835 GHz	2.4905 GHz	1.000 MHz	2.488400000 GHz	-26.13 dBm	-1.130 dB
2	2	2.4905 GHz	2.4950 GHz	1.000 MHz	2.494932500 GHz	-23.89 dBm	-10.89 dB
3	3	2.4950 GHz	2.4960 GHz	200.0 kHz	2.495991667 GHz	-27.40 dBm	-14.40 dB
4	4	2.4960 GHz	2.5085 GHz	200.0 kHz	2.504250000 GHz	6.858 dBm	-18.14 dB

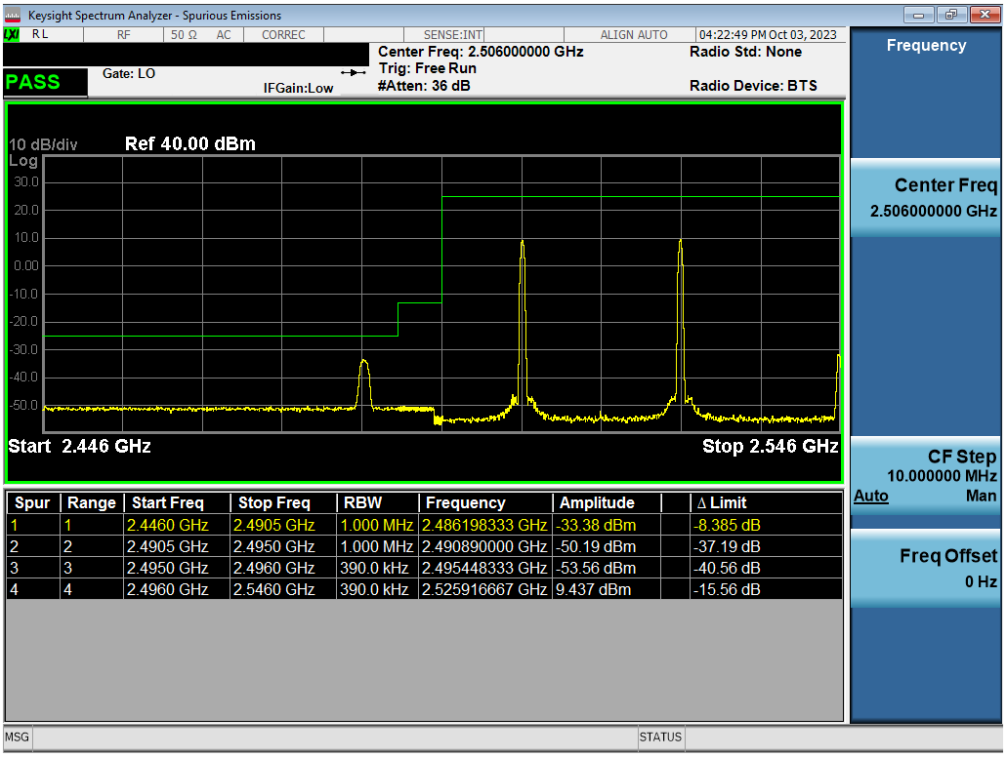
Plot 7-109. Lower ACP Plot (LTE Band 41(PC3) - 10MHz QPSK – Full RB - Ant1)



Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.6775 GHz	2.6900 GHz	200.0 kHz	2.682833333 GHz	6.835 dBm	-18.17 dB
2	2	2.6900 GHz	2.6910 GHz	200.0 kHz	2.690026667 GHz	-28.87 dBm	-18.87 dB
3	3	2.6910 GHz	2.6950 GHz	1.000 MHz	2.691146667 GHz	-27.25 dBm	-17.25 dB
4	4	2.6950 GHz	2.7000 GHz	1.000 MHz	2.697741667 GHz	-28.35 dBm	-15.35 dB
5	5	2.7000 GHz	2.7025 GHz	1.000 MHz	2.701470833 GHz	-37.01 dBm	-12.01 dB

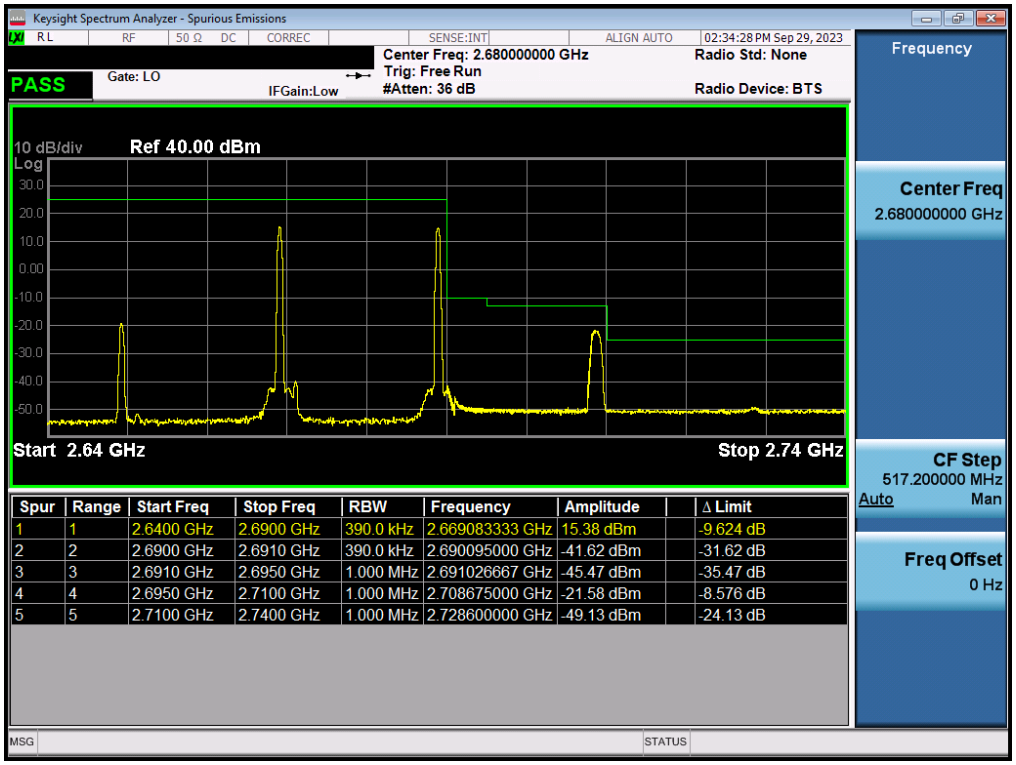
Plot 7-110. Upper ACP Plot (LTE Band 41(PC3) - 10MHz QPSK – Full RB - Ant1)

ULCA - LTE Band 41(PC3) – Ant1



Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.4460 GHz	2.4905 GHz	1.000 MHz	2.486198333 GHz	-33.38 dBm	-8.385 dB
2	2	2.4905 GHz	2.4950 GHz	1.000 MHz	2.490890000 GHz	-50.19 dBm	-37.19 dB
3	3	2.4950 GHz	2.4960 GHz	390.0 kHz	2.495448333 GHz	-53.56 dBm	-40.56 dB
4	4	2.4960 GHz	2.5460 GHz	390.0 kHz	2.525916667 GHz	9.437 dBm	-15.56 dB

Plot 7-111. Lower ACP Plot – A-MPR (ULCA LTE B41(PC3) - 20MHz QPSK – Full RB - Ant1)



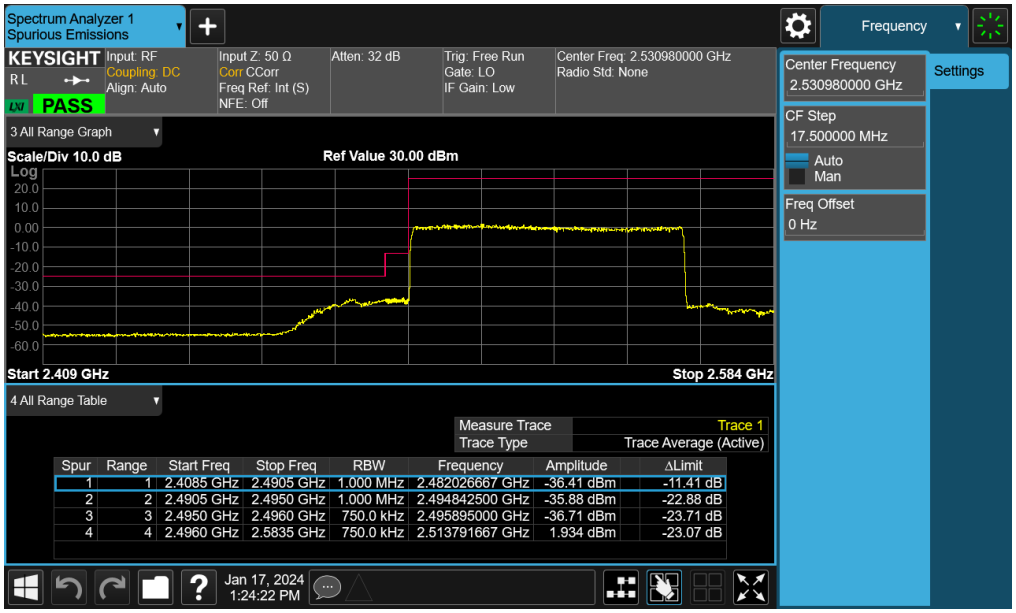
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.6400 GHz	2.6900 GHz	390.0 kHz	2.669083333 GHz	15.38 dBm	-9.624 dB
2	2	2.6900 GHz	2.6910 GHz	390.0 kHz	2.690095000 GHz	-41.62 dBm	-31.62 dB
3	3	2.6910 GHz	2.6950 GHz	1.000 MHz	2.691026667 GHz	-45.47 dBm	-35.47 dB
4	4	2.6950 GHz	2.7100 GHz	1.000 MHz	2.708675000 GHz	-21.58 dBm	-8.576 dB
5	5	2.7100 GHz	2.7400 GHz	1.000 MHz	2.728600000 GHz	-49.13 dBm	-24.13 dB

Plot 7-112. Upper ACP Plot (ULCA LTE B41(PC3) - 20MHz QPSK – Full RB - Ant1)

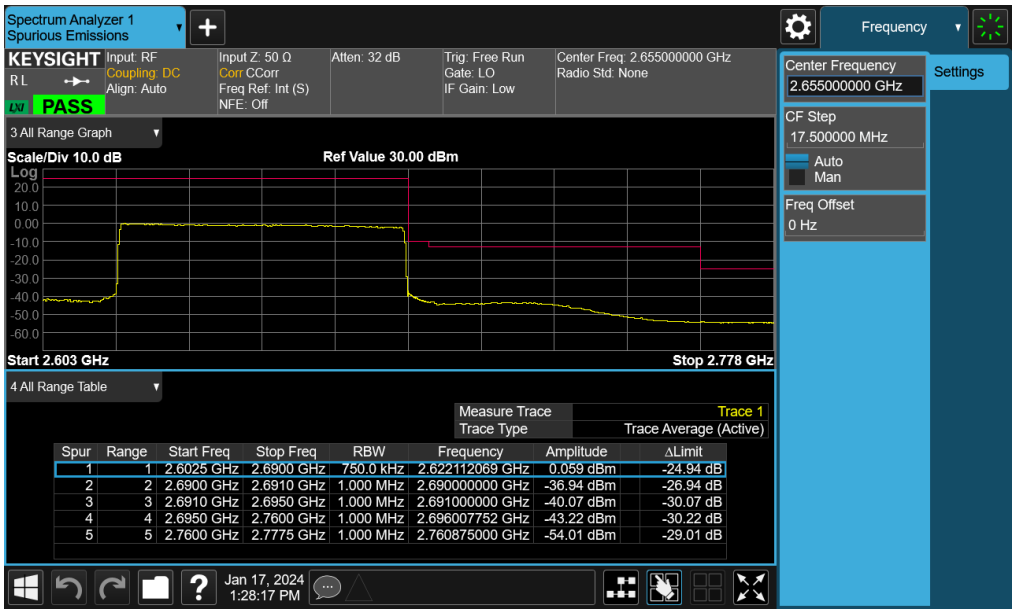
Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
NR n41	100 MHz	Low	Band Edge	-37.89	-25	-12.89
		High	Band Edge	-29.96	-10	-19.96
	90 MHz	Low	Band Edge	-37.17	-25	-12.17
		High	Band Edge	-30.40	-10	-20.40
	80 MHz	Low	Band Edge	-36.76	-25	-11.76
		High	Band Edge	-33.14	-10	-23.14
	70 MHz	Low	Band Edge	-36.41	-25	-11.41
		High	Band Edge	-36.94	-10	-26.94
	60 MHz	Low	Band Edge	-36.76	-25	-11.76
		High	Band Edge	-27.74	-10	-17.74
	50 MHz	Low	Band Edge	-40.41	-25	-15.41
		High	Band Edge	-36.20	-10	-26.20
	40 MHz	Low	Band Edge	-42.49	-25	-17.49
		High	Band Edge	-34.90	-10	-24.90
	30 MHz	Low	Band Edge	-41.11	-25	-16.11
		High	Band Edge	-49.51	-25	-24.51
	25 MHz	Low	Band Edge	-39.80	-25	-14.80
		High	Band Edge	-39.78	-25	-14.78
	20 MHz	Low	Band Edge	-37.23	-25	-12.23
		High	Band Edge	-45.86	-25	-20.86
	15 MHz	Low	Band Edge	-38.37	-25	-13.37
		High	Band Edge	-47.75	-25	-22.75
	10 MHz	Low	Band Edge	-37.83	-25	-12.83
		High	Band Edge	-34.38	-10	-24.38

Table 7-12. Conducted Band Edge Results – NR – Ant1

NR Band n41 – ANT 1



Plot 7-113. Lower ACP Plot (NR Band n41 - 70MHz DFT-s-QPSK – Full RB Configuration)

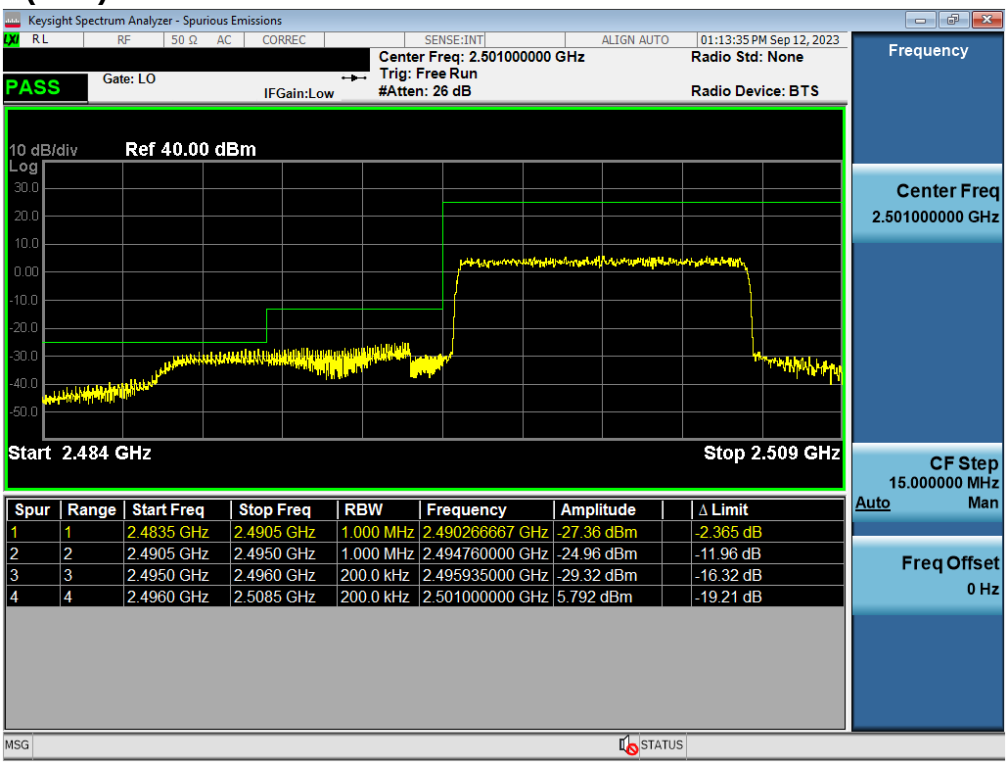


Plot 7-114. Upper ACP Plot (NR Band n41 - 70MHz DFT-s-QPSK – Full RB Configuration)

Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
LTE B41 PC3	20 MHz	Low	Band Edge	-27.48	-25	-2.48
		High	Band Edge	-31.10	-13	-18.10
	15 MHz	Low	Band Edge	-28.56	-25	-3.56
		High	Band Edge	-40.09	-25	-15.09
	10 MHz	Low	Band Edge	-27.36	-25	-2.36
		High	Band Edge	-39.02	-25	-14.02
	5 MHz	Low	Band Edge	-17.81	-13	-4.81
		High	Band Edge	-23.90	-10	-13.90
LTE-B41 PC3 ULCA	20+20MHz	Low	Band Edge	-29.59	-25	-4.59
		High	Band Edge	-36.92	-25	-11.92

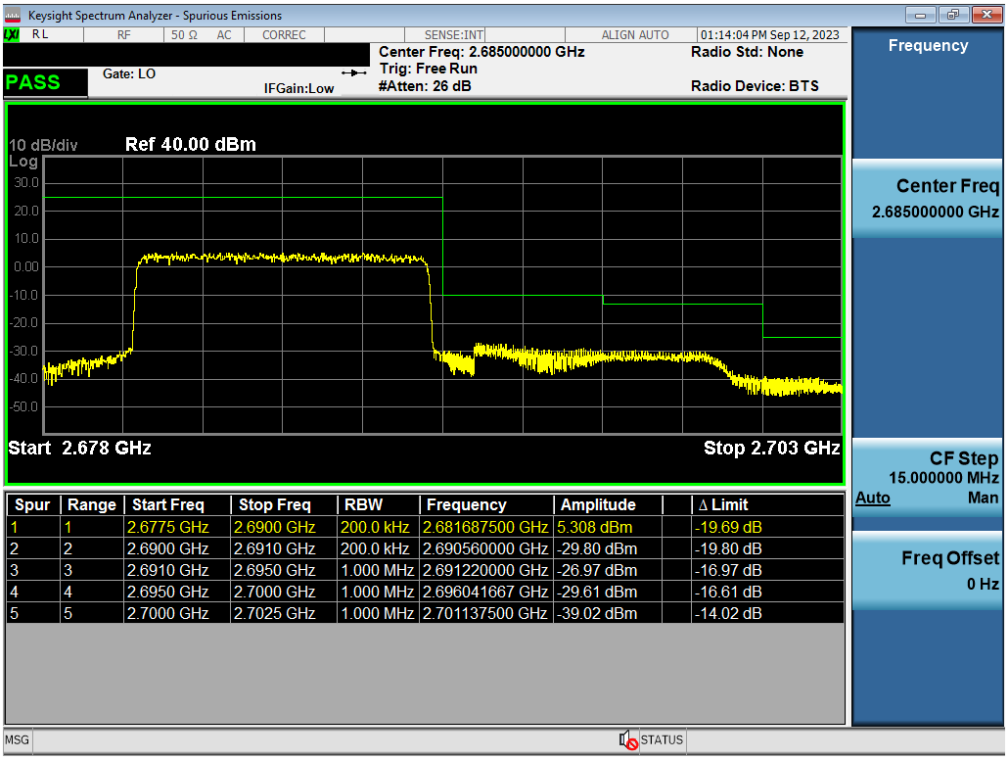
Table 7-13. Conducted Band Edge Test Results – LTE – Ant2

LTE Band 41(PC3) – Ant2



Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.4835 GHz	2.4905 GHz	1.000 MHz	2.490266667 GHz	-27.36 dBm	-2.365 dB
2	2	2.4905 GHz	2.4950 GHz	1.000 MHz	2.494760000 GHz	-24.96 dBm	-11.96 dB
3	3	2.4950 GHz	2.4960 GHz	200.0 kHz	2.495935000 GHz	-29.32 dBm	-16.32 dB
4	4	2.4960 GHz	2.5085 GHz	200.0 kHz	2.501000000 GHz	5.792 dBm	-19.21 dB

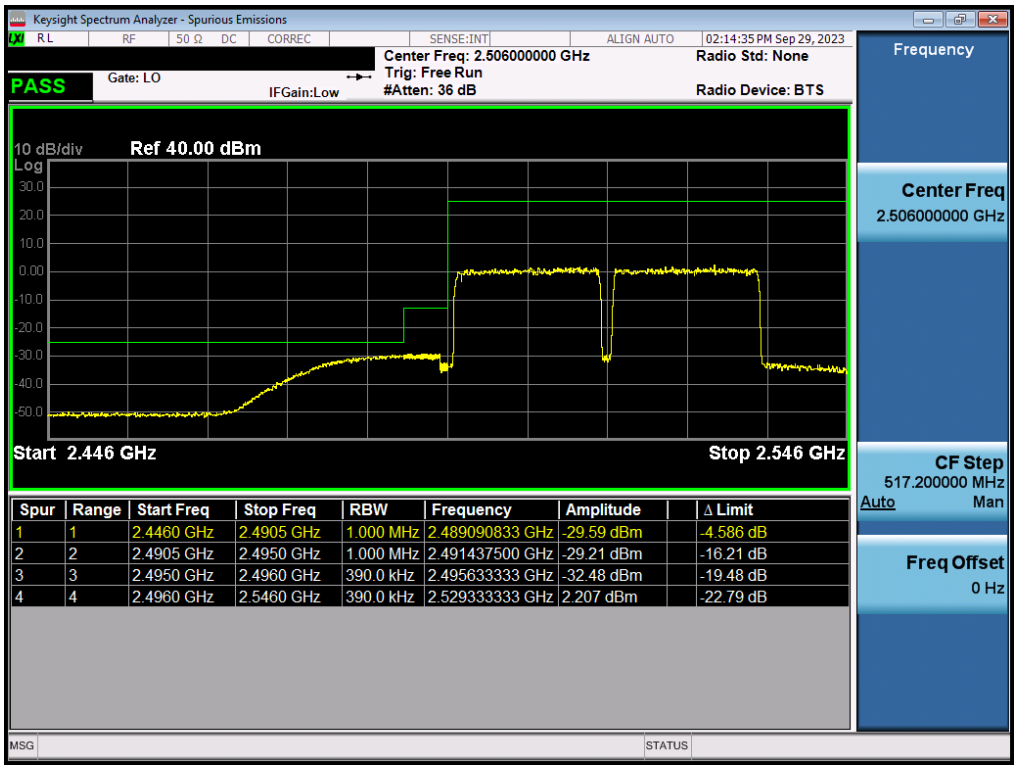
Plot 7-115. Lower ACP Plot (LTE Band 41(PC3) - 10MHz QPSK – Full RB - Ant2)



Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.6775 GHz	2.6900 GHz	200.0 kHz	2.681687500 GHz	5.308 dBm	-19.69 dB
2	2	2.6900 GHz	2.6910 GHz	200.0 kHz	2.690560000 GHz	-29.80 dBm	-19.80 dB
3	3	2.6910 GHz	2.6950 GHz	1.000 MHz	2.691220000 GHz	-26.97 dBm	-16.97 dB
4	4	2.6950 GHz	2.7000 GHz	1.000 MHz	2.696041667 GHz	-29.61 dBm	-16.61 dB
5	5	2.7000 GHz	2.7025 GHz	1.000 MHz	2.701137500 GHz	-39.02 dBm	-14.02 dB

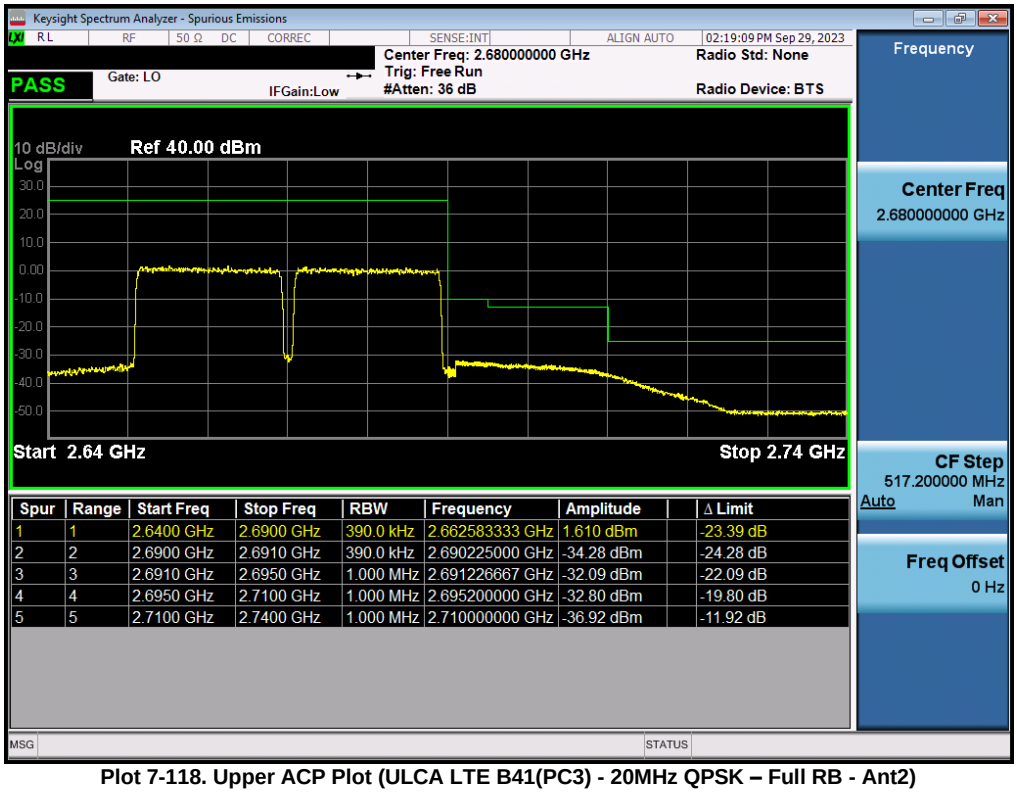
Plot 7-116. Upper ACP Plot (LTE Band 41(PC3) - 10MHz QPSK – Full RB - Ant2)

ULCA - LTE Band 41(PC3) – Ant2



Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.4460 GHz	2.4905 GHz	1.000 MHz	2.489090833 GHz	-29.59 dBm	-4.586 dB
2	2	2.4905 GHz	2.4950 GHz	1.000 MHz	2.491437500 GHz	-29.21 dBm	-16.21 dB
3	3	2.4950 GHz	2.4960 GHz	390.0 kHz	2.495633333 GHz	-32.48 dBm	-19.48 dB
4	4	2.4960 GHz	2.5460 GHz	390.0 kHz	2.529333333 GHz	2.207 dBm	-22.79 dB

Plot 7-117. Lower ACP Plot (ULCA LTE B41(PC3) - 20MHz QPSK – Full RB - Ant2)



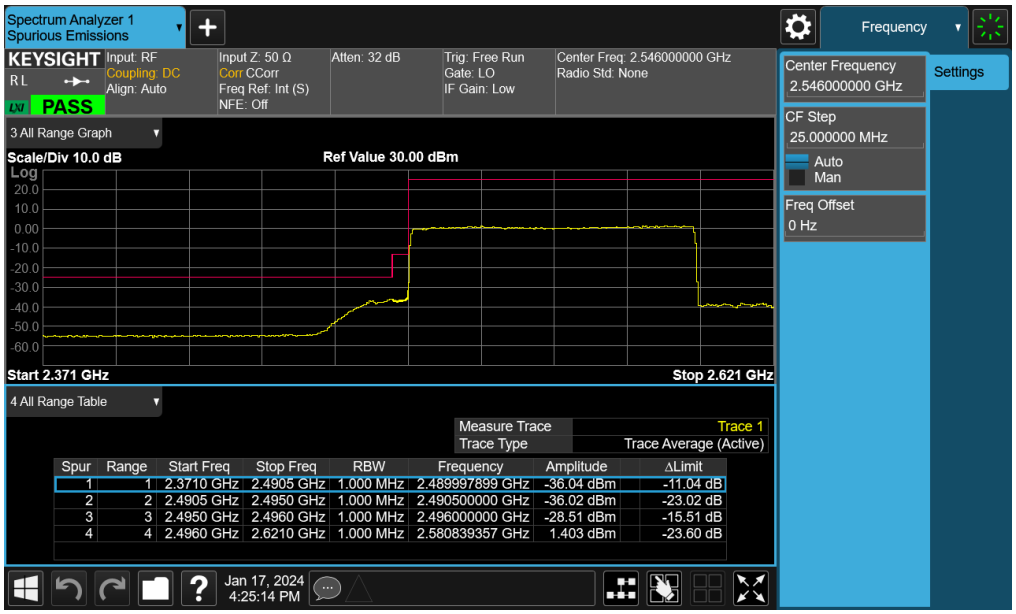
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.6400 GHz	2.6900 GHz	390.0 kHz	2.662583333 GHz	1.610 dBm	-23.39 dB
2	2	2.6900 GHz	2.6910 GHz	390.0 kHz	2.690225000 GHz	-34.28 dBm	-24.28 dB
3	3	2.6910 GHz	2.6950 GHz	1.000 MHz	2.691226667 GHz	-32.09 dBm	-22.09 dB
4	4	2.6950 GHz	2.7100 GHz	1.000 MHz	2.695200000 GHz	-32.80 dBm	-19.80 dB
5	5	2.7100 GHz	2.7400 GHz	1.000 MHz	2.710000000 GHz	-36.92 dBm	-11.92 dB

Plot 7-118. Upper ACP Plot (ULCA LTE B41(PC3) - 20MHz QPSK – Full RB - Ant2)

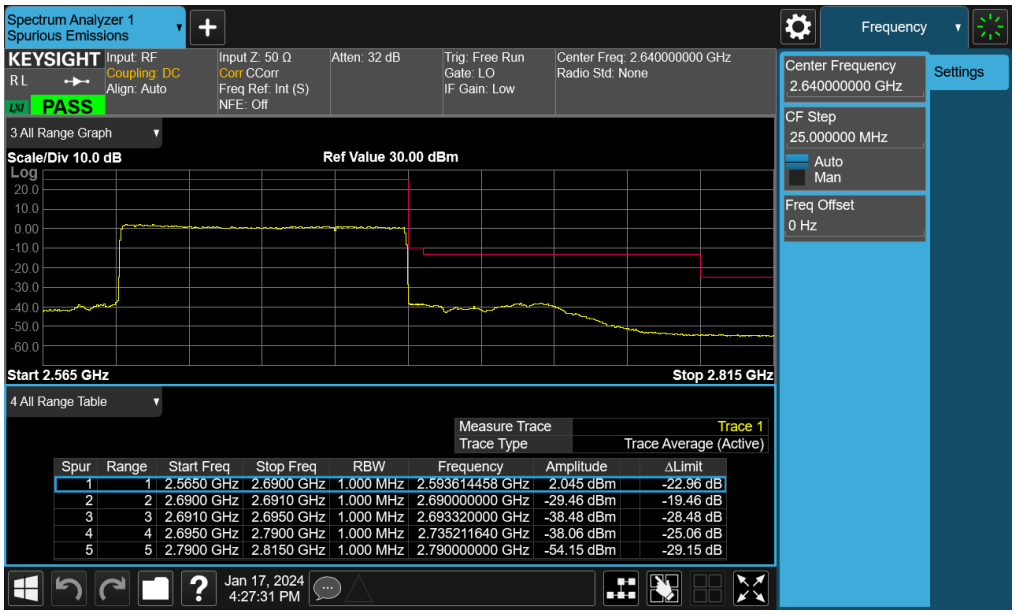
Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
NR n41	100 MHz	Low	Band Edge	-36.04	-25	-11.04
		High	Band Edge	-29.46	-10	-19.46
	90 MHz	Low	Band Edge	-38.45	-25	-13.45
		High	Band Edge	-31.72	-10	-21.72
	80 MHz	Low	Band Edge	-37.61	-25	-12.61
		High	Band Edge	-33.04	-10	-23.04
	70 MHz	Low	Band Edge	-37.51	-25	-12.51
		High	Band Edge	-35.59	-10	-25.59
	60 MHz	Low	Band Edge	-41.88	-25	-16.88
		High	Band Edge	-27.64	-10	-17.64
	50 MHz	Low	Band Edge	-44.16	-25	-19.16
		High	Band Edge	-49.32	-25	-24.32
	40 MHz	Low	Band Edge	-43.32	-25	-18.32
		High	Band Edge	-34.10	-10	-24.10
	30 MHz	Low	Band Edge	-43.23	-25	-18.23
		High	Band Edge	-47.48	-25	-22.48
	25 MHz	Low	Band Edge	-43.63	-25	-18.63
		High	Band Edge	-43.60	-25	-18.80
	20 MHz	Low	Band Edge	-39.15	-25	-14.15
		High	Band Edge	-45.33	-25	-20.33
	15 MHz	Low	Band Edge	-45.68	-25	-20.68
		High	Band Edge	-45.51	-25	-20.51
	10 MHz	Low	Band Edge	-44.99	-25	-19.99
		High	Band Edge	-32.81	-10	-22.81

Table 7-14. Conducted Band Edge Results - NR - Ant2

NR Band n41 – Ant2



Plot 7-119. Lower ACP Plot (NR Band n41 - 100MHz CP-OFDM-QPSK – Full RB Configuration – Ant2)



Plot 7-120. Upper ACP Plot (NR Band n41 - 100MHz CP-OFDM-QPSK – Full RB Configuration – Ant2)

7.6 Radiated Power (EIRP)

Test Overview

Equivalent Isotropic Radiated Power (EIRP) measurements are performed using the substitution method described in ANSI C63.26-2015 with the EUT transmitting into an integral antenna. Measurements are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as RMS average measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

Test Procedures Used

ANSI C63.26-2015 – Section 5.2.4.4

Test Settings

1. Radiated power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation. For signals with burst transmission, the signal analyzer's "time domain power" measurement capability is used
2. RBW = 1 – 5% of the expected OBW, not to exceed 1MHz
3. VBW ≥ 3 x RBW
4. Span = 1.5 times the OBW
5. No. of sweep points ≥ 2 x span / RBW
6. Detector = RMS
7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto". Trigger is set to enable triggering only on full power bursts with the sweep time set less than or equal to the transmission burst duration.
8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation. For signals with burst transmission, the "gating" function was enabled to ensure that measurements are performed during times in which the transmitter is operating at its maximum power.
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The trace was allowed to stabilize.

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

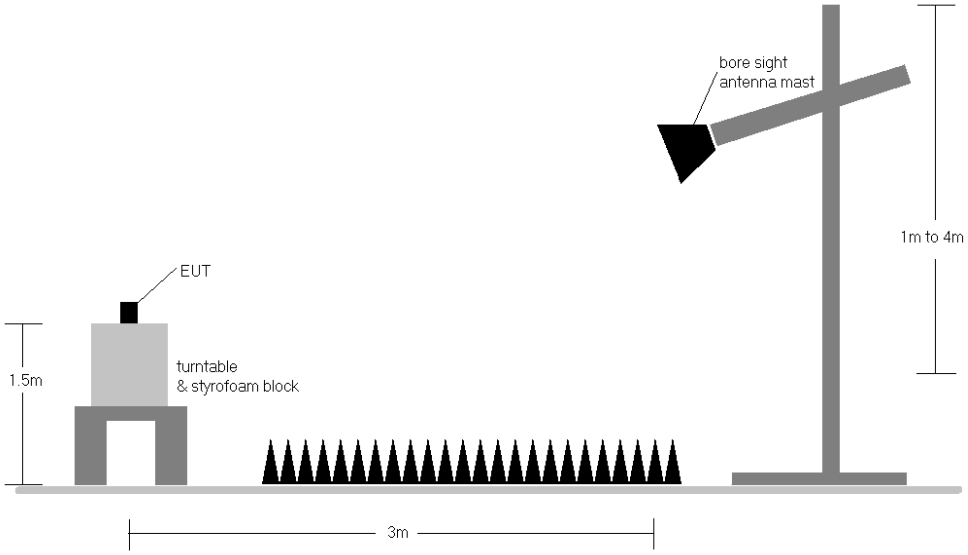


Figure 7-5. Radiated Test Setup >1GHz

Test Notes

1) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst-case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.

2) This unit was tested with its standard battery.

3) For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst-case configuration. All modes of operation were investigated and the worst-case configuration results are reported in this section.

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
20 MHz	QPSK	2506.0	H	140	253	4.17	1 / 50	17.36	21.53	0.142	33.01	-11.48
	QPSK	2593.0	H	136	247	4.00	1 / 50	18.87	22.87	0.194	33.01	-10.14
	QPSK	2680.0	H	129	245	4.50	1 / 0	19.45	**23.95**	0.248	33.01	-9.06
	16-QAM	2680.0	H	129	245	4.50	1 / 0	18.55	23.05	0.202	33.01	-9.96
15 MHz	QPSK	2503.5	H	140	253	4.17	1 / 74	17.19	21.36	0.137	33.01	-11.65
	QPSK	2593.0	H	136	247	4.00	1 / 0	18.70	22.70	0.186	33.01	-10.31
	QPSK	2682.5	H	129	245	4.51	1 / 0	19.24	**23.75**	0.237	33.01	-9.26
	16-QAM	2682.5	H	129	245	4.51	1 / 0	18.68	23.19	0.209	33.01	-9.82
10 MHz	QPSK	2501.0	H	140	253	4.17	1 / 0	17.10	21.27	0.134	33.01	-11.74
	QPSK	2593.0	H	136	247	4.00	1 / 0	18.58	22.58	0.181	33.01	-10.43
	QPSK	2685.0	H	129	245	4.52	1 / 25	19.29	**23.81**	0.241	33.01	-9.20
	16-QAM	2685.0	H	129	245	4.52	1 / 25	18.22	22.74	0.188	33.01	-10.27
5 MHz	QPSK	2498.5	H	140	253	4.16	1 / 24	17.30	21.46	0.140	33.01	-11.55
	QPSK	2593.0	H	136	247	4.00	1 / 0	18.72	22.72	0.187	33.01	-10.29
	QPSK	2687.5	H	129	245	4.53	1 / 0	19.35	**23.88**	0.244	33.01	-9.13
	16-QAM	2687.5	H	129	245	4.53	1 / 0	18.32	22.85	0.193	33.01	-10.16
20 MHz	WCP	2680.0	H	116	154	4.50	1 / 50	18.00	22.50	0.178	33.01	-10.51

Table 7-121. EIRP Data (LTE Band 41(PC3)) – Ant1

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
100 MHz	π/2 BPSK	2546.01	H	101	337	4.19	1 / 136	15.95	20.14	0.103	33.01	-12.87
	π/2 BPSK	2592.99	H	105	337	4.00	1 / 136	16.98	20.98	0.125	33.01	-12.03
	π/2 BPSK	2640.00	H	100	338	4.31	1 / 1	17.58	21.89	0.155	33.01	-11.12
	QPSK	2546.01	H	101	337	4.19	1 / 136	16.04	20.23	0.105	33.01	-12.78
	QPSK	2592.99	H	105	337	4.00	1 / 136	17.00	21.00	0.126	33.01	-12.01
	QPSK	2640.00	H	100	338	4.31	1 / 1	17.70	**22.01**	0.159	33.01	-11.00
	16-QAM	2640.00	H	100	338	4.31	1 / 1	15.70	20.01	0.100	33.01	-13.00
90 MHz	π/2 BPSK	2541.00	H	101	337	4.19	1 / 122	15.69	19.88	0.097	33.01	-13.13
	π/2 BPSK	2592.99	H	105	337	4.00	1 / 122	16.74	20.74	0.119	33.01	-12.27
	π/2 BPSK	2644.98	H	100	338	4.36	1 / 122	17.40	21.76	0.150	33.01	-11.25
	QPSK	2541.00	H	101	337	4.19	1 / 122	15.89	20.08	0.102	33.01	-12.93
	QPSK	2592.99	H	105	337	4.00	1 / 122	16.83	20.83	0.121	33.01	-12.18
	QPSK	2644.98	H	100	338	4.36	1 / 122	17.57	**21.93**	0.156	33.01	-11.08
	16-QAM	2644.98	H	100	338	4.36	1 / 122	16.00	20.35	0.108	33.01	-12.66
80 MHz	π/2 BPSK	2536.02	H	101	337	4.19	1 / 108	15.79	19.98	0.099	33.01	-13.03
	π/2 BPSK	2592.99	H	105	337	4.00	1 / 108	16.64	20.64	0.116	33.01	-12.37
	π/2 BPSK	2649.99	H	100	338	4.40	1 / 215	17.49	21.89	0.155	33.01	-11.12
	QPSK	2536.02	H	101	337	4.19	1 / 108	16.06	20.25	0.106	33.01	-12.76
	QPSK	2592.99	H	105	337	4.00	1 / 108	16.96	20.96	0.125	33.01	-12.05
	QPSK	2649.99	H	100	338	4.40	1 / 215	17.44	21.84	0.153	33.01	-11.18
	16-QAM	2649.99	H	100	338	4.40	1 / 215	15.62	20.02	0.100	33.01	-12.99
70 MHz	π/2 BPSK	2531.01	H	101	337	4.18	1 / 187	15.91	20.09	0.102	33.01	-12.92
	π/2 BPSK	2592.99	H	105	337	4.00	1 / 94	16.79	20.79	0.120	33.01	-12.22
	π/2 BPSK	2655.00	H	100	338	4.42	1 / 94	17.50	**21.92**	0.155	33.01	-11.09
	QPSK	2531.01	H	101	337	4.18	1 / 187	16.18	20.37	0.109	33.01	-12.64
	QPSK	2592.99	H	105	337	4.00	1 / 94	16.50	20.49	0.112	33.01	-12.52
	QPSK	2655.00	H	100	338	4.42	1 / 94	17.13	21.55	0.143	33.01	-11.46
	16-QAM	2655.00	H	100	338	4.42	1 / 94	16.07	20.48	0.112	33.01	-12.53
60 MHz	π/2 BPSK	2526.00	H	101	337	4.18	1 / 160	15.85	20.03	0.101	33.01	-12.98
	π/2 BPSK	2592.99	H	105	337	4.00	1 / 1	16.74	20.74	0.119	33.01	-12.27
	π/2 BPSK	2659.98	H	100	338	4.43	1 / 1	17.50	21.93	0.156	33.01	-11.08
	QPSK	2526.00	H	101	337	4.18	1 / 160	16.15	20.33	0.108	33.01	-12.68
	QPSK	2592.99	H	105	337	4.00	1 / 1	16.64	20.63	0.116	33.01	-12.38
	QPSK	2659.98	H	100	338	4.43	1 / 1	17.53	**21.97**	0.157	33.01	-11.04
	16-QAM	2592.99	H	105	337	4.00	1 / 1	16.28	20.27	0.107	33.01	-12.74
50 MHz	π/2 BPSK	2521.02	H	101	337	4.18	1 / 66	16.05	20.23	0.106	33.01	-12.78
	π/2 BPSK	2592.99	H	105	337	4.00	1 / 66	17.19	21.18	0.131	33.01	-11.83
	π/2 BPSK	2664.99	H	100	338	4.45	1 / 66	17.69	22.14	0.164	33.01	-10.87
	QPSK	2521.02	H	101	337	4.18	1 / 66	16.30	20.48	0.112	33.01	-12.53
	QPSK	2592.99	H	105	337	4.00	1 / 1	16.73	20.73	0.118	33.01	-12.28
	QPSK	2664.99	H	100	338	4.45	1 / 66	18.20	**22.65**	0.184	33.01	-10.36
	16-QAM	2664.99	H	100	338	4.45	1 / 66	15.59	20.04	0.101	33.01	-12.97
40 MHz	π/2 BPSK	2516.01	H	101	337	4.18	1 / 104	15.79	19.97	0.099	33.01	-13.04
	π/2 BPSK	2592.99	H	105	337	4.00	1 / 104	17.16	21.16	0.131	33.01	-11.85
	π/2 BPSK	2670.00	H	100	338	4.47	1 / 104	17.85	**22.32**	0.170	33.01	-10.69
	QPSK	2516.01	H	101	337	4.18	1 / 104	16.60	20.78	0.120	33.01	-12.23
	QPSK	2592.99	H	105	337	4.00	1 / 104	17.72	21.72	0.149	33.01	-11.29
	QPSK	2670.00	H	100	338	4.47	1 / 104	17.06	21.53	0.142	33.01	-11.48
	16-QAM	2592.99	H	105	337	4.00	1 / 104	16.12	20.12	0.103	33.01	-12.89
30 MHz	π/2 BPSK	2511.00	H	101	337	4.18	1 / 1	15.88	20.06	0.101	33.01	-12.95
	π/2 BPSK	2592.99	H	105	337	4.00	1 / 1	17.06	21.06	0.128	33.01	-11.95
	π/2 BPSK	2674.98	H	100	338	4.48	1 / 1	17.59	22.07	0.161	33.01	-10.94
	QPSK	2511.00	H	101	337	4.18	1 / 1	16.84	21.02	0.126	33.01	-11.99
	QPSK	2592.99	H	105	337	4.00	1 / 1	16.56	20.56	0.114	33.01	-12.45
	QPSK	2674.98	H	100	338	4.48	1 / 1	17.85	**22.34**	0.171	33.01	-10.67
	16-QAM	2592.99	H	105	337	4.00	1 / 1	16.13	20.13	0.103	33.01	-12.88
25 MHz	π/2 BPSK	2508.50	H	101	337	4.17	1 / 1	15.54	19.72	0.094	33.01	-13.29
	π/2 BPSK	2592.99	H	105	337	4.00	1 / 39	16.56	20.56	0.114	33.01	-12.45
	π/2 BPSK	2677.48	H	100	338	4.49	1 / 39	17.02	21.51	0.142	33.01	-11.50
	QPSK	2508.50	H	101	337	4.17	1 / 1	15.86	20.03	0.101	33.01	-12.98
	QPSK	2592.99	H	105	337	4.00	1 / 39	16.79	20.79	0.120	33.01	-12.22
	QPSK	2677.48	H	100	338	4.49	1 / 39	17.14	**21.63**	0.146	33.01	-11.38
	16-QAM	2592.99	H	105	337	4.00	1 / 39	16.01	20.01	0.100	33.01	-13.00
20 MHz	π/2 BPSK	2506.02	H	101	337	4.17	1 / 1	15.92	20.09	0.102	33.01	-12.92
	π/2 BPSK	2592.99	H	105	337	4.00	1 / 1	17.52	21.52	0.142	33.01	-11.49
	π/2 BPSK	2679.99	H	100	338	4.50	1 / 1	17.19	**21.70**	0.148	33.01	-11.31
	QPSK	2506.02	H	101	337	4.17	1 / 1	15.48	19.65	0.092	33.01	-13.36
	QPSK	2592.99	H	105	337	4.00	1 / 1	17.35	21.35	0.136	33.01	-11.66
	QPSK	2679.99	H	100	338	4.50	1 / 1	17.04	21.54	0.143	33.01	-11.47
	16-QAM	2679.99	H	100	338	4.50	1 / 1	14.55	19.05	0.080	33.01	-13.96
15 MHz	π/2 BPSK	2503.50	H	101	337	4.17	1 / 1	16.15	20.33	0.108	33.01	-12.68
	π/2 BPSK	2592.99	H	105	337	4.00	1 / 1	17.45	21.45	0.140	33.01	-11.56
	π/2 BPSK	2682.48	H	100	338	4.51	1 / 36	17.49	22.00	0.159	33.01	-11.01
	QPSK	2503.50	H	101	337	4.17	1 / 1	16.46	20.63	0.116	33.01	-12.38
	QPSK	2592.99	H	105	337	4.00	1 / 1	16.36	20.36	0.109	33.01	-12.65
	QPSK	2682.48	H	100	338	4.51	1 / 36	17.97	**22.48**	0.177	33.01	-10.53
	16-QAM	2682.48	H	100	338	4.51	1 / 36	15.41	19.92	0.098	33.01	-13.09
10 MHz	π/2 BPSK	2501.01	H	101	337	4.17	1 / 12	16.32	20.49	0.112	33.01	-12.52
	π/2 BPSK	2592.99	H	105	337	4.00	1 / 1	17.00	21.00	0.126	33.01	-12.01
	π/2 BPSK	2685.00	H	100	338	4.52	1 / 12	18.23	**22.74**	0.188	33.01	-10.27
	QPSK	2501.01	H	101	337	4.17	1 / 12	16.06	20.23	0.105	33.01	-12.78
	QPSK	2592.99	H	105	337	4.00	1 / 1	17.77	21.77	0.150	33.01	-11.24
	QPSK	2685.00	H	100	338	4.52	1 / 12	18.00	22.52	0.179	33.01	-10.49
	16-QAM	2592.99	H	105	337	4.00	1 / 1	16.45	20.45	0.111	33.01	-12.56
100 MHz	QPSK (CP-OFDM)	#N/A	H	100	338	4.31	1 / 1	15.92	20.23	0.106	33.01	-12.78
	QPSK (WCP)	2640.00	H	100	338	4.31	1 / 136	16.16	20.47	0.112	33.01	-12.54

Table 7-122. EIRP Data (NR Band n41) – Ant1

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
20 MHz	QPSK	2506.0	H	120	321	4.17	1 / 0	19.44	**23.61**	0.230	33.01	-9.40
	QPSK	2593.0	H	145	315	4.00	1 / 0	19.07	23.07	0.203	33.01	-9.94
	QPSK	2680.0	H	131	310	4.50	1 / 0	19.01	23.51	0.224	33.01	-9.50
	16-QAM	2506.0	H	120	321	4.17	1 / 0	18.21	22.38	0.173	33.01	-10.63
15 MHz	QPSK	2503.5	H	120	321	4.17	1 / 74	19.75	23.92	0.247	33.01	-9.09
	QPSK	2593.0	H	145	315	4.00	1 / 37	18.82	22.82	0.192	33.01	-10.19
	QPSK	2682.5	H	131	310	4.51	1 / 74	18.96	23.47	0.223	33.01	-9.54
	16-QAM	2682.5	H	131	310	4.51	1 / 74	17.94	22.45	0.176	33.01	-10.56
10 MHz	QPSK	2501.0	H	120	321	4.17	1 / 49	19.53	23.70	0.235	33.01	-9.31
	QPSK	2593.0	H	145	315	4.00	1 / 49	18.76	22.76	0.189	33.01	-10.25
	QPSK	2685.0	H	131	310	4.52	1 / 49	18.93	23.45	0.221	33.01	-9.56
	16-QAM	2685.0	H	131	310	4.52	1 / 49	17.67	22.18	0.165	33.01	-10.83
5 MHz	QPSK	2498.5	H	120	321	4.16	1 / 24	18.91	23.07	0.203	33.01	-9.94
	QPSK	2593.0	H	145	315	4.00	1 / 24	19.34	23.34	0.216	33.01	-9.67
	QPSK	2687.5	H	131	310	4.53	1 / 24	18.57	23.10	0.204	33.01	-9.91
	16-QAM	2687.5	H	131	310	4.53	1 / 24	18.52	23.05	0.202	33.01	-9.96
20 MHz	WCP	2506.0	H	153	303	4.17	1 / 0	18.30	22.47	0.177	33.01	-10.54

Table 7-123. EIRP Data (LTE Band 41(PC3)) – Ant2

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
100 MHz	π/2 BPSK	2546.01	H	100	128	4.19	1 / 136	18.37	22.56	0.180	33.01	-10.45
	π/2 BPSK	2592.99	H	100	113	4.00	1 / 136	18.20	22.20	0.166	33.01	-10.81
	π/2 BPSK	2640.00	H	115	116	4.31	1 / 1	19.11	**23.42**	0.220	33.01	-9.59
	QPSK	2546.01	H	100	128	4.19	1 / 136	18.43	22.62	0.183	33.01	-10.39
	QPSK	2592.99	H	100	113	4.00	1 / 136	18.37	22.37	0.173	33.01	-10.64
	QPSK	2640.00	H	115	116	4.31	1 / 1	18.82	23.13	0.206	33.01	-9.88
	16-QAM	2640.00	H	115	116	4.31	1 / 1	17.11	21.42	0.139	33.01	-11.59
90 MHz	π/2 BPSK	2541.00	H	100	128	4.19	1 / 122	18.30	22.49	0.177	33.01	-10.52
	π/2 BPSK	2592.99	H	100	113	4.00	1 / 122	18.09	22.08	0.162	33.01	-10.93
	π/2 BPSK	2644.98	H	115	116	4.36	1 / 122	19.29	**23.64**	0.231	33.01	-9.37
	QPSK	2541.00	H	100	128	4.19	1 / 122	18.68	22.87	0.194	33.01	-10.14
	QPSK	2592.99	H	100	113	4.00	1 / 122	18.57	22.57	0.181	33.01	-10.44
	QPSK	2644.98	H	115	116	4.36	1 / 122	18.79	23.14	0.206	33.01	-9.87
	16-QAM	2541.00	H	100	128	4.19	1 / 122	17.66	21.85	0.153	33.01	-11.16
80 MHz	π/2 BPSK	2536.02	H	100	128	4.19	1 / 108	18.36	22.54	0.180	33.01	-10.47
	π/2 BPSK	2592.99	H	100	113	4.00	1 / 1	18.40	22.40	0.174	33.01	-10.61
	π/2 BPSK	2649.99	H	115	116	4.40	1 / 1	19.14	**23.54**	0.226	33.01	-9.47
	QPSK	2536.02	H	100	128	4.19	1 / 108	18.83	23.01	0.200	33.01	-10.00
	QPSK	2592.99	H	100	113	4.00	1 / 1	18.47	22.47	0.177	33.01	-10.54
	QPSK	2649.99	H	115	116	4.40	1 / 1	18.43	22.83	0.192	33.01	-10.18
	16-QAM	2536.02	H	100	128	4.19	1 / 108	17.84	22.02	0.159	33.01	-10.99
70 MHz	π/2 BPSK	2531.01	H	100	128	4.18	1 / 94	18.44	22.62	0.183	33.01	-10.39
	π/2 BPSK	2592.99	H	100	113	4.00	1 / 1	18.01	22.01	0.159	33.01	-11.00
	π/2 BPSK	2655.00	H	115	116	4.42	1 / 187	19.08	**23.50**	0.224	33.01	-9.51
	QPSK	2531.01	H	100	128	4.18	1 / 94	18.96	23.14	0.206	33.01	-9.87
	QPSK	2592.99	H	100	113	4.00	1 / 1	18.66	22.66	0.184	33.01	-10.35
	QPSK	2655.00	H	115	116	4.42	1 / 187	18.58	23.00	0.199	33.01	-10.01
	16-QAM	2655.00	H	115	116	4.42	1 / 187	17.59	22.01	0.159	33.01	-11.01
60 MHz	π/2 BPSK	2526.00	H	100	128	4.18	1 / 160	18.51	22.69	0.186	33.01	-10.32
	π/2 BPSK	2592.99	H	100	113	4.00	1 / 81	17.92	21.92	0.155	33.01	-11.10
	π/2 BPSK	2659.98	H	115	116	4.43	1 / 160	18.69	23.12	0.205	33.01	-9.89
	QPSK	2526.00	H	100	128	4.18	1 / 160	18.76	22.94	0.197	33.01	-10.07
	QPSK	2592.99	H	100	113	4.00	1 / 81	17.77	21.77	0.150	33.01	-11.24
	QPSK	2659.98	H	115	116	4.43	1 / 160	18.74	**23.18**	0.208	33.01	-9.83
	16-QAM	2659.98	H	115	116	4.43	1 / 160	16.59	21.02	0.126	33.01	-11.99
50 MHz	π/2 BPSK	2521.02	H	100	128	4.18	1 / 131	18.63	22.81	0.191	33.01	-10.20
	π/2 BPSK	2592.99	H	100	113	4.00	1 / 1	18.36	22.36	0.172	33.01	-10.65
	π/2 BPSK	2664.99	H	115	116	4.45	1 / 66	19.45	**23.90**	0.245	33.01	-9.11
	QPSK	2521.02	H	100	128	4.18	1 / 131	18.32	22.50	0.178	33.01	-10.51
	QPSK	2592.99	H	100	113	4.00	1 / 1	18.63	22.63	0.183	33.01	-10.38
	QPSK	2664.99	H	115	116	4.45	1 / 66	19.29	23.74	0.237	33.01	-9.27
	16-QAM	2664.99	H	115	116	4.45	1 / 66	16.84	21.29	0.135	33.01	-11.72
40 MHz	π/2 BPSK	2516.01	H	100	128	4.18	1 / 1	18.61	22.79	0.190	33.01	-10.22
	π/2 BPSK	2592.99	H	100	113	4.00	1 / 1	18.43	22.42	0.175	33.01	-10.59
	π/2 BPSK	2670.00	H	115	116	4.47	1 / 53	18.87	23.34	0.216	33.01	-9.67
	QPSK	2516.01	H	100	128	4.18	1 / 1	18.26	22.43	0.175	33.01	-10.58
	QPSK	2592.99	H	100	113	4.00	1 / 1	18.66	22.66	0.184	33.01	-10.35
	QPSK	2670.00	H	115	116	4.47	1 / 53	19.08	**23.54**	0.226	33.01	-9.47
	16-QAM	2670.00	H	115	116	4.47	1 / 53	16.83	21.30	0.135	33.01	-11.71
30 MHz	π/2 BPSK	2511.00	H	100	128	4.18	1 / 1	18.72	22.90	0.195	33.01	-10.11
	π/2 BPSK	2592.99	H	100	113	4.00	1 / 1	17.80	21.80	0.151	33.01	-11.22
	π/2 BPSK	2674.98	H	115	116	4.48	1 / 39	19.01	23.50	0.224	33.01	-9.51
	QPSK	2511.00	H	100	128	4.18	1 / 1	18.19	22.37	0.172	33.01	-10.64
	QPSK	2592.99	H	100	113	4.00	1 / 1	18.11	22.11	0.162	33.01	-10.90
	QPSK	2674.98	H	115	116	4.48	1 / 39	19.82	**24.30**	0.269	33.01	-8.71
	16-QAM	2674.98	H	115	116	4.48	1 / 39	16.10	20.58	0.114	33.01	-12.43
25 MHz	π/2 BPSK	2508.50	H	100	128	4.17	1 / 39	18.10	22.28	0.169	33.01	-10.73
	π/2 BPSK	2592.99	H	100	113	4.00	1 / 1	17.71	21.71	0.148	33.01	-11.30
	π/2 BPSK	2677.48	H	115	116	4.49	1 / 39	18.75	**23.24**	0.211	33.01	-9.77
	QPSK	2508.50	H	100	128	4.17	1 / 39	18.20	22.38	0.173	33.01	-10.63
	QPSK	2592.99	H	100	113	4.00	1 / 1	18.09	22.09	0.162	33.01	-10.92
	QPSK	2677.48	H	115	116	4.49	1 / 39	18.28	22.77	0.189	33.01	-10.24
	16-QAM	2677.48	H	115	116	4.49	1 / 39	17.05	21.55	0.143	33.01	-11.46
20 MHz	π/2 BPSK	2506.02	H	100	128	4.17	1 / 39	18.76	22.93	0.197	33.01	-10.08
	π/2 BPSK	2592.99	H	100	113	4.00	1 / 1	18.32	22.32	0.171	33.01	-10.69
	π/2 BPSK	2679.99	H	115	116	4.50	1 / 1	18.86	**23.36**	0.217	33.01	-9.65
	QPSK	2506.02	H	100	128	4.17	1 / 39	17.98	22.15	0.164	33.01	-10.86
	QPSK	2592.99	H	100	113	4.00	1 / 1	18.63	22.63	0.183	33.01	-10.38
	QPSK	2679.99	H	115	116	4.50	1 / 1	18.51	23.01	0.200	33.01	-10.00
	16-QAM	2679.99	H	115	116	4.50	1 / 1	17.33	21.83	0.152	33.01	-11.18
15 MHz	π/2 BPSK	2503.50	H	100	128	4.17	1 / 39	18.17	22.34	0.171	33.01	-10.67
	π/2 BPSK	2592.99	H	100	113	4.00	1 / 39	18.11	22.11	0.163	33.01	-10.90
	π/2 BPSK	2682.48	H	115	116	4.51	1 / 76	18.96	**23.47**	0.223	33.01	-9.54
	QPSK	2503.50	H	100	128	4.17	1 / 39	17.89	22.07	0.161	33.01	-10.94
	QPSK	2592.99	H	100	113	4.00	1 / 39	17.79	21.79	0.151	33.01	-11.22
	QPSK	2682.48	H	115	116	4.51	1 / 76	18.20	22.71	0.187	33.01	-10.30
	16-QAM	2682.48	H	115	116	4.51	1 / 76	17.02	21.53	0.142	33.01	-11.48
10 MHz	π/2 BPSK	2501.01	H	100	128	4.17	1 / 1	18.30	22.47	0.177	33.01	-10.54
	π/2 BPSK	2592.99	H	100	113	4.00	1 / 1	17.94	21.94	0.156	33.01	-11.07
	π/2 BPSK	2685.00	H	115	116	4.52	1 / 1	19.18	**23.69**	0.234	33.01	-9.32
	QPSK	2501.01	H	100	128	4.17	1 / 1	18.68	22.86	0.193	33.01	-10.15
	QPSK	2592.99	H	100	113	4.00	1 / 1	18.92	22.92	0.196	33.01	-10.09
	QPSK	2685.00	H	115	116	4.52	1 / 1	18.29	22.81	0.191	33.01	-10.20
	16-QAM	2685.00	H	115	116	4.52	1 / 1	16.50	21.02	0.126	33.01	-11.99
100 MHz	QPSK (CP-OFDM)	#N/A	H	115	116	4.31	1 / 1	16.76	21.07	0.128	33.01	-11.94
	QPSK (WCP)	2640.0	H	115	116	4.31	1 / 1	18.35	22.66	0.185	33.01	-10.35

Table 7-124. EIRP Data (NR Band n41) – Ant2

7.7 Radiated Spurious Emissions Measurements

Test Overview

Radiated spurious emissions measurements are performed using the field strength conversion method described in ANSI C63.26-2015 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using hybrid (biconical/log) antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as RMS measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

Test Procedures Used

ANSI C63.26-2015 – Section 5.5.4

Test Settings

1. RBW = 100kHz for emissions below 1GHz and 1MHz for emissions above 1GHz
2. VBW ≥ 3 x RBW
3. Span = 1.5 times the OBW
4. No. of sweep points ≥ 2 x span / RBW
5. Detector = RMS
6. Trace mode = Average (Max Hold for pulsed emissions)
7. The trace was allowed to stabilize

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

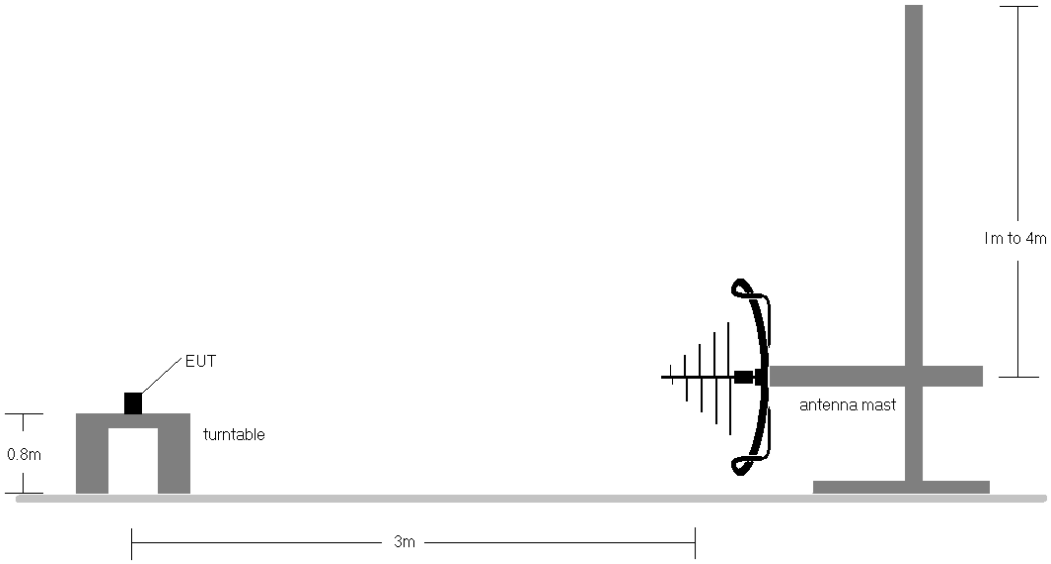


Figure 7-6. Test Instrument & Measurement Setup < 1GHz

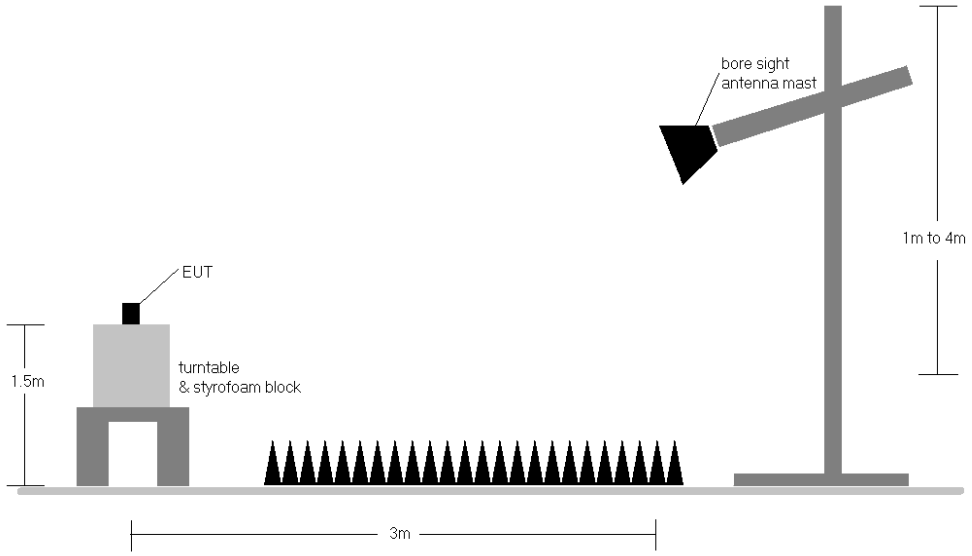


Figure 7-7. Test Instrument & Measurement Setup >1 GHz

Test Notes

1) Field strengths are calculated using the Measurement quantity conversions in ANSI C63.26-2015 Section 5.2.7:
   a) E(dBµV/m) = Measured amplitude level (dBm) + 107 + Cable Loss (dB) + Antenna Factor (dB/m)
   b) EIRP (dBm) = E(dBµV/m) + 20logD – 104.8; where D is the measurement distance in meters.

2) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst-case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.

3) This unit was tested with its standard battery.

4) The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.

5) Emissions below 18GHz were measured at a 3-meter test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.

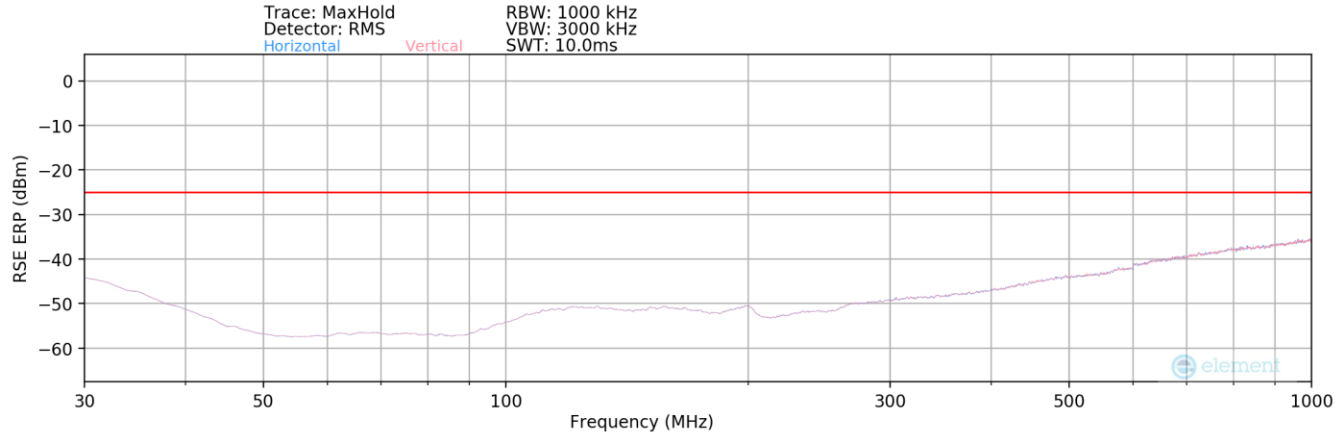
6) The "-" shown in the following RSE tables are used to denote a noise floor measurement.

7) ULCA spurious emissions measurements were evaluated for the two contiguous channels using various combinations of RB size, RB offset, modulation, and channel bandwidth. Channel bandwidth data is shown in the tables below based only on the channel bandwidths that were supported in this device.

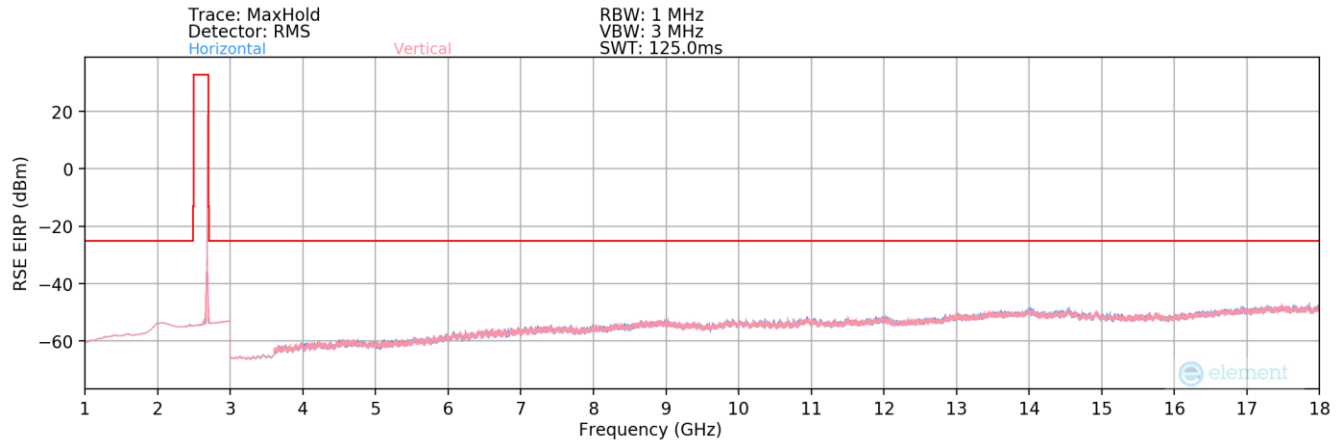
8) For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

9) Spurious emission in EN-DC Operating mode with Sub 6GHz NR carrier as well as an LTE carrier (anchor) has been checked and was found to not to be the worst case. Spurious emissions from the NR carrier device are subject to the rules under which the NR carrier operates. Spurious emissions caused by the LTE carrier must meet the requirements of the rules under which the LTE carrier operates.

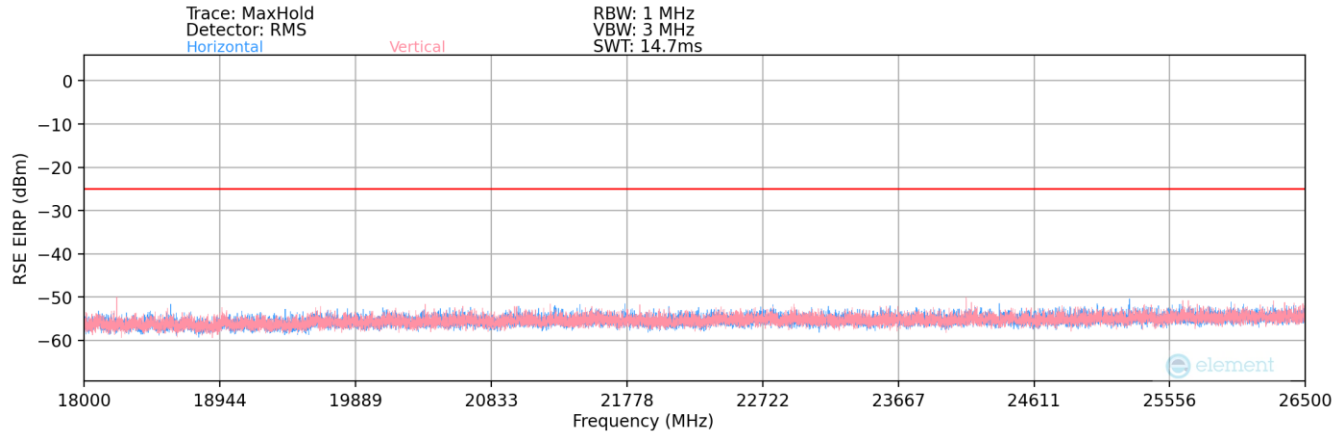
LTE Band 41(PC3) – Ant1



Plot 7-125. Radiated Spurious Plot (LTE Band 41(PC3) – Ant1)



Plot 7-126. Radiated Spurious Plot (LTE Band 41(PC3) – Ant1)



Plot 7-127. Radiated Spurious Plot (LTE Band 41(PC3) – Ant1)

Bandwidth (MHz):	20
Frequency (MHz):	2506.0
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5012.00	V	-	-	-77.02	3.17	33.15	-62.11	-25.00	-37.11
7518.00	V	-	-	-76.61	8.91	39.30	-55.96	-25.00	-30.96
10024.00	V	-	-	-78.46	11.10	39.64	-55.62	-25.00	-30.62

Table 7-15. Radiated Spurious Data (LTE Band 41(PC3) – Low Channel – Ant1)

Bandwidth (MHz):	20
Frequency (MHz):	2593.0
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5186.00	V	326	366	-73.97	3.49	36.52	-58.73	-25.00	-33.73
7779.00	V	-	-	-77.31	8.22	37.91	-57.35	-25.00	-32.35
10372.00	V	-	-	-77.26	11.63	41.37	-53.89	-25.00	-28.89
12965.00	V	208	329	-78.95	14.13	42.18	-53.08	-25.00	-28.08
15558.00	V	-	-	-79.67	13.98	41.31	-53.95	-25.00	-28.95

Table 7-16. Radiated Spurious Data (LTE Band 41(PC3) – Mid Channel – Ant1)

Bandwidth (MHz):	20
Frequency (MHz):	2680.0
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5360.00	V	222	358	-74.50	3.36	35.86	-59.40	-25.00	-34.40
8040.00	V	-	-	-77.69	9.00	38.31	-56.95	-25.00	-31.95
10720.00	V	-	-	-78.93	11.91	39.98	-55.28	-25.00	-30.28
13400.00	V	298	342	-78.98	14.98	43.00	-52.25	-25.00	-27.25
16080.00	V	-	-	-79.98	14.59	41.61	-53.64	-25.00	-28.64

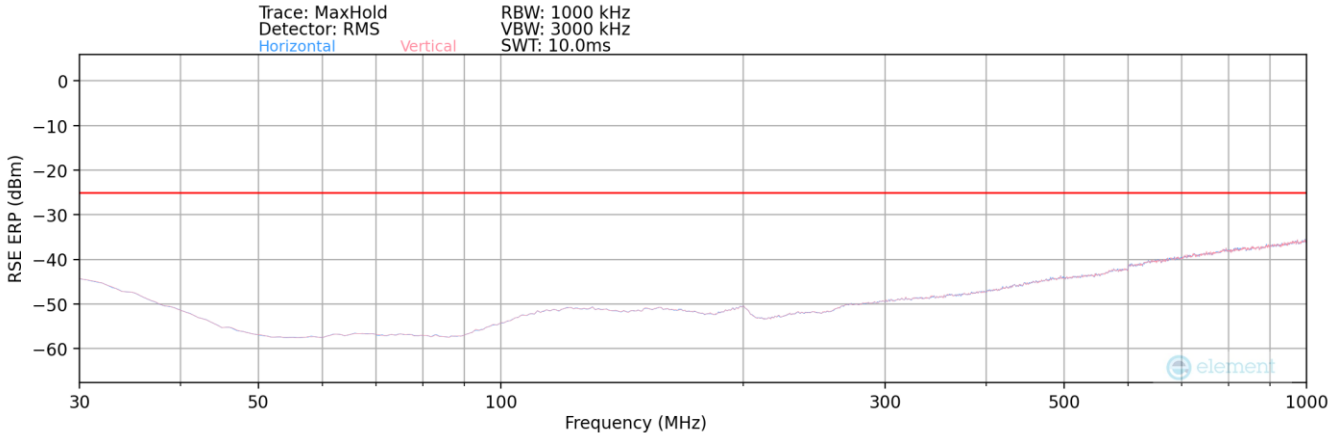
Table 7-17. Radiated Spurious Data (LTE Band 41(PC3) – High Channel – Ant1)

Bandwidth (MHz):	20
Frequency (MHz):	2680.0
RB / Offset:	1 / 50

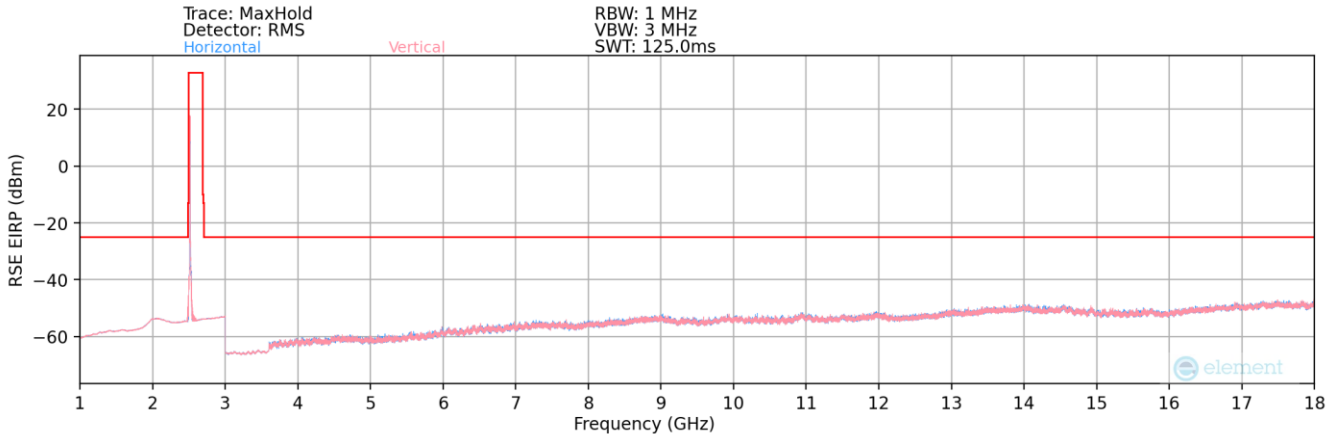
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
198.00	V	-	-	-83.81	20.00	43.19	-54.22	-25.00	-29.22

Table 7-18. Radiated Spurious Data (LTE Band 41(PC3) – High Channel – Ant1)

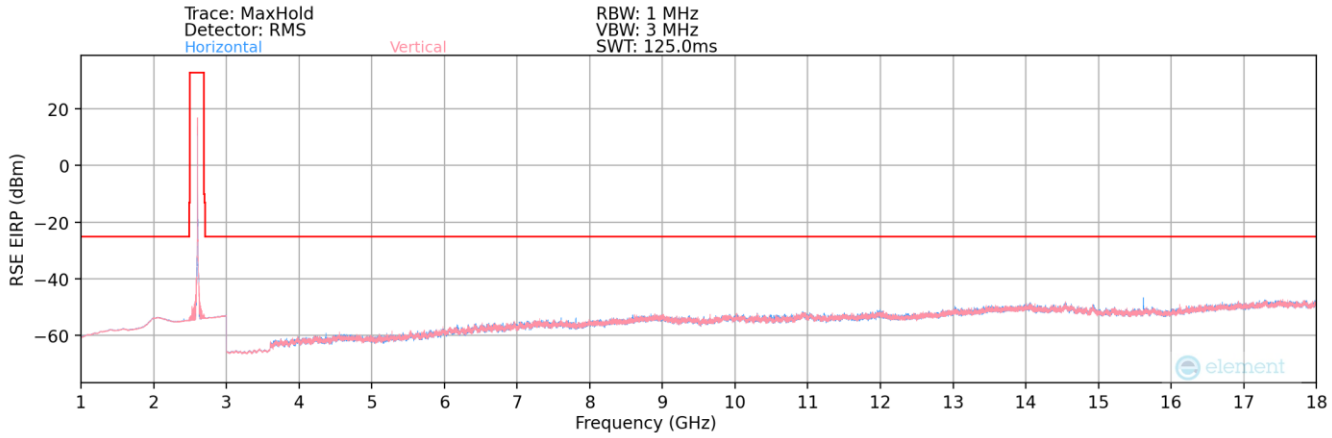
ULCA - LTE B41(PC3) – Ant1



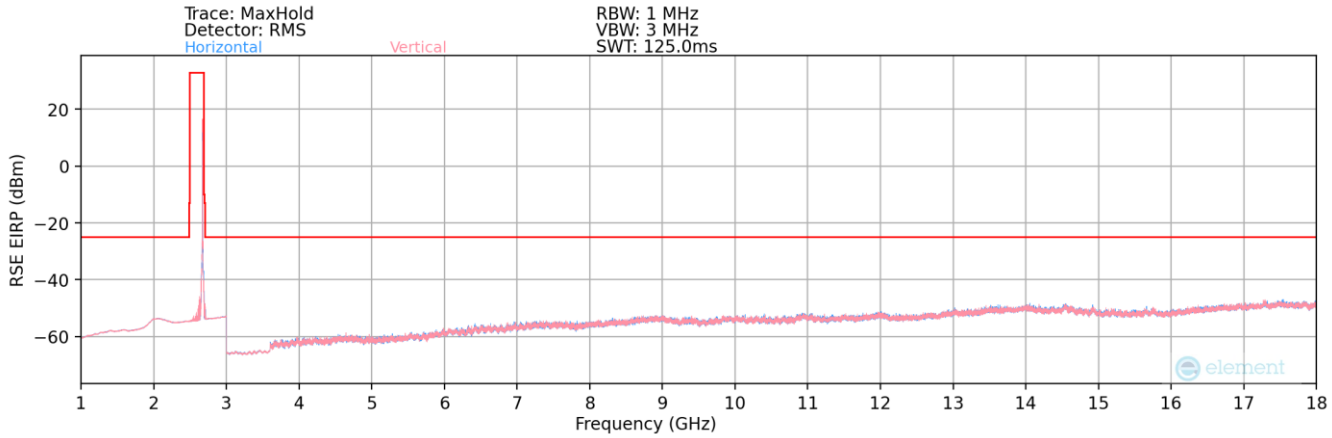
Plot 7-128. Radiated Spurious Plot (ULCA LTE B41(PC3) – Ant1) – Below 1GHz



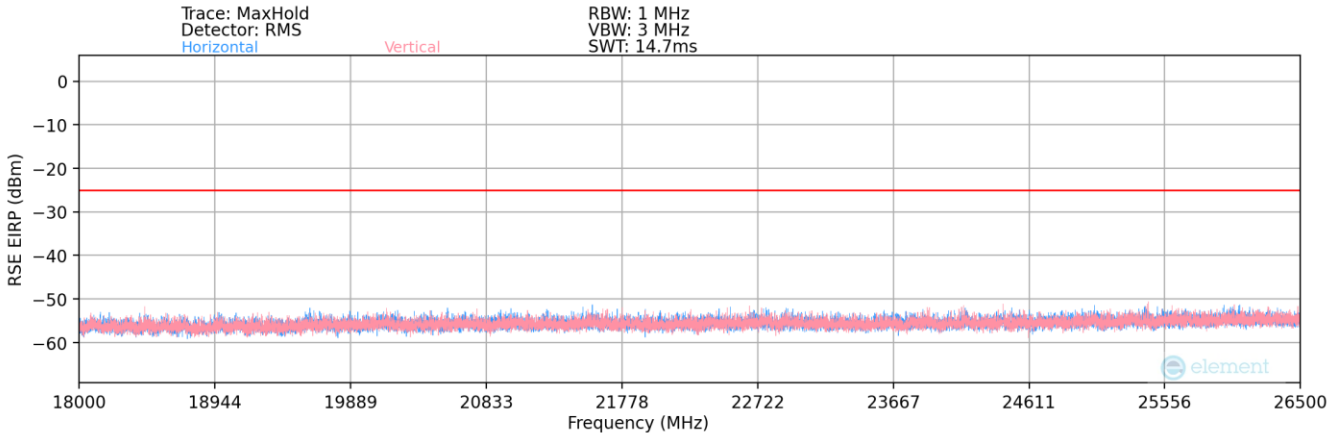
Plot 7-129. Radiated Spurious Plot (ULCA LTE B41(PC3) – Ant1)– Low Channel



Plot 7-130. Radiated Spurious Plot (ULCA LTE B41(PC3) – Ant1) – Mid Channel



Plot 7-131. Radiated Spurious Plot (ULCA LTE B41(PC3) – Ant1) – High Channel



Plot 7-132. Radiated Spurious Plot (ULCA LTE B41(PC3) – Ant1) – Mid Channel

PCC Bandwidth (MHz):	20
PCC Frequency (MHz):	2506.0
PCC RB / Offset:	1 / 99
SCC Bandwidth (MHz):	20
SCC Frequency (MHz):	2525.8
SCC RB / Offset:	1 / 0

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5031.80	V	271	349	-61.55	3.17	48.62	-46.64	-25.00	-21.64
7547.70	V	288	349	-61.19	8.91	54.72	-40.54	-25.00	-15.54
10063.60	V	187	21	-62.74	11.10	55.36	-39.90	-25.00	-14.90
12579.50	V	217	359	-62.72	12.91	57.19	-38.07	-25.00	-13.07
15095.40	V	220	357	-73.31	14.66	48.35	-46.91	-25.00	-21.91
17611.30	V	-	-	-77.80	16.72	45.92	-49.34	-25.00	-24.34
20127.20	V	-	-	-58.77	3.25	51.48	-53.32	-25.00	-28.32
22643.10	V	-	-	-59.16	4.10	51.94	-52.86	-25.00	-27.86

Table 7-19. Radiated Spurious Data (ULCA LTE B41(PC3) – Low Channel – Ant1)

PCC Bandwidth (MHz):	20
PCC Frequency (MHz):	2593.0
PCC RB / Offset:	1 / 99
SCC Bandwidth (MHz):	20
SCC Frequency (MHz):	2612.8
SCC RB / Offset:	1 / 0

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5205.80	V	255	356	-60.29	3.49	50.20	-45.05	-25.00	-20.05
7808.70	V	282	347	-62.99	8.22	52.23	-43.03	-25.00	-18.03
10411.60	V	183	6	-62.60	11.63	56.03	-39.23	-25.00	-14.23
13014.50	V	208	5	-68.13	14.13	53.00	-42.26	-25.00	-17.26
15617.40	V	203	64	-67.97	13.98	53.01	-42.25	-25.00	-17.25
18220.30	V	-	-	-57.43	1.83	51.40	-53.40	-25.00	-28.40
20823.20	V	-	-	-57.84	3.60	52.75	-52.05	-25.00	-27.05
23426.10	V	-	-	-59.59	4.09	51.50	-53.30	-25.00	-28.30

Table 7-20. Radiated Spurious Data (ULCA LTE B41(PC3) – Mid Channel – Ant1)

PCC Bandwidth (MHz):	20
PCC Frequency (MHz):	2680.0
PCC RB / Offset:	1 / 0
SCC Bandwidth (MHz):	20
SCC Frequency (MHz):	2660.2
SCC RB / Offset:	1 / 99

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5340.20	V	288	6	-59.39	3.36	50.97	-44.29	-25.00	-19.29
8010.30	V	275	345	-59.45	9.00	56.55	-38.71	-25.00	-13.71
10680.40	V	203	8	-64.90	11.91	54.01	-41.25	-25.00	-16.25
13350.50	V	206	347	-68.53	14.98	53.45	-41.80	-25.00	-16.80
16020.60	V	184	358	-72.99	14.59	48.60	-46.65	-25.00	-21.65
18690.70	V	-	-	-57.20	1.98	51.78	-53.02	-25.00	-28.02
21360.80	V	-	-	-58.53	3.99	52.46	-52.34	-25.00	-27.34
24030.90	V	-	-	-59.38	4.07	51.69	-53.11	-25.00	-28.11

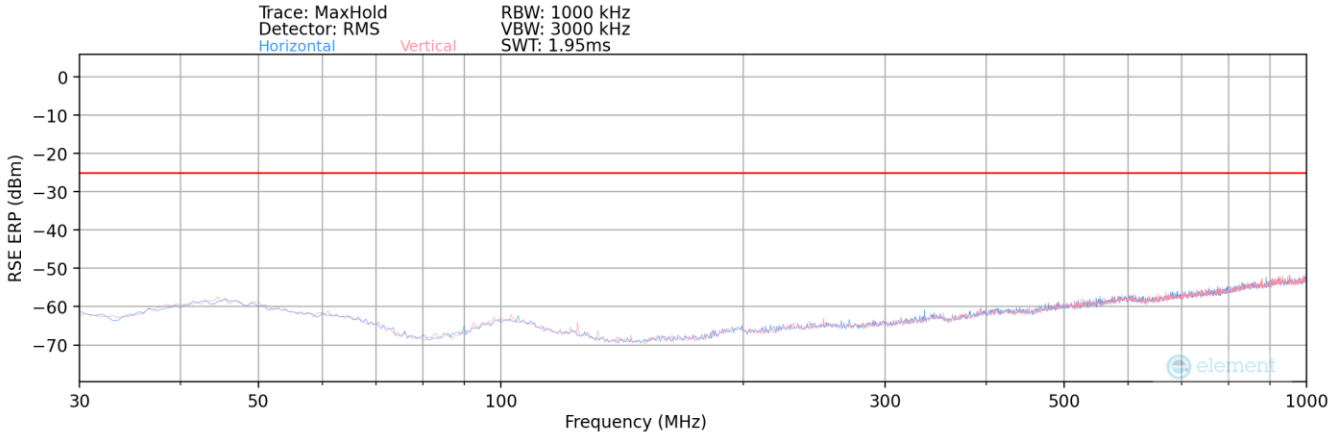
Table 7-21. Radiated Spurious Data (ULCA LTE B41(PC3) – High Channel – Ant1)

PCC Bandwidth (MHz):	20
PCC Frequency (MHz):	2680.0
PCC RB / Offset:	1 / 0
SCC Bandwidth (MHz):	20
SCC Frequency (MHz):	2660.2
SCC RB / Offset:	1 / 99

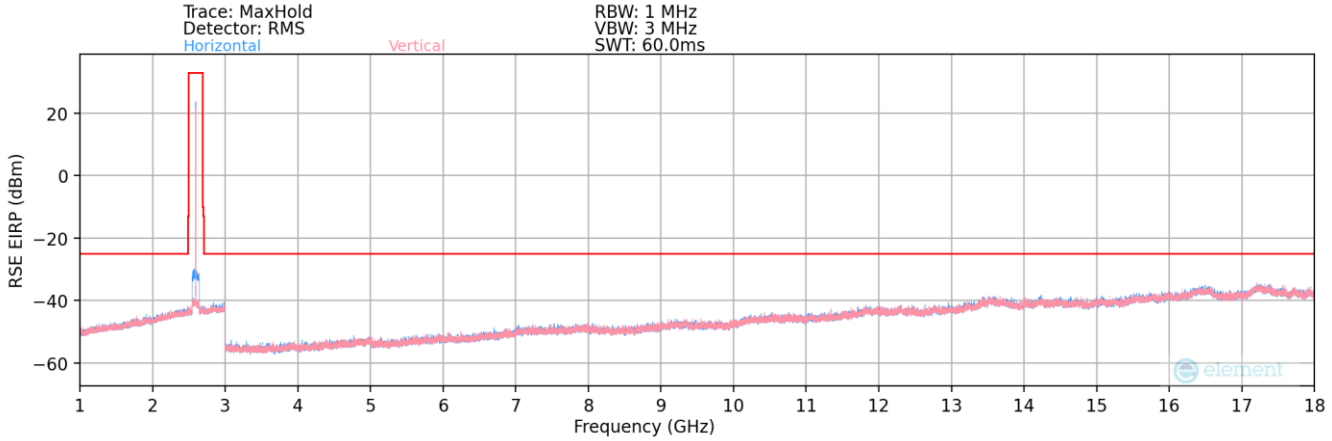
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
888.60	V	-	-	-97.05	31.09	41.04	-56.37	-25.00	-31.37

Table 7-22. Radiated Spurious Data (ULCA LTE B41(PC3) – High Channel – Ant1)

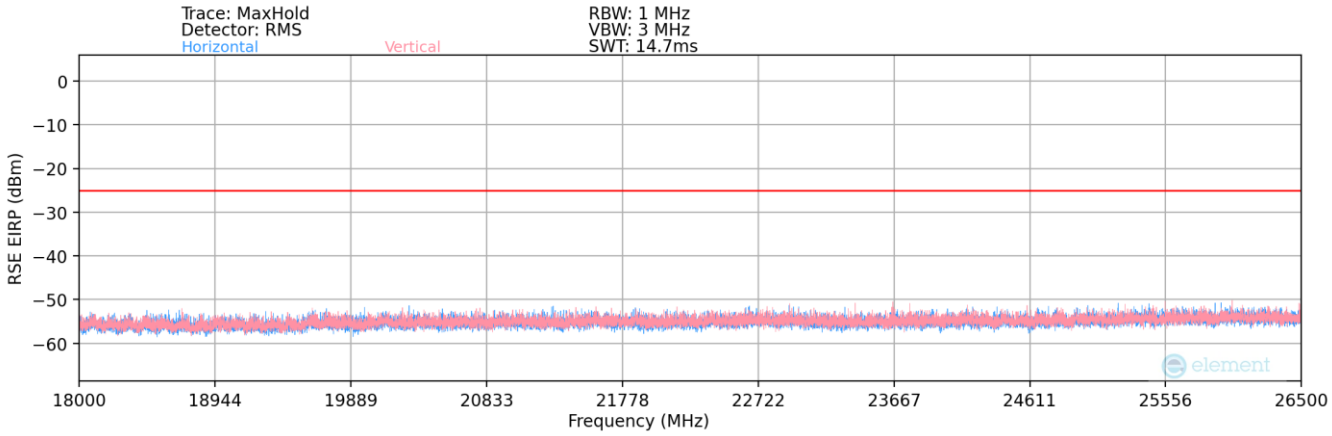
NR Band n41 – Ant1



Plot 7-133. Radiated Spurious Plot (NR Band n41 – Ant1)



Plot 7-134. Radiated Spurious Plot (NR Band n41 – Ant1)



Plot 7-135. Radiated Spurious Plot (NR Band n41 – Ant1)

Bandwidth (MHz):	100
Frequency (MHz):	2546.01
RB / Offset:	1 / 136

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5092.02	H	-	-	-72.40	10.12	44.72	-50.54	-25.00	-25.54
7638.03	H	-	-	-74.97	15.84	47.87	-47.38	-25.00	-22.38
10184.04	H	-	-	-75.86	19.71	50.85	-44.40	-25.00	-19.40

Table 7-23. Radiated Spurious Data (NR Band n41 – Low Channel – Ant1)

Bandwidth (MHz):	100
Frequency (MHz):	2592.99
RB / Offset:	1 / 136

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5185.98	H	-	-	-72.43	10.54	45.11	-50.15	-25.00	-25.15
7778.97	H	-	-	-74.14	15.59	48.45	-46.81	-25.00	-21.81
10371.96	H	-	-	-74.54	19.60	52.06	-43.20	-25.00	-18.20

Table 7-24. Radiated Spurious Data (NR Band n41 – Mid Channel – Ant1)

Bandwidth (MHz):	100
Frequency (MHz):	2640.00
RB / Offset:	1 / 136

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5280.00	H	-	-	-72.56	10.33	44.77	-50.48	-25.00	-25.48
7920.00	H	-	-	-73.45	15.63	49.18	-46.07	-25.00	-21.07
10560.00	H	-	-	-75.25	19.99	51.74	-43.52	-25.00	-18.52

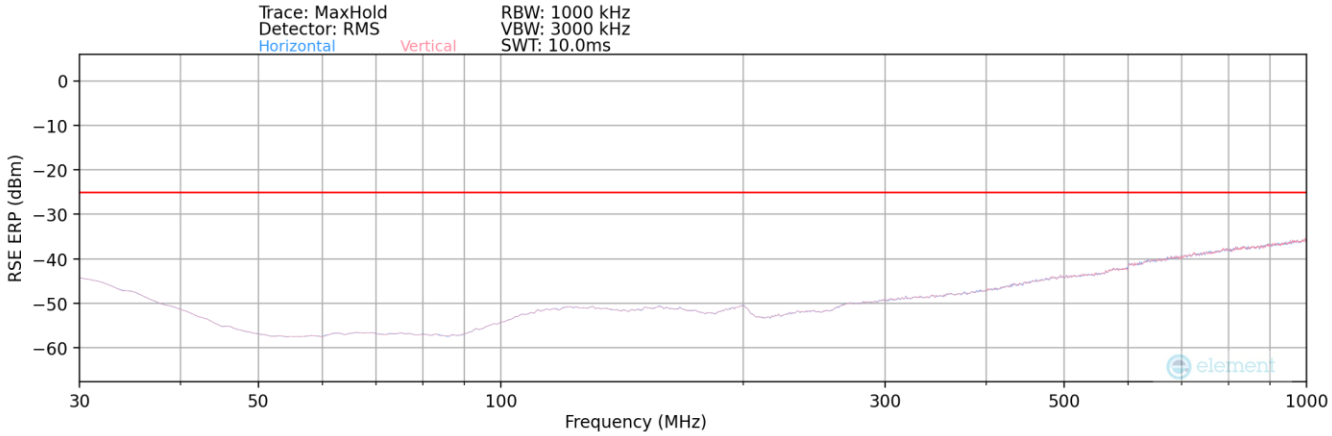
Table 7-25. Radiated Spurious Data (NR Band n41 – High Channel – Ant1)

Bandwidth (MHz):	100
Frequency (MHz):	2592.99
RB / Offset:	1 / 136

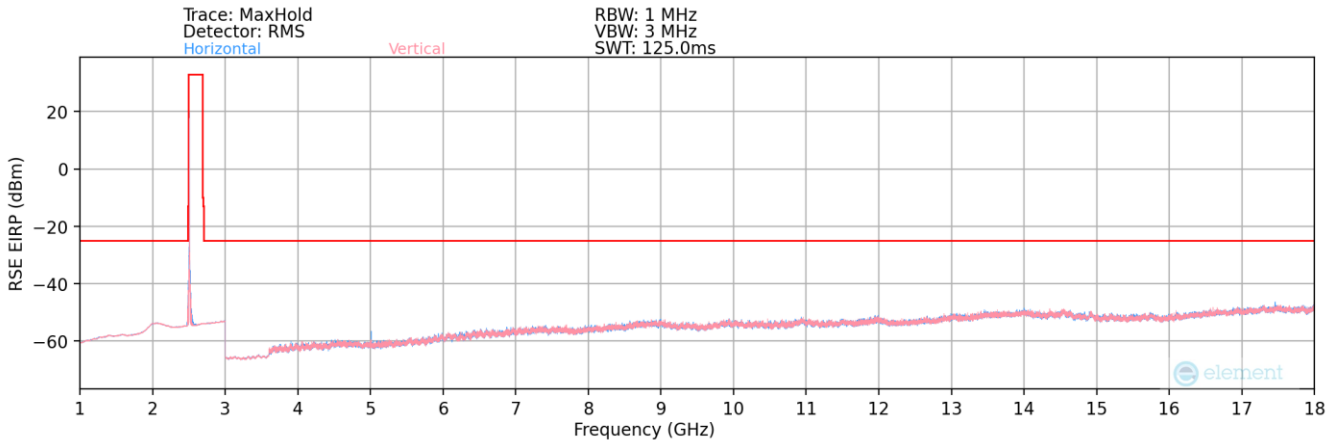
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
342.00	H	-	-	-66.21	-9.72	31.07	-66.34	-25.00	-41.34

Table 7-26. Radiated Spurious Data (NR Band n41 – Low Channel – Ant1)

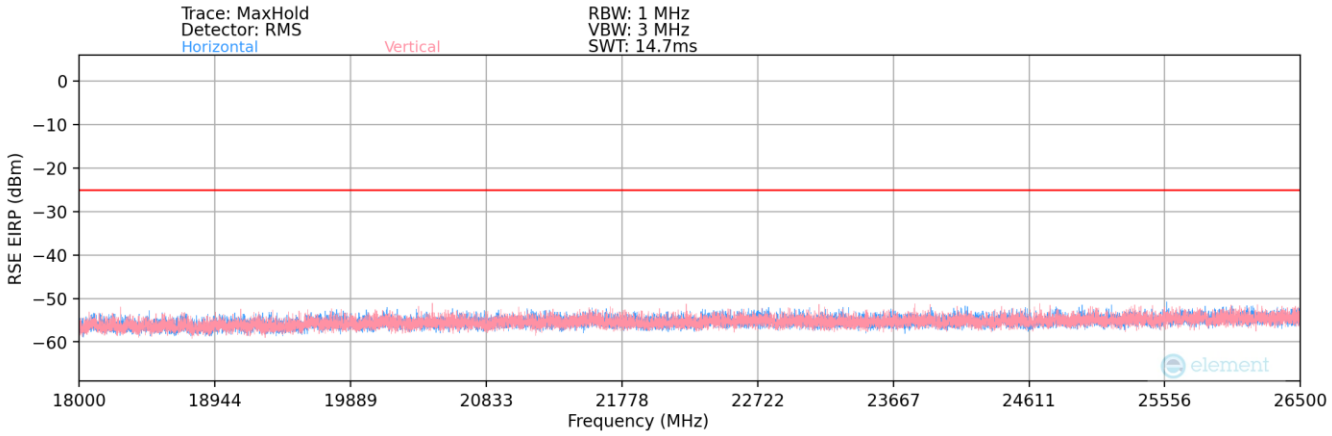
LTE Band 41(PC3) – Ant2



Plot 7-136. Radiated Spurious Plot (LTE Band 41(PC3) – Ant2)



Plot 7-137. Radiated Spurious Plot (LTE Band 41(PC3) – Ant2)



Plot 7-138. Radiated Spurious Plot (LTE Band 41(PC3) – Ant2)

Bandwidth (MHz):	20
Frequency (MHz):	2506.0
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5012.00	H	192	322	-68.75	3.17	41.42	-53.84	-25.00	-28.84
7518.00	H	162	23	-77.75	8.91	38.16	-57.10	-25.00	-32.10
10024.00	H	-	-	-78.17	11.10	39.93	-55.33	-25.00	-30.33
12530.00	H	154	48	-76.33	12.91	43.58	-51.68	-25.00	-26.68
15036.00	H	-	-	-80.77	14.66	40.89	-54.37	-25.00	-29.37
17542.00	H	-	-	-79.27	16.72	44.45	-50.81	-25.00	-25.81

Table 7-27. Radiated Spurious Data (LTE Band 41(PC3) – Low Channel – Ant2)

Bandwidth (MHz):	20
Frequency (MHz):	2593.0
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5186.00	H	200	330	-73.90	3.49	36.59	-58.66	-25.00	-33.66
7779.00	H	182	356	-76.35	8.22	38.87	-56.39	-25.00	-31.39
10372.00	H	-	-	-79.61	11.63	39.02	-56.24	-25.00	-31.24
12965.00	H	-	-	-79.99	14.13	41.14	-54.12	-25.00	-29.12
15558.00	H	-	-	-79.69	13.98	41.29	-53.97	-25.00	-28.97

Table 7-28. Radiated Spurious Data (LTE Band 41(PC3) – Mid Channel – Ant2)

Bandwidth (MHz):	20
Frequency (MHz):	2680.0
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5360.00	H	179	45	-75.39	3.36	34.97	-60.29	-25.00	-35.29
8040.00	H	-	-	-77.46	9.00	38.54	-56.72	-25.00	-31.72
10720.00	H	-	-	-79.87	11.91	39.04	-56.22	-25.00	-31.22
13400.00	H	-	-	-79.50	14.98	42.48	-52.77	-25.00	-27.77

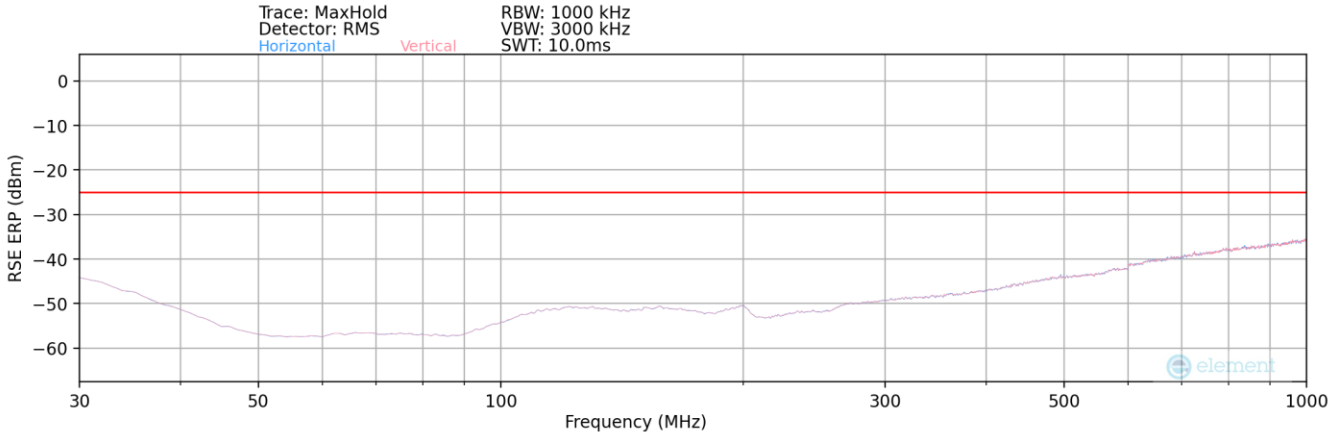
Table 7-29. Radiated Spurious Data (LTE Band 41(PC3) – High Channel – Ant2)

Bandwidth (MHz):	20
Frequency (MHz):	2593.0
RB / Offset:	1 / 50

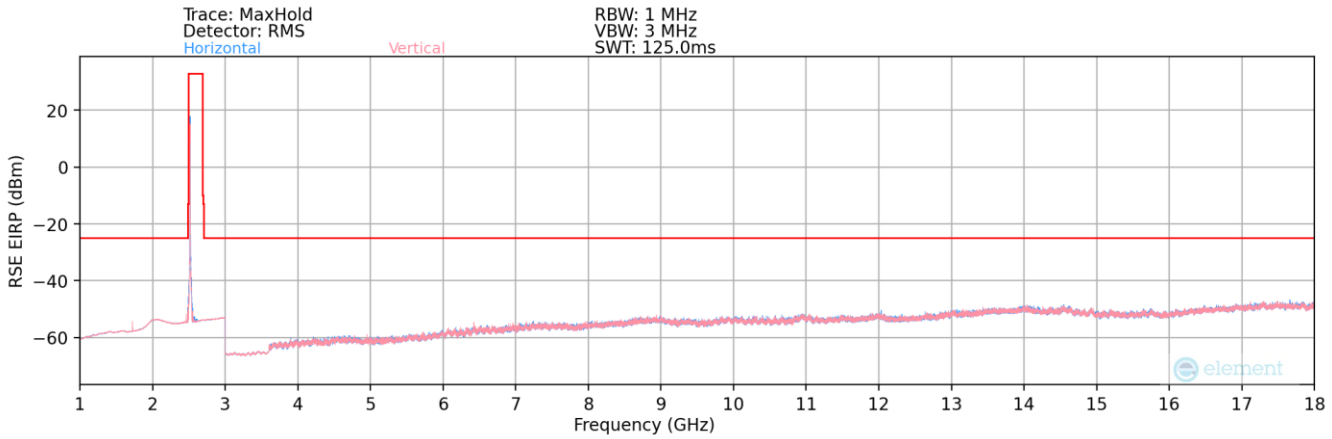
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
200.00	H	-	-	-86.22	20.36	41.14	-56.27	-25.00	-31.27

Table 7-30. Radiated Spurious Data (LTE Band 41(PC3) – Mid Channel – Ant2)

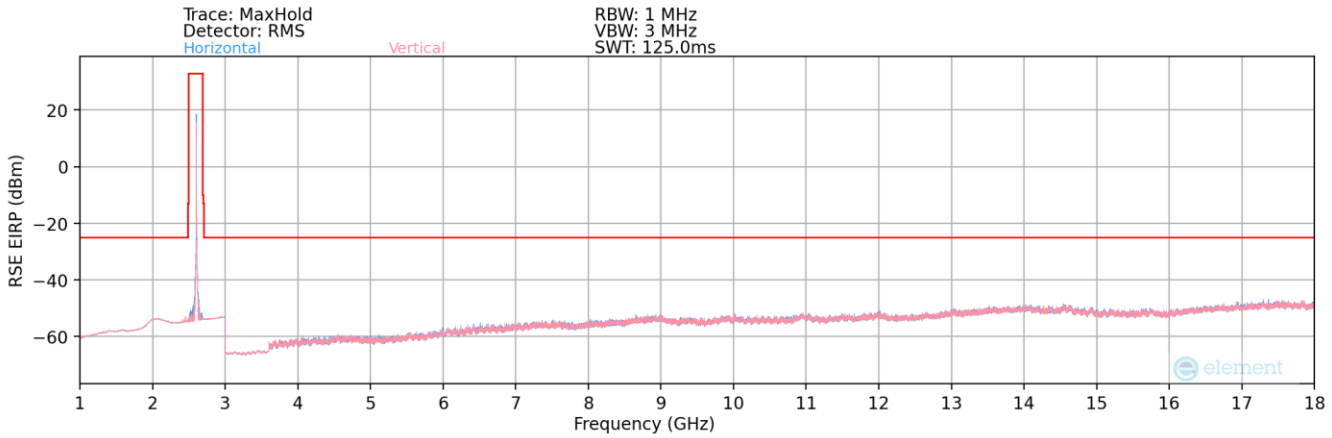
ULCA - LTE B41(PC3) – Ant2



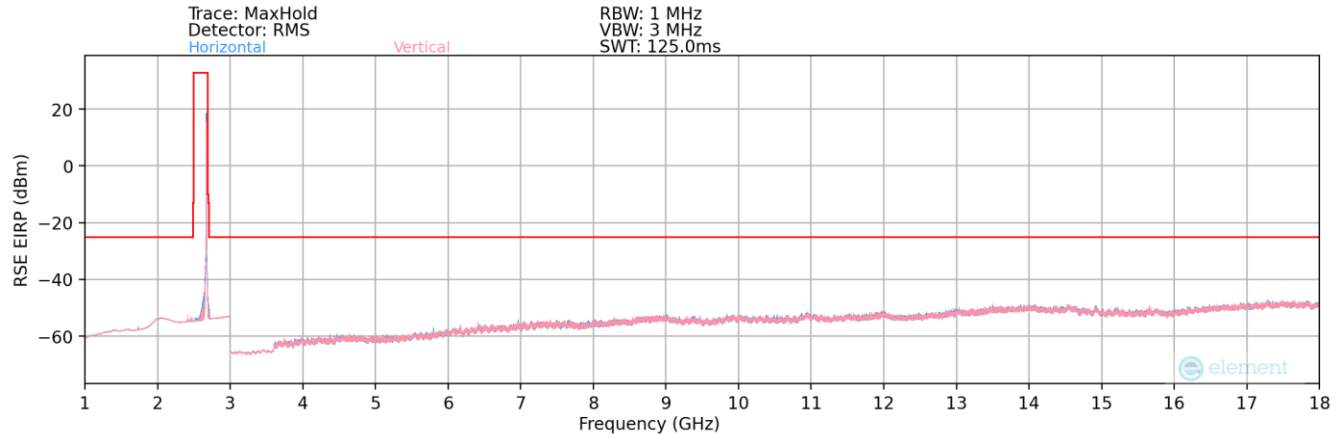
Plot 7-139. Radiated Spurious Plot (ULCA LTE B41(PC3) – Ant2) – Below 1GHz



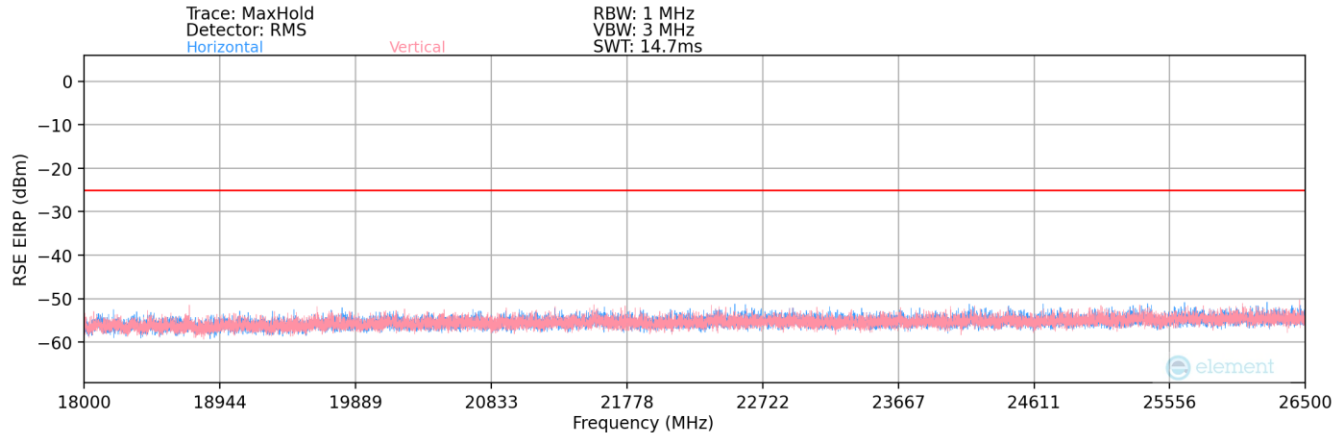
Plot 7-140. Radiated Spurious Plot (ULCA LTE B41(PC2) – Ant3) – Low Channel



Plot 7-141. Radiated Spurious Plot (ULCA LTE B41(PC2) – Ant3) – Mid Channel



Plot 7-142. Radiated Spurious Plot (ULCA LTE B41(PC2) – Ant3) – High Channel



Plot 7-143. Radiated Spurious Plot (ULCA LTE B41(PC3) – Ant2)

PCC Bandwidth (MHz):	20
PCC Frequency (MHz):	2506.0
PCC RB / Offset:	1 / 99
SCC Bandwidth (MHz):	20
SCC Frequency (MHz):	2525.8
SCC RB / Offset:	1 / 0

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5031.80	H	172	44	-70.77	3.17	39.40	-55.86	-25.00	-30.86
7547.70	H	-	-	-77.10	8.91	38.81	-56.45	-25.00	-31.45
10063.60	H	-	-	-77.44	11.10	40.66	-54.60	-25.00	-29.60
12579.50	H	-	-	-78.02	12.91	41.89	-53.37	-25.00	-28.37

Plot 7-31. Radiated Spurious Plot (ULCA LTE B41(PC3) – Ant2 – Low Channel)

PCC Bandwidth (MHz):	20
PCC Frequency (MHz):	2593.0
PCC RB / Offset:	1 / 99
SCC Bandwidth (MHz):	20
SCC Frequency (MHz):	2612.8
SCC RB / Offset:	1 / 0

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5205.80	H	151	47	-74.20	3.49	36.29	-58.96	-25.00	-33.96
7808.70	H	-	-	-76.68	8.22	38.54	-56.72	-25.00	-31.72
10411.60	H	-	-	-78.39	11.63	40.24	-55.02	-25.00	-30.02
13014.50	H	-	-	-78.49	14.13	42.64	-52.62	-25.00	-27.62

Plot 7-32. Radiated Spurious Plot (ULCA LTE B41(PC3) – Ant2 – Mid Channel)

PCC Bandwidth (MHz):	20
PCC Frequency (MHz):	2680.0
PCC RB / Offset:	1 / 0
SCC Bandwidth (MHz):	20
SCC Frequency (MHz):	2660.2
SCC RB / Offset:	1 / 99

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
5340.20	H	-	-	-75.67	3.36	34.69	-60.57	-25.00	-35.57
8010.30	H	-	-	-76.92	9.00	39.08	-56.18	-25.00	-31.18
10680.40	H	-	-	-77.76	11.91	41.15	-54.11	-25.00	-29.11
13350.50	H	-	-	-77.71	14.98	44.27	-50.98	-25.00	-25.98

Plot 7-33. Radiated Spurious Plot (ULCA LTE B41(PC3) – Ant2 – High Channel)

PCC Bandwidth (MHz):	20
PCC Frequency (MHz):	2680.0
PCC RB / Offset:	1 / 0
SCC Bandwidth (MHz):	20
SCC Frequency (MHz):	2660.2
SCC RB / Offset:	1 / 99

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
836.80	H	-	-	-95.02	30.72	42.70	-54.71	-25.00	-29.71

Plot 7-34. Radiated Spurious Plot (ULCA LTE B41(PC3) – Ant2 – High Channel