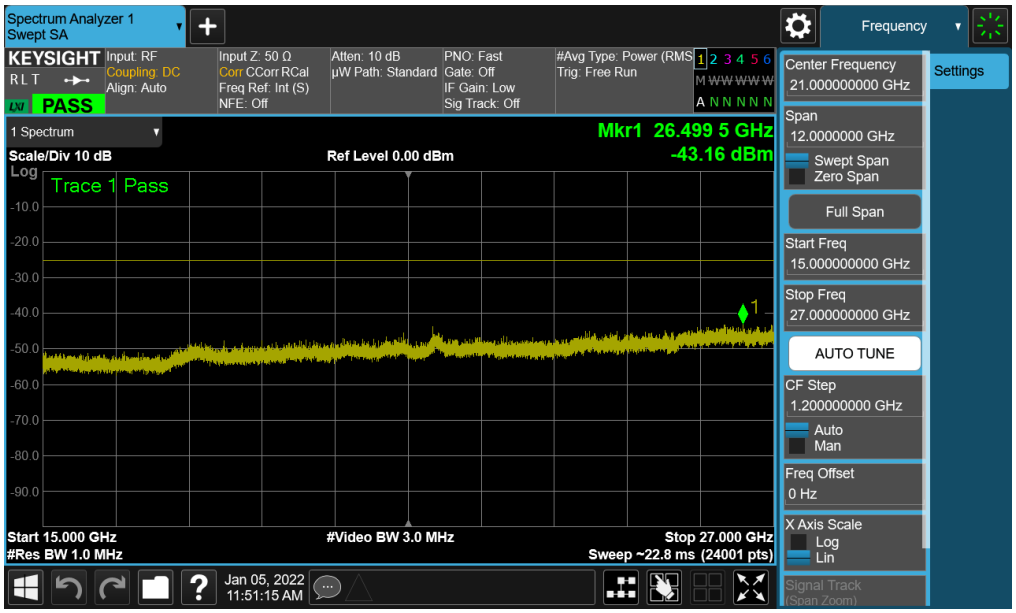
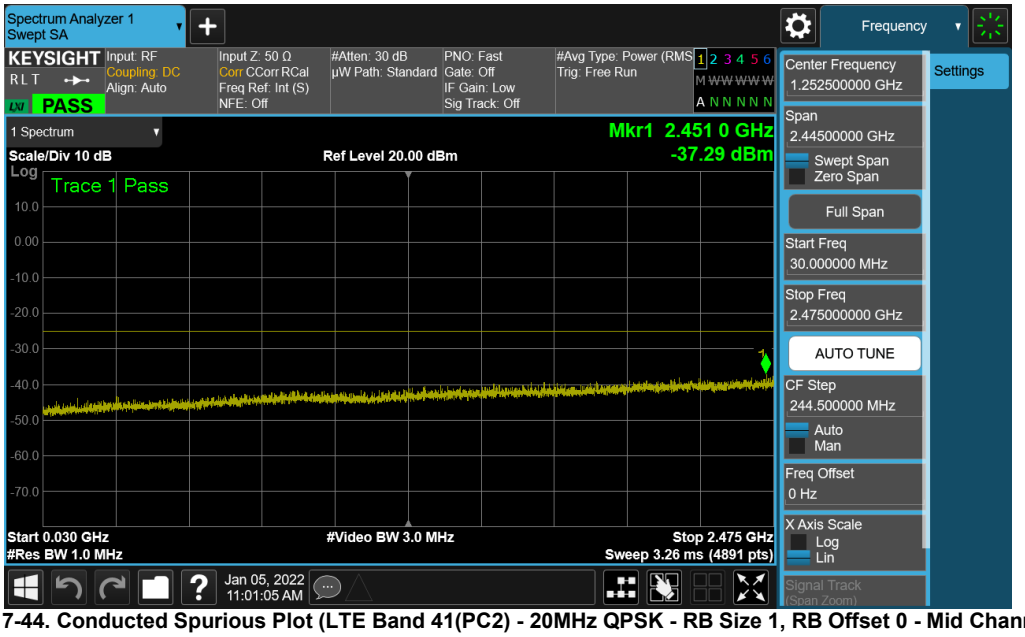
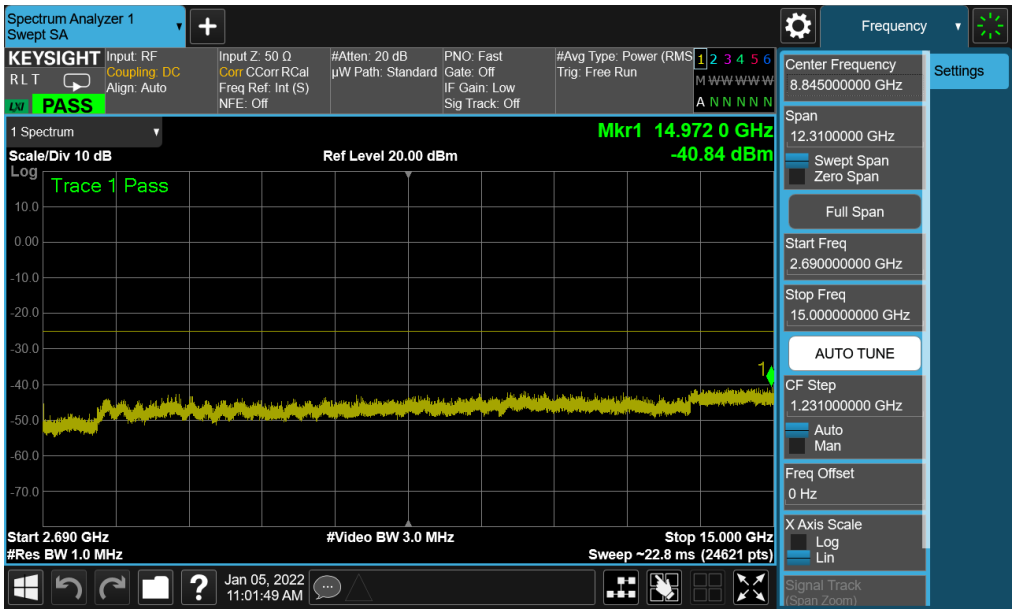


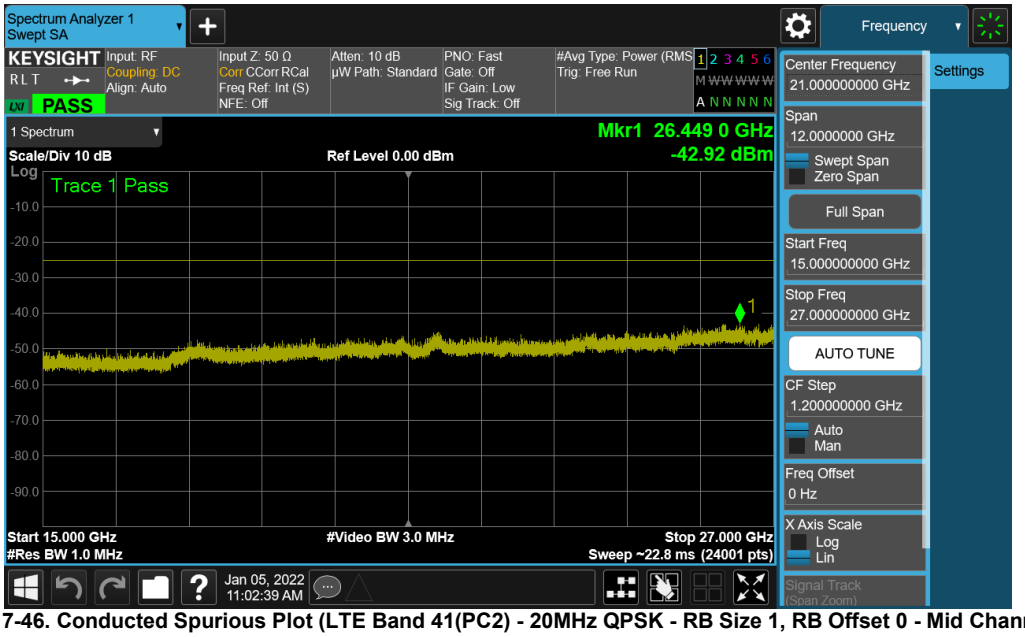
Plot 7-43. Conducted Spurious Plot (LTE Band 41(PC2) - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)



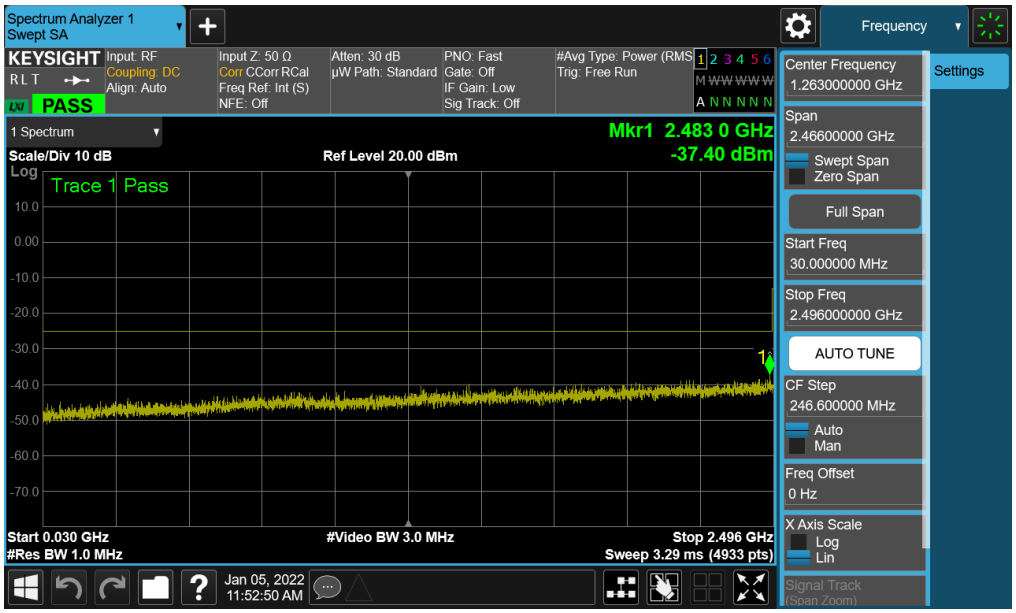
Plot 7-44. Conducted Spurious Plot (LTE Band 41(PC2) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)



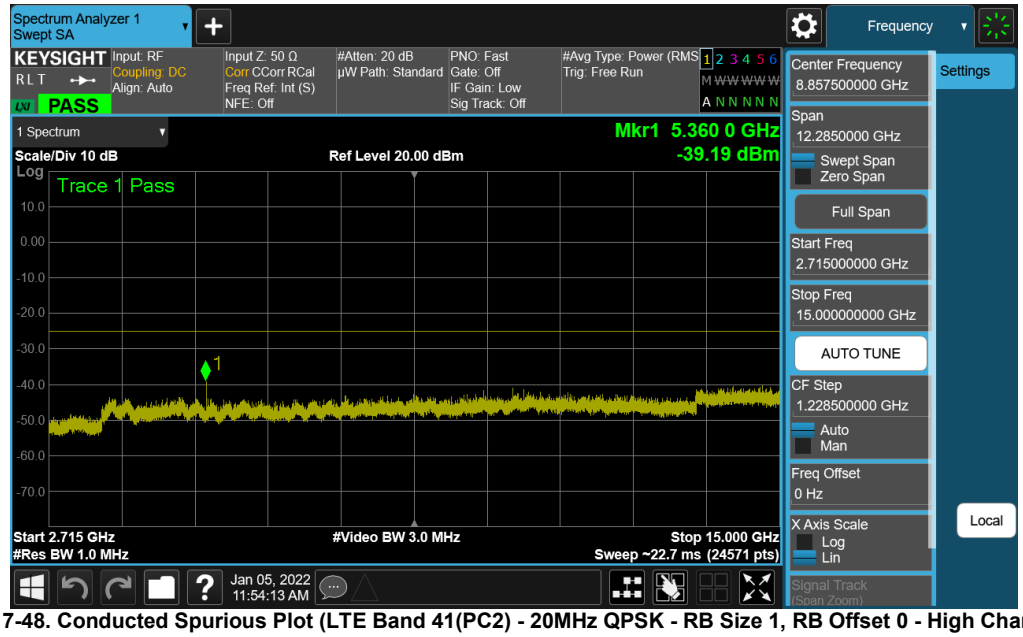
Plot 7-45. Conducted Spurious Plot (LTE Band 41(PC2) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)



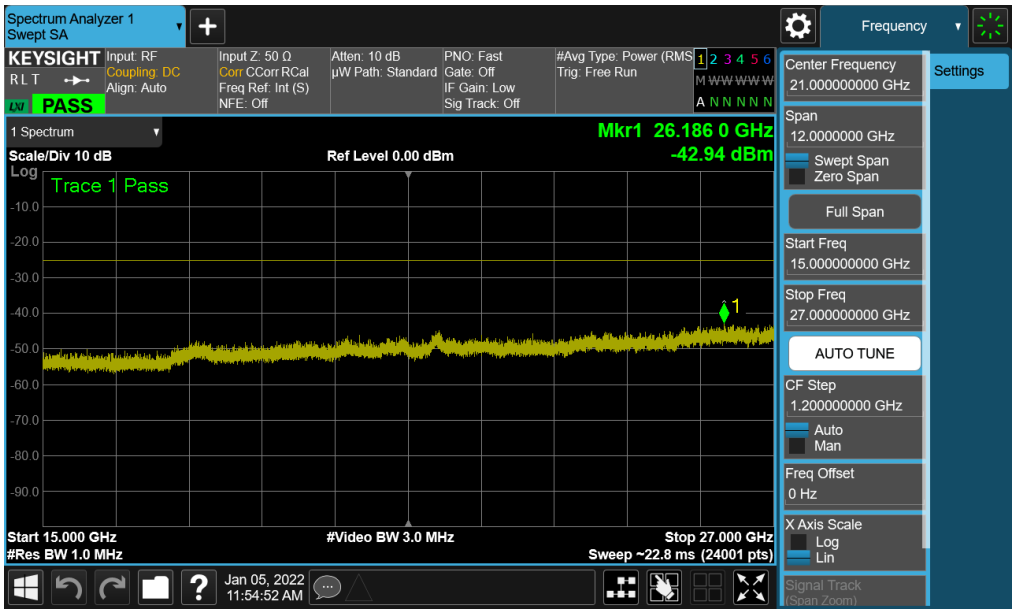
Plot 7-46. Conducted Spurious Plot (LTE Band 41(PC2) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)



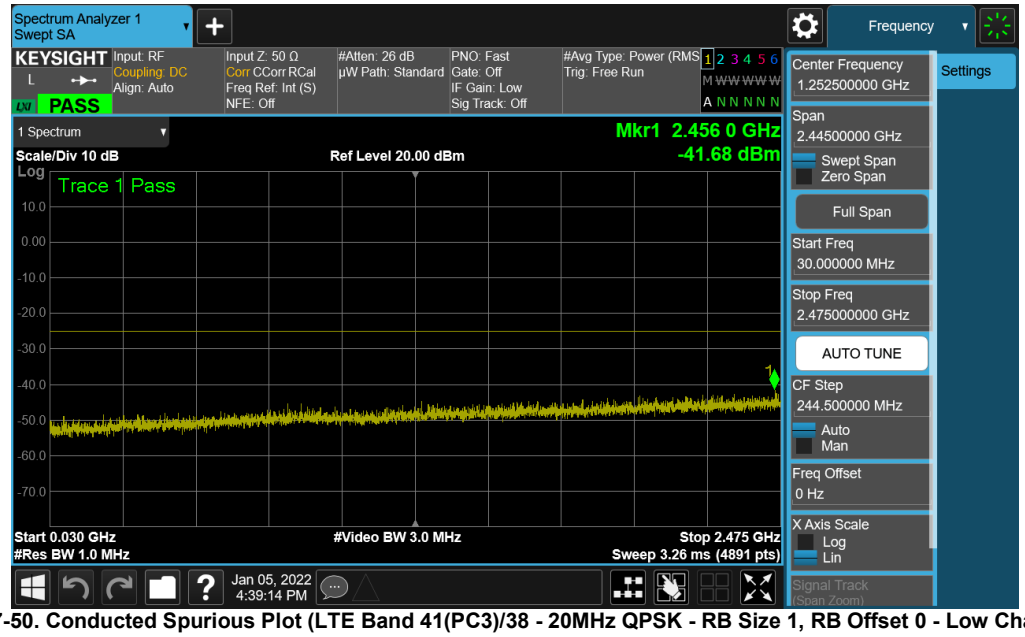
Plot 7-47. Conducted Spurious Plot (LTE Band 41(PC2) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel)



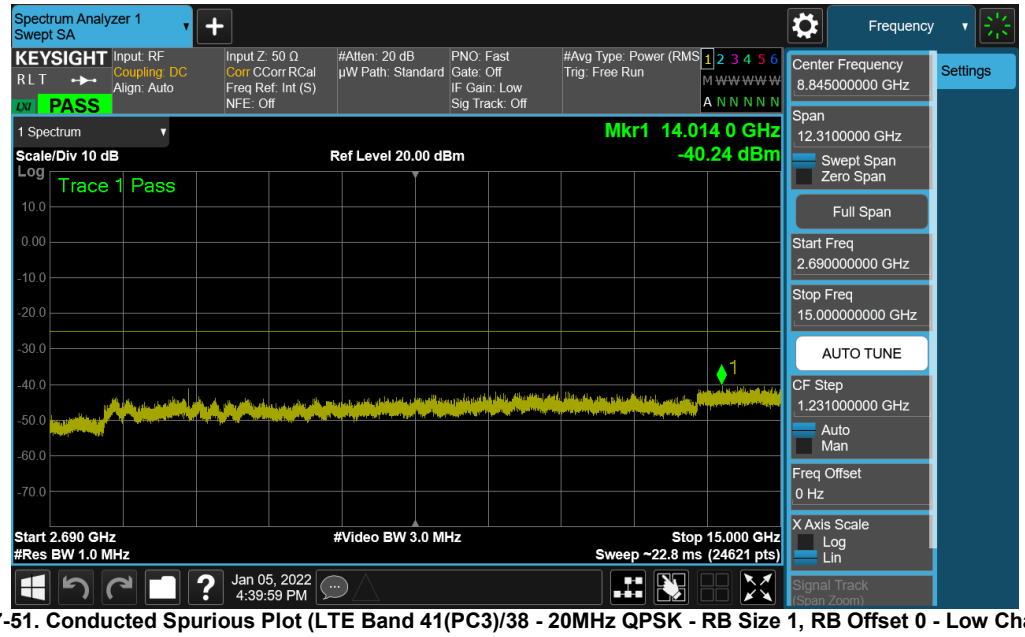
Plot 7-48. Conducted Spurious Plot (LTE Band 41(PC2) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel)



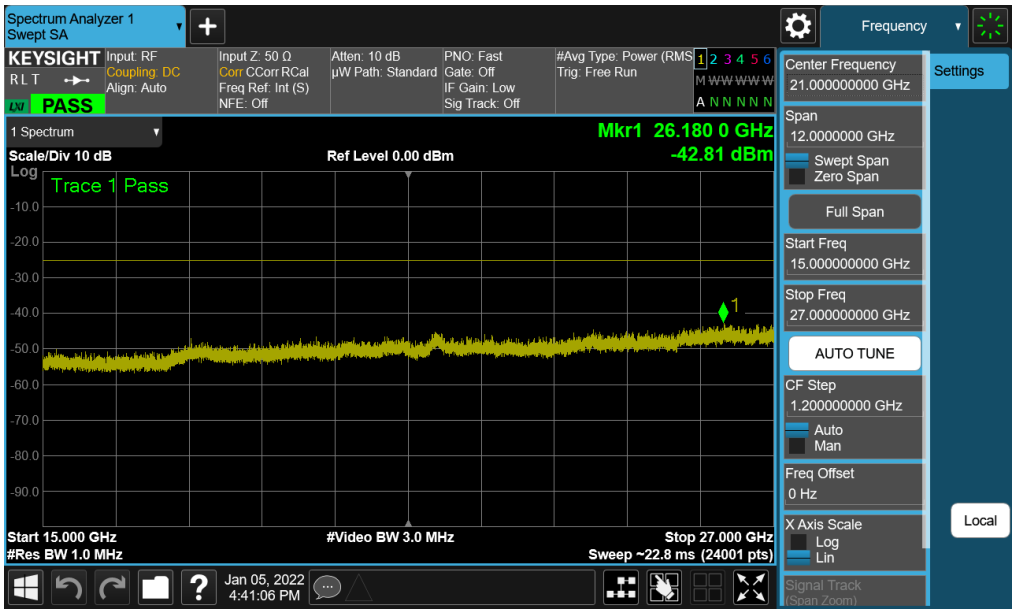
Plot 7-49. Conducted Spurious Plot (LTE Band 41(PC2) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel)



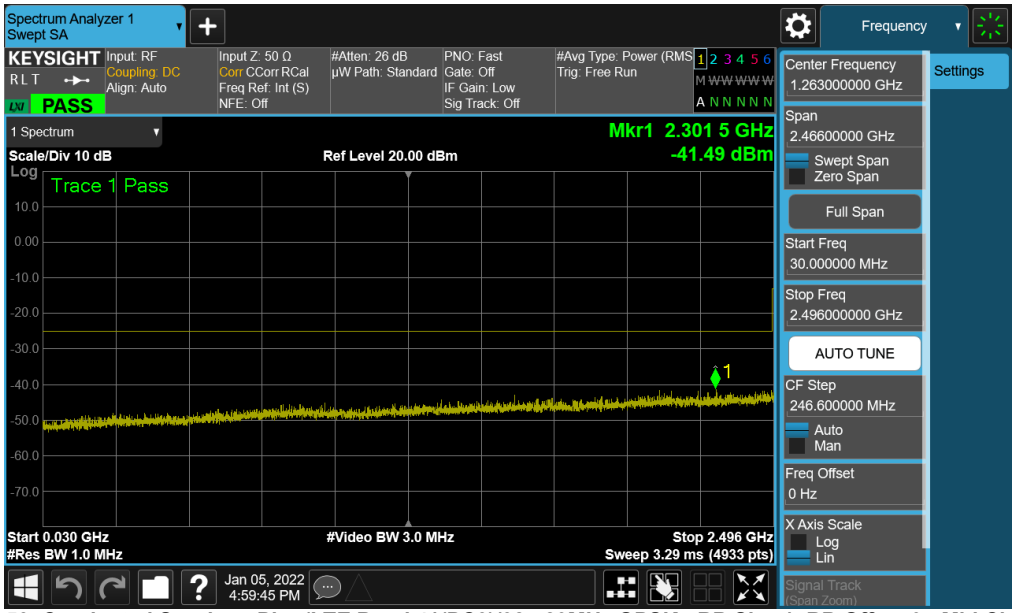
Plot 7-50. Conducted Spurious Plot (LTE Band 41(PC3)/38 - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)



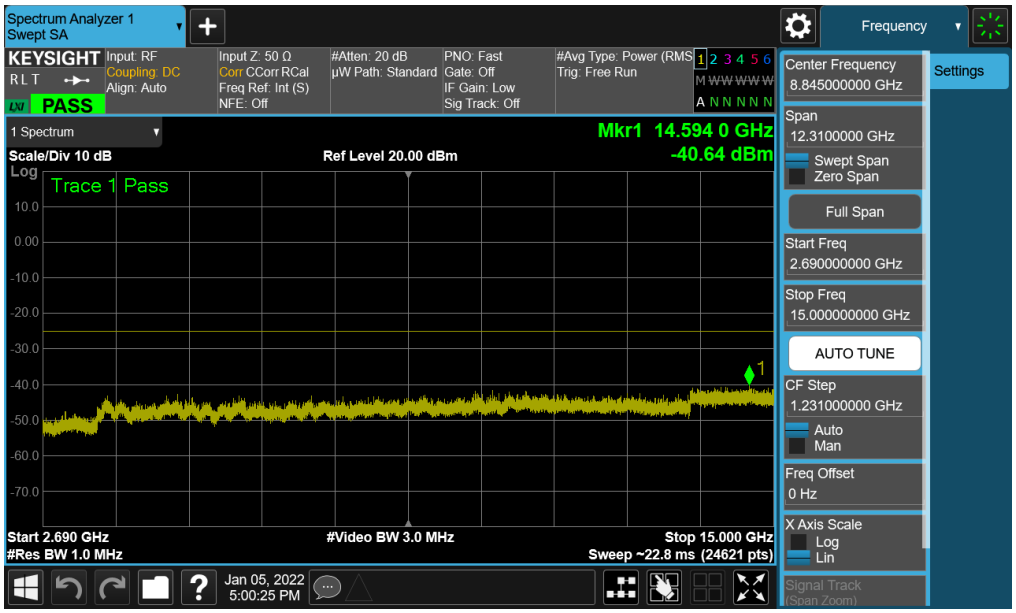
Plot 7-51. Conducted Spurious Plot (LTE Band 41(PC3)/38 - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)



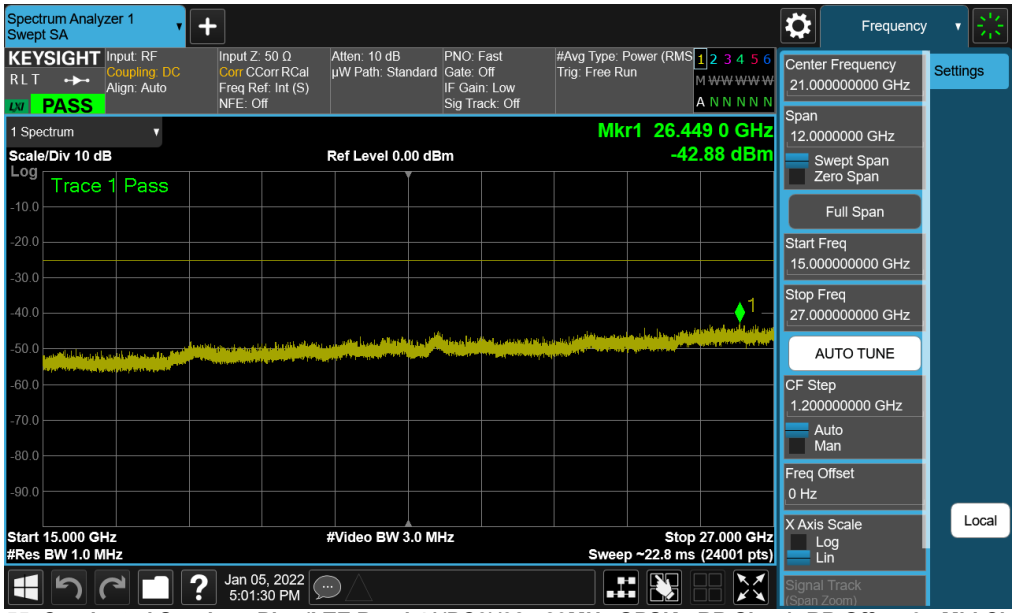
Plot 7-52. Conducted Spurious Plot (LTE Band 41(PC3)/38 - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)



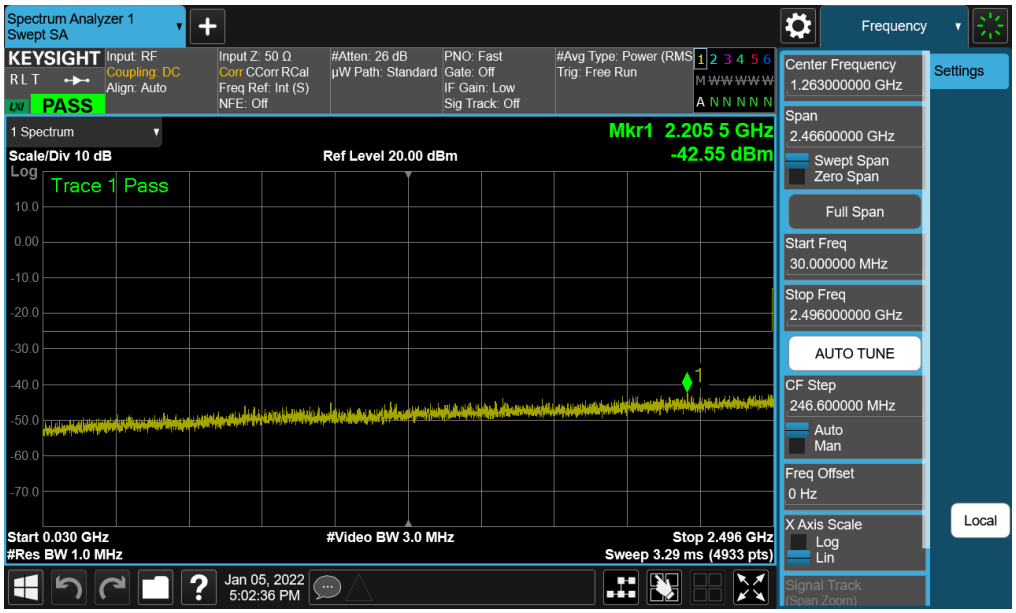
Plot 7-53. Conducted Spurious Plot (LTE Band 41(PC3)/38 - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)



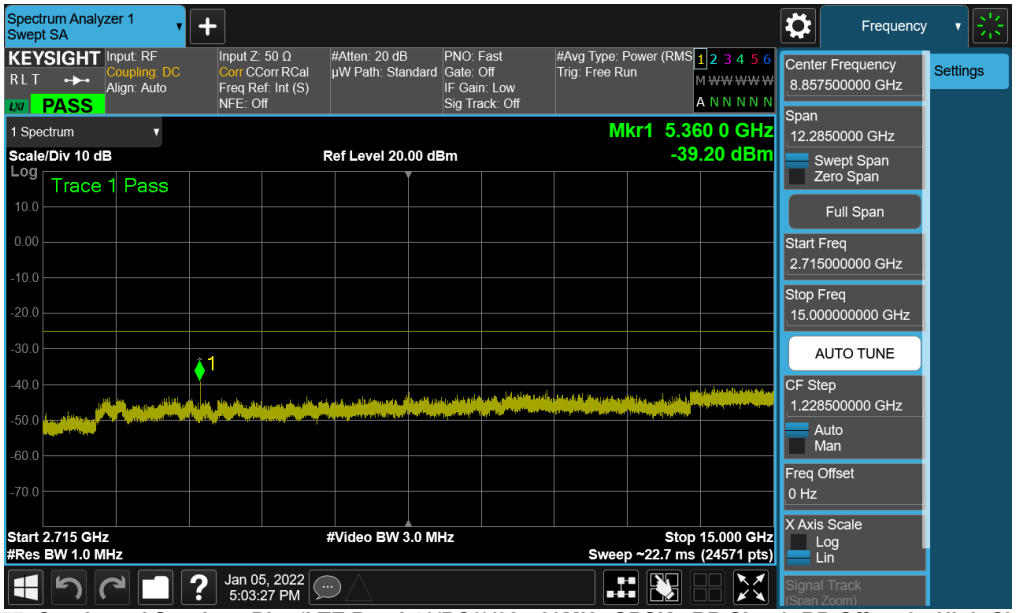
Plot 7-54. Conducted Spurious Plot (LTE Band 41(PC3)/38 - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)



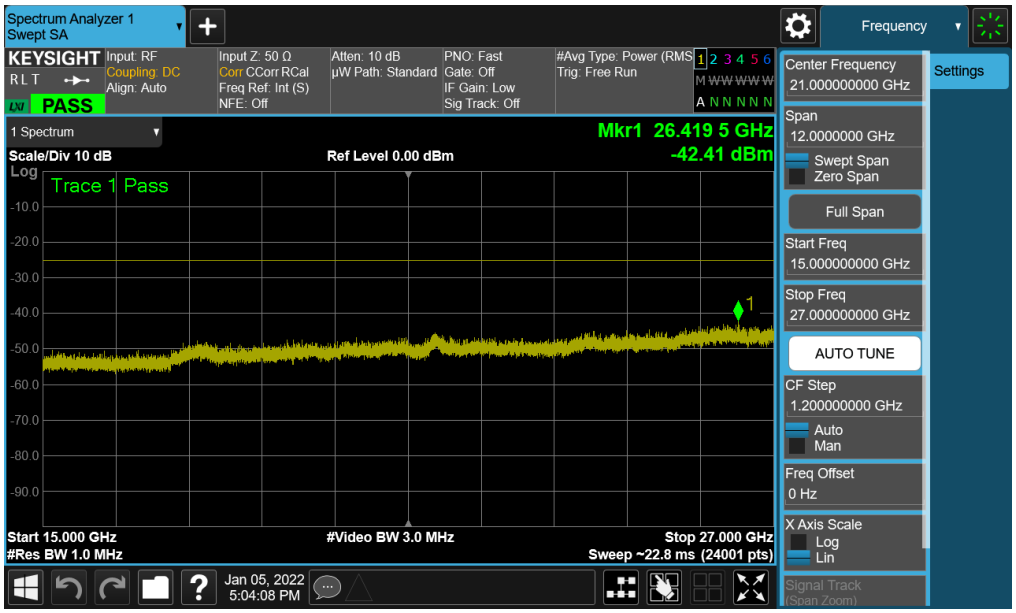
Plot 7-55. Conducted Spurious Plot (LTE Band 41(PC3)/38 - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)



Plot 7-56. Conducted Spurious Plot (LTE Band 41(PC3)/38 - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel)



Plot 7-57. Conducted Spurious Plot (LTE Band 41(PC3)/38 - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel)



Plot 7-58. Conducted Spurious Plot (LTE Band 41(PC3)/38 - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

7.4 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 7 and 41 is as noted in the Test Notes on the following page.

Test Procedure Used

KDB 971168 D01 v03r01 – Section 6.0

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.

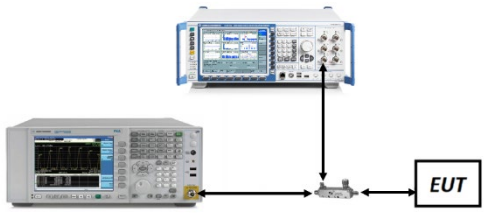
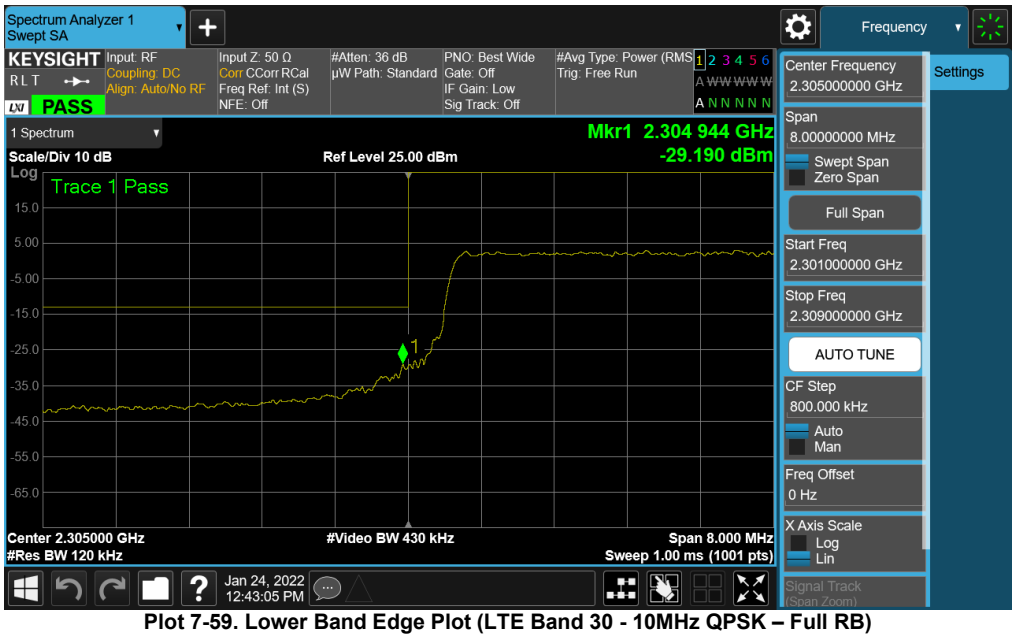


Figure 7-3. Test Instrument & Measurement Setup

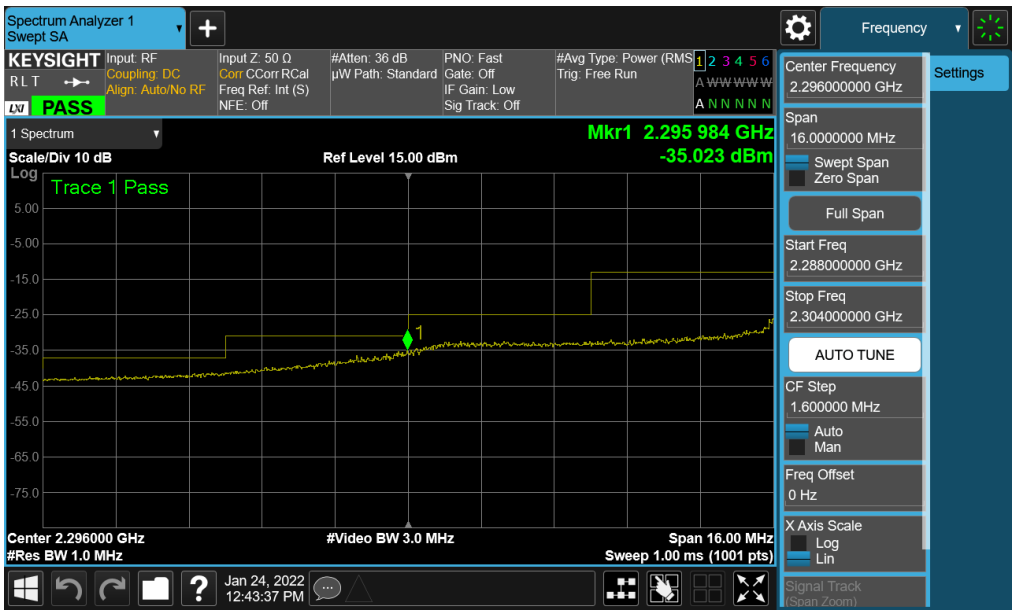
Test Notes

1. Per 27.53(a)(5) in the 1 MHz bands immediately outside and adjacent to the channel blocks at 2305, 2310, 2315, 2320, 2345, 2350, 2355, and 2360 MHz, a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e., 1 MHz). 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.

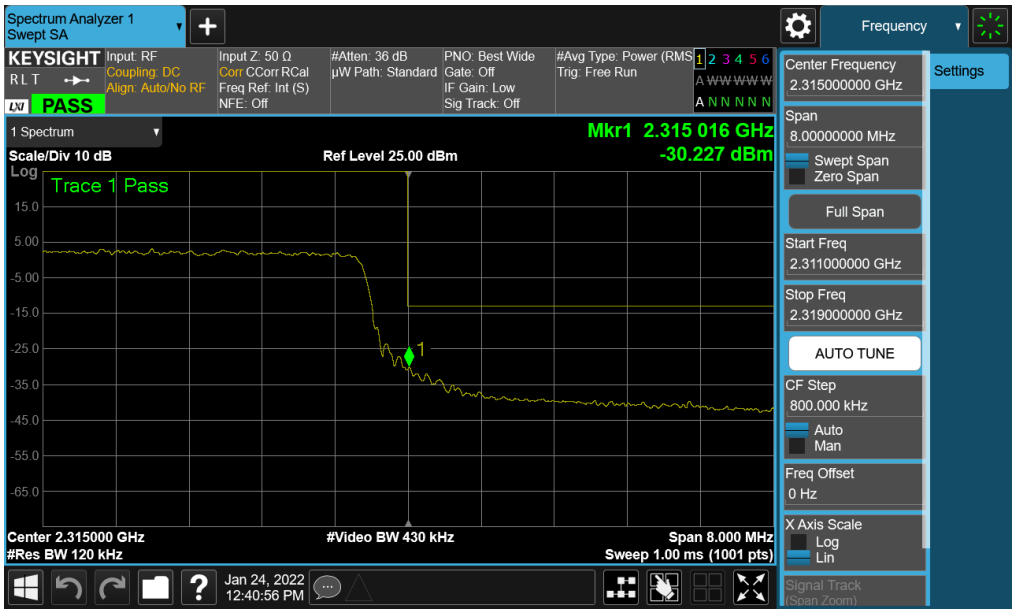
2. Per 27.53(m) for operations in the BRS/EBS bands, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 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.



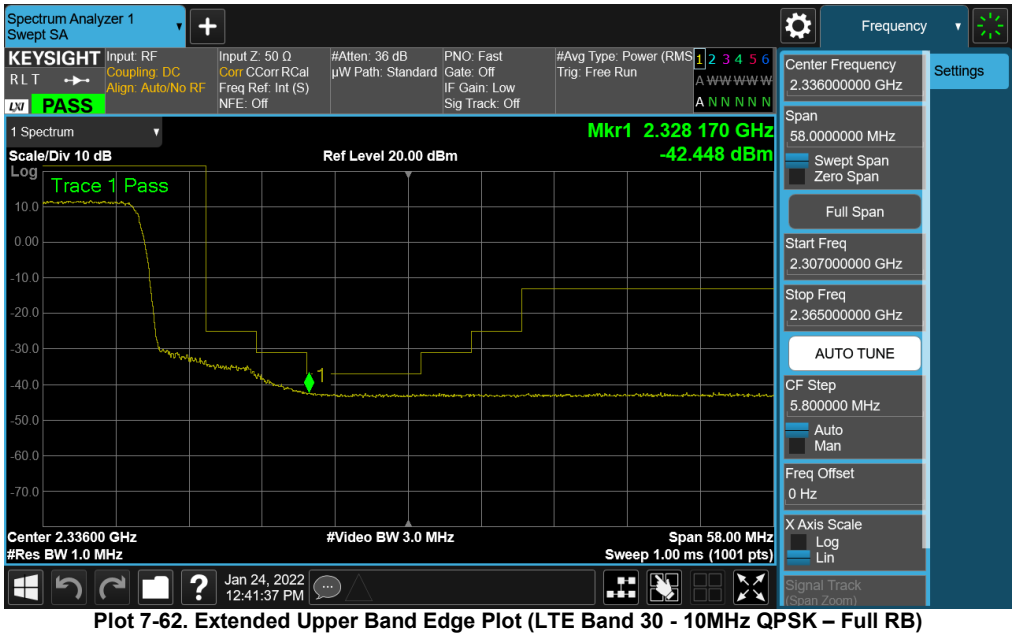
Plot 7-59. Lower Band Edge Plot (LTE Band 30 - 10MHz QPSK – Full RB)



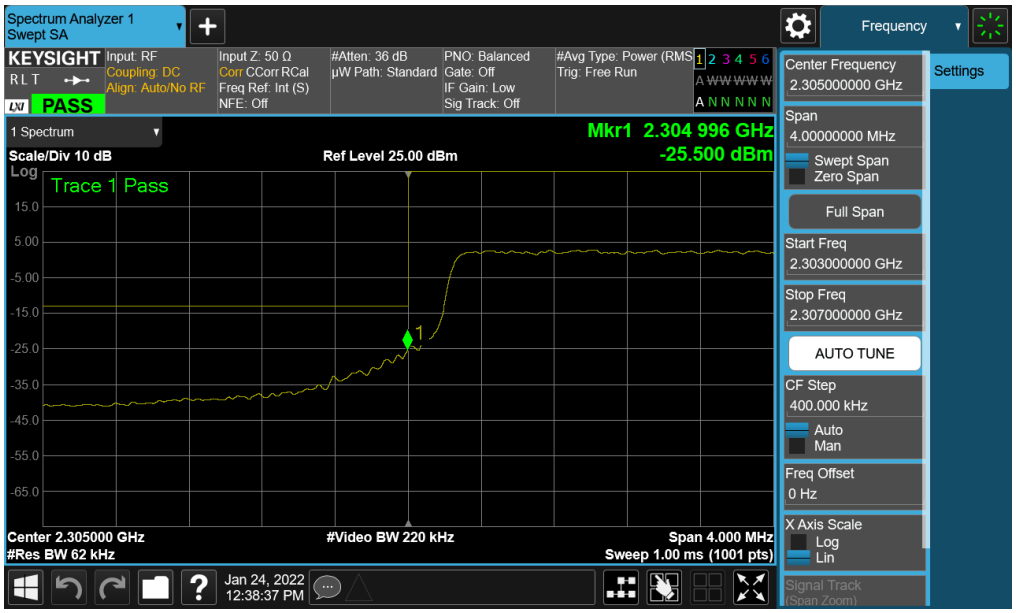
Plot 7-60. Extended Lower Band Edge Plot (LTE Band 30 - 10MHz QPSK – Full RB)



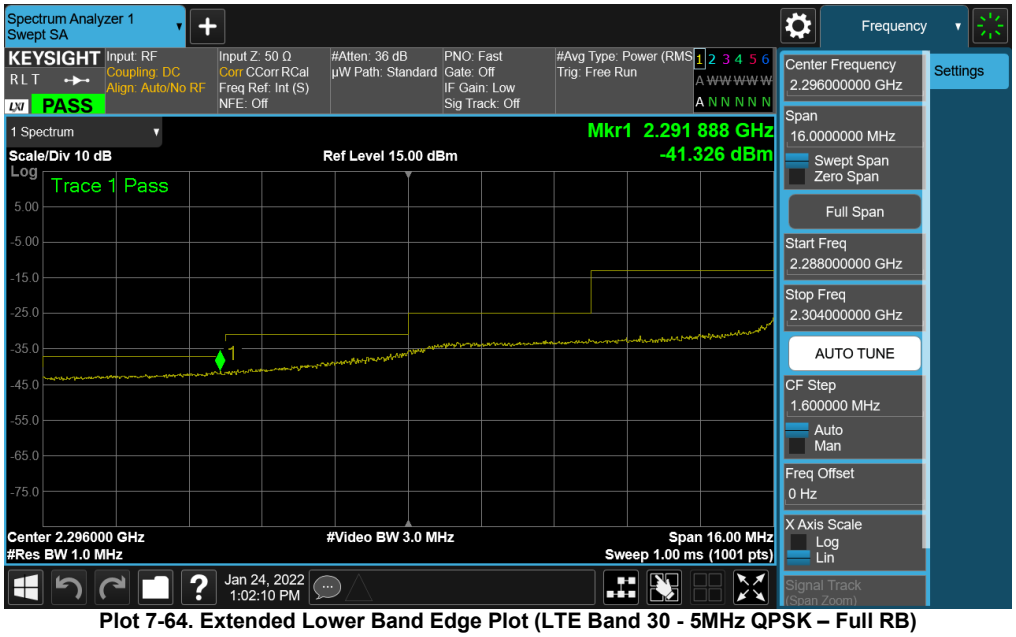
Plot 7-61. Upper Band Edge Plot (LTE Band 30 - 10MHz QPSK – Full RB)



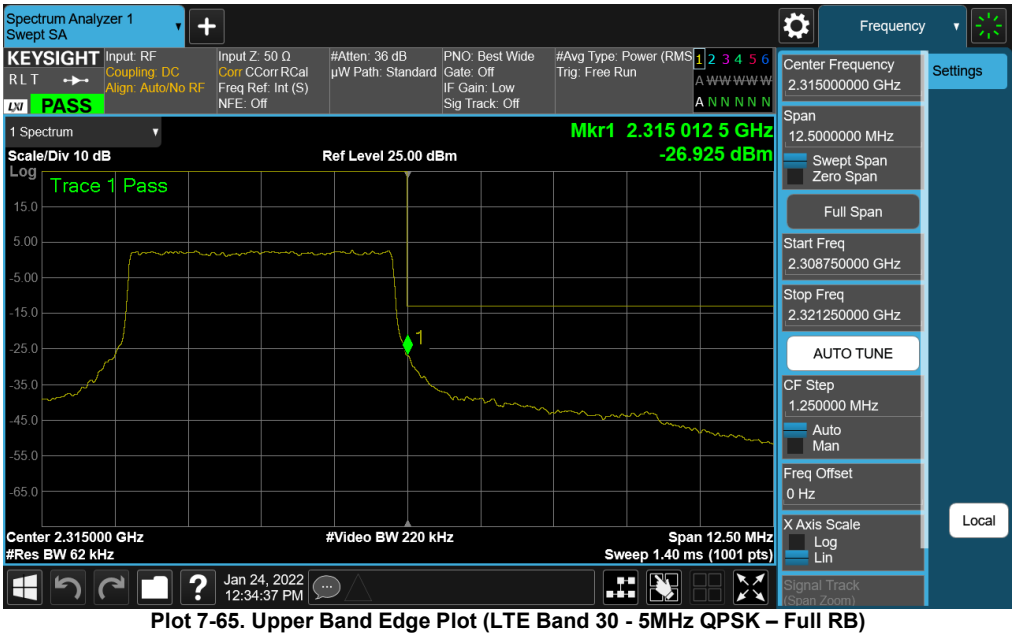
Plot 7-62. Extended Upper Band Edge Plot (LTE Band 30 - 10MHz QPSK – Full RB)



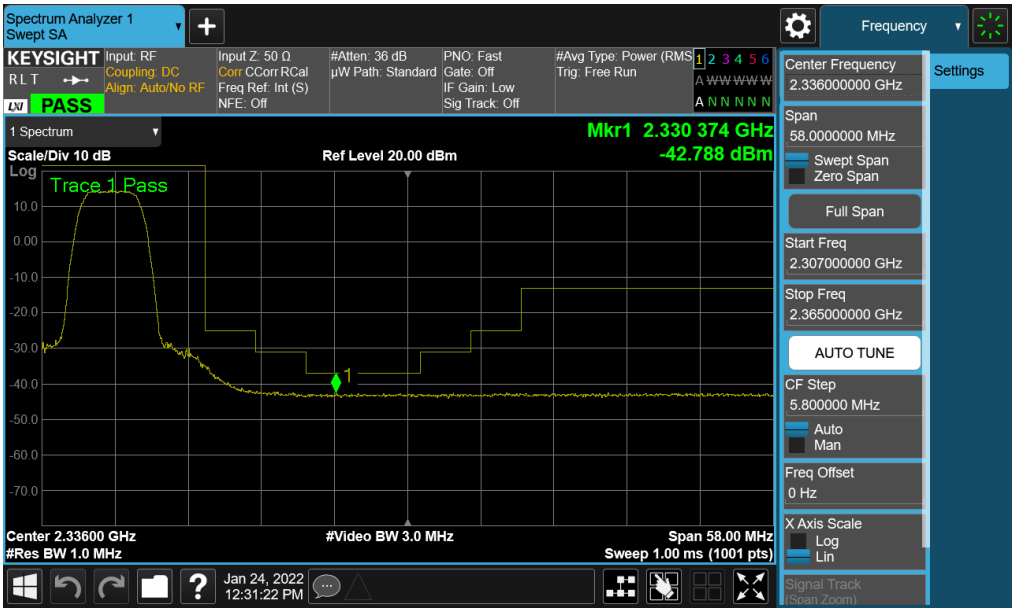
Plot 7-63. Lower Band Edge Plot (LTE Band 30 - 5MHz QPSK – Full RB)



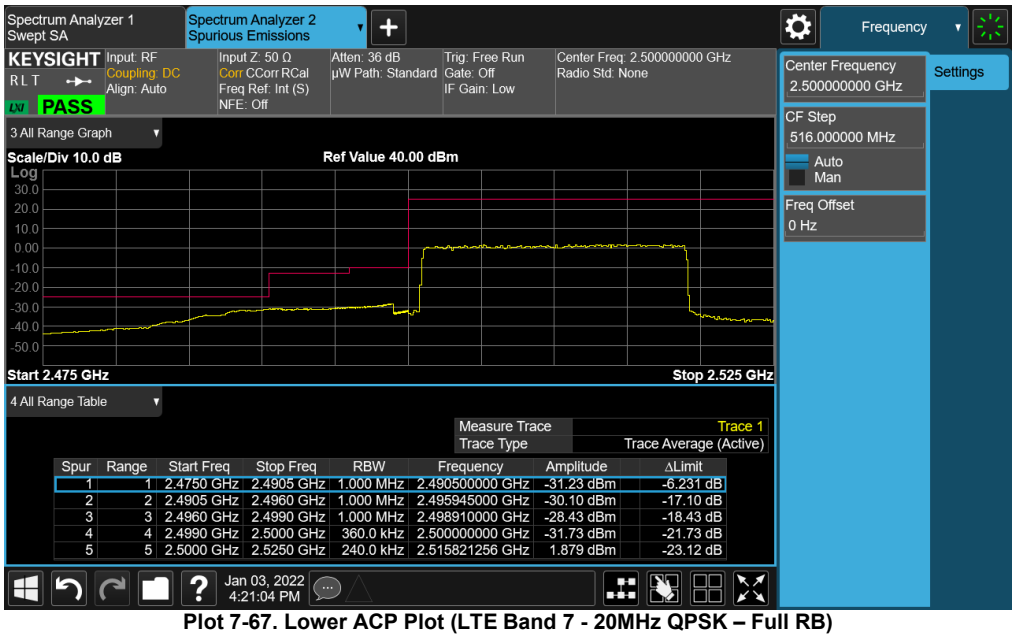
Plot 7-64. Extended Lower Band Edge Plot (LTE Band 30 - 5MHz QPSK – Full RB)



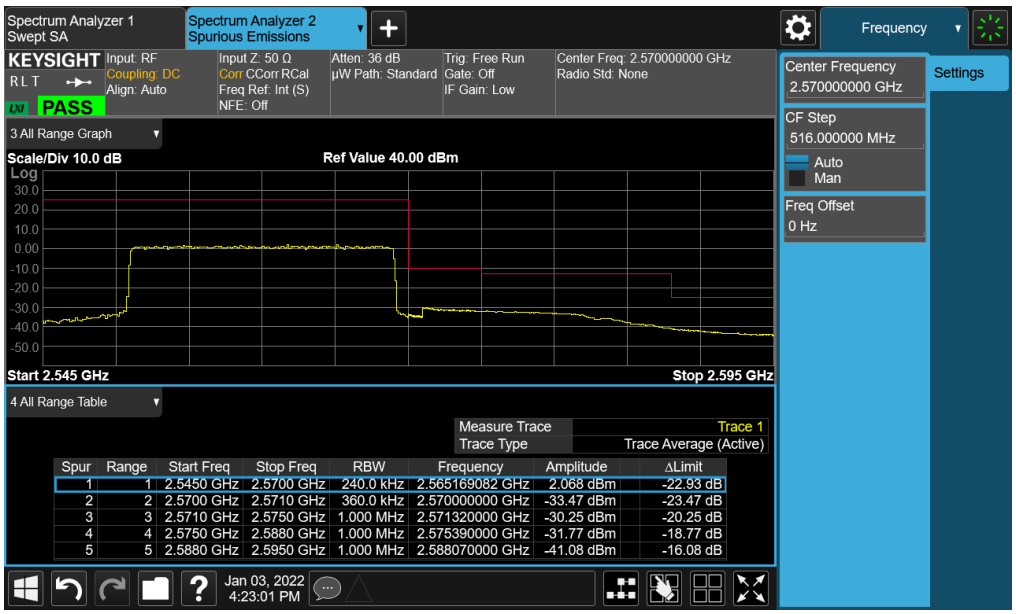
Plot 7-65. Upper Band Edge Plot (LTE Band 30 - 5MHz QPSK – Full RB)



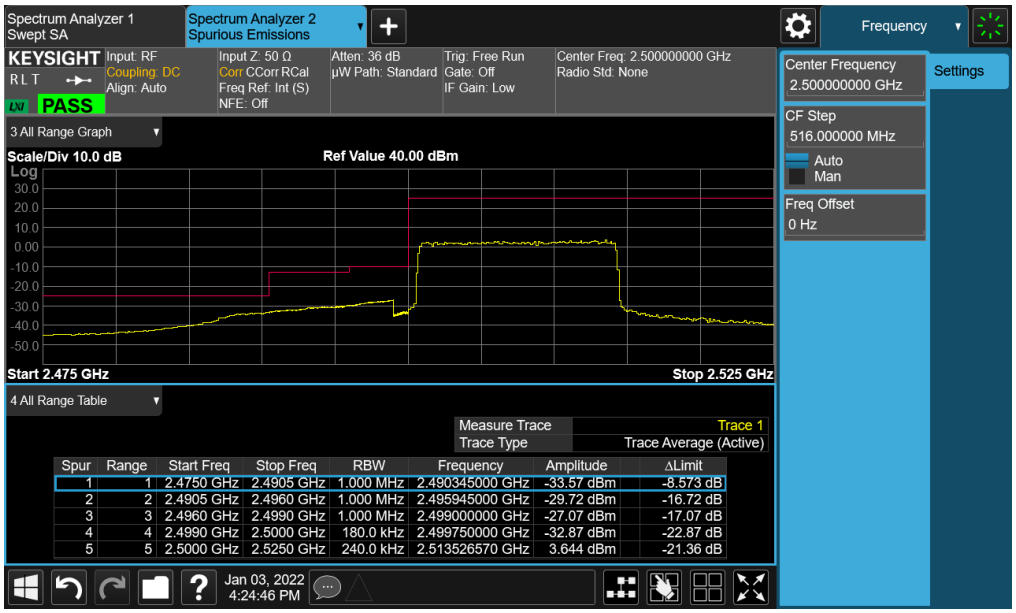
Plot 7-66. Extended Upper Band Edge Plot (LTE Band 30 - 5MHz QPSK – Full RB)



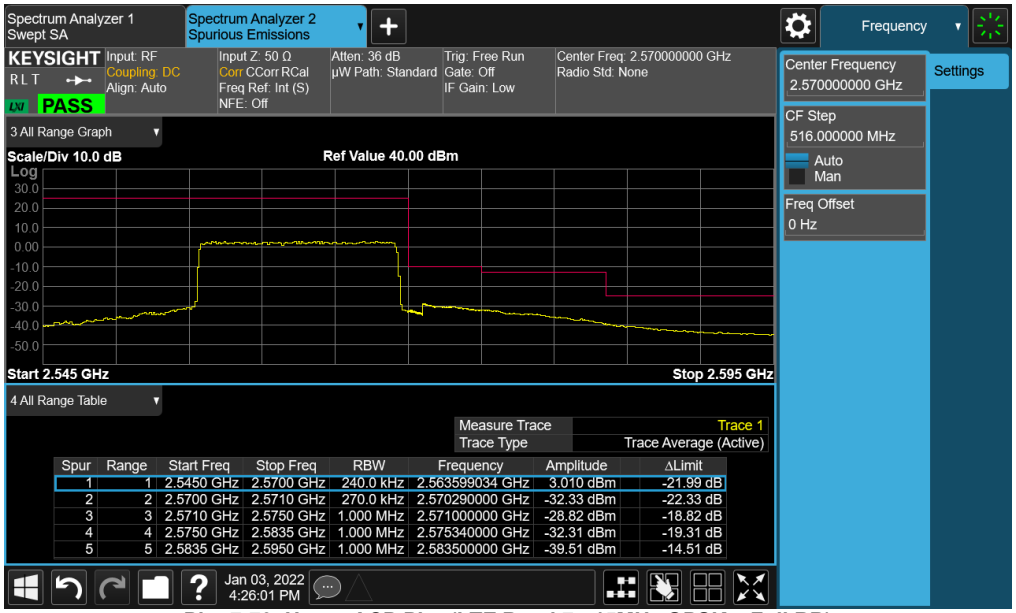
Plot 7-67. Lower ACP Plot (LTE Band 7 - 20MHz QPSK – Full RB)



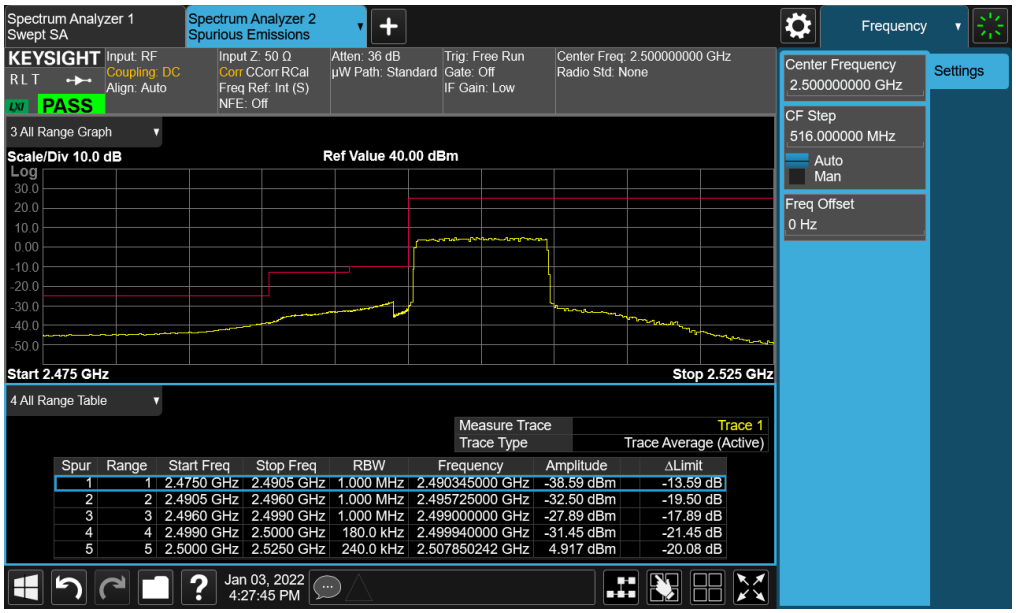
Plot 7-68. Upper ACP Plot (LTE Band 7 - 20MHz QPSK – Full RB)



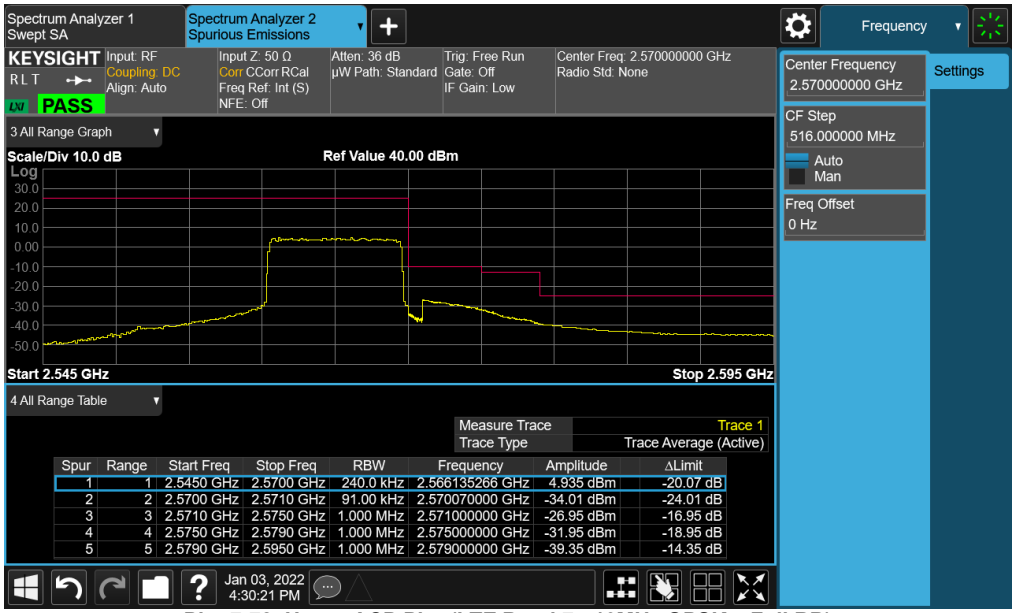
Plot 7-69. Lower ACP Plot (LTE Band 7 - 15MHz QPSK – Full RB)



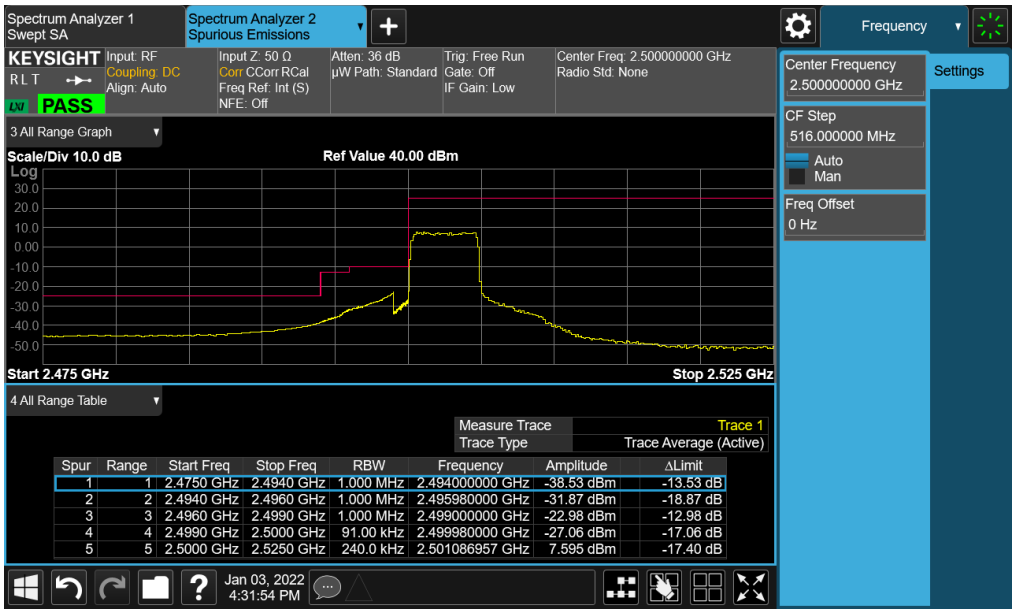
Plot 7-70. Upper ACP Plot (LTE Band 7 - 15MHz QPSK – Full RB)



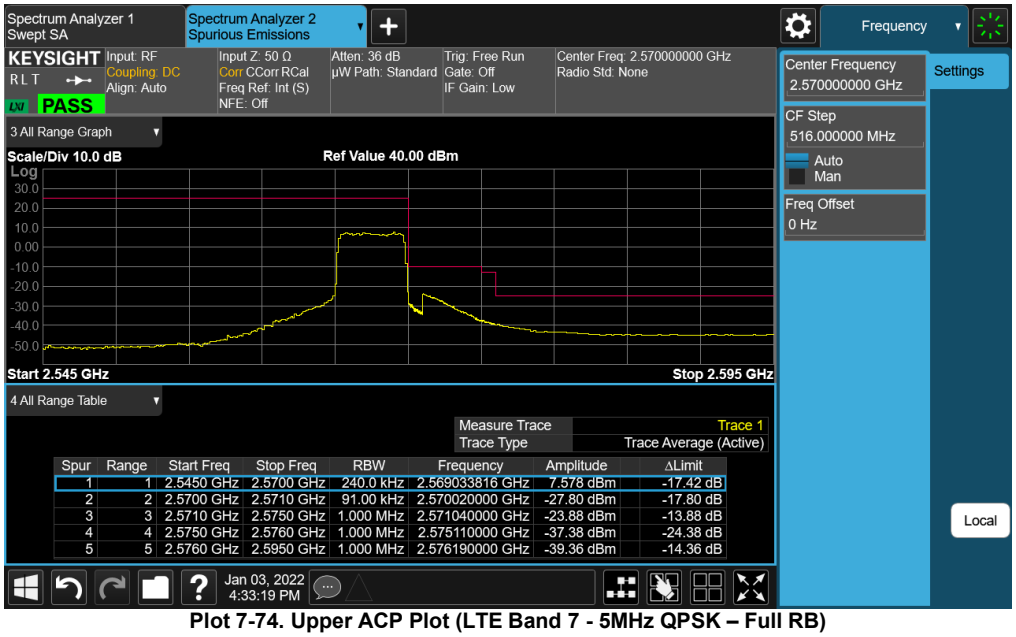
Plot 7-71. Lower ACP Plot (LTE Band 7 - 10MHz QPSK – Full RB)



Plot 7-72. Upper ACP Plot (LTE Band 7 - 10MHz QPSK – Full RB)

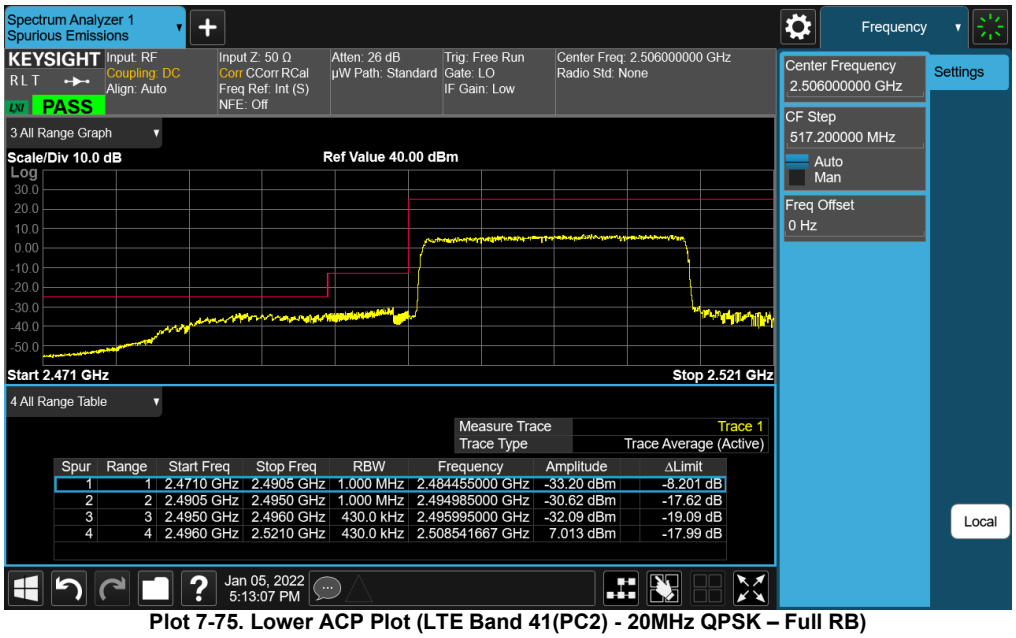


Plot 7-73. Lower ACP Plot (LTE Band 7 - 5MHz QPSK – Full RB)

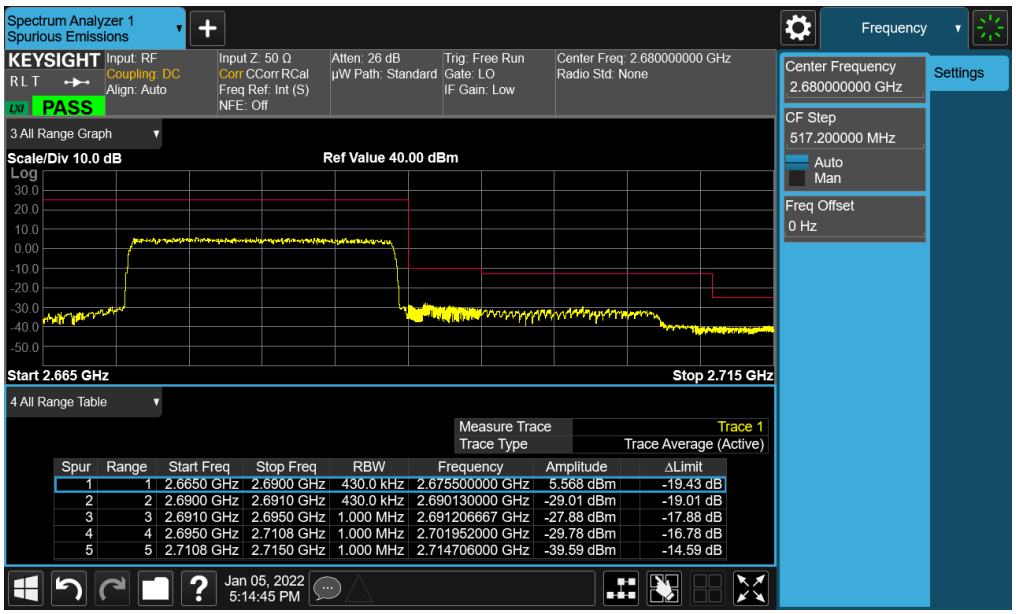


Plot 7-74. Upper ACP Plot (LTE Band 7 - 5MHz QPSK – Full RB)

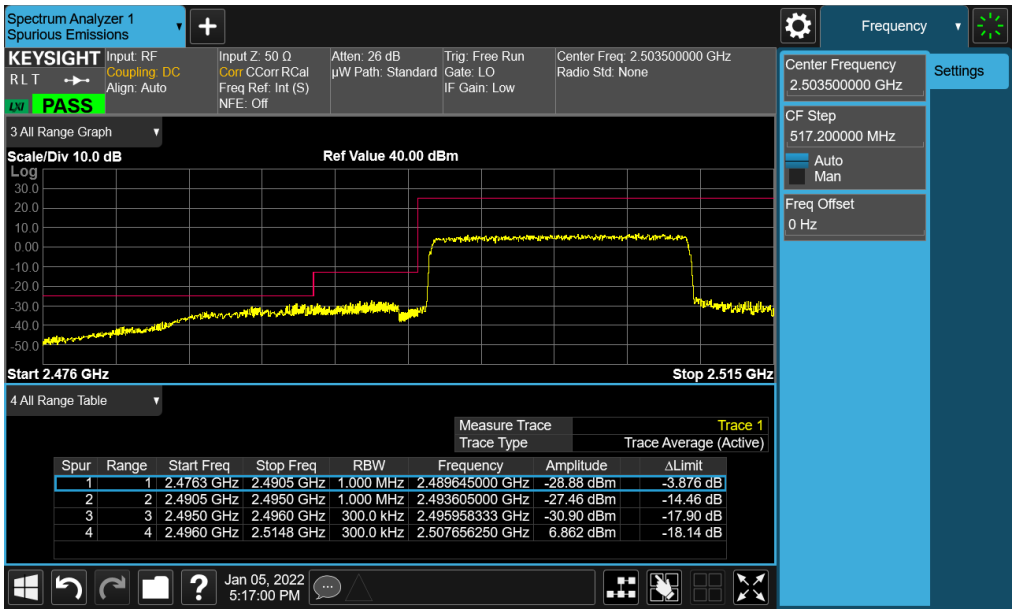
LTE Band 41(PC2)



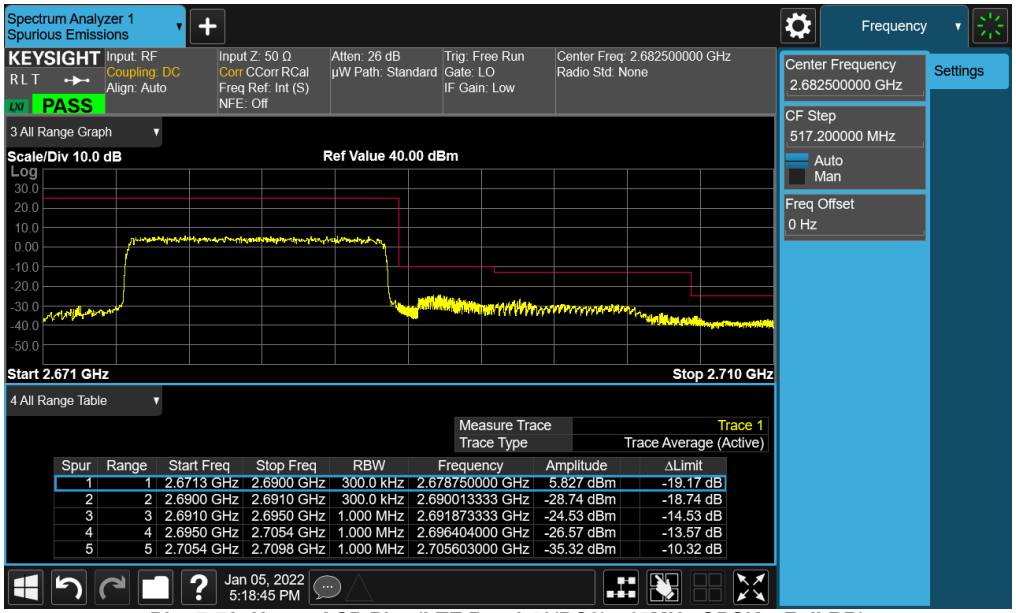
Plot 7-75. Lower ACP Plot (LTE Band 41(PC2) - 20MHz QPSK – Full RB)



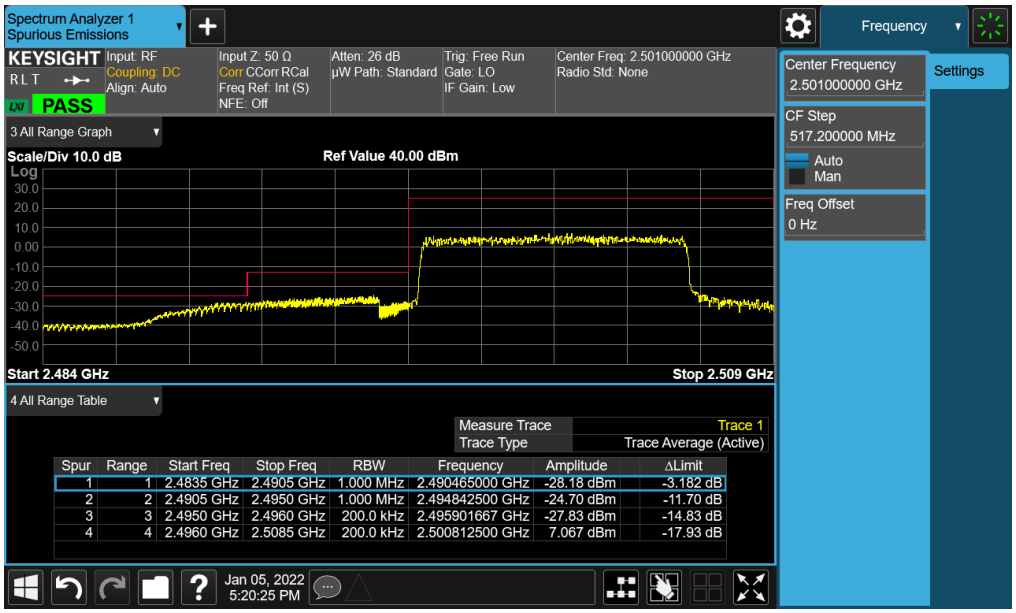
Plot 7-76. Upper ACP Plot (LTE Band 41(PC2) - 20MHz QPSK – Full RB)



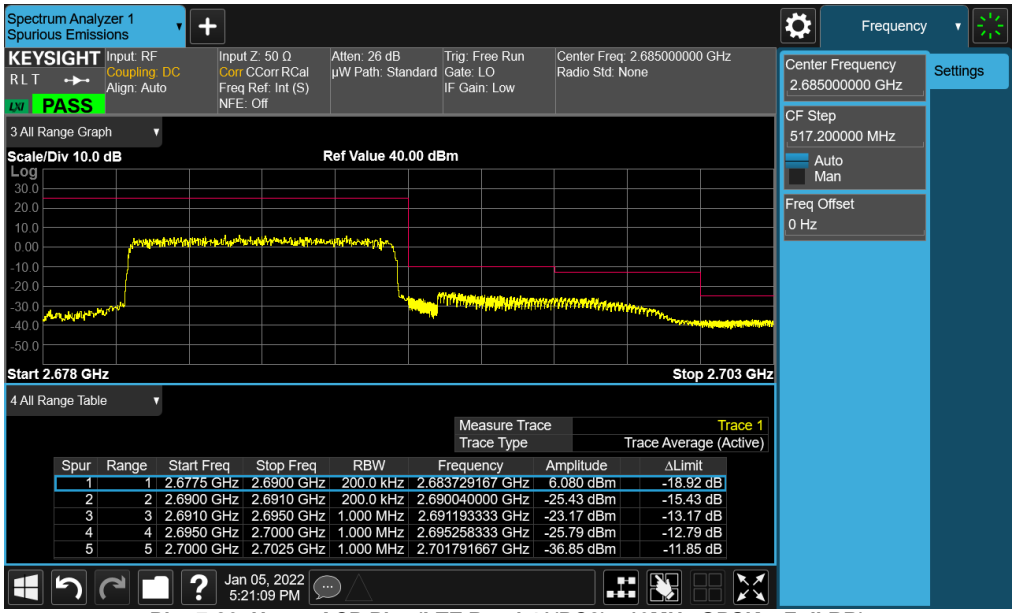
Plot 7-77. Lower ACP Plot (LTE Band 41(PC2) - 15MHz QPSK – Full RB)



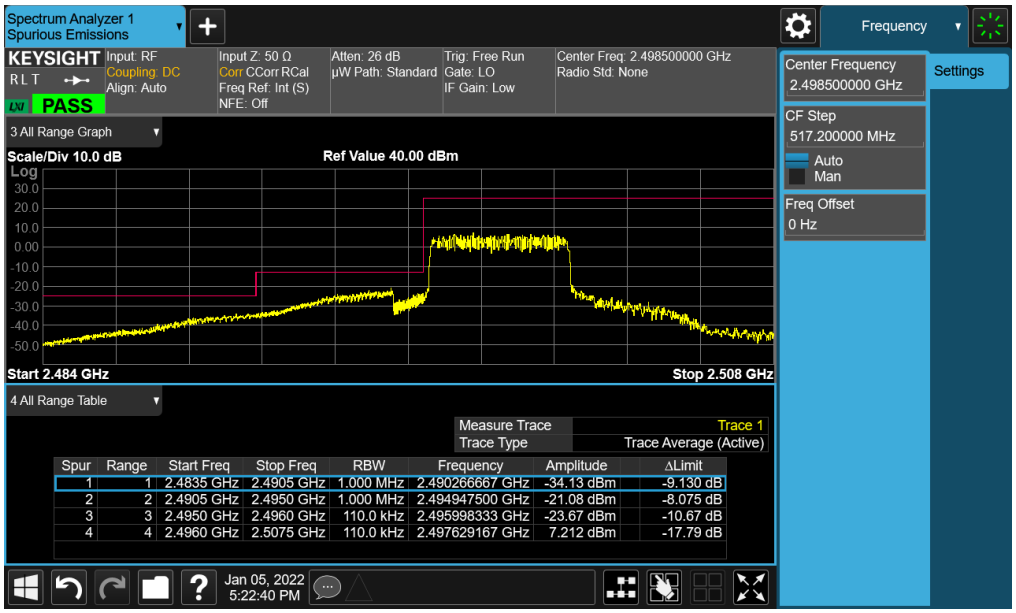
Plot 7-78. Upper ACP Plot (LTE Band 41(PC2) - 15MHz QPSK – Full RB)



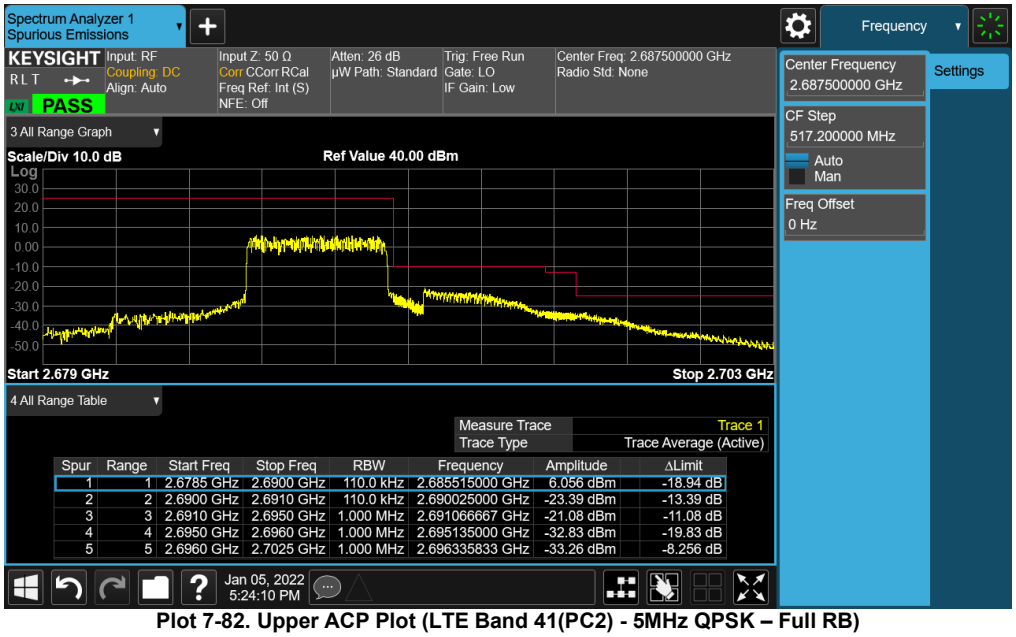
Plot 7-79. Lower ACP Plot (LTE Band 41(PC2) - 10MHz QPSK – Full RB)



Plot 7-80. Upper ACP Plot (LTE Band 41(PC2) - 10MHz QPSK – Full RB)

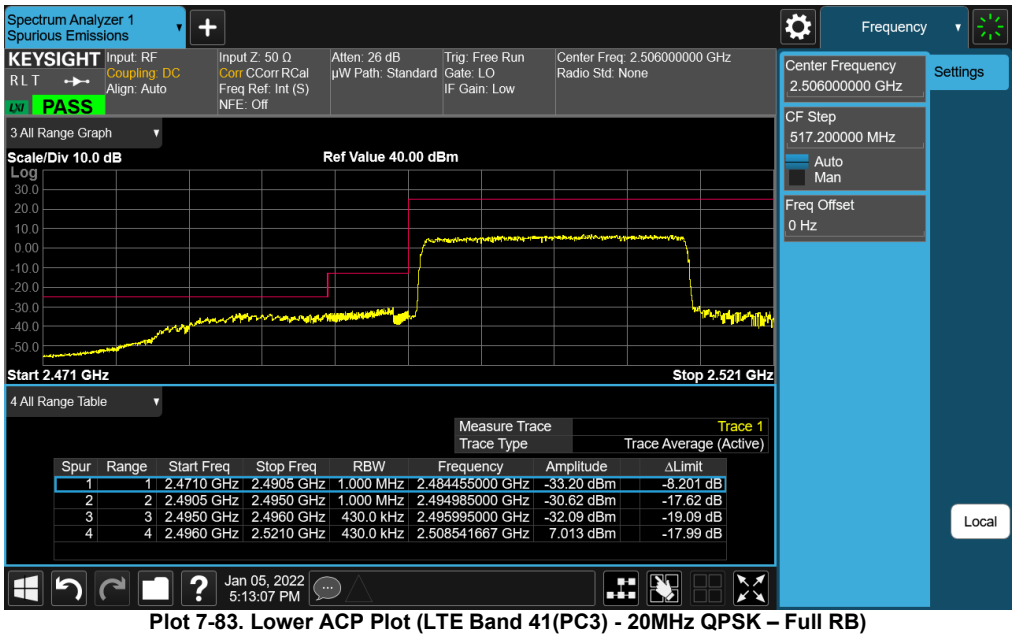


Plot 7-81. Lower ACP Plot (LTE Band 41(PC2) - 5MHz QPSK – Full RB)

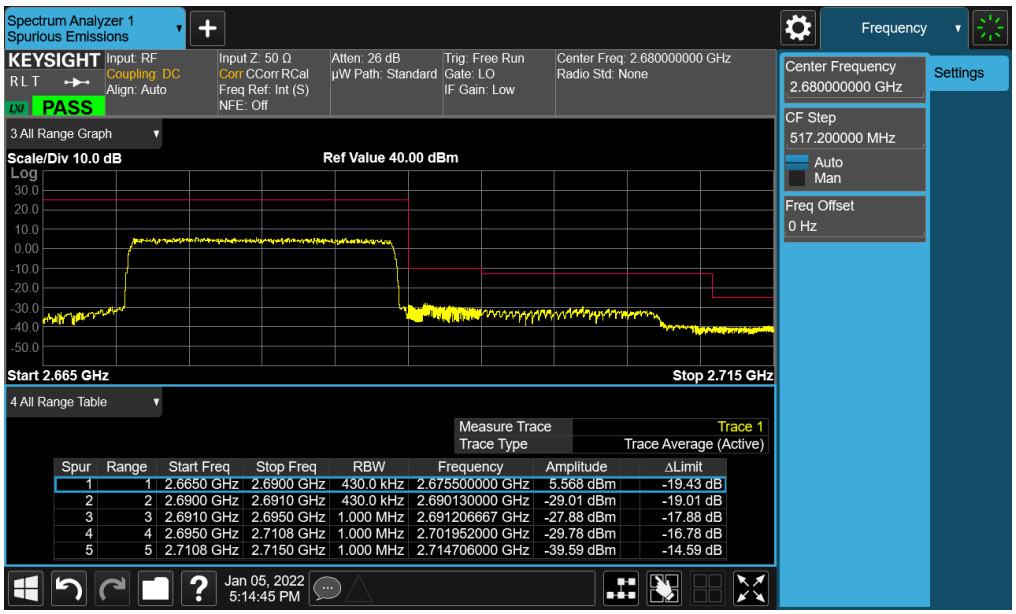


Plot 7-82. Upper ACP Plot (LTE Band 41(PC2) - 5MHz QPSK – Full RB)

LTE Band 41(PC3)



Plot 7-83. Lower ACP Plot (LTE Band 41(PC3) - 20MHz QPSK – Full RB)



Plot 7-84. Upper ACP Plot (LTE Band 41(PC3) - 20MHz QPSK – Full RB)