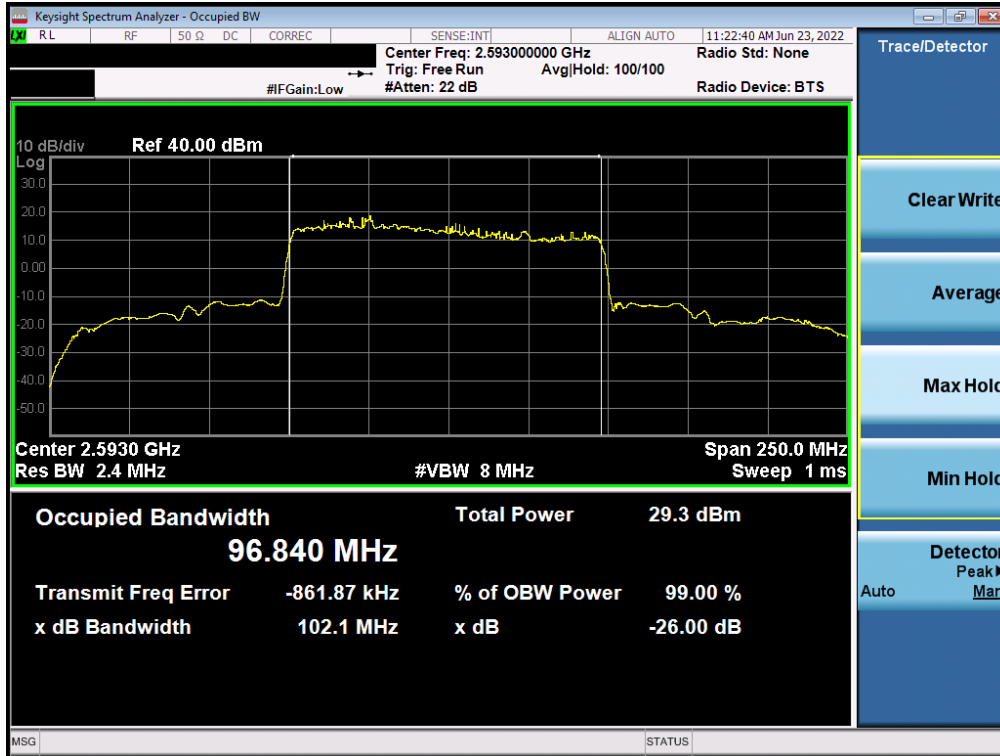
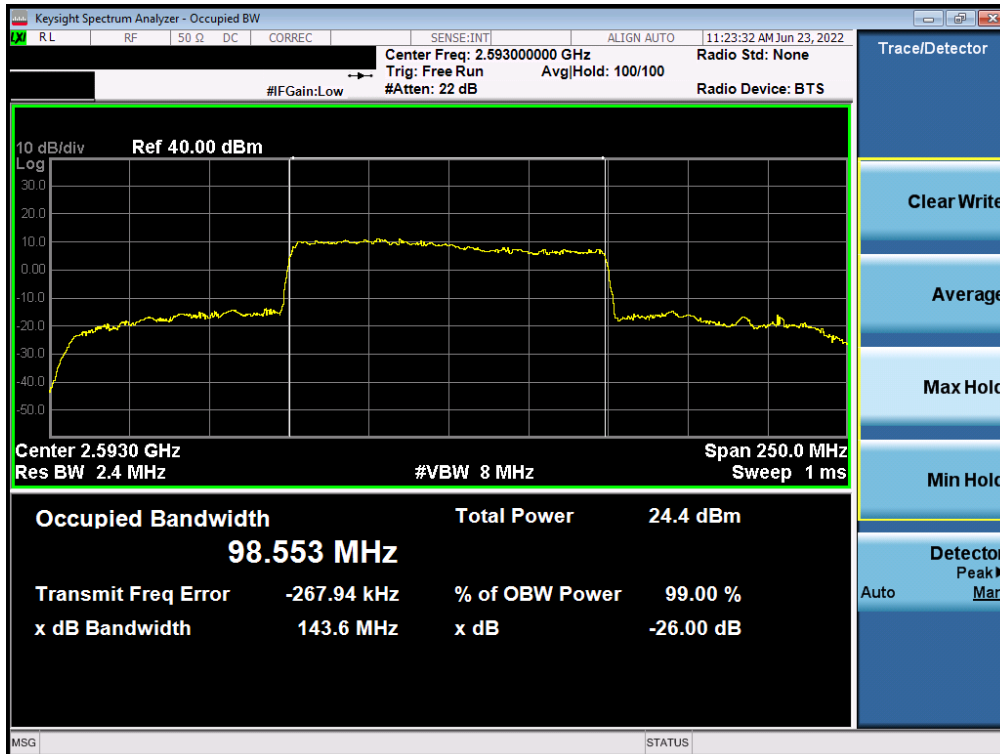


NR Band n41 – Ant8



Plot 7-80. Occupied Bandwidth Plot (NR Band n41 - 100MHz $\pi/2$ BPSK - Full RB – Ant8)



Plot 7-81. Occupied Bandwidth Plot (NR Band n41 - 100MHz QPSK - Full RB – Ant8)

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Plot 7-82. Occupied Bandwidth Plot (NR Band n41 - 100MHz 16-QAM - Full RB – Ant8)

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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 30, the minimum permissible attenuation level of any spurious emission <2288MHz and >2365MHz is $70 + 10 \log_{10}(P_{[Watts]})$.

For Band 7 and 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.

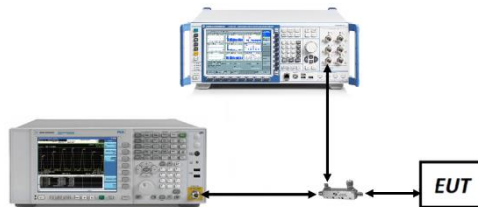


Figure 7-3. Test Instrument & Measurement Setup

Test Notes

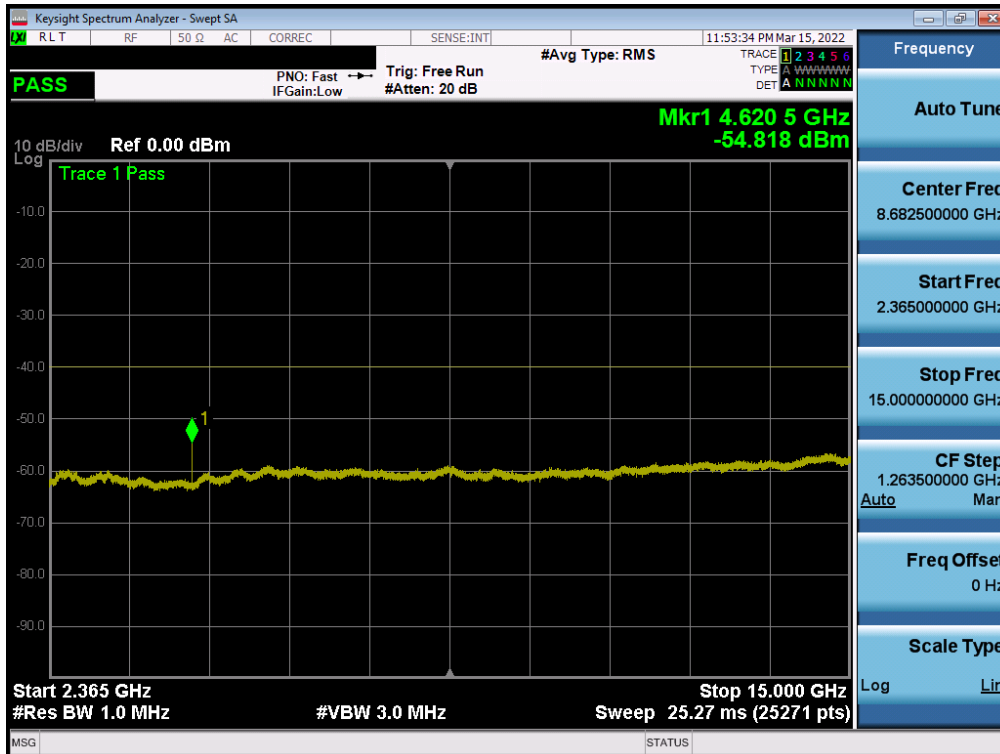
1. Per Part 27, RSS-195 and RSS-199, compliance with the applicable limits is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz.
2. For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst-case configuration. All modes of operation were investigated and the worst-case configuration results are reported in this section.

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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LTE Band 30 – Ant1



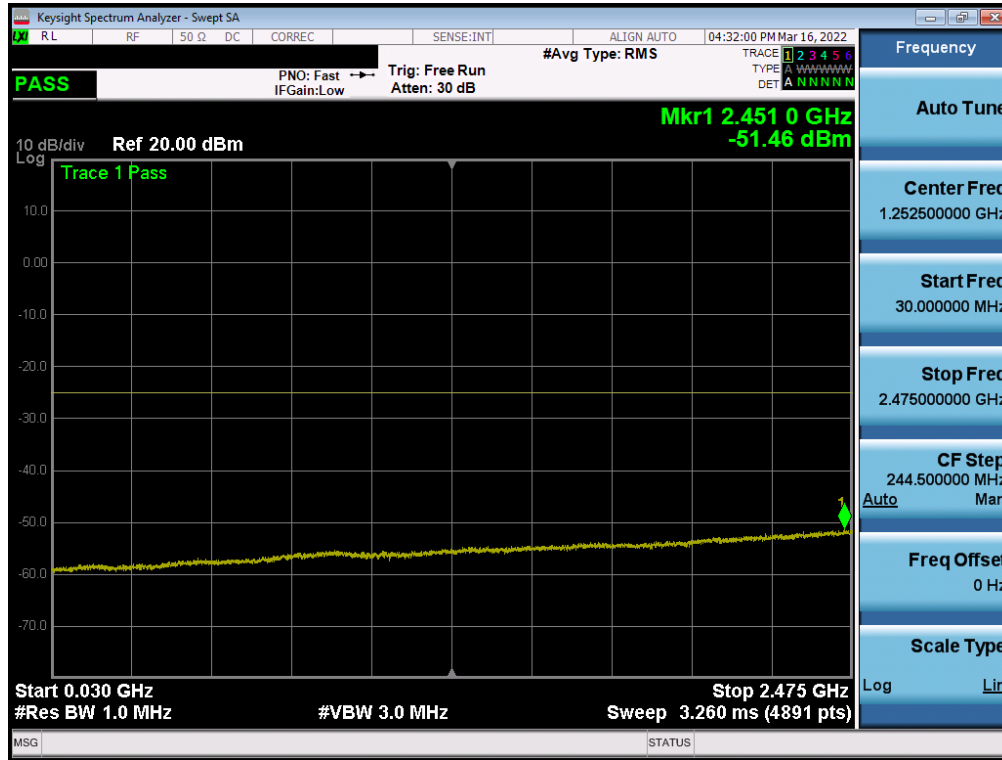
Plot 7-83. Conducted Spurious Plot (LTE Band 30 - 10MHz QPSK - RB Size 1, RB Offset 0 - Ant1)



Plot 7-84. Conducted Spurious Plot (LTE Band 30 - 10MHz QPSK - RB Size 1, RB Offset 0 - Ant1)

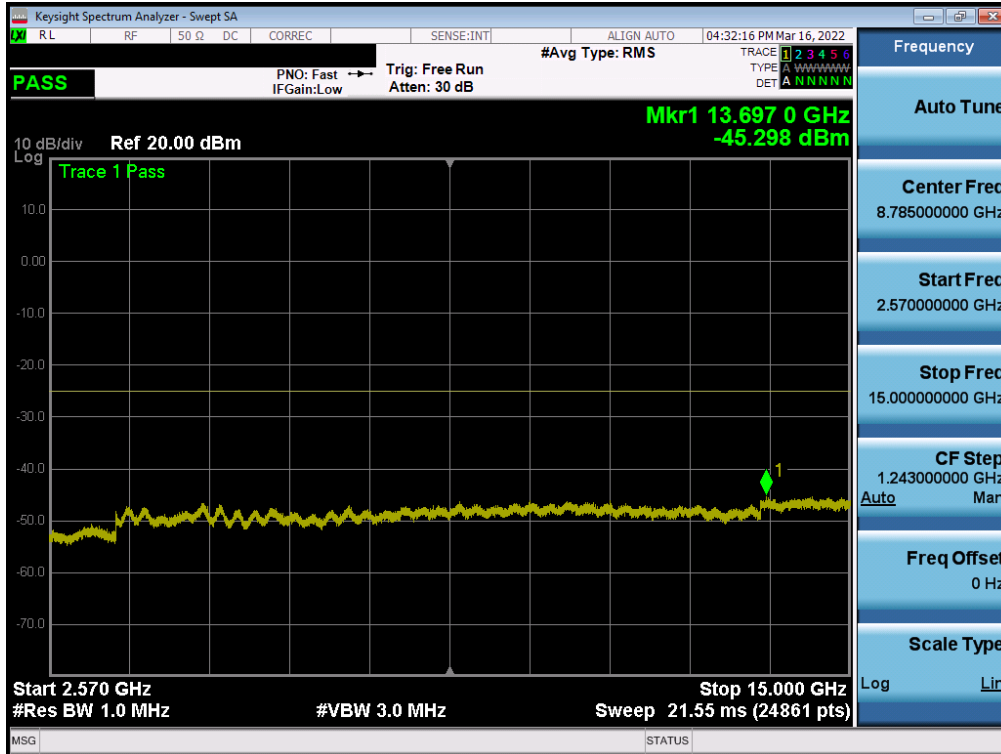
FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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LTE Band 7 – Ant1

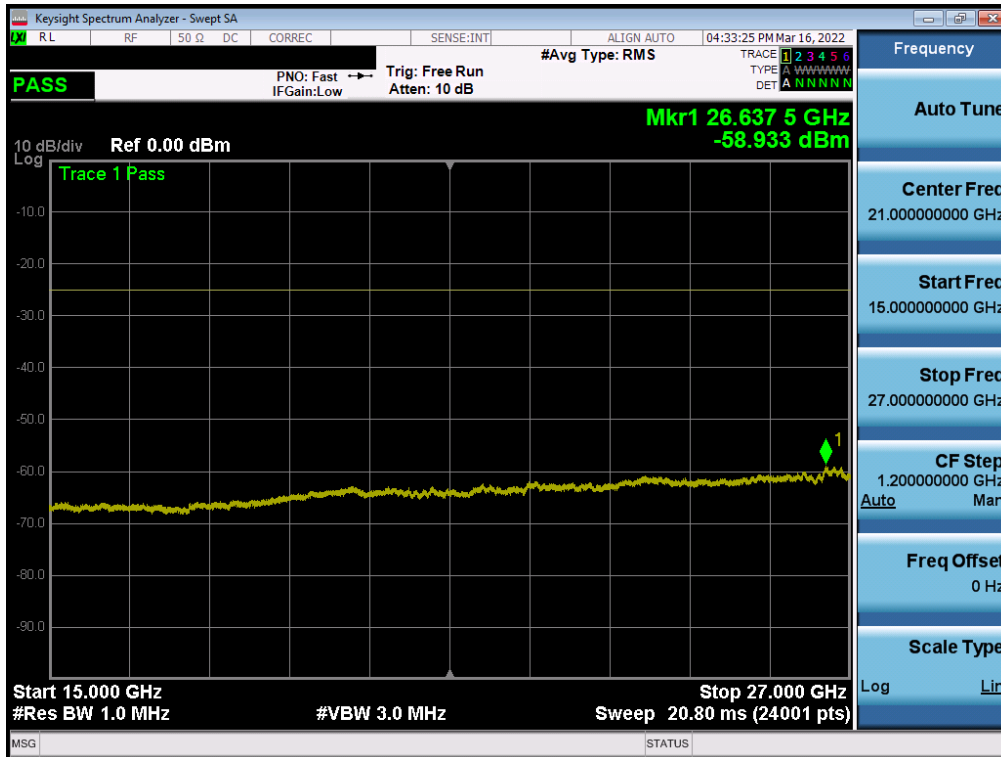


Plot 7-86. Conducted Spurious Plot (LTE Band 7 - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel - Ant1)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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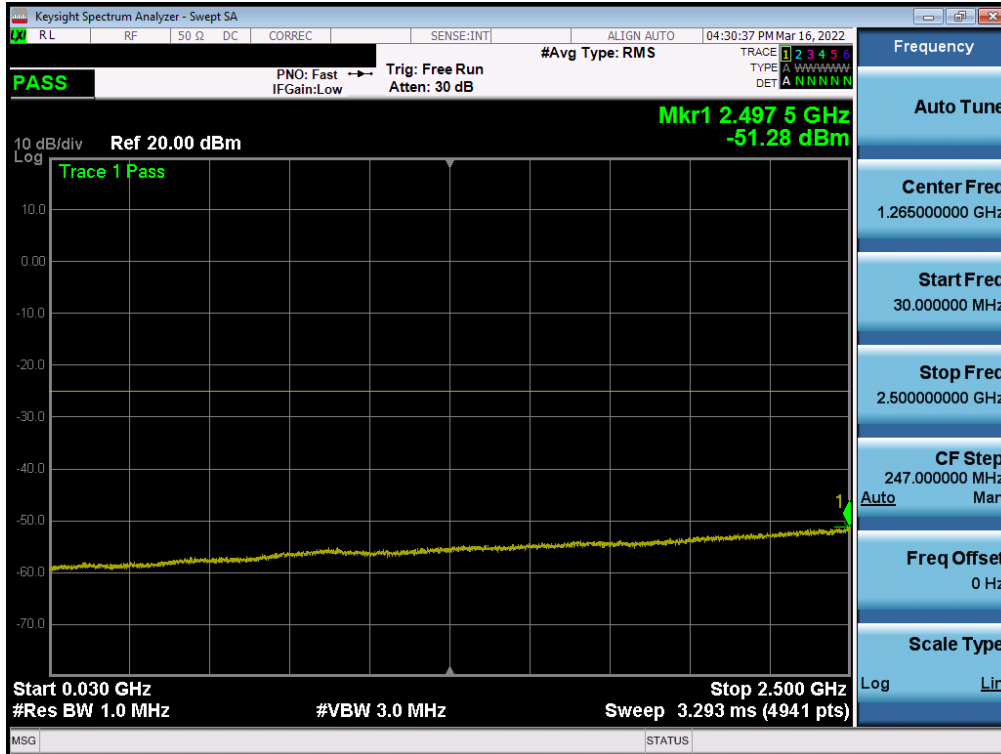


Plot 7-87. Conducted Spurious Plot (LTE Band 7 - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel - Ant1)

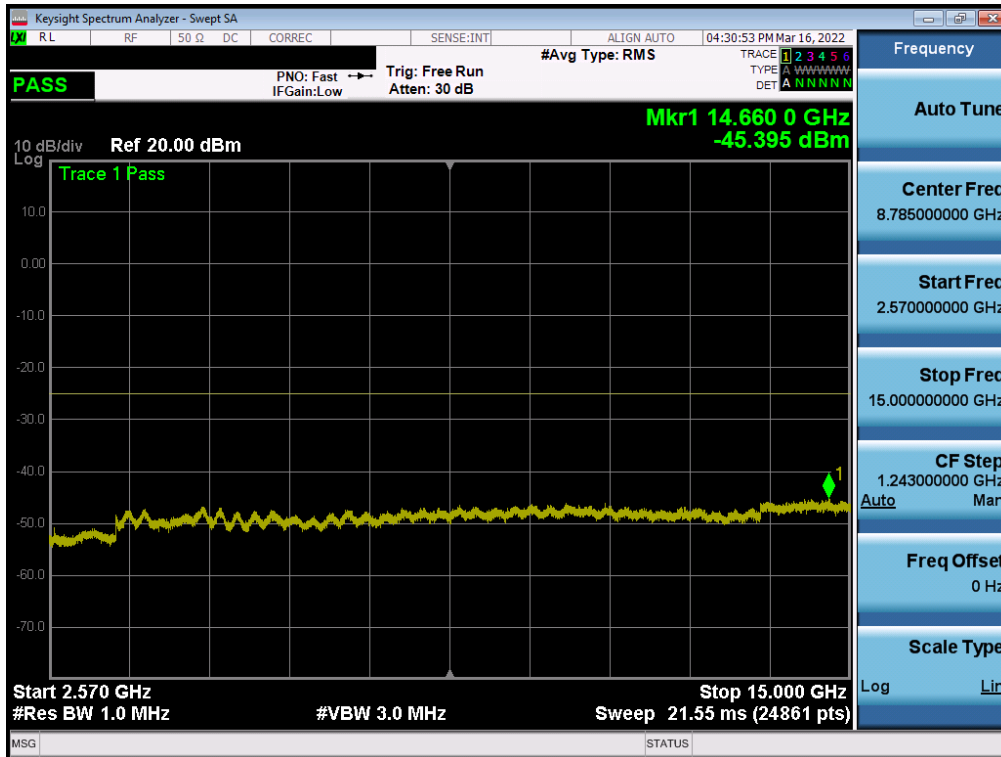


Plot 7-88. Conducted Spurious Plot (LTE Band 7 - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel - Ant1)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2204040049-07-R1.C3K	Test Dates: 03/15/2022- 08/11/2022	EUT Type: Portable Computing Device	Page 67 of 195

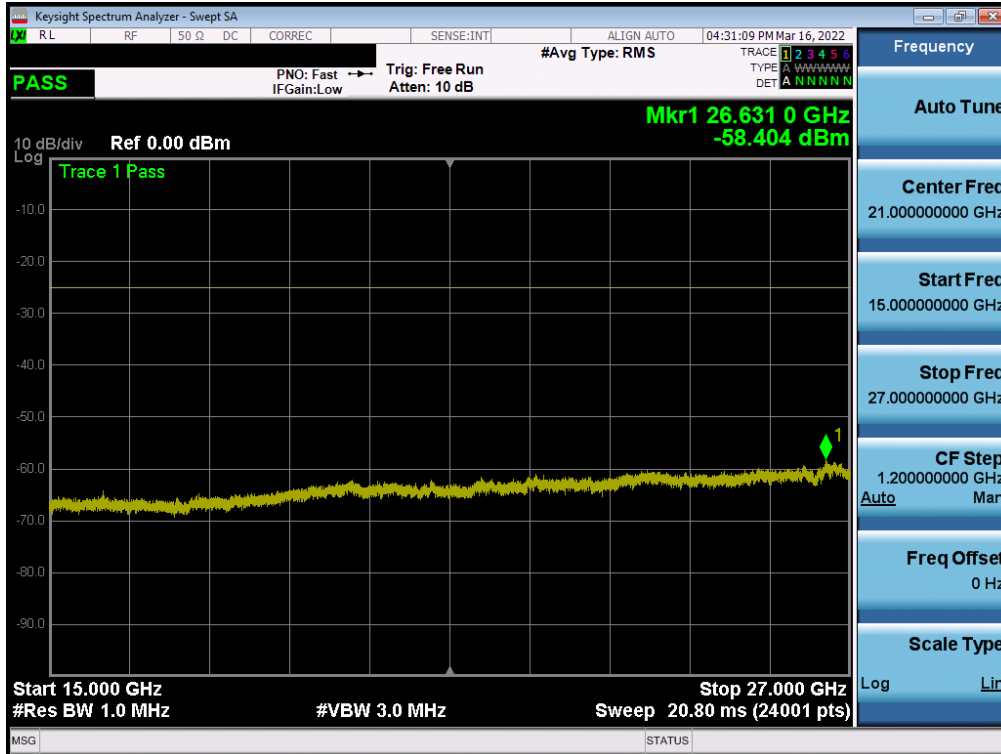


Plot 7-89. Conducted Spurious Plot (LTE Band 7 - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel - Ant1)

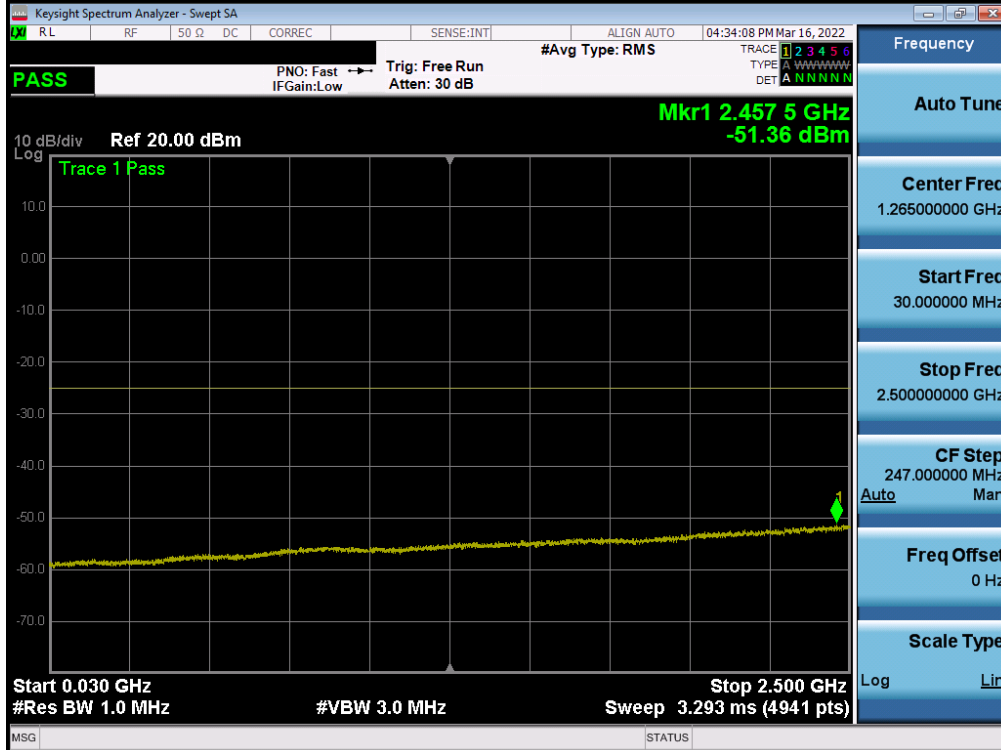


Plot 7-90. Conducted Spurious Plot (LTE Band 7 - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel - Ant1)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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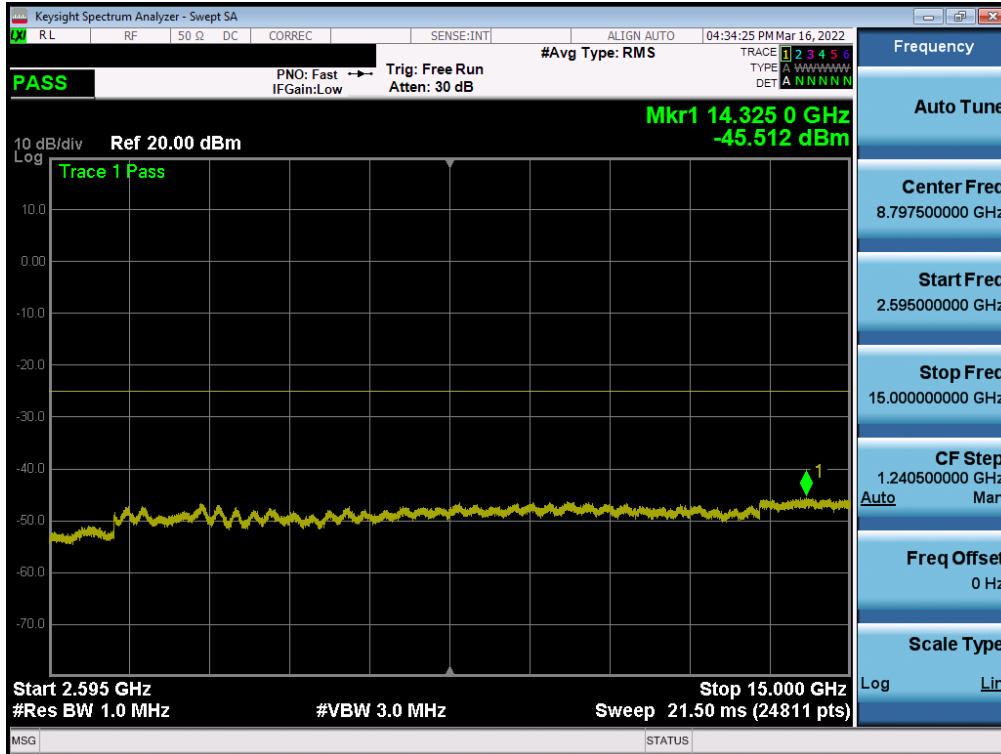


Plot 7-91. Conducted Spurious Plot (LTE Band 7 - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel - Ant1)



Plot 7-92. Conducted Spurious Plot (LTE Band 7 - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel - Ant1)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2204040049-07-R1.C3K	Test Dates: 03/15/2022- 08/11/2022	EUT Type: Portable Computing Device	Page 69 of 195



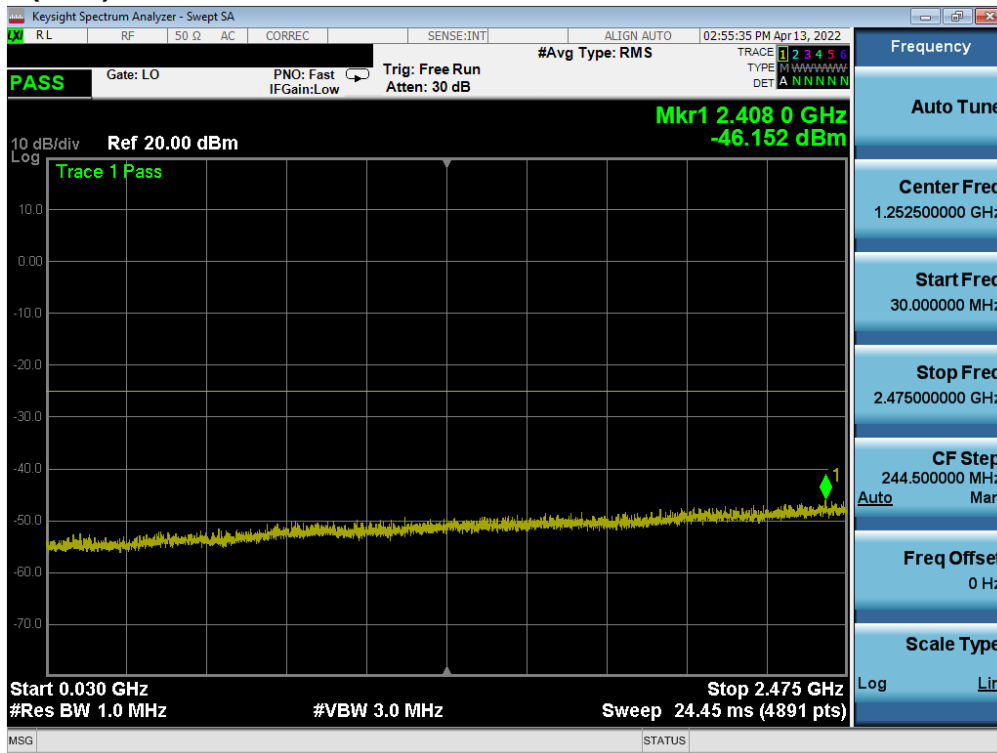
Plot 7-93. Conducted Spurious Plot (LTE Band 7 - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel - Ant1)



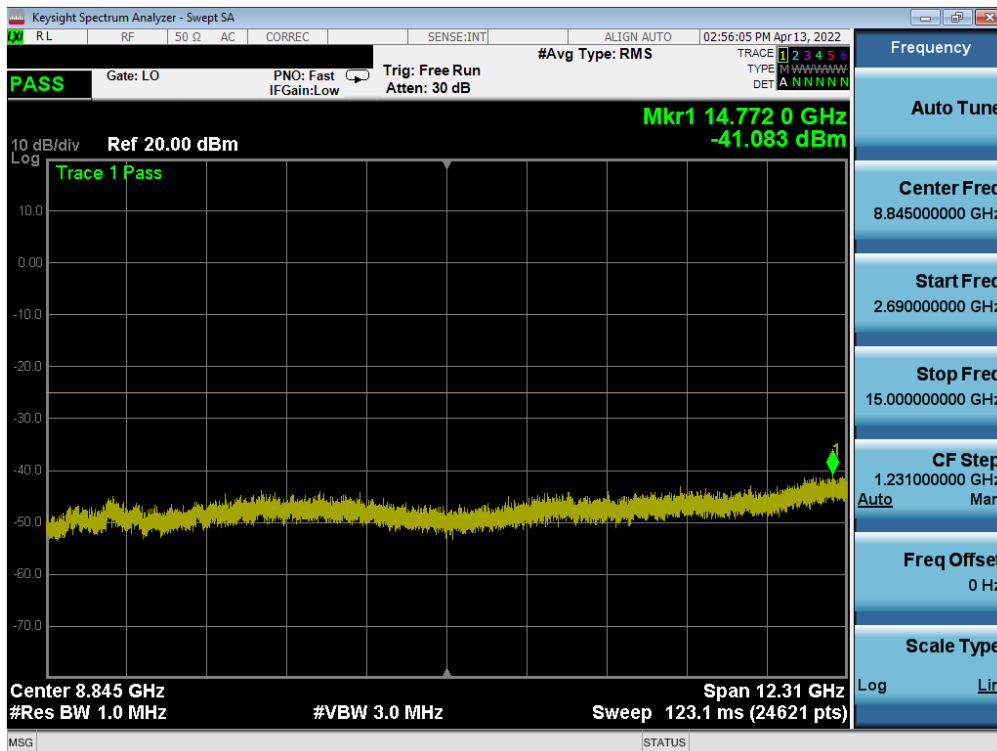
Plot 7-94. Conducted Spurious Plot (LTE Band 7 - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel - Ant1)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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LTE Band 41(PC2) – Ant1

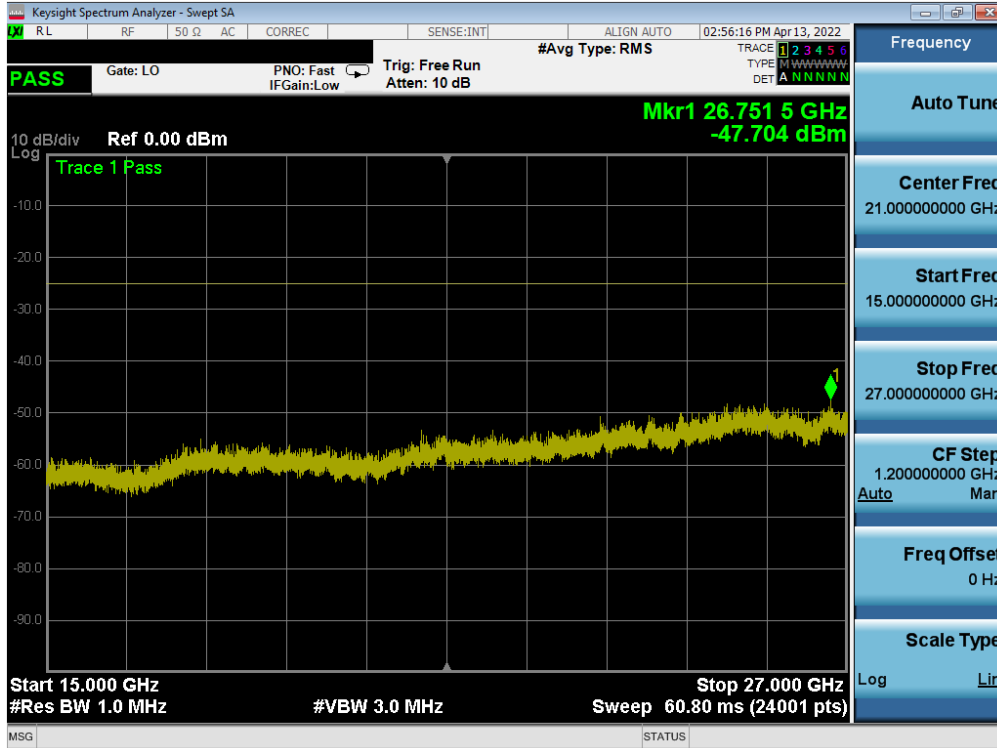


Plot 7-95. Conducted Spurious Plot (LTE Band 41(PC2) - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel - Ant1)

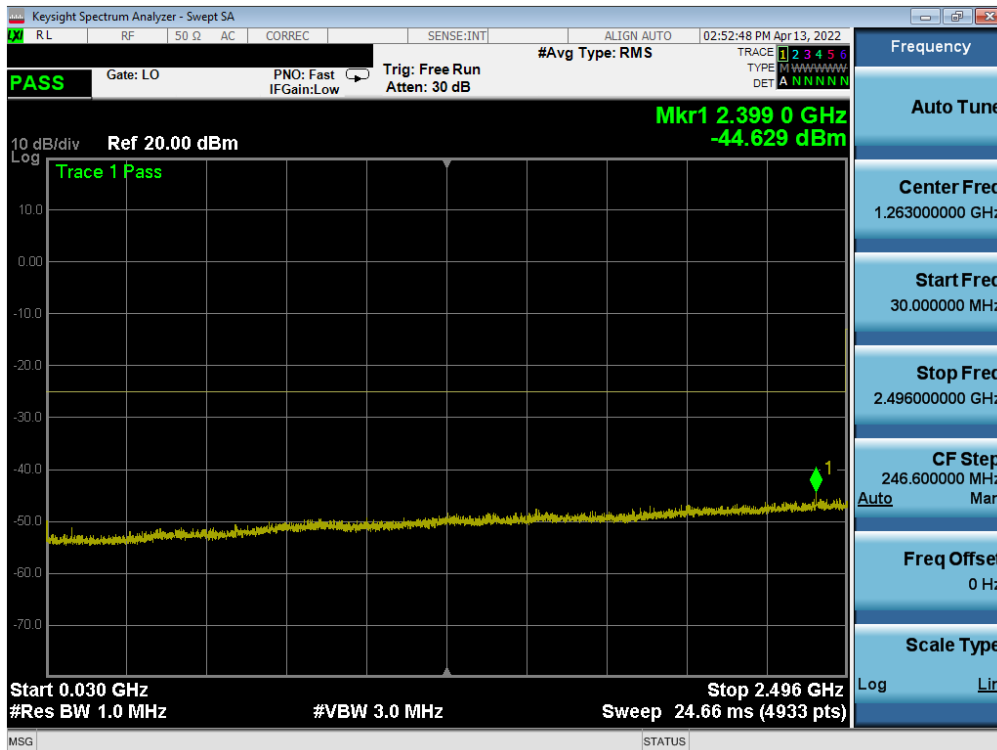


Plot 7-96. Conducted Spurious Plot (LTE Band 41(PC2) - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel - Ant1)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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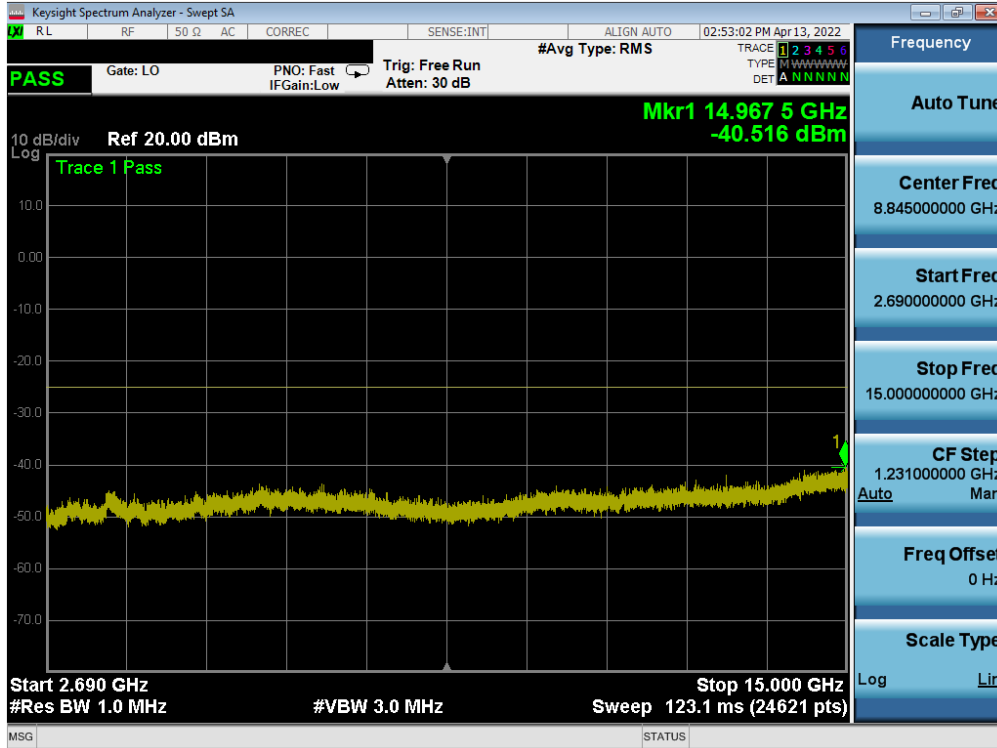


Plot 7-97. Conducted Spurious Plot (LTE Band 41(PC2) - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel - Ant1)

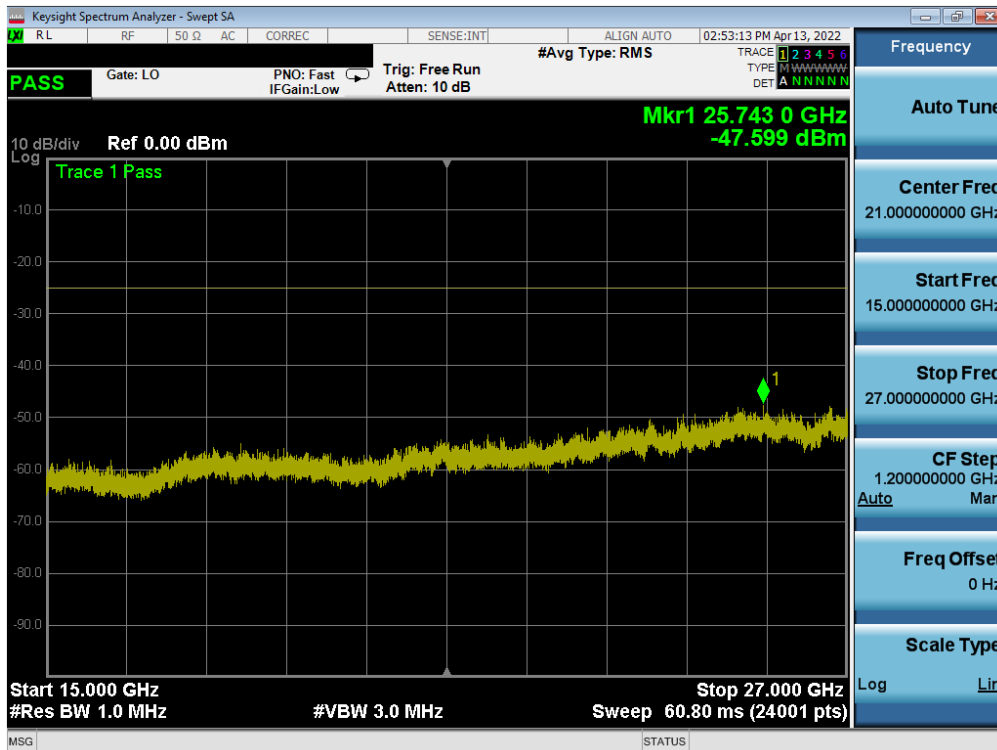


Plot 7-98. Conducted Spurious Plot (LTE Band 41(PC2) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel - Ant1)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2204040049-07-R1.C3K	Test Dates: 03/15/2022- 08/11/2022	EUT Type: Portable Computing Device	Page 72 of 195

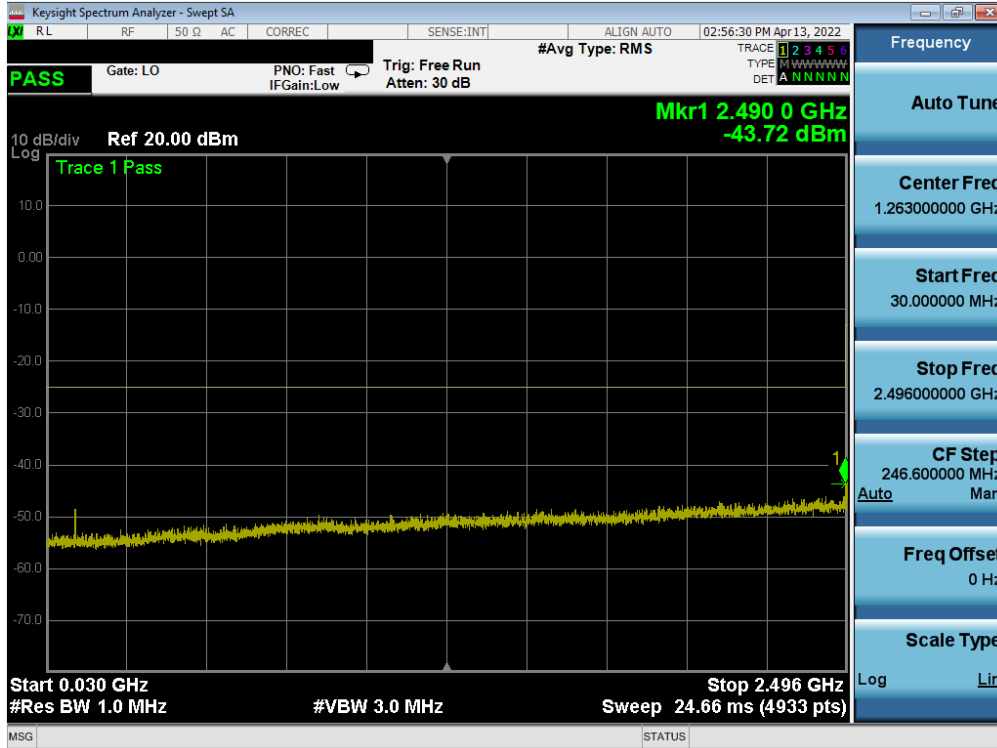


Plot 7-99. Conducted Spurious Plot (LTE Band 41(PC2) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel - Ant1)

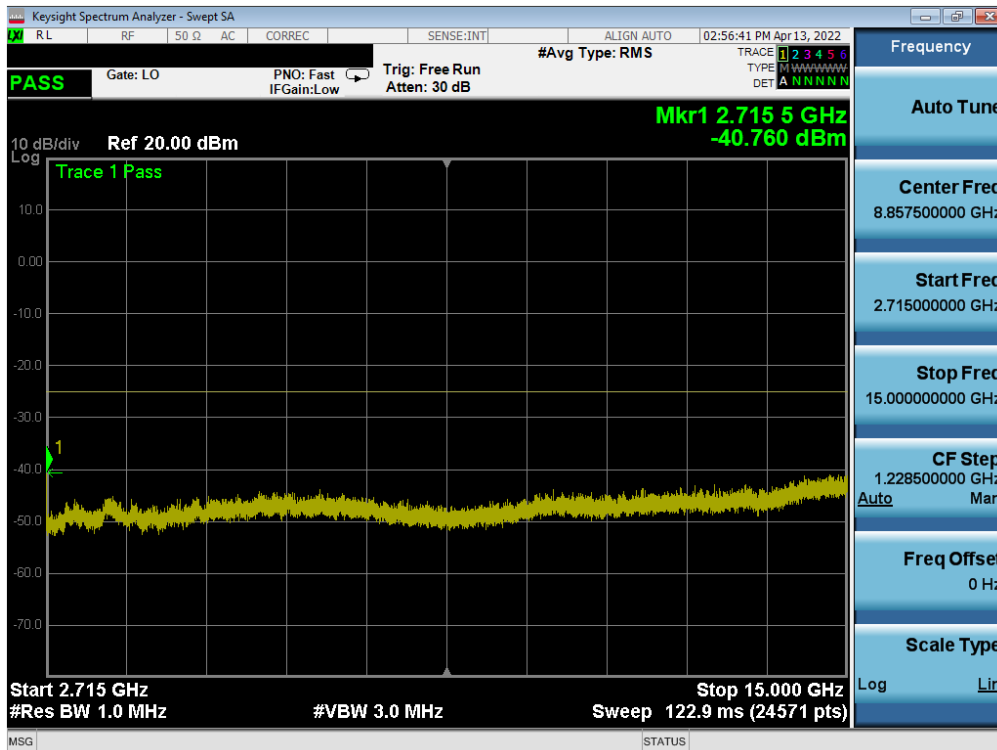


Plot 7-100. Conducted Spurious Plot (LTE Band 41(PC2) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel - Ant1)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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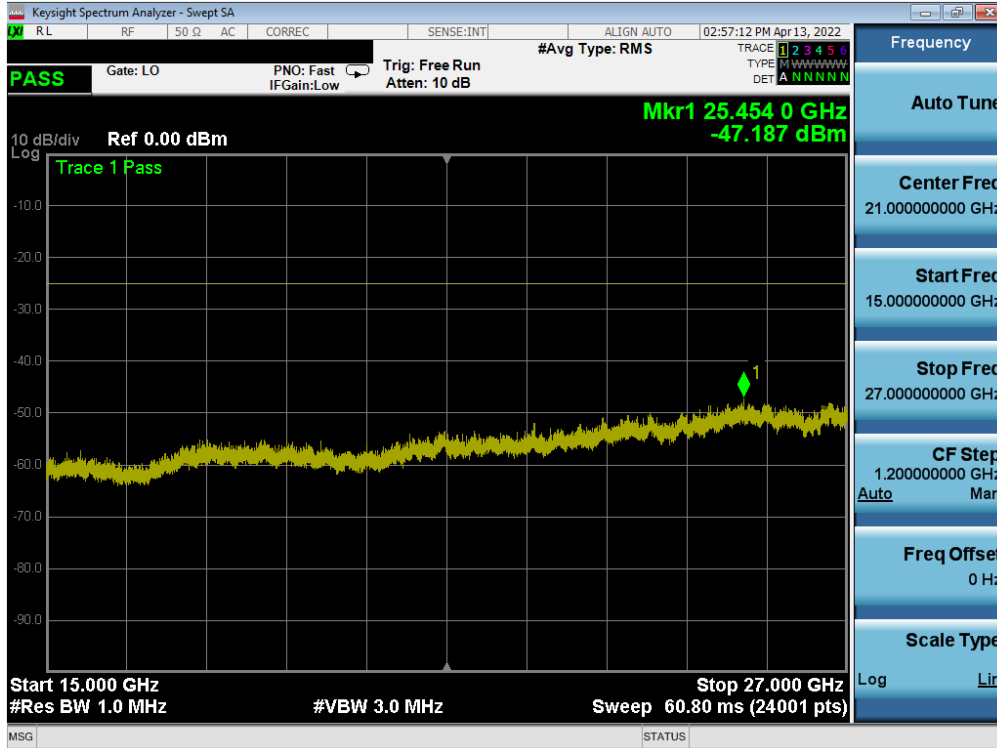


Plot 7-101. Conducted Spurious Plot (LTE Band 41(PC2) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel - Ant1)



Plot 7-102. Conducted Spurious Plot (LTE Band 41(PC2) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel - Ant1)

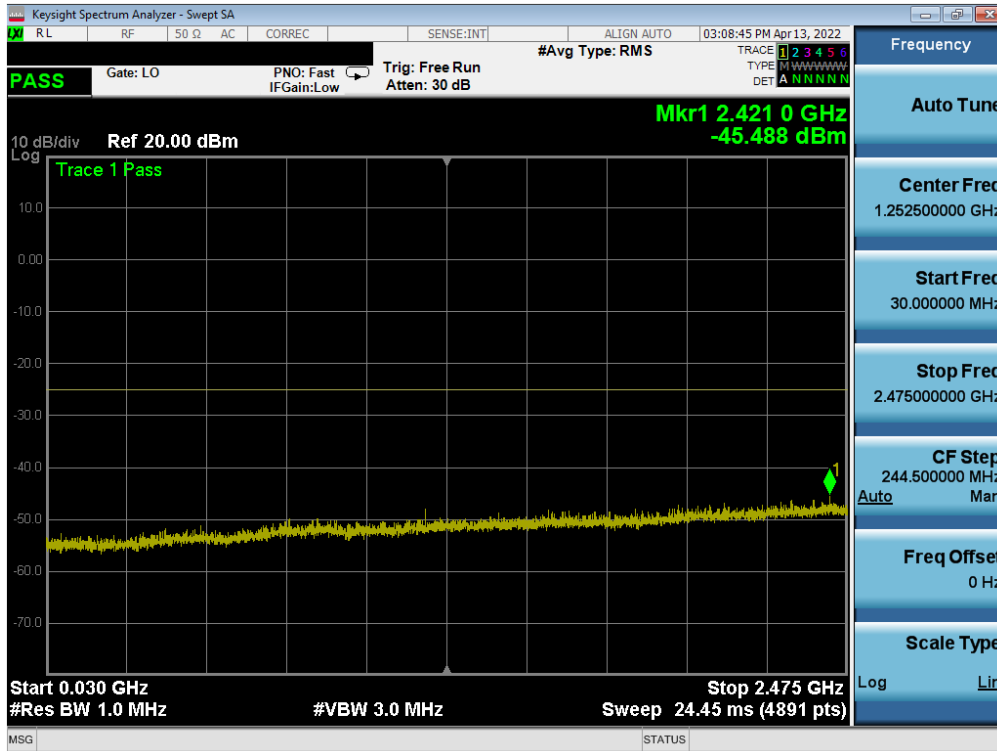
FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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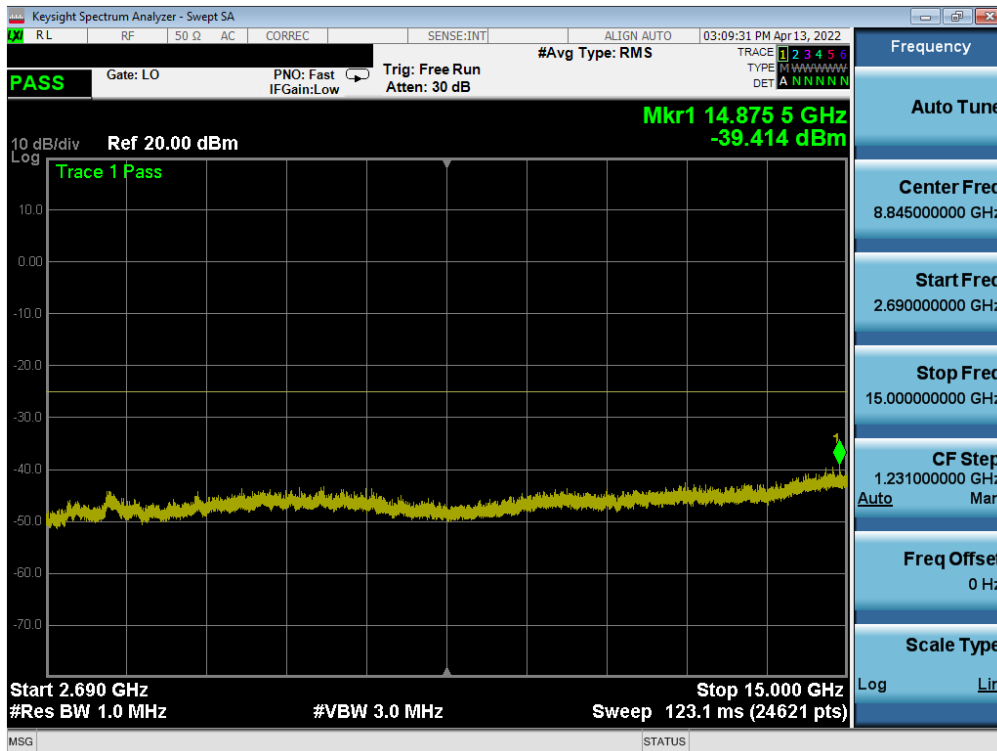
Plot 7-103. Conducted Spurious Plot (LTE Band 41(PC2) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel - Ant1)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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LTE Band 41(PC3) – Ant1

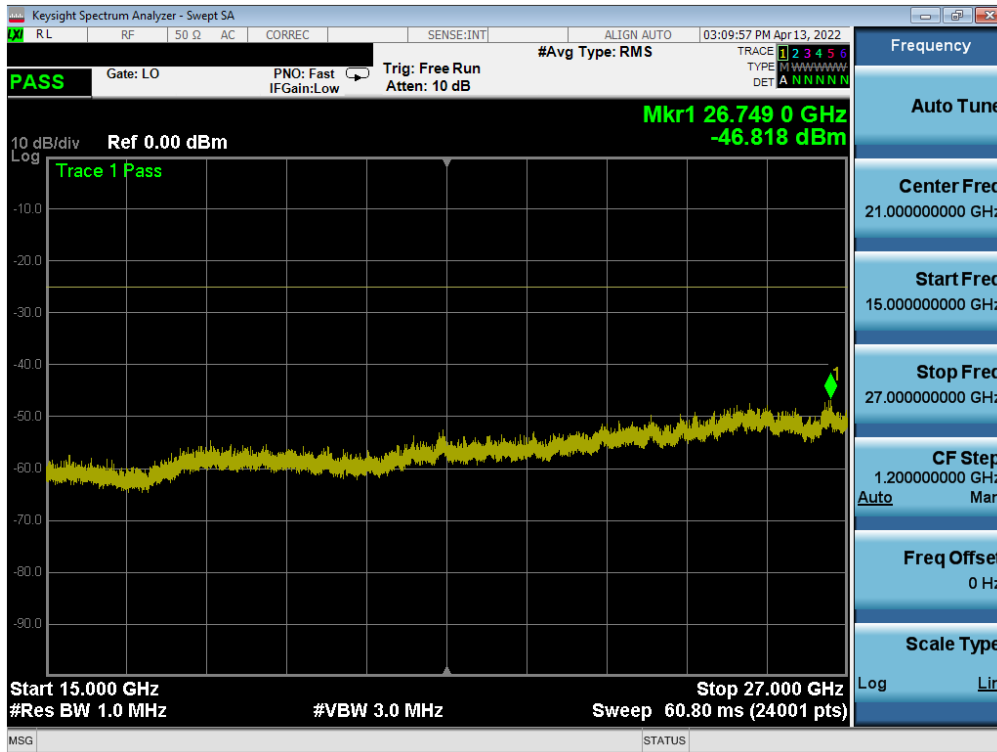


Plot 7-104. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel - Ant1)

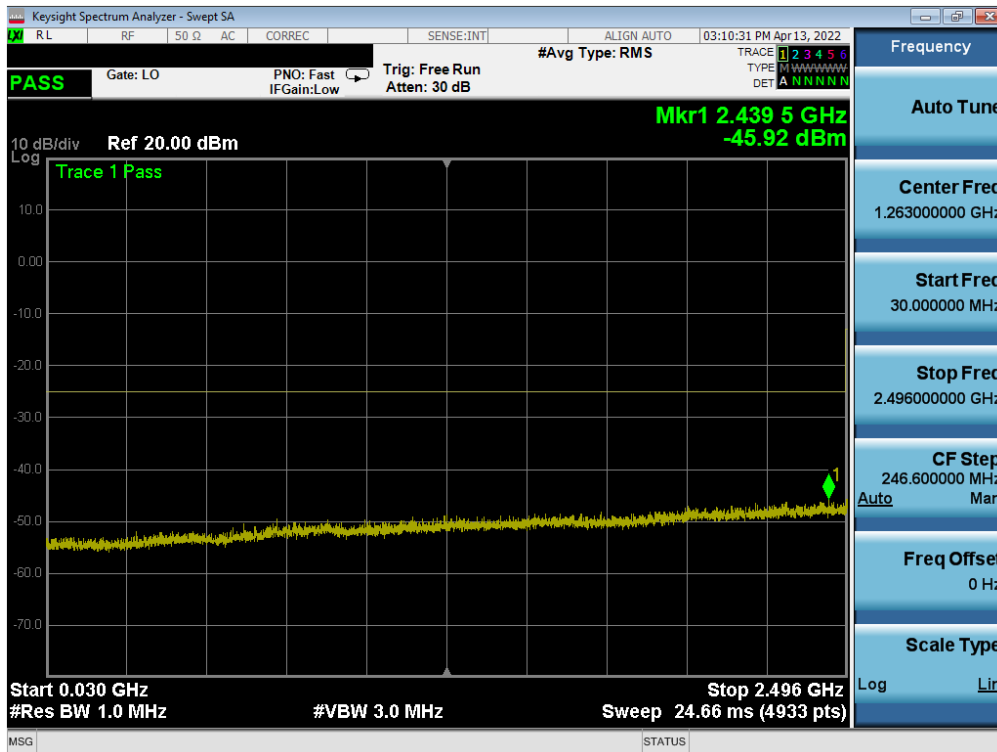


Plot 7-105. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel - Ant1)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2204040049-07-R1.C3K	Test Dates: 03/15/2022- 08/11/2022	EUT Type: Portable Computing Device	Page 76 of 195

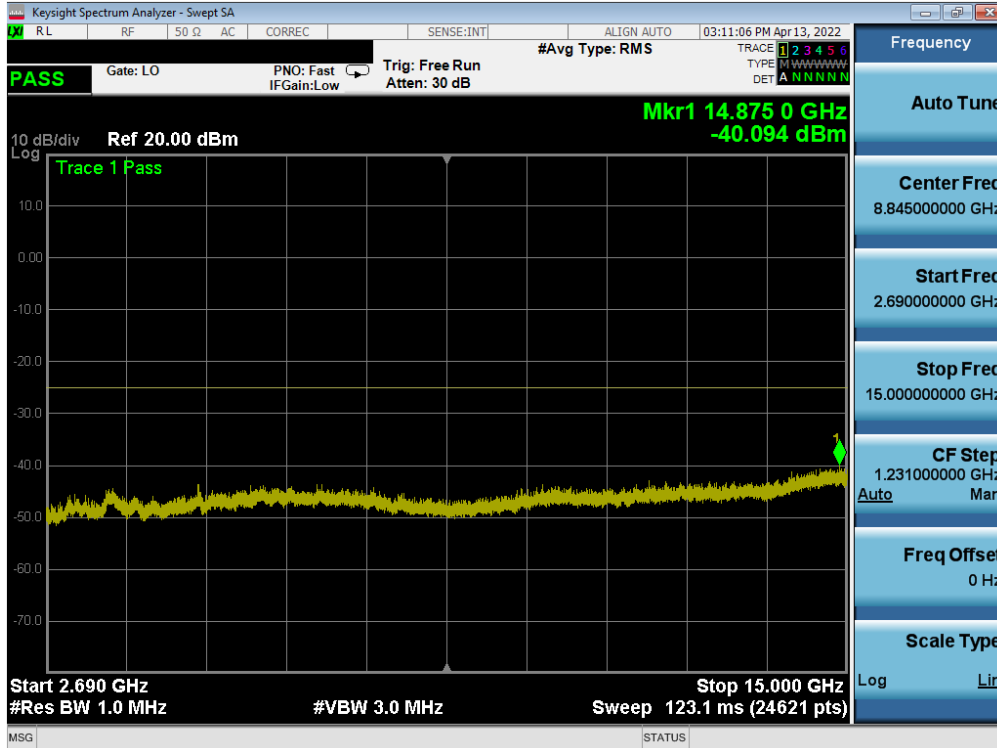


Plot 7-106. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel - Ant1)

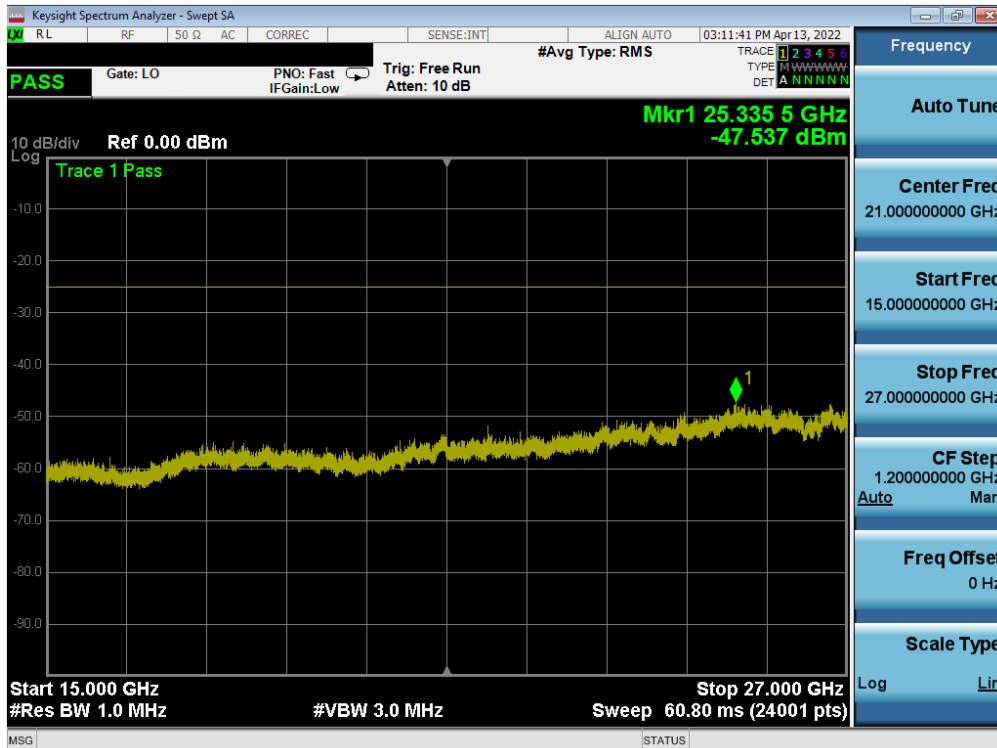


Plot 7-107. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel - Ant1)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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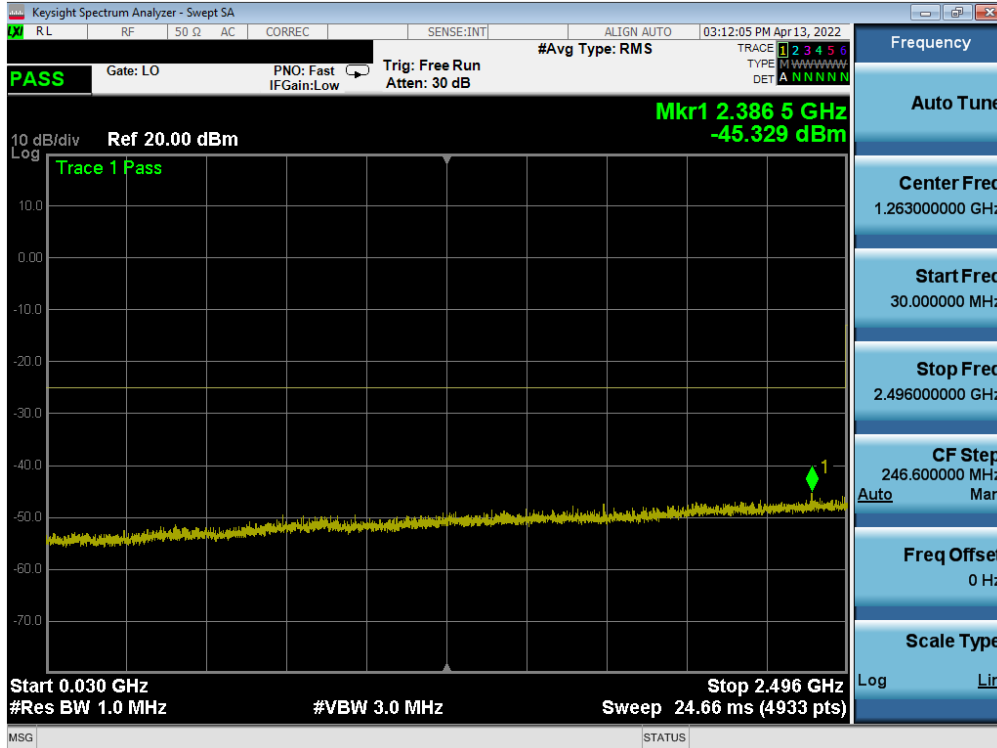


Plot 7-108. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel - Ant1)

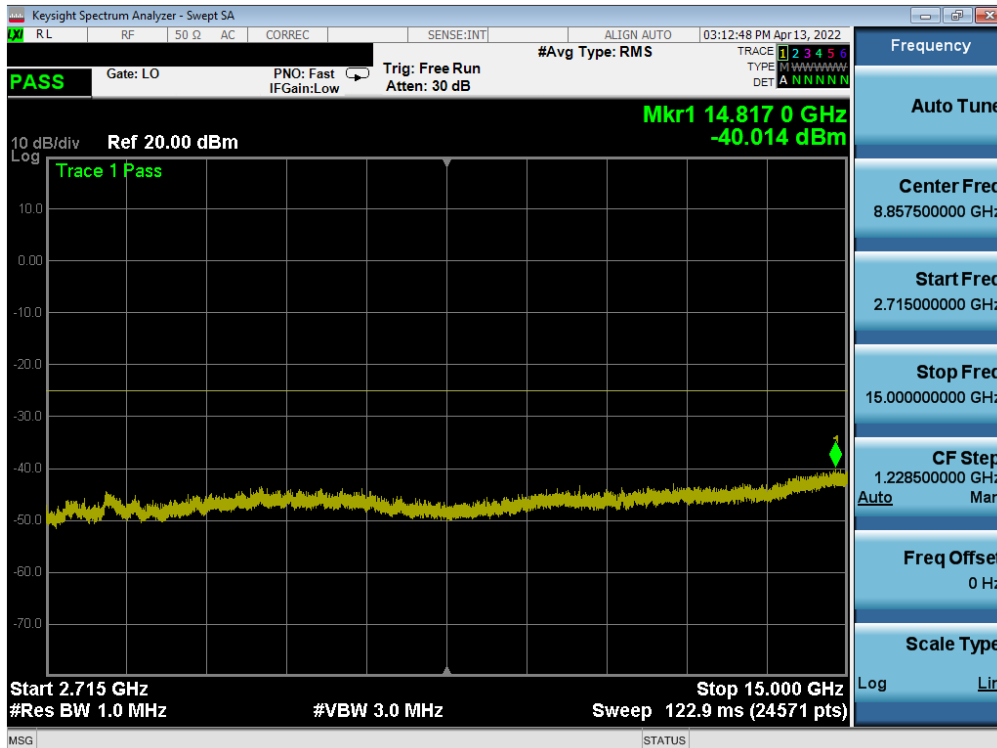


Plot 7-109. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel - Ant1)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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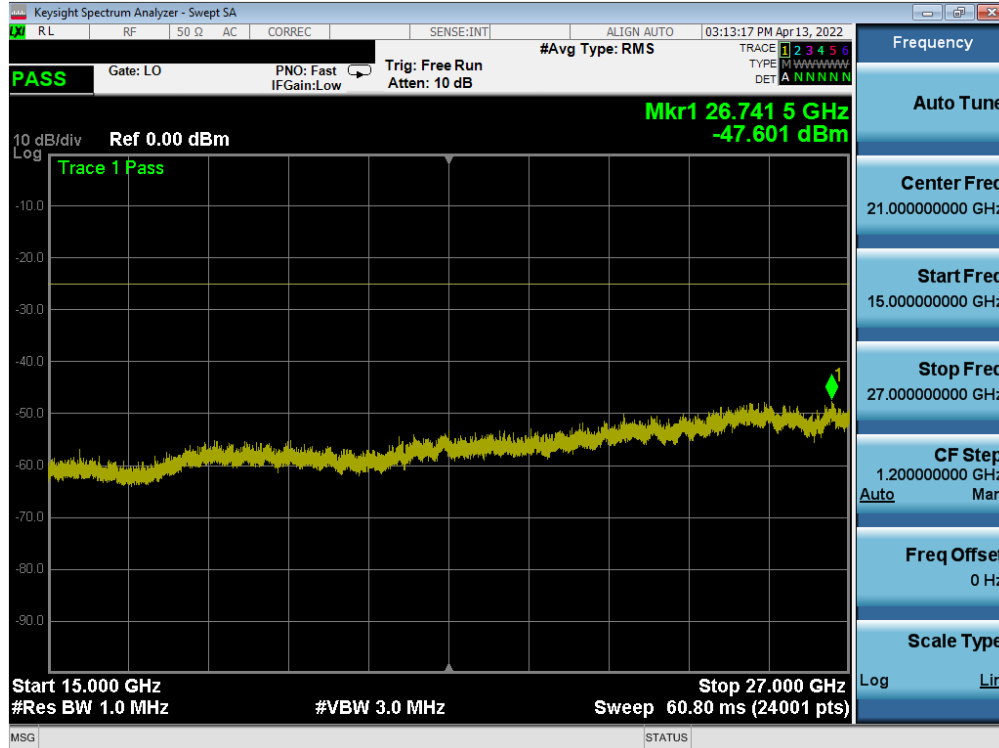


Plot 7-110. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel - Ant1)



Plot 7-111. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel - Ant1)

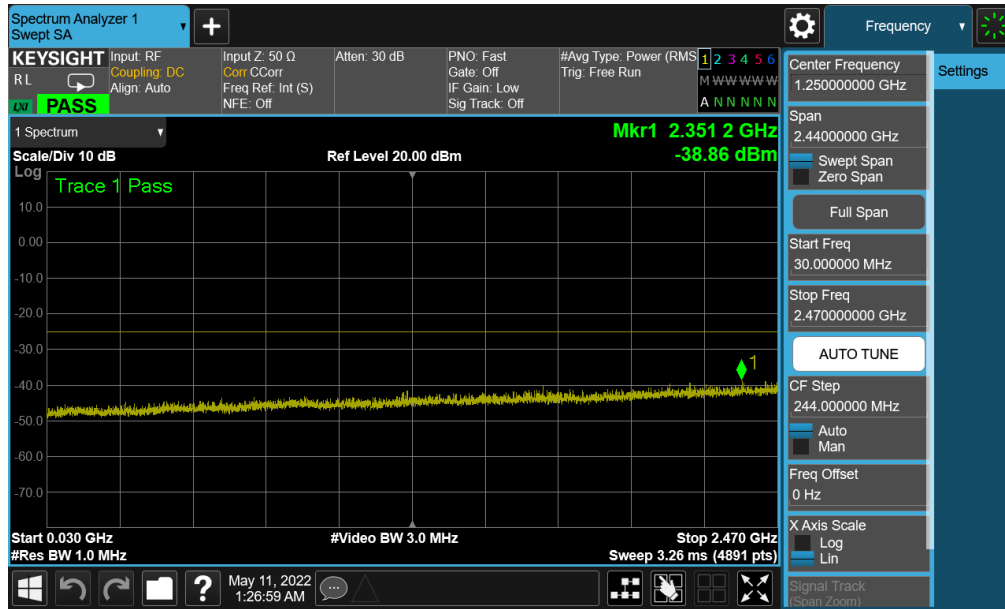
FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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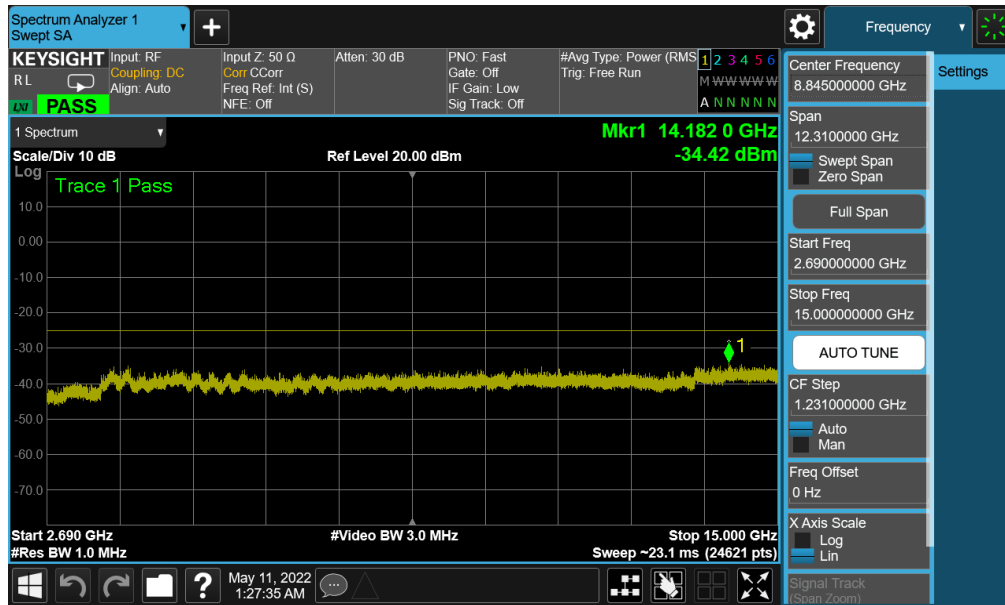
Plot 7-112. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel - Ant1)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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NR Band n41 – Ant1

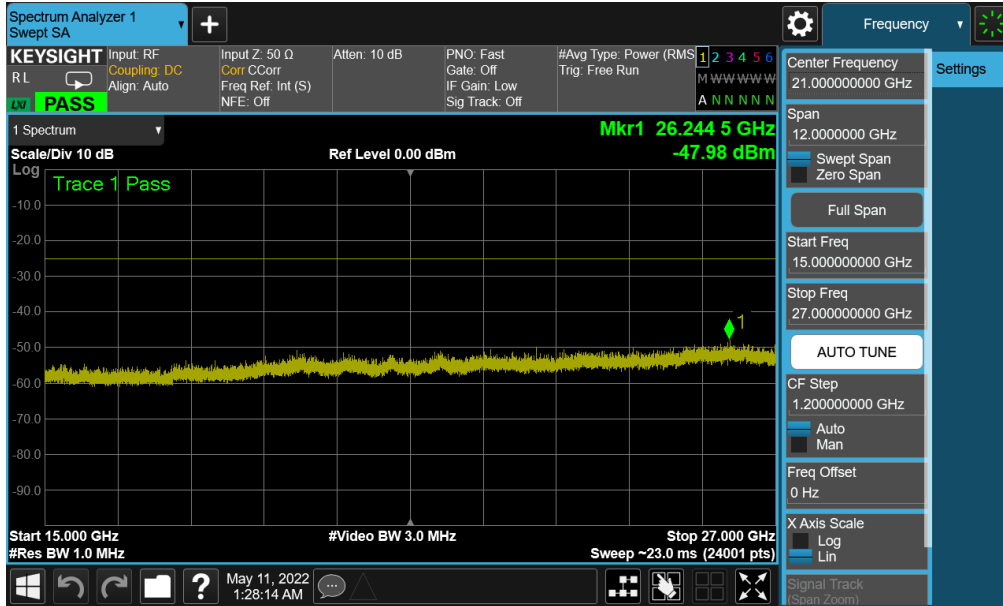


Plot 7-113. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - Low Channel Ant1)

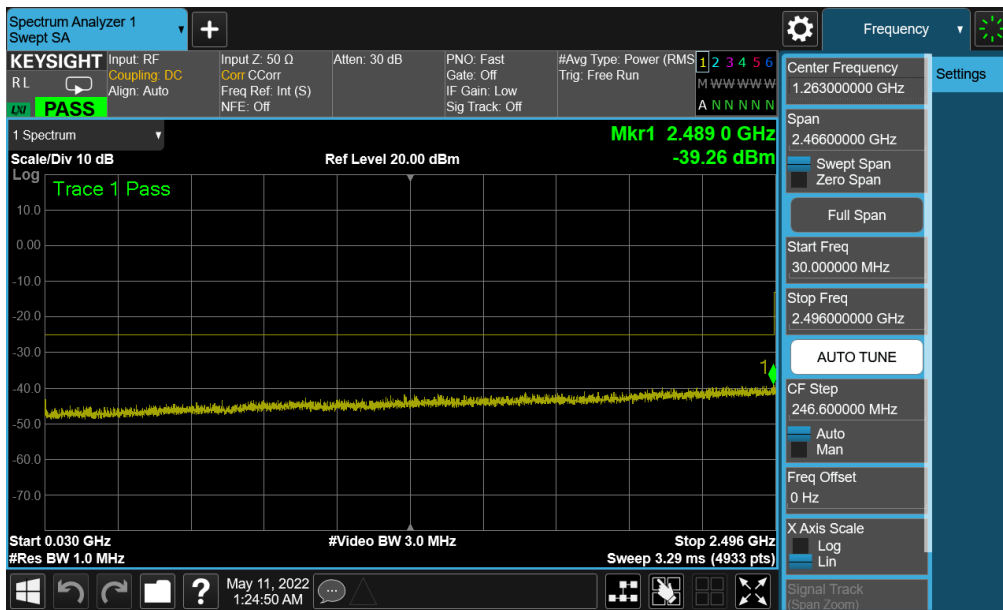


Plot 7-114. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - Low Channel Ant1)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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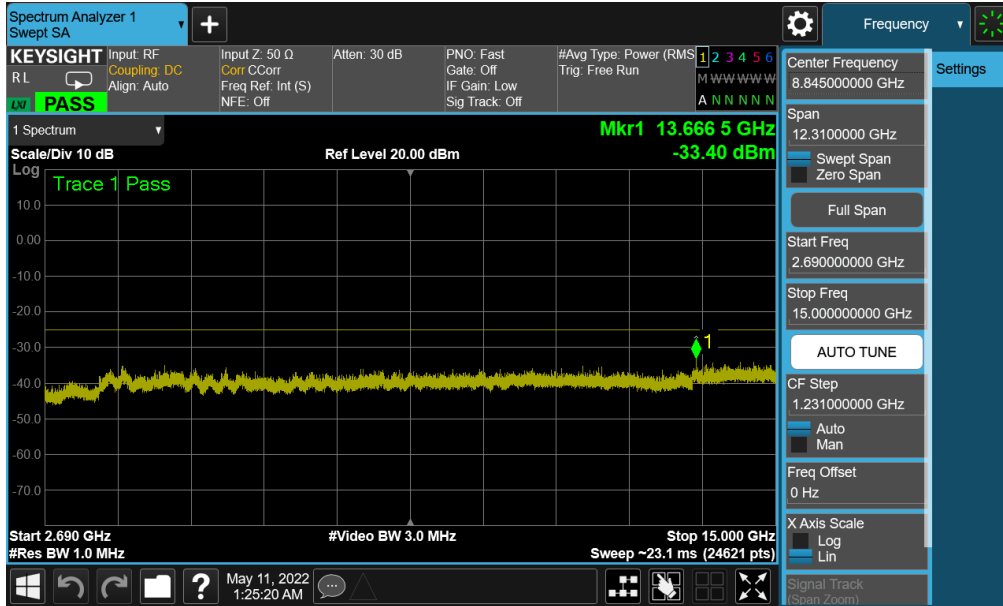


Plot 7-115. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - Low Channel Ant1)

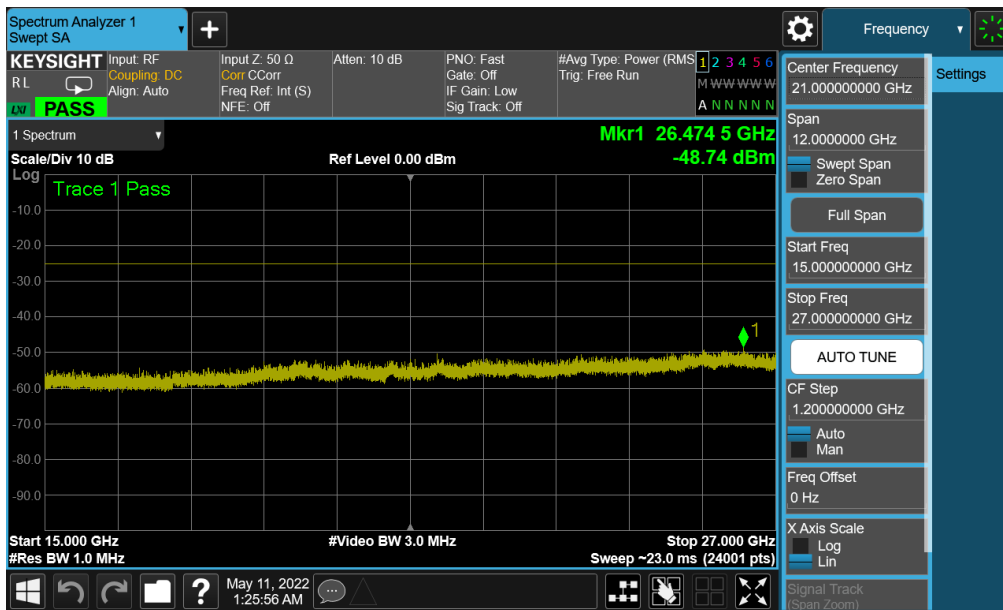


Plot 7-116. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel Ant1)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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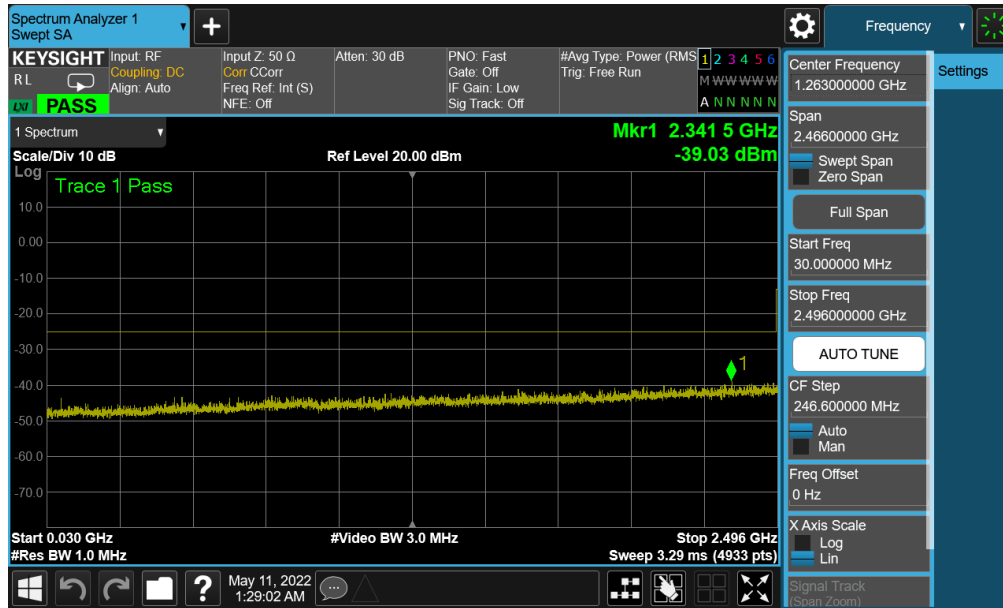


Plot 7-117. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel Ant1)

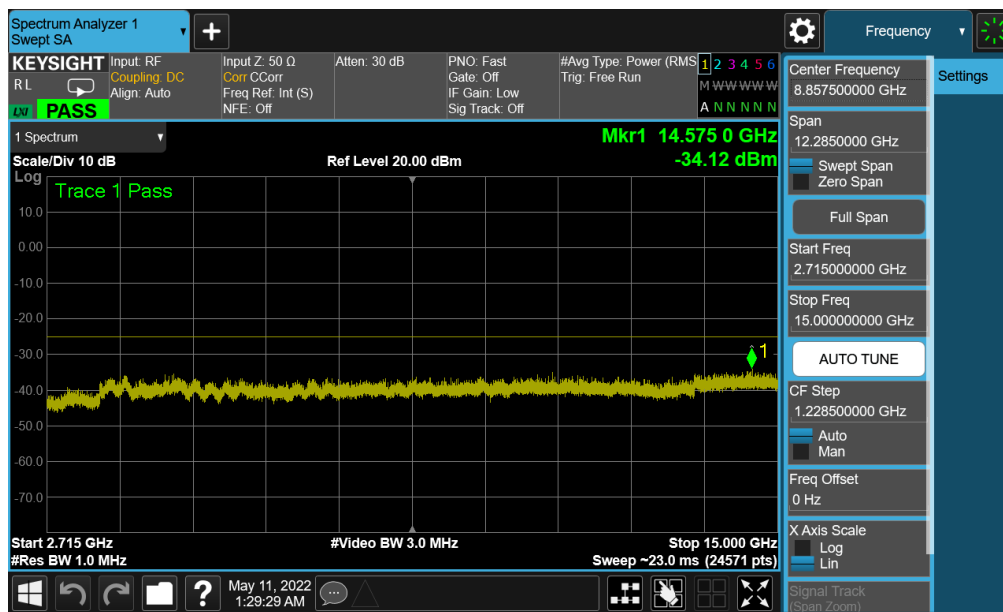


Plot 7-118. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel Ant1)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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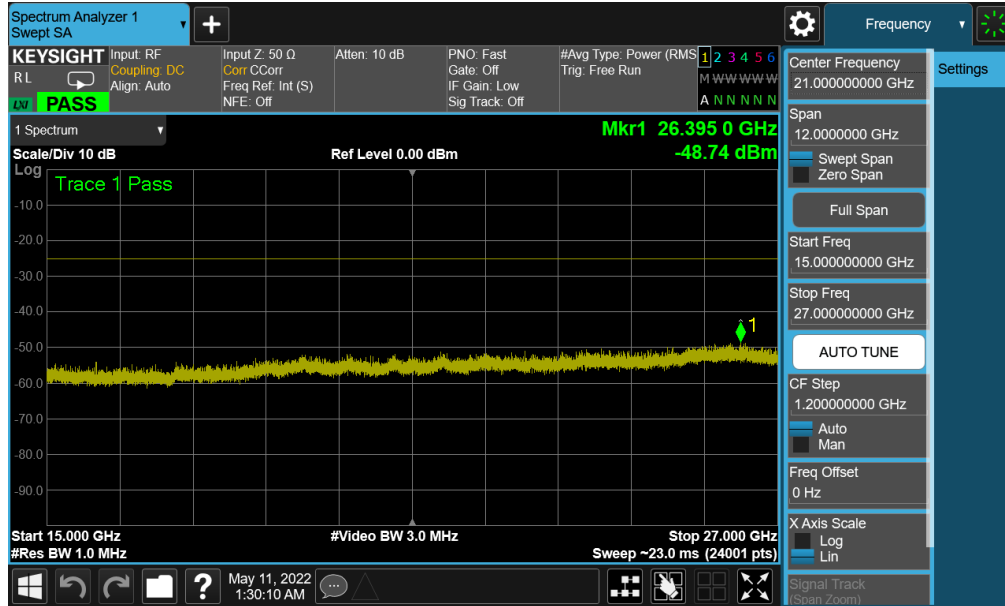


Plot 7-119. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - High Channel Ant1)



Plot 7-120. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - High Channel Ant1)

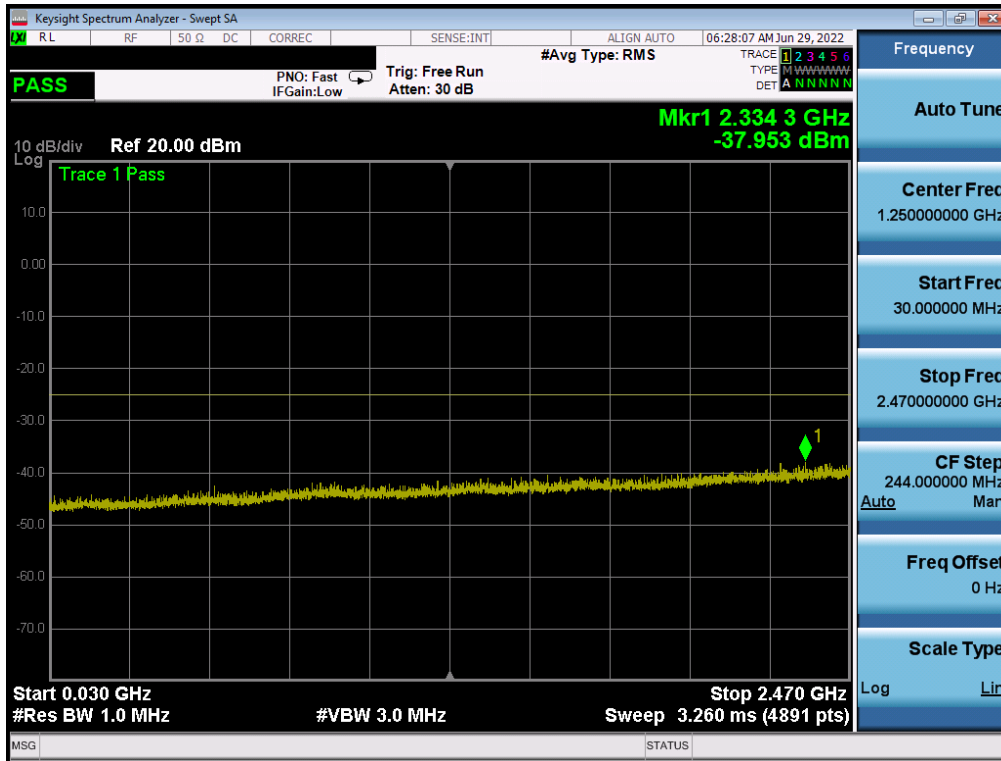
FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2204040049-07-R1.C3K	Test Dates: 03/15/2022- 08/11/2022	EUT Type: Portable Computing Device	Page 84 of 195



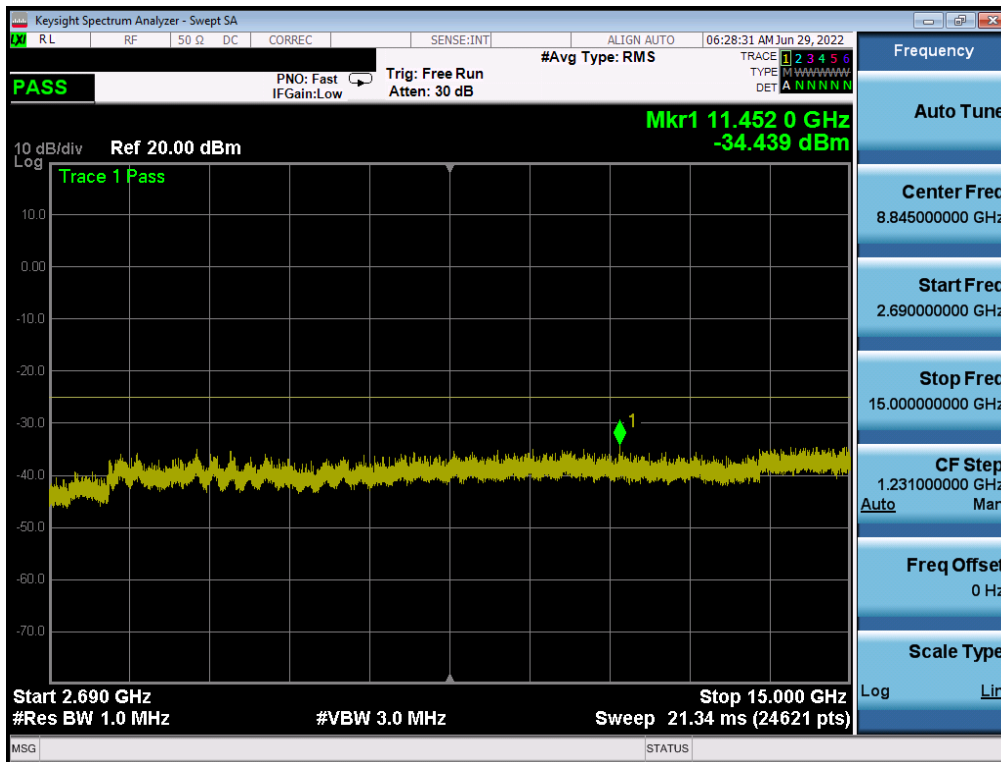
Plot 7-121. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - High Channel Ant1)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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NR Band n41 – Ant4

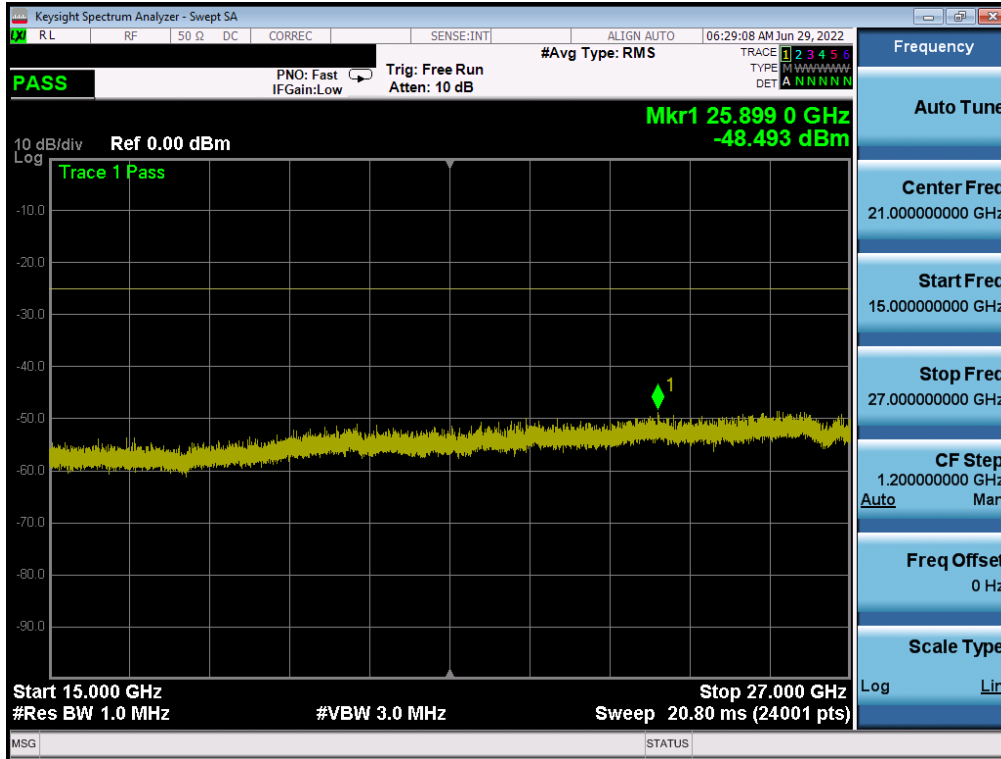


Plot 7-122. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - Low Channel Ant4)

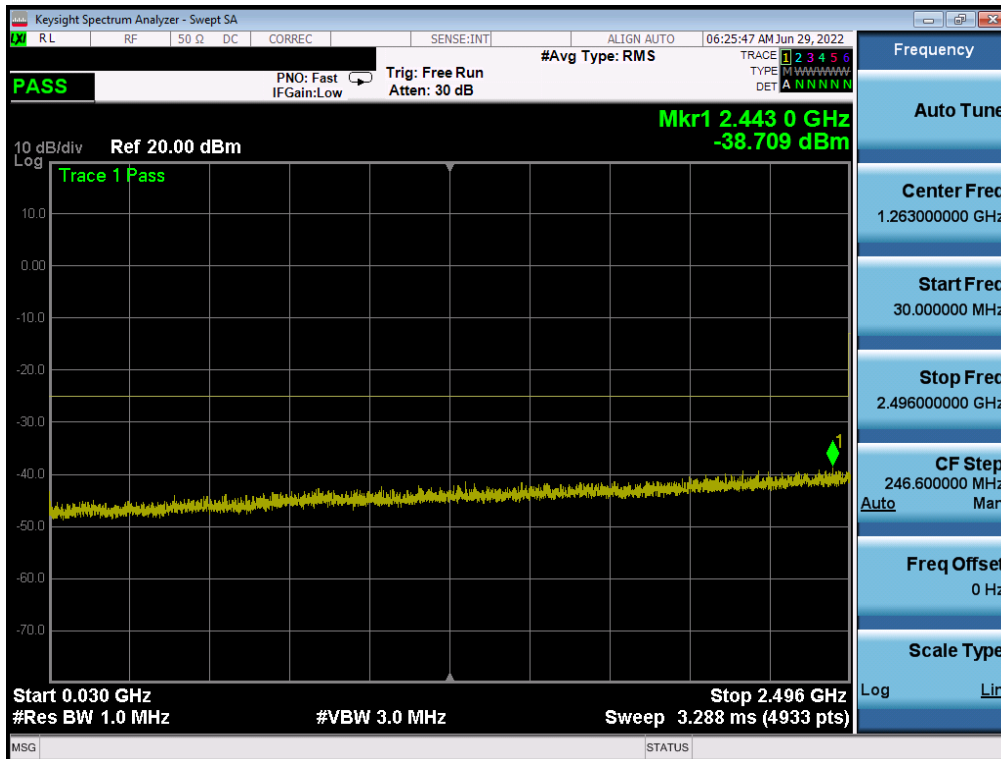


Plot 7-123. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - Low Channel Ant4)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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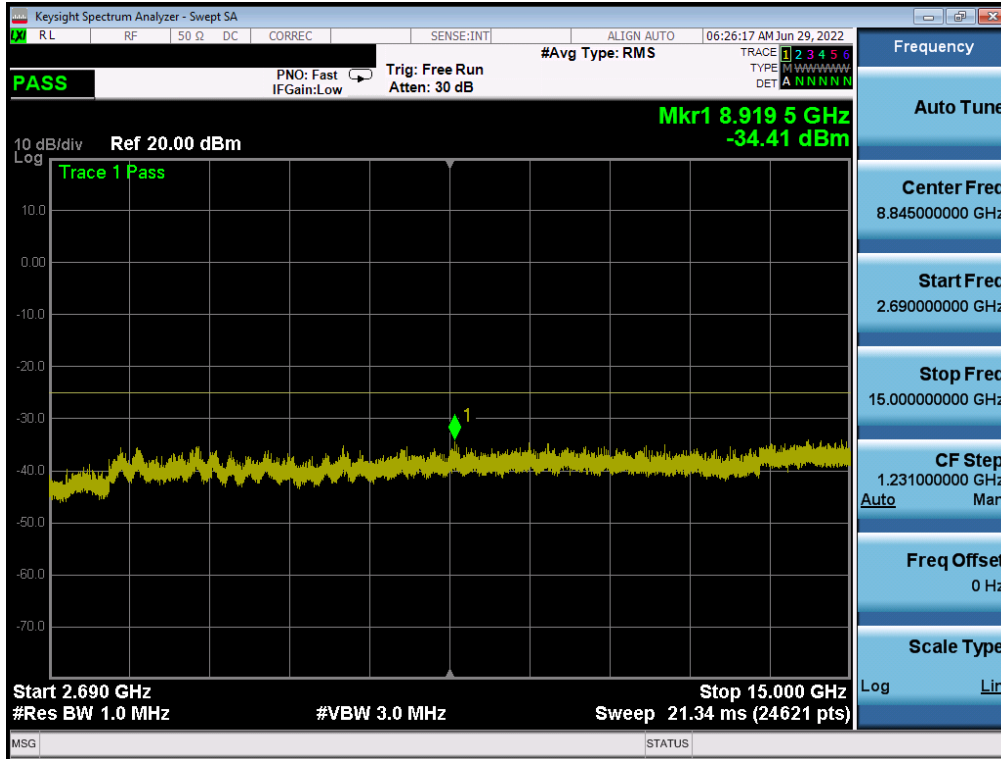


Plot 7-124. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - Low Channel Ant4)

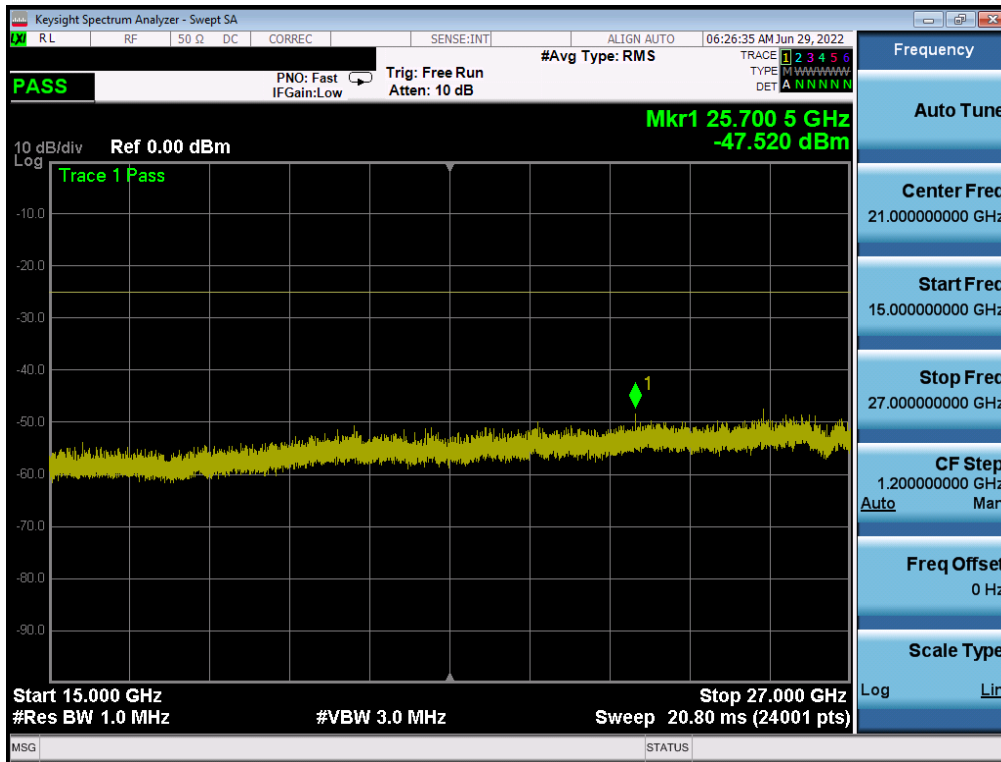


Plot 7-125. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel Ant4)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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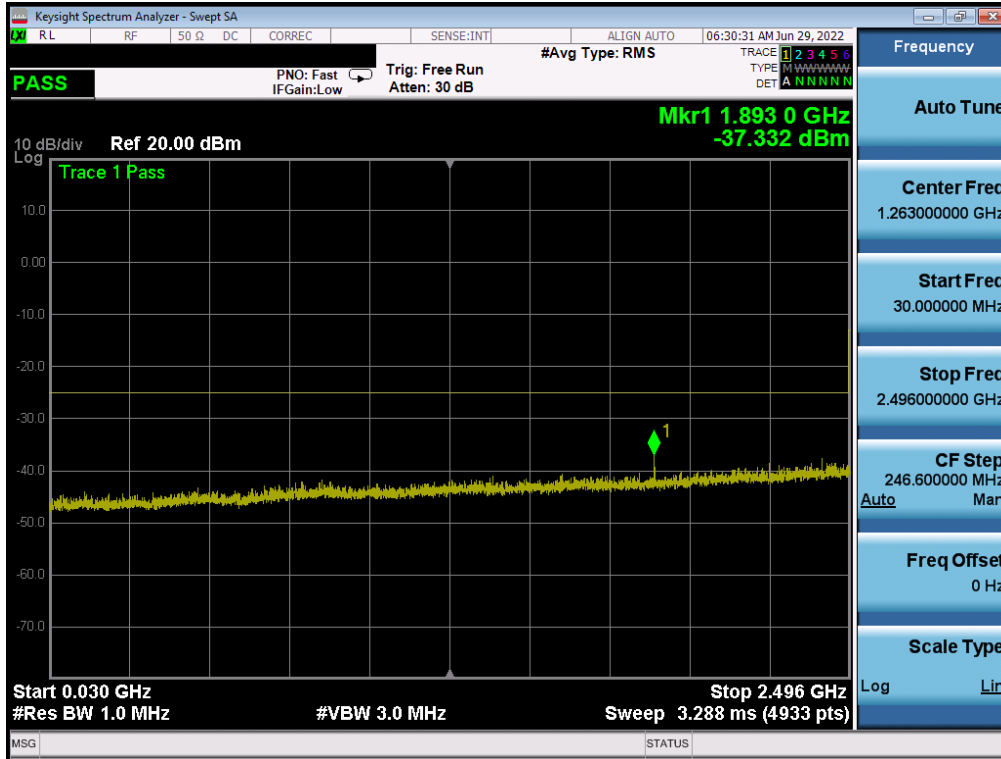


Plot 7-126. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel Ant4)

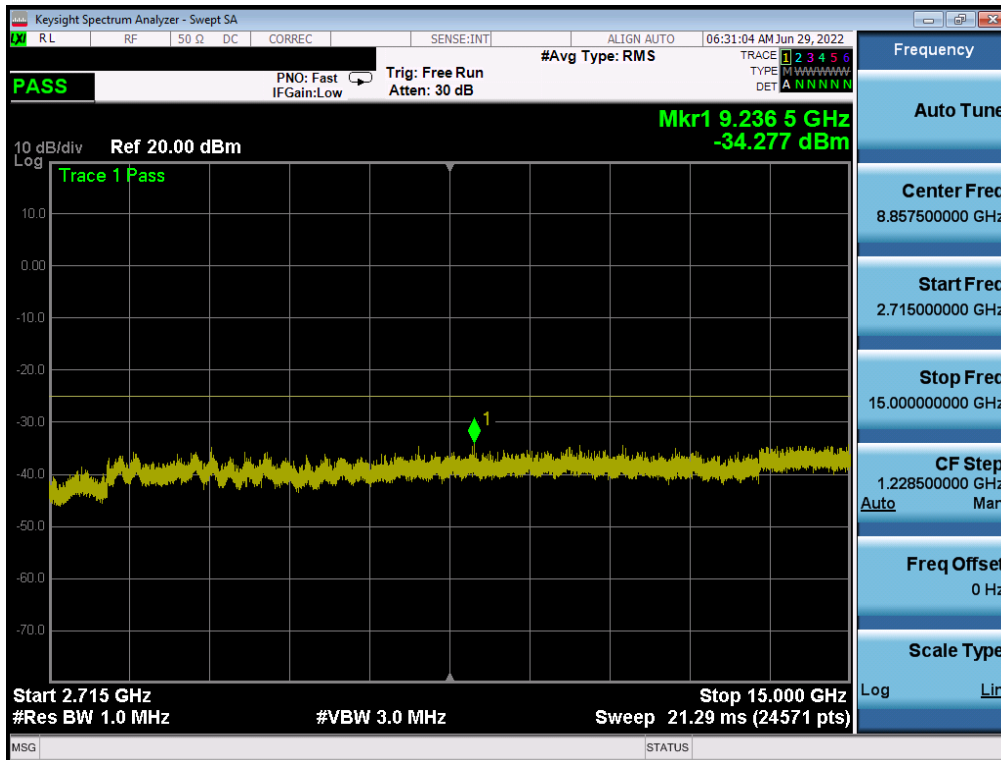


Plot 7-127. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel Ant4)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2204040049-07-R1.C3K	Test Dates: 03/15/2022- 08/11/2022	EUT Type: Portable Computing Device	Page 88 of 195



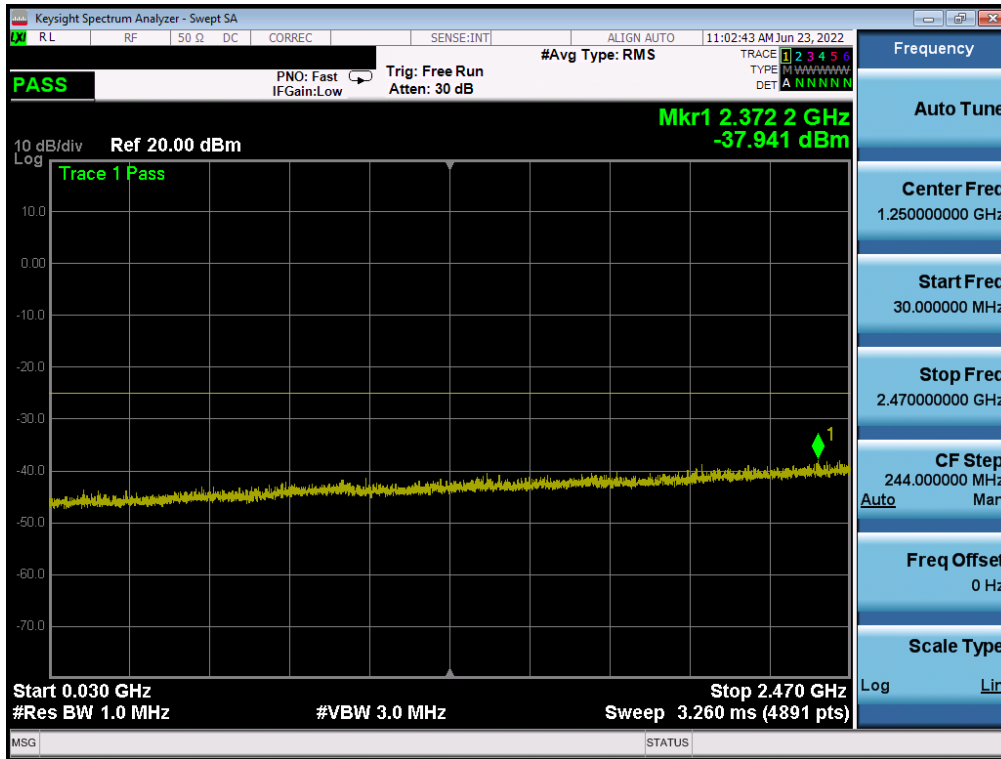
Plot 7-128. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - High Channel Ant4)



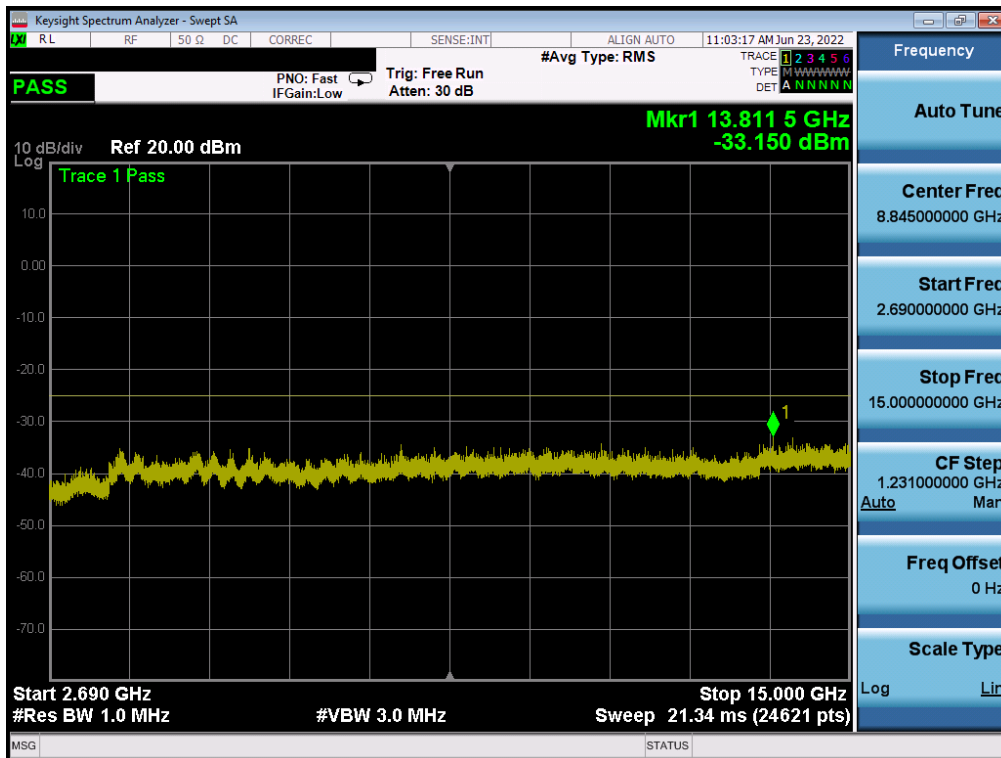
Plot 7-129. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - High Channel Ant4)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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NR Band n41 – Ant5

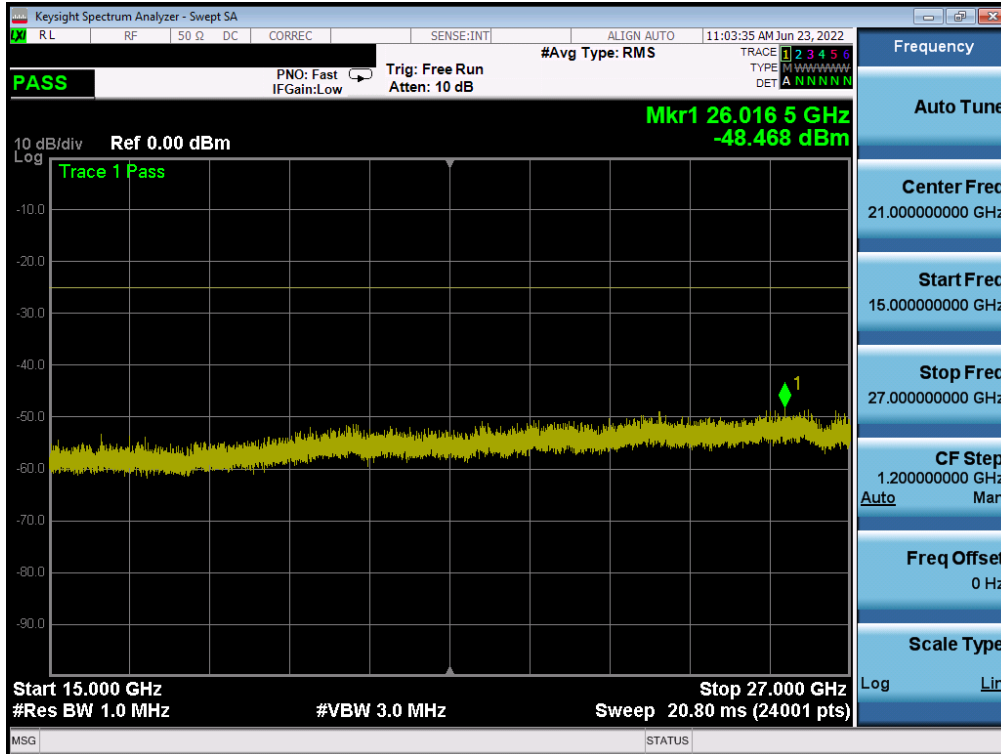


Plot 7-131. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - Low Channel Ant5)

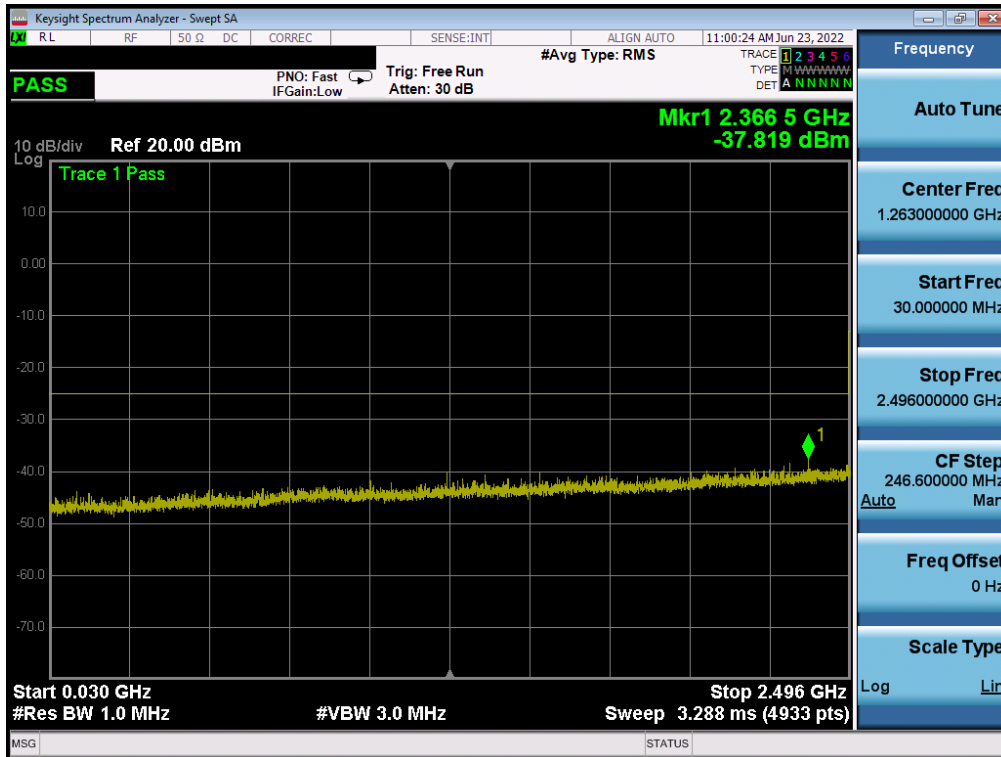


Plot 7-132. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - Low Channel Ant5)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2204040049-07-R1.C3K	Test Dates: 03/15/2022- 08/11/2022	EUT Type: Portable Computing Device	Page 91 of 195

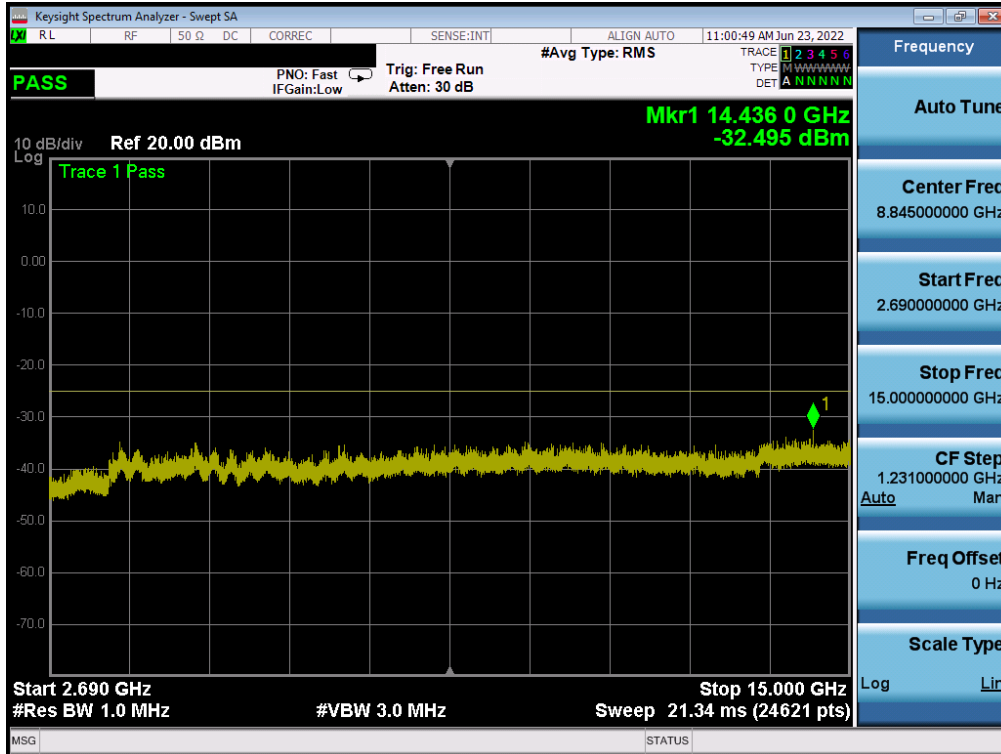


Plot 7-133. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - Low Channel Ant5)

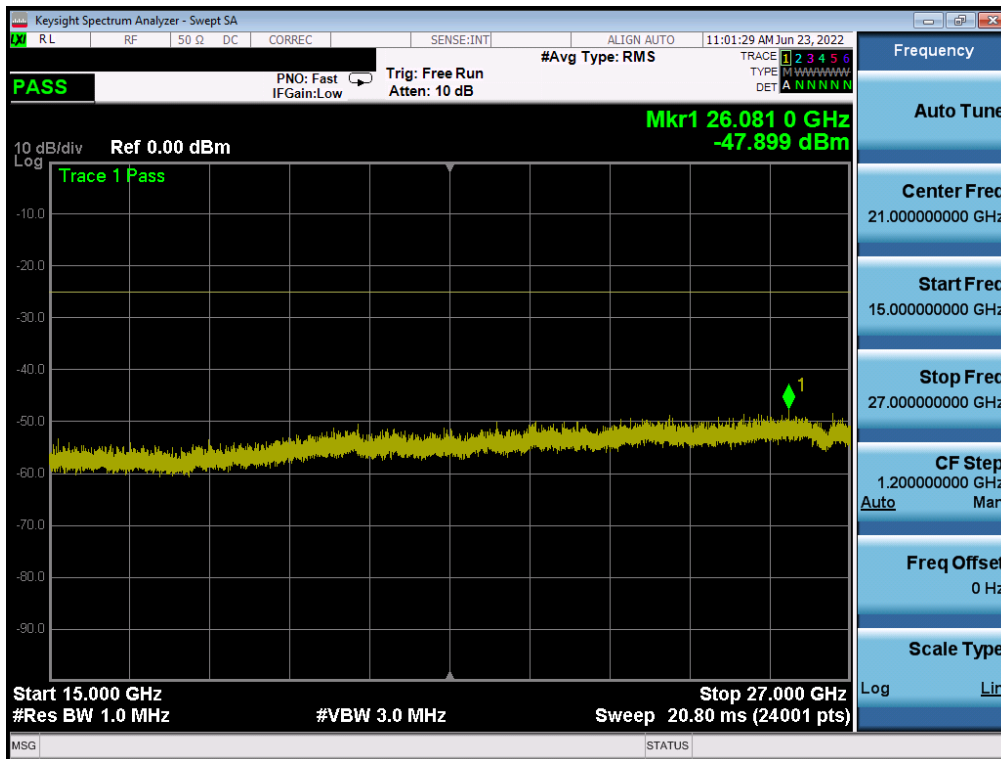


Plot 7-134. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel Ant5)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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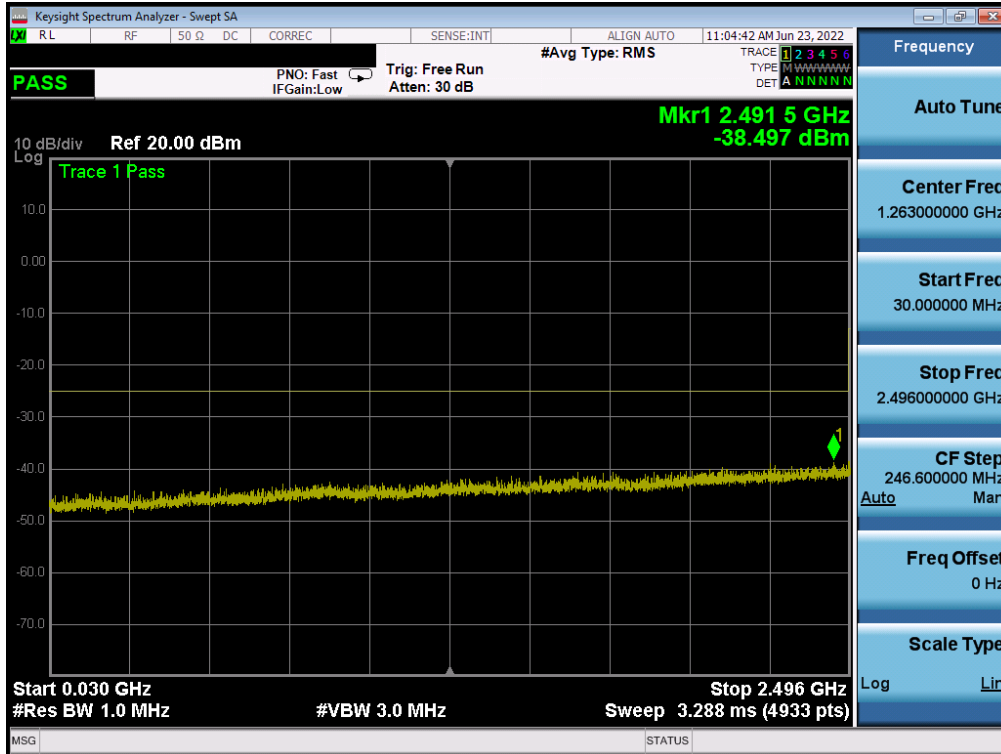


Plot 7-135. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel Ant5)

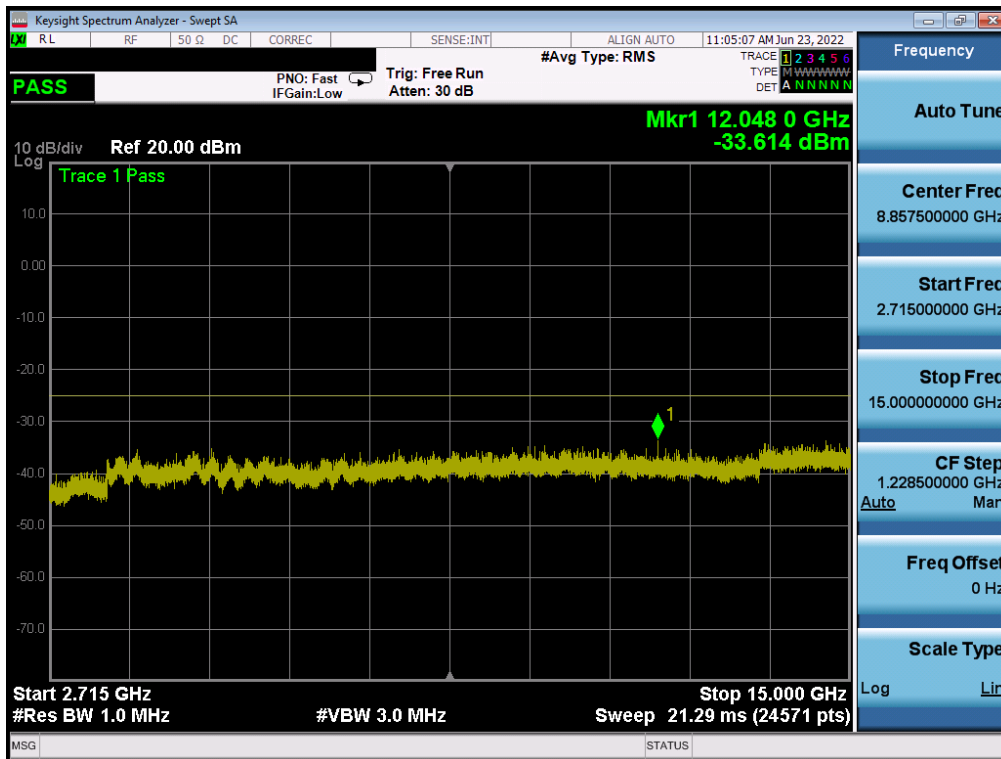


Plot 7-136. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel Ant5)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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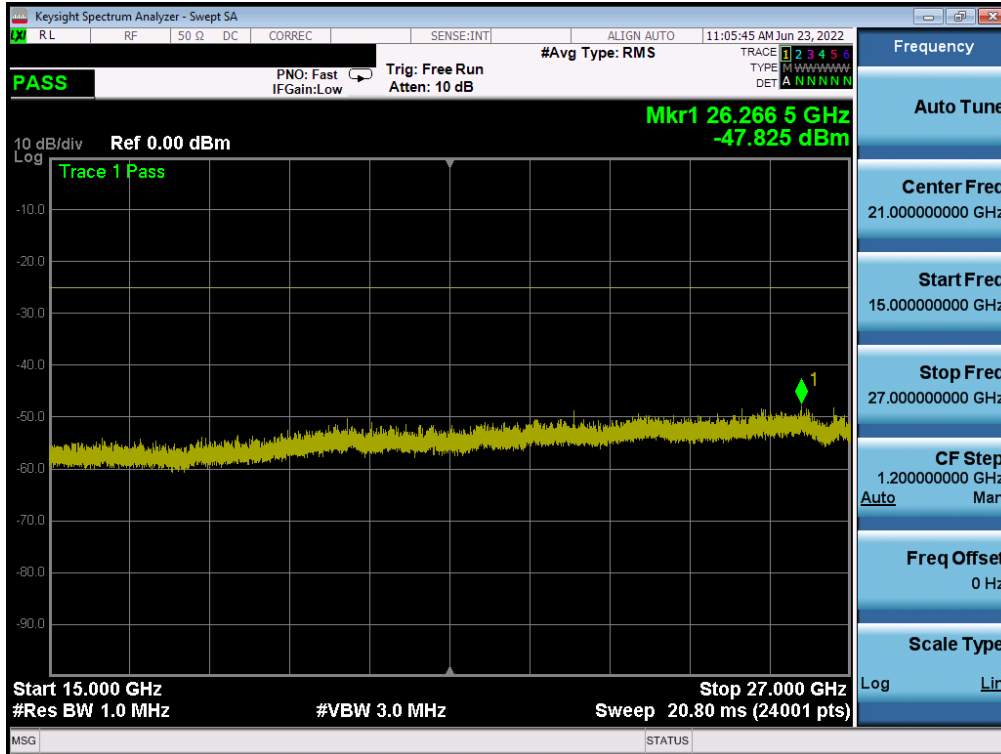


Plot 7-137. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - High Channel Ant5)



Plot 7-138. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - High Channel Ant5)

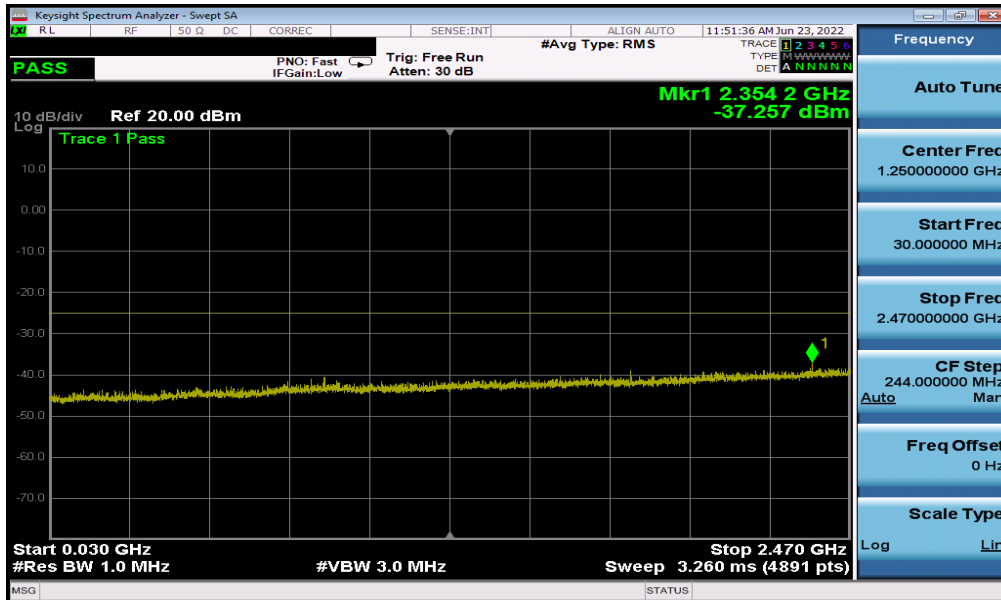
FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2204040049-07-R1.C3K	Test Dates: 03/15/2022- 08/11/2022	EUT Type: Portable Computing Device	Page 94 of 195



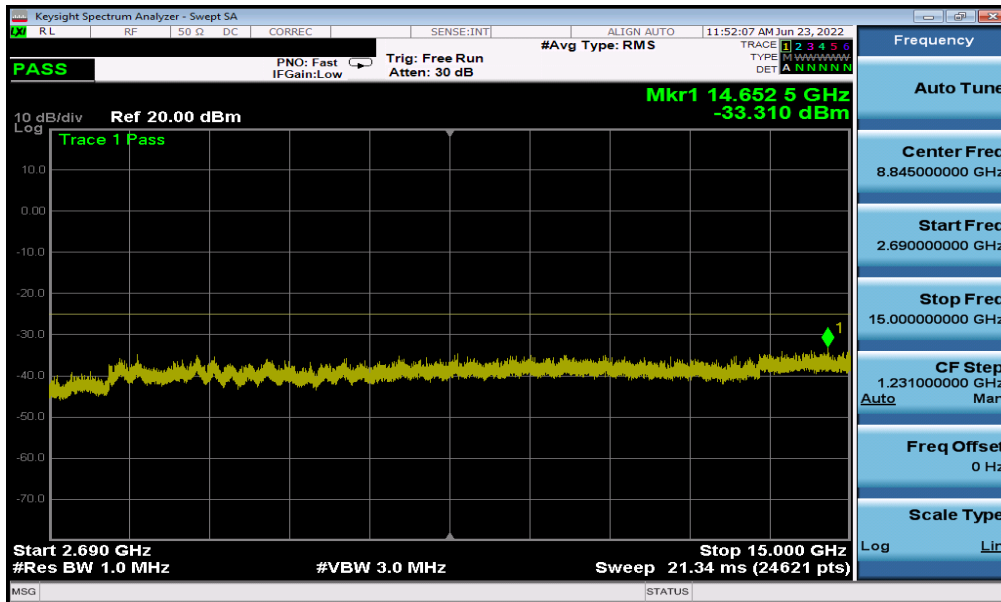
Plot 7-139. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - High Channel Ant5)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2204040049-07-R1.C3K	Test Dates: 03/15/2022- 08/11/2022	EUT Type: Portable Computing Device	Page 95 of 195

NR Band n41 – Ant8

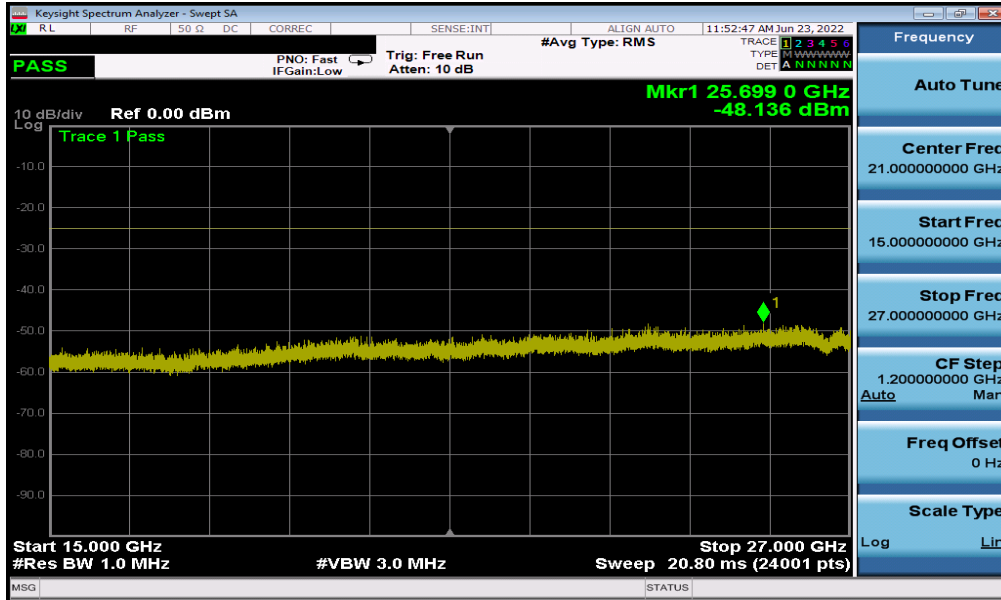


Plot 7-140. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - Low Channel Ant8)

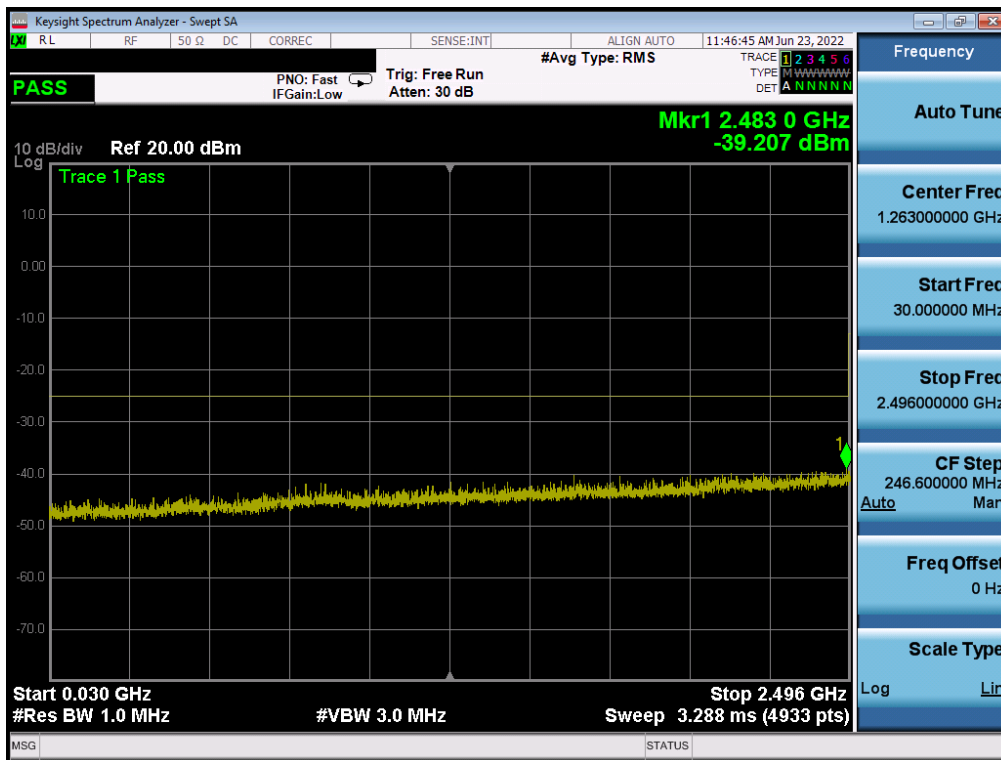


Plot 7-141. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - Low Channel Ant8)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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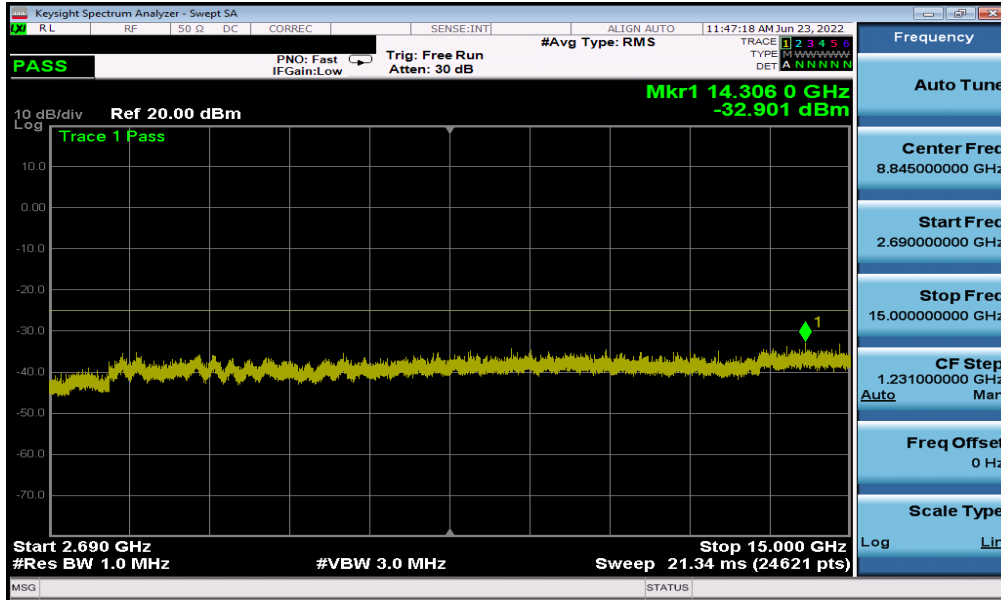


Plot 7-142. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - Low Channel Ant8)

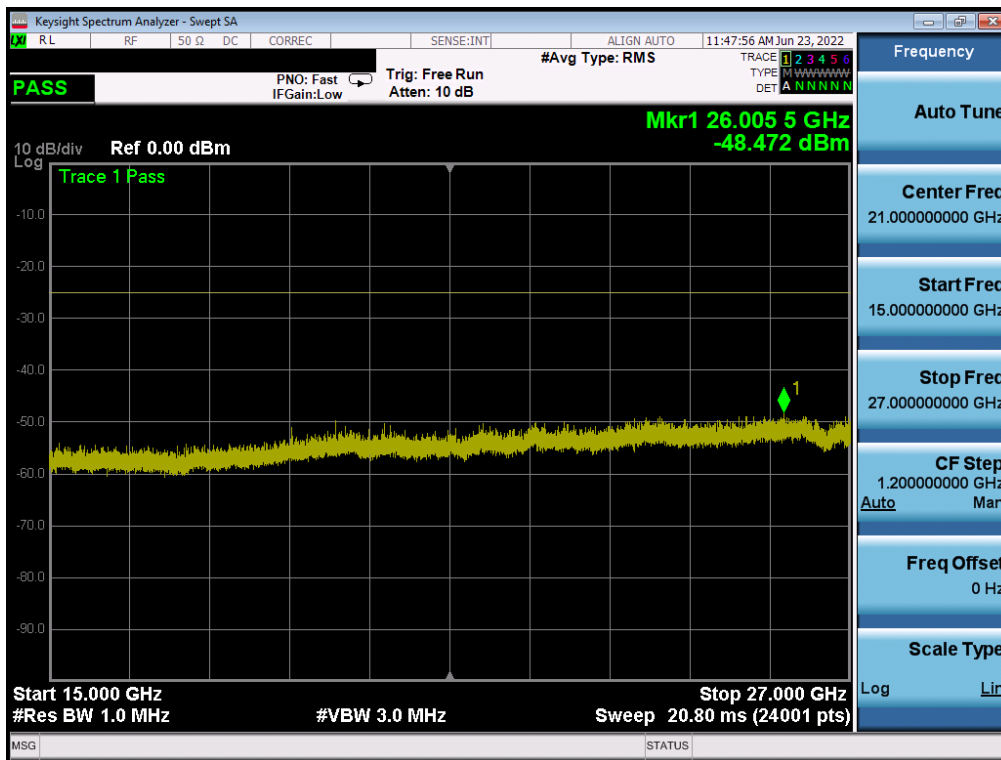


Plot 7-143. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel Ant8)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2204040049-07-R1.C3K	Test Dates: 03/15/2022- 08/11/2022	EUT Type: Portable Computing Device	Page 97 of 195

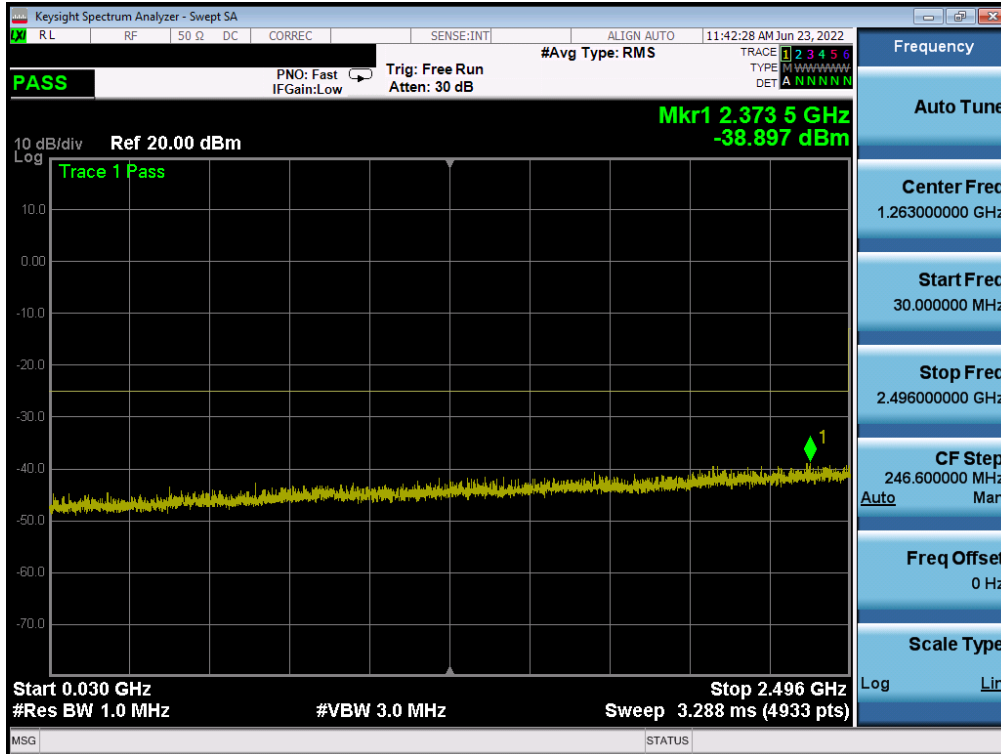


Plot 7-144. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel Ant8)

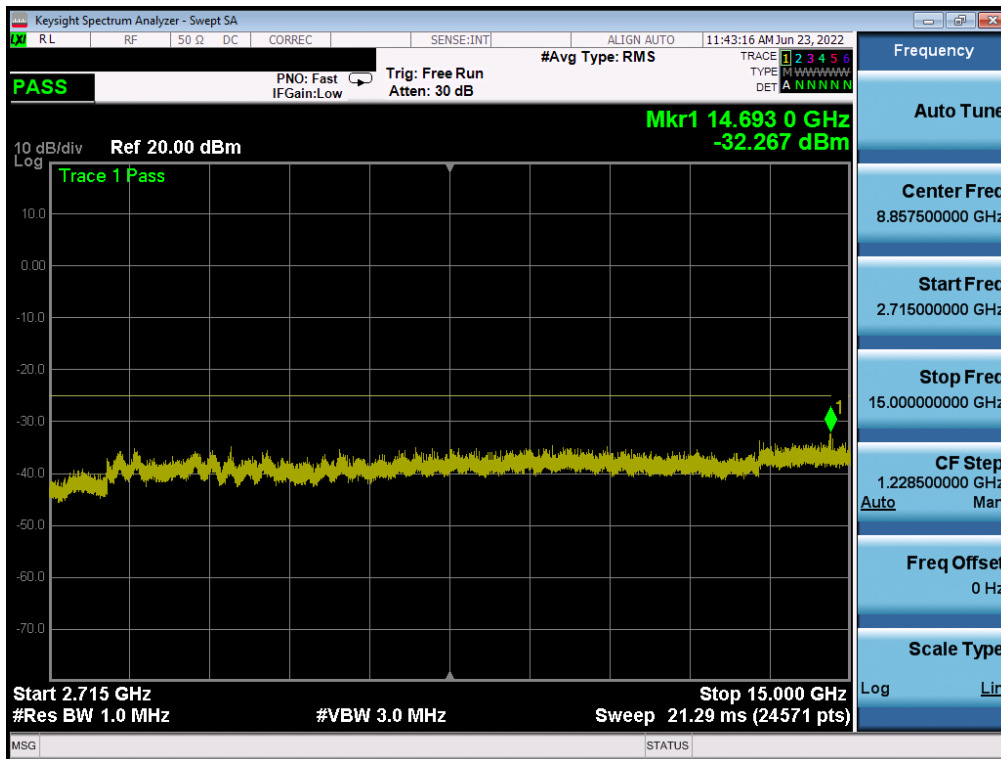


Plot 7-145. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel Ant8)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2204040049-07-R1.C3K	Test Dates: 03/15/2022- 08/11/2022	EUT Type: Portable Computing Device	Page 98 of 195

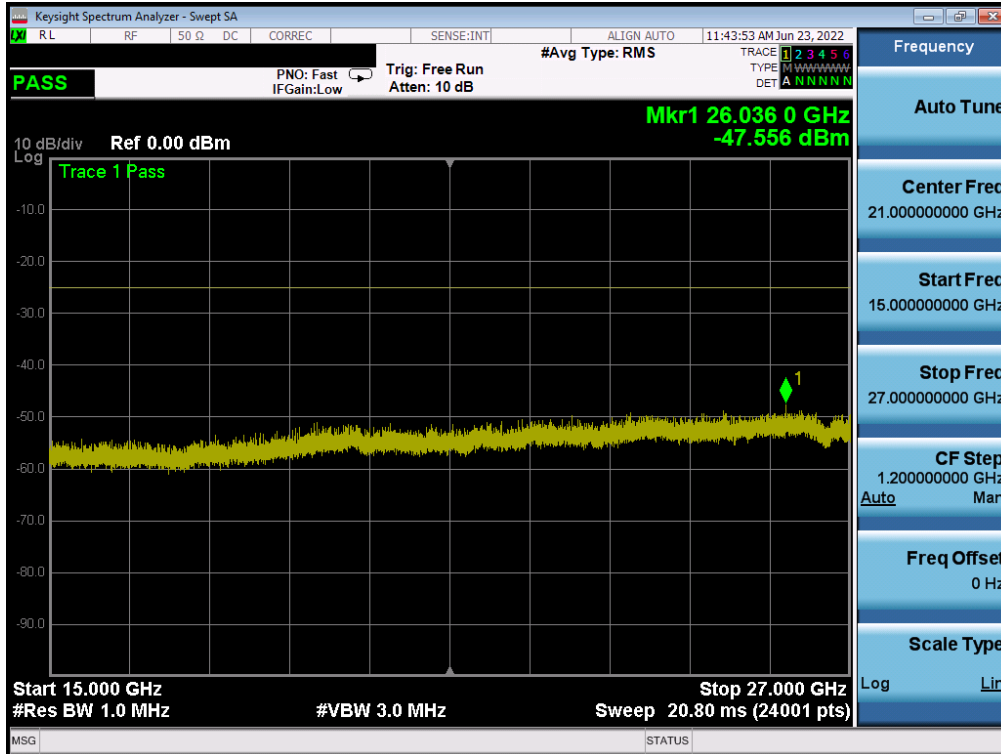


Plot 7-146. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - High Channel Ant8)



Plot 7-147. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - High Channel Ant8)

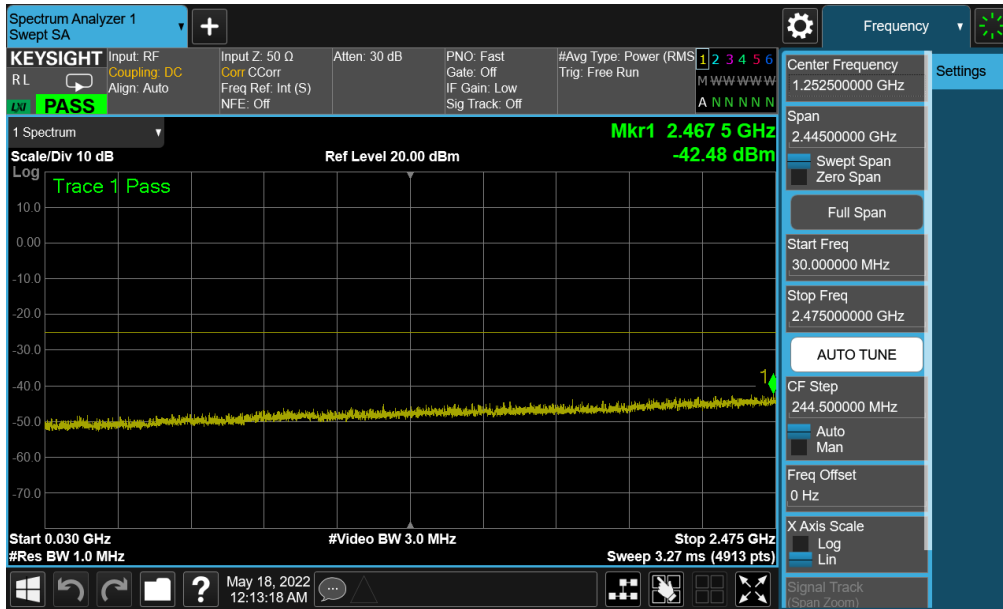
FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2204040049-07-R1.C3K	Test Dates: 03/15/2022- 08/11/2022	EUT Type: Portable Computing Device	Page 99 of 195



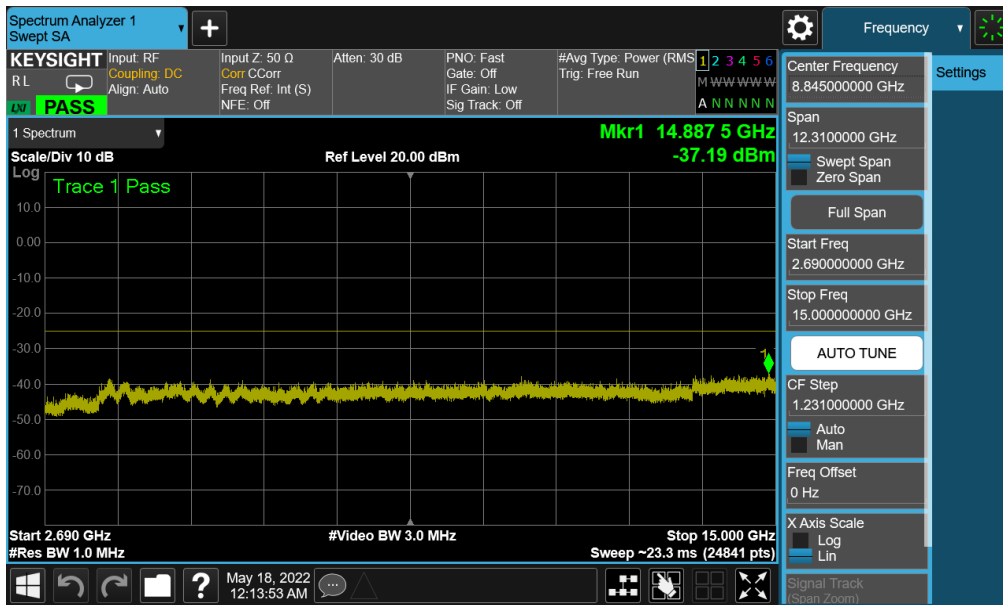
Plot 7-148. Conducted Spurious Plot (NR Band n41 - 100MHz QPSK - RB Size 1, RB Offset 0 - High Channel Ant8)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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ULCA - LTE B41(PC3) – Ant1

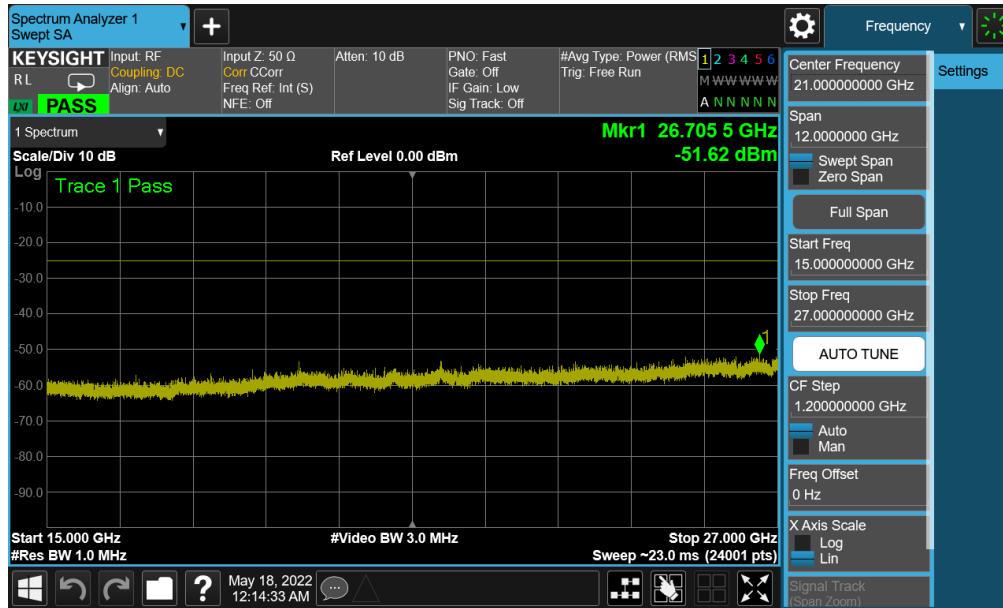


Plot 7-149. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel Ant1)

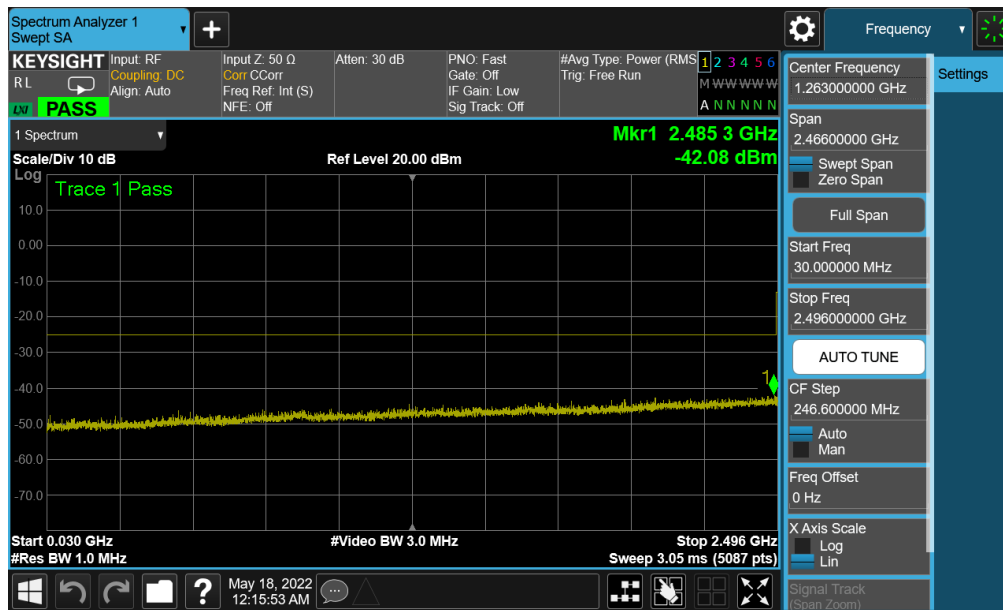


Plot 7-150. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel Ant1)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2204040049-07-R1.C3K	Test Dates: 03/15/2022- 08/11/2022	EUT Type: Portable Computing Device	Page 101 of 195

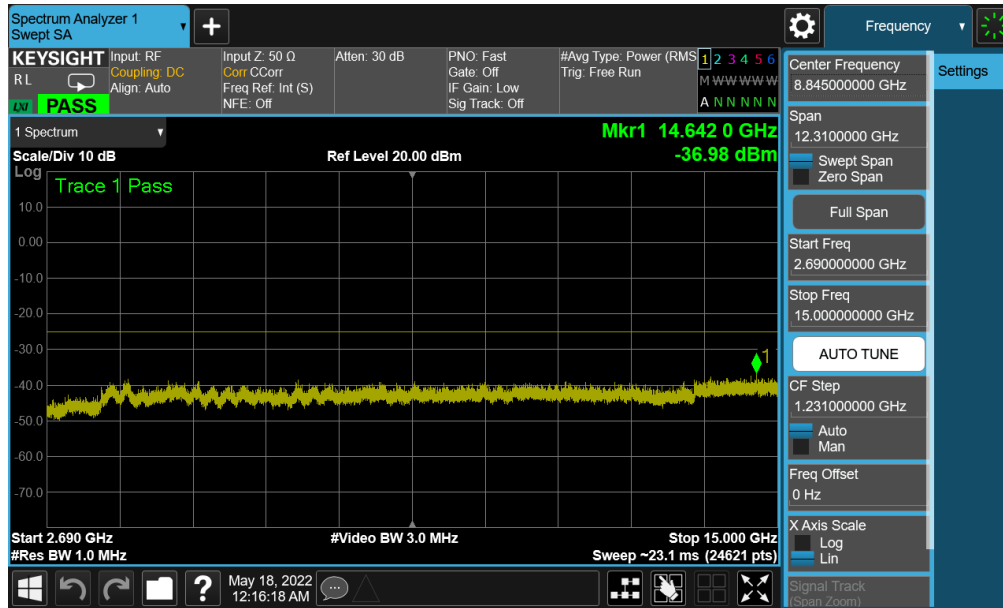


Plot 7-151. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel Ant1)

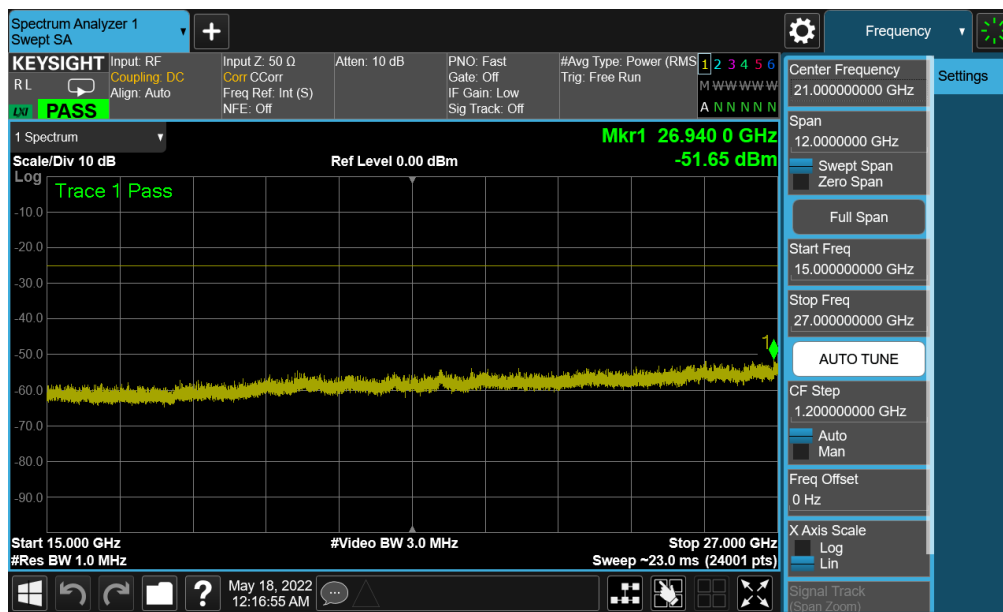


Plot 7-152. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel Ant1)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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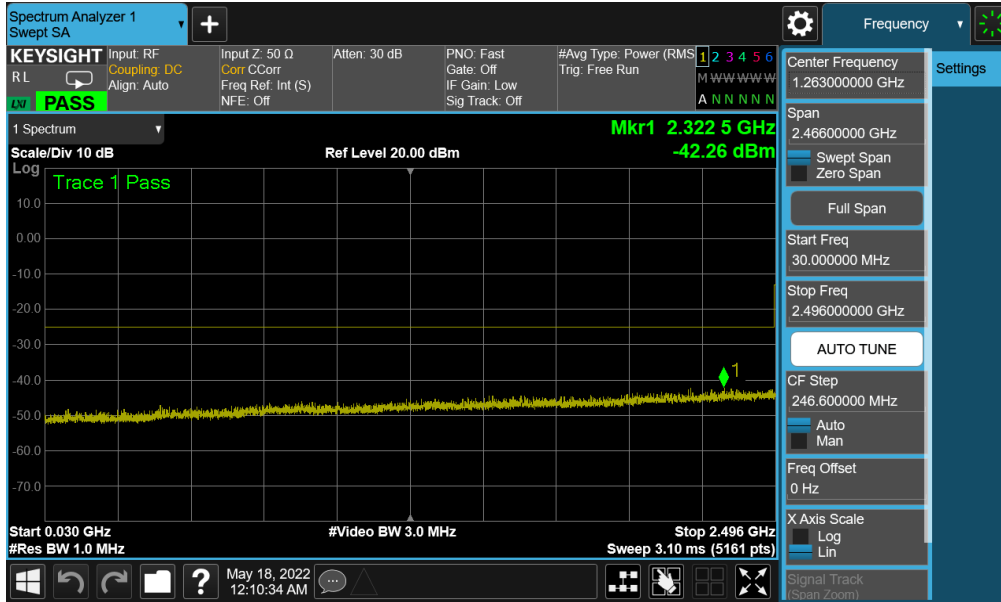


Plot 7-153. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel Ant1)

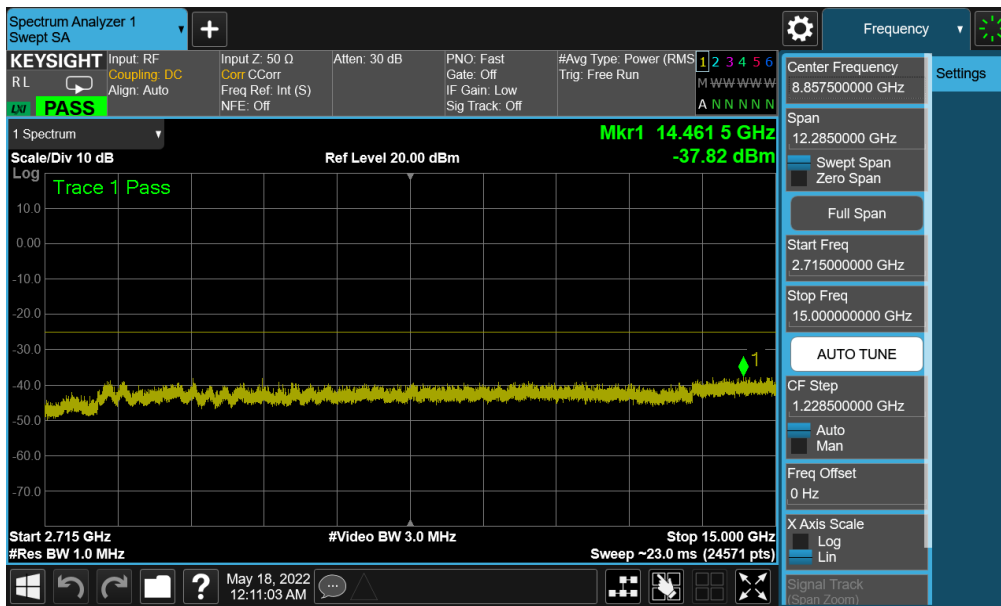


Plot 7-154. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel Ant1)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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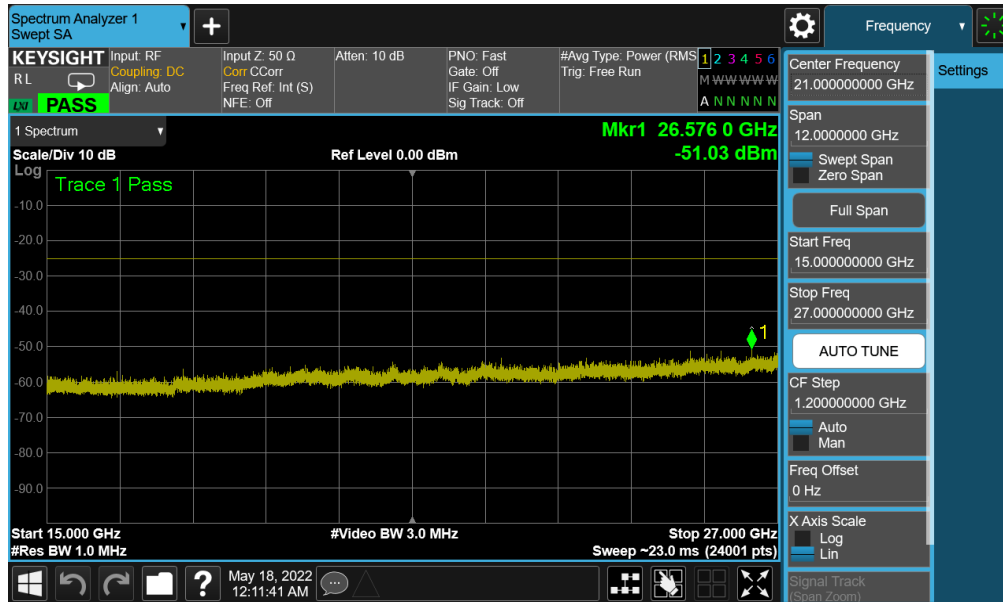


Plot 7-155. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel Ant1)



Plot 7-156. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel Ant1)

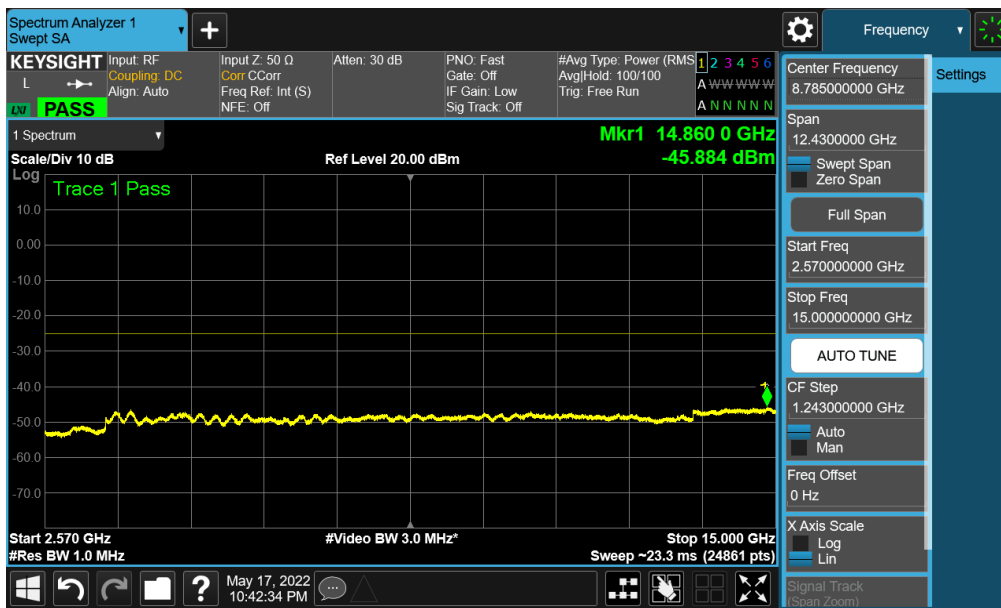
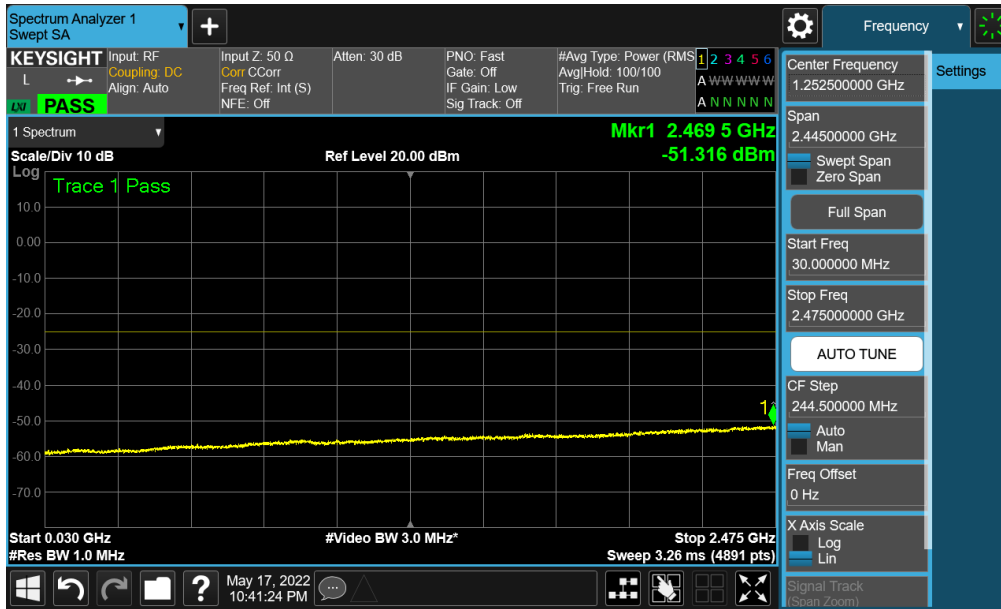
FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2204040049-07-R1.C3K	Test Dates: 03/15/2022- 08/11/2022	EUT Type: Portable Computing Device	Page 104 of 195



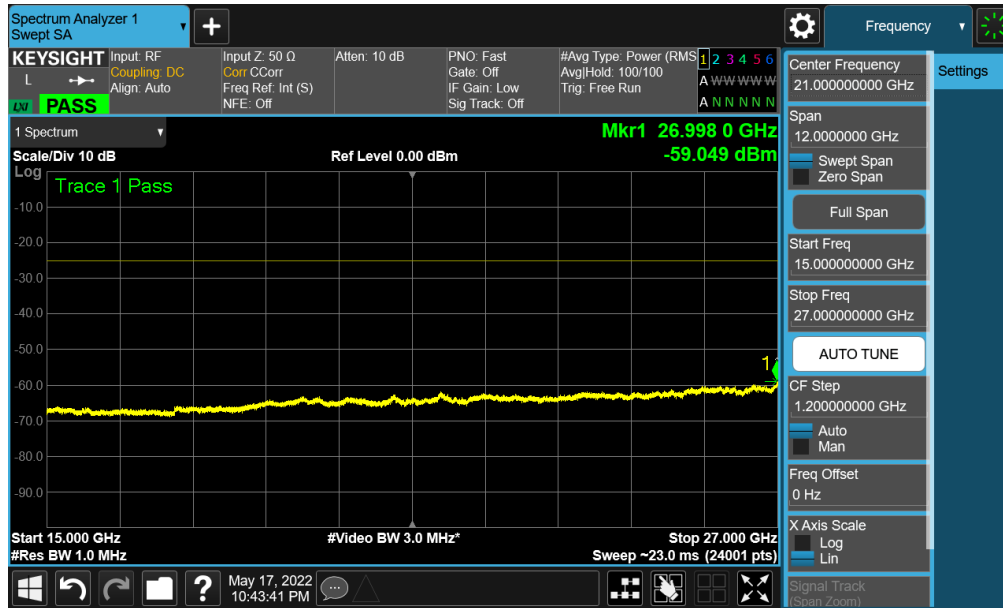
Plot 7-157. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel Ant1)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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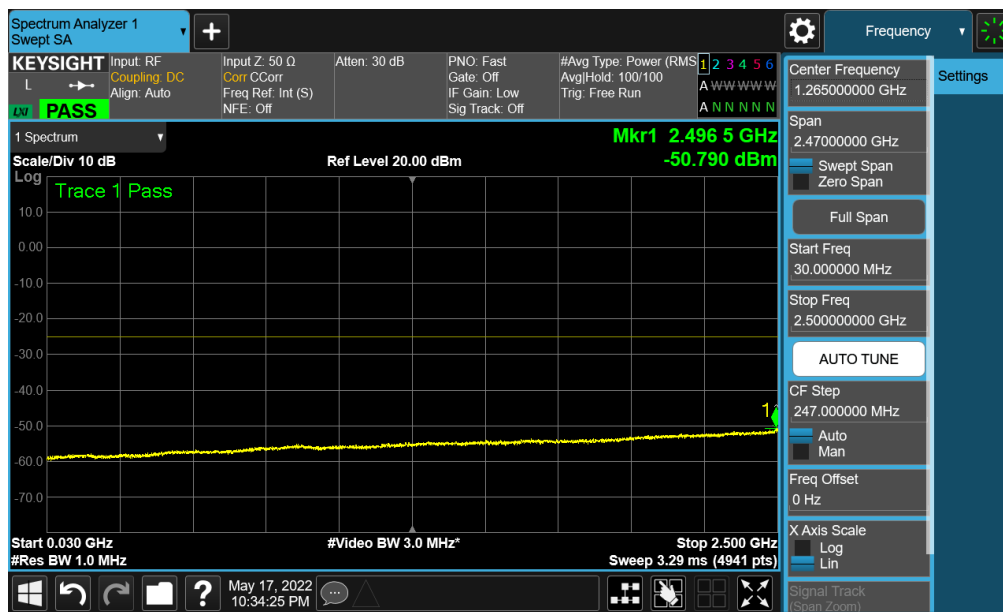
ULCA – LTE B7– Ant1



FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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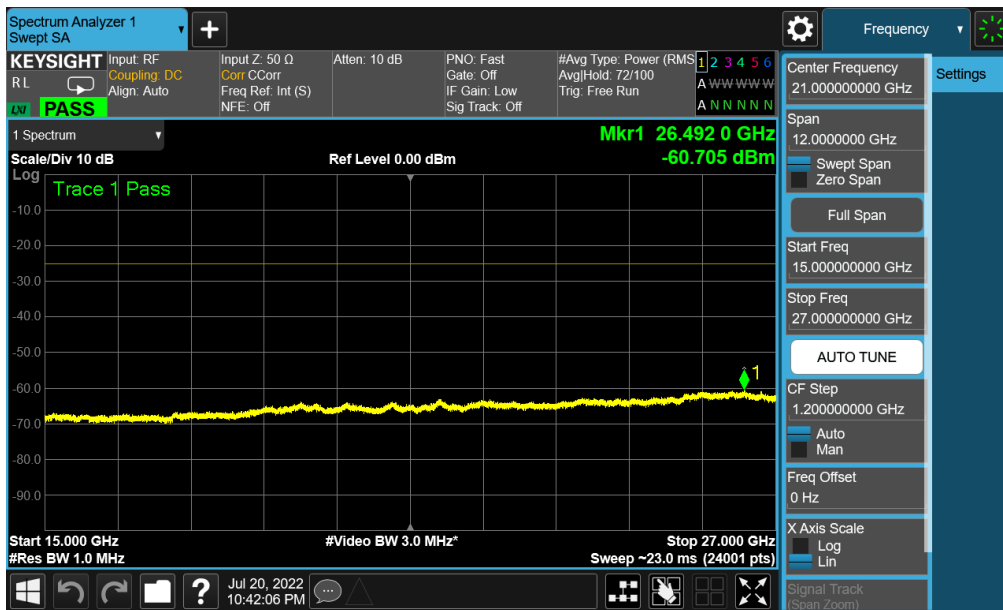
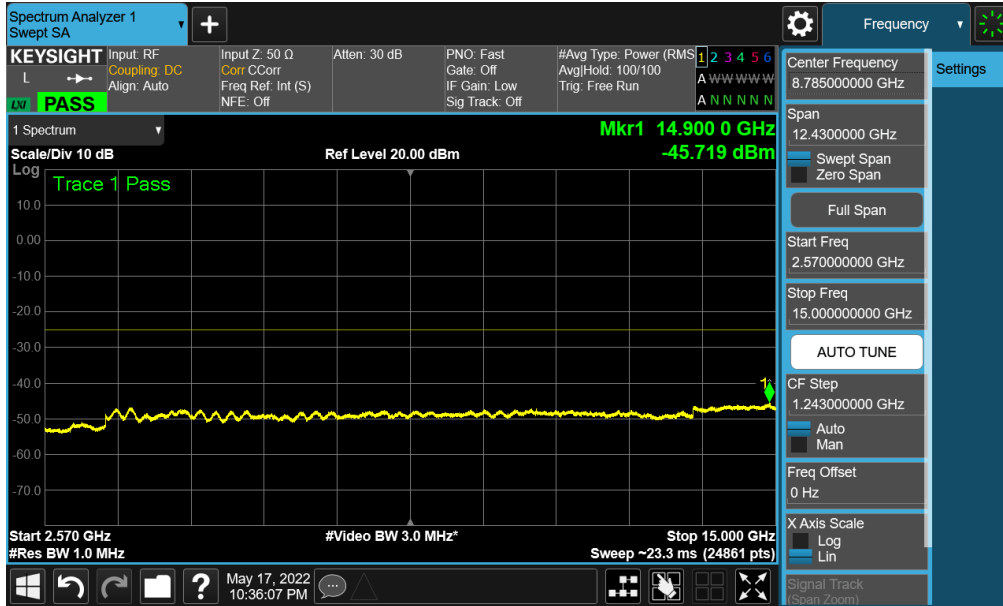


Plot 7-160. Conducted Spurious Plot (ULCA LTE B7- 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel Ant1)

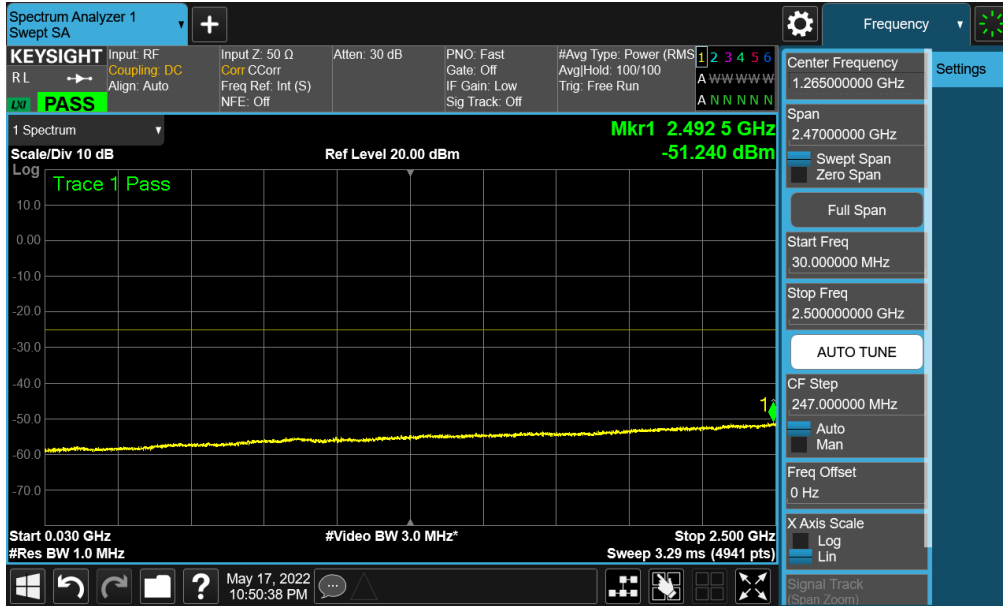


Plot 7-161. Conducted Spurious Plot (ULCA LTE B7- 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel Ant1)

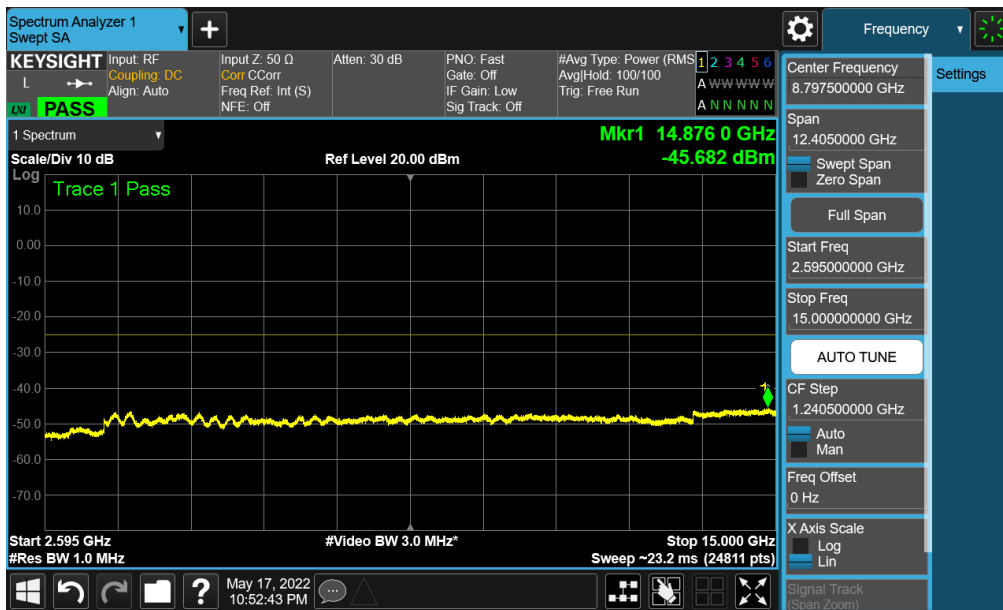
FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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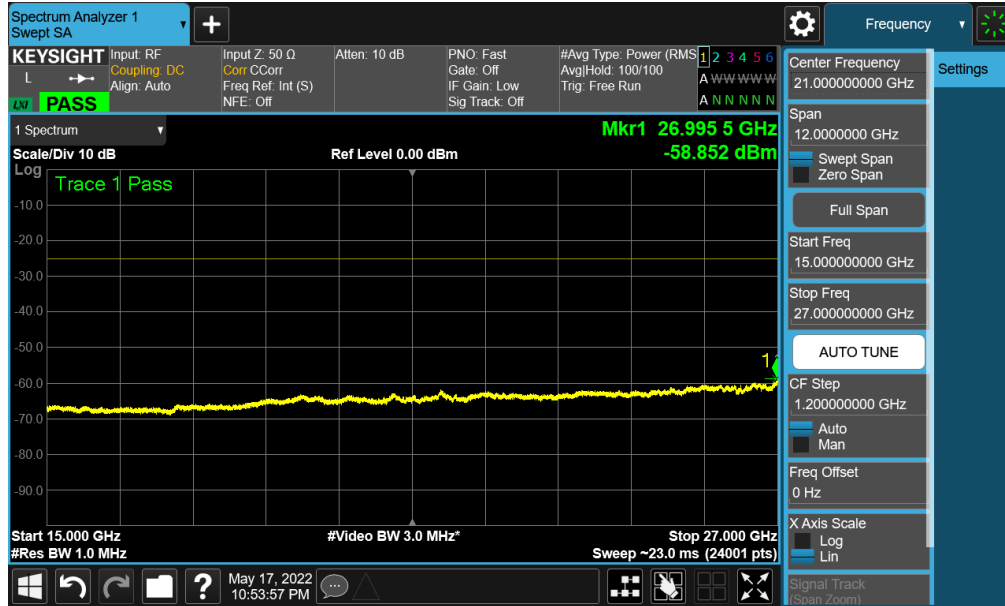


Plot 7-164. Conducted Spurious Plot (ULCA LTE B7- 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel Ant1)



Plot 7-165. Conducted Spurious Plot (ULCA LTE B7- 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel Ant1)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-166. Conducted Spurious Plot (ULCA LTE B7- 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel Ant1)

FCC ID: C3K1997	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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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 $> 43 + 10 \log_{10} (P[\text{Watts}]$ at 2300-2305MHz & 2345-2360MHz, $> 55 + 10 \log_{10} (P[\text{Watts}]$ at 2320-2324MHz & 2341-2345MHz, $> 61 + 10 \log_{10} (P[\text{Watts}]$ at 2324-2328MHz & 2337-2341MHz, $> 67 + 10 \log_{10} (P[\text{Watts}]$ at 2288-2292MHz & 2328-2337MHz, and $> 70 + 10 \log_{10} (P[\text{Watts}]$ at frequencies $< 2288\text{MHz}$ & $> 2365\text{MHz}$.

The minimum permissible attenuation level for Band 7 and 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 \geq 1% of the emission bandwidth
4. VBW \geq 3 x RBW
5. Detector = RMS
6. Number of sweep points \geq 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.

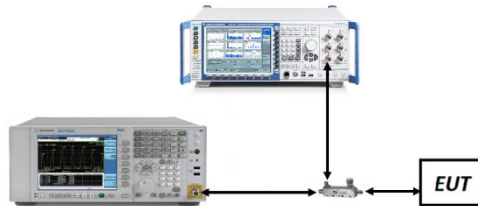


Figure 7-4. Test Instrument & Measurement Setup

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Test Notes

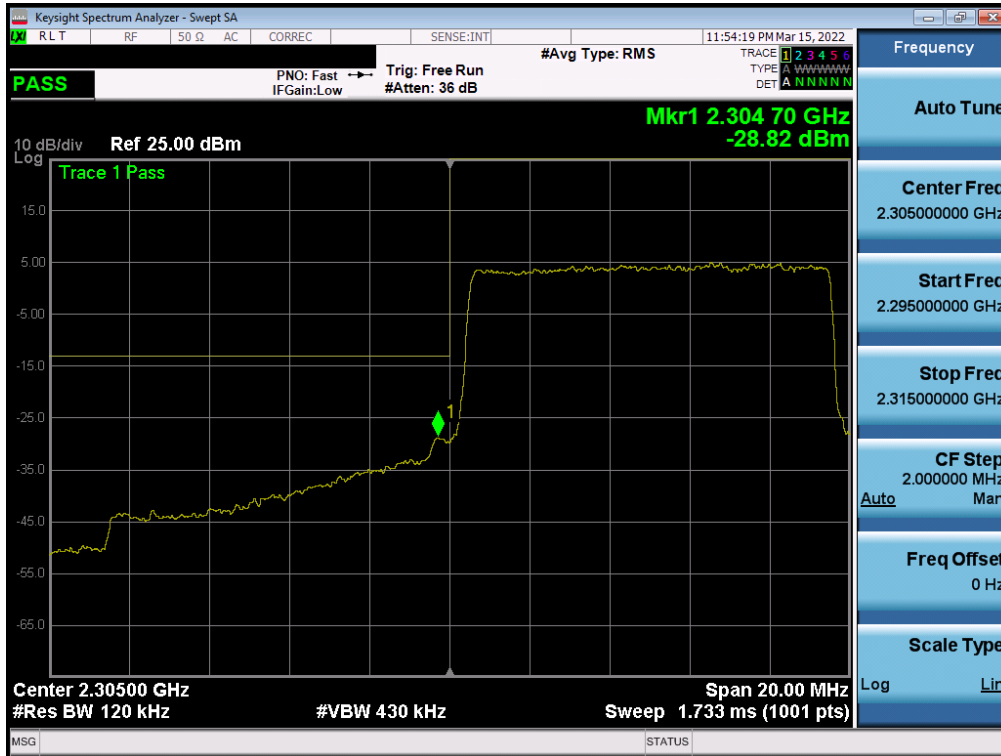
1. Per 27.53(a)(5) in the 1 MHz bands immediately outside and adjacent to the channel blocks at 2305, 2310, 2315, 2320, 2345, 2350, 2355, and 2360 MHz, a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution 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 than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz.

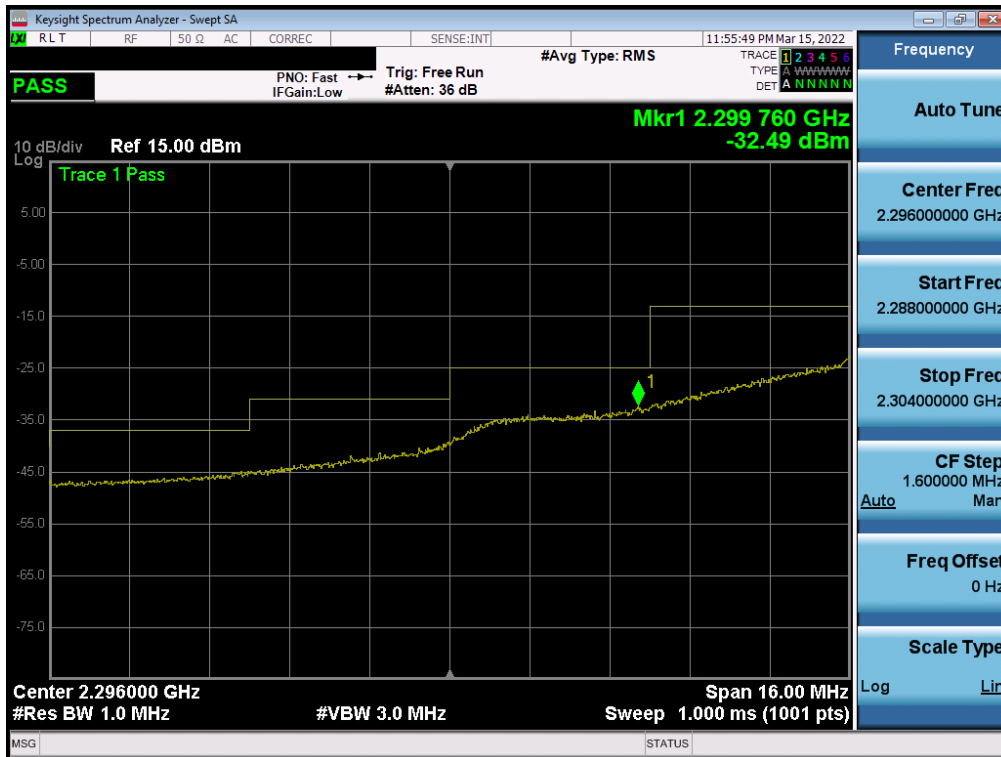
3. For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst-case configuration. All modes of operation were investigated and the worst-case configuration results are reported in this section.

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LTE Band 30 – Ant1



Plot 7-167. Lower Band Edge Plot (LTE Band 30 - 10MHz QPSK – Full RB - Ant1)

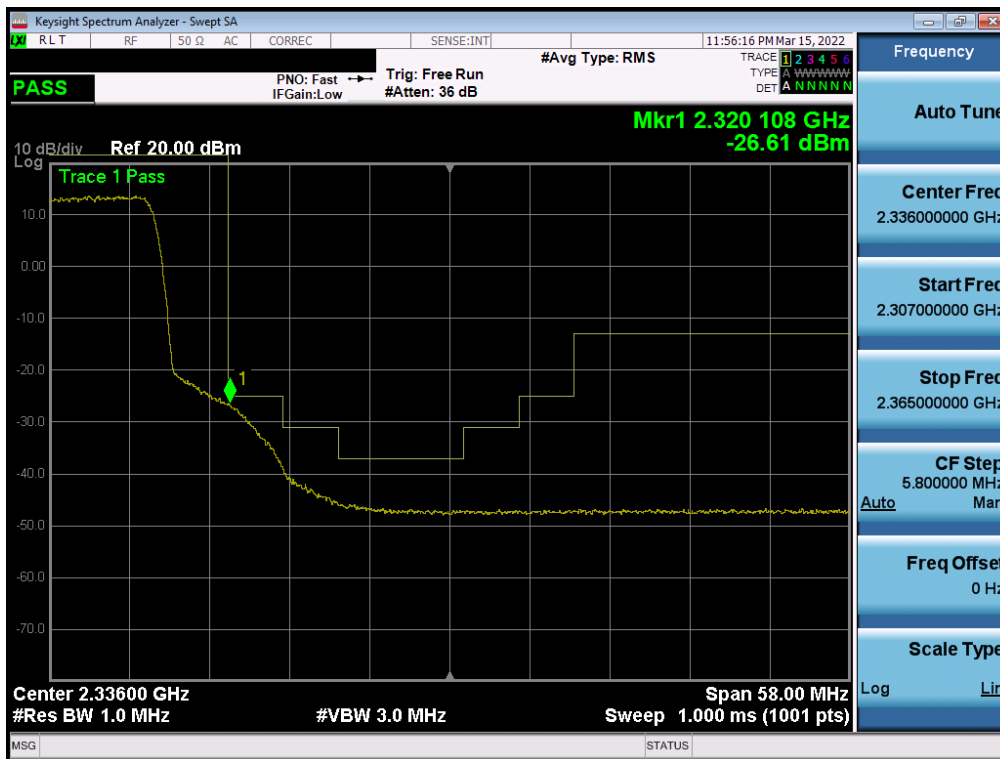


Plot 7-168. Extended Lower Band Edge Plot (LTE Band 30 - 10MHz QPSK – Full RB - Ant1)

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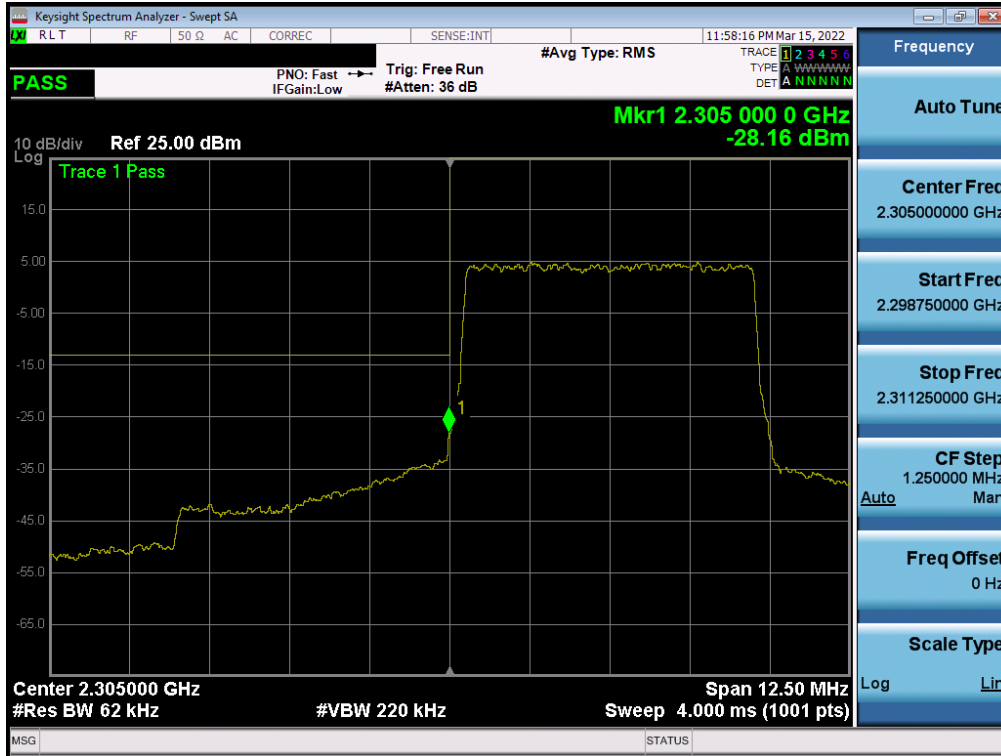


Plot 7-169. Upper Band Edge Plot (LTE Band 30 - 10MHz QPSK – Full RB - Ant1)



Plot 7-170. Extended Upper Band Edge Plot (LTE Band 30 - 10MHz QPSK – Full RB - Ant1)

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Plot 7-171. Lower Band Edge Plot (LTE Band 30 - 5MHz QPSK – Full RB - Ant1)



Plot 7-172. Extended Lower Band Edge Plot (LTE Band 30 - 5MHz QPSK – Full RB - Ant1)

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