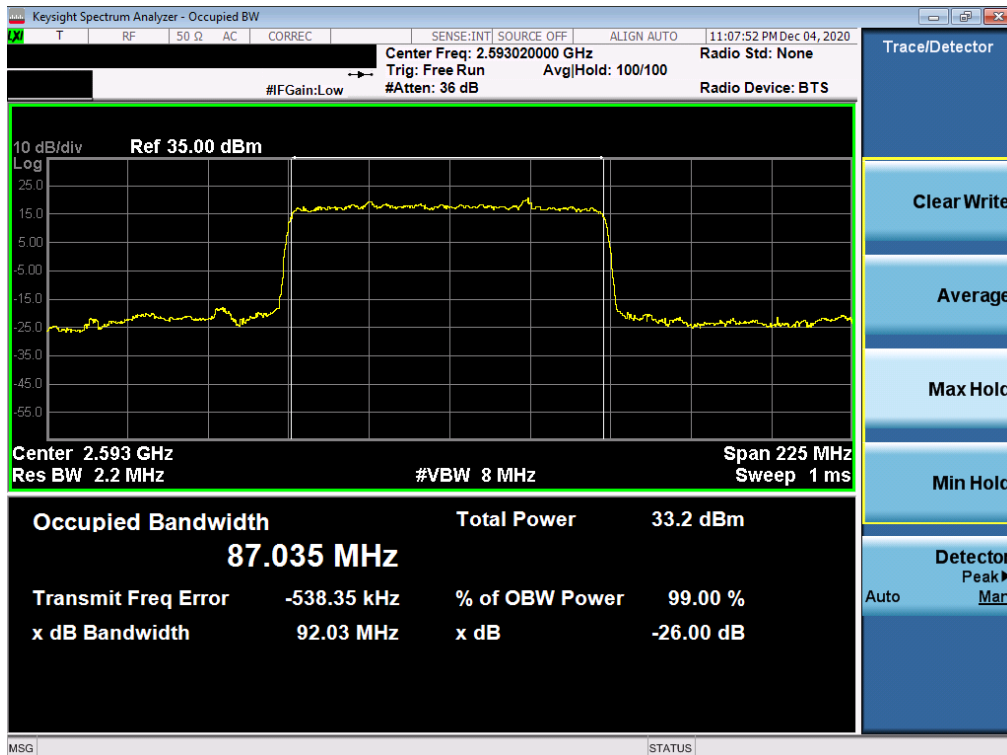
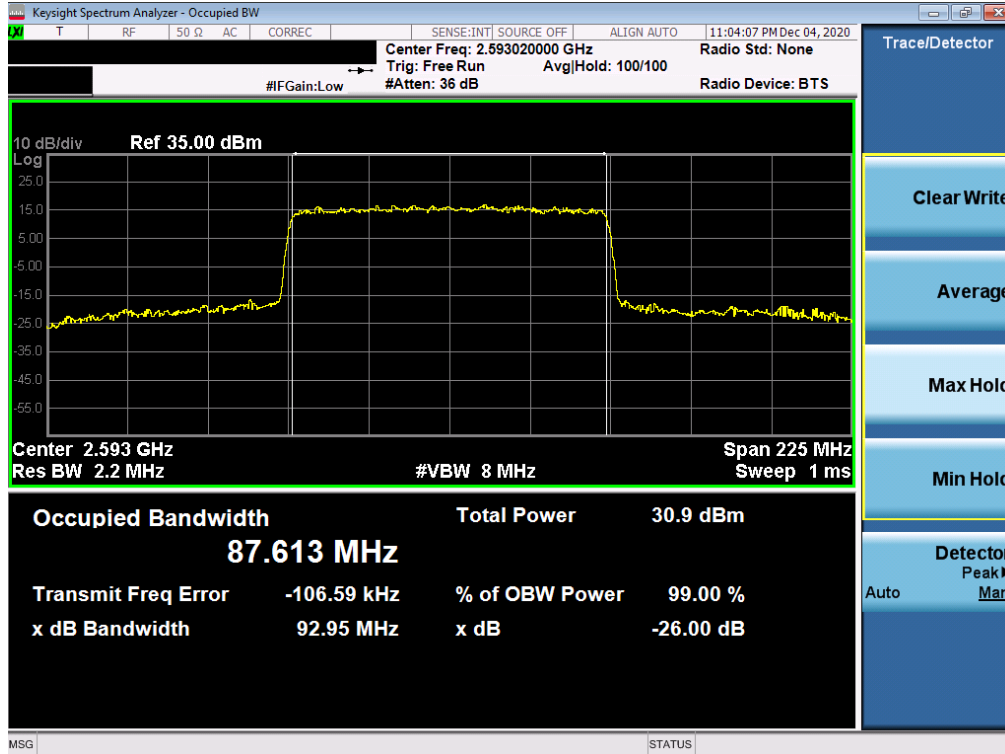


Plot 7-112. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 100MHz 256-QAM - Full RB Configuration)

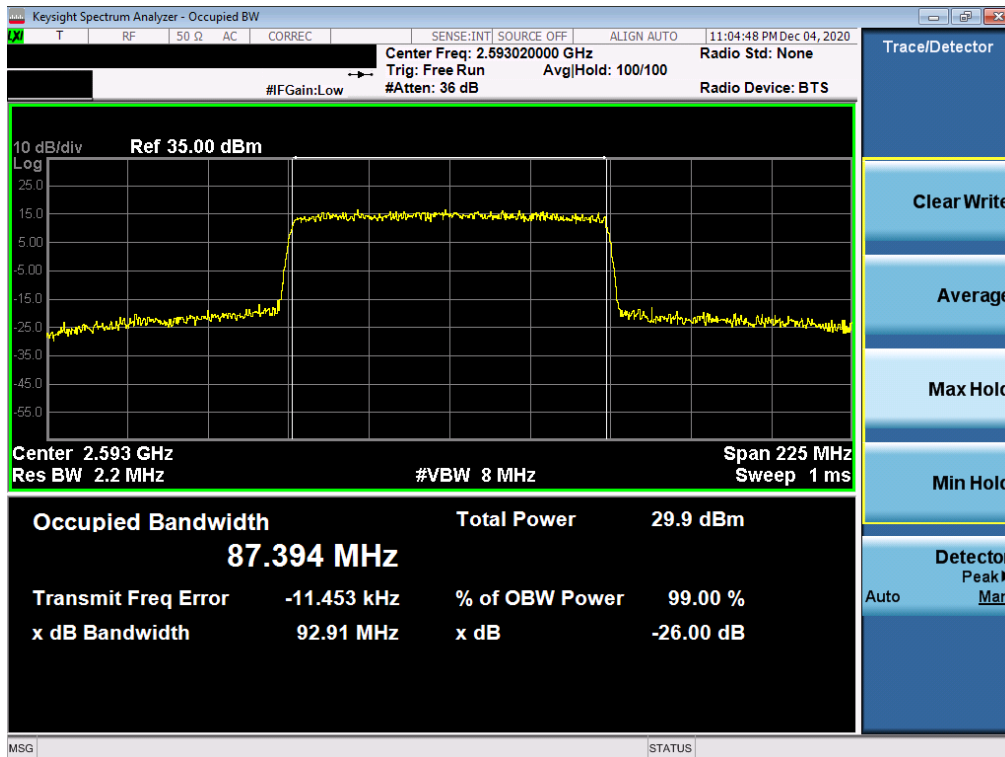


Plot 7-113. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 90MHz  $\pi/2$  BPSK - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 75 of 242

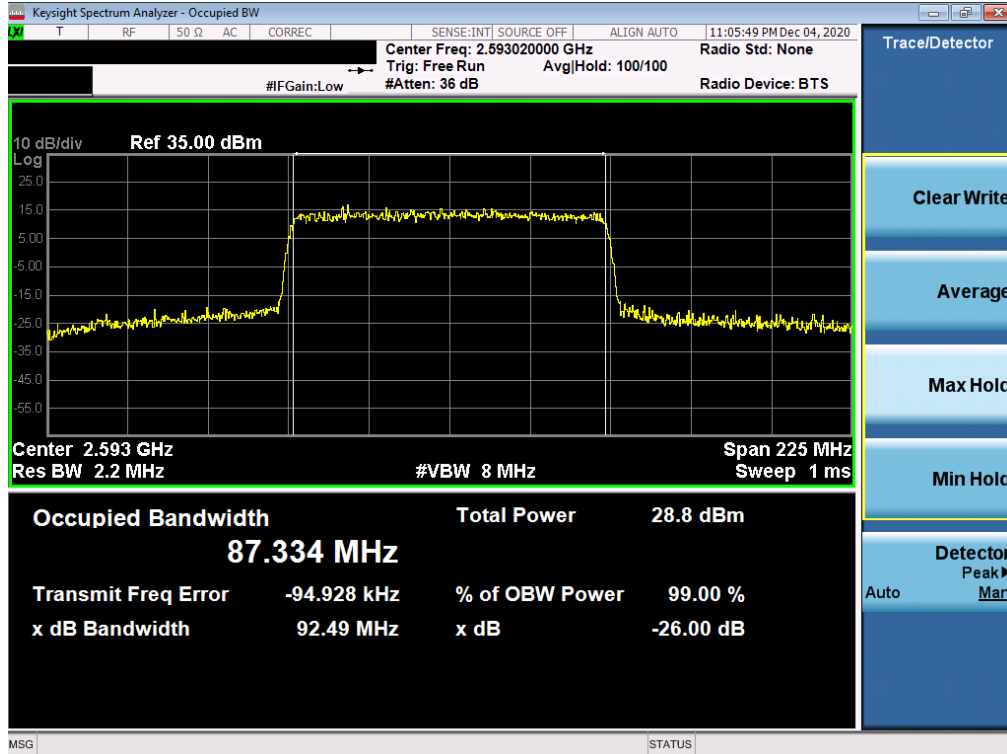


Plot 7-114. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 90MHz QPSK - Full RB Configuration)

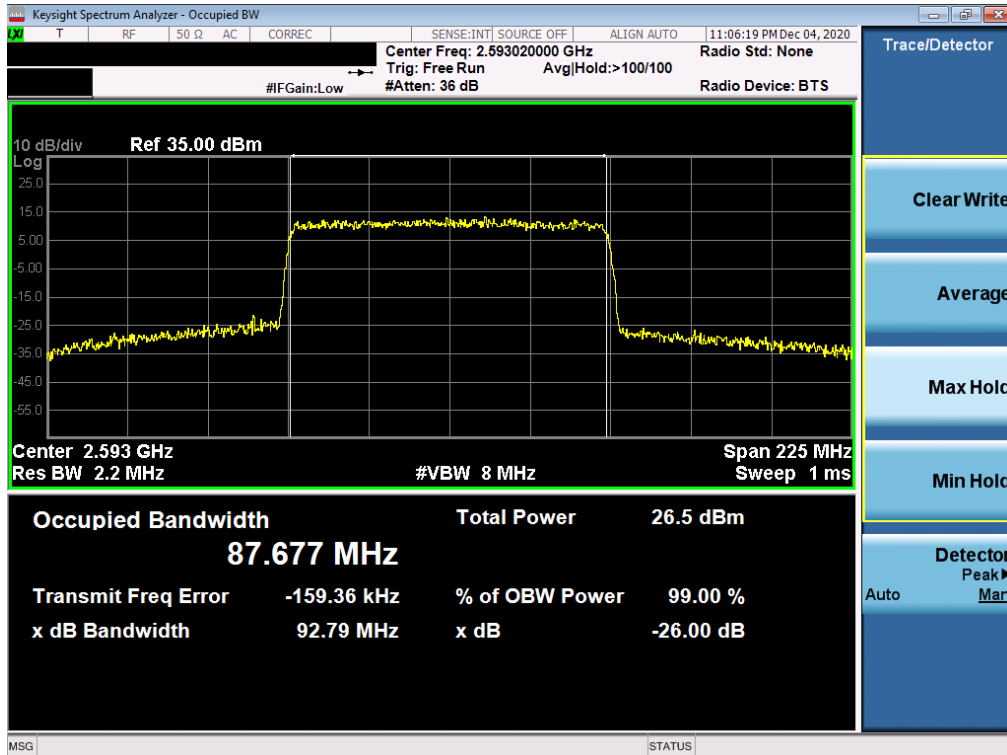


Plot 7-115. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 90MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of  element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 76 of 242

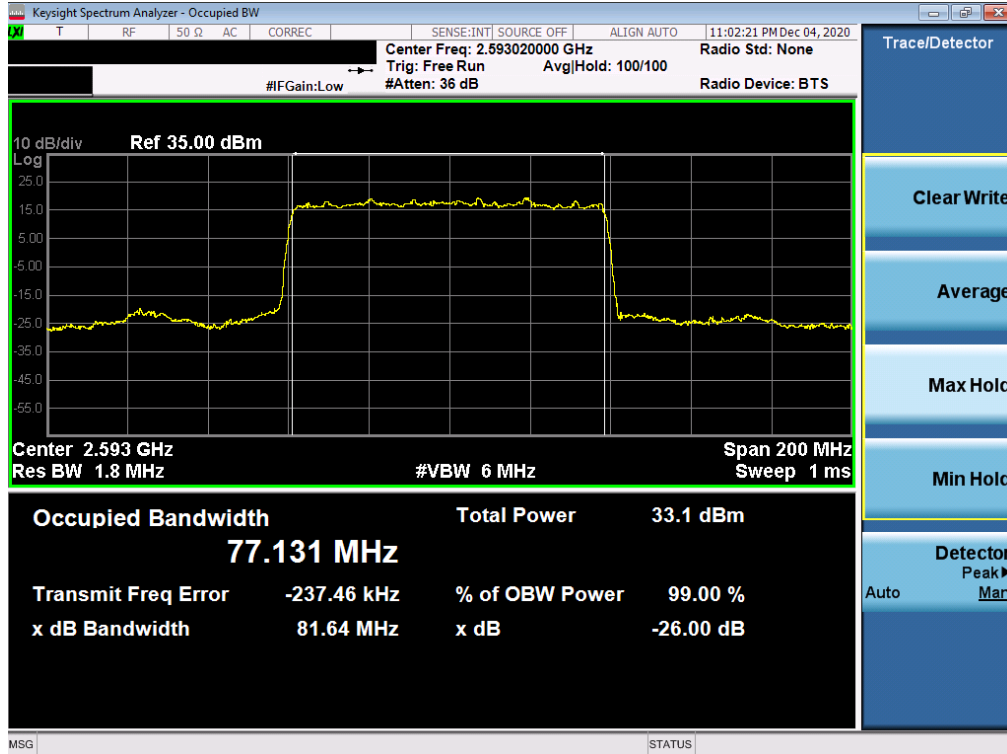


Plot 7-116. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 90MHz 64-QAM - Full RB Configuration)

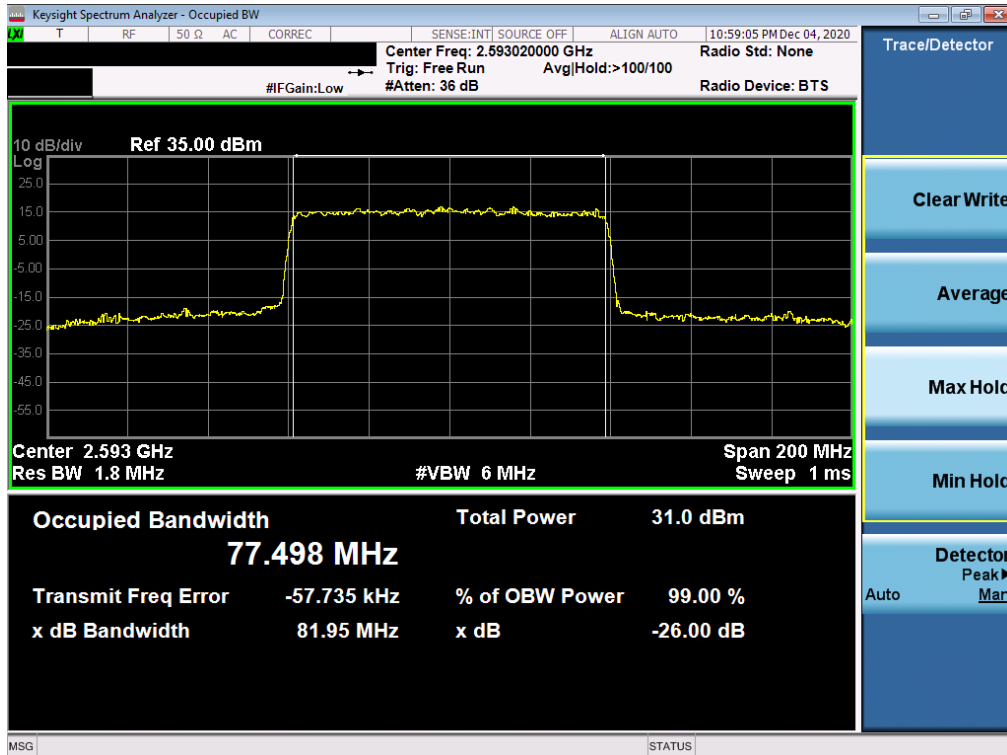


Plot 7-117. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 90MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 77 of 242

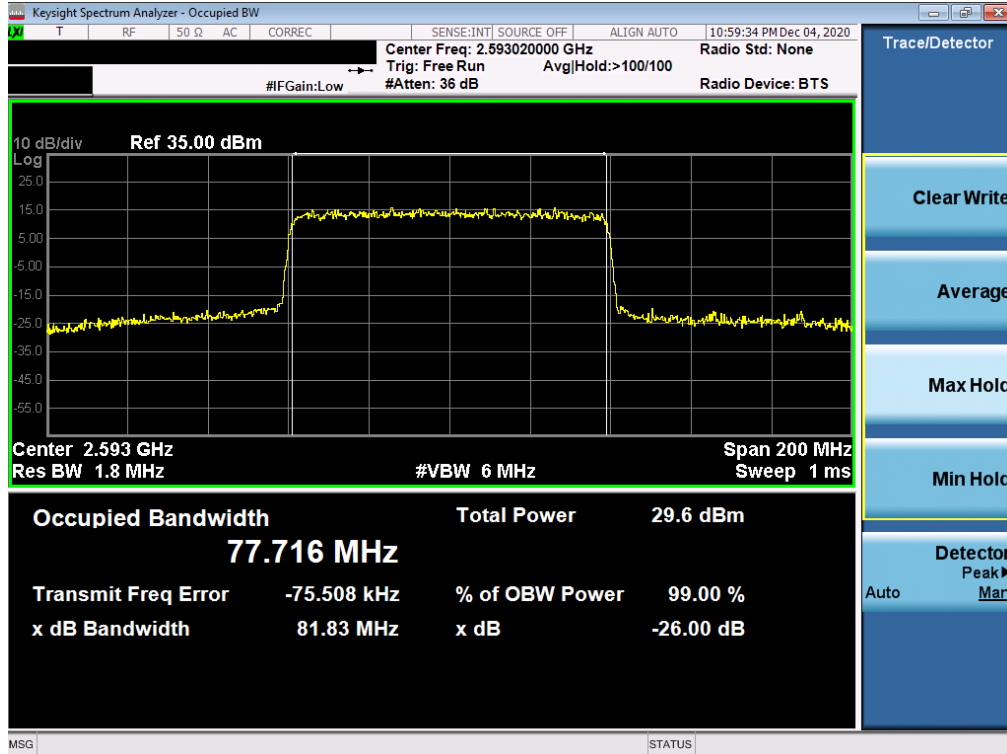


Plot 7-118. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 80MHz  $\pi/2$  BPSK - Full RB Configuration)

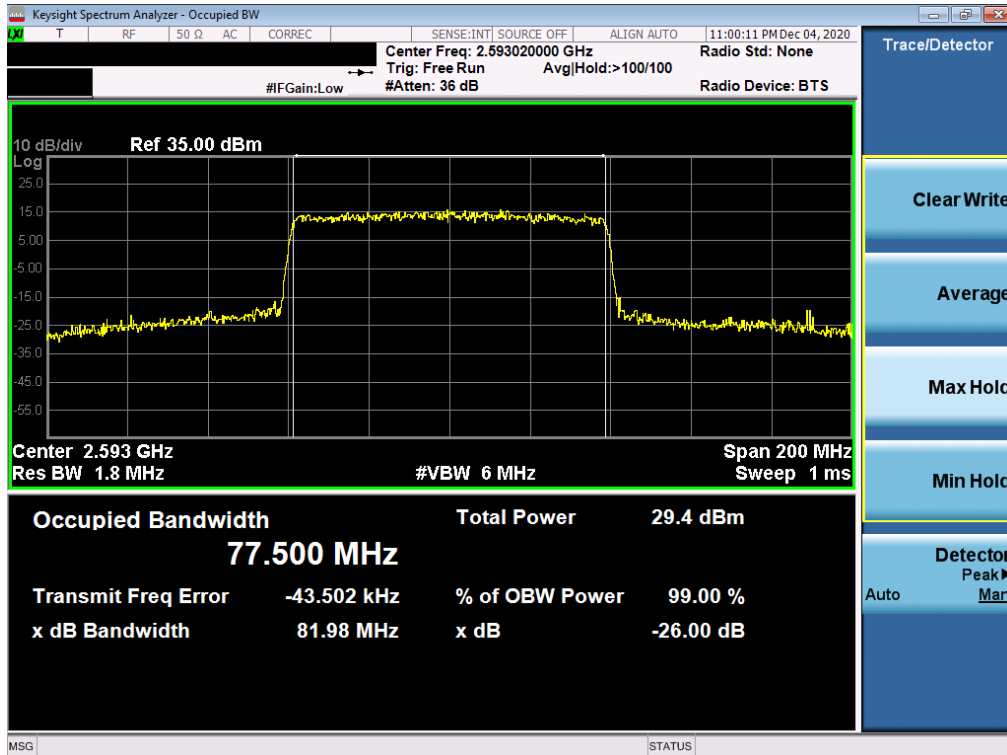


Plot 7-119. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 80MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 78 of 242

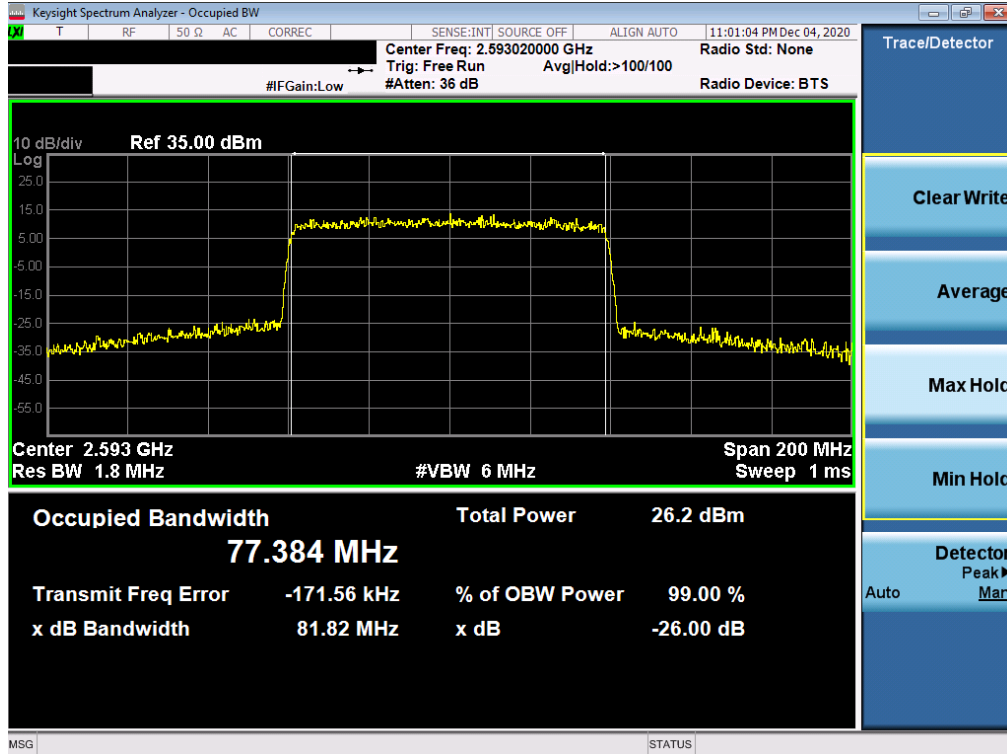


Plot 7-120. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 80MHz 16-QAM - Full RB Configuration)

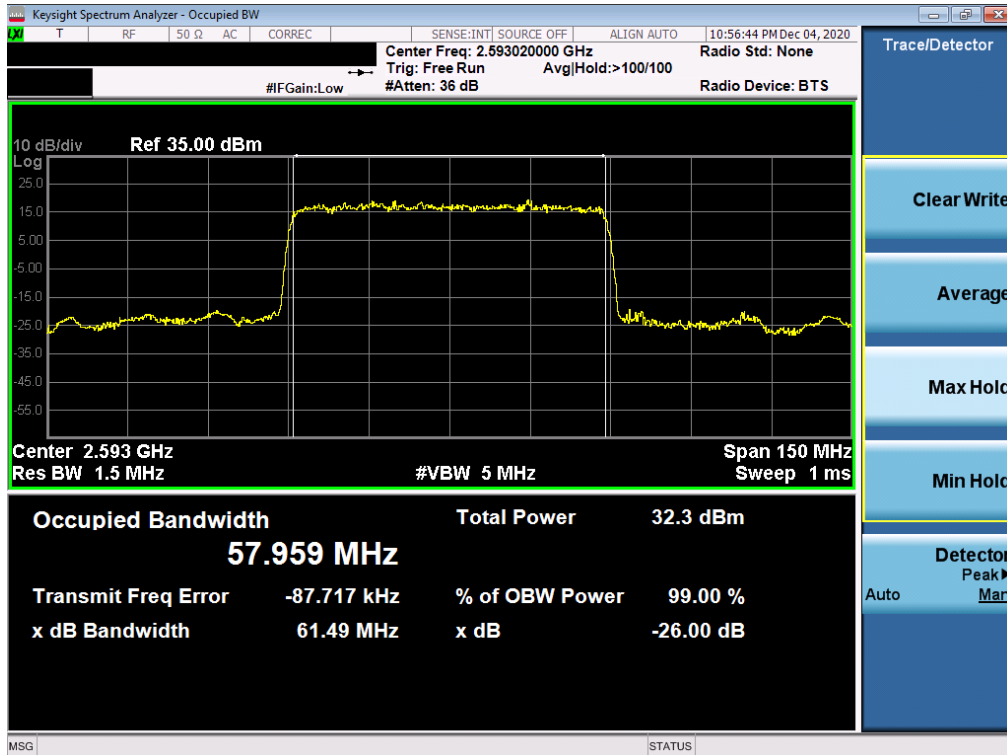


Plot 7-121. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 80MHz 64-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 79 of 242

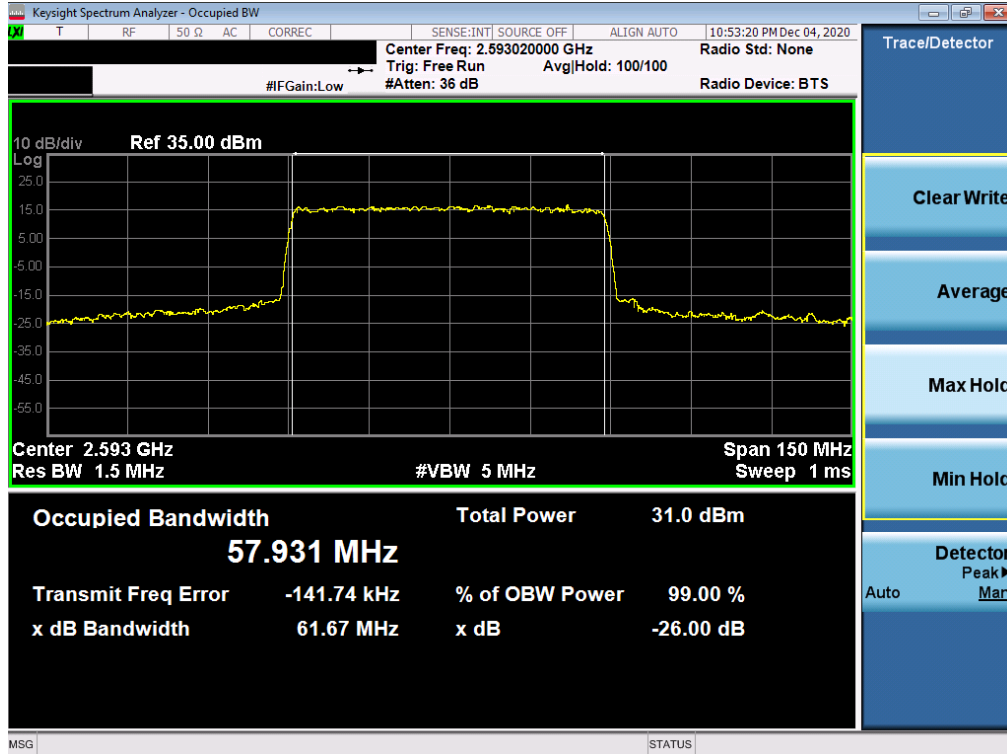


Plot 7-122. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 80MHz 256-QAM - Full RB Configuration)

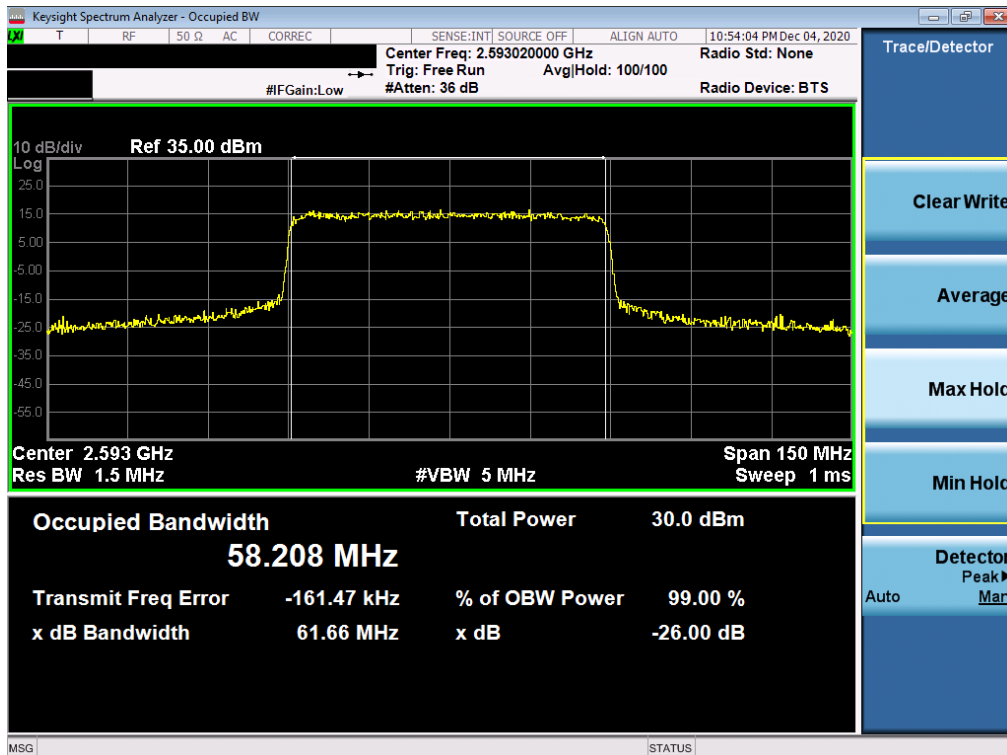


Plot 7-123. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 60MHz  $\pi/2$  BPSK - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 80 of 242



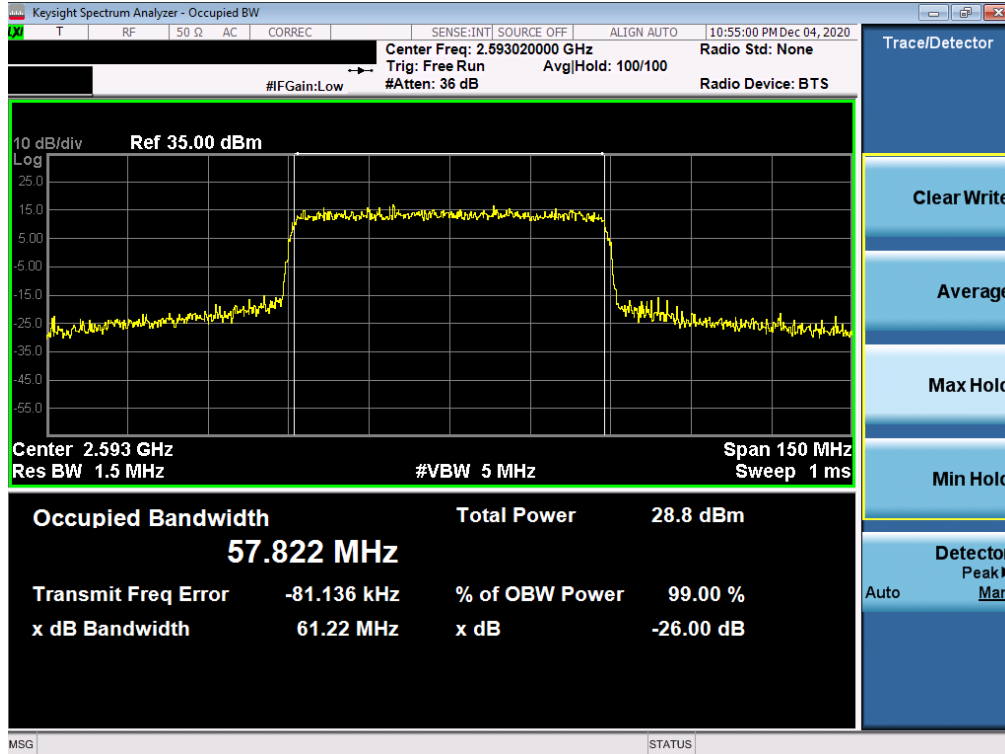
Plot 7-124. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 60MHz QPSK - Full RB Configuration)



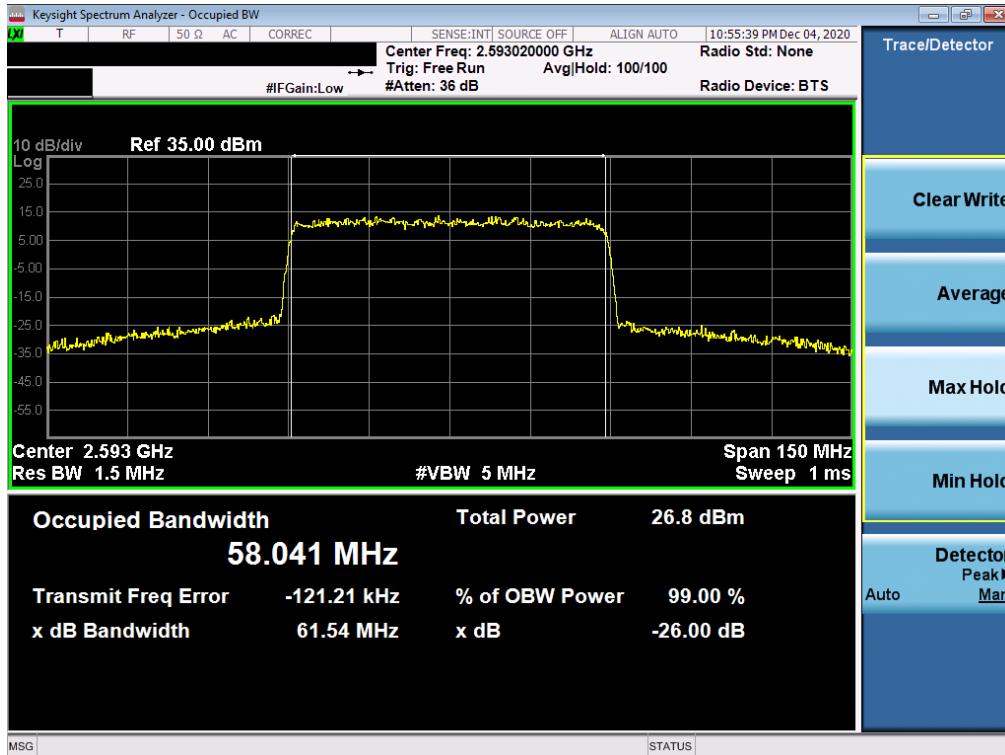
Plot 7-125. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 60MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 81 of 242





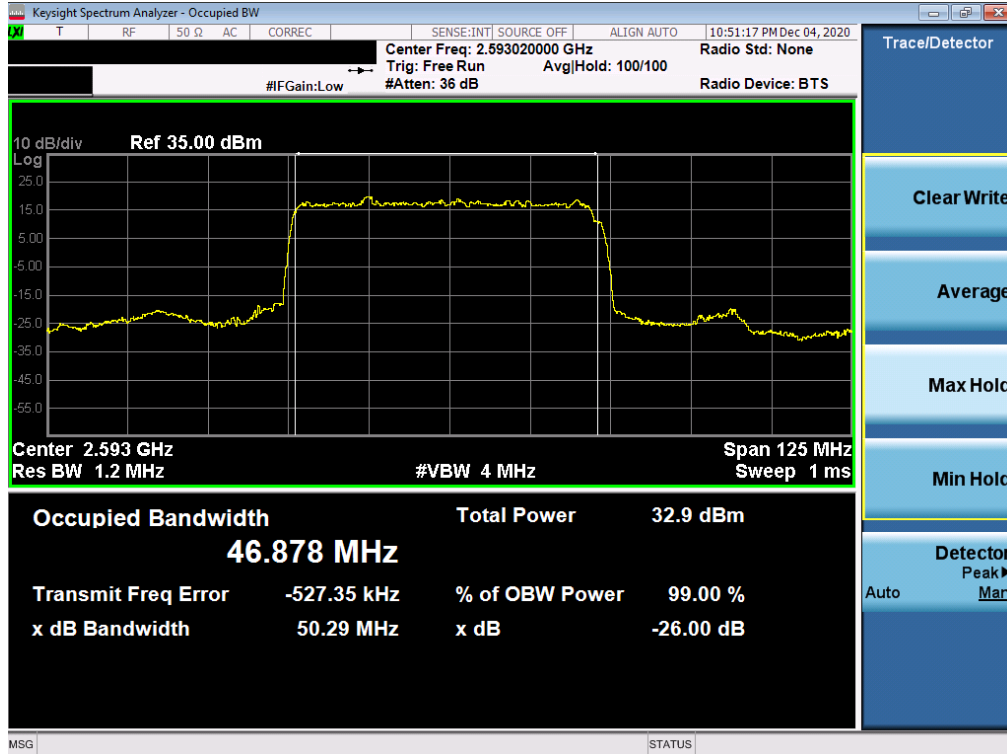
Plot 7-126. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 60MHz 64-QAM - Full RB Configuration)



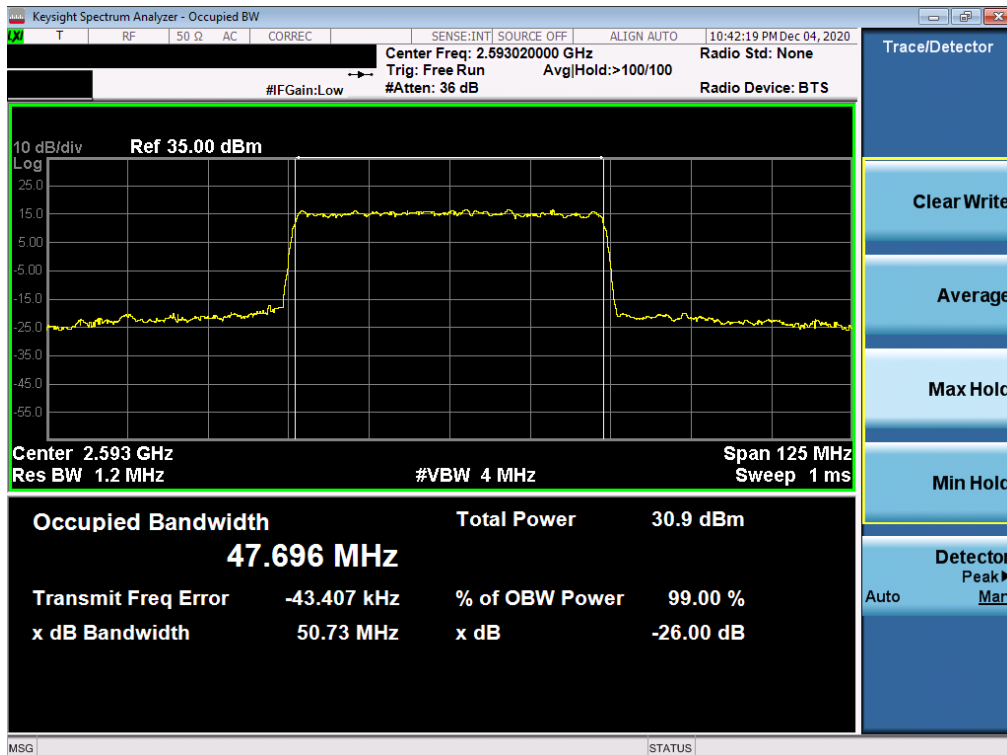
Plot 7-127. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 60MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 82 of 242



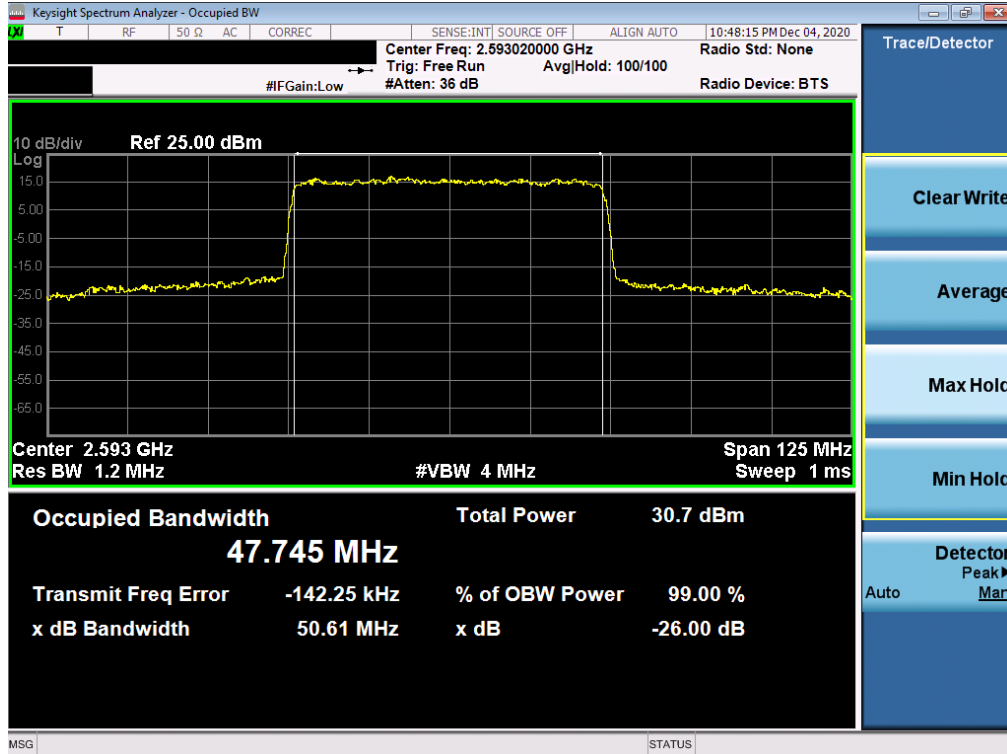


Plot 7-128. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 50MHz  $\pi/2$  BPSK - Full RB Configuration)

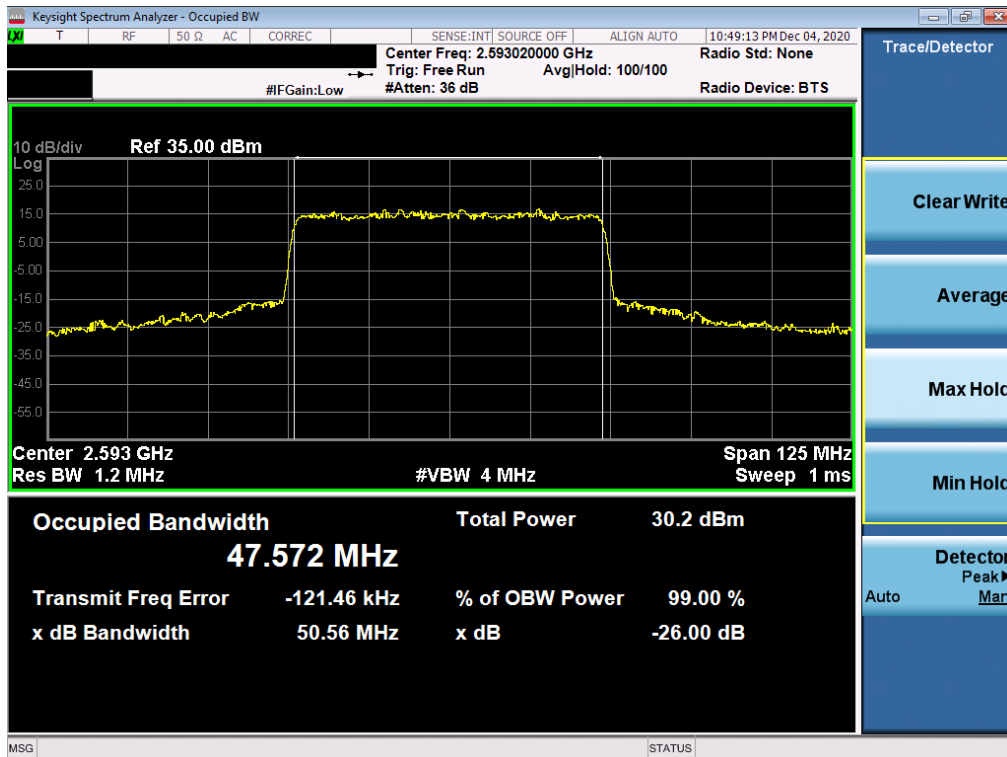


Plot 7-129. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 50MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of  element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 83 of 242

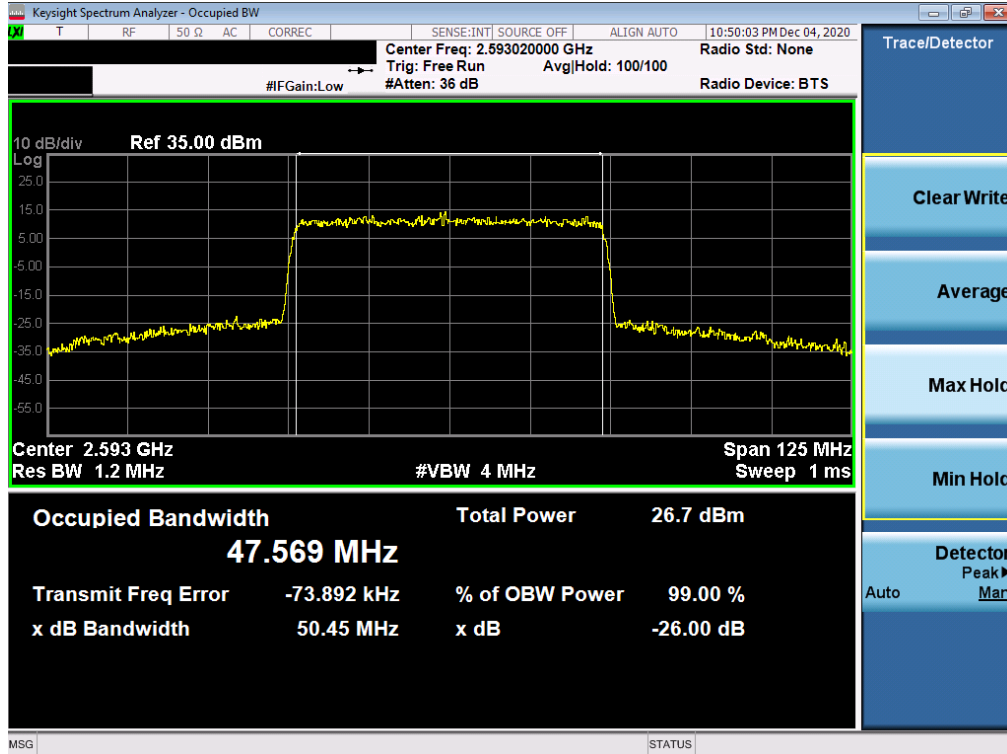


Plot 7-130. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 50MHz 16-QAM - Full RB Configuration)

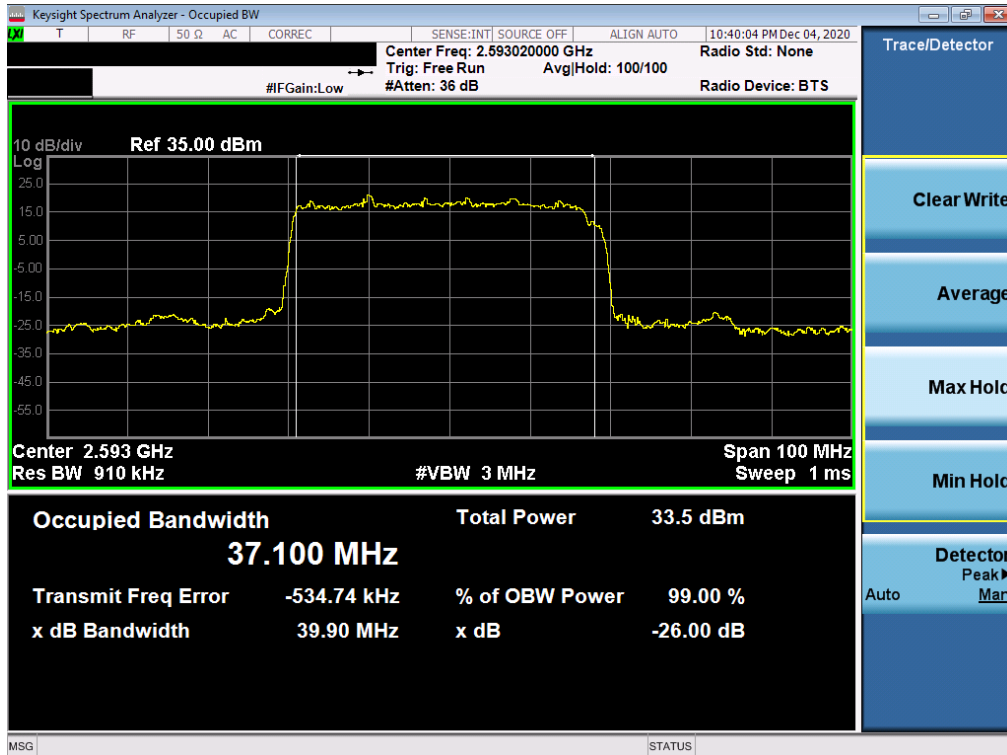


Plot 7-131. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 50MHz 64-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 84 of 242

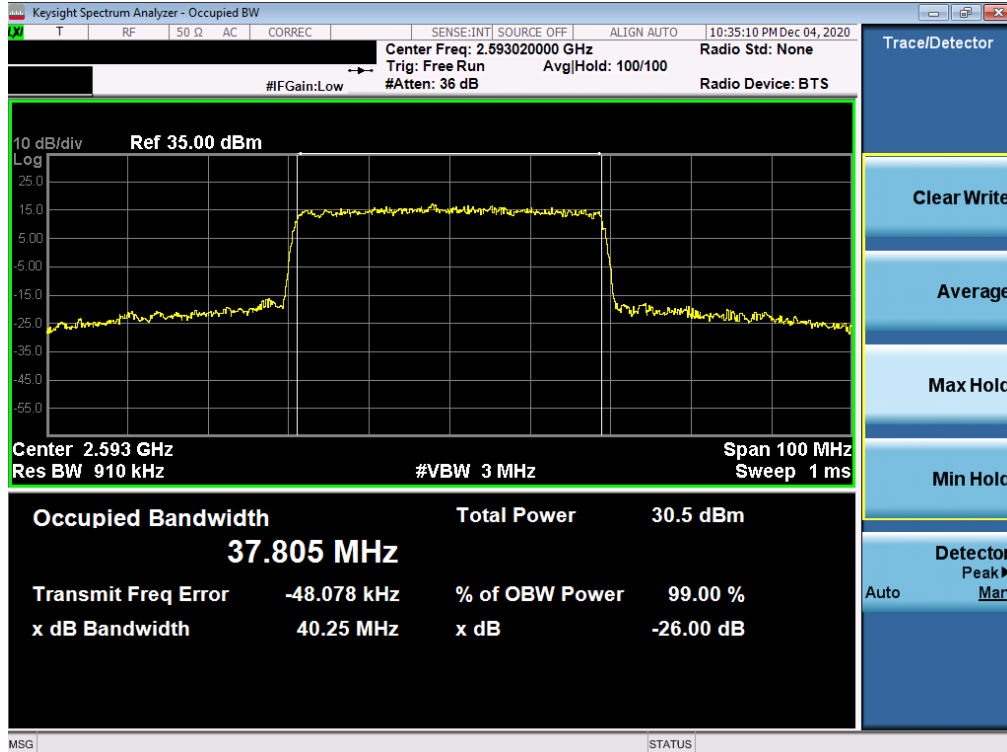


Plot 7-132. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 50MHz 256-QAM - Full RB Configuration)

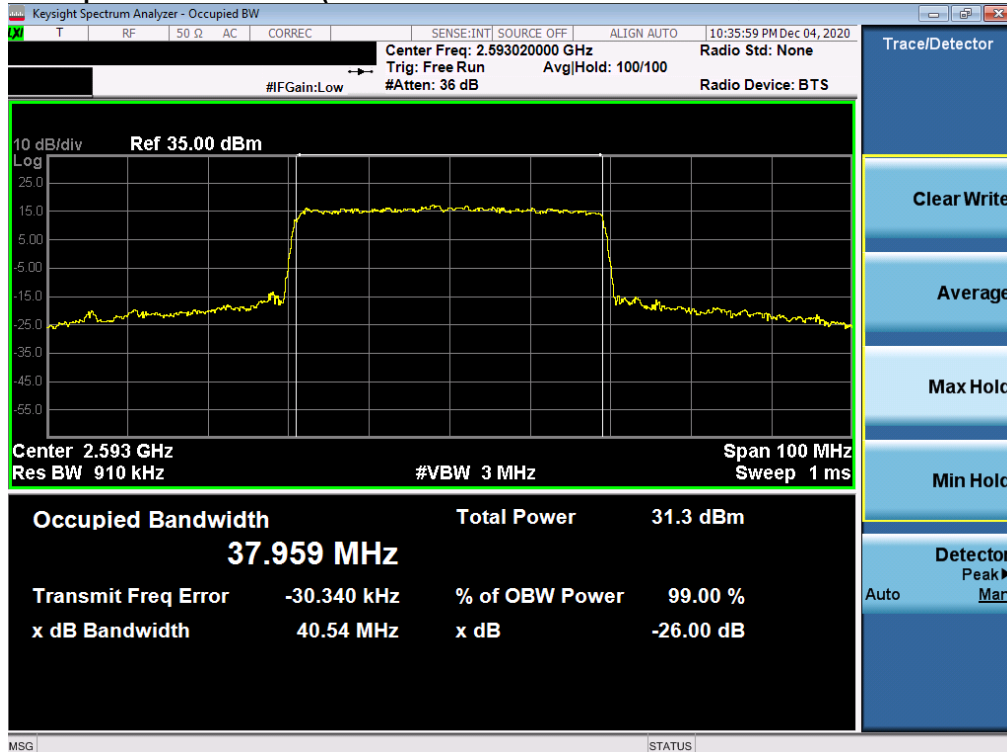


Plot 7-133. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 40MHz  $\pi/2$  BPSK - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> <small>Prout to be part of element</small>	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 85 of 242

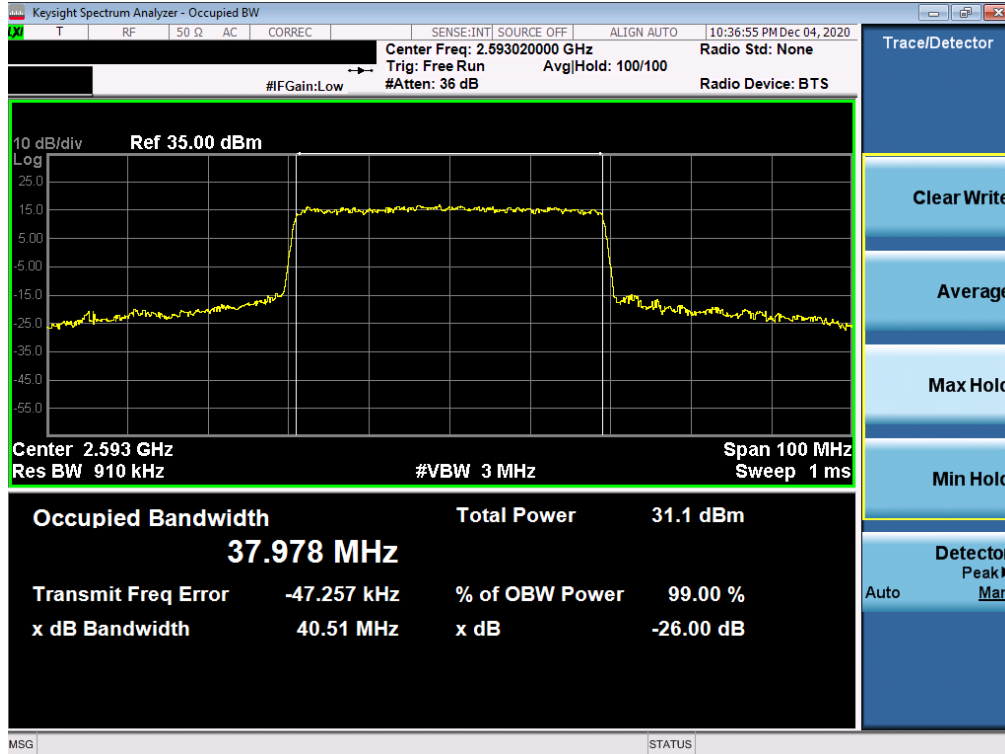


Plot 7-134. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 40MHz QPSK - Full RB Configuration)

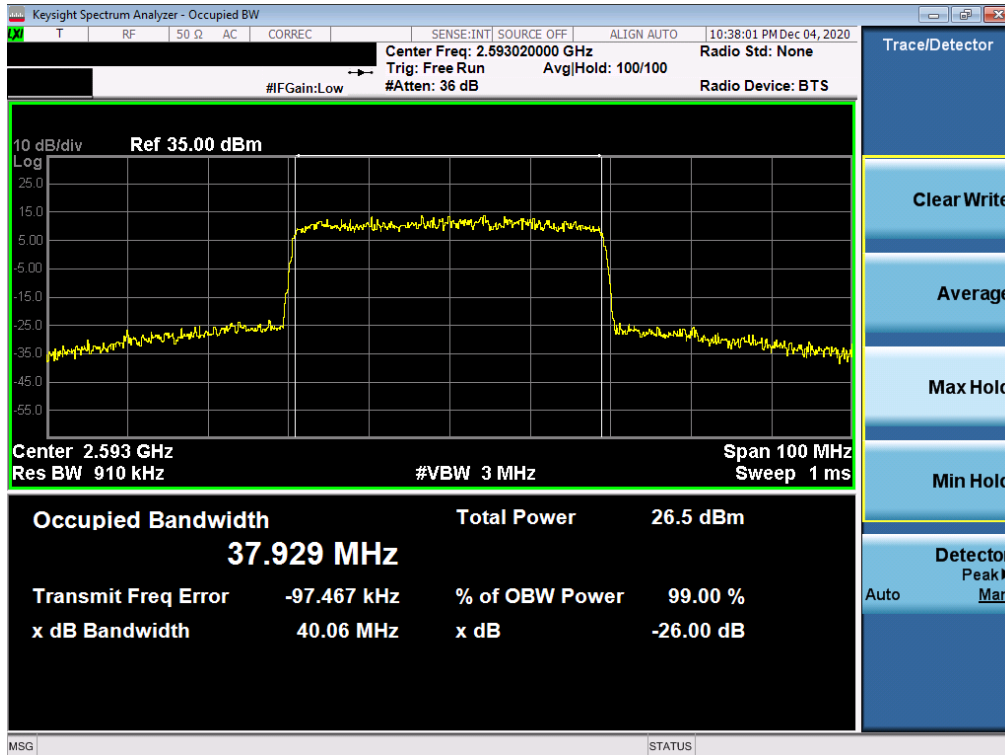


Plot 7-135. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 40MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 86 of 242

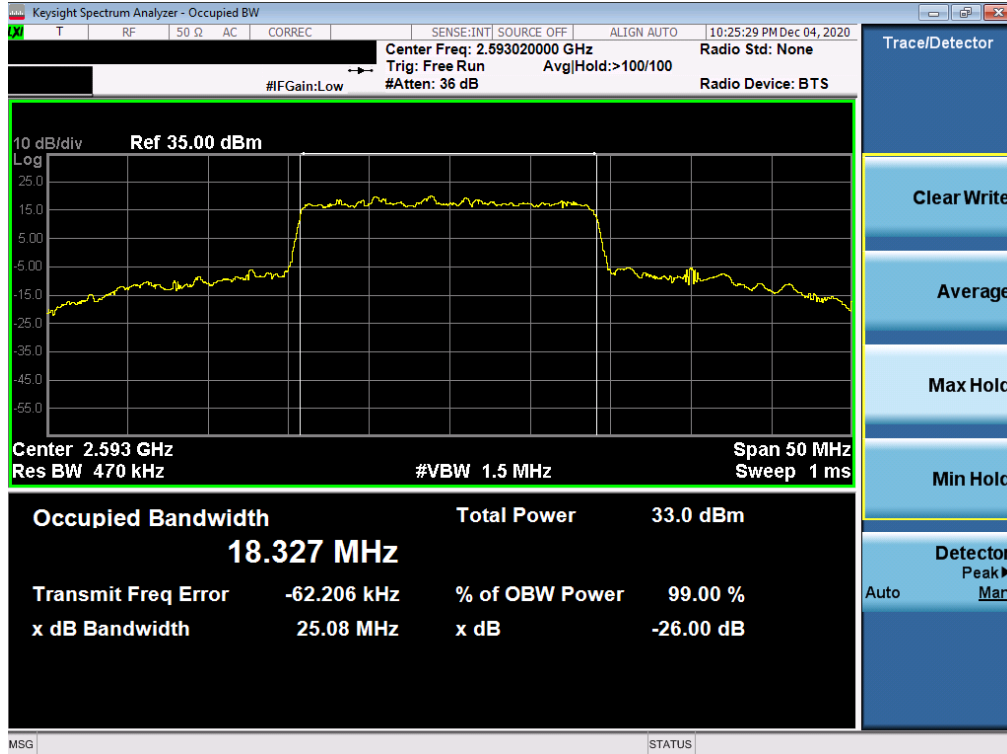


Plot 7-136. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 40MHz 64-QAM - Full RB Configuration)

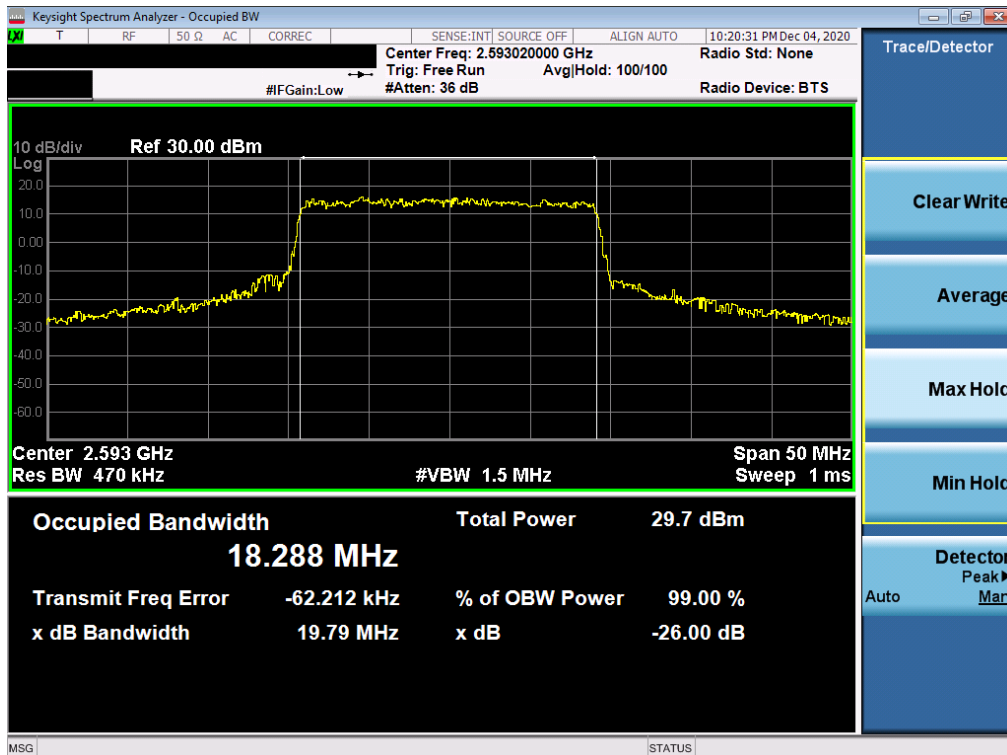


Plot 7-137. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 40MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 87 of 242

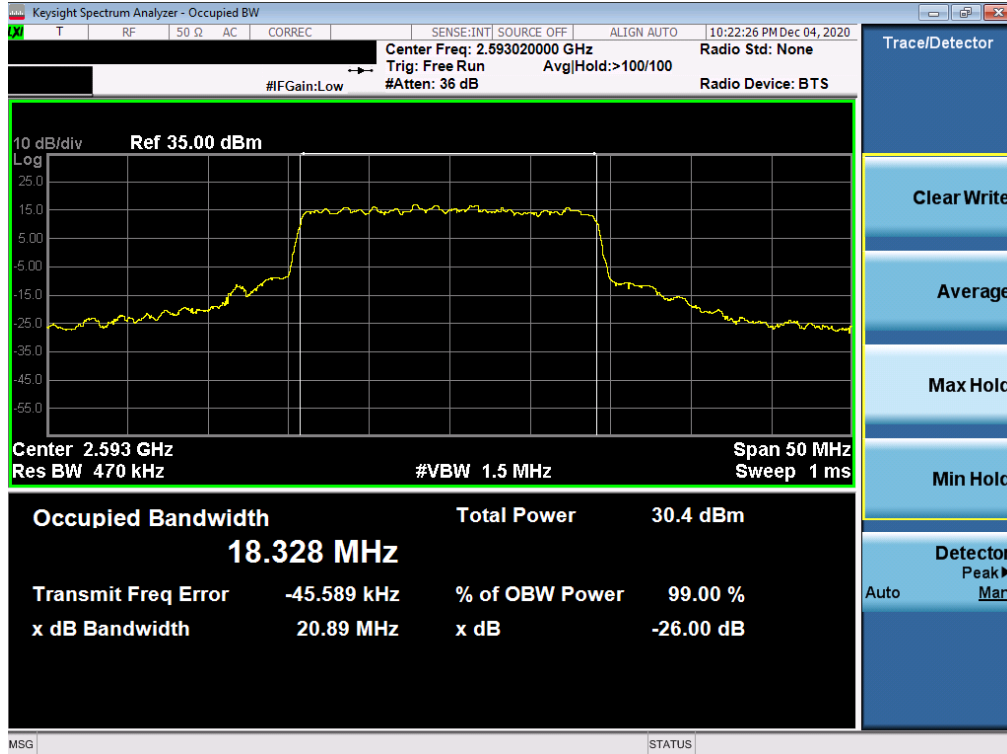


Plot 7-138. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 20MHz  $\pi/2$  BPSK - Full RB Configuration)

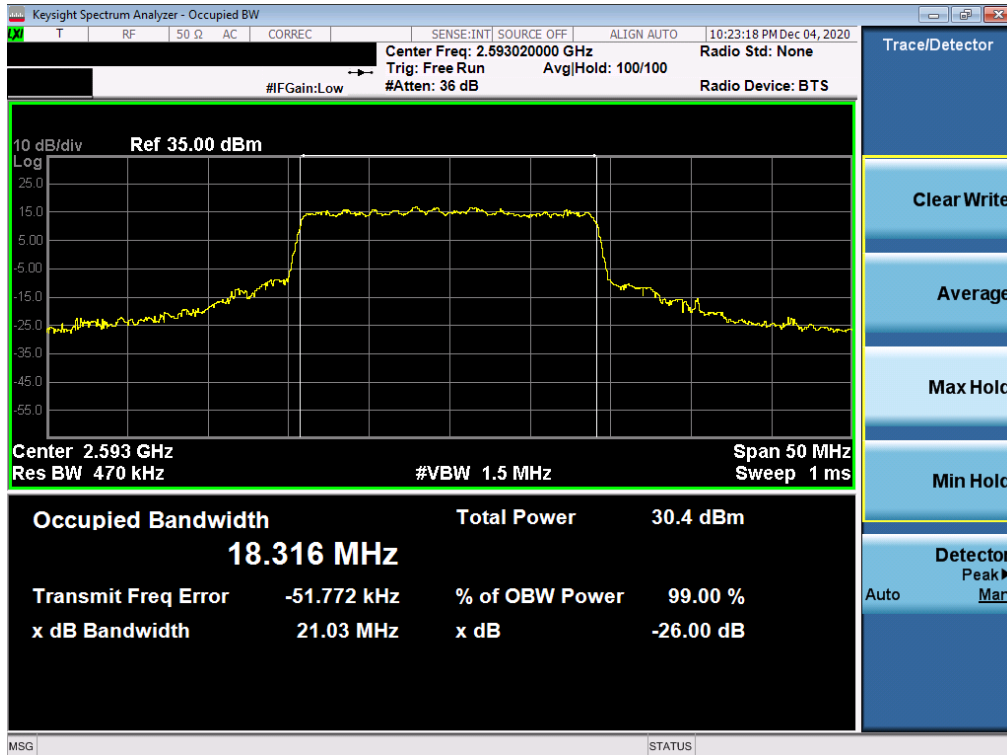


Plot 7-139. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 20MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 88 of 242



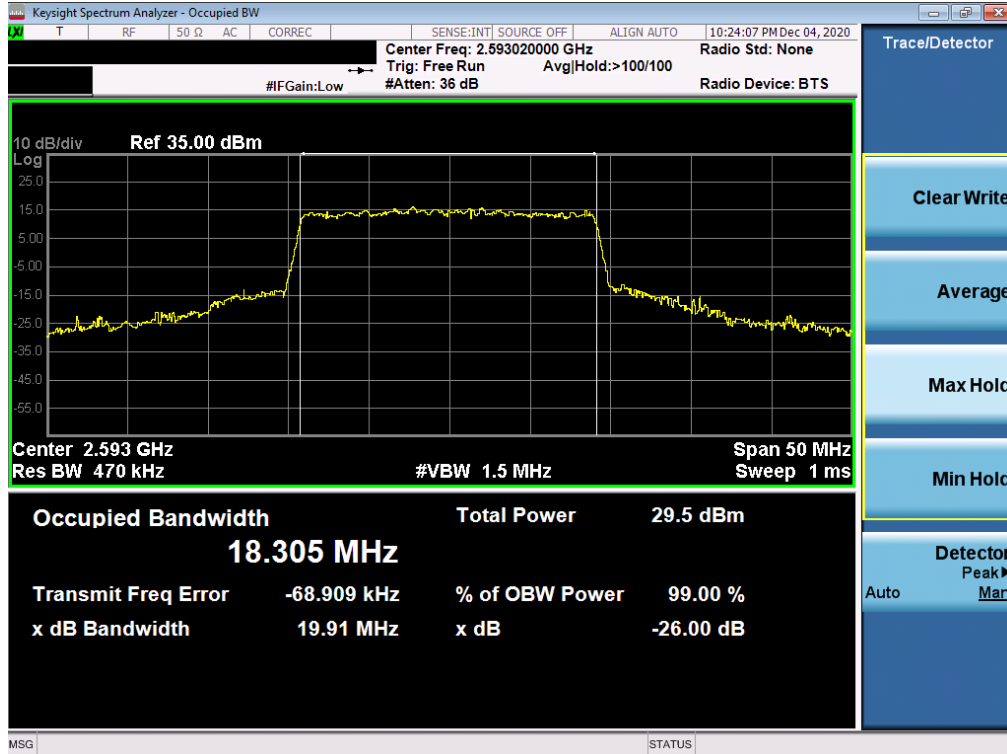
Plot 7-140. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 20MHz 16-QAM - Full RB Configuration)



Plot 7-141. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 20MHz 64-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 89 of 242

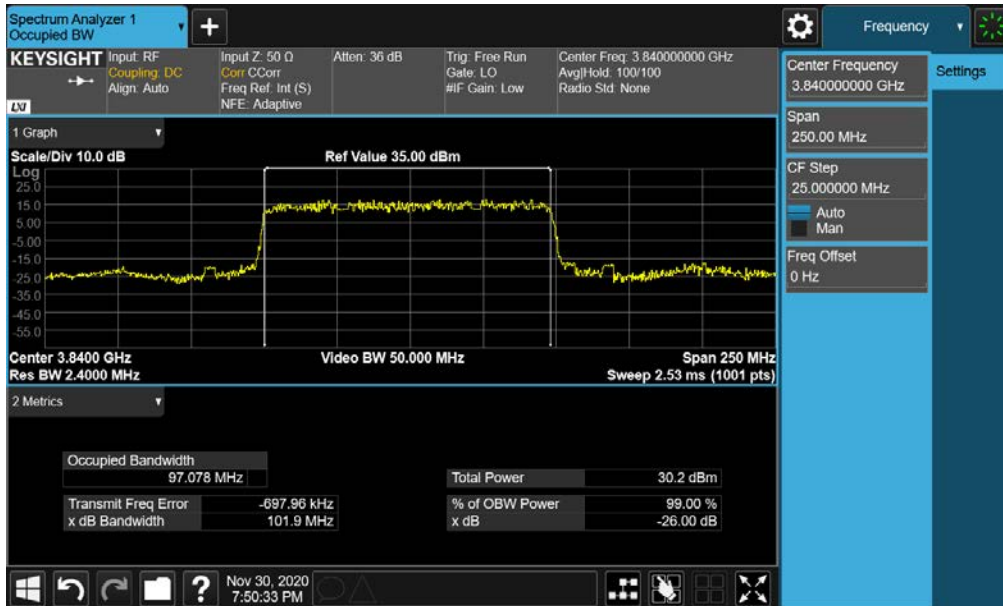




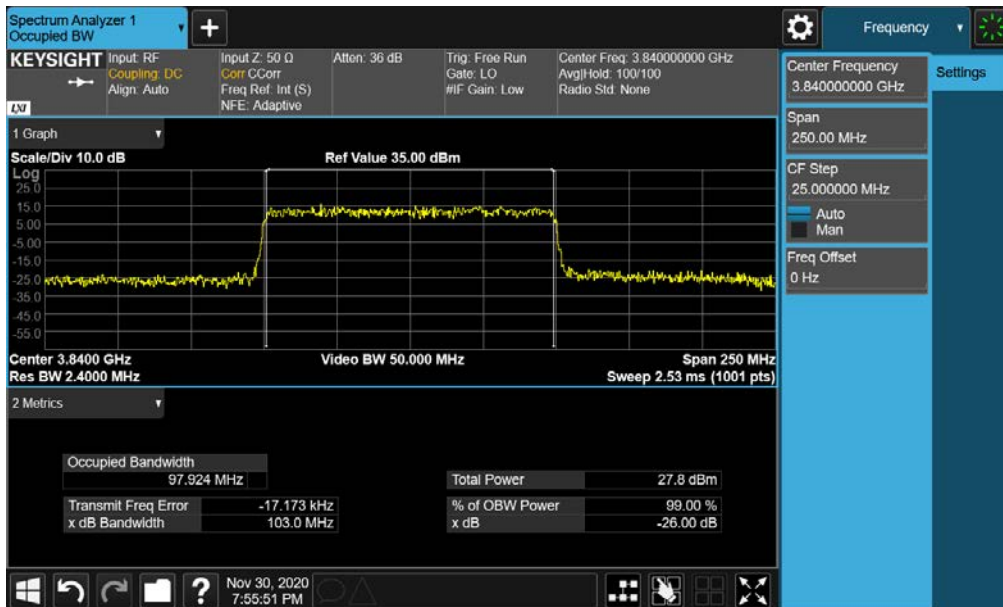
Plot 7-142. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 20MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of  element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 90 of 242

**NR Band n77**

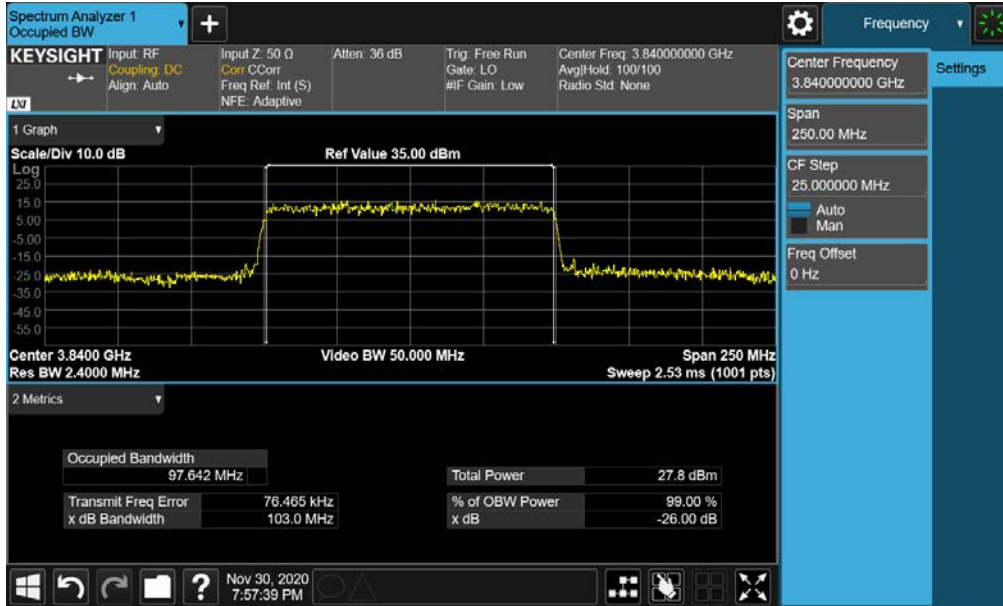


**Plot 7-143. Occupied Bandwidth Plot (NR Band n77 - 100MHz  $\pi/2$  BPSK - Full RB Configuration)**

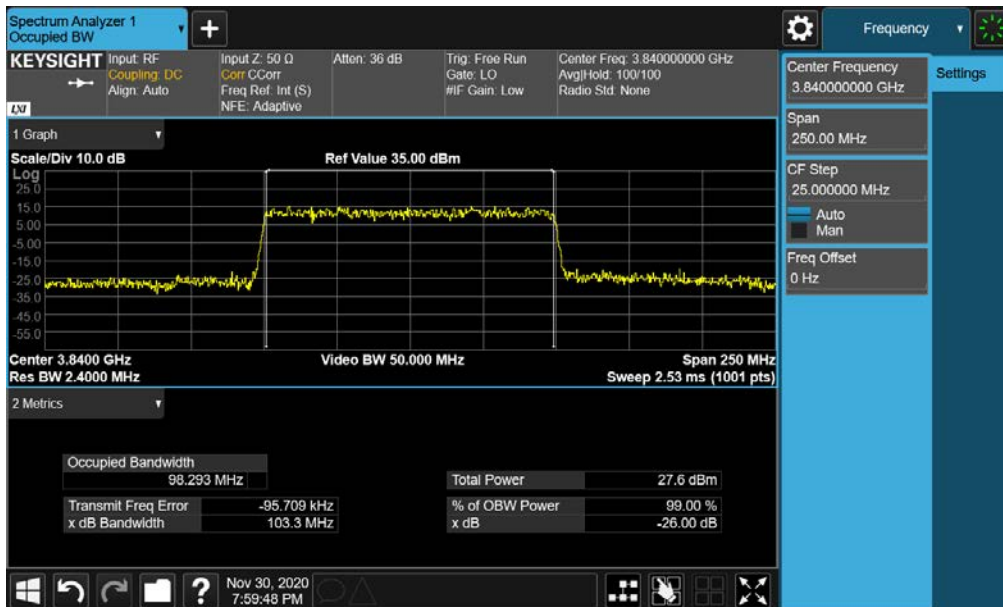


**Plot 7-144. Occupied Bandwidth Plot (NR Band n77 - 100MHz QPSK - Full RB Configuration)**

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 91 of 242

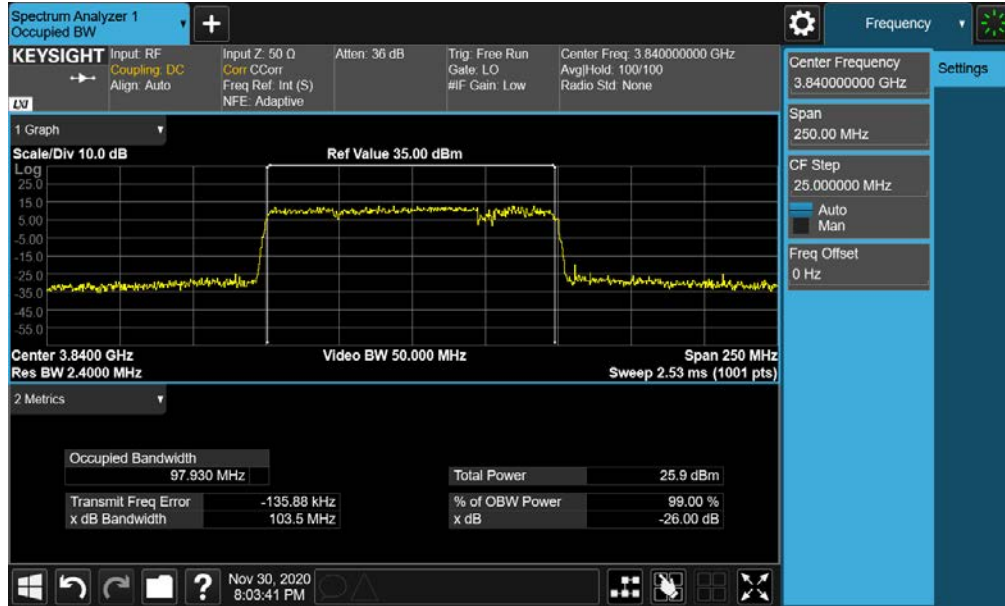


Plot 7-145. Occupied Bandwidth Plot (NR Band n77 - 100MHz 16-QAM - Full RB Configuration)

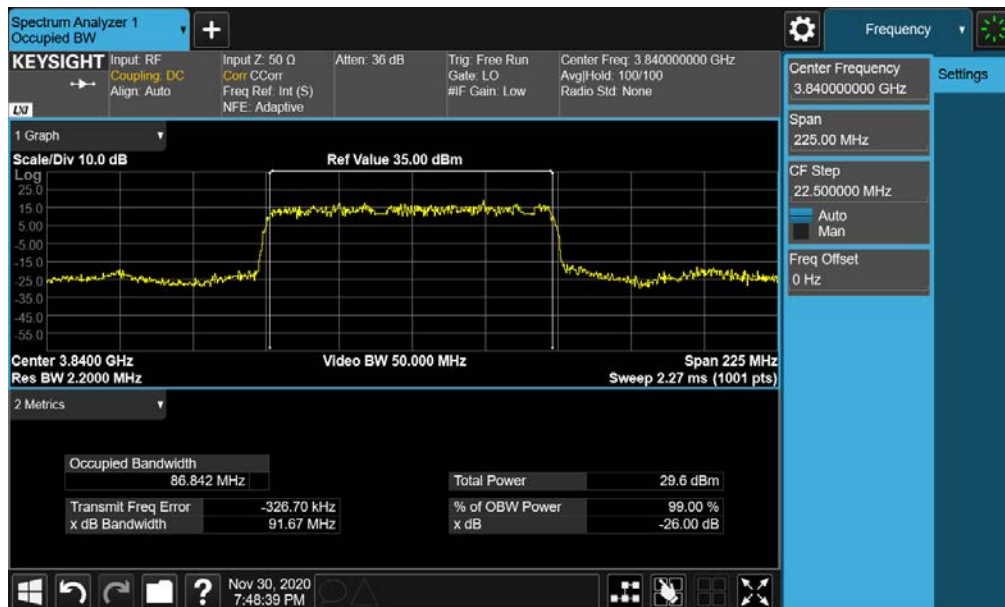


Plot 7-146. Occupied Bandwidth Plot (NR Band n77 - 100MHz 64-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of  element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 92 of 242

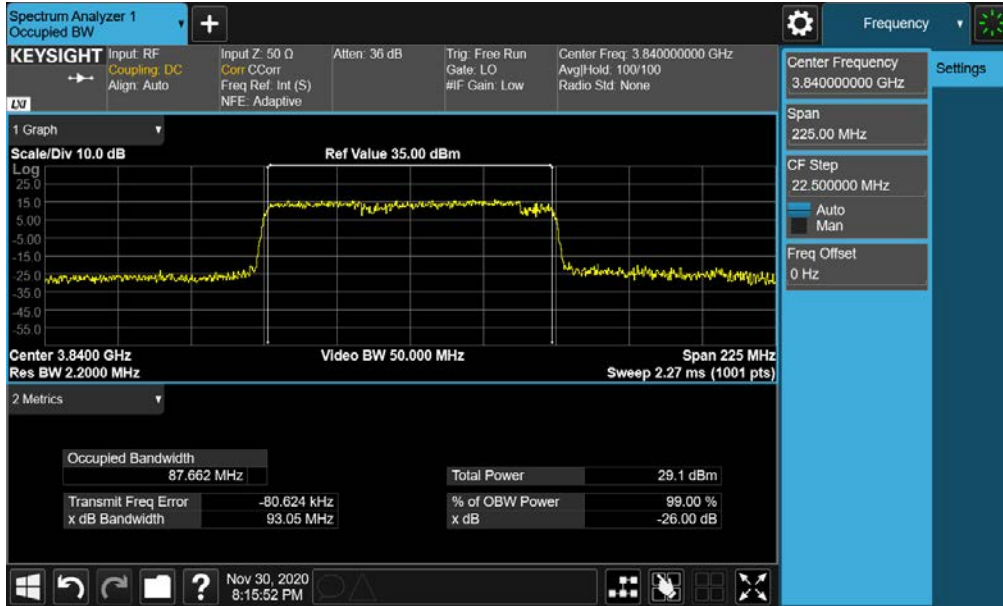


Plot 7-147. Occupied Bandwidth Plot (NR Band n77 - 100MHz 256-QAM - Full RB Configuration)

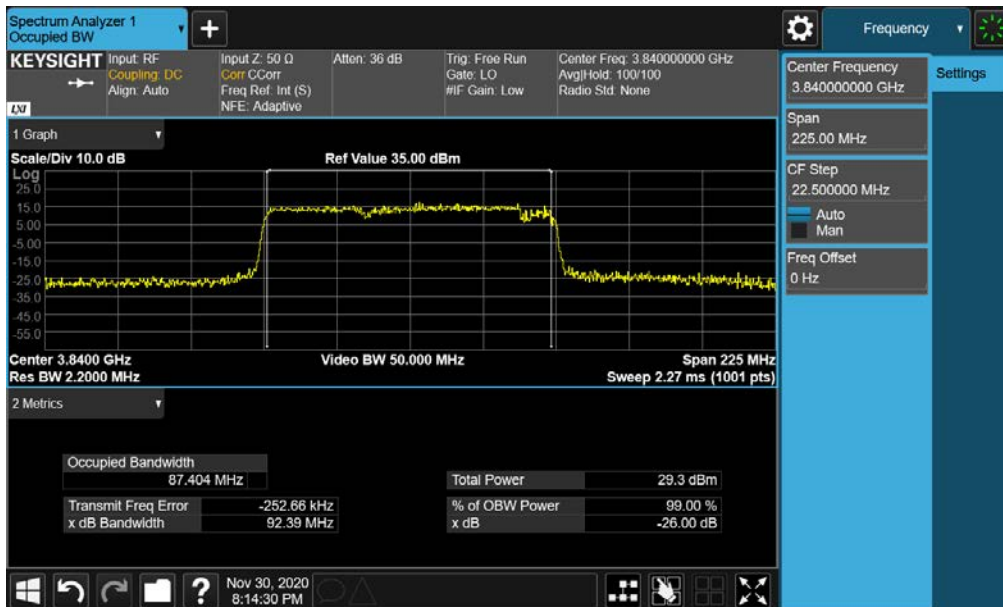


Plot 7-148. Occupied Bandwidth Plot (NR Band n77 - 90MHz  $\pi/2$  BPSK - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 93 of 242



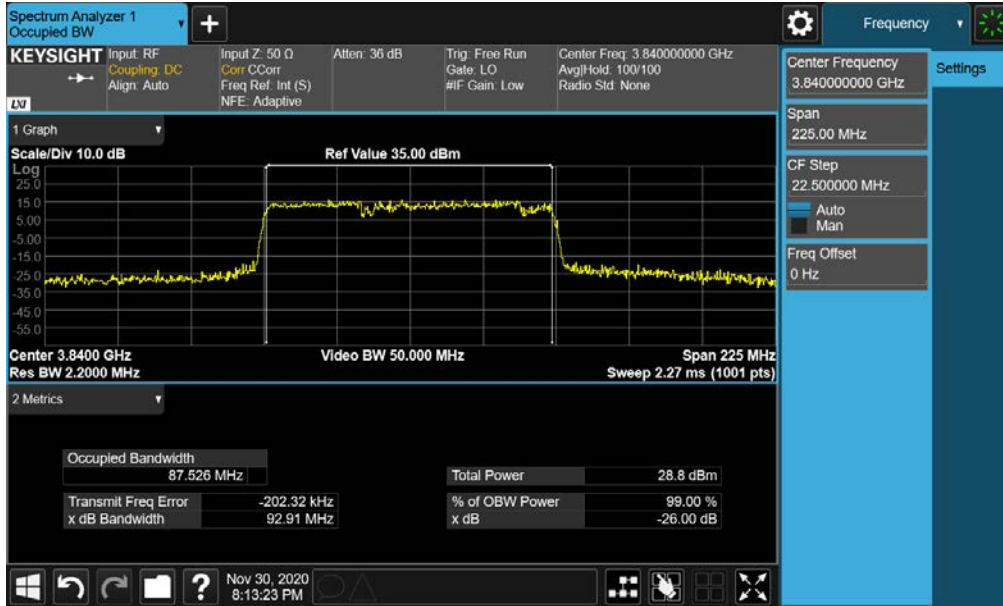
Plot 7-149. Occupied Bandwidth Plot (NR Band n77 - 90MHz QPSK - Full RB Configuration)



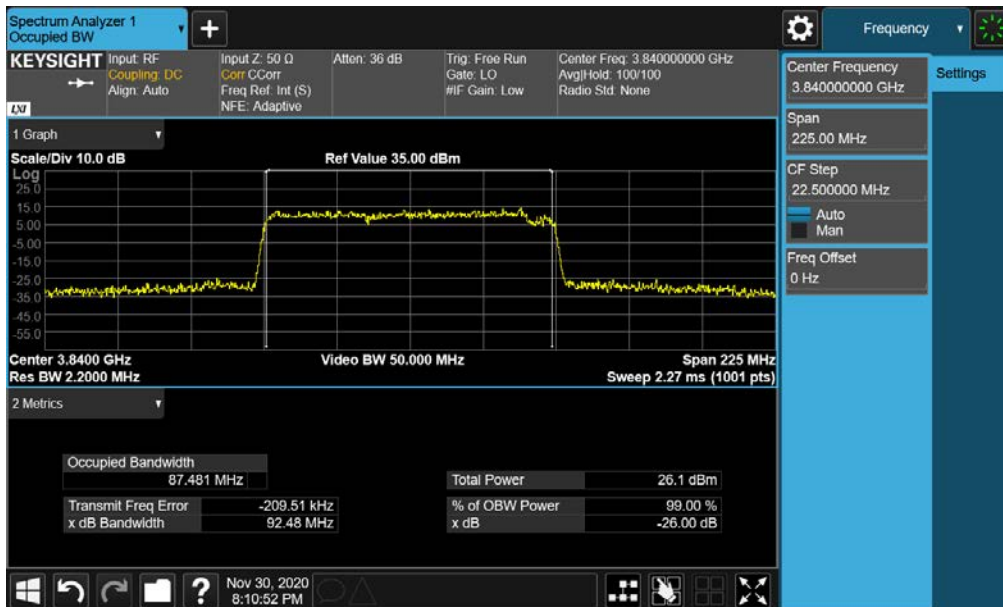
Plot 7-150. Occupied Bandwidth Plot (NR Band n77 - 90MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> <small>Product to be part of</small>	<b>PART 27 MEASUREMENT REPORT</b>	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 94 of 242



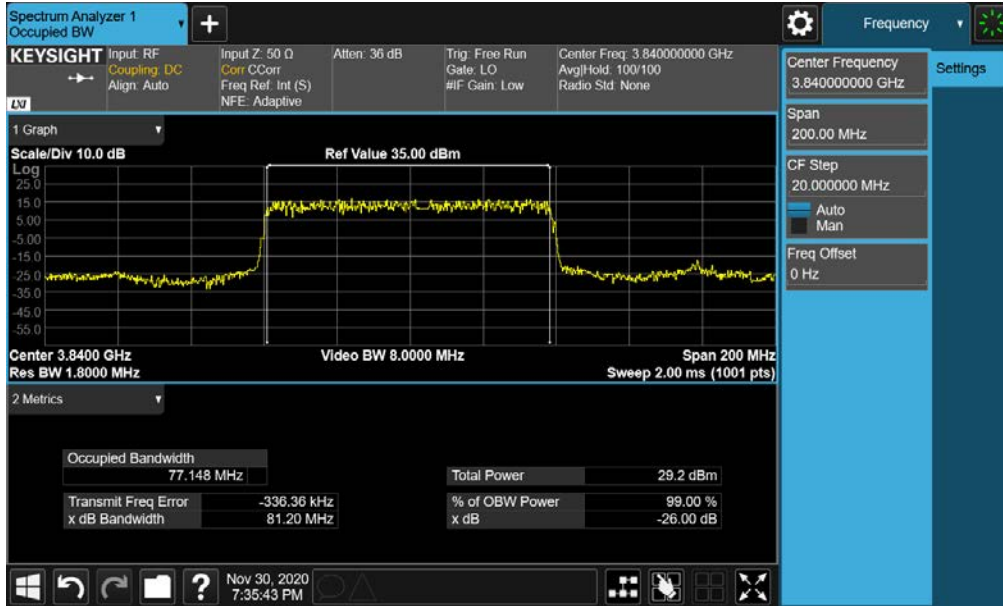


Plot 7-151. Occupied Bandwidth Plot (NR Band n77 - 90MHz 64-QAM - Full RB Configuration)

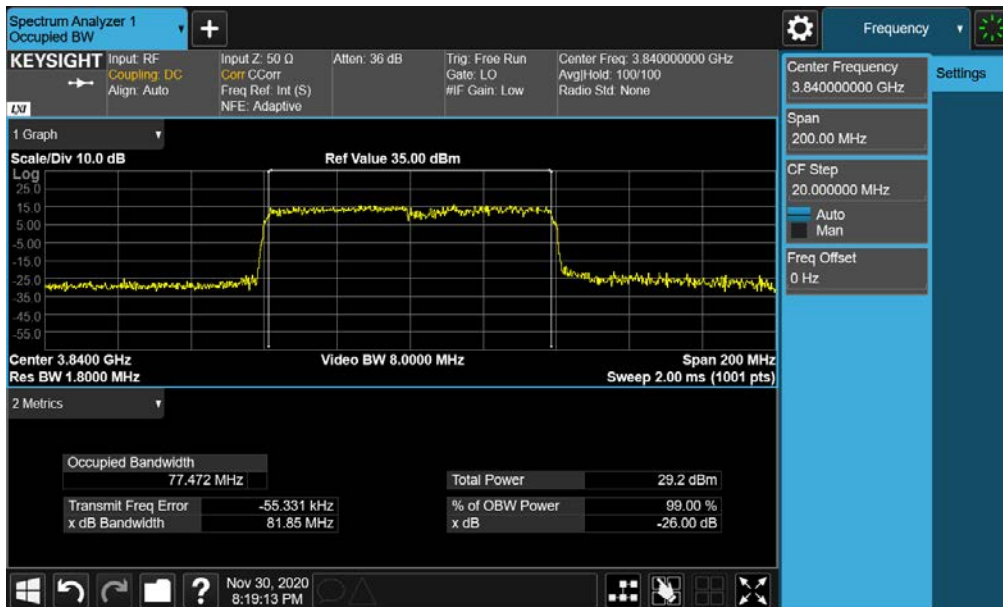


Plot 7-152. Occupied Bandwidth Plot (NR Band n77 - 90MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> <small>Product to be part of</small>	<b>PART 27 MEASUREMENT REPORT</b>	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 95 of 242



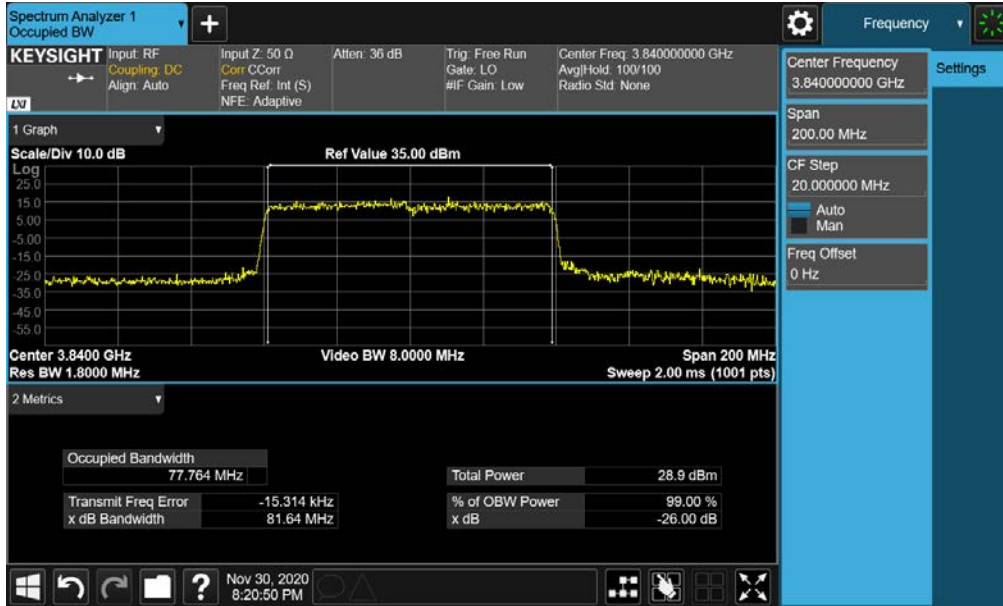
Plot 7-153. Occupied Bandwidth Plot (NR Band n77 - 80MHz  $\pi/2$  BPSK - Full RB Configuration)



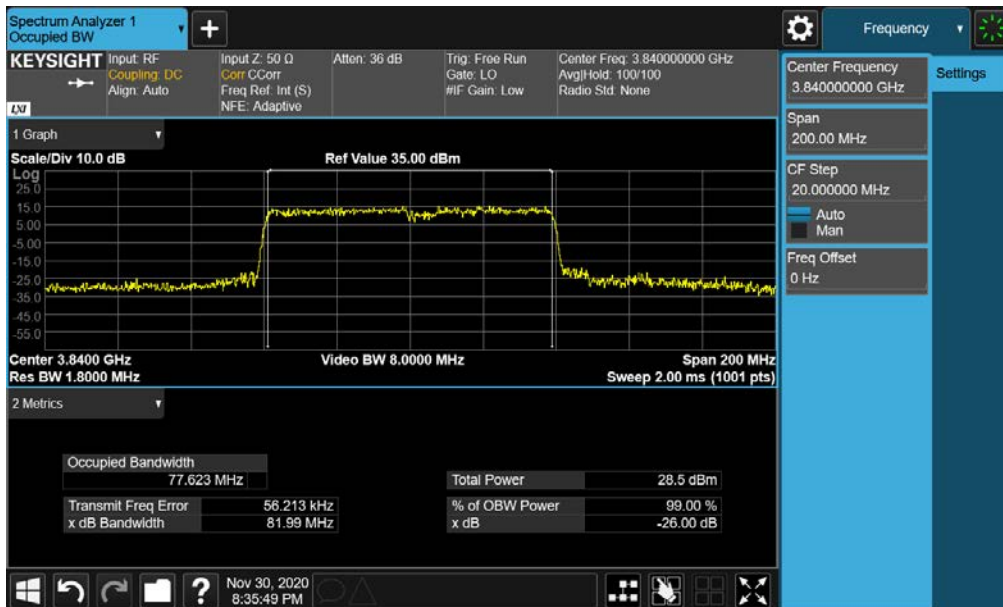
Plot 7-154. Occupied Bandwidth Plot (NR Band n77 - 80MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of  element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 96 of 242



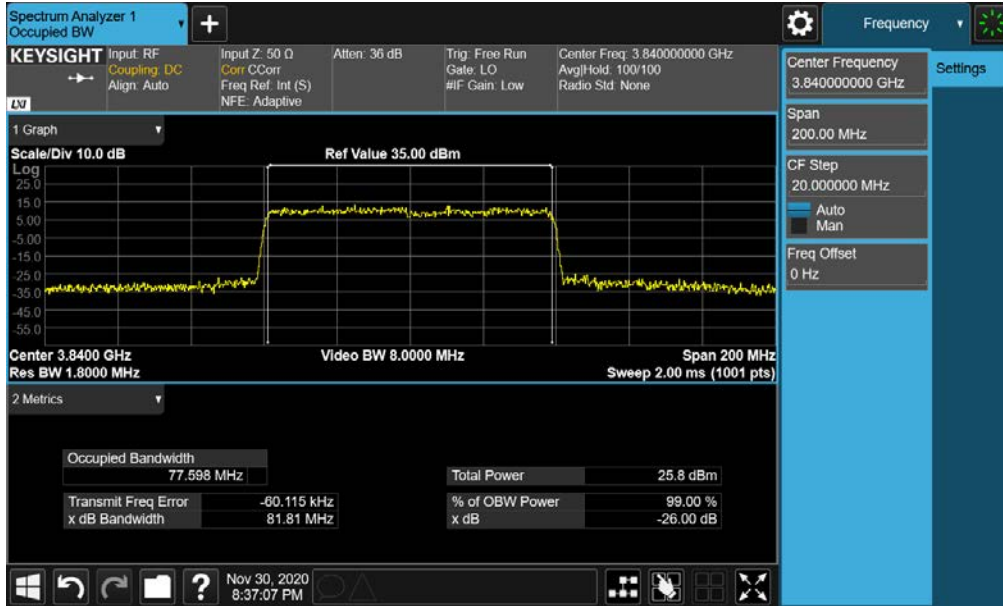


Plot 7-155. Occupied Bandwidth Plot (NR Band n77 - 80MHz 16-QAM - Full RB Configuration)

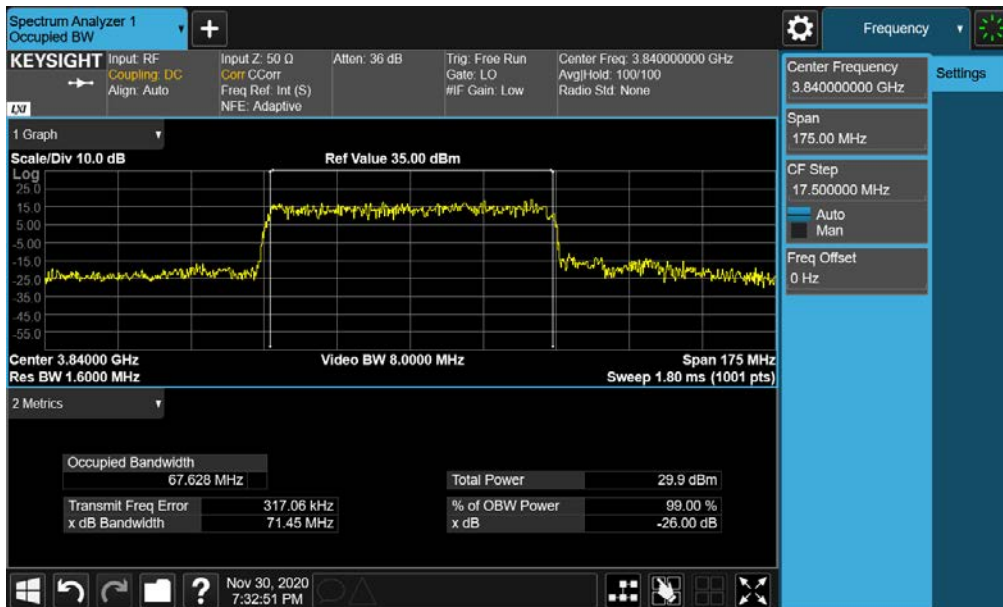


Plot 7-156. Occupied Bandwidth Plot (NR Band n77 - 80MHz 64-QAM - Full RB Configuration)




FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of  element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 97 of 242

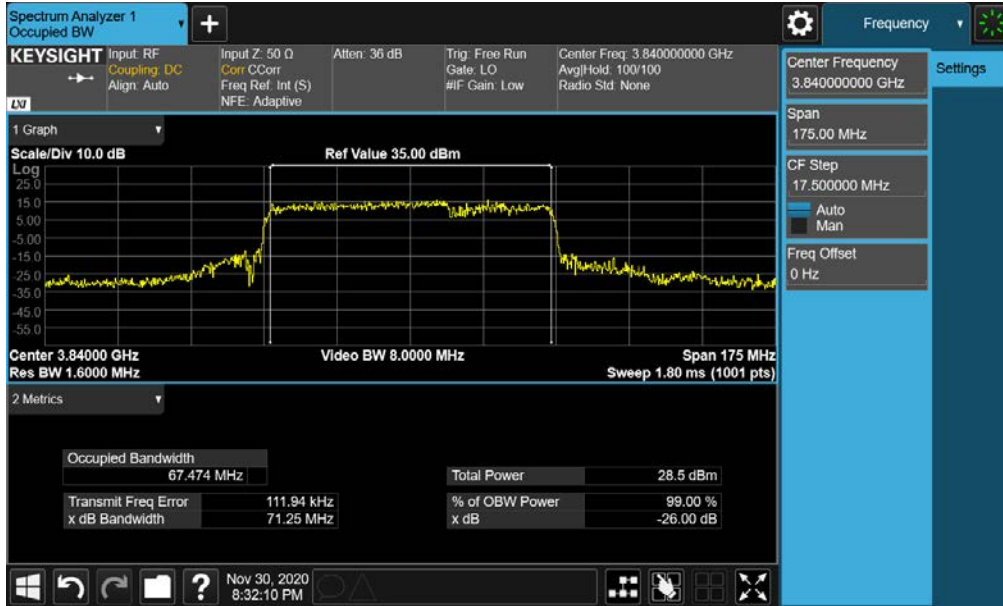


Plot 7-157. Occupied Bandwidth Plot (NR Band n77 - 80MHz 256-QAM - Full RB Configuration)

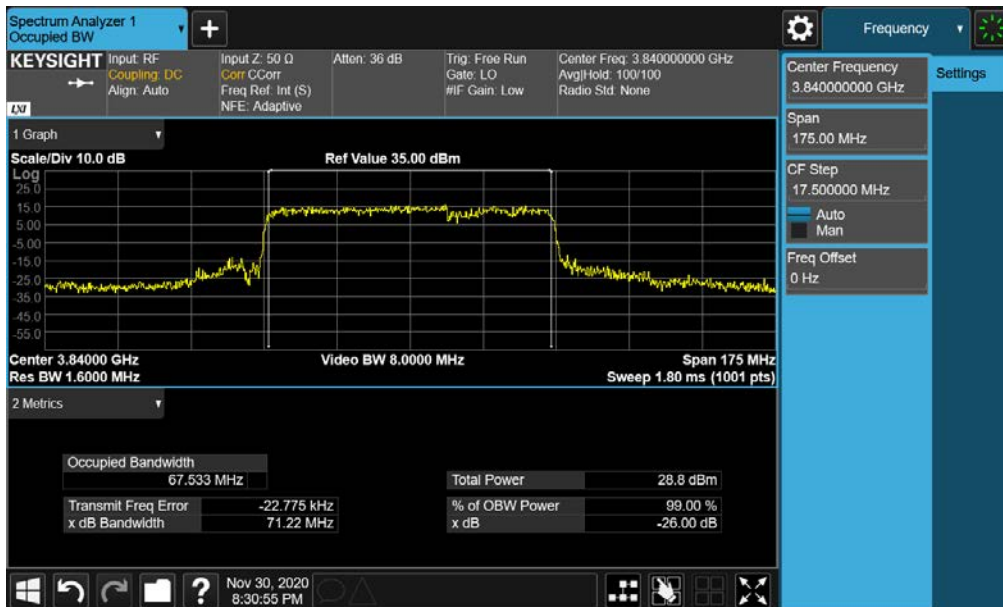


Plot 7-158. Occupied Bandwidth Plot (NR Band n77 - 70MHz  $\pi/2$  BPSK - Full RB Configuration)

FCC ID: A3LSMG996U	 <b>PCTEST</b> Proud to be part of 	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 98 of 242

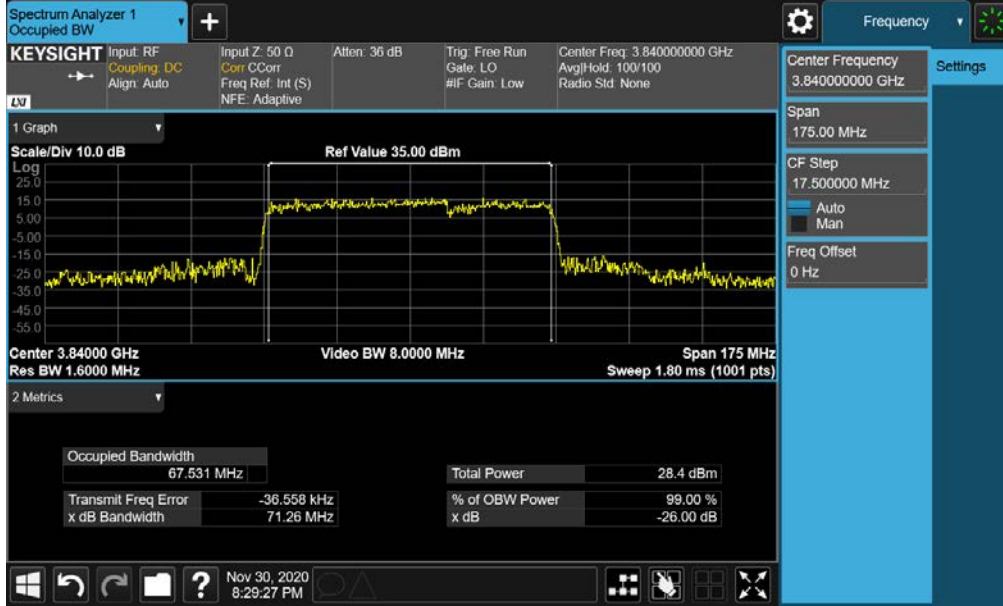


Plot 7-159. Occupied Bandwidth Plot (NR Band n77 - 70MHz QPSK - Full RB Configuration)

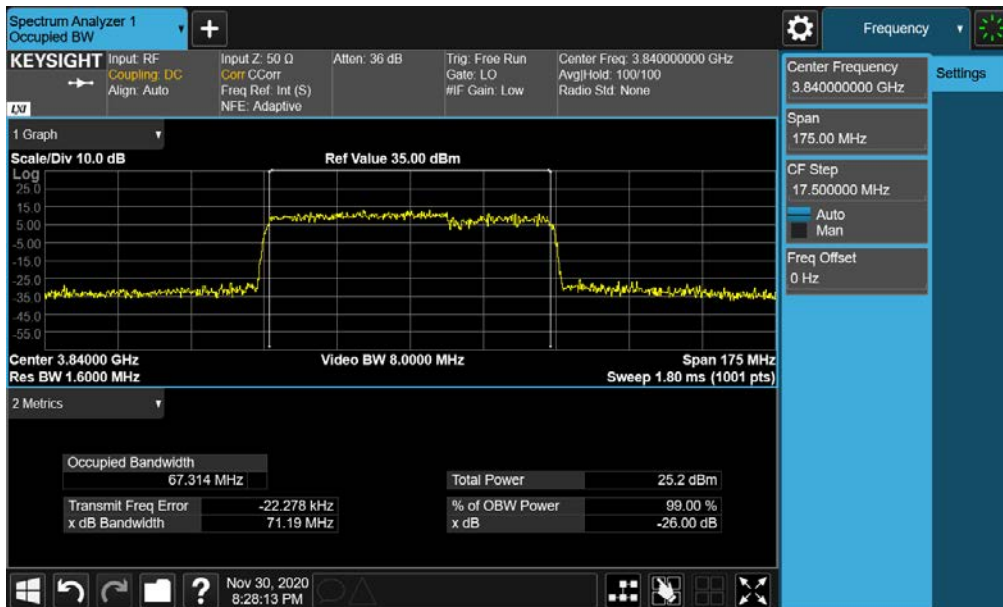


Plot 7-160. Occupied Bandwidth Plot (NR Band n77 - 70MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of  element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 99 of 242

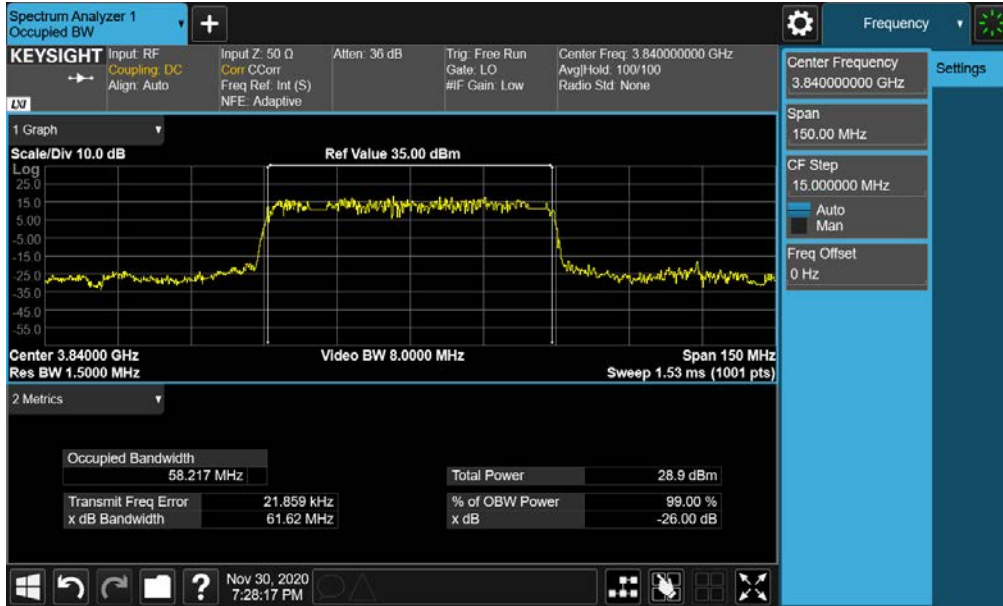


Plot 7-161. Occupied Bandwidth Plot (NR Band n77 - 70MHz 64-QAM - Full RB Configuration)

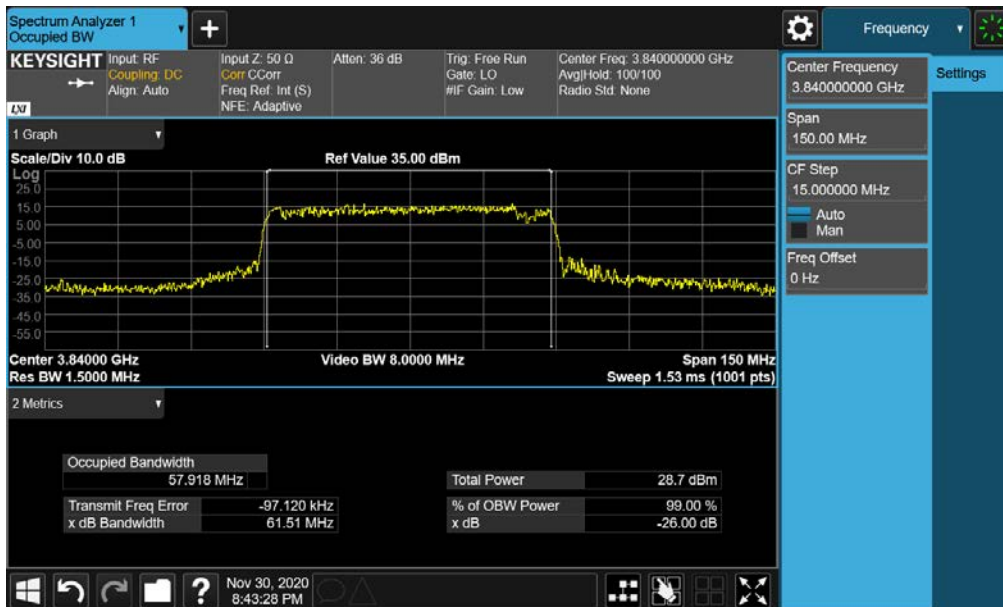


Plot 7-162. Occupied Bandwidth Plot (NR Band n77 - 70MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of  element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 100 of 242



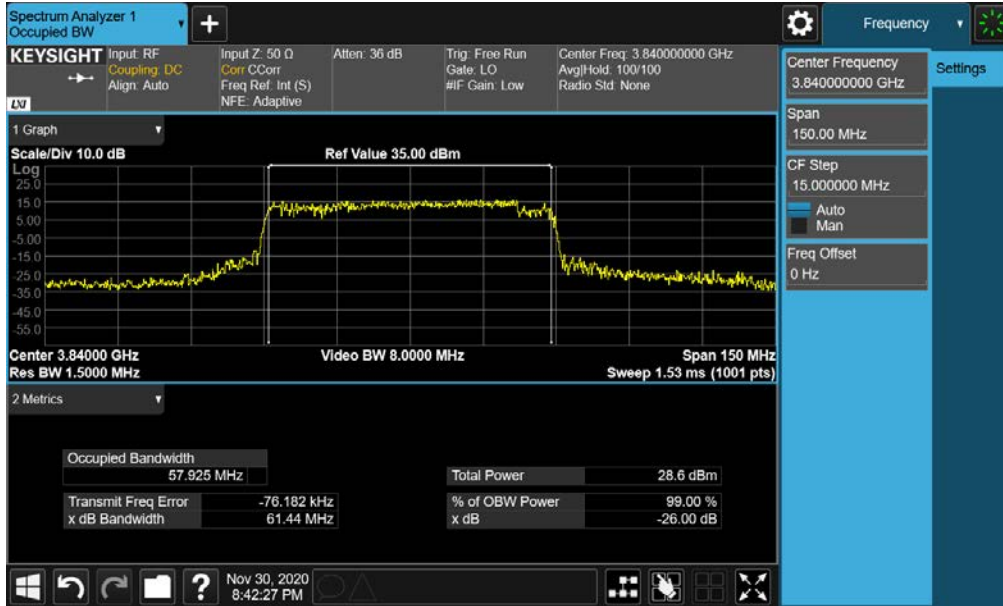
Plot 7-163. Occupied Bandwidth Plot (NR Band n77 - 60MHz  $\pi/2$  BPSK - Full RB Configuration)



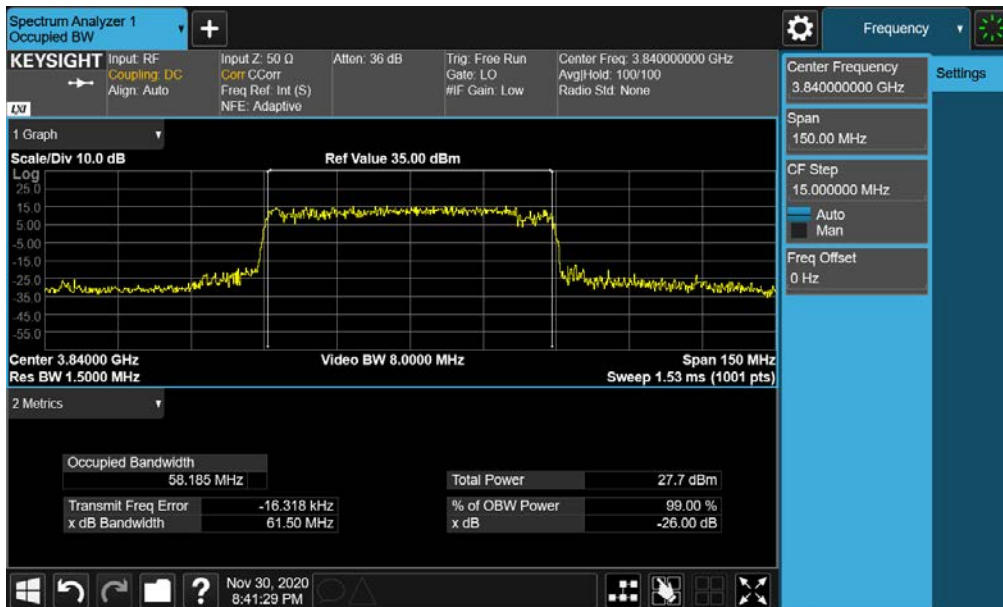
Plot 7-164. Occupied Bandwidth Plot (NR Band n77 - 60MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> <small>Product to be part of element</small>	<b>PART 27 MEASUREMENT REPORT</b>	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 101 of 242



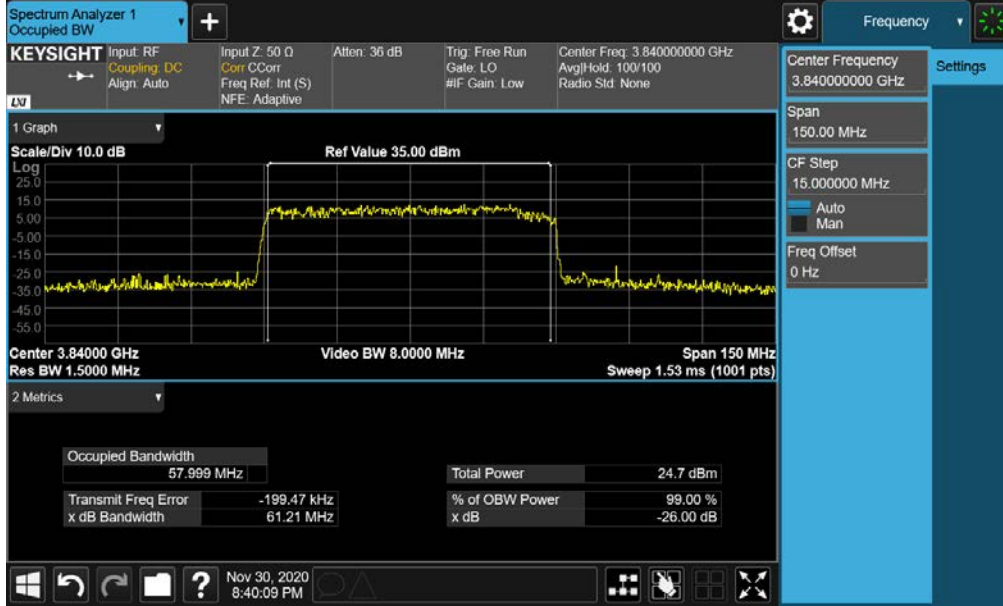


Plot 7-165. Occupied Bandwidth Plot (NR Band n77 - 60MHz 16-QAM - Full RB Configuration)

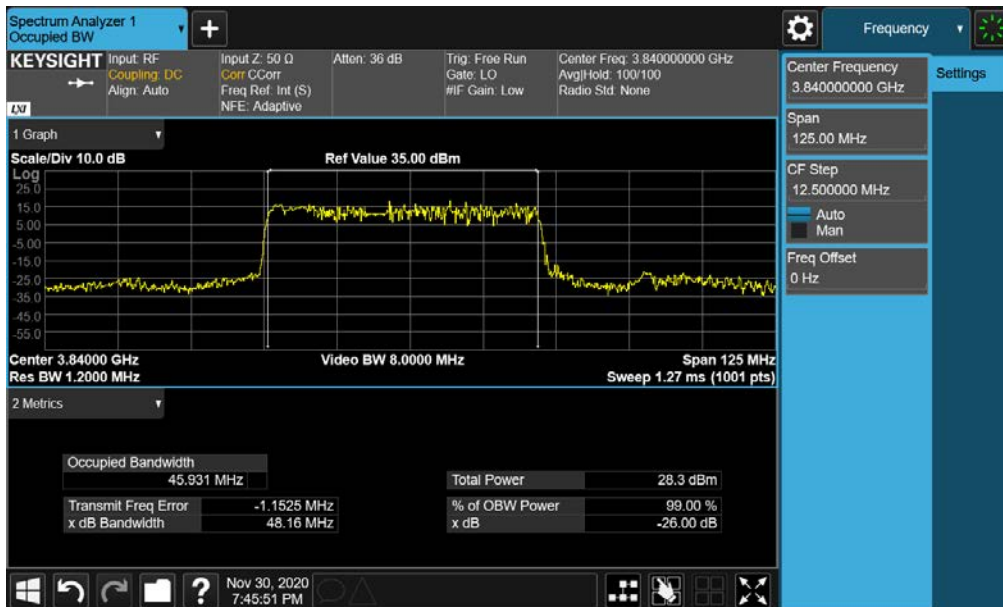


Plot 7-166. Occupied Bandwidth Plot (NR Band n77 - 60MHz 64-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of  element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Quality Manager
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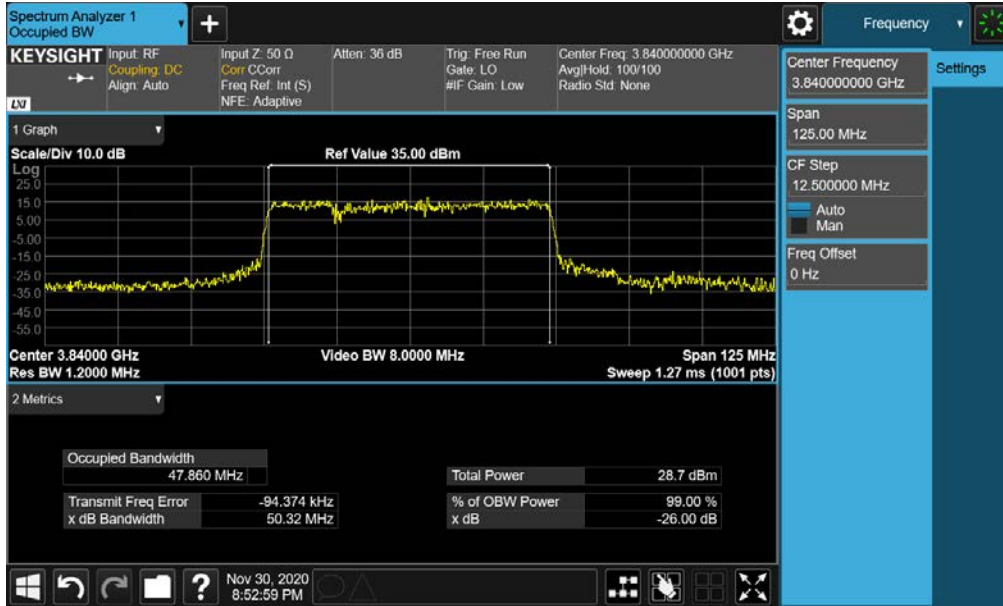
Plot 7-167. Occupied Bandwidth Plot (NR Band n77 - 60MHz 256-QAM - Full RB Configuration)



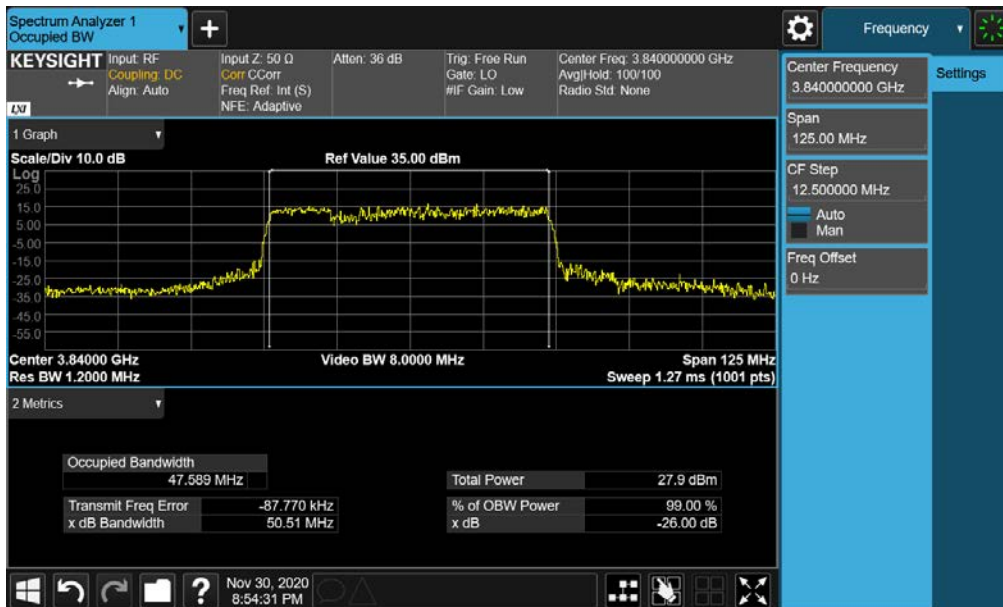
Plot 7-168. Occupied Bandwidth Plot (NR Band n77 - 50MHz  $\pi/2$  BPSK - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of  element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 103 of 242



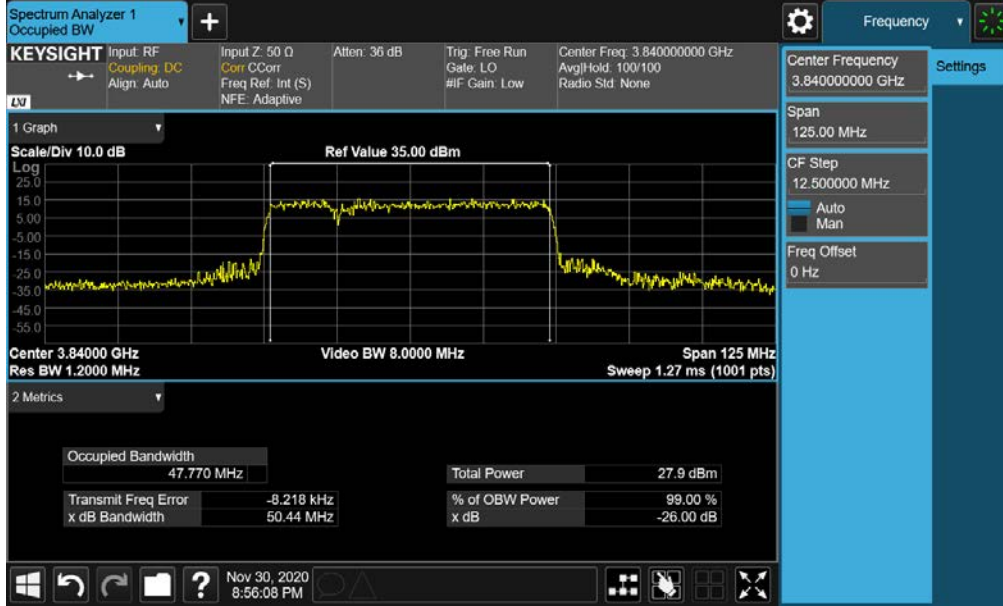


Plot 7-169. Occupied Bandwidth Plot (NR Band n77 - 50MHz QPSK - Full RB Configuration)

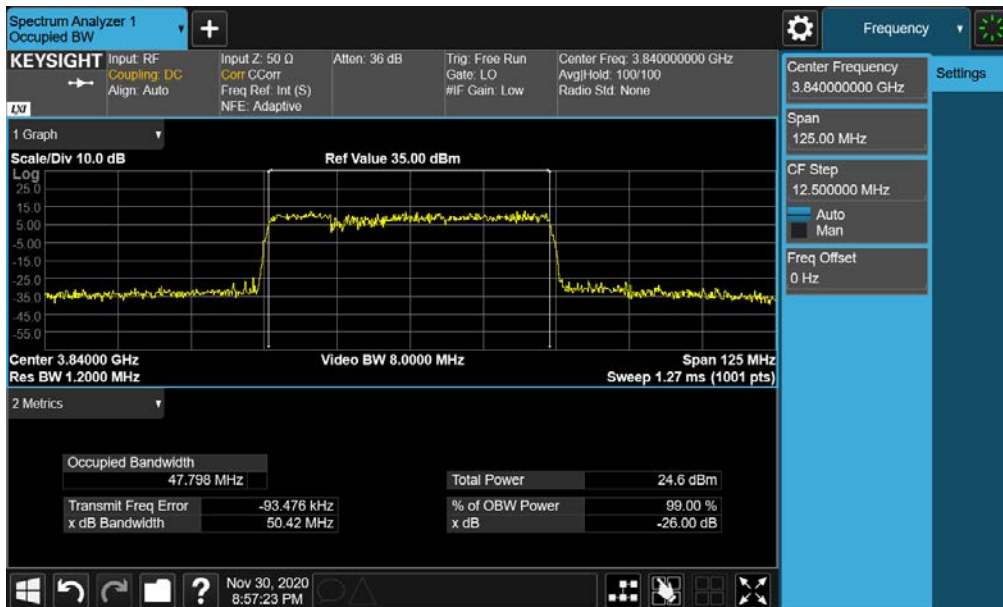


Plot 7-170. Occupied Bandwidth Plot (NR Band n77 - 50MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 104 of 242

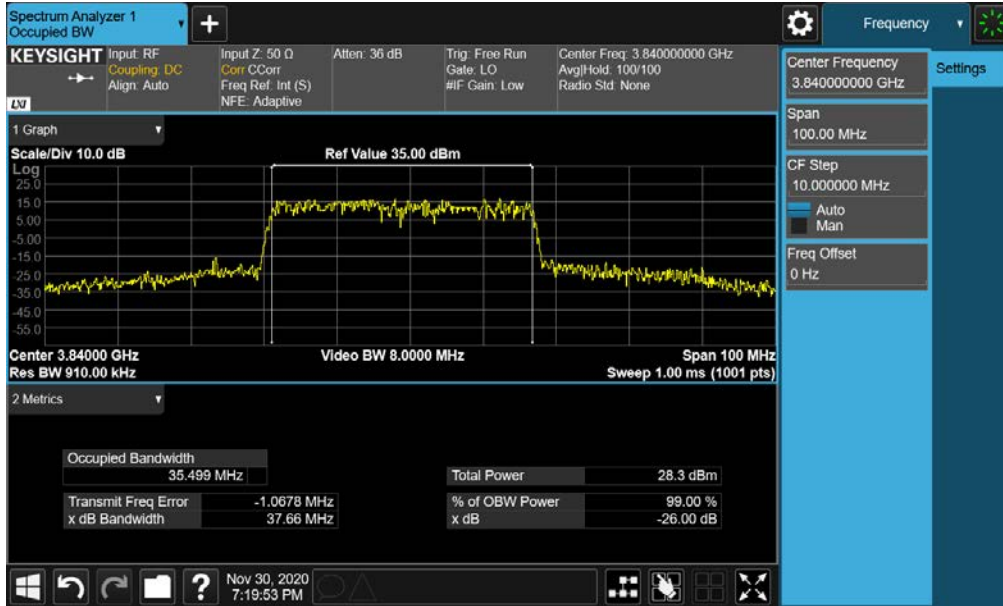


Plot 7-171. Occupied Bandwidth Plot (NR Band n77 - 50MHz 64-QAM - Full RB Configuration)

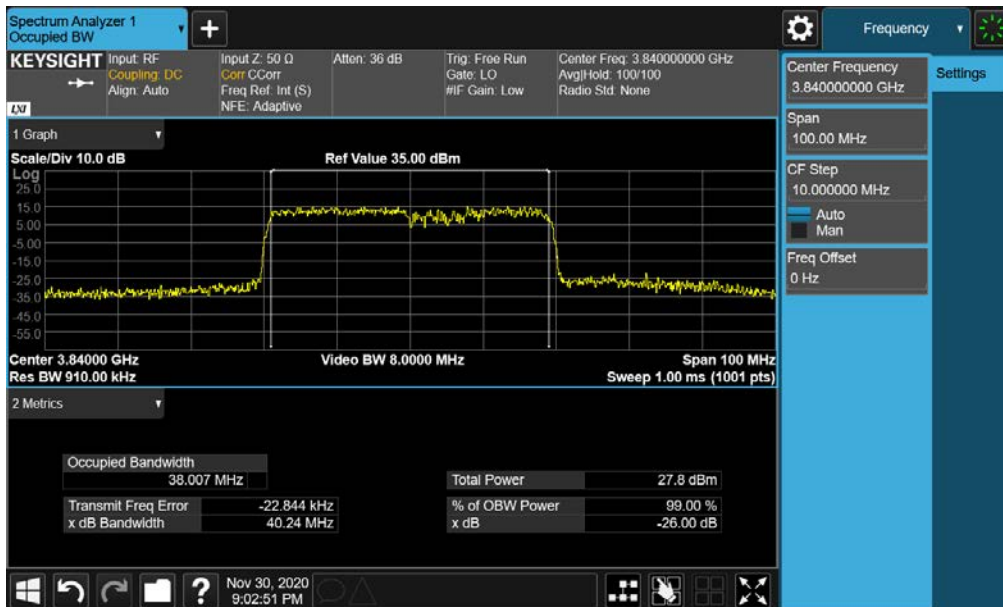


Plot 7-172. Occupied Bandwidth Plot (NR Band n77 - 50MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of  element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 105 of 242

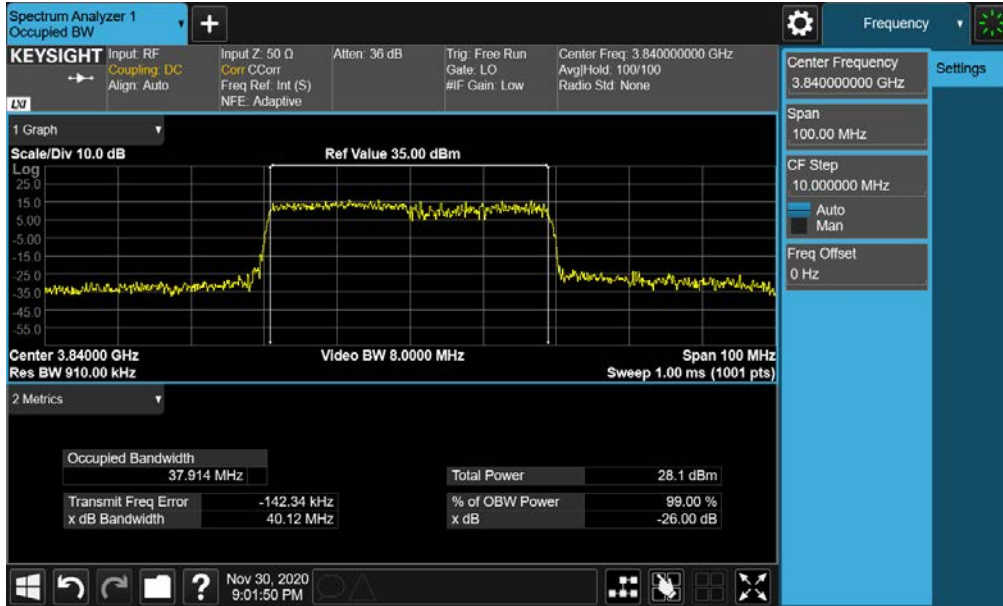


Plot 7-173. Occupied Bandwidth Plot (NR Band n77 - 40MHz  $\pi/2$  BPSK - Full RB Configuration)

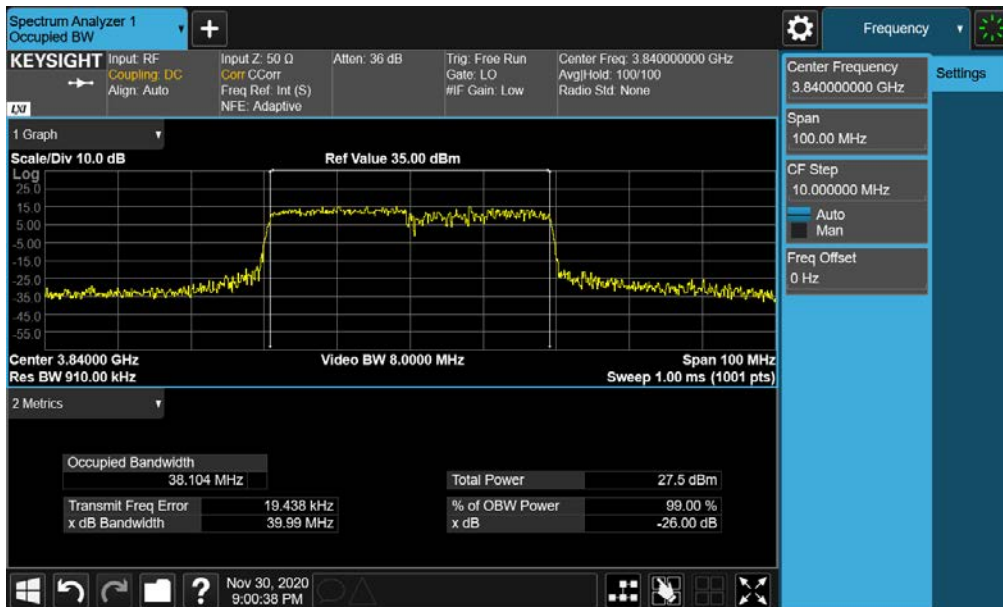


Plot 7-174. Occupied Bandwidth Plot (NR Band n77 - 40MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> <small>Product to be part of element</small>	<b>PART 27 MEASUREMENT REPORT</b>	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 106 of 242

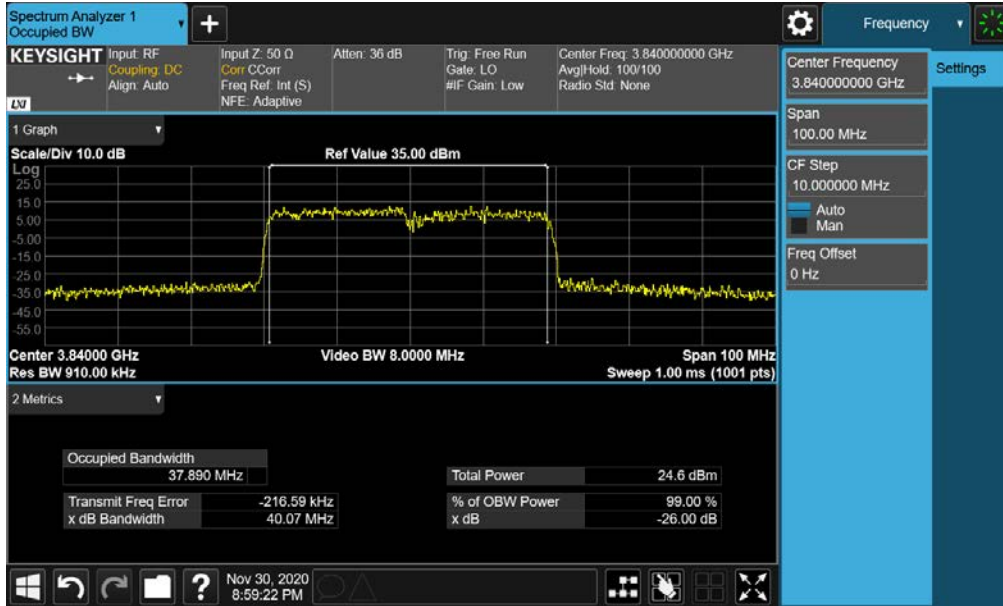


Plot 7-175. Occupied Bandwidth Plot (NR Band n77 - 40MHz 16-QAM - Full RB Configuration)

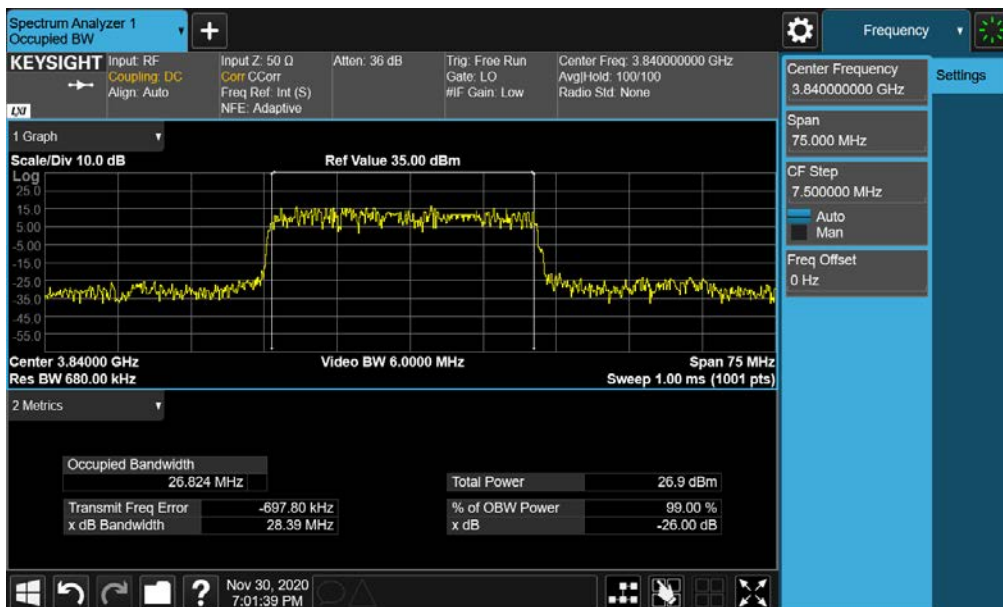


Plot 7-176. Occupied Bandwidth Plot (NR Band n77 - 40MHz 64-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> <small>Product to be part of</small>	<b>PART 27 MEASUREMENT REPORT</b>	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 107 of 242



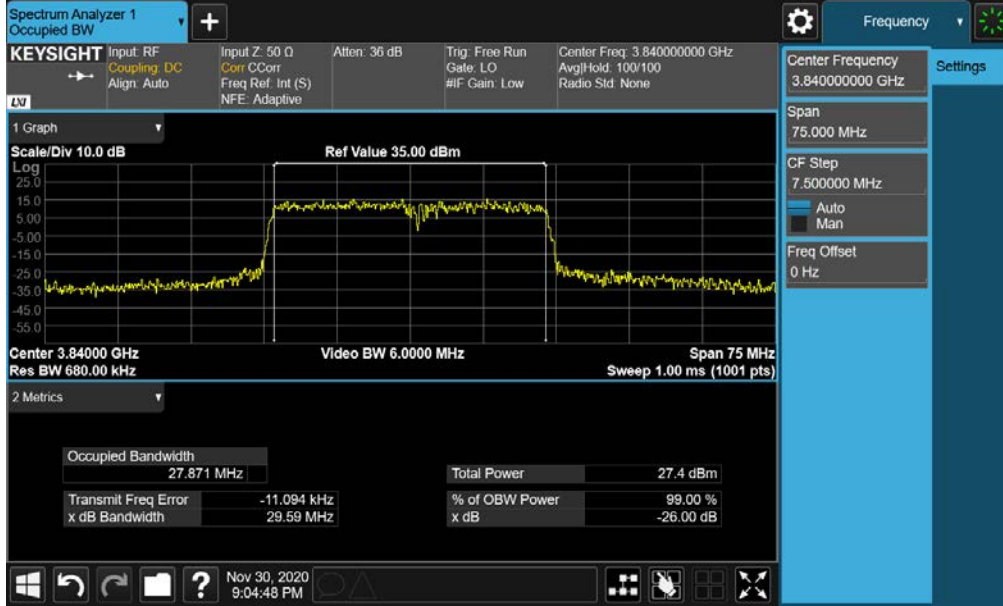
Plot 7-177. Occupied Bandwidth Plot (NR Band n77 - 40MHz 256-QAM - Full RB Configuration)



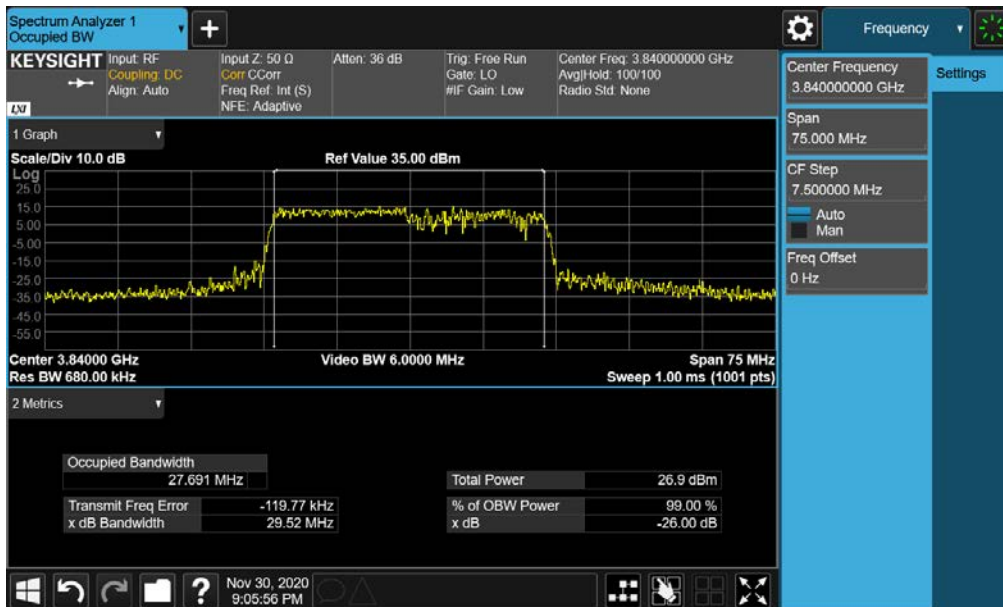
Plot 7-178. Occupied Bandwidth Plot (NR Band n77 - 30MHz  $\pi/2$  BPSK - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> <small>Prout to be part of element</small>	<b>PART 27 MEASUREMENT REPORT</b>	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 108 of 242



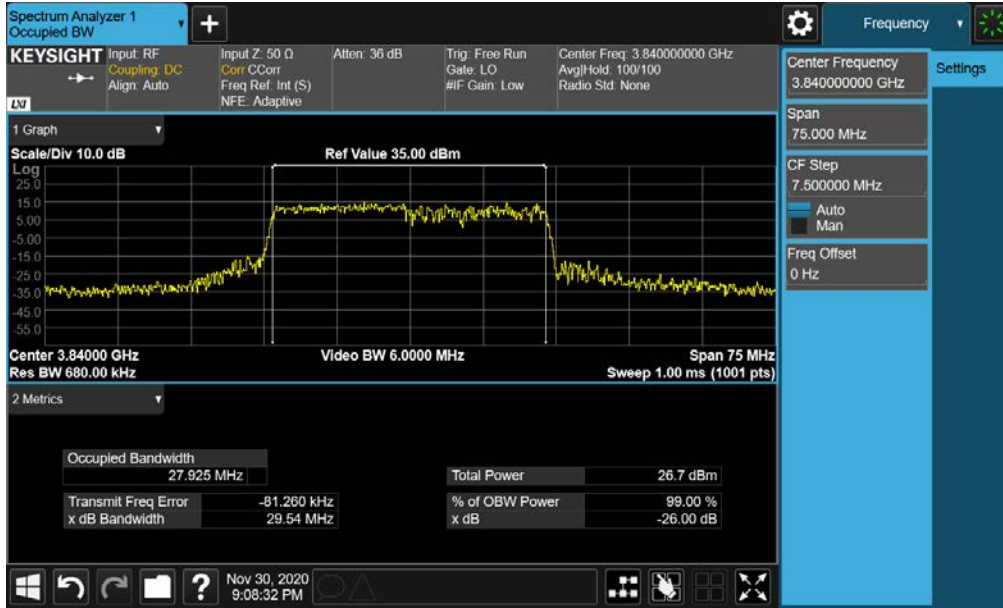


Plot 7-179. Occupied Bandwidth Plot (NR Band n77 - 30MHz QPSK - Full RB Configuration)

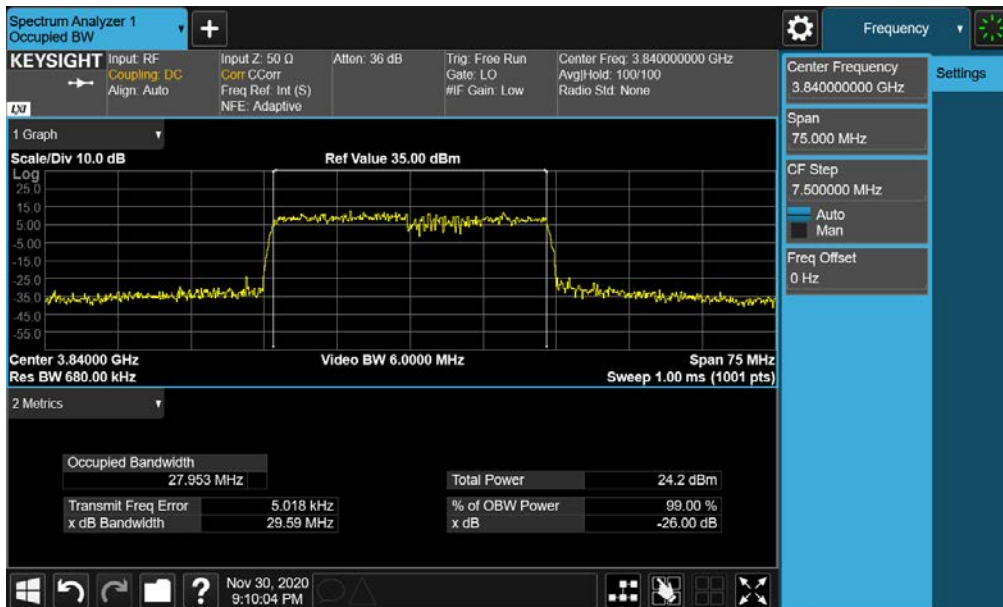


Plot 7-180. Occupied Bandwidth Plot (NR Band n77 - 30MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of  element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 109 of 242



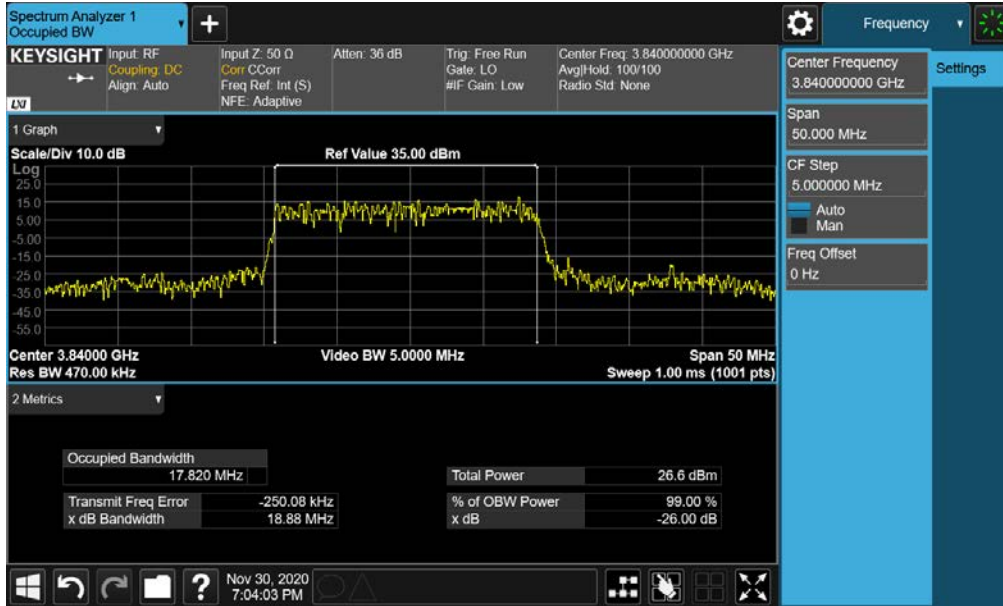
Plot 7-181. Occupied Bandwidth Plot (NR Band n77 - 30MHz 64-QAM - Full RB Configuration)



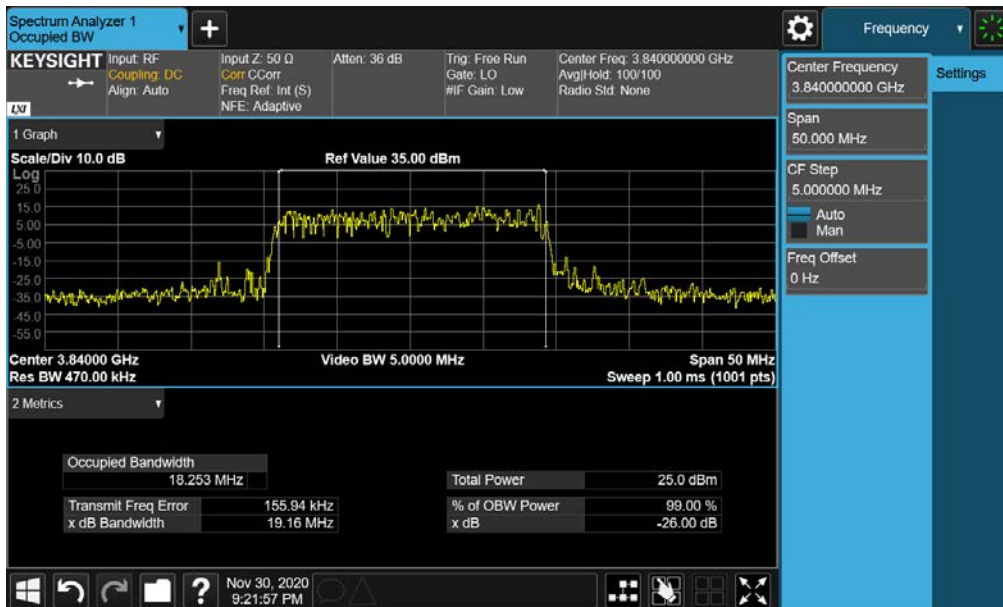
Plot 7-182. Occupied Bandwidth Plot (NR Band n77 - 30MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of  element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 110 of 242



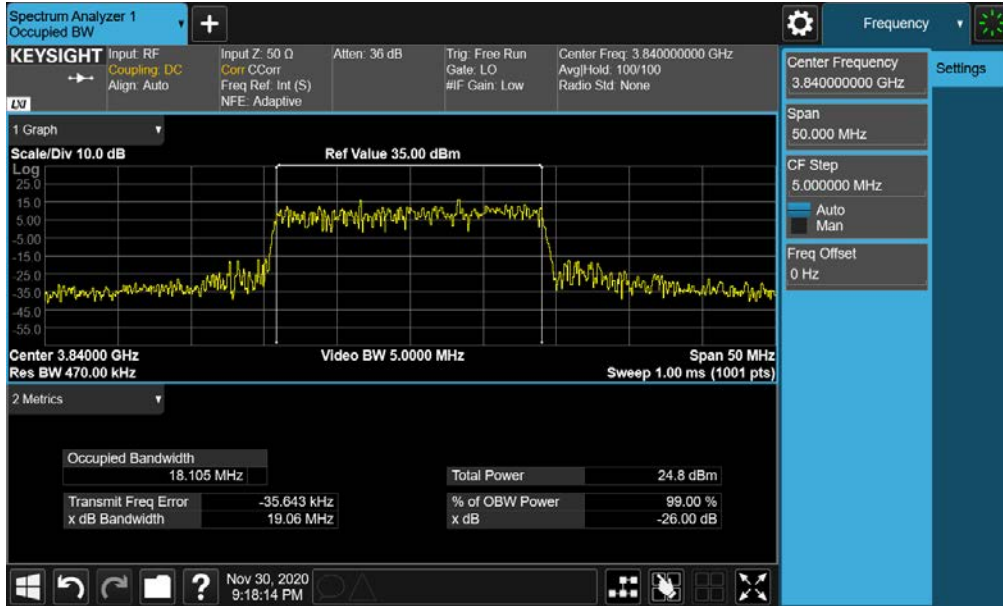


Plot 7-183. Occupied Bandwidth Plot (NR Band n77 - 20MHz  $\pi/2$  BPSK - Full RB Configuration)

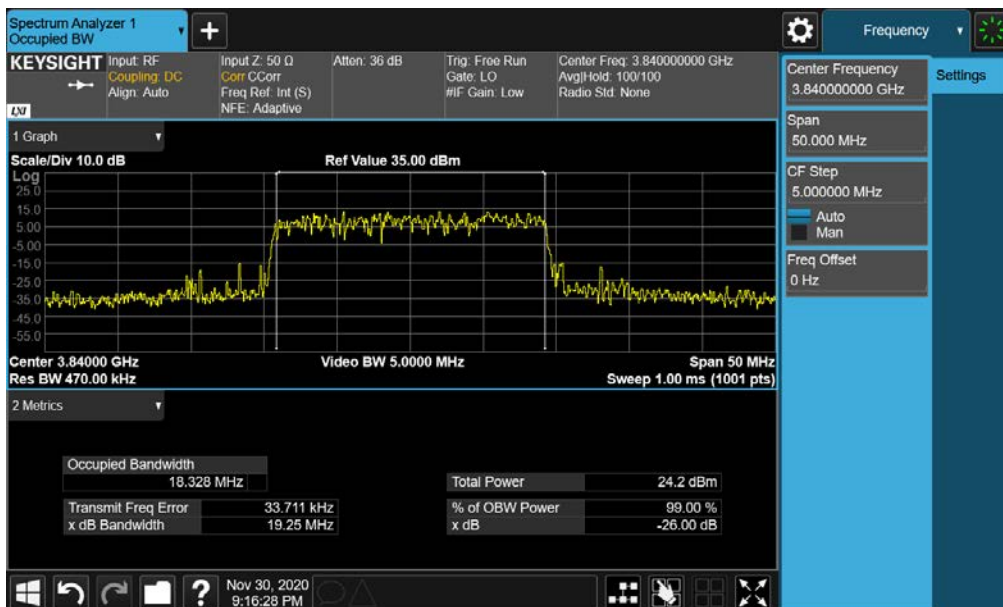


Plot 7-184. Occupied Bandwidth Plot (NR Band n77 - 20MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of  element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 111 of 242

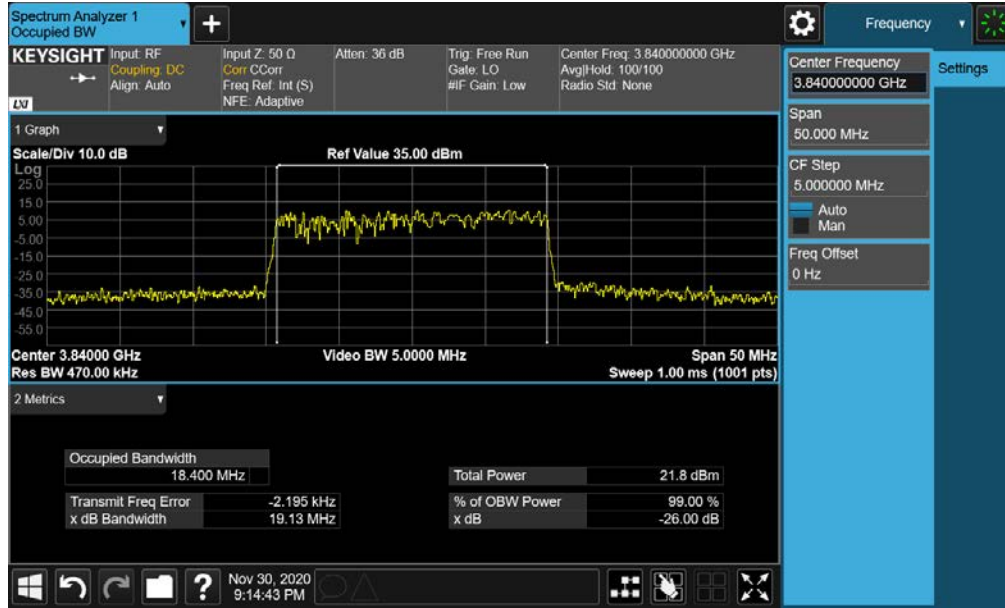


Plot 7-185. Occupied Bandwidth Plot (NR Band n77 - 20MHz 16-QAM - Full RB Configuration)



Plot 7-186. Occupied Bandwidth Plot (NR Band n77 - 20MHz 64-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of  element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 112 of 242



**Plot 7-187. Occupied Bandwidth Plot (NR Band n77 - 20MHz 256-QAM - Full RB Configuration)**

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of  element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 113 of 242

## 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 10<sup>th</sup> 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

KDB 971168 D01 v03r01 – Section 6.0

### 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.

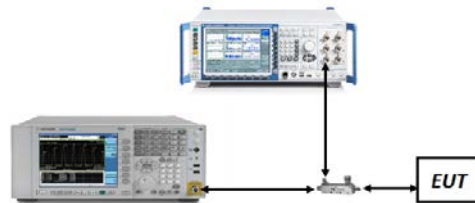






Figure 7-3. Test Instrument & Measurement Setup

### Test Notes

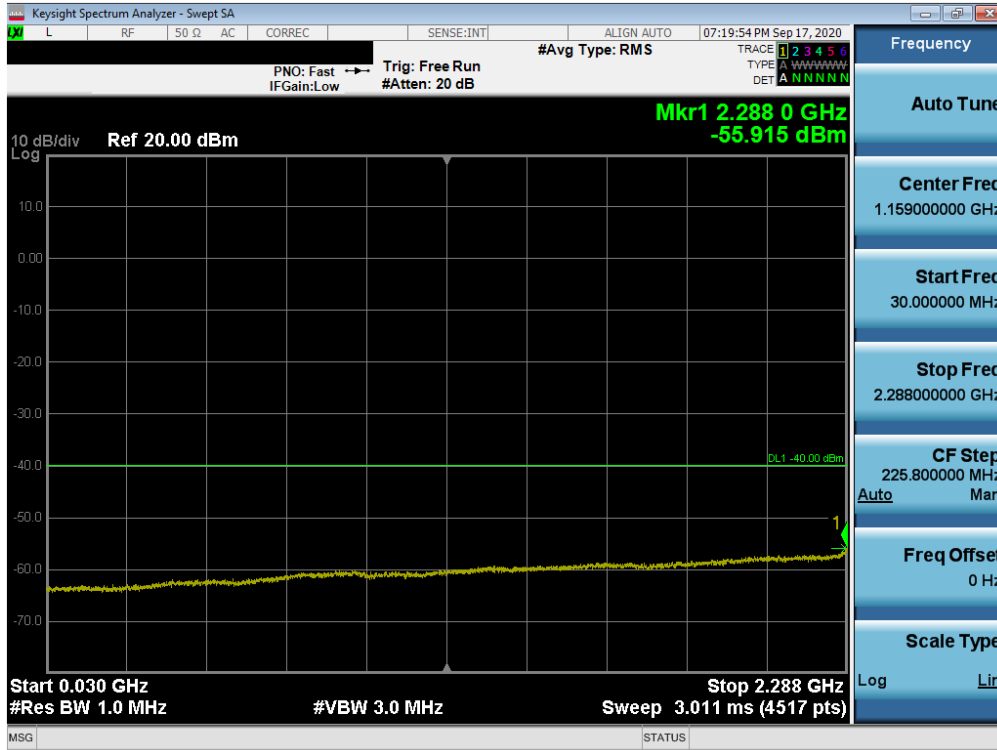
1. Per Part 27, RSS-195 and RSS-199, compliance with the applicable limits is based on the use of measurement instrumentation employing a resolution bandwidth 100 kHz or greater for measurements below 1GHz. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.

FCC ID: A3LSMG996U	 PART 27 MEASUREMENT REPORT		Approved by: Quality Manager
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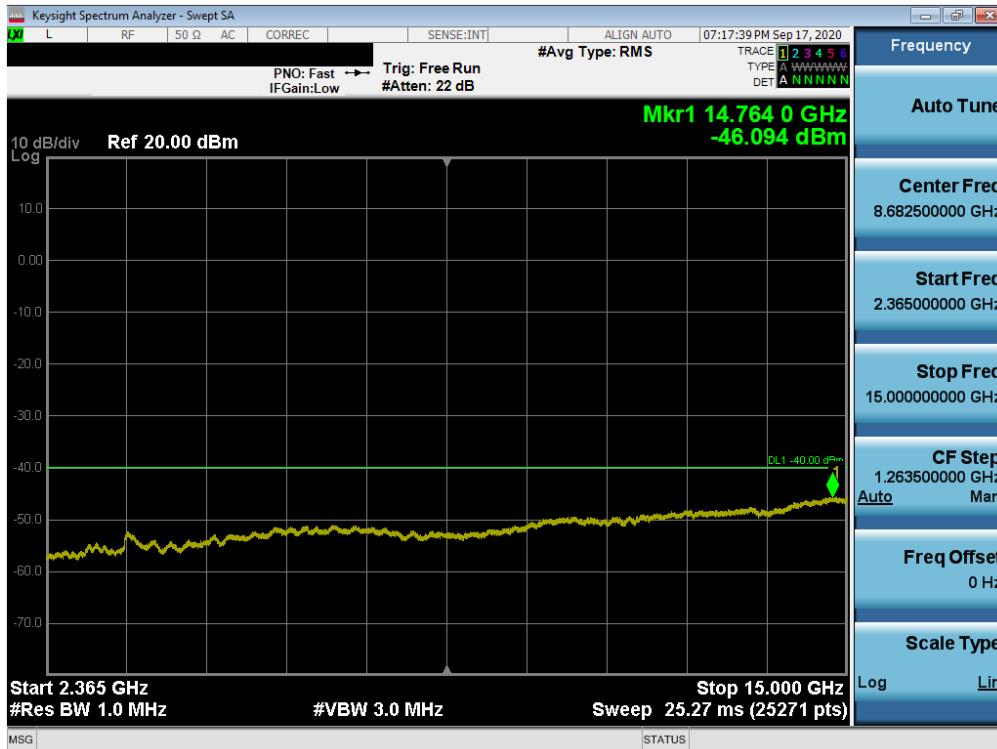
2. For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

<b>FCC ID:</b> A3LSMG996U	 <b>PART 27 MEASUREMENT REPORT</b> 		<b>Approved by:</b> Quality Manager
<b>Test Report S/N:</b> 1M2009140143-21-R1.A3L	<b>Test Dates:</b> 09/15/2020 – 12/10/2020	<b>EUT Type:</b> Portable Handset	Page 115 of 242

# LTE Band 30



Plot 7-188. Conducted Spurious Plot (LTE Band 30 - 10MHz QPSK - RB Size 1, RB Offset 0)



Plot 7-189. Conducted Spurious Plot (LTE Band 30 - 10MHz QPSK - RB Size 1, RB Offset 0)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 116 of 242

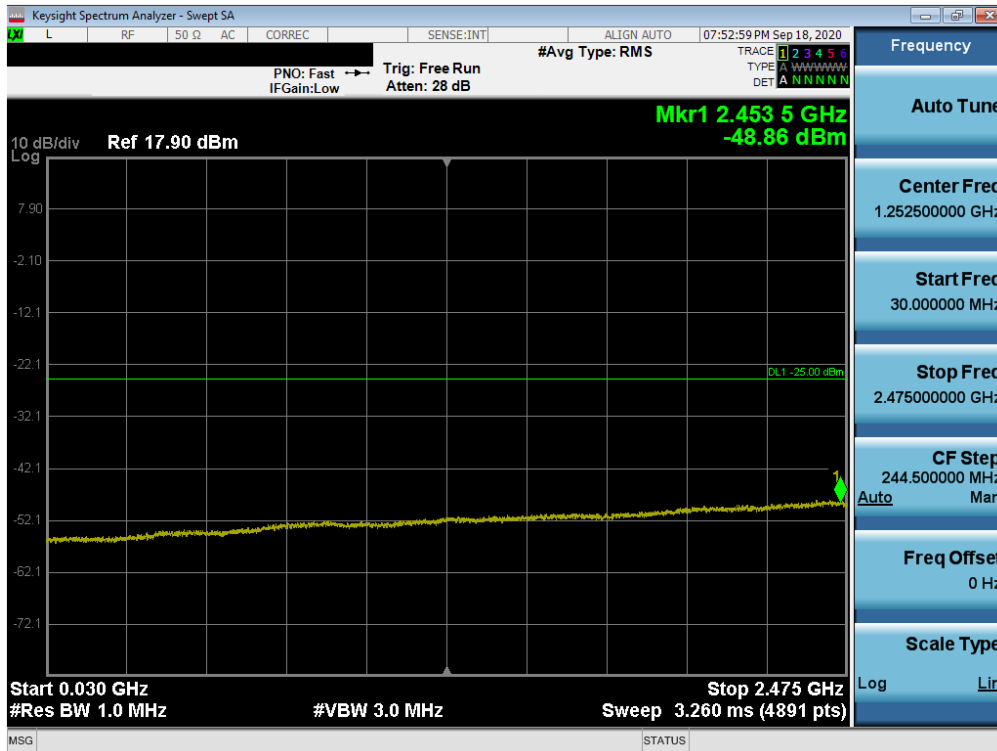




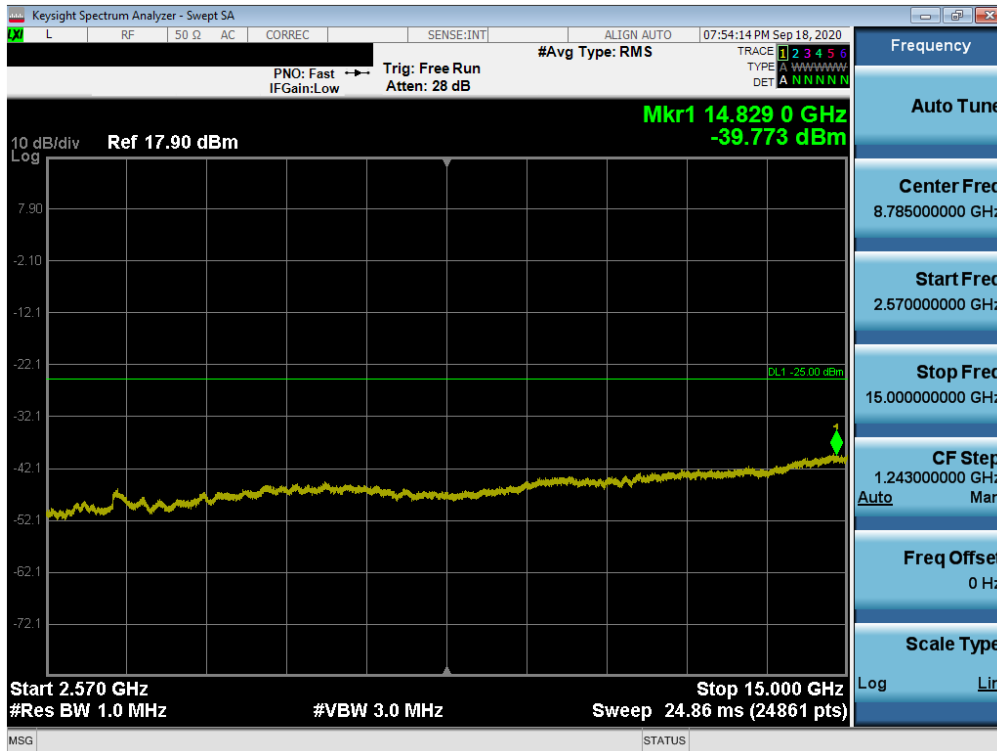
Plot 7-190. Conducted Spurious Plot (LTE Band 30 - 10MHz QPSK - RB Size 1, RB Offset 0)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of  element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 117 of 242

### LTE Band 7

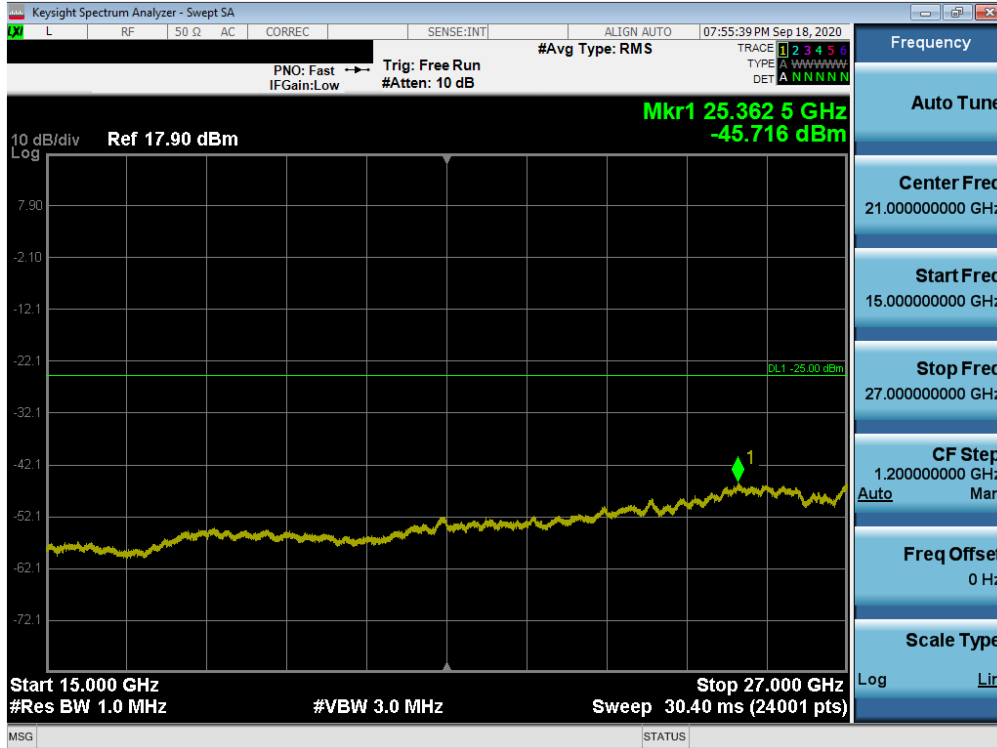


Plot 7-191. Conducted Spurious Plot (LTE Band 7 - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)



Plot 7-192. Conducted Spurious Plot (LTE Band 7 - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

FCC ID: A3LSMG996U	<b>PCTEST</b> <small>Proud to be part of element</small>	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 118 of 242

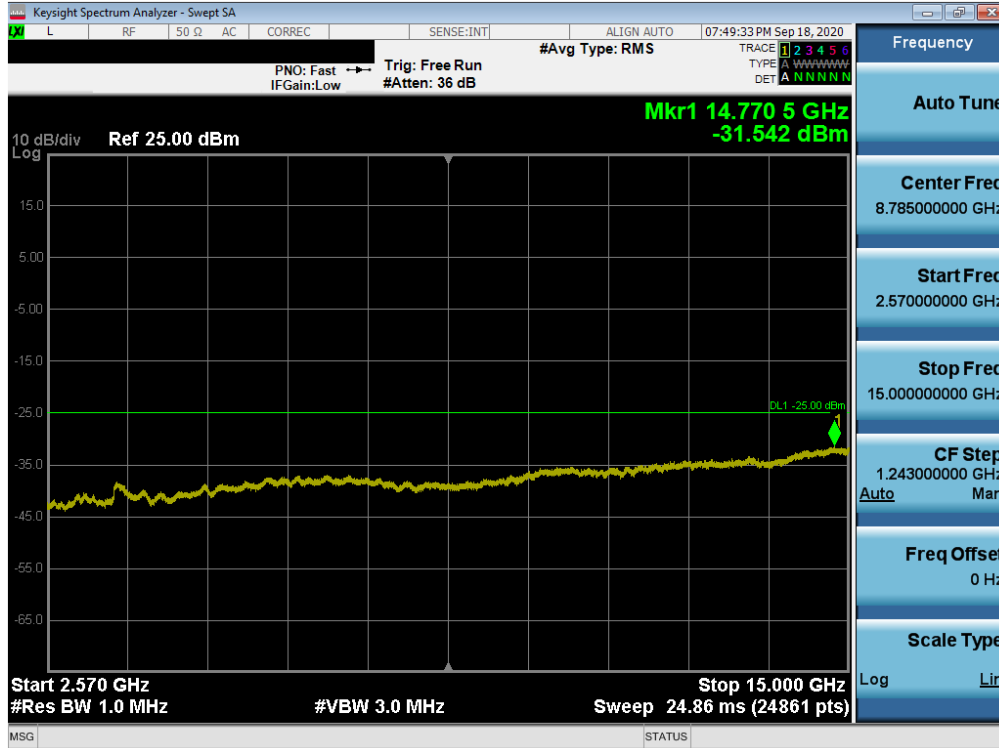


Plot 7-193. Conducted Spurious Plot (LTE Band 7 - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)



Plot 7-194. Conducted Spurious Plot (LTE Band 7 - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of  element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Quality Manager
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Plot 7-195. Conducted Spurious Plot (LTE Band 7 - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

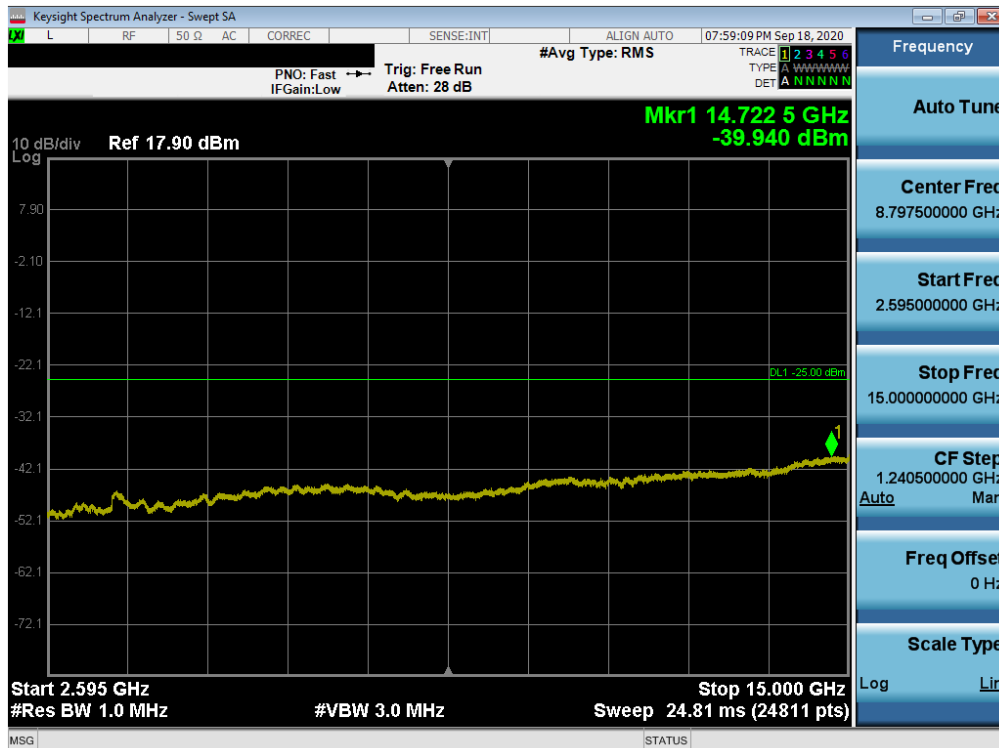


Plot 7-196. Conducted Spurious Plot (LTE Band 7 - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of  element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Quality Manager
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Plot 7-197. Conducted Spurious Plot (LTE Band 7 - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel)



Plot 7-198. Conducted Spurious Plot (LTE Band 7 - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of  element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 121 of 242

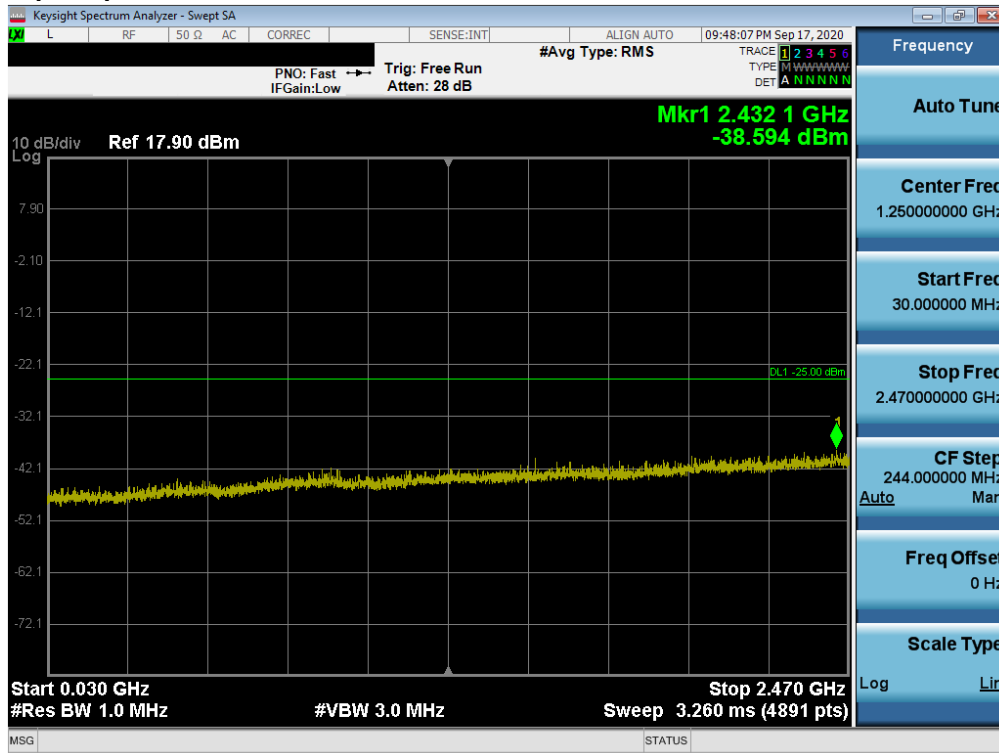


Plot 7-199. Conducted Spurious Plot (LTE Band 7 - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

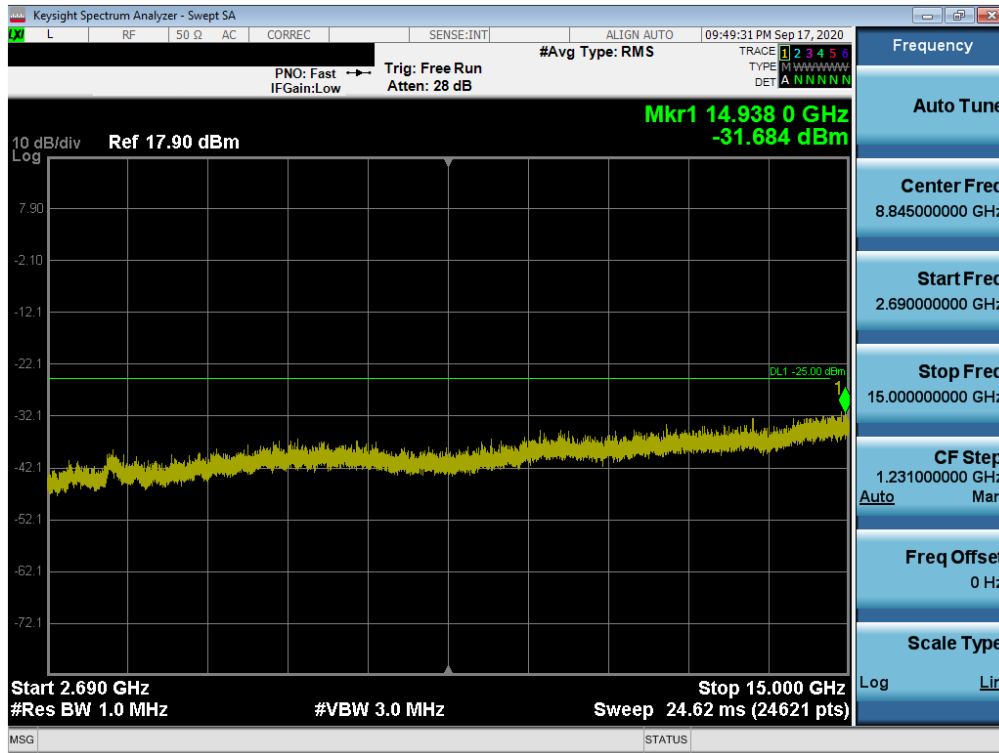
FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of  element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Quality Manager
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## LTE Band 41(PC2)

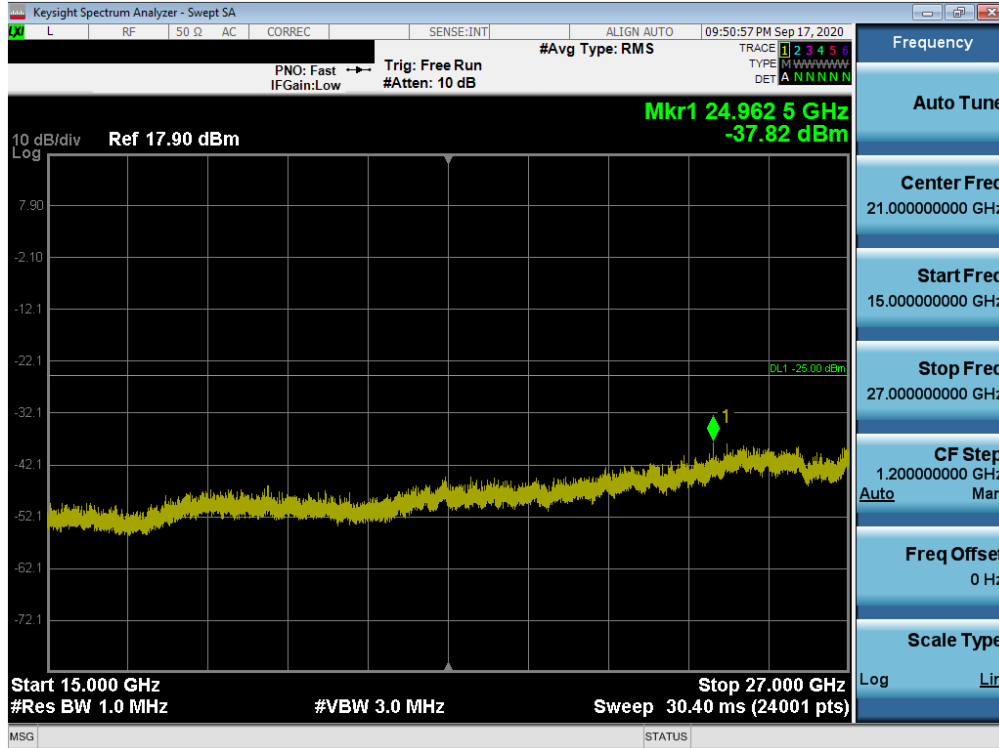


Plot 7-200. Conducted Spurious Plot (LTE Band 41(PC2) - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

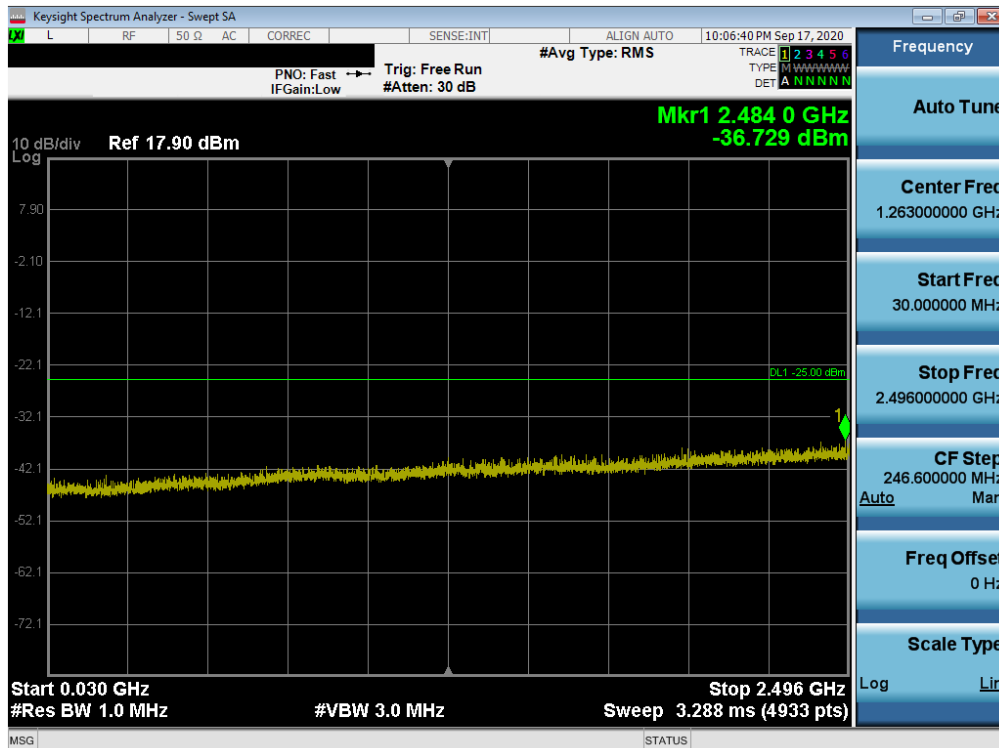


Plot 7-201. Conducted Spurious Plot (LTE Band 41(PC2) - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

FCC ID: A3LSMG996U	<b>PCTEST</b> <small>Proud to be part of element</small>	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 123 of 242

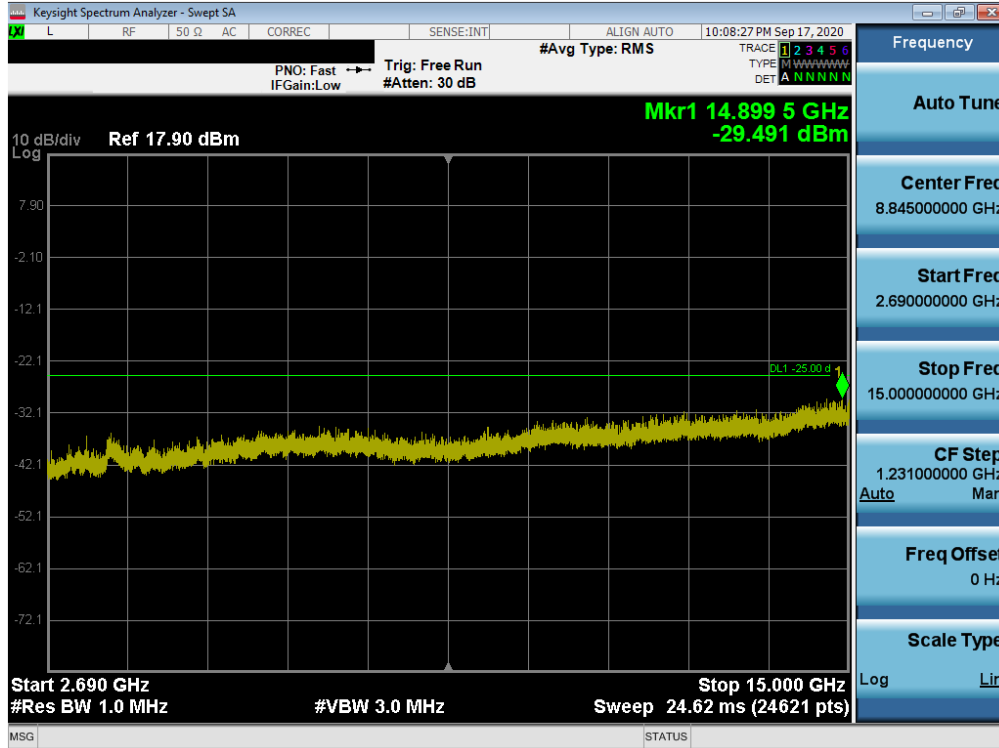


Plot 7-202. Conducted Spurious Plot (LTE Band 41(PC2) - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

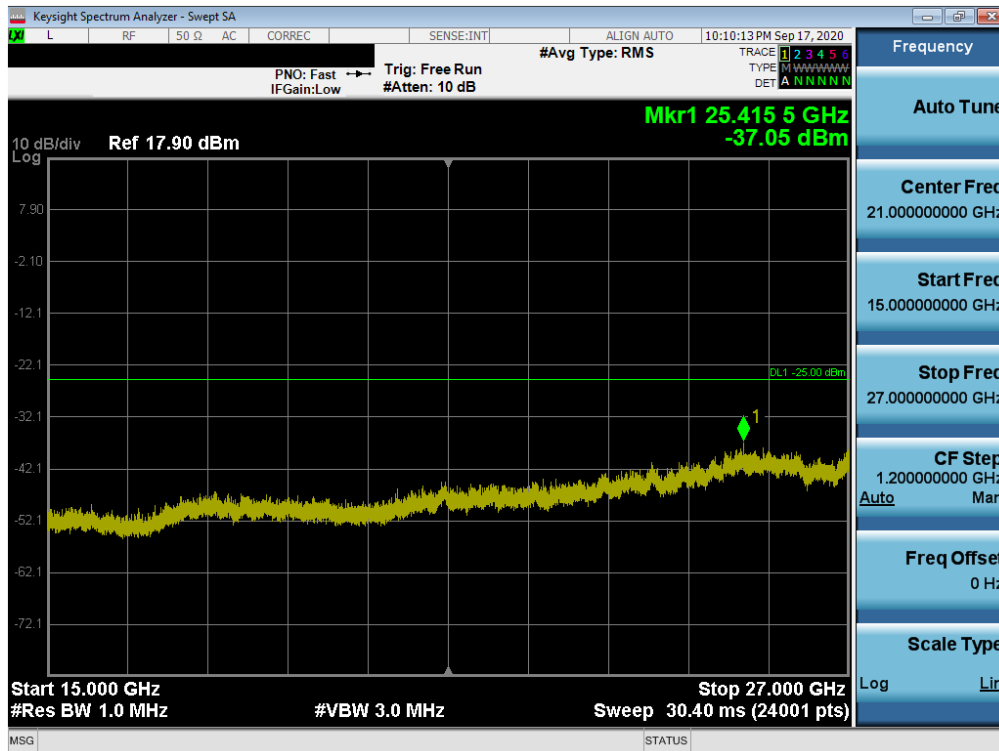


Plot 7-203. Conducted Spurious Plot (LTE Band 41(PC2) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of  element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 124 of 242

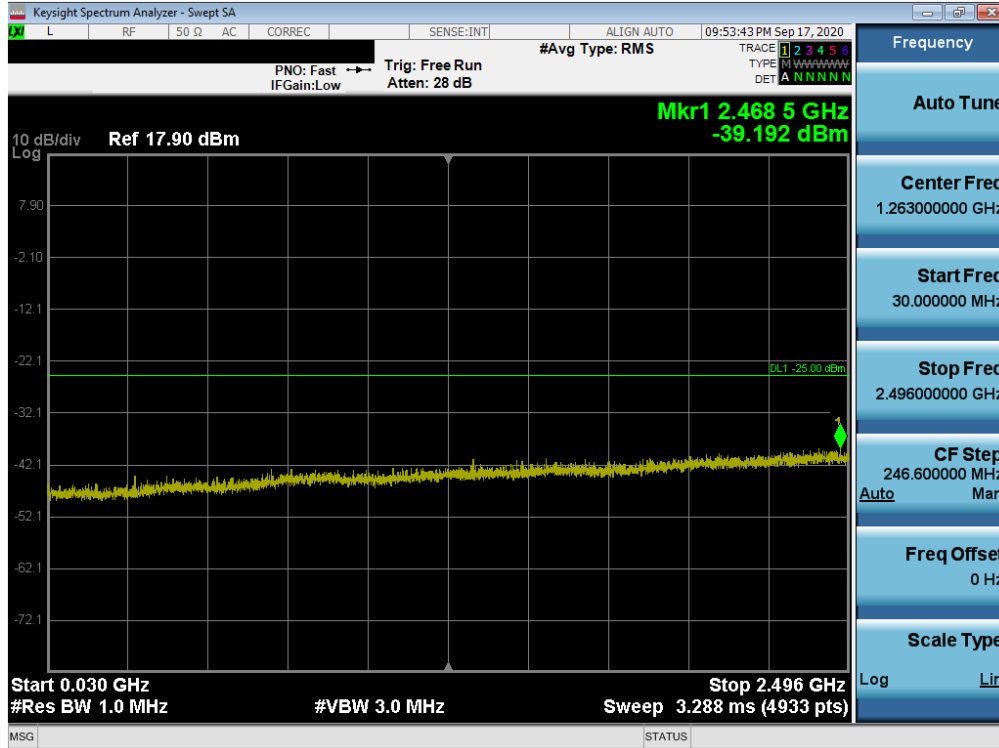


Plot 7-204. Conducted Spurious Plot (LTE Band 41(PC2) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

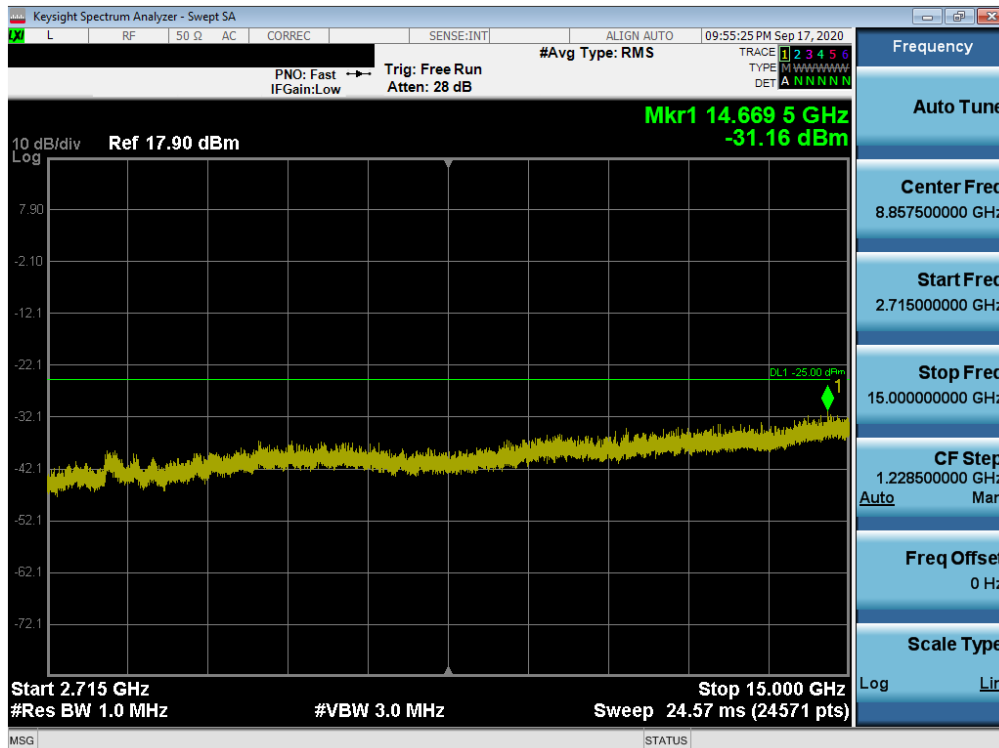


Plot 7-205. Conducted Spurious Plot (LTE Band 41(PC2) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 125 of 242

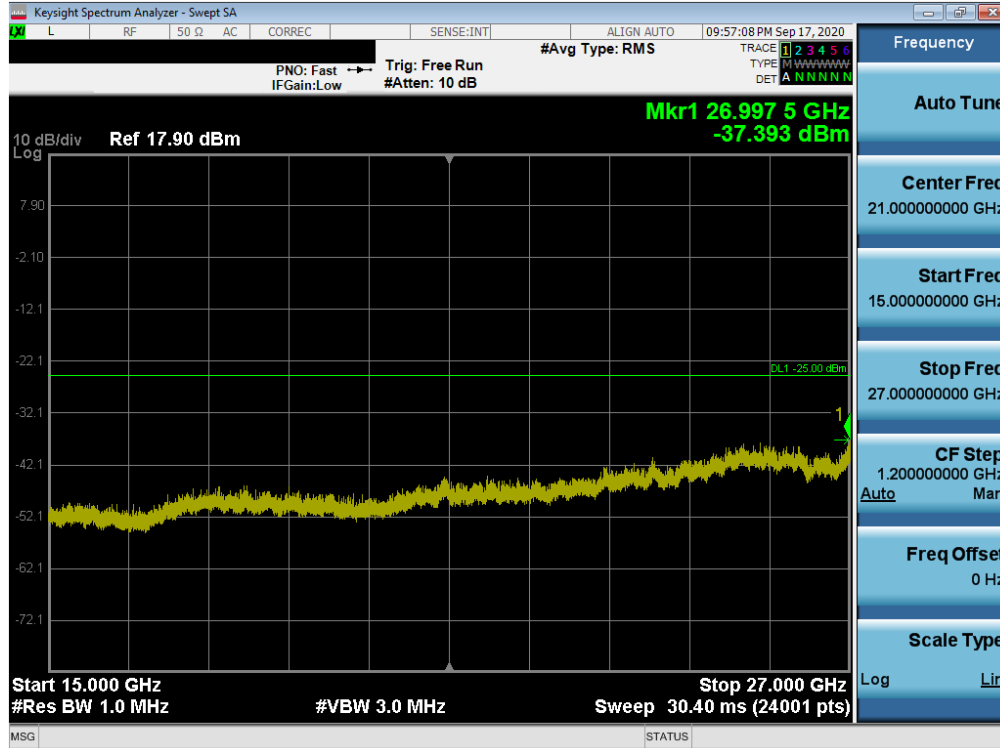


Plot 7-206. Conducted Spurious Plot (LTE Band 41(PC2) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel)



Plot 7-207. Conducted Spurious Plot (LTE Band 41(PC2) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of  element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 126 of 242

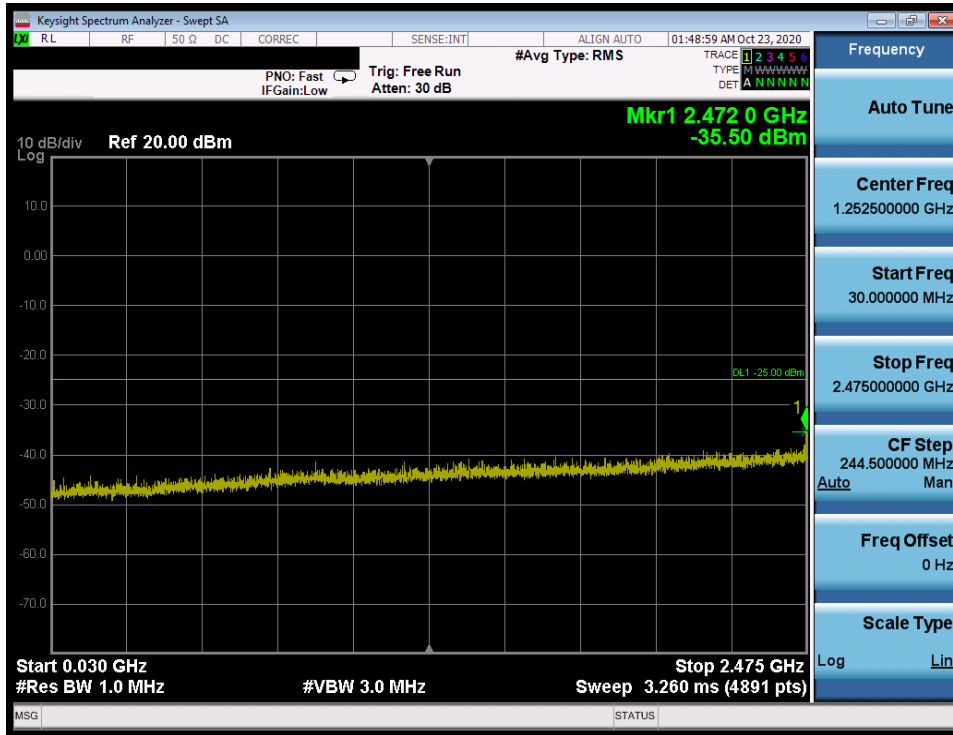


Plot 7-208. Conducted Spurious Plot (LTE Band 41(PC2) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

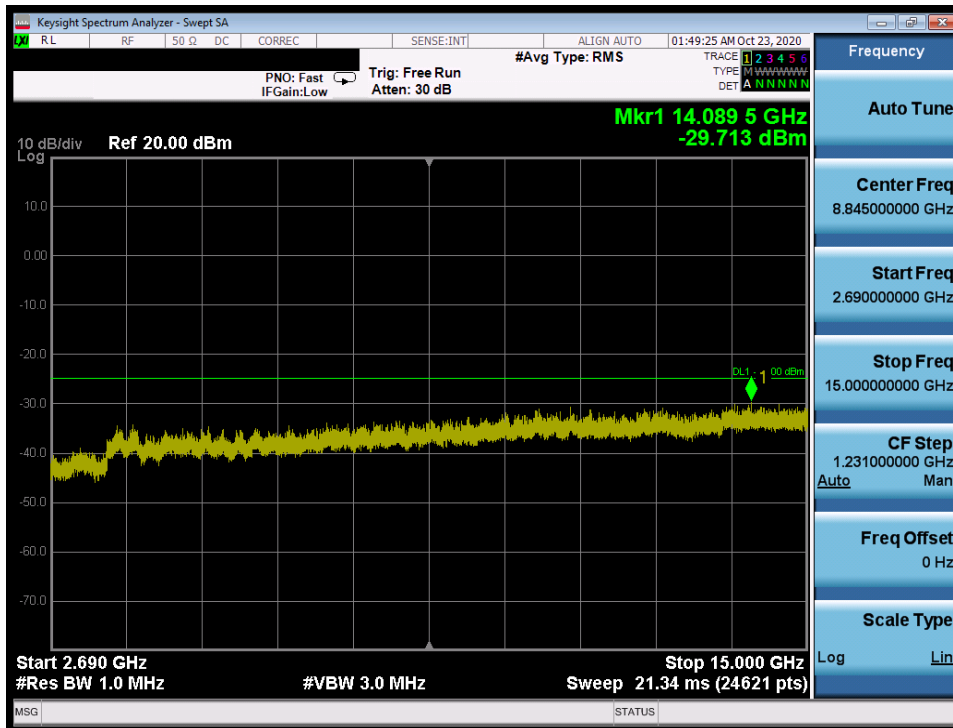
FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of  element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 127 of 242



## LTE Band 41(PC3)/38



Plot 7-209. Conducted Spurious Plot (LTE Band 41(PC3)/38 - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)



Plot 7-210. Conducted Spurious Plot (LTE Band 41(PC3)/38 - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

FCC ID: A3LSMG996U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2009140143-21-R1.A3L	Test Dates: 09/15/2020 – 12/10/2020	EUT Type: Portable Handset		Page 128 of 242