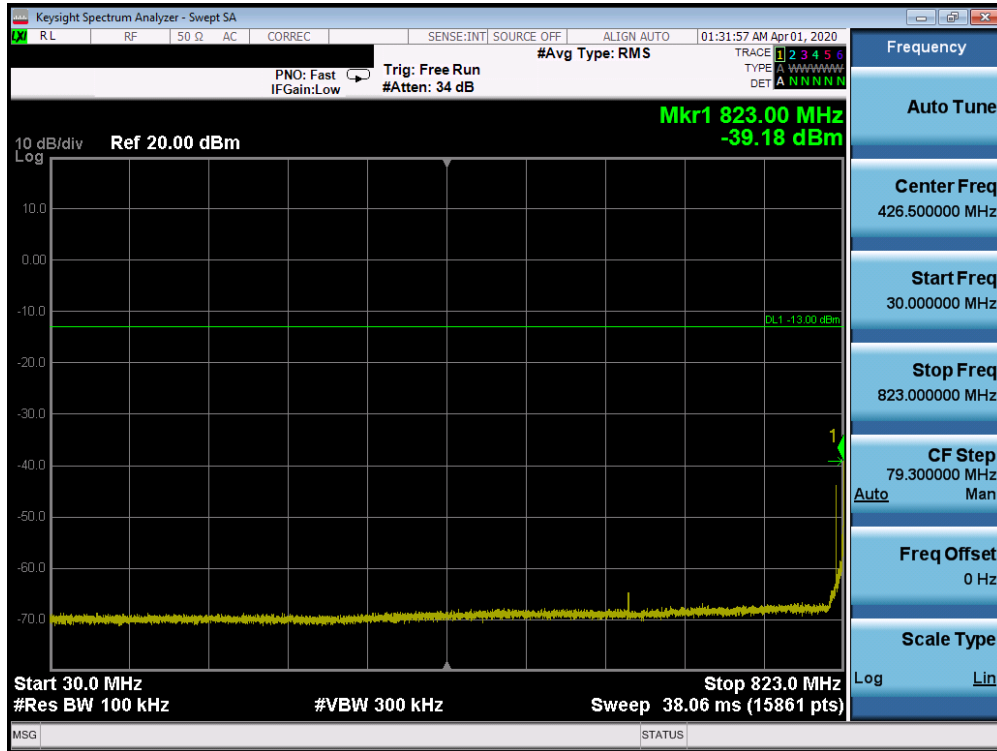
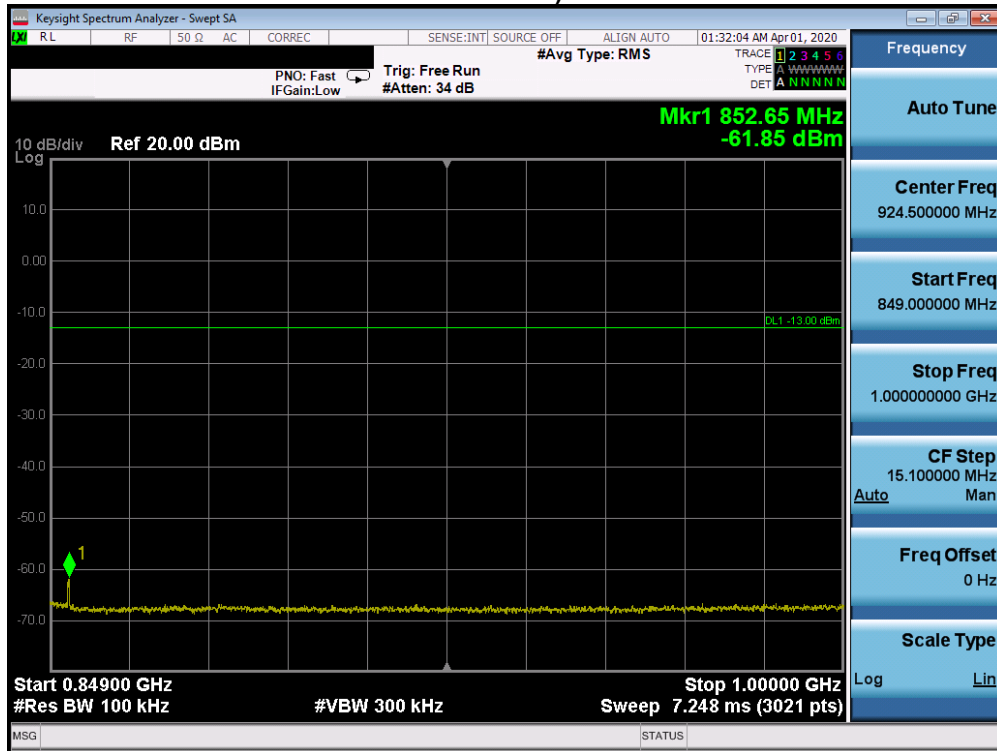


**NR Band n5**

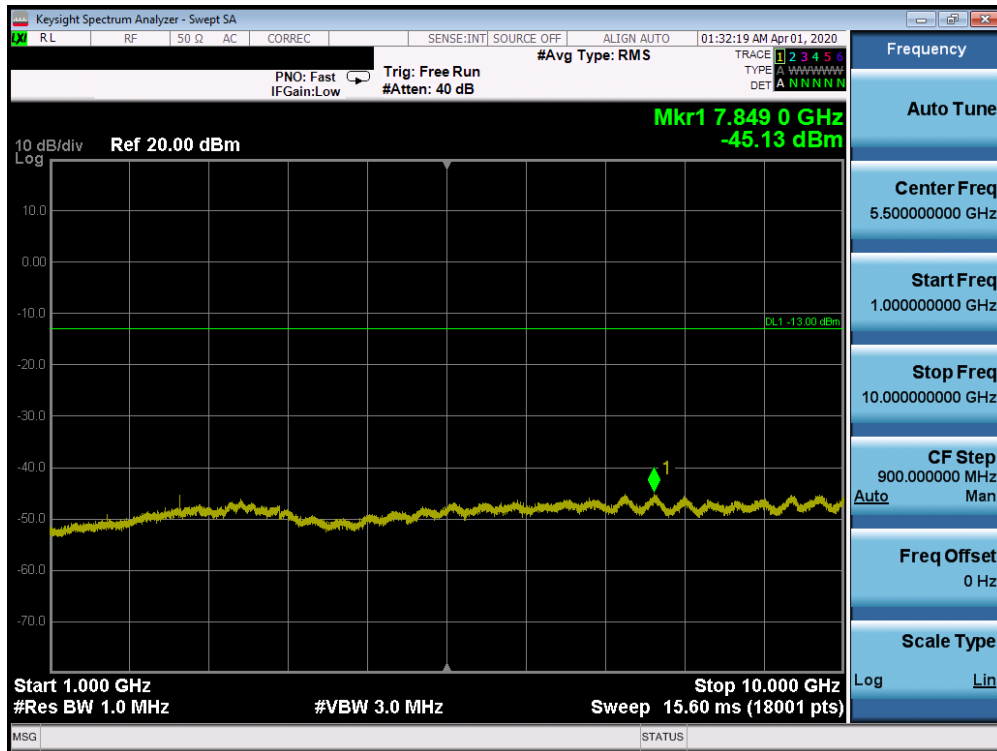


**Plot 7-206. Conducted Spurious Plot (n5 - 20.0MHz DFT-s-OFDM BPSK - RB Size 1, RB Offset 0 - Low Channel)**

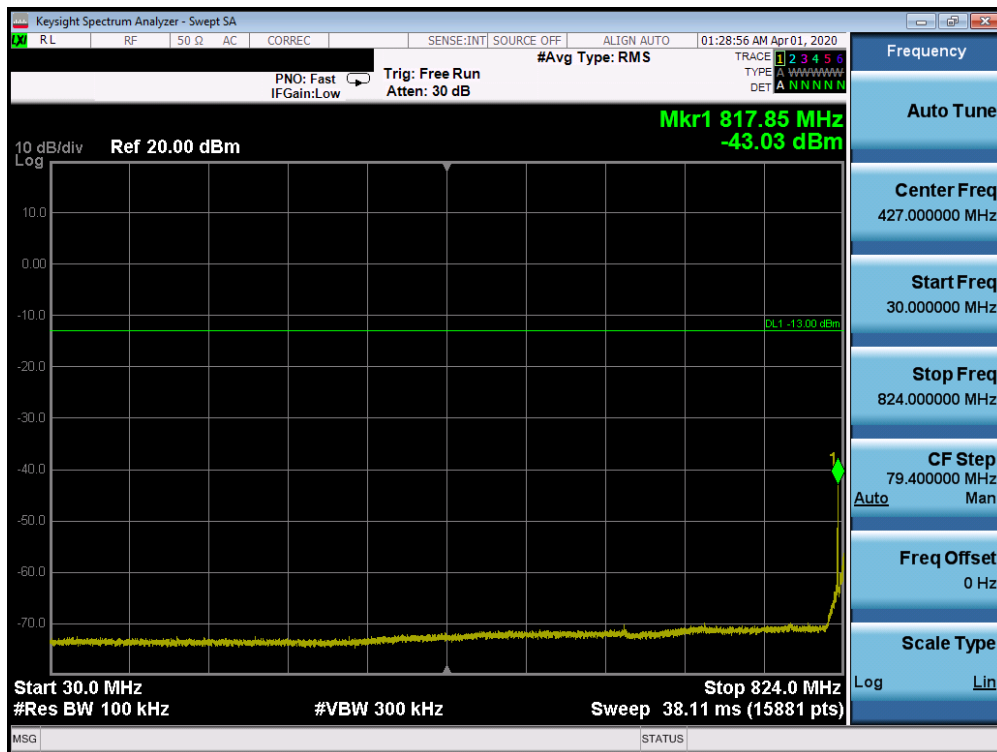


**Plot 7-207. Conducted Spurious Plot (n5 - 20.0MHz DFT-s-OFDM BPSK - RB Size 1, RB Offset 0 - Low Channel)**

FCC ID: A3LSMG981V	<b>PCTEST</b> Proud to be part of  element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 123 of 357

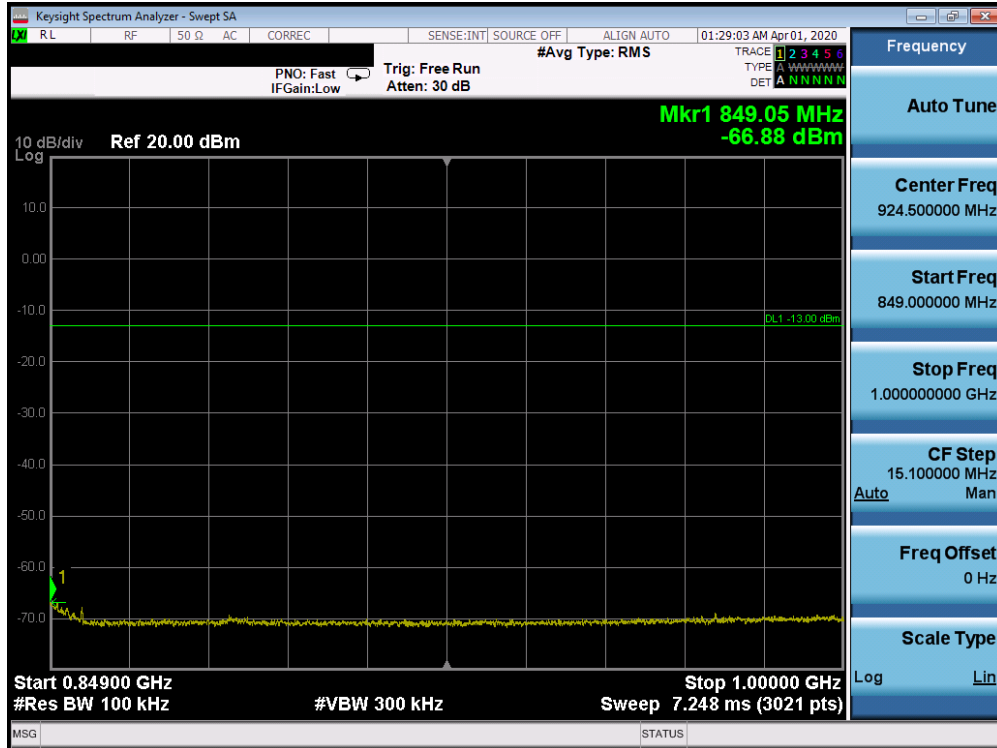


Plot 7-208. Conducted Spurious Plot (n5 - 20.0MHz DFT-s-OFDM BPSK - RB Size 1, RB Offset 0 - Low Channel)

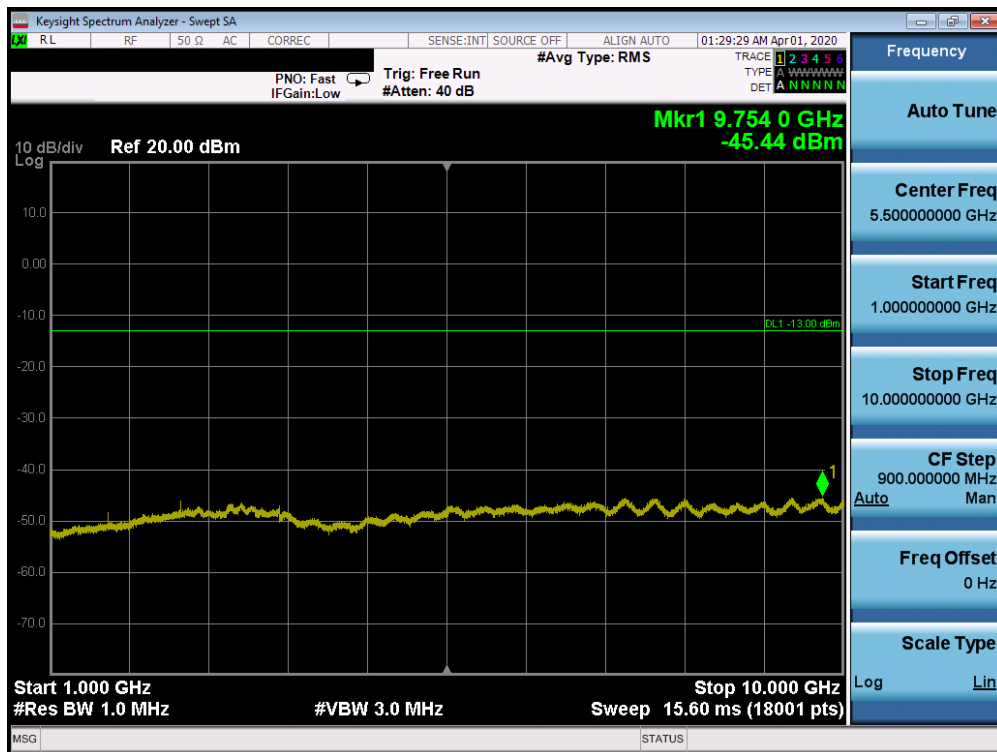


Plot 7-209. Conducted Spurious Plot (n5 - 20.0MHz DFT-s-OFDM BPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 124 of 357

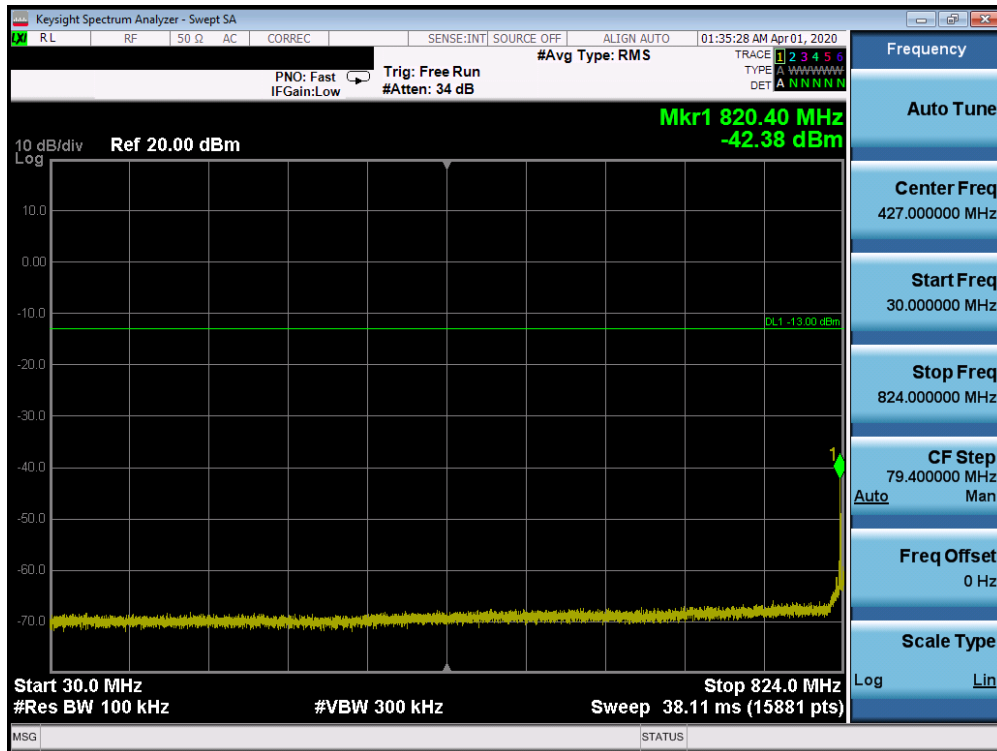


Plot 7-210. Conducted Spurious Plot (n5 - 20.0MHz DFT-s-OFDM BPSK - RB Size 1, RB Offset 0 - Mid Channel)

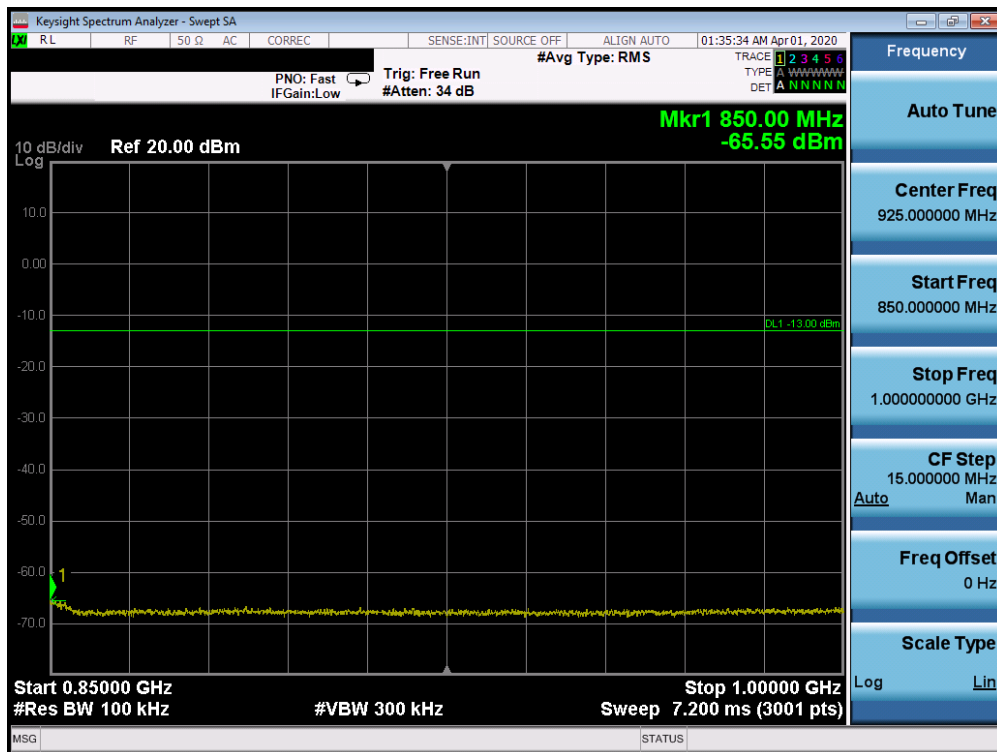


Plot 7-211. Conducted Spurious Plot (n5 - 20.0MHz DFT-s-OFDM BPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 125 of 357

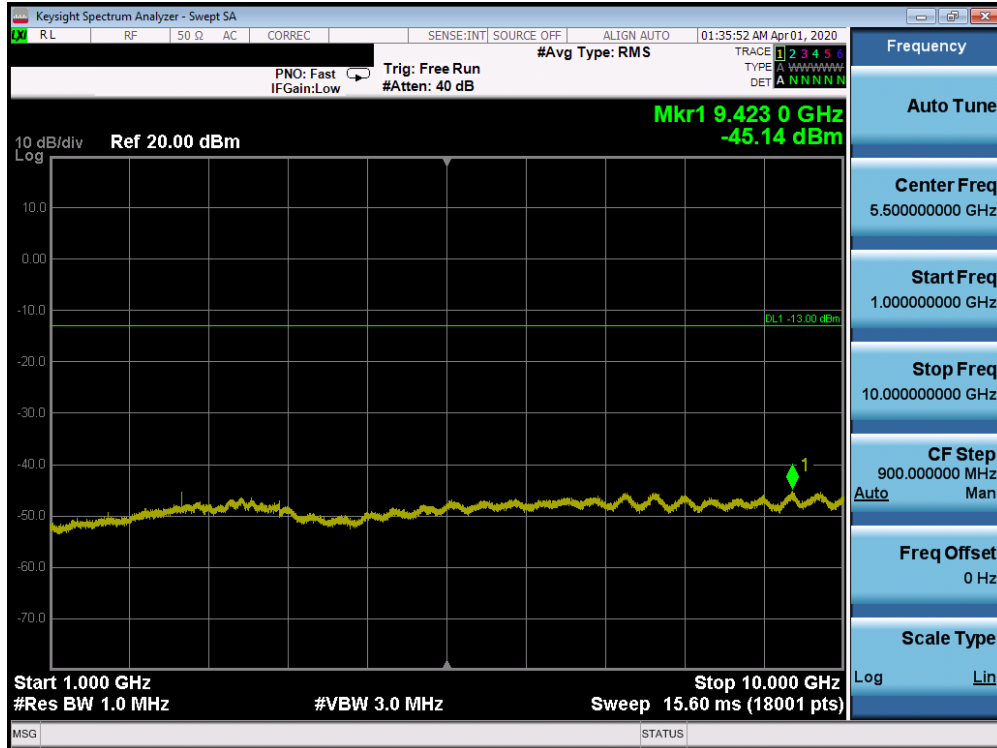


Plot 7-212. Conducted Spurious Plot (n5 - 20.0MHz DFT-s-OFDM BPSK - RB Size 1, RB Offset 0 - High Channel)



Plot 7-213. Conducted Spurious Plot (n5 - 20.0MHz DFT-s-OFDM BPSK - RB Size 1, RB Offset 0 - High Channel)

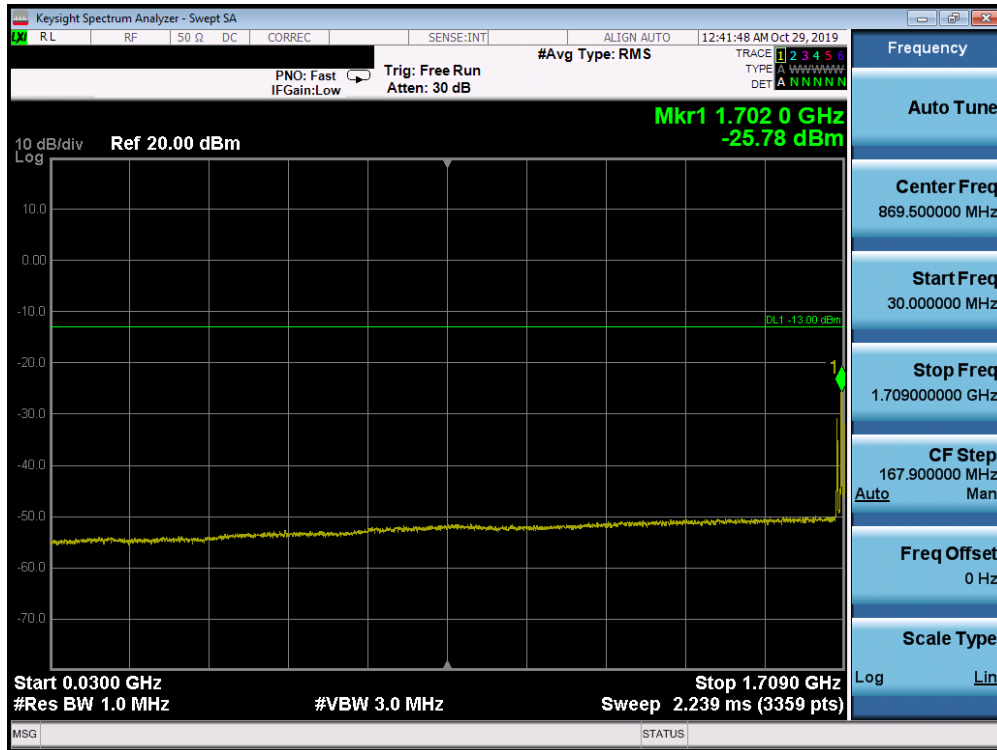
FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 126 of 357



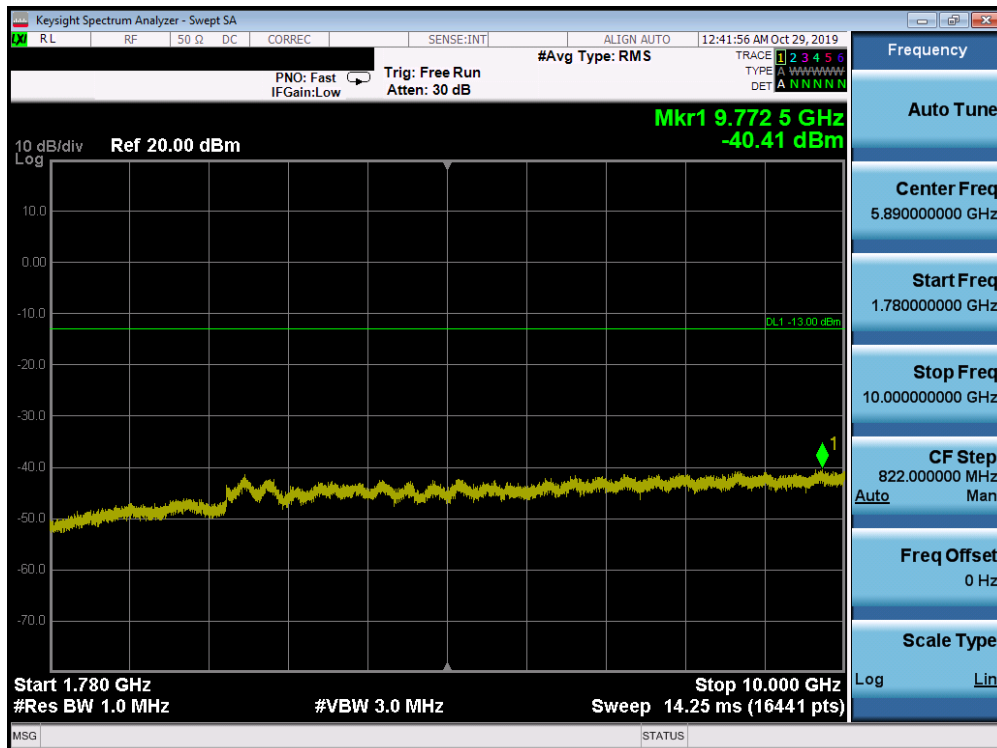
**Plot 7-214. Conducted Spurious Plot (n5 - 20.0MHz DFT-s-OFDM BPSK - RB Size 1, RB Offset 0 - High Channel)**

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 127 of 357

### Band 66/4

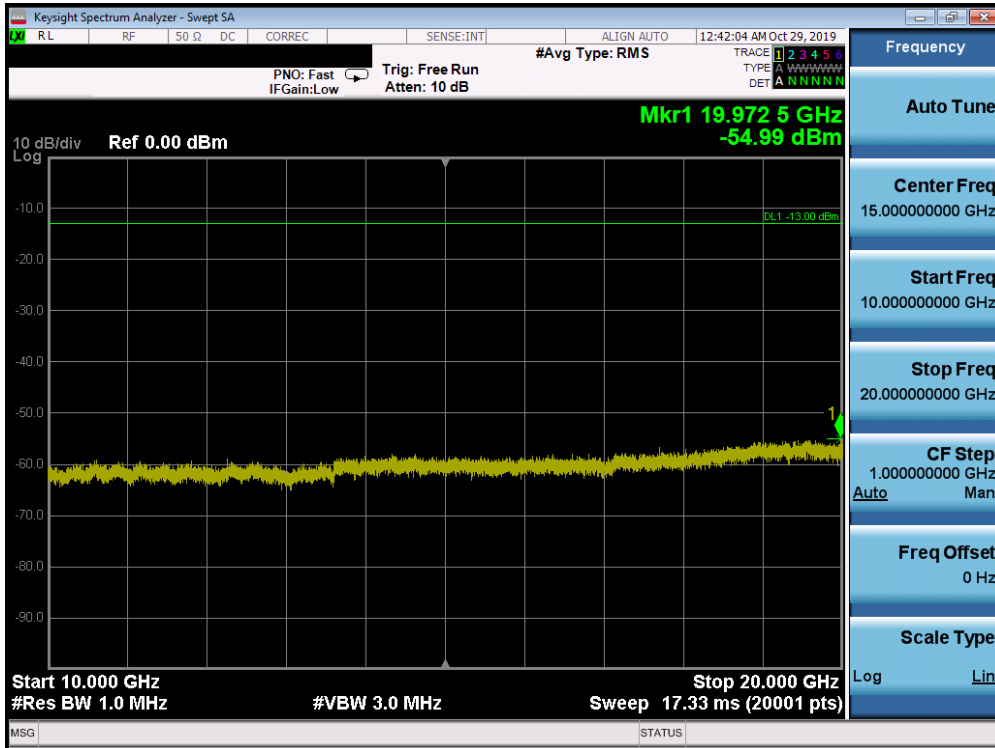


Plot 7-215. Conducted Spurious Plot (Band 66/4 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

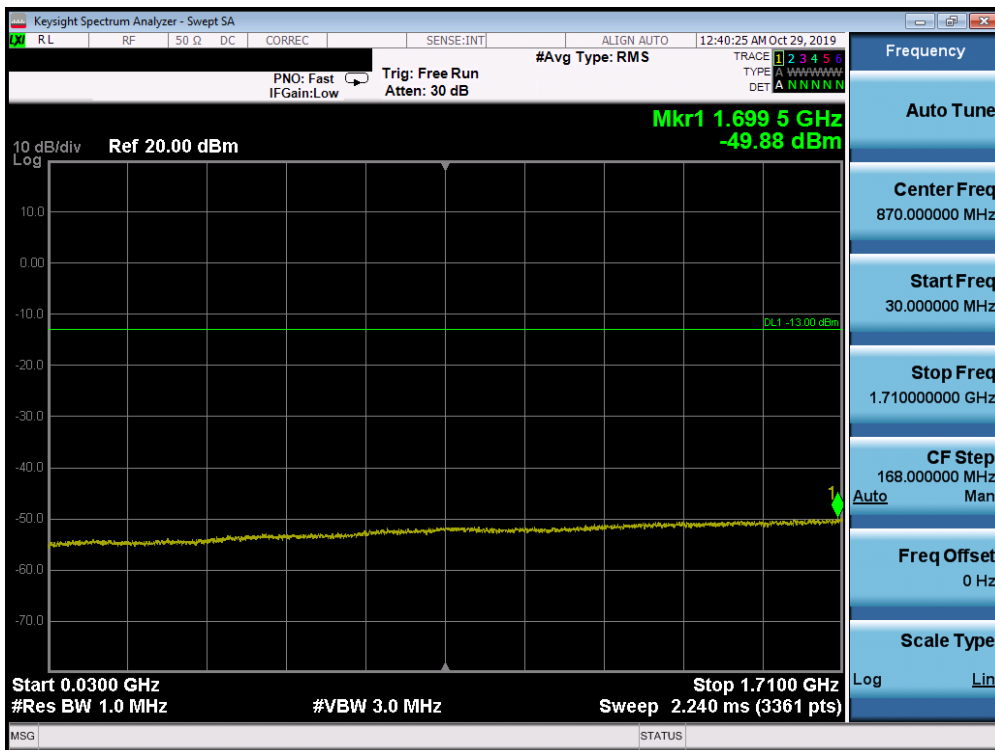


Plot 7-216. Conducted Spurious Plot (Band 66/4 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 128 of 357

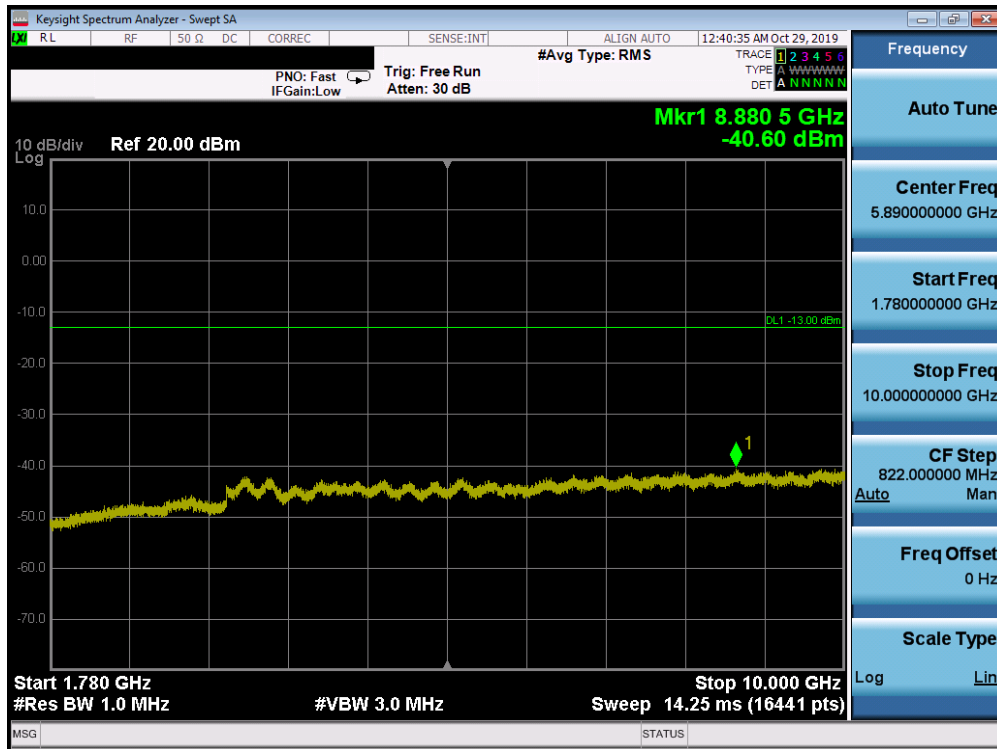


Plot 7-217. Conducted Spurious Plot (Band 66/4 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

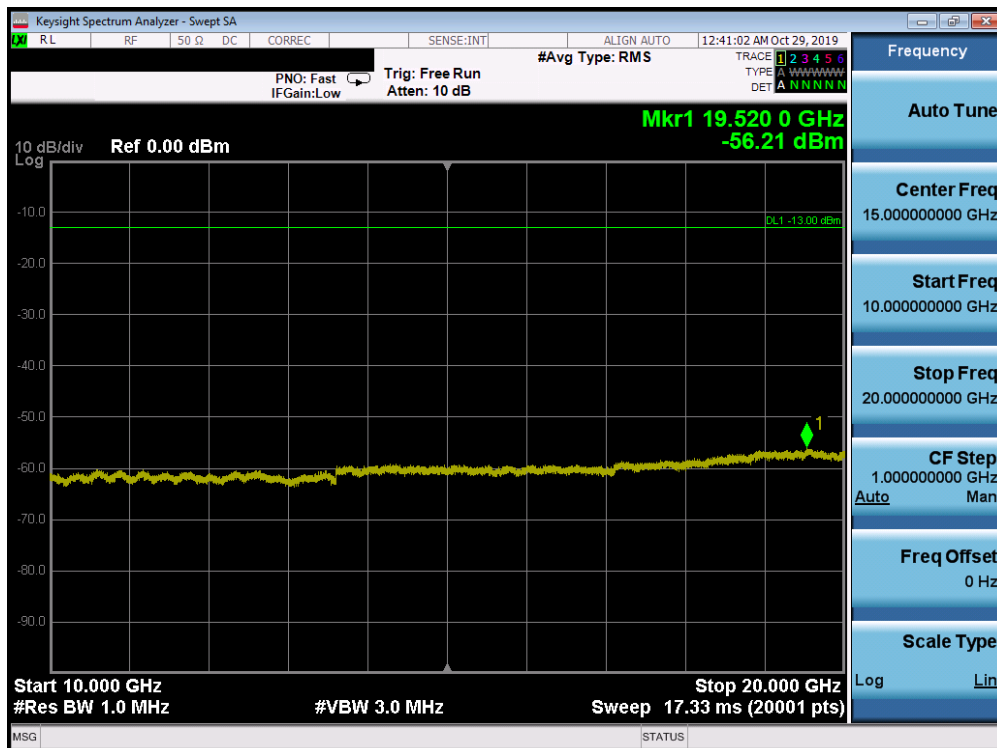


Plot 7-218. Conducted Spurious Plot (Band 66/4 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 129 of 357



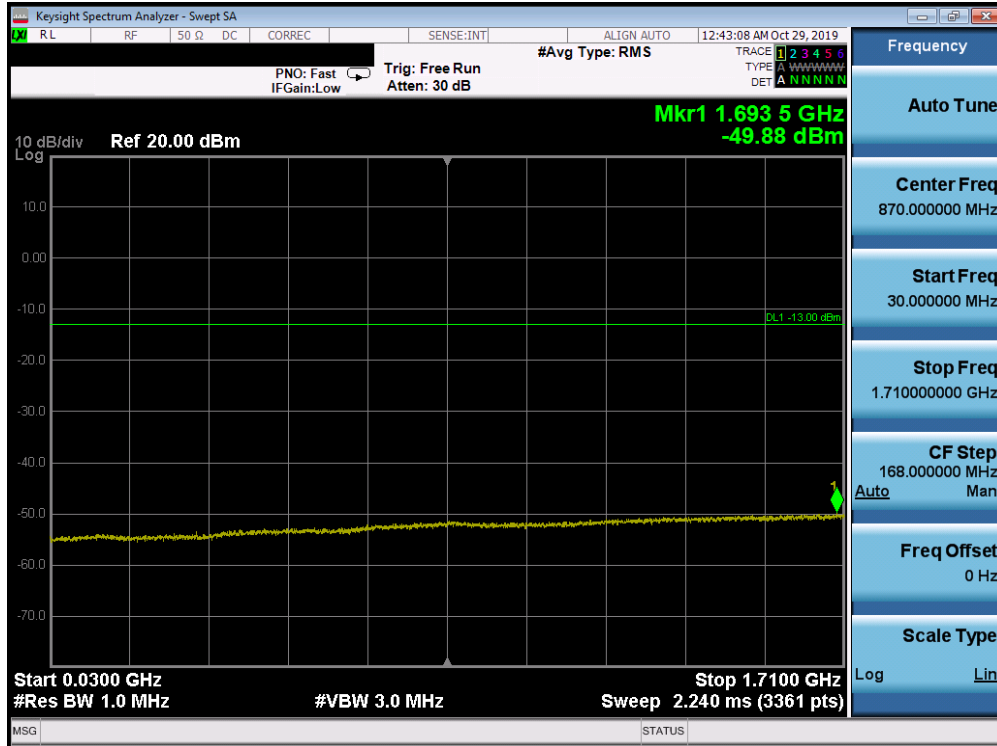
Plot 7-219. Conducted Spurious Plot (Band 66/4 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)



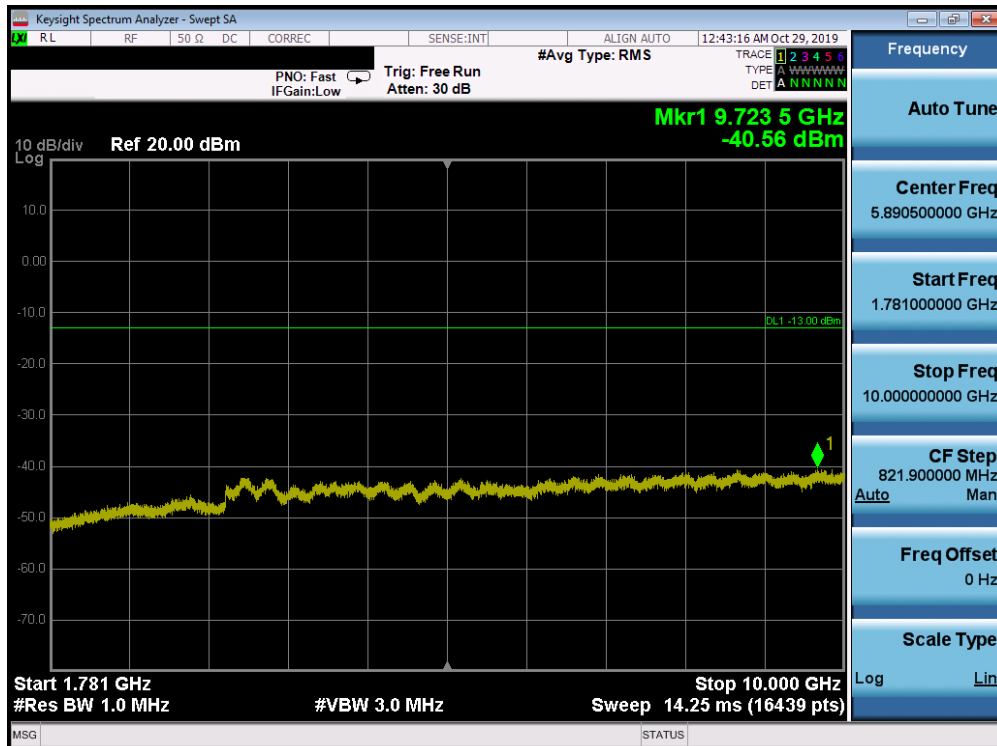
Plot 7-220. Conducted Spurious Plot (Band 66/4 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 130 of 357



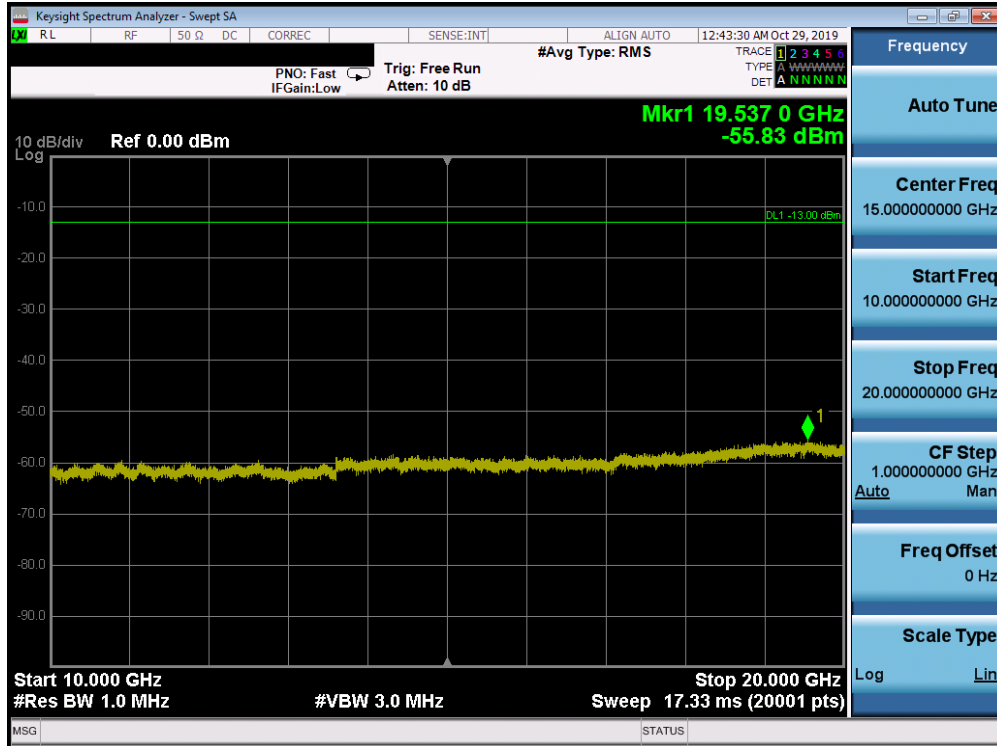


Plot 7-221. Conducted Spurious Plot (Band 66/4 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)



Plot 7-222. Conducted Spurious Plot (Band 66/4 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

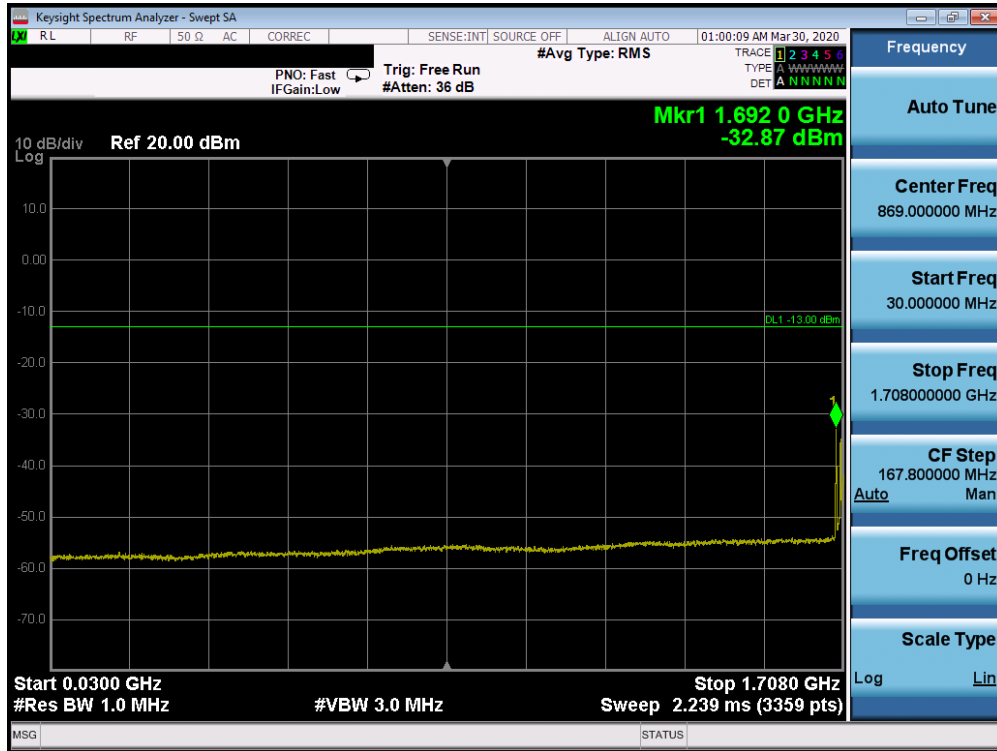
FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 131 of 357



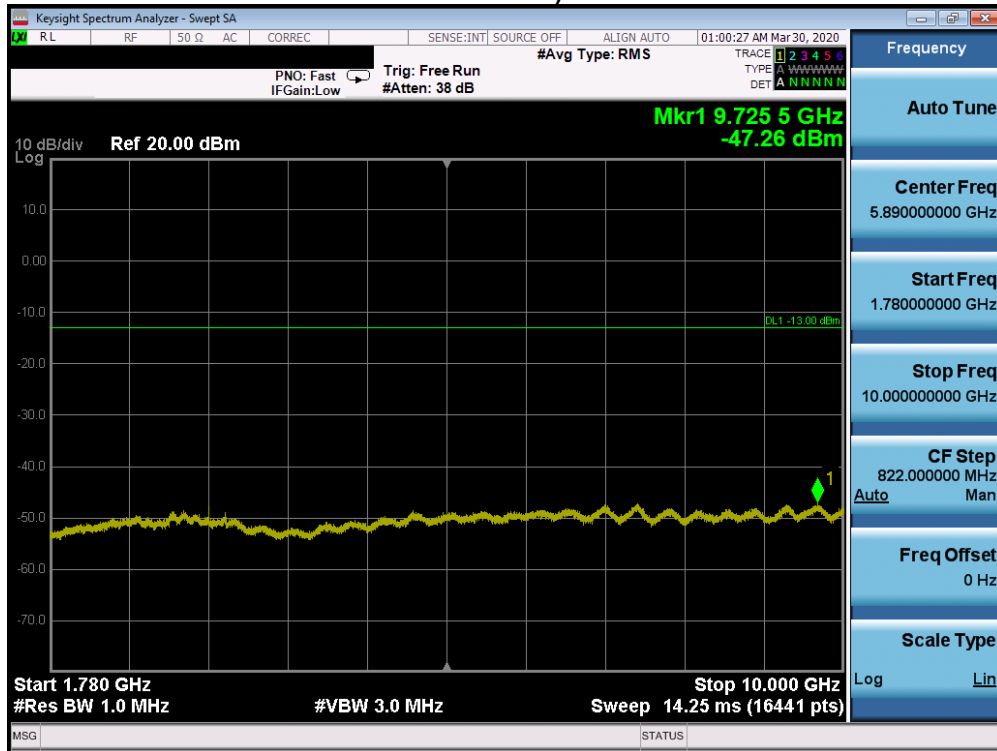
Plot 7-223. Conducted Spurious Plot (Band 66/4 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 132 of 357

**NR Band n66**



**Plot 7-224. Conducted Spurious Plot (n66 - 20.0MHz DFT-s-OFDM BPSK - RB Size 1, RB Offset 0 - Low Channel)**

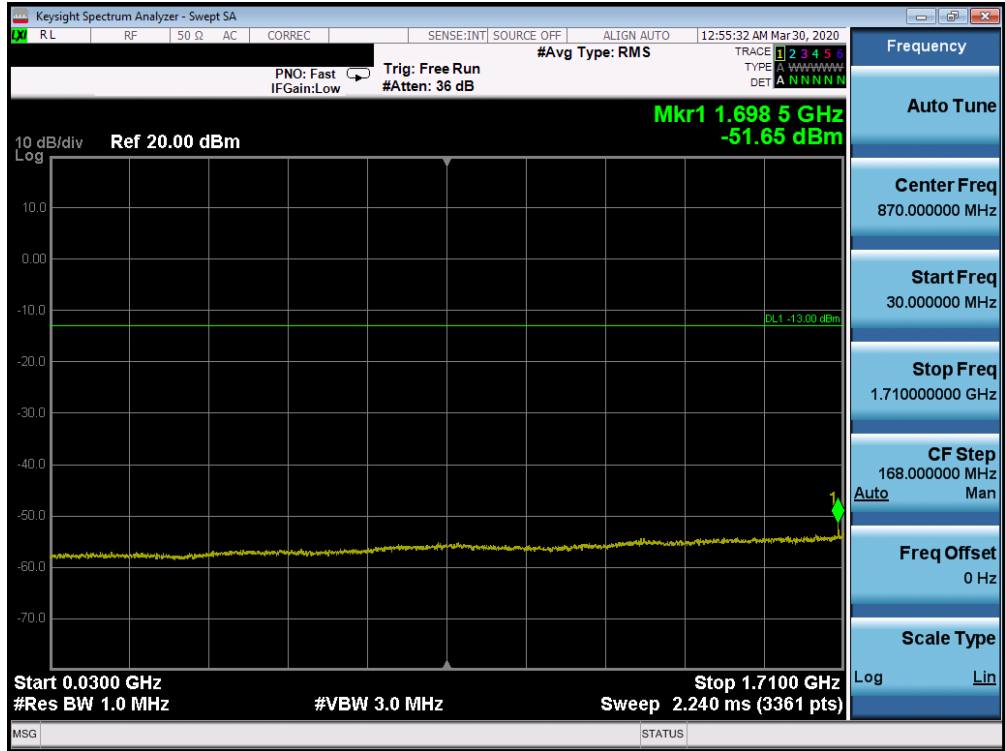


**Plot 7-225. Conducted Spurious Plot (n66 - 20.0MHz DFT-s-OFDM BPSK - RB Size 1, RB Offset 0 - Low Channel)**


FCC ID: A3LSMG981V	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 133 of 357

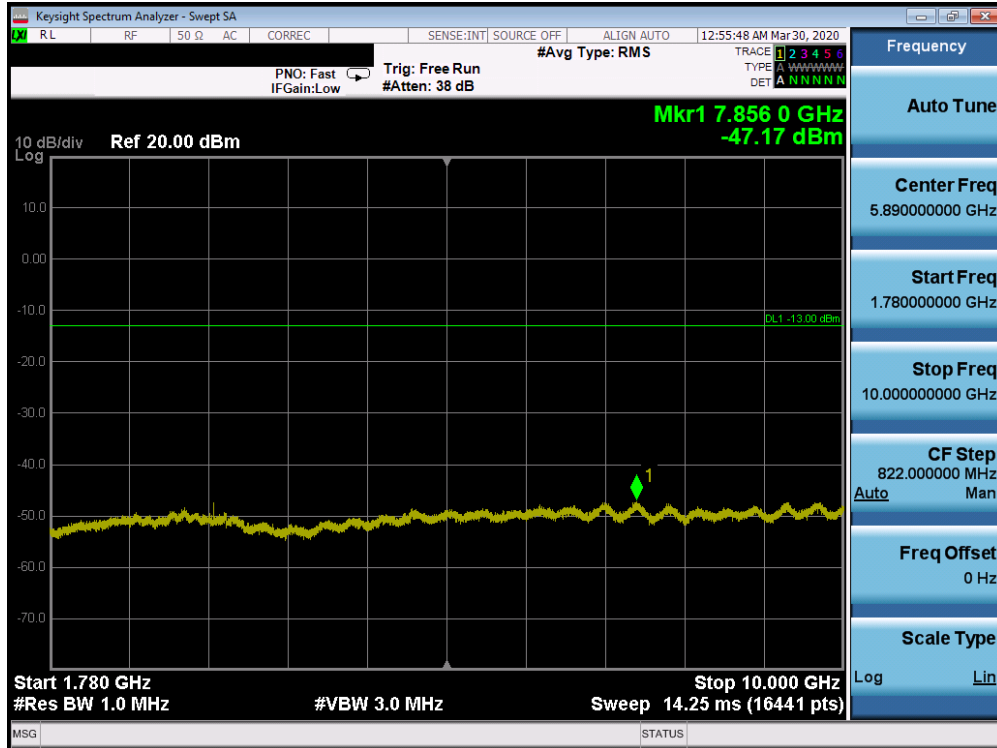


Plot 7-226. Conducted Spurious Plot (n66 - 20.0MHz DFT-s-OFDM BPSK - RB Size 1, RB Offset 0 - Low Channel)

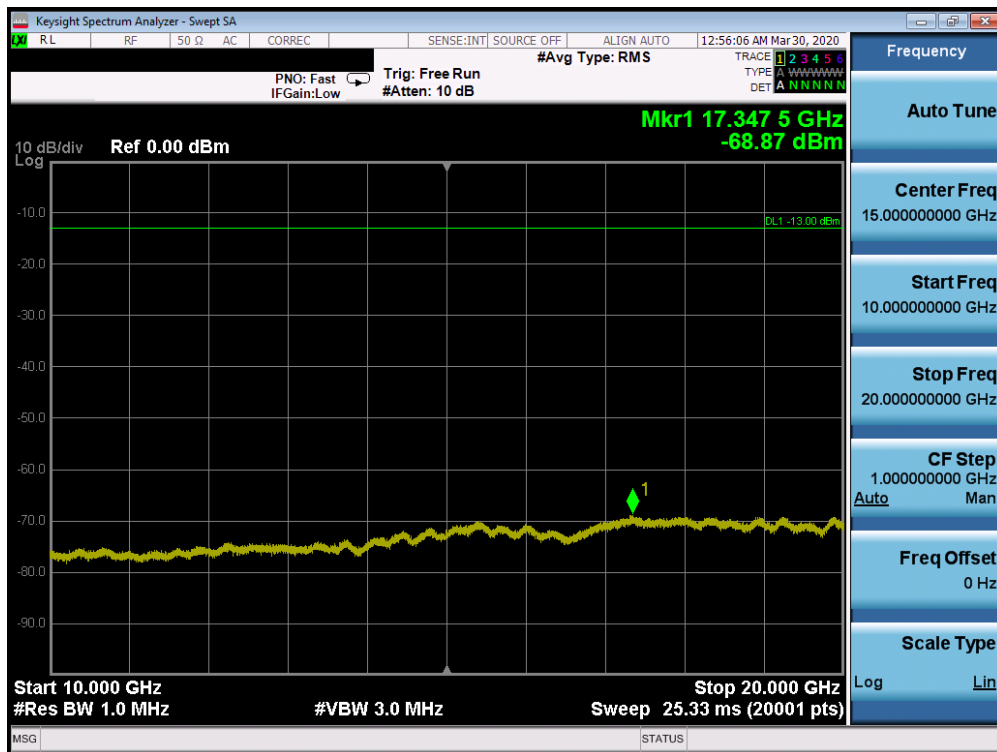


Plot 7-227. Conducted Spurious Plot (n66 - 20.0MHz DFT-s-OFDM BPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset	Page 134 of 357	

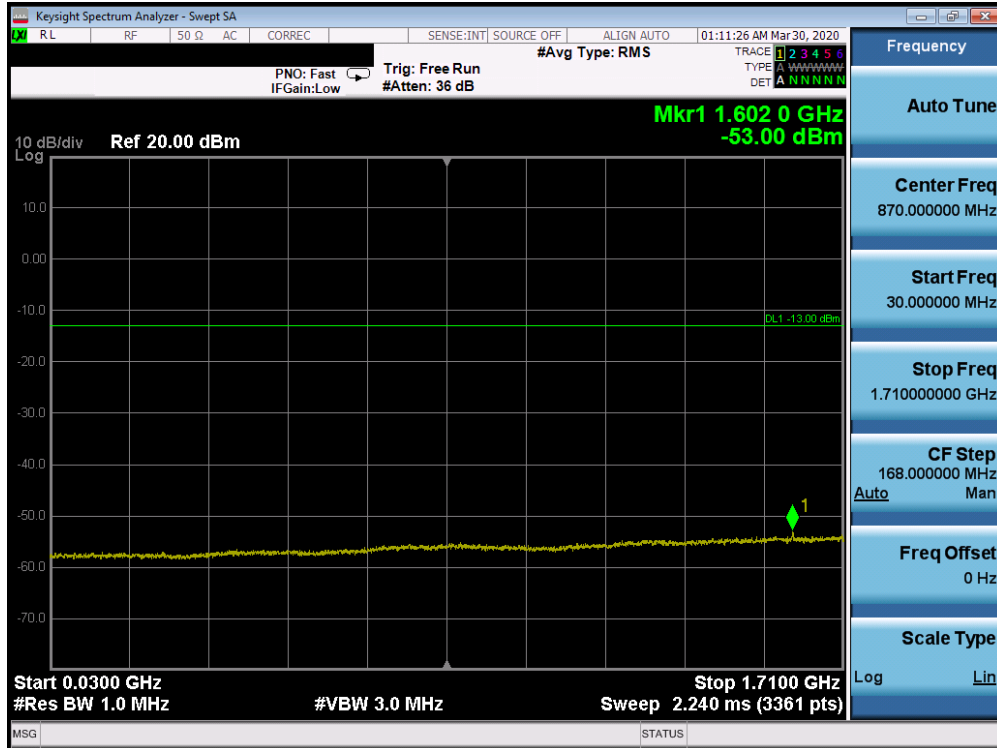


Plot 7-228. Conducted Spurious Plot (n66 - 20.0MHz DFT-s-OFDM BPSK - RB Size 1, RB Offset 0 - Mid Channel)

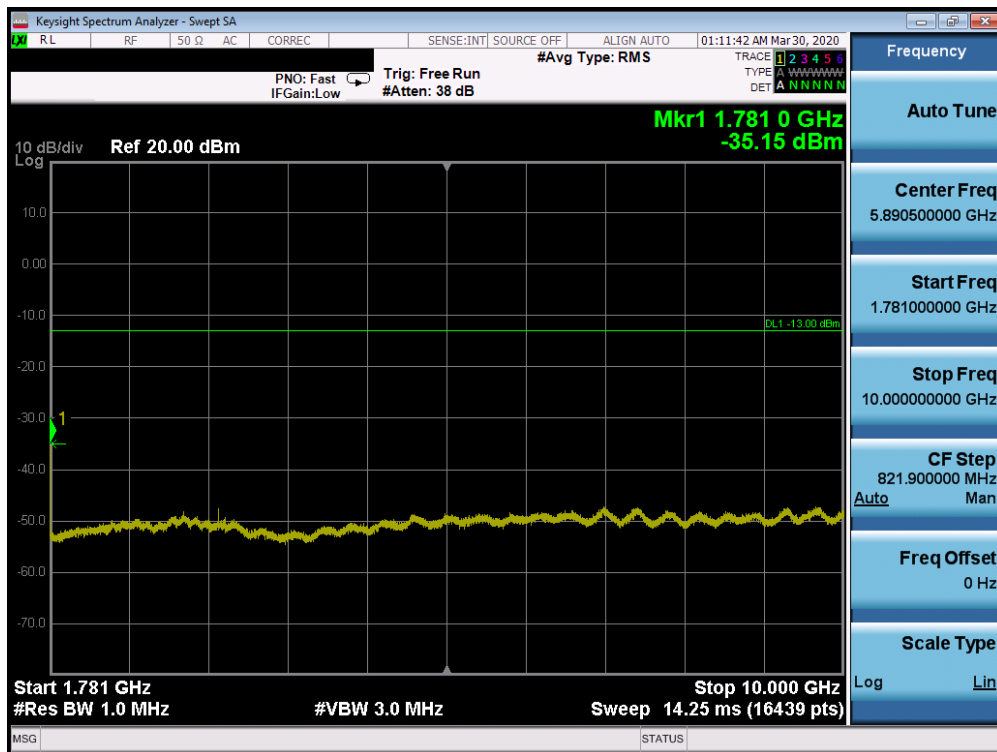


Plot 7-229. Conducted Spurious Plot (n66 - 20.0MHz DFT-s-OFDM BPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 135 of 357



Plot 7-230. Conducted Spurious Plot (n66 - 20.0MHz DFT-s-OFDM BPSK - RB Size 1, RB Offset 0 - High Channel)



Plot 7-231. Conducted Spurious Plot (n66 - 20.0MHz DFT-s-OFDM BPSK - RB Size 1, RB Offset 0 - High Channel)

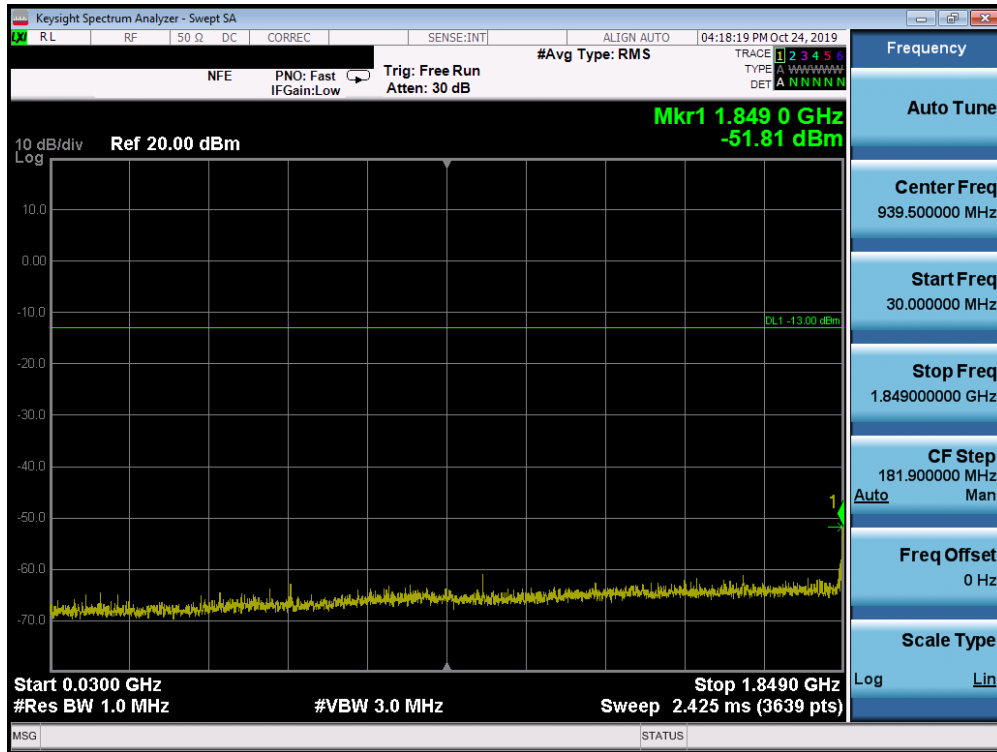
FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 136 of 357



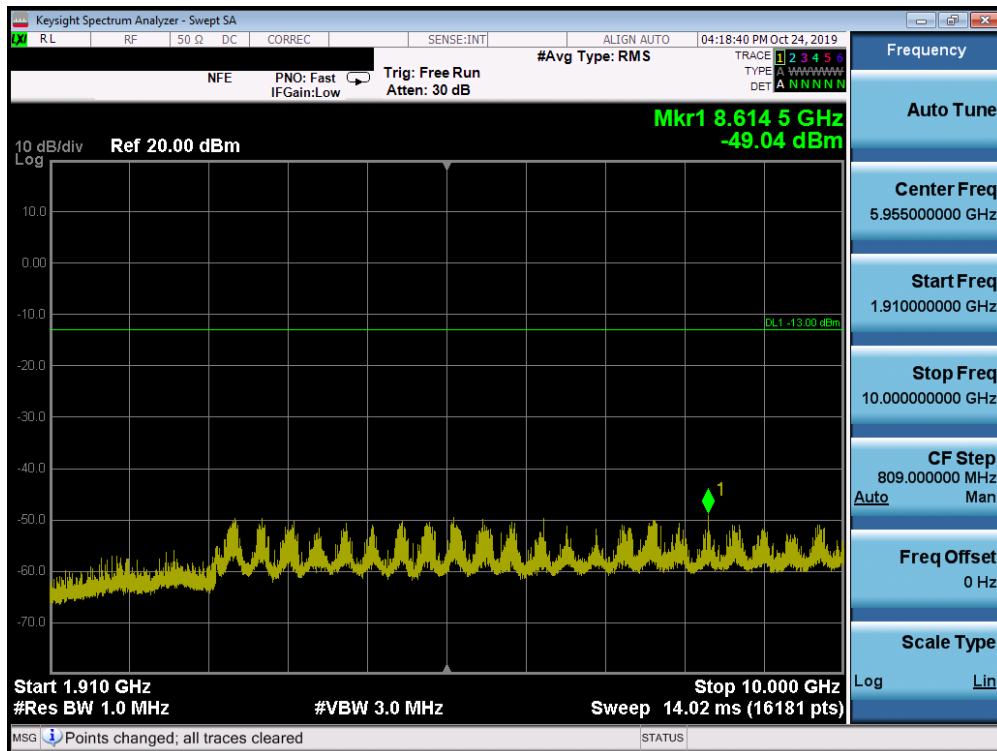
**Plot 7-232. Conducted Spurious Plot (n66 - 20.0MHz DFT-s-OFDM BPSK - RB Size 1, RB Offset 0 - High Channel)**

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 137 of 357

## Band 2



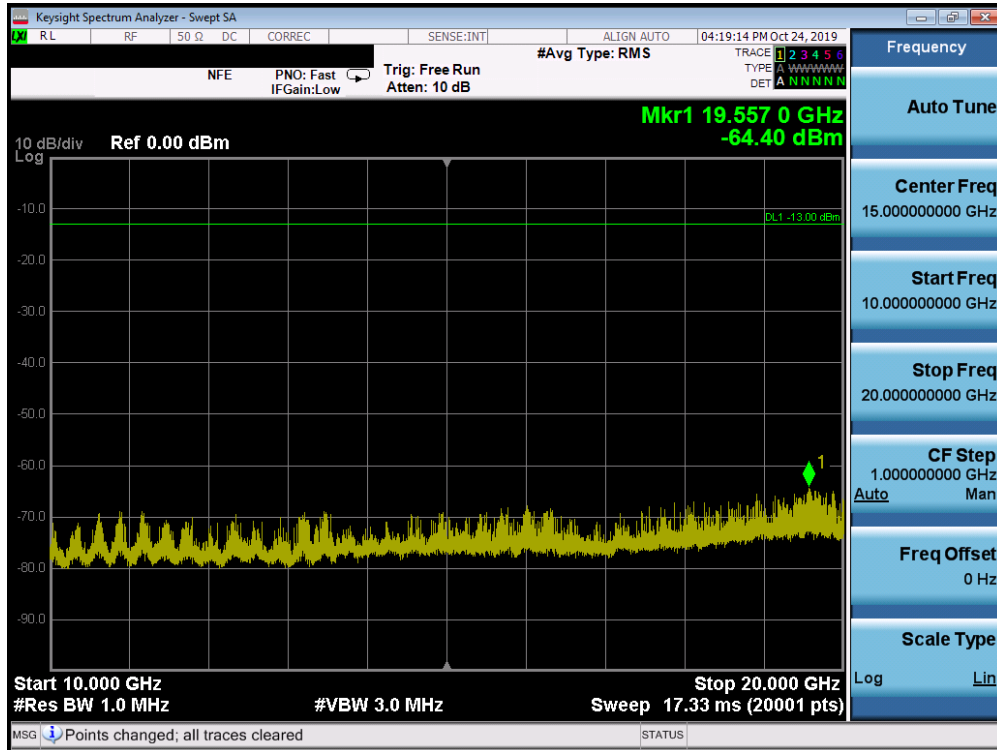
Plot 7-233. Conducted Spurious Plot (Band 2 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)



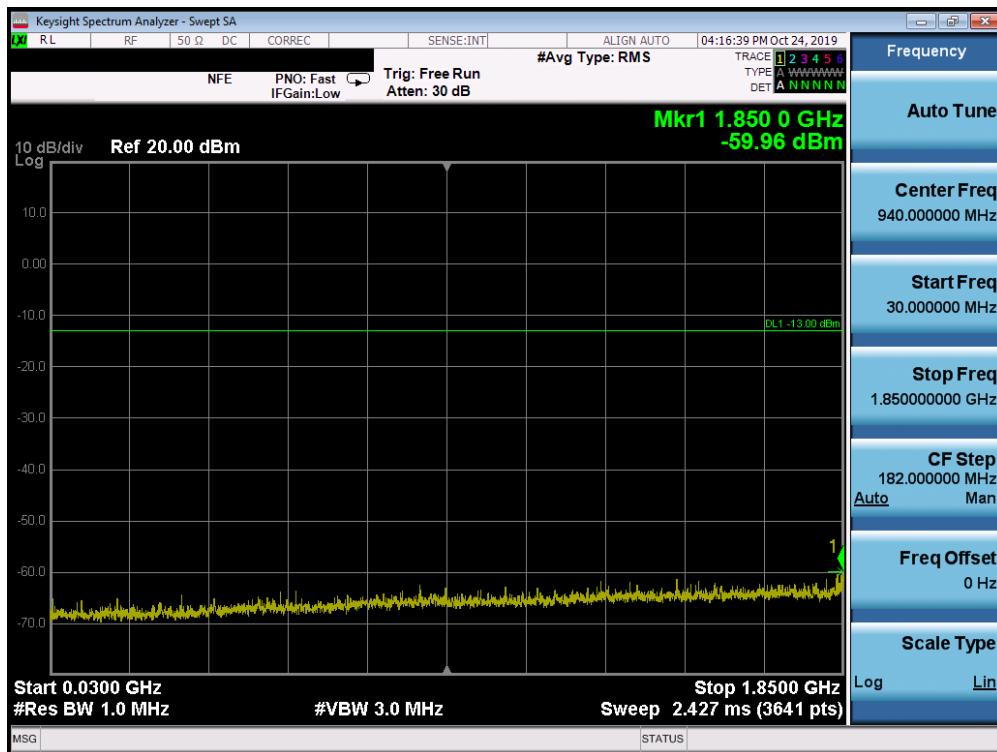
Plot 7-234. Conducted Spurious Plot (Band 2 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 138 of 357



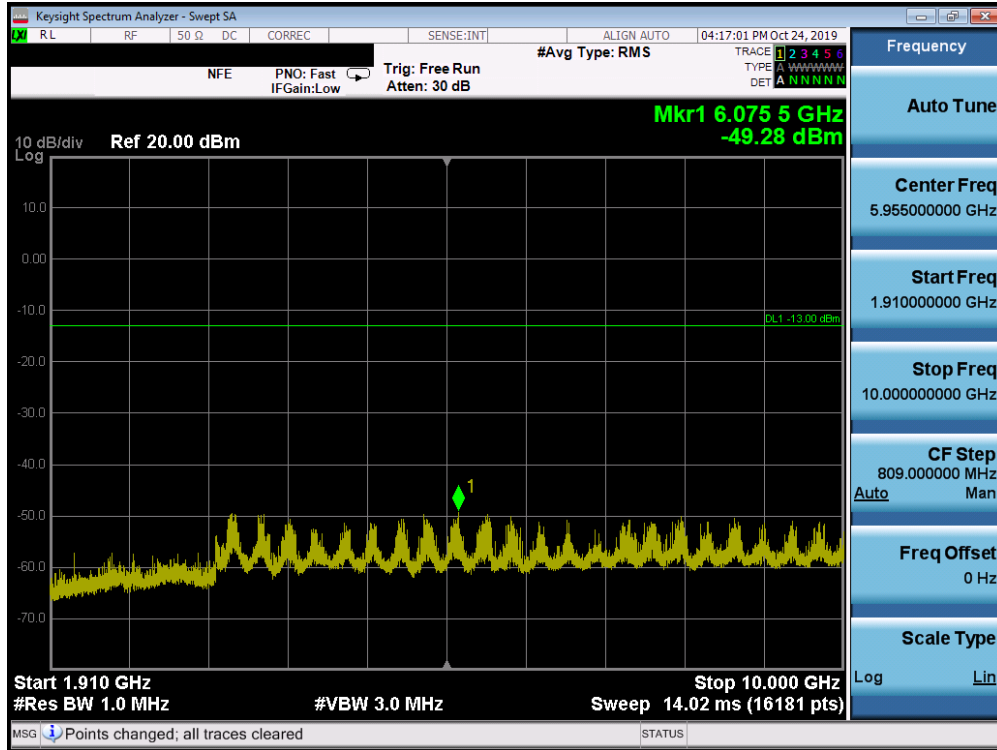


**Plot 7-235. Conducted Spurious Plot (Band 2 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)**

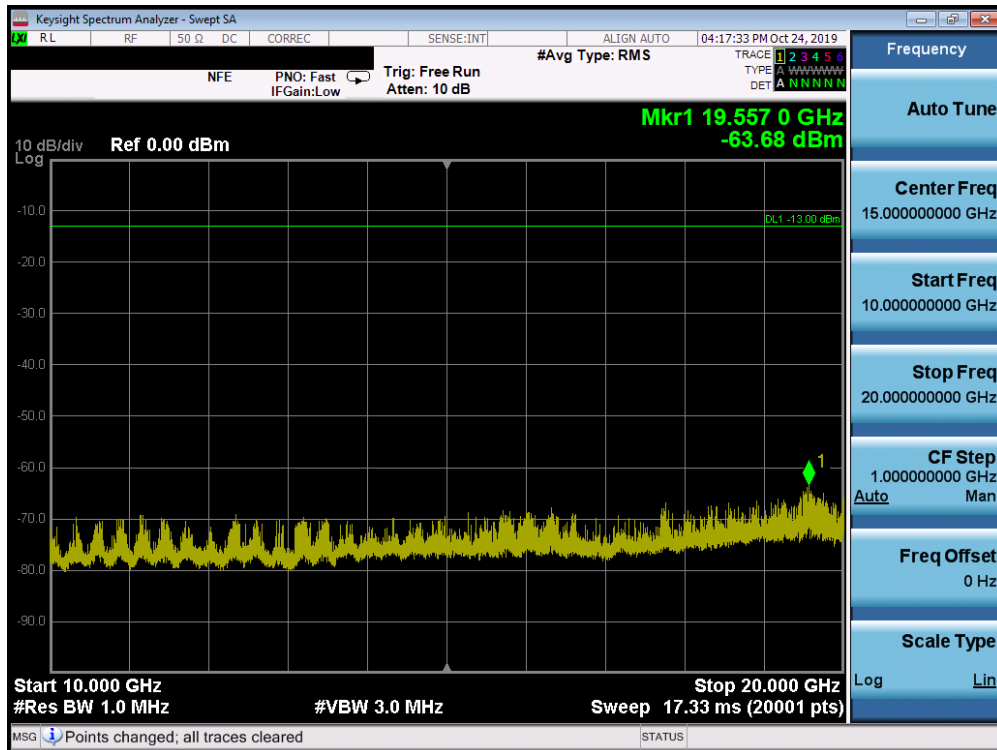


**Plot 7-236. Conducted Spurious Plot (Band 2 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)**

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 139 of 357

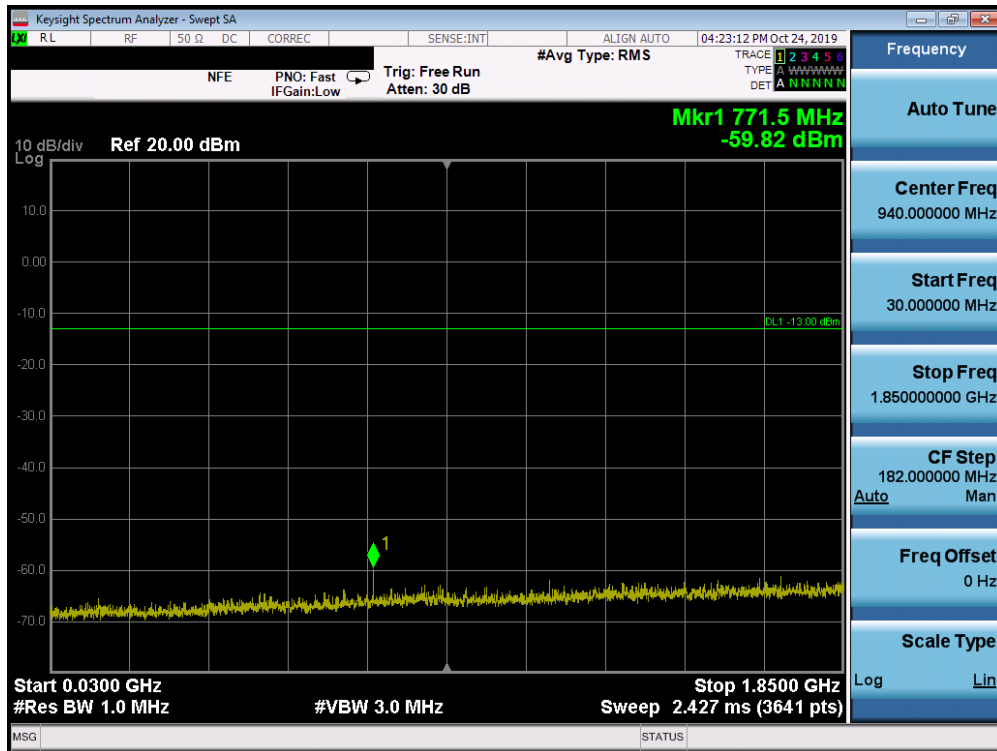


Plot 7-237. Conducted Spurious Plot (Band 2 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

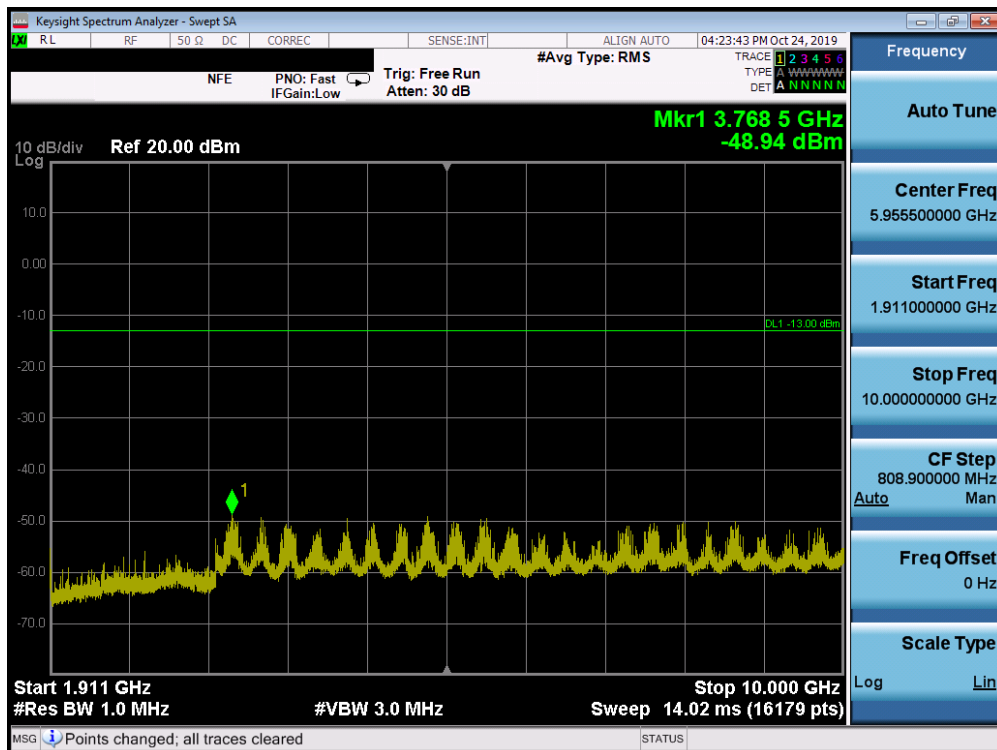


Plot 7-238. Conducted Spurious Plot (Band 2 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 140 of 357

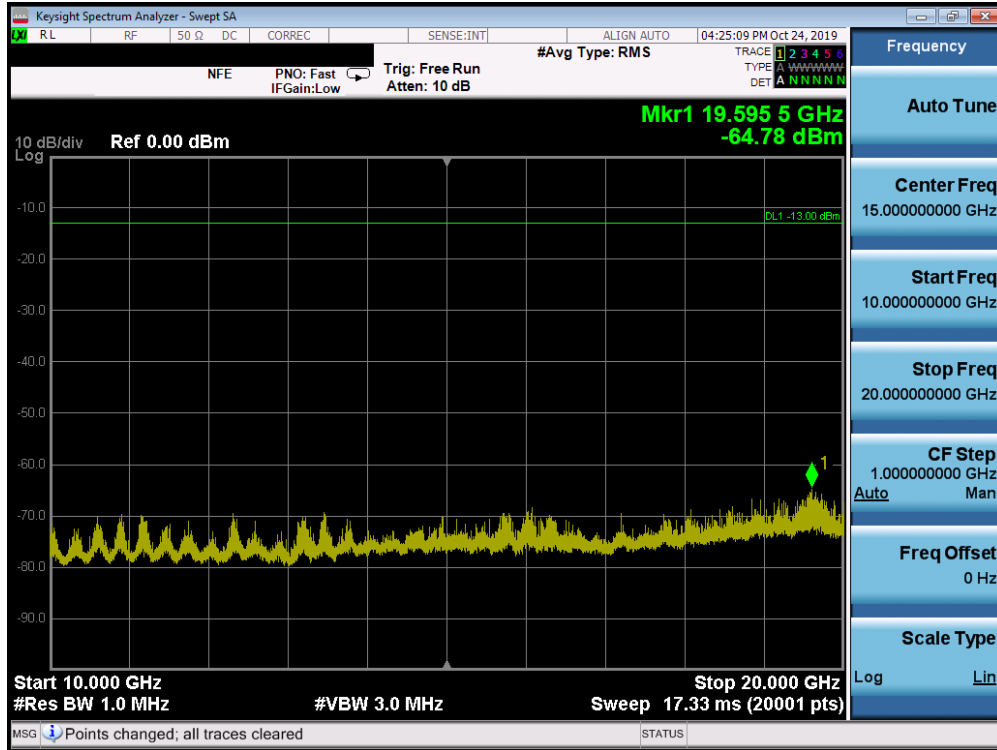


Plot 7-239. Conducted Spurious Plot (Band 2 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)



Plot 7-240. Conducted Spurious Plot (Band 2 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

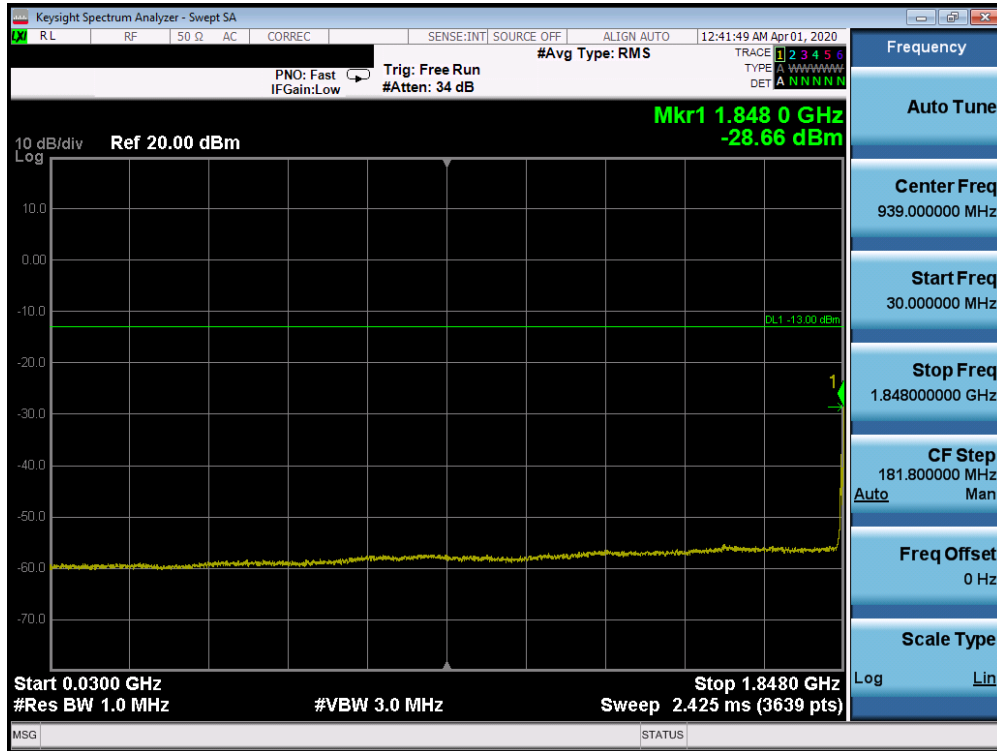
FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 141 of 357



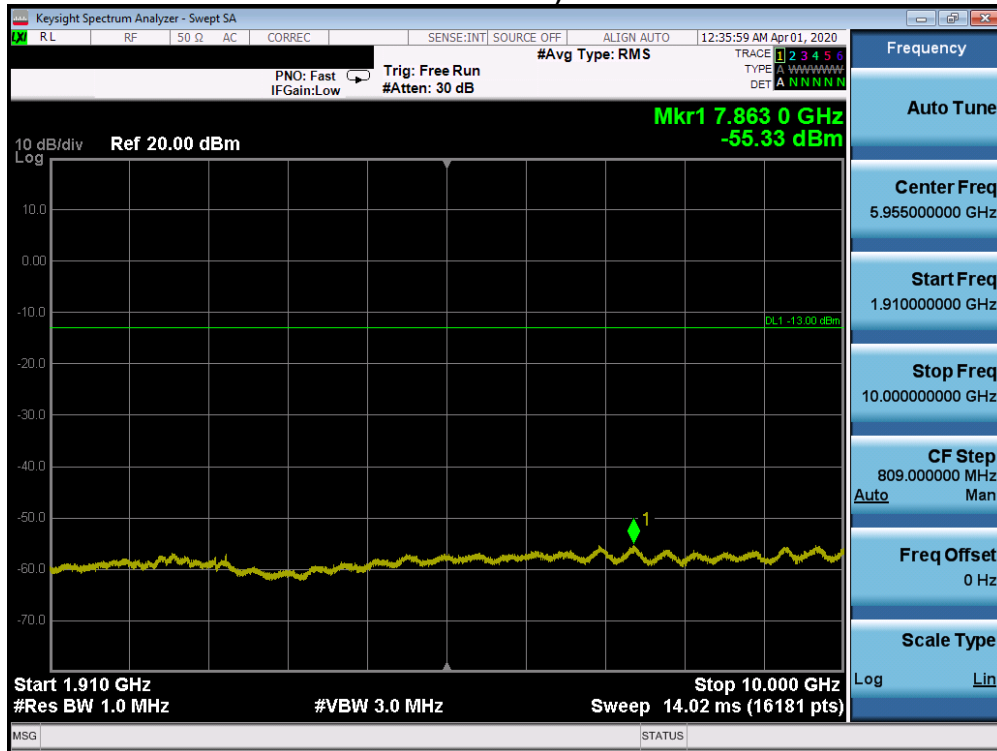
Plot 7-241. Conducted Spurious Plot (Band 2 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

FCC ID: A3LSMG981V	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 142 of 357

**NR Band n2**

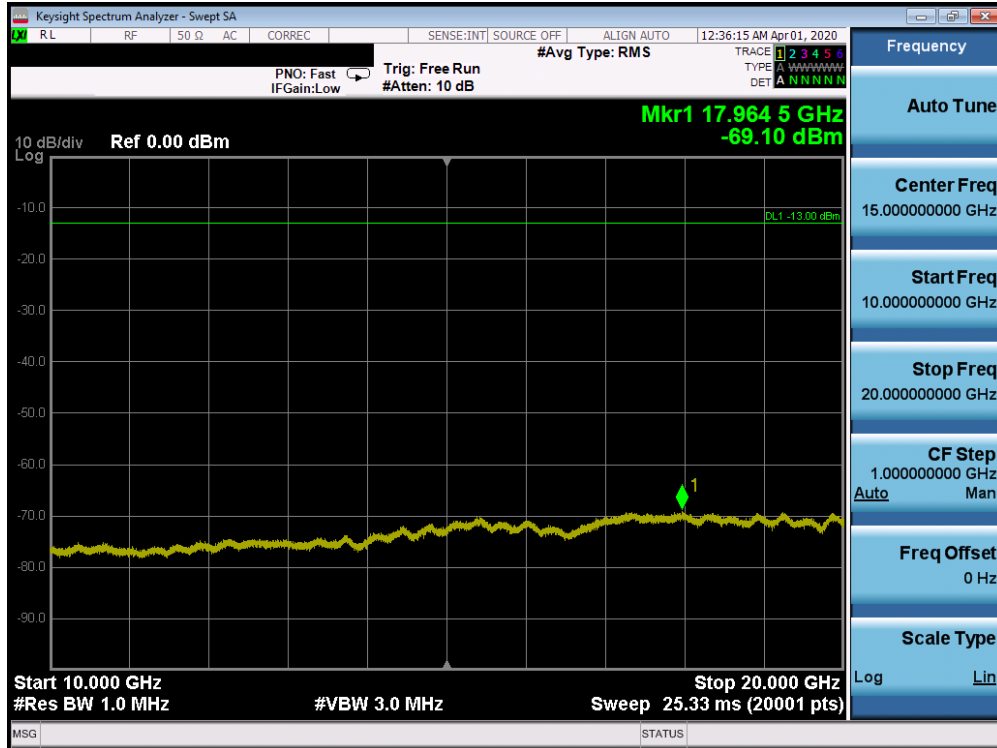


**Plot 7-242. Conducted Spurious Plot (n2 - 20.0MHz DFT-s-OFDM BPSK - RB Size 1, RB Offset 0 - Low Channel)**

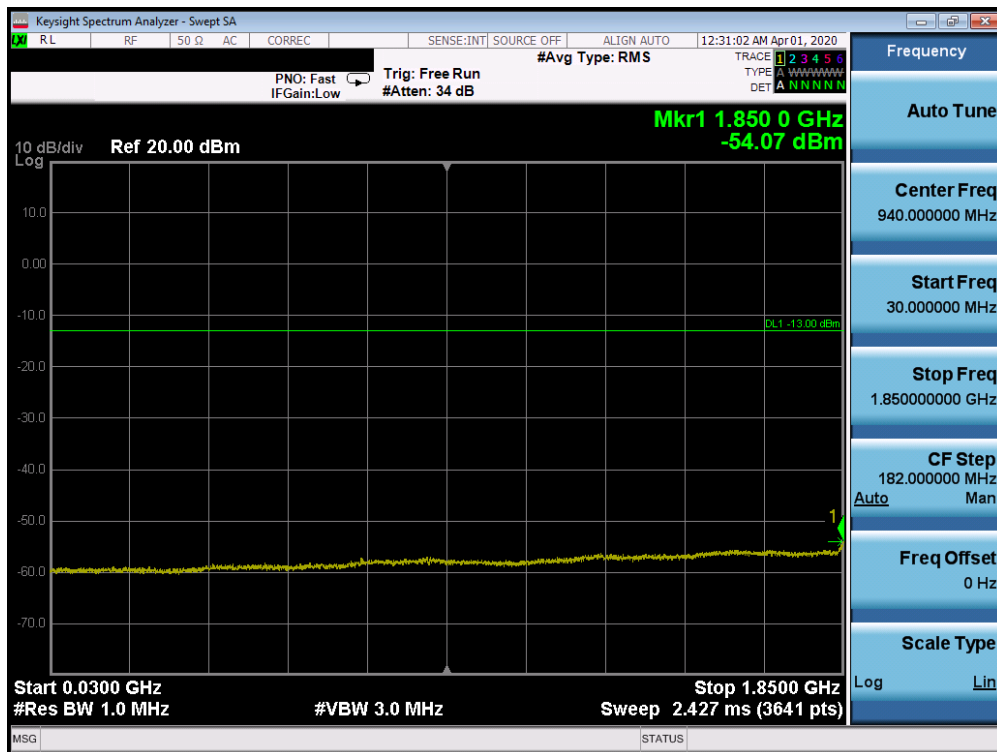


**Plot 7-243. Conducted Spurious Plot (n2 - 20.0MHz DFT-s-OFDM BPSK - RB Size 1, RB Offset 0 - Low Channel)**

FCC ID: A3LSMG981V	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 143 of 357

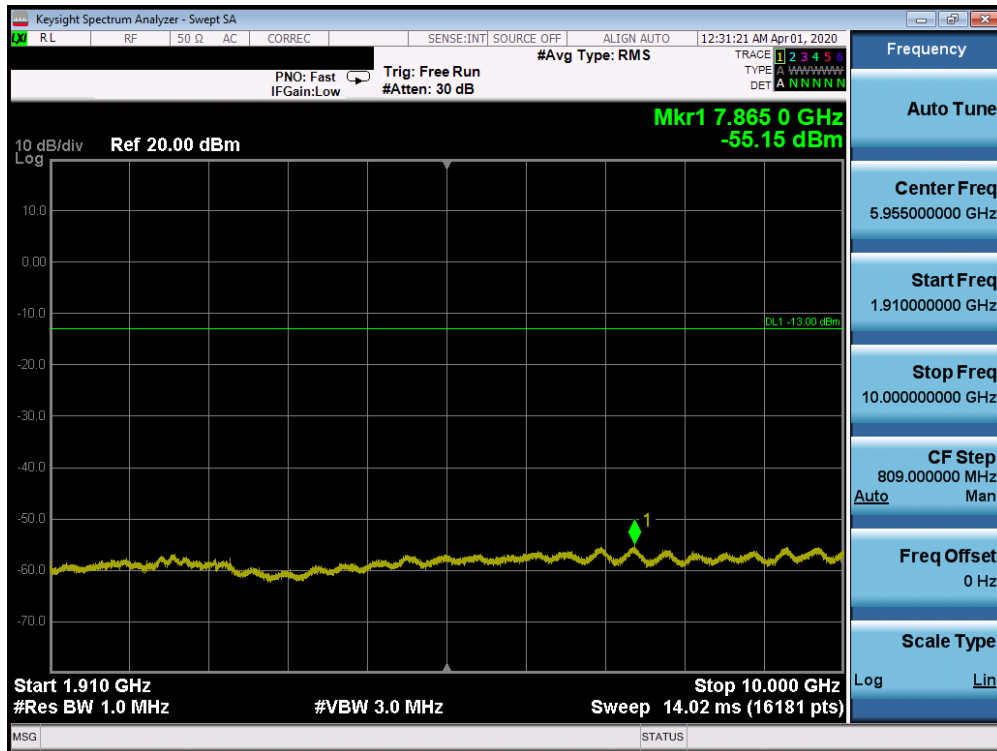


Plot 7-244. Conducted Spurious Plot (n2 - 20.0MHz DFT-s-OFDM BPSK - RB Size 1, RB Offset 0 - Low Channel)

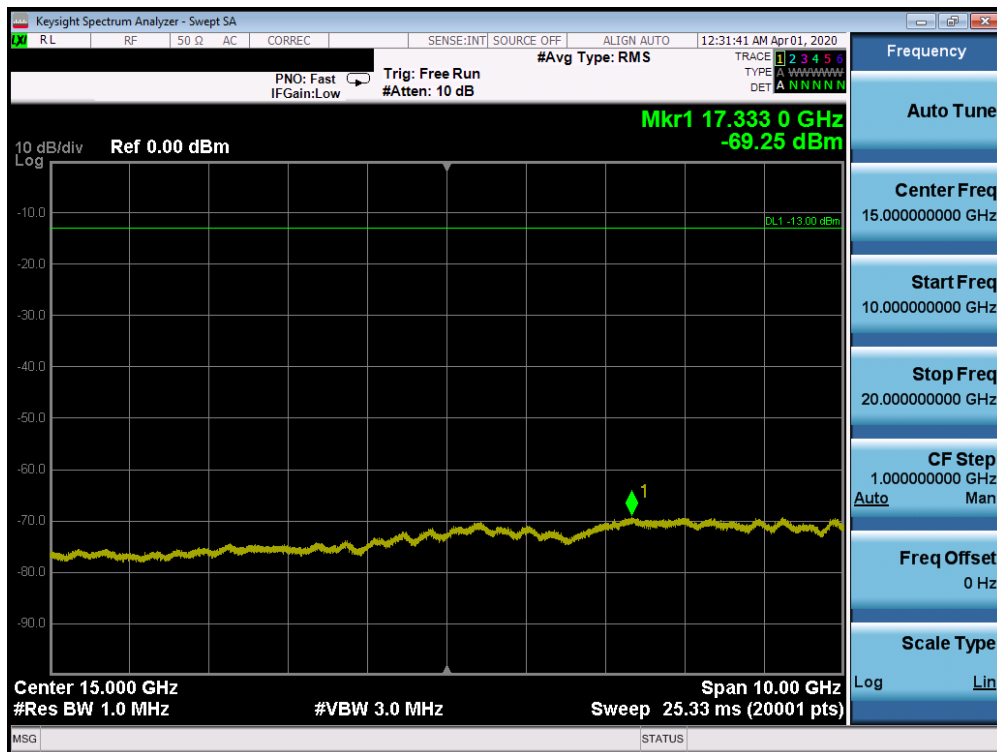


Plot 7-245. Conducted Spurious Plot (n2 - 20.0MHz DFT-s-OFDM BPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 144 of 357

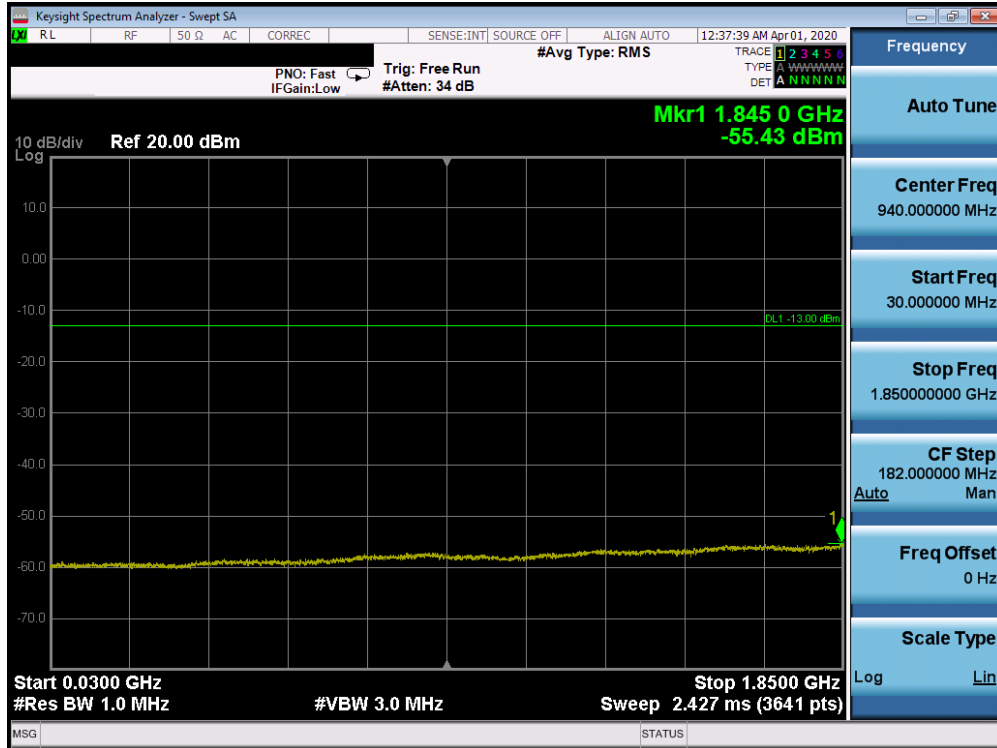


Plot 7-246. Conducted Spurious Plot (n2 - 20.0MHz DFT-s-OFDM BPSK - RB Size 1, RB Offset 0 - Mid Channel)

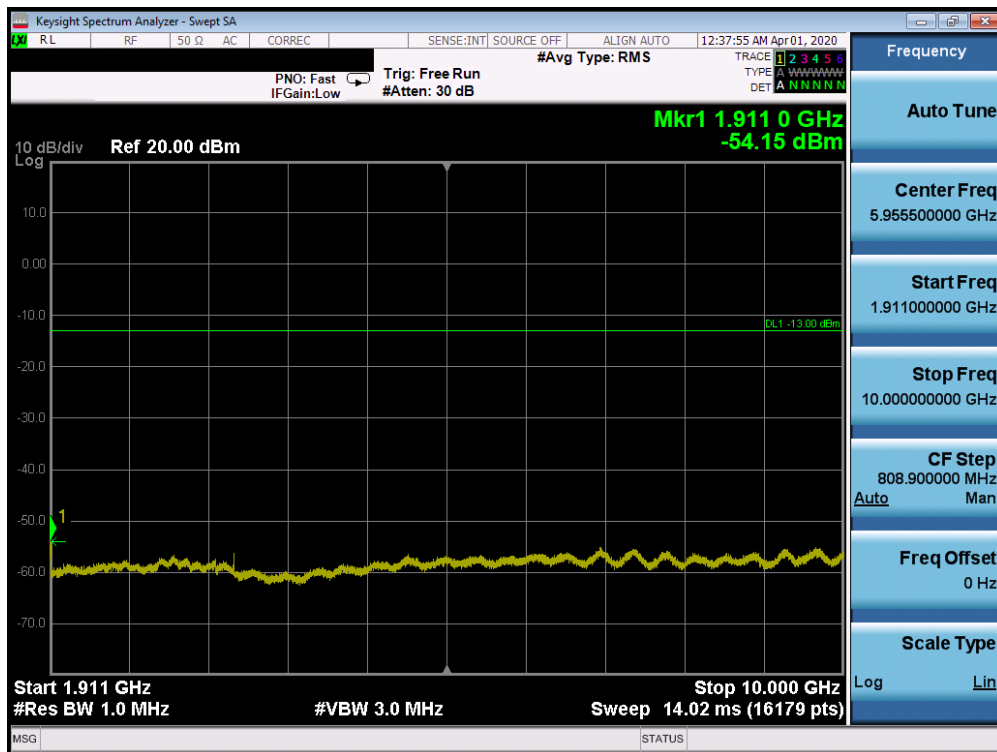


Plot 7-247. Conducted Spurious Plot (n2 - 20.0MHz DFT-s-OFDM BPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 145 of 357



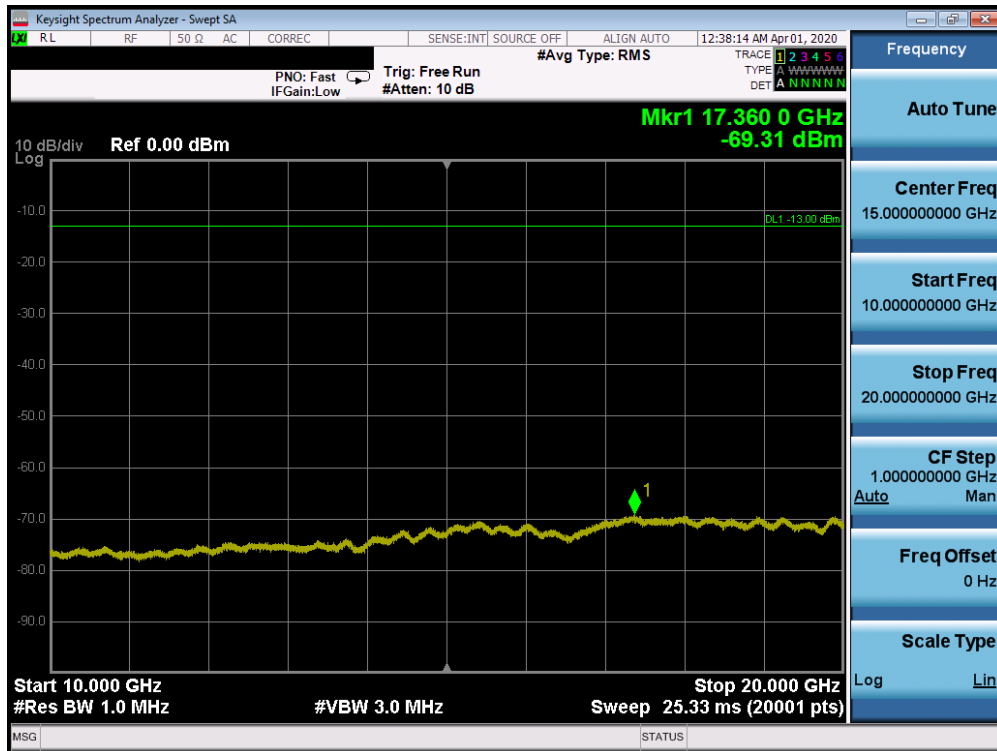
Plot 7-248. Conducted Spurious Plot (n2 - 20.0MHz DFT-s-OFDM BPSK - RB Size 1, RB Offset 0 - High Channel)



Plot 7-249. Conducted Spurious Plot (n2 - 20.0MHz DFT-s-OFDM BPSK - RB Size 1, RB Offset 0 - High Channel)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 146 of 357

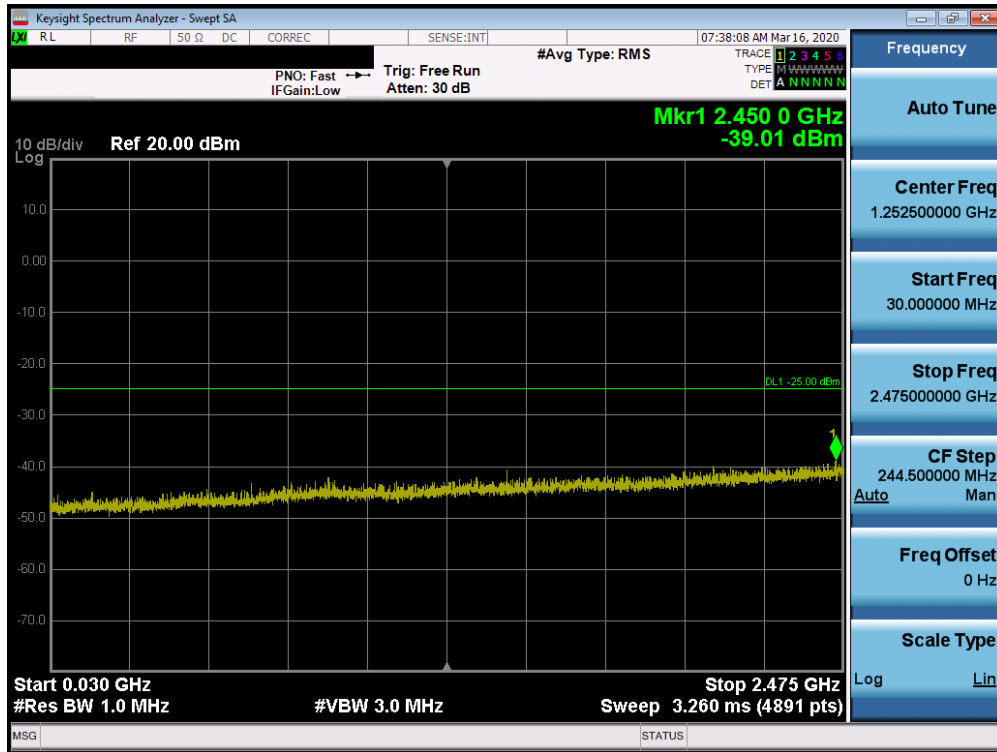




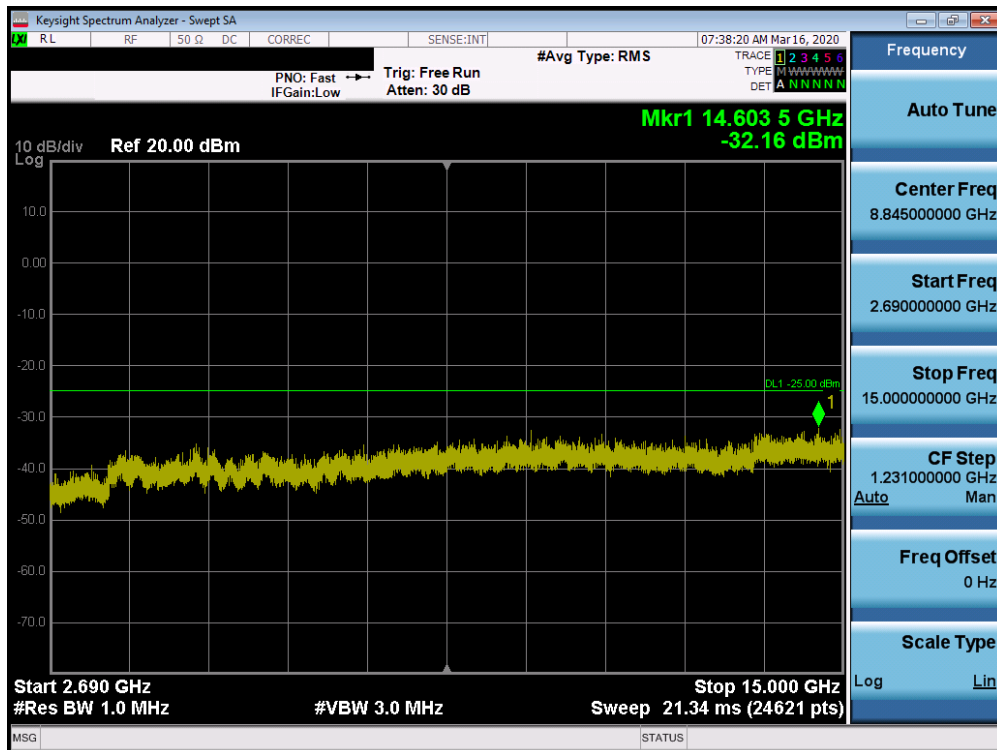
**Plot 7-250. Conducted Spurious Plot (n2 - 20.0MHz DFT-s-OFDM BPSK - RB Size 1, RB Offset 0 - High Channel)**

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 147 of 357

## Band 41

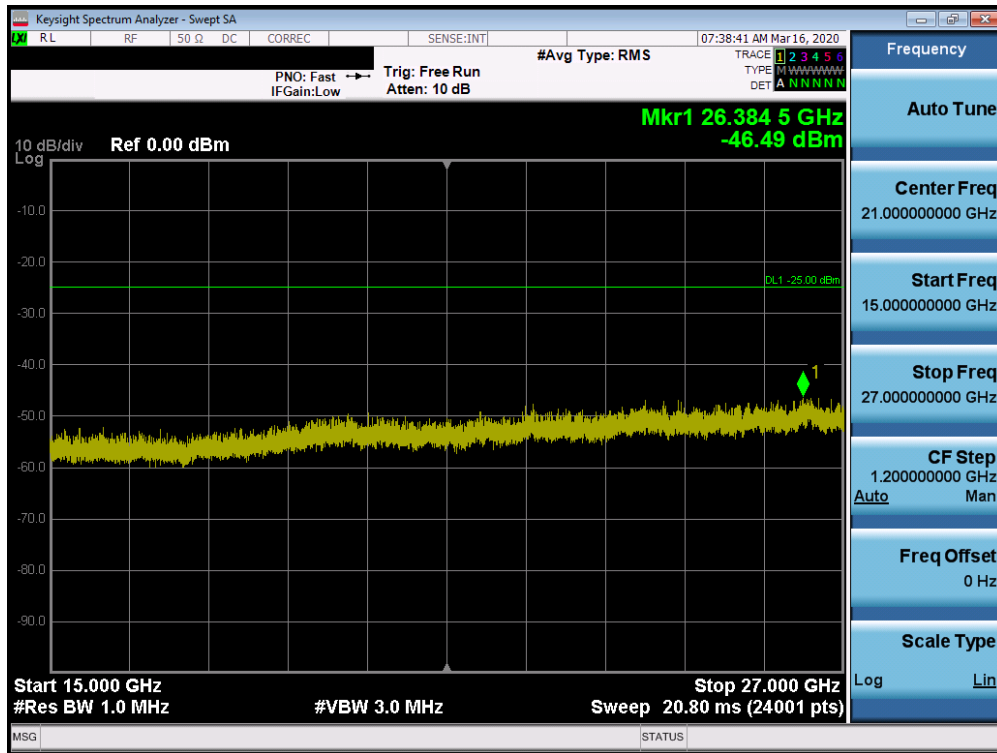


Plot 7-251. Conducted Spurious Plot (Band 41 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

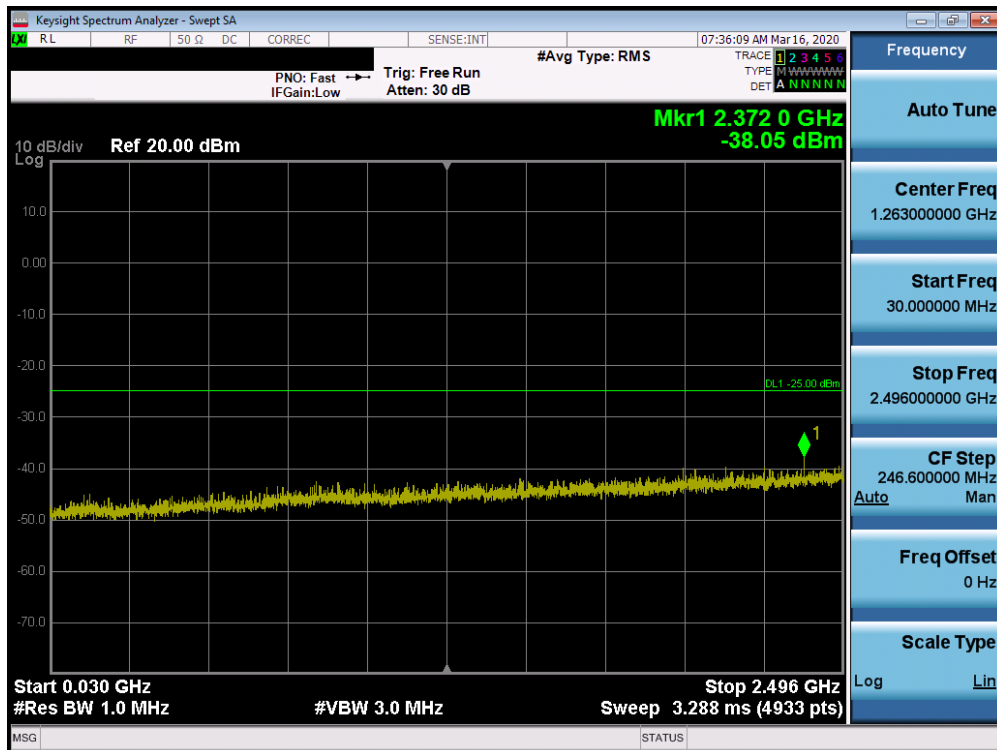


Plot 7-252. Conducted Spurious Plot (Band 41 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 148 of 357

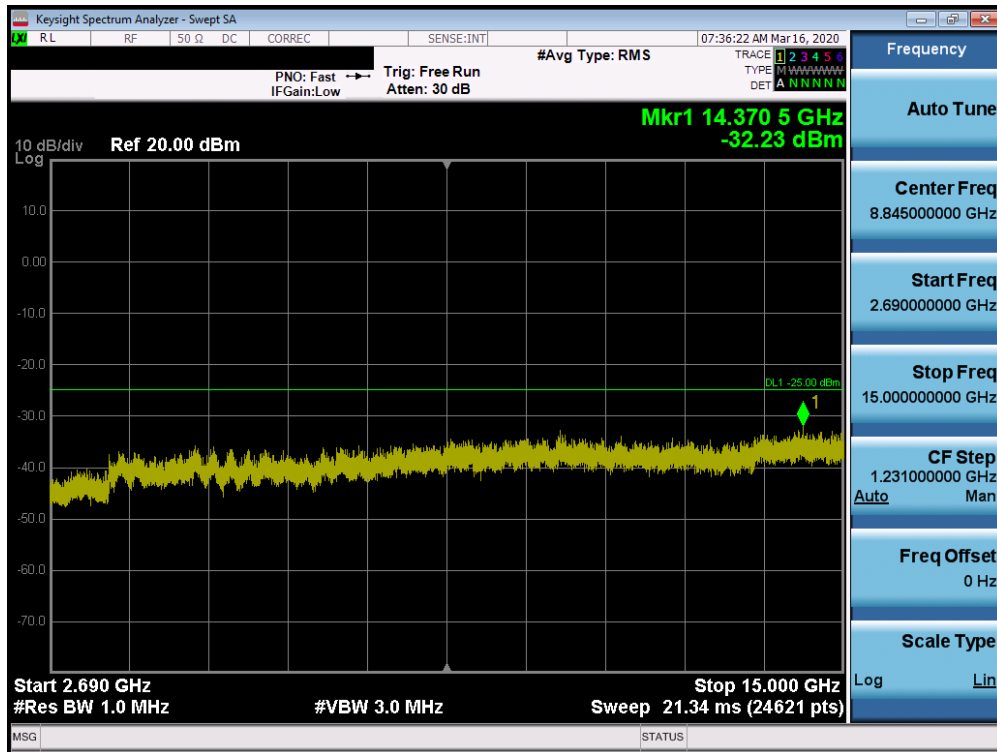


Plot 7-253. Conducted Spurious Plot (Band 41 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

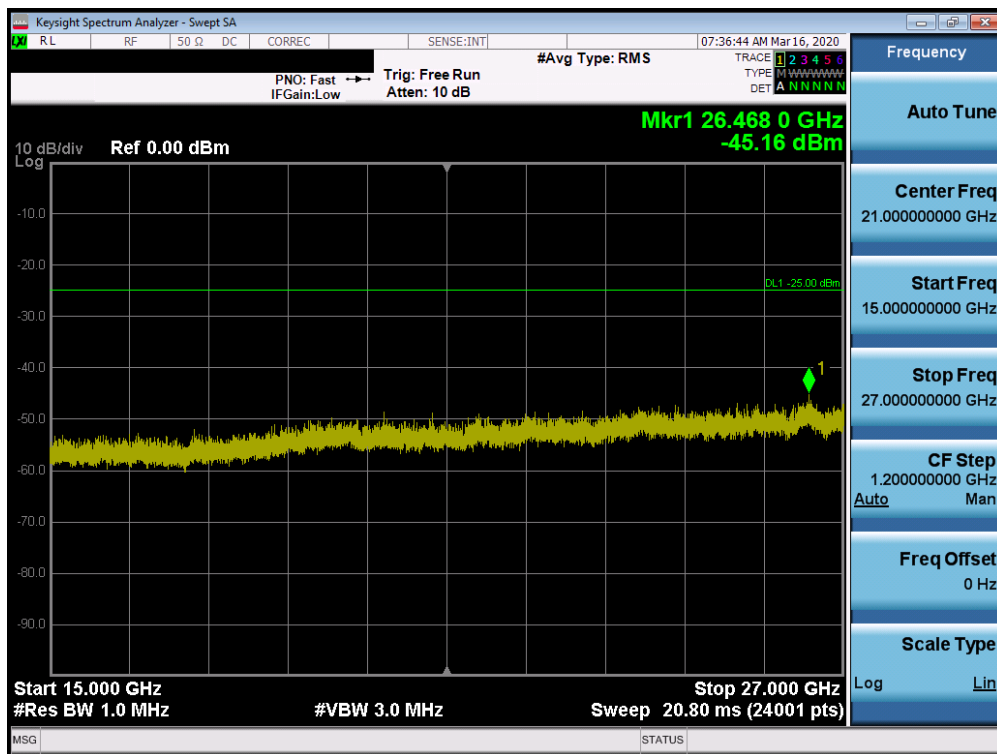


Plot 7-254. Conducted Spurious Plot (Band 41 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 149 of 357

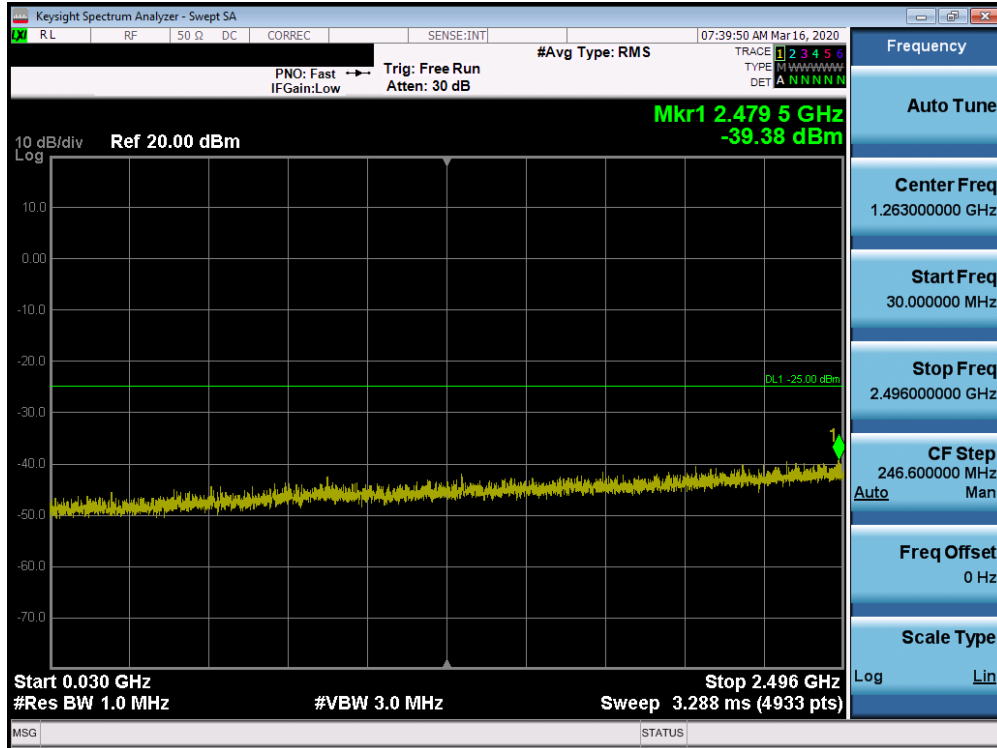


Plot 7-255. Conducted Spurious Plot (Band 41 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

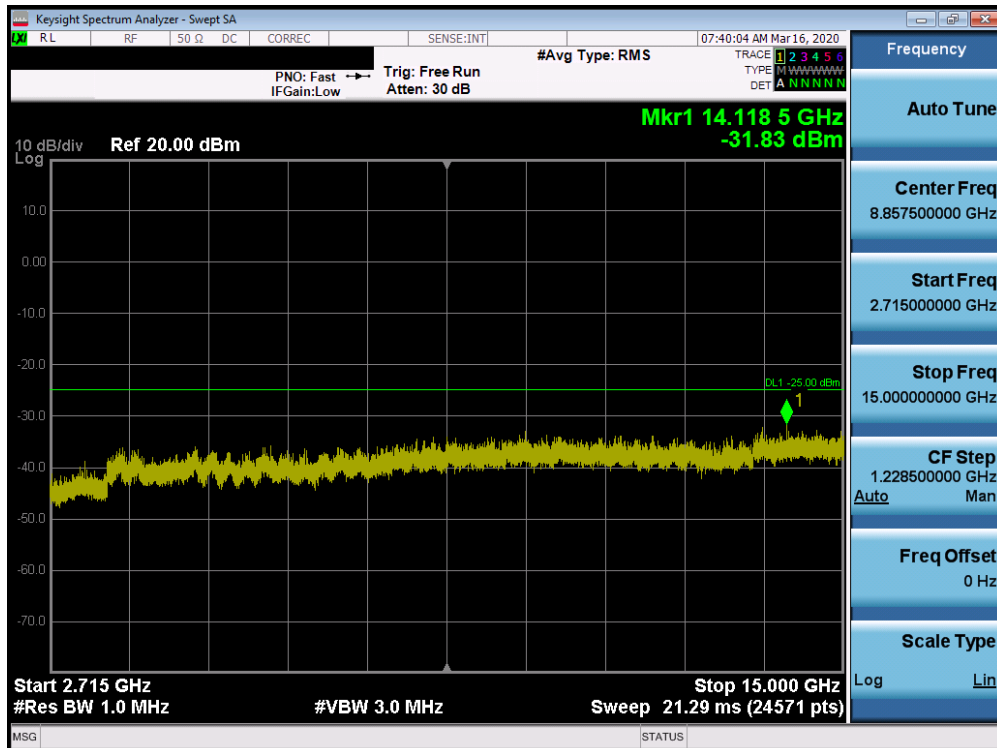


Plot 7-256. Conducted Spurious Plot (Band 41 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: A3LSMG981V	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 150 of 357

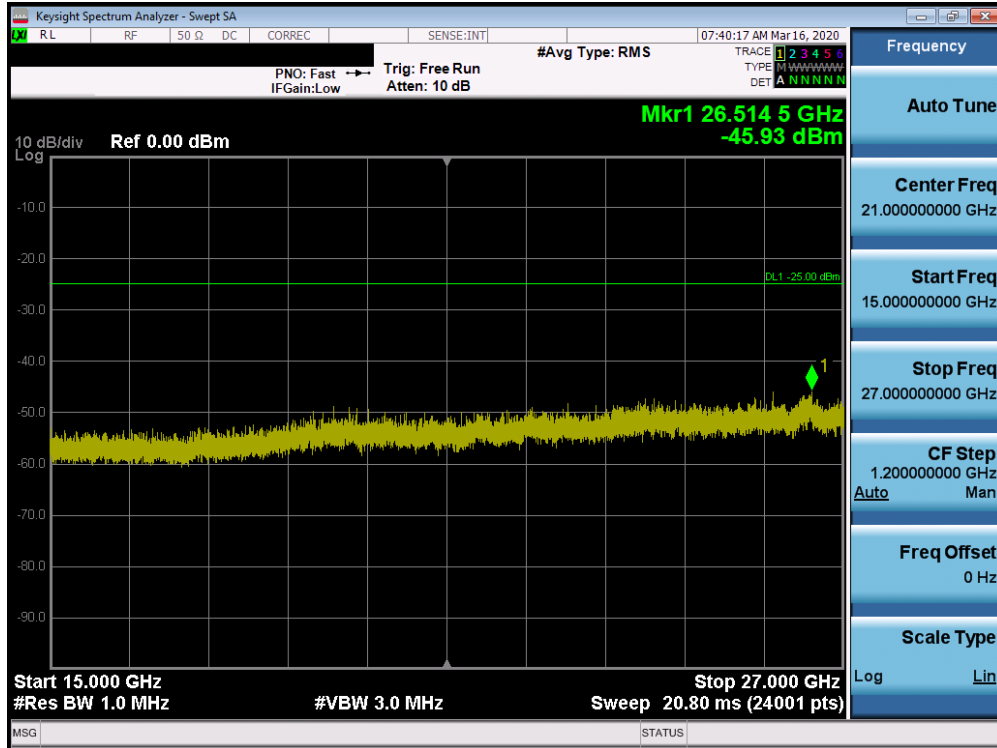


Plot 7-257. Conducted Spurious Plot (Band 41 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)



Plot 7-258. Conducted Spurious Plot (Band 41 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

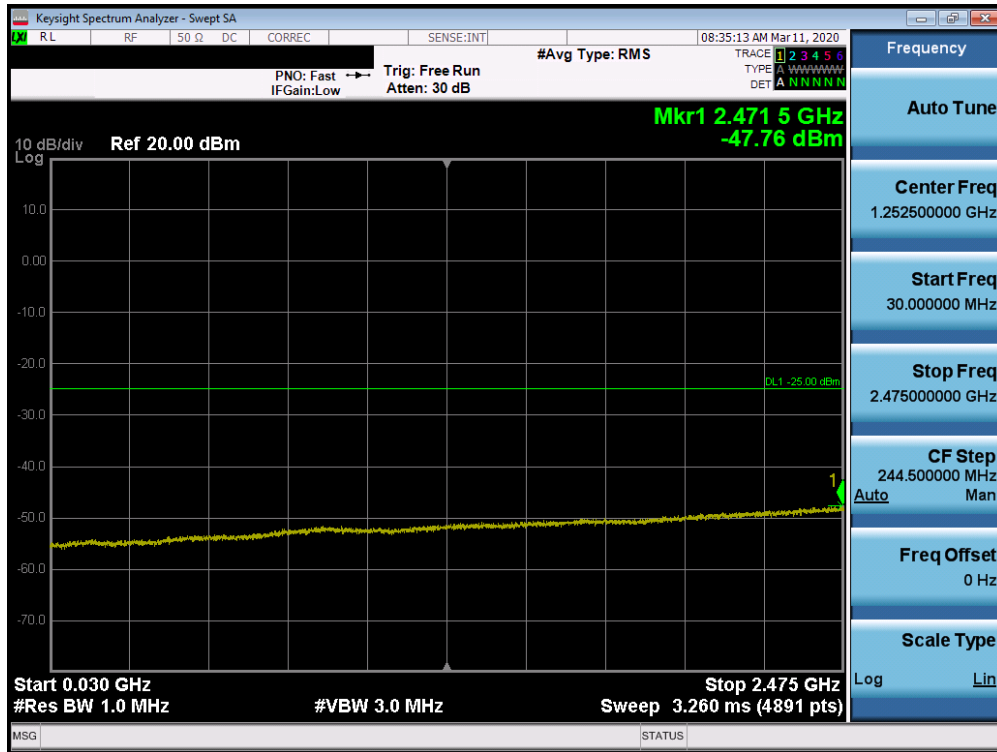
FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 151 of 357



Plot 7-259. Conducted Spurious Plot (Band 41 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

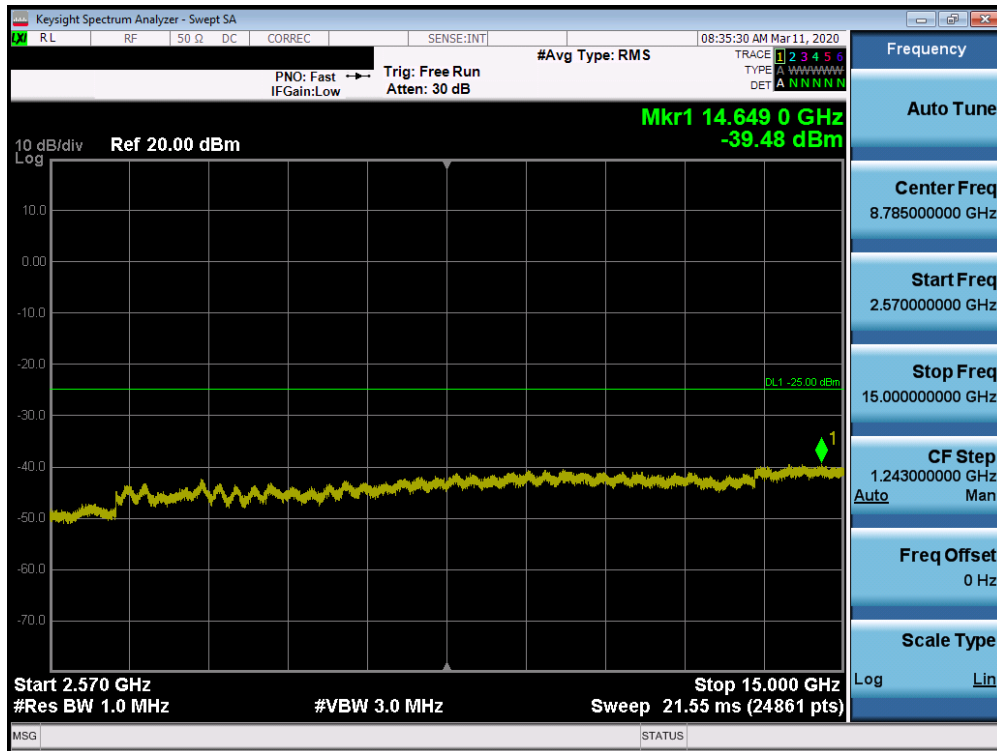
<b>FCC ID:</b> A3LSMG981V		<b>MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Approved by:</b> Quality Manager
<b>Test Report S/N:</b> 1M2003090034-05.A3L	<b>Test Dates:</b> 10/22/2019-5/6/2020	<b>EUT Type:</b> Portable Handset	Page 152 of 357	

## Band 7

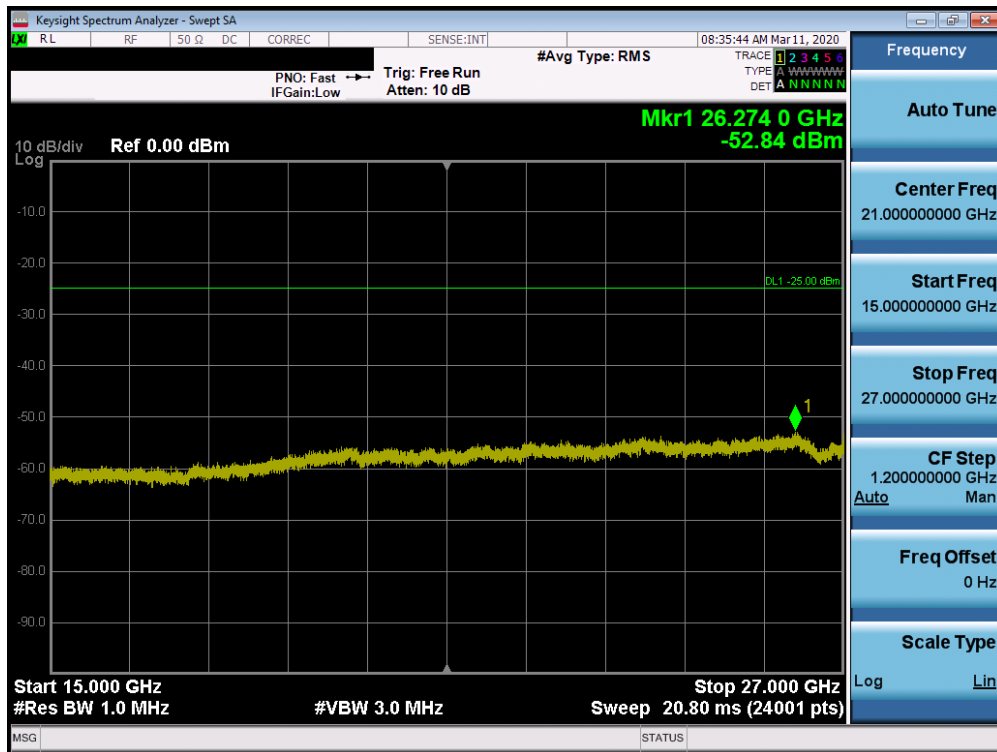


Plot 7-260. Conducted Spurious Plot (Band 7 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 153 of 357



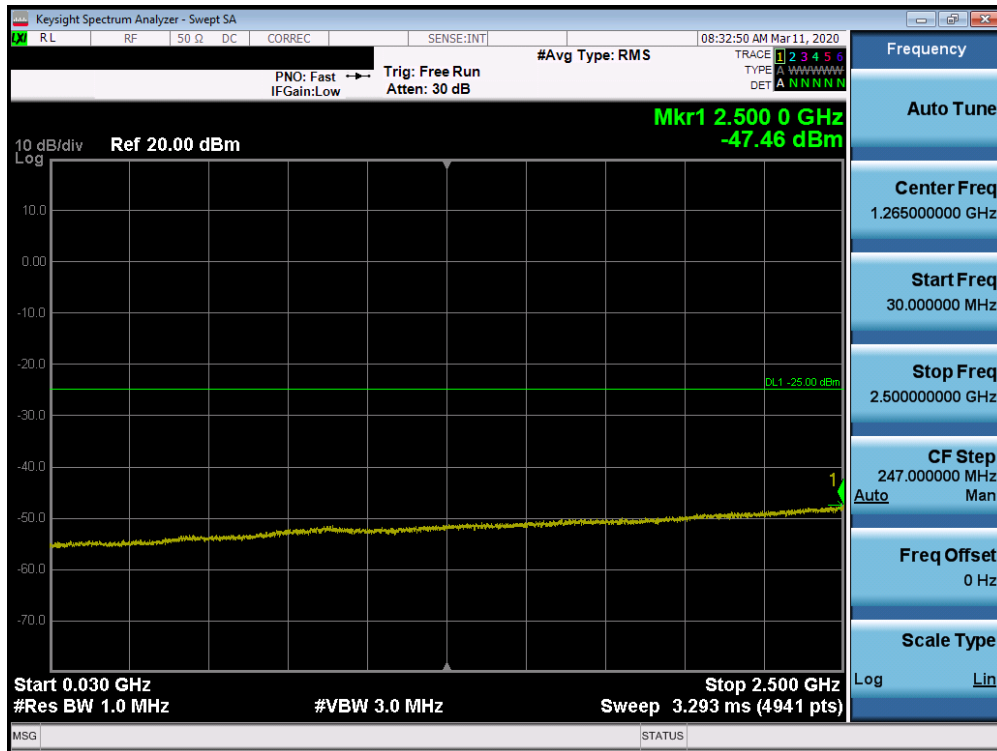
Plot 7-261. Conducted Spurious Plot (Band 7 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)



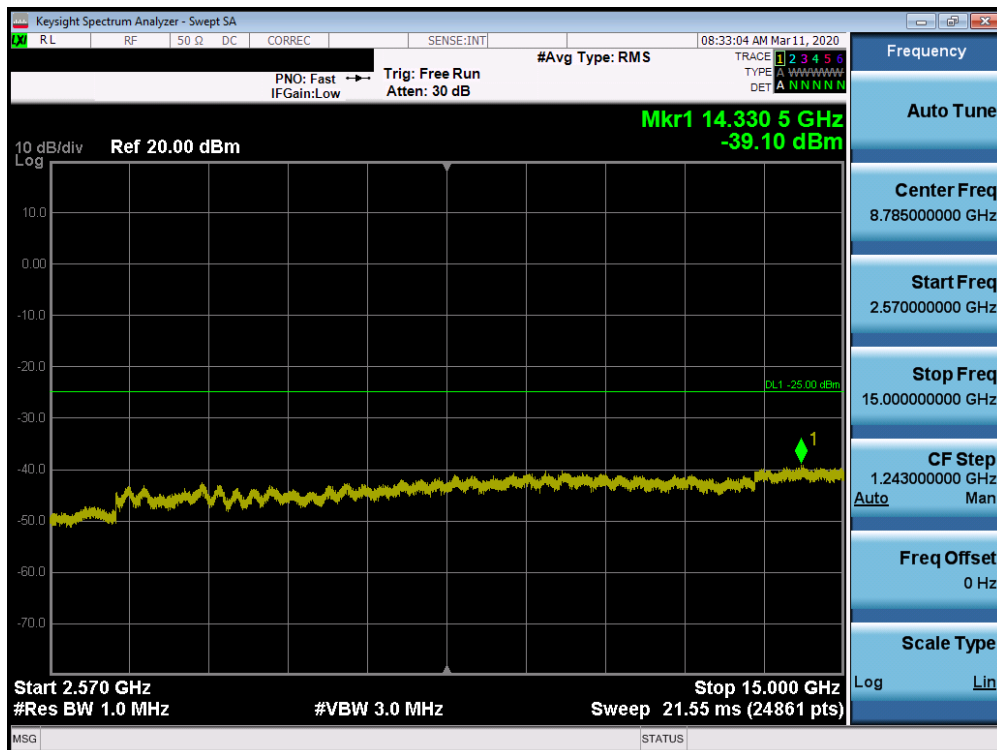
Plot 7-262. Conducted Spurious Plot (Band 7 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

FCC ID: A3LSMG981V	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 154 of 357



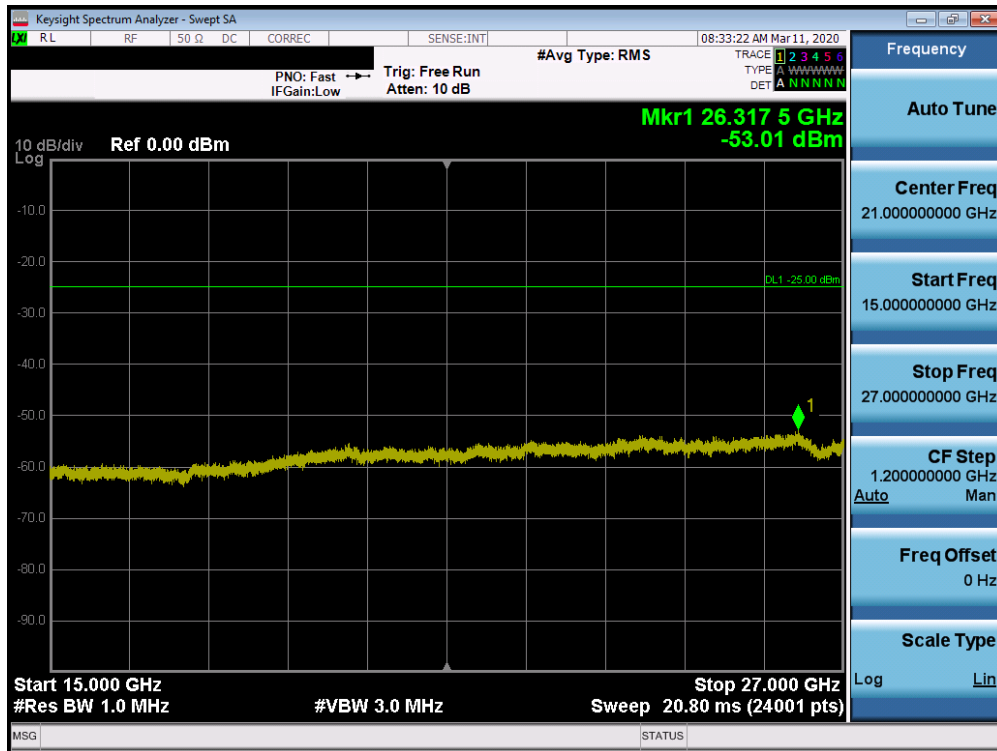


Plot 7-263. Conducted Spurious Plot (Band 7 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

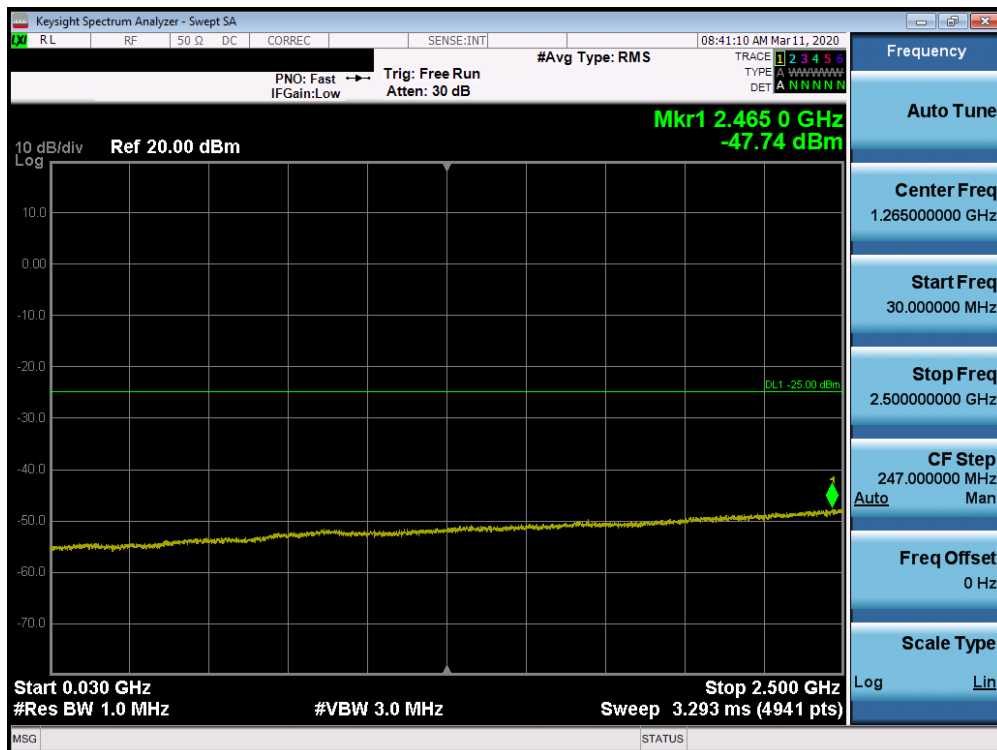


Plot 7-264. Conducted Spurious Plot (Band 7 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: A3LSMG981V	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 155 of 357

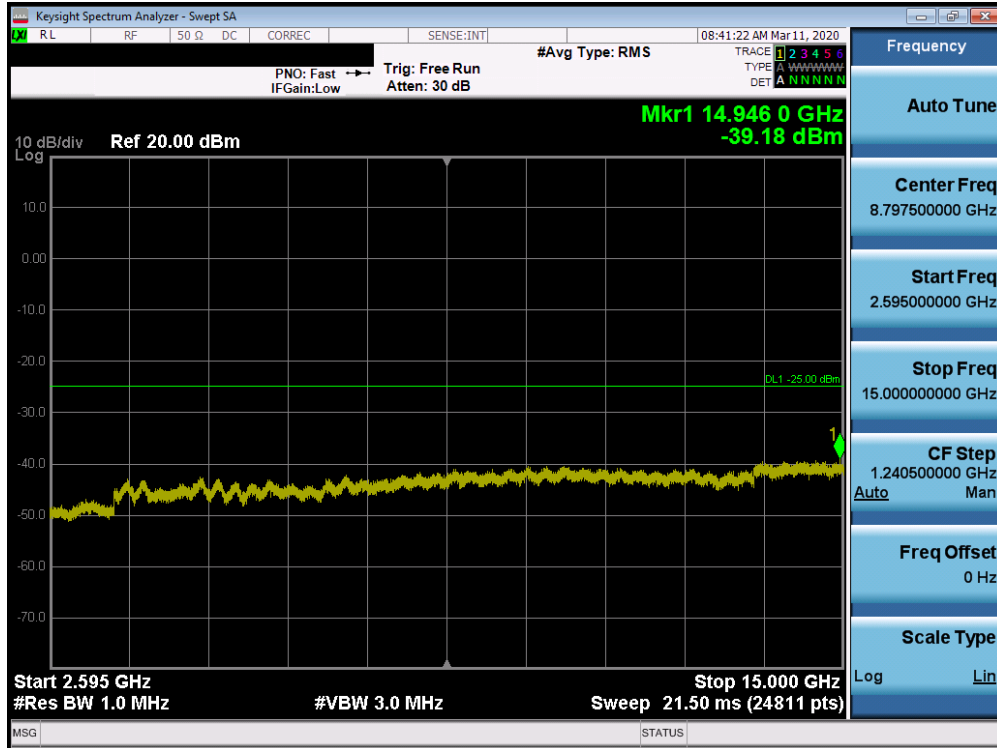


Plot 7-265. Conducted Spurious Plot (Band 7 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

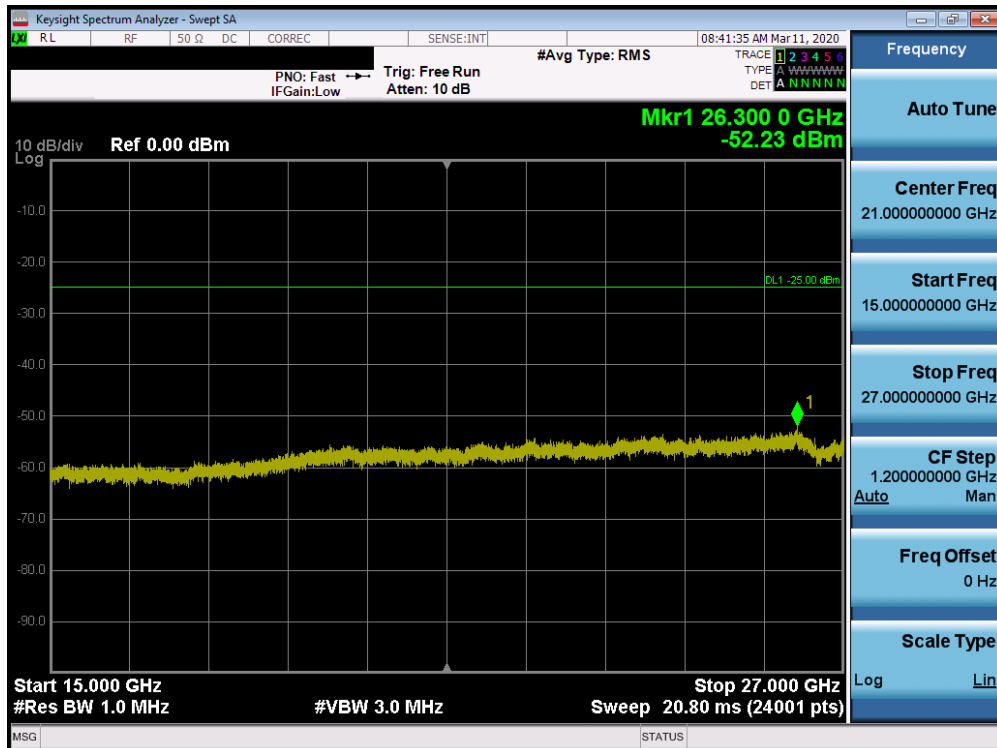


Plot 7-266. Conducted Spurious Plot (Band 7 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 156 of 357



Plot 7-267. Conducted Spurious Plot (Band 7 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)



Plot 7-268. Conducted Spurious Plot (Band 7 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 157 of 357

## 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 its maximum duty cycle, 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.***

### Test Procedure Used

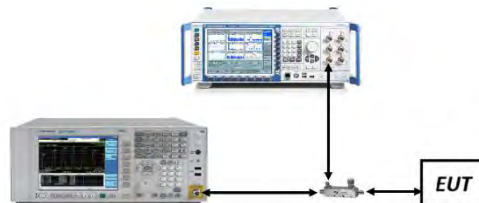
KDB 971168 D01 v03r01 – Section 6.0

### 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  $\geq$  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
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**

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 158 of 357

**Test Notes**

Per 22.917(b) 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 to demonstrate compliance with the out-of-band emissions limit. 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.

Per 27.53(g) for operations in the 698-746 MHz band, in the 100 kHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least 30 kHz may be employed to demonstrate compliance with the out-of-band emissions limit.

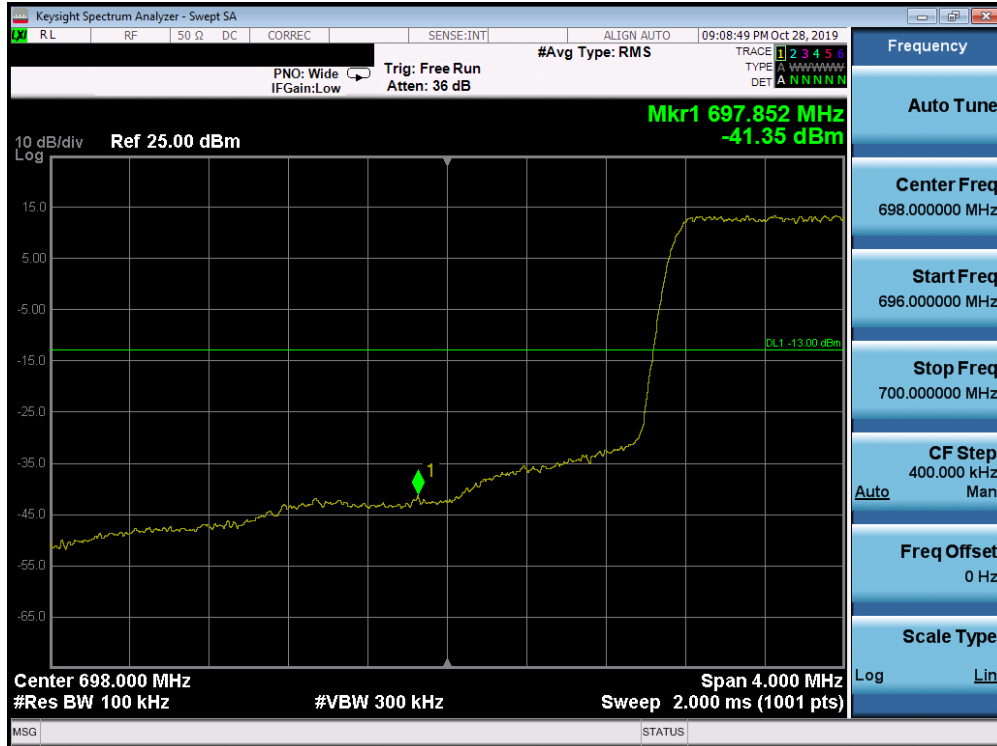
Per 27.53(c)(5) for operations in the 776-788 MHz band, in the 100 kHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least 30 kHz may be employed to demonstrate compliance with the out-of-band emissions limit.

For all plots showing emissions in the 763 – 775MHz and 793 – 805MHz band, the FCC limit per 27.53(c)(4) is  $65 + 10 \log_{10}(P) = -35\text{dBm}$  in a 6.25kHz bandwidth.

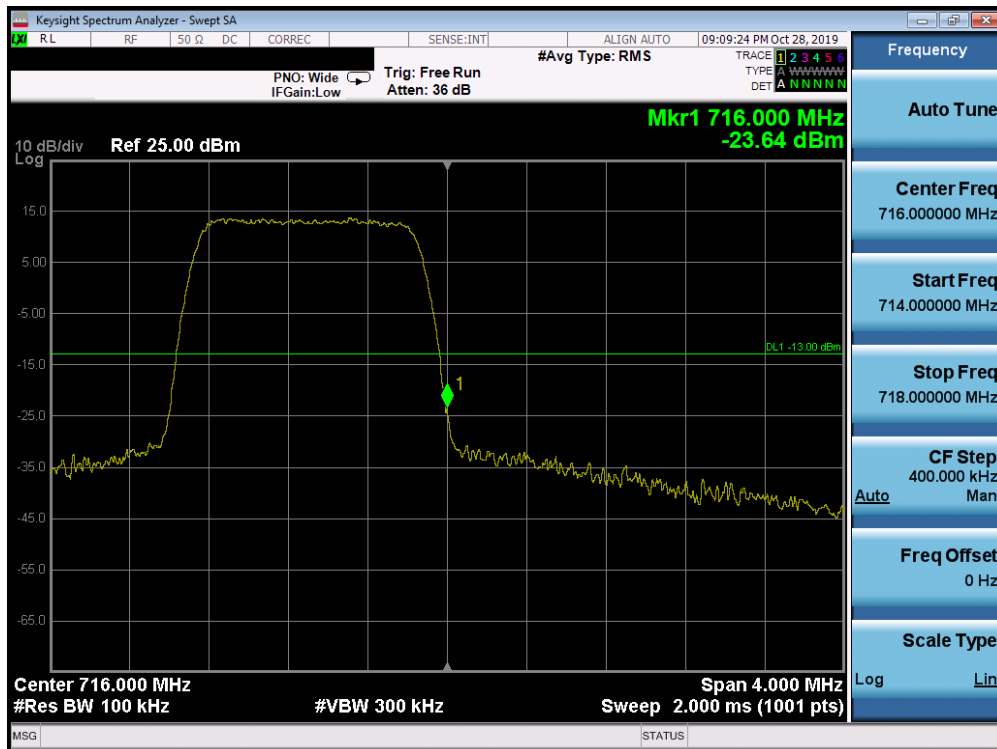
All SCS's and Waveforms (CP-OFDM vs DFT-s OFDM) were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

<b>FCC ID:</b> A3LSMG981V		<b>MEASUREMENT REPORT (CERTIFICATION)</b>	 <b>Approved by:</b> Quality Manager
<b>Test Report S/N:</b> 1M2003090034-05.A3L	<b>Test Dates:</b> 10/22/2019-5/6/2020	<b>EUT Type:</b> Portable Handset	Page 159 of 357

## Band 12

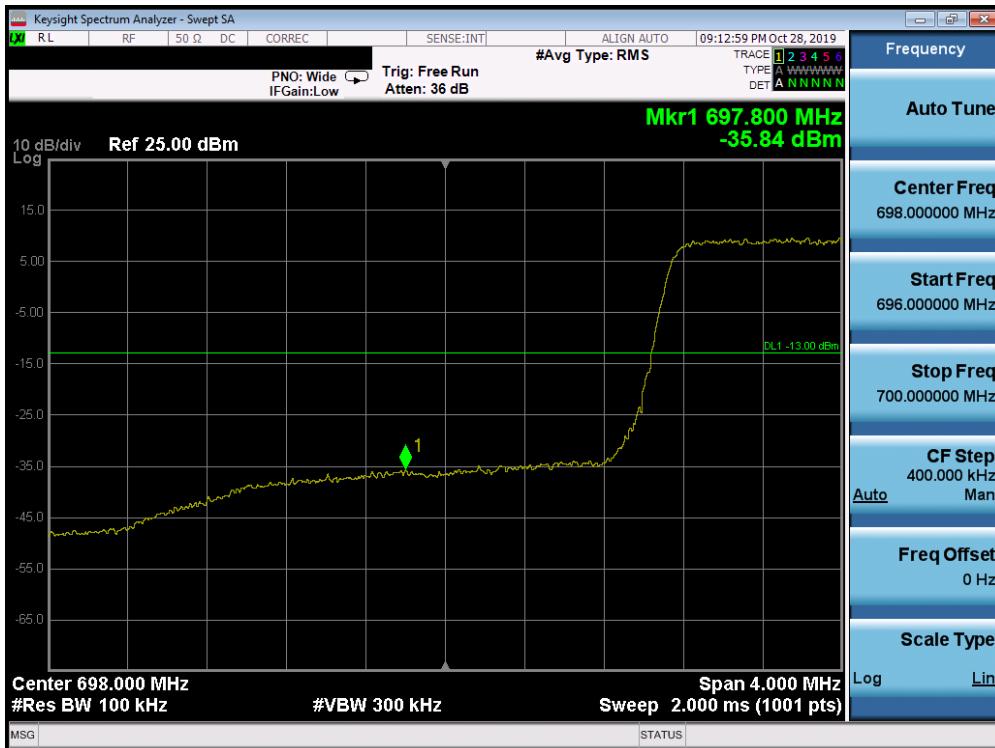


Plot 7-269. Lower Band Edge Plot (Band 12 - 1.4MHz QPSK - Full RB Configuration)



Plot 7-270. Upper Band Edge Plot (Band 12 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 160 of 357

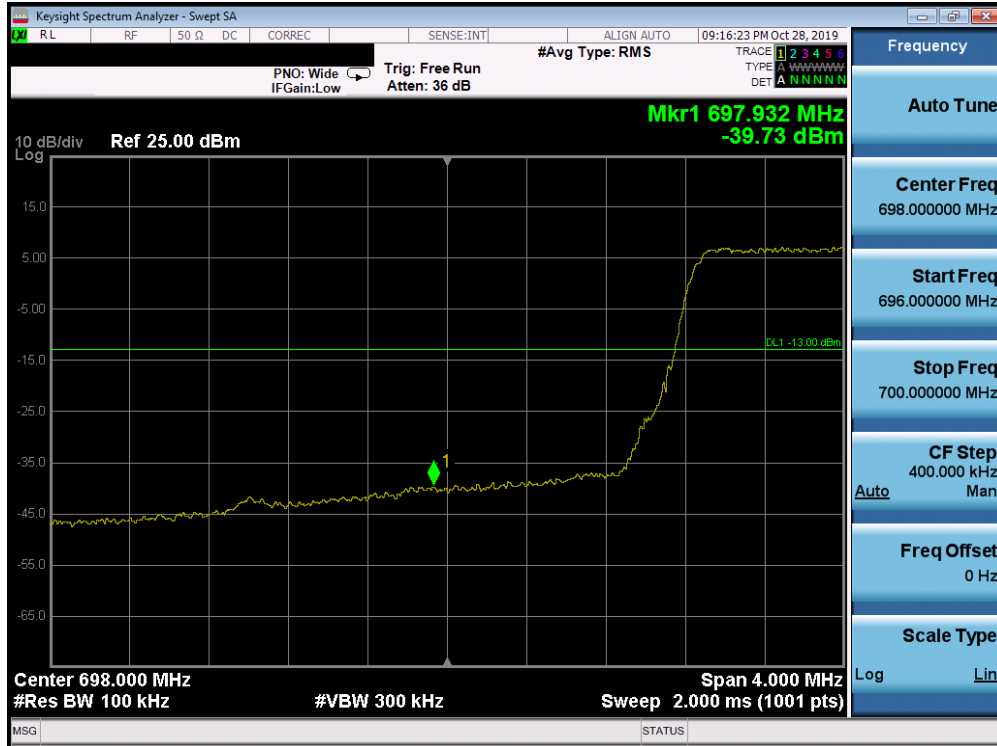


Plot 7-271. Lower Band Edge Plot (Band 12 - 3.0MHz QPSK - Full RB Configuration)



Plot 7-272. Upper Band Edge Plot (Band 12 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG981V	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 161 of 357



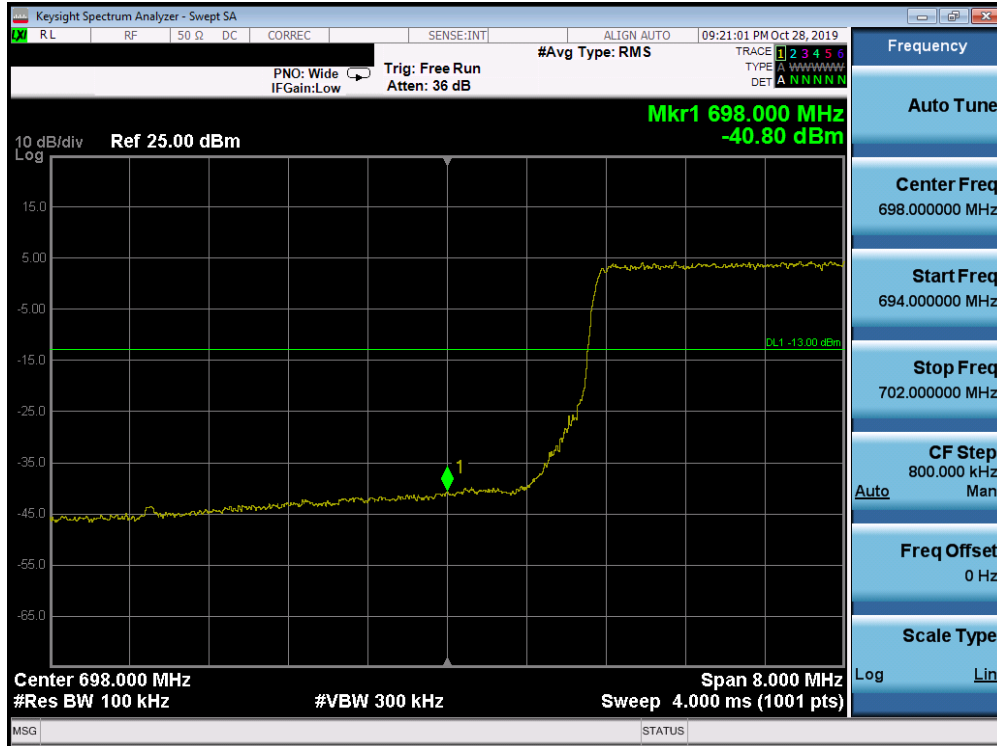
Plot 7-273. Lower Band Edge Plot (Band 12 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-274. Upper Band Edge Plot (Band 12 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG981V	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 162 of 357





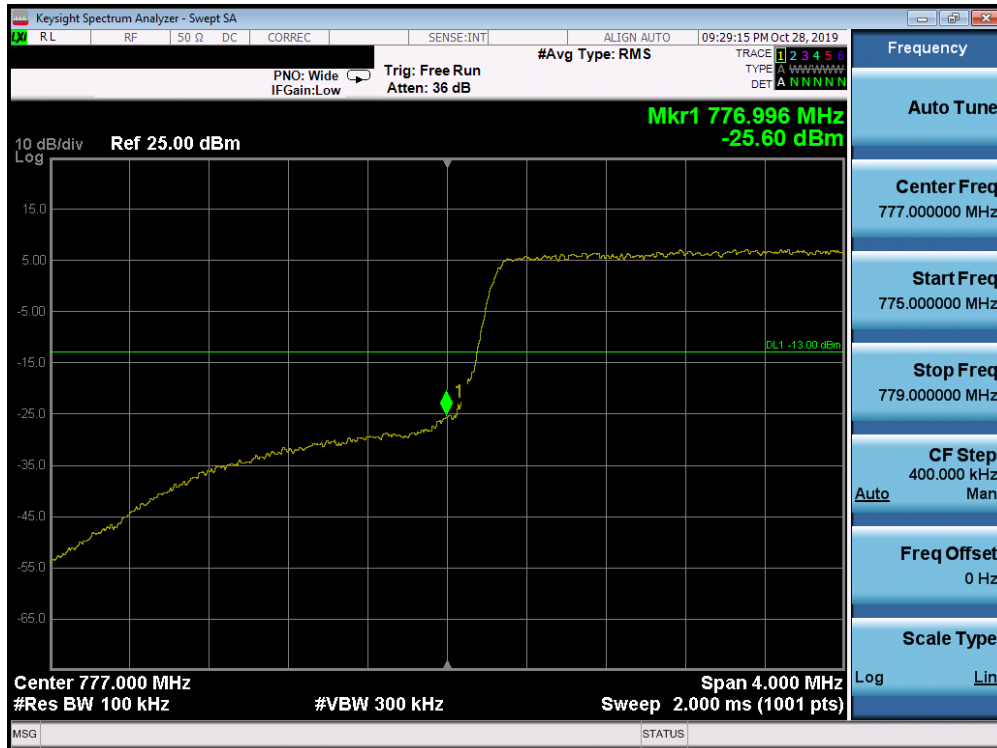
Plot 7-275. Lower Band Edge Plot (Band 12 - 10.0MHz QPSK - Full RB Configuration)



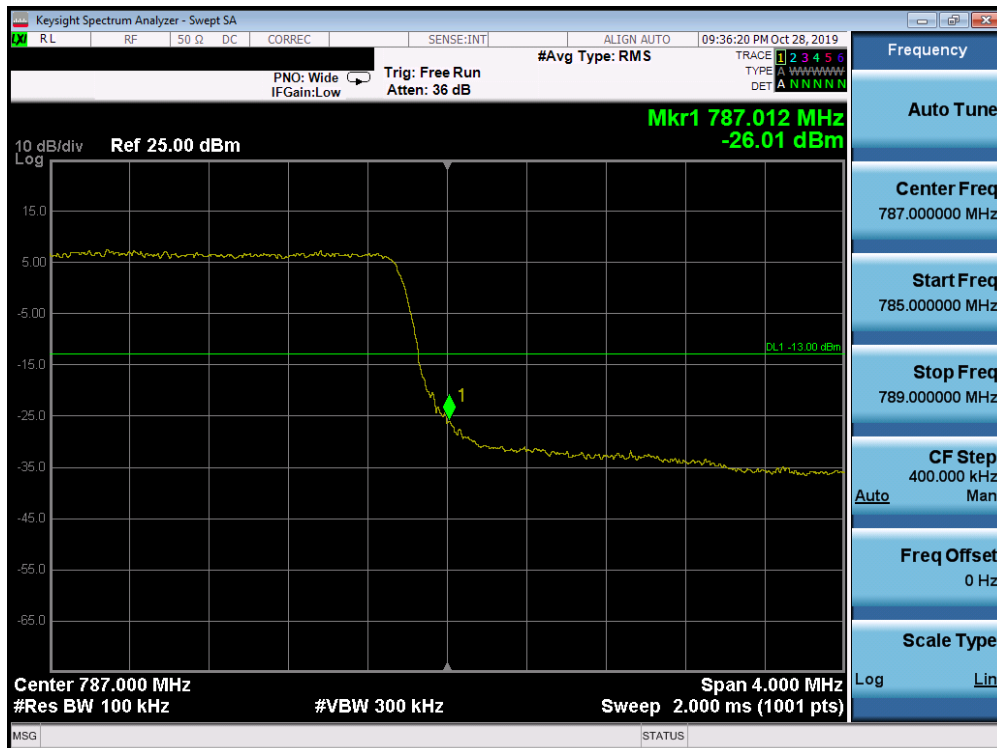
Plot 7-276. Upper Band Edge Plot (Band 12 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 163 of 357

### Band 13

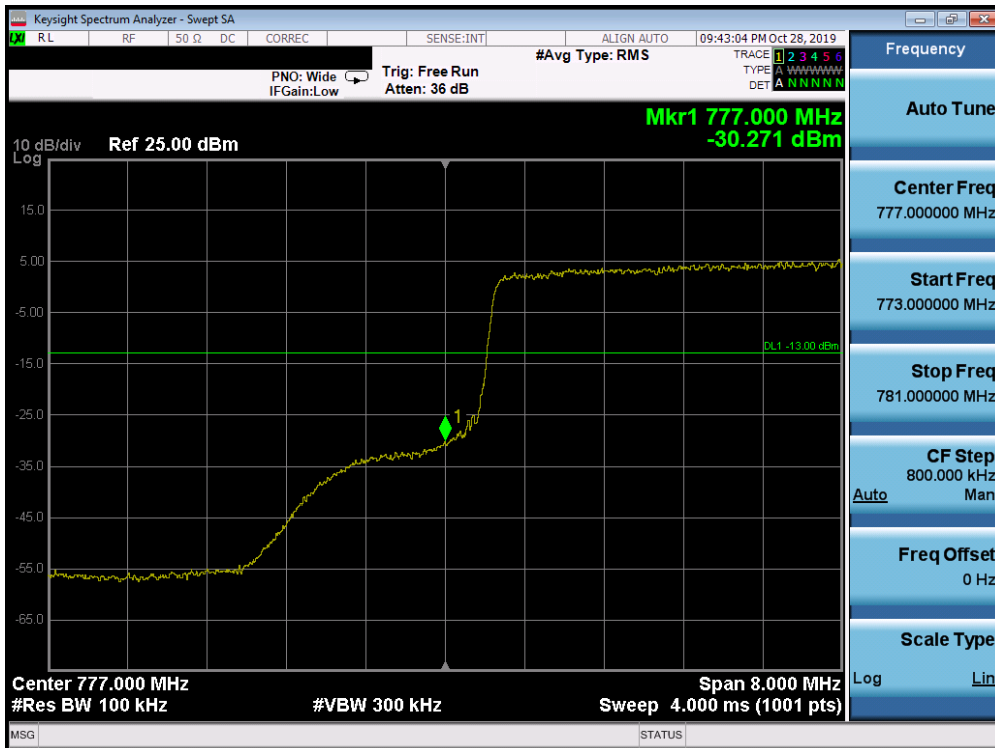


Plot 7-277. Lower Band Edge Plot (Band 13 - 5.0MHz QPSK - Full RB Configuration)

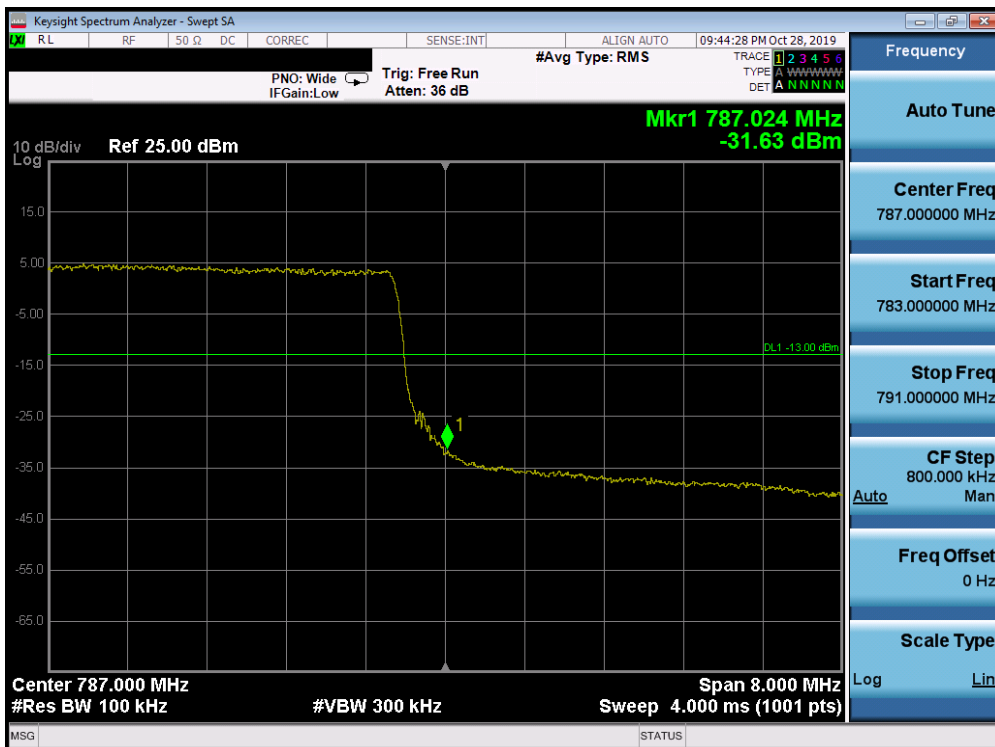


Plot 7-278. Upper Band Edge Plot (Band 13 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 164 of 357



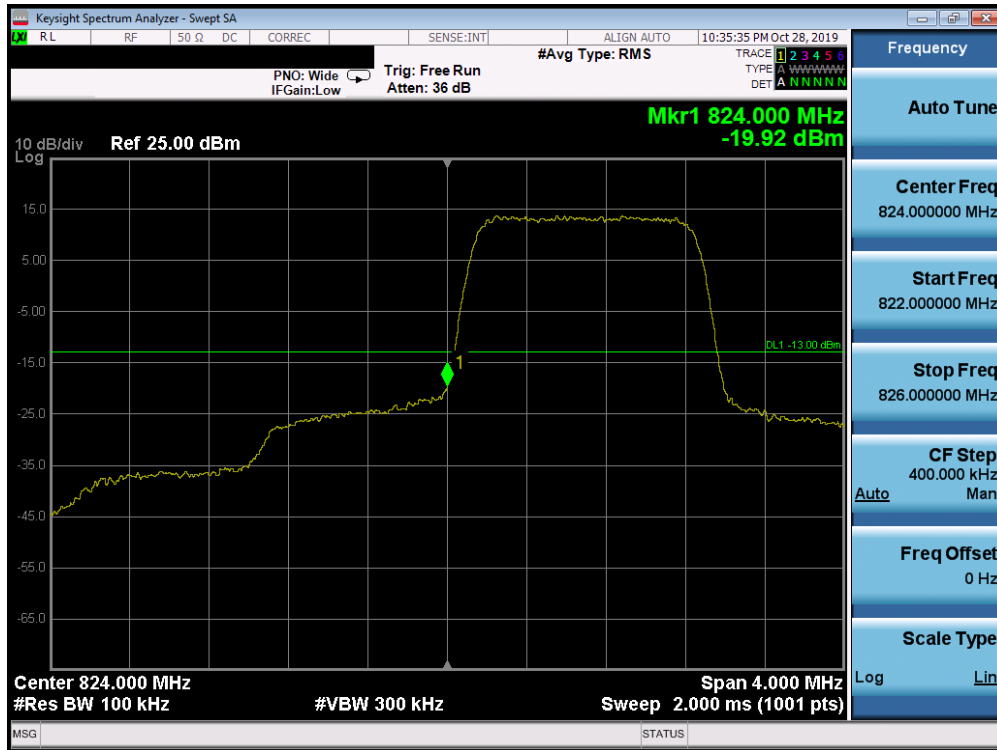
Plot 7-279. Lower Band Edge Plot (Band 13 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-280. Upper Band Edge Plot (Band 13 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 165 of 357

**Band 26/5**

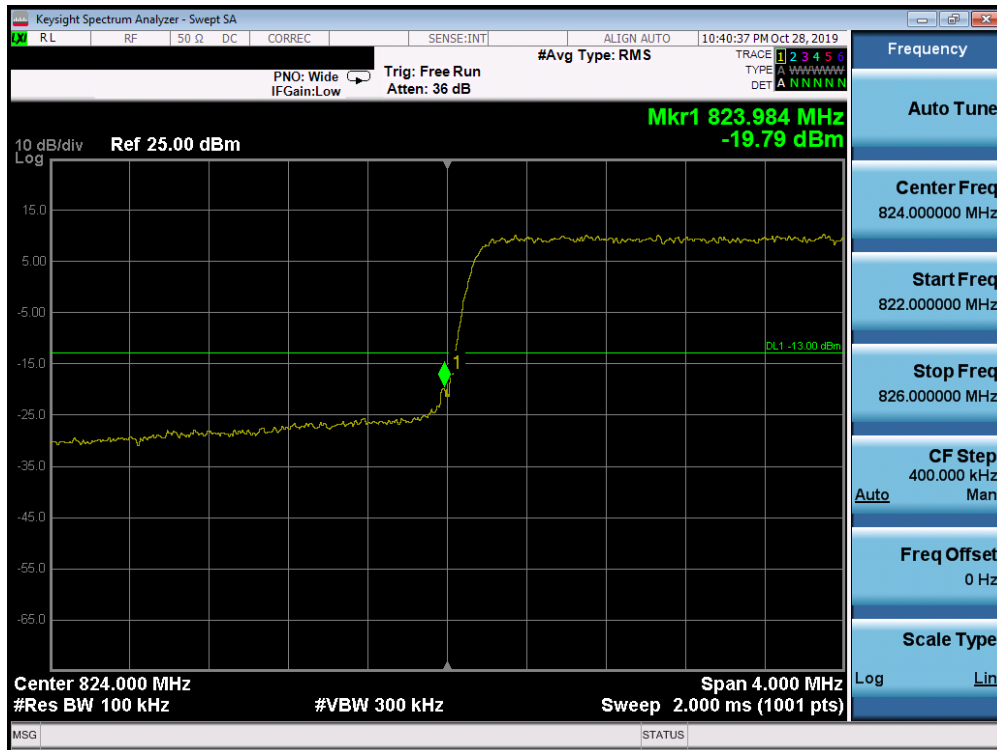


**Plot 7-281. Lower Band Edge Plot (Band 26/5 - 1.4MHz QPSK - Full RB Configuration)**

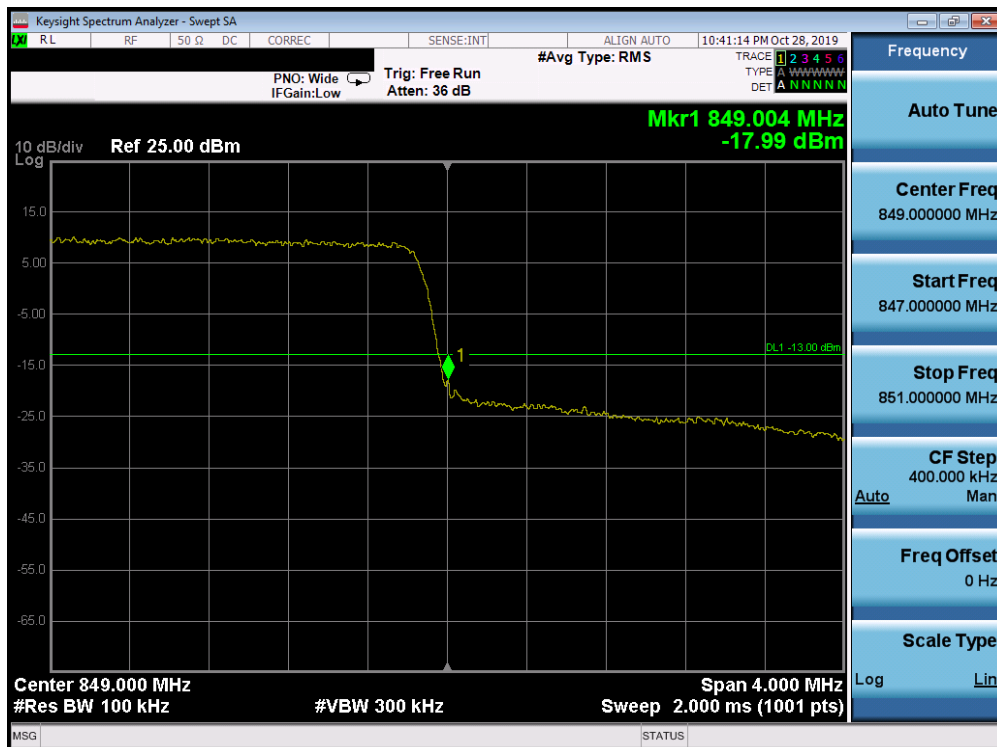


**Plot 7-282. Upper Band Edge Plot (Band 26/5 - 1.4MHz QPSK - Full RB Configuration)**

FCC ID: A3LSMG981V	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 166 of 357

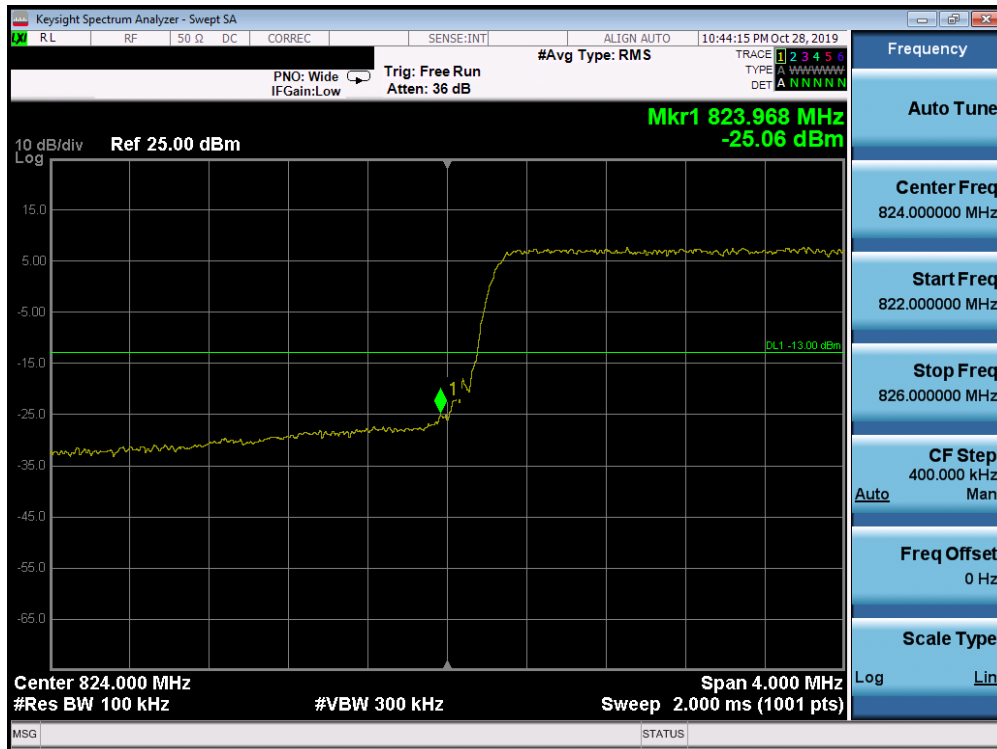


Plot 7-283. Lower Band Edge Plot (Band 26/5 - 3.0MHz QPSK - Full RB Configuration)

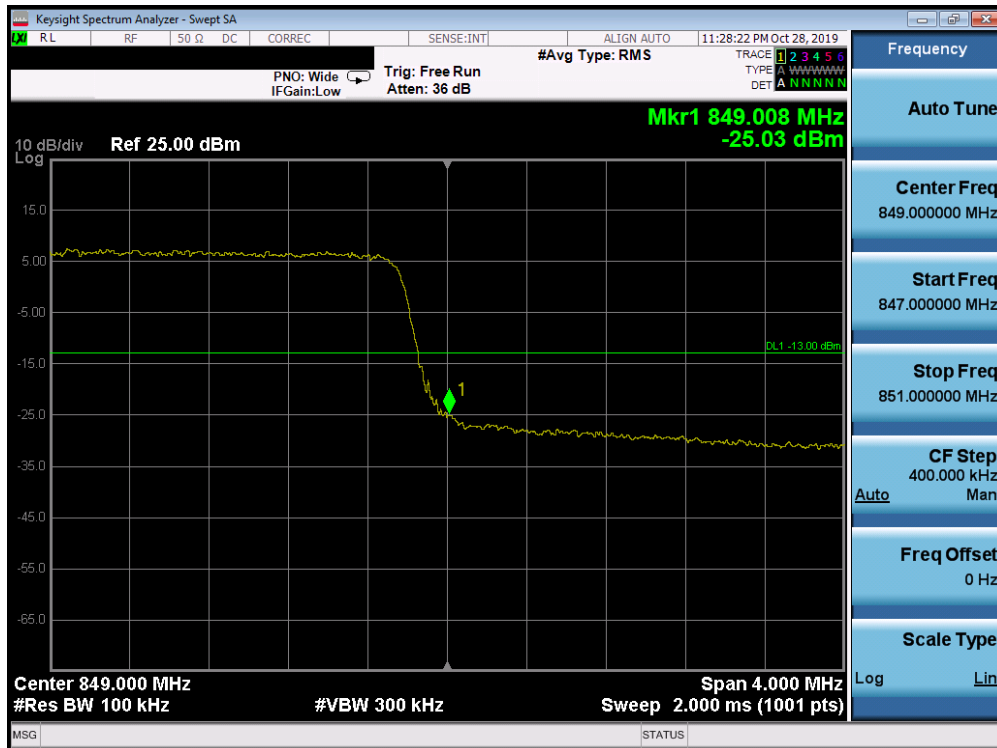


Plot 7-284. Upper Band Edge Plot (Band 26/5 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG981V	 <b>PCTEST</b> Proud to be part of 	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 167 of 357

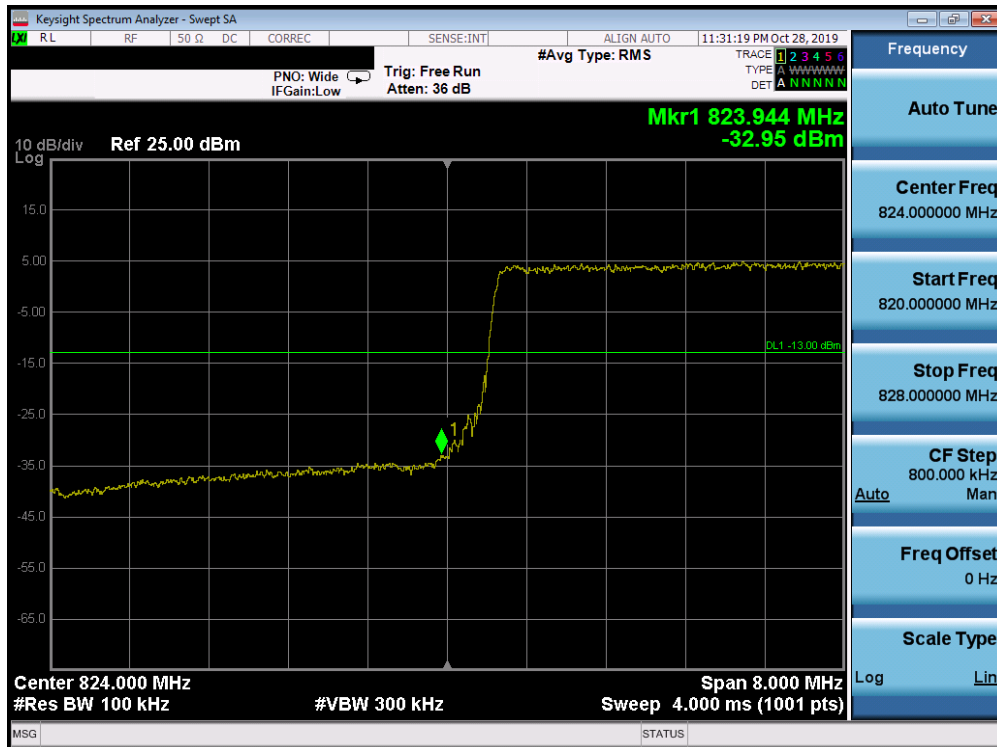


Plot 7-285. Lower Band Edge Plot (Band 26/5 - 5.0MHz QPSK - Full RB Configuration)

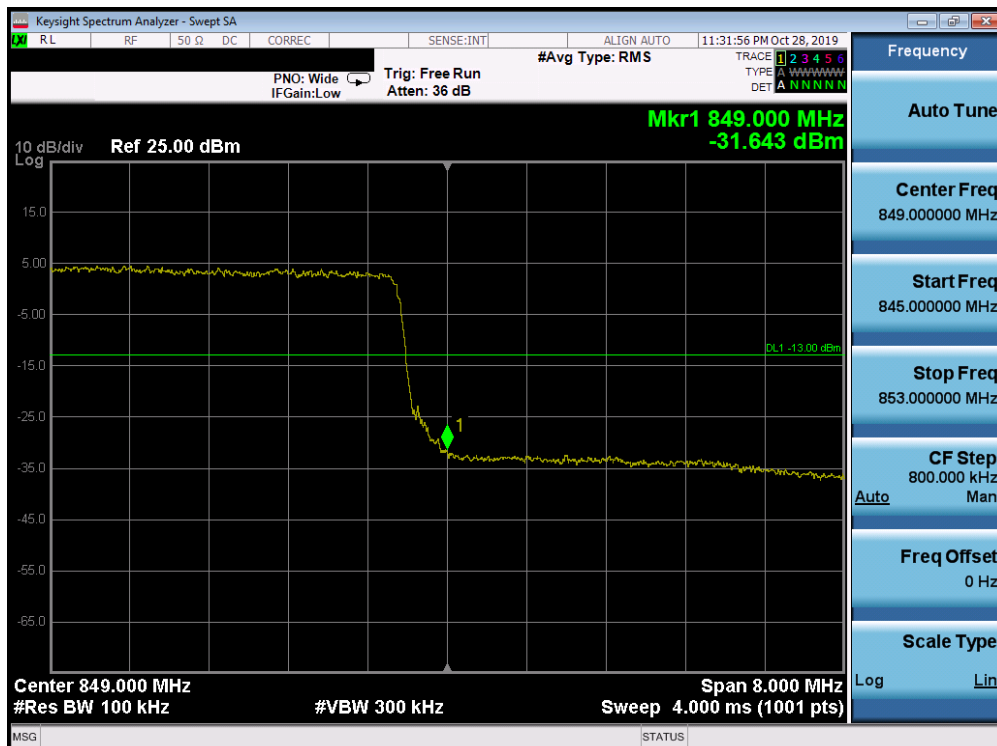


Plot 7-286. Upper Band Edge Plot (Band 26/5 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG981V	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 168 of 357

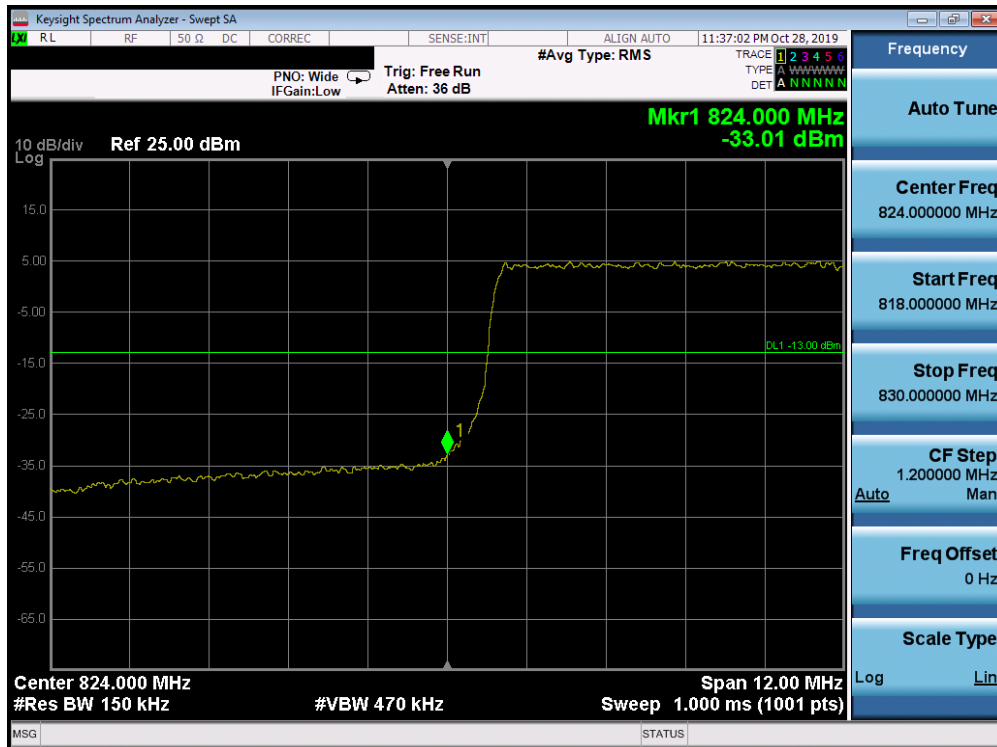


Plot 7-287. Lower Band Edge Plot (Band 26/5 - 10.0MHz QPSK - Full RB Configuration)

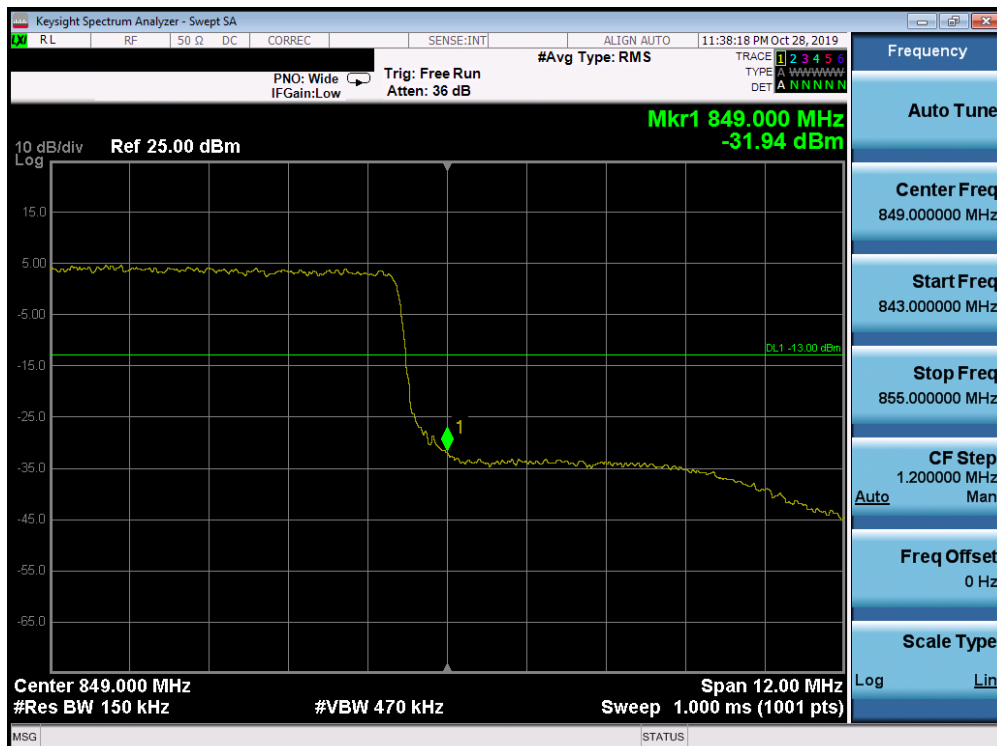


Plot 7-288. Upper Band Edge Plot (Band 26/5 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Plot 7-289. Lower Band Edge Plot (Band 26 - 15.0MHz QPSK - Full RB Configuration)

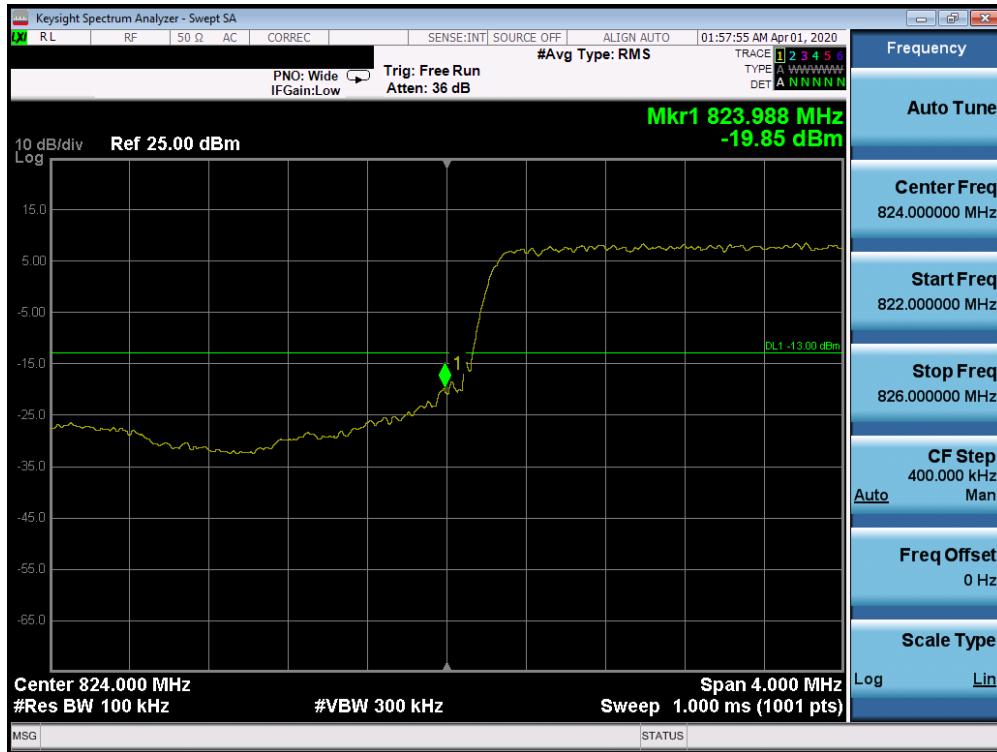


Plot 7-290. Upper Band Edge Plot (Band 26 - 15.0MHz QPSK - Full RB Configuration)

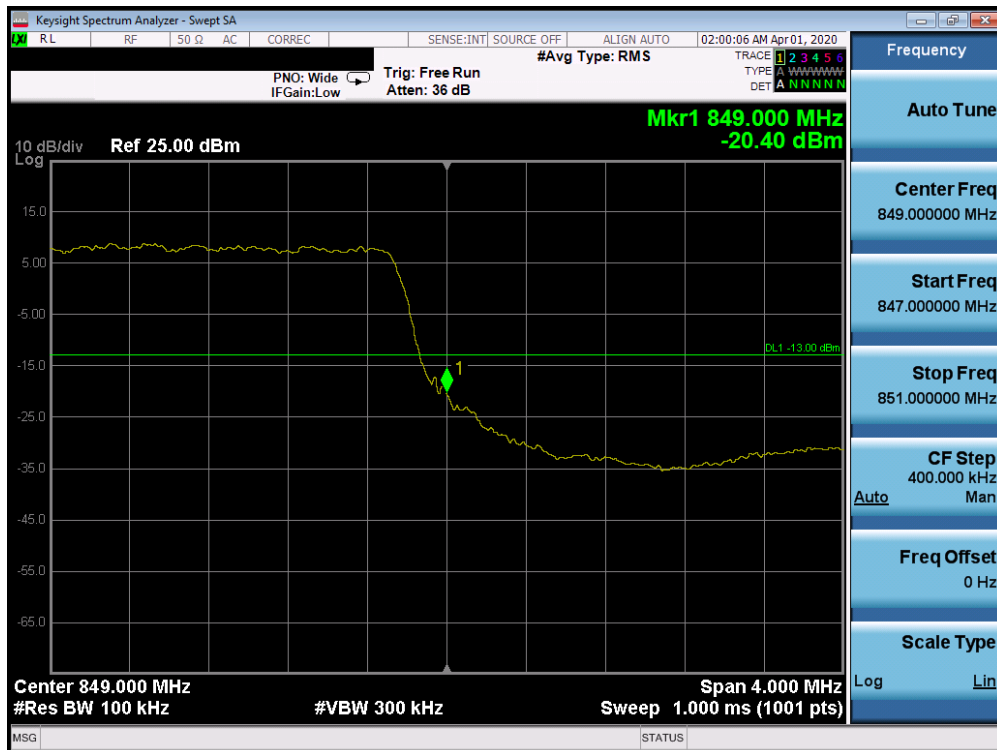
FCC ID: A3LSMG981V	<b>PCTEST</b> Proud to be part of  element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 170 of 357



**NR Band n5**

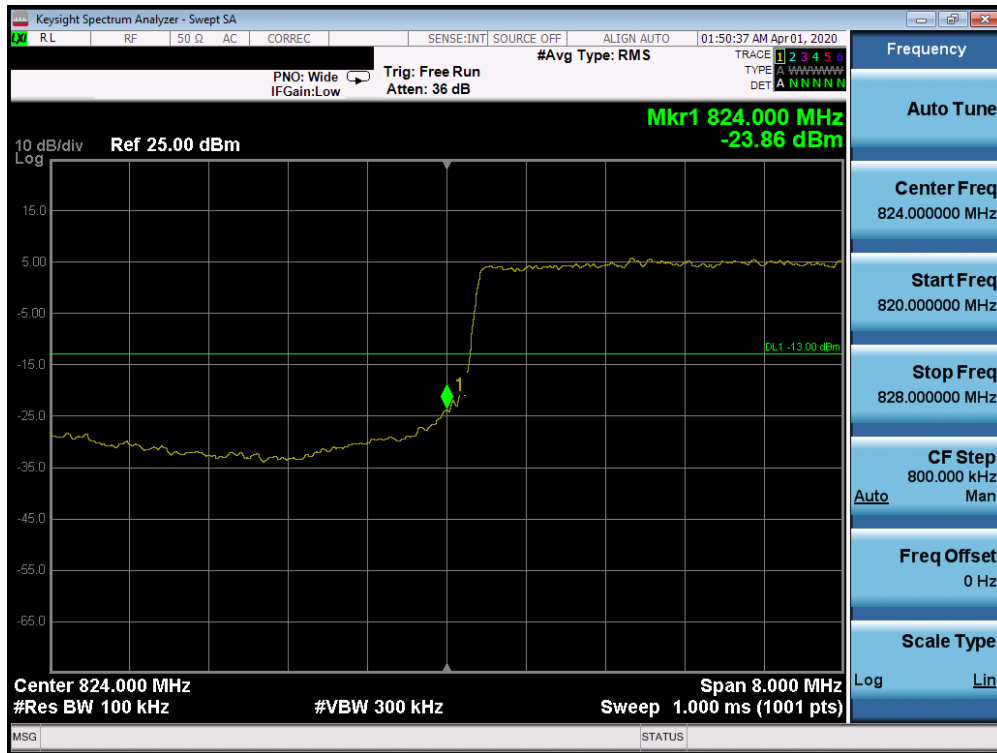


**Plot 7-291. Lower Band Edge Plot (n5 – 5.0MHz DFT-s-OFDM BPSK - Full RB Configuration)**

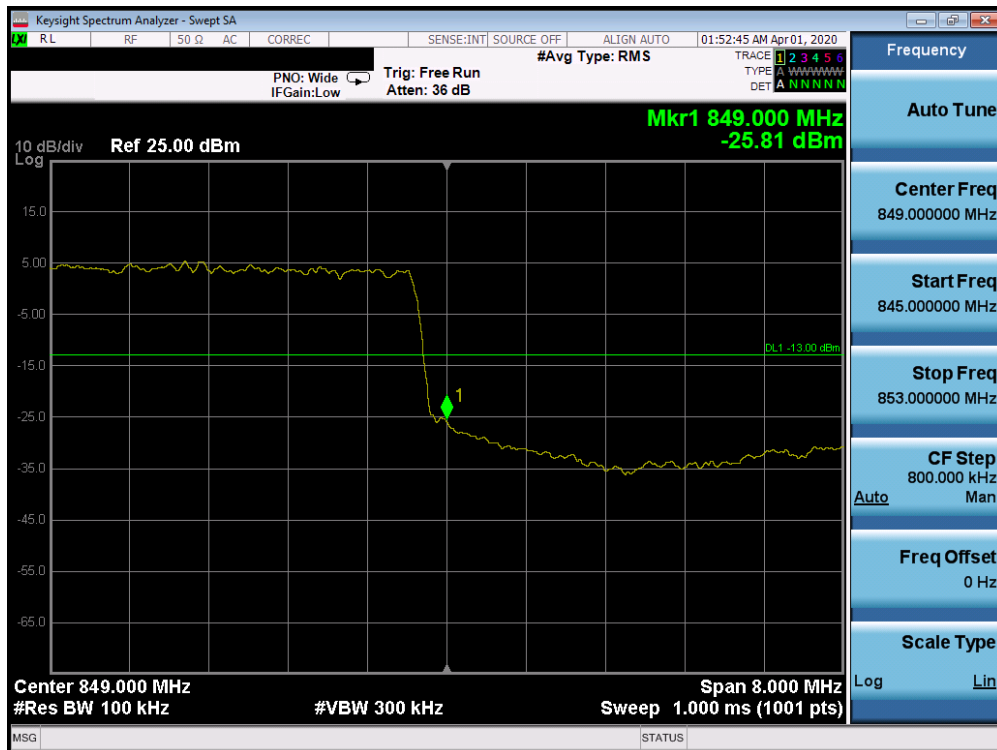


**Plot 7-292. Upper Band Edge Plot (n5 – 5.0MHz DFT-s-OFDM BPSK - Full RB Configuration)**

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 171 of 357

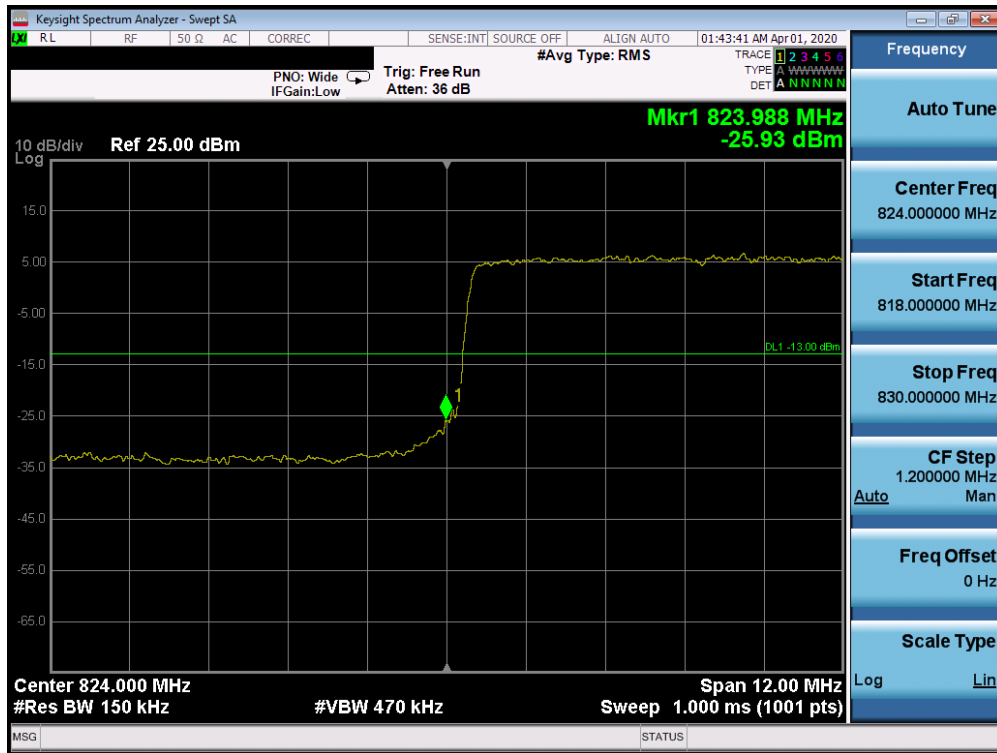


Plot 7-293. Lower Band Edge Plot (n5 – 10.0MHz DFT-s-OFDM BPSK - Full RB Configuration)



Plot 7-294. Upper Band Edge Plot (n5 – 10.0MHz DFT-s-OFDM BPSK - Full RB Configuration)

FCC ID: A3LSMG981V	<b>PCTEST</b> Proud to be part of  element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 172 of 357

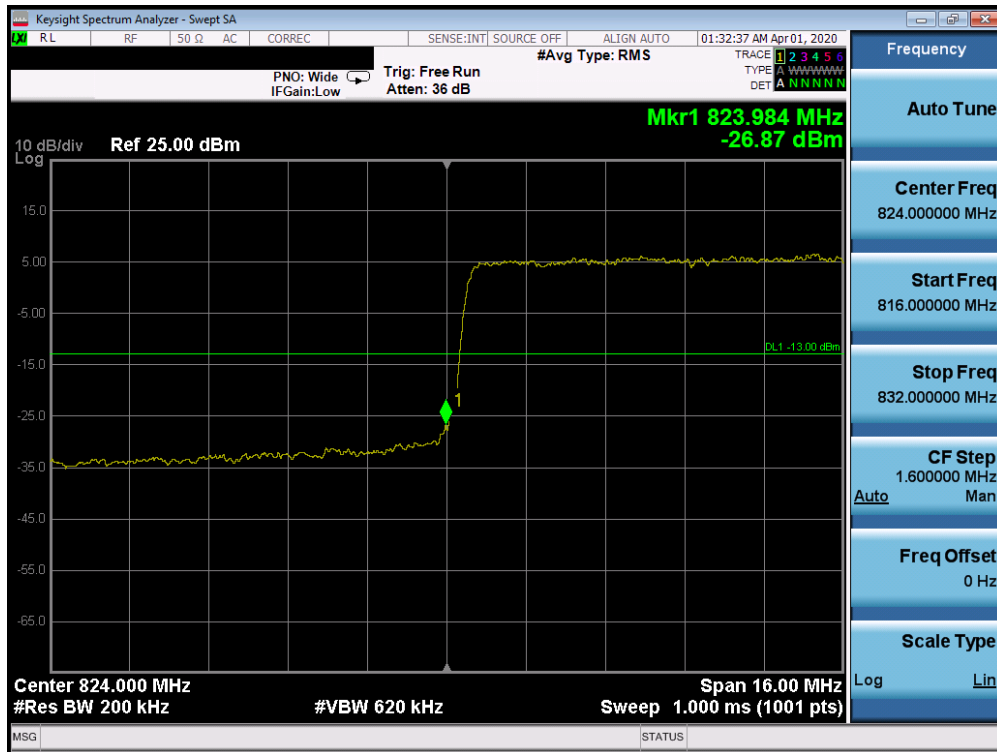


Plot 7-295. Lower Band Edge Plot (n5 – 15.0MHz DFT-s-OFDM BPSK - Full RB Configuration)



Plot 7-296. Upper Band Edge Plot (n5 – 15.0MHz DFT-s-OFDM BPSK - Full RB Configuration)

FCC ID: A3LSMG981V	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 173 of 357



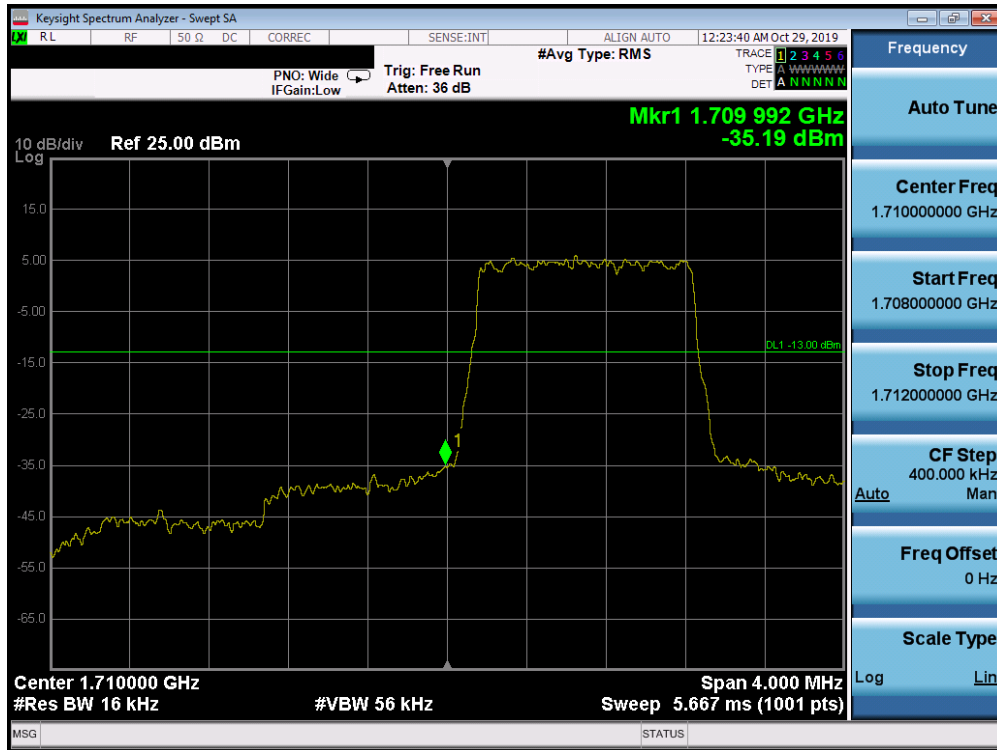
Plot 7-297. Lower Band Edge Plot (n5 – 20.0MHz DFT-s-OFDM BPSK - Full RB Configuration)



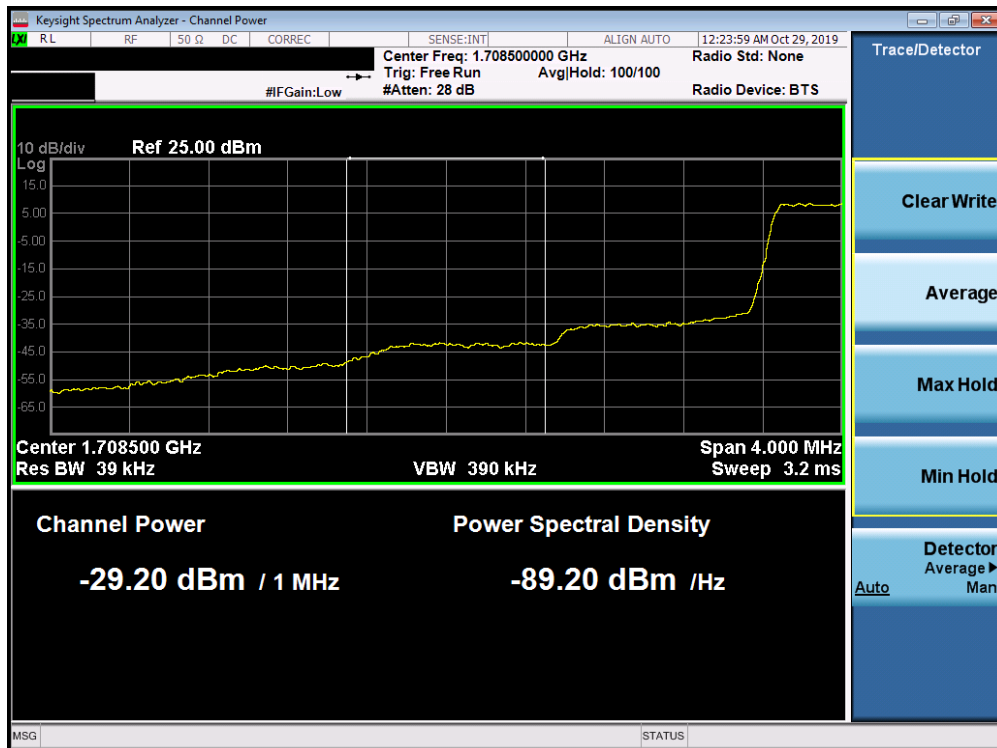
Plot 7-298. Upper Band Edge Plot (n5 – 20.0MHz DFT-s-OFDM BPSK - Full RB Configuration)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 174 of 357

**Band 66/4**

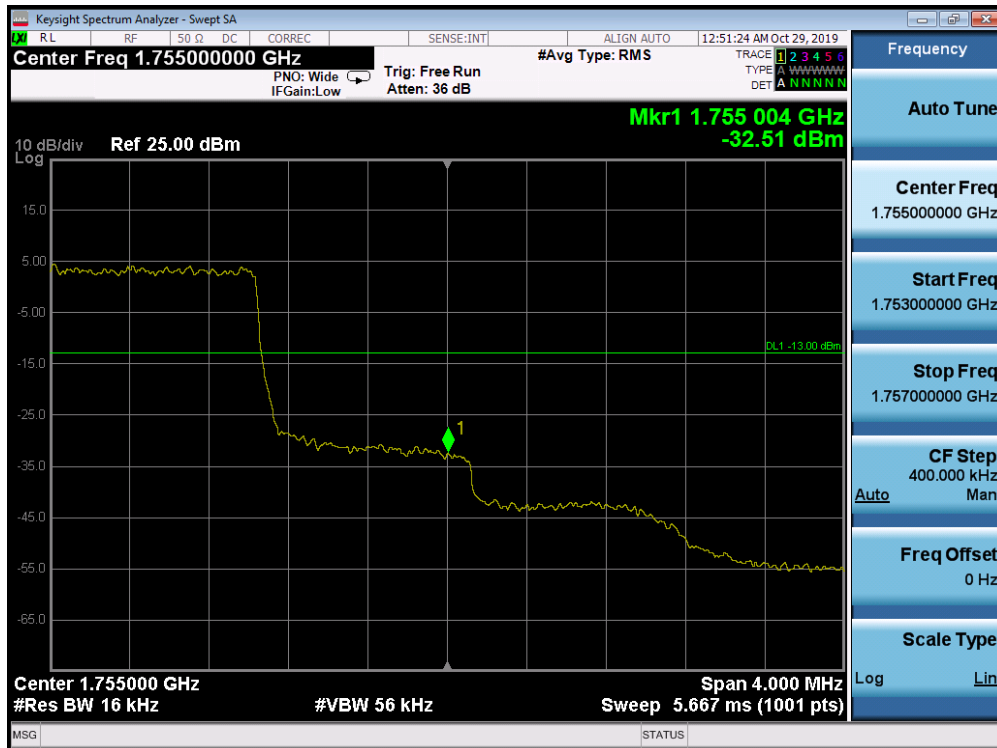


**Plot 7-299. Lower Band Edge Plot (Band 66/4 - 1.4MHz QPSK - Full RB Configuration)**

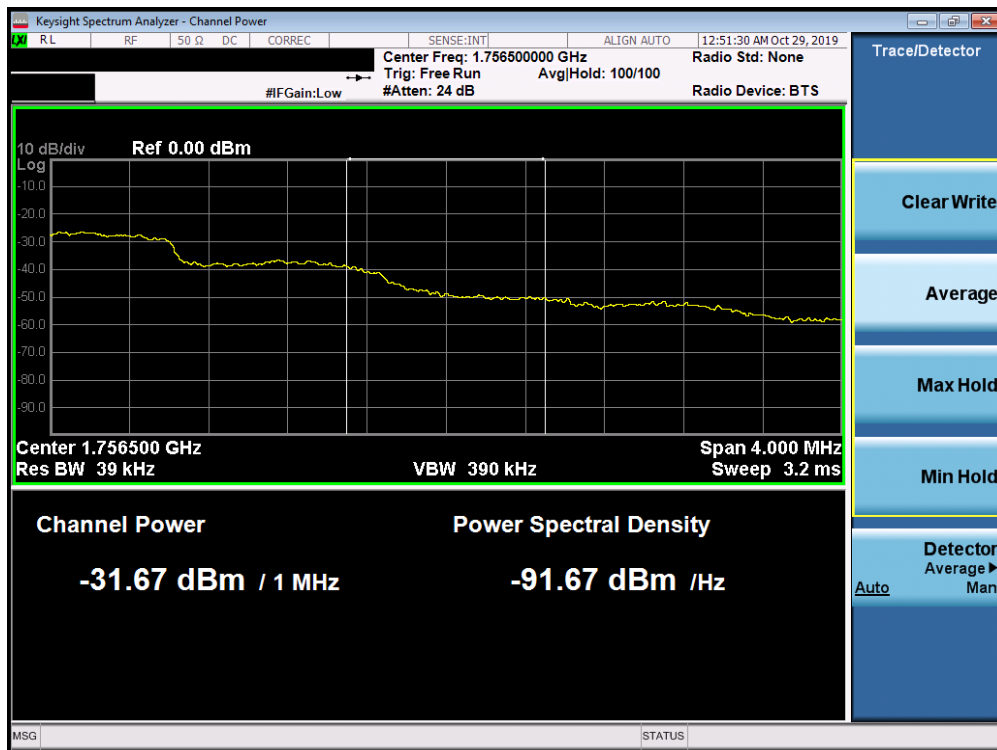


**Plot 7-300. Lower Extended Band Edge Plot (Band 66/4 - 1.4MHz QPSK - Full RB Configuration)**

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 175 of 357

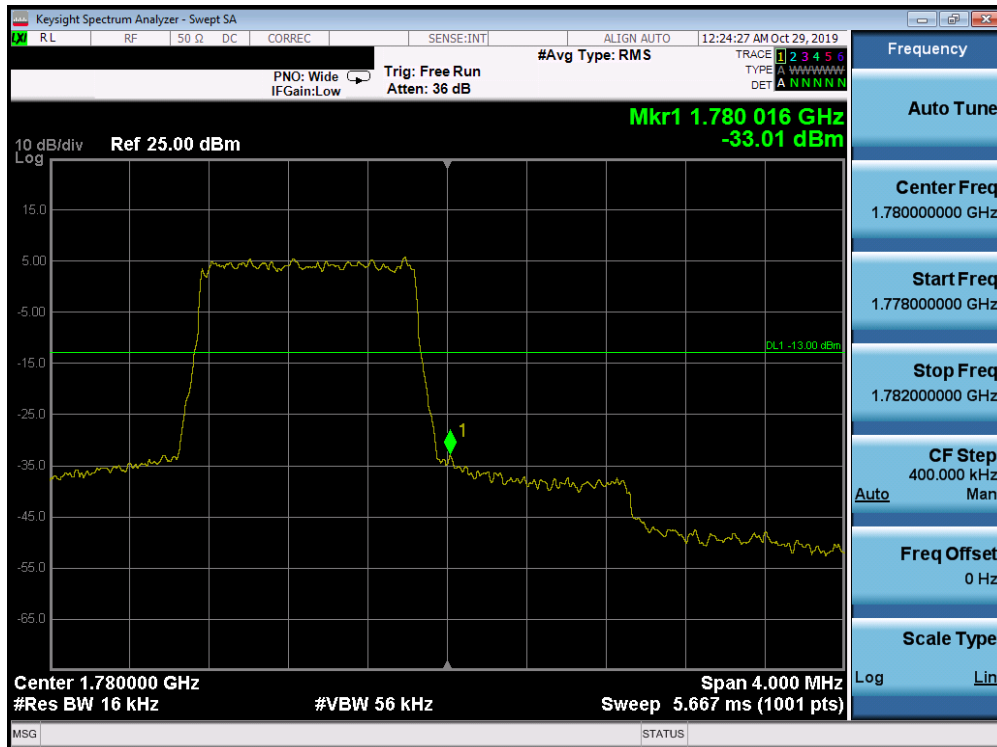


Plot 7-301. Upper Band Edge Plot (Band 4 - 1.4MHz QPSK - Full RB Configuration)

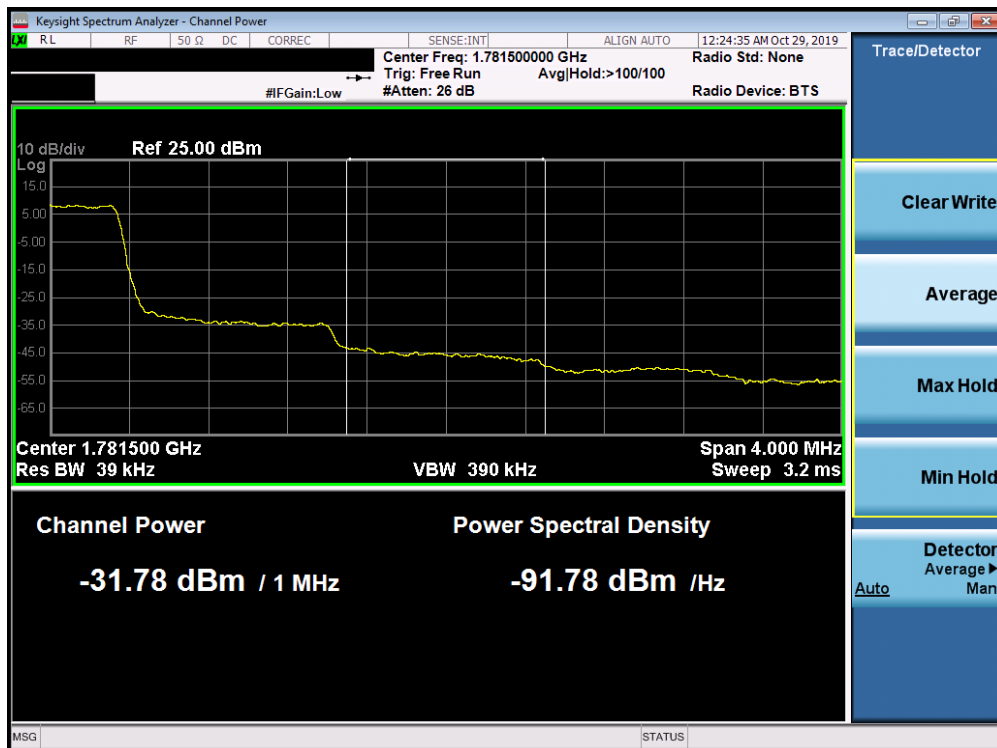


Plot 7-302. Upper Extended Band Edge Plot (Band 4 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 176 of 357

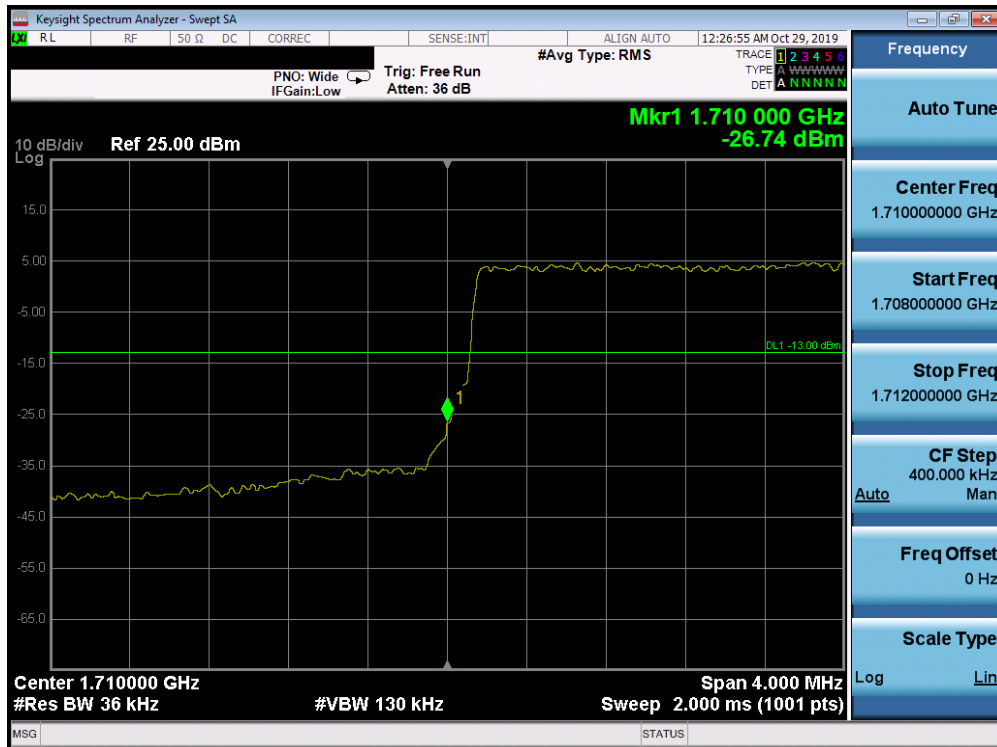


Plot 7-303. Upper Band Edge Plot (Band 66 - 1.4MHz QPSK - Full RB Configuration)

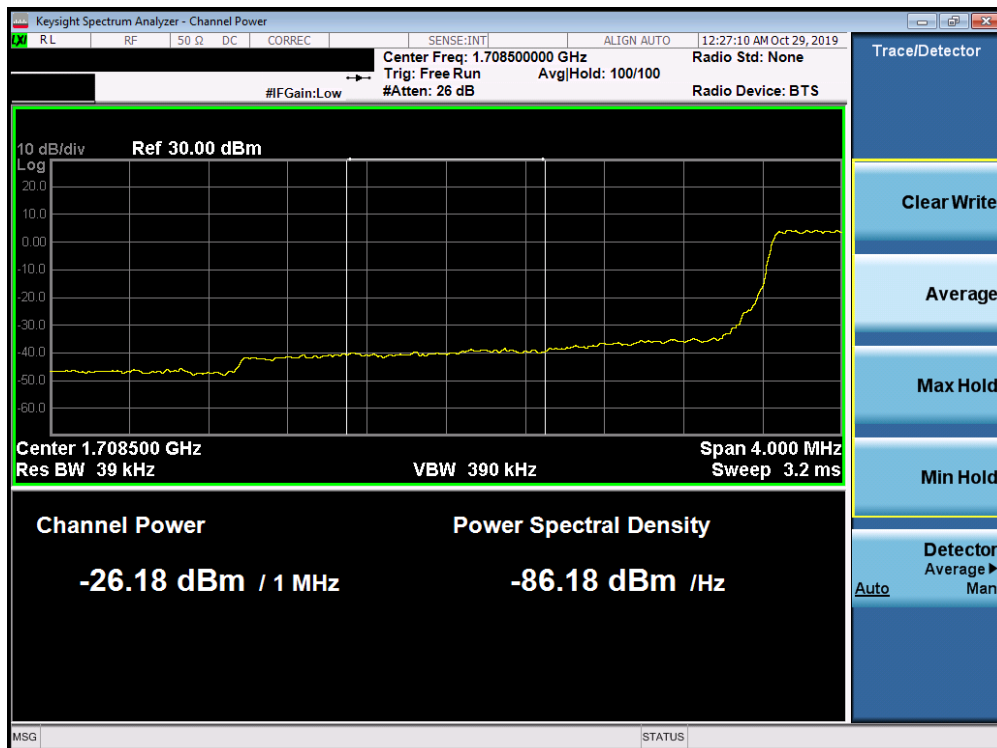


Plot 7-304. Upper Extended Band Edge Plot (Band 66 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG981V	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 177 of 357



Plot 7-305. Lower Band Edge Plot (Band 66/4 - 3.0MHz QPSK - Full RB Configuration)



Plot 7-306. Lower Extended Band Edge Plot (Band 66/4 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-05.A3L	Test Dates: 10/22/2019-5/6/2020	EUT Type: Portable Handset		Page 178 of 357