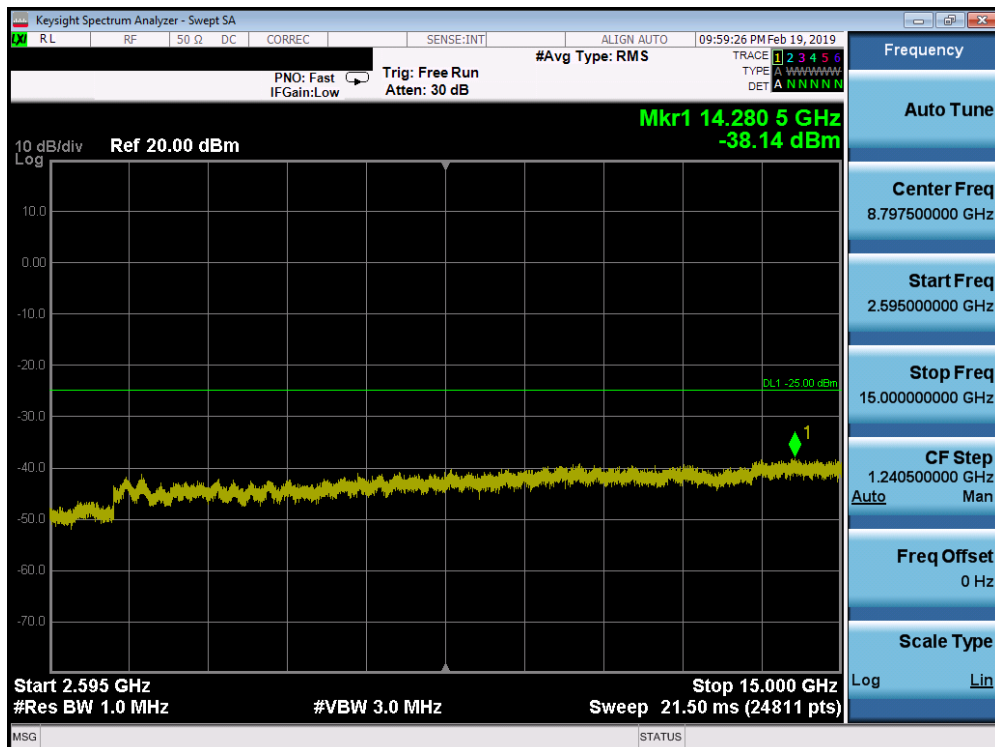


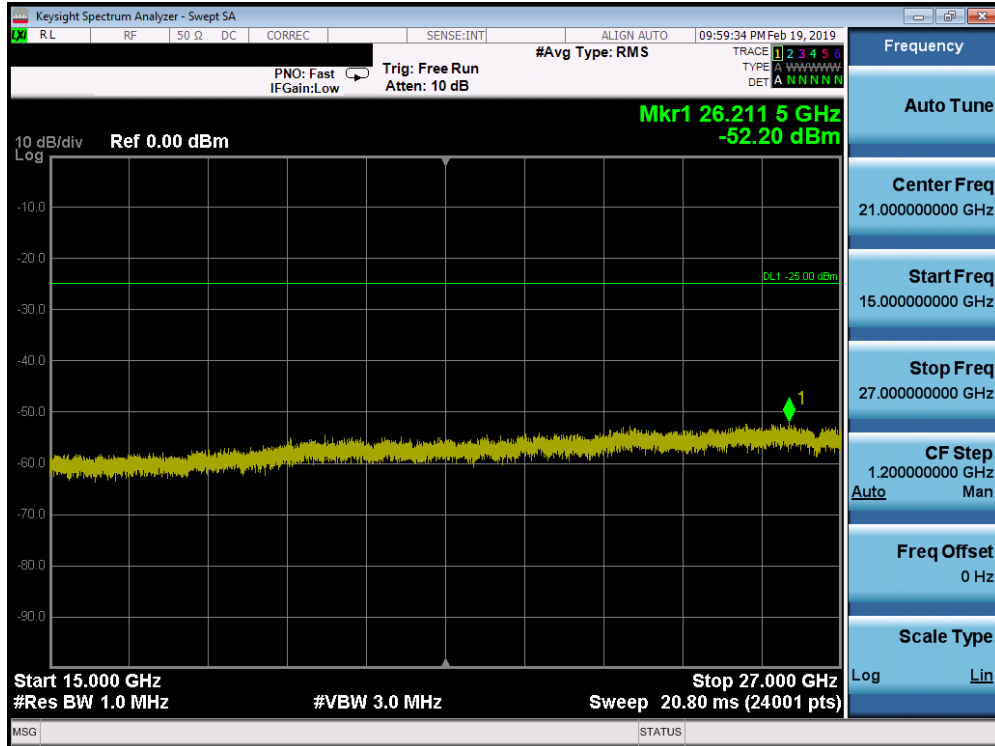


Plot 7-211. Conducted Spurious Plot (Band 7 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)



Plot 7-212. Conducted Spurious Plot (Band 7 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

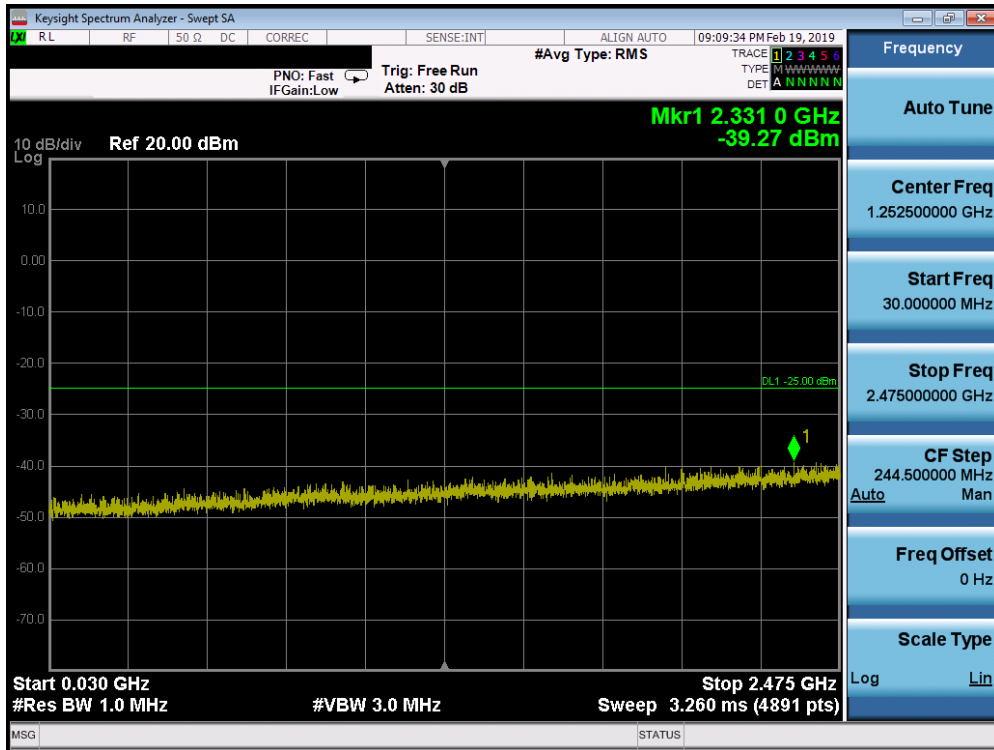
FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 129 of 348



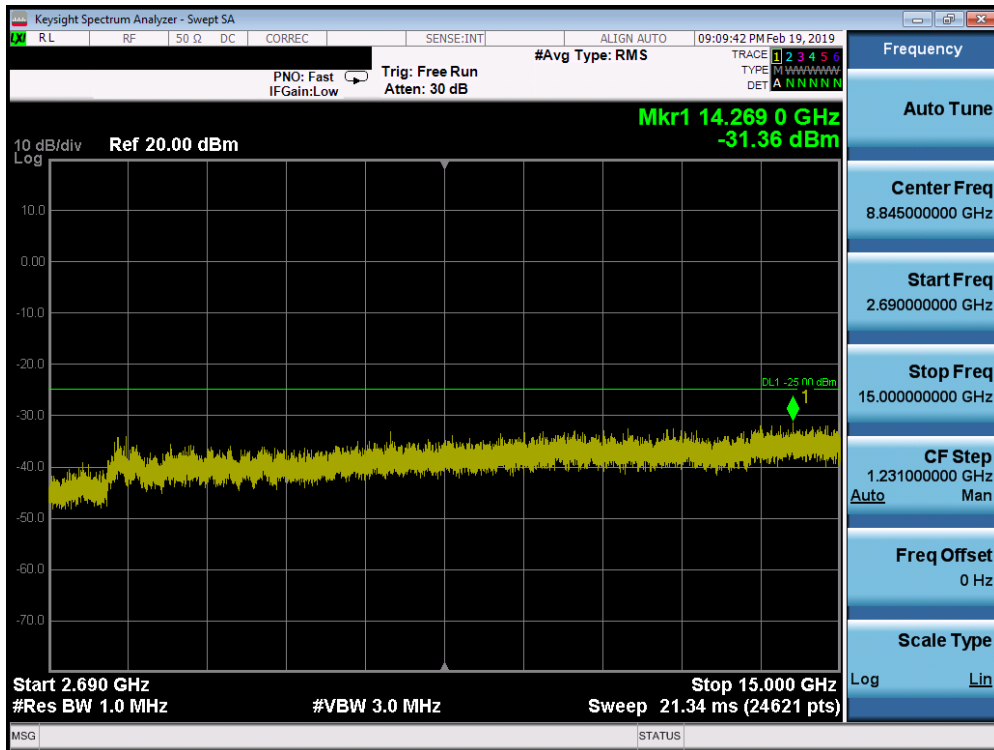
Plot 7-213. Conducted Spurious Plot (Band 7 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 130 of 348

Band 41 (PC3) / Band 38

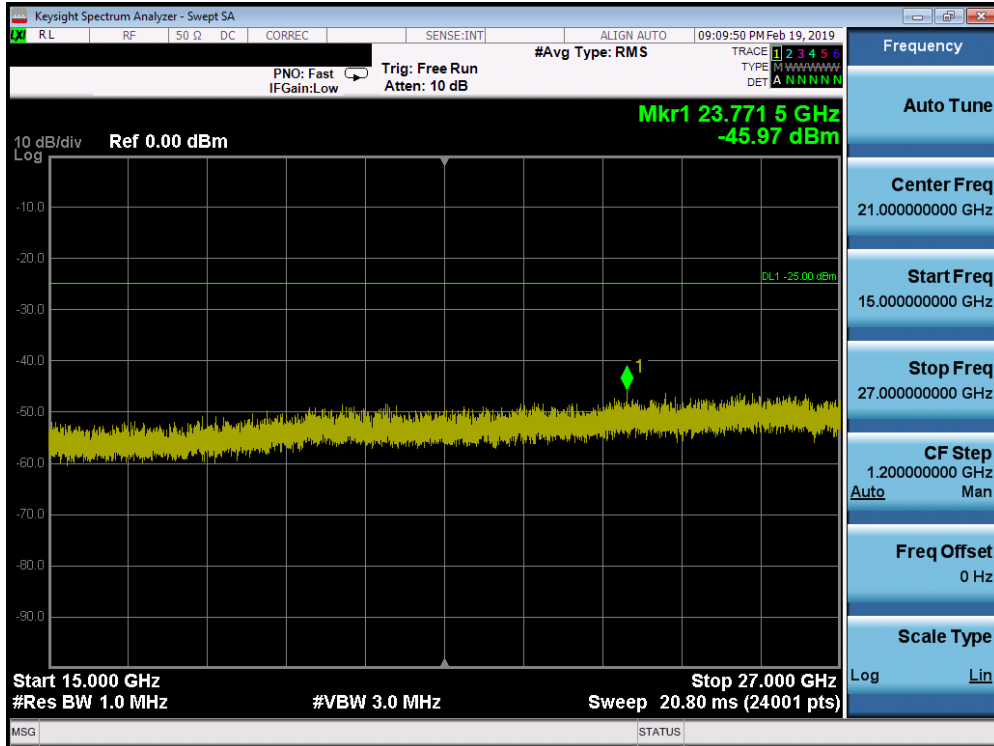


Plot 7-214. Conducted Spurious Plot (Band 41 PC3 / Band 38 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

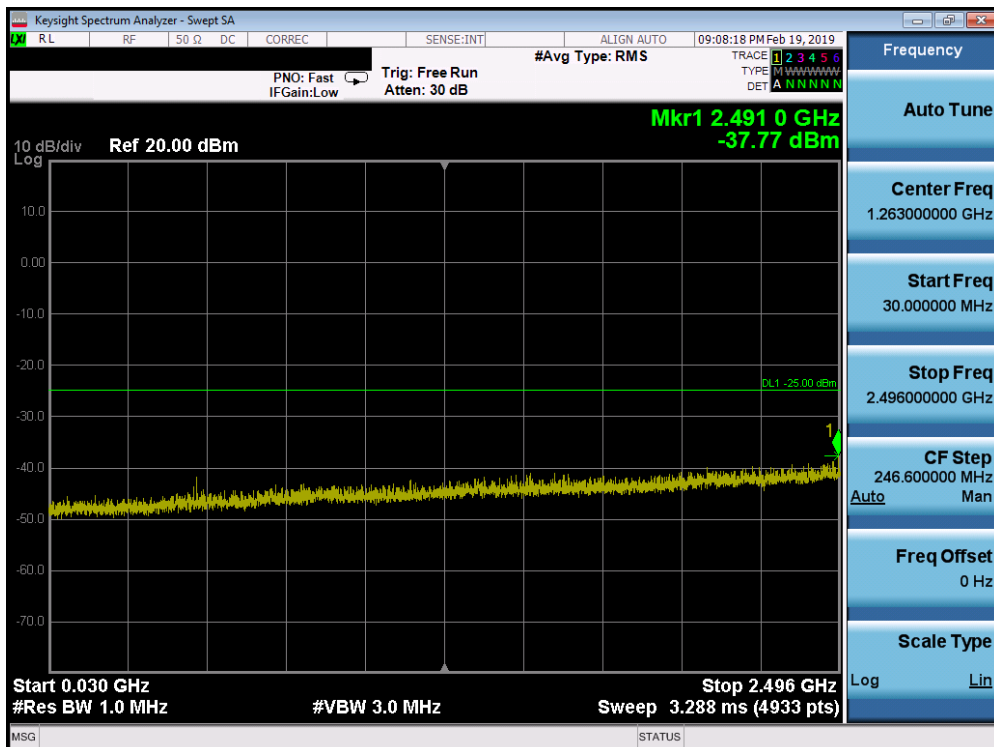


Plot 7-215. Conducted Spurious Plot (Band 41 PC3 / Band 38 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 131 of 348

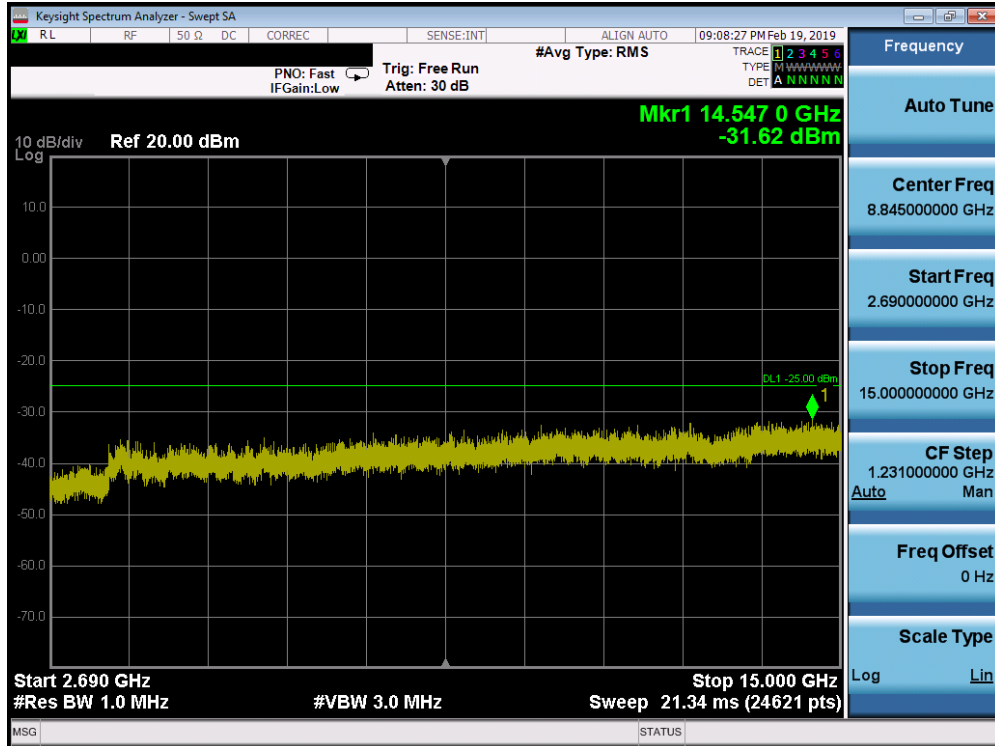


Plot 7-216. Conducted Spurious Plot (Band 41 PC3 / Band 38 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

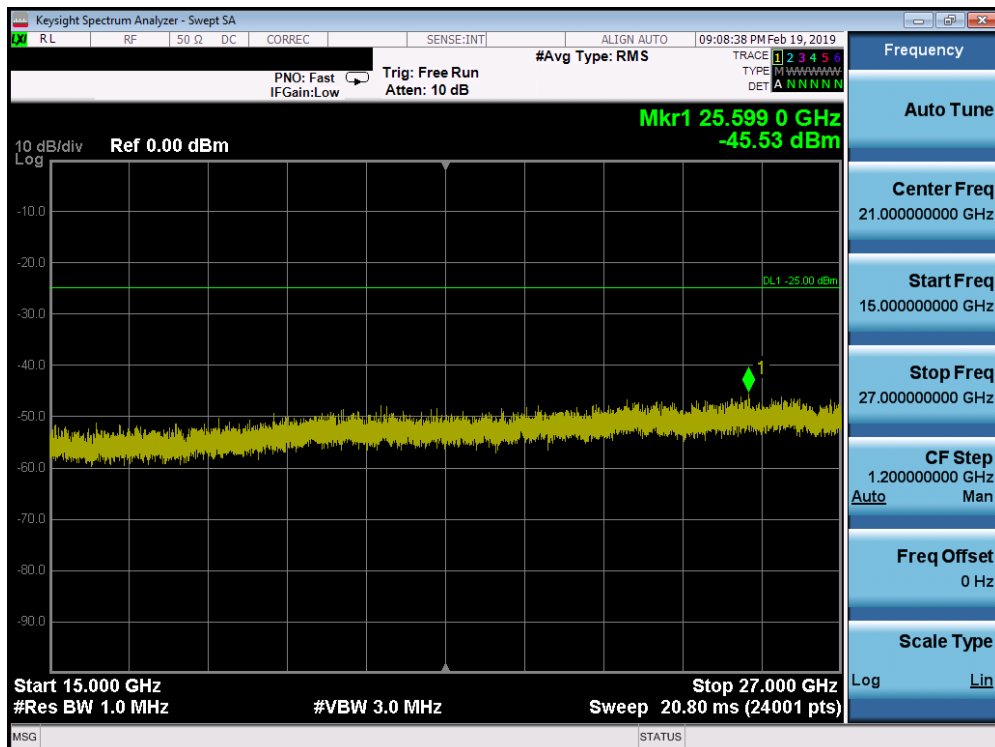


Plot 7-217. Conducted Spurious Plot (Band 41 PC3 / Band 38 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 132 of 348

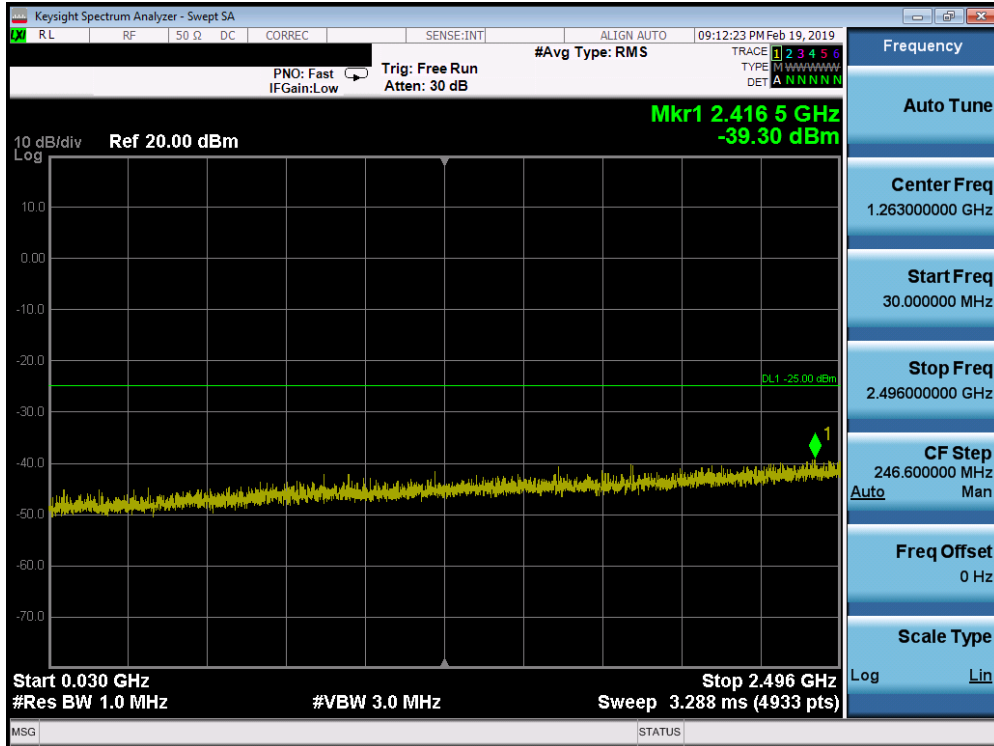


Plot 7-218. Conducted Spurious Plot (Band 41 PC3 / Band 38 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

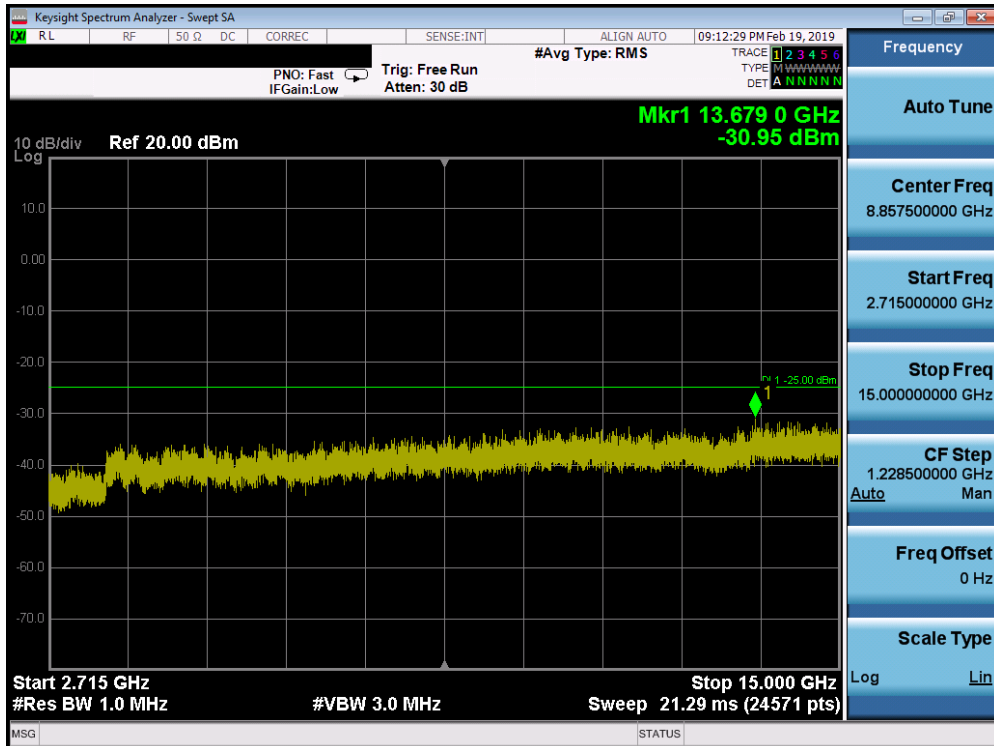


Plot 7-219. Conducted Spurious Plot (Band 41 PC3 / Band 38 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 133 of 348

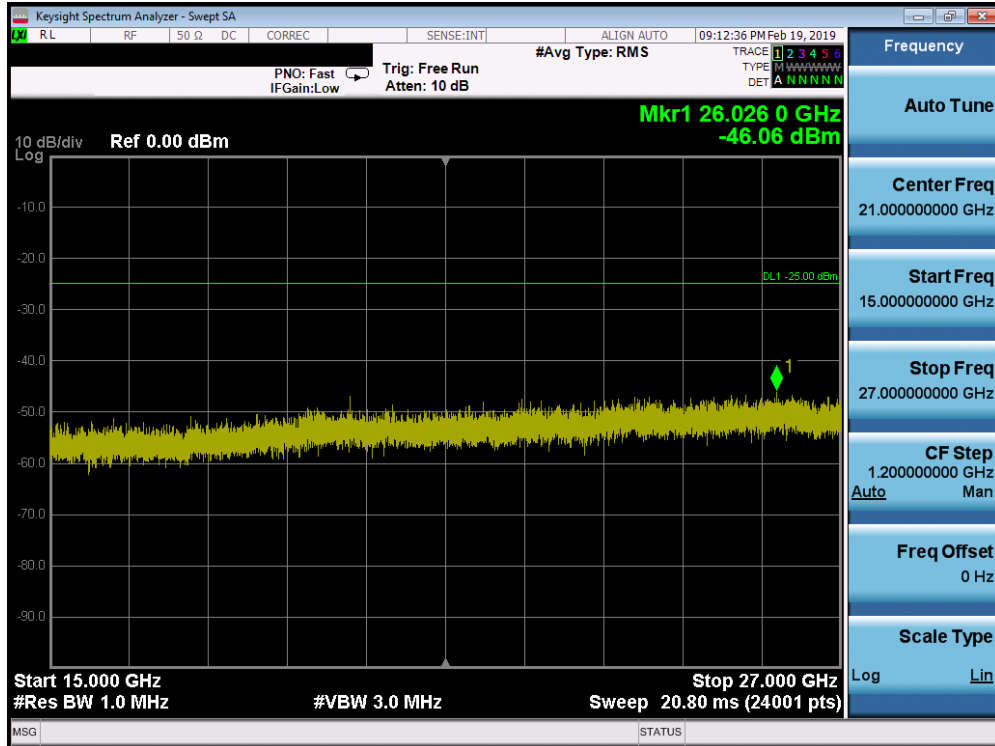


Plot 7-220. Conducted Spurious Plot (Band 41 PC3 / Band 38 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)



Plot 7-221. Conducted Spurious Plot (Band 41 PC3 / Band 38 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

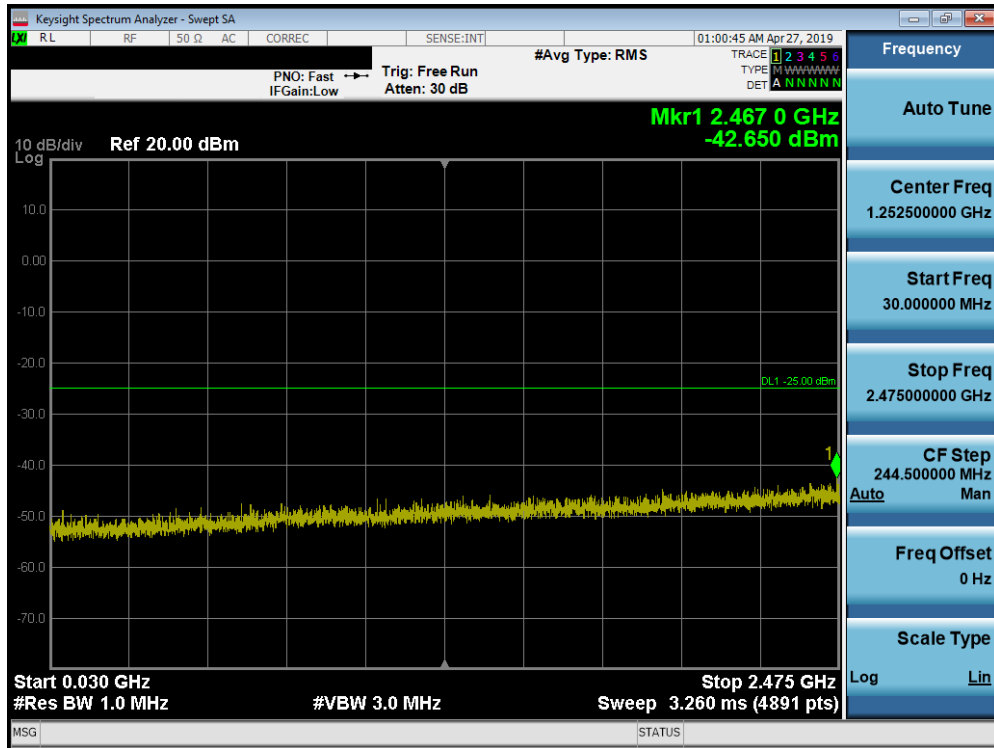
FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 134 of 348



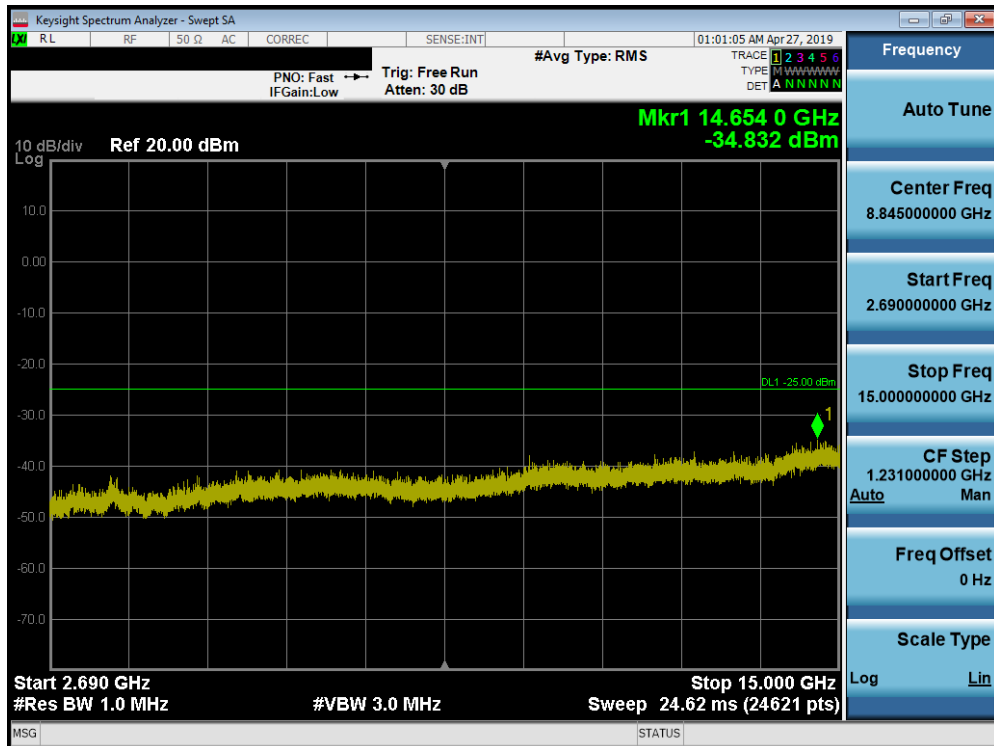
Plot 7-222. Conducted Spurious Plot (Band 41 PC3 / Band 38 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 135 of 348

Band 41 – PC2

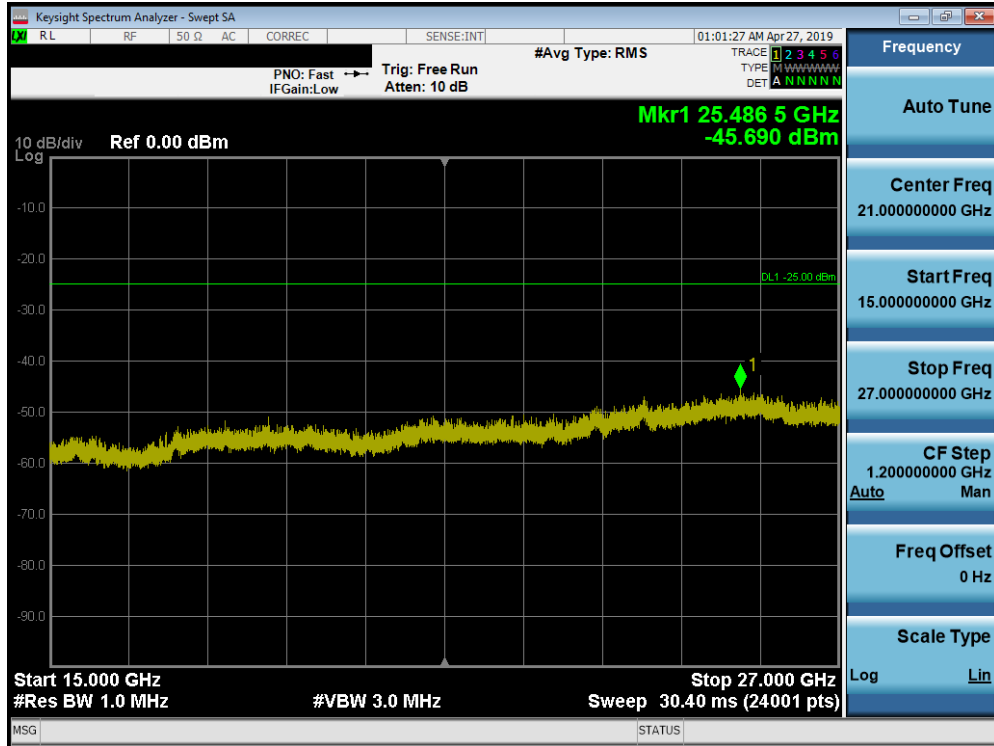


Plot 7-223. Conducted Spurious Plot (Band 41 PC2 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

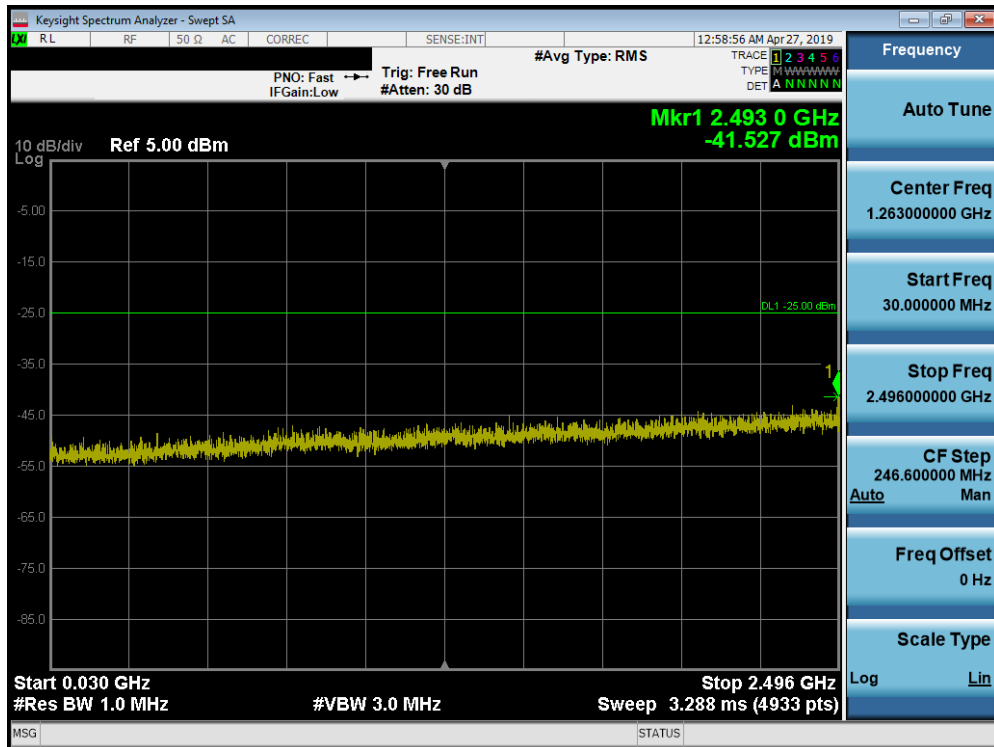


Plot 7-224. Conducted Spurious Plot (Band 41 PC2 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 136 of 348

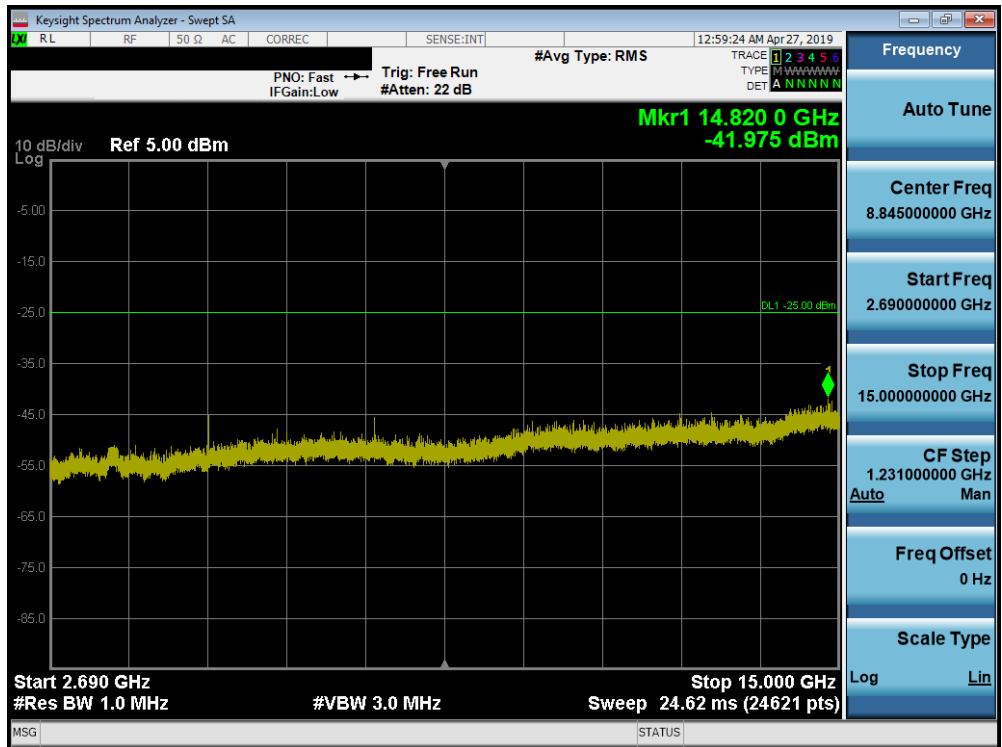


Plot 7-225. Conducted Spurious Plot (Band 41 PC2 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

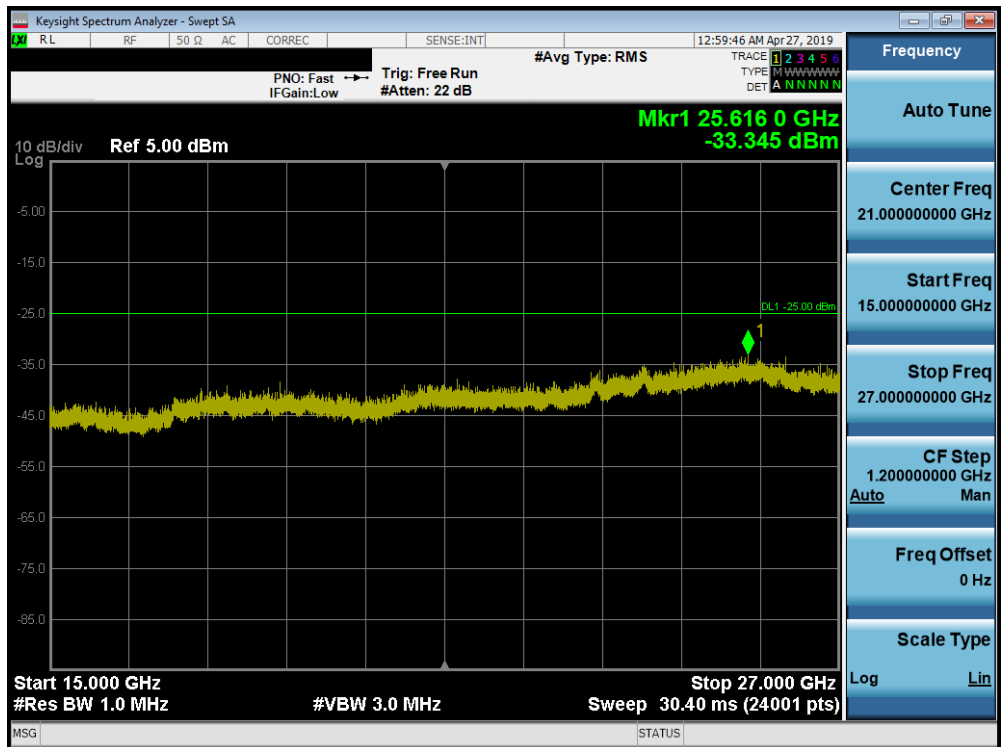


Plot 7-226. Conducted Spurious Plot (Band 41 PC2 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 137 of 348

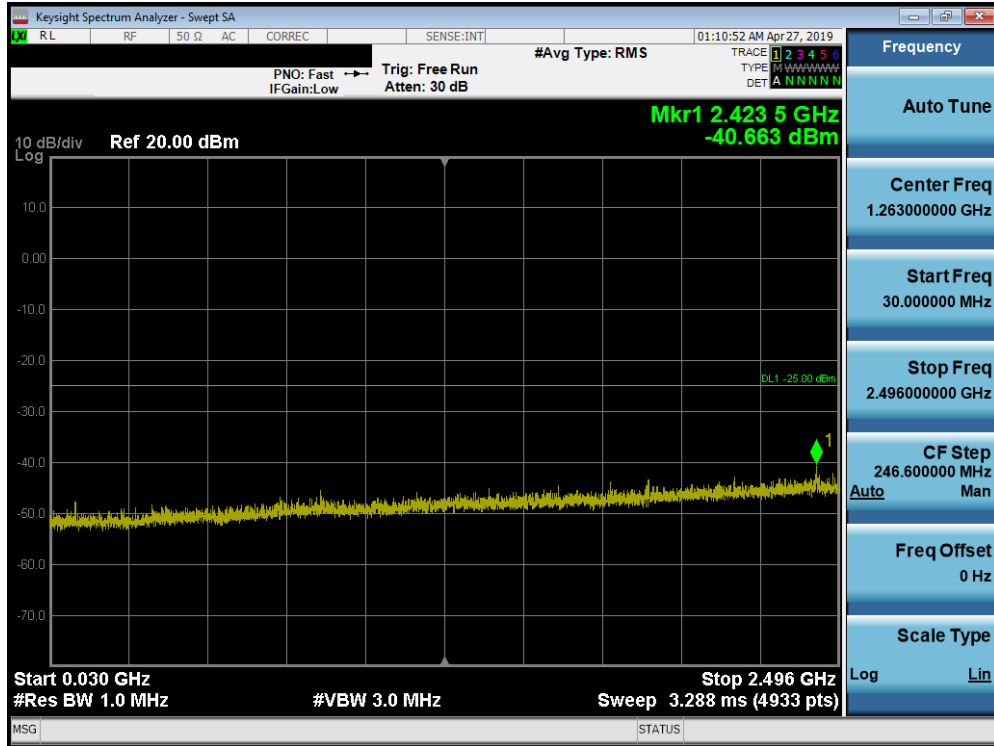


Plot 7-227. Conducted Spurious Plot (Band 41 PC2 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

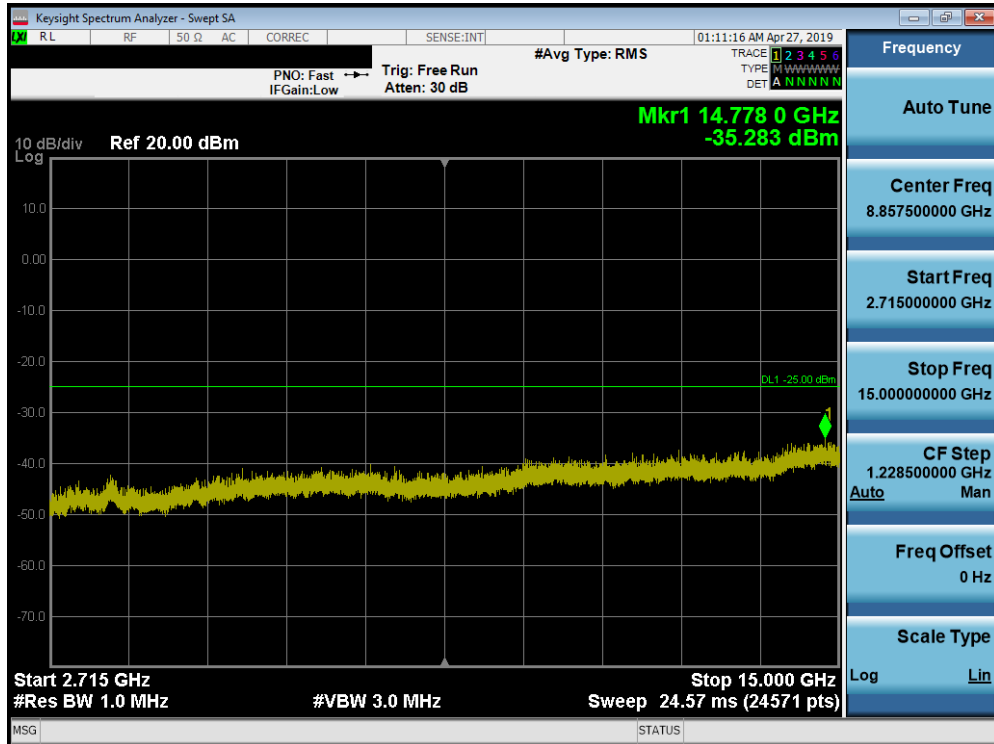


Plot 7-228. Conducted Spurious Plot (Band 41 PC2 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 138 of 348

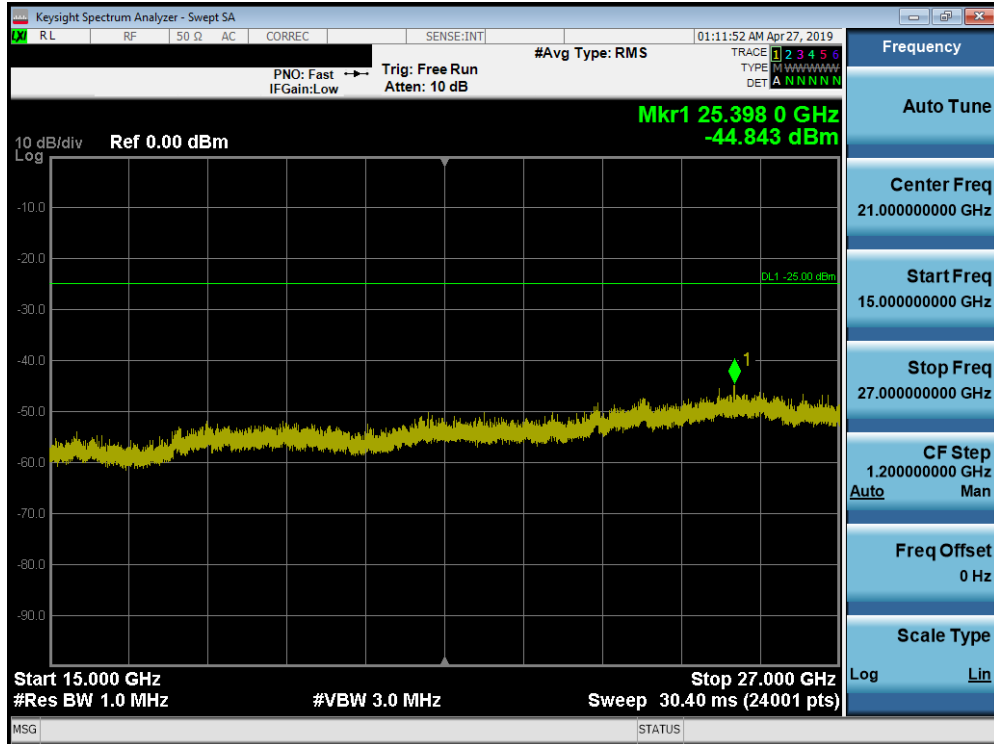


Plot 7-229. Conducted Spurious Plot (Band 41 PC2 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)



Plot 7-230. Conducted Spurious Plot (Band 41 PC2 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 139 of 348



Plot 7-231. Conducted Spurious Plot (Band 41 PC2 - 20.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 140 of 348

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.

For LTE B13, the minimum permissible attenuation level of all emissions in the 763 – 775MHz and 793 – 805MHz band is $65 + 10 \log_{10}(P_{[Watts]})$ in a 6.25kHz bandwidth, where P is the transmitter power in Watts.

For LTE B7, B41/38, the minimum permissible attenuation levels are $40 + 10 \log (P_{[Watts]})$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P_{[Watts]})$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P_{[Watts]})$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth. In addition, the minimum permissible attenuation levels shall not be less than $43 + 10 \log (P_{[Watts]})$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P_{[Watts]})$ dB at or below 2490.5 MHz.

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.

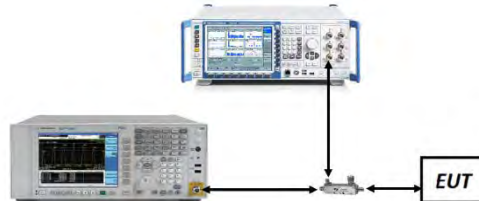


Figure 7-3. Test Instrument & Measurement Setup

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 141 of 348

Test Notes

Per 22.917(b) 24.238(a) 27.53(h) 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.

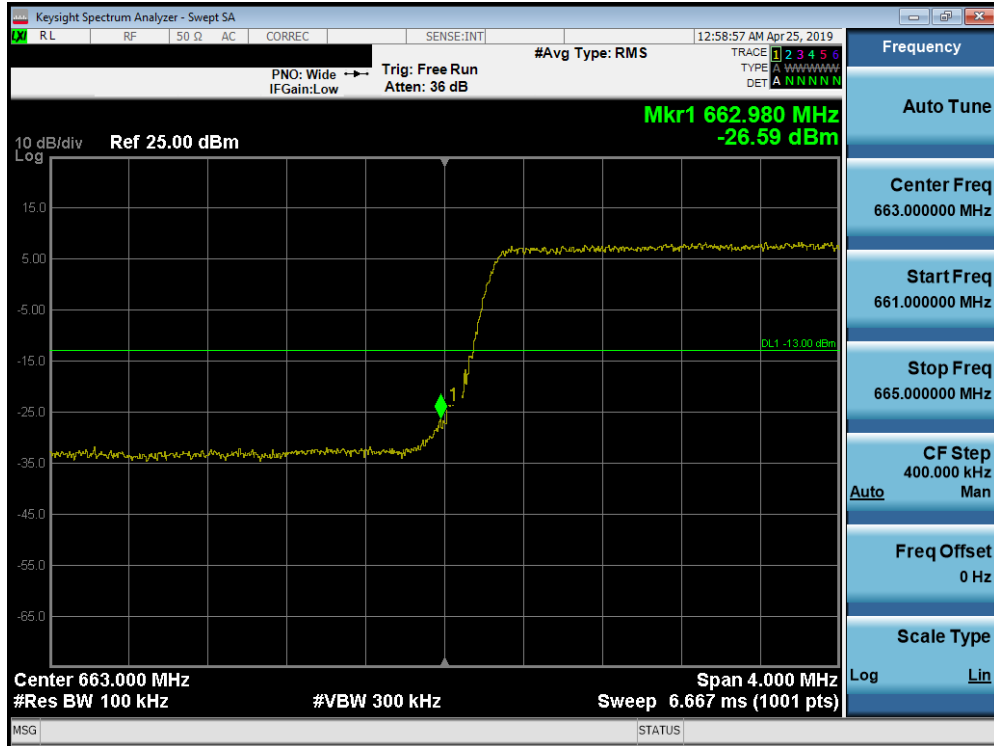
Per 27.53(g) for operations in the 698-746 MHz band, in the 100 kHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least 30 kHz may be employed to demonstrate compliance with the out-of-band emissions limit.

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.

FCC ID: A3LSMG977T	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset	Page 142 of 348

Band 71

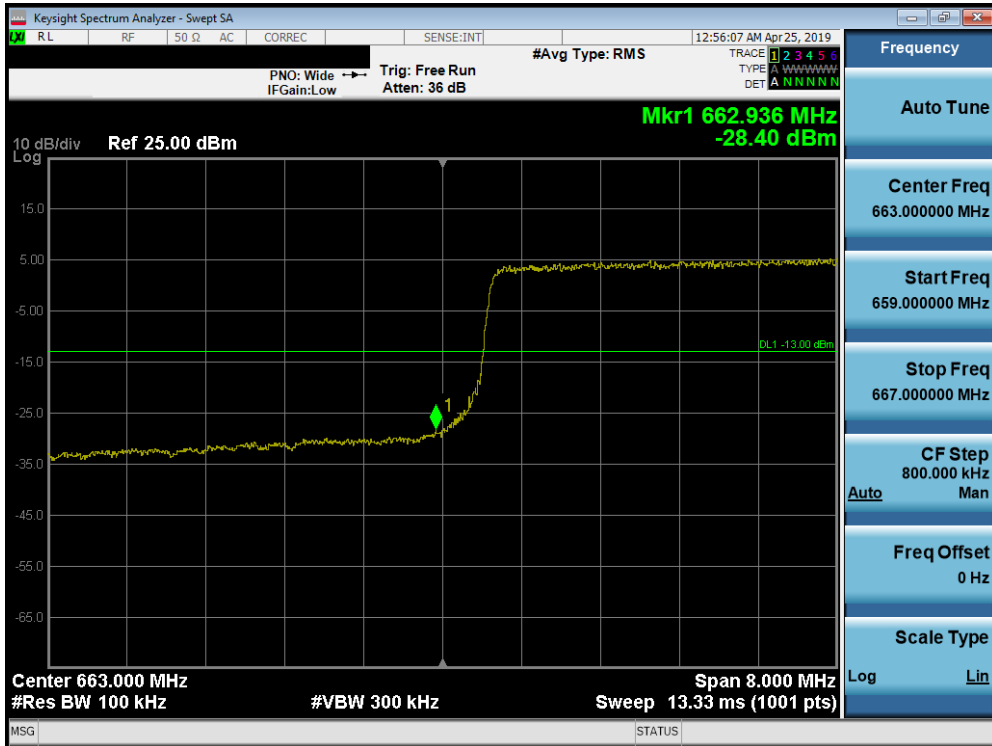


Plot 7-232. Lower Band Edge Plot (Band 71 – 5.0MHz QPSK - Full RB Configuration)

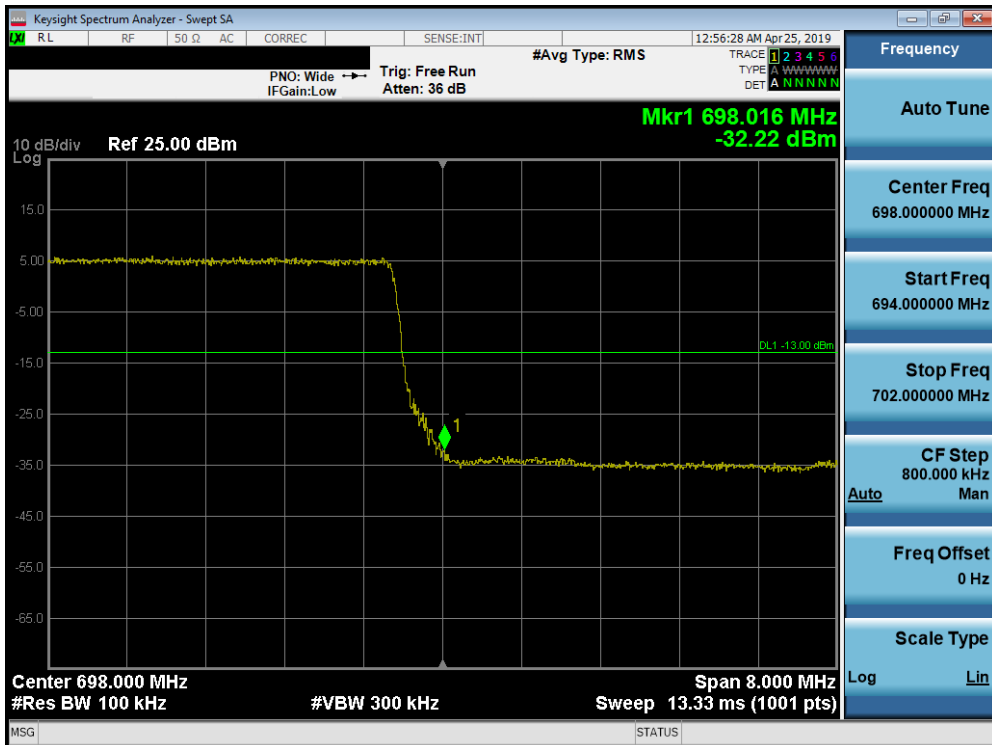


Plot 7-233. Upper Band Edge Plot (Band 71 – 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 143 of 348

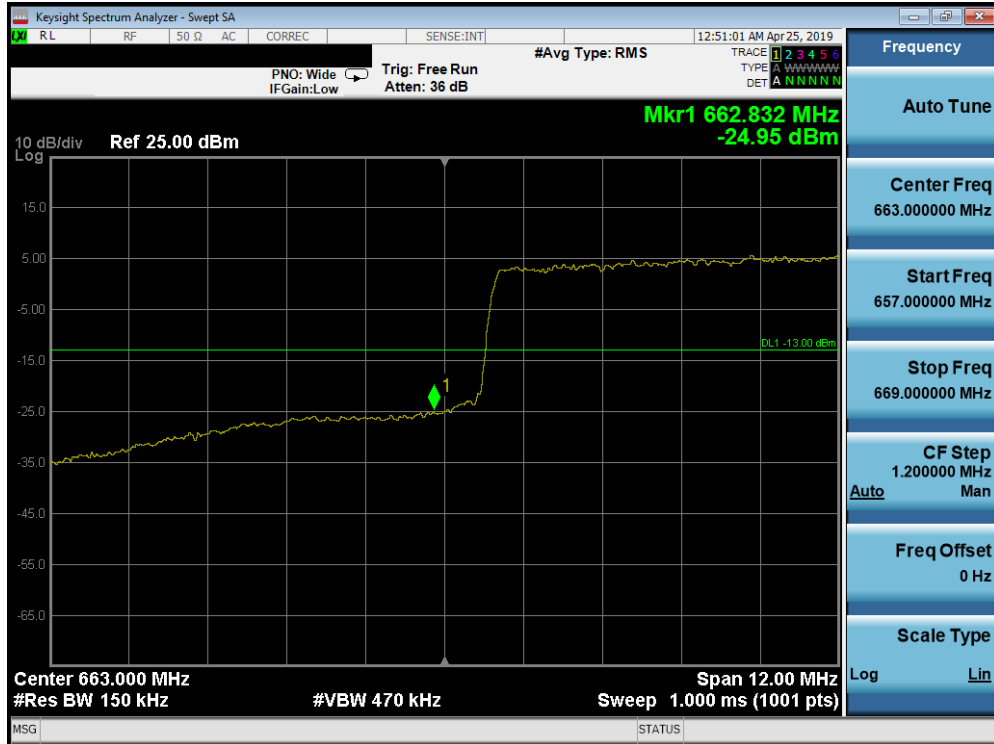


Plot 7-234. Lower Band Edge Plot (Band 71 – 10.0MHz QPSK - Full RB Configuration)

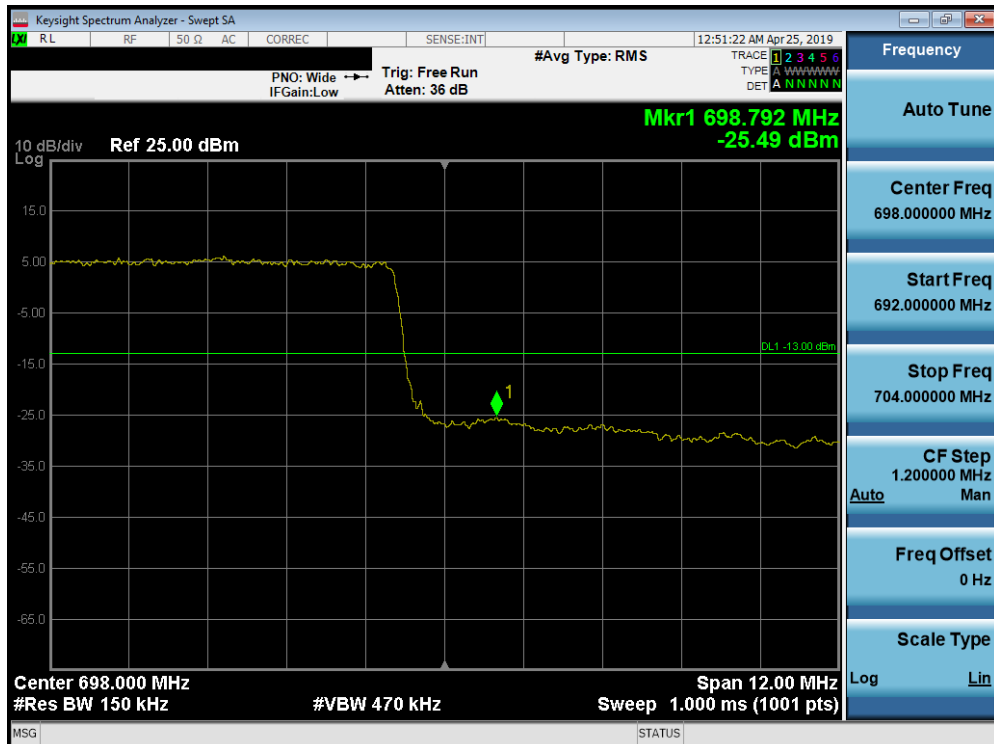


Plot 7-235. Upper Band Edge Plot (Band 71 – 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 144 of 348

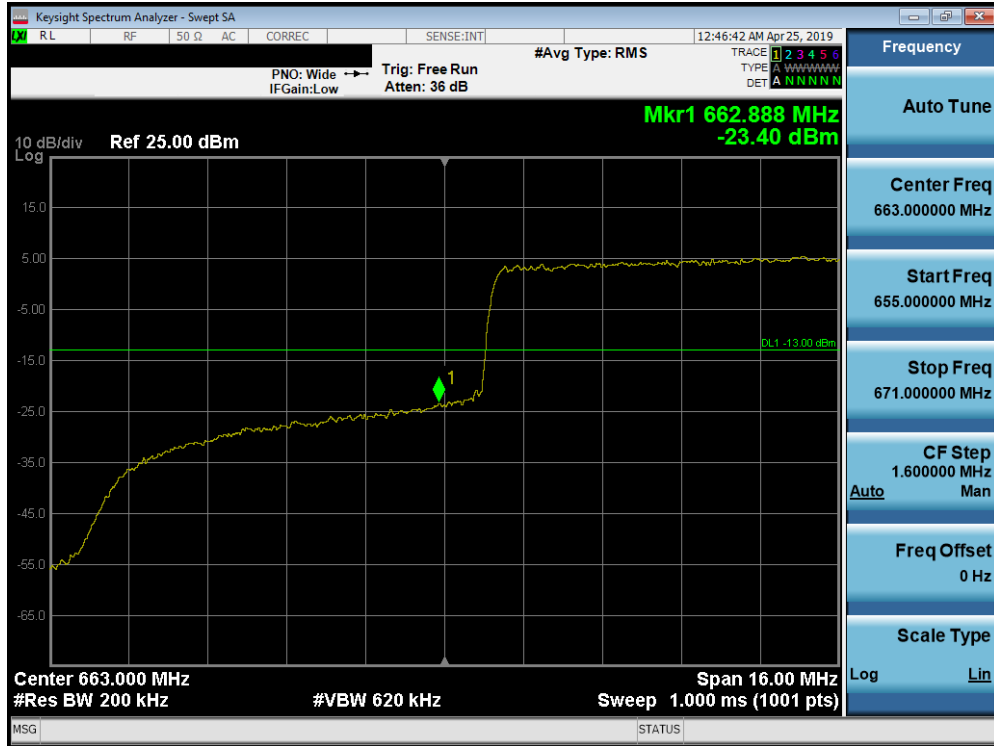


Plot 7-236. Lower Band Edge Plot (Band 71 - 15.0MHz QPSK - Full RB Configuration)

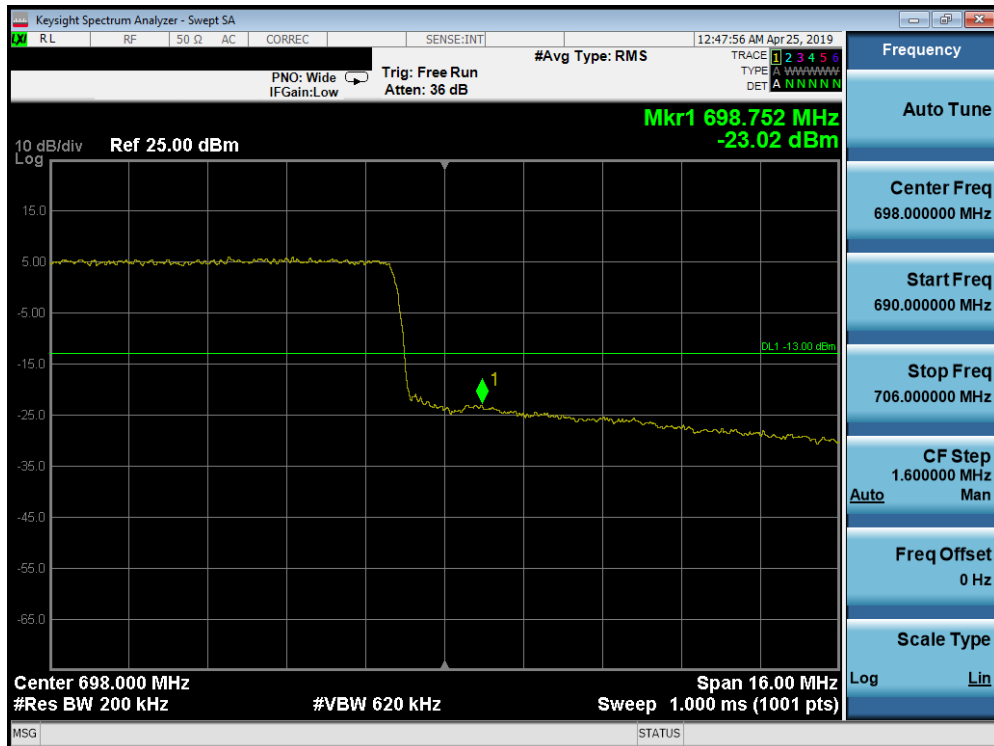


Plot 7-237. Upper Band Edge Plot (Band 71 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 145 of 348



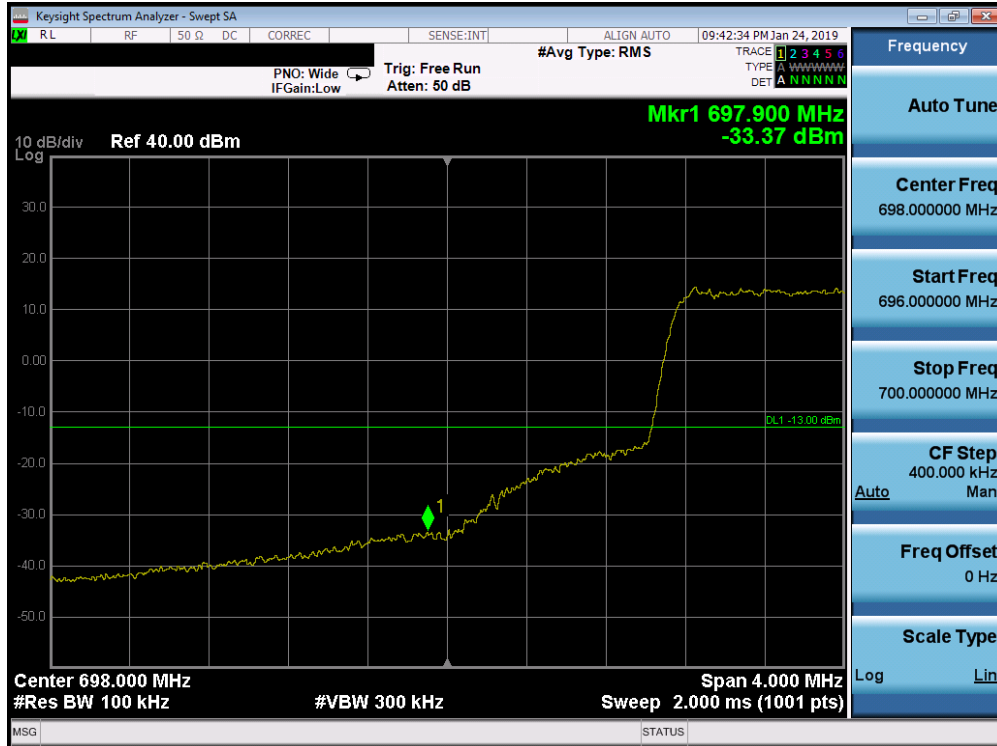
Plot 7-238. Lower Band Edge Plot (Band 71 - 20.0MHz QPSK - Full RB Configuration)



Plot 7-239. Upper Band Edge Plot (Band 71 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 146 of 348

Band 12

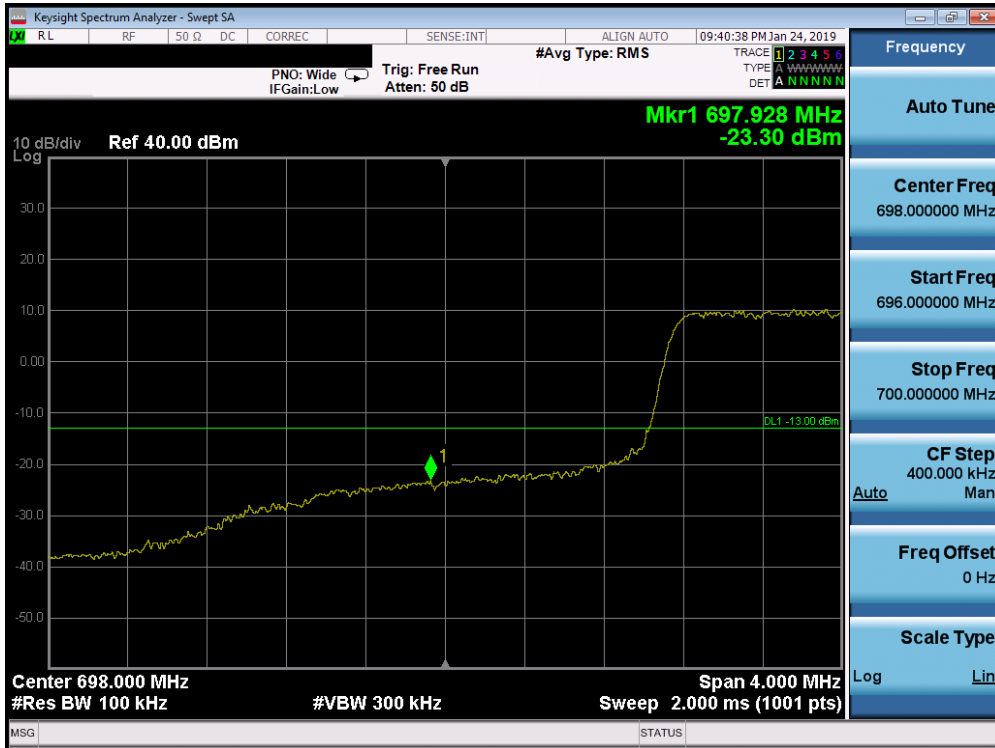


Plot 7-240. Lower Band Edge Plot (Band 12 - 1.4MHz QPSK - Full RB Configuration)



Plot 7-241. Upper Band Edge Plot (Band 12 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 147 of 348

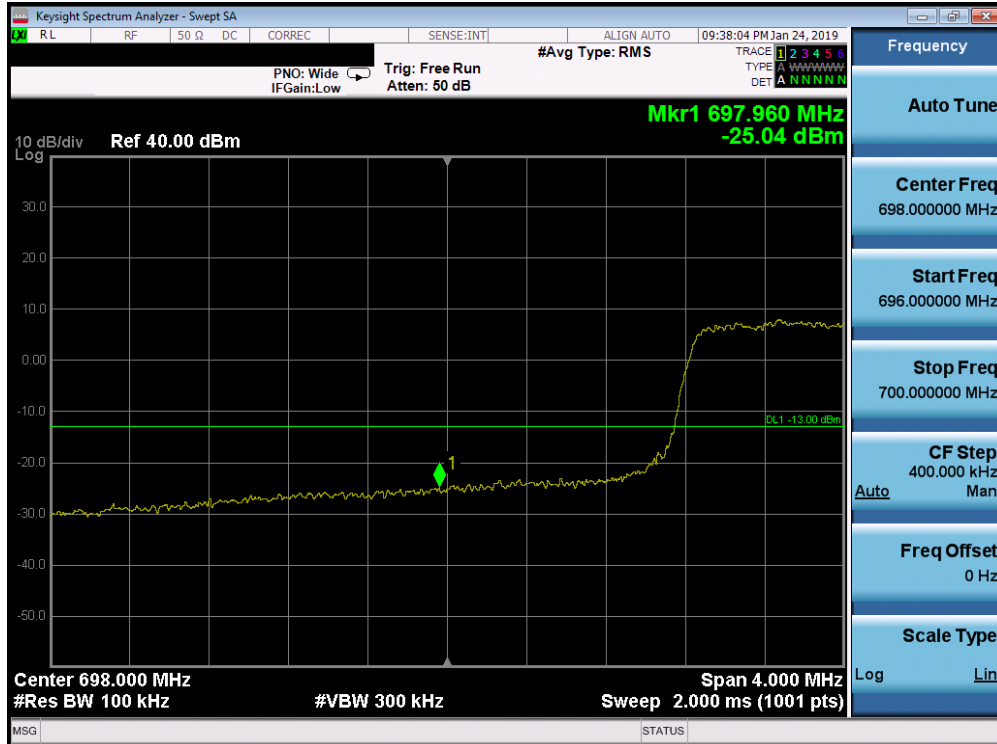


Plot 7-242. Lower Band Edge Plot (Band 12 - 3.0MHz QPSK - Full RB Configuration)



Plot 7-243. Upper Band Edge Plot (Band 12 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 148 of 348

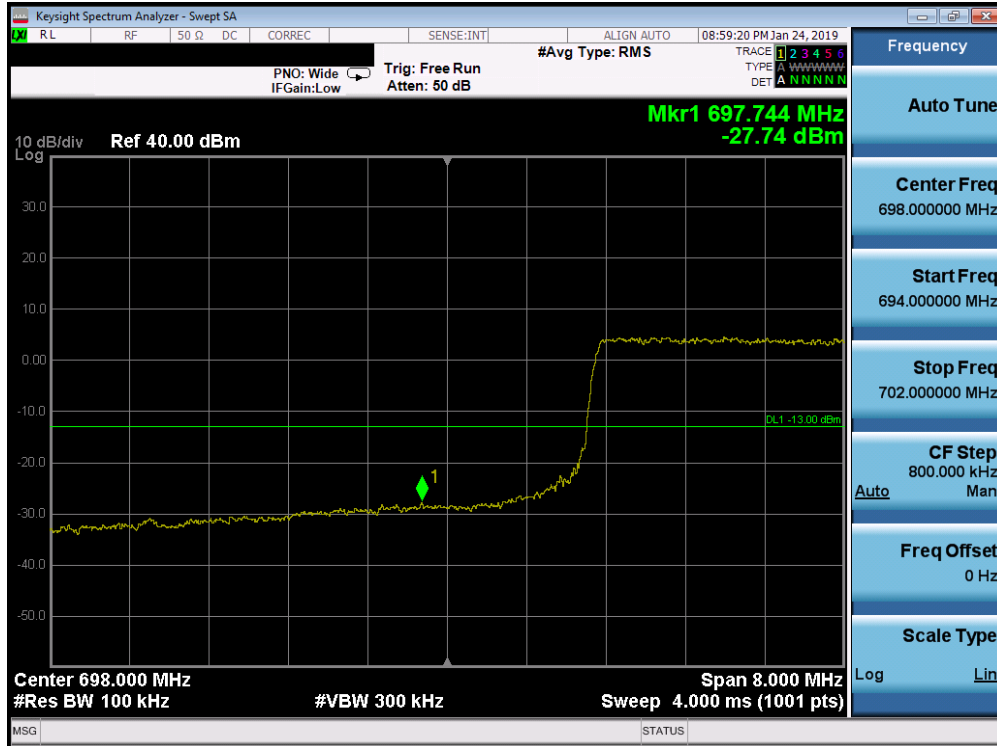


Plot 7-244. Lower Band Edge Plot (Band 12 - 5.0MHz QPSK - Full RB Configuration)

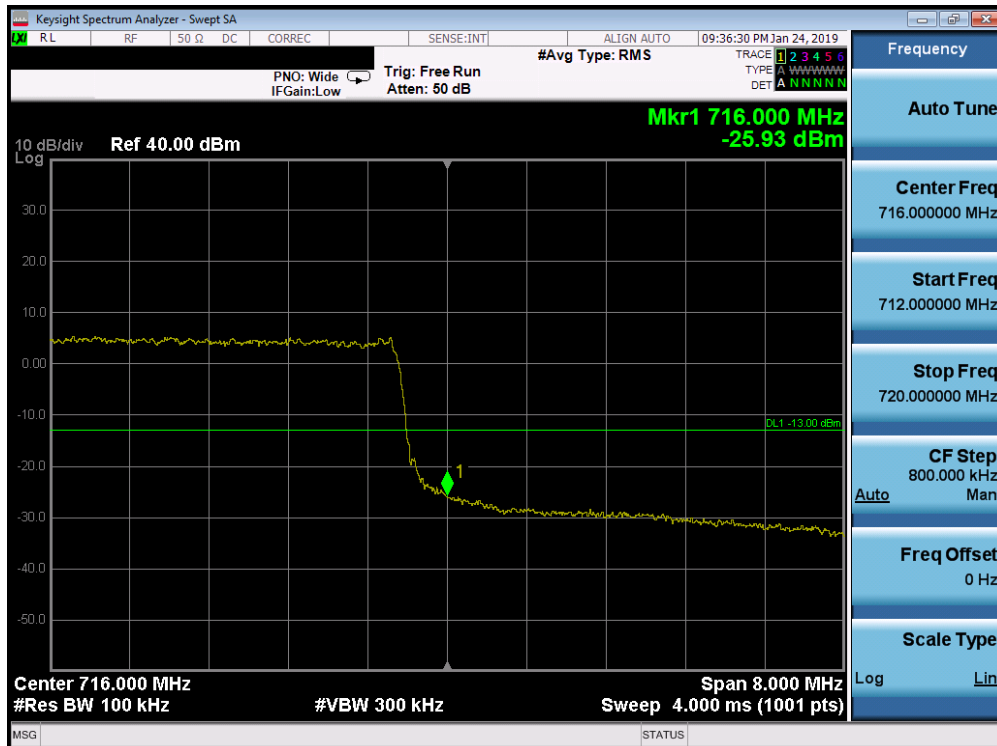


Plot 7-245. Upper Band Edge Plot (Band 12 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 149 of 348



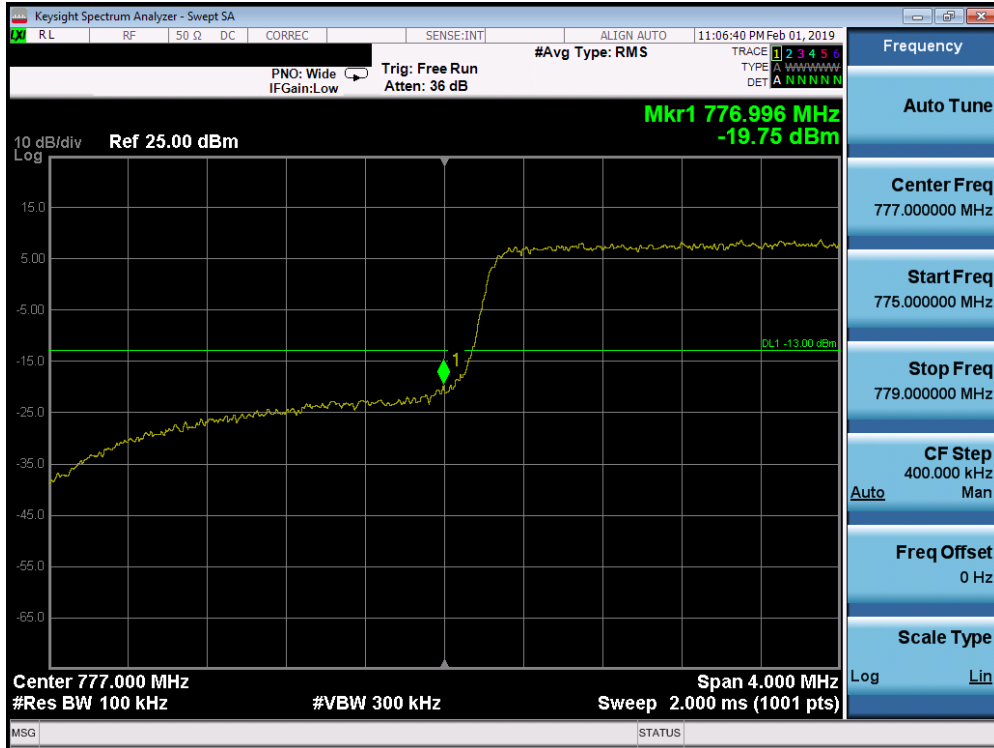
Plot 7-246. Lower Band Edge Plot (Band 12 - 10.0MHz QPSK - Full RB Configuration)



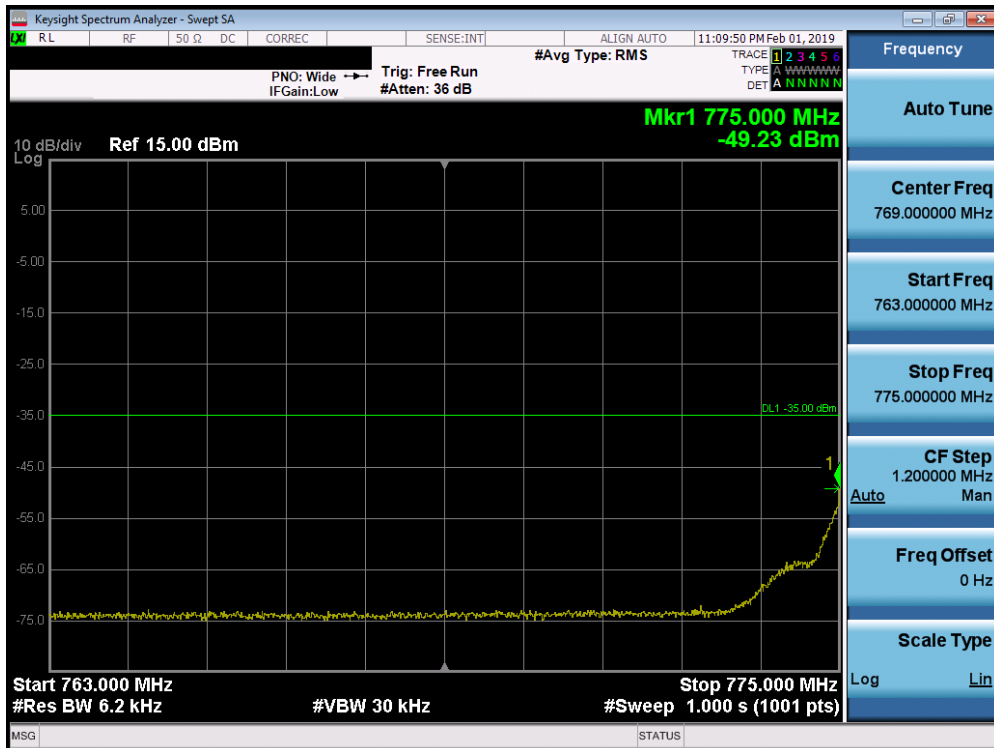
Plot 7-247. Upper Band Edge Plot (Band 12 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 150 of 348

Band 13

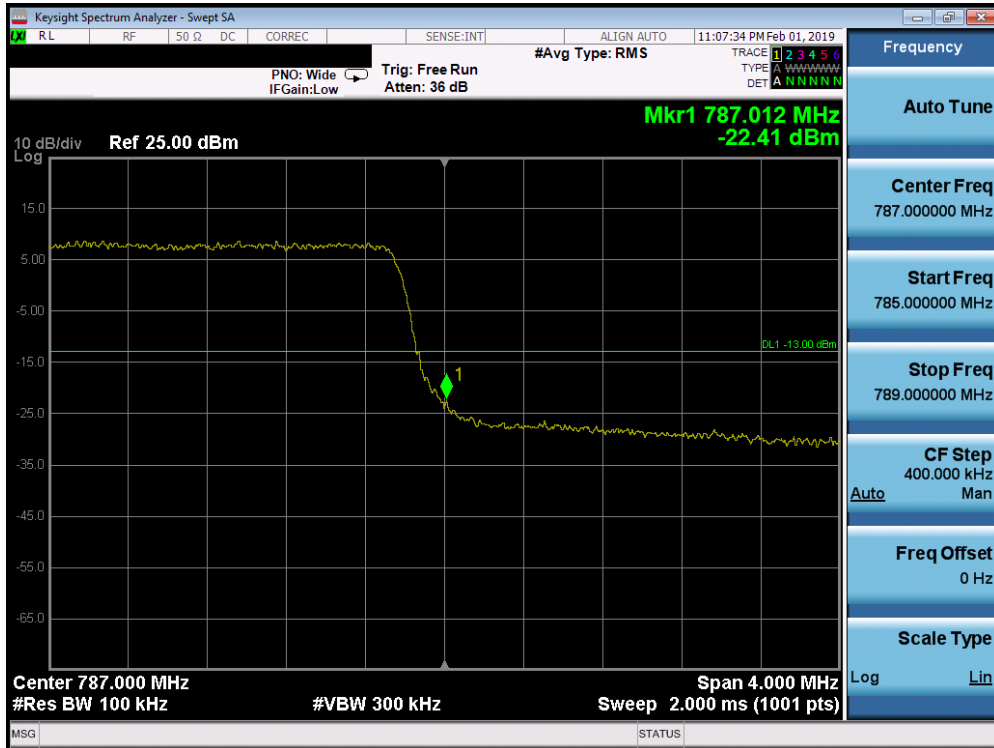


Plot 7-248. Lower Band Edge Plot (Band 13 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-249. Lower Emission Mask Plot (Band 13 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 151 of 348

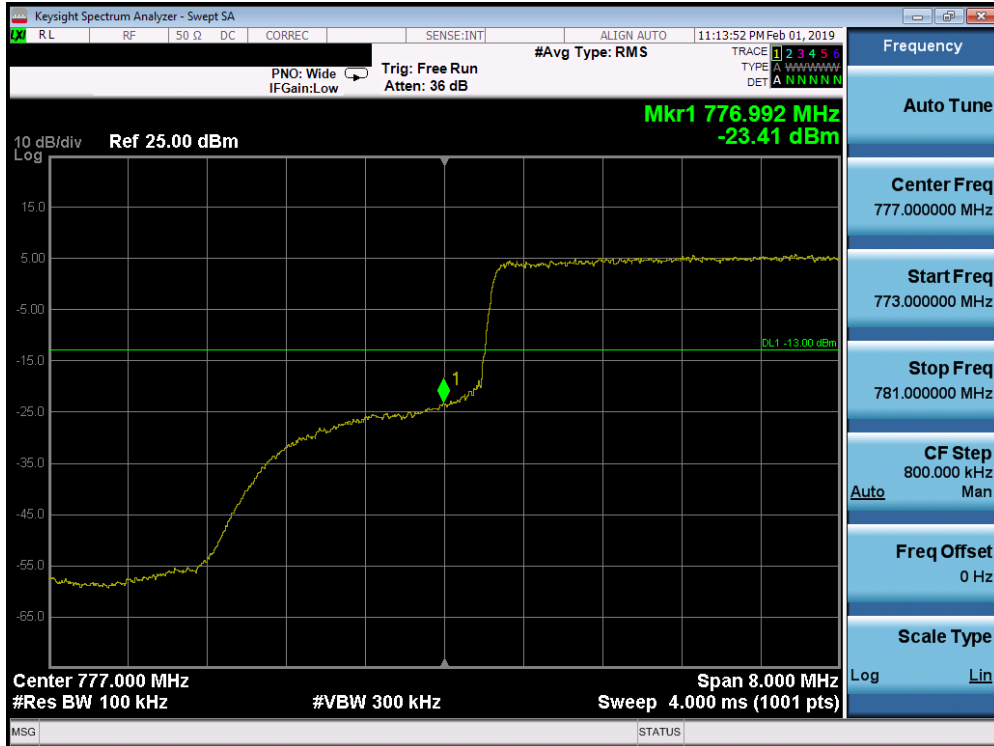


Plot 7-250. Upper Band Edge Plot (Band 13 - 5.0MHz QPSK - Full RB Configuration)

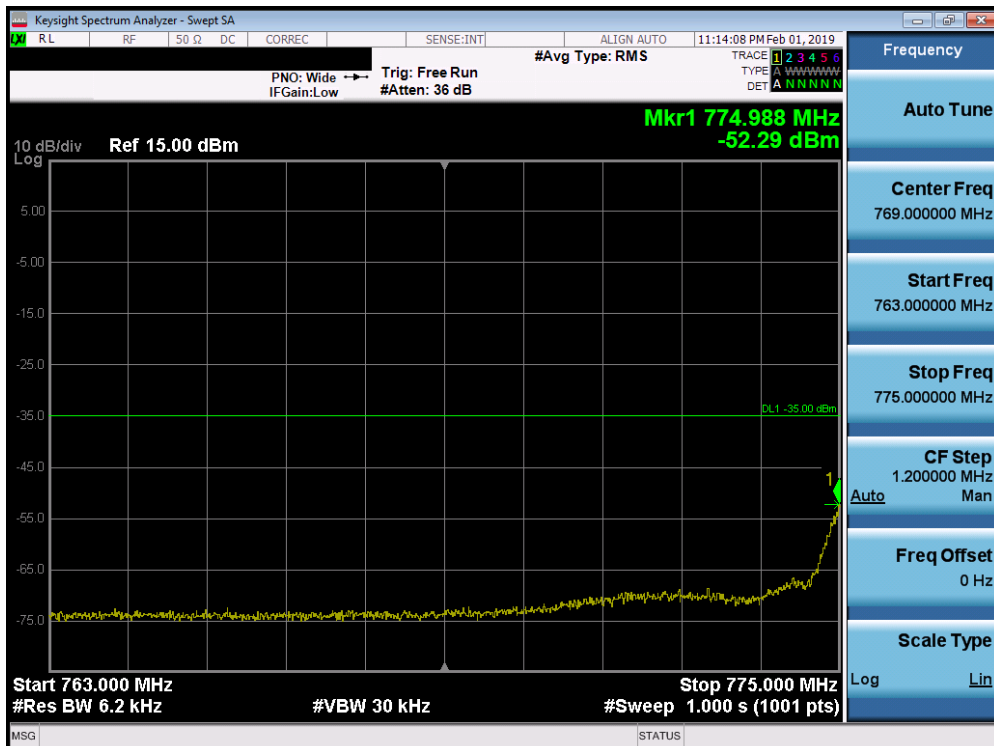


Plot 7-251. Upper Emission Mask Plot (Band 13 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 152 of 348



Plot 7-252. Lower Band Edge Plot (Band 13 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-253. Lower Emission Mask Plot (Band 13 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 153 of 348



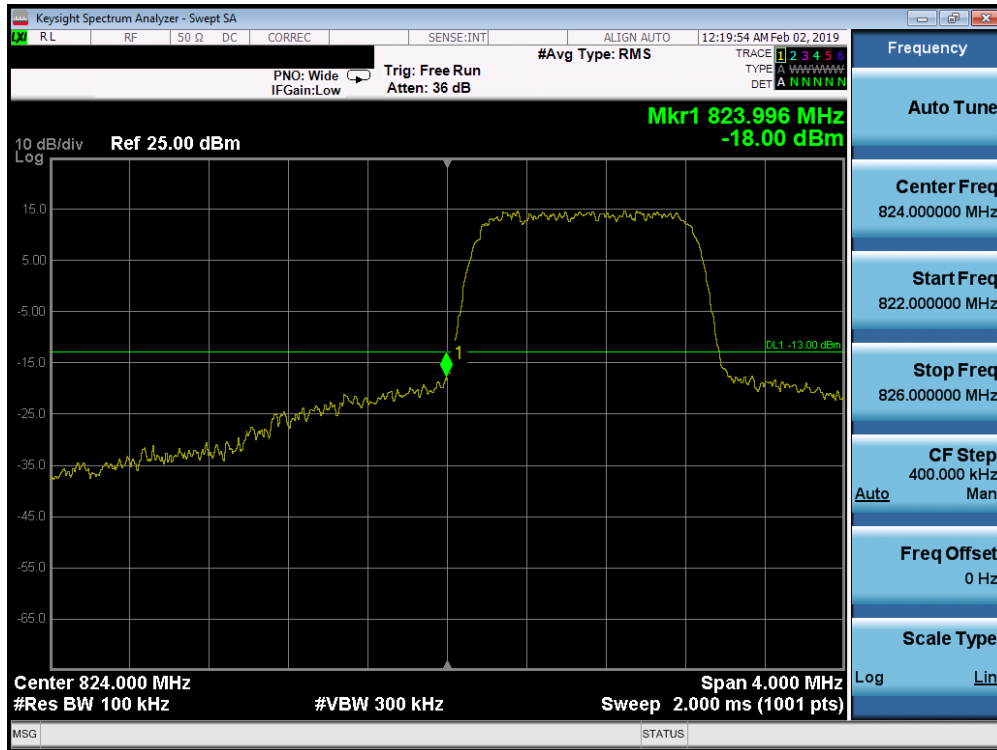
Plot 7-254. Upper Band Edge Plot (Band 13 - 10.0MHz QPSK - Full RB Configuration)



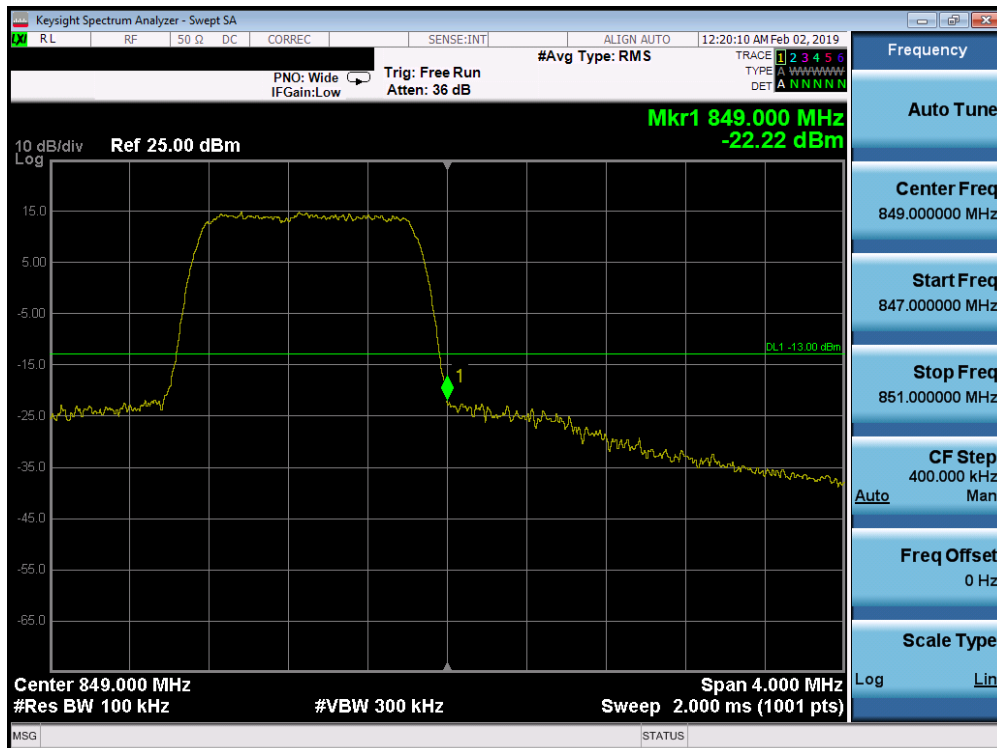
Plot 7-255. Upper Emission Mask Plot (Band 13 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 154 of 348

Band 26/5

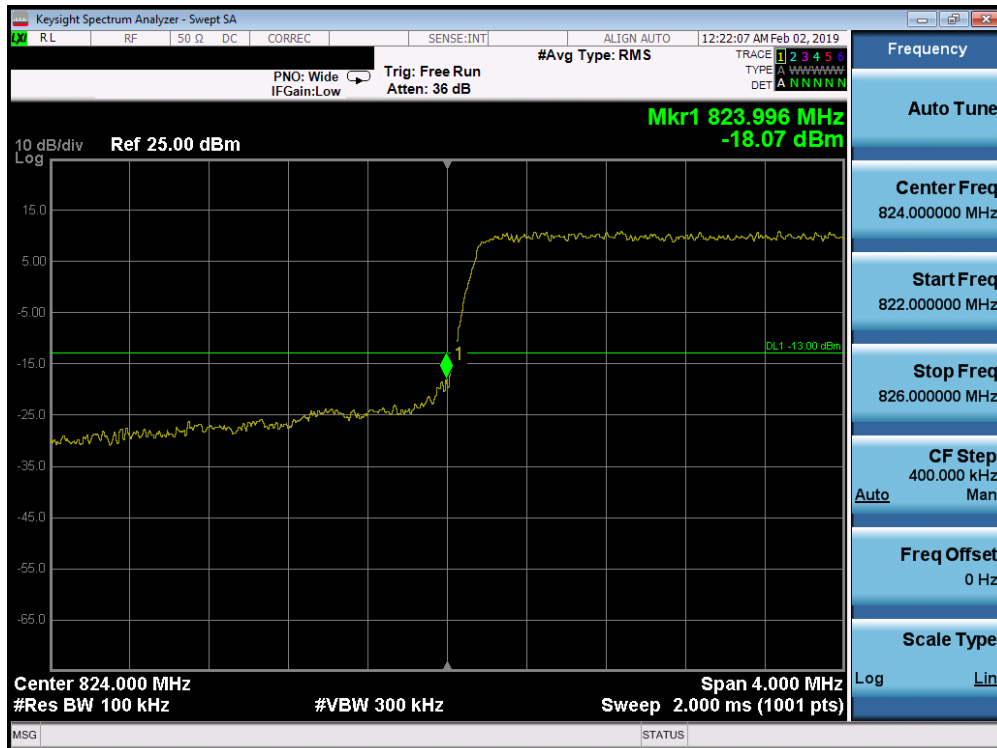


Plot 7-256. Lower Band Edge Plot (Band 26/5 - 1.4MHz QPSK - Full RB Configuration)

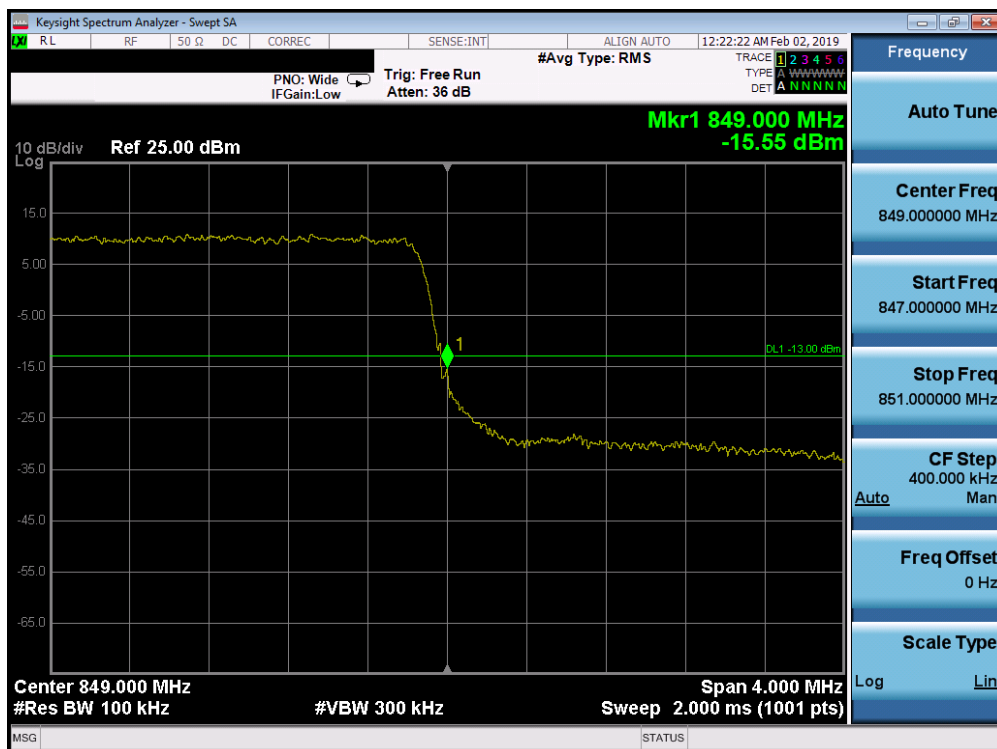


Plot 7-257. Upper Band Edge Plot (Band 26/5 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 155 of 348

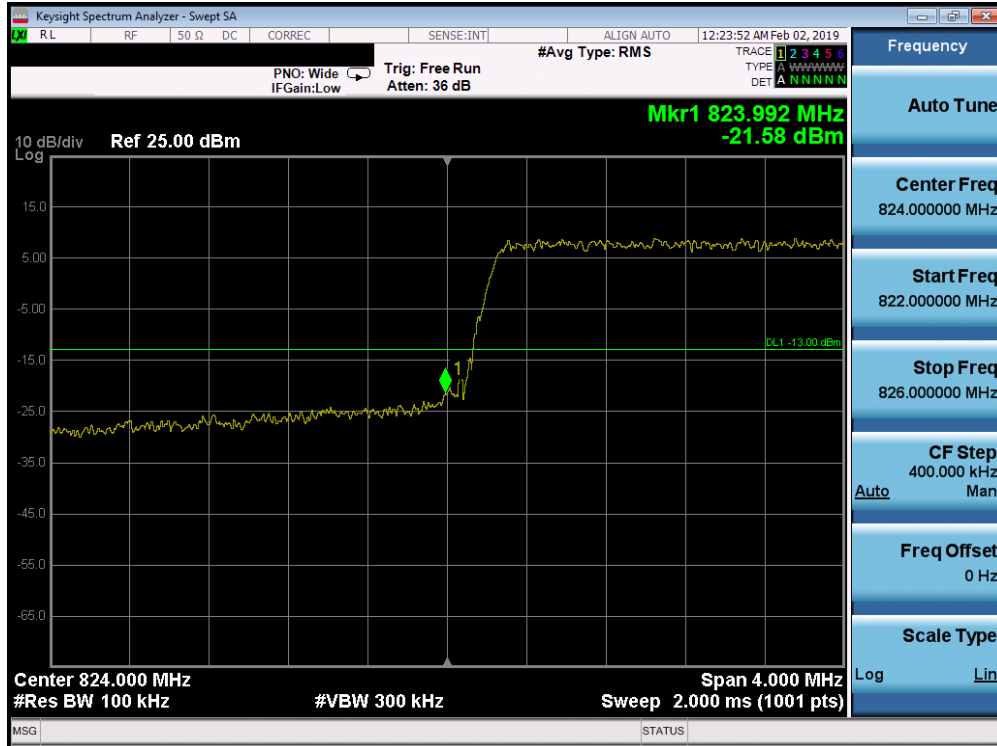


Plot 7-258. Lower Band Edge Plot (Band 26/5 - 3.0MHz QPSK - Full RB Configuration)

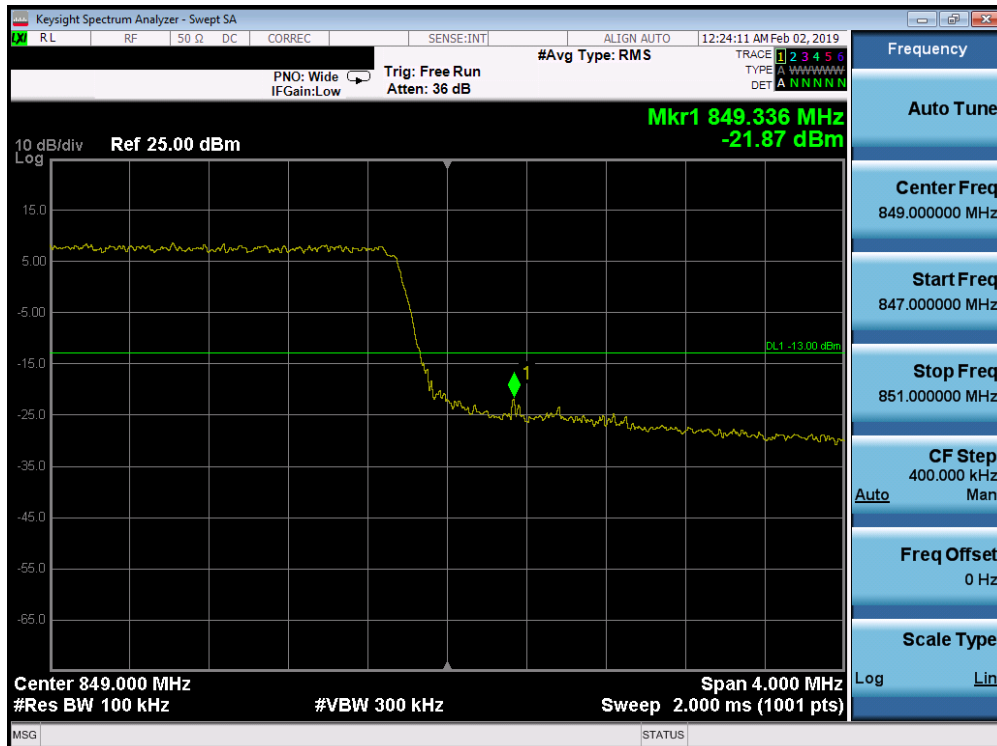


Plot 7-259. Upper Band Edge Plot (Band 26/5 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 156 of 348

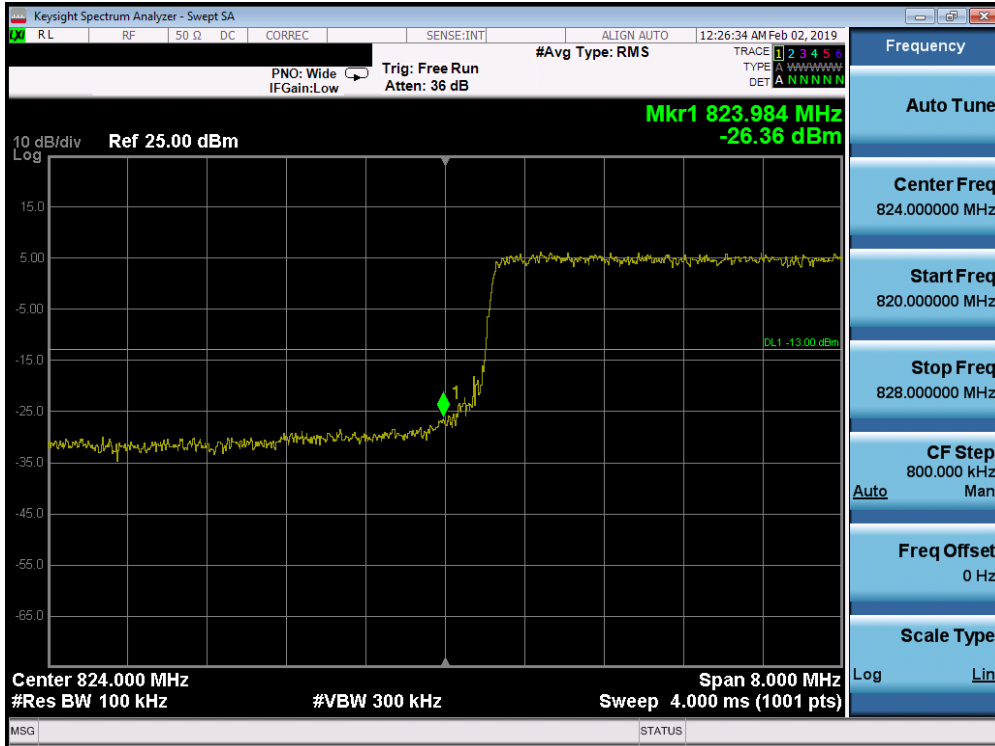


Plot 7-260. Lower Band Edge Plot (Band 26/5 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-261. Upper Band Edge Plot (Band 26/5 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 157 of 348

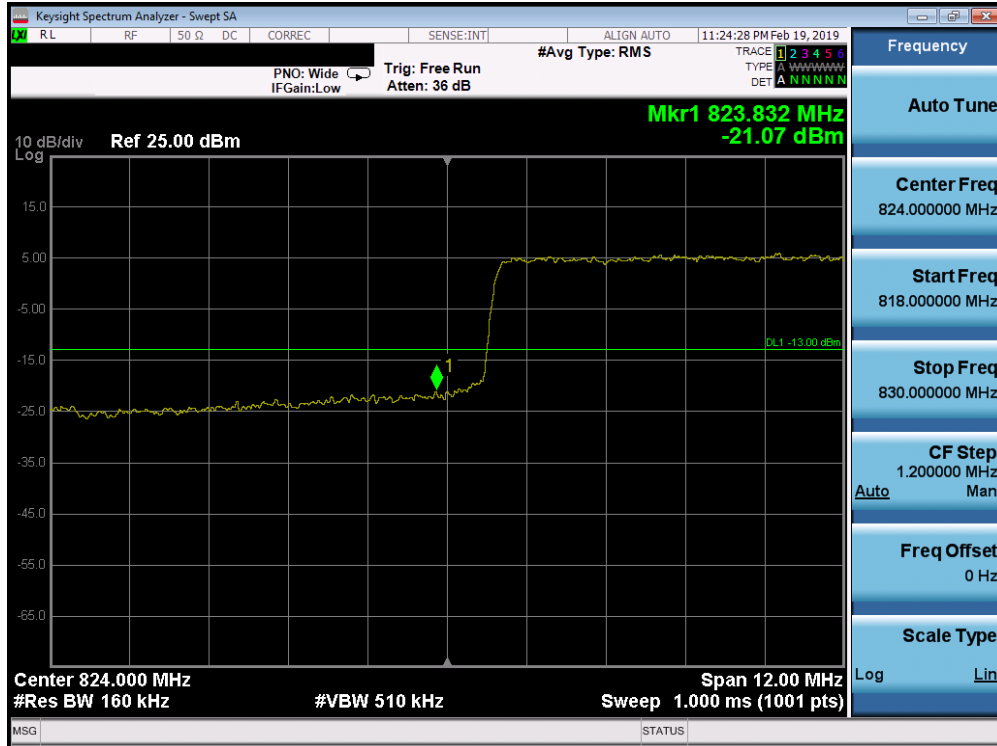


Plot 7-262. Lower Band Edge Plot (Band 26/5 - 10.0MHz QPSK - Full RB Configuration)

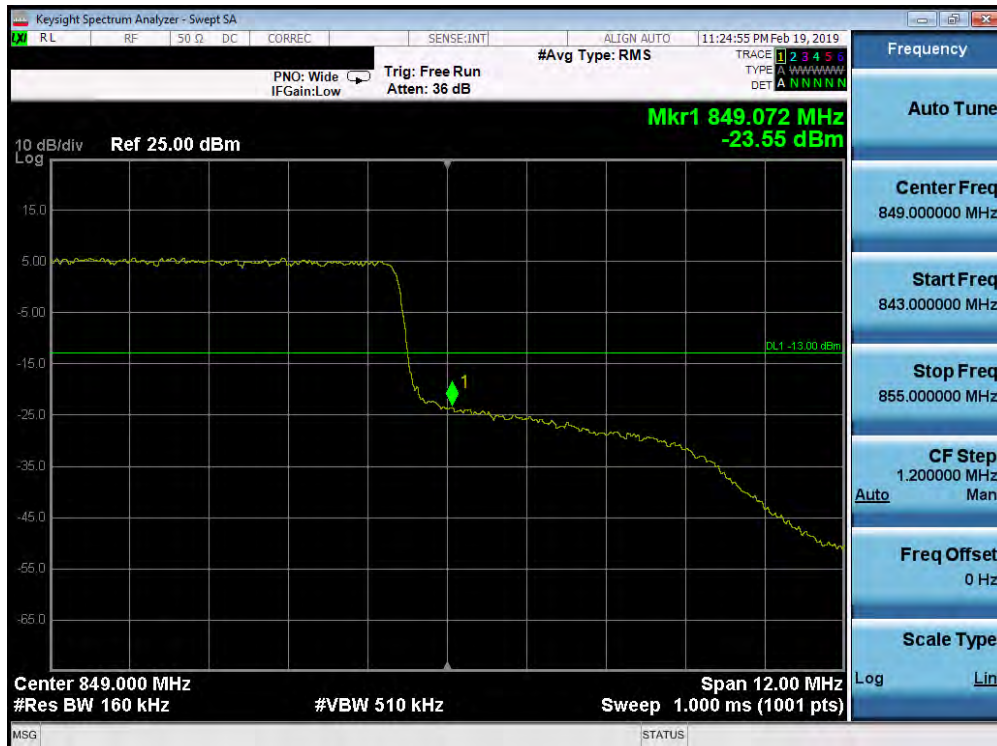


Plot 7-263. Upper Band Edge Plot (Band 26/5 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 158 of 348



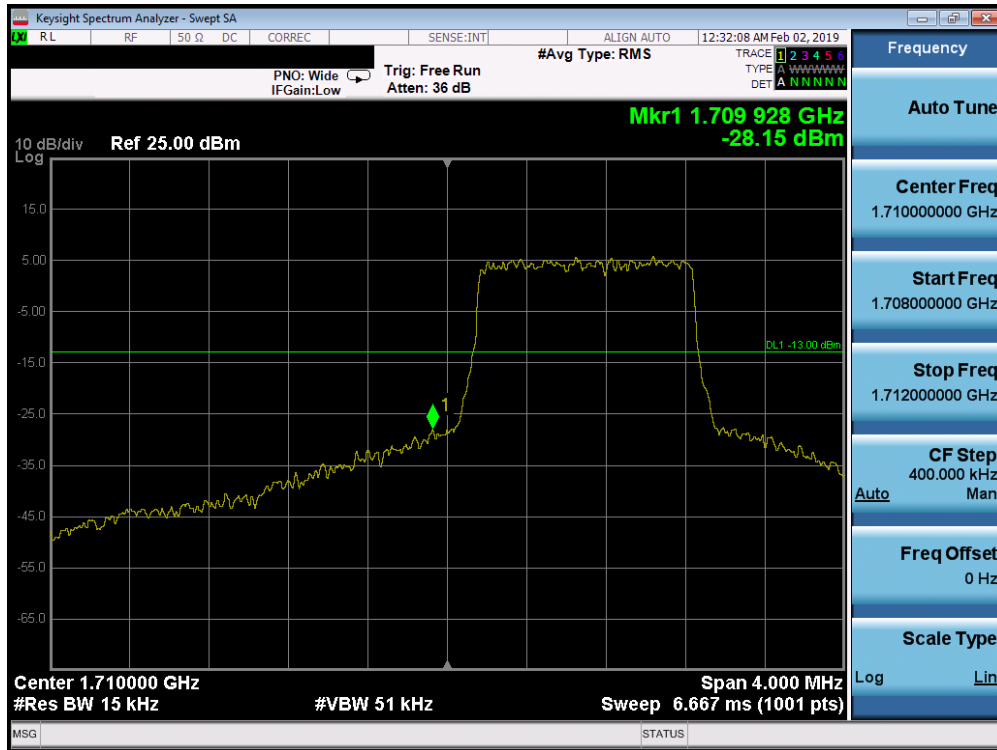
Plot 7-264. Lower Band Edge Plot (Band 26 - 15.0MHz QPSK - Full RB Configuration)



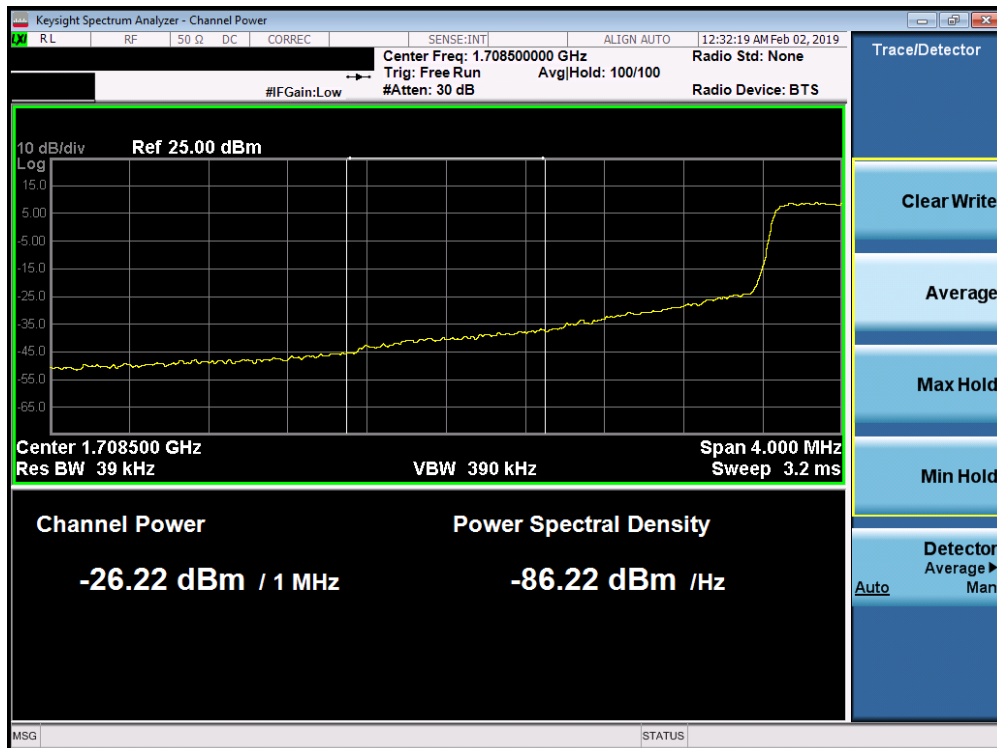
Plot 7-265. Upper Band Edge Plot (Band 26 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 159 of 348

Band 66/4

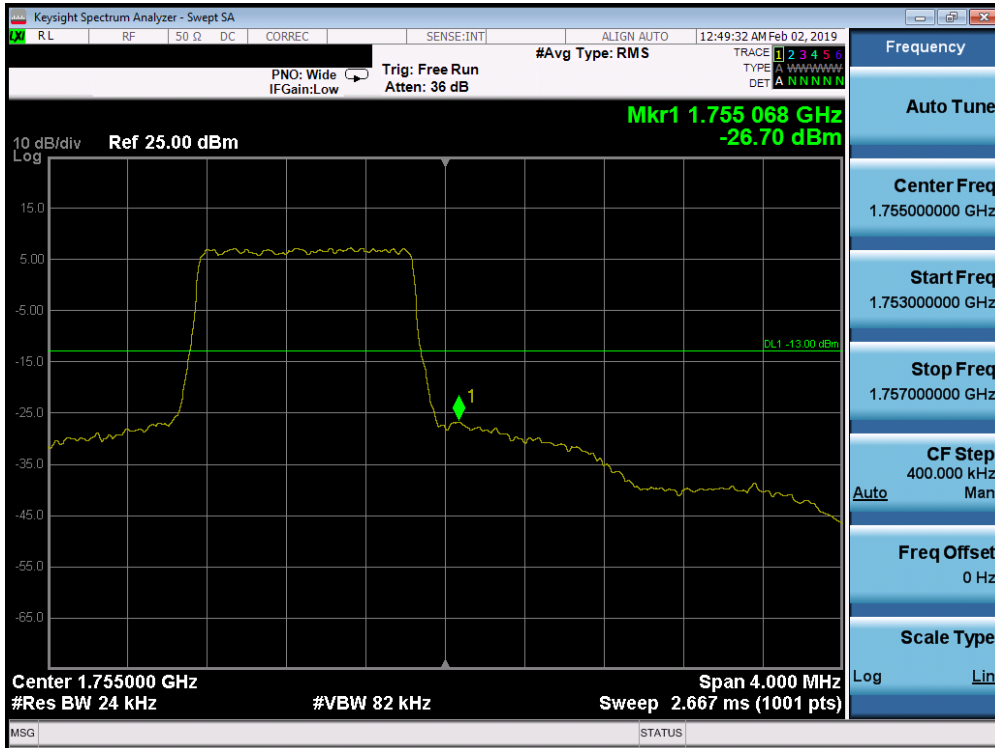


Plot 7-266. Lower Band Edge Plot (Band 66/4 - 1.4MHz QPSK - Full RB Configuration)



Plot 7-267. Lower Extended Band Edge Plot (Band 66/4 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 160 of 348



Plot 7-268. Upper Band Edge Plot (Band 4 - 1.4MHz QPSK - Full RB Configuration)

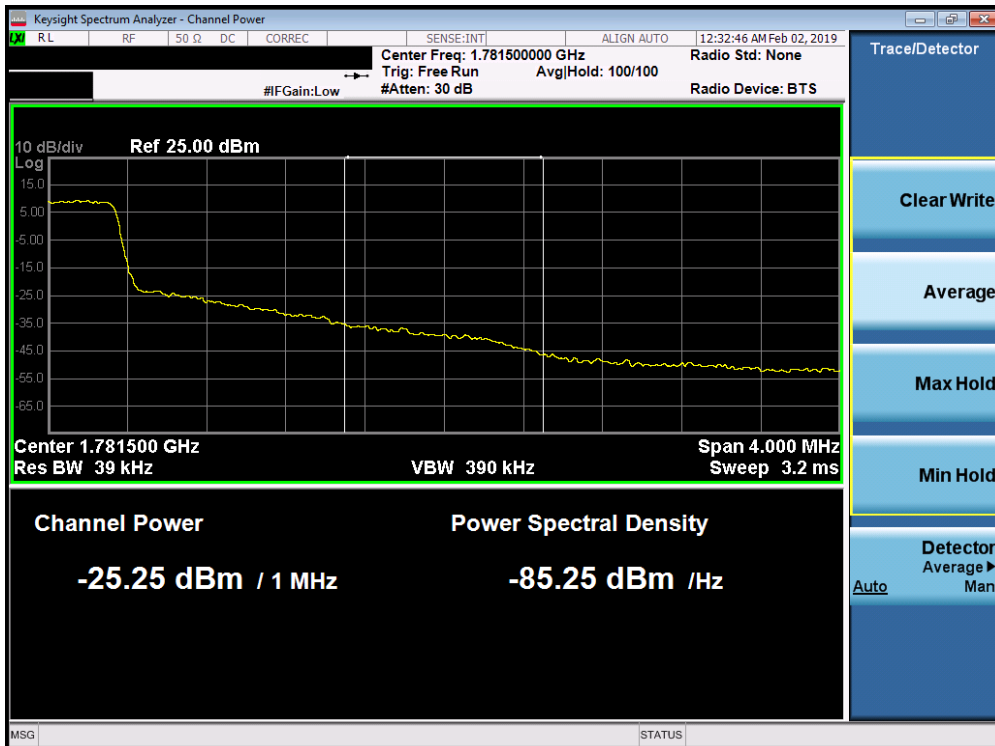


Plot 7-269. Upper Extended Band Edge Plot (Band 4 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 161 of 348

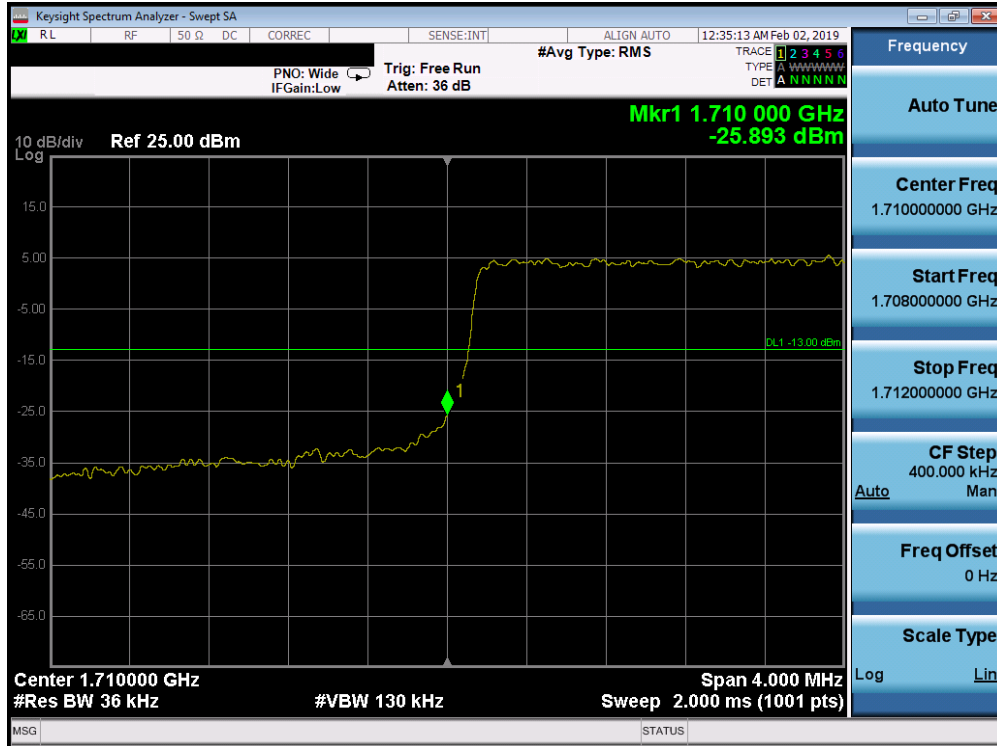


Plot 7-270. Upper Band Edge Plot (Band 66 - 1.4MHz QPSK - Full RB Configuration)

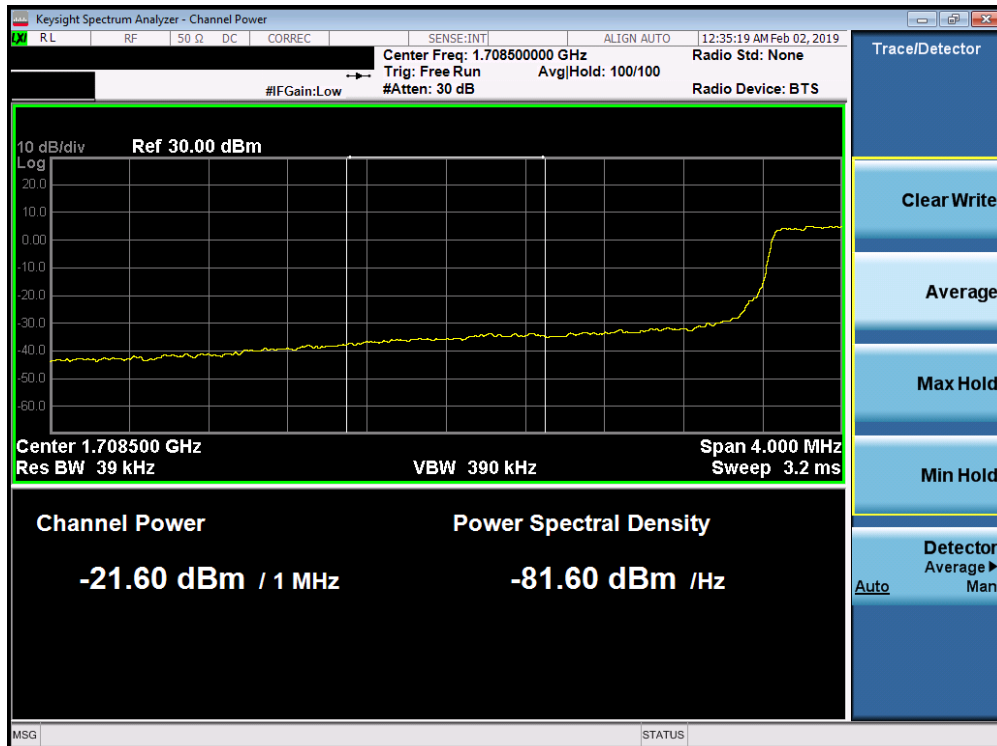


Plot 7-271. Upper Extended Band Edge Plot (Band 66 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 162 of 348



Plot 7-272. Lower Band Edge Plot (Band 66/4 - 3.0MHz QPSK - Full RB Configuration)

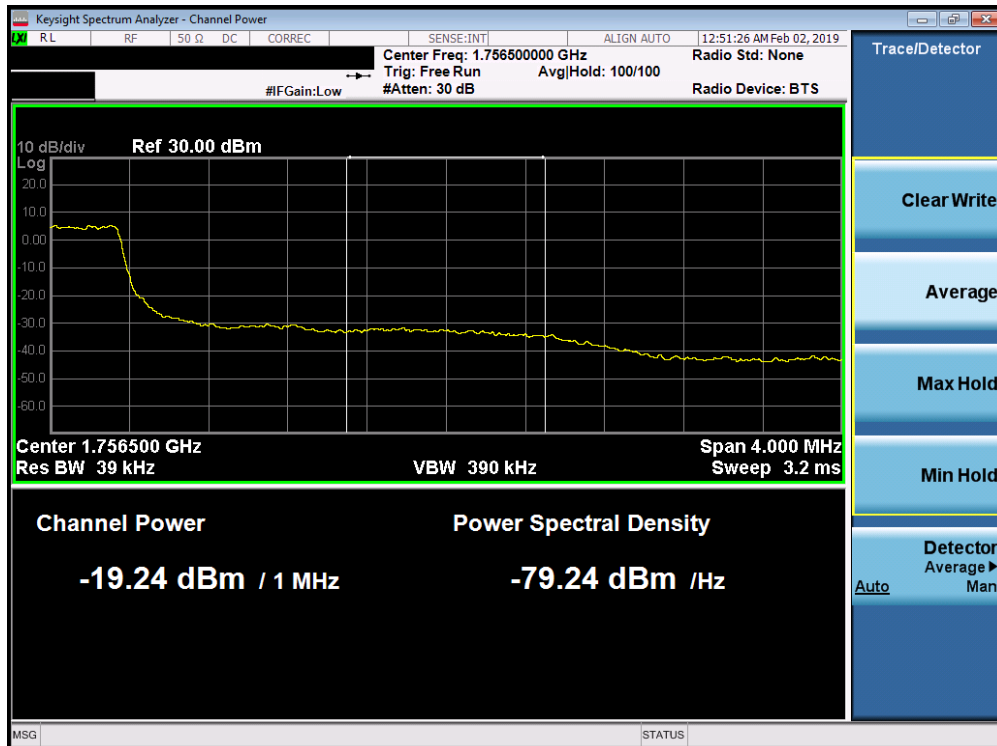


Plot 7-273. Lower Extended Band Edge Plot (Band 66/4 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 163 of 348

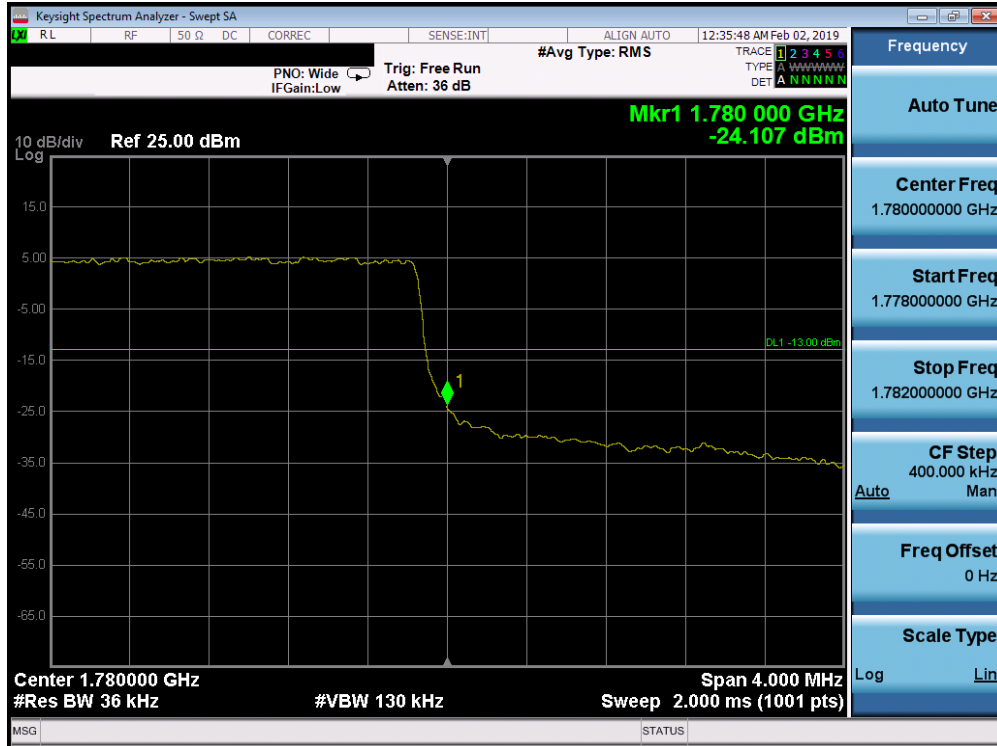


Plot 7-274. Upper Band Edge Plot (Band 4 - 3.0MHz QPSK - Full RB Configuration)

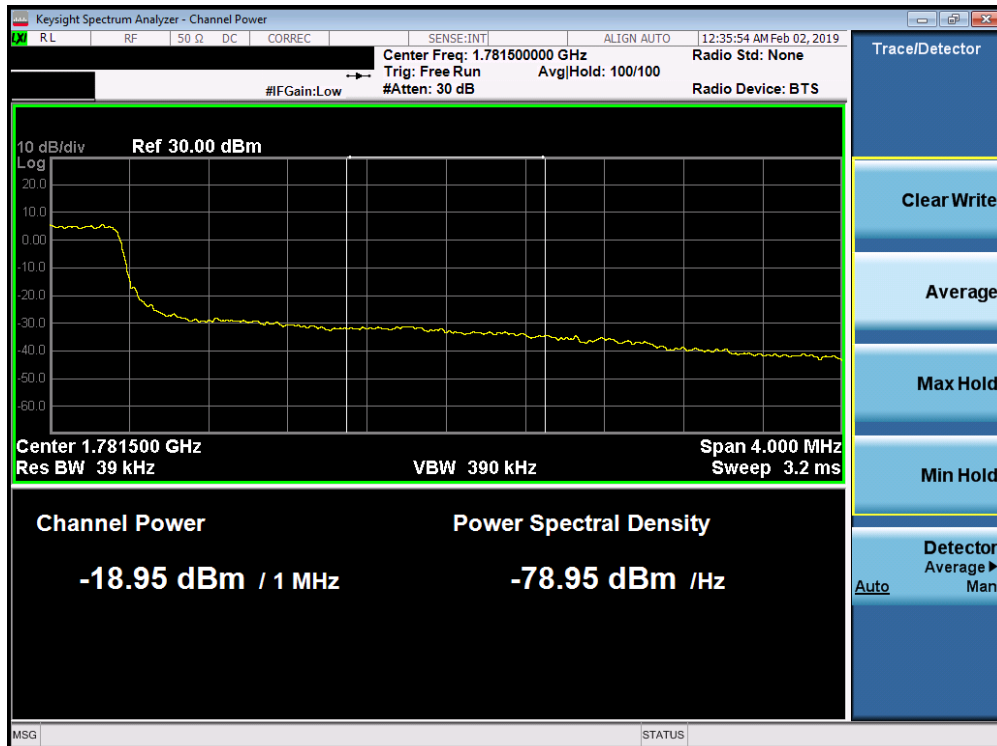


Plot 7-275. Upper Extended Band Edge Plot (Band 4 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 164 of 348

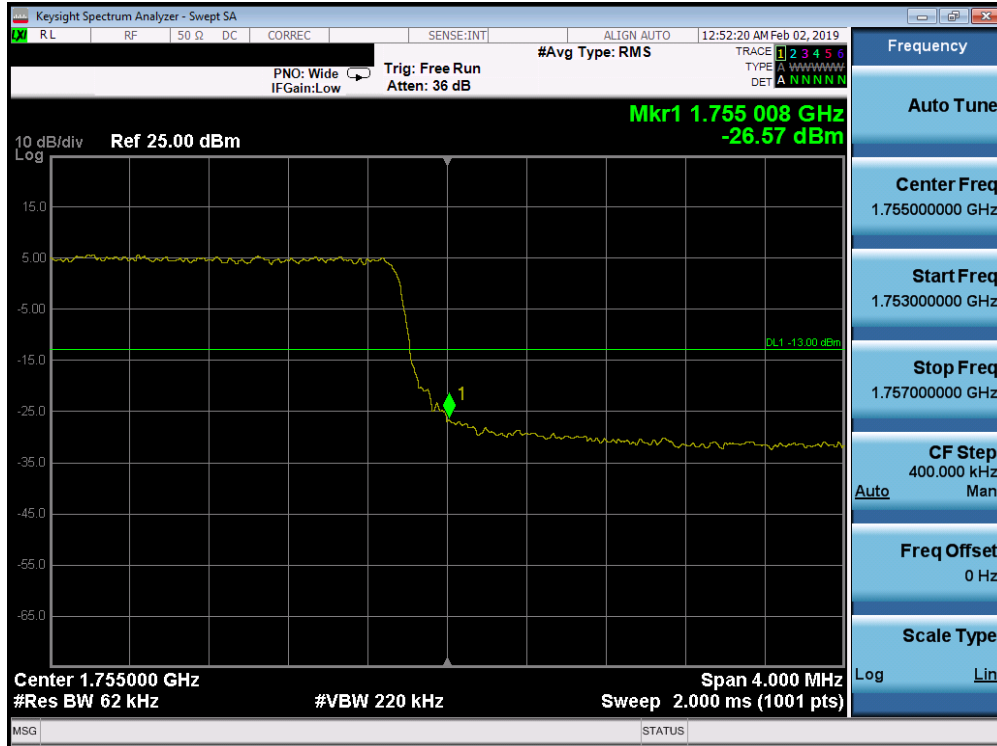


Plot 7-276. Upper Band Edge Plot (Band 66 - 3.0MHz QPSK - Full RB Configuration)

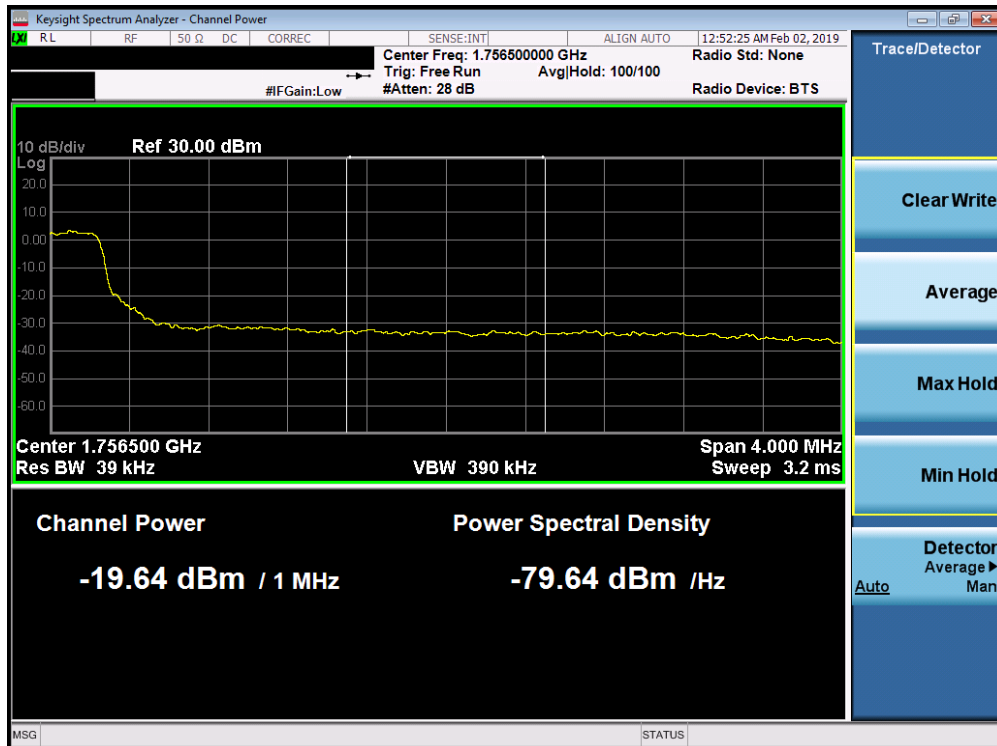


Plot 7-277. Upper Extended Band Edge Plot (Band 66 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 165 of 348

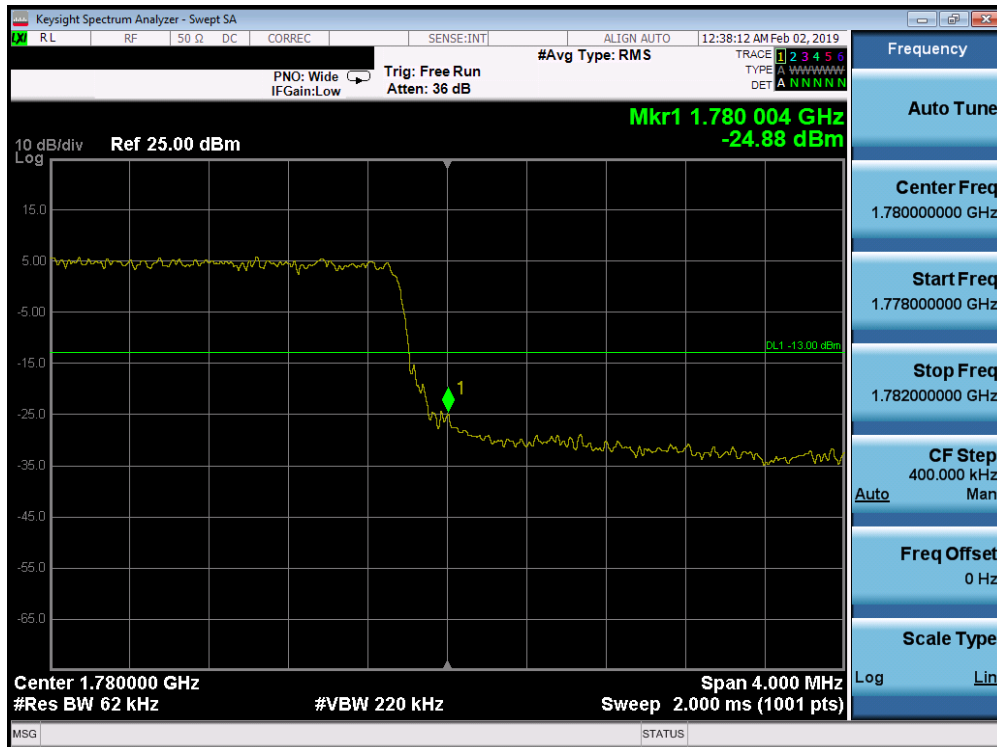


Plot 7-280. Upper Band Edge Plot (Band 4 - 5.0MHz QPSK - Full RB Configuration)

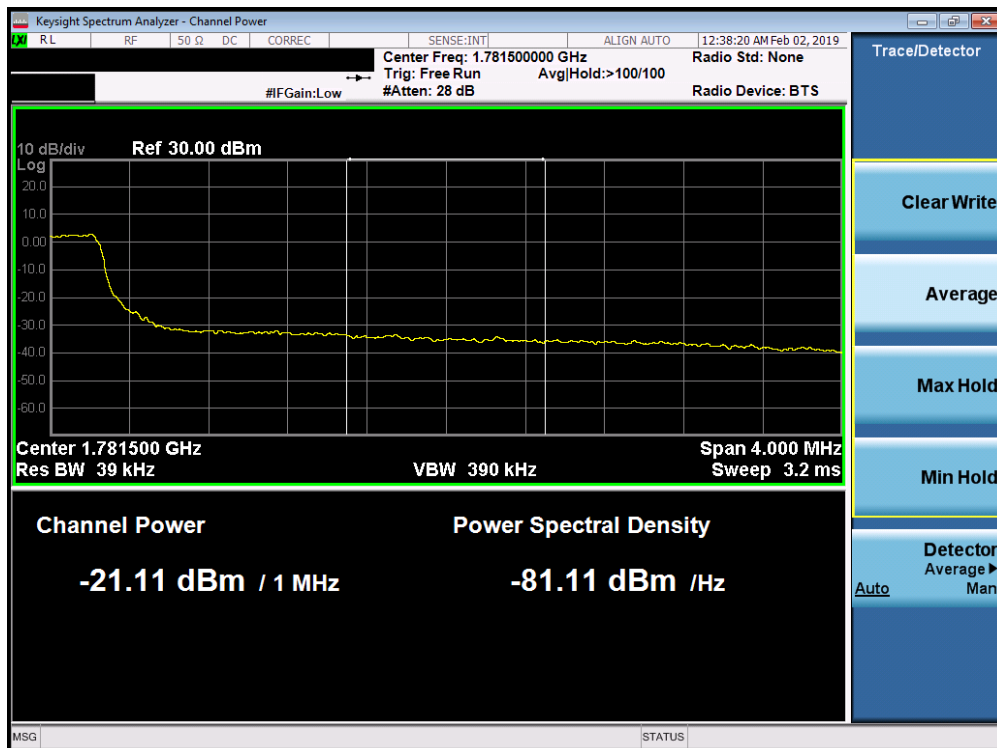


Plot 7-281. Upper Extended Band Edge Plot (Band 4 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 167 of 348

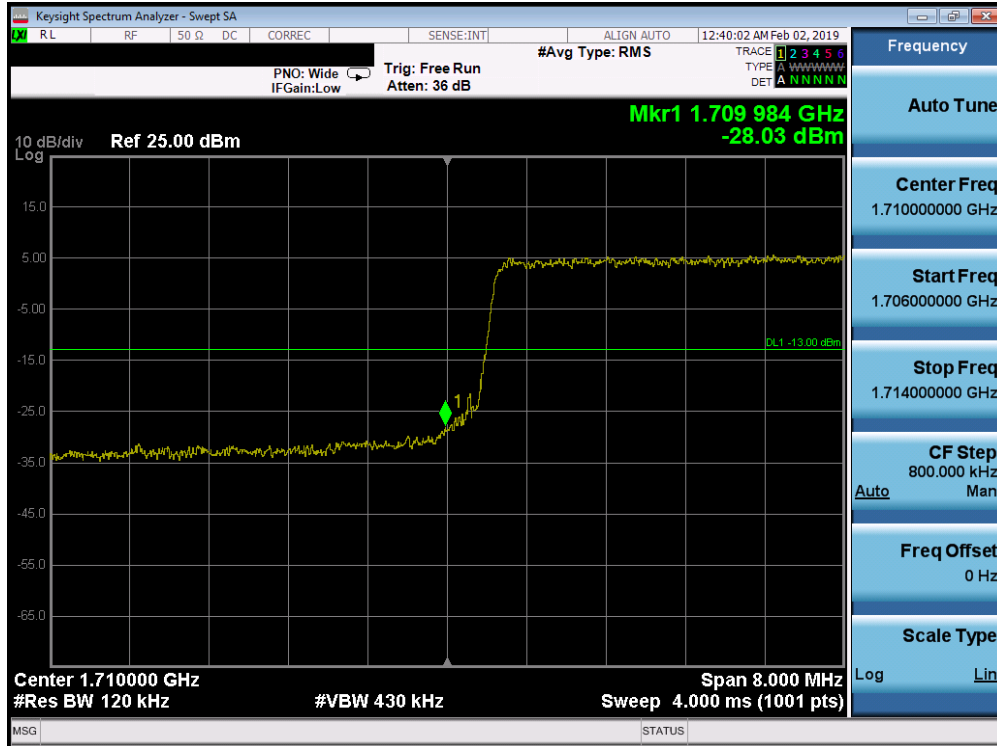


Plot 7-282. Upper Band Edge Plot (Band 66 - 5.0MHz QPSK - Full RB Configuration)

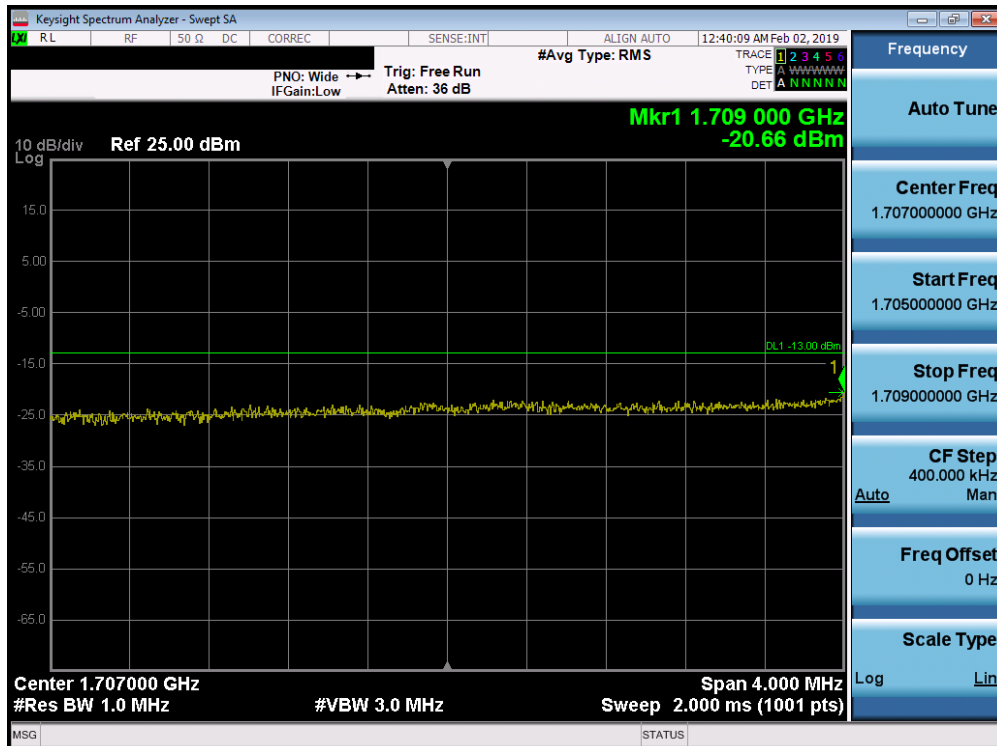


Plot 7-283. Upper Extended Band Edge Plot (Band 66 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 168 of 348

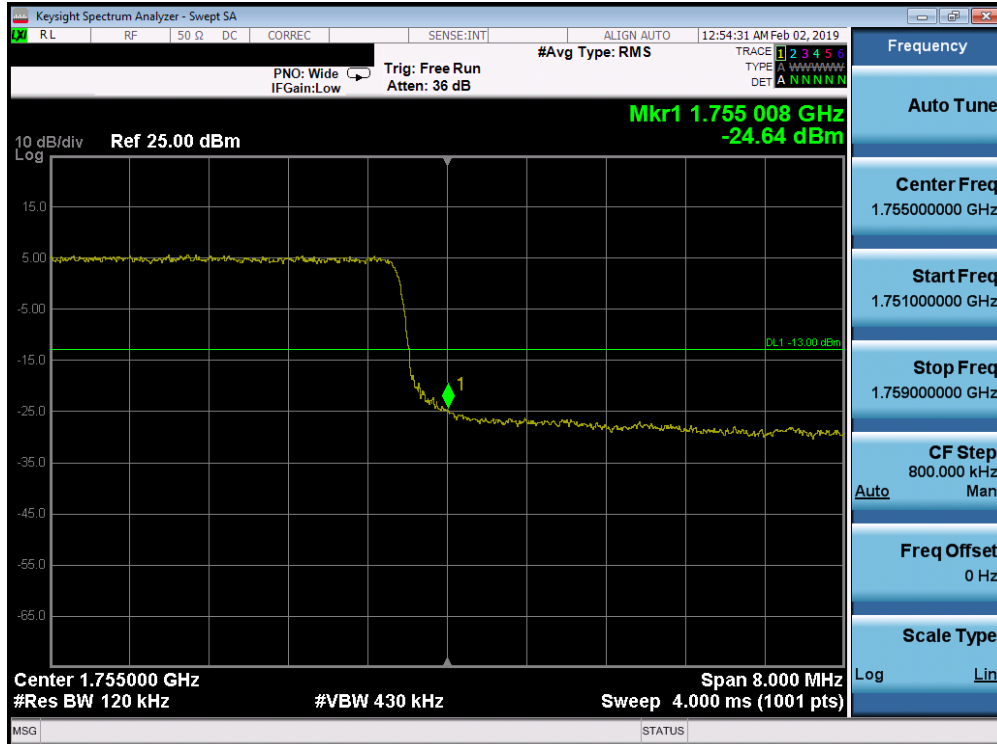


Plot 7-284. Lower Band Edge Plot (Band 66/4 - 10.0MHz QPSK - Full RB Configuration)

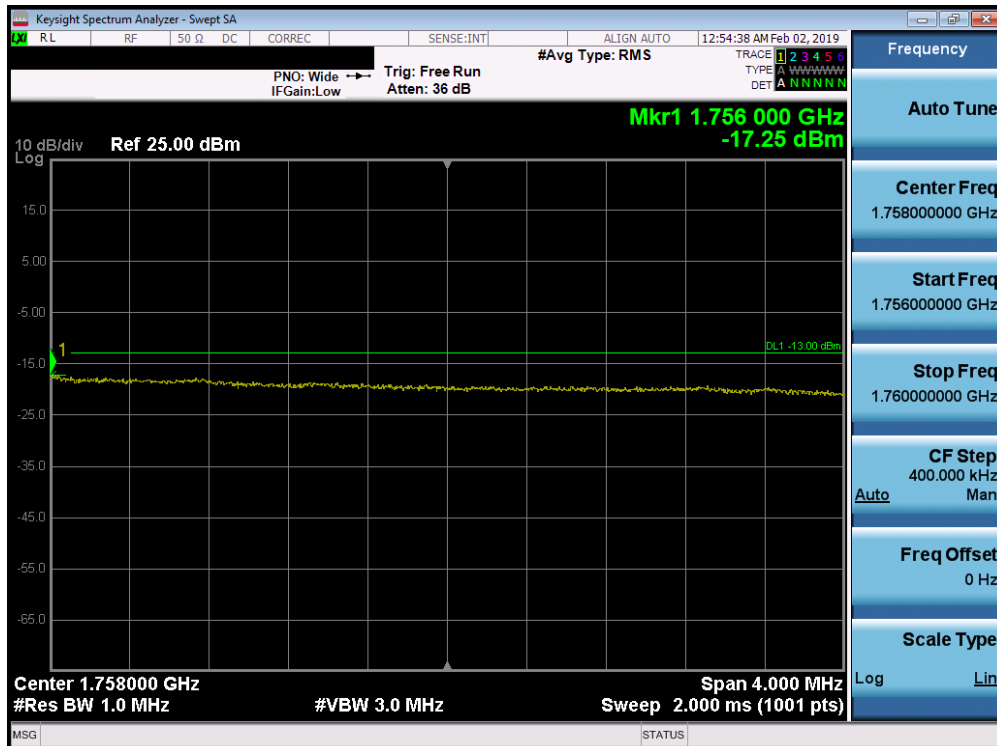


Plot 7-285. Lower Extended Band Edge Plot (Band 66/4 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 169 of 348

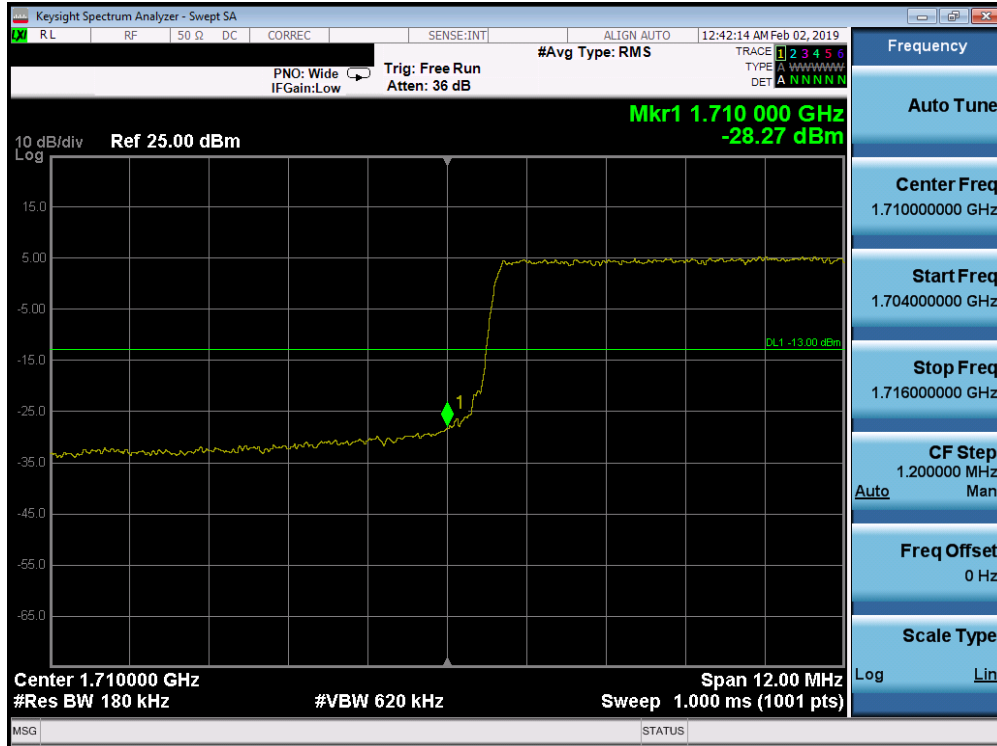


Plot 7-286. Upper Band Edge Plot (Band 4 - 10.0MHz QPSK - Full RB Configuration)

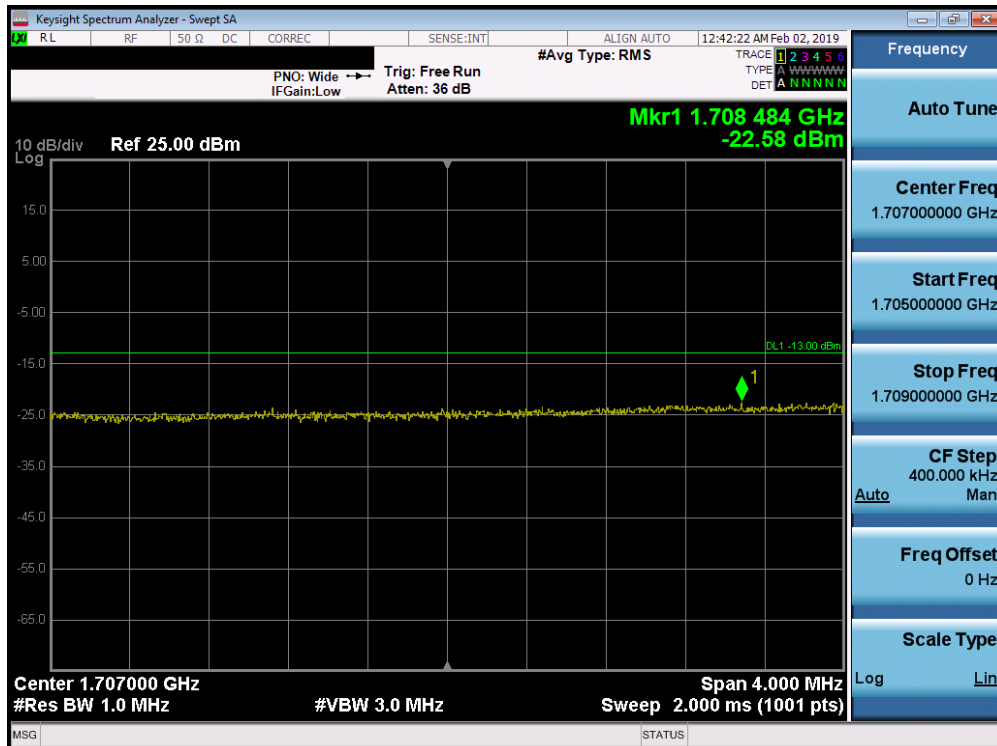


Plot 7-287. Upper Extended Band Edge Plot (Band 4 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 170 of 348

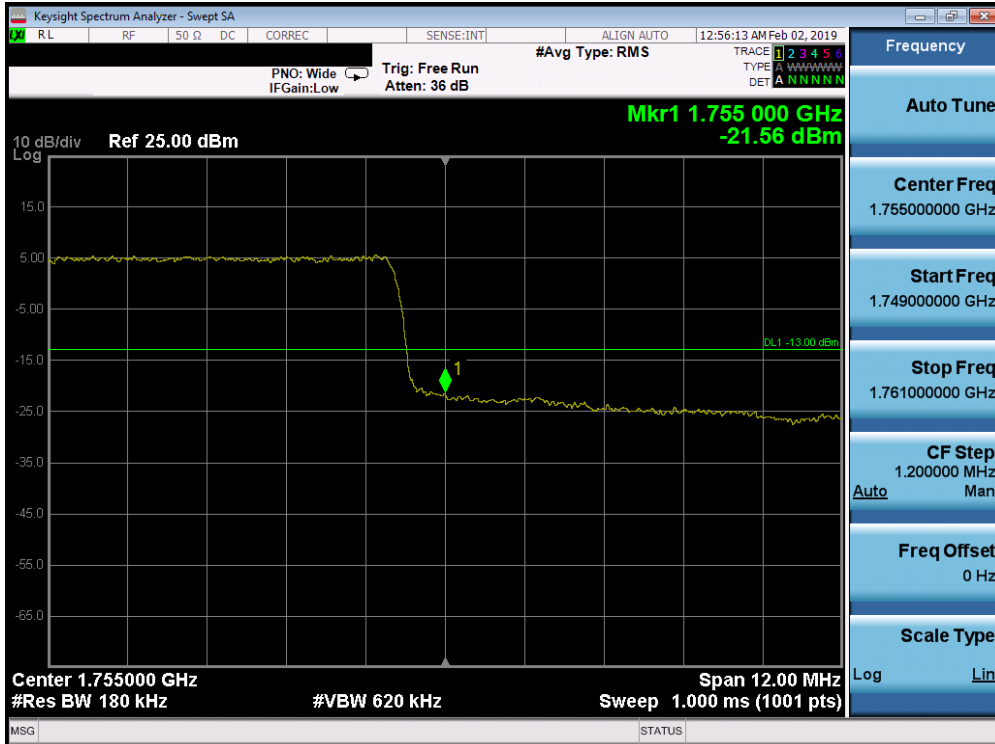


Plot 7-290. Lower Band Edge Plot (Band 66/4 - 15.0MHz QPSK - Full RB Configuration)

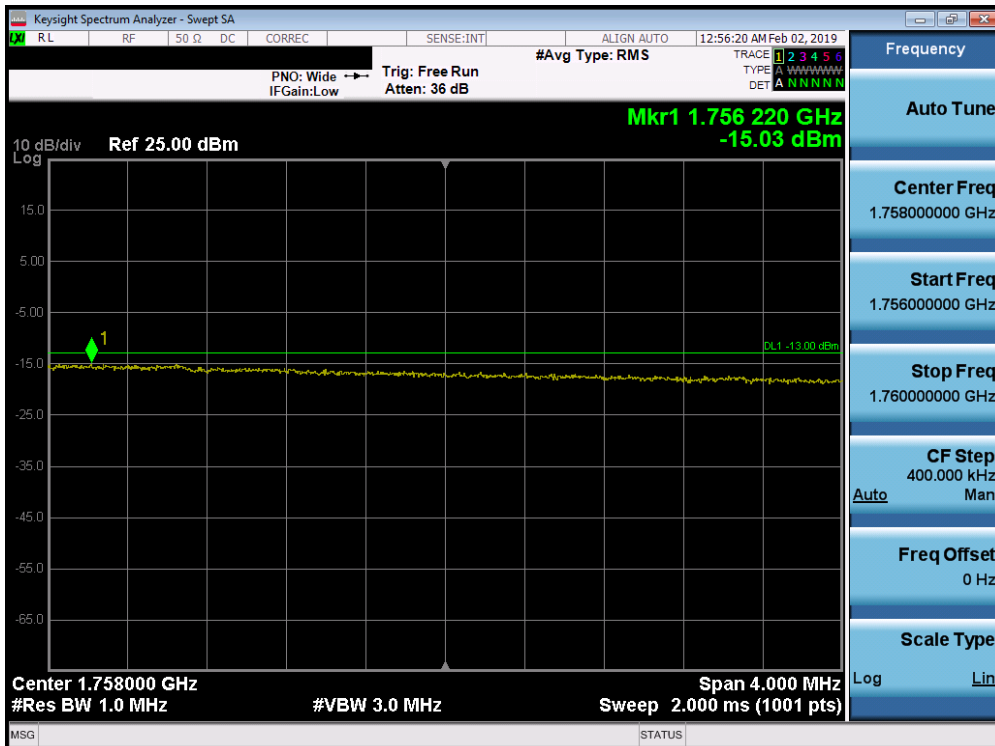


Plot 7-291. Lower Extended Band Edge Plot (Band 66/4 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 172 of 348

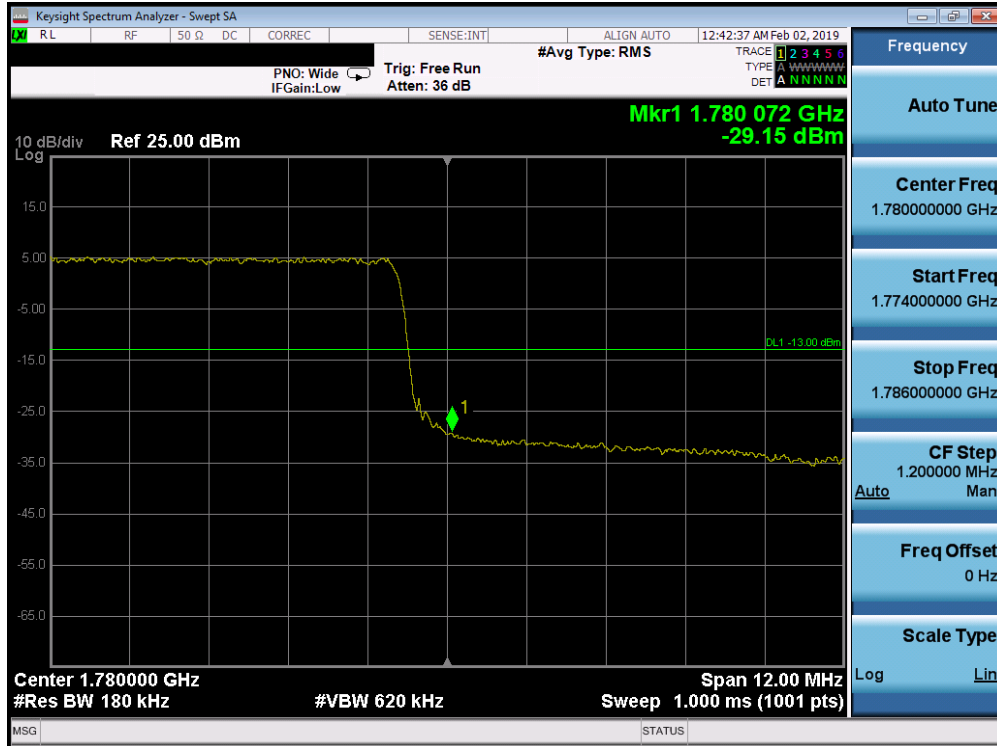


Plot 7-292. Upper Band Edge Plot (Band 4 - 15.0MHz QPSK - Full RB Configuration)

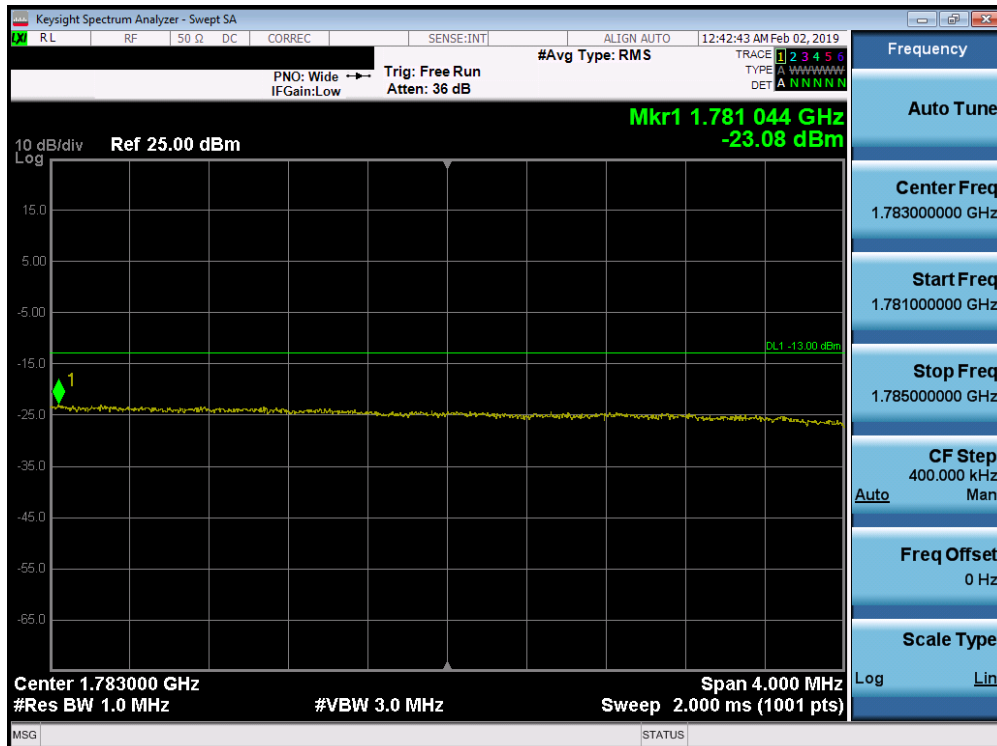


Plot 7-293. Upper Extended Band Edge Plot (Band 4 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 173 of 348

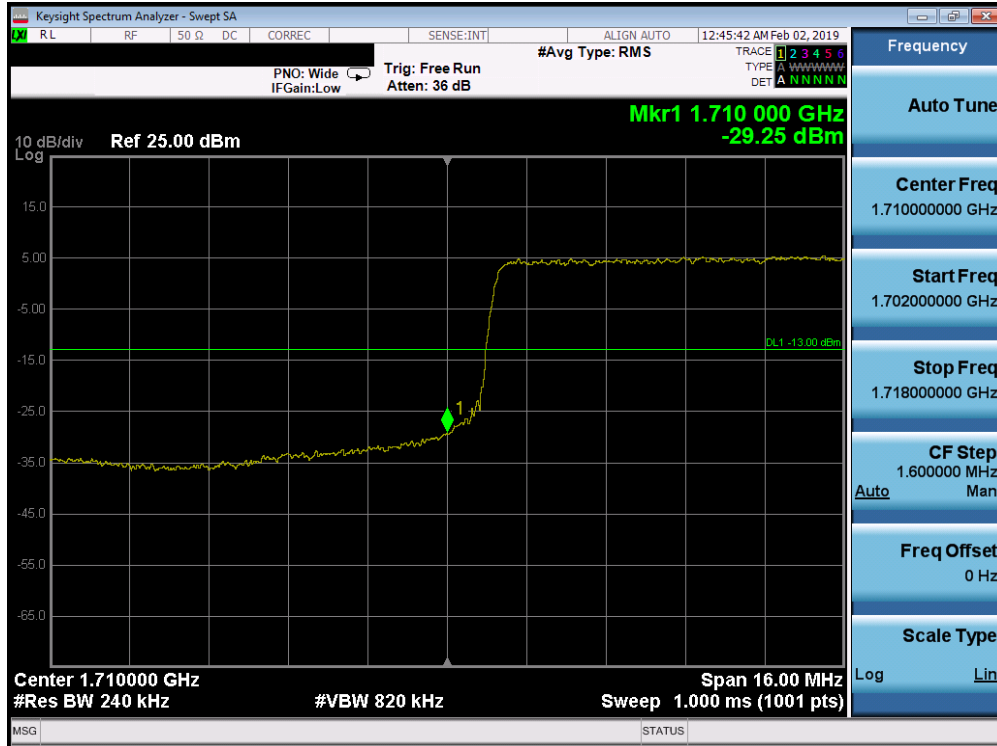


Plot 7-294. Upper Band Edge Plot (Band 66 - 15.0MHz QPSK - Full RB Configuration)

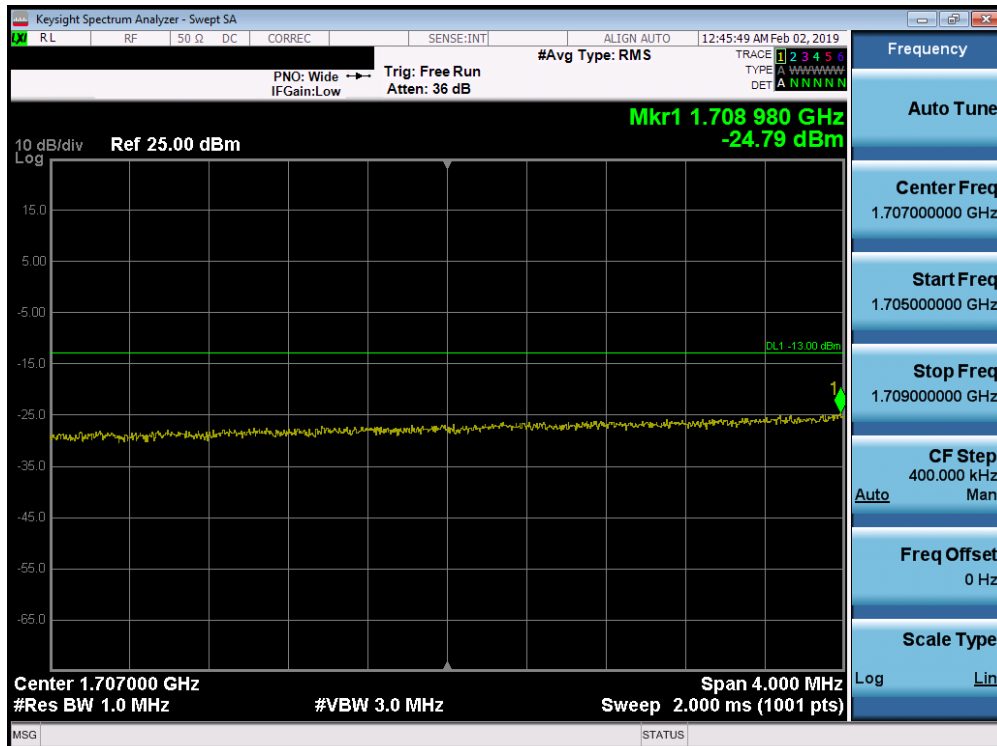


Plot 7-295. Upper Extended Band Edge Plot (Band 66 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 174 of 348

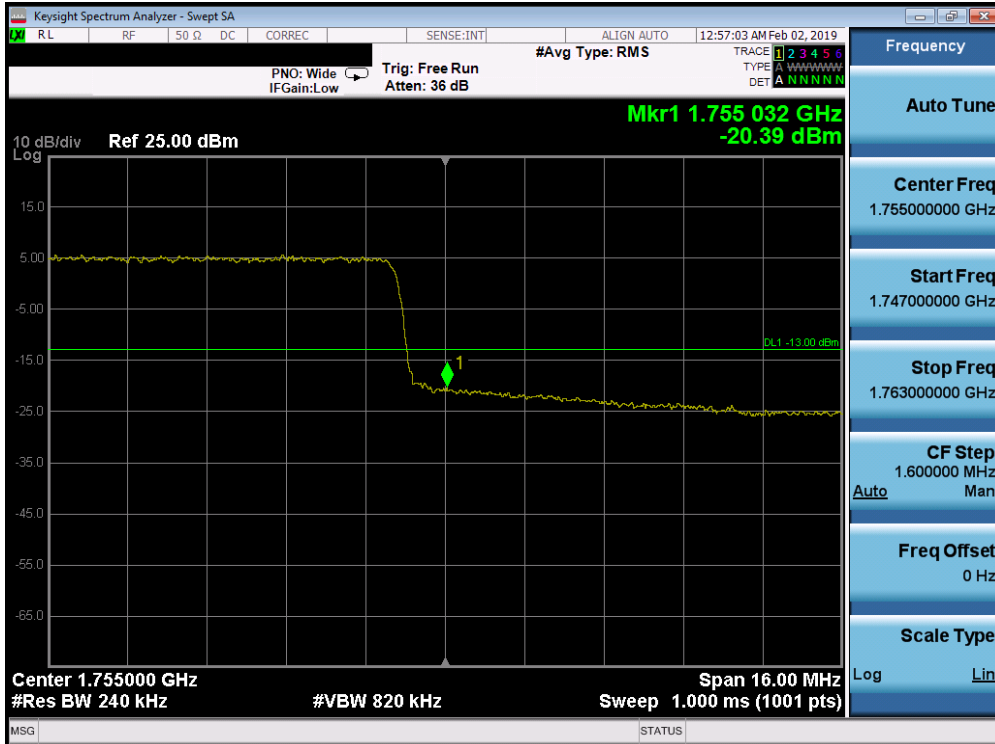


Plot 7-296. Lower Band Edge Plot (Band 66/4 - 20.0MHz QPSK - Full RB Configuration)

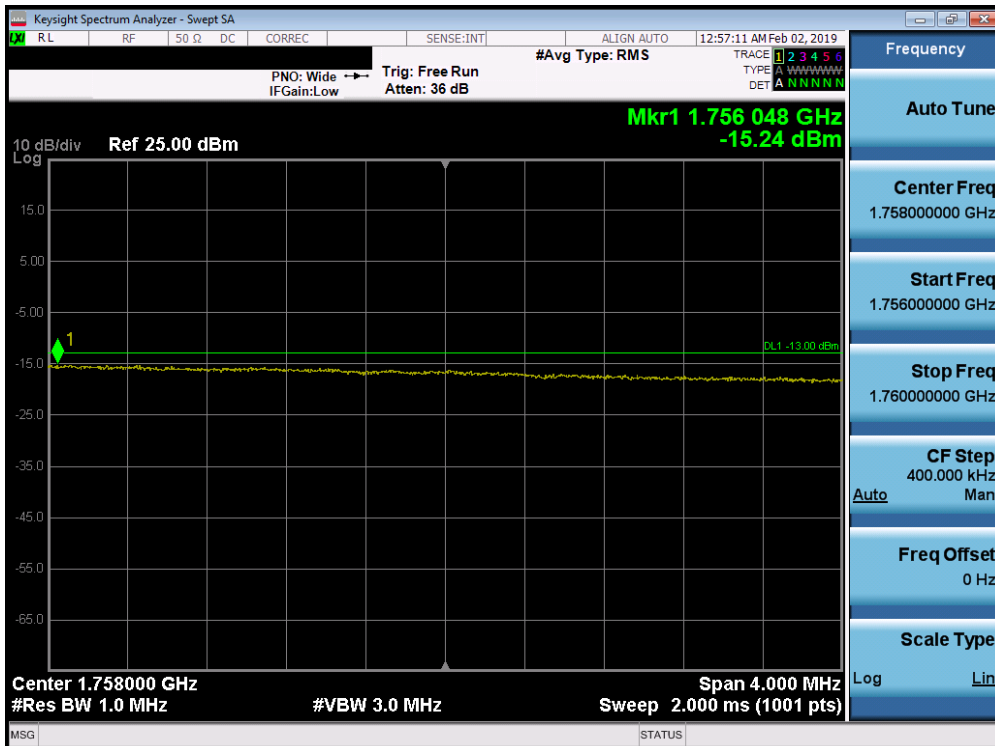


Plot 7-297. Lower Extended Band Edge Plot (Band 66/4 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 175 of 348

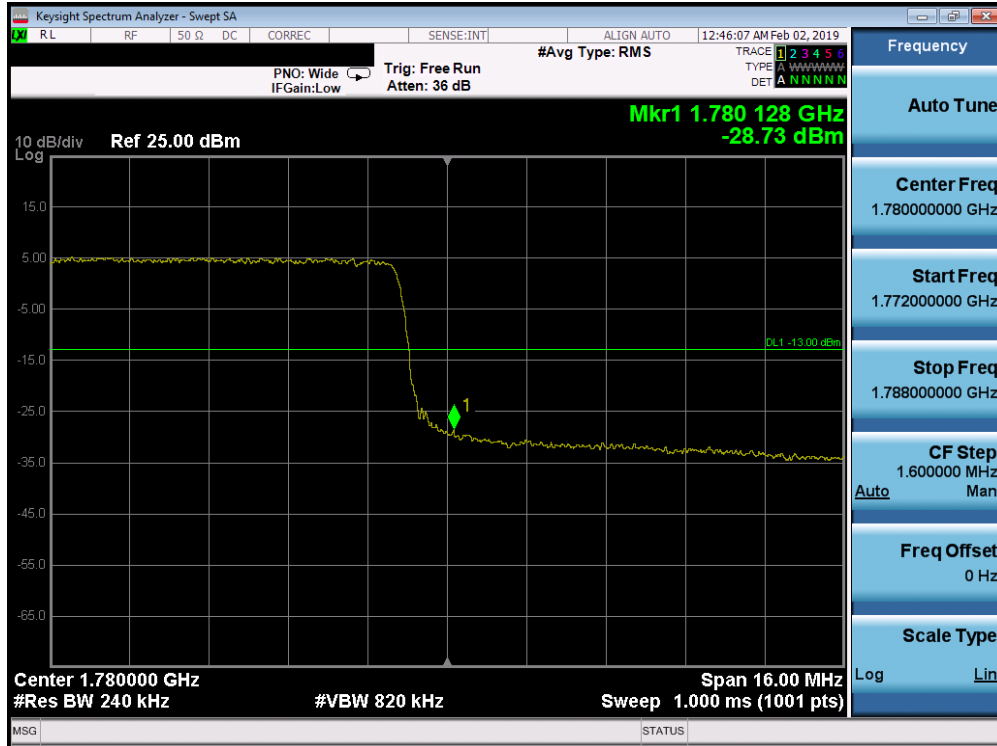


Plot 7-298. Upper Band Edge Plot (Band 4 - 20.0MHz QPSK - Full RB Configuration)

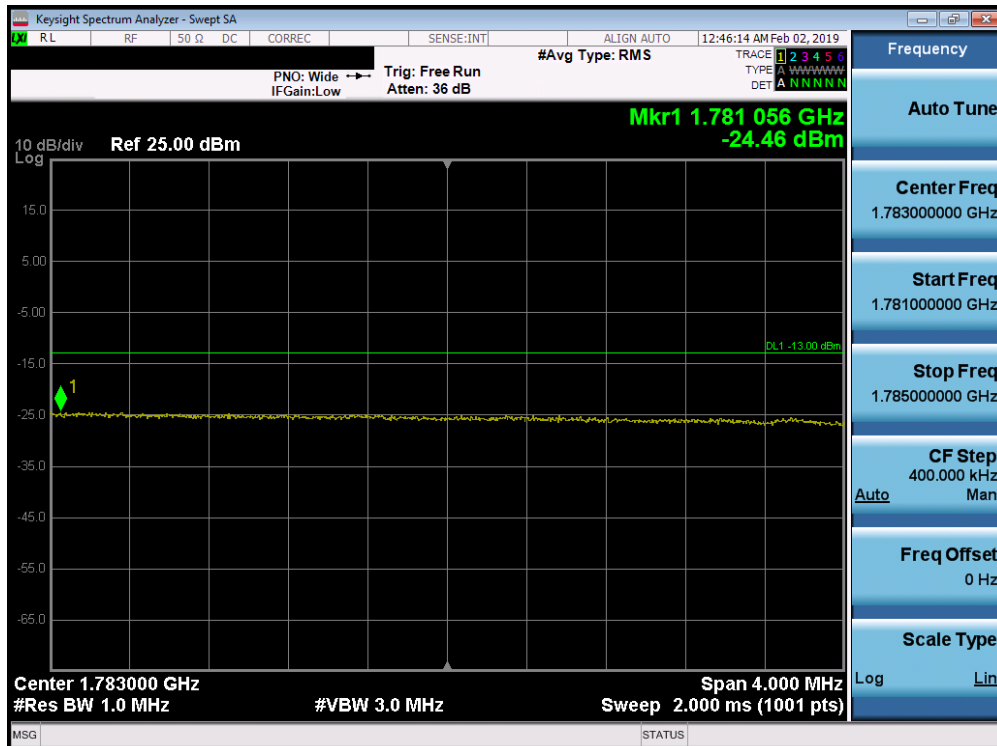


Plot 7-299. Upper Extended Band Edge Plot (Band 4 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 176 of 348



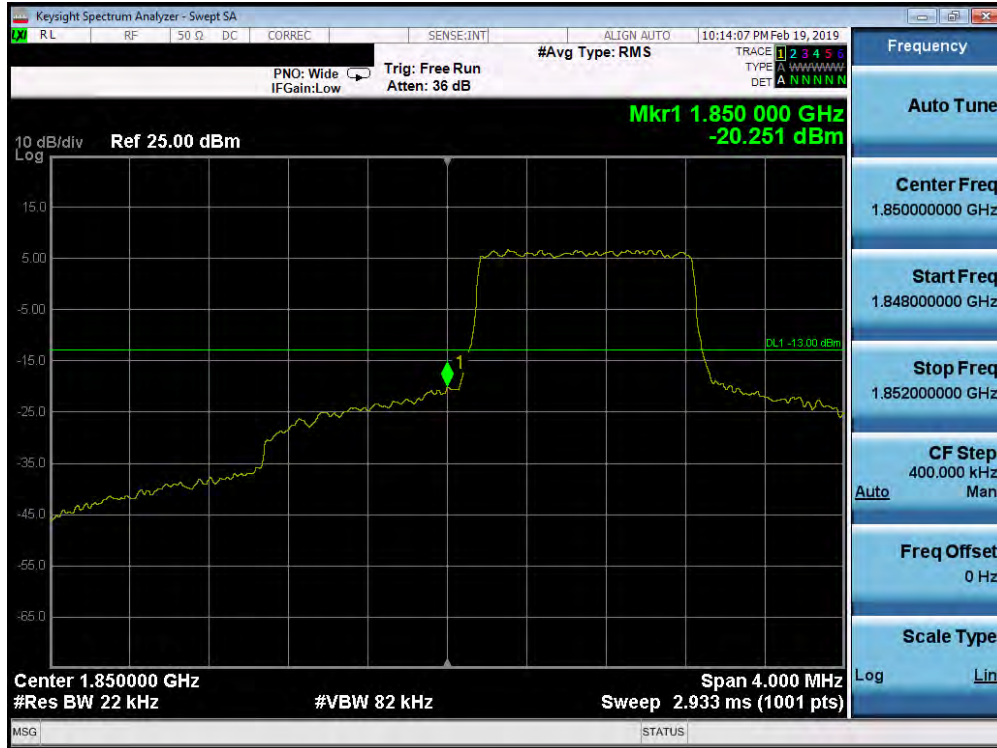
Plot 7-300. Upper Band Edge Plot (Band 66 - 20.0MHz QPSK - Full RB Configuration)



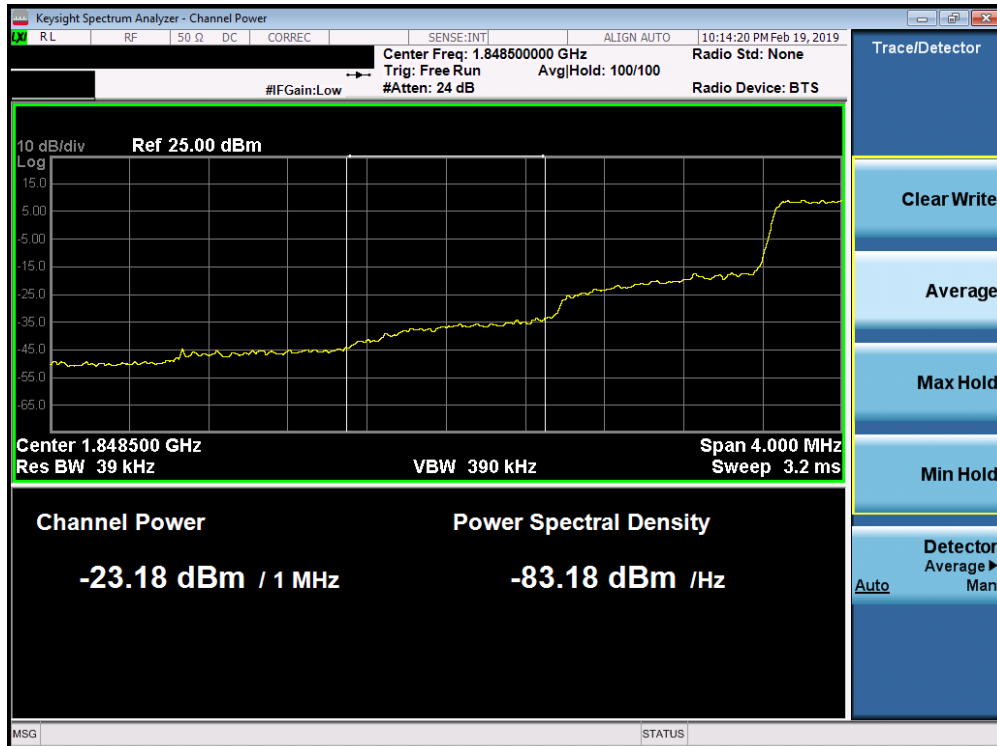
Plot 7-301. Upper Extended Band Edge Plot (Band 66 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 177 of 348

Band 25/2



Plot 7-302. Lower Band Edge Plot (Band 25/2- 1.4MHz QPSK - Full RB Configuration)

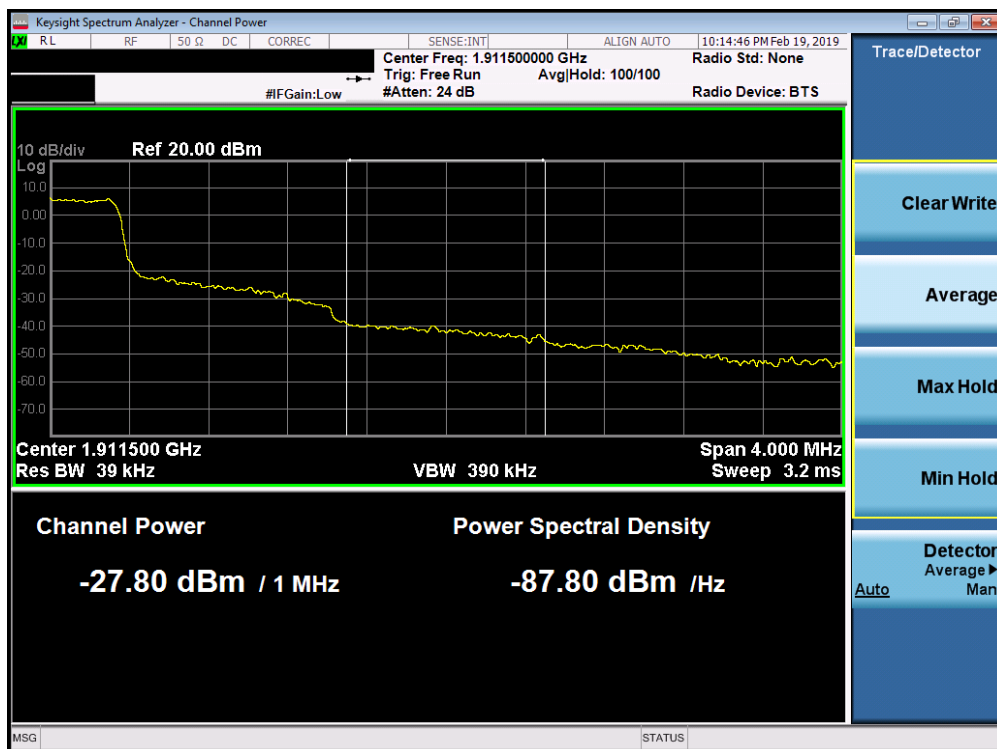


Plot 7-303. Lower Extended Band Edge Plot (Band 25/2- 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 178 of 348

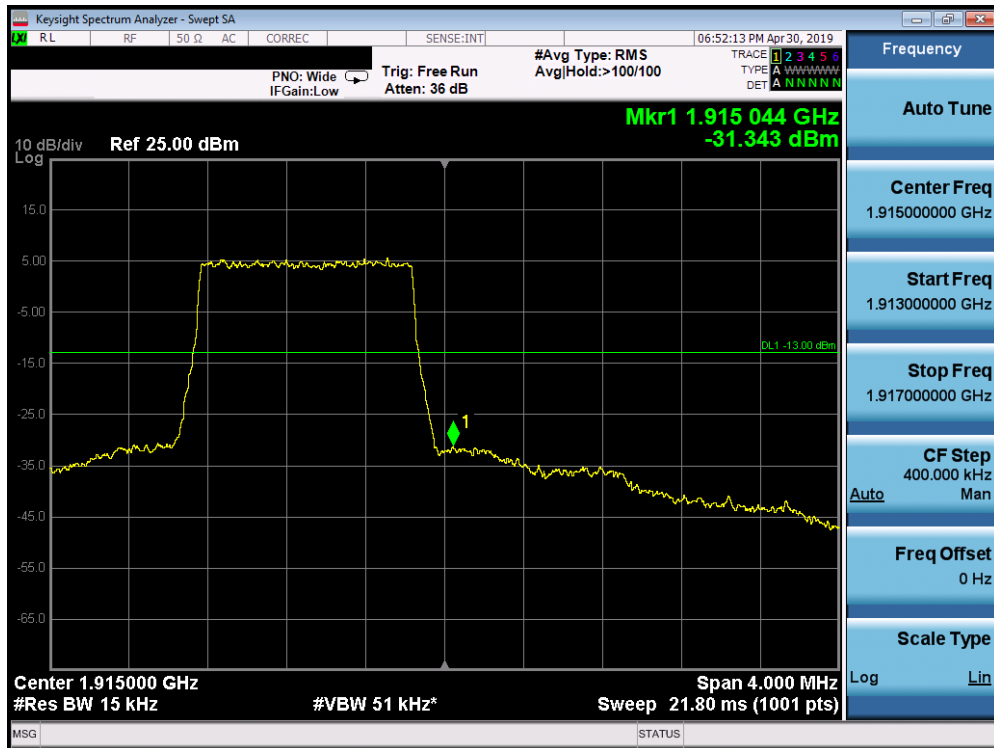


Plot 7-304. Upper Band Edge Plot (Band 2 - 1.4MHz QPSK - Full RB Configuration)

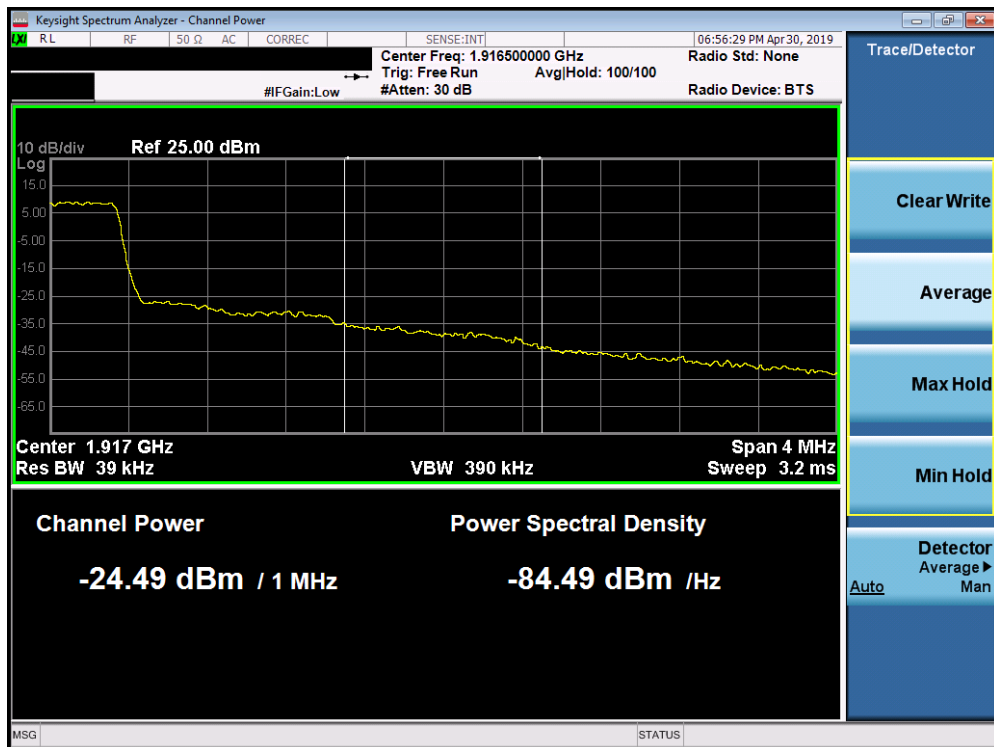


Plot 7-305. Upper Extended Band Edge Plot (Band 2 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 179 of 348

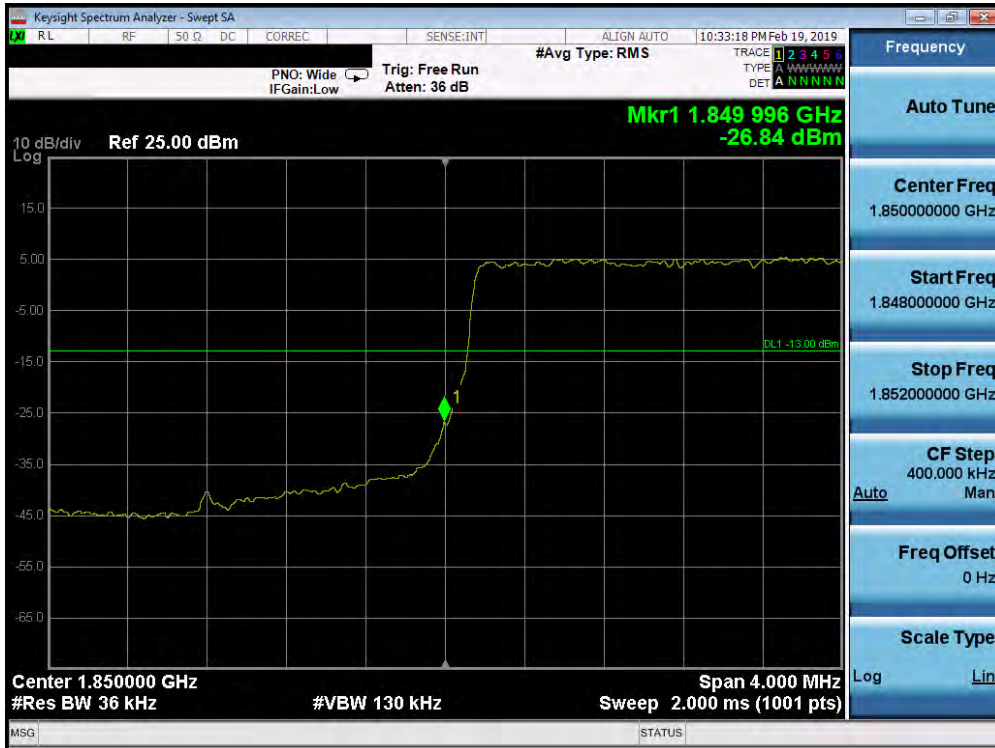


Plot 7-306. Upper Band Edge Plot (Band 25- 1.4MHz QPSK - Full RB Configuration)

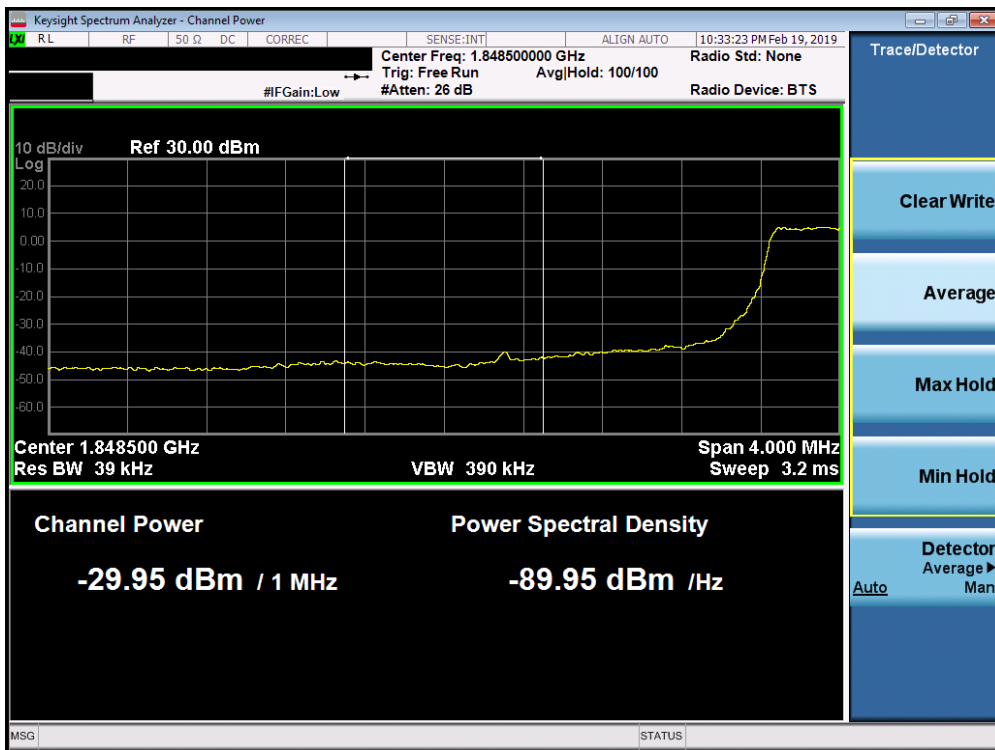


Plot 7-307. Upper Extended Band Edge Plot (Band 25 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 180 of 348



Plot 7-308. Lower Band Edge Plot (Band 25/2- 3.0MHz QPSK - Full RB Configuration)

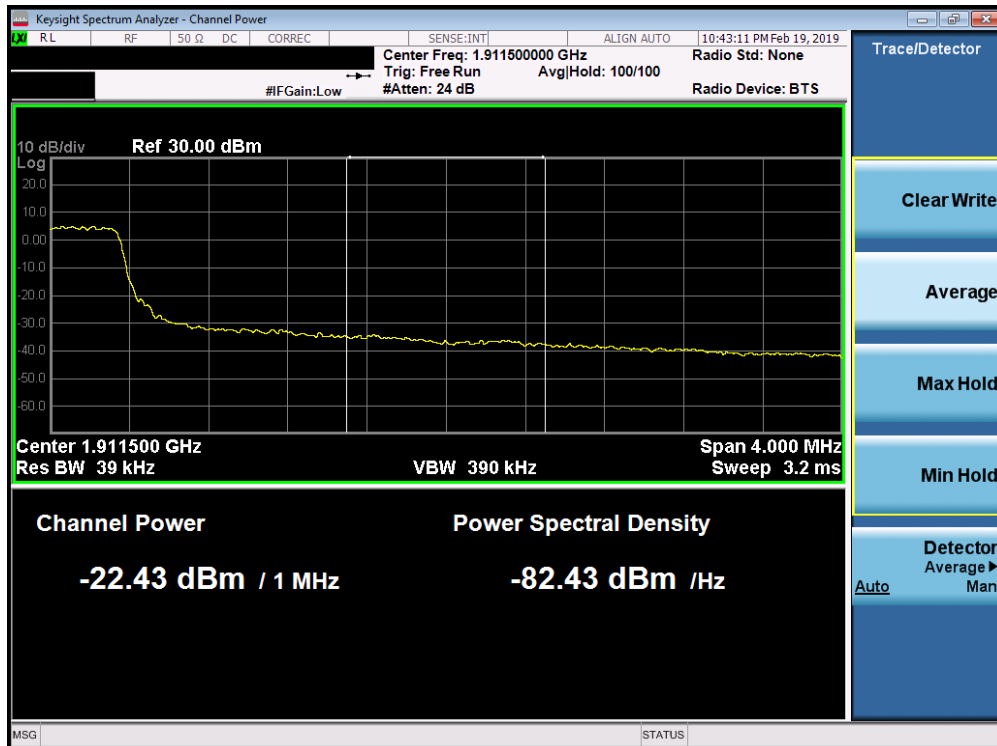


Plot 7-309. Lower Extended Band Edge Plot (Band 25/2- 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 181 of 348

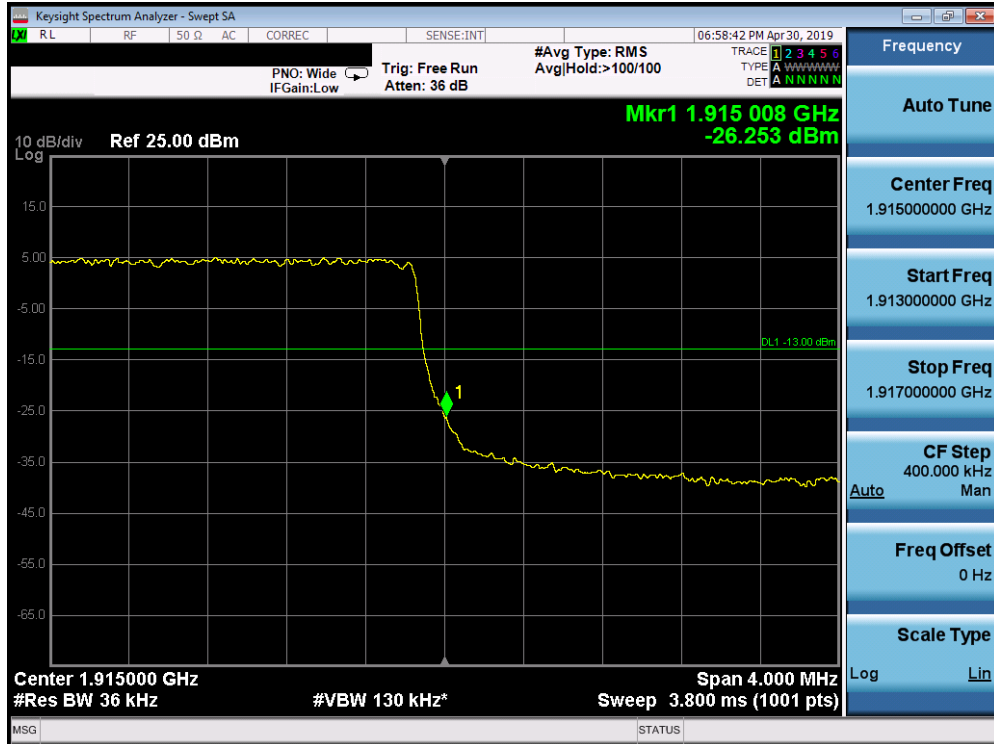


Plot 7-310. Upper Band Edge Plot (Band 2 - 3.0MHz QPSK - Full RB Configuration)

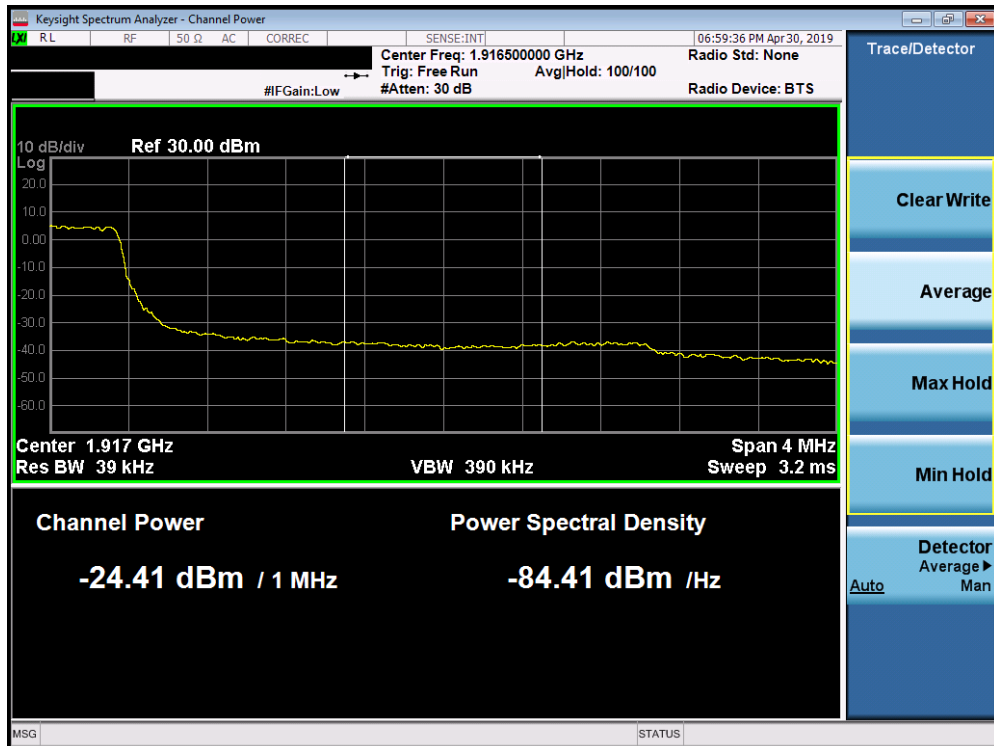


Plot 7-311. Upper Extended Band Edge Plot (Band 2 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T	PCTEST ENGINEERING LABORATORY, INC.		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset			Page 182 of 348

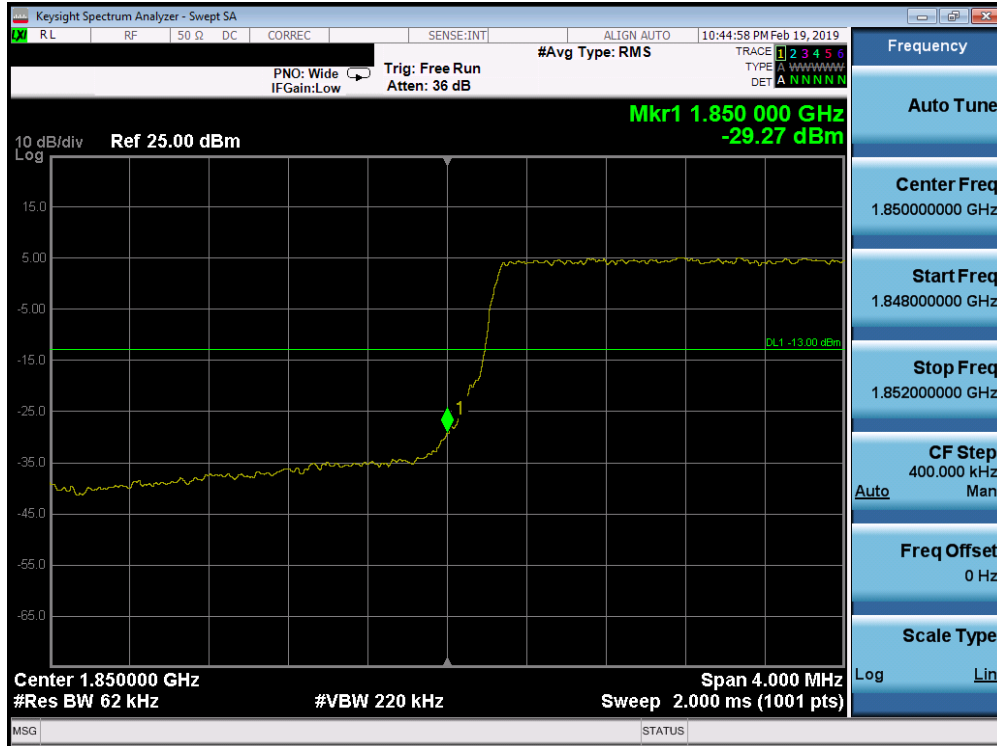


Plot 7-312. Upper Band Edge Plot (Band 25 - 3.0MHz QPSK - Full RB Configuration)

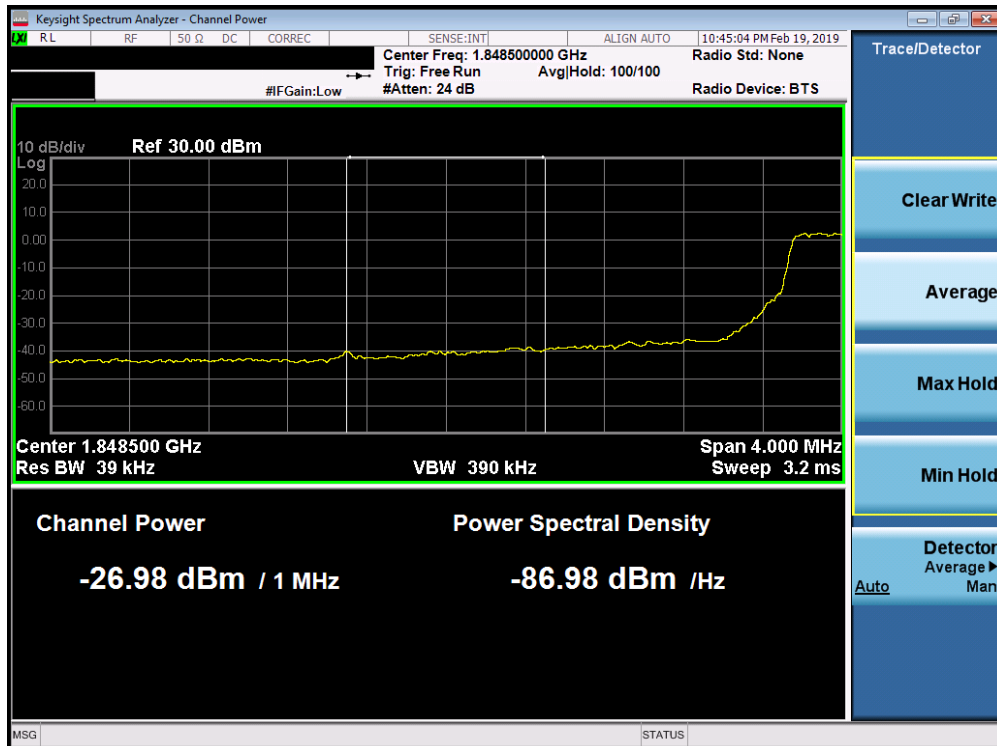


Plot 7-313. Upper Extended Band Edge Plot (Band 25 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 183 of 348

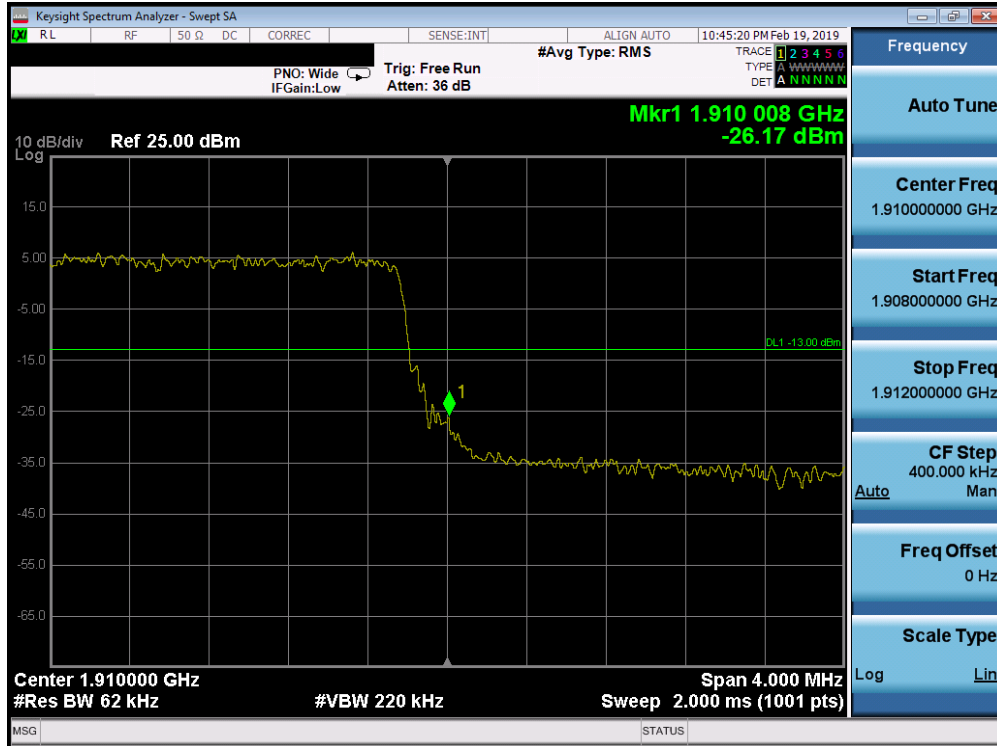


Plot 7-314. Lower Band Edge Plot (Band 25/2 - 5.0MHz QPSK - Full RB Configuration)

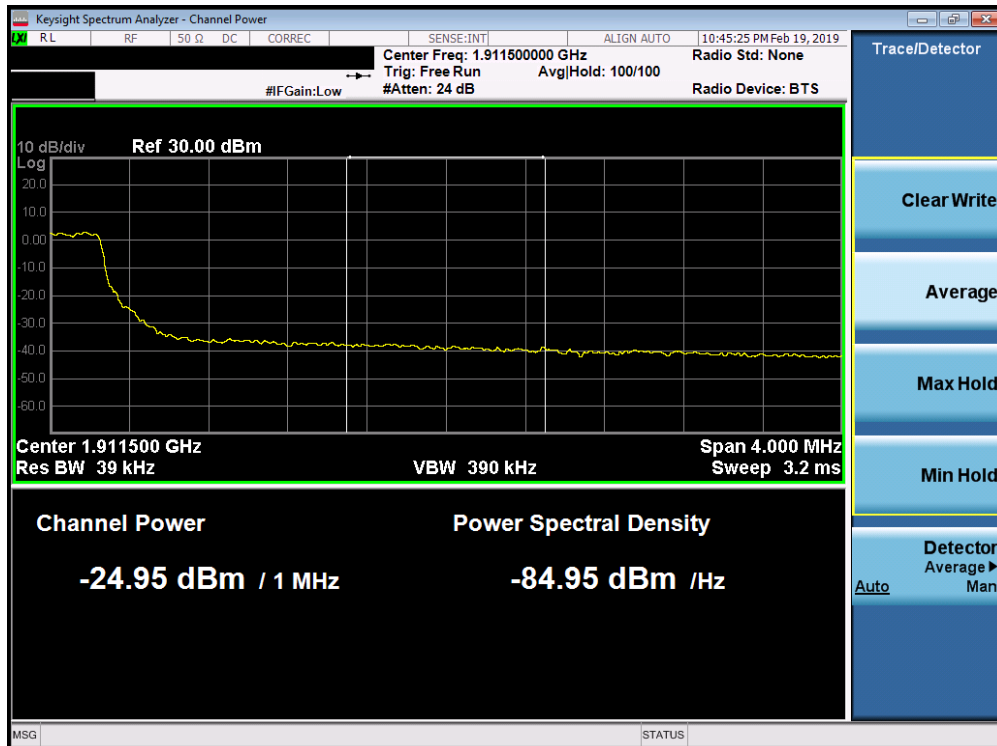


Plot 7-315. Lower Extended Band Edge Plot (Band 25/2 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 184 of 348

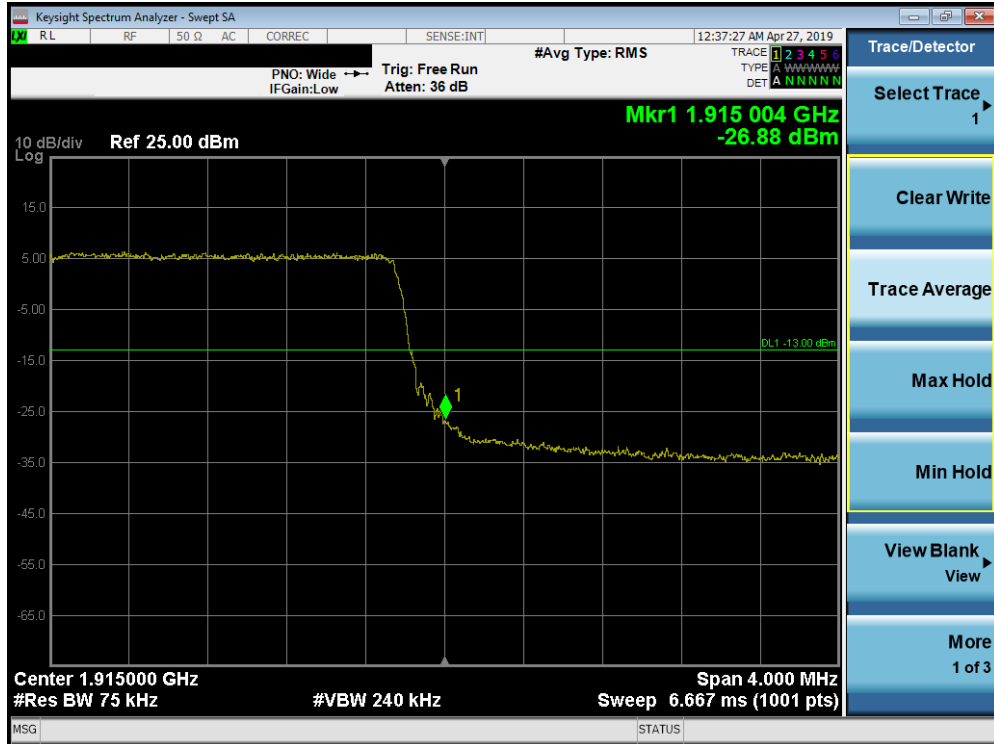


Plot 7-316. Upper Band Edge Plot (Band 2 - 5.0MHz QPSK - Full RB Configuration)

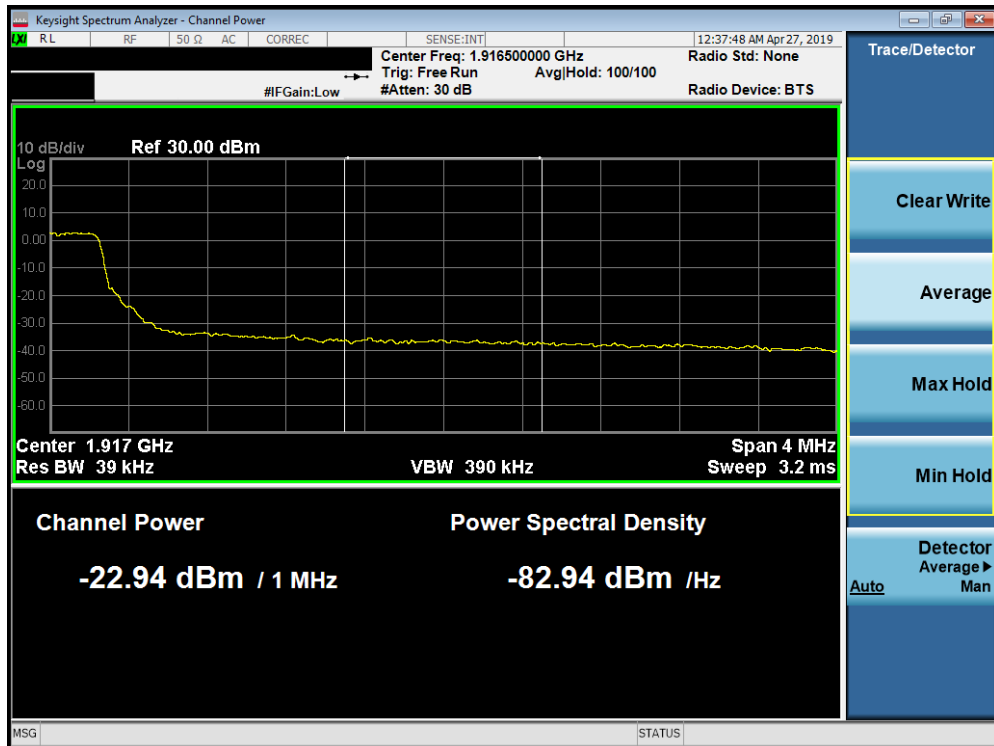


Plot 7-317. Upper Extended Band Edge Plot (Band 2 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 185 of 348



Plot 7-318. Upper Band Edge Plot (Band 25 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-319. Upper Extended Band Edge Plot (Band 25 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG977T		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1903060032-03.A3L	Test Dates: 01/22 - 05/08/2019	EUT Type: Portable Handset		Page 186 of 348