



Plot 7-89. Conducted Spurious Plot (Band 2 - 10.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

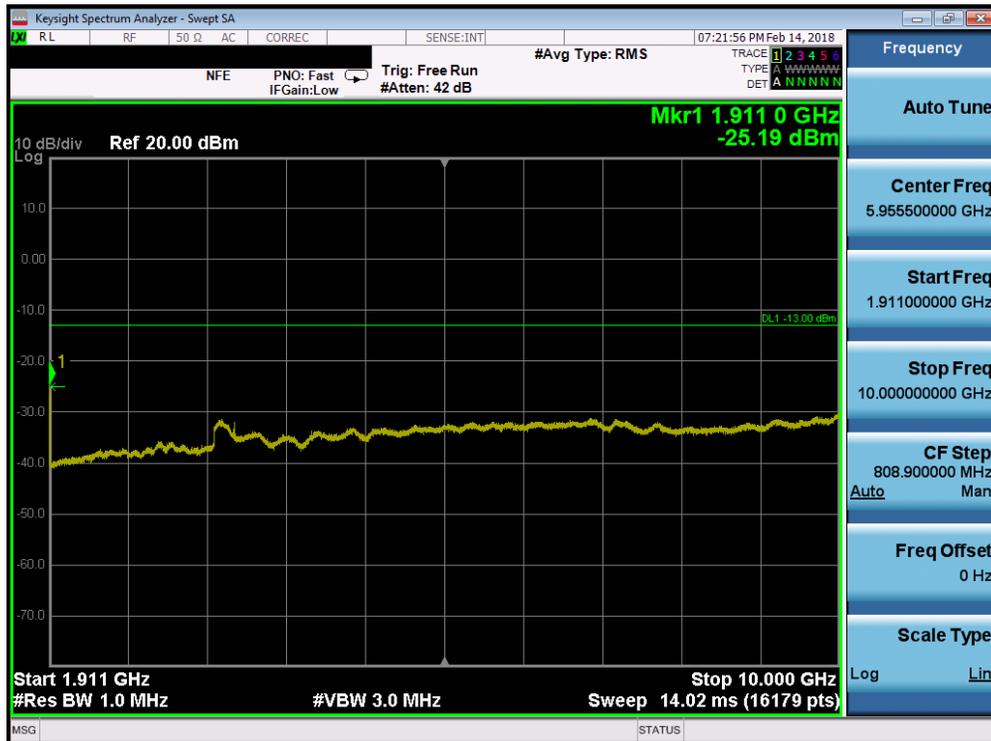


Plot 7-90. Conducted Spurious Plot (Band 2 - 10.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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Plot 7-91. Conducted Spurious Plot (Band 2 - 10.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)



Plot 7-92. Conducted Spurious Plot (Band 2 - 10.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

FCC ID: ZNFX212TA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Plot 7-93. Conducted Spurious Plot (Band 2 - 10.0MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

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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 $43 + \log_{10}(P_{[Watts]})$, where P is the transmitter power in Watts.

Test Procedure Used

KDB 971168 D01 v03 – 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.

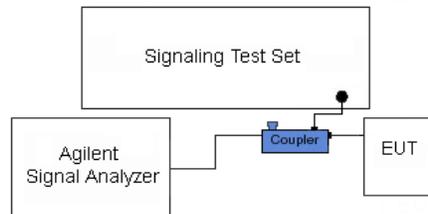


Figure 7-3. Test Instrument & Measurement Setup

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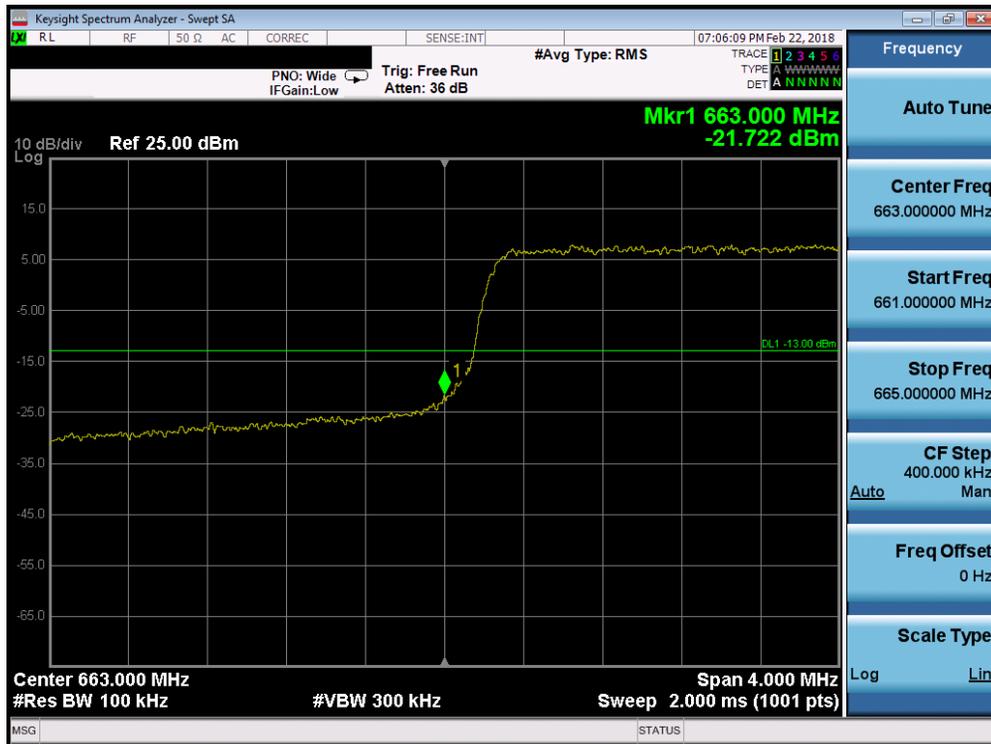
Test Notes

Per 22.917(b), 24.238(a), 27.53(h), RSS-130(4.6), RSS-132(5.5), RSS-133(6.5), and RSS-139(6.5) 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.

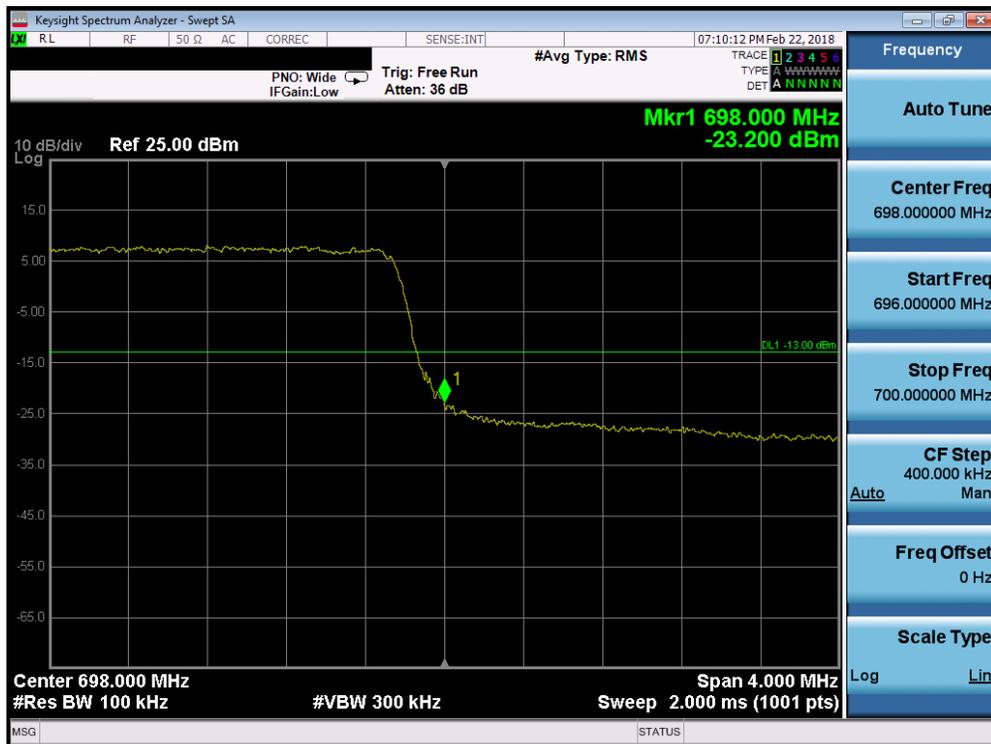
Per 27.53(g) RSS-130(4.6) for operations in the 698-746 MHz band, in the 100 kHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least 30 kHz may be employed to demonstrate compliance with the out-of-band emissions limit.

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Band 71

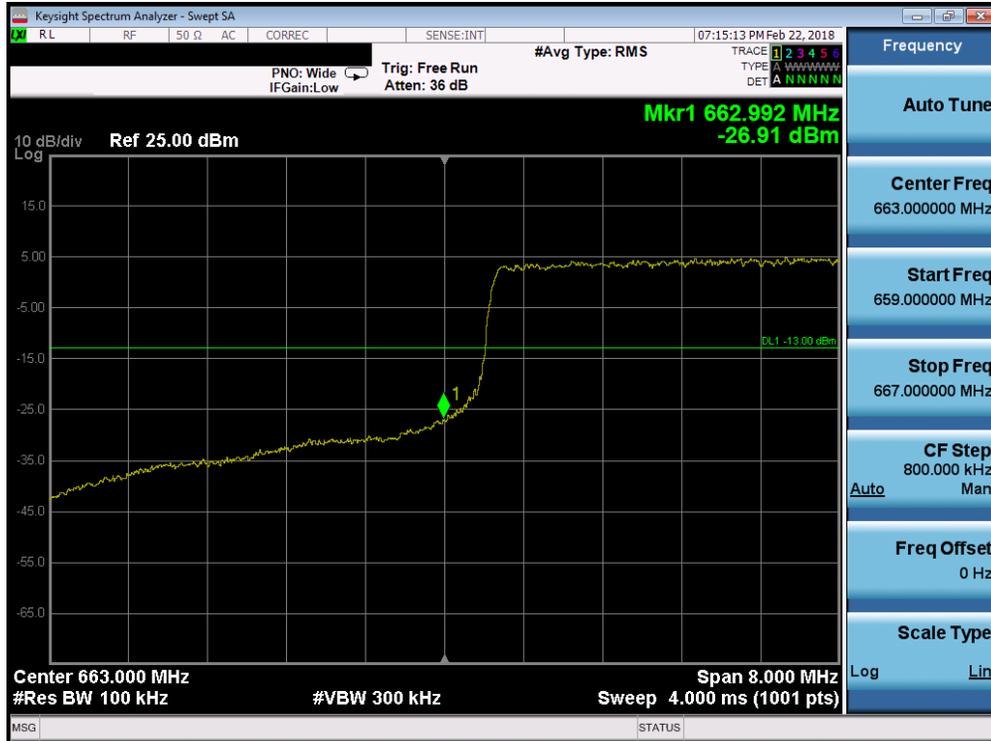


Plot 7-94. Lower Band Edge Plot (Band 71 - 5MHz QPSK - Full RB Configuration)



Plot 7-95. Upper Band Edge Plot (Band 71 - 5MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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Plot 7-96. Lower Band Edge Plot (Band 71 - 10MHz QPSK - Full RB Configuration)



Plot 7-97. Upper Band Edge Plot (Band 71 - 10MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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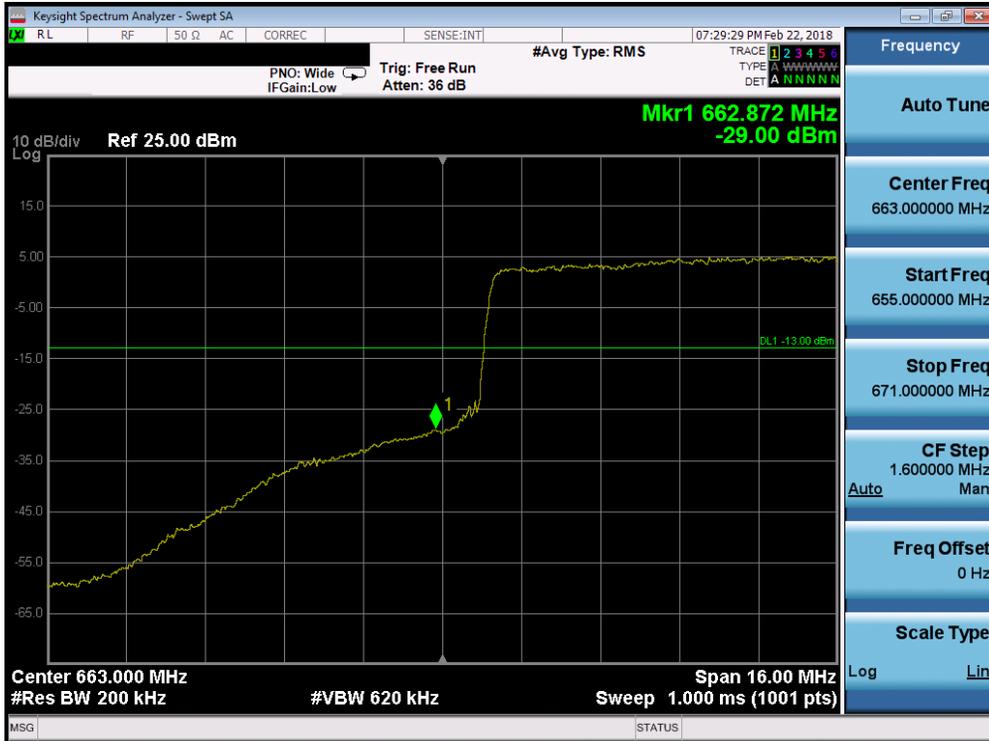


Plot 7-98. Lower Band Edge Plot (Band 71 - 15MHz QPSK - Full RB Configuration)



Plot 7-99. Upper Band Edge Plot (Band 71 - 15MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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Plot 7-100. Lower Band Edge Plot (Band 71 - 20MHz QPSK - Full RB Configuration)



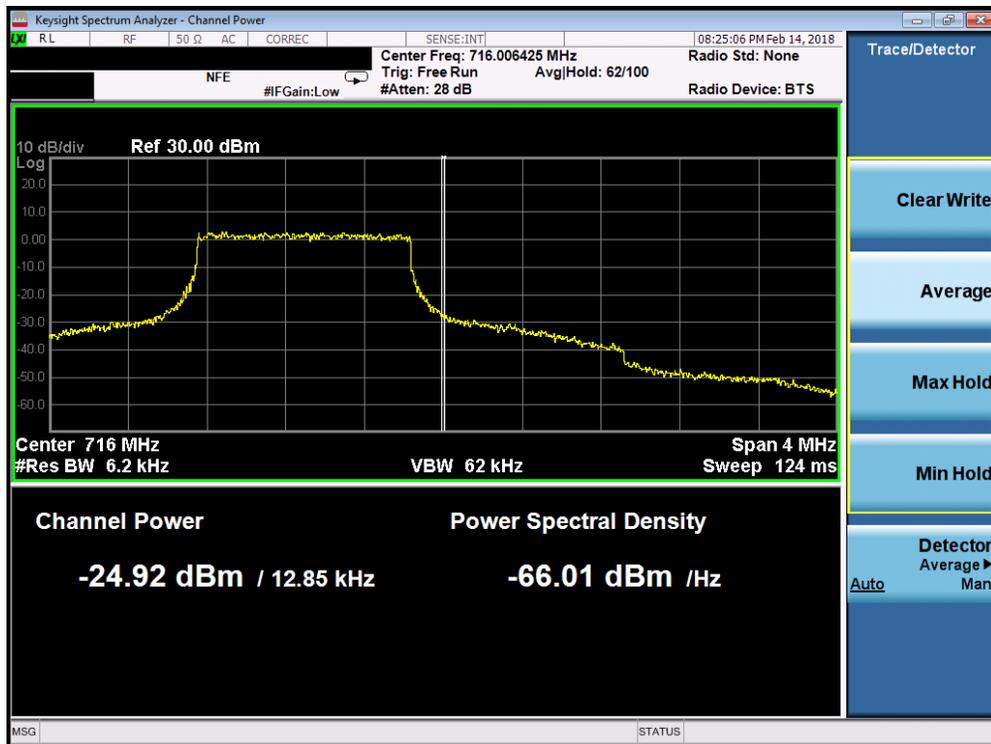
Plot 7-101. Upper Band Edge Plot (Band 71 - 20MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Band 12

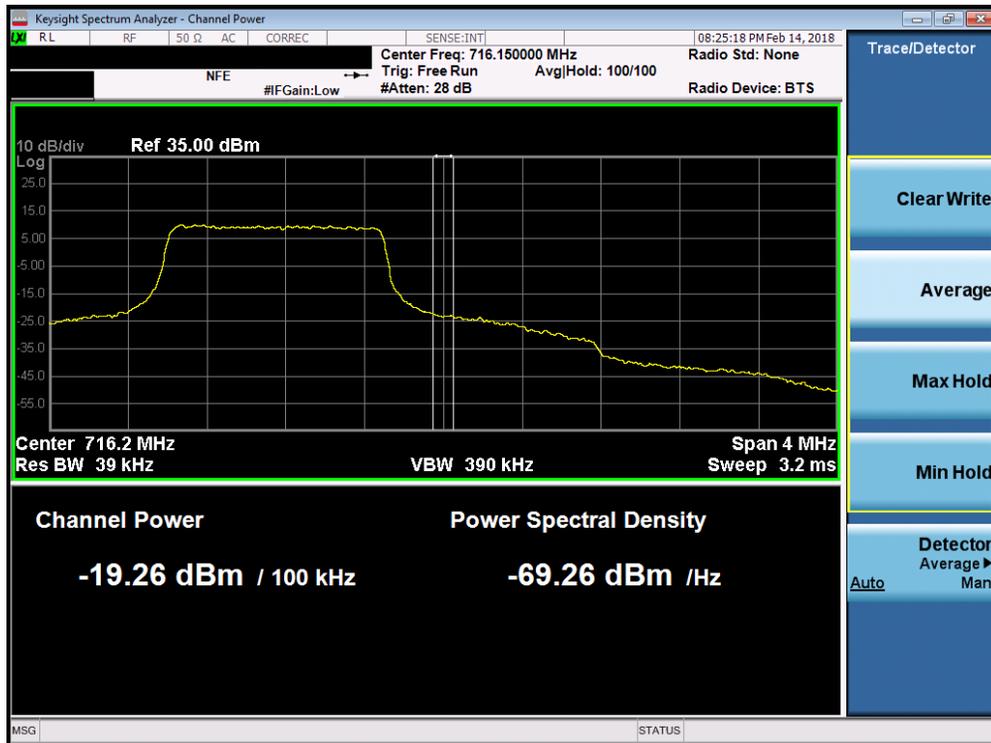


Plot 7-102. Lower Band Edge Plot (Band 12 - 1.4MHz QPSK - Full RB Configuration)



Plot 7-103. Upper Band Edge Plot (Band 12 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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Plot 7-104. Upper Extended Band Edge Plot (Band 12 - 1.4MHz QPSK - Full RB Configuration)



Plot 7-105. Lower Band Edge Plot (Band 12 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Plot 7-106. Upper Band Edge Plot (Band 12 - 3.0MHz QPSK - Full RB Configuration)



Plot 7-107. Lower Band Edge Plot (Band 12 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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Plot 7-108. Upper Band Edge Plot (Band 12 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-109. Lower Band Edge Plot (Band 12 - 10.0MHz QPSK - Full RB Configuration)

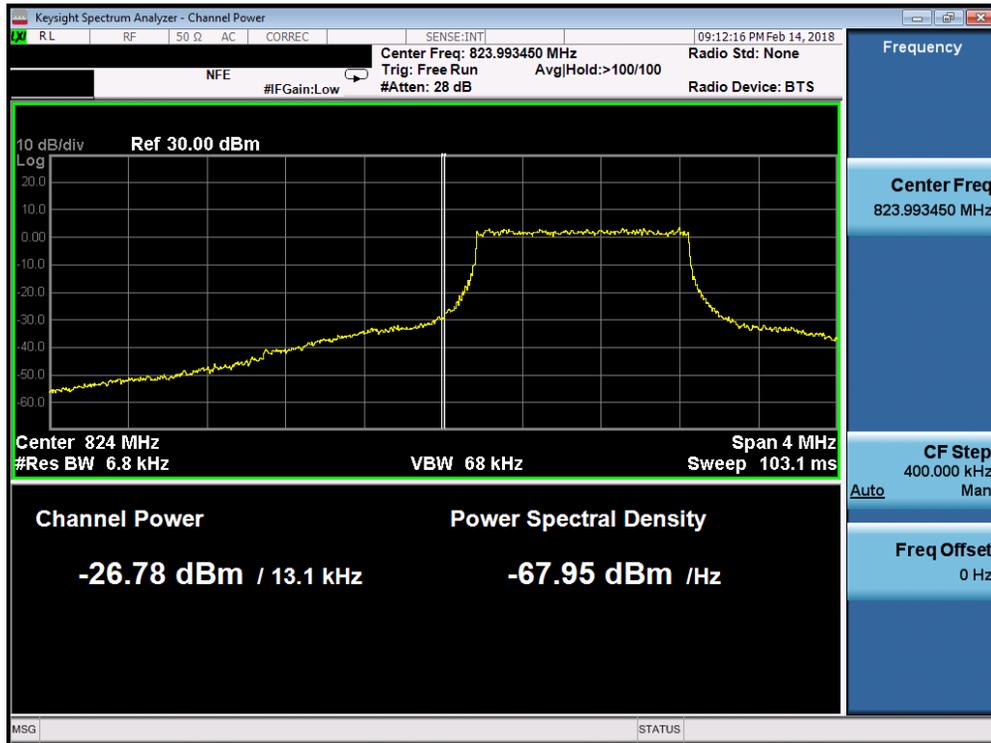
FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1802060016-03.ZNF	Test Dates: 2/5-2/21/2018	EUT Type: Portable Handset		Page 75 of 167



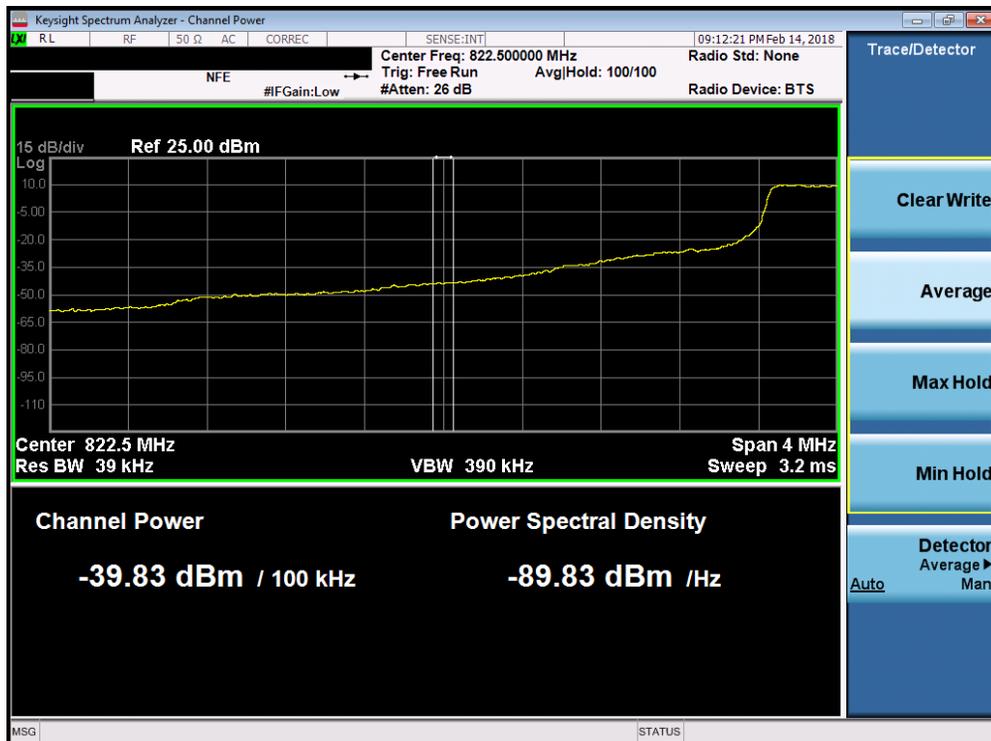
Plot 7-110. Upper Band Edge Plot (Band 12 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
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Band 5

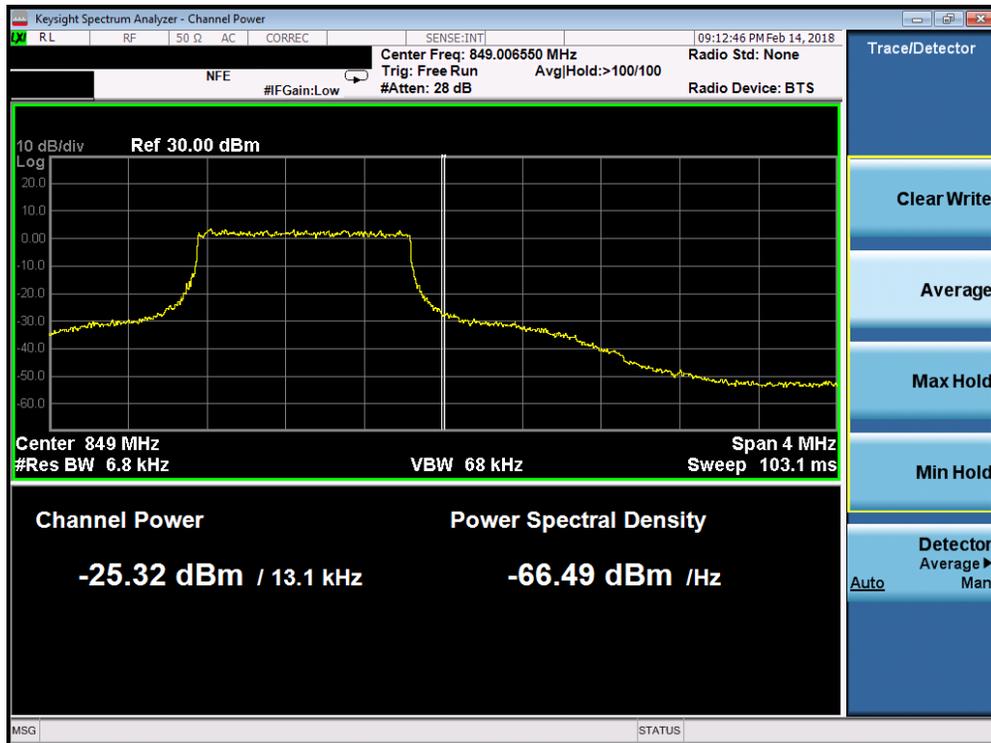


Plot 7-111. Lower Band Edge Plot (Band 5 - 1.4MHz QPSK - Full RB Configuration)

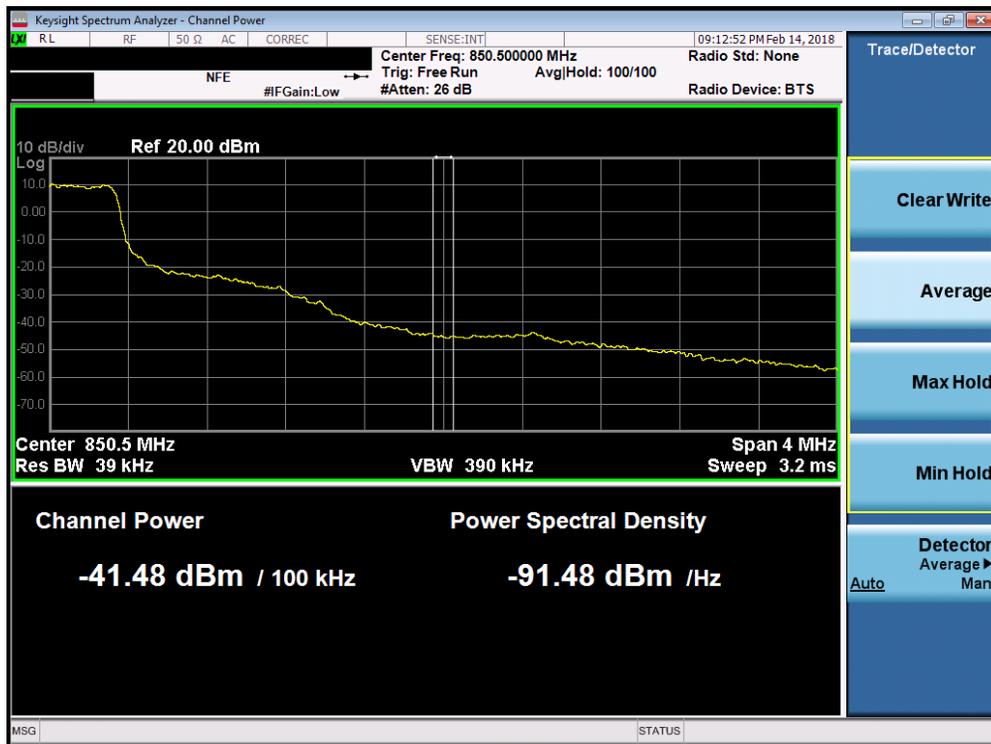


Plot 7-112. Lower Extended Band Edge Plot (Band 5 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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Plot 7-113. Upper Band Edge Plot (Band 5 - 1.4MHz QPSK - Full RB Configuration)



Plot 7-114. Upper Extended Band Edge Plot (Band 5 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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Plot 7-115. Lower Band Edge Plot (Band 5 - 3.0MHz QPSK - Full RB Configuration)



Plot 7-116. Upper Band Edge Plot (Band 5 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Plot 7-117. Lower Band Edge Plot (Band 5 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-118. Upper Band Edge Plot (Band 5 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Plot 7-119. Lower Band Edge Plot (Band 5 - 10.0MHz QPSK - Full RB Configuration)



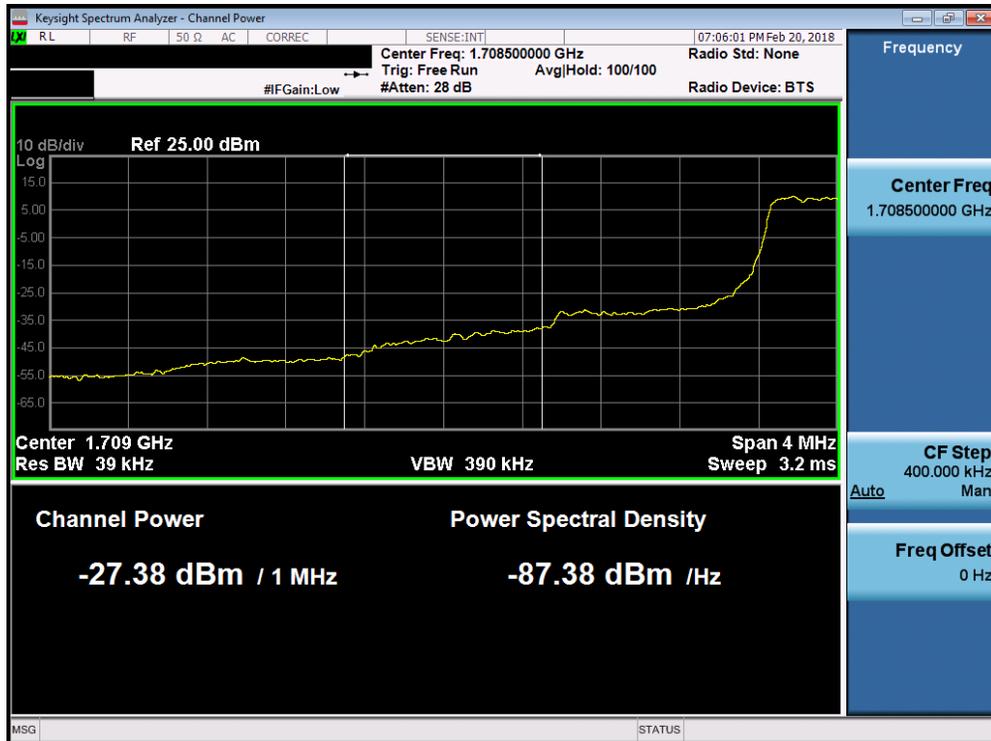
Plot 7-120. Upper Band Edge Plot (Band 5 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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Band 66



Plot 7-121. Lower Band Edge Plot (Band 66 - 1.4MHz QPSK - Full RB Configuration)

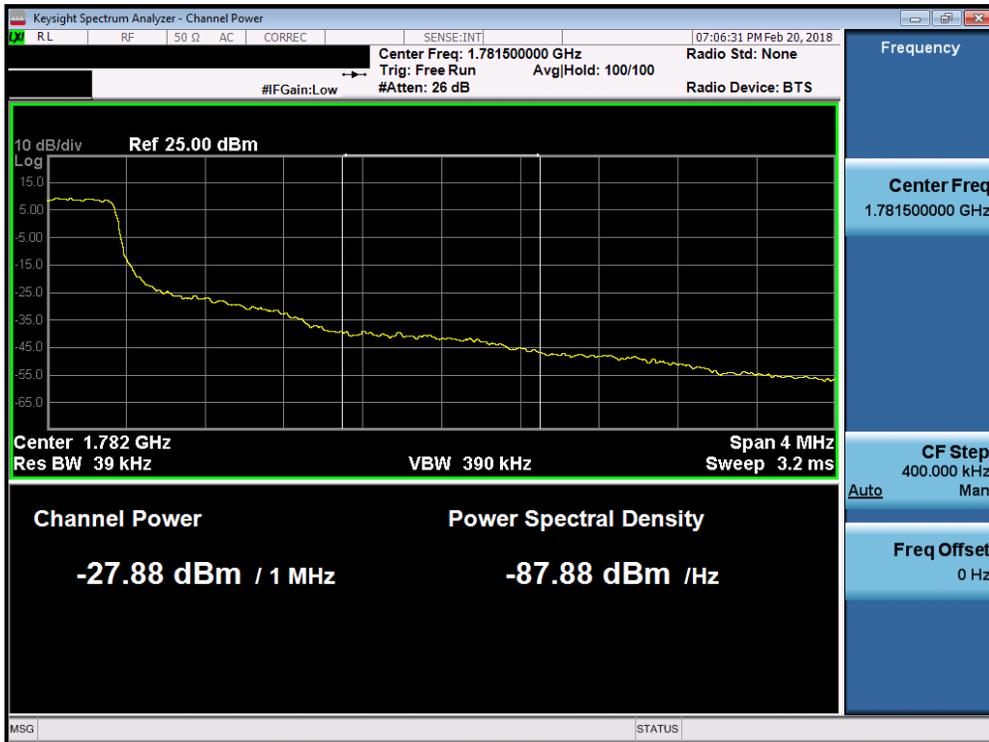


Plot 7-122. Lower Extended Band Edge Plot (Band 66 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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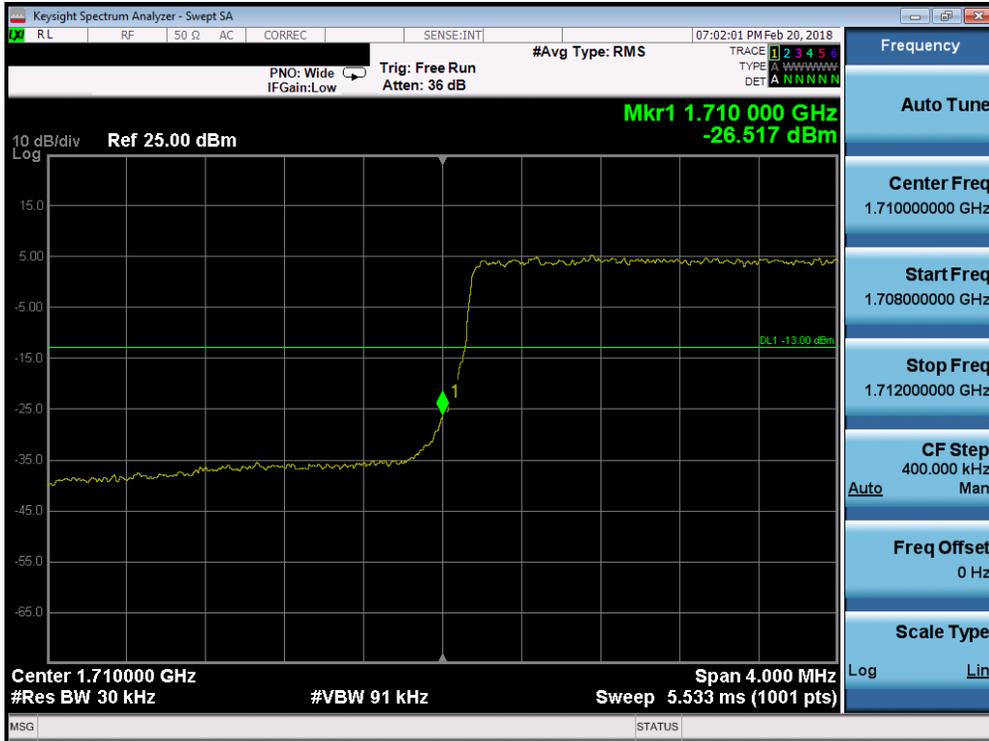


Plot 7-123. Upper Band Edge Plot (Band 66 - 1.4MHz QPSK - Full RB Configuration)

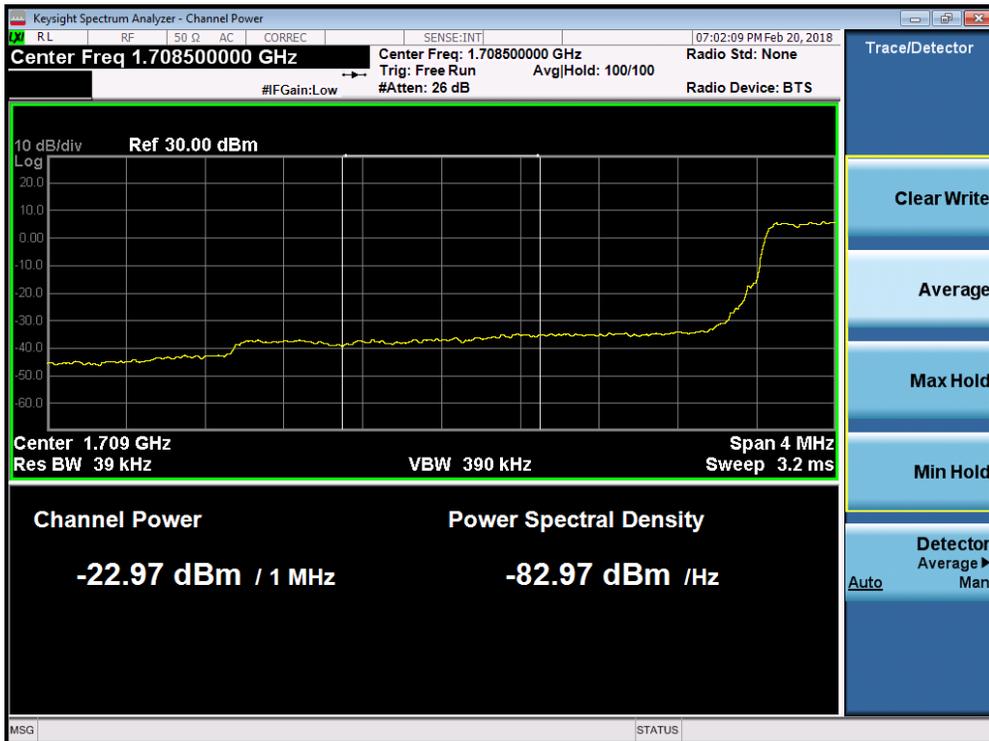


Plot 7-124. Upper Extended Band Edge Plot (Band 66 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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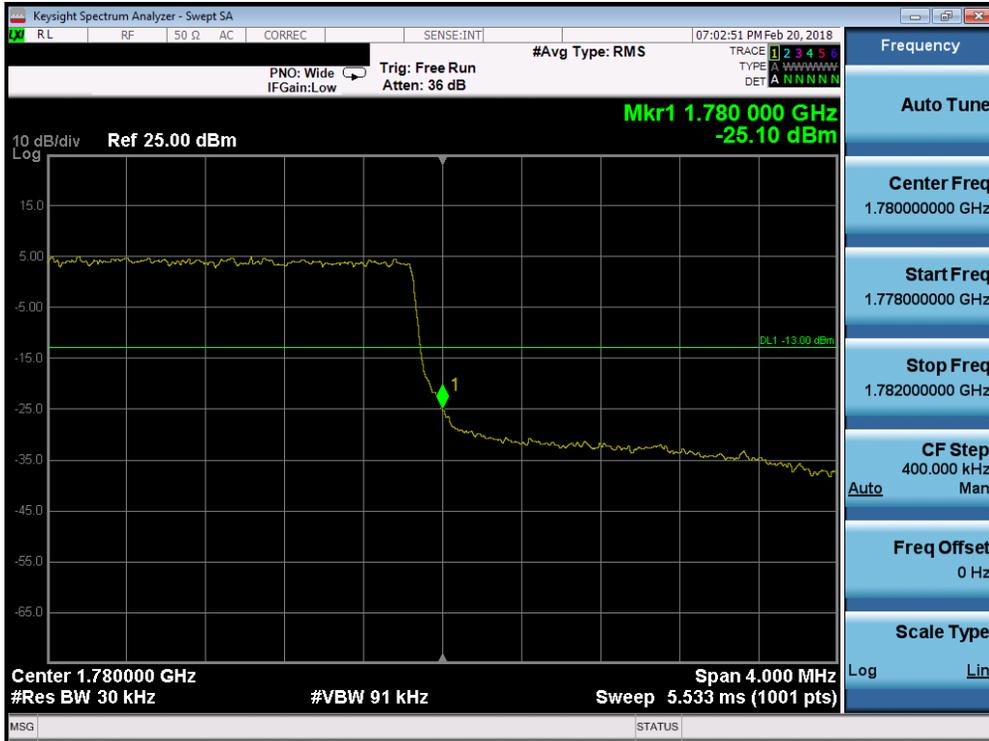


Plot 7-125. Lower Band Edge Plot (Band 66 - 3.0MHz QPSK - Full RB Configuration)

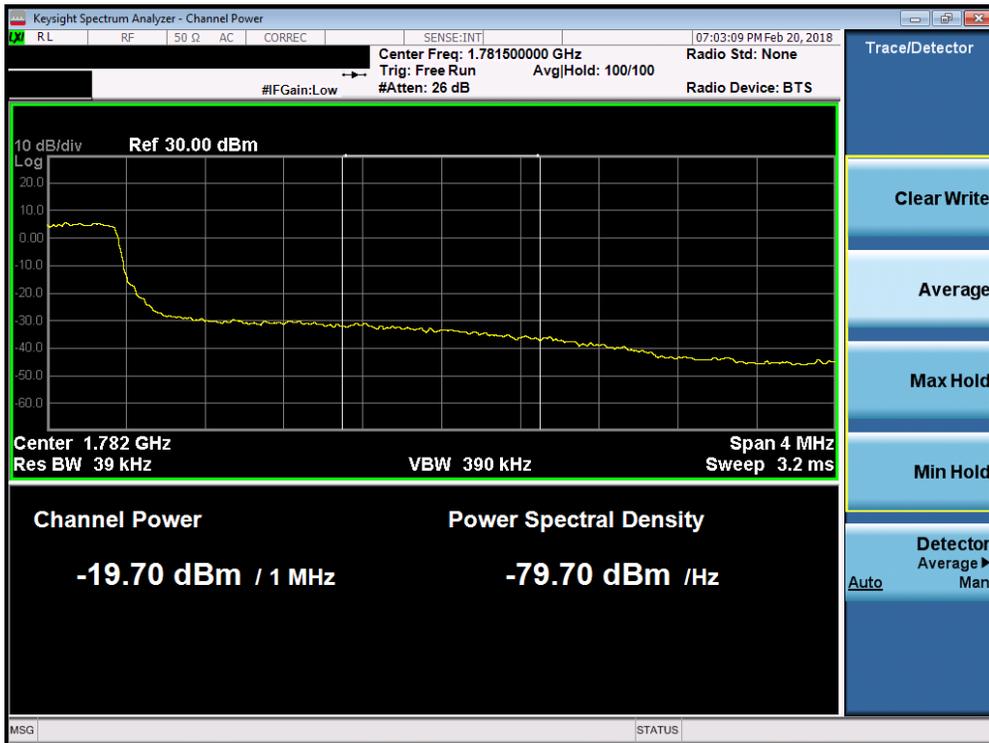


Plot 7-126. Lower Extended Band Edge Plot (Band 66 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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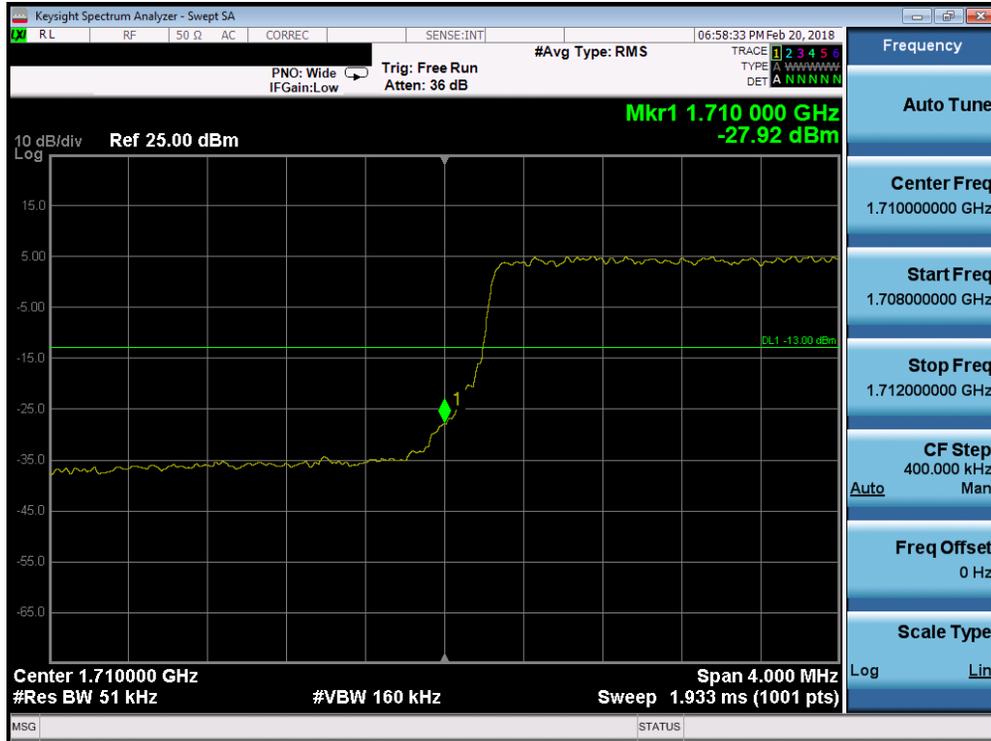


Plot 7-127. Upper Band Edge Plot (Band 66 - 3.0MHz QPSK - Full RB Configuration)

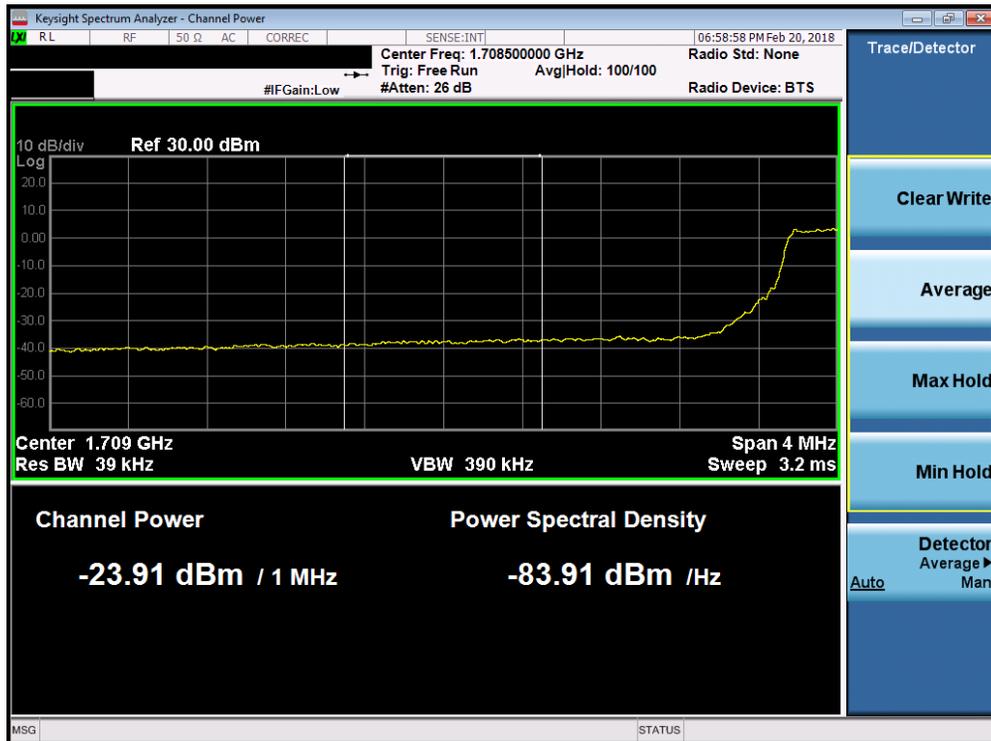


Plot 7-128. Upper Extended Band Edge Plot (Band 66 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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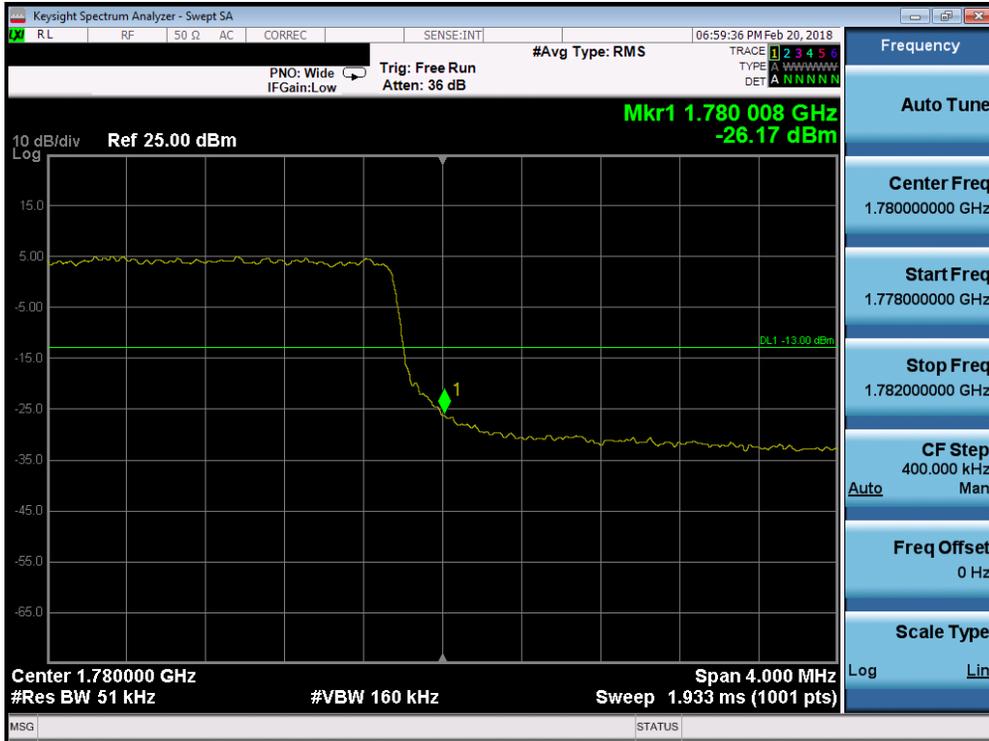


Plot 7-129. Lower Band Edge Plot (Band 66 - 5.0MHz QPSK - Full RB Configuration)

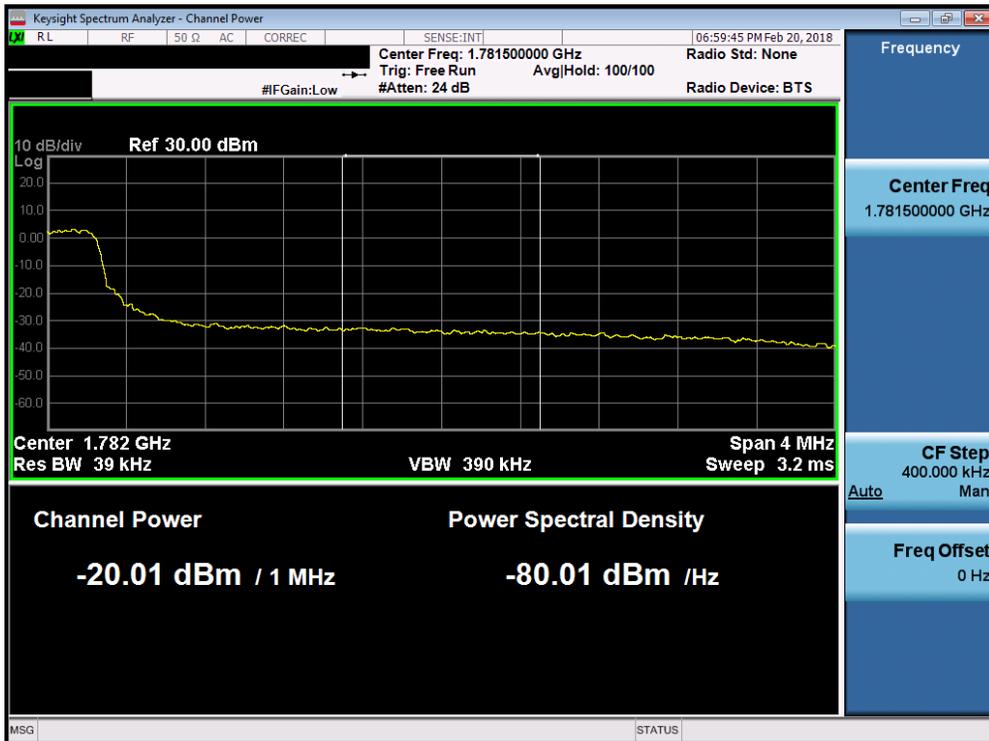


Plot 7-130. Lower Extended Band Edge Plot (Band 66 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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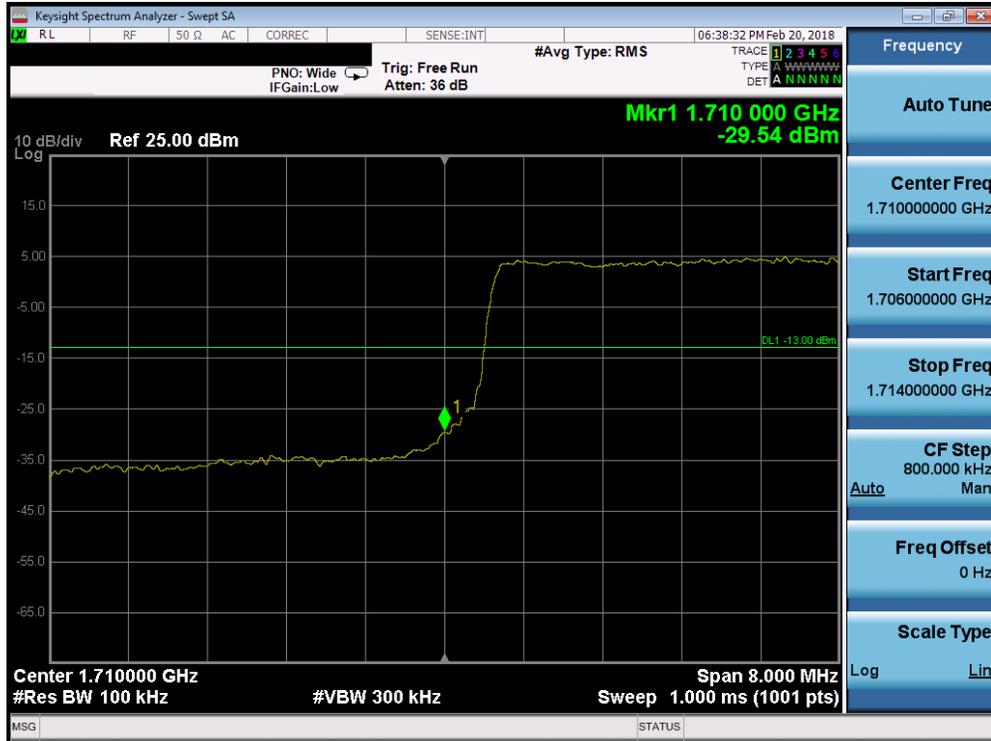


Plot 7-131. Upper Band Edge Plot (Band 66 - 5.0MHz QPSK - Full RB Configuration)

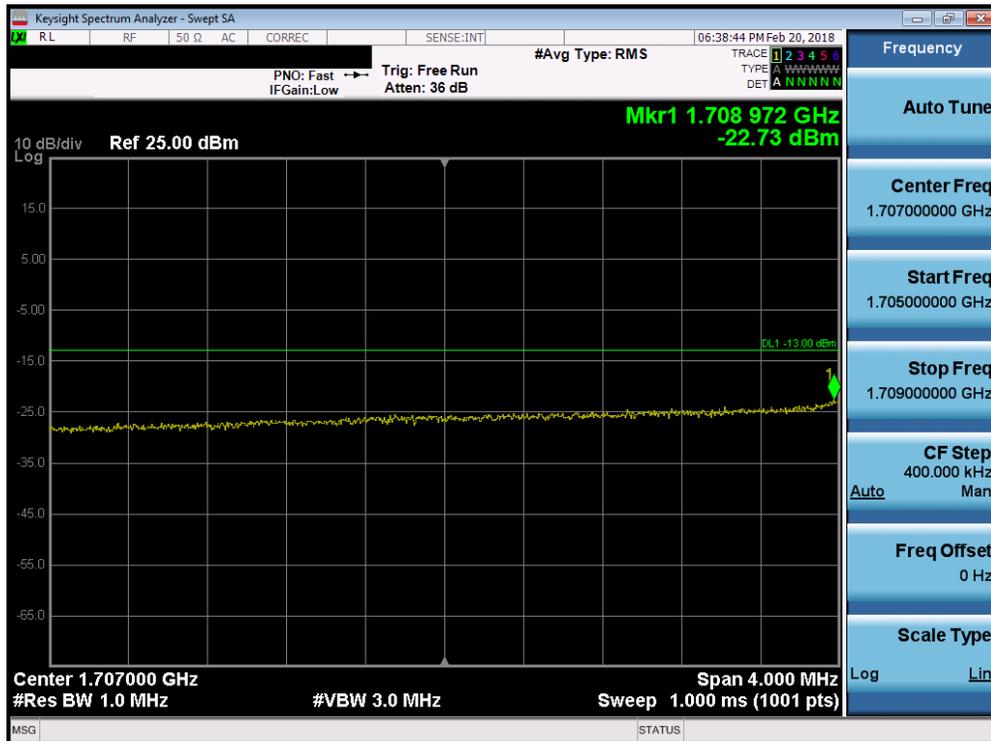


Plot 7-132. Upper Extended Band Edge Plot (Band 66 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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Plot 7-133. Lower Band Edge Plot (Band 66 - 10.0MHz QPSK - Full RB Configuration)

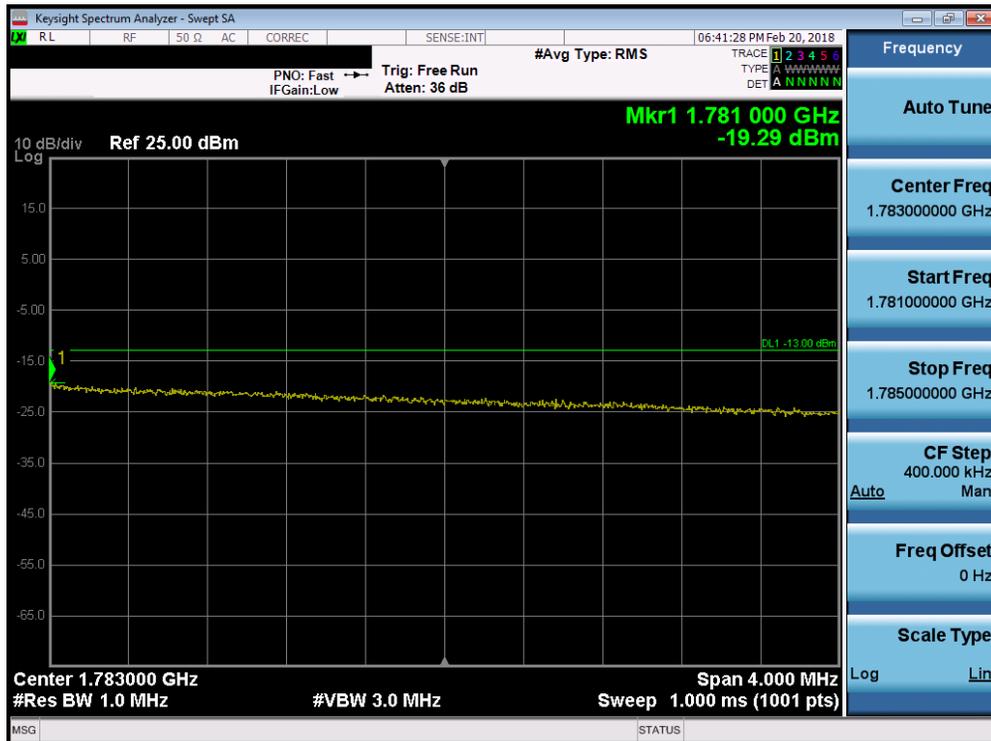


Plot 7-134. Lower Extended Band Edge Plot (Band 66 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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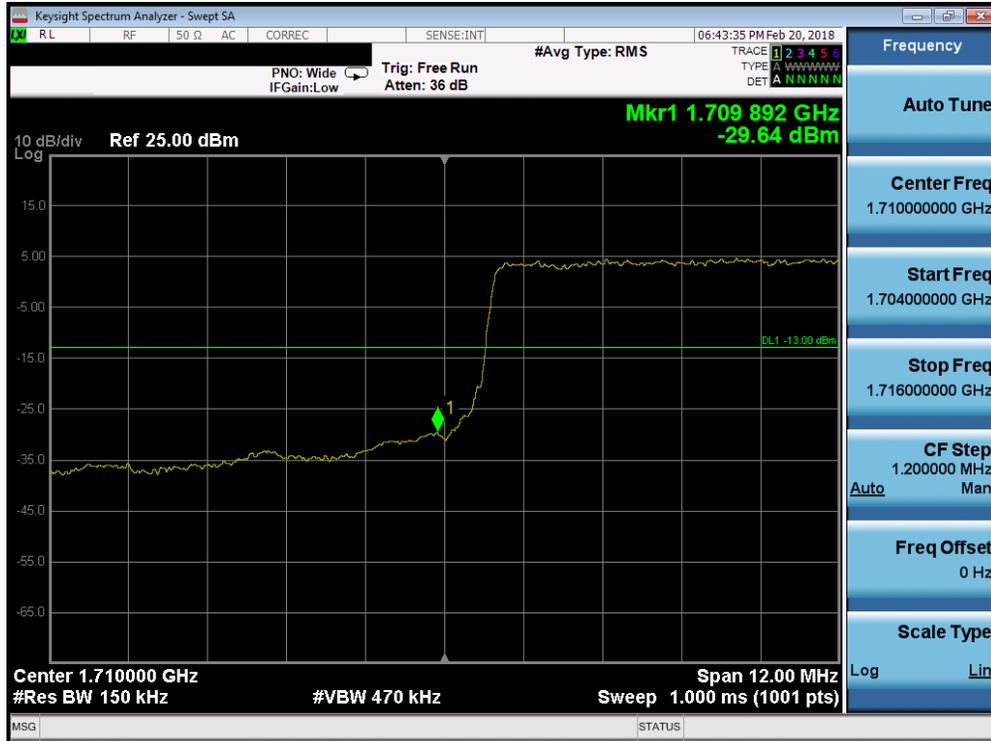


Plot 7-135. Upper Band Edge Plot (Band 66 - 10.0MHz QPSK - Full RB Configuration)

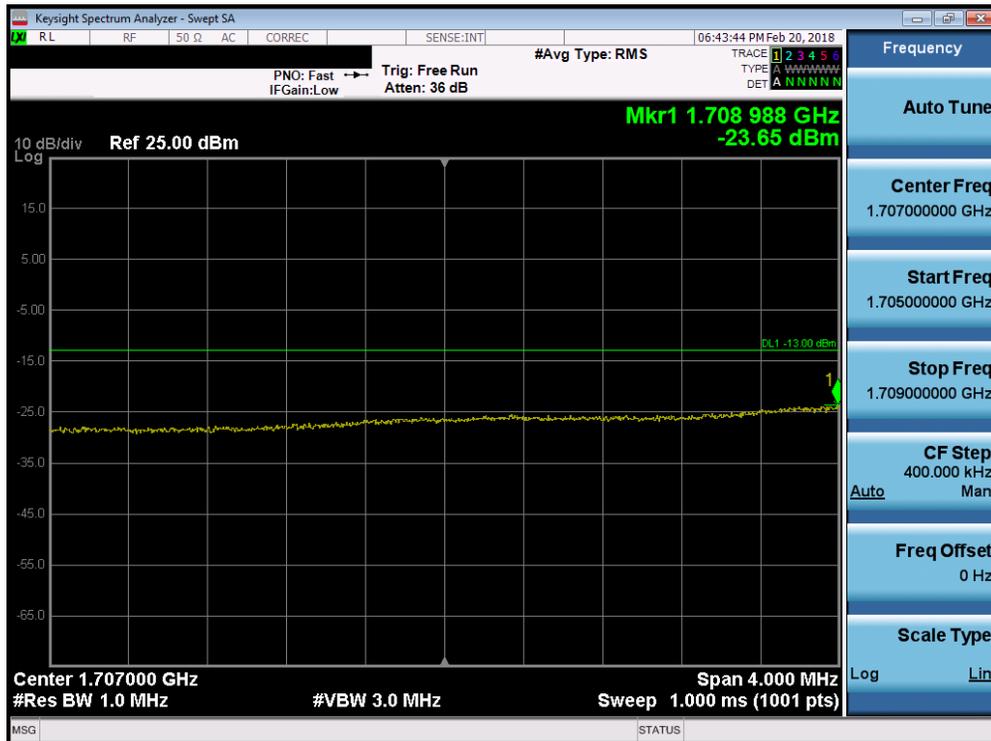


Plot 7-136. Upper Extended Band Edge Plot (Band 66 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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Plot 7-137. Lower Band Edge Plot (Band 66 - 15.0MHz QPSK - Full RB Configuration)

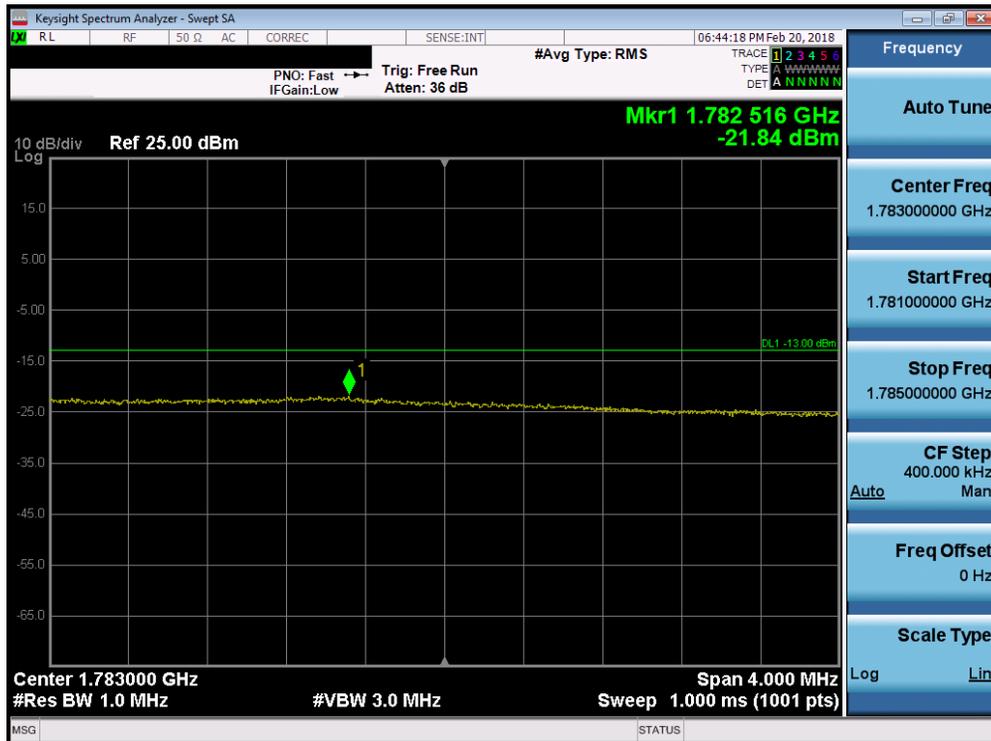


Plot 7-138. Lower Extended Band Edge Plot (Band 66 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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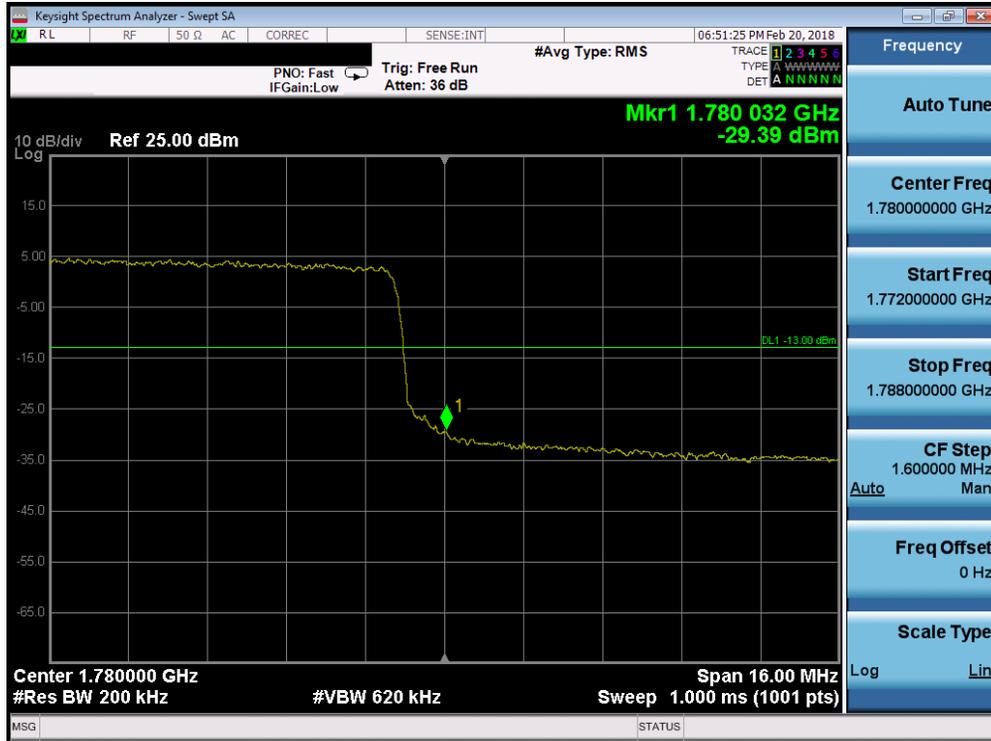


Plot 7-139. Upper Band Edge Plot (Band 66 - 15.0MHz QPSK - Full RB Configuration)

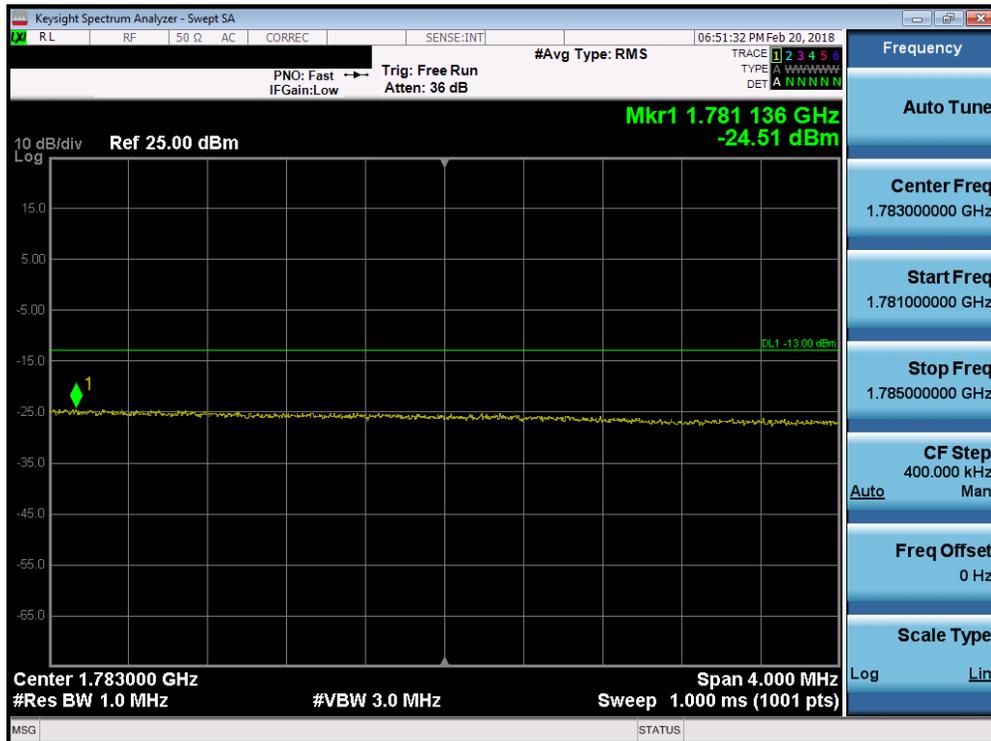


Plot 7-140. Upper Extended Band Edge Plot (Band 66 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Plot 7-143. Upper Band Edge Plot (Band 66 - 20.0MHz QPSK - Full RB Configuration)



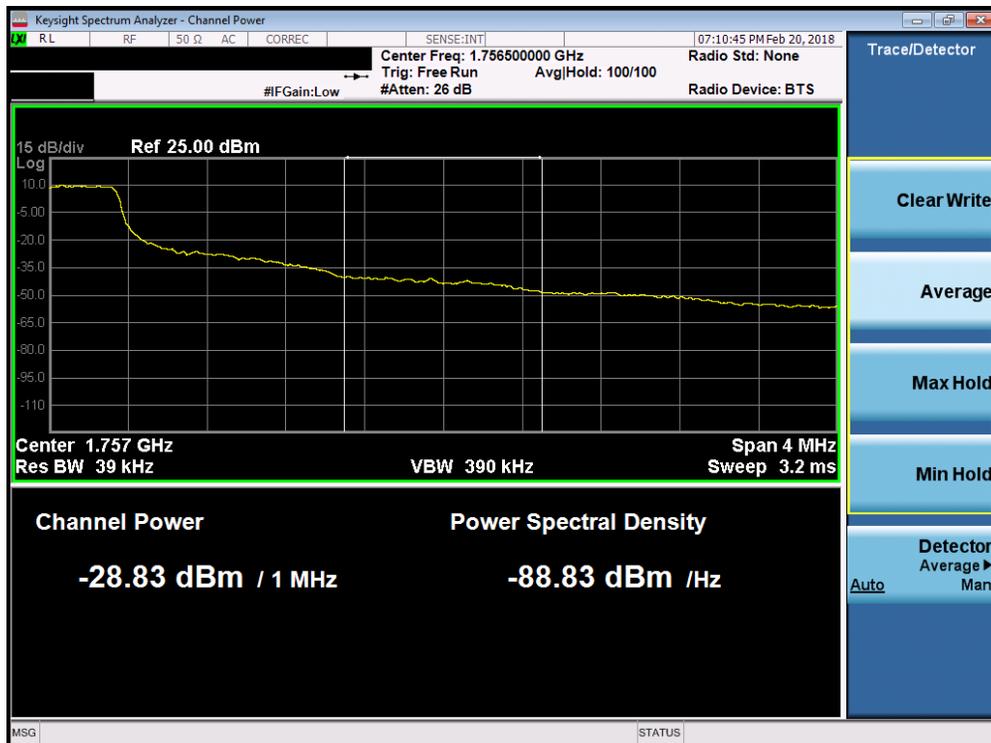
Plot 7-144. Upper Extended Band Edge Plot (Band 66 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Band 4



Plot 7-145. Upper Band Edge Plot (Band 4 - 1.4MHz QPSK - Full RB Configuration)

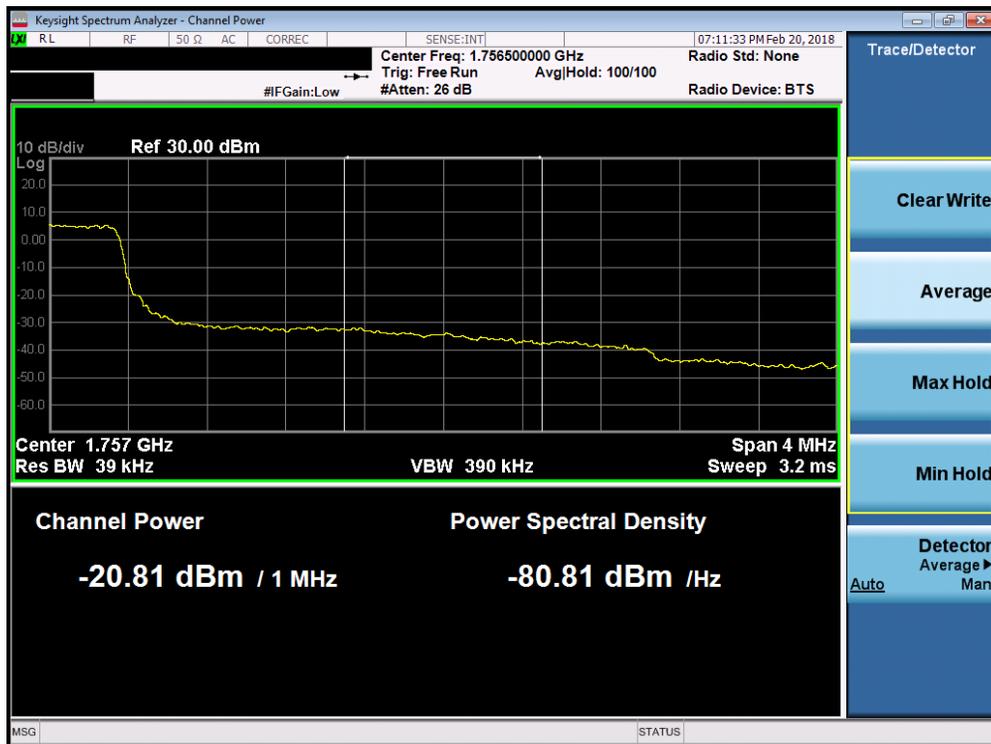


Plot 7-146. Upper Extended Band Edge Plot (Band 4 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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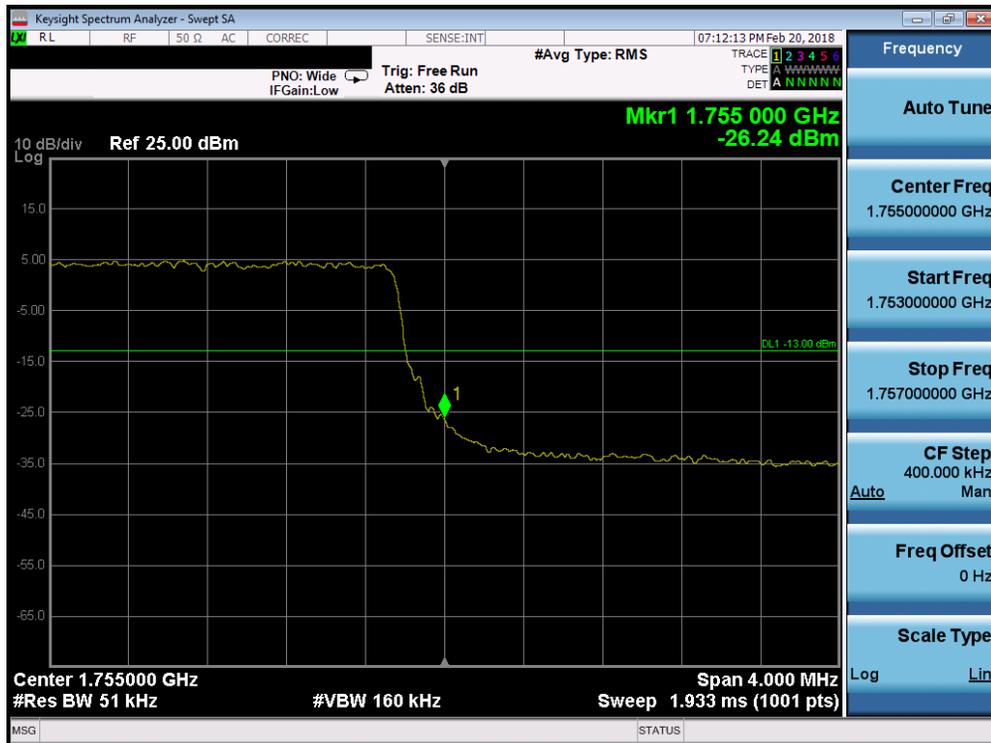


Plot 7-147. Upper Band Edge Plot (Band 4 - 3.0MHz QPSK - Full RB Configuration)

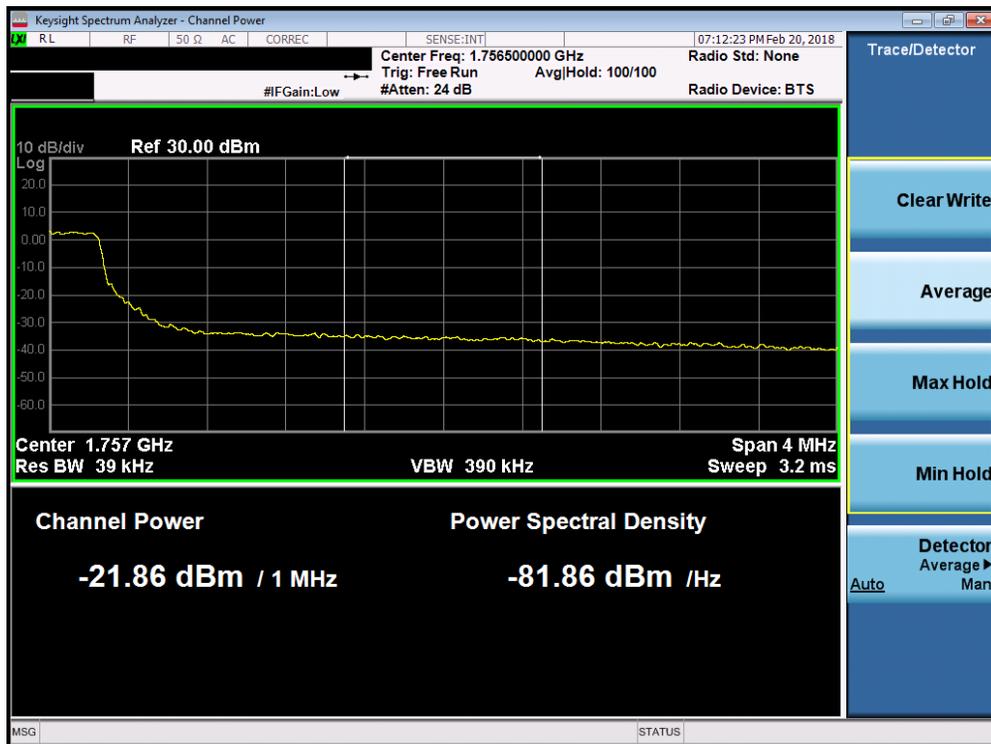


Plot 7-148. Upper Extended Band Edge Plot (Band 4 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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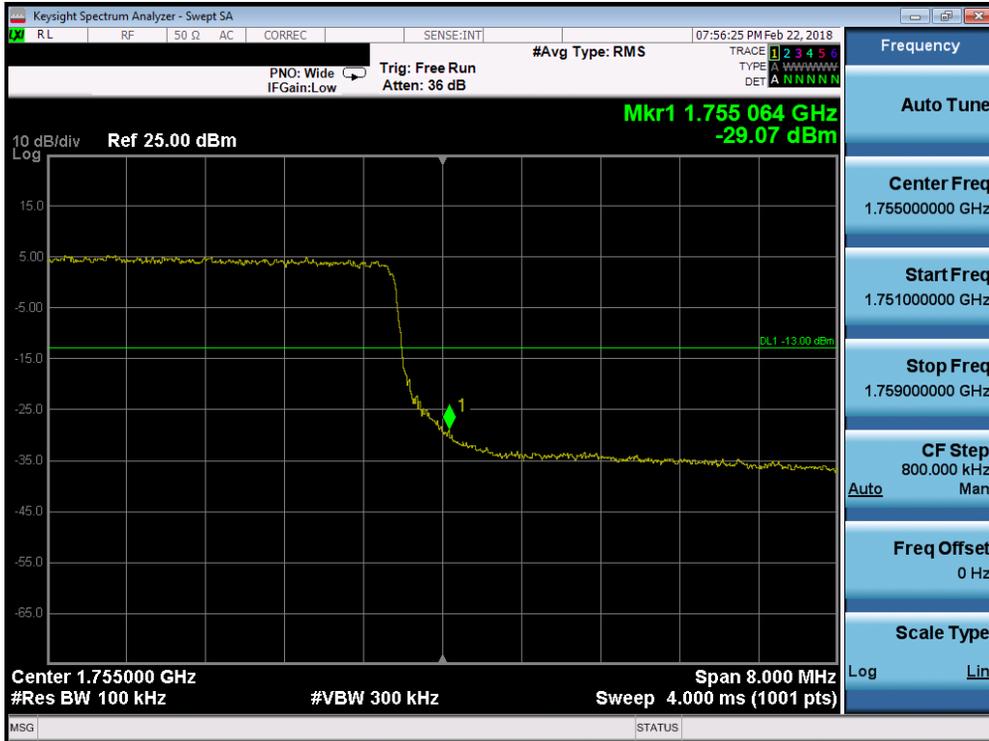


Plot 7-149. Upper Band Edge Plot (Band 4 - 5.0MHz QPSK - Full RB Configuration)

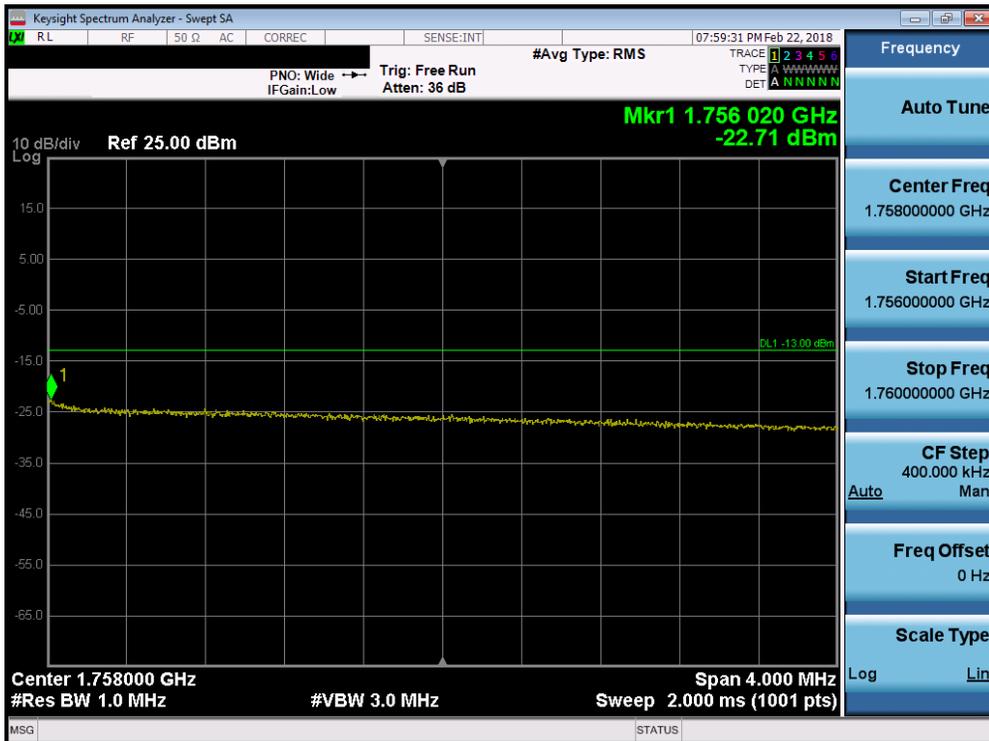


Plot 7-150. Upper Extended Band Edge Plot (Band 4 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1802060016-03.ZNF	Test Dates: 2/5-2/21/2018	EUT Type: Portable Handset		Page 96 of 167

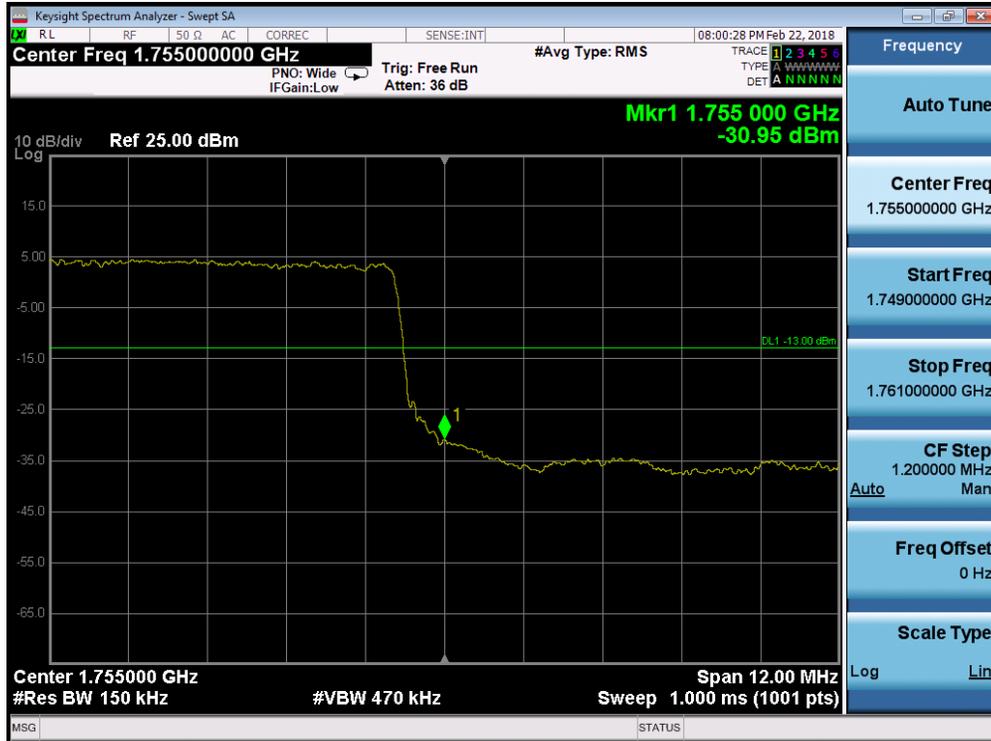


Plot 7-151. Upper Band Edge Plot (Band 4 - 10.0MHz QPSK - Full RB Configuration)

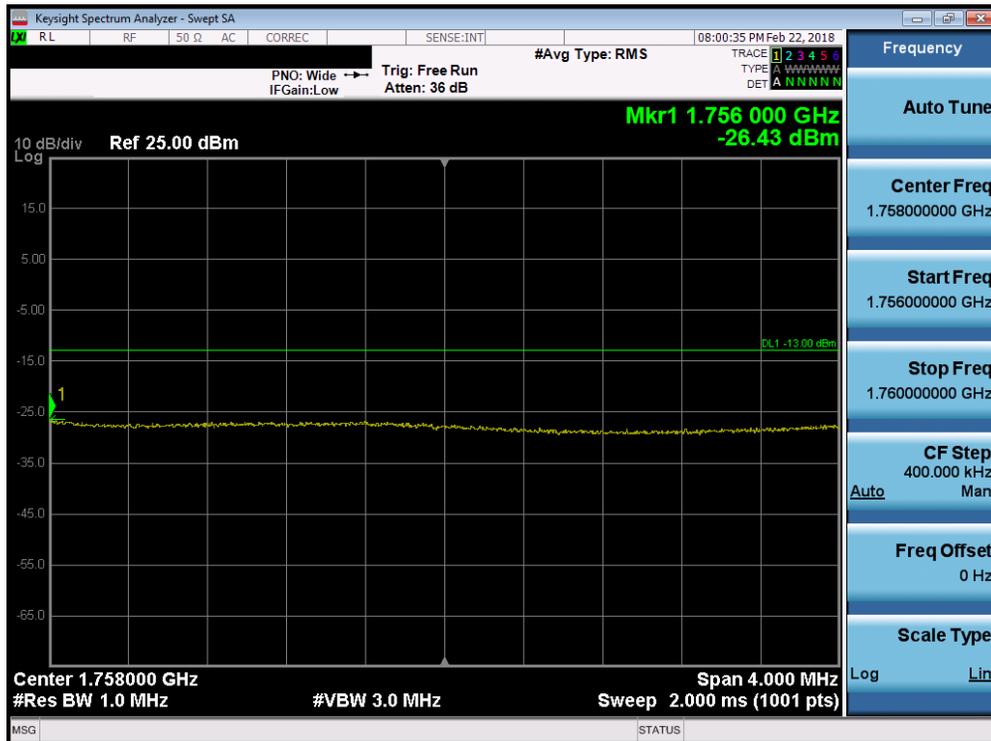


Plot 7-152. Upper Extended Band Edge Plot (Band 4 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1802060016-03.ZNF	Test Dates: 2/5-2/21/2018	EUT Type: Portable Handset		Page 97 of 167



Plot 7-153. Upper Band Edge Plot (Band 4 - 15.0MHz QPSK - Full RB Configuration)

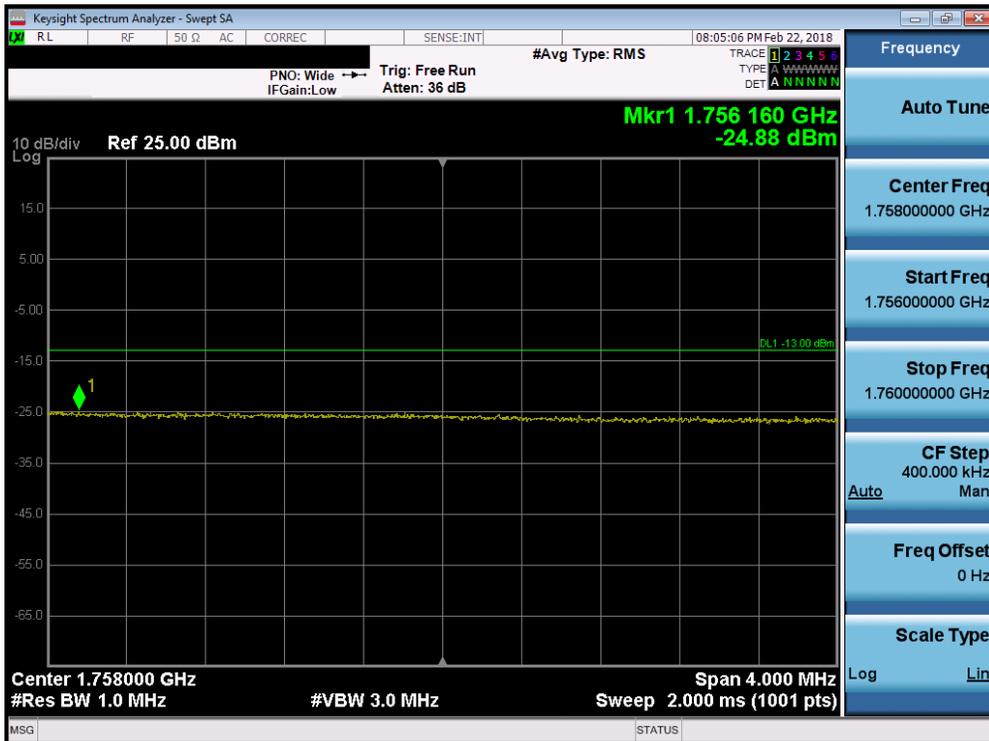


Plot 7-154. Upper Extended Band Edge Plot (Band 4 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1802060016-03.ZNF	Test Dates: 2/5-2/21/2018	EUT Type: Portable Handset		Page 98 of 167



Plot 7-155. Upper Band Edge Plot (Band 4 - 20.0MHz QPSK - Full RB Configuration)



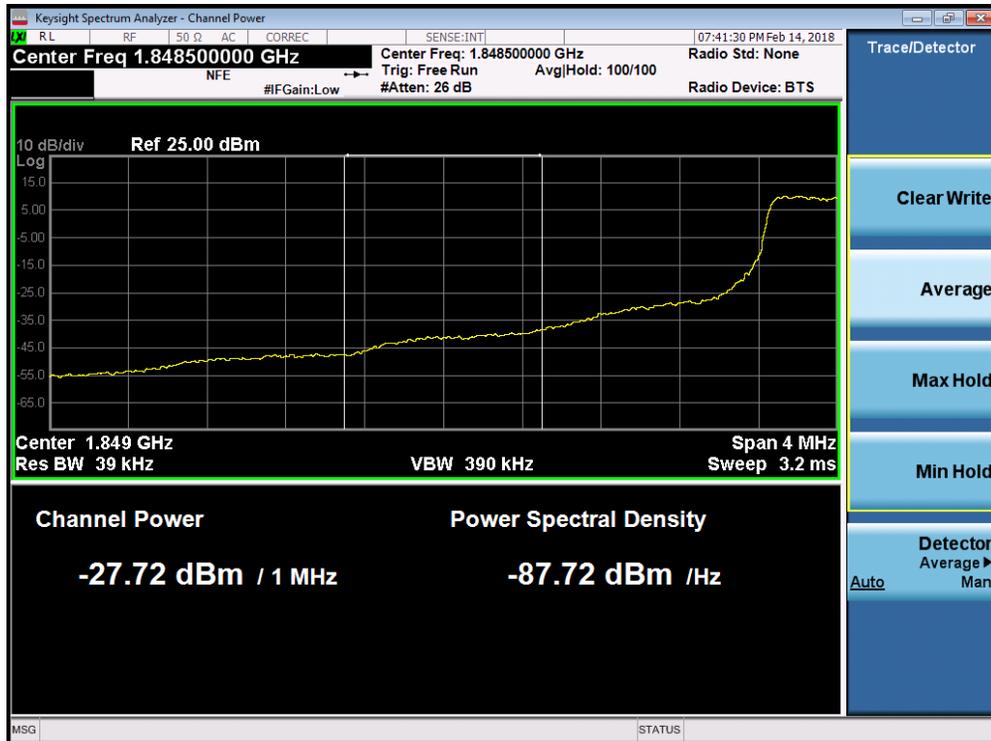
Plot 7-156. Upper Extended Band Edge Plot (Band 4 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1802060016-03.ZNF	Test Dates: 2/5-2/21/2018	EUT Type: Portable Handset		Page 99 of 167

Band 2



Plot 7-157. Lower Band Edge Plot (Band 2 - 1.4MHz QPSK - Full RB Configuration)

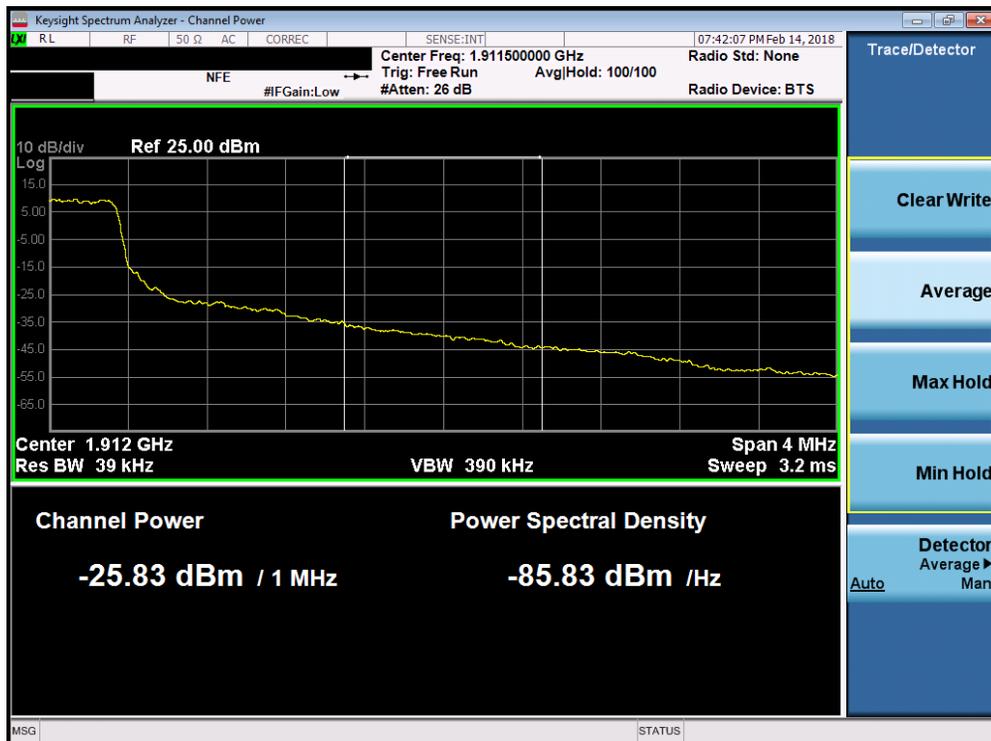


Plot 7-158. Lower Extended Band Edge Plot (Band 2 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1802060016-03.ZNF	Test Dates: 2/5-2/21/2018	EUT Type: Portable Handset		Page 100 of 167



Plot 7-159. Upper Band Edge Plot (Band 2 - 1.4MHz QPSK - Full RB Configuration)

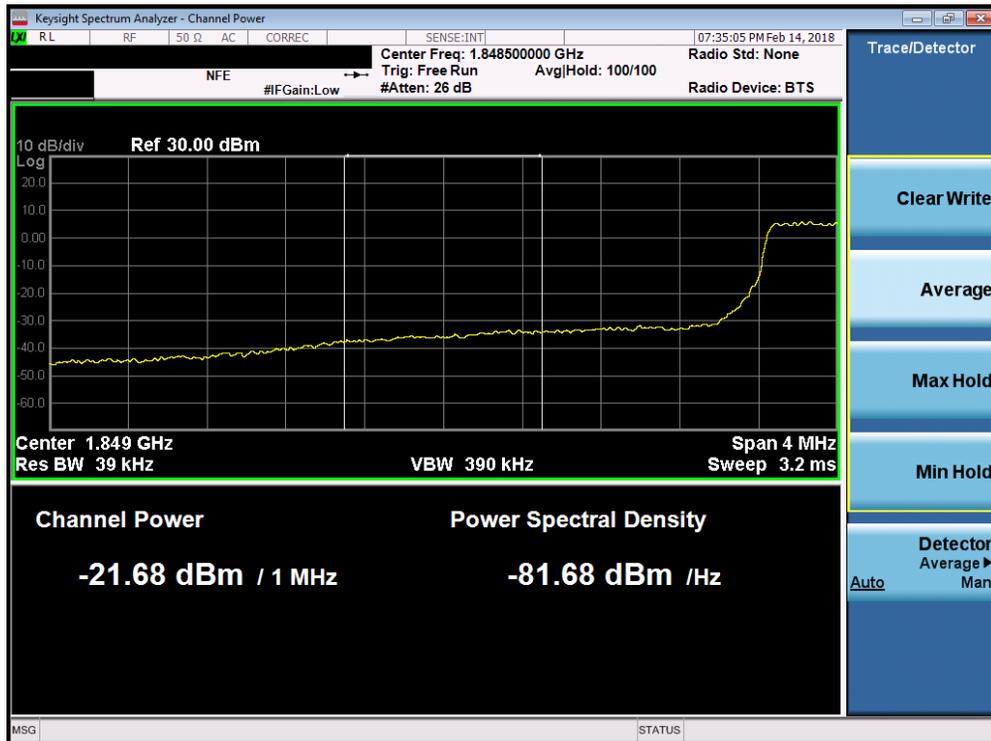


Plot 7-160. Upper Extended Band Edge Plot (Band 2 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1802060016-03.ZNF	Test Dates: 2/5-2/21/2018	EUT Type: Portable Handset		Page 101 of 167



Plot 7-161. Lower Band Edge Plot (Band 2 - 3.0MHz QPSK - Full RB Configuration)

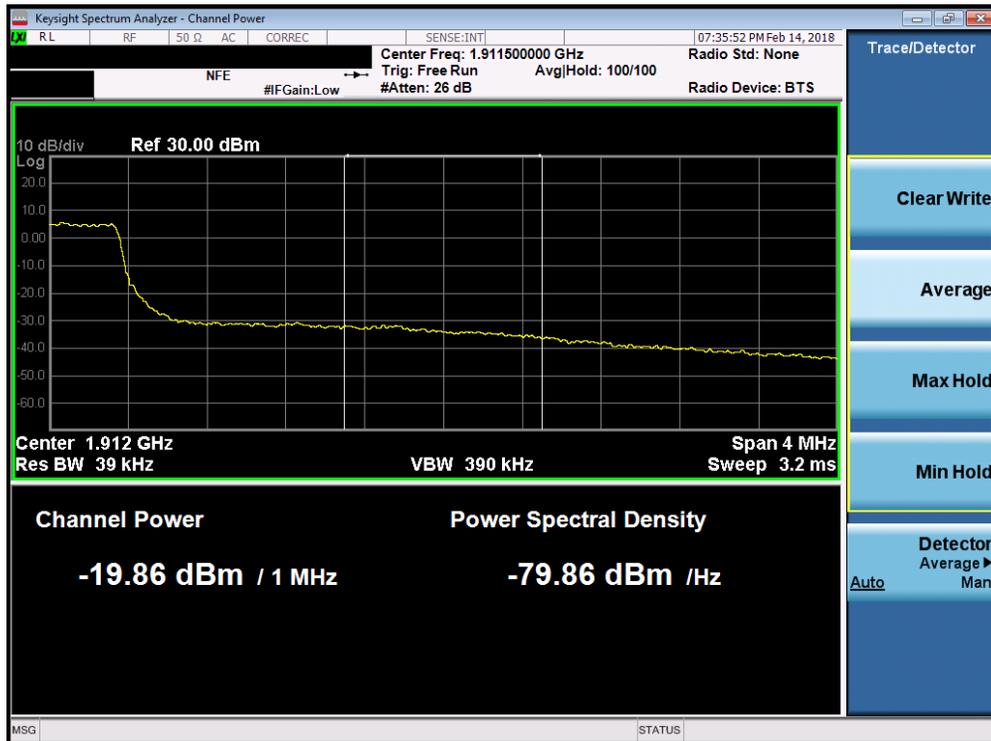


Plot 7-162. Lower Extended Band Edge Plot (Band 2 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1802060016-03.ZNF	Test Dates: 2/5-2/21/2018	EUT Type: Portable Handset		Page 102 of 167

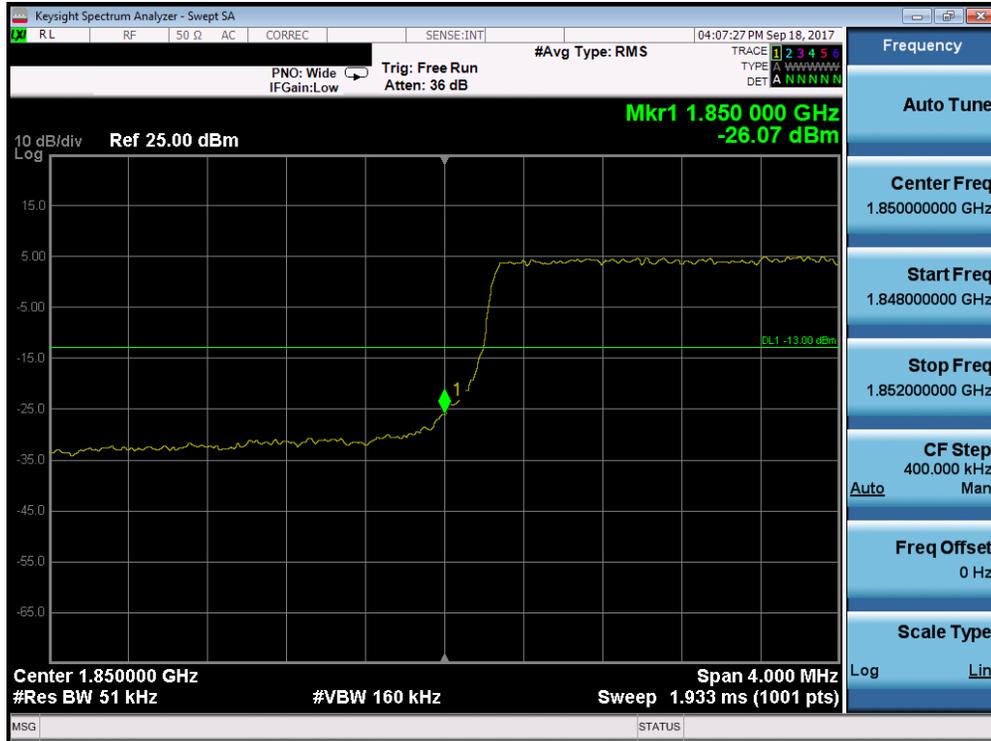


Plot 7-163. Upper Band Edge Plot (Band 2 - 3.0MHz QPSK - Full RB Configuration)

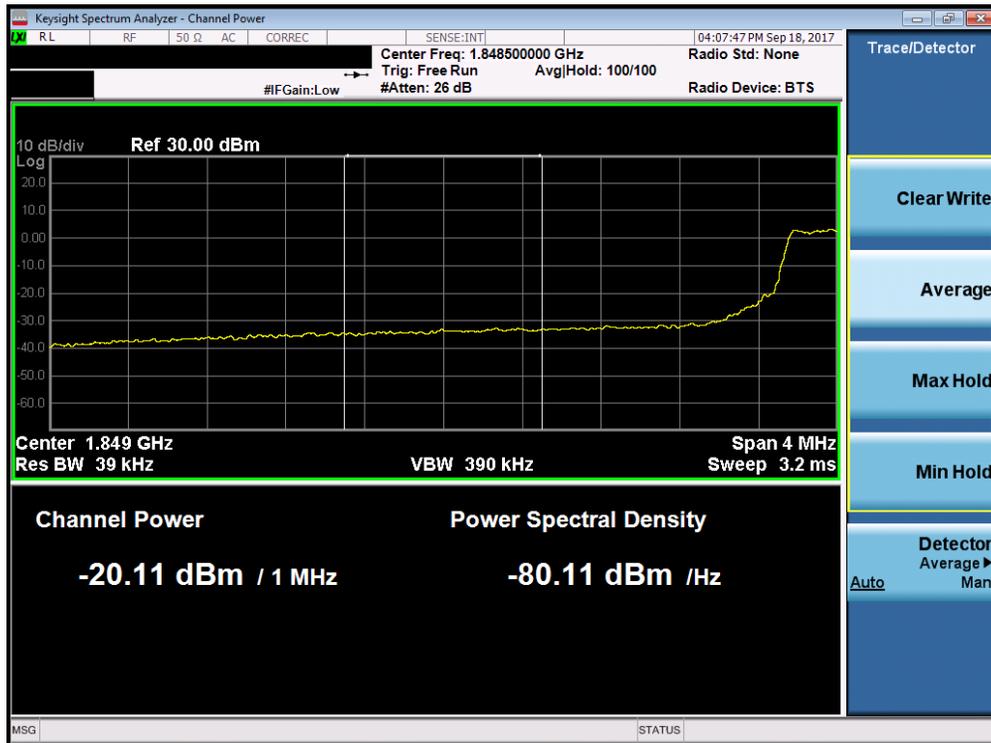


Plot 7-164. Upper Extended Band Edge Plot (Band 2 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1802060016-03.ZNF	Test Dates: 2/5-2/21/2018	EUT Type: Portable Handset		Page 103 of 167

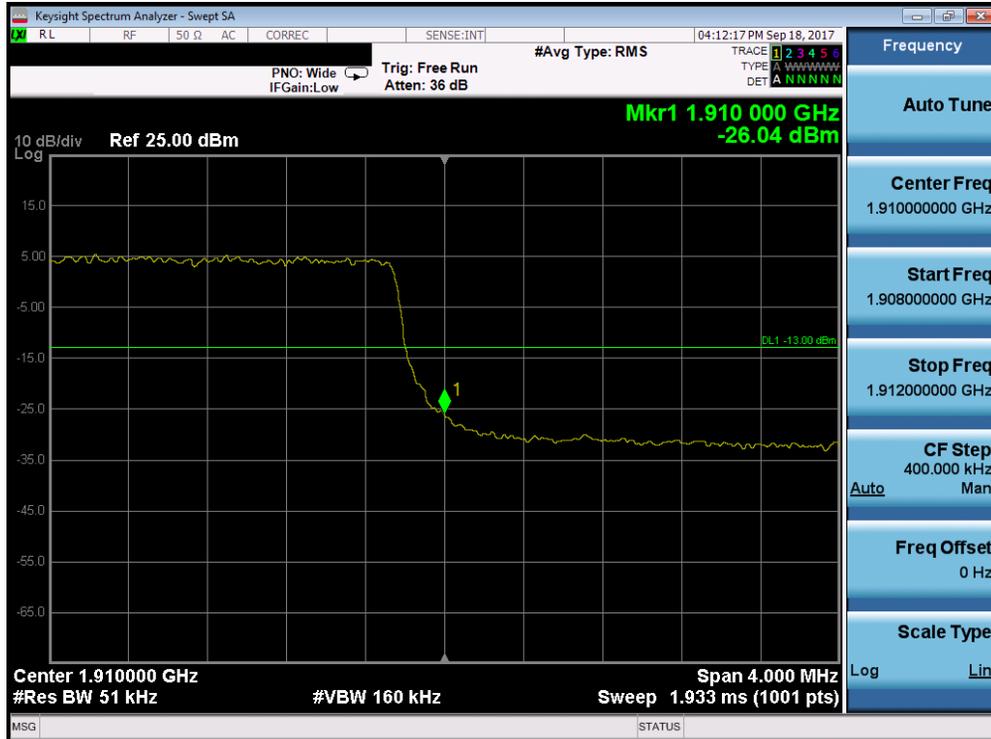


Plot 7-165. Lower Band Edge Plot (Band 2 - 5.0MHz QPSK - Full RB Configuration)

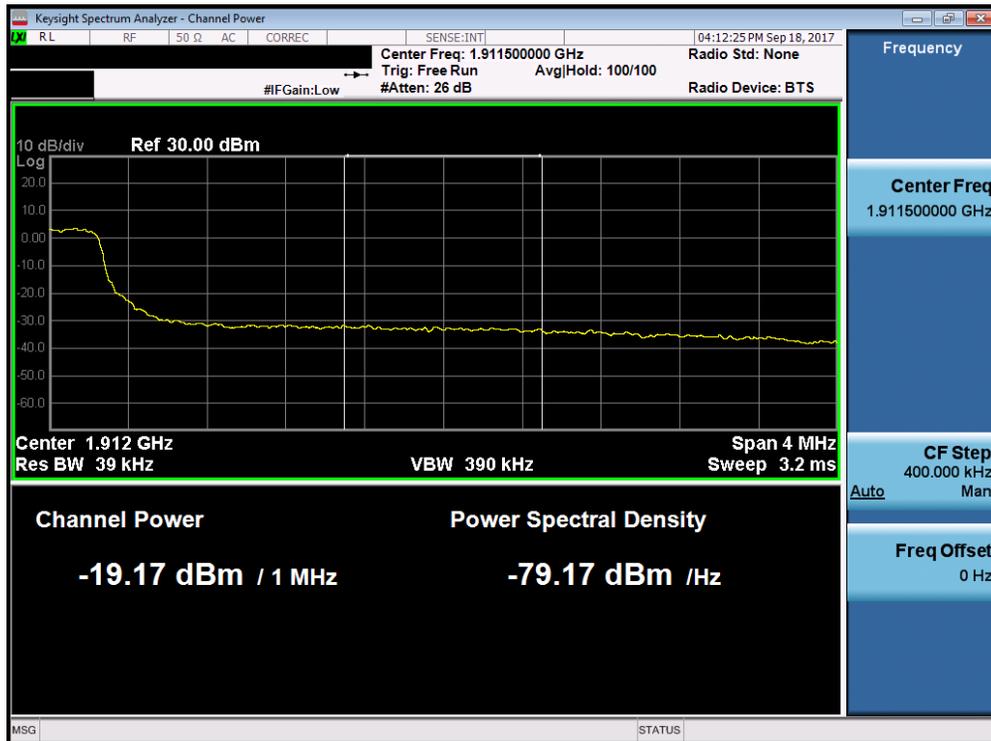


Plot 7-166. Lower Extended Band Edge Plot (Band 2 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1802060016-03.ZNF	Test Dates: 2/5-2/21/2018	EUT Type: Portable Handset		Page 104 of 167



Plot 7-167. Upper Band Edge Plot (Band 2 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-168. Upper Extended Band Edge Plot (Band 2 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1802060016-03.ZNF	Test Dates: 2/5-2/21/2018	EUT Type: Portable Handset		Page 105 of 167



Plot 7-169. Lower Band Edge Plot (Band 2 - 10.0MHz QPSK - Full RB Configuration)

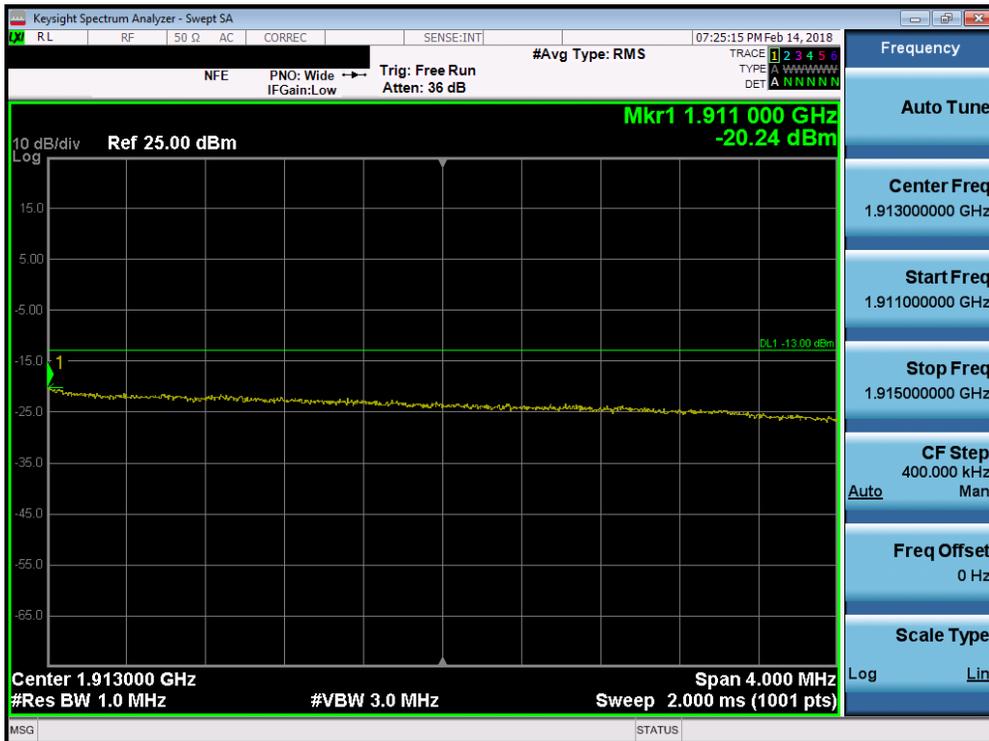


Plot 7-170. Lower Extended Band Edge Plot (Band 2 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1802060016-03.ZNF	Test Dates: 2/5-2/21/2018	EUT Type: Portable Handset		Page 106 of 167

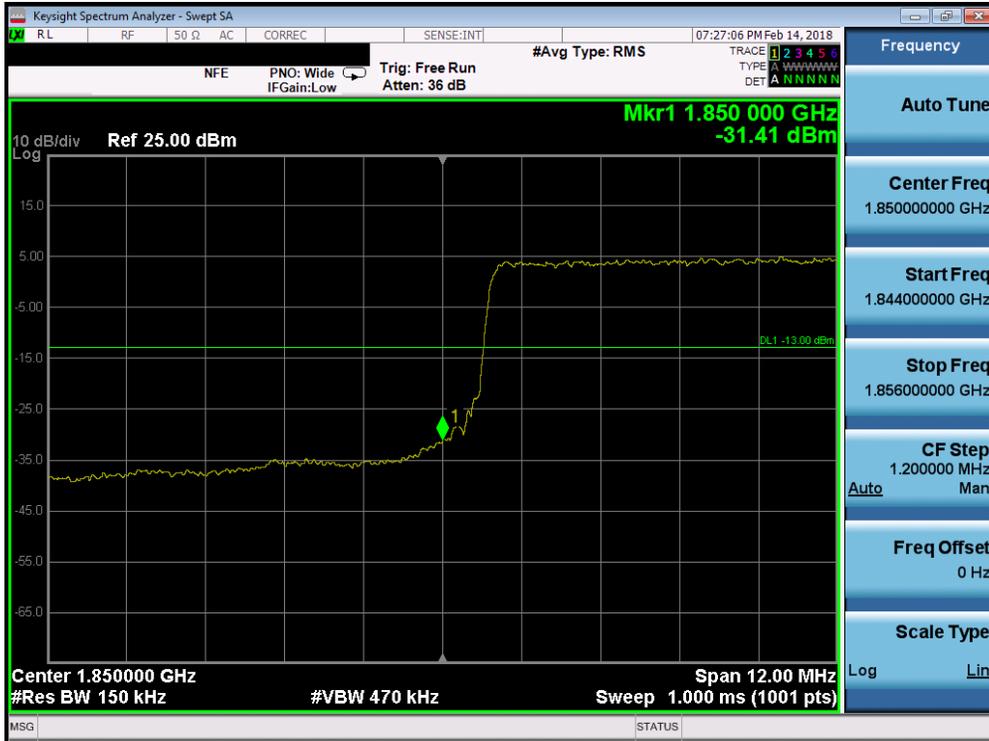


Plot 7-171. Upper Band Edge Plot (Band 2 - 10.0MHz QPSK - Full RB Configuration)

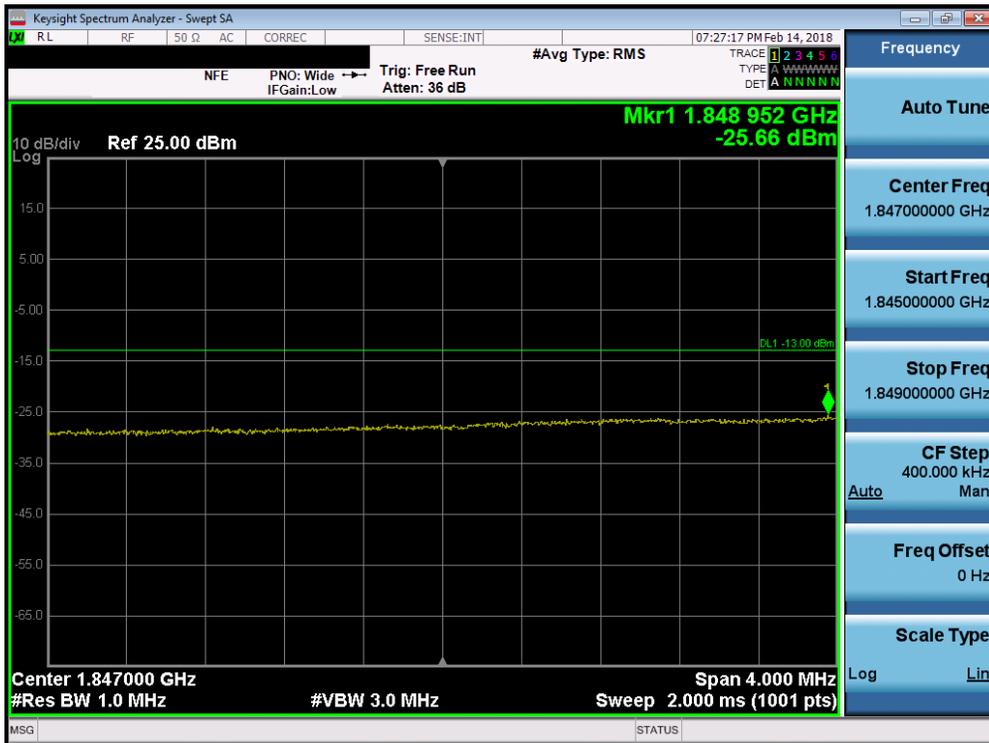


Plot 7-172. Upper Extended Band Edge Plot (Band 2 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1802060016-03.ZNF	Test Dates: 2/5-2/21/2018	EUT Type: Portable Handset		Page 107 of 167



Plot 7-173. Lower Band Edge Plot (Band 2 - 15.0MHz QPSK - Full RB Configuration)



Plot 7-174. Lower Extended Band Edge Plot (Band 2 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1802060016-03.ZNF	Test Dates: 2/5-2/21/2018	EUT Type: Portable Handset		Page 108 of 167



Plot 7-175. Upper Band Edge Plot (Band 2 - 15.0MHz QPSK - Full RB Configuration)



Plot 7-176. Upper Extended Band Edge Plot (Band 2 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1802060016-03.ZNF	Test Dates: 2/5-2/21/2018	EUT Type: Portable Handset		Page 109 of 167



Plot 7-177. Lower Band Edge Plot (Band 2 - 20.0MHz QPSK - Full RB Configuration)

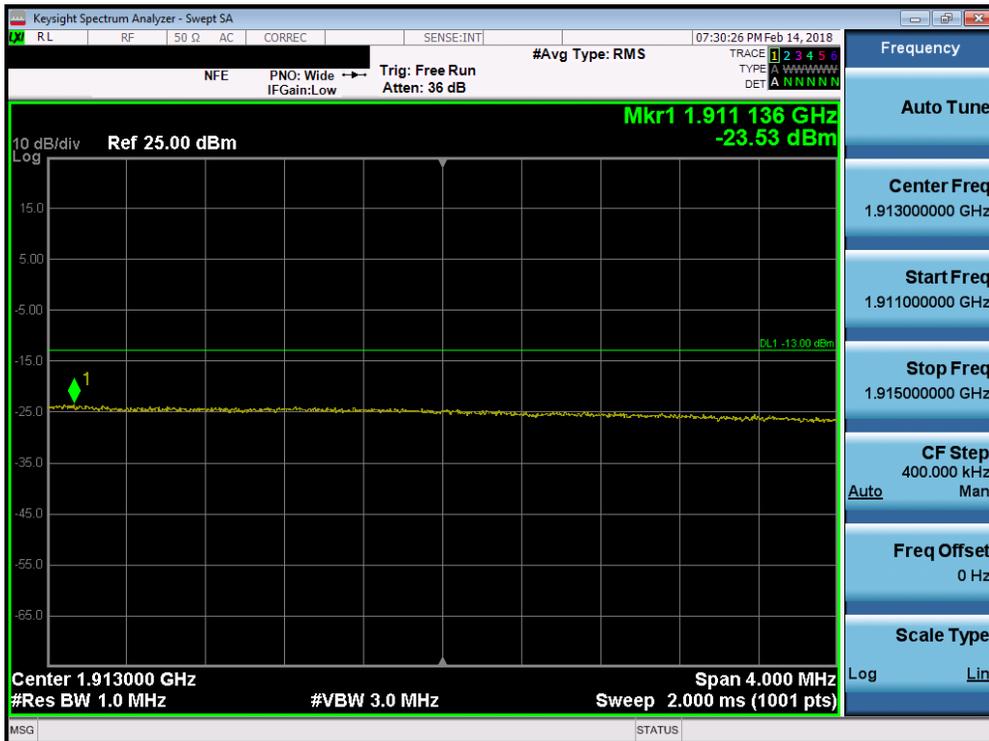


Plot 7-178. Lower Extended Band Edge Plot (Band 2 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1802060016-03.ZNF	Test Dates: 2/5-2/21/2018	EUT Type: Portable Handset		Page 110 of 167



Plot 7-179. Upper Band Edge Plot (Band 2 - 20.0MHz QPSK - Full RB Configuration)



Plot 7-180. Upper Extended Band Edge Plot (Band 2 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1802060016-03.ZNF	Test Dates: 2/5-2/21/2018	EUT Type: Portable Handset		Page 111 of 167

7.5 Peak-Average Ratio

Test Overview

A peak to average ratio measurement is performed at the conducted port of the EUT. The spectrum analyzers Complementary Cumulative Distribution Function (CCDF) measurement profile is used to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth. The CCDF curve shows how much time the peak waveform spends at or above a given average power level. The percent of time the signal spends at or above the level defines the probability for that particular power level.

Test Procedure Used

KDB 971168 D01 v03 – Section 5.7.1

Test Settings

1. The signal analyzer's CCDF measurement profile is enabled
2. Frequency = carrier center frequency
3. Measurement BW > Emission bandwidth of signal
4. The signal analyzer was set to collect one million samples to generate the CCDF curve
5. The measurement interval was set depending on the type of signal analyzed. For continuous signals (>98% duty cycle), the measurement interval was set to 1ms.

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

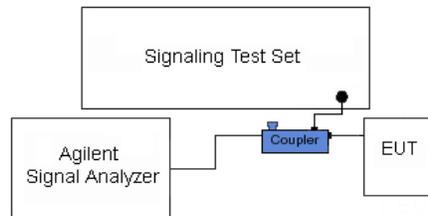


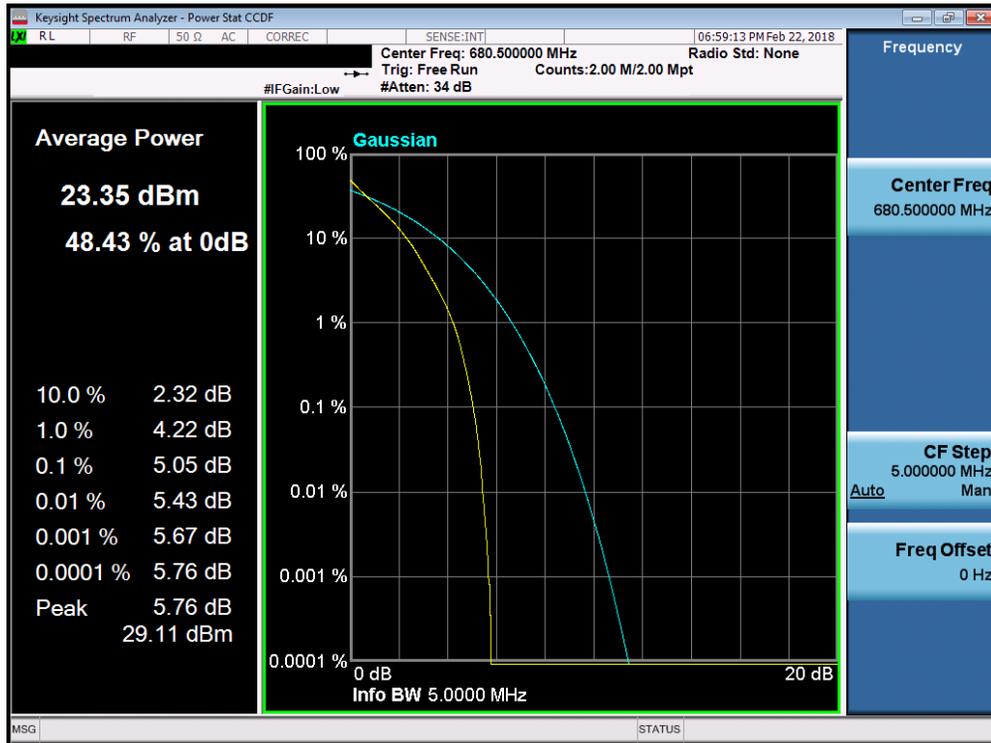
Figure 7-4. Test Instrument & Measurement Setup

Test Notes

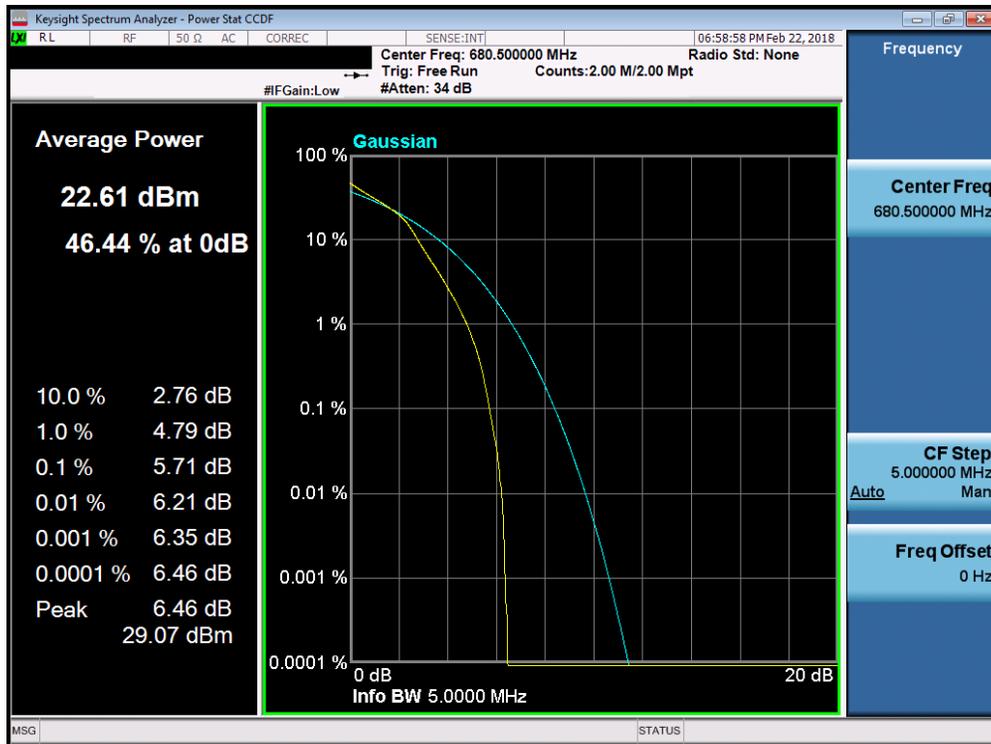
None.

FCC ID: ZNFX212TA	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1802060016-03.ZNF	Test Dates: 2/5-2/21/2018	EUT Type: Portable Handset	Page 112 of 167	

Band 71

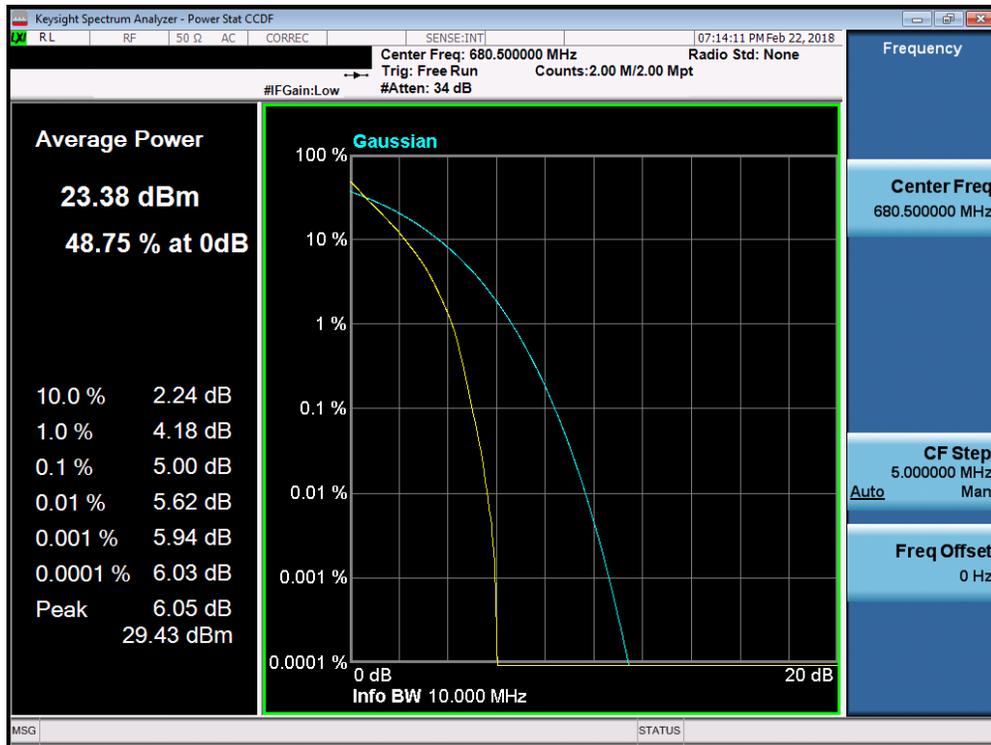


Plot 7-181. PAR Plot (Band 71 – 5.0MHz QPSK - Full RB Configuration)

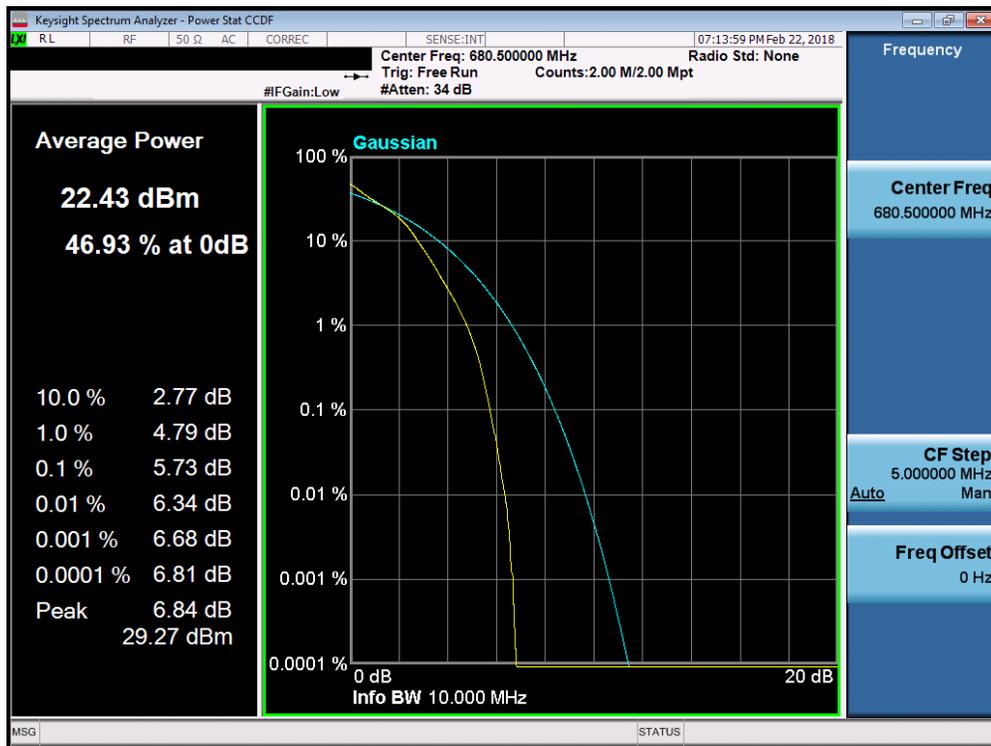


Plot 7-182. PAR Plot (Band 71 – 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFX212TA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1802060016-03.ZNF	Test Dates: 2/5-2/21/2018	EUT Type: Portable Handset		Page 113 of 167



Plot 7-183. PAR Plot (Band 71 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-184. PAR Plot (Band 71 - 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFX212TA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1802060016-03.ZNF	Test Dates: 2/5-2/21/2018	EUT Type: Portable Handset		Page 114 of 167