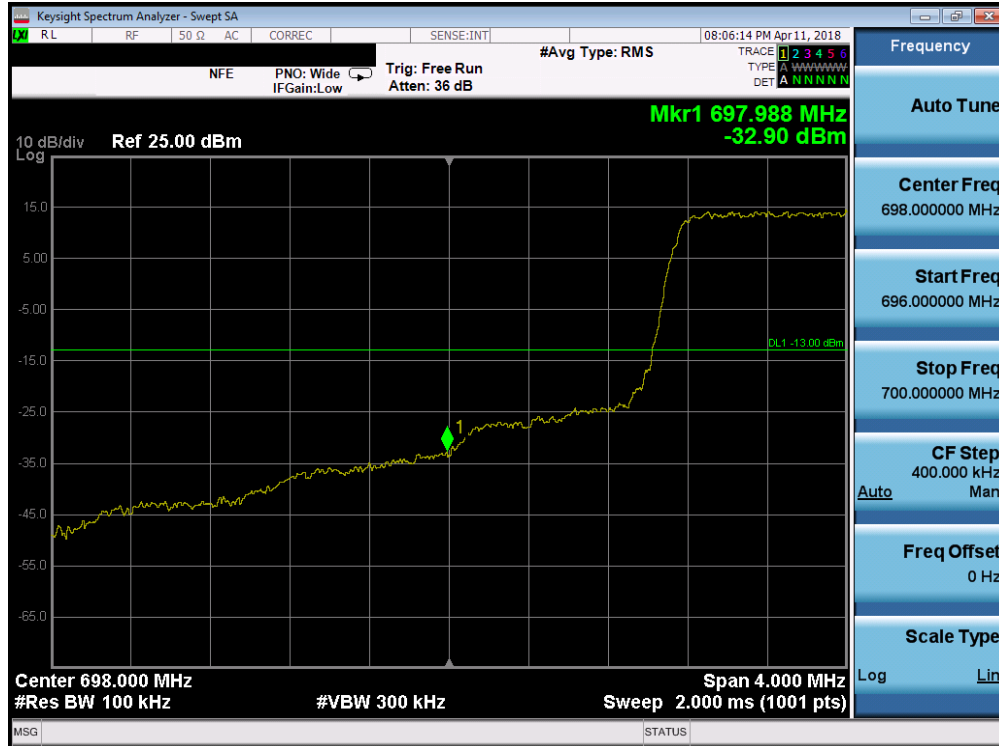
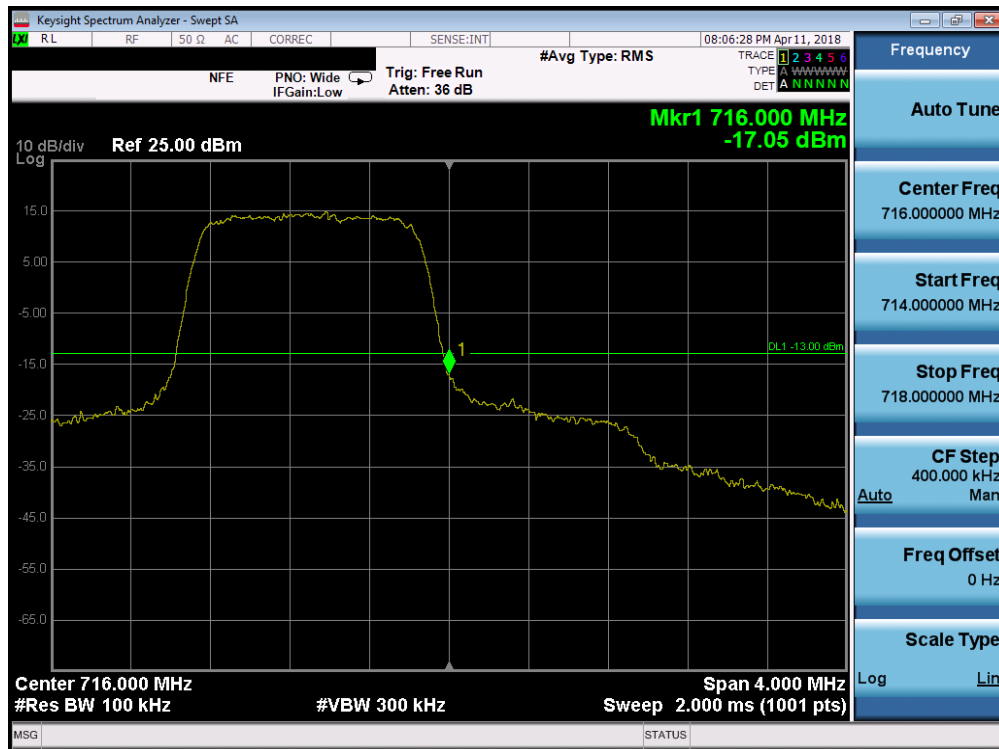


Band 12/17

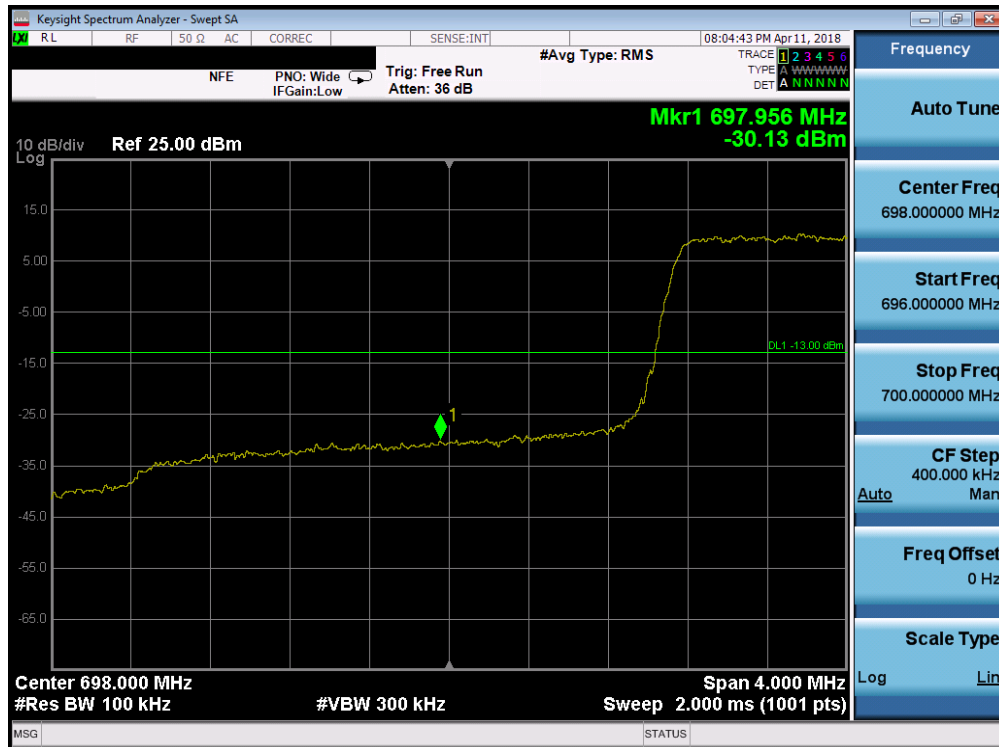


Plot 7-107. Lower Band Edge Plot (Band 12 - 1.4MHz QPSK - Full RB Configuration)



FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 75 of 185

Plot 7-108. Upper Band Edge Plot (Band 12 - 1.4MHz QPSK - Full RB Configuration)

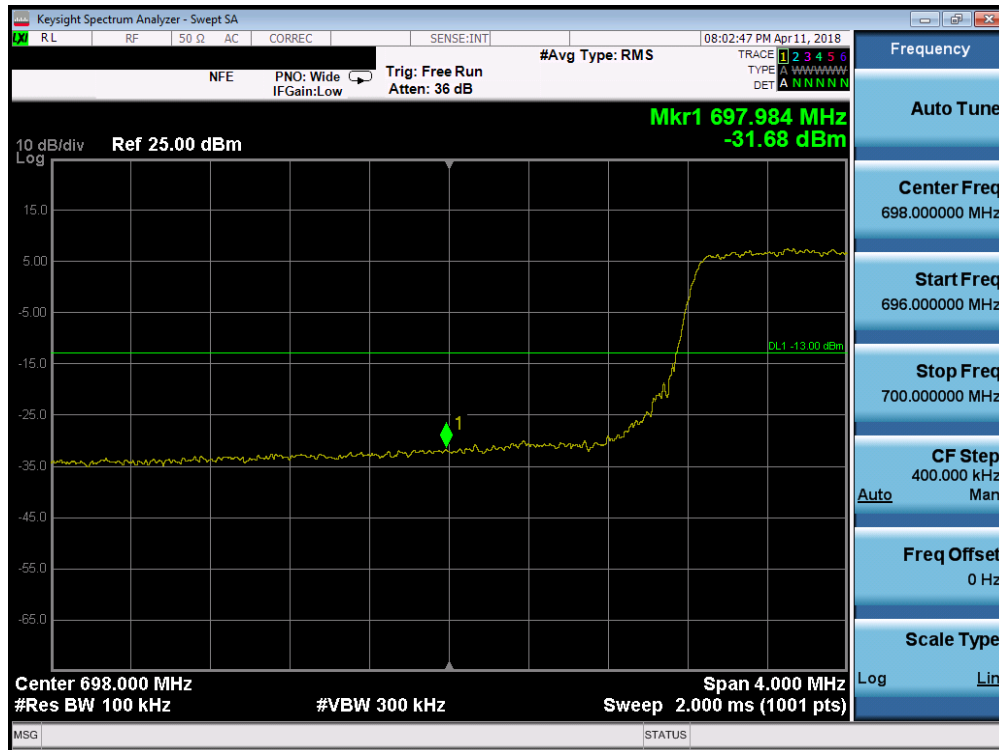


Plot 7-109. Lower Band Edge Plot (Band 12 - 3.0MHz QPSK - Full RB Configuration)

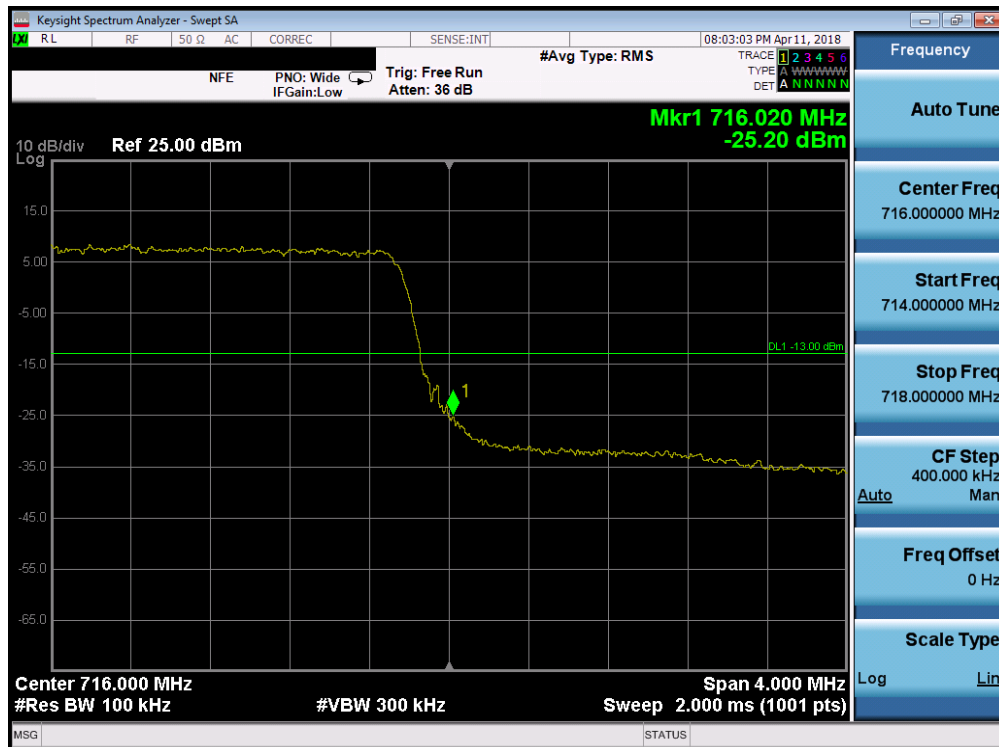


Plot 7-110. Upper Band Edge Plot (Band 12 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 76 of 185

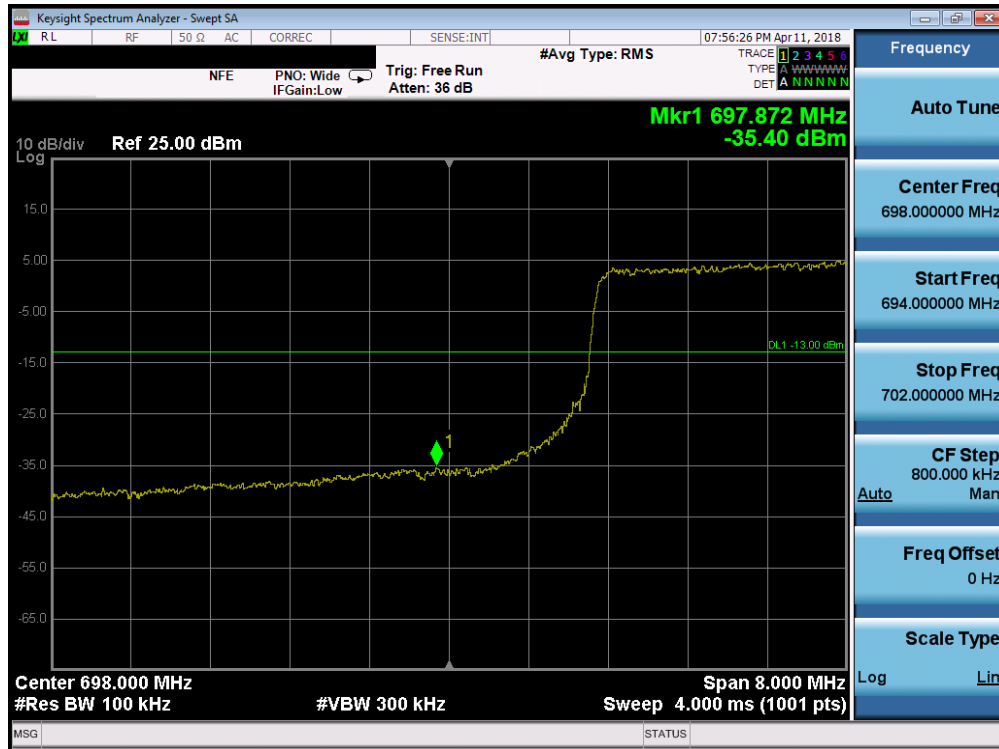


Plot 7-111. Lower Band Edge Plot (Band 12/17 - 5.0MHz QPSK - Full RB Configuration)

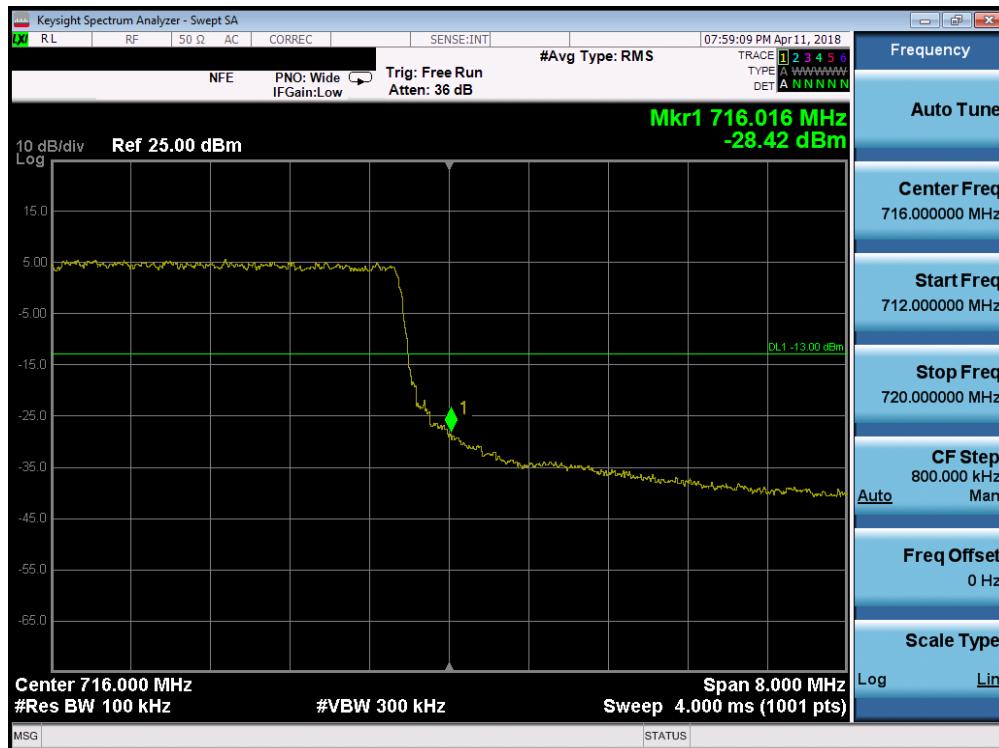


Plot 7-112. Upper Band Edge Plot (Band 12/17 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03- R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 77 of 185



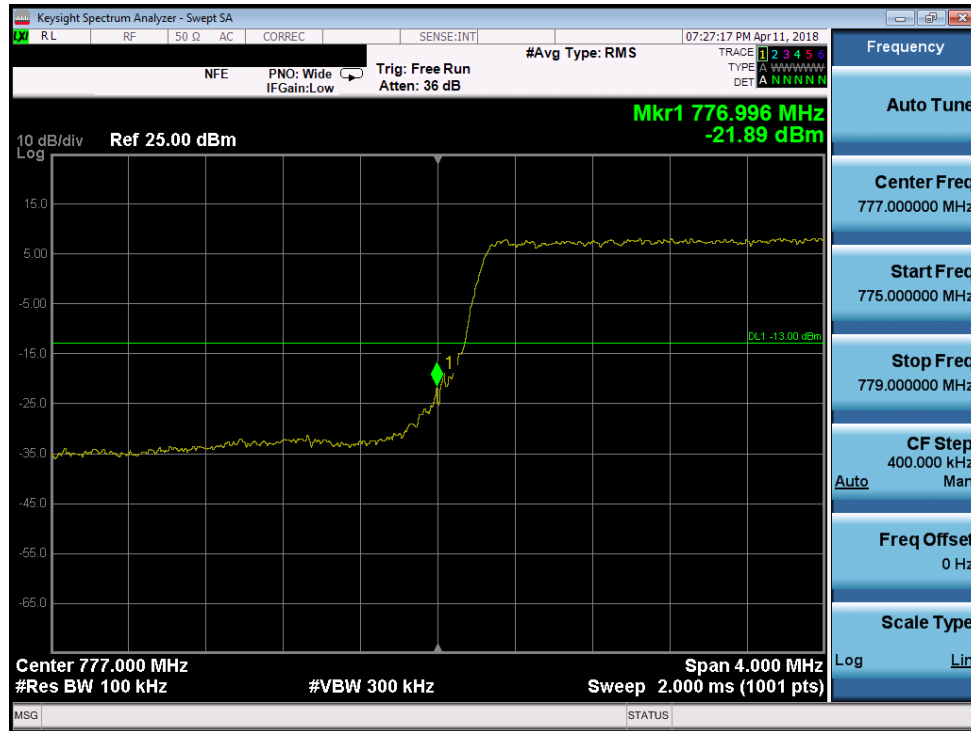
Plot 7-113. Lower Band Edge Plot (Band 12/17 - 10.0MHz QPSK - Full RB Configuration)



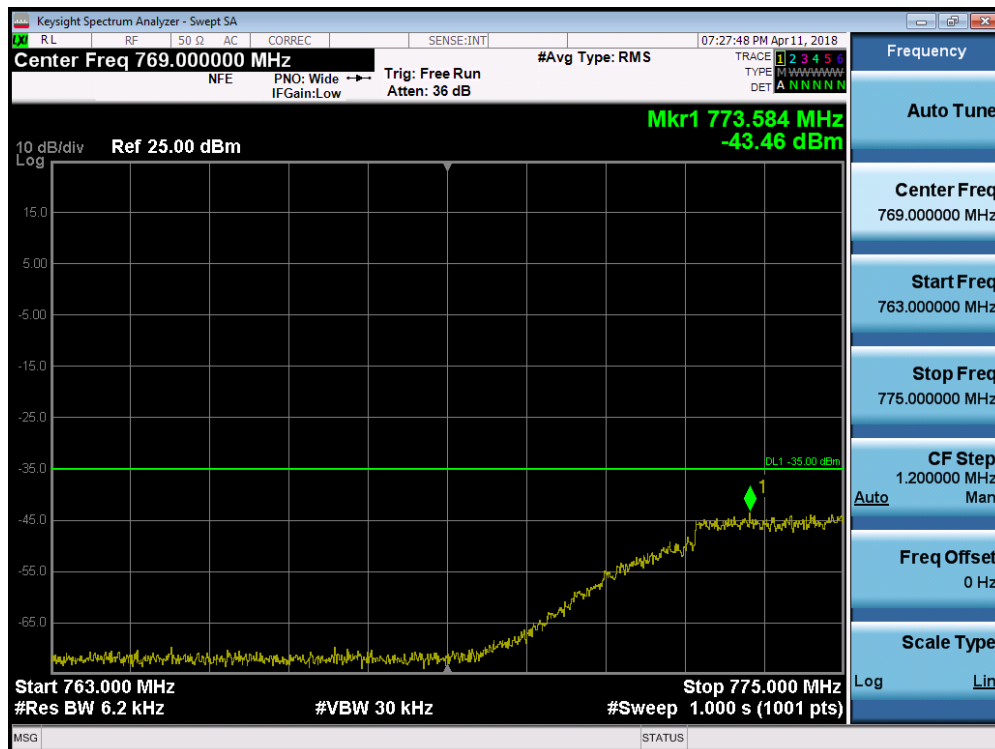
Plot 7-114. Upper Band Edge Plot (Band 12/17 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03- R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 78 of 185

Band 13

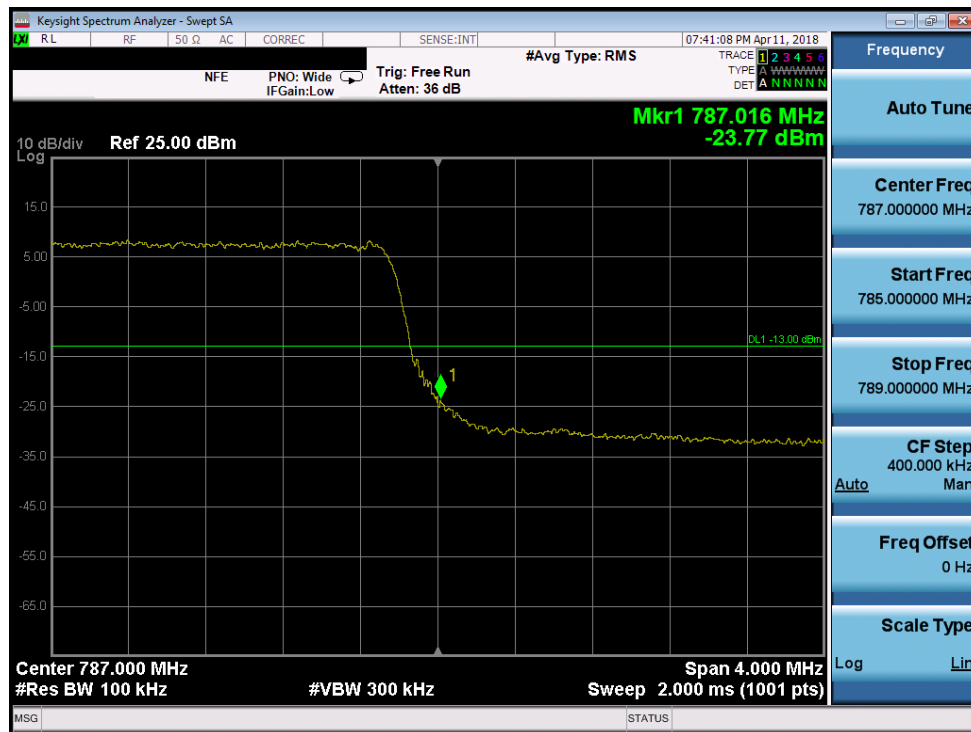


Plot 7-115. Lower Band Edge Plot (Band 13 - 5.0MHz QPSK - Full RB Configuration)

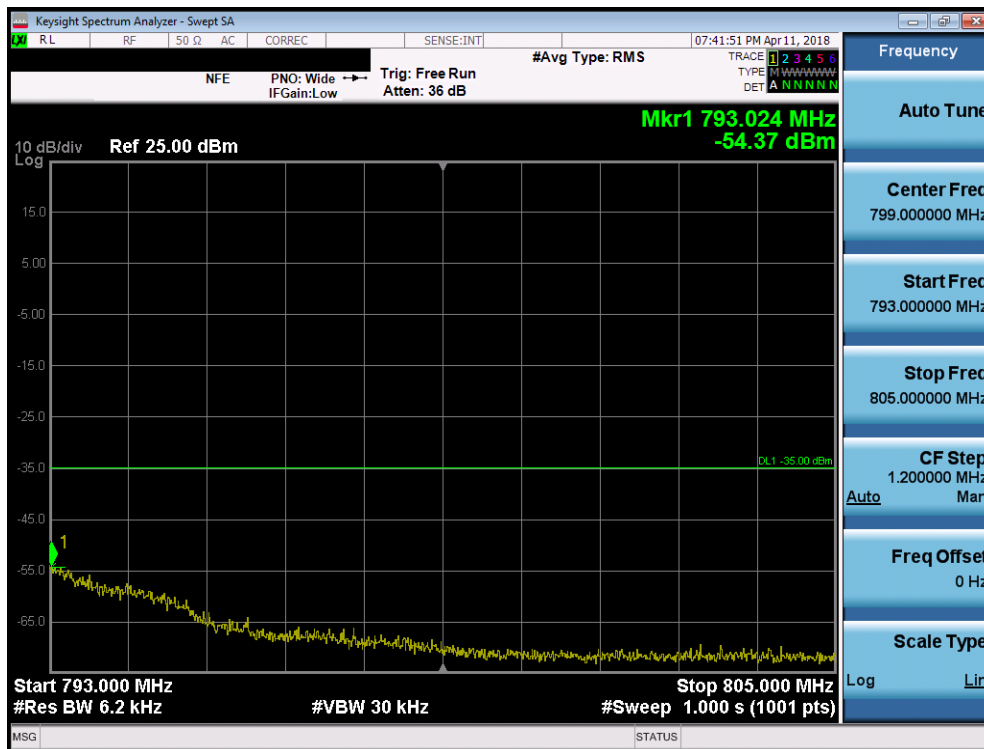


Plot 7-116. Lower Emission Mask (Band 13 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 79 of 185

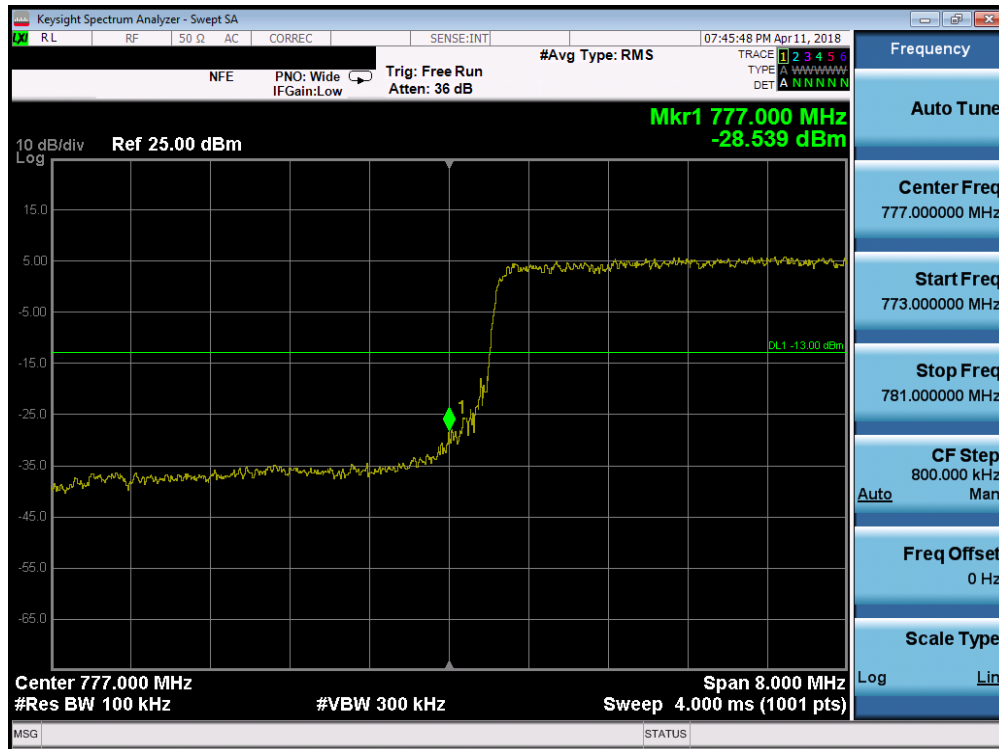


Plot 7-117. Upper Band Edge Plot (Band 13 - 5.0MHz QPSK - Full RB Configuration)

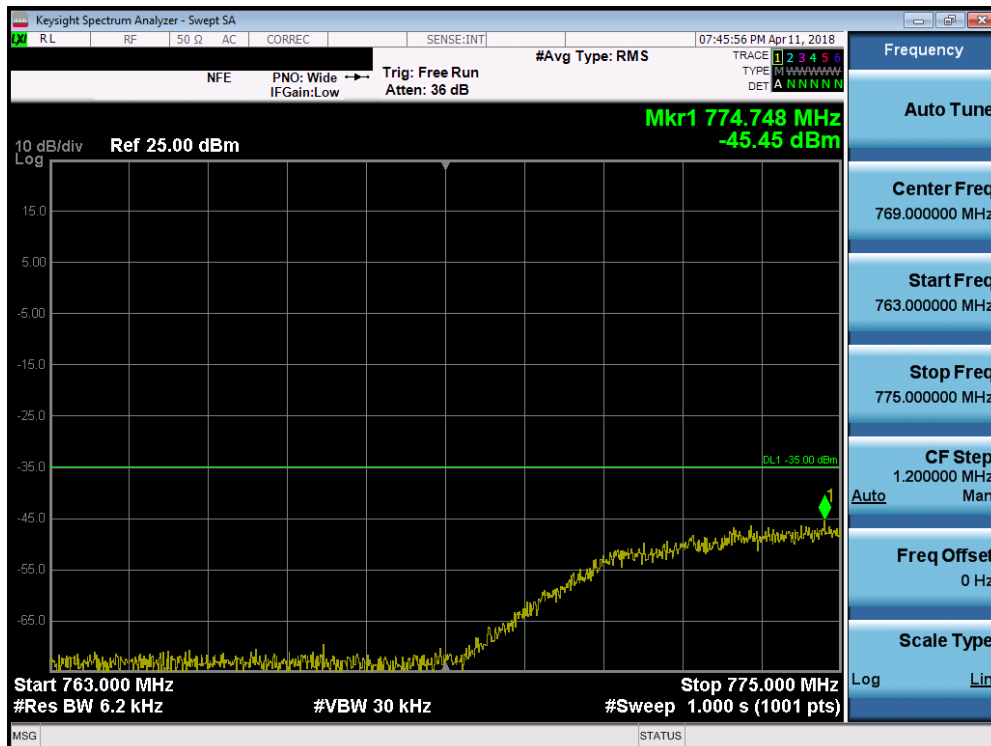


Plot 7-118. Upper Emission Mask (Band 13 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 80 of 185

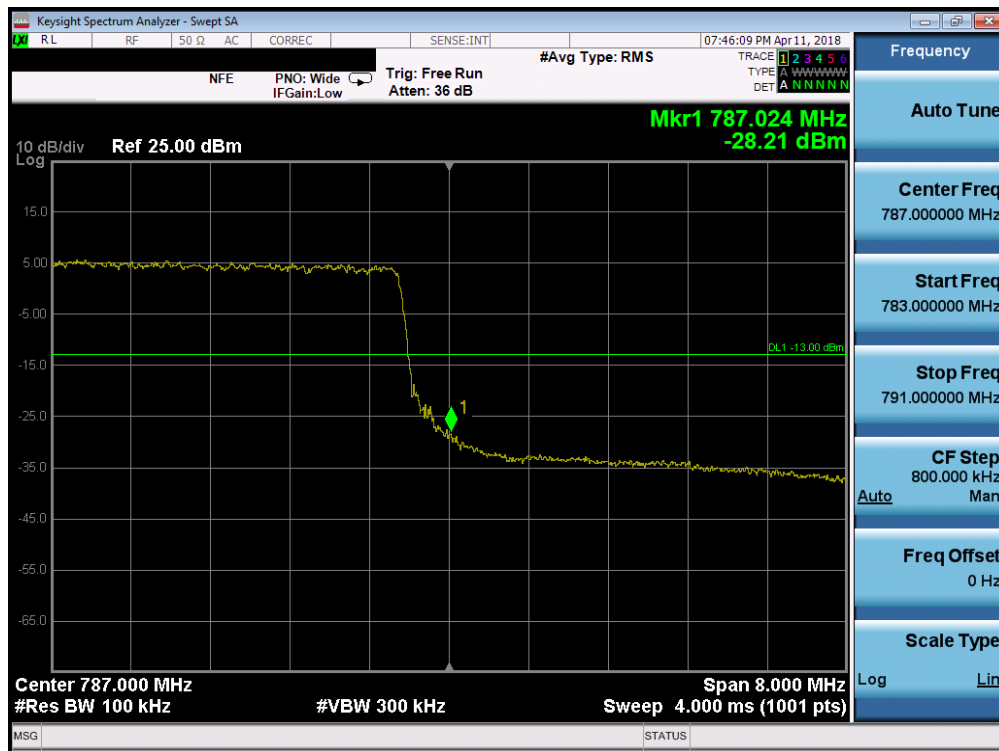


Plot 7-119. Lower Band Edge Plot (Band 13 - 10.0MHz QPSK - Full RB Configuration)

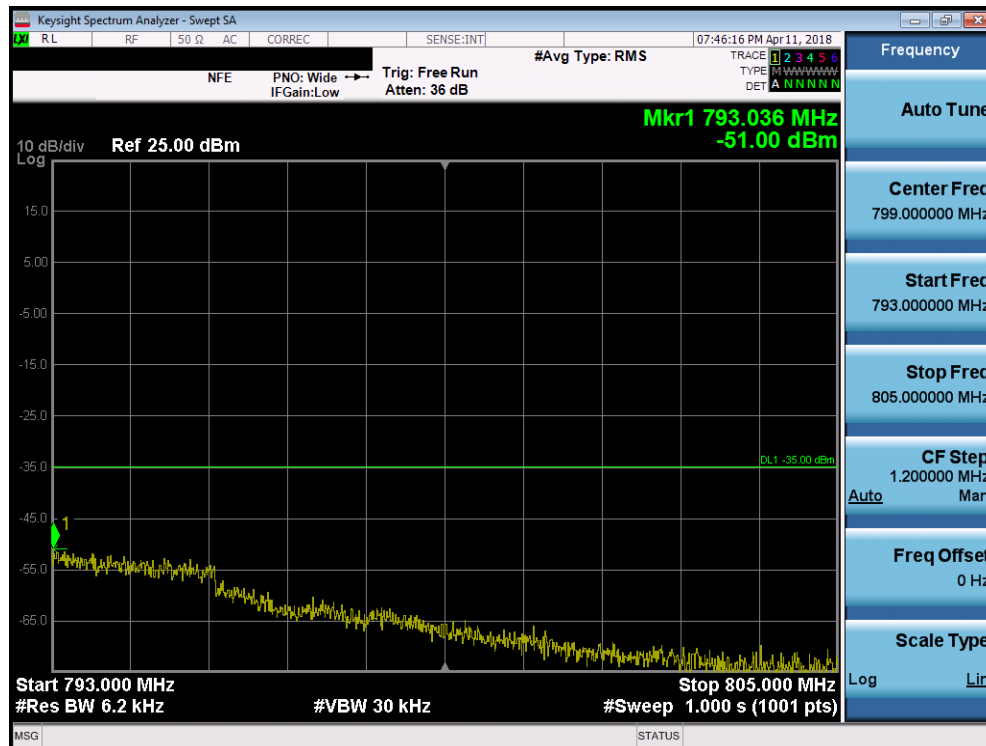


Plot 7-120. Lower Emission Mask (Band 13 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 81 of 185



Plot 7-121. Upper Band Edge Plot (Band 13 - 10.0MHz QPSK - Full RB Configuration)

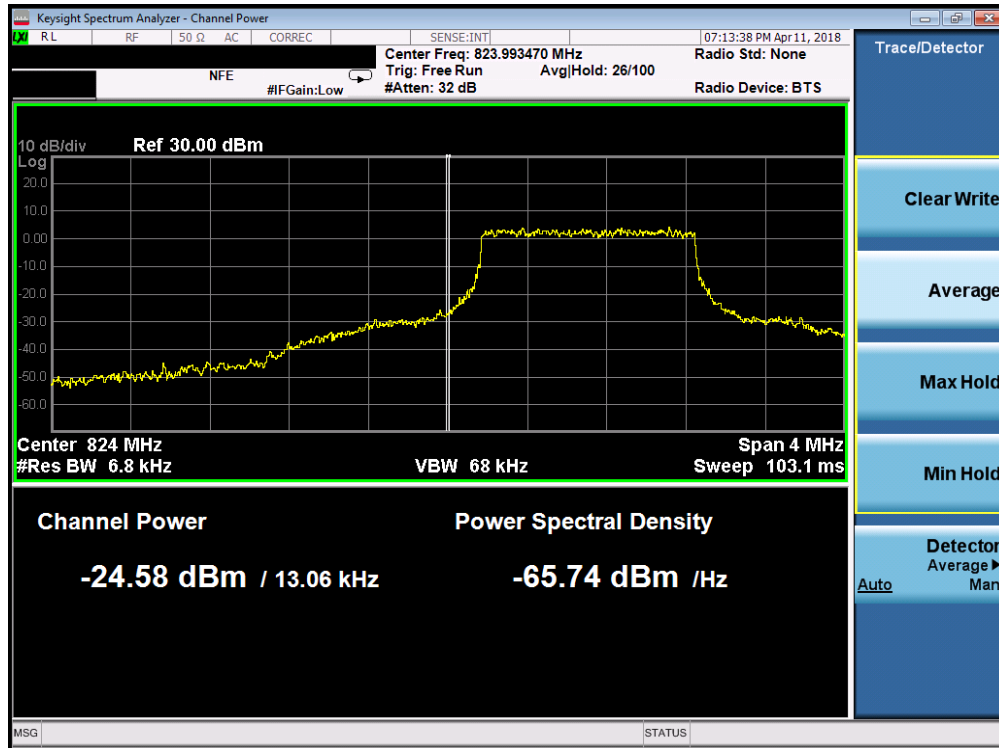


Plot 7-122. Upper Emission Mask (Band 13 - 10.0MHz QPSK - Full RB Configuration)

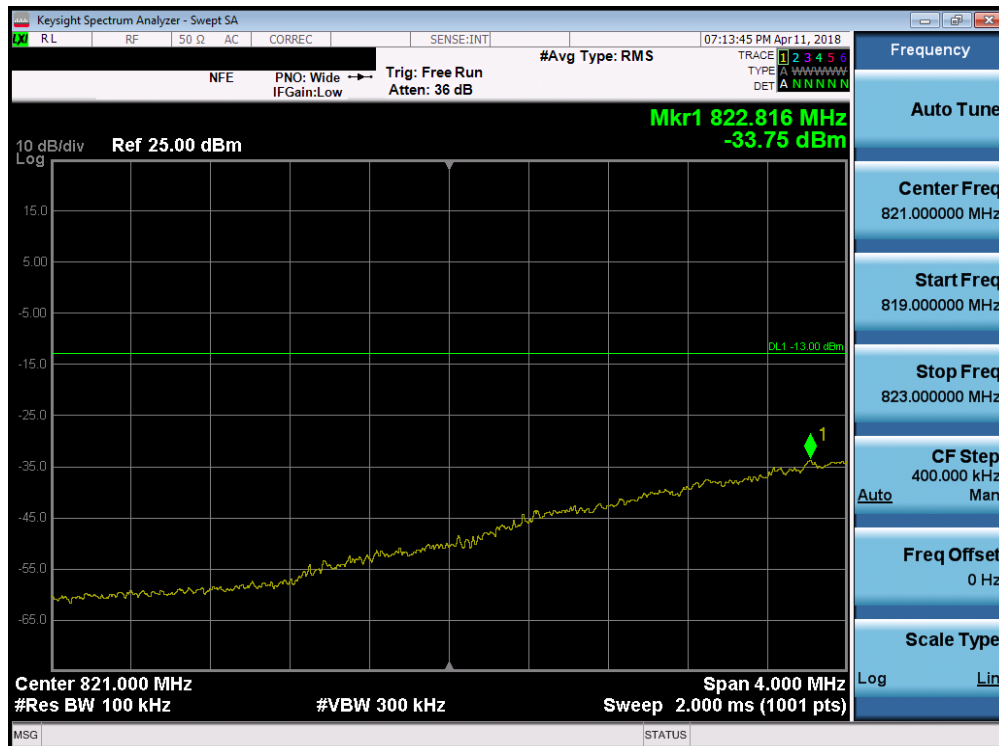
FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03- R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 82 of 185

FCC ID: ZNFX510WM	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1805100104-03- R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset	Page 83 of 185

Band 5

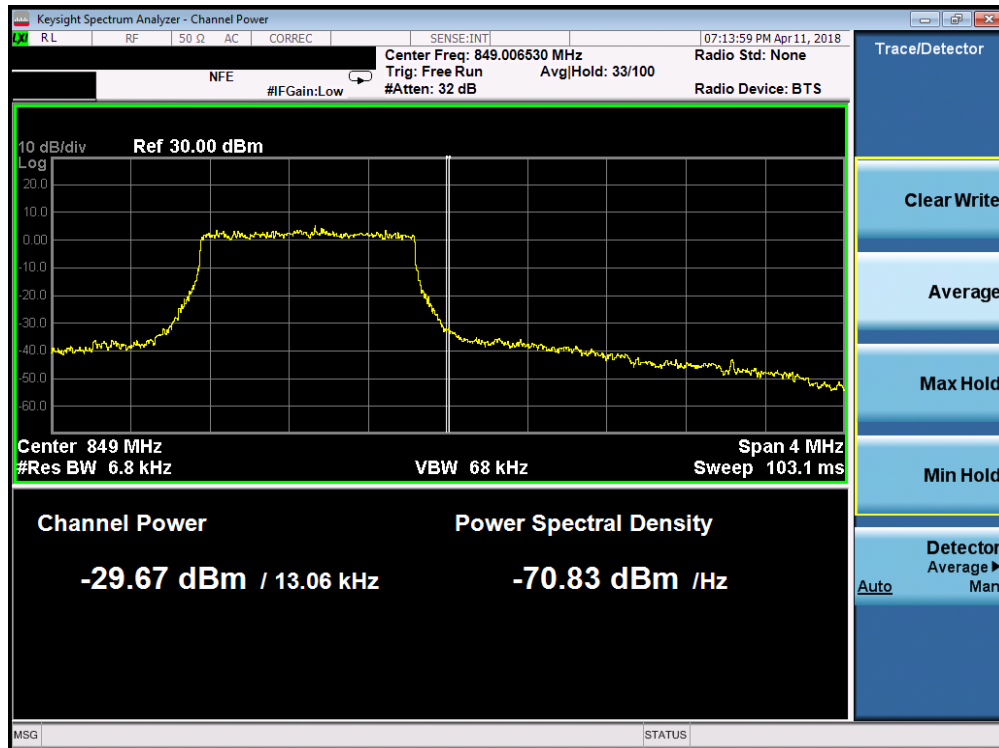


Plot 7-123. Lower Band Edge Plot (Band 5 - 1.4MHz QPSK - Full RB Configuration)



Plot 7-124. Lower Extended Band Edge Plot (Band 5 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset	Page 84 of 185

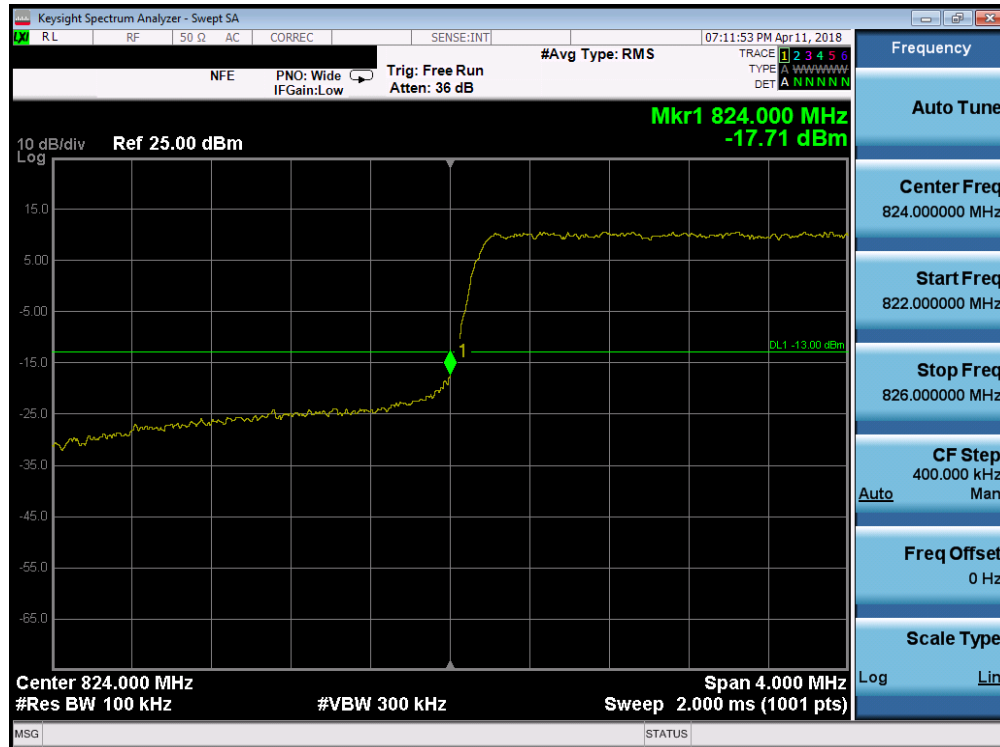


Plot 7-125. Upper Band Edge Plot (Band 5 - 1.4MHz QPSK - Full RB Configuration)

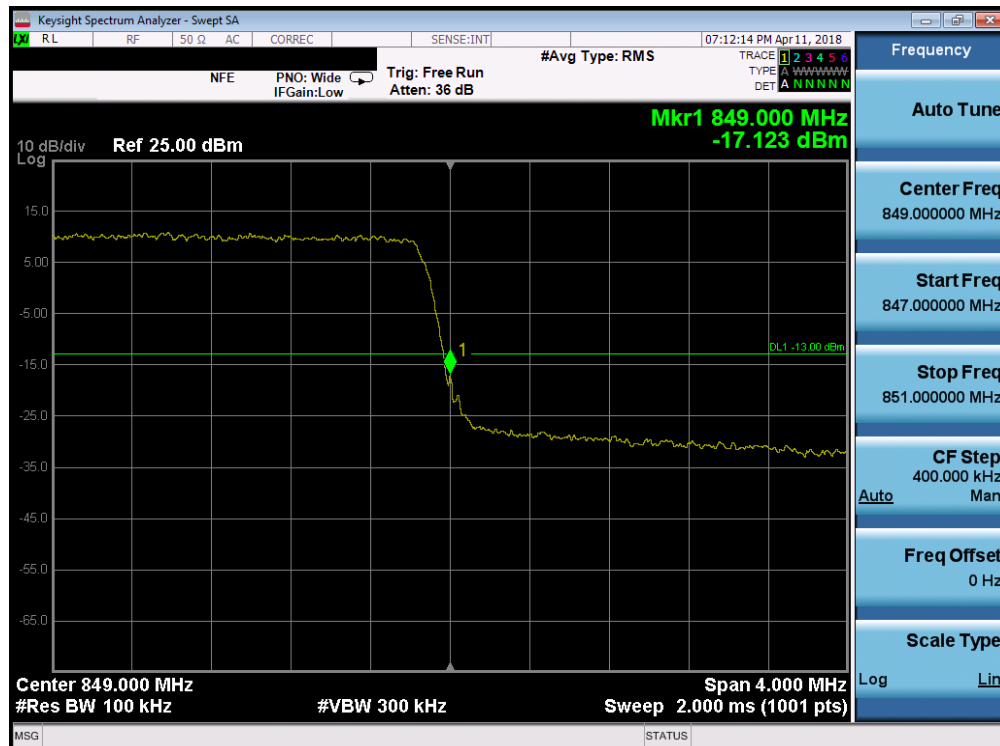


Plot 7-126. Upper Extended Band Edge Plot (Band 5 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03- R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 85 of 185

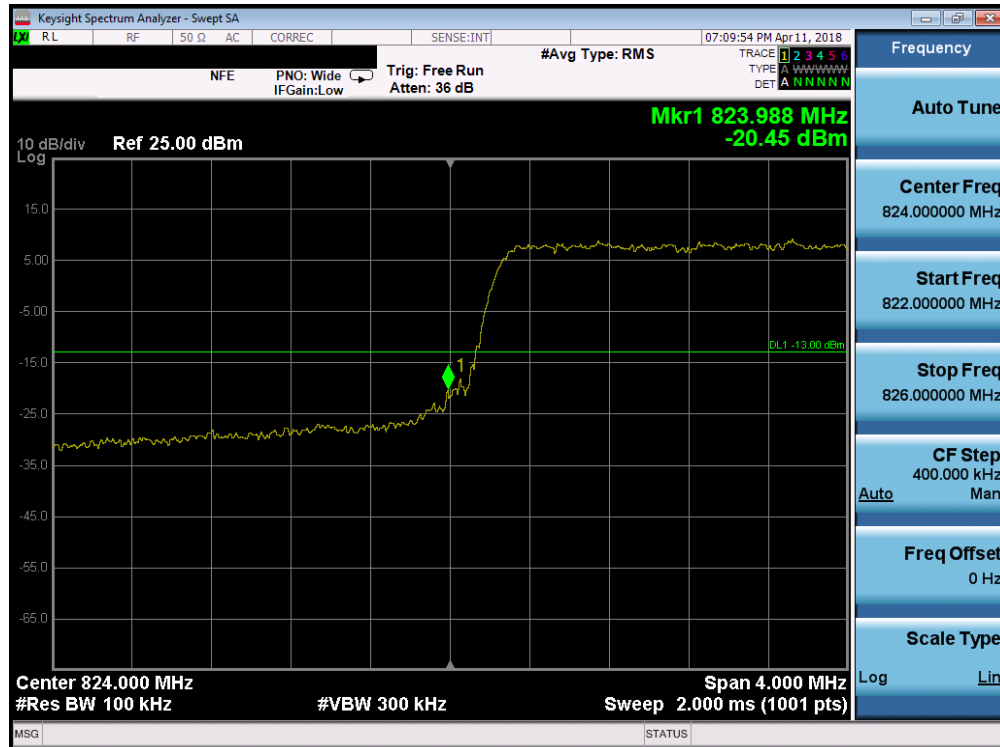


Plot 7-127. Lower Band Edge Plot (Band 5 - 3.0MHz QPSK - Full RB Configuration)

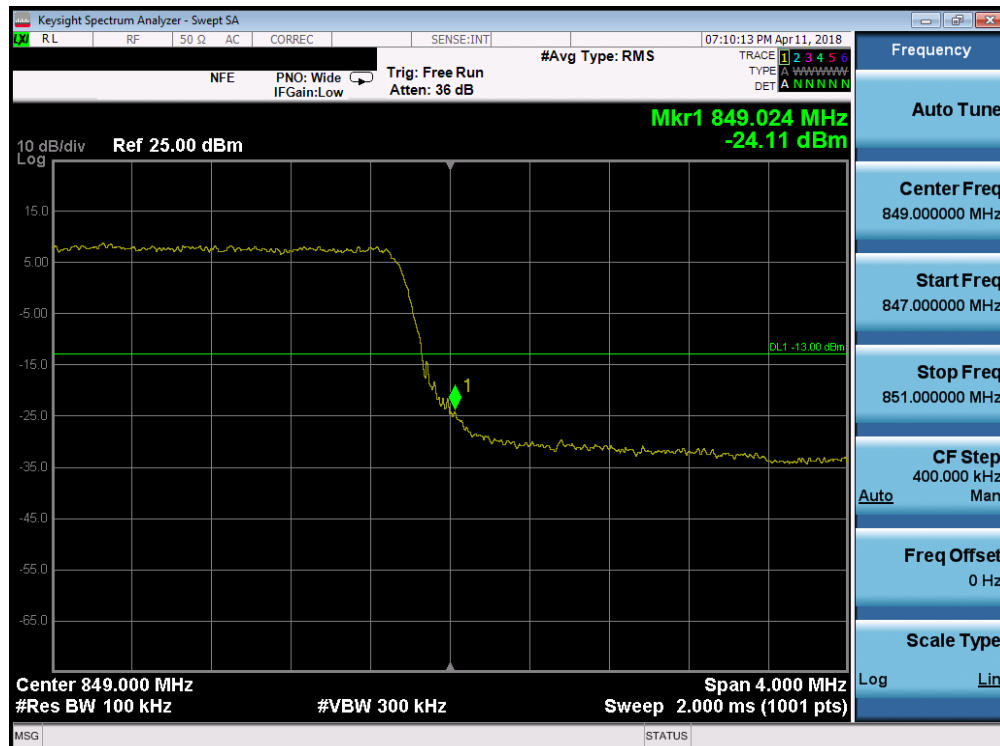


Plot 7-128. Upper Band Edge Plot (Band 5 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 86 of 185

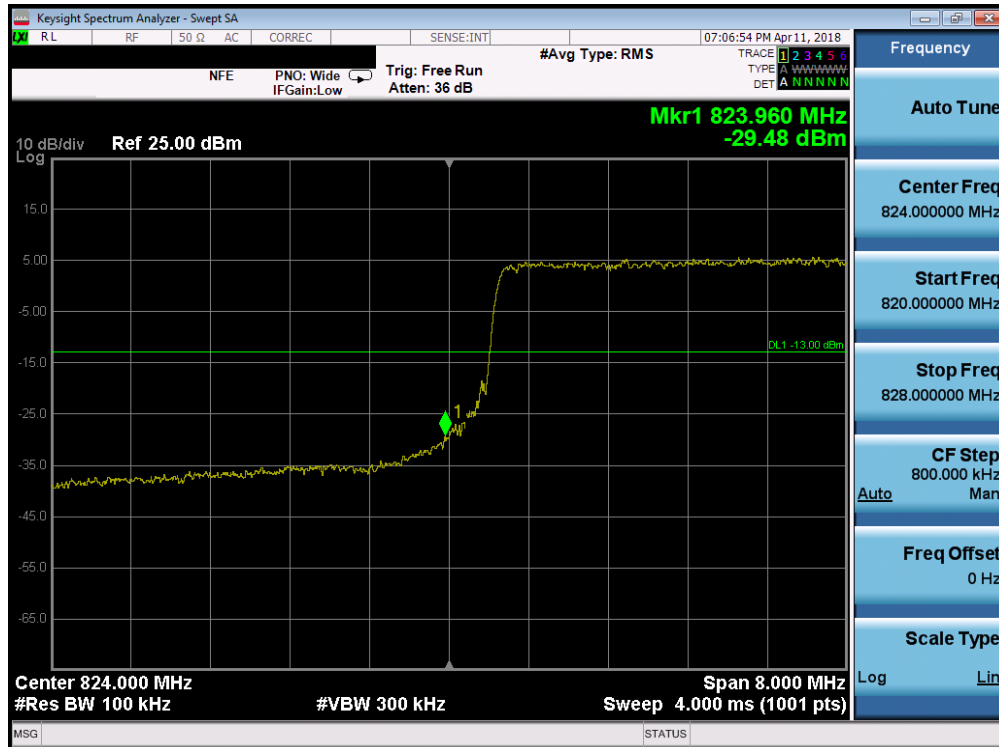


Plot 7-129. Lower Band Edge Plot (Band 5 - 5.0MHz QPSK - Full RB Configuration)

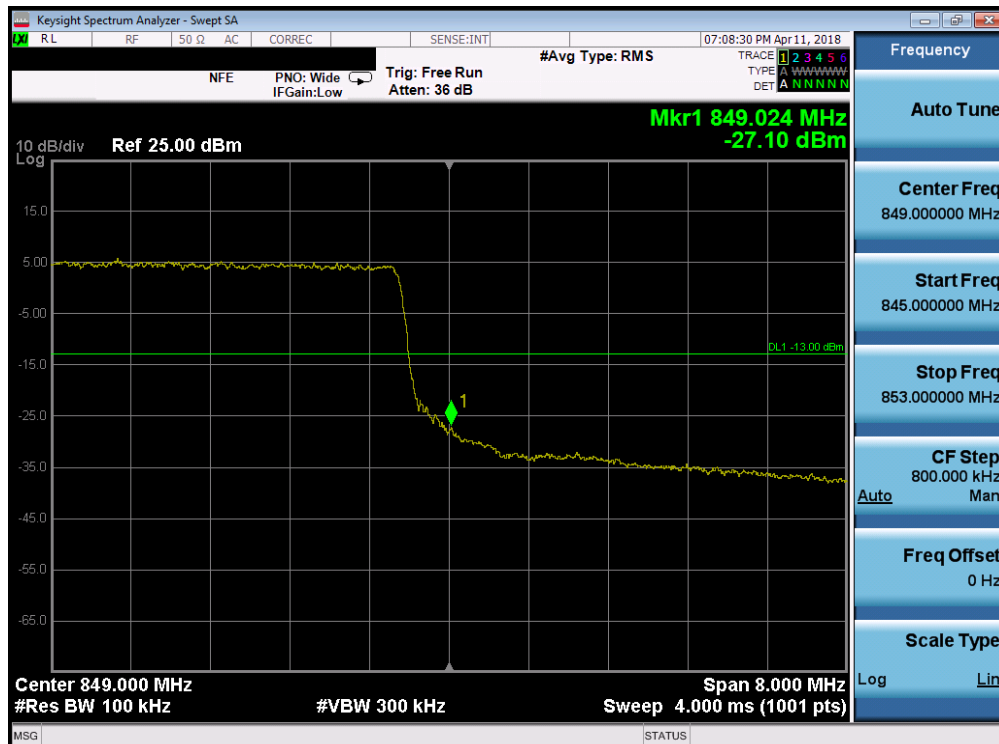


Plot 7-130. Upper Band Edge Plot (Band 5 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03- R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 87 of 185



Plot 7-131. Lower Band Edge Plot (Band 5 - 10.0MHz QPSK - Full RB Configuration)



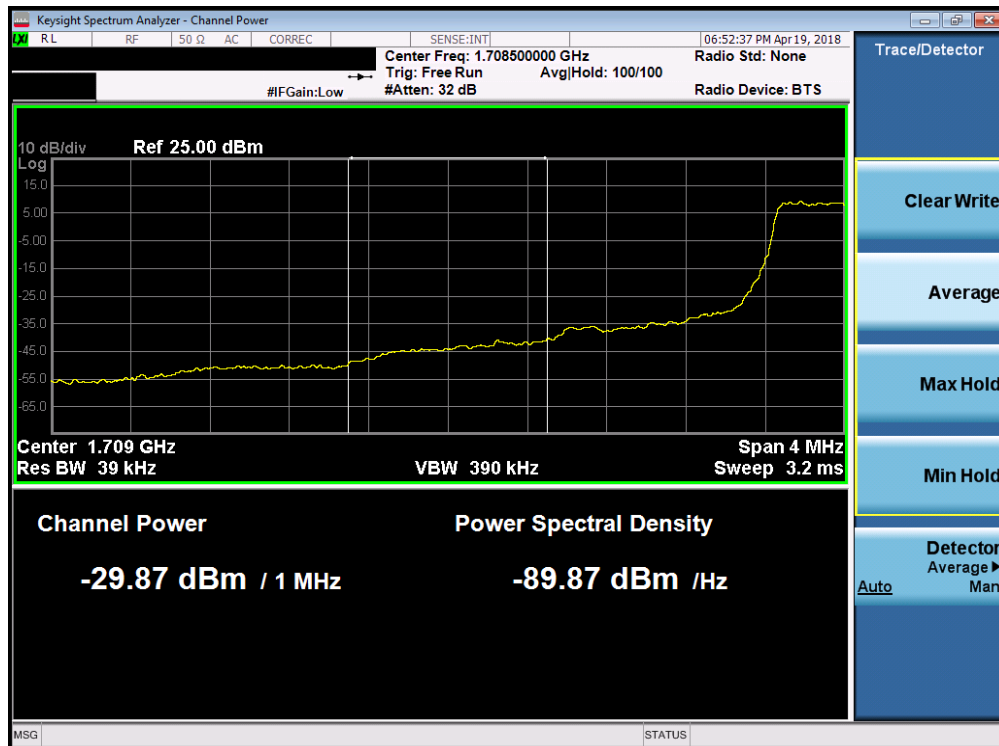
Plot 7-132. Upper Band Edge Plot (Band 5 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 88 of 185

Band 66/4



Plot 7-133. Lower Band Edge Plot (Band 66/4 - 1.4MHz QPSK - Full RB Configuration)

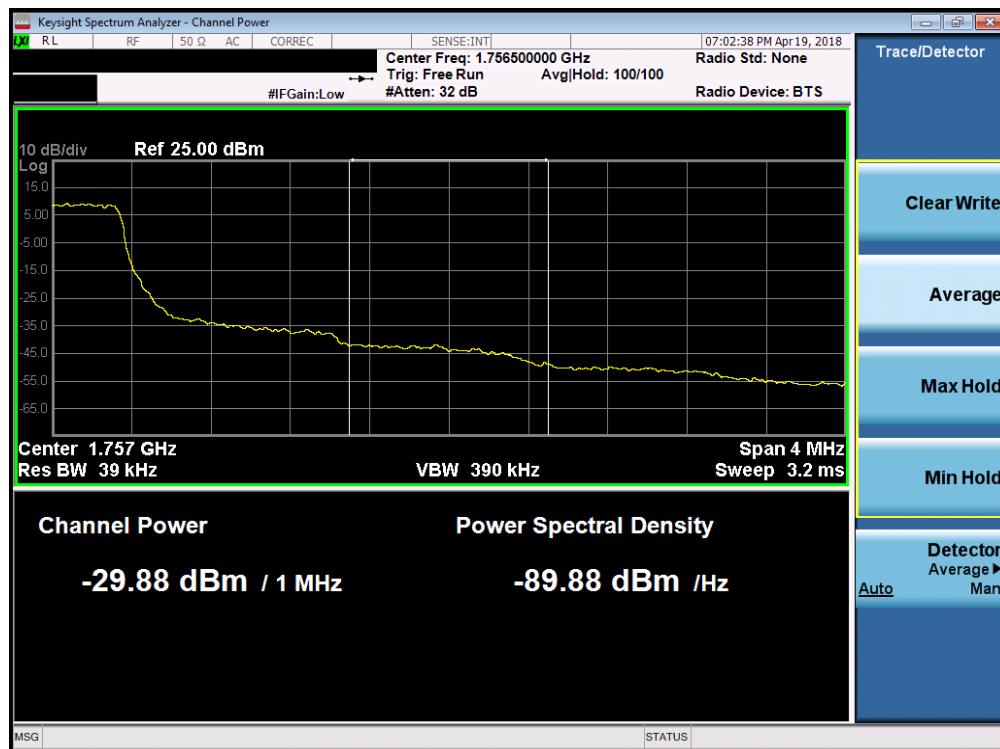


Plot 7-134. Lower Extended Band Edge Plot (Band 66/4 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03- R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 89 of 185

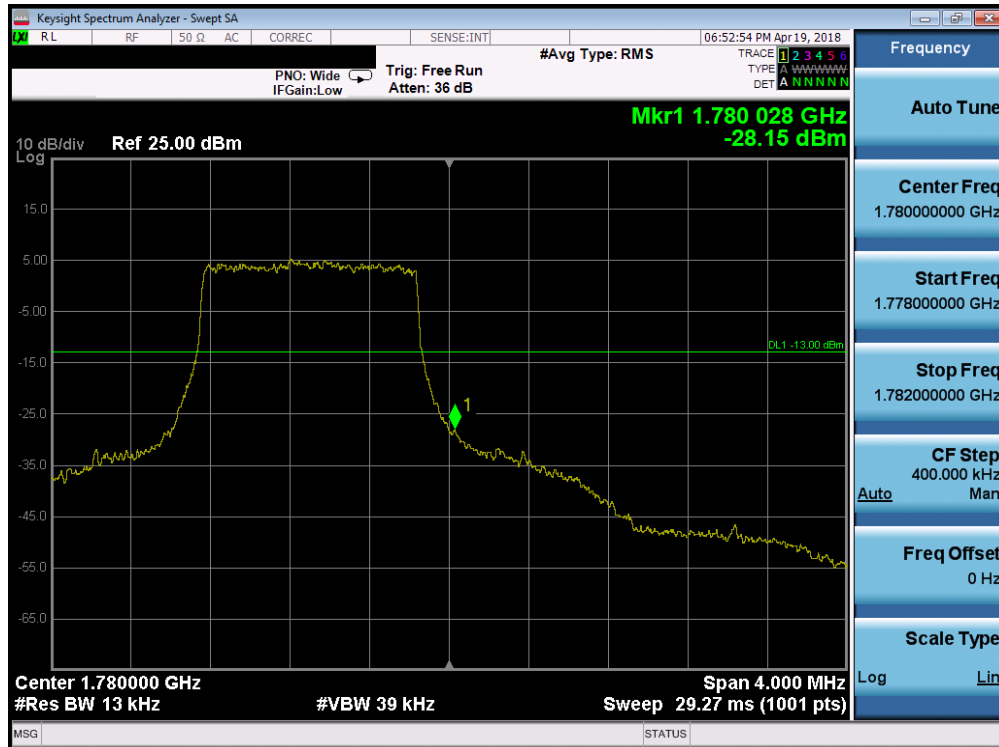


Plot 7-135. Upper Band Edge Plot (Band 4 - 1.4MHz QPSK - Full RB Configuration)

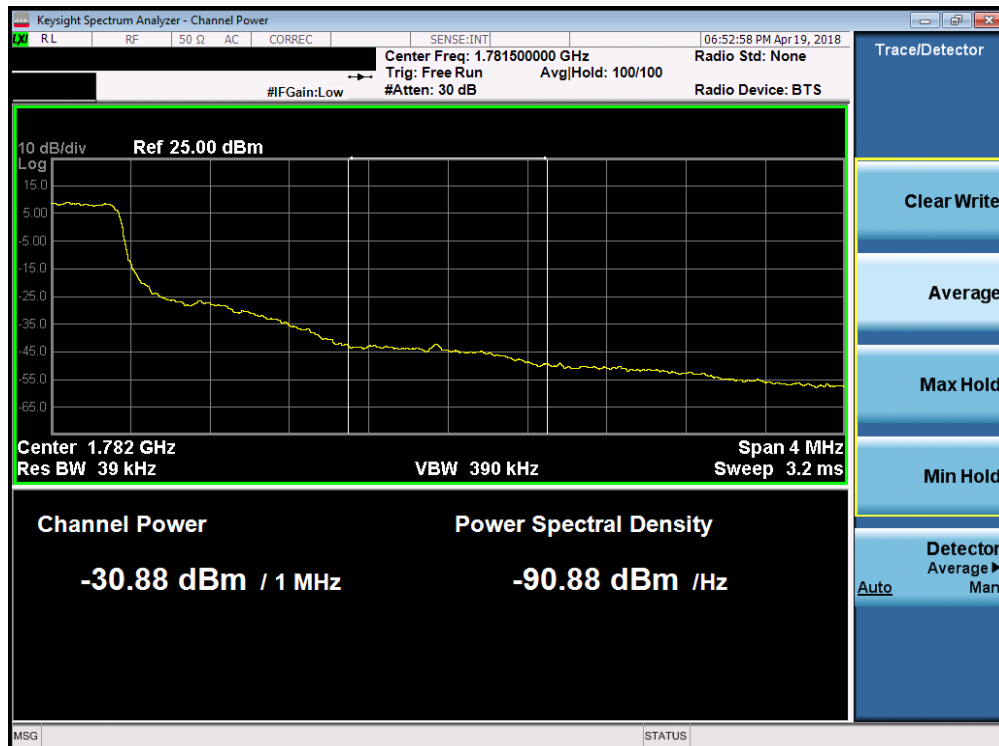


Plot 7-136. Upper Extended Band Edge Plot (Band 4 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 90 of 185

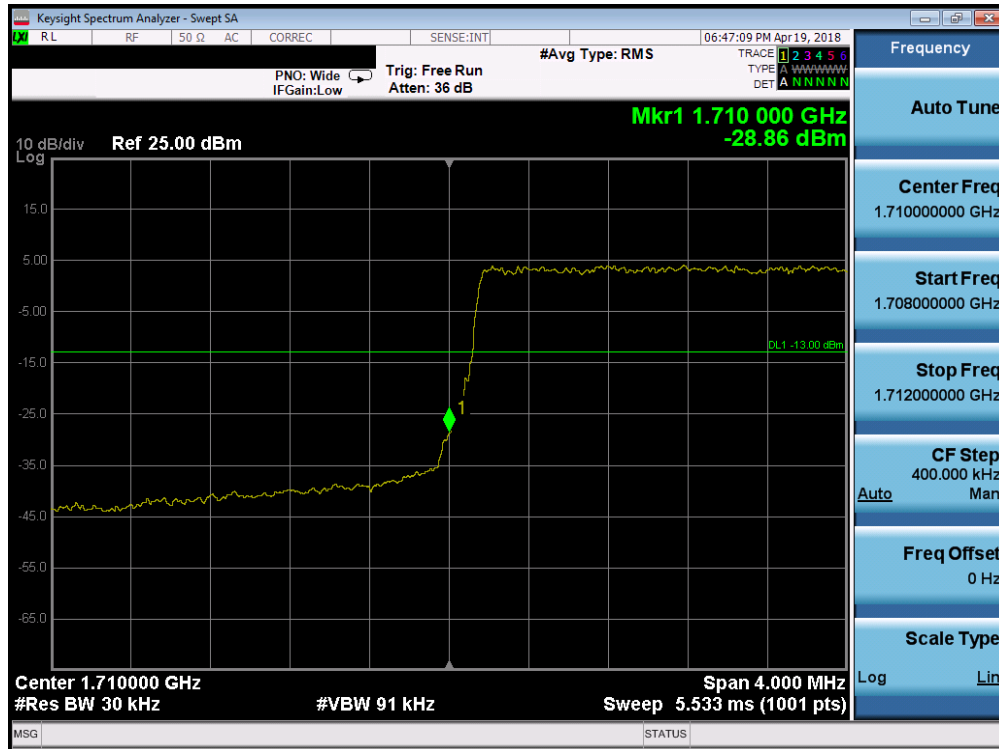


Plot 7-137. Upper Band Edge Plot (Band 66 - 1.4MHz QPSK - Full RB Configuration)

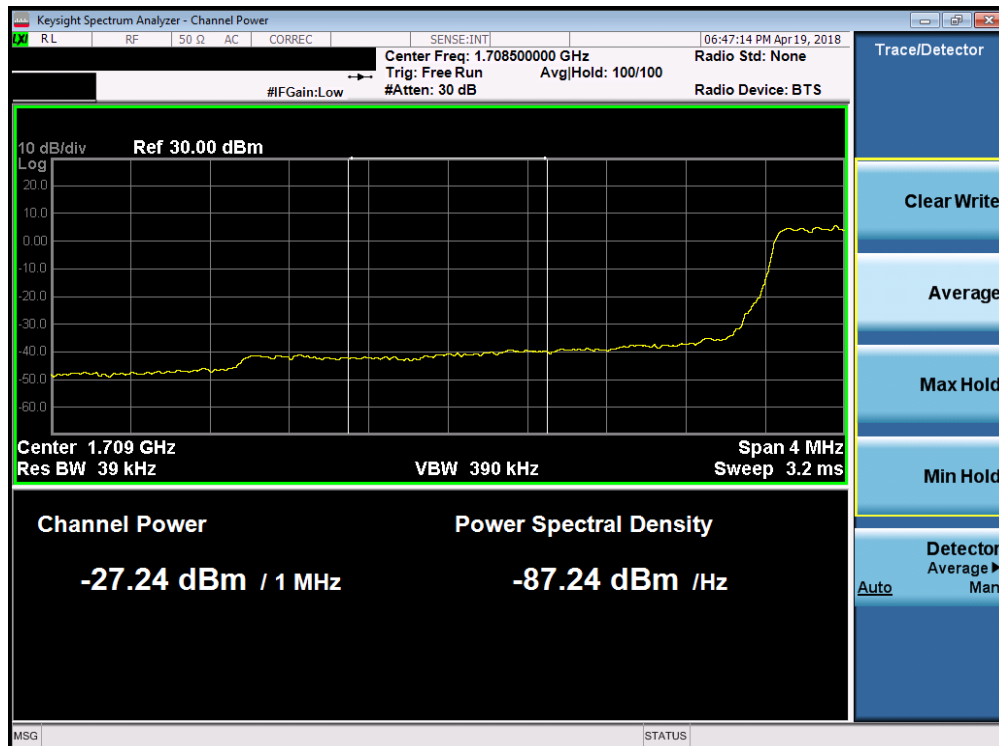


Plot 7-138. Upper Extended Band Edge Plot (Band 66 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03- R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 91 of 185

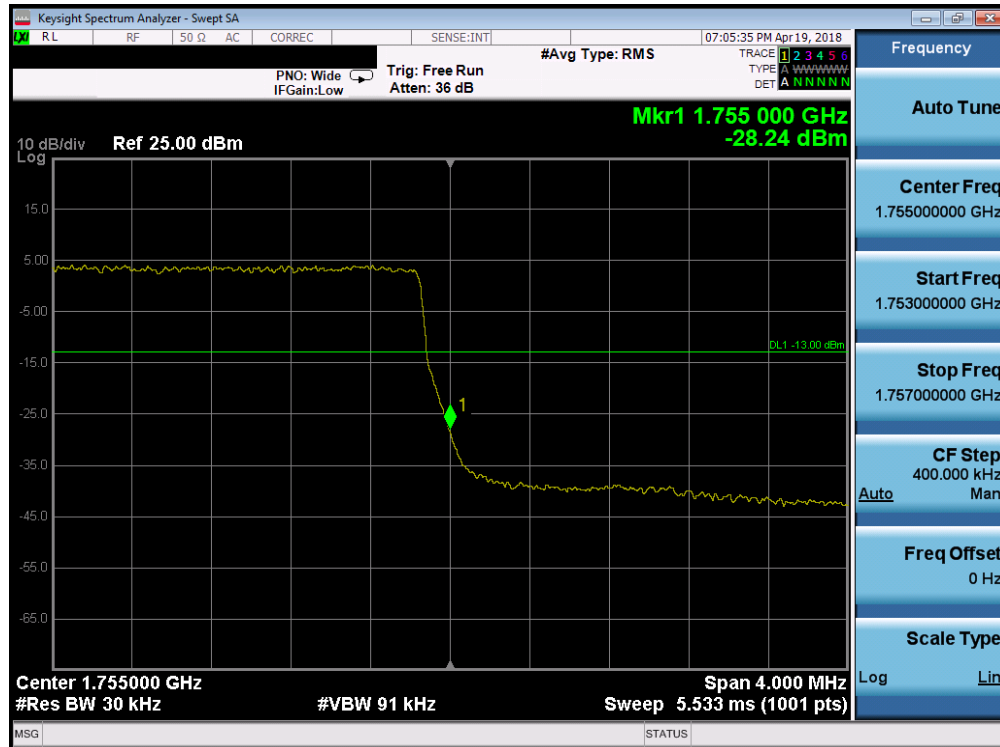


Plot 7-139. Lower Band Edge Plot (Band 66/4 - 3.0MHz QPSK - Full RB Configuration)

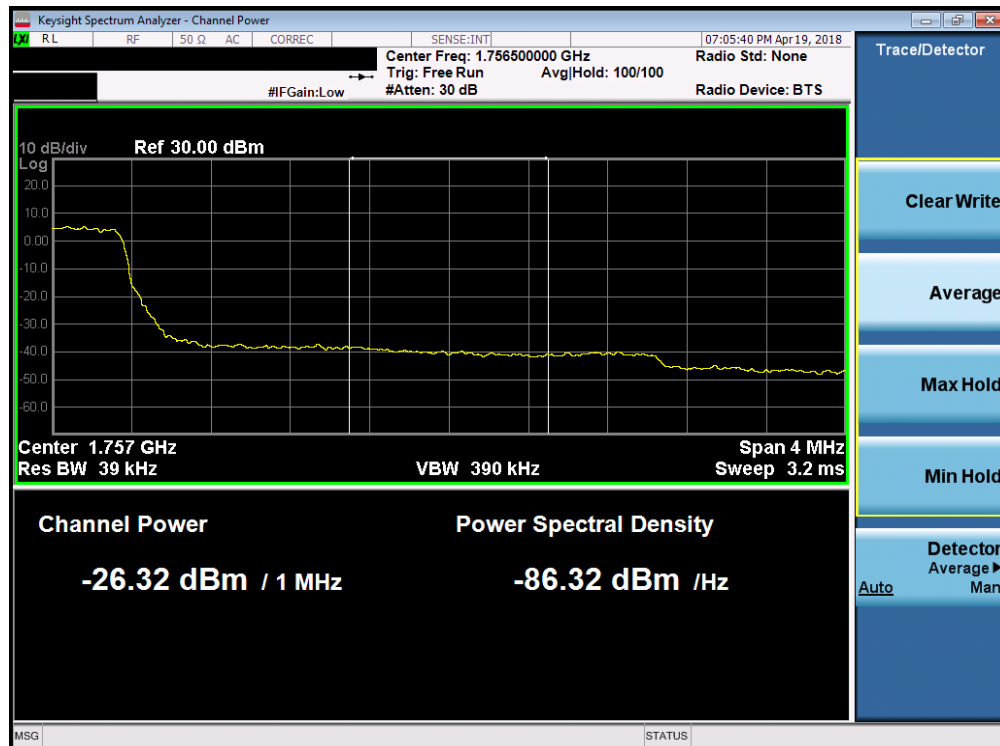


Plot 7-140. Lower Extended Band Edge Plot (Band 66/4 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 92 of 185

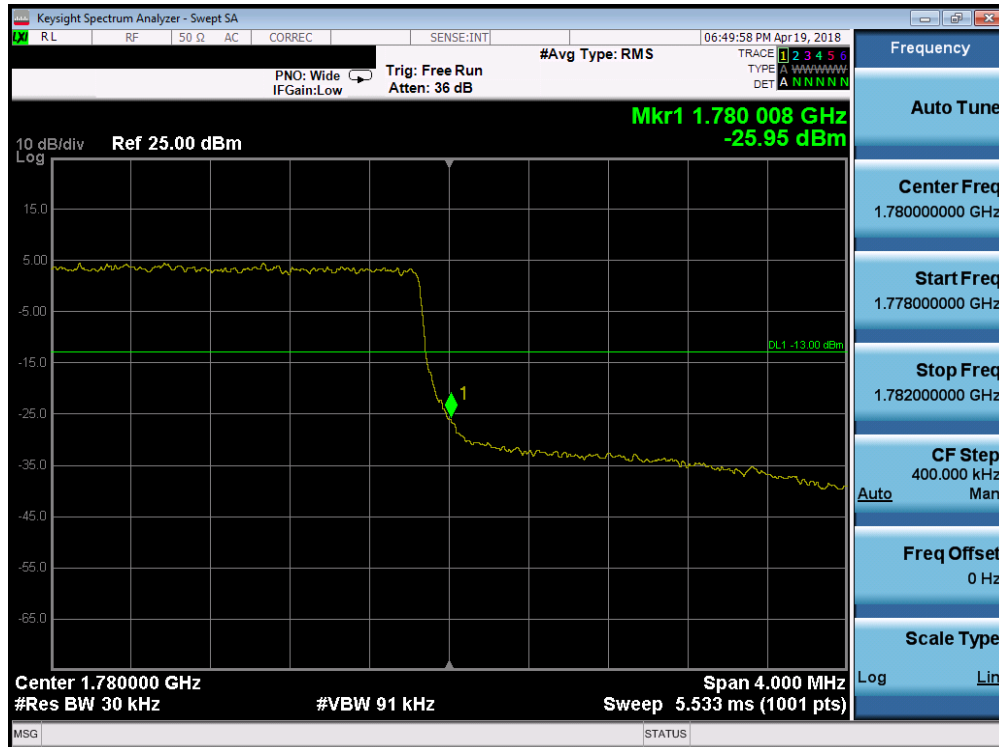


Plot 7-141. Upper Band Edge Plot (Band 4 - 3.0MHz QPSK - Full RB Configuration)

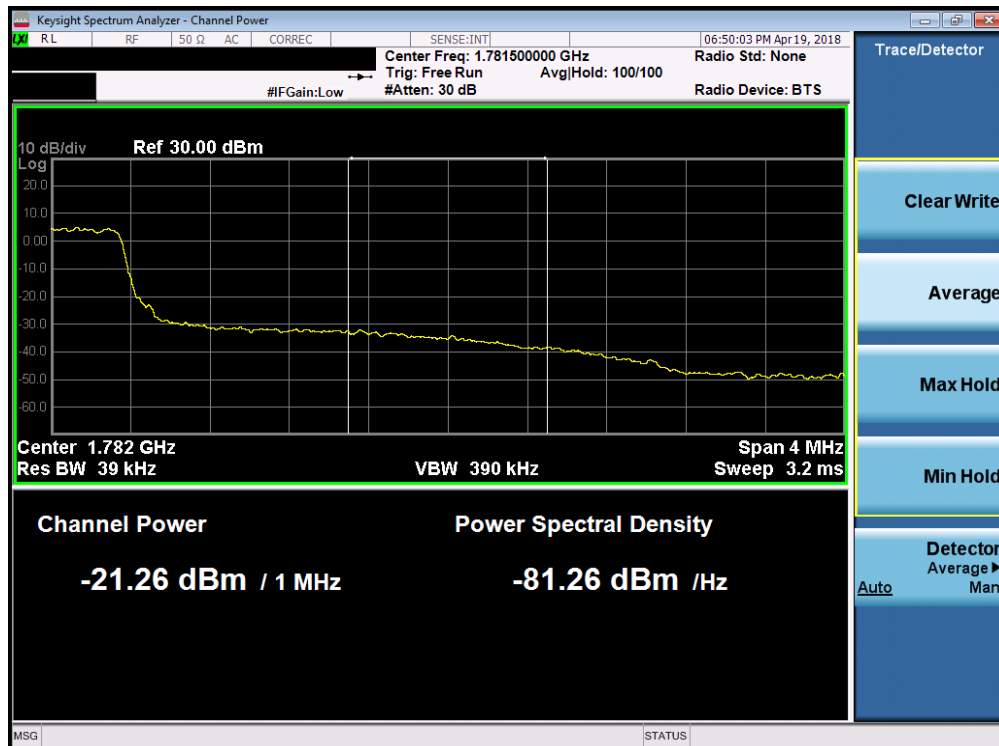


Plot 7-142. Upper Extended Band Edge Plot (Band 4 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03- R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 93 of 185

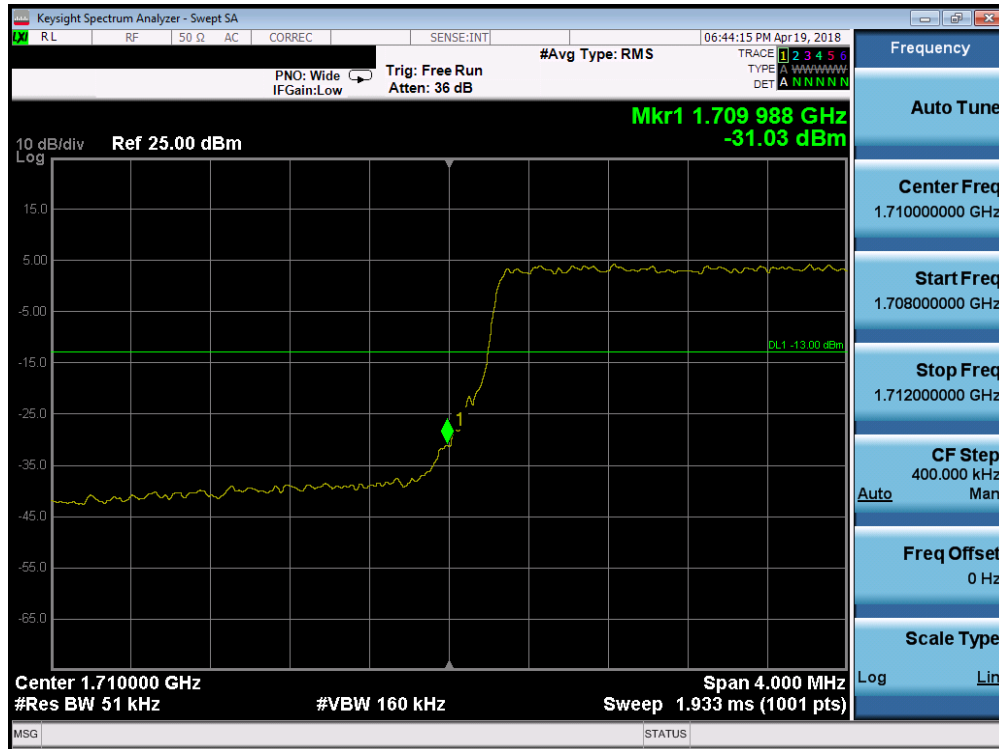


Plot 7-143. Upper Band Edge Plot (Band 66 - 3.0MHz QPSK - Full RB Configuration)

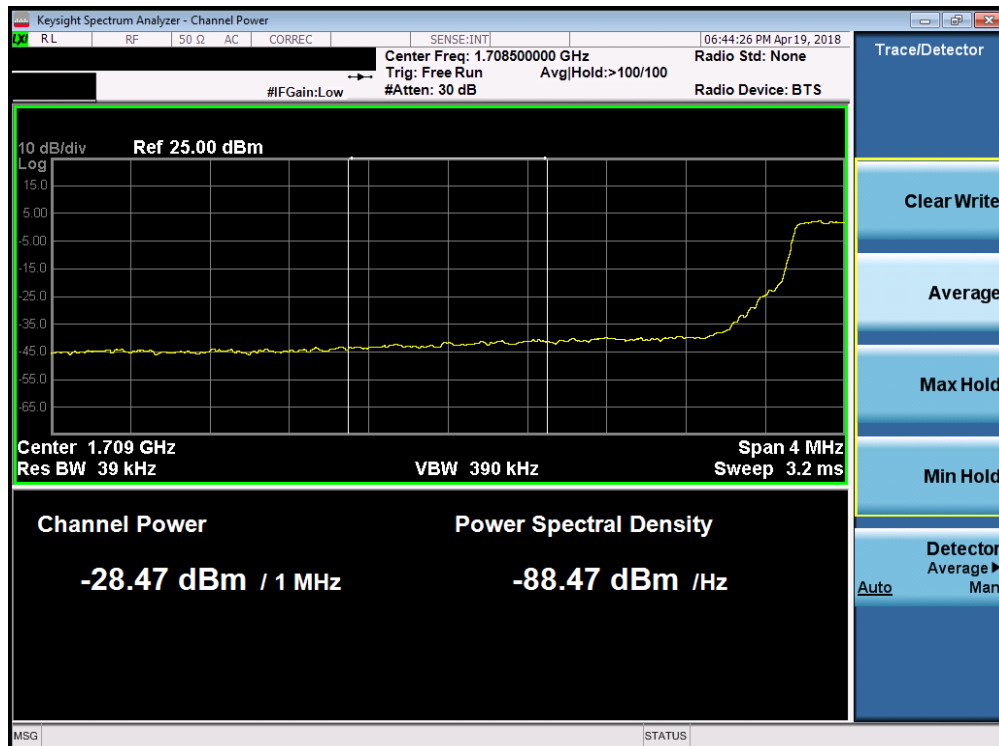


Plot 7-144. Upper Extended Band Edge Plot (Band 66 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03- R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 94 of 185

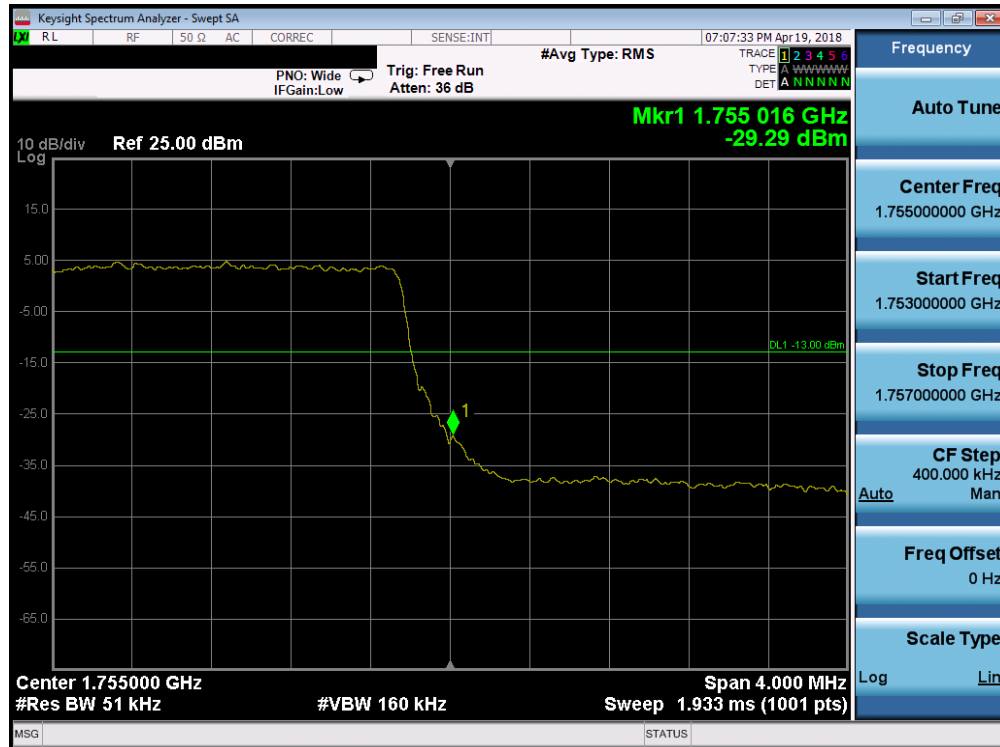


Plot 7-145. Lower Band Edge Plot (Band 66/4 - 5.0MHz QPSK - Full RB Configuration)

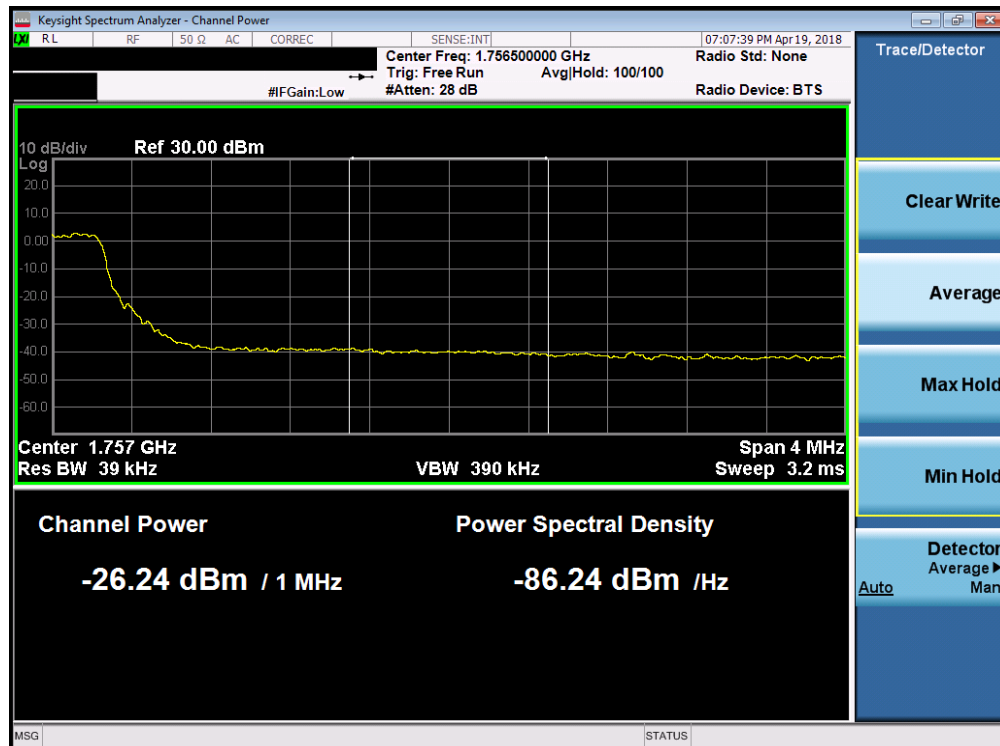


Plot 7-146. Lower Extended Band Edge Plot (Band 66/4 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 95 of 185

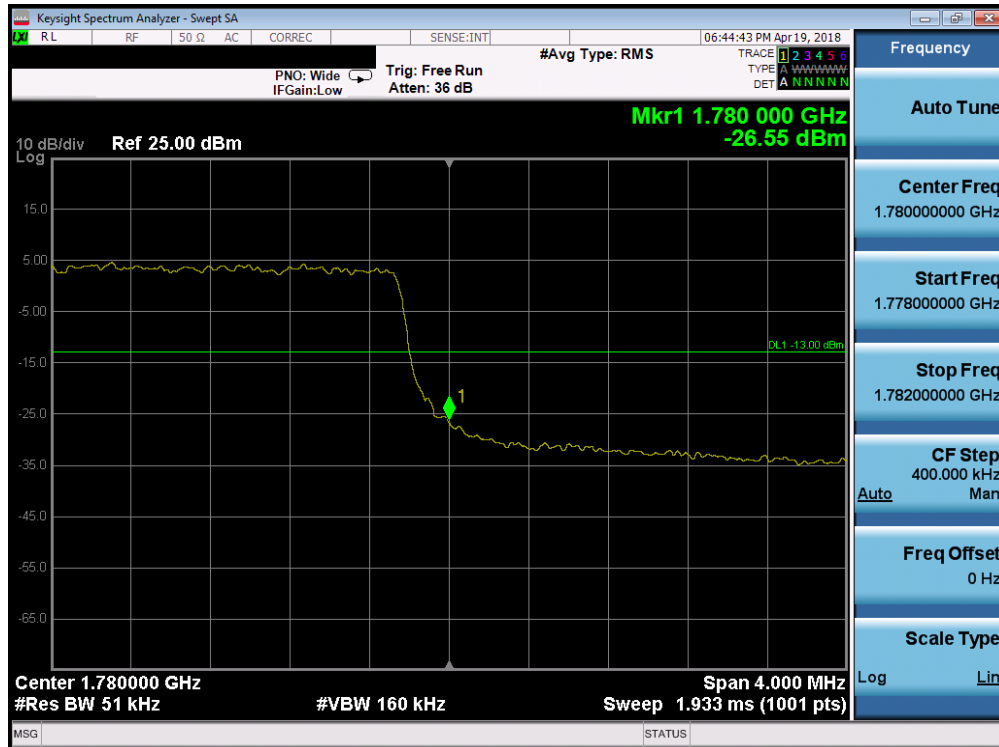


Plot 7-147. Upper Band Edge Plot (Band 4 - 5.0MHz QPSK - Full RB Configuration)

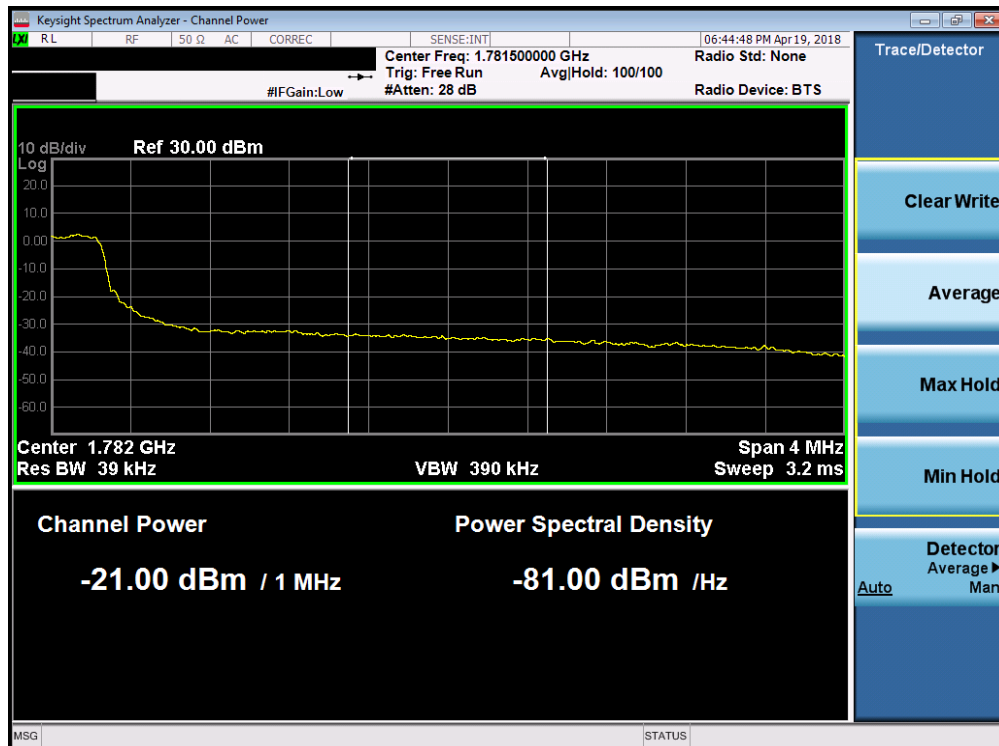


Plot 7-148. Upper Extended Band Edge Plot (Band 4 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03- R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 96 of 185

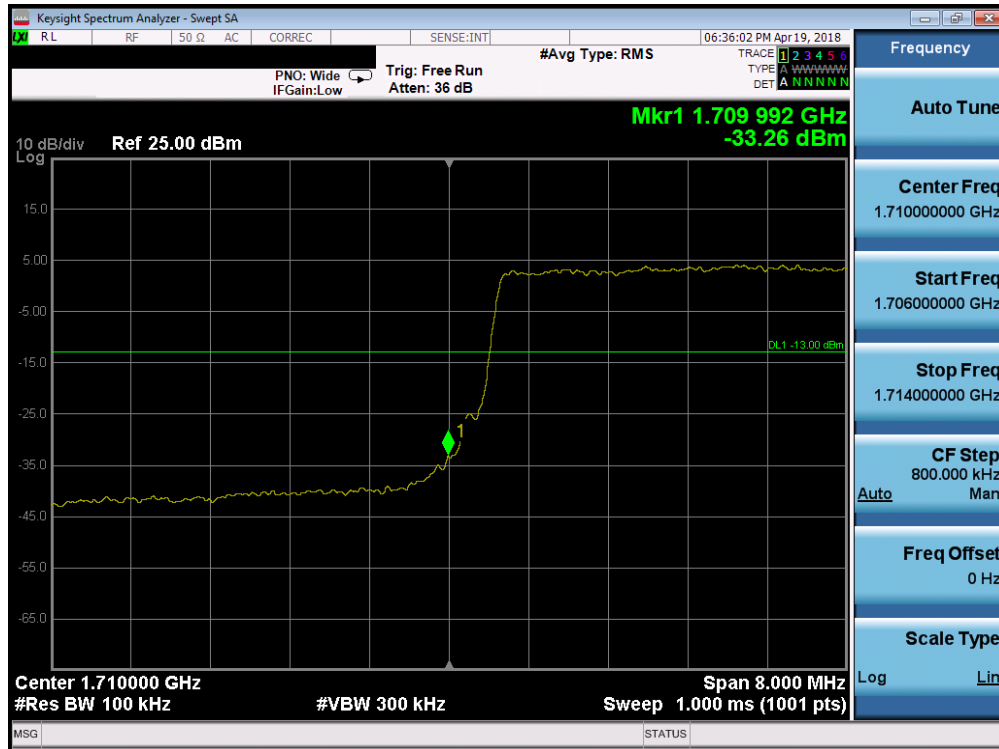


Plot 7-149. Upper Band Edge Plot (Band 66 - 5.0MHz QPSK - Full RB Configuration)

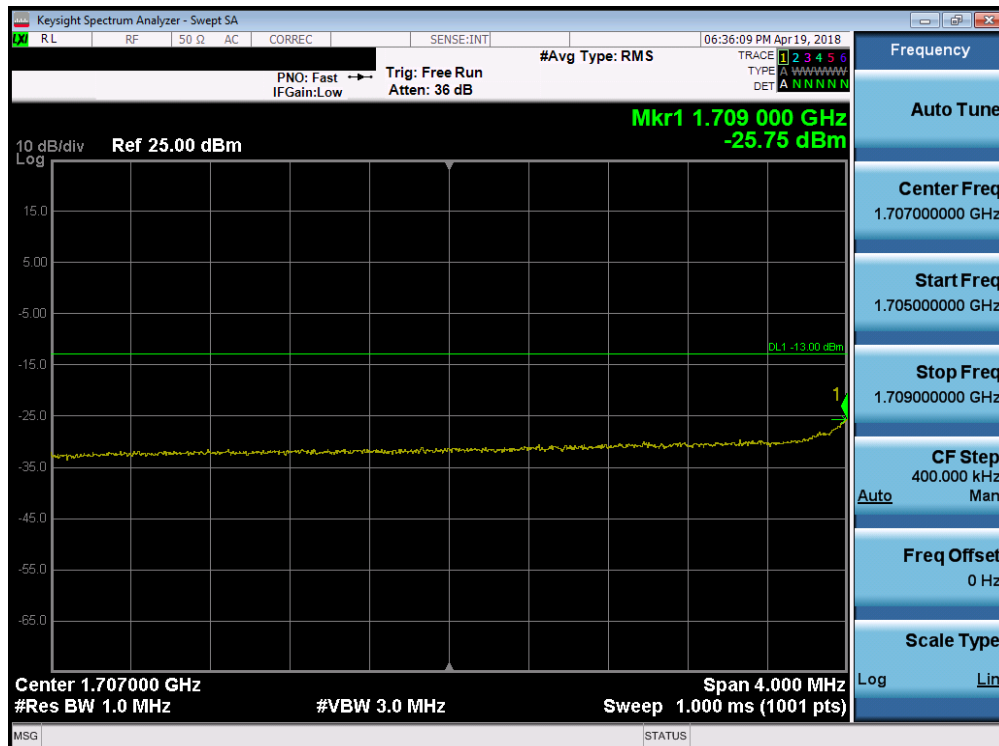


Plot 7-150. Upper Extended Band Edge Plot (Band 66 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 97 of 185

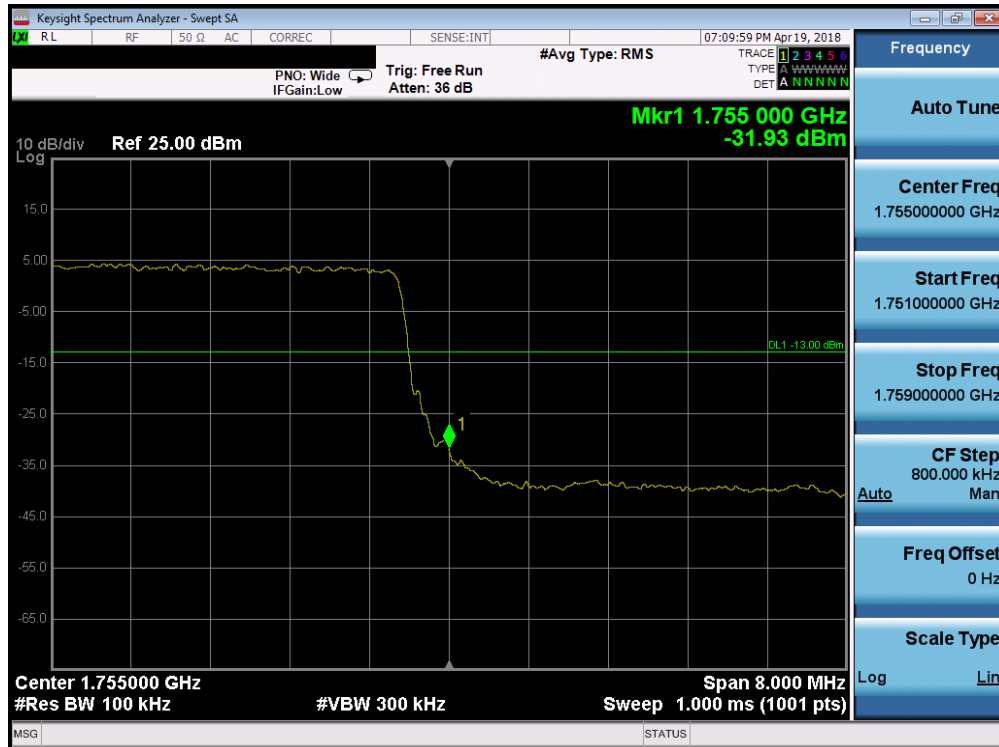


Plot 7-151. Lower Band Edge Plot (Band 66/4 - 10.0MHz QPSK - Full RB Configuration)

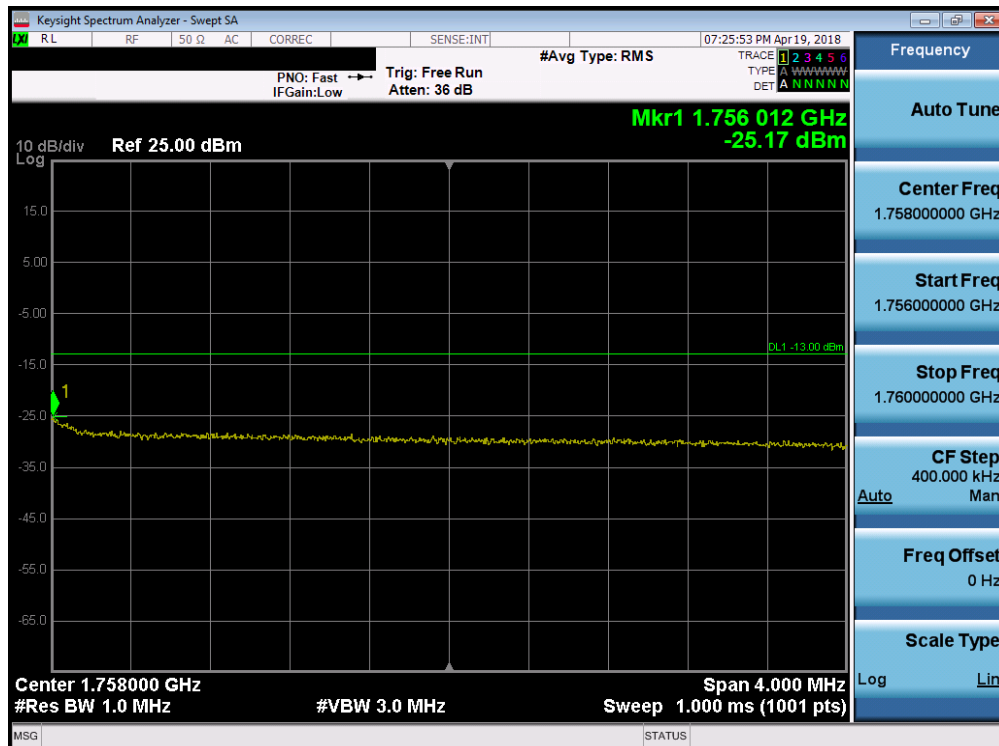


Plot 7-152. Lower Extended Band Edge Plot (Band 66/4 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 98 of 185

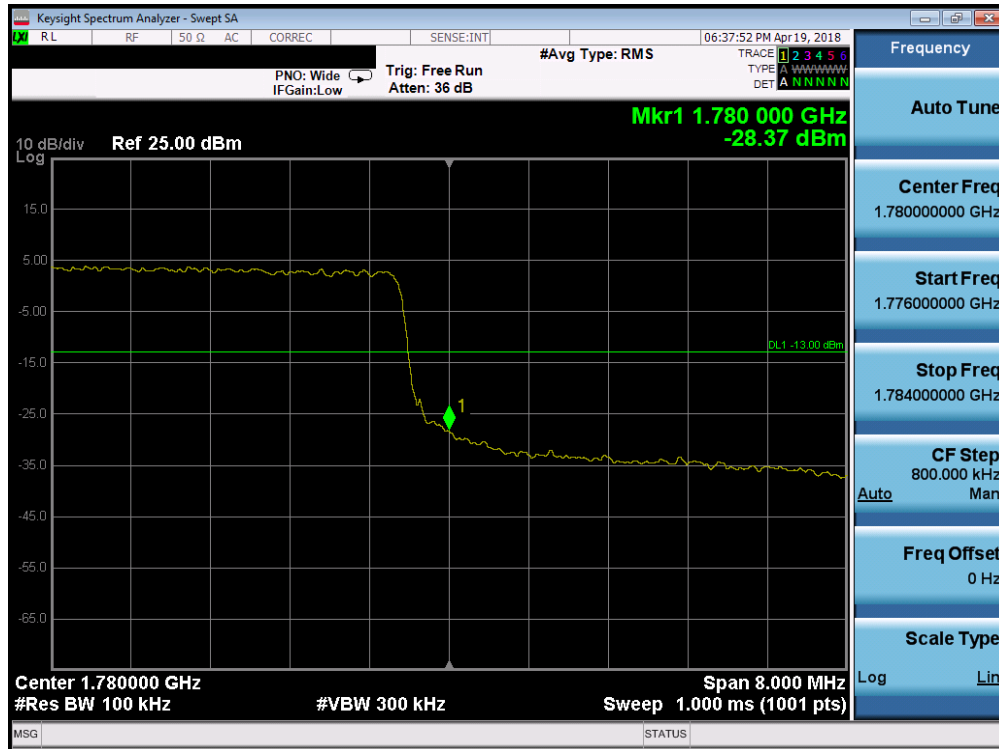


Plot 7-153. Upper Band Edge Plot (Band 4 - 10.0MHz QPSK - Full RB Configuration)

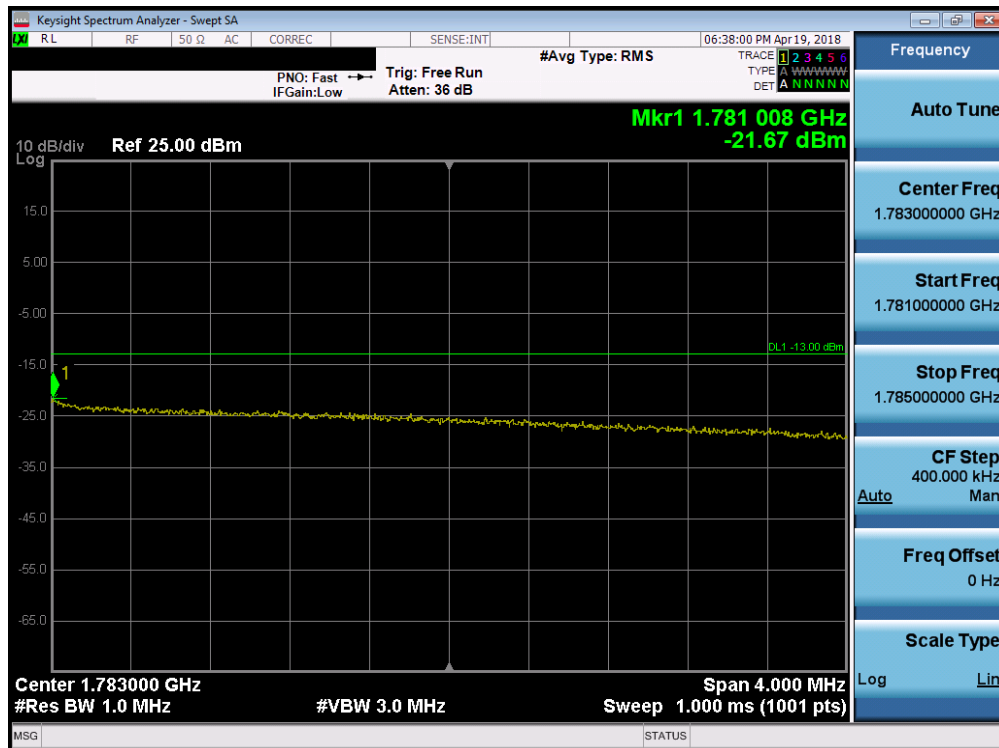


Plot 7-154. Upper Extended Band Edge Plot (Band 4 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03- R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 99 of 185

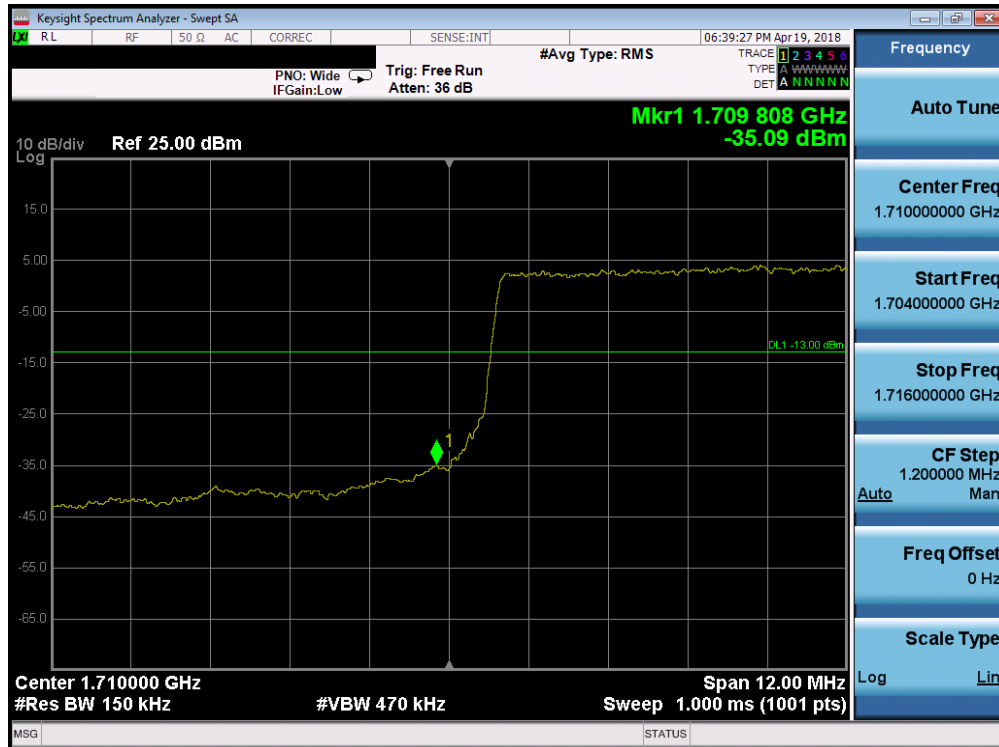


Plot 7-155. Upper Band Edge Plot (Band 66 - 10.0MHz QPSK - Full RB Configuration)

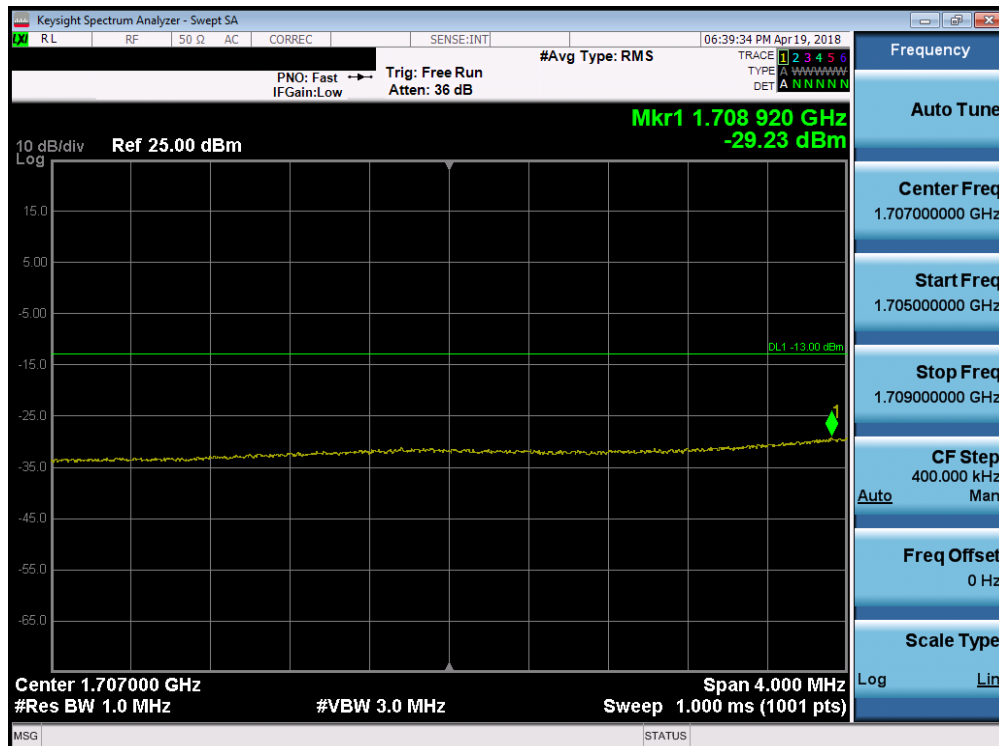


Plot 7-156. Upper Extended Band Edge Plot (Band 66 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 100 of 185

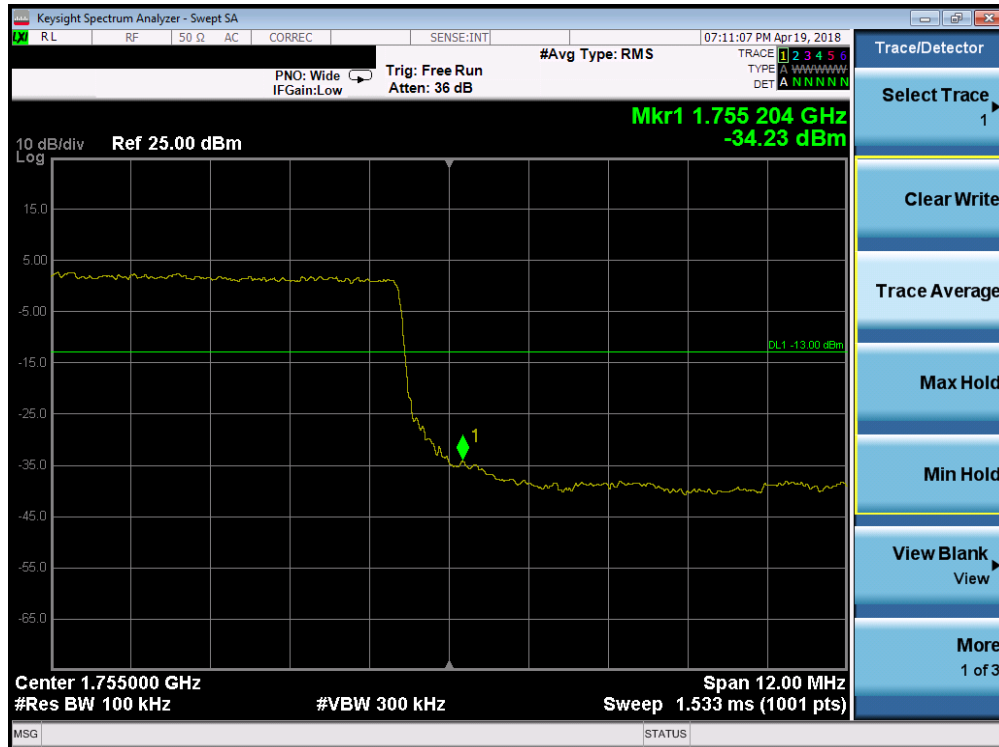


Plot 7-157. Lower Band Edge Plot (Band 66/4 - 15.0MHz QPSK - Full RB Configuration)

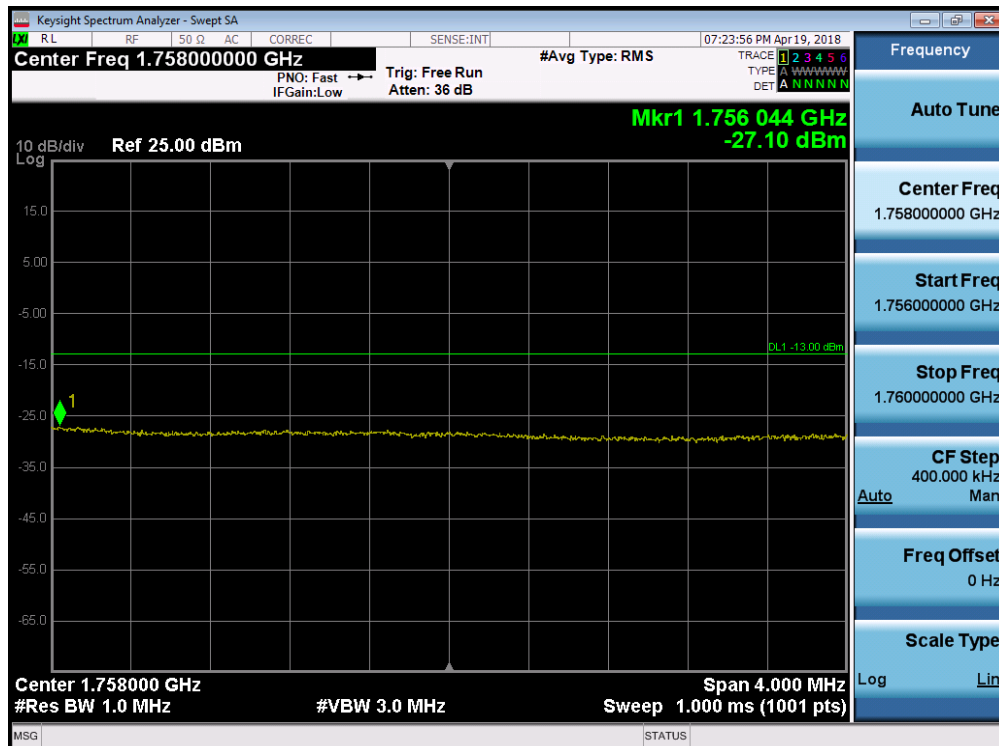


Plot 7-158. Lower Extended Band Edge Plot (Band 66/4 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 101 of 185

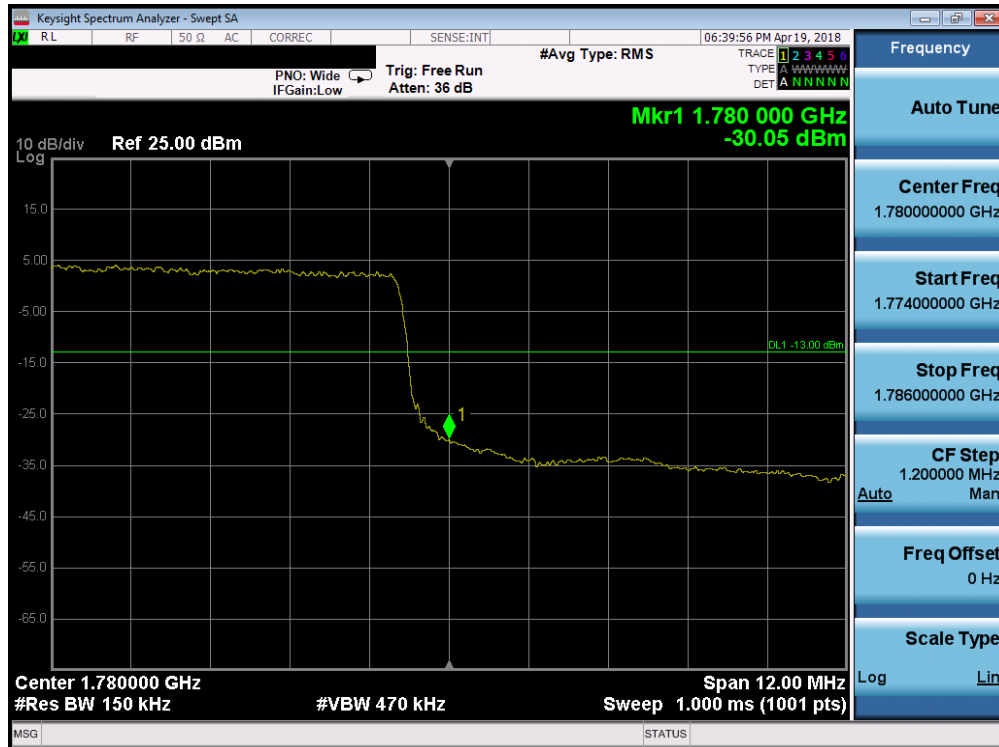


Plot 7-159. Upper Band Edge Plot (Band 4 - 15.0MHz QPSK - Full RB Configuration)

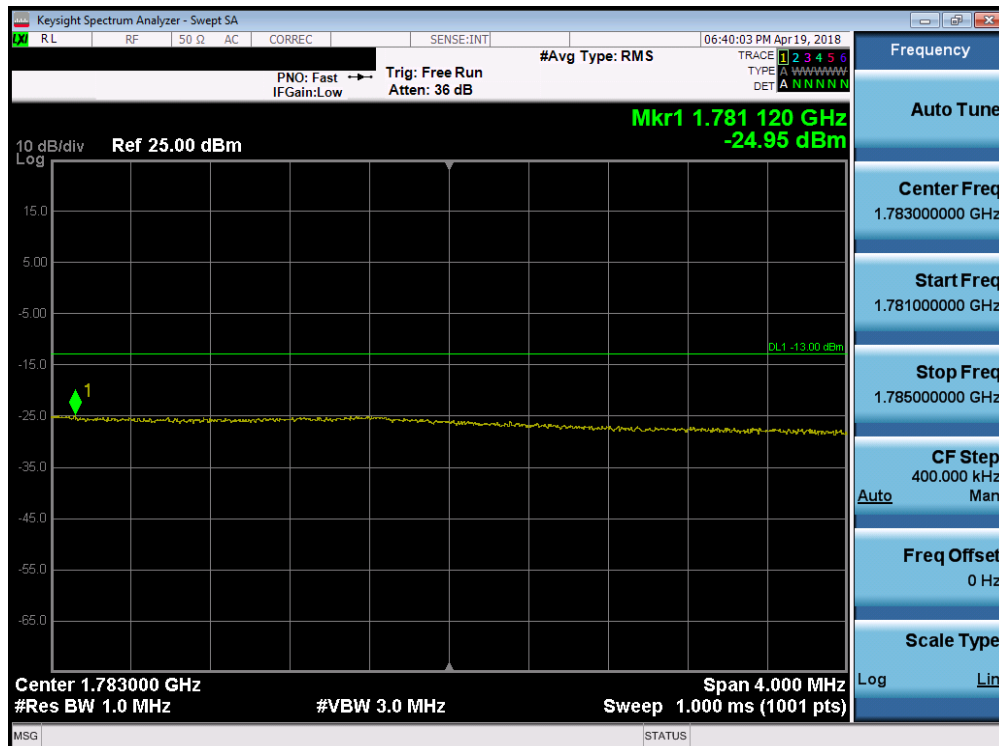


Plot 7-160. Upper Extended Band Edge Plot (Band 4 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 102 of 185

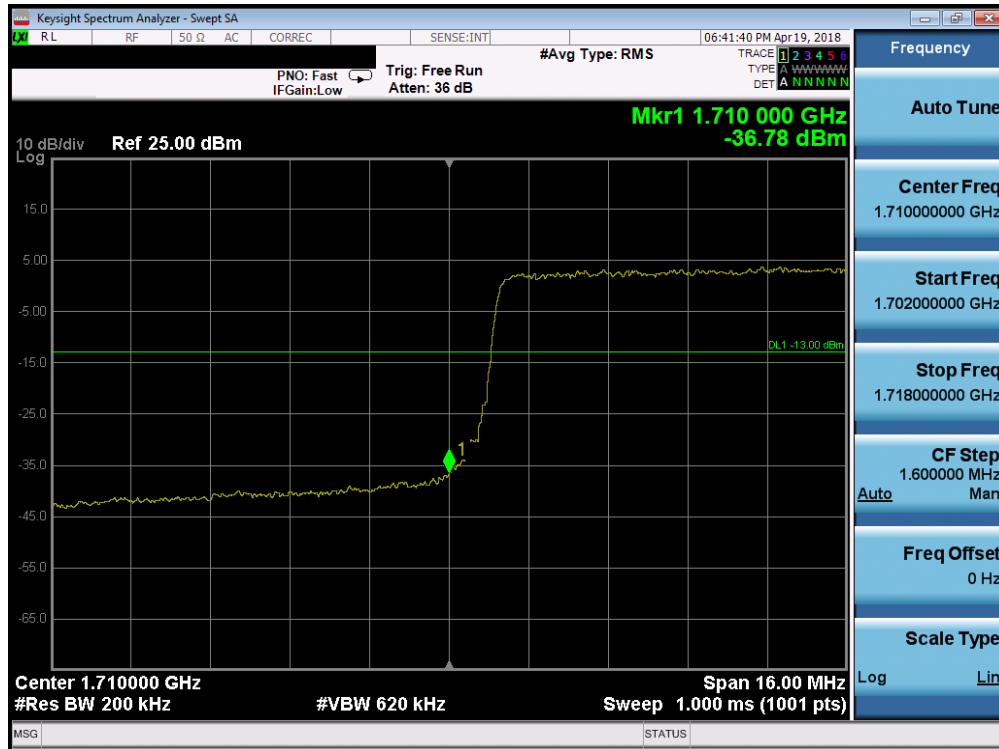


Plot 7-161. Upper Band Edge Plot (Band 66 - 15.0MHz QPSK - Full RB Configuration)

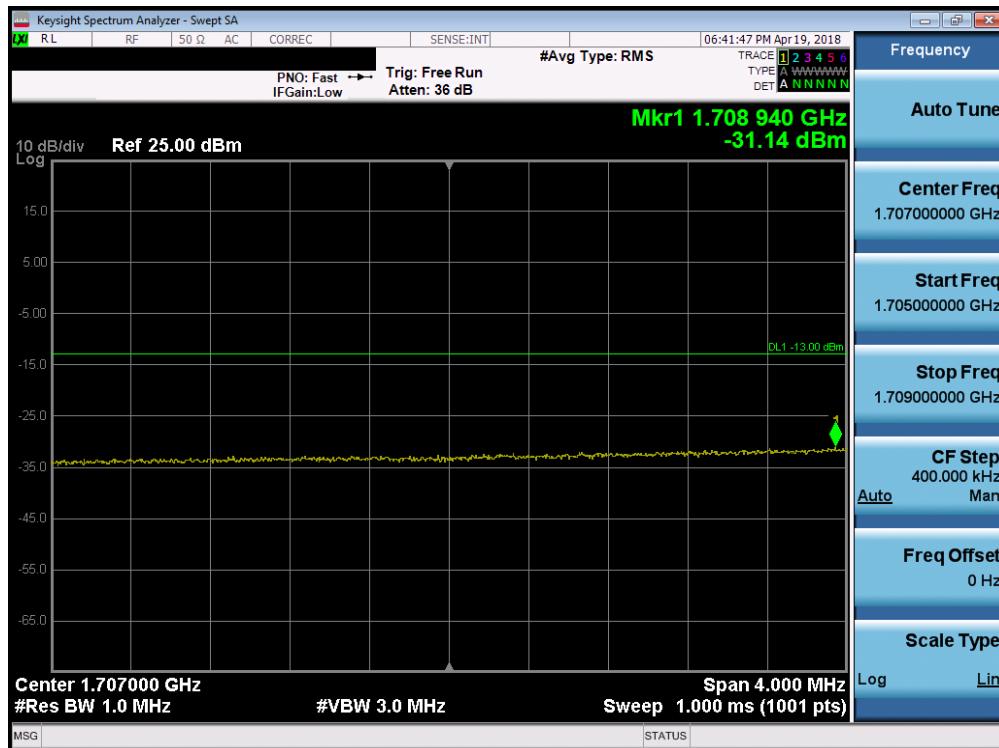


Plot 7-162. Upper Extended Band Edge Plot (Band 66 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 103 of 185

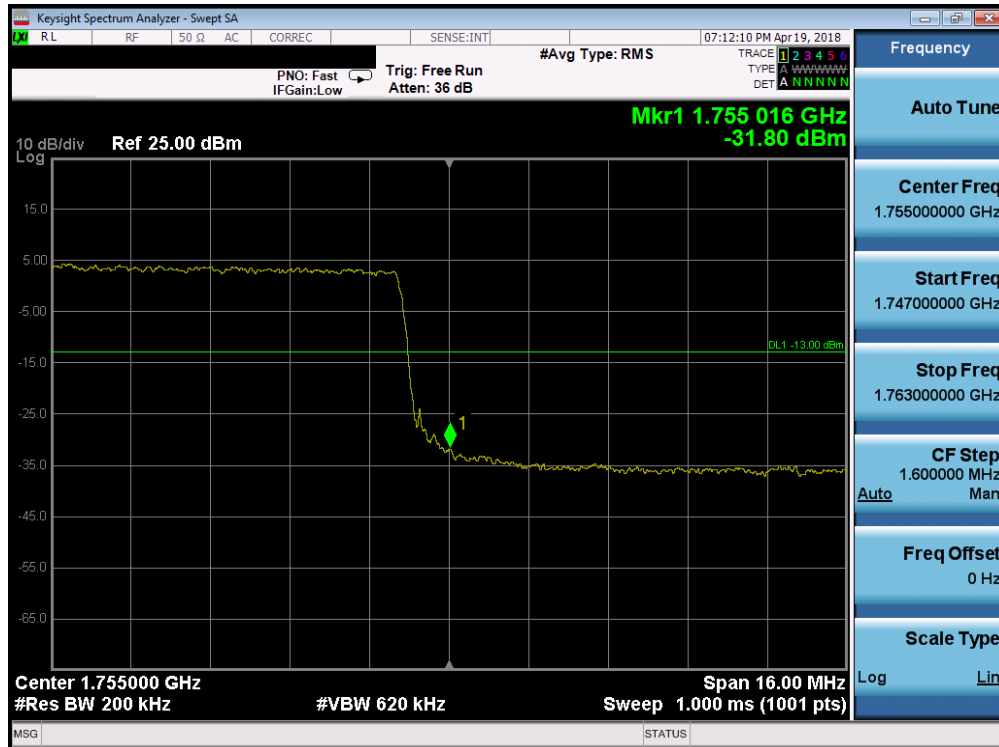


Plot 7-163. Lower Band Edge Plot (Band 66/4 - 20.0MHz QPSK - Full RB Configuration)

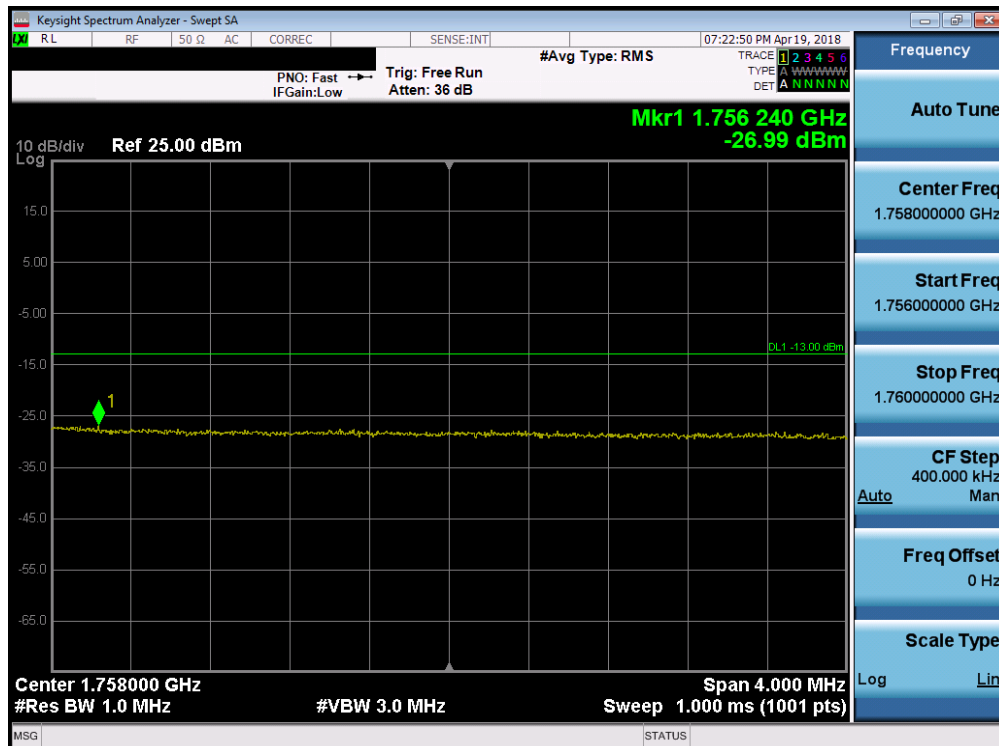


Plot 7-164. Lower Extended Band Edge Plot (Band 66/4 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 104 of 185

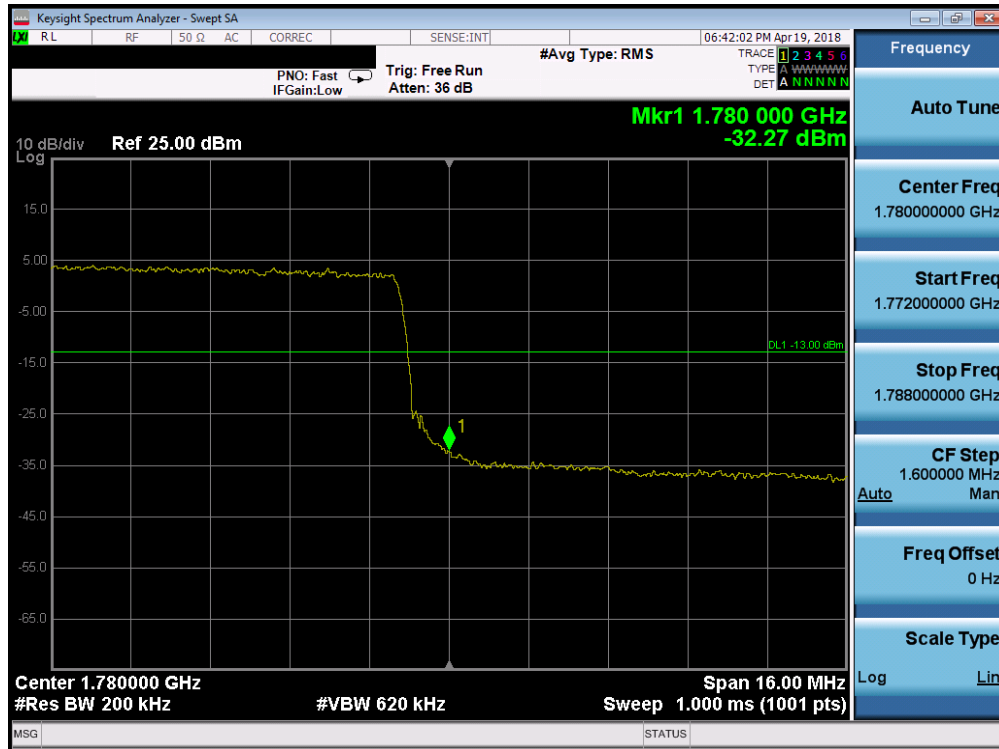


Plot 7-165. Upper Band Edge Plot (Band 4 - 20.0MHz QPSK - Full RB Configuration)

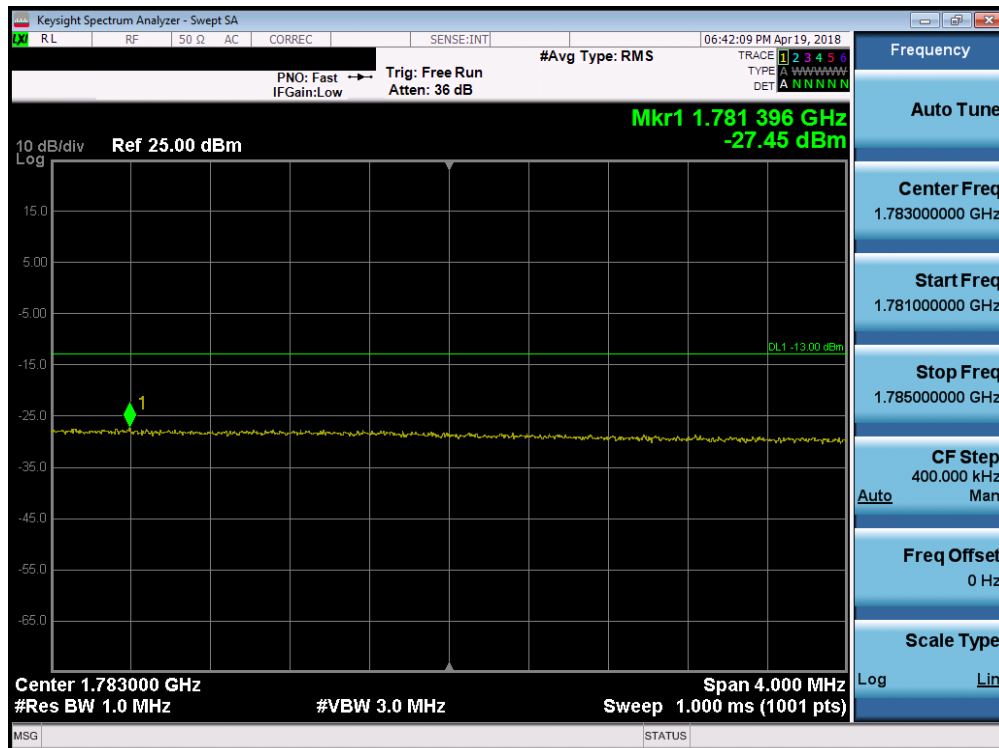


Plot 7-166. Upper Extended Band Edge Plot (Band 4 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 105 of 185



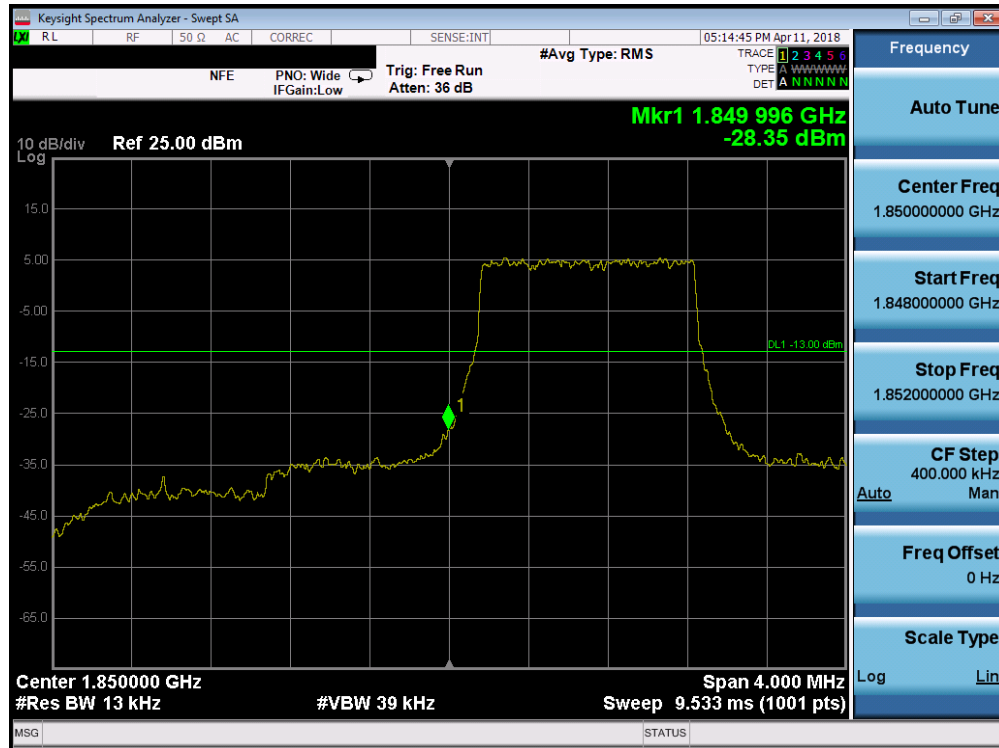
Plot 7-167. Upper Band Edge Plot (Band 66 - 20.0MHz QPSK - Full RB Configuration)



Plot 7-168. Upper Extended Band Edge Plot (Band 66 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 106 of 185



Band 2



Plot 7-169. Lower Band Edge Plot (Band 2 - 1.4MHz QPSK - Full RB Configuration)

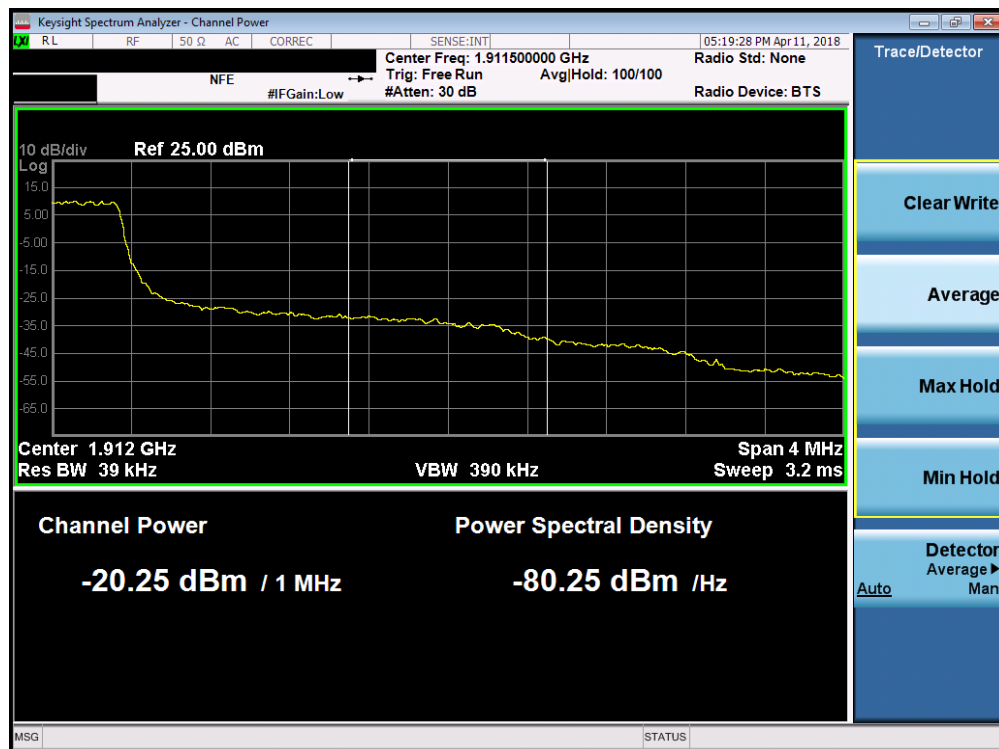


Plot 7-170. Lower Extended Band Edge Plot (Band 2 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset	Page 107 of 185

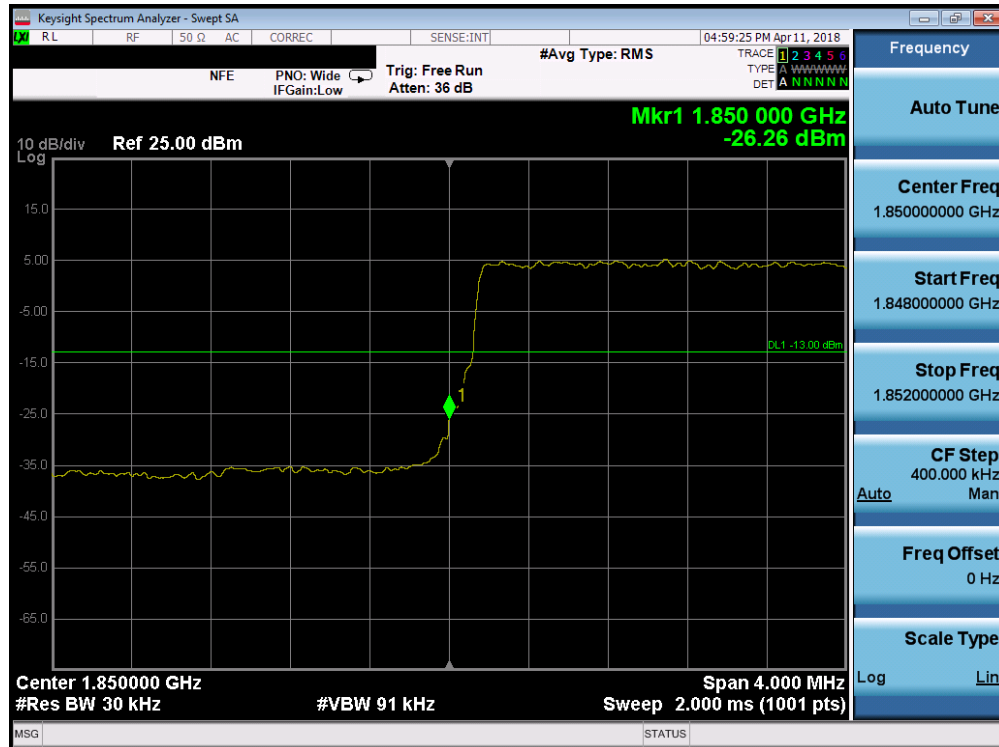


Plot 7-171. Upper Band Edge Plot (Band 2 - 1.4MHz QPSK - Full RB Configuration)

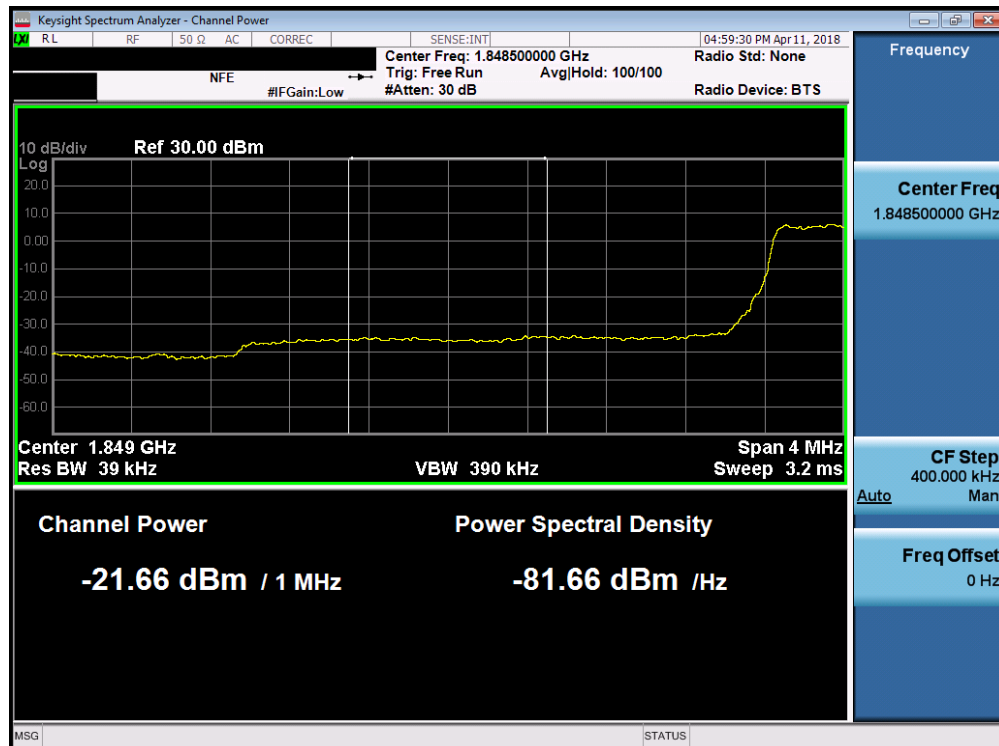


Plot 7-172. Upper Extended Band Edge Plot (Band 2 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 108 of 185

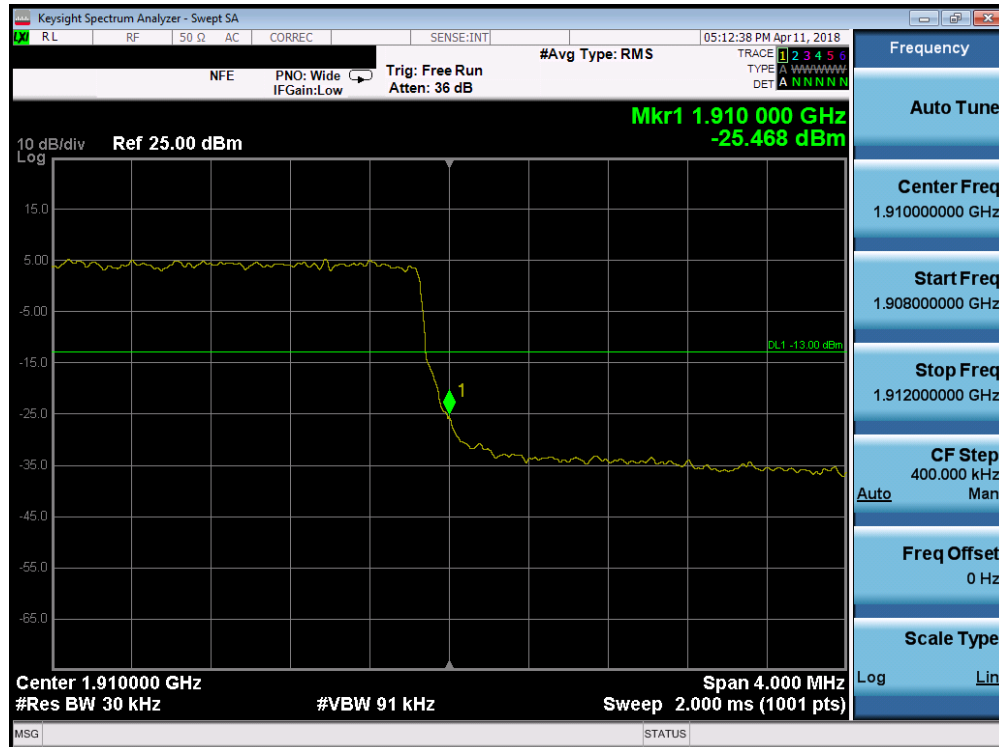


Plot 7-173. Lower Band Edge Plot (Band 2 - 3.0MHz QPSK - Full RB Configuration)

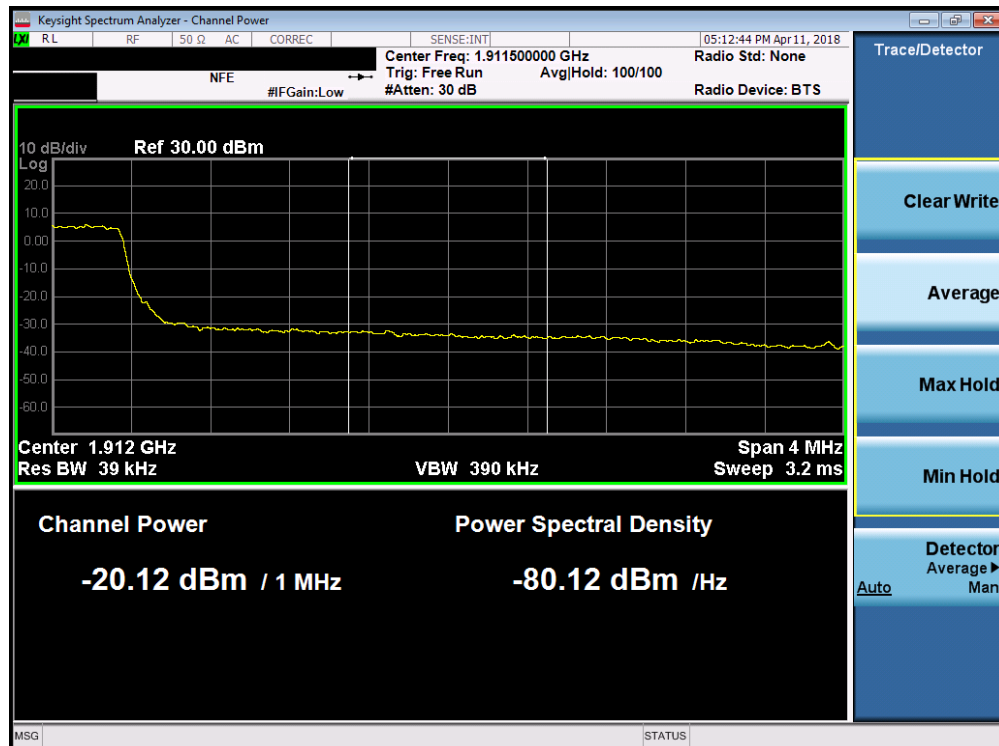


Plot 7-174. Lower Extended Band Edge Plot (Band 2 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 109 of 185

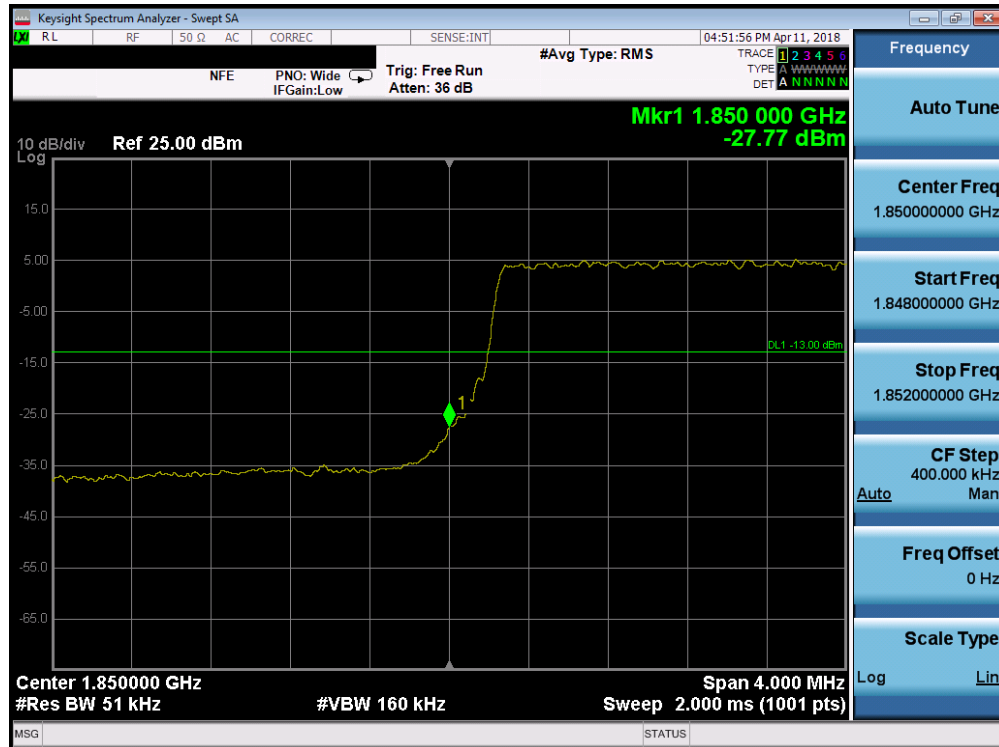


Plot 7-175. Upper Band Edge Plot (Band 2 - 3.0MHz QPSK - Full RB Configuration)

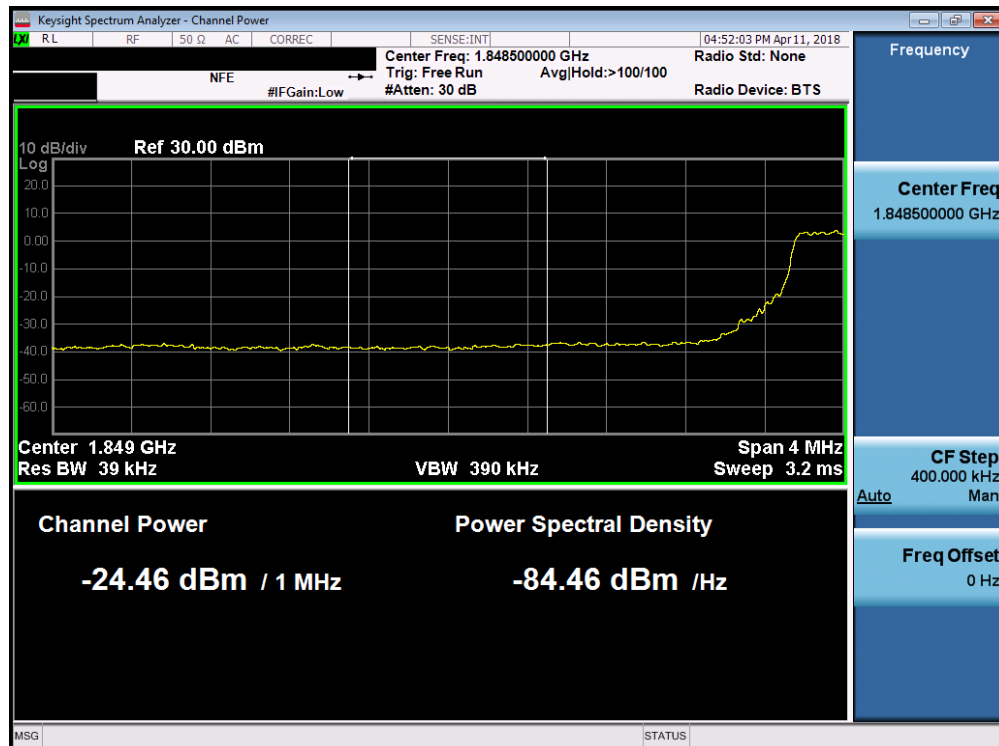


Plot 7-176. Upper Extended Band Edge Plot (Band 2 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 110 of 185

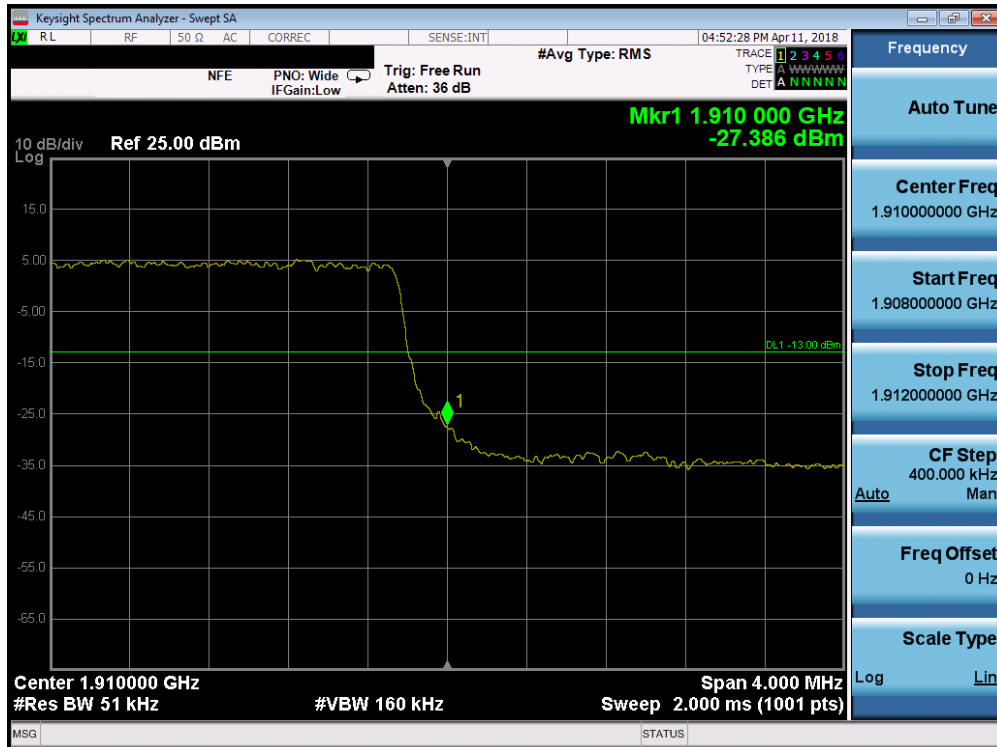


Plot 7-177. Lower Band Edge Plot (Band 2 - 5.0MHz QPSK - Full RB Configuration)

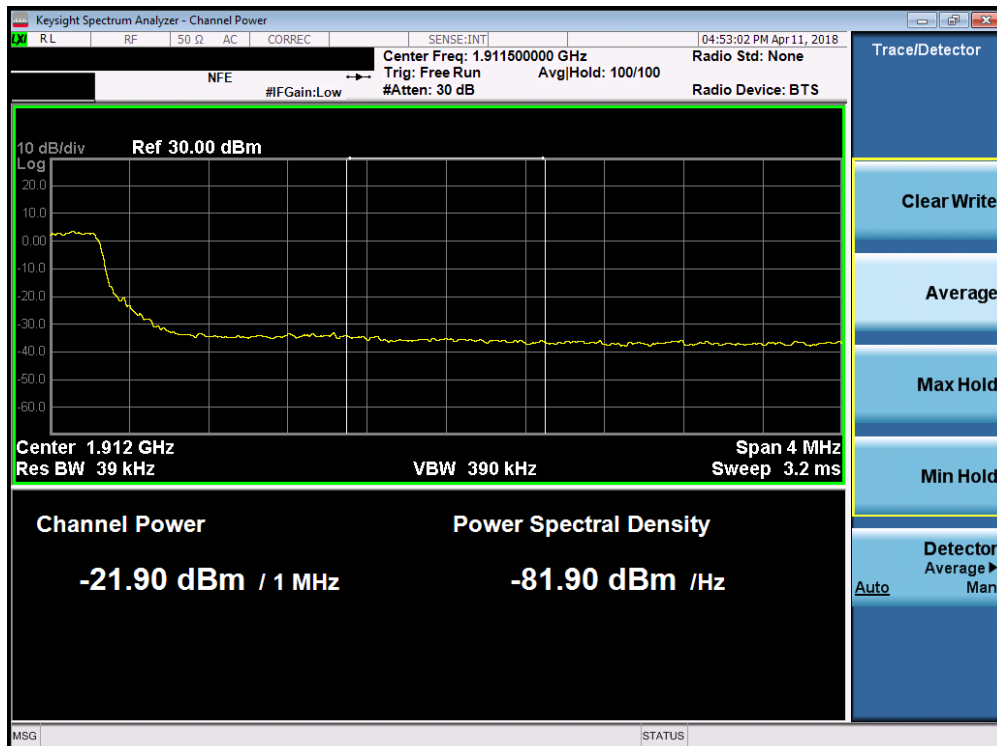


Plot 7-178. Lower Extended Band Edge Plot (Band 2 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 111 of 185

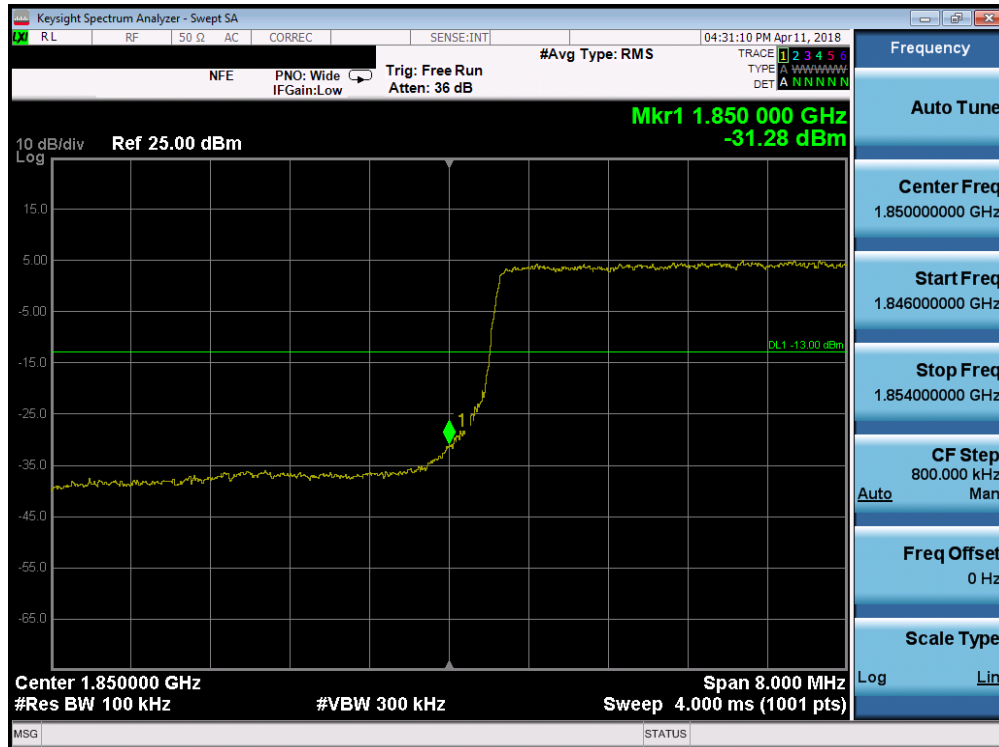


Plot 7-179. Upper Band Edge Plot (Band 2 - 5.0MHz QPSK - Full RB Configuration)

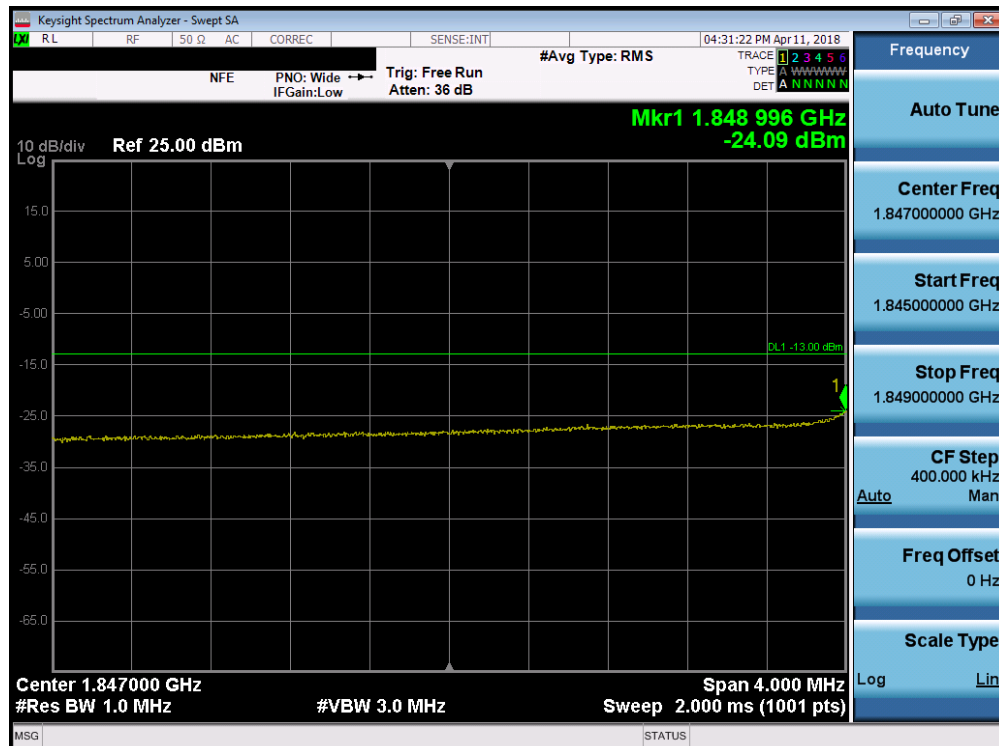


Plot 7-180. Upper Extended Band Edge Plot (Band 2 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 112 of 185

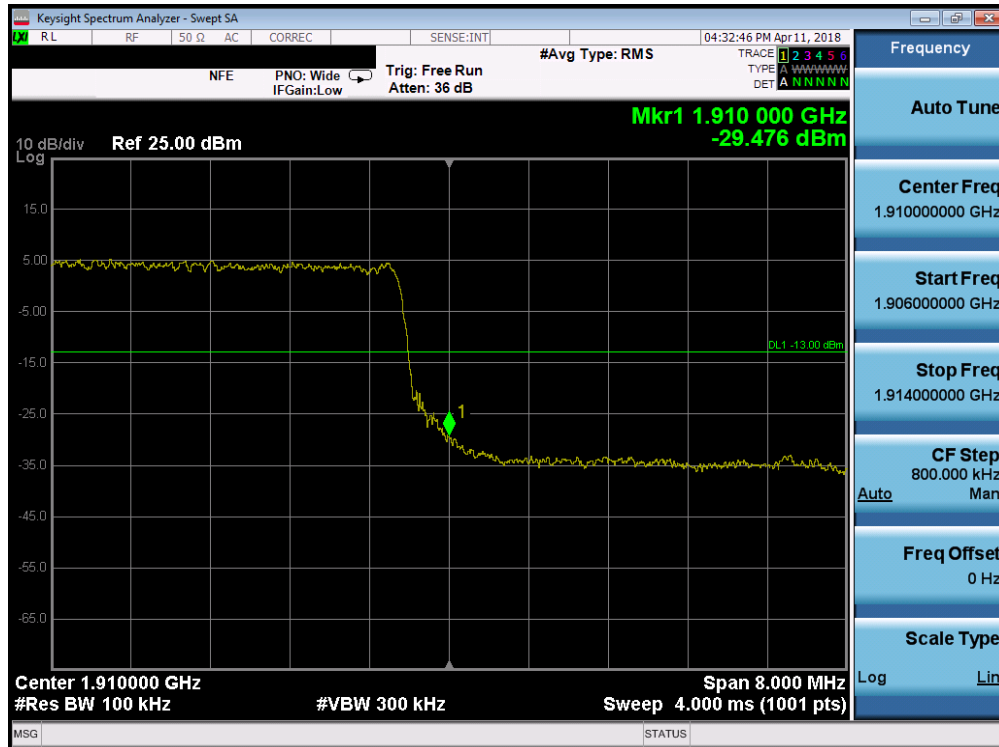


Plot 7-181. Lower Band Edge Plot (Band 2 - 10.0MHz QPSK - Full RB Configuration)

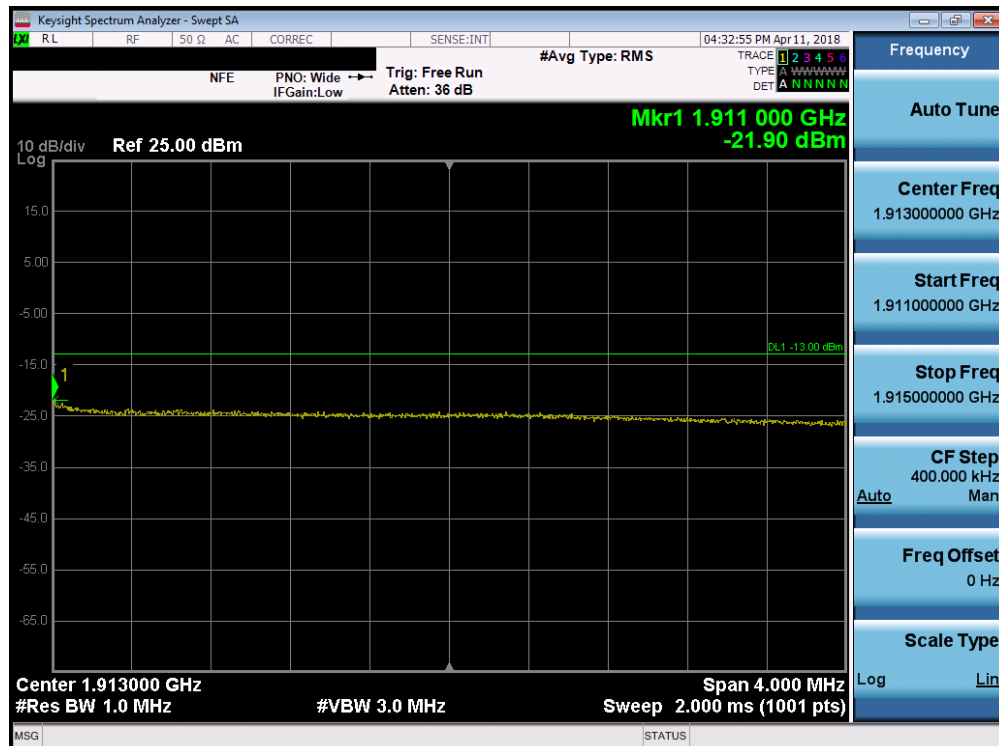


Plot 7-182. Lower Extended Band Edge Plot (Band 2 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 113 of 185

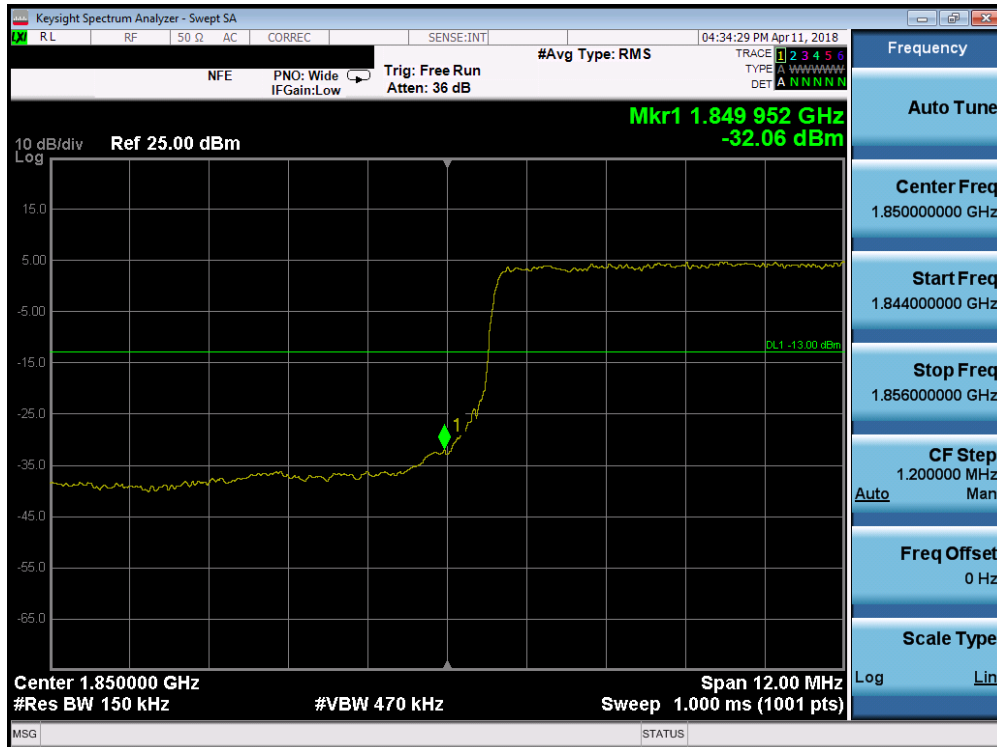


Plot 7-183. Upper Band Edge Plot (Band 2 - 10.0MHz QPSK - Full RB Configuration)

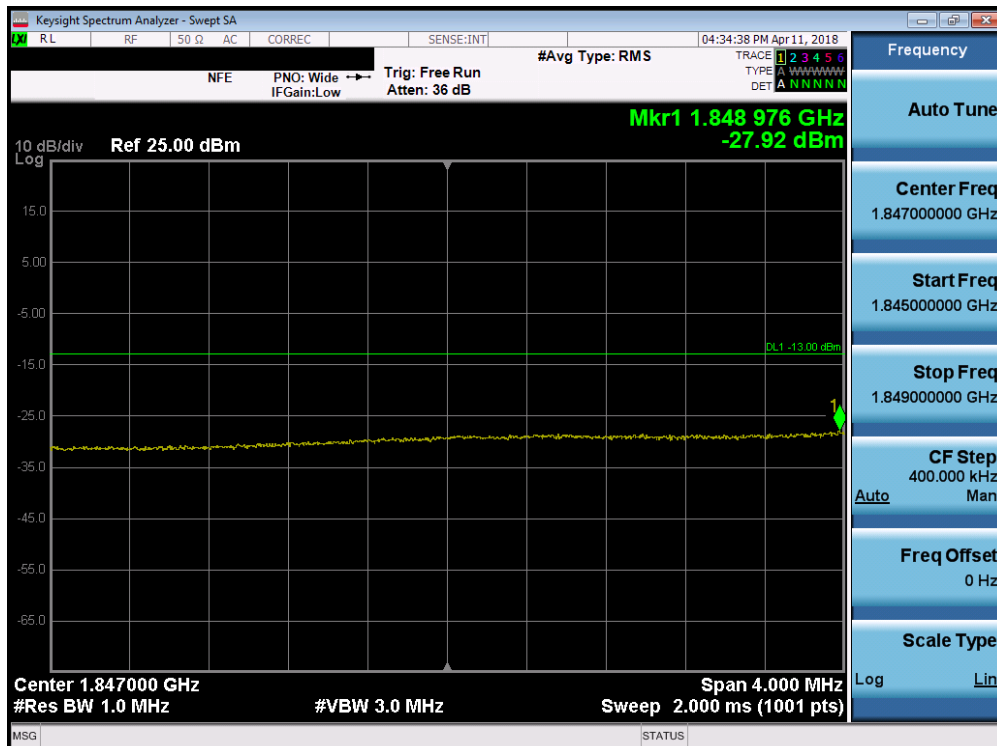


Plot 7-184. Upper Extended Band Edge Plot (Band 2 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 114 of 185

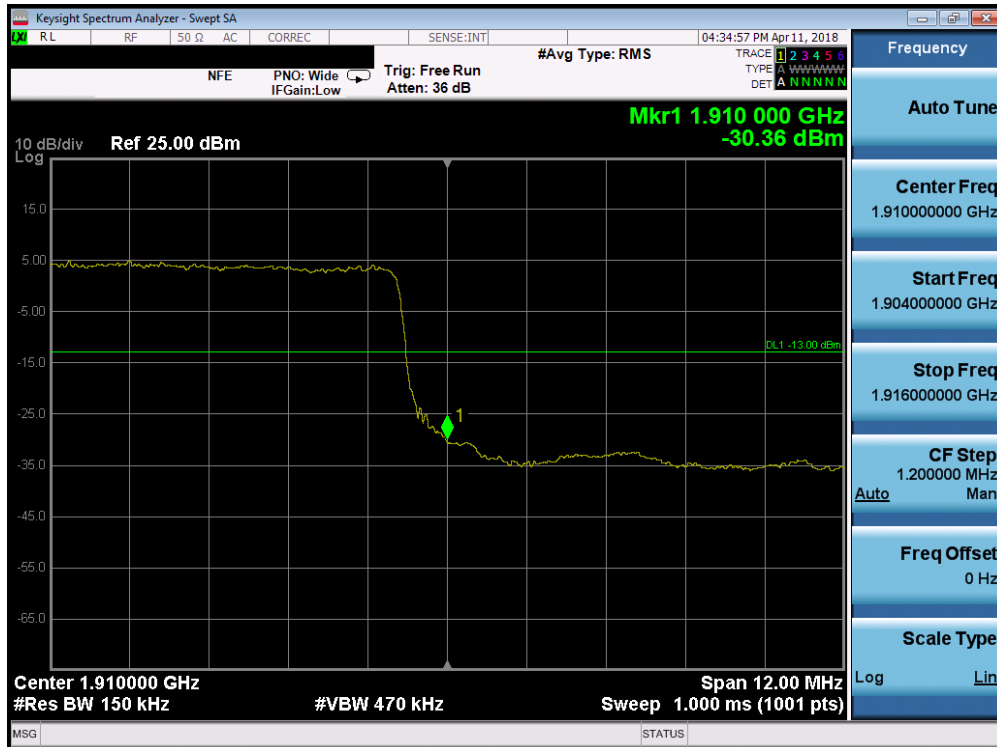


Plot 7-185. Lower Band Edge Plot (Band 2 - 15.0MHz QPSK - Full RB Configuration)



Plot 7-186. Lower Extended Band Edge Plot (Band 2 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 115 of 185

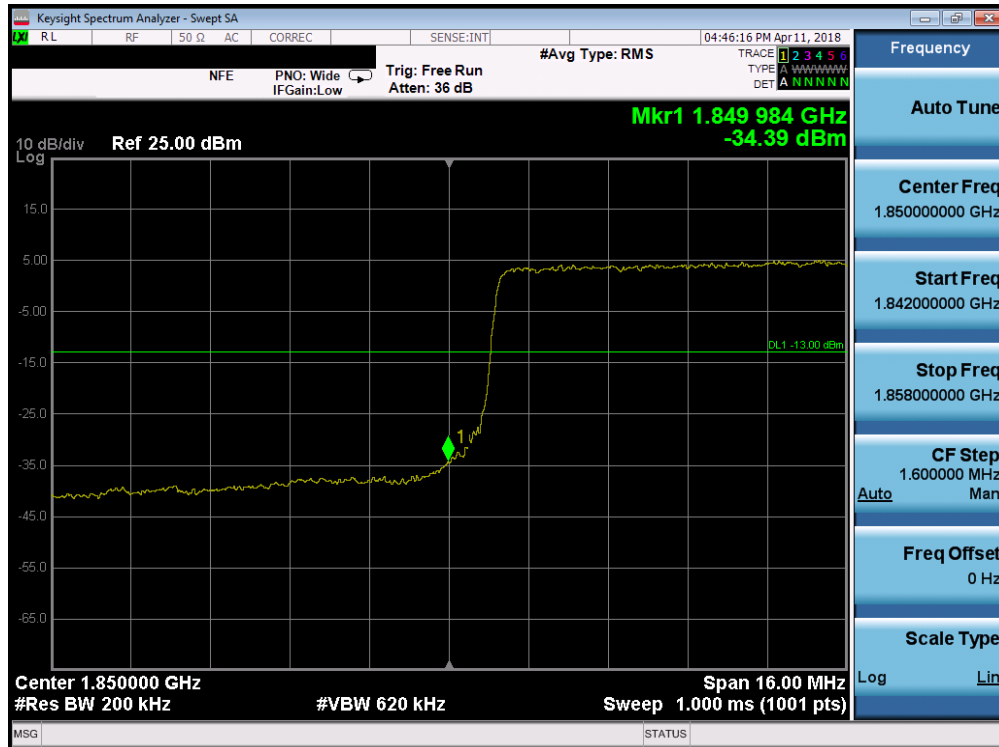


Plot 7-187. Upper Band Edge Plot (Band 2 - 15.0MHz QPSK - Full RB Configuration)

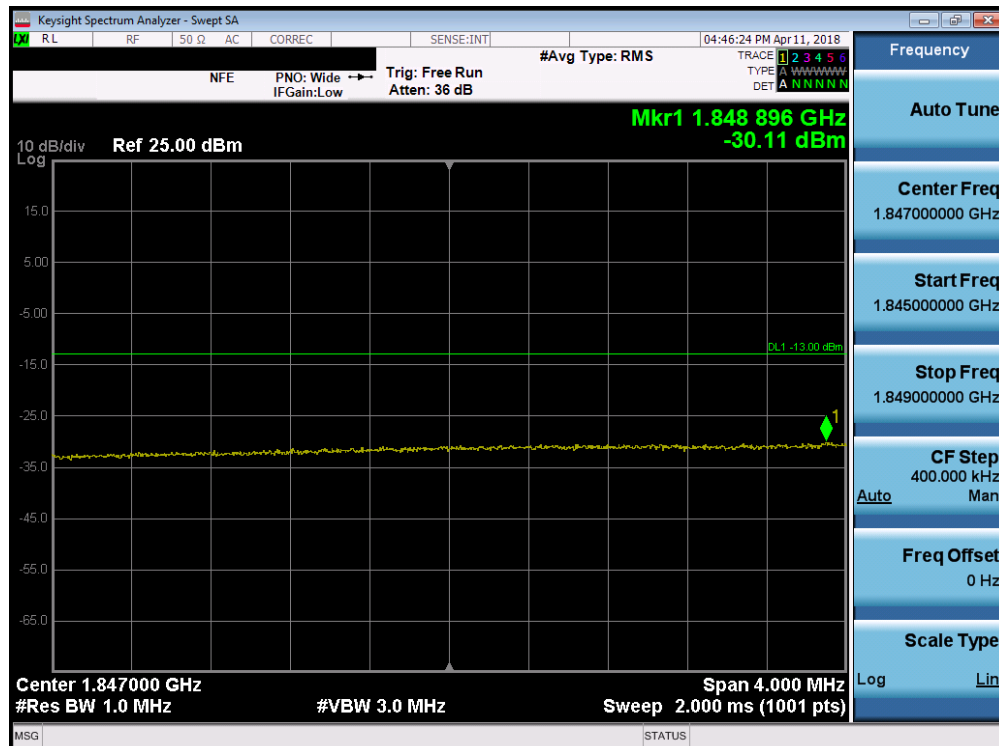


Plot 7-188. Upper Extended Band Edge Plot (Band 2 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 116 of 185



Plot 7-189. Lower Band Edge Plot (Band 2 - 20.0MHz QPSK - Full RB Configuration)

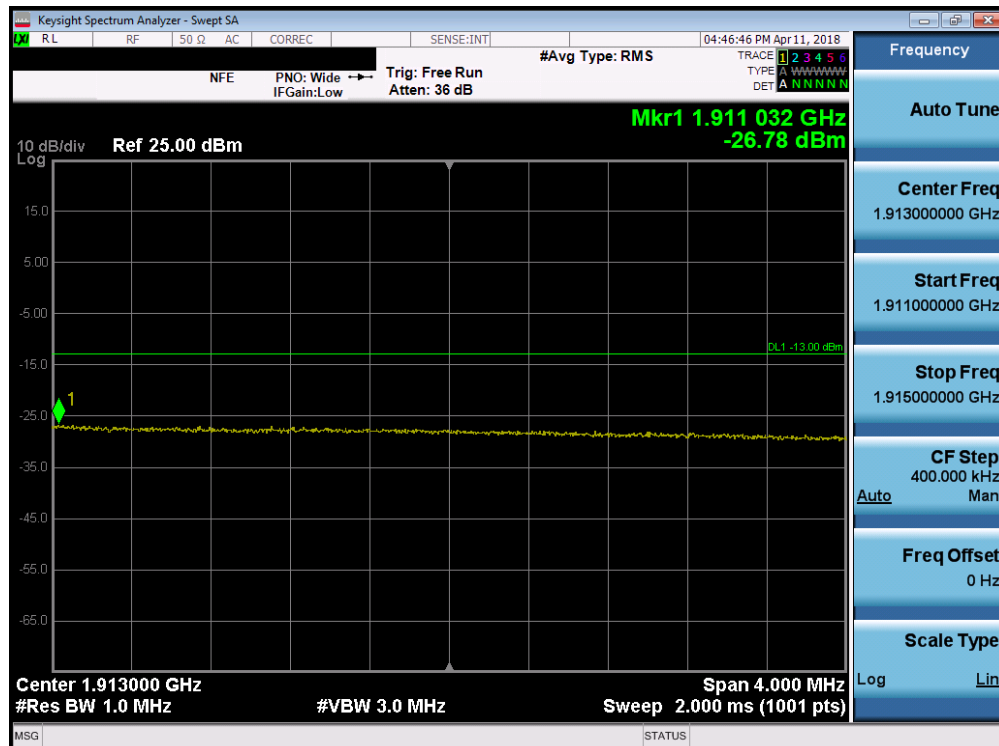


Plot 7-190. Lower Extended Band Edge Plot (Band 2 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 117 of 185



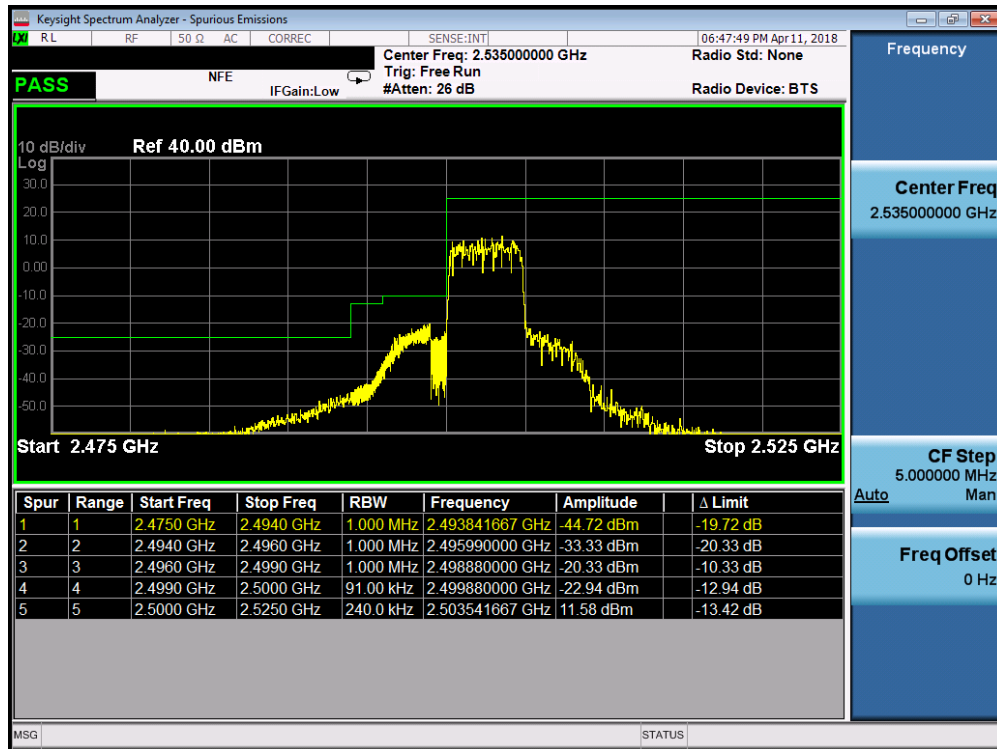
Plot 7-191. Upper Band Edge Plot (Band 2 - 20.0MHz QPSK - Full RB Configuration)



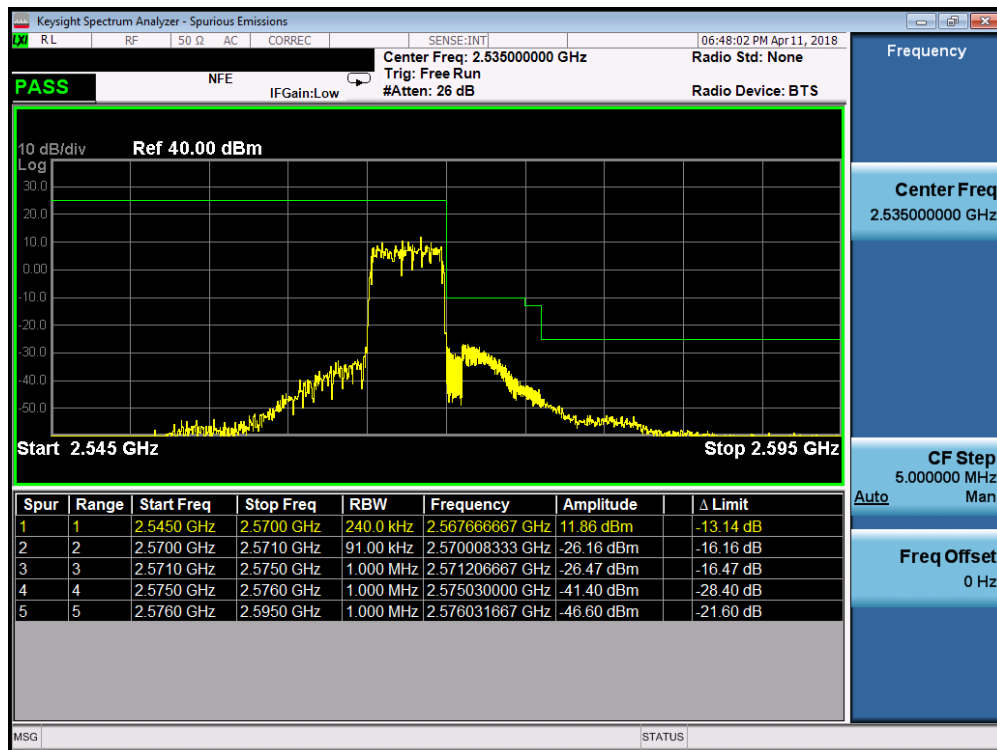
Plot 7-192. Upper Extended Band Edge Plot (Band 2 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 118 of 185

Band 7

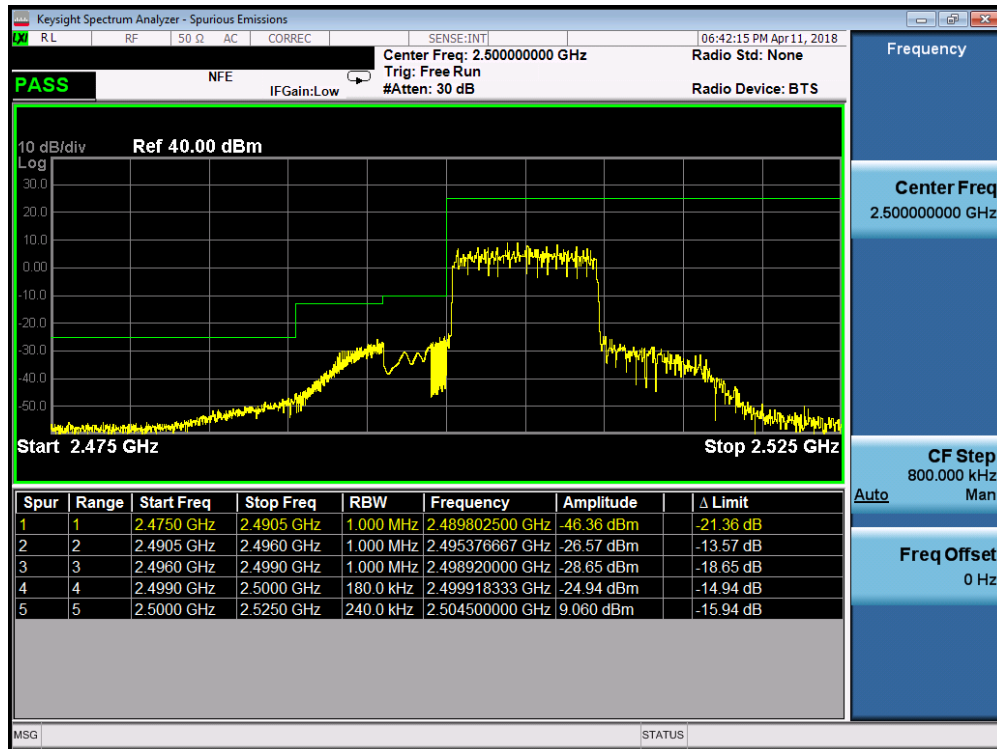


Plot 7-193. Lower ACP Plot (Band 7 – 5.0MHz QPSK – RB Size 25)

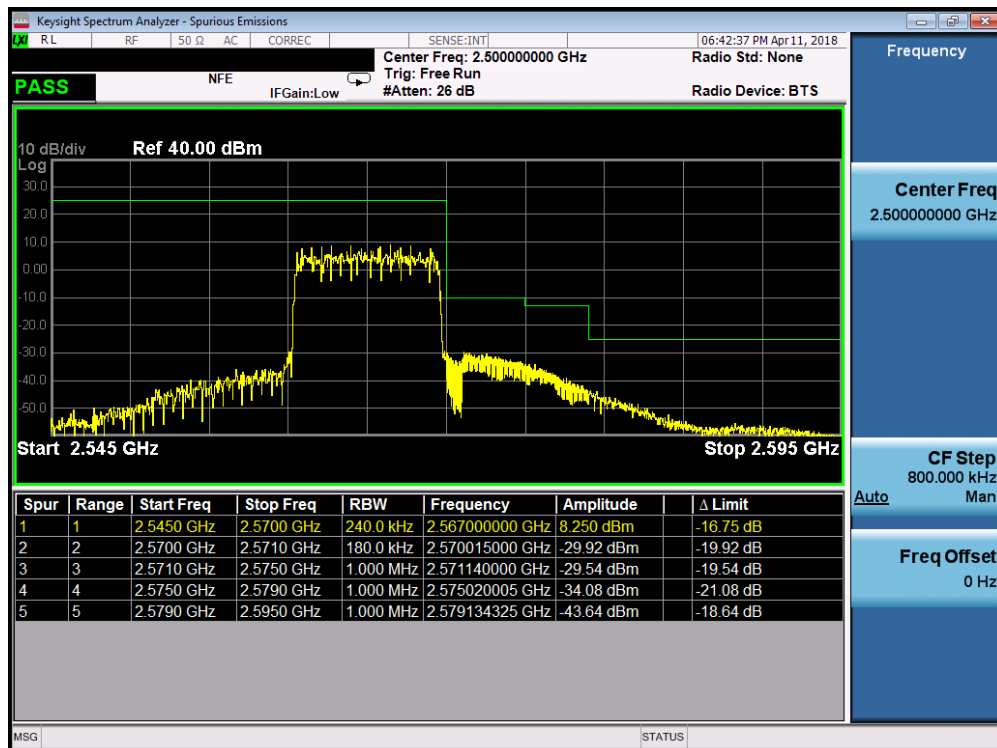


Plot 7-194. Upper ACP Plot (Band 7 – 5.0MHz QPSK – RB Size 25)

FCC ID: ZNFX510WM	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 119 of 185

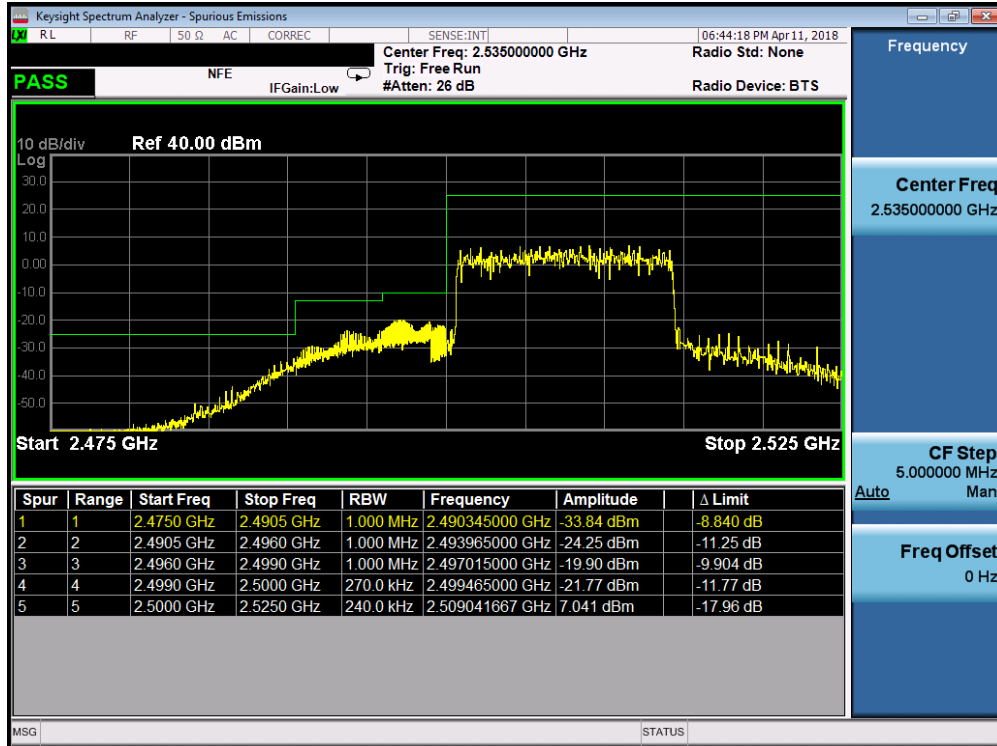


Plot 7-195. Lower ACP Plot (Band 7 – 10.0MHz QPSK – RB Size 50)

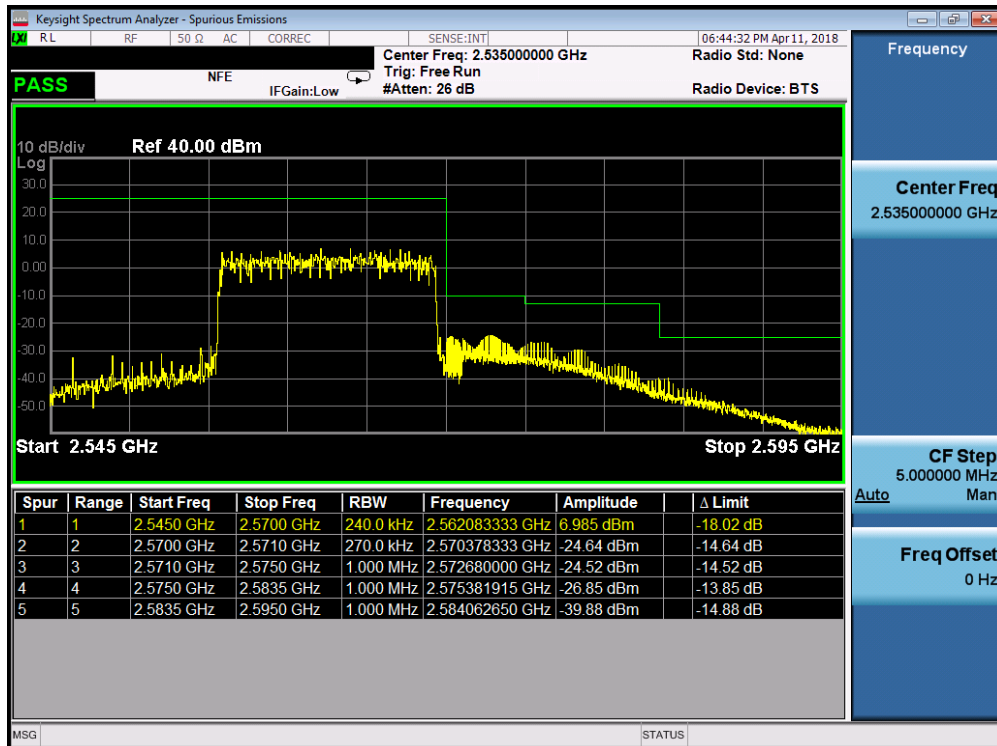


Plot 7-196. Upper ACP Plot (Band 7 – 10.0MHz QPSK – RB Size 50)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 120 of 185

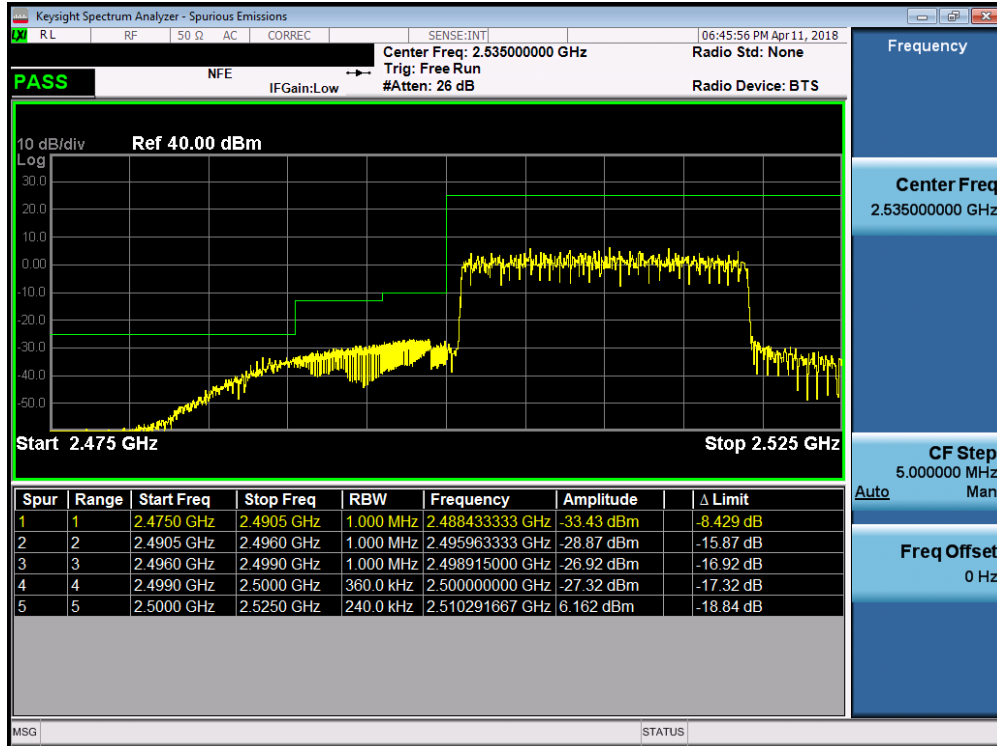


Plot 7-197. Lower ACP Plot (Band 7 – 15.0MHz QPSK – RB Size 75)

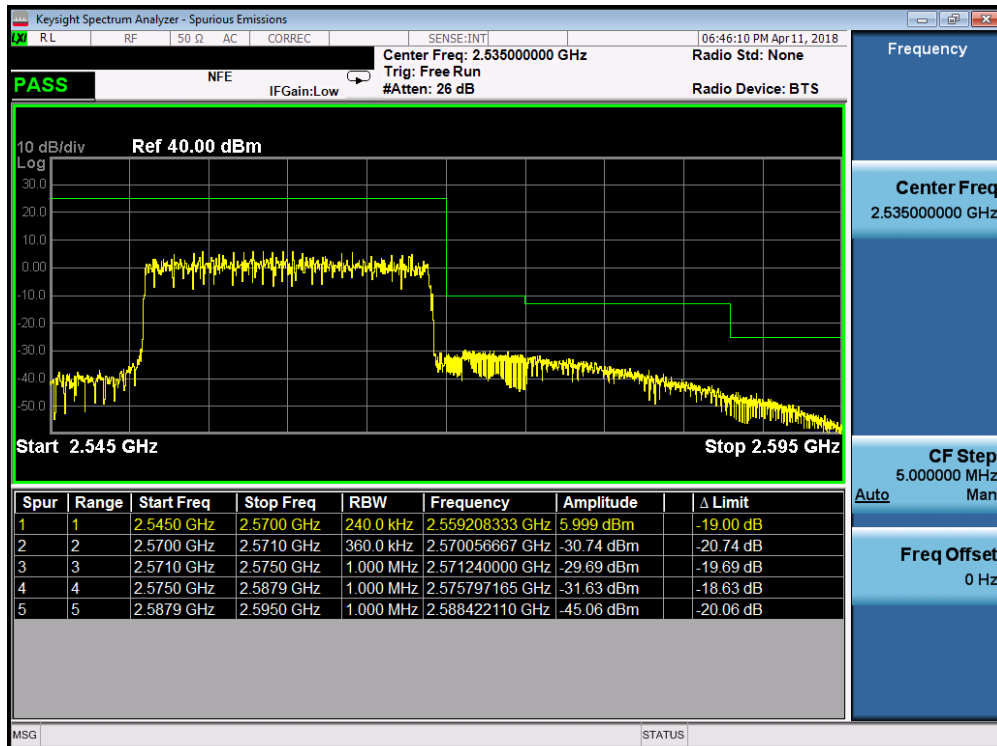


Plot 7-198. Upper ACP Plot (Band 7 – 15.0MHz QPSK – RB Size 75)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03- R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 121 of 185



Plot 7-199. Lower ACP Plot (Band 7 – 20.0MHz QPSK – RB Size 100)



Plot 7-200. Upper ACP Plot (Band 7 – 20.0MHz QPSK – RB Size 100)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03-R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset	Page 122 of 185

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 v03r01 – 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.



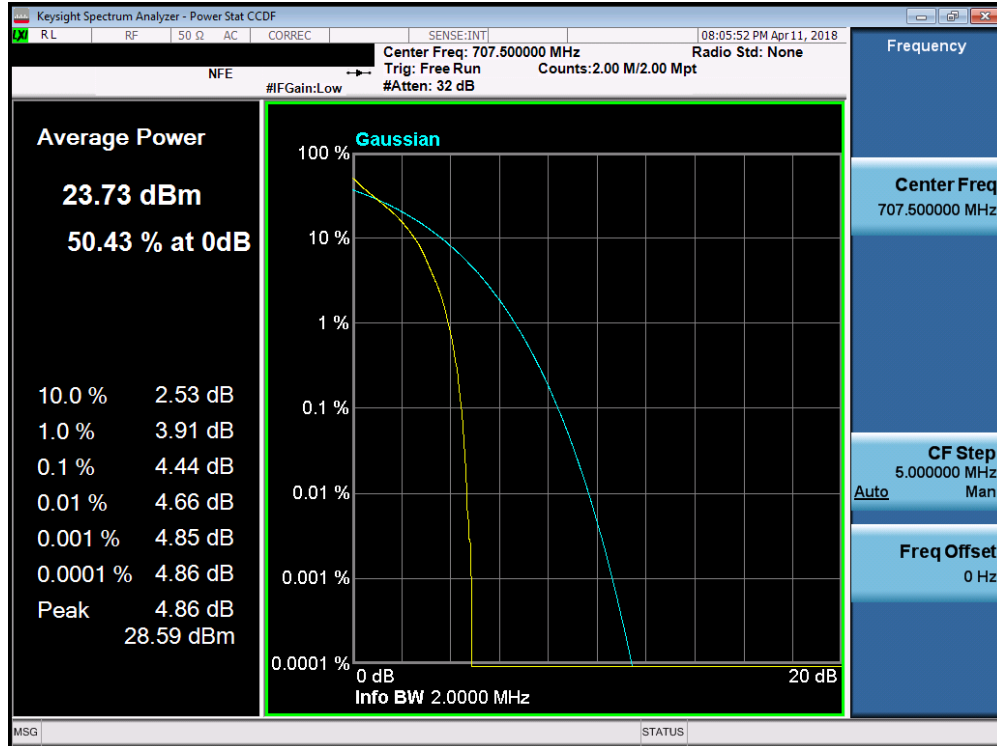
Figure 7-4. Test Instrument & Measurement Setup

Test Notes

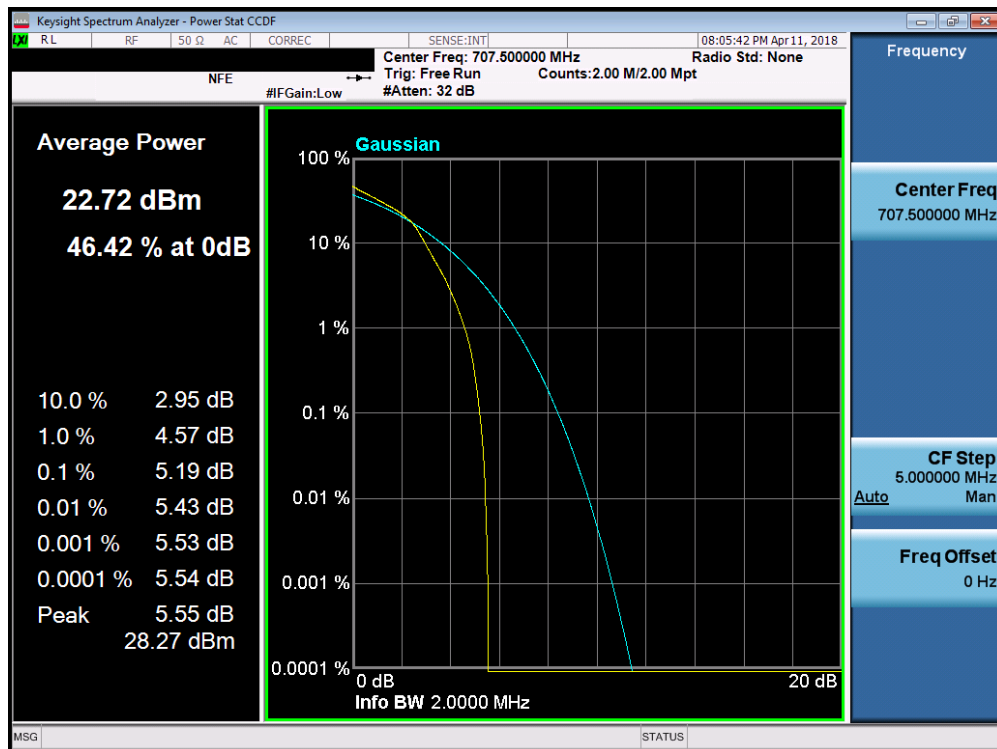
None.

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1805100104-03- R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 123 of 185

Band 12/17

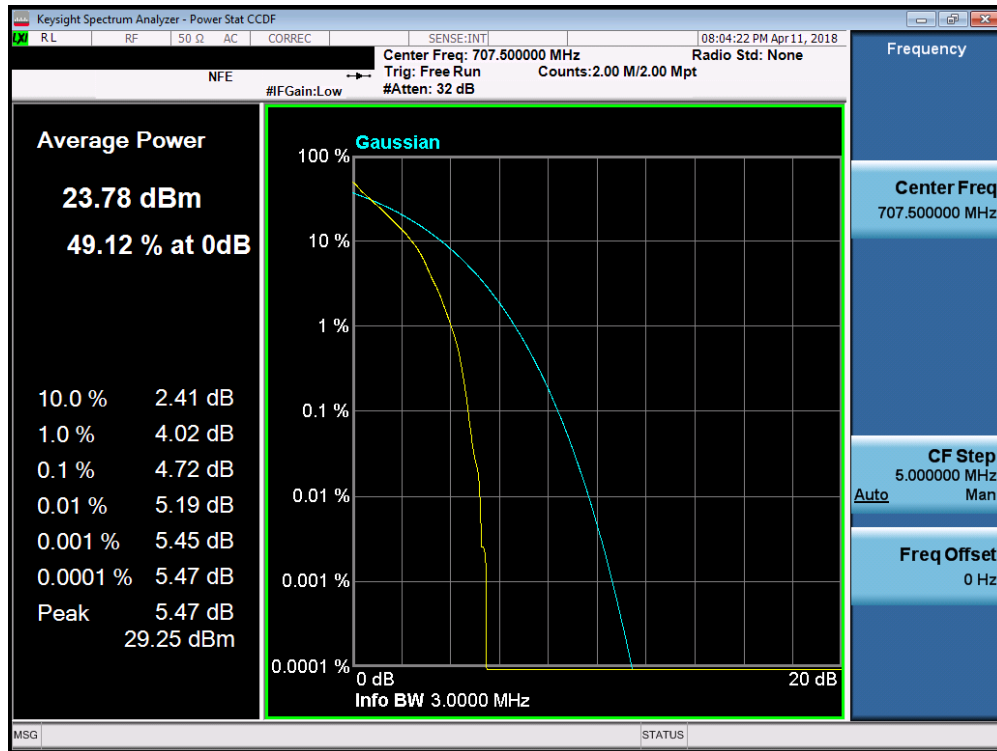


Plot 7-201. PAR Plot (Band 12 - 1.4MHz QPSK - Full RB Configuration)

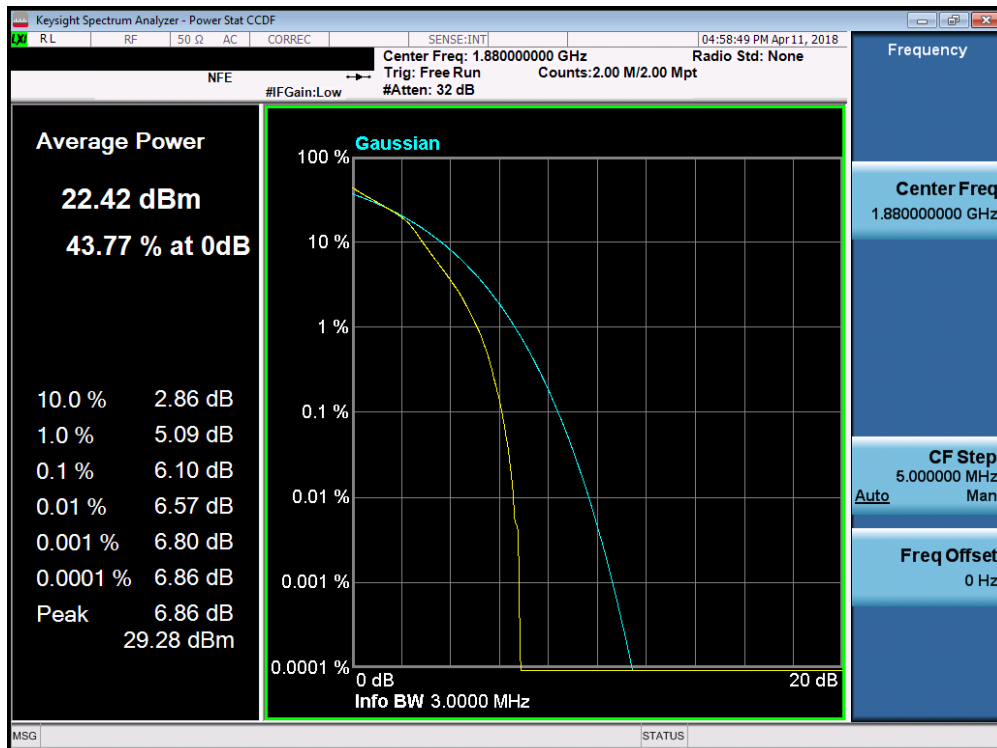


FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03- R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset	Page 124 of 185

Plot 7-202. PAR Plot (Band 12 - 1.4MHz 16-QAM - Full RB Configuration)

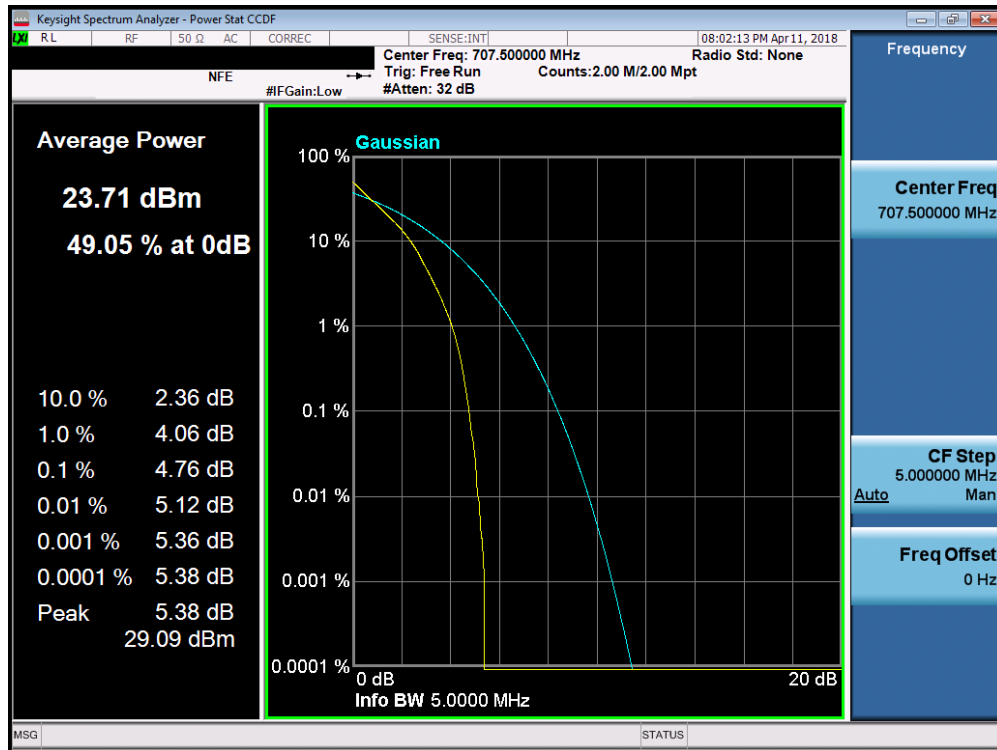


Plot 7-203. PAR Plot (Band 12 - 3.0MHz QPSK - Full RB Configuration)

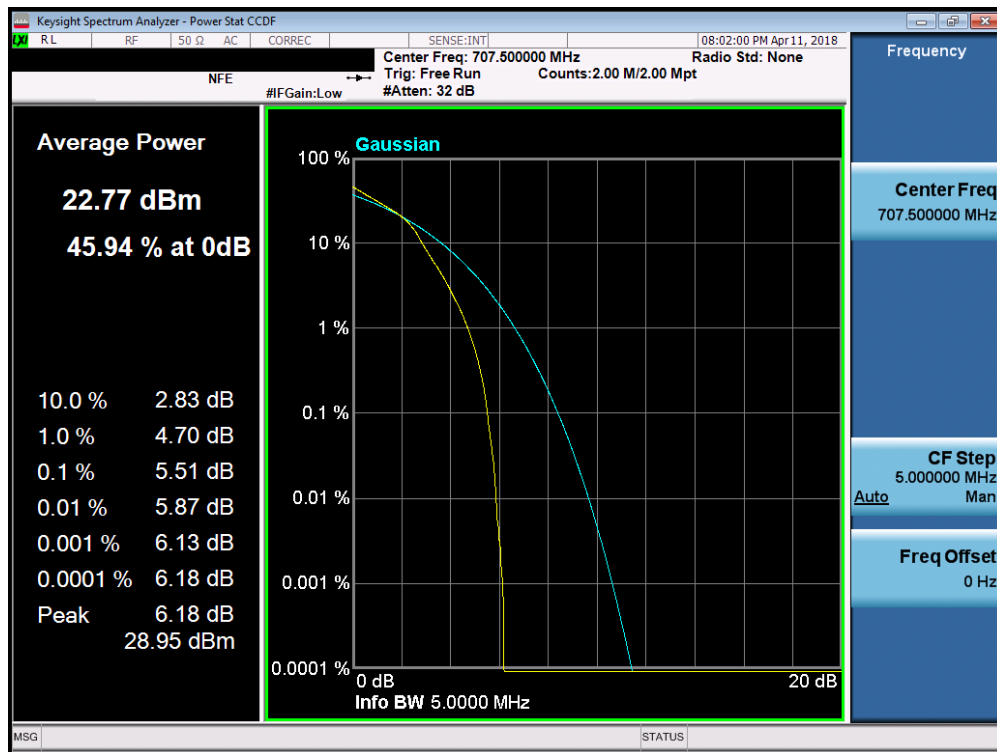


Plot 7-204. PAR Plot (Band 12 - 3.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03- R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset	Page 125 of 185

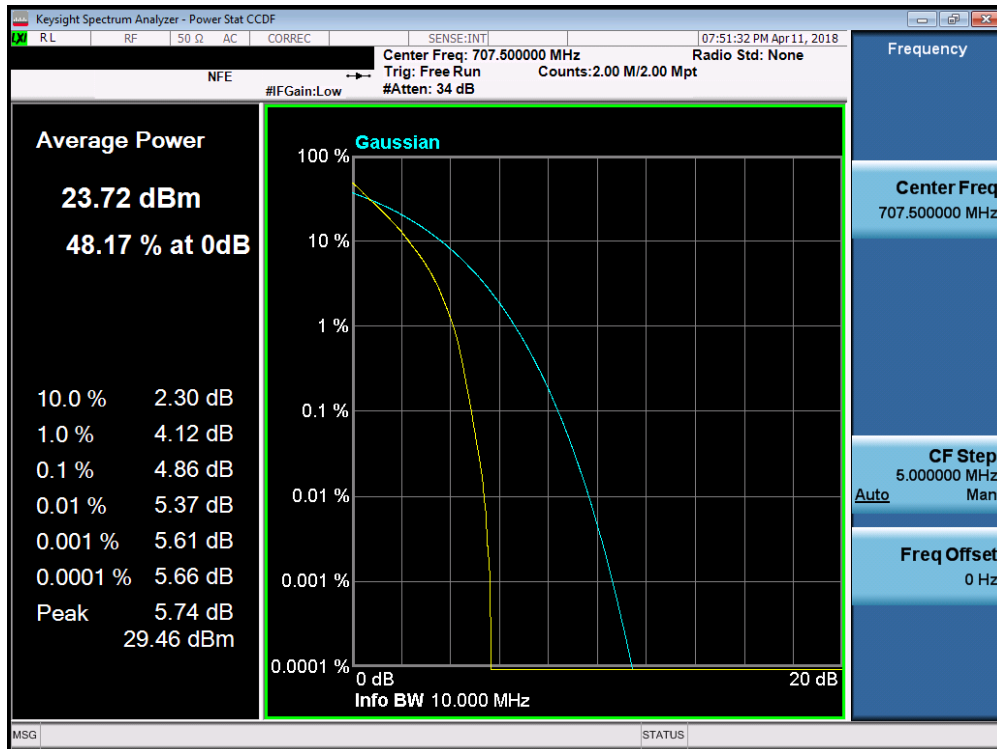


Plot 7-205. PAR Plot (Band 12/17 - 5.0MHz QPSK - Full RB Configuration)

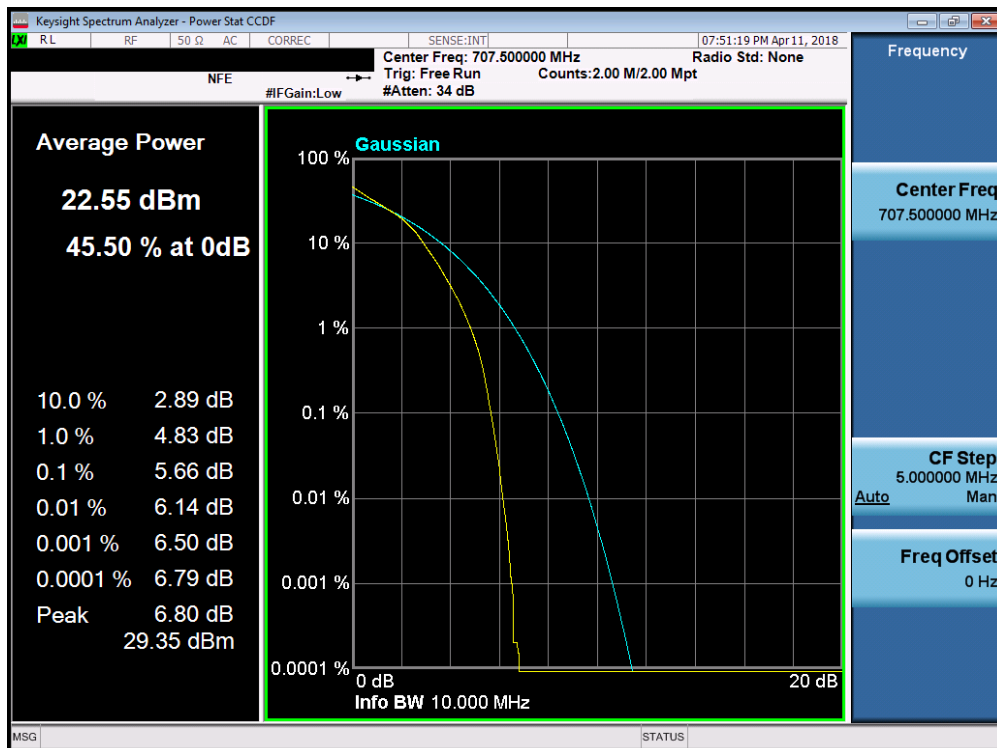


Plot 7-206. PAR Plot (Band 12/17 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03- R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 126 of 185



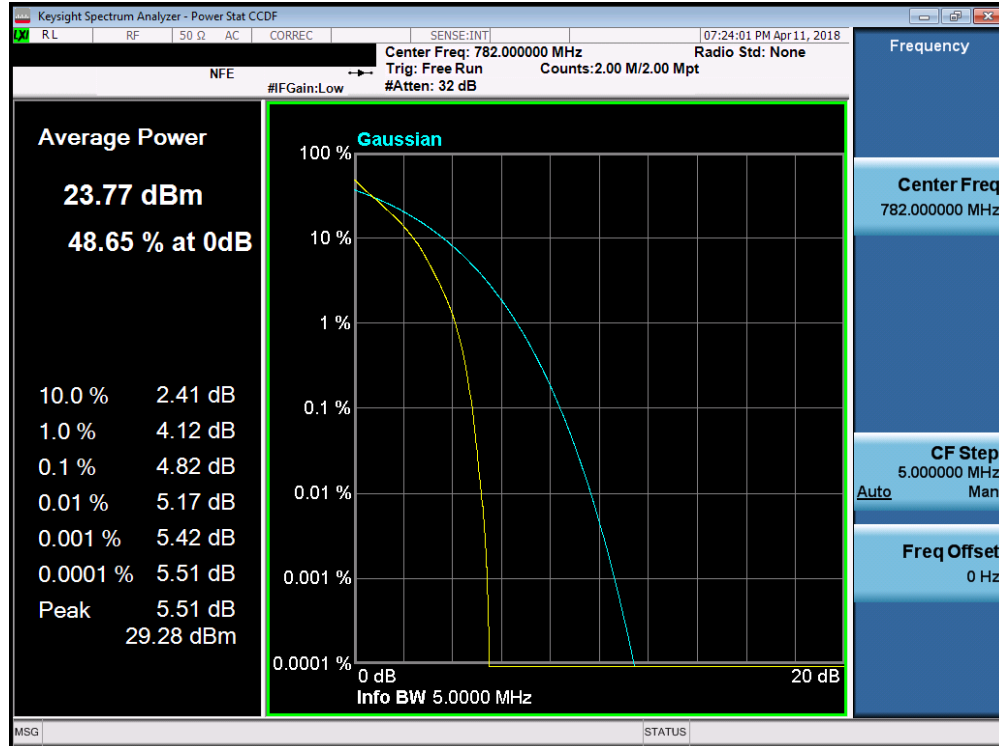
Plot 7-207. PAR Plot (Band 12/17 - 10.0MHz QPSK - Full RB Configuration)



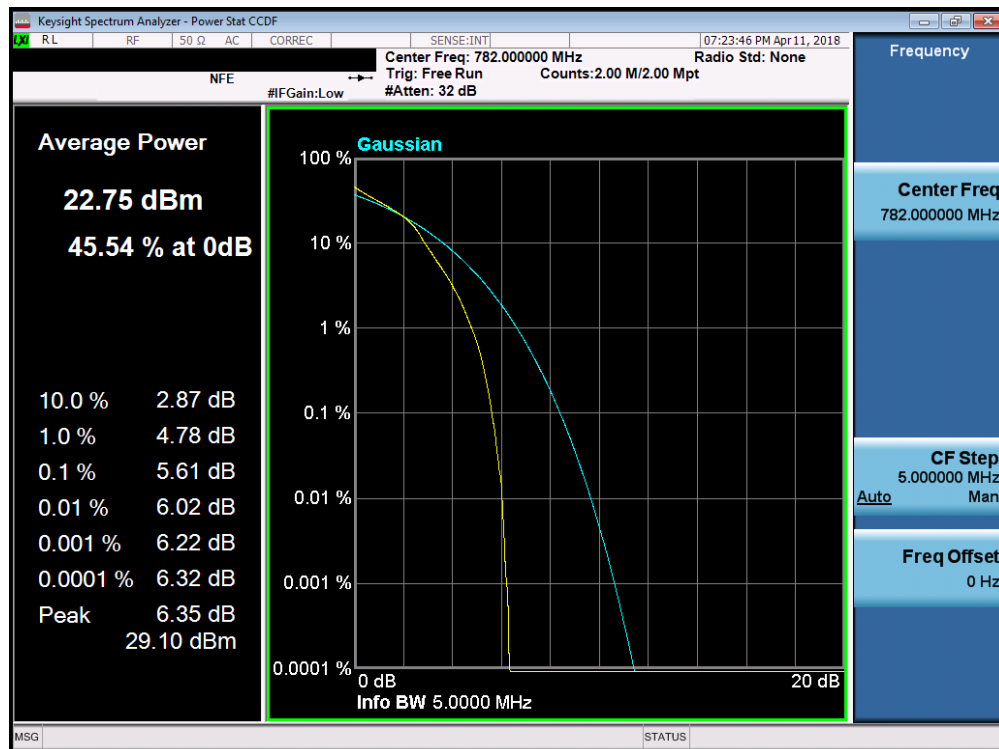
Plot 7-208. PAR Plot (Band 12/17 - 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03- R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 127 of 185

Band 13

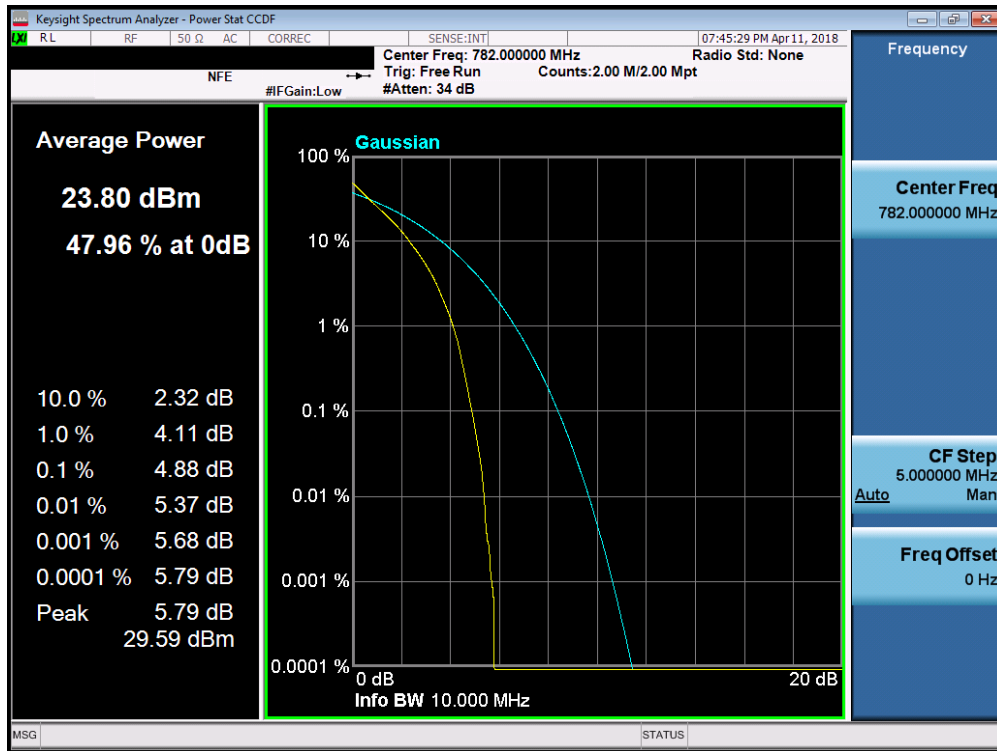


Plot 7-209. PAR Plot (Band 5 – 5.0MHz QPSK - Full RB Configuration)

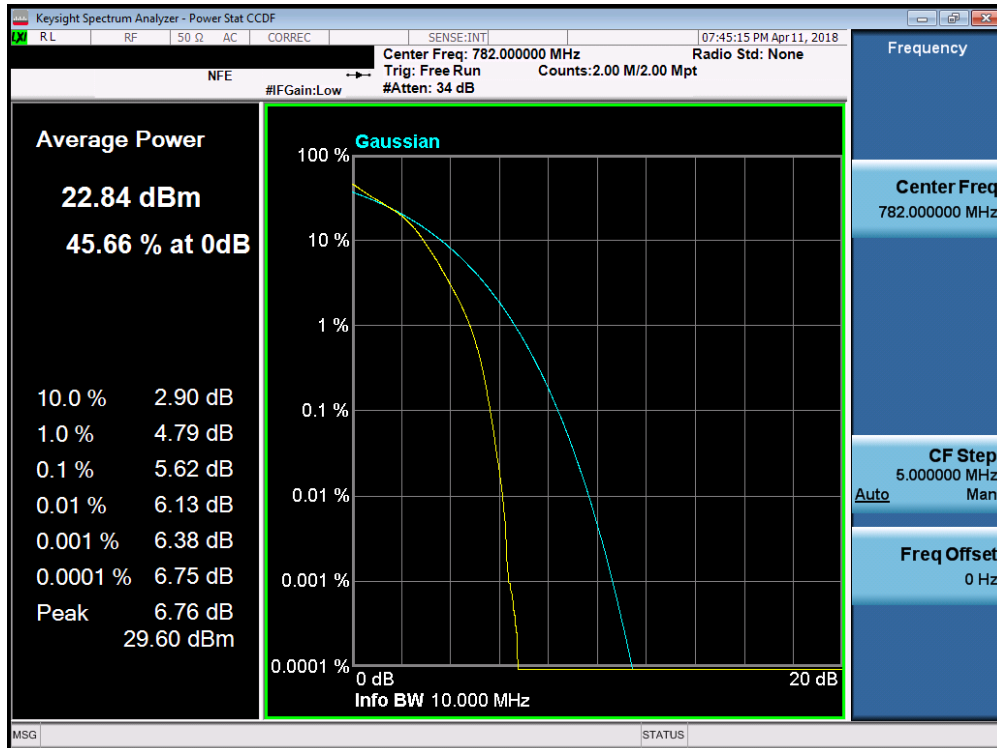


FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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Plot 7-210. PAR Plot (Band 5 – 5.0MHz 16-QAM - Full RB Configuration)



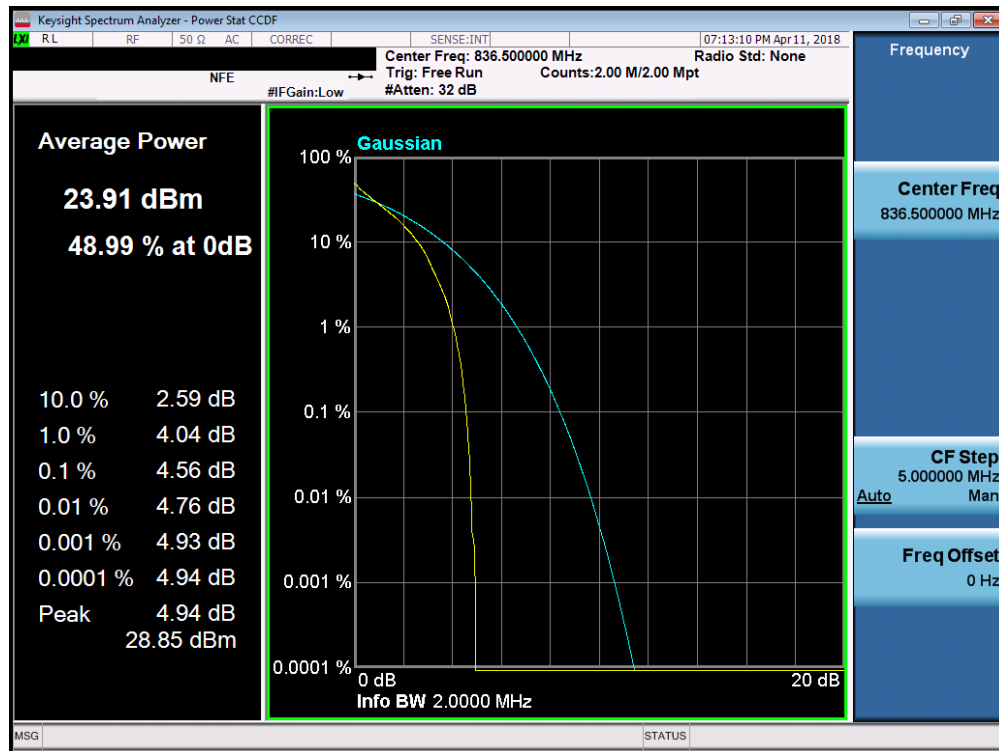
Plot 7-211. PAR Plot (Band 5 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-212. PAR Plot (Band 5 - 10.0MHz 16-QAM - Full RB Configuration)

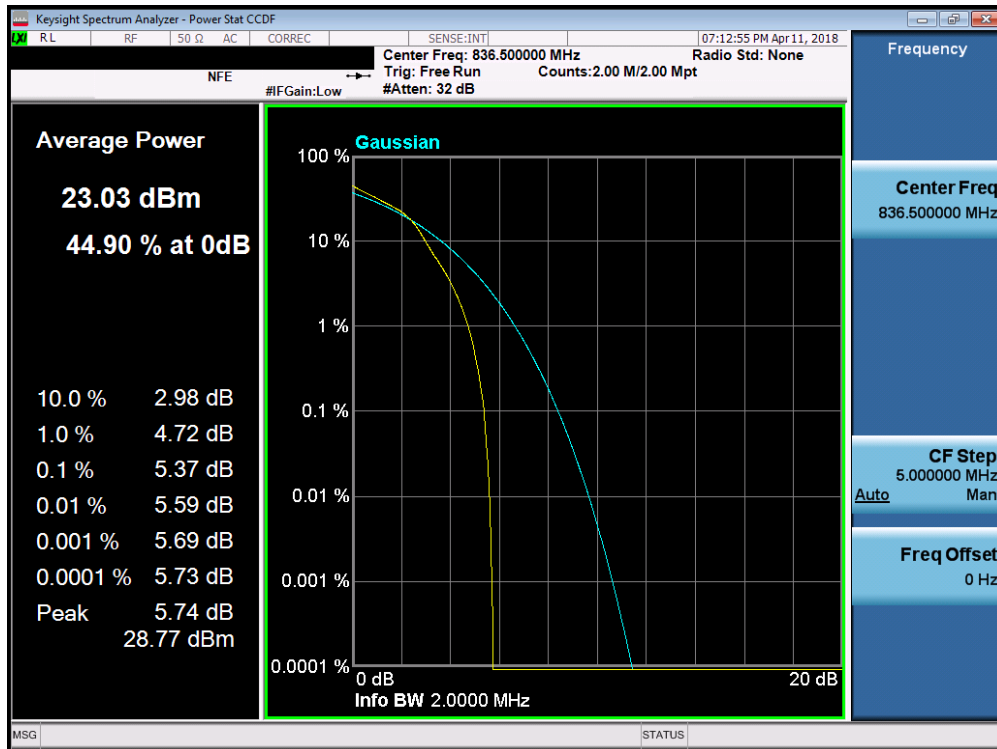
FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03- R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 129 of 185

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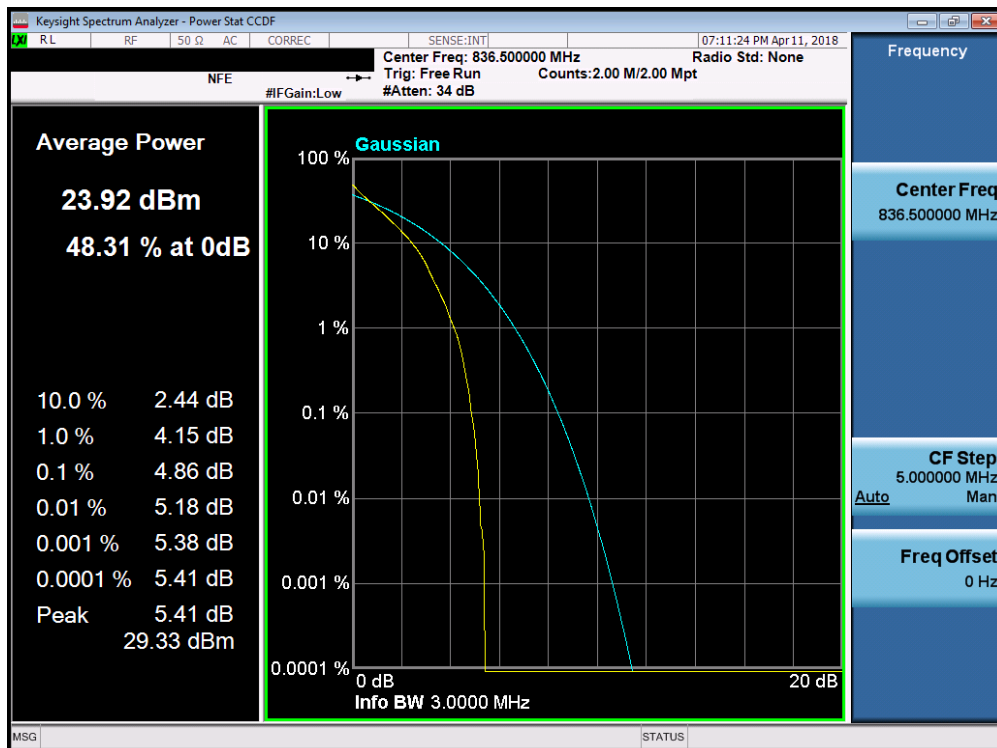


Plot 7-213. PAR Plot (Band 5 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03- R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 130 of 185

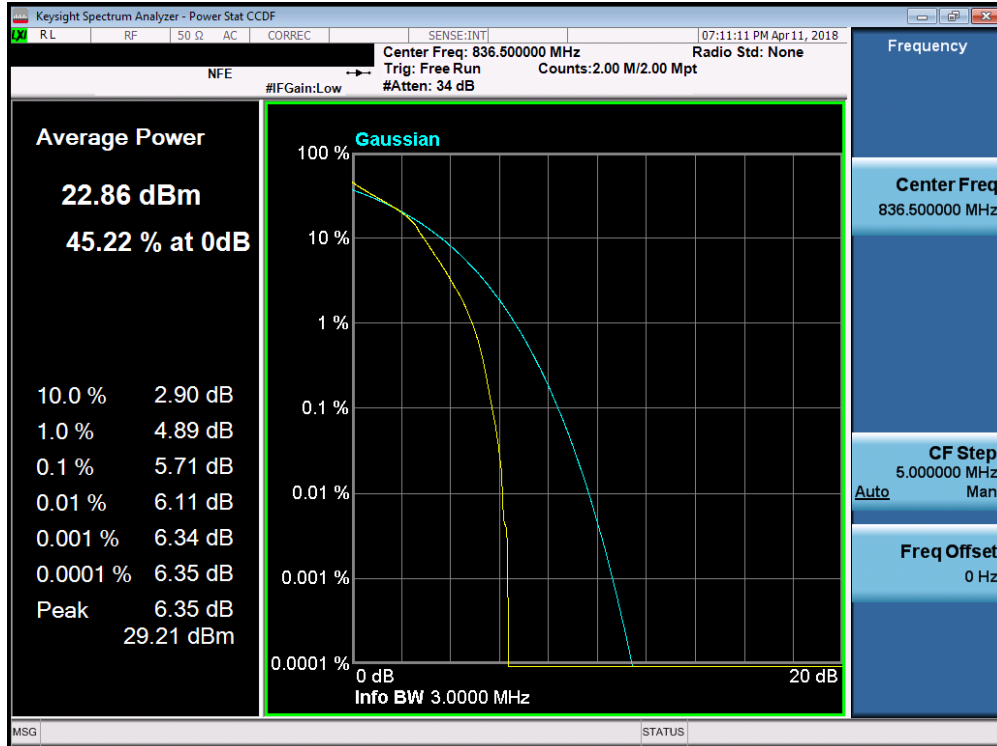


Plot 7-214. PAR Plot (Band 5 - 1.4MHz 16-QAM - Full RB Configuration)

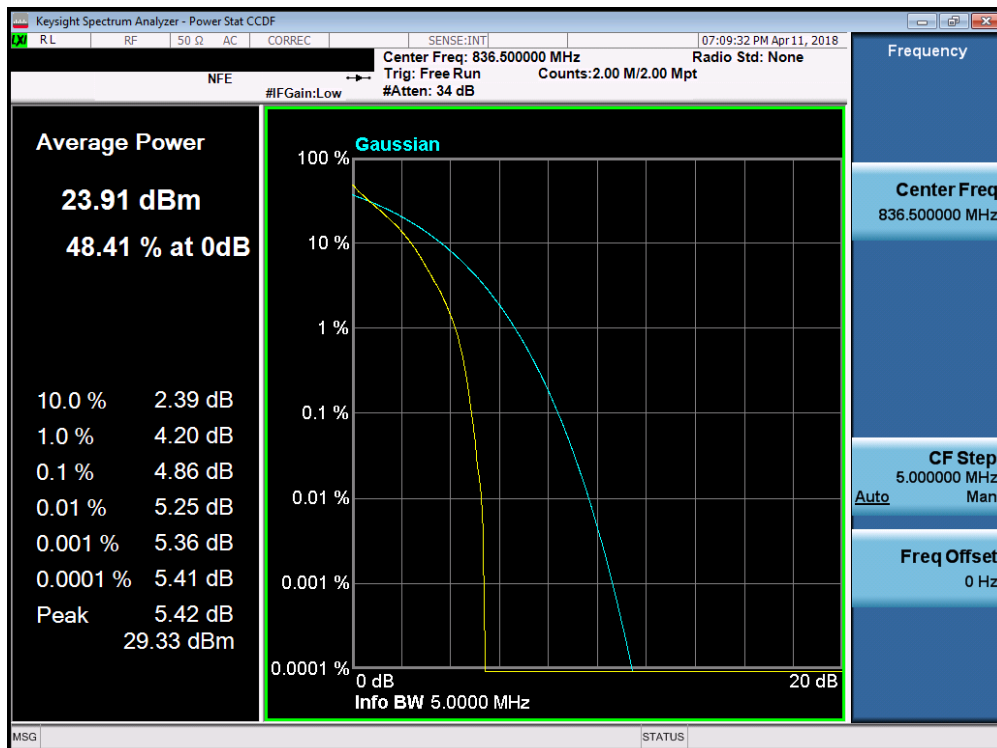


Plot 7-215. PAR Plot (Band 5 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03- R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 131 of 185



Plot 7-216. PAR Plot (Band 5 - 3.0MHz 16-QAM - Full RB Configuration)



Plot 7-217. PAR Plot (Band 5 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX510WM	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1805100104-03- R1.ZNF	Test Dates: 4/2-5/25/2018	EUT Type: Portable Handset		Page 132 of 185