

7.4 Band Edge Emissions at Antenna Terminal

§2.1051 §22.917(a) §24.238(a) §27.53(c) §27.53(g) §27.53(h) §27.53(m)

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 for Band 41 is as noted in the Test Notes on the following page.

The minimum permissible attenuation level of any spurious emission is $43 + \log_{10}(P_{\text{Watts}})$, where P is the transmitter power in Watts.

Test Procedure Used

KDB 971168 D01 v02r02 – 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 for continuous emissions, max hold for pulse emissions
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.

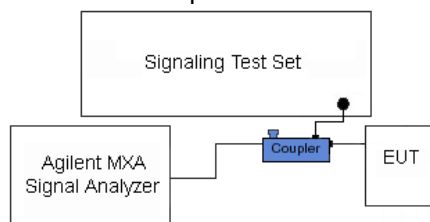


Figure 7-3. Test Instrument & Measurement Setup

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.

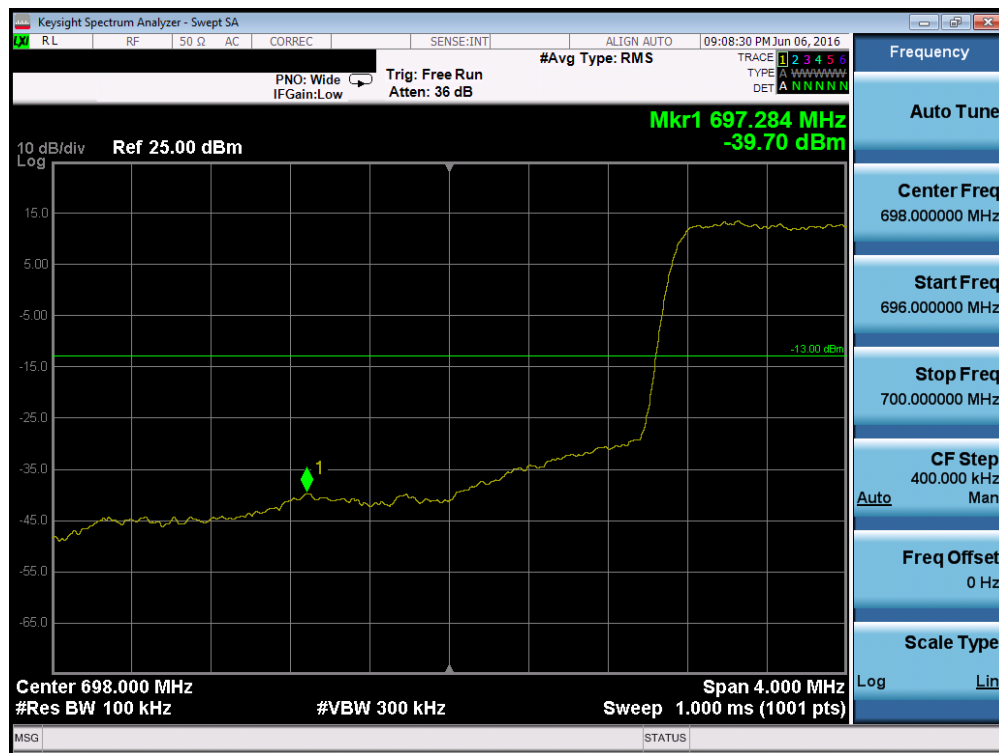
FCC ID: A3LSMN9300		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1606061018.A3L	Test Dates: 6/1 - 7/15/2016	EUT Type: Portable Handset		Page 75 of 165

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.

Per 27.53(m) for operations in the BRS/EBS bands, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ 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 attenuation factor shall not be less that $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz.

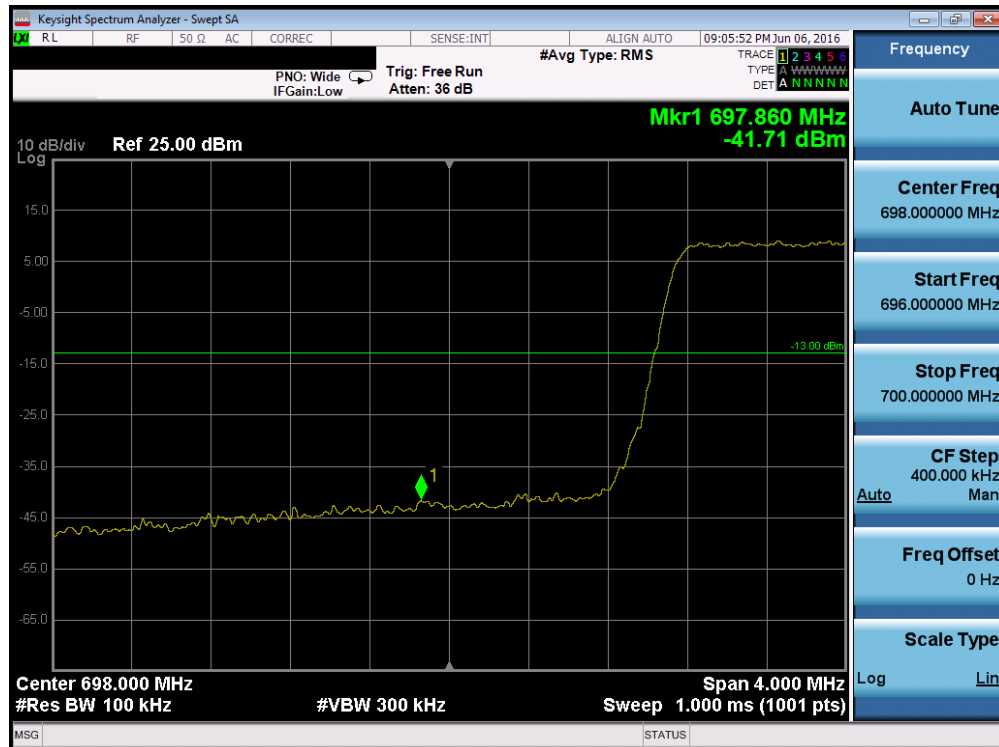


Plot 7-118. Lower Band Edge Plot (Band 12 – 1.4MHz QPSK – RB Size 6)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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Plot 7-119. Upper Band Edge Plot (Band 12 – 1.4MHz QPSK – RB Size 6)

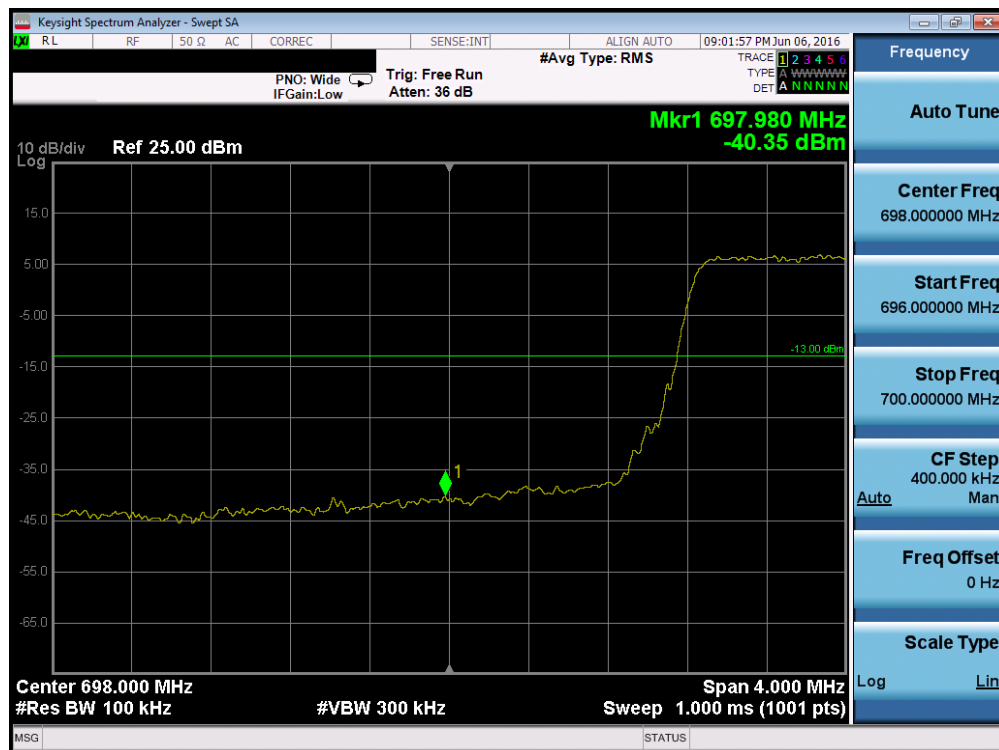


Plot 7-120. Lower Band Edge Plot (Band 12 – 3.0MHz QPSK – RB Size 15)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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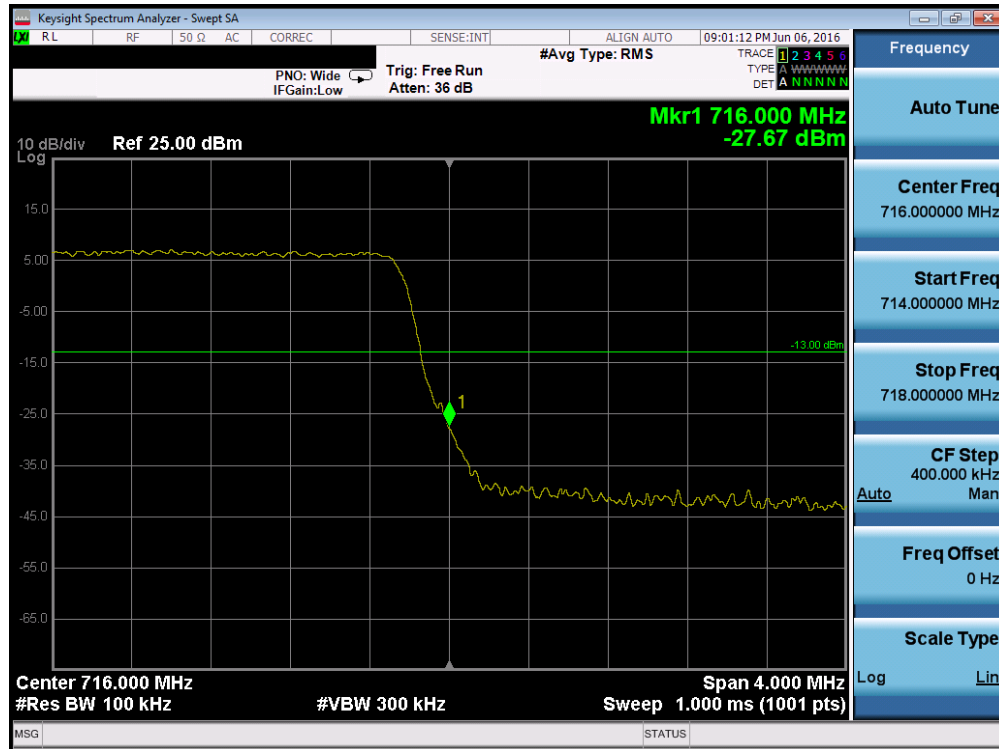


Plot 7-121. Upper Band Edge Plot (Band 12 – 3.0MHz QPSK – RB Size 15)

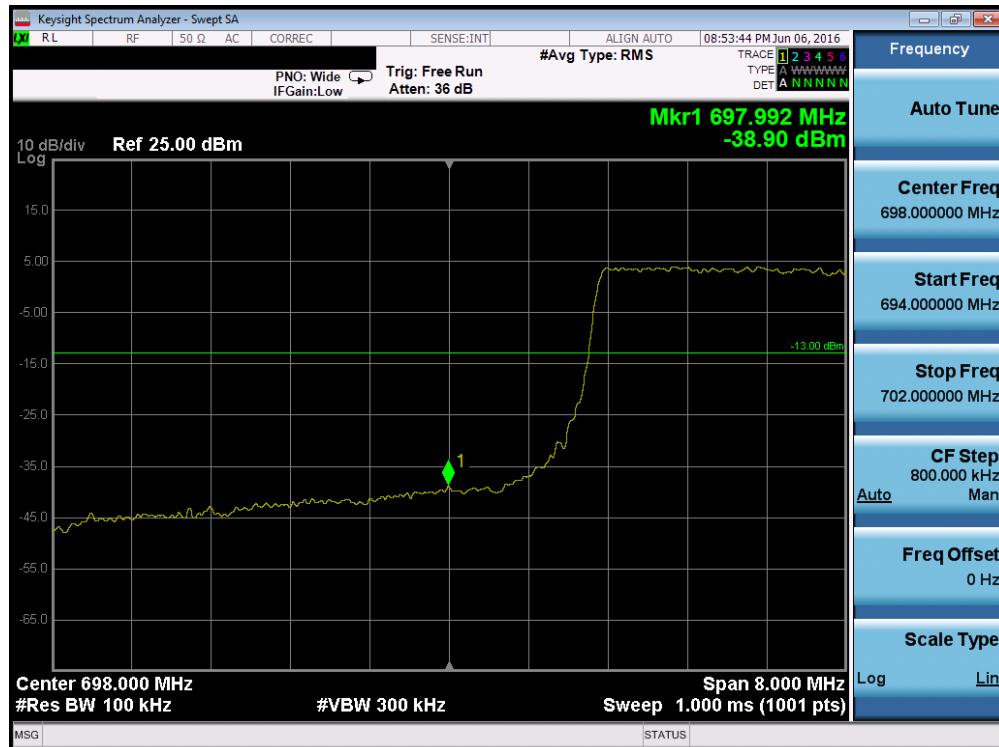


Plot 7-122. Lower Band Edge Plot (Band 12 – 5.0MHz QPSK – RB Size 25)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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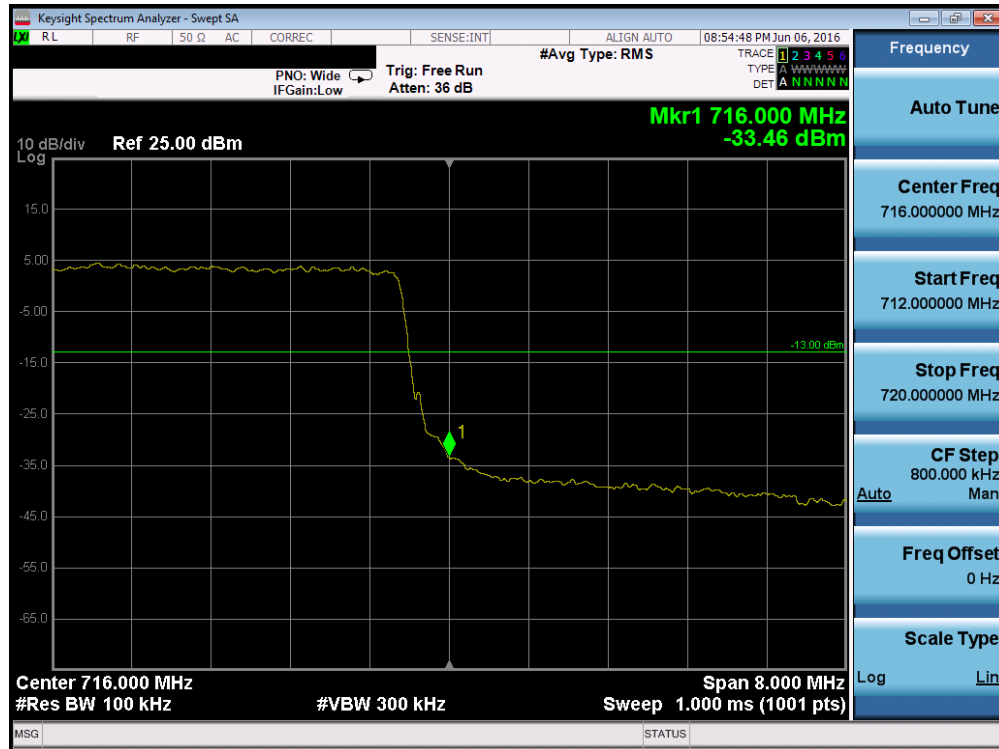


Plot 7-123. Upper Band Edge Plot (Band 12 – 5.0MHz QPSK – RB Size 25)

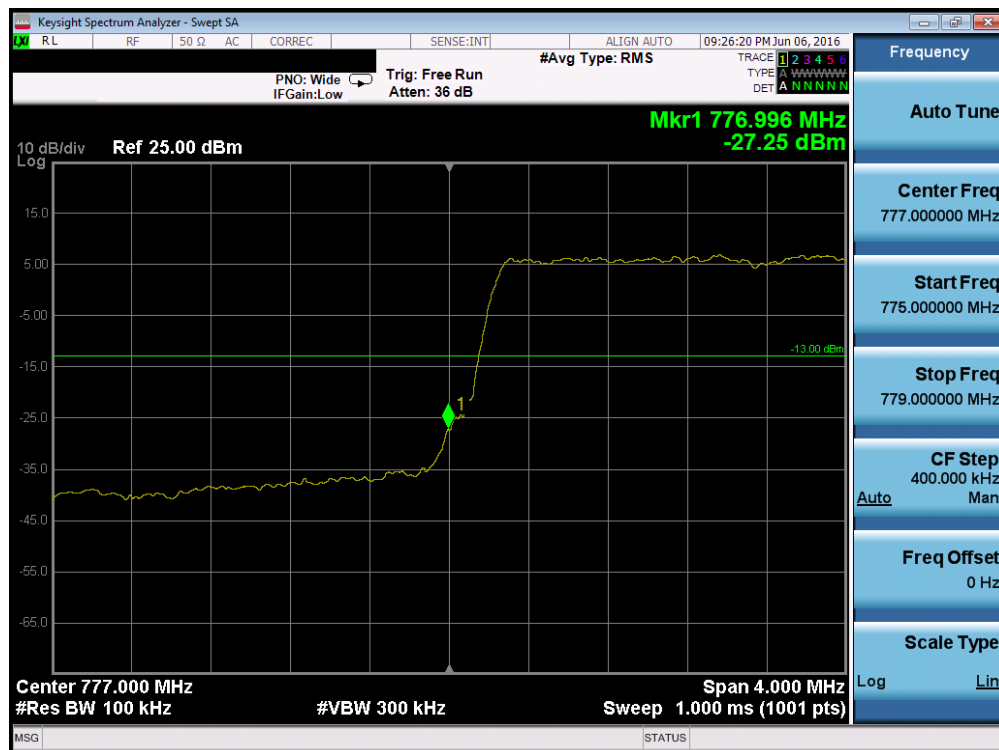


Plot 7-124. Lower Band Edge Plot (Band 12 – 10.0MHz QPSK – RB Size 50)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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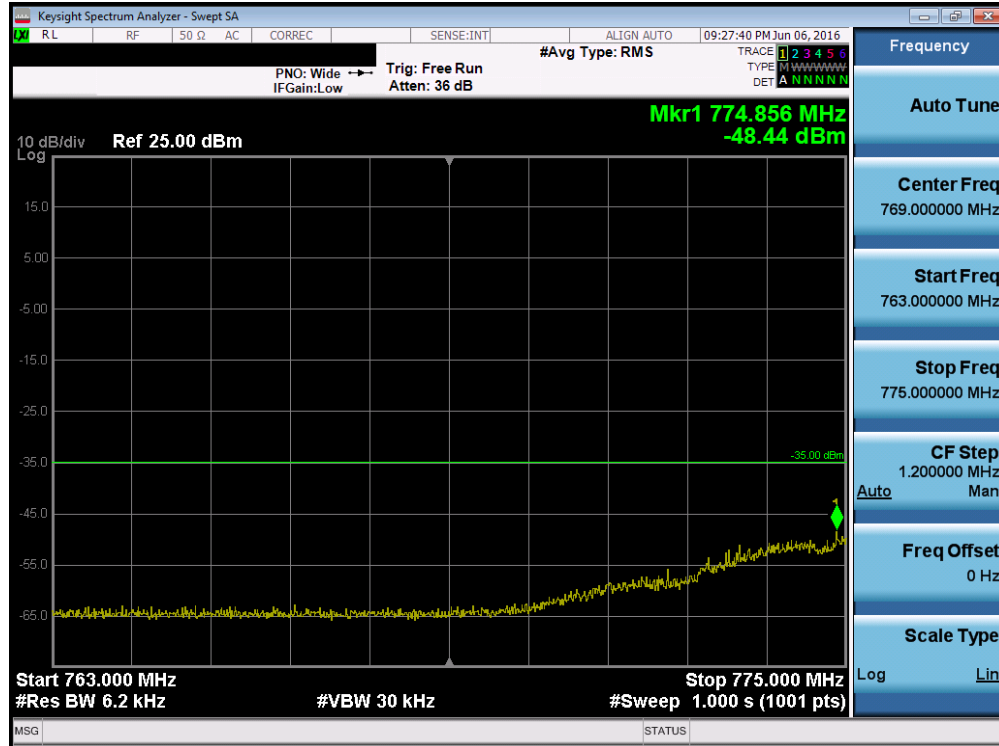


Plot 7-125. Upper Band Edge Plot (Band 12 – 10.0MHz QPSK – RB Size 50)

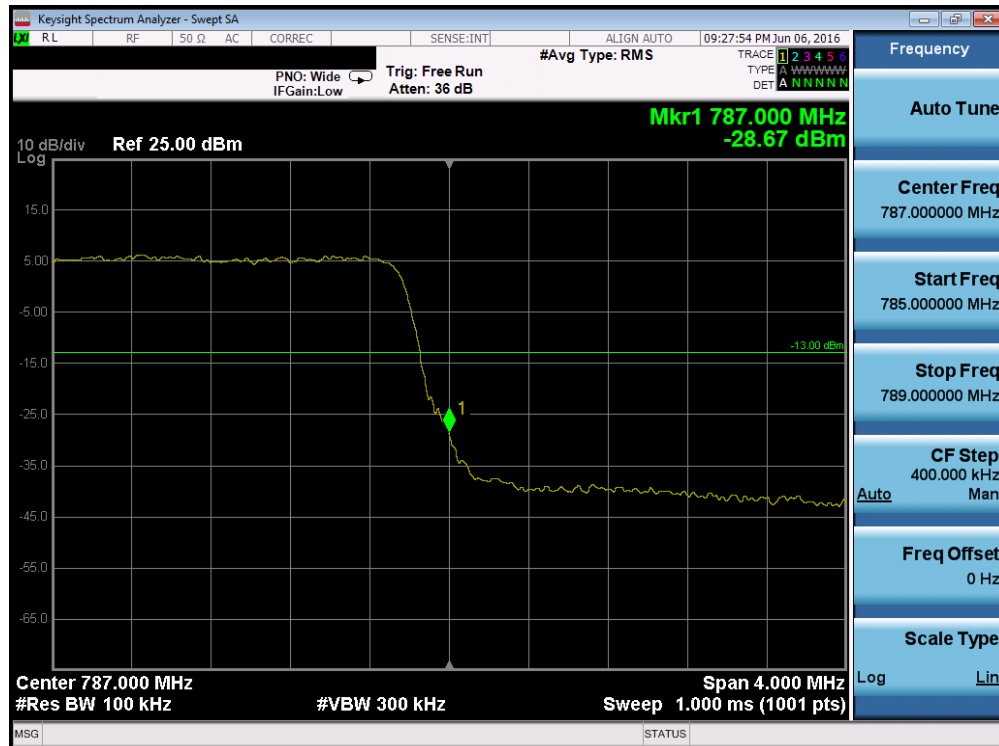


Plot 7-126. Lower Band Edge Plot (Band 13 – 5.0MHz QPSK – RB Size 25)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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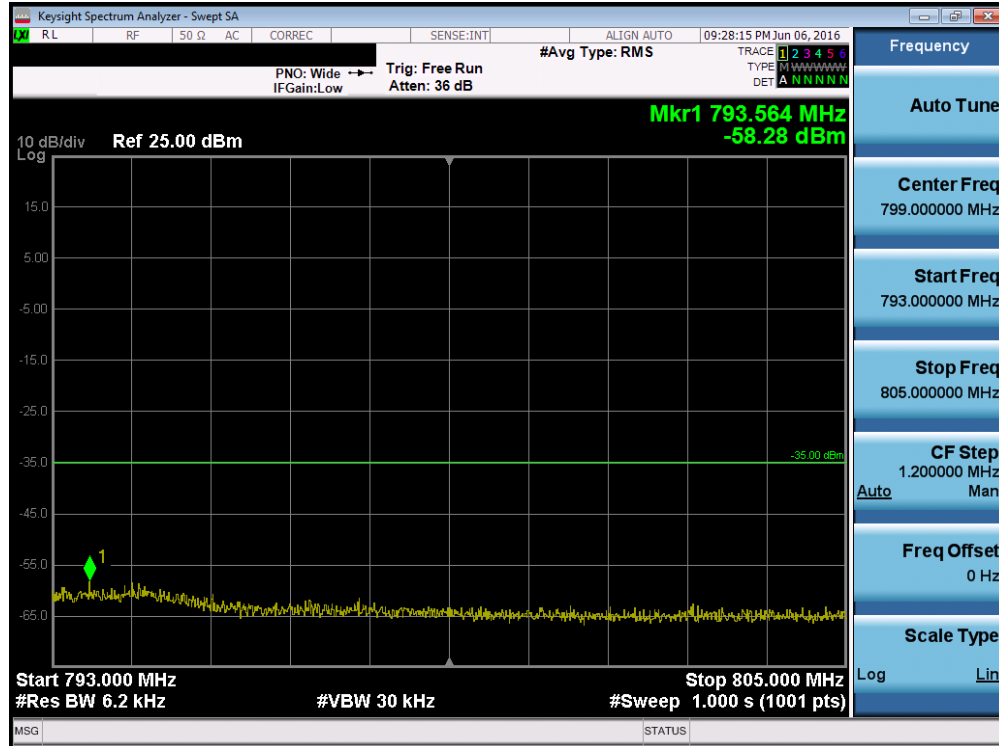


Plot 7-127. Lower Emission Mask Edge Plot (Band 13 – 5.0MHz QPSK – RB Size 25)

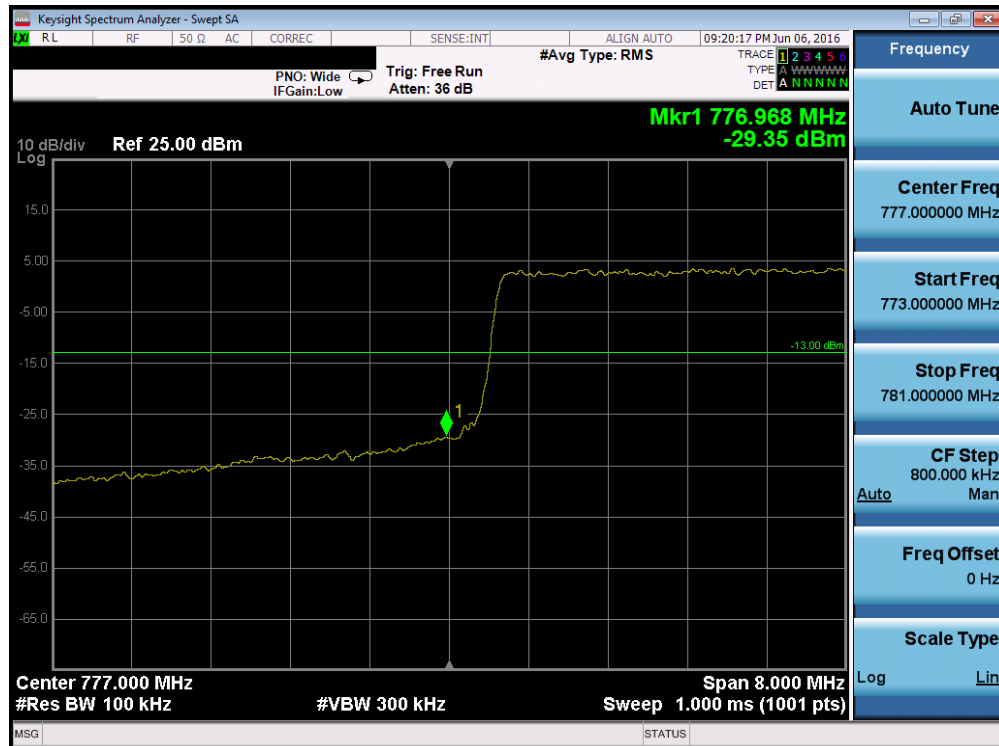


Plot 7-128. Upper Band Edge Plot (Band 13 – 5.0MHz QPSK – RB Size 25)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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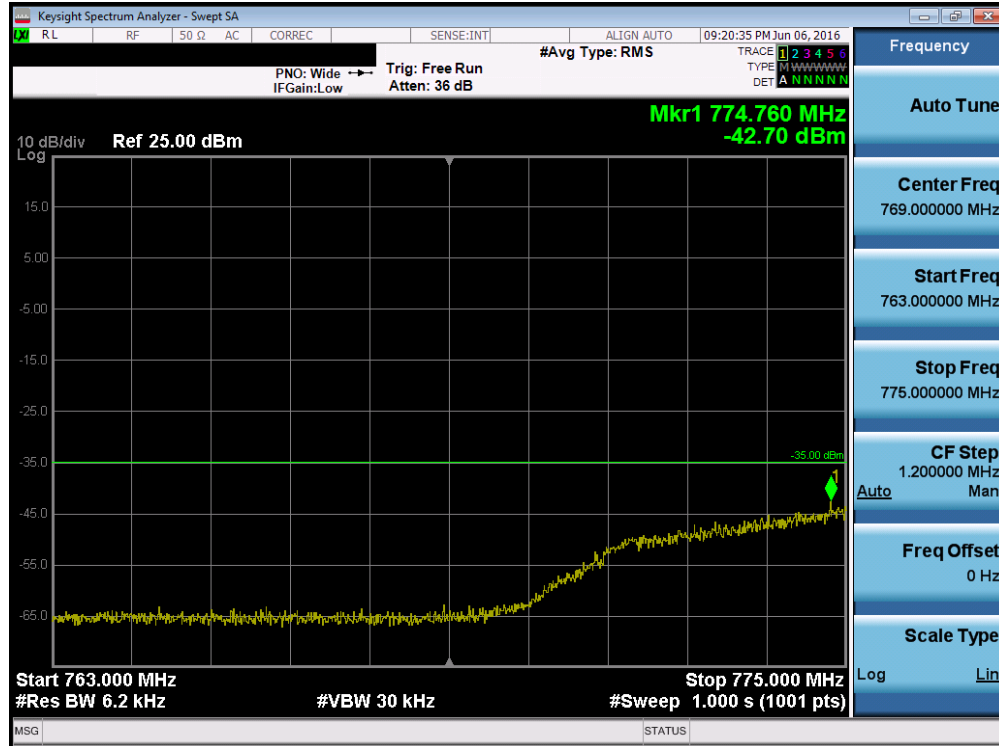


Plot 7-129. Upper Emission Mask Edge Plot (Band 13 – 5.0MHz QPSK – RB Size 25)

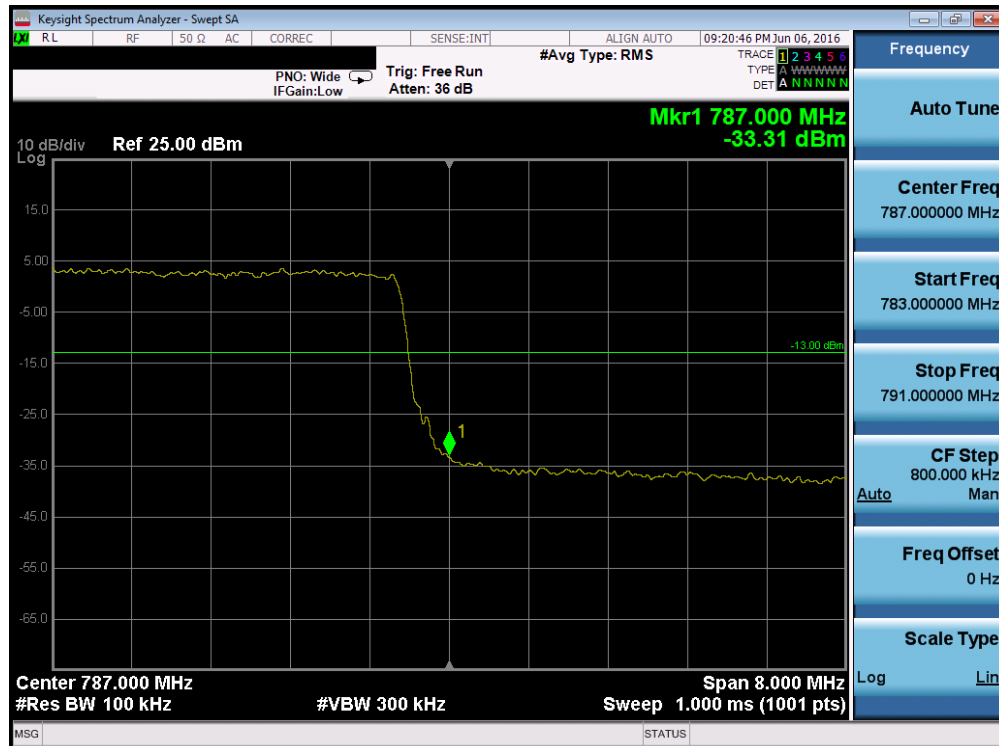


Plot 7-130. Lower Band Edge Plot (Band 13 – 10.0MHz QPSK – RB Size 50)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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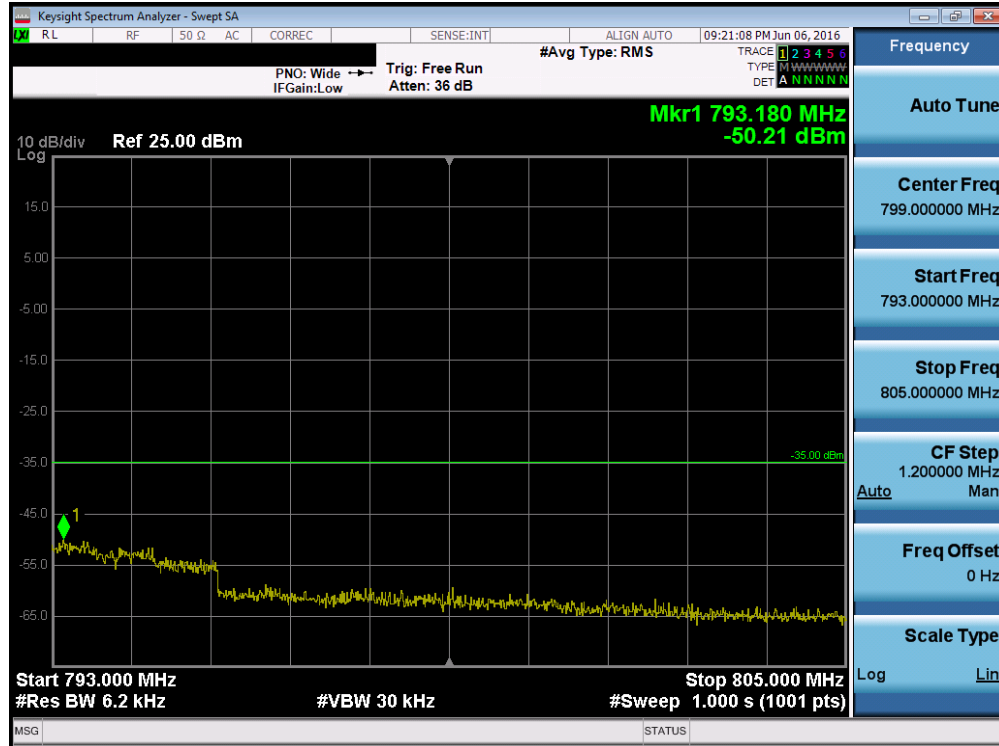


Plot 7-131. Lower Emission Mask Edge Plot (Band 13 – 10.0MHz QPSK – RB Size 50)

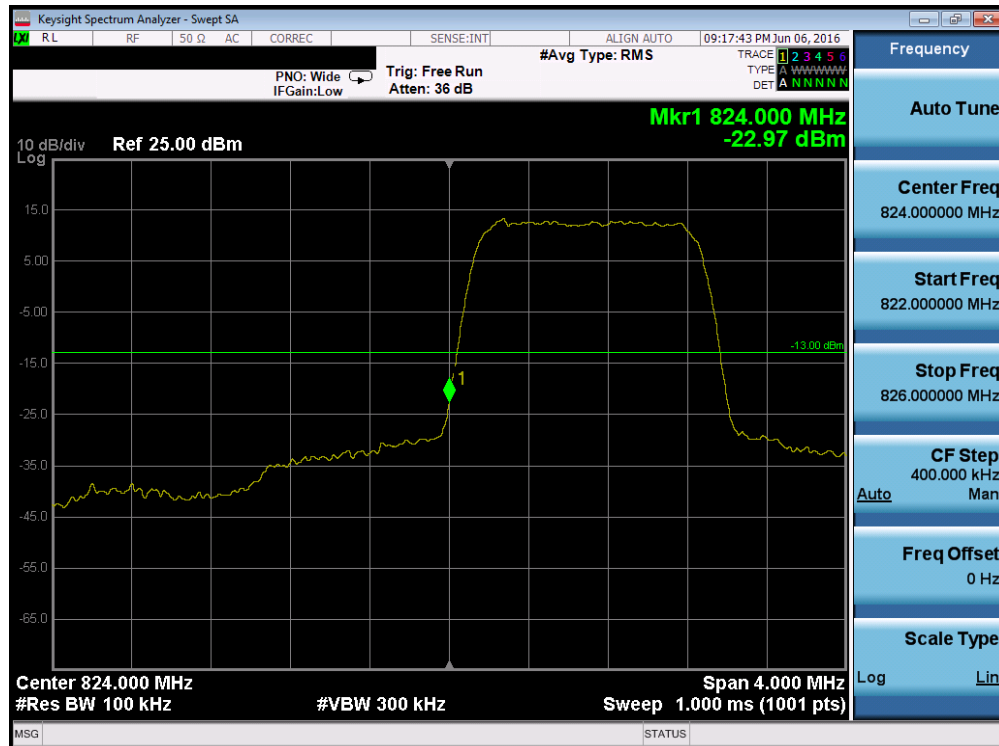


Plot 7-132. Upper Band Edge Plot (Band 13 – 10.0MHz QPSK – RB Size 50)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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Plot 7-133. Upper Emission Mask Edge Plot (Band 13 – 10.0MHz QPSK – RB Size 50)

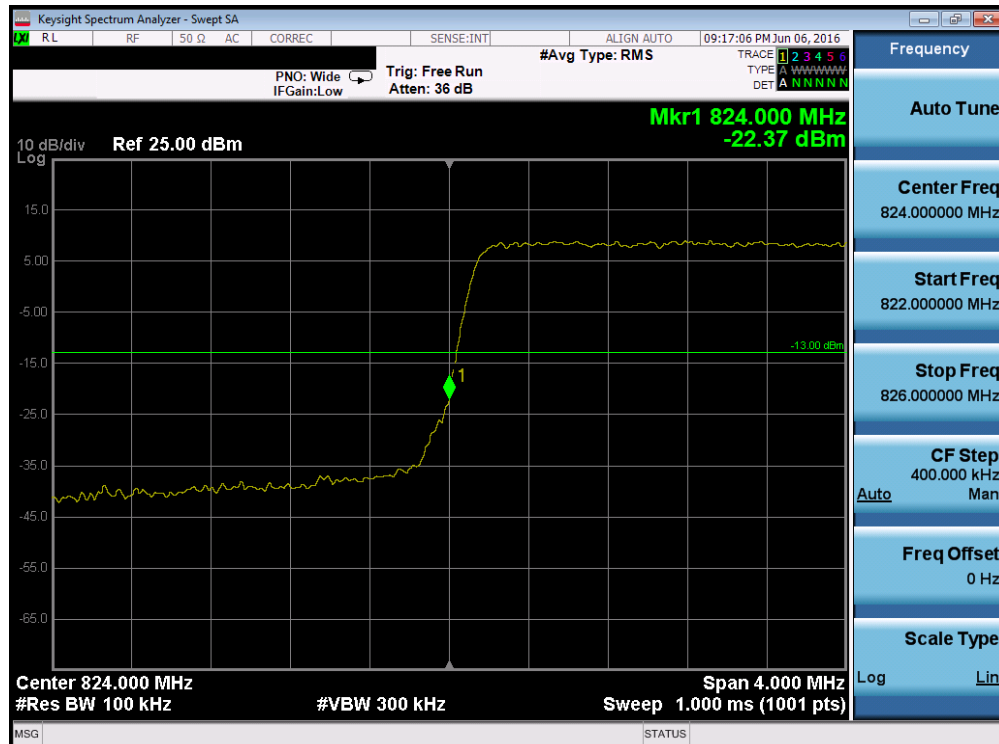


Plot 7-134. Lower Band Edge Plot (Band 26/5 – 1.4MHz QPSK – RB Size 6)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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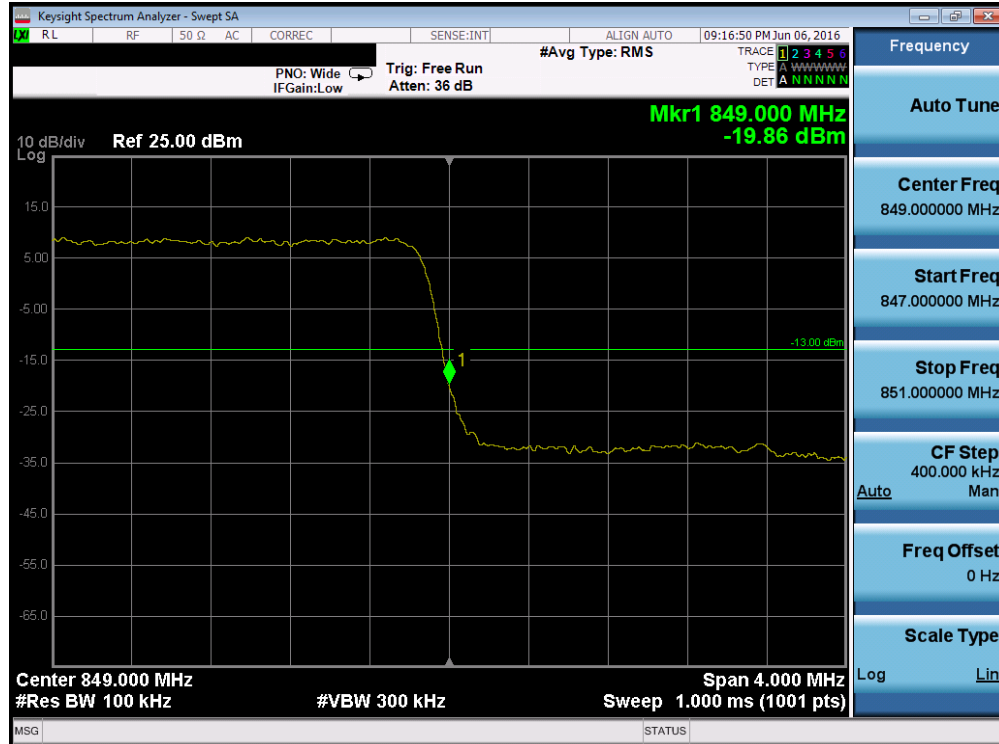


Plot 7-135. Upper Band Edge Plot (Band 26/5 – 1.4MHz QPSK – RB Size 6)

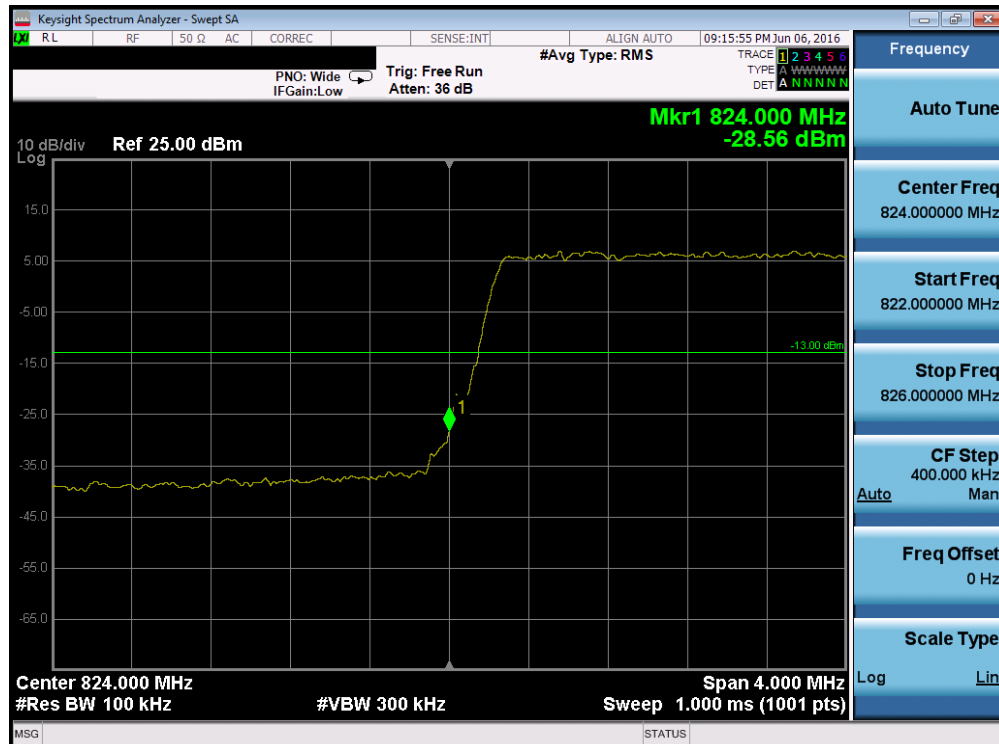


Plot 7-136. Lower Band Edge Plot (Band 26/5 – 3.0MHz QPSK – RB Size 15)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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Plot 7-137. Upper Band Edge Plot (Band 26/5 - 3.0MHz QPSK - RB Size 15)

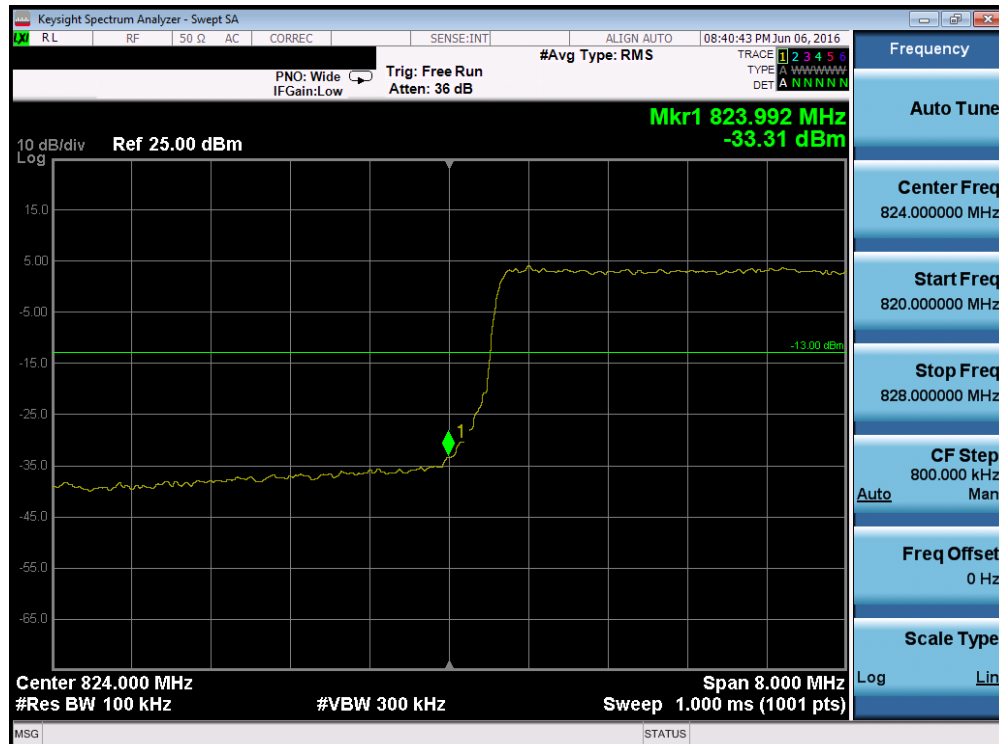


Plot 7-138. Lower Band Edge Plot (Band 26/5 - 5.0MHz QPSK - RB Size 25)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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Plot 7-139. Upper Band Edge Plot (Band 26/5 – 5.0MHz QPSK – RB Size 25)

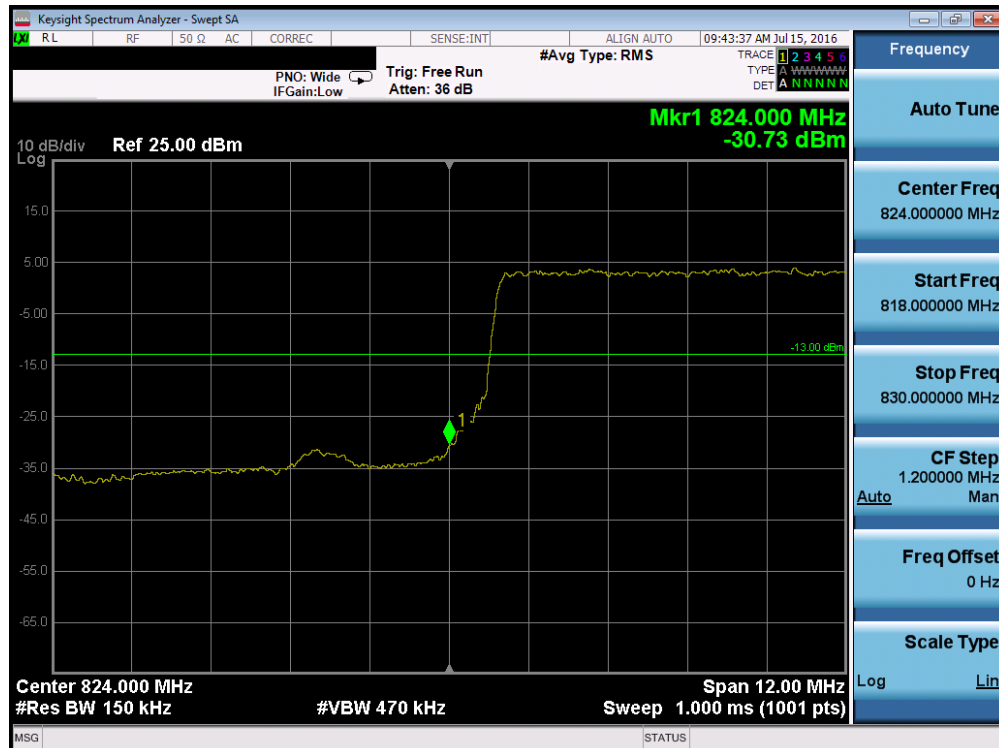


Plot 7-140. Lower Band Edge Plot (Band 26/5 – 10.0MHz QPSK – RB Size 50)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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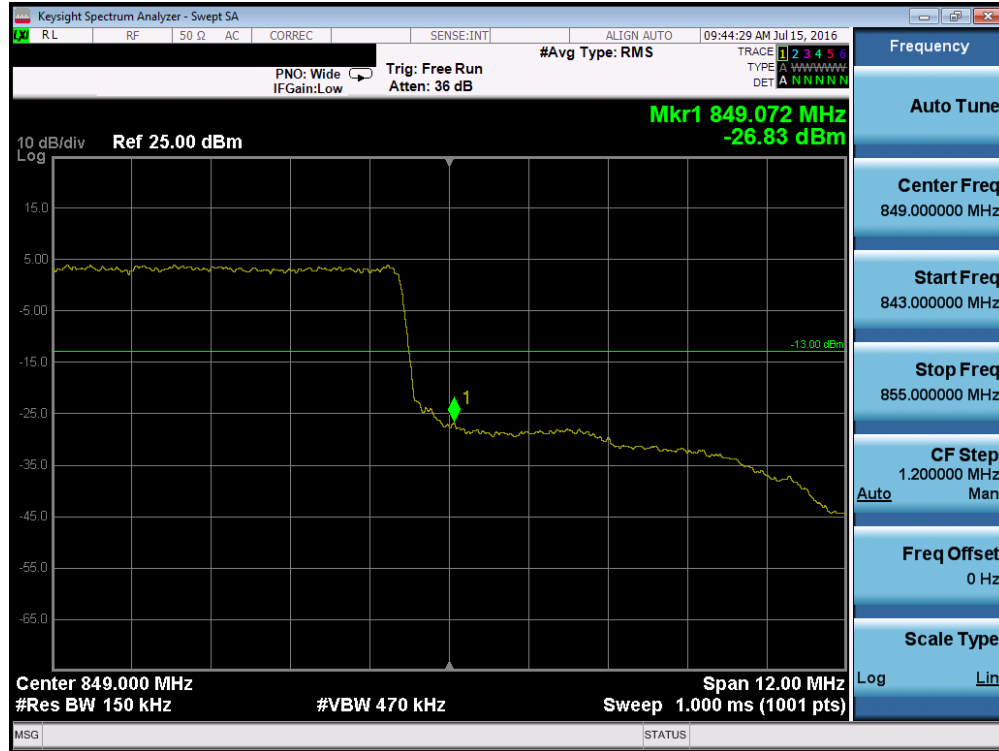


Plot 7-141. Upper Band Edge Plot (Band 26/5 - 10.0MHz QPSK - RB Size 50)

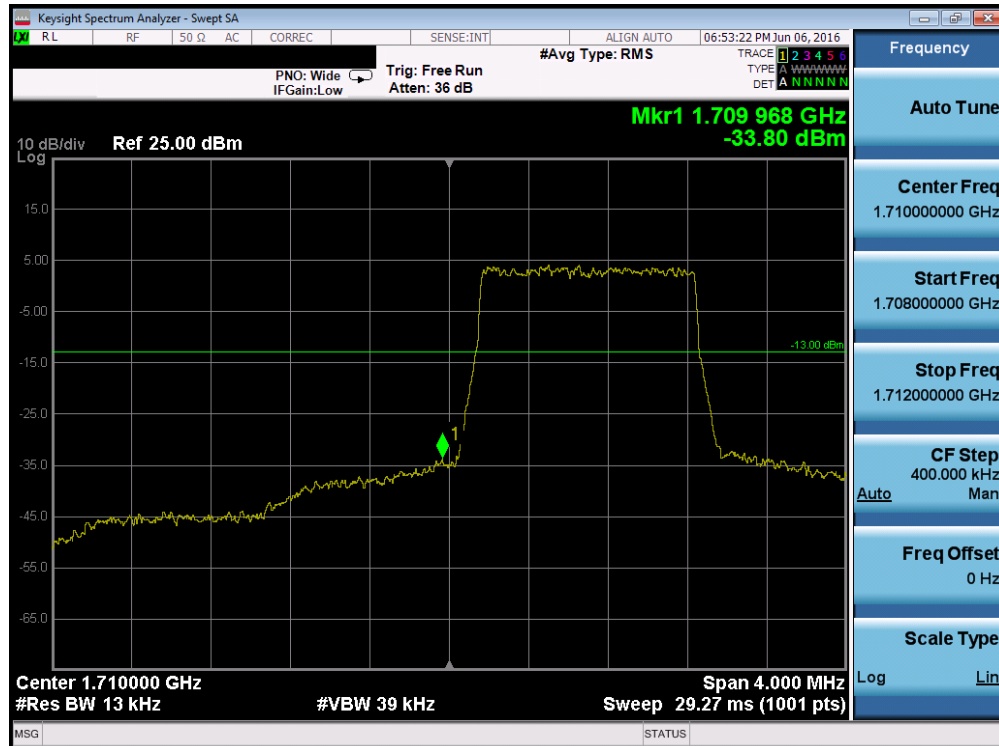


Plot 7-142. Lower Band Edge Plot (Band 26 - 15.0MHz QPSK - RB Size 50)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1606061018.A3L	Test Dates: 6/1 - 7/15/2016	EUT Type: Portable Handset		Page 88 of 165

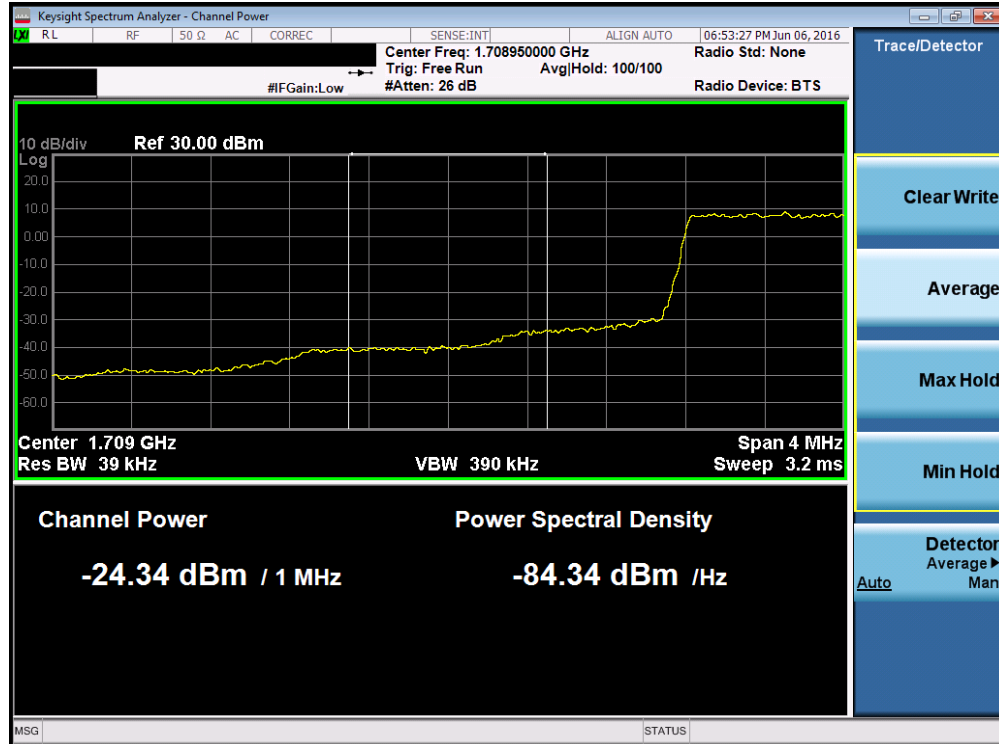


Plot 7-143. Upper Band Edge Plot (Band 26 – 15.0MHz QPSK – RB Size 50)

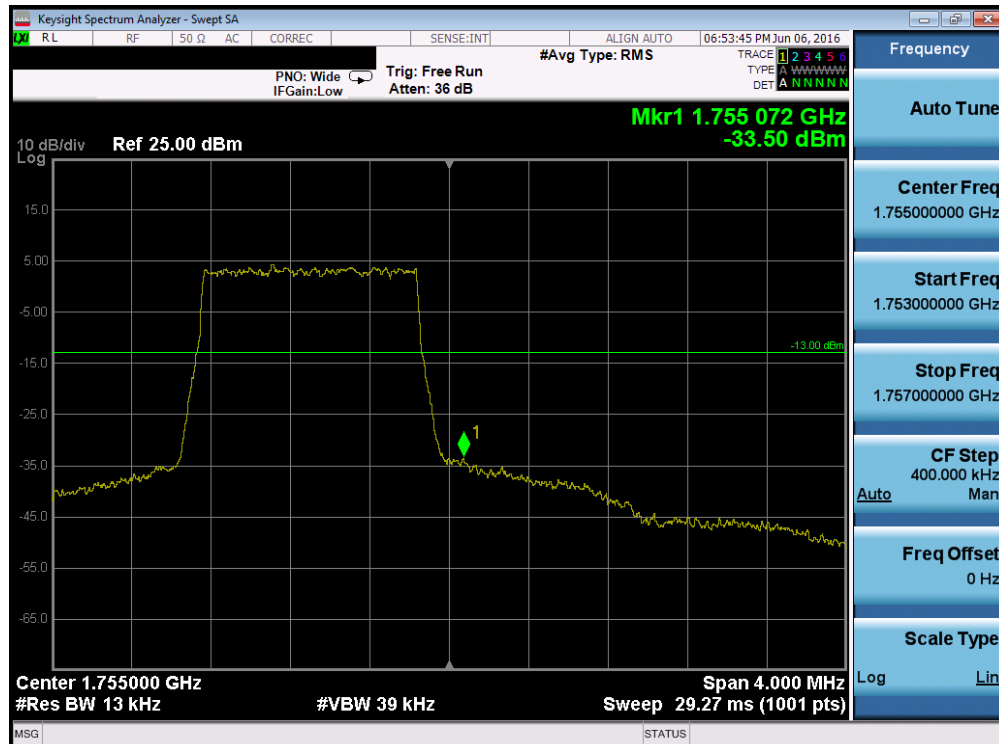


Plot 7-144. Lower Band Edge Plot (Band 4 – 1.4MHz QPSK – RB Size 6)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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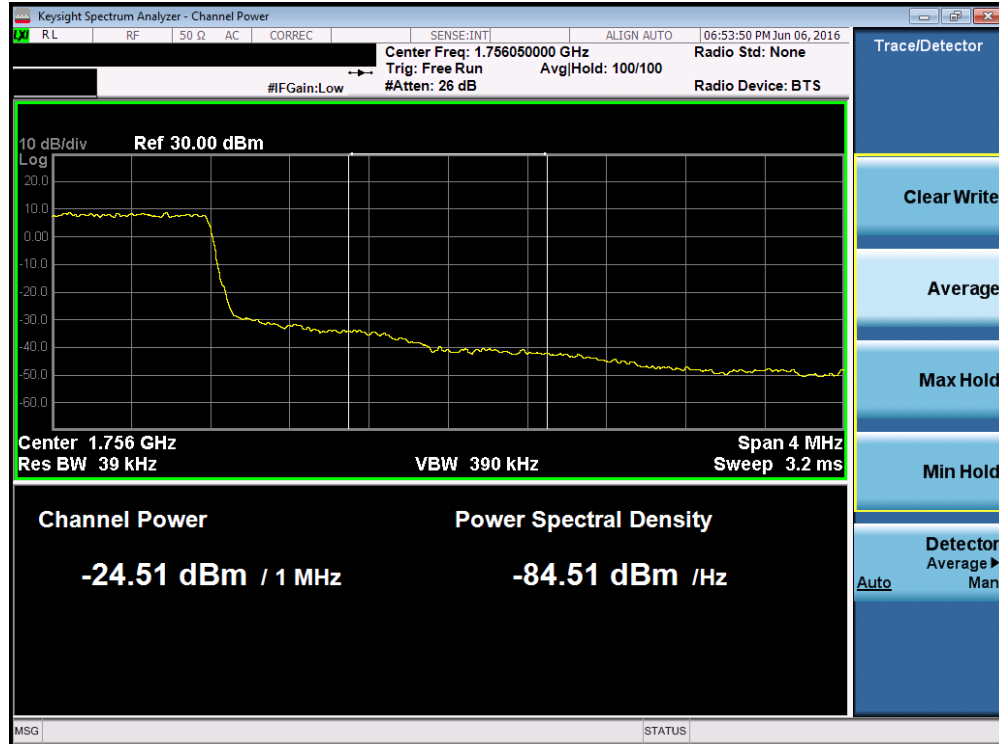


Plot 7-145. Lower Extended Band Edge Plot (Band 4 – 1.4MHz QPSK – RB Size 6)

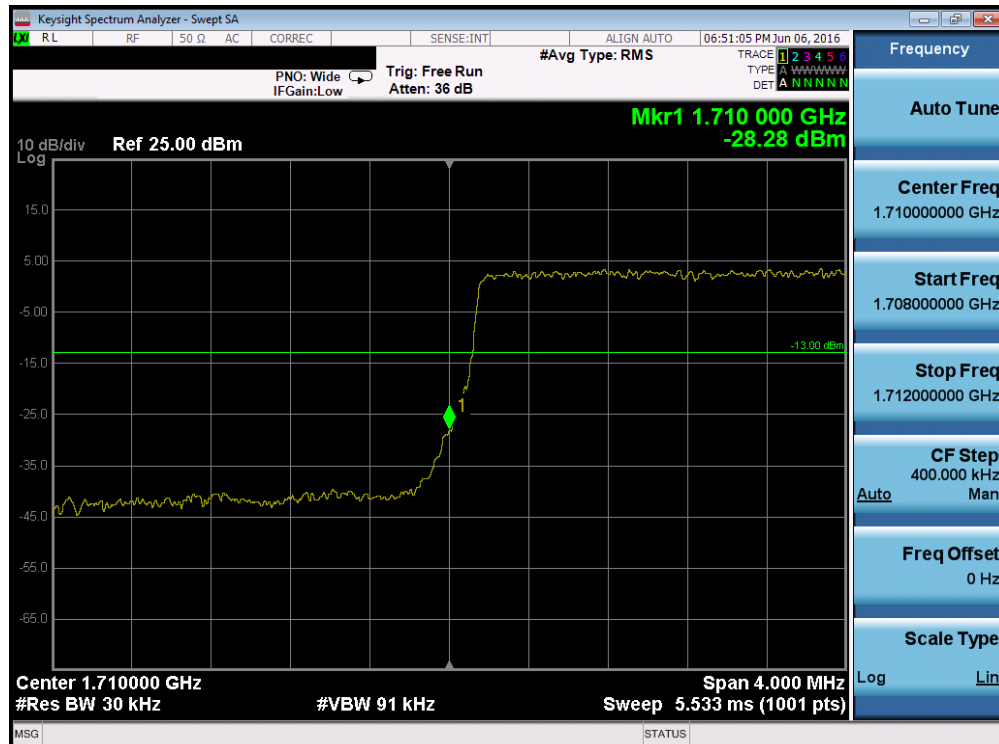


Plot 7-146. Upper Band Edge Plot (Band 4 – 1.4MHz QPSK – RB Size 6)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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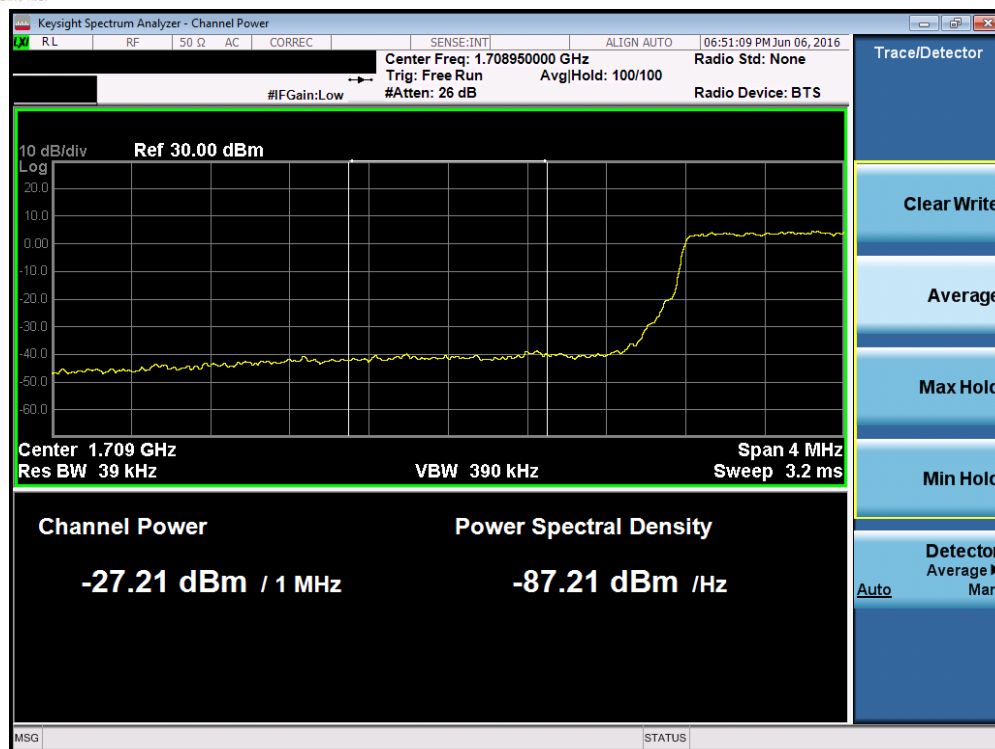


Plot 7-147. Upper Extended Band Edge Plot (Band 4 – 1.4MHz QPSK – RB Size 6)

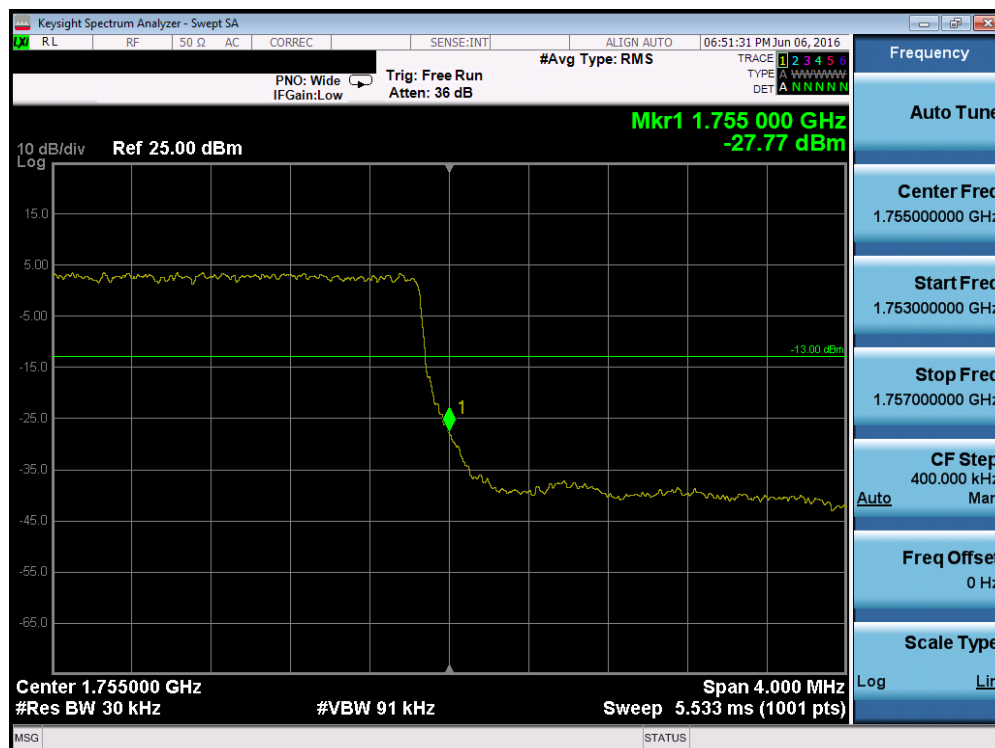


Plot 7-148. Lower Band Edge Plot (Band 4 – 3.0MHz QPSK – RB Size 15)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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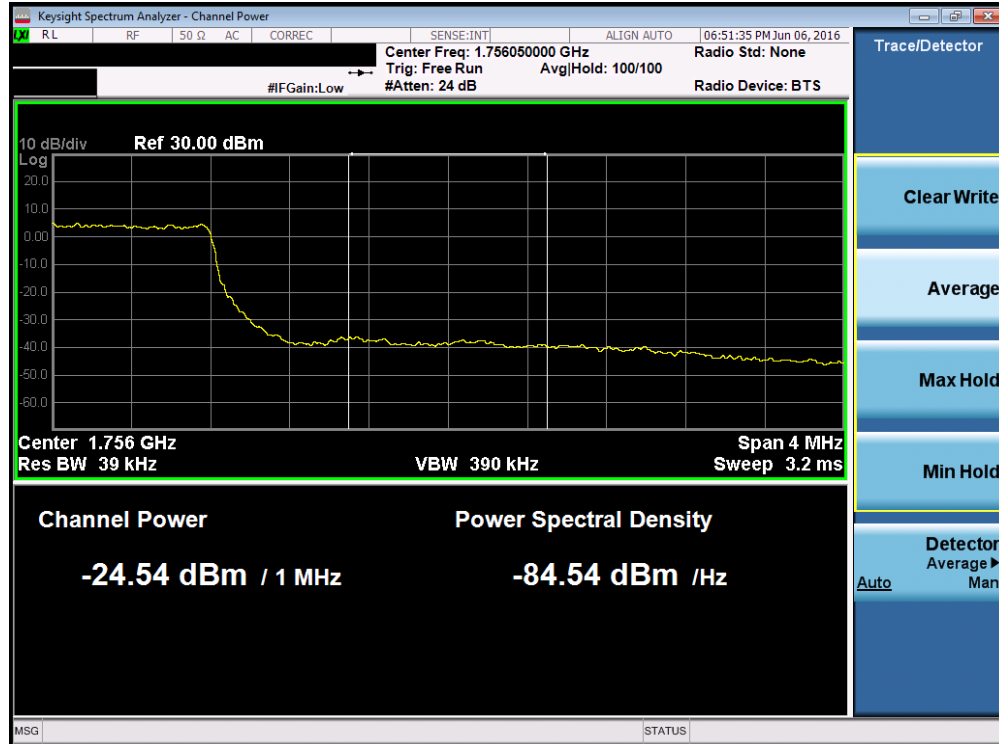


Plot 7-149. Lower Extended Band Edge Plot (Band 4 – 3.0MHz QPSK – RB Size 15)

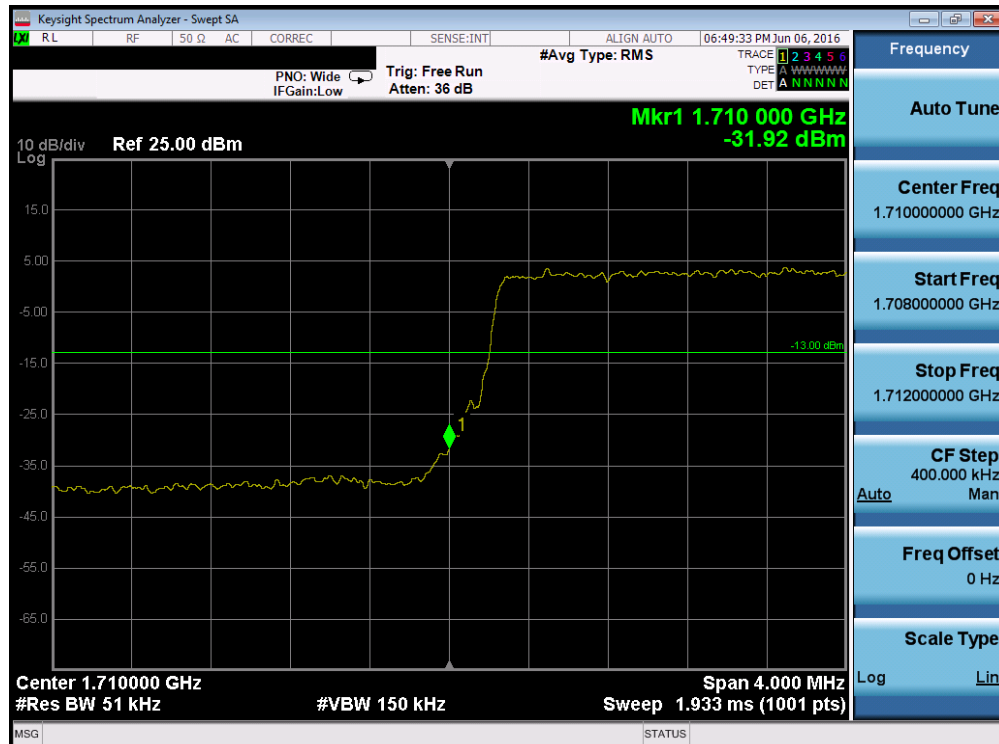


Plot 7-150. Upper Band Edge Plot (Band 4 – 3.0MHz QPSK – RB Size 15)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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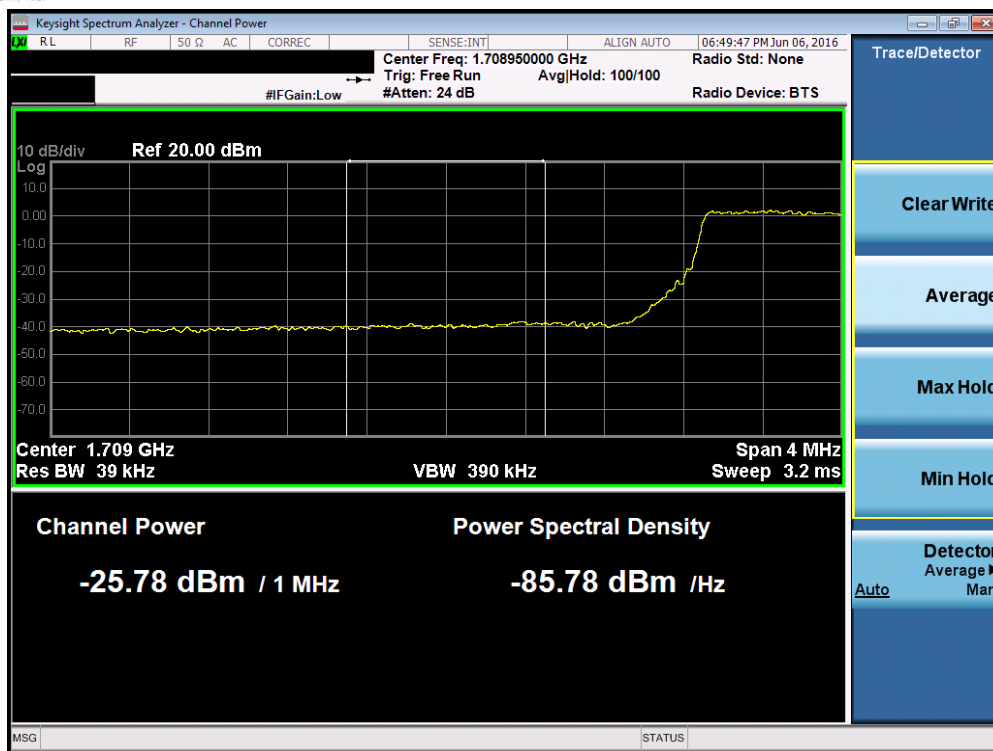


Plot 7-151. Upper Extended Band Edge Plot (Band 4 – 3.0MHz QPSK – RB Size 15)

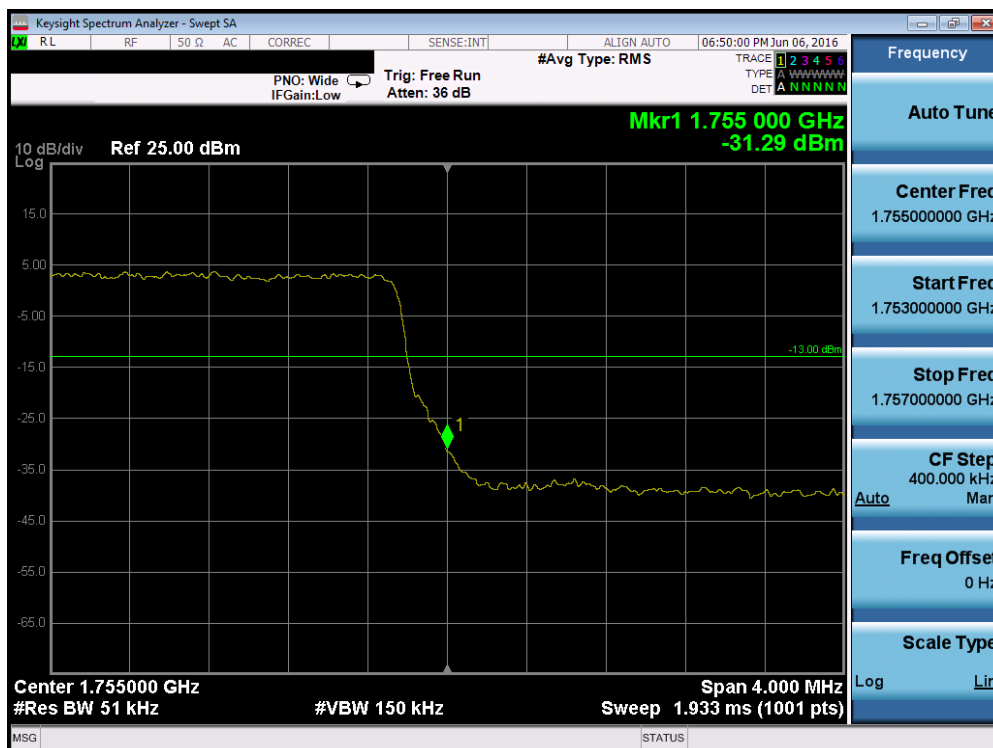


Plot 7-152. Lower Band Edge Plot (Band 4 – 5.0MHz QPSK – RB Size 25)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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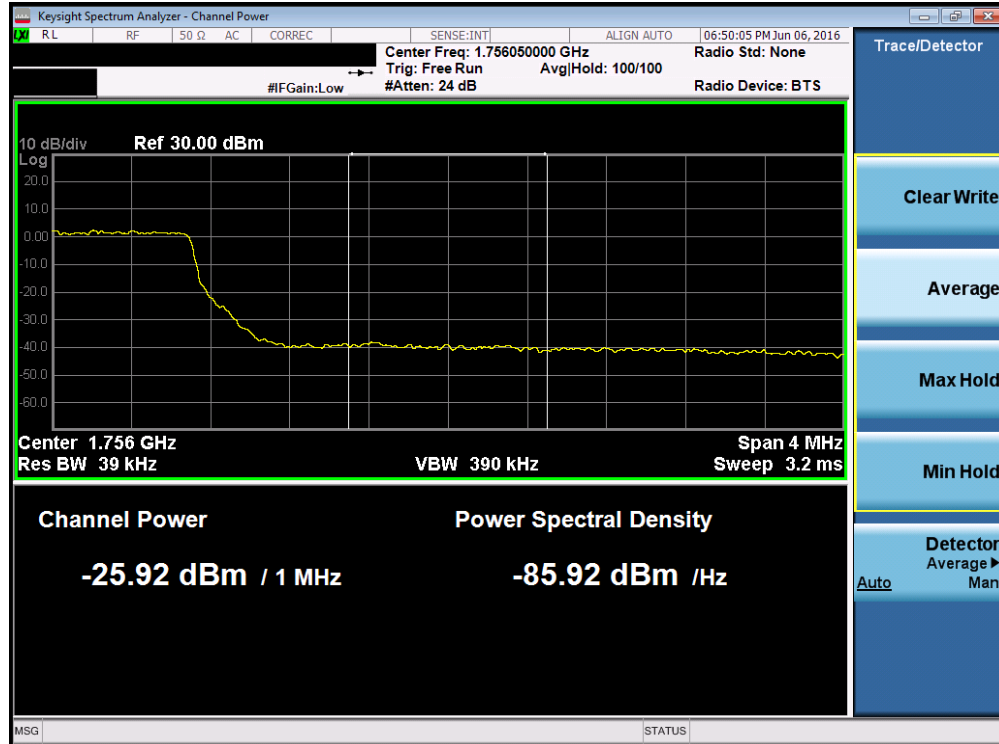


Plot 7-153. Lower Extended Band Edge Plot (Band 4 – 5.0MHz QPSK – RB Size 25)

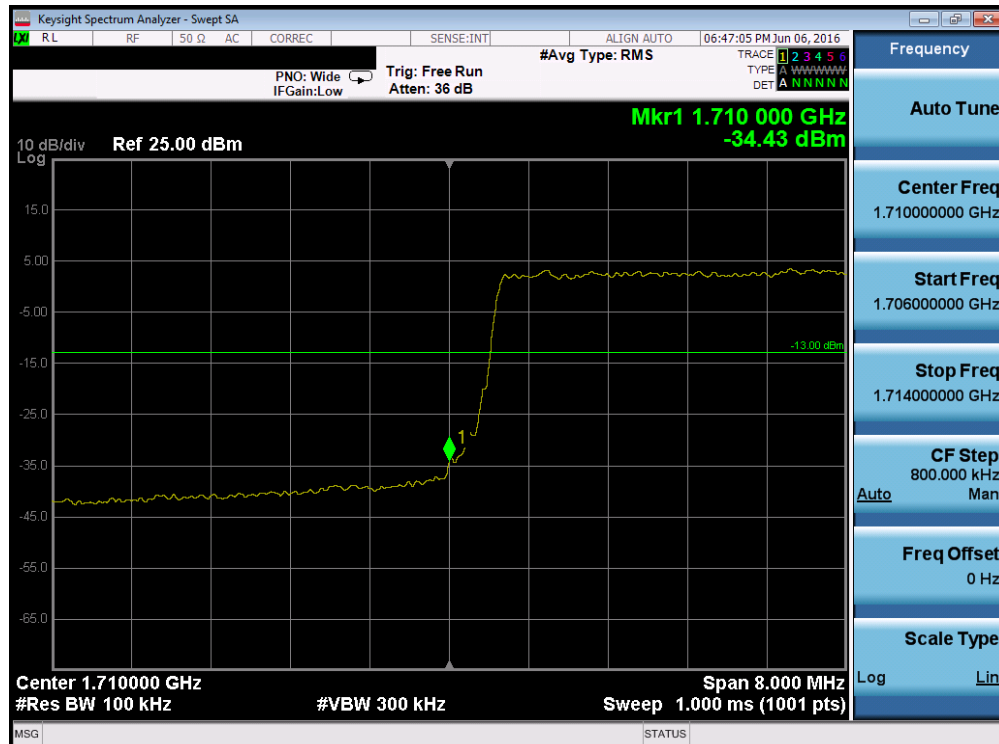


Plot 7-154. Upper Band Edge Plot (Band 4 – 5.0MHz QPSK – RB Size 25)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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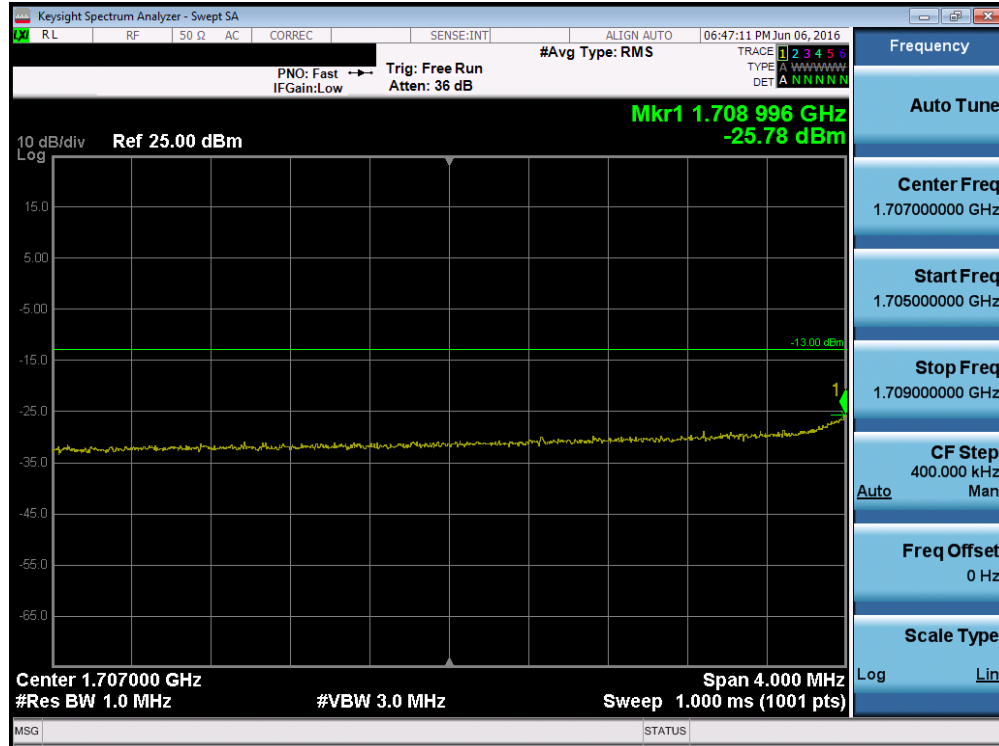


Plot 7-155. Upper Extended Band Edge Plot (Band 4 – 5.0MHz QPSK – RB Size 25)

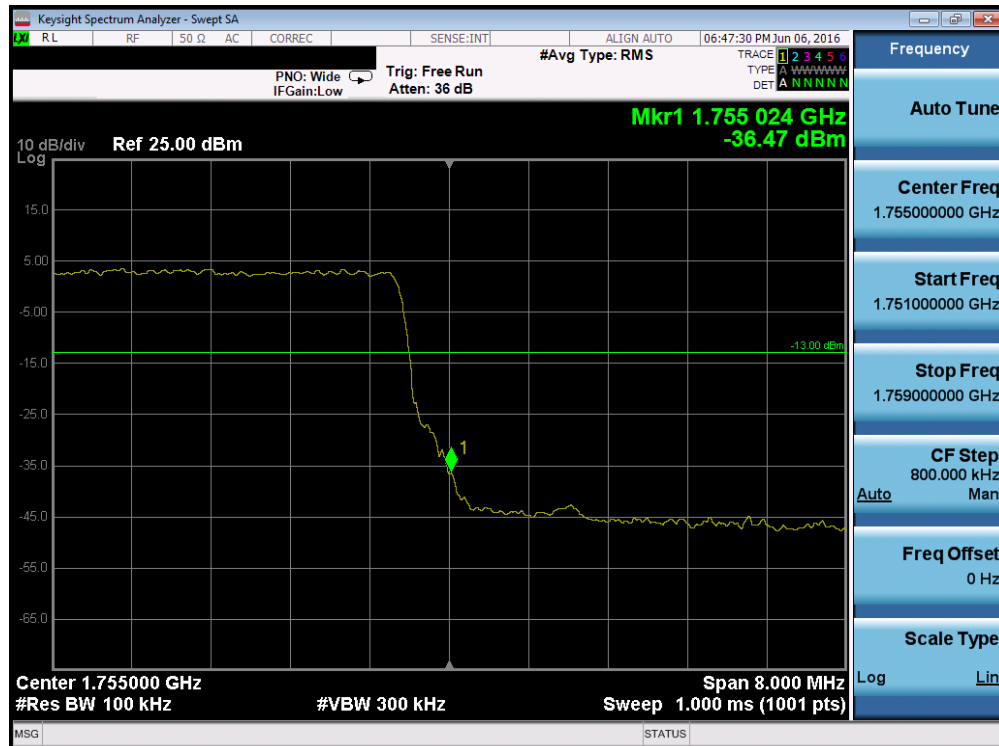


Plot 7-156. Lower Band Edge Plot (Band 4 – 10.0MHz QPSK – RB Size 50)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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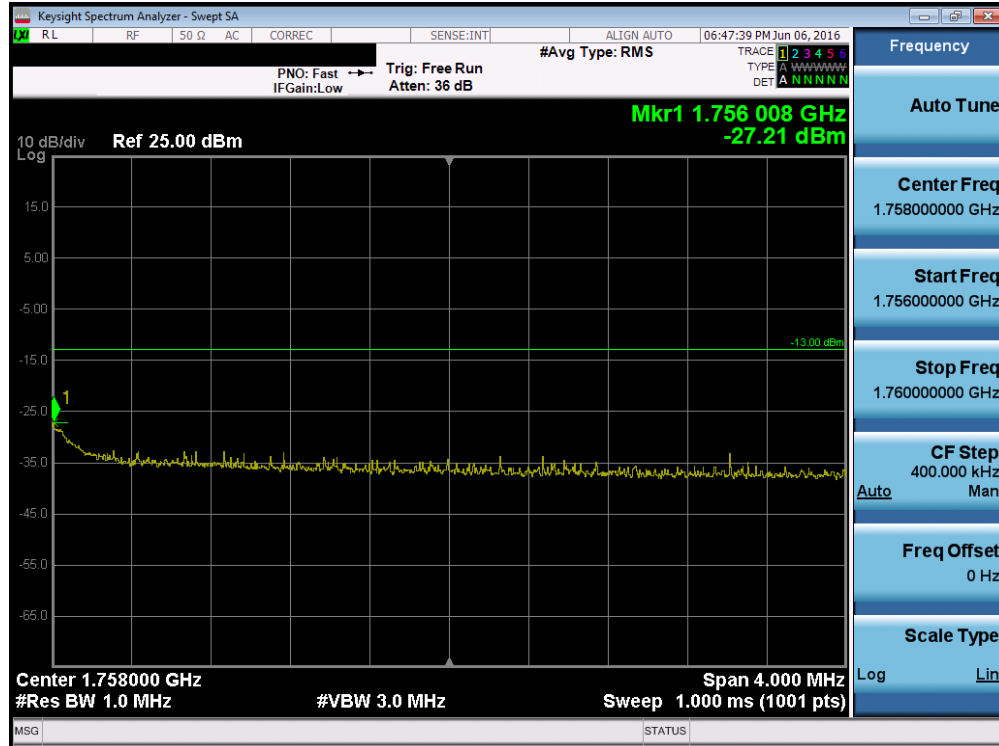


Plot 7-157. Lower Extended Band Edge Plot (Band 4 – 10.0MHz QPSK – RB Size 50)

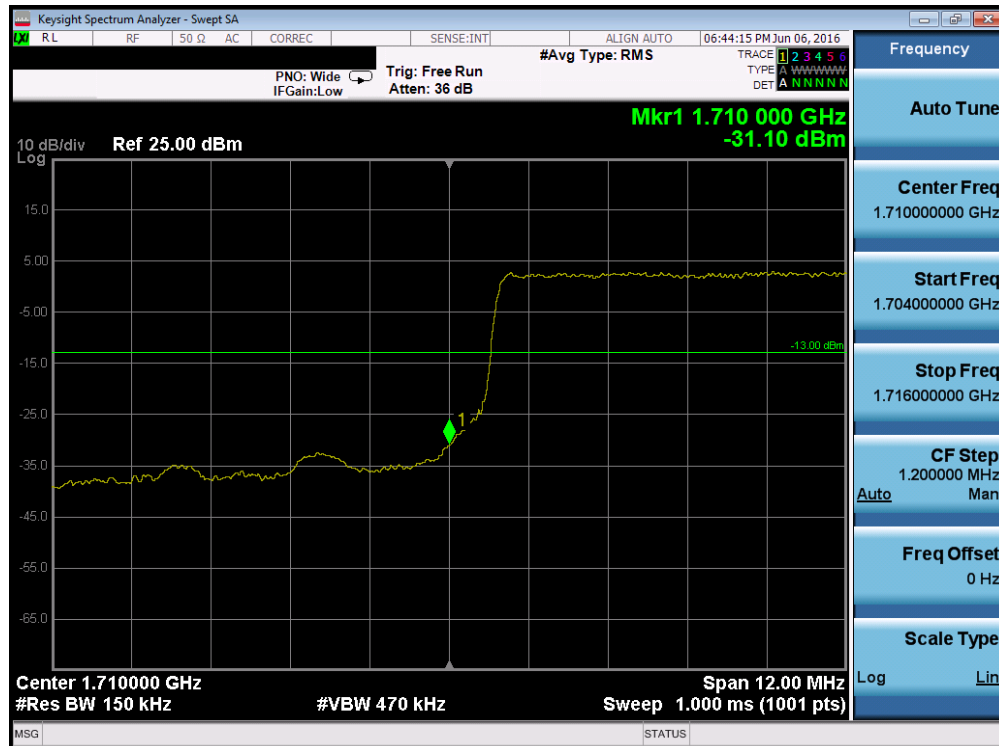


Plot 7-158. Upper Band Edge Plot (Band 4 – 10.0MHz QPSK – RB Size 50)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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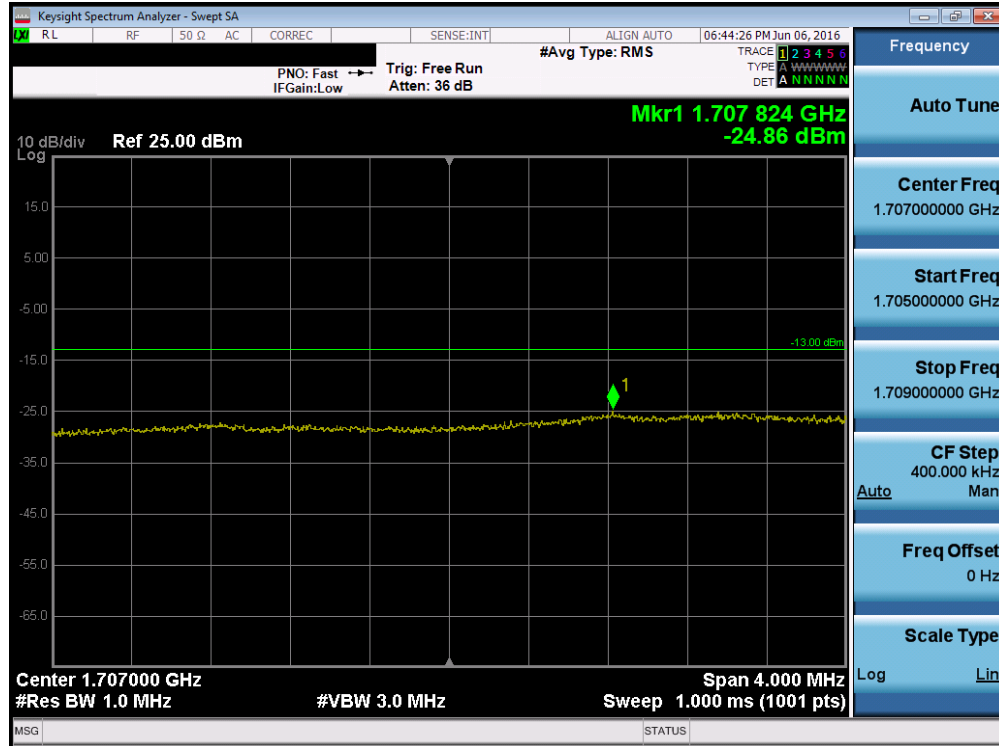


Plot 7-159. Upper Extended Band Edge Plot (Band 4 – 10.0MHz QPSK – RB Size 50)

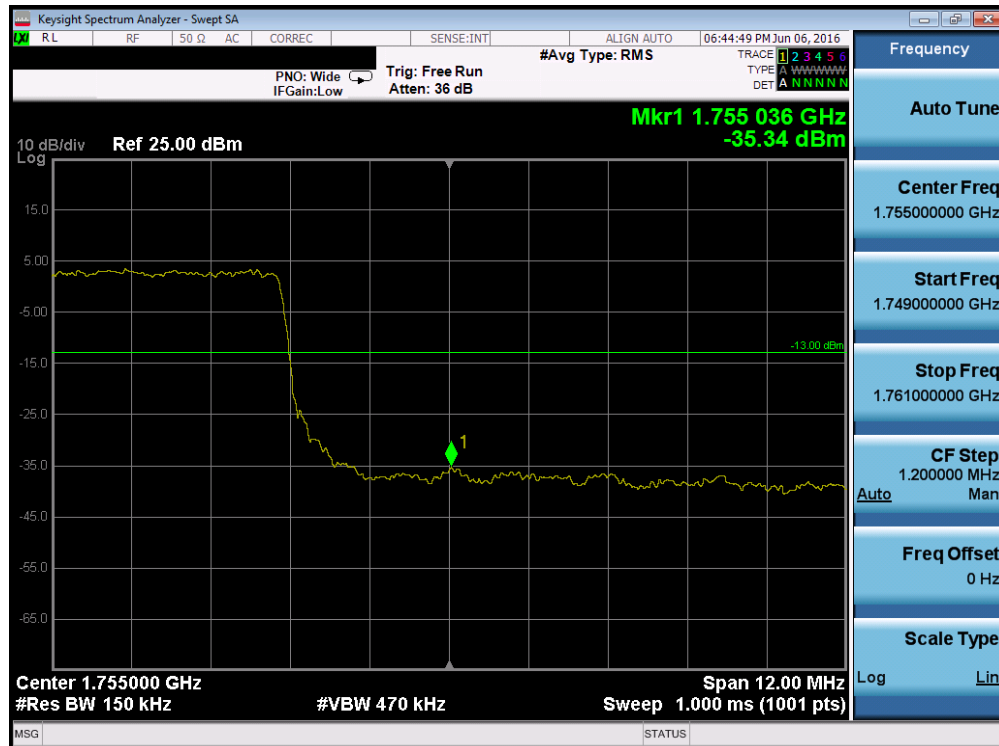


Plot 7-160. Lower Band Edge Plot (Band 4 – 15.0MHz QPSK – RB Size 75)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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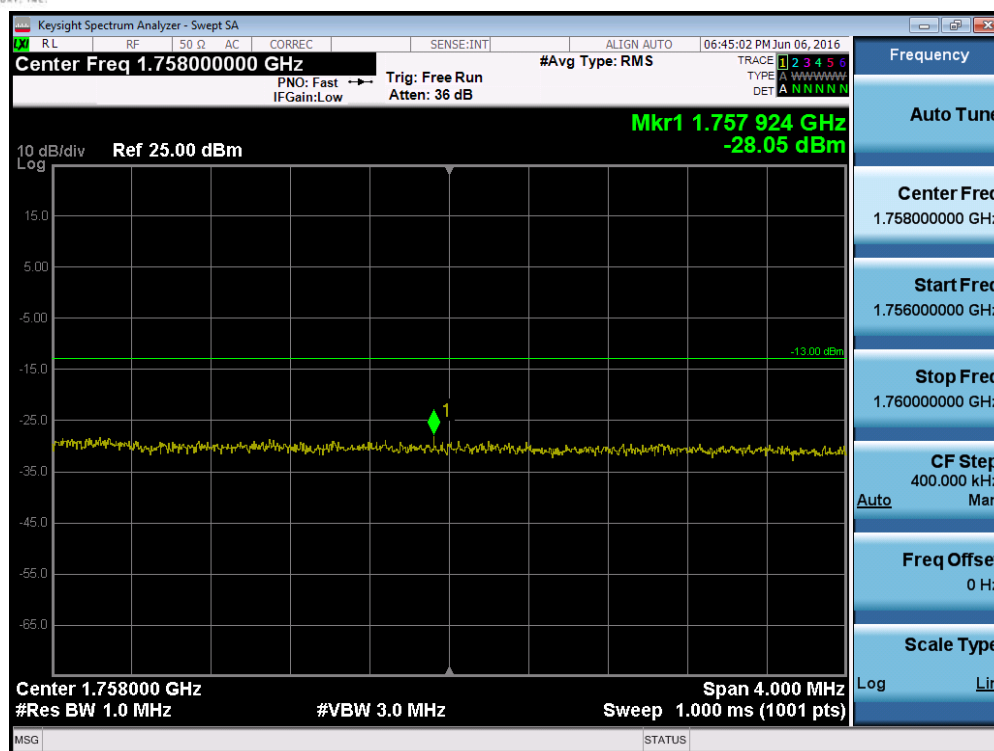


Plot 7-161. Lower Extended Band Edge Plot (Band 4 – 15.0MHz QPSK – RB Size 75)

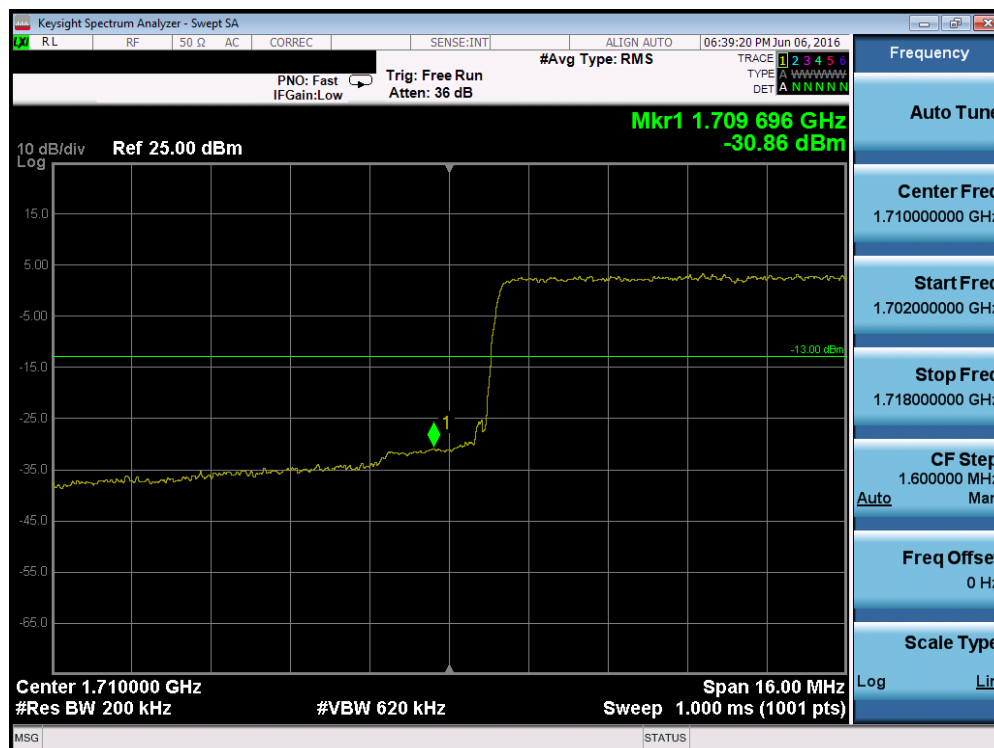


Plot 7-162. Upper Band Edge Plot (Band 4 – 15.0MHz QPSK – RB Size 75)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1606061018.A3L	Test Dates: 6/1 - 7/15/2016	EUT Type: Portable Handset		Page 98 of 165

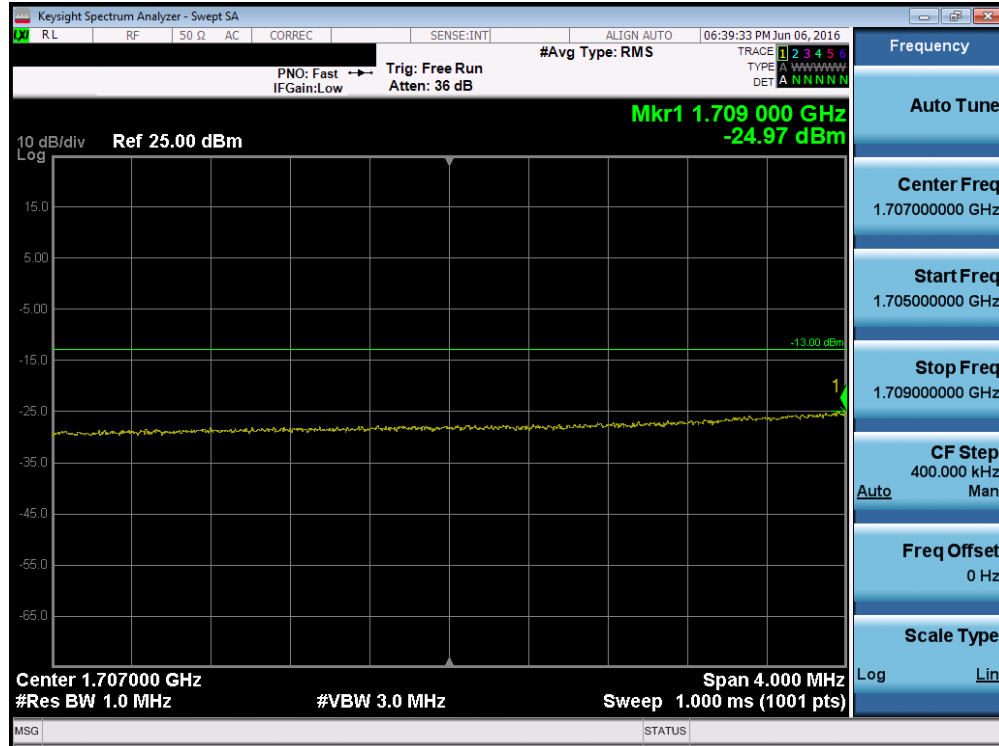


Plot 7-163. Upper Extended Band Edge Plot (Band 4 – 15.0MHz QPSK – RB Size 75)

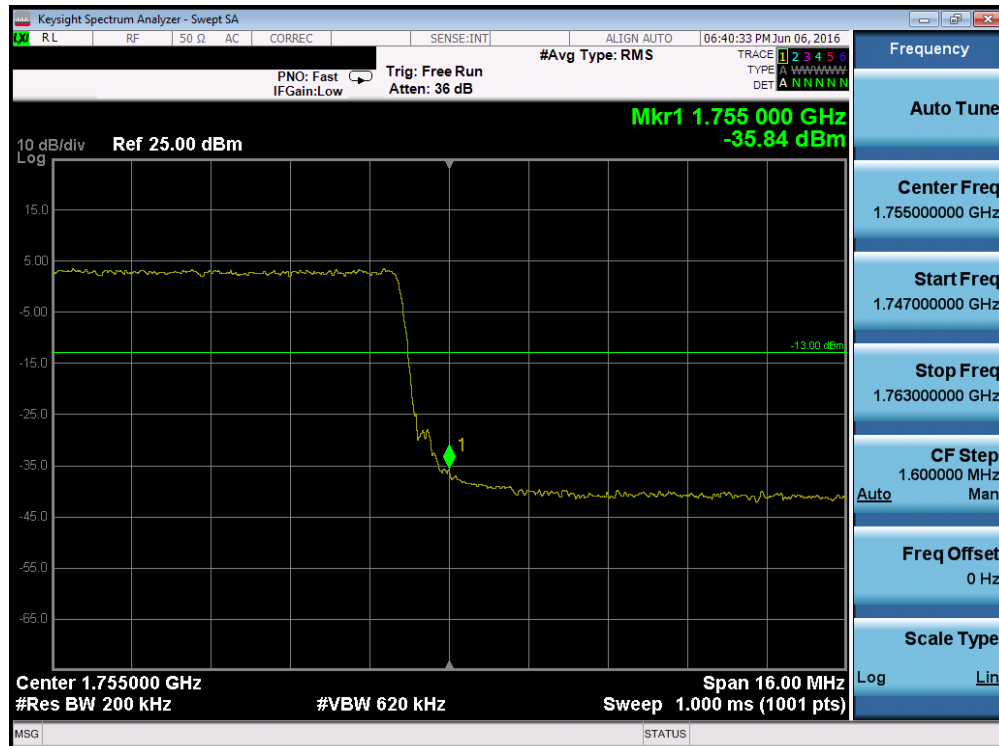


Plot 7-164. Lower Band Edge Plot (Band 4 – 20.0MHz QPSK – RB Size 100)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1606061018.A3L	Test Dates: 6/1 - 7/15/2016	EUT Type: Portable Handset		Page 99 of 165

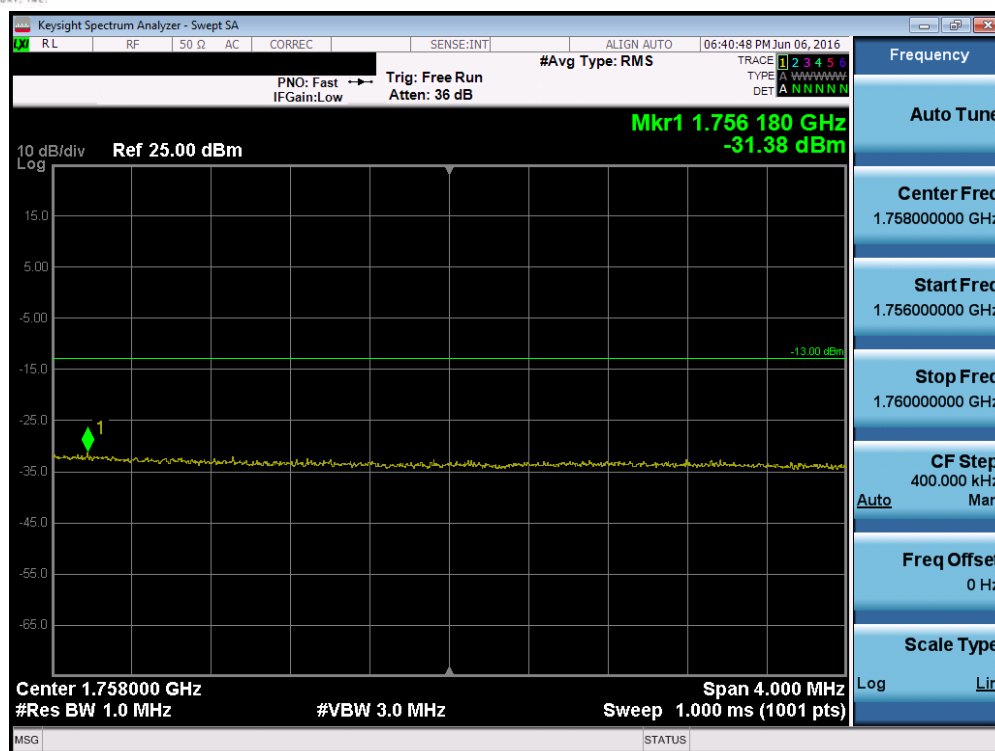


Plot 7-165. Lower Extended Band Edge Plot (Band 4 – 20.0MHz QPSK – RB Size 100)

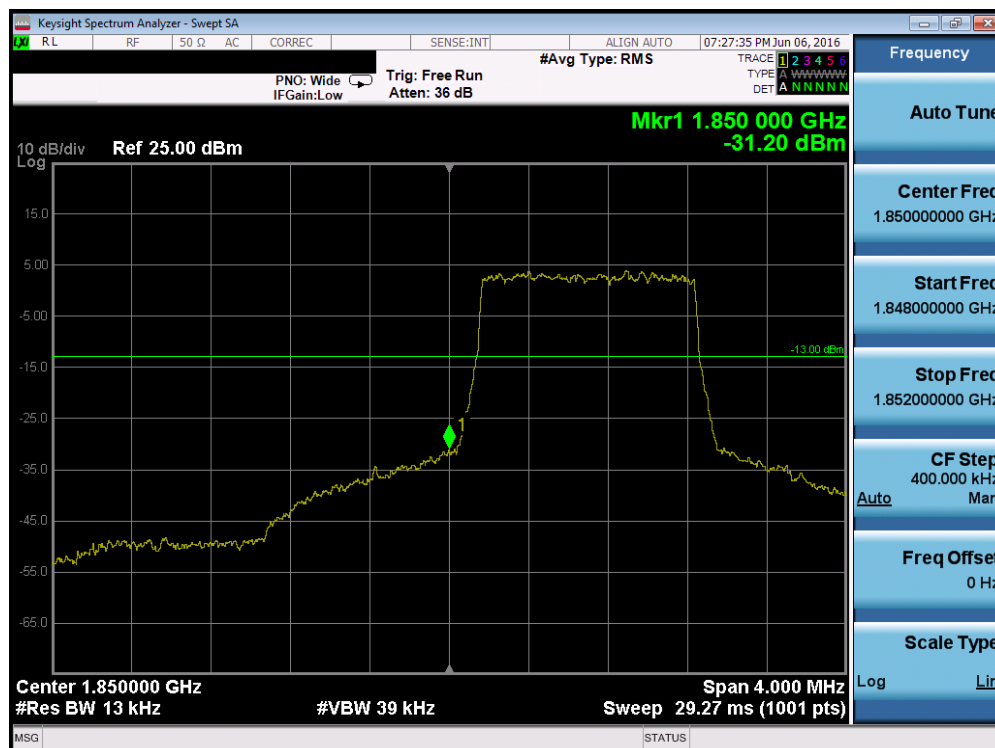


Plot 7-166. Upper Band Edge Plot (Band 4 – 20.0MHz QPSK – RB Size 100)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1606061018.A3L	Test Dates: 6/1 - 7/15/2016	EUT Type: Portable Handset		Page 100 of 165

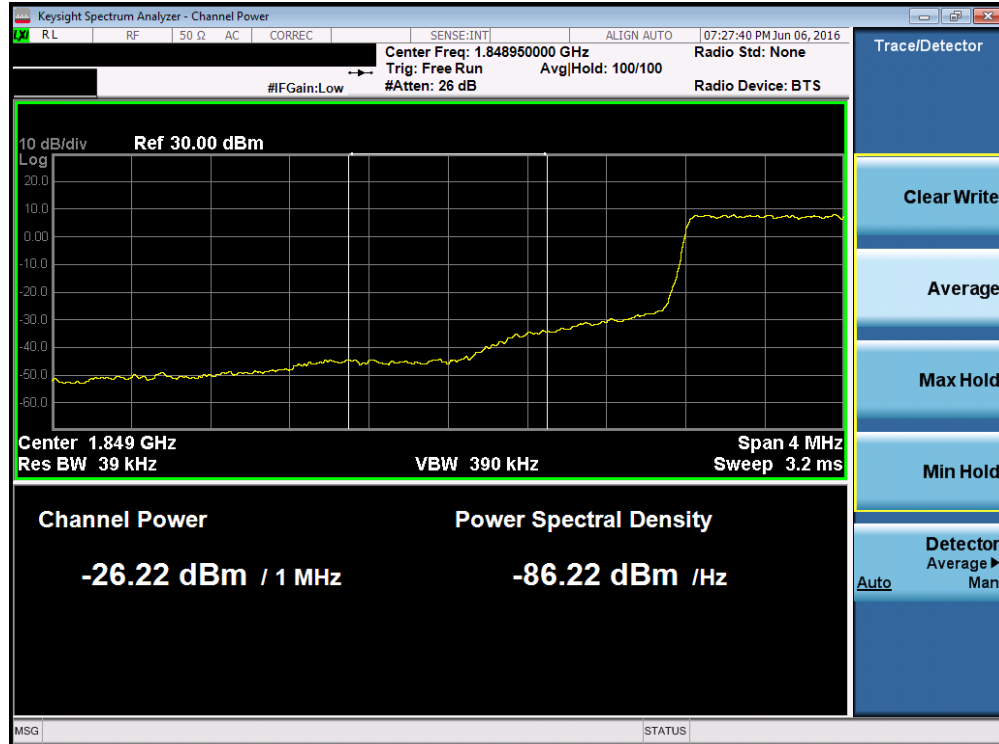


Plot 7-167. Upper Extended Band Edge Plot (Band 4 – 20.0MHz QPSK – RB Size 100)

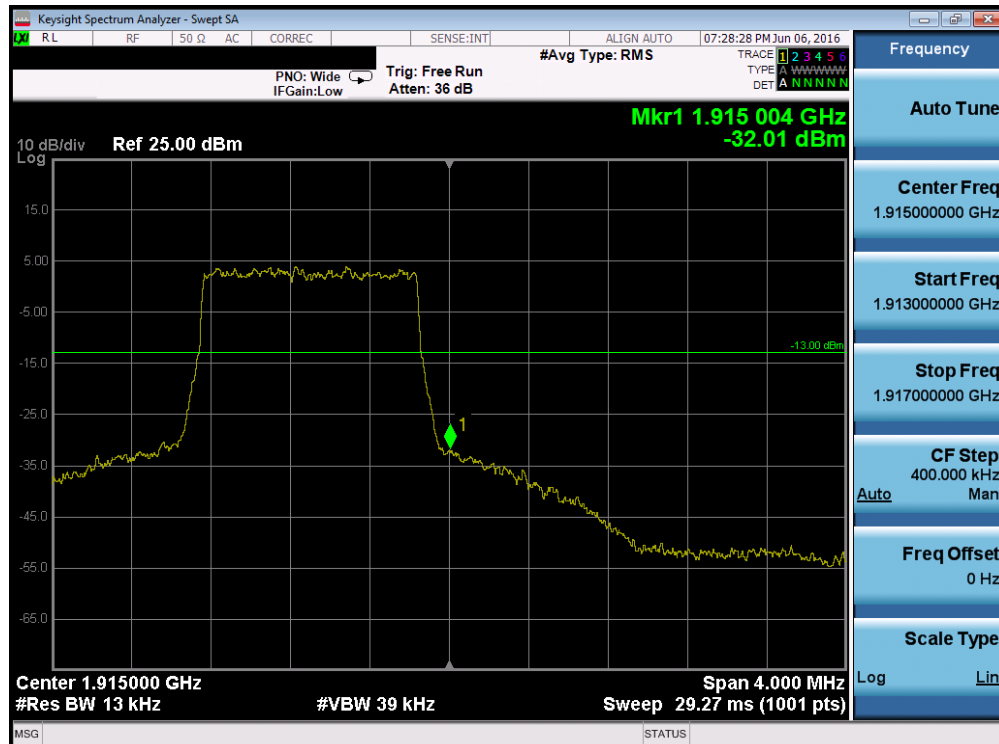


Plot 7-168. Lower Band Edge Plot (Band 25/2 – 1.4MHz QPSK – RB Size 6)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1606061018.A3L	Test Dates: 6/1 - 7/15/2016	EUT Type: Portable Handset		Page 101 of 165

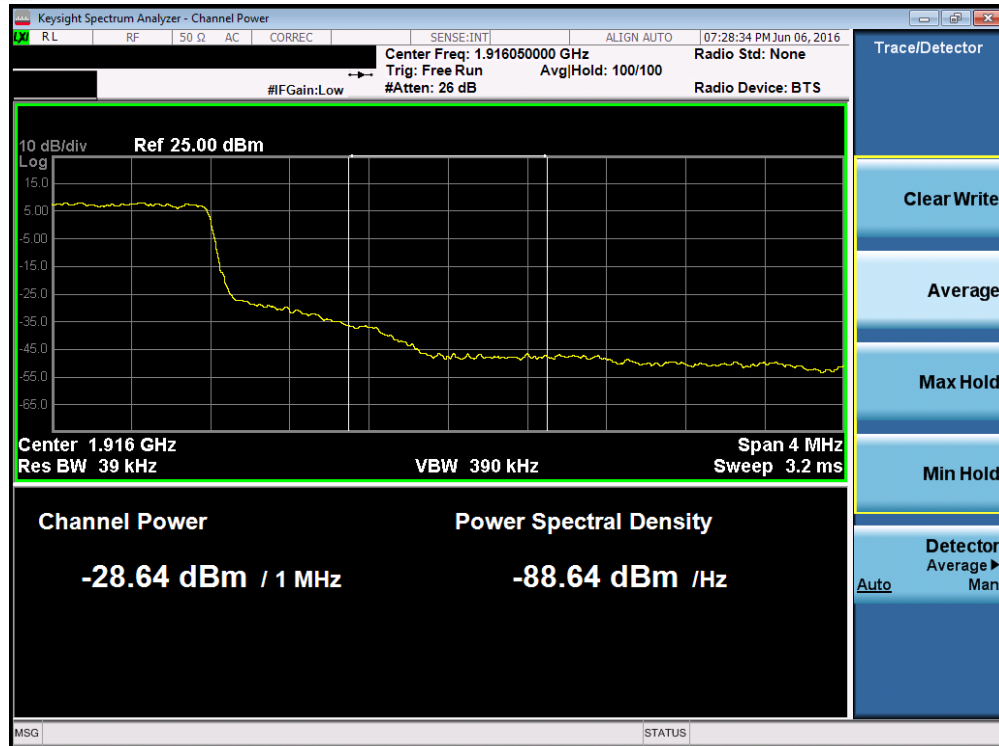


Plot 7-169. Lower Extended Band Edge Plot (Band 25/2 – 1.4MHz QPSK – RB Size 6)

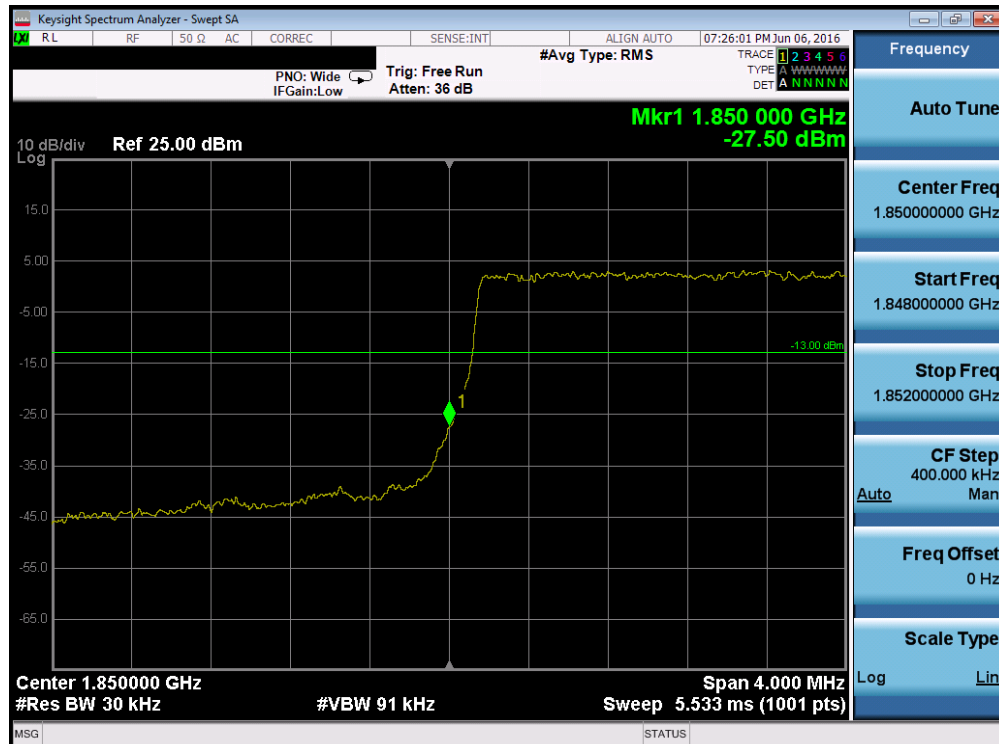


Plot 7-170. Upper Band Edge Plot (Band 25/2 – 1.4MHz QPSK – RB Size 6)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1606061018.A3L	Test Dates: 6/1 - 7/15/2016	EUT Type: Portable Handset		Page 102 of 165

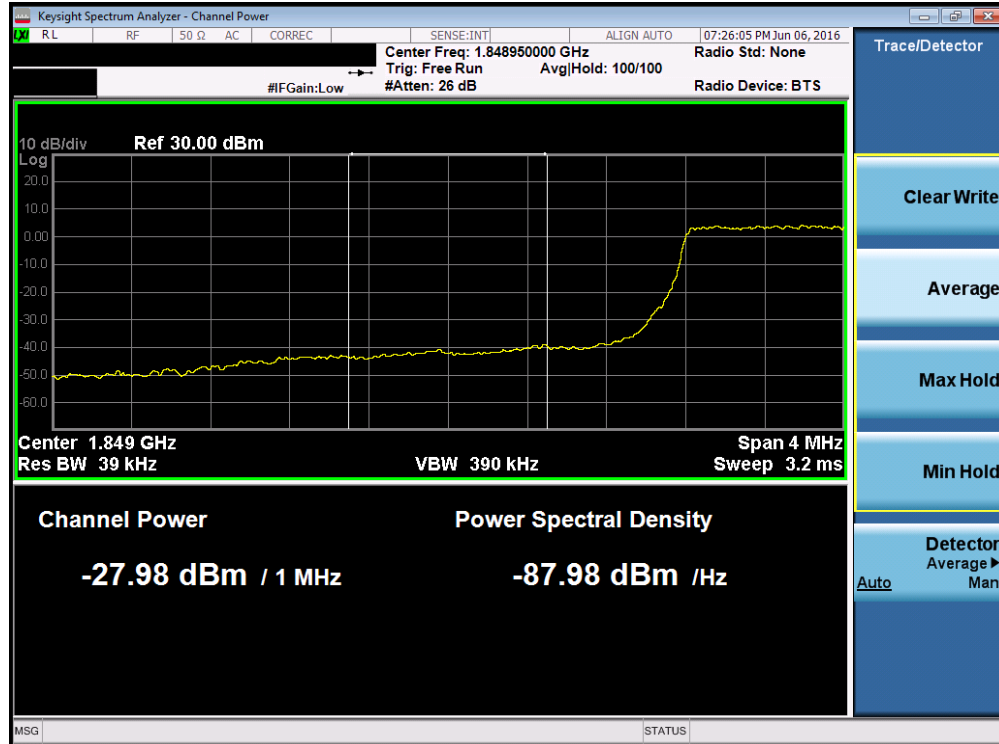


Plot 7-171. Upper Extended Band Edge Plot (Band 25/2 – 1.4MHz QPSK – RB Size 6)

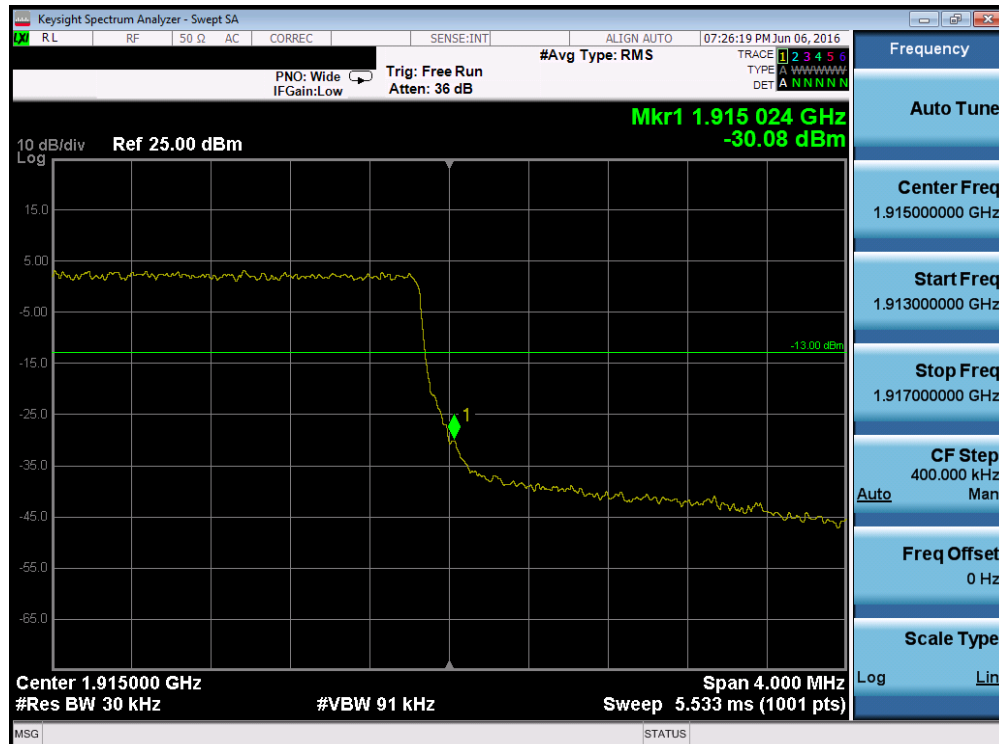


Plot 7-172. Lower Band Edge Plot (Band 25/2 – 3.0MHz QPSK – RB Size 15)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1606061018.A3L	Test Dates: 6/1 - 7/15/2016	EUT Type: Portable Handset		Page 103 of 165

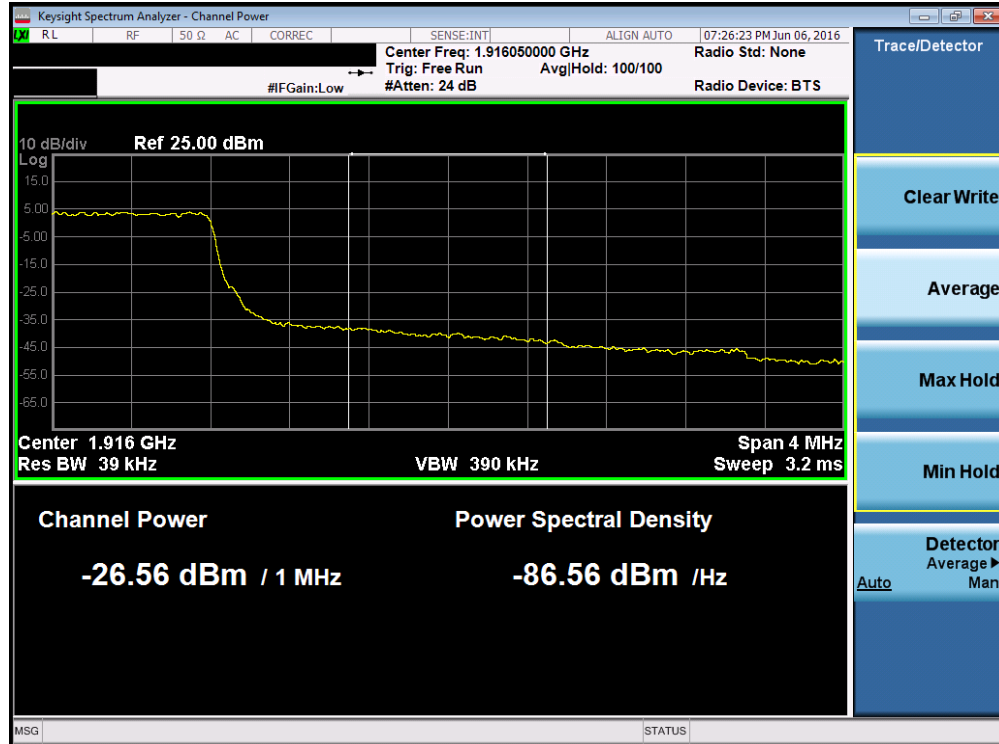


Plot 7-173. Lower Extended Band Edge Plot (Band 25/2 – 3.0MHz QPSK – RB Size 15)

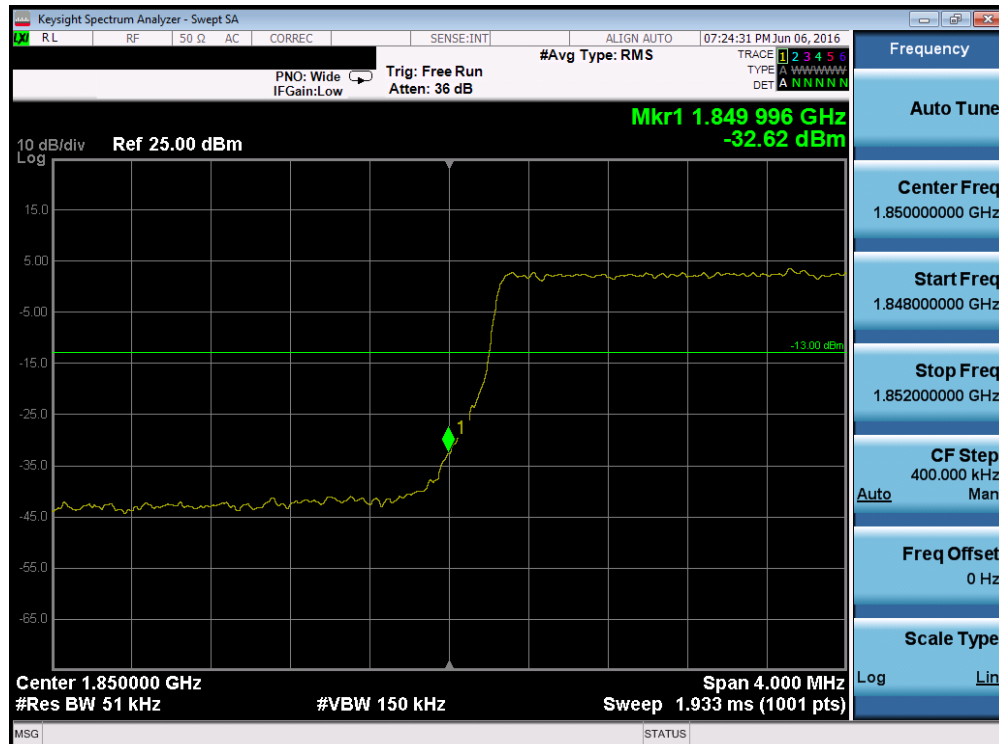


Plot 7-174. Upper Band Edge Plot (Band 25/2 – 3.0MHz QPSK – RB Size 15)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1606061018.A3L	Test Dates: 6/1 - 7/15/2016	EUT Type: Portable Handset		Page 104 of 165

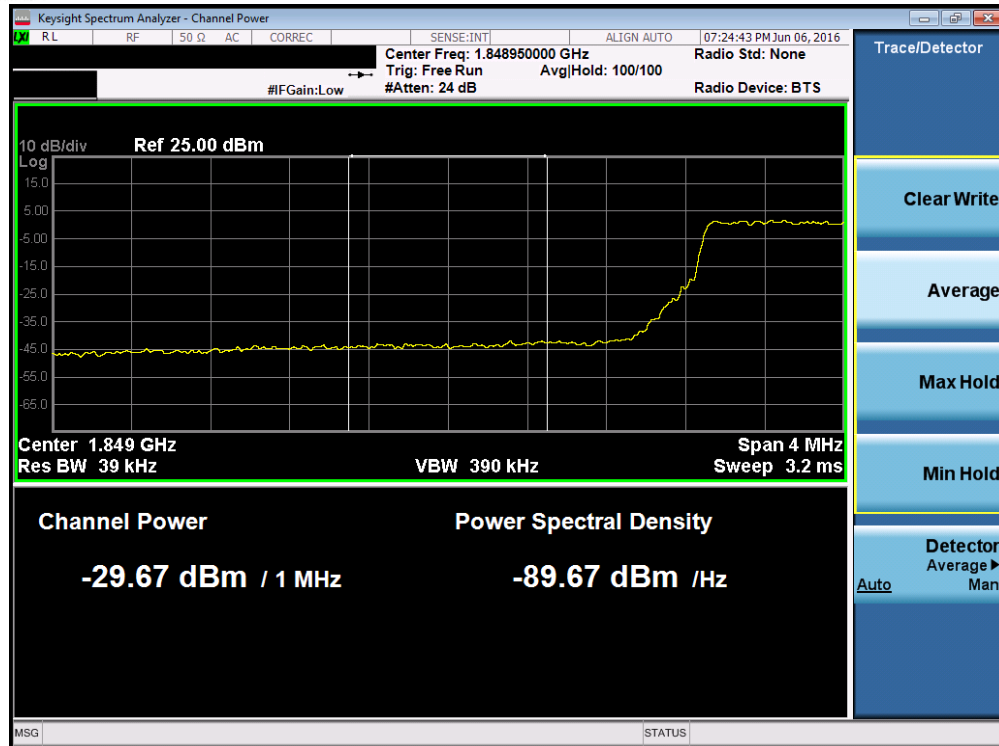


Plot 7-175. Upper Extended Band Edge Plot (Band 25/2 – 3.0MHz QPSK – RB Size 15)



Plot 7-176. Lower Band Edge Plot (Band 25/2 – 5.0MHz QPSK – RB Size 25)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1606061018.A3L	Test Dates: 6/1 - 7/15/2016	EUT Type: Portable Handset		Page 105 of 165

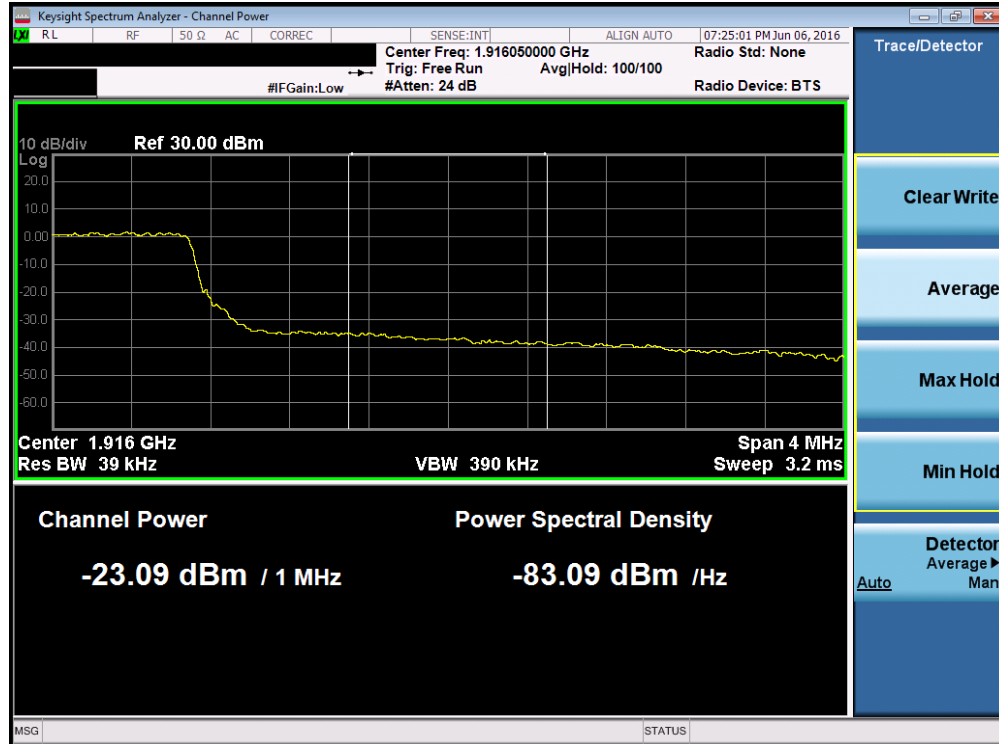


Plot 7-177. Lower Extended Band Edge Plot (Band 25/2 – 5.0MHz QPSK – RB Size 25)

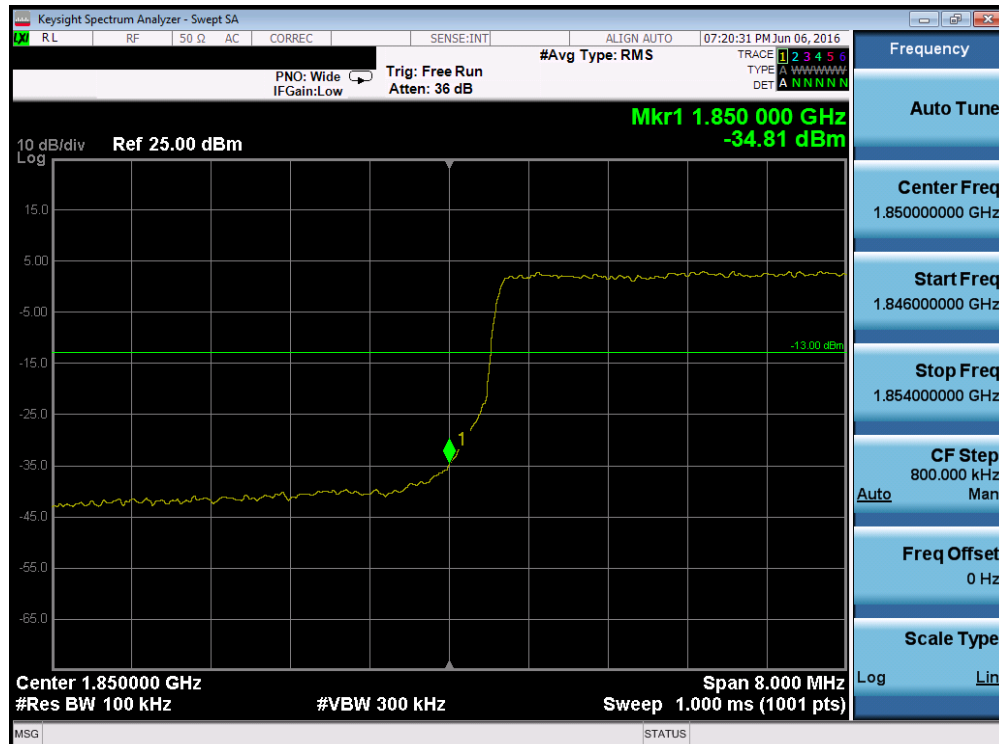


Plot 7-178. Upper Band Edge Plot (Band 25/2 – 5.0MHz QPSK – RB Size 25)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1606061018.A3L	Test Dates: 6/1 - 7/15/2016	EUT Type: Portable Handset		Page 106 of 165

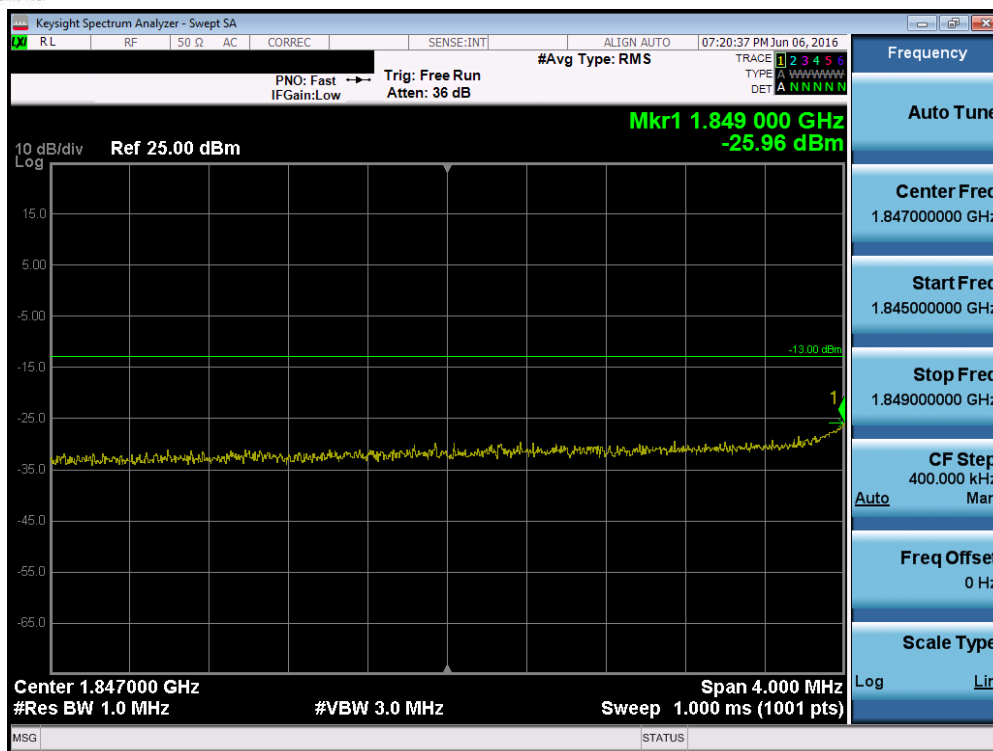


Plot 7-179. Upper Extended Band Edge Plot (Band 25/2 – 5.0MHz QPSK – RB Size 25)

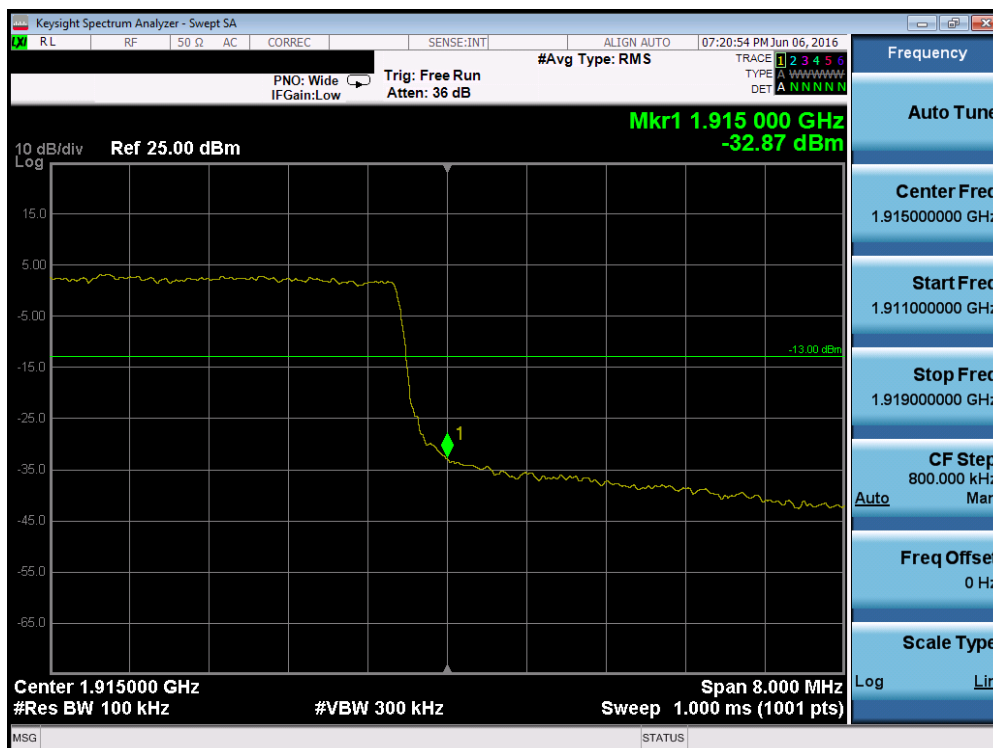


Plot 7-180. Lower Band Edge Plot (Band 25/2 – 10.0MHz QPSK – RB Size 50)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1606061018.A3L	Test Dates: 6/1 - 7/15/2016	EUT Type: Portable Handset		Page 107 of 165

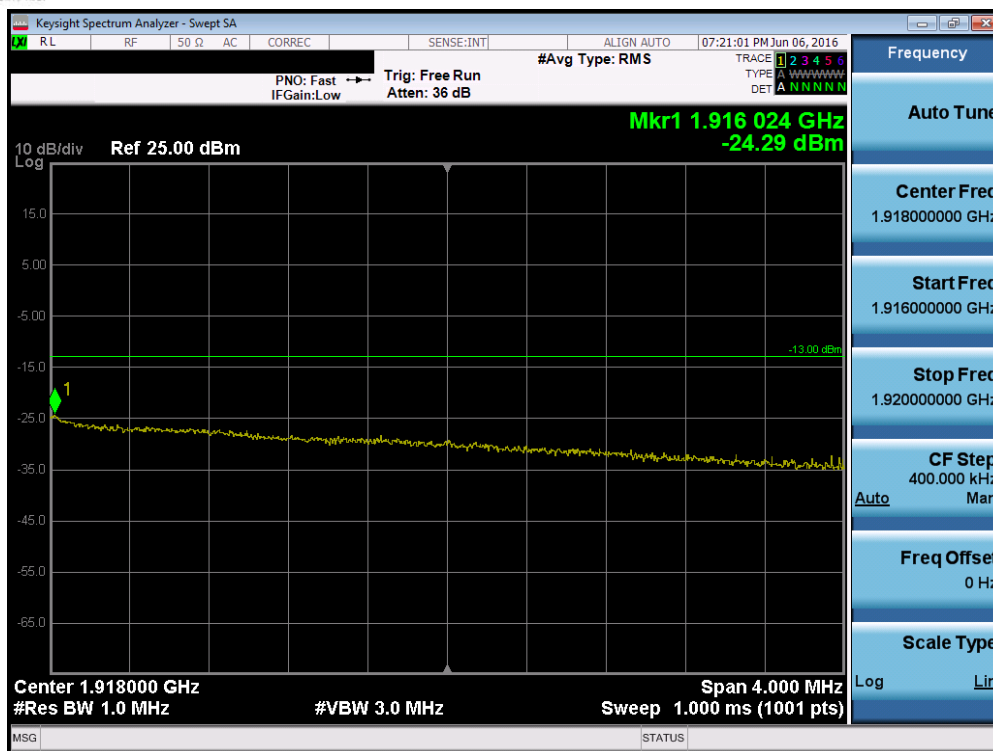


Plot 7-181. Lower Extended Band Edge Plot (Band 25/2 – 10.0MHz QPSK – RB Size 50)

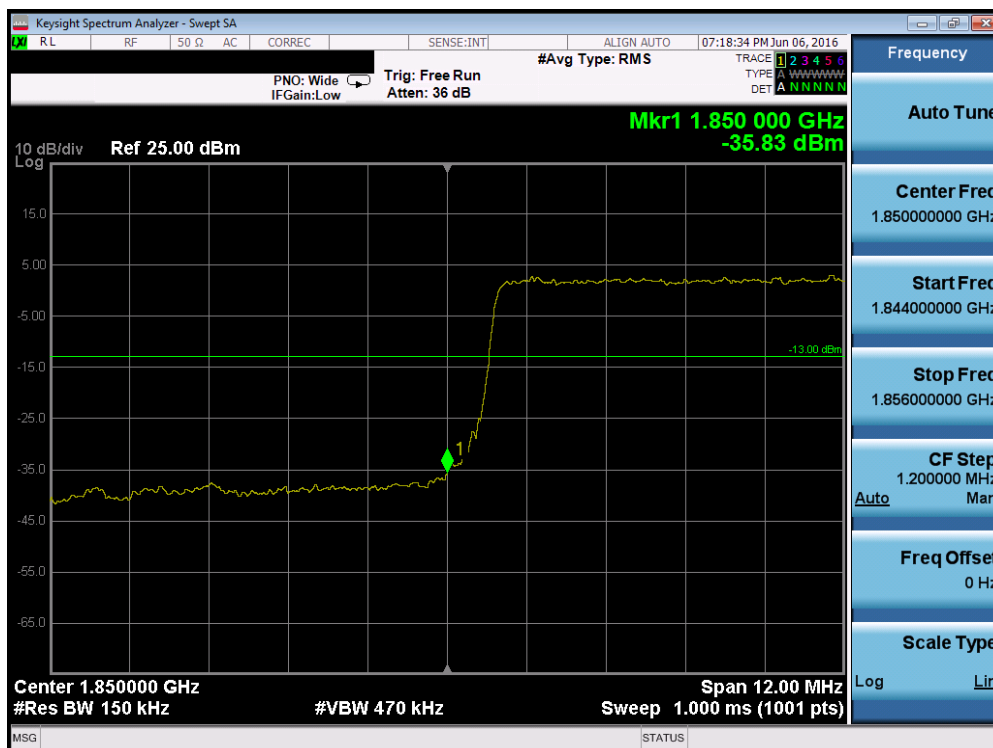


Plot 7-182. Upper Band Edge Plot (Band 25/2 – 10.0MHz QPSK – RB Size 50)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1606061018.A3L	Test Dates: 6/1 - 7/15/2016	EUT Type: Portable Handset		Page 108 of 165

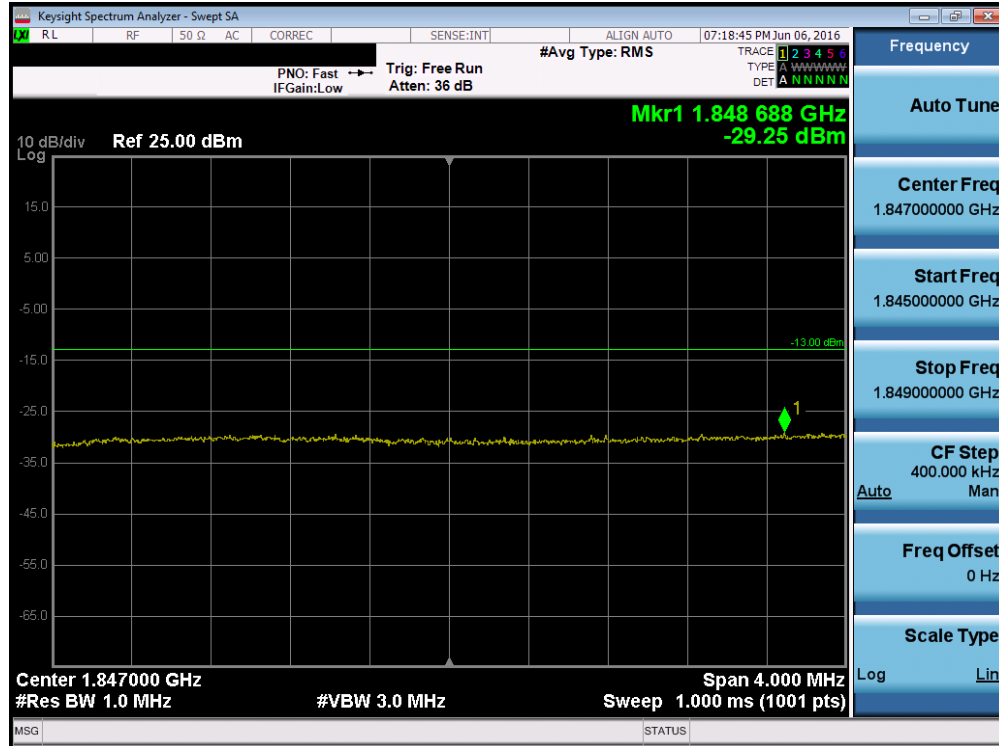


Plot 7-183. Upper Extended Band Edge Plot (Band 25/2 – 10.0MHz QPSK – RB Size 50)

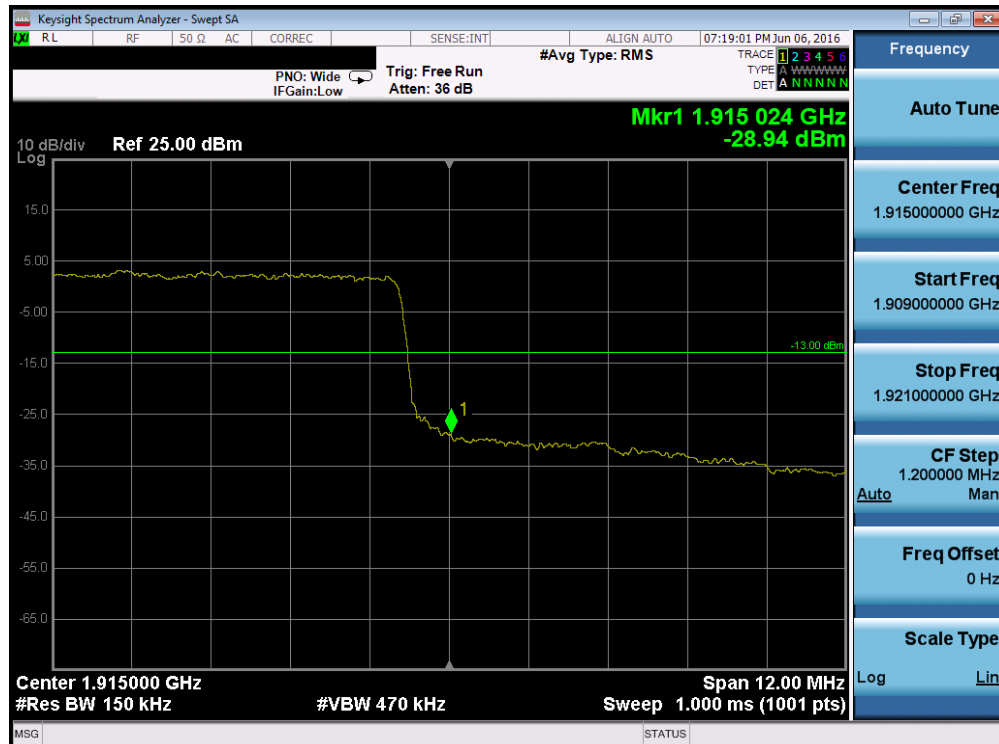


Plot 7-184. Lower Band Edge Plot (Band 25/2 – 15.0MHz QPSK – RB Size 75)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1606061018.A3L	Test Dates: 6/1 - 7/15/2016	EUT Type: Portable Handset		Page 109 of 165

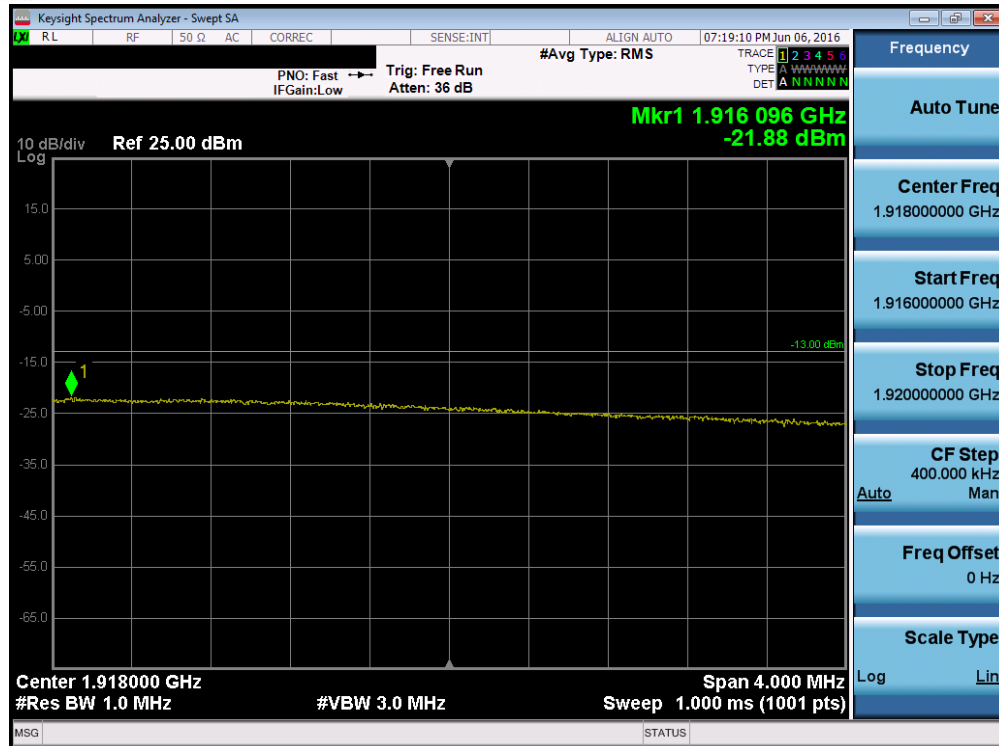


Plot 7-185. Lower Extended Band Edge Plot (Band 25/2 – 15.0MHz QPSK – RB Size 75)

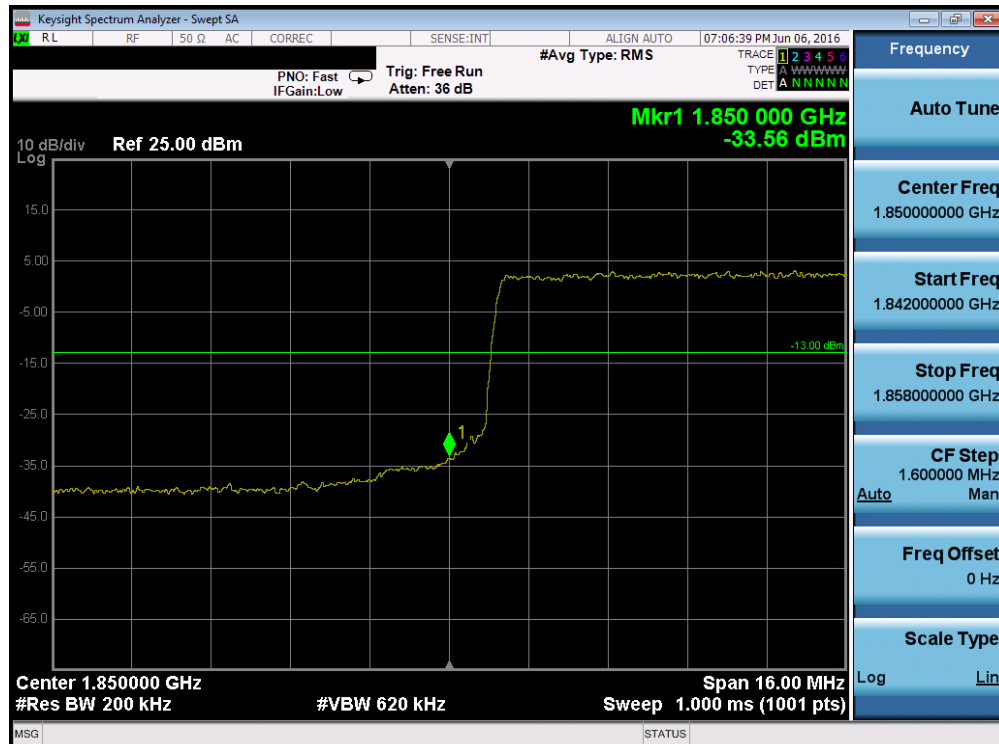


Plot 7-186. Upper Band Edge Plot (Band 25/2 – 15.0MHz QPSK – RB Size 75)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1606061018.A3L	Test Dates: 6/1 - 7/15/2016	EUT Type: Portable Handset		Page 110 of 165

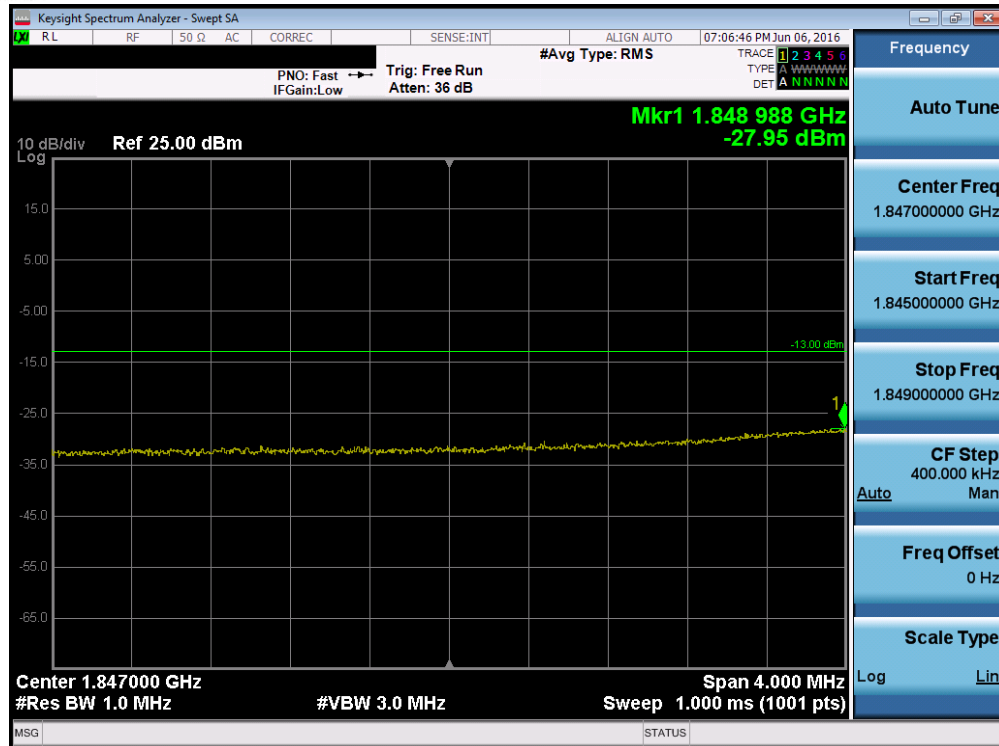


Plot 7-187. Upper Extended Band Edge Plot (Band 25/2 – 15.0MHz QPSK – RB Size 75)

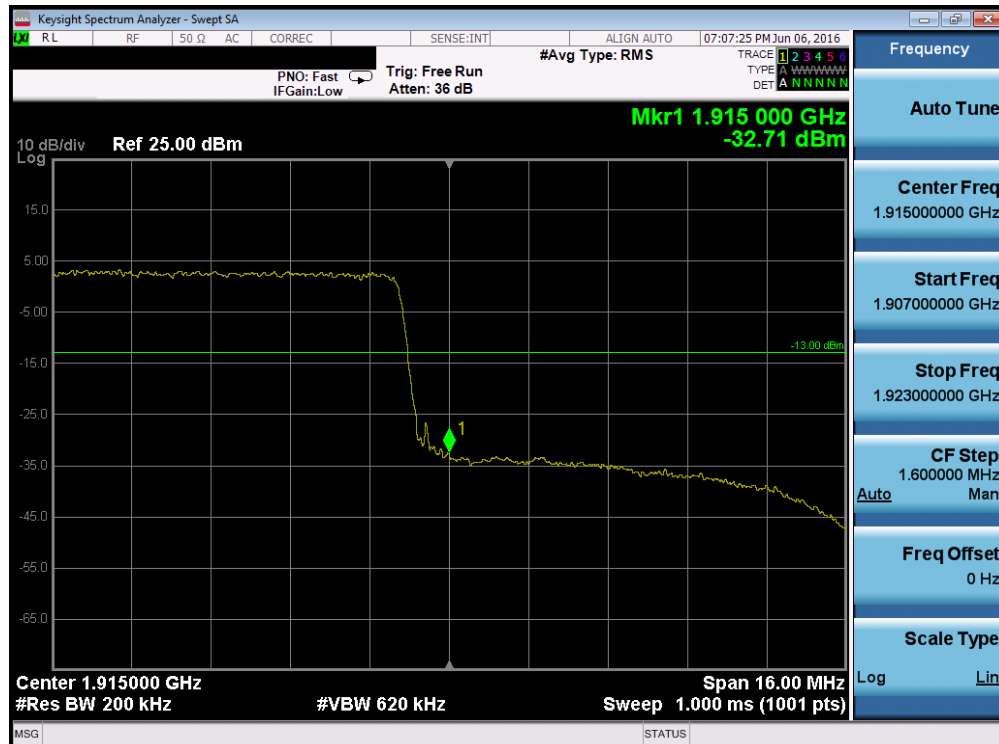


Plot 7-188. Lower Band Edge Plot (Band 25/2 – 20.0MHz QPSK – RB Size 100)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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Plot 7-189. Lower Extended Band Edge Plot (Band 25/2 – 20.0MHz QPSK – RB Size 100)

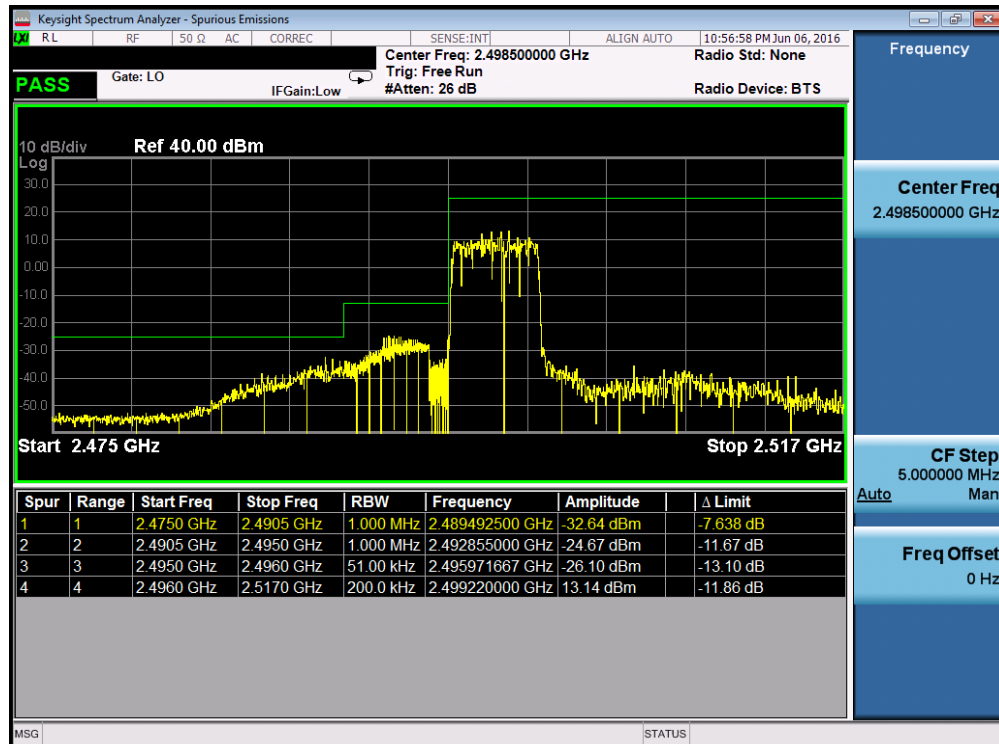


Plot 7-190. Upper Band Edge Plot (Band 25/2 – 20.0MHz QPSK – RB Size 100)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1606061018.A3L	Test Dates: 6/1 - 7/15/2016	EUT Type: Portable Handset		Page 112 of 165

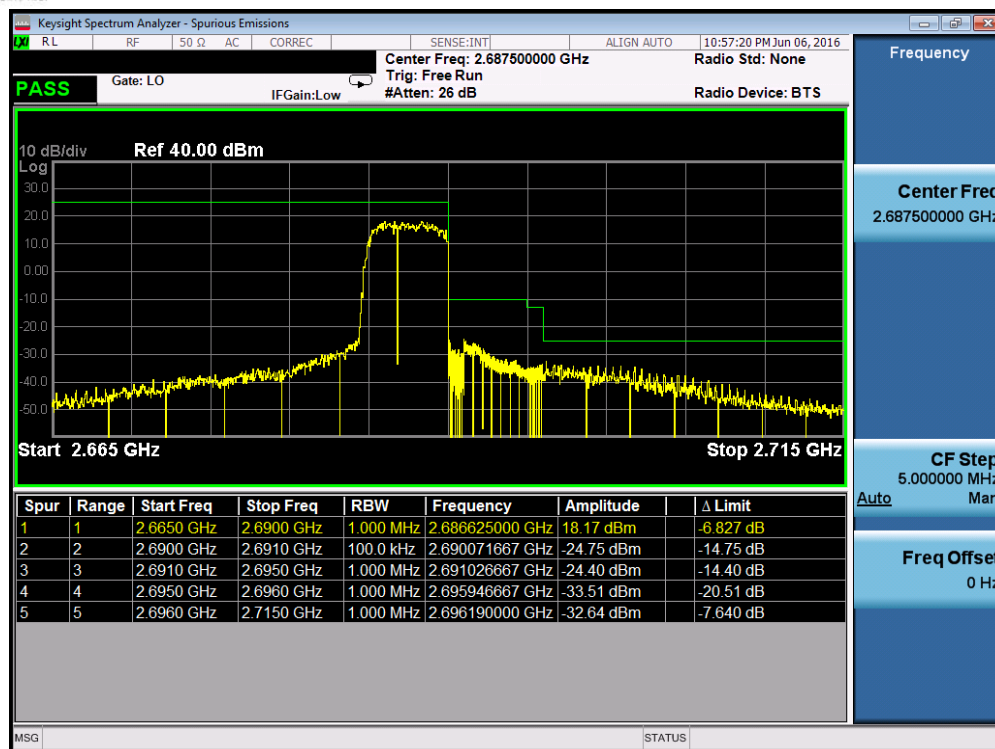


Plot 7-191. Upper Extended Band Edge Plot (Band 25/2 – 20.0MHz QPSK – RB Size 100)

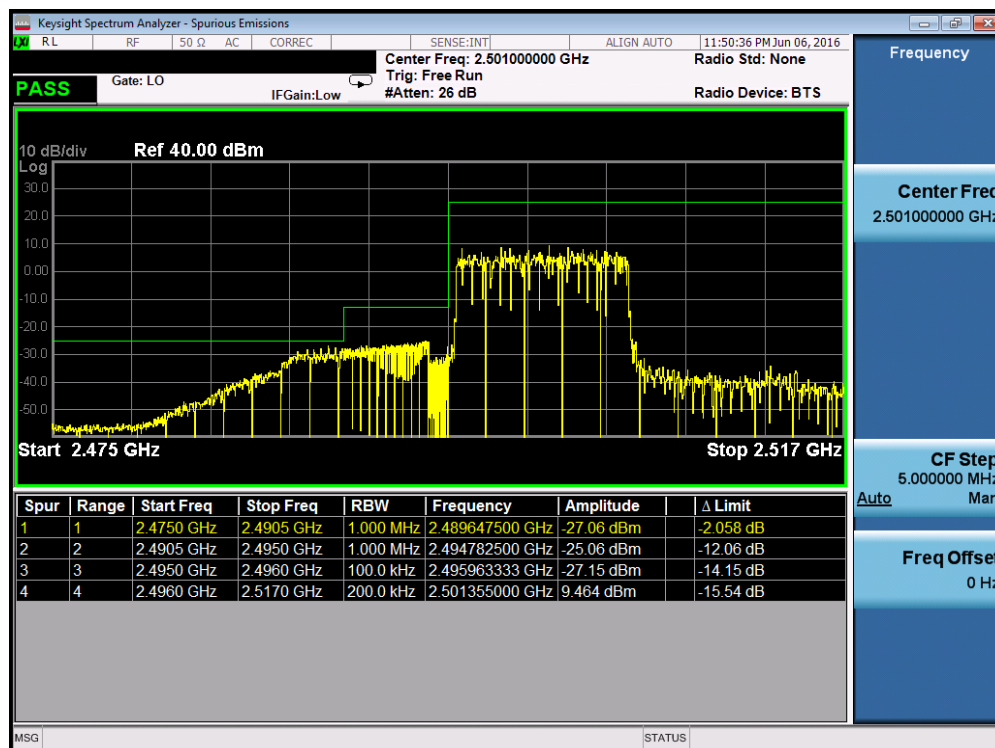


Plot 7-192. Lower ACP Plot (Band 41 – 5.0MHz QPSK – RB Size 25)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1606061018.A3L	Test Dates: 6/1 - 7/15/2016	EUT Type: Portable Handset		Page 113 of 165

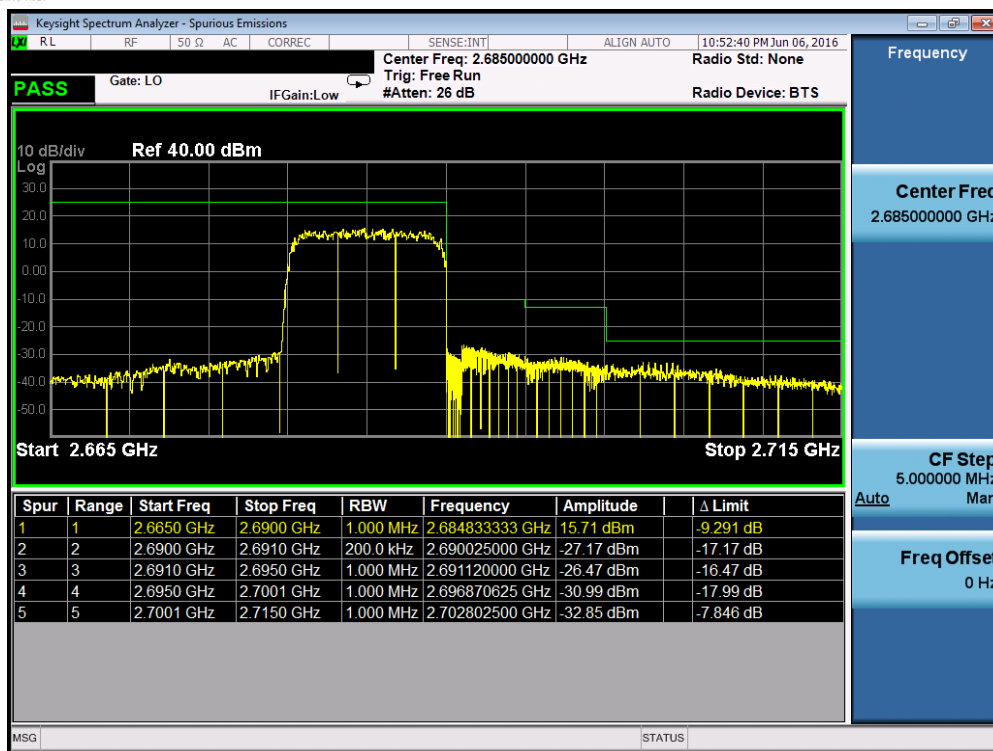


Plot 7-193. Upper ACP Plot (Band 41 – 5.0MHz QPSK – RB Size 25)

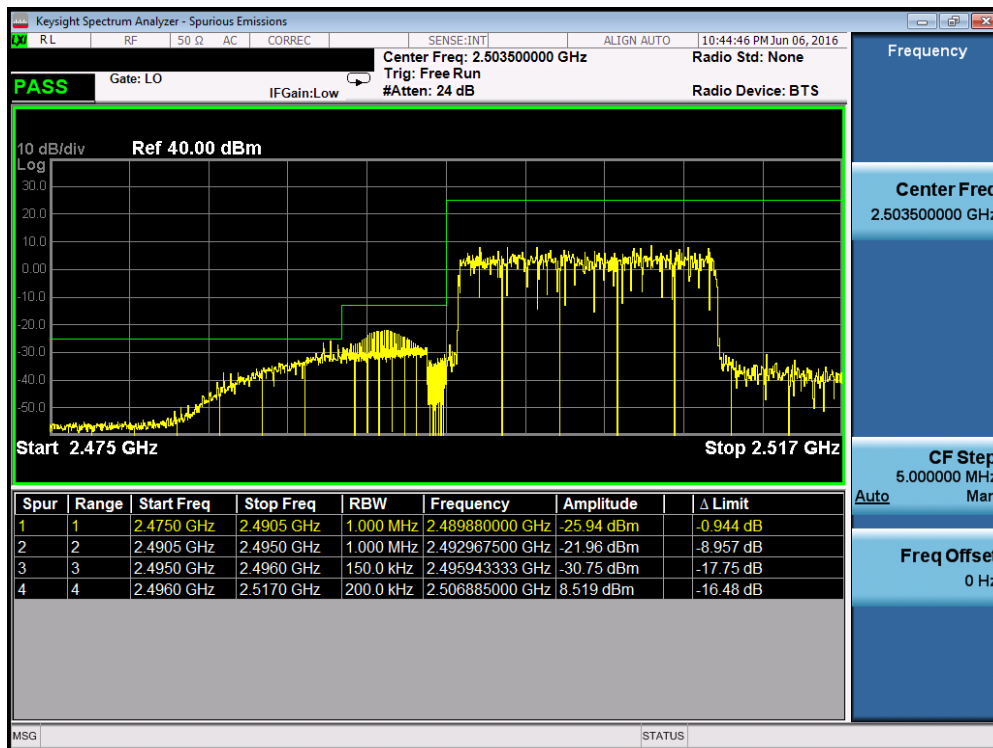


Plot 7-194. Lower ACP Plot (Band 41 – 10.0MHz QPSK – RB Size 50)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1606061018.A3L	Test Dates: 6/1 - 7/15/2016	EUT Type: Portable Handset		Page 114 of 165

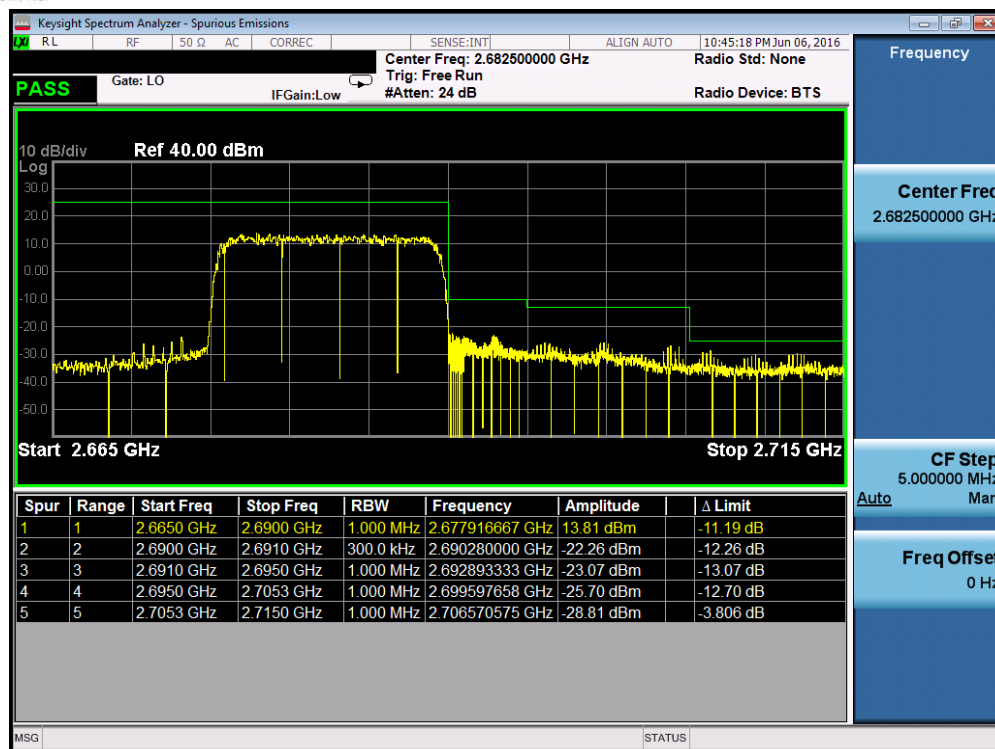


Plot 7-195. Upper ACP Plot (Band 41 – 10.0MHz QPSK – RB Size 50)

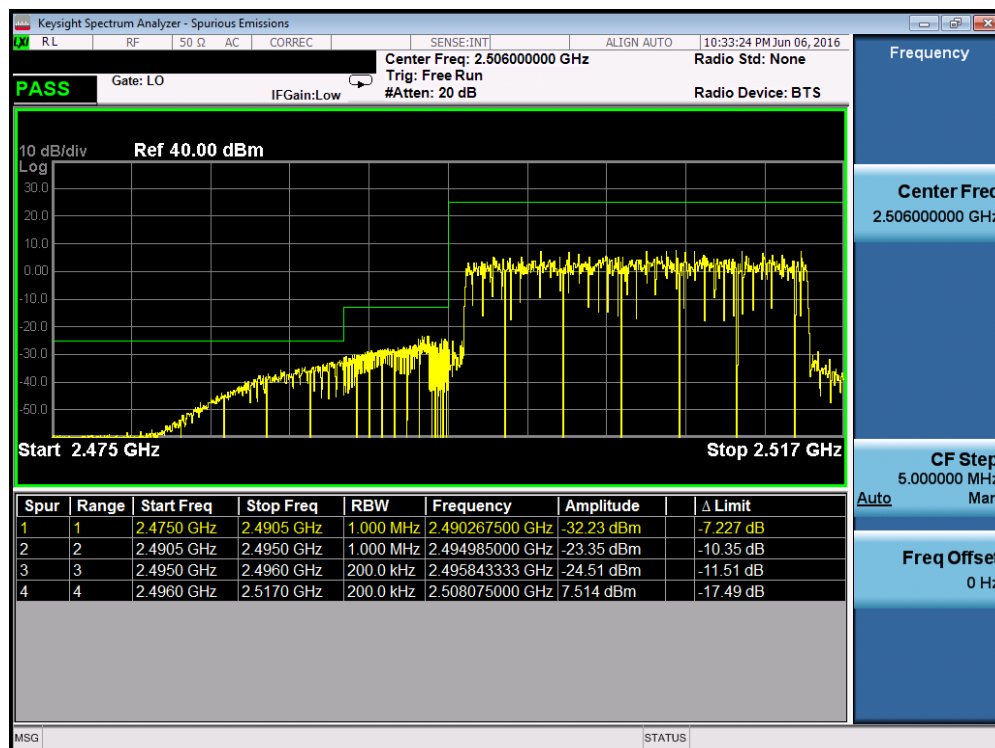


Plot 7-196. Lower ACP Plot (Band 41 – 15.0MHz QPSK – RB Size 75)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		SAMSUNG	Reviewed by: Quality Manager
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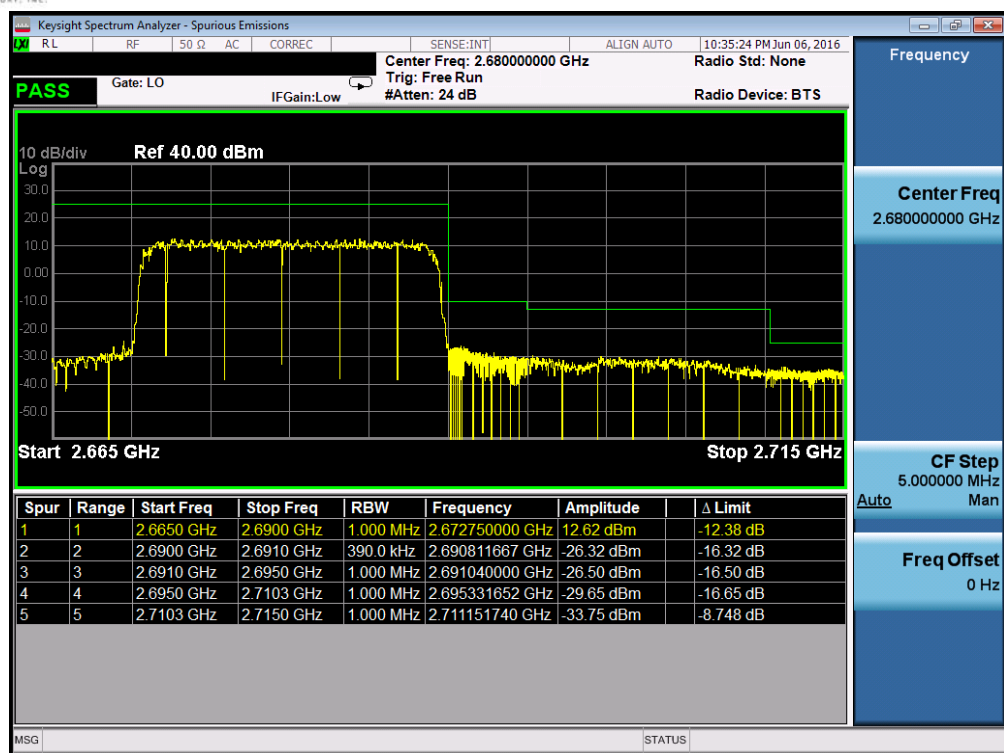


Plot 7-197. Upper ACP Plot (Band 41 – 15.0MHz QPSK – RB Size 75)



Plot 7-198. Lower ACP Plot (Band 41 – 20.0MHz QPSK – RB Size 100)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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Plot 7-199. Upper ACP Plot (Band 41 – 20.0MHz QPSK – RB Size 100)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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7.5 Peak-Average Ratio

§24.232(d)

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 v02r02 – 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. For burst transmissions, the spectrum analyzer is set to use an internal "RF Burst" trigger that is synced with an incoming pulse and the measurement interval is set to less than the duration of the "on time" of one burst to ensure that energy is only captured during a time in which the transmitter is operating at maximum power

Test Setup

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

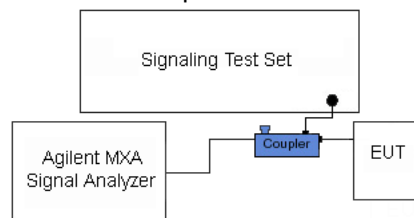
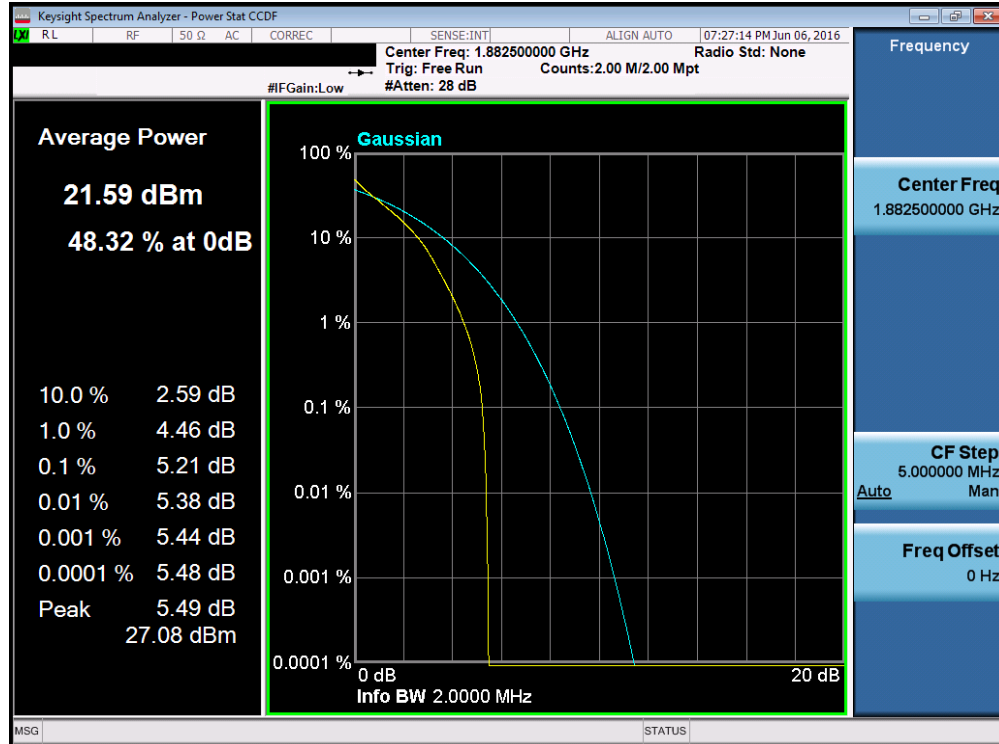


Figure 7-4. Test Instrument & Measurement Setup

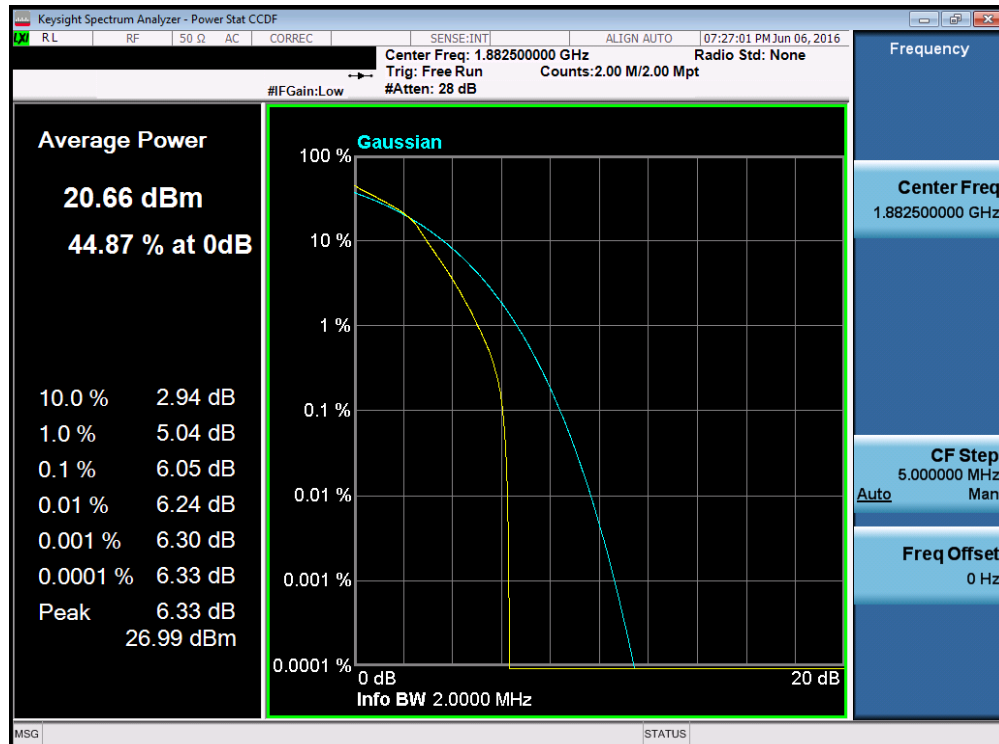
Test Notes

None.

FCC ID: A3LSMN9300		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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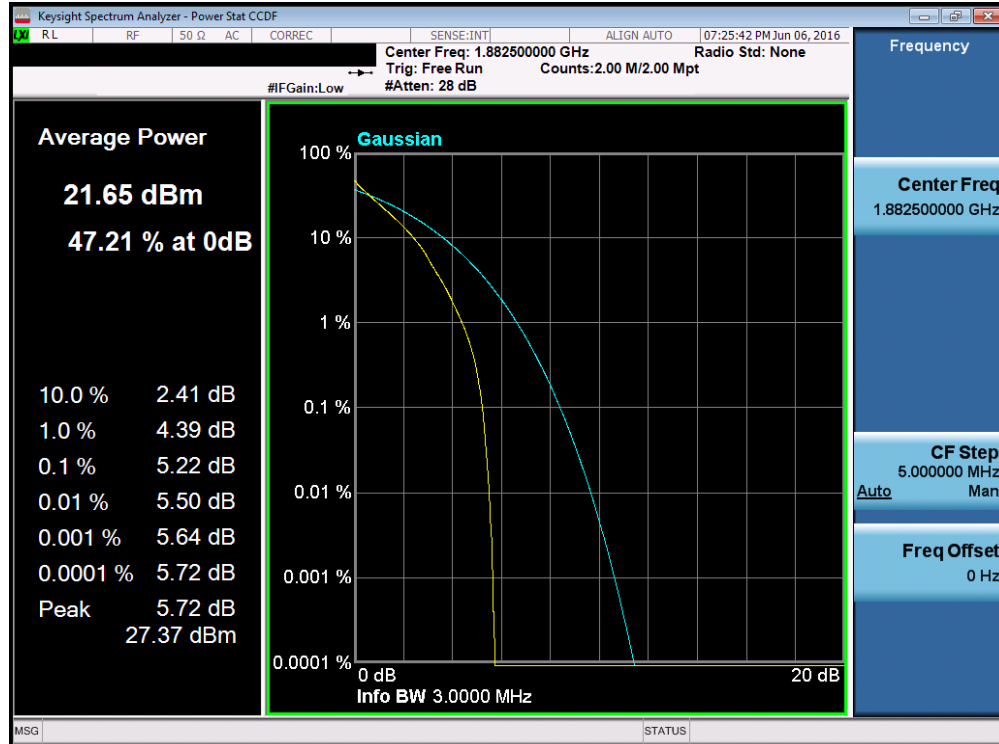


Plot 7-200. PAR Plot (Band 25 – 1.4MHz QPSK – RB Size 6)

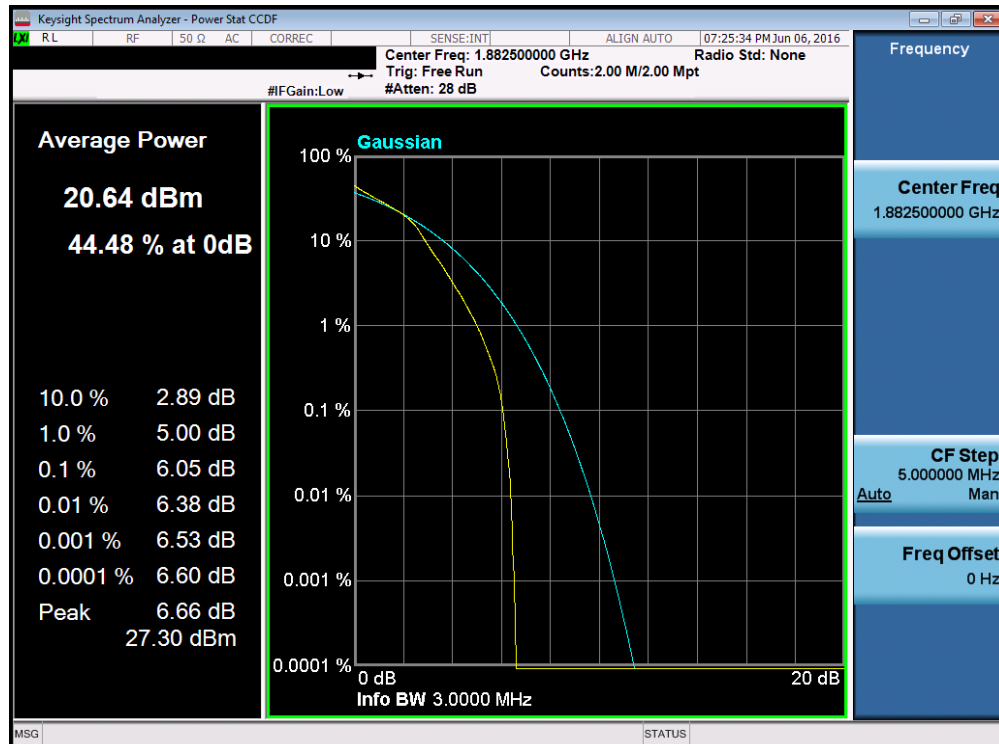


Plot 7-201. PAR Plot (Band 25 – 1.4MHz 16-QAM – RB Size 6)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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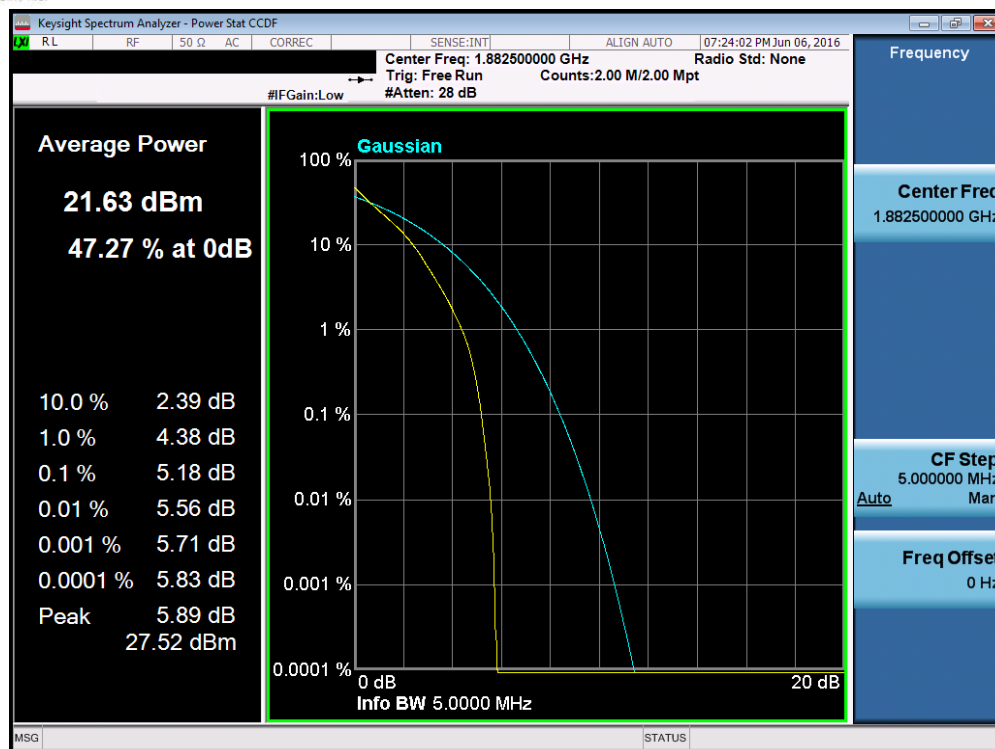


Plot 7-202. PAR Plot (Band 25 – 3.0MHz QPSK – RB Size 15)

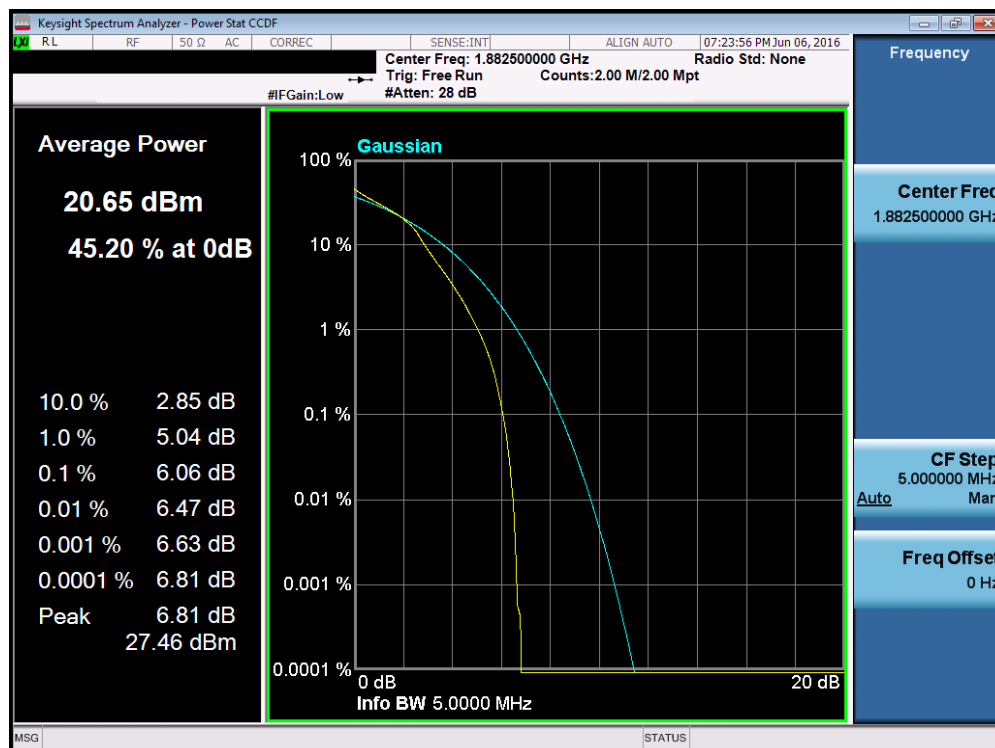


Plot 7-203. PAR Plot (Band 25 – 3.0MHz 16-QAM – RB Size 15)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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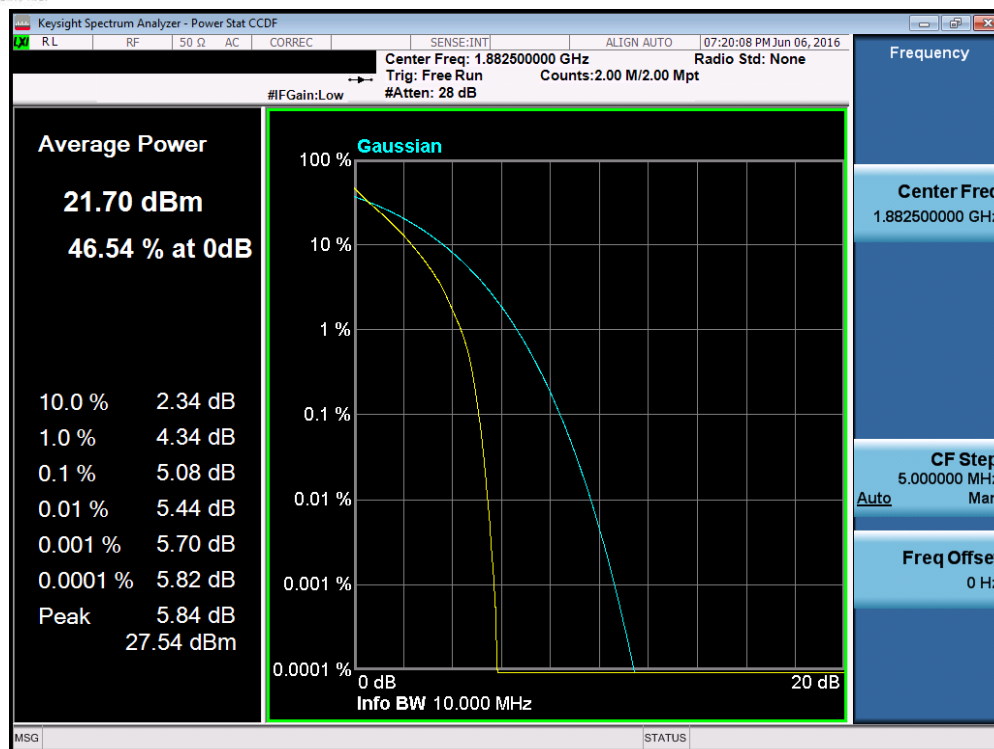


Plot 7-204. PAR Plot (Band 25 – 5.0MHz QPSK – RB Size 25)

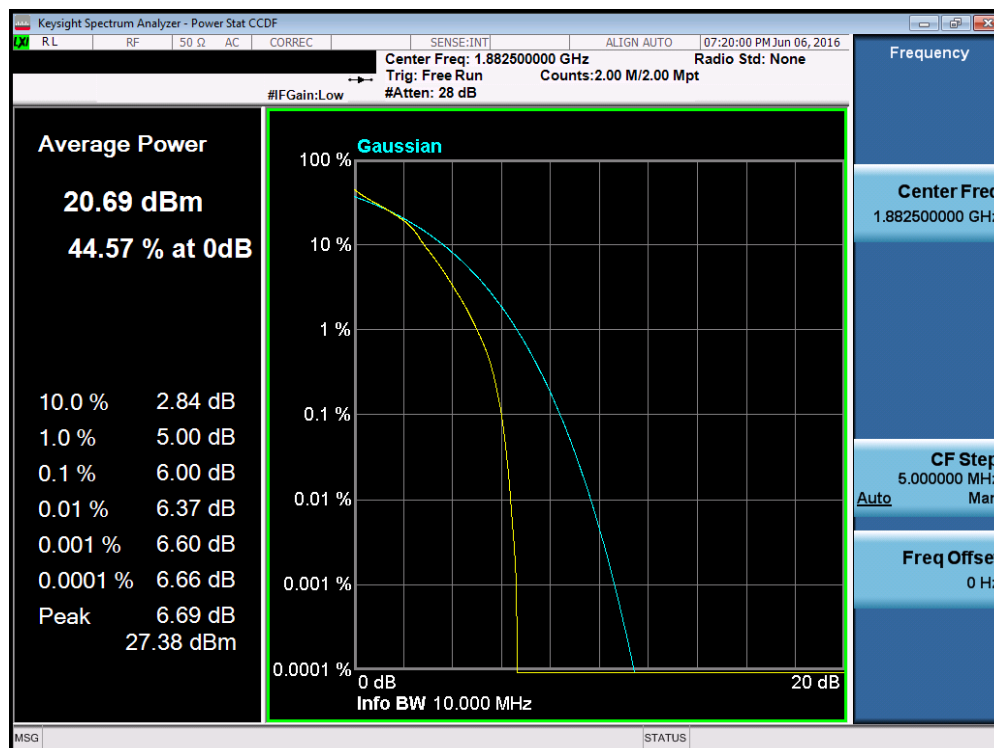


Plot 7-205. PAR Plot (Band 25 – 5.0MHz 16-QAM – RB Size 25)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1606061018.A3L	Test Dates: 6/1 - 7/15/2016	EUT Type: Portable Handset		Page 121 of 165

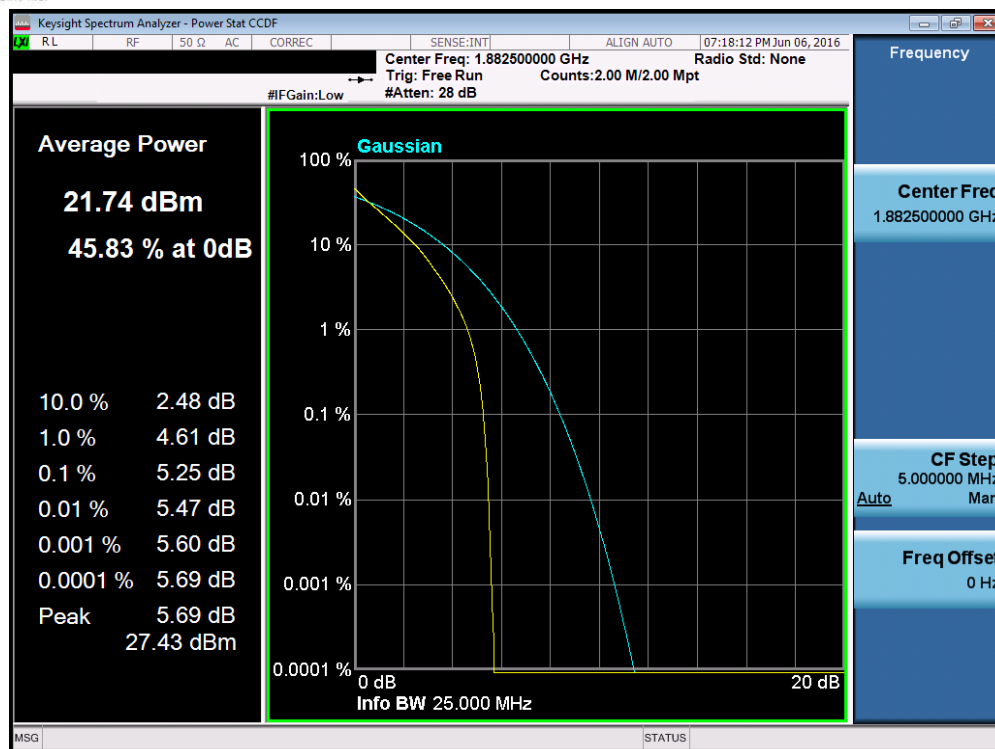


Plot 7-206. PAR Plot (Band 25 – 10.0MHz QPSK – RB Size 50)

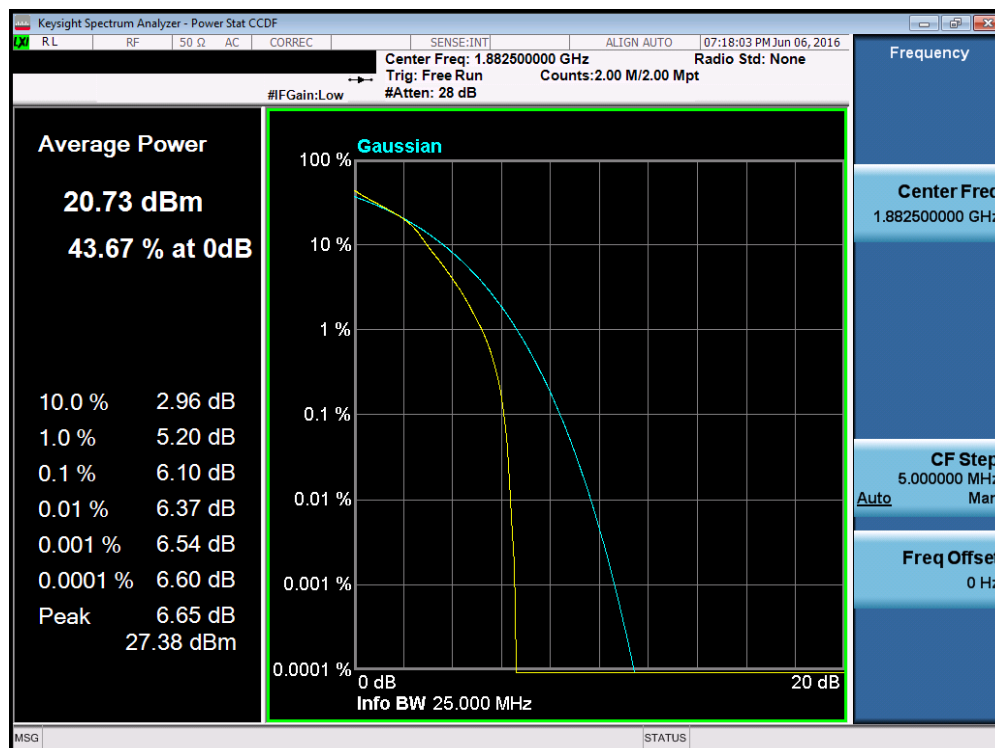


Plot 7-207. PAR Plot (Band 25 – 10.0MHz 16-QAM – RB Size 50)

FCC ID: A3LSMN9300	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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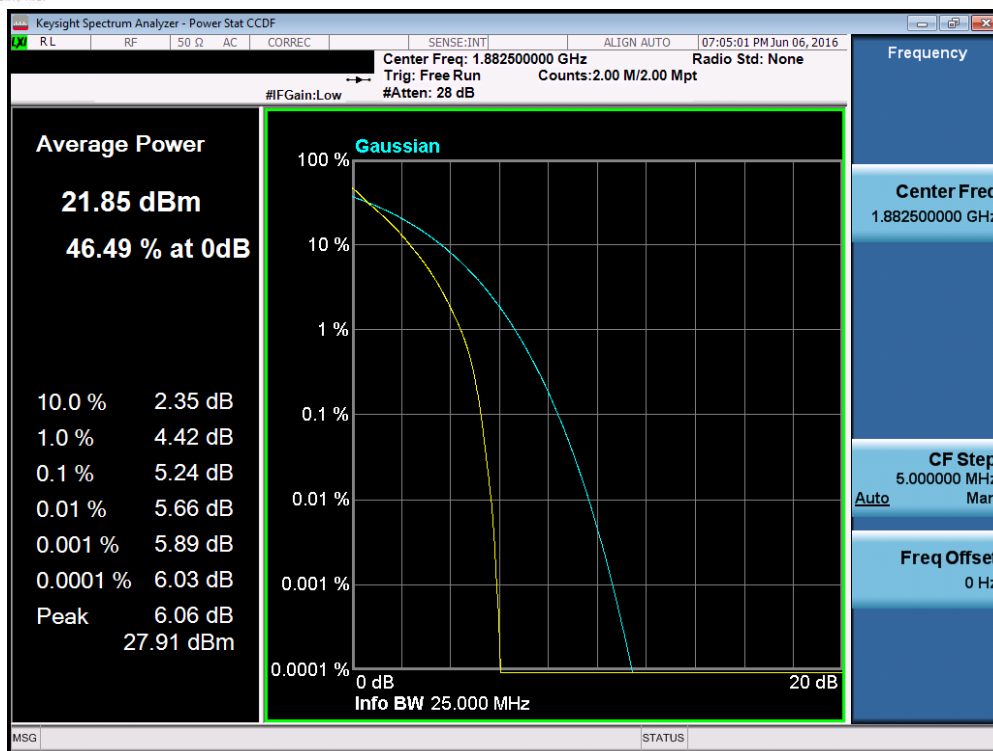


Plot 7-208. PAR Plot (Band 25 – 15.0MHz QPSK – RB Size 75)

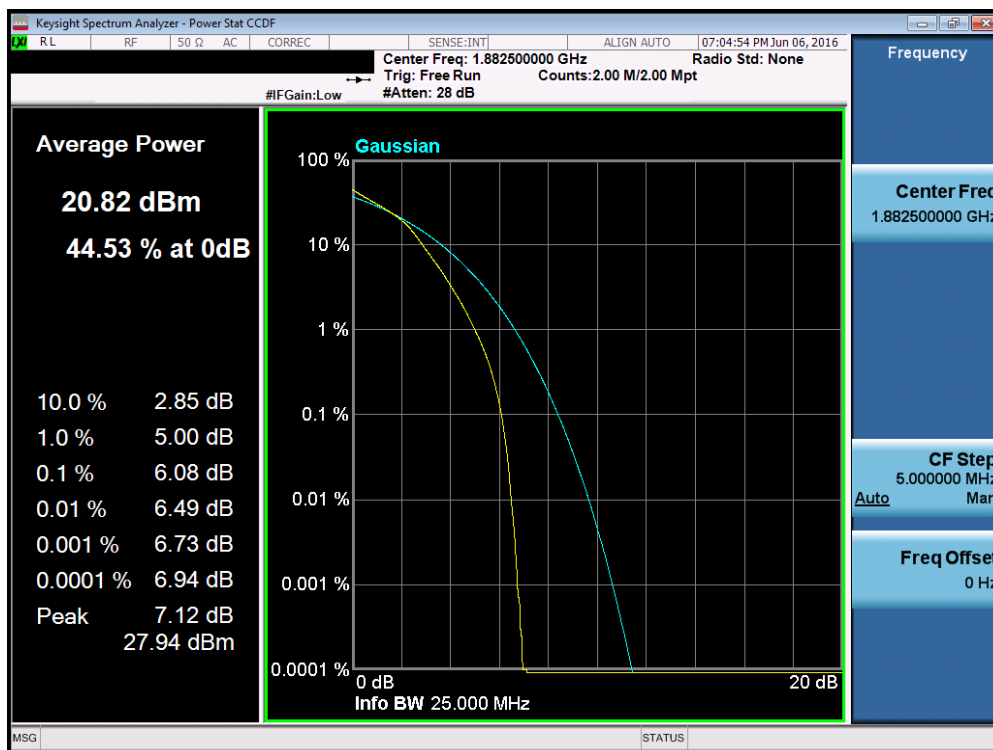


Plot 7-209. PAR Plot (Band 25 – 15.0MHz 16-QAM – RB Size 75)

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Plot 7-210. PAR Plot (Band 25 – 20.0MHz QPSK – RB Size 100)



Plot 7-211. PAR Plot (Band 25 – 20.0MHz 16-QAM – RB Size 100)

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7.6 Radiated Power (ERP/EIRP)

§22.913(a.2) §24.232(c.2) §27.50(h.2) §27.50(b.10) §27.50(c.10) §27.50(d.4)

Test Overview

Effective Radiated Power (ERP) and Equivalent Isotropic Radiated Power (EIRP) measurements are performed using the substitution method described in ANSI/TIA-603-D-2010 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using vertically and horizontally polarized tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

Test Procedures Used

KDB 971168 D01 v02r02 – Section 5.2.1

ANSI/TIA-603-D-2010 – Section 2.2.17

Test Settings

1. Radiated power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation. For signals with burst transmission, the signal analyzer's "time domain power" measurement capability is used
2. RBW = 1 – 5% of the expected OBW, not to exceed 1MHz
3. VBW $\geq 3 \times$ RBW
4. Span = 1.5 times the OBW
5. No. of sweep points $\geq 2 \times$ span / RBW
6. Detector = RMS
7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto".
Trigger is set to enable triggering only on full power bursts with the sweep time set less than or equal to the transmission burst duration
8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation. For signals with burst transmission, the "gating" function was enabled to ensure that measurements are performed during times in which the transmitter is operating at its maximum power
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The trace was allowed to stabilize

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Test Setup

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

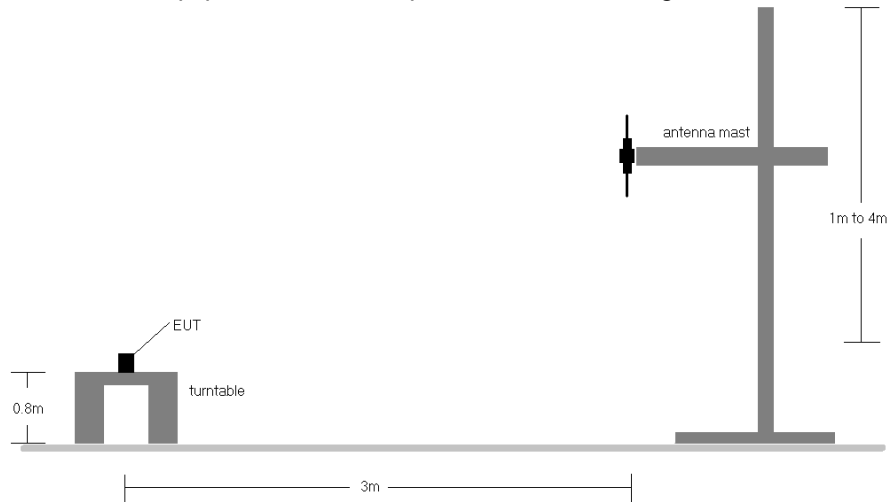


Figure 7-5. Radiated Test Setup <1GHz

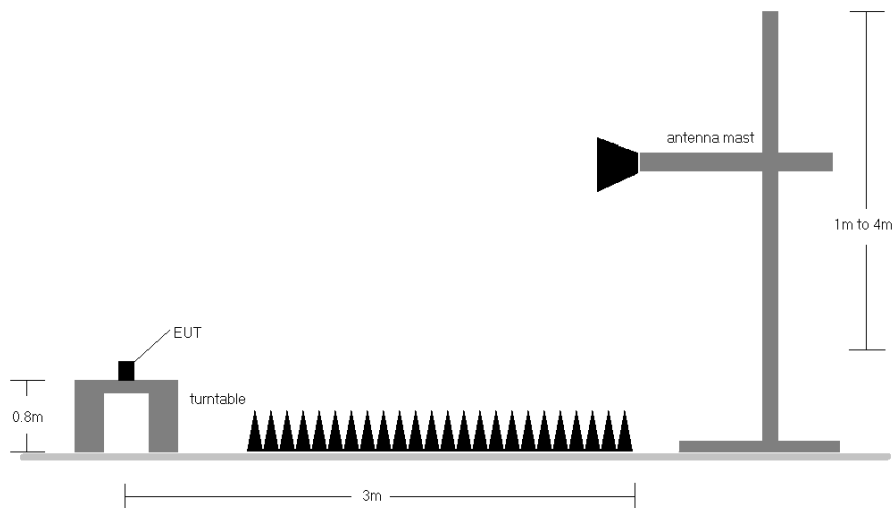


Figure 7-6. Radiated Test Setup >1GHz

Test Notes

- 1) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
- 2) This unit was tested with its standard battery.
- 3) Additional radiated spurious emission measurements were performed with the EUT lying flat on a certified wireless charging pad (WCP) while operating under normal conditions in a simulated call or data transmission configuration. The worst case radiated power data is shown in the WCP configuration is shown in the last line of each ERP/EIRP table.

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7.6.1 Antenna A Radiated Power (ERP/EIRP)

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBd]	ERP [dBm]	ERP Limit [dBm]	Margin [dB]
699.70	1.4	QPSK	H	215	172	3 / 2	8.71	2.12	10.83	34.77	-23.94
707.50	1.4	QPSK	H	225	172	3 / 2	9.90	2.31	12.21	34.77	-22.56
715.30	1.4	QPSK	H	220	165	3 / 2	11.17	2.52	13.69	34.77	-21.08
699.70	1.4	16-QAM	H	215	172	3 / 2	7.90	2.12	10.02	34.77	-24.75
707.50	1.4	16-QAM	H	225	172	3 / 2	8.98	2.31	11.29	34.77	-23.48
715.30	1.4	16-QAM	H	220	165	3 / 2	10.23	2.52	12.75	34.77	-22.02
700.50	3	QPSK	H	213	165	1 / 0	8.65	2.12	10.77	34.77	-24.00
707.50	3	QPSK	H	223	150	1 / 14	9.25	2.31	11.56	34.77	-23.21
714.50	3	QPSK	H	233	170	1 / 14	11.11	2.50	13.61	34.77	-21.16
700.50	3	16-QAM	H	213	165	1 / 14	10.35	2.12	12.47	34.77	-22.30
707.50	3	16-QAM	H	223	150	1 / 14	8.41	2.31	10.72	34.77	-24.05
714.50	3	16-QAM	H	233	170	1 / 14	10.35	2.50	12.85	34.77	-21.92
701.50	5	QPSK	H	215	172	1 / 0	8.93	2.15	11.08	34.77	-23.69
707.50	5	QPSK	H	225	170	1 / 24	9.97	2.31	12.28	34.77	-22.49
713.50	5	QPSK	H	233	176	1 / 24	11.20	2.48	13.68	34.77	-21.10
701.50	5	16-QAM	H	215	172	1 / 0	8.16	2.15	10.31	34.77	-24.46
707.50	5	16-QAM	H	225	170	1 / 24	9.28	2.31	11.59	34.77	-23.18
713.50	5	16-QAM	H	233	176	1 / 24	9.36	2.48	11.84	34.77	-22.94
704.00	10	QPSK	H	223	167	1 / 49	10.12	2.22	12.34	34.77	-22.44
707.50	10	QPSK	H	228	157	1 / 49	9.98	2.31	12.29	34.77	-22.48
711.00	10	QPSK	H	230	165	1 / 49	11.27	2.41	13.68	34.77	-21.09
704.00	10	16-QAM	H	223	167	1 / 49	9.32	2.22	11.54	34.77	-23.24
707.50	10	16-QAM	H	228	157	1 / 49	9.10	2.31	11.41	34.77	-23.36
711.00	10	16-QAM	H	230	165	1 / 49	10.49	2.41	12.90	34.77	-21.87
715.30	1.4	QPSK	V	154	62	1 / 74	10.43	2.52	12.95	34.77	-21.82
715.30	1.4	QPSK	H	311	230	1 / 74	8.45	2.52	10.97	34.77	-23.80

Table 7-2. ERP Data (Band 12)

FCC ID: A3LSMN9300		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBd]	ERP [dBm]	ERP Limit [dBm]	Margin [dB]
779.50	5	QPSK	H	188	177	1 / 24	16.31	4.19	20.50	34.77	-14.27
782.00	5	QPSK	H	182	160	1 / 0	14.61	4.25	18.86	34.77	-15.91
784.50	5	QPSK	H	186	180	1 / 0	14.59	4.32	18.91	34.77	-15.86
779.50	5	16QAM	H	188	177	1 / 24	15.28	4.19	19.47	34.77	-15.30
782.00	5	16QAM	H	182	160	1 / 0	13.86	4.25	18.11	34.77	-16.66
784.50	5	16QAM	H	186	180	1 / 0	13.79	4.32	18.11	34.77	-16.66
782.00	10	QPSK	H	186	189	1 / 0	14.59	4.25	18.84	34.77	-15.93
782.00	10	16QAM	H	186	189	1 / 0	13.81	4.25	18.06	34.77	-16.71
779.50	5	QPSK	V	188	177	1 / 24	15.28	4.19	19.47	34.77	-15.30
779.50	5	QPSK	H	188	177	1 / 24	16.11	4.19	20.30	34.77	-14.47

Table 7-3. ERP Data (Band 13)

FCC ID: A3LSMN9300		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBd]	ERP [dBm]	ERP Limit [dBm]	Margin [dB]
824.70	1.4	QPSK	V	128	200	3 / 2	16.31	4.95	21.26	38.45	-17.20
836.50	1.4	QPSK	V	130	310	3 / 2	14.91	5.00	19.91	38.45	-18.54
848.30	1.4	QPSK	V	145	150	3 / 2	17.29	5.05	22.34	38.45	-16.11
824.70	1.4	16-QAM	V	128	200	1 / 0	15.31	4.95	20.26	38.45	-18.20
836.50	1.4	16-QAM	V	130	310	3 / 2	13.97	5.00	18.97	38.45	-19.48
848.30	1.4	16-QAM	V	145	150	1 / 0	16.40	5.05	21.45	38.45	-17.00
825.50	3	QPSK	V	129	200	1 / 0	14.41	4.95	19.36	38.45	-19.09
836.50	3	QPSK	V	142	122	1 / 0	15.51	5.00	20.51	38.45	-17.94
847.50	3	QPSK	V	145	300	1 / 0	16.99	5.05	22.04	38.45	-16.41
825.50	3	16-QAM	V	129	200	1 / 0	13.56	4.95	18.51	38.45	-19.94
836.50	3	16-QAM	V	142	122	1 / 0	14.64	5.00	19.64	38.45	-18.81
847.50	3	16-QAM	V	145	300	1 / 0	16.17	5.05	21.22	38.45	-17.23
826.50	5	QPSK	V	127	104	1 / 0	14.73	4.95	19.68	38.45	-18.77
836.50	5	QPSK	V	145	300	1 / 0	15.74	5.00	20.74	38.45	-17.71
846.50	5	QPSK	V	134	54	1 / 0	16.76	5.04	21.80	38.45	-16.65
826.50	5	16-QAM	V	127	104	1 / 0	13.96	4.95	18.91	38.45	-19.54
836.50	5	16-QAM	V	145	300	1 / 0	14.98	5.00	19.98	38.45	-18.47
846.50	5	16-QAM	V	134	54	1 / 0	16.05	5.04	21.09	38.45	-17.36
829.00	10	QPSK	V	142	106	1 / 0	15.97	4.96	20.93	38.45	-17.52
836.50	10	QPSK	V	142	73	1 / 0	16.68	5.00	21.68	38.45	-16.77
844.00	10	QPSK	V	137	65	1 / 49	17.28	5.03	22.31	38.45	-16.14
829.00	10	16-QAM	V	142	106	1 / 0	15.17	4.96	20.13	38.45	-18.32
836.50	10	16-QAM	V	142	73	1 / 0	15.86	5.00	20.86	38.45	-17.59
844.00	10	16-QAM	V	137	65	1 / 49	15.72	5.03	20.75	38.45	-17.70
848.30	1.4	QPSK	H	145	150	1 / 0	16.47	5.05	21.52	38.45	-16.93
848.30	1.4	QPSK	H	145	150	1 / 0	12.44	5.05	17.49	38.45	-20.96

Table 7-4. ERP Data (Band 26/5)

FCC ID: A3LSMN9300		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBd]	ERP [dBm]	ERP Limit [dBm]	Margin [dB]
831.50	15	QPSK	V	137	115	1 / 0	15.50	4.96	20.46	38.45	-17.99
836.50	15	QPSK	V	151	153	1 / 0	16.41	5.00	21.41	38.45	-17.04
841.50	15	QPSK	V	129	165	1 / 0	16.96	5.03	21.99	38.45	-16.46
831.50	15	16-QAM	V	137	115	1 / 0	14.42	4.96	19.38	38.45	-19.07
836.50	15	16-QAM	V	151	153	1 / 0	15.50	5.00	20.50	38.45	-17.95
841.50	15	16-QAM	V	129	165	1 / 0	15.82	5.03	20.85	38.45	-17.60

Table 7-5. ERP Data (Band 26)

FCC ID: A3LSMN9300		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP Limit [dBm]	Margin [dB]
1710.70	1.4	QPSK	H	110	82	1 / 5	12.16	9.66	21.82	30.00	-8.18
1732.50	1.4	QPSK	H	112	100	1 / 5	12.34	9.61	21.95	30.00	-8.05
1754.30	1.4	QPSK	H	108	320	1 / 5	11.16	9.57	20.73	30.00	-9.27
1710.70	1.4	16-QAM	H	110	82	1 / 5	11.07	9.66	20.73	30.00	-9.27
1732.50	1.4	16-QAM	H	112	100	1 / 5	10.64	9.61	20.25	30.00	-9.75
1754.30	1.4	16-QAM	H	108	320	1 / 5	10.15	9.57	19.72	30.00	-10.28
1711.50	3	QPSK	H	120	103	1 / 14	12.06	9.66	21.72	30.00	-8.28
1732.50	3	QPSK	H	120	84	1 / 14	12.46	9.61	22.07	30.00	-7.93
1753.50	3	QPSK	H	120	65	1 / 14	11.46	9.57	21.03	30.00	-8.97
1711.50	3	16-QAM	H	120	103	1 / 14	11.16	9.66	20.82	30.00	-9.18
1732.50	3	16-QAM	H	120	84	1 / 14	11.72	9.61	21.33	30.00	-8.67
1753.50	3	16-QAM	H	120	65	1 / 14	10.66	9.57	20.23	30.00	-9.77
1712.50	5	QPSK	H	120	89	1 / 24	12.16	9.66	21.82	30.00	-8.18
1732.50	5	QPSK	H	120	85	1 / 24	12.64	9.61	22.25	30.00	-7.75
1752.50	5	QPSK	H	120	86	1 / 24	12.14	9.57	21.71	30.00	-8.29
1712.50	5	16-QAM	H	120	89	1 / 24	11.66	9.66	21.32	30.00	-8.68
1732.50	5	16-QAM	H	120	85	1 / 24	11.98	9.61	21.59	30.00	-8.41
1752.50	5	16-QAM	H	120	86	1 / 24	11.19	9.57	20.76	30.00	-9.24
1715.00	10	QPSK	H	120	85	1 / 49	12.14	9.66	21.80	30.00	-8.20
1732.50	10	QPSK	H	120	26	1 / 49	12.93	9.61	22.54	30.00	-7.46
1750.00	10	QPSK	H	120	66	1 / 49	11.92	9.57	21.49	30.00	-8.51
1715.00	10	16-QAM	H	120	85	1 / 49	11.41	9.66	21.07	30.00	-8.93
1732.50	10	16-QAM	H	120	26	1 / 49	12.31	9.61	21.92	30.00	-8.08
1750.00	10	16-QAM	H	120	66	1 / 49	11.34	9.57	20.91	30.00	-9.09
1717.50	15	QPSK	H	120	80	1 / 74	11.86	9.66	21.52	30.00	-8.48
1732.50	15	QPSK	H	120	54	1 / 74	12.24	9.61	21.85	30.00	-8.15
1747.50	15	QPSK	H	120	69	1 / 74	11.64	9.57	21.21	30.00	-8.79
1717.50	15	16-QAM	H	120	80	1 / 74	11.16	9.66	20.82	30.00	-9.18
1732.50	15	16-QAM	H	120	54	1 / 74	11.73	9.61	21.34	30.00	-8.66
1747.50	15	16-QAM	H	120	69	1 / 74	11.05	9.57	20.62	30.00	-9.38
1720.00	20	QPSK	H	120	55	1 / 99	12.13	9.66	21.79	30.00	-8.21
1732.50	20	QPSK	H	120	92	1 / 99	11.92	9.61	21.53	30.00	-8.47
1745.00	20	QPSK	H	120	77	1 / 99	10.73	9.57	20.30	30.00	-9.70
1720.00	20	16-QAM	H	120	55	1 / 99	10.53	9.66	20.19	30.00	-9.81
1732.50	20	16-QAM	H	120	92	1 / 99	11.36	9.61	20.97	30.00	-9.03
1745.00	20	16-QAM	H	120	77	1 / 99	9.54	9.57	19.11	30.00	-10.89
1732.50	10	QPSK	V	98	148	1 / 99	11.77	9.61	21.38	30.00	-8.62
1732.50	10	QPSK	H	119	100	1 / 99	11.17	9.61	20.78	30.00	-9.22

Table 7-6. EIRP Data (Band 4)

FCC ID: A3LSMN9300		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP Limit [dBm]	Margin [dB]
1850.70	1.4	QPSK	H	134	35	1 / 5	11.70	9.34	21.04	33.01	-11.97
1882.50	1.4	QPSK	H	134	33	1 / 0	11.77	9.27	21.04	33.01	-11.97
1914.30	1.4	QPSK	H	130	30	1 / 5	11.49	9.24	20.73	33.01	-12.28
1850.70	1.4	16-QAM	H	134	35	1 / 5	10.88	9.34	20.22	33.01	-12.79
1882.50	1.4	16-QAM	H	134	33	1 / 0	10.97	9.27	20.24	33.01	-12.77
1914.30	1.4	16-QAM	H	130	30	1 / 5	10.59	9.24	19.83	33.01	-13.18
1851.50	3	QPSK	H	134	35	1 / 0	11.90	9.34	21.24	33.01	-11.77
1882.50	3	QPSK	H	134	33	1 / 0	12.14	9.27	21.41	33.01	-11.60
1913.50	3	QPSK	H	131	31	1 / 14	11.47	9.24	20.71	33.01	-12.30
1851.50	3	16-QAM	H	134	35	1 / 0	11.10	9.34	20.44	33.01	-12.57
1882.50	3	16-QAM	H	134	33	1 / 0	11.35	9.27	20.62	33.01	-12.39
1913.50	3	16-QAM	H	131	31	1 / 0	10.50	9.24	19.74	33.01	-13.27
1852.50	5	QPSK	H	134	35	1 / 0	11.97	9.34	21.31	33.01	-11.70
1882.50	5	QPSK	H	135	35	1 / 0	12.30	9.27	21.57	33.01	-11.44
1912.50	5	QPSK	H	130	32	1 / 24	11.68	9.24	20.92	33.01	-12.09
1852.50	5	16-QAM	H	134	35	1 / 0	11.25	9.34	20.59	33.01	-12.42
1882.50	5	16-QAM	H	135	35	1 / 0	11.46	9.27	20.73	33.01	-12.28
1912.50	5	16-QAM	H	130	32	1 / 24	10.61	9.24	19.85	33.01	-13.16
1855.00	10	QPSK	H	134	36	1 / 49	12.05	9.34	21.39	33.01	-11.62
1882.50	10	QPSK	H	134	34	1 / 0	12.25	9.27	21.52	33.01	-11.49
1910.00	10	QPSK	H	132	30	1 / 49	11.48	9.24	20.72	33.01	-12.29
1855.00	10	16-QAM	H	134	36	1 / 49	11.30	9.34	20.64	33.01	-12.37
1882.50	10	16-QAM	H	134	34	1 / 0	11.56	9.27	20.83	33.01	-12.18
1910.00	10	16-QAM	H	132	30	1 / 49	10.63	9.24	19.87	33.01	-13.14
1857.50	15	QPSK	H	136	36	1 / 0	11.64	9.34	20.98	33.01	-12.03
1882.50	15	QPSK	H	136	35	1 / 0	12.14	9.27	21.41	33.01	-11.60
1907.50	15	QPSK	H	130	31	1 / 0	10.98	9.24	20.22	33.01	-12.79
1857.50	15	16-QAM	H	136	36	1 / 0	10.86	9.34	20.20	33.01	-12.81
1882.50	15	16-QAM	H	136	35	1 / 0	11.38	9.27	20.65	33.01	-12.36
1907.50	15	16-QAM	H	130	31	1 / 0	10.17	9.24	19.41	33.01	-13.60
1860.00	20	QPSK	H	135	36	1 / 0	12.01	9.34	21.35	33.01	-11.66
1882.50	20	QPSK	H	135	34	1 / 0	12.50	9.27	21.77	33.01	-11.24
1905.00	20	QPSK	H	131	31	1 / 0	11.07	9.24	20.31	33.01	-12.70
1860.00	20	16-QAM	H	135	36	1 / 0	11.28	9.34	20.62	33.01	-12.39
1882.50	20	16-QAM	H	135	34	1 / 0	11.66	9.27	20.93	33.01	-12.08
1905.00	20	16-QAM	H	131	31	1 / 0	10.13	9.24	19.37	33.01	-13.64
1882.50	20	QPSK	V	135	34	1 / 0	11.10	9.27	20.37	33.01	-12.64
1882.50	20	QPSK	H	135	34	1 / 0	11.91	9.27	21.18	33.01	-11.83

Table 7-7. EIRP Data (Band 25/2)

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Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP Limit [dBm]	Margin [dB]
2498.50	5	QPSK	H	160	240	1 / 0	11.40	8.60	20.00	33.01	-13.01
2593.00	5	QPSK	H	168	246	1 / 24	10.78	8.53	19.31	33.01	-13.70
2687.50	5	QPSK	H	175	300	1 / 0	9.95	8.79	18.74	33.01	-14.27
2498.50	5	16-QAM	H	160	240	1 / 0	10.57	8.60	19.17	33.01	-13.84
2593.00	5	16-QAM	H	168	246	1 / 24	9.80	8.53	18.33	33.01	-14.68
2687.50	5	16-QAM	H	175	300	1 / 0	9.22	8.79	18.01	33.01	-15.00
2501.00	10	QPSK	H	162	190	1 / 0	11.70	8.60	20.30	33.01	-12.71
2593.00	10	QPSK	H	200	200	1 / 0	10.87	8.53	19.40	33.01	-13.61
2685.00	10	QPSK	H	145	84	1 / 0	10.55	8.78	19.33	33.01	-13.68
2501.00	10	16-QAM	H	162	190	1 / 0	10.67	8.60	19.27	33.01	-13.74
2593.00	10	16-QAM	H	200	200	1 / 0	9.76	8.53	18.29	33.01	-14.72
2685.00	10	16-QAM	H	145	84	1 / 0	9.58	8.78	18.36	33.01	-14.65
2503.50	15	QPSK	H	177	253	1 / 0	11.59	8.59	20.18	33.01	-12.83
2593.00	15	QPSK	H	137	244	1 / 0	9.93	8.53	18.46	33.01	-14.55
2682.50	15	QPSK	H	246	161	1 / 0	9.13	8.77	17.90	33.01	-15.11
2503.50	15	16-QAM	H	177	253	1 / 0	10.70	8.59	19.29	33.01	-13.72
2593.00	15	16-QAM	H	137	244	1 / 0	9.20	8.53	17.73	33.01	-15.28
2682.50	15	16-QAM	H	246	161	1 / 0	8.19	8.77	16.96	33.01	-16.05
2506.00	20	QPSK	H	120	154	1 / 0	12.20	8.59	20.79	33.01	-12.22
2593.00	20	QPSK	H	168	243	1 / 0	10.33	8.53	18.86	33.01	-14.15
2680.00	20	QPSK	H	100	220	1 / 0	9.45	8.77	18.22	33.01	-14.79
2506.00	20	16-QAM	H	120	154	1 / 0	11.25	8.59	19.84	33.01	-13.17
2593.00	20	16-QAM	H	168	243	1 / 0	9.51	8.53	18.04	33.01	-14.97
2680.00	20	16-QAM	H	100	220	1 / 0	8.70	8.77	17.47	33.01	-15.54
2506.00	20	QPSK	V	120	154	1 / 0	9.21	8.59	17.80	33.01	-15.21
2506.00	20	QPSK	H	154	154	1 / 0	11.10	8.59	19.69	33.01	-13.32

Table 7-8. EIRP Data (Band 41)

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7.6.2 Antenna B Radiated Power (ERP)

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBd]	ERP [dBm]	ERP Limit [dBm]	Margin [dB]
824.70	1.4	QPSK	H	300	320	3 / 2	12.18	5.01	17.19	38.45	-21.26
836.50	1.4	QPSK	H	201	300	3 / 2	11.71	5.16	16.87	38.45	-21.58
848.30	1.4	QPSK	H	320	150	3 / 2	12.40	5.30	17.70	38.45	-20.75
824.70	1.4	16-QAM	H	300	320	3 / 2	11.33	5.01	16.34	38.45	-22.11
836.50	1.4	16-QAM	H	201	300	1 / 0	10.91	5.16	16.07	38.45	-22.38
848.30	1.4	16-QAM	H	320	150	1 / 0	11.56	5.30	16.86	38.45	-21.59
825.50	3	QPSK	H	329	120	1 / 14	11.01	5.02	16.03	38.45	-22.42
836.50	3	QPSK	H	300	200	1 / 0	11.95	5.16	17.11	38.45	-21.34
847.50	3	QPSK	H	122	250	1 / 0	12.06	5.29	17.35	38.45	-21.10
825.50	3	16-QAM	H	329	120	1 / 14	10.19	5.02	15.21	38.45	-23.24
836.50	3	16-QAM	H	300	200	1 / 0	11.09	5.16	16.25	38.45	-22.20
847.50	3	16-QAM	H	122	250	1 / 14	10.17	5.29	15.46	38.45	-22.99
826.50	5	QPSK	H	329	329	1 / 24	12.53	5.03	17.56	38.45	-20.89
836.50	5	QPSK	H	329	330	1 / 0	12.78	5.16	17.94	38.45	-20.51
846.50	5	QPSK	H	198	345	1 / 24	12.11	5.28	17.39	38.45	-21.06
826.50	5	16-QAM	H	329	329	1 / 0	11.33	5.03	16.36	38.45	-22.09
836.50	5	16-QAM	H	329	330	1 / 0	12.03	5.16	17.19	38.45	-21.26
846.50	5	16-QAM	H	198	345	1 / 24	11.37	5.28	16.65	38.45	-21.80
829.00	10	QPSK	H	329	326	1 / 49	12.66	5.06	17.72	38.45	-20.73
836.50	10	QPSK	H	357	329	1 / 0	11.45	5.16	16.61	38.45	-21.84
844.00	10	QPSK	H	332	312	1 / 0	12.14	5.25	17.39	38.45	-21.06
829.00	10	16-QAM	H	329	326	1 / 49	11.84	5.06	16.90	38.45	-21.55
836.50	10	16-QAM	H	357	329	1 / 0	10.53	5.16	15.69	38.45	-22.76
844.00	10	16-QAM	H	332	312	1 / 0	11.36	5.25	16.61	38.45	-21.84
836.50	5	QPSK	V	329	330	1 / 74	11.15	5.16	16.31	38.45	-22.14
836.50	5	QPSK	H	329	330	1 / 0	11.99	5.16	17.15	38.45	-21.30

Table 7-9. ERP Data (Band 5)

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7.7 Radiated Spurious Emissions Measurements

§2.1053 §22.917(a) §24.238(a) §27.53(c) §27.53(f) §27.53(g) §27.53(h) §27.53(m)

Test Overview

Radiated spurious emissions measurements are performed using the substitution method described in ANSI/TIA-603-D-2010 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using vertically and horizontally polarized tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as peak measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

Test Procedures Used

KDB 971168 D01 v02r02 – Section 5.8

ANSI/TIA-603-D-2010 – Section 2.2.12

Test Settings

1. RBW = 100kHz for emissions below 1GHz and 1MHz for emissions above 1GHz
2. VBW $\geq 3 \times$ RBW
3. Span = 1.5 times the OBW
4. No. of sweep points $\geq 2 \times$ span / RBW
5. Detector = Peak
6. Trace mode = max hold
7. The trace was allowed to stabilize

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Test Setup

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

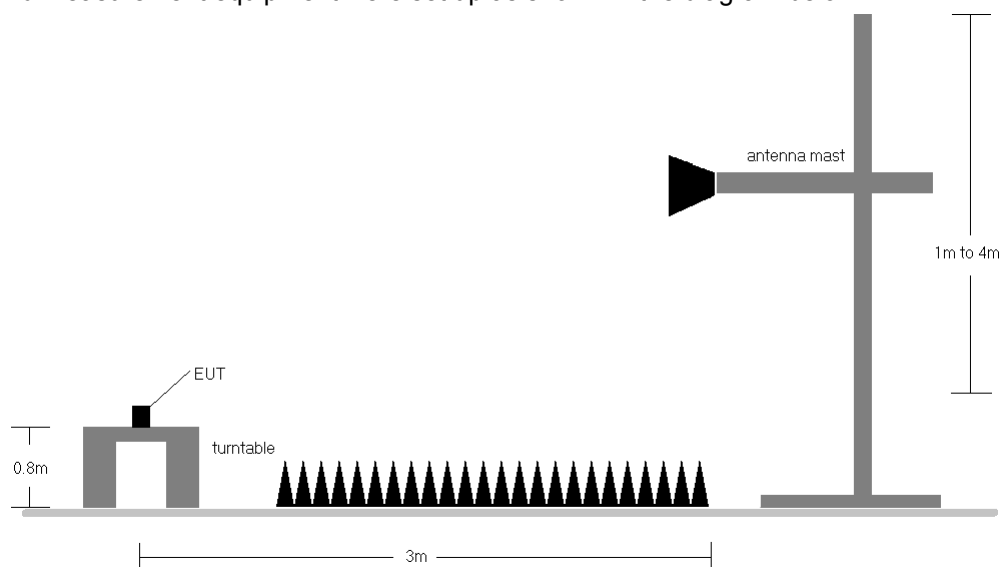


Figure 7-7. Test Instrument & Measurement Setup

Test Notes

- 1) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
- 2) This unit was tested with its standard battery.
- 3) The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.
- 4) Emissions below 18GHz were measured at a 3 meter test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.
- 5) The "-" shown in the following RSE tables are used to denote a noise floor measurement.

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7.7.1 Antenna A Radiated Spurious Emissions Measurements

OPERATING FREQUENCY: 699.70 MHz
 CHANNEL: 23017
 MEASURED OUTPUT POWER: 10.83 dBm = 0.012 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 1.4 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 23.83 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
1399.40	H	100	328	-57.40	2.34	-55.05	65.9
2099.10	H	-	-	-57.26	3.46	-53.80	64.6

Table 7-10. Radiated Spurious Data (Band 12 – Low Channel)

OPERATING FREQUENCY: 707.50 MHz
 CHANNEL: 23095
 MEASURED OUTPUT POWER: 12.21 dBm = 0.017 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 1.4 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 25.21 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
1415.00	H	164	13	-58.50	2.54	-55.96	68.2
2122.50	H	-	-	-57.53	3.42	-54.11	66.3

Table 7-11. Radiated Spurious Data (Band 12 – Mid Channel)

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OPERATING FREQUENCY: 715.30 MHz
 CHANNEL: 23173
 MEASURED OUTPUT POWER: 13.69 dBm = 0.023 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 1.4 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 26.69 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
1430.60	H	100	0	-58.45	2.74	-55.71	69.4
2145.90	H	-	-	-57.26	3.37	-53.89	67.6

Table 7-12. Radiated Spurious Data (Band 12 – High Channel)

OPERATING FREQUENCY: 715.30 MHz
 CHANNEL: 23173
 MEASURED OUTPUT POWER: 10.97 dBm = 0.013 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 1.4 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 23.97 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
1430.60	H	100	347	-60.16	2.74	-57.42	68.4
2145.90	H	-	-	-59.61	3.37	-56.24	67.2

Table 7-13. Radiated Spurious Data with WCP (Band 12 – High Channel)

OPERATING FREQUENCY: 779.50 MHz
 CHANNEL: 23205
 MEASURED OUTPUT POWER: 20.50 dBm = 0.112 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 33.50 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
2338.50	H	132	142	-56.85	3.64	-53.21	73.7
3118.00	H	100	200	-57.45	4.98	-52.47	73.0

Table 7-14. Radiated Spurious Data (Band 13 – Low Channel)

OPERATING FREQUENCY: 782.00 MHz
 CHANNEL: 23230
 MEASURED OUTPUT POWER: 18.86 dBm = 0.077 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 31.86 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
2346.00	H	254	127	-56.15	3.63	-52.51	71.4
3128.00	H	-	-	-55.79	4.95	-50.84	69.7

Table 7-15. Radiated Spurious Data (Band 13 – Mid Channel)

OPERATING FREQUENCY: 784.50 MHz
 CHANNEL: 23255
 MEASURED OUTPUT POWER: 18.91 dBm = 0.078 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 31.91 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
2353.50	H	254	127	-56.11	3.63	-52.48	71.4
3138.00	H	-	-	-55.70	4.92	-50.77	69.7

Table 7-16. Radiated Spurious Data (Band 13 – High Channel)

MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.00 MHz
 DISTANCE: 3 meters
 NARROWBAND EMISSION LIMIT: -50 dBm
 WIDEBAND EMISSION LIMIT: -40 dBm/MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	Margin [dB]
1559.00	H	102	317	-65.58	6.55	-59.03	-19.0
1564.00	H	110	317	-66.30	6.57	-59.73	-19.7
1569.00	H	115	315	-66.28	6.59	-59.69	-19.7

Table 7-17. Radiated Spurious Data (Band 13 – 1559-1610MHz Band)

OPERATING FREQUENCY: 779.50 MHz
 CHANNEL: 23205
 MEASURED OUTPUT POWER: 20.30 dBm = 0.107 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 33.30 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
2338.50	H	-	-	-56.60	3.64	-52.96	73.3

Table 7-18. Radiated Spurious Data with WCP (Band 13 – Low Channel)

OPERATING FREQUENCY: 824.70 MHz
 CHANNEL: 26797
 MEASURED OUTPUT POWER: 21.26 dBm = 0.134 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 1.4 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 34.26 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	[dBc]
1649.40	V	312	38	-54.06	3.64	-50.42	71.7
2474.10	V	-	-	-57.47	3.54	-53.93	75.2

Table 7-19. Radiated Spurious Data (Band 26 – Low Channel)

OPERATING FREQUENCY: 836.50 MHz
 CHANNEL: 26915
 MEASURED OUTPUT POWER: 19.91 dBm = 0.098 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 1.4 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 32.91 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
1673.00	V	254	300	-54.62	3.54	-51.08	71.0
2509.50	V	-	-	-56.61	3.50	-53.11	73.0

Table 7-20. Radiated Spurious Data (Band 26 – Mid Channel)

OPERATING FREQUENCY: 848.30 MHz
 CHANNEL: 27033
 MEASURED OUTPUT POWER: 22.34 dBm = 0.171 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 1.4 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 35.34 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
1696.60	V	300	362	-53.64	3.44	-50.20	72.5
2544.90	V	-	-	-57.18	3.74	-53.44	75.8

Table 7-21. Radiated Spurious Data (Band 26 – High Channel)

OPERATING FREQUENCY: 848.30 MHz
 CHANNEL: 27033
 MEASURED OUTPUT POWER: 17.49 dBm = 0.056 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 1.4 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 30.49 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
1696.60	H	100	327	-54.15	3.44	-50.71	68.2
2544.90	H	-	-	-57.46	3.74	-53.72	71.2

Table 7-22. Radiated Spurious Data with WCP (Band 26 – High Channel)

OPERATING FREQUENCY: 1860.00 MHz
 CHANNEL: 26140
 MEASURED OUTPUT POWER: 21.35 dBm = 0.136 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 34.35 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	[dBc]
3720.00	H	171	89	-48.91	8.48	-40.43	61.8
5580.00	H	-	-	-55.13	10.55	-44.58	65.9

Table 7-23. Radiated Spurious Data (Band 25 – Low Channel)

FCC ID: A3LSMN9300		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)					Reviewed by: Quality Manager
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OPERATING FREQUENCY: 1882.50 MHz
 CHANNEL: 26365
 MEASURED OUTPUT POWER: 21.77 dBm = 0.150 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 34.77 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	[dBc]
3765.00	H	-	-	-56.39	8.66	-47.74	69.5

Table 7-24. Radiated Spurious Data (Band 25 – Mid Channel)

OPERATING FREQUENCY: 1905.00 MHz
 CHANNEL: 26590
 MEASURED OUTPUT POWER: 20.31 dBm = 0.107 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 33.31 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	[dBc]
3810.00	H	100	65	-55.40	8.78	-46.62	66.9
5715.00	H	-	-	-55.73	10.70	-45.04	65.3

Table 7-25. Radiated Spurious Data (Band 25 – High Channel)

FCC ID: A3LSMN9300		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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OPERATING FREQUENCY: 1882.50 MHz
 CHANNEL: 26365
 MEASURED OUTPUT POWER: 21.18 dBm = 0.131 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 34.18 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	[dBc]
3765.00	H	-	-	-56.91	8.66	-48.26	69.4

Table 7-26. Radiated Spurious Data with WCP (Band 25 – Mid Channel)

OPERATING FREQUENCY: 2506.00 MHz
 CHANNEL: 39750
 MEASURED OUTPUT POWER: 20.79 dBm = 0.120 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: $55 + 10 \log_{10} (W)$ 45.79 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	[dBc]
5012.00	H	100	145	-52.88	10.16	-42.72	63.5
7518.00	H	100	110	-50.18	12.04	-38.14	58.9
10024.00	H	188	91	-50.81	12.99	-37.82	58.6
12530.00	H	100	74	-48.53	13.25	-35.29	56.1
15036.00	H	-	-	-48.89	14.07	-34.82	55.6

Table 7-27. Radiated Spurious Data (Band 41 – Low Channel)

FCC ID: A3LSMN9300		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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OPERATING FREQUENCY: 2593.00 MHz
 CHANNEL: 40620
 MEASURED OUTPUT POWER: 18.86 dBm = 0.077 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: $55 + 10 \log_{10} (W)$ 43.86 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	[dBc]
5186.00	H	397	255	-53.12	10.40	-42.72	61.6
7779.00	H	245	169	-54.80	12.24	-42.56	61.4
10372.00	H	-	-	-52.59	13.13	-39.46	58.3

Table 7-28. Radiated Spurious Data (Band 41 – Mid Channel)

OPERATING FREQUENCY: 2680.00 MHz
 CHANNEL: 41490
 MEASURED OUTPUT POWER: 18.22 dBm = 0.066 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: $55 + 10 \log_{10} (W)$ 43.22 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	[dBc]
5360.00	H	316	145	-55.02	10.36	-44.66	62.9
8040.00	H	367	176	-54.32	12.52	-41.81	60.0
10720.00	H	-	-	-51.77	12.99	-38.79	57.0

Table 7-29. Radiated Spurious Data (Band 41 – High Channel)

FCC ID: A3LSMN9300		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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OPERATING FREQUENCY: 2506.00 MHz
 CHANNEL: 39750
 MEASURED OUTPUT POWER: 19.69 dBm = 0.093 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: $55 + 10 \log_{10}(W)$ 44.69 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	[dBc]
5012.00	H	110	242	-54.87	10.91	-43.96	63.7
7518.00	H	-	-	-54.30	11.10	-43.20	62.9

Table 7-30. Radiated Spurious Data with WCP (Band 41 – Low Channel)

FCC ID: A3LSMN9300		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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7.7.2 Antenna B Radiated Spurious Emissions Measurements

OPERATING FREQUENCY: 826.50 MHz
 CHANNEL: 20425
 MEASURED OUTPUT POWER: 17.56 dBm = 0.057 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 30.56 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
1653.00	H	110	181	-64.50	6.70	-57.80	75.4
2479.50	H	-	-	-62.55	7.54	-55.01	72.6

Table 7-31. Radiated Spurious Data (Band 5 – Low Channel)

OPERATING FREQUENCY: 836.50 MHz
 CHANNEL: 20525
 MEASURED OUTPUT POWER: 17.94 dBm = 0.062 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 30.94 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
1673.00	H	105	181	-64.75	6.70	-58.05	76.0
2509.50	H	-	-	-62.65	7.63	-55.02	73.0

Table 7-32. Radiated Spurious Data (Band 5 – Mid Channel)

FCC ID: A3LSMN9300		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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OPERATING FREQUENCY: 846.50 MHz
 CHANNEL: 20625
 MEASURED OUTPUT POWER: 17.39 dBm = 0.055 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 30.39 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
1693.00	H	106	181	-64.37	6.70	-57.67	75.1
2539.50	H	-	-	-63.34	7.60	-55.74	73.1

Table 7-33. Radiated Spurious Data (Band 5 – High Channel)

OPERATING FREQUENCY: 836.50 MHz
 CHANNEL: 20525
 MEASURED OUTPUT POWER: 17.15 dBm = 0.052 W
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 30.15 dBc

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	[dBc]
1673.00	H	102	34	-58.60	6.70	-51.90	69.1
2509.50	H	-	-	-63.35	7.63	-55.72	72.9

Table 7-34. Radiated Spurious Data with WCP (Band 5 – Mid Channel)

7.8 Frequency Stability / Temperature Variation

\$2.1055 \$22.355 \$24.235 \$27.54

Test Overview and Limit

Frequency stability testing is performed in accordance with the guidelines of ANSI/TIA-603-D-2010. The frequency stability of the transmitter is measured by:

- a.) **Temperature:** The temperature is varied from -30°C to +50°C in 10°C increments using an environmental chamber.
- b.) **Primary Supply Voltage:** The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

For Part 22, the frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ (± 2.5 ppm) of the center frequency. For Part 24 and Part 27, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

Test Procedure Used

ANSI/TIA-603-D-2010

Test Settings

1. The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).
2. The equipment is turned on in a "standby" condition for fifteen minutes before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
3. Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

Test Setup

The EUT was connected via an RF cable to a spectrum analyzer with the EUT placed inside an environmental chamber.

Test Notes

None

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Band 12 Frequency Stability Measurements

§2.1055 §27.54

OPERATING FREQUENCY: 707,500,000 Hz

CHANNEL: 23790

REFERENCE VOLTAGE: 3.85 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.85	+ 20 (Ref)	707,499,981	-19	-0.0000027
100 %		- 30	707,499,902	-98	-0.0000139
100 %		- 20	707,499,828	-172	-0.0000244
100 %		- 10	707,499,971	-29	-0.0000040
100 %		0	707,499,850	-150	-0.0000212
100 %		+ 10	707,499,922	-78	-0.0000111
100 %		+ 20	707,499,918	-82	-0.0000115
100 %		+ 30	707,499,838	-162	-0.0000229
100 %		+ 40	707,499,992	-8	-0.0000012
100 %		+ 50	707,499,999	-1	-0.0000002
BATT. ENDPOINT	3.45	+ 20	707,499,911	-89	-0.0000125

Table 7-35. Frequency Stability Data (Band 12)

FCC ID: A3LSMN9300		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)			Reviewed by: Quality Manager
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Band 12 Frequency Stability Measurements

§2.1055 §27.54

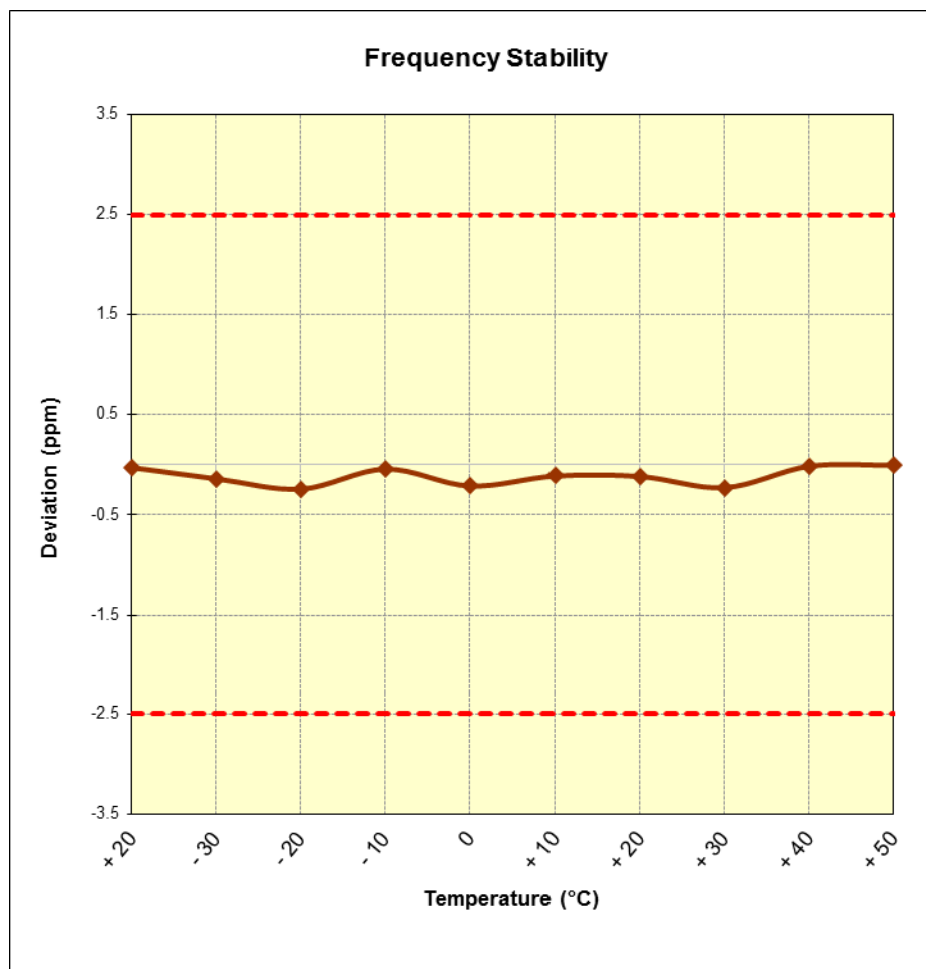


Figure 7-8. Frequency Stability Graph (Band 12)

FCC ID: A3LSMN9300		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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Band 13 Frequency Stability Measurements

§2.1055 §27.54

OPERATING FREQUENCY: 782,000,000 Hz

CHANNEL: 23230

REFERENCE VOLTAGE: 3.85 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.85	+ 20 (Ref)	781,999,898	-102	-0.0000131
100 %		- 30	781,999,970	-30	-0.0000038
100 %		- 20	781,999,874	-126	-0.0000161
100 %		- 10	781,999,892	-108	-0.0000138
100 %		0	781,999,897	-103	-0.0000132
100 %		+ 10	781,999,910	-90	-0.0000115
100 %		+ 20	781,999,951	-49	-0.0000063
100 %		+ 30	781,999,886	-114	-0.0000146
100 %		+ 40	781,999,901	-99	-0.0000126
100 %		+ 50	781,999,984	-16	-0.0000021
BATT. ENDPOINT	3.45	+ 20	781,999,974	-26	-0.0000034

Table 7-36. Frequency Stability Data (Band 13)

FCC ID: A3LSMN9300		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)			Reviewed by: Quality Manager
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Band 13 Frequency Stability Measurements

§2.1055 §27.54

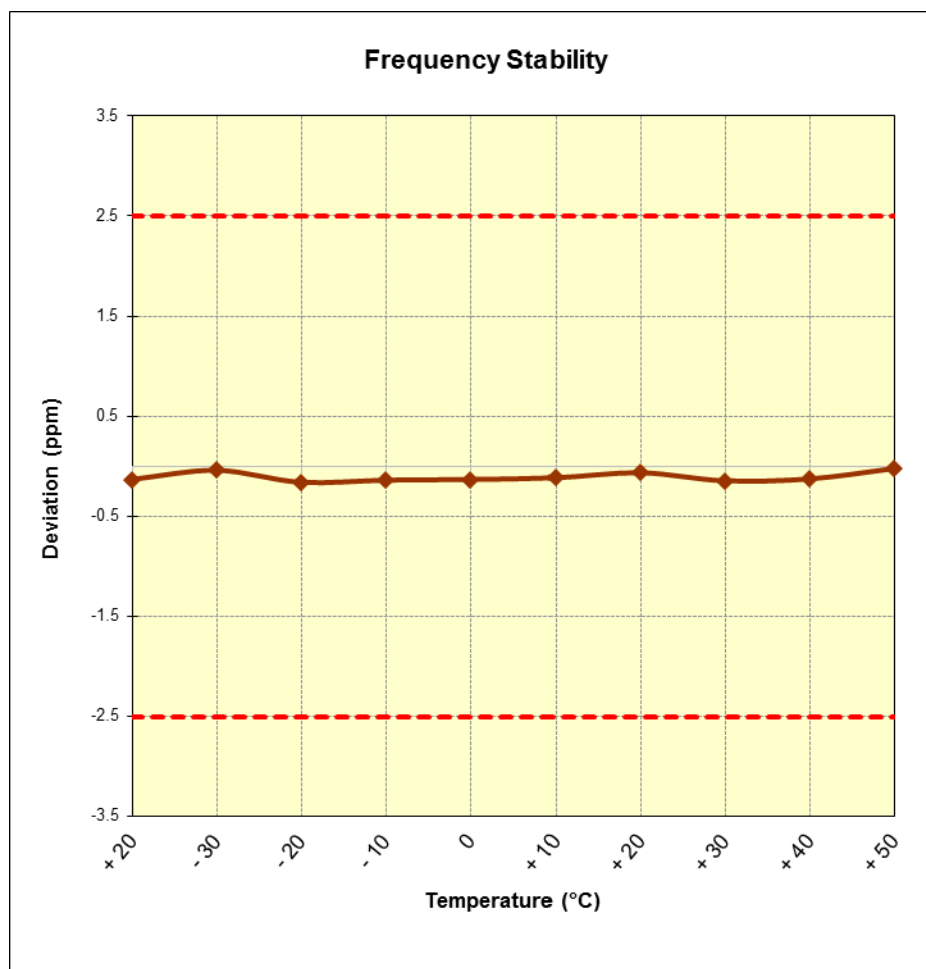


Figure 7-9. Frequency Stability Graph (Band 13)

FCC ID: A3LSMN9300		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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Band 5 Frequency Stability Measurements

§2.1055 §22.355

OPERATING FREQUENCY: 836,500,000 Hz

CHANNEL: 20525

REFERENCE VOLTAGE: 3.85 VDC

DEVIATION LIMIT: ± 0.00025 % or 2.5 ppm

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.85	+ 20 (Ref)	836,499,974	-26	-0.0000031
100 %		- 30	836,499,837	-163	-0.0000194
100 %		- 20	836,499,924	-76	-0.0000091
100 %		- 10	836,499,915	-85	-0.0000101
100 %		0	836,499,922	-78	-0.0000093
100 %		+ 10	836,499,944	-56	-0.0000067
100 %		+ 20	836,499,995	-5	-0.0000006
100 %		+ 30	836,499,817	-183	-0.0000219
100 %		+ 40	836,499,832	-168	-0.0000201
100 %		+ 50	836,499,807	-193	-0.0000231
BATT. ENDPOINT	3.45	+ 20	836,499,866	-134	-0.0000160

Table 7-37. Frequency Stability Data (Band 5)

FCC ID: A3LSMN9300		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)			Reviewed by: Quality Manager
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Band 5 Frequency Stability Measurements

§2.1055 §22.355

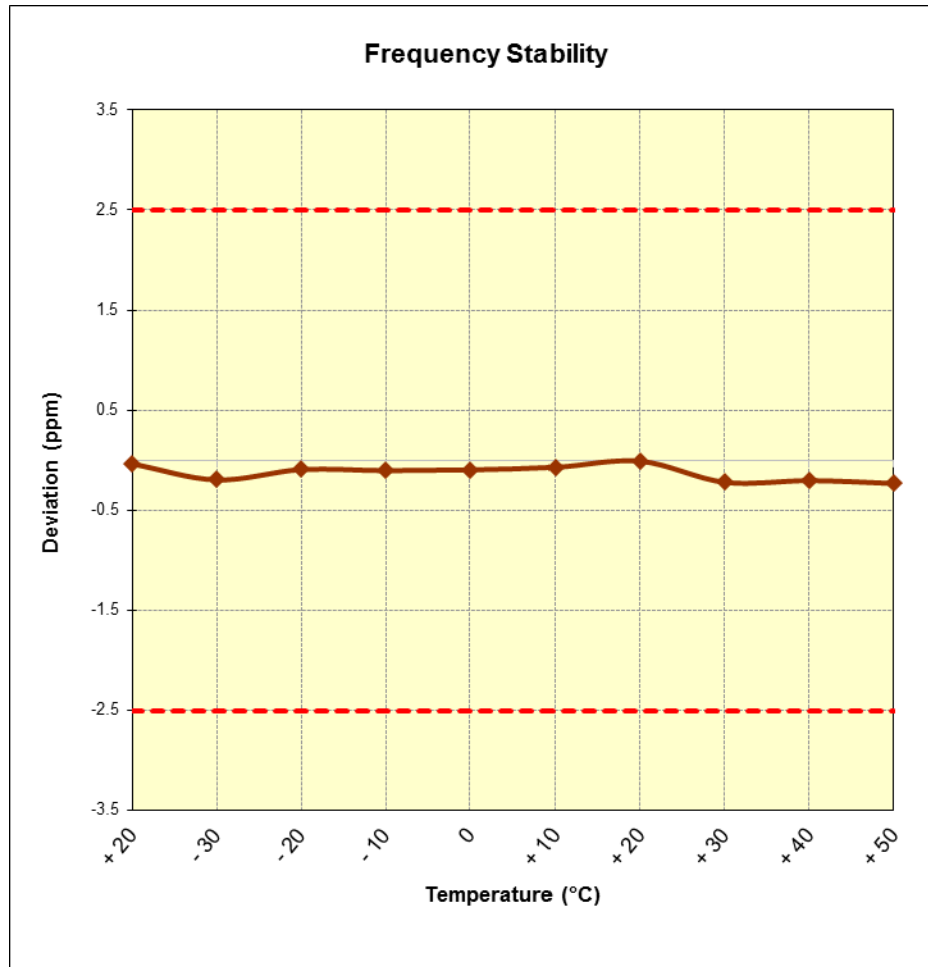


Figure 7-10. Frequency Stability Graph (Band 5)

FCC ID: A3LSMN9300		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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Band 26 Frequency Stability Measurements

§2.1055 §22.355

OPERATING FREQUENCY: 831,500,000 Hz

CHANNEL: 26865

REFERENCE VOLTAGE: 3.85 VDC

DEVIATION LIMIT: ± 0.00025 % or 2.5 ppm

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.85	+ 20 (Ref)	831,499,914	-86	-0.0000104
100 %		- 30	831,499,901	-99	-0.0000119
100 %		- 20	831,499,801	-199	-0.0000239
100 %		- 10	831,499,813	-187	-0.0000225
100 %		0	831,499,987	-13	-0.0000015
100 %		+ 10	831,499,973	-27	-0.0000032
100 %		+ 20	831,499,959	-41	-0.0000050
100 %		+ 30	831,499,909	-91	-0.0000110
100 %		+ 40	831,499,945	-55	-0.0000066
100 %		+ 50	831,499,957	-43	-0.0000052
BATT. ENDPOINT	3.45	+ 20	831,499,809	-191	-0.0000230

Table 7-38. Frequency Stability Data (Band 26)

FCC ID: A3LSMN9300		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)			Reviewed by: Quality Manager
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Band 26 Frequency Stability Measurements

§2.1055 §22.355

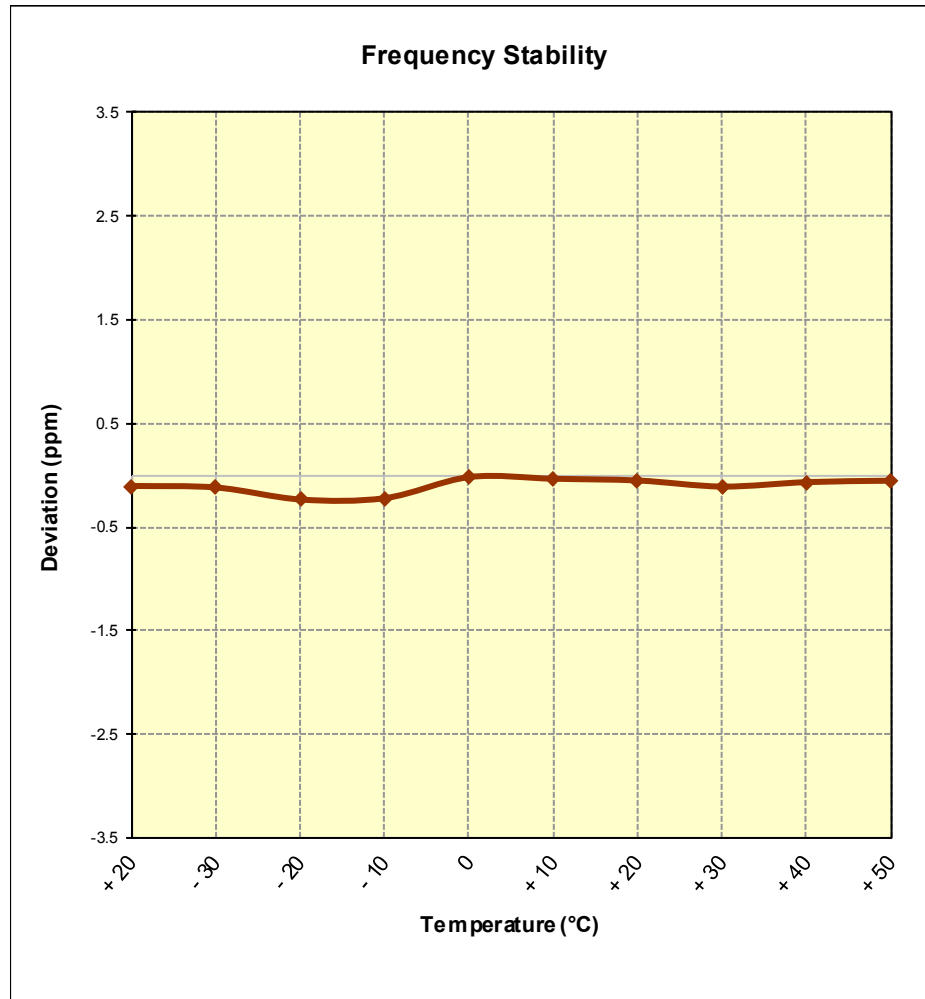


Figure 7-11. Frequency Stability Graph (Band 26)

FCC ID: A3LSMN9300		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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Band 4 Frequency Stability Measurements

\$2.1055 \$27.54

OPERATING FREQUENCY: 1,732,500,000 Hz
 CHANNEL: 20175
 REFERENCE VOLTAGE: 3.85 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.85	+ 20 (Ref)	1,732,499,942	-58	-0.0000033
100 %		- 30	1,732,499,846	-154	-0.0000089
100 %		- 20	1,732,499,822	-178	-0.0000103
100 %		- 10	1,732,499,829	-171	-0.0000099
100 %		0	1,732,499,854	-146	-0.0000084
100 %		+ 10	1,732,499,927	-73	-0.0000042
100 %		+ 20	1,732,499,885	-115	-0.0000066
100 %		+ 30	1,732,499,948	-52	-0.0000030
100 %		+ 40	1,732,499,996	-4	-0.0000002
100 %		+ 50	1,732,499,880	-120	-0.0000069
BATT. ENDPOINT	3.45	+ 20	1,732,499,831	-169	-0.0000097

Table 7-39. Frequency Stability Data (Band 4)

Note:

Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

FCC ID: A3LSMN9300		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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Band 4 Frequency Stability Measurements

§2.1055 §§27.54

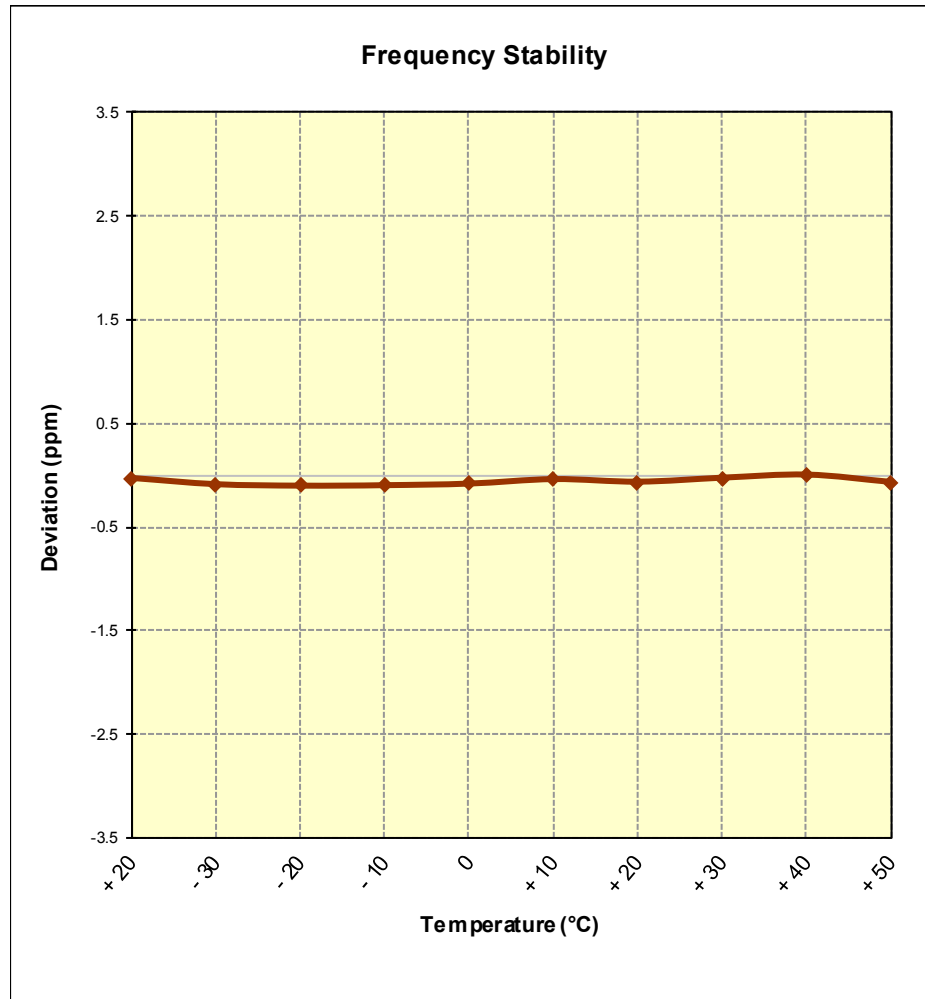


Figure 7-12. Frequency Stability Graph (Band 4)

FCC ID: A3LSMN9300		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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Band 25 Frequency Stability Measurements

§2.1055 §24.235

OPERATING FREQUENCY: 1,882,500,000 Hz

CHANNEL: 26365

REFERENCE VOLTAGE: 3.85 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.85	+ 20 (Ref)	1,882,499,812	-188	-0.0000100
100 %		- 30	1,882,499,963	-37	-0.0000019
100 %		- 20	1,882,499,947	-53	-0.0000028
100 %		- 10	1,882,499,850	-150	-0.0000080
100 %		0	1,882,499,826	-174	-0.0000093
100 %		+ 10	1,882,499,853	-147	-0.0000078
100 %		+ 20	1,882,499,821	-179	-0.0000095
100 %		+ 30	1,882,499,954	-46	-0.0000024
100 %		+ 40	1,882,499,981	-19	-0.0000010
100 %		+ 50	1,882,499,823	-177	-0.0000094
BATT. ENDPOINT	3.45	+ 20	1,882,499,965	-35	-0.0000018

Table 7-40. Frequency Stability Data (Band 25)

Note:

Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

FCC ID: A3LSMN9300		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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Band 25 Frequency Stability Measurements

§2.1055 §24.235

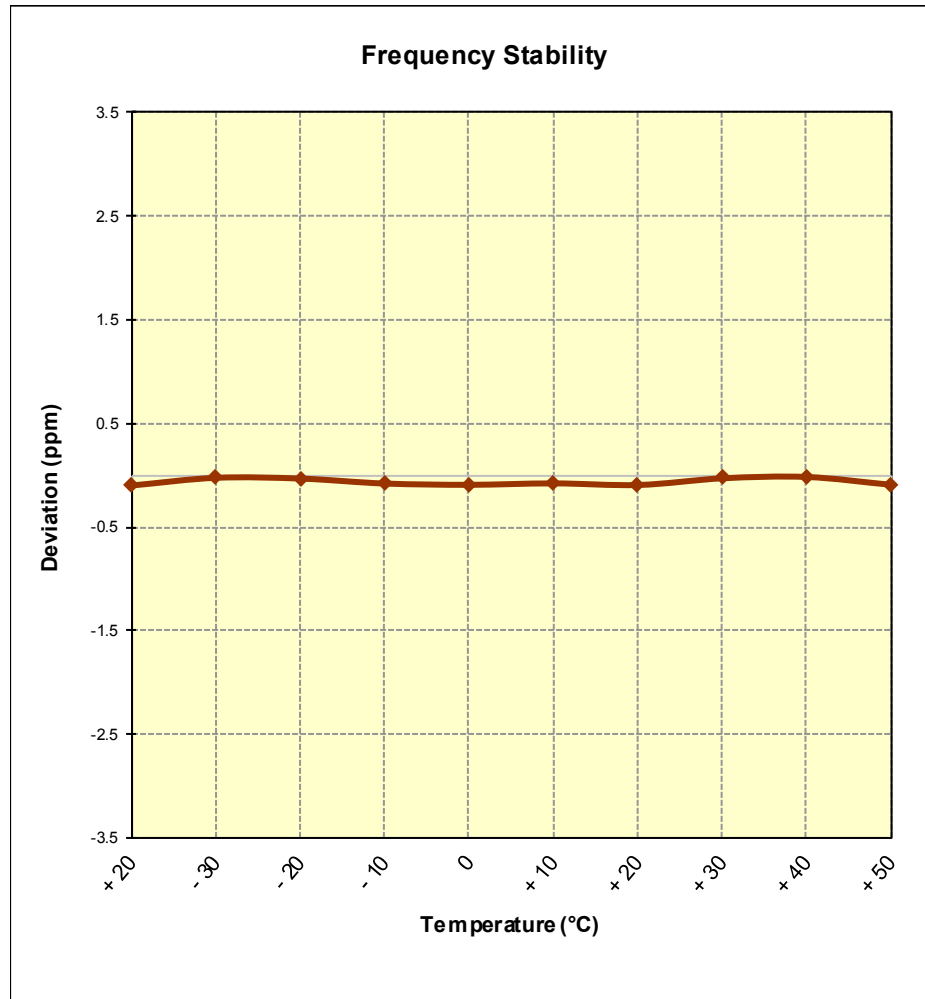


Figure 7-13. Frequency Stability Graph (Band 25)

FCC ID: A3LSMN9300		FCC Pt. 22, 24, & 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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Band 41 Frequency Stability Measurements

§2.1055 §27.54

OPERATING FREQUENCY: 2,593,000,000 Hz
 CHANNEL: 40620
 REFERENCE VOLTAGE: 3.85 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.85	+ 20 (Ref)	2,592,999,933	-67	-0.0000026
100 %		- 30	2,592,999,939	-61	-0.0000024
100 %		- 20	2,592,999,950	-50	-0.0000019
100 %		- 10	2,592,999,871	-129	-0.0000050
100 %		0	2,592,999,978	-22	-0.0000009
100 %		+ 10	2,592,999,826	-174	-0.0000067
100 %		+ 20	2,592,999,995	-5	-0.0000002
100 %		+ 30	2,592,999,946	-54	-0.0000021
100 %		+ 40	2,592,999,903	-97	-0.0000038
100 %		+ 50	2,592,999,875	-125	-0.0000048
BATT. ENDPOINT	3.45	+ 20	2,592,999,990	-10	-0.0000004

Table 7-41. Frequency Stability Data (Band 41)

Note:

Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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Band 41 Frequency Stability Measurements

§2.1055 §27.54

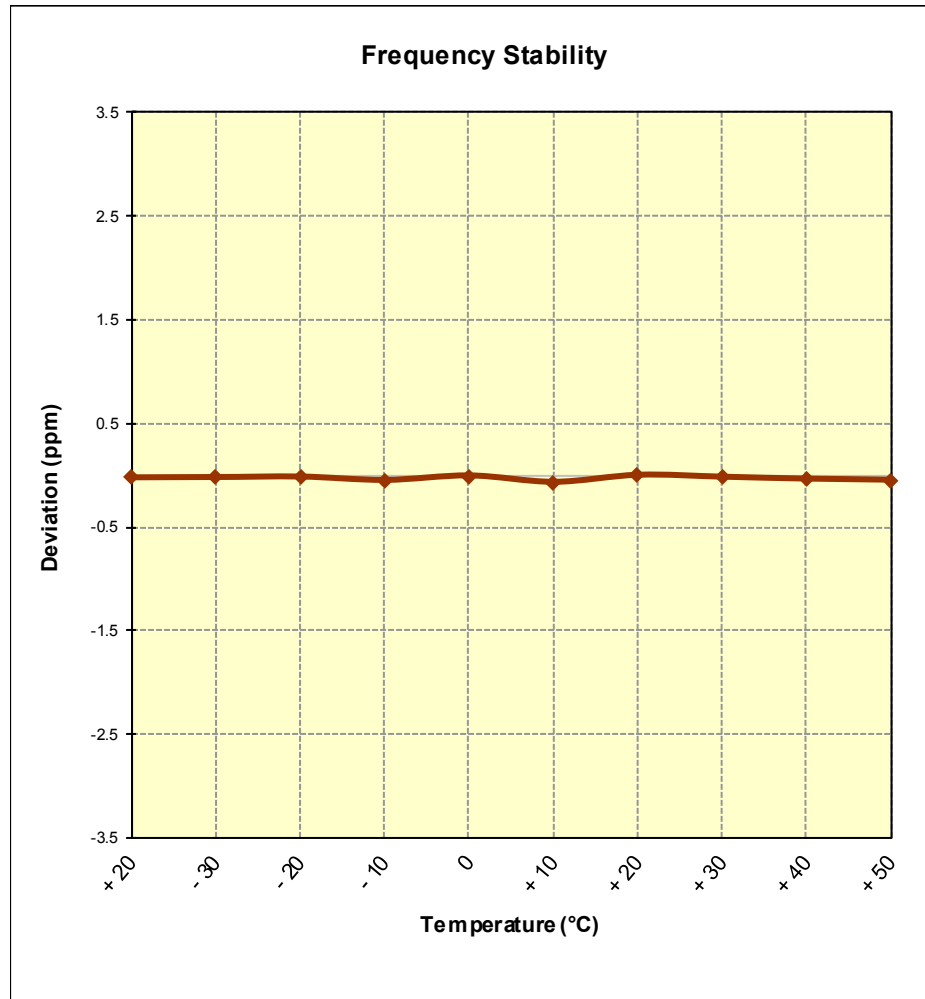


Figure 7-14. Frequency Stability Graph (Band 41)

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8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Samsung Portable Handset FCC ID: A3LSMN9300** complies with all the requirements of Parts 22, 24, & 27 of the FCC rules for LTE operation only.

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