

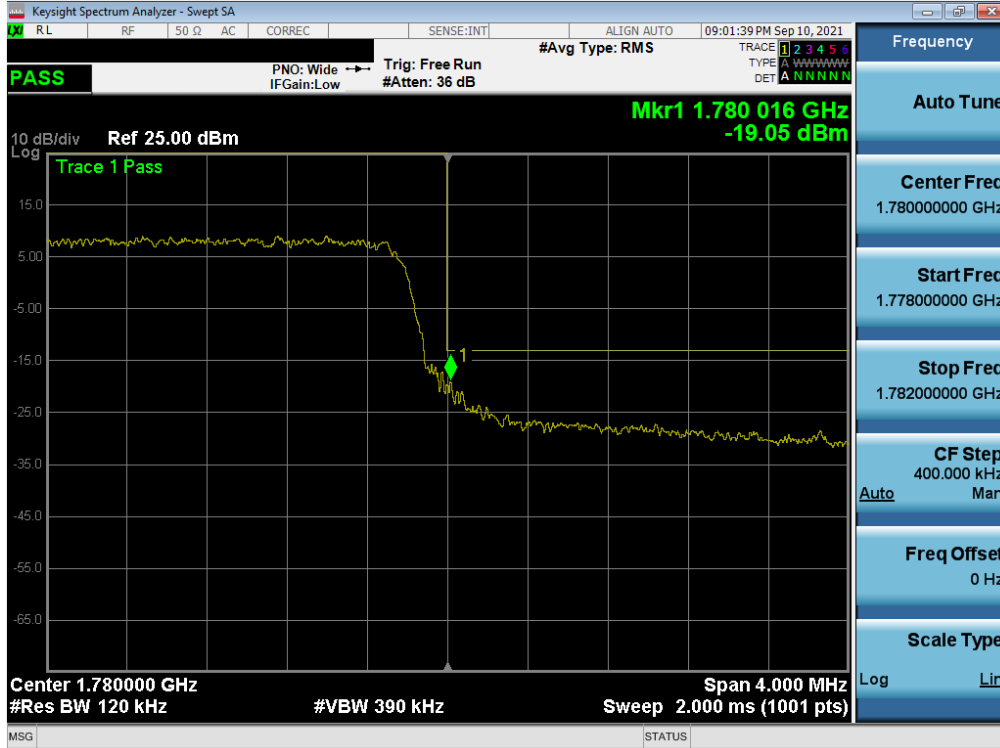


Plot 7-228. Upper Band Edge Plot (LTE Band 4 - 5MHz QPSK – Full RB)

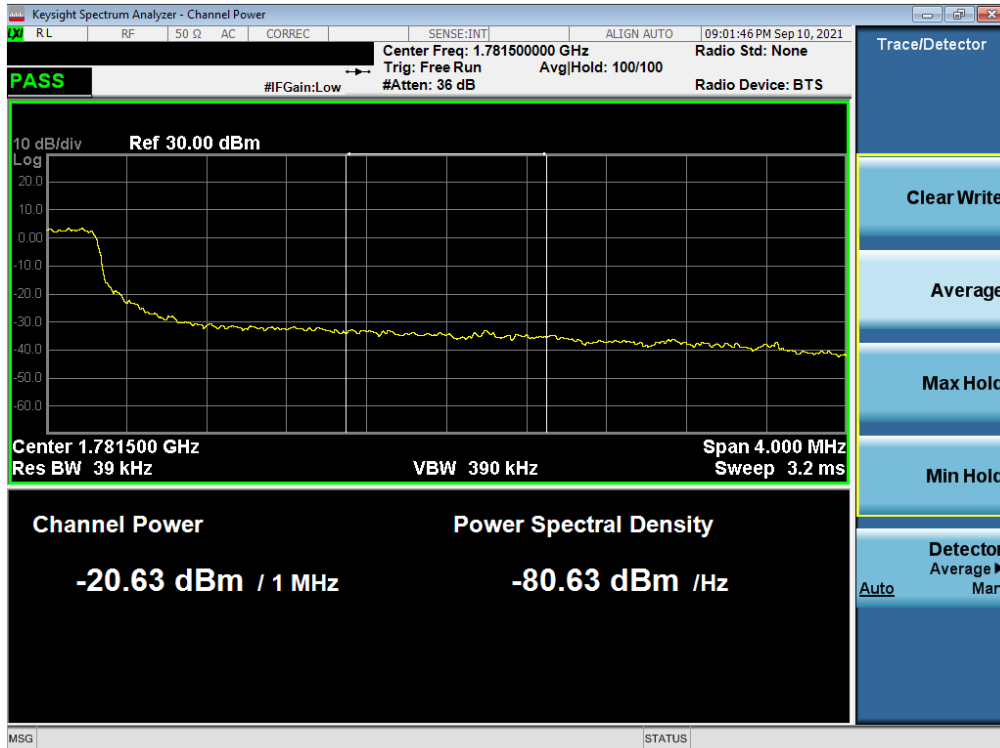


Plot 7-229. Upper Extended Band Edge Plot (LTE Band 4 - 5MHz QPSK – Full RB)

FCC ID: A3LSMS906U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-230. Upper Band Edge Plot (LTE Band 66 - 5MHz QPSK – Full RB)

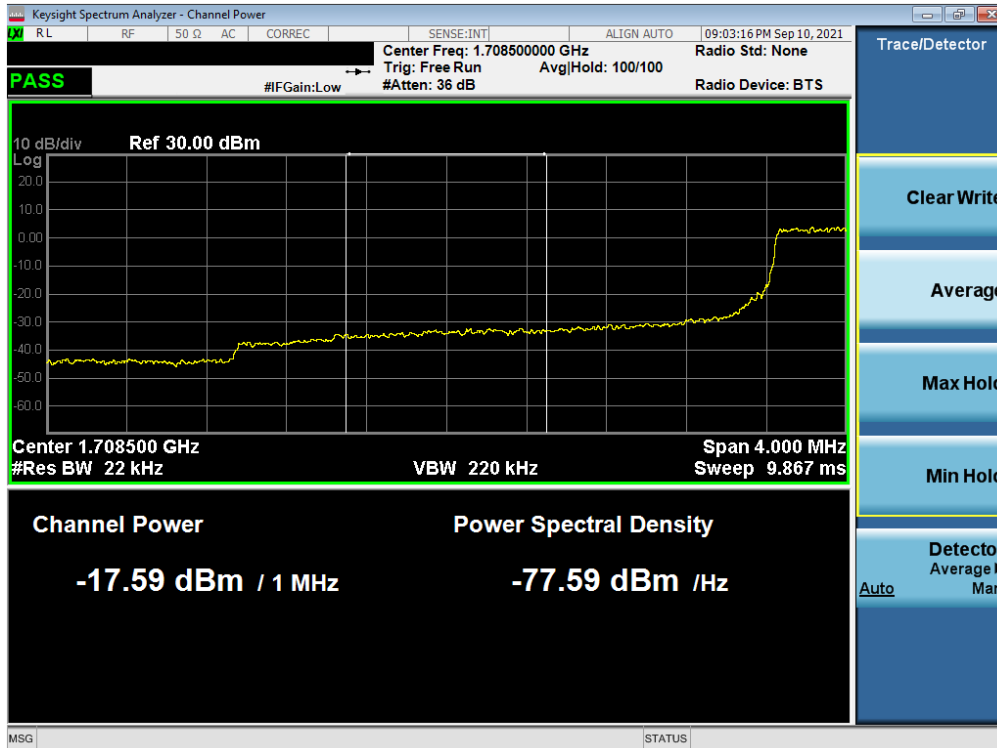


Plot 7-231. Upper Extended Band Edge Plot (LTE Band 66 - 5MHz QPSK – Full RB)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
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Plot 7-232. Lower Band Edge Plot (LTE Band 66/4 - 3MHz QPSK – Full RB)

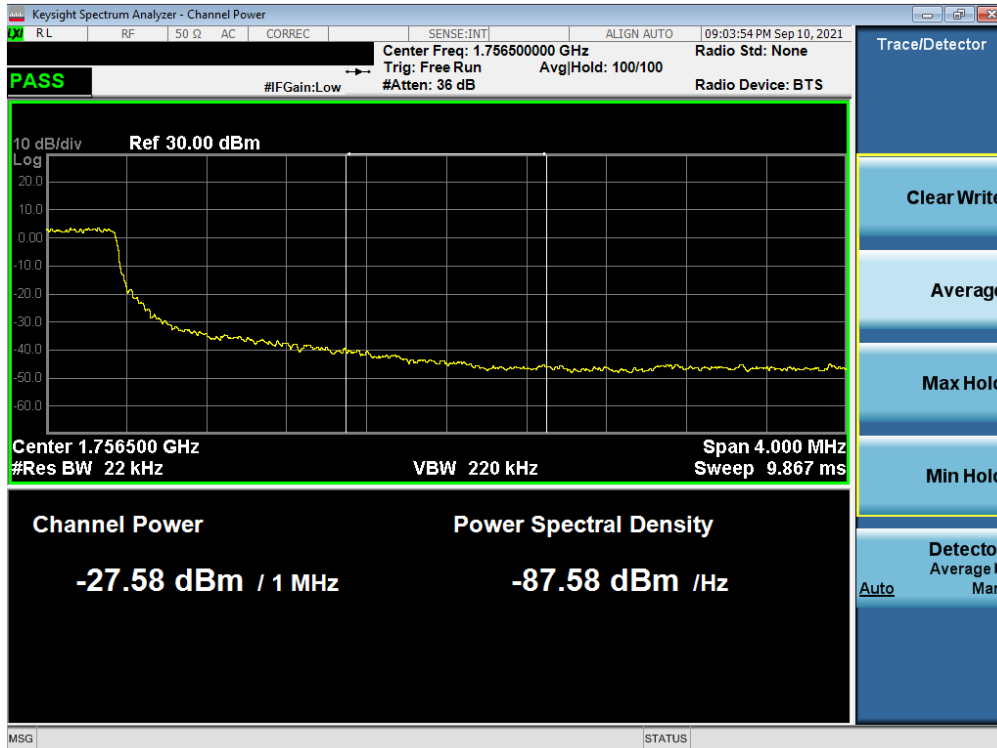


Plot 7-233. Lower Extended Band Edge Plot (LTE Band 66/4 - 3MHz QPSK – Full RB)

FCC ID: A3LSMS906U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-234. Upper Band Edge Plot (LTE Band 4 - 3MHz QPSK – Full RB)

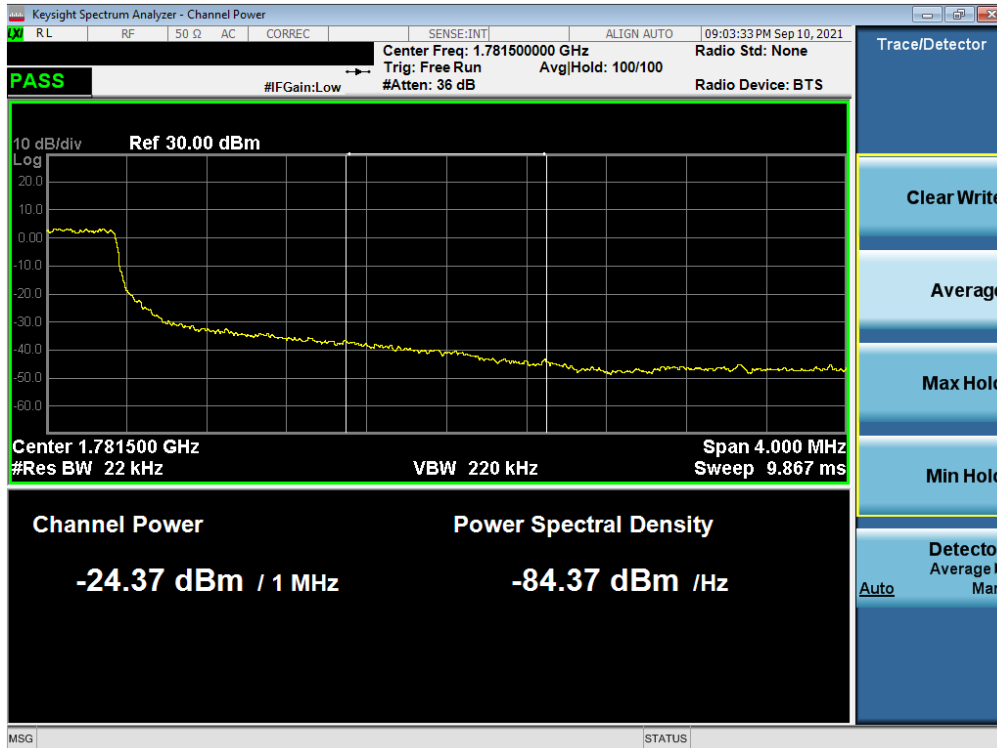


Plot 7-235. Upper Extended Band Edge Plot (LTE Band 4 - 3MHz QPSK – Full RB)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 143 of 253

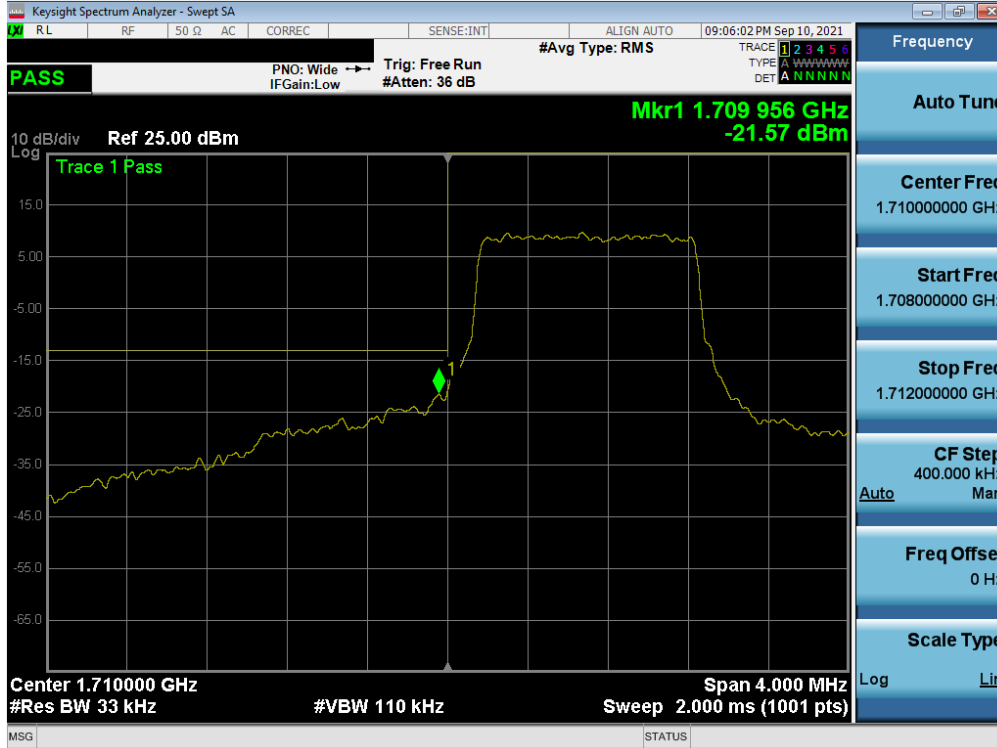


Plot 7-236. Upper Band Edge Plot (LTE Band 66 - 3MHz QPSK - Full RB)

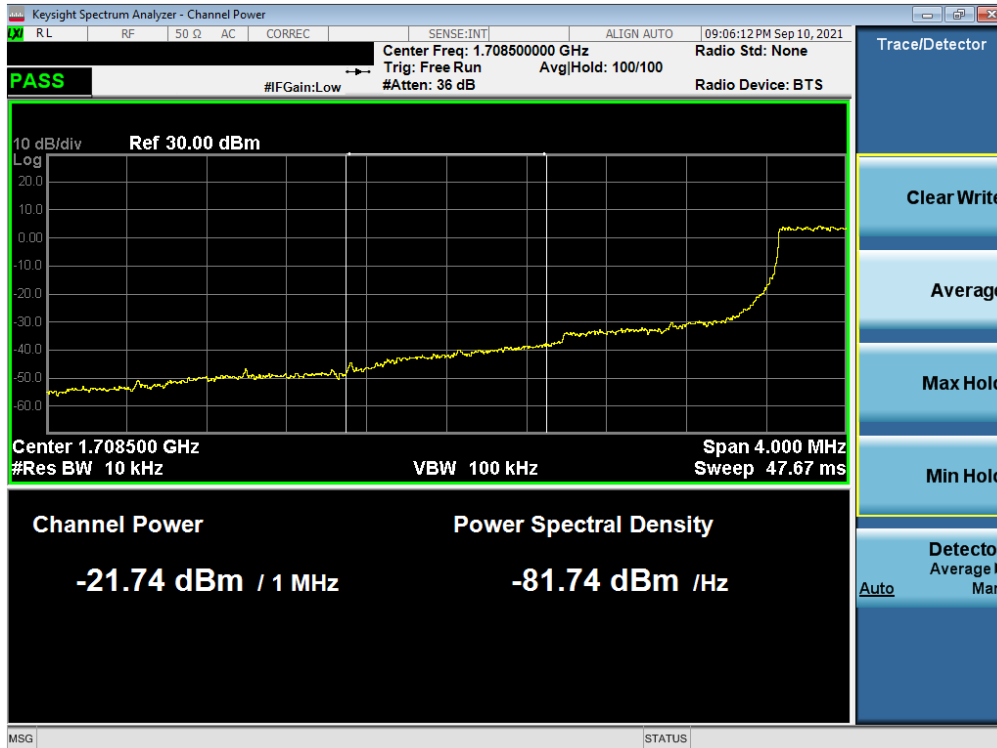


Plot 7-237. Upper Extended Band Edge Plot (LTE Band 66 - 3MHz QPSK - Full RB)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
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Plot 7-238. Lower Band Edge Plot (LTE Band 66/4 – 1.4MHz QPSK – Full RB)

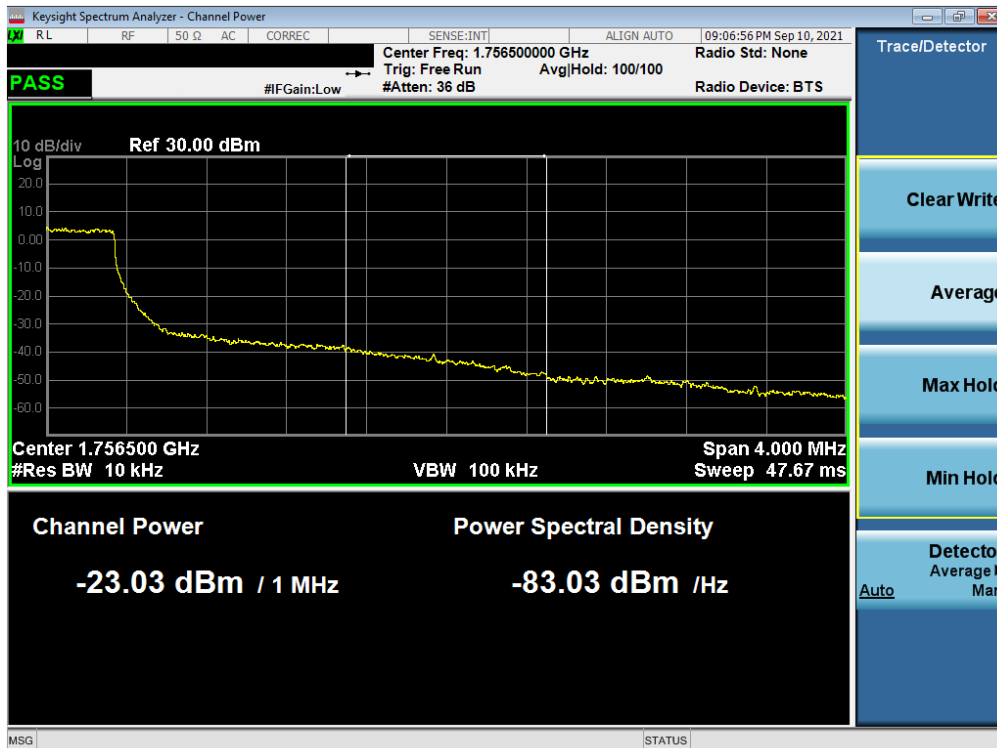


Plot 7-239. Lower Extended Band Edge Plot (LTE Band 66/4 – 1.4MHz QPSK – Full RB)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
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Plot 7-240. Upper Band Edge Plot (LTE Band 4 – 1.4MHz QPSK – Full RB)

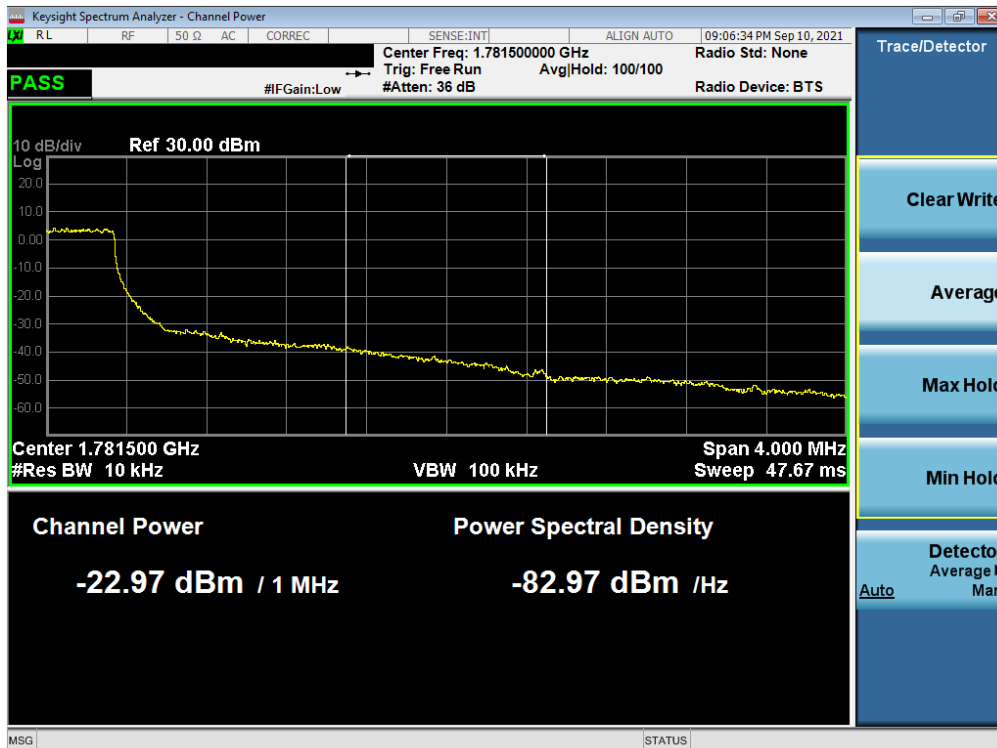


Plot 7-241. Upper Extended Band Edge Plot (LTE Band 4 – 1.4MHz QPSK – Full RB)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
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Plot 7-242. Upper Band Edge Plot (LTE Band 66 – 1.4MHz QPSK – Full RB)

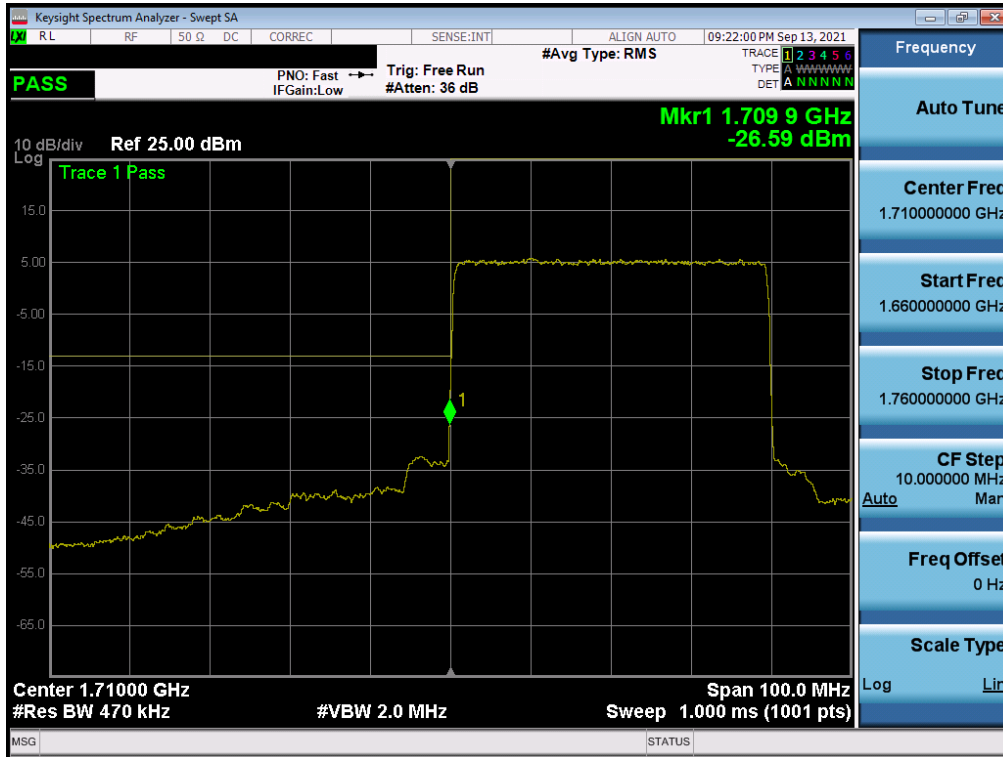


Plot 7-243. Upper Extended Band Edge Plot (LTE Band 66 – 1.4MHz QPSK – Full RB)

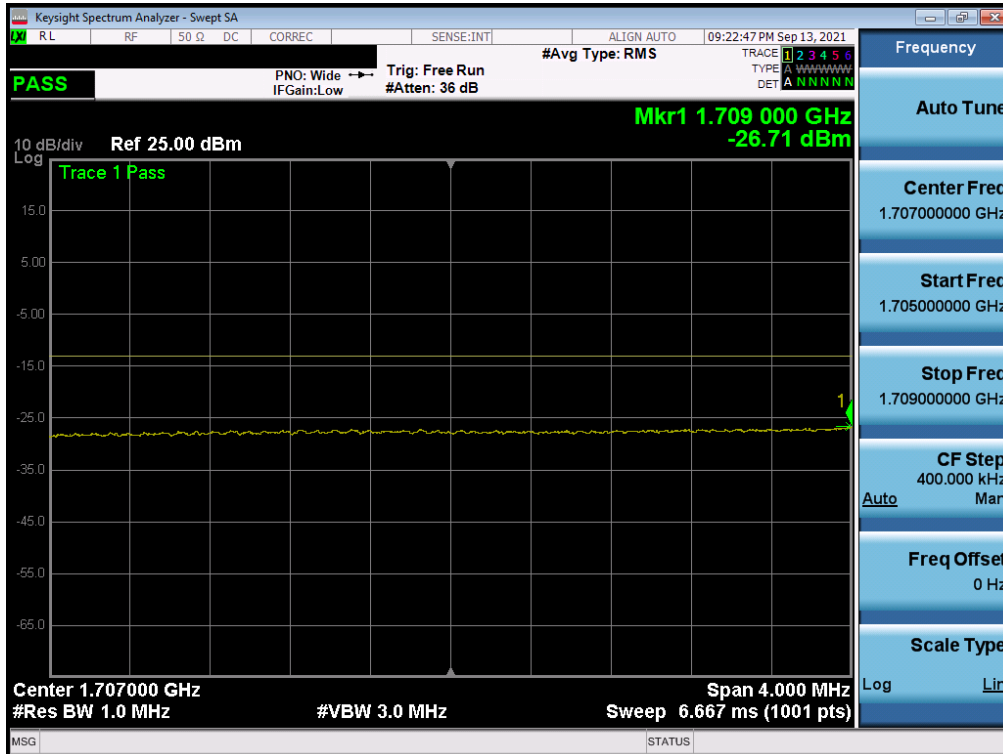
FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 147 of 253



## NR Band n66 – Ant A



Plot 7-244. Lower Band Edge Plot (NR Band n66 – 40.0MHz - Full RB – Ant A)

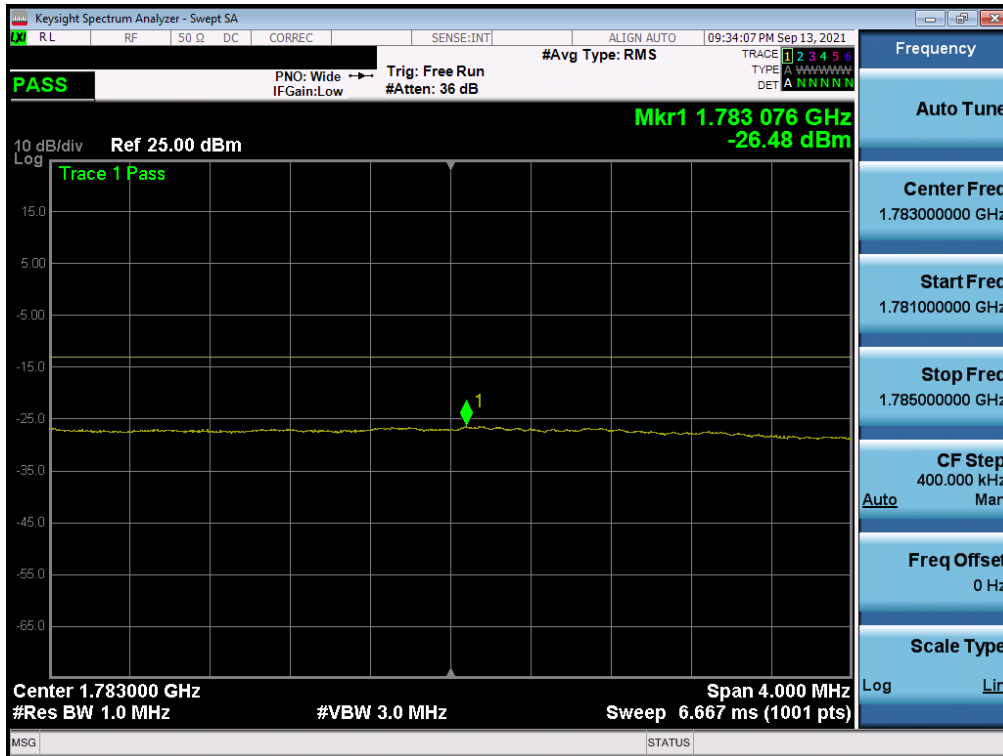


Plot 7-245. Lower Extended Band Edge Plot (NR Band n66 – 40.0MHz - Full RB - Ant A)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 148 of 253



Plot 7-246. Upper Band Edge Plot (NR Band n66 – 40.0MHz - Full RB - Ant A)

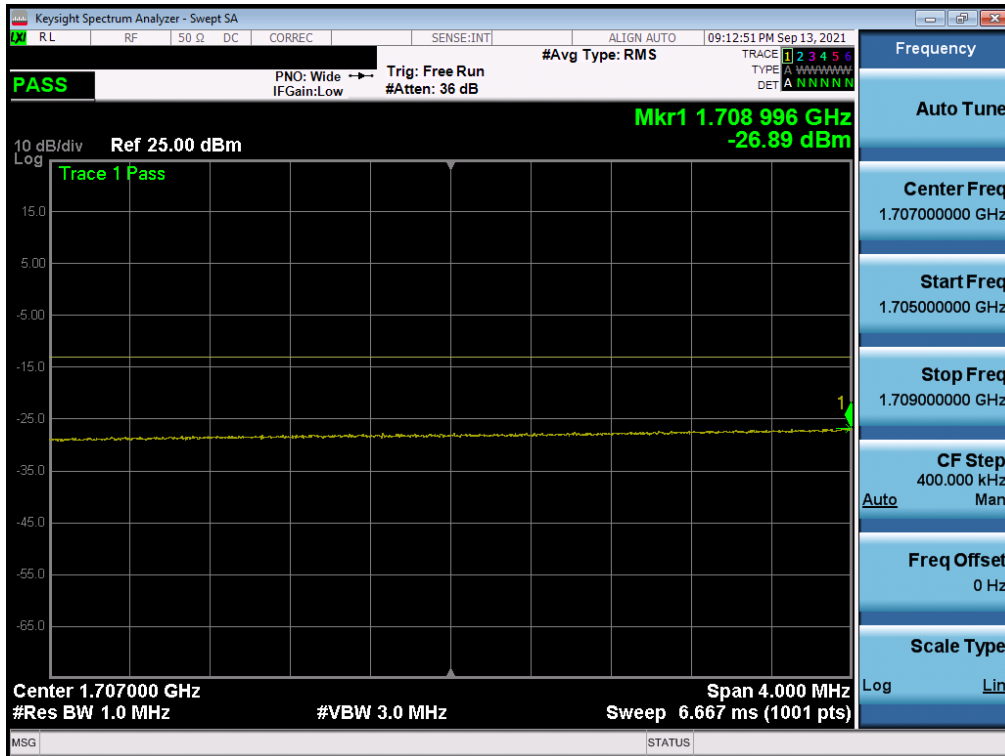


Plot 7-247. Upper Extended Band Edge Plot (NR Band n66 – 40.0MHz - Full RB - Ant A)

FCC ID: A3LSMS906U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 149 of 253



Plot 7-248. Lower Band Edge Plot (NR Band n66 – 30.0MHz - Full RB - Ant A)

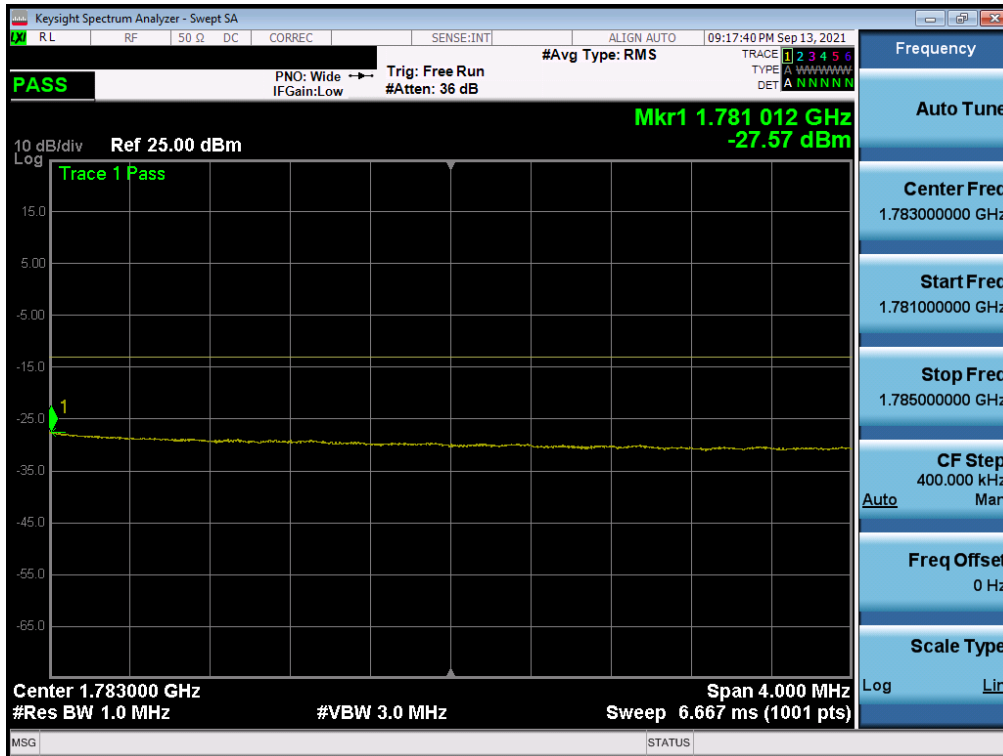


Plot 7-249. Lower Extended Band Edge Plot (NR Band n66 – 30.0MHz - Full RB - Ant A)

FCC ID: A3LSMS906U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 150 of 253



Plot 7-250. Upper Band Edge Plot (NR Band n66 – 30.0MHz - Full RB - Ant A)

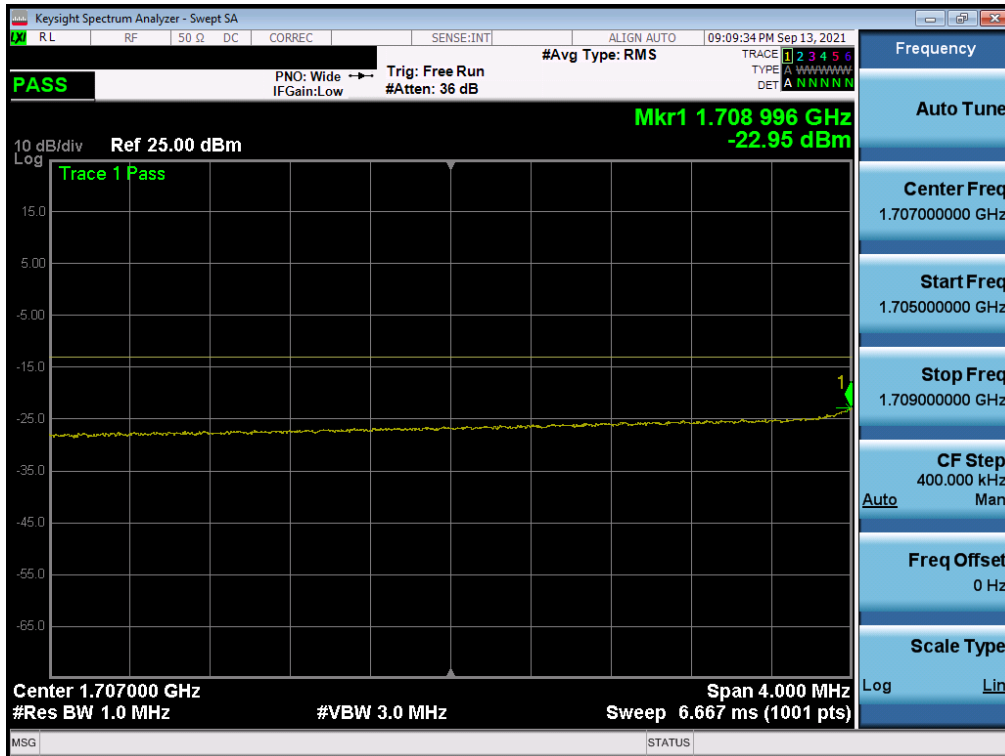


Plot 7-251. Upper Extended Band Edge Plot (NR Band n66 – 30.0MHz - Full RB - Ant A)

FCC ID: A3LSMS906U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 151 of 253



Plot 7-252. Lower Band Edge Plot (NR Band n66 – 20.0MHz - Full RB - Ant A)



Plot 7-253. Lower Extended Band Edge Plot (NR Band n66 – 20.0MHz - Full RB - Ant A)

FCC ID: A3LSMS906U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 152 of 253

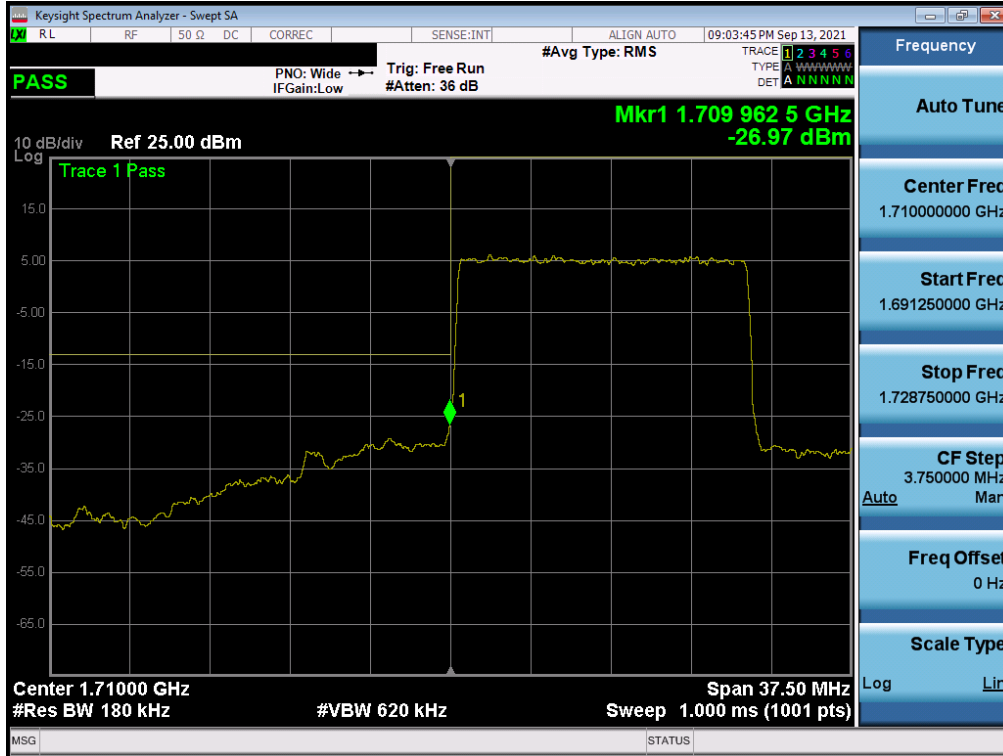


Plot 7-254. Upper Band Edge Plot (NR Band n66 – 20.0MHz - Full RB - Ant A)

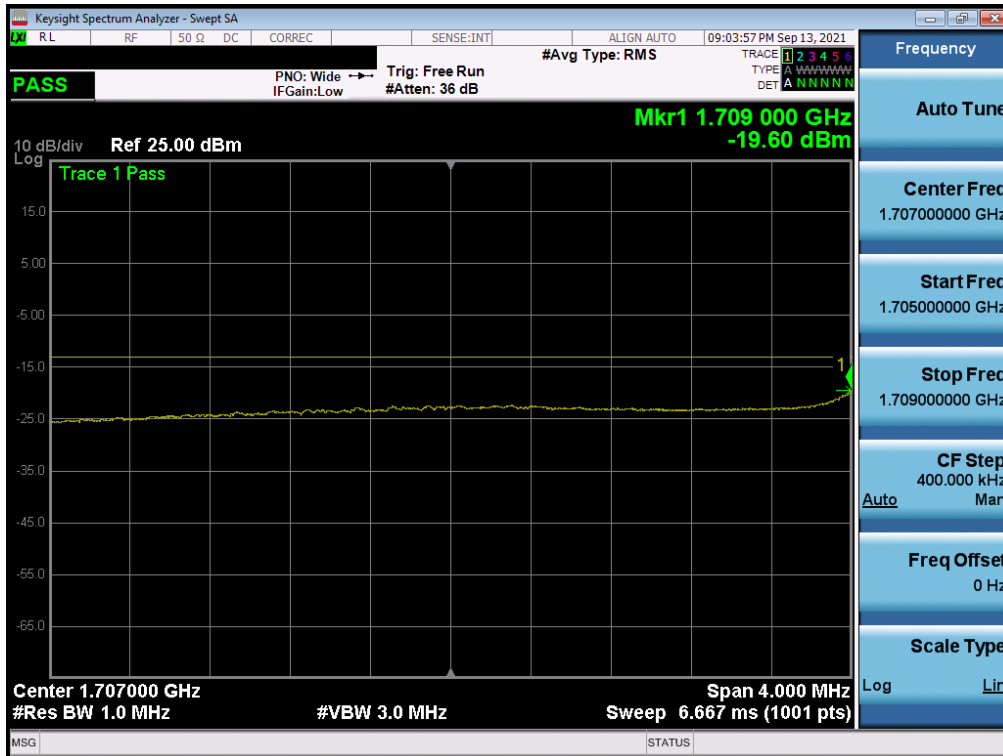


Plot 7-255. Upper Extended Band Edge Plot (NR Band n66 – 20.0MHz - Full RB - Ant A)

FCC ID: A3LSMS906U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 153 of 253



Plot 7-256. Lower Band Edge Plot (NR Band n66 – 15.0MHz - Full RB - Ant A)



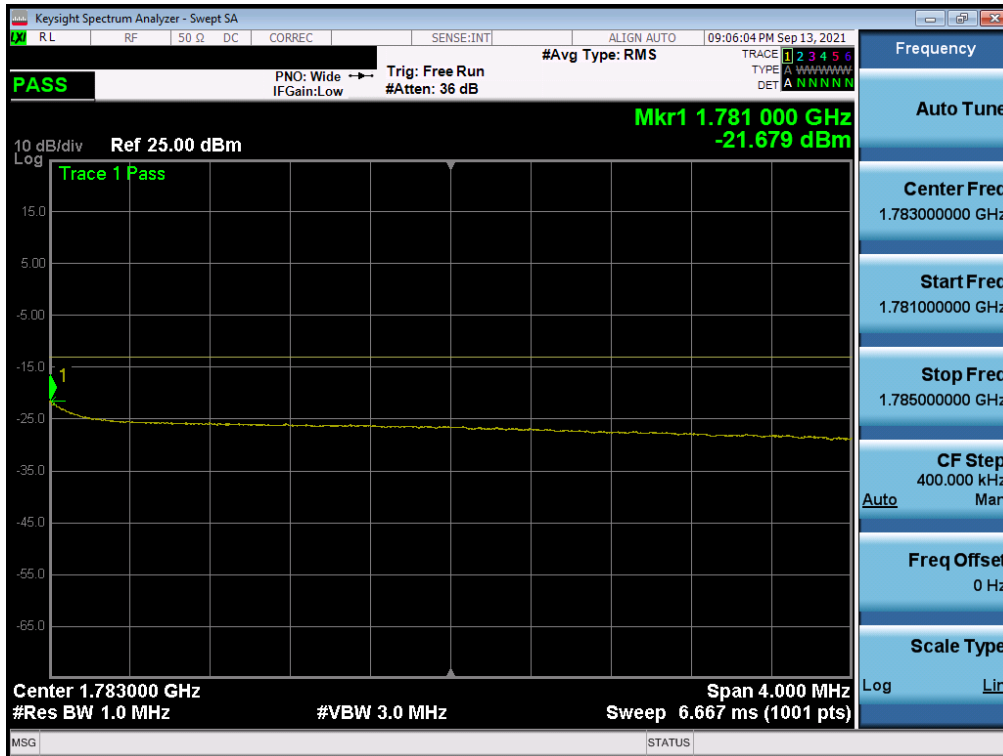
Plot 7-257. Lower Extended Band Edge Plot (NR Band n66 – 15.0MHz - Full RB - Ant A)

FCC ID: A3LSMS906U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 154 of 253





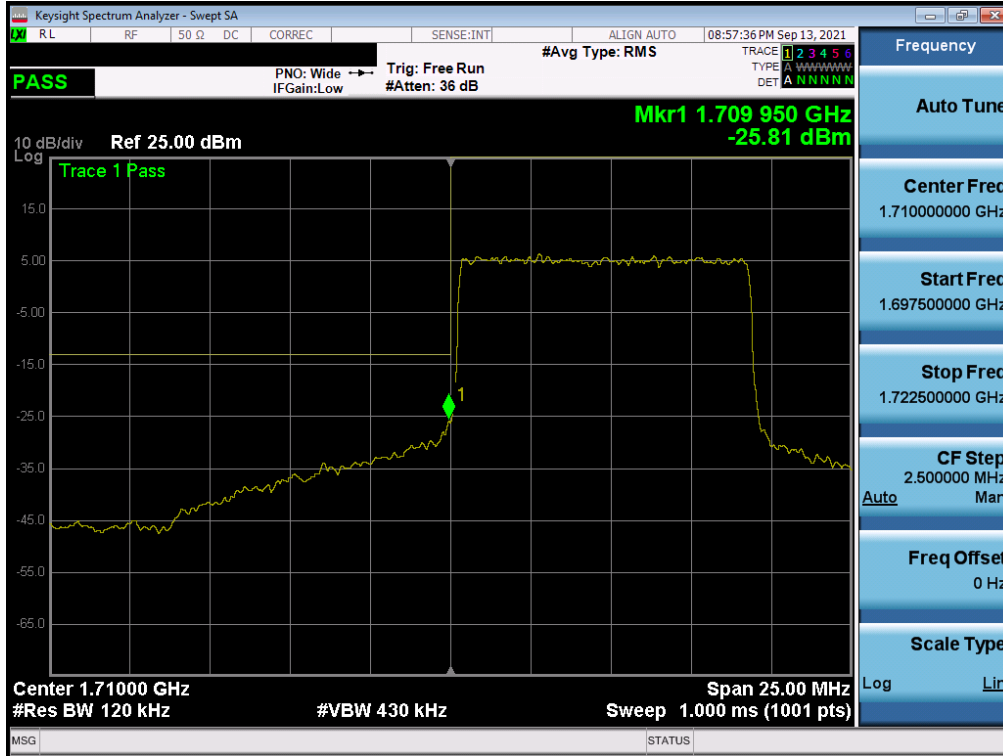
Plot 7-258. Upper Band Edge Plot (NR Band n66 – 15.0MHz - Full RB - Ant A)



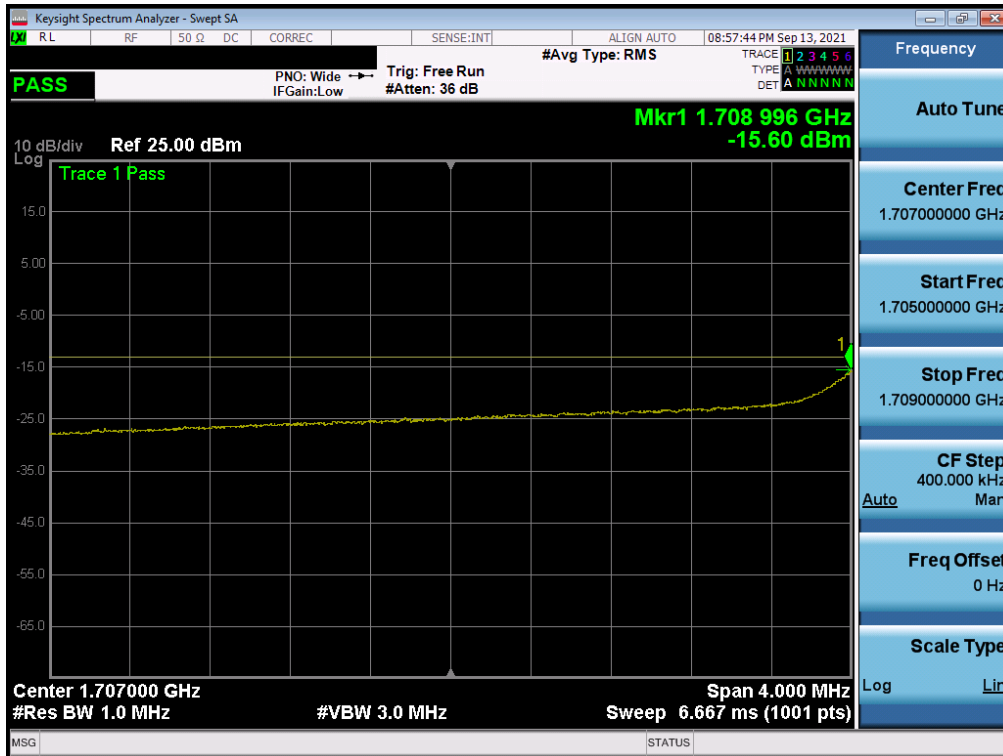
Plot 7-259. Upper Extended Band Edge Plot (NR Band n66 – 15.0MHz - Full RB - Ant A)

FCC ID: A3LSMS906U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 155 of 253





Plot 7-260. Lower Band Edge Plot (NR Band n66 – 10.0MHz - Full RB - Ant A)

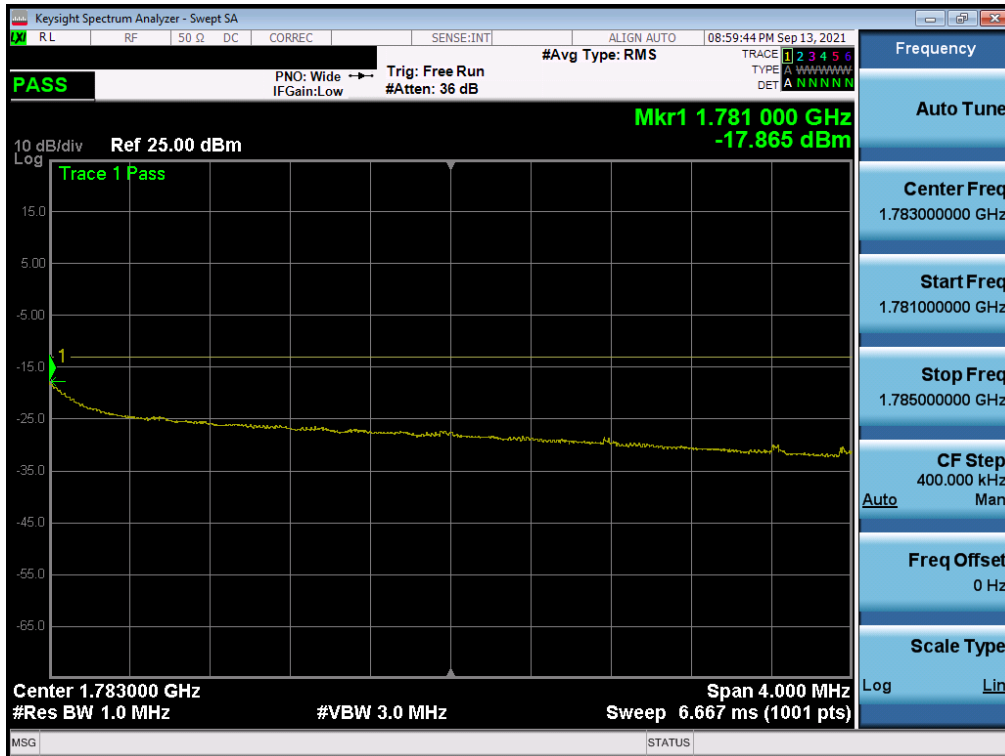


Plot 7-261. Lower Extended Band Edge Plot (NR Band n66 – 10.0MHz - Full RB - Ant A)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 156 of 253

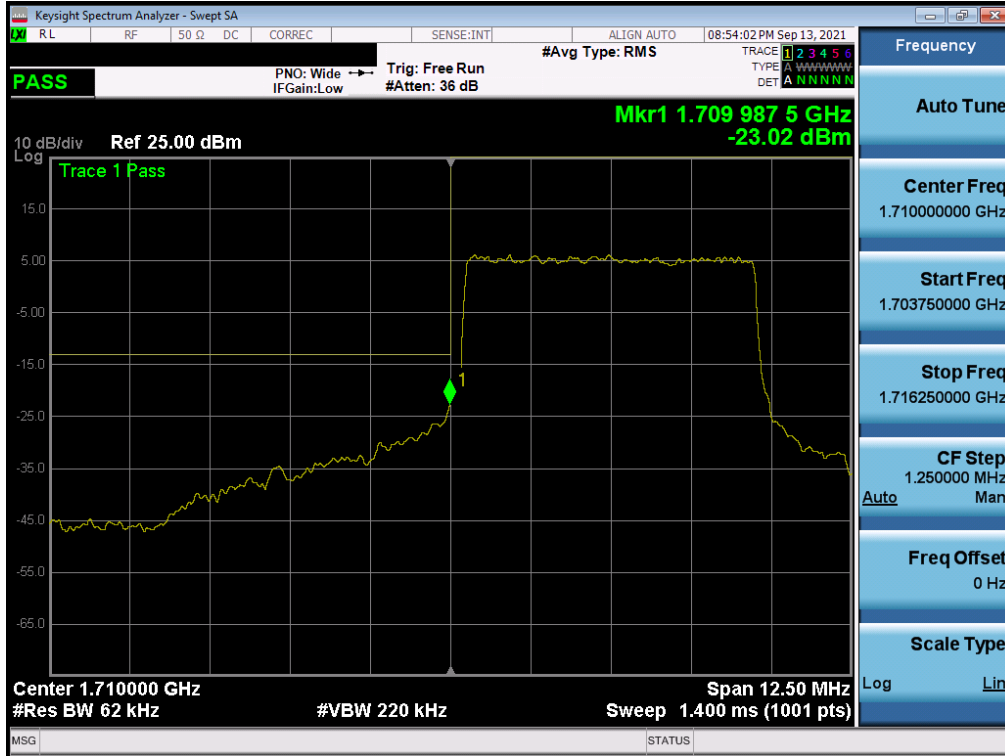


Plot 7-262. Upper Band Edge Plot (NR Band n66 – 10.0MHz - Full RB - Ant A)

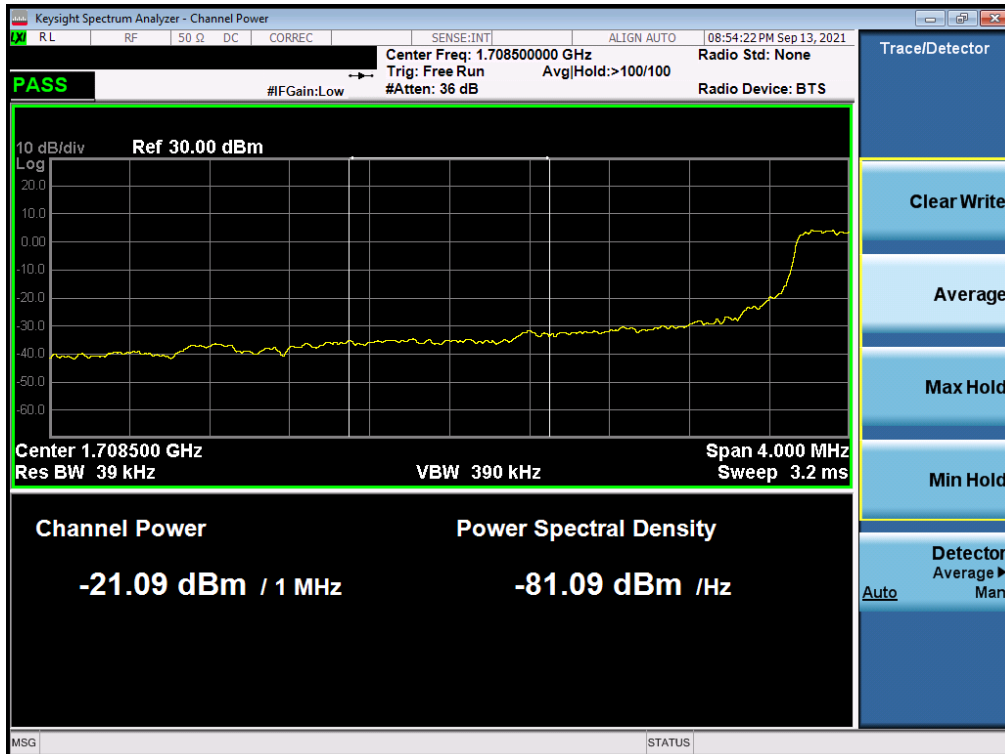


Plot 7-263. Upper Extended Band Edge Plot (NR Band n66 – 10.0MHz - Full RB - Ant A)

FCC ID: A3LSMS906U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 157 of 253



Plot 7-264. Lower Band Edge Plot (NR Band n66 – 5.0MHz - Full RB - Ant A)

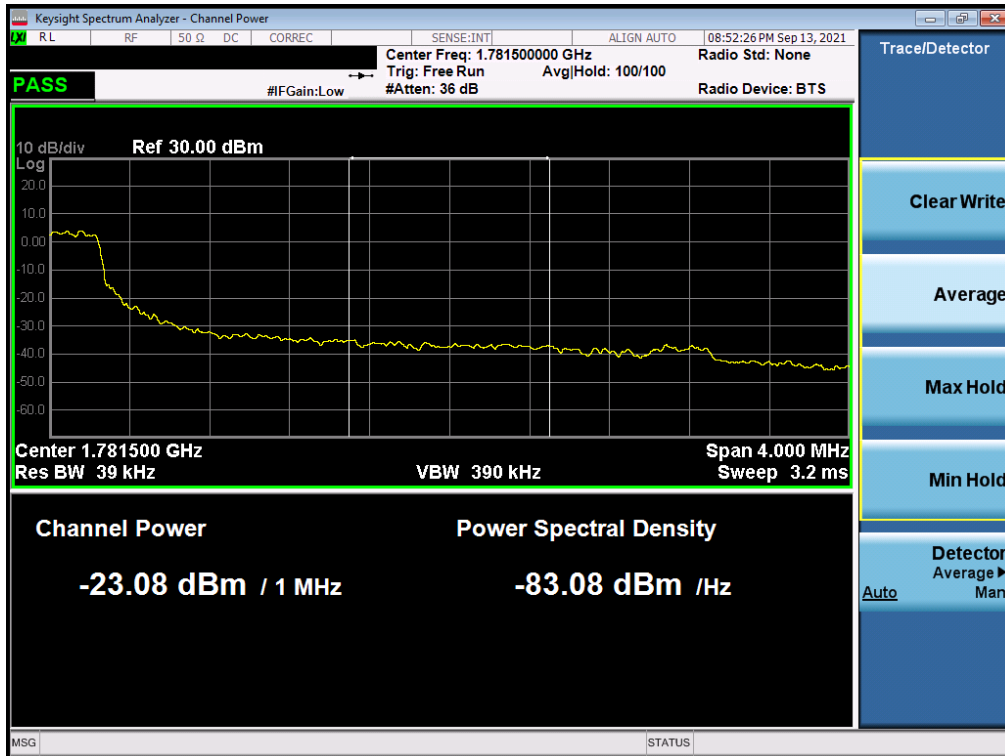


Plot 7-265. Lower Extended Band Edge Plot (NR Band n66 – 5.0MHz - Full RB - Ant A)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 158 of 253



Plot 7-266. Upper Band Edge Plot (NR Band n66 – 5.0MHz - Full RB - Ant A)



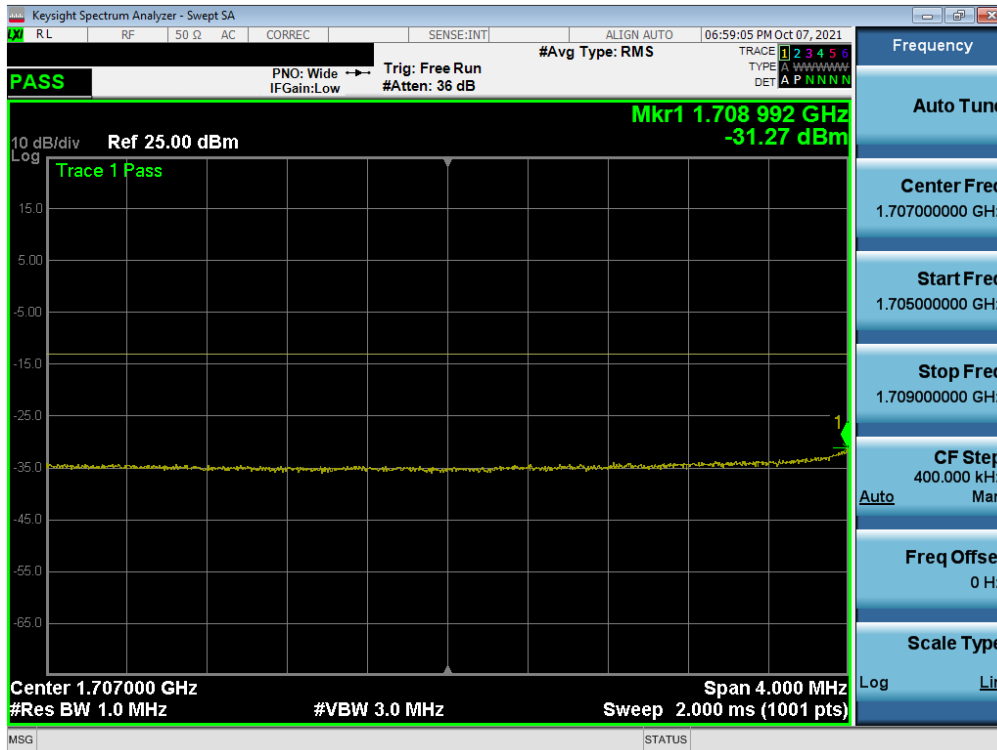
Plot 7-267. Upper Extended Band Edge Plot (NR Band n66 – 5.0MHz - Full RB - Ant A)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 159 of 253

# NR Band n66 – Ant I



Plot 7-268. Lower Band Edge Plot (NR Band n66 – 40.0MHz - Full RB – Ant I)

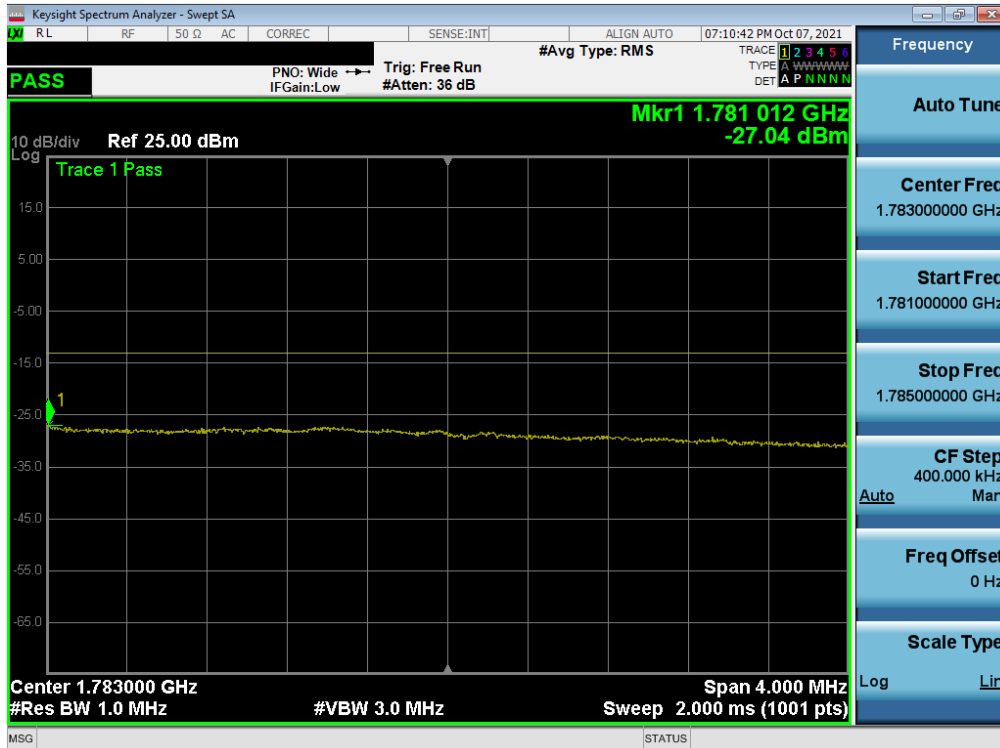


Plot 7-269. Lower Extended Band Edge Plot (NR Band n66 – 40.0MHz - Full RB - Ant I)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 160 of 253

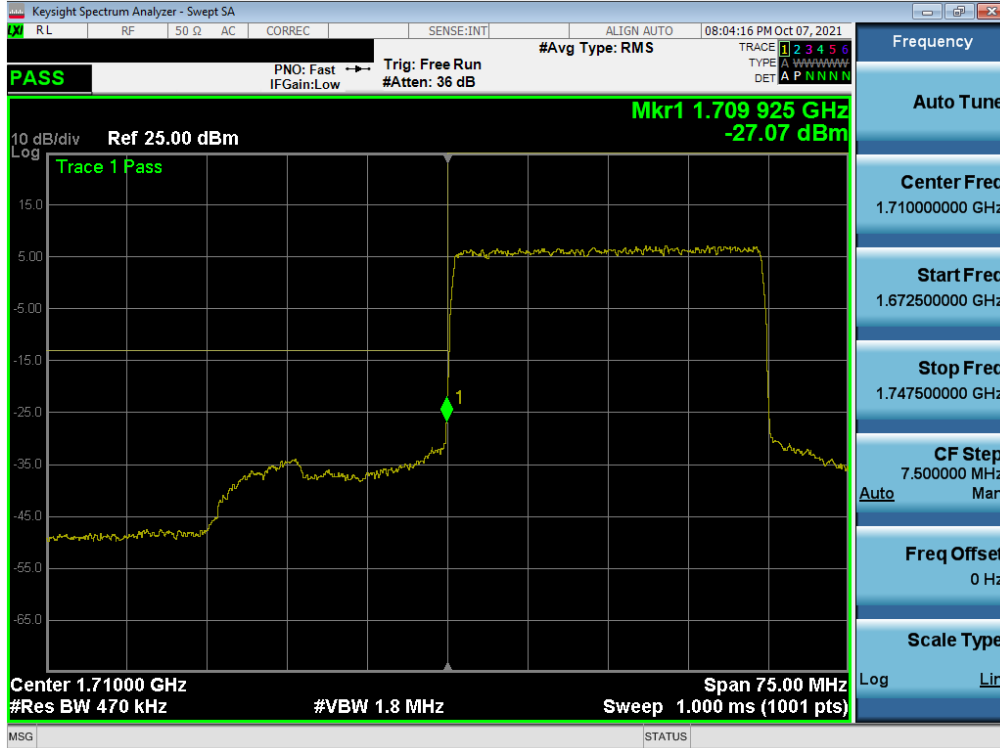


Plot 7-270. Upper Band Edge Plot (NR Band n66 – 40.0MHz - Full RB - Ant I)

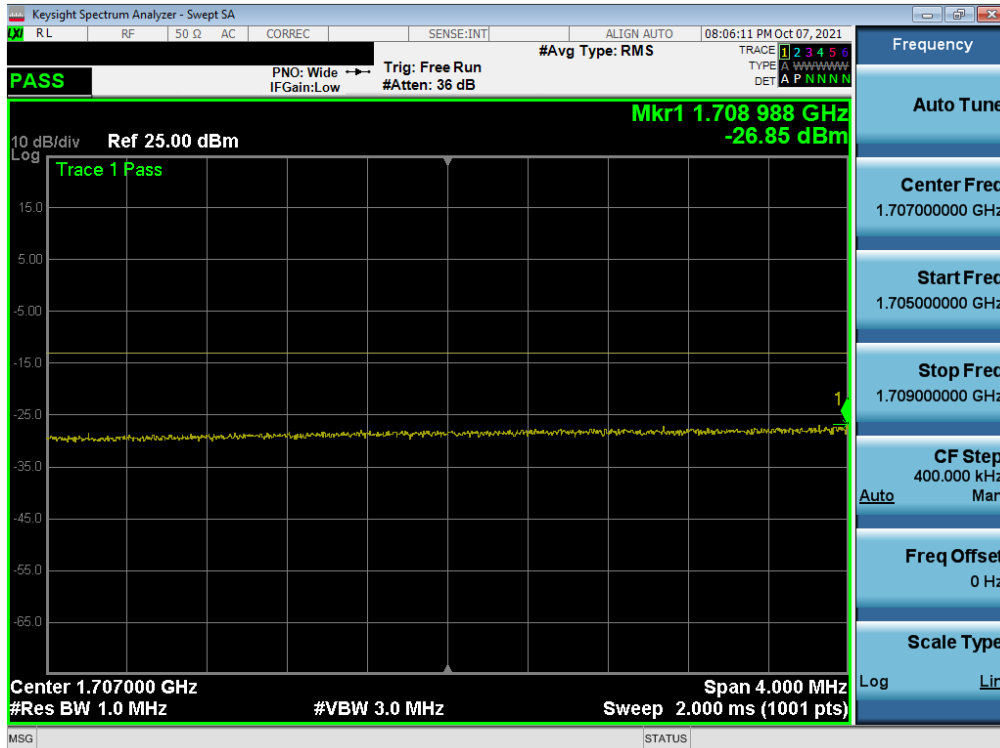


Plot 7-271. Upper Extended Band Edge Plot (NR Band n66 – 40.0MHz - Full RB - Ant I)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
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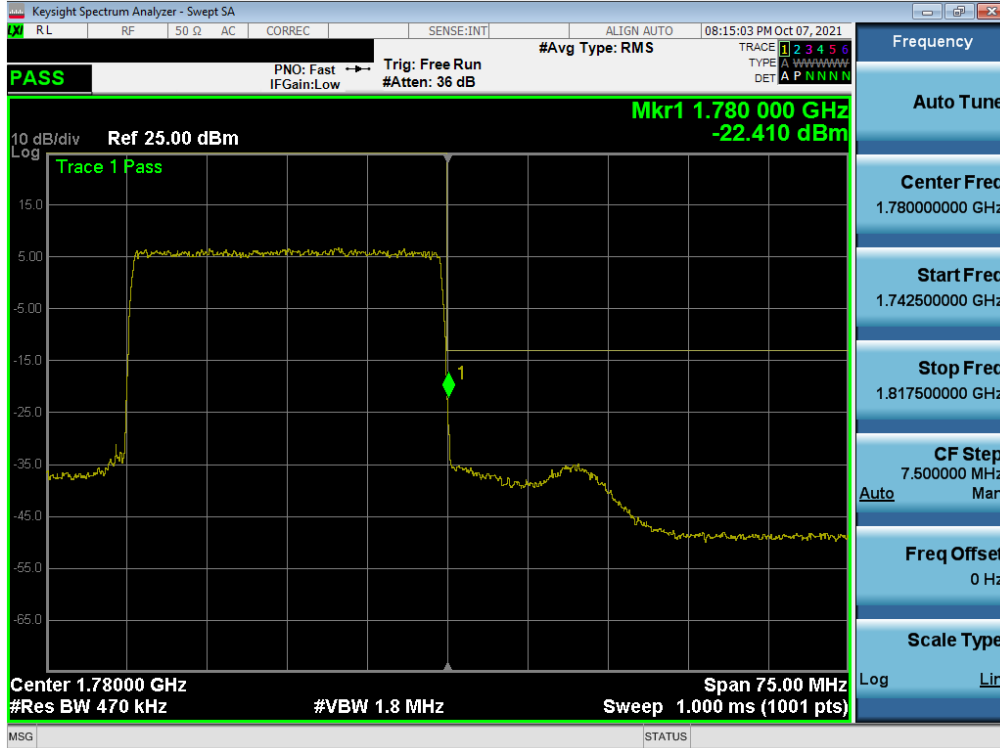


Plot 7-272. Lower Band Edge Plot (NR Band n66 – 30.0MHz - Full RB - Ant I)

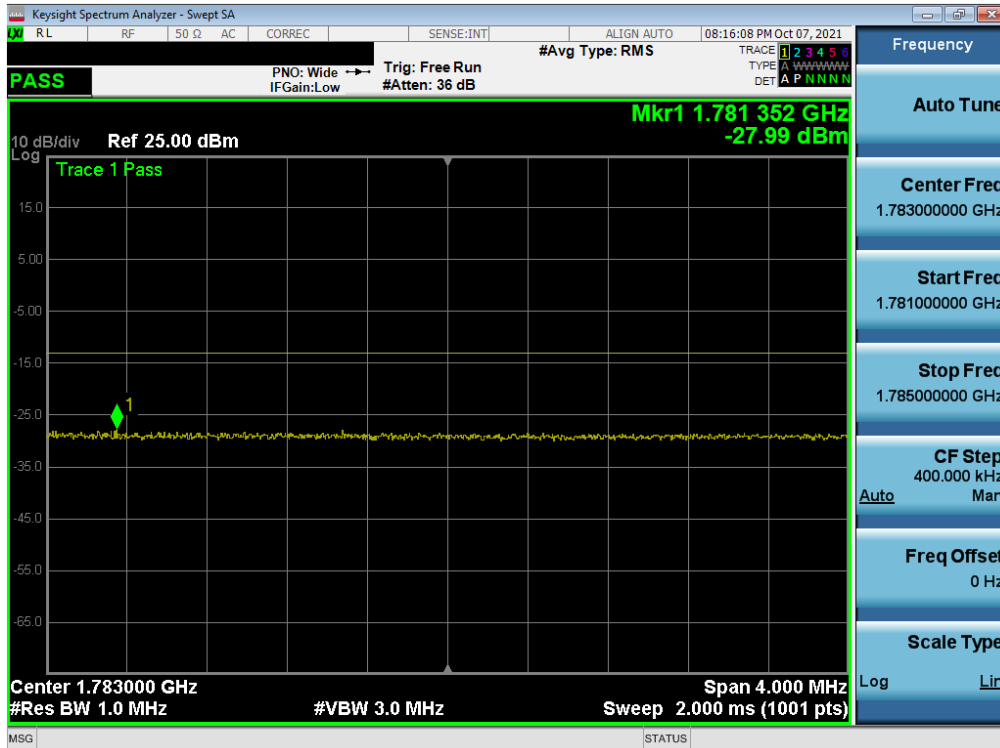


Plot 7-273. Lower Extended Band Edge Plot (NR Band n66 – 30.0MHz - Full RB - Ant I)

FCC ID: A3LSMS906U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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Plot 7-274. Upper Band Edge Plot (NR Band n66 – 30.0MHz - Full RB - Ant I)



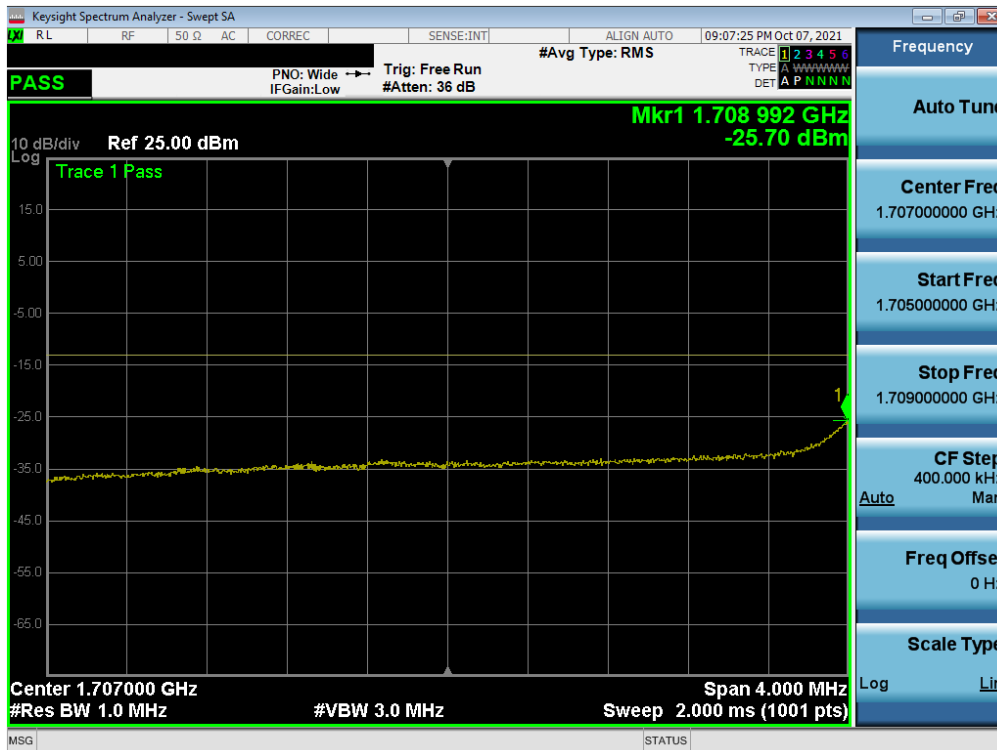
Plot 7-275. Upper Extended Band Edge Plot (NR Band n66 – 30.0MHz - Full RB - Ant I)

FCC ID: A3LSMS906U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-276. Lower Band Edge Plot (NR Band n66 – 20.0MHz - Full RB - Ant I)

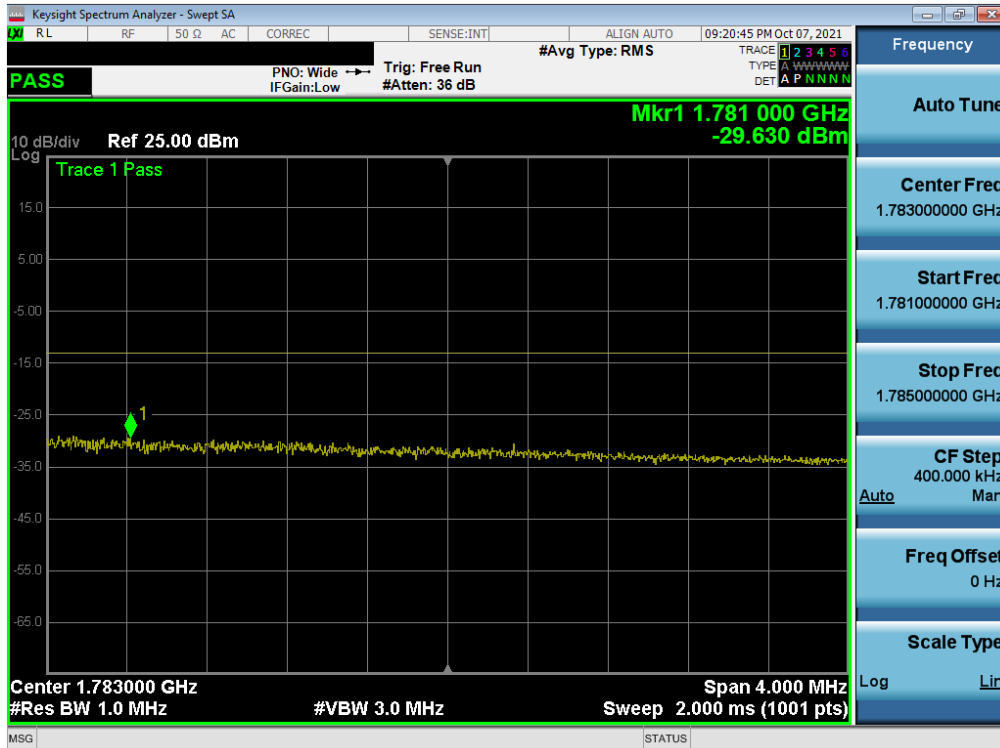


Plot 7-277. Lower Extended Band Edge Plot (NR Band n66 – 20.0MHz - Full RB - Ant I)

FCC ID: A3LSMS906U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 164 of 253

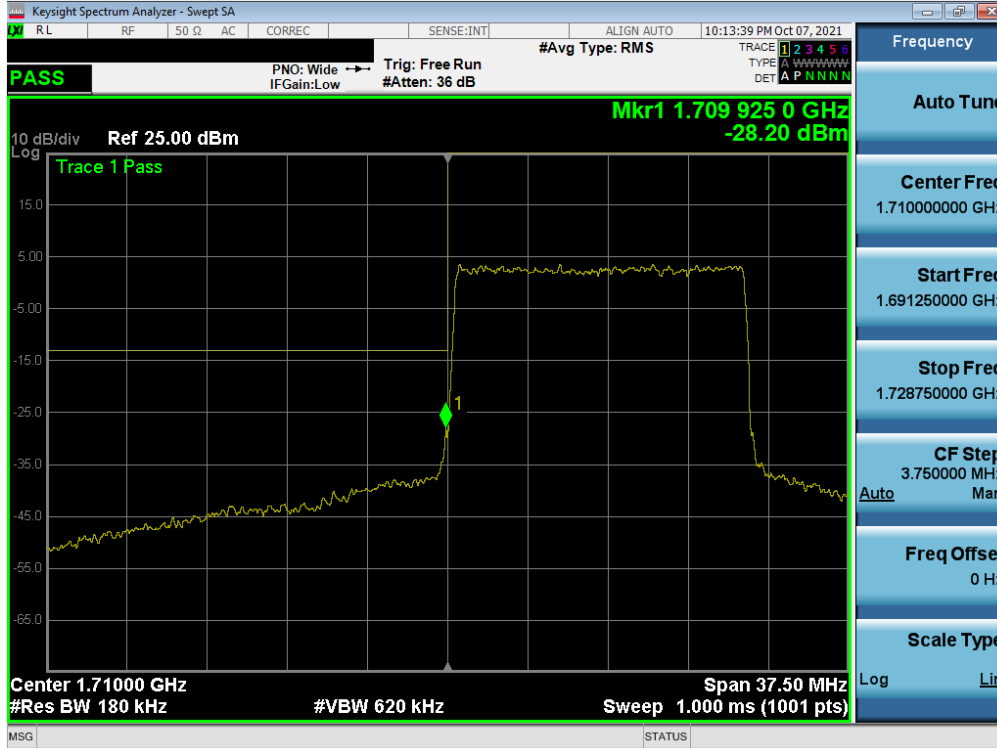


Plot 7-278. Upper Band Edge Plot (NR Band n66 – 20.0MHz - Full RB - Ant I)

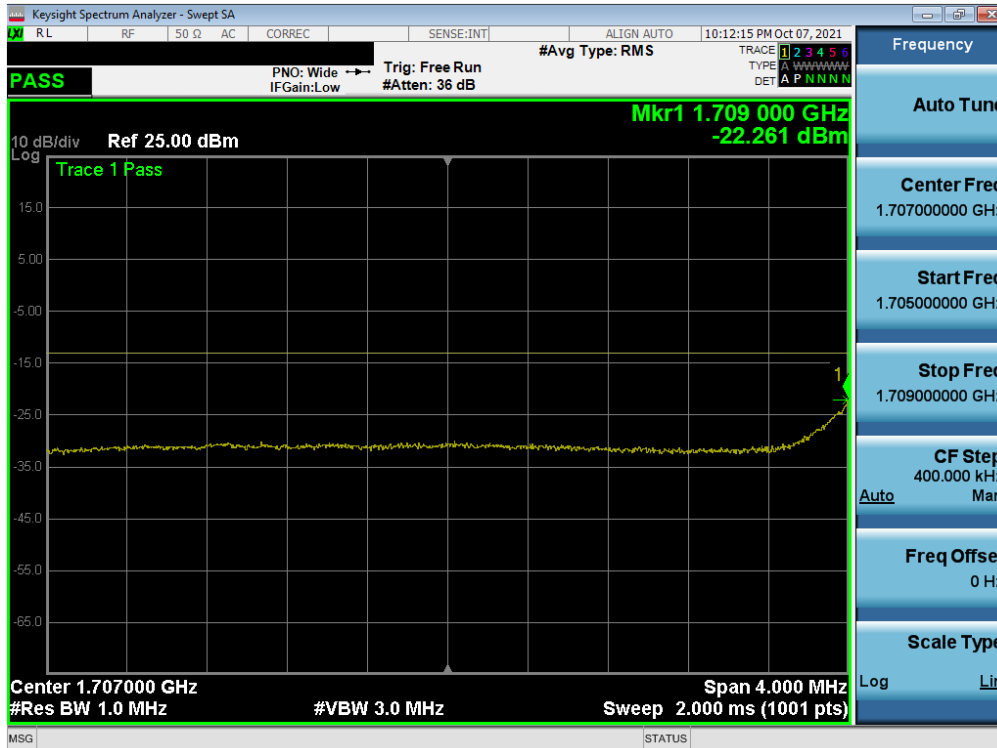


Plot 7-279. Upper Extended Band Edge Plot (NR Band n66 – 20.0MHz - Full RB - Ant I)

FCC ID: A3LSMS906U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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Plot 7-280. Lower Band Edge Plot (NR Band n66 – 15.0MHz - Full RB - Ant I)



Plot 7-281. Lower Extended Band Edge Plot (NR Band n66 – 15.0MHz - Full RB - Ant I)

FCC ID: A3LSMS906U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-282. Upper Band Edge Plot (NR Band n66 - 15.0MHz - Full RB - Ant I)

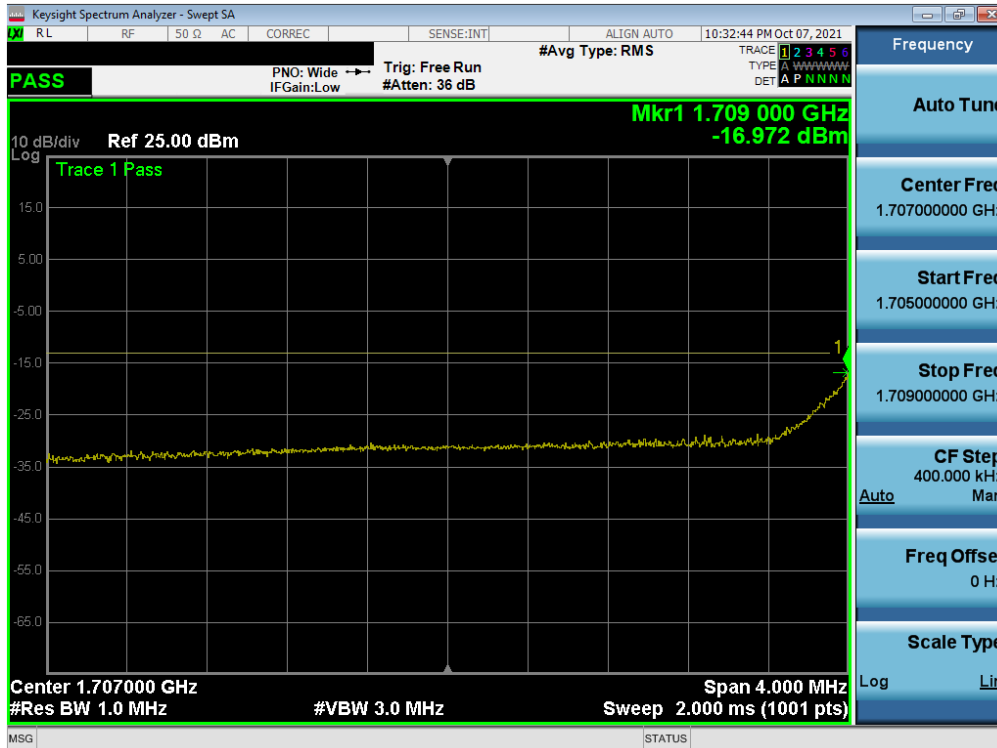


Plot 7-283. Upper Extended Band Edge Plot (NR Band n66 - 15.0MHz - Full RB - Ant I)

FCC ID: A3LSMS906U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 167 of 253



Plot 7-284. Lower Band Edge Plot (NR Band n66 – 10.0MHz - Full RB - Ant I)

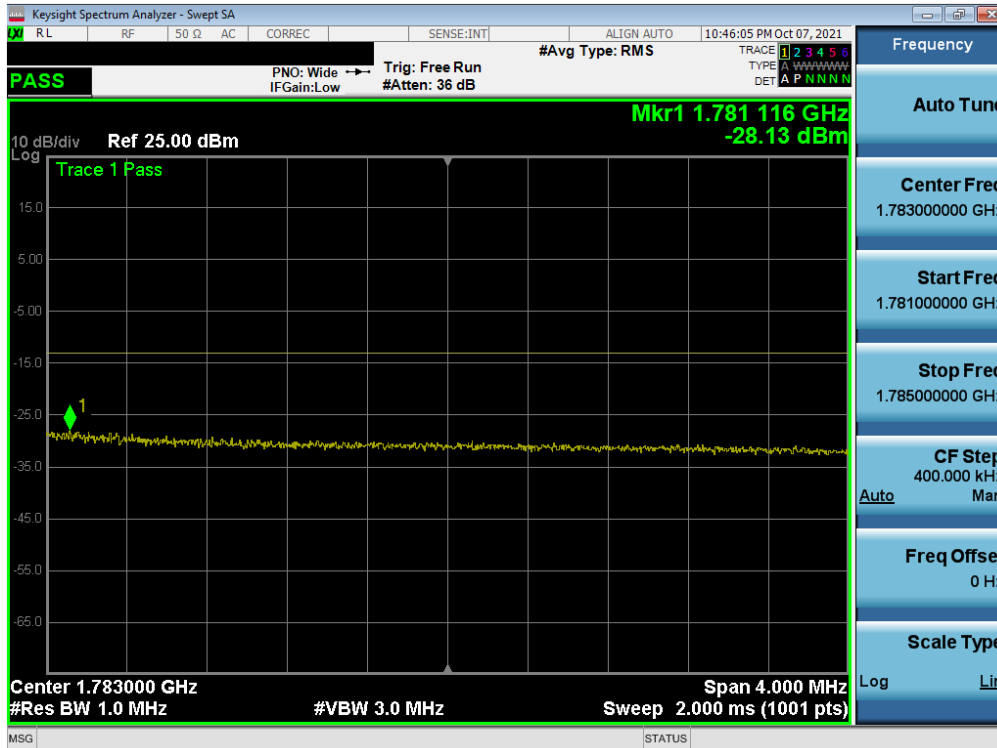


Plot 7-285. Lower Extended Band Edge Plot (NR Band n66 – 10.0MHz - Full RB - Ant I)

FCC ID: A3LSMS906U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 168 of 253



Plot 7-286. Upper Band Edge Plot (NR Band n66 – 10.0MHz - Full RB - Ant I)

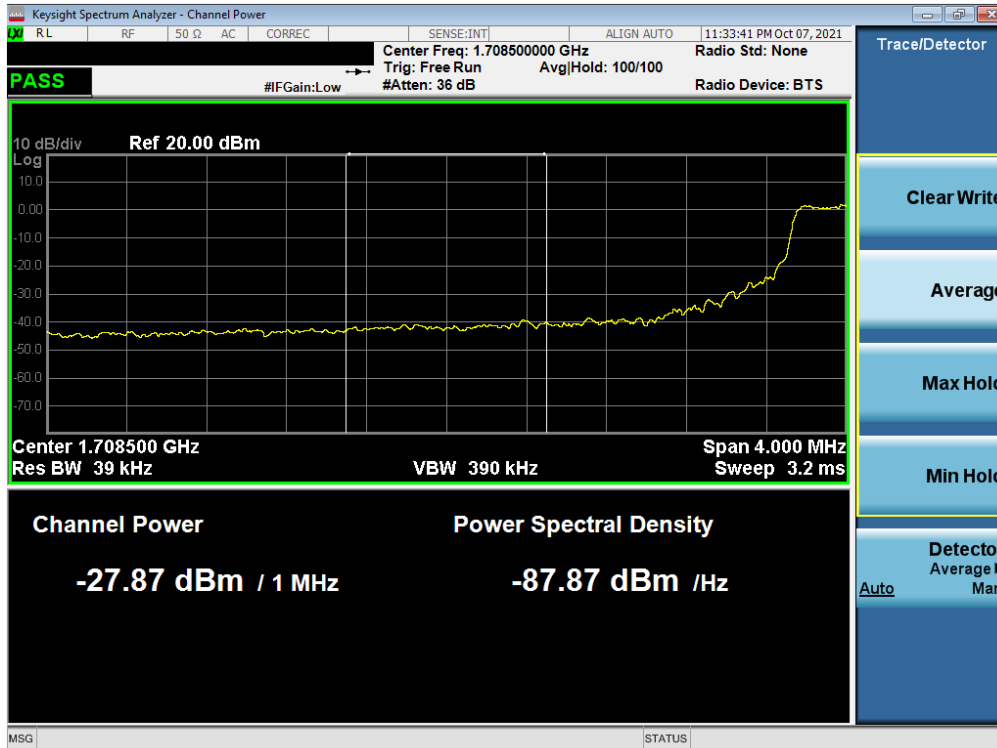


Plot 7-287. Upper Extended Band Edge Plot (NR Band n66 – 10.0MHz - Full RB - Ant I)

FCC ID: A3LSMS906U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-288. Lower Band Edge Plot (NR Band n66 – 5.0MHz - Full RB - Ant I)

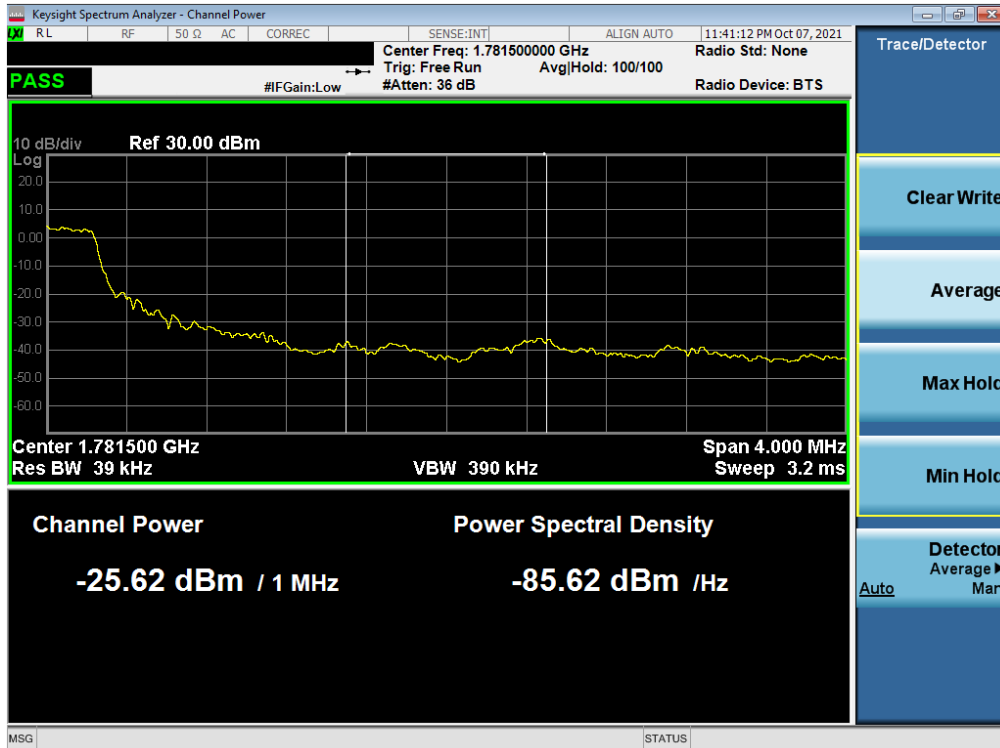


Plot 7-289. Lower Extended Band Edge Plot (NR Band n66 – 5.0MHz - Full RB - Ant I)

FCC ID: A3LSMS906U	PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-290. Upper Band Edge Plot (NR Band n66 – 5.0MHz - Full RB - Ant I)



Plot 7-291. Upper Extended Band Edge Plot (NR Band n66 – 5.0MHz - Full RB - Ant I)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 171 of 253



## 7.6 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  $\geq$  OBW or specified reference bandwidth
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.

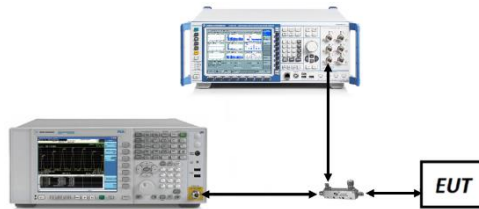


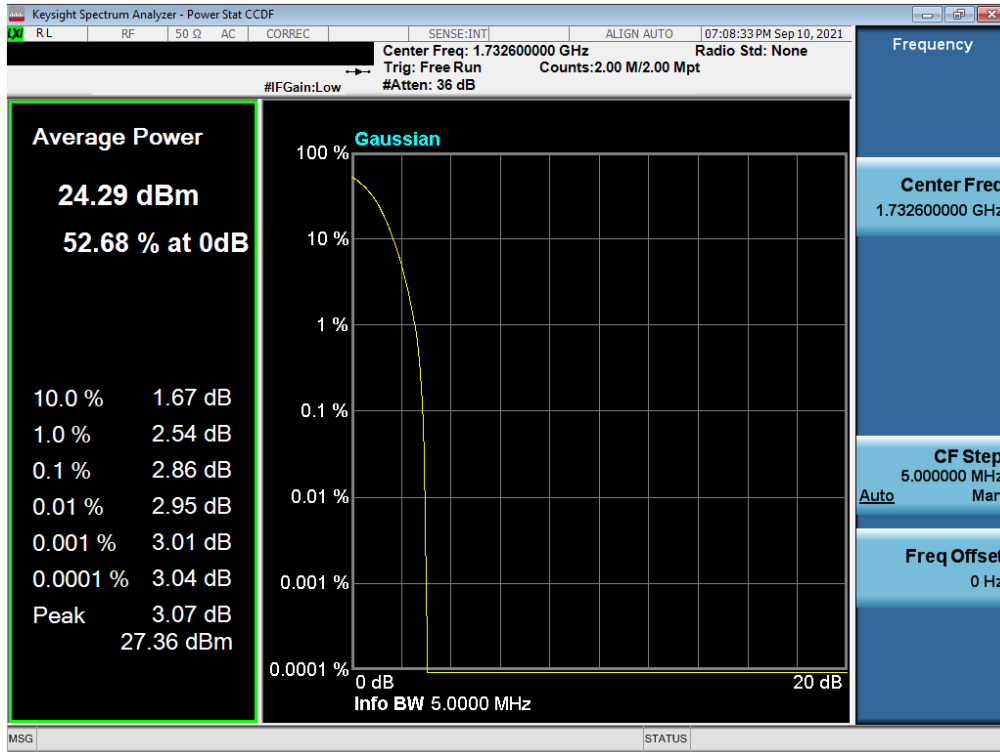
Figure 7-5. Test Instrument & Measurement Setup

### Test Notes

None.

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 172 of 253

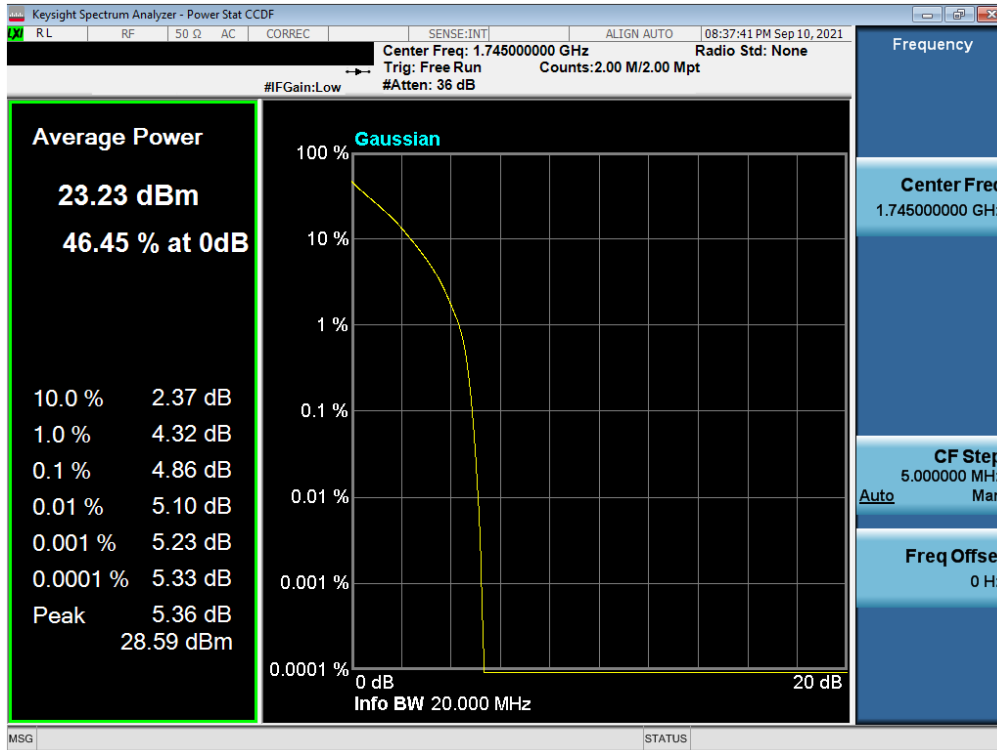
# WCDMA AWS



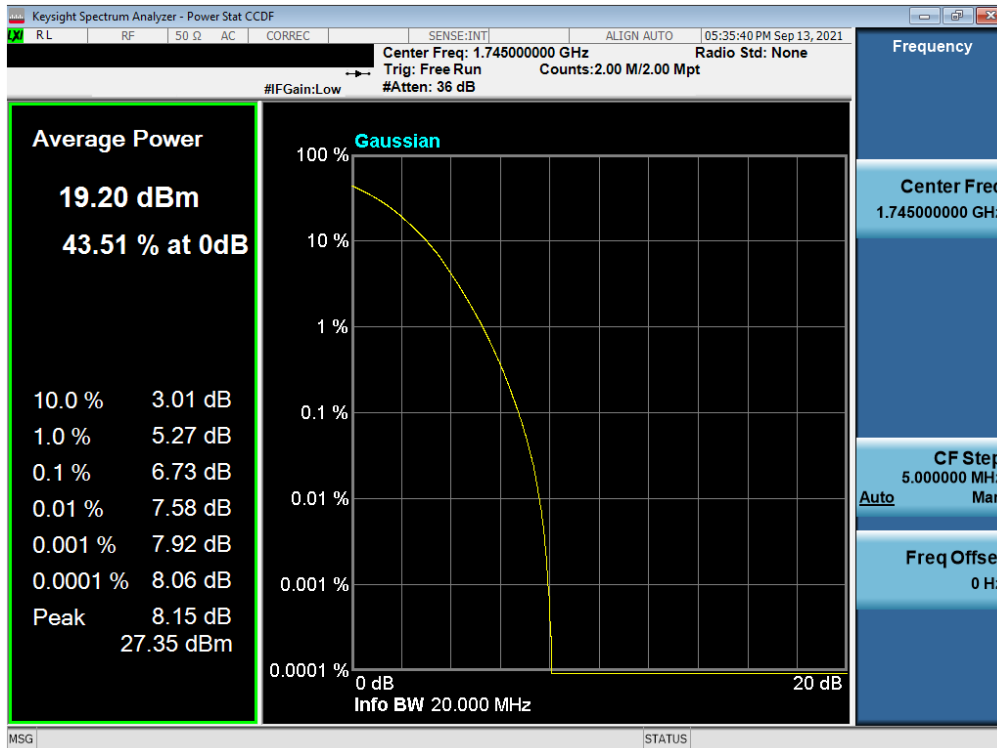
Plot 7-292. PAR Plot (WCDMA, Ch. 1413)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 173 of 253

### LTE Band 66/4

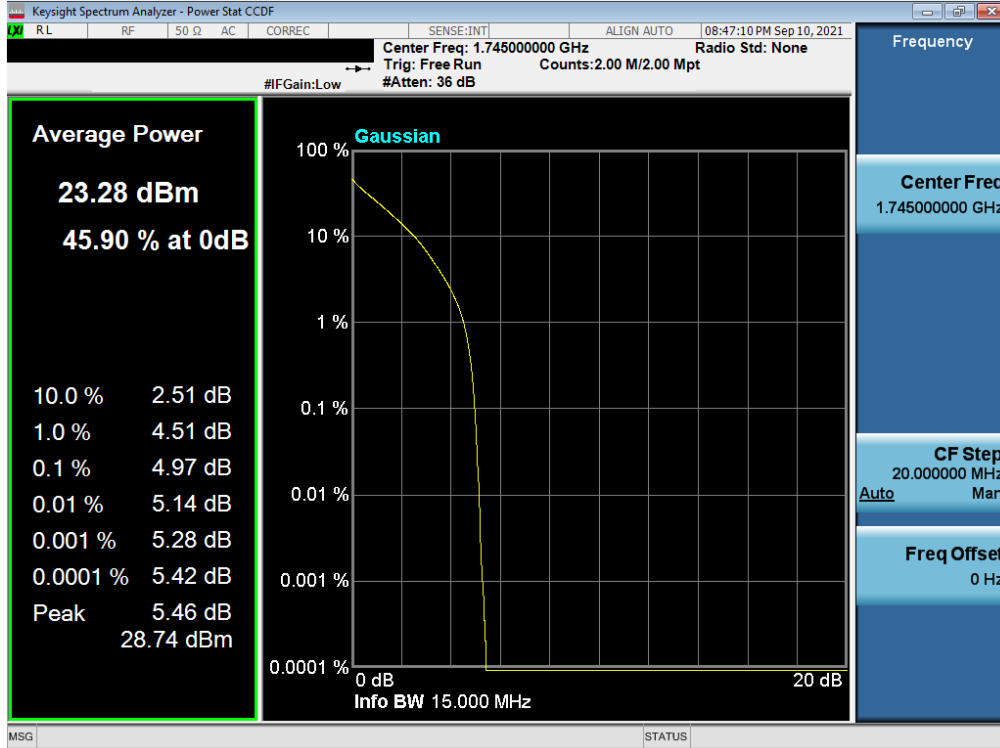


Plot 7-293. PAR Plot (LTE Band 66/4 - 20MHz QPSK - Full RB)

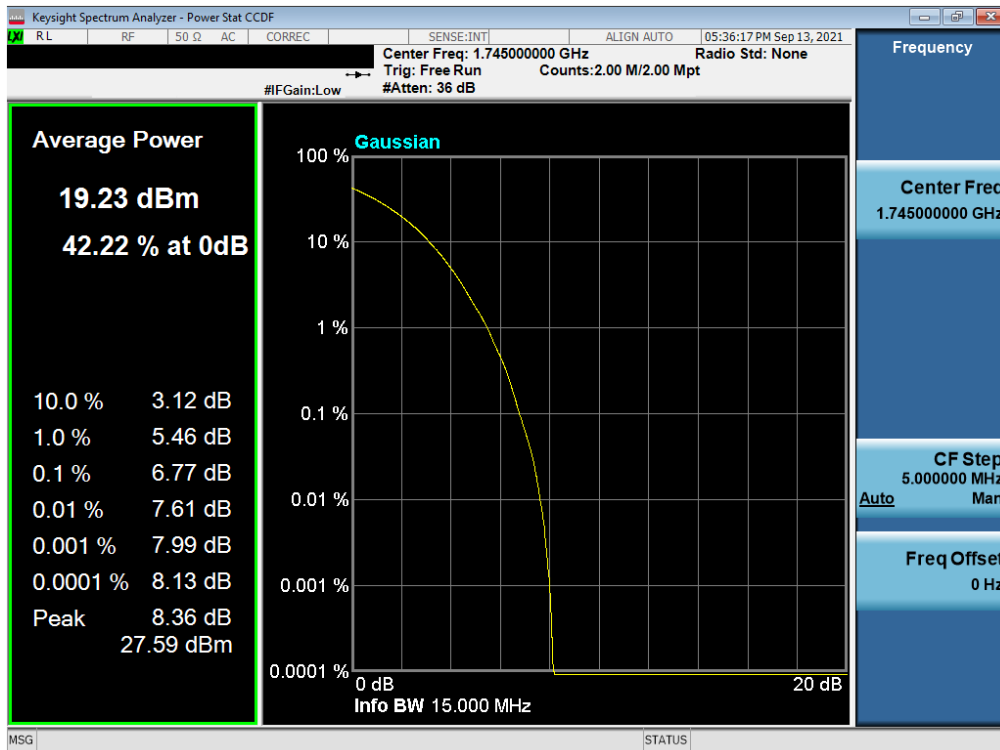


Plot 7-294. PAR Plot (LTE Band 66/4 - 20MHz 256-QAM - Full RB)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 174 of 253

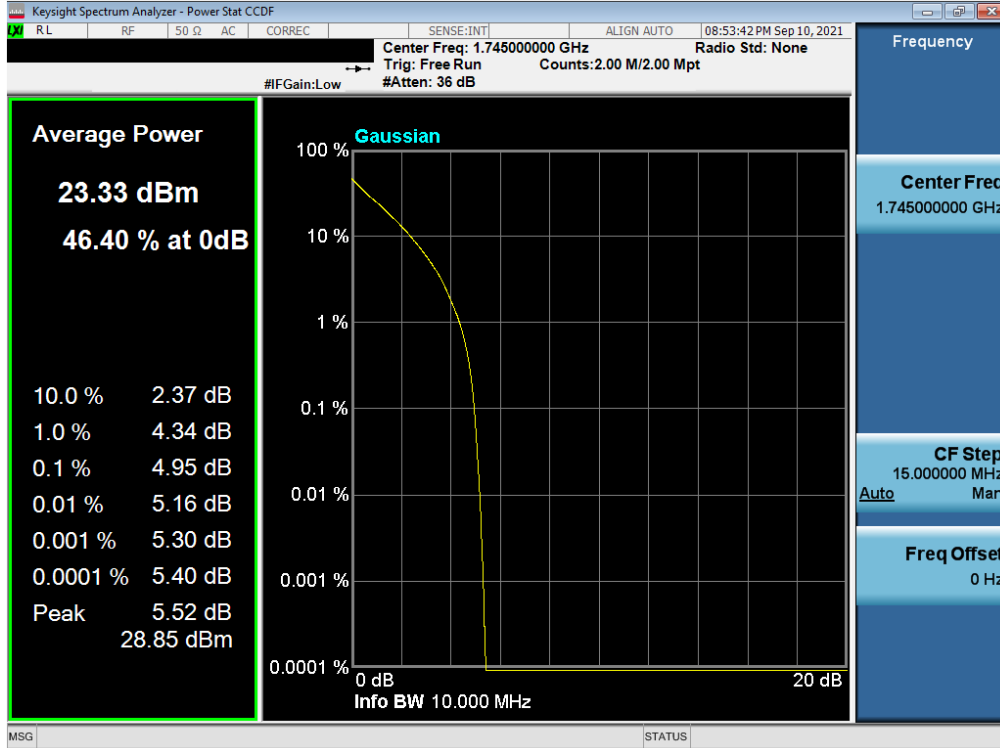


Plot 7-295. PAR Plot (LTE Band 66/4 - 15MHz QPSK - Full RB)

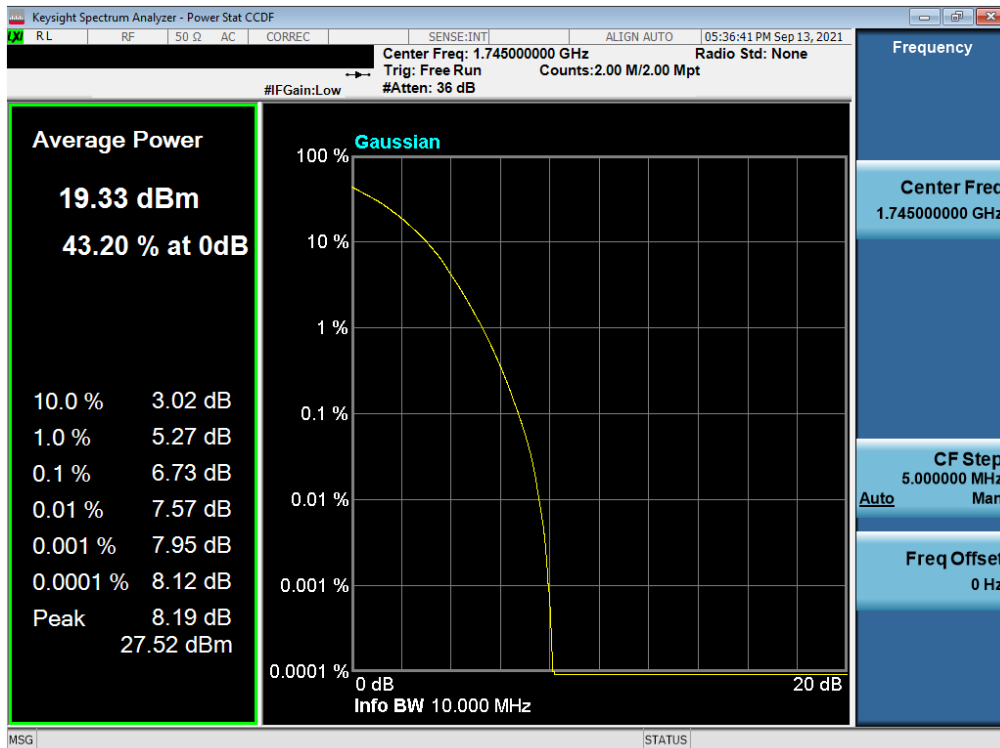


Plot 7-296. PAR Plot (LTE Band 66/4 - 15MHz 256-QAM - Full RB)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 175 of 253

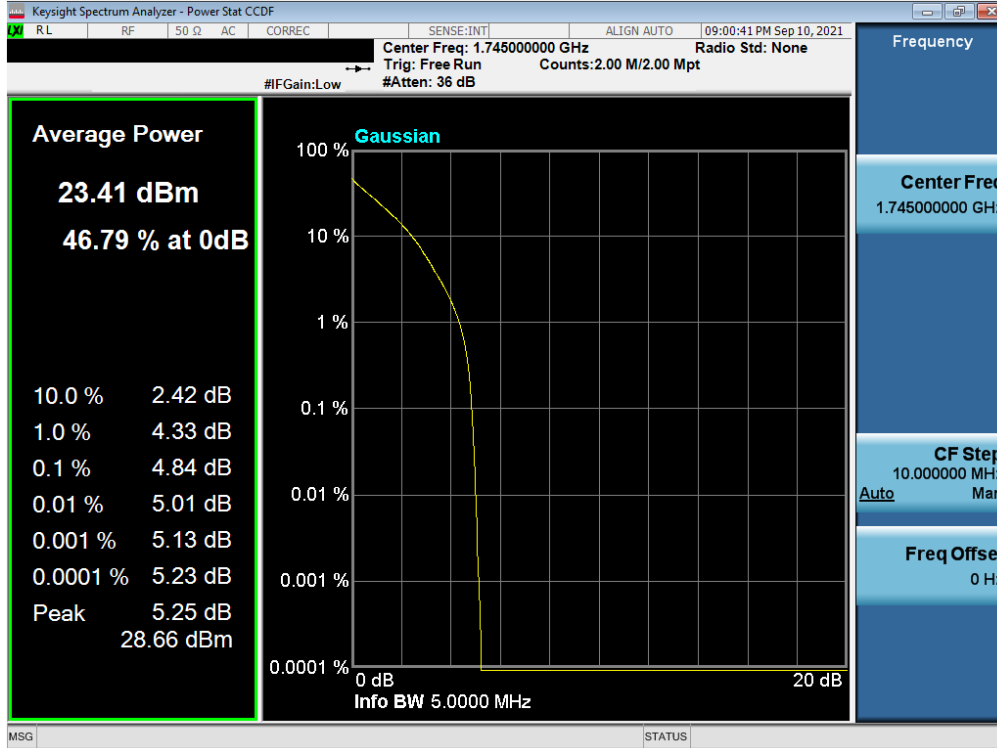


Plot 7-297. PAR Plot (LTE Band 66/4 - 10MHz QPSK - Full RB)

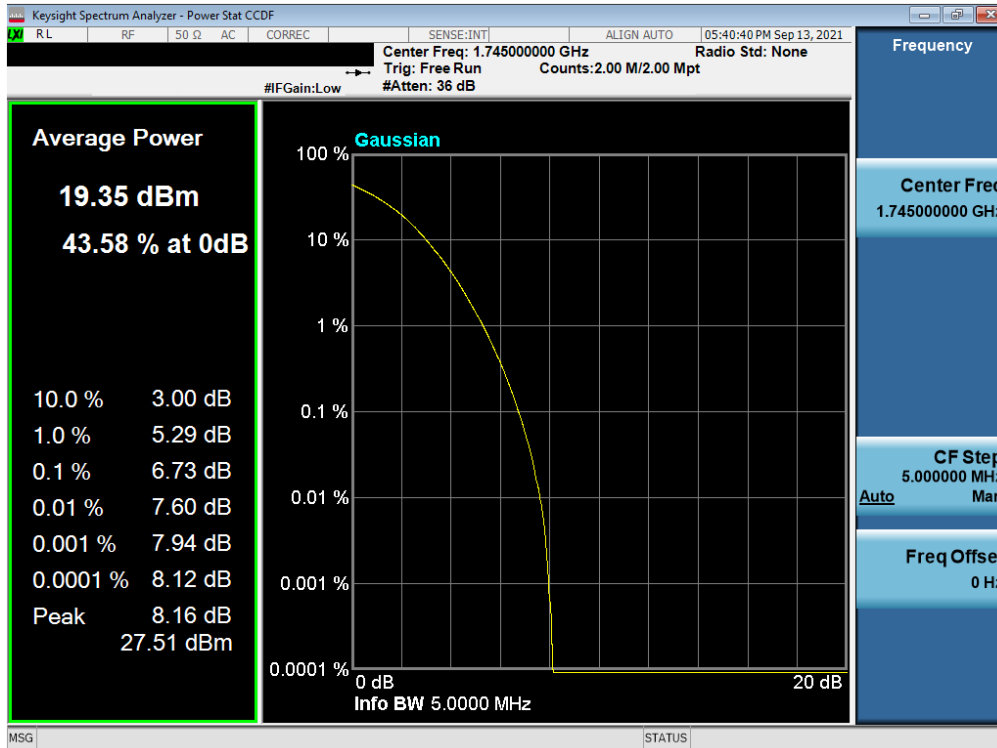


Plot 7-298. PAR Plot (LTE Band 66/4 - 10MHz 256-QAM - Full RB)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 176 of 253

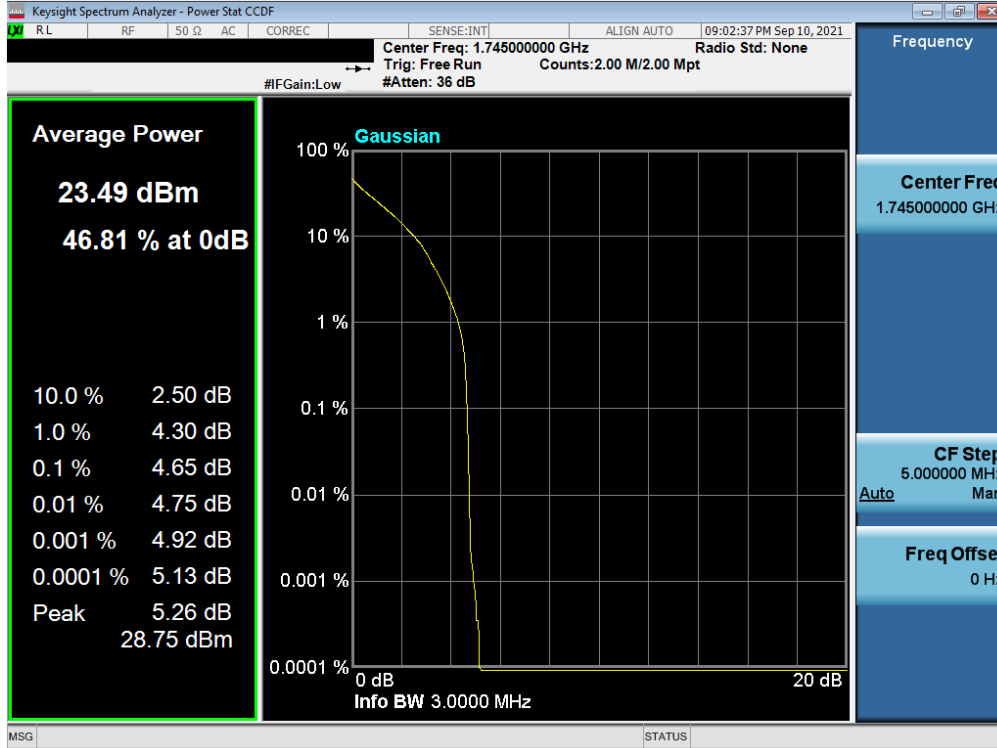


Plot 7-299. PAR Plot (LTE Band 66/4 - 5MHz QPSK - Full RB)

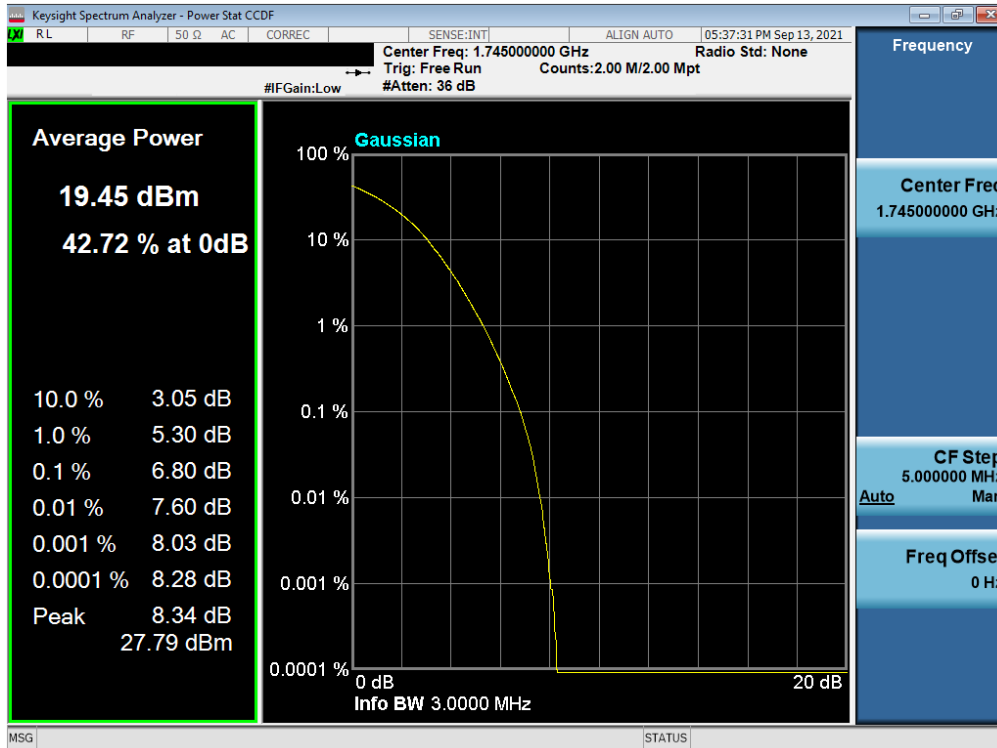


Plot 7-300. PAR Plot (LTE Band 66/4 - 5MHz 256-QAM - Full RB)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 177 of 253

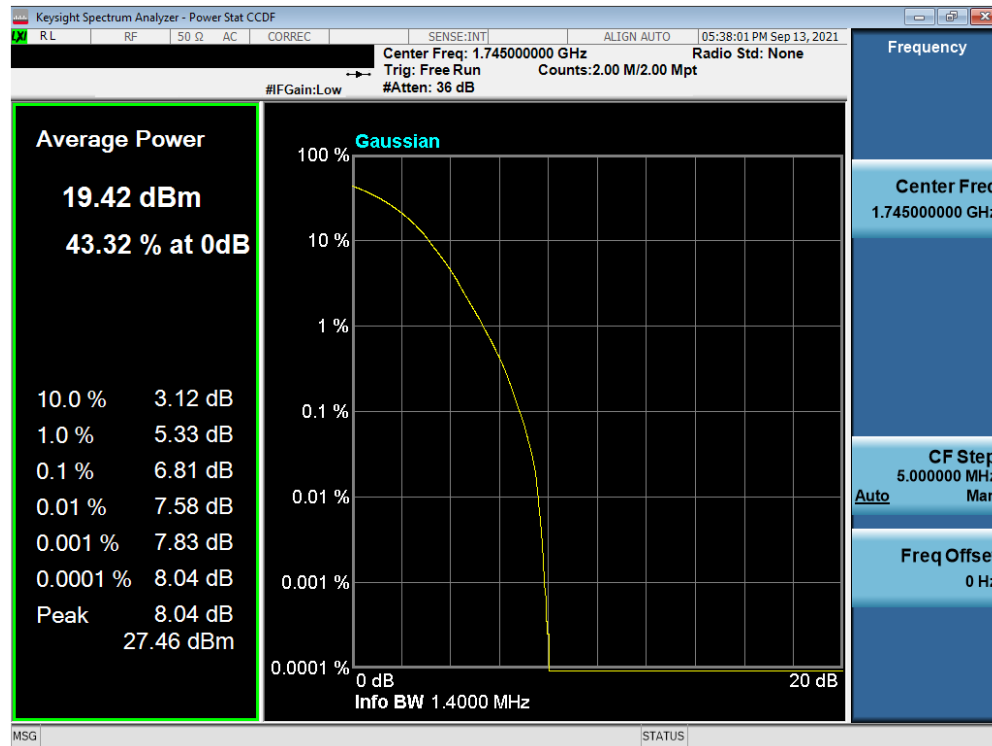
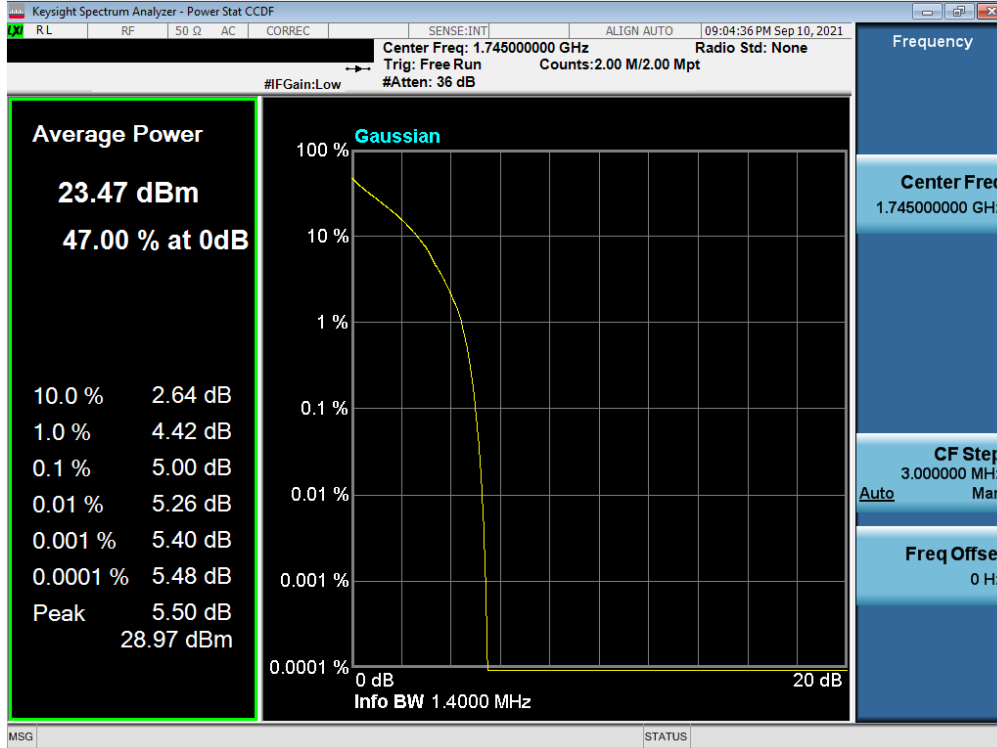


Plot 7-301. PAR Plot (LTE Band 66/4 - 3MHz QPSK - Full RB)



Plot 7-302. PAR Plot (LTE Band 66/4 - 3MHz 256-QAM - Full RB)

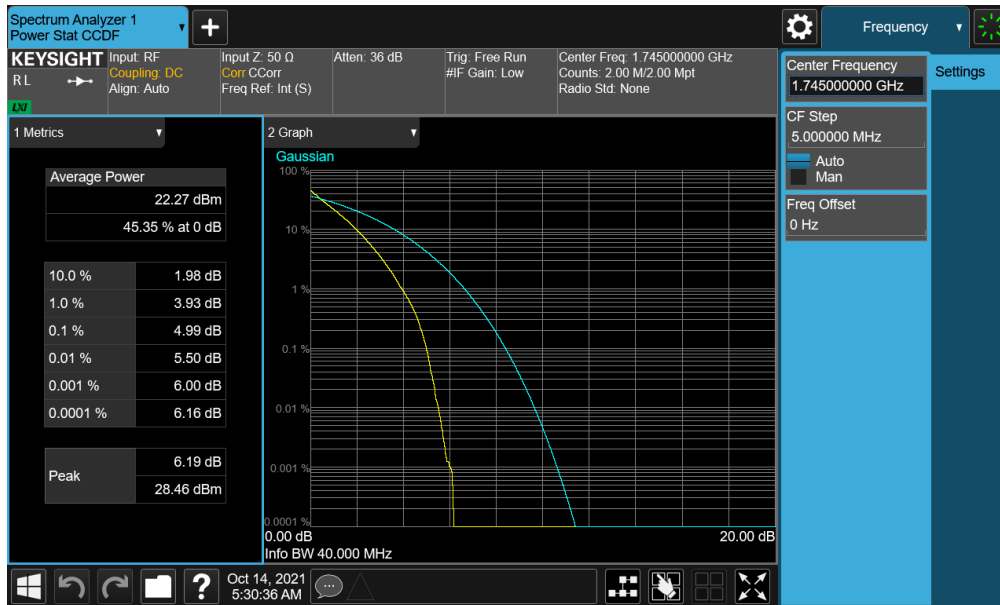
FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 178 of 253



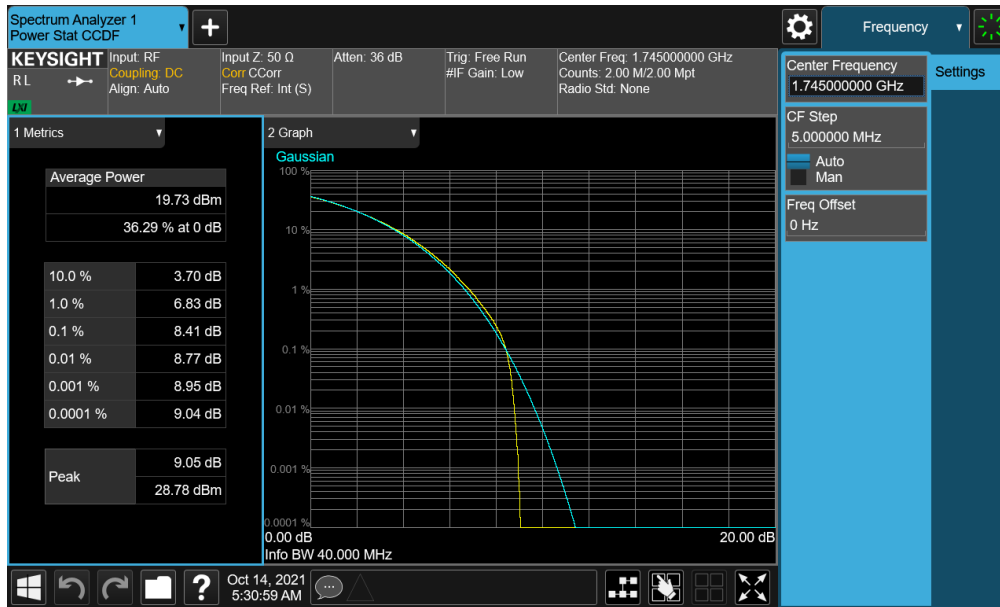
FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 179 of 253



## NR Band n66 – Ant A



**Plot 7-305. PAR Plot (NR Band n66 - 40.0MHz DFT-s-OFDM BPSK - Full RB – Ant A)**



**Plot 7-306. PAR Plot (NR Band n66 - 40.0MHz CP-OFDM QPSK - Full RB - Ant A)**

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 180 of 253



Plot 7-307. PAR Plot (NR Band n66 - 40.0MHz CP-OFDM 256-QAM - Full RB - Ant A)



Plot 7-308. PAR Plot (NR Band n66 - 30.0MHz DFT-s-OFDM BPSK - Full RB - Ant A)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of  element	<b>PART 27 MEASUREMENT REPORT</b>		<b>Approved by:</b> Technical Manager
<b>Test Report S/N:</b> 1M2109090103-04-R1.A3L	<b>Test Dates:</b> 09/09/2021 - 11/10/2021	<b>EUT Type:</b> Portable Handset		Page 181 of 253

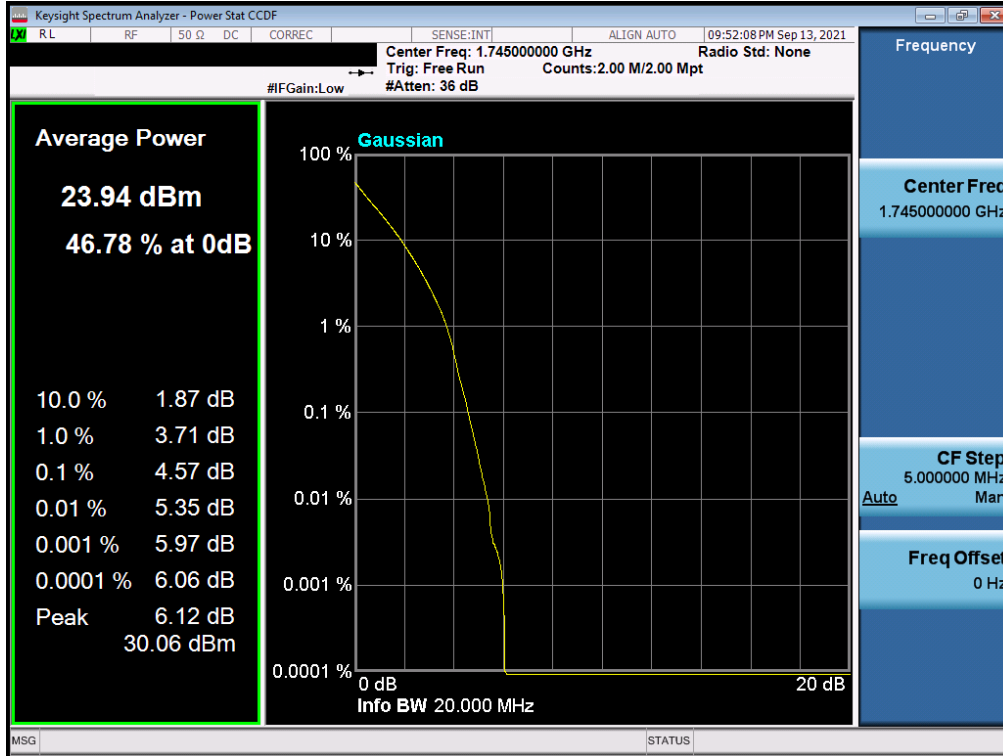


Plot 7-309. PAR Plot (NR Band n66 - 30.0MHz CP-OFDM QPSK - Full RB - Ant A)

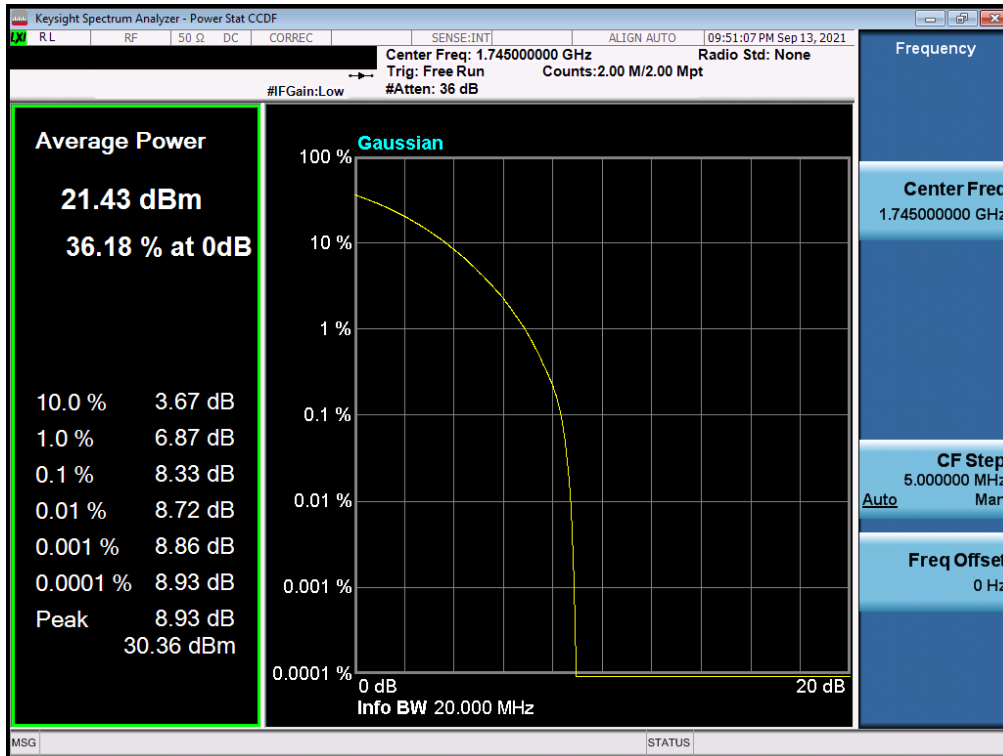


Plot 7-310. PAR Plot (NR Band n66 - 30.0MHz CP-OFDM 256-QAM - Full RB - Ant A)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of  element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 182 of 253

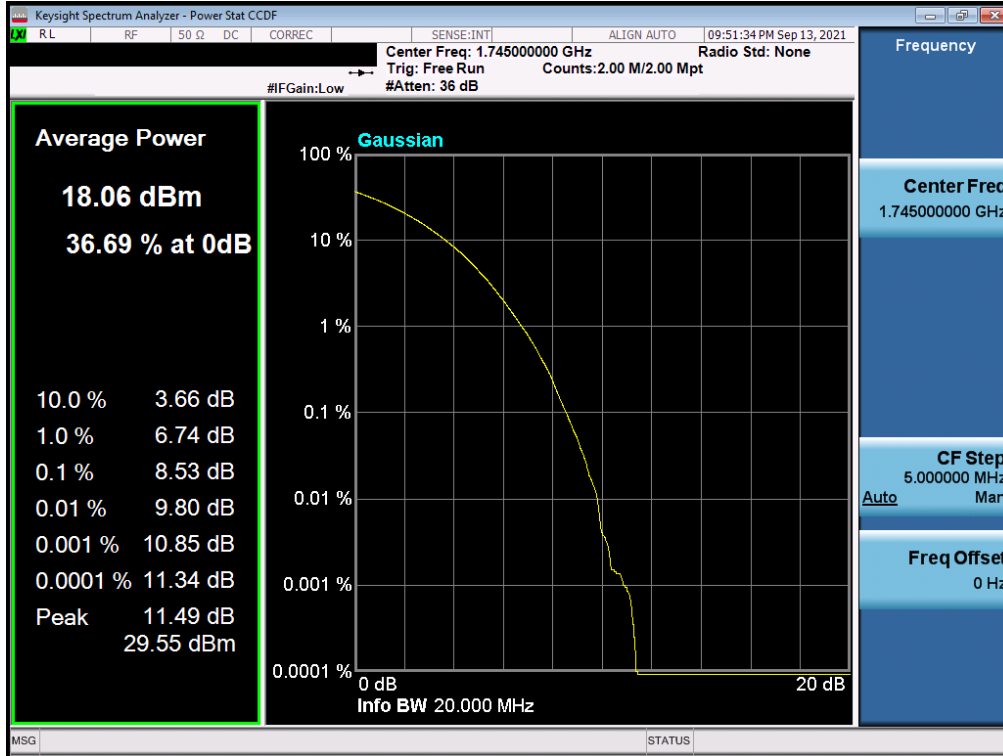


Plot 7-311. PAR Plot (NR Band n66 - 20.0MHz DFT-s-OFDM BPSK - Full RB - Ant A)

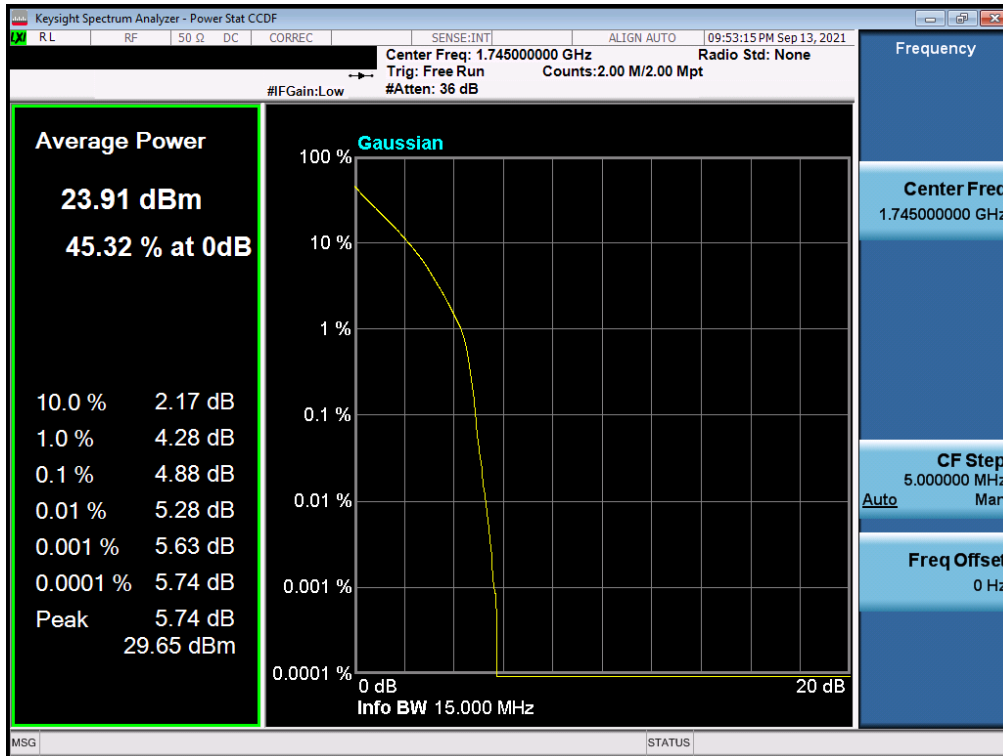


Plot 7-312. PAR Plot (NR Band n66 - 20.0MHz CP-OFDM QPSK - Full RB - Ant A)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 183 of 253

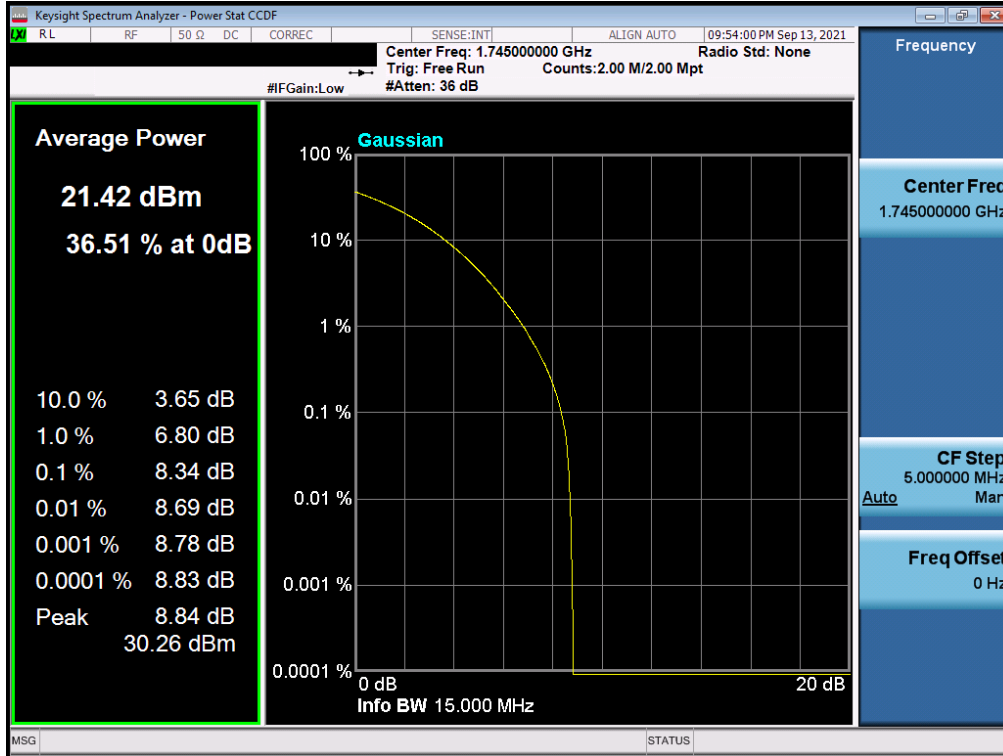


Plot 7-313. PAR Plot (NR Band n66 - 20.0MHz CP-OFDM 256-QAM - Full RB - Ant A)

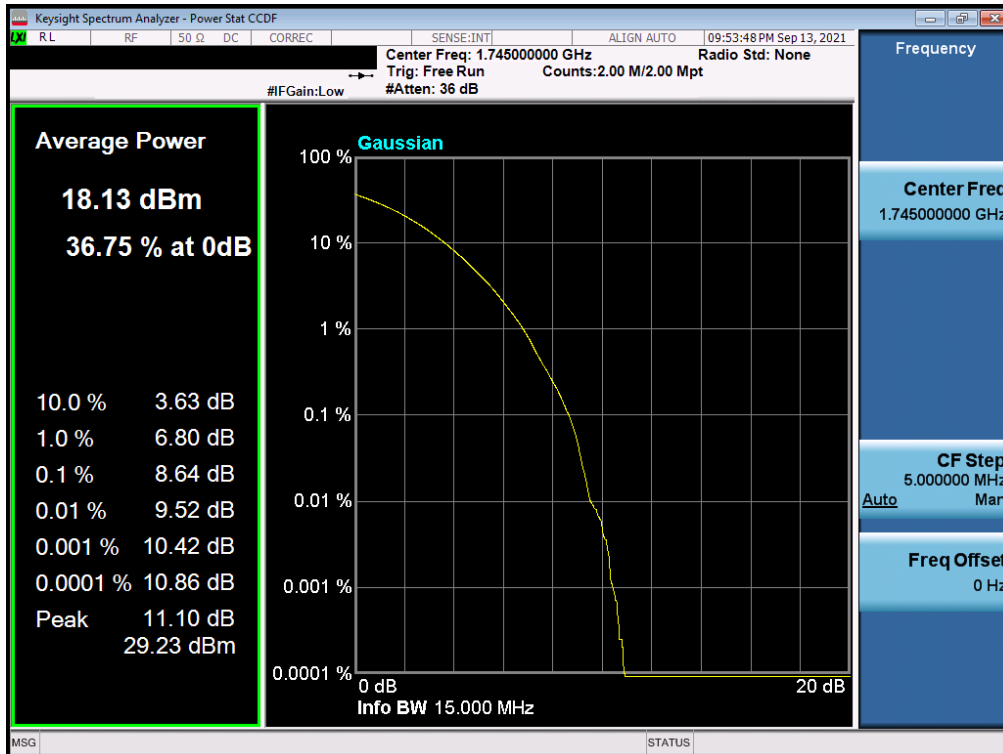


Plot 7-314. PAR Plot (NR Band n66 - 15.0MHz DFT-s-OFDM BPSK - Full RB - Ant A)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 184 of 253

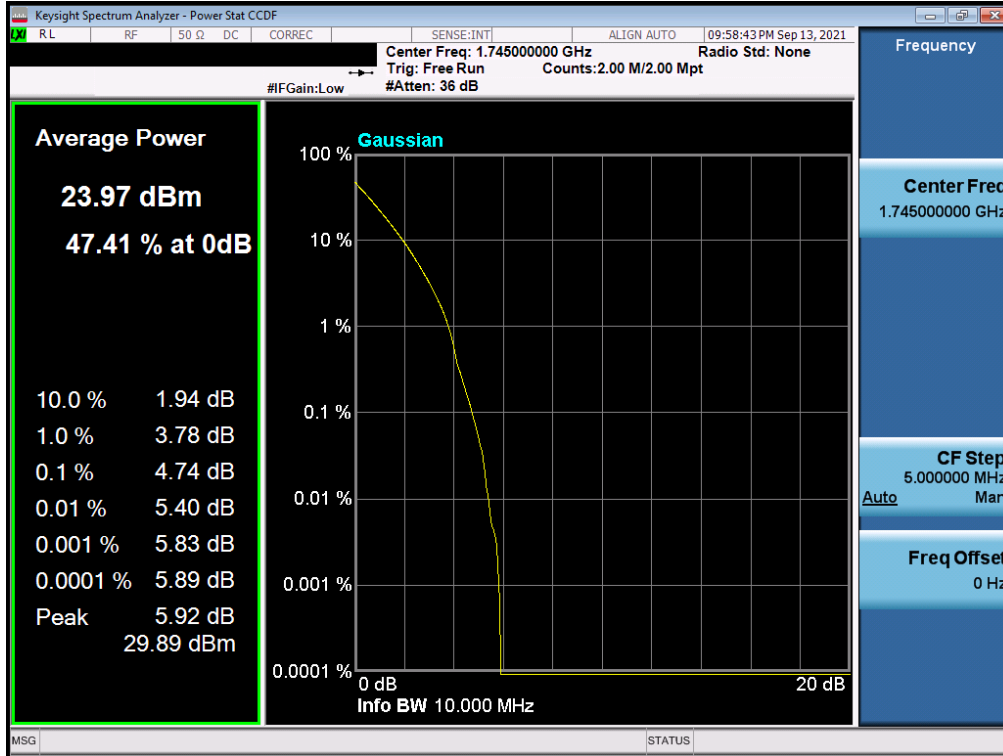


Plot 7-315. PAR Plot (NR Band n66 - 15.0MHz CP-OFDM QPSK - Full RB - Ant A)

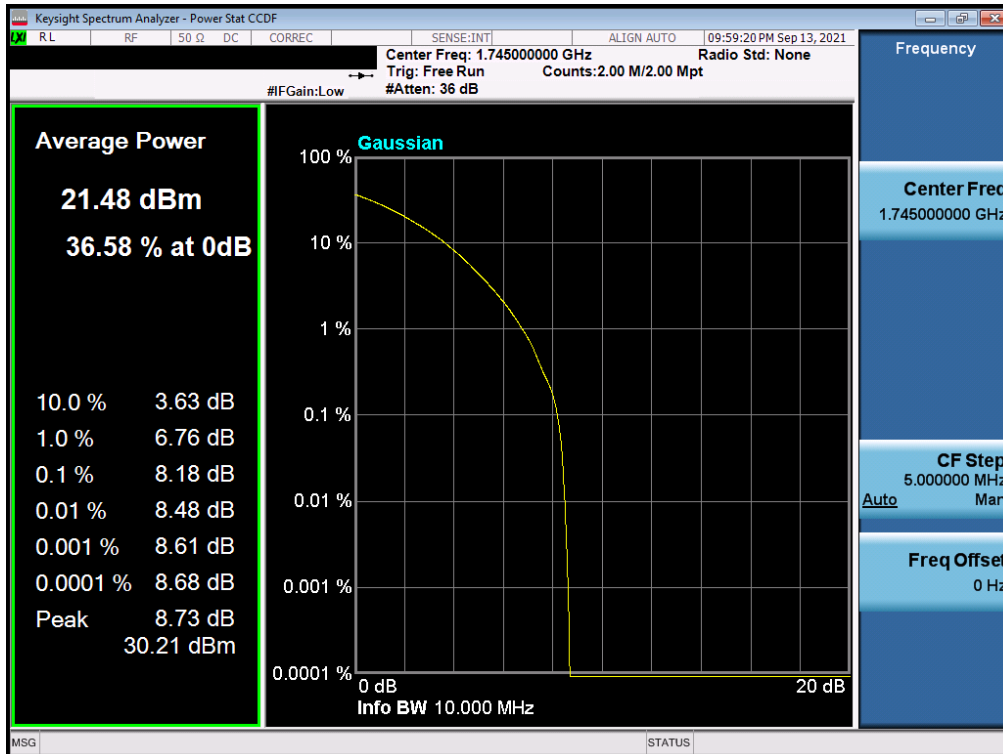


Plot 7-316. PAR Plot (NR Band n66 - 15.0MHz CP-OFDM 256-QAM - Full RB - Ant A)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 185 of 253

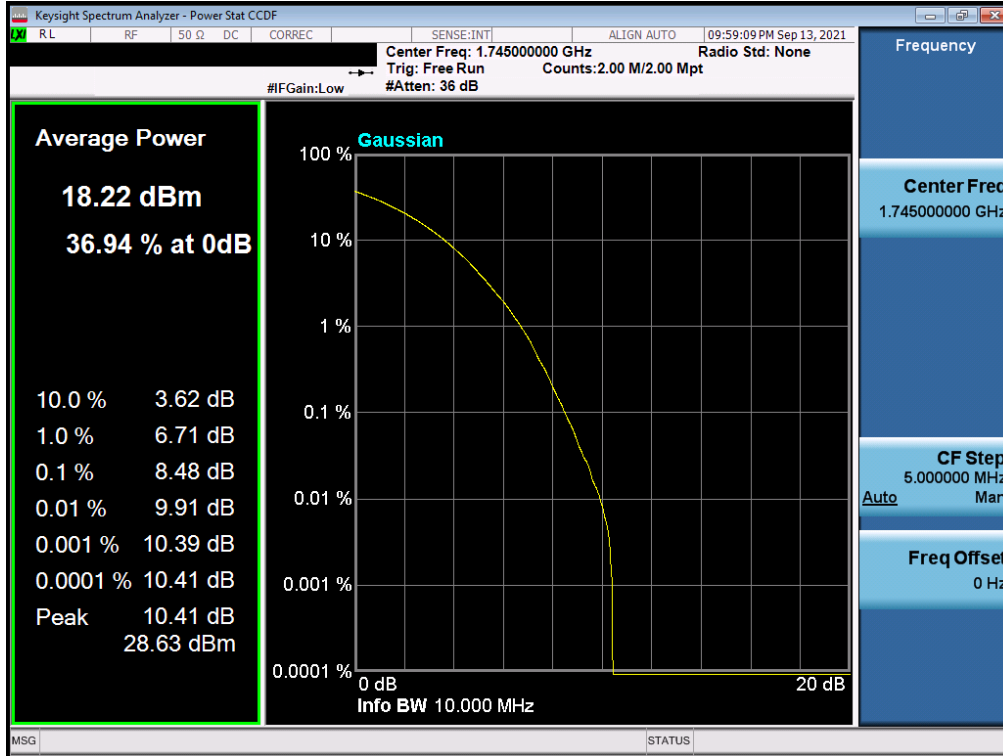


Plot 7-317. PAR Plot (NR Band n66 - 10.0MHz DFT-s-OFDM BPSK - Full RB - Ant A)

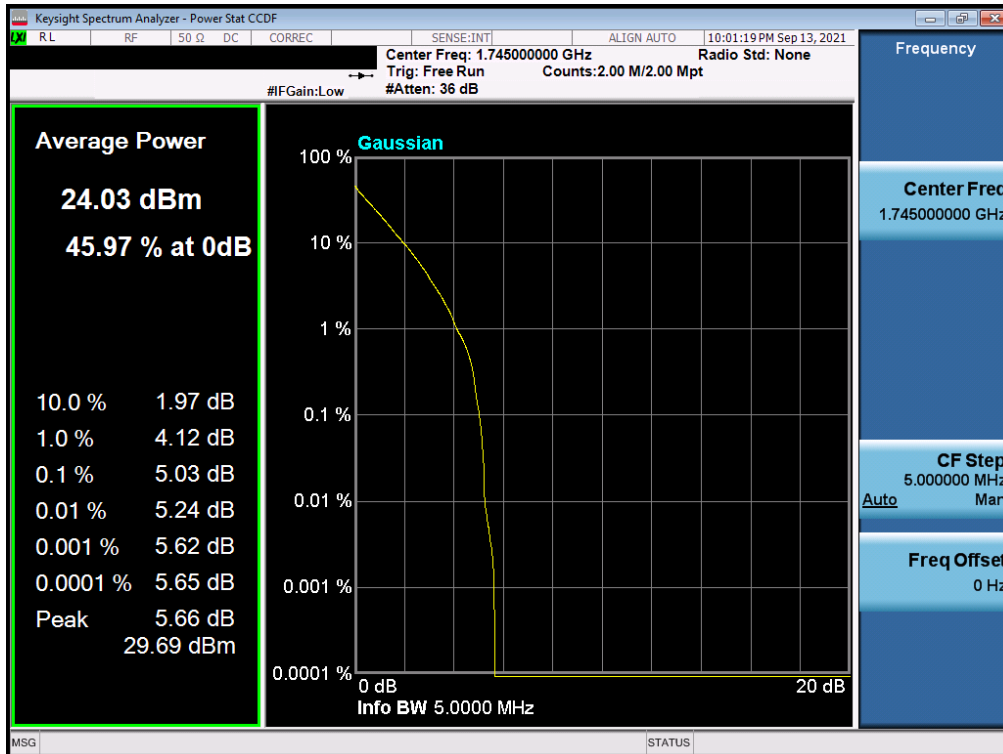


Plot 7-318. PAR Plot (NR Band n66 - 10.0MHz CP-OFDM QPSK - Full RB - Ant A)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 186 of 253



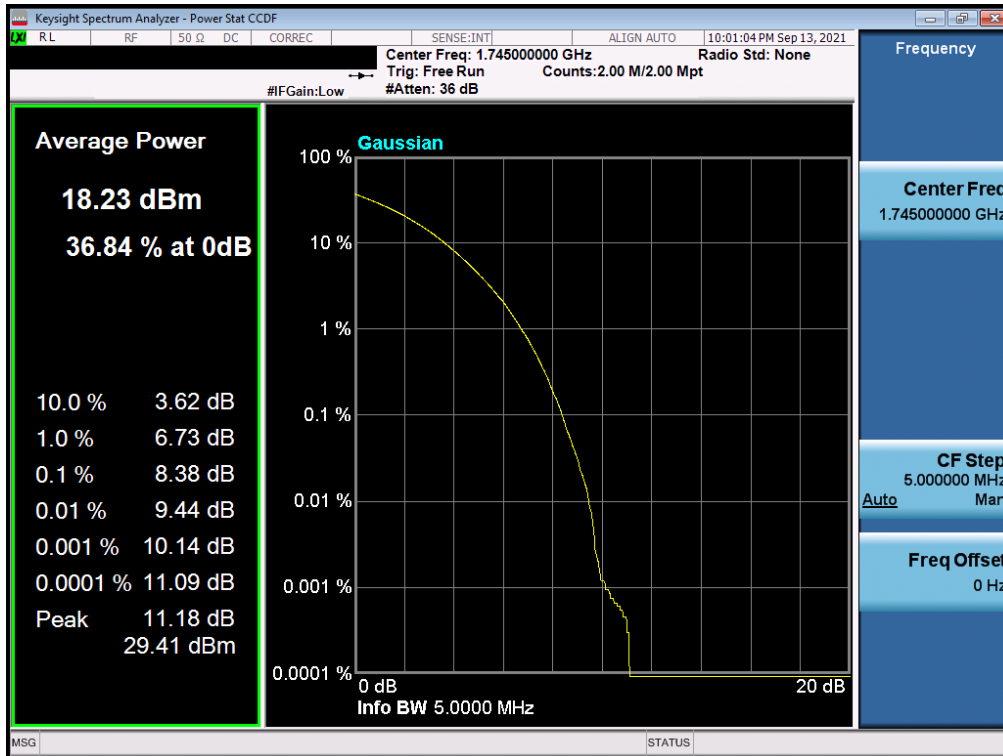
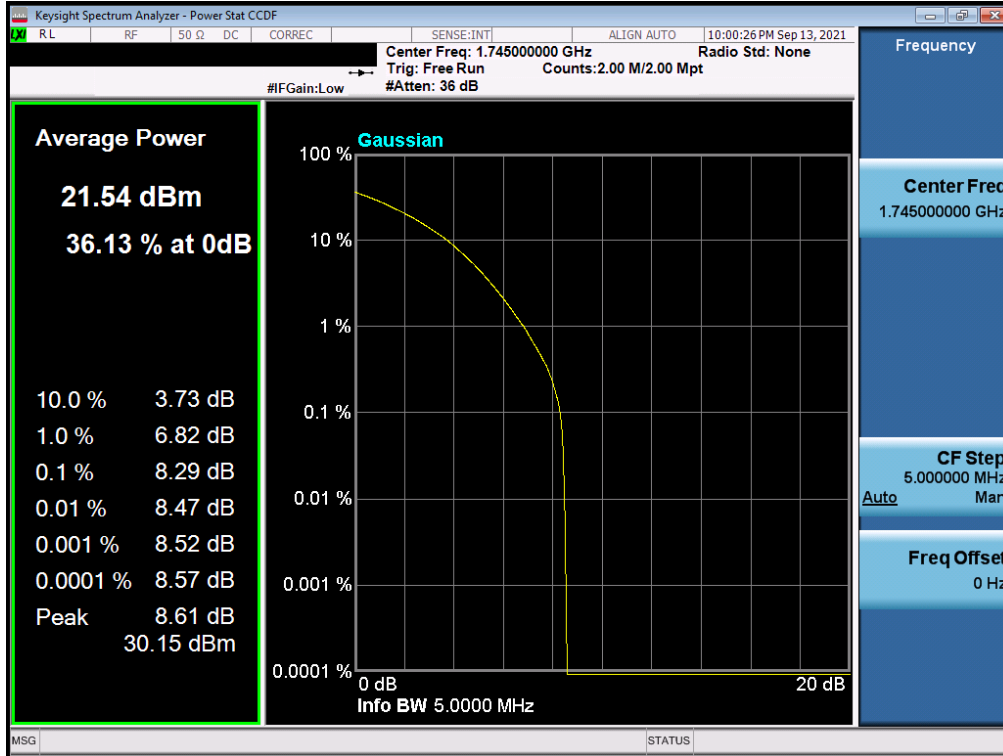
Plot 7-319. PAR Plot (NR Band n66 - 10.0MHz CP-OFDM 256-QAM - Full RB - Ant A)



Plot 7-320. PAR Plot (NR Band n66 - 5.0MHz DFT-s-OFDM BPSK - Full RB - Ant A)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 187 of 253



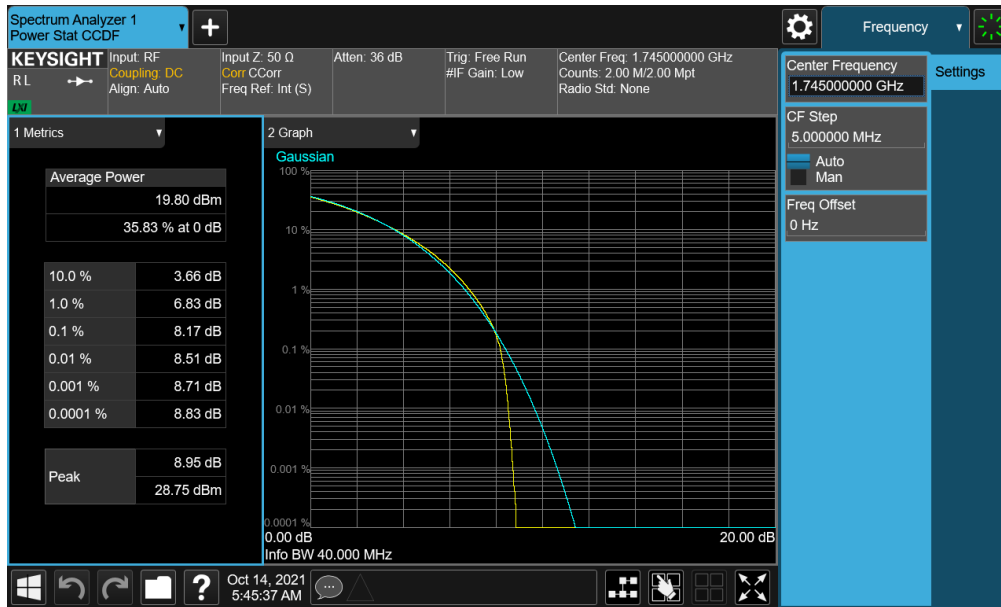


FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 188 of 253

## NR Band n66 – Ant I



Plot 7-323. PAR Plot (NR Band n66 - 40.0MHz DFT-s-OFDM BPSK - Full RB – Ant I)



Plot 7-324. PAR Plot (NR Band n66 - 40.0MHz CP-OFDM QPSK - Full RB - Ant I)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 189 of 253



**Plot 7-325. PAR Plot (NR Band n66 - 40.0MHz CP-OFDM 256-QAM - Full RB - Ant I)**

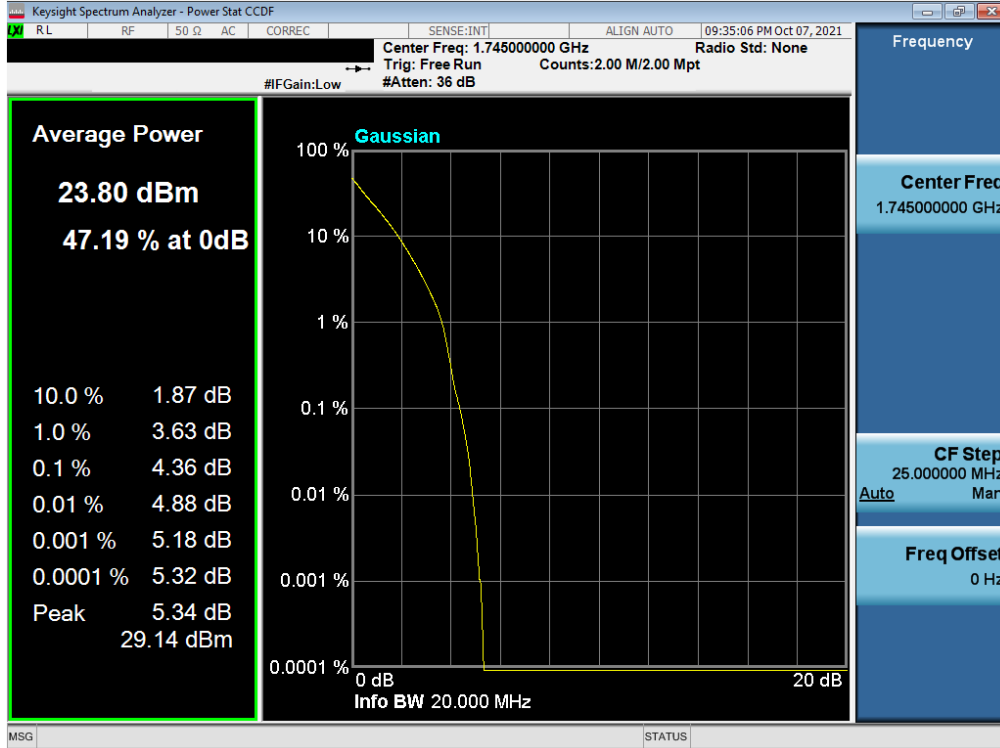


**Plot 7-326. PAR Plot (NR Band n66 - 30.0MHz DFT-s-OFDM BPSK - Full RB - Ant I)**

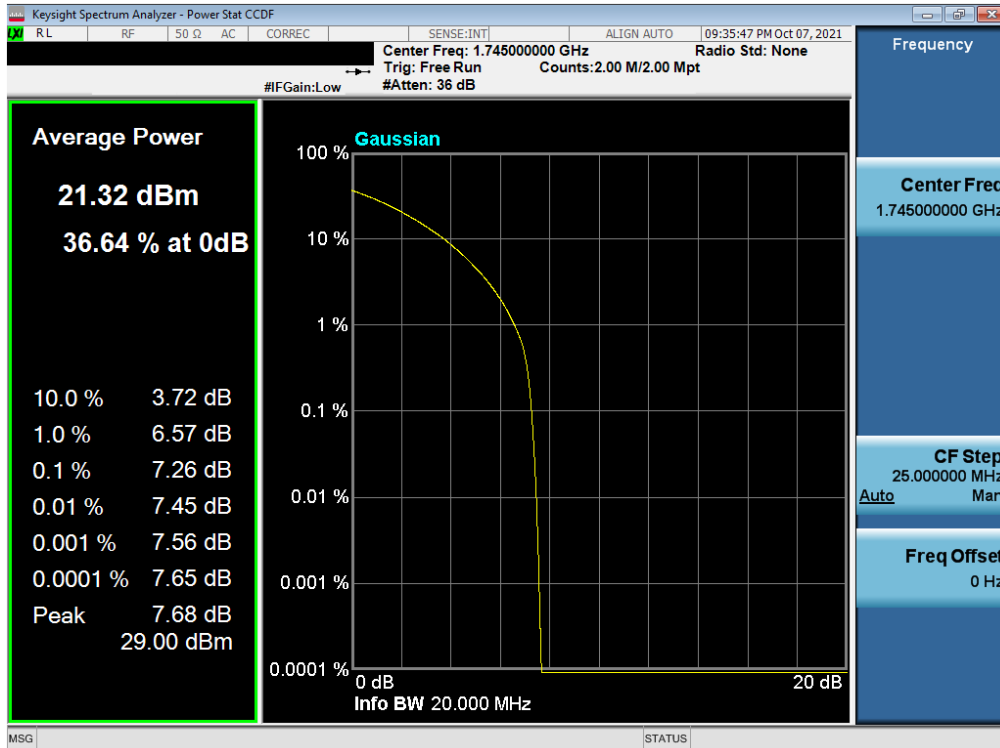
FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of  element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 190 of 253



FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 191 of 253

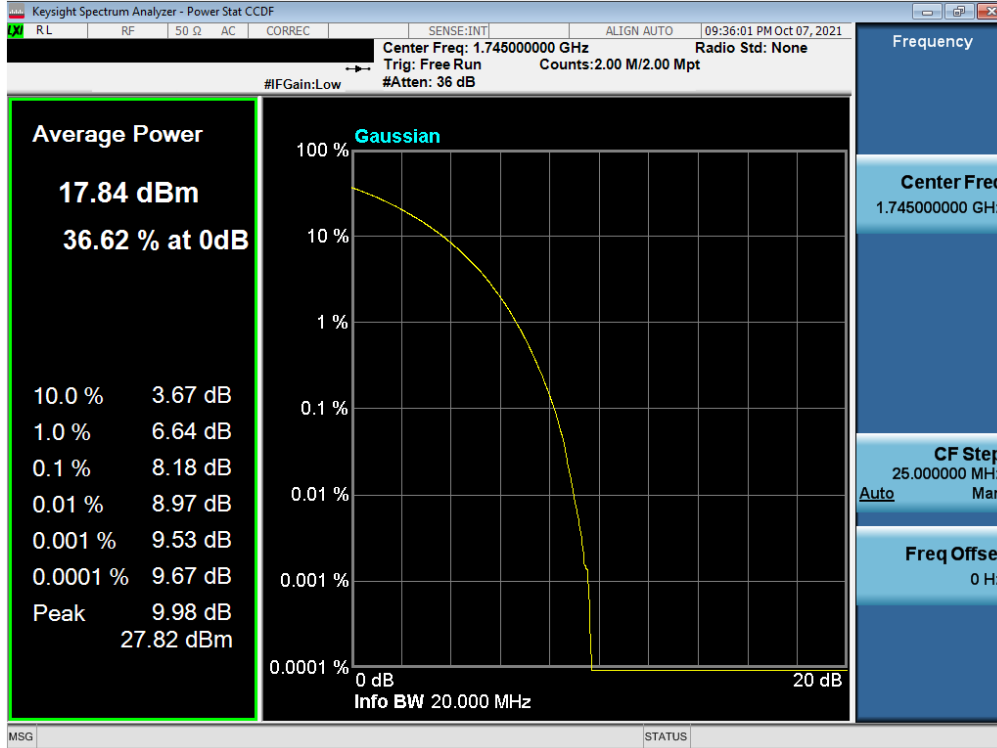


Plot 7-329. PAR Plot (NR Band n66 - 20.0MHz DFT-s-OFDM BPSK - Full RB - Ant I)

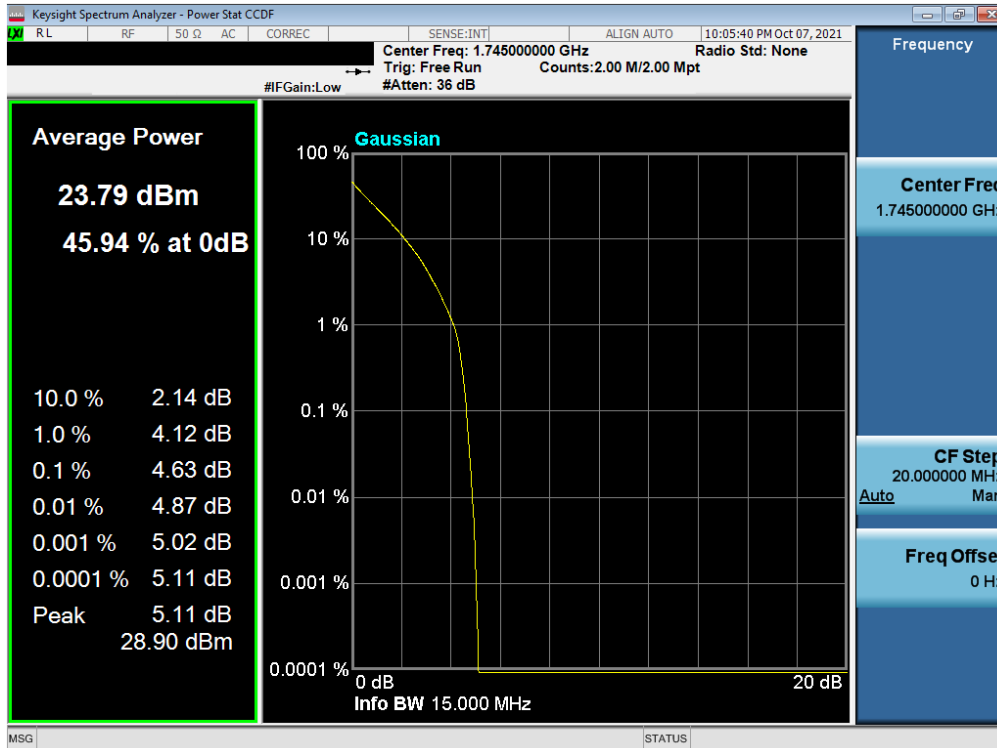


Plot 7-330. PAR Plot (NR Band n66 - 20.0MHz CP-OFDM QPSK - Full RB - Ant I)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 192 of 253

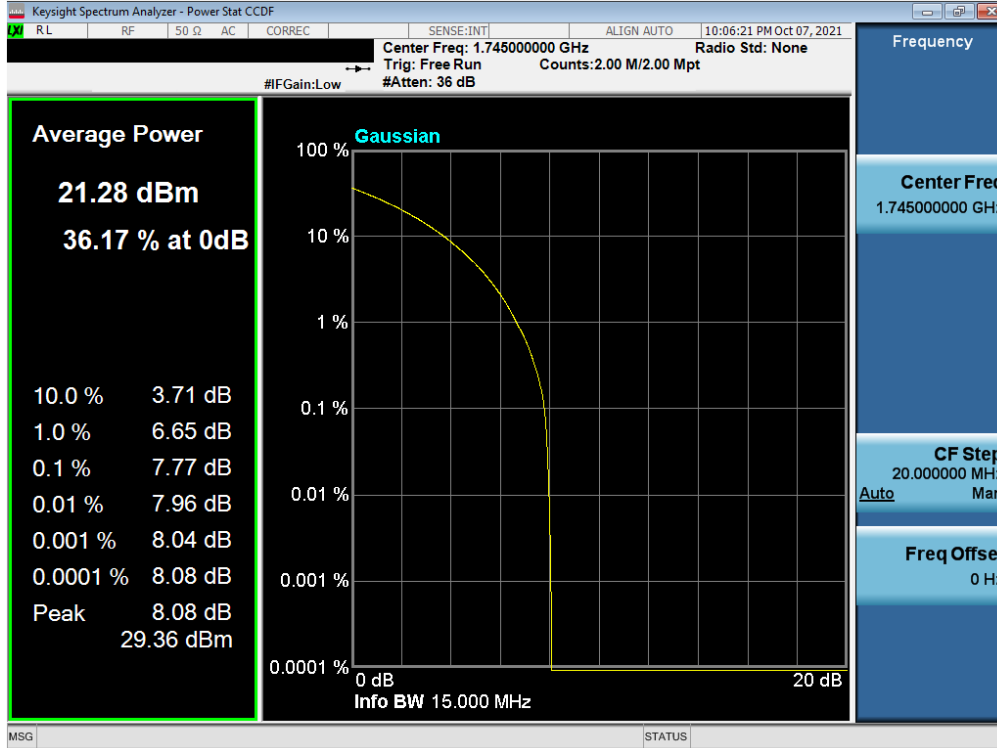


Plot 7-331. PAR Plot (NR Band n66 - 20.0MHz CP-OFDM 256-QAM - Full RB - Ant I)

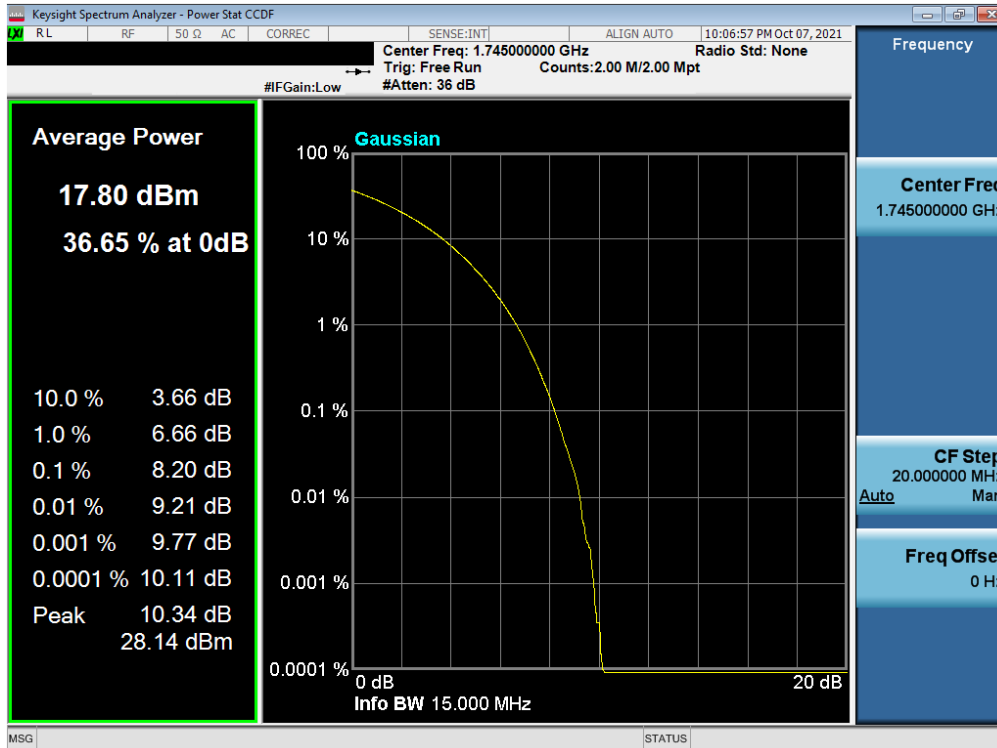


Plot 7-332. PAR Plot (NR Band n66 - 15.0MHz DFT-s-OFDM BPSK - Full RB - Ant I)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 193 of 253

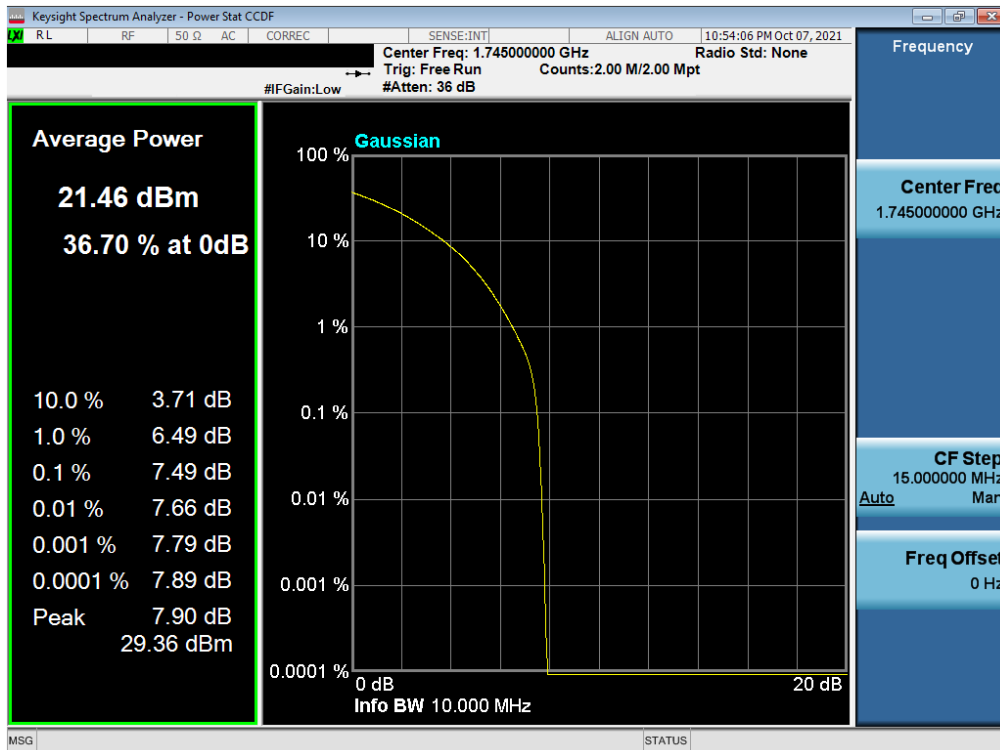
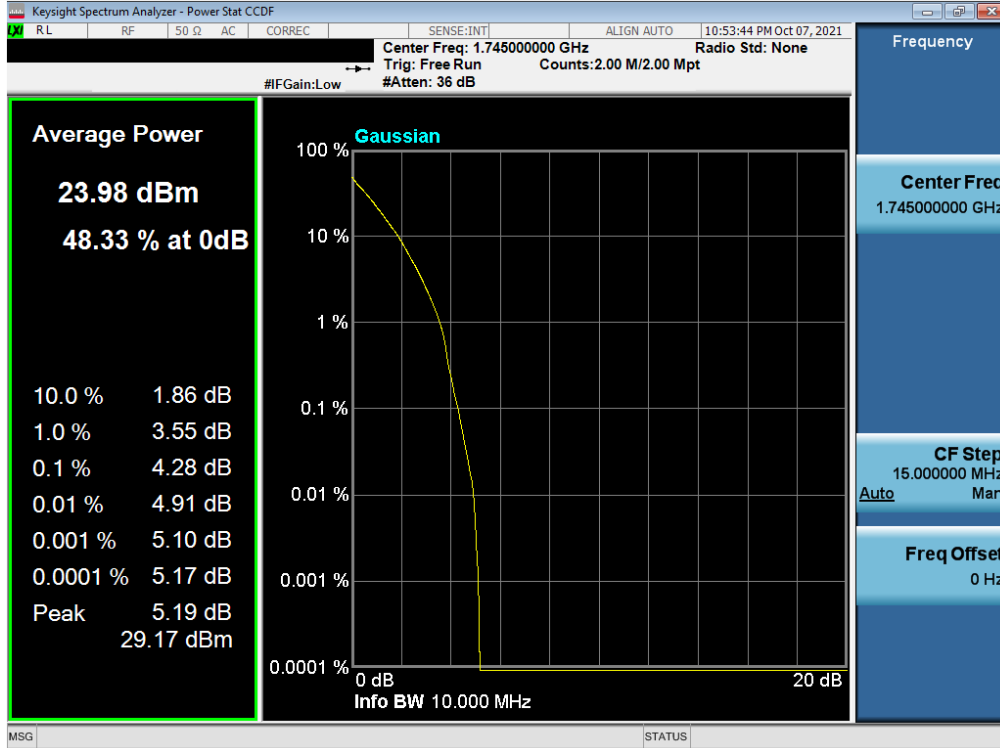


Plot 7-333. PAR Plot (NR Band n66 - 15.0MHz CP-OFDM QPSK - Full RB - Ant I)



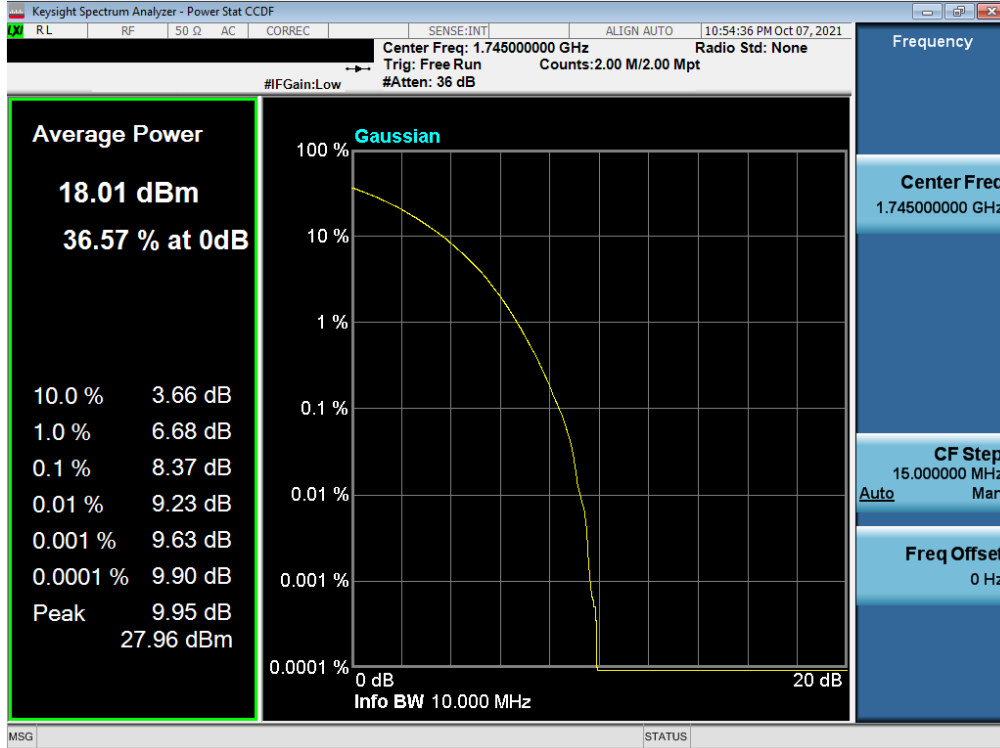
Plot 7-334. PAR Plot (NR Band n66 - 15.0MHz CP-OFDM 256-QAM - Full RB - Ant I)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 194 of 253

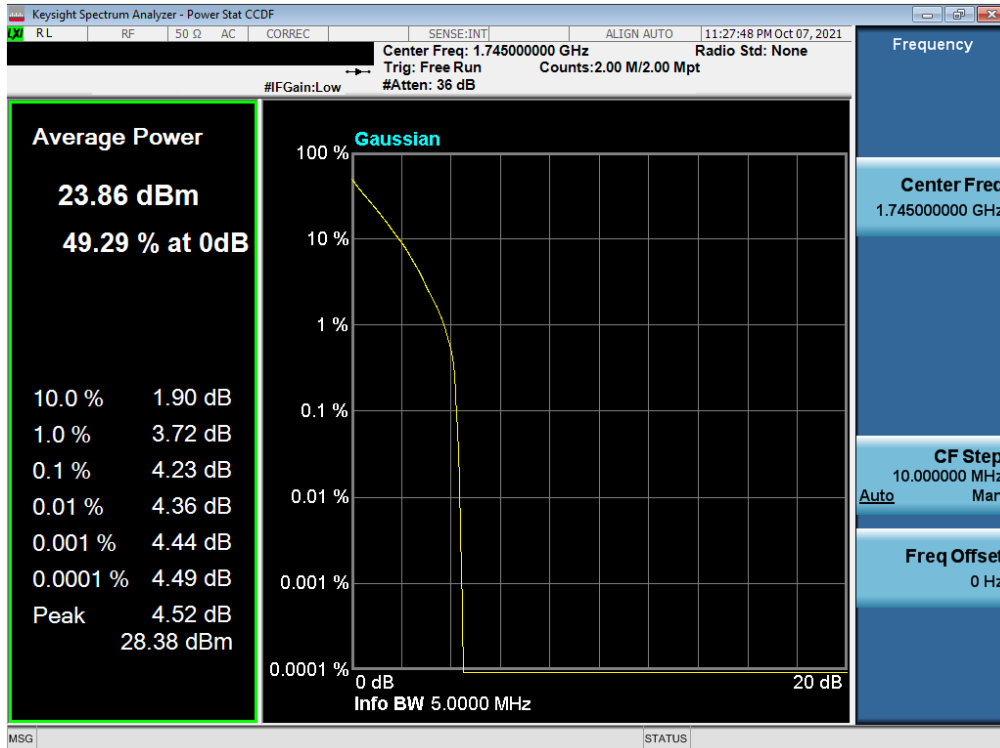


FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 195 of 253



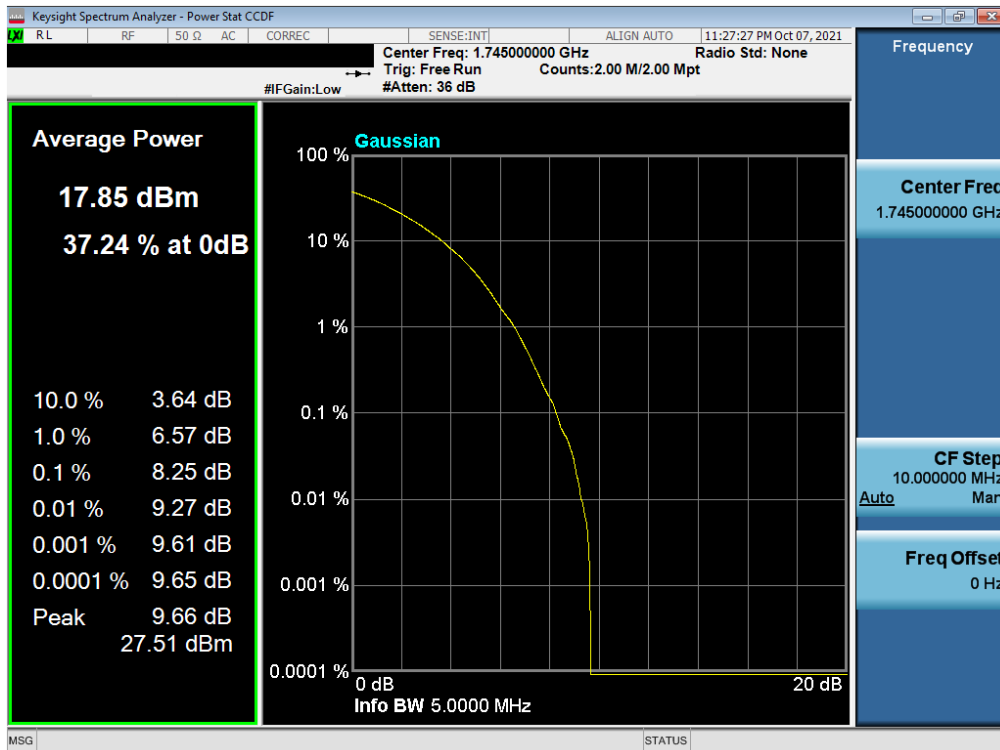
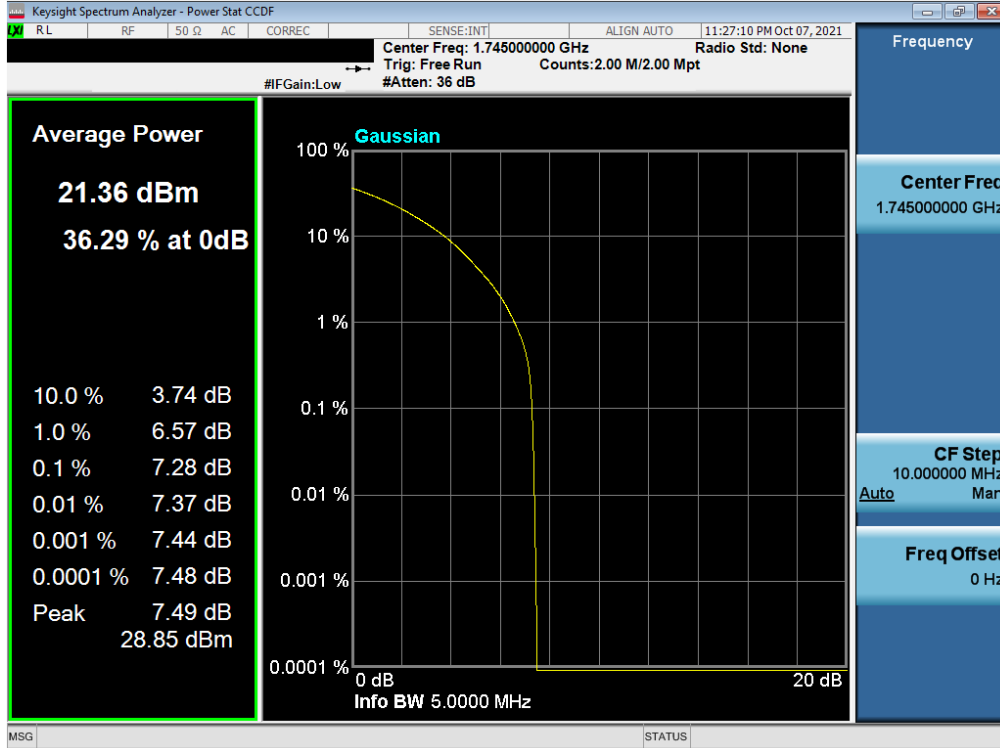


Plot 7-337. PAR Plot (NR Band n66 - 10.0MHz CP-OFDM 256-QAM - Full RB - Ant I)



Plot 7-338. PAR Plot (NR Band n66 - 5.0MHz DFT-s-OFDM BPSK - Full RB - Ant I)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-04-R1.A3L	Test Dates: 09/09/2021 - 11/10/2021	EUT Type: Portable Handset		Page 196 of 253



FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
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## 7.7 Radiated Power (ERP/EIRP)

### Test Overview

Effective Radiated Power (ERP) and Equivalent Isotropic Radiated Power (EIRP) measurements are performed using the substitution method described in ANSI/TIA-603-E-2016 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 maximum power, and at the appropriate frequencies.



### Test Procedures Used

KDB 971168 D01 v03r01 – Section 5.2.1

ANSI/TIA-603-E-2016 – Section 2.2.17

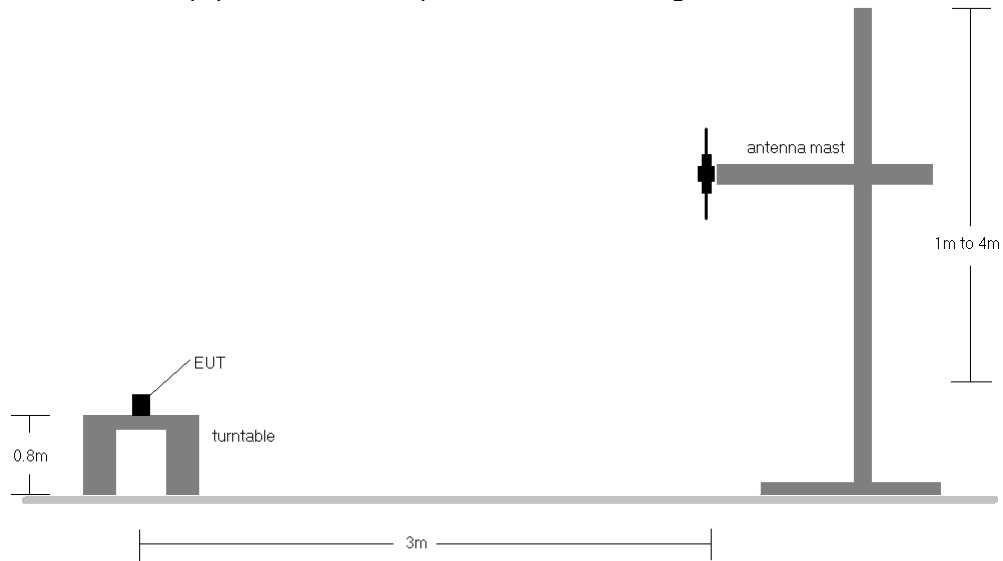
### Test Settings

1. Radiated power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation.
2. RBW = 1 – 5% of the expected OBW, not to exceed 1MHz
3. VBW  $\geq$  3 x RBW
4. Span = 1.5 times the OBW
5. No. of sweep points  $\geq$  2 x span / RBW
6. Detector = RMS
7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto".
8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation.
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The trace was allowed to stabilize

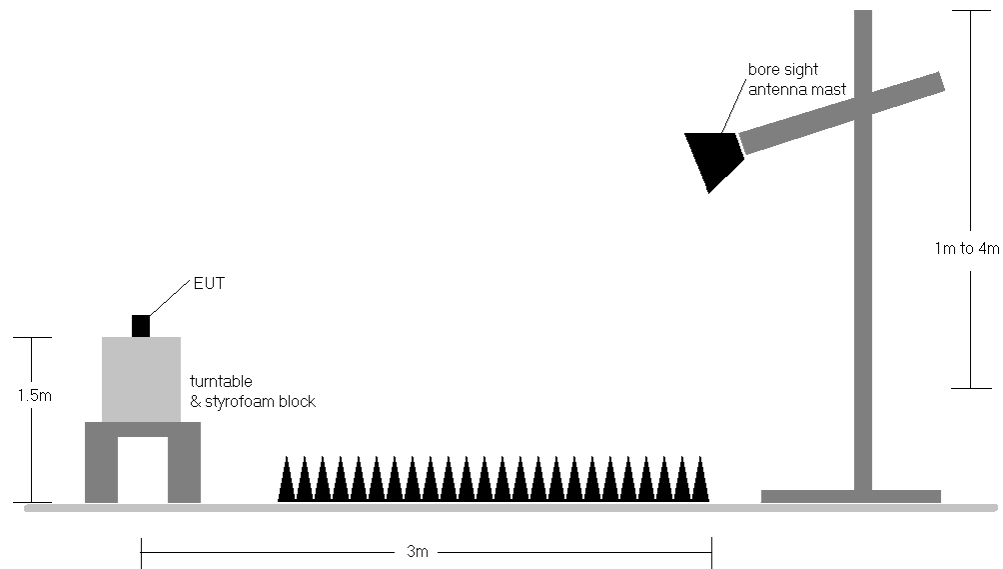
FCC ID: A3LSMS906U	 PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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**Test Setup**

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



**Figure 7-6. Radiated Test Setup <1GHz**





**Figure 7-7. Radiated Test Setup >1GHz**

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## 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) For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

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