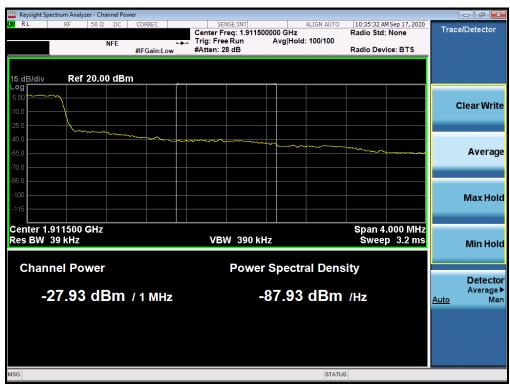




Plot 7-203. Upper Band Edge Plot (LTE Band 2 – 1.4MHz QPSK – Full RB Configuration)



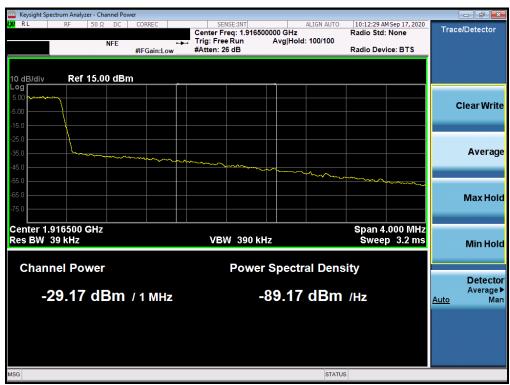
Plot 7-204. Extended Upper Band Edge Plot (LTE Band 2 – 1.4MHz QPSK – Full RB Configuration)

FCC ID: A3LSMG996U	PCTEST*	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Quality Manager
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Plot 7-205. Upper Band Edge Plot (LTE Band 25 – 1.4MHz QPSK – Full RB Configuration)



Plot 7-206. Extended Upper Band Edge Plot (LTE Band 25 – 1.4MHz QPSK – Full RB Configuration)

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## NR Band n25 Ant A



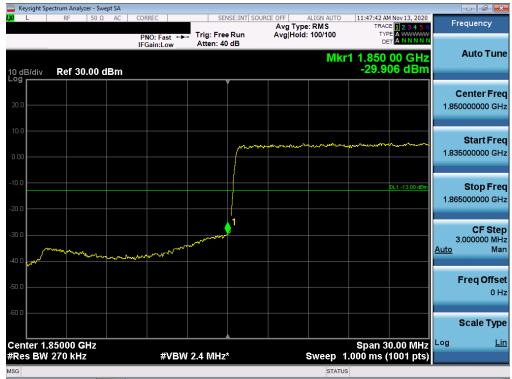
Plot 7-207. Lower Band Edge Plot (NR Band n25 Ant A - 40.0MHz DFT-s-OFDM-QPSK - Full RB)



Plot 7-208. Upper Band Edge Plot (NR Band n25 Ant A - 40.0MHz DFT-s-OFDM-QPSK - Full RB)

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Plot 7-209. Lower Band Edge Plot (NR Band n25 Ant A - 30.0MHz DFT-s-OFDM-QPSK - Full RB)



Plot 7-210. Upper Band Edge Plot (NR Band n25 Ant A – 30.0MHz DFT-s-OFDM-QPSK - Full RB)

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Plot 7-211. Lower Band Edge Plot (NR Band n25 Ant A - 25.0MHz DFT-s-OFDM-QPSK - Full RB)



Plot 7-212. Upper Band Edge Plot (NR Band n25 Ant A – 25.0MHz DFT-s-OFDM-QPSK - Full RB)

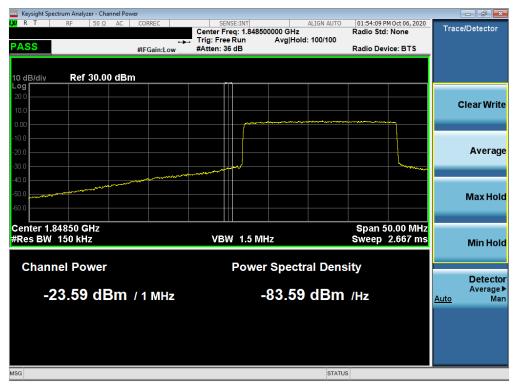
FCC ID: A3LSMG996U	PCTEST*	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Quality Manager
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### NR Band n2/n25 Ant A



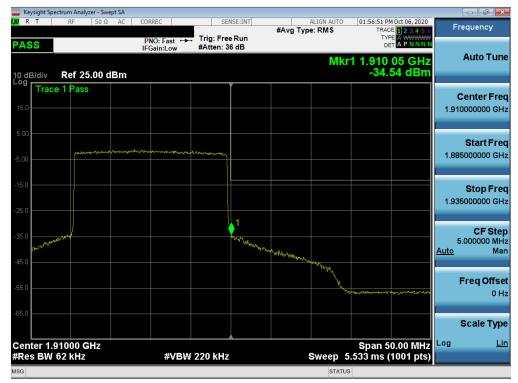
Plot 7-213. Lower Band Edge Plot (NR Band n2 Ant A - 20.0MHz DFT-s-OFDM-QPSK - Full RB)



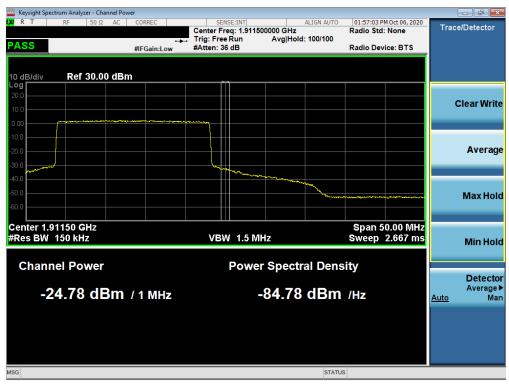
Plot 7-214. Lower Extended Band Edge Plot (NR Band n2 Ant A – 20.0MHz DFT-s-OFDM-QPSK - Full RB)

FCC ID: A3LSMG996U	PCTEST*	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Quality Manager
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Plot 7-215. Upper Band Edge Plot (NR Band n2 Ant A - 20.0MHz DFT-s-OFDM-QPSK - Full RB)

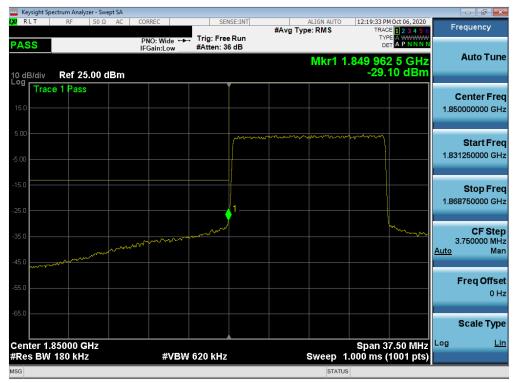


Plot 7-216. Upper Extended Band Edge Plot (NR Band n2 Ant A – 20.0MHz DFT-s-OFDM-QPSK - Full RB)

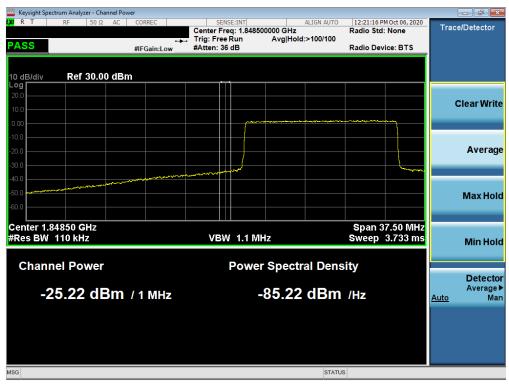
FCC ID: A3LSMG996U	PCTEST*	PART 24 MEASUREMENT REPORT	AMSUNG	Approved by: Quality Manager
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Plot 7-217. Lower Band Edge Plot (NR Band n2 Ant A – 15.0MHz DFT-s-OFDM-QPSK - Full RB)



Plot 7-218. Lower Extended Band Edge Plot (NR Band n2 Ant A – 15.0MHz DFT-s-OFDM-QPSK - Full RB)

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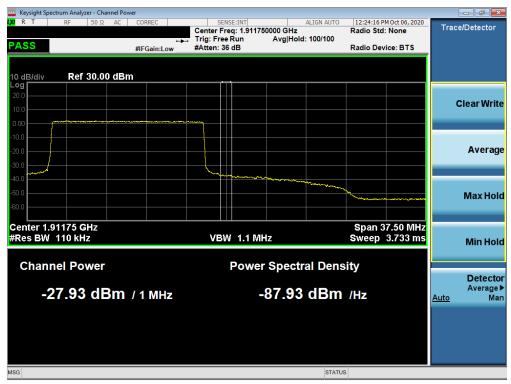
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Plot 7-219. Upper Band Edge Plot (NR Band n2 Ant A - 15.0MHz DFT-s-OFDM-QPSK - Full RB)

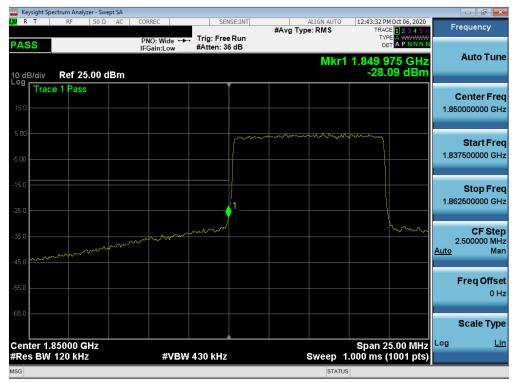


Plot 7-220. Upper Extended Band Edge Plot (NR Band n2 Ant A - 15.0MHz DFT-s-OFDM-QPSK - Full RB)

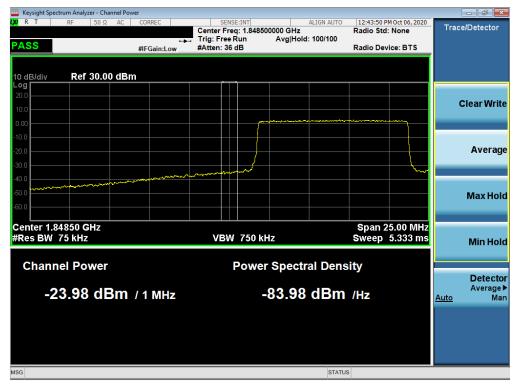
FCC ID: A3LSMG996U	PCTEST*	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Quality Manager
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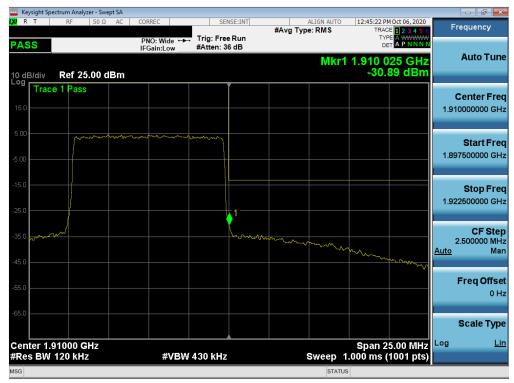
Plot 7-221. Lower Band Edge Plot (NR Band n2 Ant A – 10.0MHz DFT-s-OFDM-QPSK - Full RB)



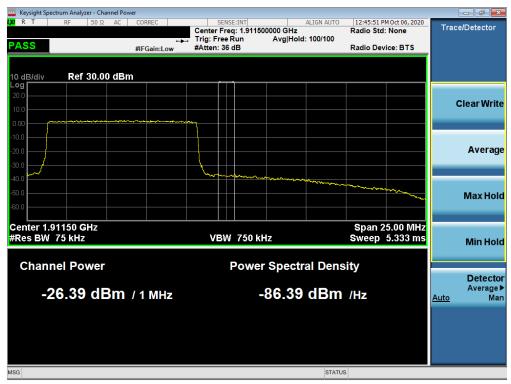
Plot 7-222. Lower Extended Band Edge Plot (NR Band n2 Ant A – 10.0MHz DFT-s-OFDM-QPSK - Full RB)

FCC ID: A3LSMG996U	PCTEST*	PART 24 MEASUREMENT REPORT	AMSUNG	Approved by: Quality Manager
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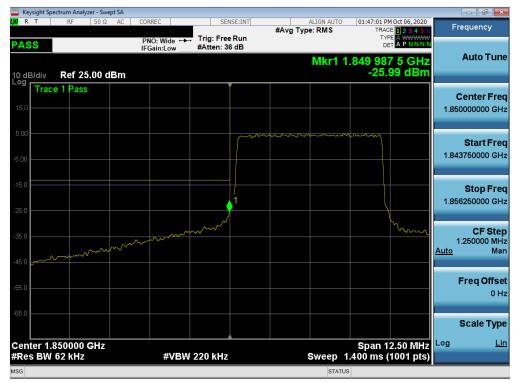
Plot 7-223. Upper Band Edge Plot (NR Band n2 Ant A - 10.0MHz DFT-s-OFDM-QPSK - Full RB)



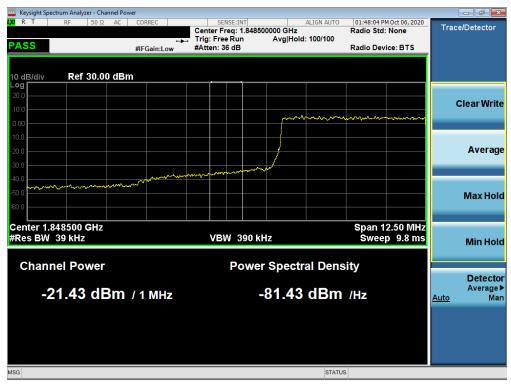
Plot 7-224. Upper Extended Band Edge Plot (NR Band n2 Ant A - 10.0MHz DFT-s-OFDM-QPSK - Full RB)

FCC ID: A3LSMG996U	PCTEST*	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Quality Manager
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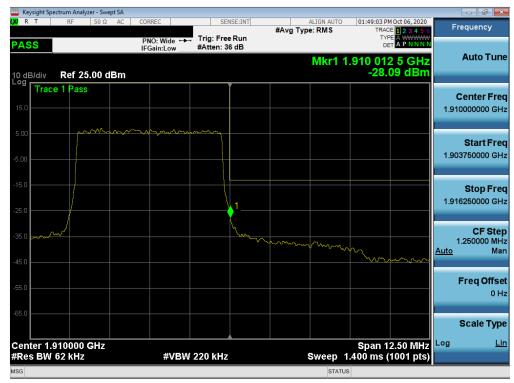
Plot 7-225. Lower Band Edge Plot (NR Band n2 Ant A - 5.0MHz DFT-s-OFDM-QPSK - Full RB)



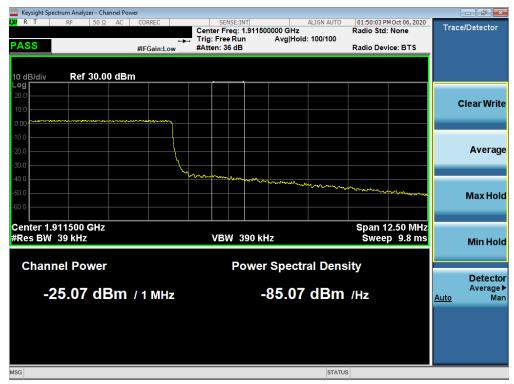
Plot 7-226. Lower Extended Band Edge Plot (NR Band n2 Ant A – 5.0MHz DFT-s-OFDM-QPSK - Full RB)

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Plot 7-227. Upper Band Edge Plot (NR Band n2 Ant A - 5.0MHz DFT-s-OFDM-QPSK - Full RB)



Plot 7-228. Upper Extended Band Edge Plot (NR Band n2 Ant A – 5.0MHz DFT-s-OFDM-QPSK - Full RB)

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## NR Band n25 Ant I



Plot 7-229. Lower Band Edge Plot (NR Band n25 Ant I- 40.0MHz DFT-s-OFDM-QPSK - Full RB)



Plot 7-230. Upper Band Edge Plot (NR Band n25 Ant I- 40.0MHz DFT-s-OFDM-QPSK - Full RB)

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Plot 7-231. Lower Band Edge Plot (NR Band n25 Ant I- 30.0MHz DFT-s-OFDM-QPSK - Full RB)



Plot 7-232. Upper Band Edge Plot (NR Band n25 Ant I- 30.0MHz DFT-s-OFDM-QPSK - Full RB)

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Plot 7-233. Lower Band Edge Plot (NR Band n25 Ant I- 25.0MHz DFT-s-OFDM-QPSK - Full RB)



Plot 7-234. Upper Band Edge Plot (NR Band n25 Ant I- 25.0MHz DFT-s-OFDM-QPSK - Full RB)

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## NR Band n2 Ant I



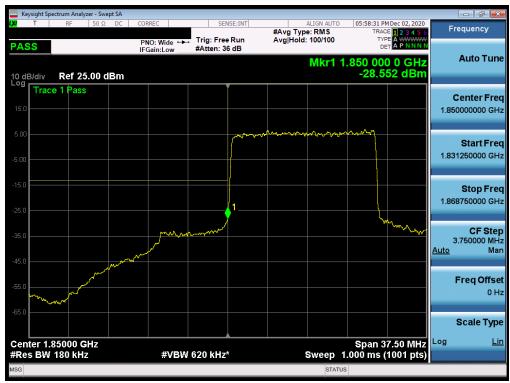
Plot 7-235. Lower Band Edge Plot (NR Band n2 Ant I- 20.0MHz DFT-s-OFDM-QPSK - Full RB)



Plot 7-236. Upper Band Edge Plot (NR Band n2 Ant I- 20.0MHz DFT-s-OFDM-QPSK - Full RB)

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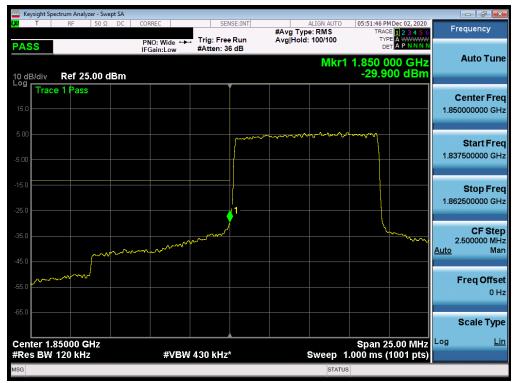
Plot 7-237. Lower Band Edge Plot (NR Band n2 Ant I- 15.0MHz DFT-s-OFDM-QPSK - Full RB)



Plot 7-238. Upper Band Edge Plot (NR Band n2 Ant I- 15.0MHz DFT-s-OFDM-QPSK - Full RB)

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Plot 7-239. Lower Band Edge Plot (NR Band n2 Ant I- 10.0MHz DFT-s-OFDM-QPSK - Full RB)



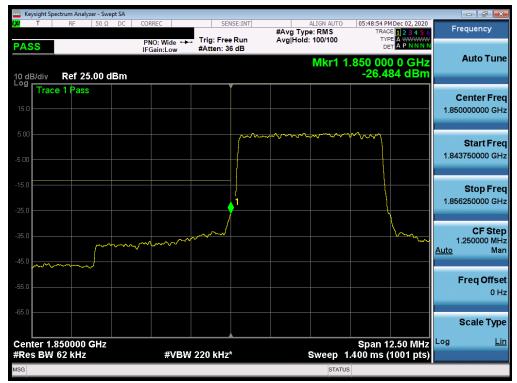
Plot 7-240. Upper Band Edge Plot (NR Band n2 Ant I- 10.0MHz DFT-s-OFDM-QPSK - Full RB)

FCC ID: A3LSMG996U	PCTEST*	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Quality Manager
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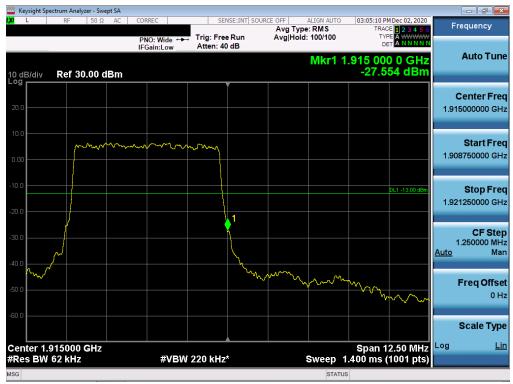
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Plot 7-241. Lower Band Edge Plot (NR Band n2 Ant I- 5.0MHz DFT-s-OFDM-QPSK - Full RB)

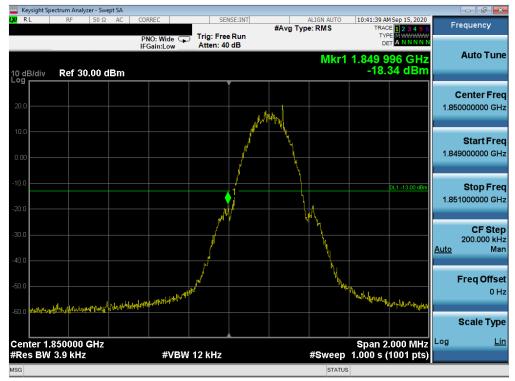


Plot 7-242. Upper Band Edge Plot (NR Band n2 Ant I- 5.0MHz DFT-s-OFDM-QPSK - Full RB)

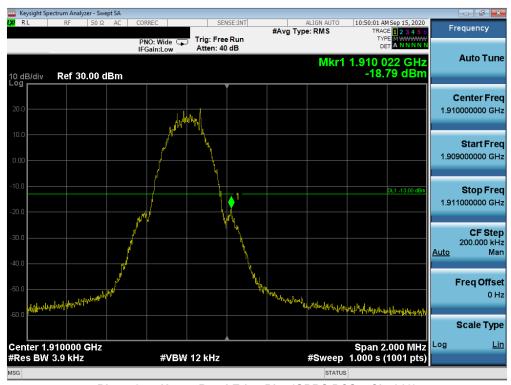
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## **GSM/GPRS PCS**



Plot 7-243. Lower Band Edge Plot (GPRS PCS - Ch. 512)

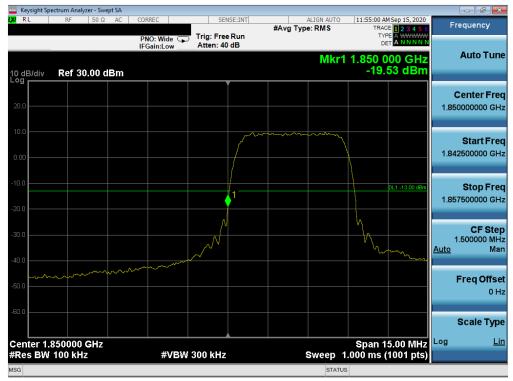


Plot 7-244. Upper Band Edge Plot (GPRS PCS - Ch. 810)

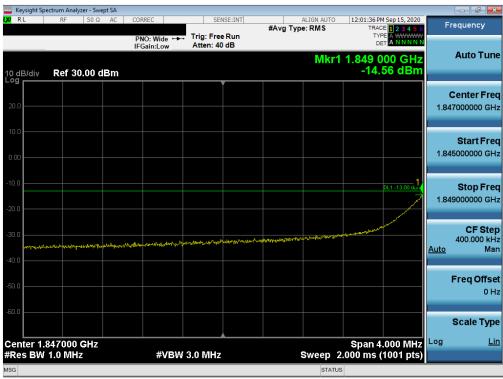
FCC ID: A3LSMG996U	PCTEST*	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Quality Manager
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### **WCDMA PCS**



Plot 7-245. Lower Band Edge Plot (WCDMA PCS - Ch. 9262)



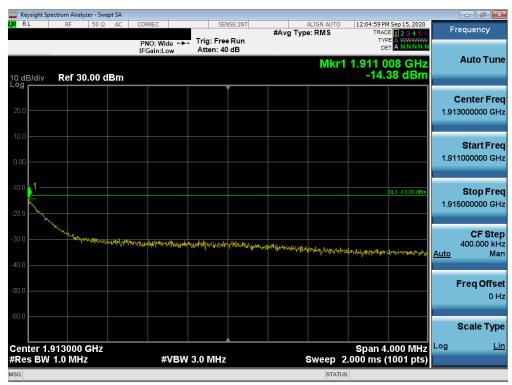
Plot 7-246. Extended Lower Band Edge Plot (WCDMA PCS - Ch. 9262)

FCC ID: A3LSMG996U	PCTEST*	PART 24 MEASUREMENT REPORT	MSUNG	Approved by: Quality Manager
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Plot 7-247. Upper Band Edge Plot (WCDMA PCS - Ch. 9538)



Plot 7-248. Extended Upper Band Edge Plot (WCDMA PCS - Ch. 9538)

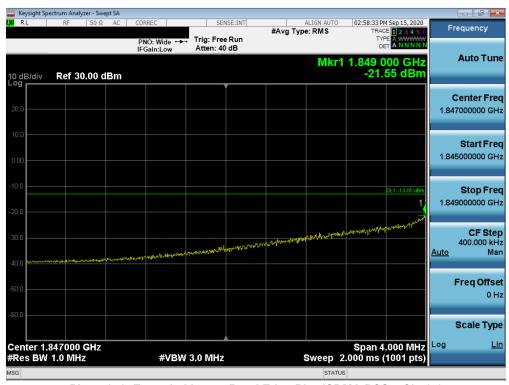
FCC ID: A3LSMG996U	PCTEST*	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Quality Manager
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## **CDMA PCS**



Plot 7-249. Lower Band Edge Plot (CDMA PCS - Ch. 25)



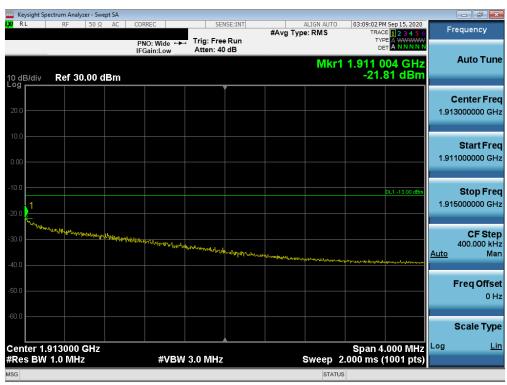
Plot 7-250. Extended Lower Band Edge Plot (CDMA PCS - Ch. 25)

FCC ID: A3LSMG996U	PCTEST*	PART 24 MEASUREMENT REPORT	MSUNG	Approved by: Quality Manager
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Plot 7-251. Upper Band Edge Plot (CDMA PCS - Ch. 1175)



Plot 7-252. Extended Upper Band Edge Plot (CDMA PCS - Ch. 1175)

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## 7.5 Peak-Average Ratio

### **Test Overview**

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

# **Test Procedure Used**

KDB 971168 D01 v03r01 - Section 5.7.1

## **Test Settings**

- 1. The signal analyzer's CCDF measurement profile is enabled
- 2. Frequency = carrier center frequency
- 3. Measurement BW ≥ 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 7-4. Test Instrument & Measurement Setup

### **Test Notes**

None.

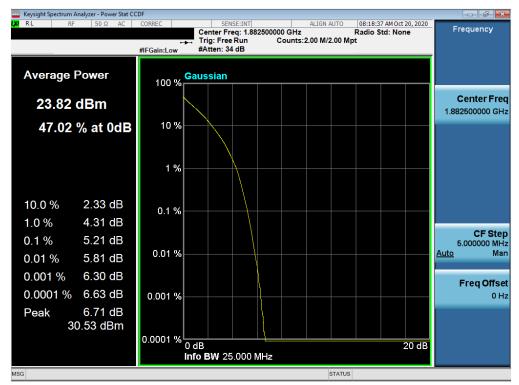
FCC ID: A3LSMG996U	PCTEST* Pexat to be part of ® element	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Quality Manager
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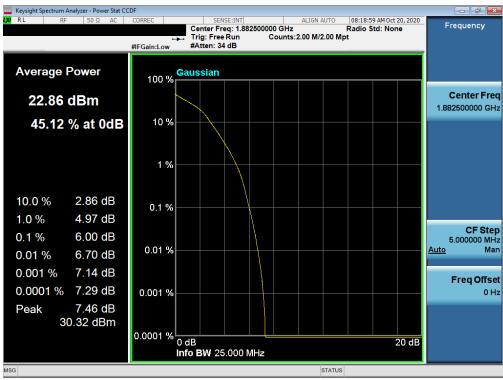
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## LTE Band 25/2



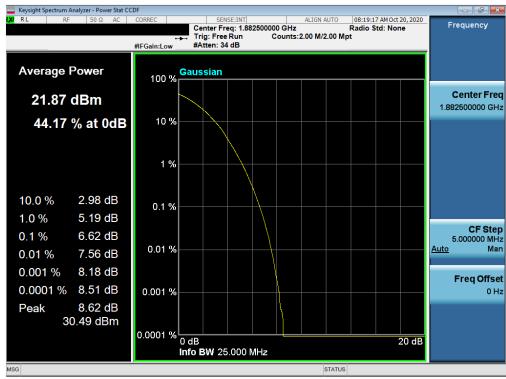
Plot 7-253. PAR Plot (LTE Band 25/2 - 20MHz QPSK - Full RB Configuration)



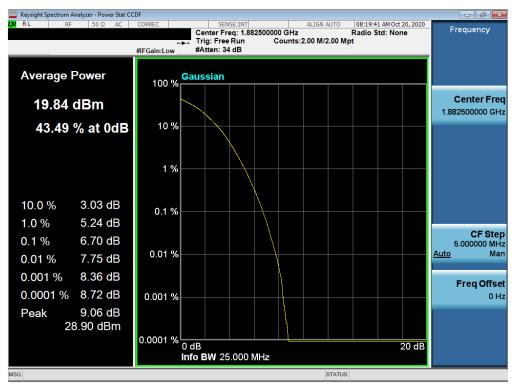
Plot 7-254. PAR Plot (LTE Band 25/2 - 20MHz 16-QAM - Full RB Configuration)

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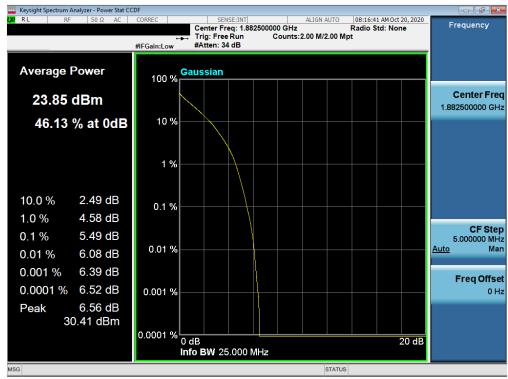
Plot 7-255. PAR Plot (LTE Band 25/2 - 20MHz 64-QAM - Full RB Configuration)



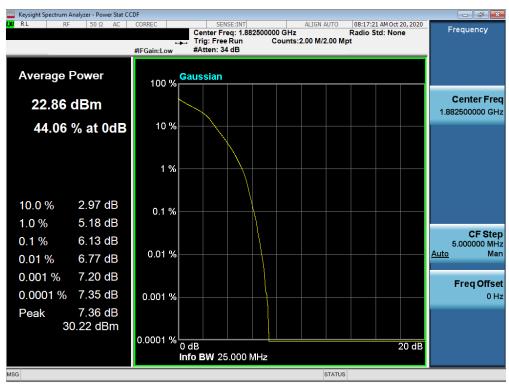
Plot 7-256. PAR Plot (LTE Band 25/2 - 20MHz 256-QAM - Full RB Configuration)

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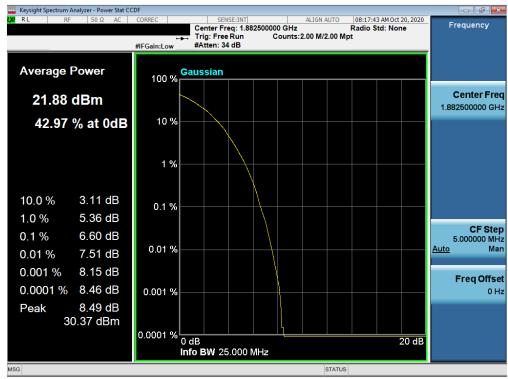
Plot 7-257. PAR Plot (LTE Band 25/2 - 15MHz QPSK - Full RB Configuration)



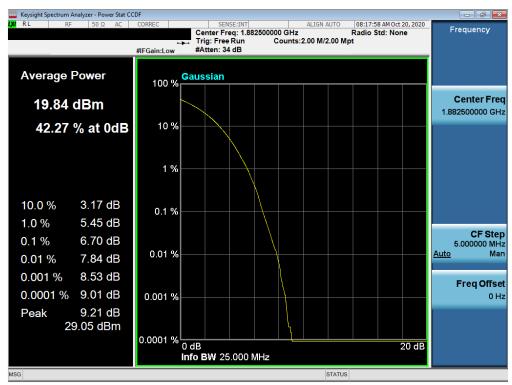
Plot 7-258. PAR Plot (LTE Band 25/2 - 15MHz 16-QAM - Full RB Configuration)

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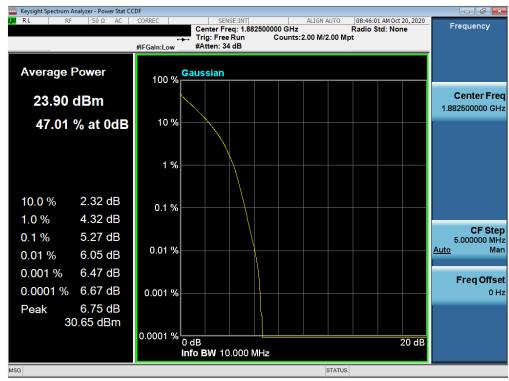
Plot 7-259. PAR Plot (LTE Band 25/2 - 15MHz 64-QAM - Full RB Configuration)



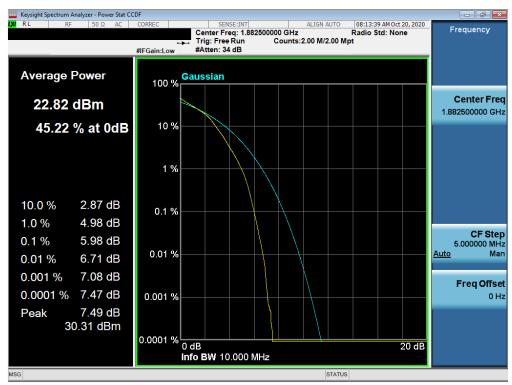
Plot 7-260. PAR Plot (LTE Band 25/2 - 15MHz 256-QAM - Full RB Configuration)

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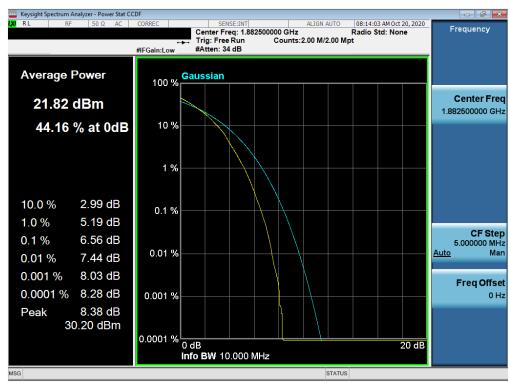
Plot 7-261. PAR Plot (LTE Band 25/2 - 10MHz QPSK - Full RB Configuration)



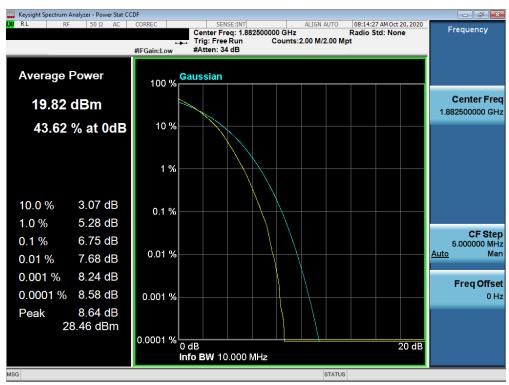
Plot 7-262. PAR Plot (LTE Band 25/2 - 10MHz 16-QAM - Full RB Configuration)

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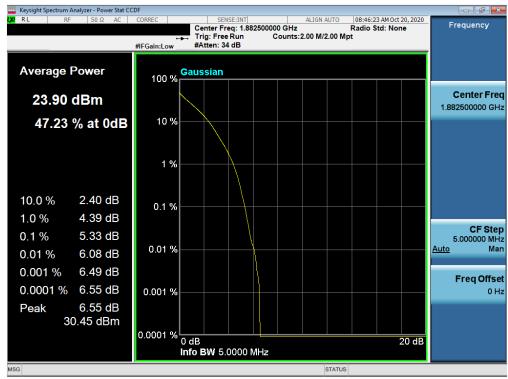
Plot 7-263. PAR Plot (LTE Band 25/2 - 10MHz 64-QAM - Full RB Configuration)



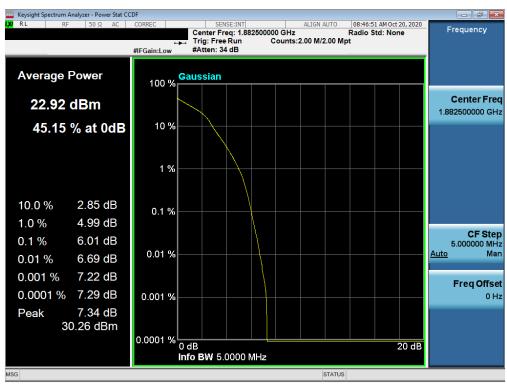
Plot 7-264. PAR Plot (LTE Band 25/2 - 10MHz 256-QAM - Full RB Configuration)

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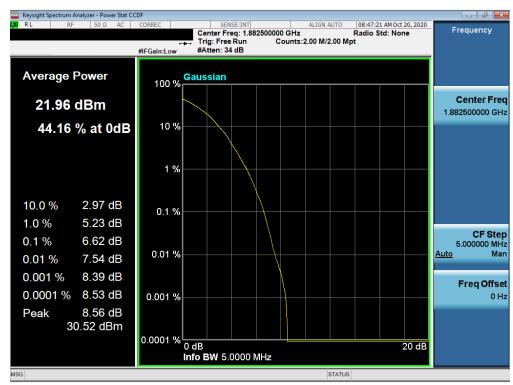
Plot 7-265. PAR Plot (LTE Band 25/2 - 5MHz QPSK - Full RB Configuration)



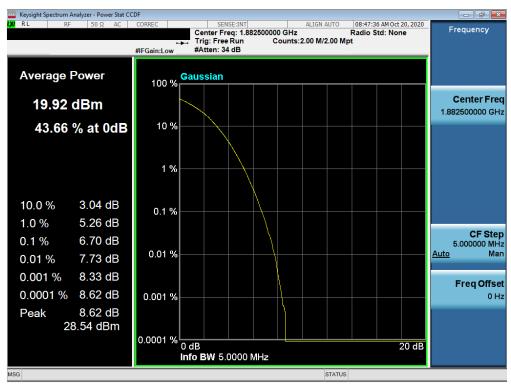
Plot 7-266. PAR Plot (LTE Band 25/2 - 5MHz 16-QAM - Full RB Configuration)

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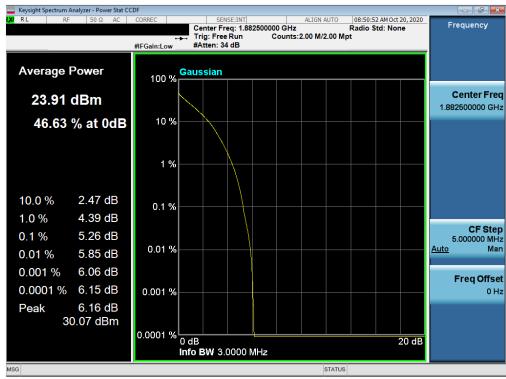
Plot 7-267. PAR Plot (LTE Band 25/2 - 5MHz 64-QAM - Full RB Configuration)



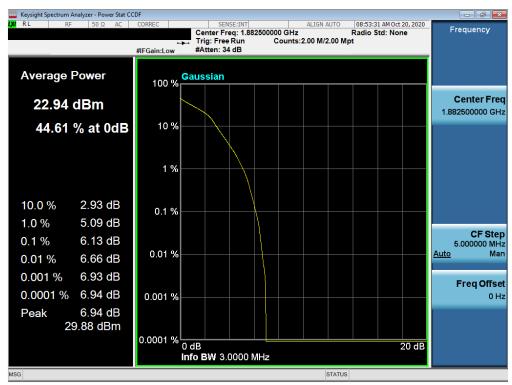
Plot 7-268. PAR Plot (LTE Band 25/2 - 5MHz 256-QAM - Full RB Configuration)

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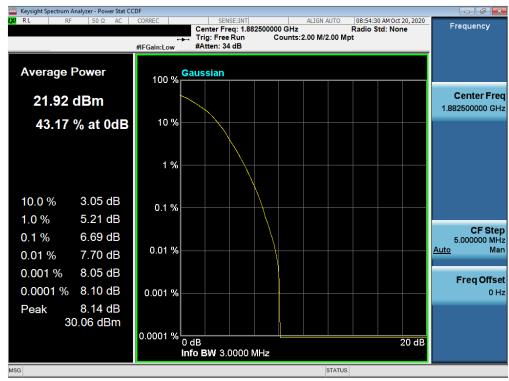
Plot 7-269. PAR Plot (LTE Band 25/2 - 3MHz QPSK - Full RB Configuration)



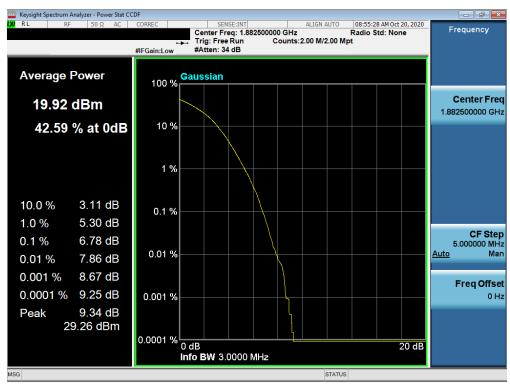
Plot 7-270. PAR Plot (LTE Band 25/2 - 3MHz 16-QAM - Full RB Configuration)

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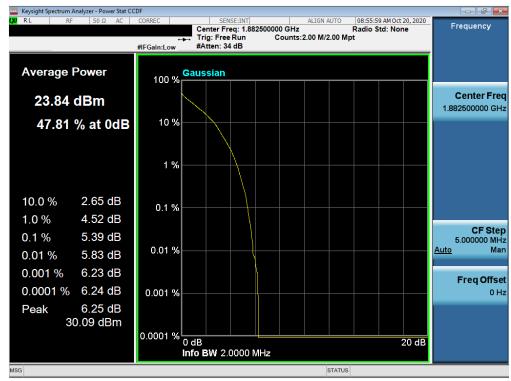
Plot 7-271. PAR Plot (LTE Band 25/2 - 3MHz 64-QAM - Full RB Configuration)



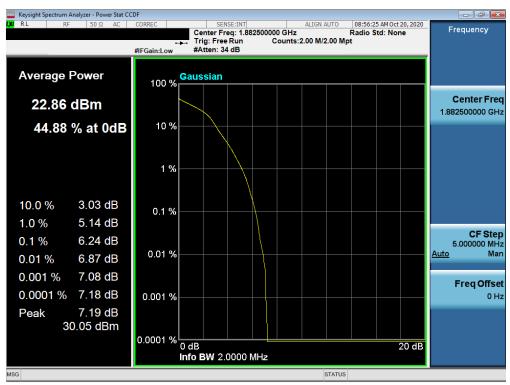
Plot 7-272. PAR Plot (LTE Band 25/2 - 3MHz 256-QAM - Full RB Configuration)

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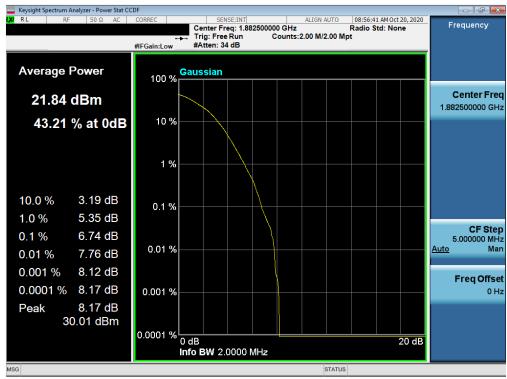
Plot 7-273. PAR Plot (LTE Band 25/2 - 1.4MHz QPSK - Full RB Configuration)



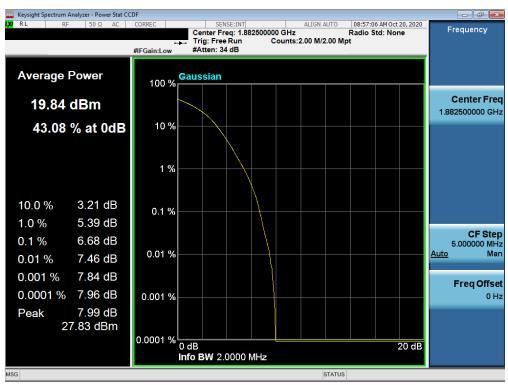
Plot 7-274. PAR Plot (LTE Band 25/2 - 1.4MHz 16-QAM - Full RB Configuration)

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Plot 7-275. PAR Plot (LTE Band 25/2 - 1.4MHz 64-QAM - Full RB Configuration)



Plot 7-276. PAR Plot (LTE Band 25/2 - 1.4MHz 256-QAM - Full RB Configuration)

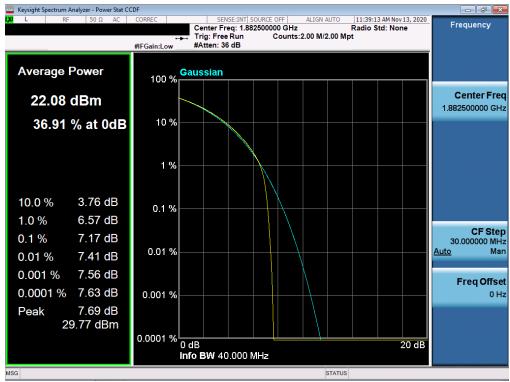
FCC ID: A3LSMG996U	PCTEST*	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Quality Manager
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## NR Band n25 Ant A



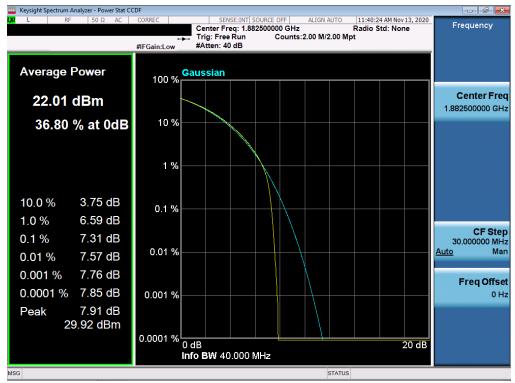
Plot 7-277. PAR Plot (NR Band n25 Ant A - 40.0MHz DFT-s-OFDM BPSK - Full RB)



Plot 7-278. PAR Plot (NR Band n25 Ant A - 40.0MHz CP-OFDM-CP-OFDM QPSK - Full RB)

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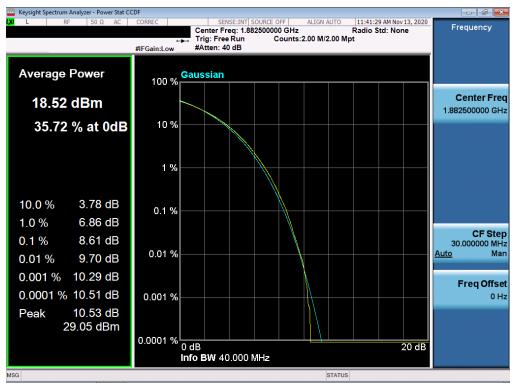
Plot 7-279. PAR Plot (NR Band n25 Ant A - 40.0MHz CP-OFDM-CP-OFDM 16-QAM - Full RB)



Plot 7-280. PAR Plot (NR Band n25 Ant A - 40.0MHz CP-OFDM-CP-OFDM 64-QAM - Full RB)

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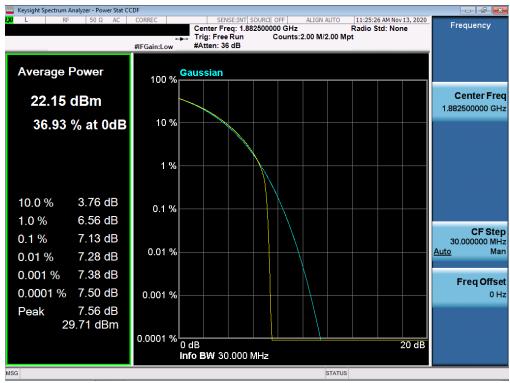
Plot 7-281. PAR Plot (NR Band n25 Ant A - 40.0MHz CP-OFDM-CP-OFDM 256-QAM - Full RB)



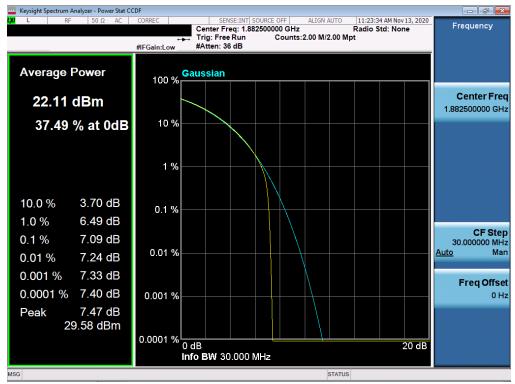
Plot 7-282. PAR Plot (NR Band n25 Ant A - 30.0MHz DFT-s-OFDM BPSK - Full RB)

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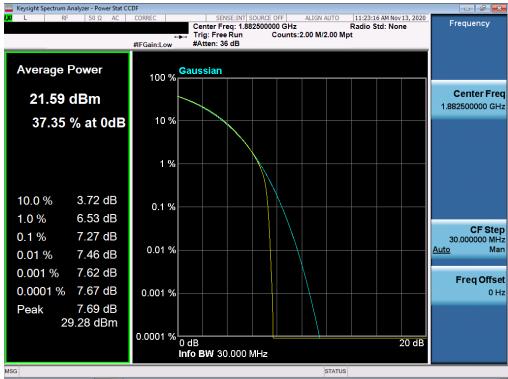
Plot 7-283. PAR Plot (NR Band n25 Ant A - 30.0MHz CP-OFDM-CP-OFDM QPSK - Full RB)



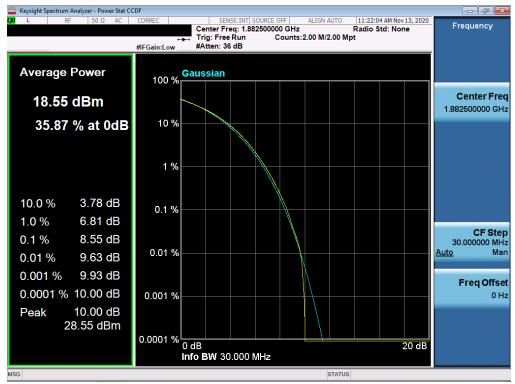
Plot 7-284. PAR Plot (NR Band n25 Ant A - 30.0MHz CP-OFDM-CP-OFDM 16-QAM - Full RB)

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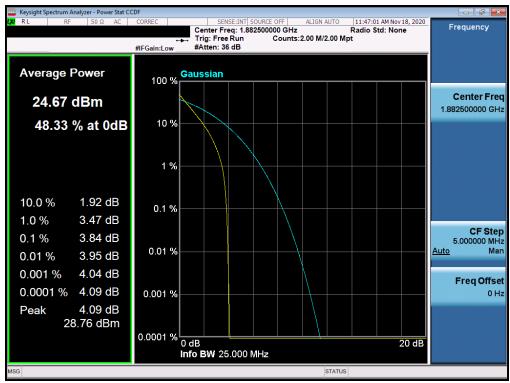
Plot 7-285. PAR Plot (NR Band n25 Ant A - 30.0MHz CP-OFDM-CP-OFDM 64-QAM - Full RB)



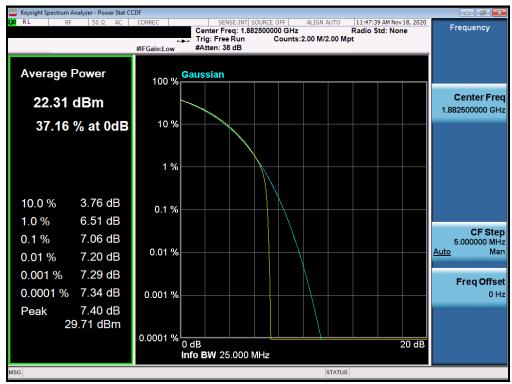
Plot 7-286. PAR Plot (NR Band n25 Ant A - 30.0MHz CP-OFDM-CP-OFDM 256-QAM - Full RB)

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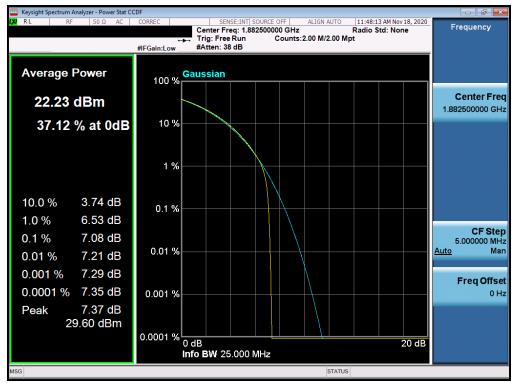
Plot 7-287. PAR Plot (NR Band n25 Ant A - 25.0MHz DFT-s-OFDM BPSK - Full RB)



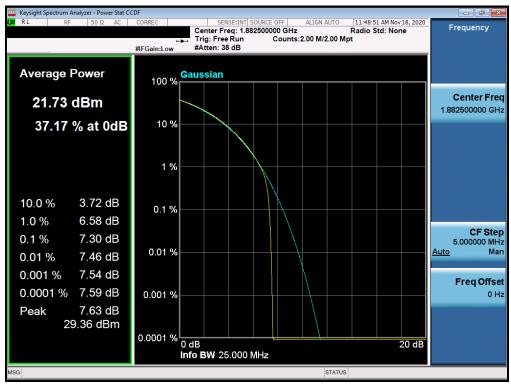
Plot 7-288. PAR Plot (NR Band n25 Ant A - 25.0MHz CP-OFDM-CP-OFDM QPSK - Full RB)

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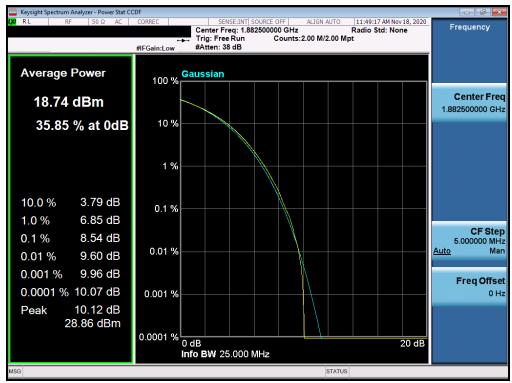
Plot 7-289. PAR Plot (NR Band n25 Ant A - 25.0MHz CP-OFDM-CP-OFDM 16-QAM - Full RB)



Plot 7-290. PAR Plot (NR Band n25 Ant A - 25.0MHz CP-OFDM-CP-OFDM 64-QAM - Full RB)

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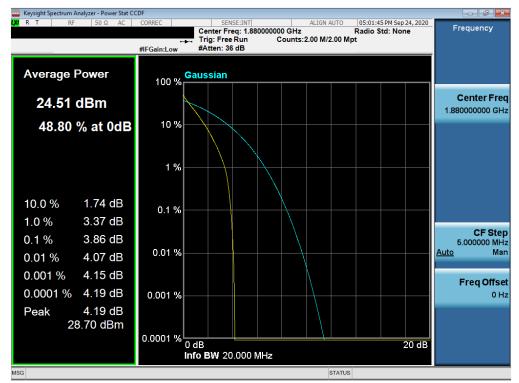


Plot 7-291. PAR Plot (NR Band n25 Ant A - 25.0MHz CP-OFDM-CP-OFDM 256-QAM - Full RB)

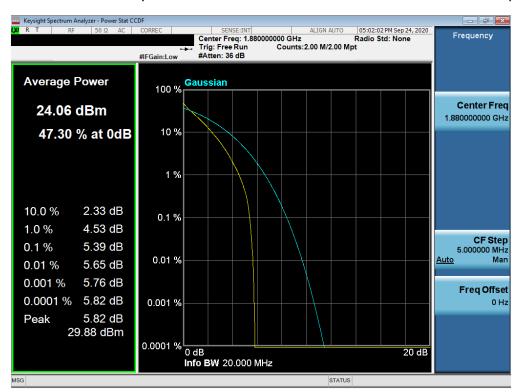
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## NR Band n2/n25 Ant A



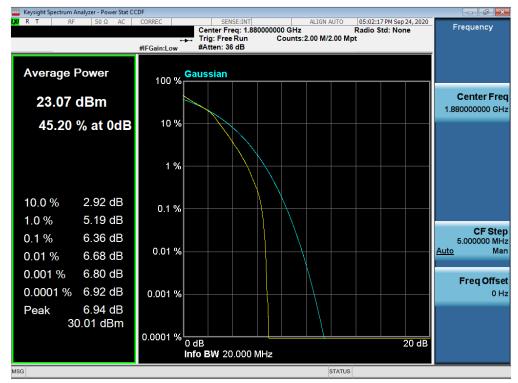
Plot 7-292. PAR Plot (NR Band n2 Ant A - 20.0MHz DFT-s-OFDM BPSK - Full RB)



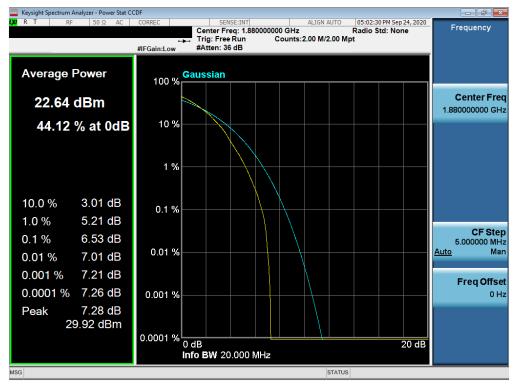
Plot 7-293. PAR Plot (NR Band n2 Ant A - 20.0MHz CP-OFDM-CP-OFDM QPSK - Full RB)

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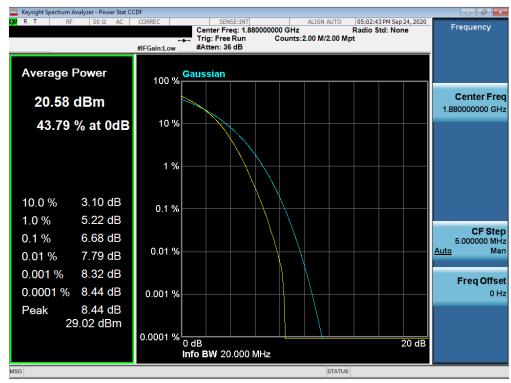
Plot 7-294. PAR Plot (NR Band n2 Ant A - 20.0MHz CP-OFDM-CP-OFDM 16-QAM - Full RB)



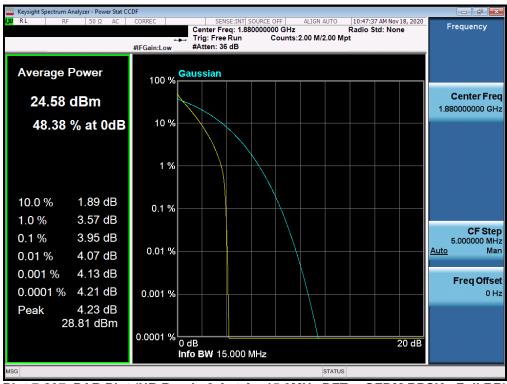
Plot 7-295. PAR Plot (NR Band n2 Ant A - 20.0MHz CP-OFDM-CP-OFDM 64-QAM - Full RB)

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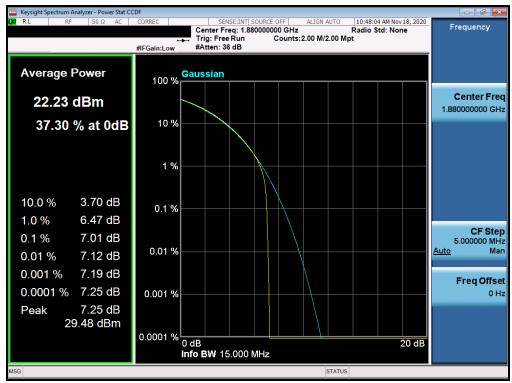
Plot 7-296. PAR Plot (NR Band n2 Ant A - 20.0MHz CP-OFDM-CP-OFDM 256-QAM - Full RB)



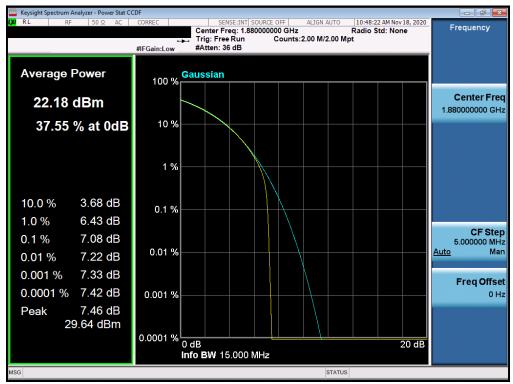
Plot 7-297. PAR Plot (NR Band n2 Ant A - 15.0MHz DFT-s-OFDM BPSK - Full RB)

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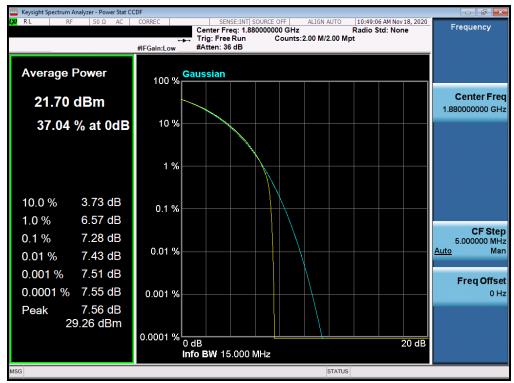
Plot 7-298. PAR Plot (NR Band n2 Ant A - 15.0MHz CP-OFDM-CP-OFDM QPSK - Full RB)



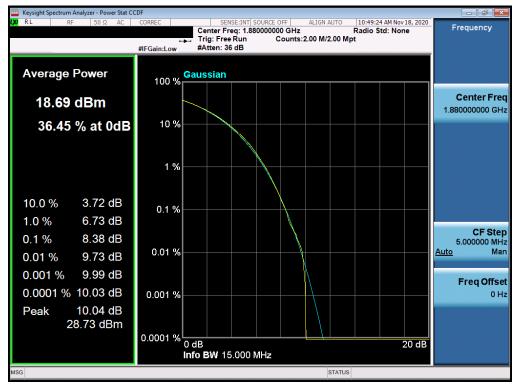
Plot 7-299. PAR Plot (NR Band n2 Ant A - 15.0MHz CP-OFDM-CP-OFDM 16-QAM - Full RB)

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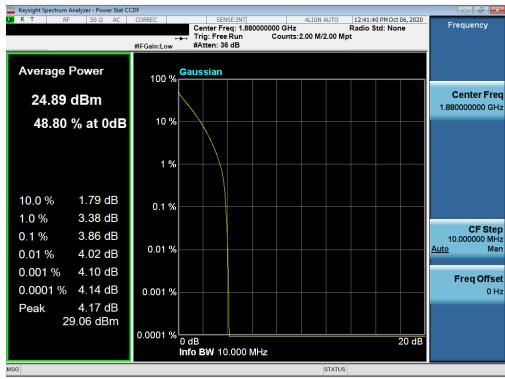
Plot 7-300. PAR Plot (NR Band n2 Ant A - 15.0MHz CP-OFDM-CP-OFDM 64-QAM - Full RB)



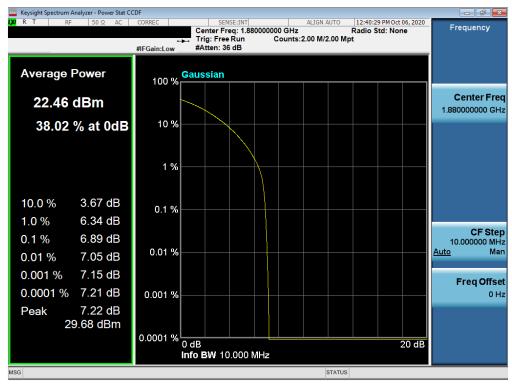
Plot 7-301. PAR Plot (NR Band n2 Ant A - 15.0MHz CP-OFDM-CP-OFDM 256-QAM - Full RB)

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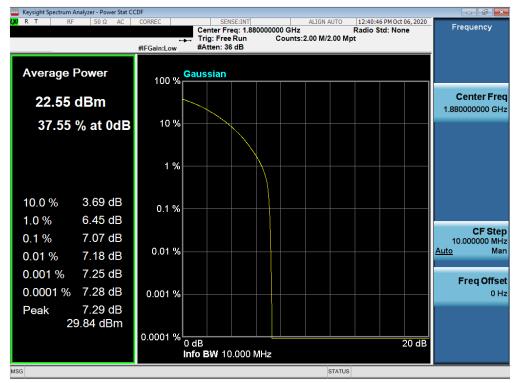
Plot 7-302. PAR Plot (NR Band n2 Ant A - 10.0MHz DFT-s-OFDM BPSK - Full RB)



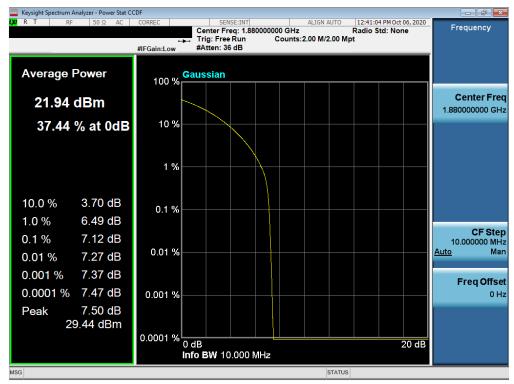
Plot 7-303. PAR Plot (NR Band n2 Ant A - 10.0MHz CP-OFDM-CP-OFDM QPSK - Full RB)

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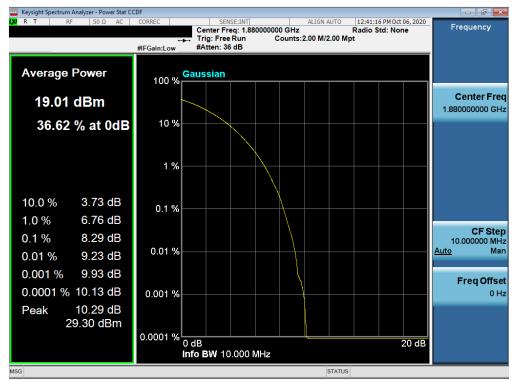
Plot 7-304. PAR Plot (NR Band n2 Ant A - 10.0MHz CP-OFDM-CP-OFDM 16-QAM - Full RB)



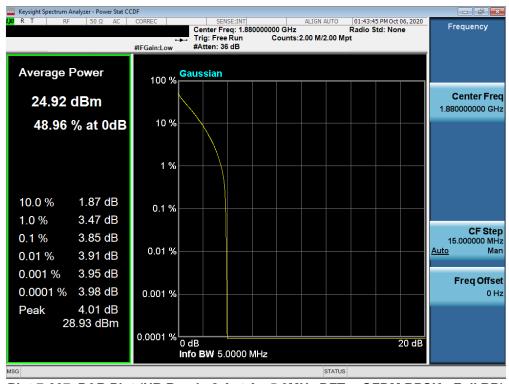
Plot 7-305. PAR Plot (NR Band n2 Ant A - 10.0MHz CP-OFDM-CP-OFDM 64-QAM - Full RB)

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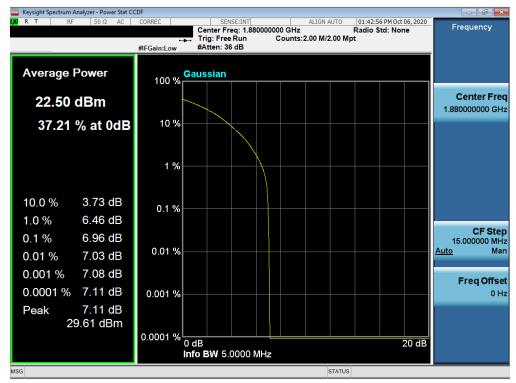
Plot 7-306. PAR Plot (NR Band n2 Ant A - 10.0MHz CP-OFDM-CP-OFDM 256-QAM - Full RB)



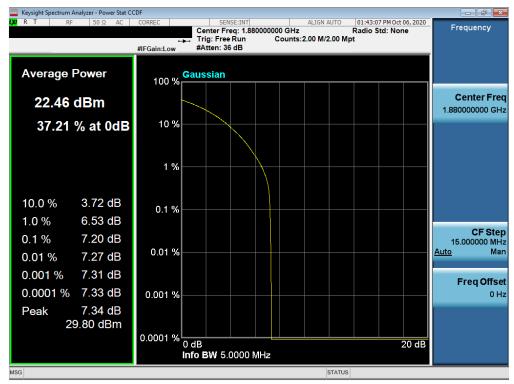
Plot 7-307. PAR Plot (NR Band n2 Ant A - 5.0MHz DFT-s-OFDM BPSK - Full RB)

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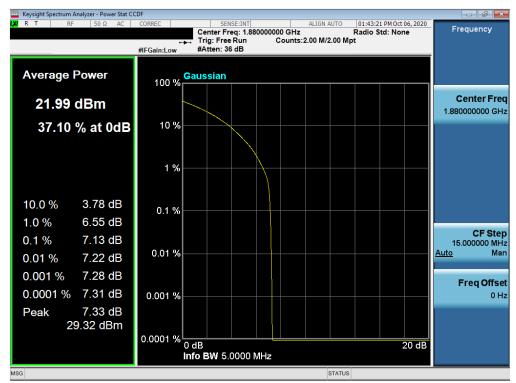
Plot 7-308. PAR Plot (NR Band n2 Ant A - 5.0MHz CP-OFDM-CP-OFDM QPSK - Full RB)



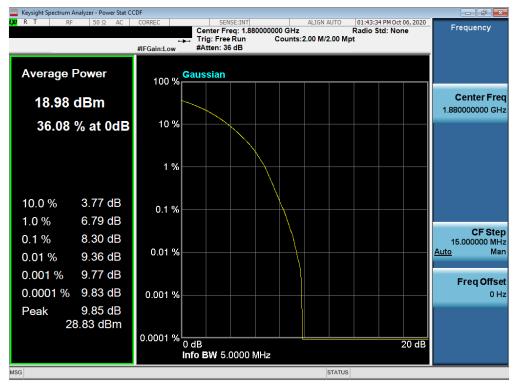
Plot 7-309. PAR Plot (NR Band n2 Ant A - 5.0MHz CP-OFDM-CP-OFDM 16-QAM - Full RB)

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Plot 7-310. PAR Plot (NR Band n2 Ant A - 5.0MHz CP-OFDM-CP-OFDM 64-QAM - Full RB)



Plot 7-311. PAR Plot (NR Band n2 Ant A - 5.0MHz CP-OFDM-CP-OFDM 256-QAM - Full RB)

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