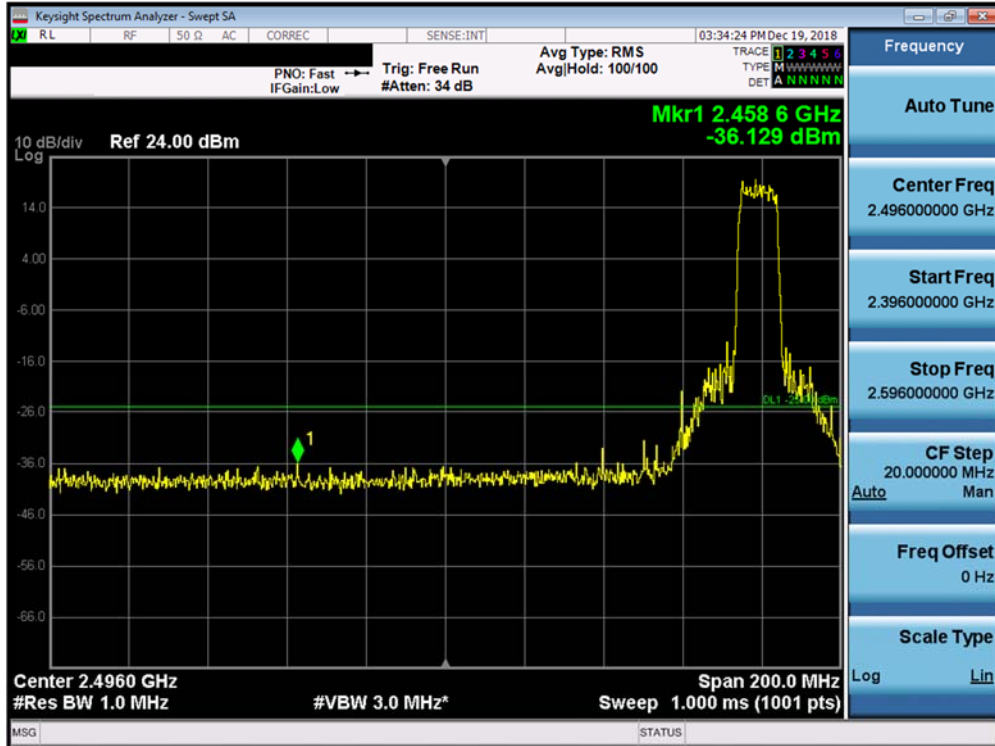
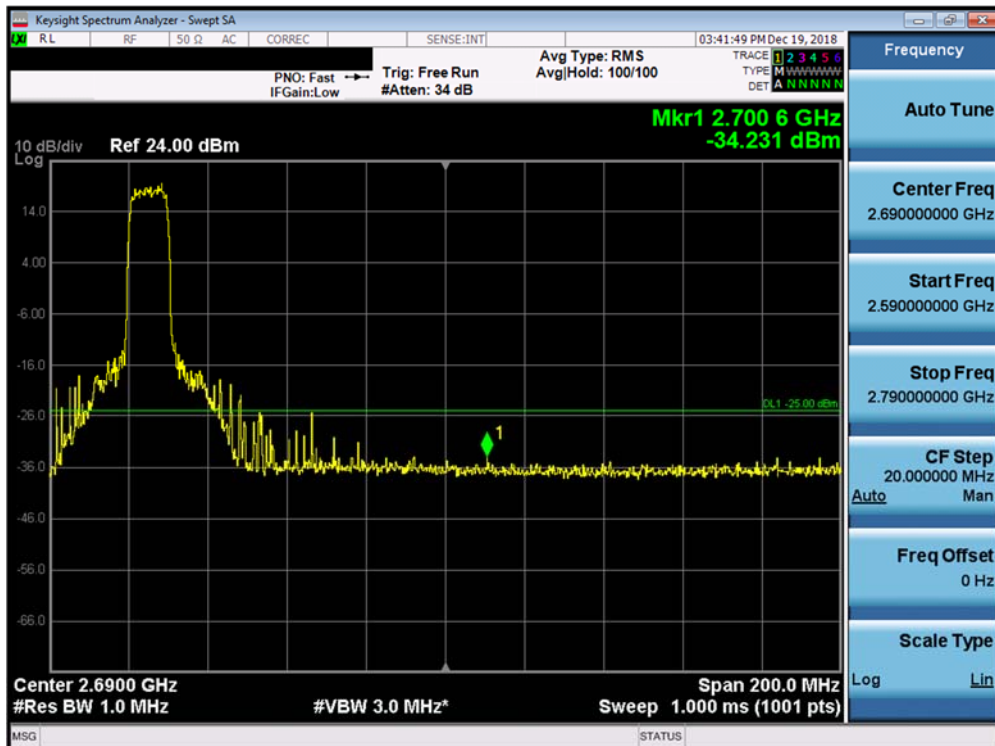


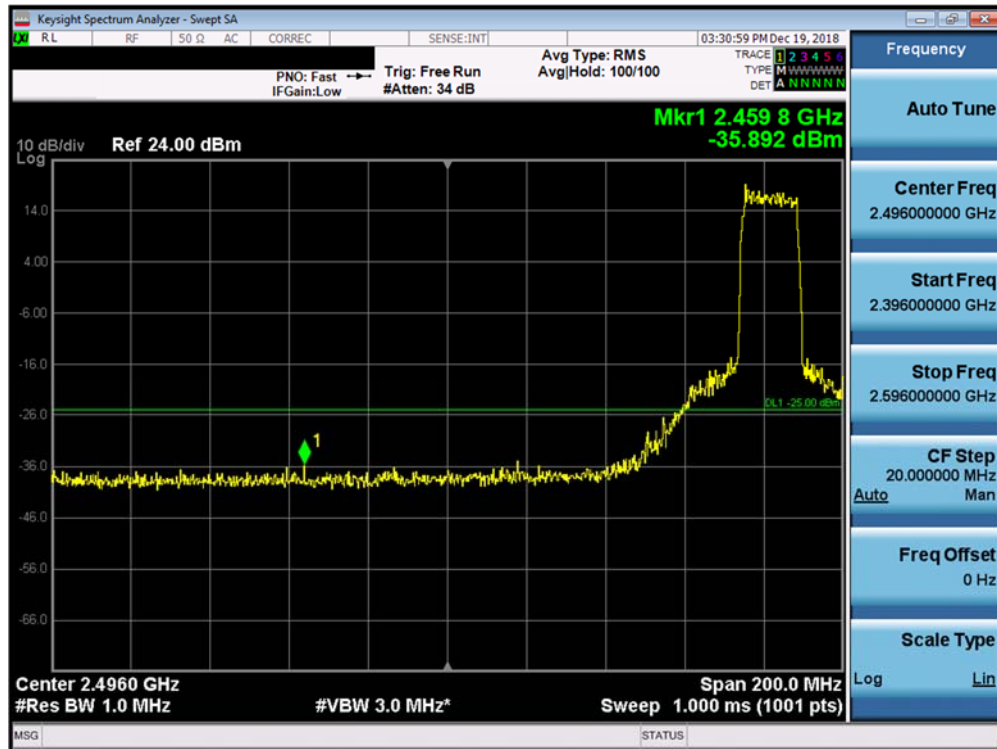


Plot 7-351. Lower Band Edge Plot (Band 38 - 10.0MHz QPSK - Full RB Configuration)

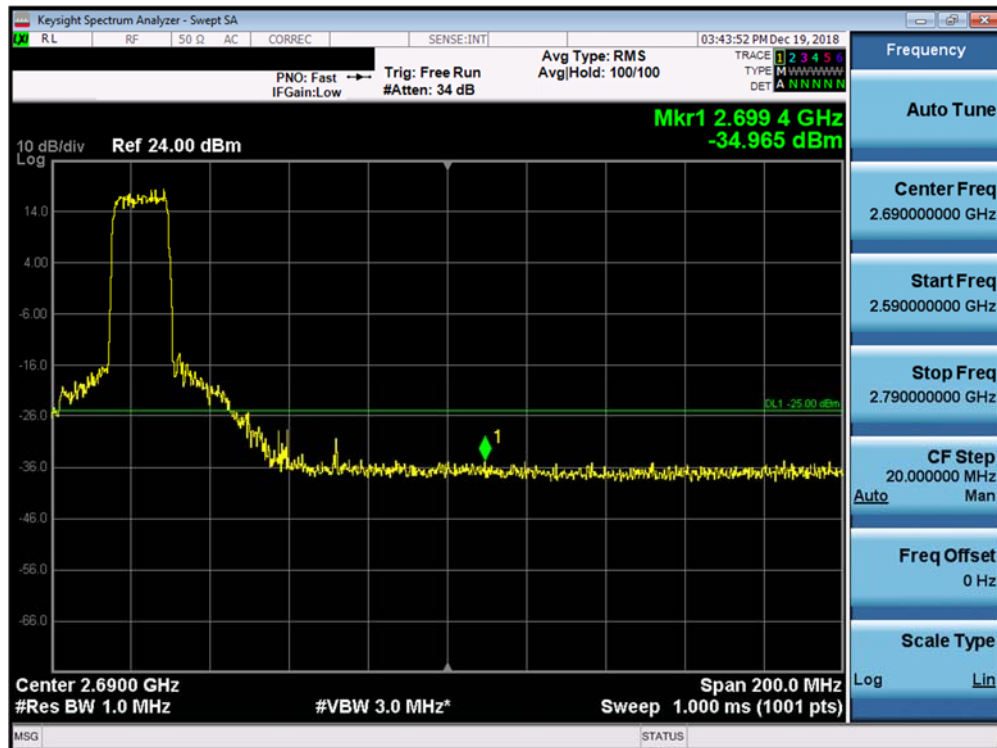


Plot 7-352. Upper Band Edge Plot (Band 38 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG975U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1810250197-03.A3L	Test Dates: 10/31/2018-1/09/2019	EUT Type: Portable Handset		Page 202 of 359

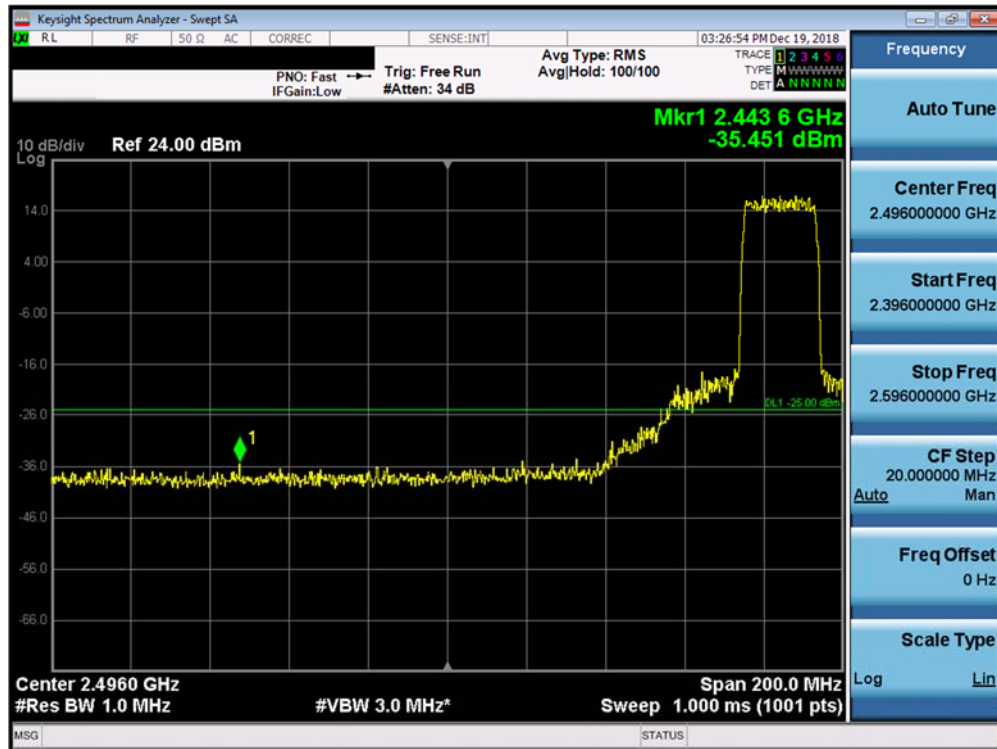


Plot 7-353. Lower Band Edge Plot (Band 38 - 15.0MHz QPSK - Full RB Configuration)

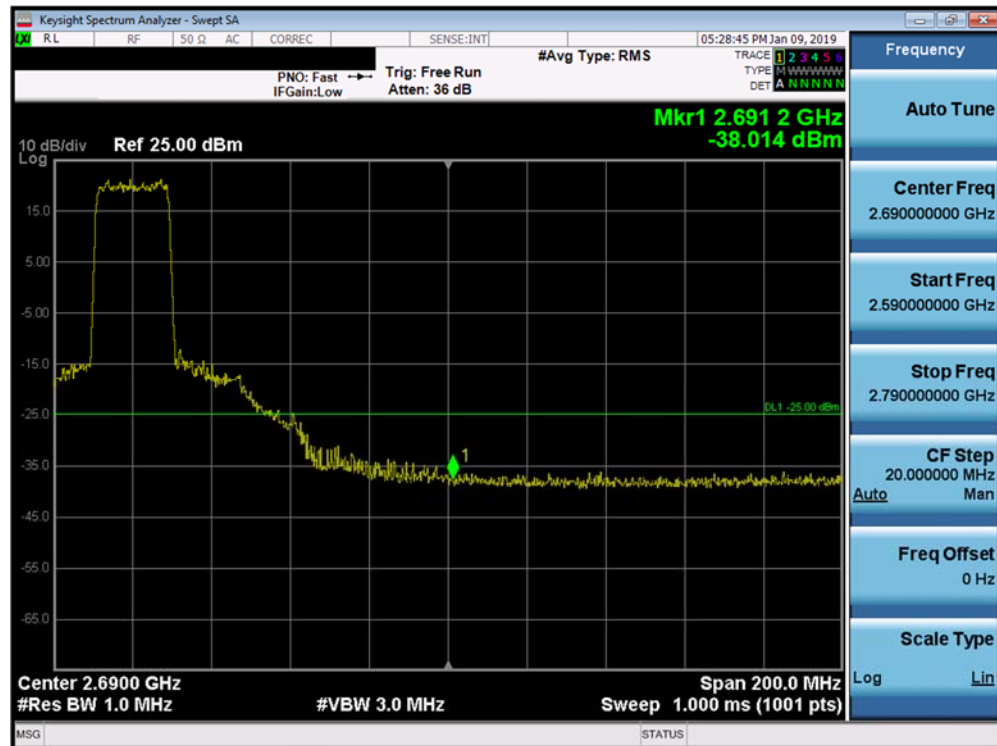


Plot 7-354. Upper Band Edge Plot (Band 38 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG975U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1810250197-03.A3L	Test Dates: 10/31/2018-1/09/2019	EUT Type: Portable Handset		Page 203 of 359



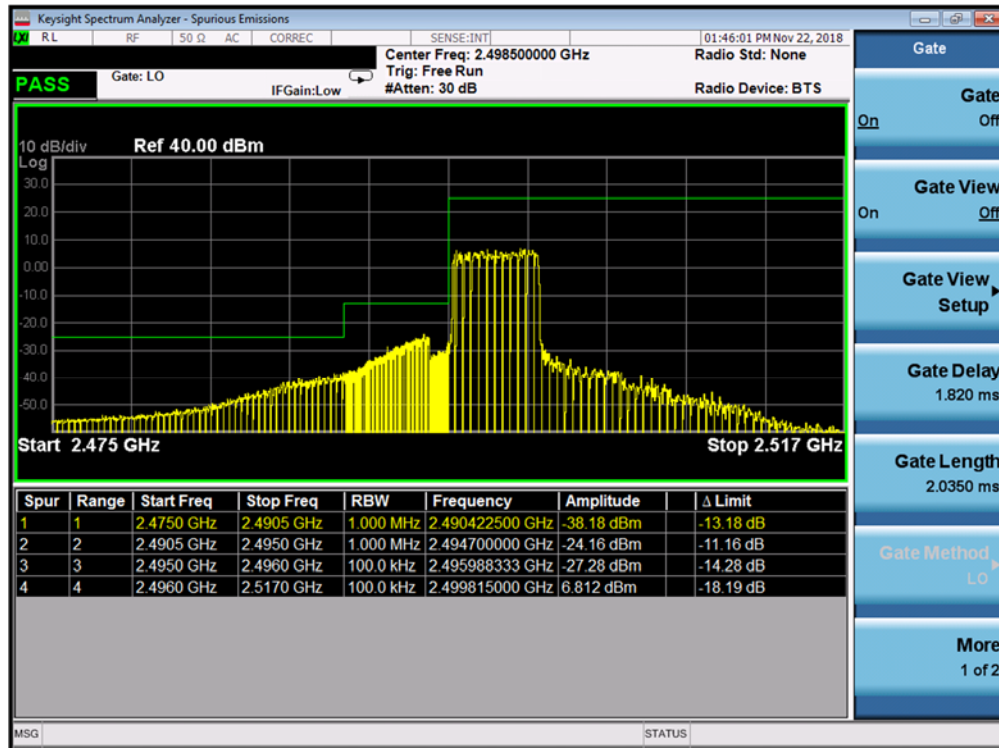
Plot 7-355. Lower Band Edge Plot (Band 38 - 20.0MHz QPSK - Full RB Configuration)



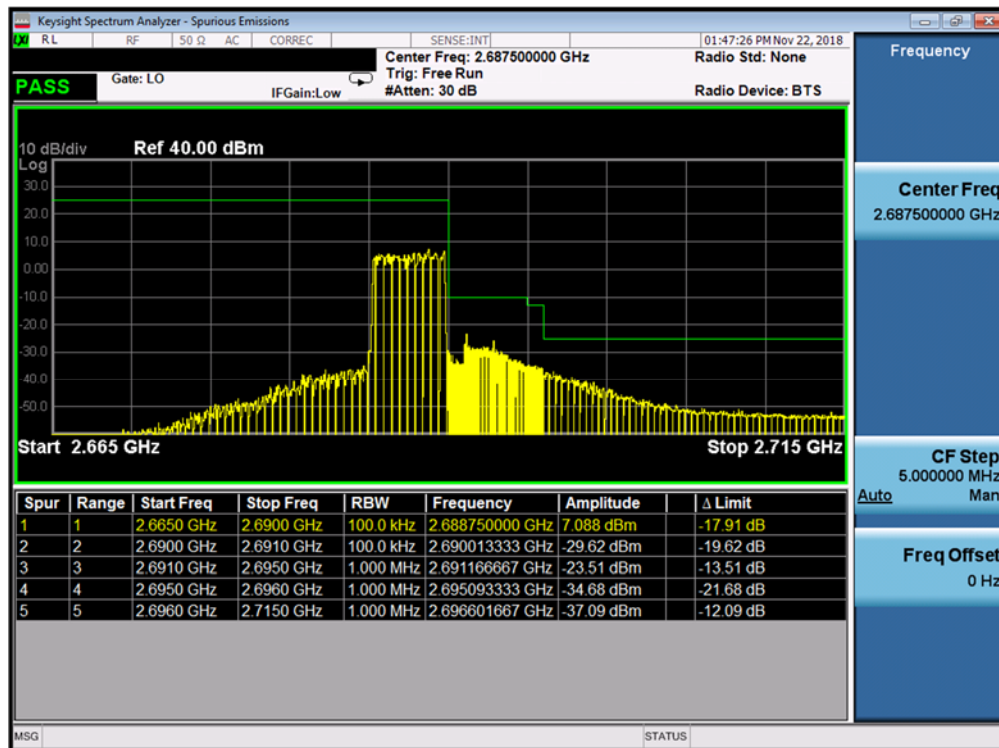
Plot 7-356. Upper Band Edge Plot (Band 38 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG975U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1810250197-03.A3L	Test Dates: 10/31/2018-1/09/2019	EUT Type: Portable Handset		Page 204 of 359

Band 41

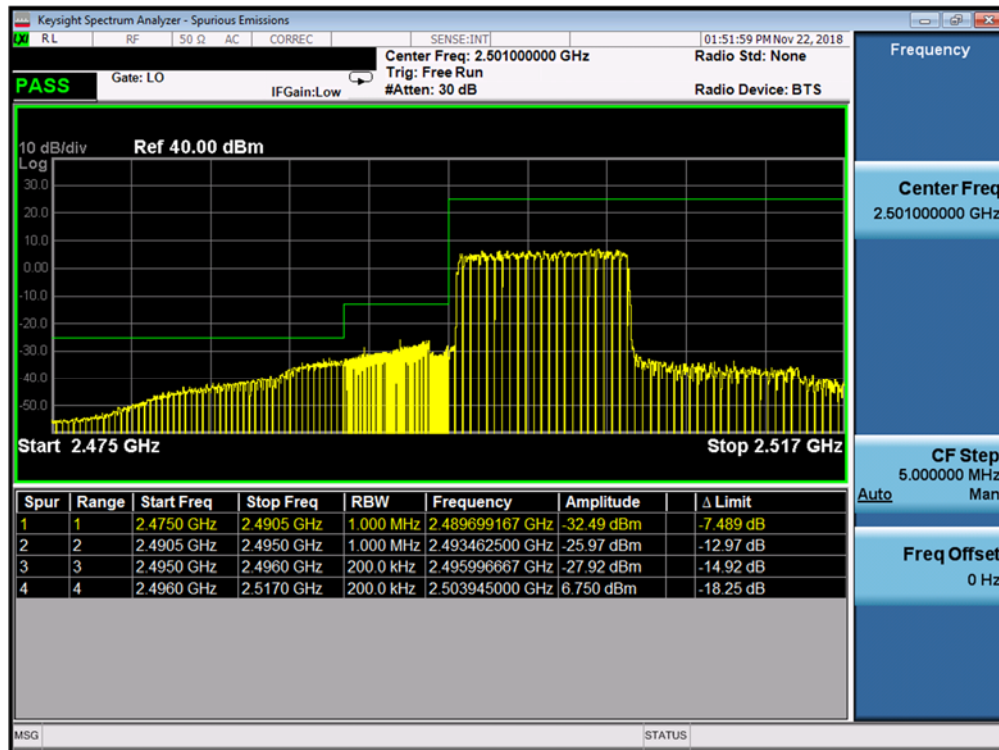


Plot 7-357. Lower ACP Plot at 2496 MHz (Band 41 - 5.0MHz QPSK - Full RB Configuration)

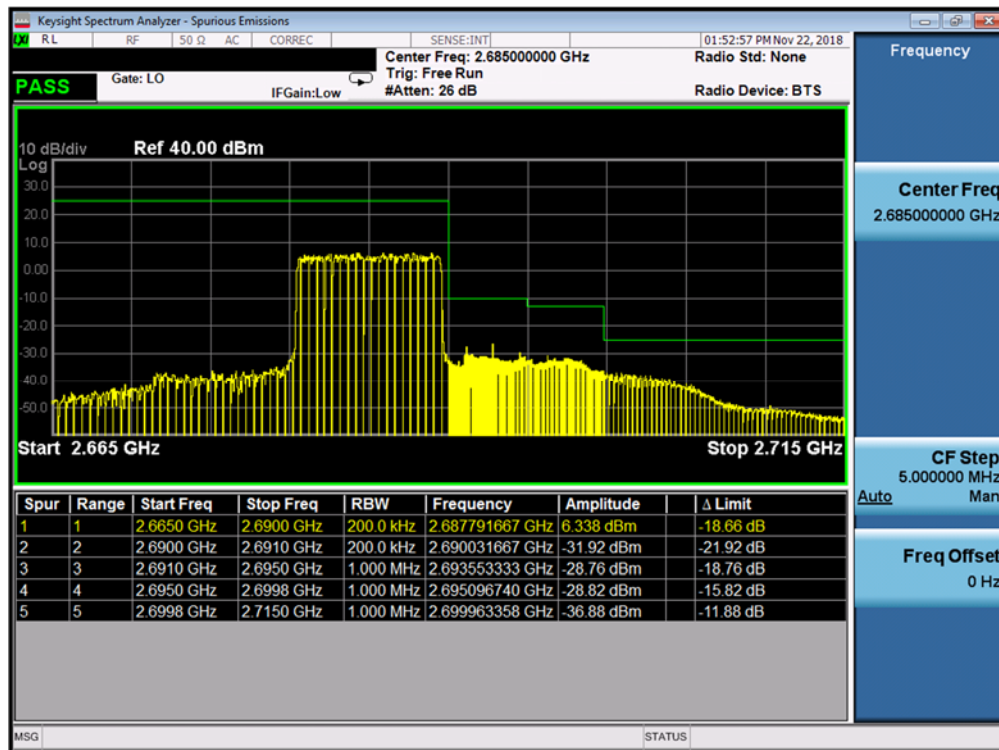


Plot 7-358. Upper ACP Plot (Band 41 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG975U			MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1810250197-03.A3L	Test Dates: 10/31/2018-1/09/2019	EUT Type: Portable Handset	Page 205 of 359		

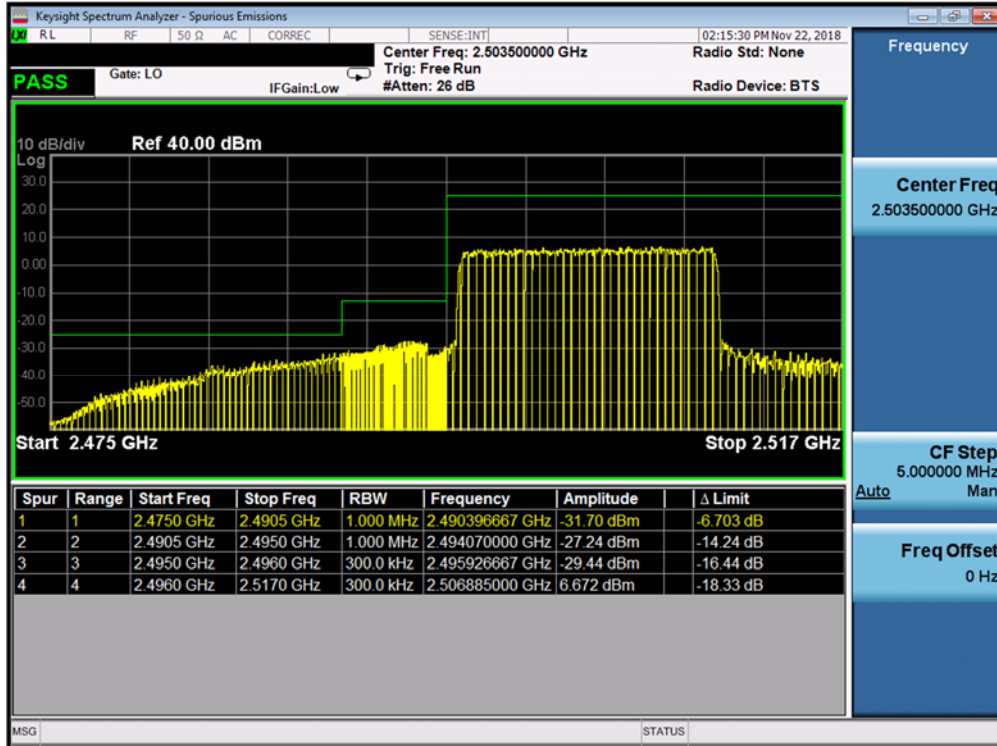


Plot 7-359. Lower ACP Plot at 2496 MHz (Band 41 - 10.0MHz QPSK - Full RB Configuration)

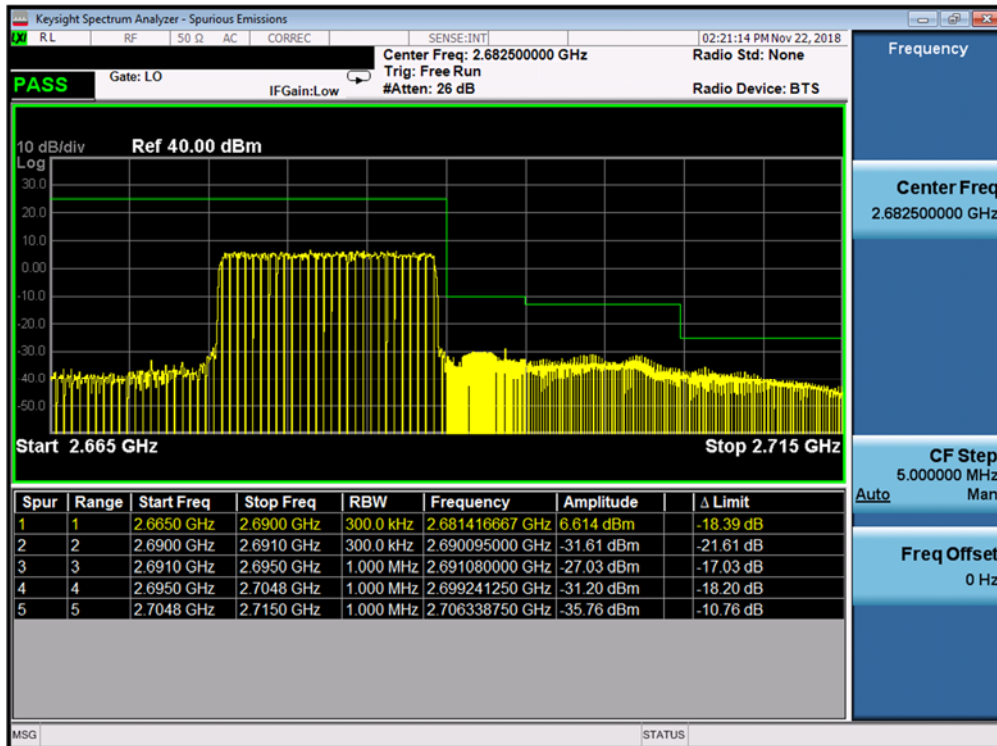


Plot 7-360. Upper ACP Plot (Band 41 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG975U	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1810250197-03.A3L	Test Dates: 10/31/2018-1/09/2019	EUT Type: Portable Handset	Page 206 of 359	

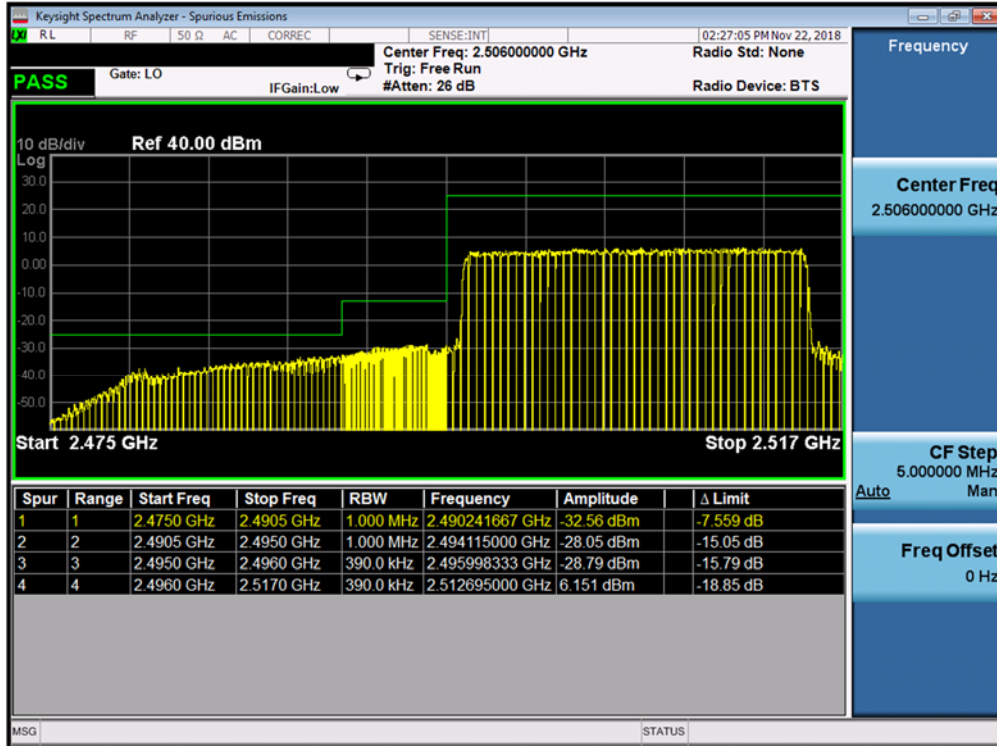


Plot 7-361. Lower ACP Plot at 2496 MHz (Band 41 - 15.0MHz QPSK - Full RB Configuration)

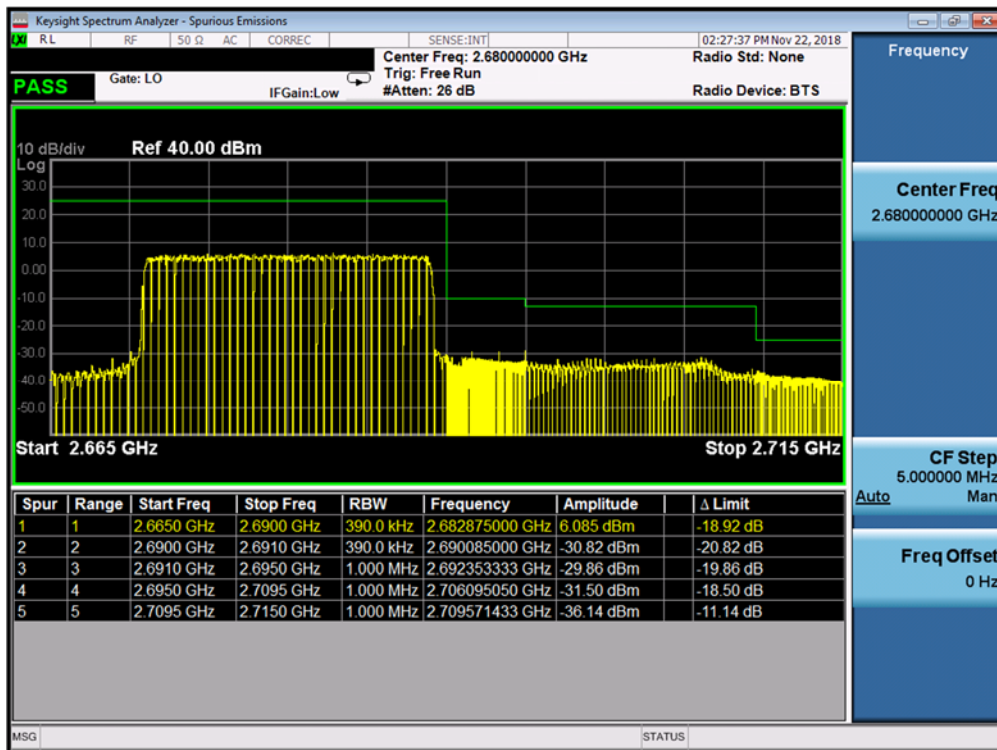


Plot 7-362. Upper ACP Plot (Band 41 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG975U			MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1810250197-03.A3L	Test Dates: 10/31/2018-1/09/2019	EUT Type: Portable Handset	Page 207 of 359		



Plot 7-363. Lower ACP Plot at 2496 MHz (Band 41 - 20.0MHz QPSK - Full RB Configuration)



Plot 7-364. Upper ACP Plot (Band 41 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG975U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1810250197-03.A3L	Test Dates: 10/31/2018-1/09/2019	EUT Type: Portable Handset		Page 208 of 359

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 $\geq$ 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.

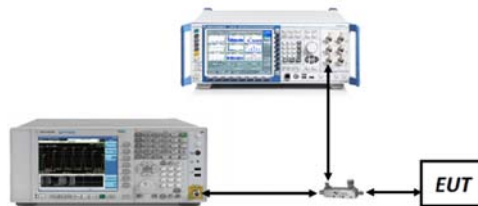


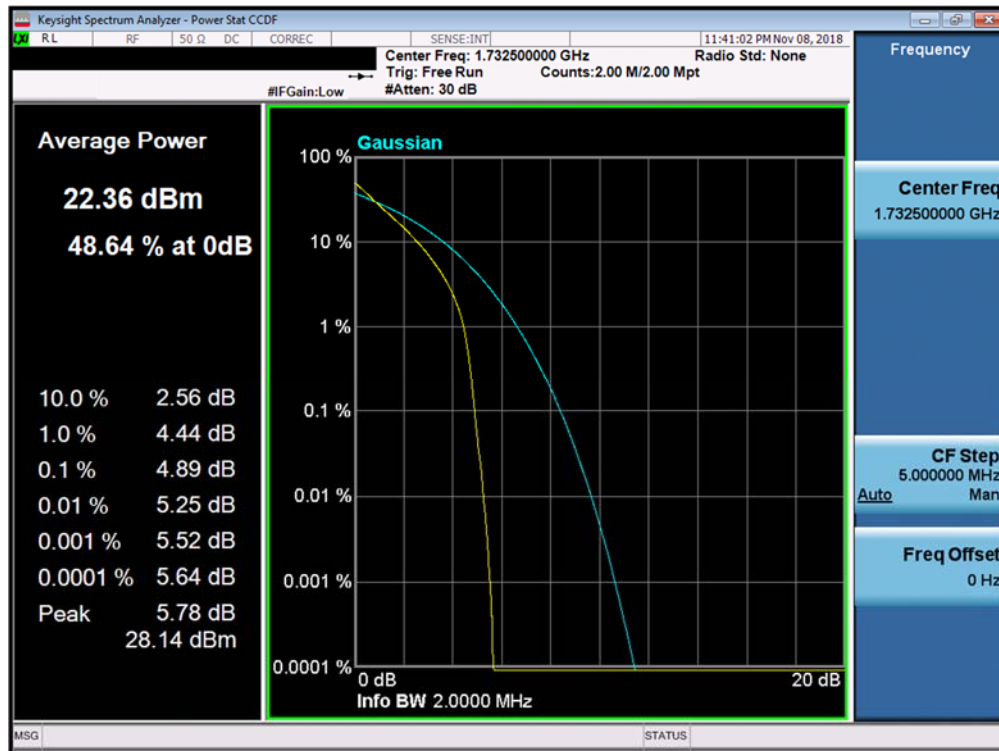
Figure 7-4. Test Instrument & Measurement Setup

Test Notes

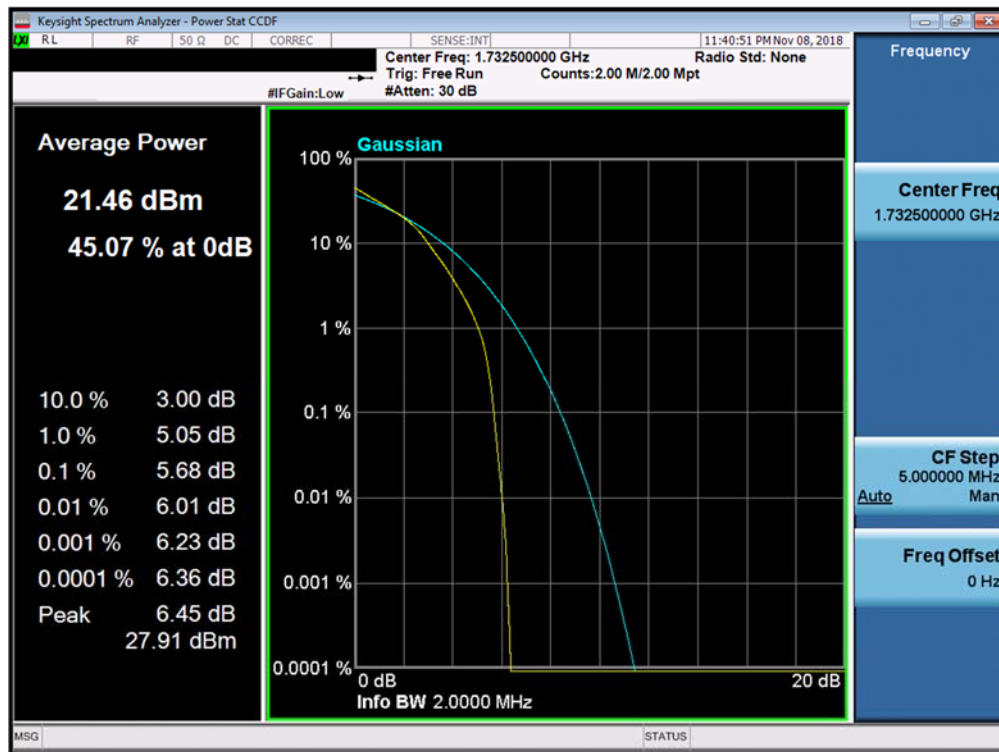
None.

FCC ID: A3LSMG975U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1810250197-03.A3L	Test Dates: 10/31/2018-1/09/2019	EUT Type: Portable Handset		Page 209 of 359

Band 66/4

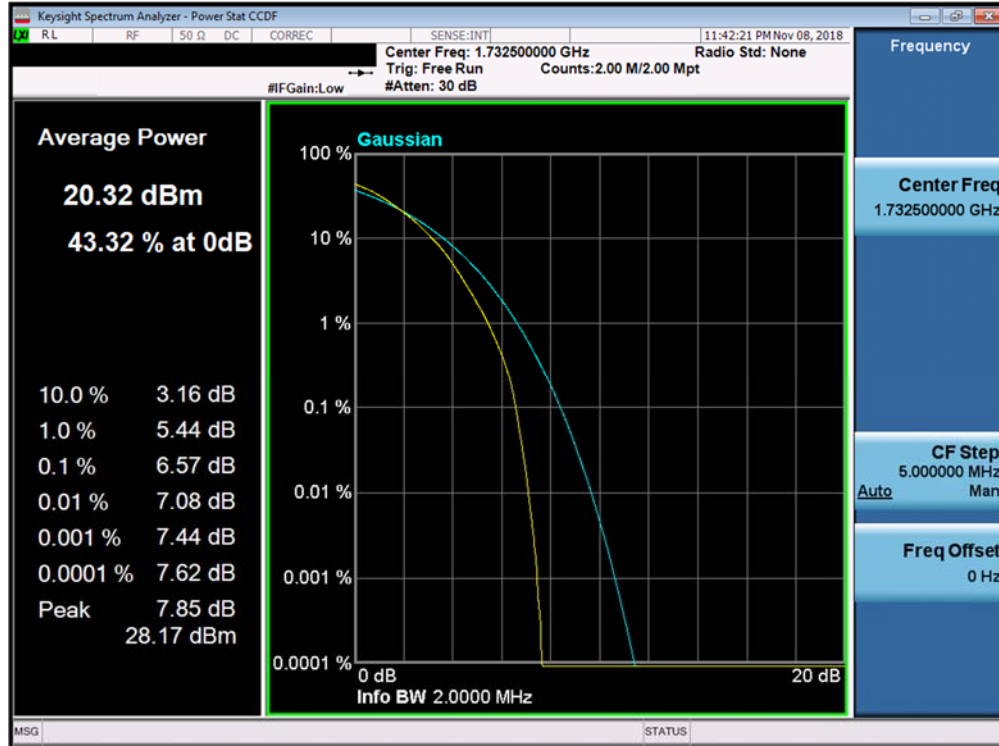


Plot 7-365. PAR Plot (Band 66/4 - 1.4MHz QPSK - Full RB Configuration)

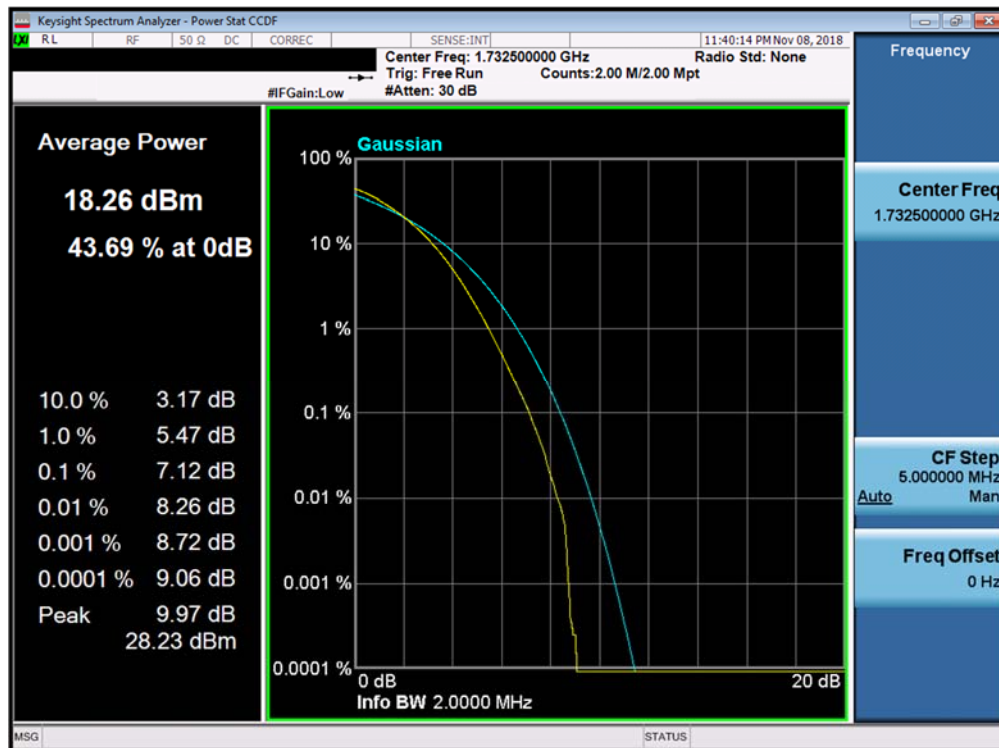


Plot 7-366. PAR Plot (Band 66/4 - 1.4MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG975U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1810250197-03.A3L	Test Dates: 10/31/2018-1/09/2019	EUT Type: Portable Handset		Page 210 of 359

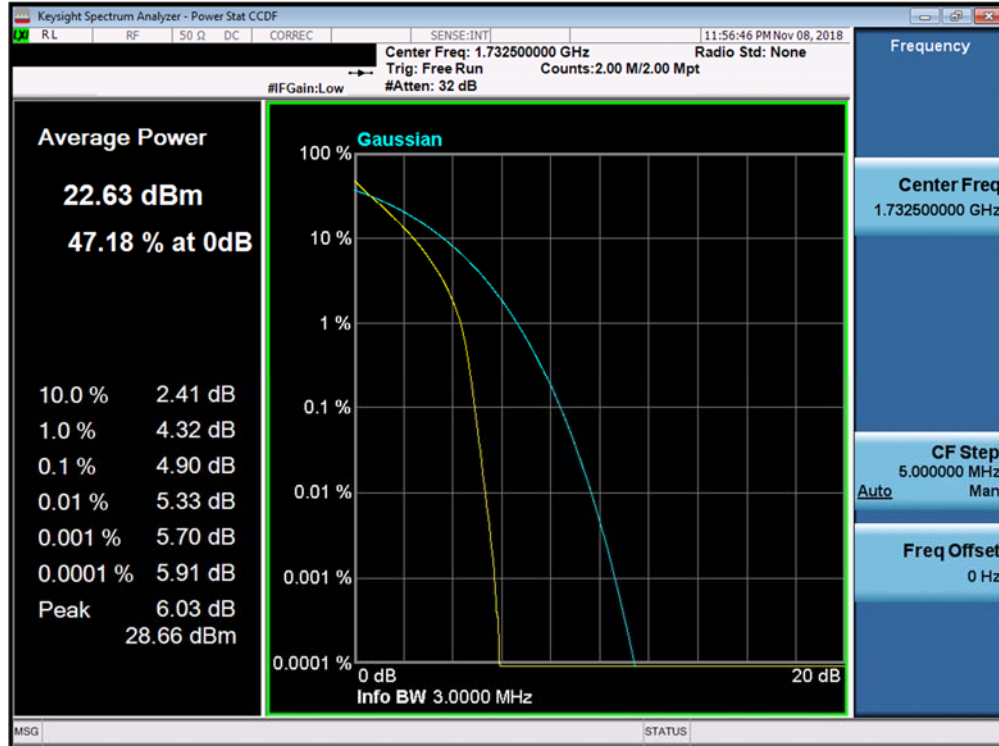


Plot 7-367. PAR Plot (Band 66/4 - 1.4MHz 64-QAM - Full RB Configuration)

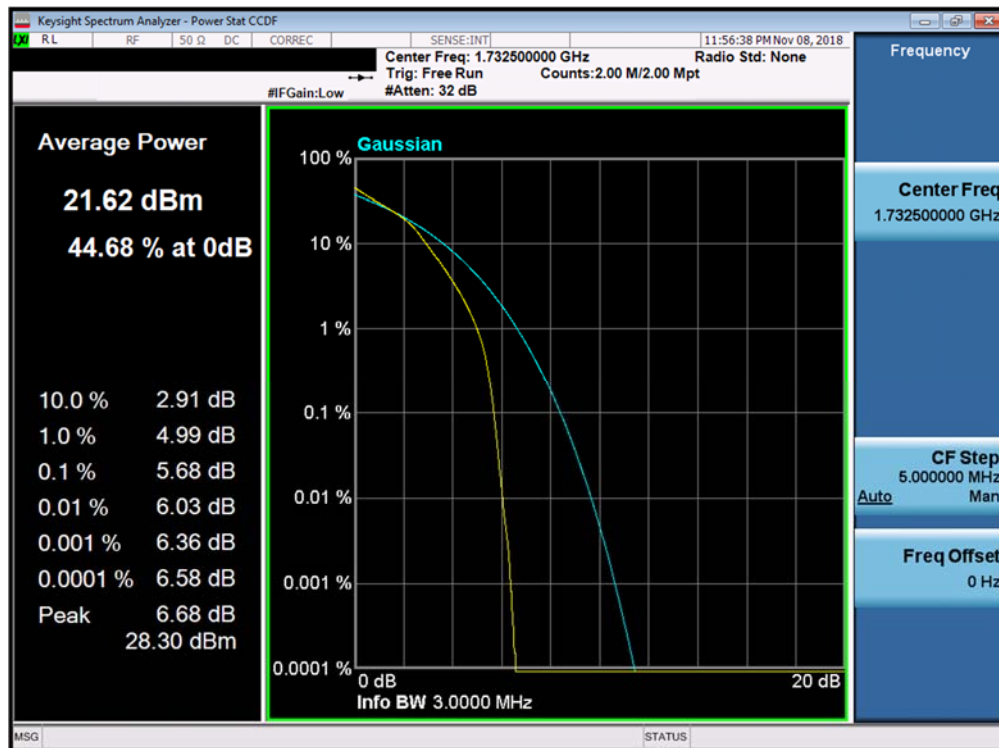


Plot 7-368. PAR Plot (Band 66/4 - 1.4MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG975U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1810250197-03.A3L	Test Dates: 10/31/2018-1/09/2019	EUT Type: Portable Handset	Page 211 of 359

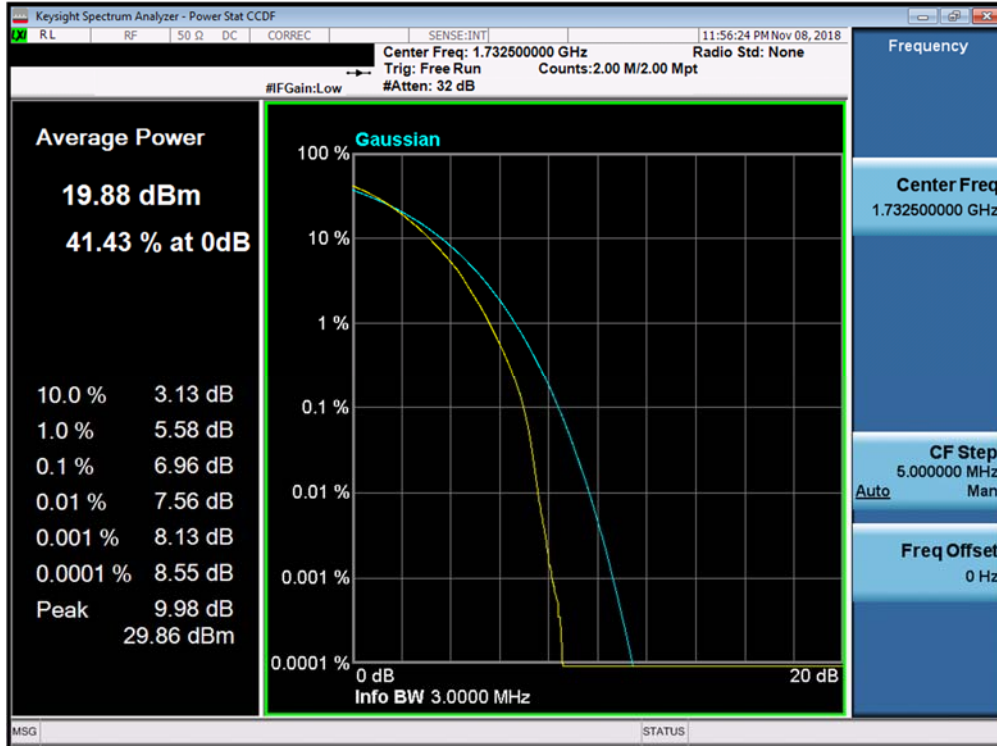


Plot 7-369. PAR Plot (Band 66/4 - 3.0MHz QPSK - Full RB Configuration)

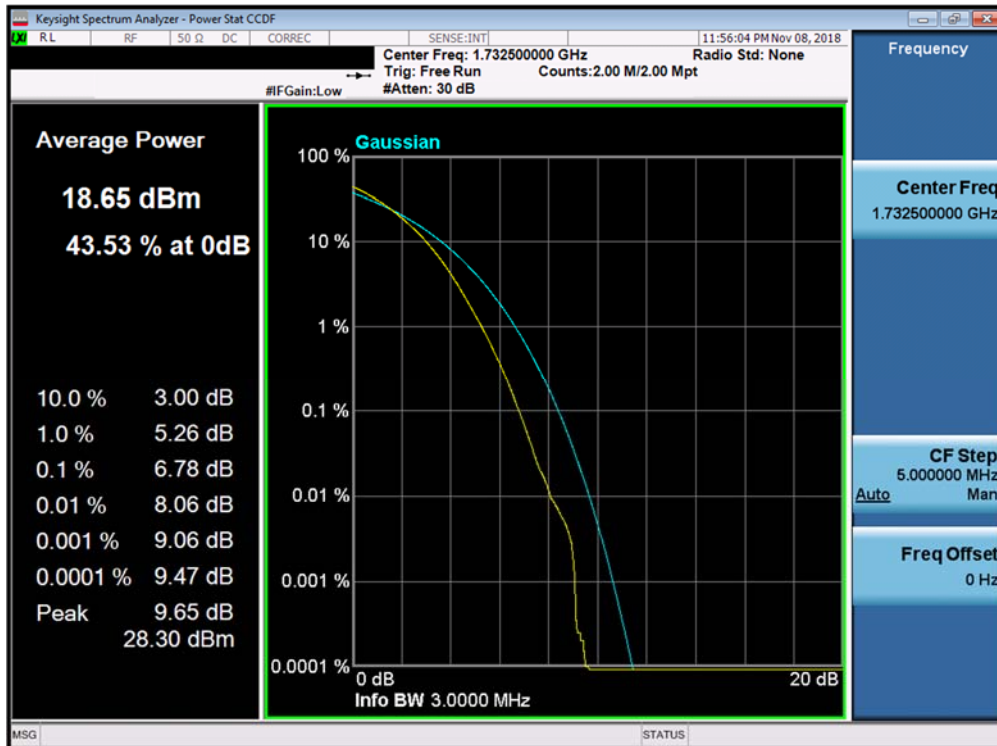


Plot 7-370. PAR Plot (Band 66/4 - 3.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG975U			MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1810250197-03.A3L	Test Dates: 10/31/2018-1/09/2019	EUT Type: Portable Handset		Page 212 of 359	

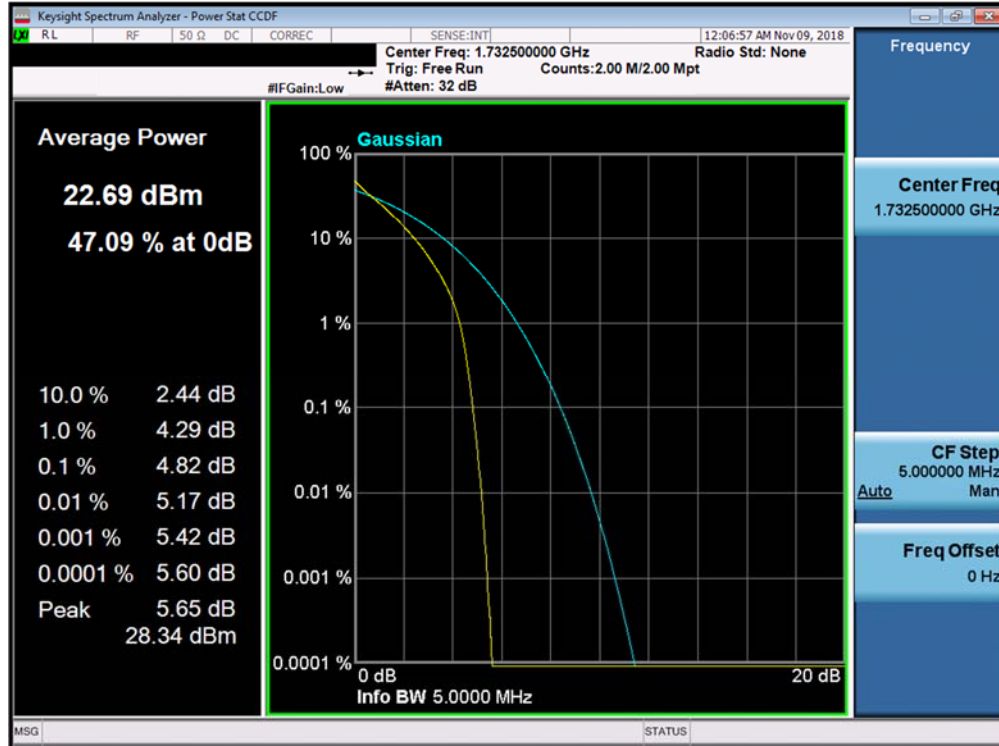


Plot 7-371. PAR Plot (Band 66/4 - 3.0MHz 64-QAM - Full RB Configuration)

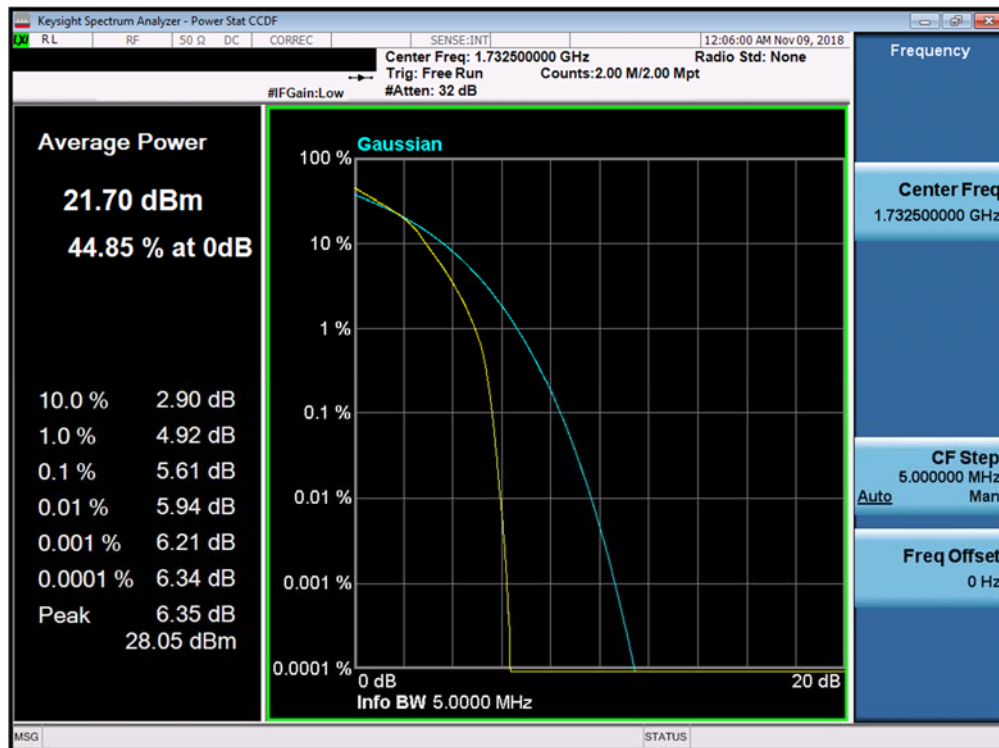


Plot 7-372. PAR Plot (Band 66/4 - 3.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG975U				Approved by: Quality Manager
Test Report S/N: 1M1810250197-03.A3L	Test Dates: 10/31/2018-1/09/2019	EUT Type: Portable Handset		Page 213 of 359

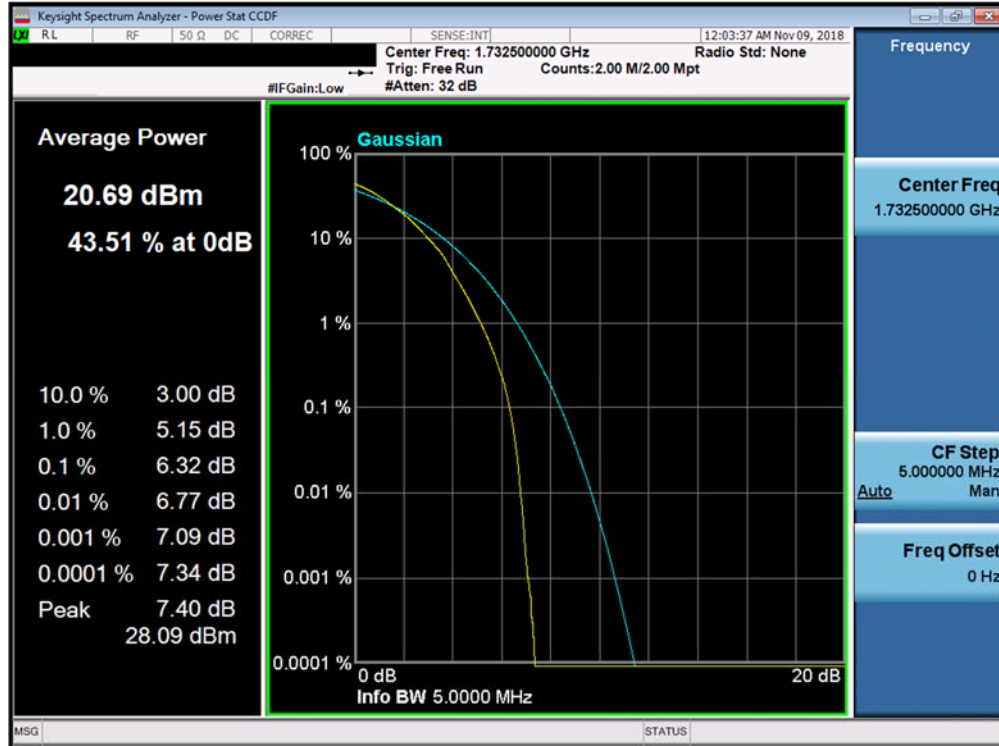


Plot 7-373. PAR Plot (Band 66/4 - 5.0MHz QPSK - Full RB Configuration)

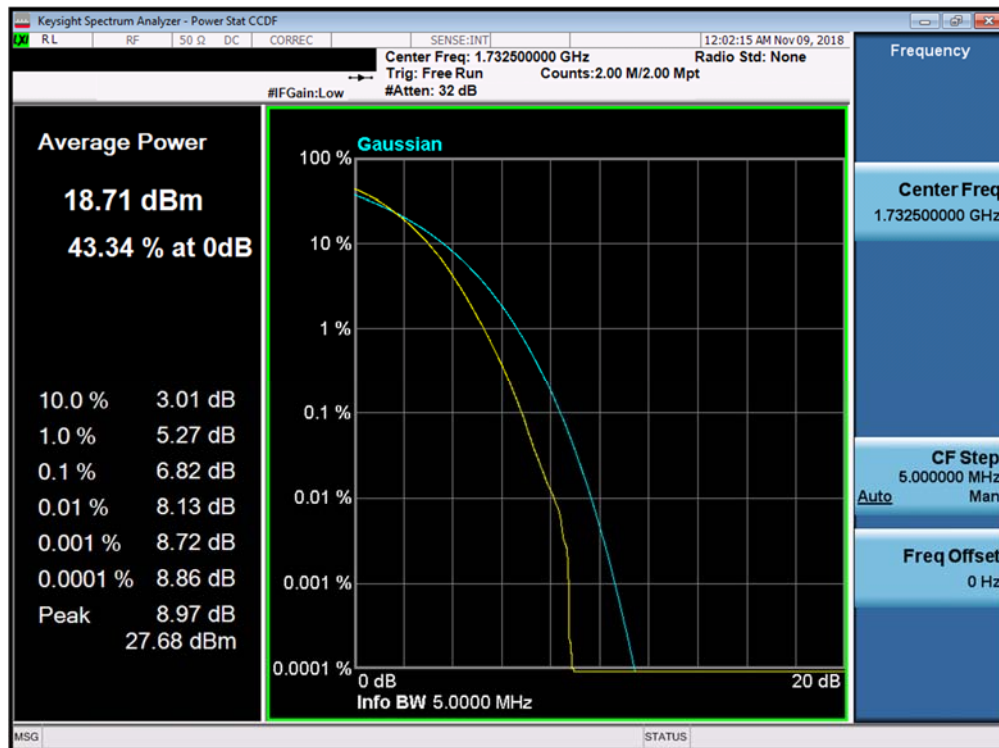


Plot 7-374. PAR Plot (Band 66/4 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG975U			MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1810250197-03.A3L	Test Dates: 10/31/2018-1/09/2019	EUT Type: Portable Handset		Page 214 of 359	

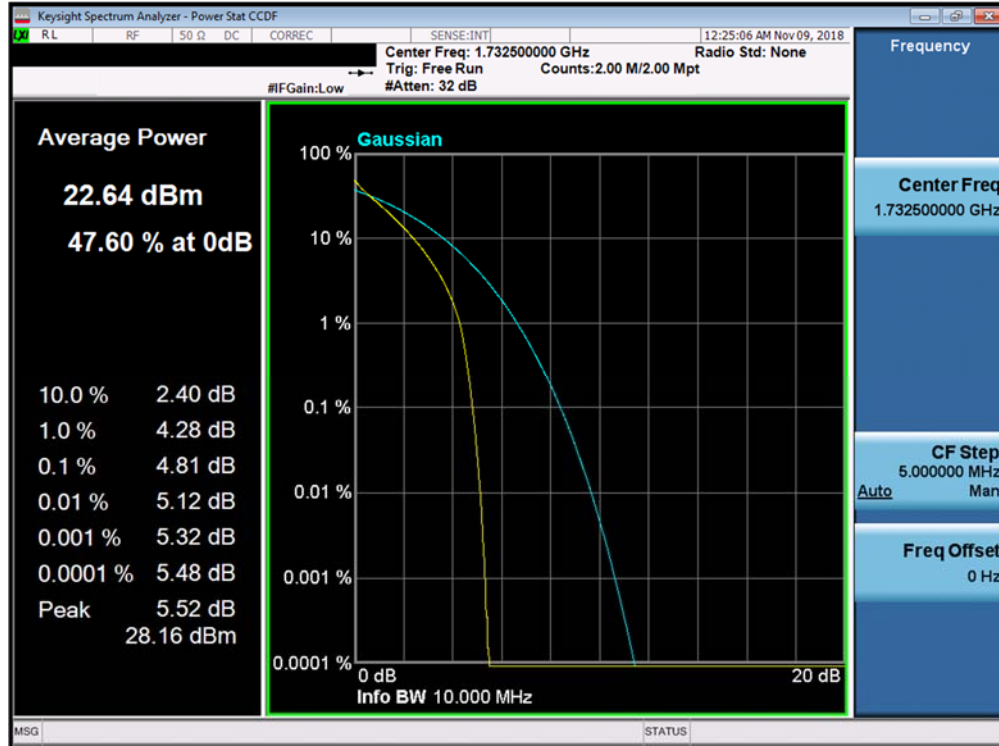


Plot 7-375. PAR Plot (Band 66/4 - 5.0MHz 64-QAM - Full RB Configuration)

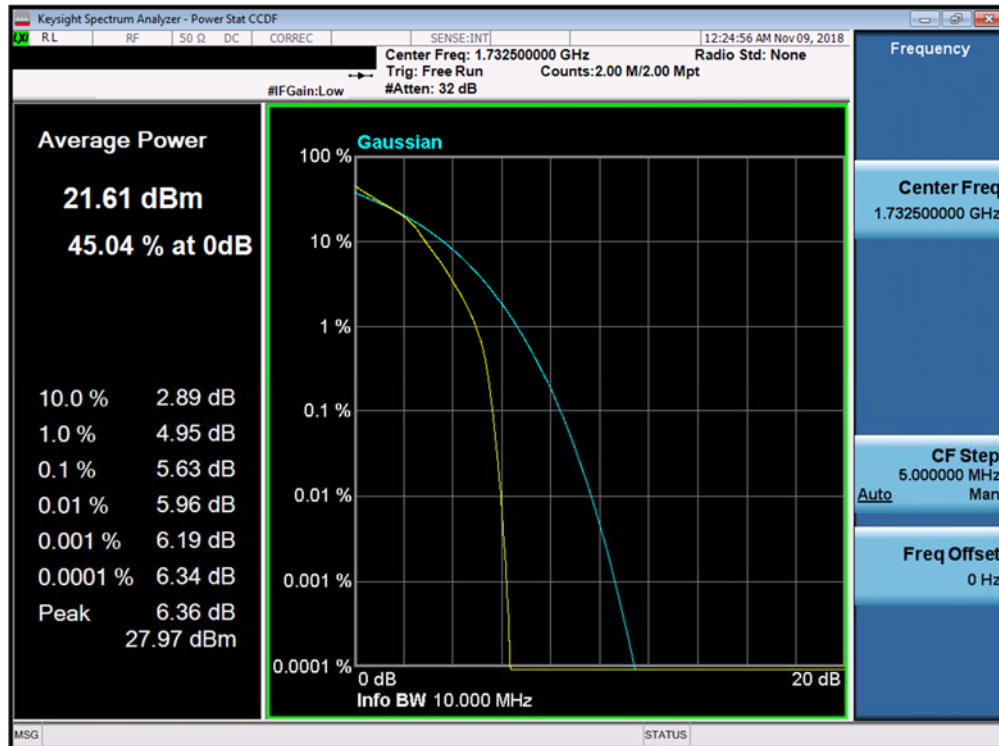


Plot 7-376. PAR Plot (Band 66/4 - 5.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG975U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1810250197-03.A3L	Test Dates: 10/31/2018-1/09/2019	EUT Type: Portable Handset	Page 215 of 359

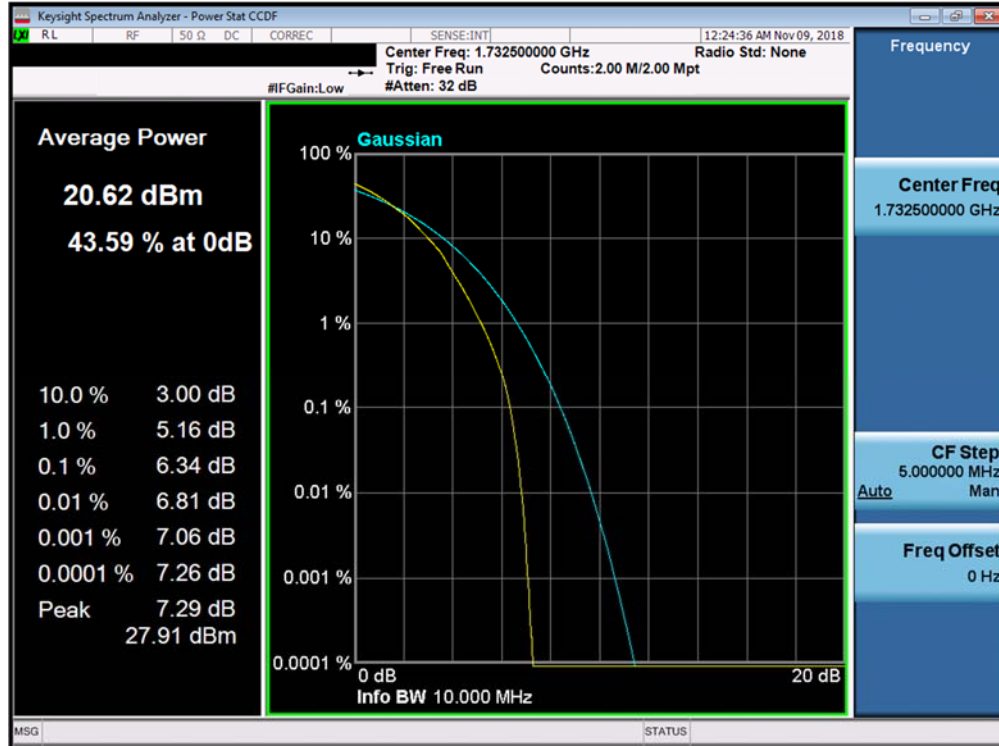


Plot 7-377. PAR Plot (Band 66/4 - 10.0MHz QPSK - Full RB Configuration)

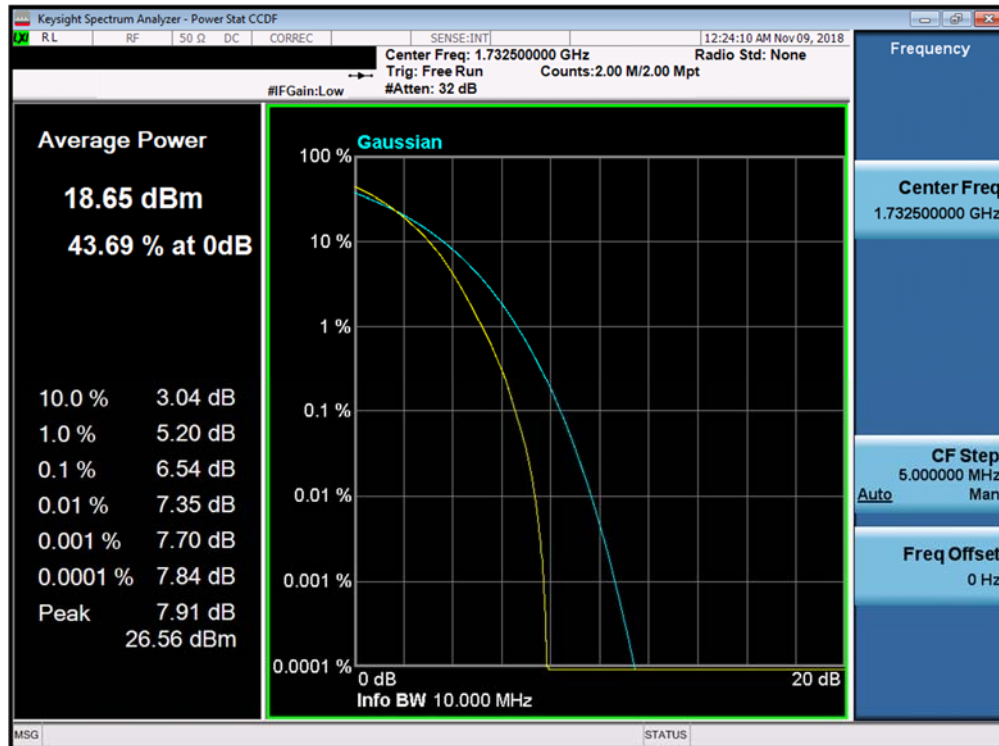


Plot 7-378. PAR Plot (Band 66/4 - 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG975U			MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1810250197-03.A3L	Test Dates: 10/31/2018-1/09/2019	EUT Type: Portable Handset			Page 216 of 359

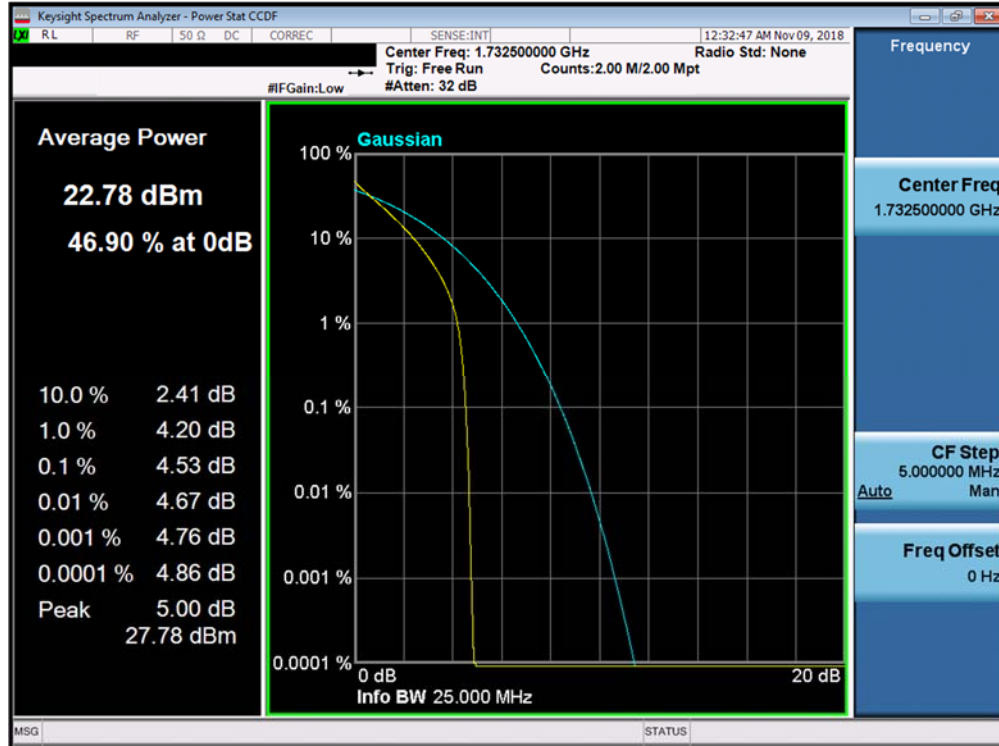


Plot 7-379. PAR Plot (Band 66/4 - 10.0MHz 64-QAM - Full RB Configuration)

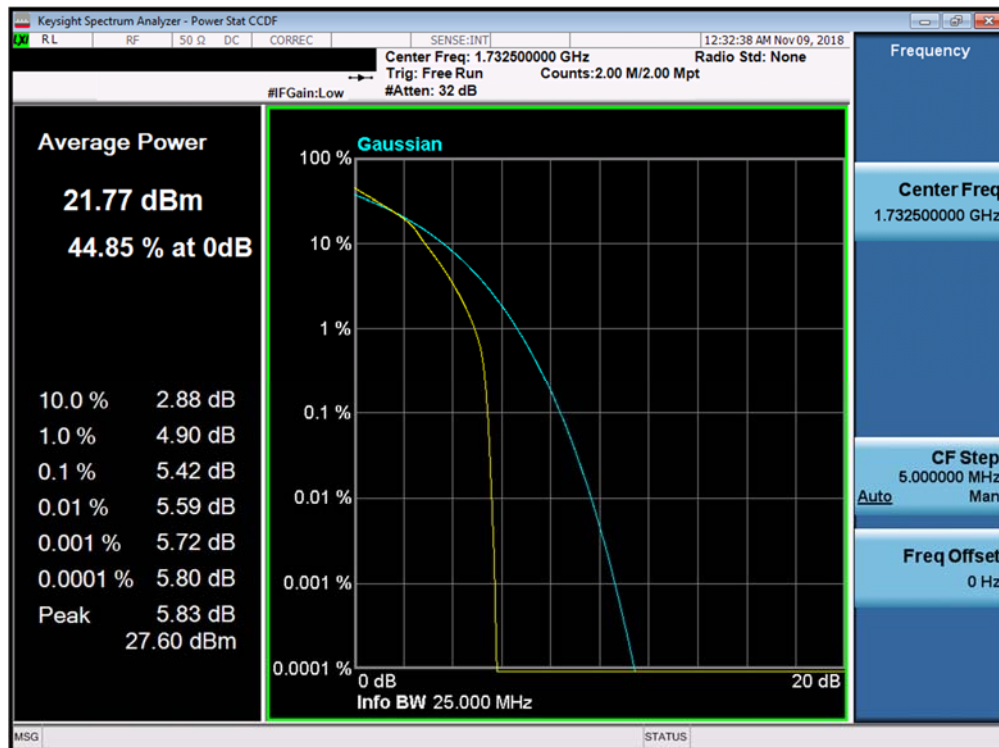


Plot 7-380. PAR Plot (Band 66/4 - 10.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG975U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1810250197-03.A3L	Test Dates: 10/31/2018-1/09/2019	EUT Type: Portable Handset		Page 217 of 359

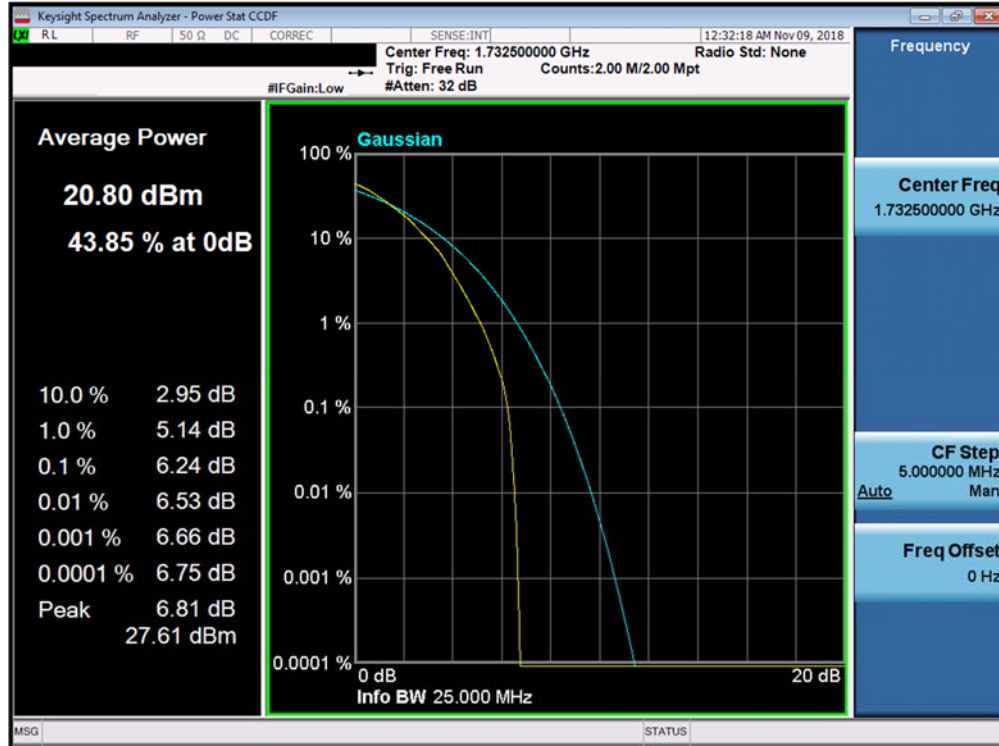


Plot 7-381. PAR Plot (Band 66/4 - 15.0MHz QPSK - Full RB Configuration)

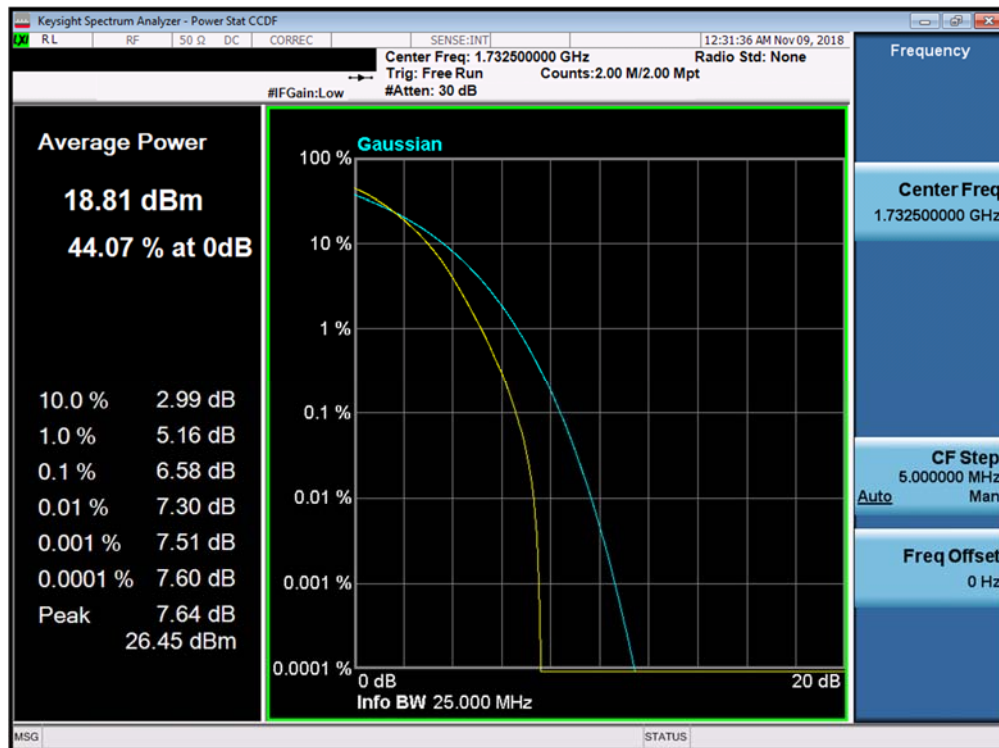


Plot 7-382. PAR Plot (Band 66/4 - 15.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG975U			MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1810250197-03.A3L	Test Dates: 10/31/2018-1/09/2019	EUT Type: Portable Handset			Page 218 of 359

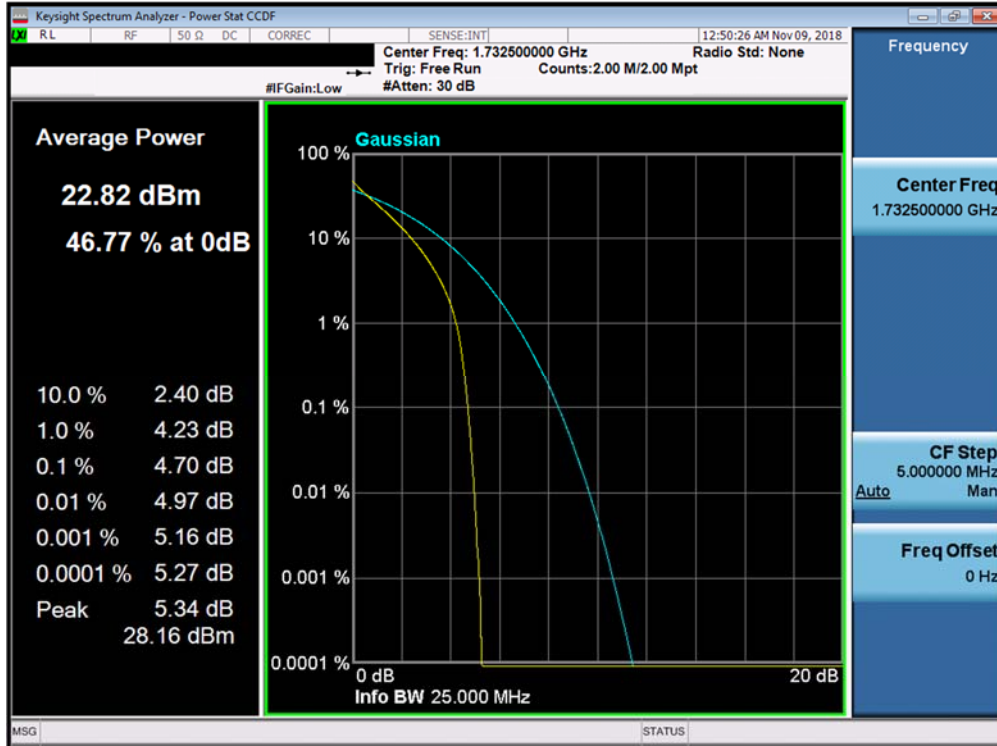


Plot 7-383. PAR Plot (Band 66/4 - 15.0MHz 64-QAM - Full RB Configuration)

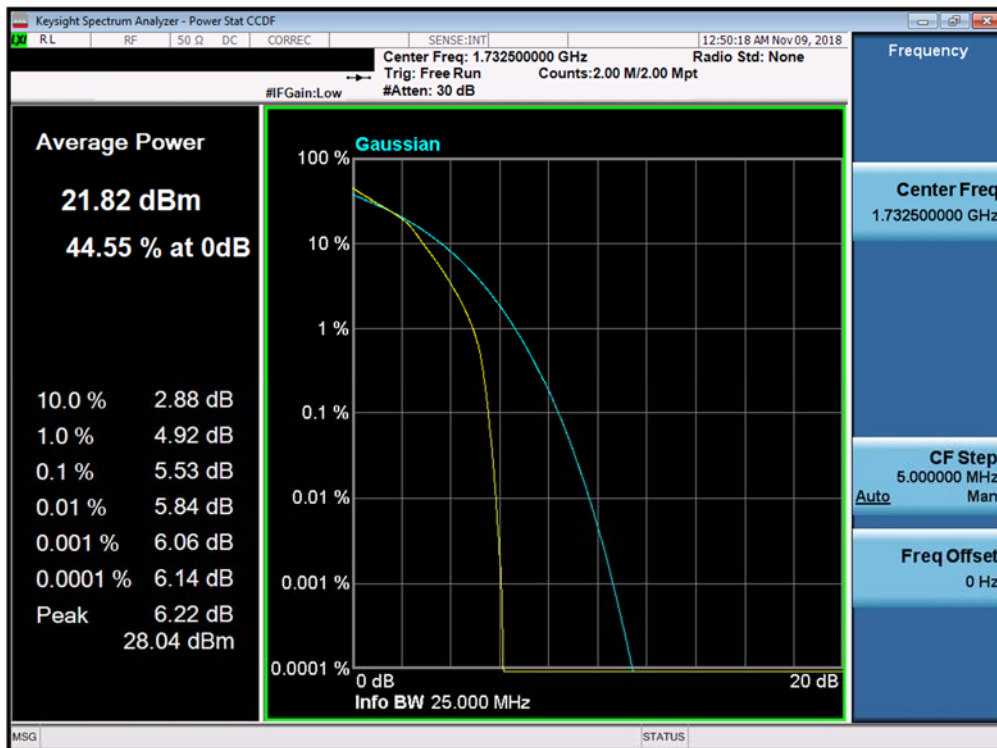


Plot 7-384. PAR Plot (Band 66/4 - 15.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG975U			MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1810250197-03.A3L	Test Dates: 10/31/2018-1/09/2019	EUT Type: Portable Handset		Page 219 of 359	

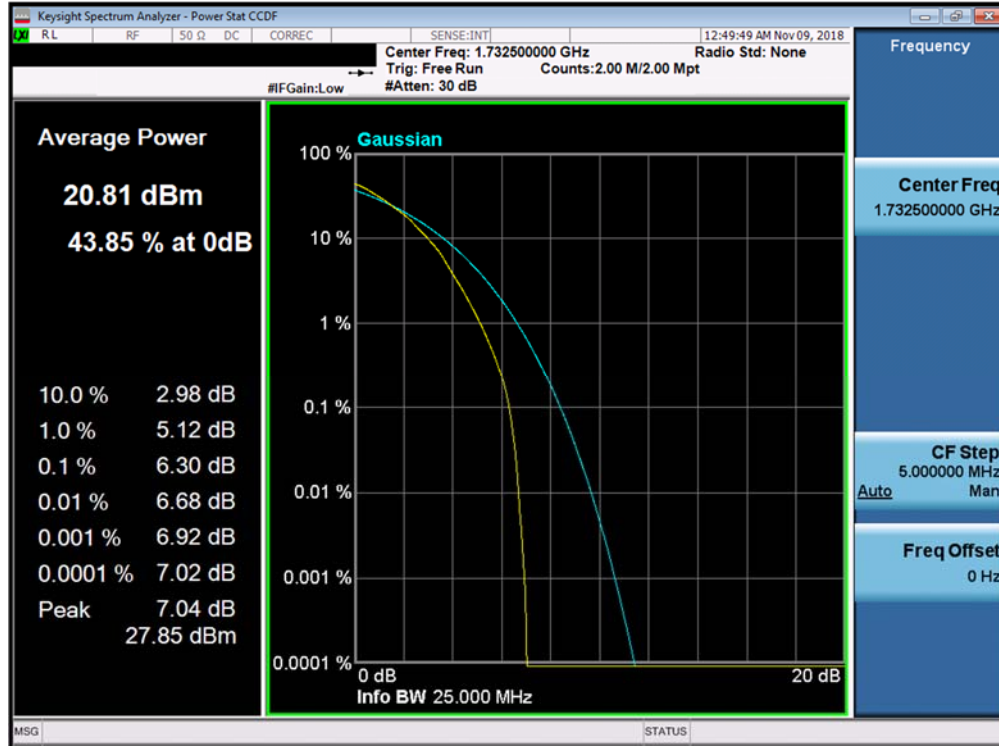


Plot 7-385. PAR Plot (Band 66/4 - 20.0MHz QPSK - Full RB Configuration)

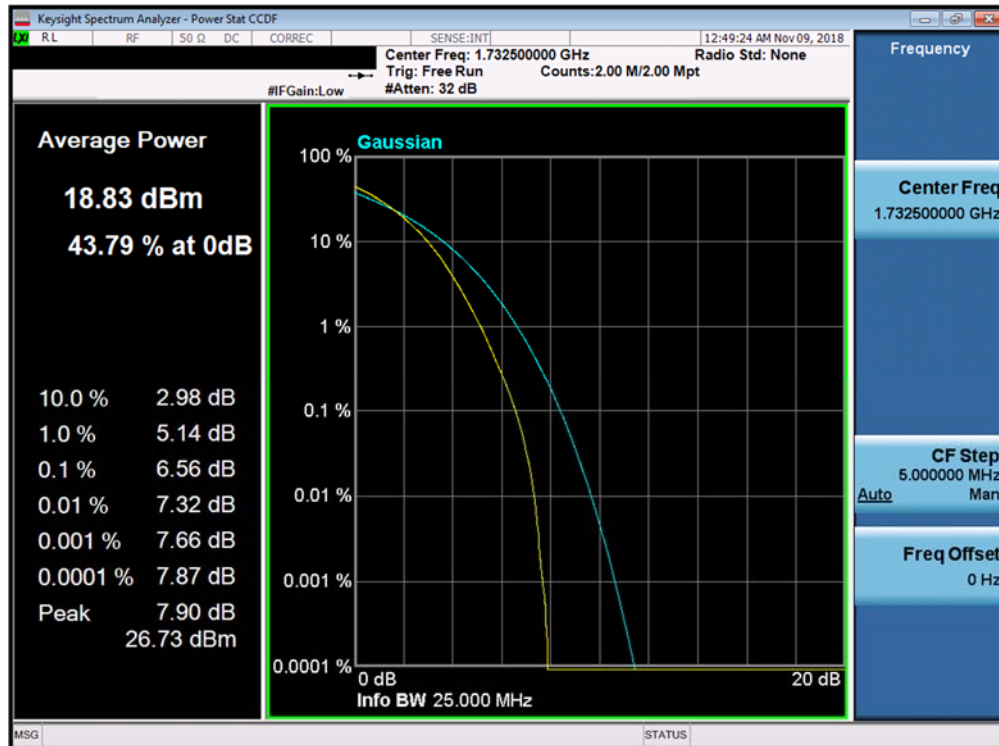


Plot 7-386. PAR Plot (Band 66/4 - 20.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG975U			MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1810250197-03.A3L	Test Dates: 10/31/2018-1/09/2019	EUT Type: Portable Handset			Page 220 of 359



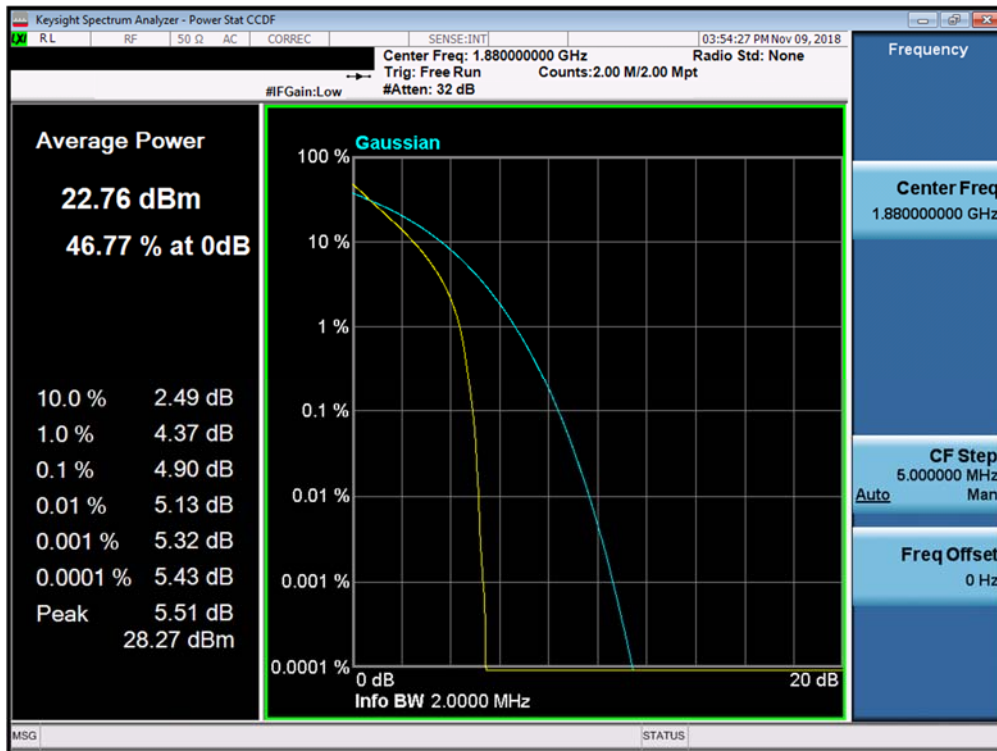
Plot 7-387. PAR Plot (Band 66/4 - 20.0MHz 64-QAM - Full RB Configuration)



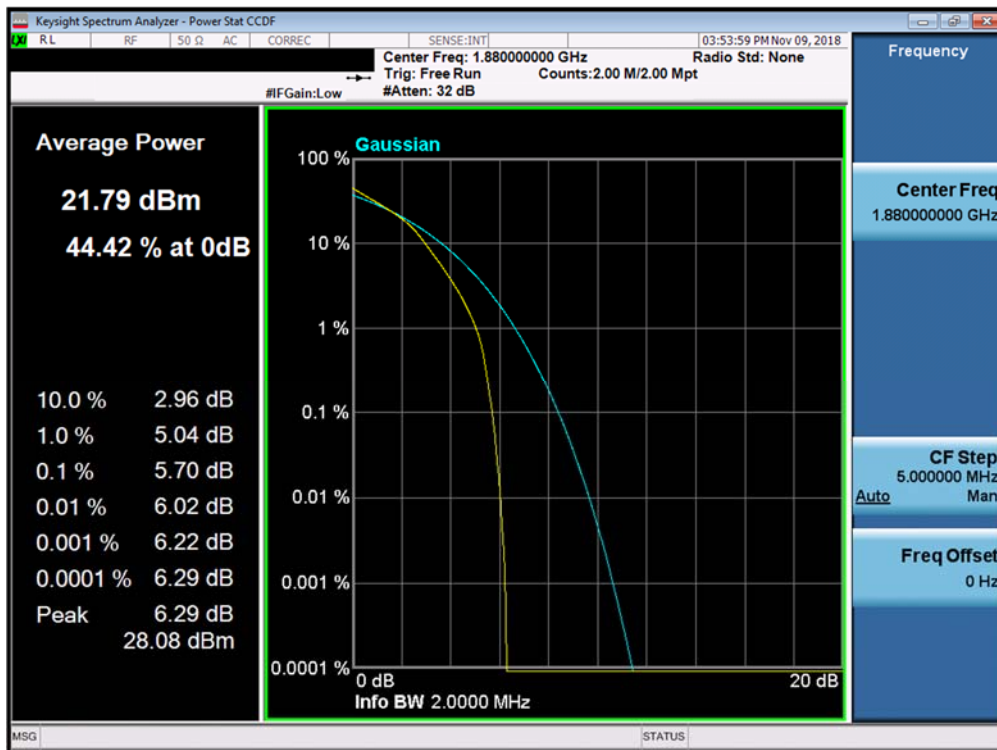
Plot 7-388. PAR Plot (Band 66/4 - 20.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG975U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1810250197-03.A3L	Test Dates: 10/31/2018-1/09/2019	EUT Type: Portable Handset	Page 221 of 359

Band 25/2

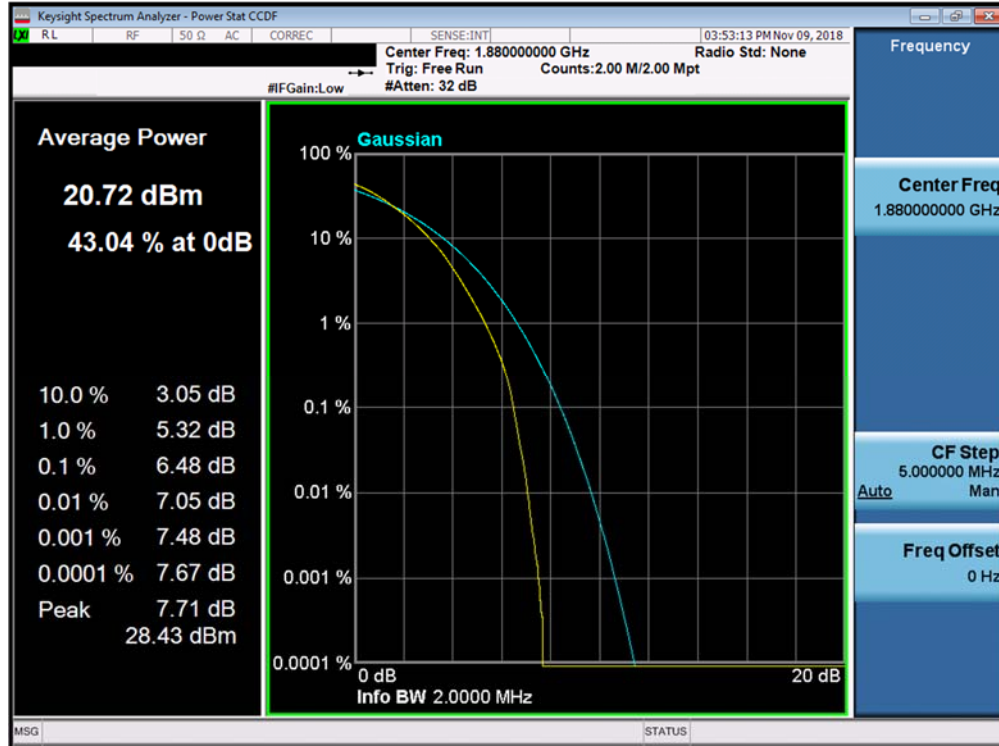


Plot 7-389. PAR Plot (Band 25/2 - 1.4MHz QPSK - Full RB Configuration)

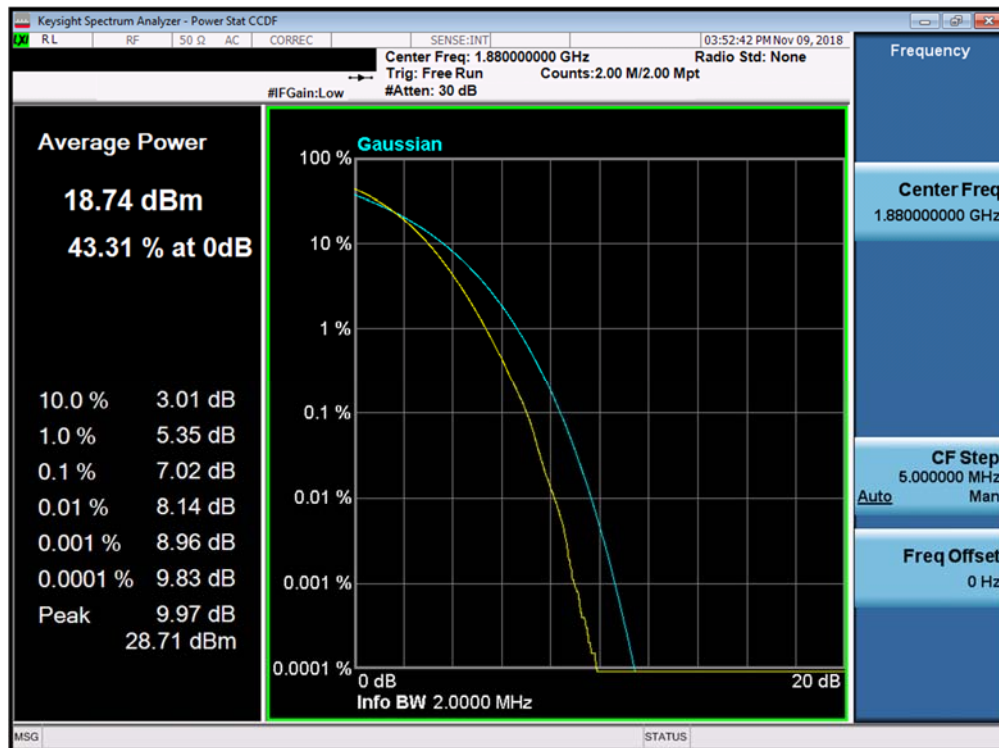


Plot 7-390. PAR Plot (Band 25/2 - 1.4MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG975U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1810250197-03.A3L	Test Dates: 10/31/2018-1/09/2019	EUT Type: Portable Handset		Page 222 of 359

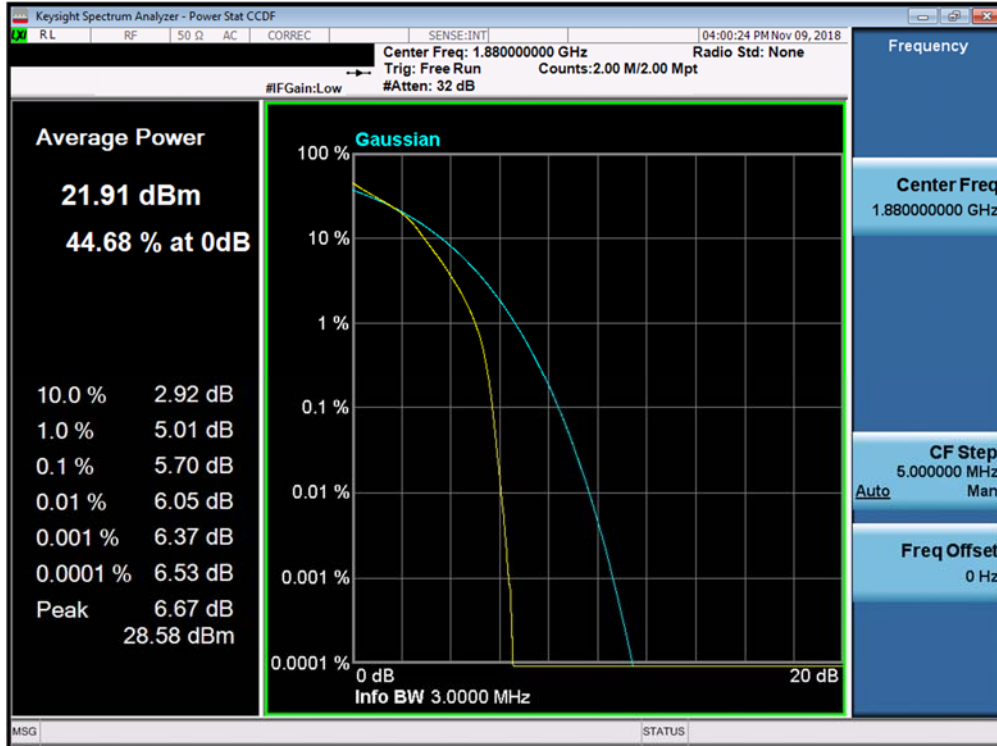


Plot 7-391. PAR Plot (Band 25/2 - 1.4MHz 64-QAM - Full RB Configuration)

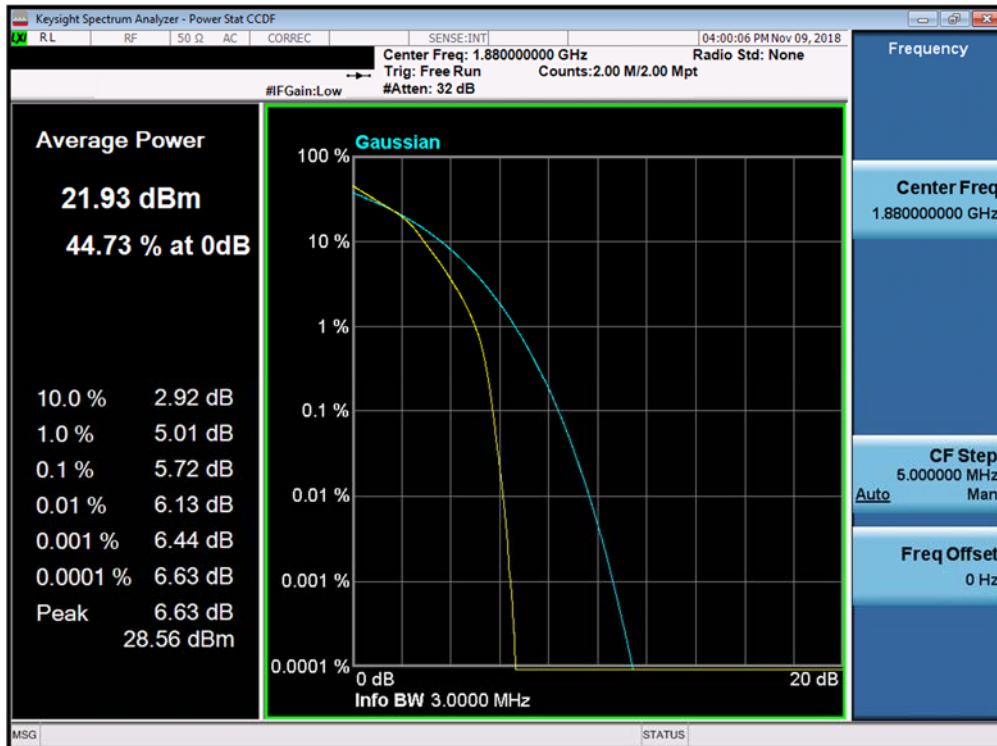


Plot 7-392. PAR Plot (Band 25/2 - 1.4MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG975U			MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1810250197-03.A3L	Test Dates: 10/31/2018-1/09/2019	EUT Type: Portable Handset		Page 223 of 359	

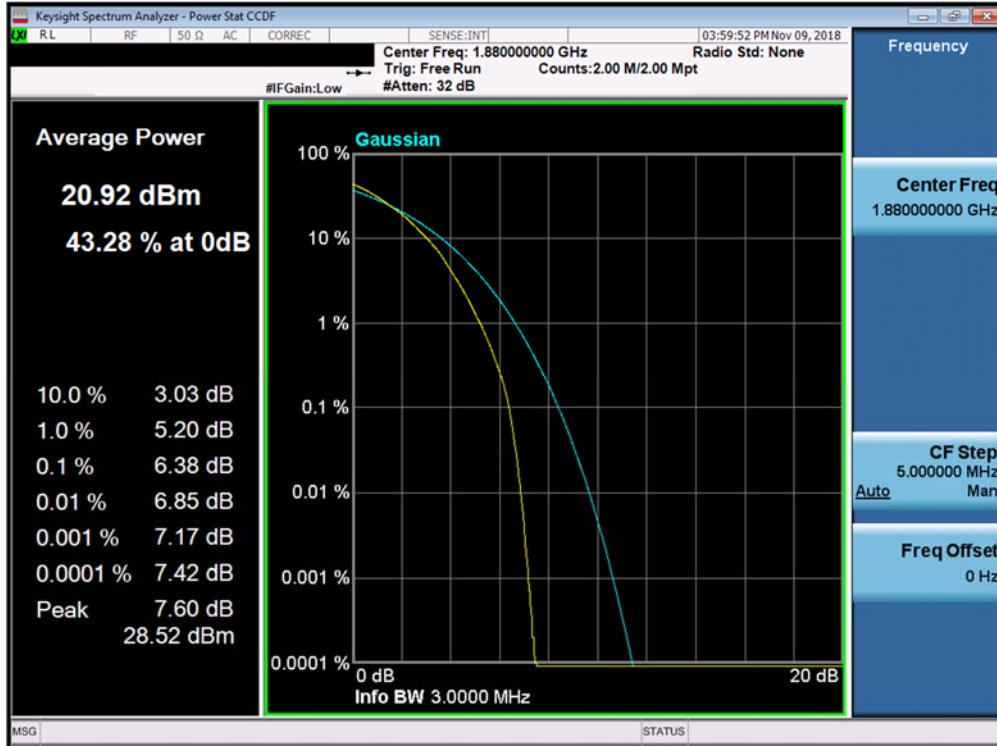


Plot 7-393. PAR Plot (Band 25/2 - 3.0MHz QPSK - Full RB Configuration)

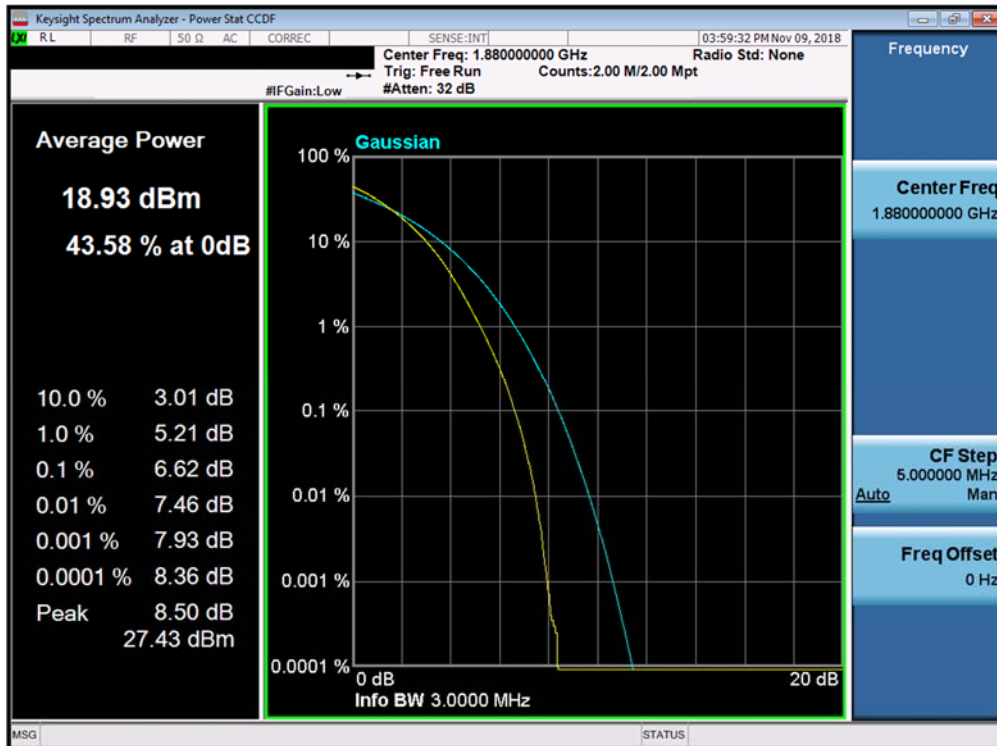


Plot 7-394. PAR Plot (Band 25/2 - 3.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG975U			MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1810250197-03.A3L	Test Dates: 10/31/2018-1/09/2019	EUT Type: Portable Handset		Page 224 of 359	



Plot 7-395. PAR Plot (Band 25/2 - 3.0MHz 64-QAM - Full RB Configuration)



Plot 7-396. PAR Plot (Band 25/2 - 3.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG975U			MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1810250197-03.A3L	Test Dates: 10/31/2018-1/09/2019	EUT Type: Portable Handset		Page 225 of 359	