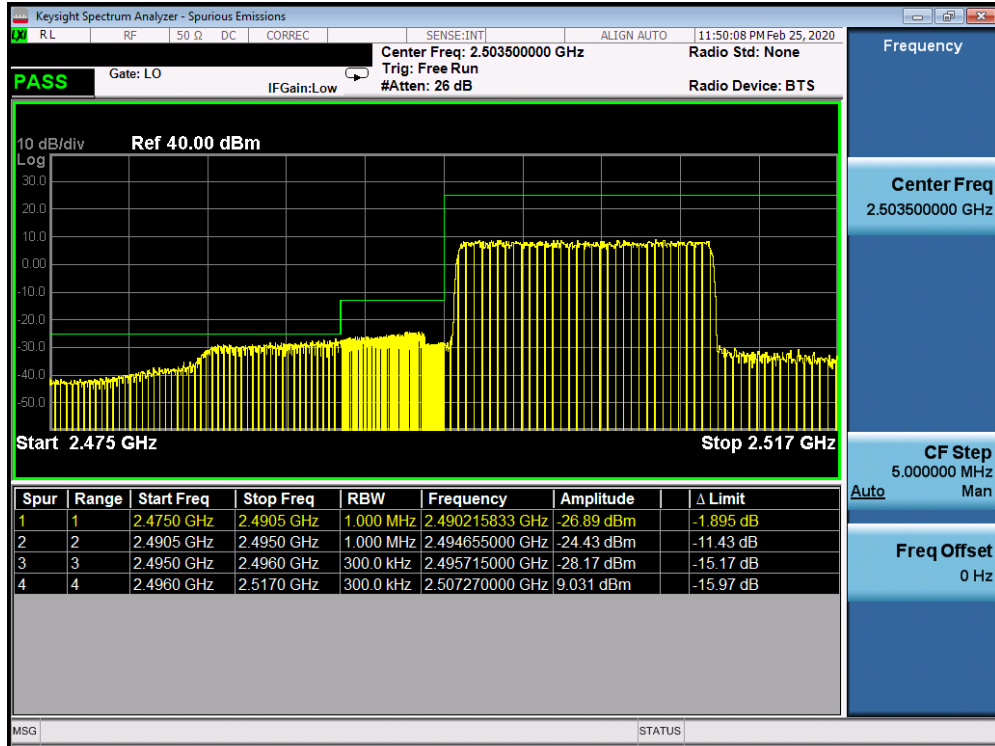
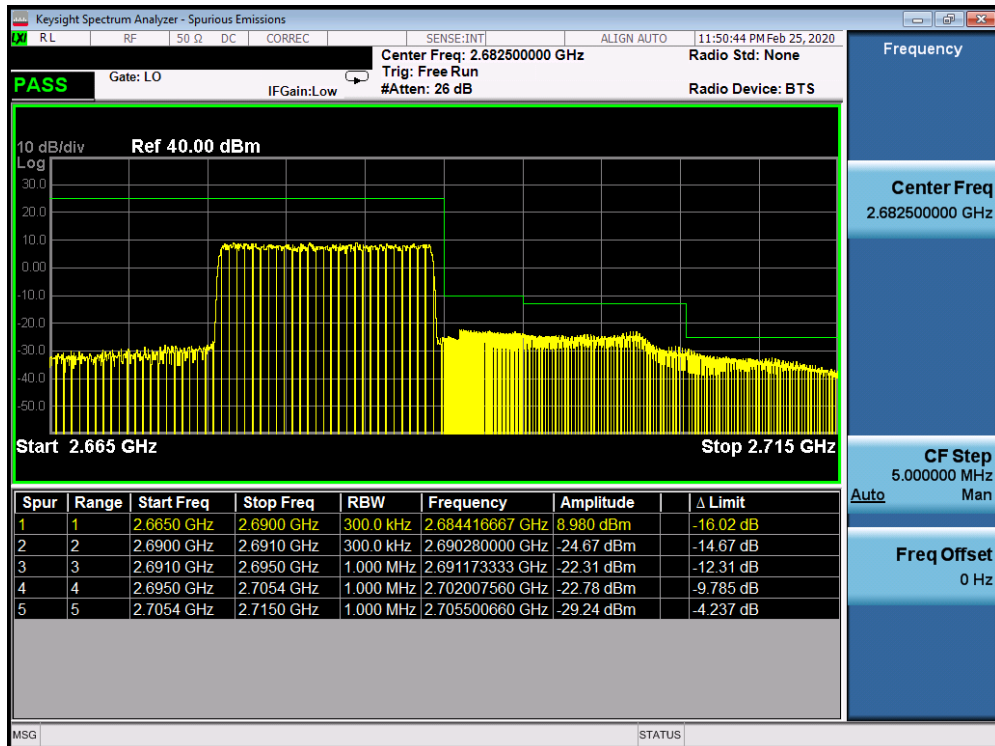


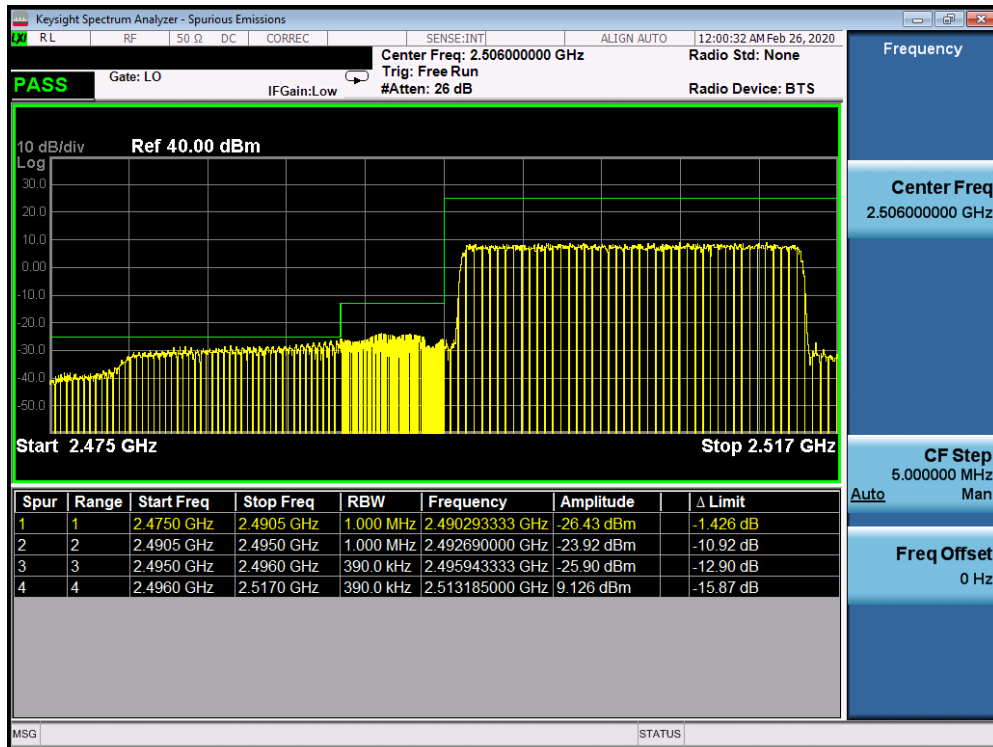


Plot 7-273. Lower ACP Plot at 2496 MHz (Band 41 PC2 - 15.0MHz QPSK - Full RB Configuration)

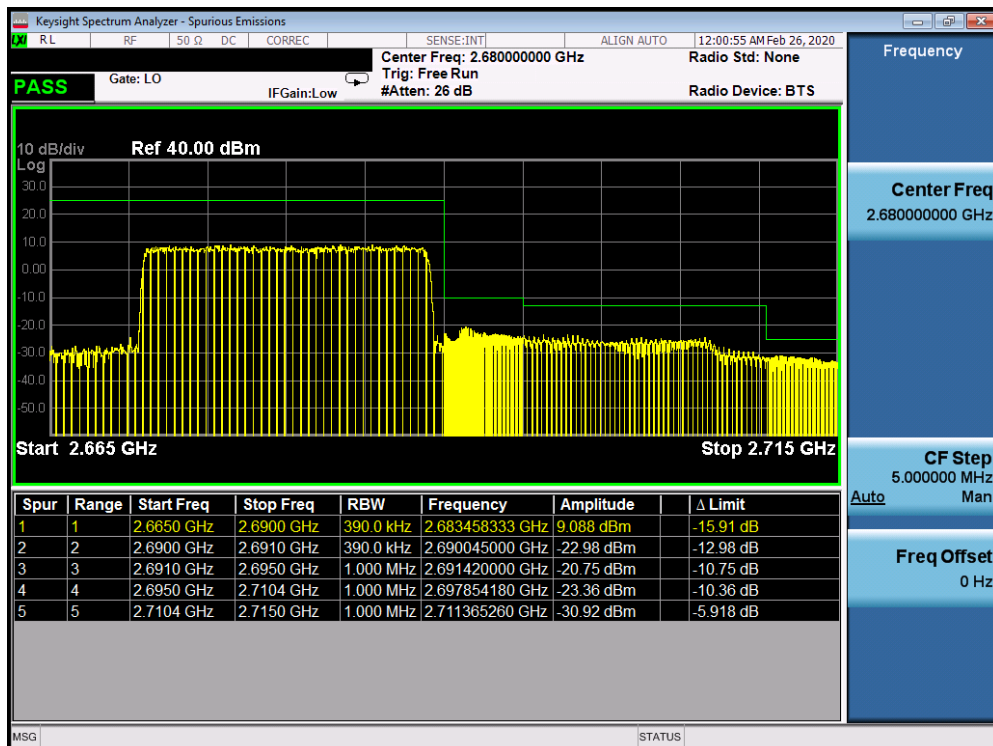


Plot 7-274. Upper ACP Plot (Band 41 PC2 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 161 of 250



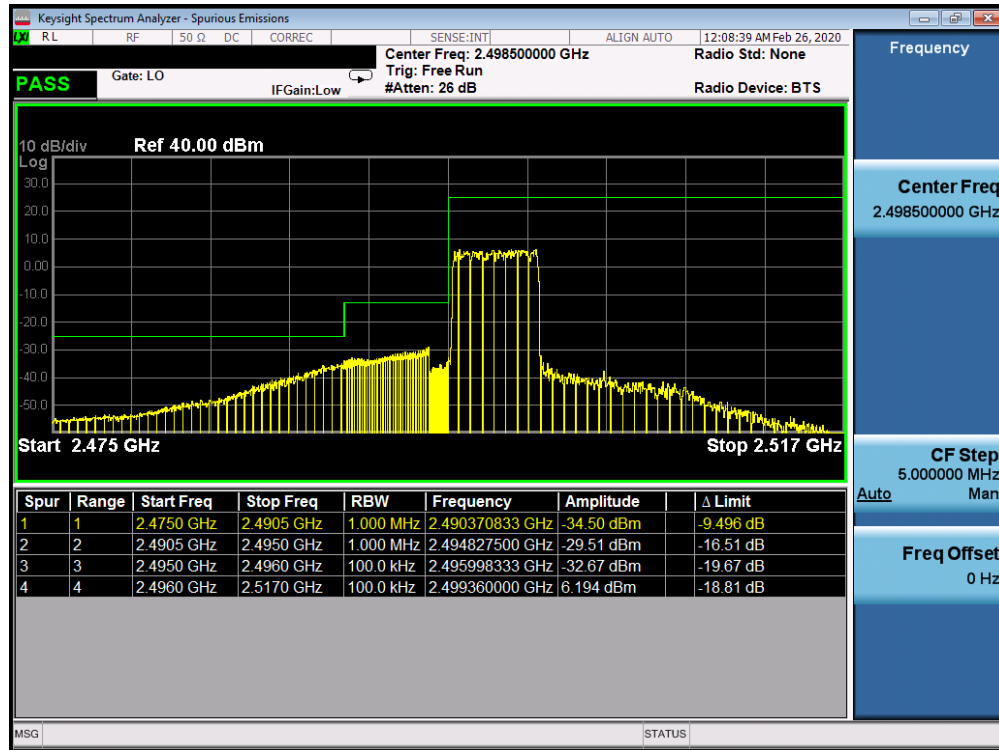
Plot 7-275. Lower ACP Plot at 2496 MHz (Band 41 PC2 - 20.0MHz QPSK - Full RB Configuration)



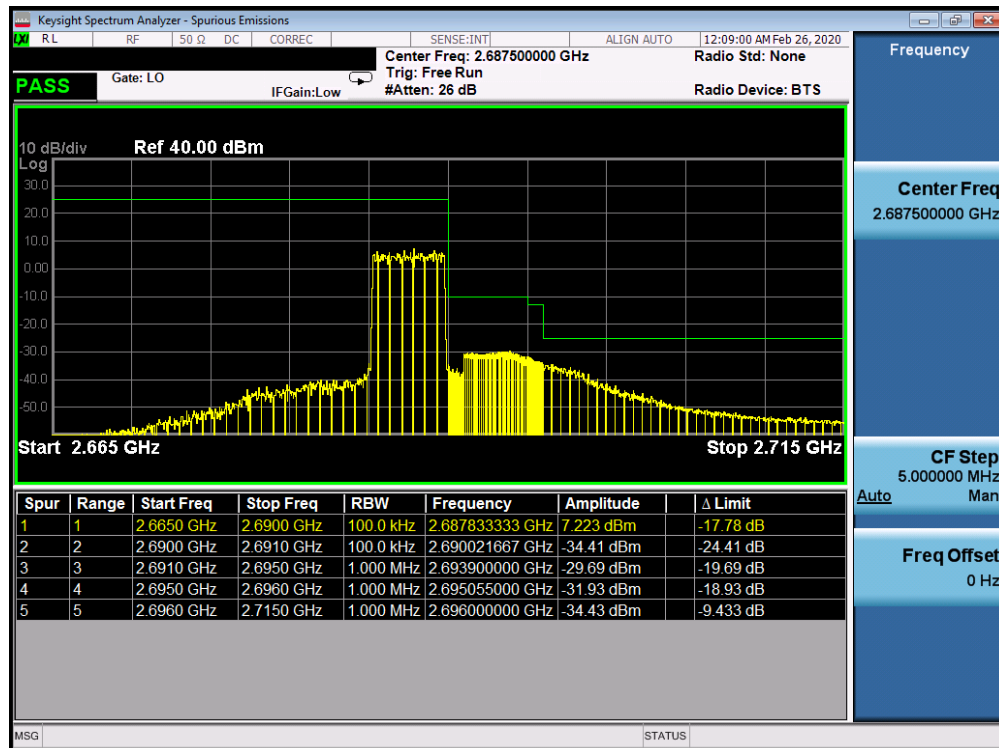
Plot 7-276. Upper ACP Plot (Band 41 PC2 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 162 of 250

Band 41 PC3

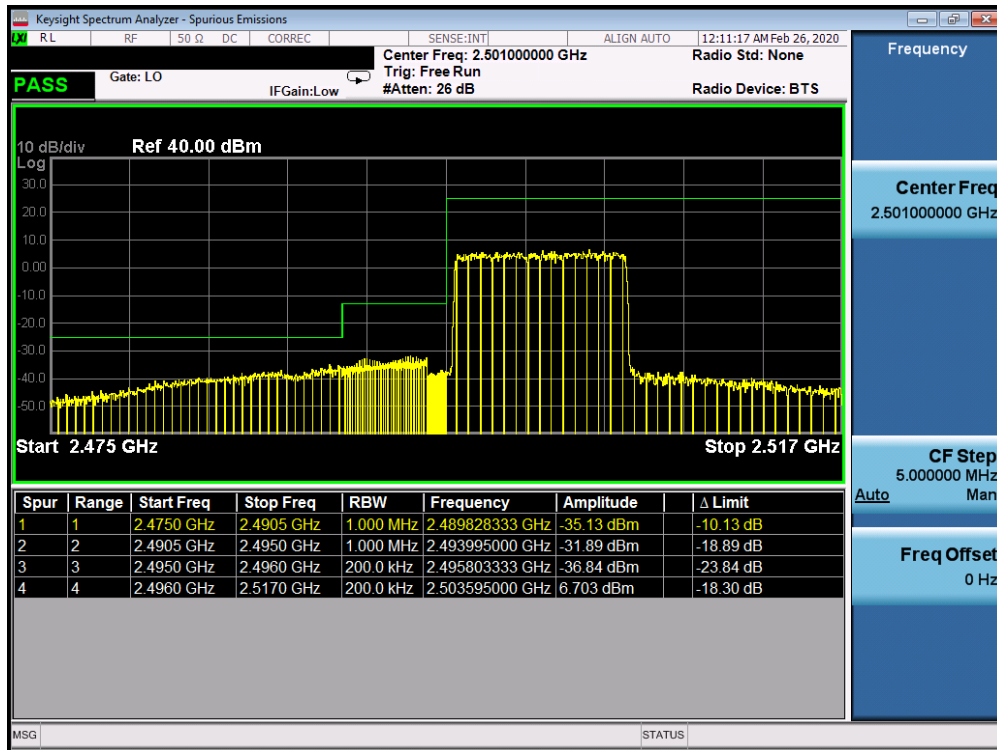


Plot 7-277. Lower ACP Plot at 2496 MHz (Band 41 PC3 - 5.0MHz QPSK - Full RB Configuration)

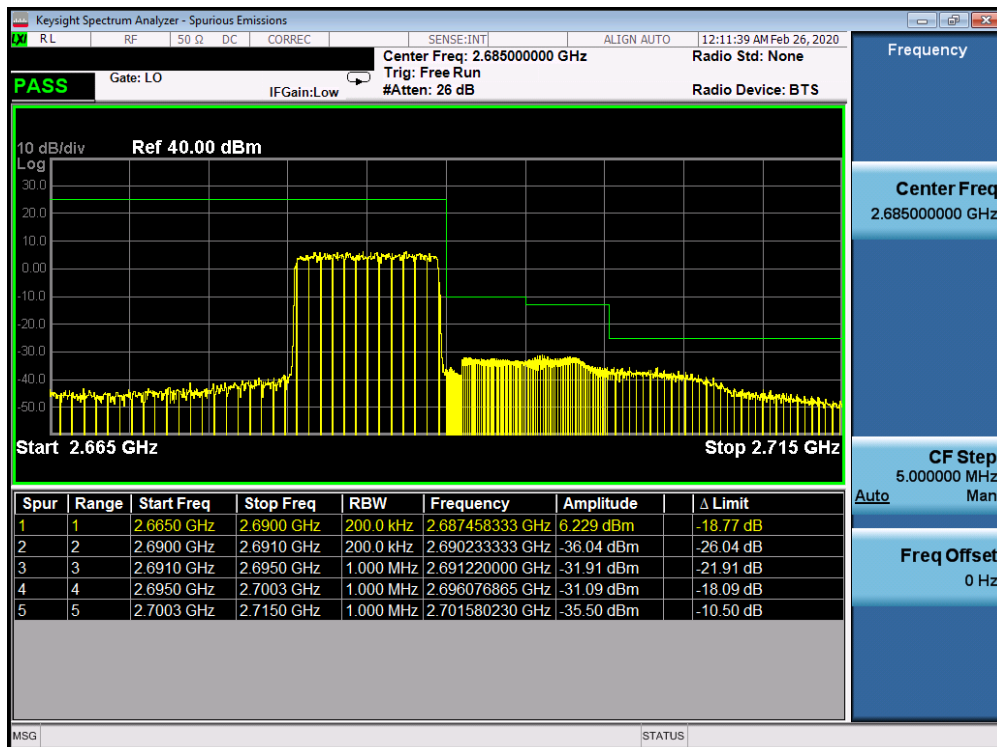


Plot 7-278. Upper ACP Plot (Band 41 PC3 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 - 4/10/2020	EUT Type: Portable Handset		Page 163 of 250

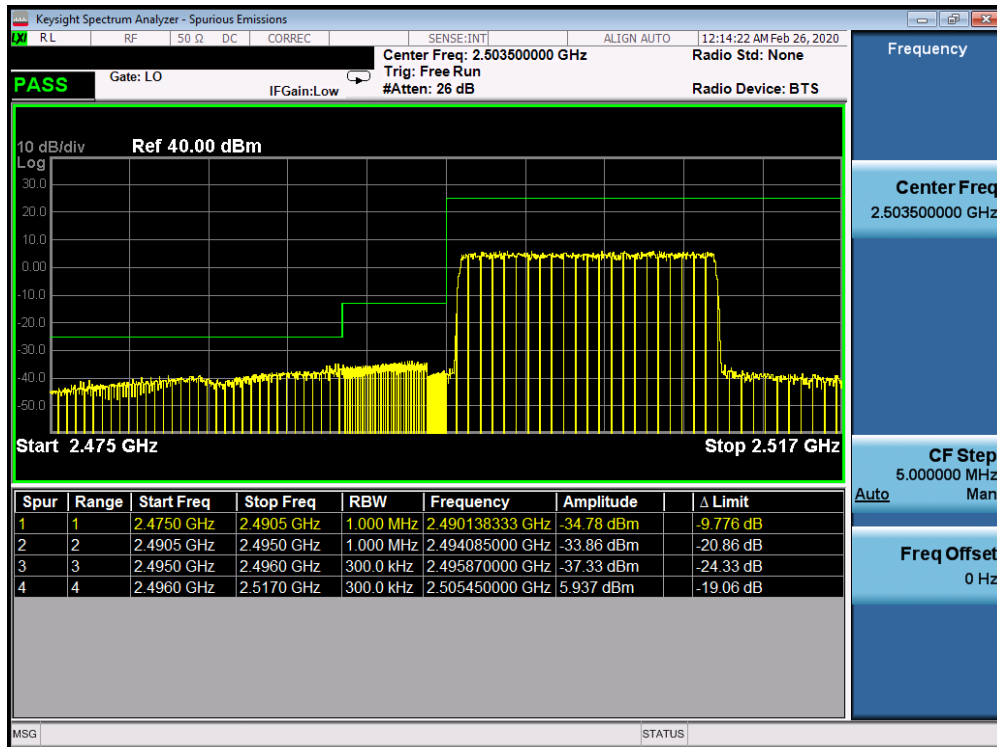


Plot 7-279. Lower ACP Plot at 2496 MHz (Band 41 PC3 - 10.0MHz QPSK - Full RB Configuration)

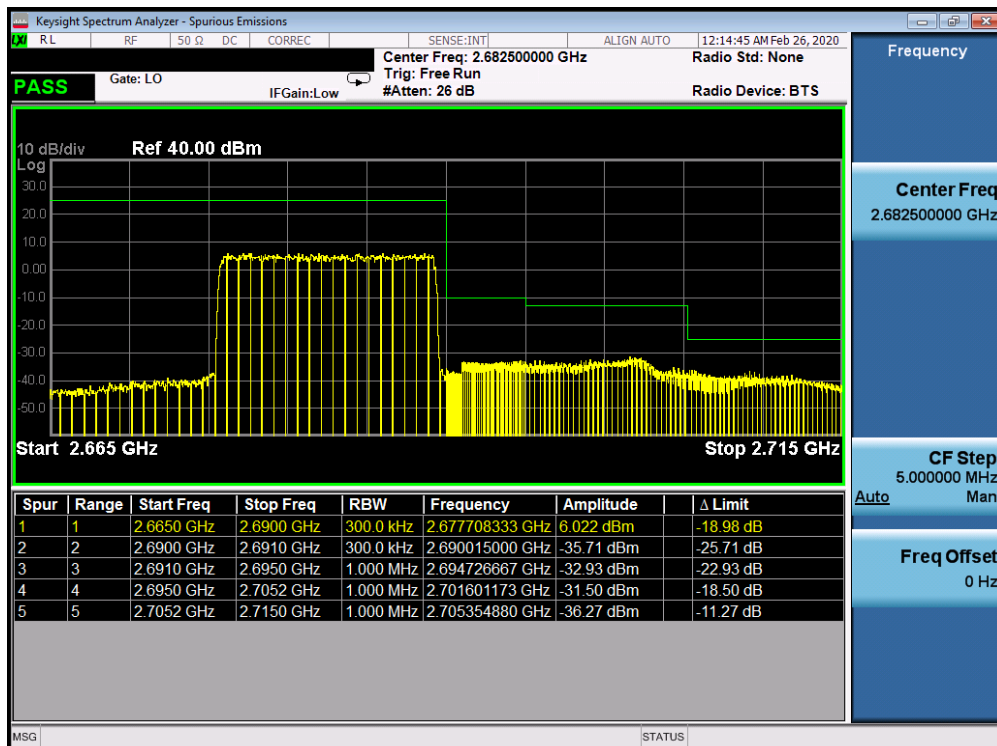


Plot 7-280. Upper ACP Plot (Band 41 PC3 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 - 4/10/2020	EUT Type: Portable Handset		Page 164 of 250

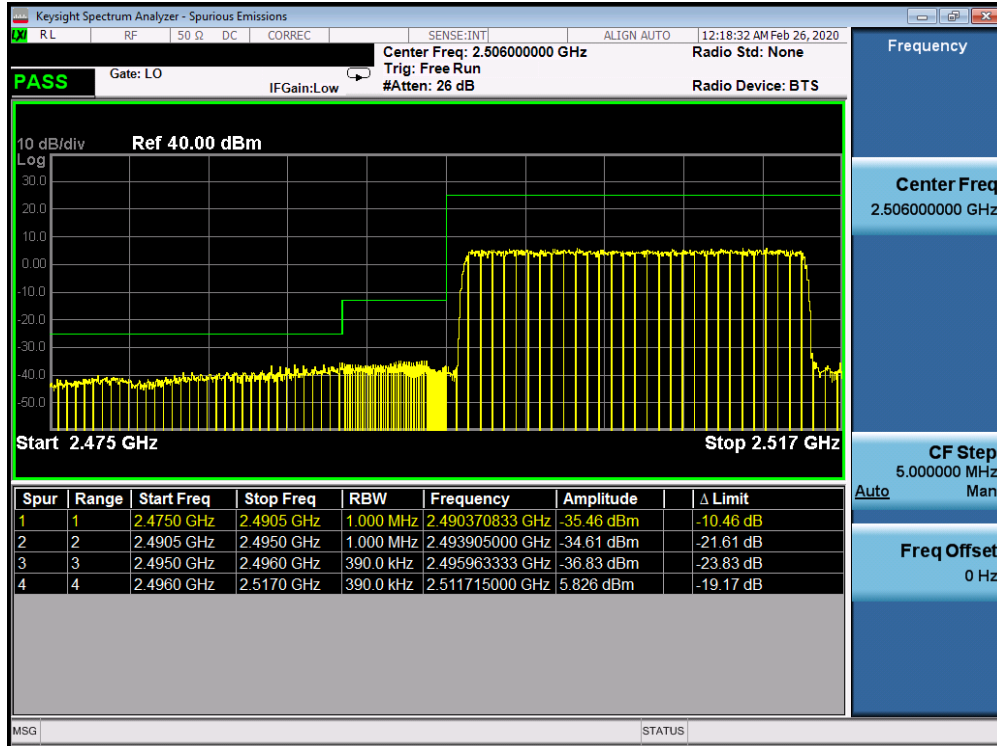


Plot 7-281. Lower ACP Plot at 2496 MHz (Band 41 PC3 - 15.0MHz QPSK - Full RB Configuration)

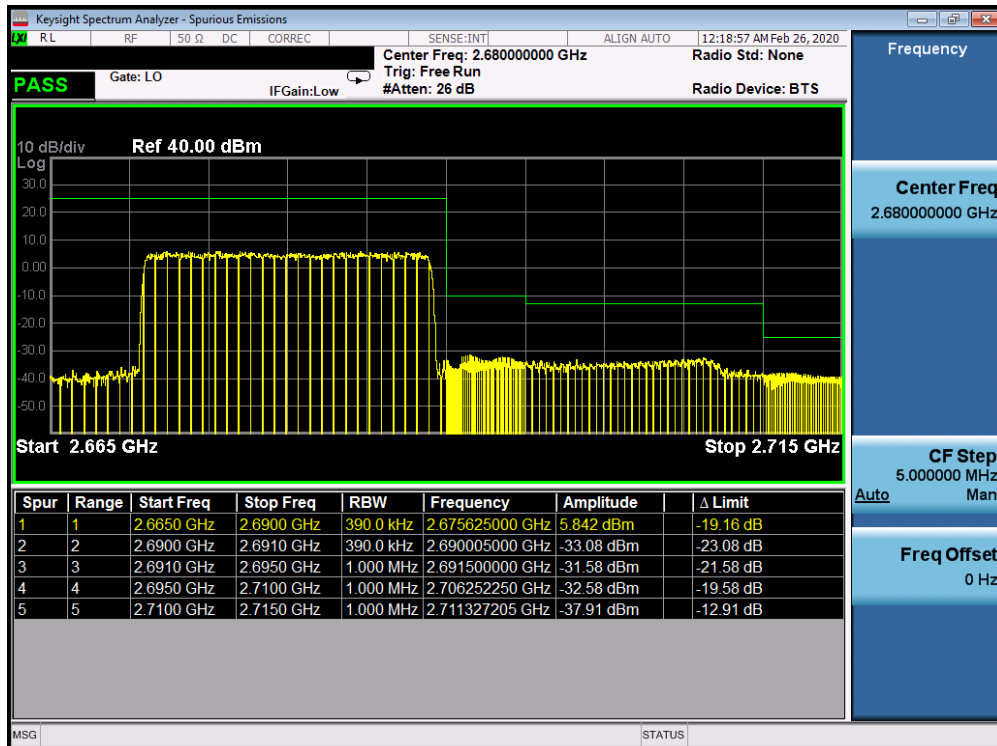


Plot 7-282. Upper ACP Plot (Band 41 PC3 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 165 of 250



Plot 7-283. Lower ACP Plot at 2496 MHz (Band 41 PC3 - 20.0MHz QPSK - Full RB Configuration)



Plot 7-284. Upper ACP Plot (Band 41 PC3 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 166 of 250

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.

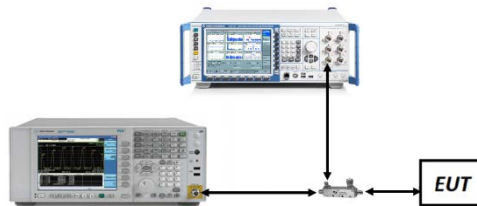


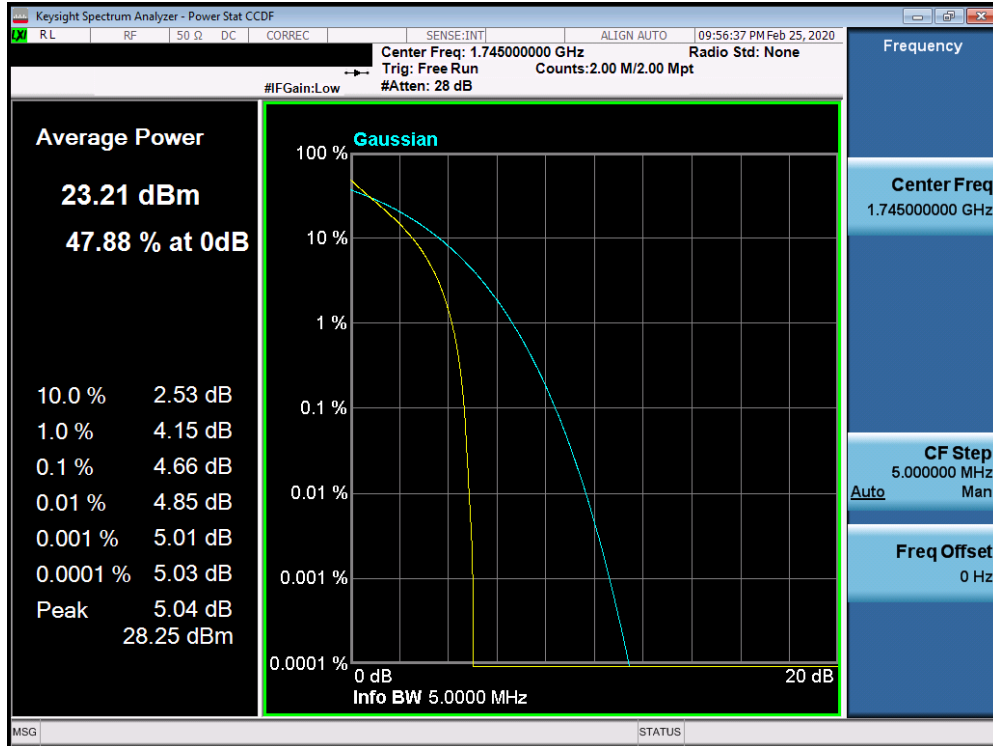
Figure 7-4. Test Instrument & Measurement Setup

Test Notes

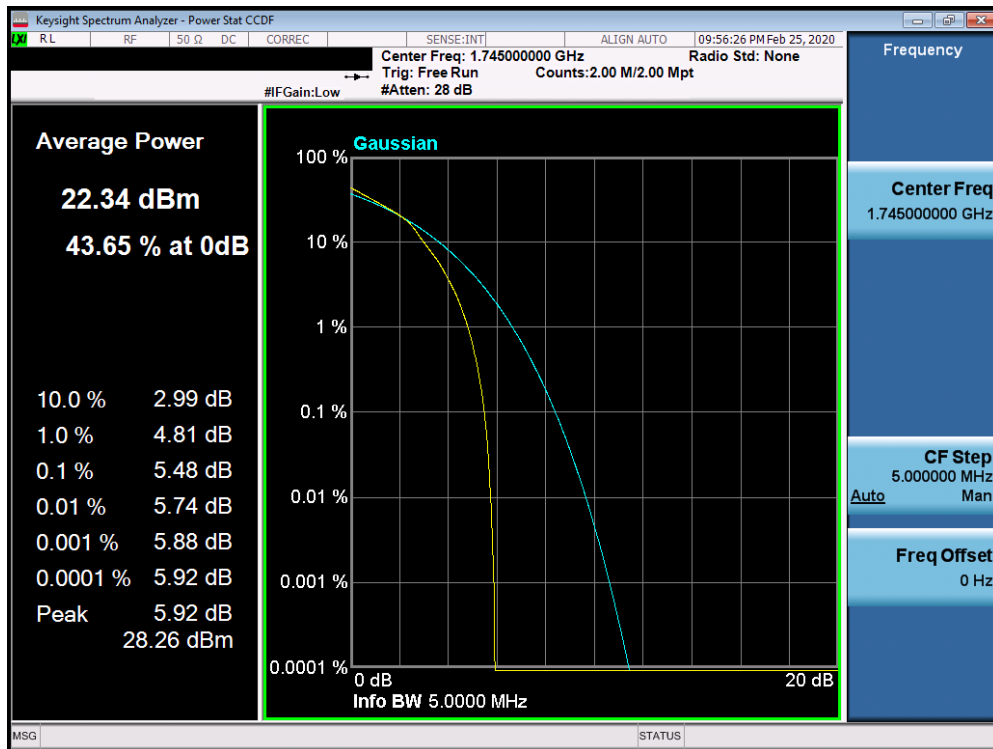
None.

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 167 of 250

Band 66/4

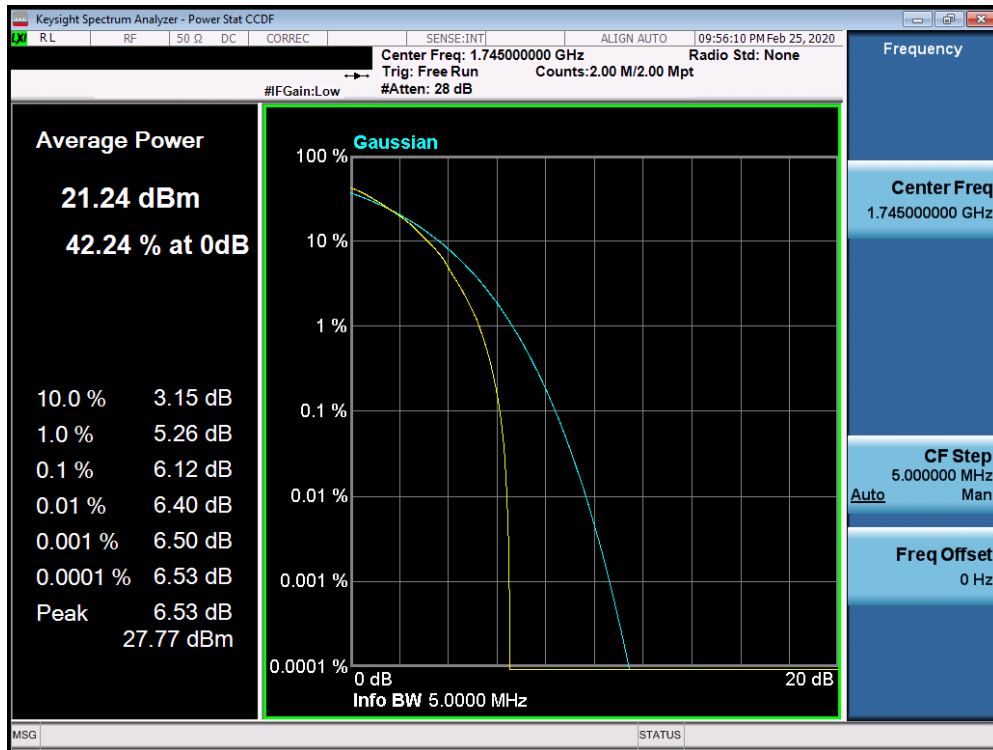


Plot 7-285. PAR Plot (Band 66/4- 1.4MHz QPSK - Full RB Configuration)

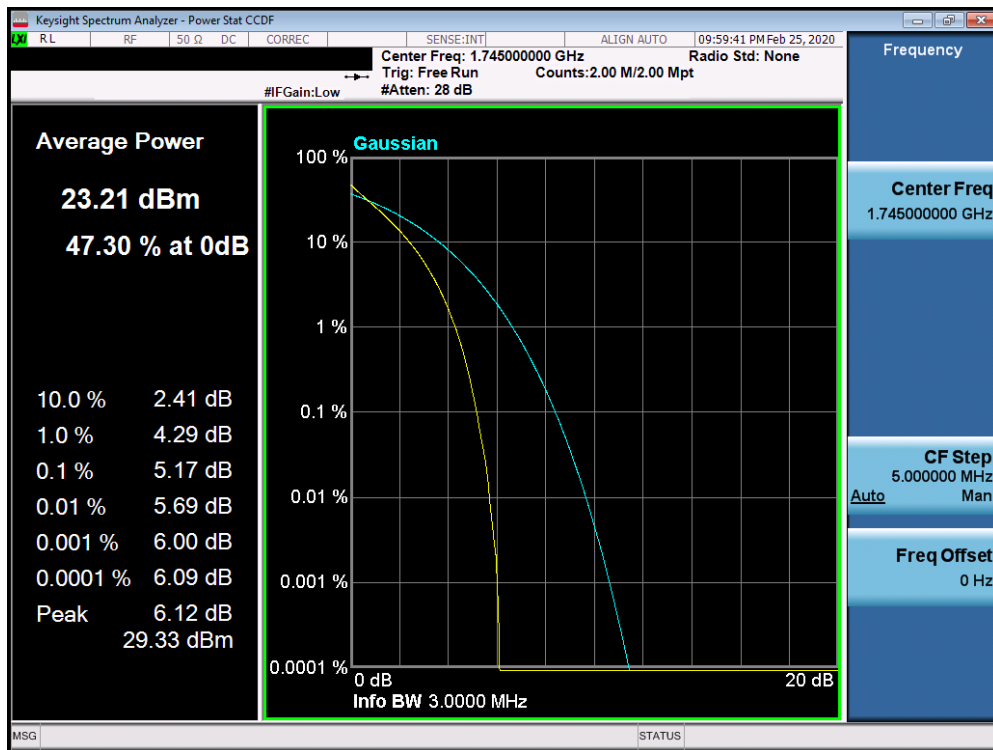


Plot 7-286. PAR Plot (Band 66/4- 1.4MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1-ZNF	Test Dates: 2/24 - 4/10/2020	EUT Type: Portable Handset		Page 168 of 250

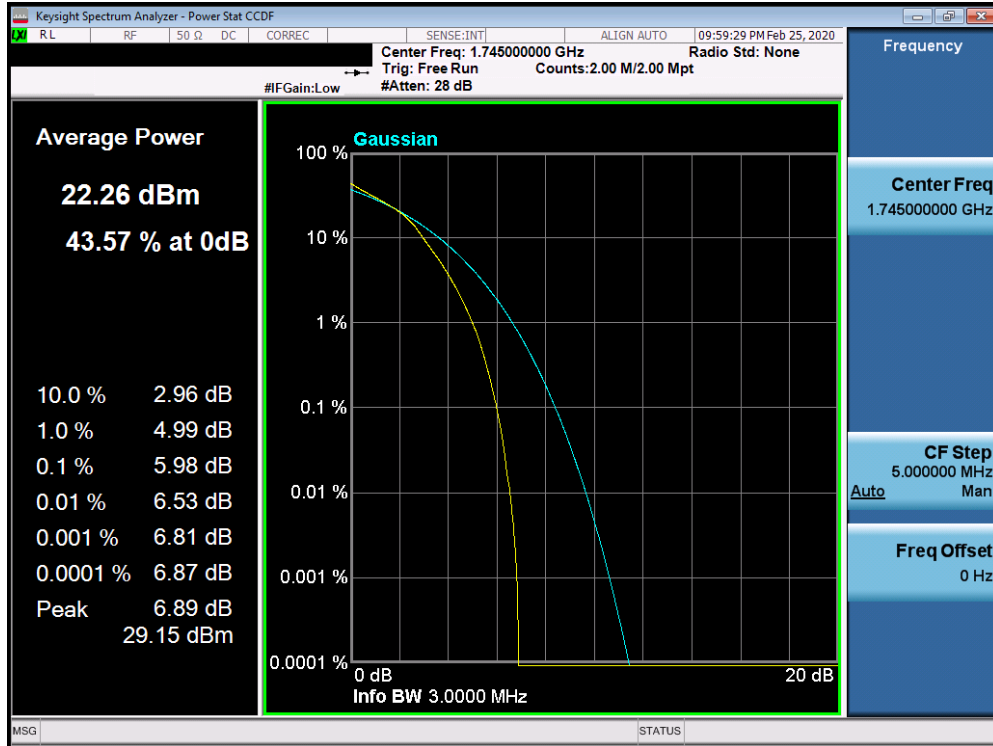


Plot 7-287. PAR Plot (Band 66/4- 1.4MHz 64-QAM - Full RB Configuration)

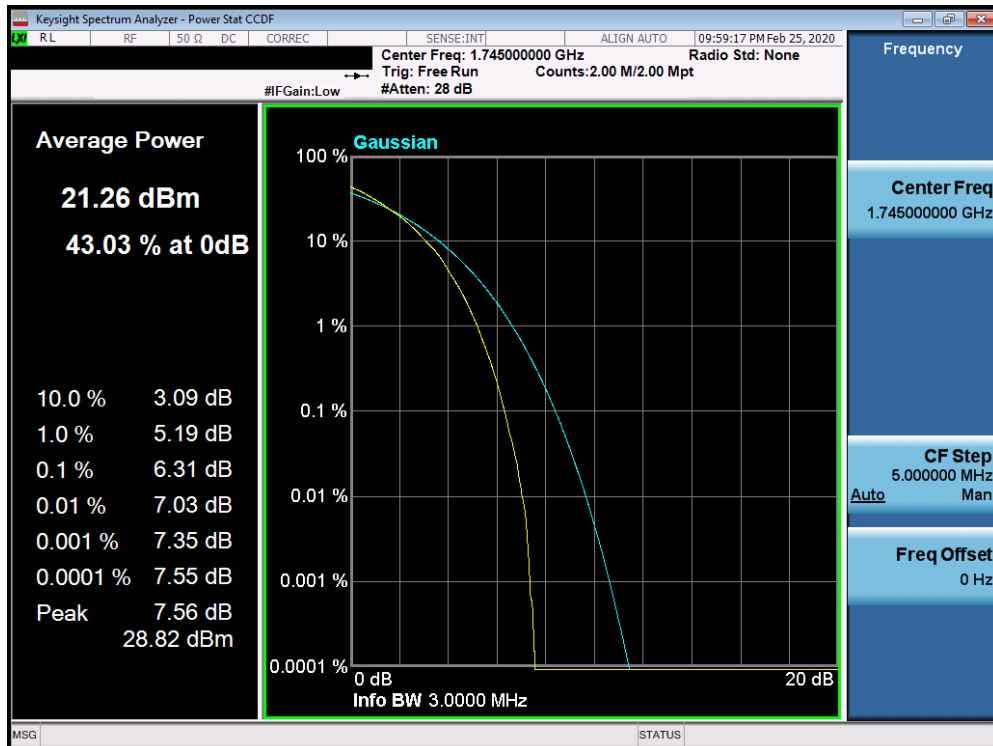


Plot 7-288. PAR Plot (Band 66/4- 3.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1-ZNF	Test Dates: 2/24 - 4/10/2020	EUT Type: Portable Handset	Page 169 of 250

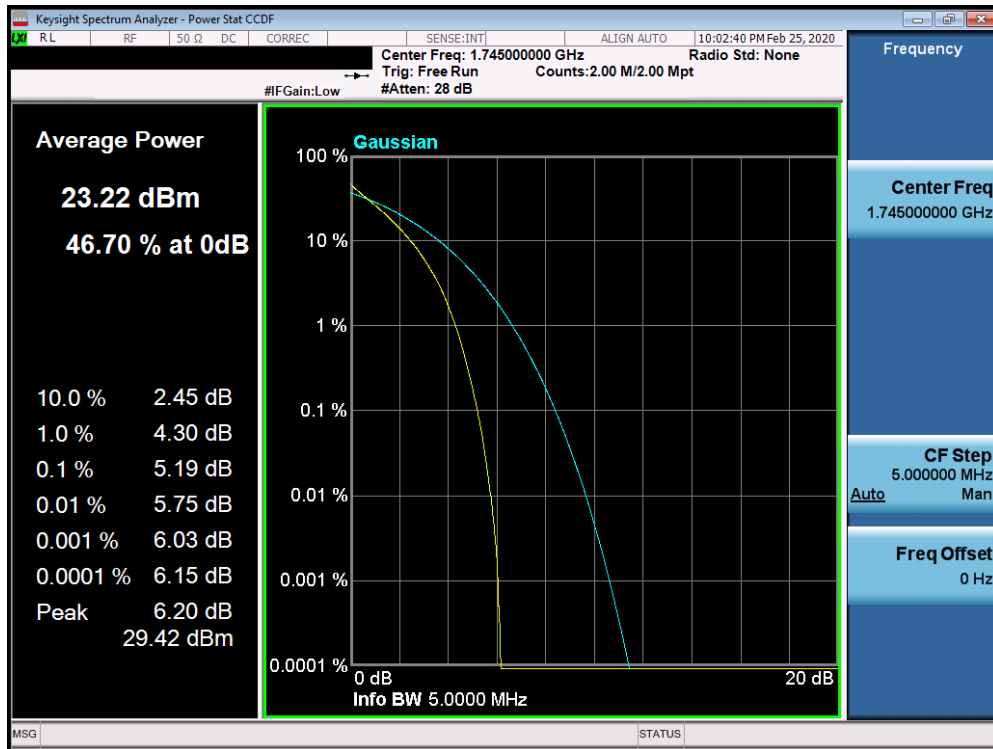


Plot 7-289. PAR Plot (Band 66/4- 3.0MHz 16-QAM - Full RB Configuration)

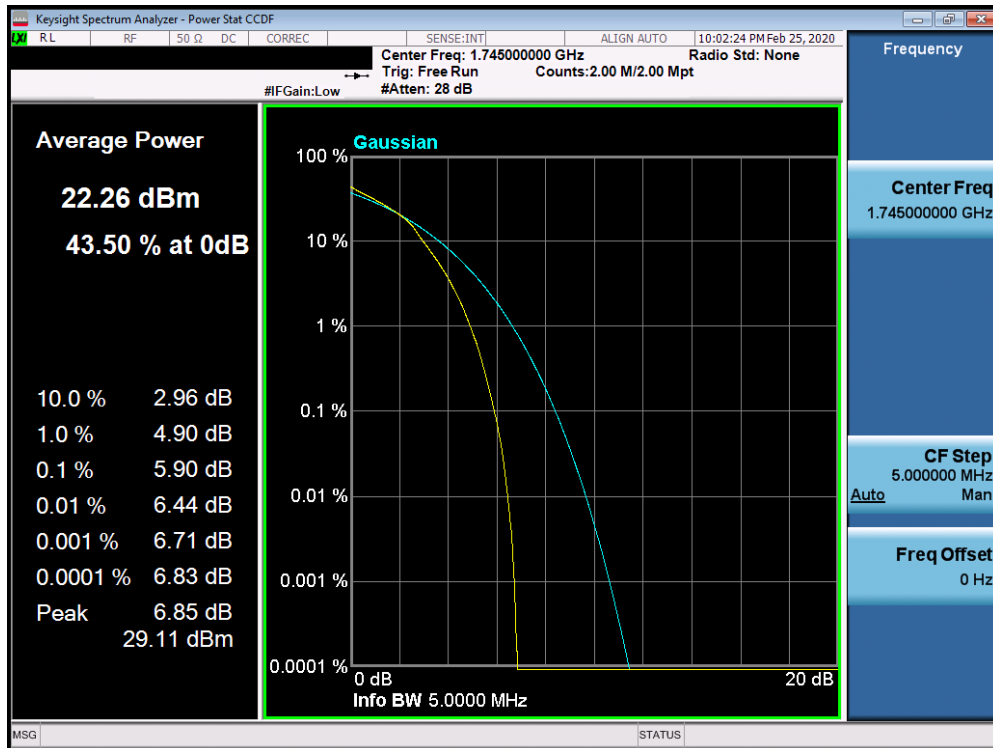


Plot 7-290. PAR Plot (Band 66/4- 3.0MHz 64-QAM - Full RB Configuration)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1-ZNF	Test Dates: 2/24 - 4/10/2020	EUT Type: Portable Handset		Page 170 of 250

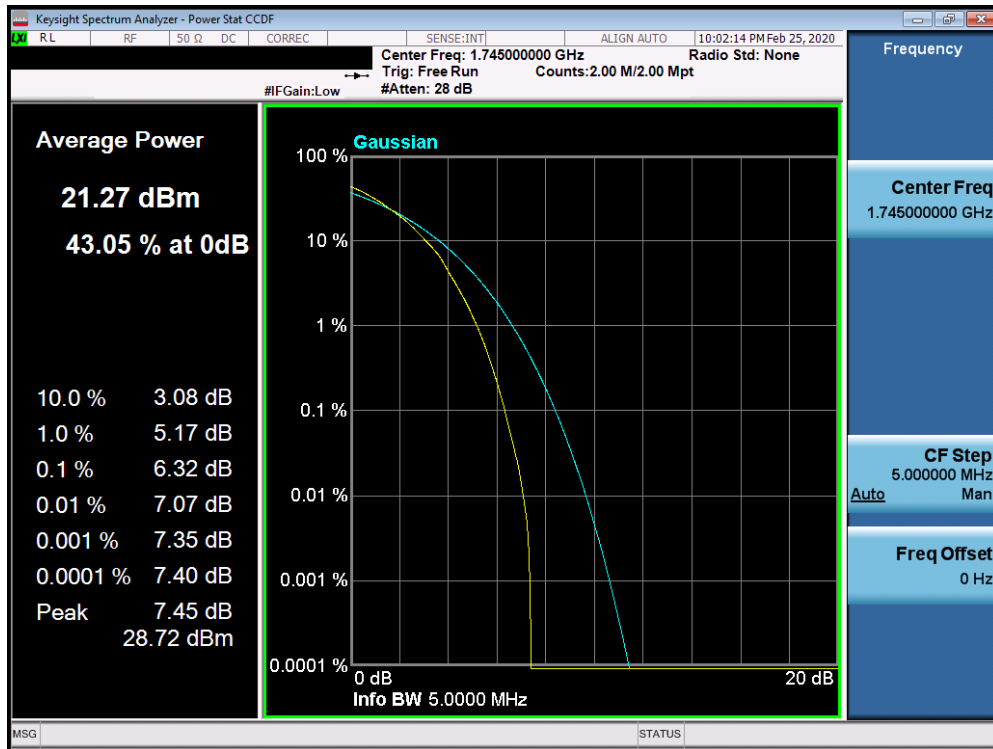


Plot 7-291. PAR Plot (Band 66/4- 5.0MHz QPSK - Full RB Configuration)

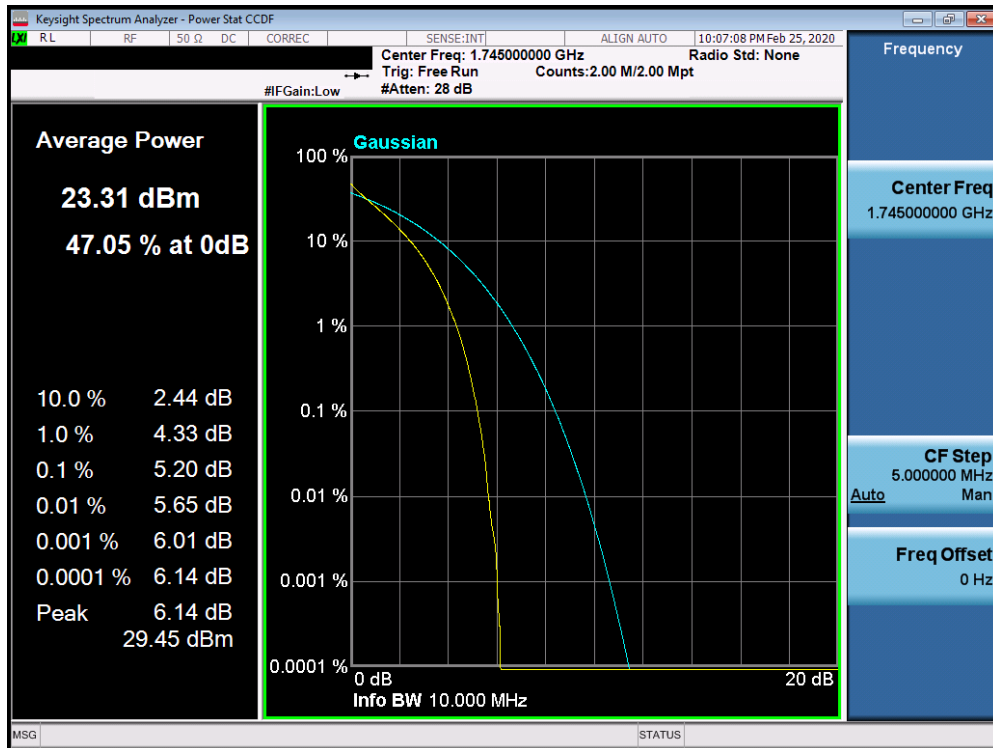


Plot 7-292. PAR Plot (Band 66/4- 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1-ZNF	Test Dates: 2/24 - 4/10/2020	EUT Type: Portable Handset		Page 171 of 250

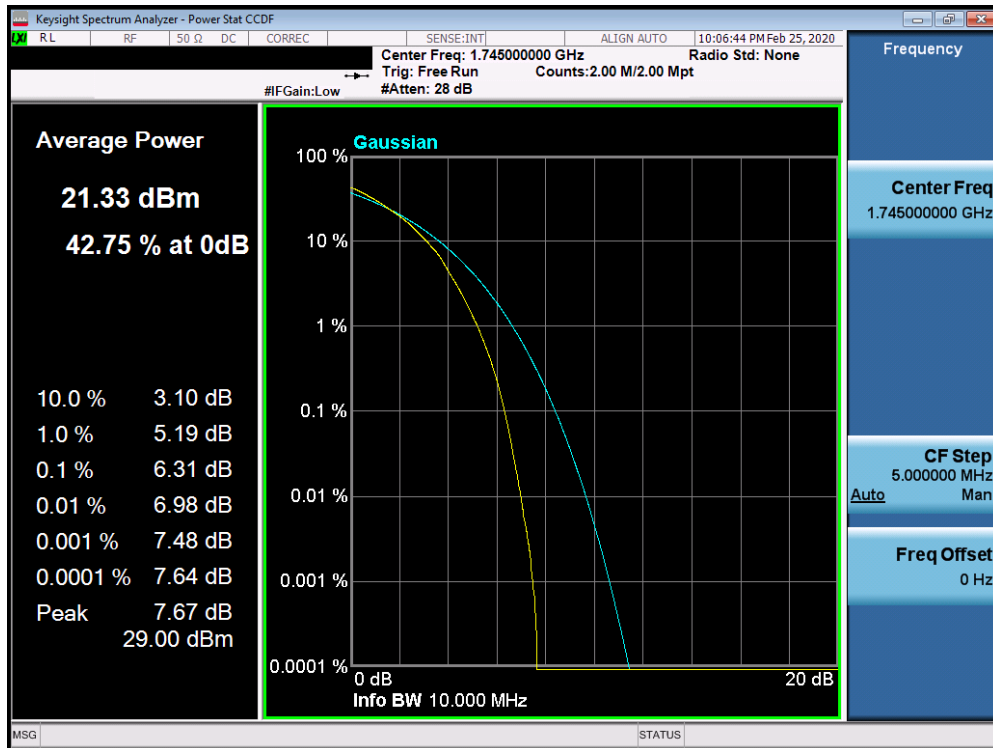
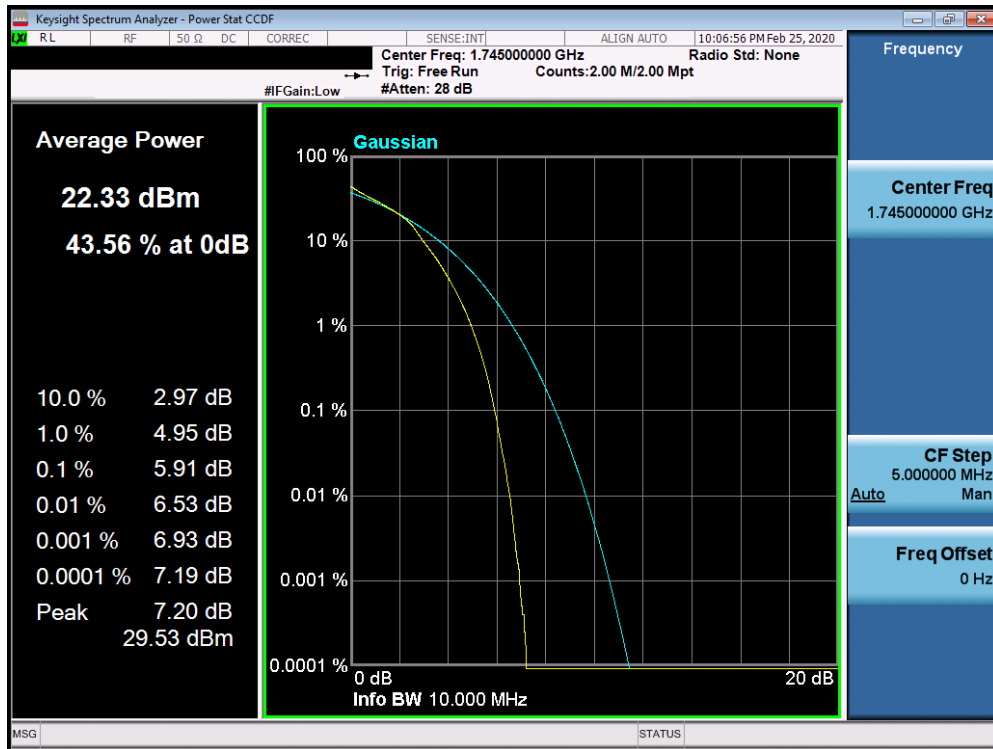


Plot 7-293. PAR Plot (Band 66/4- 5.0MHz 64-QAM - Full RB Configuration)

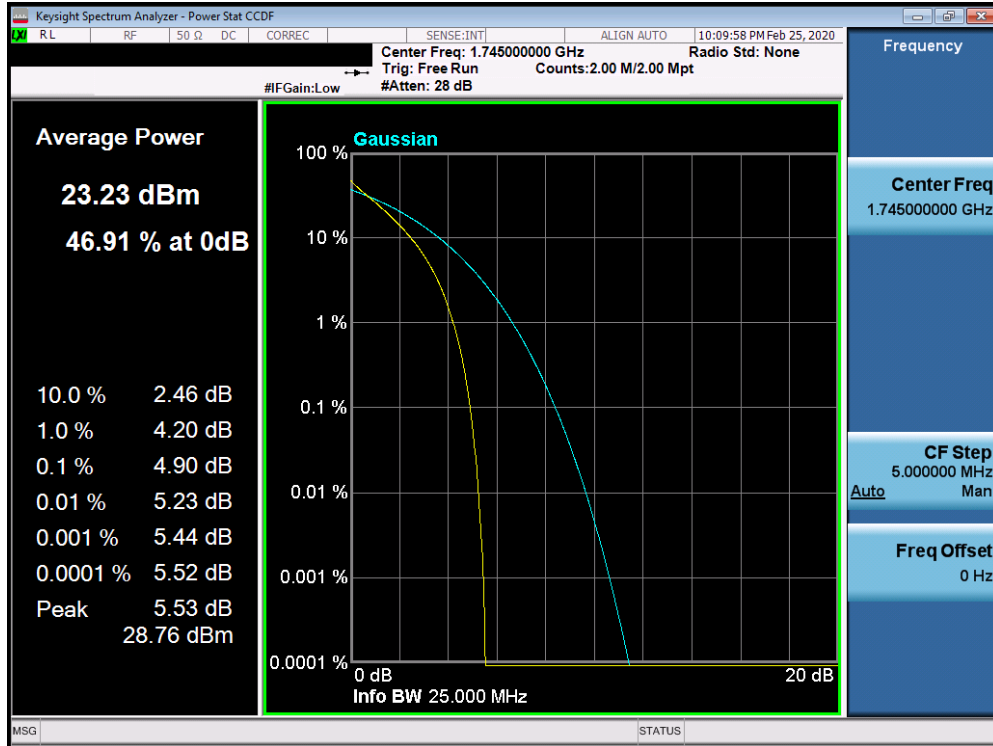


Plot 7-294. PAR Plot (Band 66/4- 10.0MHz QPSK - Full RB Configuration)

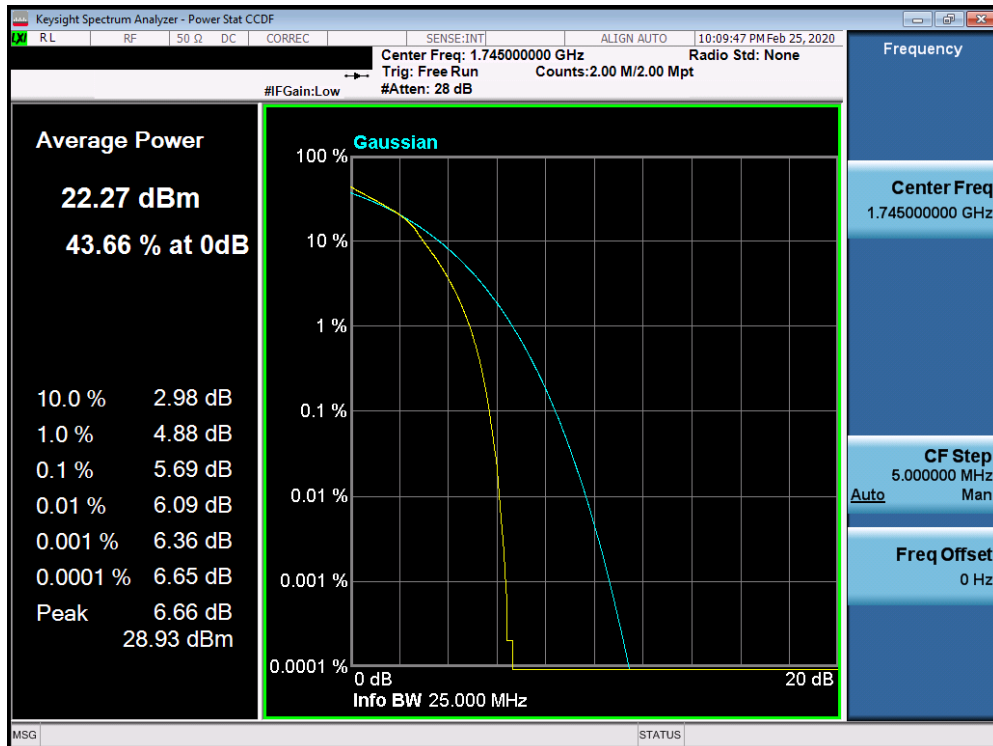
FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1-ZNF	Test Dates: 2/24 - 4/10/2020	EUT Type: Portable Handset		Page 172 of 250



FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1-ZNF	Test Dates: 2/24 - 4/10/2020	EUT Type: Portable Handset		Page 173 of 250

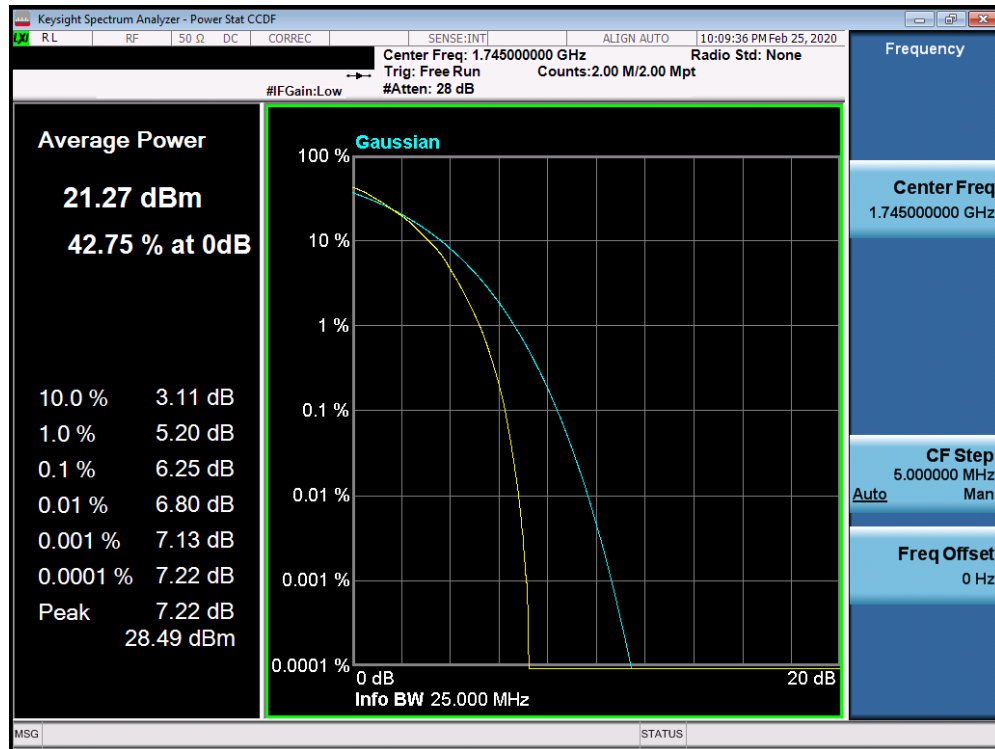


Plot 7-297. PAR Plot (Band 66/4- 15.0MHz QPSK - Full RB Configuration)

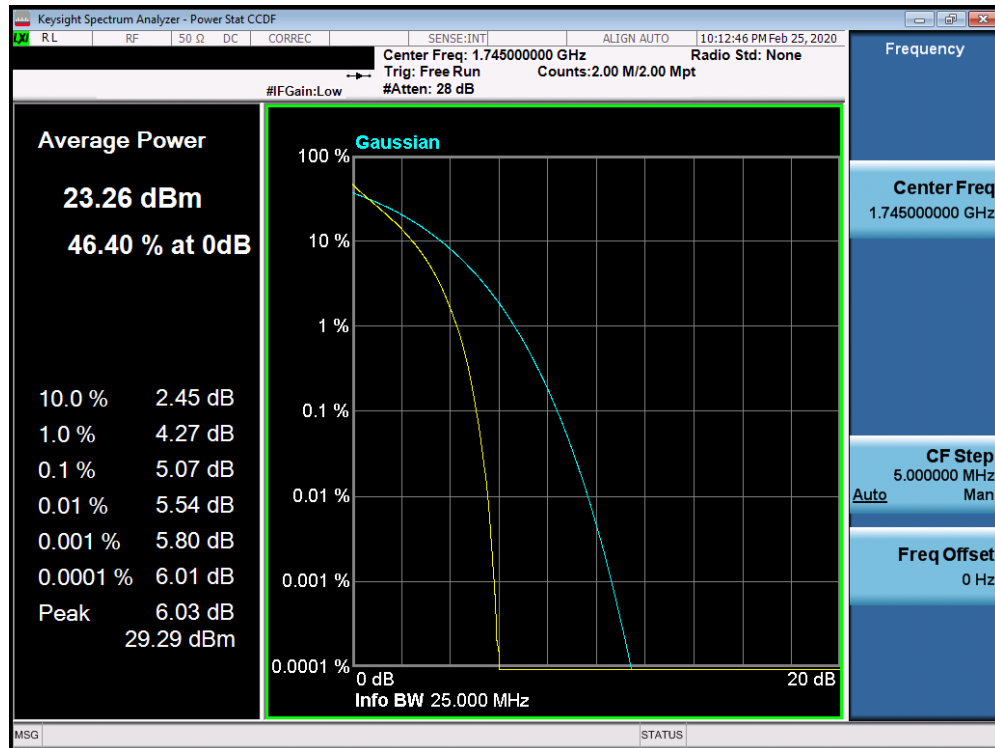


Plot 7-298. PAR Plot (Band 66/4- 15.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 - 4/10/2020	EUT Type: Portable Handset		Page 174 of 250

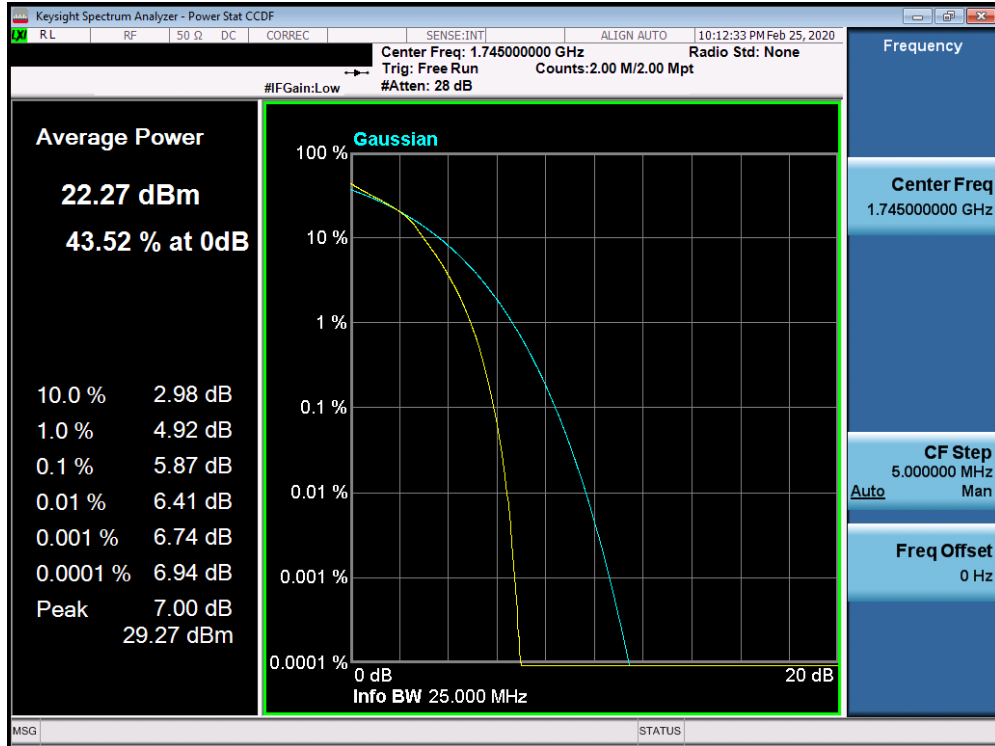


Plot 7-299. PAR Plot (Band 66/4- 15.0MHz 64-QAM - Full RB Configuration)

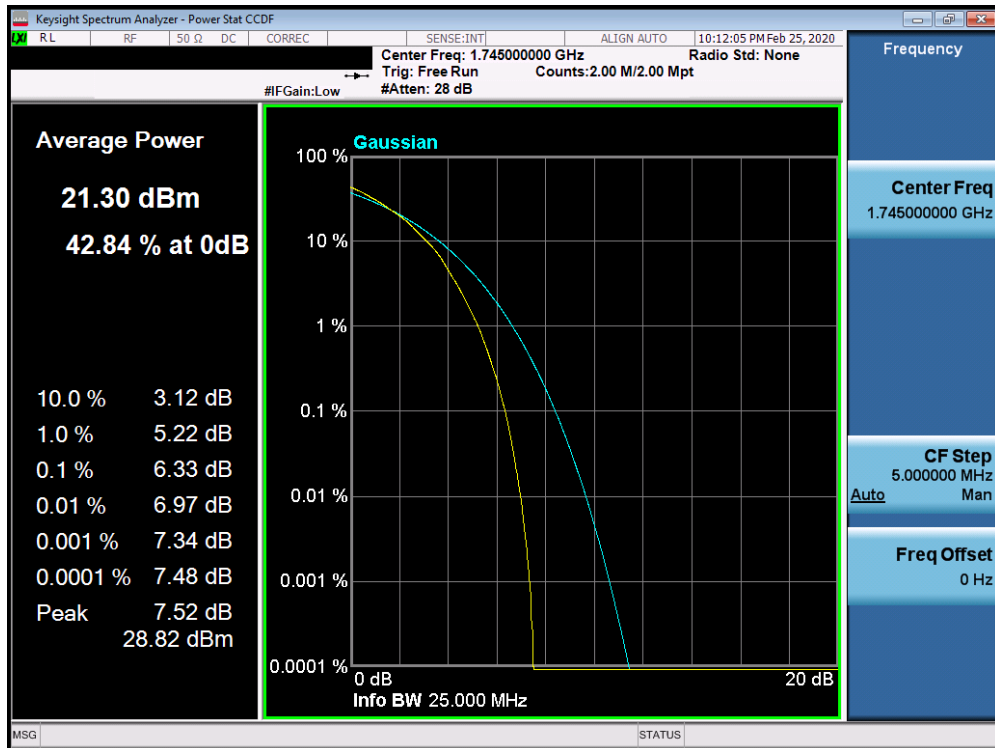


Plot 7-300. PAR Plot (Band 66/4- 20.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1-ZNF	Test Dates: 2/24 - 4/10/2020	EUT Type: Portable Handset	Page 175 of 250



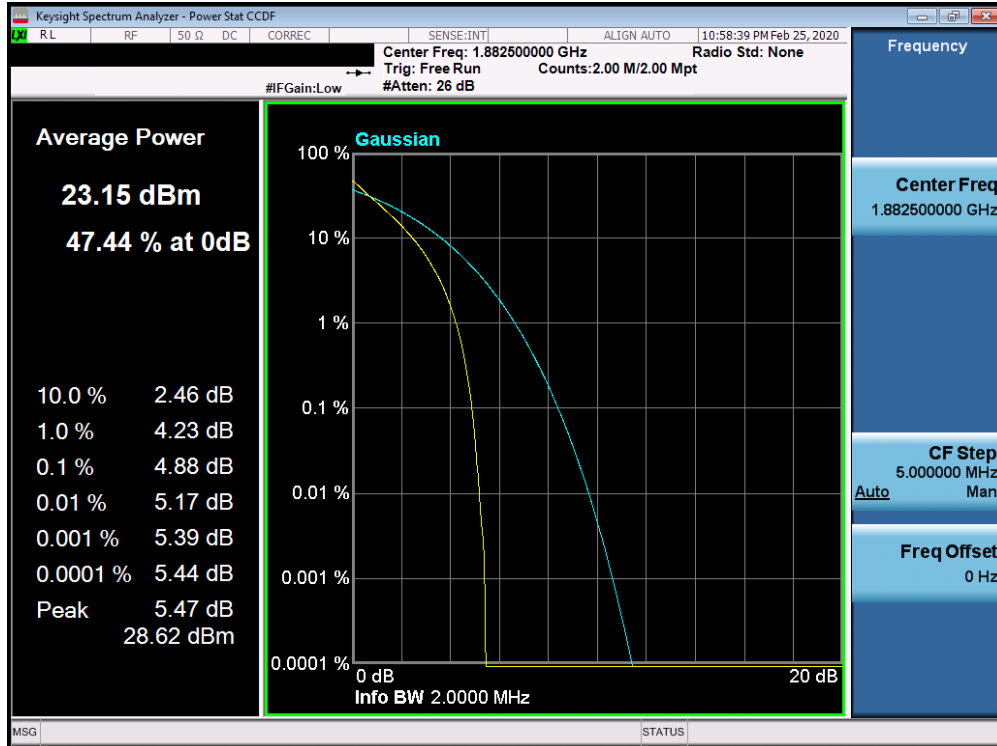
Plot 7-301. PAR Plot (Band 66/4- 20.0MHz 16-QAM - Full RB Configuration)



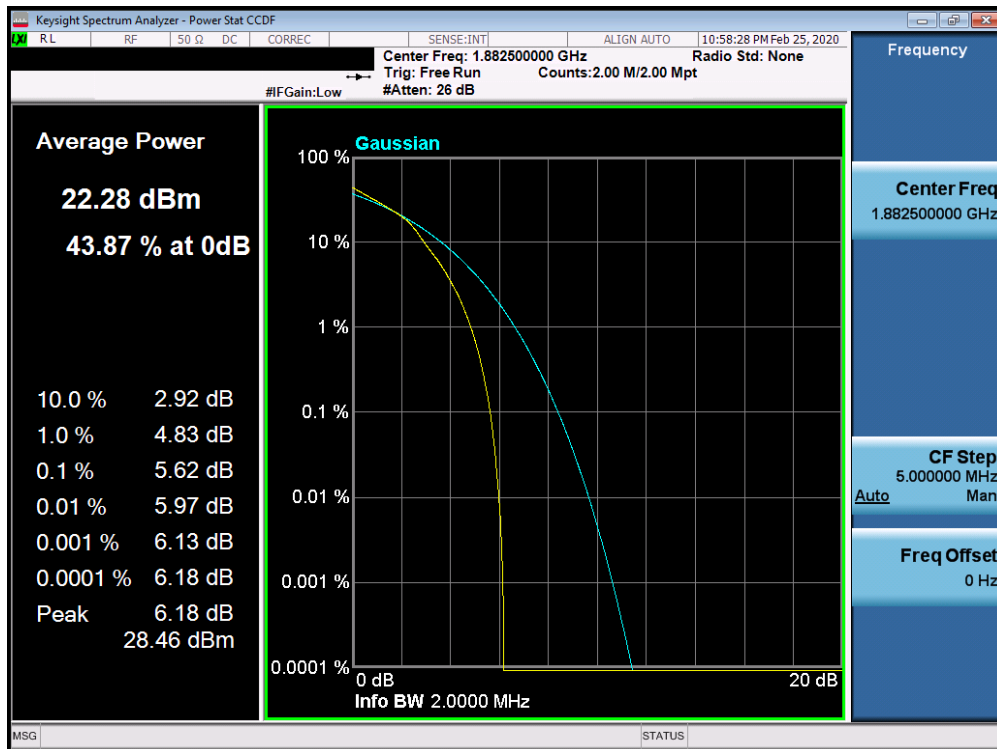
Plot 7-302. PAR Plot (Band 66/4- 20.0MHz 64-QAM - Full RB Configuration)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1-ZNF	Test Dates: 2/24 - 4/10/2020	EUT Type: Portable Handset		Page 176 of 250

Band 25/2

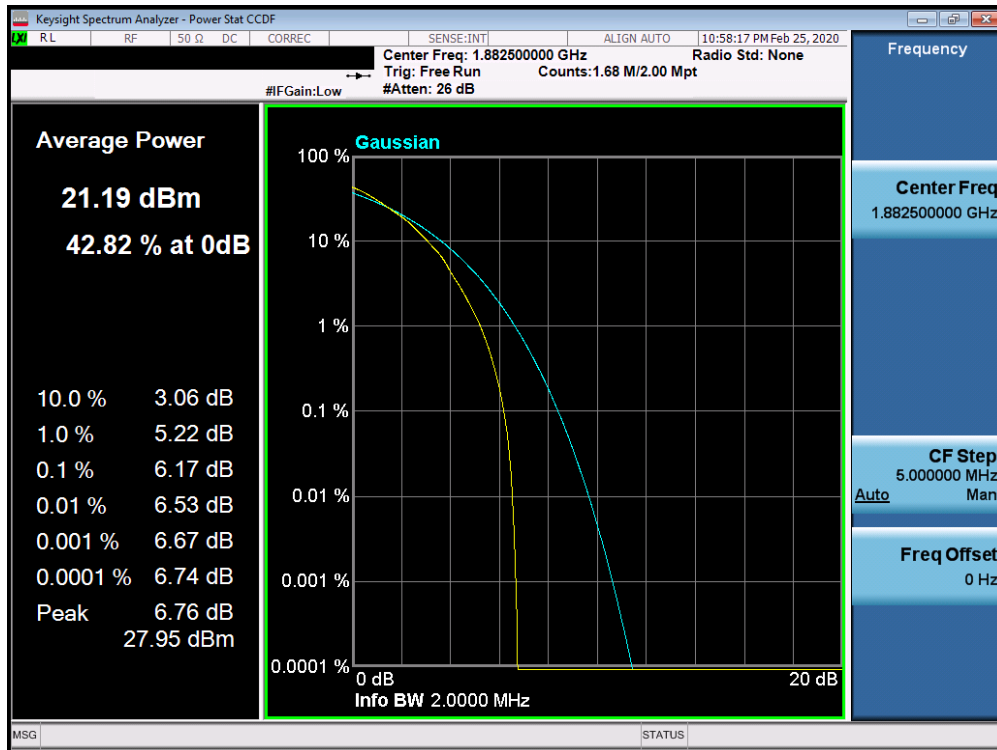


Plot 7-303. PAR Plot (Band 25/2- 1.4MHz QPSK - Full RB Configuration)

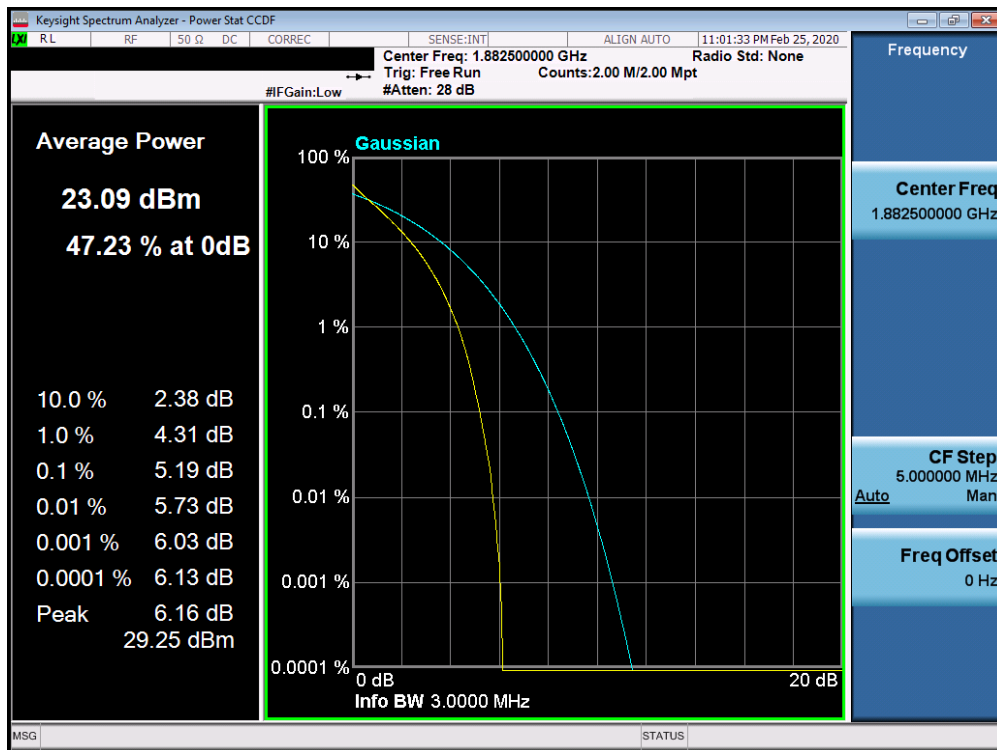


Plot 7-304. PAR Plot (Band 25/2- 1.4MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1-ZNF	Test Dates: 2/24 - 4/10/2020	EUT Type: Portable Handset		Page 177 of 250

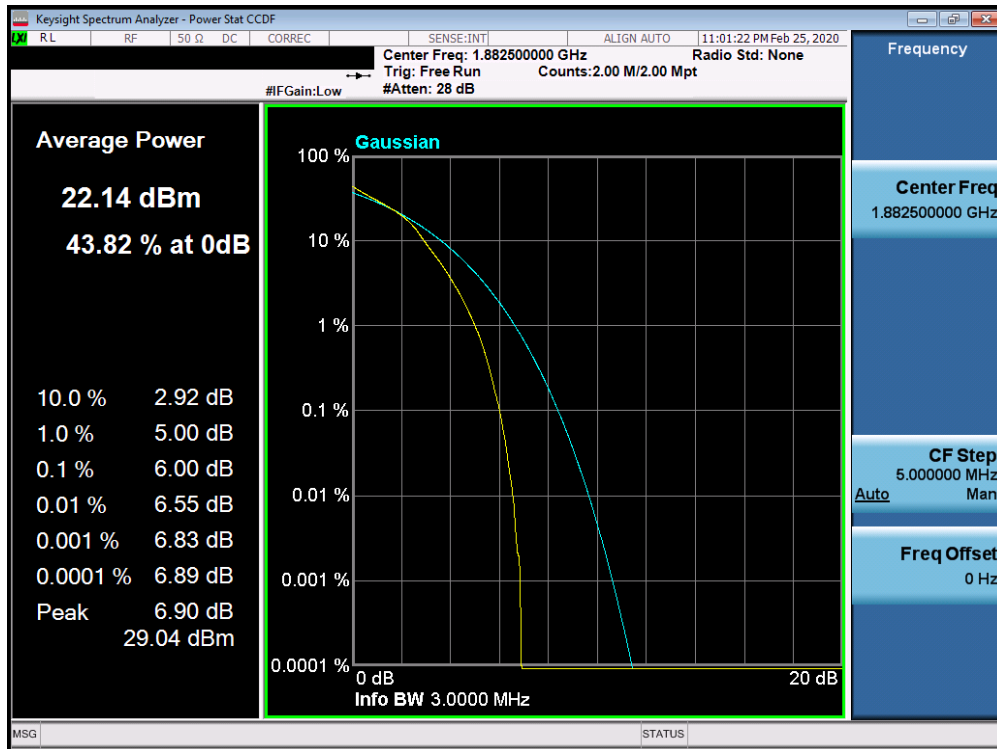


Plot 7-305. PAR Plot (Band 25/2- 1.4MHz 64-QAM - Full RB Configuration)

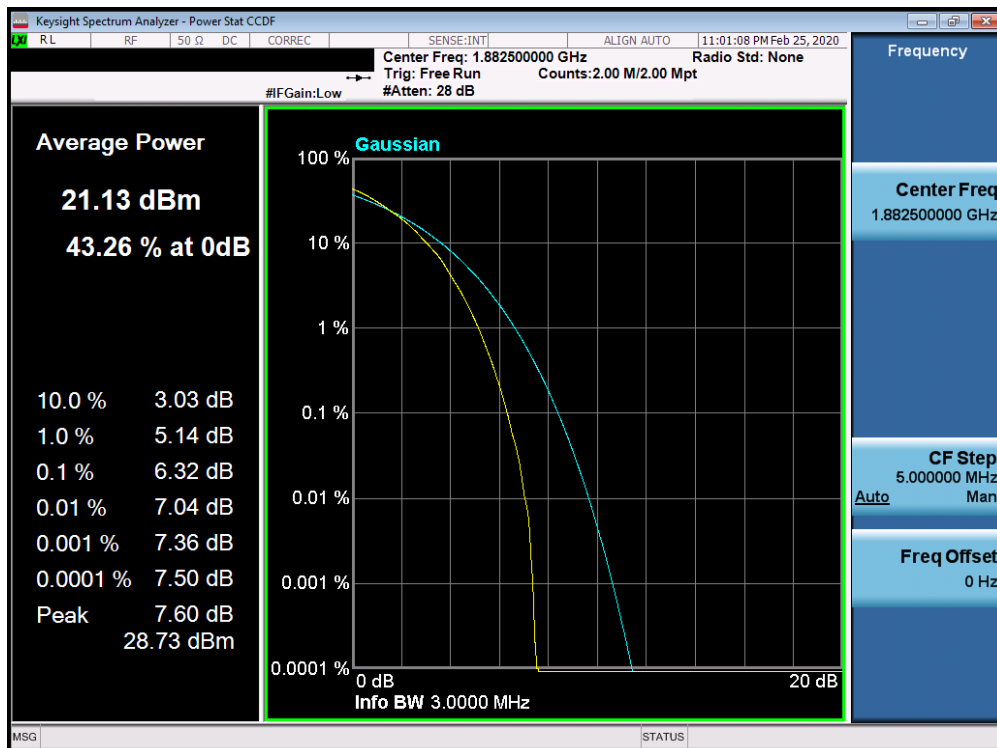


Plot 7-306. PAR Plot (Band 25/2- 3.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1-ZNF	Test Dates: 2/24 - 4/10/2020	EUT Type: Portable Handset	Page 178 of 250

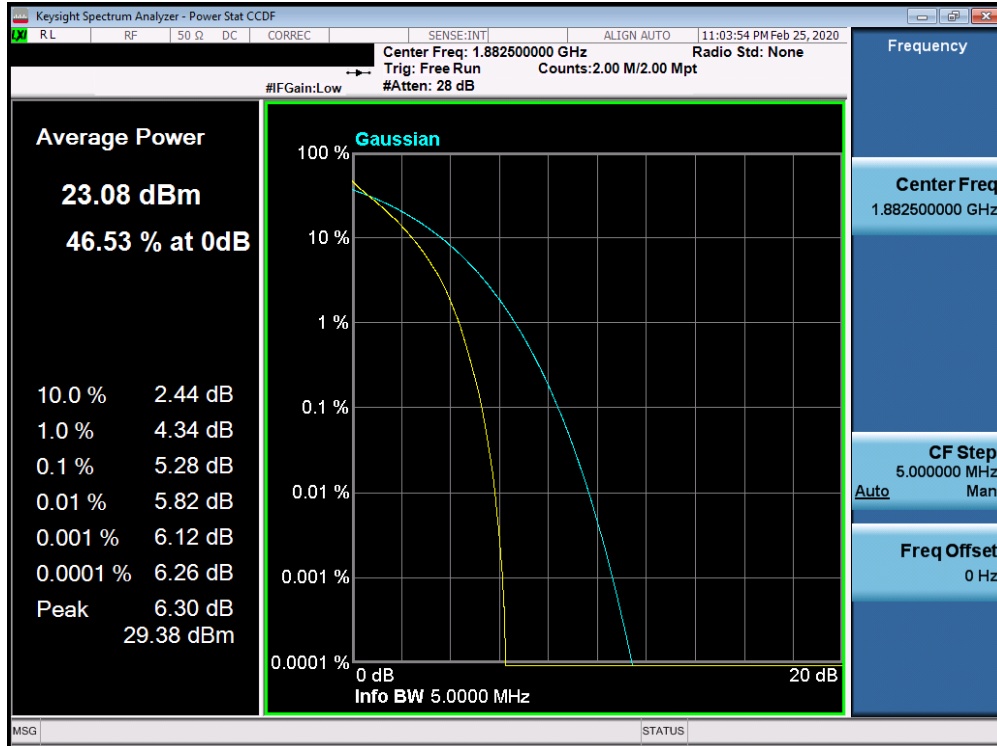


Plot 7-307. PAR Plot (Band 25/2- 3.0MHz 16-QAM - Full RB Configuration)

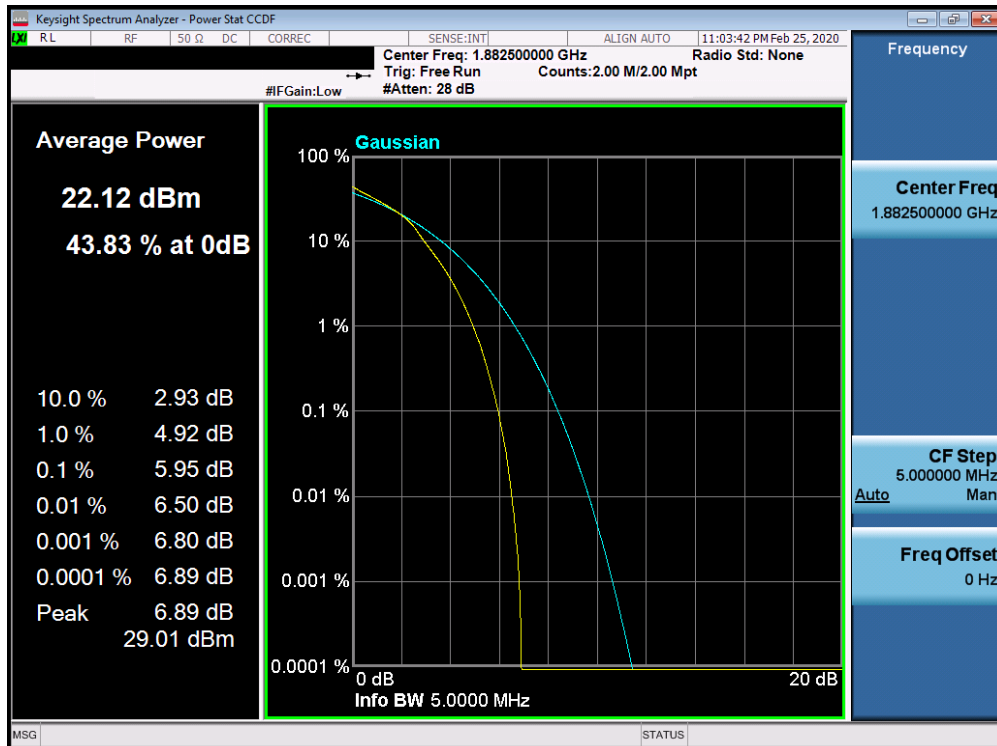


Plot 7-308. PAR Plot (Band 25/2- 3.0MHz 64-QAM - Full RB Configuration)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1-ZNF	Test Dates: 2/24 - 4/10/2020	EUT Type: Portable Handset		Page 179 of 250

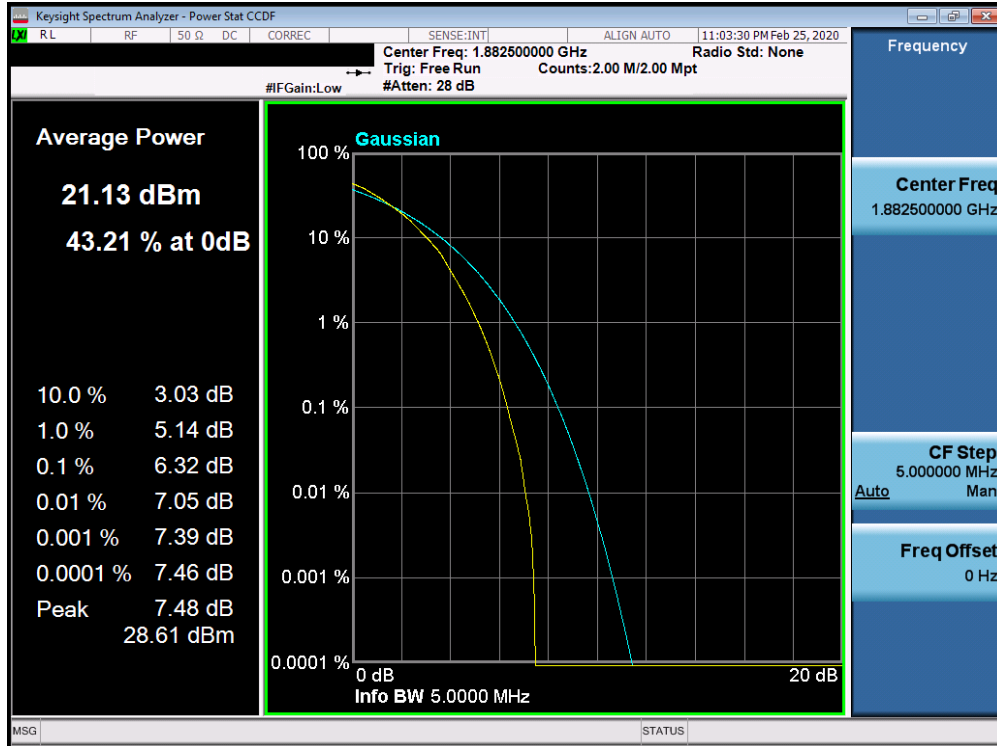


Plot 7-309. PAR Plot (Band 25/2- 5.0MHz QPSK - Full RB Configuration)

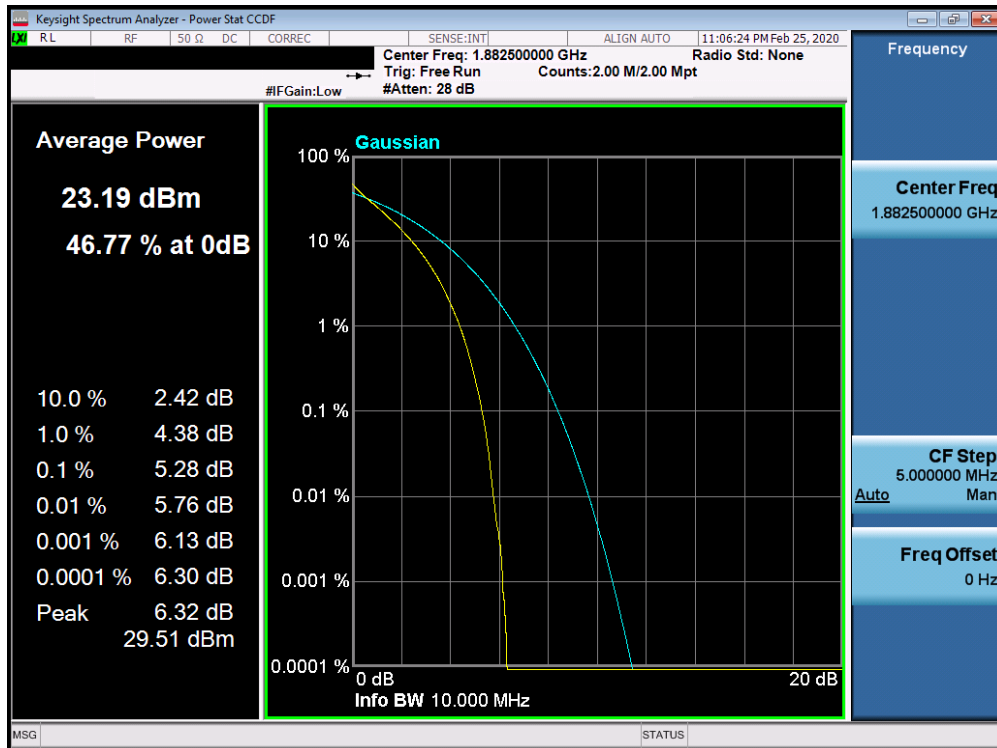


Plot 7-310. PAR Plot (Band 25/2- 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1-ZNF	Test Dates: 2/24 - 4/10/2020	EUT Type: Portable Handset		Page 180 of 250

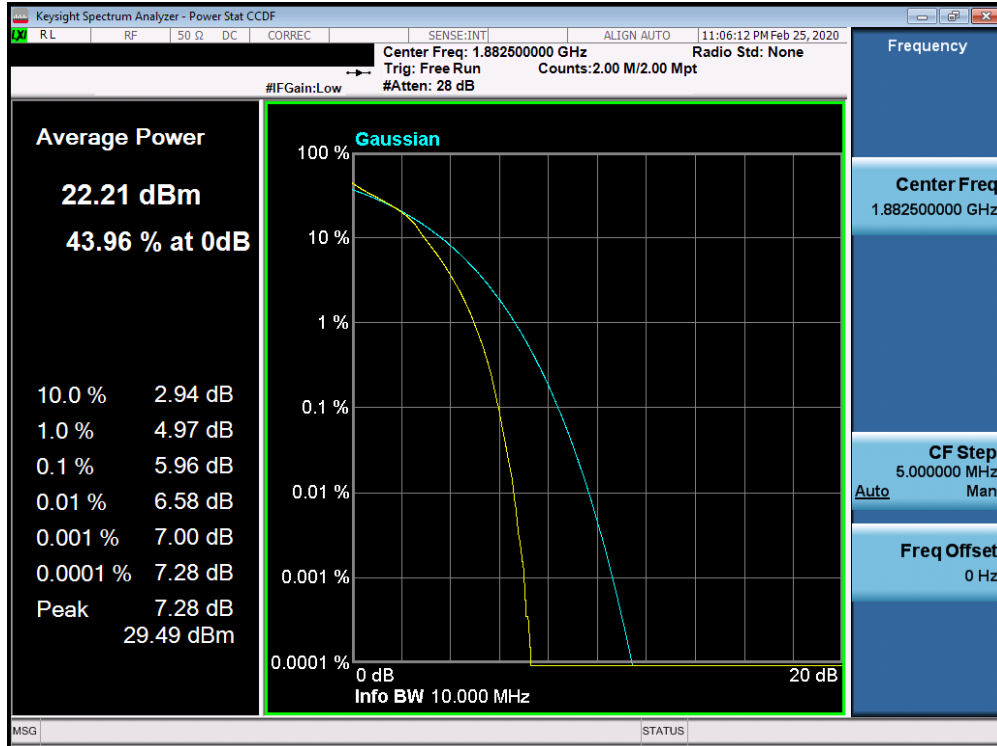


Plot 7-311. PAR Plot (Band 25/2- 5.0MHz 64-QAM - Full RB Configuration)

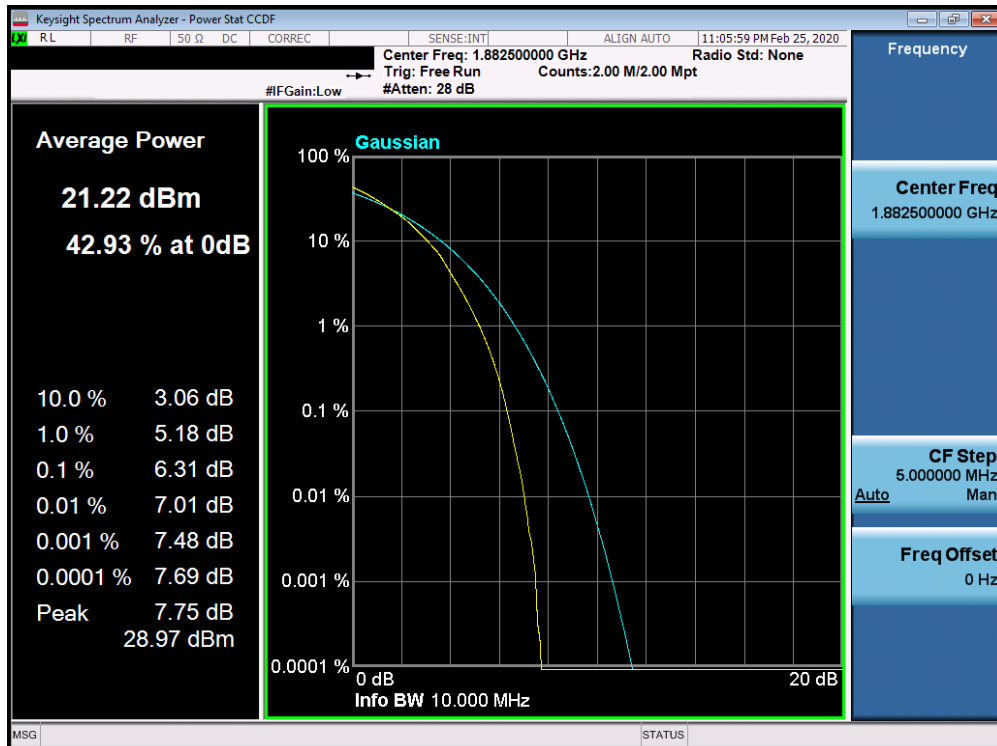


Plot 7-312. PAR Plot (Band 25/2- 10.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1-ZNF	Test Dates: 2/24 - 4/10/2020	EUT Type: Portable Handset		Page 181 of 250

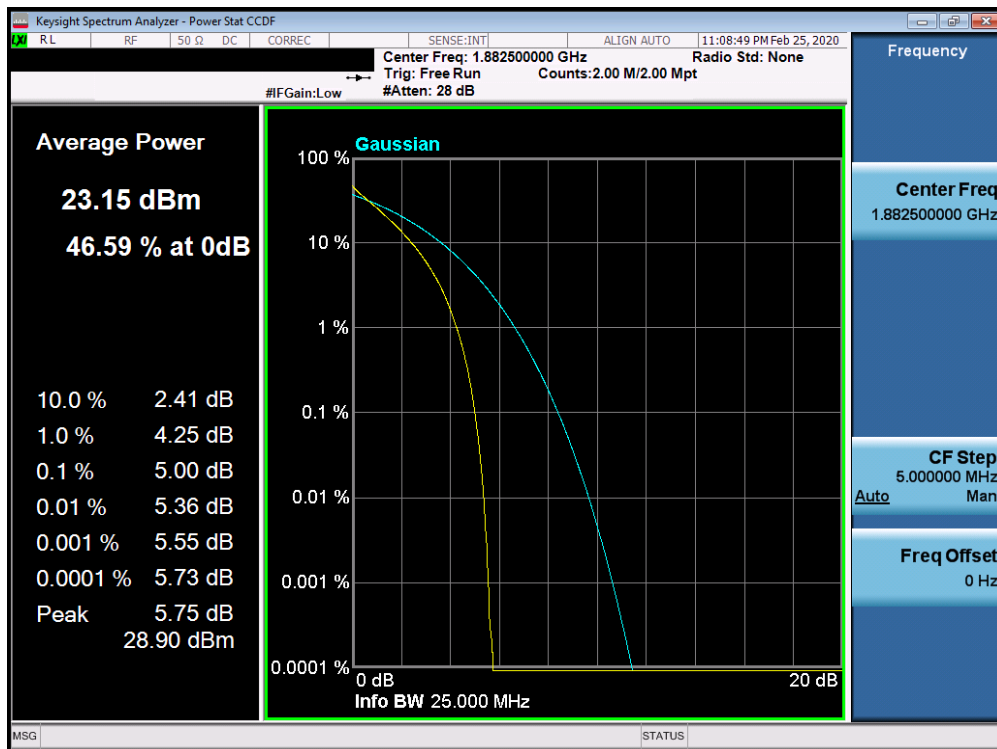


Plot 7-313. PAR Plot (Band 25/2- 10.0MHz 16-QAM - Full RB Configuration)

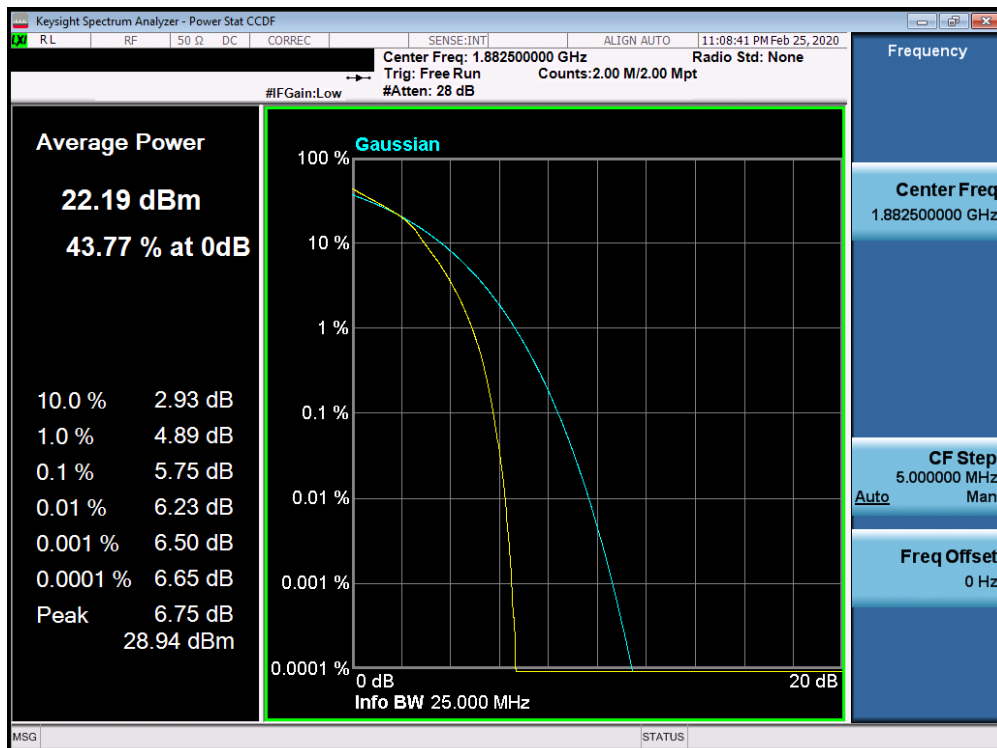


Plot 7-314. PAR Plot (Band 25/2- 10.0MHz 64-QAM - Full RB Configuration)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1-ZNF	Test Dates: 2/24 - 4/10/2020	EUT Type: Portable Handset		Page 182 of 250

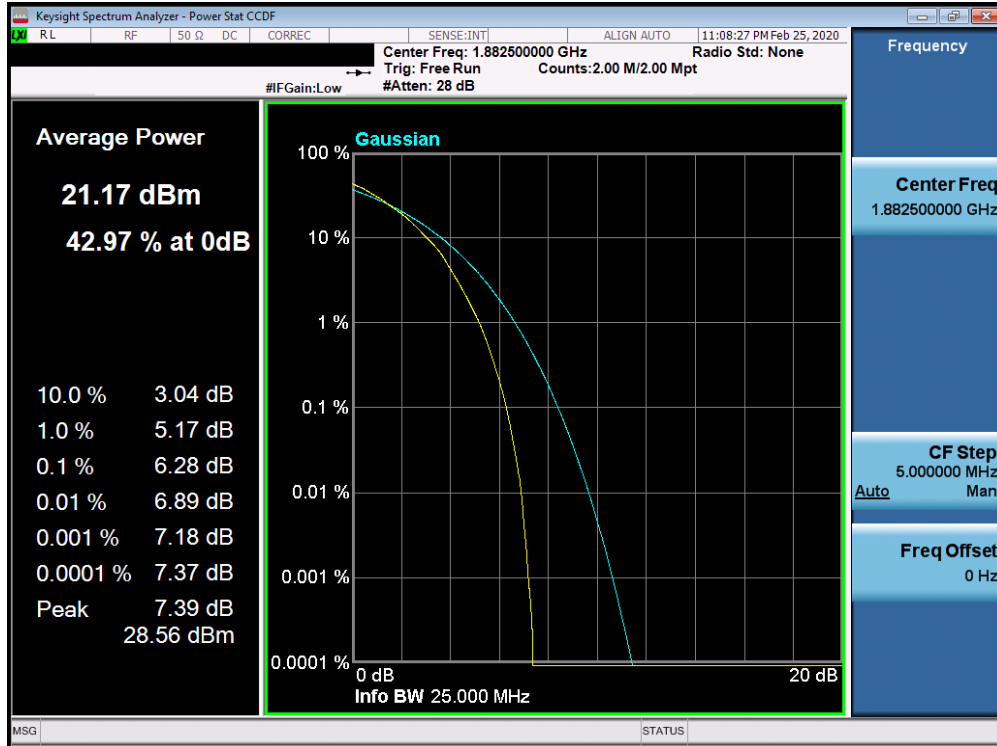


Plot 7-315. PAR Plot (Band 25/2- 15.0MHz QPSK - Full RB Configuration)

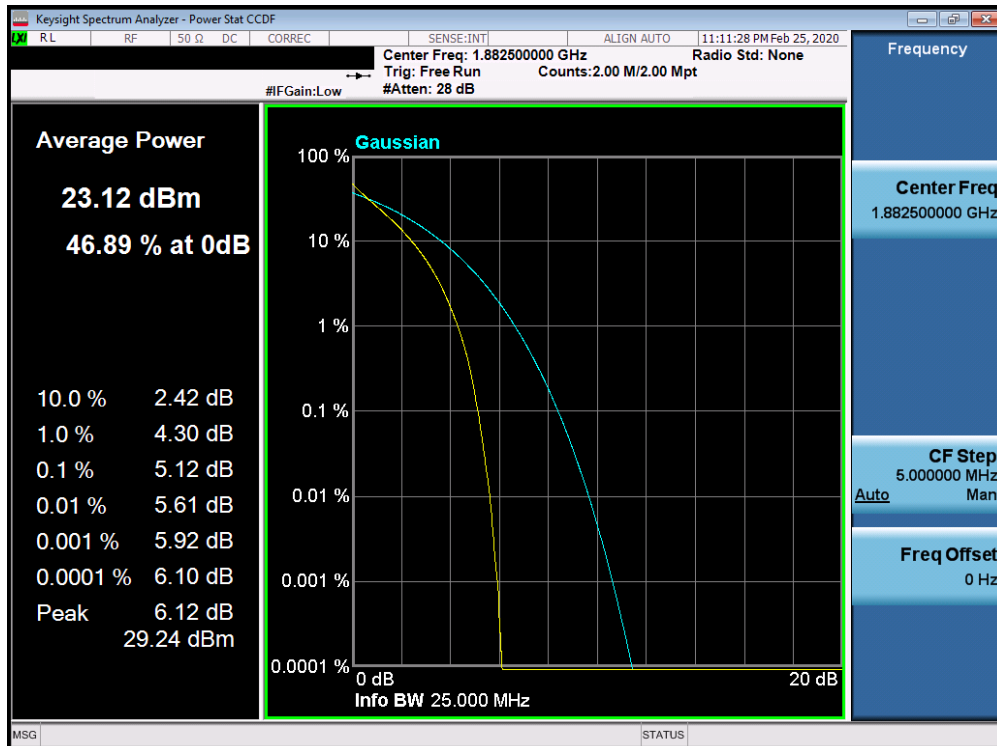


Plot 7-316. PAR Plot (Band 25/2- 15.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1-ZNF	Test Dates: 2/24 - 4/10/2020	EUT Type: Portable Handset		Page 183 of 250

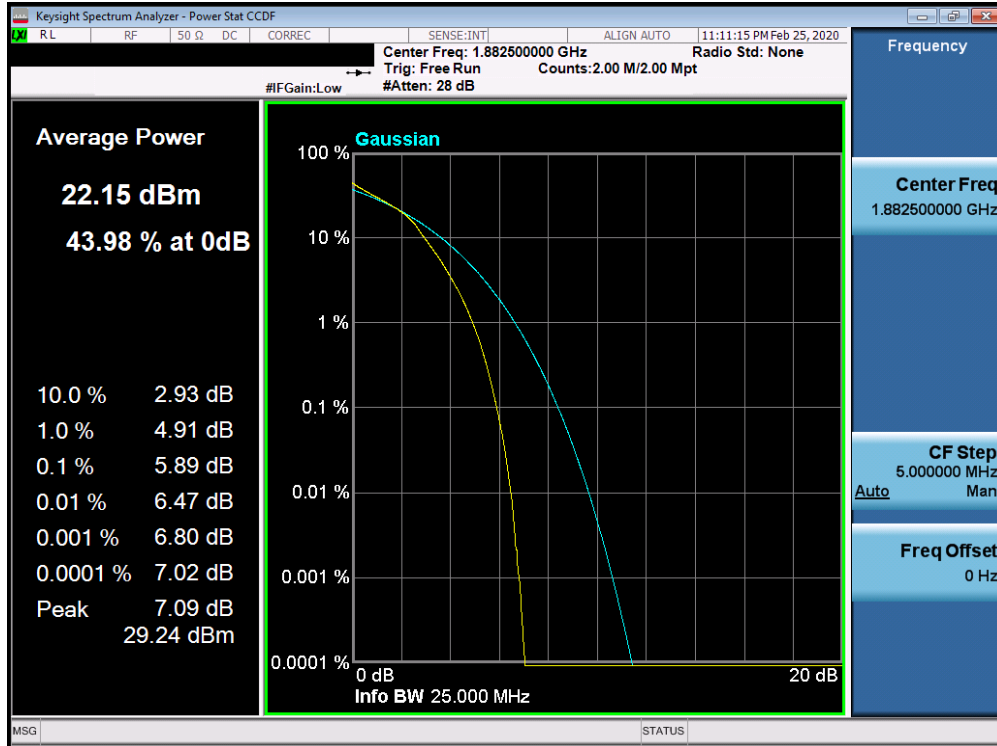


Plot 7-317. PAR Plot (Band 25/2- 15.0MHz 64-QAM - Full RB Configuration)

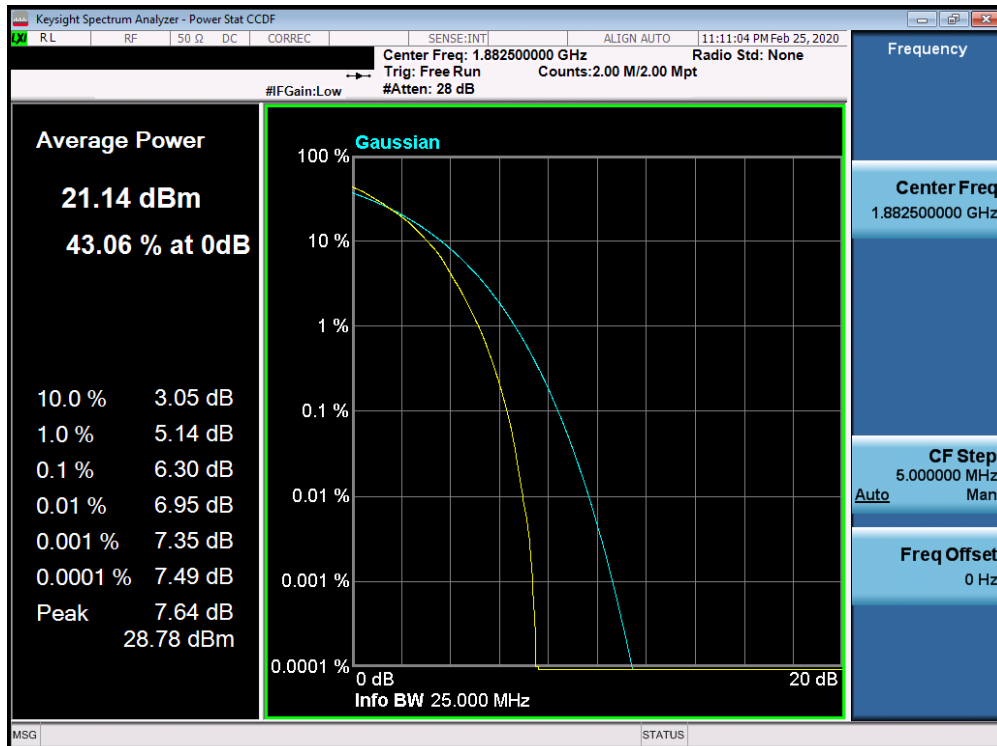


Plot 7-318. PAR Plot (Band 25/2- 20.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1-ZNF	Test Dates: 2/24 - 4/10/2020	EUT Type: Portable Handset		Page 184 of 250



Plot 7-319. PAR Plot (Band 25/2- 20.0MHz 16-QAM - Full RB Configuration)



Plot 7-320. PAR Plot (Band 25/2- 20.0MHz 64-QAM - Full RB Configuration)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1-ZNF	Test Dates: 2/24 - 4/10/2020	EUT Type: Portable Handset		Page 185 of 250

7.6 Uplink Carrier Aggregation

§27.53(m)

Test Overview

The EUT is set up to transmit two contiguous LTE channels. The power level of both carriers and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

For Band 41, the minimum permissible attenuation level of any spurious emission is $55 + 10 \log_{10}(P_{\text{Watts}})$.

Test Procedure Used

KDB 971168 D01 v03r01 – Section 6.0

Test Settings

1. Start frequency was set to 30MHz and stop frequency was set to at least 10 * the fundamental frequency (separated into at least two plots per channel)
2. Detector = RMS
3. Trace mode = trace average for continuous emissions, max hold for pulse emissions
4. Sweep time = auto couple
5. The trace was allowed to stabilize
6. Please see test notes below for RBW and VBW settings

Test Setup

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

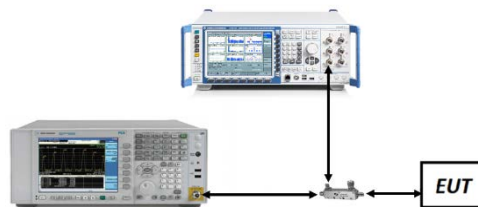


Figure 7-5. Test Instrument & Measurement Setup

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 186 of 250

Test Notes

1. Uplink carrier aggregation is only supported in this EUT while operating in Power Class 2 and 3.
2. Conducted power and spurious emissions measurements were evaluated for the two contiguous channels using various combinations of RB size, RB offset, modulation, and channel bandwidth. Channel bandwidth data is shown in the tables below based only on the channel bandwidths that were supported in this device. The worst case (highest) powers were found while operating with QPSK modulation, as shown in Table 7-503 and 7-504 below, with both carriers set to transmit using 1RB.
3. Compliance with the applicable limits is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater for frequencies less than 1 GHz and 1 MHz or greater for frequencies greater than 1 GHz. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

FCC ID: ZNFK300TM	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Uplink CA Configuration B41 (PC3)

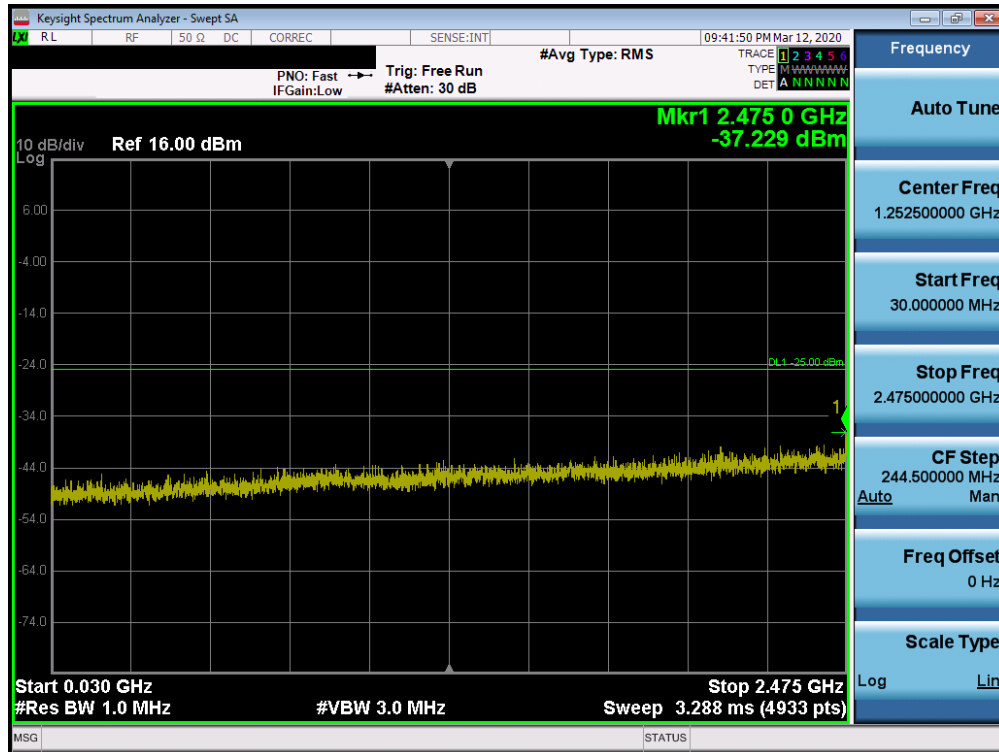
Power State	PCC							SCC							Power ULCA Tx.Power (dBm)
	PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) Channel	SCC (UL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	
Max	LTE B41	20	39750	2506	QPSK	1	99	LTE B41	20	39948	2525.8	QPSK	1	0	22.81
Max	LTE B41	20	40620	2593	QPSK	1	99	LTE B41	20	40818	2612.8	QPSK	1	0	22.53
Max	LTE B41	20	41490	2680	QPSK	1	0	LTE B41	20	41292	2660.2	QPSK	1	99	23.40

Table 7-3. Conducted Powers (B41 (PC3) – 20MHz + 20MHz Channel Bandwidth - PCC/SCC: 1RB)

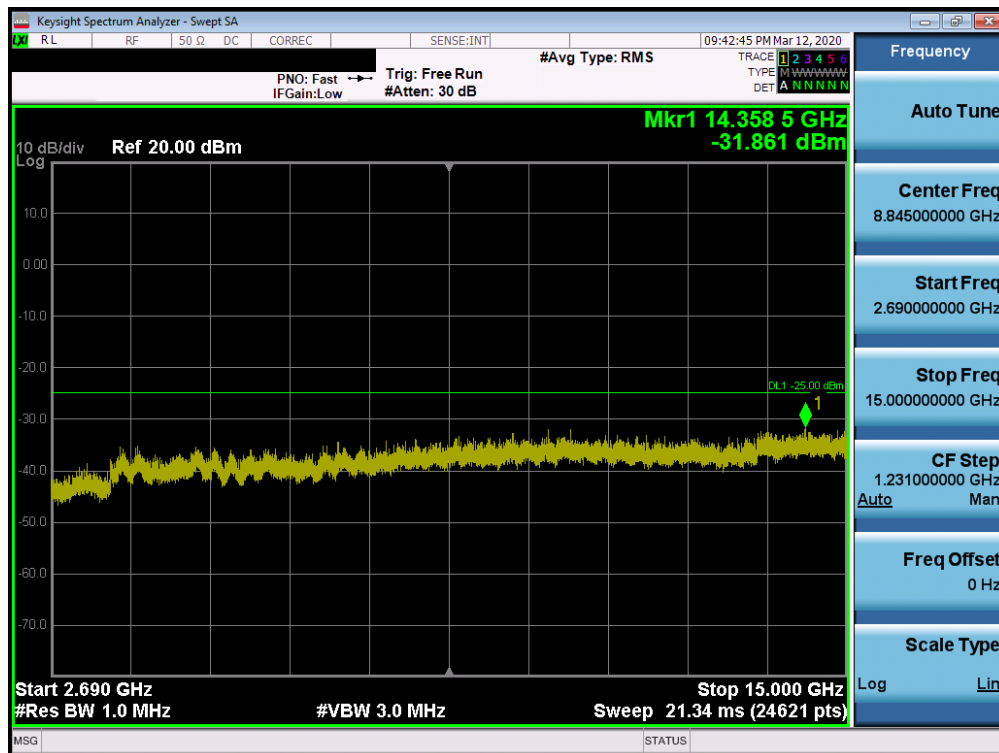
Power State	PCC							SCC							Power ULCA Tx.Power (dBm)
	PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) Channel	SCC (UL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	
Max	LTE B41	20	41490	2680	QPSK	1	0	LTE B41	20	41292	2660.2	QPSK	100	0	22.36
Max	LTE B41	20	41490	2680	16-QAM	1	0	LTE B41	20	41292	2660.2	16-QAM	100	0	21.40
Max	LTE B41	20	41490	2680	64-QAM	1	0	LTE B41	20	41292	2660.2	64-QAM	100	0	20.60

Table 7-4. Conducted Powers (B41 (PC3) with Various Combinations for 20MHz + 20MHz Channel Bandwidth)

FCC ID: ZNFK300TM	 Proud to be part of 		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset			Page 188 of 250

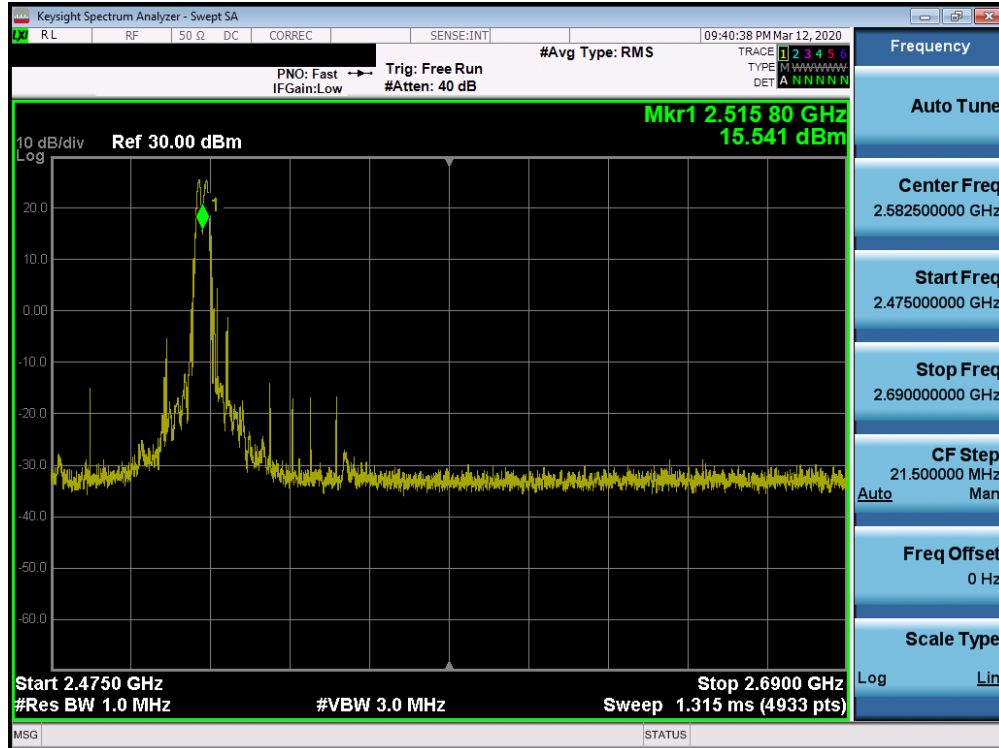


Plot 7-321. Conducted Spurious Plot (Band 41 (PC3) – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Low Channel)

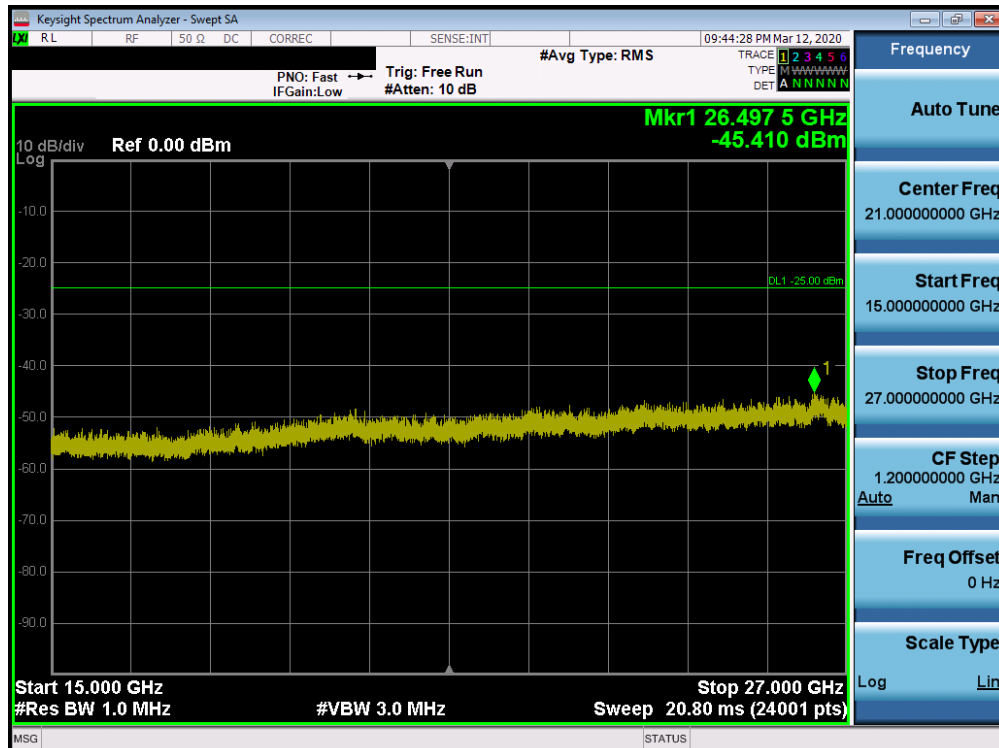


Plot 7-322. Conducted Spurious Plot (Band 41 (PC3) – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Low Channel)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 189 of 250

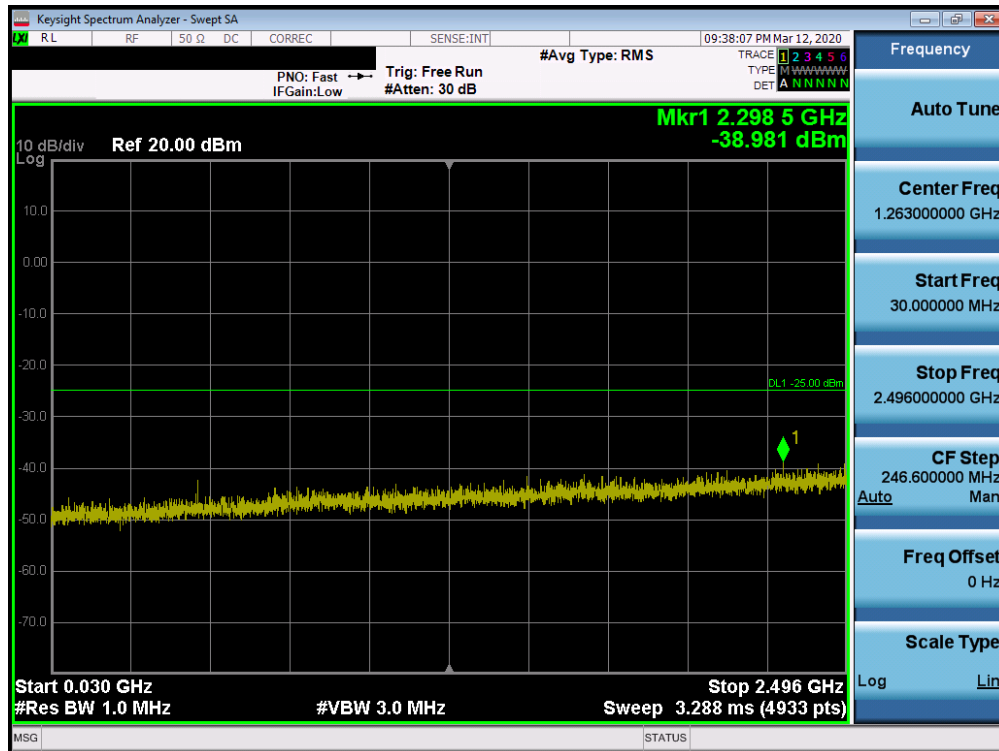


Plot 7-323. Conducted Spurious Plot (Band 41 (PC3) – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Low Channel)

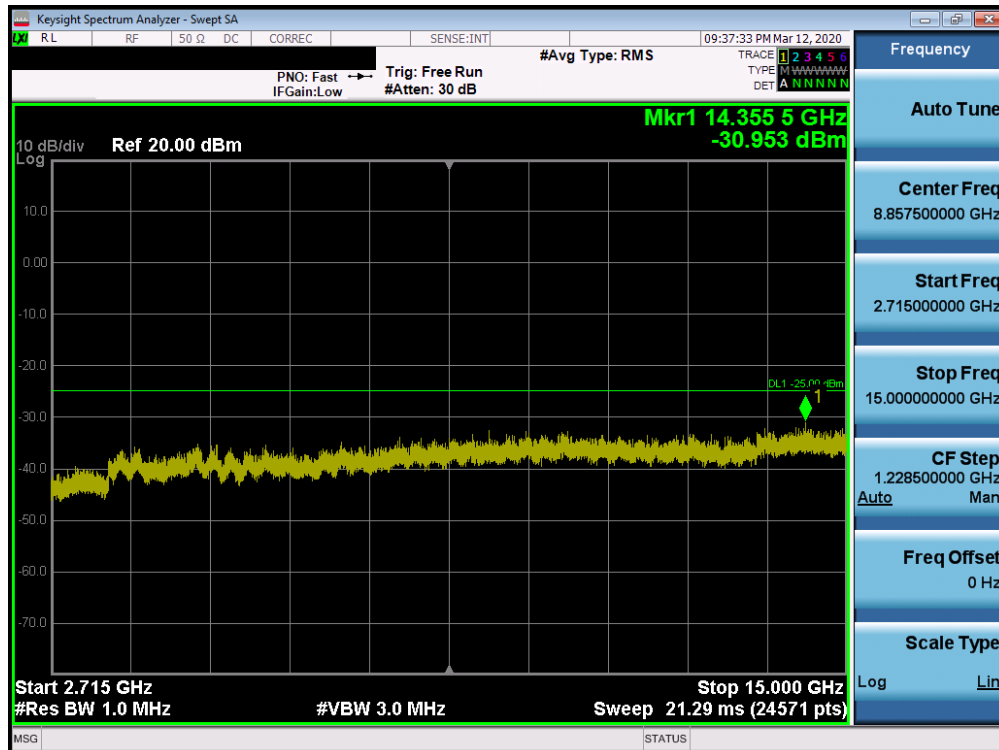


Plot 7-324. Conducted Spurious Plot (Band 41 (PC3) – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Low Channel)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 190 of 250

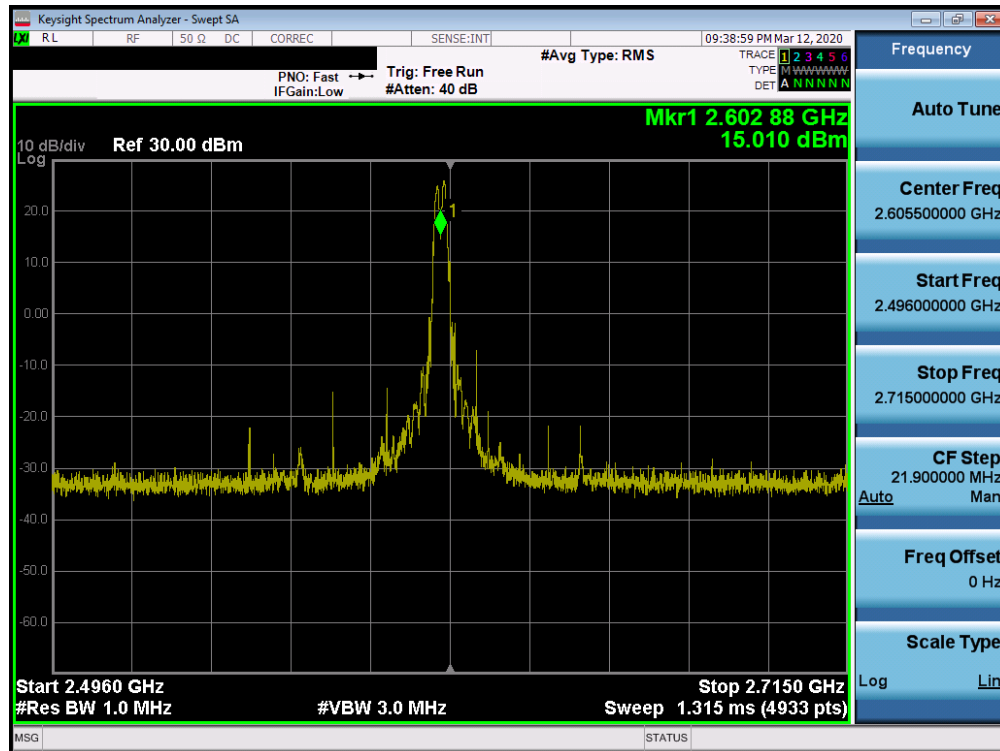


Plot 7-325. Conducted Spurious Plot (Band 41 (PC3) – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Mid Channel)

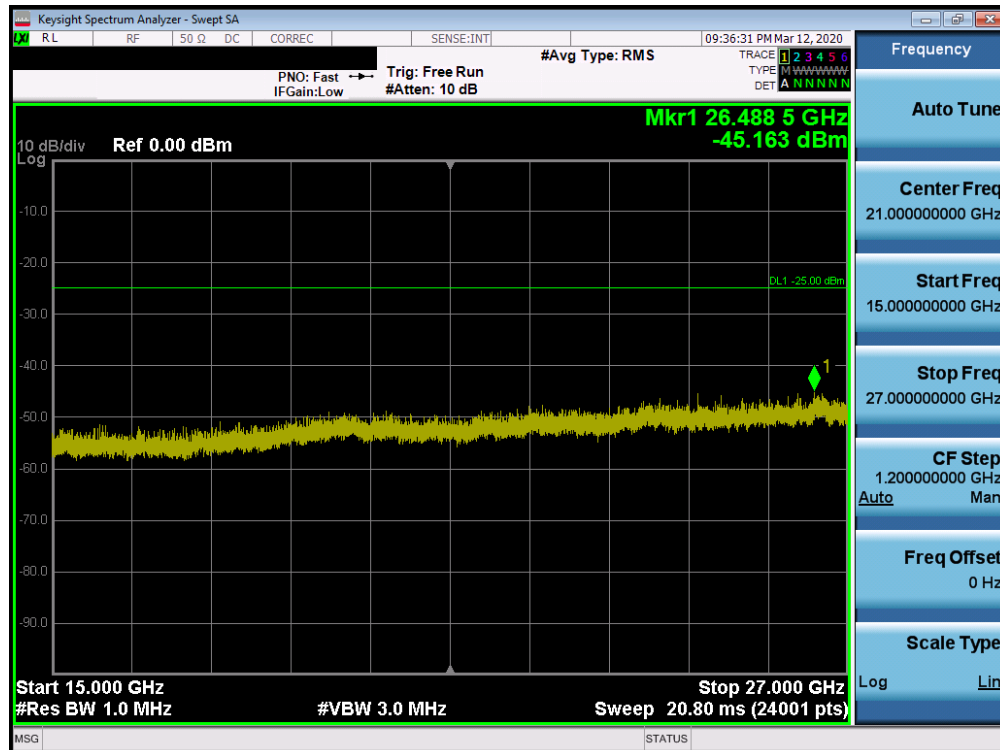


Plot 7-326. Conducted Spurious Plot (Band 41 (PC3) – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Mid Channel)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 191 of 250

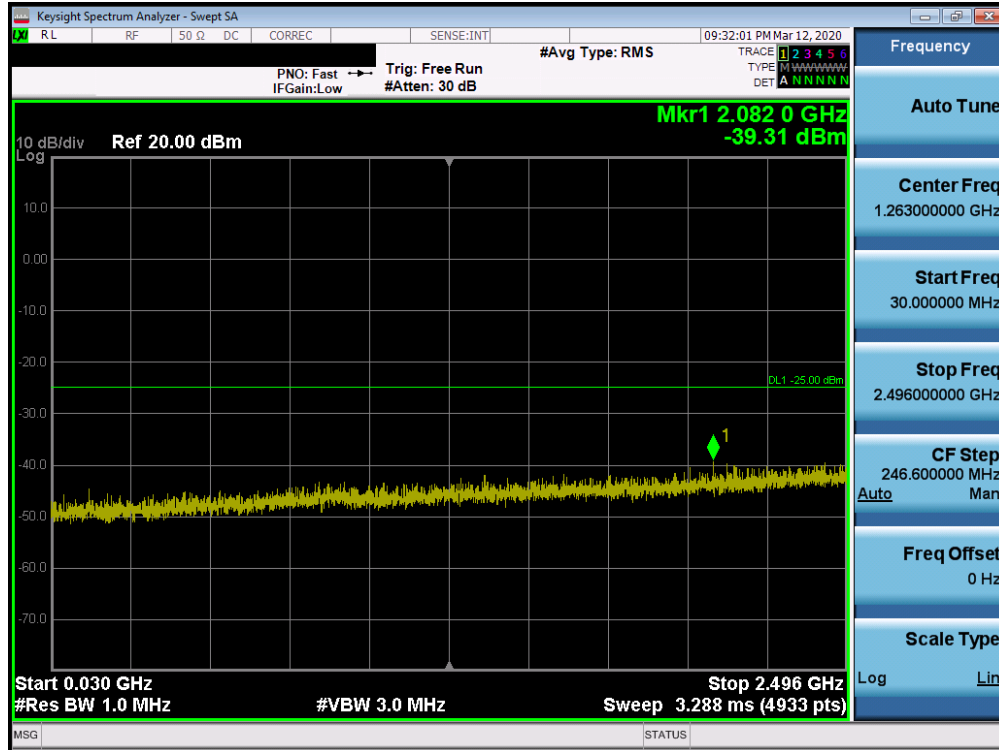


Plot 7-327. Conducted Spurious Plot (Band 41 (PC3) – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Mid Channel)

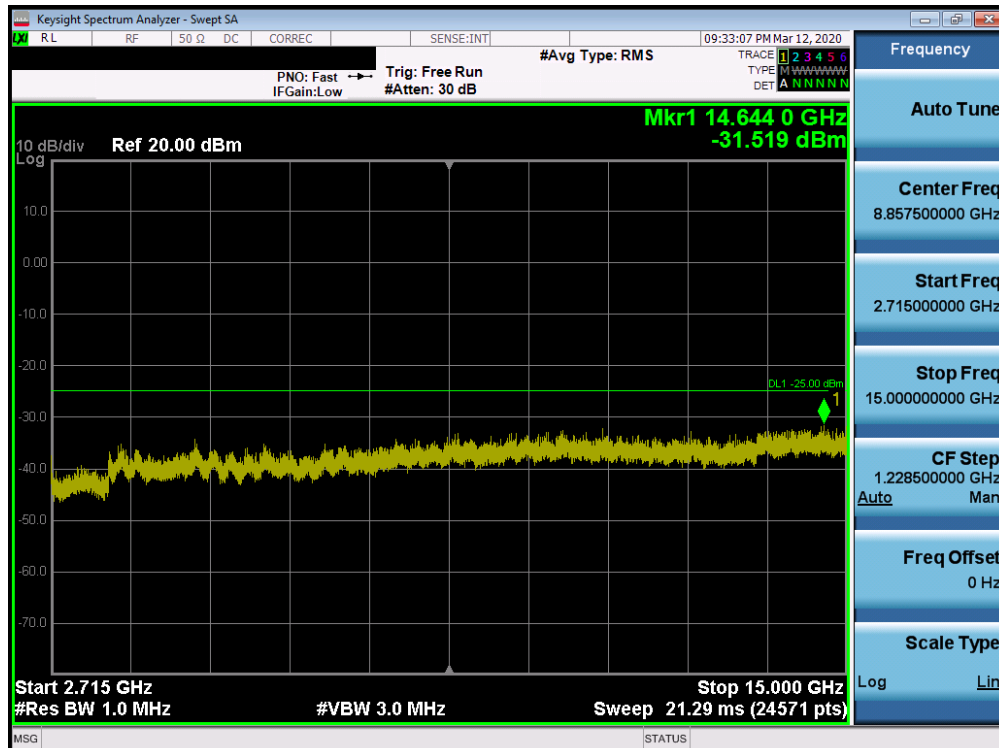


Plot 7-328. Conducted Spurious Plot (Band 41 (PC3) – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Mid Channel)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1-ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 192 of 250

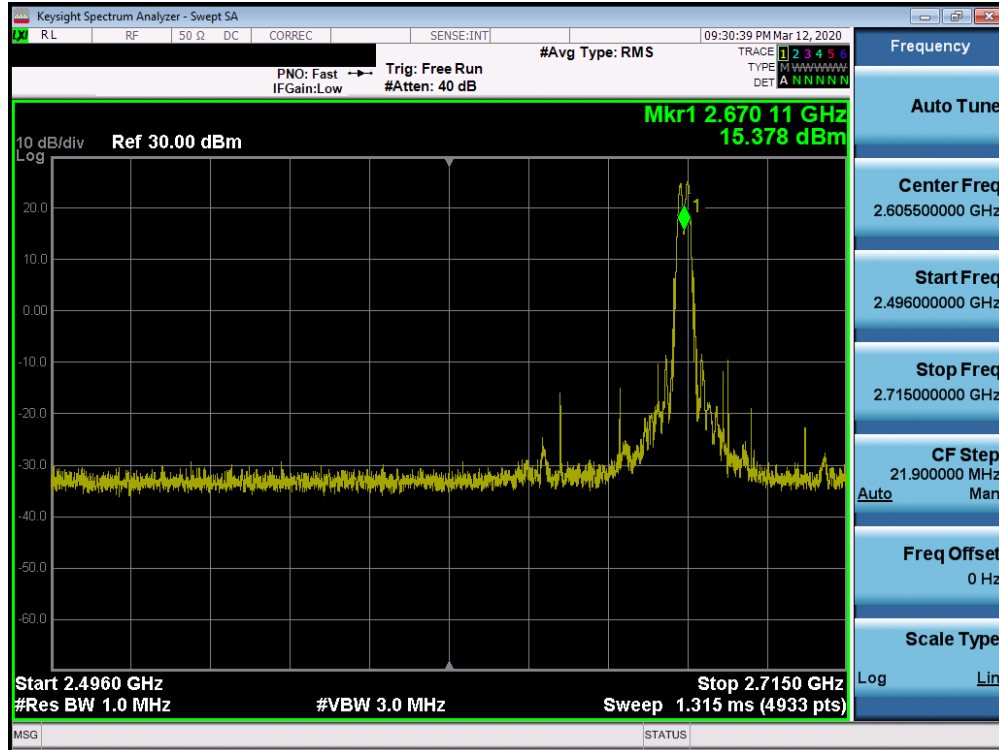


Plot 7-329. Conducted Spurious Plot (Band 41 (PC3) – 20.0MHz QPSK – PCC 1/0 SCC 1/99 – High Channel)

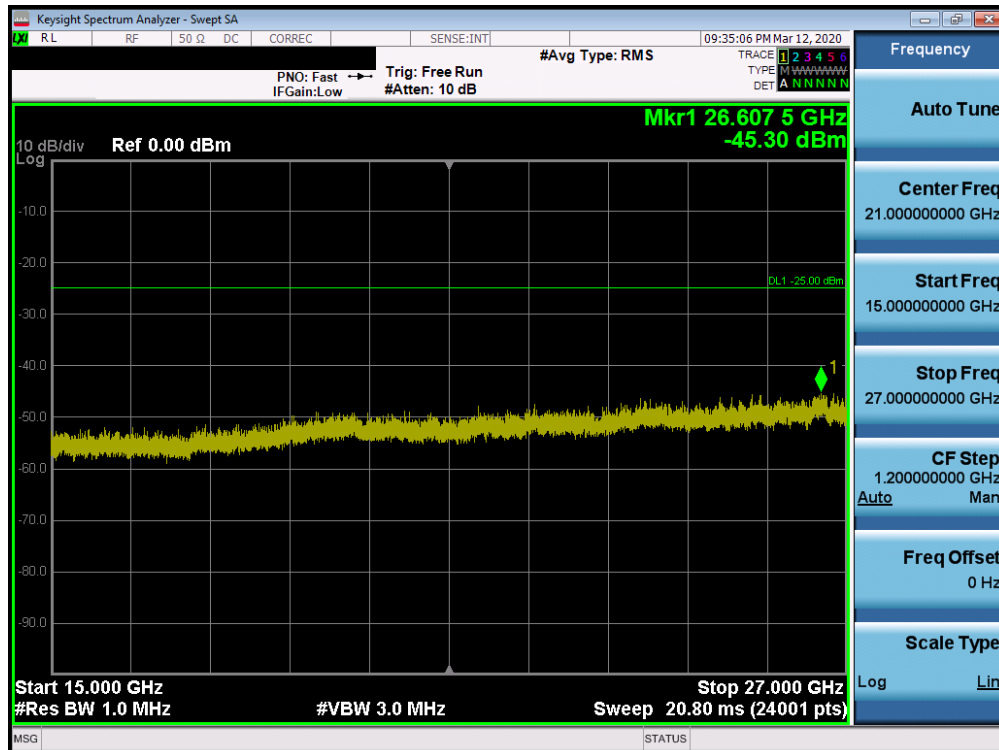


Plot 7-330. Conducted Spurious Plot (Band 41 (PC3) – 20.0MHz QPSK – PCC 1/0 SCC 1/99 – High Channel)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 193 of 250



Plot 7-331. Conducted Spurious Plot (Band 41 (PC3) – 20.0MHz QPSK – PCC 1/0 SCC 1/99 – High Channel)



Plot 7-332. Conducted Spurious Plot (Band 41 (PC3) – 20.0MHz QPSK – PCC 1/0 SCC 1/99 – High Channel)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 194 of 250

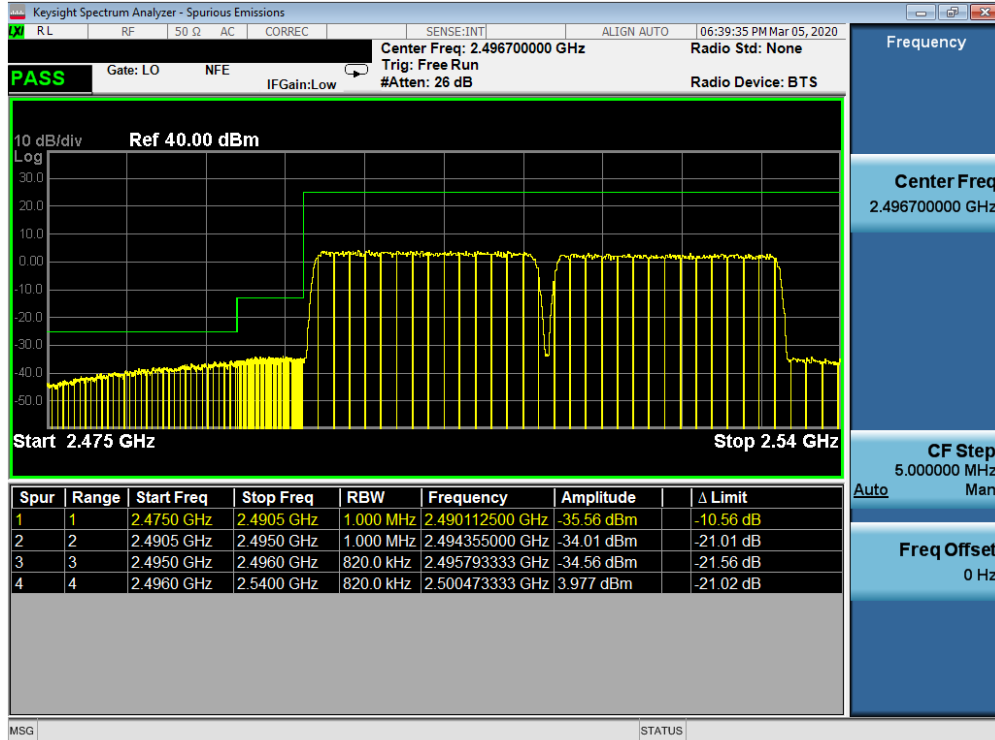


Table 7-333. Lower ACP Plot (Band 41 (PC3) QPSK – PCC:20 MHz SCC:20 MHz – Full RB)

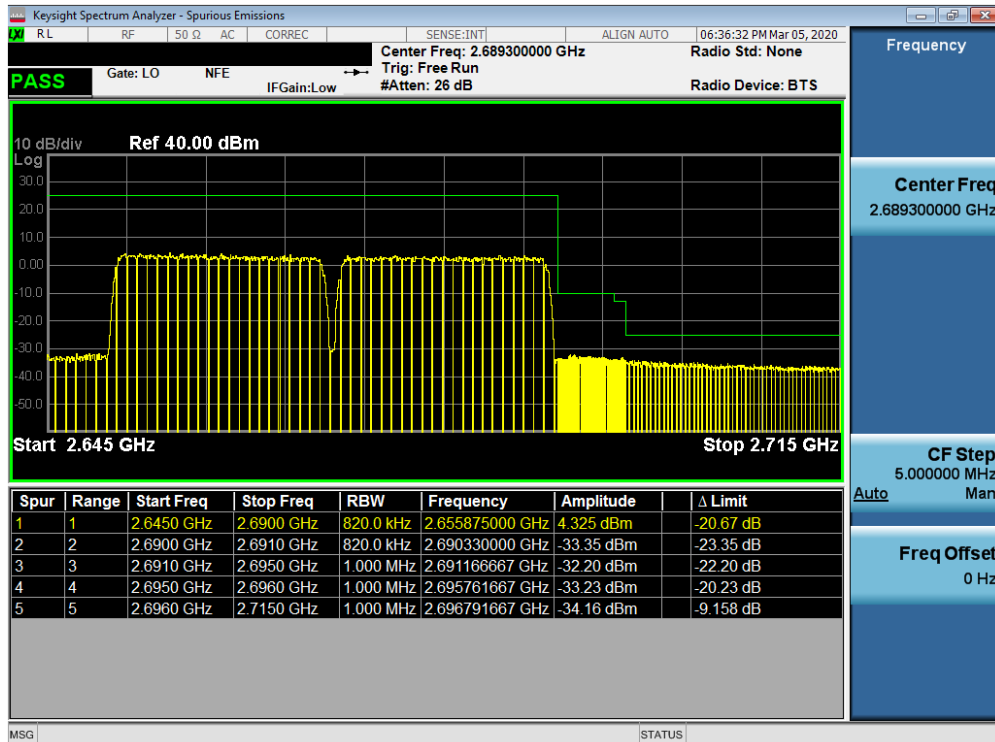


Table 7-334. Upper ACP Plot (Band 41 (PC3) QPSK – PCC:20 MHz SCC:20 MHz – Full RB)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 195 of 250

Uplink CA Configuration B41 (PC2)

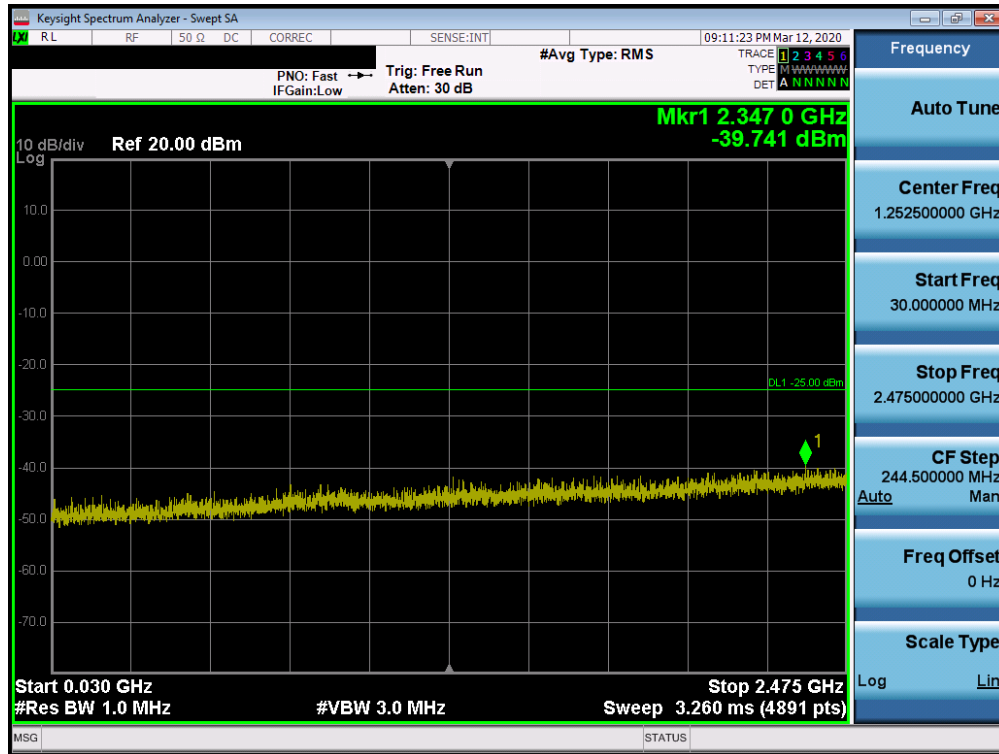
Power State	PCC							SCC							Power ULCA Tx.Power (dBm)
	PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) Channel	SCC (UL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	
Max	LTE B41	20	39750	2506	QPSK	1	99	LTE B41	20	39948	2525.8	QPSK	1	0	25.52
Max	LTE B41	20	40620	2593	QPSK	1	99	LTE B41	20	40818	2612.8	QPSK	1	0	25.63
Max	LTE B41	20	41490	2680	QPSK	1	0	LTE B41	20	41292	2660.2	QPSK	1	99	26.10

Table 7-5. Conducted Powers (B41 (PC2) - 20MHz + 20MHz Channel Bandwidth - PCC/SCC: 1RB)

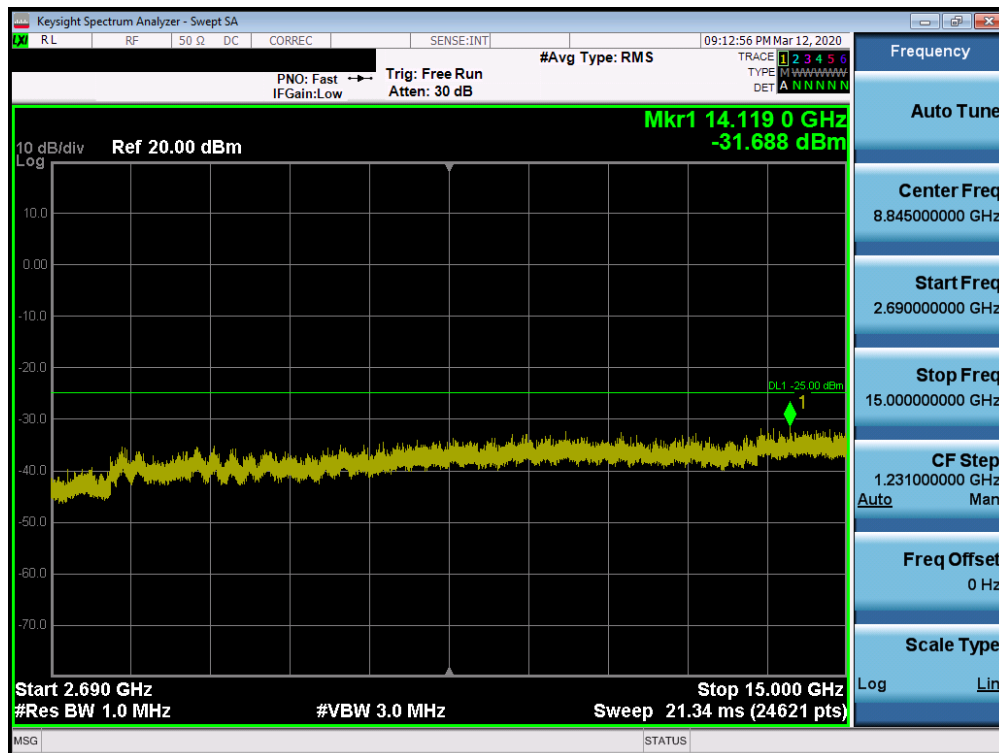
Power State	PCC							SCC							Power ULCA Tx.Power (dBm)
	PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) Channel	SCC (UL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	
Max	LTE B41	20	41490	2680	QPSK	100	0	LTE B41	20	41292	2660.2	QPSK	100	0	24.53
Max	LTE B41	20	41490	2680	16-QAM	100	0	LTE B41	20	41292	2660.2	16-QAM	100	0	23.90
Max	LTE B41	20	41490	2680	64-QAM	100	0	LTE B41	20	41292	2660.2	64-QAM	100	0	22.68

Table 7-6. Conducted Powers (B41 (PC2) with Various Combinations for 20MHz + 20MHz Channel Bandwidth)

FCC ID: ZNFK300TM	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset	Page 196 of 250	

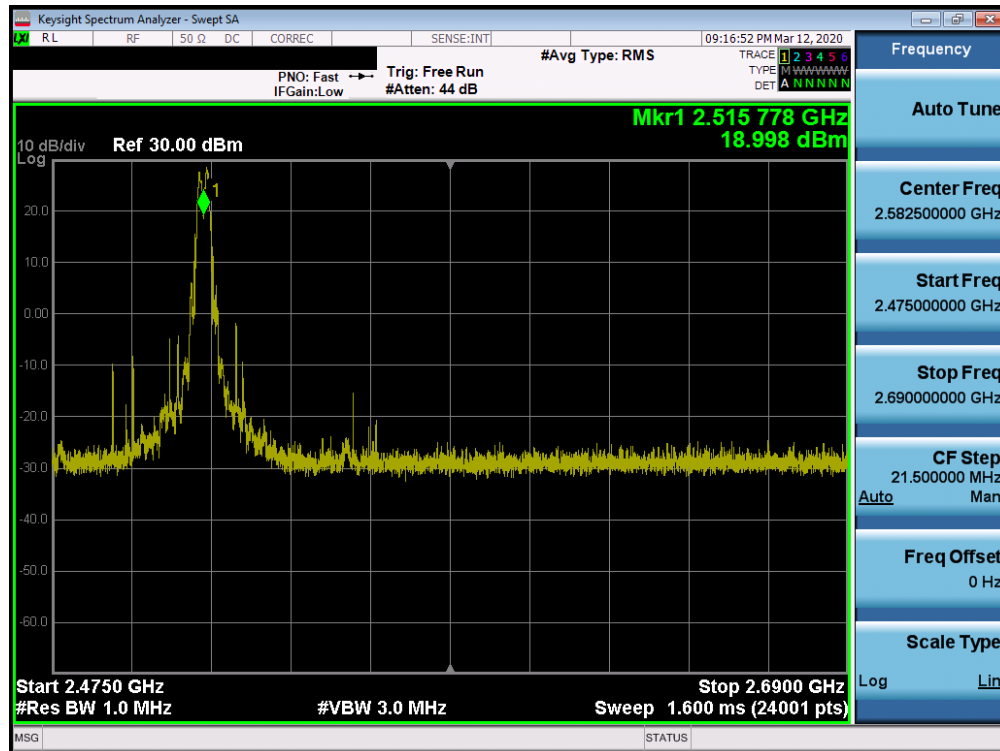


Plot 7-335. Conducted Spurious Plot (Band 41 (PC2) – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Low Channel)

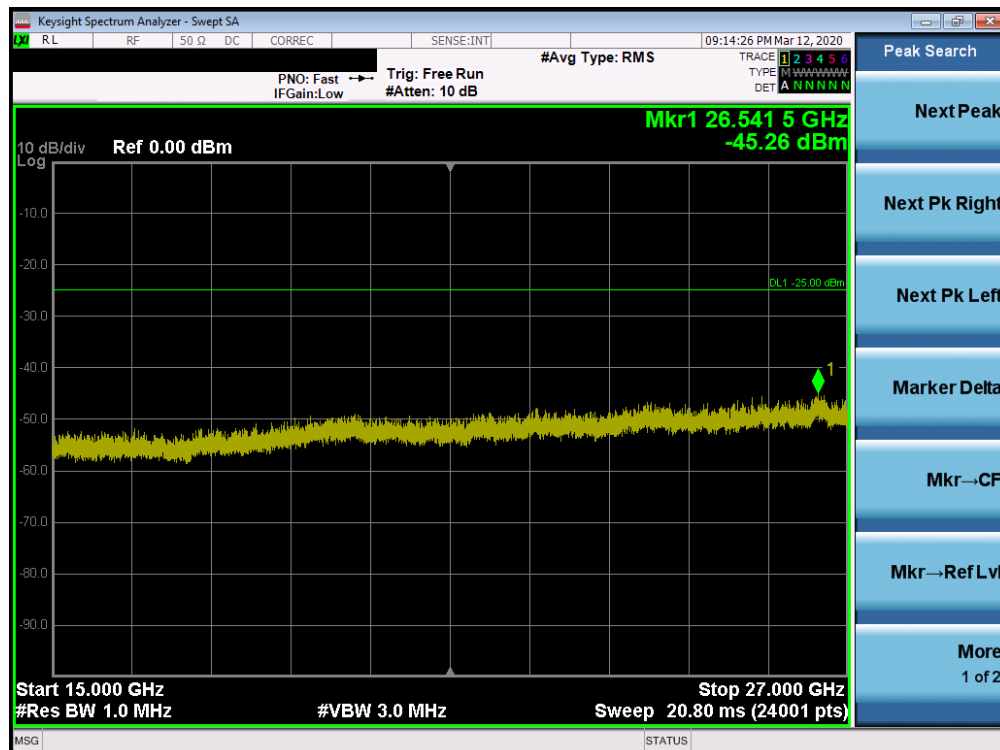


Plot 7-336. Conducted Spurious Plot (Band 41 (PC2) – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Low Channel)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 197 of 250

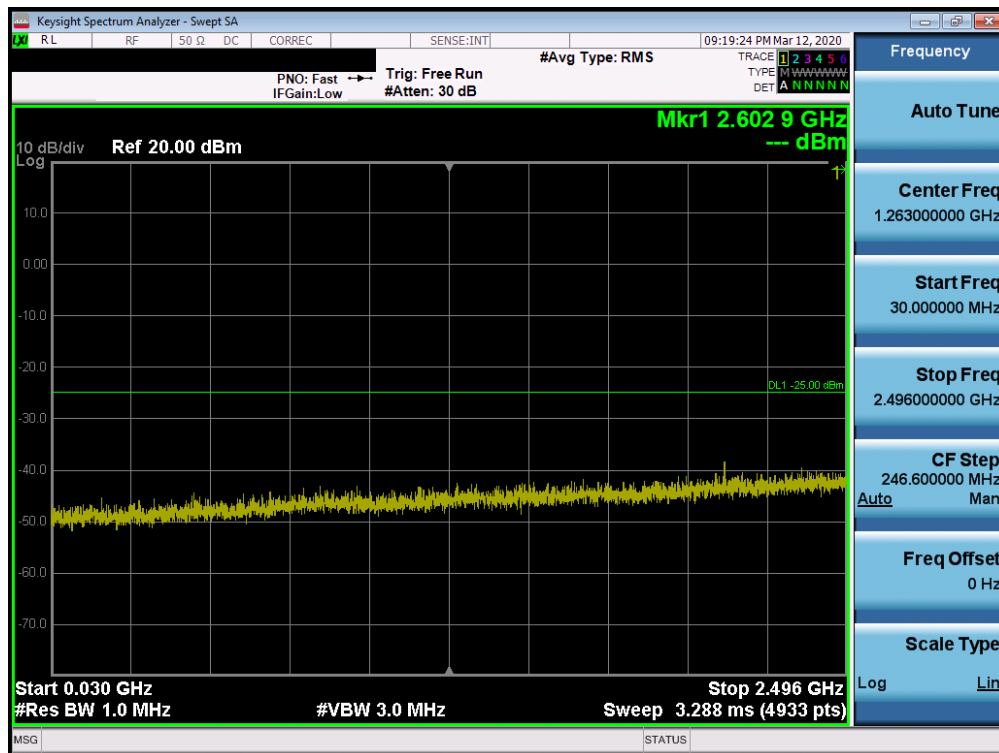


Plot 7-337. Conducted Spurious Plot (Band 41 (PC2) – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Low Channel)

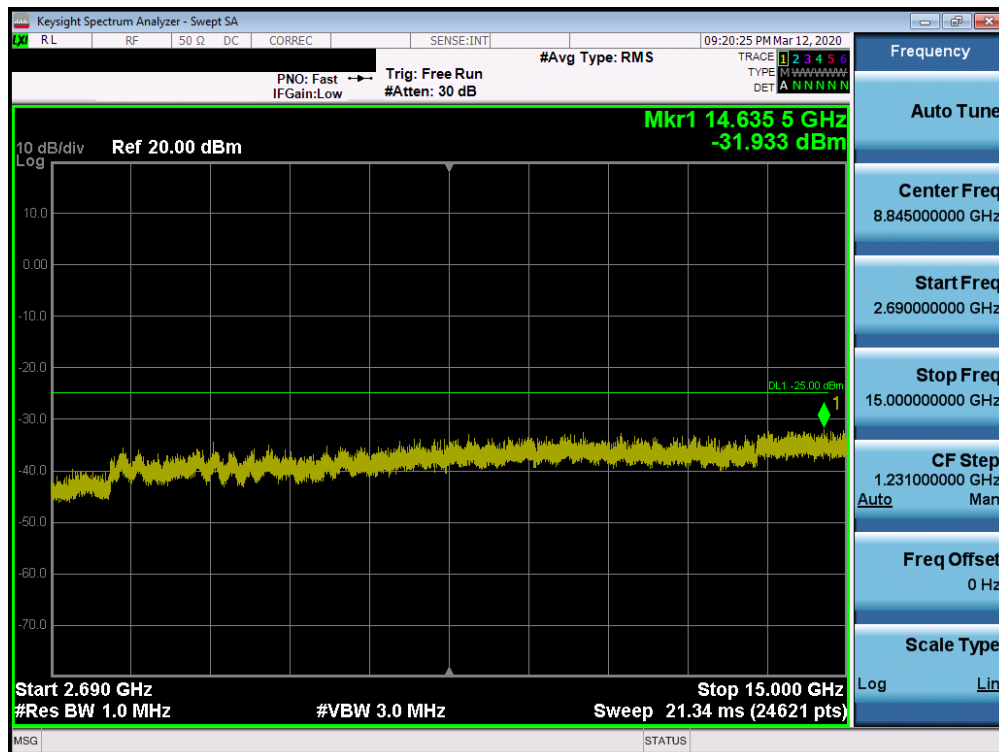


Plot 7-338. Conducted Spurious Plot (Band 41 (PC2) – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Low Channel)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1-ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 198 of 250

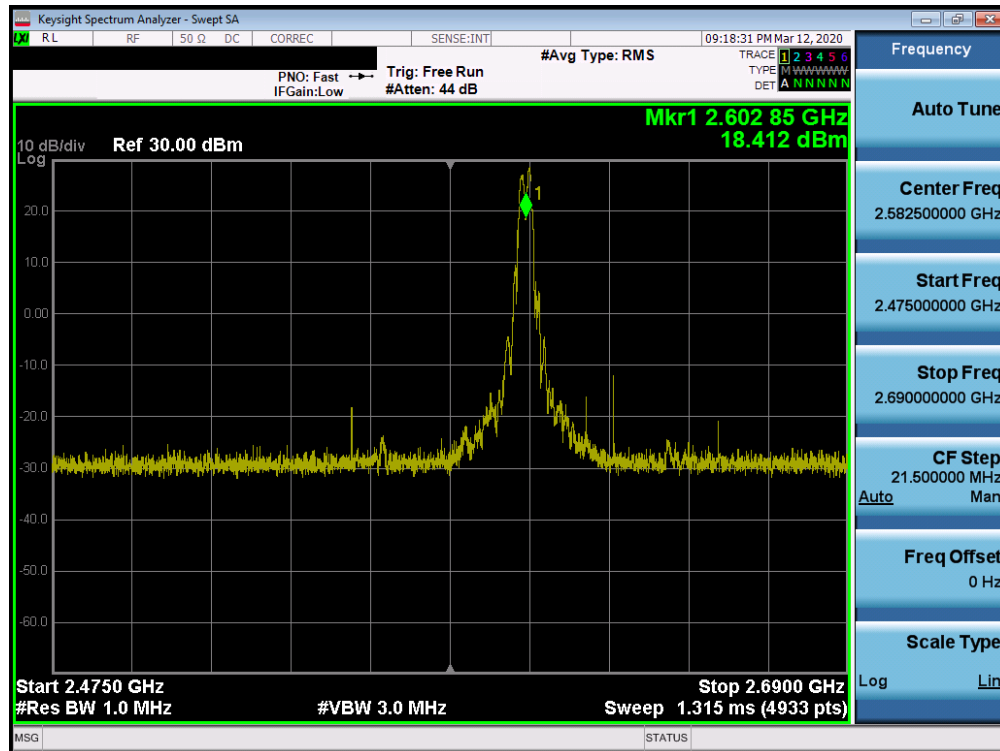


Plot 7-339. Conducted Spurious Plot (Band 41 (PC2) – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Mid Channel)

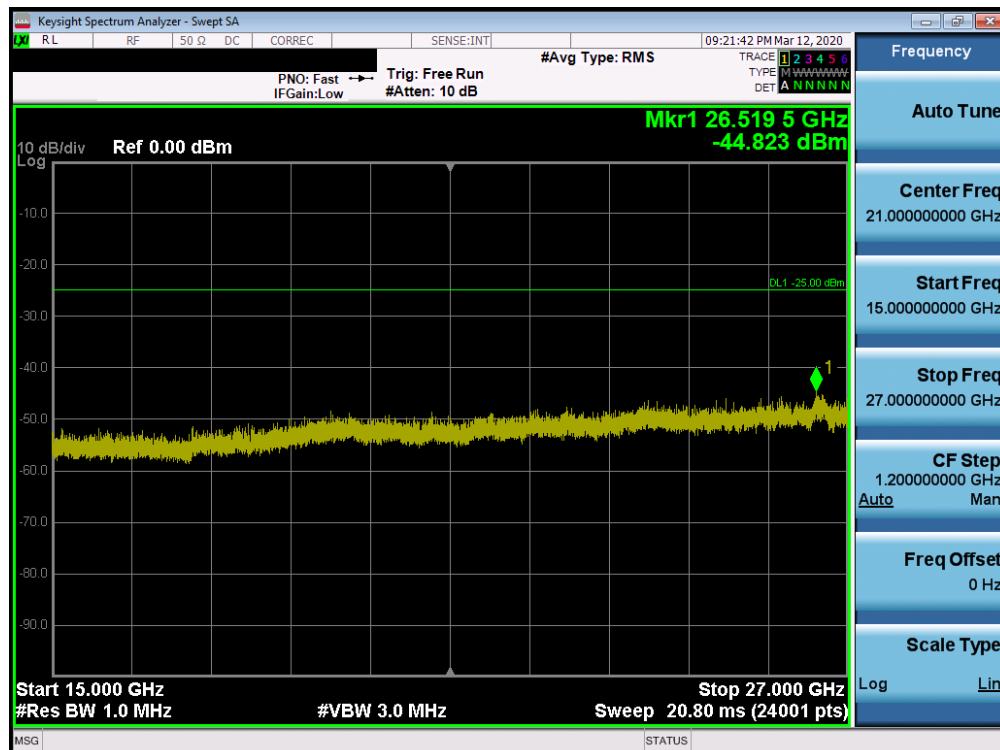


Plot 7-340. Conducted Spurious Plot (Band 41 (PC2) – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Mid Channel)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 199 of 250

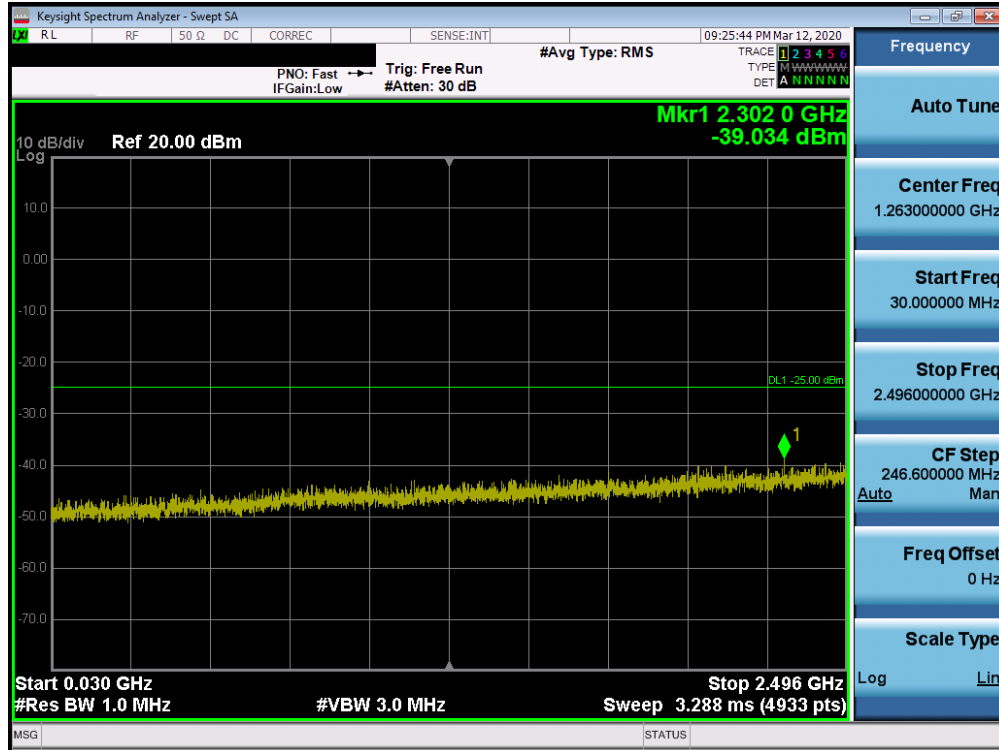


Plot 7-341. Conducted Spurious Plot (Band 41 (PC2) – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Mid Channel)

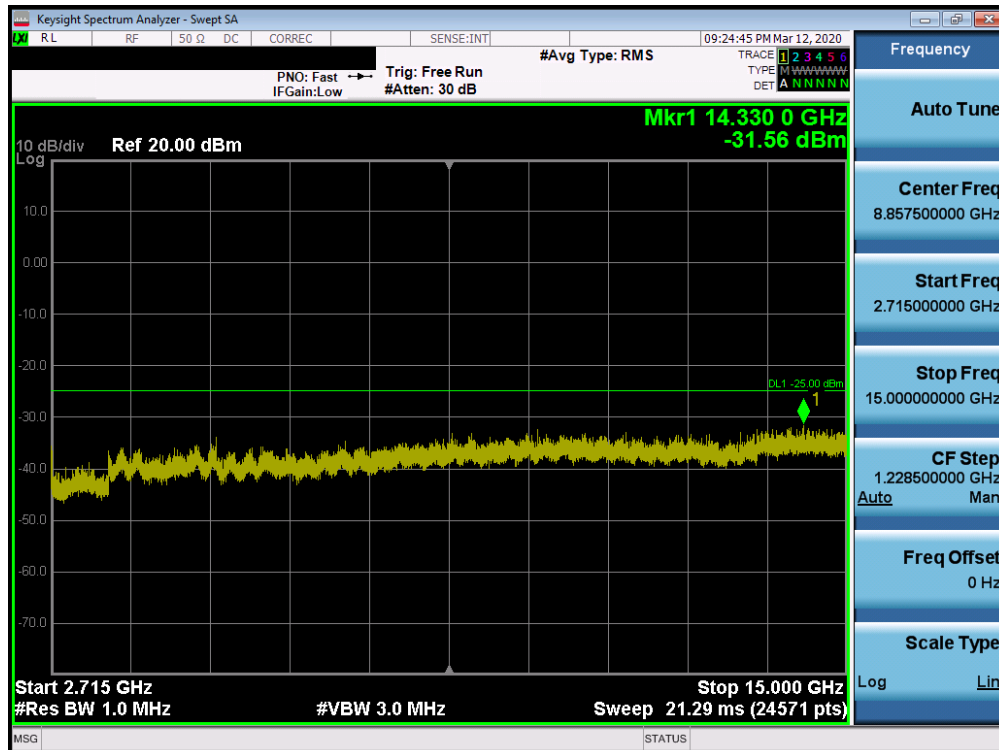


Plot 7-342. Conducted Spurious Plot (Band 41 (PC2) – 20.0MHz QPSK – PCC 1/99 SCC 1/0 – Mid Channel)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1-ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 200 of 250

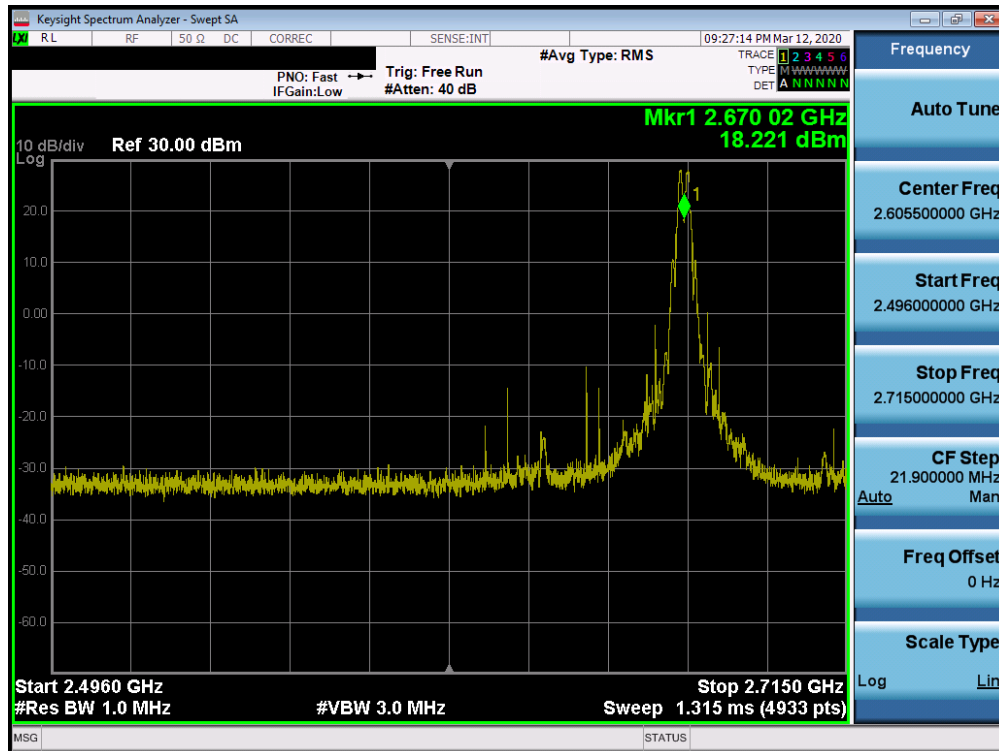


Plot 7-343. Conducted Spurious Plot (Band 41 (PC2) – 20.0MHz QPSK – PCC 1/0 SCC 1/99 – High Channel)

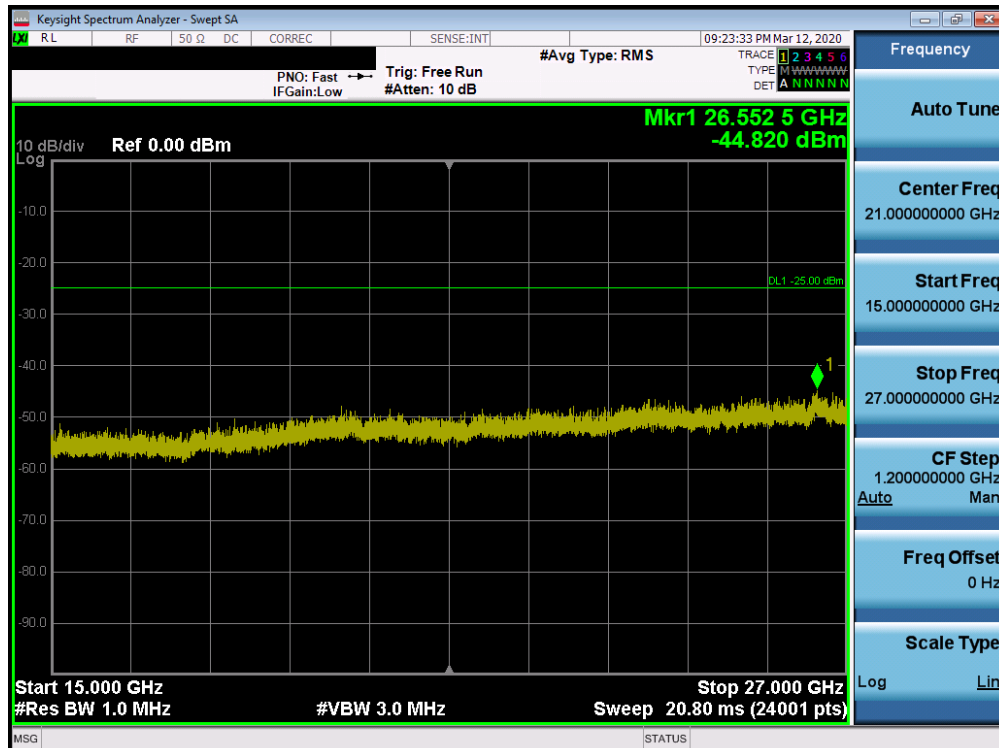


Plot 7-344. Conducted Spurious Plot (Band 41 (PC2) – 20.0MHz QPSK – PCC 1/0 SCC 1/99 – High Channel)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1-ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 201 of 250



Plot 7-345. Conducted Spurious Plot (Band 41 (PC2) – 20.0MHz QPSK – PCC 1/0 SCC 1/99 – High Channel)



Plot 7-346. Conducted Spurious Plot (Band 41 (PC2) – 20.0MHz QPSK – PCC 1/0 SCC 1/99 – High Channel)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 202 of 250

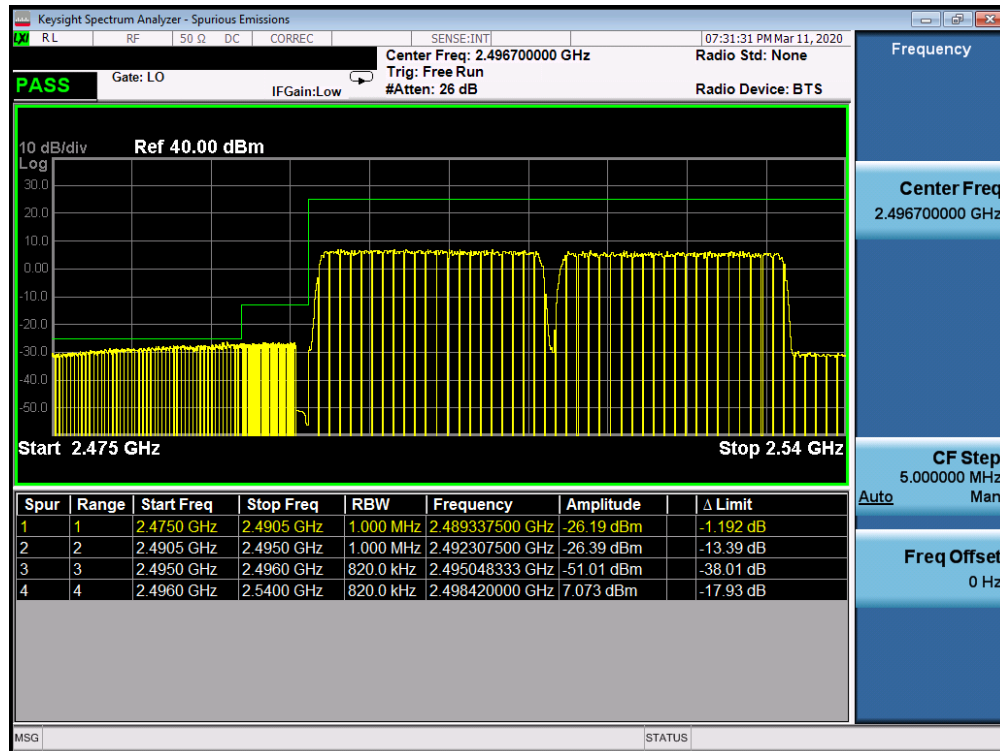


Table 7-347. Lower ACP Plot (Band 41 (PC2) QPSK – PCC:20 MHz SCC:20 MHz – Full RB)

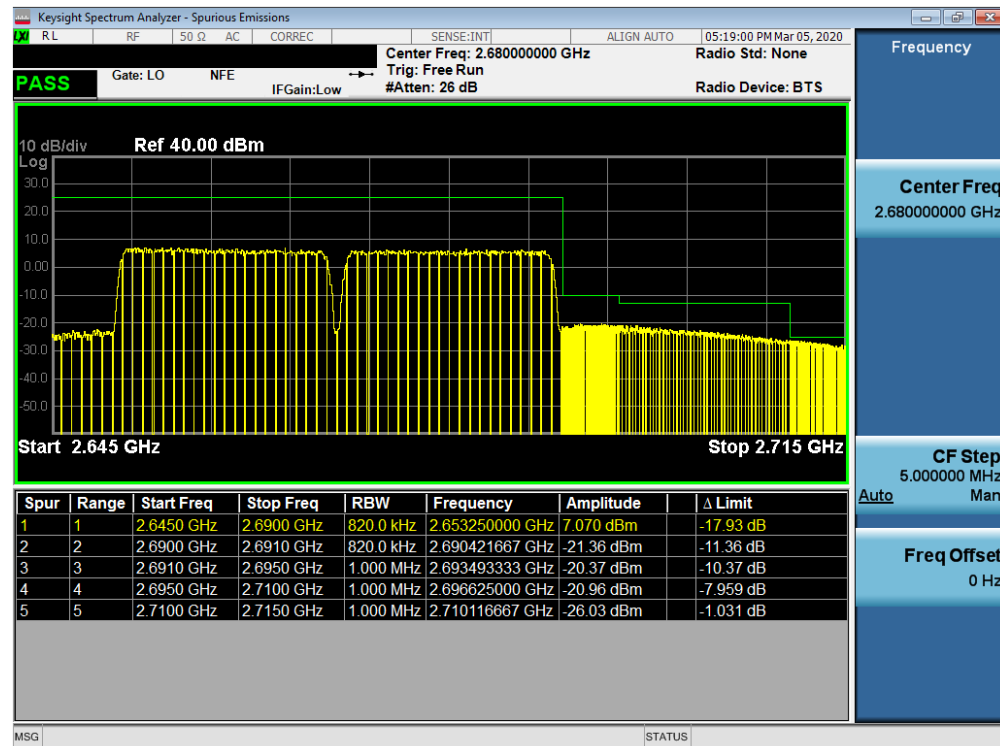


Table 7-348. Upper ACP Plot (Band 41 (PC2) QPSK – PCC:20 MHz SCC:20 MHz – Full RB)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 203 of 250

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 its maximum duty cycle, 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. For signals with burst transmission, the signal analyzer's "time domain power" measurement capability is used
2. RBW = 1 – 5% of the expected OBW, not to exceed 1MHz
3. VBW $\geq$ 3 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". Trigger is set to enable triggering only on full power bursts with the sweep time set less than or equal to the transmission burst duration
8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation. For signals with burst transmission, the "gating" function was enabled to ensure that measurements are performed during times in which the transmitter is operating at its maximum power
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The trace was allowed to stabilize

FCC ID: ZNFK300TM	 PCTEST [®] Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	 LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1-ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 204 of 250

Test Setup

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

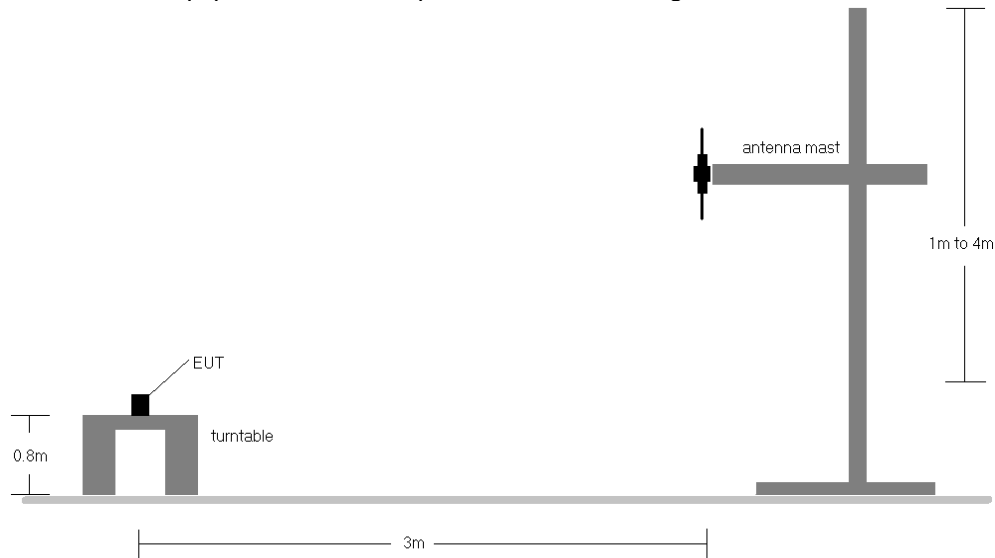


Figure 7-6. Radiated Test Setup <1GHz

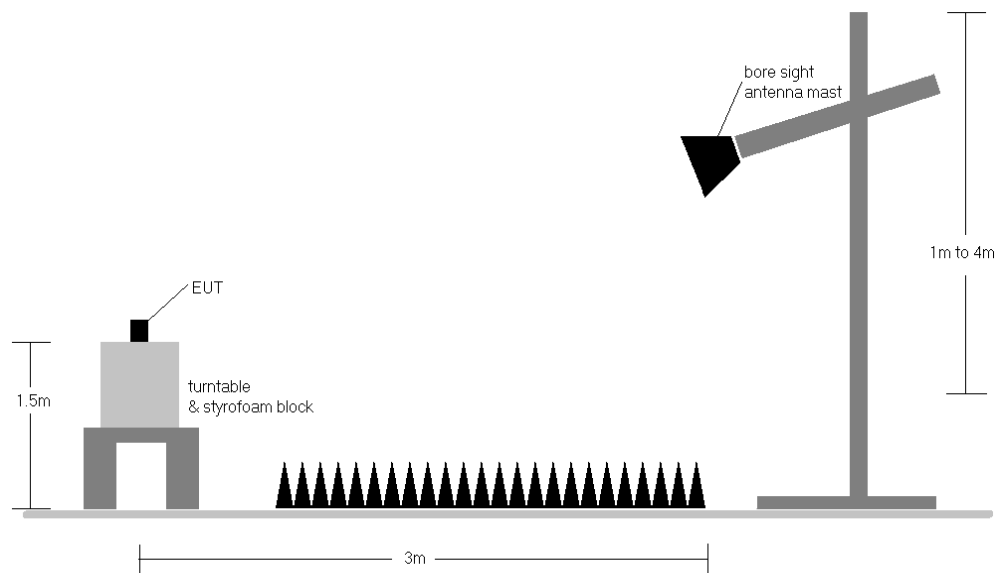


Figure 7-7. Radiated Test Setup >1GHz

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.

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
665.50	5	QPSK	V	182	333	1 / 12	14.23	3.75	17.98	0.063	34.77	-16.79
680.50	5	QPSK	V	199	351	1 / 12	13.67	4.20	17.87	0.061	34.77	-16.90
695.50	5	QPSK	V	201	325	1 / 12	13.47	4.50	17.97	0.063	34.77	-16.80
665.50	5	16-QAM	V	182	333	1 / 12	13.52	3.75	17.27	0.053	34.77	-17.50
665.50	5	64-QAM	V	182	333	1 / 12	12.24	3.75	15.99	0.040	34.77	-18.78
668.00	10	QPSK	V	166	288	1 / 25	14.13	3.80	17.93	0.062	34.77	-16.84
680.50	10	QPSK	V	192	305	1 / 25	13.62	4.20	17.82	0.061	34.77	-16.95
693.00	10	QPSK	V	190	330	1 / 25	13.45	4.40	17.85	0.061	34.77	-16.92
668.00	10	16-QAM	V	166	288	1 / 25	13.38	3.80	17.18	0.052	34.77	-17.59
668.00	10	64-QAM	V	166	288	1 / 25	12.10	3.80	15.90	0.039	34.77	-18.87
670.50	15	QPSK	V	170	278	1 / 0	13.69	3.90	17.59	0.057	34.77	-17.18
680.50	15	QPSK	V	166	311	1 / 36	13.50	4.20	17.70	0.059	34.77	-17.07
690.50	15	QPSK	V	180	306	1 / 36	13.14	4.40	17.54	0.057	34.77	-17.23
680.50	15	16-QAM	V	166	311	1 / 36	12.92	4.20	17.12	0.052	34.77	-17.65
680.50	15	64-QAM	V	166	311	1 / 36	11.76	4.20	15.96	0.039	34.77	-18.81
673.00	20	QPSK	V	179	343	1 / 50	15.64	4.00	17.49	0.056	34.77	-17.28
680.50	20	QPSK	V	185	347	1 / 50	15.83	4.20	17.88	0.061	34.77	-16.89
688.00	20	QPSK	V	194	337	1 / 50	15.65	4.40	17.90	0.062	34.77	-16.87
688.00	20	16-QAM	V	194	337	1 / 50	14.55	4.40	16.80	0.048	34.77	-17.97
688.00	20	64-QAM	V	194	337	1 / 50	13.48	4.40	15.73	0.037	34.77	-19.04
665.50	5	QPSK	H	142	67	1 / 50	15.51	4.20	17.56	0.057	34.77	-17.21

Table 7-7. ERP Data (Band 71)

FCC ID: ZNFK300TM	 PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	 LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 206 of 250

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
699.70	1.4	QPSK	V	162	177	1 / 2	13.22	4.50	15.57	0.036	34.77	-19.20	17.72	0.059	36.99	-19.27
707.50	1.4	QPSK	V	172	174	1 / 2	13.05	4.60	15.50	0.035	34.77	-19.27	17.65	0.058	36.99	-19.34
715.30	1.4	QPSK	V	182	183	1 / 2	13.16	4.63	15.64	0.037	34.77	-19.13	17.79	0.060	36.99	-19.20
715.30	1.4	16-QAM	V	182	183	1 / 2	11.92	4.63	14.40	0.028	34.77	-20.37	16.55	0.045	36.99	-20.44
715.30	1.4	64-QAM	V	182	183	1 / 2	11.44	4.63	13.92	0.025	34.77	-20.85	16.07	0.040	36.99	-20.92
700.50	3	QPSK	V	170	169	1 / 7	13.26	4.55	15.66	0.037	34.77	-19.11	17.81	0.060	36.99	-19.18
707.50	3	QPSK	V	169	166	1 / 7	13.17	4.60	15.62	0.036	34.77	-19.15	17.77	0.060	36.99	-19.22
714.50	3	QPSK	V	179	149	1 / 7	13.24	4.60	15.69	0.037	34.77	-19.08	17.84	0.061	36.99	-19.15
707.50	3	16-QAM	V	169	166	1 / 7	13.17	4.60	15.62	0.036	34.77	-19.15	17.77	0.060	36.99	-19.22
707.50	3	64-QAM	V	169	166	1 / 7	12.52	4.60	14.97	0.031	34.77	-19.80	17.12	0.052	36.99	-19.87
701.50	5	QPSK	V	160	177	1 / 12	13.37	4.60	15.82	0.038	34.77	-18.95	17.97	0.063	36.99	-19.02
707.50	5	QPSK	V	174	160	1 / 12	13.34	4.60	15.79	0.038	34.77	-18.98	17.94	0.062	36.99	-19.05
713.50	5	QPSK	V	174	177	1 / 12	13.29	4.60	15.74	0.037	34.77	-19.03	17.89	0.062	36.99	-19.10
713.50	5	16-QAM	V	174	177	1 / 12	13.29	4.60	15.74	0.037	34.77	-19.03	17.89	0.062	36.99	-19.10
713.50	5	64-QAM	V	174	177	1 / 12	12.29	4.60	14.74	0.030	34.77	-20.03	16.89	0.049	36.99	-20.10
704.00	10	QPSK	V	163	180	1 / 49	15.39	4.50	17.74	0.059	34.77	-17.03	19.89	0.097	36.99	-17.10
707.50	10	QPSK	V	174	166	1 / 49	15.66	4.60	18.11	0.065	34.77	-16.66	20.26	0.106	36.99	-16.73
711.00	10	QPSK	V	174	177	1 / 49	16.32	4.60	18.77	0.075	34.77	-16.00	20.92	0.124	36.99	-16.07
711.00	10	16-QAM	V	174	177	1 / 49	15.07	4.60	17.52	0.056	34.77	-17.25	19.67	0.093	36.99	-17.32
711.00	10	64-QAM	V	174	177	1 / 49	13.86	4.60	16.31	0.043	34.77	-18.46	18.46	0.070	36.99	-18.53
711.00	10	QPSK	H	150	256	1 / 49	16.17	4.60	18.62	0.073	34.77	-16.15	20.77	0.119	36.99	-16.22

Table 7-8. ERP Data (Band 12)

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
779.50	5	QPSK	V	157	240	1 / 12	14.62	5.70	18.17	0.066	34.77	-16.60	20.32	0.108	36.99	-16.67
782.00	5	QPSK	V	163	244	1 / 12	14.70	5.80	18.35	0.068	34.77	-16.42	20.50	0.112	36.99	-16.49
784.50	5	QPSK	V	162	250	1 / 12	14.46	5.80	18.11	0.065	34.77	-16.66	20.26	0.106	36.99	-16.73
782.00	5	16-QAM	V	163	244	1 / 12	13.91	5.80	17.56	0.057	34.77	-17.21	19.71	0.094	36.99	-17.28
782.00	5	64-QAM	V	163	244	1 / 12	12.83	5.80	16.48	0.044	34.77	-18.29	18.63	0.073	36.99	-18.36
782.00	10	QPSK	V	160	238	1 / 0	14.89	5.80	18.54	0.071	34.77	-16.23	20.69	0.117	36.99	-16.30
782.00	10	16-QAM	V	160	238	1 / 0	13.67	5.80	17.32	0.054	34.77	-17.45	19.47	0.089	36.99	-17.52
782.00	10	64-QAM	V	160	238	1 / 0	12.57	5.80	16.22	0.042	34.77	-18.55	18.37	0.069	36.99	-18.62
782.00	10	QPSK	H	226	344	1 / 0	12.79	5.80	16.44	0.044	34.77	-18.33	18.59	0.072	36.99	-18.40

Table 7-9. ERP Data (Band 13)

FCC ID: ZNFK300TM	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset	Page 207 of 250

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
824.70	1.4	QPSK	V	142	210	1 / 2	14.64	6.30	18.79	0.076	38.45	-19.66	20.94	0.124	40.61	-19.67
836.50	1.4	QPSK	V	146	222	1 / 2	14.54	6.40	18.79	0.076	38.45	-19.66	20.94	0.124	40.61	-19.67
848.30	1.4	QPSK	V	139	201	1 / 2	14.47	6.50	18.82	0.076	38.45	-19.63	20.97	0.125	40.61	-19.64
848.30	1.4	16-QAM	V	139	201	1 / 2	13.60	6.50	17.95	0.062	38.45	-20.50	20.10	0.102	40.61	-20.51
848.30	1.4	64-QAM	V	139	201	1 / 2	12.33	6.50	16.68	0.047	38.45	-21.77	18.83	0.076	40.61	-21.78
825.50	3	QPSK	V	142	211	1 / 7	14.56	6.30	18.71	0.074	38.45	-19.74	20.86	0.122	40.61	-19.75
836.50	3	QPSK	V	147	222	1 / 7	14.52	6.40	18.77	0.075	38.45	-19.68	20.92	0.124	40.61	-19.69
847.50	3	QPSK	V	147	230	1 / 7	14.34	6.50	18.69	0.074	38.45	-19.76	20.84	0.121	40.61	-19.77
836.50	3	16-QAM	V	147	222	1 / 7	13.67	6.40	17.92	0.062	38.45	-20.53	20.07	0.102	40.61	-20.54
836.50	3	64-QAM	V	147	222	1 / 7	12.75	6.40	17.00	0.050	38.45	-21.45	19.15	0.082	40.61	-21.46
826.50	5	QPSK	V	151	221	1 / 12	14.64	6.30	18.79	0.076	38.45	-19.66	20.94	0.124	40.61	-19.67
836.50	5	QPSK	V	143	231	1 / 12	14.54	6.40	18.79	0.076	38.45	-19.66	20.94	0.124	40.61	-19.67
846.50	5	QPSK	V	147	189	1 / 12	14.55	6.50	18.90	0.078	38.45	-19.55	21.05	0.127	40.61	-19.56
846.50	5	16-QAM	V	147	189	1 / 12	13.58	6.50	17.93	0.062	38.45	-20.52	20.08	0.102	40.61	-20.53
846.50	5	64-QAM	V	147	189	1 / 12	12.60	6.50	16.95	0.050	38.45	-21.50	19.10	0.081	40.61	-21.51
829.00	10	QPSK	V	142	211	1 / 25	14.63	6.30	18.78	0.076	38.45	-19.67	20.93	0.124	40.61	-19.68
836.50	10	QPSK	V	144	214	1 / 25	14.51	6.40	18.76	0.075	38.45	-19.69	20.91	0.123	40.61	-19.70
844.00	10	QPSK	V	163	201	1 / 25	14.65	6.40	18.90	0.078	38.45	-19.55	21.05	0.127	40.61	-19.56
844.00	10	16-QAM	V	163	201	1 / 25	13.69	6.40	17.94	0.062	38.45	-20.51	20.09	0.102	40.61	-20.52
844.00	10	64-QAM	V	163	201	1 / 25	12.54	6.40	16.79	0.048	38.45	-21.66	18.94	0.078	40.61	-21.67

Table 7-10. ERP Data (Band 26/5)

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
831.50	15	QPSK	V	136	205	1 / 36	14.72	6.35	18.92	0.078	38.45	-19.53	21.07	0.128	40.61	-19.54
836.50	15	QPSK	V	139	218	1 / 36	14.57	6.40	18.82	0.076	38.45	-19.63	20.97	0.125	40.61	-19.64
841.50	15	QPSK	V	141	196	1 / 0	14.55	6.40	18.80	0.076	38.45	-19.65	20.95	0.124	40.61	-19.66
831.50	15	16-QAM	V	136	205	1 / 36	13.56	6.35	17.76	0.060	38.45	-20.69	19.91	0.098	40.61	-20.70
831.50	15	64-QAM	V	136	205	1 / 36	12.63	6.35	16.83	0.048	38.45	-21.62	18.98	0.079	40.61	-21.63
831.50	15	QPSK	H	202	172	1 / 36	12.84	6.40	17.09	0.051	38.45	-21.36	19.24	0.084	40.61	-21.37

Table 7-11. ERP Data (Band 26)

FCC ID: ZNFK300TM	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset	Page 208 of 250

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1710.70	1.4	QPSK	V	171	151	1 / 2	12.49	9.35	21.84	0.153	30.00	-8.16
1745.00	1.4	QPSK	V	222	146	1 / 2	12.72	9.11	21.83	0.152	30.00	-8.17
1779.30	1.4	QPSK	V	241	134	1 / 2	12.62	9.17	21.79	0.151	30.00	-8.21
1710.70	1.4	16-QAM	V	171	151	1 / 2	11.20	9.35	20.55	0.114	30.00	-9.45
1710.70	1.4	64-QAM	V	171	151	1 / 2	10.45	9.35	19.80	0.095	30.00	-10.20
1711.50	3	QPSK	V	174	156	1 / 7	12.49	9.34	21.83	0.152	30.00	-8.17
1745.00	3	QPSK	V	222	164	1 / 7	12.75	9.11	21.86	0.153	30.00	-8.14
1778.50	3	QPSK	V	241	134	1 / 7	12.63	9.17	21.80	0.151	30.00	-8.20
1745.00	3	16-QAM	V	222	164	1 / 7	11.56	9.11	20.67	0.117	30.00	-9.33
1745.00	3	64-QAM	V	222	164	1 / 7	10.83	9.11	19.94	0.099	30.00	-10.06
1712.50	5	QPSK	V	174	156	1 / 12	12.44	9.34	21.78	0.151	30.00	-8.22
1745.00	5	QPSK	V	220	146	1 / 12	12.76	9.11	21.87	0.154	30.00	-8.13
1777.50	5	QPSK	V	241	139	1 / 12	12.54	9.16	21.70	0.148	30.00	-8.30
1745.00	5	16-QAM	V	220	146	1 / 12	11.74	9.11	20.85	0.122	30.00	-9.15
1745.00	5	64-QAM	V	220	146	1 / 12	10.69	9.11	19.80	0.095	30.00	-10.20
1715.00	10	QPSK	V	149	156	1 / 25	12.36	9.32	21.68	0.147	30.00	-8.32
1745.00	10	QPSK	V	205	150	1 / 25	12.76	9.11	21.87	0.154	30.00	-8.13
1775.00	10	QPSK	V	247	156	1 / 25	12.72	9.16	21.88	0.154	30.00	-8.12
1775.00	10	16-QAM	V	247	156	1 / 25	11.64	9.16	20.80	0.120	30.00	-9.20
1775.00	10	64-QAM	V	247	156	1 / 25	10.59	9.16	19.75	0.094	30.00	-10.25
1717.50	15	QPSK	V	172	156	1 / 36	12.58	9.30	21.88	0.154	30.00	-8.12
1745.00	15	QPSK	V	219	142	1 / 36	12.71	9.11	21.82	0.152	30.00	-8.18
1772.50	15	QPSK	V	246	162	1 / 36	12.63	9.15	21.78	0.151	30.00	-8.22
1717.50	15	16-QAM	V	172	156	1 / 36	11.42	9.30	20.72	0.118	30.00	-9.28
1717.50	15	64-QAM	V	172	156	1 / 36	10.41	9.30	19.71	0.094	30.00	-10.29
1720.00	20	QPSK	V	175	145	1 / 50	12.07	9.28	21.35	0.137	30.00	-8.65
1745.00	20	QPSK	V	213	141	1 / 50	12.80	9.11	21.91	0.155	30.00	-8.09
1770.00	20	QPSK	V	262	138	1 / 50	12.35	9.14	21.49	0.141	30.00	-8.51
1745.00	20	16-QAM	V	213	141	1 / 50	11.82	9.11	20.93	0.124	30.00	-9.07
1745.00	20	64-QAM	V	213	141	1 / 50	10.80	9.11	19.91	0.098	30.00	-10.09
1745.00	20	QPSK	H	100	343	1 / 50	12.56	9.11	21.67	0.147	30.00	-8.33

Table 7-12. EIRP Data (Band 66/4)

FCC ID: ZNFK300TM	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset	Page 209 of 250

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1850.70	1.4	QPSK	H	130	151	1 / 2	13.18	9.48	22.66	0.185	33.01	-10.35
1882.50	1.4	QPSK	H	166	322	1 / 2	12.61	9.94	22.55	0.180	33.01	-10.46
1914.30	1.4	QPSK	H	149	310	1 / 2	12.36	10.29	22.65	0.184	33.01	-10.36
1850.70	1.4	16-QAM	H	130	151	1 / 2	12.30	9.48	21.78	0.151	33.01	-11.23
1850.70	1.4	64-QAM	H	130	151	1 / 2	11.29	9.48	20.77	0.119	33.01	-12.24
1851.50	3	QPSK	H	123	152	1 / 14	13.18	9.50	22.68	0.185	33.01	-10.33
1882.50	3	QPSK	H	166	309	1 / 7	12.70	9.94	22.64	0.184	33.01	-10.37
1913.50	3	QPSK	H	152	214	1 / 7	12.36	10.29	22.65	0.184	33.01	-10.36
1851.50	3	16-QAM	H	123	152	1 / 14	12.34	9.50	21.84	0.153	33.01	-11.17
1851.50	3	64-QAM	H	123	152	1 / 14	11.31	9.50	20.81	0.121	33.01	-12.20
1852.50	5	QPSK	H	126	222	1 / 12	13.01	9.51	22.52	0.179	33.01	-10.49
1882.50	5	QPSK	H	156	307	1 / 12	12.78	9.94	22.72	0.187	33.01	-10.29
1912.50	5	QPSK	H	147	321	1 / 24	12.31	10.28	22.59	0.182	33.01	-10.42
1882.50	5	16-QAM	H	156	307	1 / 12	11.83	9.94	21.77	0.150	33.01	-11.24
1882.50	5	64-QAM	H	156	307	1 / 12	10.90	9.94	20.84	0.121	33.01	-12.17
1855.00	10	QPSK	H	145	214	1 / 25	13.17	9.55	22.72	0.187	33.01	-10.29
1882.50	10	QPSK	H	156	322	1 / 0	12.68	9.94	22.62	0.183	33.01	-10.39
1910.00	10	QPSK	H	149	324	1 / 25	12.42	10.26	22.68	0.185	33.01	-10.33
1855.00	10	16-QAM	H	145	214	1 / 25	12.21	9.55	21.76	0.150	33.01	-11.25
1855.00	10	64-QAM	H	145	214	1 / 25	11.28	9.55	20.83	0.121	33.01	-12.18
1857.50	15	QPSK	H	124	159	1 / 36	20.56	9.58	22.71	0.187	33.01	-10.30
1882.50	15	QPSK	H	148	326	1 / 36	20.48	9.94	22.63	0.183	33.01	-10.38
1907.50	15	QPSK	H	149	222	1 / 36	20.57	10.24	22.72	0.187	33.01	-10.29
1907.50	15	16-QAM	H	149	222	1 / 36	19.69	10.24	21.84	0.153	33.01	-11.17
1907.50	15	64-QAM	H	149	222	1 / 36	18.70	10.24	20.85	0.122	33.01	-12.16
1860.00	20	QPSK	H	120	146	1 / 0	13.11	9.62	22.73	0.187	33.01	-10.28
1882.50	20	QPSK	H	155	310	1 / 50	12.64	9.94	22.58	0.181	33.01	-10.44
1905.00	20	QPSK	H	153	308	1 / 50	12.42	10.22	22.64	0.184	33.01	-10.37
1860.00	20	16-QAM	H	120	146	1 / 0	11.76	9.62	21.38	0.137	33.01	-11.63
1860.00	20	64-QAM	H	120	146	1 / 0	10.89	9.62	20.51	0.112	33.01	-12.50
1860.00	20	QPSK	V	107	147	1 / 0	12.18	9.94	22.12	0.163	33.01	-10.90

Table 7-13. EIRP Data (Band 25/2)

FCC ID: ZNFK300TM	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset	Page 210 of 250

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
2498.50	5	QPSK	H	162	42	1 / 12	16.53	9.43	25.96	0.394	33.01	-7.05
2593.00	5	QPSK	H	132	32	1 / 12	16.19	9.55	25.74	0.375	33.01	-7.27
2687.50	5	QPSK	H	114	43	1 / 12	16.00	9.82	25.82	0.382	33.01	-7.19
2498.50	5	16-QAM	H	162	42	1 / 12	15.69	9.43	25.12	0.325	33.01	-7.89
2498.50	5	64-QAM	H	162	42	1 / 12	14.59	9.43	24.02	0.252	33.01	-8.99
2501.00	10	QPSK	H	162	44	1 / 25	16.63	9.43	26.06	0.404	33.01	-6.95
2593.00	10	QPSK	H	134	31	1 / 25	16.30	9.55	25.85	0.385	33.01	-7.16
2685.00	10	QPSK	H	116	40	1 / 27	16.10	9.82	25.92	0.391	33.01	-7.09
2501.00	10	16-QAM	H	162	44	1 / 25	15.86	9.43	25.29	0.338	33.01	-7.72
2501.00	10	64-QAM	H	162	44	1 / 25	14.63	9.43	24.06	0.255	33.01	-8.95
2503.50	15	QPSK	H	169	44	1 / 36	16.42	9.43	25.85	0.385	33.01	-7.16
2593.00	15	QPSK	H	133	42	1 / 36	16.17	9.55	25.72	0.373	33.01	-7.29
2682.50	15	QPSK	H	128	46	1 / 36	16.01	9.83	25.84	0.384	33.01	-7.17
2503.50	15	16-QAM	H	169	44	1 / 36	15.65	9.43	25.08	0.322	33.01	-7.93
2503.50	15	64-QAM	H	169	44	1 / 36	14.42	9.43	23.85	0.243	33.01	-9.16
2506.00	20	QPSK	H	158	37	1 / 50	16.66	9.42	26.08	0.406	33.01	-6.93
2593.00	20	QPSK	H	126	30	1 / 0	16.36	9.55	25.91	0.390	33.01	-7.10
2680.00	20	QPSK	H	104	32	1 / 0	15.14	9.83	24.97	0.314	33.01	-8.04
2593.00	20	16-QAM	H	126	30	1 / 0	15.67	9.55	25.22	0.333	33.01	-7.79
2506.00	20	64-QAM	H	158	37	1 / 50	15.09	9.42	24.51	0.283	33.01	-8.50
2506.00	20	QPSK	V	112	322	1 / 50	14.02	9.42	23.44	0.221	33.01	-9.57

Table 7-14. EIRP Data (Band 41 – PC2)

FCC ID: ZNFK300TM	 PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	 LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 211 of 250

Frequency [MHz]	Channel Bandwidth [MHz]	Mod.	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	RB Size/Offset	Substitute Level [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
2498.50	5	QPSK	H	171	25	1 / 12	13.61	9.43	23.04	0.201	33.01	-9.97
2593.00	5	QPSK	H	149	34	1 / 12	13.45	9.55	23.00	0.200	33.01	-10.01
2687.50	5	QPSK	H	119	33	1 / 12	13.19	9.82	23.01	0.200	33.01	-10.00
2498.50	5	16-QAM	H	171	25	1 / 12	12.66	9.43	22.09	0.162	33.01	-10.92
2498.50	5	64-QAM	H	171	25	1 / 12	11.40	9.43	20.83	0.121	33.01	-12.18
2501.00	10	QPSK	H	167	33	1 / 25	13.57	9.43	23.00	0.200	33.01	-10.01
2593.00	10	QPSK	H	146	27	1 / 25	13.20	9.55	22.75	0.188	33.01	-10.26
2685.00	10	QPSK	H	116	44	1 / 25	13.15	9.82	22.97	0.198	33.01	-10.04
2501.00	10	16-QAM	H	167	33	1 / 25	12.47	9.43	21.90	0.155	33.01	-11.11
2501.00	10	64-QAM	H	167	33	1 / 25	11.28	9.43	20.71	0.118	33.01	-12.30
2503.50	15	QPSK	H	172	41	1 / 36	13.60	9.43	23.03	0.201	33.01	-9.98
2593.00	15	QPSK	H	138	36	1 / 36	13.27	9.55	22.82	0.191	33.01	-10.19
2682.50	15	QPSK	H	118	14	1 / 36	13.12	9.83	22.95	0.197	33.01	-10.06
2503.50	15	16-QAM	H	172	41	1 / 36	12.55	9.43	21.98	0.158	33.01	-11.03
2503.50	15	64-QAM	H	172	41	1 / 36	11.28	9.43	20.71	0.118	33.01	-12.30
2506.00	20	QPSK	H	170	23	1 / 0	13.72	9.42	23.14	0.206	33.01	-9.87
2593.00	20	QPSK	H	123	33	1 / 0	13.61	9.55	23.16	0.207	33.01	-9.85
2680.00	20	QPSK	H	107	27	1 / 0	12.45	9.83	22.28	0.169	33.01	-10.73
2593.00	20	16-QAM	H	123	33	1 / 0	12.98	9.55	22.53	0.179	33.01	-10.48
2593.00	20	64-QAM	H	123	33	1 / 0	12.09	9.55	21.64	0.146	33.01	-11.37
2593.00	20	QPSK	V	118	320	1 / 0	13.56	9.55	23.11	0.205	33.01	-9.90

Table 7-15. EIRP Data (Band 41 – PC3)

FCC ID: ZNFK300TM	 PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	 LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 212 of 250

7.8 Radiated Spurious Emissions Measurements

Test Overview

Radiated spurious emissions 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.

Test Procedures Used

KDB 971168 D01 v03r01 – Section 5.8

ANSI/TIA-603-E-2016 – Section 2.2.12

Test Settings

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

FCC ID: ZNFK300TM	 PCTEST [®] Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	 LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 213 of 250

Test Setup

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

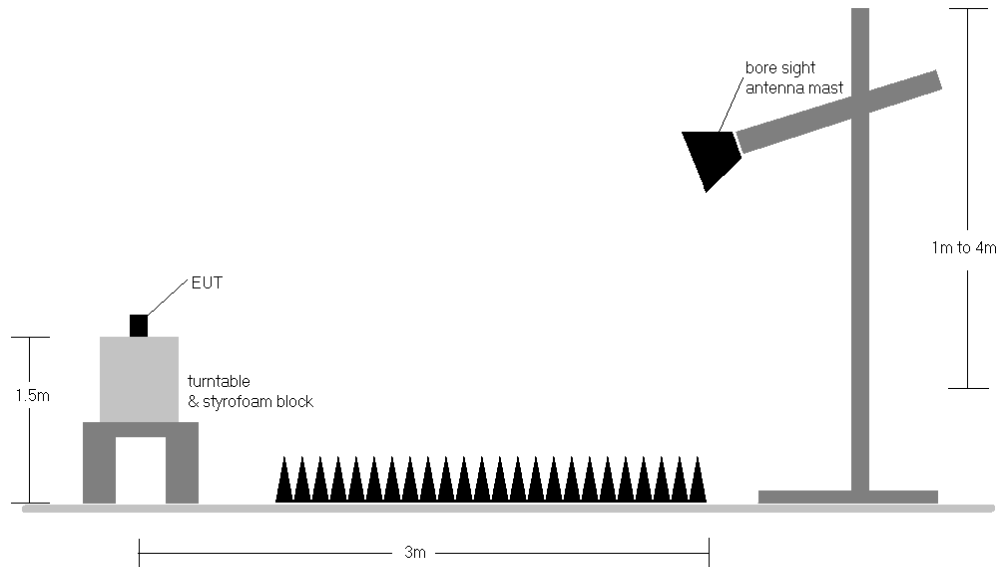


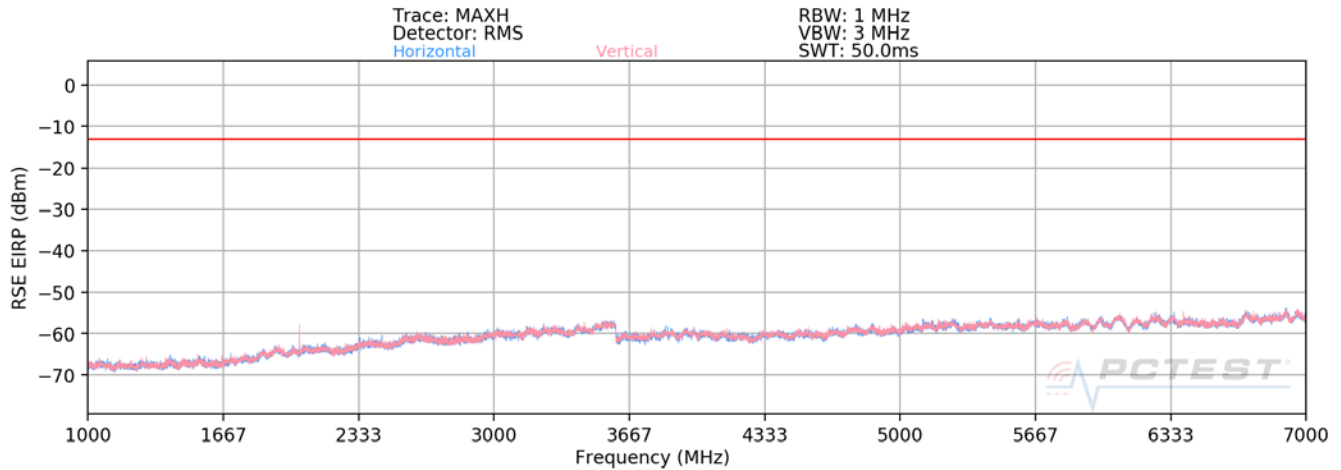
Figure 7-8. Test Instrument & Measurement Setup

Test Notes

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

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 214 of 250

Band 71



Plot 7-349. Radiated Spurious Plot above 1GHz (Band 71)

OPERATING FREQUENCY: 673.00 MHz
MODULATION SIGNAL: QPSK
BANDWIDTH: 20.0 MHz
DISTANCE: 3 meters
LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1346.00	H	186	43	-72.11	7.50	-64.61	-51.6
2019.00	H	160	351	-67.63	8.71	-58.91	-45.9
2692.00	H	-	-	-69.29	10.02	-59.27	-46.3
3365.00	H	-	-	-68.15	9.69	-58.46	-45.5
4038.00	H	-	-	-71.79	9.87	-61.91	-48.9

Table 7-16. Radiated Spurious Data (Band 71 – Low Channel)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 215 of 250

OPERATING FREQUENCY: 680.50 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1361.00	H	-	-	-73.49	7.51	-65.97	-53.0
2041.50	H	184	182	-65.17	8.79	-56.37	-43.4
2722.00	H	-	-	-70.76	10.11	-60.65	-47.7
3402.50	H	-	-	-67.23	9.83	-57.40	-44.4
4083.00	H	-	-	-72.28	10.08	-62.20	-49.2

Table 7-17. Radiated Spurious Data (Band 71 – Mid Channel)

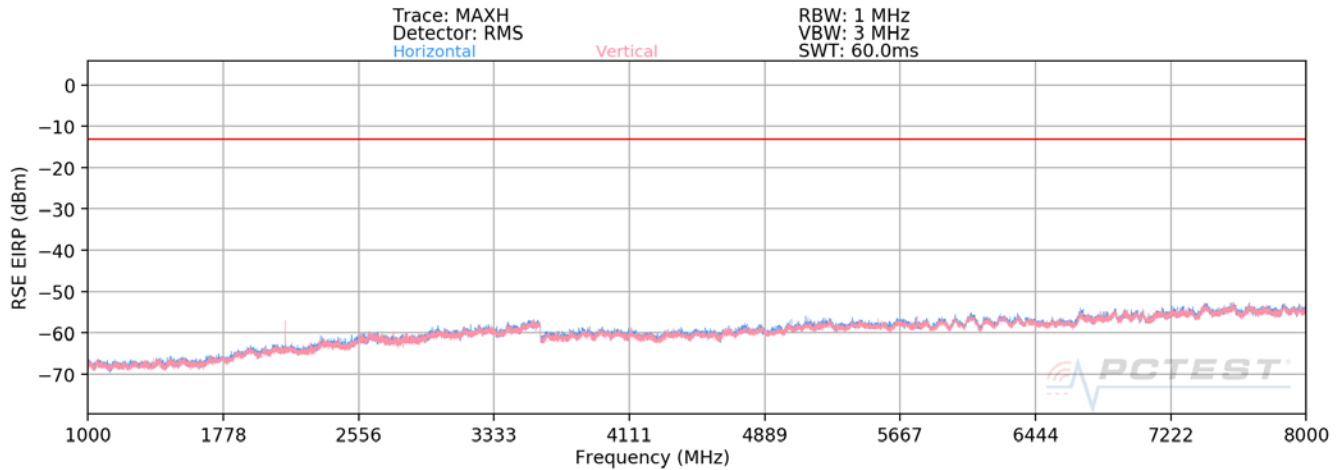
OPERATING FREQUENCY: 688.00 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 20.0 MHz
 DISTANCE: 3 meters
 LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1376.00	H	-	-	-72.83	7.49	-65.33	-52.3
2064.00	H	195	110	-69.26	8.83	-60.42	-47.4
2752.00	H	-	-	-70.41	10.20	-60.21	-47.2
3440.00	H	-	-	-67.03	9.87	-57.16	-44.2
4128.00	H	-	-	-72.20	10.21	-61.98	-49.0

Table 7-18. Radiated Spurious Data (Band 71 – High Channel)

FCC ID: ZNFK300TM	 PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	 LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 216 of 250

Band 12



Plot 7-350. Radiated Spurious Plot above 1GHz (Band 12)

OPERATING FREQUENCY: 704.00 MHz

MODULATION SIGNAL: QPSK

BANDWIDTH: 10.0 MHz

DISTANCE: 3 meters

LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1408.00	V	-	-	-72.42	7.57	-64.85	-51.9
2112.00	V	400	93	-62.26	8.88	-53.38	-40.4
2816.00	V	-	-	-69.25	10.15	-59.10	-46.1
3520.00	V	-	-	-66.41	9.94	-56.47	-43.5
4224.00	V	-	-	-72.61	10.53	-62.08	-49.1

Table 7-19. Radiated Spurious Data (Band 12 – Low Channel)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 217 of 250

OPERATING FREQUENCY: 707.50 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 10.0 MHz
 DISTANCE: 3 meters
 LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1415.00	V	-	-	-72.01	7.66	-64.35	-51.4
2122.50	V	400	98	-61.48	8.89	-52.59	-39.6
2830.00	V	-	-	-75.02	10.12	-64.89	-51.9
3537.50	V	-	-	-65.25	9.93	-55.32	-42.3
4245.00	V	-	-	-72.10	10.61	-61.49	-48.5

Table 7-20. Radiated Spurious Data (Band 12 – Mid Channel)

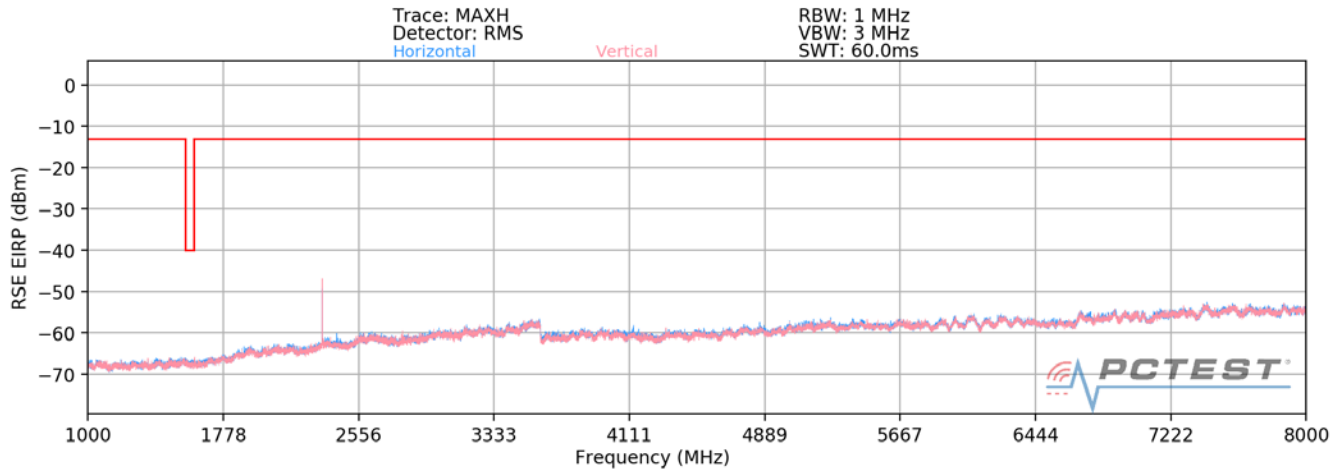
OPERATING FREQUENCY: 711.00 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 10.0 MHz
 DISTANCE: 3 meters
 LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1422.00	V	-	-	-72.94	7.75	-65.19	-52.2
2133.00	V	267	347	-65.76	8.90	-56.86	-43.9
2844.00	V	-	-	-69.02	10.10	-58.92	-45.9
3555.00	V	-	-	-65.35	9.92	-55.42	-42.4
4266.00	V	-	-	-73.36	10.68	-62.68	-49.7

Table 7-21. Radiated Spurious Data (Band 12 – High Channel)

FCC ID: ZNFK300TM	 PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	 LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 218 of 250

Band 13



Plot 7-351. Radiated Spurious Plot above 1GHz (Band 13)

OPERATING FREQUENCY: 782.00 MHz
MODULATION SIGNAL: QPSK
BANDWIDTH: 10.0 MHz
DISTANCE: 3 meters
LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
2346.00	V	299	84	-69.64	9.46	-60.18	-47.2
3128.00	V	314	78	-52.79	9.37	-43.42	-30.4
3910.00	V	-	-	-64.89	9.40	-55.49	-42.5
4692.00	V	-	-	-71.94	10.96	-60.97	-48.0
5474.00	V	-	-	-70.41	10.83	-59.58	-46.6

Table 7-22. Radiated Spurious Data (Band 13 – Mid Channel)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 219 of 250

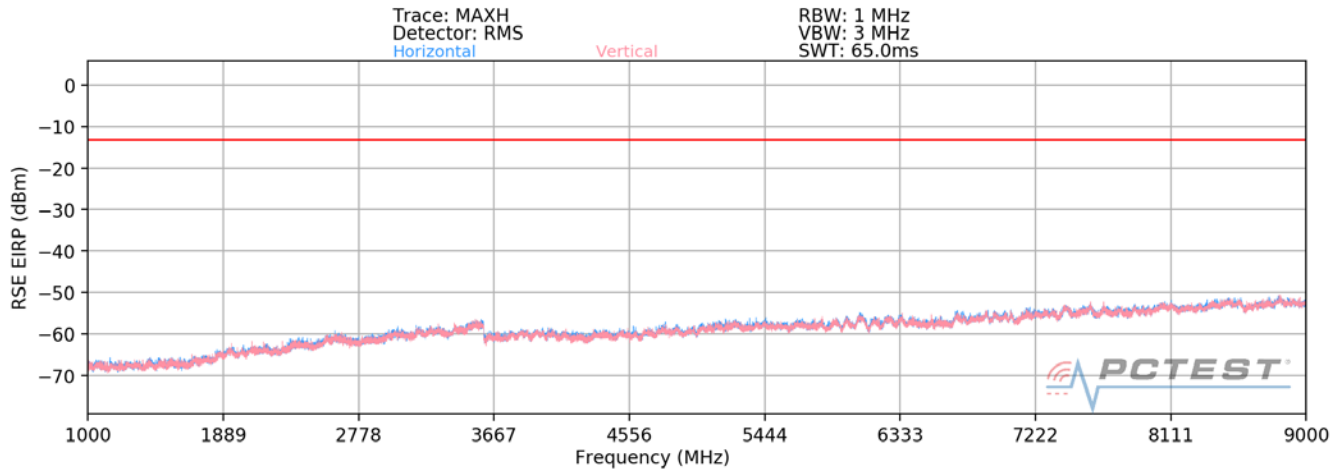
MODULATION SIGNAL: QPSK
 BANDWIDTH: 10.00 MHz
 DISTANCE: 3 meters
 NARROWBAND EMISSION LIMIT: -50 dBm
 WIDEBAND EMISSION LIMIT: -40 dBm/MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1564.00	V	-	-	-73.20	8.56	-64.64	-24.6

Table 7-23. Radiated Spurious Data (Band 13 – 1559-1610MHz Band)

FCC ID: ZNFK300TM	 PCTEST Proud to be part of 	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 220 of 250

Band 26



Plot 7-352. Radiated Spurious Plot above 1GHz (Band 26)

OPERATING FREQUENCY: 831.50 MHz

MODULATION SIGNAL: QPSK

BANDWIDTH: 15.0 MHz

DISTANCE: 3 meters

LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1663.00	V	400	84	-71.63	8.98	-62.65	-49.6
2494.50	V	-	-	-70.55	9.76	-60.79	-47.8
3326.00	V	-	-	-66.82	9.62	-57.20	-44.2
4157.50	V	-	-	-72.23	10.28	-61.95	-48.9

Table 7-24. Radiated Spurious Data (Band 26 – Low Channel)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 221 of 250

OPERATING FREQUENCY: 836.50 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 15.0 MHz
 DISTANCE: 3 meters
 LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1673.00	V	390	85	-70.46	8.98	-61.48	-48.5
2509.50	V	-	-	-69.31	9.78	-59.53	-46.5
3346.00	V	-	-	-67.09	9.63	-57.46	-44.5
4182.50	V	-	-	-72.66	10.37	-62.29	-49.3
5019.00	V	-	-	-70.97	10.91	-60.06	-47.1

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

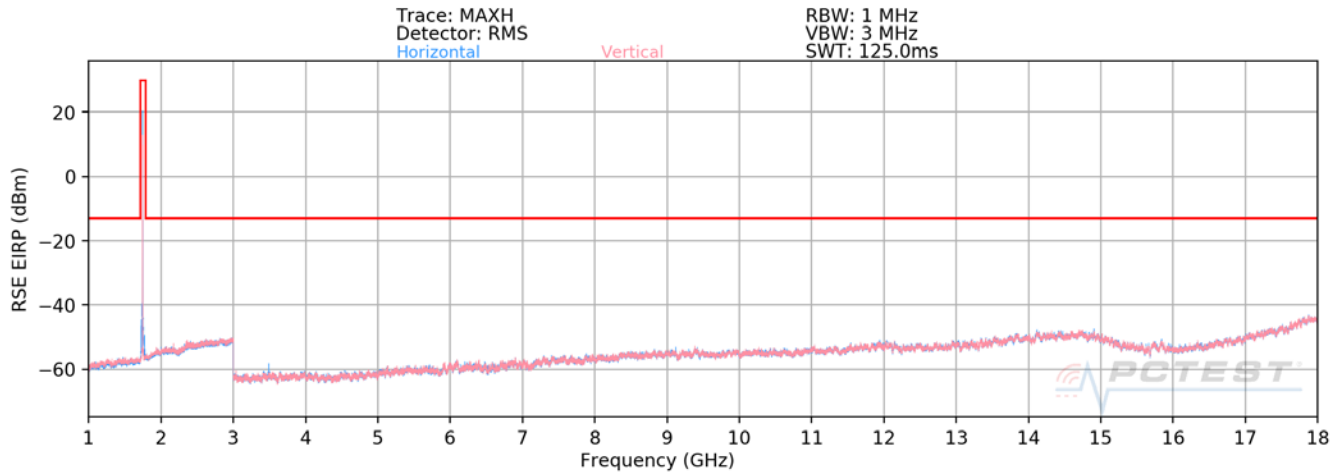
OPERATING FREQUENCY: 841.50 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 15.0 MHz
 DISTANCE: 3 meters
 LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1683.00	V	394	139	-72.11	8.98	-63.13	-50.1
2524.50	V	-	-	-69.48	9.78	-59.70	-46.7
3366.00	V	-	-	-67.74	9.70	-58.04	-45.0
4207.50	V	-	-	-72.42	10.47	-61.96	-49.0

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

FCC ID: ZNFK300TM	 PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	 LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 222 of 250

Band 66/4



Plot 7-353. Radiated Spurious Plot above 1GHz (Band 66/4)

OPERATING FREQUENCY: 1720.00 MHz
MODULATION SIGNAL: QPSK
BANDWIDTH: 20.0 MHz
DISTANCE: 3 meters
LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3440.00	H	396	134	-62.26	6.22	-56.04	-43.0
5160.00	H	-	-	-66.84	8.68	-58.17	-45.2
6880.00	H	-	-	-65.11	8.76	-56.35	-43.4
8600.00	H	-	-	-63.97	9.17	-54.79	-41.8

Table 7-27. Radiated Spurious Data (Band 66/4 – Low Channel)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 223 of 250

OPERATING FREQUENCY: 1745.00 MHz
MODULATION SIGNAL: QPSK
BANDWIDTH: 20.0 MHz
DISTANCE: 3 meters
LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3490.00	H	295	91	-61.01	6.32	-54.68	-41.7
5235.00	H	-	-	-67.57	8.71	-58.86	-45.9
6980.00	H	144	268	-63.03	8.74	-54.30	-41.3
8725.00	H	-	-	-63.55	9.42	-54.13	-41.1
10470.00	H	118	89	-57.43	9.62	-47.81	-34.8
12215.00	H	-	-	-60.64	9.09	-51.55	-38.6

Table 7-28. Radiated Spurious Data (Band 66/4 – Mid Channel)

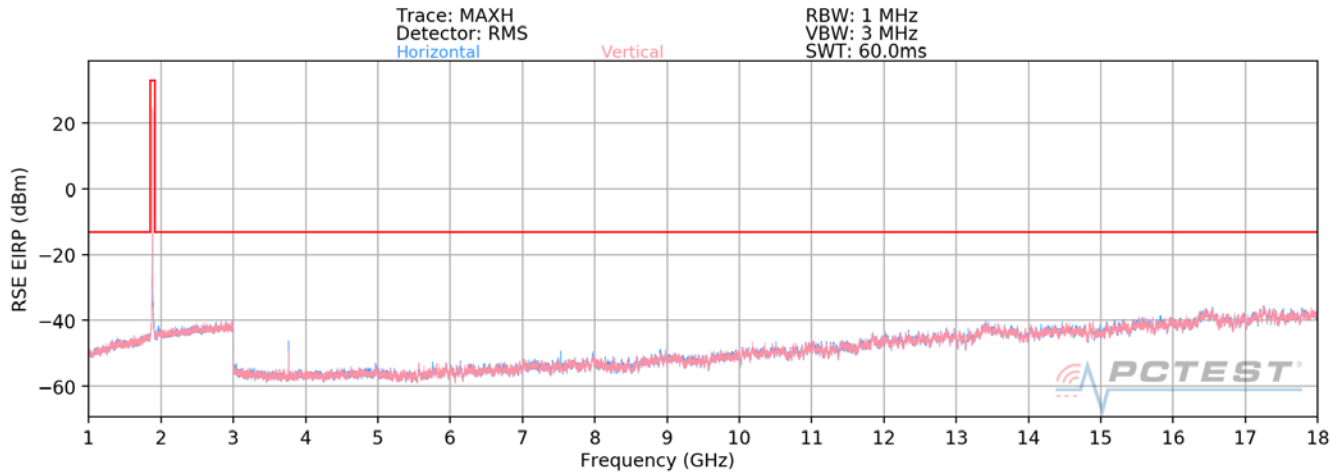
OPERATING FREQUENCY: 1770.00 MHz
MODULATION SIGNAL: QPSK
BANDWIDTH: 20.0 MHz
DISTANCE: 3 meters
LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3540.00	H	398	141	-61.19	6.31	-54.88	-41.9
5310.00	H	-	-	-67.57	8.74	-58.83	-45.8
7080.00	H	119	266	-61.92	8.66	-53.25	-40.3
8850.00	H	-	-	-63.31	9.53	-53.78	-40.8
10620.00	H	114	87	-58.12	9.50	-48.62	-35.6
12390.00	H	-	-	-60.29	9.12	-51.16	-38.2

Table 7-29. Radiated Spurious Data (Band 66/4 – High Channel)

FCC ID: ZNFK300TM	 PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	 LG	Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 224 of 250

Band 25/2



Plot 7-354. Radiated Spurious Plot above 1GHz (Band 25/2)

OPERATING FREQUENCY: 1860.00 MHz
MODULATION SIGNAL: QPSK
BANDWIDTH: 20.0 MHz
DISTANCE: 3 meters
LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3720.00	H	123	142	-51.63	6.90	-44.73	-31.7
5580.00	H	-	-	-58.27	9.06	-49.20	-36.2
7440.00	H	-	-	-57.01	9.26	-47.74	-34.7
9300.00	H	-	-	-55.27	9.40	-45.87	-32.9
11160.00	H	-	-	-53.24	9.46	-43.78	-30.8

Table 7-30. Radiated Spurious Data (Band 25/2 – Low Channel)

FCC ID: ZNFK300TM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 225 of 250

OPERATING FREQUENCY: 1882.50 MHz
MODULATION SIGNAL: QPSK
BANDWIDTH: 20.0 MHz
DISTANCE: 3 meters
LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3765.00	H	112	16	-49.22	6.94	-42.27	-29.3
5647.50	H	-	-	-59.94	9.17	-50.77	-37.8
7530.00	H	299	110	-56.65	9.31	-47.34	-34.3
9412.50	H	-	-	-55.46	9.50	-45.96	-33.0
11295.00	H	-	-	-49.95	9.49	-40.47	-27.5

Table 7-31. Radiated Spurious Data (Band 25/2 – Mid Channel)

OPERATING FREQUENCY: 1905.00 MHz
MODULATION SIGNAL: QPSK
BANDWIDTH: 20.0 MHz
DISTANCE: 3 meters
LIMIT: -13 dBm

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
3810.00	H	101	150	-51.34	7.07	-44.27	-31.3
5715.00	H	-	-	-59.67	9.04	-50.63	-37.6
7620.00	H	-	-	-56.37	9.27	-47.10	-34.1
9525.00	H	-	-	-55.73	9.46	-46.27	-33.3
11430.00	H	-	-	-50.21	9.49	-40.72	-27.7

Table 7-32. Radiated Spurious Data (Band 25/2 – High Channel)

FCC ID: ZNFK300TM	 PCTEST Proud to be part of 	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002250026-02-R1.ZNF	Test Dates: 2/24 – 4/10/2020	EUT Type: Portable Handset		Page 226 of 250