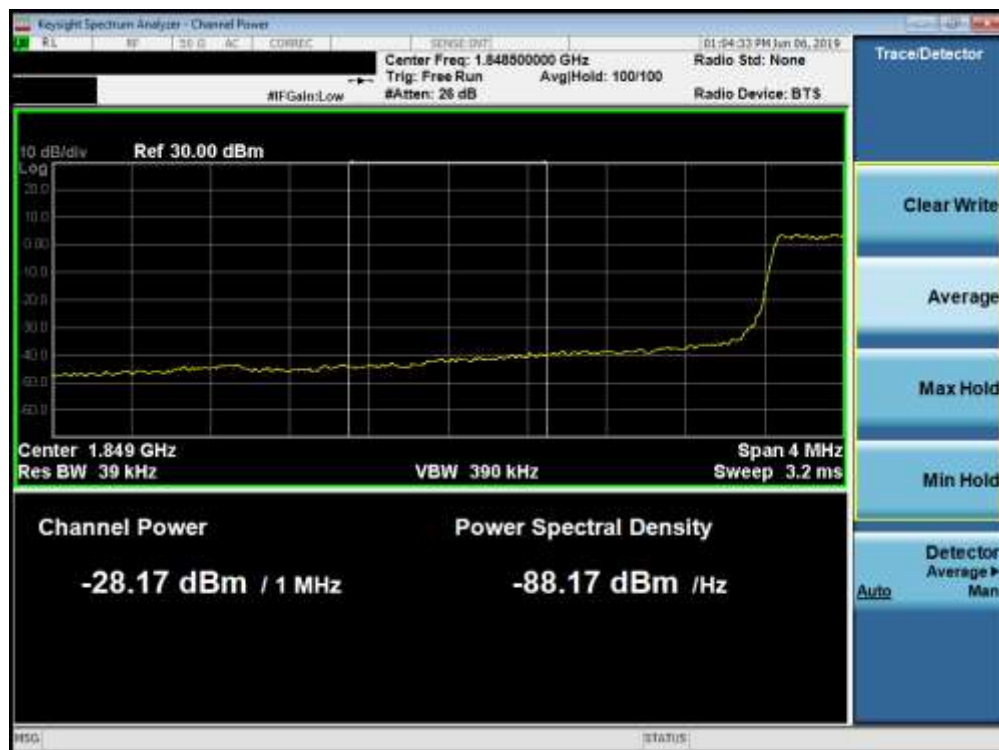


Plot 7-167. Lower Band Edge Plot (Band 2 - 3.0MHz QPSK - Full RB Configuration)

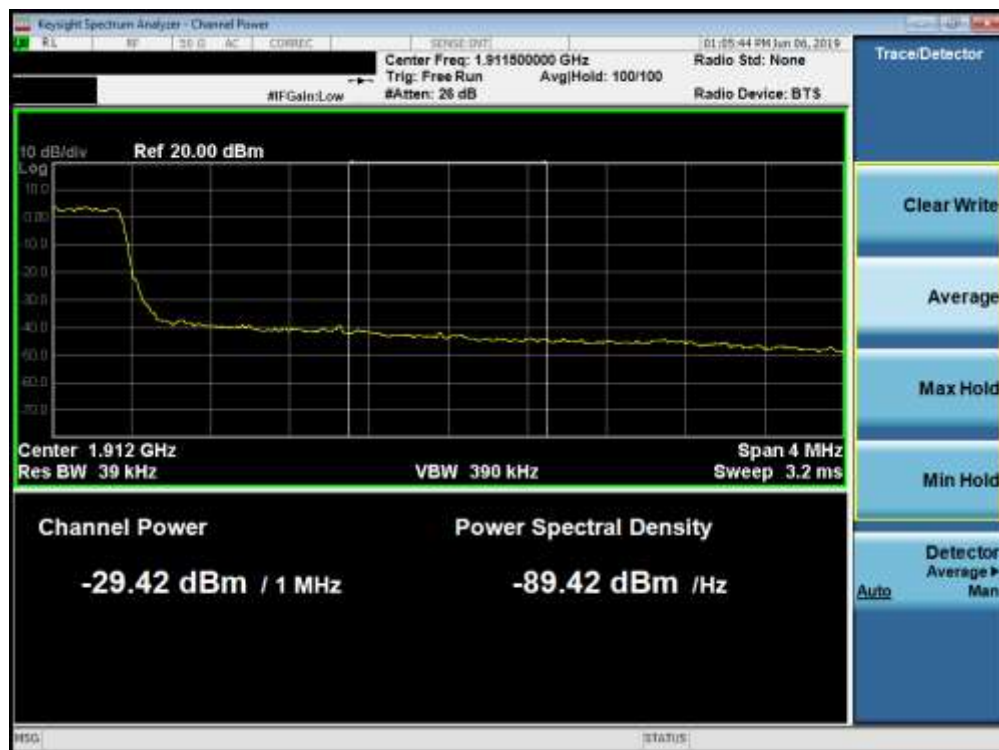


Plot 7-168. Lower Extended Band Edge Plot (Band 2 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX525WA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1-ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset		Page 106 of 178

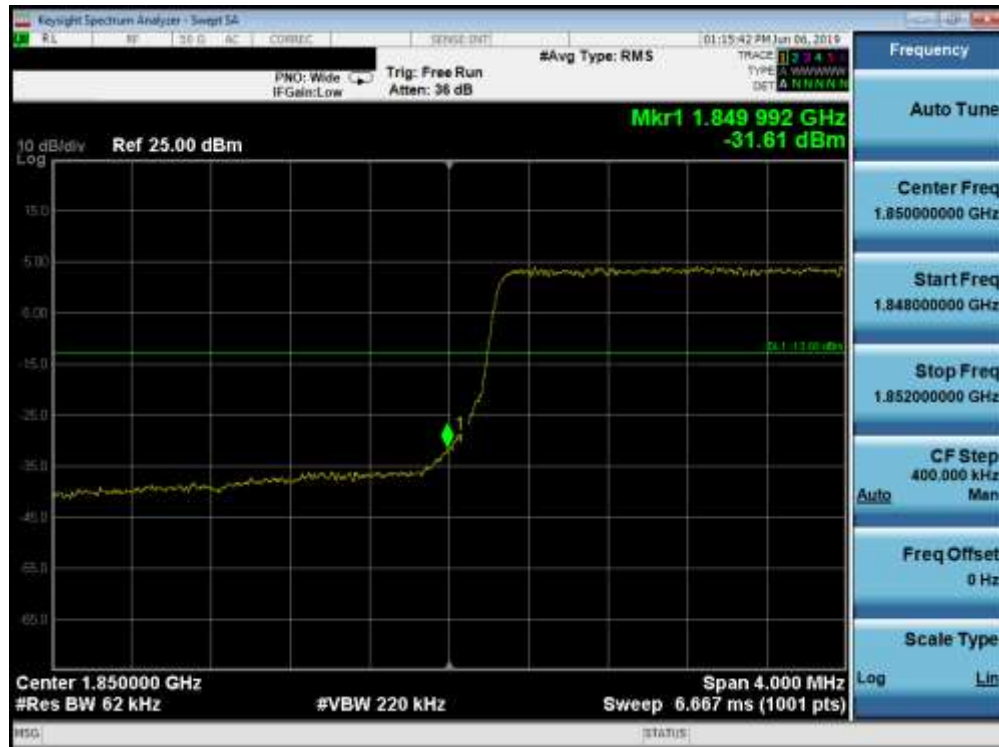


Plot 7-169. Upper Band Edge Plot (Band 2 - 3.0MHz QPSK - Full RB Configuration)

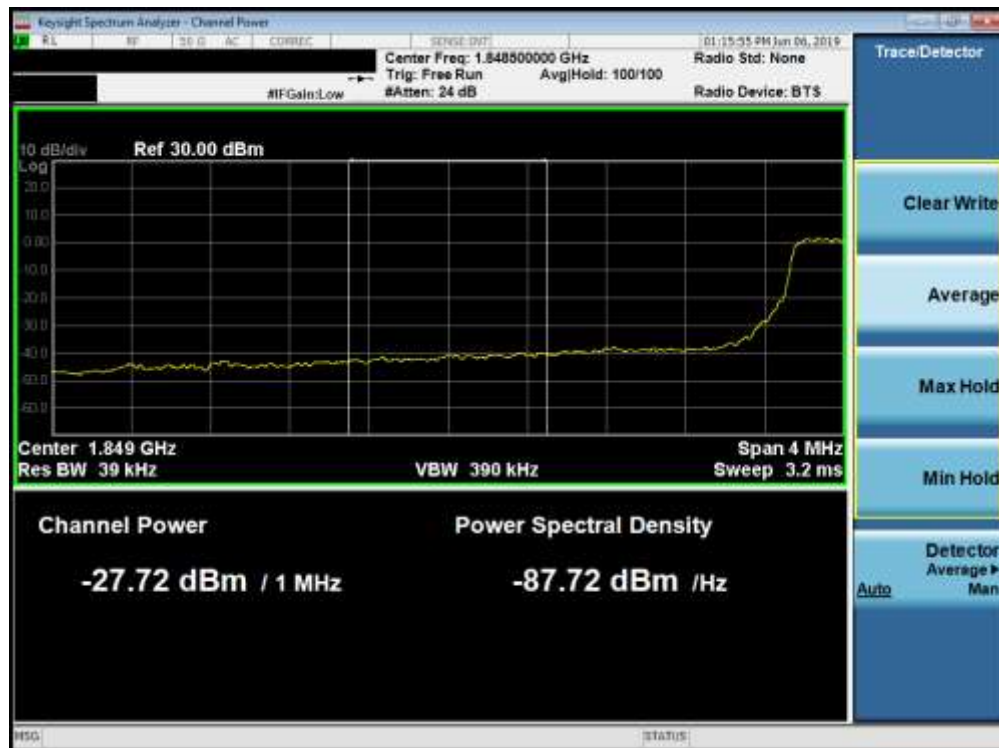


Plot 7-170. Upper Extended Band Edge Plot (Band 2 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX525WA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1-ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset		Page 107 of 178

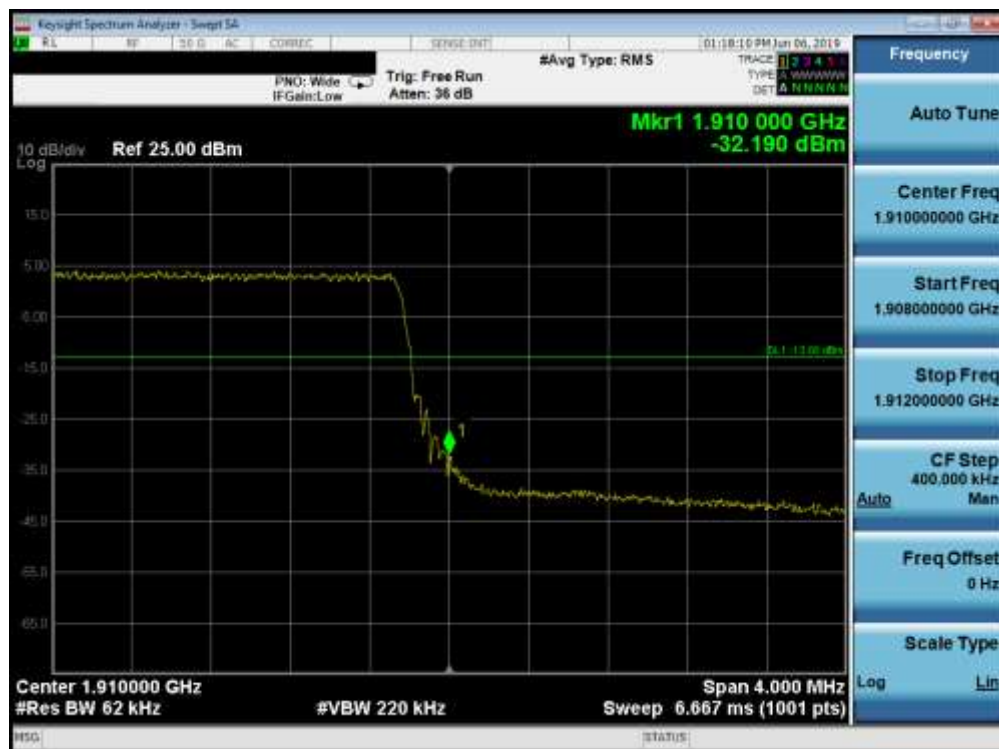


Plot 7-171. Lower Band Edge Plot (Band 2 - 5.0MHz QPSK - Full RB Configuration)

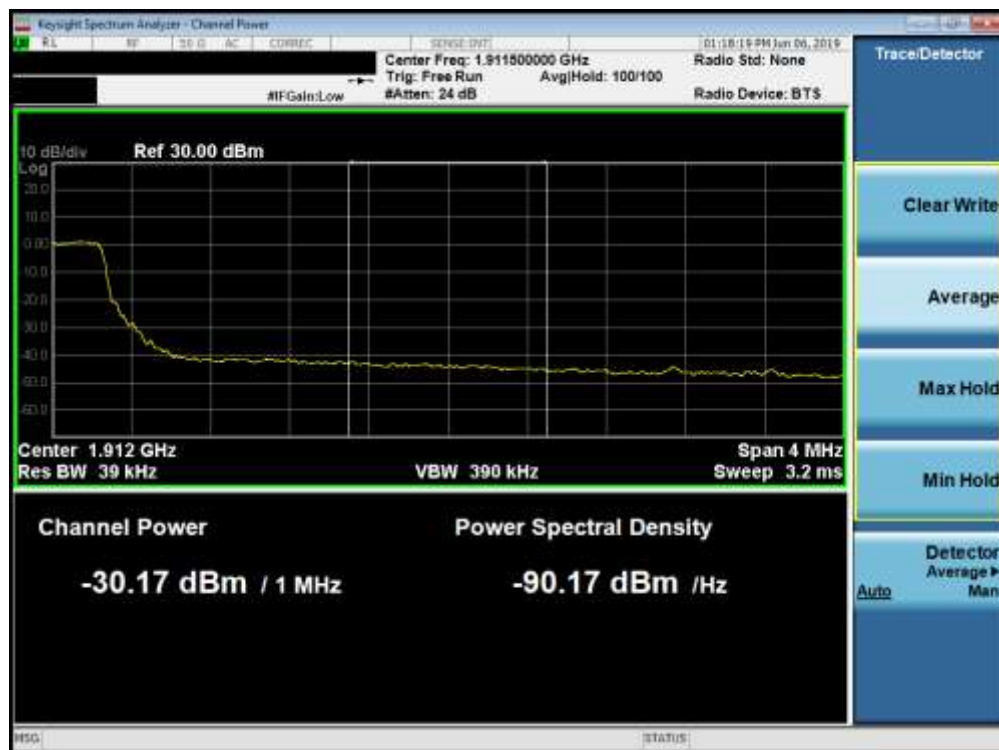


Plot 7-172. Lower Extended Band Edge Plot (Band 2 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX525WA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1-ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset		Page 108 of 178

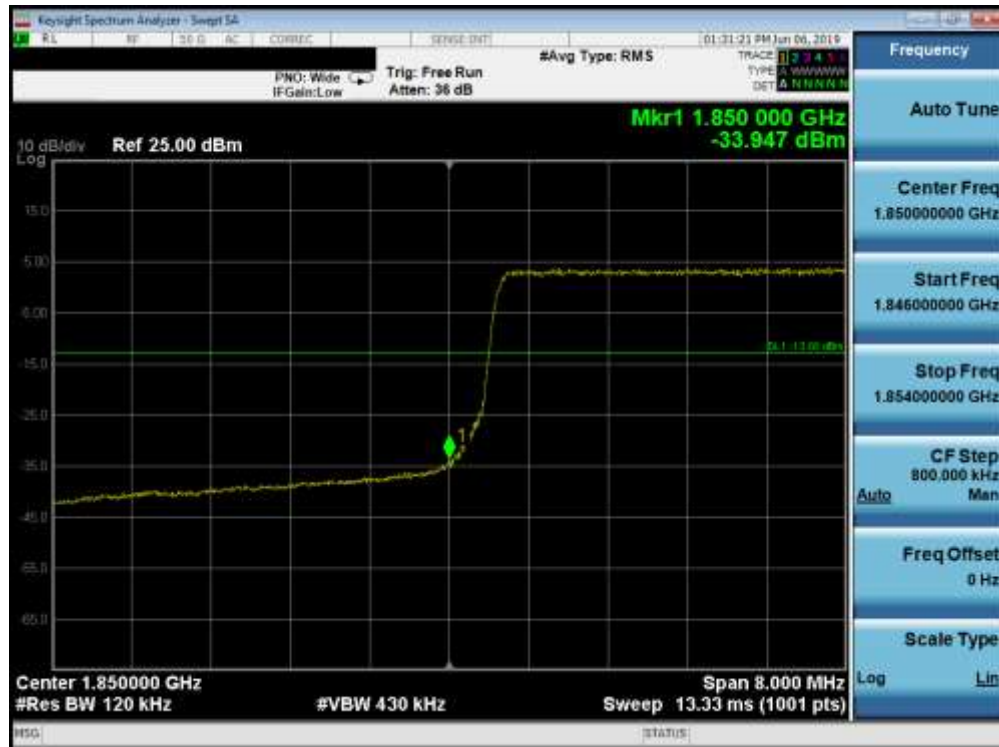


Plot 7-173. Upper Band Edge Plot (Band 2 - 5.0MHz QPSK - Full RB Configuration)

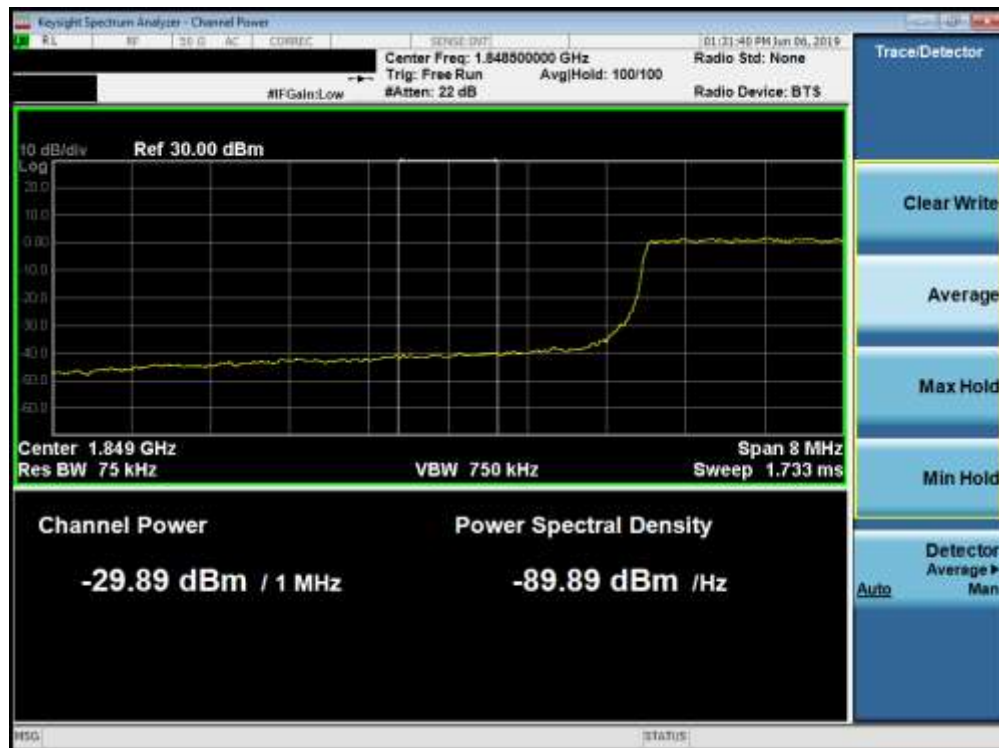


Plot 7-174. Upper Extended Band Edge Plot (Band 2 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX525WA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1-ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset		Page 109 of 178

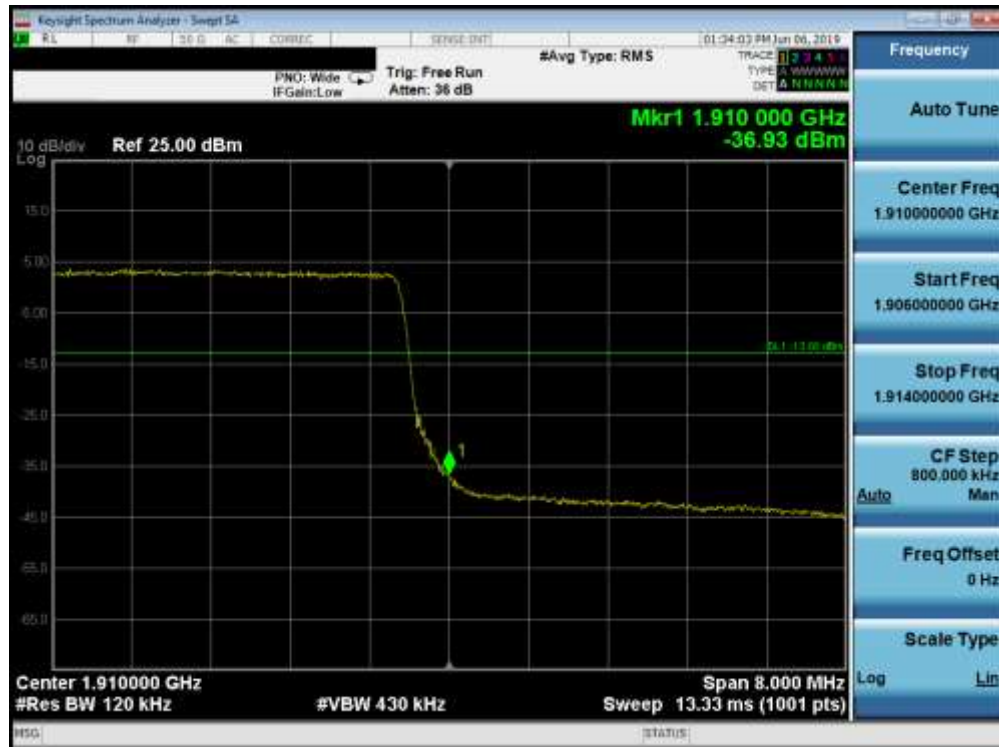


Plot 7-175. Lower Band Edge Plot (Band 2 - 10.0MHz QPSK - Full RB Configuration)

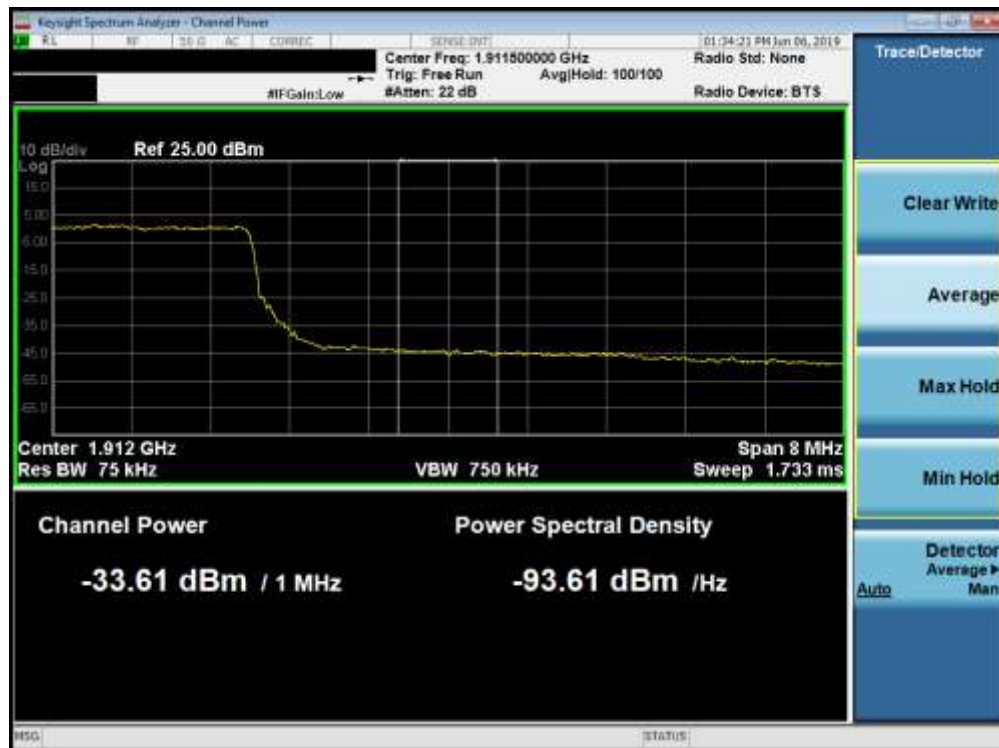


Plot 7-176. Lower Extended Band Edge Plot (Band 2 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX525WA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1-ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset		Page 110 of 178

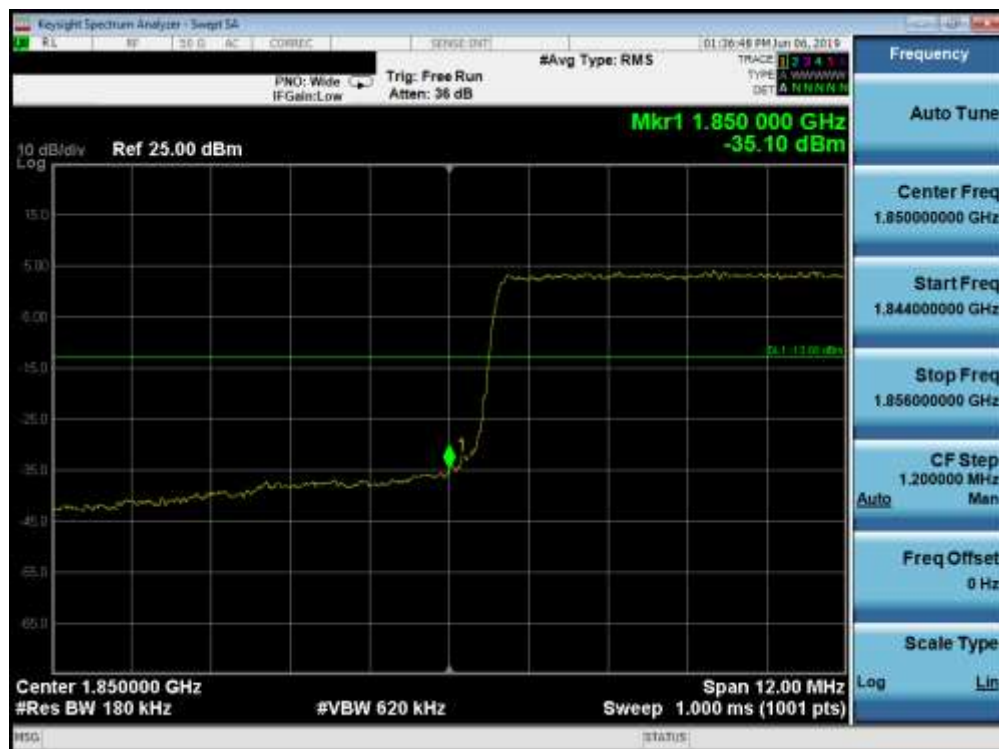


Plot 7-177. Upper Band Edge Plot (Band 2 - 10.0MHz QPSK - Full RB Configuration)

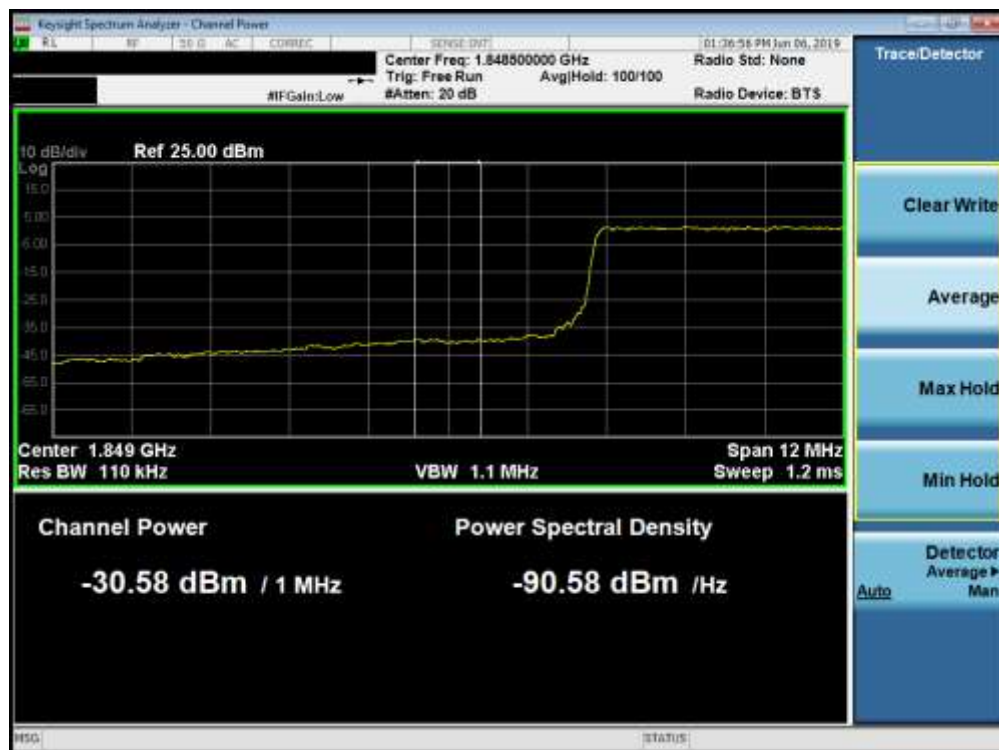


Plot 7-178. Upper Extended Band Edge Plot (Band 2 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX525WA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1-ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset		Page 111 of 178



Plot 7-179. Lower Band Edge Plot (Band 2 - 15.0MHz QPSK - Full RB Configuration)

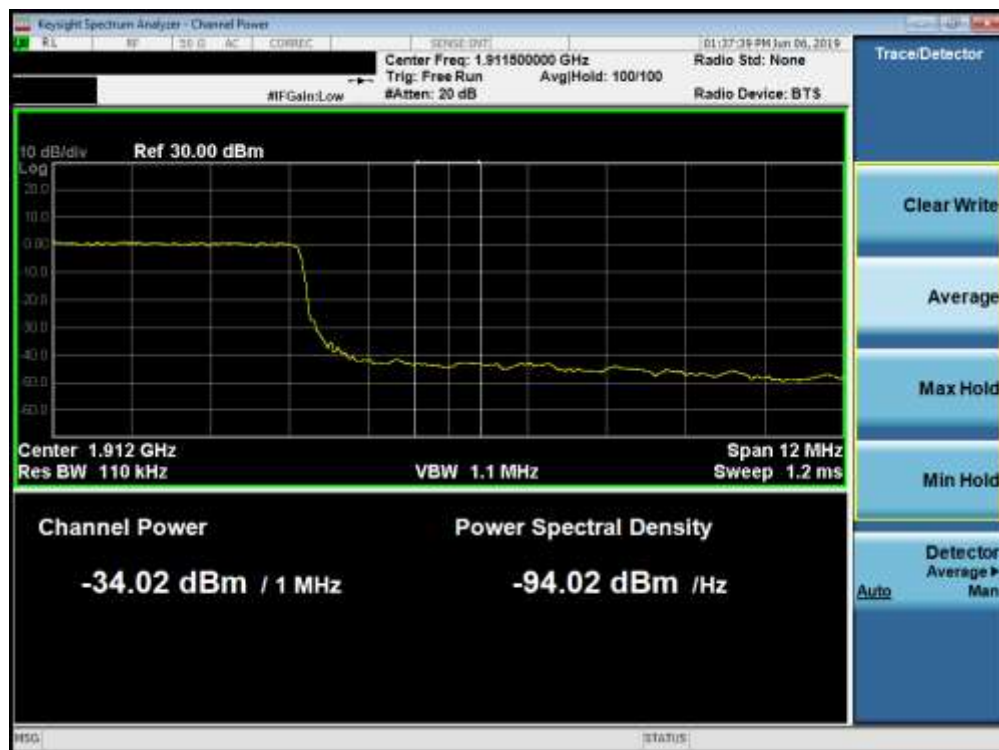


Plot 7-180. Lower Extended Band Edge Plot (Band 2 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX525WA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1-ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset		Page 112 of 178

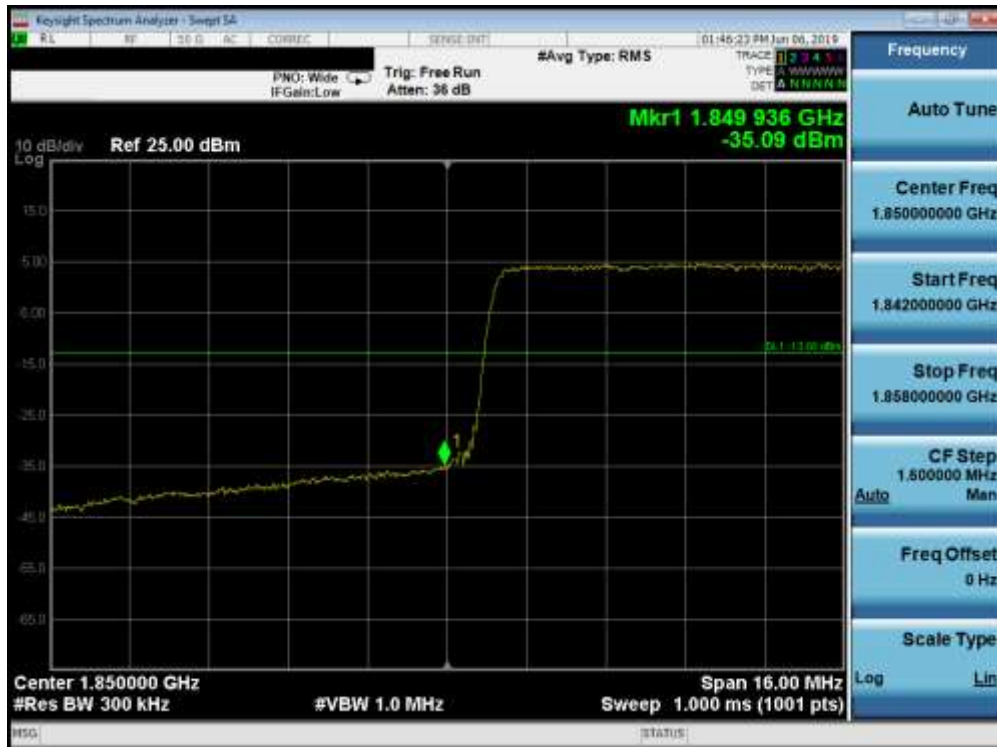


Plot 7-181. Upper Band Edge Plot (Band 2 - 15.0MHz QPSK - Full RB Configuration)

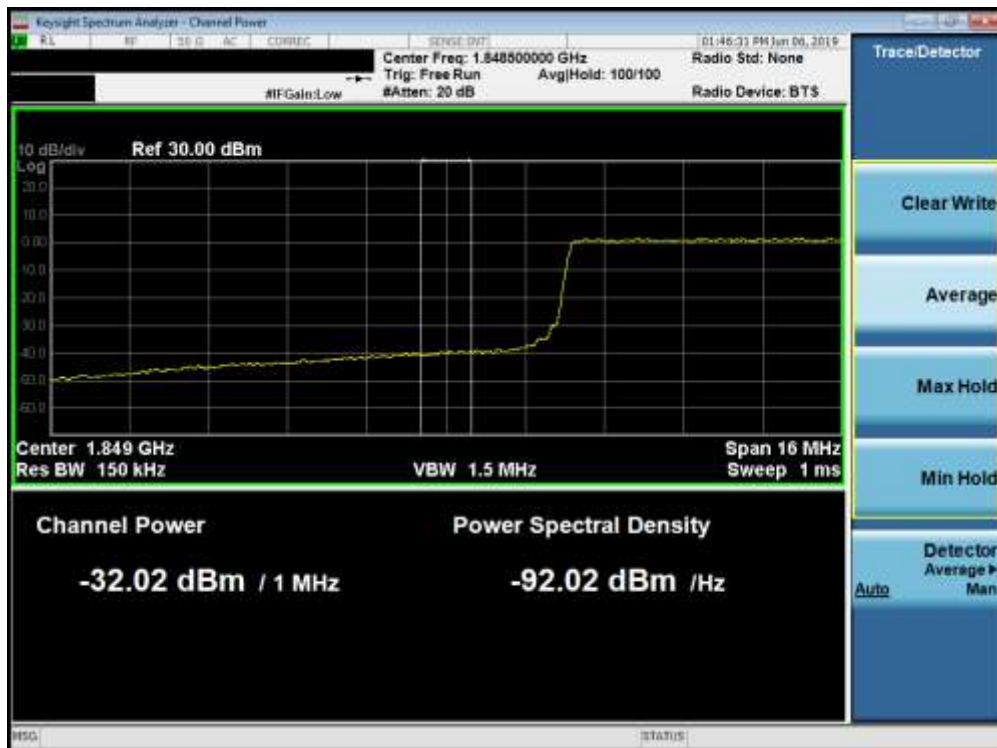


Plot 7-182. Upper Extended Band Edge Plot (Band 2 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX525WA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1-ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset		Page 113 of 178



Plot 7-183. Lower Band Edge Plot (Band 2 - 20.0MHz QPSK - Full RB Configuration)

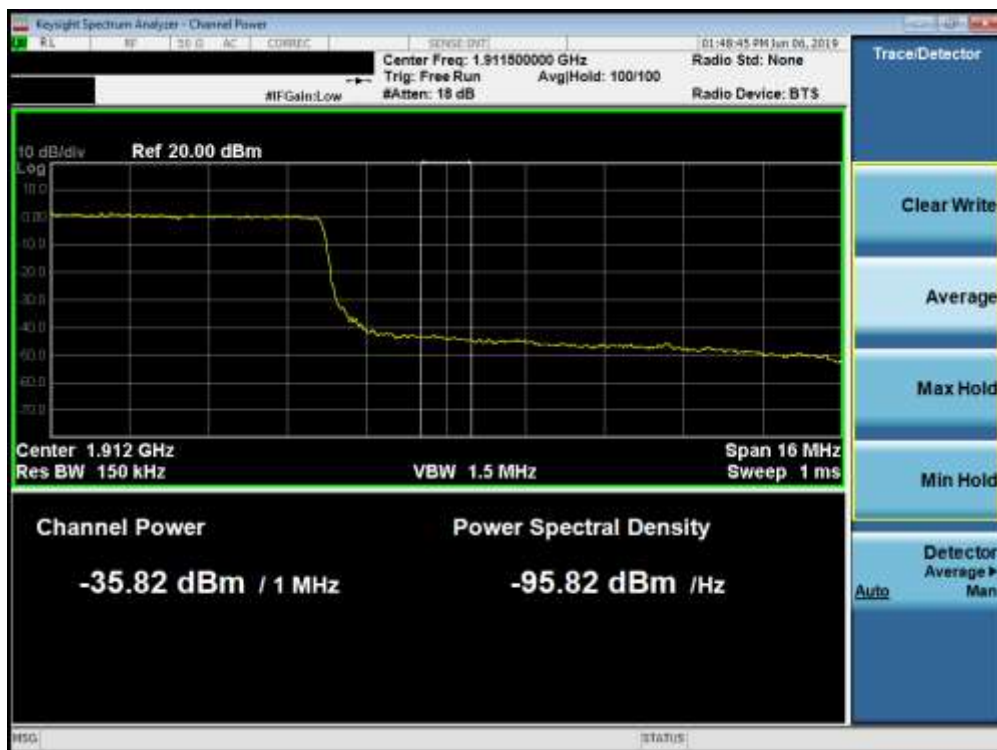


Plot 7-184. Lower Extended Band Edge Plot (Band 2 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX525WA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset		Page 114 of 178



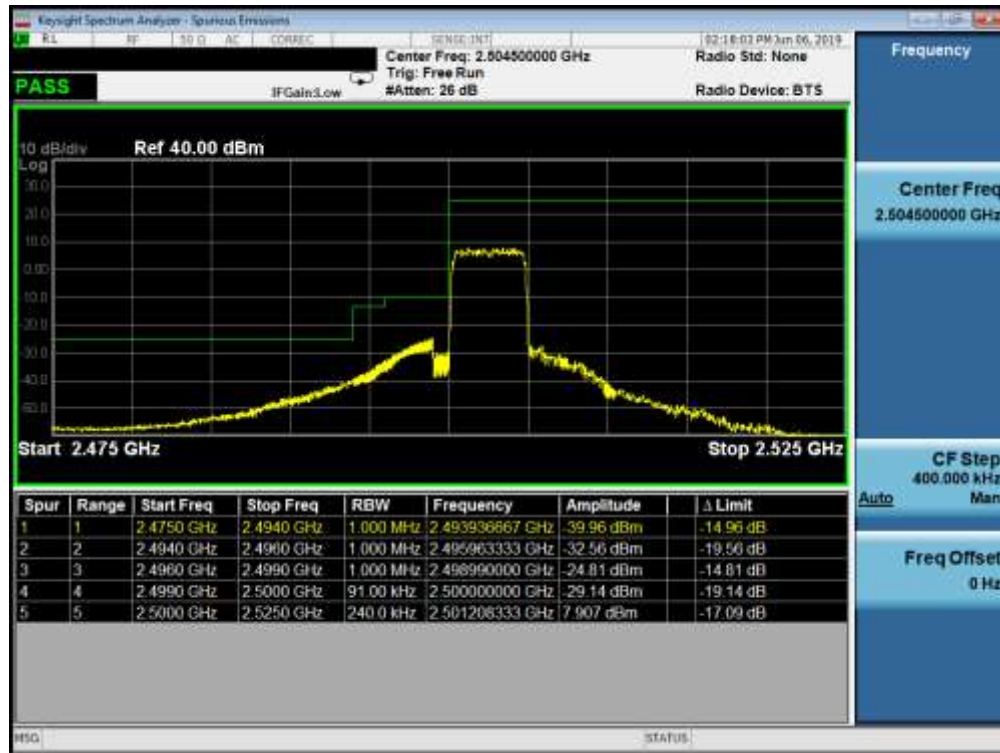
Plot 7-185. Upper Band Edge Plot (Band 2 - 20.0MHz QPSK - Full RB Configuration)



Plot 7-186. Upper Extended Band Edge Plot (Band 2 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX525WA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1-ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset		Page 115 of 178

Band 7



Plot 7-187. Lower ACP Plot Plot (Band 7 – 5.0MHz QPSK - Full RB Configuration)



Plot 7-188. Upper ACP Plot (Band 7 – 5.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX525WA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		LG	Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1-ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset			Page 116 of 178



Plot 7-189. Lower ACP Plot (Band 7 – 10.0MHz QPSK - Full RB Configuration)



Plot 7-190. Upper ACP Plot (Band 7 – 10.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX525WA	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset	Page 117 of 178



Plot 7-191. Lower ACP Plot (Band 7 – 15.0MHz QPSK - Full RB Configuration)



Plot 7-192. Upper ACP Plot (Band 7 – 15.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX525WA	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset	Page 118 of 178



Plot 7-193. Lower ACP Plot (Band 7 – 20.0MHz QPSK - Full RB Configuration)



Plot 7-194. Upper ACP Plot (Band 7 – 20.0MHz QPSK - Full RB Configuration)

FCC ID: ZNFX525WA	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset		Page 119 of 178

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.

Test Setup

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



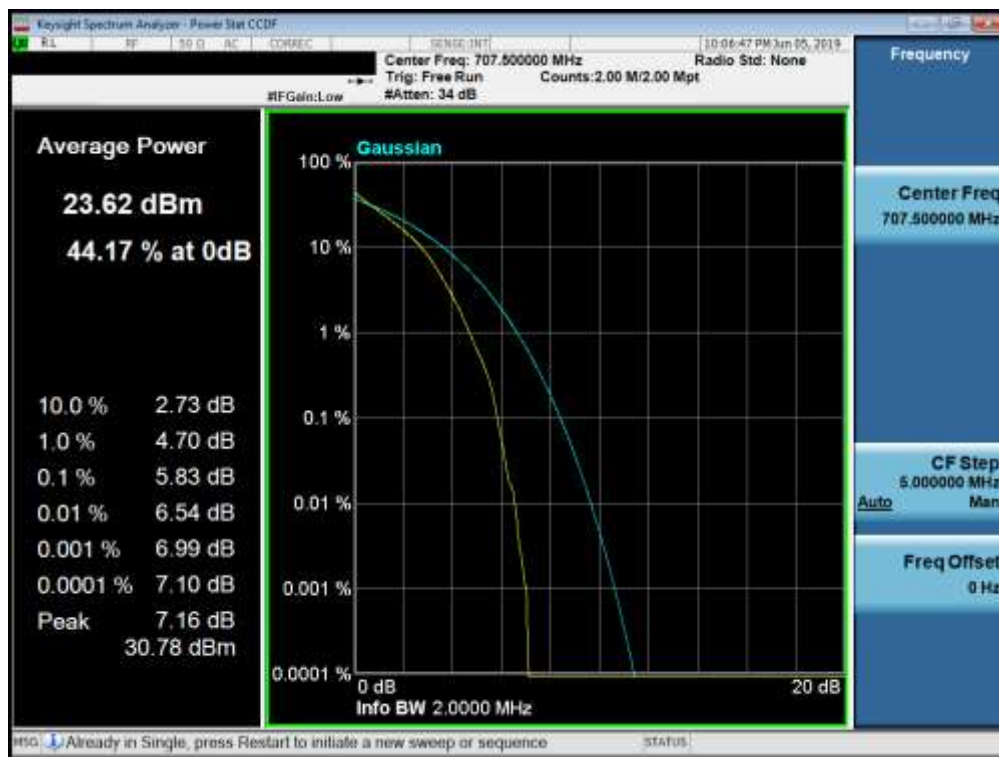
Figure 7-4. Test Instrument & Measurement Setup

Test Notes

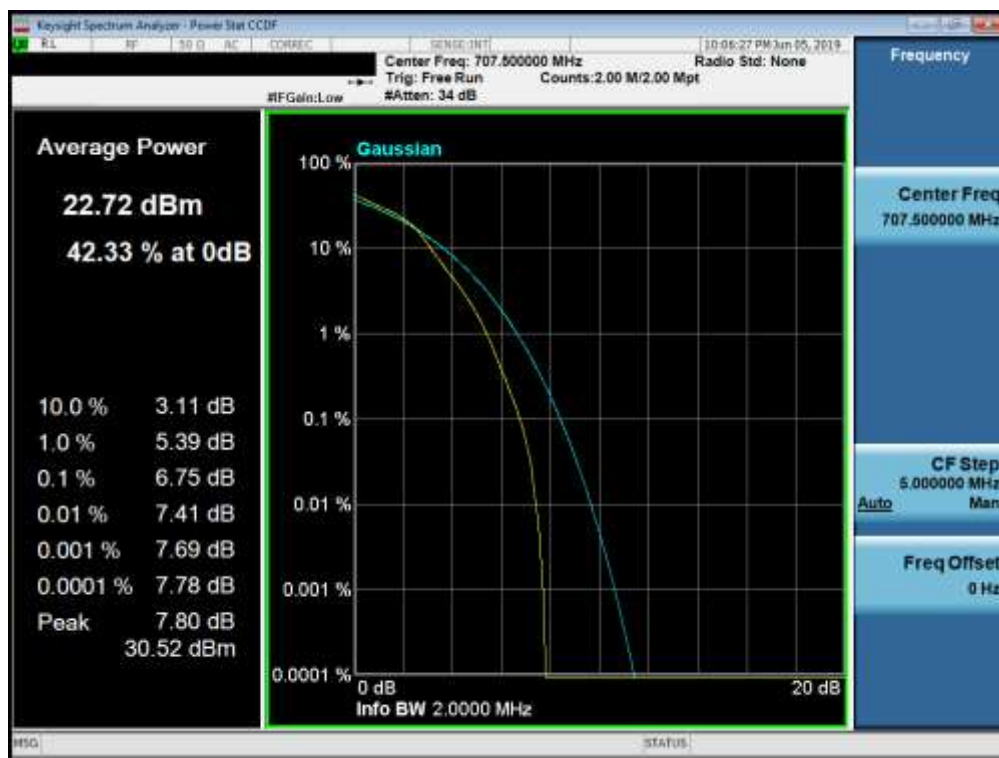
None.

FCC ID: ZNFX525WA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset		Page 120 of 178

Band 12/17

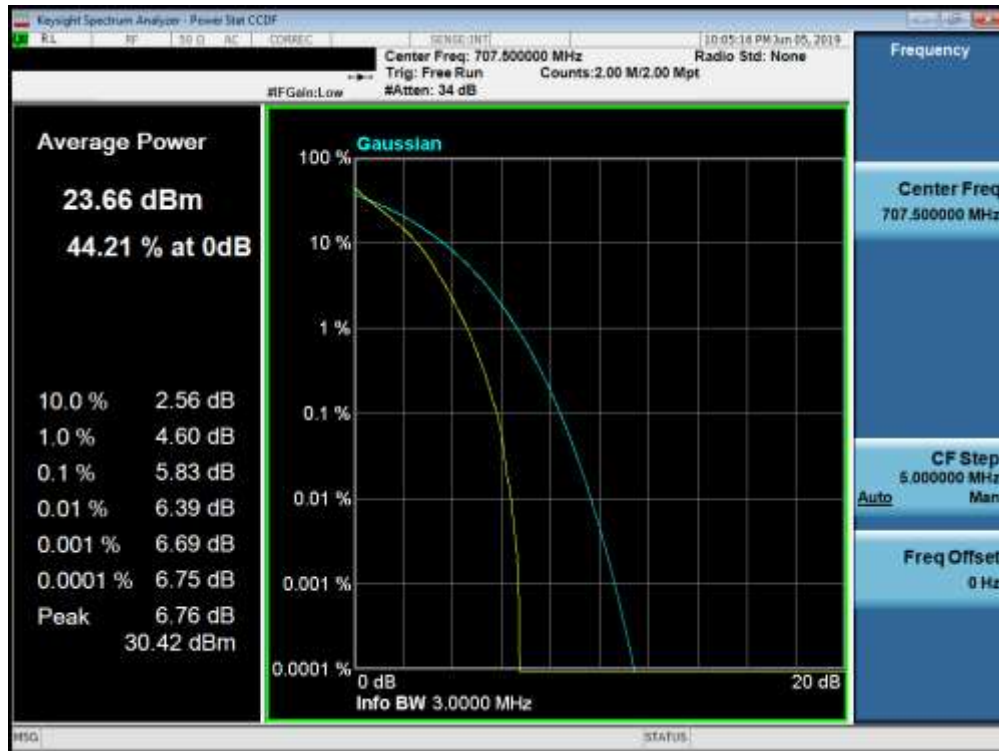


Plot 7-195. PAR Plot (Band 12 - 1.4MHz QPSK - Full RB Configuration)

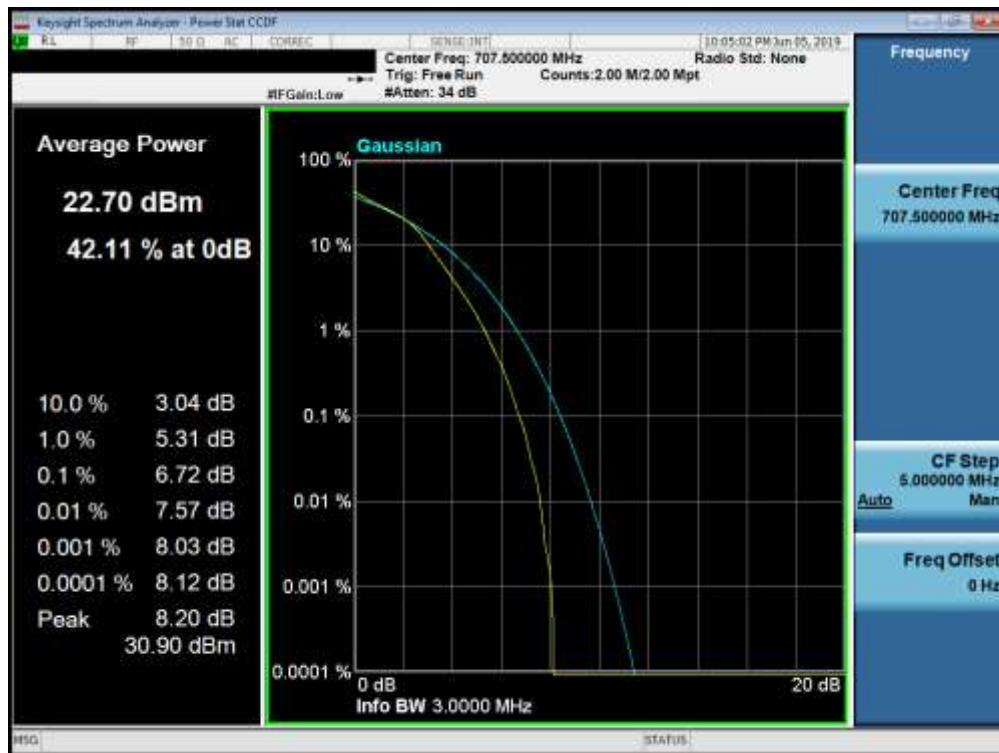


Plot 7-196. PAR Plot (Band 12 - 1.4MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFX525WA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1-ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset		Page 121 of 178

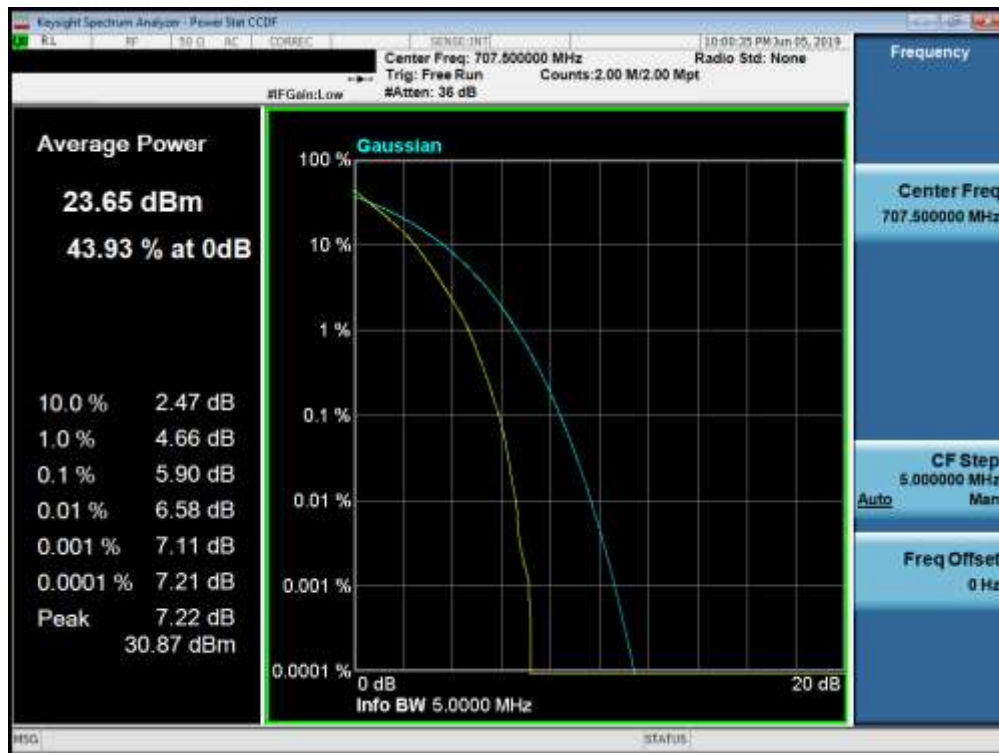


Plot 7-197. PAR Plot (Band 12 – 3.0MHz QPSK - Full RB Configuration)

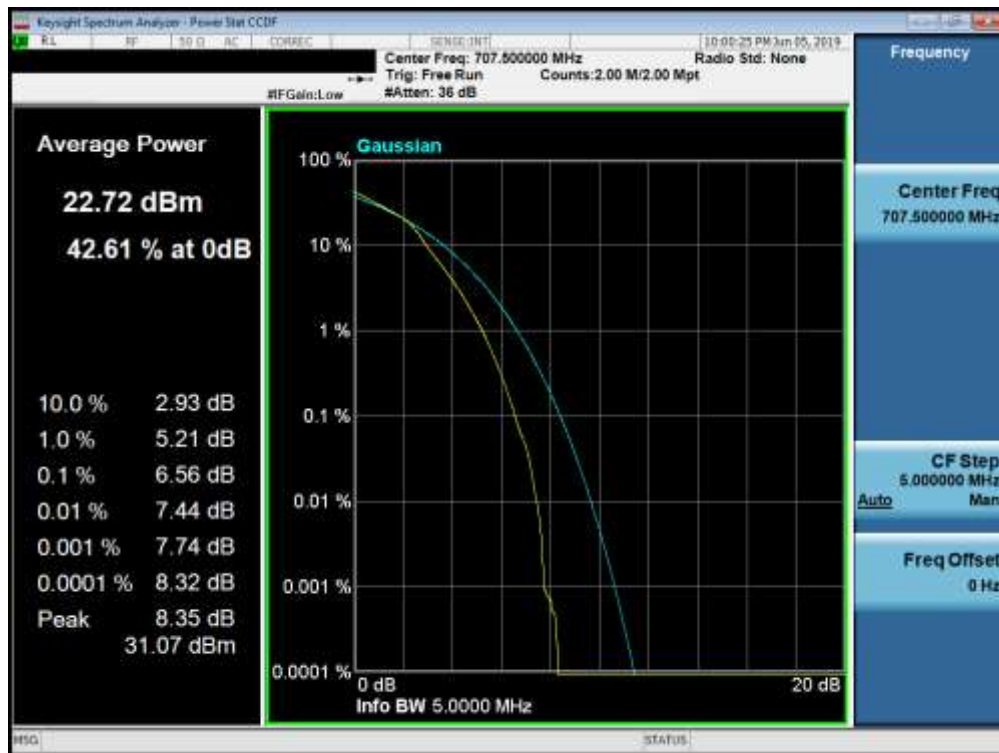


Plot 7-198. PAR Plot (Band 12 – 3.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFX525WA	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset	Page 122 of 178

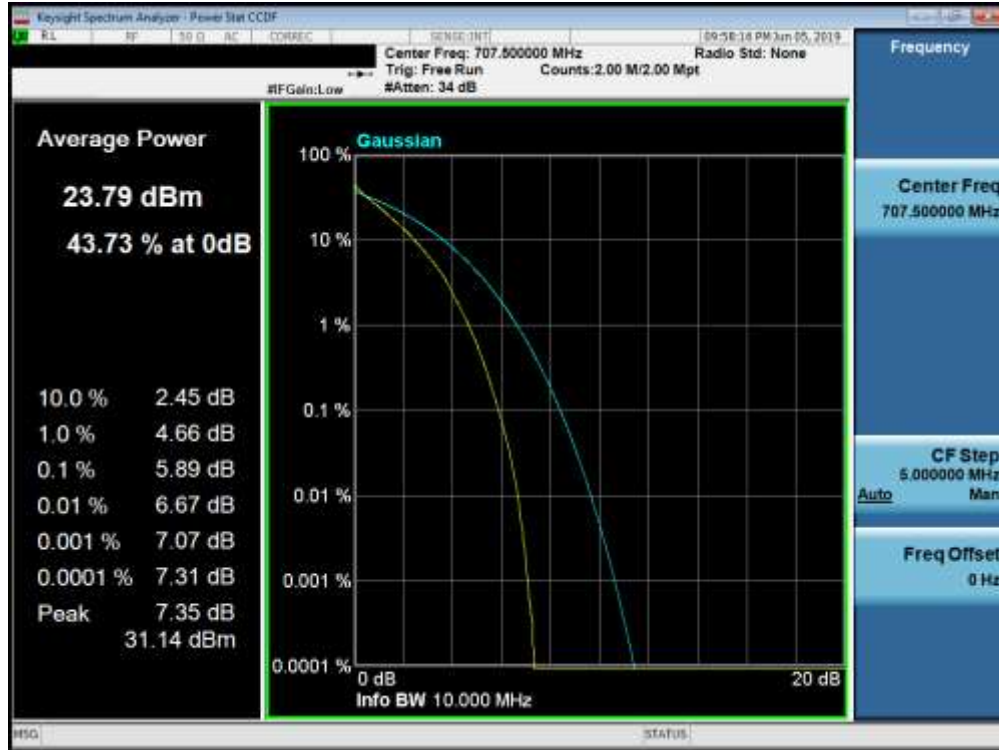


Plot 7-199. PAR Plot (Band 12/17 – 5.0MHz QPSK - Full RB Configuration)

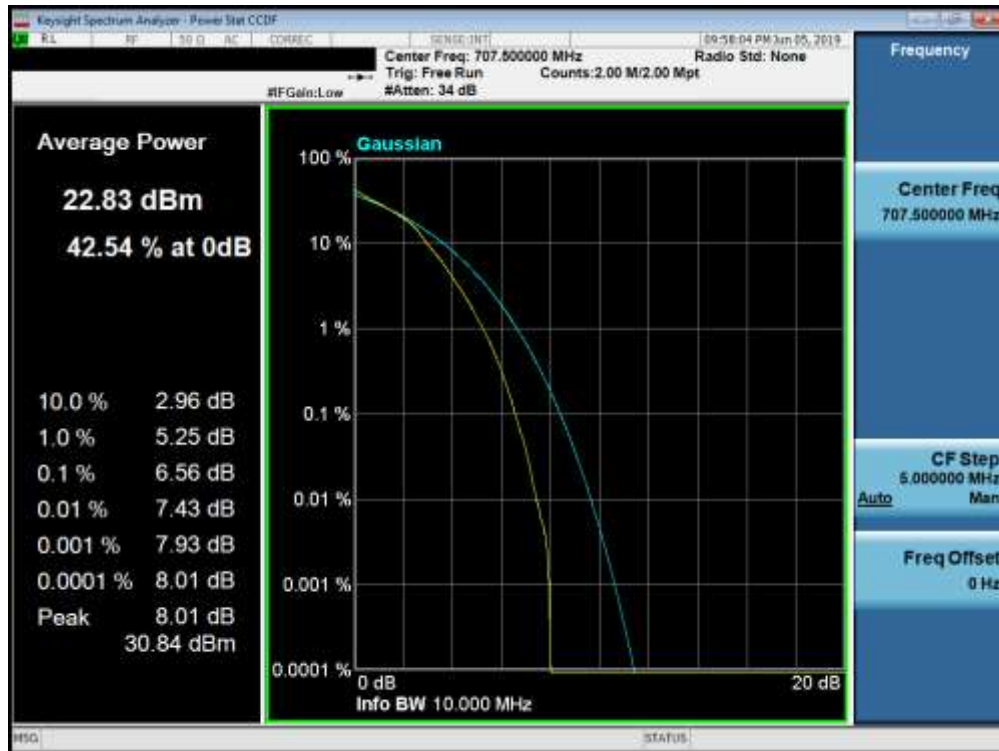


Plot 7-200. PAR Plot (Band 12/17 – 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFX525WA	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset	Page 123 of 178



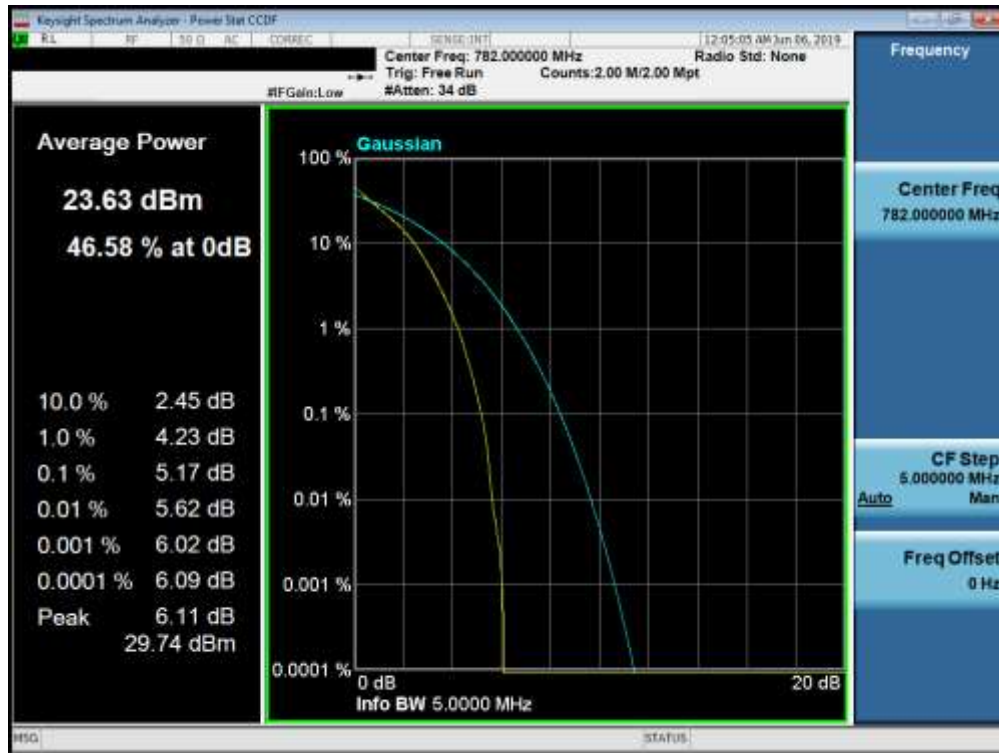
Plot 7-201. PAR Plot (Band 12/17 – 10.0MHz QPSK - Full RB Configuration)



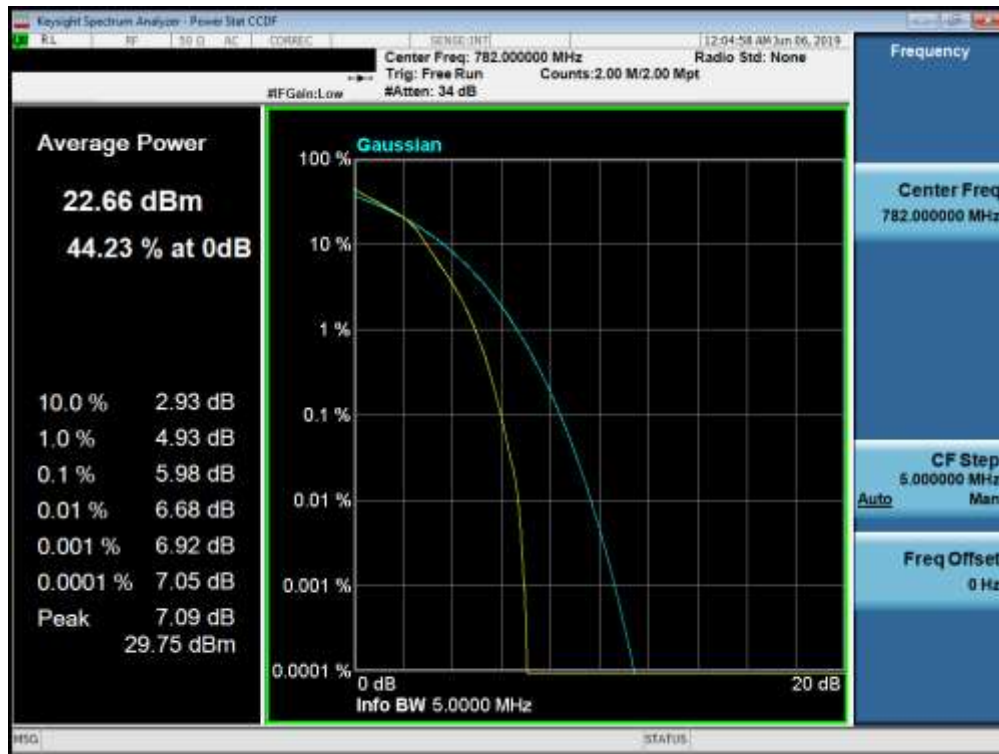
Plot 7-202. PAR Plot (Band 12/17 – 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFX525WA	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1-ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset	Page 124 of 178

Band 13

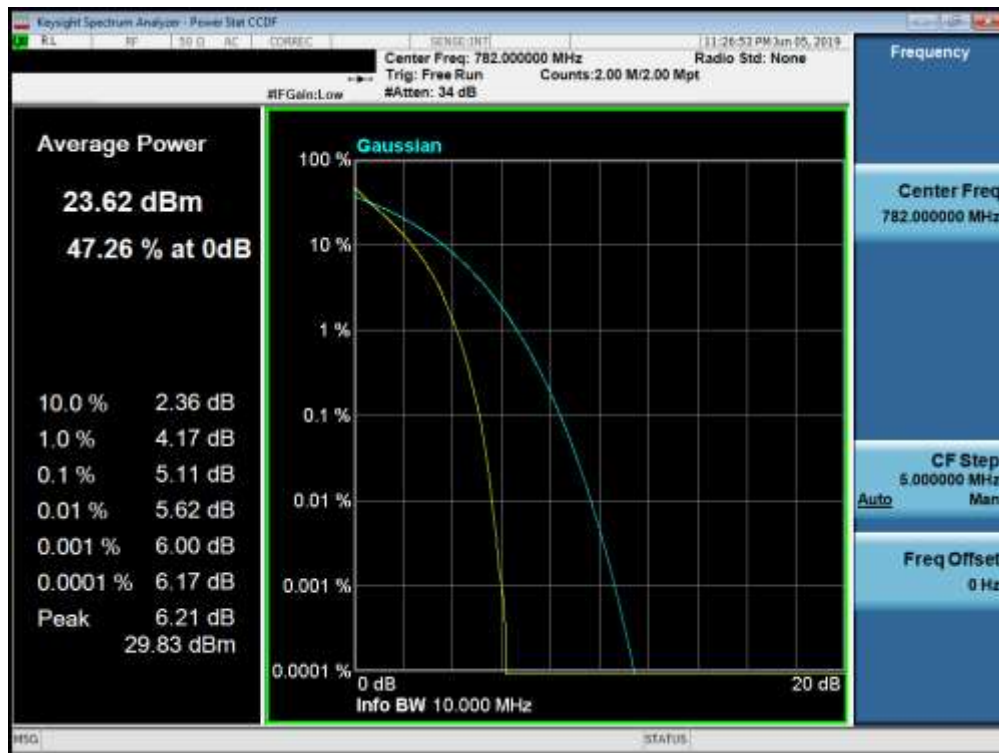


Plot 7-203. PAR Plot (Band 13 – 5.0MHz QPSK - Full RB Configuration)

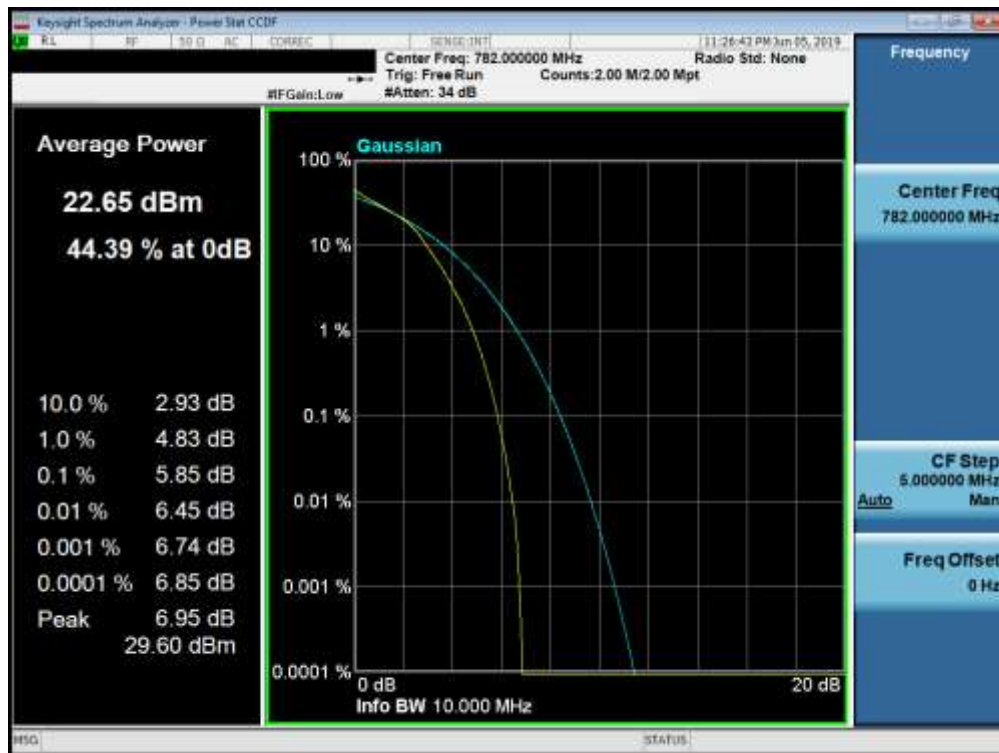


Plot 7-204. PAR Plot (Band 13 – 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFX525WA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1-ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset		Page 125 of 178



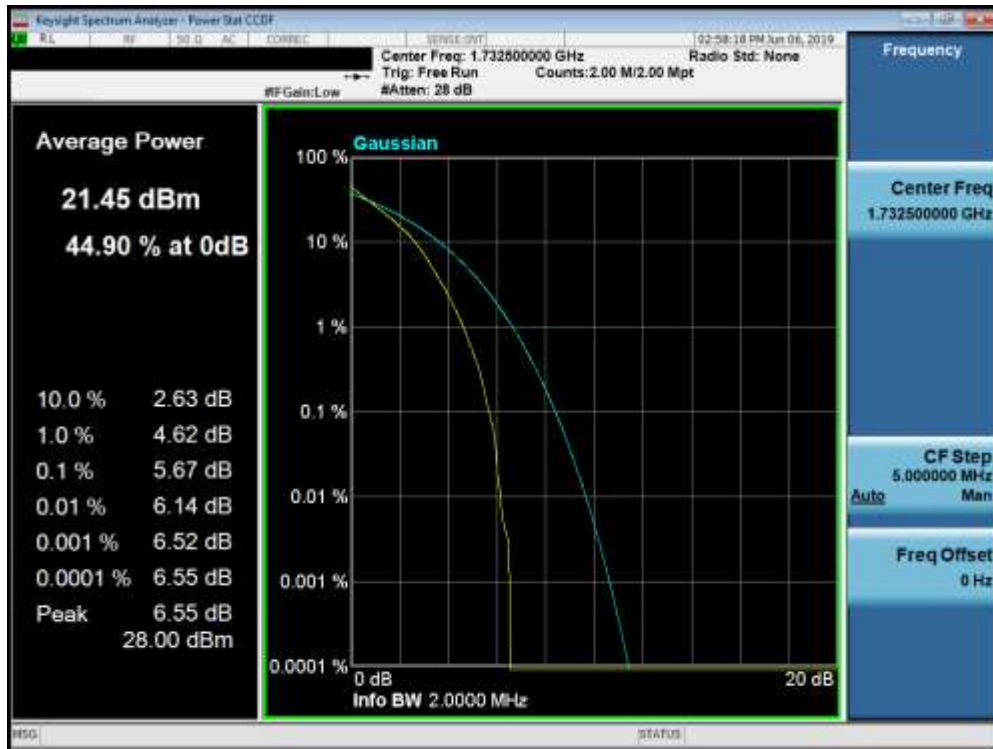
Plot 7-205. PAR Plot (Band 13 – 10.0MHz QPSK - Full RB Configuration)



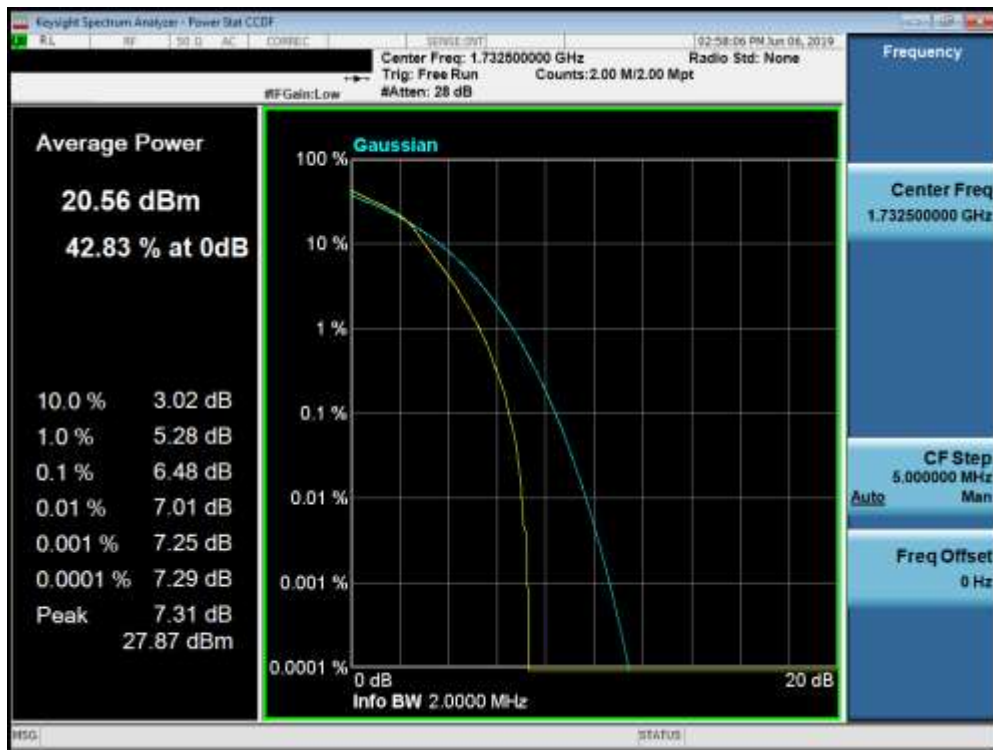
Plot 7-206. PAR Plot (Band 13 – 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFX525WA	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1-ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset	Page 126 of 178

Band 66/4

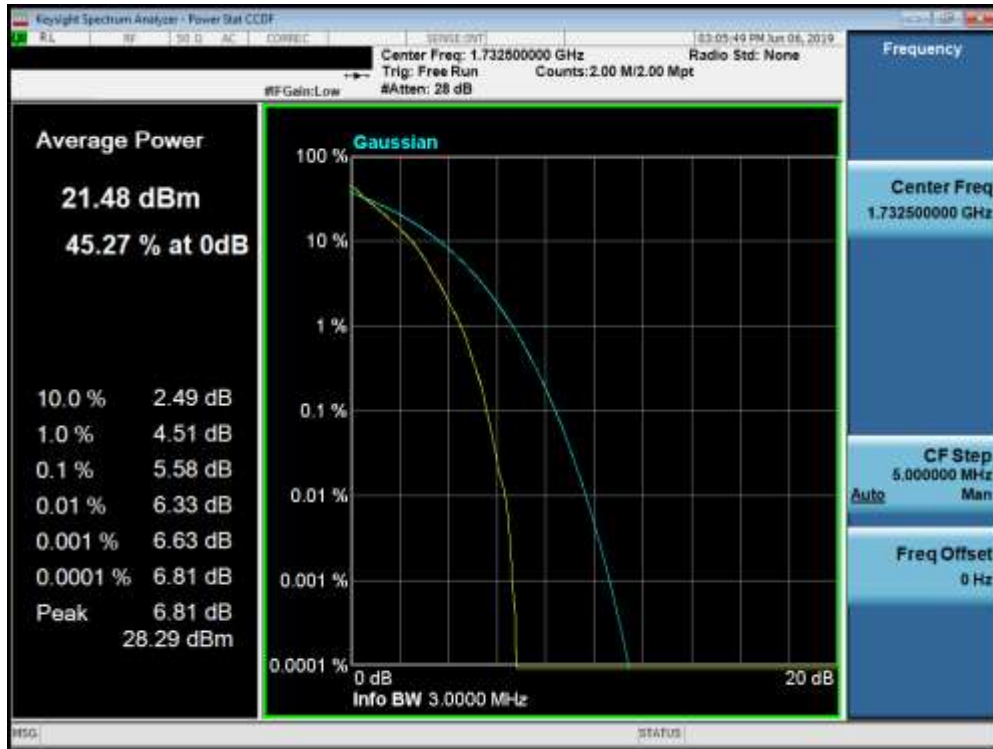


Plot 7-207. PAR Plot (Band 66/4 - 1.4MHz QPSK - Full RB Configuration)

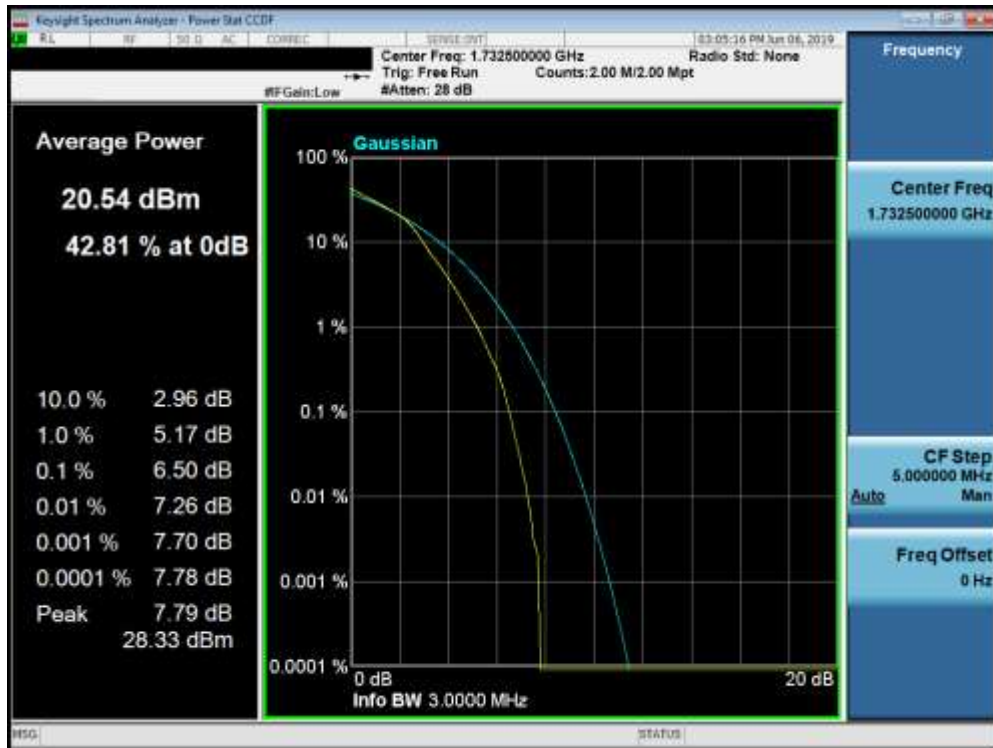


Plot 7-208. PAR Plot (Band 66/4 - 1.4MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFX525WA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1-ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset		Page 127 of 178

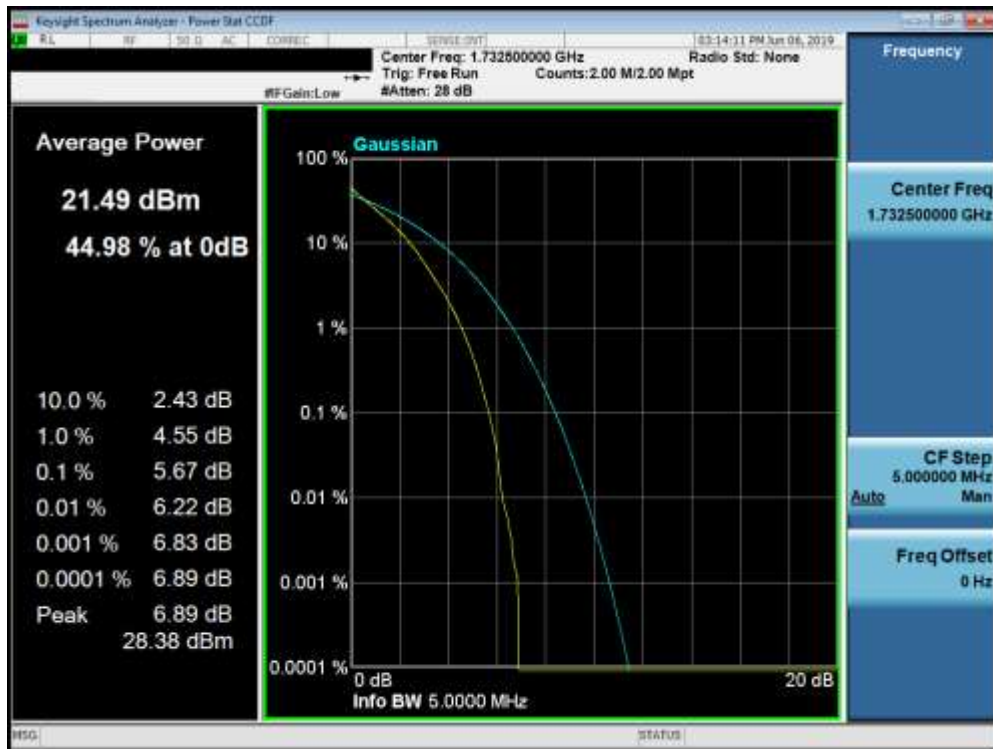


Plot 7-209. PAR Plot (Band 66/4 - 3.0MHz QPSK - Full RB Configuration)

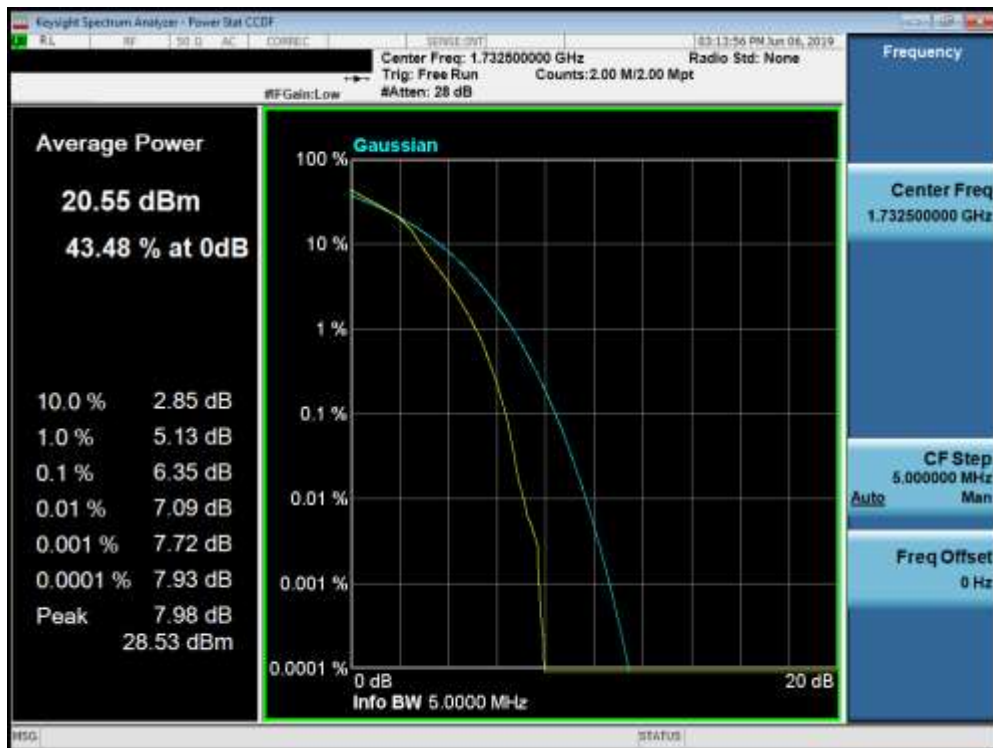


Plot 7-210. PAR Plot (Band 66/4 - 3.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFX525WA	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset	Page 128 of 178

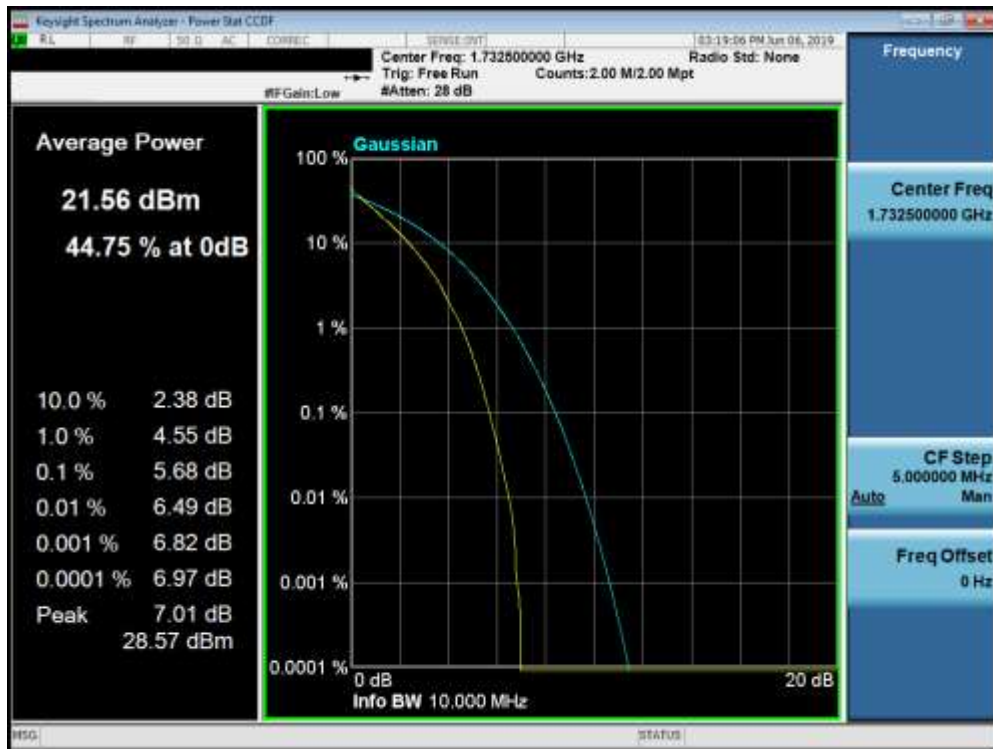


Plot 7-211. PAR Plot (Band 66/4 - 5.0MHz QPSK - Full RB Configuration)

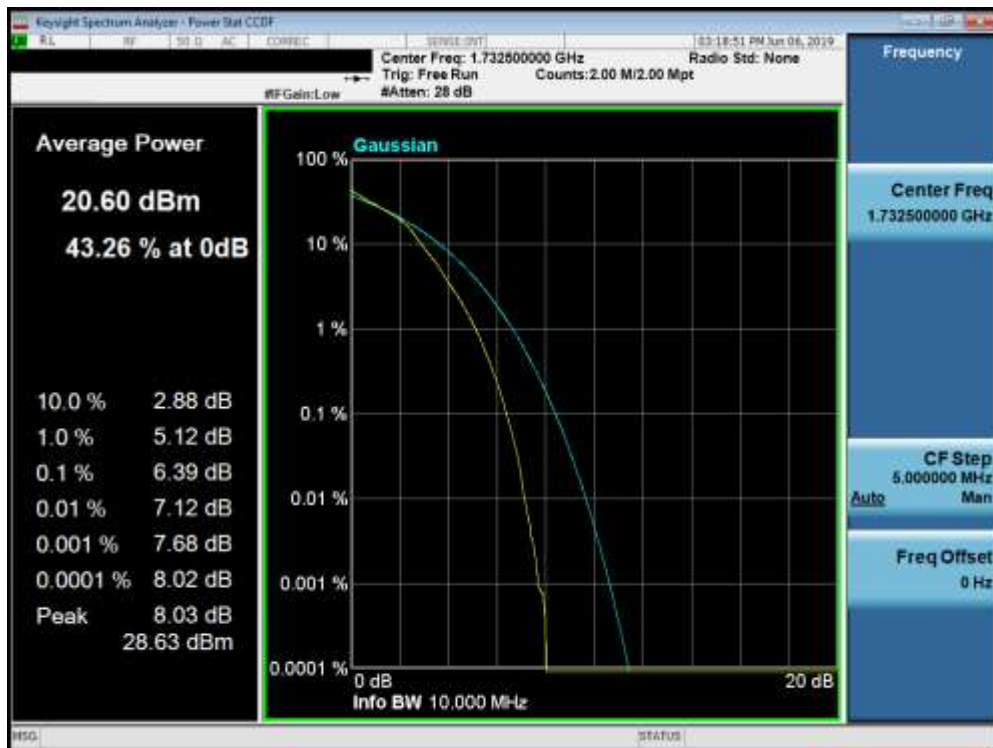


Plot 7-212. PAR Plot (Band 66/4 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFX525WA	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset	Page 129 of 178

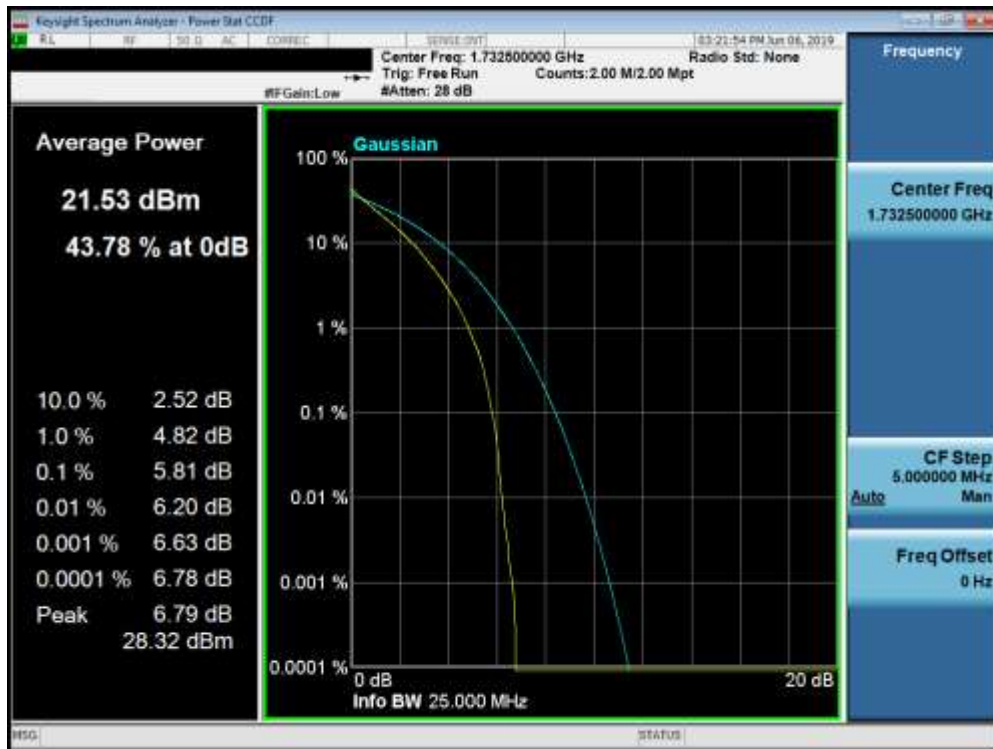


Plot 7-213. PAR Plot (Band 66/4 - 10.0MHz QPSK - Full RB Configuration)

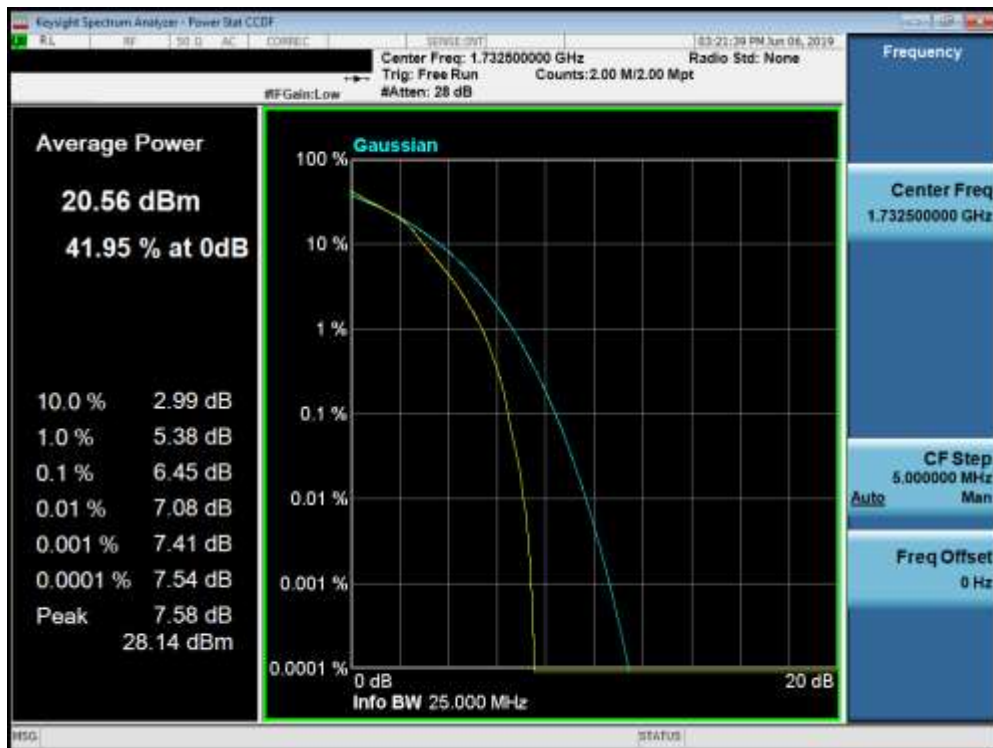


Plot 7-214. PAR Plot (Band 66/4 - 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFX525WA	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset	Page 130 of 178

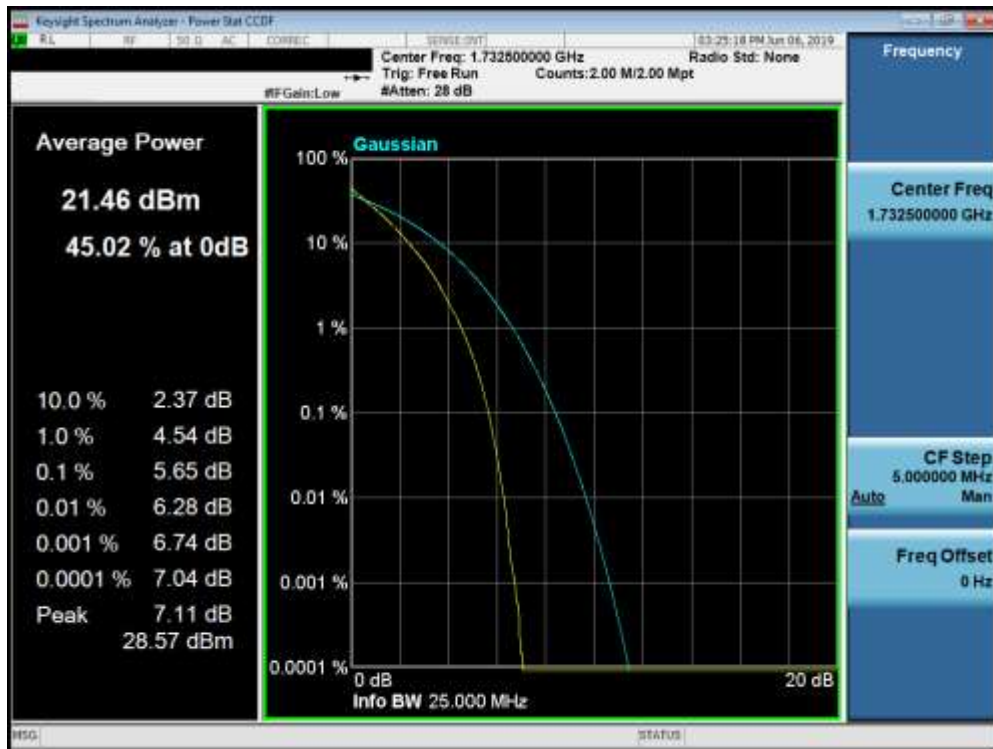


Plot 7-215. PAR Plot (Band 66/4 - 15.0MHz QPSK - Full RB Configuration)

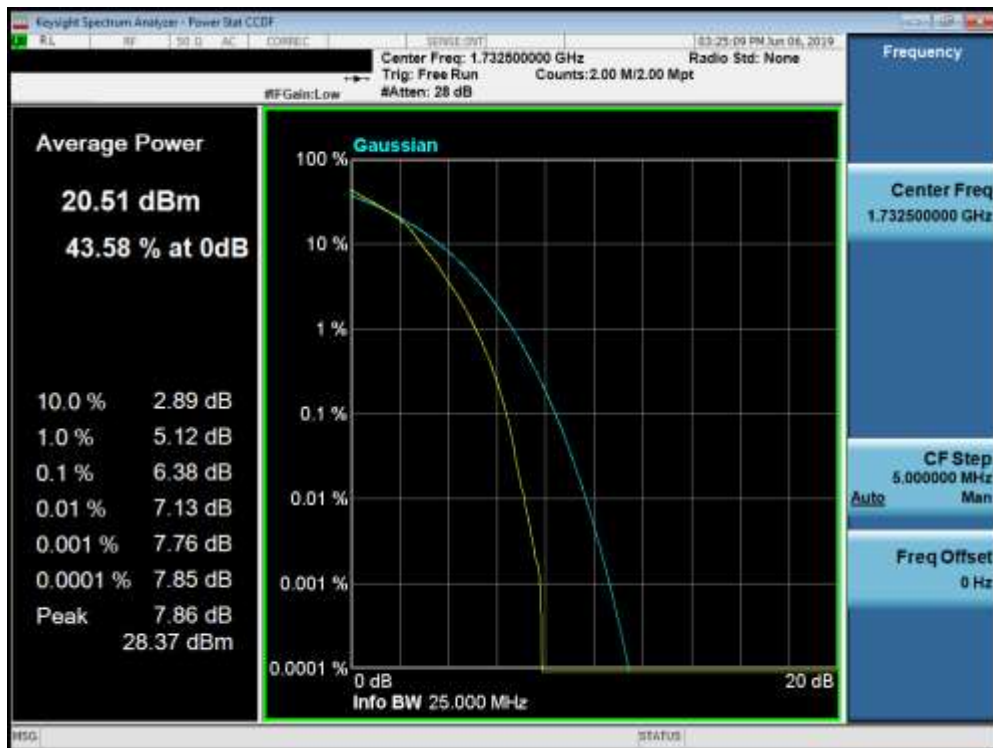


Plot 7-216. PAR Plot (Band 66/4 - 15.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFX525WA	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset	Page 131 of 178



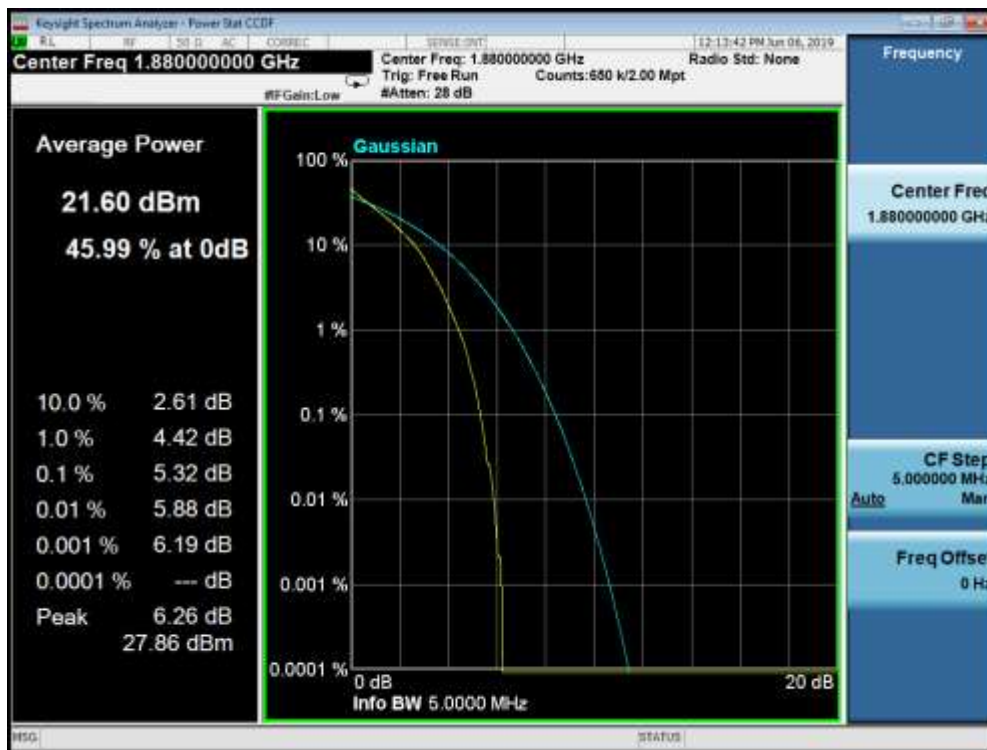
Plot 7-217. PAR Plot (Band 66/4 - 20.0MHz QPSK - Full RB Configuration)



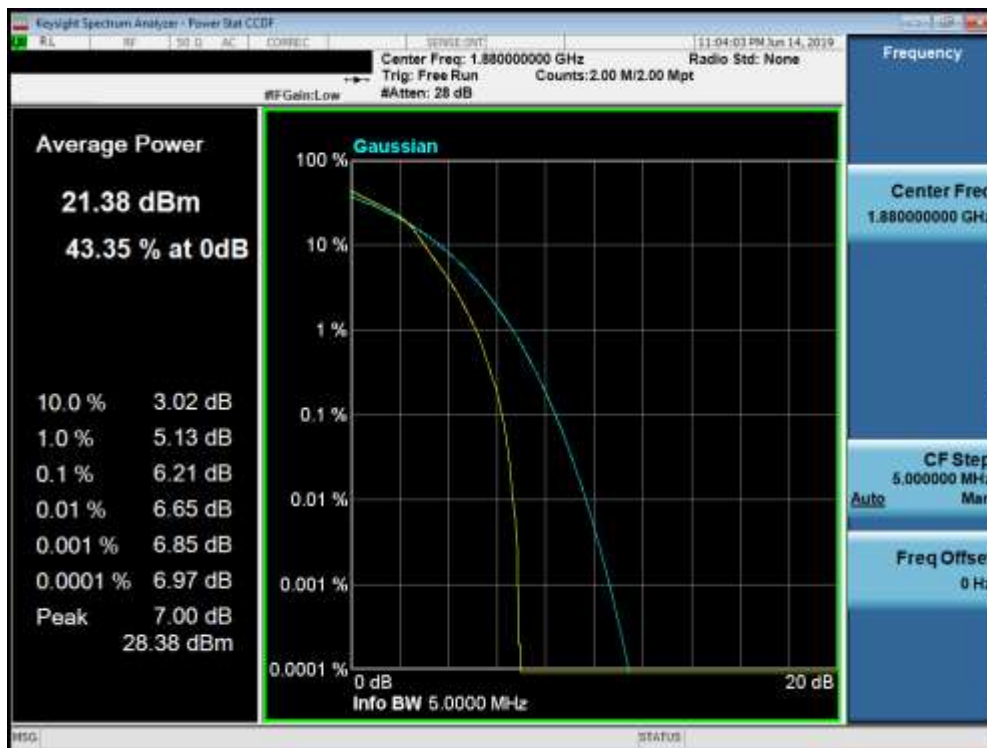
Plot 7-218. PAR Plot (Band 66/4 - 20.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFX525WA	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1-ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset	Page 132 of 178

Band 2

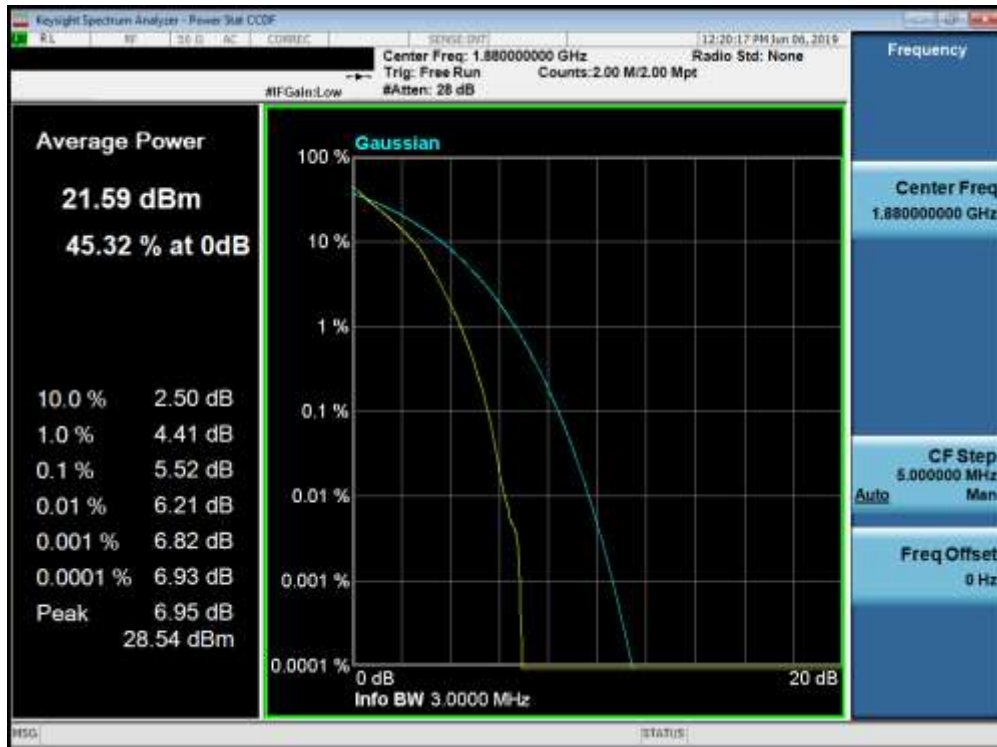


Plot 7-219. PAR Plot (Band 2 - 1.4MHz QPSK - Full RB Configuration)

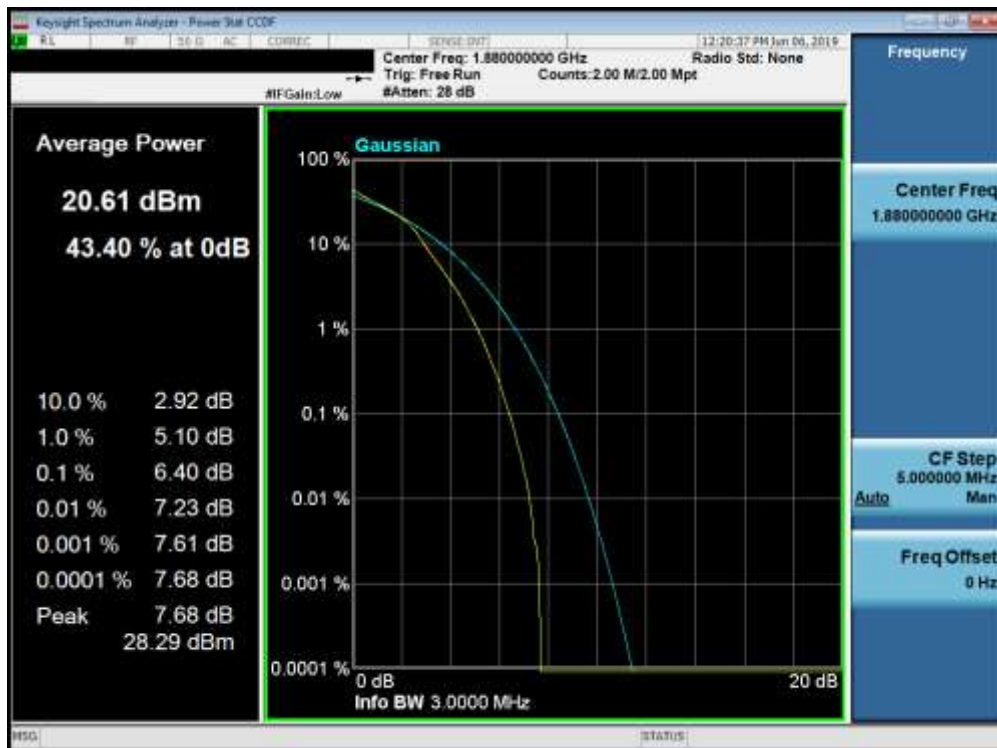


Plot 7-220. PAR Plot (Band 2 - 1.4MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFX525WA	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset	Page 133 of 178

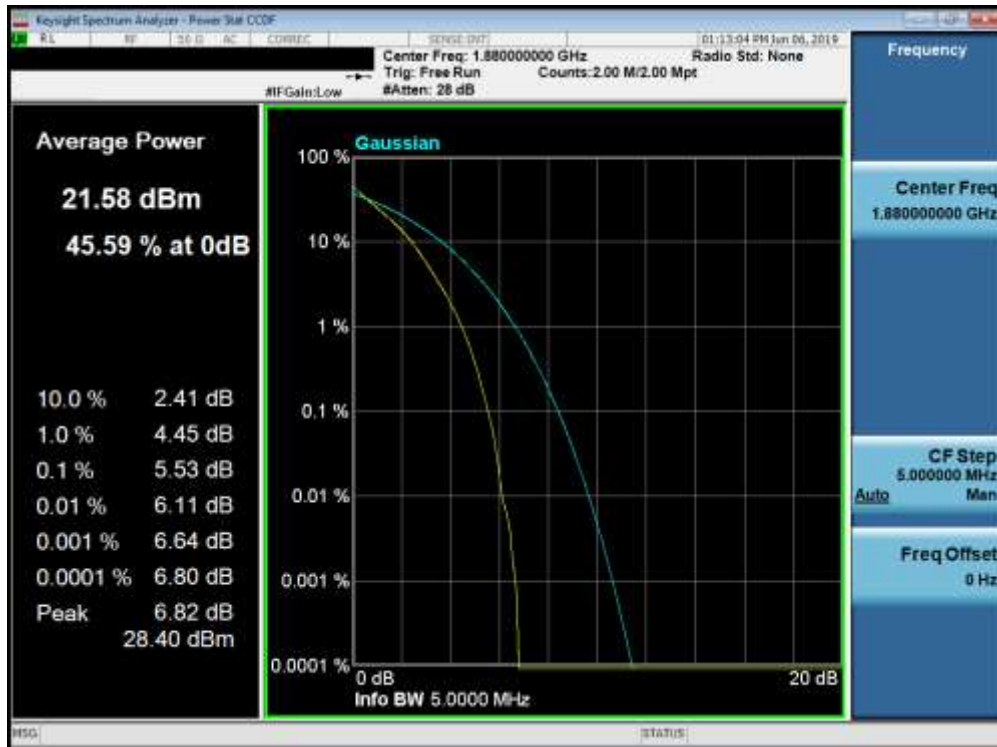


Plot 7-221. PAR Plot (Band 2 - 3.0MHz QPSK - Full RB Configuration)

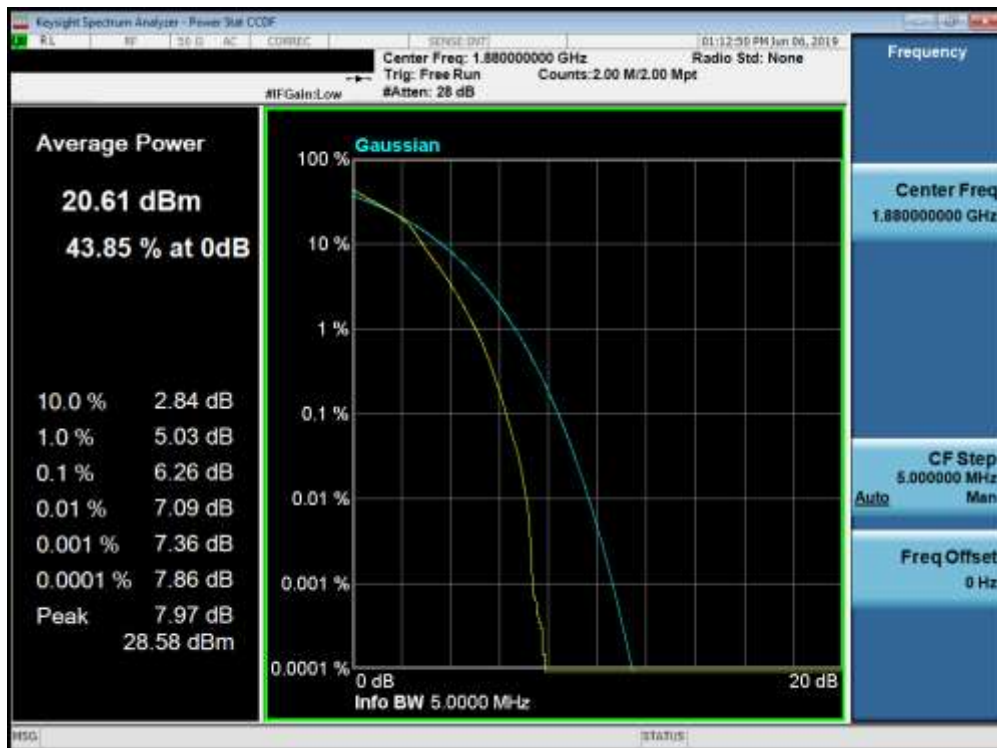


Plot 7-222. PAR Plot (Band 2 - 3.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFX525WA	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset	Page 134 of 178

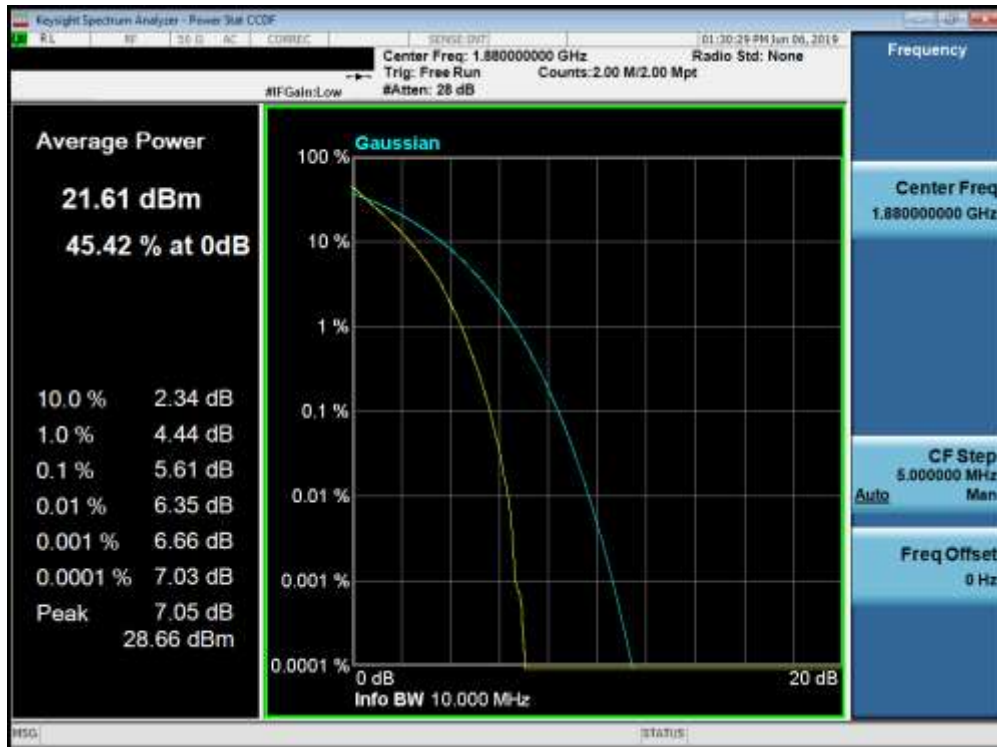


Plot 7-223. PAR Plot (Band 2 - 5.0MHz QPSK - Full RB Configuration)

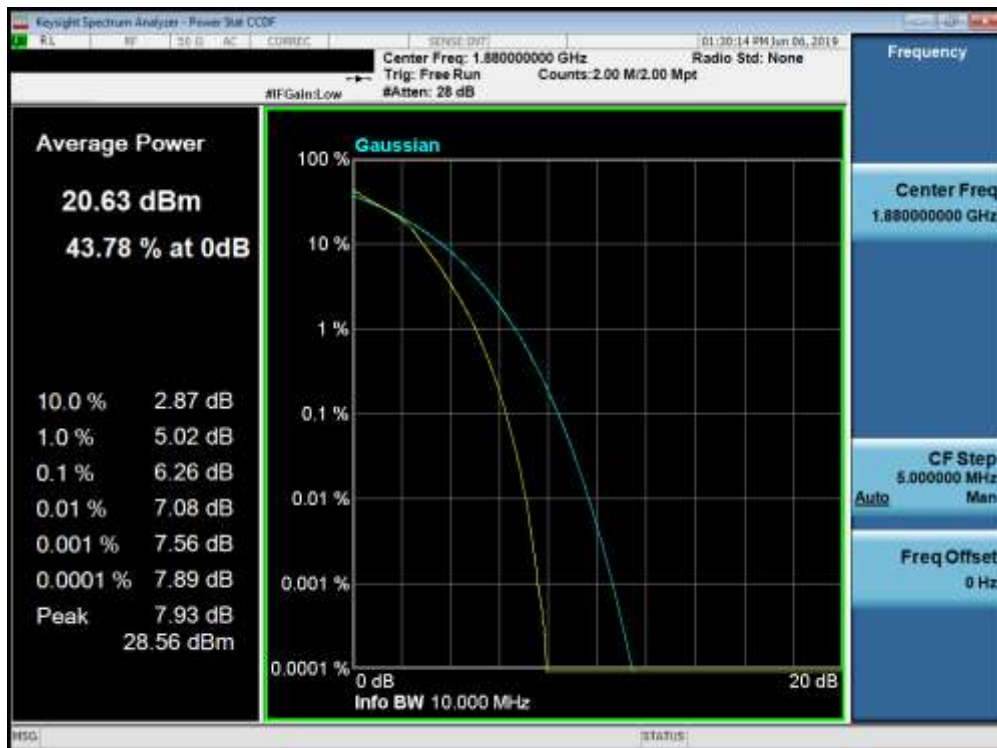


Plot 7-224. PAR Plot (Band 2 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFX525WA	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset	Page 135 of 178

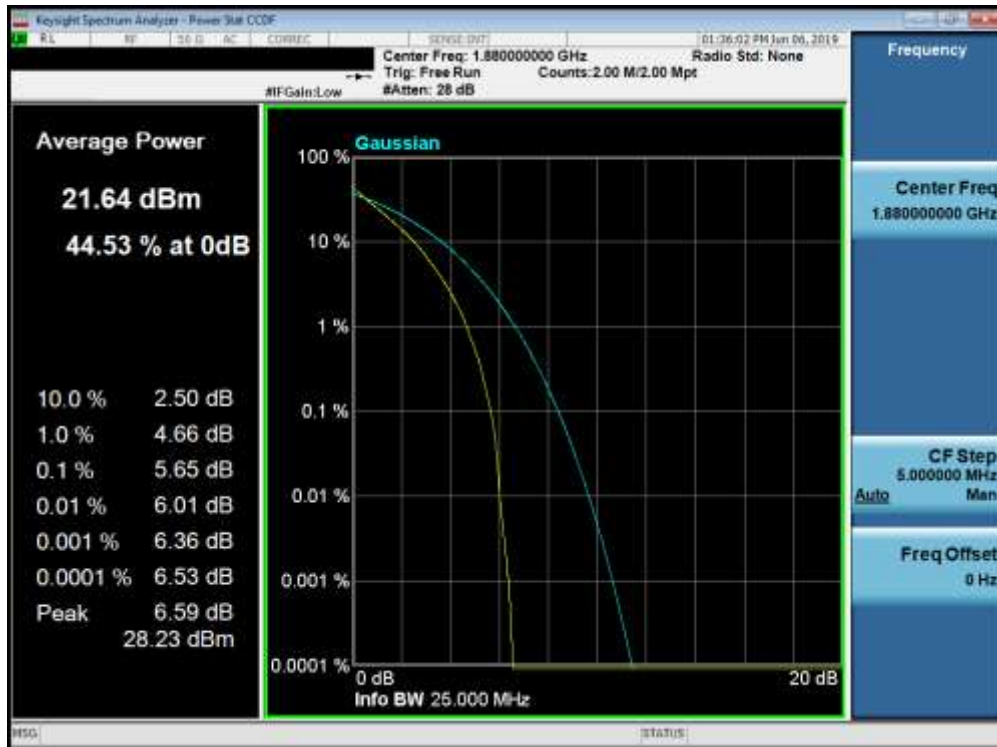


Plot 7-225. PAR Plot (Band 2 - 10.0MHz QPSK - Full RB Configuration)

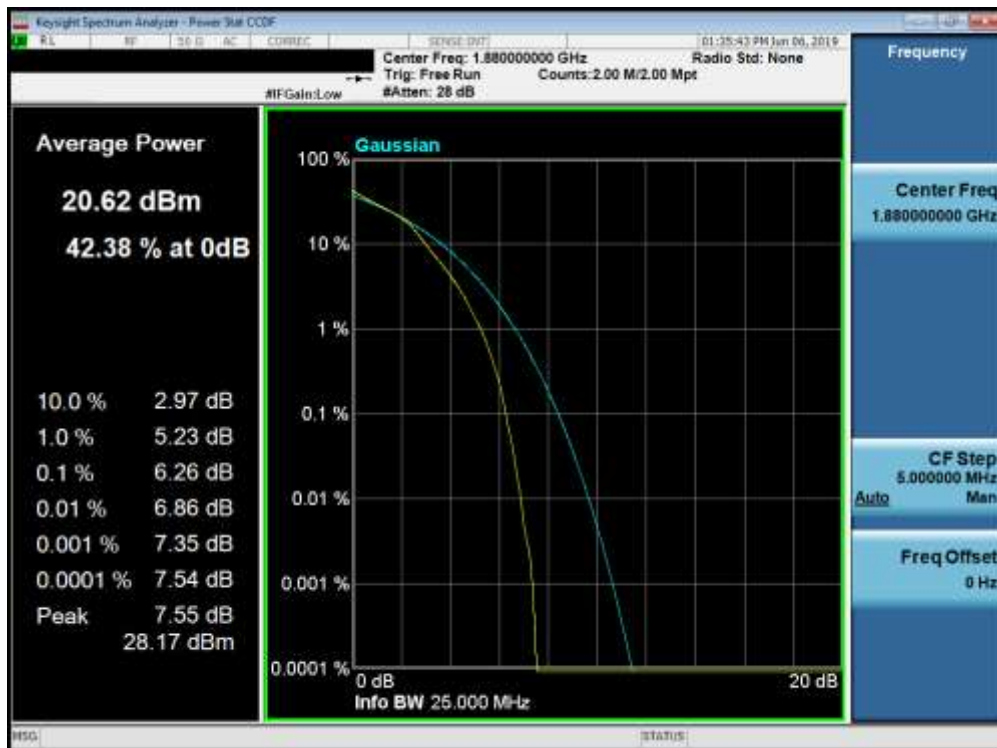


Plot 7-226. PAR Plot (Band 2 - 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFX525WA	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset	Page 136 of 178

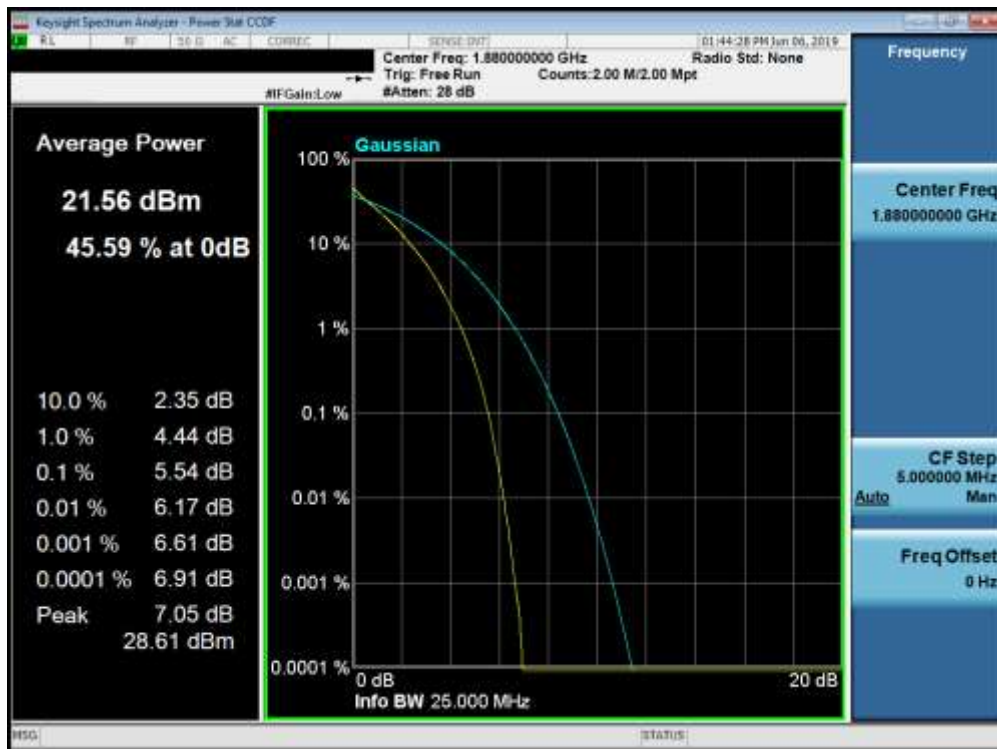


Plot 7-227. PAR Plot (Band 2 - 15.0MHz QPSK - Full RB Configuration)

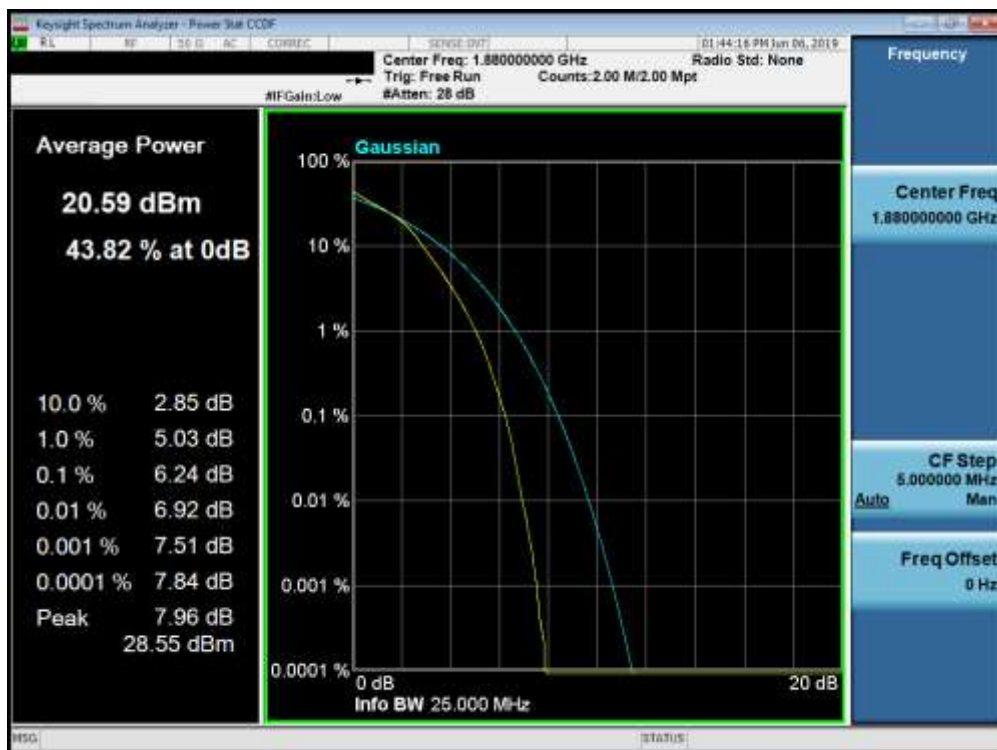


Plot 7-228. PAR Plot (Band 2 - 15.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFX525WA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset	Page 137 of 178



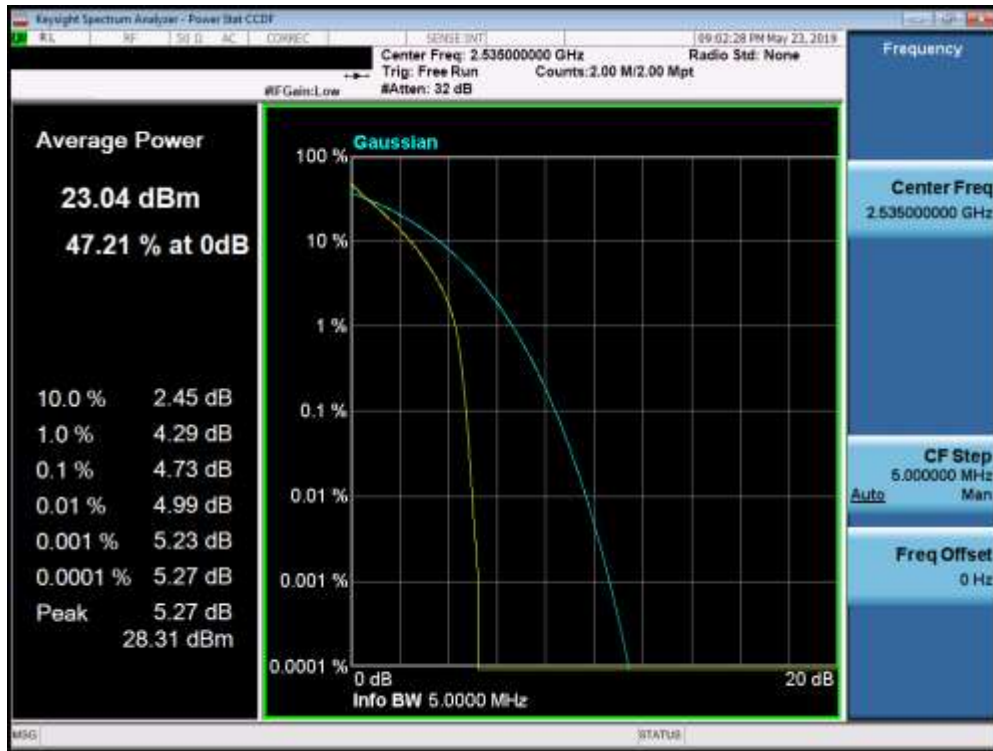
Plot 7-229. PAR Plot (Band 2 - 20.0MHz QPSK - Full RB Configuration)



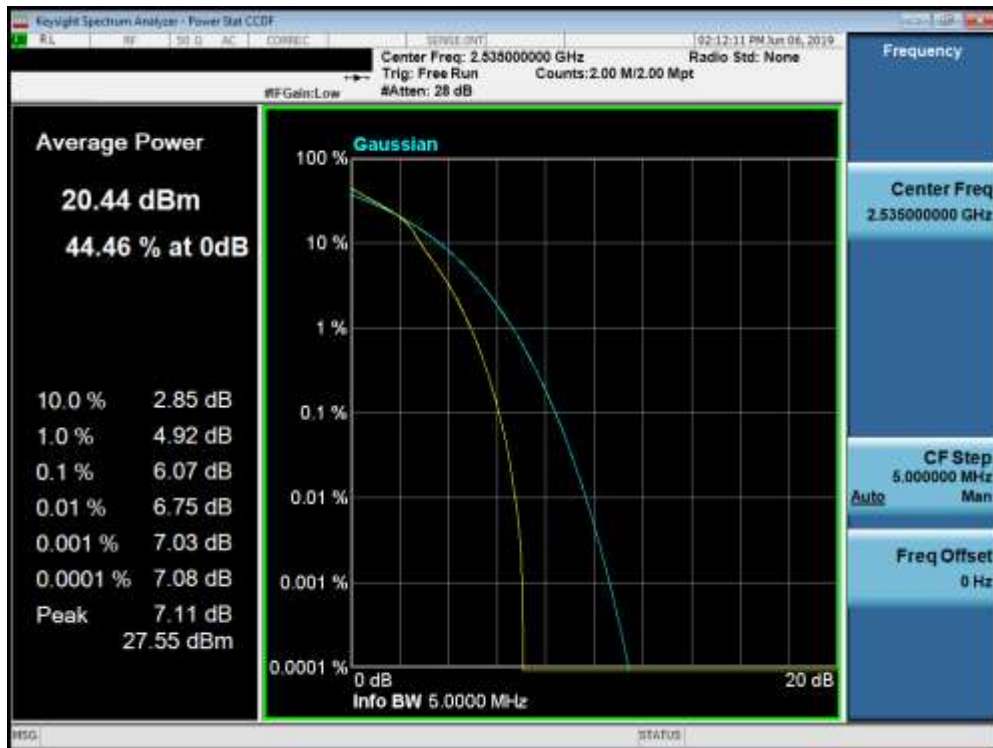
Plot 7-230. PAR Plot (Band 2 - 20.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFX525WA	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Band 7

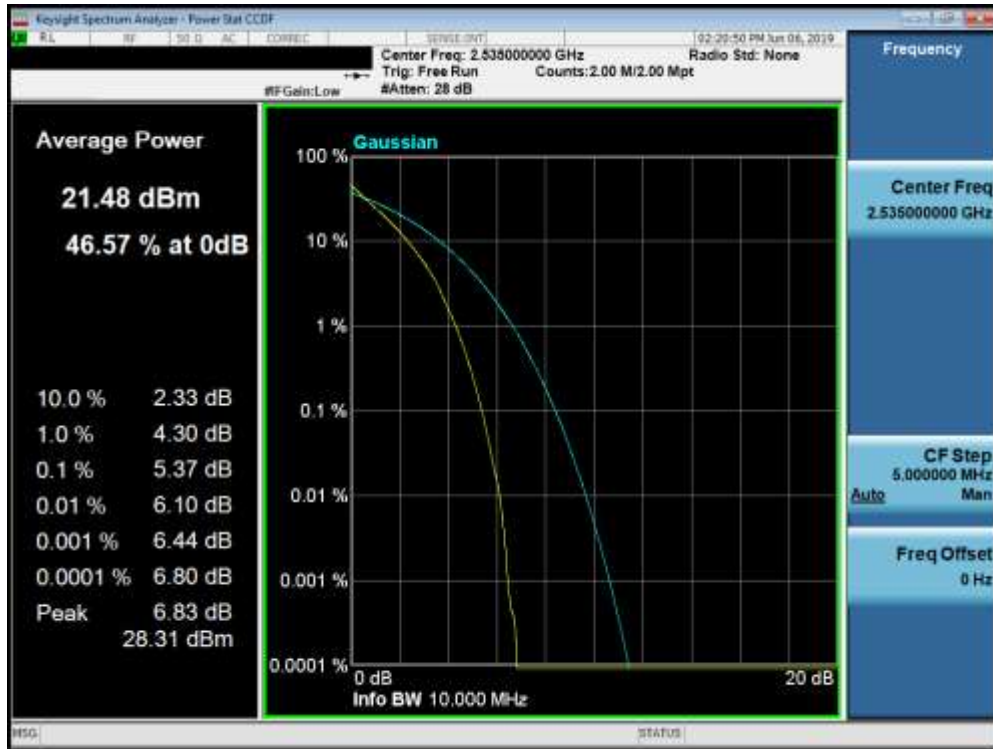


Plot 7-231. PAR Plot (Band 7 - 5.0MHz QPSK - Full RB Configuration)

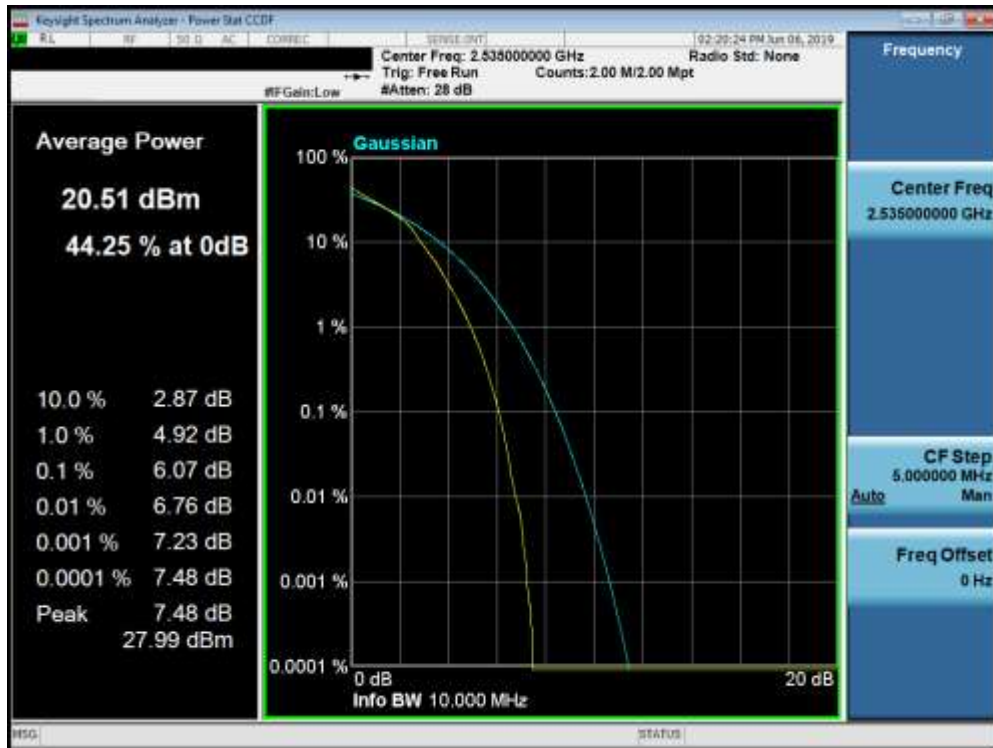


Plot 7-232. PAR Plot (Band 7 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFX525WA	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset	Page 139 of 178

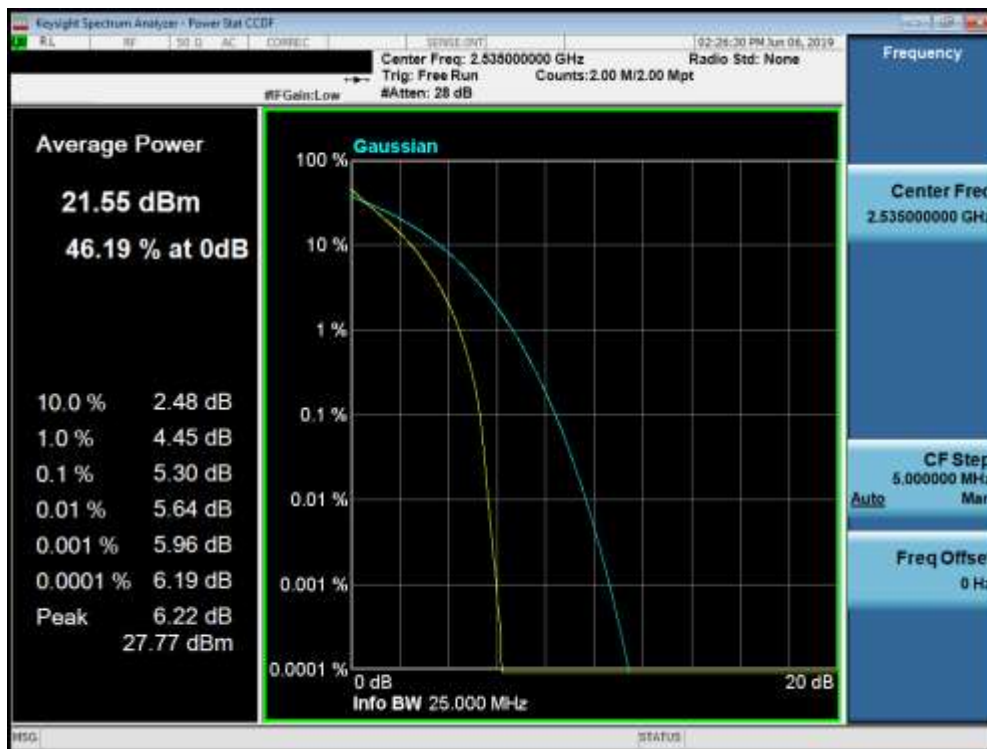


Plot 7-233. PAR Plot (Band 7 - 10.0MHz QPSK - Full RB Configuration)

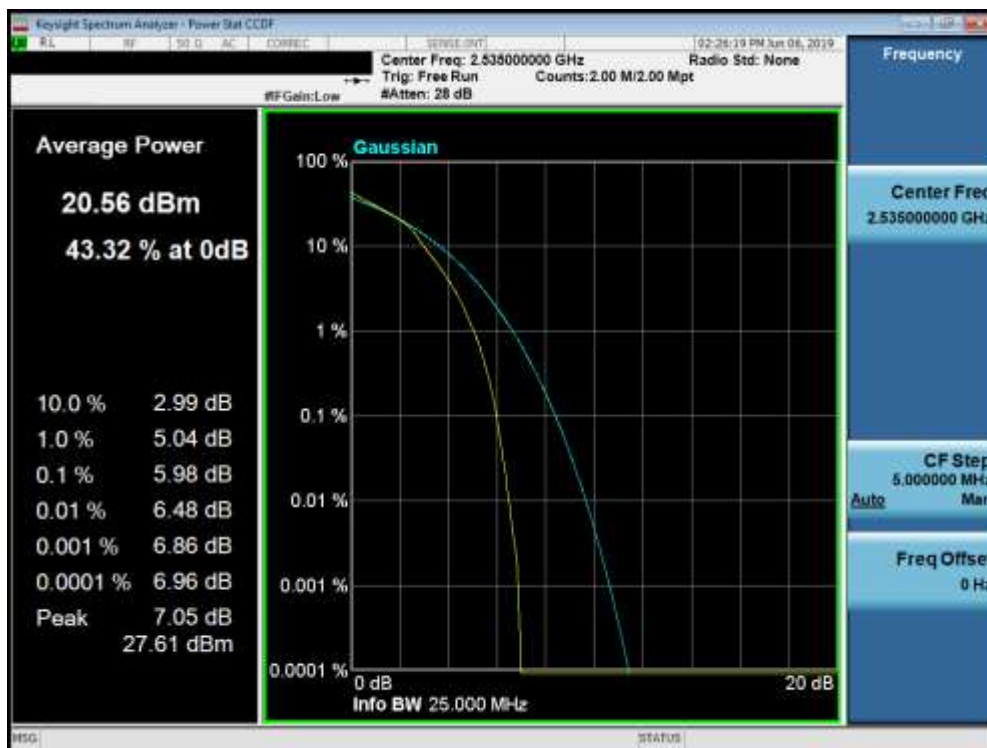


Plot 7-234. PAR Plot (Band 7 - 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFX525WA	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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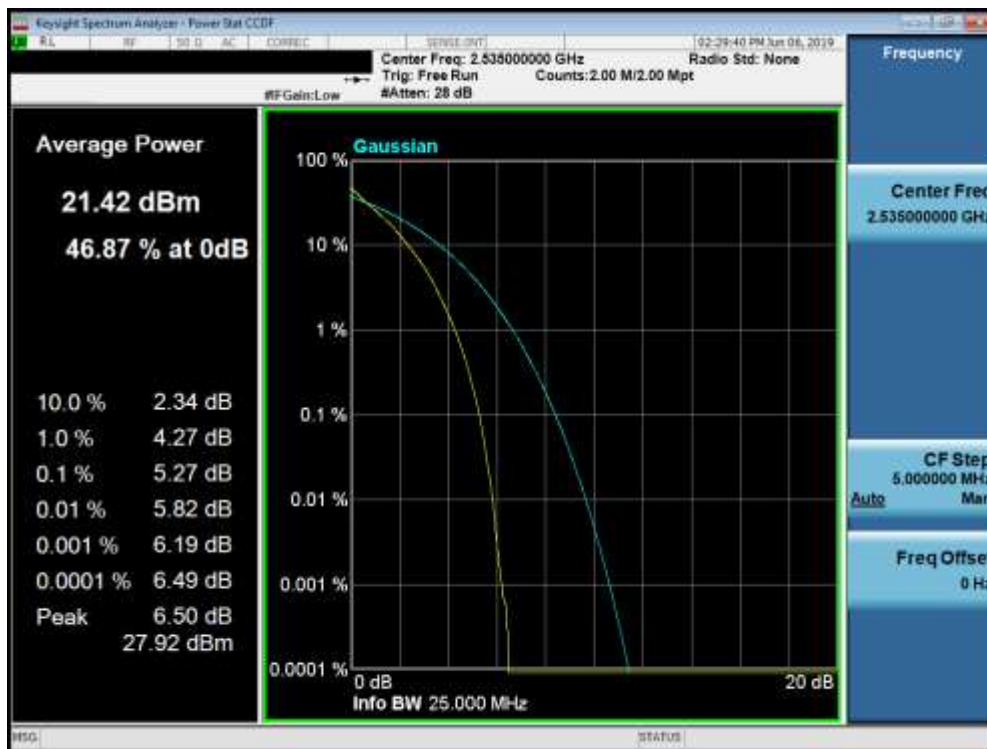


Plot 7-235. PAR Plot (Band 7 - 15.0MHz QPSK - Full RB Configuration)

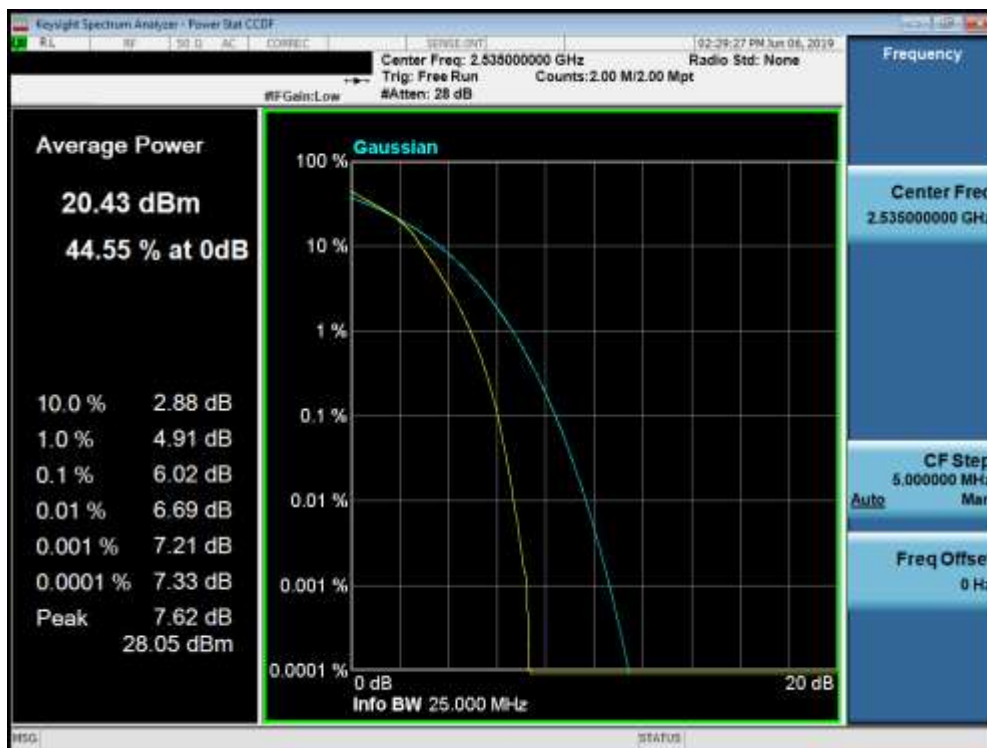


Plot 7-236. PAR Plot (Band 7 - 15.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFX525WA	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
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Plot 7-237. PAR Plot (Band 7 - 20.0MHz QPSK - Full RB Configuration)



Plot 7-238. PAR Plot (Band 7 - 20.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFX525WA	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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7.6 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.
2. RBW = 1 – 5% of the expected OBW, not to exceed 1MHz
3. VBW $\geq 3 \times$ RBW
4. Span = 1.5 times the OBW
5. No. of sweep points $\geq 2 \times$ span / RBW
6. Detector = RMS
7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto".
8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation.
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The trace was allowed to stabilize

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Test Setup

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

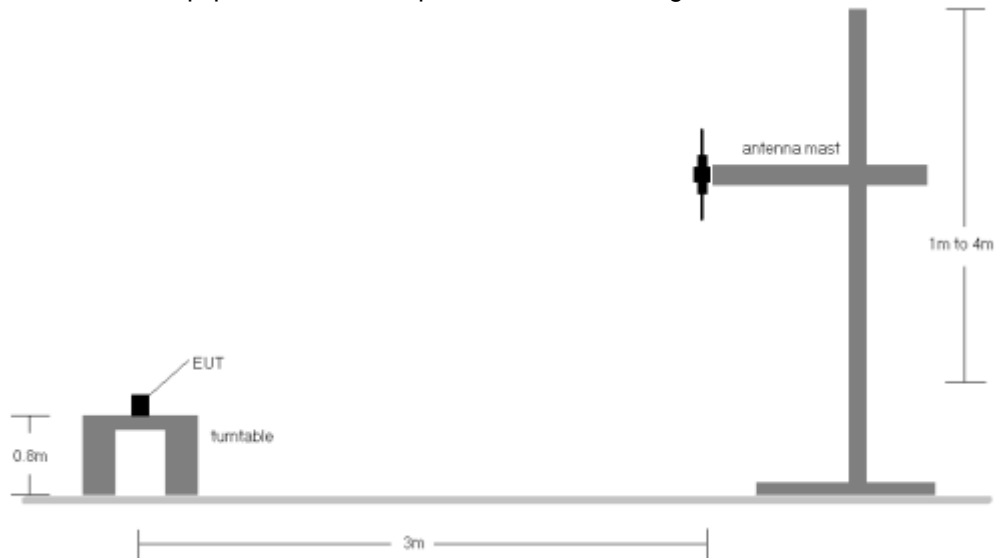


Figure 7-5. Radiated Test Setup <1GHz

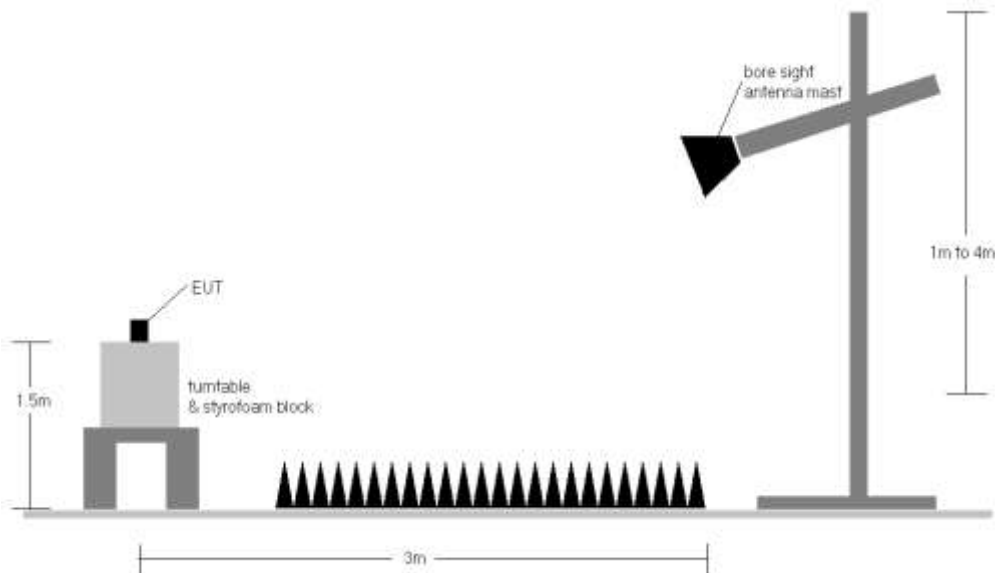


Figure 7-6. Radiated Test Setup >1GHz

Test Notes

- 1) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
- 2) This unit was tested with its standard battery.

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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]
699.70	1.4	QPSK	H	113	262	1 / 5	17.61	1.40	16.86	0.049	34.77	-17.91
707.50	1.4	QPSK	H	120	263	1 / 5	18.37	1.43	17.65	0.058	34.77	-17.12
715.30	1.4	QPSK	H	123	112	1 / 5	19.22	1.46	18.53	0.071	34.77	-16.24
715.30	1.4	16-QAM	H	123	112	1 / 5	18.30	1.46	17.61	0.058	34.77	-17.16
700.50	3	QPSK	H	118	261	1 / 14	17.92	1.40	17.17	0.052	34.77	-17.60
707.50	3	QPSK	H	123	277	1 / 14	18.18	1.43	17.46	0.056	34.77	-17.31
714.50	3	QPSK	H	124	112	1 / 14	19.35	1.46	18.66	0.073	34.77	-16.11
714.50	3	16-QAM	H	124	112	1 / 14	18.50	1.46	17.81	0.060	34.77	-16.96

Table 7-3. 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]
701.50	5	QPSK	H	121	71	1 / 24	18.78	1.41	18.04	0.064	34.77	-16.73
707.50	5	QPSK	H	125	58	1 / 24	19.35	1.43	18.63	0.073	34.77	-16.14
713.50	5	QPSK	H	123	62	1 / 24	19.96	1.46	19.27	0.084	34.77	-15.50
713.50	5	16-QAM	H	123	62	1 / 24	19.13	1.46	18.44	0.070	34.77	-16.33
704.00	10	QPSK	H	123	66	1 / 49	19.96	1.42	19.23	0.084	34.77	-15.54
707.50	10	QPSK	H	127	68	1 / 49	19.95	1.43	19.23	0.084	34.77	-15.54
711.00	10	QPSK	H	124	68	1 / 49	20.08	1.45	19.38	0.087	34.77	-15.39
711.00	10	16-QAM	H	124	68	1 / 49	19.20	1.45	18.50	0.071	34.77	-16.27
711.00	10	H	V	154	53	1 / 49	19.42	1.45	18.72	0.074	34.77	-16.05

Table 7-4. ERP Data (Band 12/17)

FCC ID: ZNFX525WA	 MEASUREMENT REPORT (CERTIFICATION) 		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]
779.50	5	QPSK	H	103	106	1 / 0	20.98	1.72	20.55	0.114	34.77	-14.22
782.00	5	QPSK	H	101	102	1 / 0	20.81	1.73	20.39	0.109	34.77	-14.38
784.50	5	QPSK	H	102	101	1 / 0	20.22	1.74	19.81	0.096	34.77	-14.96
779.50	5	16-QAM	H	103	106	1 / 0	20.23	1.72	19.80	0.096	34.77	-14.97
782.00	10	QPSK	H	103	84	1 / 0	20.52	1.73	20.10	0.102	34.77	-14.67
782.00	10	16-QAM	H	103	84	1 / 0	19.44	1.73	19.02	0.080	34.77	-15.75
779.50	5	QPSK	V	105	267	1 / 0	20.25	1.72	19.82	0.096	34.77	-14.95

Table 7-5. ERP Data (Band 13)

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	120	256	1 / 5	19.02	1.65	18.52	0.071	38.45	-19.94	20.67	0.117	40.61	-19.94
836.50	1.4	QPSK	V	111	259	1 / 5	20.23	1.57	19.65	0.092	38.45	-18.80	21.80	0.151	40.61	-18.80
848.30	1.4	QPSK	V	113	74	1 / 5	21.44	1.50	20.79	0.120	38.45	-17.66	22.94	0.197	40.61	-17.67
848.30	1.4	16-QAM	V	113	74	1 / 5	20.24	1.50	19.59	0.091	38.45	-18.86	21.74	0.149	40.61	-18.87
825.50	3	QPSK	V	116	263	1 / 14	18.82	1.64	18.31	0.068	38.45	-20.14	20.46	0.111	40.61	-20.15
836.50	3	QPSK	V	116	261	1 / 14	20.74	1.57	20.16	0.104	38.45	-18.29	22.31	0.170	40.61	-18.29
847.50	3	QPSK	V	114	66	1 / 14	21.63	1.51	20.99	0.125	38.45	-17.46	23.14	0.206	40.61	-17.47
847.50	3	16-QAM	V	114	66	1 / 14	20.43	1.51	19.79	0.095	38.45	-18.66	21.94	0.156	40.61	-18.67
826.50	5	QPSK	V	191	102	1 / 24	21.24	1.63	20.72	0.118	38.45	-17.73	22.87	0.194	40.61	-17.73
836.50	5	QPSK	V	106	118	1 / 24	21.49	1.57	20.91	0.123	38.45	-17.54	23.06	0.202	40.61	-17.54
846.50	5	QPSK	V	103	113	1 / 24	21.08	1.51	20.44	0.111	38.45	-18.01	22.59	0.182	40.61	-18.01
836.50	5	16-QAM	V	106	118	1 / 24	20.55	1.57	19.97	0.099	38.45	-18.48	22.12	0.163	40.61	-18.48
829.00	10	QPSK	V	118	126	1 / 49	21.89	1.62	21.36	0.137	38.45	-17.09	23.51	0.224	40.61	-17.10
836.50	10	QPSK	V	115	141	1 / 49	22.42	1.57	21.84	0.153	38.45	-16.61	23.99	0.251	40.61	-16.61
844.00	10	QPSK	V	113	71	1 / 49	21.60	1.53	20.98	0.125	38.45	-17.47	23.13	0.205	40.61	-17.48
836.50	10	16-QAM	V	115	141	1 / 49	21.38	1.57	20.80	0.120	38.45	-17.65	22.95	0.197	40.61	-17.65
836.50	10	QPSK	H	102	287	1 / 49	19.90	1.57	19.32	0.086	38.45	-19.13	21.47	0.140	40.61	-19.13

Table 7-6. ERP Data (Band 5)

FCC ID: ZNFX525WA	 MEASUREMENT REPORT (CERTIFICATION) 		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]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1710.70	1.4	QPSK	H	125	19	1 / 5	15.74	8.43	24.17	0.261	30.00	-5.83
1745.00	1.4	QPSK	H	129	10	1 / 5	17.49	7.92	25.41	0.347	30.00	-4.59
1779.30	1.4	QPSK	H	167	6	1 / 5	16.30	8.07	24.37	0.274	30.00	-5.63
1745.00	1.4	16-QAM	H	129	10	1 / 5	16.72	7.92	24.64	0.291	30.00	-5.36
1711.50	3	QPSK	H	175	11	1 / 14	16.12	8.42	24.54	0.284	30.00	-5.46
1745.00	3	QPSK	H	131	9	1 / 14	17.20	7.92	25.12	0.325	30.00	-4.88
1778.50	3	QPSK	H	168	3	1 / 14	16.65	8.07	24.72	0.296	30.00	-5.28
1745.00	3	16-QAM	H	131	9	1 / 14	16.42	7.92	24.34	0.272	30.00	-5.66
1712.50	5	QPSK	H	130	12	1 / 24	15.53	8.41	23.94	0.247	30.00	-6.06
1745.00	5	QPSK	H	129	8	1 / 24	17.28	7.92	25.20	0.331	30.00	-4.80
1777.50	5	QPSK	H	166	4	1 / 24	16.28	8.06	24.34	0.272	30.00	-5.66
1712.50	5	16-QAM	H	130	12	1 / 24	15.78	8.41	24.19	0.262	30.00	-5.81
1715.00	10	QPSK	H	175	8	1 / 49	15.48	8.37	23.85	0.243	30.00	-6.15
1745.00	10	QPSK	H	128	11	1 / 49	16.52	7.92	24.44	0.278	30.00	-5.56
1775.00	10	QPSK	H	168	3	1 / 49	16.80	8.04	24.84	0.305	30.00	-5.16
1775.00	10	16-QAM	H	168	3	1 / 49	15.88	8.04	23.92	0.247	30.00	-6.08
1717.50	15	QPSK	H	168	3	1 / 74	15.05	8.33	23.38	0.218	30.00	-6.62
1745.00	15	QPSK	H	132	6	1 / 74	16.92	7.92	24.84	0.305	30.00	-5.16
1772.50	15	QPSK	H	167	4	1 / 74	16.53	8.02	24.55	0.285	30.00	-5.45
1745.00	15	16-QAM	H	132	6	1 / 74	16.23	7.92	24.15	0.260	30.00	-5.85
1720.00	20	QPSK	H	130	12	1 / 99	16.03	8.29	24.32	0.271	30.00	-5.68
1745.00	20	QPSK	H	129	3	1 / 99	15.76	7.92	23.68	0.233	30.00	-6.32
1770.00	20	QPSK	H	166	4	1 / 99	15.97	8.00	23.97	0.250	30.00	-6.03
1720.00	20	16-QAM	H	130	12	1 / 99	15.43	8.29	23.72	0.236	30.00	-6.28
1745.00	1.4	QPSK	V	113	4	1 / 5	14.25	7.92	22.17	0.165	30.00	-7.83

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

FCC ID: ZNFX525WA	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset	Page 147 of 178

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	144	122	1 / 0	16.50	8.42	24.92	0.310	33.01	-8.09
1880.00	1.4	QPSK	H	148	184	1 / 0	16.61	8.26	24.87	0.307	33.01	-8.14
1909.30	1.4	QPSK	H	157	189	1 / 0	16.70	8.16	24.86	0.306	33.01	-8.15
1850.70	1.4	16-QAM	H	144	122	1 / 0	15.83	8.42	24.25	0.266	33.01	-8.76
1851.50	3	QPSK	H	156	156	1 / 0	16.65	8.42	25.07	0.321	33.01	-7.94
1880.00	3	QPSK	H	162	174	1 / 0	16.66	8.26	24.92	0.310	33.01	-8.09
1908.50	3	QPSK	H	141	188	1 / 0	16.70	8.16	24.86	0.306	33.01	-8.15
1851.50	3	16-QAM	H	156	156	1 / 0	15.73	8.42	24.15	0.260	33.01	-8.86
1852.50	5	QPSK	H	144	191	1 / 0	16.56	8.41	24.97	0.314	33.01	-8.04
1880.00	5	QPSK	H	148	188	1 / 0	15.62	8.26	23.88	0.244	33.01	-9.13
1907.50	5	QPSK	H	157	184	1 / 0	15.92	8.16	24.08	0.256	33.01	-8.93
1852.50	5	16-QAM	H	144	191	1 / 0	15.82	8.41	24.23	0.265	33.01	-8.78
1855.00	10	QPSK	H	152	178	1 / 0	16.28	8.40	24.68	0.294	33.01	-8.33
1880.00	10	QPSK	H	147	181	1 / 0	15.75	8.26	24.01	0.252	33.01	-9.00
1905.00	10	QPSK	H	156	183	1 / 0	14.96	8.15	23.11	0.205	33.01	-9.90
1855.00	10	16-QAM	H	152	178	1 / 0	15.50	8.40	23.90	0.245	33.01	-9.11
1857.50	15	QPSK	H	143	187	1 / 0	16.42	8.38	24.80	0.302	33.01	-8.21
1880.00	15	QPSK	H	136	182	1 / 0	15.50	8.26	23.76	0.237	33.01	-9.25
1902.50	15	QPSK	H	157	206	1 / 0	14.51	8.15	22.66	0.184	33.01	-10.35
1857.50	15	16-QAM	H	143	187	1 / 0	15.60	8.38	23.98	0.250	33.01	-9.03
1860.00	20	QPSK	H	141	200	1 / 0	15.58	8.37	23.95	0.248	33.01	-9.06
1880.00	20	QPSK	H	156	196	1 / 0	15.27	8.26	23.53	0.225	33.01	-9.48
1900.00	20	QPSK	H	136	197	1 / 0	16.38	8.15	24.53	0.283	33.01	-8.48
1860.00	20	16-QAM	H	141	200	1 / 0	14.83	8.37	23.20	0.209	33.01	-9.81
1852.50	5	H	V	124	137	1 / 0	15.72	8.42	24.14	0.259	33.01	-8.87

Table 7-8. EIRP Data (Band 2)

FCC ID: ZNFX525WA	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset	Page 148 of 178

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]
2502.50	5	QPSK	H	108	221	1 / 0	13.95	9.43	23.38	0.218	33.01	-9.63
2535.00	5	QPSK	H	106	201	1 / 24	-9.43	9.39	22.78	0.190	33.01	-10.23
2567.50	5	QPSK	H	112	214	1 / 0	-9.43	9.45	23.22	0.210	33.01	-9.79
2502.50	5	16-QAM	H	108	221	1 / 0	-9.43	9.43	22.69	0.186	33.01	-10.32
2505.00	10	QPSK	H	102	209	1 / 0	-9.43	9.43	23.47	0.222	33.01	-9.54
2535.00	10	QPSK	H	105	217	1 / 49	-9.43	9.39	22.91	0.195	33.01	-10.10
2565.00	10	QPSK	H	100	215	1 / 0	-9.43	9.44	23.38	0.218	33.01	-9.63
2505.00	10	16-QAM	H	102	209	1 / 0	-9.43	9.43	22.77	0.189	33.01	-10.24
2507.50	15	QPSK	H	102	209	1 / 0	-9.43	9.42	23.37	0.217	33.01	-9.64
2535.00	15	QPSK	H	105	217	1 / 74	-9.43	9.39	22.84	0.192	33.01	-10.17
2562.50	15	QPSK	H	100	215	1 / 0	-9.43	9.43	23.28	0.213	33.01	-9.73
2507.50	15	16-QAM	H	102	209	1 / 0	-9.43	9.42	22.60	0.182	33.01	-10.41
2510.00	20	QPSK	H	102	209	1 / 0	14.04	9.42	23.46	0.222	33.01	-9.55
2535.00	20	QPSK	H	105	217	1 / 99	13.78	9.39	23.17	0.208	33.01	-9.84
2560.00	20	QPSK	H	100	215	1 / 0	13.72	9.42	23.14	0.206	33.01	-9.87
2510.00	20	16-QAM	H	102	209	1 / 0	13.30	9.42	22.72	0.187	33.01	-10.29
10.00	QPSK	H	V	198	321	1 / 0	10.77	9.43	20.20	0.105	33.01	-12.81

Table 7-9. EIRP Data (Band 7)

FCC ID: ZNFX525WA	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset	Page 149 of 178

7.7 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: ZNFX525WA	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset	Page 150 of 178

Test Setup

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

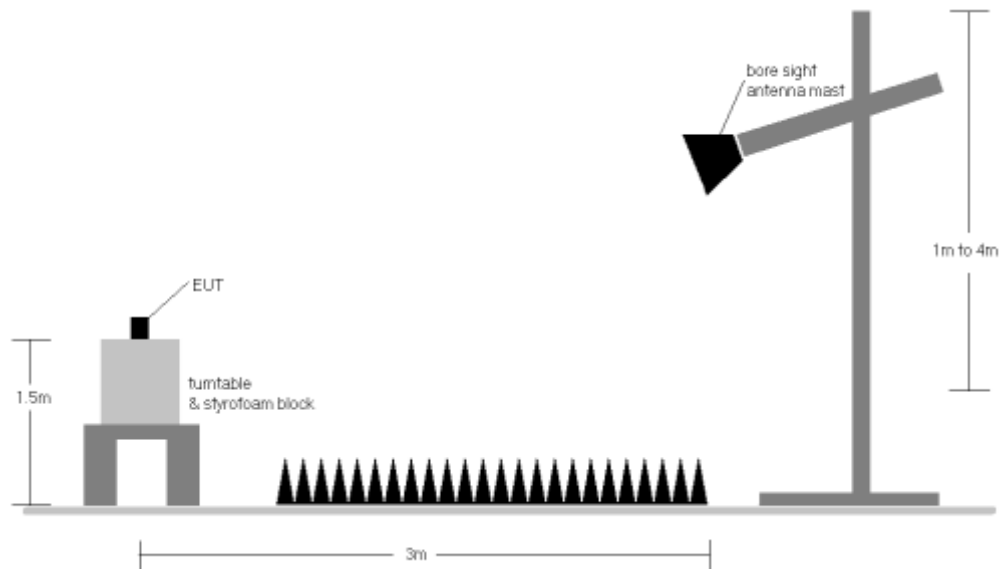


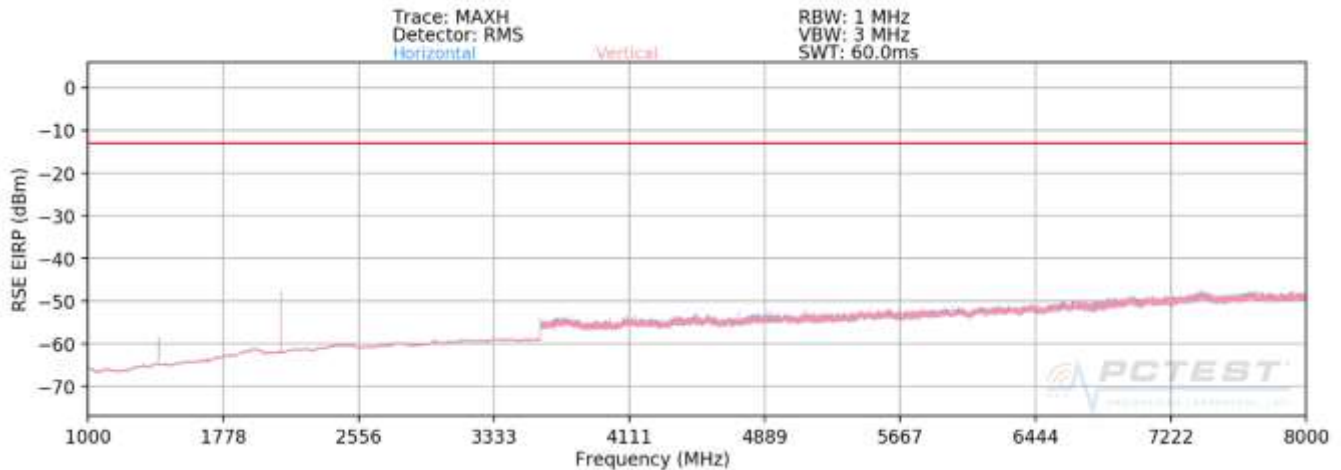
Figure 7-7. Test Instrument & Measurement Setup

Test Notes

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

FCC ID: ZNFX525WA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset		Page 151 of 178

Band 12/17



Plot 7-239. Radiated Spurious Plot above 1GHz (Band 12/17)

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	H	165	214	-67.80	7.99	-59.80	-46.8
2112.00	H	169	134	-47.69	9.11	-38.58	-25.6
2816.00	H	-	-	-68.77	10.11	-58.66	-45.7
3520.00	H	-	-	-72.34	9.73	-62.60	-49.6

Table 7-10. Radiated Spurious Data (Band 12/17 – Low Channel)

FCC ID: ZNFX525WA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset		Page 152 of 178

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	H	116	342	-69.25	8.09	-61.16	-48.2
2122.50	H	108	148	-46.61	9.11	-37.50	-24.5
2830.00	H	-	-	-70.96	10.14	-60.82	-47.8
3537.50	H	-	-	-72.41	9.76	-62.65	-49.7

Table 7-11. Radiated Spurious Data (Band 12/17 – Mid Channel)

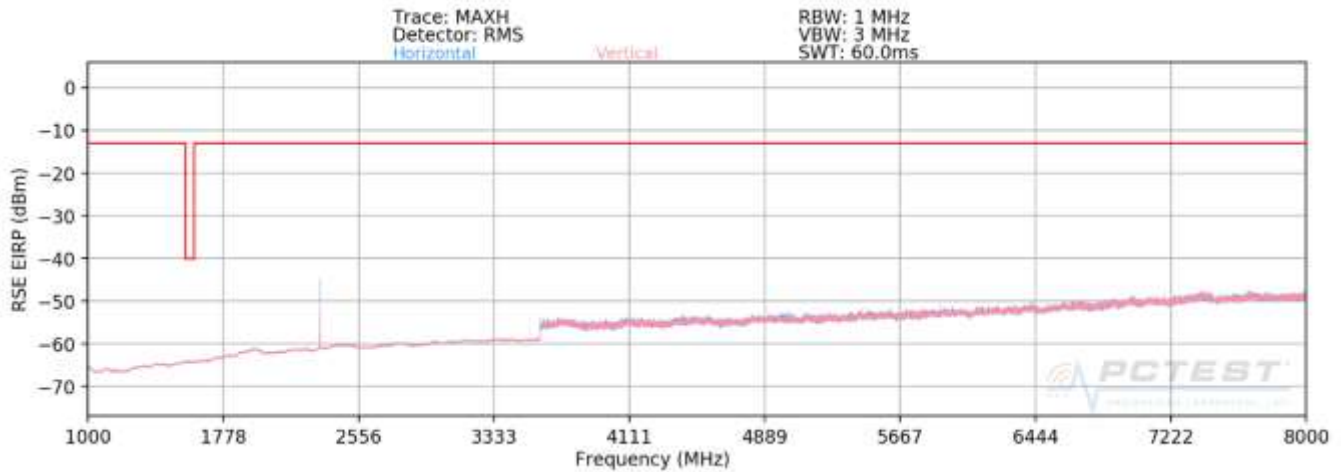
OPERATING FREQUENCY: 711.00 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 10.0 MHz
 DISTANCE: 3 meters
 LIMIT: -13 dBm

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	H	200	305	-69.22	8.18	-61.04	-48.0
2133.00	H	110	141	-50.97	9.11	-41.86	-28.9
2844.00	H	-	-	-70.44	10.17	-60.27	-47.3
3555.00	H	-	-	-73.41	9.80	-63.61	-50.6

Table 7-12. Radiated Spurious Data (Band 12/17 – High Channel)

FCC ID: ZNFX525WA	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset	Page 153 of 178

Band 13



Plot 7-240. Radiated Spurious Plot above 1GHz (Band 13)

OPERATING FREQUENCY: 779.50 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 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]
2338.50	H	-	-	-69.65	9.47	-60.18	-47.2
3118.00	H	160	188	-48.09	9.51	-38.58	-25.6
3897.50	H	-	-	-67.41	9.25	-58.16	-45.2
4677.00	H	-	-	-70.62	11.40	-59.21	-46.2

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

FCC ID: ZNFX525WA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset		Page 154 of 178

OPERATING FREQUENCY: 782.00 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 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	H	117	58	-67.86	9.44	-58.43	-45.4
3128.00	H	187	177	-57.56	9.48	-48.08	-35.1
3910.00	H	-	-	-68.12	9.26	-58.86	-45.9
4692.00	H	-	-	-73.39	11.43	-61.95	-49.0

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

OPERATING FREQUENCY: 784.50 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 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]
2353.50	H	127	244	-69.51	9.40	-60.11	-47.1
3138.00	H	198	128	-52.52	9.45	-43.06	-30.1
3922.50	H	-	-	-68.50	9.26	-59.23	-46.2
4707.00	H	-	-	-70.56	11.45	-59.11	-46.1

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

FCC ID: ZNFX525WA	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset	Page 155 of 178

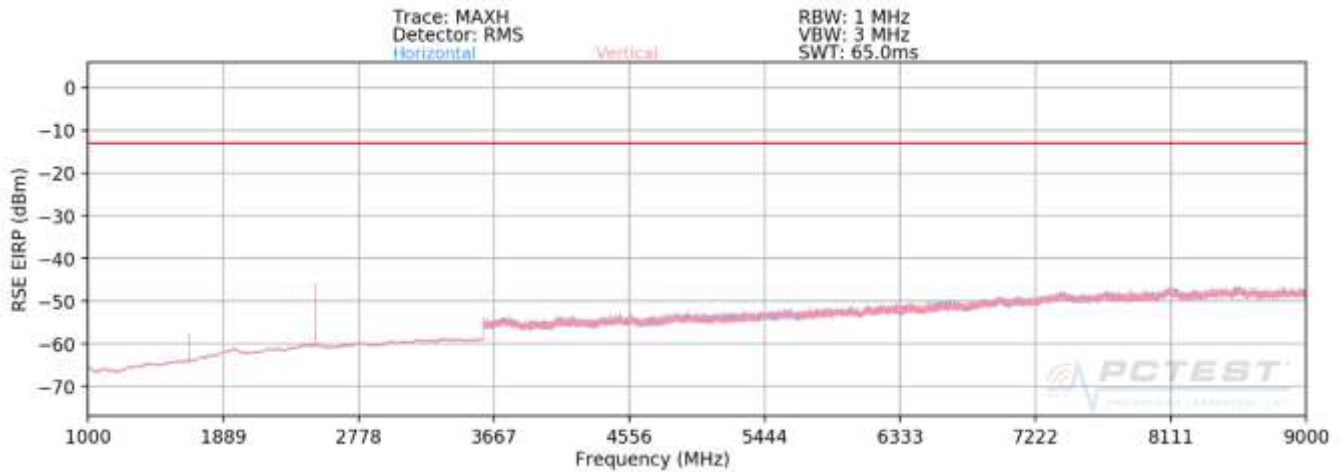
MODULATION SIGNAL:	QPSK
BANDWIDTH:	5.00 MHz
DISTANCE:	3 meters
NARROWBAND EMISSION LIMIT:	-50 dBm
WIDEBAND EMISSION LIMIT:	-40 dBm/MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
1559.00	H	278	190	-54.23	3.53	-50.70	-10.7
1564.00	H	309	192	-56.95	3.53	-53.42	-13.4
1569.00	H	299	182	-56.99	3.53	-53.46	-13.5

Table 7-16. Radiated Spurious Data (Band 13 – 1559-1610MHz Band)

FCC ID: ZNFX525WA	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset	Page 156 of 178

Band 5



Plot 7-241. Radiated Spurious Plot above 1GHz (Band 5)

OPERATING FREQUENCY: 829.00 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]
1658.00	V	131	13	-67.12	8.88	-58.24	-45.2
2487.00	V	104	361	-51.36	9.23	-42.13	-29.1
3316.00	V	-	-	-60.86	9.43	-51.42	-38.4
4145.00	V	-	-	-60.64	10.13	-50.51	-37.5

Table 7-17. Radiated Spurious Data (Band 5 – Low Channel)

FCC ID: ZNFX525WA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset		Page 157 of 178

OPERATING FREQUENCY: 836.50 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]
1673.00	V	195	146	-66.06	8.78	-57.28	-44.3
2509.50	V	156	324	-52.28	9.27	-43.00	-30.0
3346.00	V	-	-	-62.13	9.44	-52.69	-39.7
4182.50	V	-	-	-63.18	10.34	-52.83	-39.8

Table 7-18. Radiated Spurious Data (Band 5 – Mid Channel)

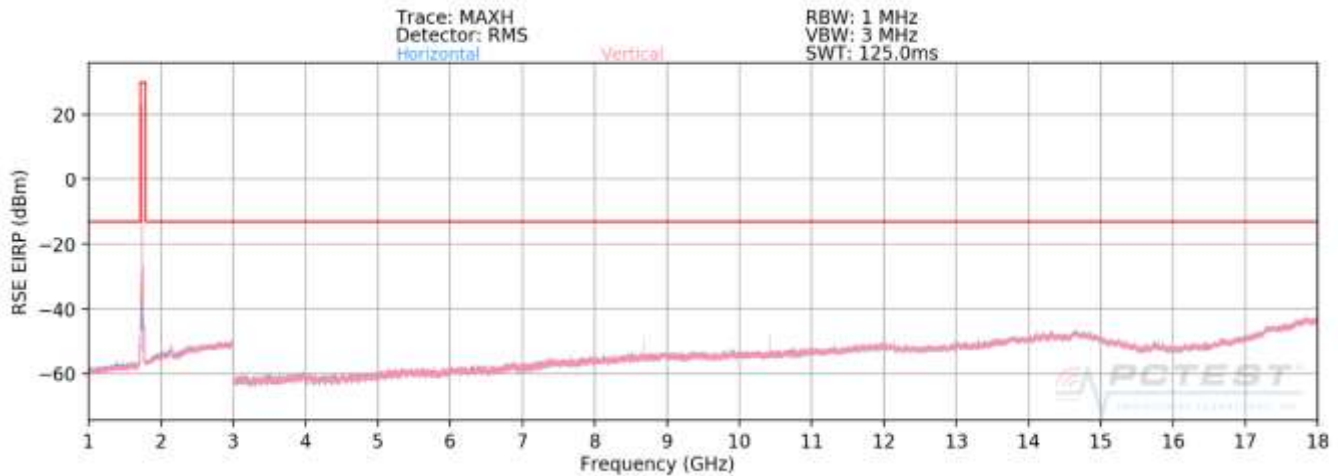
OPERATING FREQUENCY: 844.00 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 10.0 MHz
 DISTANCE: 3 meters
 LIMIT: -13 dBm

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]
1688.00	V	131	219	-66.11	8.68	-57.44	-44.4
2532.00	V	104	183	-50.47	9.28	-41.19	-28.2
3376.00	V	-	-	-62.75	9.50	-53.24	-40.2
4220.00	V	-	-	-61.60	10.53	-51.07	-38.1

Table 7-19. Radiated Spurious Data (Band 5 – High Channel)

FCC ID: ZNFX525WA	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset	Page 158 of 178

Band 66/4



Plot 7-242. Radiated Spurious Plot above 1GHz (Band 66/4)

OPERATING FREQUENCY: 1710.70 MHz
MODULATION SIGNAL: QPSK
BANDWIDTH: 1.4 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]
3421.40	H	195	351	-61.24	9.61	-51.63	-38.6
5132.10	H	104	33	-57.68	11.06	-46.62	-33.6
6842.80	H	-	-	-57.49	10.93	-46.56	-33.6
8553.50	H	-	-	-58.89	11.79	-47.09	-34.1

Table 7-20. Radiated Spurious Data (Band 66/4 – Low Channel)

FCC ID: ZNFX525WA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset		Page 159 of 178

OPERATING FREQUENCY: 1745.00 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 1.4 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	169	339	-59.61	9.70	-49.91	-36.9
5235.00	H	168	329	-55.47	11.08	-44.39	-31.4
6980.00	H	-	-	-59.29	11.04	-48.25	-35.2
8725.00	H	-	-	-59.13	11.88	-47.25	-34.2

Table 7-21. Radiated Spurious Data (Band 66/4 – Mid Channel)

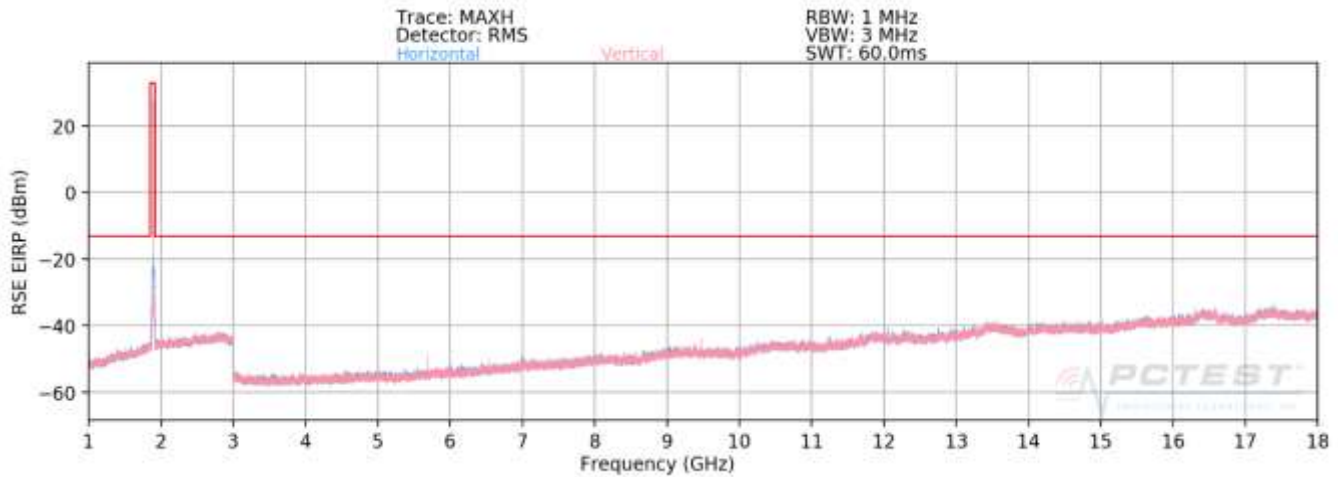
OPERATING FREQUENCY: 1779.30 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 1.4 MHz
 DISTANCE: 3 meters
 LIMIT: -13 dBm

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]
3558.60	H	166	349	-60.83	9.81	-51.02	-38.0
5337.90	H	-	-	-60.66	11.13	-49.52	-36.5
7117.20	H	-	-	-57.47	11.07	-46.40	-33.4

Table 7-22. Radiated Spurious Data (Band 66/4 – High Channel)

FCC ID: ZNFX525WA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset		Page 160 of 178

Band 2



Plot 7-243. Radiated Spurious Plot above 1GHz (Band 2)

OPERATING FREQUENCY: 1852.50 MHz
MODULATION SIGNAL: QPSK
BANDWIDTH: 5.0 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]
3705.00	H	184	28	-57.51	9.83	-47.68	-34.7
5557.50	H	-	-	-60.77	11.19	-49.58	-36.6
7410.00	H	-	-	-58.40	10.88	-47.53	-34.5

Table 7-23. Radiated Spurious Data (Band 2 – Low Channel)

FCC ID: ZNFX525WA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset		Page 161 of 178

OPERATING FREQUENCY: 1880.00 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 3.0 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]
3760.00	H	159	255	-53.74	9.59	-44.15	-31.2
5640.00	H	-	-	-64.20	11.30	-52.89	-39.9
7520.00	H	-	-	-59.73	11.08	-48.65	-35.6

Table 7-24. Radiated Spurious Data (Band 2 – Mid Channel)

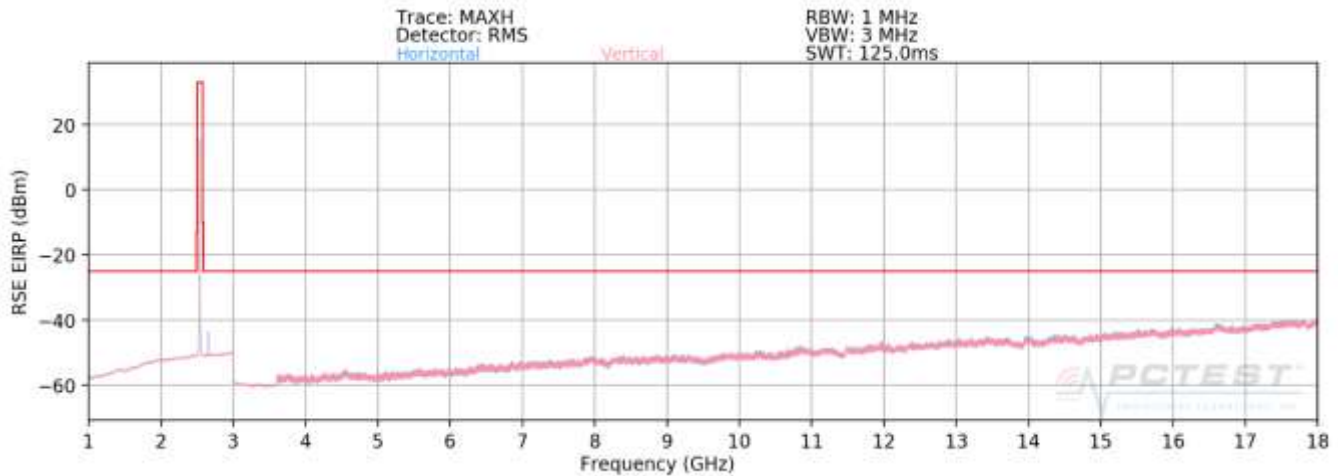
OPERATING FREQUENCY: 1907.50 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 5.0 MHz
 DISTANCE: 3 meters
 LIMIT: -13 dBm

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]
3815.00	H	154	107	-55.80	9.28	-46.52	-33.5
5722.50	H	120	362	-58.13	11.40	-46.73	-33.7
7630.00	H	-	-	-58.65	11.33	-47.32	-34.3
9537.50	H	-	-	-58.55	12.41	-46.14	-33.1

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

FCC ID: ZNFX525WA	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset	Page 162 of 178

Band 7



Plot 7-244. Radiated Spurious Plot 1GHz - 18GHz (Band 7)

OPERATING FREQUENCY: 2505.00 MHz
MODULATION SIGNAL: QPSK
BANDWIDTH: 10.0 MHz
DISTANCE: 3 meters
LIMIT: -25 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]
5010.00	H	153	47	-61.26	11.39	-49.87	-24.9
7515.00	H	166	216	-57.99	11.39	-46.60	-21.6
10020.00	H	-	-	-57.08	12.31	-44.77	-19.8
12525.00	H	-	-	-54.54	12.85	-41.70	-16.7

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

FCC ID: ZNFX525WA	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset		Page 163 of 178

OPERATING FREQUENCY: 2535.00 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 10.0 MHz
 DISTANCE: 3 meters
 LIMIT: -25 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]
5070.00	H	142	222	-61.24	11.21	-50.03	-25.0
7605.00	H	155	217	-57.18	11.29	-45.89	-20.9
10140.00	H	-	-	-56.94	12.41	-44.53	-19.5
12675.00	H	-	-	-53.49	12.85	-40.64	-15.6

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

OPERATING FREQUENCY: 2565.00 MHz
 MODULATION SIGNAL: QPSK
 BANDWIDTH: 10.0 MHz
 DISTANCE: 3 meters
 LIMIT: -25 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]
5130.00	H	147	246	-62.17	11.06	-51.10	-26.1
7695.00	H	166	216	-58.76	11.43	-47.33	-22.3
10260.00	H	-	-	-55.92	11.43	-44.48	-19.5
12825.00	H	-	-	-51.64	12.55	-39.09	-14.1

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

FCC ID: ZNFX525WA	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
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7.8 Frequency Stability / Temperature Variation

Test Overview and Limit

Frequency stability testing is performed in accordance with the guidelines of ANSI/TIA-603-E-2016. The frequency stability of the transmitter is measured by:

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

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

Test Procedure Used

ANSI/TIA-603-E-2016

Test Settings

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

Test Setup

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

Test Notes

None

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Band 12/17 Frequency Stability Measurements

OPERATING FREQUENCY: 707,500,000 Hz
 CHANNEL: 23790
 REFERENCE VOLTAGE: 3.82 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.82	- 30	707,499,709	-291	-0.0000411
100 %		- 20	707,500,292	292	0.0000413
100 %		- 10	707,499,759	-241	-0.0000341
100 %		0	707,499,766	-234	-0.0000331
100 %		+ 10	707,500,088	88	0.0000124
100 %		+ 20	707,500,121	121	0.0000171
100 %		+ 30	707,500,224	224	0.0000317
100 %		+ 40	707,499,980	-20	-0.0000028
100 %		+ 50	707,499,805	-195	-0.0000276
BATT. ENDPOINT	3.21	+ 20	707,500,137	137	0.0000194

Table 7-29. Frequency Stability Data (Band 12/17)

Note:

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

FCC ID: ZNFX525WA	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
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Band 12/17 Frequency Stability Measurements

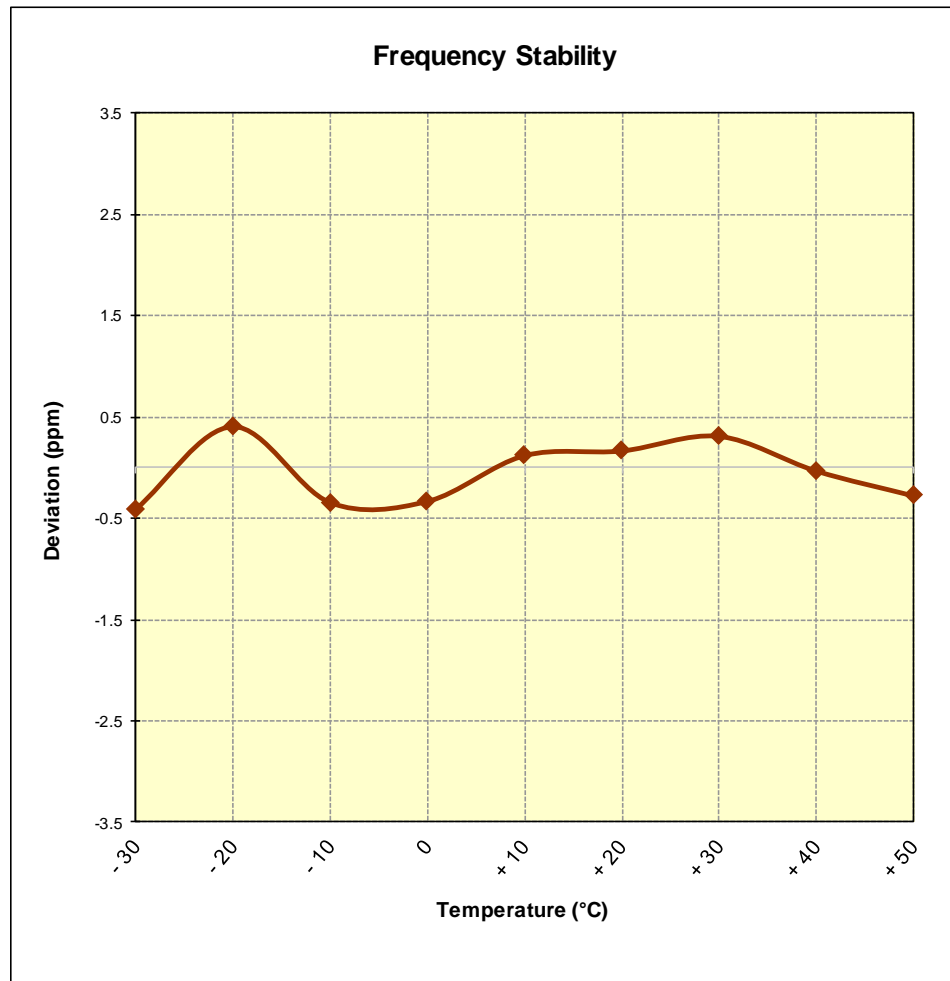


Figure 7-8. Frequency Stability Graph (Band 12/17)

FCC ID: ZNFX525WA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Band 13 Frequency Stability Measurements

OPERATING FREQUENCY: 782,000,000 Hz
 CHANNEL: 23230
 REFERENCE VOLTAGE: 3.82 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.82	- 30	782,000,025	25	0.0000032
100 %		- 20	782,000,102	102	0.0000130
100 %		- 10	782,000,046	46	0.0000059
100 %		0	781,999,959	-41	-0.0000052
100 %		+ 10	781,999,815	-185	-0.0000237
100 %		+ 20	782,000,088	88	0.0000113
100 %		+ 30	782,000,040	40	0.0000051
100 %		+ 40	782,000,066	66	0.0000084
100 %		+ 50	782,000,010	10	0.0000013
BATT. ENDPOINT	3.21	+ 20	782,000,306	306	0.0000391

Table 7-30. Frequency Stability Data (Band 13)

Note:

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

FCC ID: ZNFX525WA	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
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Band 13 Frequency Stability Measurements

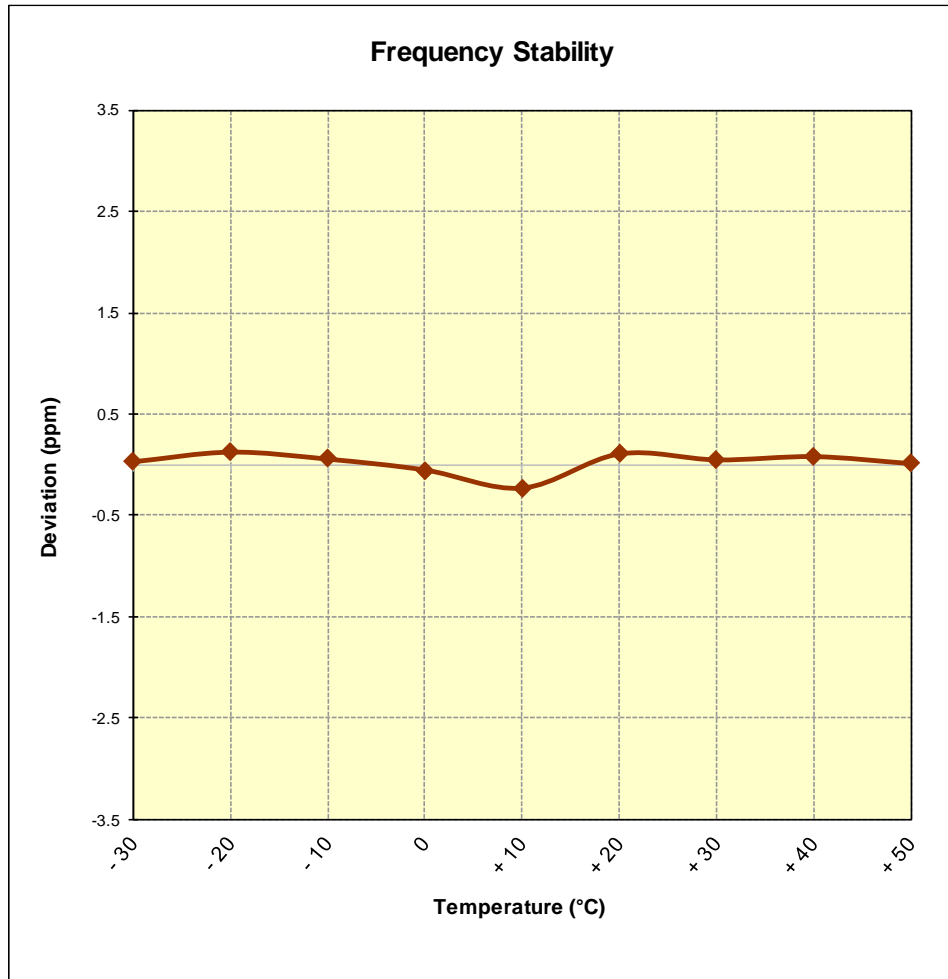


Figure 7-9. Frequency Stability Graph (Band 13)

FCC ID: ZNFX525WA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Band 5 Frequency Stability Measurements

OPERATING FREQUENCY: 836,500,000 Hz
 CHANNEL: 20525
 REFERENCE VOLTAGE: 3.82 VDC
 DEVIATION LIMIT: ± 0.00025 % or 2.5 ppm

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.82	- 30	836,500,191	191	0.0000228
100 %		- 20	836,499,633	-367	-0.0000439
100 %		- 10	836,500,258	258	0.0000308
100 %		0	836,500,300	300	0.0000359
100 %		+ 10	836,499,891	-109	-0.0000130
100 %		+ 20	836,500,264	264	0.0000316
100 %		+ 30	836,500,423	423	0.0000506
100 %		+ 40	836,500,214	214	0.0000256
100 %		+ 50	836,499,985	-15	-0.0000018
BATT. ENDPOINT	3.21	+ 20	836,499,958	-42	-0.0000050

Table 7-31. Frequency Stability Data (Band 5)

FCC ID: ZNFX525WA	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
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Band 5 Frequency Stability Measurements

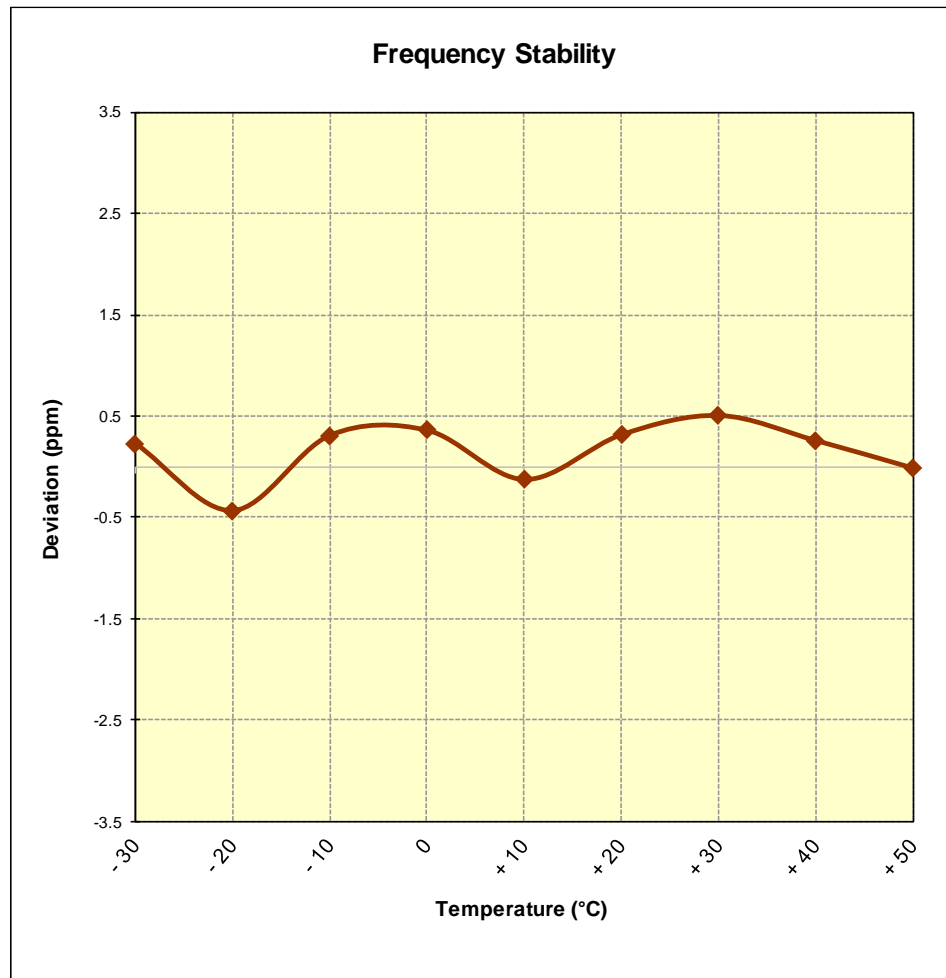


Figure 7-10. Frequency Stability Graph (Band 5)

FCC ID: ZNFX525WA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Band 66/4 Frequency Stability Measurements

OPERATING FREQUENCY: 1,745,000,000 Hz
 CHANNEL: 132322
 REFERENCE VOLTAGE: 3.82 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.82	- 30	1,744,999,837	-163	-0.0000093
100 %		- 20	1,744,999,948	-52	-0.0000030
100 %		- 10	1,745,000,122	122	0.0000070
100 %		0	1,745,000,014	14	0.0000008
100 %		+ 10	1,745,000,151	151	0.0000087
100 %		+ 20	1,745,000,004	4	0.0000002
100 %		+ 30	1,744,999,730	-270	-0.0000155
100 %		+ 40	1,744,999,703	-297	-0.0000170
100 %		+ 50	1,744,999,960	-40	-0.0000023
BATT. ENDPOINT	3.21	+ 20	1,744,999,781	-219	-0.0000126

Table 7-32. Frequency Stability Data (Band 66/4)

Note:

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

FCC ID: ZNFX525WA	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
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Band 66/4 Frequency Stability Measurements

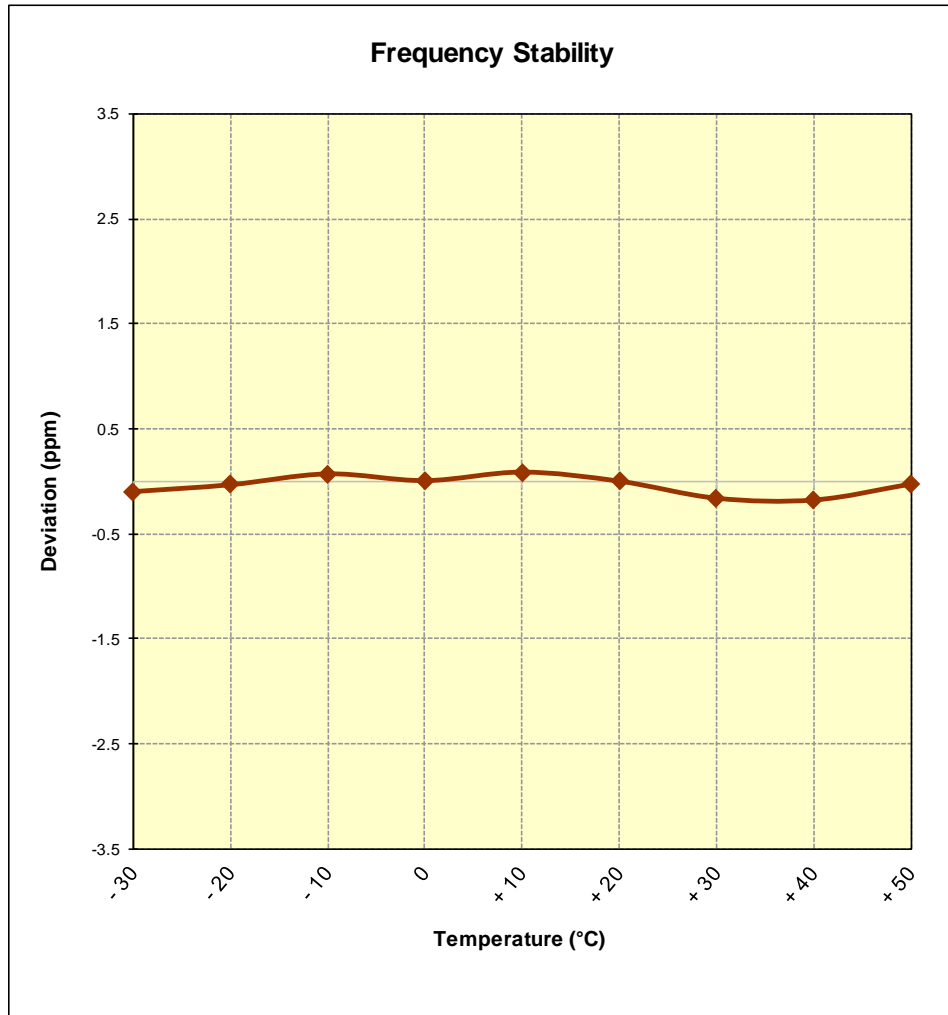


Figure 7-11. Frequency Stability Graph (Band 66/4)

FCC ID: ZNFX525WA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Band 2 Frequency Stability Measurements

OPERATING FREQUENCY: 1,880,000,000 Hz

CHANNEL: 18900

REFERENCE VOLTAGE: 3.82 VDC

DEVIATION LIMIT: ± 0.00025 % or 2.5 ppm

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.82	- 30	1,879,999,798	-202	-0.0000107
100 %		- 20	1,880,000,059	59	0.0000031
100 %		- 10	1,879,999,972	-28	-0.0000015
100 %		0	1,879,999,805	-195	-0.0000104
100 %		+ 10	1,879,999,911	-89	-0.0000047
100 %		+ 20	1,879,999,650	-350	-0.0000186
100 %		+ 30	1,879,999,541	-459	-0.0000244
100 %		+ 40	1,879,999,665	-335	-0.0000178
100 %		+ 50	1,880,000,089	89	0.0000047
BATT. ENDPOINT	3.21	+ 20	1,879,999,941	-59	-0.0000031

Table 7-33. Frequency Stability Data (Band 2)

FCC ID: ZNFX525WA	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
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Band 2 Frequency Stability Measurements

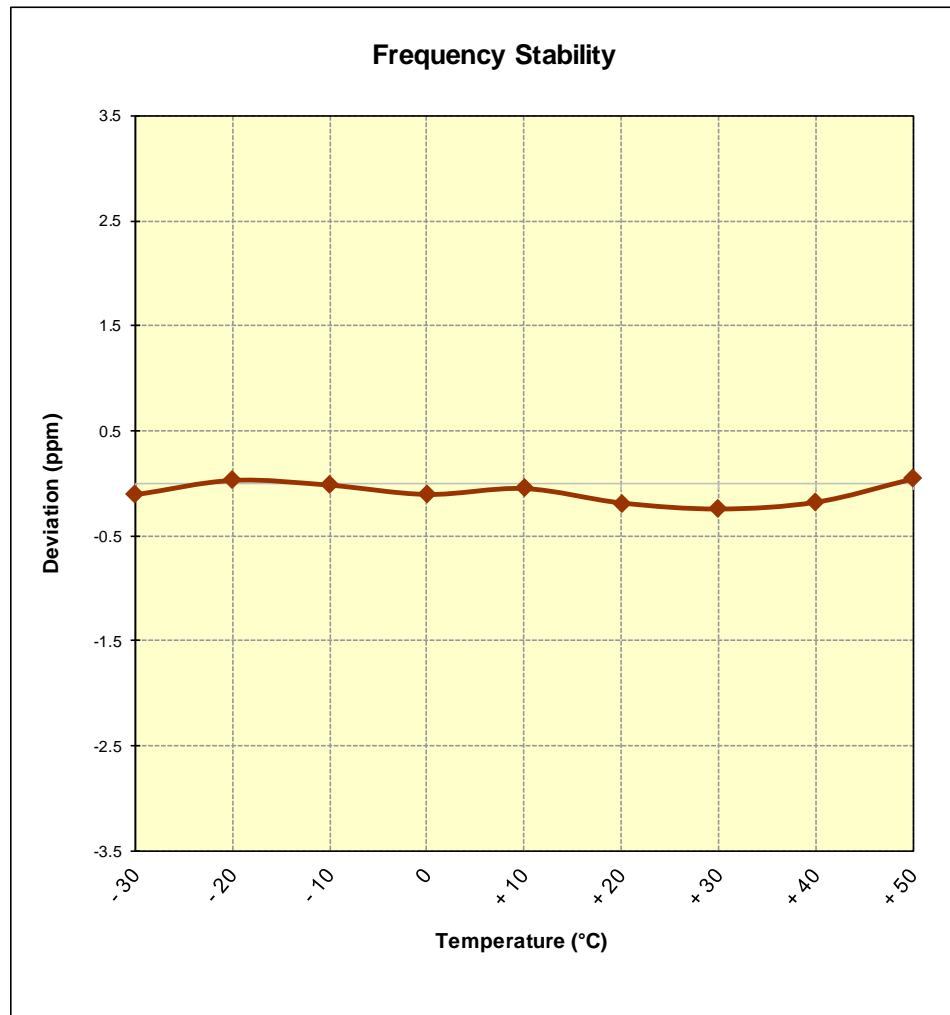


Figure 7-12. Frequency Stability Graph (Band 2)

FCC ID: ZNFX525WA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905300091-03-R1.ZNF	Test Dates: 5/30 - 6/18/2019	EUT Type: Portable Handset		Page 175 of 178

Band 7 Frequency Stability Measurements

OPERATING FREQUENCY: 2,535,000,000 Hz
 CHANNEL: 21100
 REFERENCE VOLTAGE: 3.82 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.82	- 30	2,535,000,132	132	0.0000052
100 %		- 20	2,534,999,986	-14	-0.0000006
100 %		- 10	2,534,999,892	-108	-0.0000043
100 %		0	2,535,000,113	113	0.0000045
100 %		+ 10	2,535,000,345	345	0.0000136
100 %		+ 20	2,534,999,995	-5	-0.0000002
100 %		+ 30	2,535,000,113	113	0.0000045
100 %		+ 40	2,535,000,138	138	0.0000054
100 %		+ 50	2,535,000,099	99	0.0000039
BATT. ENDPOINT		+ 20	2,534,999,933	-67	-0.0000026

Table 7-34. Frequency Stability Data (Band 7)

Note:

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

FCC ID: ZNFX525WA	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
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Band 7 Frequency Stability Measurements

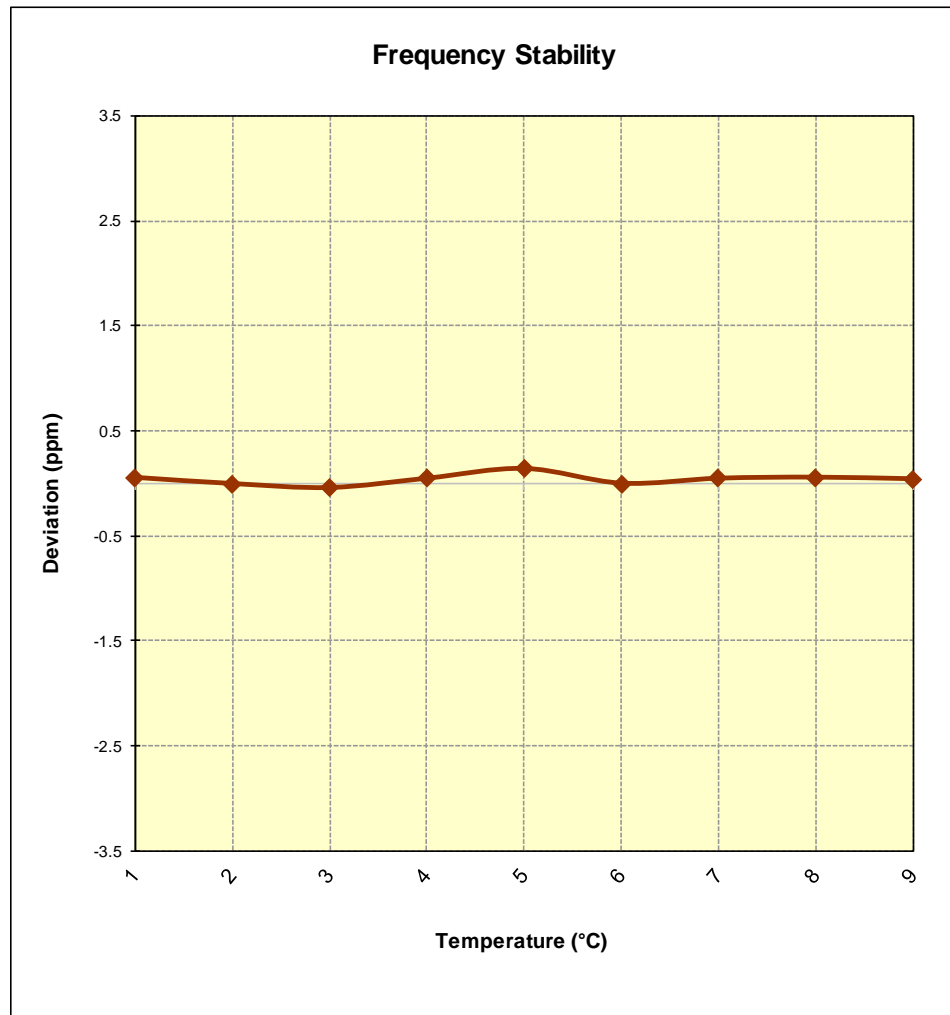


Figure 7-13. Frequency Stability Graph (Band 7)

FCC ID: ZNFX525WA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **LG Portable Handset FCC ID: ZNFX525WA** complies with all the requirements of Part 22, 24, & 27 of the FCC Rules and RSS-130, RSS-132, RSS-133, RSS-139, RSS-199 of the Innovation, Science and Economic Development Canada Rules for LTE operation only.

FCC ID: ZNFX525WA		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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