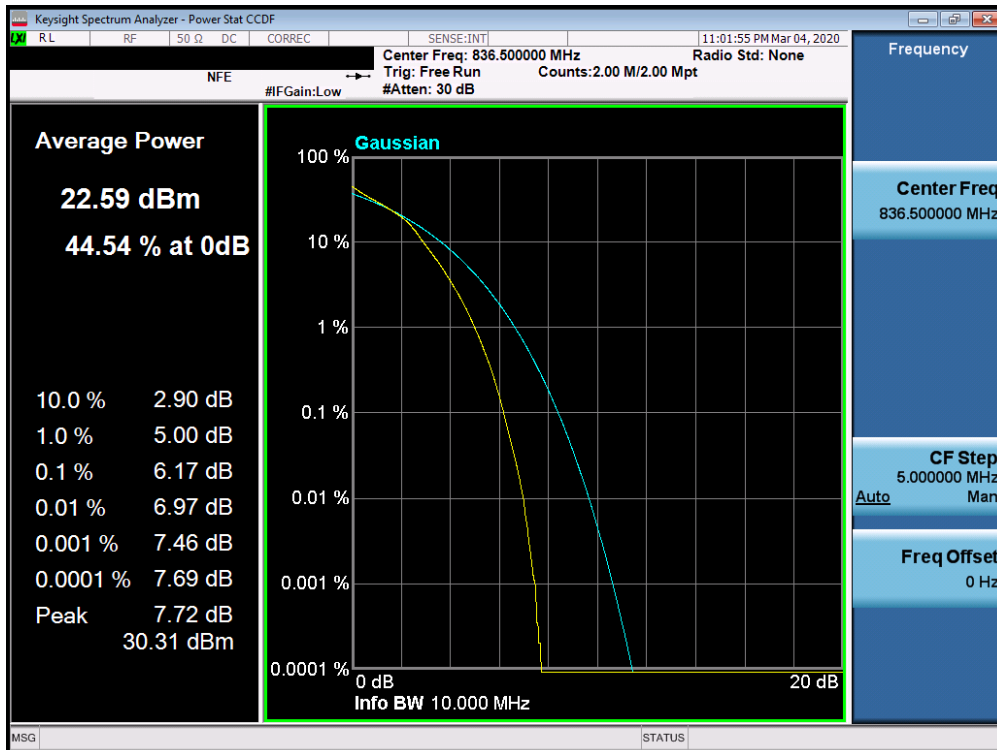


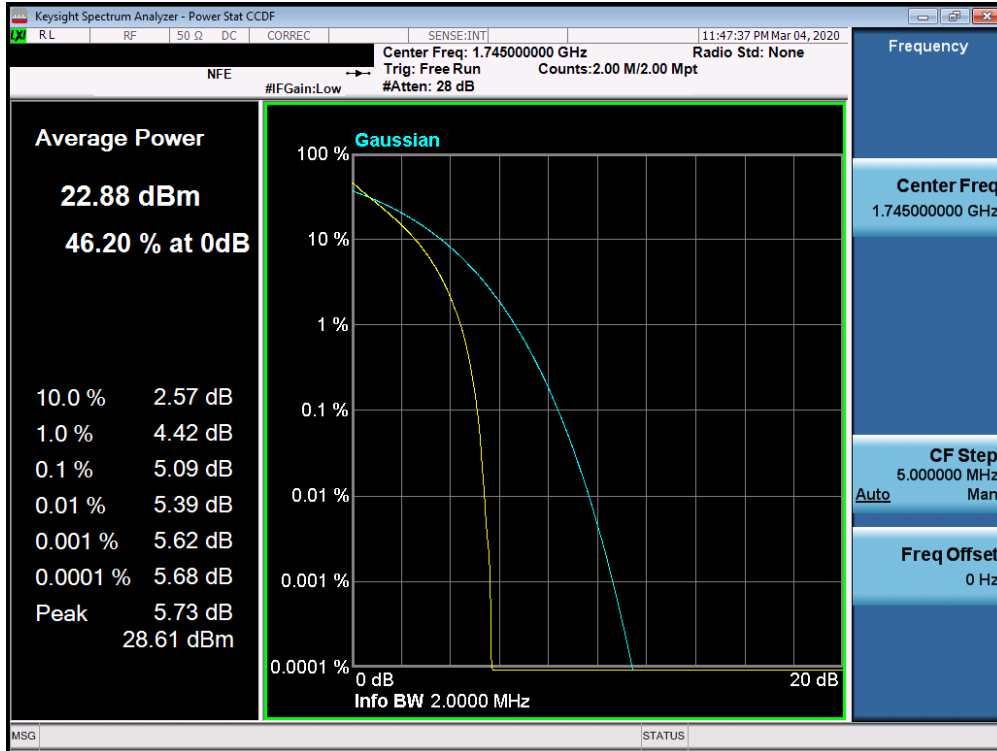
**Plot 7-204. PAR Plot (Band 5 - 10.0MHz QPSK - Full RB Configuration)**



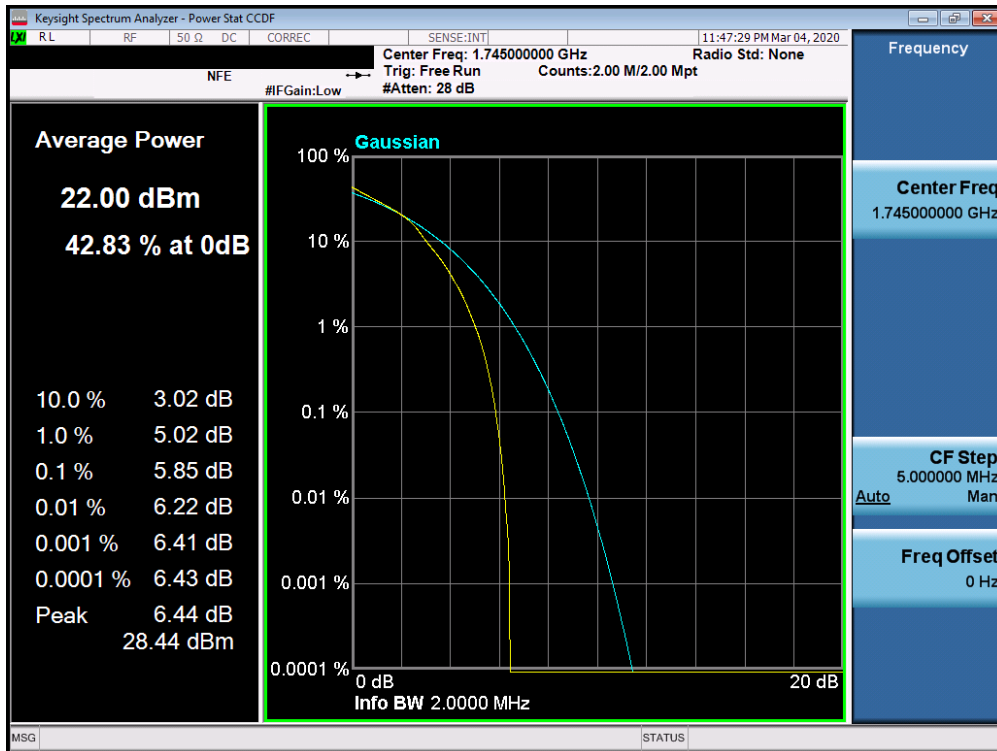
**Plot 7-205. PAR Plot (Band 5 - 10.0MHz 16-QAM - Full RB Configuration)**

FCC ID: ZNFQ730AM	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 - 3/26-2020	EUT Type: Portable Handset		Page 124 of 168

**Band 66/4**

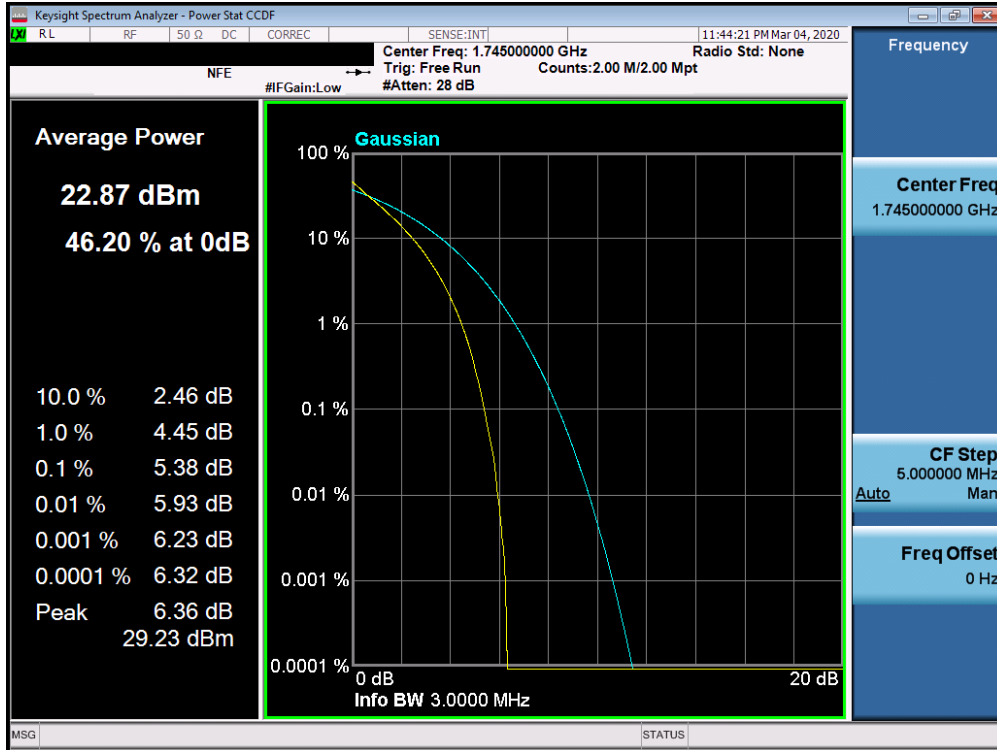


**Plot 7-206. PAR Plot (Band 66/4 - 1.4MHz QPSK - Full RB Configuration)**

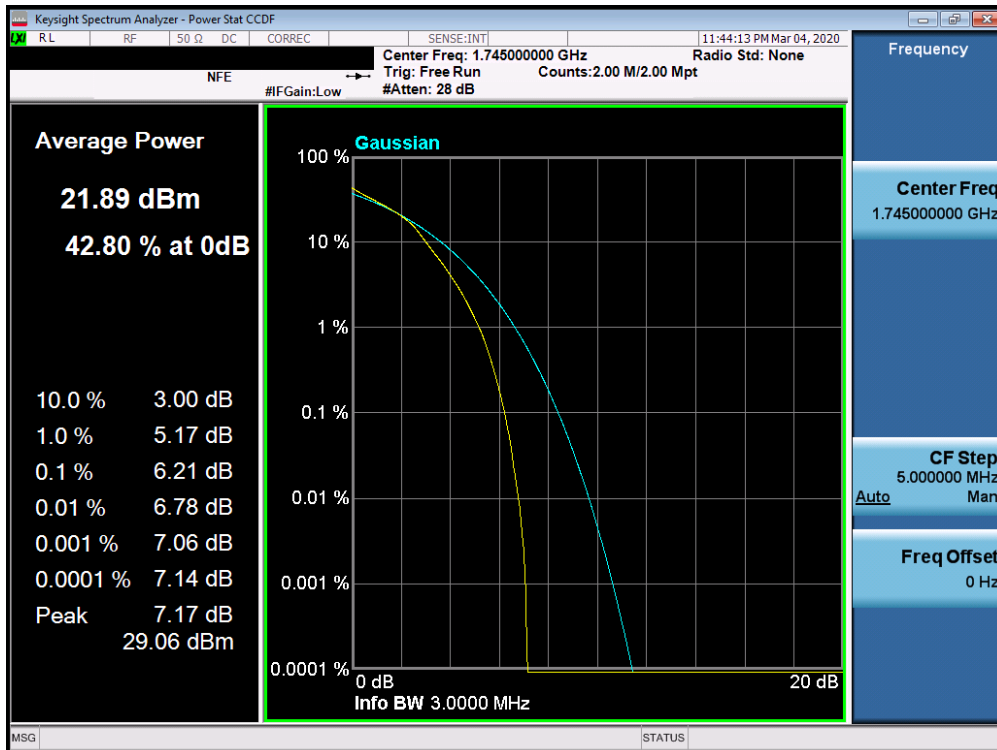


**Plot 7-207. PAR Plot (Band 66/4 - 1.4MHz 16-QAM - Full RB Configuration)**

FCC ID: ZNFQ730AM	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 - 3/26-2020	EUT Type: Portable Handset		Page 125 of 168

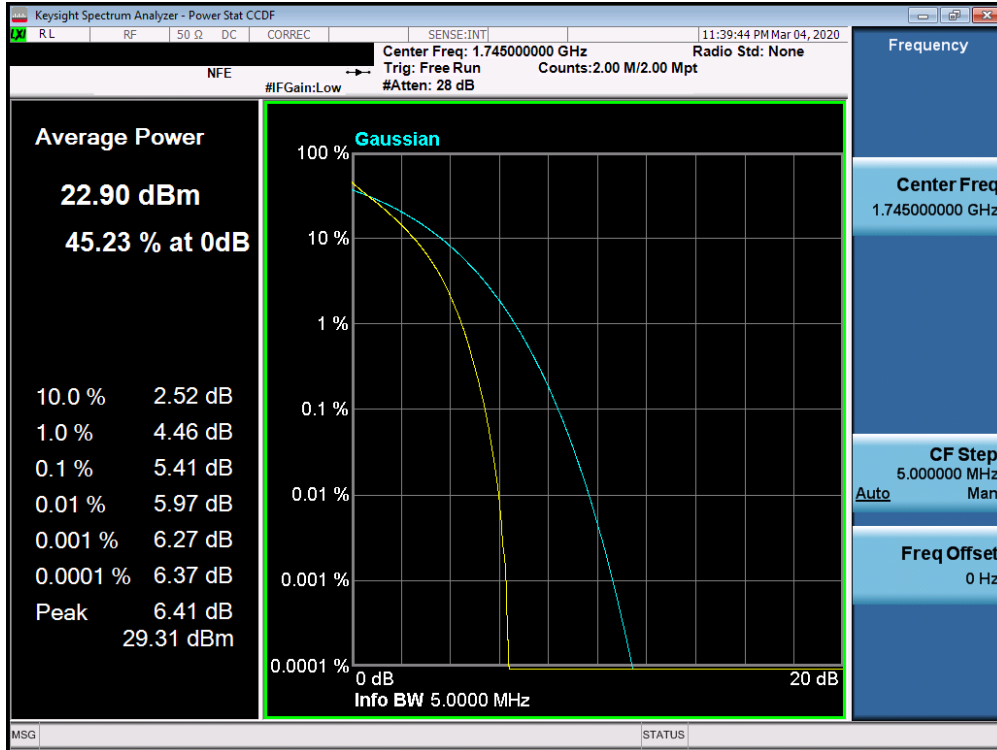


**Plot 7-208. PAR Plot (Band 66/4 - 3.0MHz QPSK - Full RB Configuration)**

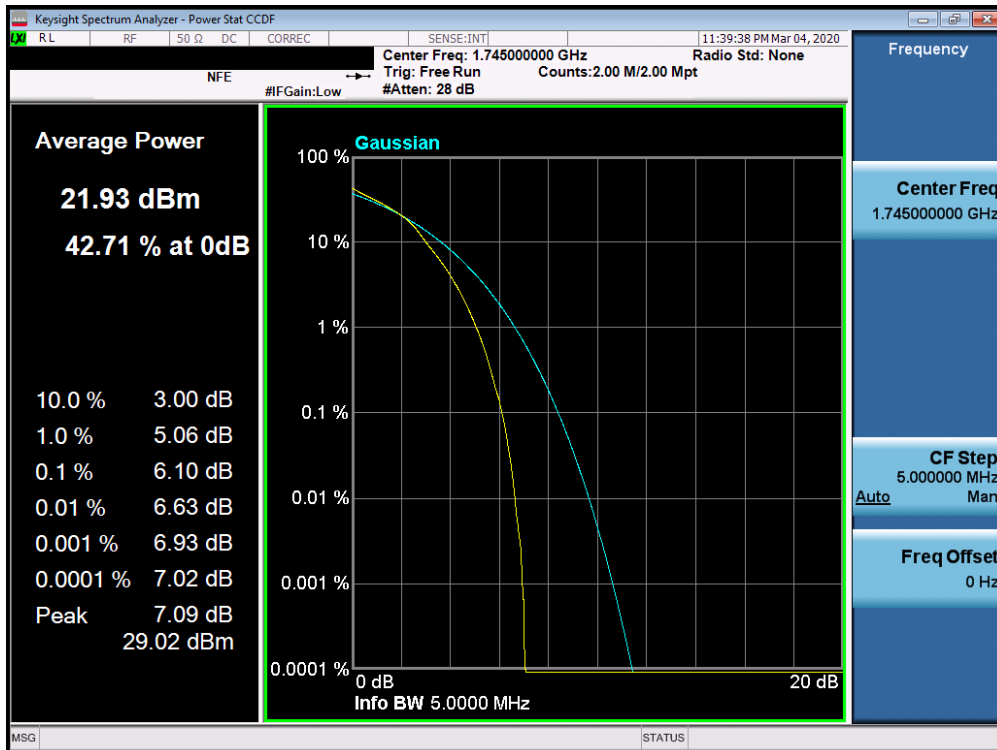


**Plot 7-209. PAR Plot (Band 66/4 - 3.0MHz 16-QAM - Full RB Configuration)**

FCC ID: ZNFQ730AM	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 - 3/26-2020	EUT Type: Portable Handset		Page 126 of 168

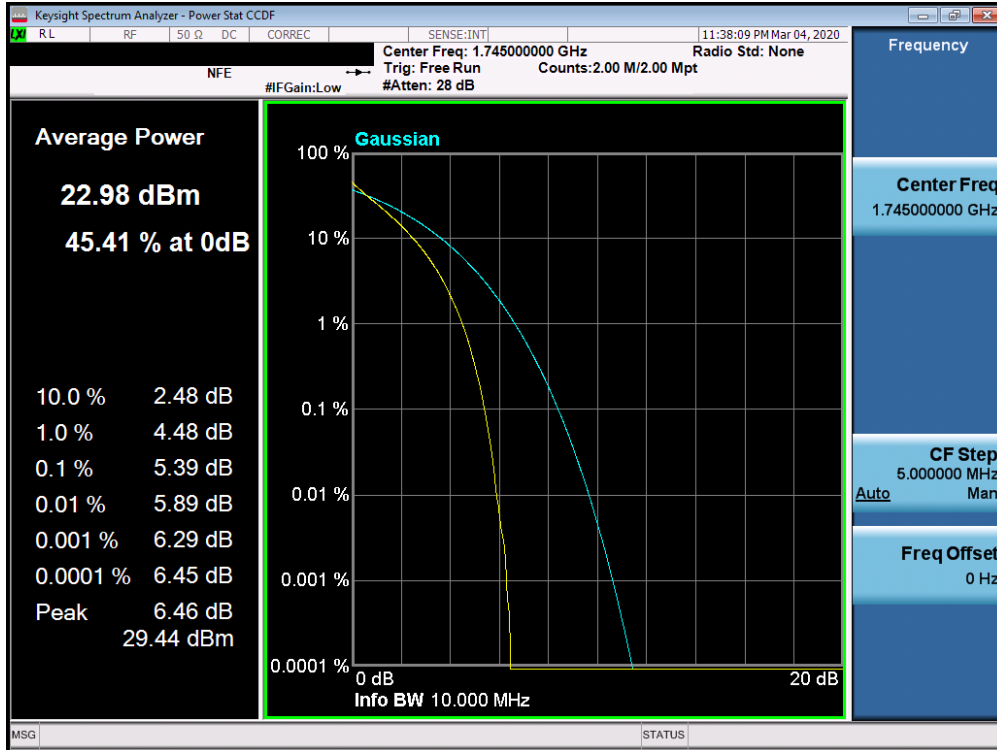


**Plot 7-210. PAR Plot (Band 66/4 - 5.0MHz QPSK - Full RB Configuration)**

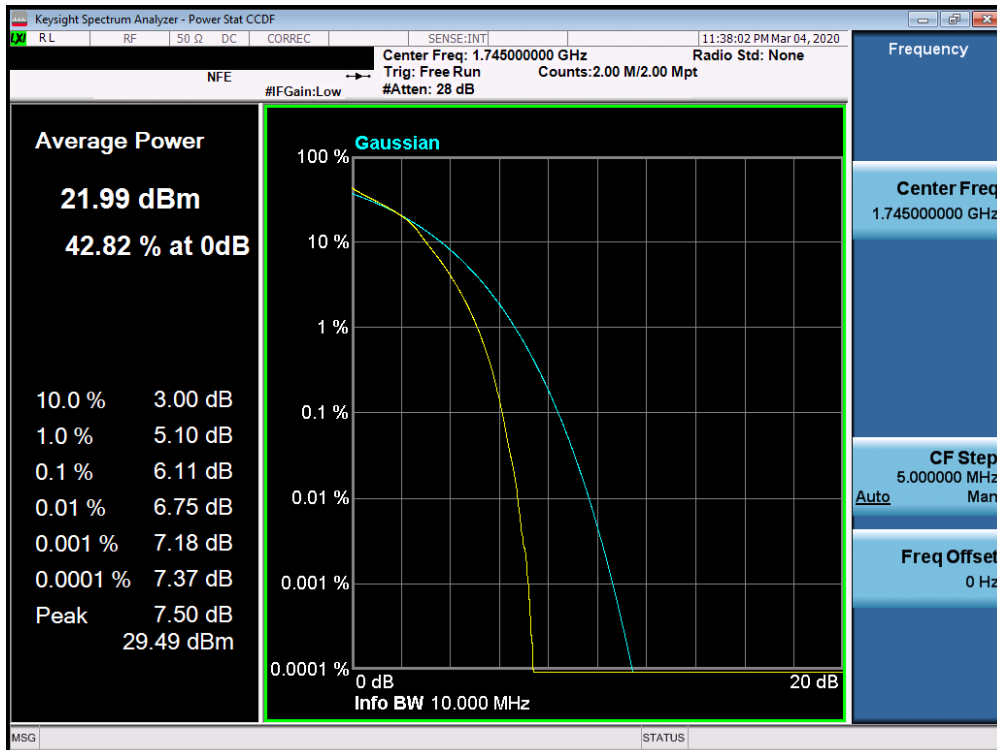


**Plot 7-211. PAR Plot (Band 66/4 - 5.0MHz 16-QAM - Full RB Configuration)**

FCC ID: ZNFQ730AM	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 - 3/26-2020	EUT Type: Portable Handset		Page 127 of 168

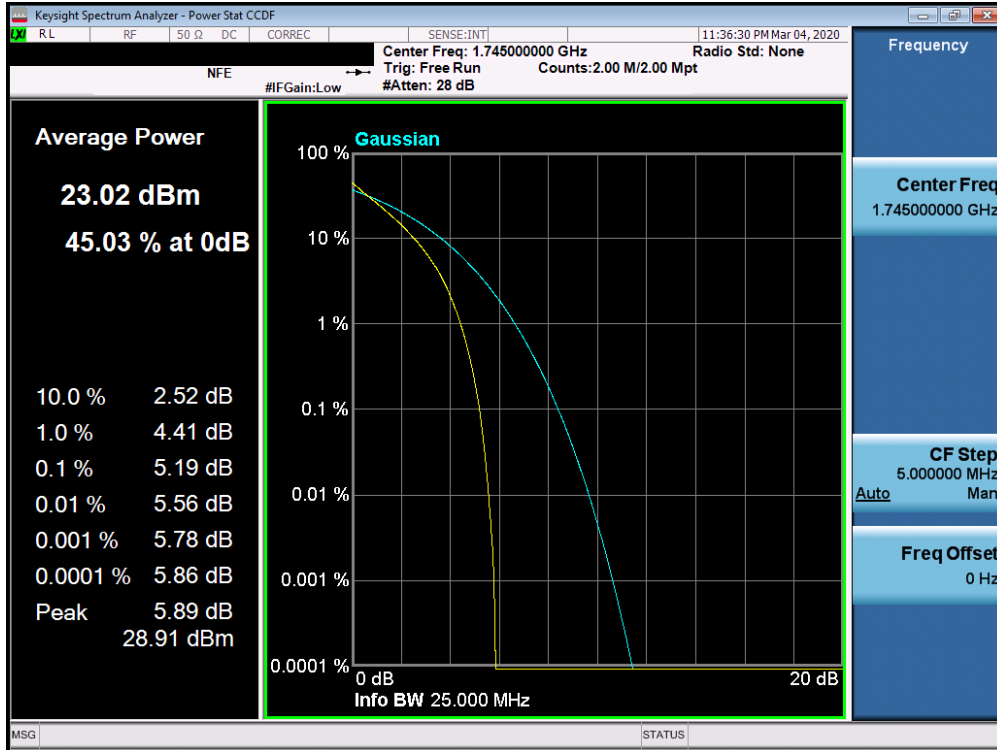


**Plot 7-212. PAR Plot (Band 66/4 - 10.0MHz QPSK - Full RB Configuration)**

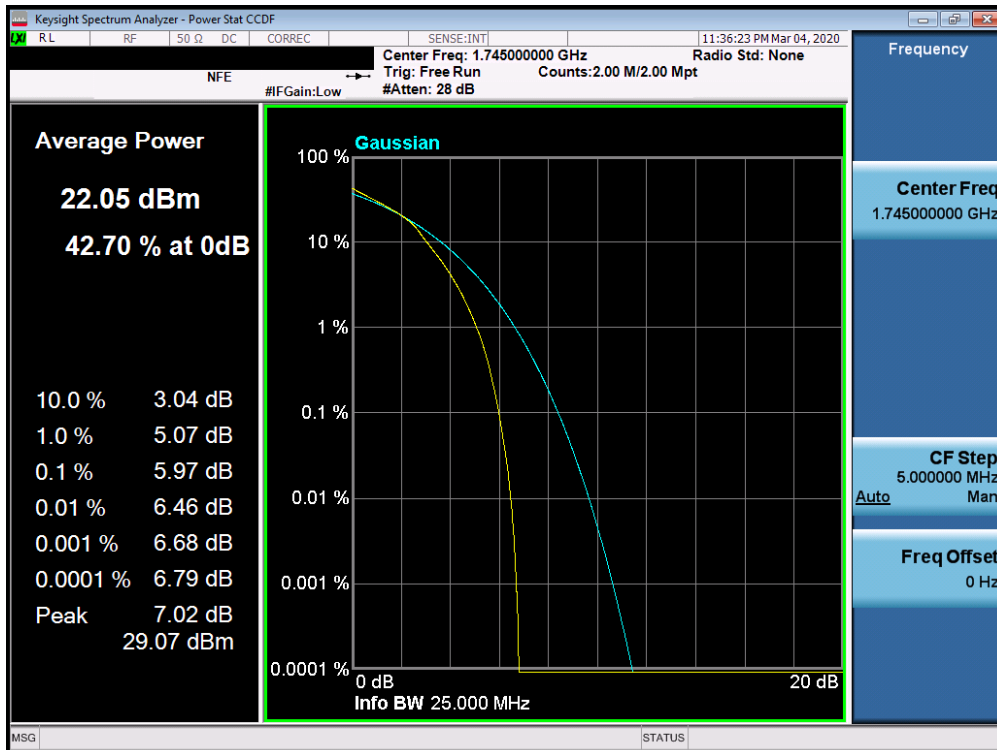


**Plot 7-213. PAR Plot (Band 66/4 - 10.0MHz 16-QAM - Full RB Configuration)**

FCC ID: ZNFQ730AM	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 - 3/26-2020	EUT Type: Portable Handset		Page 128 of 168

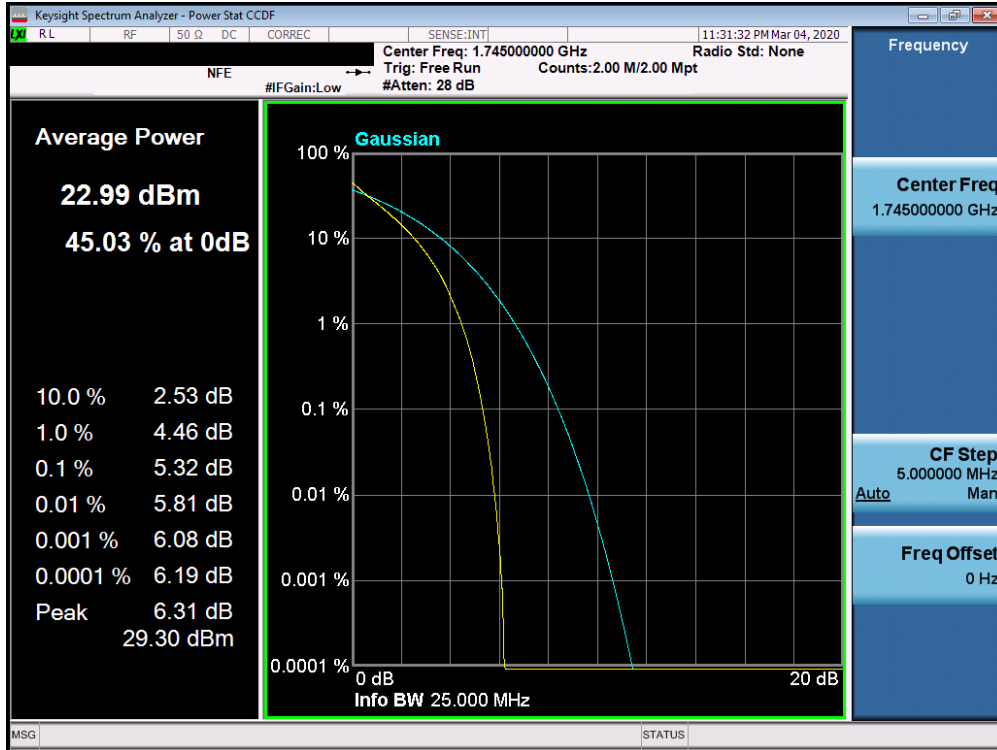


**Plot 7-214. PAR Plot (Band 66/4 - 15.0MHz QPSK - Full RB Configuration)**

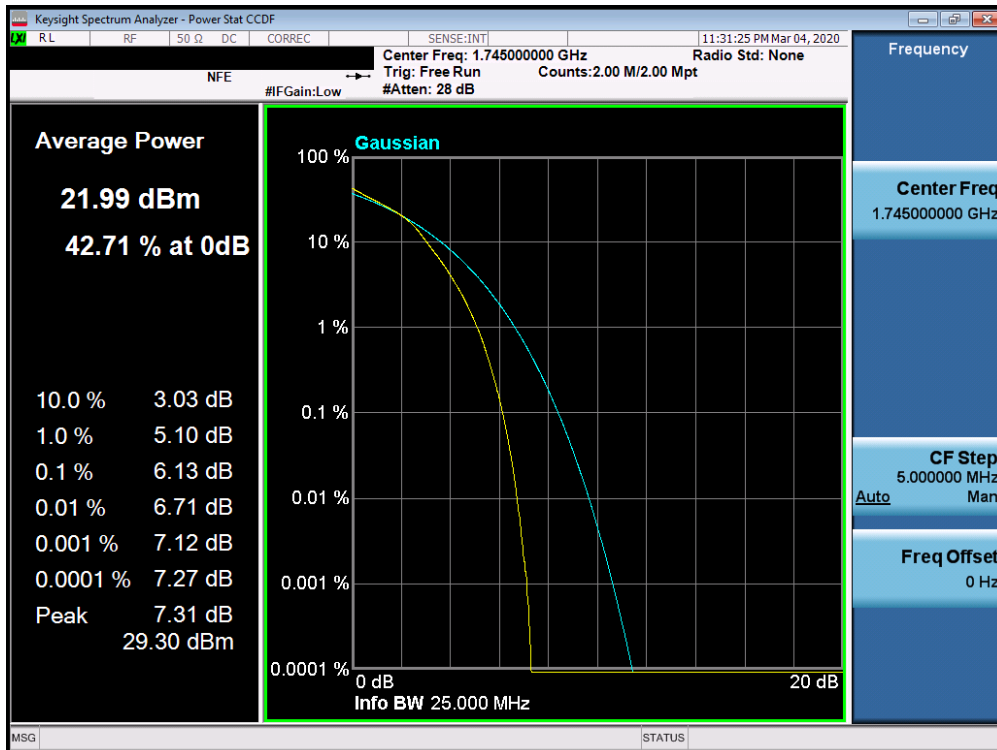


**Plot 7-215. PAR Plot (Band 66/4 - 15.0MHz 16-QAM - Full RB Configuration)**

FCC ID: ZNFQ730AM	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 - 3/26-2020	EUT Type: Portable Handset		Page 129 of 168



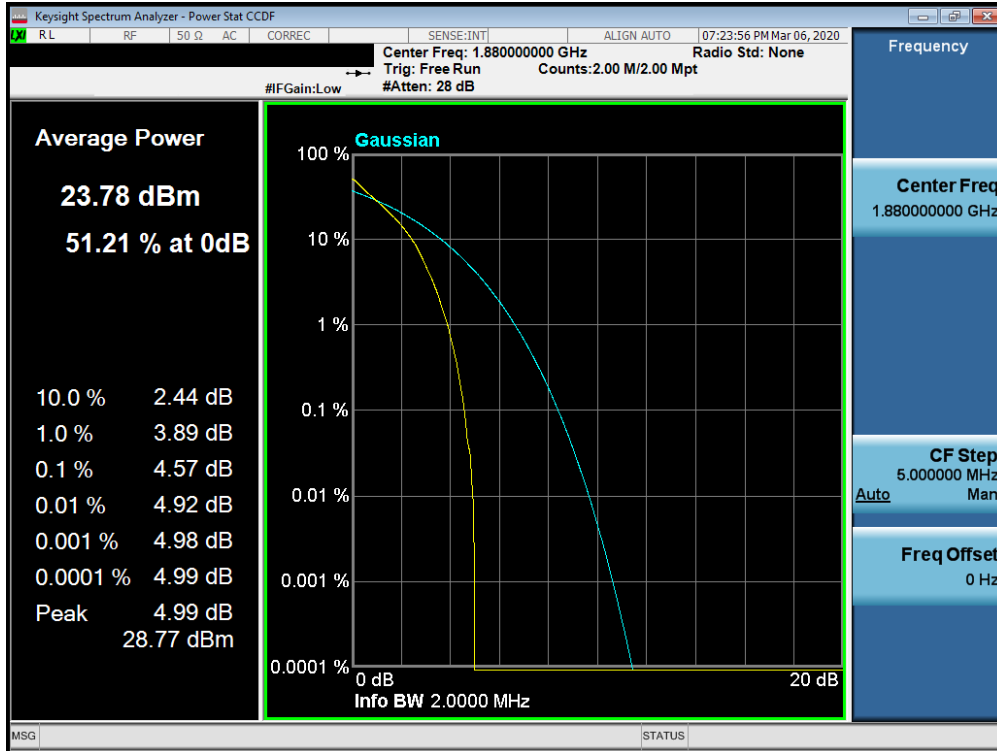
Plot 7-216. PAR Plot (Band 66/4 - 20.0MHz QPSK - Full RB Configuration)



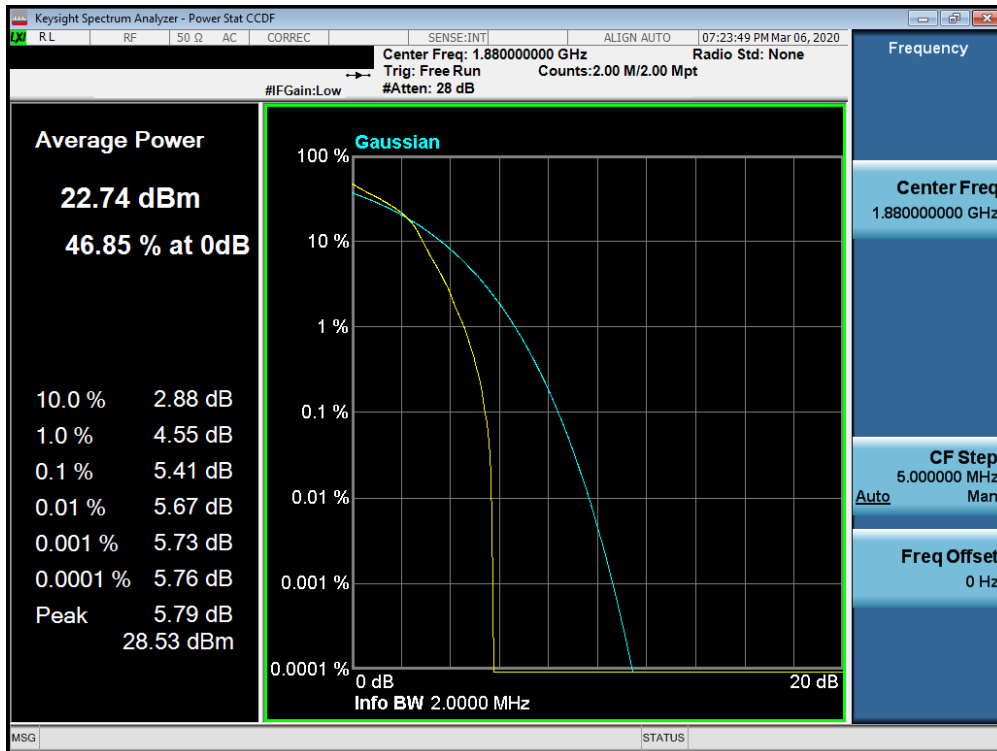
Plot 7-217. PAR Plot (Band 66/4 - 20.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFQ730AM	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 - 3/26-2020	EUT Type: Portable Handset		Page 130 of 168

**Band 2**



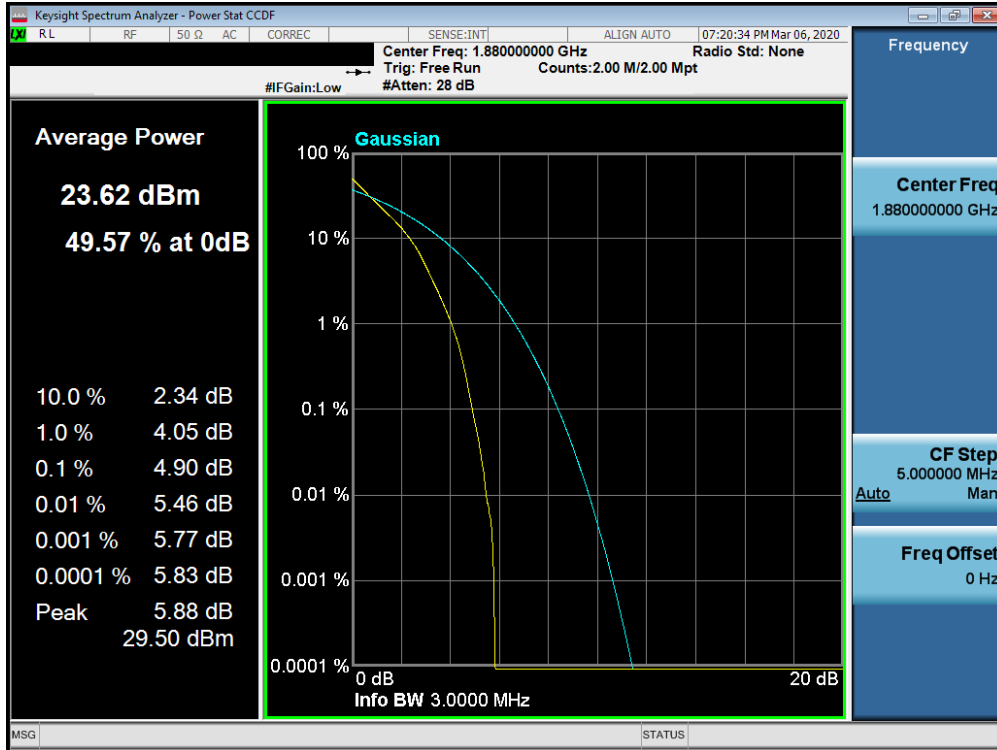
**Plot 7-218. PAR Plot (Band 2 - 1.4MHz QPSK - Full RB Configuration)**



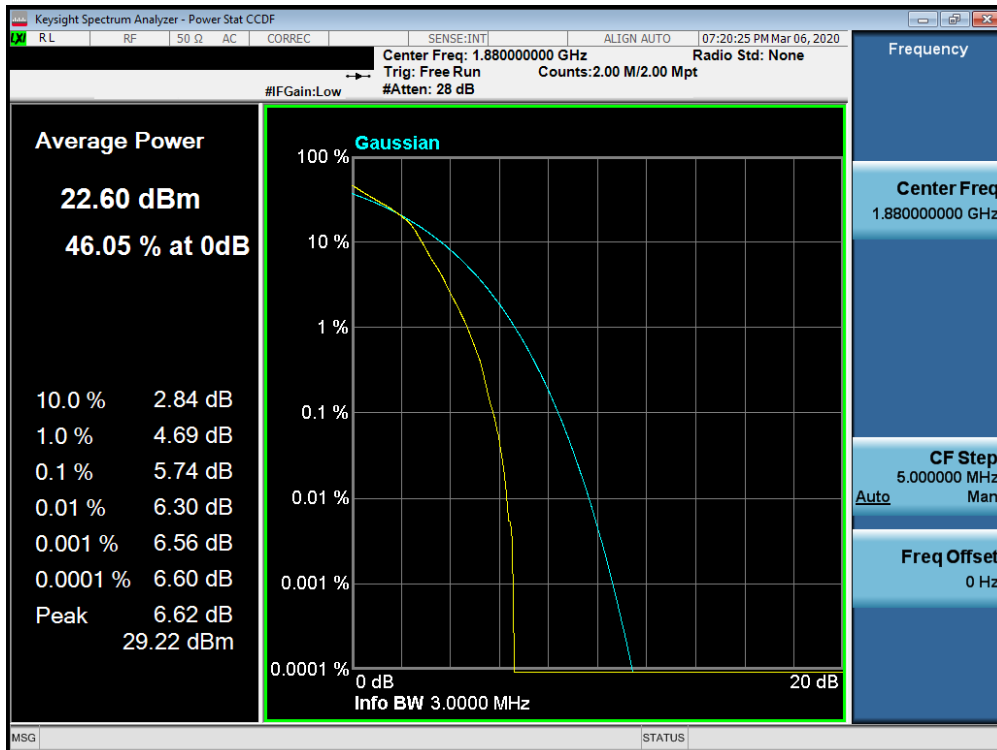
**Plot 7-219. PAR Plot (Band 2 - 1.4MHz 16-QAM - Full RB Configuration)**

FCC ID: ZNFQ730AM	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 - 3/26-2020	EUT Type: Portable Handset		Page 131 of 168



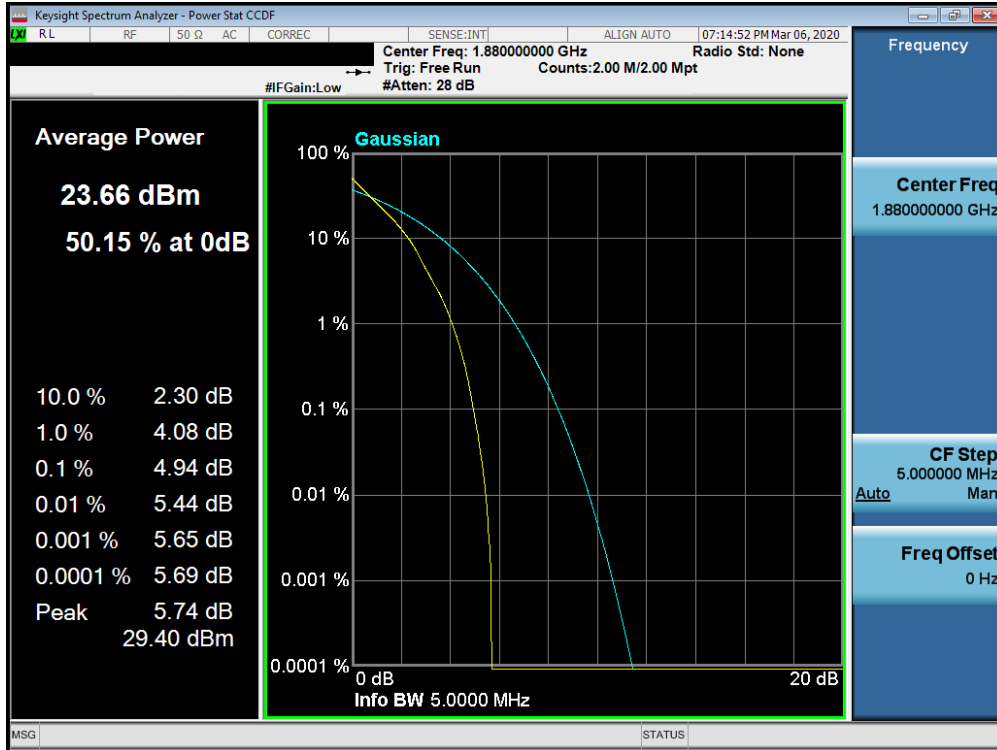


Plot 7-220. PAR Plot (Band 2 - 3.0MHz QPSK - Full RB Configuration)

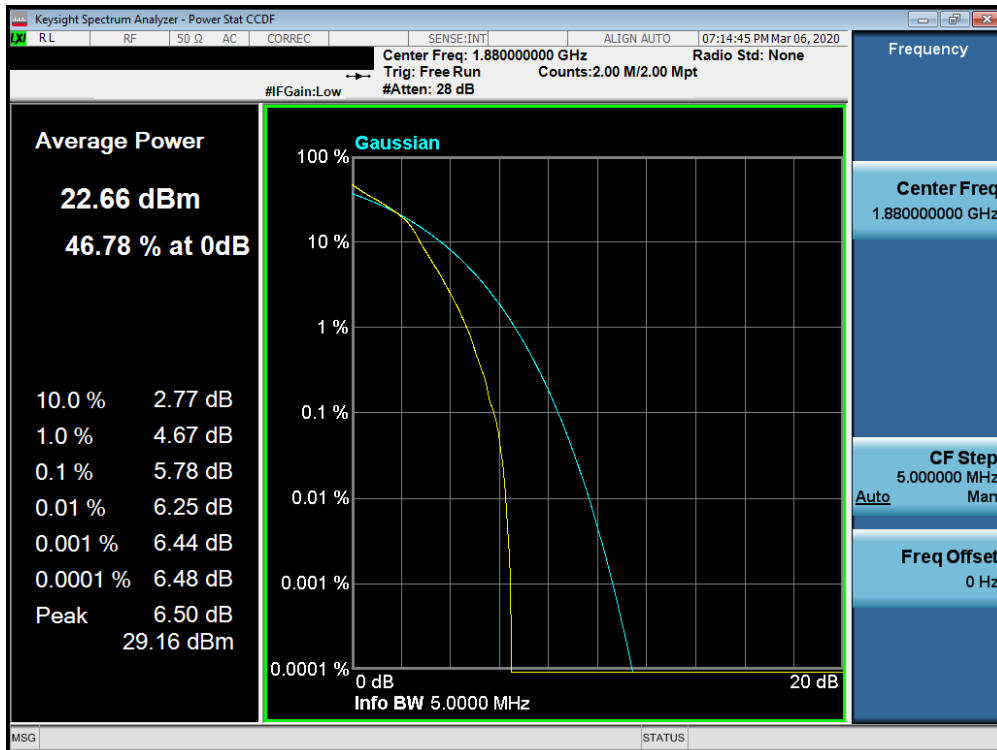


Plot 7-221. PAR Plot (Band 2 - 3.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFQ730AM		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 - 3/26-2020	EUT Type: Portable Handset		Page 132 of 168

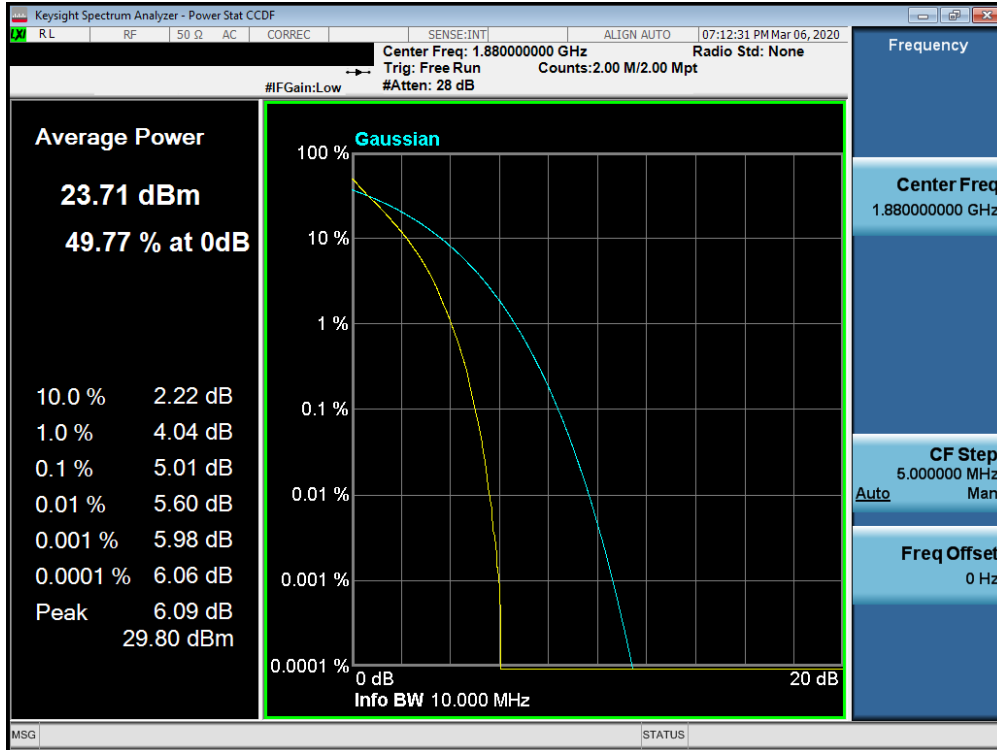


Plot 7-222. PAR Plot (Band 2 - 5.0MHz QPSK - Full RB Configuration)

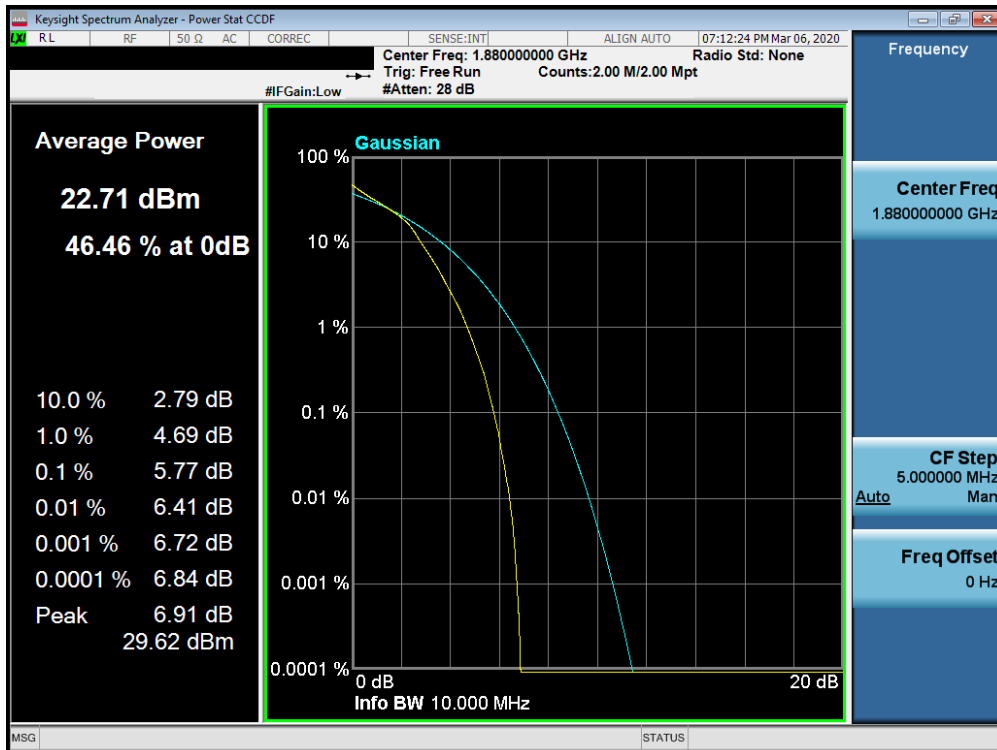


Plot 7-223. PAR Plot (Band 2 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFQ730AM	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 - 3/26-2020	EUT Type: Portable Handset		Page 133 of 168

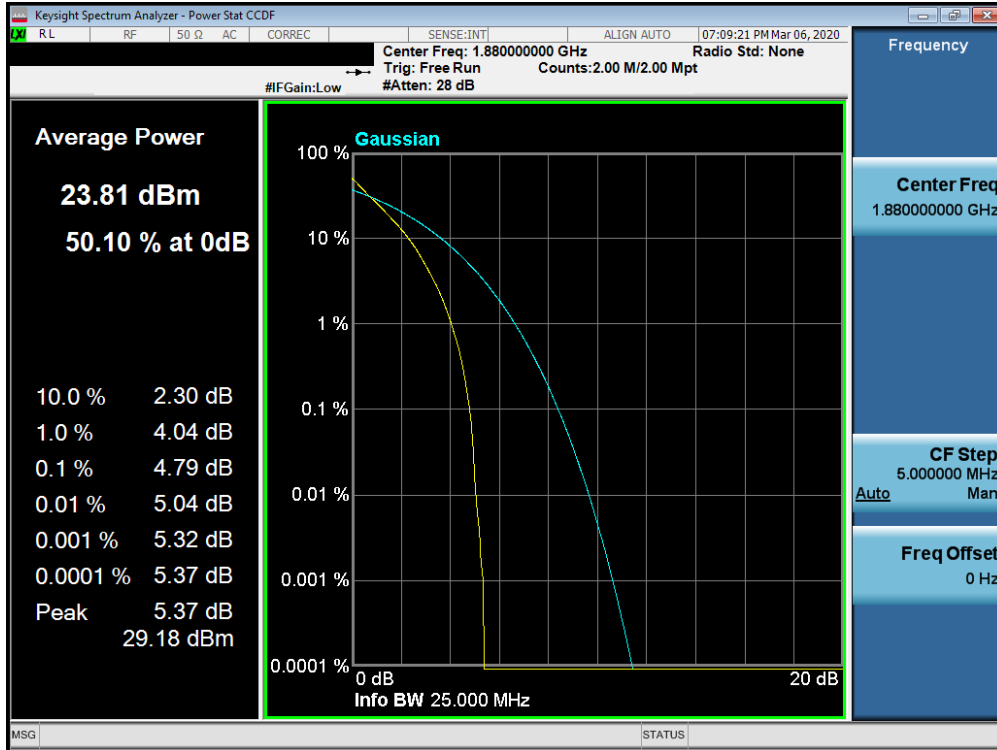


Plot 7-224. PAR Plot (Band 2 - 10.0MHz QPSK - Full RB Configuration)

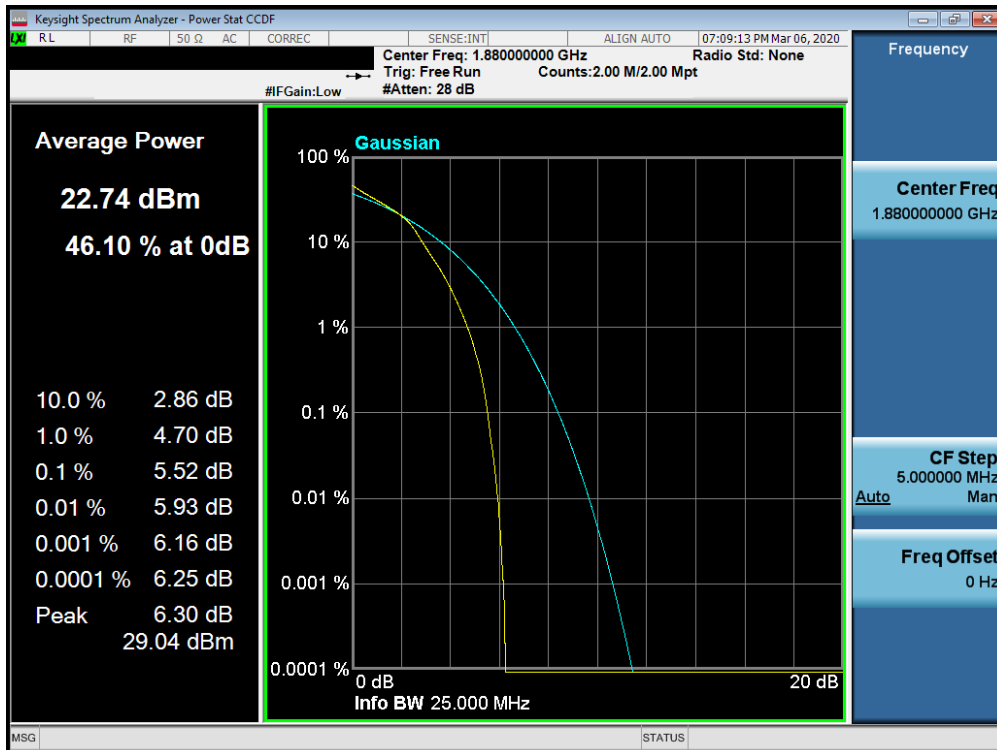


Plot 7-225. PAR Plot (Band 2 - 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFQ730AM		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 - 3/26-2020	EUT Type: Portable Handset		Page 134 of 168

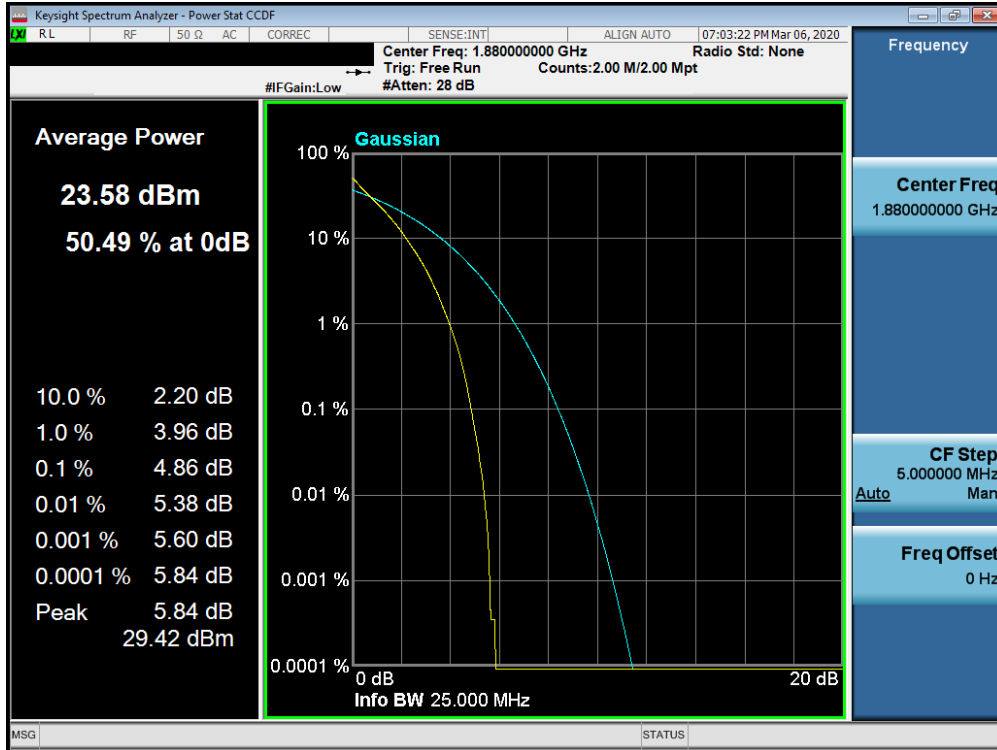


Plot 7-226. PAR Plot (Band 2 - 15.0MHz QPSK - Full RB Configuration)

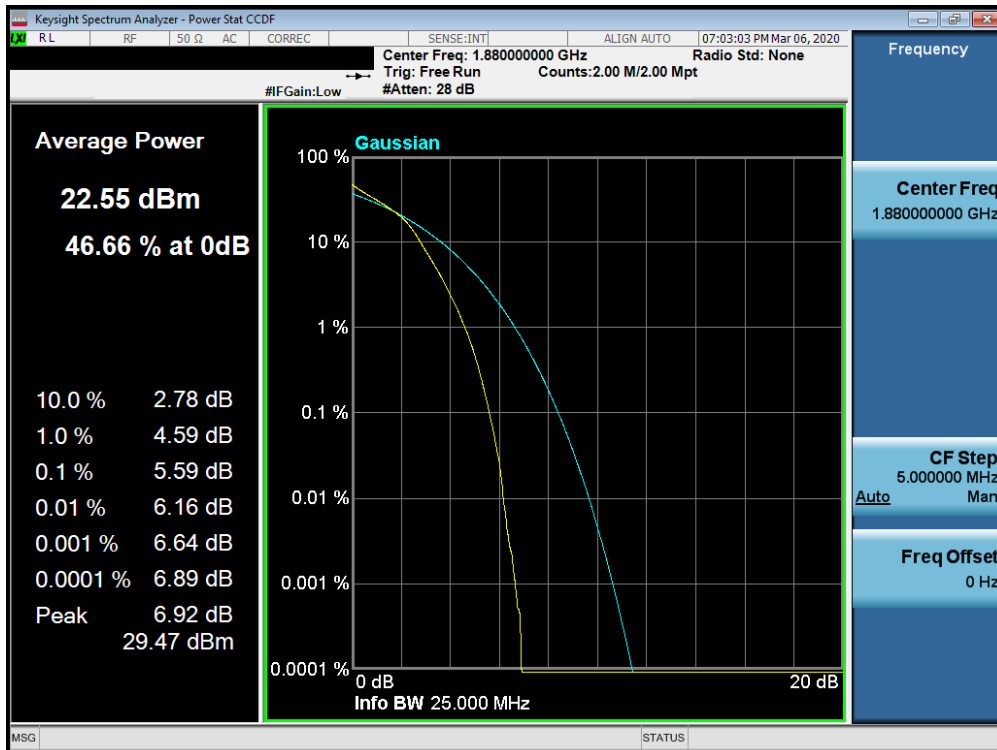


Plot 7-227. PAR Plot (Band 2 - 15.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFQ730AM	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 - 3/26-2020	EUT Type: Portable Handset		Page 135 of 168



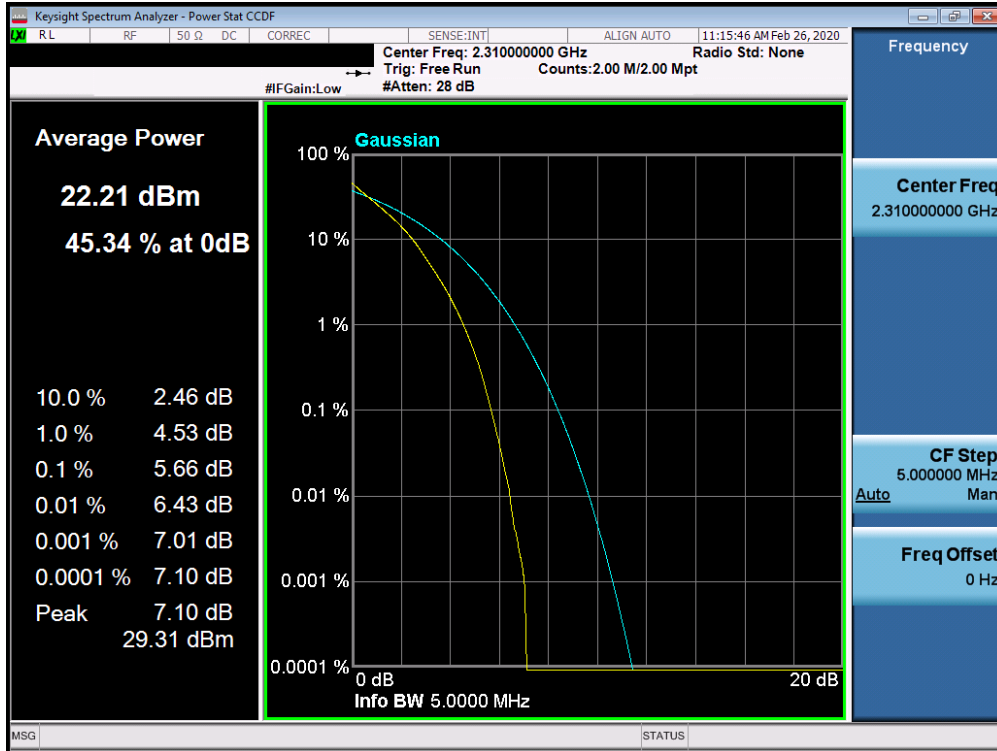
Plot 7-228. PAR Plot (Band 2 - 20.0MHz QPSK - Full RB Configuration)



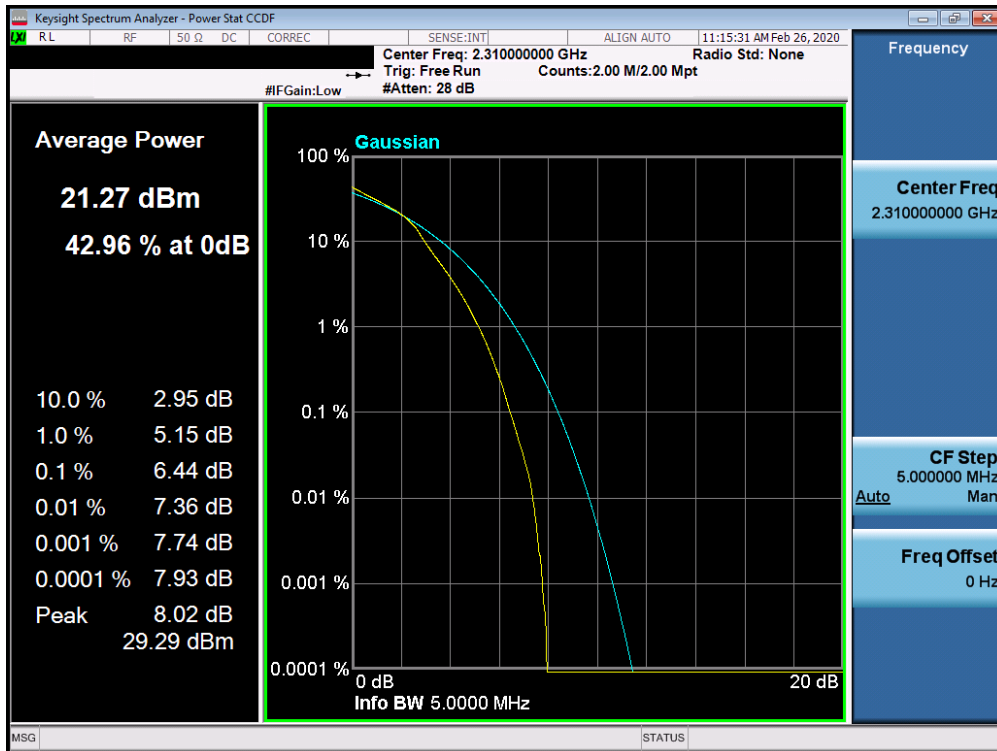
Plot 7-229. PAR Plot (Band 2 - 20.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFQ730AM		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 - 3/26-2020	EUT Type: Portable Handset		Page 136 of 168

**Band 30**

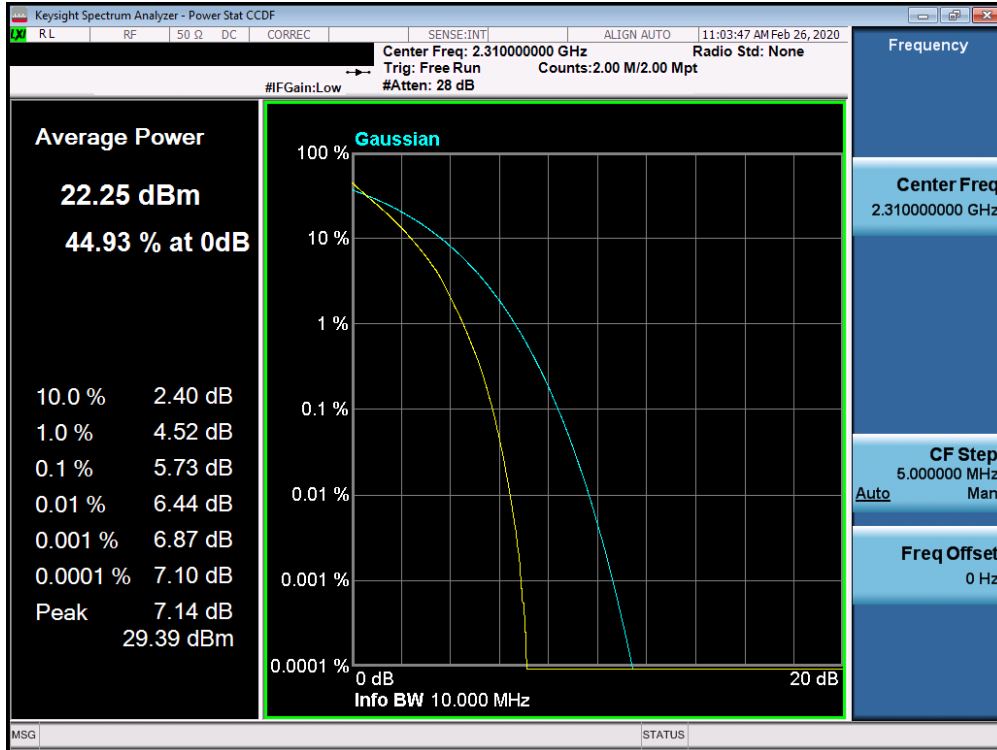


**Plot 7-230. PAR Plot (Band 30 - 5.0MHz QPSK - Full RB Configuration)**

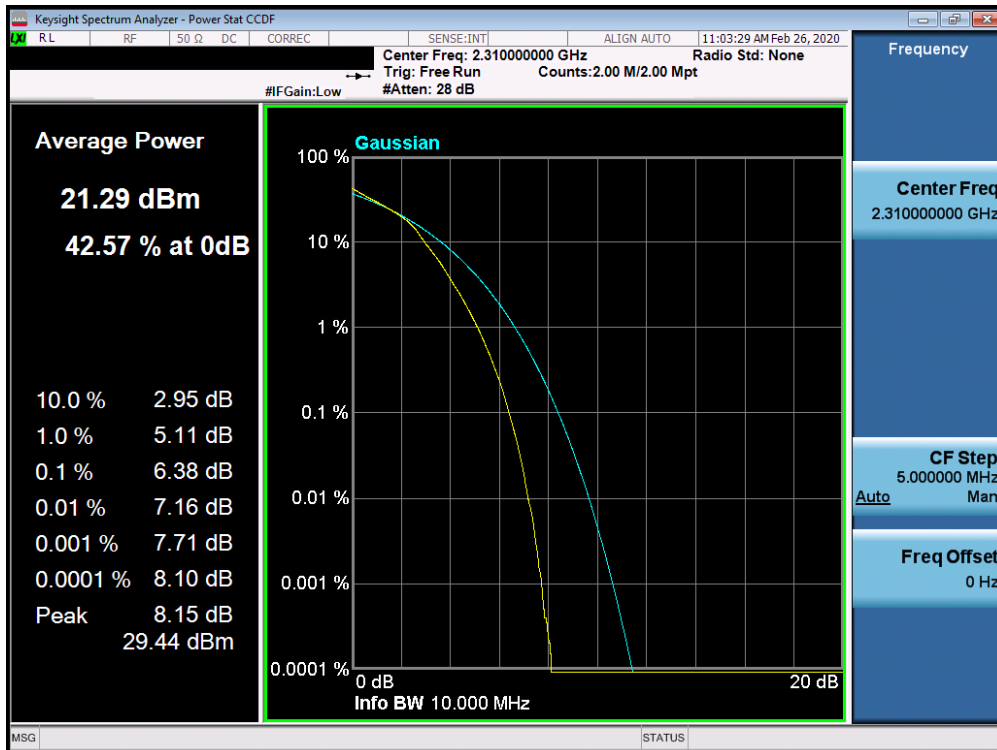


**Plot 7-231. PAR Plot (Band 30 - 5.0MHz 16-QAM - Full RB Configuration)**

FCC ID: ZNFQ730AM	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 - 3/26-2020	EUT Type: Portable Handset		Page 137 of 168



Plot 7-232. PAR Plot (Band 30 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-233. PAR Plot (Band 30 - 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFQ730AM		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 - 3/26-2020	EUT Type: Portable Handset		Page 138 of 168

## 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

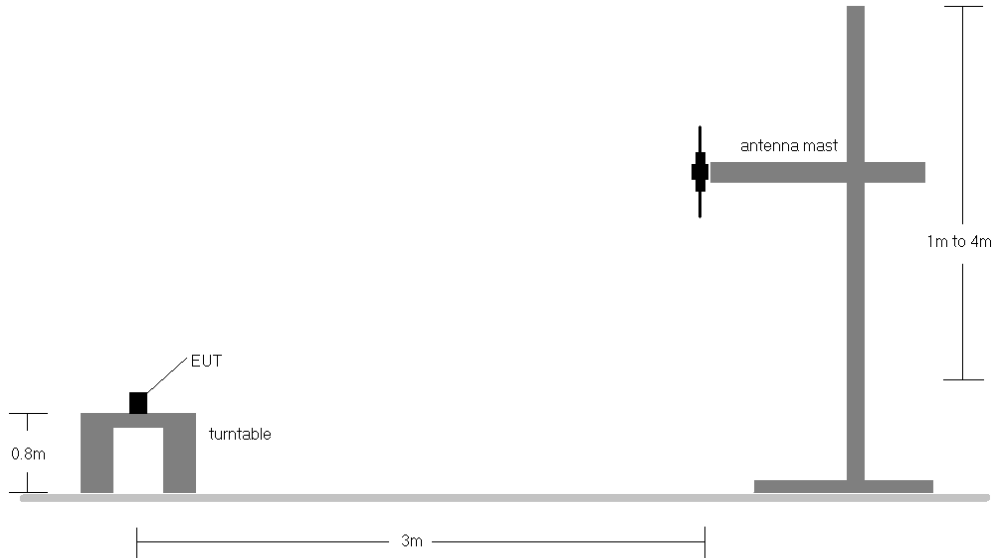
1. Radiated power measurements are performed using the signal analyzer’s “channel power” measurement capability for signals with continuous operation.
2. RBW = 1 – 5% of the expected OBW, not to exceed 1MHz
3. VBW  $\geq$  3 x RBW
4. Span = 1.5 times the OBW
5. No. of sweep points  $\geq$  2 x span /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

FCC ID: ZNFQ730AM	 PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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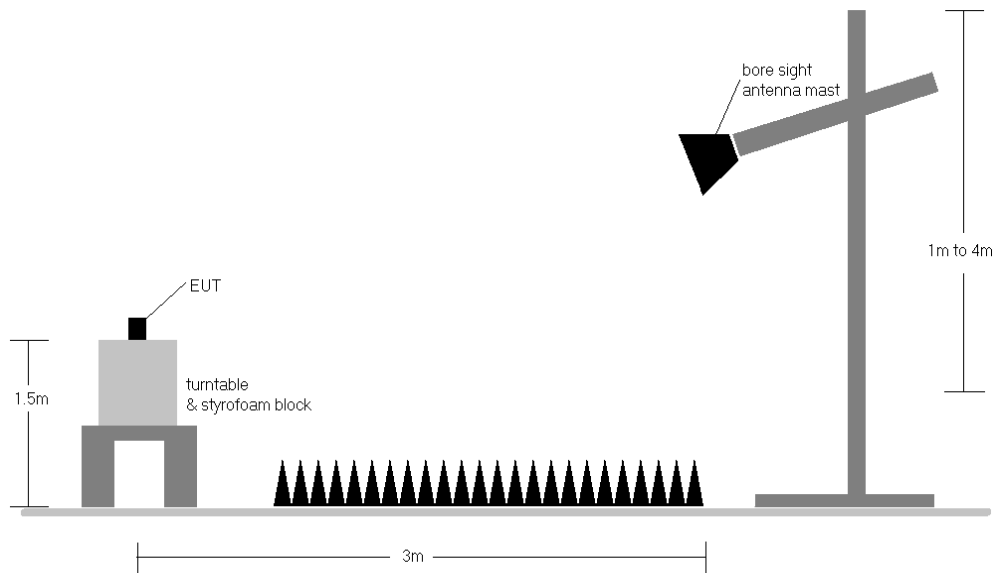


**Test Setup**

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.

FCC ID: ZNFQ730AM	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	<b>LG</b>	Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 – 3/26-2020	EUT Type: Portable Handset		Page 140 of 168

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	158	130	1 / 5	14.90	4.50	<b>17.25</b>	0.053	34.77	-17.52	<b>19.40</b>	0.087	36.99	-17.59
707.50	1.4	QPSK	V	165	134	1 / 5	14.70	4.60	17.15	0.052	34.77	-17.62	19.30	0.085	36.99	-17.69
715.30	1.4	QPSK	V	166	128	1 / 0	14.56	4.63	17.04	0.051	34.77	-17.73	19.19	0.083	36.99	-17.80
699.70	1.4	16-QAM	V	158	130	1 / 5	13.63	4.50	15.98	0.040	34.77	-18.79	18.13	0.065	36.99	-18.86
700.50	3	QPSK	V	161	135	1 / 14	14.77	4.55	<b>17.17</b>	0.052	34.77	-17.60	<b>19.32</b>	0.086	36.99	-17.67
707.50	3	QPSK	V	158	131	1 / 14	14.60	4.60	17.05	0.051	34.77	-17.72	19.20	0.083	36.99	-17.79
714.50	3	QPSK	V	161	143	1 / 0	14.60	4.60	17.05	0.051	34.77	-17.72	19.20	0.083	36.99	-17.79
700.50	3	16-QAM	V	161	135	1 / 14	13.60	4.55	16.00	0.040	34.77	-18.77	18.15	0.065	36.99	-18.84
701.50	5	QPSK	V	162	132	1 / 24	14.91	4.60	<b>17.36</b>	0.054	34.77	-17.41	<b>19.51</b>	0.089	36.99	-17.48
707.50	5	QPSK	V	168	138	1 / 24	14.63	4.60	17.08	0.051	34.77	-17.69	19.23	0.084	36.99	-17.76
713.50	5	QPSK	V	162	130	1 / 0	14.52	4.60	16.97	0.050	34.77	-17.80	19.12	0.082	36.99	-17.87
701.50	5	16-QAM	V	162	132	1 / 24	14.17	4.60	<b>16.62</b>	0.046	34.77	-18.15	<b>18.77</b>	0.075	36.99	-18.22
704.00	10	QPSK	V	157	137	1 / 49	15.52	4.50	17.87	0.061	34.77	-16.90	20.02	0.100	36.99	-16.97
707.50	10	QPSK	V	166	135	1 / 0	15.67	4.60	18.12	0.065	34.77	-16.65	20.27	0.106	36.99	-16.72
711.00	10	QPSK	V	164	132	1 / 0	15.72	4.60	<b>18.17</b>	<b>0.066</b>	34.77	-16.60	<b>20.32</b>	<b>0.108</b>	36.99	-16.67
711.00	10	16-QAM	V	164	132	1 / 0	14.87	4.60	17.32	0.054	34.77	-17.45	19.47	0.089	36.99	-17.52
711.00	10	QPSK	H	166	135	1 / 0	15.89	3.70	17.44	0.055	34.77	-17.33	19.59	0.091	36.99	-17.40

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]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
824.70	1.4	QPSK	V	146	179	1 / 5	12.63	6.30	16.78	0.048	38.45	-21.67	18.93	0.078	40.61	-21.68
836.50	1.4	QPSK	V	143	159	1 / 0	12.31	6.40	16.56	0.045	38.45	-21.89	18.71	0.074	40.61	-21.90
848.30	1.4	QPSK	V	131	161	1 / 0	12.54	6.50	<b>16.89</b>	0.049	38.45	-21.56	<b>19.04</b>	0.080	40.61	-21.57
848.30	1.4	16-QAM	V	131	161	1 / 0	11.38	6.50	15.73	0.037	38.45	-22.72	17.88	0.061	40.61	-22.73
825.50	3	QPSK	V	141	182	1 / 14	11.64	6.30	15.79	0.038	38.45	-22.66	17.94	0.062	40.61	-22.67
836.50	3	QPSK	V	138	164	1 / 0	12.62	6.40	16.87	0.049	38.45	-21.58	19.02	0.080	40.61	-21.59
847.50	3	QPSK	V	144	157	1 / 0	12.60	6.50	<b>16.95</b>	0.050	38.45	-21.50	<b>19.10</b>	0.081	40.61	-21.51
847.50	3	16-QAM	V	144	157	1 / 0	11.63	6.50	<b>15.98</b>	0.040	38.45	-22.47	<b>18.13</b>	0.065	40.61	-22.48
826.50	5	QPSK	V	135	176	1 / 24	12.61	6.30	16.76	0.047	38.45	-21.69	18.91	0.078	40.61	-21.70
836.50	5	QPSK	V	142	171	1 / 0	12.58	6.40	16.83	0.048	38.45	-21.62	18.98	0.079	40.61	-21.63
846.50	5	QPSK	V	147	164	1 / 0	12.62	6.50	<b>16.97</b>	<b>0.050</b>	38.45	-21.48	<b>19.12</b>	<b>0.082</b>	40.61	-21.49
846.50	5	16-QAM	V	147	164	1 / 0	11.74	6.50	<b>16.09</b>	0.041	38.45	-22.36	<b>18.24</b>	0.067	40.61	-22.37
829.00	10	QPSK	V	131	172	1 / 49	12.52	6.30	16.67	0.046	38.45	-21.78	18.82	0.076	40.61	-21.79
836.50	10	QPSK	V	139	174	1 / 0	12.50	6.40	16.75	0.047	38.45	-21.70	18.90	0.078	40.61	-21.71
844.00	10	QPSK	V	142	176	1 / 0	12.53	6.40	<b>16.78</b>	0.048	38.45	-21.67	<b>18.93</b>	0.078	40.61	-21.68
844.00	10	16-QAM	V	142	176	1 / 0	11.75	6.40	<b>16.00</b>	0.040	38.45	-22.45	<b>18.15</b>	0.065	40.61	-22.46
846.50	5.0	QPSK	H	226	47	1 / 0	12.00	6.70	16.55	0.045	38.45	-21.90	18.70	0.074	40.61	-21.91

Table 7-4. ERP Data (Band 5)

FCC ID: ZNFQ730AM		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 – 3/26-2020	EUT Type: Portable Handset	Page 141 of 168	

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	147	41	1 / 5	11.30	9.35	20.65	0.116	30.00	-9.35
1745.00	1.4	QPSK	V	143	59	1 / 5	11.56	9.11	<b>20.67</b>	0.117	30.00	-9.33
1779.30	1.4	QPSK	V	110	154	1 / 0	11.38	9.17	20.55	0.114	30.00	-9.45
1745.00	1.4	16-QAM	V	143	59	1 / 5	10.83	9.11	<b>19.94</b>	0.099	30.00	-10.06
1711.50	3	QPSK	V	133	46	1 / 14	11.31	9.34	20.65	0.116	30.00	-9.35
1745.00	3	QPSK	V	134	57	1 / 14	11.59	9.11	<b>20.70</b>	0.117	30.00	-9.30
1778.50	3	QPSK	V	108	158	1 / 0	11.25	9.17	20.42	0.110	30.00	-9.58
1745.00	3	16-QAM	V	134	57	1 / 14	10.85	9.11	<b>19.96</b>	0.099	30.00	-10.04
1712.50	5	QPSK	V	143	42	1 / 24	11.28	9.34	20.62	0.115	30.00	-9.38
1745.00	5	QPSK	V	137	53	1 / 24	11.61	9.11	<b>20.72</b>	0.118	30.00	-9.28
1777.50	5	QPSK	V	102	164	1 / 0	11.18	9.16	20.34	0.108	30.00	-9.66
1745.00	5	16-QAM	V	137	53	1 / 24	10.79	9.11	<b>19.90</b>	0.098	30.00	-10.10
1715.00	10	QPSK	V	141	38	1 / 49	11.23	9.32	20.55	0.113	30.00	-9.45
1745.00	10	QPSK	V	130	47	1 / 49	11.61	9.11	<b>20.72</b>	0.118	30.00	-9.28
1775.00	10	QPSK	V	112	161	1 / 0	11.24	9.16	20.40	0.110	30.00	-9.60
1745.00	10	16-QAM	V	130	47	1 / 49	10.88	9.11	<b>19.99</b>	0.100	30.00	-10.01
1717.50	15	QPSK	V	144	41	1 / 74	11.16	9.30	20.46	0.111	30.00	-9.54
1745.00	15	QPSK	V	132	51	1 / 74	11.74	9.11	<b>20.85</b>	<b>0.122</b>	30.00	-9.15
1772.50	15	QPSK	V	106	163	1 / 0	11.17	9.15	20.32	0.108	30.00	-9.68
1745.00	15	16-QAM	V	132	51	1 / 74	10.88	9.11	<b>19.99</b>	0.100	30.00	-10.01
1720.00	20	QPSK	V	141	46	1 / 99	11.18	9.28	20.46	0.111	30.00	-9.54
1745.00	20	QPSK	V	128	47	1 / 99	11.65	9.11	<b>20.76</b>	0.119	30.00	-9.24
1770.00	20	QPSK	V	101	151	1 / 0	11.26	9.14	20.40	0.110	30.00	-9.60
1745.00	20	16-QAM	V	128	47	1 / 99	10.81	9.11	<b>19.92</b>	0.098	30.00	-10.08
1745.00	15.0	QPSK	H	182	135	1 / 74	11.30	9.23	20.53	0.113	30.00	-9.47

Table 7-5. EIRP Data (Band 66/4)

FCC ID: ZNFQ730AM		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 – 3/26-2020	EUT Type: Portable Handset		Page 142 of 168

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	168	7	1 / 0	10.79	9.48	20.27	0.107	33.01	-12.74
1880.00	1.4	QPSK	H	164	1	1 / 5	10.48	9.90	20.38	0.109	33.01	-12.63
1909.30	1.4	QPSK	H	158	10	1 / 0	10.67	10.25	<b>20.92</b>	0.124	33.01	-12.09
1909.30	1.4	16-QAM	H	158	10	1 / 0	9.51	10.25	<b>19.76</b>	0.095	33.01	-13.25
1851.50	3	QPSK	H	174	13	1 / 0	10.75	9.50	20.25	0.106	33.01	-12.76
1880.00	3	QPSK	H	163	8	1 / 14	10.45	9.90	20.35	0.108	33.01	-12.66
1908.50	3	QPSK	H	161	16	1 / 0	10.76	10.25	<b>21.01</b>	<b>0.126</b>	33.01	-12.00
1908.50	3	16-QAM	H	161	16	1 / 0	9.46	10.25	<b>19.71</b>	0.093	33.01	-13.30
1852.50	5	QPSK	H	171	11	1 / 0	10.70	9.51	20.21	0.105	33.01	-12.80
1880.00	5	QPSK	H	161	4	1 / 24	10.48	9.90	20.38	0.109	33.01	-12.63
1907.50	5	QPSK	H	157	16	1 / 0	10.58	10.24	<b>20.82</b>	0.121	33.01	-12.19
1907.50	5	16-QAM	H	157	16	1 / 0	9.61	10.24	<b>19.85</b>	0.097	33.01	-13.16
1855.00	10	QPSK	H	173	6	1 / 0	10.72	9.55	20.27	0.106	33.01	-12.74
1880.00	10	QPSK	H	157	3	1 / 49	10.48	9.90	20.38	0.109	33.01	-12.63
1905.00	10	QPSK	H	162	13	1 / 0	10.77	10.22	<b>20.99</b>	0.126	33.01	-12.02
1905.00	10	16-QAM	H	162	13	1 / 0	9.45	10.22	<b>19.67</b>	0.093	33.01	-13.34
1857.50	15	QPSK	H	170	4	1 / 0	10.57	9.58	20.15	0.104	33.01	-12.86
1880.00	15	QPSK	H	162	1	1 / 74	10.55	9.90	20.45	0.111	33.01	-12.56
1902.50	15	QPSK	H	158	8	1 / 0	10.68	10.20	<b>20.88</b>	0.122	33.01	-12.13
1902.50	15	16-QAM	H	158	8	1 / 0	9.59	10.20	<b>19.79</b>	0.095	33.01	-13.22
1860.00	20	QPSK	H	173	2	1 / 0	10.64	9.62	20.26	0.106	33.01	-12.75
1880.00	20	QPSK	H	158	2	1 / 99	10.52	9.90	20.42	0.110	33.01	-12.59
1900.00	20	QPSK	H	160	12	1 / 0	10.52	10.18	<b>20.70</b>	0.117	33.01	-12.31
1900.00	20	16-QAM	H	160	12	1 / 0	9.60	10.18	<b>19.78</b>	0.095	33.01	-13.23
1908.50	3.0	QPSK	V	101	154	1 / 0	9.65	9.90	19.55	0.090	33.01	-13.46

Table 7-6. EIRP Data (Band 2)

FCC ID: ZNFQ730AM		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 – 3/26-2020	EUT Type: Portable Handset		Page 143 of 168

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]
2307.50	5	QPSK	H	115	154	1 / 24	10.27	10.31	<b>20.58</b>	0.114	23.98	-3.40
2312.50	5	QPSK	H	115	156	25 / 0	10.25	10.31	20.56	0.114	23.98	-3.42
2307.50	5	16-QAM	H	115	154	1 / 24	9.57	10.31	19.88	0.097	23.98	-4.10
2310.00	10	QPSK	H	115	158	1 / 49	10.82	10.31	<b>21.13</b>	<b>0.130</b>	23.98	-2.85
2310.00	10	16-QAM	H	115	158	1 / 0	9.84	10.31	20.15	0.103	23.98	-3.83
2310.00	10	QPSK	V	138	306	1 / 49	10.52	10.22	20.74	0.119	23.98	-3.24

**Table 7-7. EIRP Data (Band 30)**

FCC ID: ZNFQ730AM	 PCTEST <sup>®</sup> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	 LG	Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 – 3/26-2020	EUT Type: Portable Handset	Page 144 of 168	

## 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

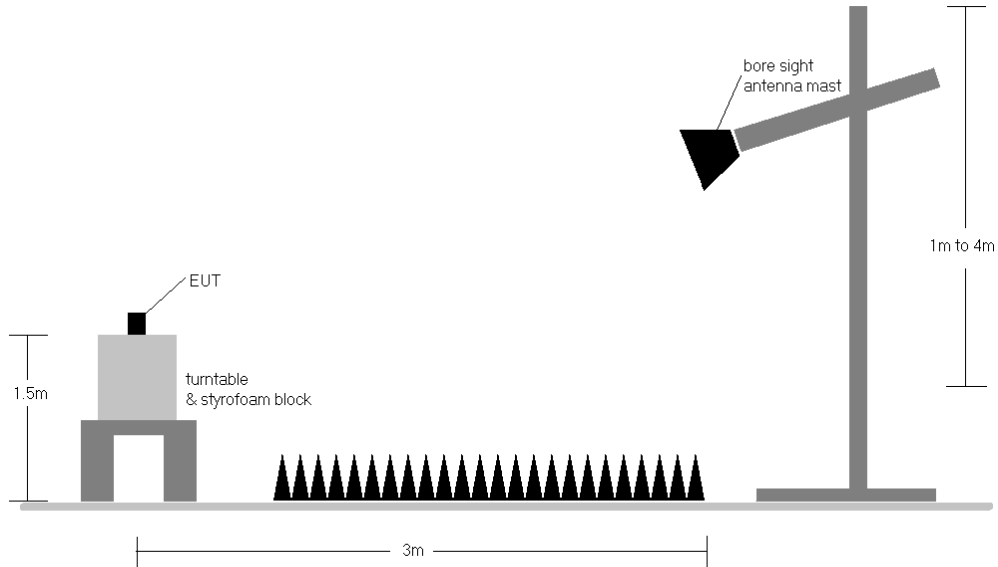
### Test Settings

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

FCC ID: ZNFQ730AM		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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**Test Setup**

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



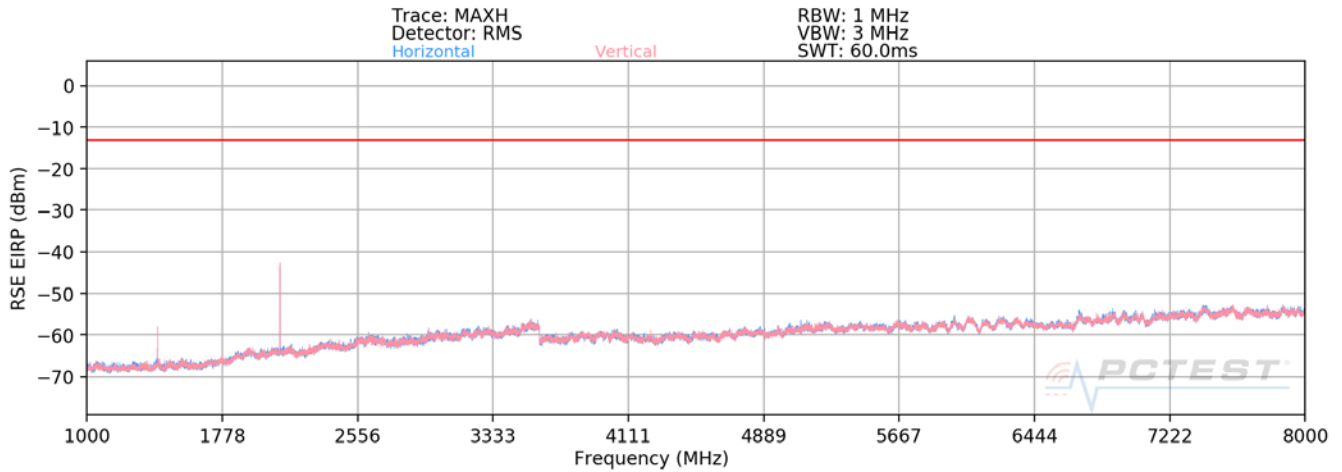
**Figure 7-7. Test Instrument & Measurement Setup**

**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: ZNFQ730AM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 – 3/26-2020	EUT Type: Portable Handset		Page 146 of 168

## Band 12



**Plot 7-234. 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	186	302	-63.53	7.57	-55.96	-43.0
2112.00	V	211	359	-61.20	8.88	-52.32	-39.3
2816.00	V	-	-	-78.36	10.15	-68.21	-55.2
3520.00	V	-	-	-76.55	9.94	-66.61	-53.6

**Table 7-8. Radiated Spurious Data (Band 12 – Low Channel)**

FCC ID: ZNFQ730AM		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 – 3/26-2020	EUT Type: Portable Handset		Page 147 of 168



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	148	84	-64.42	7.66	-56.76	-43.8
2122.50	V	138	352	-60.10	8.89	-51.21	-38.2
2830.00	V	-	-	-77.14	10.12	-67.01	-54.0
3537.50	V	-	-	-75.16	9.93	-65.23	-52.2

Table 7-9. Radiated Spurious Data (Band 12 – Mid Channel)

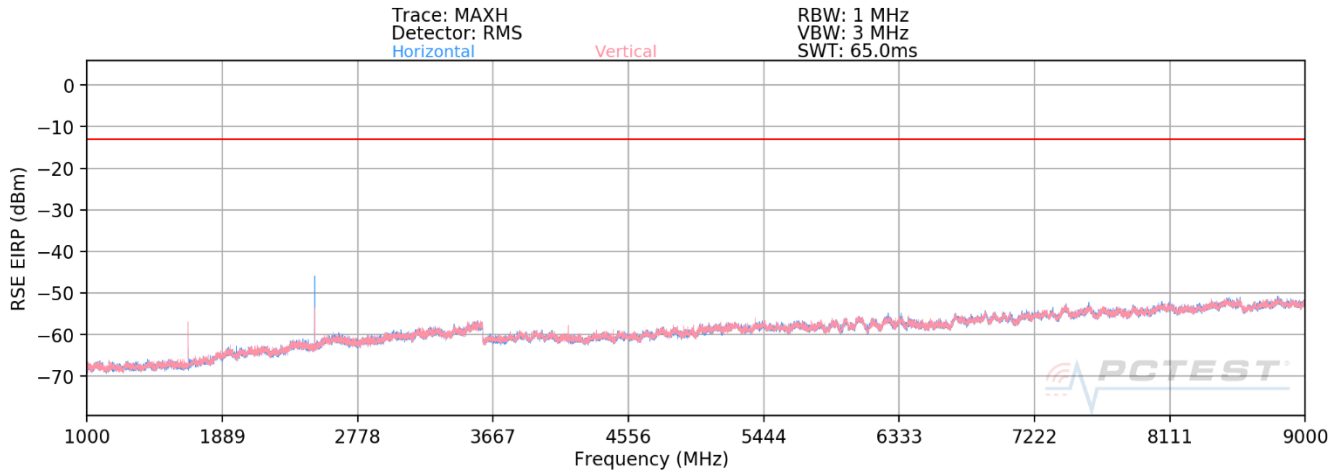
OPERATING FREQUENCY: 711.00 MHz  
 MODULATION SIGNAL: QPSK  
 BANDWIDTH: 10.0 MHz  
 DISTANCE: 3 meters  
 LIMIT: -13 dBm

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	163	269	-59.74	7.75	-51.99	-39.0
2133.00	V	198	41	-58.44	8.90	-49.54	-36.5
2844.00	V	-	-	-78.01	10.10	-67.91	-54.9
3555.00	V	-	-	-76.39	9.92	-66.46	-53.5

Table 7-10. Radiated Spurious Data (Band 12 – High Channel)

FCC ID: ZNFQ730AM		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 – 3/26-2020	EUT Type: Portable Handset		Page 148 of 168

## Band 5



**Plot 7-235. Radiated Spurious Plot above 1GHz (Band 5)**

OPERATING FREQUENCY: 826.50 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]
1653.00	H	216	1	-68.61	8.98	-59.63	-46.6
2479.50	H	224	113	-53.84	9.73	-44.10	-31.1
3306.00	H	224	10	-76.91	9.62	-67.29	-54.3
4132.50	H	-	-	-77.06	10.24	-66.82	-53.8
4959.00	H	-	-	-76.12	10.95	-65.17	-52.2

**Table 7-11. Radiated Spurious Data (Band 5 – Low Channel)**

FCC ID: ZNFQ730AM		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 – 3/26-2020	EUT Type: Portable Handset		Page 149 of 168

OPERATING FREQUENCY: 836.50 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]
1673.00	H	162	1	-72.68	8.98	-63.70	-50.7
2509.50	H	138	115	-50.67	9.78	-40.89	-27.9
3346.00	H	196	42	-74.50	9.63	-64.87	-51.9
4182.50	H	-	-	-77.83	10.37	-67.46	-54.5
5019.00	H	-	-	-76.61	10.91	-65.70	-52.7

Table 7-12. Radiated Spurious Data (Band 5 – Mid Channel)

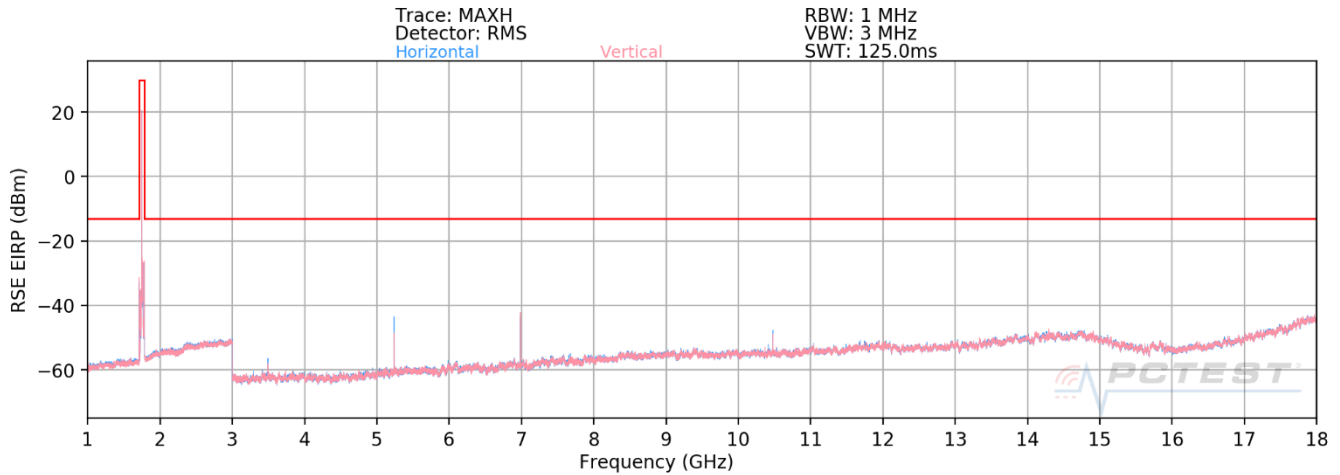
OPERATING FREQUENCY: 846.50 MHz  
 MODULATION SIGNAL: QPSK  
 BANDWIDTH: 5.0 MHz  
 DISTANCE: 3 meters  
 LIMIT: -13 dBm

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]
1693.00	H	215	359	-70.50	8.98	-61.51	-48.5
2539.50	H	168	370	-53.10	9.78	-43.32	-30.3
3386.00	H	-	-	-77.73	9.74	-68.00	-55.0
4232.50	H	-	-	-78.16	10.51	-67.64	-54.6

Table 7-13. Radiated Spurious Data (Band 5 – High Channel)

FCC ID: ZNFQ730AM		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 – 3/26-2020	EUT Type: Portable Handset		Page 150 of 168

## Band 66/4



**Plot 7-236. Radiated Spurious Plot above 1GHz (Band 66/4)**

OPERATING FREQUENCY: 1717.50 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]
3435.00	V	178	38	-67.66	9.87	-57.78	-44.8
5152.50	V	240	310	-75.67	10.74	-64.93	-51.9
6870.00	V	337	322	-58.76	11.71	-47.05	-34.0
8587.50	V	-	-	-71.10	11.11	-59.99	-47.0
10305.00	V	387	23	-61.38	12.42	-48.96	-36.0
12022.50	V	-	-	-69.82	12.75	-57.07	-44.1
13740.00	V	-	-	-66.88	12.03	-54.84	-41.8

**Table 7-14. Radiated Spurious Data (Band 66/4 – Low Channel)**

FCC ID: ZNFQ730AM		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 – 3/26-2020	EUT Type: Portable Handset		Page 151 of 168

OPERATING FREQUENCY: 1745.00 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]
3490.00	V	189	30	-70.54	9.94	-60.59	-47.6
5235.00	V	226	353	-73.92	10.76	-63.16	-50.2
6980.00	V	368	329	-57.79	11.85	-45.94	-32.9
8725.00	V	-	-	-70.54	11.03	-59.52	-46.5
10470.00	V	385	2	-61.48	12.64	-48.84	-35.8
12215.00	V	-	-	-70.68	13.15	-57.53	-44.5
13960.00	V	-	-	-67.19	11.90	-55.29	-42.3

Table 7-15. Radiated Spurious Data (Band 66/4 – Mid Channel)

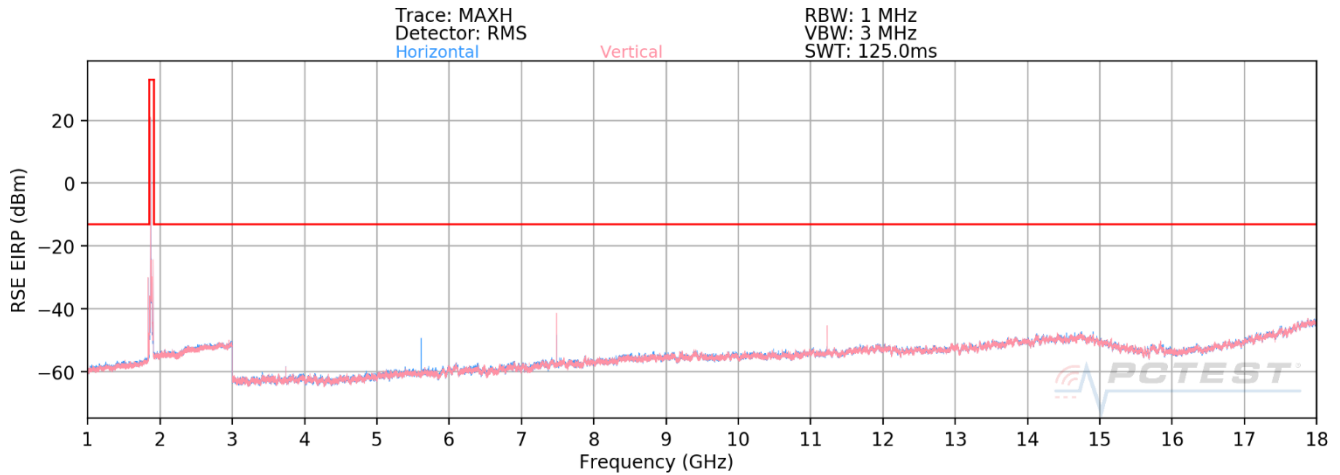
OPERATING FREQUENCY: 1772.50 MHz  
 MODULATION SIGNAL: QPSK  
 BANDWIDTH: 15.0 MHz  
 DISTANCE: 3 meters  
 LIMIT: -13 dBm

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]
3545.00	V	213	35	-70.18	9.92	-60.26	-47.3
5317.50	V	215	351	-74.28	10.72	-63.57	-50.6
7090.00	V	368	326	-55.57	11.82	-43.76	-30.8
8862.50	V	-	-	-70.14	11.02	-59.11	-46.1
10635.00	V	378	360	-59.94	12.62	-47.33	-34.3
12407.50	V	-	-	-70.30	13.39	-56.90	-43.9
14180.00	V	-	-	-66.00	11.58	-54.42	-41.4

Table 7-16. Radiated Spurious Data (Band 66/4 – High Channel)

FCC ID: ZNFQ730AM		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 – 3/26-2020	EUT Type: Portable Handset		Page 152 of 168

## Band 2



**Plot 7-237. Radiated Spurious Plot above 1GHz (Band 2)**

OPERATING FREQUENCY: 1851.50 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]
3703.00	V	111	300	-71.90	9.54	-62.37	-49.4
5554.50	V	303	355	-72.69	11.02	-61.68	-48.7
7406.00	V	115	236	-51.01	11.01	-40.00	-27.0
9257.50	V	-	-	-70.96	11.64	-59.32	-46.3
11109.00	V	113	293	-65.24	12.78	-52.46	-39.5
12960.50	V	-	-	-70.06	13.26	-56.79	-43.8
14812.00	V	-	-	-66.93	12.67	-54.27	-41.3

**Table 7-17. Radiated Spurious Data (Band 2 – Low Channel)**

FCC ID: ZNFQ730AM		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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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	V	187	87	-71.67	9.40	-62.28	-49.3
5640.00	V	111	45	-50.06	11.20	-38.86	-25.9
7520.00	V	112	231	-48.08	11.14	-36.94	-23.9
9400.00	V	120	24	-69.24	11.60	-57.64	-44.6
11280.00	V	349	1	-65.78	12.78	-53.00	-40.0
13160.00	V	-	-	-68.58	13.20	-55.39	-42.4
15040.00	V	-	-	-69.93	13.56	-56.37	-43.4

Table 7-18. Radiated Spurious Data (Band 2 – Mid Channel)

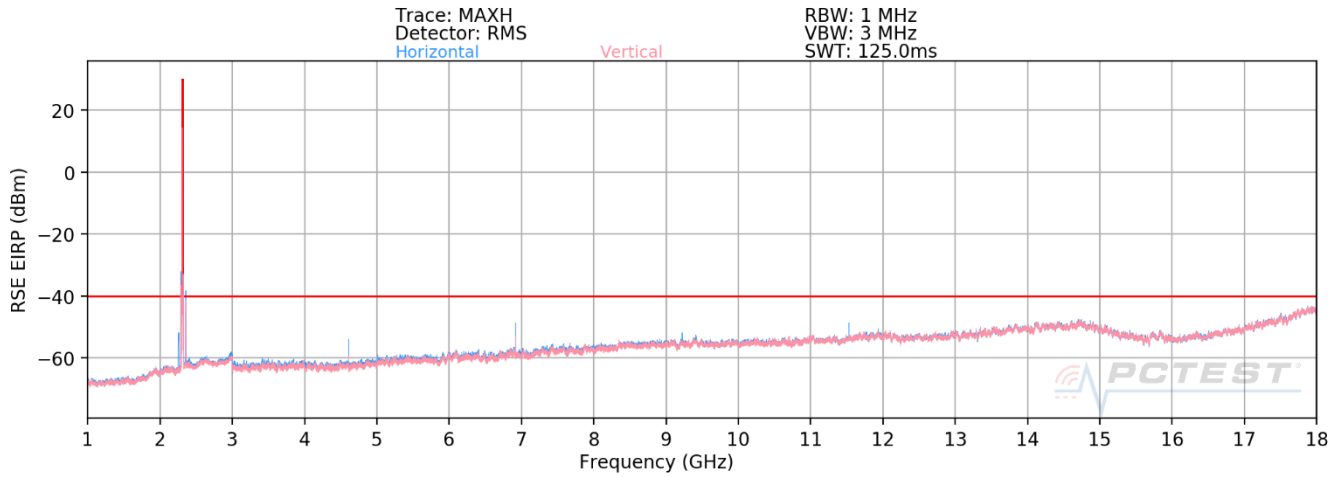
OPERATING FREQUENCY: 1908.50 MHz  
 MODULATION SIGNAL: QPSK  
 BANDWIDTH: 3.0 MHz  
 DISTANCE: 3 meters  
 LIMIT: -13 dBm

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]
3817.00	V	179	163	-73.21	9.31	-63.90	-50.9
5725.50	V	272	352	-72.63	11.34	-61.29	-48.3
7634.00	V	369	235	-55.08	11.27	-43.81	-30.8
9542.50	V	-	-	-71.35	11.70	-59.64	-46.6
11451.00	V	113	287	-64.63	12.87	-51.76	-38.8
13359.50	V	-	-	-70.58	12.84	-57.74	-44.7
15268.00	V	-	-	-71.03	14.71	-56.32	-43.3

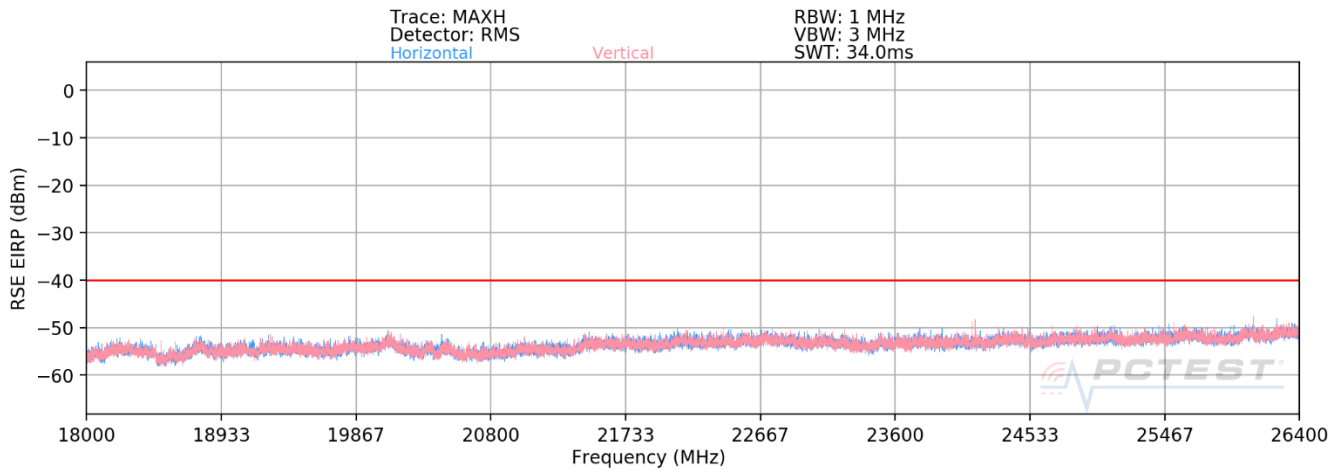
Table 7-19. Radiated Spurious Data (Band 2 – High Channel)

FCC ID: ZNFQ730AM		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 – 3/26-2020	EUT Type: Portable Handset		Page 154 of 168

### Band 30



**Plot 7-238. Radiated Spurious Plot above 1GHz (Band 30)**



**Plot 7-239. Radiated Spurious Plot 18GHz – 265GHz (Band 30)**

<b>FCC ID:</b> ZNFQ730AM		<b>MEASUREMENT REPORT (CERTIFICATION)</b>	<b>Approved by:</b> Quality Manager
<b>Test Report S/N:</b> 1M2002240025-03-R1.ZNF	<b>Test Dates:</b> 2/25 – 3/26-2020	<b>EUT Type:</b> Portable Handset	Page 155 of 168



OPERATING FREQUENCY: 2310.00 MHz  
 MODULATION SIGNAL: QPSK  
 BANDWIDTH: 10.0 MHz  
 DISTANCE: 3 meters  
 LIMIT: -40 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]
4620.00	V	145	53	-69.56	10.95	-58.62	-18.6
6930.00	V	400	359	-61.79	11.77	-50.02	-10.0
9240.00	V	395	24	-62.02	11.65	-50.37	-10.4
11550.00	V	259	346	-67.53	12.76	-54.77	-14.8
13860.00	V	214	323	-65.78	12.04	-53.74	-13.7
16170.00	V	200	40	-73.71	16.64	-57.06	-17.1

Table 7-20. Radiated Spurious Data (Band 30 – Mid Channel)

FCC ID: ZNFQ730AM		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  $\pm 0.00025\%$  ( $\pm 2.5$  ppm) of the center frequency. 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

FCC ID: ZNFQ730AM		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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## Band 12 Frequency Stability Measurements

OPERATING FREQUENCY: 707,500,000 Hz  
 CHANNEL: 23790  
 REFERENCE VOLTAGE: 4.27 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.27	- 30	707,499,920	-80	-0.0000113
100 %		- 20	707,499,729	-271	-0.0000383
100 %		- 10	707,500,261	261	0.0000369
100 %		0	707,500,162	162	0.0000229
100 %		+ 10	707,499,808	-192	-0.0000271
100 %		+ 20	707,500,073	73	0.0000103
100 %		+ 30	707,499,894	-106	-0.0000150
100 %		+ 40	707,500,055	55	0.0000078
100 %		+ 50	707,499,790	-210	-0.0000297
BATT. ENDPOINT		2.86	+ 20	707,499,854	-146

**Table 7-21. Frequency Stability Data (Band 12)**

FCC ID: ZNFQ730AM		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 – 3/26-2020	EUT Type: Portable Handset	Page 158 of 168	

## Band 12 Frequency Stability Measurements

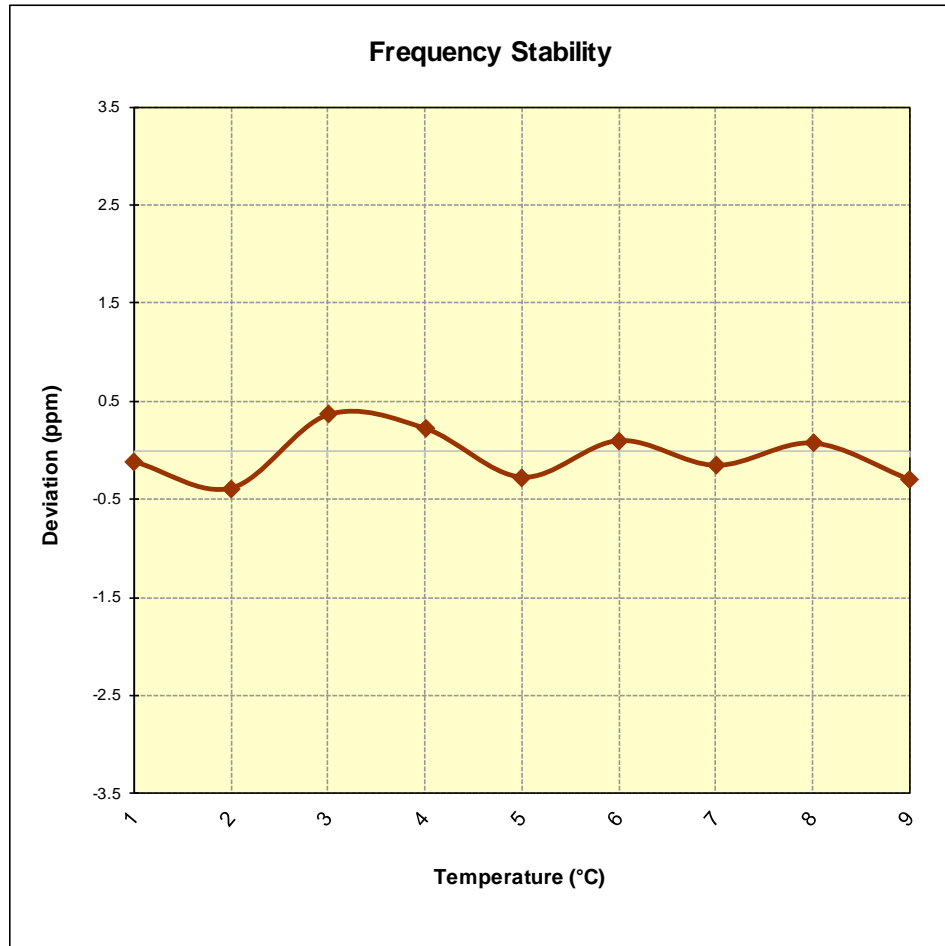


Figure 7-8. Frequency Stability Graph (Band 12)

FCC ID: ZNFQ730AM	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	<b>LG</b>	Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 – 3/26-2020	EUT Type: Portable Handset		Page 159 of 168

## Band 5 Frequency Stability Measurements

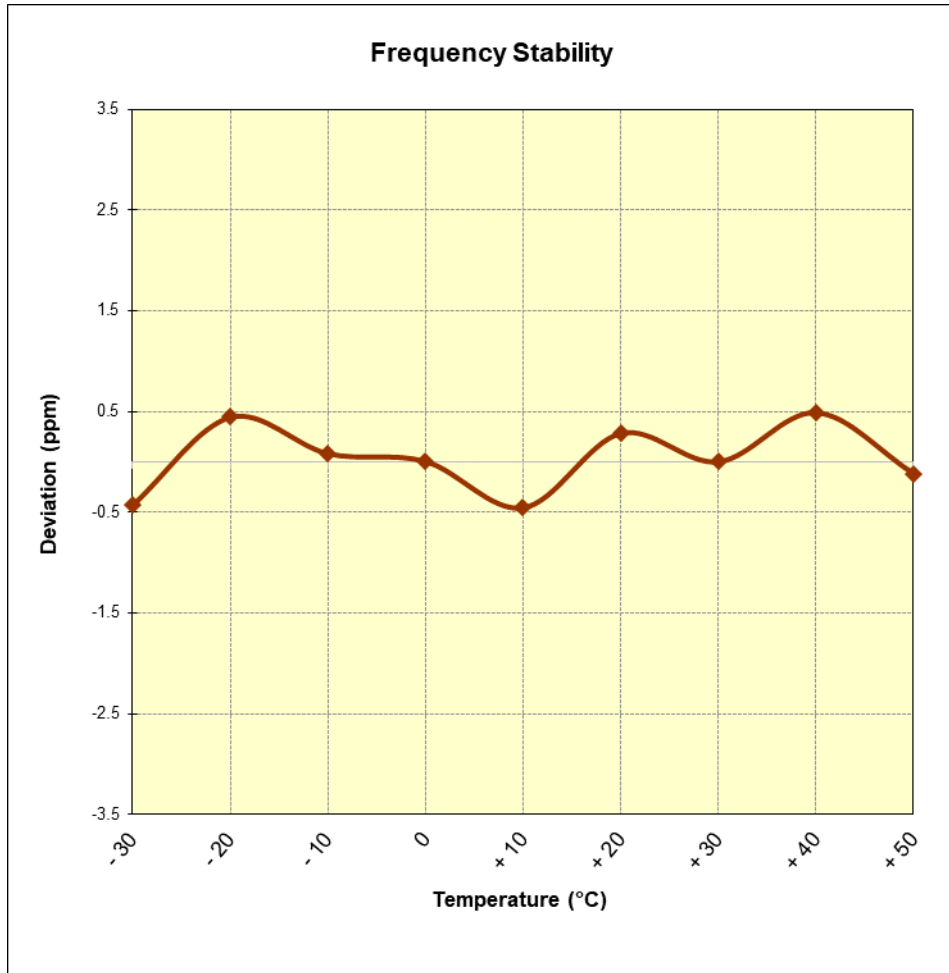
OPERATING FREQUENCY: 836,500,000 Hz  
 CHANNEL: 20525  
 REFERENCE VOLTAGE: 4.27 VDC  
 DEVIATION LIMIT: ± 0.00025 % or 2.5 ppm

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.27	- 30	836,499,642	-358	-0.0000428
100 %		- 20	836,500,375	375	0.0000448
100 %		- 10	836,500,072	72	0.0000086
100 %		0	836,500,007	7	0.0000008
100 %		+ 10	836,499,620	-380	-0.0000454
100 %		+ 20	836,500,241	241	0.0000288
100 %		+ 30	836,500,004	4	0.0000005
100 %		+ 40	836,500,415	415	0.0000496
100 %		+ 50	836,499,905	-95	-0.0000114
BATT. ENDPOINT		2.86	+ 20	836,499,825	-175

Figure 7-9. Frequency Stability Graph (Band 5)

FCC ID: ZNFQ730AM		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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## Band 5 Frequency Stability Measurements



**Table 7-22. Frequency Stability Data (Band 5)**

FCC ID: ZNFQ730AM		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: 4.27 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.27	- 30	1,745,000,190	190	0.0000109
100 %		- 20	1,744,999,597	-403	-0.0000231
100 %		- 10	1,744,999,976	-24	-0.0000014
100 %		0	1,745,000,302	302	0.0000173
100 %		+ 10	1,745,000,217	217	0.0000124
100 %		+ 20	1,745,000,064	64	0.0000037
100 %		+ 30	1,744,999,985	-15	-0.0000009
100 %		+ 40	1,745,000,069	69	0.0000040
100 %		+ 50	1,744,999,949	-51	-0.0000029
BATT. ENDPOINT		2.86	+ 20	1,745,000,175	175

Table 7-23. Frequency Stability Data (Band 66/4)

FCC ID: ZNFQ730AM		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 – 3/26-2020	EUT Type: Portable Handset	Page 162 of 168	

## Band 66/4 Frequency Stability Measurements

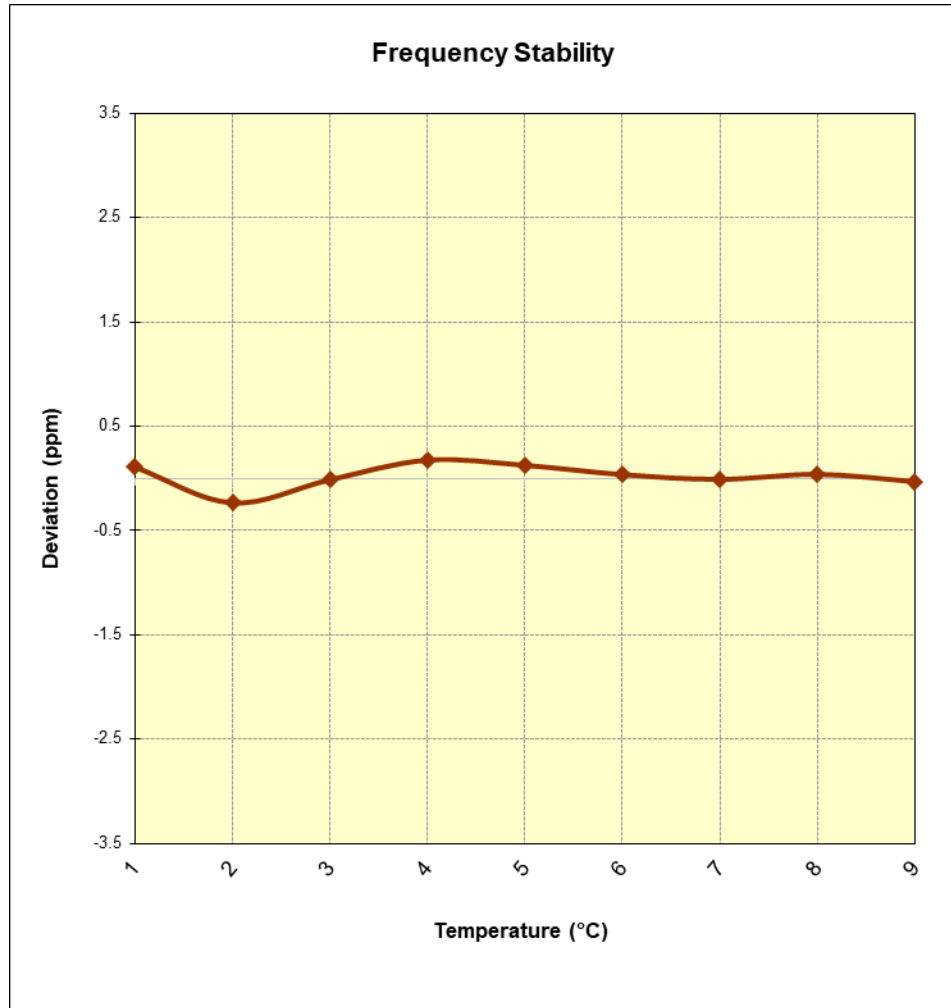


Figure 7-10. Frequency Stability Graph (Band 66/4)

FCC ID: ZNFQ730AM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 – 3/26-2020	EUT Type: Portable Handset		Page 163 of 168



## Band 2 Frequency Stability Measurements

OPERATING FREQUENCY: 1,880,000,000 Hz  
 CHANNEL: 18900  
 REFERENCE VOLTAGE: 4.27 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.27	- 30	1,880,000,195	195	0.0000104
100 %		- 20	1,880,000,001	1	0.0000001
100 %		- 10	1,880,000,159	159	0.0000085
100 %		0	1,879,999,958	-42	-0.0000022
100 %		+ 10	1,880,000,045	45	0.0000024
100 %		+ 20	1,880,000,101	101	0.0000054
100 %		+ 30	1,879,999,728	-272	-0.0000145
100 %		+ 40	1,879,999,795	-205	-0.0000109
100 %		+ 50	1,880,000,321	321	0.0000171
BATT. ENDPOINT	2.86	+ 20	1,880,000,054	54	0.0000029

Table 7-24. Frequency Stability Data (Band 2)

FCC ID: ZNFQ730AM		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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## Band 2 Frequency Stability Measurements

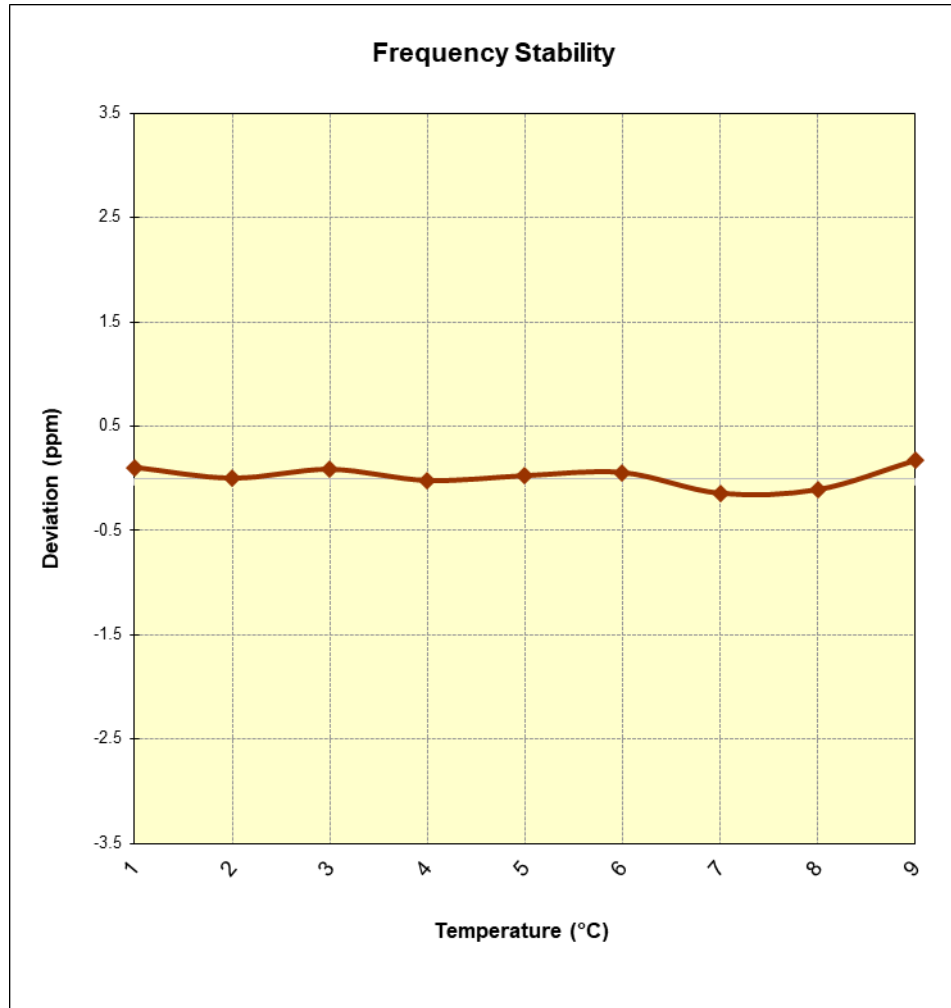


Figure 7-11. Frequency Stability Graph (Band 2)

FCC ID: ZNFQ730AM	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	<b>LG</b>	Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 – 3/26-2020	EUT Type: Portable Handset		Page 165 of 168

## Band 30 Frequency Stability Measurements

OPERATING FREQUENCY: 2,310,000,000 Hz  
 CHANNEL: 27710  
 REFERENCE VOLTAGE: 4.27 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.27	- 30	2,309,999,526	-474	-0.0000205
100 %		- 20	2,309,999,940	-60	-0.0000026
100 %		- 10	2,309,999,930	-70	-0.0000030
100 %		0	2,310,000,042	42	0.0000018
100 %		+ 10	2,309,999,921	-79	-0.0000034
100 %		+ 20	2,309,999,995	-5	-0.0000002
100 %		+ 30	2,309,999,683	-317	-0.0000137
100 %		+ 40	2,309,999,911	-89	-0.0000039
100 %		+ 50	2,310,000,061	61	0.0000026
BATT. ENDPOINT		2.86	+ 20	2,309,999,768	-232

**Table 7-25. Frequency Stability Data (Band 30)**

FCC ID: ZNFQ730AM		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 – 3/26-2020	EUT Type: Portable Handset	Page 166 of 168	

## Band 30 Frequency Stability Measurements

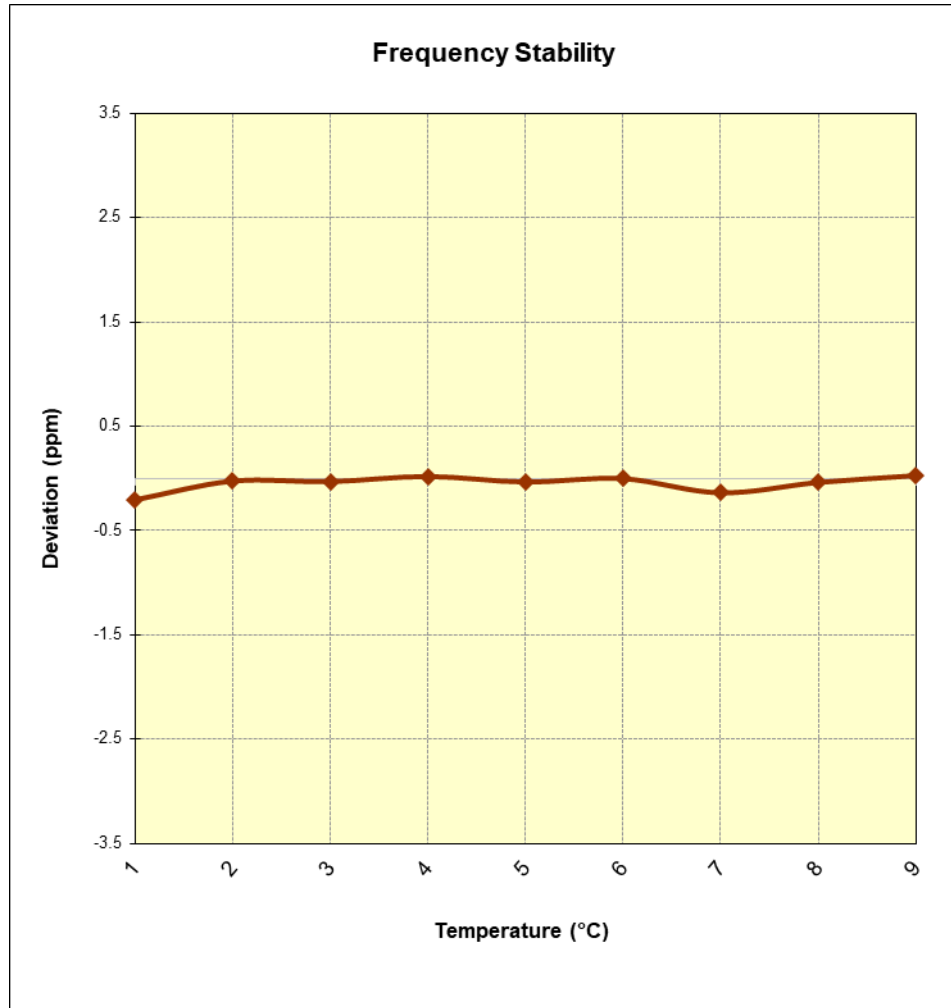


Figure 7-12. Frequency Stability Graph (Band 30)

FCC ID: ZNFQ730AM	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 – 3/26-2020	EUT Type: Portable Handset		Page 167 of 168

## 8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **LG Portable Handset FCC ID: ZNFQ730AM** complies with all the requirements of Part 22, 24, & 27 of the FCC Rules for LTE operation only.

FCC ID: ZNFQ730AM		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2002240025-03-R1.ZNF	Test Dates: 2/25 – 3/26-2020	EUT Type: Portable Handset		Page 168 of 168