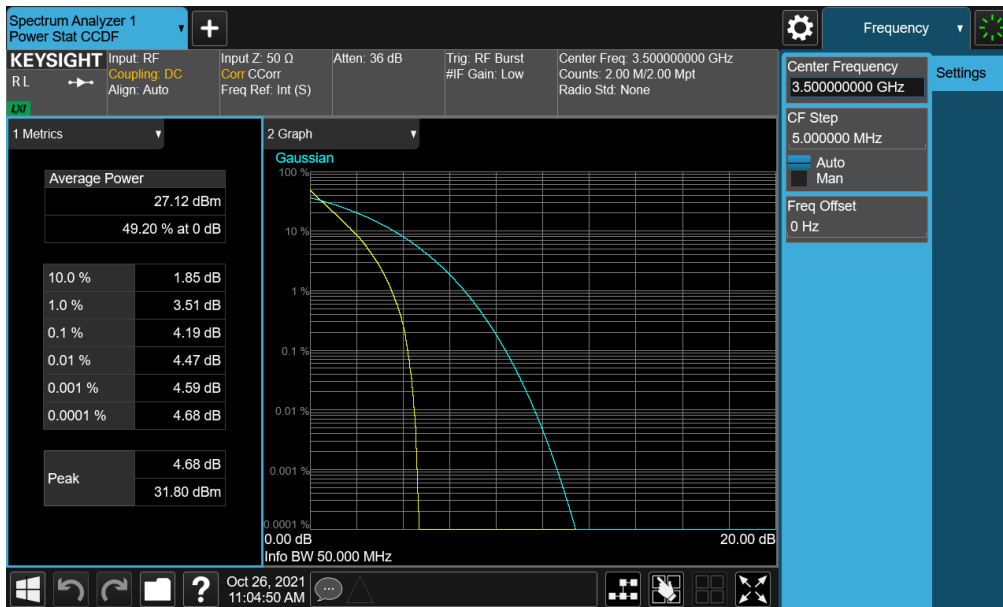


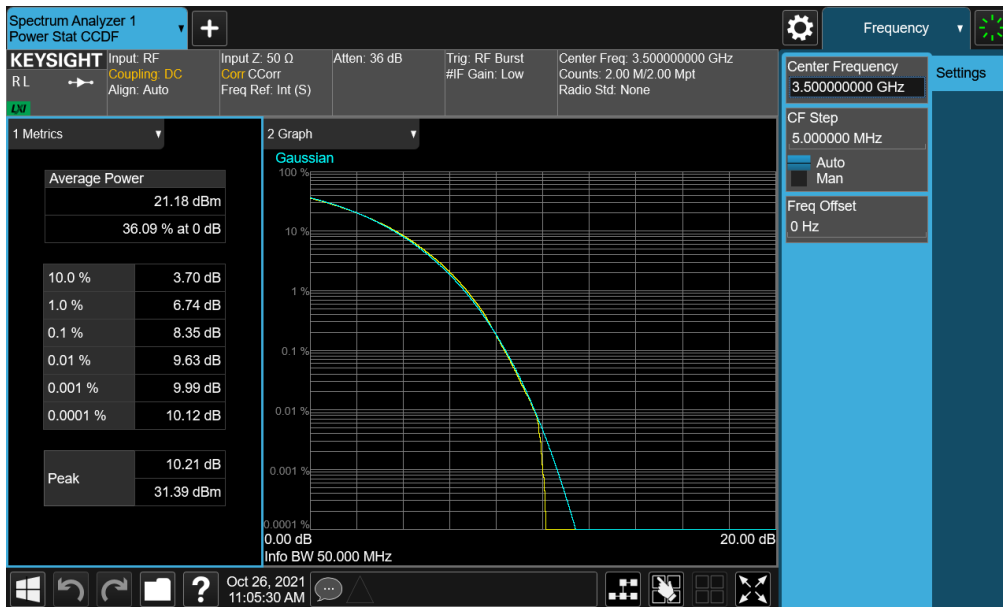


**Plot 7-185. PAR Plot (NR Band n77 (DoD) - 60MHz CP-OFDM 256-QAM - Full RB - ANT F)**

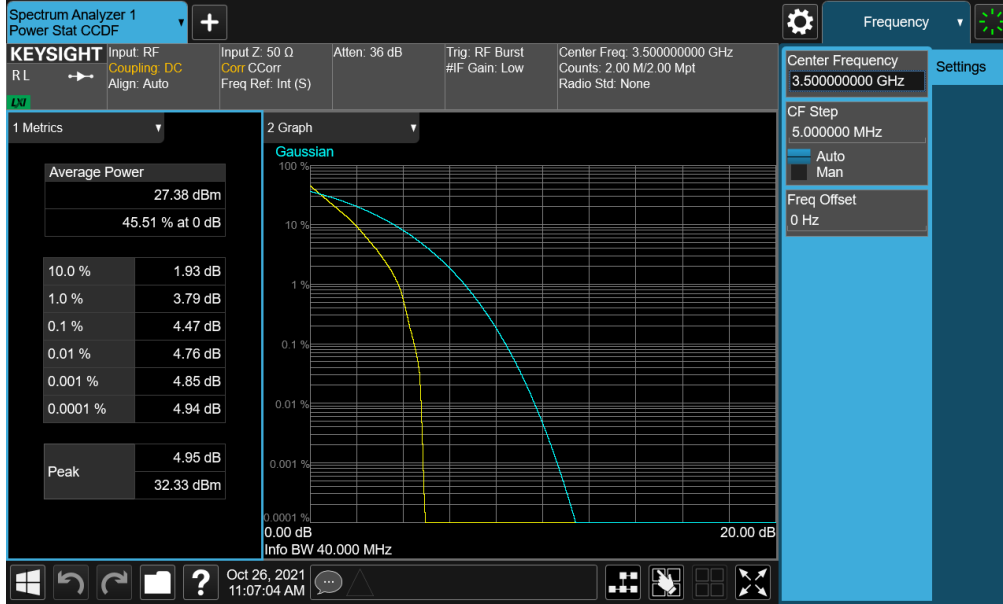


**Plot 7-186. PAR Plot (NR Band n77 (DoD) - 50MHz DFT-s-OFDM BPSK - Full RB - ANT F)**

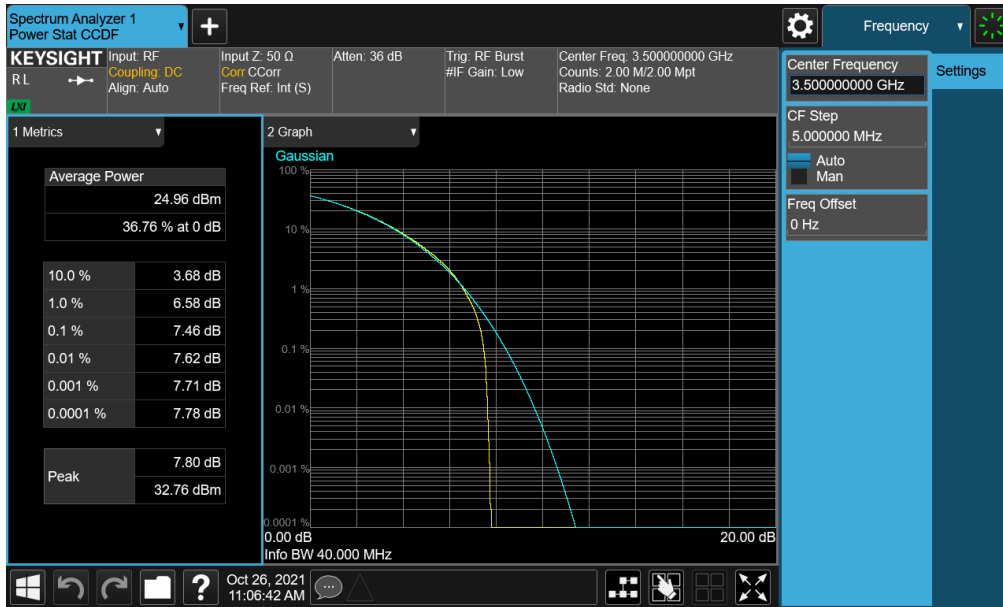
FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Technical Manager
Test Report S/N: 1M2109090103-29.A3L	Test Dates: 9/10/2021 - 11/10/2021	EUT Type: Portable Handset		Page 120 of 181



FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Technical Manager
Test Report S/N: 1M2109090103-29.A3L	Test Dates: 9/10/2021 - 11/10/2021	EUT Type: Portable Handset		Page 121 of 181



**Plot 7-189. PAR Plot (NR Band n77 (DoD) - 40MHz DFT-s-OFDM BPSK - Full RB - ANT F)**

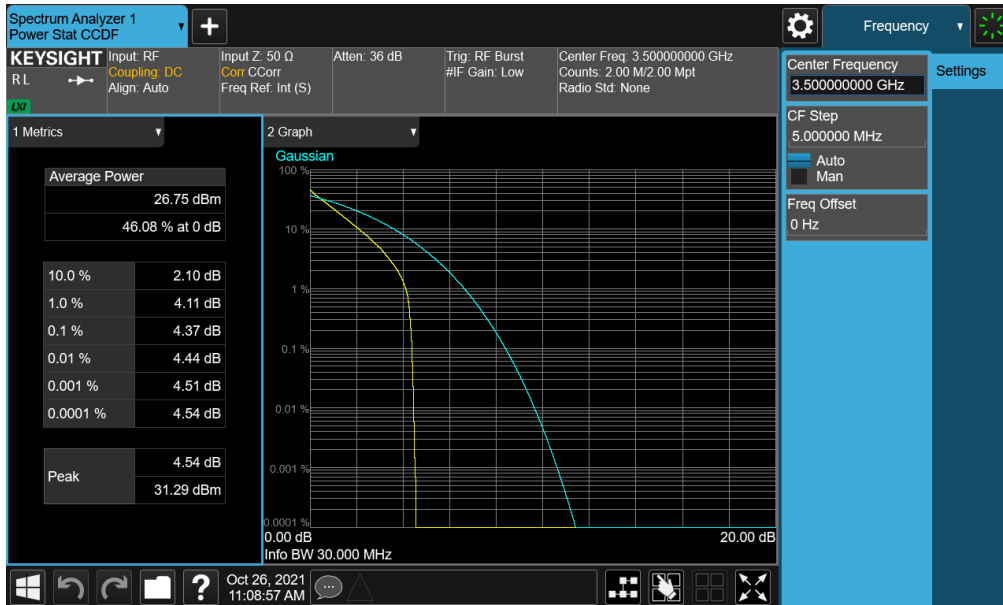


**Plot 7-190. PAR Plot (NR Band n77 (DoD) - 40MHz CP-OFDM QPSK - Full RB - ANT F)**

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Technical Manager
Test Report S/N: 1M2109090103-29.A3L	Test Dates: 9/10/2021 - 11/10/2021	EUT Type: Portable Handset		Page 122 of 181



**Plot 7-191. PAR Plot (NR Band n77 (DoD) - 40MHz CP-OFDM 256-QAM - Full RB - ANT F)**



**Plot 7-192. PAR Plot (NR Band n77 (DoD) - 30MHz DFT-s-OFDM BPSK - Full RB - ANT F)**

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Technical Manager
Test Report S/N: 1M2109090103-29.A3L	Test Dates: 9/10/2021 - 11/10/2021	EUT Type: Portable Handset		Page 123 of 181

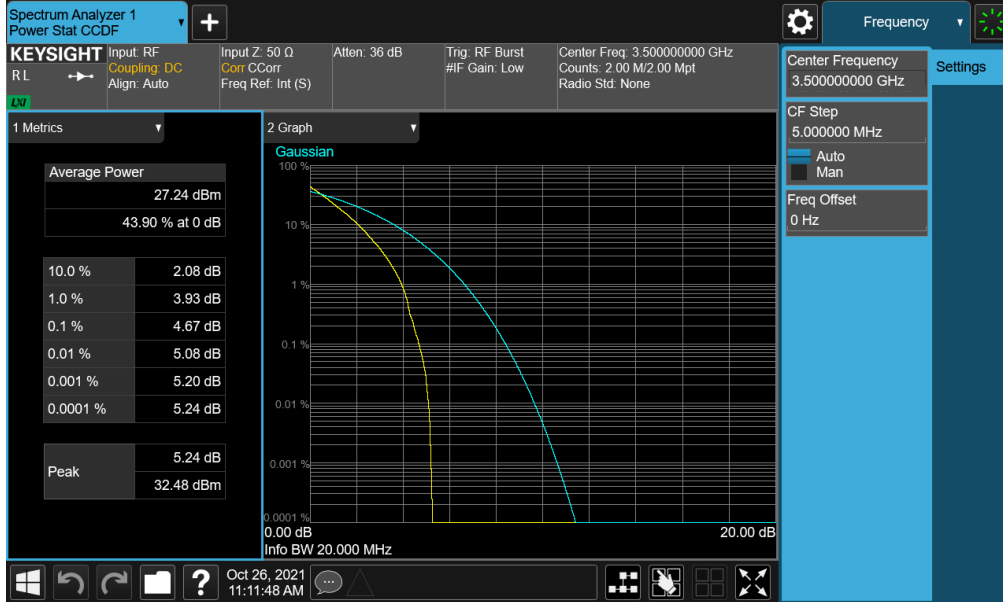


**Plot 7-193. PAR Plot (NR Band n77 (DoD) - 30MHz CP-OFDM QPSK - Full RB - ANT F)**

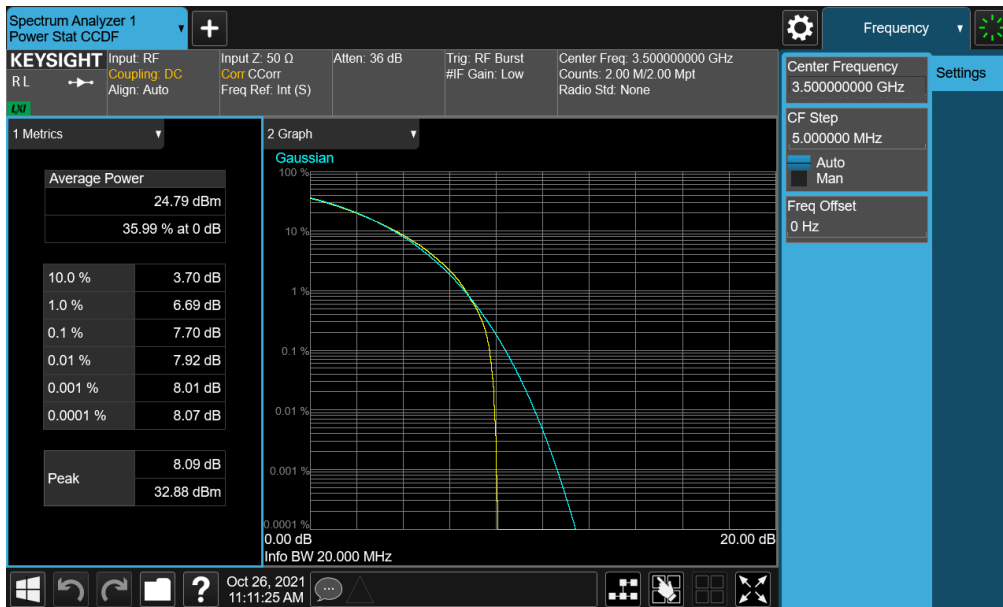


**Plot 7-194. PAR Plot (NR Band n77 (DoD) - 30MHz CP-OFDM 256-QAM - Full RB - ANT F)**

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>	<b>Approved by:</b> Technical Manager
Test Report S/N: 1M2109090103-29.A3L	Test Dates: 9/10/2021 - 11/10/2021	EUT Type: Portable Handset	Page 124 of 181



**Plot 7-195. PAR Plot (NR Band n77 (DoD) - 20MHz DFT-s-OFDM BPSK - Full RB - ANT F)**

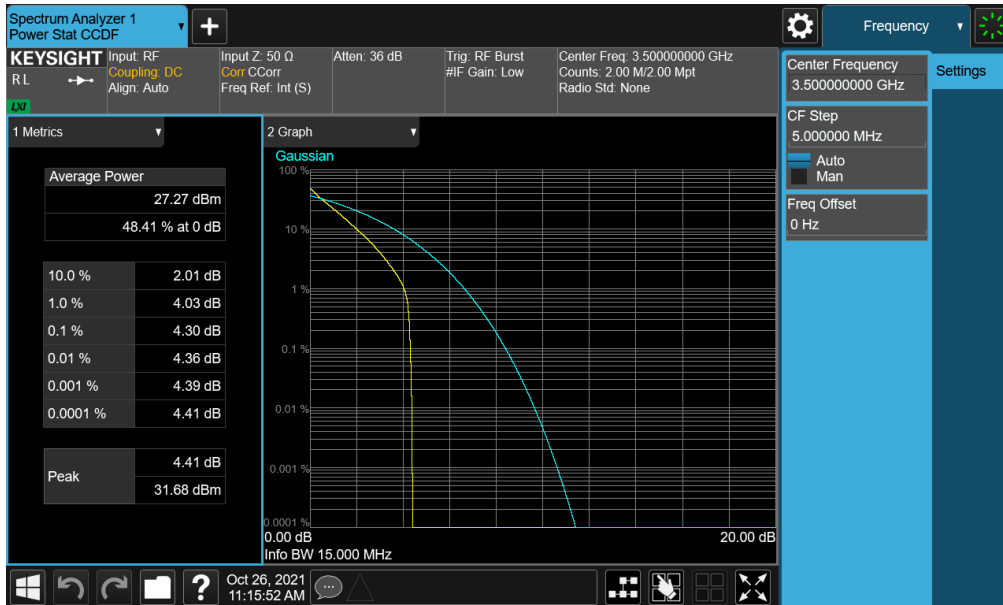


**Plot 7-196. PAR Plot (NR Band n77 (DoD) - 20MHz CP-OFDM QPSK - Full RB - ANT F)**

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Technical Manager
Test Report S/N: 1M2109090103-29.A3L	Test Dates: 9/10/2021 - 11/10/2021	EUT Type: Portable Handset		Page 125 of 181

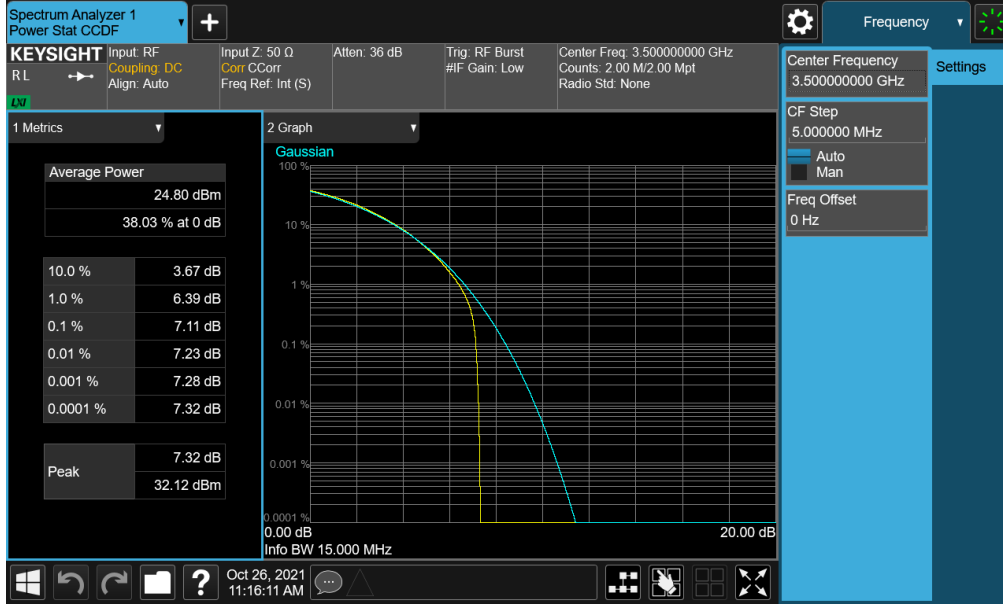


**Plot 7-197. PAR Plot (NR Band n77 (DoD) - 20MHz CP-OFDM 256-QAM - Full RB - ANT F)**



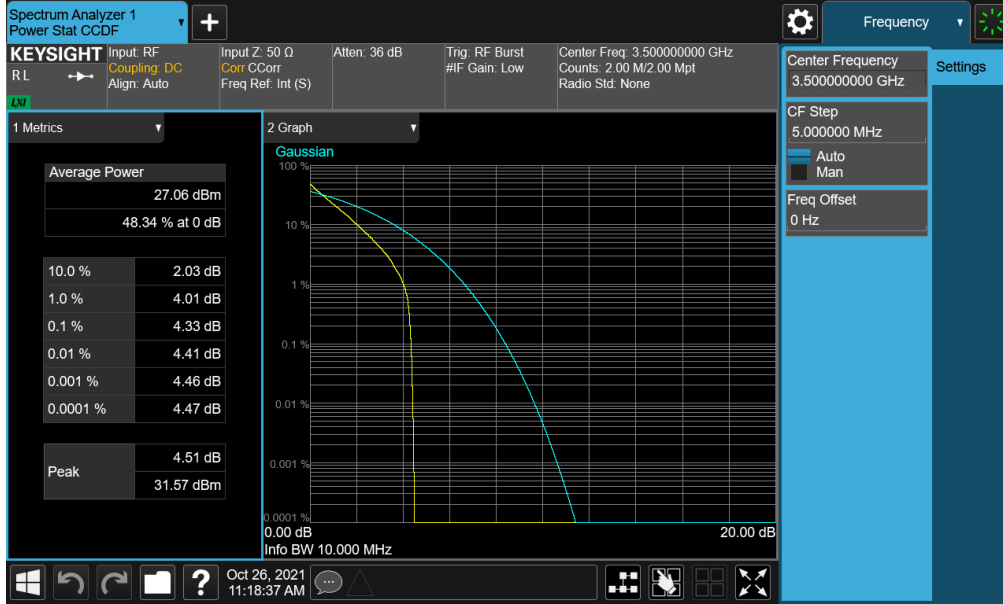
**Plot 7-198. PAR Plot (NR Band n77 (DoD) - 15MHz DFT-s-OFDM BPSK - Full RB - ANT F)**

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>	<b>Approved by:</b> Technical Manager
Test Report S/N: 1M2109090103-29.A3L	Test Dates: 9/10/2021 - 11/10/2021	EUT Type: Portable Handset	Page 126 of 181

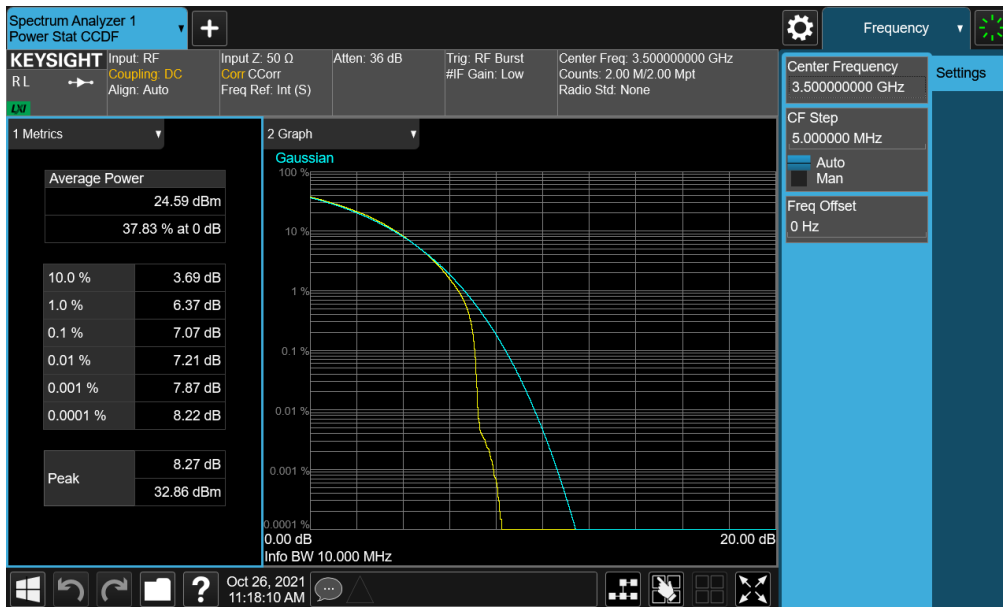


FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Technical Manager
Test Report S/N: 1M2109090103-29.A3L	Test Dates: 9/10/2021 - 11/10/2021	EUT Type: Portable Handset		Page 127 of 181





**Plot 7-201. PAR Plot (NR Band n77 (DoD) - 10MHz DFT-s-OFDM BPSK - Full RB - ANT F)**



**Plot 7-202. PAR Plot (NR Band n77 (DoD) - 10MHz CP-OFDM QPSK - Full RB - ANT F)**

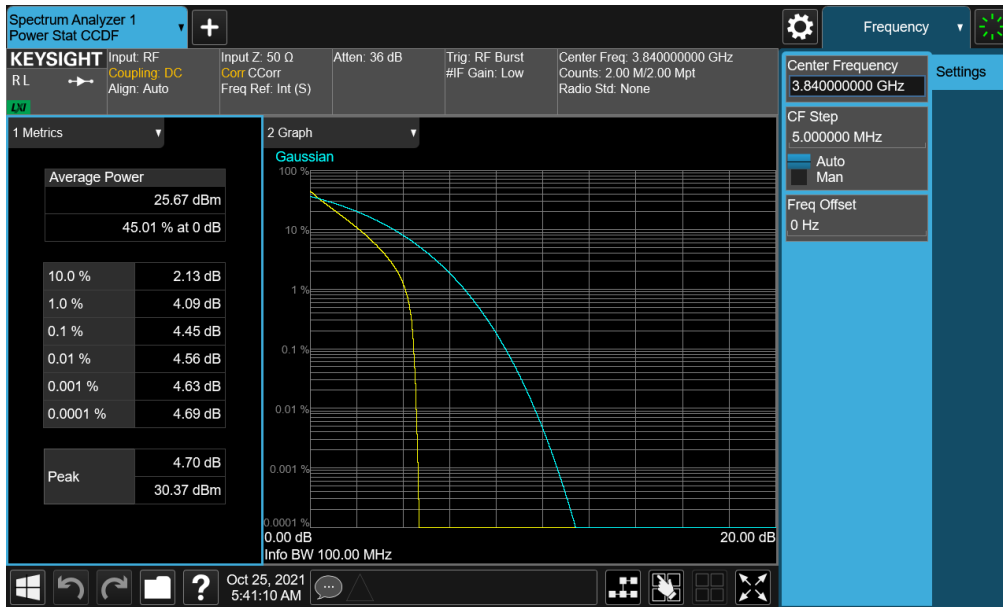
FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Technical Manager
Test Report S/N: 1M2109090103-29.A3L	Test Dates: 9/10/2021 - 11/10/2021	EUT Type: Portable Handset		Page 128 of 181



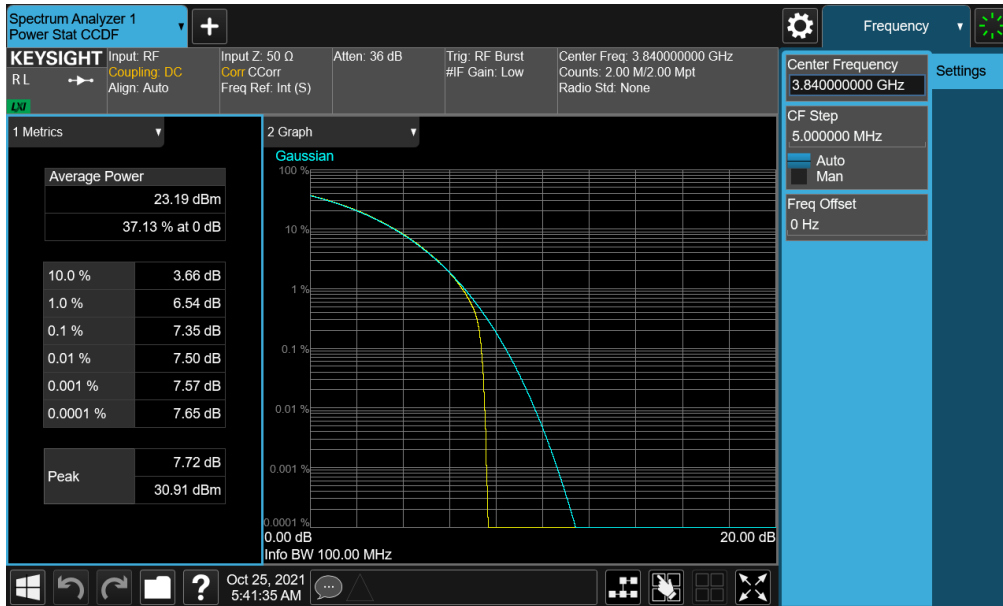
**Plot 7-203. PAR Plot (NR Band n77 (DoD) - 10MHz CP-OFDM 256-QAM - Full RB - ANT F)**

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-29.A3L	Test Dates: 9/10/2021 - 11/10/2021	EUT Type: Portable Handset		Page 129 of 181

## NR Band n77 (C-Band) – SRS-1 – Ant F

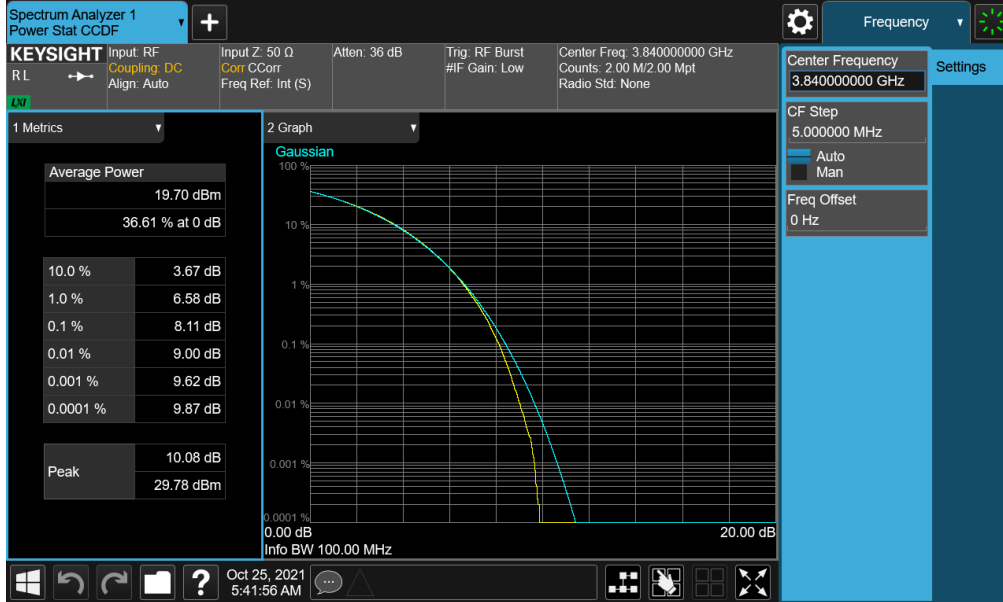


Plot 7-204. PAR Plot (NR Band n77 - 100MHz DFT-s-OFDM BPSK - Full RB - ANT F)

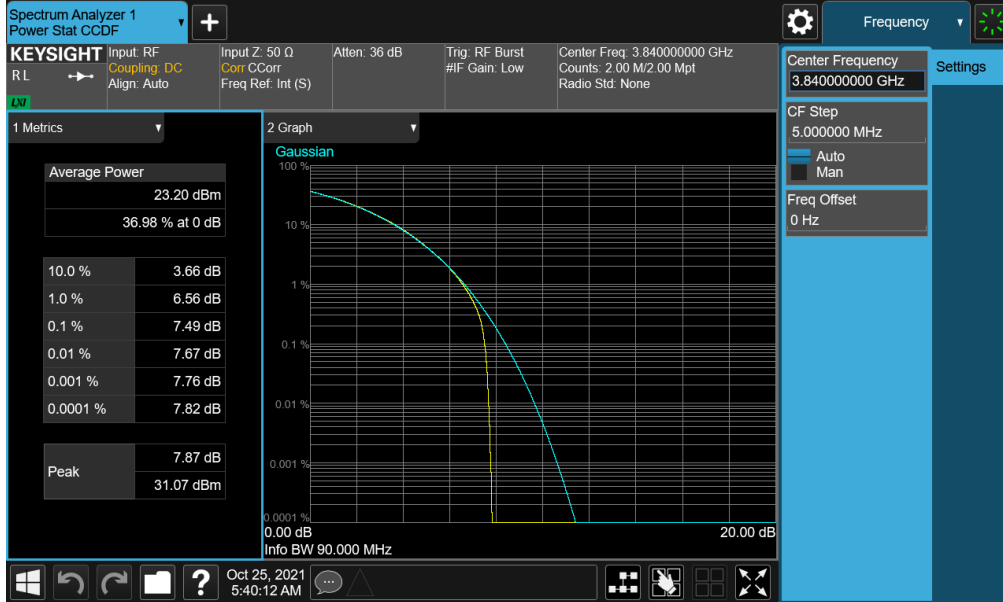


Plot 7-205. PAR Plot (NR Band n77 - 100MHz CP-OFDM QPSK - Full RB - ANT F)

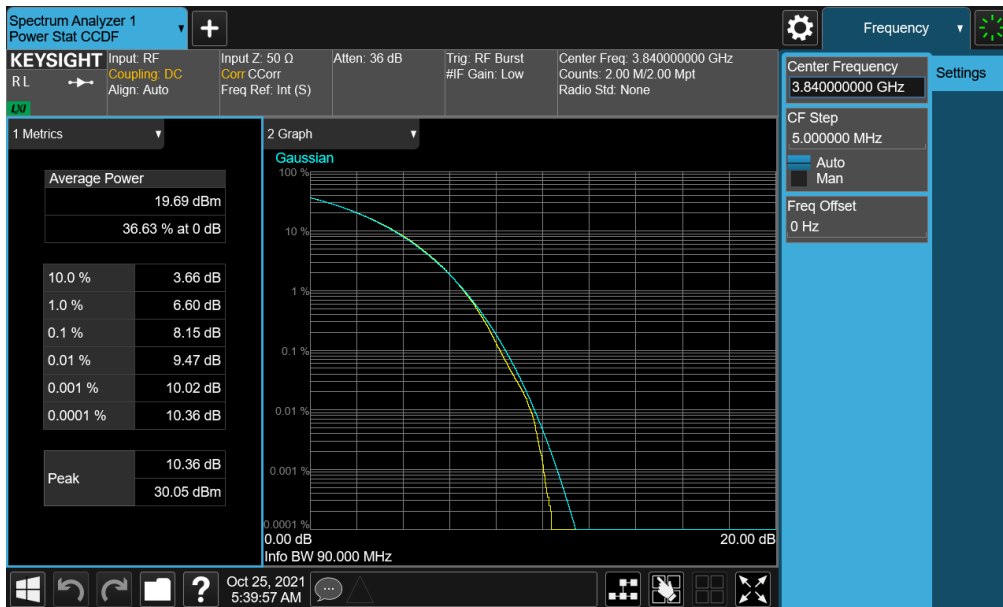
FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	PART 27 MEASUREMENT REPORT	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2109090103-29.A3L	Test Dates: 9/10/2021 - 11/10/2021	EUT Type: Portable Handset		Page 130 of 181



FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>	<b>Approved by:</b> Technical Manager
Test Report S/N: 1M2109090103-29.A3L	Test Dates: 9/10/2021 - 11/10/2021	EUT Type: Portable Handset	Page 131 of 181

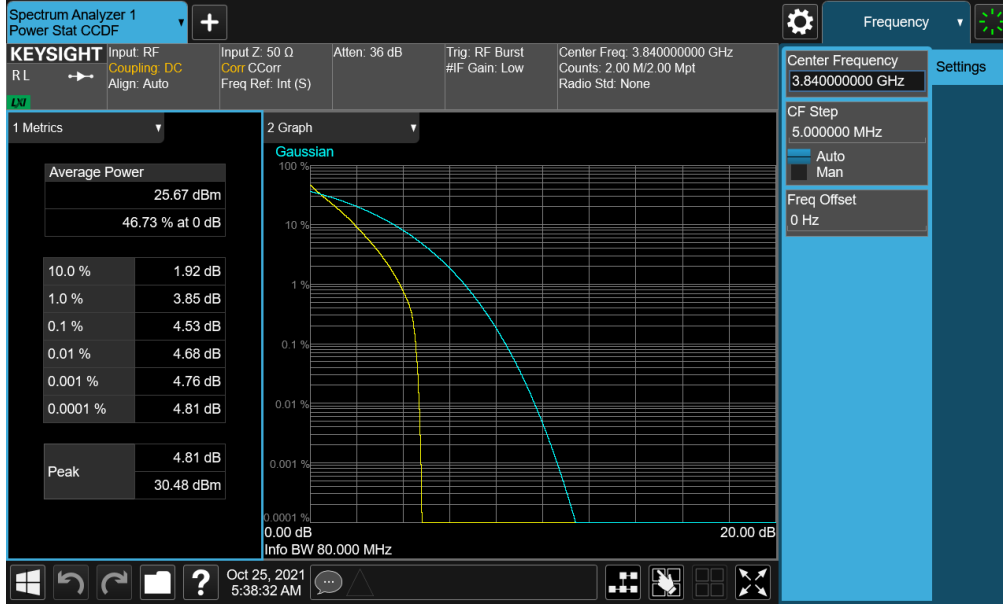


**Plot 7-208. PAR Plot (NR Band n77 - 90MHz CP-OFDM QPSK - Full RB - ANT F)**

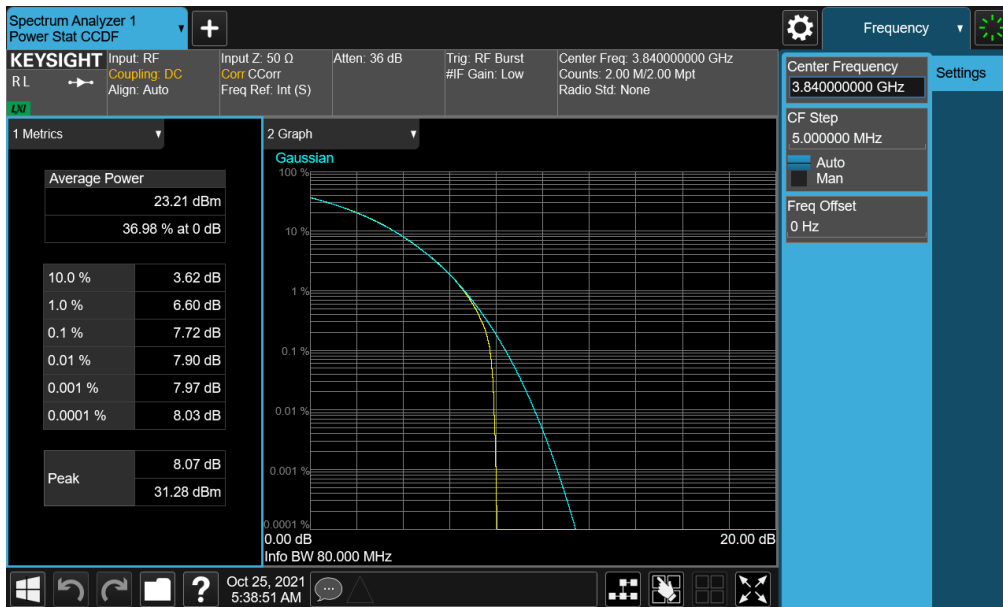


**Plot 7-209. PAR Plot (NR Band n77 - 90MHz CP-OFDM 256-QAM - Full RB - ANT F)**

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>	<b>Approved by:</b> Technical Manager
Test Report S/N: 1M2109090103-29.A3L	Test Dates: 9/10/2021 - 11/10/2021	EUT Type: Portable Handset	Page 132 of 181



**Plot 7-210. PAR Plot (NR Band n77 - 80MHz DFT-s-OFDM BPSK - Full RB - ANT F)**



**Plot 7-211. PAR Plot (NR Band n77 - 80MHz CP-OFDM QPSK - Full RB - ANT F)**

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>	<b>Approved by:</b> Technical Manager
Test Report S/N: 1M2109090103-29.A3L	Test Dates: 9/10/2021 - 11/10/2021	EUT Type: Portable Handset	Page 133 of 181

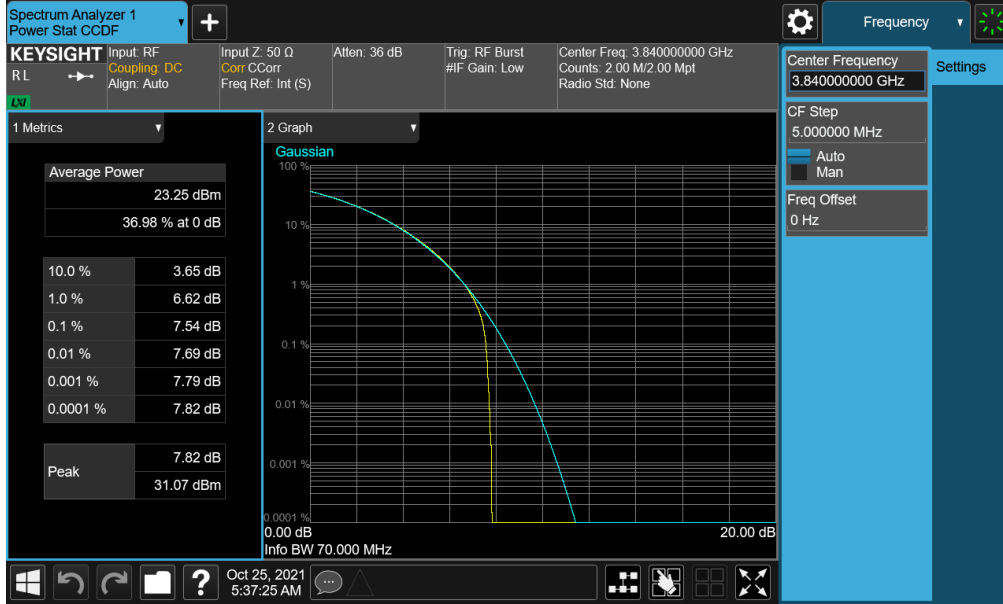


**Plot 7-212. PAR Plot (NR Band n77 - 80MHz CP-OFDM 256-QAM - Full RB - ANT F)**

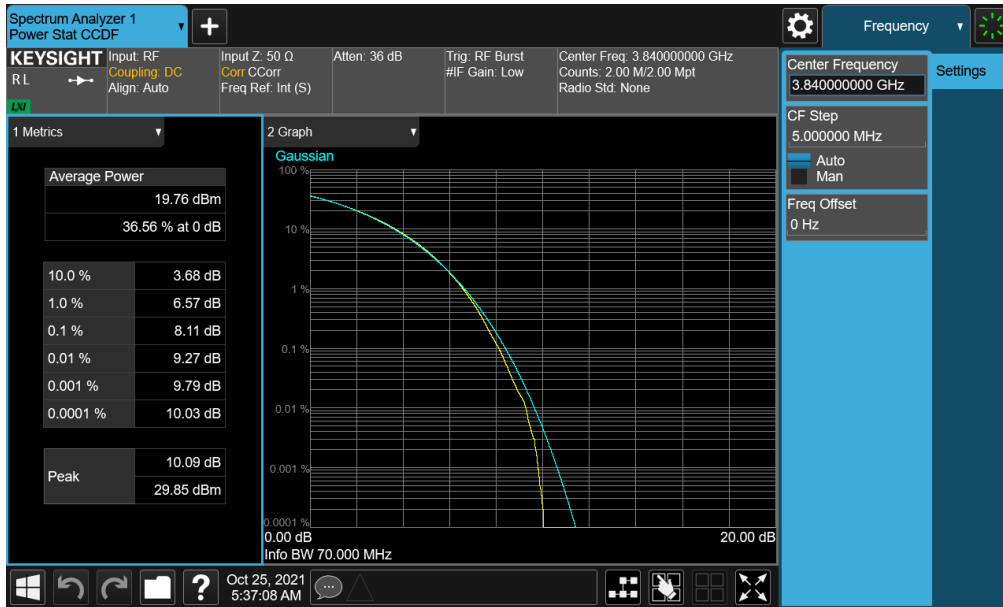


**Plot 7-213. PAR Plot (NR Band n77 - 70MHz DFT-s-OFDM BPSK - Full RB - ANT F)**

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Technical Manager
Test Report S/N: 1M2109090103-29.A3L	Test Dates: 9/10/2021 - 11/10/2021	EUT Type: Portable Handset		Page 134 of 181



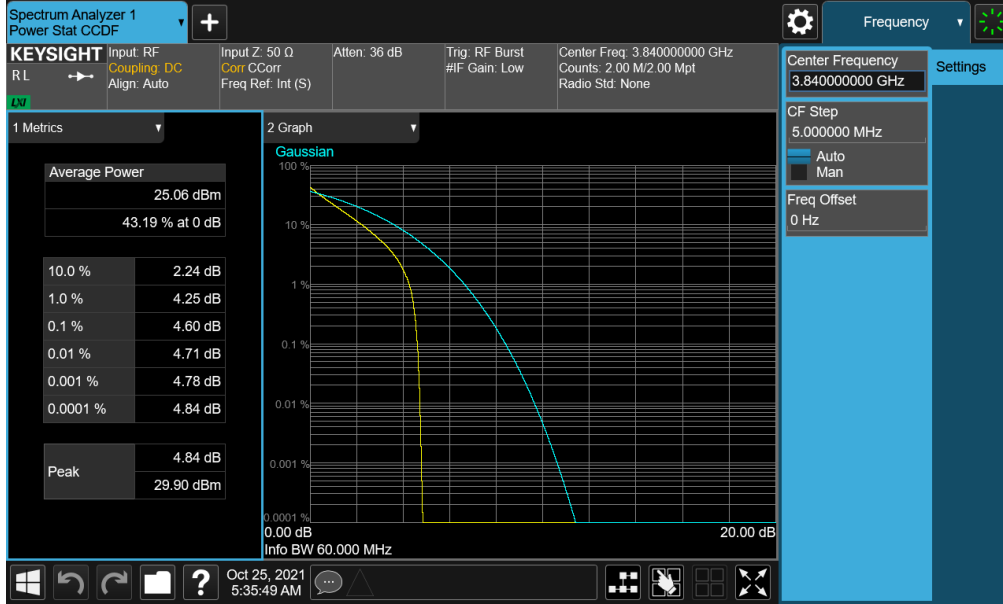
**Plot 7-214. PAR Plot (NR Band n77 - 70MHz CP-OFDM QPSK - Full RB - ANT F)**



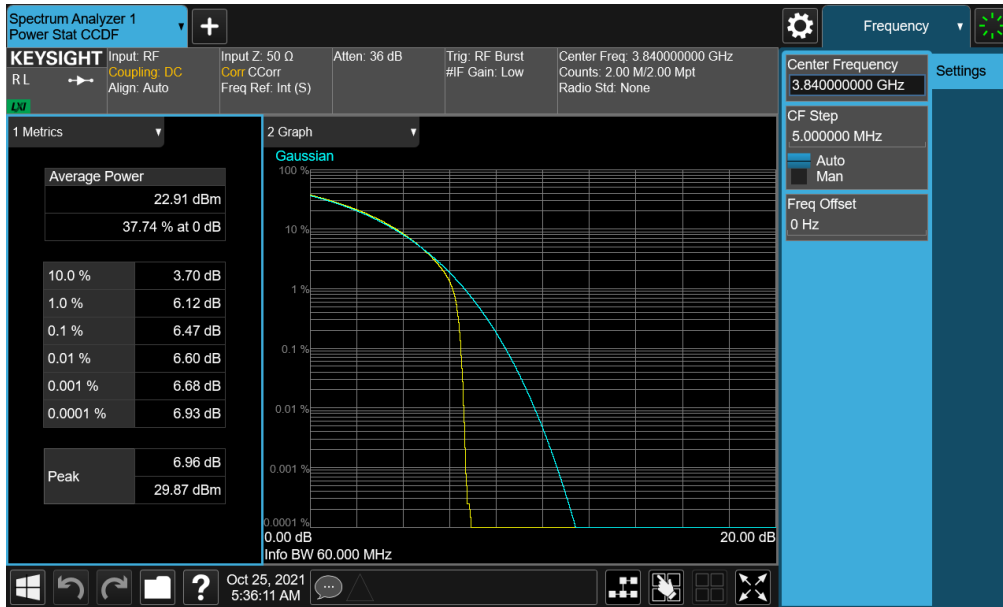
**Plot 7-215. PAR Plot (NR Band n77 - 70MHz CP-OFDM 256-QAM - Full RB - ANT F)**

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Technical Manager
Test Report S/N: 1M2109090103-29.A3L	Test Dates: 9/10/2021 - 11/10/2021	EUT Type: Portable Handset		Page 135 of 181



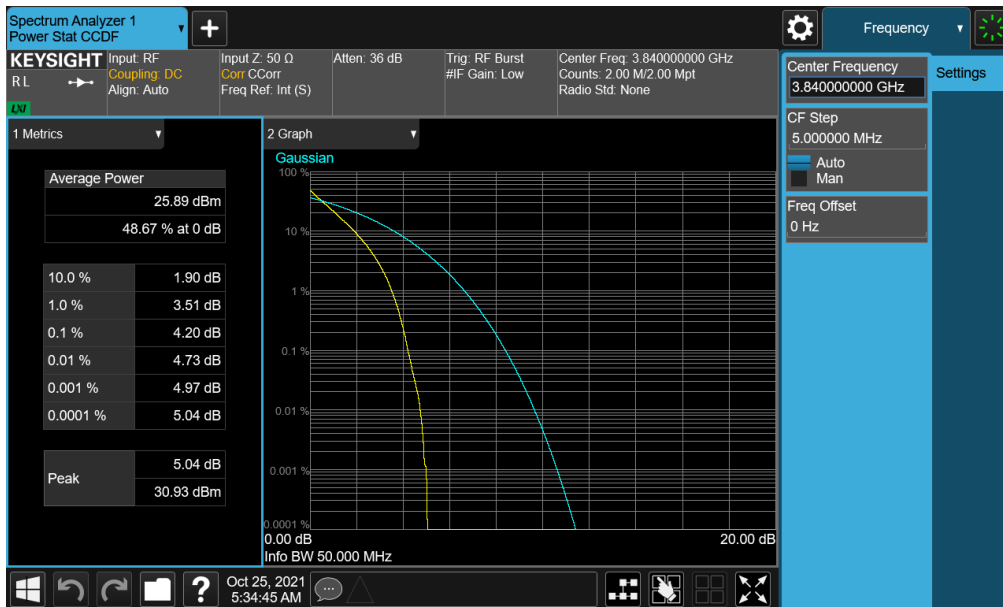


Plot 7-216. PAR Plot (NR Band n77 - 60MHz DFT-s-OFDM BPSK - Full RB - ANT F)



Plot 7-217. PAR Plot (NR Band n77 - 60MHz CP-OFDM QPSK - Full RB - ANT F)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>	<b>Approved by:</b> Technical Manager
Test Report S/N: 1M2109090103-29.A3L	Test Dates: 9/10/2021 - 11/10/2021	EUT Type: Portable Handset	Page 136 of 181



FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Technical Manager
Test Report S/N: 1M2109090103-29.A3L	Test Dates: 9/10/2021 - 11/10/2021	EUT Type: Portable Handset		Page 137 of 181

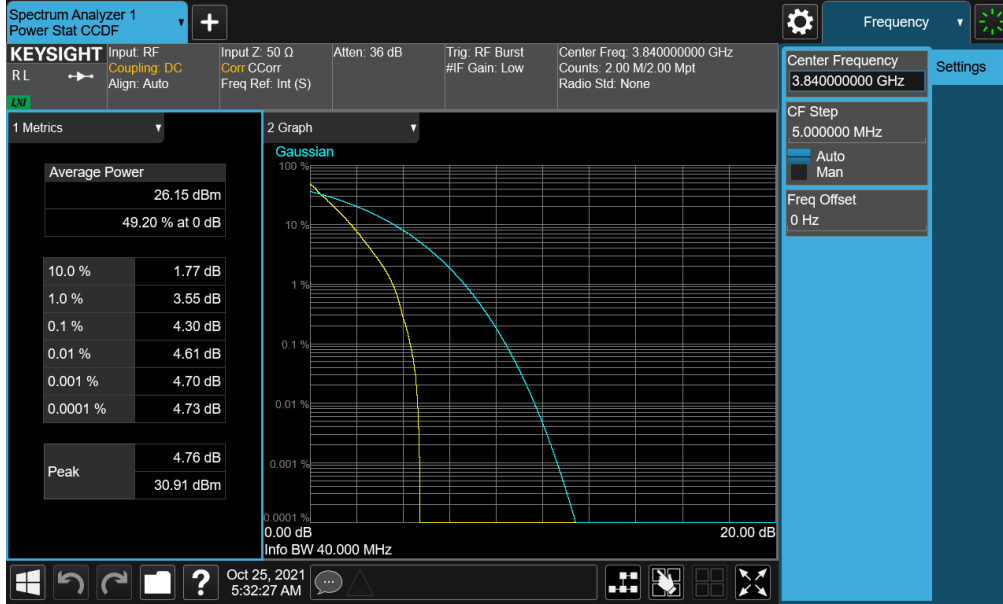


Plot 7-220. PAR Plot (NR Band n77 - 50MHz CP-OFDM QPSK - Full RB - ANT F)

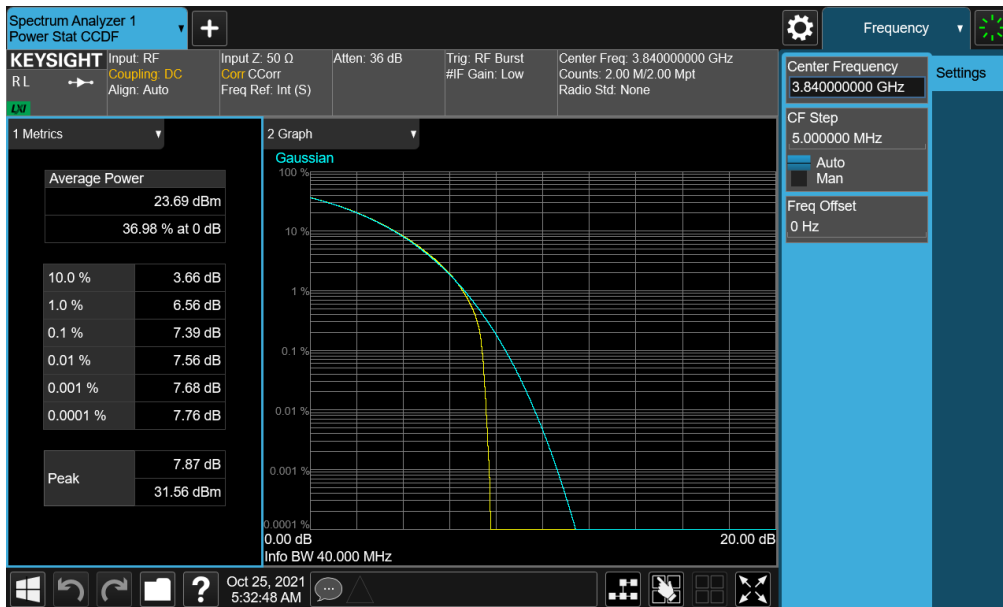


Plot 7-221. PAR Plot (NR Band n77 - 50MHz CP-OFDM 256-QAM - Full RB - ANT F)

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Technical Manager
Test Report S/N: 1M2109090103-29.A3L	Test Dates: 9/10/2021 - 11/10/2021	EUT Type: Portable Handset		Page 138 of 181

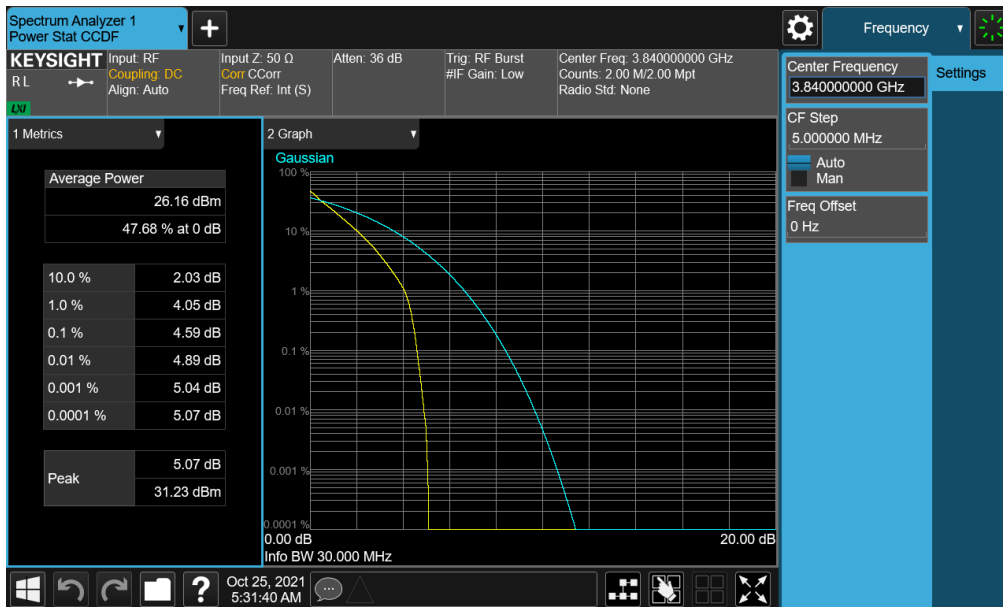


**Plot 7-222. PAR Plot (NR Band n77 - 40MHz DFT-s-OFDM BPSK - Full RB - ANT F)**

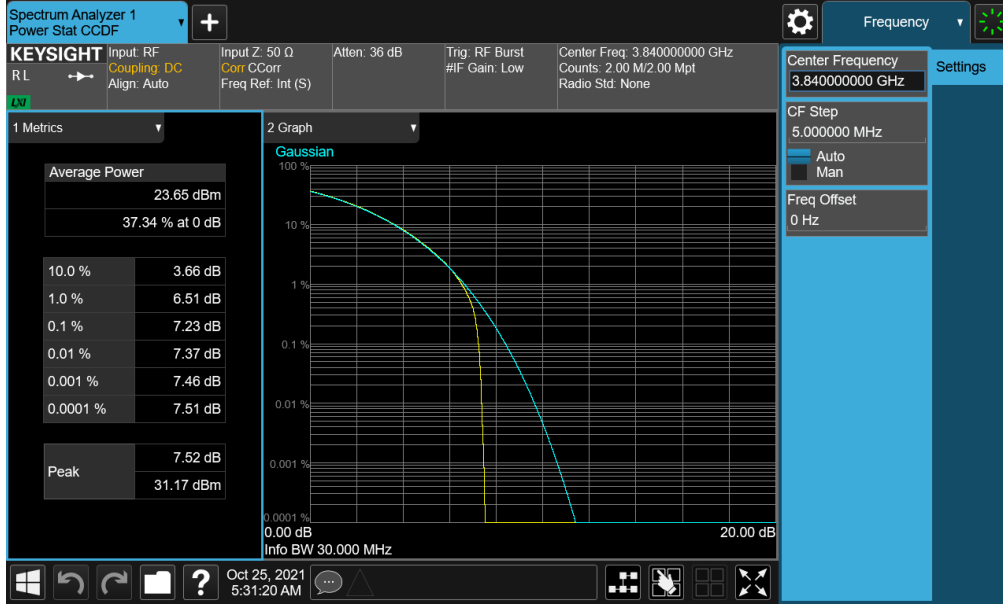


**Plot 7-223. PAR Plot (NR Band n77 - 40MHz CP-OFDM QPSK - Full RB - ANT F)**

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>	<b>Approved by:</b> Technical Manager
Test Report S/N: 1M2109090103-29.A3L	Test Dates: 9/10/2021 - 11/10/2021	EUT Type: Portable Handset	Page 139 of 181



FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Technical Manager
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**Plot 7-226. PAR Plot (NR Band n77 - 30MHz CP-OFDM QPSK - Full RB - ANT F)**



**Plot 7-227. PAR Plot (NR Band n77 - 30MHz CP-OFDM 256-QAM - Full RB - ANT F)**

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Technical Manager
Test Report S/N: 1M2109090103-29.A3L	Test Dates: 9/10/2021 - 11/10/2021	EUT Type: Portable Handset		Page 141 of 181

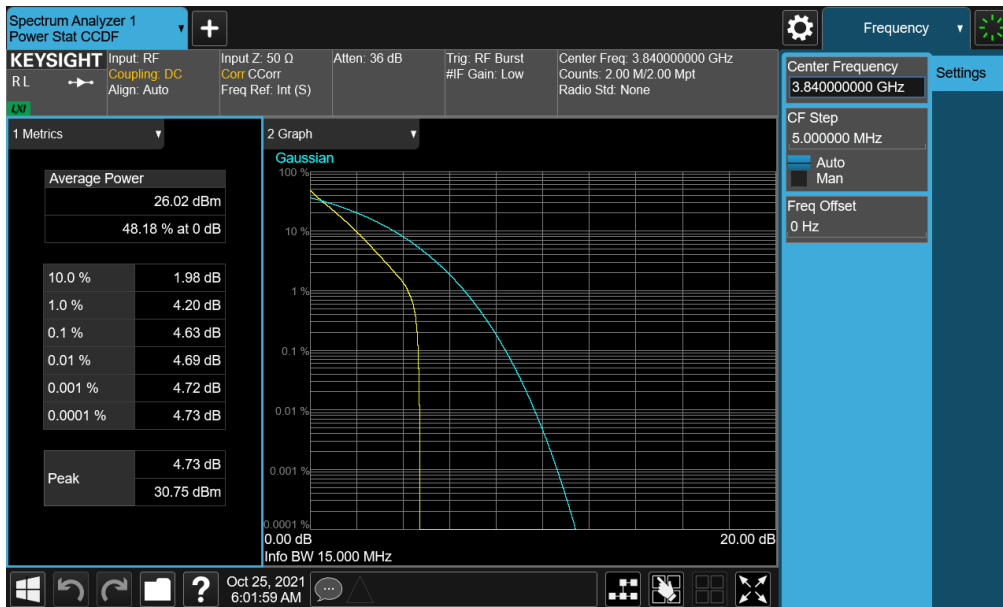


**Plot 7-228. PAR Plot (NR Band n77 - 20MHz DFT-s-OFDM BPSK - Full RB - ANT F)**



**Plot 7-229. PAR Plot (NR Band n77 - 20MHz CP-OFDM QPSK - Full RB - ANT F)**

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Technical Manager
Test Report S/N: 1M2109090103-29.A3L	Test Dates: 9/10/2021 - 11/10/2021	EUT Type: Portable Handset		Page 142 of 181



FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Technical Manager
Test Report S/N: 1M2109090103-29.A3L	Test Dates: 9/10/2021 - 11/10/2021	EUT Type: Portable Handset		Page 143 of 181





**Plot 7-232. PAR Plot (NR Band n77 - 15MHz CP-OFDM QPSK - Full RB - ANT F)**

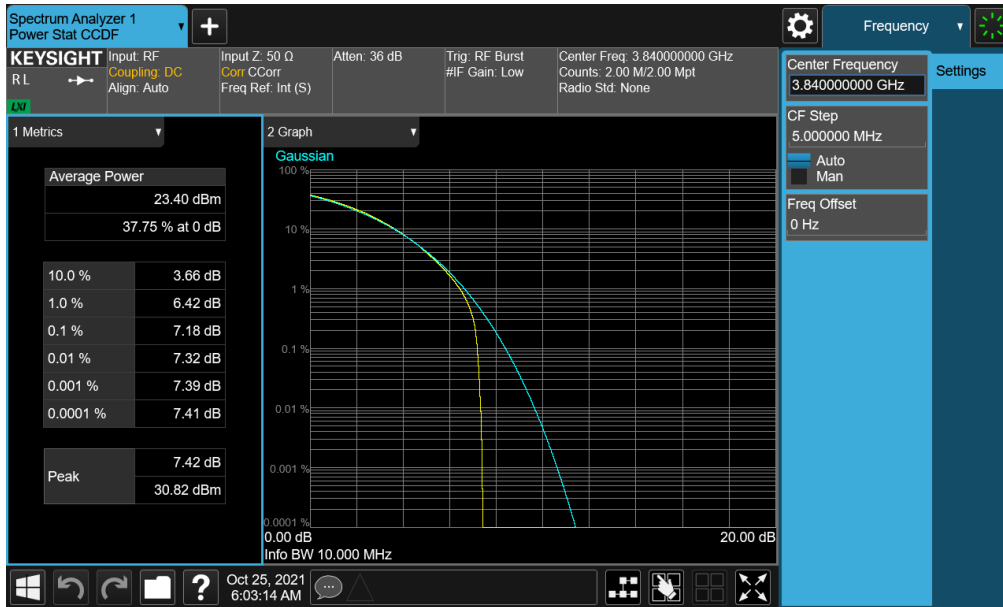


**Plot 7-233. PAR Plot (NR Band n77 - 15MHz CP-OFDM 256-QAM - Full RB - ANT F)**

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Technical Manager
Test Report S/N: 1M2109090103-29.A3L	Test Dates: 9/10/2021 - 11/10/2021	EUT Type: Portable Handset		Page 144 of 181

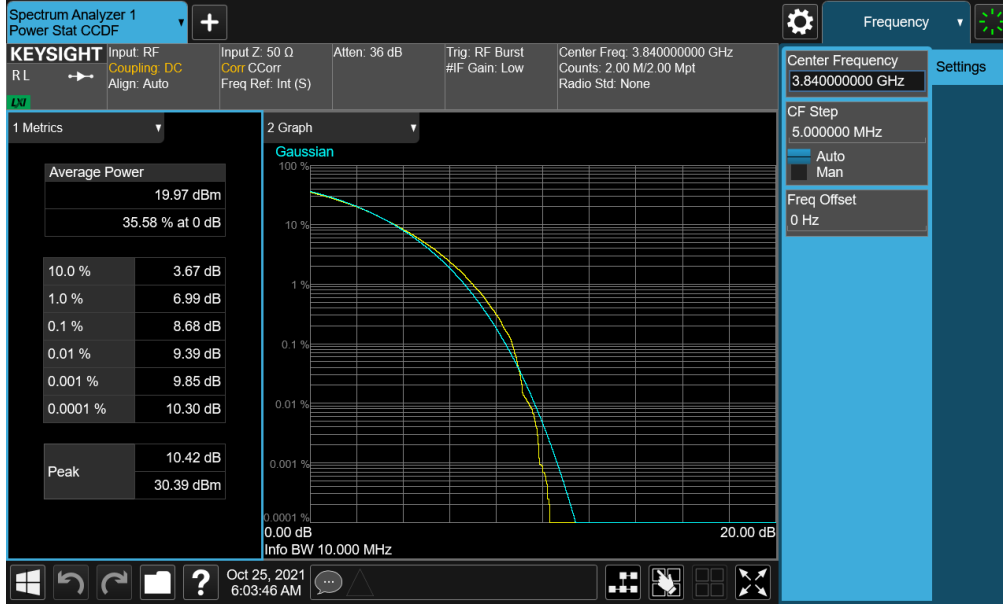


**Plot 7-234. PAR Plot (NR Band n77 - 10MHz DFT-s-OFDM BPSK - Full RB - ANT F)**



**Plot 7-235. PAR Plot (NR Band n77 - 10MHz CP-OFDM QPSK - Full RB - ANT F)**

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>		Approved by: Technical Manager
Test Report S/N: 1M2109090103-29.A3L	Test Dates: 9/10/2021 - 11/10/2021	EUT Type: Portable Handset		Page 145 of 181



**Plot 7-236. PAR Plot (NR Band n77 - 10MHz CP-OFDM 256-QAM - Full RB - ANT F)**

FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>	<b>Approved by:</b> Technical Manager
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## 7.7 Radiated Power (EIRP)

### Test Overview

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 maximum power, and at the appropriate frequencies.



### Test Procedures Used

KDB 971168 D01 v03r01 – Section 5.2.1

ANSI/TIA-603-E-2016 – Section 2.2.17

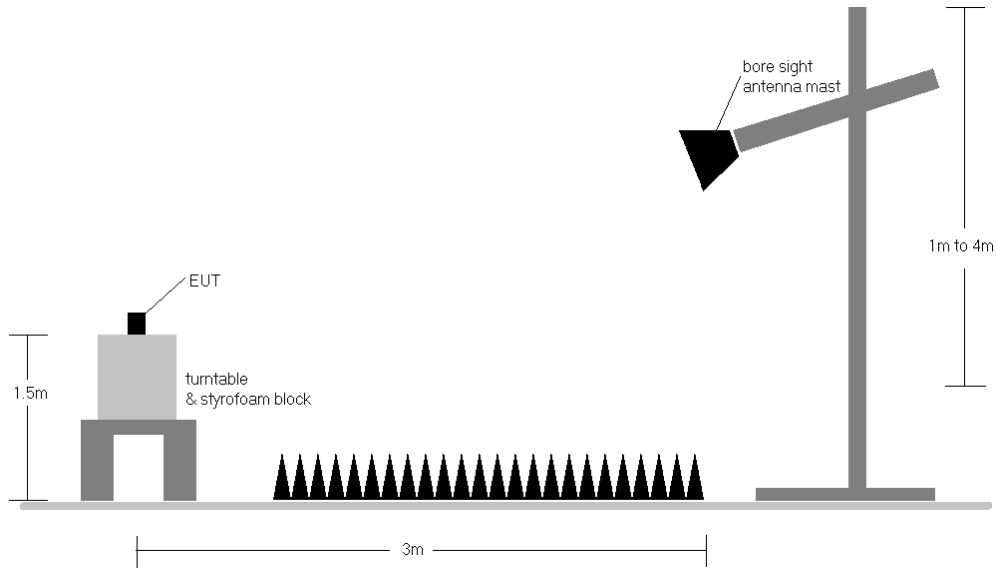
### Test Settings

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

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**Test Setup**

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



**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.
- 3) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case setup is reported in the tables below.
- 4) For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

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Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
100 MHz	$\pi/2$ BPSK	3500.0	H	186	10	7.74	1 / 68	4.59	12.33	0.017	30.00	-17.67
	QPSK	3500.0	H	186	10	7.74	1 / 68	4.38	12.12	0.016	30.00	-17.88
	16-QAM	3500.0	H	186	10	7.74	1 / 68	3.57	11.31	0.014	30.00	-18.69

Table 7-12. EIRP Data (NR Band n77 (DoD) – SRS-2 – ANT C)

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
100 MHz	$\pi/2$ BPSK	3750.0	H	164	15	5.98	1 / 68	5.41	11.39	0.014	30.00	-18.61
	$\pi/2$ BPSK	3840.0	H	169	13	6.02	1 / 68	5.08	11.10	0.013	30.00	-18.90
	$\pi/2$ BPSK	3930.0	H	141	367	5.99	1 / 68	3.76	9.75	0.009	30.00	-20.25
	QPSK	3750.0	H	164	15	5.98	1 / 68	5.21	11.19	0.013	30.00	-18.81
	QPSK	3840.0	H	169	13	6.02	1 / 68	5.08	11.10	0.013	30.00	-18.90
	QPSK	3930.0	H	141	367	5.99	1 / 68	3.44	9.43	0.009	30.00	-20.57
	16-QAM	3750.0	H	164	15	5.98	1 / 68	3.99	9.97	0.010	30.00	-20.03

Table 7-13. EIRP Data (NR Band n77 (C-Band) – SRS-2 – ANT C)

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
100 MHz	$\pi/2$ BPSK	3500.0	H	131	39	7.74	1 / 136	6.83	14.57	0.029	30.00	-15.43
	QPSK	3500.0	H	131	39	7.74	1 / 136	6.84	14.58	0.029	30.00	-15.42
	16-QAM	3500.0	H	131	39	7.74	1 / 136	6.09	13.83	0.024	30.00	-16.17

Table 7-14. EIRP Data (NR Band n77 (DoD) – SRS-3 – ANT K)

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
100 MHz	$\pi/2$ BPSK	3750.0	V	109	97	6.83	1 / 68	4.40	11.23	0.013	30.00	-18.77
	$\pi/2$ BPSK	3840.0	V	104	102	6.47	1 / 68	2.26	8.73	0.007	30.00	-21.27
	$\pi/2$ BPSK	3930.0	V	121	100	6.49	1 / 136	-3.91	2.58	0.002	30.00	-27.42
	QPSK	3750.0	V	109	97	6.83	1 / 68	4.39	11.22	0.013	30.00	-18.78
	QPSK	3840.0	V	104	102	6.47	1 / 68	2.21	8.68	0.007	30.00	-21.32
	QPSK	3930.0	V	121	100	6.49	1 / 136	-4.02	2.47	0.002	30.00	-27.53
	16-QAM	3750.0	V	109	97	6.83	1 / 68	3.39	10.22	0.011	30.00	-19.78



Table 7-15. EIRP Data (NR Band n77 (C-Band) – SRS-3 – ANT K)

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
100 MHz	$\pi/2$ BPSK	3500.0	H	113	31	7.74	1 / 136	8.37	16.11	0.041	30.00	-13.89
	QPSK	3500.0	H	113	31	7.74	1 / 136	8.78	16.52	0.045	30.00	-13.48
	16-QAM	3500.0	H	113	31	7.74	1 / 136	6.14	13.88	0.024	30.00	-16.12

Table 7-16. EIRP Data (NR Band n77 (DoD) – SRS-4 – ANT D)

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
100 MHz	$\pi/2$ BPSK	3750.0	H	104	27	5.98	1 / 68	9.25	15.23	0.033	30.00	-14.77
	$\pi/2$ BPSK	3840.0	H	107	28	6.02	1 / 68	8.16	14.18	0.026	30.00	-15.82
	$\pi/2$ BPSK	3930.0	H	109	28	5.99	1 / 68	9.02	15.01	0.032	30.00	-14.99
	QPSK	3750.0	H	104	27	5.98	1 / 68	9.35	15.33	0.034	30.00	-14.67
	QPSK	3840.0	H	107	28	6.02	1 / 68	7.75	13.77	0.024	30.00	-16.23
	QPSK	3930.0	H	109	28	5.99	1 / 68	9.01	15.00	0.032	30.00	-15.00
	16-QAM	3930.0	H	109	28	5.99	1 / 68	7.81	13.80	0.024	30.00	-16.20

Table 7-17. EIRP Data (NR Band n77 (C-Band) – SRS-4 – ANT D)

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## 7.8 Radiated Spurious Emissions Measurements

### Test Overview



Radiated spurious emissions measurements are performed using the field strength conversion method described in KDB 971168 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using horizontally and vertically 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 peak measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

### Test Procedures Used

KDB 971168 D01 v03r01 – Section 5.8

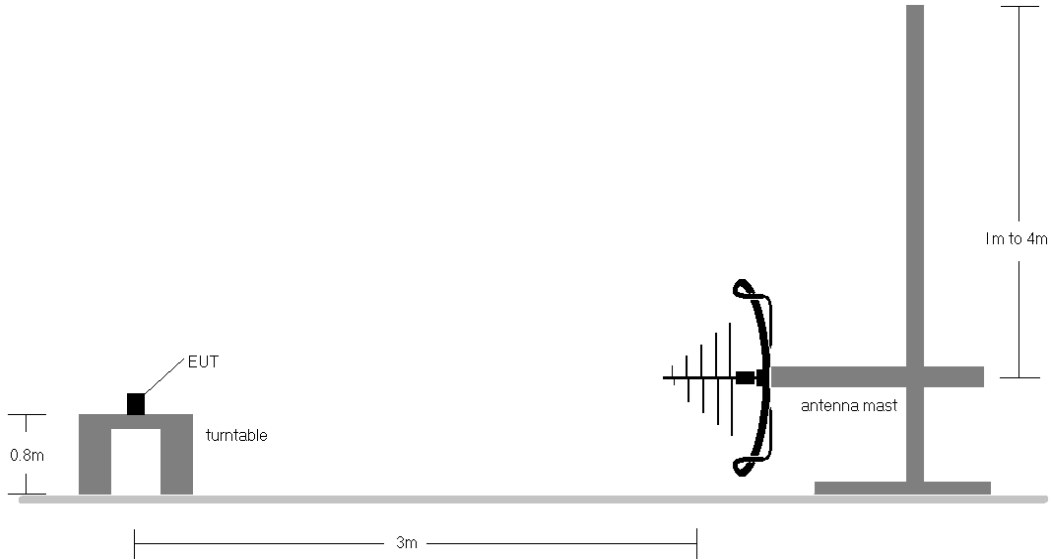
### Test Settings

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

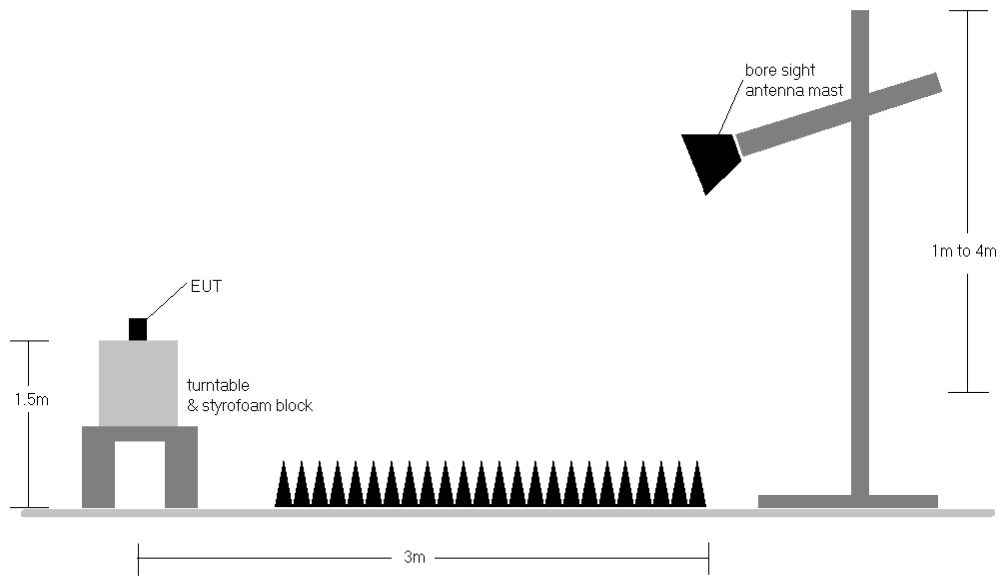
FCC ID: A3LSMS906U	 <b>PART 27 MEASUREMENT REPORT</b> 		Approved by: Technical Manager
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**Test Setup**

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



**Figure 7-7. Test Instrument & Measurement Setup < 1GHz**





**Figure 7-8. Test Instrument & Measurement Setup >1 GHz**

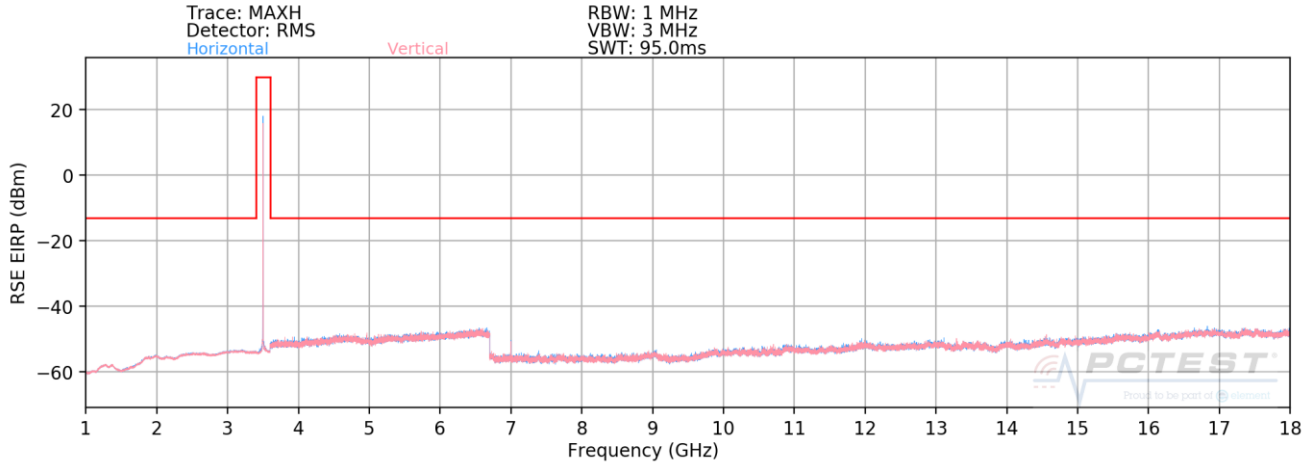
FCC ID: A3LSMS906U	<b>PCTEST</b> Proud to be part of element	<b>PART 27 MEASUREMENT REPORT</b>	<b>Approved by:</b> Technical Manager
<b>Test Report S/N:</b> 1M2109090103-29.A3L	<b>Test Dates:</b> 9/10/2021 - 11/10/2021	<b>EUT Type:</b> Portable Handset	Page 153 of 181

## Test Notes

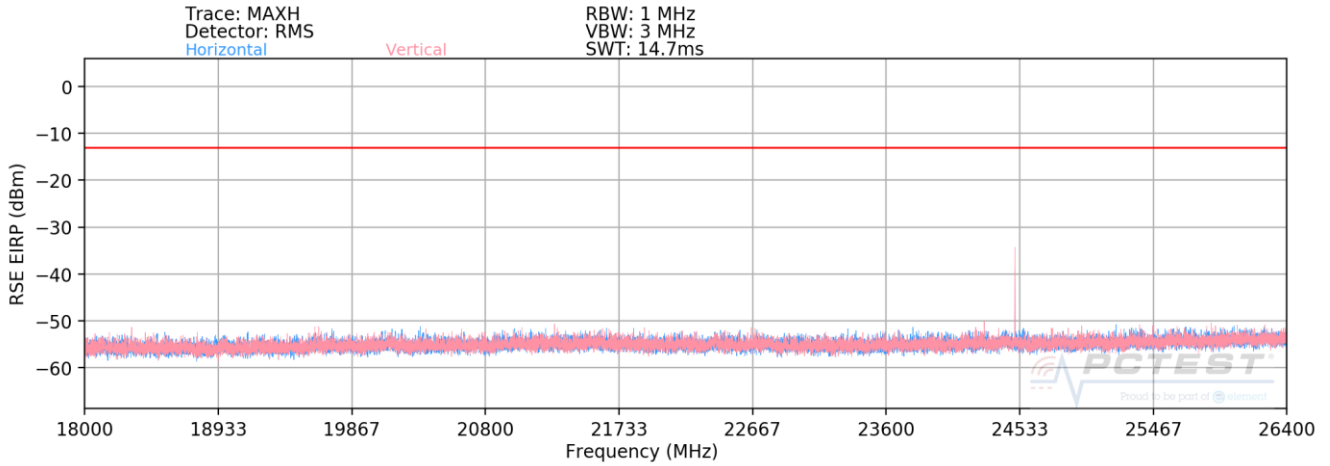
- 1) Field strengths are calculated using the Measurement quantity conversions in KDB 971168 Section 5.8.4.
  - a)  $E(\text{dB}\mu\text{V}/\text{m}) = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$
  - b)  $\text{EIRP (dBm)} = E(\text{dB}\mu\text{V}/\text{m}) + 20\log D - 104.8$ ; where D is the measurement distance in meters.
- 2) 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.
- 3) This unit was tested with its standard battery.
- 4) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case setup is reported in the tables below.
- 5) The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.
- 6) 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.
- 7) The "-" shown in the following RSE tables are used to denote a noise floor measurement.
- 8) For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.
- 9) Spurious emissions shown in this section are measured while operating in EN-DC mode with Sub 6GHz NR carrier as well as an LTE carrier (anchor). Spurious emissions from the NR carrier device, is subject to the rules under which the NR carrier operates. Spurious emission caused by the LTE carrier must meet the requirements of the rules under which the LTE carrier operates.

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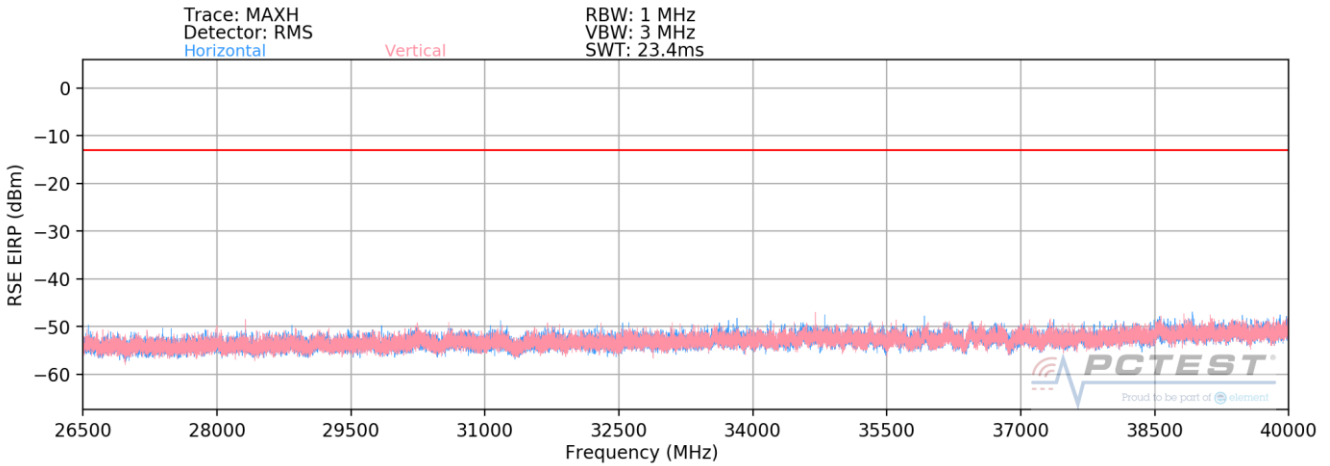
## NR Band n77 (DoD-Band) – SRS-1 - Ant F



Plot 7-237. Radiated Spurious Plot (NR Band n77 (DoD) – Ant F)



Plot 7-238. Radiated Spurious Plot (NR Band n77 (DoD) – Ant F)



Plot 7-239. Radiated Spurious Plot (NR Band n77 (DoD) – Ant F)

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Bandwidth (MHz):	100
Frequency (MHz):	3500.01
RB / Offset:	1 / 136
Mode:	Stand Alone



Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
7000.0	H	275	21	-64.77	9.07	51.30	-43.96	-13.00	-30.96
10500.0	H	268	285	-72.56	12.08	46.52	-48.74	-13.00	-35.74
14000.0	H	229	37	-78.11	14.29	43.18	-52.07	-13.00	-39.07
17500.1	H	218	325	-77.25	17.89	47.64	-47.61	-13.00	-34.61
21000.1	H	-	-	-59.95	4.69	51.74	-53.06	-13.00	-40.06
24500.1	H	150	42	-41.51	5.21	70.70	-34.10	-13.00	-21.10
28000.1	H	150	345	-48.12	6.12	65.00	-39.80	-13.00	-26.80
31500.1	H	-	-	-58.90	8.05	56.15	-48.65	-13.00	-35.65

Table 7-18. Radiated Spurious Data (NR Band n77 (DoD) – Mid Channel – Ant F)

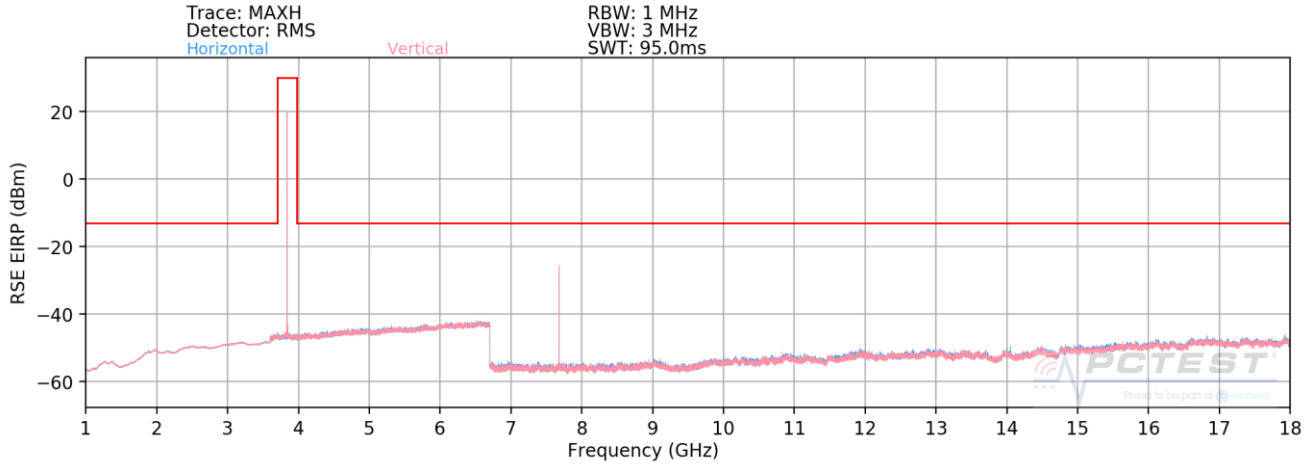
Bandwidth (MHz):	100
Frequency (MHz):	3500.01
RB / Offset:	1 / 136
Mode:	Stand Alone

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
7000.0	H	139	278	-67.50	9.07	48.57	-46.69	-13.00	-33.69
10500.0	H	133	4	-78.21	12.08	40.87	-54.39	-13.00	-41.39
14000.0	H	248	323	-76.73	14.29	44.56	-50.69	-13.00	-37.69
17500.1	H	175	8	-78.34	17.89	46.55	-48.70	-13.00	-35.70

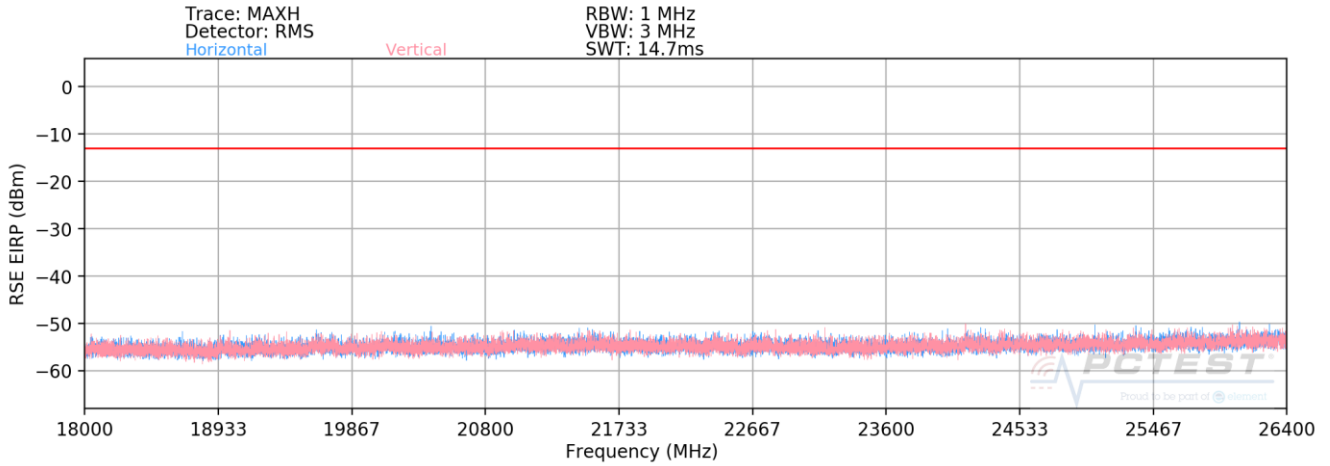
Table 7-19. Radiated Spurious Data with WCP (NR Band n77 (DoD) – Ant F)

FCC ID: A3LSMS906U	 PCTEST Proud to be part of element	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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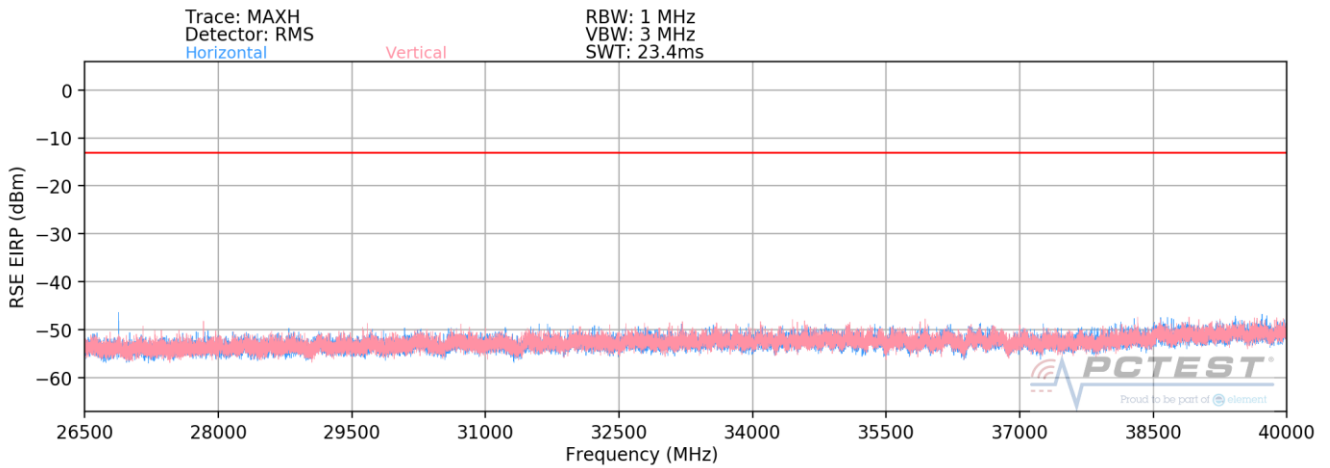
## NR Band n77 (C-Band) – SRS-1 – Ant F



Plot 7-240. Radiated Spurious Plot (NR Band n77 – Ant F)



Plot 7-241. Radiated Spurious Plot (NR Band n77 – Ant F)



Plot 7-242. Radiated Spurious Plot (NR Band n77 – Ant F)

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