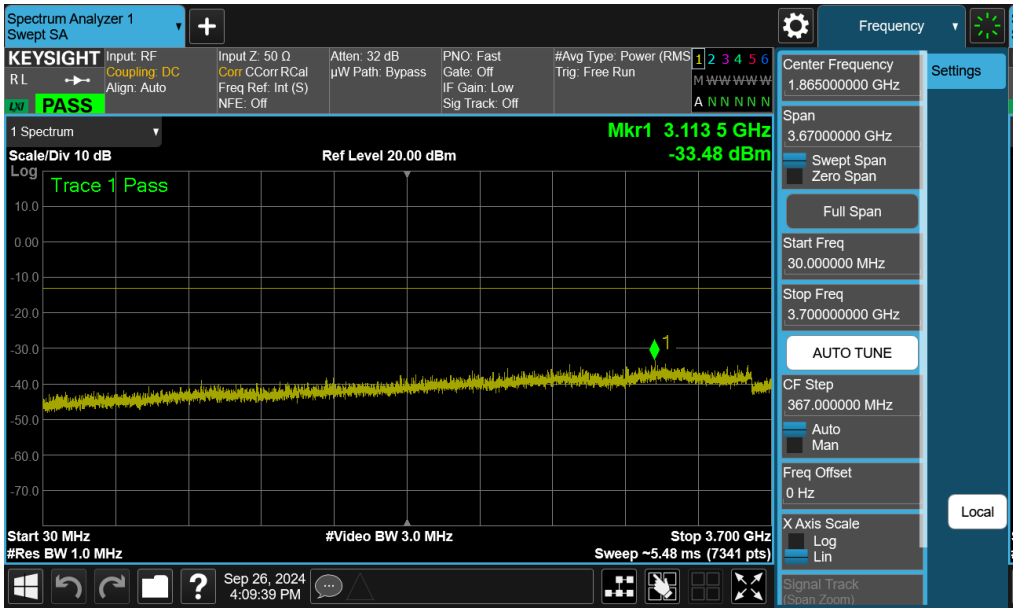
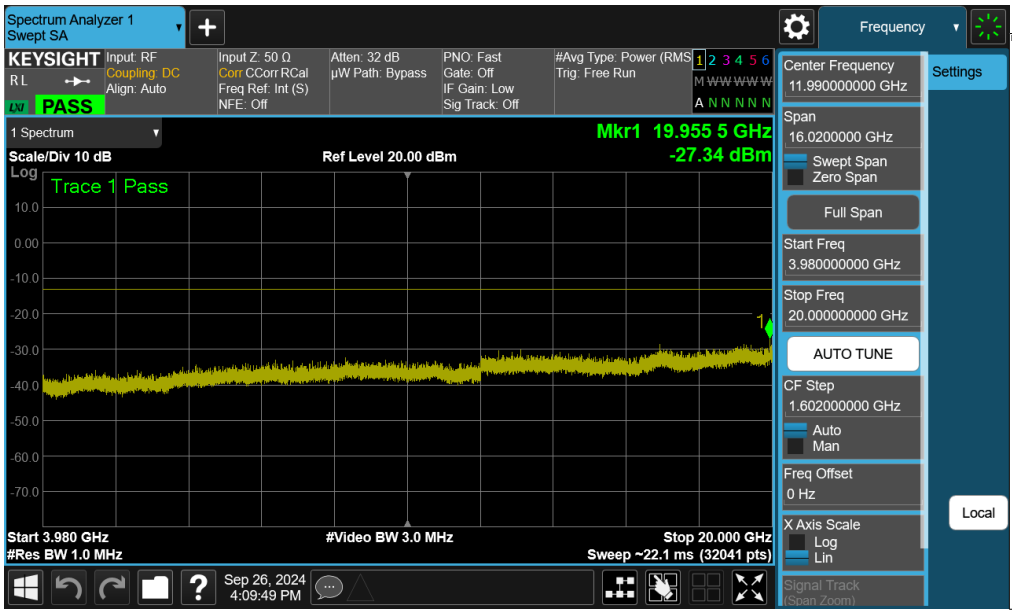
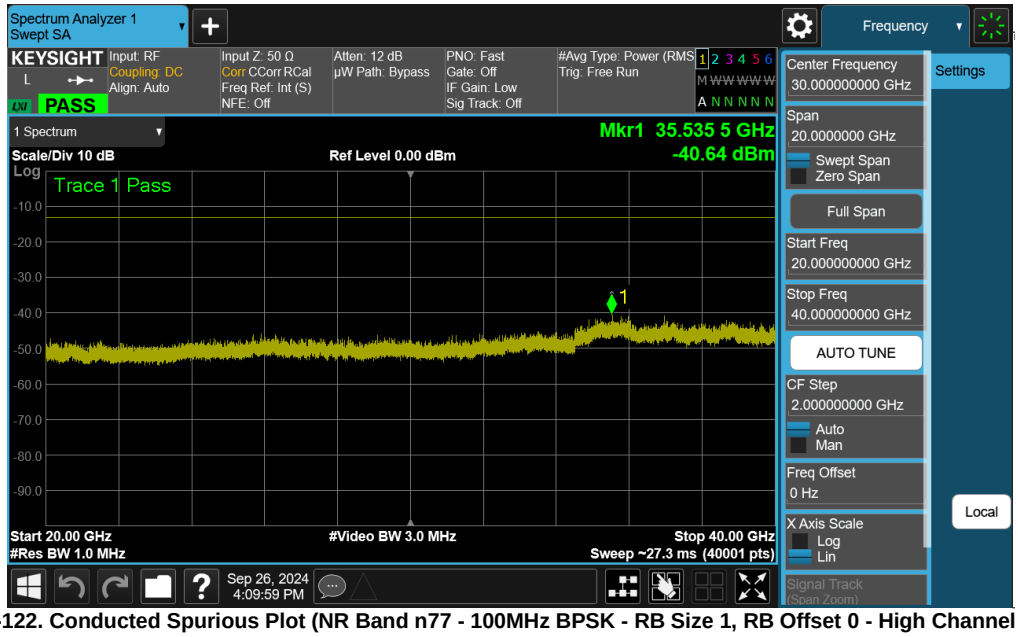
NR Band n77 C-band – Ant D



Plot 7-120. Conducted Spurious Plot (NR Band n77 - 100MHz BPSK - RB Size 1, RB Offset 0 - High Channel Ant D)



Plot 7-121. Conducted Spurious Plot (NR Band n77 - 100MHz BPSK - RB Size 1, RB Offset 0 - High Channel Ant D)



Plot 7-122. Conducted Spurious Plot (NR Band n77 - 100MHz BPSK - RB Size 1, RB Offset 0 - High Channel Ant D)

7.5 Band Edge Emissions at Antenna Terminal

Test Overview

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

For operations in the 3700 – 3980MHz band and the 3450 – 3550MHz band, the maximum permissible conducted power level of any out-of-band emission is -13dBm/MHz.

Test Procedure Used

ANSI C63.26-2015 – Section 5.7.3

Test Settings

1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. RBW ≥ 1% of the emission bandwidth
4. VBW ≥ 3 x RBW
5. Detector = RMS
6. Number of sweep points ≥ 2 x Span/RBW
7. Trace mode = trace average for continuous emissions, max hold for pulse emissions
8. Sweep time = auto couple
9. The trace was allowed to stabilize

Test Setup

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

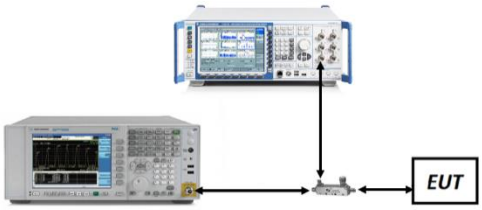


Figure 7-4. Test Instrument & Measurement Setup

Test Notes

1. Per Part 27.53(l), compliance with the -13dBm/MHz conducted power limit for out-of-band emissions is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be either one percent of the emission bandwidth of the fundamental emission of the transmitter or 350 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz.

2. Per Part 27.53(n), compliance with the -13dBm/MHz conducted power limit for out-of-band emissions is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed, but limited to a maximum of 200 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz.

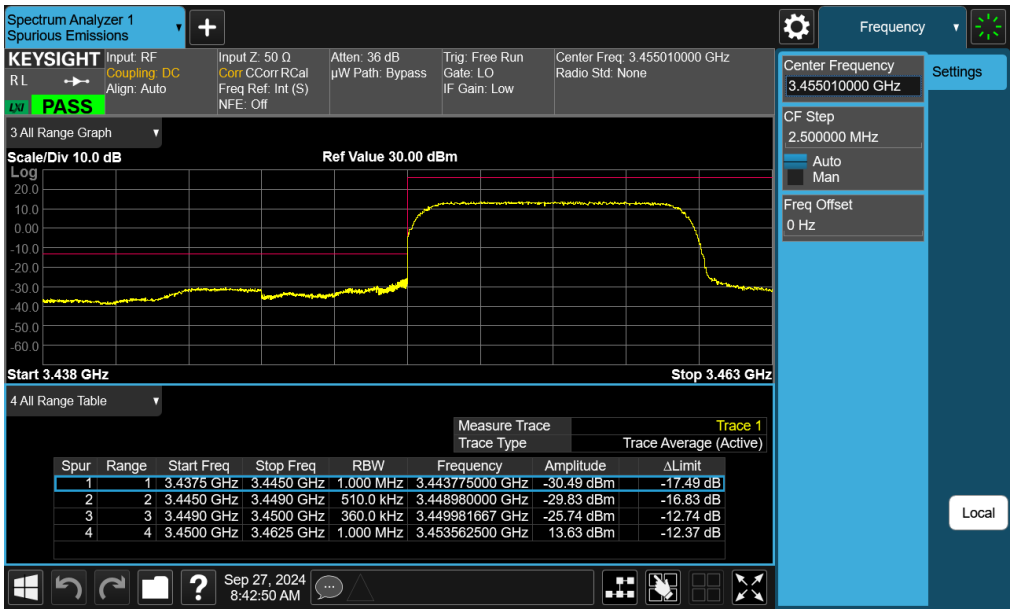
3. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

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.

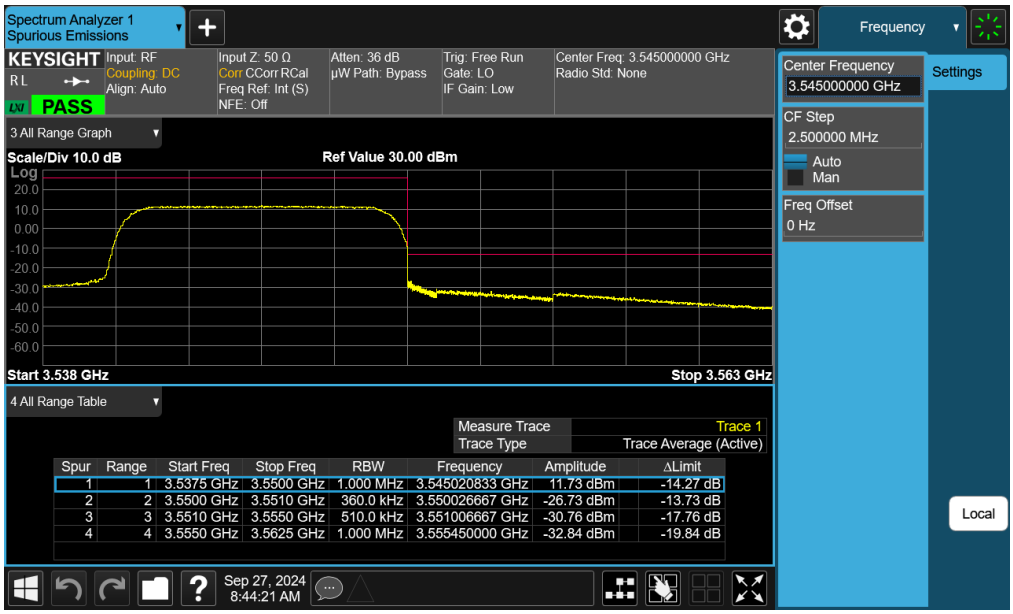
Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
NR-n77 PC2 DoD Band	100MHz	Low	Band Edge	-33.40	-13	-20.40
		High	Band Edge	-38.08	-13	-25.08
	90MHz	Low	Band Edge	-33.29	-13	-20.29
		High	Band Edge	-37.53	-13	-24.53
	80MHz	Low	Band Edge	-33.64	-13	-20.64
		High	Band Edge	-36.70	-13	-23.70
	70MHz	Low	Band Edge	-32.22	-13	-19.22
		High	Band Edge	-36.90	-13	-23.90
	60MHz	Low	Band Edge	-33.29	-13	-20.29
		High	Band Edge	-34.43	-13	-21.43
	50MHz	Low	Band Edge	-32.92	-13	-19.92
		High	Band Edge	-33.50	-13	-20.50
	40MHz	Low	Band Edge	-32.96	-13	-19.96
		High	Band Edge	-31.82	-13	-18.82
	30MHz	Low	Band Edge	-30.57	-13	-17.57
		High	Band Edge	-30.64	-13	-17.64
	25MHz	Low	Band Edge	-26.76	-13	-13.76
		High	Band Edge	-27.71	-13	-14.71
	20MHz	Low	Band Edge	-30.44	-13	-17.44
		High	Band Edge	-30.22	-13	-17.22
	15MHz	Low	Band Edge	-29.38	-13	-16.38
		High	Band Edge	-27.03	-13	-14.03
	10MHz	Low	Band Edge	-25.74	-13	-12.74
		High	Band Edge	-26.73	-13	-13.73
NR-n77 PC2 C Band	100MHz	Low	Band Edge	-32.60	-13	-19.60
		High	Band Edge	-36.66	-13	-23.66
	90MHz	Low	Band Edge	-33.79	-13	-20.79
		High	Band Edge	-36.44	-13	-23.44
	80MHz	Low	Band Edge	-32.74	-13	-19.74
		High	Band Edge	-37.63	-13	-24.63
	70MHz	Low	Band Edge	-33.51	-13	-20.51
		High	Band Edge	-35.98	-13	-22.98
	60MHz	Low	Band Edge	-33.26	-13	-20.26
		High	Band Edge	-35.60	-13	-22.60
	50MHz	Low	Band Edge	-33.05	-13	-20.05
		High	Band Edge	-26.31	-13	-13.31
	40MHz	Low	Band Edge	-31.53	-13	-18.53
		High	Band Edge	-27.03	-13	-14.03
	30MHz	Low	Band Edge	-29.91	-13	-16.91
		High	Band Edge	-24.17	-13	-11.17
	25MHz	Low	Band Edge	-28.13	-13	-15.13
		High	Band Edge	-31.74	-13	-18.74
	20MHz	Low	Band Edge	-30.12	-13	-17.12
		High	Band Edge	-22.64	-13	-9.64
	15MHz	Low	Band Edge	-25.80	-13	-12.80
		High	Band Edge	-29.91	-13	-16.91
	10MHz	Low	Band Edge	-25.28	-13	-12.28
		High	Band Edge	-19.16	-13	-6.16

Table 7-11. Conducted Band Edge Test Results – NR Band n77 – Ant F

NR Band n77 DoD – Ant F

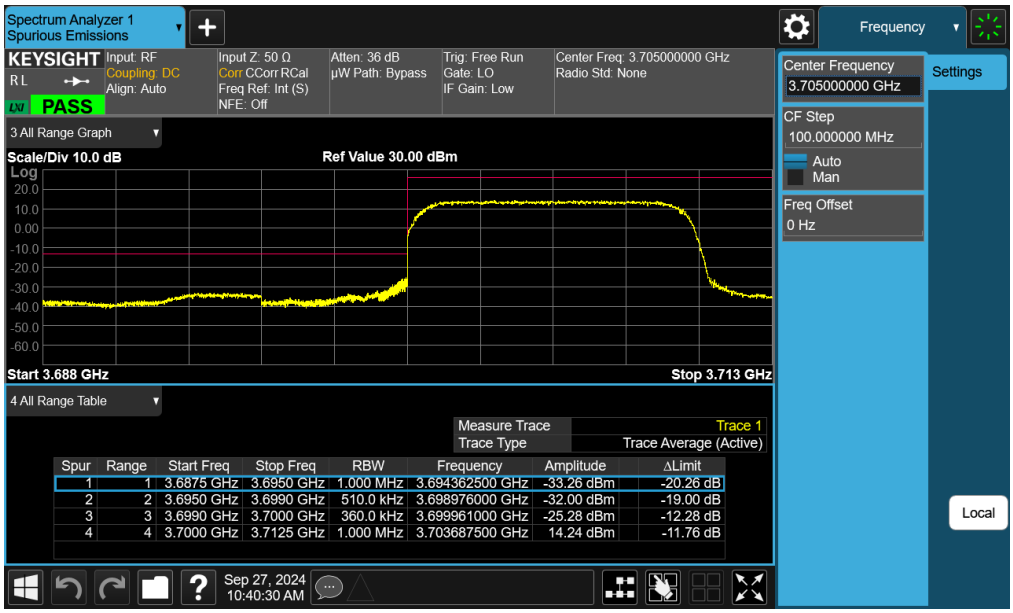


Plot 7-123. Lower Band Edge Plot (NR Band n77 - 10MHz DFT-s-OFDM-QPSK – Full RB - Ant F)

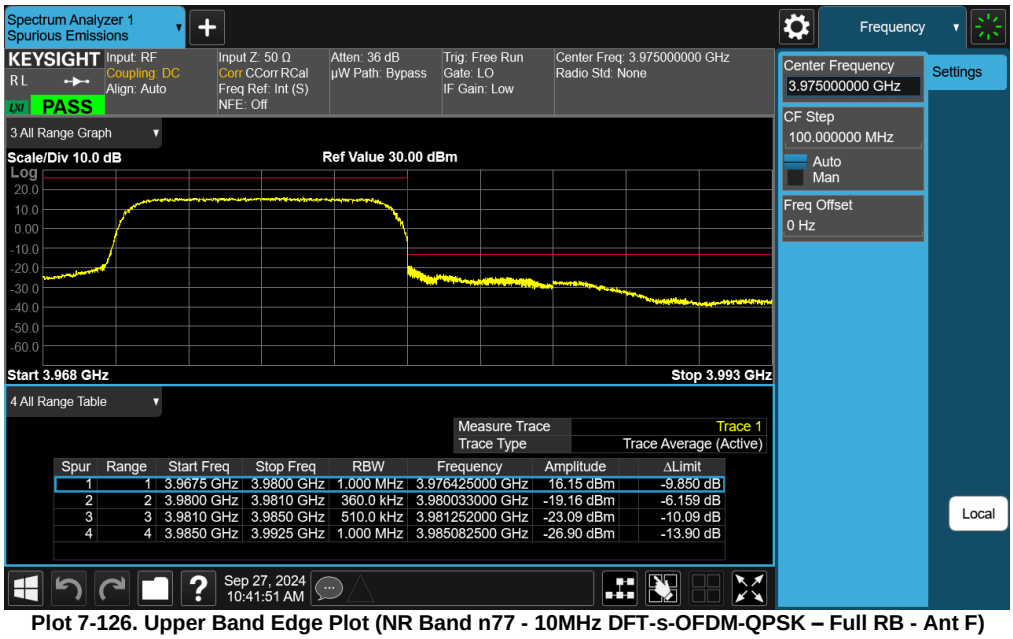


Plot 7-124. Upper Band Edge Plot (NR Band n77 - 10MHz CP-OFDM-QPSK – Full RB - Ant F)

NR Band n77 C-band – Ant F



Plot 7-125. Lower Band Edge Plot (NR Band n77 - 10MHz DFT-s-OFDM-QPSK – Full RB - Ant F)



Plot 7-126. Upper Band Edge Plot (NR Band n77 - 10MHz DFT-s-OFDM-QPSK – Full RB - Ant F)

Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
NR-n77 PC2 DoD Band	100MHz	Low	Band Edge	-36.33	-13	-23.33
		High	Band Edge	-32.95	-13	-19.95
NR-n77 PC2 C Band	100MHz	Low	Band Edge	-36.27	-13	-23.27
		High	Band Edge	-42.11	-13	-29.11

Table 7-12. Conducted Band Edge Test Results – NR Band n77 – Ant C

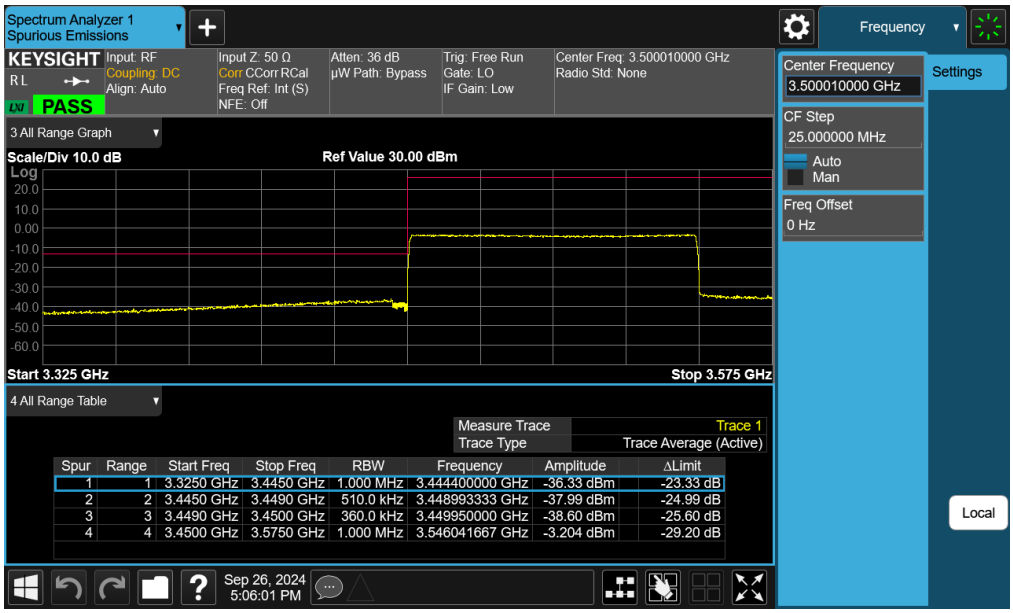
Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
NR-n77 PC2 DoD Band	100MHz	Low	Band Edge	-34.63	-13	-21.63
		High	Band Edge	-39.15	-13	-26.15
NR-n77 PC2 C Band	100MHz	Low	Band Edge	-34.45	-13	-21.45
		High	Band Edge	-40.33	-13	-27.33

Table 7-13. Conducted Band Edge Test Results – NR Band n77 – Ant I

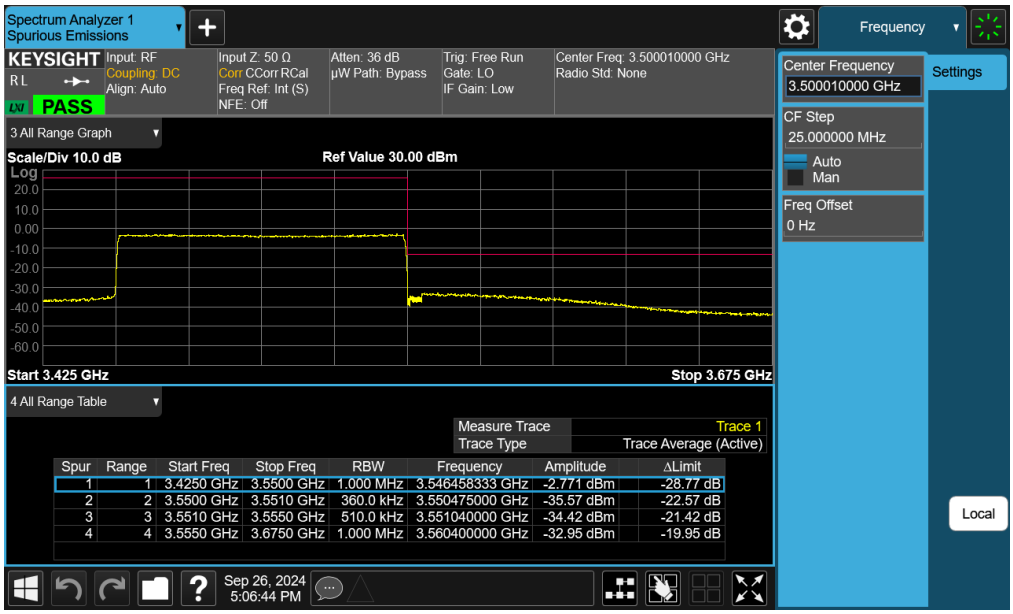
Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
NR-n77 PC2 DoD Band	100MHz	Low	Band Edge	-40.73	-13	-27.73
		High	Band Edge	-36.73	-13	-23.73
NR-n77 PC2 C Band	100MHz	Low	Band Edge	-37.57	-13	-24.57
		High	Band Edge	-42.49	-13	-29.49

Table 7-14. Conducted Band Edge Test Results – NR Band n77 – Ant D

NR Band n77 DoD – Ant C

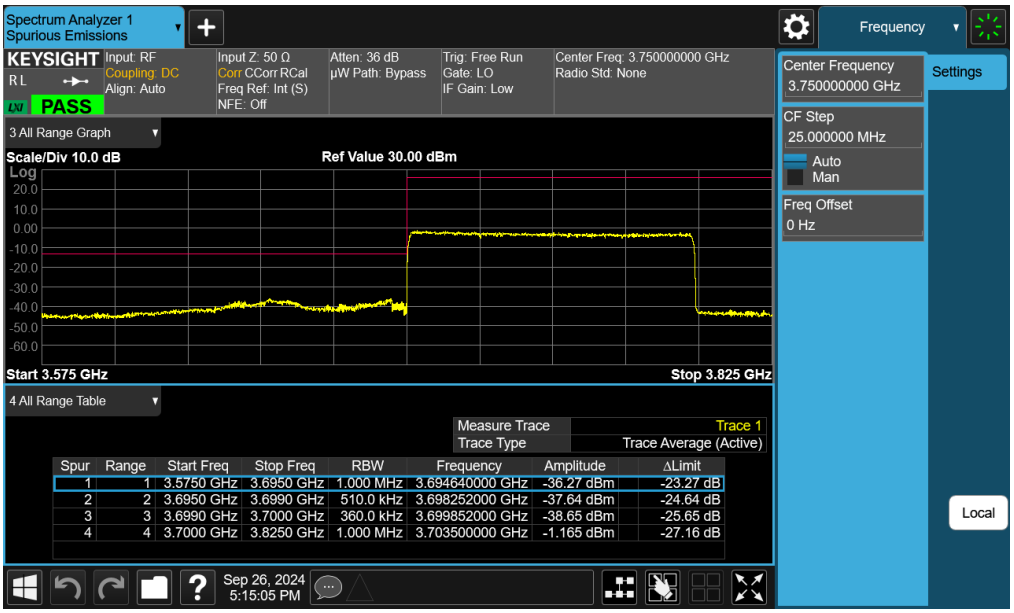


Plot 7-127. Lower Band Edge Plot (NR Band n77 - 100MHz CP-OFDM-QPSK – Full RB - Ant C)

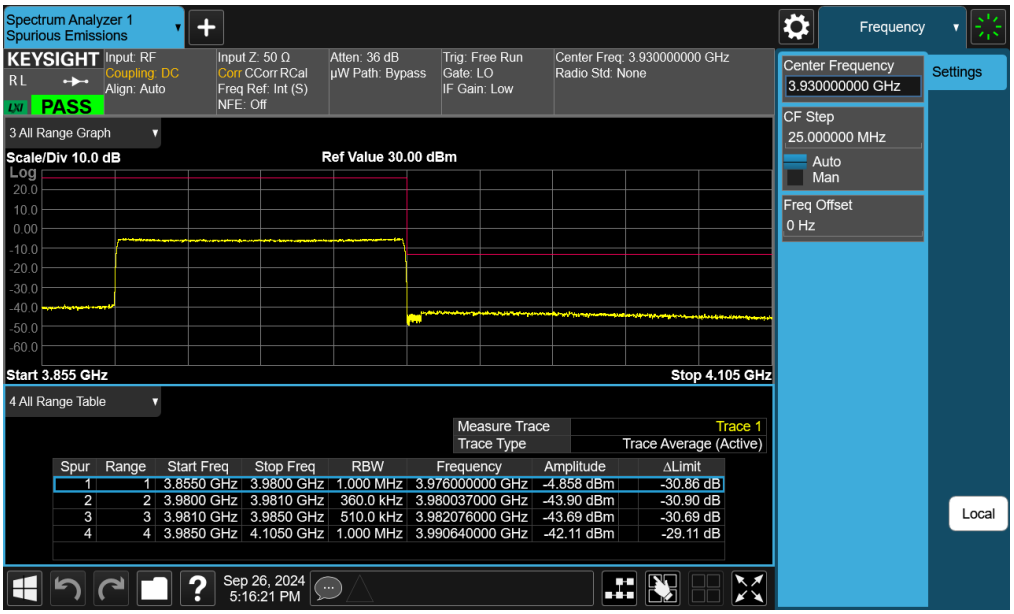


Plot 7-128. Upper Band Edge Plot (NR Band n77 - 100MHz CP-OFDM-QPSK – Full RB - Ant C)

NR Band n77 C-band – Ant C

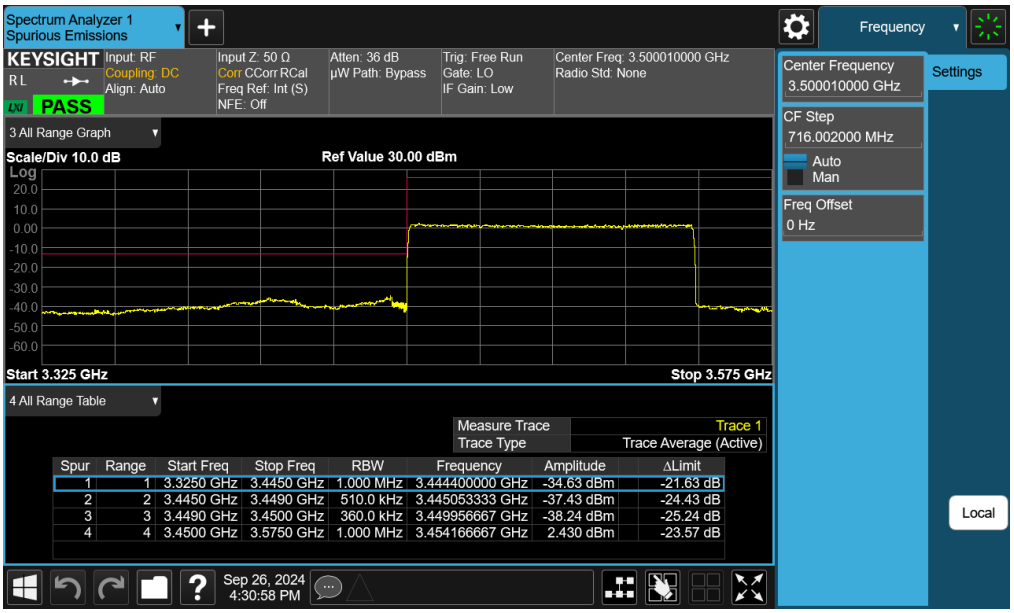


Plot 7-129. Lower Band Edge Plot (NR Band n77 - 100MHz DFT-s-OFDM-BPSK – Full RB - Ant C)

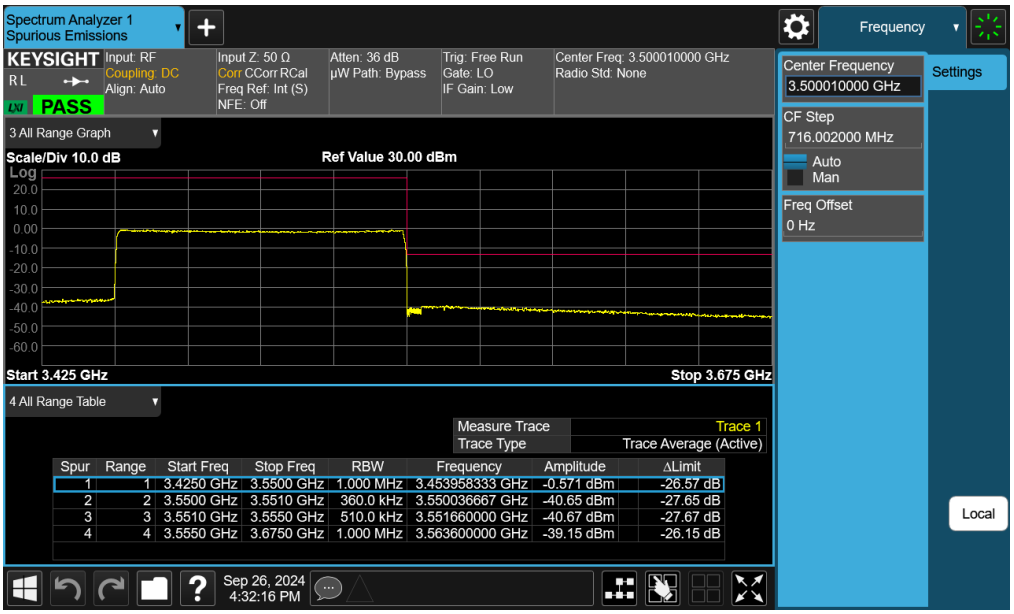


Plot 7-130. Upper Band Edge Plot (NR Band n77 - 100MHz CP-OFDM-QPSK – Full RB - Ant C)

NR Band n77 DoD – Ant I

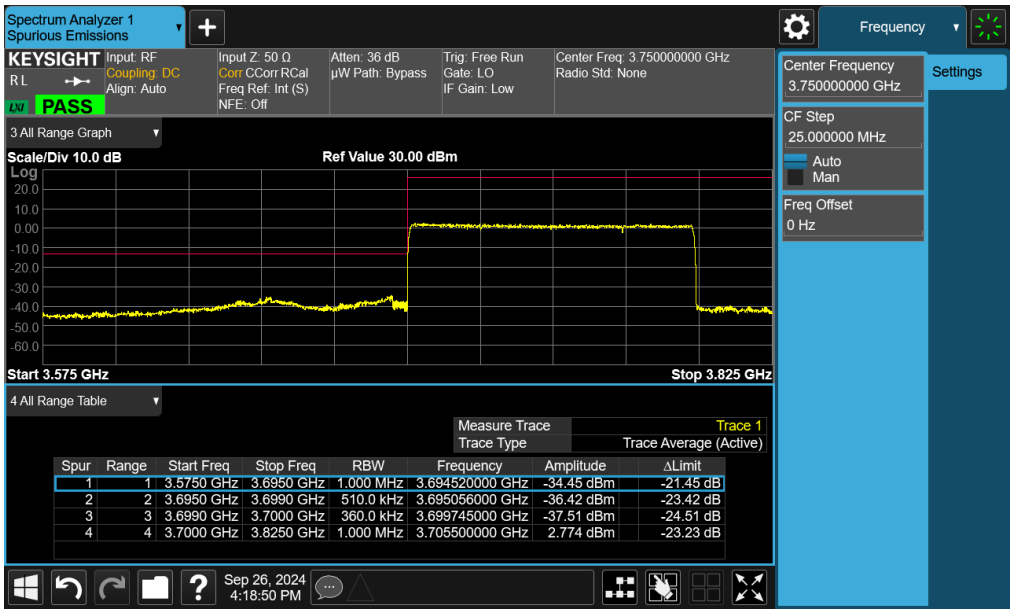


Plot 7-131. Lower Band Edge Plot (NR Band n77 - 100MHz DFT-s-OFDM-BPSK – Full RB - Ant I)

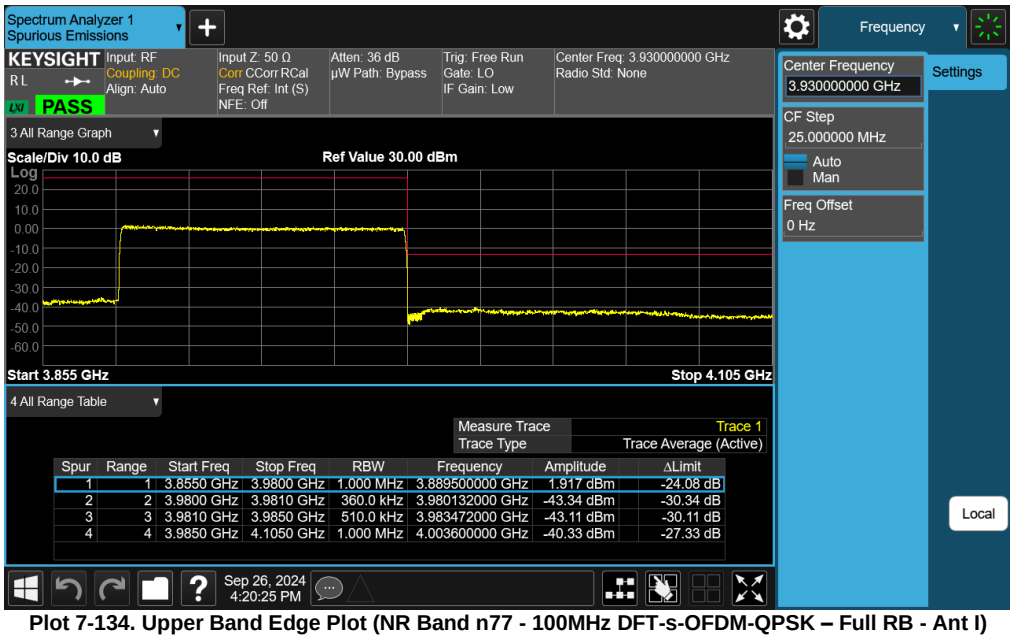


Plot 7-132. Upper Band Edge Plot (NR Band n77 - 100MHz CP-OFDM-QPSK – Full RB - Ant I)

NR Band n77 C-band – Ant I

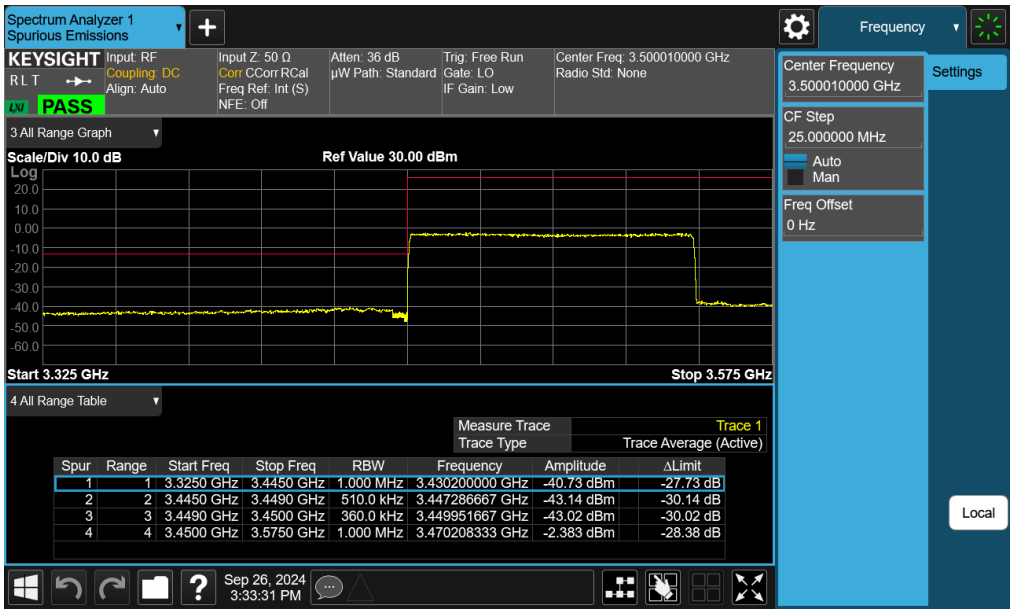


Plot 7-133. Lower Band Edge Plot (NR Band n77 - 100MHz DFT-s-OFDM-BPSK – Full RB - Ant I)

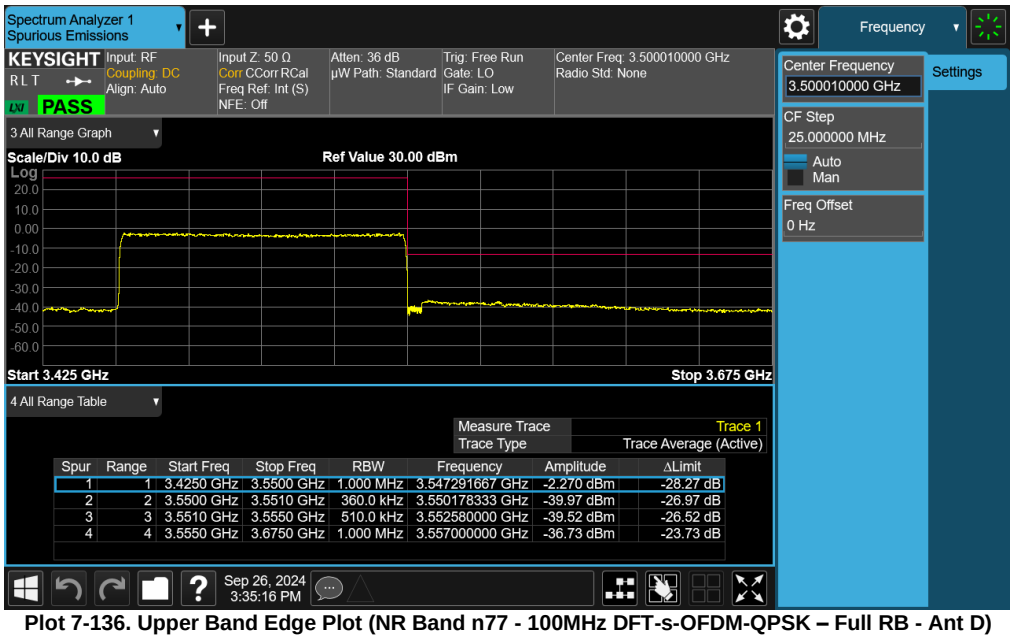


Plot 7-134. Upper Band Edge Plot (NR Band n77 - 100MHz DFT-s-OFDM-QPSK – Full RB - Ant I)

NR Band n77 DoD – Ant D

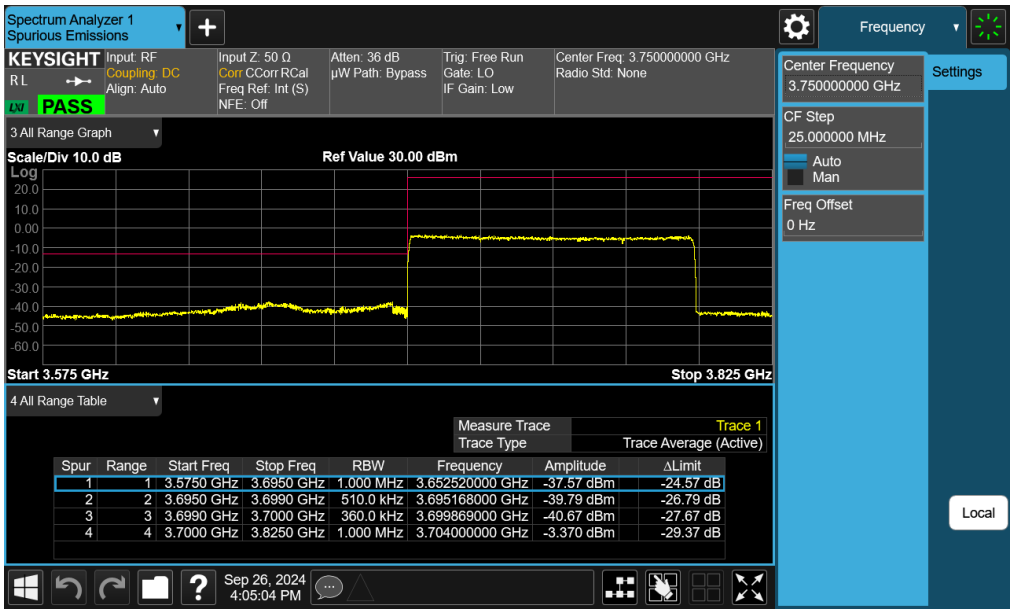


Plot 7-135. Lower Band Edge Plot (NR Band n77 - 100MHz DFT-s-OFDM-BPSK – Full RB - Ant D)

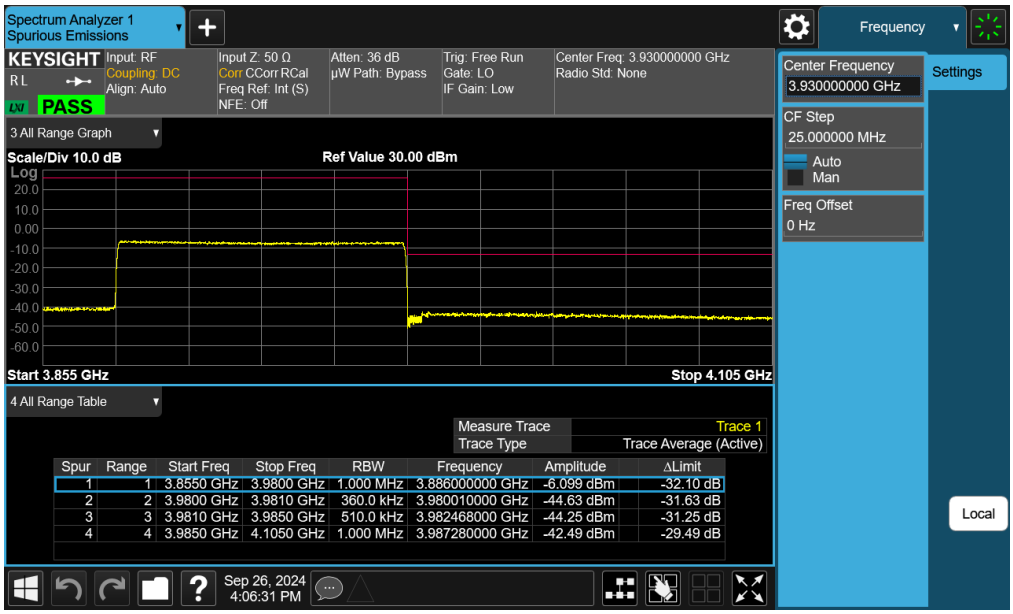


Plot 7-136. Upper Band Edge Plot (NR Band n77 - 100MHz DFT-s-OFDM-QPSK – Full RB - Ant D)

NR Band n77 C-band – Ant D



Plot 7-137. Lower Band Edge Plot (NR Band n77 - 100MHz DFT-s-OFDM-BPSK – Full RB - Ant D)



Plot 7-138. Upper Band Edge Plot (NR Band n77 - 100MHz CP OFDM-QPSK – Full RB - Ant D)

7.6 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.

The peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB.

Test Procedure Used

ANSI C63.26-2015 – Section 5.2.3.4

Test Settings

1. The signal analyzer's CCDF measurement profile is enabled
2. Frequency = carrier center frequency
3. Measurement BW ≥ OBW or specified reference bandwidth
4. The signal analyzer was set to collect one million samples to generate the CCDF curve
5. The measurement interval was set depending on the type of signal analyzed. For continuous signals (>98% duty cycle), the measurement interval was set to 1ms. For burst transmissions, the spectrum analyzer is set to use an internal "RF Burst" trigger that is synced with an incoming pulse and the measurement interval is set to less than the duration of the "on time" of one burst to ensure that energy is only captured during a time in which the transmitter is operating at maximum power

Test Setup

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

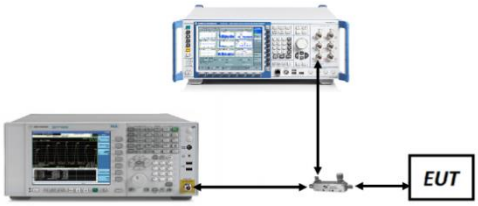


Figure 7-5. Test Instrument & Measurement Setup

Test Notes

For the QAM modulations, 256QAM was found to have the worst-case peak-to-average ratio so it is the only QAM measurement included in this section.

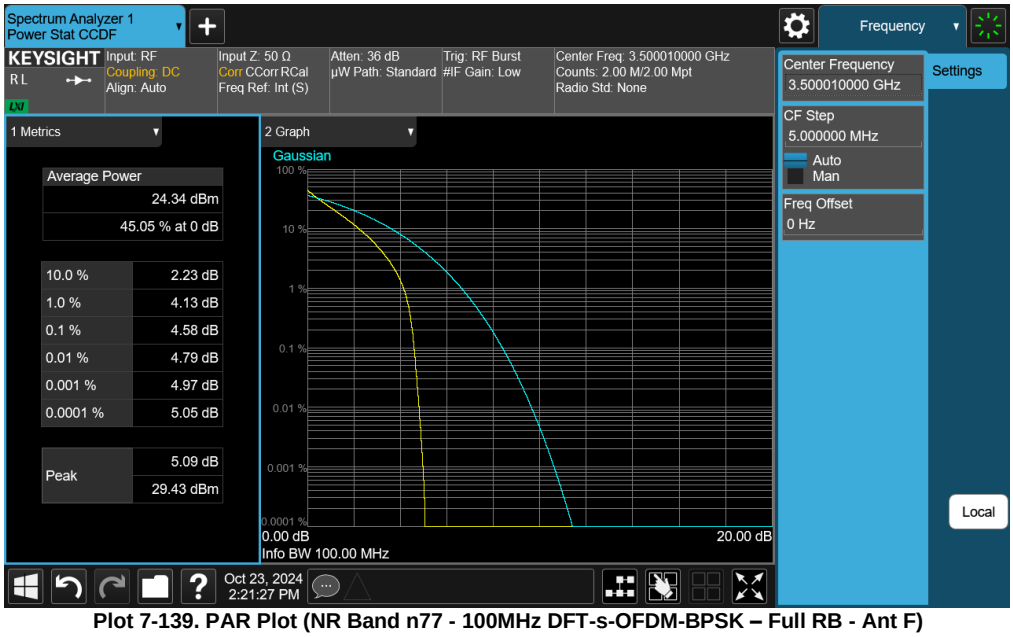
Mode	Bandwidth	Modulation	Average Power [dBm]	PAR at 0.1% [dB]	PAR Limit [dB]	Margin [dB]
NR-n77PC2-R1	100MHz	π/2 BPSK	24.34	4.58	13	-8.42
		QPSK	22.03	7.16	13	-5.84
		256QAM	19.25	8.67	13	-4.33
	90MHz	π/2 BPSK	24.48	4.28	13	-8.72
		QPSK	22.42	6.96	13	-6.04
		256QAM	19.73	8.68	13	-4.32
	80MHz	π/2 BPSK	24.68	4.43	13	-8.57
		QPSK	22.18	7.04	13	-5.96
		256QAM	19.34	8.68	13	-4.32
	70MHz	π/2 BPSK	24.40	4.26	13	-8.74
		QPSK	22.31	6.96	13	-6.04
		256QAM	19.71	8.67	13	-4.33
	60MHz	π/2 BPSK	24.54	4.18	13	-8.82
		QPSK	22.10	6.95	13	-6.05
		256QAM	19.30	8.69	13	-4.31
	50MHz	π/2 BPSK	24.66	4.17	13	-8.83
		QPSK	22.08	6.84	13	-6.16
		256QAM	19.27	8.69	13	-4.31
	40MHz	π/2 BPSK	24.37	4.03	13	-8.97
		QPSK	22.24	6.68	13	-6.32
		256QAM	19.65	8.63	13	-4.37
	30MHz	π/2 BPSK	24.50	4.10	13	-8.90
		QPSK	21.91	6.69	13	-6.31
		256QAM	19.13	8.64	13	-4.36
	25MHz	π/2 BPSK	24.87	4.11	13	-8.89
		QPSK	22.88	6.81	13	-6.19
		256QAM	20.39	8.63	13	-4.37
	20MHz	π/2 BPSK	24.74	3.95	13	-9.05
		QPSK	22.59	6.64	13	-6.36
		256QAM	19.99	8.63	13	-4.37
	15MHz	π/2 BPSK	24.99	4.06	13	-8.94
		QPSK	22.46	6.67	13	-6.33
		256QAM	19.64	8.69	13	-4.31
	10MHz	π/2 BPSK	24.58	4.08	13	-8.92
		QPSK	22.47	6.58	13	-6.42
		256QAM	19.85	8.64	13	-4.36

Table 7-15. PAR Test Results – NR Band n77 DoD – Ant F

Mode	Bandwidth	Modulation	Average Power [dBm]	PAR at 0.1% [dB]	PAR Limit [dB]	Margin [dB]
NR-n77PC2	100MHz	π/2 BPSK	25.70	4.42	13	-8.58
		QPSK	23.49	6.97	13	-6.03
		256QAM	20.81	8.54	13	-4.46
	90MHz	π/2 BPSK	25.84	4.10	13	-8.90
		QPSK	23.52	6.80	13	-6.20
		256QAM	20.82	8.52	13	-4.48
	80MHz	π/2 BPSK	25.66	4.23	13	-8.77
		QPSK	23.40	6.86	13	-6.14
		256QAM	20.71	8.54	13	-4.46
	70MHz	π/2 BPSK	25.79	4.09	13	-8.91
		QPSK	23.34	6.80	13	-6.20
		256QAM	20.68	8.52	13	-4.48
	60MHz	π/2 BPSK	25.78	4.02	13	-8.98
		QPSK	23.54	6.78	13	-6.22
		256QAM	20.84	8.53	13	-4.47
	50MHz	π/2 BPSK	25.94	3.98	13	-9.02
		QPSK	23.57	6.66	13	-6.34
		256QAM	20.86	8.54	13	-4.46
	40MHz	π/2 BPSK	25.35	3.84	13	-9.16
		QPSK	23.03	6.56	13	-6.44
		256QAM	20.40	8.53	13	-4.47
	30MHz	π/2 BPSK	25.32	3.95	13	-9.05
		QPSK	23.04	6.57	13	-6.43
		16QAM	23.04	6.73	13	-6.27
	25MHz	π/2 BPSK	25.00	3.83	13	-9.17
		QPSK	22.62	6.85	13	-6.15
		256QAM	19.88	8.51	13	-4.49
	20MHz	π/2 BPSK	24.70	3.82	13	-9.18
		QPSK	22.42	6.52	13	-6.48
		256QAM	19.81	8.54	13	-4.46
	15MHz	π/2 BPSK	25.38	3.89	13	-9.11
		QPSK	22.71	6.57	13	-6.43
		256QAM	19.99	8.50	13	-4.50
	10MHz	π/2 BPSK	24.92	3.95	13	-9.05
		QPSK	22.62	6.45	13	-6.55
		256QAM	19.92	8.50	13	-4.50

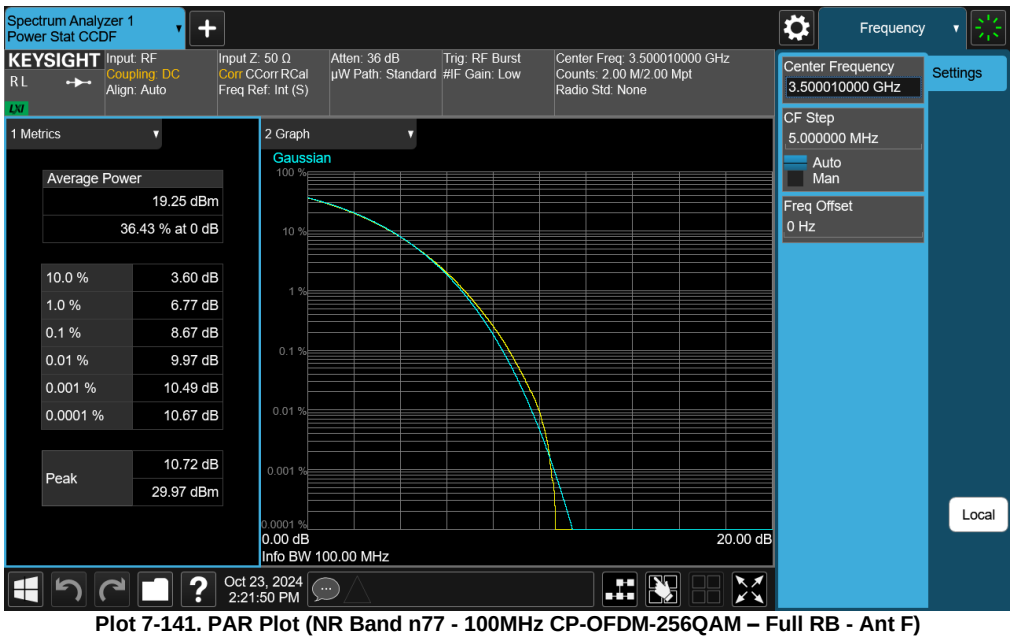
Table 7-16. PAR Test Results – NR Band n77 C-band – Ant F

NR Band n77 DoD – Ant F



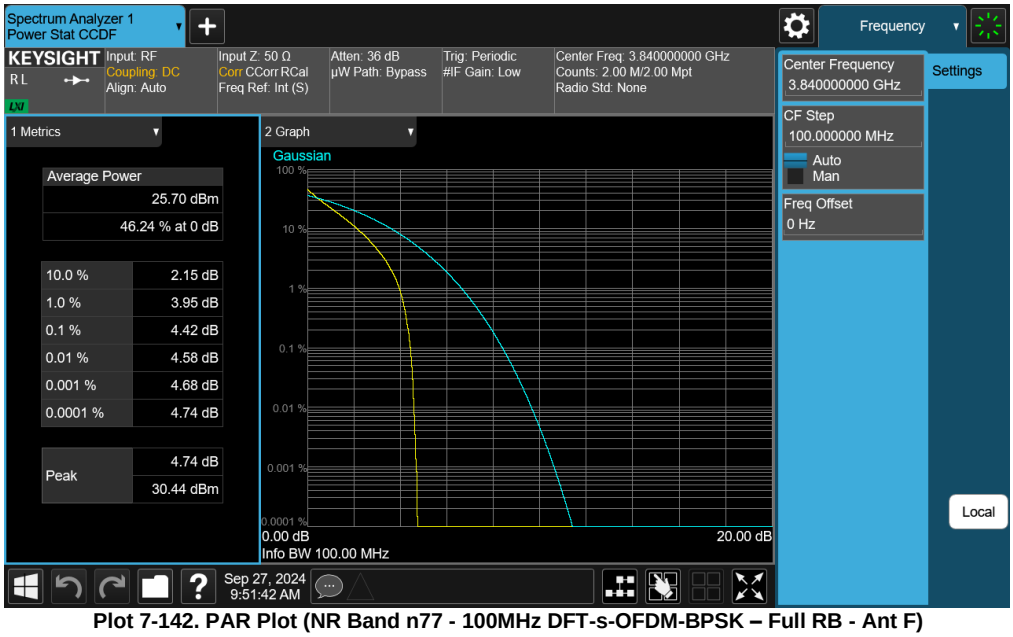
Plot 7-139. PAR Plot (NR Band n77 - 100MHz DFT-s-OFDM-BPSK – Full RB - Ant F)

Plot 7-140. PAR Plot (NR Band n77 - 100MHz CP-OFDM-QPSK – Full RB - Ant F)



Plot 7-141. PAR Plot (NR Band n77 - 100MHz CP-OFDM-256QAM – Full RB - Ant F)

NR Band n77 C-band – Ant F



Plot 7-142. PAR Plot (NR Band n77 - 100MHz DFT-s-OFDM-BPSK – Full RB - Ant F)

Plot 7-143. PAR Plot (NR Band n77 - 100MHz CP-OFDM-QPSK – Full RB - Ant F)

Plot 7-144. PAR Plot (NR Band n77 - 100MHz CP-OFDM-256QAM – Full RB - Ant F)

Mode	Bandwidth	Modulation	Average Power [dBm]	PAR at 0.1% [dB]	PAR Limit [dB]	Margin [dB]
NR-n77PC2-R1	100MHz	π/2 BPSK	19.03	4.52	13	-8.48
		QPSK	17.68	6.46	13	-6.54
		256QAM	14.66	8.29	13	-4.71
NR-n77PC2	100MHz	π/2 BPSK	19.49	4.52	13	-8.48
		QPSK	17.15	7.06	13	-5.94
		256QAM	14.49	8.62	13	-4.38

Table 7-17. PAR Test Results – NR Band n77 – Ant C

Mode	Bandwidth	Modulation	Average Power [dBm]	PAR at 0.1% [dB]	PAR Limit [dB]	Margin [dB]
NR-n77PC2-R1	100MHz	π/2 BPSK	23.52	4.51	13	-8.49
		QPSK	20.67	7.13	13	-5.87
		256QAM	17.80	8.70	13	-4.30
NR-n77PC2	100MHz	π/2 BPSK	24.65	4.59	13	-8.41
		QPSK	21.97	6.96	13	-6.04
		256QAM	19.16	8.55	13	-4.45

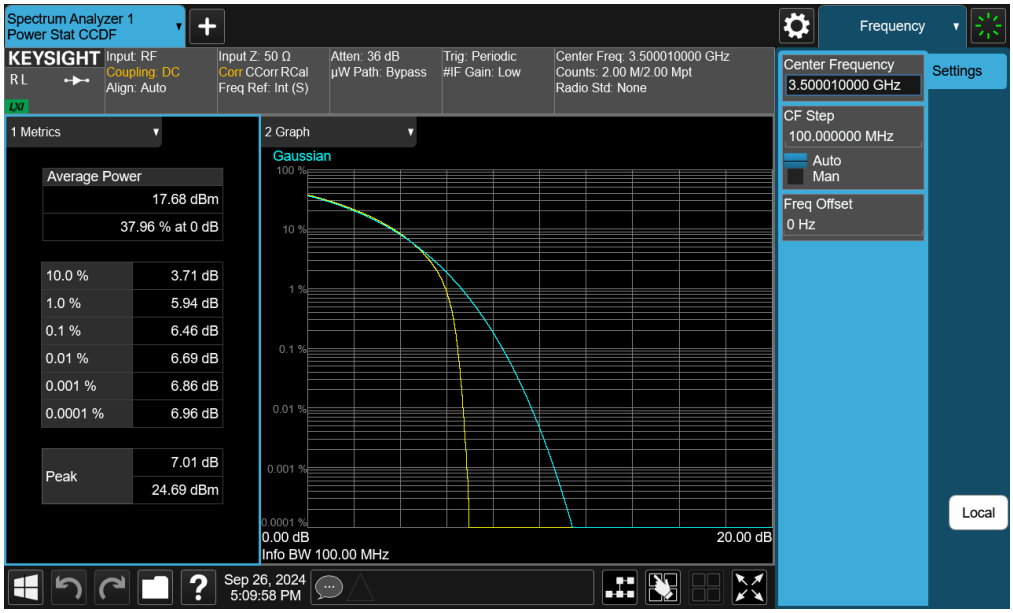
Table 7-18. PAR Test Results – NR Band n77 – Ant I

Mode	Bandwidth	Modulation	Average Power [dBm]	PAR at 0.1% [dB]	PAR Limit [dB]	Margin [dB]
NR-n77PC2-R1	100MHz	π/2 BPSK	17.94	4.44	13	-8.56
		QPSK	15.82	6.80	13	-6.20
		256QAM	13.13	8.45	13	-4.55
NR-n77PC2	100MHz	π/2 BPSK	17.33	4.51	13	-8.49
		QPSK	15.30	7.08	13	-5.92
		256QAM	12.75	8.63	13	-4.37

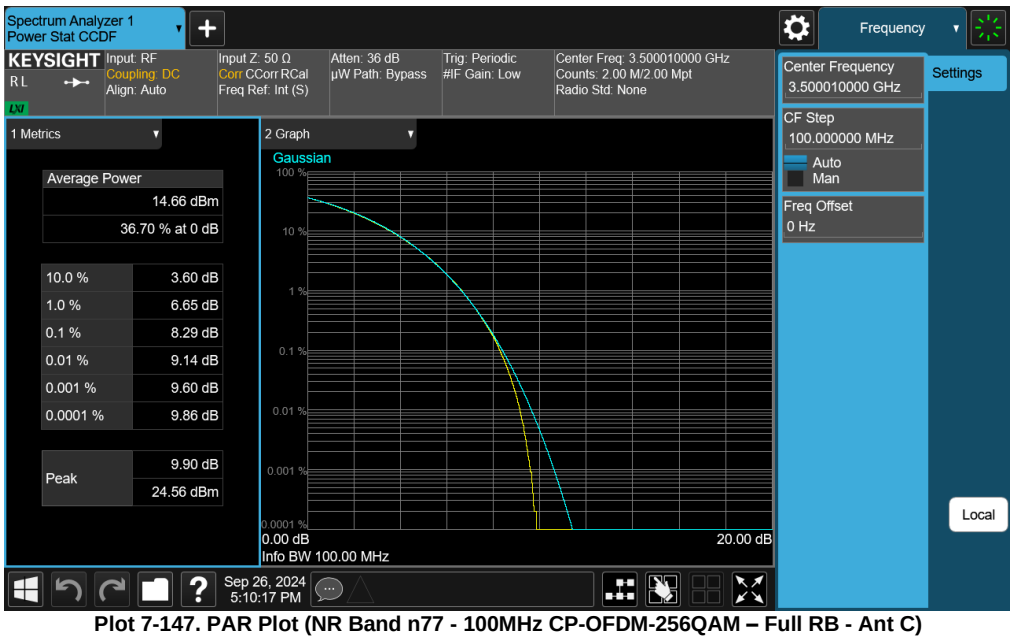
Table 7-19. PAR Test Results – NR Band n77 – Ant D

NR Band n77 DoD – Ant C

Plot 7-145. PAR Plot (NR Band n77 - 100MHz DFT-s-OFDM-BPSK – Full RB - Ant C)



Plot 7-146. PAR Plot (NR Band n77 - 100MHz CP-OFDM-QPSK – Full RB - Ant C)

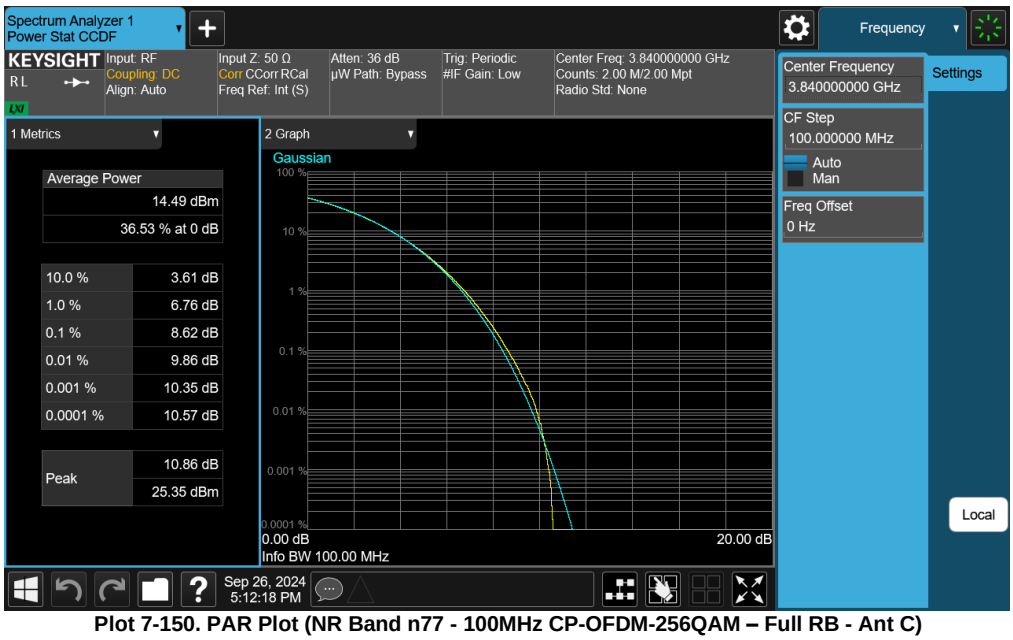


Plot 7-147. PAR Plot (NR Band n77 - 100MHz CP-OFDM-256QAM – Full RB - Ant C)

NR Band n77 C-band – Ant C

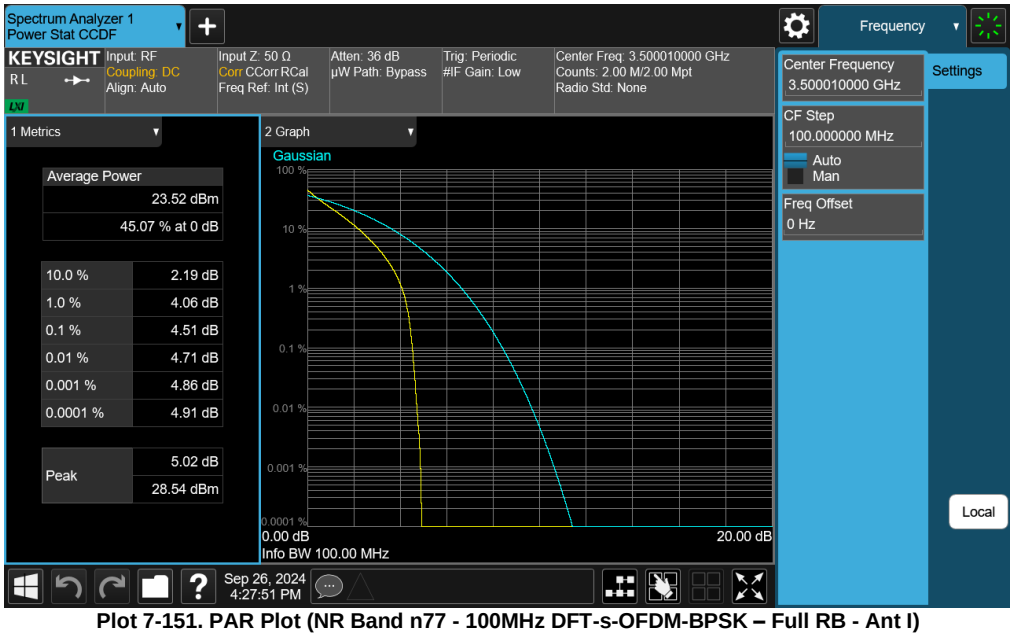
Plot 7-148. PAR Plot (NR Band n77 - 100MHz DFT-s-OFDM-BPSK – Full RB - Ant C)

Plot 7-149. PAR Plot (NR Band n77 - 100MHz CP-OFDM-QPSK – Full RB - Ant C)

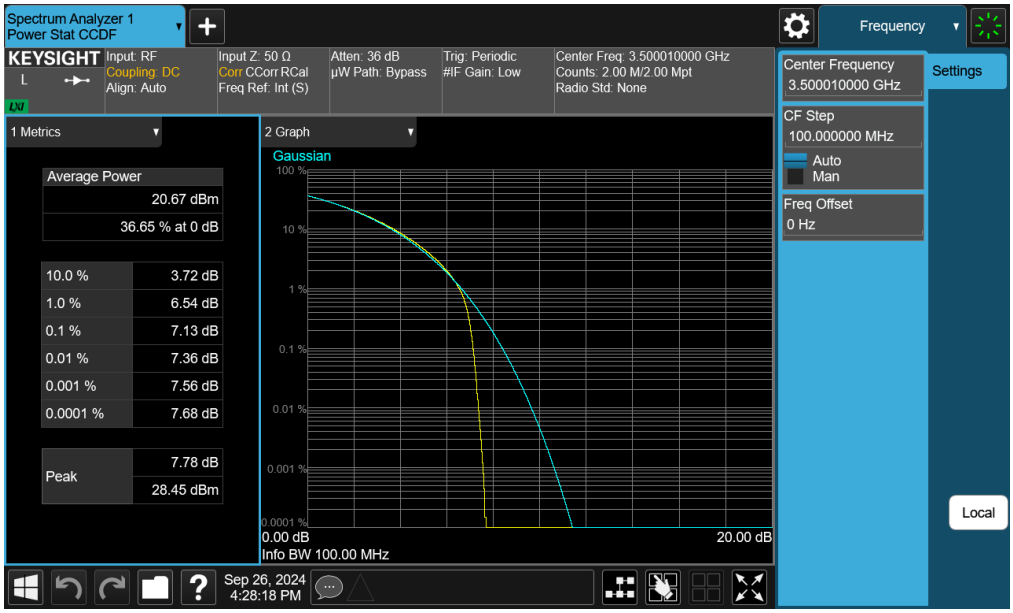


Plot 7-150. PAR Plot (NR Band n77 - 100MHz CP-OFDM-256QAM – Full RB - Ant C)

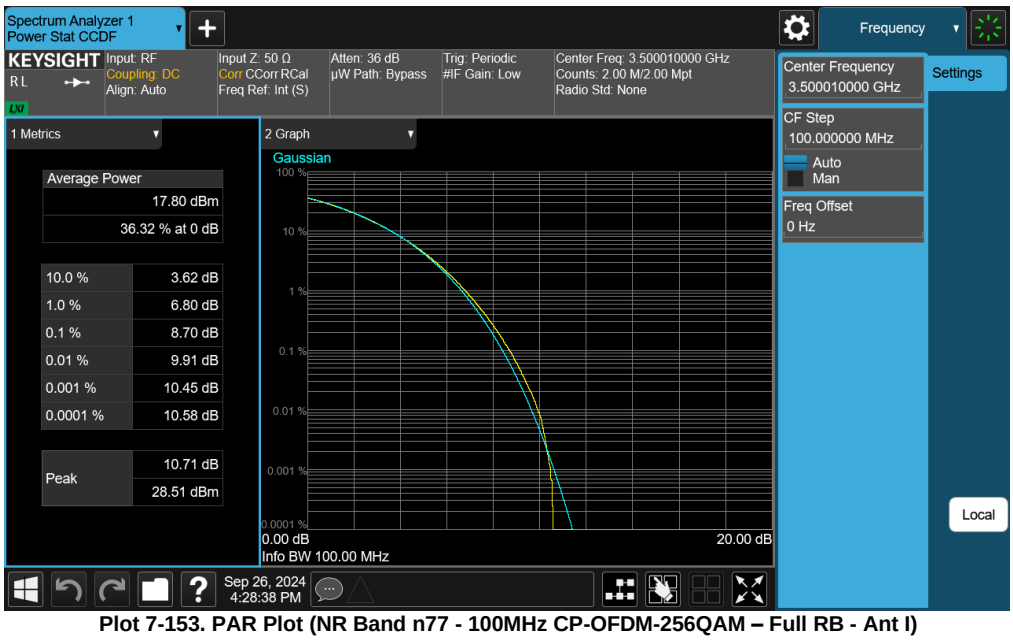
NR Band n77 DoD – Ant I



Plot 7-151. PAR Plot (NR Band n77 - 100MHz DFT-s-OFDM-BPSK – Full RB - Ant I)

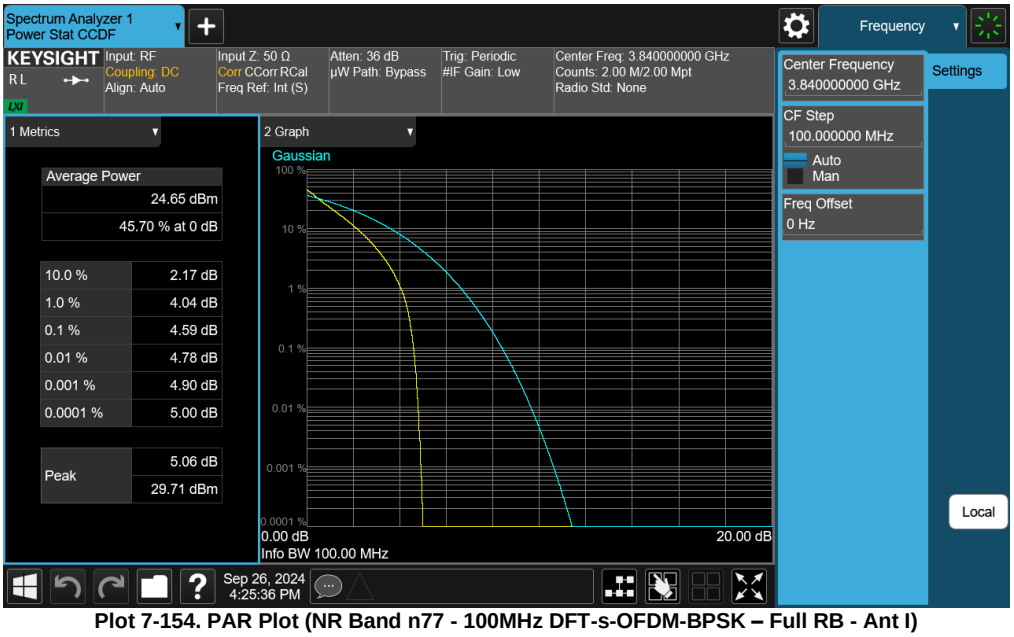


Plot 7-152. PAR Plot (NR Band n77 - 100MHz CP-OFDM-QPSK – Full RB - Ant I)



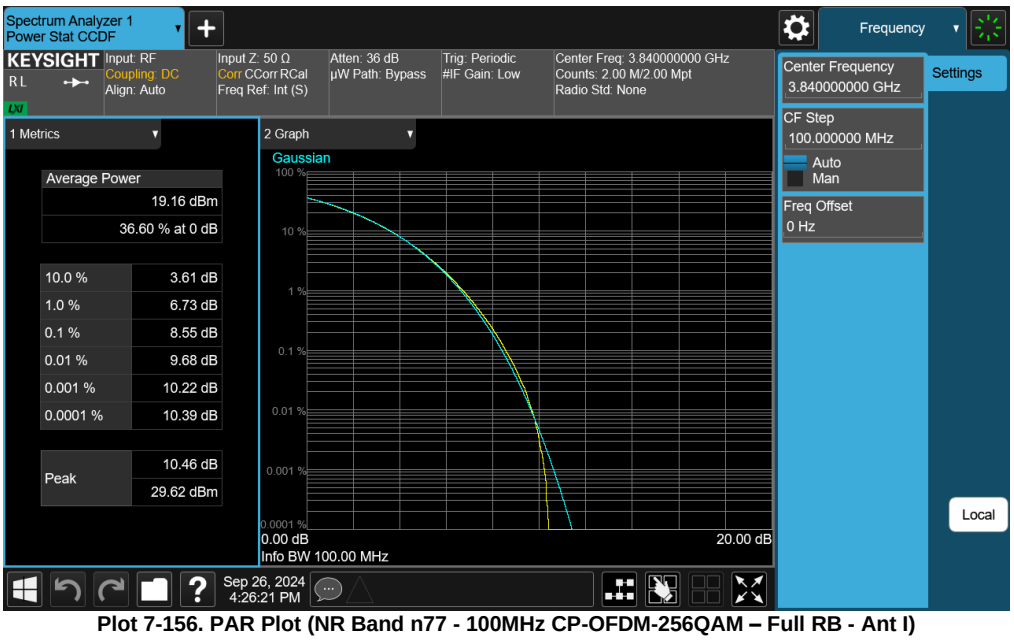
Plot 7-153. PAR Plot (NR Band n77 - 100MHz CP-OFDM-256QAM – Full RB - Ant I)

NR Band n77 C-band – Ant I



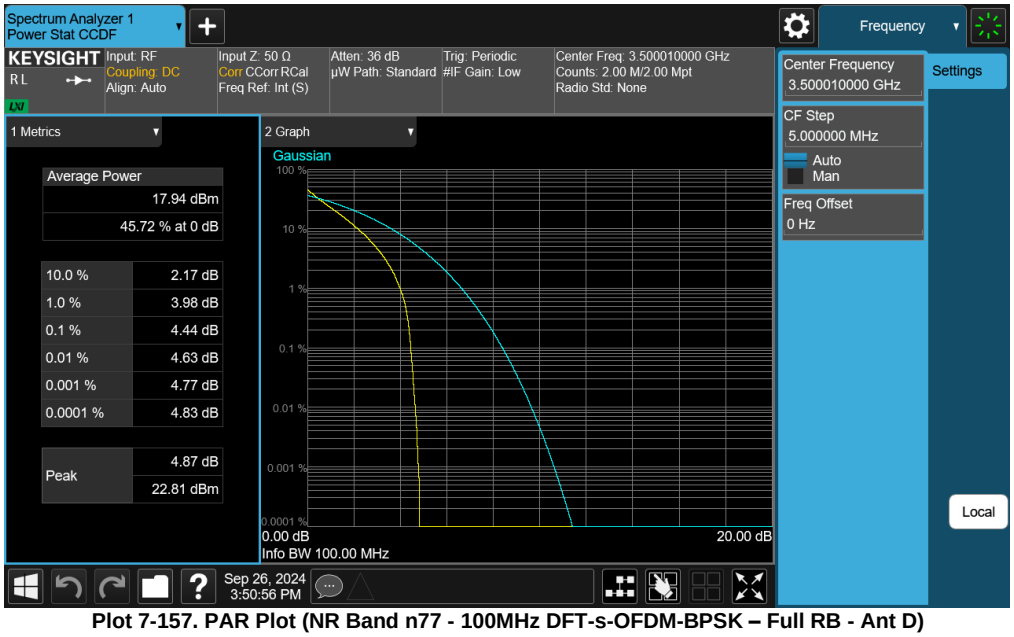
Plot 7-154. PAR Plot (NR Band n77 - 100MHz DFT-s-OFDM-BPSK – Full RB - Ant I)

Plot 7-155. PAR Plot (NR Band n77 - 100MHz CP-OFDM-QPSK – Full RB - Ant I)

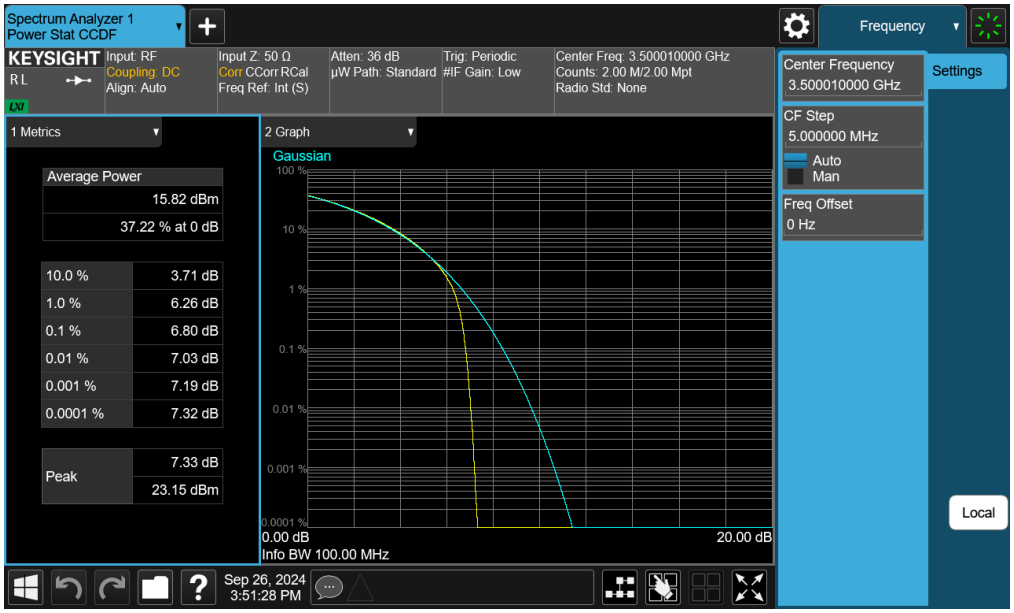


Plot 7-156. PAR Plot (NR Band n77 - 100MHz CP-OFDM-256QAM – Full RB - Ant I)

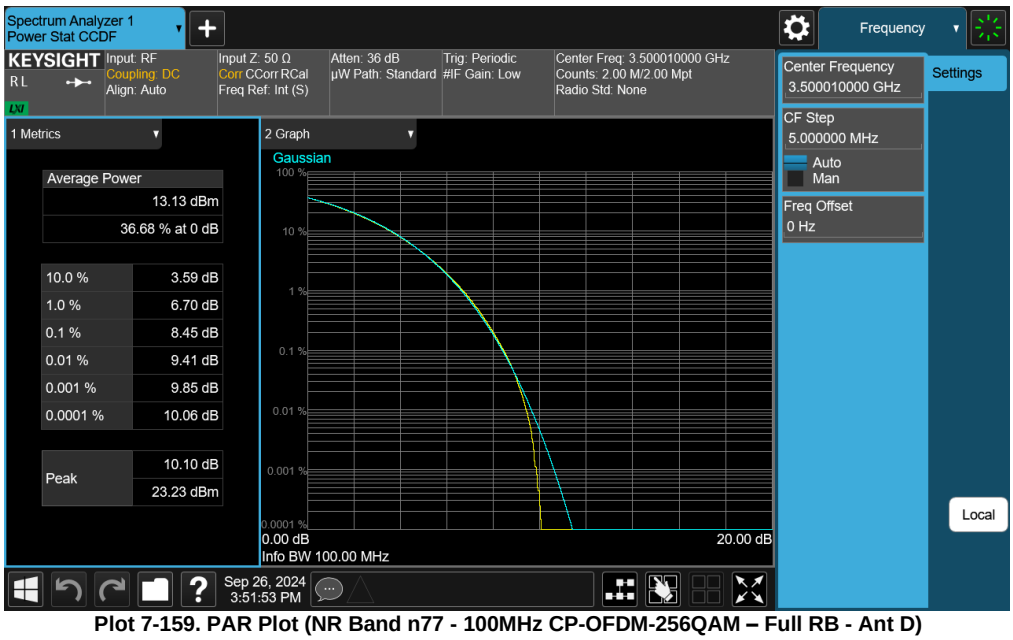
NR Band n77 DoD – Ant D



Plot 7-157. PAR Plot (NR Band n77 - 100MHz DFT-s-OFDM-BPSK – Full RB - Ant D)



Plot 7-158. PAR Plot (NR Band n77 - 100MHz CP-OFDM-QPSK – Full RB - Ant D)

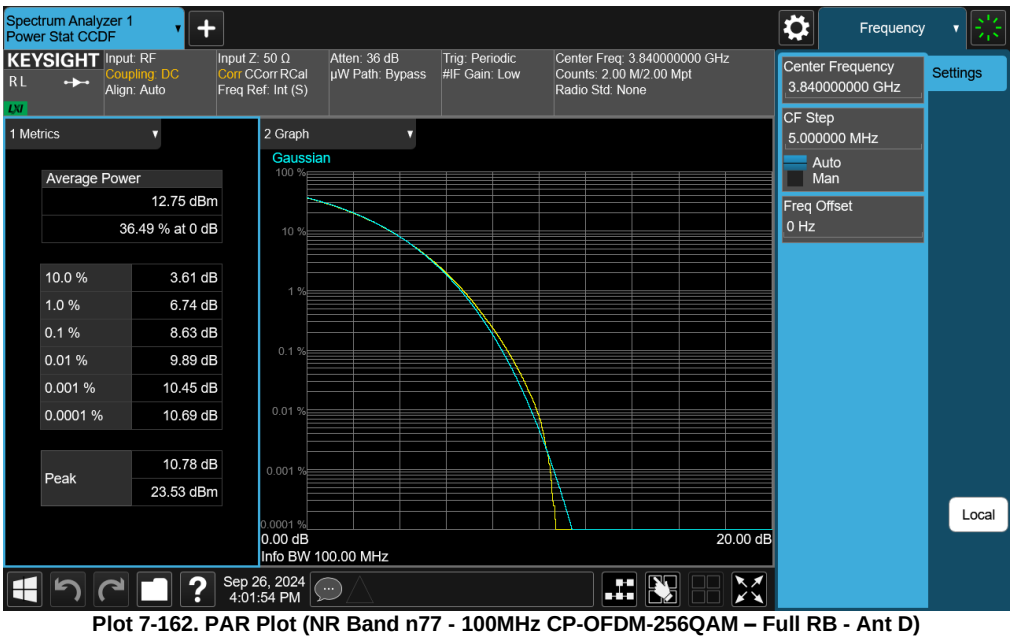


Plot 7-159. PAR Plot (NR Band n77 - 100MHz CP-OFDM-256QAM – Full RB - Ant D)

NR Band n77 C-band – Ant D

Plot 7-160. PAR Plot (NR Band n77 - 100MHz DFT-s-OFDM-BPSK – Full RB - Ant D)

Plot 7-161. PAR Plot (NR Band n77 - 100MHz CP-OFDM-QPSK – Full RB - Ant D)



Plot 7-162. PAR Plot (NR Band n77 - 100MHz CP-OFDM-256QAM – Full RB - Ant D)

7.7 Radiated Power (EIRP)

Test Overview

Equivalent Isotropic Radiated Power (EIRP) measurements are performed using the substitution method described in ANSI C63.26-2015 with the EUT transmitting into an integral antenna. Measurements 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

ANSI C63.26-2015 – Section 5.2.4.4

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 ≥ 3 x RBW
4. Span = 1.5 times the OBW
5. No. of sweep points ≥ 2 x span / RBW
6. Detector = RMS
7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto". Trigger is set to enable triggering only on full power bursts with the sweep time set less than or equal to the transmission burst duration.
8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation. For signals with burst transmission, the "gating" function was enabled to ensure that measurements are performed during times in which the transmitter is operating at its maximum power.
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The trace was allowed to stabilize.

Test Setup

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

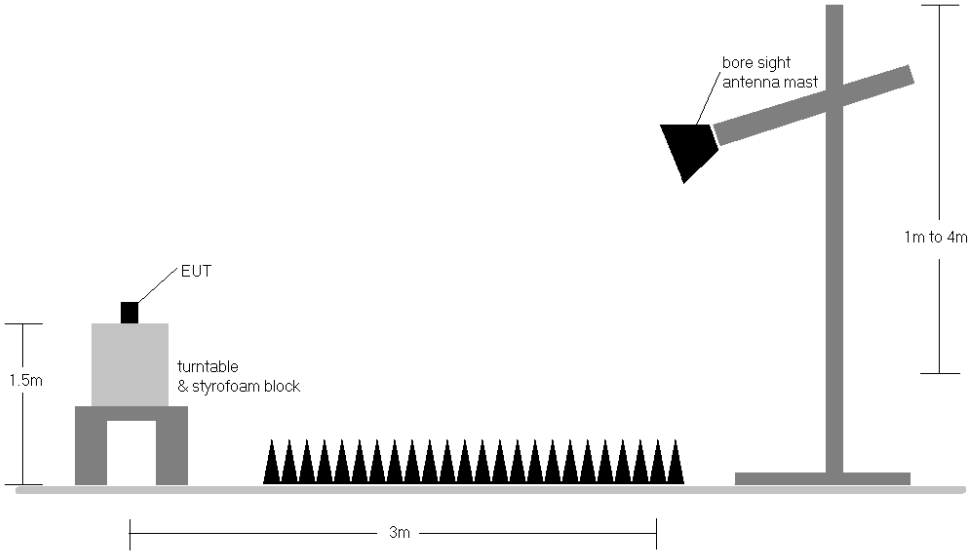


Figure 7-6. Radiated Test Setup >1GHz

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) 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.

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	π/2 BPSK	3500.01	H	192	338	9.71	1 / 271	13.58	23.29	0.213	30.00	-6.71
	QPSK	3500.01	H	192	338	9.71	1 / 271	13.59	**23.30**	0.214	30.00	-6.70
	16-QAM	3500.01	H	192	338	9.71	1 / 271	12.77	22.48	0.177	30.00	-7.52
90 MHz	π/2 BPSK	3495.00	H	192	338	9.71	1 / 1	13.49	23.20	0.209	30.00	-6.80
	π/2 BPSK	3500.01	H	192	338	9.71	1 / 1	13.19	22.90	0.195	30.00	-7.10
	π/2 BPSK	3504.99	H	192	338	9.71	1 / 243	13.10	22.81	0.191	30.00	-7.19
	QPSK	3495.00	H	192	338	9.71	1 / 243	13.57	23.29	0.213	30.00	-6.71
	QPSK	3500.01	H	192	338	9.71	1 / 243	13.75	23.46	0.222	30.00	-6.54
	QPSK	3504.99	H	192	338	9.71	1 / 243	13.80	**23.51**	0.225	30.00	-6.49
	16-QAM	3504.99	H	192	338	9.71	1 / 243	12.95	22.66	0.184	30.00	-7.34
80 MHz	π/2 BPSK	3490.02	H	192	338	9.72	1 / 1	14.20	23.92	0.247	30.00	-6.08
	π/2 BPSK	3500.01	H	192	338	9.71	1 / 1	13.51	23.22	0.210	30.00	-6.78
	π/2 BPSK	3510.00	H	192	338	9.71	1 / 1	13.36	23.07	0.203	30.00	-6.93
	QPSK	3490.02	H	192	338	9.72	1 / 215	14.35	**24.07**	0.255	30.00	-5.93
	QPSK	3500.01	H	192	338	9.71	1 / 215	13.91	23.62	0.230	30.00	-6.38
	QPSK	3510.00	H	192	338	9.71	1 / 215	13.91	23.62	0.230	30.00	-6.38
	16-QAM	3490.02	H	192	338	9.72	1 / 1	13.30	23.02	0.200	30.00	-6.98
70 MHz	π/2 BPSK	3485.01	H	192	338	9.72	1 / 1	13.54	23.26	0.212	30.00	-6.74
	π/2 BPSK	3500.01	H	192	338	9.71	1 / 1	14.26	23.97	0.249	30.00	-6.03
	π/2 BPSK	3514.98	H	192	338	9.71	1 / 1	14.01	23.72	0.235	30.00	-6.28
	QPSK	3485.01	H	192	338	9.72	1 / 1	13.99	23.71	0.235	30.00	-6.29
	QPSK	3500.01	H	192	338	9.71	1 / 1	14.61	**24.32**	0.270	30.00	-5.68
	QPSK	3514.98	H	192	338	9.71	1 / 1	14.23	23.93	0.247	30.00	-6.07
	16-QAM	3500.01	H	192	338	9.71	1 / 1	13.64	23.35	0.216	30.00	-6.65
60 MHz	π/2 BPSK	3480.00	H	192	338	9.72	1 / 1	13.70	23.42	0.220	30.00	-6.58
	π/2 BPSK	3500.01	H	192	338	9.71	1 / 1	13.87	23.58	0.228	30.00	-6.42
	π/2 BPSK	3519.99	H	192	338	9.70	1 / 160	12.63	22.33	0.171	30.00	-7.67
	QPSK	3500.01	H	192	338	9.71	1 / 1	14.33	**24.04**	0.254	30.00	-5.96
	QPSK	3519.99	H	192	338	9.70	1 / 1	13.52	23.22	0.210	30.00	-6.78
	16-QAM	3500.01	H	192	338	9.71	1 / 1	13.50	23.21	0.210	30.00	-6.79
50 MHz	π/2 BPSK	3475.02	H	192	338	9.73	1 / 1	12.92	22.64	0.184	30.00	-7.36
	π/2 BPSK	3500.01	H	192	338	9.71	1 / 1	13.49	23.20	0.209	30.00	-6.80
	π/2 BPSK	3525.00	H	192	338	9.70	1 / 1	13.24	22.94	0.197	30.00	-7.06
	QPSK	3475.02	H	192	338	9.73	1 / 1	13.46	23.19	0.208	30.00	-6.81
	QPSK	3500.01	H	192	338	9.71	1 / 1	14.00	**23.72**	0.235	30.00	-6.28
	QPSK	3525.00	H	192	338	9.70	1 / 131	13.89	23.59	0.229	30.00	-6.41
	16-QAM	3500.01	H	192	338	9.71	1 / 1	13.20	22.91	0.196	30.00	-7.09
40 MHz	π/2 BPSK	3470.01	H	192	338	9.73	1 / 1	13.68	23.41	0.219	30.00	-6.59
	π/2 BPSK	3500.01	H	192	338	9.71	1 / 1	12.87	22.58	0.181	30.00	-7.42
	π/2 BPSK	3529.98	H	192	338	9.70	1 / 104	13.14	22.84	0.192	30.00	-7.16
	QPSK	3470.01	H	192	338	9.73	1 / 104	14.09	**23.82**	0.241	30.00	-6.18
	QPSK	3500.01	H	192	338	9.71	1 / 1	13.53	23.24	0.211	30.00	-6.76
	QPSK	3529.98	H	192	338	9.70	1 / 104	13.79	23.49	0.223	30.00	-6.51
	16-QAM	3500.01	H	192	338	9.71	1 / 1	12.90	22.61	0.182	30.00	-7.39
30 MHz	π/2 BPSK	3465.00	H	192	338	9.73	1 / 1	13.82	23.55	0.227	30.00	-6.45
	π/2 BPSK	3500.01	H	192	338	9.71	1 / 1	13.68	23.39	0.218	30.00	-6.61
	π/2 BPSK	3534.99	H	192	338	9.70	1 / 1	13.52	23.22	0.210	30.00	-6.78
	QPSK	3465.00	H	192	338	9.73	1 / 76	14.16	23.89	0.245	30.00	-6.11
	QPSK	3500.01	H	192	338	9.71	1 / 1	14.20	**23.91**	0.246	30.00	-6.09
	QPSK	3534.99	H	192	338	9.70	1 / 76	14.05	23.75	0.237	30.00	-6.25
	16-QAM	3500.01	H	192	338	9.71	1 / 1	13.27	22.98	0.198	30.00	-7.02
25 MHz	π/2 BPSK	3462.51	H	192	338	9.74	1 / 63	14.22	23.96	0.249	30.00	-6.04
	π/2 BPSK	3500.01	H	192	338	9.71	1 / 1	14.14	23.85	0.243	30.00	-6.15
	π/2 BPSK	3537.48	H	192	338	9.70	1 / 32	14.15	23.85	0.243	30.00	-6.15
	QPSK	3462.51	H	192	338	9.74	1 / 63	14.90	24.63	0.291	30.00	-5.37
	QPSK	3500.01	H	192	338	9.71	1 / 1	15.04	24.75	0.298	30.00	-5.25
	QPSK	3537.48	H	192	338	9.70	1 / 32	15.12	**24.82**	0.303	30.00	-5.18
	16-QAM	3537.48	H	192	338	9.70	1 / 32	13.93	23.63	0.231	30.00	-6.37
20 MHz	π/2 BPSK	3460.02	H	192	338	9.74	1 / 1	13.29	23.02	0.201	30.00	-6.98
	π/2 BPSK	3500.01	H	192	338	9.71	1 / 1	13.04	22.76	0.189	30.00	-7.24
	π/2 BPSK	3540.00	H	192	338	9.70	1 / 1	13.08	22.77	0.189	30.00	-7.23
	QPSK	3460.02	H	192	338	9.74	1 / 49	13.63	**23.37**	0.217	30.00	-6.63
	QPSK	3500.01	H	192	338	9.71	1 / 1	13.52	23.23	0.210	30.00	-6.77
	QPSK	3540.00	H	192	338	9.70	1 / 25	13.49	23.19	0.208	30.00	-6.81
	16-QAM	3460.02	H	192	338	9.74	1 / 1	12.85	22.58	0.181	30.00	-7.42
15 MHz	π/2 BPSK	3457.50	H	192	338	9.74	1 / 36	13.96	23.70	0.234	30.00	-6.30
	π/2 BPSK	3500.01	H	192	338	9.71	1 / 36	14.06	23.77	0.238	30.00	-6.23
	π/2 BPSK	3542.49	H	192	338	9.70	1 / 36	14.08	23.78	0.239	30.00	-6.22
	QPSK	3457.50	H	192	338	9.74	1 / 36	14.76	**24.50**	0.282	30.00	-5.50
	QPSK	3500.01	H	192	338	9.71	1 / 36	14.70	24.41	0.276	30.00	-5.59
	QPSK	3542.49	H	192	338	9.70	1 / 36	14.78	24.48	0.280	30.00	-5.52
	16-QAM	3457.50	H	192	338	9.74	1 / 36	13.63	23.37	0.217	30.00	-6.63
10 MHz	π/2 BPSK	3455.01	H	192	338	9.74	1 / 1	12.99	22.73	0.188	30.00	-7.27
	π/2 BPSK	3500.01	H	192	338	9.71	1 / 12	12.77	22.48	0.177	30.00	-7.52
	π/2 BPSK	3544.98	H	192	338	9.70	1 / 1	12.91	22.61	0.182	30.00	-7.39
	QPSK	3455.01	H	192	338	9.74	1 / 22	13.63	**23.37**	0.217	30.00	-6.63
	QPSK	3500.01	H	192	338	9.71	1 / 12	13.38	23.09	0.204	30.00	-6.91
	QPSK	3544.98	H	192	338	9.70	1 / 12	13.36	23.06	0.202	30.00	-6.94
	16-QAM	3455.01	H	192	338	9.74	1 / 1	12.80	22.34	0.171	30.00	-7.66
100 MHz	QPSK (CP-OFDM)	3500.0	H	189	338	9.71	1 / 22	12.42	22.13	0.163	30.00	-7.87
	QPSK (Opposite Pol.)	3500.0	V	135	311	9.71	1 / 22	11.07	20.78	0.120	30.00	-9.22
	QPSK (WCP)	3500.0	H	193	329	9.71	1 / 22	12.97	22.68	0.185	30.00	-7.32

Table 7-20. EIRP Data (NR Band n77 DoD – Ant F)

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	π/2 BPSK	3750.00	H	181	333	9.64	1 / 1	13.83	23.47	0.222	30.00	-6.53
	π/2 BPSK	3840.00	H	193	329	9.61	1 / 271	14.98	**24.59**	0.288	30.00	-5.41
	π/2 BPSK	3930.00	H	192	336	9.59	1 / 136	14.83	24.42	0.277	30.00	-5.58
	QPSK	3750.00	H	181	333	9.64	1 / 1	13.82	23.46	0.222	30.00	-6.54
	QPSK	3840.00	H	193	329	9.61	1 / 271	14.97	24.58	0.287	30.00	-5.42
	QPSK	3930.00	H	192	336	9.59	1 / 136	14.80	24.39	0.275	30.00	-5.61
	16-QAM	3840.00	H	193	329	9.61	1 / 271	14.18	23.79	0.240	30.00	-6.21
90 MHz	π/2 BPSK	3745.02	H	181	333	9.64	1 / 122	13.39	23.03	0.201	30.00	-6.97
	π/2 BPSK	3840.00	H	193	329	9.61	1 / 1	14.93	24.54	0.284	30.00	-5.46
	π/2 BPSK	3934.98	H	192	336	9.59	1 / 243	14.66	24.25	0.266	30.00	-5.75
	QPSK	3745.02	H	181	333	9.64	1 / 1	14.14	23.78	0.239	30.00	-6.22
	QPSK	3840.00	H	193	329	9.61	1 / 1	14.93	**24.55**	0.285	30.00	-5.45
	QPSK	3934.98	H	192	336	9.59	1 / 243	14.35	23.94	0.247	30.00	-6.06
	16-QAM	3934.98	H	192	336	9.59	1 / 243	14.62	24.20	0.263	30.00	-5.80
80 MHz	π/2 BPSK	3740.01	H	181	333	9.64	1 / 1	13.34	22.98	0.198	30.00	-7.02
	π/2 BPSK	3840.00	H	193	329	9.61	1 / 1	15.14	24.75	0.298	30.00	-5.25
	π/2 BPSK	3939.99	H	192	336	9.59	1 / 215	14.72	24.31	0.270	30.00	-5.69
	QPSK	3740.01	H	181	333	9.64	1 / 1	14.11	23.75	0.237	30.00	-6.25
	QPSK	3840.00	H	193	329	9.61	1 / 1	15.30	**24.92**	0.310	30.00	-5.08
	QPSK	3939.99	H	192	336	9.59	1 / 215	14.62	24.21	0.264	30.00	-5.79
	16-QAM	3840.00	H	193	329	9.61	1 / 1	14.38	23.99	0.251	30.00	-6.01
70 MHz	π/2 BPSK	3735.00	H	181	333	9.64	1 / 1	13.41	23.05	0.202	30.00	-6.95
	π/2 BPSK	3840.00	H	193	329	9.61	1 / 1	15.00	24.62	0.289	30.00	-5.38
	π/2 BPSK	3945.00	H	192	336	9.59	1 / 187	15.72	**25.30**	0.339	30.00	-4.70
	QPSK	3735.00	H	181	333	9.64	1 / 1	14.13	23.78	0.239	30.00	-6.22
	QPSK	3840.00	H	193	329	9.61	1 / 1	15.12	24.74	0.298	30.00	-5.26
	QPSK	3945.00	H	192	336	9.59	1 / 187	15.29	24.87	0.307	30.00	-5.13
	16-QAM	3945.00	H	192	336	9.59	1 / 187	14.78	24.36	0.273	30.00	-5.64
60 MHz	π/2 BPSK	3730.02	H	181	333	9.64	1 / 1	13.63	23.28	0.213	30.00	-6.72
	π/2 BPSK	3840.00	H	193	329	9.61	1 / 1	15.00	24.62	0.290	30.00	-5.38
	π/2 BPSK	3949.98	H	192	336	9.58	1 / 160	15.78	**25.36**	0.344	30.00	-4.64
	QPSK	3730.02	H	181	333	9.64	1 / 160	14.33	23.97	0.250	30.00	-6.03
	QPSK	3840.00	H	193	329	9.61	1 / 1	15.08	24.70	0.295	30.00	-5.30
	QPSK	3949.98	H	192	336	9.58	1 / 160	15.52	25.10	0.324	30.00	-4.90
	16-QAM	3949.98	H	192	336	9.58	1 / 160	15.03	24.61	0.289	30.00	-5.39
50 MHz	π/2 BPSK	3725.01	H	181	333	9.65	1 / 1	13.96	23.61	0.229	30.00	-6.39
	π/2 BPSK	3840.00	H	193	329	9.61	1 / 1	15.73	25.34	0.342	30.00	-4.66
	π/2 BPSK	3954.99	H	192	336	9.58	1 / 131	16.48	**26.06**	0.404	30.00	-3.94
	QPSK	3725.01	H	181	333	9.65	1 / 1	14.55	24.19	0.263	30.00	-5.81
	QPSK	3840.00	H	193	329	9.61	1 / 1	15.57	25.18	0.330	30.00	-4.82
	QPSK	3954.99	H	192	336	9.58	1 / 131	16.43	26.01	0.399	30.00	-3.99
	16-QAM	3840.00	H	193	329	9.61	1 / 1	14.92	24.53	0.284	30.00	-5.47
40 MHz	π/2 BPSK	3720.00	H	181	333	9.65	1 / 1	14.59	24.24	0.265	30.00	-5.76
	π/2 BPSK	3840.00	H	193	329	9.61	1 / 1	14.76	24.38	0.274	30.00	-5.62
	π/2 BPSK	3960.00	H	192	336	9.58	1 / 104	16.44	**26.02**	0.400	30.00	-3.98
	QPSK	3720.00	H	181	333	9.65	1 / 1	14.98	24.62	0.290	30.00	-5.38
	QPSK	3840.00	H	193	329	9.61	1 / 1	14.86	24.47	0.280	30.00	-5.53
	QPSK	3960.00	H	192	336	9.58	1 / 104	16.44	26.02	0.400	30.00	-3.98
	16-QAM	3960.00	H	192	336	9.58	1 / 104	15.50	25.08	0.322	30.00	-4.92
30 MHz	π/2 BPSK	3715.02	H	181	333	9.65	1 / 1	14.40	24.05	0.254	30.00	-5.95
	π/2 BPSK	3840.00	H	193	329	9.61	1 / 1	14.74	24.35	0.272	30.00	-5.65
	π/2 BPSK	3964.98	H	192	336	9.58	1 / 1	16.61	26.19	0.415	30.00	-3.81
	QPSK	3715.02	H	181	333	9.65	1 / 76	14.86	24.50	0.282	30.00	-5.50
	QPSK	3840.00	H	193	329	9.61	1 / 1	14.65	24.27	0.267	30.00	-5.73
	QPSK	3964.98	H	192	336	9.58	1 / 1	16.62	**26.20**	0.417	30.00	-3.80
	16-QAM	3964.98	H	192	336	9.58	1 / 1	14.89	24.47	0.280	30.00	-5.53
25 MHz	π/2 BPSK	3712.50	H	192	338	9.65	1 / 39	14.41	24.06	0.255	30.00	-5.94
	π/2 BPSK	3840.00	H	192	338	9.61	1 / 1	14.52	24.13	0.259	30.00	-5.87
	π/2 BPSK	3967.50	H	192	338	9.58	1 / 76	15.59	**25.17**	0.329	30.00	-4.83
	QPSK	3712.50	H	192	338	9.65	1 / 39	15.24	24.89	0.308	30.00	-5.11
	QPSK	3840.00	H	192	338	9.61	1 / 1	15.00	24.61	0.289	30.00	-5.39
	QPSK	3967.50	H	192	338	9.58	1 / 76	15.58	25.16	0.328	30.00	-4.84
	16-QAM	3967.50	H	192	338	9.58	1 / 76	15.27	24.85	0.305	30.00	-5.15
20 MHz	π/2 BPSK	3710.01	H	181	333	9.65	1 / 1	14.18	23.83	0.241	30.00	-6.17
	π/2 BPSK	3840.00	H	193	329	9.61	1 / 1	14.48	24.09	0.257	30.00	-5.91
	π/2 BPSK	3969.99	H	192	336	9.58	1 / 1	16.57	26.15	0.412	30.00	-3.85
	QPSK	3710.01	H	181	333	9.65	1 / 49	14.72	24.37	0.274	30.00	-5.63
	QPSK	3840.00	H	193	329	9.61	1 / 49	15.86	25.47	0.352	30.00	-4.53
	QPSK	3969.99	H	192	336	9.58	1 / 25	16.62	**26.19**	0.416	30.00	-3.81
	16-QAM	3969.99	H	192	336	9.58	1 / 1	15.00	24.58	0.287	30.00	-5.42
15 MHz	π/2 BPSK	3707.52	H	181	333	9.65	1 / 1	15.16	24.81	0.303	30.00	-5.19
	π/2 BPSK	3840.00	H	193	329	9.61	1 / 1	14.70	24.31	0.270	30.00	-5.69
	π/2 BPSK	3972.48	H	192	336	9.58	1 / 1	15.18	24.76	0.299	30.00	-5.24
	QPSK	3707.52	H	181	333	9.65	1 / 1	16.09	**25.74**	0.375	30.00	-4.26
	QPSK	3840.00	H	193	329	9.61	1 / 1	15.07	24.68	0.294	30.00	-5.32
	QPSK	3972.48	H	192	336	9.58	1 / 19	15.35	24.93	0.311	30.00	-5.07
	16-QAM	3972.48	H	192	336	9.58	1 / 19	15.84	25.41	0.348	30.00	-4.59
10 MHz	π/2 BPSK	3705.00	H	181	333	9.65	1 / 1	13.60	23.26	0.212	30.00	-6.74
	π/2 BPSK	3840.00	H	193	329	9.61	1 / 1	13.79	23.41	0.219	30.00	-6.59
	π/2 BPSK	3975.00	H	192	336	9.58	24 / 0	16.23	25.80	0.381	30.00	-4.20
	QPSK	3705.00	H	181	333	9.65	1 / 22	14.08	23.74	0.236	30.00	-6.26
	QPSK	3840.00	H	193	329	9.61	1 / 22	13.79	23.40	0.219	30.00	-6.60
	QPSK	3975.00	H	192	336	9.58	1 / 1	16.48	**26.06**	0.403	30.00	-3.94
	16-QAM	3975.00	H	192	336	9.58	1 / 1	16.07	25.64	0.367	30.00	-4.36
100 MHz	QPSK (CP-OFDM)	3840.00	H	188	332	9.61	1 / 32	13.68	23.29	0.213	30.00	-6.71
	QPSK (Opposite Pol.)	3840.00	V	136	308	9.61	1 / 32	12.41	22.02	0.159	30.00	-7.98
	QPSK (WCP)	3840.00	H	193	334	9.61	1 / 32	13.01	22.62	0.183	30.00	-7.38

Table 7-21. EIRP Data (NR Band n77 C-band – Ant F)

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	π/2 BPSK	3500.01	H	102	37	9.71	1 / 68	12.72	**22.43**	0.175	30.00	-7.57
	QPSK	3500.01	H	102	37	9.71	1 / 68	12.70	22.41	0.174	30.00	-7.59
	16-QAM	3500.01	H	102	37	9.71	1 / 68	12.71	22.42	0.175	30.00	-7.58
100 MHz	QPSK (CP-OFDM)	3500.0	H	101	36	9.71	1 / 68	12.33	22.04	0.160	30.00	-7.96
	QPSK (Opposite Pol.)	3500.0	V	102	88	9.71	1 / 68	12.17	21.88	0.154	30.00	-8.12

Table 7-22. EIRP Data (NR Band n77 DoD – 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	π/2 BPSK	3750.00	H	114	40	9.64	1 / 68	10.12	**19.76**	0.095	30.00	-10.24
	π/2 BPSK	3840.00	H	116	28	9.61	1 / 68	8.31	17.92	0.062	30.00	-12.08
	π/2 BPSK	3930.00	H	101	34	9.59	1 / 68	4.55	14.14	0.026	30.00	-15.86
	QPSK	3750.00	H	114	40	9.64	1 / 68	9.99	19.63	0.092	30.00	-10.37
	QPSK	3840.00	H	116	28	9.61	1 / 68	8.48	18.09	0.064	30.00	-11.91
	QPSK	3930.00	H	101	34	9.59	1 / 68	4.59	14.18	0.026	30.00	-15.82
	16-QAM	3750.00	H	114	40	9.64	1 / 68	9.20	18.84	0.077	30.00	-11.16
100 MHz	QPSK (CP-OFDM)	3750.0	H	100	39	9.64	1 / 68	8.97	18.61	0.073	30.00	-11.39
	QPSK (Opposite Pol.)	3750.0	V	105	83	9.64	1 / 68	10.06	19.70	0.093	30.00	-10.30

Table 7-23. EIRP Data (NR Band n77 C-band – 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	π/2 BPSK	3500.01	H	200	321	9.71	1 / 204	12.21	**21.92**	0.156	30.00	-8.08
	QPSK	3500.01	H	200	321	9.71	1 / 204	12.18	21.89	0.155	30.00	-8.11
	16-QAM	3500.01	H	200	321	9.71	1 / 204	11.91	21.62	0.145	30.00	-8.38
100 MHz	QPSK (CP-OFDM)	3500.0	H	199	316	9.71	1 / 204	11.48	21.19	0.132	30.00	-8.81
	QPSK (Opposite Pol.)	3500.0	V	390	12	9.71	1 / 204	8.50	18.21	0.066	30.00	-11.79

Table 7-24. EIRP Data (NR Band n77 DoD – Ant I)

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	π/2 BPSK	3750.00	H	217	315	9.64	1 / 68	12.97	22.61	0.182	30.00	-7.39
	π/2 BPSK	3840.00	H	207	318	9.61	1 / 68	12.98	22.59	0.182	30.00	-7.41
	π/2 BPSK	3930.00	H	215	311	9.59	1 / 68	11.30	20.89	0.123	30.00	-9.11
	QPSK	3750.00	H	217	315	9.64	1 / 68	12.98	**22.62**	0.183	30.00	-7.38
	QPSK	3840.00	H	207	318	9.61	1 / 68	12.98	22.59	0.182	30.00	-7.41
	QPSK	3930.00	H	215	311	9.59	1 / 68	11.32	20.91	0.123	30.00	-9.09
	16-QAM	3840.00	H	207	318	9.61	1 / 68	12.80	22.41	0.174	30.00	-7.59
100 MHz	QPSK (CP-OFDM)	3750.0	H	204	311	9.65	1 / 68	8.83	18.48	0.070	30.00	-11.52
	QPSK (Opposite Pol.)	3750.0	V	369	10	9.65	1 / 68	10.16	19.81	0.096	30.00	-10.19

Table 7-25. EIRP Data (NR Band n77 C-band – Ant I)

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	π/2 BPSK	3500.01	H	100	344	9.71	1 / 68	7.92	**17.63**	0.058	30.00	-12.37
	QPSK	3500.01	H	100	344	9.71	1 / 68	7.89	17.60	0.058	30.00	-12.40
	16-QAM	3500.01	H	100	344	9.71	1 / 68	7.90	17.61	0.058	30.00	-12.39
100 MHz	QPSK (CP-OFDM)	3500.0	V	109	358	9.71	1 / 68	7.48	17.19	0.052	30.00	-12.81
	QPSK (Opposite Pol.)	3500.0	H	102	346	9.71	1 / 68	7.58	17.29	0.054	30.00	-12.71

Table 7-26. EIRP Data (NR Band n77 DoD – 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	π/2 BPSK	3750.00	V	100	354	9.64	1 / 68	5.87	**15.51**	0.036	30.00	-14.49
	π/2 BPSK	3840.00	V	100	344	9.61	1 / 68	4.88	14.49	0.028	30.00	-15.51
	π/2 BPSK	3930.00	V	101	351	9.59	1 / 68	1.58	11.17	0.013	30.00	-18.83
	QPSK	3750.00	V	100	354	9.64	1 / 68	5.86	15.50	0.035	30.00	-14.50
	QPSK	3840.00	V	100	344	9.61	1 / 68	4.90	14.51	0.028	30.00	-15.49
	QPSK	3930.00	V	101	351	9.59	1 / 68	1.62	11.21	0.013	30.00	-18.79
	16-QAM	3750.00	V	100	354	9.64	1 / 68	5.01	14.65	0.029	30.00	-15.35
100 MHz	QPSK (CP-OFDM)	3750.0	V	101	352	9.64	1 / 68	4.88	14.52	0.028	30.00	-15.48
	QPSK (Opposite Pol.)	3750.0	H	139	324	9.64	1 / 68	5.64	15.28	0.034	30.00	-14.72

Table 7-27. EIRP Data (NR Band n77 C-band – Ant D)

7.8 Radiated Spurious Emissions Measurements

Test Overview

Radiated spurious emissions measurements are performed using the field strength conversion method described in ANSI C63.26-2015 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using hybrid (biconical/log) antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as RMS measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

Test Procedures Used

ANSI C63.26-2015 – Section 5.5.4

Test Settings

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

Test Setup

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

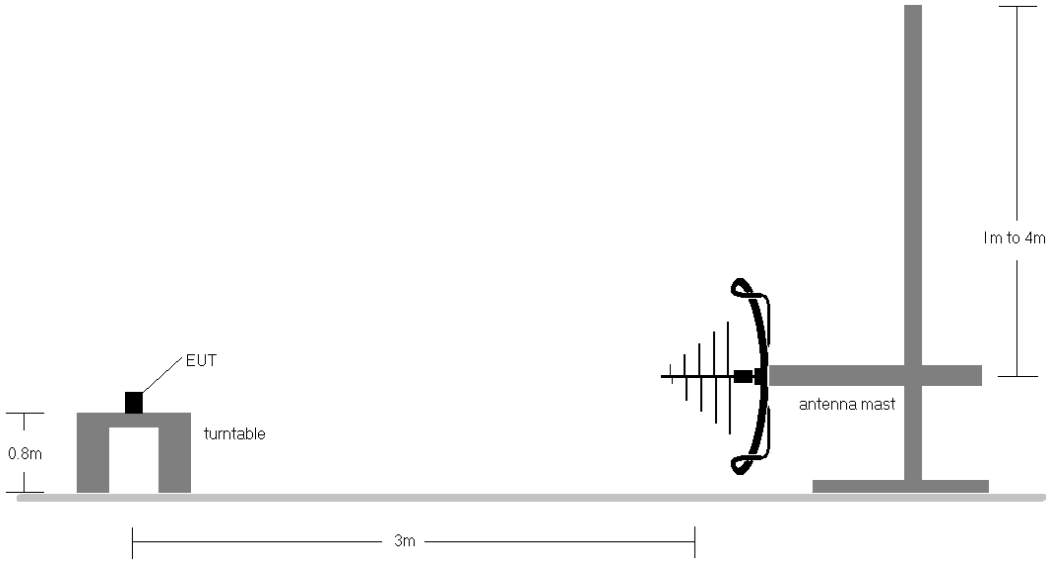


Figure 7-7. Test Instrument & Measurement Setup < 1GHz

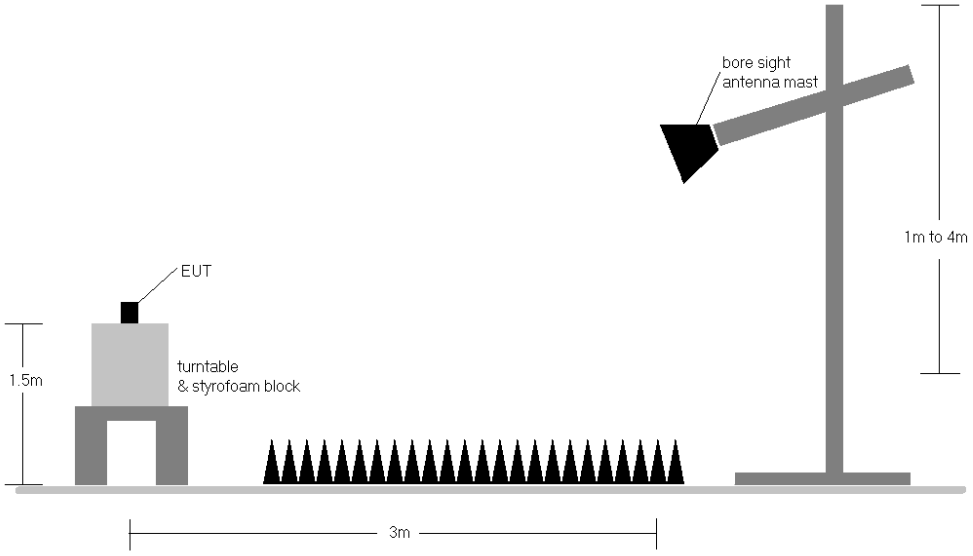


Figure 7-8. Test Instrument & Measurement Setup >1 GHz

Test Notes

1) Field strengths are calculated using the Measurement quantity conversions in ANSI C63.26-2015 Section 5.2.7:

   b) E(dBµV/m) = Measured amplitude level (dBm) + 107 + Cable Loss (dB) + Antenna Factor (dB/m)
   d) EIRP (dBm) = E(dBµV/m) + 20logD – 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 spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.

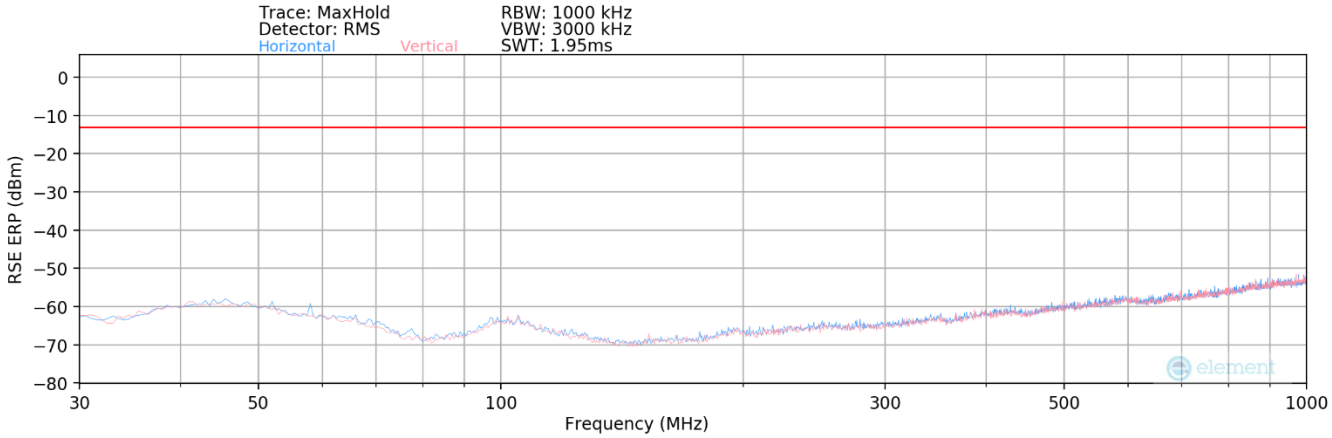
5) Emissions below 18GHz were measured at a 3 meter test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.

6) The "-" shown in the following RSE tables are used to denote a noise floor measurement.

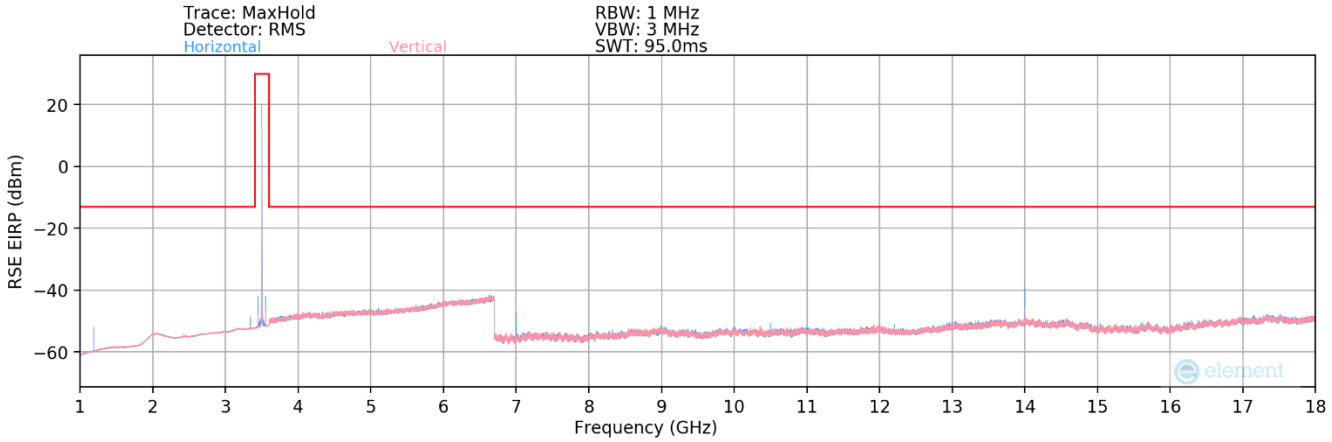
7) For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst-case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

8) Spurious emission in EN-DC Operating mode with Sub 6GHz NR carrier as well as an LTE carrier (anchor) has been checked and was found to not to be the worst case. Spurious emissions from the NR carrier device are subject to the rules under which the NR carrier operates. Spurious emissions caused by the LTE carrier must meet the requirements of the rules under which the LTE carrier operates.

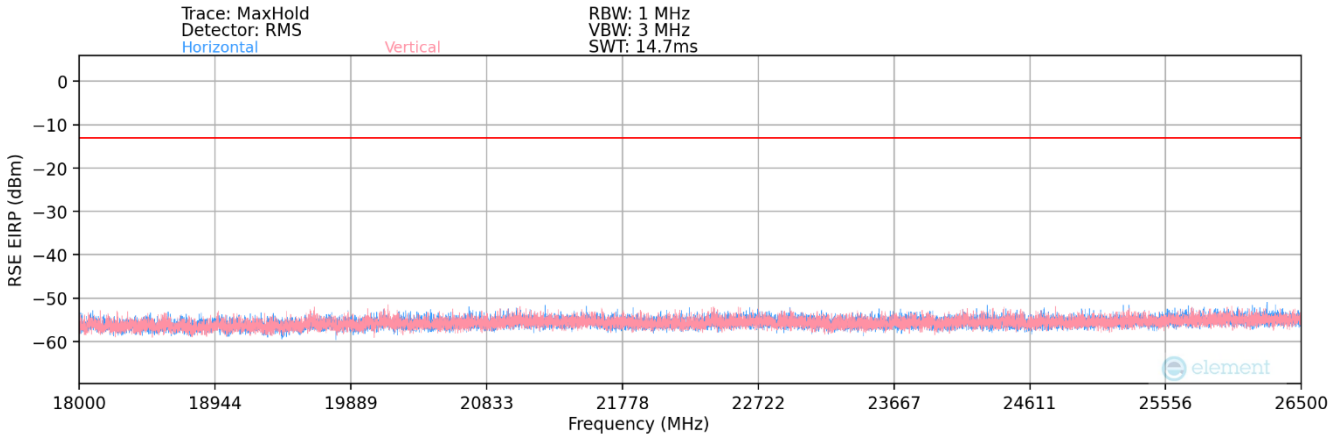
NR Band n77 DoD – Ant F



Plot 7-163. Radiated Spurious Plot (NR Band n77 – Ant F)



Plot 7-164. Radiated Spurious Plot (NR Band n77 – Ant F)



Plot 7-165. Radiated Spurious Plot (NR Band n77 – Ant F)