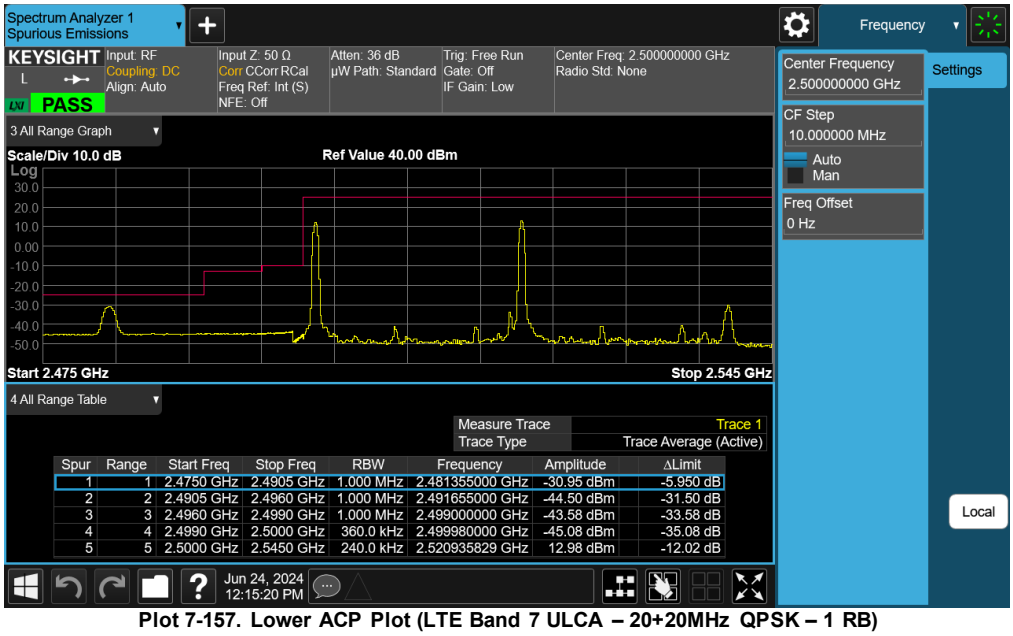
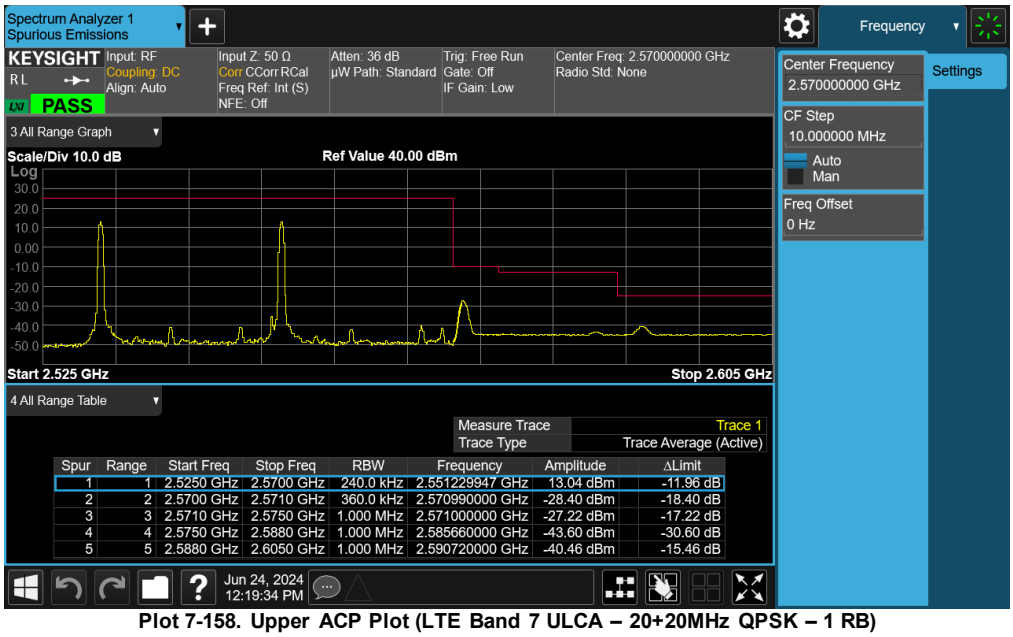
ULCA LTE Band 7

Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
LTE-B7 ULCA	20+20MHz	Low	Band Edge	-30.95	-25	-5.95
		High	Band Edge	-40.46	-25	-15.46

Table 7-27. Conducted Band Edge Test Results



Plot 7-157. Lower ACP Plot (LTE Band 7 ULCA – 20+20MHz QPSK – 1 RB)

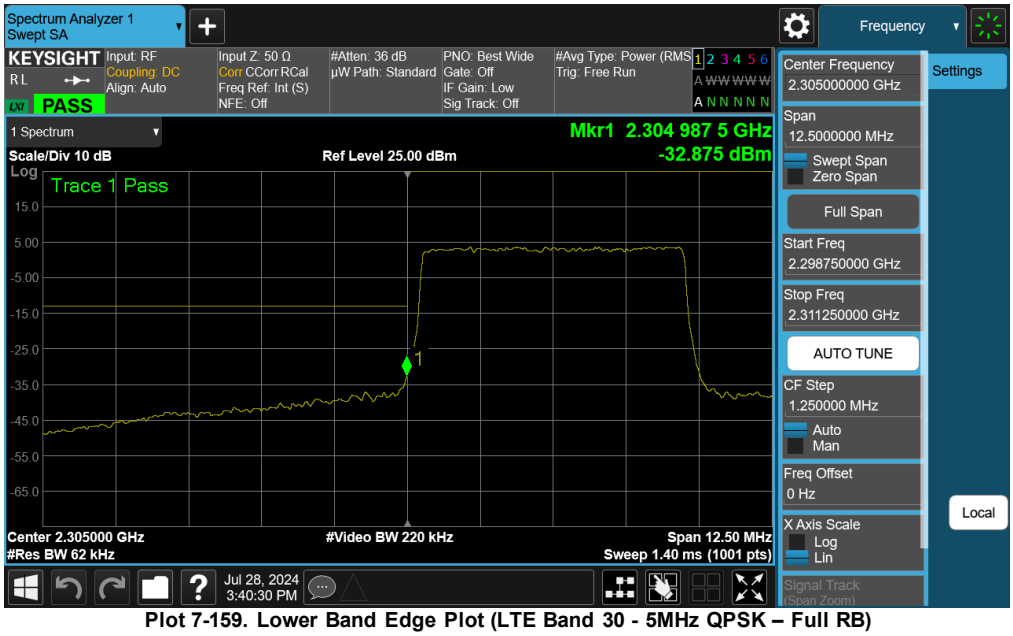


Plot 7-158. Upper ACP Plot (LTE Band 7 ULCA – 20+20MHz QPSK – 1 RB)

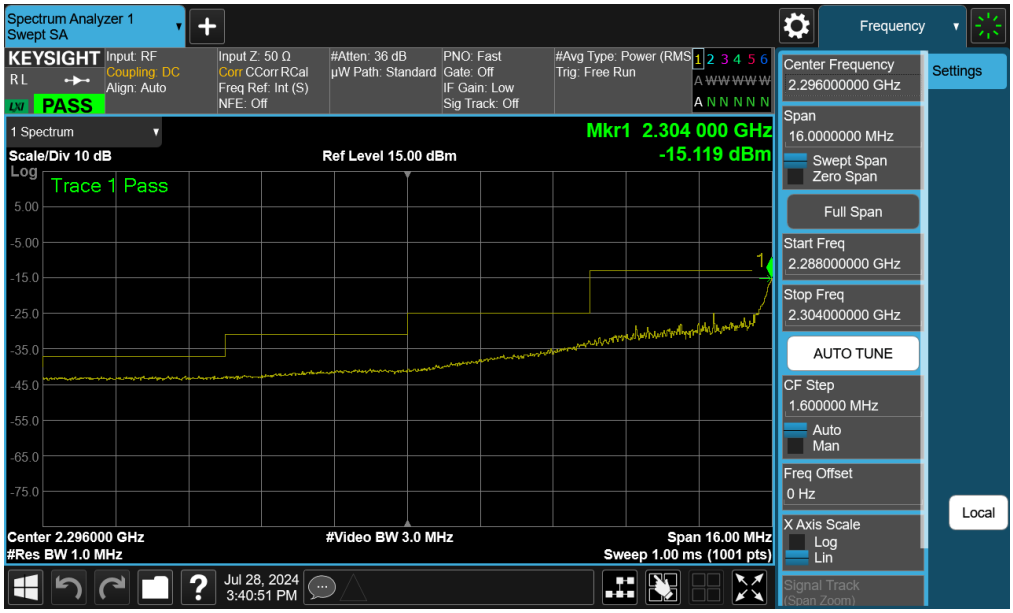
LTE Band 30 – Ant S2

Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
LTE-B30	10MHz	Low	Band Edge	-35.05	-13	-22.05
		Low	Extended	-39.54	-37	-2.54
		High	Band Edge	-33.92	-13	-20.92
		High	Extended	-29.38	-25	-4.38
	5MHz	Low	Band Edge	-32.88	-13	-19.87
		Low	Extended	-15.12	-13	-2.12
		High	Band Edge	-30.95	-13	-17.95
		High	Extended	-42.14	-37	-5.14

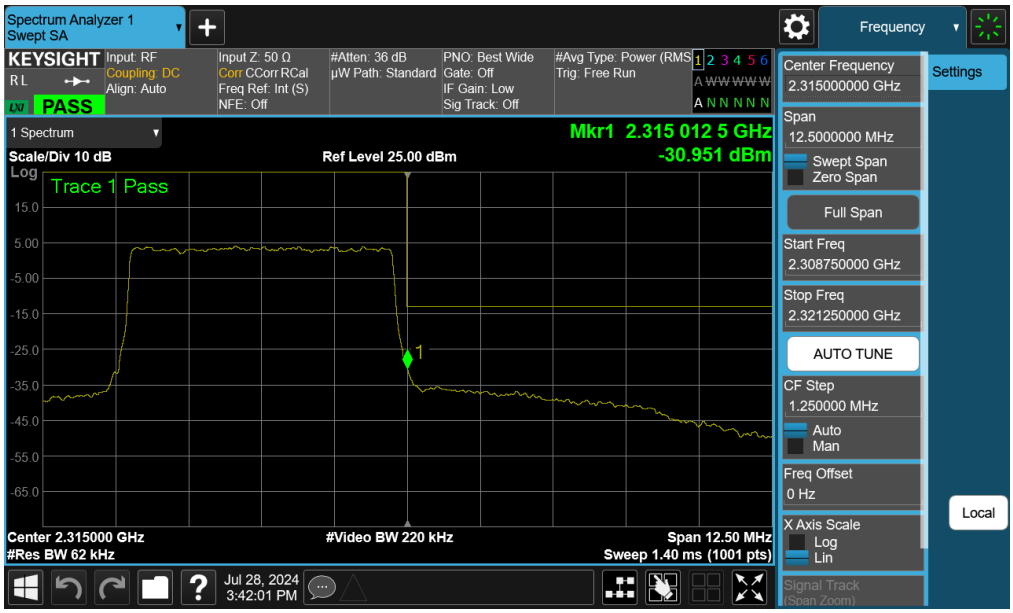
Table 7-28. Conducted Band Edge Test Results



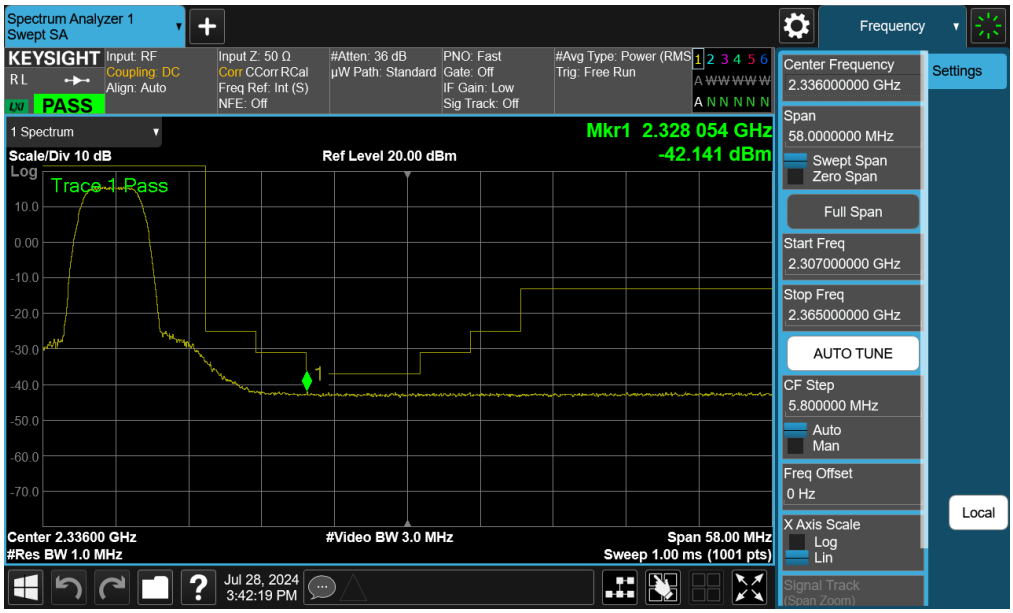
Plot 7-159. Lower Band Edge Plot (LTE Band 30 - 5MHz QPSK – Full RB)



Plot 7-160. Extended Lower Band Edge Plot (LTE Band 30 - 5MHz QPSK – Full RB)



Plot 7-161. Upper Band Edge Plot (LTE Band 30 - 5MHz QPSK – Full RB)

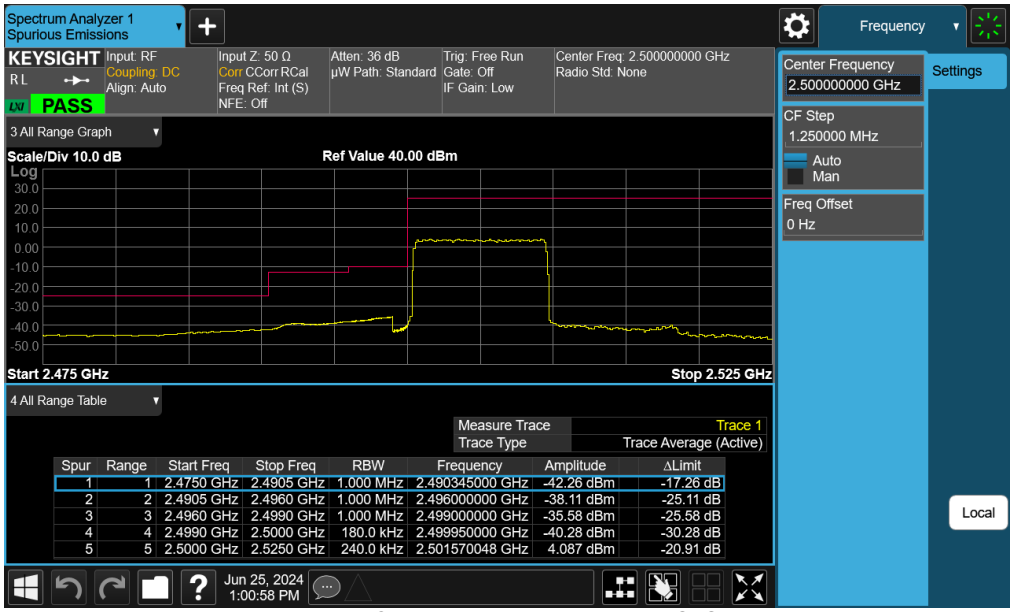


Plot 7-162. Extended Upper Band Edge Plot (LTE Band 30 - 5MHz QPSK – Full RB)

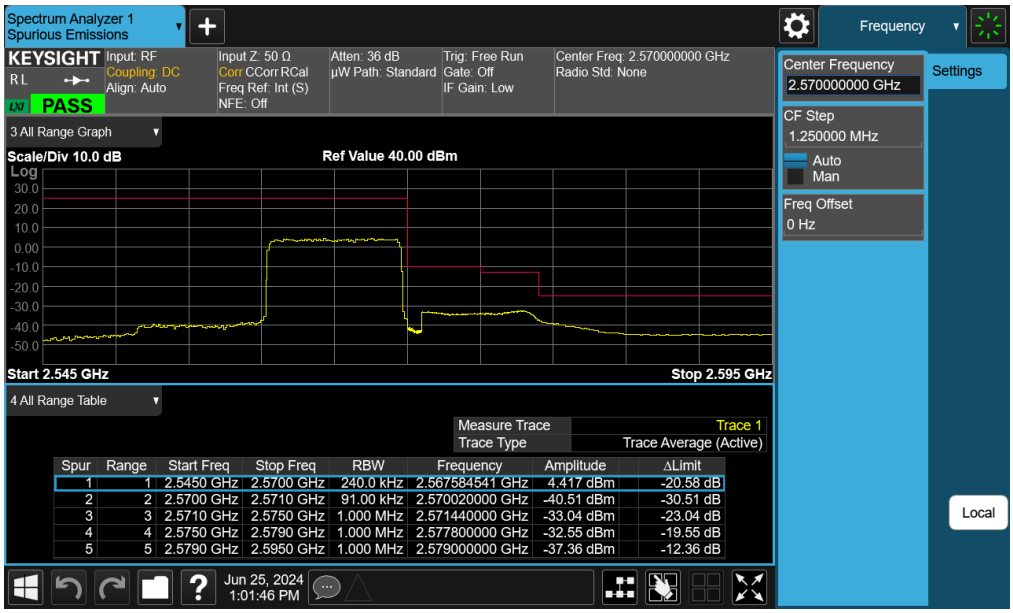
LTE Band 7 – Ant S2

Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
LTE-B7	20MHz	Low	Band Edge	-41.36	-25	-16.36
		High	Band Edge	-44.47	-25	-19.47
	15MHz	Low	Band Edge	-40.27	-25	-15.27
		High	Band Edge	-41.72	-25	-16.72
	10MHz	Low	Band Edge	-42.26	-25	-17.26
		High	Band Edge	-37.36	-25	-12.36
	5MHz	Low	Band Edge	-40.10	-25	-15.10
		High	Band Edge	-37.66	-25	-12.66

Table 7-29. Conducted Band Edge Test Results



Plot 7-163. Lower ACP Plot (LTE Band 7 - 10MHz QPSK – Full RB)

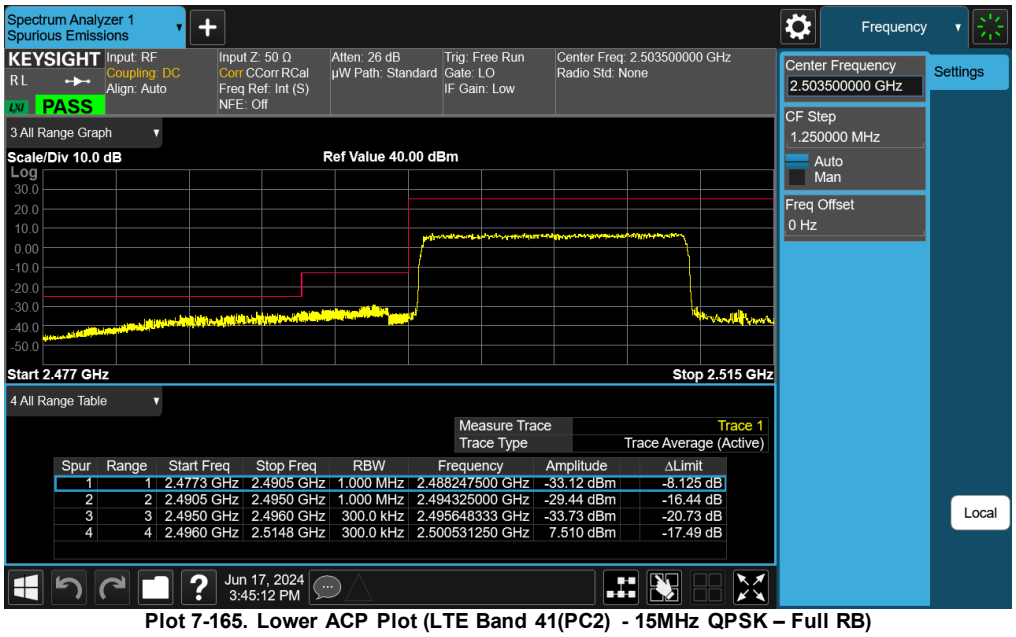


Plot 7-164. Upper ACP Plot (LTE Band 7 - 10MHz QPSK – Full RB)

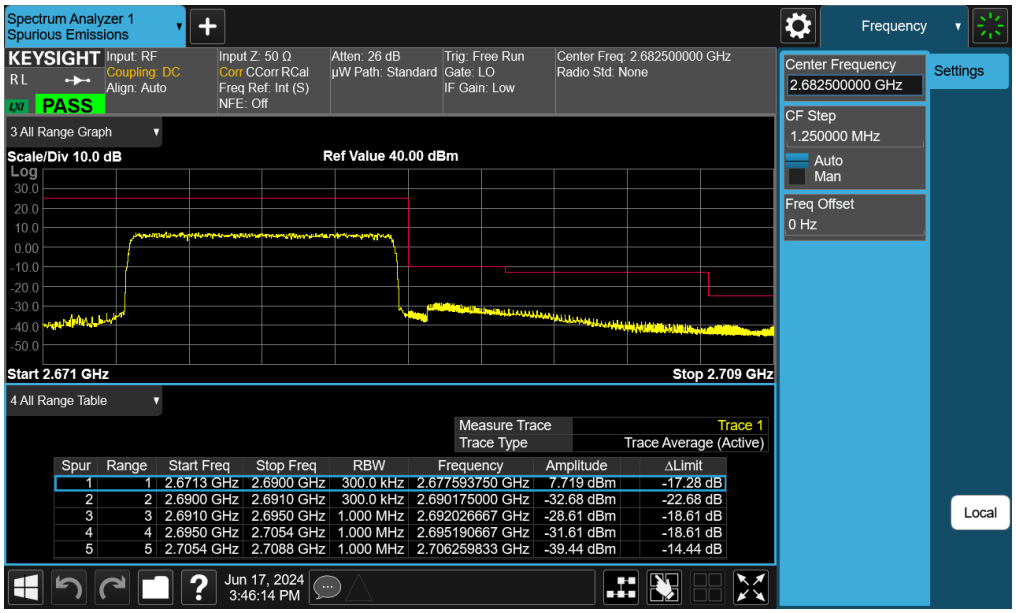
LTE Band 41(PC2)

Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
LTE-B41PC2	20MHz	Low	Band Edge	-36.04	-25	-11.04
		High	Band Edge	-32.00	-13	-19.00
	15MHz	Low	Band Edge	-33.12	-25	-8.12
		High	Band Edge	-39.44	-25	-14.44
	10MHz	Low	Band Edge	-33.79	-25	-8.79
		High	Band Edge	-41.27	-25	-16.27
	5MHz	Low	Band Edge	-37.32	-25	-12.32
		High	Band Edge	-39.40	-25	-14.40

Table 7-30. Conducted Band Edge Test Results



Plot 7-165. Lower ACP Plot (LTE Band 41(PC2) - 15MHz QPSK – Full RB)

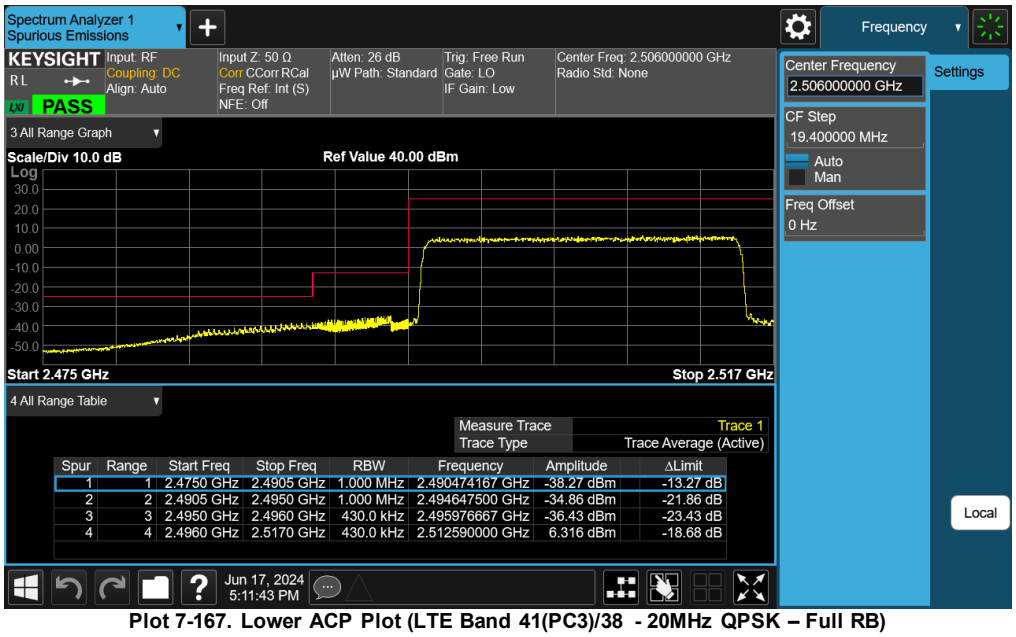


Plot 7-166. Upper ACP Plot (LTE Band 41(PC2) - 15MHz QPSK – Full RB)

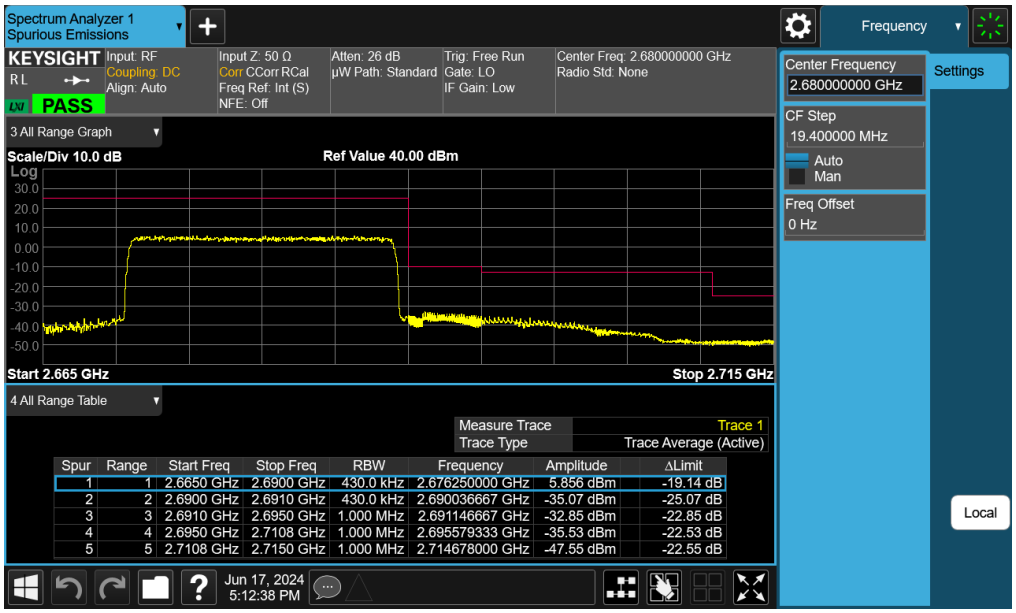
LTE Band 41(PC3)/38

Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
LTE-B41PC3-38	20MHz	Low	Band Edge	-38.27	-25	-13.27
		High	Band Edge	-35.53	-13	-22.53
	15MHz	Low	Band Edge	-39.43	-25	-14.43
		High	Band Edge	-44.09	-25	-19.09
	10MHz	Low	Band Edge	-40.52	-25	-15.52
		High	Band Edge	-44.55	-25	-19.55
	5MHz	Low	Band Edge	-31.13	-13	-18.13
		High	Band Edge	-40.90	-25	-15.90

Table 7-31. Conducted Band Edge Test Results



Plot 7-167. Lower ACP Plot (LTE Band 41(PC3)/38 - 20MHz QPSK – Full RB)

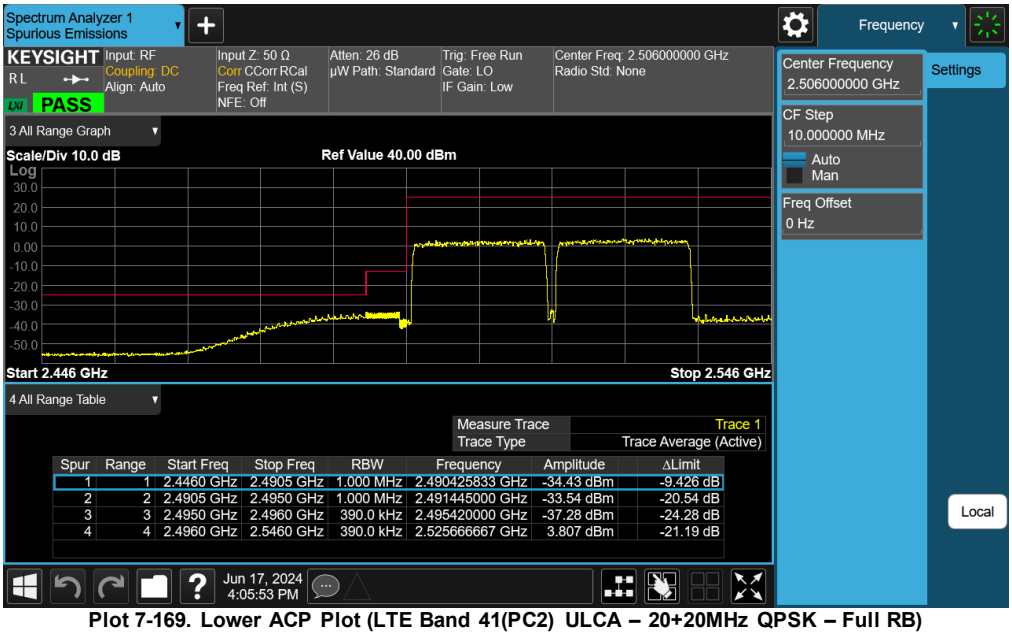


Plot 7-168. Upper ACP Plot (LTE Band 41(PC3)/38 - 20MHz QPSK – Full RB)

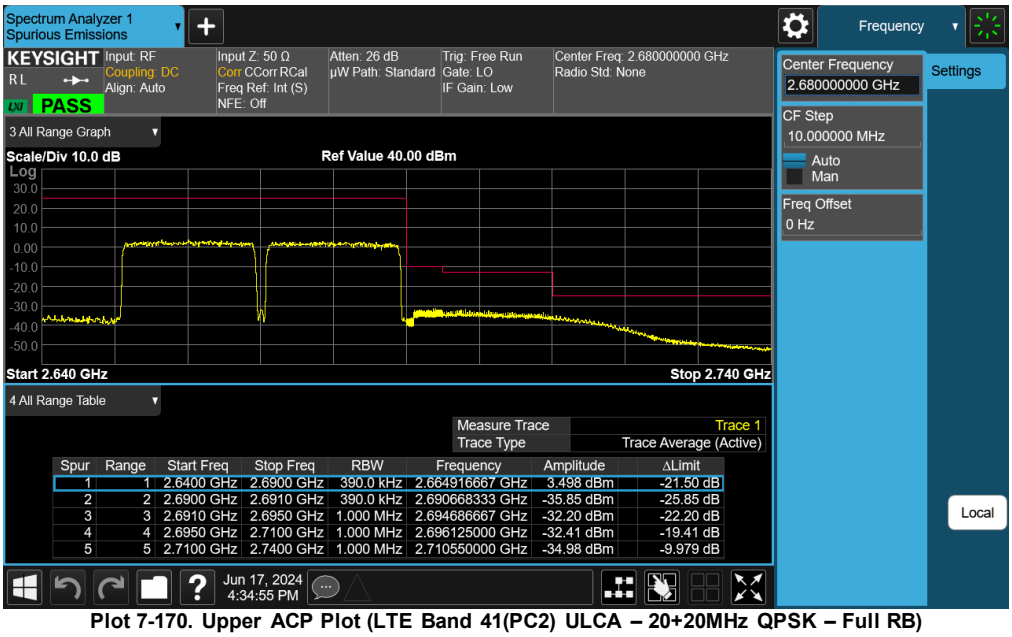
ULCA LTE Band 41

Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
LTE-B41 PC2 ULCA	20+20MHz	Low	Band Edge	-34.43	-25	-9.43
		High	Band Edge	-34.98	-25	-9.98
LTE-B41 PC3 ULCA	20+20MHz	Low	Band Edge	-37.50	-25	-12.50
		High	Band Edge	-36.74	-25	-11.74

Table 7-32. Conducted Band Edge Test Results



Plot 7-169. Lower ACP Plot (LTE Band 41(PC2) ULCA – 20+20MHz QPSK – Full RB)

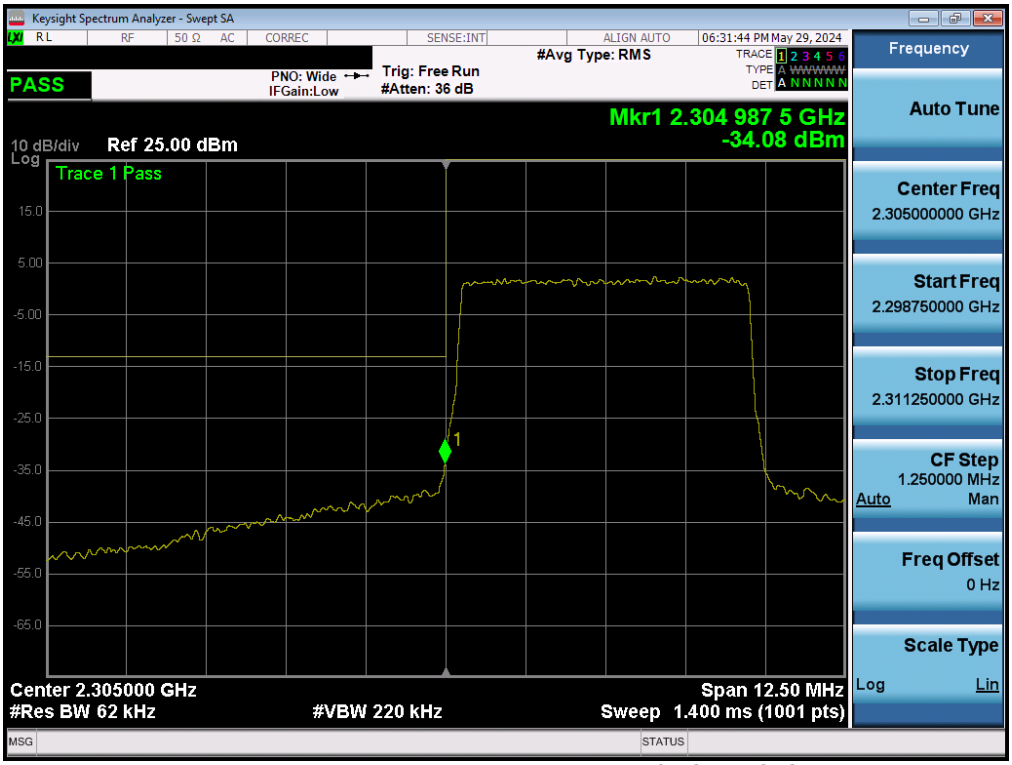


Plot 7-170. Upper ACP Plot (LTE Band 41(PC2) ULCA – 20+20MHz QPSK – Full RB)

NR Band n30

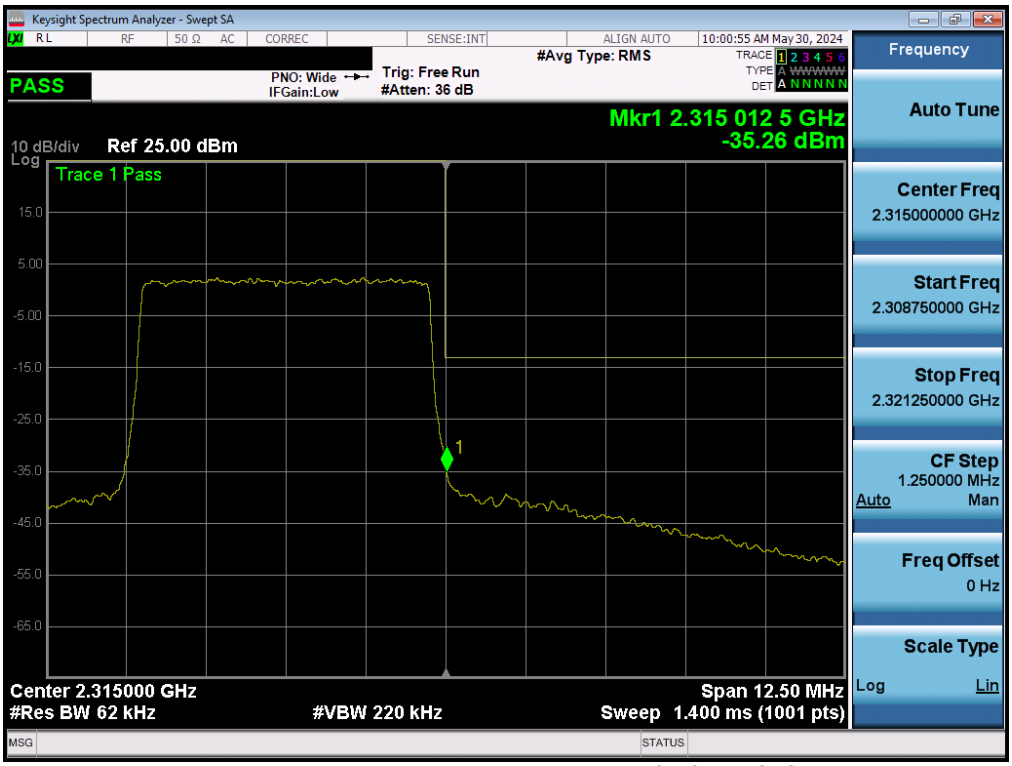
Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
NR-n30	10MHz	Low	Band Edge	-37.31	-13	-24.31
		Low	Extended	-19.69	-13	-6.69
		High	Band Edge	-37.69	-13	-24.69
		High	Extended	-32.68	-25	-7.68
	5MHz	Low	Band Edge	-34.08	-13	-21.08
		Low	Extended	-14.04	-13	-1.04
		High	Band Edge	-35.26	-13	-22.26
		High	Extended	-38.93	-25	-13.93

Table 7-33. Conducted Band Edge Test Results



Plot 7-171. Lower Band Edge Plot (NR Band n30 - 5MHz CP-OFDM-QPSK – Full RB)

Plot 7-172. Extended Lower Band Edge Plot (NR Band n30 - 5MHz DFT-s-OFDM-BPSK – Full RB)



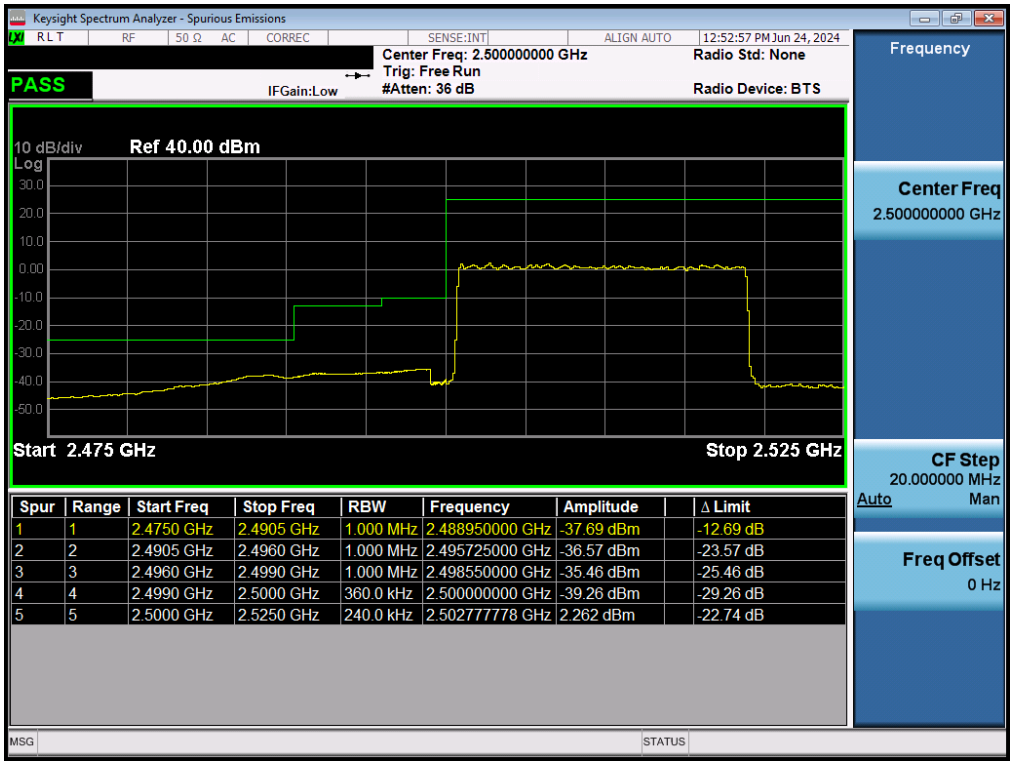
Plot 7-173. Upper Band Edge Plot (NR Band n30 - 5MHz CP-OFDM-QPSK – Full RB)

Plot 7-174. Extended Upper Band Edge Plot (NR Band n30 - 5MHz CP-OFDM-QPSK – Full RB)

NR Band n7

Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
NR-n7	40MHz	Low	Band Edge	-39.27	-25	-14.27
		High	Band Edge	-44.04	-25	-19.04
	30MHz	Low	Band Edge	-39.07	-25	-14.07
		High	Band Edge	-44.21	-25	-19.21
	25MHz	Low	Band Edge	-38.37	-25	-13.37
		High	Band Edge	-40.92	-25	-15.92
	20MHz	Low	Band Edge	-37.69	-25	-12.69
		High	Band Edge	-43.09	-25	-18.09
	15MHz	Low	Band Edge	-38.15	-25	-13.15
		High	Band Edge	-42.88	-25	-17.88
	10MHz	Low	Band Edge	-41.19	-25	-16.19
		High	Band Edge	-42.19	-25	-17.19
	5MHz	Low	Band Edge	-41.42	-25	-16.42
		High	Band Edge	-41.80	-25	-16.80

Table 7-34. Conducted Band Edge Test Results



Plot 7-175. Lower Band Edge Plot (NR Band n7 - 20MHz DFT-s-OFDM-QPSK – Full RB)

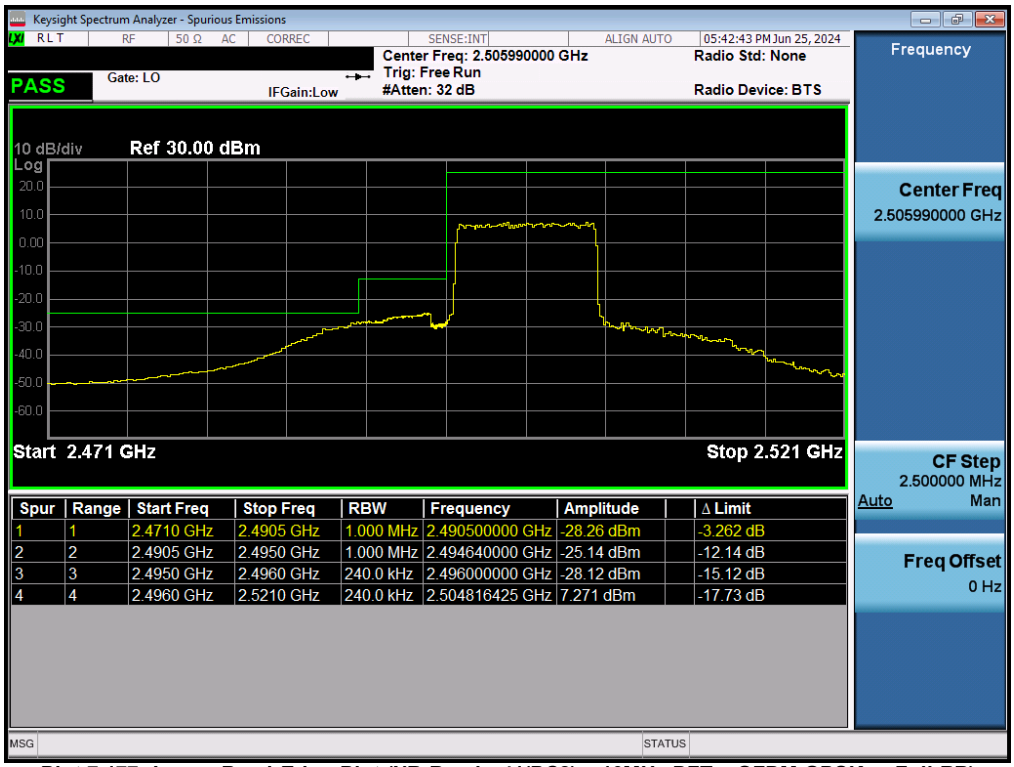
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.5450 GHz	2.5700 GHz	240.0 kHz	2.567463768 GHz	1.999 dBm	-23.00 dB
2	2	2.5700 GHz	2.5710 GHz	360.0 kHz	2.570000000 GHz	-36.82 dBm	-26.82 dB
3	3	2.5710 GHz	2.5750 GHz	1.000 MHz	2.571000000 GHz	-32.70 dBm	-22.70 dB
4	4	2.5750 GHz	2.5880 GHz	1.000 MHz	2.575130000 GHz	-35.24 dBm	-22.24 dB
5	5	2.5880 GHz	2.5950 GHz	1.000 MHz	2.588000000 GHz	-43.09 dBm	-18.09 dB

Plot 7-176. Upper Band Edge Plot (NR Band n7 - 20MHz DFT-s-OFDM-QPSK – Full RB)

NR Band n41(PC2)

Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
NR-n41PC2	100MHz	Low	Band Edge	-37.90	-25	-12.90
		High	Band Edge	-26.65	-10	-16.65
	90MHz	Low	Band Edge	-37.84	-25	-12.84
		High	Band Edge	-30.28	-10	-20.28
	80MHz	Low	Band Edge	-37.40	-25	-12.40
		High	Band Edge	-31.71	-10	-21.71
	70MHz	Low	Band Edge	-35.14	-25	-10.14
		High	Band Edge	-34.62	-13	-21.62
	60MHz	Low	Band Edge	-35.45	-25	-10.45
		High	Band Edge	-23.67	-10	-13.67
	50MHz	Low	Band Edge	-34.25	-25	-9.25
		High	Band Edge	-44.75	-25	-19.75
	40MHz	Low	Band Edge	-32.55	-25	-7.55
		High	Band Edge	-44.29	-25	-19.29
	30MHz	Low	Band Edge	-34.26	-25	-9.26
		High	Band Edge	-42.67	-25	-17.67
	20MHz	Low	Band Edge	-32.13	-25	-7.13
		High	Band Edge	-40.74	-25	-15.74
	15MHz	Low	Band Edge	-30.04	-25	-5.04
		High	Band Edge	-41.56	-25	-16.56
	10MHz	Low	Band Edge	-28.26	-25	-3.26
		High	Band Edge	-30.49	-10	-20.49

Table 7-35. Conducted Band Edge Test Results



Plot 7-177. Lower Band Edge Plot (NR Band n41(PC2) - 10MHz DFT-s-OFDM-QPSK – Full RB)

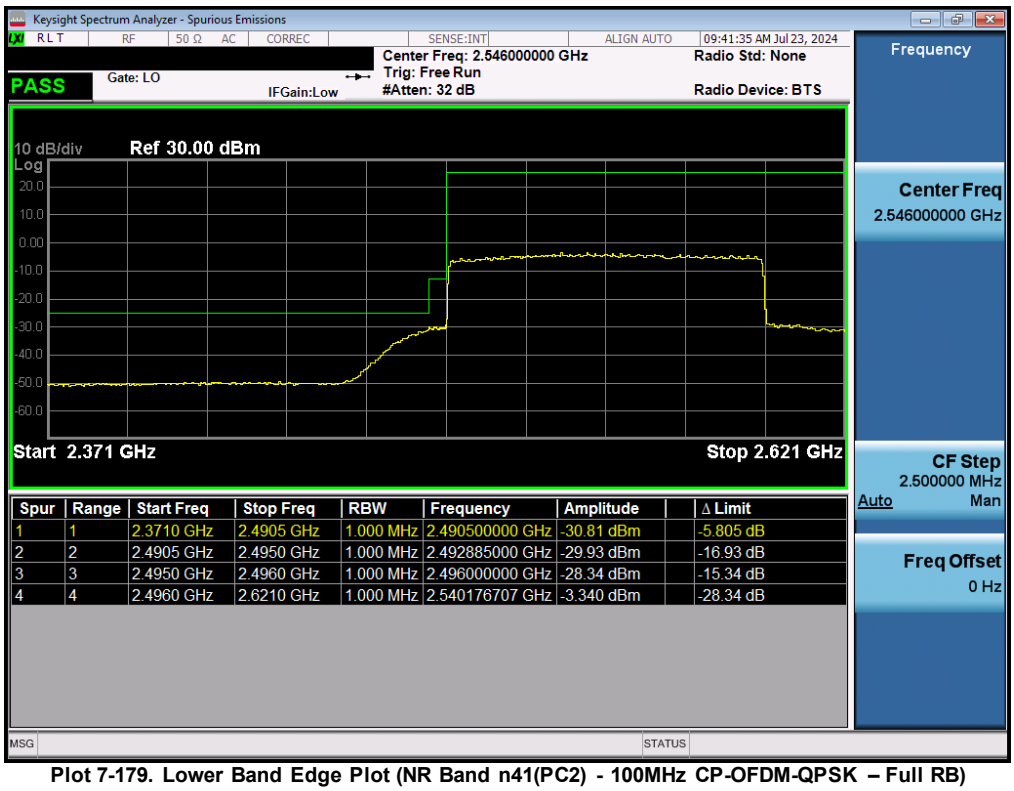
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.6650 GHz	2.6900 GHz	220.0 kHz	2.682699115 GHz	6.494 dBm	-18.51 dB
2	2	2.6900 GHz	2.6910 GHz	430.0 kHz	2.690030000 GHz	-31.76 dBm	-21.76 dB
3	3	2.6910 GHz	2.6950 GHz	1.000 MHz	2.691200000 GHz	-30.49 dBm	-20.49 dB
4	4	2.6950 GHz	2.7100 GHz	1.000 MHz	2.695000000 GHz	-33.65 dBm	-20.65 dB
5	5	2.7100 GHz	2.7150 GHz	1.000 MHz	2.710000000 GHz	-48.10 dBm	-23.10 dB

Plot 7-178. Upper Band Edge Plot (NR Band n41(PC2) - 10MHz CP-OFDM-QPSK – Full RB)

NR Band n41(PC2) – Ant S2

Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
NR-n41PC2	100MHz	Low	Band Edge	-30.81	-25	-5.81
		High	Band Edge	-31.55	-13	-18.55

Table 7-36. Conducted Band Edge Test Results



Plot 7-179. Lower Band Edge Plot (NR Band n41(PC2) - 100MHz CP-OFDM-QPSK – Full RB)

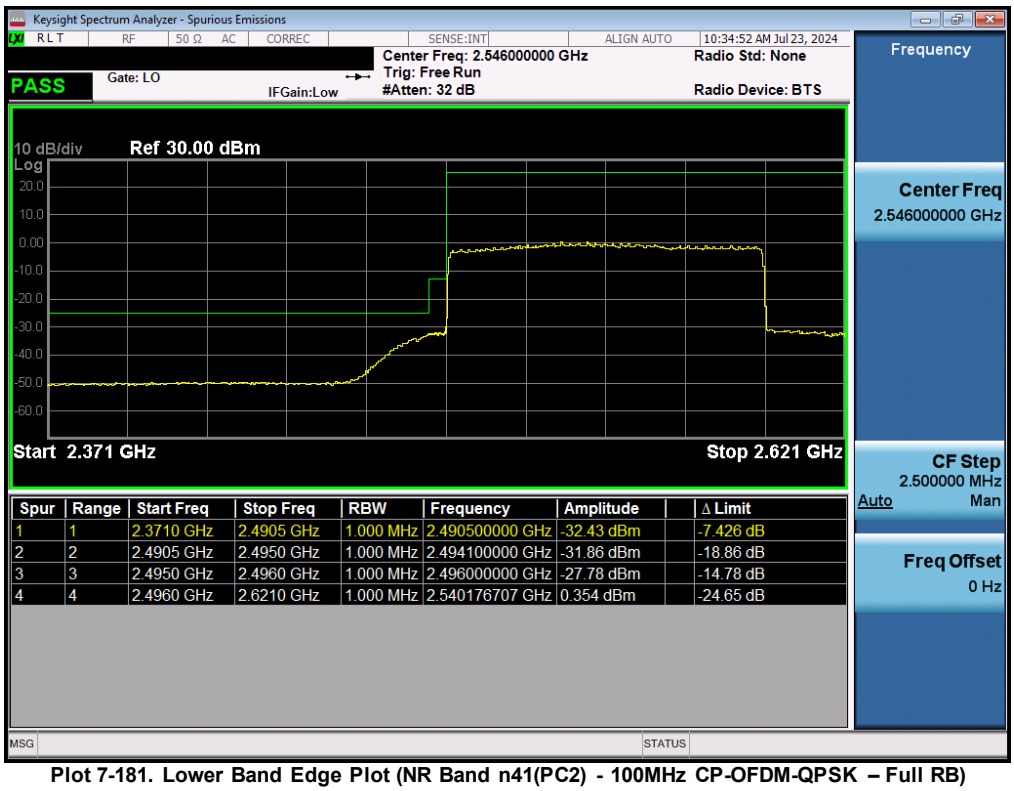
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.5650 GHz	2.6900 GHz	1.000 MHz	2.640803213 GHz	-4.531 dBm	-29.53 dB
2	2	2.6900 GHz	2.6910 GHz	1.000 MHz	2.690000000 GHz	-29.81 dBm	-19.81 dB
3	3	2.6910 GHz	2.6950 GHz	1.000 MHz	2.691000000 GHz	-31.07 dBm	-21.07 dB
4	4	2.6950 GHz	2.7900 GHz	1.000 MHz	2.700026455 GHz	-31.55 dBm	-18.55 dB
5	5	2.7900 GHz	2.8150 GHz	1.000 MHz	2.796750000 GHz	-49.87 dBm	-24.87 dB

Plot 7-180. Upper Band Edge Plot (NR Band n41(PC2) - 100MHz CP-OFDM-QPSK – Full RB)

NR Band n41(PC2) – Ant S4

Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
NR-n41PC2	100MHz	Low	Band Edge	-32.43	-25	-7.43
		High	Band Edge	-28.18	-10	-18.18

Table 7-37. Conducted Band Edge Test Results



Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.3710 GHz	2.4905 GHz	1.000 MHz	2.490500000 GHz	-32.43 dBm	-7.426 dB
2	2	2.4905 GHz	2.4950 GHz	1.000 MHz	2.494100000 GHz	-31.86 dBm	-18.86 dB
3	3	2.4950 GHz	2.4960 GHz	1.000 MHz	2.496000000 GHz	-27.78 dBm	-14.78 dB
4	4	2.4960 GHz	2.6210 GHz	1.000 MHz	2.540176707 GHz	0.354 dBm	-24.65 dB

Plot 7-181. Lower Band Edge Plot (NR Band n41(PC2) - 100MHz CP-OFDM-QPSK – Full RB)

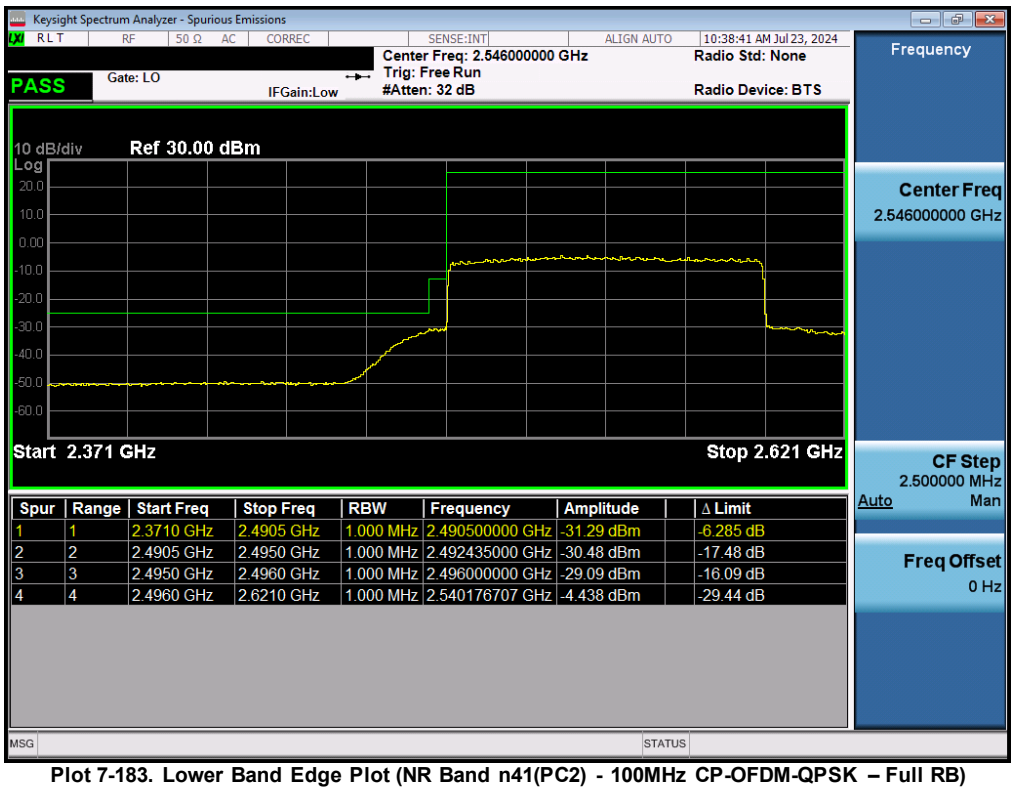
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.5650 GHz	2.6900 GHz	1.000 MHz	2.619718876 GHz	-0.228 dBm	-25.23 dB
2	2	2.6900 GHz	2.6910 GHz	1.000 MHz	2.690000000 GHz	-28.18 dBm	-18.18 dB
3	3	2.6910 GHz	2.6950 GHz	1.000 MHz	2.691080000 GHz	-31.00 dBm	-21.00 dB
4	4	2.6950 GHz	2.7900 GHz	1.000 MHz	2.696507937 GHz	-32.40 dBm	-19.40 dB
5	5	2.7900 GHz	2.8150 GHz	1.000 MHz	2.792500000 GHz	-49.86 dBm	-24.86 dB

Plot 7-182. Upper Band Edge Plot (NR Band n41(PC2) - 100MHz CP-OFDM-QPSK – Full RB)

NR Band n41(PC2) – Ant S1

Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
NR-n41PC2	100MHz	Low	Band Edge	-31.29	-25	-6.29
		High	Band Edge	-32.51	-13	-19.51

Table 7-38. Conducted Band Edge Test Results



Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.3710 GHz	2.4905 GHz	1.000 MHz	2.490500000 GHz	-31.29 dBm	-6.285 dB
2	2	2.4905 GHz	2.4950 GHz	1.000 MHz	2.492435000 GHz	-30.48 dBm	-17.48 dB
3	3	2.4950 GHz	2.4960 GHz	1.000 MHz	2.496000000 GHz	-29.09 dBm	-16.09 dB
4	4	2.4960 GHz	2.6210 GHz	1.000 MHz	2.540176707 GHz	-4.438 dBm	-29.44 dB

Plot 7-183. Lower Band Edge Plot (NR Band n41(PC2) - 100MHz CP-OFDM-QPSK – Full RB)

Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.5650 GHz	2.6900 GHz	1.000 MHz	2.635281124 GHz	-4.966 dBm	-29.97 dB
2	2	2.6900 GHz	2.6910 GHz	1.000 MHz	2.690000000 GHz	-30.76 dBm	-20.76 dB
3	3	2.6910 GHz	2.6950 GHz	1.000 MHz	2.691120000 GHz	-31.80 dBm	-21.80 dB
4	4	2.6950 GHz	2.7900 GHz	1.000 MHz	2.695502646 GHz	-32.51 dBm	-19.51 dB
5	5	2.7900 GHz	2.8150 GHz	1.000 MHz	2.803000000 GHz	-49.88 dBm	-24.88 dB

Plot 7-184. Upper Band Edge Plot (NR Band n41(PC2) - 100MHz CP-OFDM-QPSK – Full RB)

7.6 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.

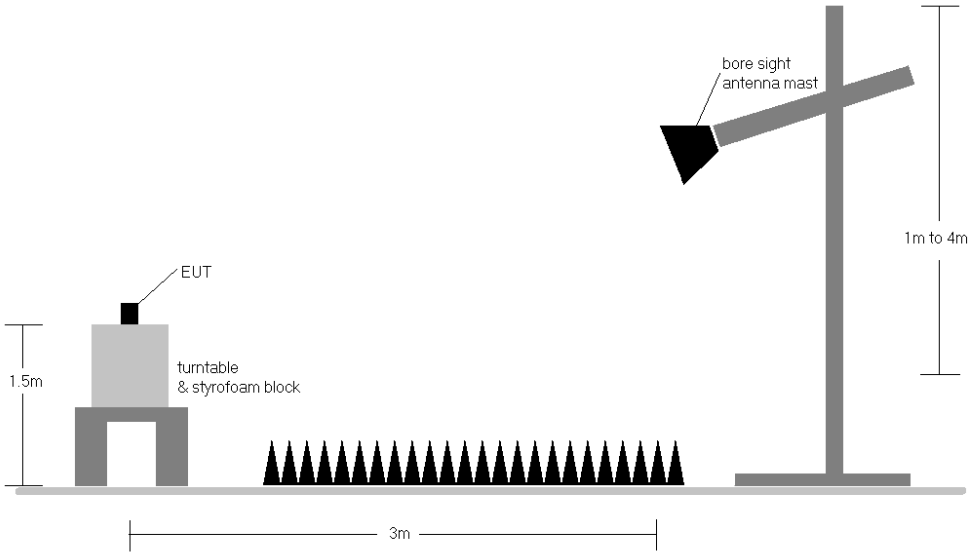


Figure 7-5. Radiated Test Setup >1GHz

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]
10 MHz	QPSK	2310.0	H	144	249	9.16	1 / 49	13.81	**22.97**	0.198	23.98	-1.01
	16-QAM	2310.0	H	144	249	9.16	1 / 49	12.94	22.10	0.162	23.98	-1.88
5 MHz	QPSK	2307.5	H	144	249	9.16	1 / 0	13.79	**22.95**	0.197	23.98	-1.03
	QPSK	2310.0	H	144	249	9.16	1 / 12	13.72	22.88	0.194	23.98	-1.10
	QPSK	2312.5	H	144	249	9.17	1 / 0	13.78	22.94	0.197	23.98	-1.04
	16-QAM	2310.0	H	144	249	9.16	1 / 12	13.10	22.26	0.168	23.98	-1.72
10 MHz	Opposite Pol.	2310.0	V	350	106	9.16	1 / 49	12.82	21.98	0.158	23.98	-2.00

Table 7-39. EIRP Data (LTE Band 30)

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]
10 MHz	QPSK	2310.0	H	149	137	9.16	1 / 49	9.82	**18.98**	0.079	23.98	-5.00
	16-QAM	2310.0	H	149	137	9.16	1 / 49	8.94	18.10	0.065	23.98	-5.88
5 MHz	QPSK	2307.5	H	149	137	9.16	1 / 24	9.87	19.03	0.080	23.98	-4.95
	QPSK	2310.0	H	149	137	9.16	1 / 24	9.85	19.01	0.080	23.98	-4.97
	QPSK	2312.5	H	149	137	9.17	1 / 12	10.00	**19.16**	0.082	23.98	-4.82
	16-QAM	2310.0	H	149	137	9.16	1 / 24	9.10	18.27	0.067	23.98	-5.71
10 MHz	Opposite Pol.	2310.0	V	398	232	9.16	1 / 49	9.57	18.73	0.075	23.98	-5.25

Table 7-40. EIRP Data (LTE Band 30) – Ant S2

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]
20 MHz	QPSK	2510.0	H	143	254	9.40	1 / 50	16.28	**25.68**	0.370	33.01	-7.33
	QPSK	2535.0	H	137	253	9.44	1 / 0	15.91	25.35	0.343	33.01	-7.66
	QPSK	2560.0	H	135	256	9.48	1 / 0	15.71	25.19	0.330	33.01	-7.82
	16-QAM	2510.0	H	143	254	9.40	1 / 50	15.43	24.83	0.304	33.01	-8.18
15 MHz	QPSK	2507.5	H	143	254	9.40	1 / 74	16.21	**25.61**	0.364	33.01	-7.40
	QPSK	2535.0	H	137	253	9.44	1 / 37	15.89	25.33	0.341	33.01	-7.68
	QPSK	2562.5	H	135	256	9.48	1 / 0	15.57	25.05	0.320	33.01	-7.96
	16-QAM	2507.5	H	143	254	9.40	1 / 74	15.44	24.84	0.305	33.01	-8.17
10 MHz	QPSK	2505.0	H	143	254	9.40	1 / 49	16.21	**25.60**	0.363	33.01	-7.41
	QPSK	2535.0	H	137	253	9.44	1 / 25	15.96	25.40	0.347	33.01	-7.61
	QPSK	2565.0	H	135	256	9.48	1 / 0	15.57	25.06	0.320	33.01	-7.95
	16-QAM	2505.0	H	143	254	9.40	1 / 49	15.42	24.81	0.303	33.01	-8.20
5 MHz	QPSK	2502.5	H	143	254	9.39	1 / 24	16.28	**25.67**	0.369	33.01	-7.34
	QPSK	2535.0	H	137	253	9.44	1 / 0	15.93	25.37	0.344	33.01	-7.64
	QPSK	2567.5	H	135	256	9.49	1 / 24	15.49	24.98	0.315	33.01	-8.03
	16-QAM	2502.5	H	143	254	9.39	1 / 24	15.51	24.90	0.309	33.01	-8.11
20 MHz	Opposite Pol.	2510.0	V	238	260	9.40	1/99	16.12	25.52	0.356	33.01	-7.49

Table 7-41. EIRP Data (LTE Band 7)

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]
20 MHz	QPSK	2510.0	H	144	72	9.40	1 / 99	10.06	19.46	0.088	33.01	-13.55
	QPSK	2535.0	H	144	77	9.44	1 / 99	11.25	20.69	0.117	33.01	-12.32
	QPSK	2560.0	H	140	79	9.48	1 / 99	11.56	**21.04**	0.127	33.01	-11.97
	16-QAM	2560.0	H	140	79	9.48	1 / 99	10.43	19.91	0.098	33.01	-13.10
15 MHz	QPSK	2507.5	H	144	72	9.40	1 / 74	9.91	19.31	0.085	33.01	-13.70
	QPSK	2535.0	H	144	77	9.44	1 / 37	11.00	20.44	0.111	33.01	-12.57
	QPSK	2562.5	H	140	79	9.48	1 / 74	11.68	**21.16**	0.131	33.01	-11.85
	16-QAM	2562.5	H	140	79	9.48	1 / 74	10.54	20.02	0.100	33.01	-12.99
10 MHz	QPSK	2505.0	H	144	72	9.40	1 / 0	9.95	19.34	0.086	33.01	-13.67
	QPSK	2535.0	H	144	77	9.44	1 / 25	10.95	20.39	0.109	33.01	-12.62
	QPSK	2565.0	H	140	79	9.48	1 / 49	11.78	**21.26**	0.134	33.01	-11.75
	16-QAM	2565.0	H	140	79	9.48	1 / 49	10.70	20.19	0.104	33.01	-12.82
5 MHz	QPSK	2502.5	H	144	72	9.39	1 / 24	10.12	19.51	0.089	33.01	-13.50
	QPSK	2535.0	H	144	77	9.44	1 / 12	10.97	20.41	0.110	33.01	-12.60
	QPSK	2567.5	H	140	79	9.49	1 / 24	11.77	**21.26**	0.134	33.01	-11.75
	16-QAM	2567.5	H	140	79	9.49	1 / 24	10.41	19.90	0.098	33.01	-13.11
20 MHz	Opposite Pol.	2560.0	V	290	77	9.40	1 / 99	10.50	19.90	0.098	33.01	-13.11

Table 7-42. EIRP Data (LTE Band 7) – Ant S2

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]
20 MHz	QPSK	2506.0	H	147	254	9.40	1 / 50	17.87	**27.27**	0.533	33.01	-5.74
	QPSK	2593.0	H	165	257	9.53	1 / 50	17.60	27.13	0.516	33.01	-5.89
	QPSK	2680.0	H	126	254	9.65	1 / 50	16.47	26.12	0.409	33.01	-6.89
	16-QAM	2593.0	H	165	257	9.53	1 / 50	17.01	26.54	0.450	33.01	-6.48
15 MHz	QPSK	2503.5	H	147	254	9.39	1 / 37	17.95	**27.35**	0.543	33.01	-5.66
	QPSK	2593.0	H	165	257	9.53	1 / 37	17.68	27.21	0.525	33.01	-5.81
	QPSK	2682.5	H	126	254	9.65	1 / 74	16.38	26.03	0.401	33.01	-6.98
	16-QAM	2593.0	H	165	257	9.53	1 / 37	17.32	26.85	0.484	33.01	-6.17
10 MHz	QPSK	2501.0	H	147	254	9.39	1 / 25	17.84	**27.23**	0.528	33.01	-5.78
	QPSK	2593.0	H	165	257	9.53	1 / 49	17.38	26.91	0.490	33.01	-6.11
	QPSK	2685.0	H	126	254	9.66	1 / 25	16.54	26.20	0.417	33.01	-6.81
	16-QAM	2593.0	H	165	257	9.53	1 / 25	16.81	26.34	0.430	33.01	-6.68
5 MHz	QPSK	2498.5	H	147	254	9.39	1 / 24	18.14	**27.53**	0.566	33.01	-5.48
	QPSK	2593.0	H	165	257	9.53	1 / 12	17.69	27.22	0.527	33.01	-5.80
	QPSK	2687.5	H	126	254	9.66	1 / 24	16.65	26.31	0.427	33.01	-6.70
	16-QAM	2498.5	H	147	254	9.39	1 / 24	17.36	26.75	0.473	33.01	-6.26
20 MHz	Opposite Pol.	2506.0	V	233	253	9.40	1 / 0	17.73	27.13	0.516	33.01	-5.88

Table 7-43. EIRP Data (LTE Band 41(PC2))

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]
20 MHz	QPSK	2506.0	H	145	254	9.40	1 / 99	16.12	**25.52**	0.356	33.01	-7.49
	QPSK	2593.0	H	166	258	9.53	1 / 50	15.12	24.65	0.291	33.01	-8.37
	QPSK	2680.0	H	129	254	9.65	1 / 99	14.13	23.78	0.239	33.01	-9.23
	16-QAM	2506.0	H	145	254	9.40	1 / 99	15.26	24.66	0.292	33.01	-8.35
15 MHz	QPSK	2503.5	H	145	254	9.39	1 / 0	16.10	**25.50**	0.355	33.01	-7.51
	QPSK	2593.0	H	166	258	9.53	1 / 74	14.40	23.93	0.247	33.01	-9.09
	QPSK	2682.5	H	129	254	9.65	1 / 0	14.14	23.79	0.239	33.01	-9.22
	16-QAM	2503.5	H	145	254	9.39	1 / 0	15.24	24.64	0.291	33.01	-8.37
10 MHz	QPSK	2501.0	H	145	254	9.39	1 / 0	16.21	**25.60**	0.363	33.01	-7.41
	QPSK	2593.0	H	166	258	9.53	1 / 0	15.01	24.54	0.284	33.01	-8.48
	QPSK	2685.0	H	129	254	9.66	1 / 0	14.15	23.81	0.240	33.01	-9.20
	16-QAM	2501.0	H	145	254	9.39	1 / 0	14.96	24.35	0.272	33.01	-8.66
5 MHz	QPSK	2498.5	H	145	254	9.39	1 / 0	16.20	**25.59**	0.362	33.01	-7.42
	QPSK	2593.0	H	166	258	9.53	1 / 24	14.82	24.35	0.272	33.01	-8.67
	QPSK	2687.5	H	129	254	9.66	1 / 24	14.13	23.79	0.239	33.01	-9.22
	16-QAM	2498.5	H	145	254	9.39	1 / 0	15.01	24.40	0.275	33.01	-8.61
20 MHz	Opposite Pol.	2506.0	V	272	246	9.40	1 / 0	15.96	25.36	0.344	33.01	-7.65

Table 7-44. EIRP Data (LTE Band 41(PC3)/38)

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]
10 MHz	π/2 BPSK	2310.0	H	146	250	9.16	1 / 50	13.73	**22.89**	0.195	23.98	-1.09
	QPSK	2310.0	H	146	250	9.16	1 / 50	13.68	22.84	0.192	23.98	-1.14
	16-QAM	2310.0	H	146	250	9.16	1 / 50	12.86	22.02	0.159	23.98	-1.96
5 MHz	π/2 BPSK	2307.5	H	146	250	9.16	1 / 12	13.65	22.81	0.191	23.98	-1.17
	π/2 BPSK	2310.0	H	146	250	9.16	1 / 12	13.72	**22.88**	0.194	23.98	-1.10
	π/2 BPSK	2312.5	H	146	250	9.17	1 / 12	13.69	22.85	0.193	23.98	-1.13
	QPSK	2307.5	H	146	250	9.16	1 / 1	13.67	22.83	0.192	23.98	-1.15
	QPSK	2310.0	H	146	250	9.16	1 / 12	13.72	**22.88**	0.194	23.98	-1.10
	QPSK	2312.5	H	146	250	9.17	1 / 12	13.64	22.80	0.191	23.98	-1.18
	16-QAM	2307.5	H	146	250	9.16	1 / 1	12.93	22.09	0.162	23.98	-1.89
10 MHz	QPSK (CP-OFDM)	2310.0	H	146	250	9.16	1 / 26	11.98	21.14	0.130	23.98	-2.84
	Opposite Pol.	2310.0	V	351	103	9.16	1 / 26	13.58	22.74	0.188	23.98	-1.24

Table 7-45. EIRP Data (NR Band n30)

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]
40 MHz	π/2 BPSK	2520.0	H	142	258	9.42	1 / 108	16.44	**25.86**	0.385	33.01	-7.15
	π/2 BPSK	2535.0	H	138	258	9.44	1 / 1	15.80	25.24	0.334	33.01	-7.77
	π/2 BPSK	2550.0	H	137	259	9.46	1 / 1	15.50	24.96	0.313	33.01	-8.05
	QPSK	2520.0	H	142	258	9.42	1 / 108	16.27	25.69	0.371	33.01	-7.32
	QPSK	2535.0	H	138	258	9.44	1 / 1	15.63	25.07	0.321	33.01	-7.94
	QPSK	2550.0	H	137	259	9.46	1 / 1	15.38	24.84	0.305	33.01	-8.17
	16-QAM	2520.0	H	142	258	9.42	1 / 108	15.31	24.73	0.297	33.01	-8.28
30 MHz	π/2 BPSK	2515.0	H	142	258	9.41	1 / 80	16.37	**25.78**	0.378	33.01	-7.23
	π/2 BPSK	2535.0	H	138	258	9.44	1 / 80	15.84	25.28	0.337	33.01	-7.73
	π/2 BPSK	2555.0	H	137	259	9.47	1 / 1	15.46	24.93	0.311	33.01	-8.08
	QPSK	2515.0	H	142	258	9.41	1 / 158	16.24	25.65	0.367	33.01	-7.36
	QPSK	2535.0	H	138	258	9.44	1 / 80	15.66	25.10	0.324	33.01	-7.91
	QPSK	2555.0	H	137	259	9.47	1 / 1	15.40	24.87	0.307	33.01	-8.14
	16-QAM	2515.0	H	142	258	9.41	1 / 80	15.24	24.65	0.292	33.01	-8.36
25 MHz	π/2 BPSK	2512.5	H	142	258	9.41	1 / 131	16.36	25.77	0.377	33.01	-7.24
	π/2 BPSK	2535.0	H	138	258	9.44	1 / 66	15.70	25.14	0.327	33.01	-7.87
	π/2 BPSK	2557.5	H	137	259	9.47	1 / 1	15.33	24.80	0.302	33.01	-8.21
	QPSK	2512.5	H	142	258	9.41	1 / 131	16.27	25.68	0.370	33.01	-7.33
	QPSK	2535.0	H	138	258	9.44	1 / 1	17.50	**26.94**	0.494	33.01	-6.07
	QPSK	2557.5	H	137	259	9.47	1 / 1	15.24	24.71	0.296	33.01	-8.30
	16-QAM	2535.0	H	138	258	9.44	1 / 66	14.53	23.97	0.249	33.01	-9.04
20 MHz	π/2 BPSK	2510.0	H	142	258	9.40	1 / 104	16.44	**25.85**	0.384	33.01	-7.16
	π/2 BPSK	2535.0	H	138	258	9.44	1 / 1	15.68	25.12	0.325	33.01	-7.89
	π/2 BPSK	2560.0	H	137	259	9.48	1 / 1	15.38	24.85	0.306	33.01	-8.16
	QPSK	2510.0	H	142	258	9.40	1 / 104	16.29	25.70	0.371	33.01	-7.31
	QPSK	2535.0	H	138	258	9.44	1 / 53	15.52	24.96	0.313	33.01	-8.05
	QPSK	2560.0	H	137	259	9.48	1 / 1	15.25	24.72	0.297	33.01	-8.29
	16-QAM	2510.0	H	142	258	9.40	1 / 104	15.31	24.72	0.296	33.01	-8.29
15 MHz	π/2 BPSK	2507.5	H	142	258	9.40	1 / 77	16.36	**25.76**	0.377	33.01	-7.25
	π/2 BPSK	2535.0	H	138	258	9.44	1 / 39	15.75	25.19	0.330	33.01	-7.82
	π/2 BPSK	2562.5	H	137	259	9.48	1 / 1	15.20	24.68	0.294	33.01	-8.33
	QPSK	2507.5	H	142	258	9.40	1 / 77	16.22	25.62	0.365	33.01	-7.39
	QPSK	2535.0	H	138	258	9.44	1 / 1	15.56	25.00	0.316	33.01	-8.01
	QPSK	2562.5	H	137	259	9.48	1 / 1	15.18	24.66	0.293	33.01	-8.35
	16-QAM	2535.0	H	138	258	9.44	1 / 39	14.56	24.00	0.251	33.01	-9.01
10 MHz	π/2 BPSK	2505.0	H	142	258	9.40	1 / 26	16.24	**25.64**	0.366	33.01	-7.37
	π/2 BPSK	2535.0	H	138	258	9.44	1 / 26	15.64	25.08	0.322	33.01	-7.93
	π/2 BPSK	2565.0	H	137	259	9.48	1 / 1	15.20	24.68	0.294	33.01	-8.33
	QPSK	2505.0	H	142	258	9.40	1 / 26	16.13	25.53	0.357	33.01	-7.48
	QPSK	2535.0	H	138	258	9.44	1 / 26	15.52	24.96	0.313	33.01	-8.05
	QPSK	2565.0	H	137	259	9.48	1 / 1	15.18	24.66	0.293	33.01	-8.35
	16-QAM	2535.0	H	138	258	9.44	1 / 26	14.56	24.00	0.251	33.01	-9.01
5 MHz	π/2 BPSK	2502.5	H	142	258	9.39	1 / 1	16.29	**25.68**	0.370	33.01	-7.33
	π/2 BPSK	2535.0	H	138	258	9.44	1 / 12	15.71	25.15	0.327	33.01	-7.86
	π/2 BPSK	2567.5	H	137	259	9.49	1 / 12	15.12	24.61	0.289	33.01	-8.40
	QPSK	2502.5	H	142	258	9.39	1 / 12	16.26	25.65	0.367	33.01	-7.36
	QPSK	2535.0	H	138	258	9.44	1 / 12	15.56	25.00	0.316	33.01	-8.01
	QPSK	2567.5	H	137	259	9.49	1 / 12	15.08	24.57	0.287	33.01	-8.44
	16-QAM	2502.5	H	142	258	9.39	1 / 12	15.27	24.66	0.292	33.01	-8.35
40 MHz	QPSK (CP-OFDM)	2520.0	H	142	258	9.42	1 / 108	14.62	24.04	0.254	33.01	-8.97
	QPSK (Opposite Pol.)	2520.0	V	211	259	9.42	1 / 1	15.99	25.41	0.348	33.01	-7.60

Table 7-46. EIRP Data (NR Band n7)

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	2546.01	H	201	261	9.46	1 / 271	18.51	**27.97**	0.626	33.01	-5.04
	π/2 BPSK	2592.99	H	190	259	9.53	1 / 136	18.09	27.62	0.577	33.01	-5.40
	π/2 BPSK	2640.00	H	126	257	9.59	1 / 271	17.49	27.08	0.511	33.01	-5.93
	QPSK	2546.01	H	201	261	9.46	1 / 271	18.48	27.94	0.622	33.01	-5.07
	QPSK	2592.99	H	190	259	9.53	1 / 136	18.18	27.71	0.590	33.01	-5.31
	QPSK	2640.00	H	126	257	9.59	1 / 271	17.33	26.92	0.492	33.01	-6.09
	16-QAM	2546.01	H	201	261	9.46	1 / 271	17.08	26.54	0.450	33.01	-6.47
90 MHz	π/2 BPSK	2541.00	H	201	261	9.45	1 / 122	18.50	**27.95**	0.623	33.01	-5.06
	π/2 BPSK	2592.99	H	190	259	9.53	1 / 243	18.08	27.61	0.576	33.01	-5.41
	π/2 BPSK	2644.98	H	126	257	9.60	1 / 243	17.34	26.94	0.495	33.01	-6.07
	QPSK	2541.00	H	201	261	9.45	1 / 122	18.43	27.88	0.613	33.01	-5.13
	QPSK	2592.99	H	190	259	9.53	1 / 243	18.24	27.77	0.598	33.01	-5.25
	QPSK	2644.98	H	126	257	9.60	1 / 243	17.32	26.92	0.492	33.01	-6.09
	16-QAM	2541.00	H	201	261	9.45	1 / 122	16.99	26.44	0.440	33.01	-6.57
80 MHz	π/2 BPSK	2536.02	H	201	261	9.44	1 / 108	18.48	27.93	0.620	33.01	-5.08
	π/2 BPSK	2592.99	H	190	259	9.53	1 / 1	18.24	27.77	0.598	33.01	-5.25
	π/2 BPSK	2649.99	H	126	257	9.61	1 / 215	17.57	27.17	0.521	33.01	-5.84
	QPSK	2536.02	H	201	261	9.44	1 / 108	18.37	27.82	0.605	33.01	-5.19
	QPSK	2592.99	H	190	259	9.53	1 / 215	18.24	27.77	0.598	33.01	-5.25
	QPSK	2649.99	H	126	257	9.61	1 / 215	17.51	27.11	0.514	33.01	-5.90
	16-QAM	2536.02	H	201	261	9.44	1 / 108	16.92	26.37	0.433	33.01	-6.64
70 MHz	π/2 BPSK	2531.01	H	201	261	9.43	1 / 94	18.48	27.92	0.619	33.01	-5.09
	π/2 BPSK	2592.99	H	190	259	9.53	1 / 187	18.47	**28.00**	0.630	33.01	-5.02
	π/2 BPSK	2655.00	H	126	257	9.61	1 / 187	17.68	27.29	0.536	33.01	-5.72
	QPSK	2531.01	H	201	261	9.43	1 / 187	18.22	27.66	0.583	33.01	-5.35
	QPSK	2592.99	H	190	259	9.53	1 / 187	18.43	27.96	0.624	33.01	-5.06
	QPSK	2655.00	H	126	257	9.61	1 / 187	17.71	27.32	0.540	33.01	-5.69
	16-QAM	2531.01	H	201	261	9.43	1 / 94	17.16	26.60	0.457	33.01	-6.41
60 MHz	π/2 BPSK	2526.00	H	201	261	9.43	1 / 1	18.51	27.94	0.622	33.01	-5.07
	π/2 BPSK	2592.99	H	190	259	9.53	1 / 160	18.58	**28.11**	0.646	33.01	-4.91
	π/2 BPSK	2659.98	H	126	257	9.62	1 / 81	17.66	27.28	0.535	33.01	-5.73
	QPSK	2526.00	H	201	261	9.43	1 / 1	18.52	27.95	0.623	33.01	-5.06
	QPSK	2592.99	H	190	259	9.53	1 / 160	18.46	27.99	0.629	33.01	-5.03
	QPSK	2659.98	H	126	257	9.62	1 / 81	17.50	27.12	0.516	33.01	-5.89
	16-QAM	2526.00	H	201	261	9.43	1 / 1	17.53	26.96	0.496	33.01	-6.05
50 MHz	π/2 BPSK	2521.02	H	201	261	9.42	1 / 1	18.54	27.96	0.625	33.01	-5.05
	π/2 BPSK	2592.99	H	190	259	9.53	1 / 131	18.61	28.14	0.651	33.01	-4.88
	π/2 BPSK	2664.99	H	126	257	9.63	1 / 131	17.70	27.33	0.541	33.01	-5.68
	QPSK	2521.02	H	201	261	9.42	1 / 1	18.66	28.08	0.642	33.01	-4.93
	QPSK	2592.99	H	190	259	9.53	1 / 131	18.64	**28.17**	0.655	33.01	-4.85
	QPSK	2664.99	H	126	257	9.63	1 / 131	17.41	27.04	0.506	33.01	-5.97
	16-QAM	2521.02	H	201	261	9.42	1 / 1	17.61	27.03	0.504	33.01	-5.98
40 MHz	π/2 BPSK	2516.01	H	201	261	9.41	1 / 1	18.62	28.04	0.636	33.01	-4.97
	π/2 BPSK	2592.99	H	190	259	9.53	1 / 104	18.58	28.11	0.646	33.01	-4.91
	π/2 BPSK	2670.00	H	126	257	9.63	1 / 53	17.73	27.36	0.545	33.01	-5.65
	QPSK	2516.01	H	201	261	9.41	1 / 1	18.83	**28.25**	0.668	33.01	-4.76
	QPSK	2592.99	H	190	259	9.53	1 / 104	18.46	27.99	0.629	33.01	-5.03
	QPSK	2670.00	H	126	257	9.63	1 / 1	17.59	27.22	0.528	33.01	-5.79
	16-QAM	2516.01	H	201	261	9.41	1 / 1	17.48	26.90	0.489	33.01	-6.11
30 MHz	π/2 BPSK	2511.00	H	201	261	9.40	1 / 1	18.56	27.97	0.626	33.01	-5.04
	π/2 BPSK	2592.99	H	190	259	9.53	1 / 39	18.49	28.02	0.633	33.01	-5.00
	π/2 BPSK	2674.98	H	126	257	9.64	1 / 39	17.83	27.47	0.559	33.01	-5.54
	QPSK	2511.00	H	201	261	9.40	1 / 1	18.70	28.11	0.647	33.01	-4.90
	QPSK	2592.99	H	190	259	9.53	1 / 76	18.63	**28.16**	0.654	33.01	-4.86
	QPSK	2674.98	H	126	257	9.64	1 / 39	17.72	27.36	0.545	33.01	-5.65
	16-QAM	2511.00	H	201	261	9.40	1 / 1	16.65	26.06	0.403	33.01	-6.95
20 MHz	π/2 BPSK	2506.02	H	201	261	9.40	1 / 1	19.06	**28.46**	0.701	33.01	-4.55
	π/2 BPSK	2592.99	H	190	259	9.53	1 / 49	18.82	28.35	0.683	33.01	-4.67
	π/2 BPSK	2679.99	H	126	257	9.65	1 / 49	17.96	27.61	0.577	33.01	-5.40
	QPSK	2506.02	H	201	261	9.40	1 / 49	18.48	27.88	0.613	33.01	-5.13
	QPSK	2592.99	H	190	259	9.53	1 / 49	18.70	28.23	0.665	33.01	-4.79
	QPSK	2679.99	H	126	257	9.65	1 / 1	18.04	27.69	0.588	33.01	-5.32
	16-QAM	2506.02	H	201	261	9.40	1 / 1	17.07	26.47	0.443	33.01	-6.54
15 MHz	π/2 BPSK	2506.02	H	201	261	9.40	1 / 25	18.96	28.36	0.685	33.01	-4.65
	π/2 BPSK	2592.99	H	190	259	9.53	1 / 1	18.45	27.98	0.627	33.01	-5.04
	π/2 BPSK	2679.99	H	126	257	9.65	1 / 25	17.76	27.41	0.551	33.01	-5.60
	QPSK	2506.02	H	201	261	9.40	1 / 18	18.89	28.29	0.674	33.01	-4.72
	QPSK	2592.99	H	190	259	9.53	1 / 1	18.38	27.91	0.617	33.01	-5.11
	QPSK	2679.99	H	126	257	9.65	1 / 18	17.67	27.32	0.540	33.01	-5.69
	16-QAM	2506.02	H	201	261	9.40	1 / 18	17.22	26.62	0.459	33.01	-6.39
10 MHz	π/2 BPSK	2506.02	H	201	261	9.40	1 / 1	18.79	28.19	0.659	33.01	-4.82
	π/2 BPSK	2592.99	H	190	259	9.53	1 / 1	18.38	27.91	0.617	33.01	-5.11
	π/2 BPSK	2679.99	H	126	257	9.65	1 / 1	17.72	27.37	0.546	33.01	-5.64
	QPSK	2506.02	H	201	261	9.40	1 / 1	18.75	28.15	0.653	33.01	-4.86
	QPSK	2592.99	H	190	259	9.53	1 / 1	18.36	27.89	0.614	33.01	-5.13
	QPSK	2679.99	H	126	257	9.65	1 / 1	17.20	26.85	0.484	33.01	-6.16
	16-QAM	2506.02	H	201	261	9.40	1 / 1	17.30	26.70	0.467	33.01	-6.31
100 MHz	QPSK (CP-OFDM)	2546.01	H	190	259	9.46	1 / 104	17.05	26.51	0.447	33.01	-6.50
	QPSK (Opposite Pol.)	2546.01	V	147	259	9.46	1 / 104	16.59	26.05	0.402	33.01	-6.96

Table 7-47. EIRP Data (NR Band n41(PC2))

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	2546.01	H	131	77	9.46	1 / 1	11.19	**20.65**	0.116	33.01	-12.36
	π/2 BPSK	2592.99	H	131	79	9.53	1 / 1	10.43	19.96	0.099	33.01	-13.06
	π/2 BPSK	2640.00	H	130	76	9.59	270 / 0	10.69	20.28	0.107	33.01	-12.73
	QPSK	2546.01	H	131	77	9.46	1 / 1	11.14	20.60	0.115	33.01	-12.41
	QPSK	2592.99	H	131	79	9.53	1 / 1	10.38	19.91	0.098	33.01	-13.11
	QPSK	2640.00	H	130	76	9.59	270 / 0	10.63	20.22	0.105	33.01	-12.79
	16-QAM	2546.01	H	131	77	9.46	1 / 1	10.78	20.24	0.106	33.01	-12.77
100 MHz	QPSK (CP-OFDM)	2546.0	H	104	264	9.41	1 / 1	9.99	19.40	0.087	33.01	-13.61
	QPSK (Opposite Pol.)	2546.0	V	158	10	9.41	1 / 1	10.35	19.76	0.095	33.01	-13.25

Table 7-48. EIRP Data (NR Band n41) – Ant S2

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	2546.01	H	138	72	9.46	1 / 271	15.22	**24.68**	0.294	33.01	-8.33
	π/2 BPSK	2592.99	H	136	78	9.53	1 / 1	14.35	23.88	0.244	33.01	-9.14
	π/2 BPSK	2640.00	H	144	76	9.59	1 / 271	14.62	24.21	0.264	33.01	-8.80
	QPSK	2546.01	H	138	72	9.46	1 / 271	15.17	**24.63**	0.290	33.01	-8.38
	QPSK	2592.99	H	136	78	9.53	1 / 1	14.52	24.05	0.254	33.01	-8.97
	QPSK	2640.00	H	144	76	9.59	1 / 271	14.71	24.30	0.269	33.01	-8.71
	16-QAM	2640.00	H	144	76	9.59	1 / 271	14.57	24.16	0.261	33.01	-8.85
100 MHz	QPSK (CP-OFDM)	2640.0	H	144	76	9.46	1 / 271	15.61	25.07	0.321	33.01	-7.94
	QPSK (Opposite Pol.)	2640.0	V	159	168	9.46	1 / 271	13.07	22.53	0.179	33.01	-10.48

Table 7-49. EIRP Data (NR Band n41) – Ant S4

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	2546.01	H	114	237	9.46	1 / 1	13.20	**22.65**	0.184	33.01	-10.36
	π/2 BPSK	2592.99	H	118	238	9.53	1 / 1	11.22	20.75	0.119	33.01	-12.27
	π/2 BPSK	2640.00	H	130	239	9.59	1 / 1	10.15	19.74	0.094	33.01	-13.27
	QPSK	2546.01	H	114	237	9.46	1 / 1	13.41	**22.86**	0.193	33.01	-10.15
	QPSK	2592.99	H	118	238	9.53	1 / 1	11.29	20.82	0.121	33.01	-12.19
	QPSK	2640.00	H	130	239	9.59	1 / 1	10.18	19.77	0.095	33.01	-13.24
	16-QAM	2546.01	H	114	237	9.46	1 / 1	13.19	**22.64**	0.184	33.01	-10.37
100 MHz	QPSK (CP-OFDM)	2546.0	H	114	239	9.46	1 / 1	14.41	23.87	0.244	33.01	-9.14
	QPSK (Opposite Pol.)	2546.0	V	364	283	9.46	1 / 1	11.81	21.27	0.134	33.01	-11.74

Table 7-50. EIRP Data (NR Band n41) – Ant S1

7.7 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.

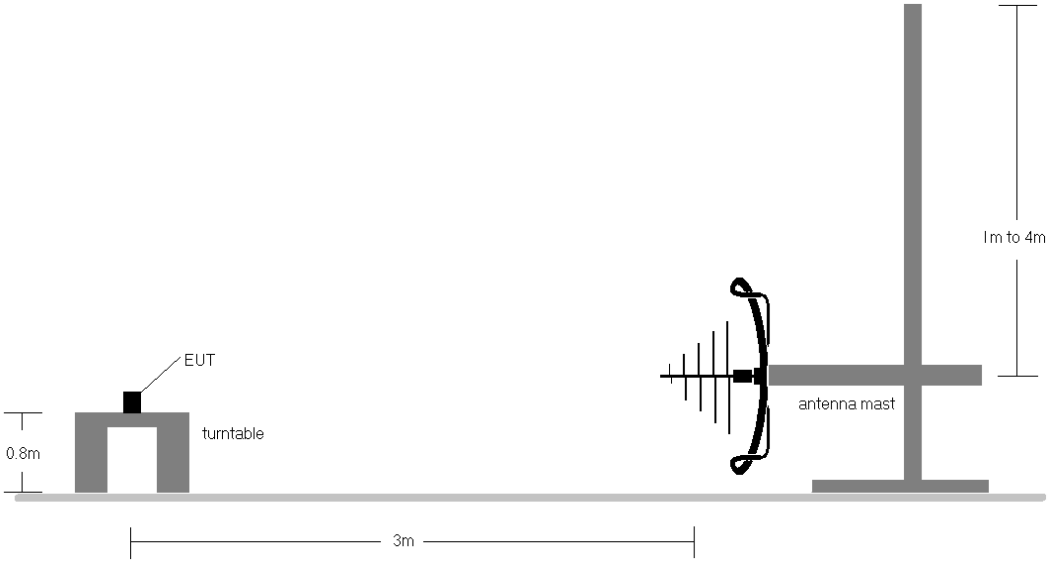


Figure 7-6. Test Instrument & Measurement Setup < 1GHz

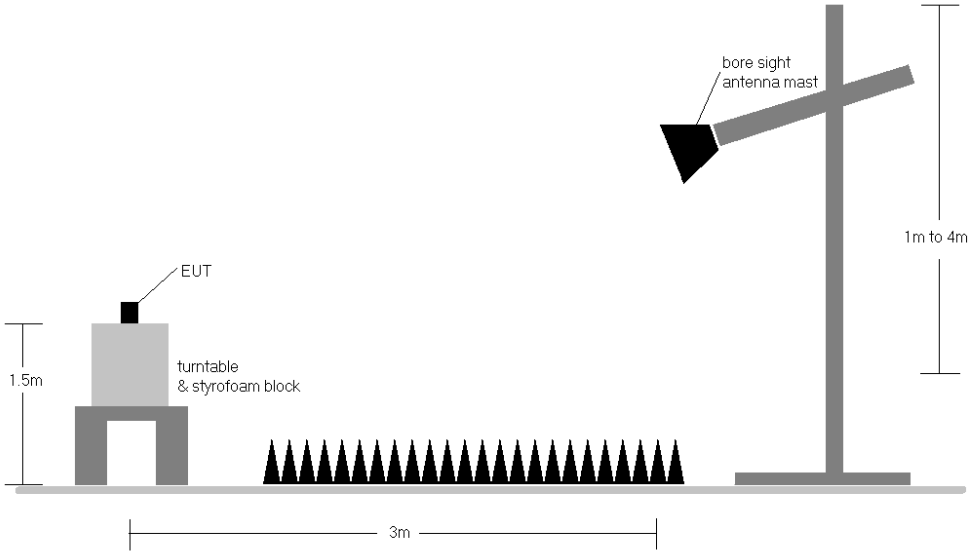


Figure 7-7. Test Instrument & Measurement Setup >1 GHz

Test Notes

1) Field strengths are calculated using the Measurement quantity conversions in ANSI C63.26-2015 Section 5.2.7:
   a) E(dBµV/m) = Measured amplitude level (dBm) + 107 + Cable Loss (dB) + Antenna Factor (dB/m)
   b) 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.

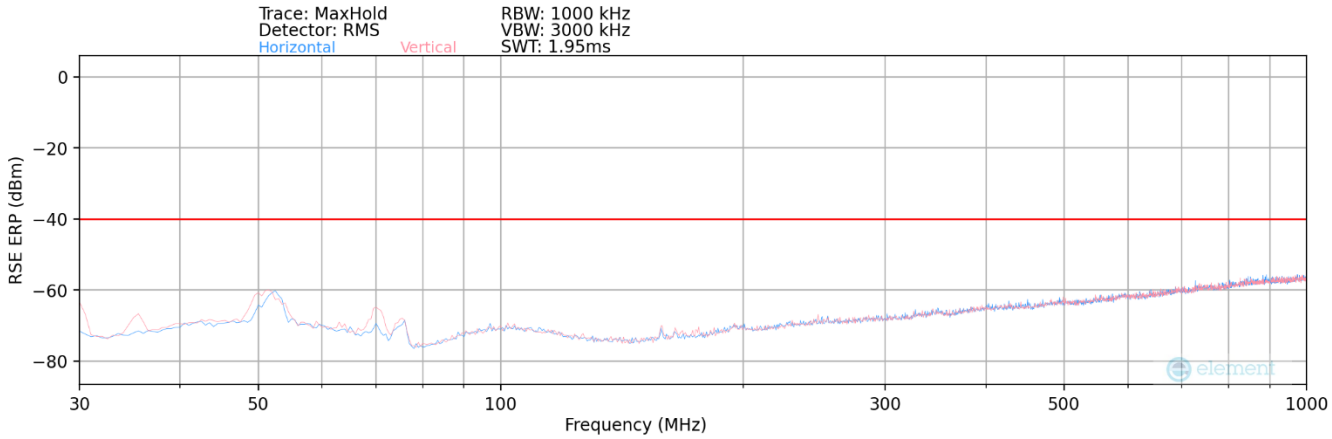
6) The "-" shown in the following RSE tables are used to denote a noise floor measurement.

7) ULCA spurious emissions measurements were evaluated for the two contiguous channels using various combinations of RB size, RB offset, modulation, and channel bandwidth. Channel bandwidth data is shown in the tables below based only on the channel bandwidths that were supported in this device.

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 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.

LTE Band 30

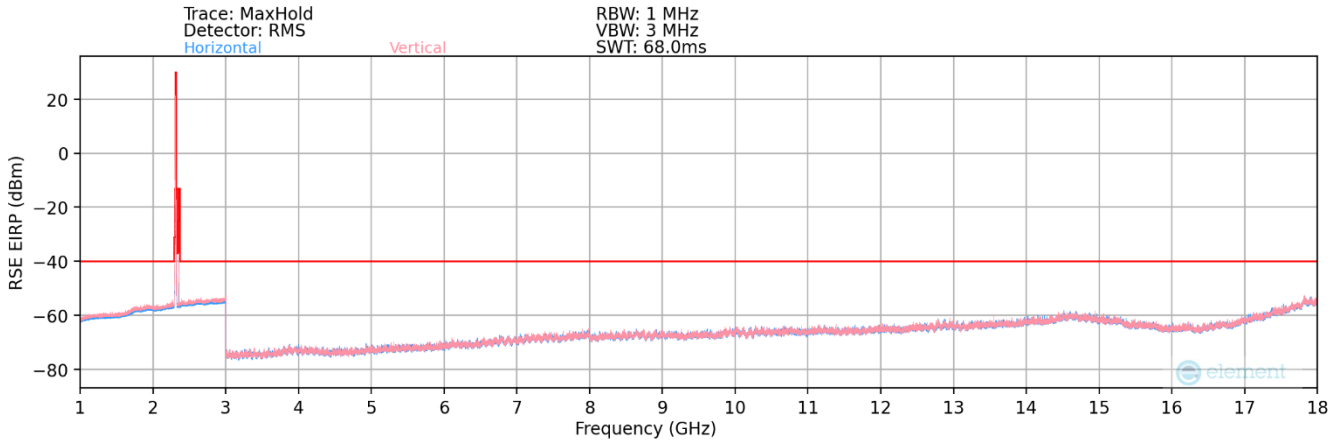


Plot 7-185. Radiated Spurious Plot – Below 1GHz (LTE Band 30)

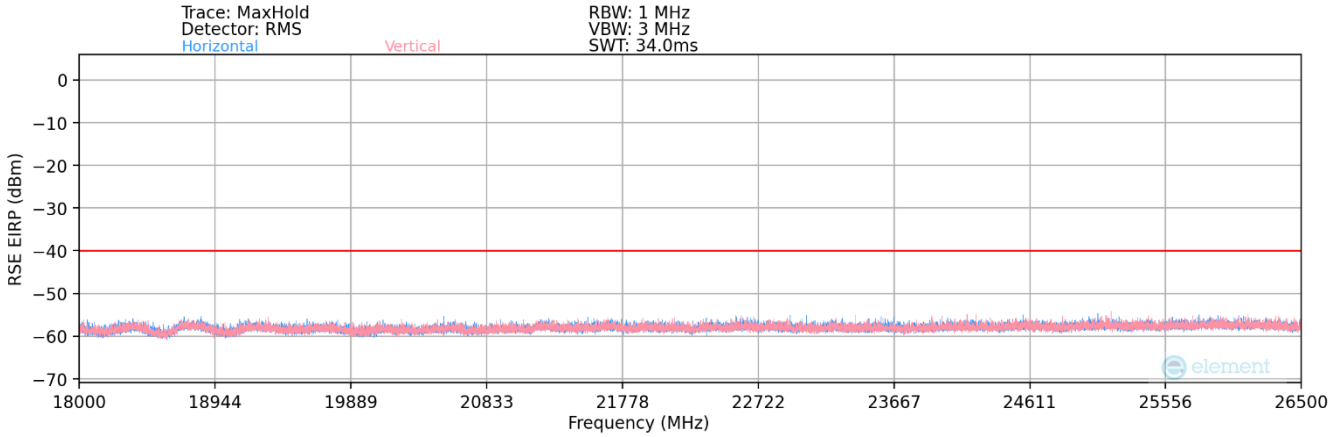
Bandwidth (MHz):	10
Frequency (MHz):	2310.0
RB / Offset:	1/25

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
30.13	V	110	358	-97.53	16.58	26.05	-71.36	-40.00	-31.36
51.68	V	105	247	-101.59	20.59	26.00	-71.41	-40.00	-31.41
70.77	V	100	151	-101.82	15.92	21.10	-76.31	-40.00	-36.31

Table 7-51. Radiated Spurious Data – Below 1GHz (LTE Band 30)



Plot 7-186. Radiated Spurious Plot (LTE Band 30)



Plot 7-187. Radiated Spurious Plot (LTE Band 30)

Bandwidth (MHz):	10
Frequency (MHz):	2310.0
RB / Offset:	1 / 25

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]
4620.00	H	-	-	-76.51	0.70	31.19	-64.07	-40.00	-24.07
6930.00	H	-	-	-77.74	5.41	34.67	-60.59	-40.00	-20.59
9240.00	H	-	-	-79.13	9.22	37.09	-58.16	-40.00	-18.16

Table 7-52. Radiated Spurious Data (LTE Band 30 – Mid Channel)