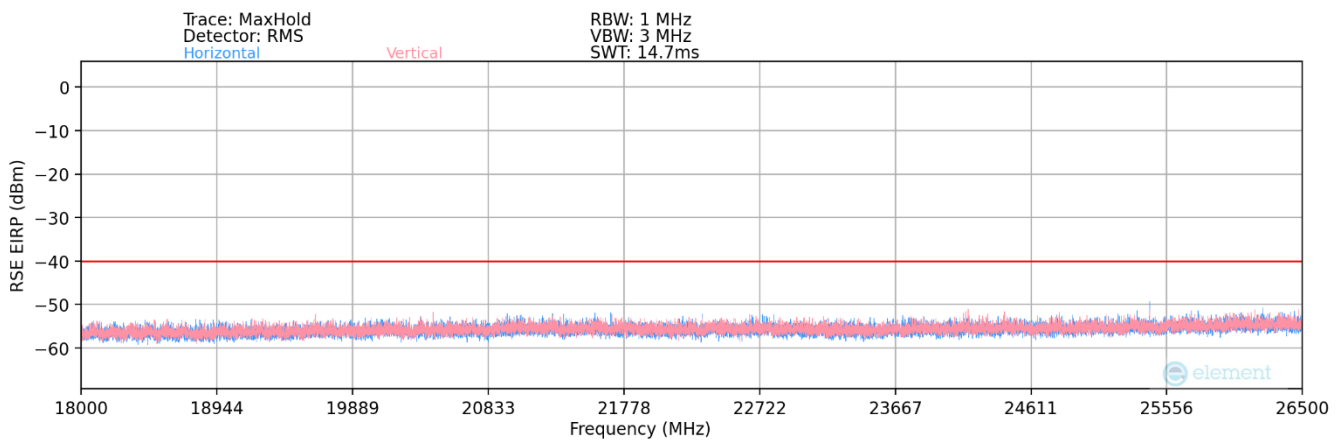
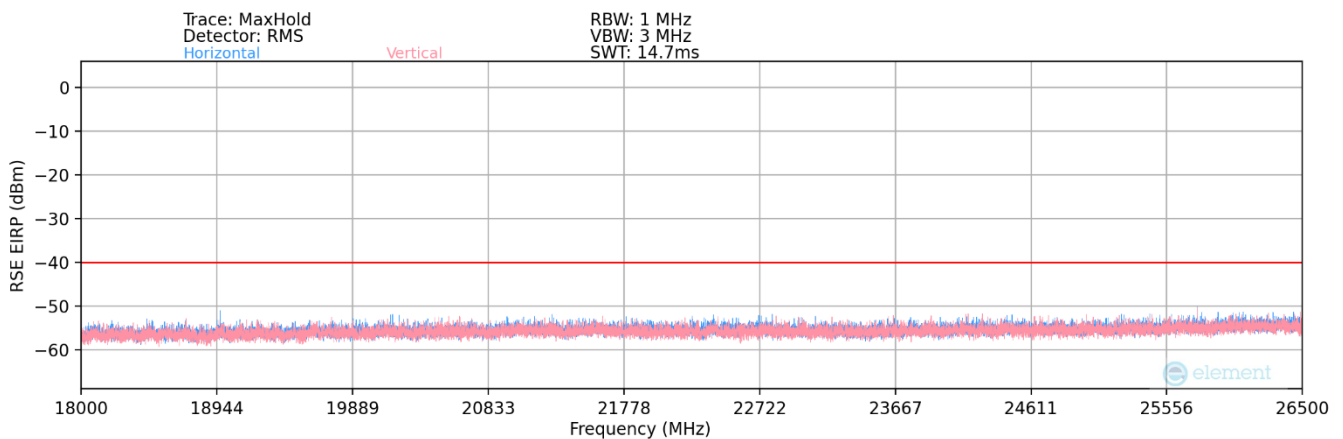


Plot 7-156. Radiated Spurious Plot – 18 – 26.5 GHz (ULCA LB48 – Low Channel)

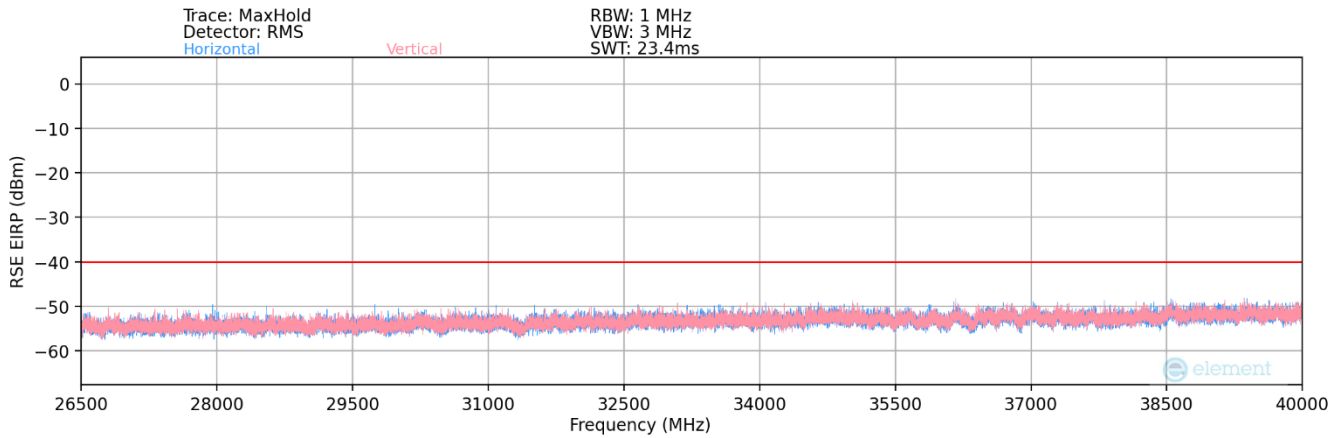


Plot 7-157. Radiated Spurious Plot – 18 – 26.5 GHz (ULCA LB48 – Mid Channel)

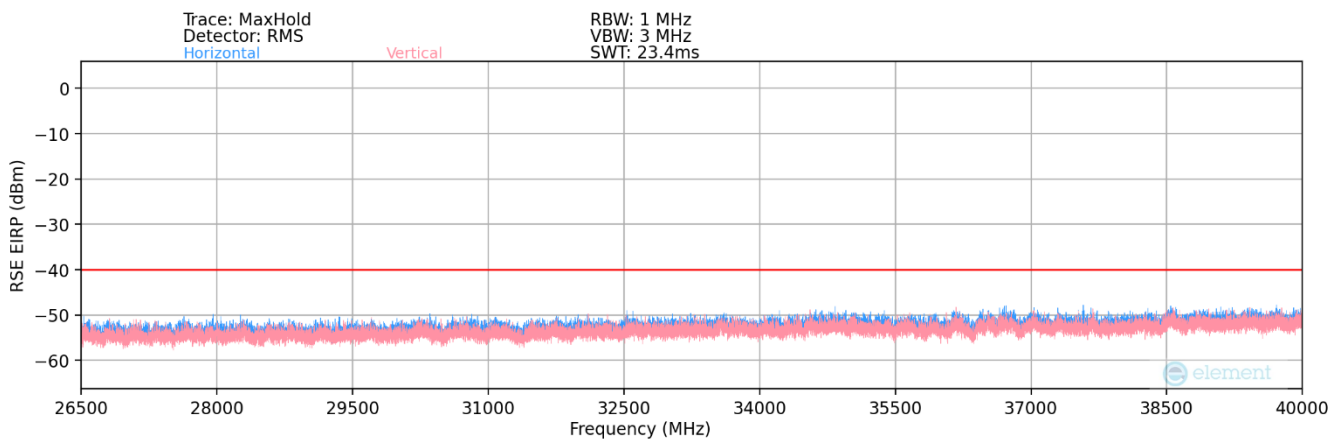


Plot 7-158. Radiated Spurious Plot – 18 – 26.5 GHz (ULCA LB48 – High Channel)

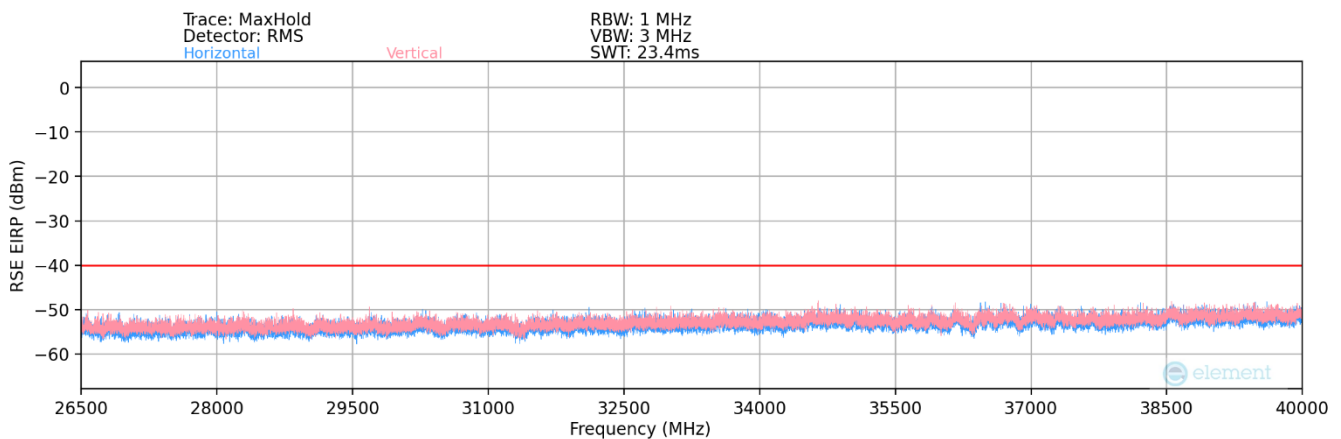
FCC ID: A3LSMS911U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-159. Radiated Spurious Plot – 26.5 - 40 GHz (ULCA LB48 – Low Channel)



Plot 7-160. Radiated Spurious Plot – 26.5 - 40 GHz (ULCA LB48 – Mid Channel)



Plot 7-161. Radiated Spurious Plot – 26.5 - 40 GHz (ULCA LB48 – High Channel)

FCC ID: A3LSMS911U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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PCC Bandwidth (MHz):	20
PCC Frequency (MHz):	3560.0
PCC RB / Offset:	1 / 99
SCC Bandwidth (MHz):	20
SCC Frequency (MHz):	3579.8
SCC RB / Offset:	1 / 0
Modulation Signal:	QPSK

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]
7120.00	H	161	95	-67.45	4.24	43.79	-51.47	-40.00	-11.47
10680.00	H	307	54	-73.31	7.93	41.62	-53.64	-40.00	-13.64
14240.00	H	-	-	-75.30	12.65	44.35	-50.91	-40.00	-10.91
17800.00	H	-	-	-75.66	16.07	47.41	-47.85	-40.00	-7.85
21360.00	H	-	-	-59.48	3.81	51.33	-53.47	-40.00	-13.47

Table 7-21. Radiated Spurious Data (ULCA LB48 – Low Channel - Ant F)

PCC Bandwidth (MHz):	20
PCC Frequency (MHz):	3625.0
PCC RB / Offset:	1 / 99
SCC Bandwidth (MHz):	20
SCC Frequency (MHz):	3644.8
SCC RB / Offset:	1 / 0
Modulation Signal:	QPSK

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]
7250.00	H	225	71	-69.18	3.95	41.77	-53.48	-40.00	-13.48
10875.00	H	250	342	-74.42	8.62	41.20	-54.06	-40.00	-14.06
14500.00	H	-	-	-75.89	13.66	44.77	-50.49	-40.00	-10.49
18125.00	H	-	-	-58.46	1.42	49.95	-54.85	-40.00	-14.85
21750.00	H	-	-	-59.67	3.83	51.16	-53.64	-40.00	-13.64

Table 7-22. Radiated Spurious Data (ULCA LB48 – Mid Channel - Ant F)

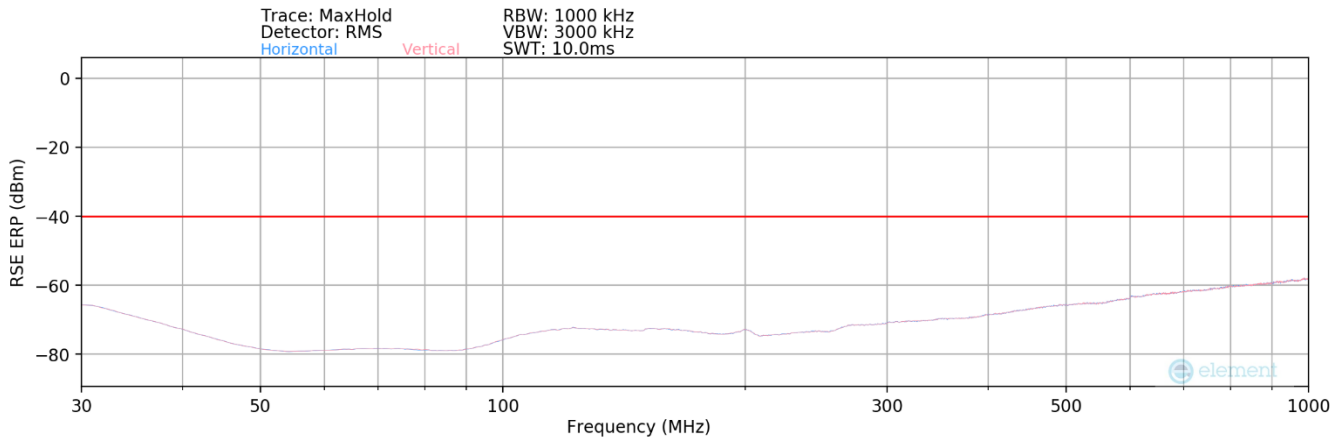
PCC Bandwidth (MHz):	20
PCC Frequency (MHz):	3690.0
PCC RB / Offset:	1 / 0
SCC Bandwidth (MHz):	20
SCC Frequency (MHz):	3670.2
SCC RB / Offset:	1 / 99
Modulation Signal:	QPSK

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]
7380.00	H	-	-	-73.05	4.52	38.47	-56.79	-40.00	-16.79
11070.00	H	-	-	-75.36	8.63	40.27	-54.98	-40.00	-14.98
14760.00	H	-	-	-75.21	13.94	45.73	-49.52	-40.00	-9.52

Table 7-23. Radiated Spurious Data (ULCA LB48 – High Channel - Ant F)

FCC ID: A3LSMS911U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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NR Band n48 – Ant F

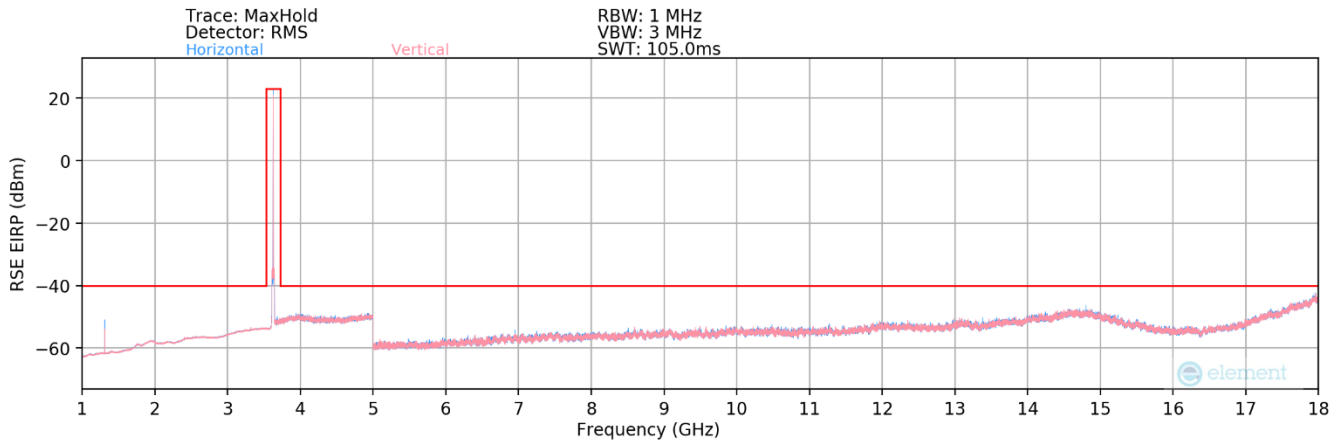


Plot 7-162. Radiated Spurious Plot 30MHz - 1GHz (NR Band n48 – Ant F)

Bandwidth (MHz):	40
Frequency (MHz):	3625.0
Modulation Signal:	QPSK
RB Config (Size / Offset):	1 / 53

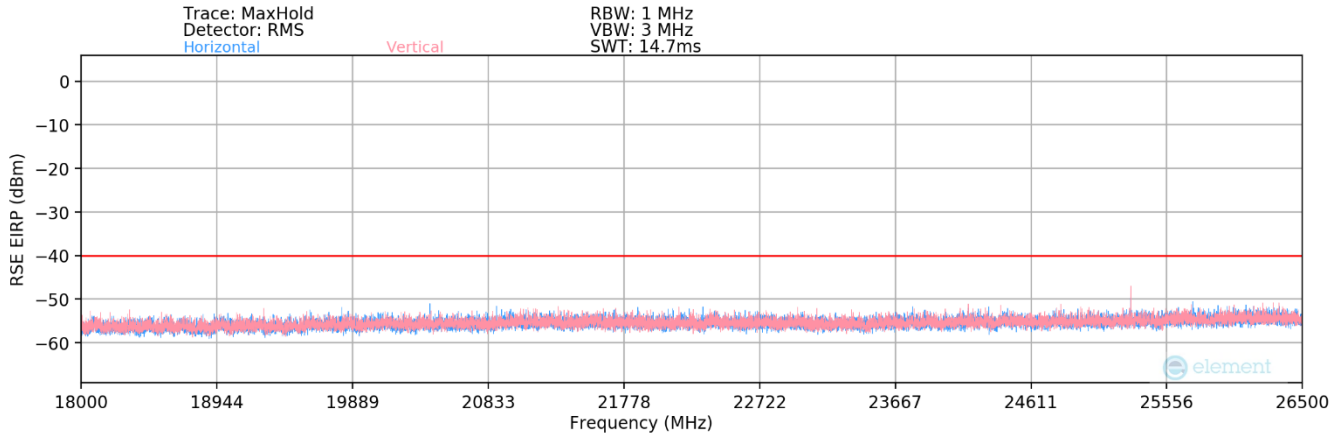
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
34.32	V	-	-	-82.68	18.43	42.75	-54.65	-40.00	-14.65
32.70	V	-	-	-82.65	18.37	42.72	-54.69	-40.00	-14.69
76.28	V	-	-	-82.15	22.58	47.43	-49.98	-40.00	-9.98

Table 7-24. Radiated Spurious Data (NR Band n48 – Ant F)

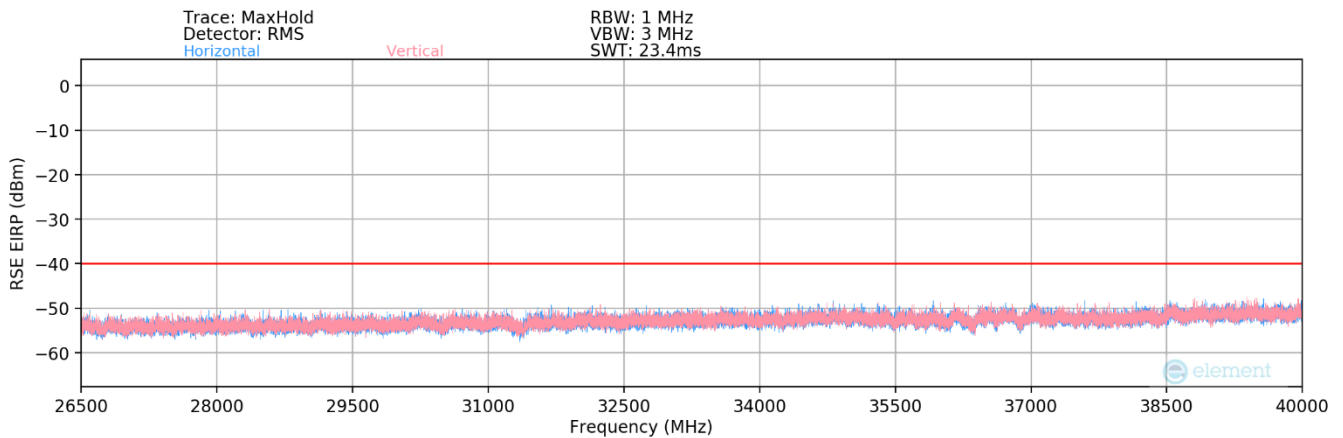


Plot 7-163. Radiated Spurious Plot (NR Band n48 – Ant F)

FCC ID: A3LSMS911U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-164. Radiated Spurious Plot 18-26.5GHz (NR Band n48 – Ant F)



Plot 7-165. Radiated Spurious Plot 26.5-40GHz (NR Band n48 – Ant F)

Bandwidth (MHz):	40
Frequency (MHz):	3570.0
Modulation Signal:	QPSK
RB Config (Size / Offset):	1 / 53

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]
7140.00	V	311	25	-68.93	4.18	42.25	-53.01	-40.00	-13.01
10710.00	V	280	61	-73.24	8.33	42.09	-53.17	-40.00	-13.17
14280.00	V	-	-	-75.94	12.66	43.72	-51.54	-40.00	-11.54
17850.00	V	-	-	-75.36	16.74	48.38	-46.87	-40.00	-6.87
21420.00	V	-	-	-62.74	3.84	48.10	-56.70	-40.00	-16.70
24990.00	V	-	-	-62.94	4.37	48.44	-56.36	-40.00	-16.36
28560.00	V	-	-	-63.21	5.31	49.10	-55.70	-40.00	-15.70

Table 7-25. Radiated Spurious Data (NR Band n48 – Low Channel - Ant F)

FCC ID: A3LSMS911U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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Bandwidth (MHz):	40
Frequency (MHz):	3625.0
Modulation Signal:	QPSK
RB Config (Size / Offset):	1 / 53

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]
7250.00	V	322	4	-68.09	3.95	42.86	-52.39	-40.00	-12.39
10875.00	V	344	58	-73.81	8.62	41.81	-53.45	-40.00	-13.45
14500.00	V	-	-	-75.88	13.66	44.78	-50.48	-40.00	-10.48
18125.00	V	-	-	-62.12	1.42	46.30	-58.50	-40.00	-18.50
21750.00	V	-	-	-62.41	3.83	48.42	-56.38	-40.00	-16.38
25058.00	V	150	348	-55.23	4.45	56.22	-48.58	-40.00	-8.58
28683.00	V	-	-	-63.24	5.53	49.29	-55.51	-40.00	-15.51

Table 7-26. Radiated Spurious Data (NR Band n48 – Mid Channel - Ant F)

Bandwidth (MHz):	40
Frequency (MHz):	3680.0
Modulation Signal:	QPSK
RB Config (Size / Offset):	1 / 53

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]
7360.00	V	128	9	-70.62	4.31	40.69	-54.56	-40.00	-14.56
11040.00	V	233	356	-75.35	8.90	40.55	-54.71	-40.00	-14.71
14720.00	V	-	-	-76.37	14.13	44.76	-50.50	-40.00	-10.50
18400.00	V	-	-	-62.56	1.43	45.87	-58.93	-40.00	-18.93
22080.00	V	-	-	-62.52	3.75	48.23	-56.57	-40.00	-16.57
25760.00	V	-	-	-63.10	4.60	48.51	-56.29	-40.00	-16.29

Table 7-27. Radiated Spurious Data (NR Band n48 – High Channel - Ant F)

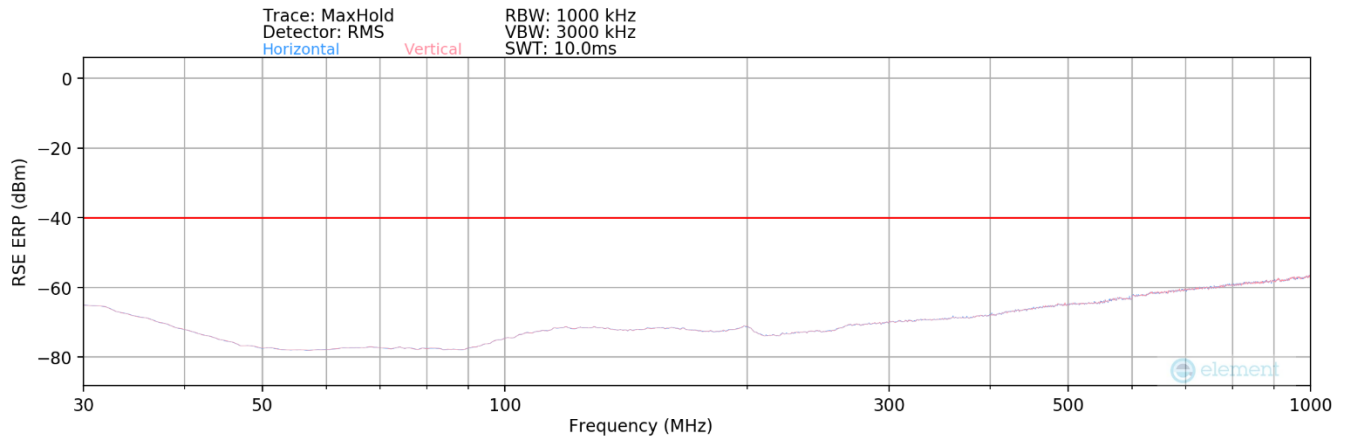
Case:	w/ Wireless Charging Pad
Bandwidth (MHz):	40
Frequency (MHz):	3625.0
Modulation Signal:	QPSK
RB Config (Size / Offset):	1/53

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]
7250.00	V	280	52	-73.01	7.59	41.58	-53.68	-40.00	-13.68
10875.00	V	-	-	-78.73	11.86	40.13	-55.12	-40.00	-15.12
14500.00	V	-	-	-78.93	15.32	43.39	-51.87	-40.00	-11.87

Table 7-28. Radiated Spurious Data with WCP (NR Band n48 – High Channel - Ant F)

FCC ID: A3LSMS911U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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NR Band n48 – Ant C



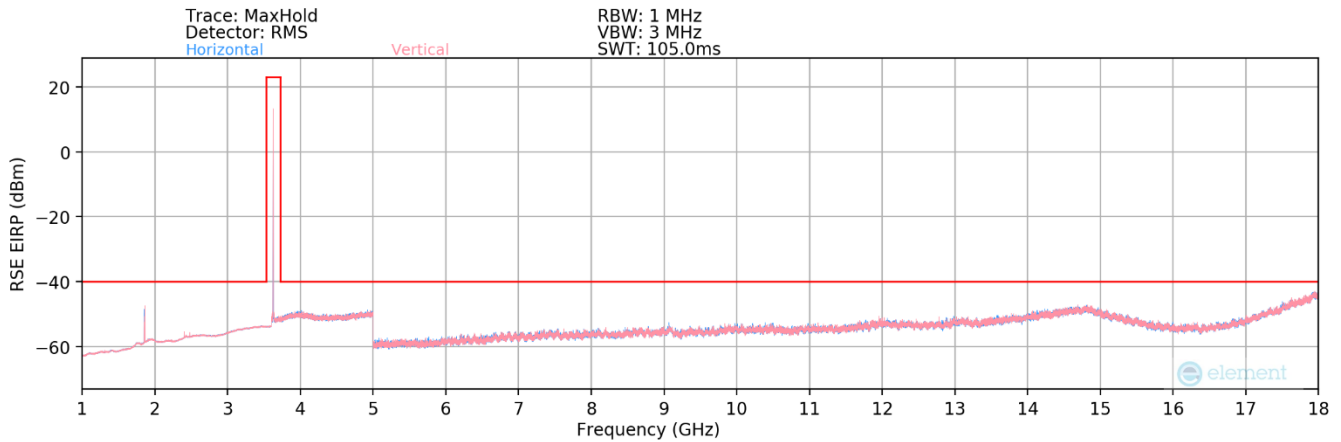
Plot 7-166. Radiated Spurious Plot 30 MHz-1 GHz (NR Band n48 – Ant C)

Bandwidth (MHz):	40
Frequency (MHz):	3680.0
Modulation Signal:	QPSK
RB Config (Size / Offset):	1 / 53

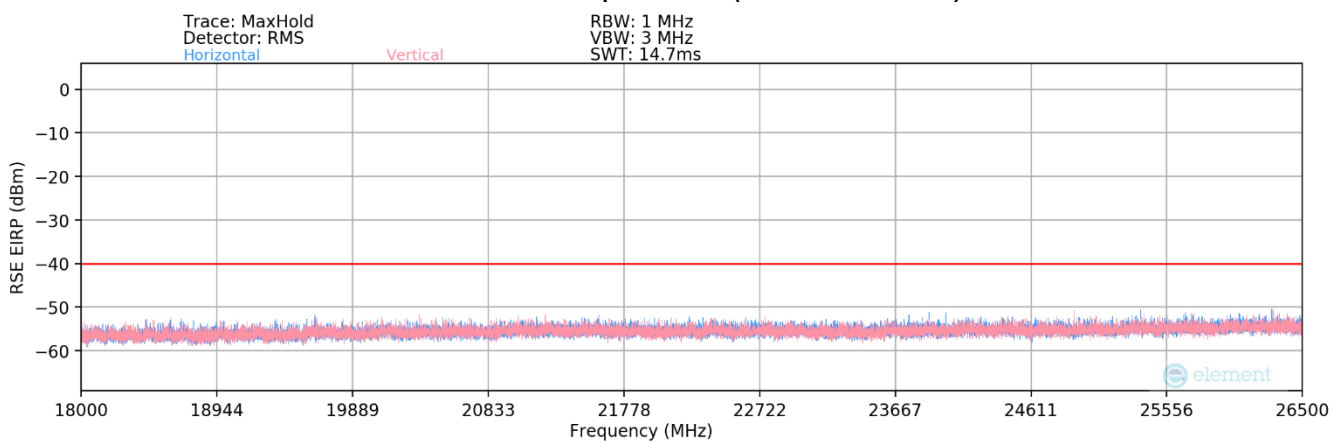
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
97.03	V	-	-	-81.35	16.84	42.49	-54.92	-40.00	-14.92
304.24	V	-	-	-80.82	21.33	47.51	-49.90	-40.00	-9.90
478.36	V	-	-	-81.25	25.57	51.32	-46.09	-40.00	-6.09

Table 7-29. Radiated Spurious Data (NR Band n48 – Ant C)

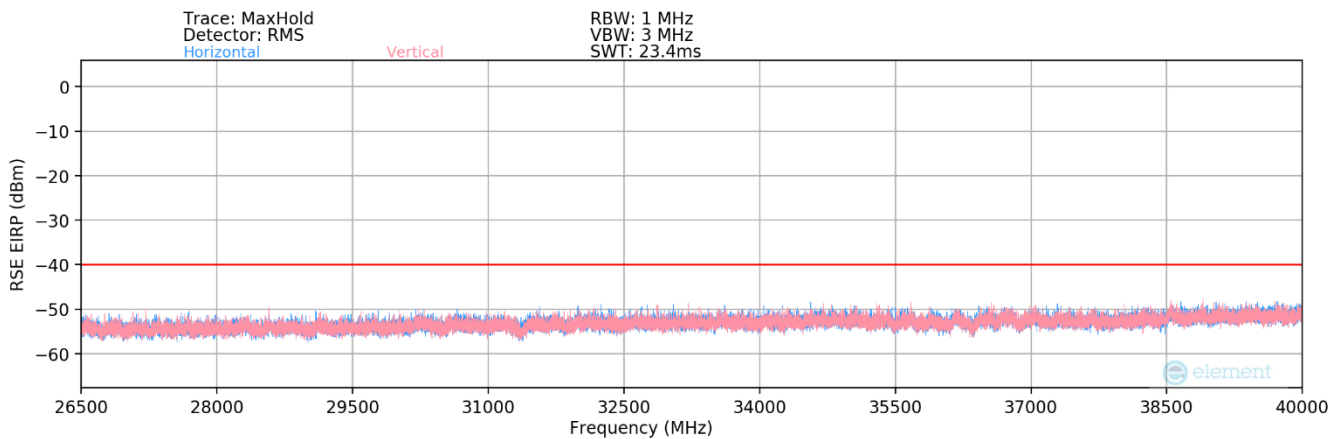
FCC ID: A3LSMS911U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-167. Radiated Spurious Plot (NR Band n48 – Ant C)



Plot 7-168. Radiated Spurious Plot (NR Band n48 – Ant C)



Plot 7-169. Radiated Spurious Plot (NR Band n48 – Ant C)

FCC ID: A3LSMS911U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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Bandwidth (MHz):	40
Frequency (MHz):	3570.0
Modulation Signal:	QPSK
RB Config (Size / Offset):	1 / 53

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]
7140.00	V	114	41	-73.09	3.97	37.88	-57.38	-40.00	-17.38
10710.00	V	-	-	-76.10	8.42	39.32	-55.93	-40.00	-15.93
14280.00	V	-	-	-76.04	13.25	44.21	-51.05	-40.00	-11.05
17850.00	V	-	-	-75.97	16.74	47.77	-47.48	-40.00	-7.48

Table 7-30. Radiated Spurious Data (NR Band n48 – Low Channel - Ant C)

Bandwidth (MHz):	40
Frequency (MHz):	3625.0
Modulation Signal:	QPSK
RB Config (Size / Offset):	1 / 53

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]
7250.00	V	112	37	-71.30	3.95	39.65	-55.60	-40.00	-15.60
10875.00	V	-	-	-75.80	8.62	39.82	-55.44	-40.00	-15.44
14500.00	V	-	-	-75.27	13.66	45.39	-49.87	-40.00	-9.87
18125.00	V	-	-	-57.34	1.42	51.08	-53.72	-40.00	-13.72
21750.00	V	-	-	-58.16	3.83	52.67	-52.13	-40.00	-12.13
25375.00	V	150	24	-55.44	4.45	56.01	-48.79	-40.00	-8.79
29000.00	V	-	-	-57.66	5.53	54.87	-49.93	-40.00	-9.93
32625.00	V	-	-	-56.93	6.85	56.92	-47.88	-40.00	-7.88

Table 7-31. Radiated Spurious Data (NR Band n48 – Mid Channel - Ant C)

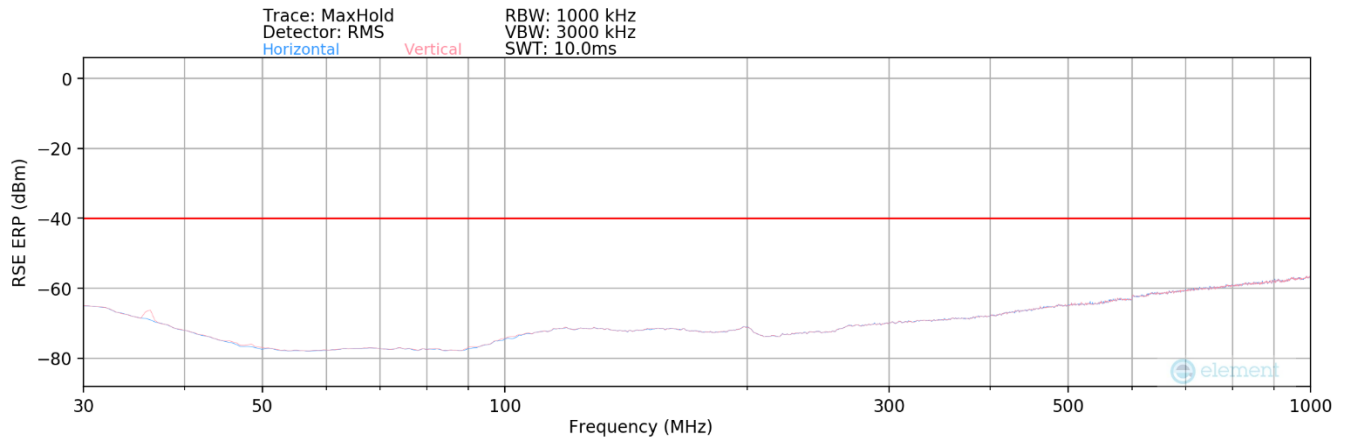
Bandwidth (MHz):	40
Frequency (MHz):	3680.0
Modulation Signal:	QPSK
RB Config (Size / Offset):	1 / 53

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]
7360.00	V	309	29	-70.41	4.20	40.79	-54.47	-40.00	-14.47
11040.00	V	-	-	-76.45	8.26	38.81	-56.45	-40.00	-16.45
14720.00	V	-	-	-76.34	14.16	44.82	-50.44	-40.00	-10.44
18400.00	V	-	-	-58.23	1.43	50.20	-54.60	-40.00	-14.60

Table 7-32. Radiated Spurious Data (NR Band n48 – High Channel - Ant C)

FCC ID: A3LSMS911U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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NR Band n48 – Ant I



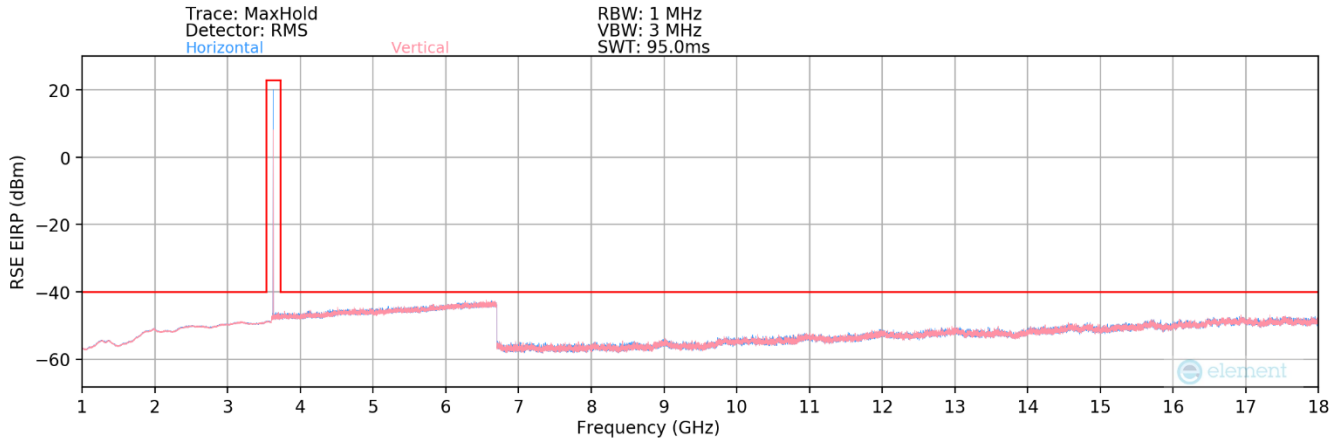
Plot 7-170. Radiated Spurious Plot 30 MHz-1 GHz (NR Band n48 – Ant I)

Bandwidth (MHz):	40
Frequency (MHz):	3570.0
Modulation Signal:	QPSK
RB Config (Size / Offset):	1 / 53

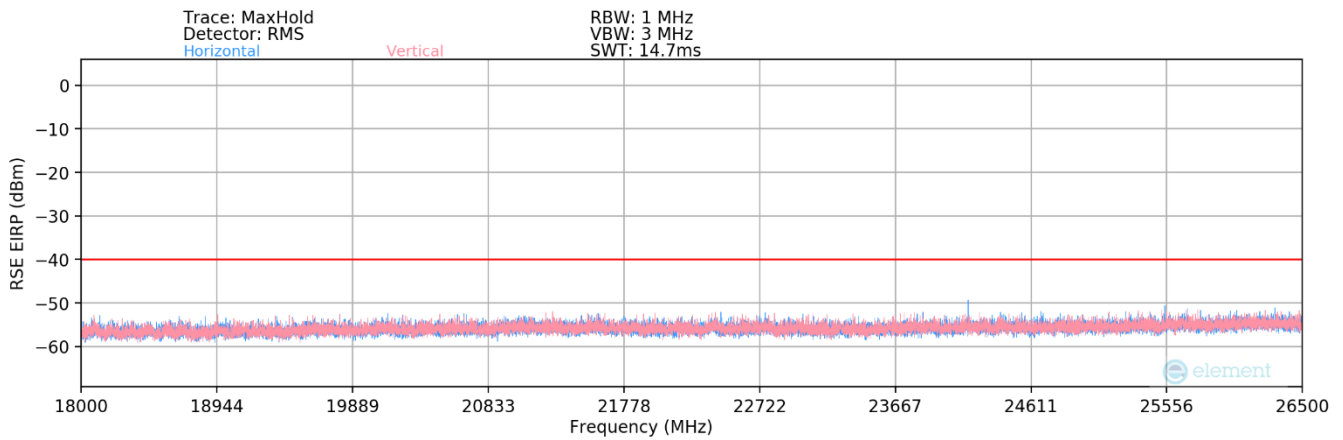
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dB μ V/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
195.35	H	-	-	-81.24	19.42	45.18	-52.23	-40.00	-12.23
312.74	H	-	-	-81.03	21.45	47.42	-49.99	-40.00	-9.99
476.44	H	-	-	-80.80	25.44	51.64	-45.77	-40.00	-5.77

Table 7-33. Radiated Spurious Data (NR Band n48 – Ant I)

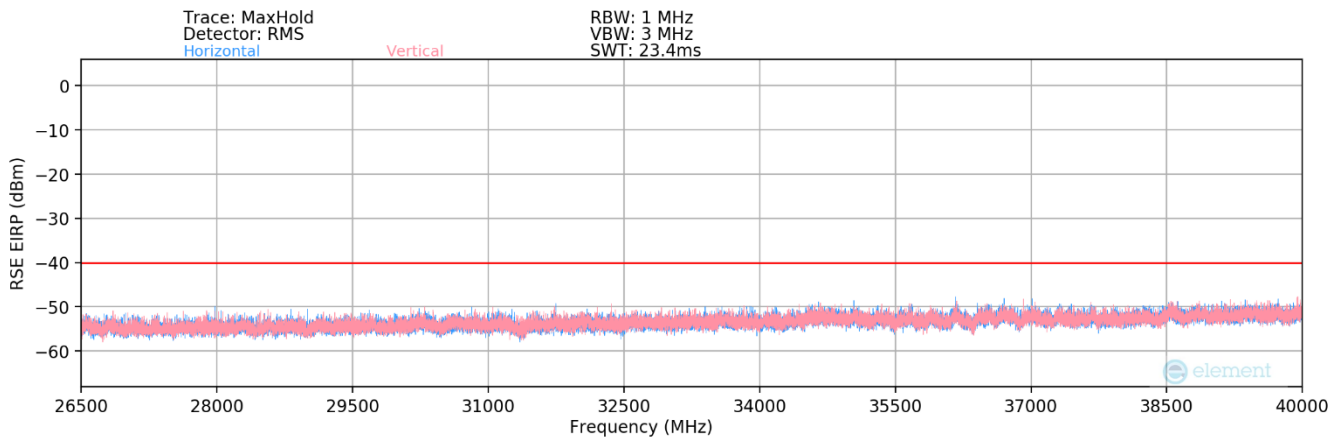
FCC ID: A3LSMS911U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-171. Radiated Spurious Plot (NR Band n48 – Ant I)



Plot 7-172. Radiated Spurious Plot (NR Band n48 – Ant I)



Plot 7-173. Radiated Spurious Plot (NR Band n48 – Ant I)

FCC ID: A3LSMS911U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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Bandwidth (MHz):	40
Frequency (MHz):	3570.0
Modulation Signal:	QPSK
RB Config (Size / Offset):	1 / 53

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]
7140.00	H	176	70	-74.07	8.26	41.19	-54.07	-40.00	-14.07
10710.00	H	-	-	-78.89	12.00	40.11	-55.15	-40.00	-15.15
14280.00	H	-	-	-78.92	15.04	43.12	-52.13	-40.00	-12.13
17850.00	H	-	-	-78.98	17.84	45.86	-49.40	-40.00	-9.40
21420.00	H	-	-	-58.00	3.84	52.84	-51.96	-40.00	-11.96
24990.00	H	150	296	-51.68	4.37	59.69	-45.11	-40.00	-5.11
28560.00	H	150	310	-51.33	5.31	60.98	-43.82	-40.00	-3.82
32130.00	H	-	-	-56.34	7.37	58.03	-46.77	-40.00	-6.77

Table 7-34. Radiated Spurious Data (NR Band n48 – Low Channel - Ant I)

Bandwidth (MHz):	40
Frequency (MHz):	3625.0
Modulation Signal:	QPSK
RB Config (Size / Offset):	1 / 53

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]
7250.00	H	175	74	-74.41	7.59	40.18	-55.08	-40.00	-15.08
10875.00	H	-	-	-78.93	11.86	39.93	-55.32	-40.00	-15.32
14500.00	H	-	-	-79.04	15.32	43.28	-51.98	-40.00	-11.98
18125.00	H	-	-	-56.92	1.42	51.50	-53.30	-40.00	-13.30
21750.00	H	-	-	-57.19	3.83	53.64	-51.16	-40.00	-11.16
25375.00	H	150	296	-50.98	4.45	60.47	-44.33	-40.00	-4.33
29000.00	H	150	322	-52.51	5.53	60.02	-44.78	-40.00	-4.78
32625.00	H	-	-	-56.58	6.85	57.27	-47.53	-40.00	-7.53

Table 7-35. Radiated Spurious Data (NR Band n48 – Mid Channel - Ant I)

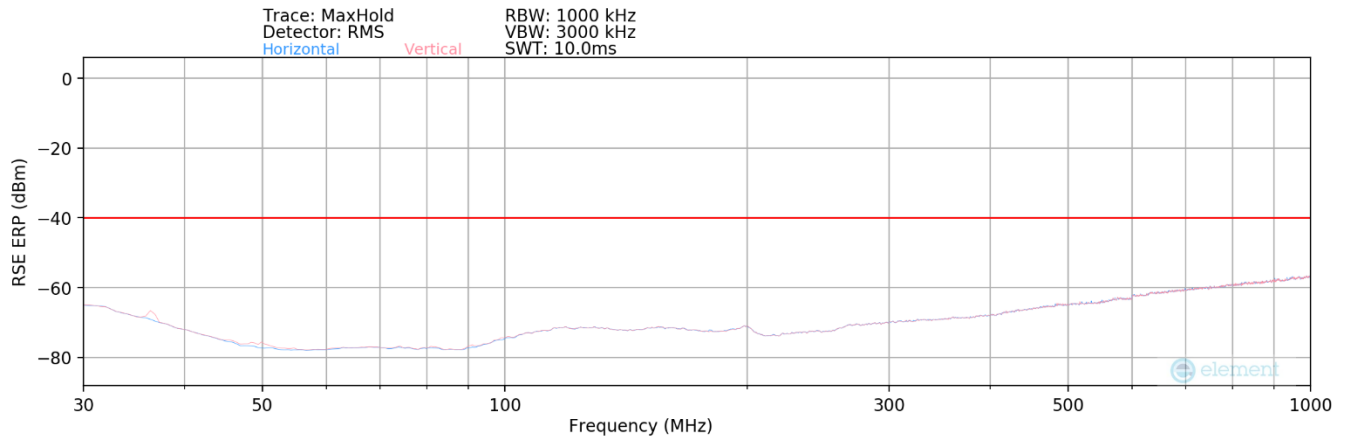
Bandwidth (MHz):	40
Frequency (MHz):	3680.0
Modulation Signal:	QPSK
RB Config (Size / Offset):	1 / 53

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]
7360.00	H	183	51	-73.56	7.24	40.68	-54.58	-40.00	-14.58
11040.00	H	-	-	-77.76	12.14	41.38	-53.88	-40.00	-13.88
14720.00	H	-	-	-79.16	15.36	43.20	-52.06	-40.00	-12.06
18400.00	H	-	-	-57.54	1.43	50.89	-53.91	-40.00	-13.91
22080.00	H	-	-	-57.66	3.75	53.09	-51.71	-40.00	-11.71
25760.00	H	150	308	-50.63	4.60	60.97	-43.83	-40.00	-3.83
29440.00	H	-	-	-57.97	5.88	54.91	-49.89	-40.00	-9.89
33120.00	H	-	-	-57.79	7.36	56.57	-48.23	-40.00	-8.23

Table 7-36. Radiated Spurious Data (NR Band n48 – High Channel - Ant I)

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NR Band n48 – Ant D



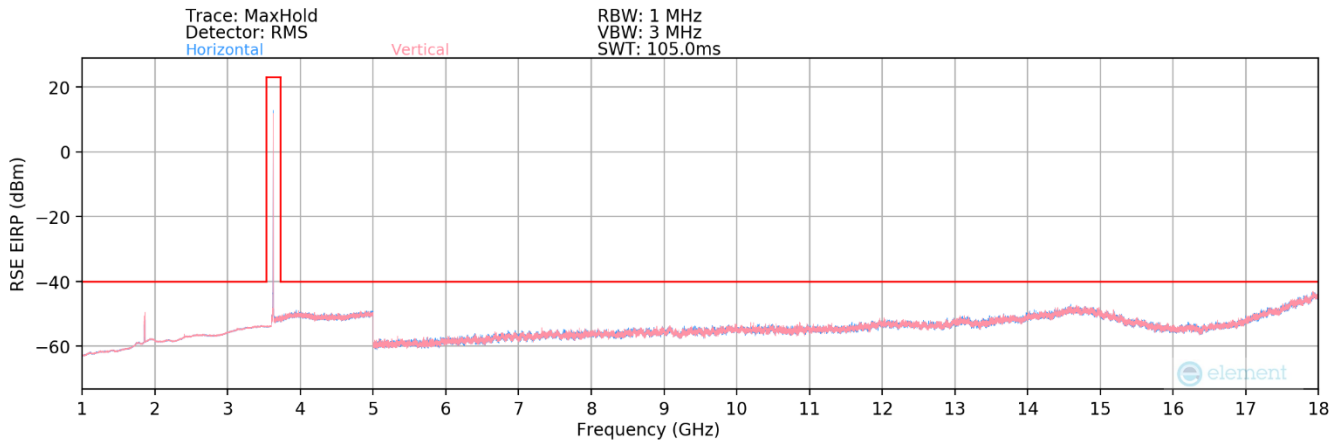
Plot 7-174. Radiated Spurious Plot 30 MHz-1 GHz (NR Band n48 – Ant D)

Bandwidth (MHz):	40
Frequency (MHz):	3570.0
Modulation Signal:	QPSK
RB Config (Size / Offset):	1 / 53

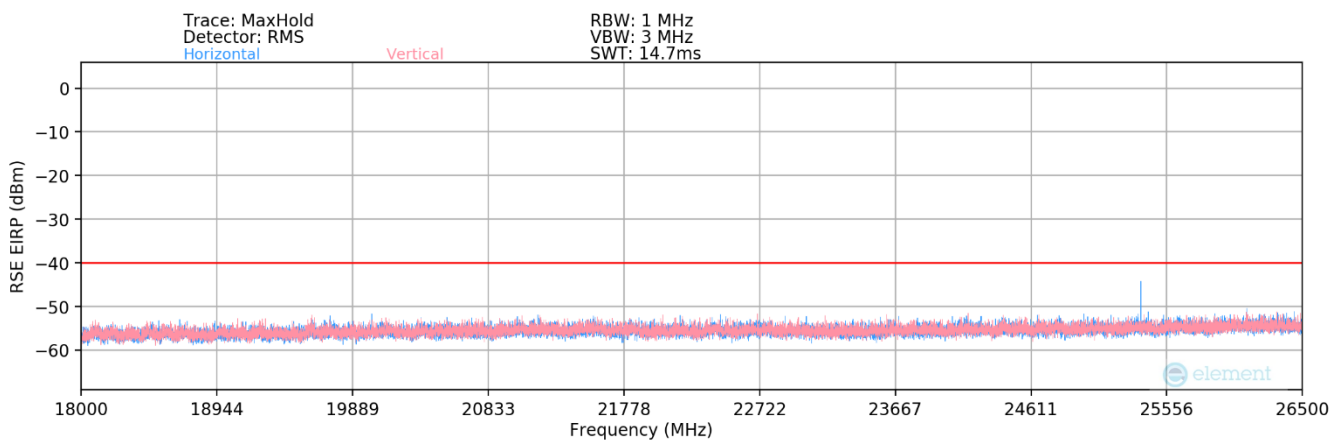
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
36.00	H	-	-	-81.23	23.38	49.15	-48.26	-40.00	-8.26
102.64	H	-	-	-80.99	17.73	43.74	-53.67	-40.00	-13.67
299.27	H	-	-	-80.62	21.17	47.55	-49.86	-40.00	-9.86

Table 7-37. Radiated Spurious Data (NR Band n48 – Ant D)

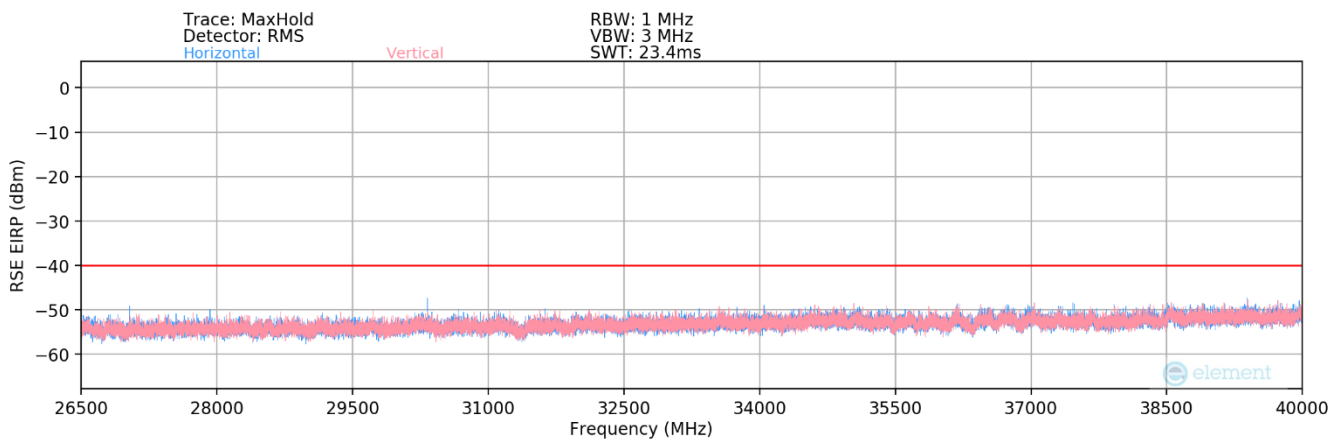
FCC ID: A3LSMS911U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2209010096-07.A3L	Test Dates: 10/06/2022 - 11/21/2022	EUT Type: Portable Handset	Page 124 of 136



Plot 7-175. Radiated Spurious Plot (NR Band n48 – Ant D)



Plot 7-176. Radiated Spurious Plot (NR Band n48 – Ant D)



Plot 7-177. Radiated Spurious Plot (NR Band n48 – Ant D)

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Bandwidth (MHz):	40
Frequency (MHz):	3570.0
Modulation Signal:	QPSK
RB Config (Size / Offset):	1 / 53

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]
7140.00	H	191	9	-69.05	4.18	42.13	-53.13	-40.00	-13.13
10710.00	H	111	329	-74.62	8.33	40.71	-54.55	-40.00	-14.55
14280.00	H	-	-	-76.35	12.66	43.31	-51.95	-40.00	-11.95
17850.00	H	-	-	-76.56	16.74	47.18	-48.07	-40.00	-8.07
21420.00	H	-	-	-57.06	3.84	53.78	-51.02	-40.00	-11.02
24990.00	H	150	299	-50.74	4.37	60.63	-44.17	-40.00	-4.17
28560.00	H	150	348	-55.92	5.31	56.39	-48.41	-40.00	-8.41
32130.00	H	-	-	-57.11	7.37	57.26	-47.54	-40.00	-7.54

Table 7-38. Radiated Spurious Data (NR Band n48 – Low Channel - Ant D)

Bandwidth (MHz):	40
Frequency (MHz):	3625.0
Modulation Signal:	QPSK
RB Config (Size / Offset):	1 / 53

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]
7250.00	H	164	325	-69.24	3.95	41.71	-53.54	-40.00	-13.54
10875.00	H	-	-	-75.84	8.62	39.78	-55.48	-40.00	-15.48
14500.00	H	-	-	-76.06	13.66	44.60	-50.66	-40.00	-10.66
18125.00	H	-	-	-57.26	1.42	51.16	-53.64	-40.00	-13.64
21750.00	H	-	-	-58.29	3.83	52.54	-52.26	-40.00	-12.26
25375.00	H	150	310	-52.23	4.45	59.22	-45.58	-40.00	-5.58
29000.00	H	150	344	-55.22	5.53	57.31	-47.49	-40.00	-7.49
32625.00	H	-	-	-57.10	6.85	56.75	-48.05	-40.00	-8.05

Table 7-39. Radiated Spurious Data (NR Band n48 – Mid Channel - Ant D)

Bandwidth (MHz):	40
Frequency (MHz):	3680.0
Modulation Signal:	QPSK
RB Config (Size / Offset):	1 / 53

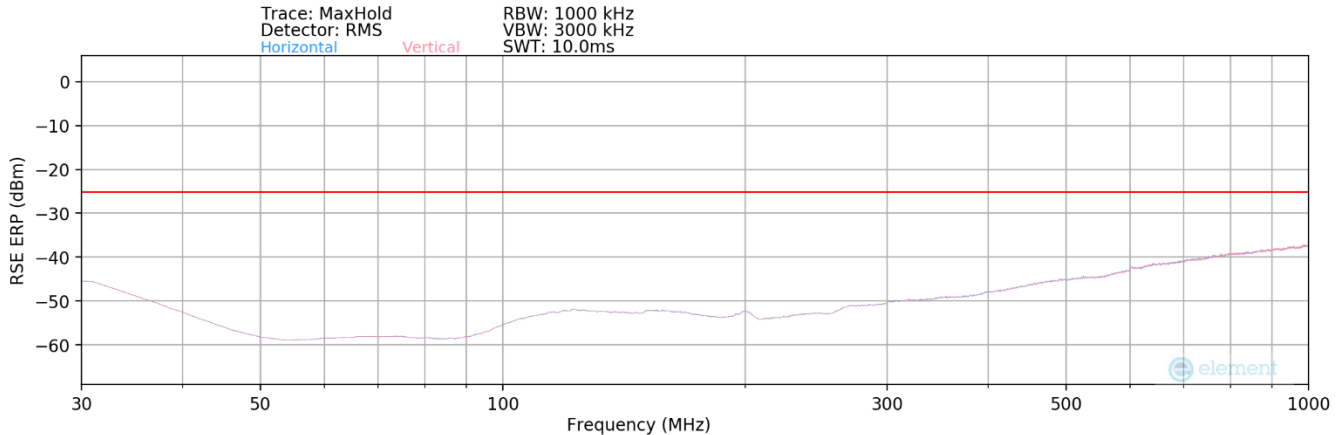
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
7360.00	H	161	92	-69.45	4.31	41.86	-53.39	-40.00	-13.39
11040.00	H	-	-	-76.21	8.90	39.69	-55.57	-40.00	-15.57
14720.00	H	-	-	-76.31	14.13	44.82	-50.44	-40.00	-10.44
18400.00	H	-	-	-57.70	1.43	50.73	-54.07	-40.00	-14.07
22080.00	H	-	-	-57.85	3.75	52.90	-51.90	-40.00	-11.90
25760.00	H	150	322	-50.29	4.60	61.31	-43.49	-40.00	-3.49
29440.00	H	150	20	-57.68	5.88	55.20	-49.60	-40.00	-9.60
33120.00	H	-	-	-57.70	7.36	56.66	-48.14	-40.00	-8.14

Table 7-40. Radiated Spurious Data (NR Band n48 – High Channel - Ant D)

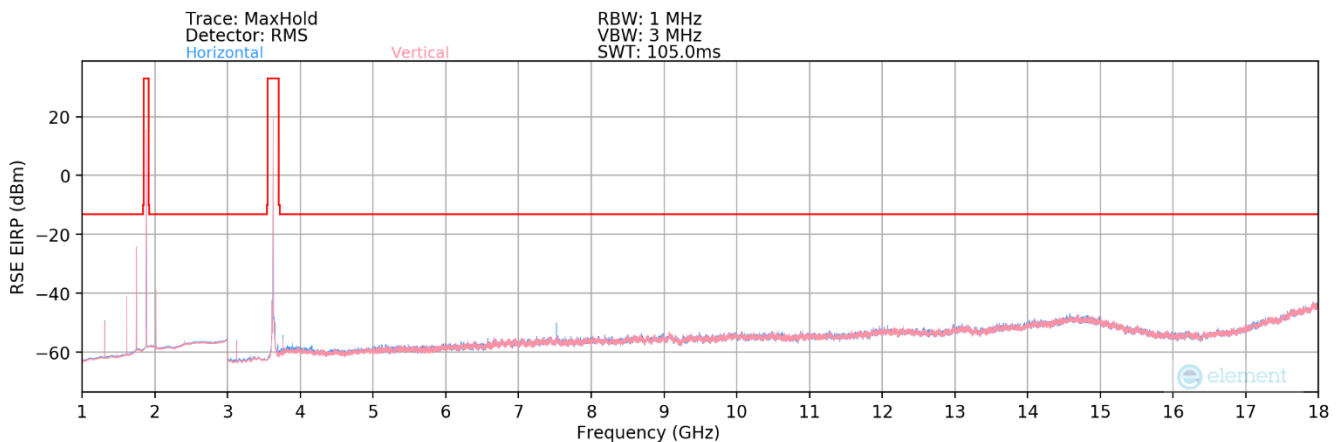
FCC ID: A3LSMS911U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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EN-DC: NR Band n48 – LTE Band 2



Plot 7-178. Radiated Spurious Plot 30 MHz-1 GHz (EN-DC: NR Band n48 – LTE Band 2)



Plot 7-179. Radiated Spurious Plot 1 GHz-18 GHz (EN-DC: NR Band n48 – LTE Band 2)

Bandwidth (MHz):	20 & 40
Frequency (MHz):	1880 & 3625
RB / Offset:	1 / 50 & 1 / 53
Mode:	EN-DC
Anchor Band:	LTE B2

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]
218.00	V	-	-	-85.40	17.80	39.40	-55.85	-13.00	-42.85
1310.00	V	186	38	-39.67	-2.08	65.25	-30.00	-13.00	-17.00
1610.00	V	157	346	-50.73	-1.05	55.22	-40.04	-13.00	-27.04
1745.00	V	197	333	-35.42	0.68	72.26	-23.00	-13.00	-10.00
2015.00	V	154	353	-49.27	1.56	59.29	-35.97	-13.00	-22.97
3760.00	V	135	1	-68.32	-1.44	37.24	-58.02	-13.00	-45.02
5640.00	V	-	-	-74.79	0.87	33.08	-62.18	-13.00	-49.18
6980.00	V	-	-	-74.91	3.56	35.65	-59.61	-13.00	-46.61

Table 7-41. Radiated Spurious Data (EN-DC: NR Band n48 – LTE Band 2)

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7.8 Frequency Stability / Temperature Variation

Test Overview and Limit

Frequency stability testing is performed in accordance with the guidelines of ANSI C63.26-2015. The frequency stability of the transmitter is measured by:

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

For Part 96, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

Test Procedure Used

ANSI C63.26-2015 – Section 5.6

Test Settings

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

Test Setup

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

Test Notes

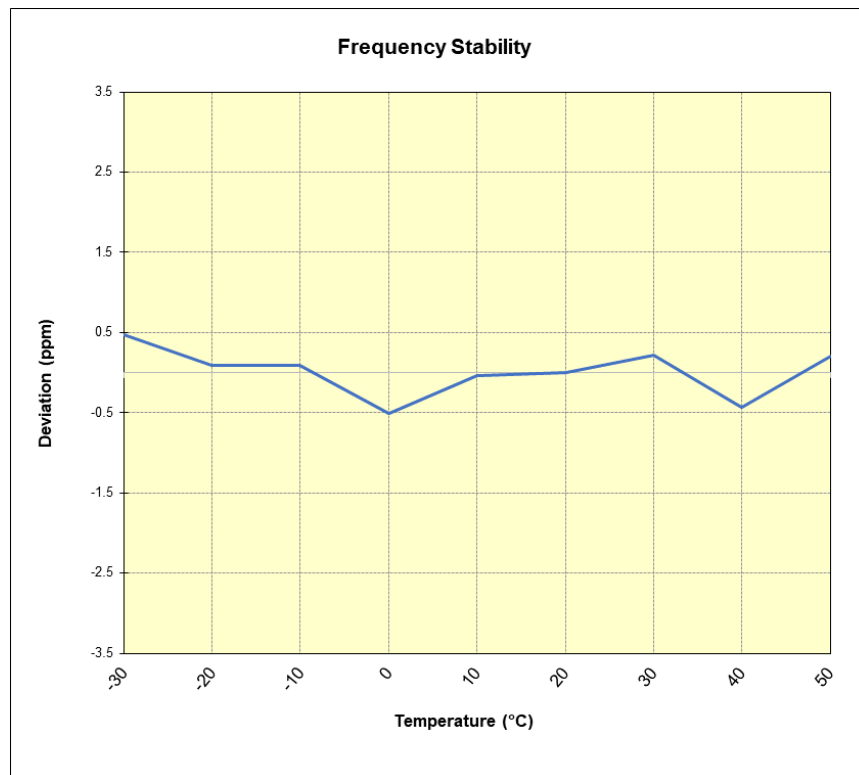
None

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Frequency Stability / Temperature Variation

LTE Band 48					
		Operating Frequency (Hz):		3,625,000,000	
		Ref. Voltage (VDC):		4.34	
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.34	- 30	3,625,093,013	1,711	0.0000472
		- 20	3,625,091,630	328	0.0000091
		- 10	3,625,091,625	323	0.0000089
		0	3,625,089,436	-1,866	-0.0000515
		+ 10	3,625,091,159	-143	-0.0000039
		+ 20 (Ref)	3,625,091,302	0	0.0000000
		+ 30	3,625,092,105	803	0.0000221
		+ 40	3,625,089,740	-1,562	-0.0000431
Battery Endpoint	3.71	+ 20	3,625,091,210	-92	-0.0000025

Table 7-42. LTE Band 48 Frequency Stability Data



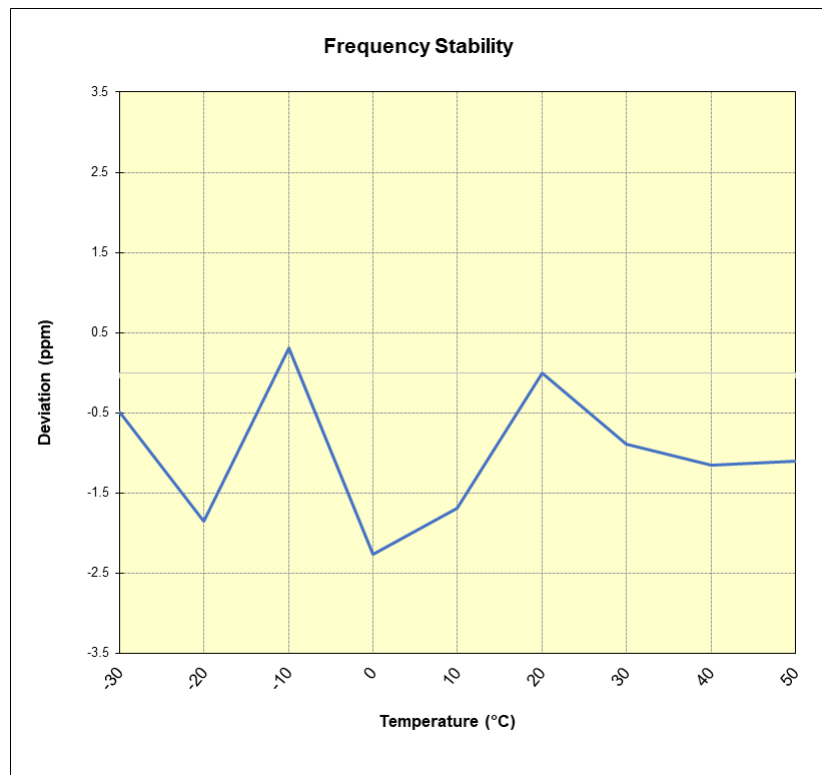
Plot 7-180. LTE Band 48 Frequency Stability Chart

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Frequency Stability / Temperature Variation

NR Band n48					
Operating Frequency (Hz):		3,625,000,000			
Ref. Voltage (VDC):		4.34			
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.34	- 30	3,625,018,369	-1,776	-0.0000490
		- 20	3,625,013,440	-6,705	-0.0001850
		- 10	3,625,021,258	1,114	0.0000307
		0	3,625,011,956	-8,189	-0.0002259
		+ 10	3,625,014,034	-6,111	-0.0001686
		+ 20 (Ref)	3,625,020,145	0	0.0000000
		+ 30	3,625,016,921	-3,223	-0.0000889
		+ 40	3,625,015,994	-4,150	-0.0001145
Battery Endpoint	3.71	+ 20	3,625,012,044	-8,101	-0.0002235

Table 7-43. NR Band n48 Frequency Stability Data



Plot 7-181. NR Band n48 Frequency Stability Chart

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7.9 End User Device Additional Requirement (CBSD Protocol)

Test Overview and Limit

End user device additional requirements are tested per the test procedures listed below. During testing, the EUT is connected to a certified LTE CBSD (Ruckus FCC ID: S9GQ910US00) and an NR CBSD (AirSpan FCC ID: PIDAV2700) as a companion device to show compliance with Part 96.47.

End User Devices may operate only if they can positively receive and decode an authorization signal transmitted by a CBSD, including the frequencies and power limits for their operation.

An End User Device must discontinue operations, change frequencies, or change its operational power level within 10 seconds of receiving instructions from its associated CBSD.

Test Procedure Used

KDB 940660 D01 v03, WINNF-18-IN-00178 v1.0.0.00, WINNF-TS-0122 v1.0.2

Test Setup/Method

The EUT was connected via an RF cable to a certified CBSD and spectrum analyzer. The following procedure is performed by applying WINNF-TS-0122 CBRS CBSD Test Specification.

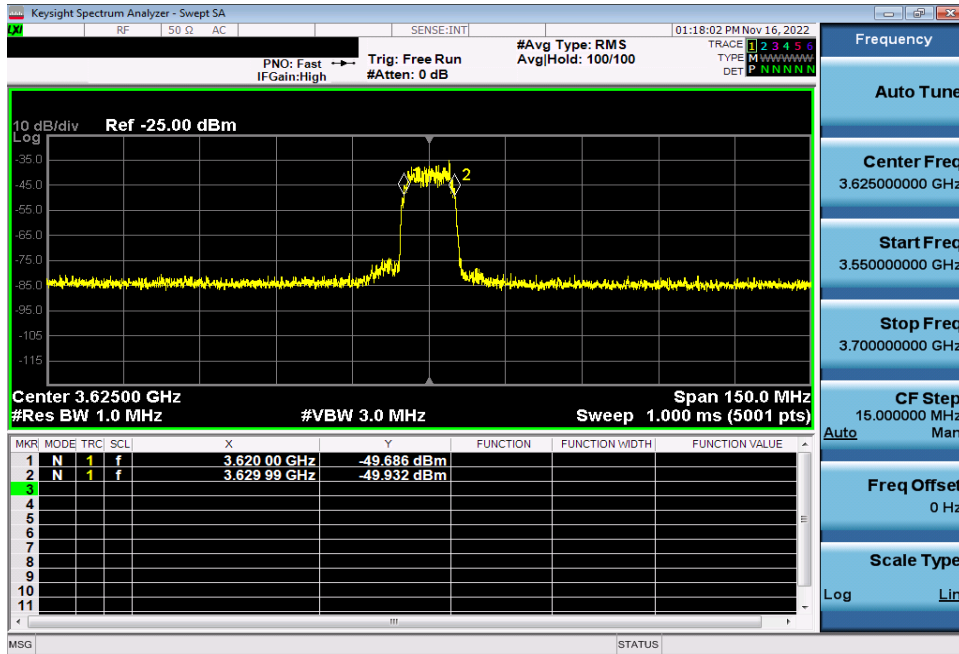
1. Run#1:
 - a. Setup WINNF.PT.C.HBT.1 with 3615MHz – 3635MHz.
 - b. Enable AP/CBSD service.
 - c. Check EUT Tx frequency.
 - d. Disable AP/CBSD service and check EUT stop transmission within 10s.
2. Run#2:
 - a. Setup WINNF.PT.C.HBT.1 with 3660MHz – 3680MHz.
 - b. Enable AP/CBSD service.
 - c. Check EUT Tx frequency.
 - d. Disable AP/CBSD service and check EUT stop transmission within 10s.

Test Notes

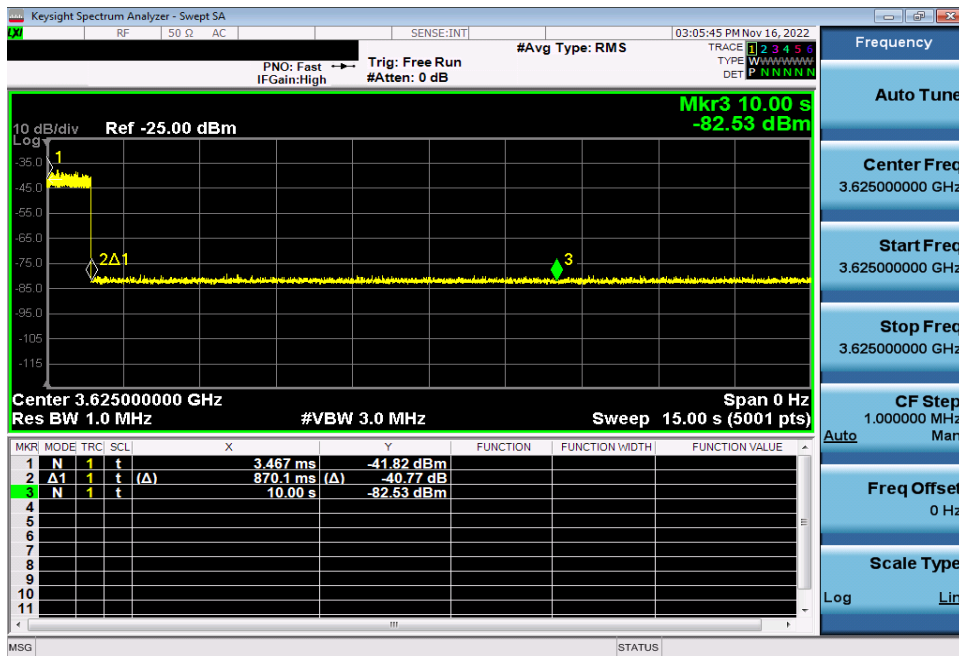
The EUT is an End User Device.

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Run#1 LTE Band 48:



Plot 7-182. Run#1 End User Device Frequency of Operations



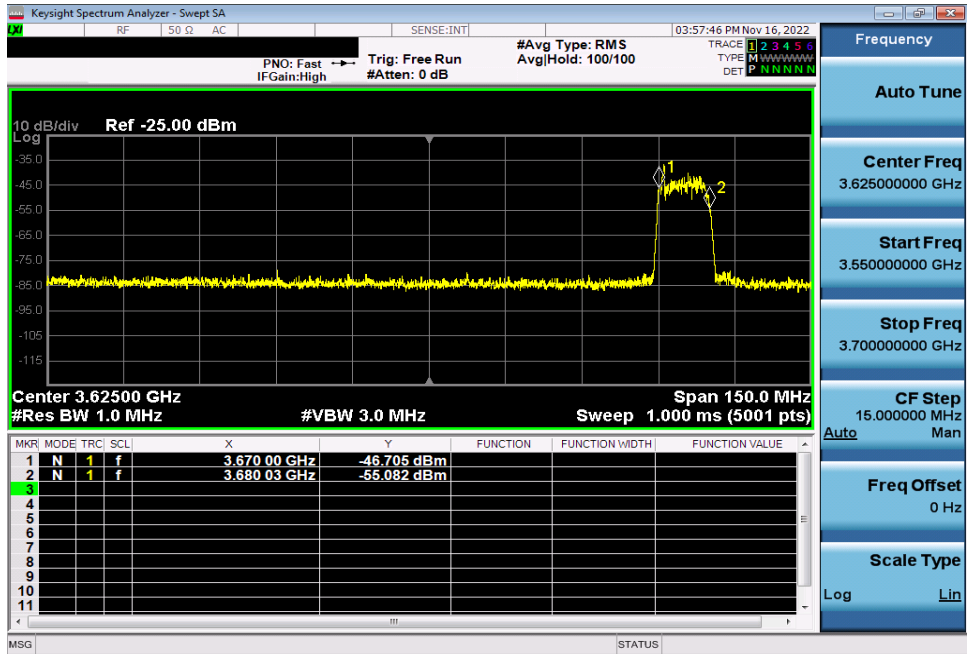
Plot 7-183. Run#1 End User Device Discontinues Operations within 10s

Note:

- Marker 1: CBSD sends instructions to discontinue LTE operations.
- Marker 2: EUT discontinues operation.
- Marker 3: 10 seconds elapsed time from CBSD sending instructions to EUT.

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Run#2 LTE Band 48:



Plot 7-184. Run#2 End User Device Frequency of Operations



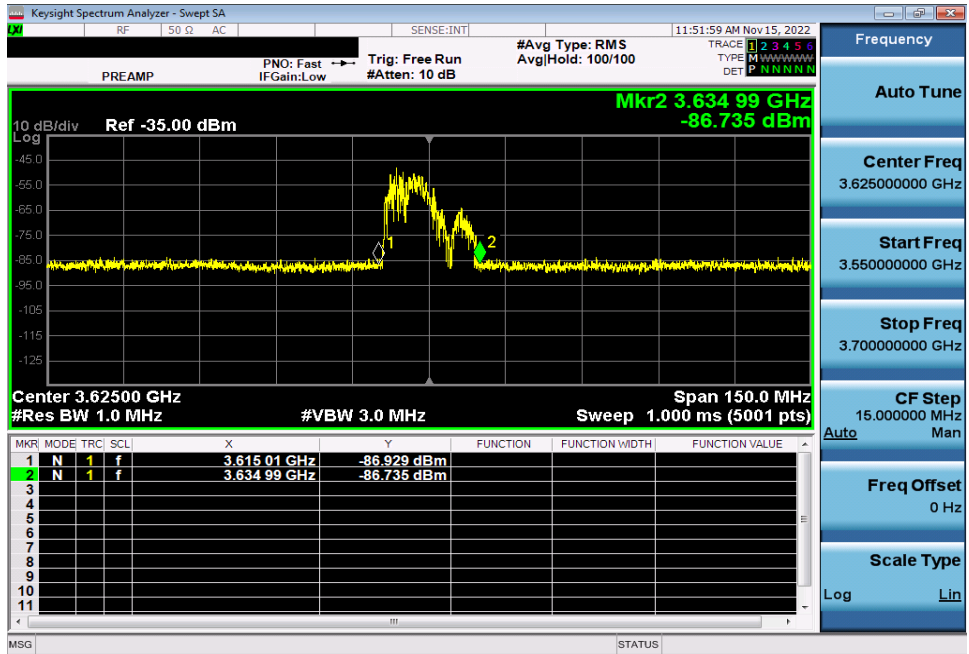
Plot 7-185. Run#2 End User Device Discontinues Operations within 10s

Note:

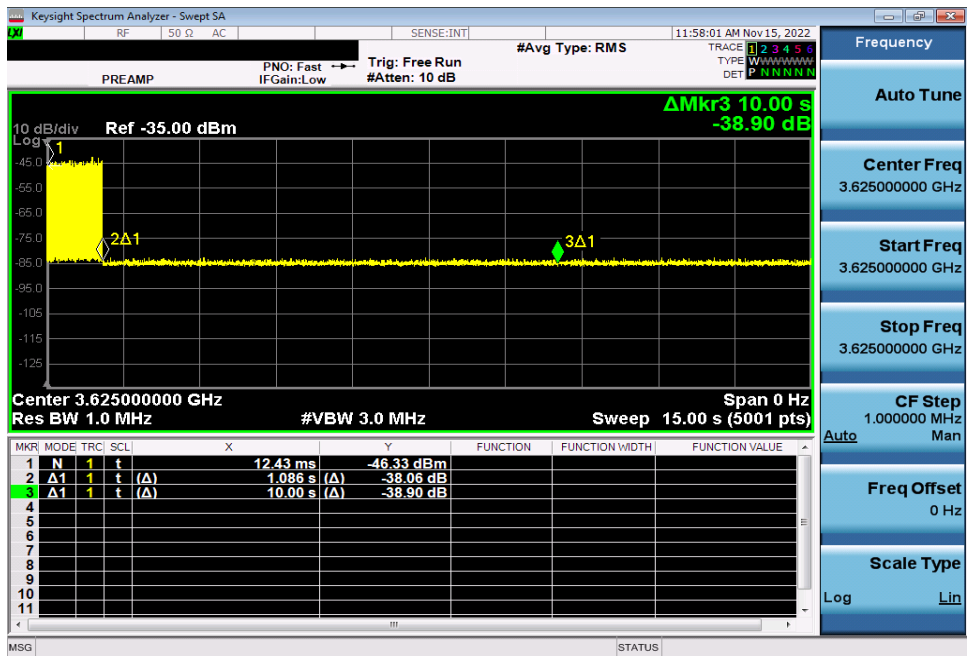
- Marker 1: CBSD sends instructions to discontinue LTE operations.
- Marker 2: EUT discontinues operation.
- Marker 3: 10 seconds elapsed time from CBSD sending instructions to EUT.

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Run#1 NR n48:



Plot 7-186. Run#1 End User Device Frequency of Operations



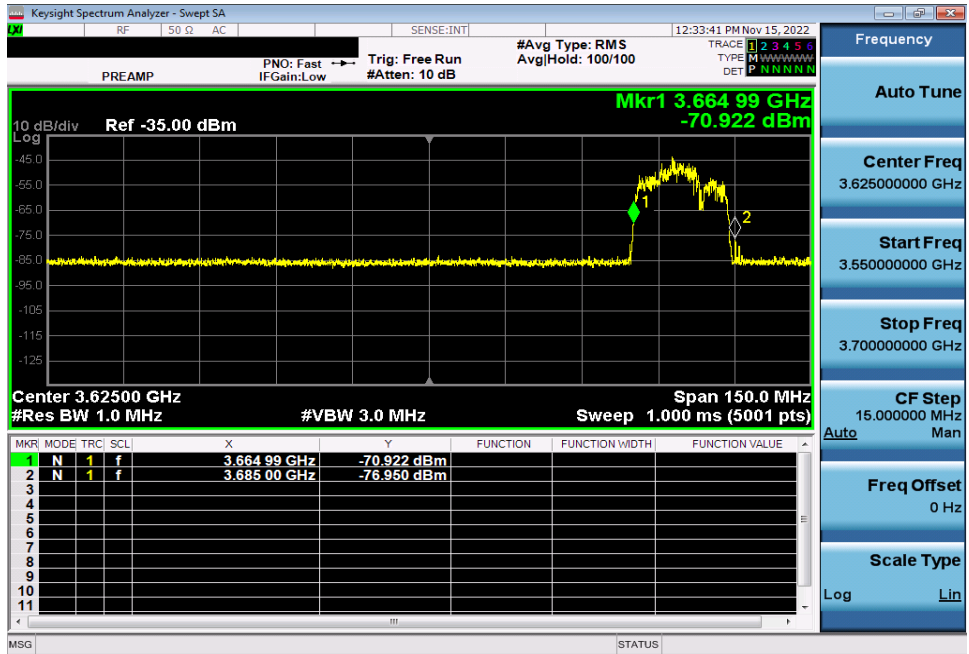
Plot 7-187. Run#1 End User Device Discontinues Operations within 10s

Note:

- Marker 1: CBSD sends instructions to discontinue LTE operations.
- Marker 2: EUT discontinues operation.
- Marker 3: 10 seconds elapsed time from CBSD sending instructions to EUT.

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Run#2 NR n48:



Plot 7-188. Run#2 End User Device Frequency of Operations



Plot 7-189. Run#2 End User Device Discontinues Operations within 10s

Note:

- Marker 1: CBSD sends instructions to discontinue LTE operations.
- Marker 2: EUT discontinues operation.
- Marker 3: 10 seconds elapsed time from CBSD sending instructions to EUT.

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8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Samsung Portable Handset FCC ID: A3LSMS911U** complies with all of the End User Device requirements of Part 96 of the FCC Rules for LTE operation only.

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