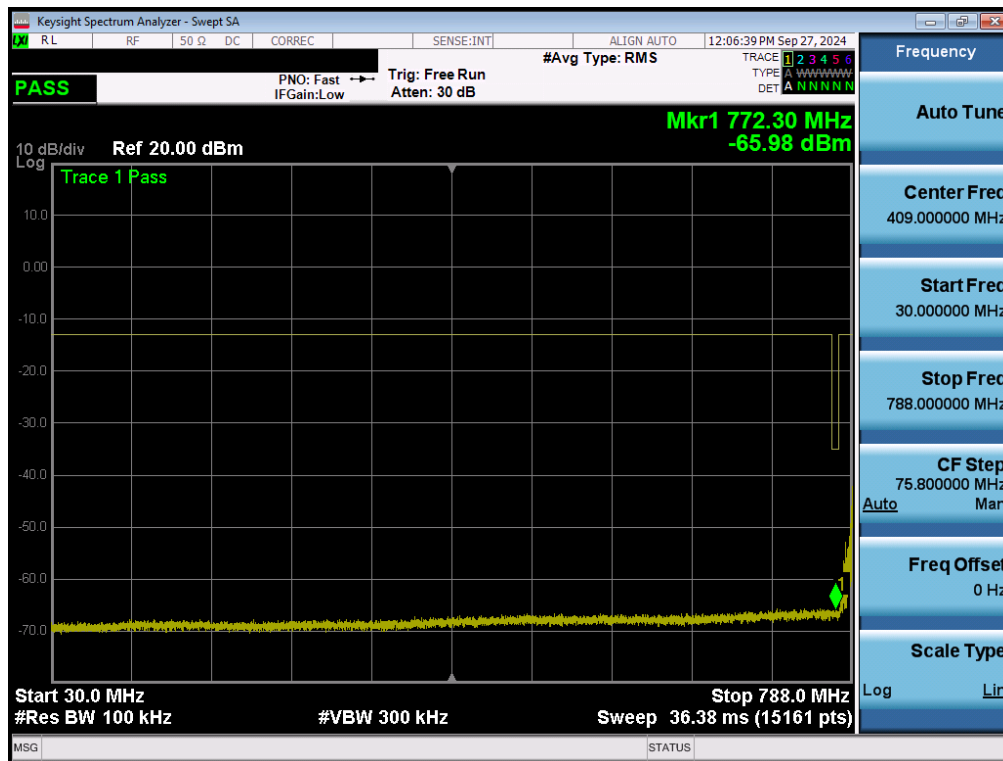
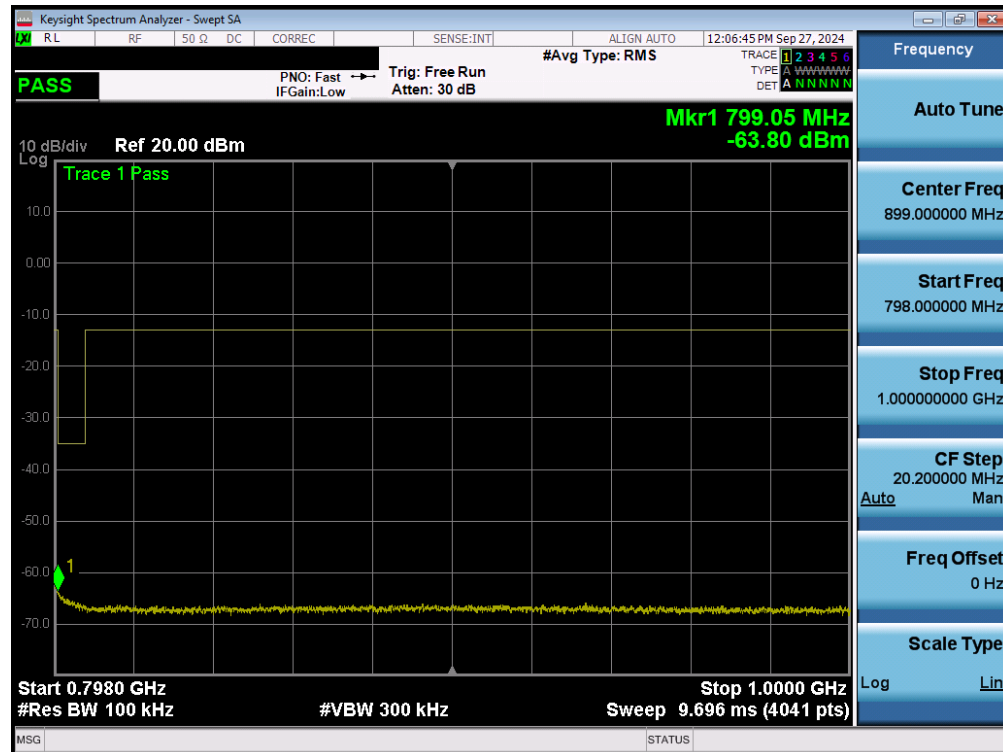


LTE Band 14 - Ant A

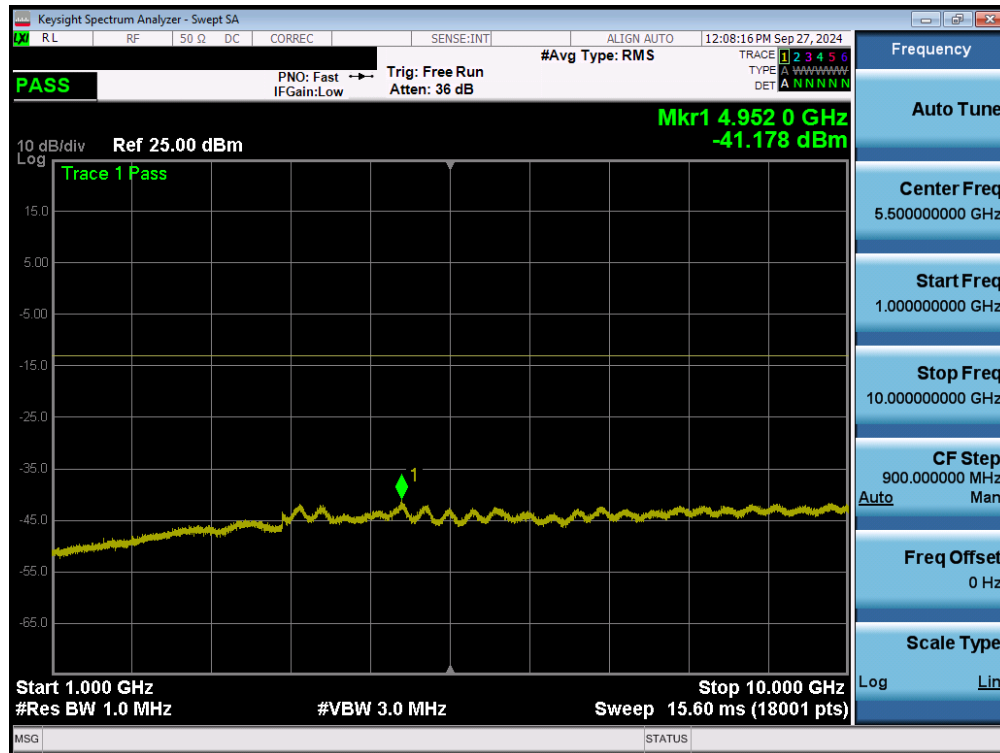


Plot 7-99. Conducted Spurious Plot (LTE Band 14 - 15MHz QPSK - RB Size 1, RB Offset 25)



Plot 7-100. Conducted Spurious Plot (LTE Band 14 - 15MHz QPSK - RB Size 1, RB Offset 25)

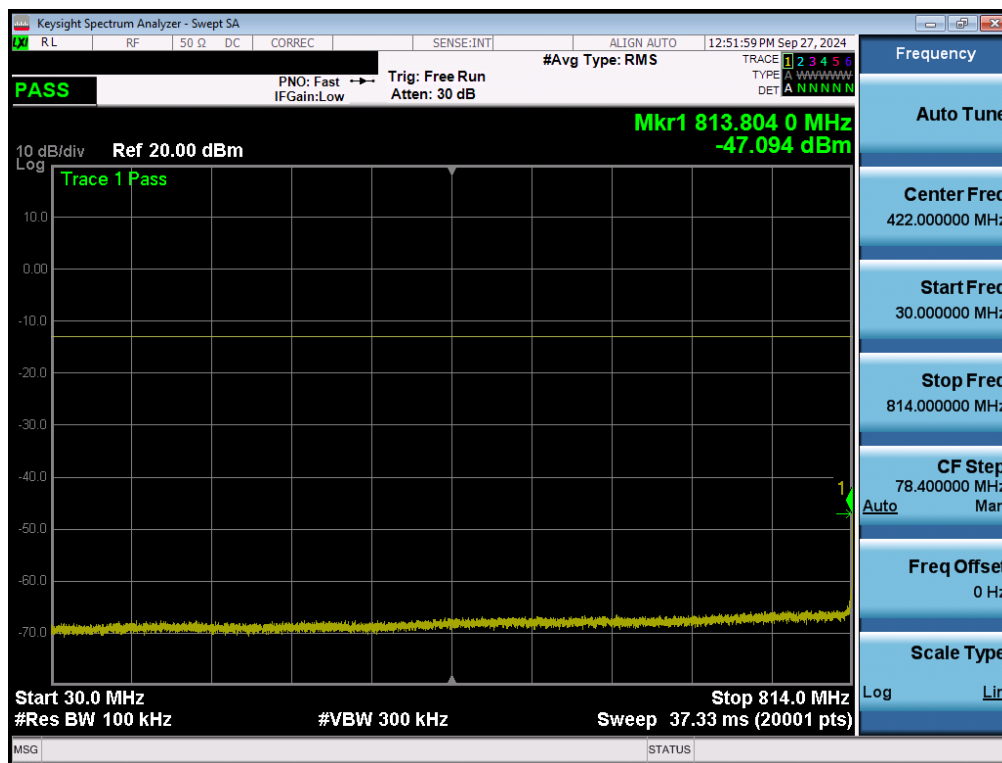
FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 74 of 128



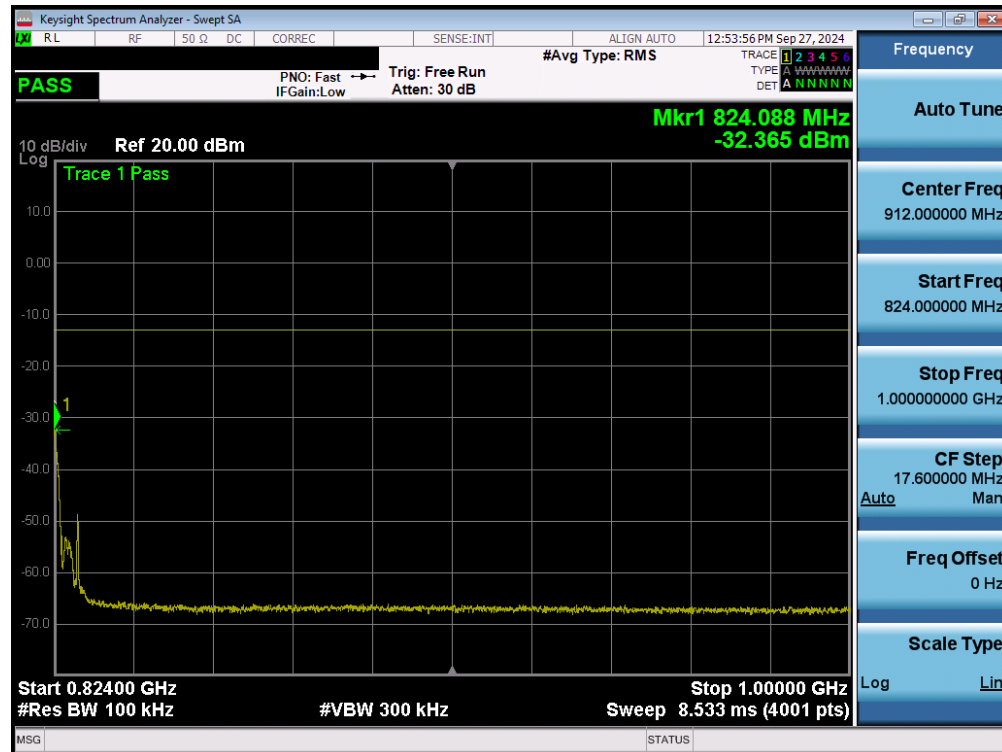
Plot 7-101. Conducted Spurious Plot (LTE Band 14 - 15MHz QPSK - RB Size 1, RB Offset 25)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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LTE Band 26 -Ant A

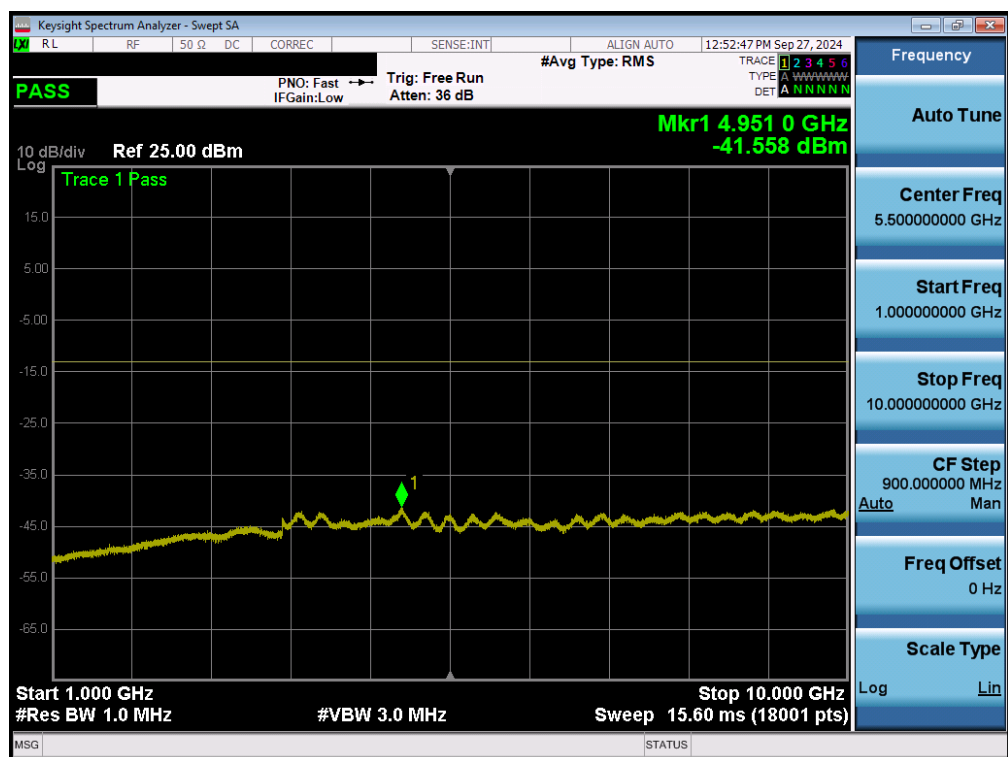


Plot 7-102. Conducted Spurious Plot (LTE Band 26 - 15MHz QPSK - RB Size 1, RB Offset 37)



Plot 7-103. Conducted Spurious Plot (LTE Band 26 - 15MHz QPSK - RB Size 1, RB Offset 37)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 76 of 128

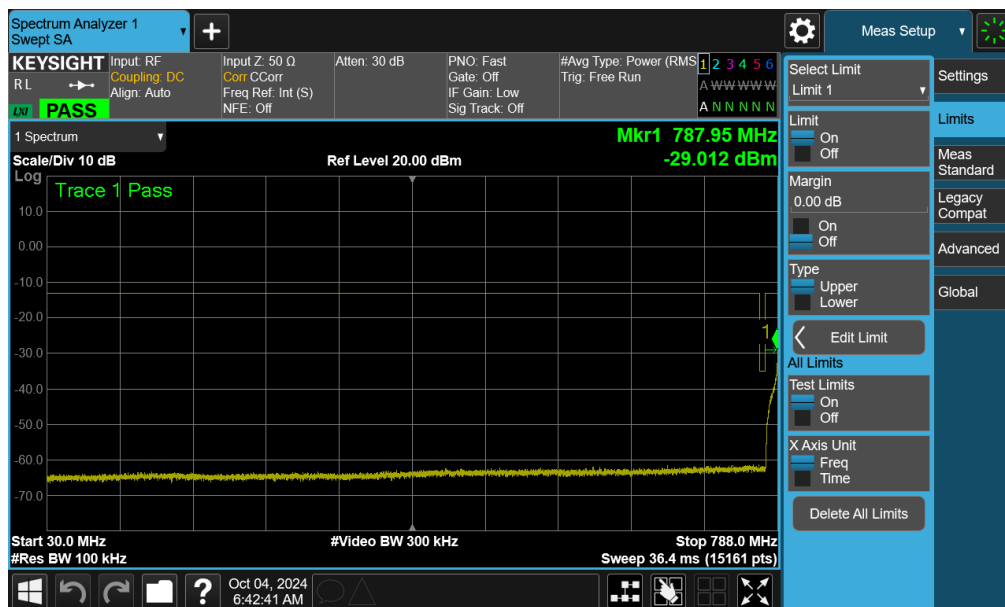


Plot 7-104. Conducted Spurious Plot (LTE Band 26 - 15MHz QPSK - RB Size 1, RB Offset 37)

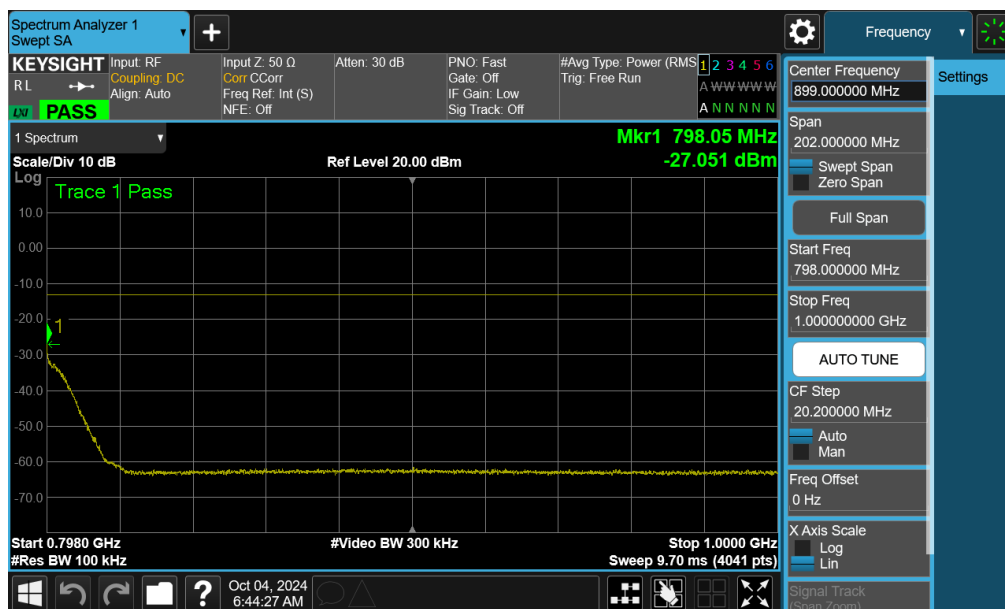
FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 77 of 128



NR Band n14 - Ant A

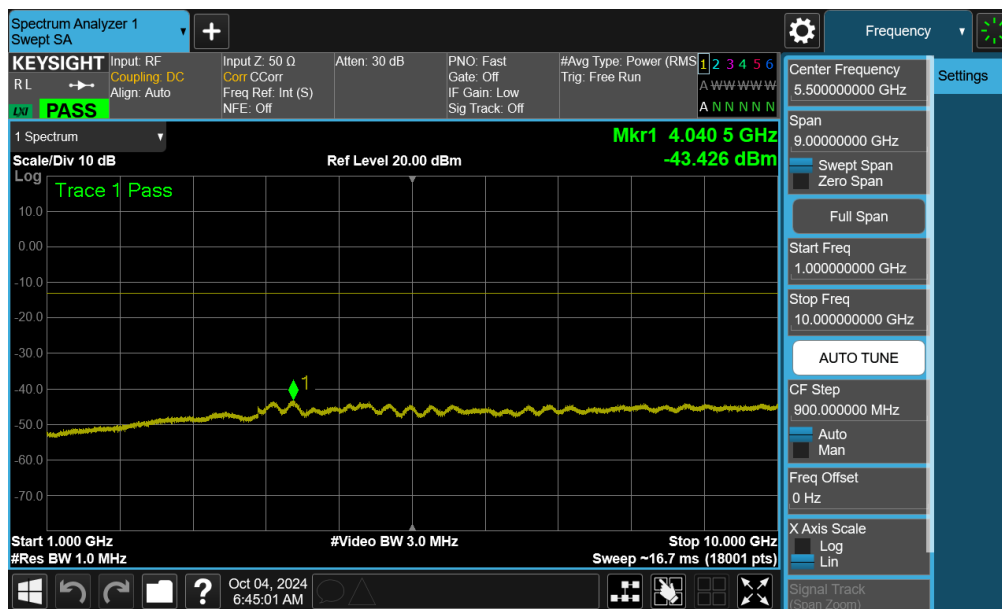


Plot 7-105. Conducted Spurious Plot (NR Band n14 - 10MHz QPSK - RB Size 1, RB Offset 0)



Plot 7-106. Conducted Spurious Plot (NR Band n14 - 10MHz QPSK - RB Size 1, RB Offset 0)

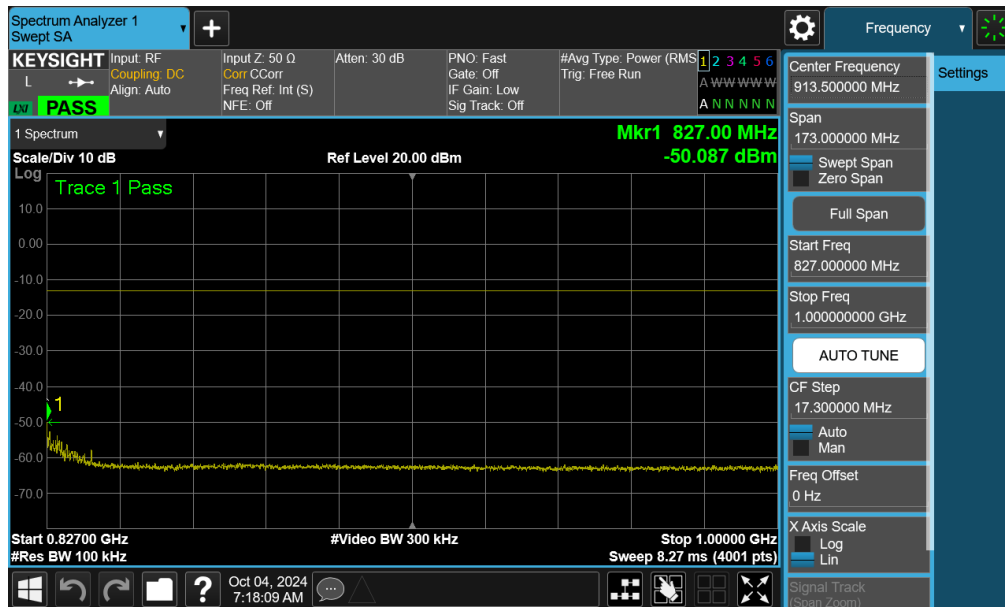
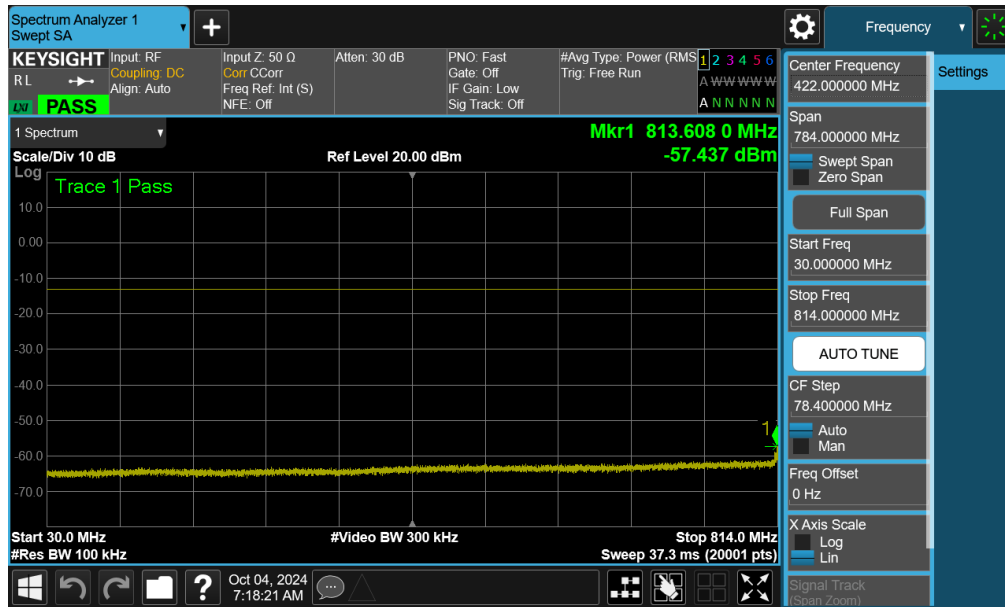
FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 78 of 128



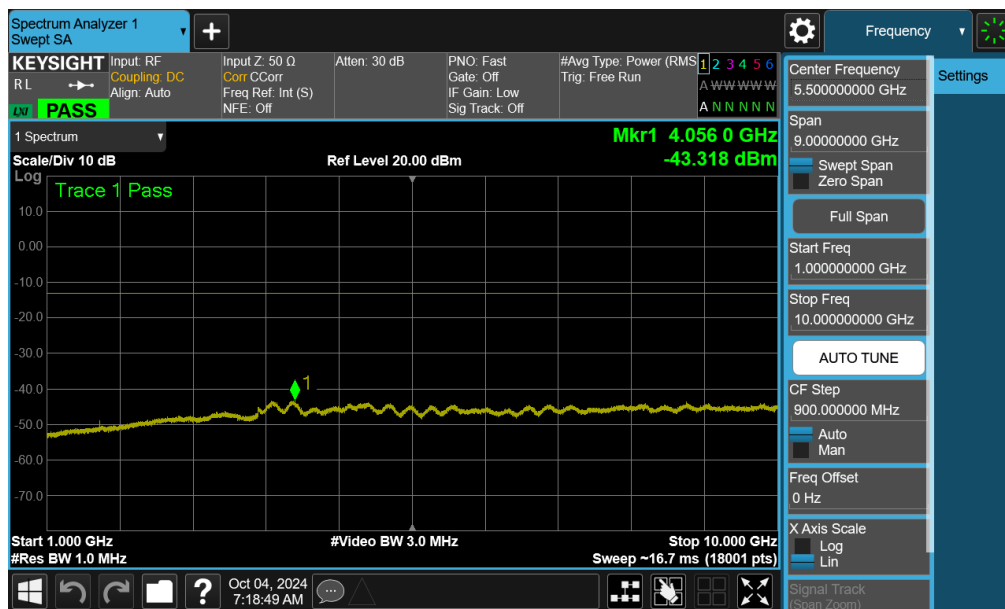
Plot 7-107. Conducted Spurious Plot (NR Band n14 - 10MHz QPSK - RB Size 1, RB Offset 0)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 79 of 128

NR Band n26 - Ant A



FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 80 of 128



Plot 7-110. Conducted Spurious Plot (NR Band n26 - 20MHz QPSK - RB Size 1, RB Offset 0)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 81 of 128

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 LTE B26 operation under Part 90.691, the minimum permissible attenuation level of any spurious emission removed from the EA licensee's frequency block by greater than 37.5 kHz is $43 + 10\log_{10}(P_{\text{Watts}})$, where P is the transmitter power in Watts. The minimum permissible attenuation level of any spurious emission removed from the EA licensee's frequency block by up to and including 37.5 kHz is $50 + 10\log_{10}(P_{\text{Watts}})$, where P is the transmitter power in Watts.

For LTE Band 14 operation under Part 90.543, the power of any emission must be reduced below the mean output power (P) by at least $43 + 10\log(P)$ dB measured in a 100 kHz bandwidth for frequencies less than 1 GHz, and in a 1 MHz bandwidth for frequencies greater than 1 GHz.

Additionally, for LTE Band 14 operation, on all frequencies between 769-775 MHz and 799-805 MHz, the power of any emission shall be attenuated by a factor not less than $65 + 10\log(P)$ dB in a 6.25 kHz band segment, for mobile and portable stations.

Test Procedure Used

ANSI C63.26-2015 – Section 5.7.3

Test Settings

1. Span was set large enough so as to capture all out of band emissions near the band edge
2. RBW = 100 kHz
3. VBW = 300 kHz
4. Detector = RMS
5. Trace mode = trace average
6. Sweep time = auto couple
7. The trace was allowed to stabilize

Test Setup

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

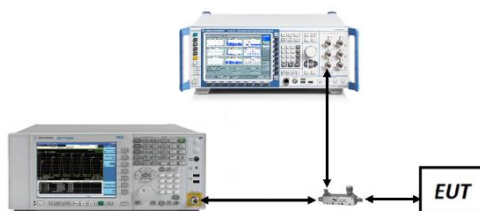


Figure 7-4. Test Instrument & Measurement Setup

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 82 of 128

Test Notes

1. For channel edge emission, the signal analyzer's "ACP" measurement capability is used.
2. Per 22.917(b) in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to demonstrate compliance with the out-of-band emissions limit. 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 emission are attenuated at least 26 dB below the transmitter power.
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.

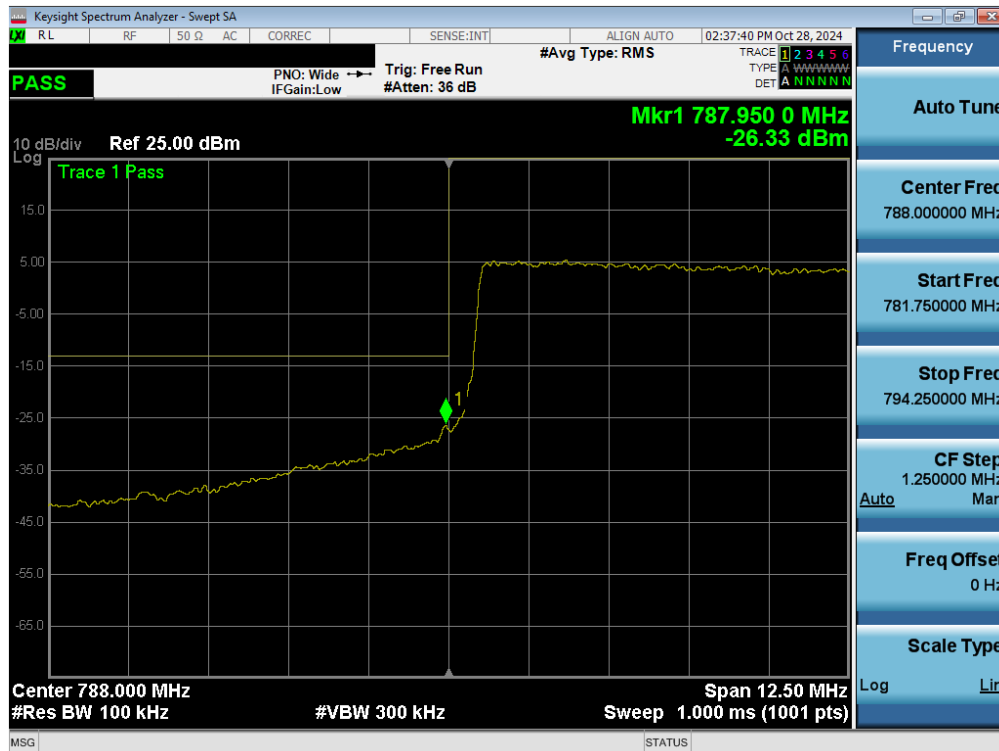
FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 83 of 128

Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
LTE-B14	10 MHz	Low	Band Edge	-26.33	-13	-13.33
		Low EmMask	Band Edge	-71.41	-35	-36.41
		High	Band Edge	-31.51	-13	-18.51
		High EmMask	Band Edge	-39.30	-35	-4.30
	5 MHz	Low	Band Edge	-21.78	-13	-8.78
		Low EmMask	Band Edge	-71.63	-35	-36.63
		High	Band Edge	-20.86	-13	-7.86
		High EmMask	Band Edge	-42.43	-35	-7.43
LTE-B26	15 MHz	Mid	Band Edge	-31.28	-20	-11.28
	10 MHz	Mid	Band Edge	-29.37	-20	-9.37
	5 MHz	Low	Band Edge	-25.78	-20	-5.78
		High	Band Edge	-24.67	-20	-4.67
	3 MHz	Low	Band Edge	-22.17	-20	-2.17
		High	Band Edge	-21.43	-20	-1.43
	1.4 MHz	Low	Band Edge	-22.53	-20	-2.53
		High	Band Edge	-21.76	-20	-1.76
NR-n14	10 MHz	Low	Band Edge	-24.69	-13	-11.69
		Low EmMask	Band Edge	-72.75	-35	-37.75
		High	Band Edge	-27.11	-13	-14.11
		High EmMask	Band Edge	-41.20	-35	-6.20
	5 MHz	Low	Band Edge	-23.80	-13	-10.80
		Low EmMask	Band Edge	-68.65	-35	-33.65
		High	Band Edge	-20.77	-13	-7.77
		High EmMask	Band Edge	-41.90	-35	-6.90
NR-n26	20 MHz	Mid	Band Edge	-32.56	-20	-12.56
	15 MHz	Mid	Band Edge	-31.37	-20	-11.37
	10 MHz	Mid	Band Edge	-29.21	-20	-9.21
	5 MHz	Low	Band Edge	-24.04	-20	-4.04
		High	Band Edge	-23.05	-20	-3.05

Table 7-10. Band Edge Test Results – Ant E

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 84 of 128

LTE Band 14 -Ant E



Plot 7-111. Lower Band Edge Plot (LTE Band 14, 10MHz QPSK - RB Size 50)

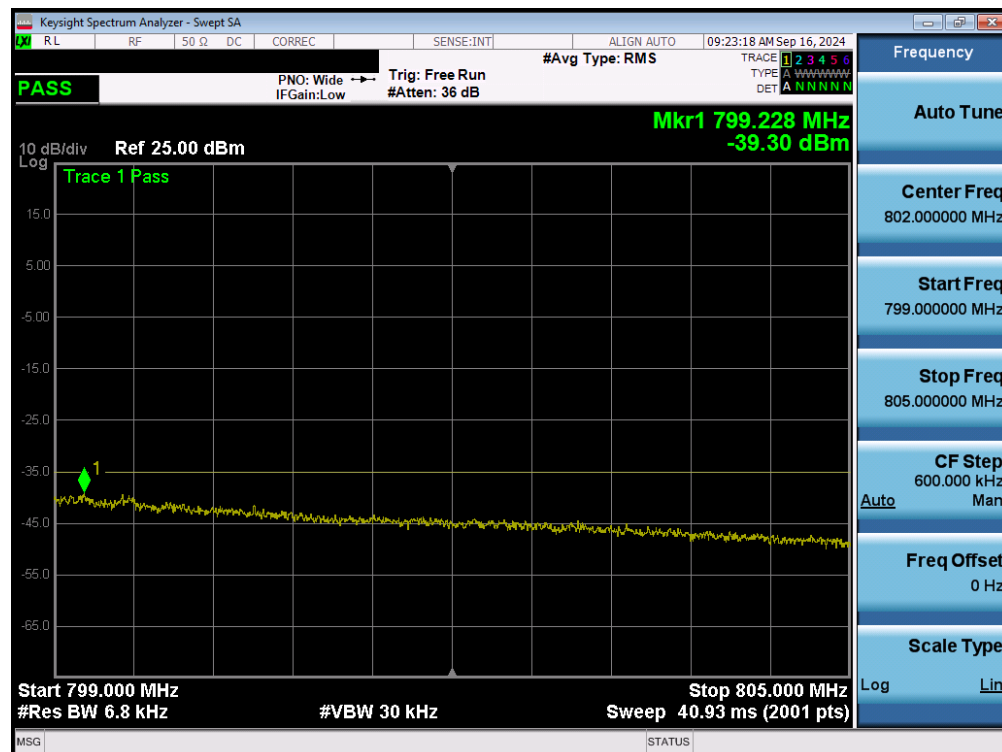


Plot 7-112. Lower Emission Mask Plot (LTE Band 14, 10MHz QPSK - RB Size 50)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 85 of 128



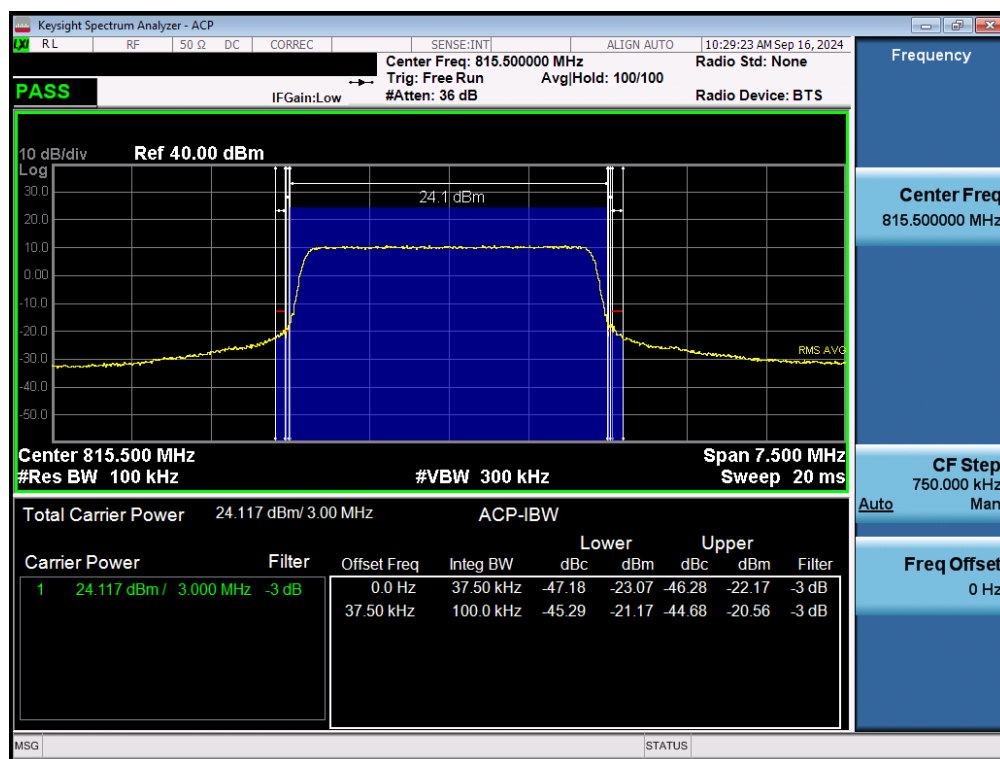
Plot 7-113. Upper Band Edge Plot (LTE Band 14, 10MHz QPSK - RB Size 50)



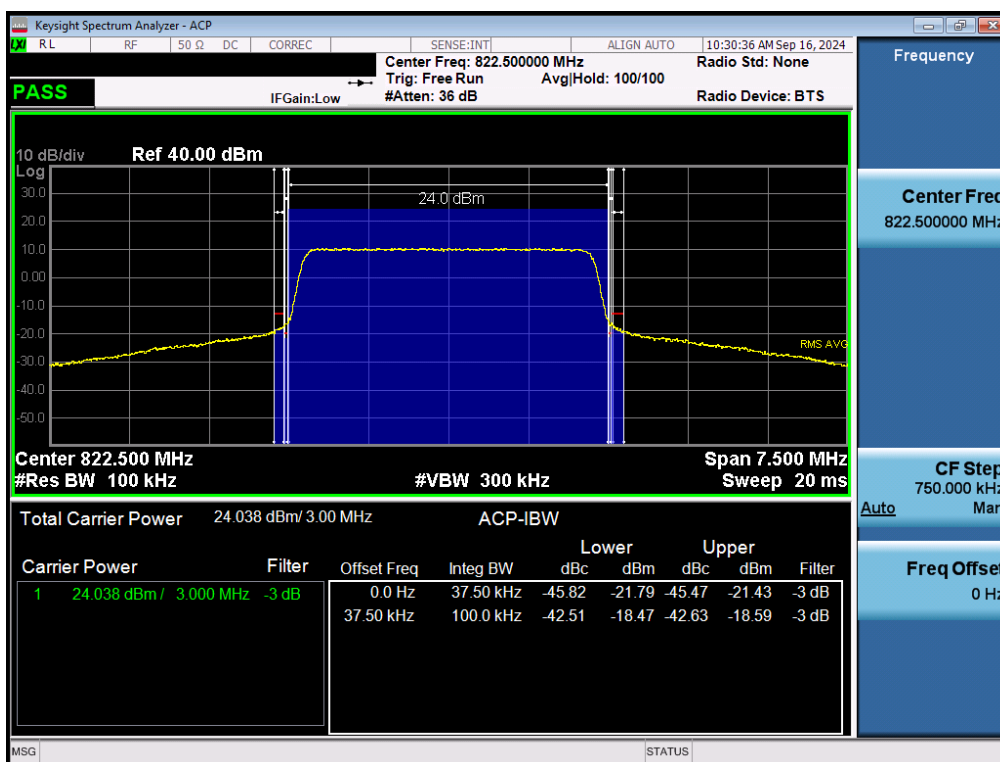
Plot 7-114. Upper Emission Mask Plot (LTE Band 14, 10MHz QPSK - RB Size 50)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 86 of 128

LTE Band 26 – Ant E



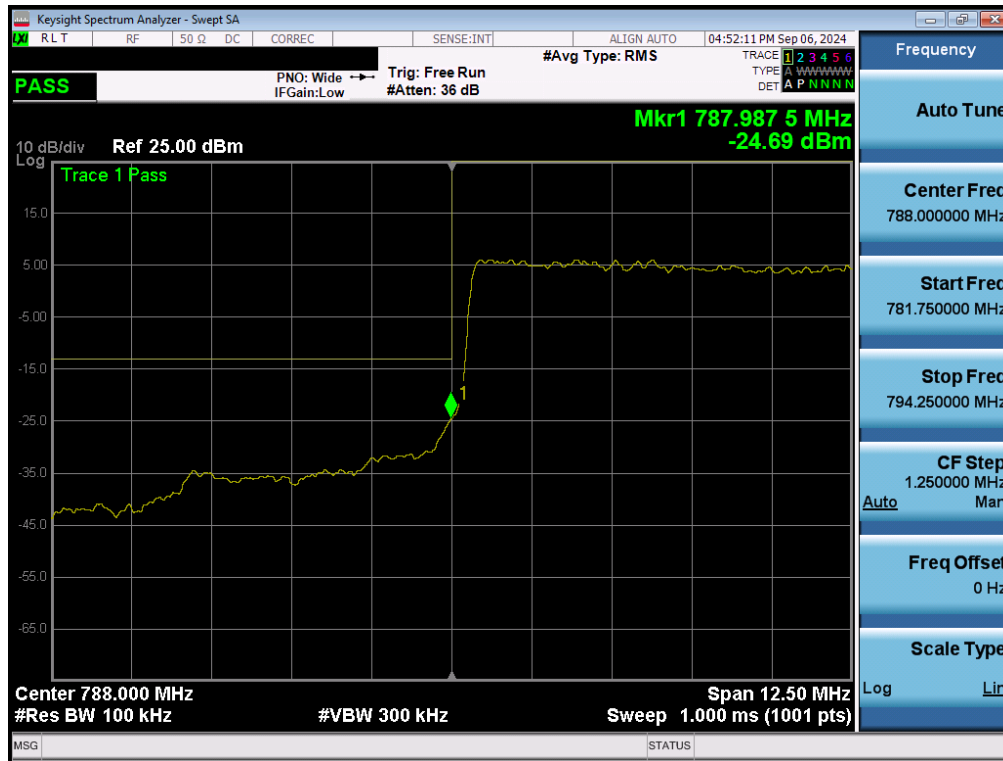
Plot 7-115. Channel - Edge Plot (LTE Band 26 - 3MHz QPSK - Low Channel)



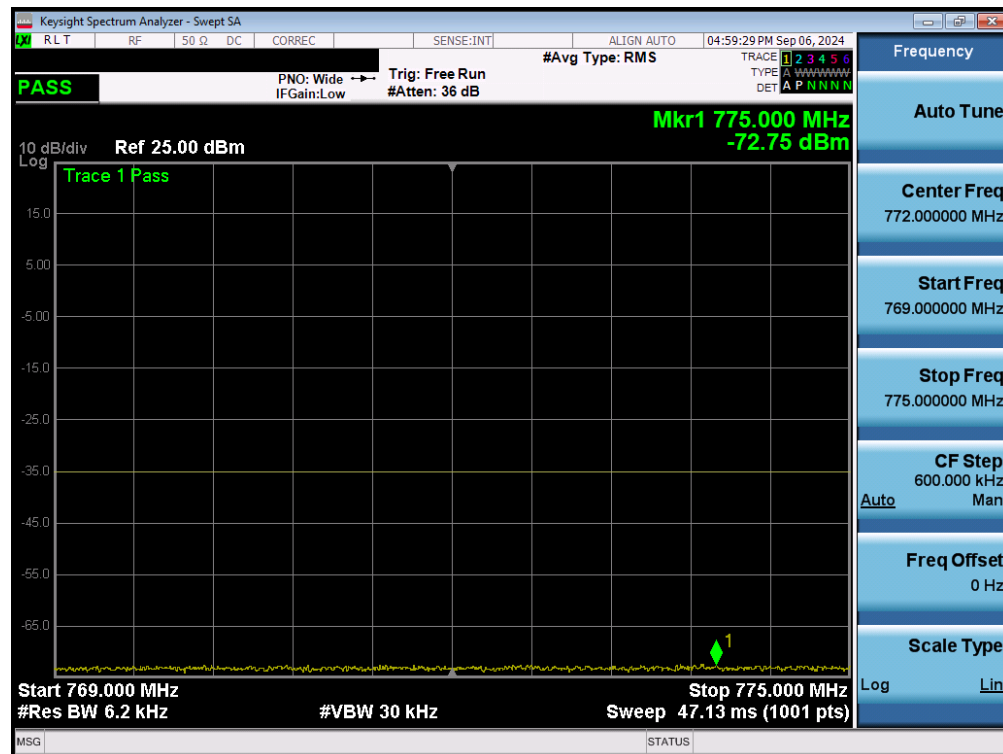
Plot 7-116. Channel - Edge Plot (LTE Band 26 - 3MHz QPSK - High Channel)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 87 of 128

NR Band n14 -Ant E



Plot 7-117. Channel Edge Plot (NR Band n14 - 10MHz BPSK - Low Channel)

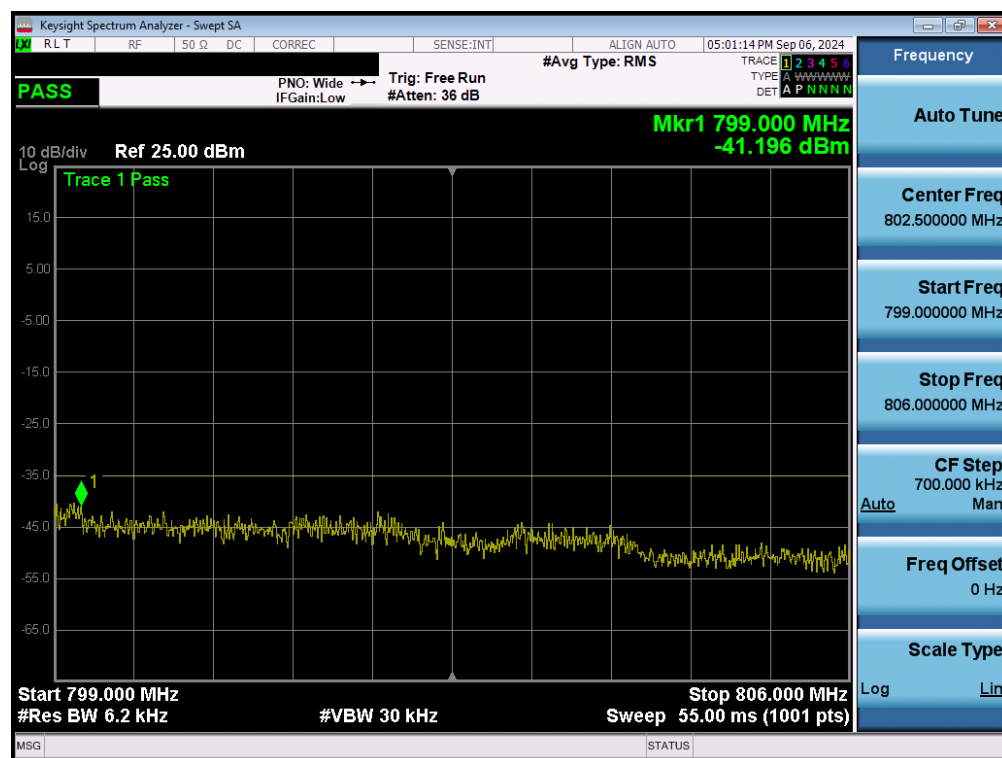


Plot 7-118. Lower Emission Mask Plot (NR Band n14 - 10MHz BPSK - Low Channel)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 88 of 128



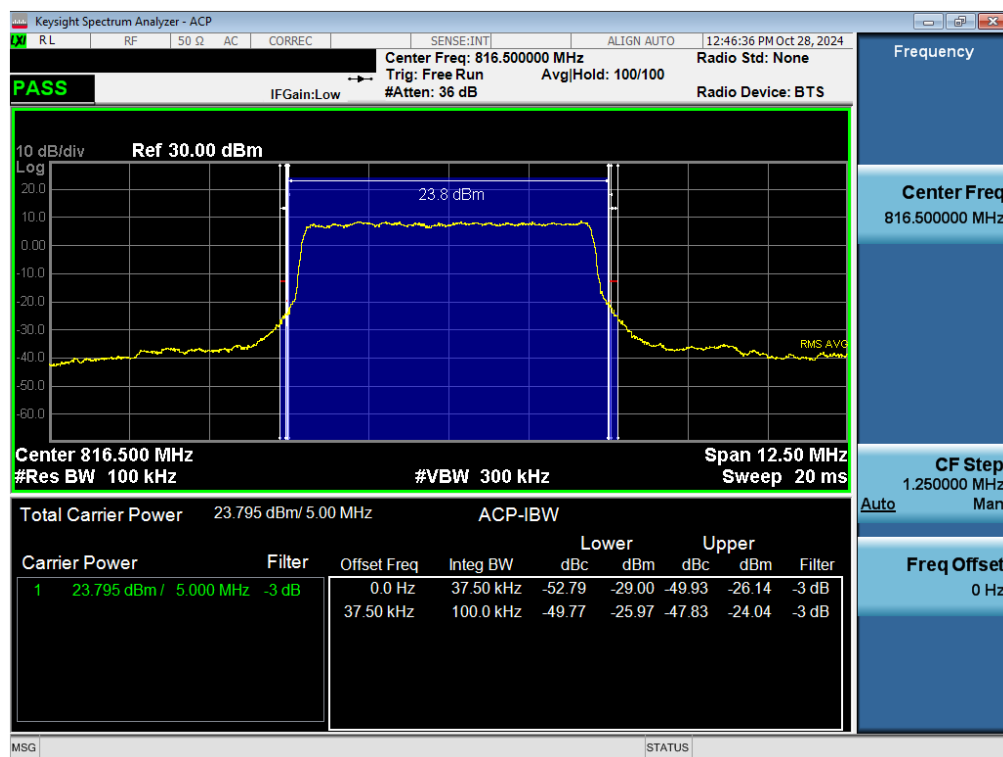
Plot 7-119. Channel Edge Plot (NR Band n14 - 5MHz BPSK - High Channel)



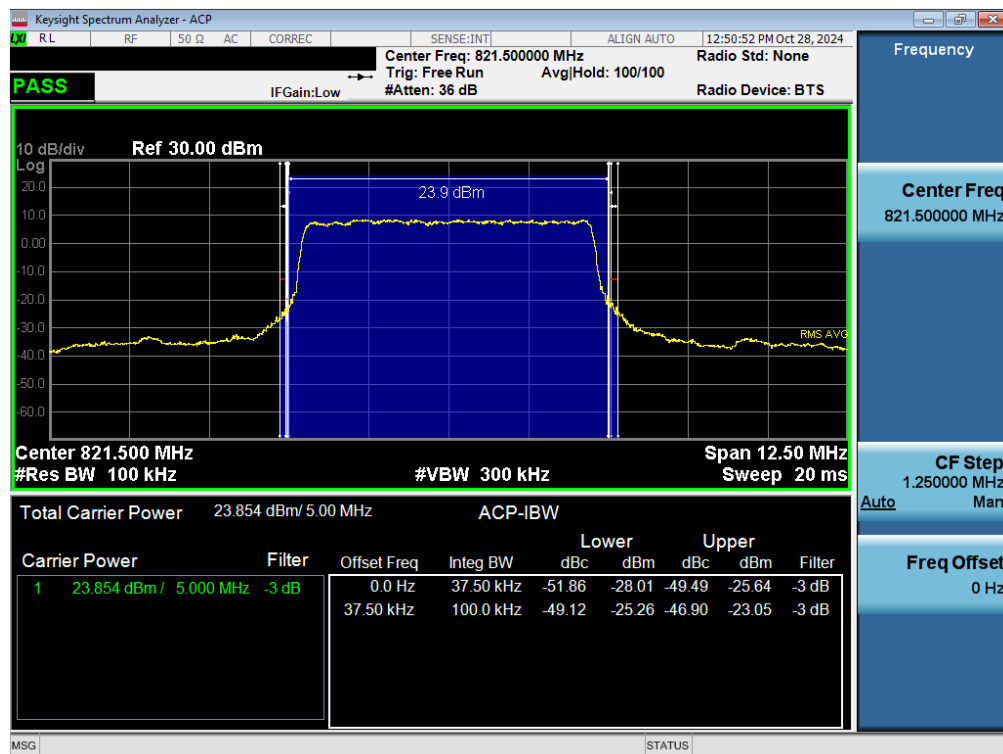
Plot 7-120. Upper Emission Mask Plot (NR Band n14 - 10MHz BPSK - High Channel)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 89 of 128

NR Band n26 -Ant E



Plot 7-121. Channel Edge Plot (NR Band n26 - 5MHz BPSK - Low Channel)



Plot 7-122. Channel Edge Plot (NR Band n26 - 5MHz BPSK - High Channel)

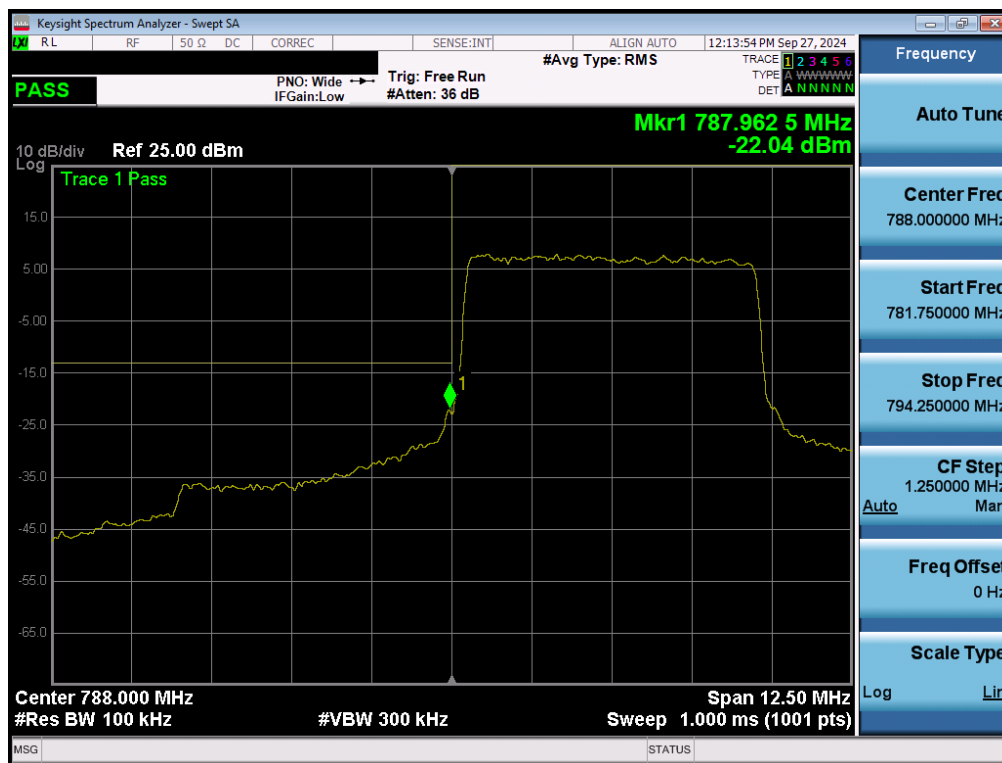
FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 90 of 128

Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
LTE-B14	10 MHz	Low	Band Edge	-27.51	-13	-14.51
		Low EmMask	Band Edge	-71.19	-35	-36.19
		High	Band Edge	-31.51	-13	-18.51
		High EmMask	Band Edge	-41.62	-35	-6.62
	5 MHz	Low	Band Edge	-22.04	-13	-9.04
		Low EmMask	Band Edge	-71.52	-35	-36.52
		High	Band Edge	-20.82	-13	-7.82
		High EmMask	Band Edge	-43.47	-35	-8.47
LTE-B26	15 MHz	Mid	Band Edge	-31.85	-20	-11.85
	10 MHz	Mid	Band Edge	-31.34	-20	-11.34
	5 MHz	Low	Band Edge	-26.93	-20	-6.93
		High	Band Edge	-27.06	-20	-7.06
	3 MHz	Low	Band Edge	-23.21	-20	-3.21
		High	Band Edge	-24.12	-20	-4.12
	1.4 MHz	Low	Band Edge	-22.85	-20	-2.85
		High	Band Edge	-22.91	-20	-2.91
NR-n14	10 MHz	Low	Band Edge	-27.25	-13	-14.25
		Low EmMask	Band Edge	-68.20	-35	-33.20
		High	Band Edge	-25.18	-13	-12.18
		High EmMask	Band Edge	-42.73	-35	-7.73
	5 MHz	Low	Band Edge	-21.89	-13	-8.89
		Low EmMask	Band Edge	-68.28	-35	-33.28
		High	Band Edge	-23.68	-13	-10.68
		High EmMask	Band Edge	-40.79	-35	-5.79
NR-n26	20 MHz	Mid	Band Edge	-32.93	-20	-12.93
	15 MHz	Mid	Band Edge	-31.95	-20	-11.95
	10 MHz	Mid	Band Edge	-28.83	-20	-8.83
	5 MHz	Low	Band Edge	-26.07	-20	-6.07
		High	Band Edge	-23.15	-20	-3.15

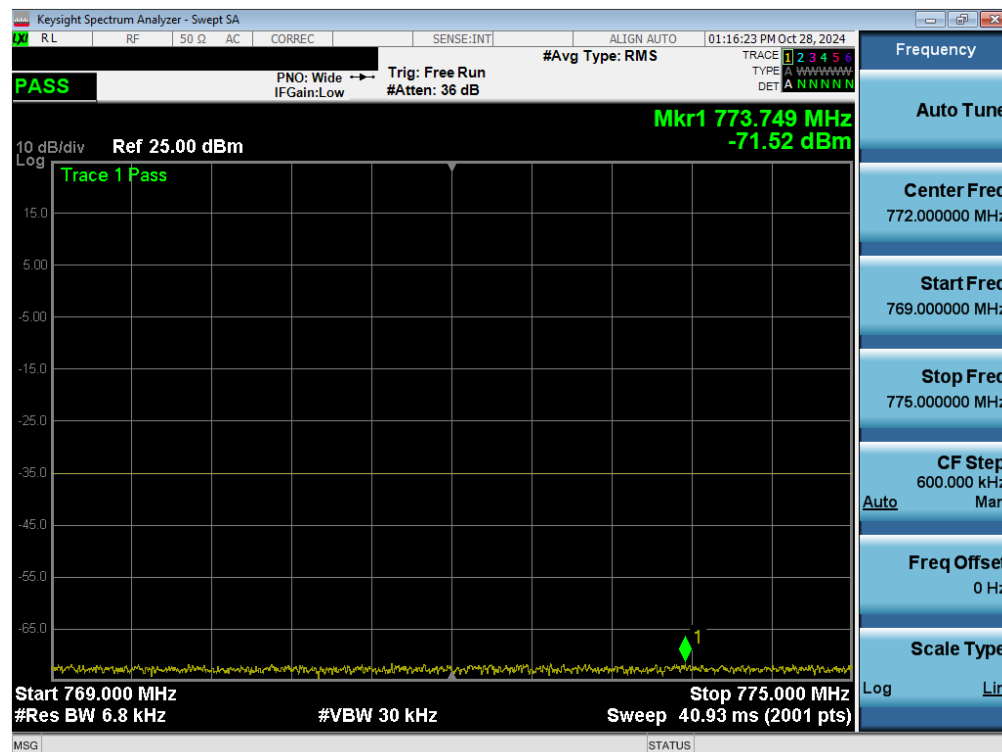
Table 7-11. Band Edge Test Results – Ant A

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 91 of 128

LTE Band 14 -Ant A



Plot 7-123. Lower Band Edge Plot (LTE Band 14, 5MHz QPSK - RB Size 25)

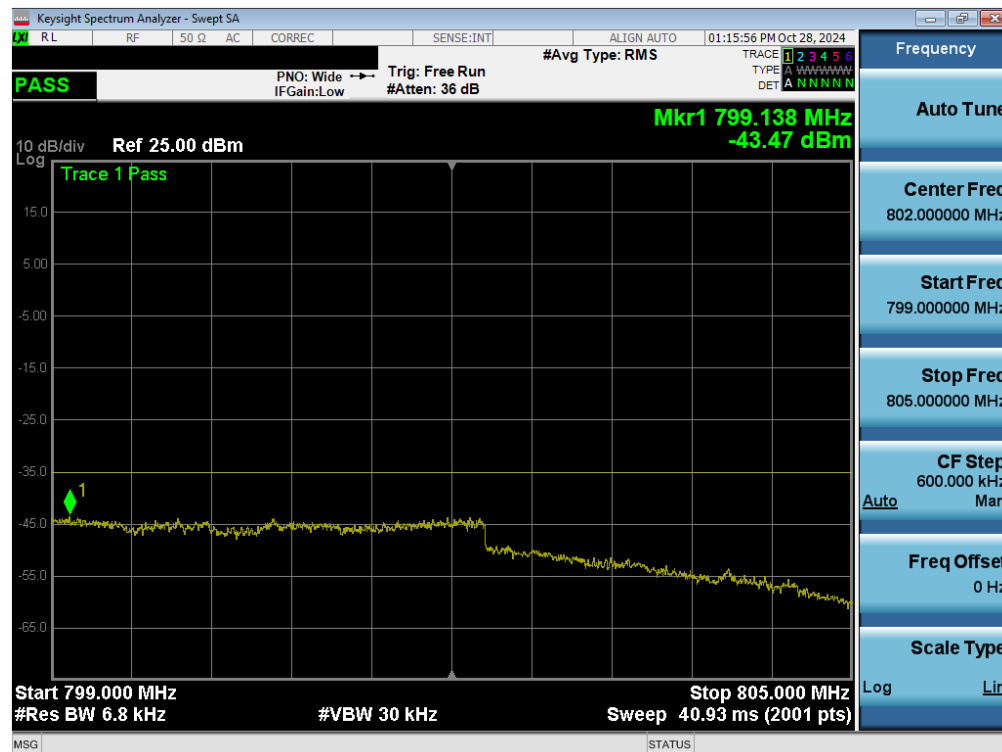


Plot 7-124. Lower Emission Mask Plot (LTE Band 14, 5MHz QPSK - RB Size 25)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 92 of 128



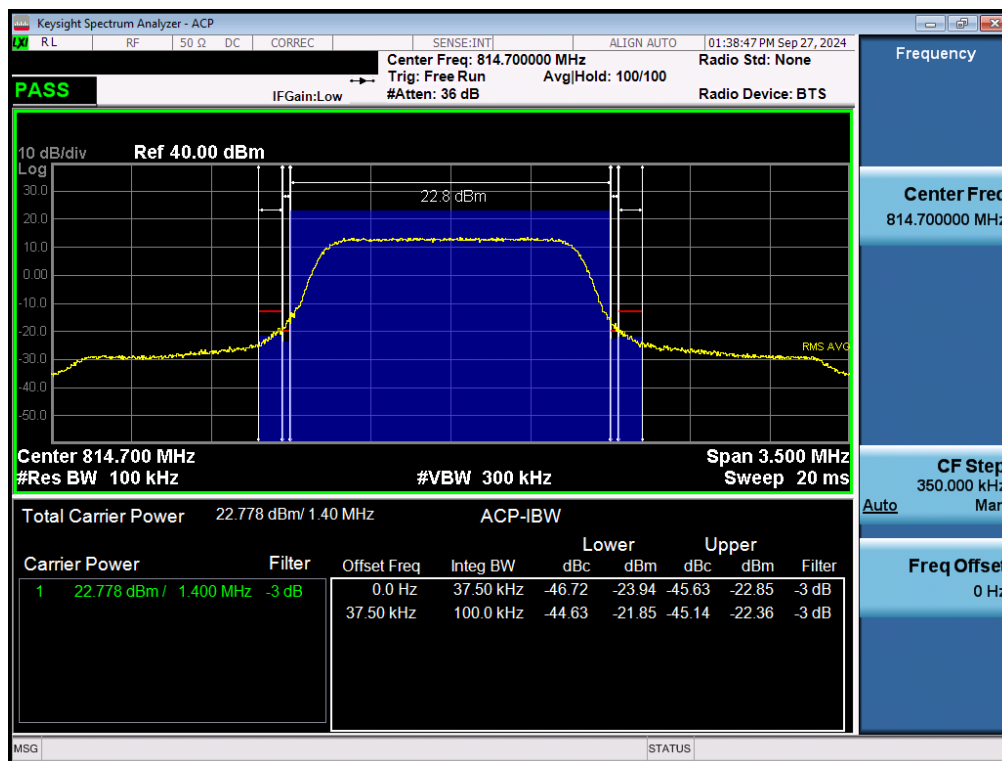
Plot 7-125. Upper Band Edge Plot (LTE Band 14, 5MHz QPSK - RB Size 25)



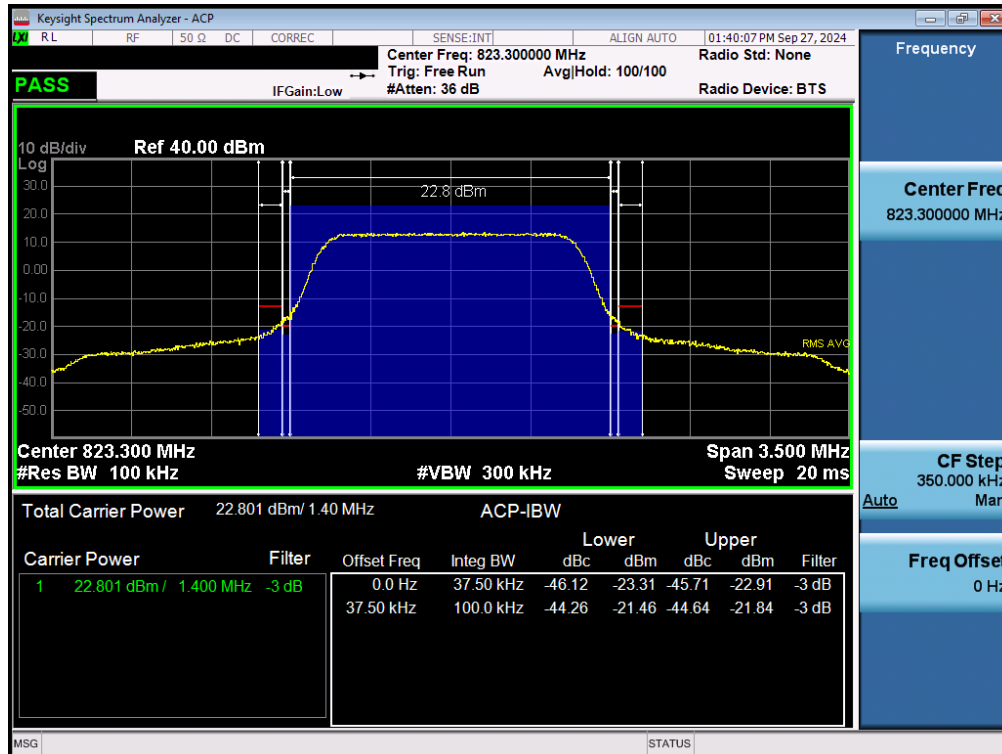
Plot 7-126. Upper Emission Mask Plot (LTE Band 14, 5MHz QPSK - RB Size 25)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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LTE Band 26 – Ant E



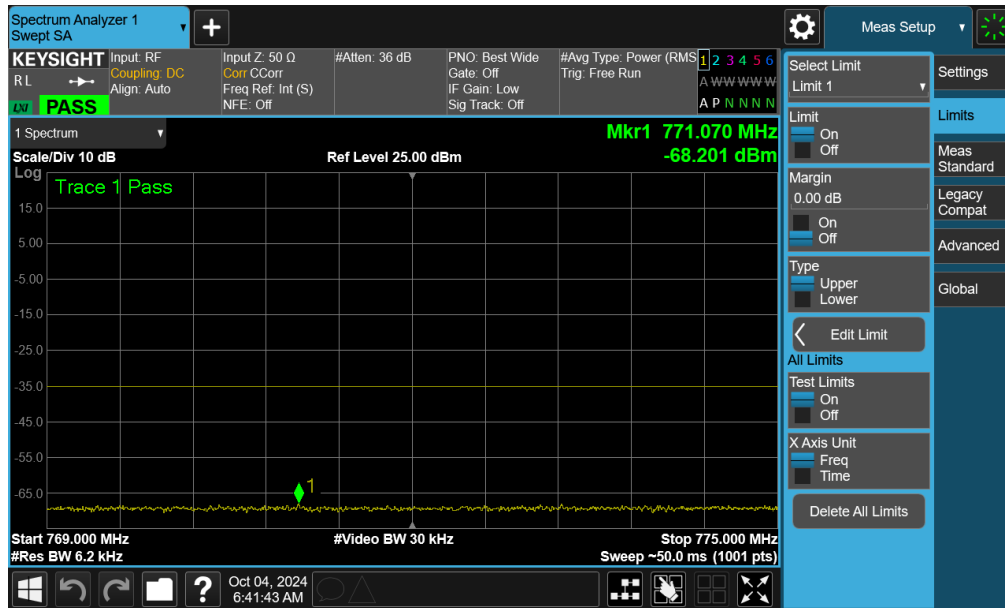
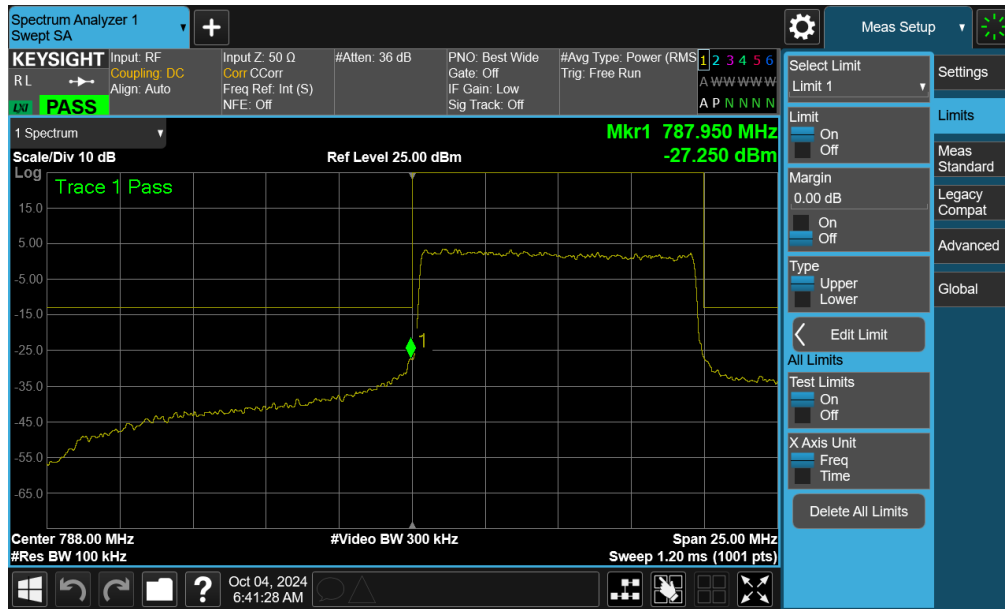
Plot 7-127. Channel - Edge Plot (LTE Band 26 - 1.4MHz QPSK - Low Channel)



Plot 7-128. Channel - Edge Plot (LTE Band 26 - 1.4MHz QPSK - High Channel)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 94 of 128

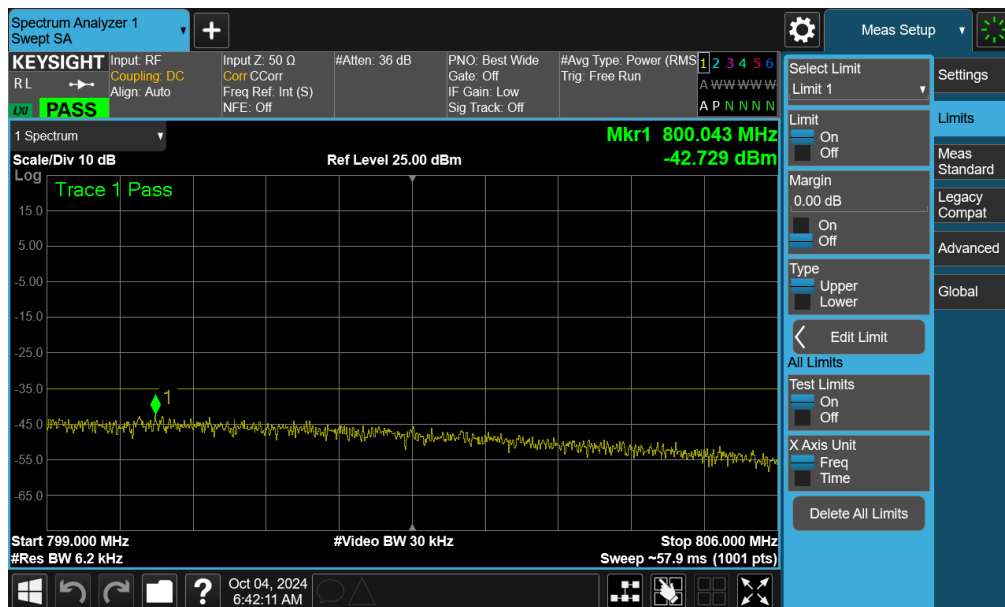
NR Band n14 -Ant E



FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 95 of 128



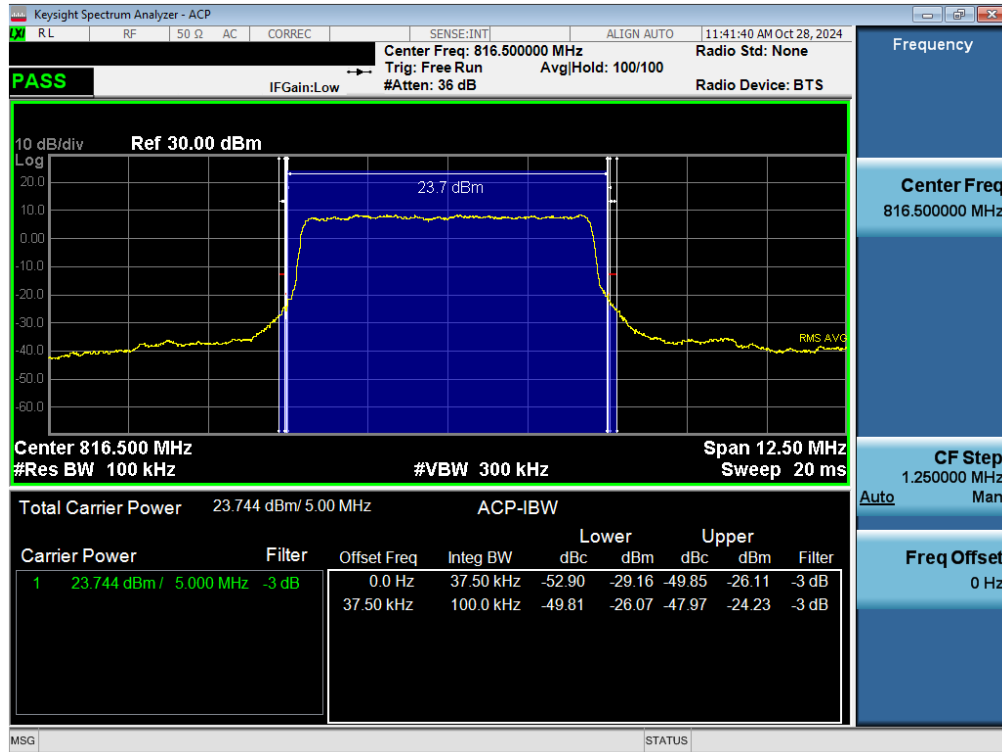
Plot 7-131. Channel Edge Plot (NR Band n14 - 10MHz BPSK - High Channel)



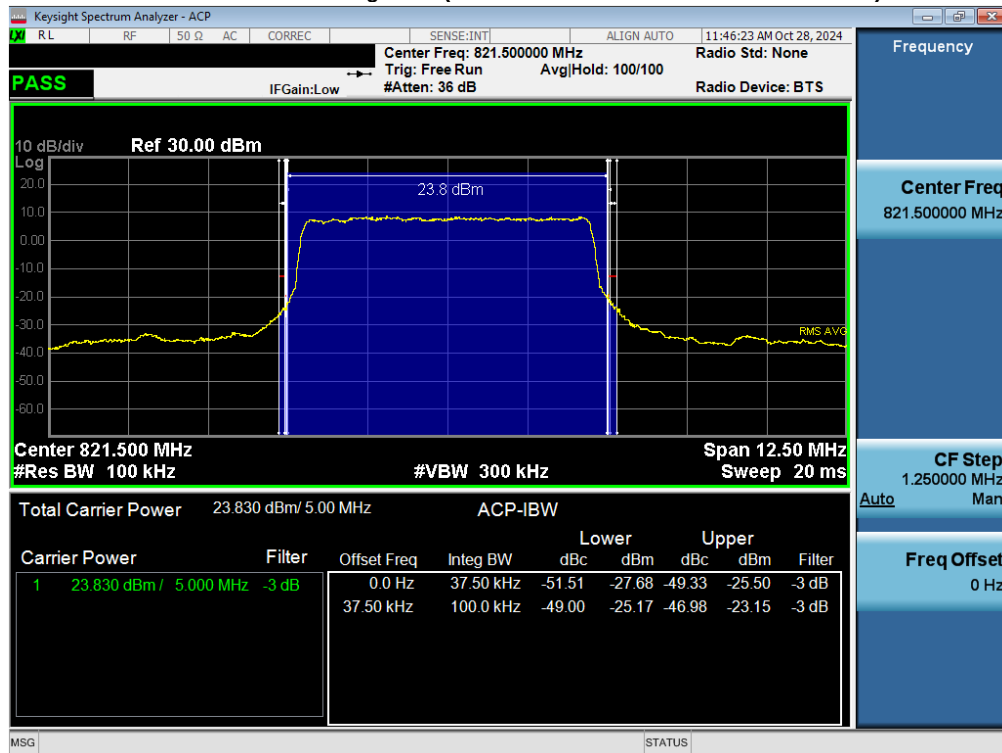
Plot 7-132. Upper Emission Mask Plot (NR Band n14 - 10MHz BPSK - High Channel)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 96 of 128

NR Band n26 -Ant A



Plot 7-133. Channel Edge Plot (NR Band n26 - 5MHz BPSK - Low Channel)



Plot 7-134. Channel Edge Plot (NR Band n26 - 5MHz BPSK - High Channel)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 97 of 128

7.6 Radiated Power (ERP)

Test Overview

Effective Radiated Power (ERP) 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.
2. RBW = 1 – 5% of the expected OBW
3. VBW $\geq$ 3 x RBW
4. Span = 1.5 times the OBW
5. No. of sweep points $\geq$ 2 x span / RBW
6. Detector = RMS
7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto".
8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation.
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The trace was allowed to stabilize.

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Test Setup

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

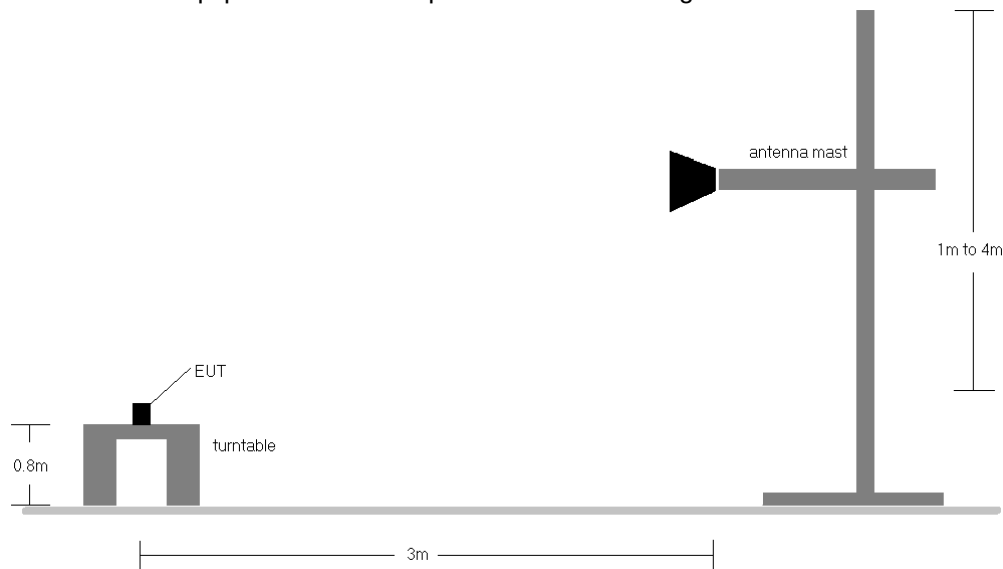


Figure 7-5. Radiated Test Setup <1GHz

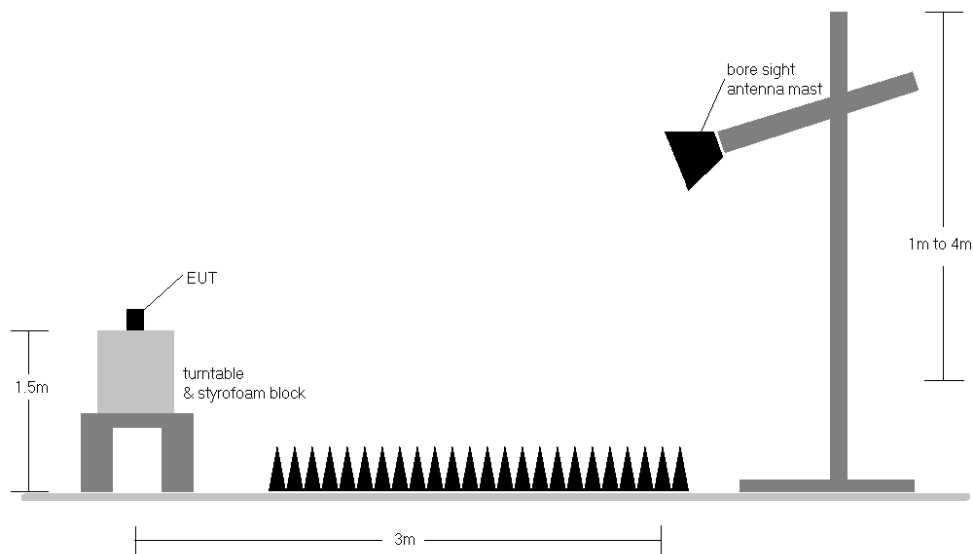


Figure 7-6. Radiated Test Setup > 1GHz

Test Notes

- 1) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
- 2) This unit was tested with its standard battery.
- 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.

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Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
10 MHz	QPSK	793.00	H	244	243	0.99	1 / 0	21.28	20.12	0.103	34.77	-14.65
	16-QAM	793.00	H	244	243	0.99	1 / 0	20.31	19.15	0.082	34.77	-15.62
5 MHz	QPSK	790.50	H	244	243	1.01	1 / 24	21.40	20.26	0.106	34.77	-14.51
	QPSK	793.00	H	244	243	0.99	1 / 12	21.42	20.27	0.106	34.77	-14.50
	QPSK	795.50	H	244	243	0.97	1 / 0	21.39	20.22	0.105	34.77	-14.56
	16-QAM	793.00	H	244	243	0.99	1 / 24	20.61	19.45	0.088	34.77	-15.32
10 MHz	QPSK (WCP)	790.50	H	115	274	0.99	1 / 0	19.86	18.70	0.074	34.77	-16.07

Table 7-12. ERP Data (LTE Band 14 – Ant E)

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
15 MHz	QPSK	821.50	H	218	247	1.30	1 / 74	20.96	20.11	0.102	38.45	-18.34
	16-QAM	821.50	H	218	247	1.30	1 / 74	20.13	19.28	0.085	38.45	-19.17
15 MHz	QPSK (WCP)	821.50	H	228	203	1.30	1 / 74	17.31	16.46	0.044	38.45	-21.99

Table 7-13. ERP Data (LTE Band 26 – Ant E)

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
10 MHz	$\pi/2$ BPSK	793.00	V	136	256	0.70	1 / 26	21.28	19.83	0.096	34.77	-14.94
	QPSK	793.00	V	136	256	0.70	1 / 26	21.37	19.92	0.098	34.77	-14.85
	16-QAM	793.00	V	136	256	0.70	1 / 26	20.25	18.80	0.076	34.77	-15.97
5 MHz	$\pi/2$ BPSK	790.50	V	136	256	0.74	1 / 12	21.14	19.73	0.094	34.77	-15.04
	$\pi/2$ BPSK	793.00	V	136	256	0.70	1 / 12	21.29	19.84	0.096	34.77	-14.93
	$\pi/2$ BPSK	795.50	V	136	256	0.65	1 / 1	21.38	19.88	0.097	34.77	-14.89
	QPSK	790.50	V	136	256	0.74	1 / 12	21.46	20.05	0.101	34.77	-14.72
	QPSK	793.00	V	136	256	0.70	1 / 12	21.47	20.02	0.100	34.77	-14.76
	QPSK	795.50	V	136	256	0.65	1 / 1	21.31	19.81	0.096	34.77	-14.96
	16-QAM	790.50	V	136	256	0.74	1 / 12	19.95	18.54	0.072	34.77	-16.23
	16-QAM	793.00	V	136	256	0.70	1 / 12	20.01	18.56	0.072	34.77	-16.21
	16-QAM	795.50	V	136	256	0.65	1 / 1	20.22	18.73	0.075	34.77	-16.05
10 MHz	QPSK (CP-OFDM)	795.50	V	131	258	0.70	1 / 50	19.94	18.49	0.071	34.77	-16.28
	QPSK (WCP)	790.50	V	171	243	0.70	1 / 26	10.75	9.30	0.009	34.77	-25.47

Table 7-14. ERP Data (NR Band n14 – Ant E)

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
20 MHz	$\pi/2$ BPSK	824.00	H	103	259	1.34	1 / 53	19.59	18.78	0.075	38.45	-19.67
	QPSK	824.00	H	103	259	1.34	1 / 53	19.73	18.92	0.078	38.45	-19.53
	16-QAM	824.00	H	103	259	1.34	1 / 53	18.42	17.61	0.058	38.45	-20.84
15 MHz	$\pi/2$ BPSK	821.50	H	103	259	1.30	1 / 77	19.81	18.95	0.079	38.45	-19.50
	QPSK	821.50	H	103	259	1.30	1 / 77	19.91	19.06	0.081	38.45	-19.39
	16-QAM	821.50	H	103	259	1.30	1 / 77	18.28	17.43	0.055	38.45	-21.03
10 MHz	$\pi/2$ BPSK	819.00	H	103	259	1.26	1 / 1	19.96	19.06	0.081	38.45	-19.39
	QPSK	819.00	H	103	259	1.26	1 / 1	19.77	18.88	0.077	38.45	-19.57
	16-QAM	819.00	H	103	259	1.26	1 / 1	18.37	17.48	0.056	38.45	-20.97
5 MHz	$\pi/2$ BPSK	816.50	H	103	259	1.21	1 / 12	19.58	18.65	0.073	38.45	-19.80
	$\pi/2$ BPSK	821.50	H	103	259	1.30	1 / 12	19.48	18.63	0.073	38.45	-19.82
	QPSK	816.50	H	103	259	1.21	1 / 12	19.44	18.51	0.071	38.45	-19.94
	QPSK	821.50	H	103	259	1.30	1 / 12	19.54	18.69	0.074	38.45	-19.77
	16-QAM	816.50	H	103	259	1.21	1 / 12	18.11	17.17	0.052	38.45	-21.28
20 MHz	16-QAM	821.50	H	103	259	1.30	1 / 12	18.14	17.29	0.054	38.45	-21.16
	QPSK (CP-OFDM)	824.00	H	104	263	1.34	1 / 53	18.09	17.28	0.053	38.45	-21.17
	QPSK (WCP)	824.00	H	103	259	1.34	1 / 53	18.96	18.15	0.065	38.45	-20.30

Table 7-15. ERP Data (NR Band n26 – Ant E)

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Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
10 MHz	QPSK	793.00	H	231	79	0.74	1 / 25	18.96	17.55	0.057	34.77	-17.22
	16-QAM	793.00	H	231	79	0.74	1 / 25	18.05	16.64	0.046	34.77	-18.13
5 MHz	QPSK	790.50	H	231	79	0.76	1 / 12	19.15	17.76	0.060	34.77	-17.01
	QPSK	793.00	H	231	79	0.74	1 / 12	19.17	17.77	0.060	34.77	-17.01
	QPSK	795.50	H	231	79	0.73	1 / 24	19.10	17.68	0.059	34.77	-17.09
	16-QAM	790.50	H	231	79	0.76	1 / 12	18.37	16.98	0.050	34.77	-17.79
	16-QAM	793.00	H	231	79	0.74	1 / 12	18.69	17.28	0.053	34.77	-17.49
	16-QAM	795.50	H	231	79	0.73	1 / 24	18.44	17.02	0.050	34.77	-17.75
10 MHz	QPSK (WCP)	790.50	H	237	62	0.74	1 / 25	16.89	15.48	0.035	34.77	-19.29

Table 7-16. ERP Data (LTE Band 14 – Ant A)

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
15 MHz	QPSK	821.50	H	241	68	1.30	1 / 0	17.95	17.10	0.051	38.45	-21.35
	16-QAM	821.50	H	241	68	1.30	1 / 0	16.84	15.99	0.040	38.45	-22.46
15 MHz	QPSK (WCP)	821.50	H	238	82	1.30	1 / 0	15.94	15.09	0.032	38.45	-23.36

Table 7-17. ERP Data (LTE Band 26 – Ant A)

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
10 MHz	$\pi/2$ BPSK	793.00	V	140	134	0.70	1 / 26	19.55	18.10	0.065	34.77	-16.67
	QPSK	793.00	V	140	134	0.70	1 / 26	19.65	18.20	0.066	34.77	-16.57
	16-QAM	793.00	V	140	134	0.70	1 / 26	18.62	17.17	0.052	34.77	-17.60
5 MHz	$\pi/2$ BPSK	790.50	V	140	134	0.74	1 / 12	19.53	18.12	0.065	34.77	-16.65
	$\pi/2$ BPSK	793.00	V	140	134	0.70	1 / 12	19.52	18.07	0.064	34.77	-16.70
	$\pi/2$ BPSK	795.50	V	140	134	0.65	1 / 1	19.52	18.03	0.063	34.77	-16.75
	QPSK	790.50	V	140	134	0.74	1 / 12	19.71	18.30	0.068	34.77	-16.47
	QPSK	793.00	V	140	134	0.70	1 / 12	19.79	18.33	0.068	34.77	-16.44
	QPSK	795.50	V	140	134	0.65	1 / 1	19.83	18.34	0.068	34.77	-16.43
	16-QAM	790.50	V	140	134	0.74	1 / 12	18.67	17.26	0.053	34.77	-17.52
	16-QAM	793.00	V	140	134	0.70	1 / 12	18.85	17.40	0.055	34.77	-17.37
	16-QAM	795.50	V	140	134	0.65	1 / 1	18.80	17.30	0.054	34.77	-17.47
10 MHz	QPSK (CP-OFDM)	795.50	V	140	134	0.70	1 / 26	18.28	16.83	0.048	34.77	-17.94
	QPSK (WCP)	790.50	V	168	122	0.70	1 / 26	11.92	10.47	0.011	34.77	-24.30

Table 7-18. ERP Data (NR Band n14 – Ant A)

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
20 MHz	$\pi/2$ BPSK	824.00	V	150	134	1.09	1 / 1	16.37	15.31	0.034	38.45	-23.14
	QPSK	824.00	V	150	134	1.09	1 / 1	16.43	15.37	0.034	38.45	-23.08
	16-QAM	824.00	V	150	134	1.09	1 / 1	15.35	14.29	0.027	38.45	-24.16
15 MHz	$\pi/2$ BPSK	821.50	V	150	134	1.04	1 / 77	16.46	15.35	0.034	38.45	-23.10
	QPSK	821.50	V	150	134	1.04	1 / 77	16.42	15.31	0.034	38.45	-23.15
	16-QAM	821.50	V	150	134	1.04	1 / 77	15.33	14.21	0.026	38.45	-24.24
20 MHz	QPSK (CP-OFDM)	824.00	V	158	130	1.09	1 / 1	15.40	14.34	0.027	38.45	-24.11
	QPSK (WCP)	824.00	V	201	22	1.09	1 / 104	10.78	9.72	0.009	38.45	-28.73

Table 7-19. ERP Data (NR Band n26 – Ant A)

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

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Test Setup

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

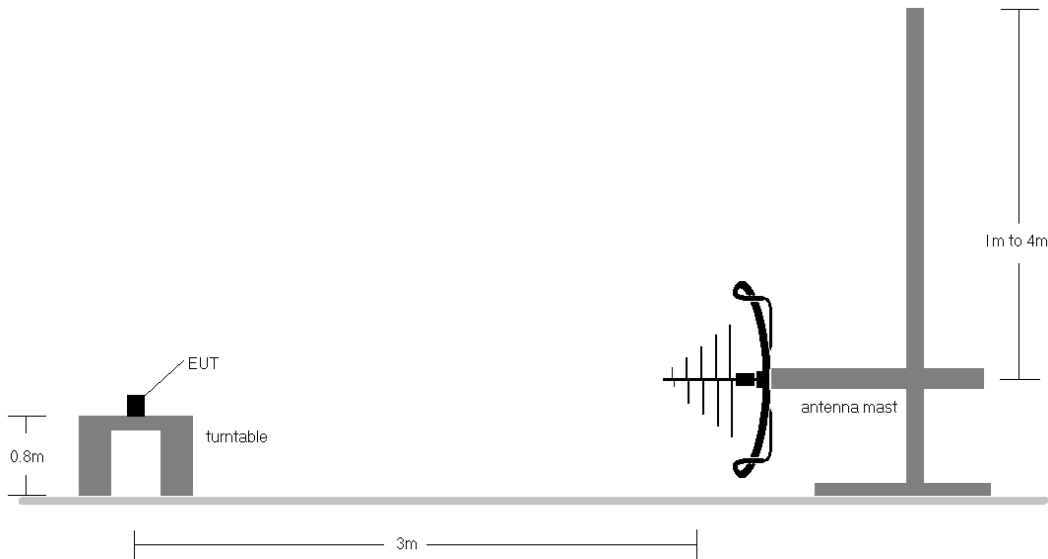


Figure 7-7. Test Instrument & Measurement Setup < 1GHz

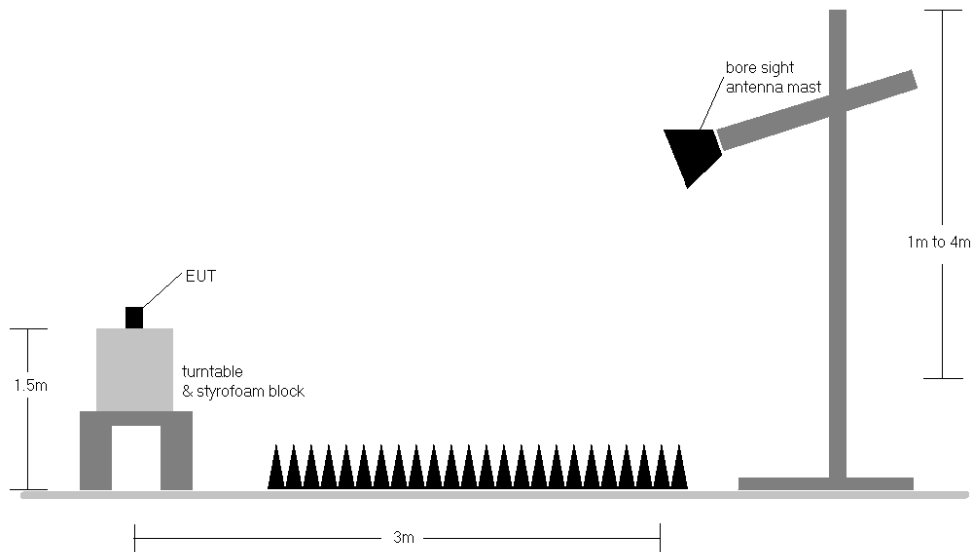


Figure 7-8. Test Instrument & Measurement Setup >1 GHz

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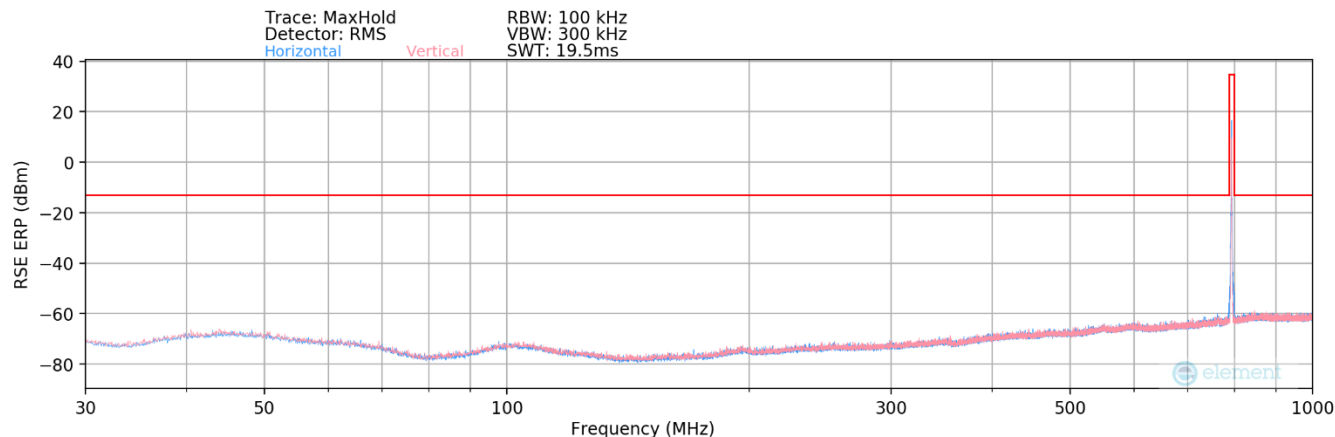
Test Notes

- 1) Field strengths are calculated using the Measurement quantity conversions in ANSI C63.26-2015 Section 5.2.7:
 - a) $E(\text{dB}\mu\text{V/m}) = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$
 - b) $\text{EIRP (dBm)} = E(\text{dB}\mu\text{V/m}) + 20\log D - 104.8$; where D is the measurement distance in meters.
- 2) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst-case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
- 3) This unit was tested with its standard battery.
- 4) The 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..

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LTE Band 14 – Ant E



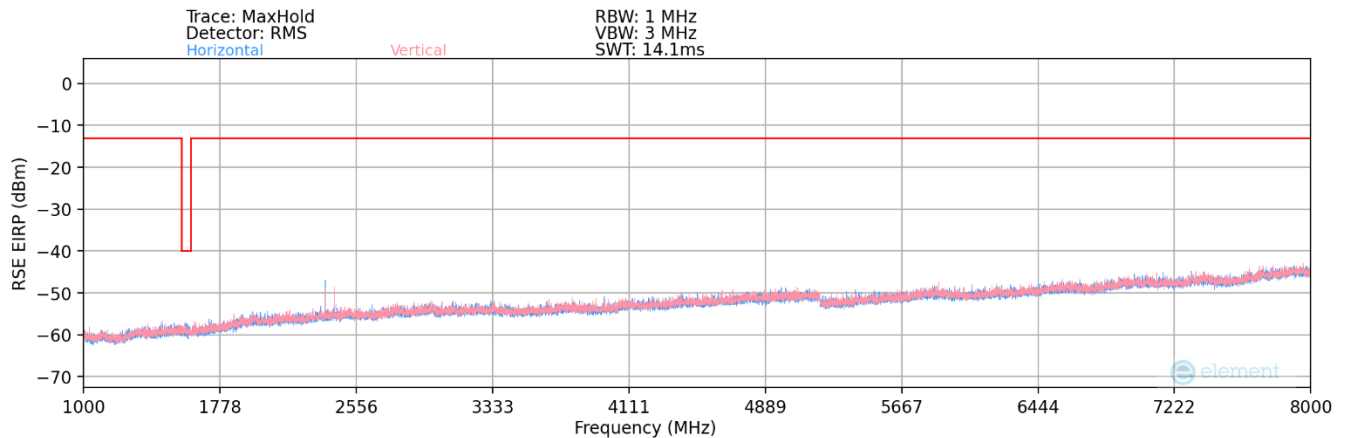
Plot 7-135. Radiated Spurious Plot Below 1GHz (LTE Band 14)

Bandwidth (MHz):	5
Frequency (MHz):	793
Modulation Signal:	QPSK
RB Config (Size / Offset):	1 / 12

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]
99.90	V	166	96	-78.47	-13.65	14.88	-82.53	-13.00	-69.53

Table 7-20. Radiated Spurious Data (LTE Band 14)

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Plot 7-136. Radiated Spurious Plot Above 1GHz (LTE Band 14)

Bandwidth (MHz):	5
Frequency (MHz):	790.5
Modulation Signal:	QPSK
RB Config (Size / Offset):	1 / 12

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]
1581.00	H	130	112	-76.16	-1.52	29.32	-65.94	-40.00	-25.94
2371.50	H	140	120	-73.76	2.39	35.63	-59.63	-13.00	-46.63
3162.00	H	-	-	-78.20	3.83	32.63	-62.63	-13.00	-49.63
3952.50	H	-	-	-78.62	4.72	33.10	-62.16	-13.00	-49.16
4743.00	H	-	-	-78.77	5.95	34.18	-61.08	-13.00	-48.08

Table 7-21. Radiated Spurious Data (LTE Band 14 – Low Channel)

Bandwidth (MHz):	5
Frequency (MHz):	793
Modulation Signal:	QPSK
RB Config (Size / Offset):	1 / 12

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]
1586.00	H	290	45	-75.93	-1.55	29.52	-65.74	-40.00	-25.74
2379.00	H	305	40	-73.07	2.36	36.29	-58.97	-13.00	-45.97
3172.00	H	-	-	-77.91	3.98	33.07	-62.18	-13.00	-49.18
3965.00	H	-	-	-78.66	4.97	33.31	-61.94	-13.00	-48.94
4758.00	H	-	-	-78.86	6.15	34.29	-60.97	-13.00	-47.97

Table 7-22. Radiated Spurious Data (LTE Band 14 – Mid Channel)

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Bandwidth (MHz):	5
Frequency (MHz):	795.5
Modulation Signal:	QPSK
RB Config (Size / Offset):	1 / 12

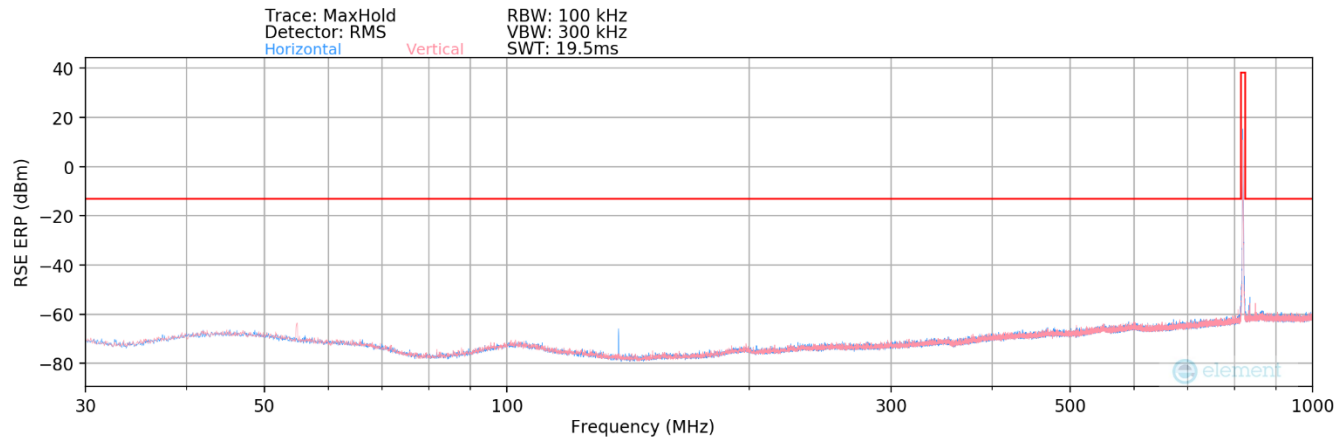
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1591.00	H	163	51	-76.80	-1.59	28.61	-66.64	-40.00	-26.64
2386.50	H	160	34	-75.75	2.36	33.61	-61.65	-13.00	-48.65
3182.00	H	-	-	-78.11	4.03	32.92	-62.34	-13.00	-49.34
3977.50	H	-	-	-78.85	4.94	33.09	-62.16	-13.00	-49.16
4773.00	H	-	-	-79.01	6.31	34.30	-60.96	-13.00	-47.96

Table 7-23. Radiated Spurious Data (LTE Band 14 – High Channel)

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LTE Band 26 – Ant E



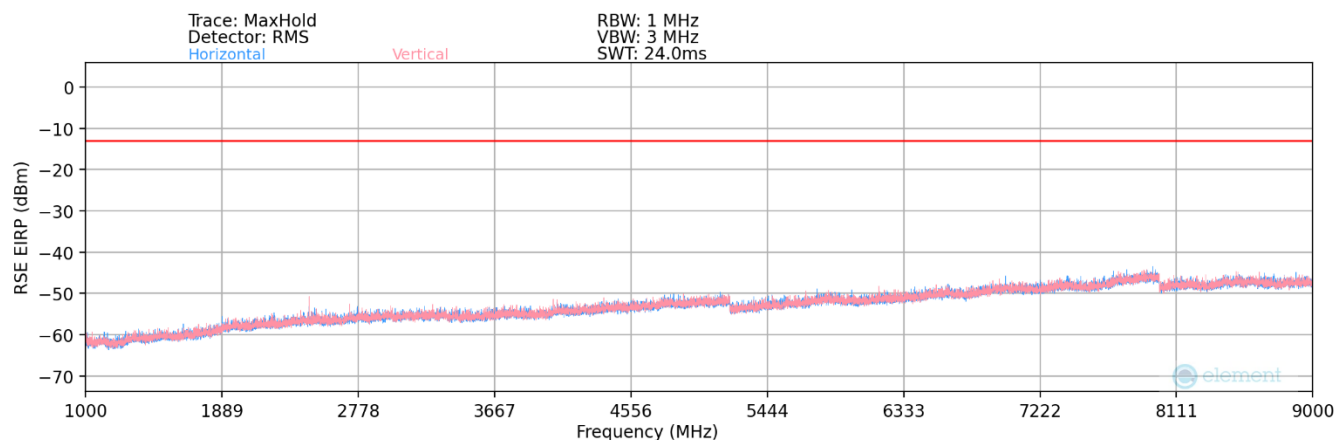
Plot 7-137. Radiated Spurious Plot Below 1GHz (LTE Band 26)

Bandwidth (MHz):	10
Frequency (MHz):	819
Modulation Signal:	QPSK
RB Config (Size / 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]
125.20	H	241	88	-80.06	-16.15	10.79	-86.62	-13.00	-73.62

Table 7-24. Radiated Spurious Data (LTE Band 26)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 108 of 128



Plot 7-138. Radiated Spurious Plot Above 1GHz (LTE Band 26)

Bandwidth (MHz):	10
Frequency (MHz):	819
Modulation Signal:	QPSK
RB Config (Size / Offset):	1 / 25

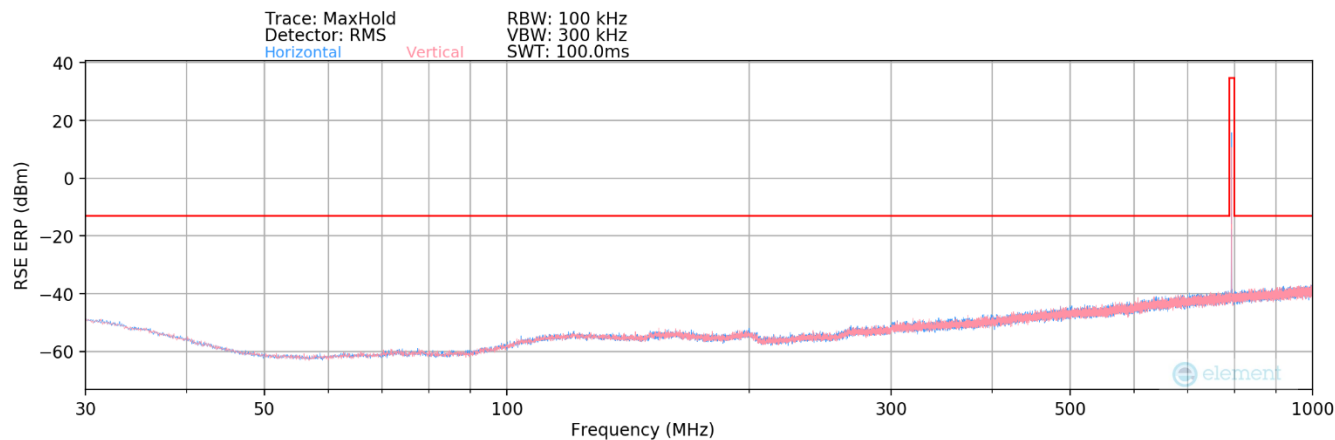
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1638.00	H	163	36	-71.61	-1.27	34.12	-61.14	-13.00	-48.14
2457.00	H	160	44	-68.53	2.77	41.24	-54.02	-13.00	-41.02
3276.00	H	-	-	-78.54	4.34	32.80	-62.45	-13.00	-49.45
4095.00	H	-	-	-79.34	5.93	33.59	-61.66	-13.00	-48.66
4914.00	H	-	-	-79.69	6.88	34.19	-61.06	-13.00	-48.06

Table 7-25. Radiated Spurious Data (LTE Band 26 – Mid Channel)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 109 of 128



NR Band n14 – Ant E



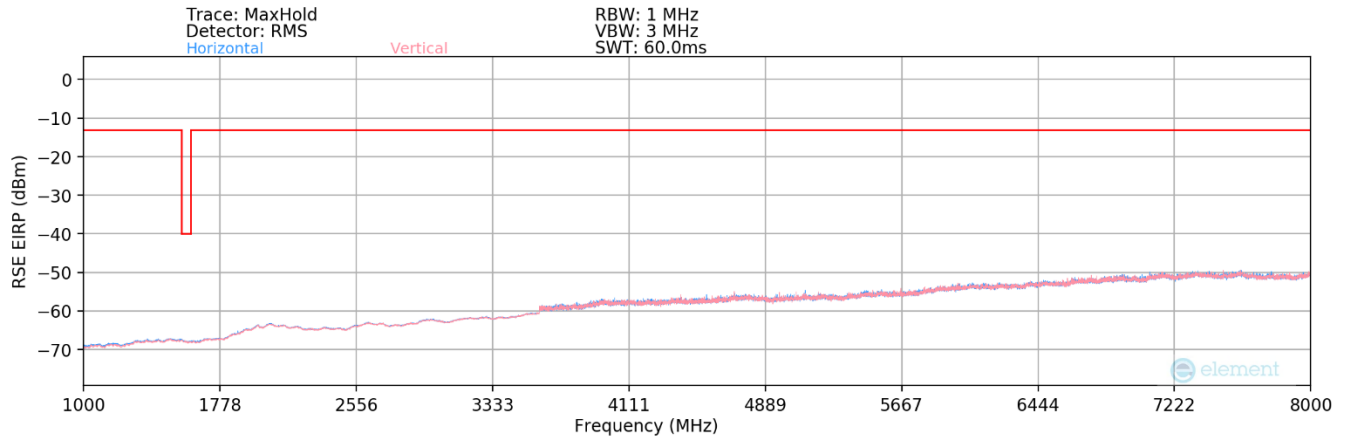
Plot 7-139. Radiated Spurious Plot Below 1GHz (NR Band n14)

Bandwidth (MHz):	5
Frequency (MHz):	793
Modulation Signal:	QPSK
RB / Offset:	1 / 12

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]
143.81	H	-	-	-84.12	19.56	42.44	-54.97	-13.00	-41.97

Table 7-26. Radiated Spurious Data (NR Band n14)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 110 of 128



Plot 7-140. Radiated Spurious Plot Above 1GHz (NR Band n14)

Bandwidth (MHz):	5
Frequency (MHz):	790.5
Modulation Signal:	QPSK
RB / Offset:	1 / 12

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]
1581.00	H	-	-	-77.45	-7.03	22.52	-72.73	-40.00	-32.73
2371.50	H	-	-	-77.44	-3.67	25.89	-69.37	-13.00	-56.37
3162.00	H	-	-	-78.43	-1.38	27.19	-68.07	-13.00	-55.07

Table 7-27. Radiated Spurious Data (NR Band n14– Low Channel)

Bandwidth (MHz):	5
Frequency (MHz):	793
Modulation Signal:	QPSK
RB / Offset:	1 / 12

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]
1586.00	H	-	-	-77.52	-7.07	22.41	-72.84	-40.00	-32.84
2379.00	H	-	-	-77.39	-3.71	25.90	-69.36	-13.00	-56.36
3172.00	H	-	-	-78.47	-1.32	27.21	-68.04	-13.00	-55.04

Table 7-28. Radiated Spurious Data (NR Band n14– Mid Channel)

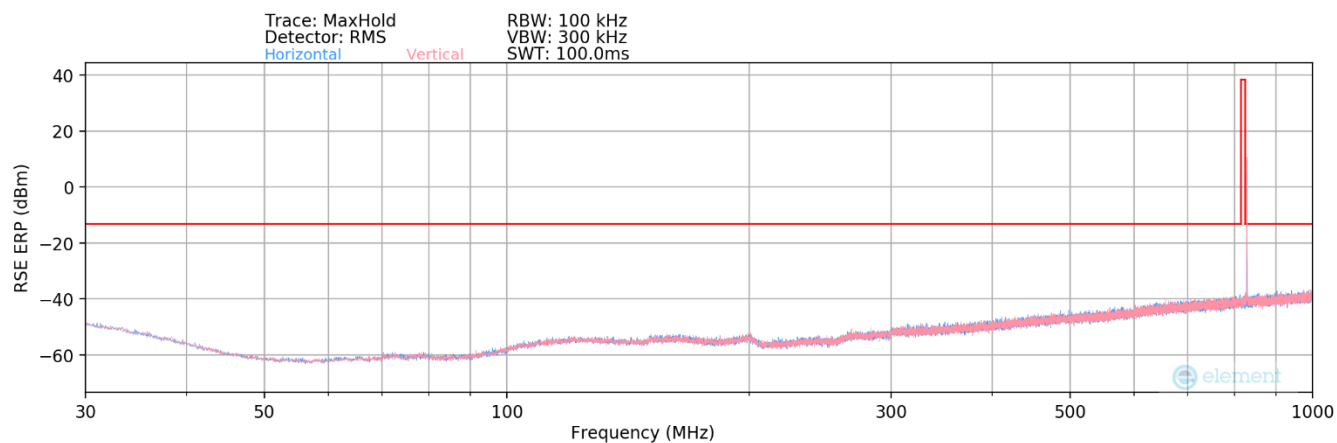
Bandwidth (MHz):	5
Frequency (MHz):	795.5
Modulation Signal:	QPSK
RB / Offset:	1 / 12

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]
1591.00	H	-	-	-77.56	-7.10	22.34	-72.92	-40.00	-32.92
2386.50	H	-	-	-77.42	-3.75	25.83	-69.43	-13.00	-56.43
3182.00	H	-	-	-78.23	-1.29	27.48	-67.77	-13.00	-54.77

Table 7-29. Radiated Spurious Data (NR Band n14– High Channel)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 111 of 128

NR Band n26 – Ant E



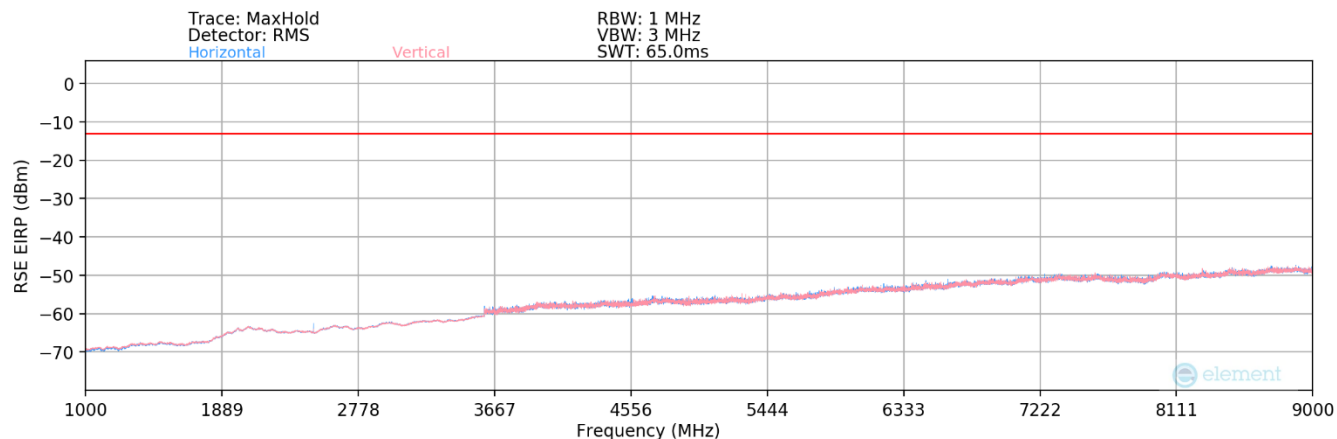
Plot 7-141. Radiated Spurious Plot Below 1GHz (NR Band n26)

Bandwidth (MHz):	30
Frequency (MHz):	829
Modulation Signal:	QPSK
RB / Offset:	1 / 80

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]
144.00	V	-	-	-84.06	19.48	42.42	-54.99	-13.00	-41.99

Table 7-30. Radiated Spurious Data (NR Band n26 – Mid Channel)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 112 of 128



Plot 7-142. Radiated Spurious Plot Above 1GHz (NR Band n26)

Bandwidth (MHz):	30
Frequency (MHz):	829
Modulation Signal:	QPSK
RB / Offset:	1 / 50

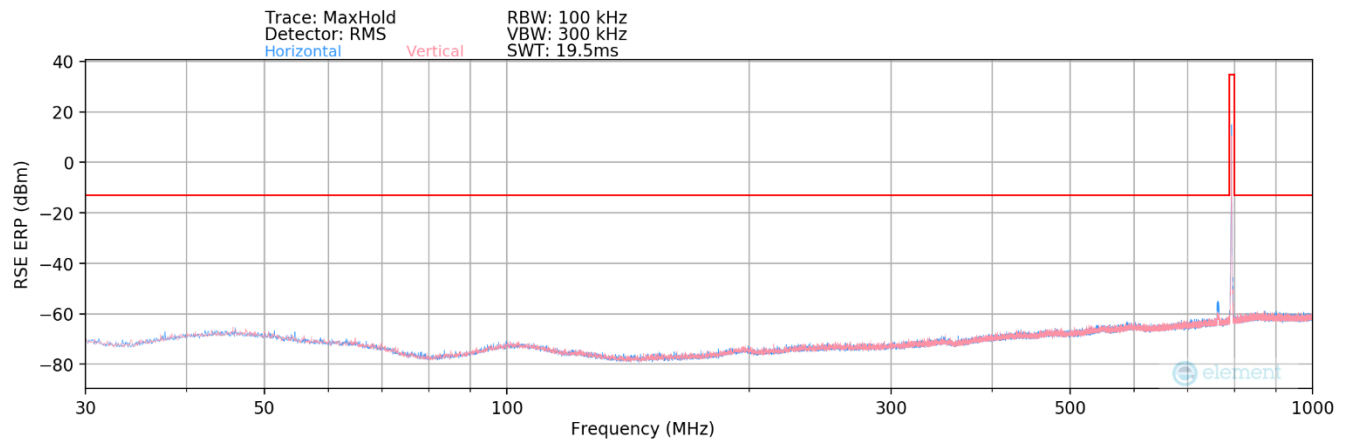
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1658.00	V	205	360	-75.96	-7.16	23.88	-71.38	-13.00	-58.38
2487.00	V	238	15	-72.86	-4.25	29.89	-65.37	-13.00	-52.37
3316.00	V	-	-	-78.31	-1.09	27.60	-67.66	-13.00	-54.66
4145.00	V	-	-	-78.29	1.74	30.45	-64.81	-13.00	-51.81
4974.00	V	-	-	-78.34	2.77	31.43	-63.82	-13.00	-50.82

Table 7-31. Radiated Spurious Data (NR Band n26 – Mid Channel)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 113 of 128



LTE Band 14 – Ant A



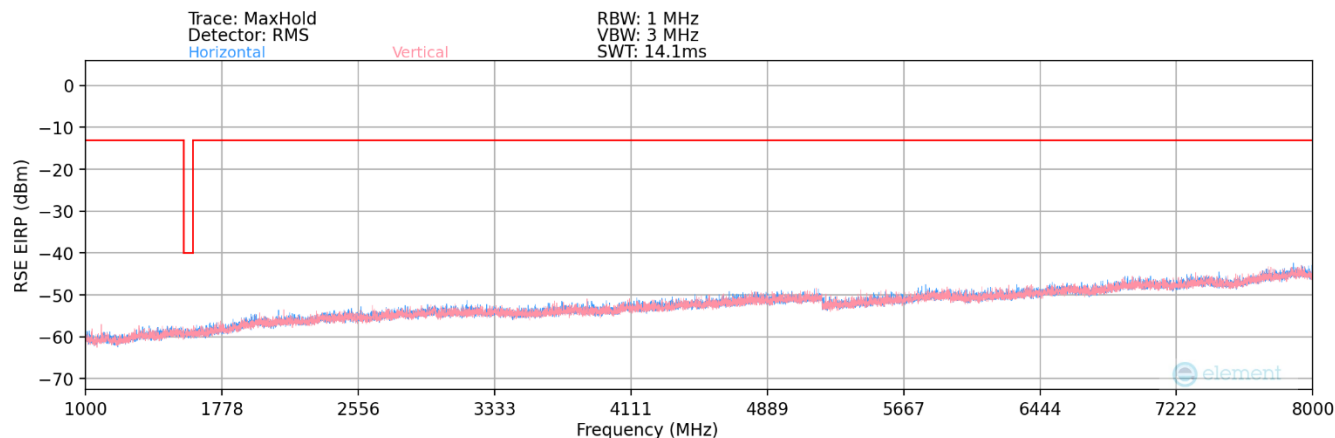
Plot 7-143. Radiated Spurious Plot Below 1GHz (LTE Band 14)

Bandwidth (MHz):	5
Frequency (MHz):	793
Modulation Signal:	QPSK
RB Config (Size / Offset):	1 / 12

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]
103.52	H	363	242	-78.45	-13.49	15.06	-82.34	-13.00	-69.34

Table 7-32. Radiated Spurious Data (LTE Band 14)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 114 of 128



Plot 7-144. Radiated Spurious Plot Above 1GHz (LTE Band 14)

Bandwidth (MHz):	5
Frequency (MHz):	793
Modulation Signal:	QPSK
RB Config (Size / Offset):	1 / 12

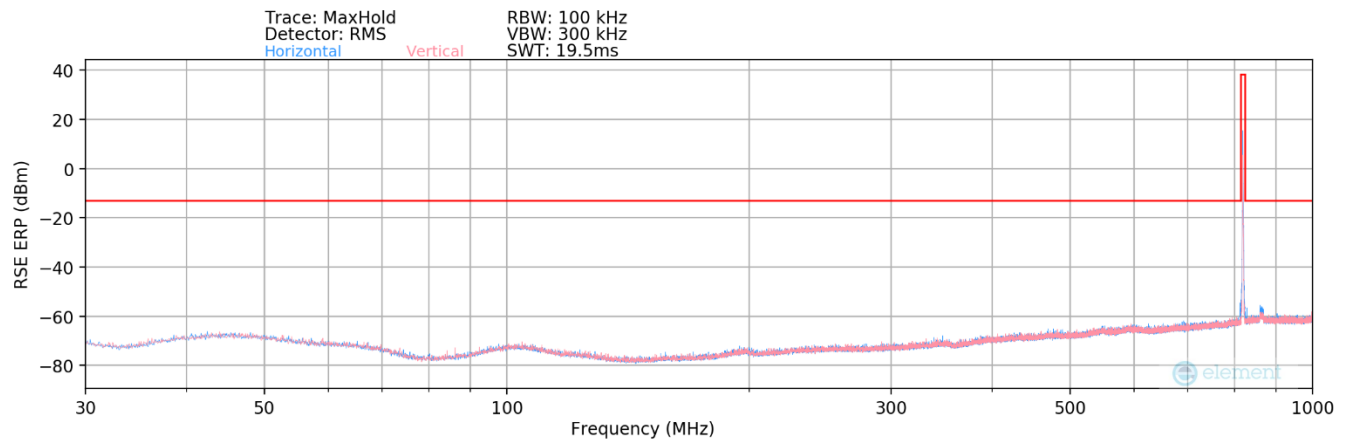
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1586.00	H	-	-	-77.14	-1.55	28.31	-66.95	-40.00	-26.95
2379.00	H	-	-	-78.22	2.36	31.14	-64.12	-13.00	-51.12
3172.00	H	-	-	-78.05	3.98	32.93	-62.32	-13.00	-49.32

Table 7-33. Radiated Spurious Data (LTE Band 14 – Mid Channel)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 115 of 128



LTE Band 26 – Ant A



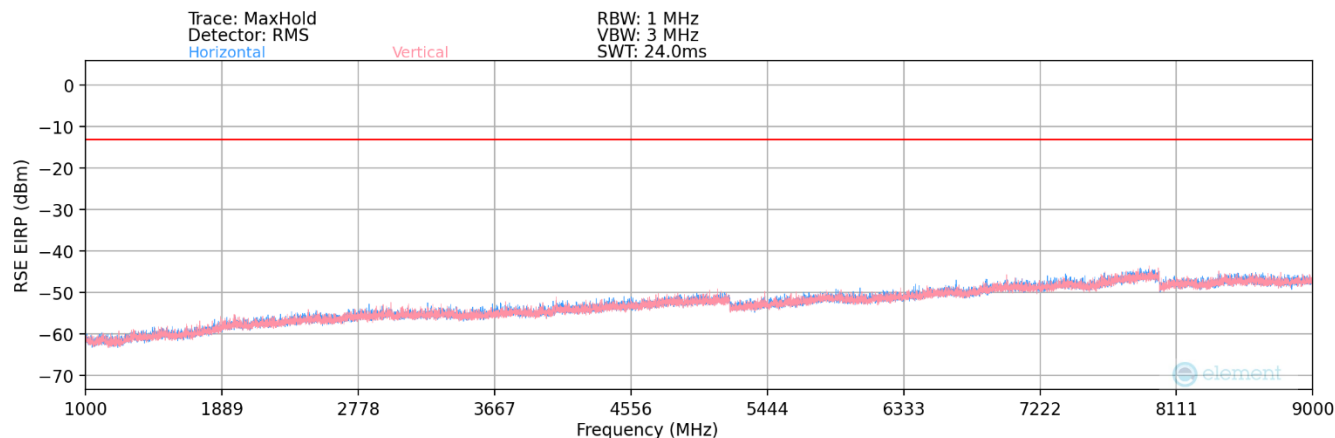
Plot 7-145. Radiated Spurious Plot Below 1GHz (LTE Band 26)

Bandwidth (MHz):	10
Frequency (MHz):	819
Modulation Signal:	QPSK
RB Config (Size / 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]
102.60	V	254	152	-78.49	-13.42	15.09	-82.31	-13.00	-69.31

Table 7-34. Radiated Spurious Data (LTE Band 26)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 116 of 128



Plot 7-146. Radiated Spurious Plot Above 1GHz (LTE Band 26)

Bandwidth (MHz):	10
Frequency (MHz):	819
Modulation Signal:	QPSK
RB Config (Size / Offset):	1 / 25

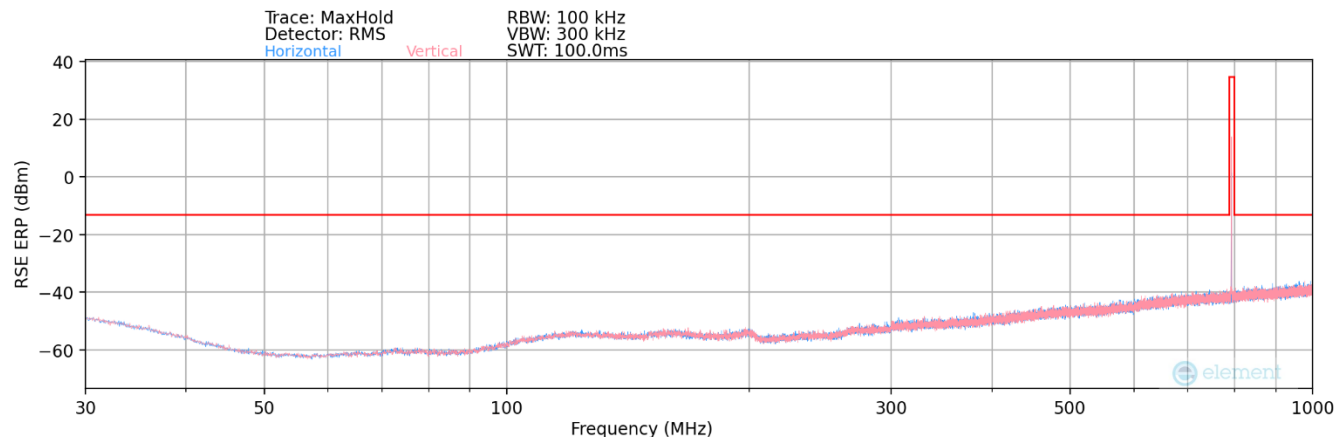
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1638.00	H	-	-	-77.19	-1.27	28.54	-66.72	-13.00	-53.72
2457.00	H	-	-	-77.61	2.77	32.16	-63.10	-13.00	-50.10
3276.00	H	-	-	-78.46	4.34	32.88	-62.37	-13.00	-49.37

Table 7-35. Radiated Spurious Data (LTE Band 26 – Mid Channel)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 117 of 128



NR Band n14 – Ant A



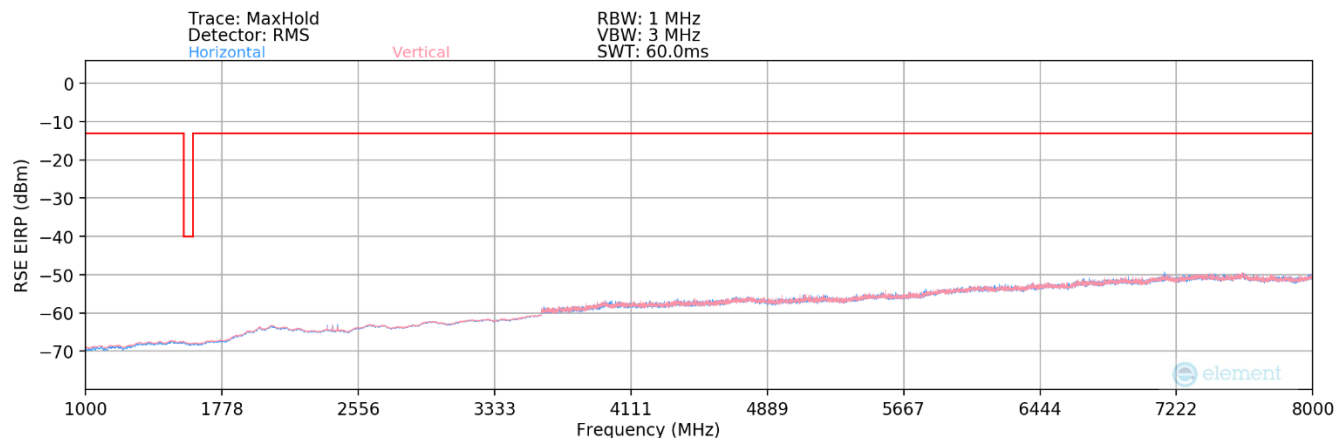
Plot 7-147. Radiated Spurious Plot Below 1GHz (NR Band n14)

Bandwidth (MHz):	5
Frequency (MHz):	793
Modulation Signal:	QPSK
RB / Offset:	1 / 12

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]
174.71	H	-	-	-84.76	18.92	41.16	-56.25	-13.00	-43.25

Table 7-36. Radiated Spurious Data (NR Band n14)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 118 of 128



Plot 7-148. Radiated Spurious Plot Above 1GHz (NR Band n14)

Bandwidth (MHz):	5
Frequency (MHz):	790.5
Modulation Signal:	QPSK
RB / Offset:	1 / 12

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]
1581.00	V	-	-	-77.53	-7.03	22.44	-72.81	-40.00	-32.81
2371.50	V	226	8	-75.01	-3.67	28.32	-66.94	-13.00	-53.94
3162.00	V	-	-	-78.48	-1.38	27.14	-68.12	-13.00	-55.12
3952.50	V	-	-	-78.49	1.80	30.31	-64.95	-13.00	-51.95
4743.00	V	-	-	-79.23	3.02	30.79	-64.47	-13.00	-51.47

Table 7-37. Radiated Spurious Data (NR Band n14– Low Channel)

Bandwidth (MHz):	5
Frequency (MHz):	793
Modulation Signal:	QPSK
RB / Offset:	1 / 12

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]
1586.00	V	276	331	-76.79	-7.07	23.14	-72.11	-40.00	-32.11
2379.00	V	294	11	-68.22	-3.71	35.07	-60.19	-13.00	-47.19
3172.00	V	-	-	-78.41	-1.32	27.27	-67.98	-13.00	-54.98
3965.00	V	-	-	-78.46	1.90	30.44	-64.82	-13.00	-51.82
4758.00	V	-	-	-79.84	3.15	30.31	-64.95	-13.00	-51.95

Table 7-38. Radiated Spurious Data (NR Band n14– Mid Channel)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 119 of 128

Bandwidth (MHz):	5
Frequency (MHz):	795.5
Modulation Signal:	QPSK
RB / Offset:	1 / 12

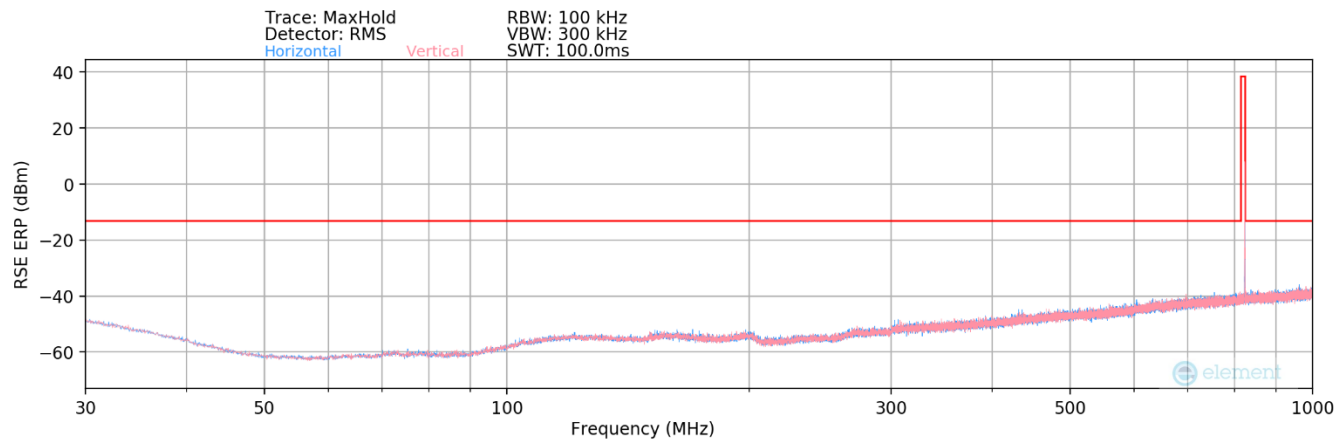
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1591.00	V	212	302	-77.40	-7.10	22.50	-72.76	-40.00	-32.76
2386.50	V	282	355	-74.27	-3.75	28.98	-66.28	-13.00	-53.28
3182.00	V	-	-	-78.24	-1.29	27.47	-67.78	-13.00	-54.78
3977.50	V	-	-	-78.59	1.98	30.39	-64.87	-13.00	-51.87
4773.00	V	-	-	-79.53	3.30	30.77	-64.49	-13.00	-51.49

Table 7-39. Radiated Spurious Data (NR Band n14– High Channel)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 120 of 128



NR Band n26 – Ant A

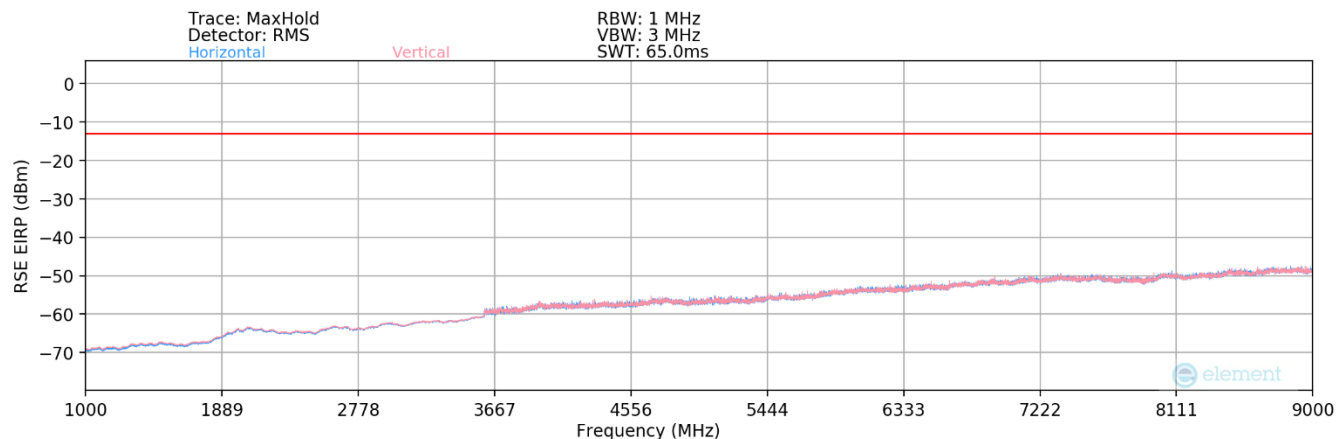


Bandwidth (MHz):	30
Frequency (MHz):	829
Modulation Signal:	QPSK
RB / Offset:	1 / 80

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]
149.58	H	-	-	-83.50	19.81	43.31	-54.09	-13.00	-41.09

Table 7-40. Radiated Spurious Data (NR Band n26 – Mid Channel)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 121 of 128



Plot 7-150. Radiated Spurious Plot Above 1GHz (NR Band n26)

Bandwidth (MHz):	20
Frequency (MHz):	824
Modulation Signal:	QPSK
RB / Offset:	1 / 50

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]
1648.00	H	-	-	-77.24	-7.27	22.49	-72.77	-13.00	-59.77
2472.00	H	-	-	-77.38	-4.17	25.45	-69.81	-13.00	-56.81
3296.00	H	-	-	-77.97	-0.97	28.06	-67.20	-13.00	-54.20

Table 7-41. Radiated Spurious Data (NR Band n26 – Mid Channel)

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 122 of 128

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.

The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ (± 2.5 ppm) of the center frequency.

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

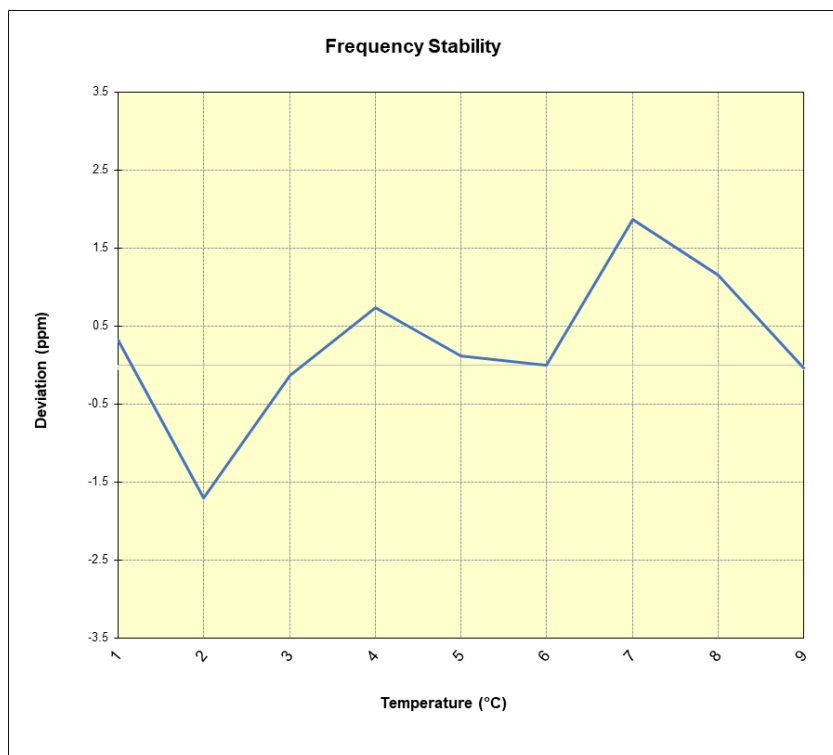
FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 123 of 128

LTE Band 14

Operating Frequency (Hz):	793,000,000
Ref. Voltage (VDC):	3.85

Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.85	- 30	793,092,292	246	0.0000310
		- 20	793,090,689	-1,357	-0.0001711
		- 10	793,091,940	-106	-0.0000134
		0	793,092,630	584	0.0000736
		+ 10	793,092,134	88	0.0000111
		+ 20 (Ref)	793,092,046	0	0.0000000
		+ 30	793,093,525	1,479	0.0001865
		+ 40	793,092,962	916	0.0001155
		+ 50	793,092,015	-31	-0.0000039
Battery Endpoint	3.21	+ 20	793,092,390	344	0.0000433

Table 7-42. LTE Band 14 Frequency Stability Data



Plot 7-151. LTE Band 14 Frequency Stability Chart

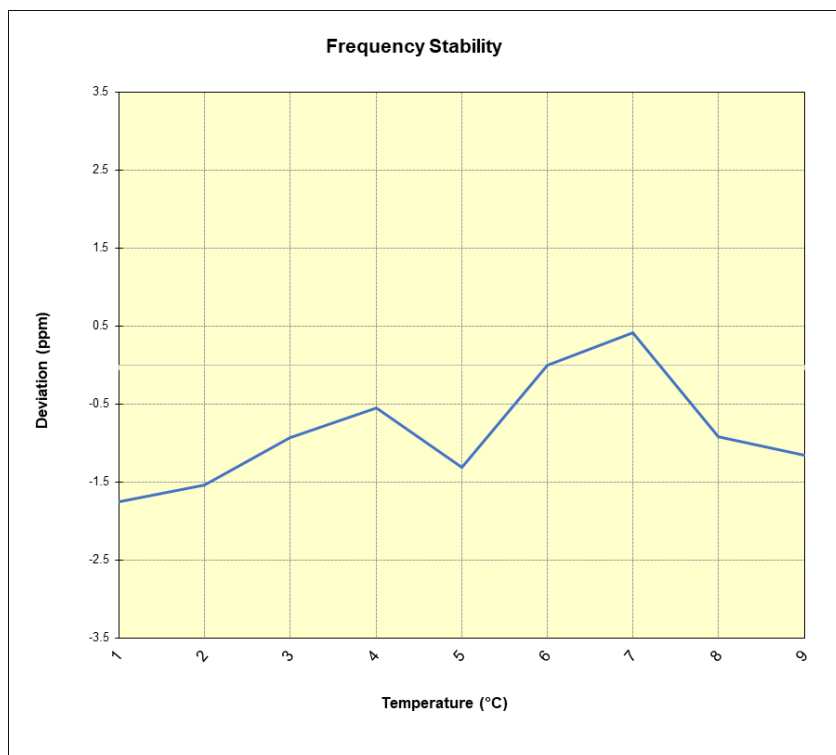
FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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LTE Band 26

Operating Frequency (Hz):	821,500,000
Ref. Voltage (VDC):	3.85
Deviation Limit:	$\pm 0.00025\%$ or 2.5 ppm

Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.85	- 30	821,501,048	-1,445	-0.0001758
		- 20	821,501,229	-1,264	-0.0001539
		- 10	821,501,730	-763	-0.0000929
		0	821,502,034	-459	-0.0000559
		+ 10	821,501,414	-1,079	-0.0001313
		+ 20 (Ref)	821,502,493	0	0.0000000
		+ 30	821,502,835	342	0.0000416
		+ 40	821,501,734	-759	-0.0000924
		+ 50	821,501,543	-950	-0.0001156
Battery Endpoint	3.21	+ 20	821,502,647	154	0.0000188

Table 7-43. LTE Band 26 Frequency Stability Data



Plot 7-152. LTE Band 26 Frequency Stability Chart

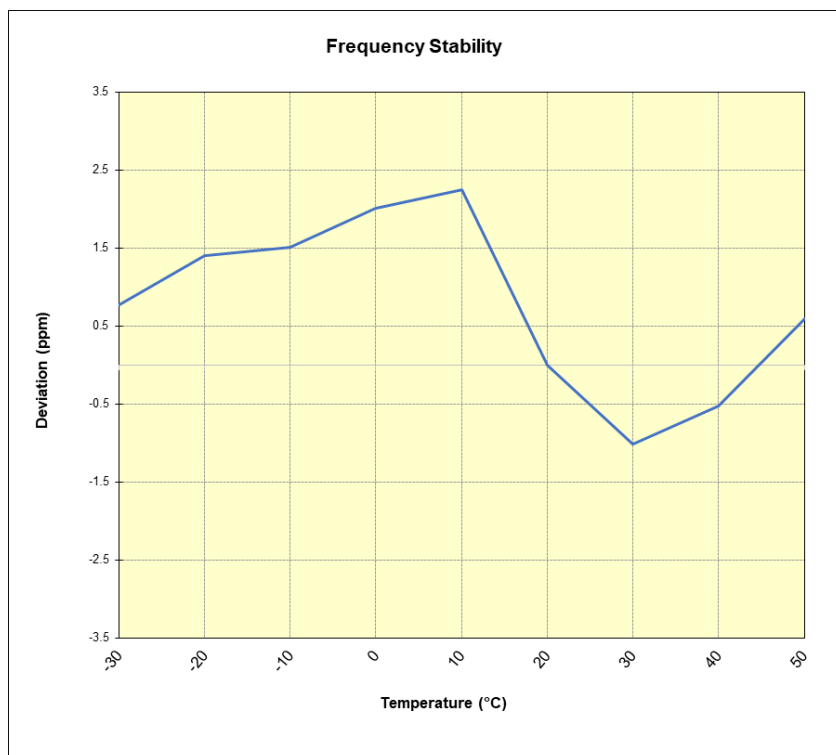
FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 125 of 128

NR Band n14

Operating Frequency (Hz):	793,000,000
Ref. Voltage (VDC):	3.85

Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.85	- 30	792,991,677	610	0.0000770
		- 20	792,992,174	1,107	0.0001396
		- 10	792,992,263	1,196	0.0001508
		0	792,992,660	1,594	0.0002010
		+ 10	792,992,849	1,782	0.0002247
		+ 20 (Ref)	792,991,067	0	0.0000000
		+ 30	792,990,261	-806	-0.0001016
		+ 40	792,990,649	-418	-0.0000527
		+ 50	792,991,533	467	0.0000589
Battery Endpoint	3.21	+ 20	792,990,780	-286	-0.0000361

Table 7-44. NR Band n14 Frequency Stability Data



Plot 7-153. NR Band n14 Frequency Stability Chart

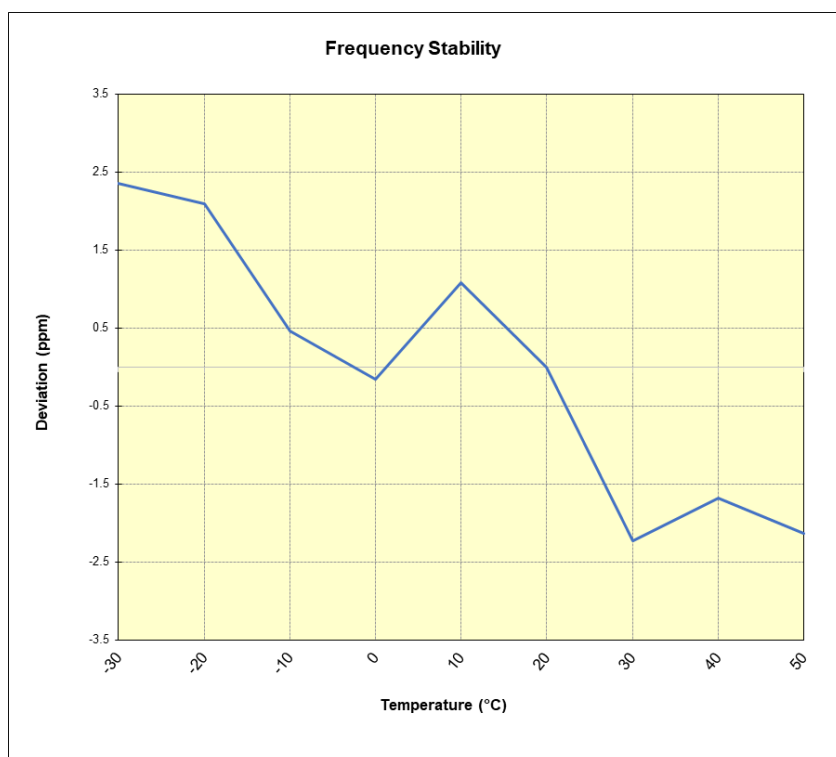
FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 126 of 128

NR Band n26

Operating Frequency (Hz):	819,000,000
Ref. Voltage (VDC):	3.85
Deviation Limit:	$\pm 0.00025\%$ or 2.5 ppm

Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.85	- 30	818,994,753	1,930	0.0002357
		- 20	818,994,531	1,708	0.0002085
		- 10	818,993,197	373	0.0000456
		0	818,992,691	-132	-0.0000162
		+ 10	818,993,706	883	0.0001078
		+ 20 (Ref)	818,992,823	0	0.0000000
		+ 30	818,991,000	-1,823	-0.0002226
		+ 40	818,991,444	-1,379	-0.0001684
		+ 50	818,991,072	-1,751	-0.0002138
Battery Endpoint	3.21	+ 20	818,991,962	-861	-0.0001052

Table 7-45. NR Band n26 Frequency Stability Data



Plot 7-154. NR Band n26 Frequency Stability Chart

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 127 of 128



8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Samsung Portable Handset** **FCC ID: A3LSMS938U** complies with all the requirements of Parts 22(H) and 90 of the FCC rules.

FCC ID: A3LSMS938U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2408260067-06.A3L	Test Dates: 09/16/2024 - 10/28/2024	EUT Type: Portable Handset	Page 128 of 128