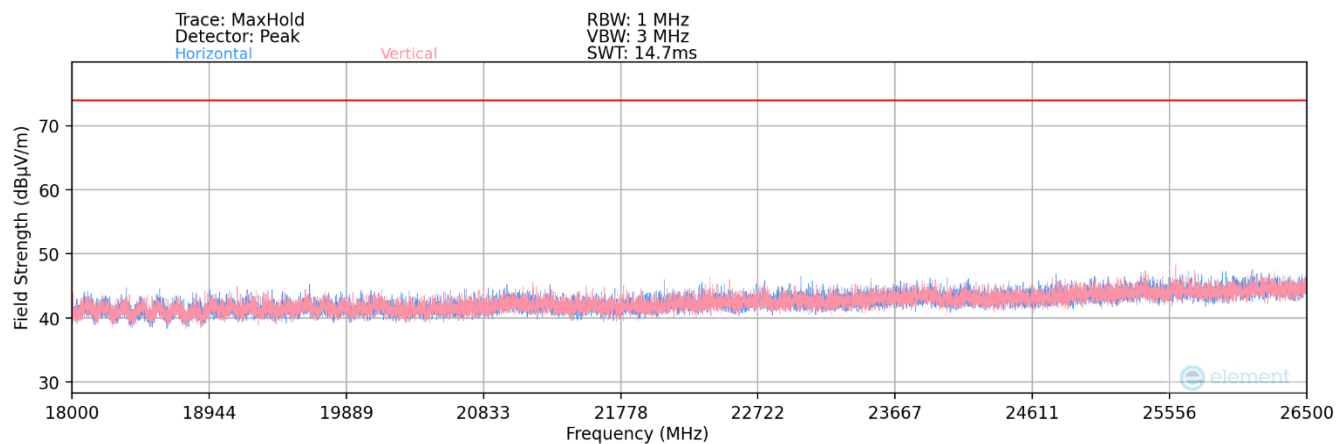




Plot 7-164. Radiated Spurious Plot above 18GHz (Bluetooth (LE) – Ch. 17) – Ant 2

FCC ID: A3LSMF966B	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2502270019-10.A3L	Test Dates: 02/24/2025 – 05/05/2025	EUT Type: Portable Handset	Page 116 of 131



Radiated Spurious Emission Measurements

§15.205 §15.209 §15.247(d); RSS-Gen [8.9]

Bluetooth Mode: LE
Distance of Measurements: 3 Meters
Operating Frequency: 2404MHz
Channel: 0

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
4808.00	Avg	V	191	290	-78.23	9.36	38.13	53.98	-15.85
4808.00	Peak	V	191	290	-67.76	9.36	48.60	73.98	-25.38
12020.00	Avg	V	-	-	-83.41	22.39	45.98	53.98	-8.00
12020.00	Peak	V	-	-	-72.47	22.39	56.92	73.98	-17.06

Table 7-17. Radiated Measurements @ 3 meters – Ant 2

Bluetooth Mode: LE
Distance of Measurements: 3 Meters
Operating Frequency: 2440MHz
Channel: 17

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
4880.00	Avg	V	176	281	-77.32	9.75	39.43	53.98	-14.55
4880.00	Peak	V	176	281	-66.28	9.75	50.47	73.98	-23.51
7320.00	Avg	V	-	-	-82.20	15.17	39.97	53.98	-14.01
7320.00	Peak	V	-	-	-71.02	15.17	51.15	73.98	-22.83
12200.00	Avg	V	-	-	-84.03	23.07	46.04	53.98	-7.94
12200.00	Peak	V	-	-	-73.19	23.07	56.88	73.98	-17.10

Table 7-18. Radiated Measurements @ 3 meters – Ant 2

FCC ID: A3LSMF966B	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2502270019-10.A3L	Test Dates: 02/24/2025 – 05/05/2025	EUT Type: Portable Handset	Page 117 of 131

Bluetooth Mode: LE
Distance of Measurements: 3 Meters
Operating Frequency: 2478MHz
Channel: 36

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
4956.00	Avg	V	182	289	-77.74	9.74	39.00	53.98	-14.98
4956.00	Peak	V	182	289	-67.00	9.74	49.74	73.98	-24.24
7434.00	Avg	V	-	-	-82.24	15.40	40.16	53.98	-13.82
7434.00	Peak	V	-	-	-70.64	15.40	51.76	73.98	-22.22
12390.00	Avg	V	-	-	-83.80	23.06	46.26	53.98	-7.72
12390.00	Peak	V	-	-	-72.79	23.06	57.27	73.98	-16.71

Table 7-19. Radiated Measurements @ 3 meters – Ant 2

Bluetooth Mode: LE
Distance of Measurements: 3 Meters
Operating Frequency: 2440MHz
Channel: 17

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
4880.00	Avg	H	-	-	-75.50	9.75	41.25	53.98	-12.73
4880.00	Peak	H	-	-	-67.55	9.75	49.20	73.98	-24.78
7320.00	Avg	H	-	-	-81.21	15.17	40.96	53.98	-13.02
7320.00	Peak	H	-	-	-72.90	15.17	49.27	73.98	-24.71
12200.00	Avg	H	-	-	-88.60	23.07	41.47	53.98	-12.51
12200.00	Peak	H	-	-	-87.44	23.07	42.63	73.98	-31.35

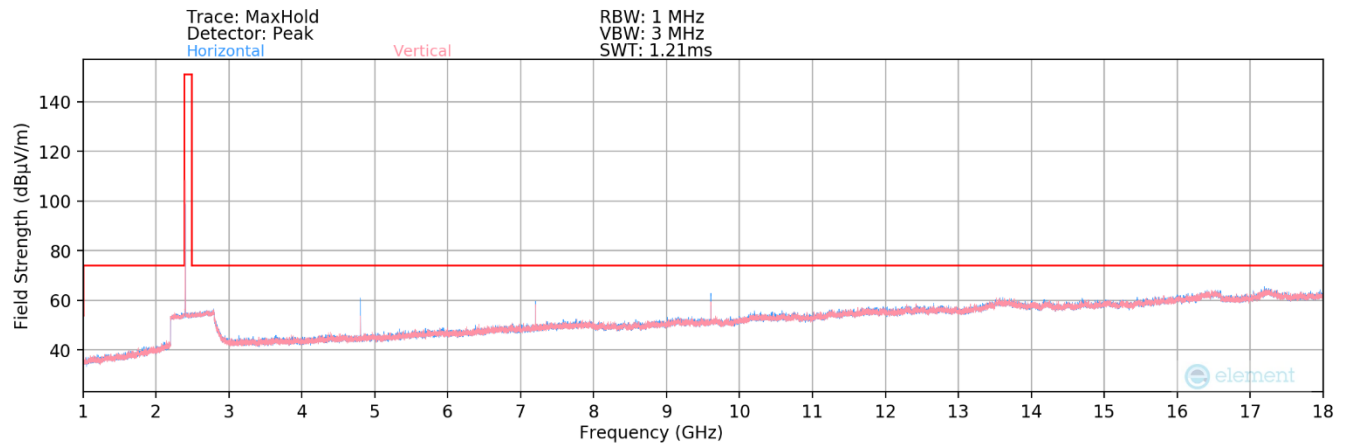
Table 7-20. Radiated Measurements @ 3 meters – Ant 2

FCC ID: A3LSMF966B	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2502270019-10.A3L	Test Dates: 02/24/2025 – 05/05/2025	EUT Type: Portable Handset	Page 118 of 131

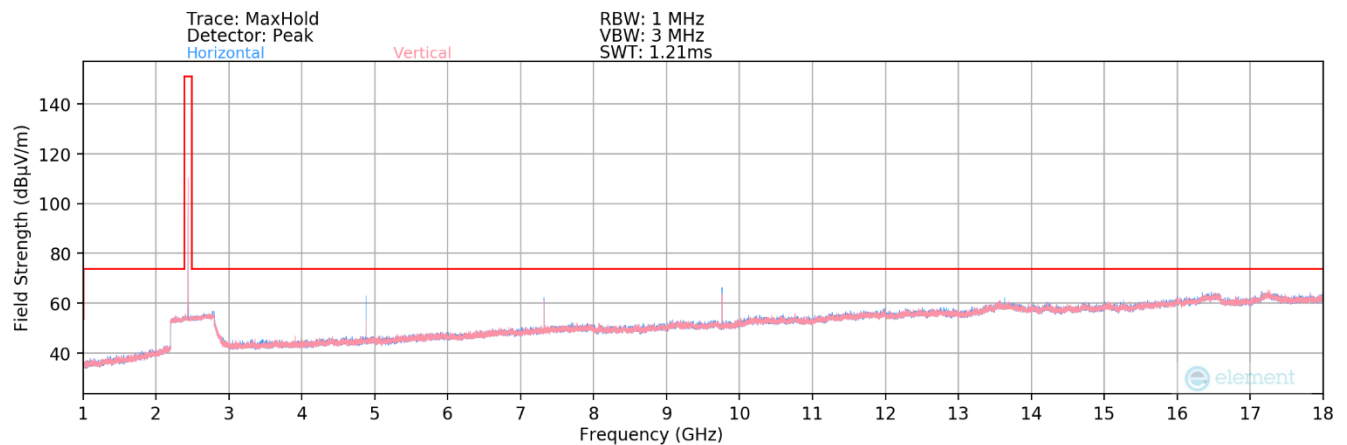


Radiated Spurious Emission Measurements – Dual Ant

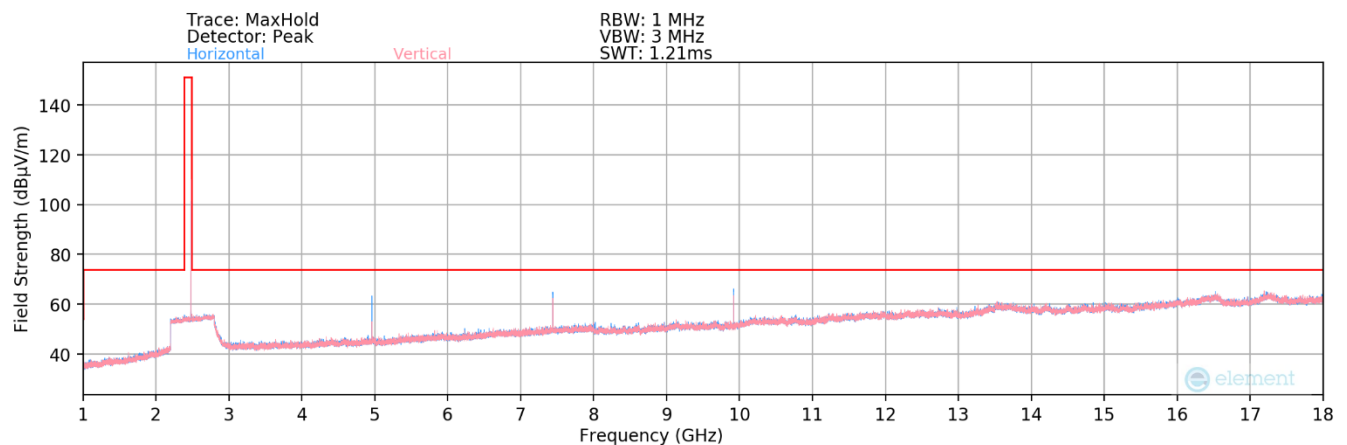
§15.205 §15.209 §15.247(d)



Plot 7-165. Radiated Spurious Plot above 1GHz (Bluetooth (LE) – Ch. 0) – Dual Ant

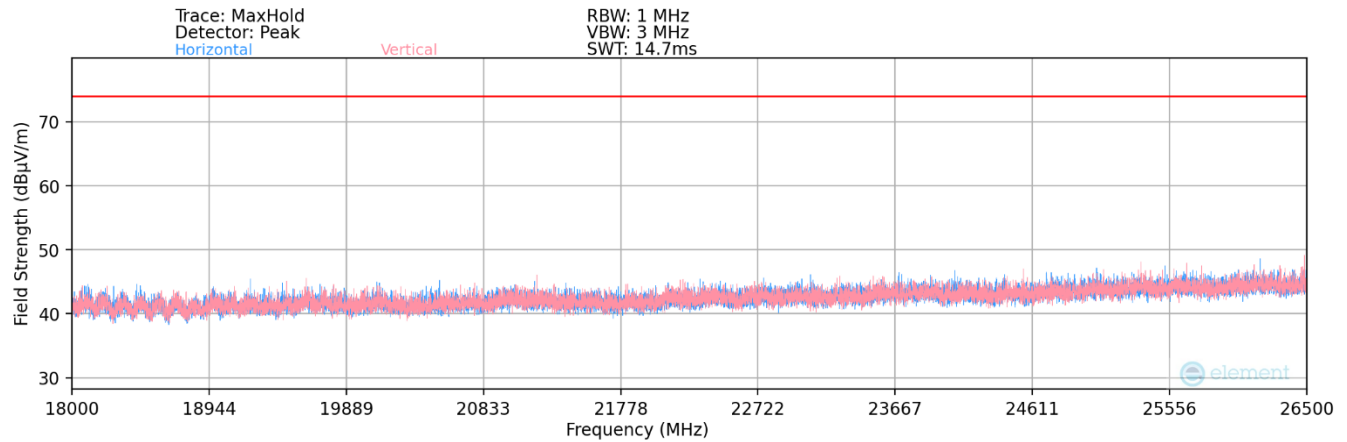


Plot 7-166. Radiated Spurious Plot above 1GHz (Bluetooth (LE) – Ch. 17) – Dual Ant



Plot 7-167. Radiated Spurious Plot above 1GHz (Bluetooth (LE) – Ch. 36) – Dual Ant

FCC ID: A3LSMF966B	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2502270019-10.A3L	Test Dates: 02/24/2025 – 05/05/2025	EUT Type: Portable Handset	Page 119 of 131



Plot 7-168. Radiated Spurious Plot above 18GHz (Bluetooth (LE) – Ch. 17) – Dual Ant

FCC ID: A3LSMF966B	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2502270019-10.A3L	Test Dates: 02/24/2025 – 05/05/2025	EUT Type: Portable Handset	Page 120 of 131



Radiated Spurious Emission Measurements

§15.205 §15.209 §15.247(d); RSS-Gen [8.9]

Bluetooth Mode: LE
Distance of Measurements: 3 Meters
Operating Frequency: 2404MHz
Channel: 0

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
4808.00	Avg	V	159	205	-71.84	9.36	44.52	53.98	-9.46
4808.00	Peak	V	159	205	-64.17	9.36	52.19	73.98	-21.79
12020.00	Avg	V	-	-	-83.59	22.39	45.80	53.98	-8.18
12020.00	Peak	V	-	-	-71.86	22.39	57.53	73.98	-16.45

Table 7-21. Radiated Measurements @ 3 meters – Dual Ant

Bluetooth Mode: LE
Distance of Measurements: 3 Meters
Operating Frequency: 2440MHz
Channel: 17

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
4880.00	Avg	V	149	179	-70.56	9.75	46.19	53.98	-7.79
4880.00	Peak	V	149	179	-62.17	9.75	54.58	73.98	-19.40
7320.00	Avg	V	155	194	-76.80	15.17	45.37	53.98	-8.61
7320.00	Peak	V	155	194	-67.06	15.17	55.11	73.98	-18.87
12200.00	Avg	V	-	-	-84.04	23.07	46.03	53.98	-7.95
12200.00	Peak	V	-	-	-72.29	23.07	57.78	73.98	-16.20

Table 7-22. Radiated Measurements @ 3 meters – Dual Ant

FCC ID: A3LSMF966B	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2502270019-10.A3L	Test Dates: 02/24/2025 – 05/05/2025	EUT Type: Portable Handset	Page 121 of 131

Bluetooth Mode: LE
Distance of Measurements: 3 Meters
Operating Frequency: 2478MHz
Channel: 36

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
4956.00	Avg	V	165	196	-72.17	9.74	44.57	53.98	-9.41
4956.00	Peak	V	165	196	-64.46	9.74	52.28	73.98	-21.70
7434.00	Avg	V	177	210	-74.50	15.40	47.90	53.98	-6.08
7434.00	Peak	V	177	210	-65.72	15.40	56.68	73.98	-17.30
12390.00	Avg	V	-	-	-83.77	23.06	46.29	53.98	-7.69
12390.00	Peak	V	-	-	-72.53	23.06	57.53	73.98	-16.45

Table 7-23. Radiated Measurements @ 3 meters – Dual Ant

FCC ID: A3LSMF966B	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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7.8 Radiated Restricted Band Edge Measurements

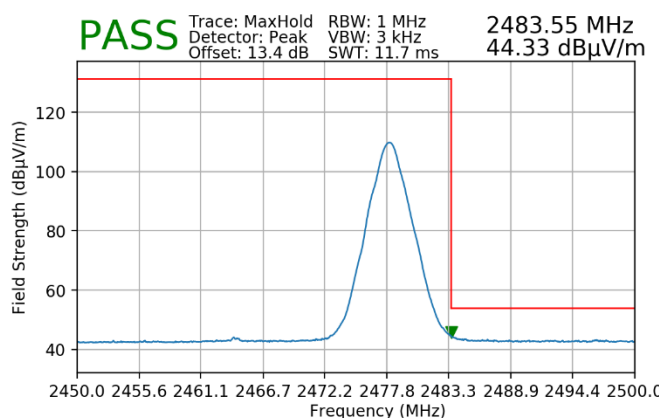
§15.205 §15.209; RSS-Gen [8.9]

The radiated restricted band edge measurements are measured with an EMI test receiver connected to the receive antenna while the EUT is transmitting.

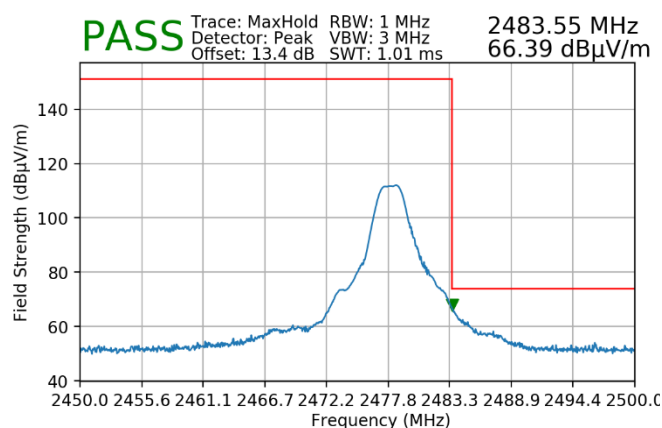
The amplitude offset shown in the following plots for average measurements was calculated using the formula:

$$\text{Offset (dB)} = (\text{Antenna Factor} + \text{Cable Loss} + \text{Attenuator}) - \text{Preamplifier Gain}$$

Bluetooth Mode:	LE
Measurement Distance:	3 Meters
Operating Frequency:	2478MHz
Channel:	36



Plot 7-169. Radiated Restricted Upper Band Edge Measurement (Average) – Ant 1

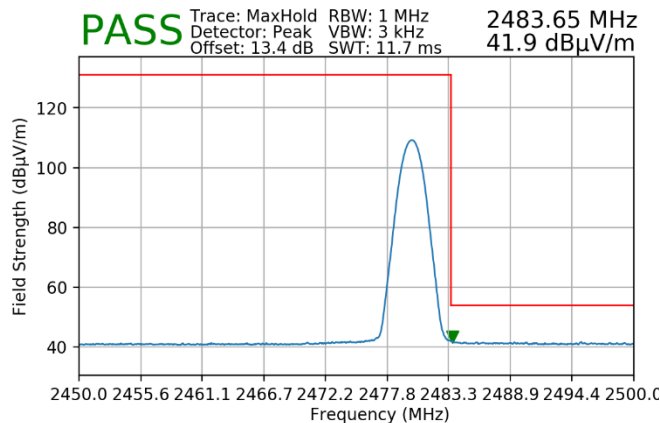


Plot 7-170. Radiated Restricted Upper Band Edge Measurement (Peak) – Ant 1

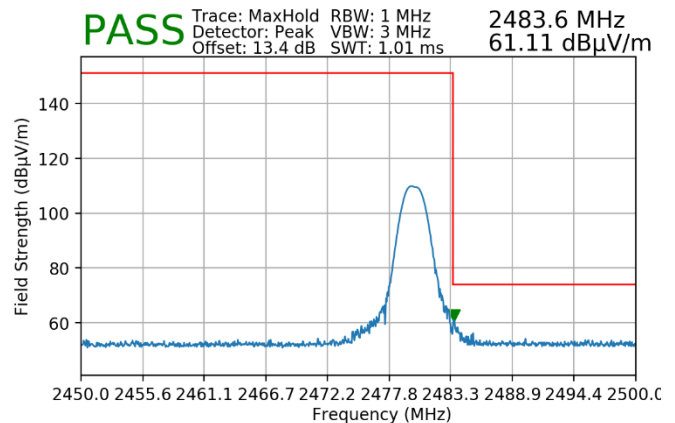
FCC ID: A3LSMF966B	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2502270019-10.A3L	Test Dates: 02/24/2025 – 05/05/2025	EUT Type: Portable Handset	Page 123 of 131



Bluetooth Mode: LE
Measurement Distance: 3 Meters
Operating Frequency: 2480MHz
Channel: 39

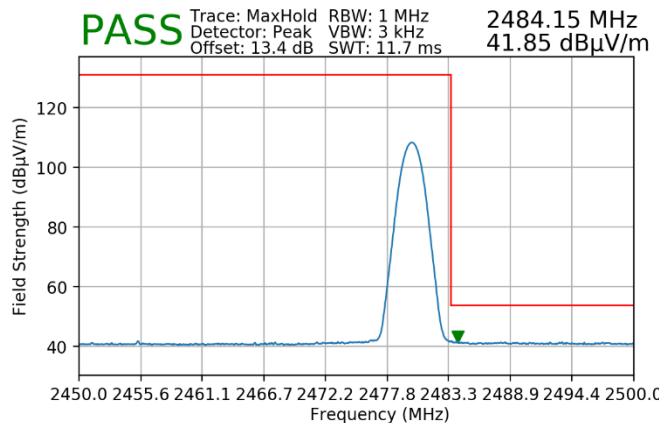


Plot 7-171. Radiated Restricted Upper Band Edge Measurement (Average) – Ant 2

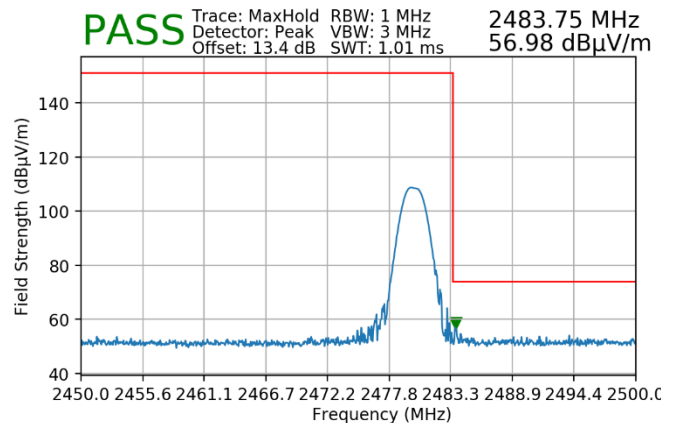


Plot 7-172. Radiated Restricted Upper Band Edge Measurement (Peak) – Ant 2

Bluetooth Mode: LE
Measurement Distance: 3 Meters
Operating Frequency: 2480MHz
Channel: 39



Plot 7-173. Radiated Restricted Upper Band Edge Measurement (Average) – Dual Ant



Plot 7-174. Radiated Restricted Upper Band Edge Measurement (Peak) – Dual Ant

FCC ID: A3LSMF966B	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2502270019-10.A3L	Test Dates: 02/24/2025 – 05/05/2025	EUT Type: Portable Handset	Page 124 of 131

7.9 Line-Conducted Test Data

§15.207; RSS-Gen [8.8]

Test Overview and Limit

All AC line conducted spurious emissions are measured with a receiver connected to a grounded LISN while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates and modes were investigated for conducted spurious emissions. Only the conducted emissions of the configuration that produced the worst case emissions are reported in this section.

All conducted emissions must not exceed the limits shown in the table below, per Section 15.207 and RSS-Gen (8.8).

Frequency of emission (MHz)	Conducted Limit (dBμV)	
	Quasi-peak	Average
0.15 – 0.5	66 to 56*	56 to 46*
0.5 – 5	56	46
5 – 30	60	50

Table 7-24. Conducted Limits

*Decreases with the logarithm of the frequency.

Test Procedures Used

ANSI C63.10-2013, Section 6.2

Test Settings

Quasi-Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the spurious emission of interest
2. RBW = 9kHz (for emissions from 150kHz – 30MHz)
3. Detector = quasi-peak
4. Sweep time = auto couple
5. Trace mode = max hold
6. Trace was allowed to stabilize

Average Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the spurious emission of interest
2. RBW = 9kHz (for emissions from 150kHz – 30MHz)
3. Detector = RMS
4. Sweep time = auto couple
5. Trace mode = max hold
6. Trace was allowed to stabilize

FCC ID: A3LSMF966B	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.

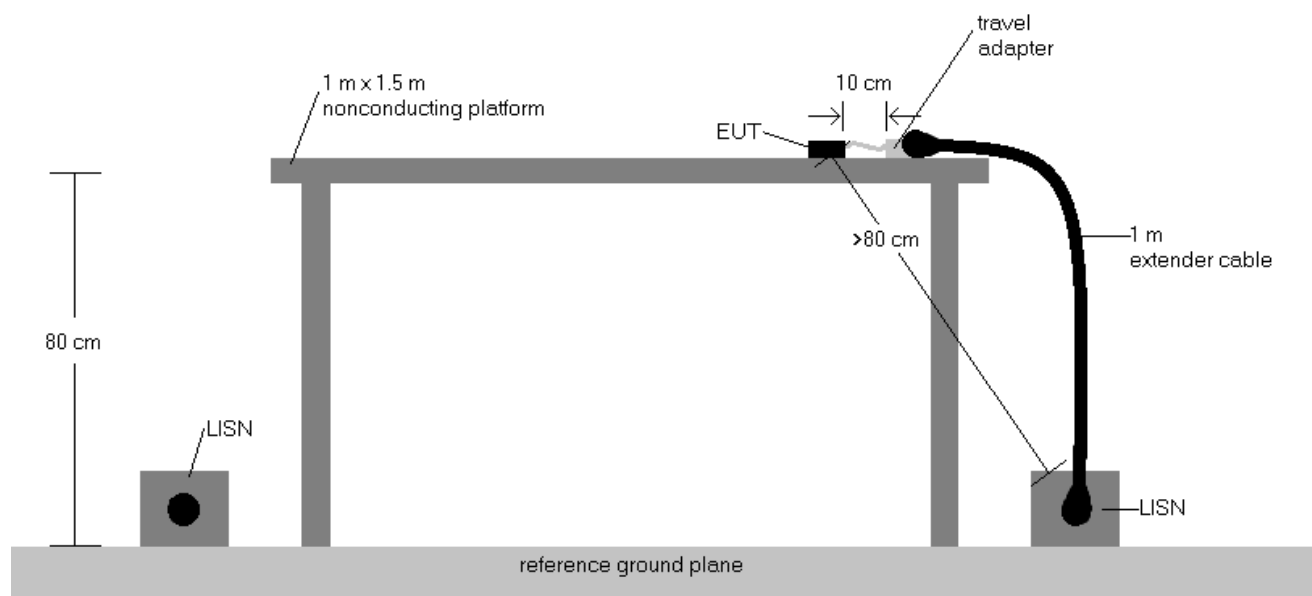
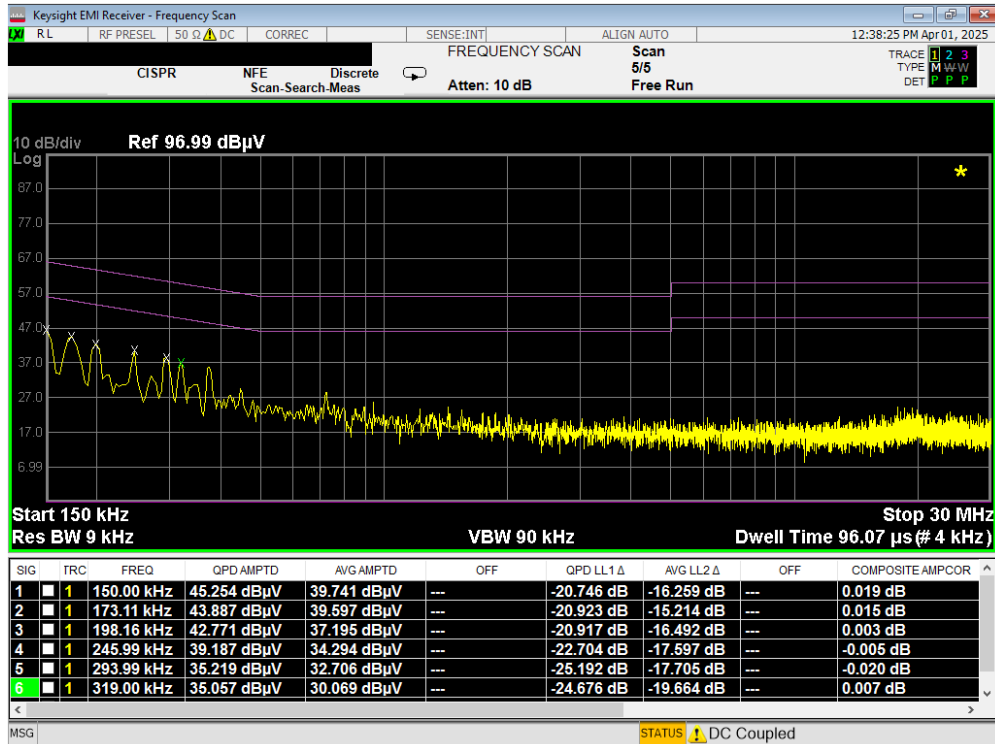


Figure 7-7. Test Instrument & Measurement Setup

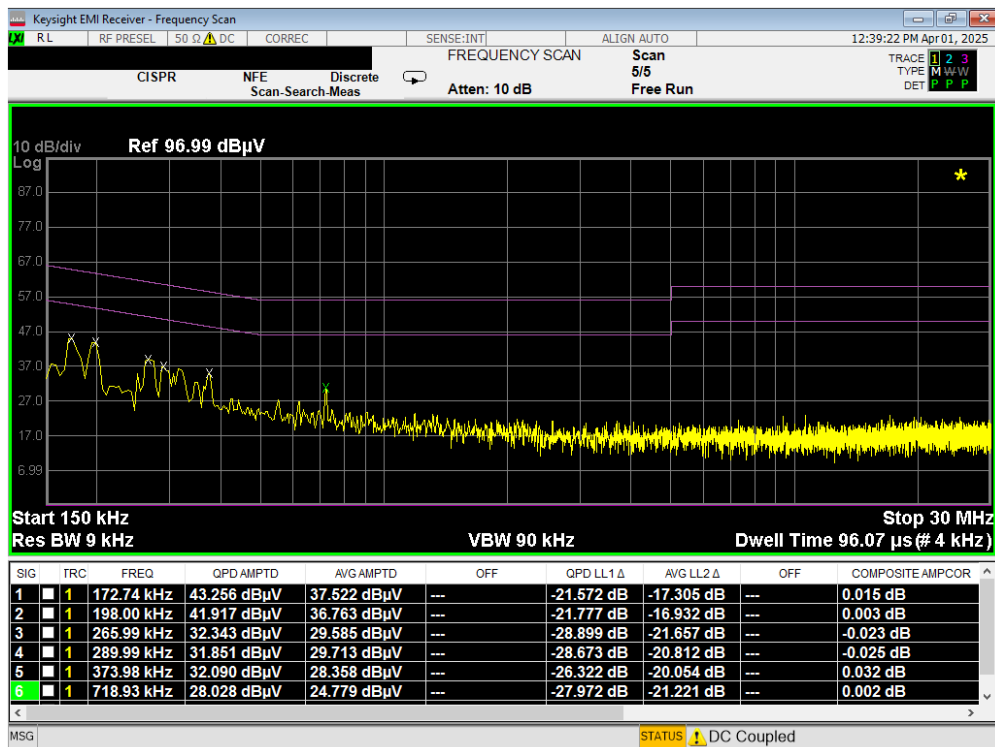
Test Notes

1. All modes of operation were investigated and the worst-case emissions are reported using mid channel. The emissions found were not affected by the choice of channel used during testing.
2. The limit for an intentional radiator from 150kHz to 30MHz are specified in Part 15.207 and RSS-Gen (8.8).
3. $\text{Corr. (dB)} = \text{Cable loss (dB)} + \text{LISN insertion factor (dB)}$
4. $\text{QP/AV Level (dB}\mu\text{V)} = \text{QP/AV Analyzer/Receiver Level (dB}\mu\text{V)} + \text{Corr. (dB)}$
5. $\text{Margin (dB)} = \text{QP/AV Limit (dB}\mu\text{V)} - \text{QP/AV Level (dB}\mu\text{V)}$
6. Traces shown in plot are made using a peak detector.
7. Deviations to the Specifications: None.

FCC ID: A3LSMF966B	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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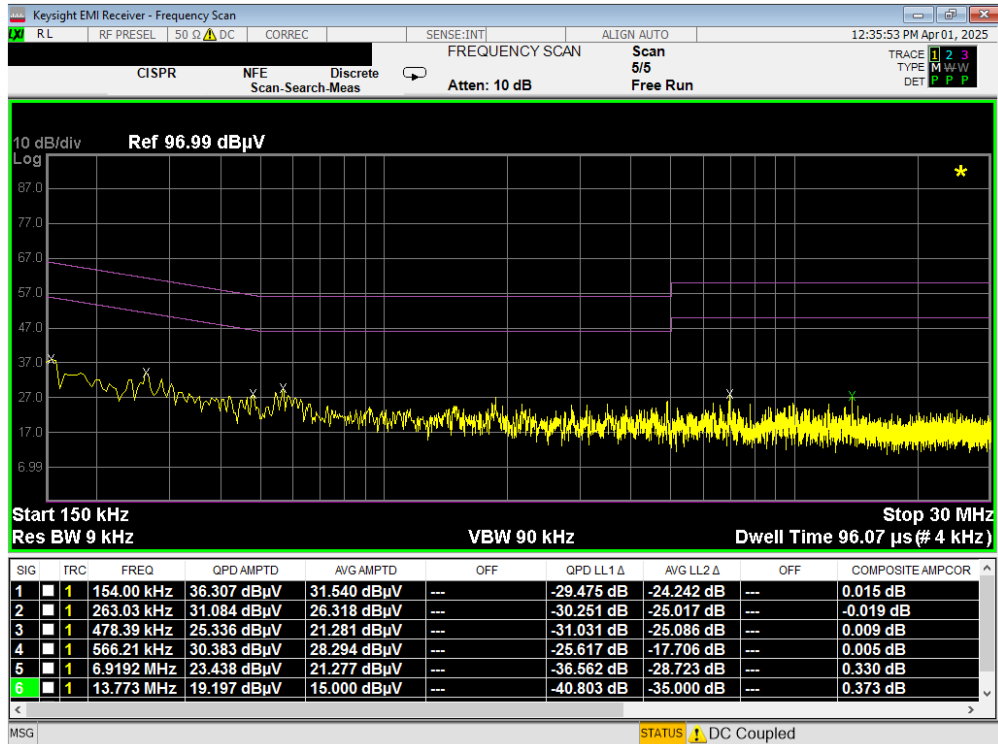


Plot 7-175. Line Conducted Plot with Bluetooth LE (L1)

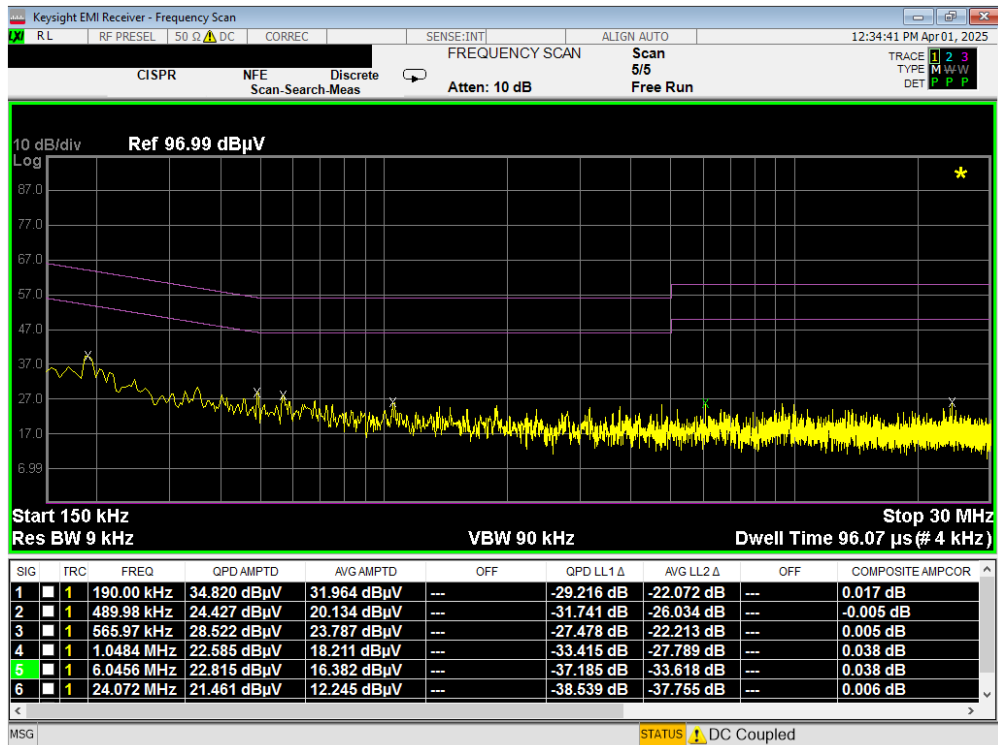


Plot 7-176. Line Conducted Plot with Bluetooth LE (N)

FCC ID: A3LSMF966B	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2502270019-10.A3L	Test Dates: 02/24/2025 – 05/05/2025	EUT Type: Portable Handset	Page 127 of 131



Plot 7-177. Line Conducted Plot with Bluetooth LE (L1) - WCP



Plot 7-178. Line Conducted Plot with Bluetooth LE (N) - WCP

FCC ID: A3LSMF966B	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2502270019-10.A3L	Test Dates: 02/24/2025 – 05/05/2025	EUT Type: Portable Handset	Page 128 of 131

8.0 CONCLUSION

The data collected relate only the item(s) tested and show that the **Samsung Portable Handset FCC ID: A3LSMF966B** is in compliance with Part 15 Subpart C (15.247) of the FCC Rules.

FCC ID: A3LSMF966B	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2502270019-10.A3L	Test Dates: 02/24/2025 – 05/05/2025	EUT Type: Portable Handset	Page 129 of 131

9.0 APPENDIX A – DATA REFERENCING RESULTS

Overview

The spot-check data presented in this section was measured on the variant model following the guidance of the FCC's Data Referencing guidance in KDB 484596 D01 v03. Each spot-check test on the EUT was performed using the same procedure and setting that were used to perform the test on the corresponding reference device. For the worst-case RSE data, the measurement is determined by an actual emission and not by noise floor.

All test cases were performed to verify the variant EUT is still in compliance with the spot-checked results to the reference device and was performed using the guidance of ANSI C63.10-2013.

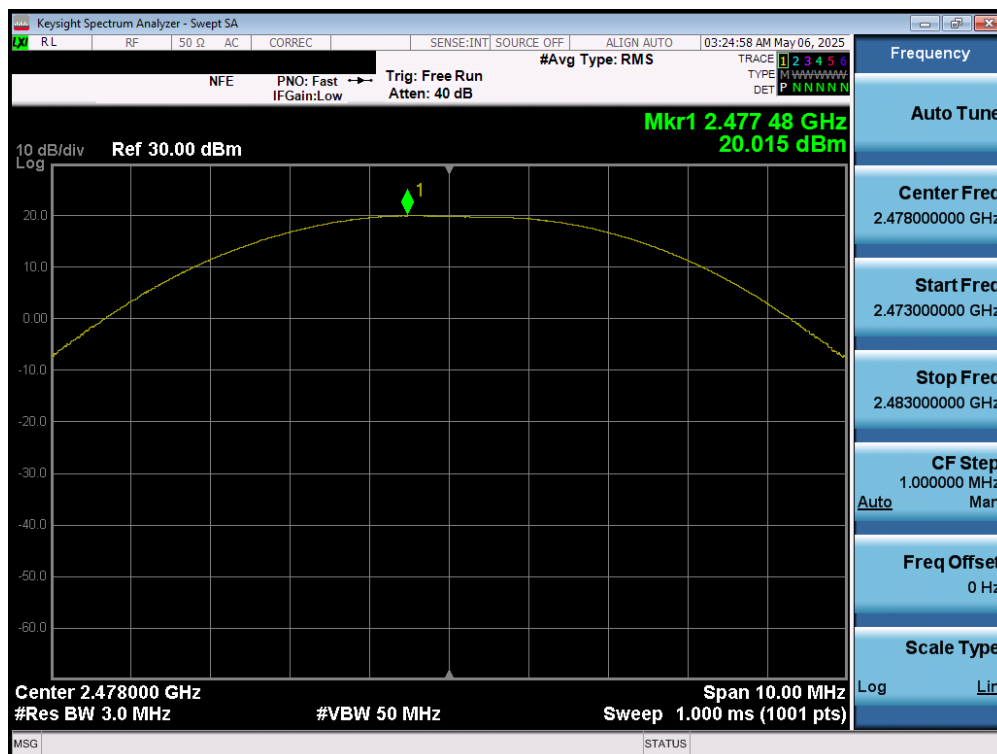
Notes

- Each spot check test on the EUT was performed using the same procedure and setting that were used to perform the test on the corresponding reference device.

Conducted Spot-Checks – SM-F966B/DS

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Bluetooth Mode	Peak Conducted Power	
				[dBm]	[mW]
2478	2 Mbps	36	LE	20.02	100.346

Table 9-1. Conducted Output Power Measurements – SISO Ant 2 (Spot-check)



Plot 9-1. Conducted Peak Power Measurement – SISO Ant2 (Spot-check)

FCC ID: A3LSMF966B	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2502270019-10.A3L	Test Dates: 02/24/2025 – 05/05/2025	EUT Type: Portable Handset	Page 130 of 131

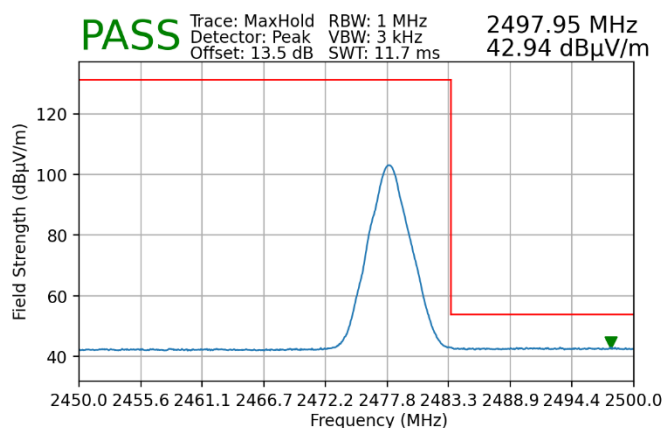
Radiated Spot-Checks – SM-F966B/DS

Bluetooth Mode: LE
Distance of Measurements: 3 Meters
Operating Frequency: 2440MHz
Channel: 17

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
4880.00	Avg	V	287	239	-76.85	6.79	36.94	53.98	-17.04
4880.00	Peak	V	287	239	-67.28	6.79	46.51	73.98	-27.47

Table 9-2. RSE Measurements – SISO Ant 1 (Spot-check)

Bluetooth Mode: LE
Measurement Distance: 3 Meters
Operating Frequency: 2478MHz
Channel: 36



Plot 9-2. Radiated Restricted Upper Band Edge Measurement – SISO Ant1 (Average)

Results

FCC Rules	Test Item	Test Case	Units	Limit	Reference Model: SM-F966U	Variant Model: SM-F966B	Deviation (dB)	Max Deviation (dB)	Pass/Fail
15.247(b)(3)	Conducted Output Power	ANT 2 - 2M - CH36 - PEAK	dBm	N/A	19.49	20.01	0.52	1	PASS
15.209	Radiated Spurious Emissions	SISO Ant1 Ch.17 - Average - 4880 MHz	dBμV/m	53.98	38.03	36.94	1.09	3	PASS
15.209	Radiated Band Edge Emissions	SISO Ant1 Ch.36 - Average	dBμV/m	53.98	44.33	42.94	1.39	3	PASS

Table 9-3. Summary of Spot-checks

FCC ID: A3LSMF966B	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
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