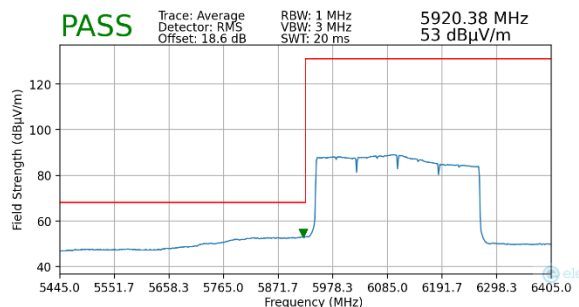
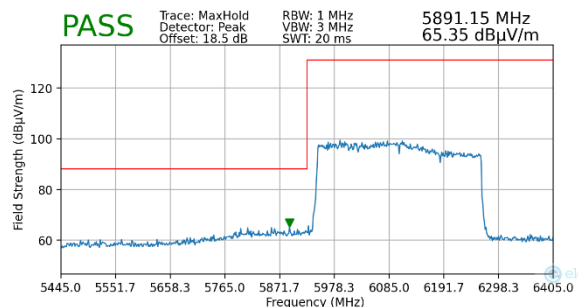


7.8.8 MIMO Radiated Band Edge Measurements (320MHz BW)

Worst Case Mode:	802.11be
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	6105MHz
Channel:	31



**Plot 7-90. Radiated Lower Band Edge Plot MIMO
(Average – UNII Band 5)**

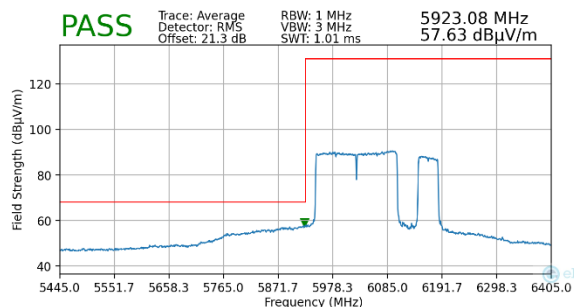


**Plot 7-91. Radiated Lower Band Edge Plot MIMO
(Peak – UNII Band 5)**

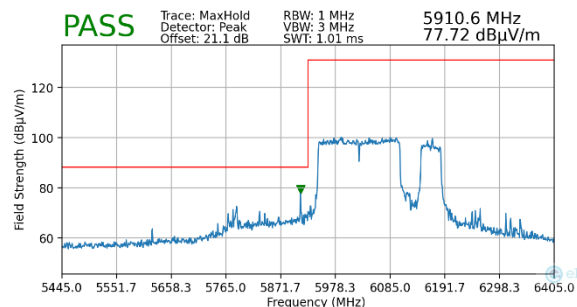
FCC ID: A3LSMF966B	MEASUREMENT REPORT		Approved by: Technical Manager
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7.8.9 MIMO Radiated Band Edge Measurements (320MHz BW – Punctured)

Worst Case Mode:	802.11be
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	6105MHz
Channel:	31



Plot 7-92. Radiated Lower Band Edge Plot MIMO
(Average – UNII Band 5)



Plot 7-93. Radiated Lower Band Edge Plot MIMO
(Peak – UNII Band 5)

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7.9 Line Conducted Test Data

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.

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

Table 7-64. 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.

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Test Setup

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

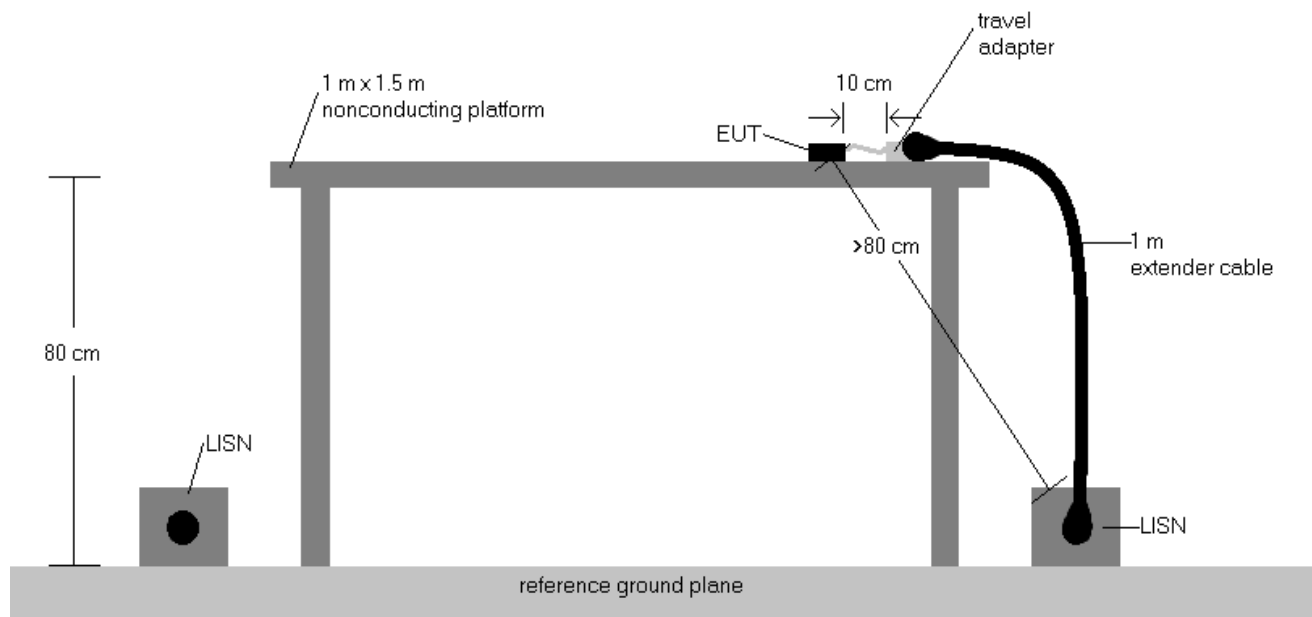
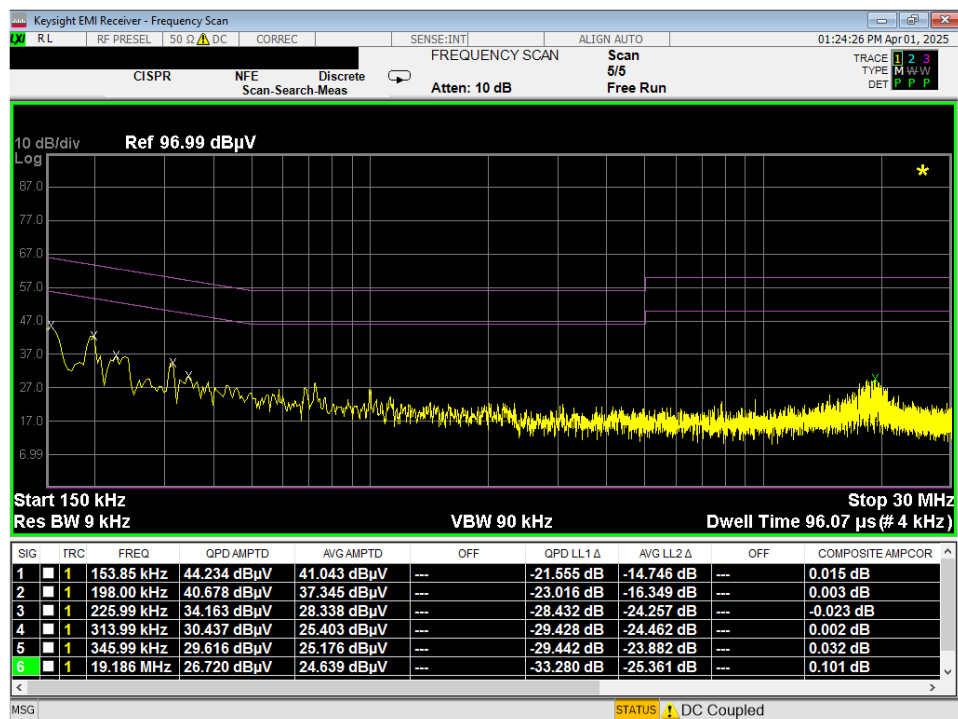


Figure 7-10. Test Instrument & Measurement Setup

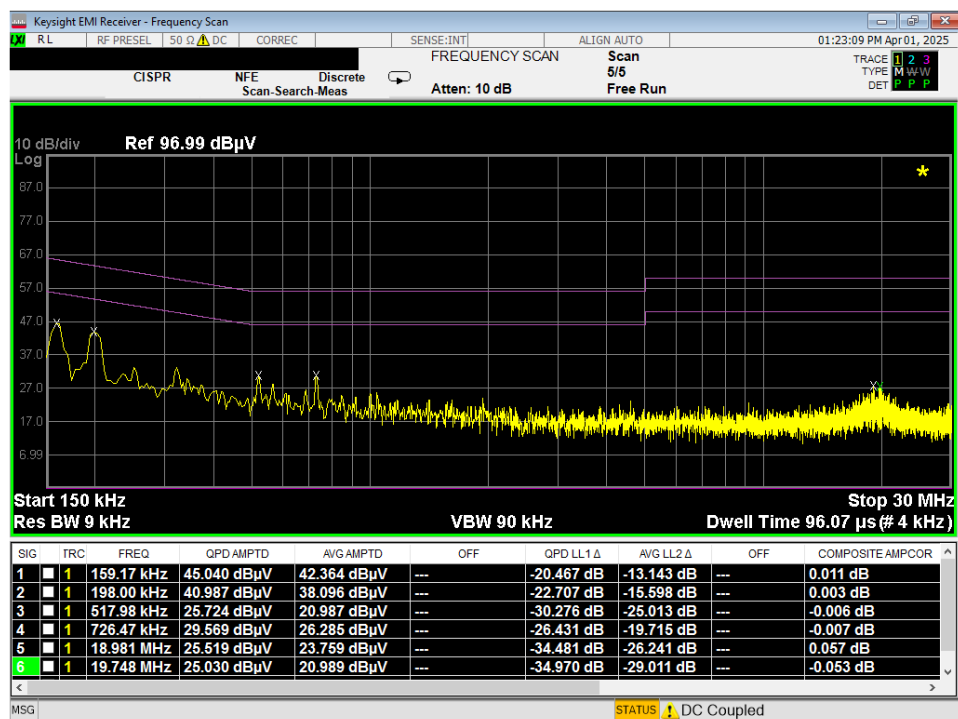
Test Notes

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 is specified in 15.207.
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.

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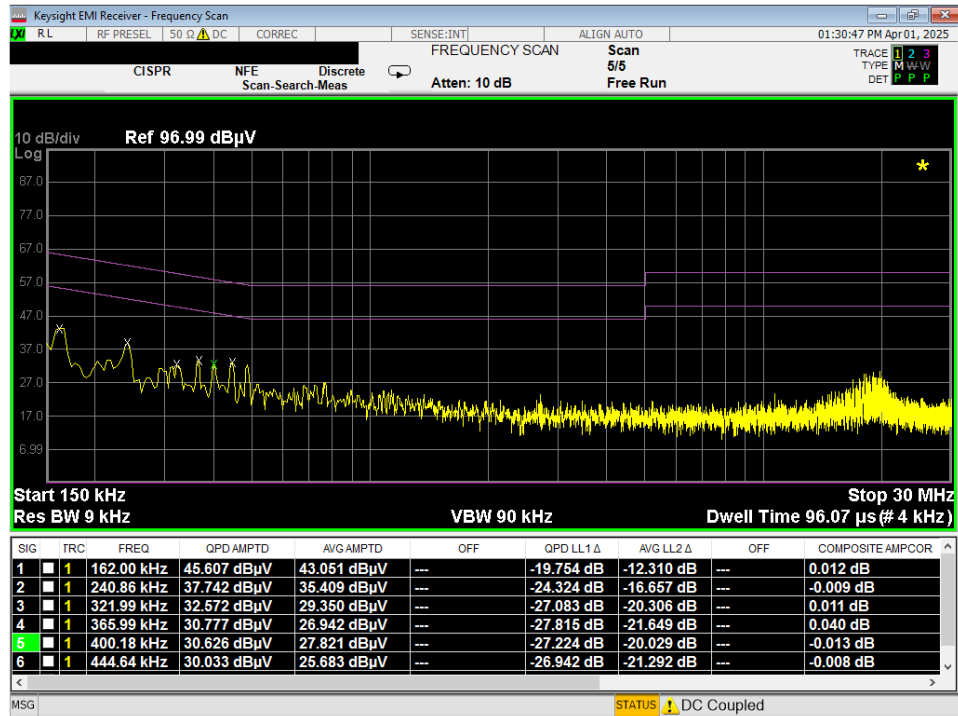


Plot 7-94. Line Conducted Plot with 802.11a UNII Band 5 (L1)

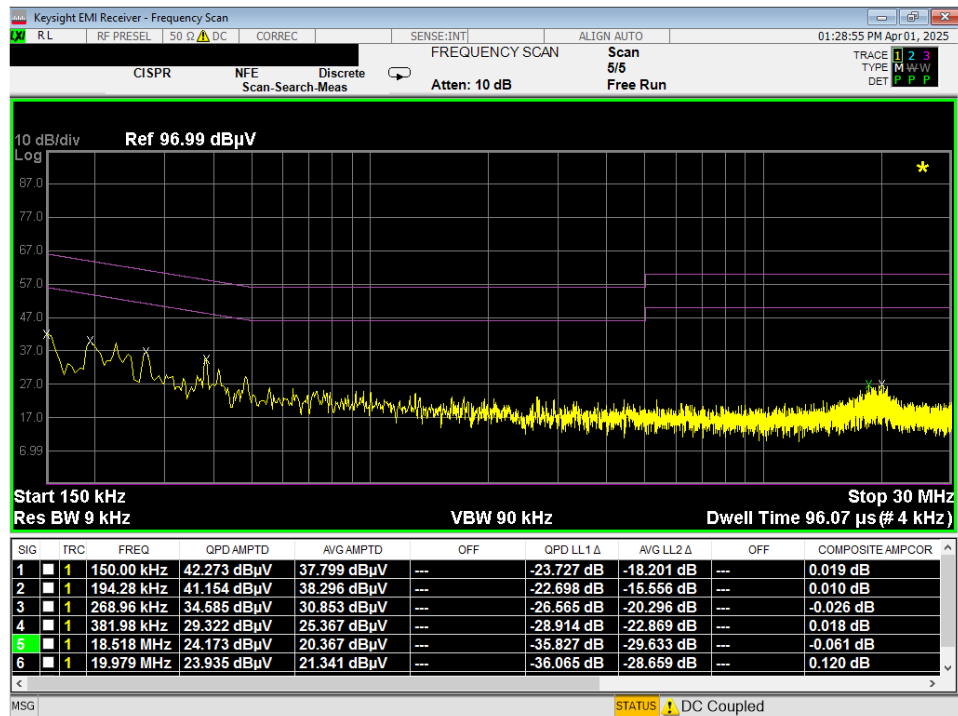


Plot 7-95. Line Conducted Plot with 802.11a UNII Band 5 (N)

FCC ID: A3LSMF966B	MEASUREMENT REPORT		Approved by: Technical Manager
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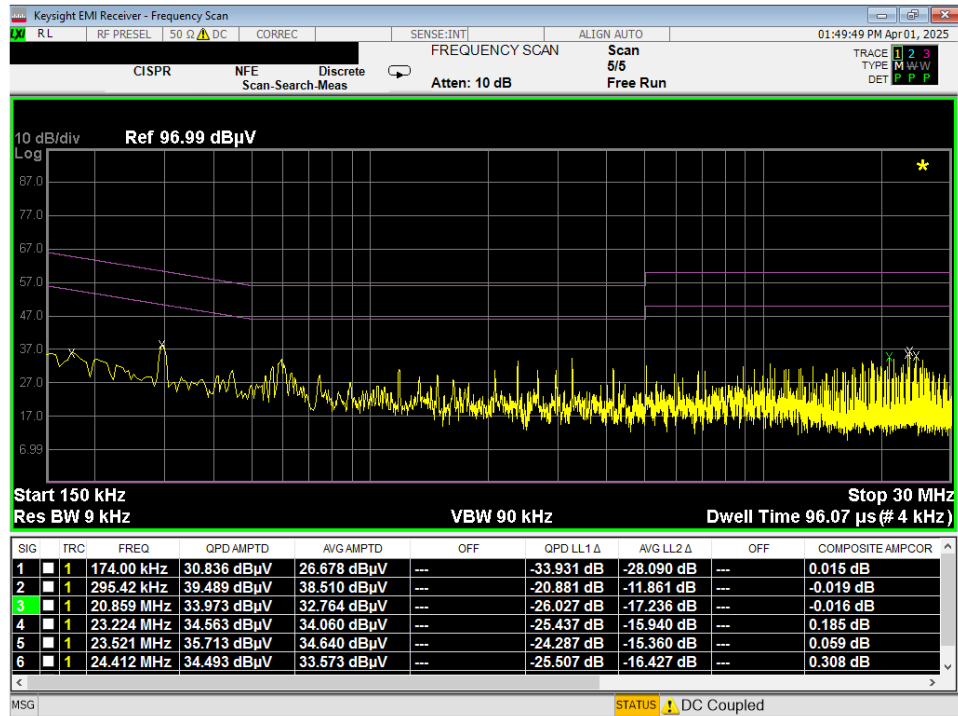


Plot 7-96. Line Conducted Plot with 802.11a UNII Band 7 (L1)

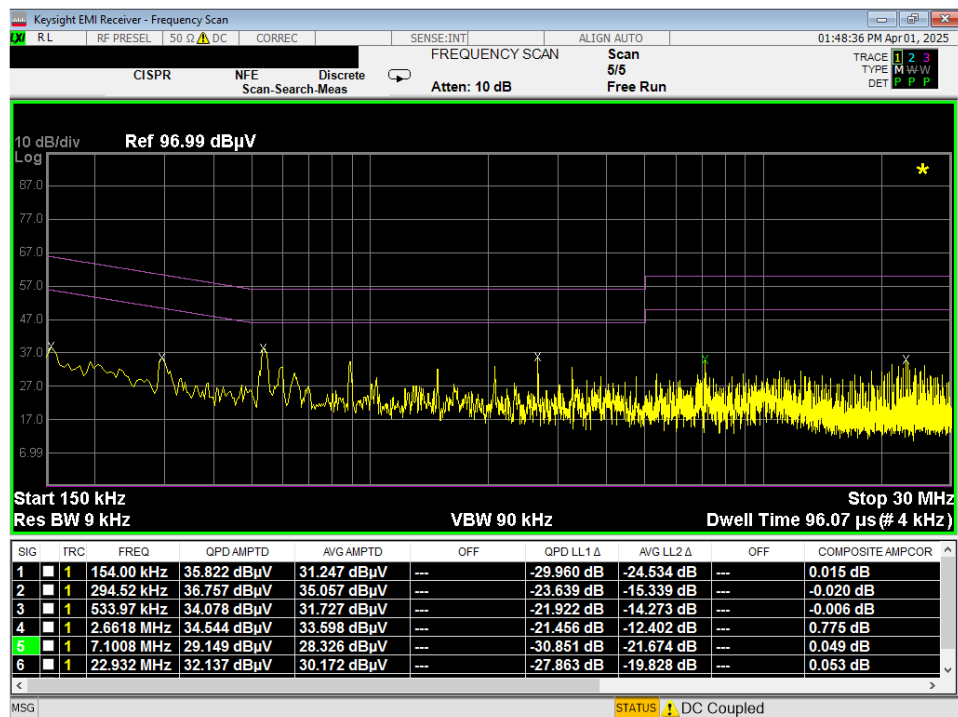


Plot 7-97. Line Conducted Plot with 802.11a UNII Band 7 (N)

FCC ID: A3LSMF966B	MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-98. Line Conducted Plot with 802.11a UNII Band 5 (L1) with WCP



Plot 7-99. Line Conducted Plot with 802.11a UNII Band 5 (N) with WCP

FCC ID: A3LSMF966B	MEASUREMENT REPORT		Approved by: Technical Manager
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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 FCC Part Subpart E (15.407) of the FCC rules for operation as a Very Low Power Device.

FCC ID: A3LSMF966B	MEASUREMENT REPORT		Approved by: Technical Manager
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9.0 APPENDIX A – DATA REFERENCING SPOT-CHECKS

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

6GHz WIFI (20MHz 802.11be MIMO)						Directional Ant. Gain [dBi]	Max e.i.r.p [dBm]	e.i.r.p Limit [dBm]	e.i.r.p Margin [dB]
Band	Freq [MHz]	Channel	Avg. Conducted Powers [dBm]						
			ANT1	ANT2	MIMO				
UNII-5	6175	45	5.92	5.88	8.91	-3.07	5.84	24.00	-18.16
UNII-7	6675	145	5.04	5.23	8.15	-2.97	5.18	24.00	-18.82

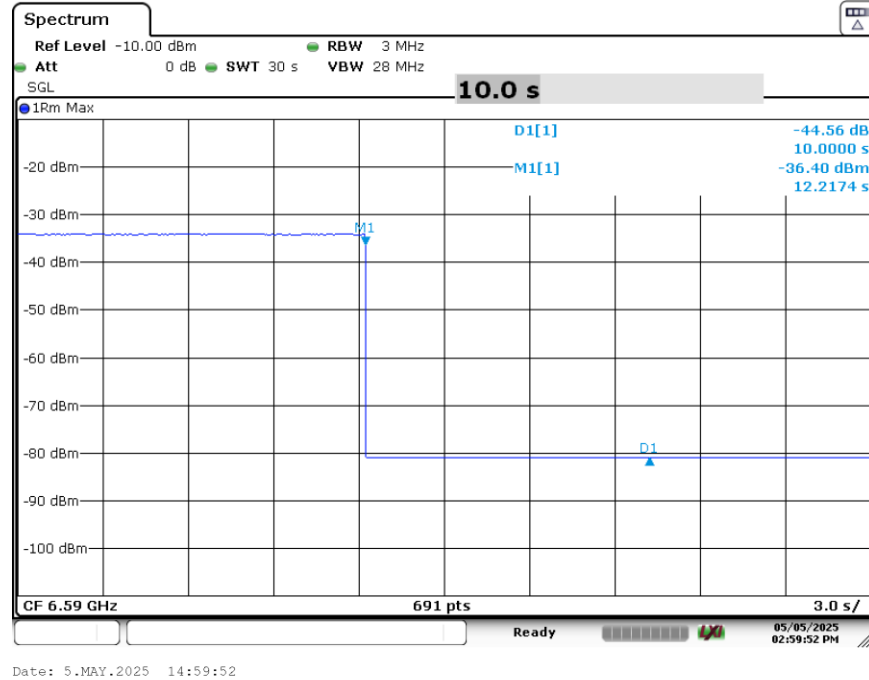
Table 9-1. Conducted Output Power Measurements (Spot-check)

FCC ID: A3LSMF966B	MEASUREMENT REPORT		Approved by: Technical Manager
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Contention Based Protocol Detection Spot-check SM-F966B

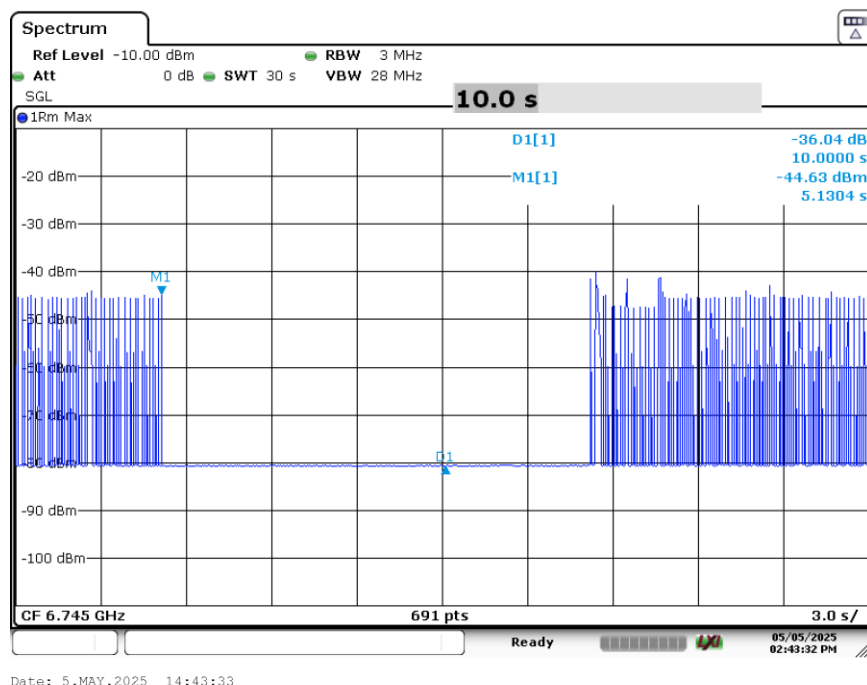
Band	Channel	Channel Freq [MHz]	Channel BW [MHz]	Incumbent Freq [MHz]	Injected (AWGN) [dBm]	Antenna Gain [dBi]	Adjusted Power Level [dBm]	Detection Limit [dBm]	Margin [dB]
UNII Band 7	159	6745	320	6590	-73.54	-11.08	-62.46	-62.0	-0.46
				6745	-74.13	-11.08	-63.05	-62.0	-1.05
				6900	-73.81	-11.08	-62.73	-62.0	-0.73

Table 9-2. Contention Based Protocol – Incumbent Detection – Spot-check (SM-F966B)

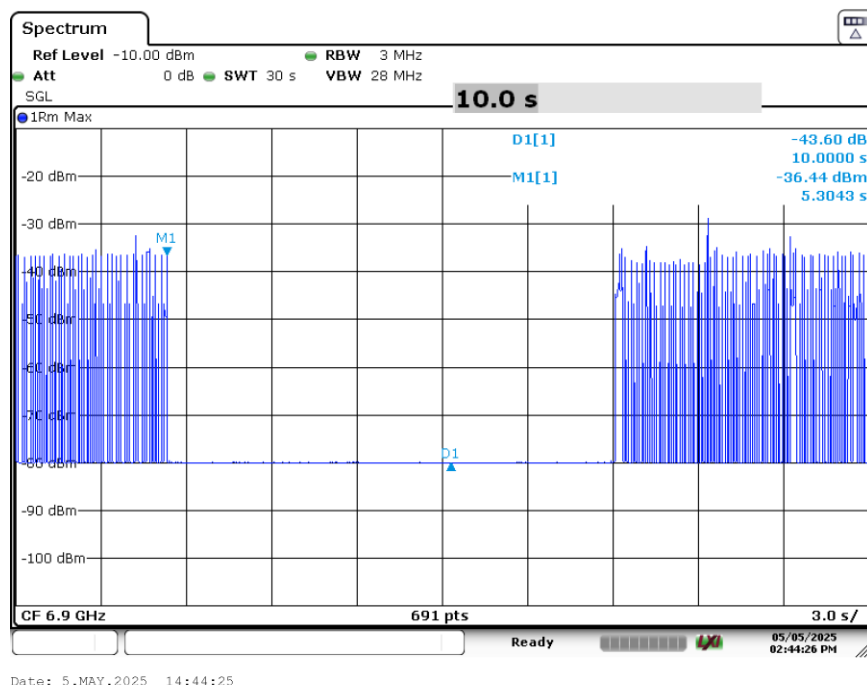


Plot 9-1. Contention Based Protocol Timing Plot (320MHz (UNII Band 5) – Ch.159 Low)

FCC ID: A3LSMF966B	MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 9-2. Contention Based Protocol Timing Plot (320MHz (UNII Band 5) – Ch.159 Mid)

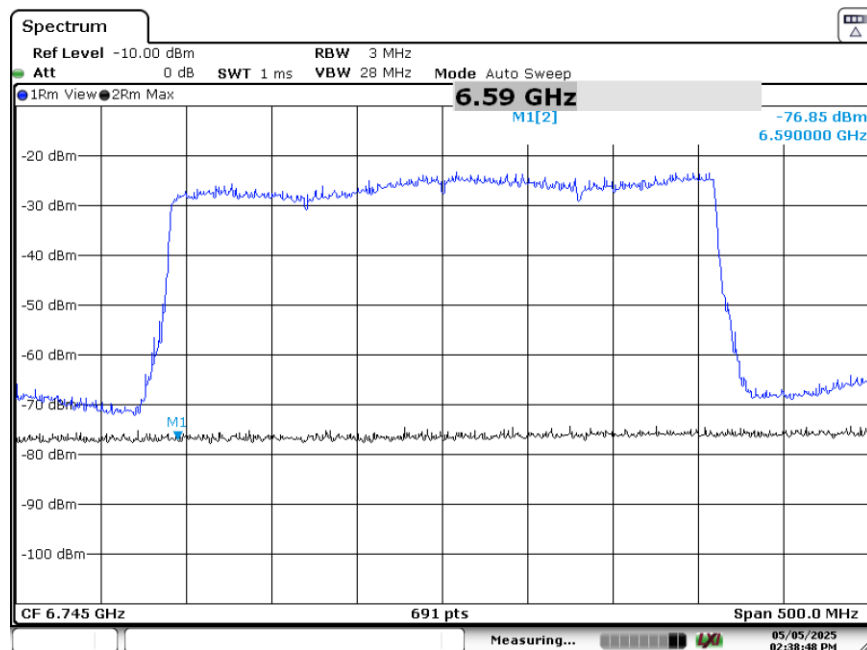


Plot 9-3. Contention Based Protocol Timing Plot (320MHz (UNII Band 5) – Ch.159 High)

FCC ID: A3LSMF966B	MEASUREMENT REPORT		Approved by: Technical Manager
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Contention Based Protocol Incumbent Avoidance Spot-Check

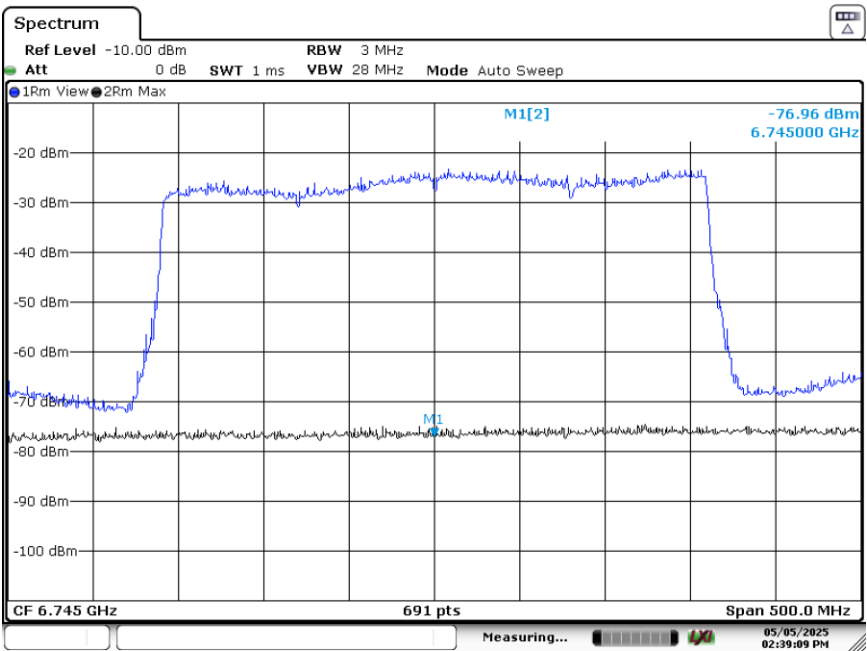
- When a 10 MHz AWGN signal centered at 6590 MHz (lower edge of channel) is injected, the channel completely stops transmitting.
- When a 10 MHz AWGN signal centered at 6745 MHz (middle of channel) is injected, the channel completely stops transmitting.
- When a 10 MHz AWGN signal centered at 6900 MHz (upper edge of channel) is injected, the channel completely stops transmitting.



Date: 5.MAY.2025 14:38:47

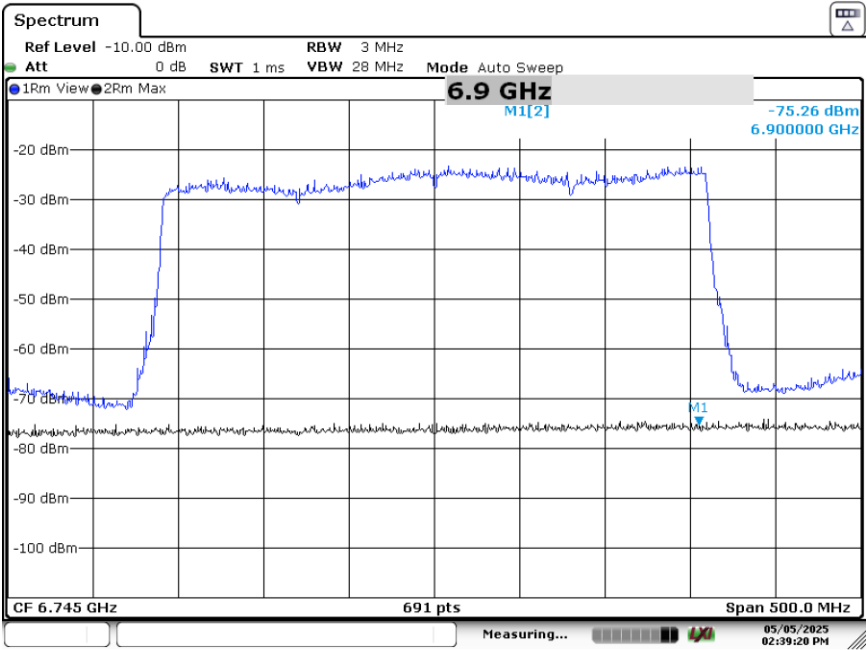
Plot 9-4. CBP 320MHz Channel - Injection Lower Edge – [6590 MHz]

FCC ID: A3LSMF966B	MEASUREMENT REPORT		Approved by: Technical Manager
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Date: 5.MAY.2025 14:39:08

Plot 9-5. CBP 320MHz Channel - Injection Center – 6745 MHz]



Date: 5.MAY.2025 14:39:20

Plot 9-6. CBP 320MHz Channel - Injection Upper Edge – [6900 MHz]

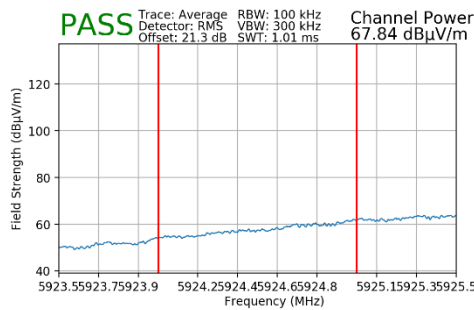
FCC ID: A3LSMF966B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2502270019-19-R1.A3L	Test Dates: 02/24/2025 – 05/05/2025	EUT Type: Portable Handset	Page 112 of 113

Radiated Spot-Checks – SM-F966B

Mode	Antenna	UNII Band	Channel	Test Channel Freq. [MHz]	Restricted	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
802.11a	MIMO	7	149	6695	*	13390.00	Average	H	137	322	-77.01	20.77	0.00	50.76	53.98	-3.22
					*	13390.00	Peak	H	137	322	-65.22	20.77	0.00	62.55	73.98	-11.43

Table 9-3. RSE Measurements (Spot-check)

Worst Case Mode: 802.11a
 Worst Case Transfer Rate: 6Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 5935MHz
 Channel: 2



Plot 9-7. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 5)

Results

FCC Rules	Test Item	Test Case	Units	Limit	Reference Model: SM-F966U	Variant Model: SM-F966B	Deviation (dB)	Max Deviation (dB)	Pass/Fail
2.1046, 15.407(a)(8)	Conducted Output Power	Mid Channel Each UNII Band - 802.11be 20MHz - VLP - Ch.45	dBm	-	8.6	8.91	0.31	1	PASS
15.407(a)(9)	Contention Based Protocol	Ch.95 - 320MHz	dBm	-62	-63.32	-62.46	0.86	3	PASS
15.209	Radiated Spurious Emissions	802.11a MIMO Ch.2 - Average - 11870 MHz	dBμV/m	53.98	50.92	50.76	-0.16	3	PASS
15.209	Radiated Band Edge Emissions	802.11a MIMO Ch.2 - Average	dBμV/m	68.2	66.09	67.84	1.75	3	PASS

Table 9-4. Summary of Spot-checks

FCC ID: A3LSMF966B	MEASUREMENT REPORT		Approved by: Technical Manager
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