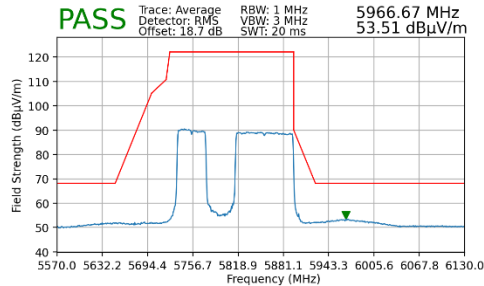
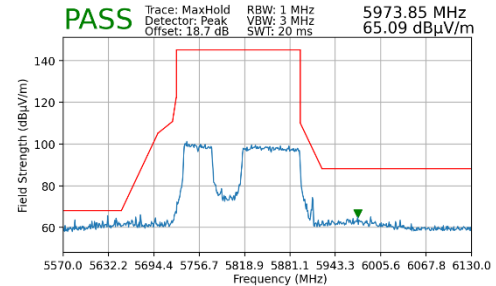


Worst Case Mode: 802.11ac
Worst Case Transfer Rate: MCS0
Distance of Measurements: 3 Meters
Operating Frequency: 5815MHz
Channel: 163

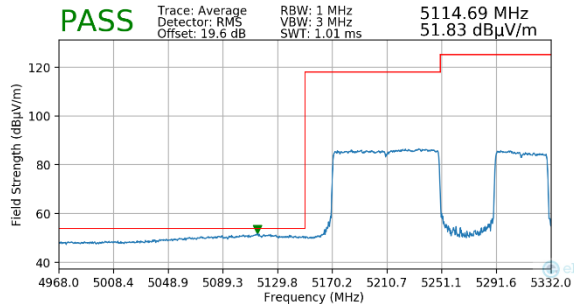


Plot 7-193. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 4)

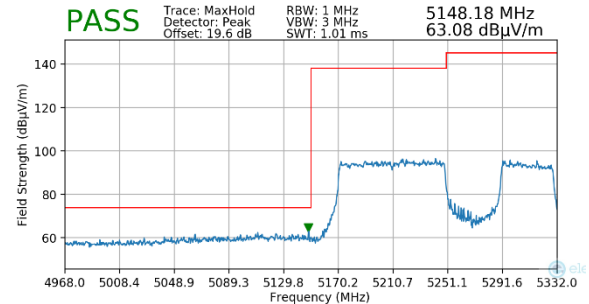


Plot 7-194. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 4)

Worst Case Mode: 802.11be
Worst Case Transfer Rate: MCS0
Distance of Measurements: 3 Meters
Operating Frequency: 5250MHz
Channel: 50



Plot 7-195. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 1) with WCP



Plot 7-196. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 1) with WCP

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7.7 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 FCC §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 7-75. Conducted Limits

*Decreases with the logarithm of the frequency.

Test Procedures Used

ANSI C63.10-2020, 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.

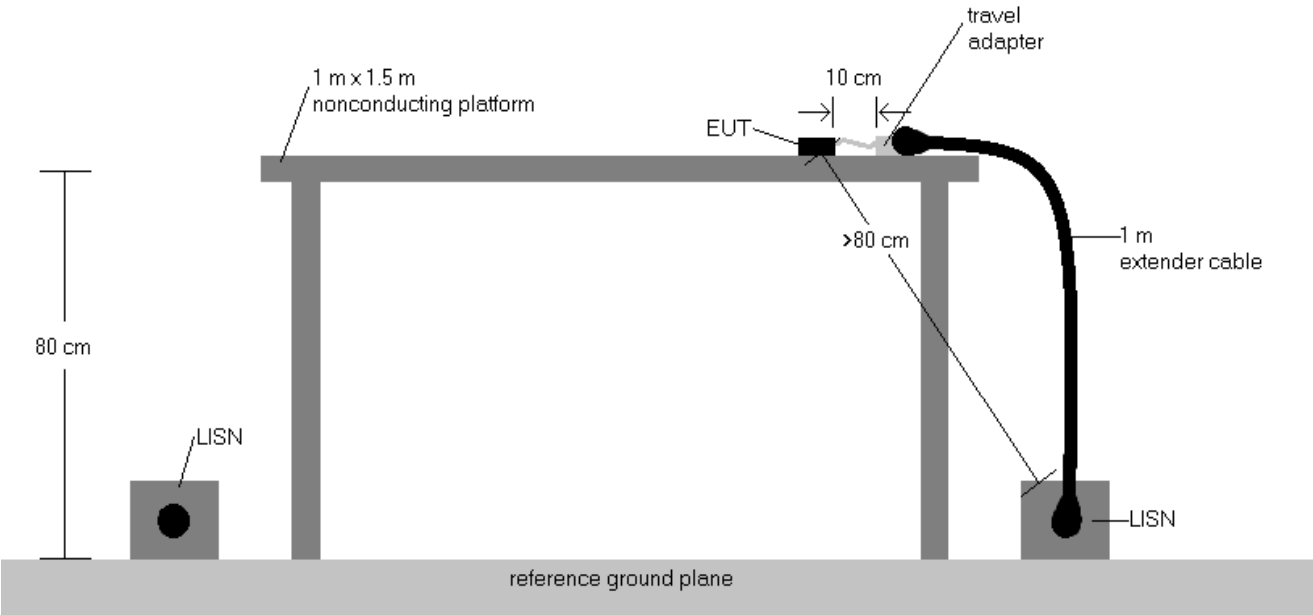
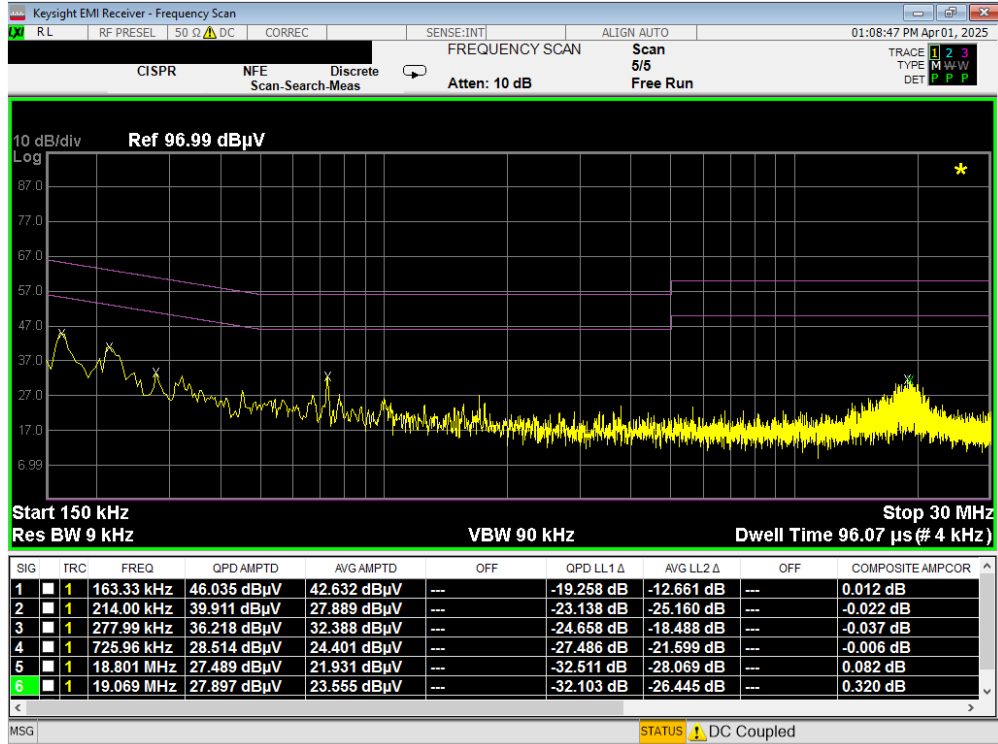


Figure 7-8. Test Instrument & Measurement Setup

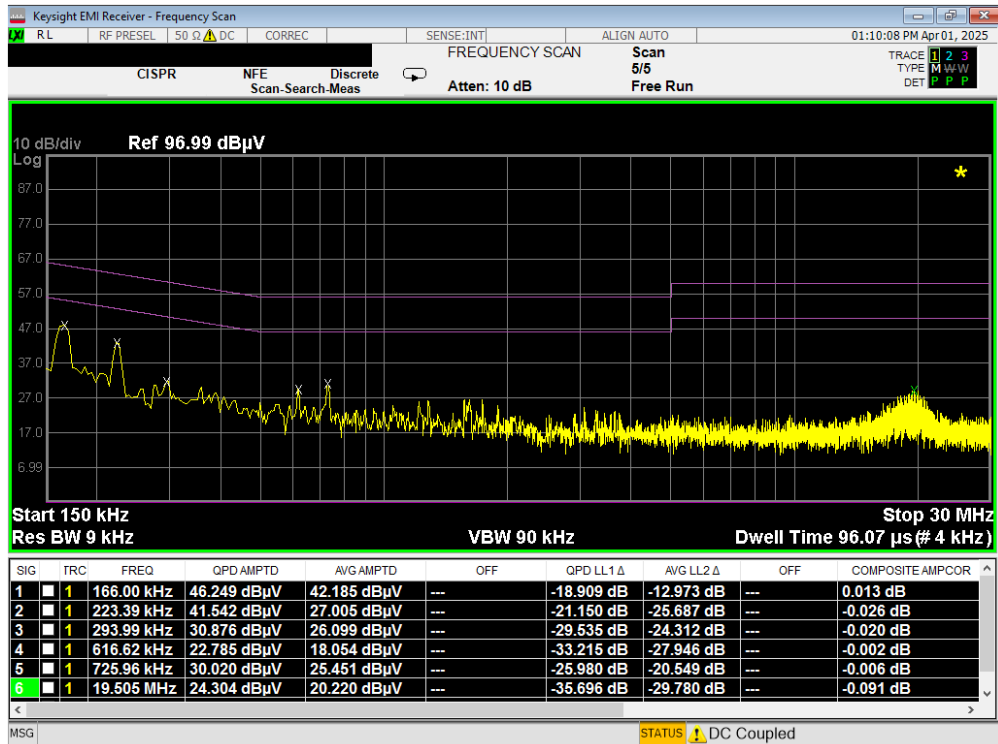
Test Notes

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 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.

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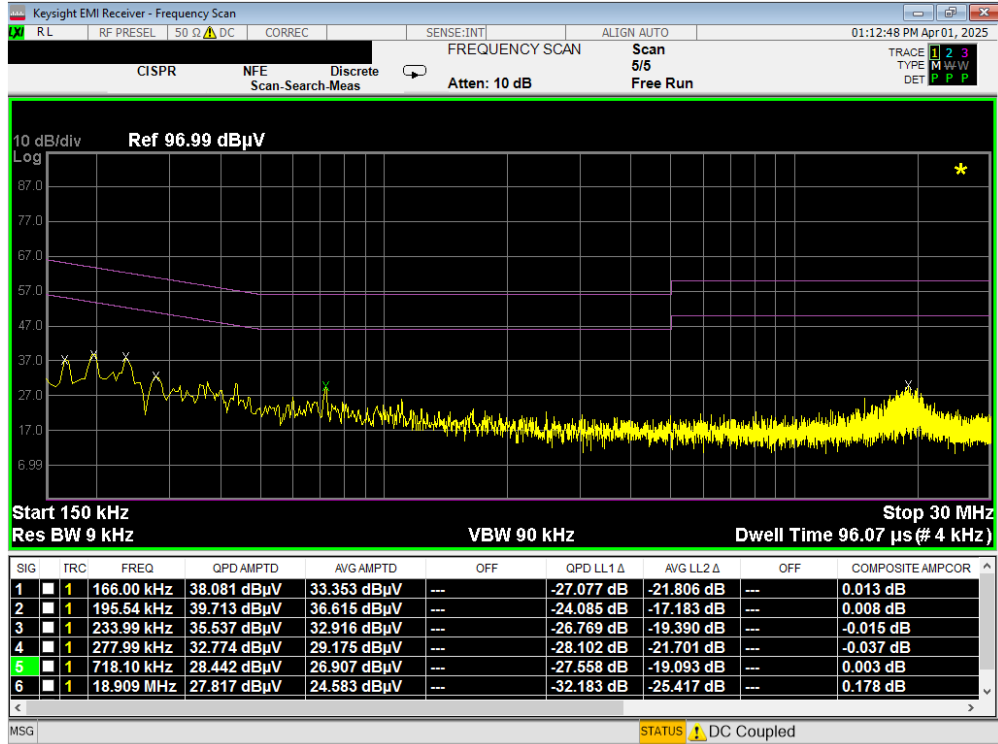


Plot 7-197. Line Conducted Plot with 802.11a UNII Band 1 (L1)

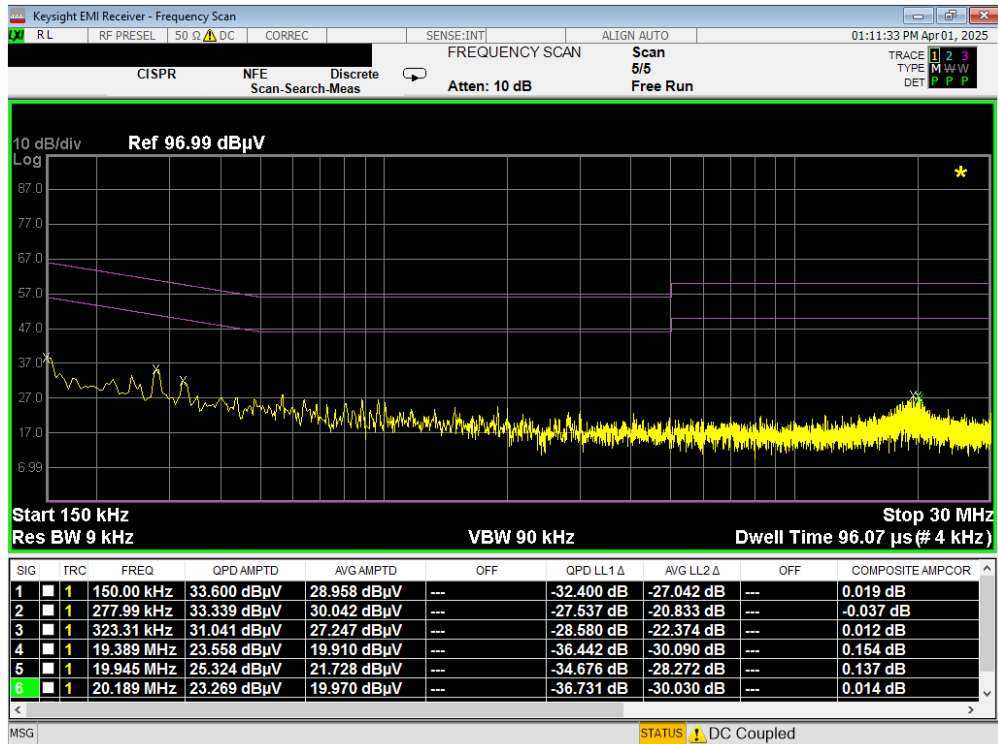


Plot 7-198. Line Conducted Plot with 802.11a UNII Band 1 (N)

FCC ID: A3LSMF966JPN	MEASUREMENT REPORT		Approved by: Technical Manager
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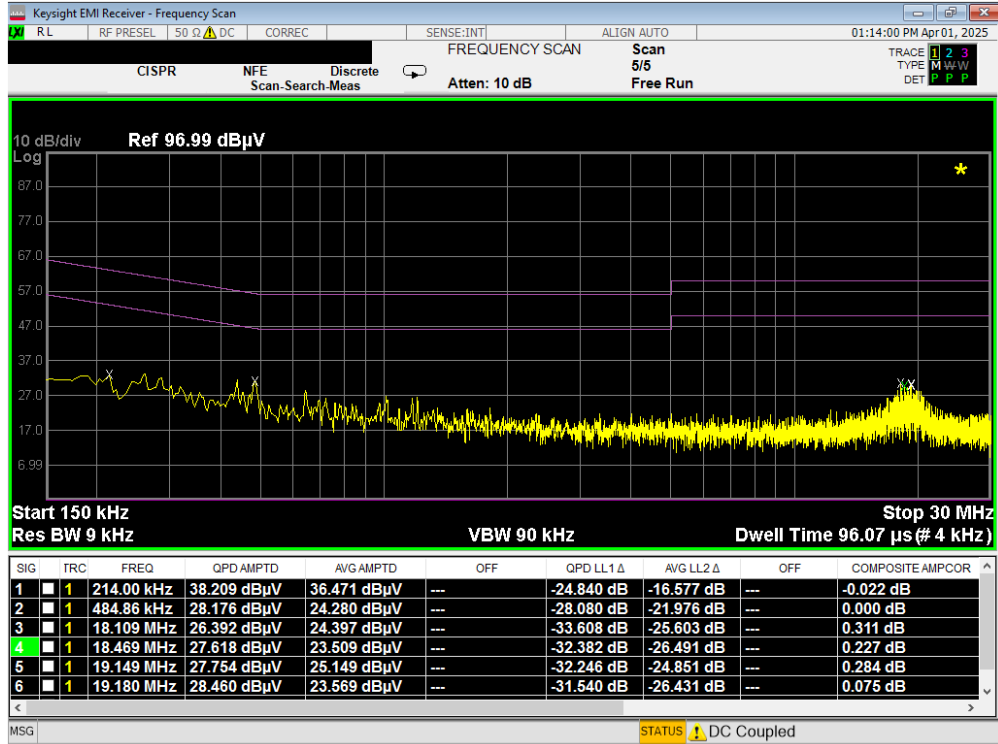


Plot 7-199. Line Conducted Plot with 802.11a UNII Band 2A (L1)

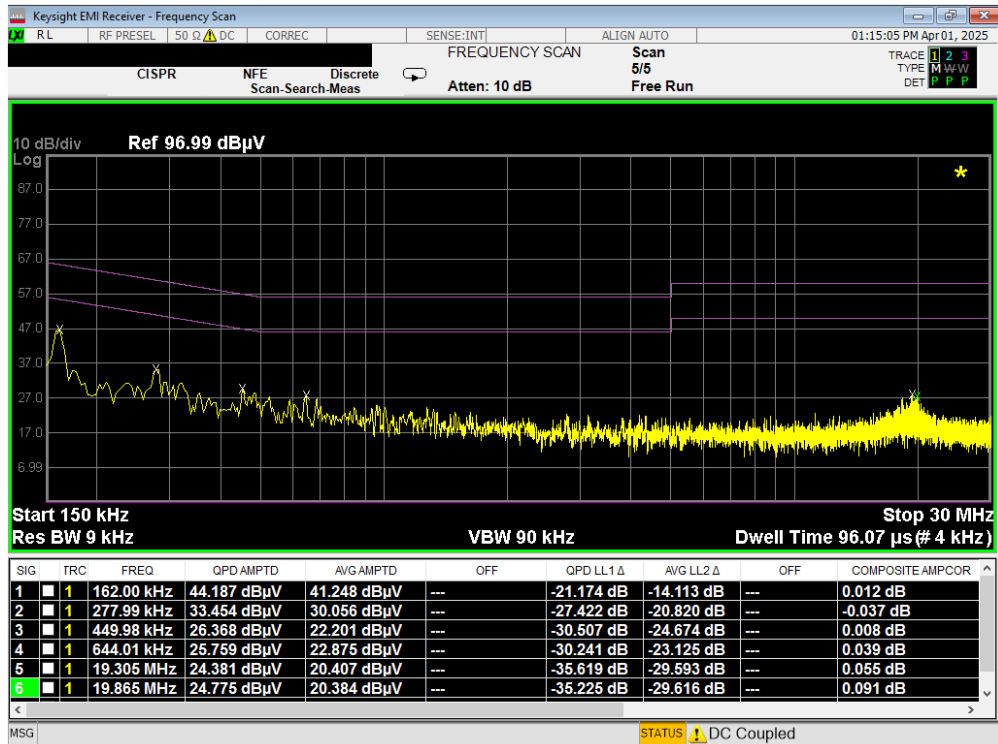


Plot 7-200. Line Conducted Plot with 802.11a UNII Band 2A (N)

FCC ID: A3LSMF966JPN	MEASUREMENT REPORT		Approved by: Technical Manager
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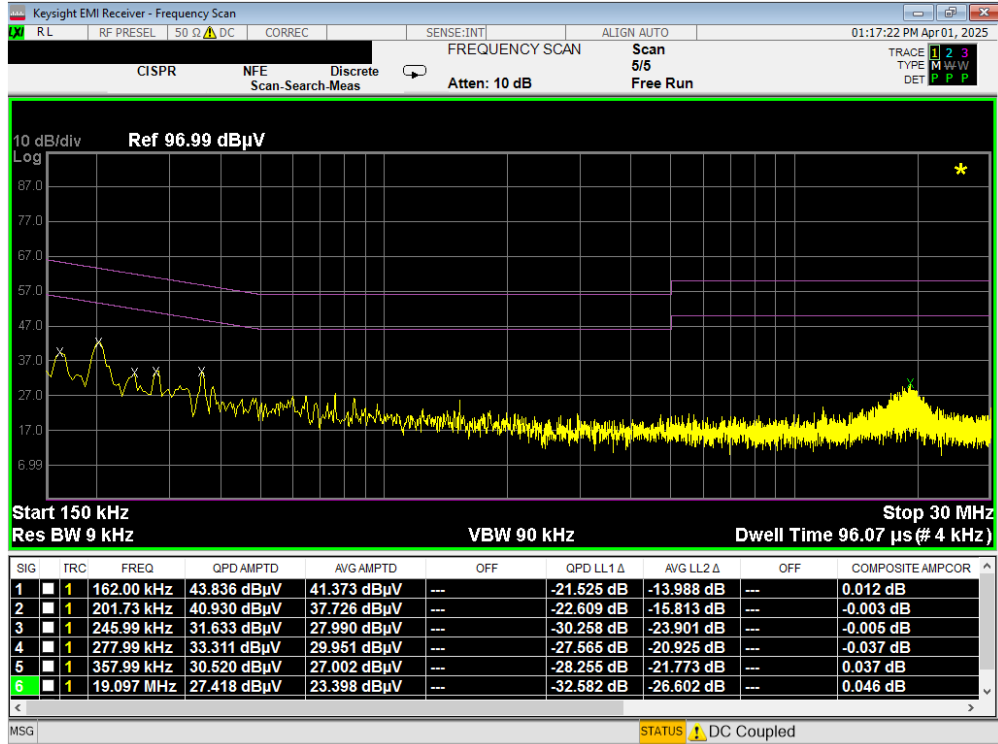


Plot 7-201. Line Conducted Plot with 802.11a UNII Band 2C (L1)

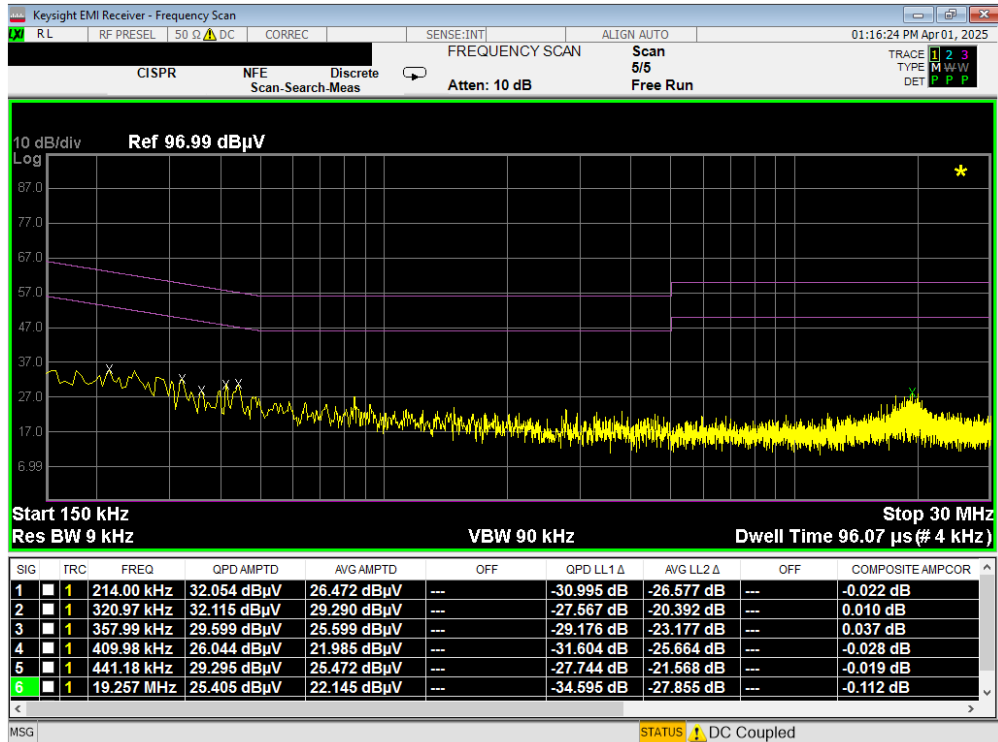


Plot 7-202. Line Conducted Plot with 802.11a UNII Band 2C (N)

FCC ID: A3LSMF966JPN	MEASUREMENT REPORT		Approved by: Technical Manager
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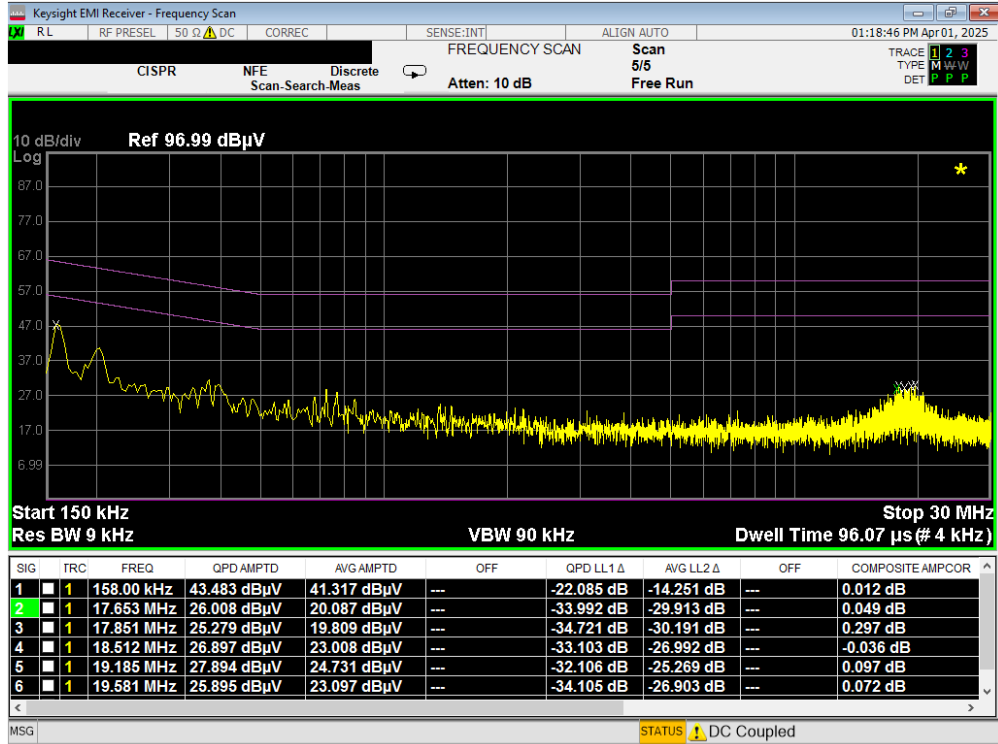


Plot 7-203. Line Conducted Plot with 802.11a UNII Band 3 (L1)

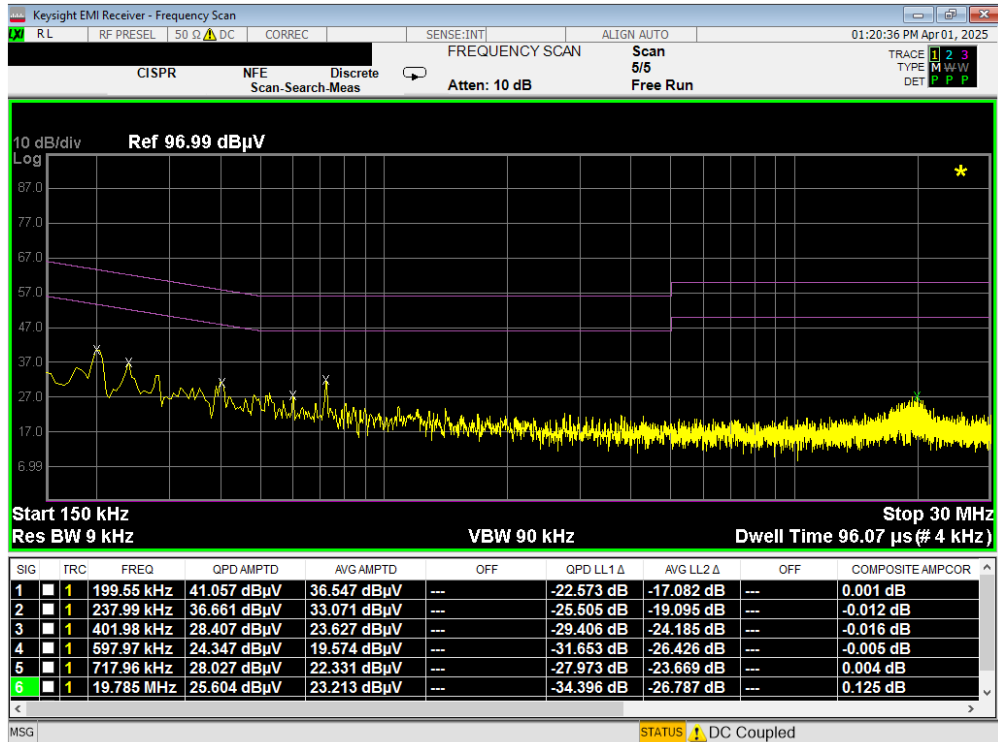


Plot 7-204. Line Conducted Plot with 802.11a UNII Band 3 (N)

FCC ID: A3LSMF966JPN	MEASUREMENT REPORT		Approved by: Technical Manager
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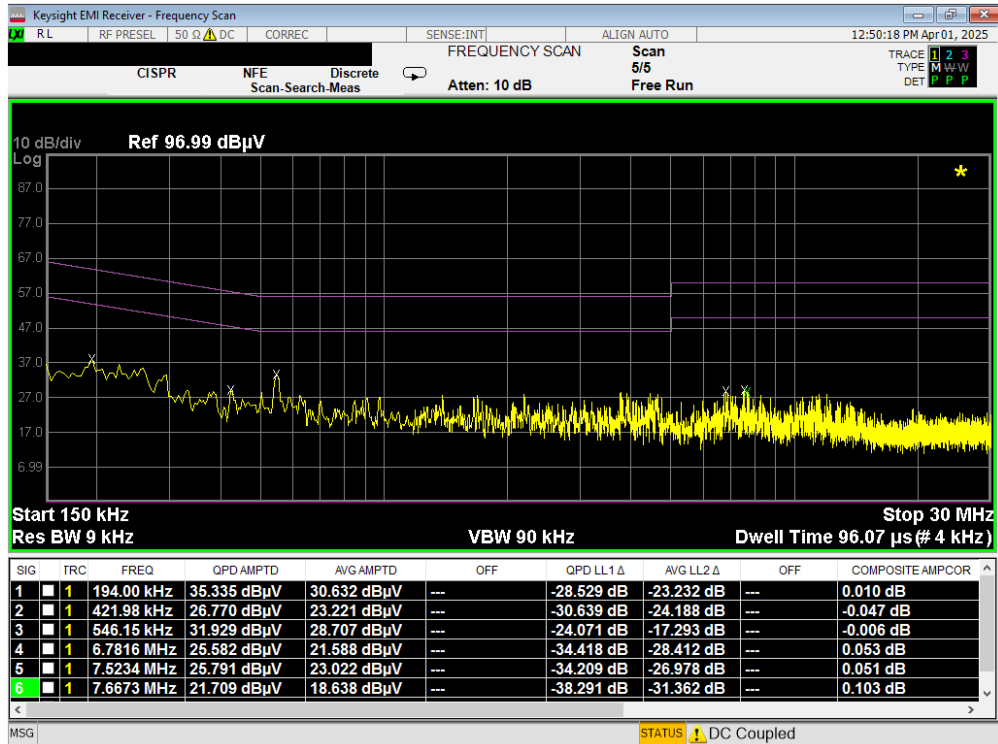


Plot 7-205. Line Conducted Plot with 802.11a UNII Band 4 (L1)

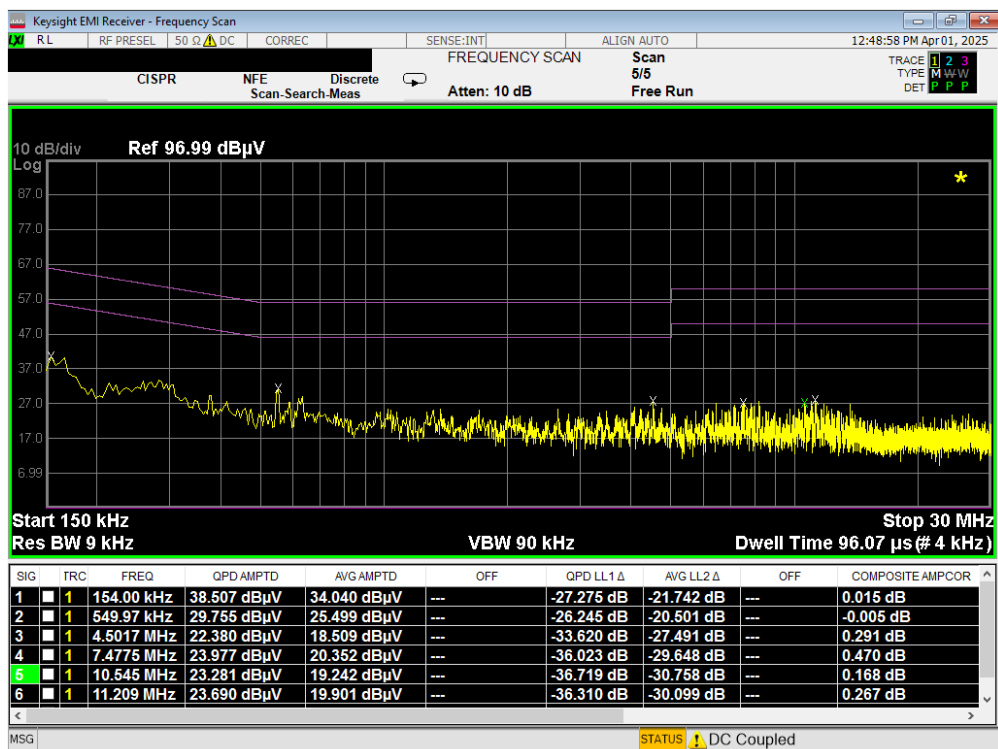


Plot 7-206. Line Conducted Plot with 802.11a UNII Band 4 (N)

FCC ID: A3LSMF966JPN	MEASUREMENT REPORT		Approved by: Technical Manager
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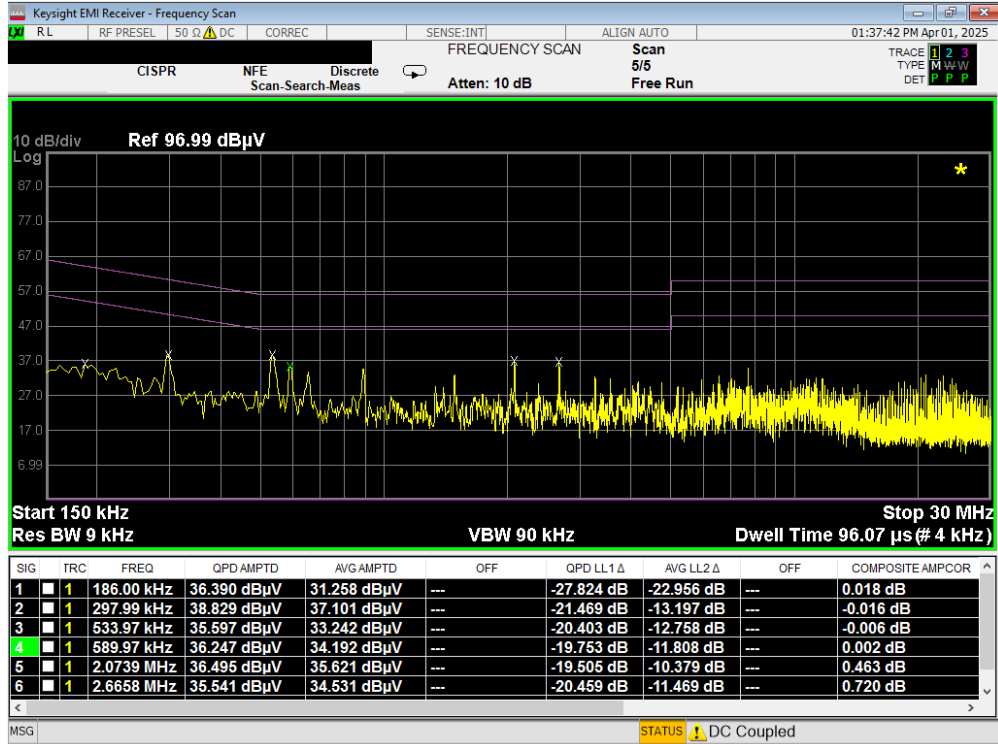


Plot 7-207. Line Conducted Plot with 802.11a UNII Band 1 (L1) – WCP

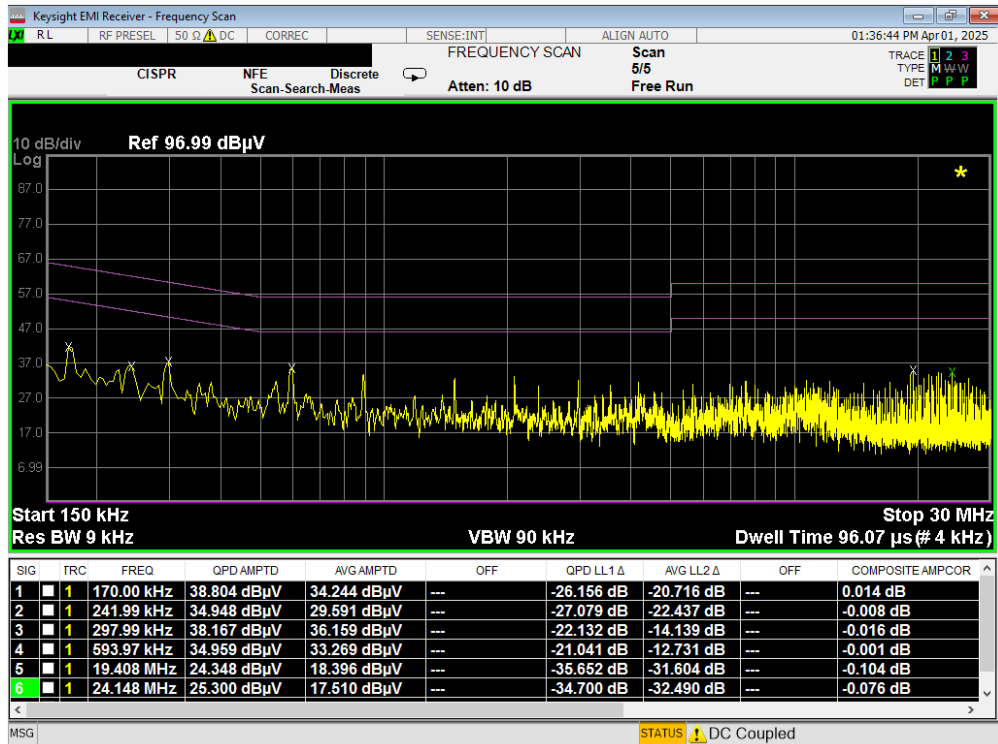


Plot 7-208. Line Conducted Plot with 802.11a UNII Band 1 (N) – WCP

FCC ID: A3LSMF966JPN	MEASUREMENT REPORT		Approved by: Technical Manager
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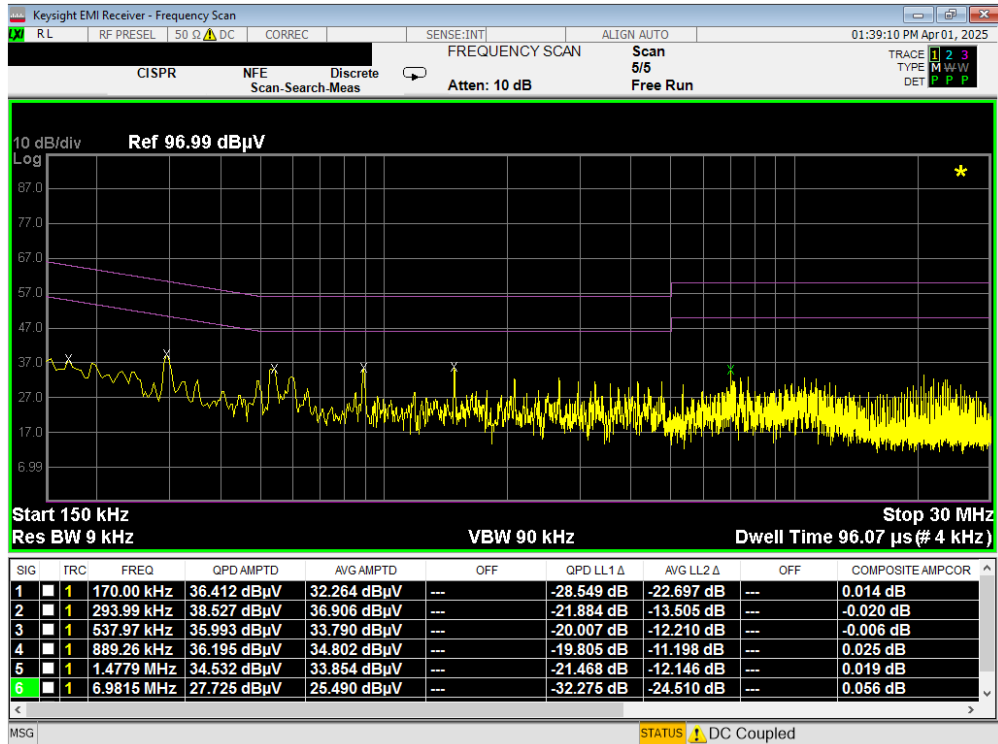


Plot 7-209. Line Conducted Plot with 802.11a UNII Band 2A (L1) – WCP

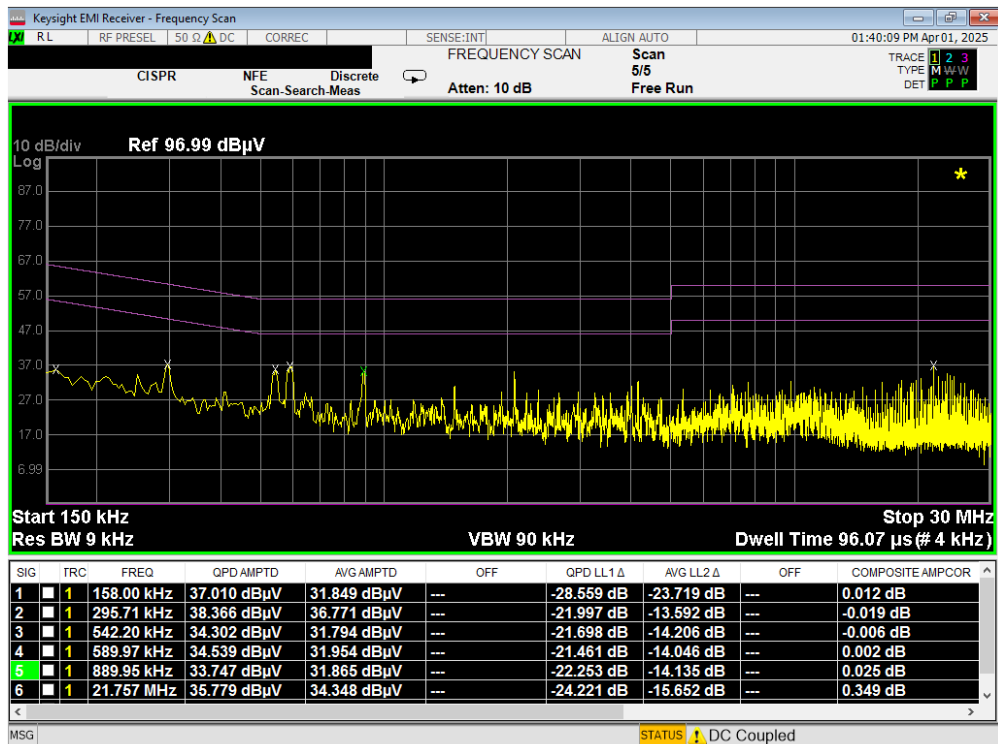


Plot 7-210. Line Conducted Plot with 802.11a UNII Band 2A (N) – WCP

FCC ID: A3LSMF966JPN	MEASUREMENT REPORT		Approved by: Technical Manager
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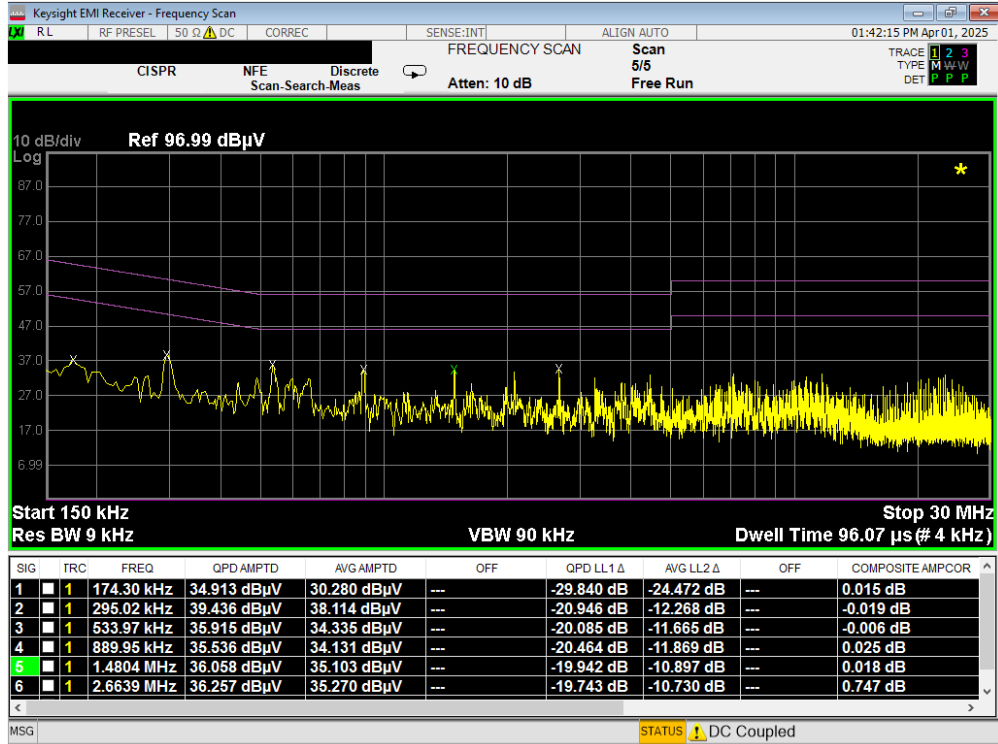


Plot 7-211. Line Conducted Plot with 802.11a UNII Band 2C (L1) – WCP

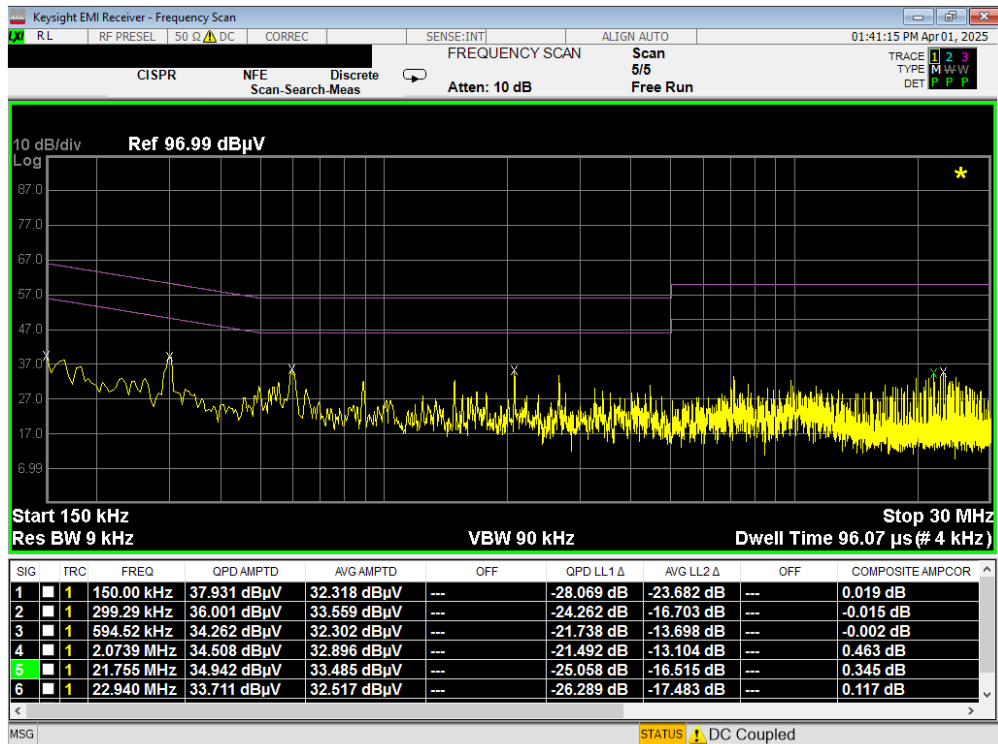


Plot 7-212. Line Conducted Plot with 802.11a UNII Band 2C (N) – WCP

FCC ID: A3LSMF966JPN	MEASUREMENT REPORT		Approved by: Technical Manager
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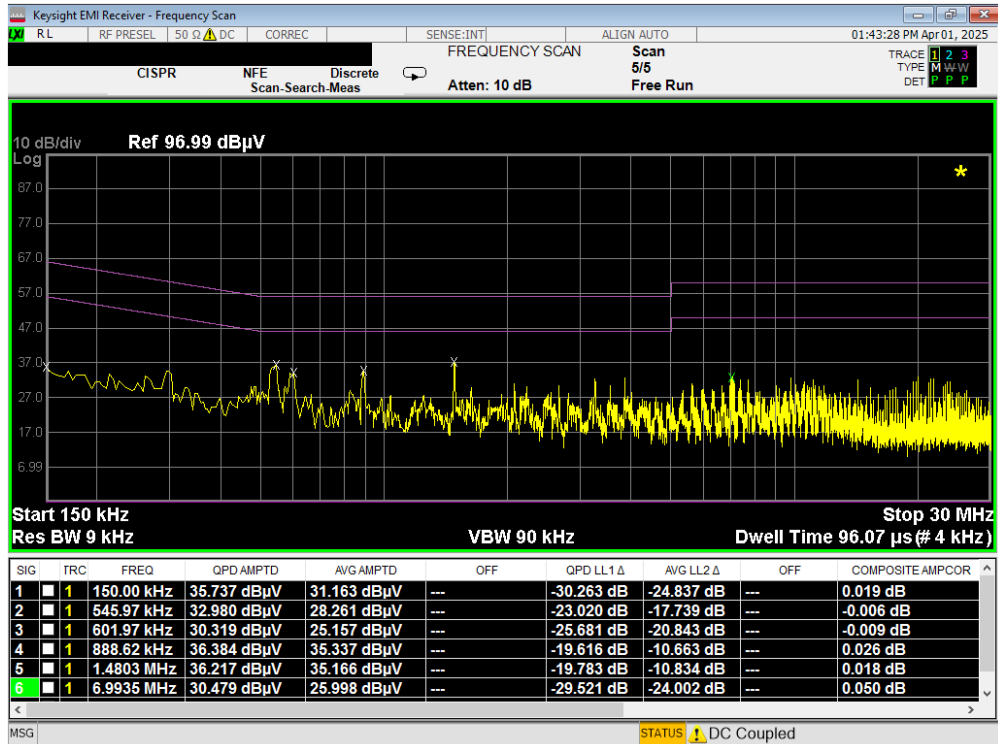


Plot 7-213. Line Conducted Plot with 802.11a UNII Band 3 (L1) – WCP

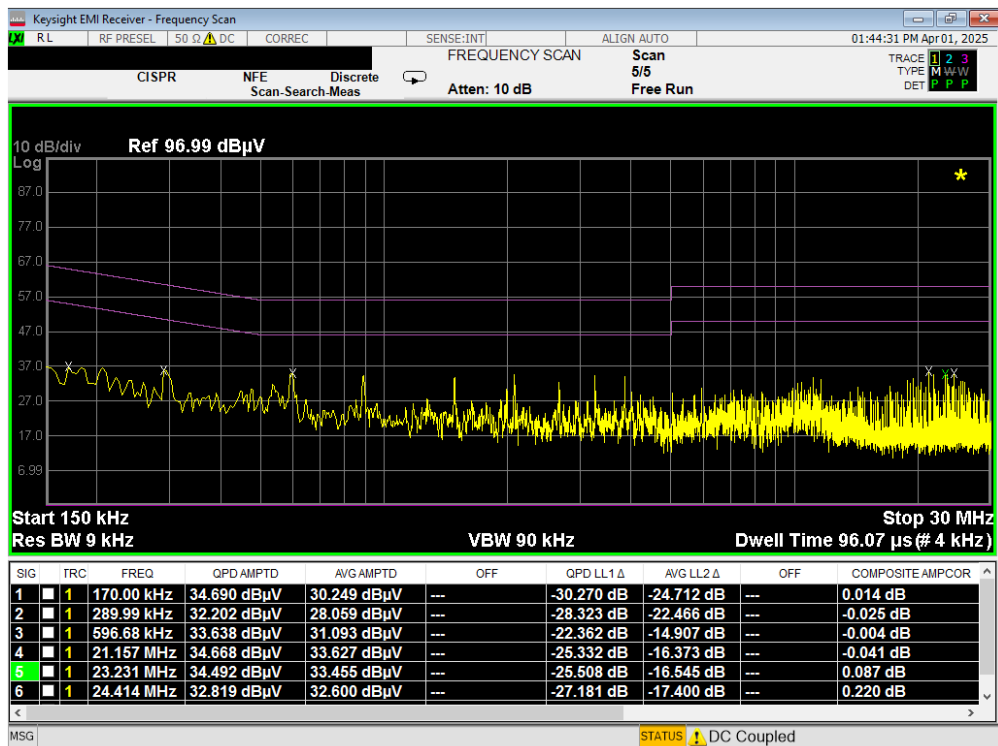


Plot 7-214. Line Conducted Plot with 802.11a UNII Band 3 (N) – WCP

FCC ID: A3LSMF966JPN	MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-215. Line Conducted Plot with 802.11a UNII Band 4 (L1) – WCP



Plot 7-216. Line Conducted Plot with 802.11a UNII Band 4 (N) – WCP

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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: A3LSMF966JPN** is in compliance with Part 15 Subpart E (15.407) of the FCC Rules.

FCC ID: A3LSMF966JPN	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 C63.10-2020.

Notes

1. 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 – SC-56F

5GHz WIFI (20MHz 802.11a MIMO)						Conducted Power Limit [dBm]	Conducted Power Margin [dB]
Band	Freq [MHz]	Channel	Avg. Conducted Powers [dBm]				
			ANT1	ANT2	MIMO		
UNII-1	5200	40	17.37	17.19	20.29	23.98	-3.69
UNII-2A	5280	56	17.75	17.20	20.49	23.98	-3.49
UNII-2C	5600	120	17.97	17.98	20.99	23.98	-2.99
UNII-3	5785	157	17.54	16.76	20.18	30.00	-9.82
UNII-4	5865	173	17.67	17.04	20.38	-	-

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

Radiated Spot-Checks – SC-56F

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	4	177	5885	*	11770.00	Average	H	-	-	-81.42	21.55	0.00	47.13	53.98	-6.85

Table 9-2. RSE Measurements (Spot-check)

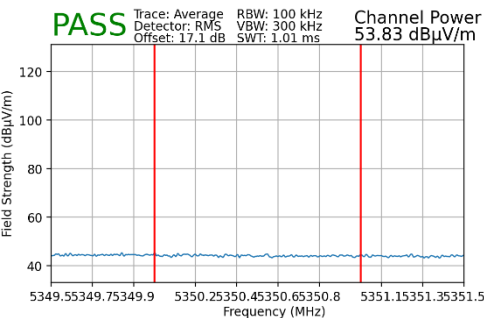
Conclusion

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 demonstrates that the use of referenced data from A3LSMF966U for the certification of A3LSMF966JPN is acceptable.

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Worst Case Mode:	802.11be
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5320MHz
Channel:	64



Plot 9-1. Radiated Upper Band Edge Plot MIMO
(Average – UNII Band 2A)

Results

FCC Rules	Test Item	Test Case	Units	Limit	Reference Model: SM-S966U	Variant Model: SC-S6F	Deviation (dB)	Max Deviation (dB)	Pass/Fail
2.1046, 15.407(a)(8)	Conducted Output Power	Mid Channel Each UNII Band - 802.11a 20MHz	d8m	N/A	20.85	20.99	0.14	1	PASS
15.209, 15.407(b)(1), 15.407(b)(2), 15.407(b)(3), 15.407(b)(4)	Radiated Spurious Emissions	802.11a MIMO Ch.177 - 11770 - Average	dBuV/m	53.98	49.73	47.13	-2.60	3	PASS
15.209	Radiated Band Edge Emissions	802.11be MIMO Ch.64 - Average	dBuV/m	53.98	51.94	53.83	1.89	3	PASS

Table 9-3. Summary of Spot-checks

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