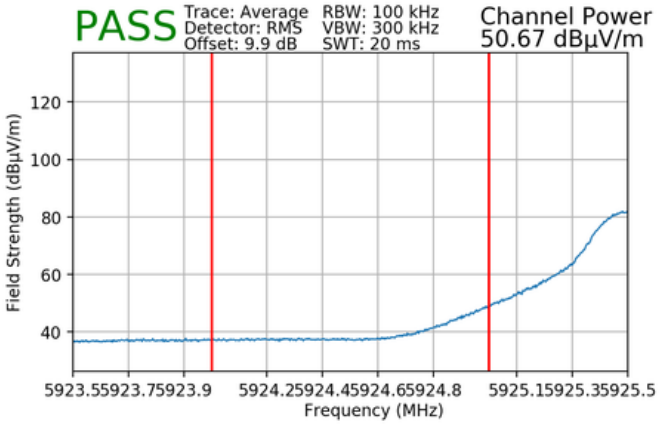
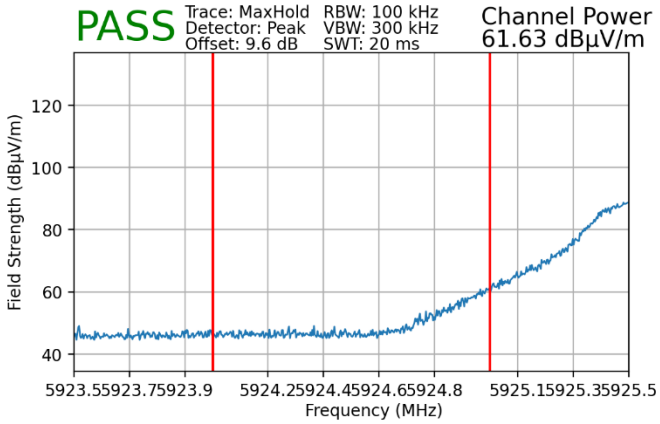
7.7.10 MIMO Radiated Band Edge Measurements (20MHz BW)

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5935MHz
Channel:	2

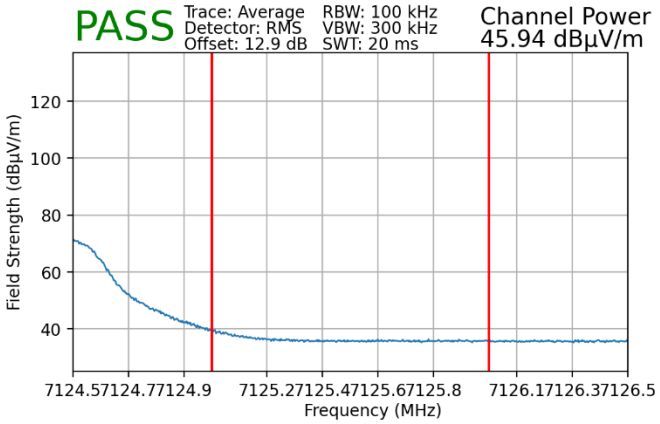


Plot 7-180. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 5)

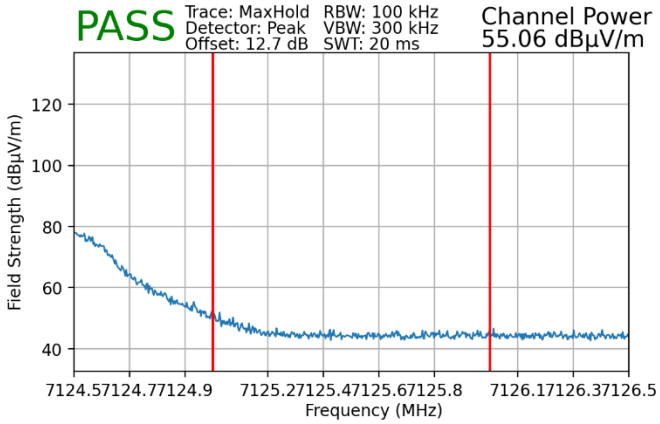


Plot 7-181. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 5)

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MSC0
Distance of Measurements:	3 Meters
Operating Frequency:	7115MHz
Channel:	233



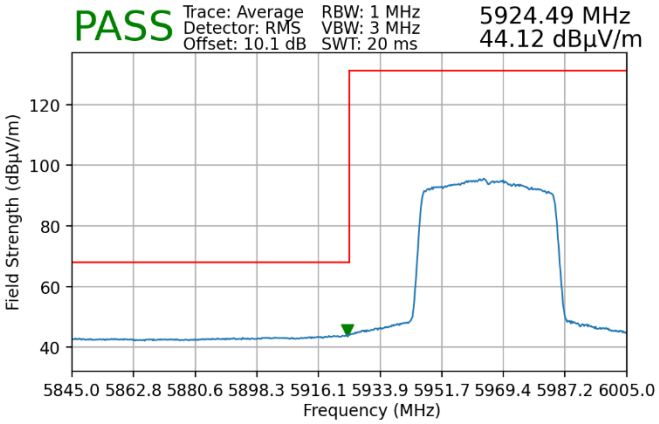
Plot 7-182. Radiated Upper Band Edge Plot MIMO (Average – UNII Band 8)



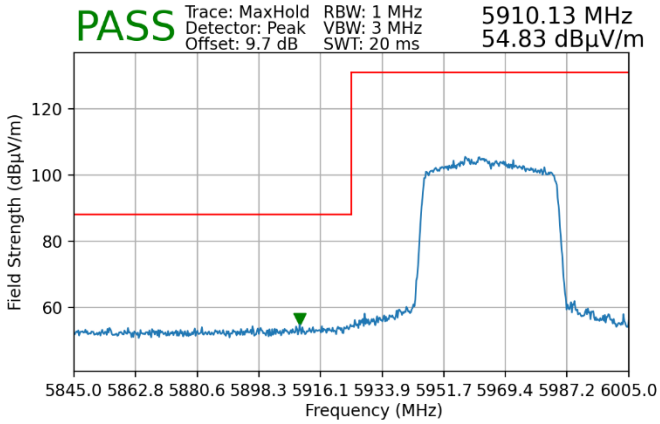
Plot 7-183. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 8)

7.7.11 MIMO Radiated Band Edge Measurements (40MHz BW)

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5965MHz
Channel:	3

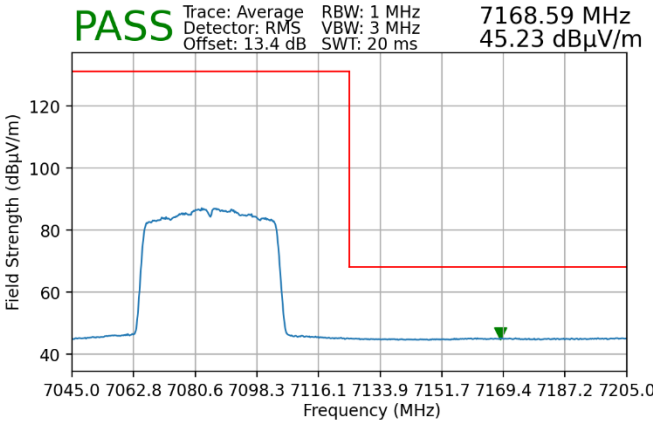


Plot 7-184. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 5)

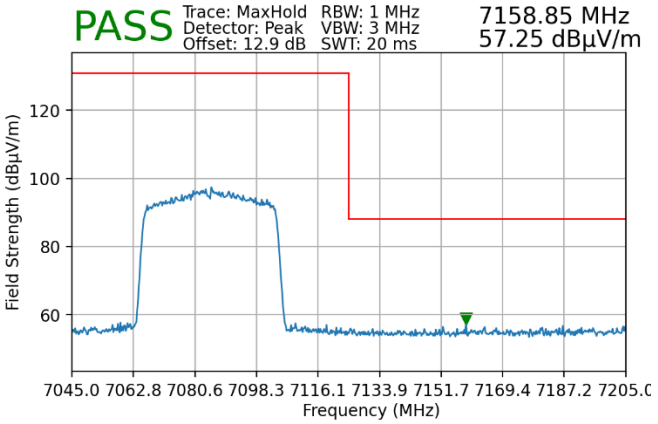


Plot 7-185. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 5)

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	7085MHz
Channel:	227



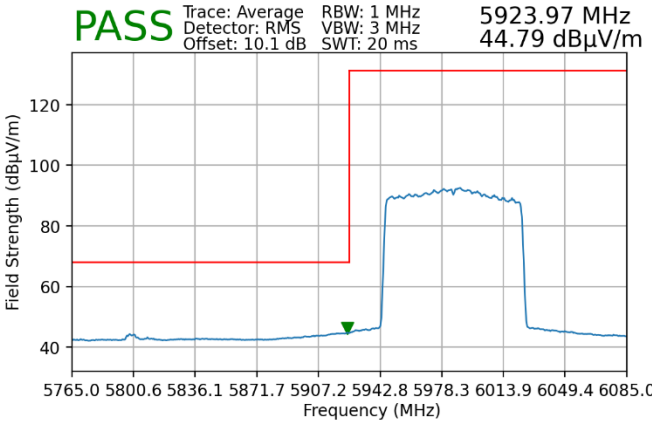
Plot 7-186. Radiated Upper Band Edge Plot MIMO (Average – UNII Band 8)



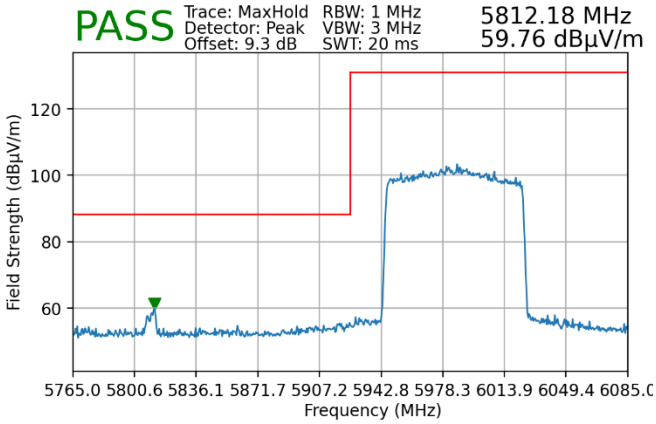
Plot 7-187. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 8)

7.7.12 MIMO Radiated Band Edge Measurements (80MHz BW)

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5985MHz
Channel:	7

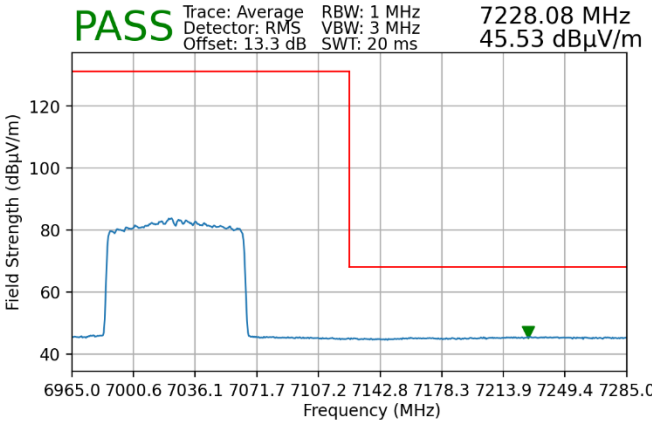


Plot 7-188. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 5)

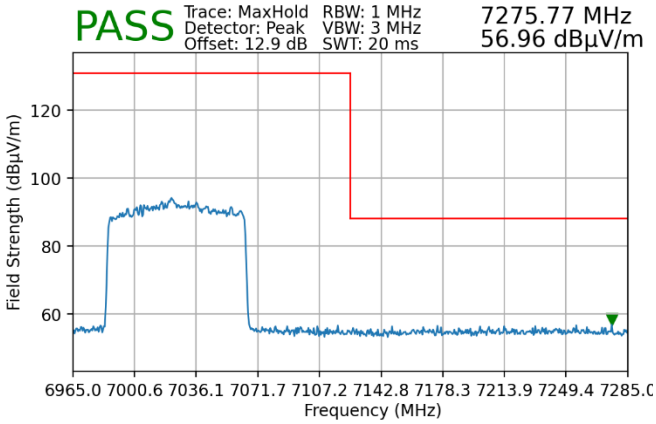


Plot 7-189. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 5)

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	7025MHz
Channel:	215



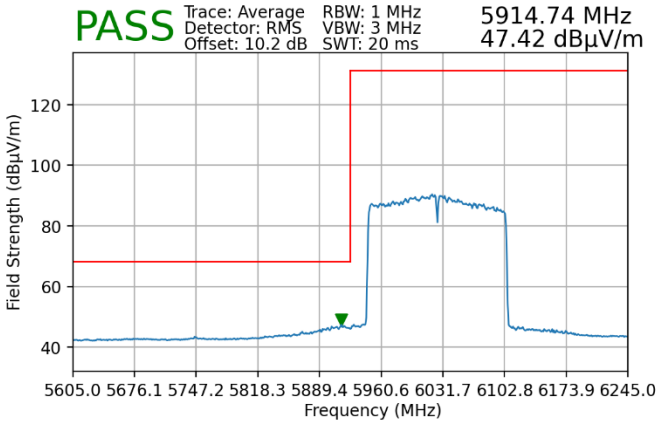
Plot 7-190. Radiated Upper Band Edge Plot MIMO (Average – UNII Band 8)



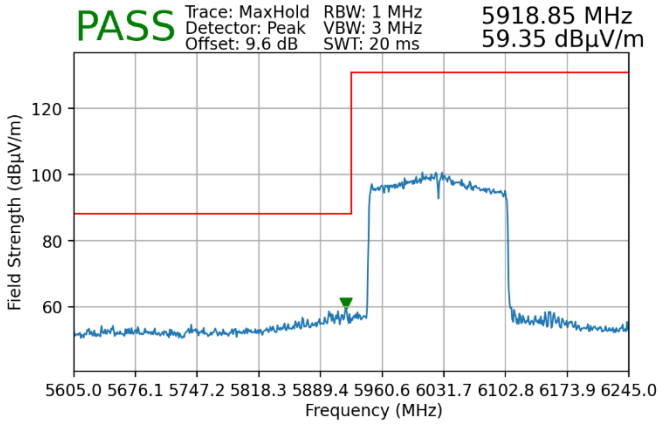
Plot 7-191. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 8)

7.7.13 MIMO Radiated Band Edge Measurements (160MHz BW)

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	6025MHz
Channel:	15

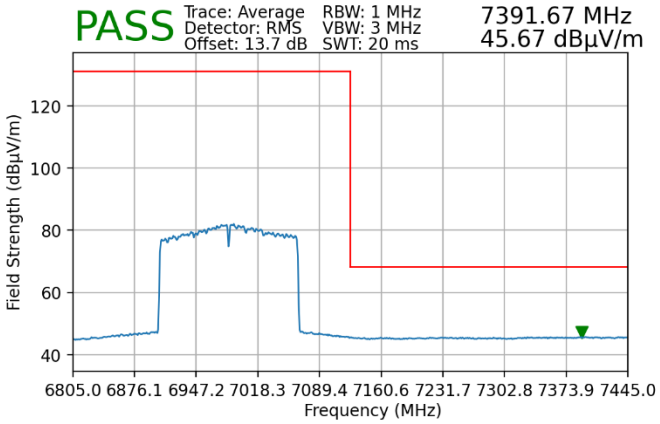


Plot 7-192. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 5)

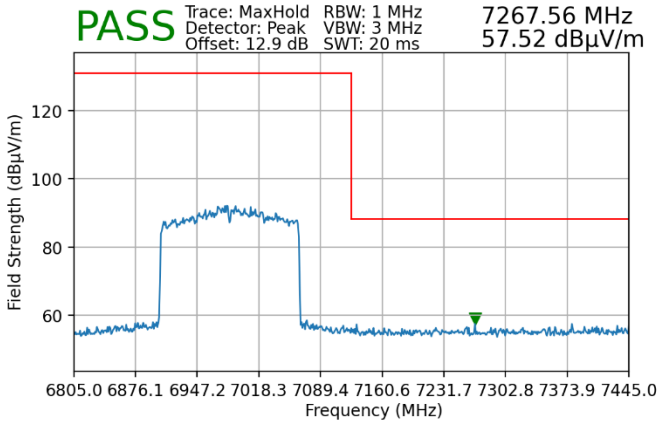


Plot 7-193. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 5)

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	6985MHz
Channel:	207



Plot 7-194. Radiated Upper Band Edge Plot MIMO (Average – UNII Band 8)



Plot 7-195. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 8)

7.8 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 (dBμV)	
	Quasi-peak	Average
0.15 – 0.5	66 to 56*	56 to 46*
0.5 – 5	56	46
5 – 30	60	50

Table 7-28. 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.

Test Setup

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

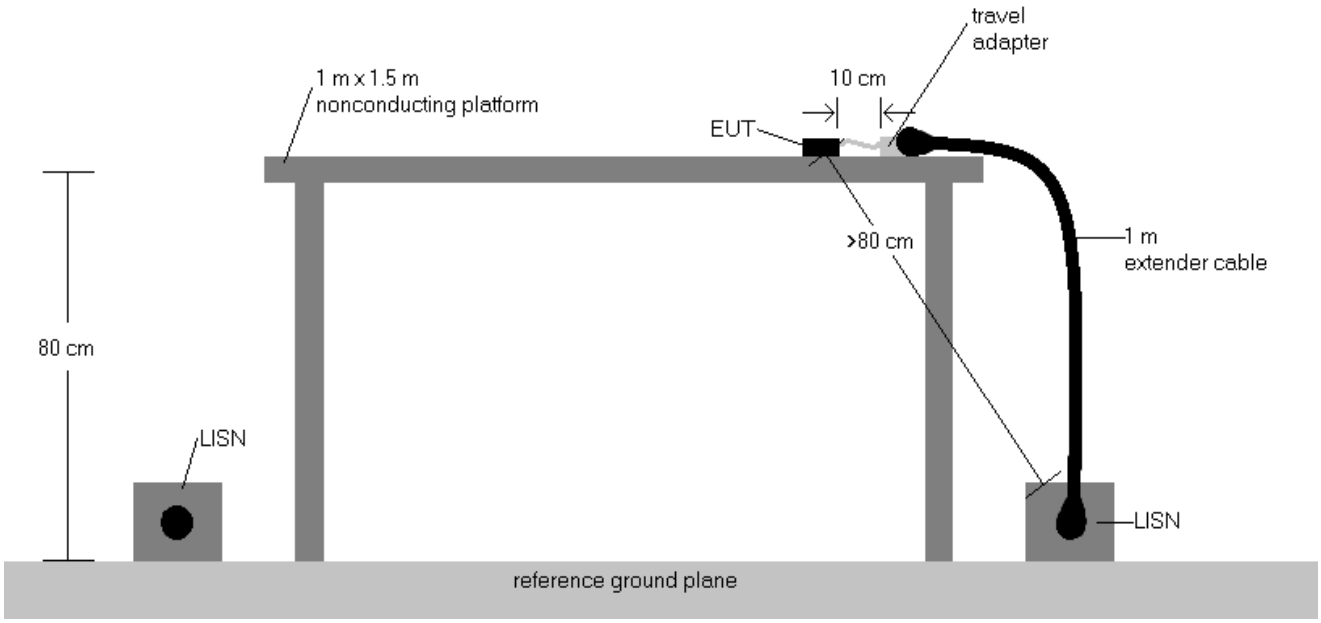
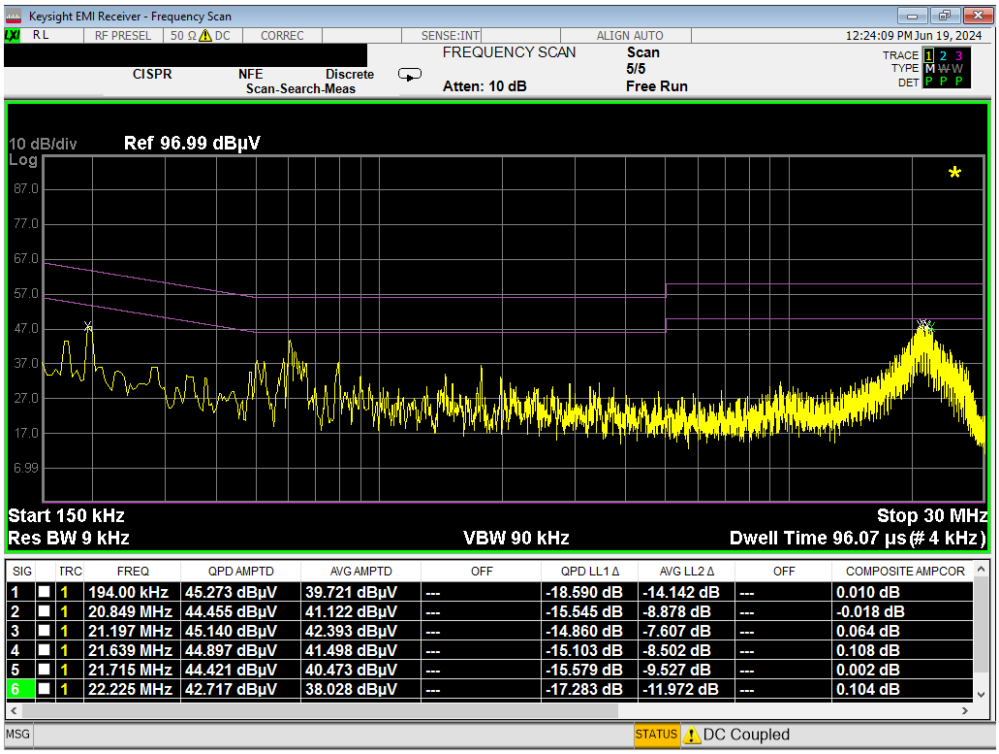


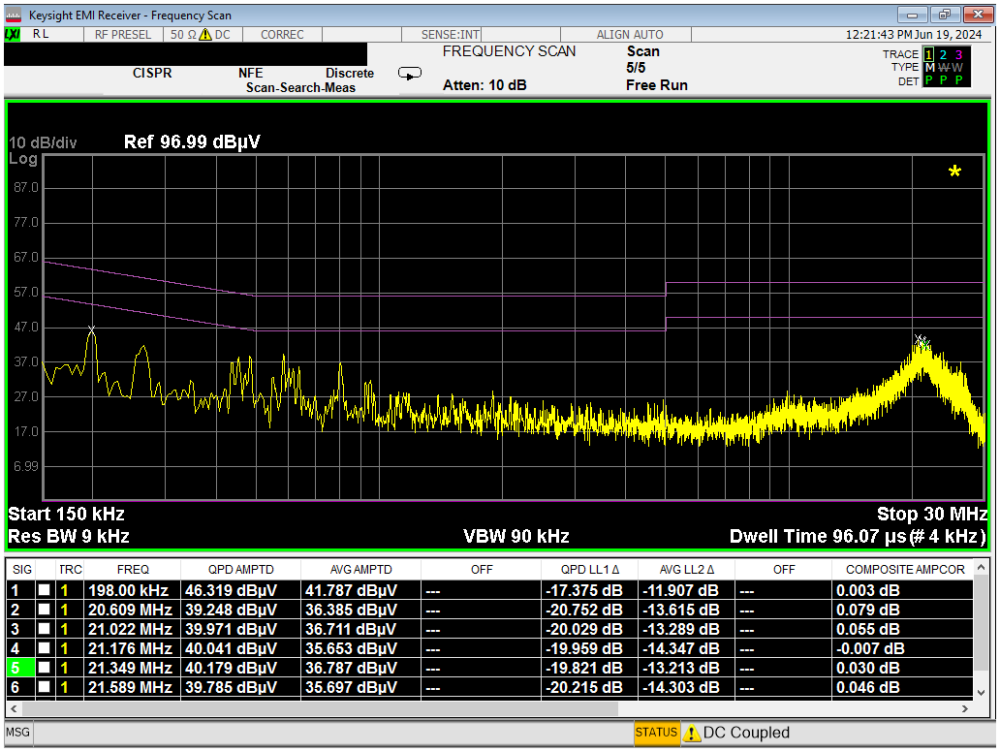
Figure 7-9. Test Instrument & Measurement Setup

Test Notes

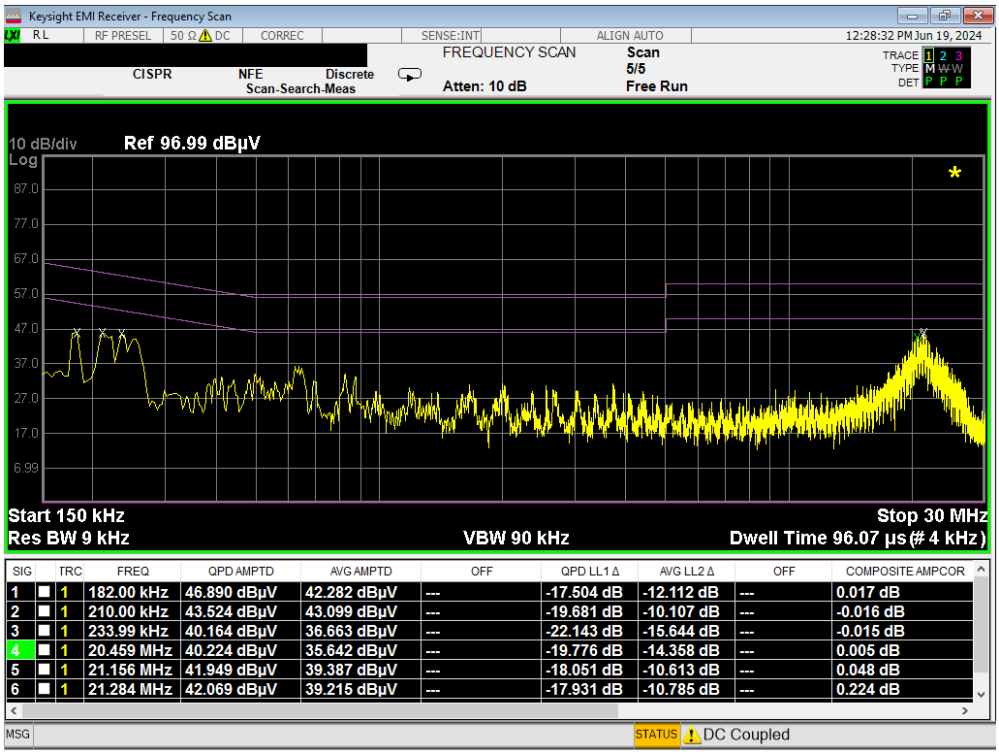
1. All modes of operation were investigated, and the worst-case emissions are reported using mid channel. The emissions found were not affected by the choice of channel used during testing.
2. The limit for an intentional radiator from 150kHz to 30MHz is specified in 15.207.
3. Corr. (dB) = Cable loss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



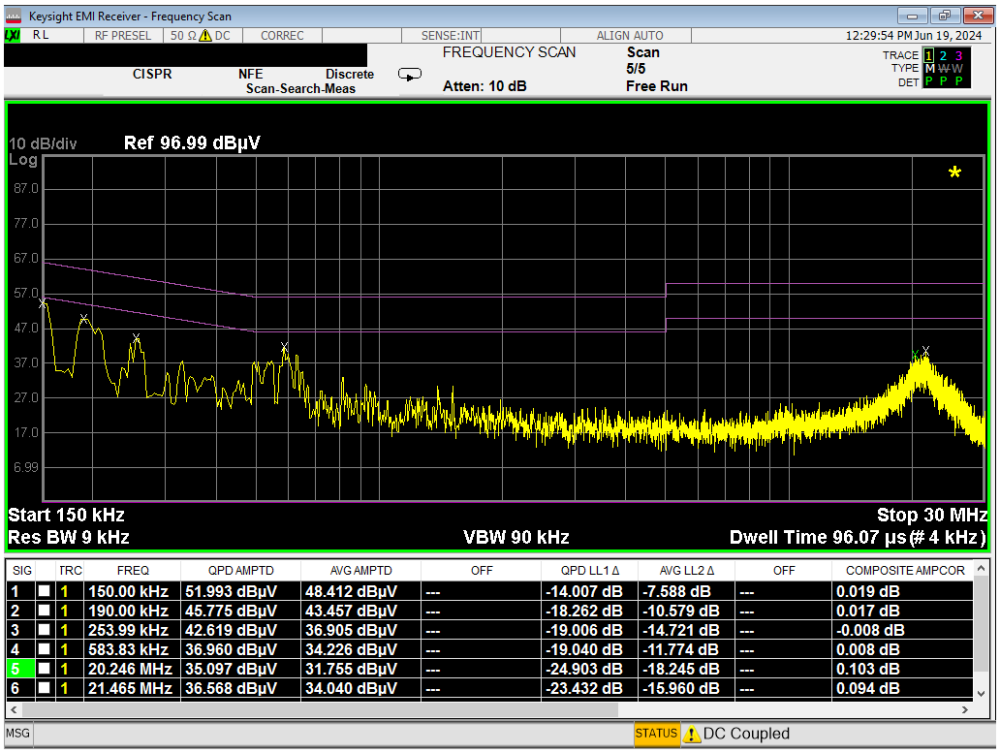
Plot 7-196. Line Conducted Plot with 802.11a UNII Band 5 (L1)



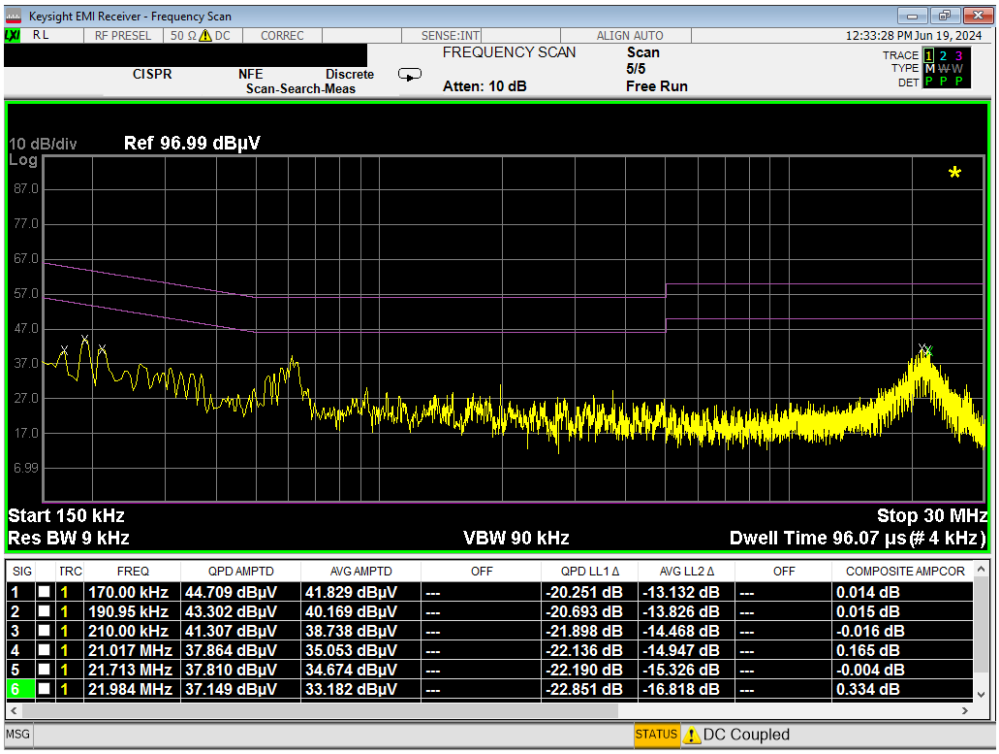
Plot 7-197. Line Conducted Plot with 802.11a UNII Band 5 (N)



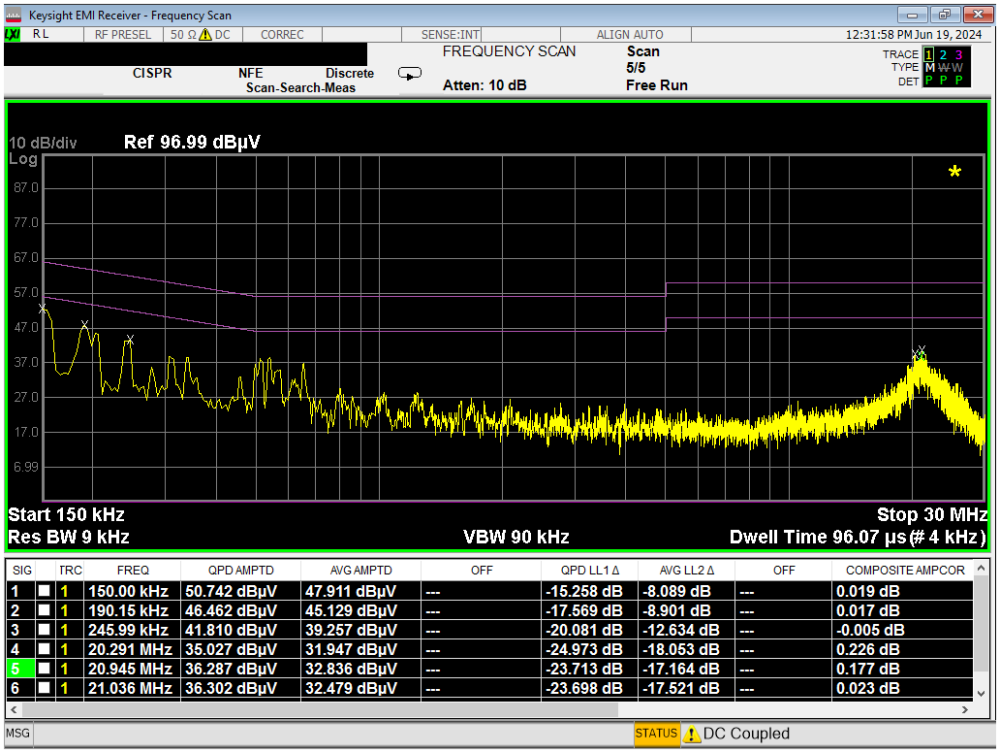
Plot 7-198. Line Conducted Plot with 802.11a UNII Band 6 (L1)



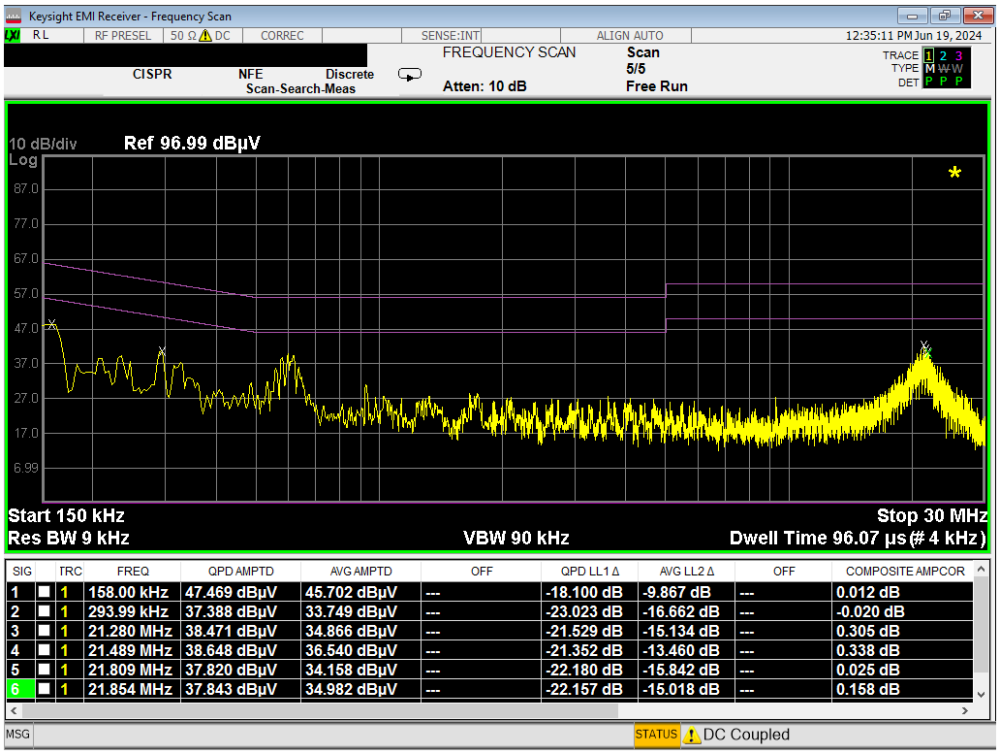
Plot 7-199. Line Conducted Plot with 802.11a UNII Band 6 (N)



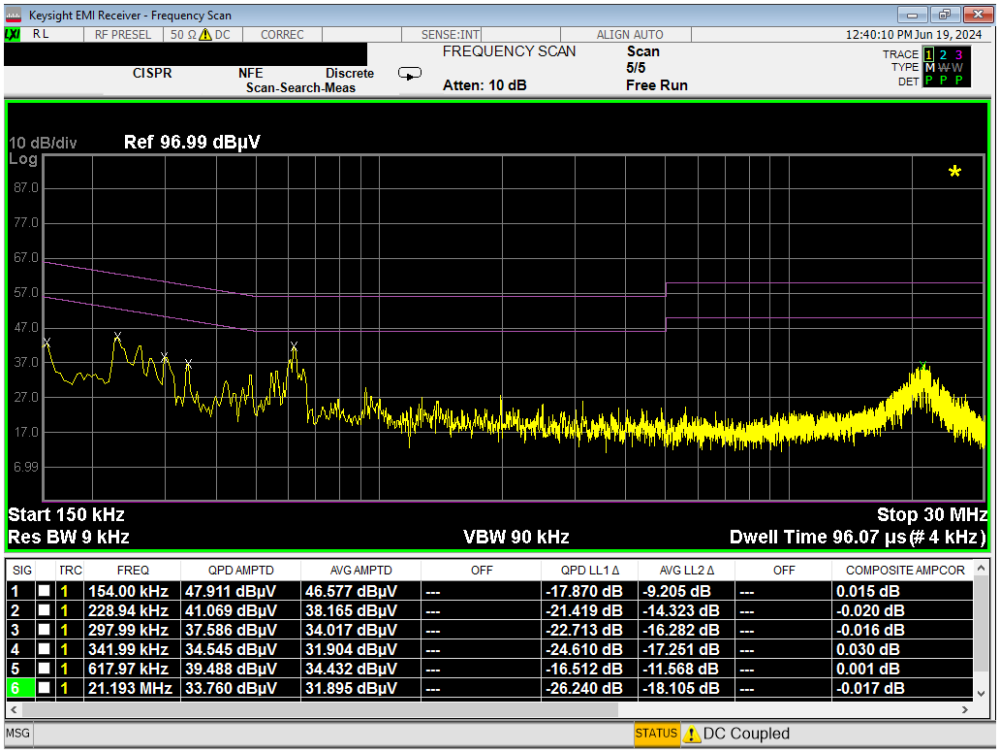
Plot 7-200. Line Conducted Plot with 802.11a UNII Band 7 (L1)



Plot 7-201. Line Conducted Plot with 802.11a UNII Band 7 (N)



Plot 7-202. Line Conducted Plot with 802.11a UNII Band 8 (L1)



Plot 7-203. Line Conducted Plot with 802.11a UNII Band 8 (N)

8.0 CONCLUSION

The data collected relate only the item(s) tested and show that the **Samsung Portable Tablet FCC ID: A3LSMX828U** is in compliance with FCC Part Subpart E (15.407) of the FCC rules for operation as a client device.