

7.7.4 SISO Antenna-1 Radiated Restricted Band Edge Measurements

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

Worst Case Mode:

Worst Case Transfer Rate:

Distance of Measurements:
Operating Frequency:

Channel:

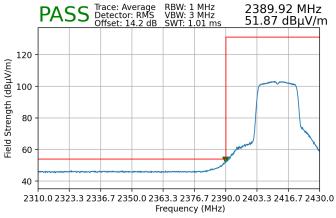
802.11g

6 Mbps

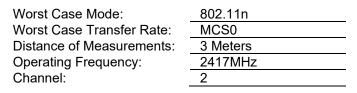
3 Meters

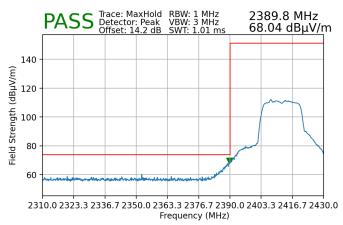
2412MHz

1

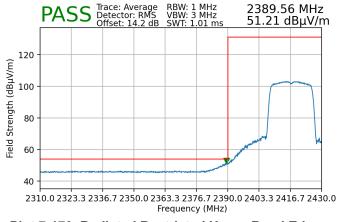


Plot 7-168. Radiated Restricted Lower Band Edge Measurement SISO ANT1 (Average)

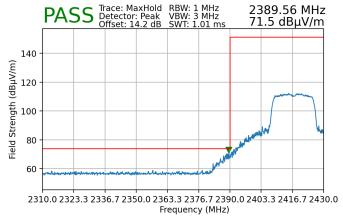




Plot 7-169. Radiated Restricted Lower Band Edge Measurement SISO ANT1 (Peak)



Plot 7-170. Radiated Restricted Upper Band Edge Measurement SISO ANT1 (Average)



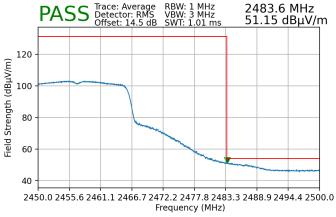
Plot 7-171. Radiated Restricted Upper Band Edge Measurement SISO ANT1 (Peak)

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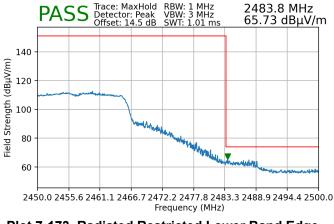


Worst Case Mode:
Worst Case Transfer Rate:
Distance of Measurements:
Operating Frequency:
Channel:

802.11n	
MCS0	
3 Meters	
2457MHz	
10	



Plot 7-172. Radiated Restricted Lower Band Edge Measurement SISO ANT1 (Average)

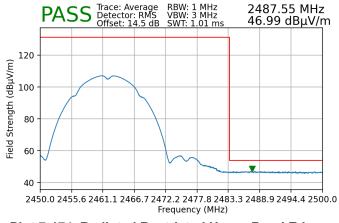


Plot 7-173. Radiated Restricted Lower Band Edge Measurement SISO ANT1 (Peak)

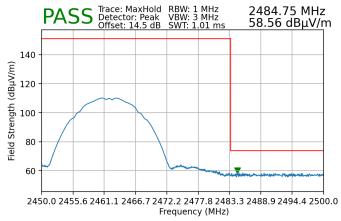
Worst Case Mode:
Worst Case Transfer Rate:
Distance of Measurements:
Operating Frequency:
Channel:

802.11b

1 Mbps
3 Meters
2462MHz
11



Plot 7-174. Radiated Restricted Upper Band Edge Measurement SISO ANT1 (Average)



Plot 7-175. Radiated Restricted Upper Band Edge Measurement SISO ANT1 (Peak)

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7.7.5 SISO Antenna-2 Radiated Restricted Band Edge Measurements

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

Worst Case Mode:

Worst Case Transfer Rate:

Distance of Measurements:
Operating Frequency:

Channel:

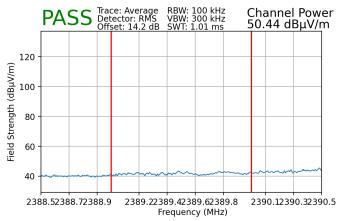
802.11g

6 Mbps

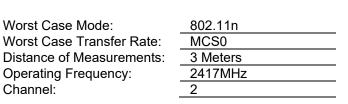
3 Meters

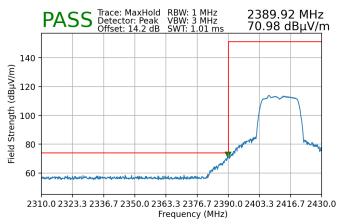
2412MHz

1

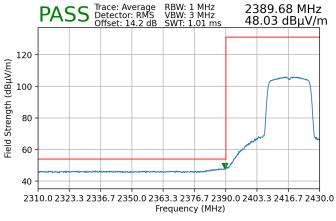


Plot 7-176. Radiated Restricted Lower Band Edge Measurement SISO ANT2 (Average)

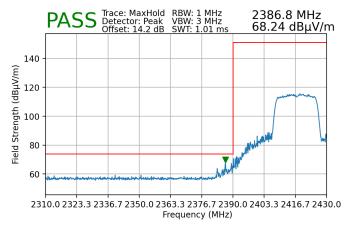




Plot 7-177. Radiated Restricted Lower Band Edge Measurement SISO ANT2 (Peak)



Plot 7-178. Radiated Restricted Upper Band Edge Measurement SISO ANT2 (Average)



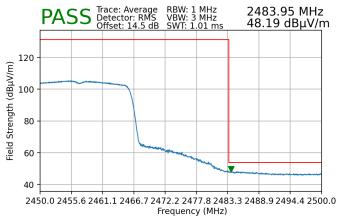
Plot 7-179. Radiated Restricted Upper Band Edge Measurement SISO ANT2 (Peak)

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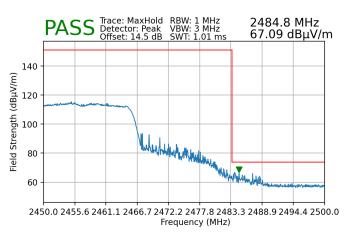


Worst Case Mode:
Worst Case Transfer Rate:
Distance of Measurements:
Operating Frequency:
Channel:

802.11n
MCS0
3 Meters
2457MHz
10



Plot 7-180. Radiated Restricted Lower Band Edge Measurement SISO ANT2 (Average)



Plot 7-181. Radiated Restricted Lower Band Edge Measurement SISO ANT2 (Peak)

Worst Case Mode:

Worst Case Transfer Rate:

Distance of Measurements:

Operating Frequency:

Channel:

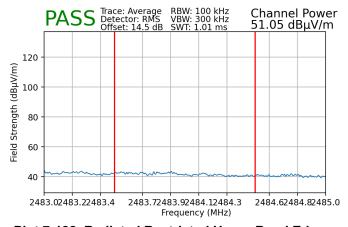
802.11g

6 Mbps

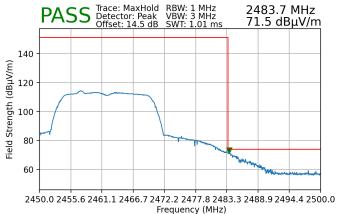
3 Meters

2462MHz

11



Plot 7-182. Radiated Restricted Upper Band Edge Measurement SISO ANT2 (Average)



Plot 7-183. Radiated Restricted Upper Band Edge Measurement SISO ANT2 (Peak)

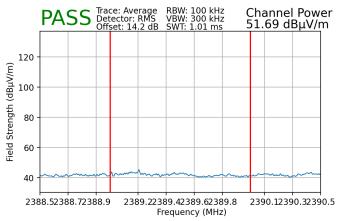
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7.7.6 MIMO Radiated Restricted Band Edge Measurements

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

Worst Case Mode: 802.11g Worst Case Transfer Rate: 6 Mbps Distance of Measurements: 3 Meters Operating Frequency: 2412MHz Channel:



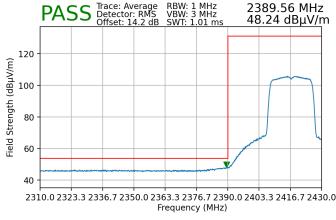
Plot 7-184. Radiated Restricted Lower Band Edge Measurement MIMO (Average)



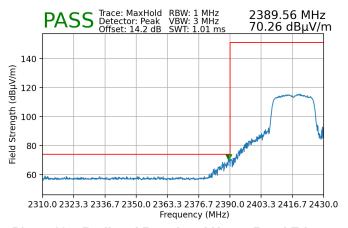
2388.48 MHz

Plot 7-185. Radiated Restricted Lower Band Edge Measurement MIMO (Peak)

Worst Case Mode: 802.11n Worst Case Transfer Rate: MCS8 Distance of Measurements: 3 Meters Operating Frequency: 2417MHz Channel: 2



Plot 7-186. Radiated Restricted Upper Band Edge Measurement MIMO (Average)



Plot 7-187. Radiated Restricted Upper Band Edge Measurement MIMO (Peak)

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Worst Case Mode:
Worst Case Transfer Rate:
Distance of Measurements:
Operating Frequency:
Channel:

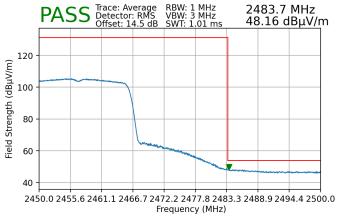
802.11n

MCS8

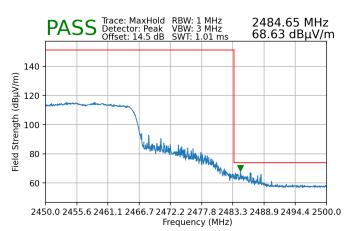
3 Meters

2457MHz

10



Plot 7-188. Radiated Restricted Lower Band Edge Measurement MIMO (Average)



Plot 7-189. Radiated Restricted Lower Band Edge Measurement MIMO (Peak)

Worst Case Mode:

Worst Case Transfer Rate:

Distance of Measurements:

Operating Frequency:

Channel:

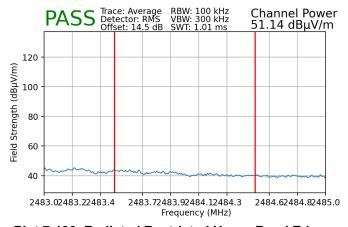
802.11g

6 Mbps

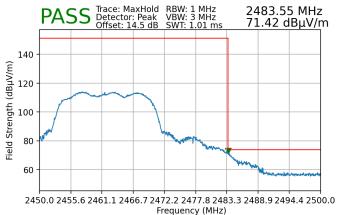
3 Meters

2462MHz

11



Plot 7-190. Radiated Restricted Upper Band Edge Measurement MIMO (Average)



Plot 7-191. Radiated Restricted Upper Band Edge Measurement MIMO (Peak)

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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 §15.207.

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

Table 7-21. Conducted Limits

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
- RBW = 9kHz (for emissions from 150kHz 30MHz)
- 3. Detector = quasi-peak
- 4. Sweep time = auto couple
- 5. Trace mode = max hold
- Trace was allowed to stabilize

Average Field Strength Measurements

- 1. Analyzer center frequency was set to the frequency of the spurious emission of interest
- 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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^{*}Decreases with the logarithm of the frequency.



Test Setup

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

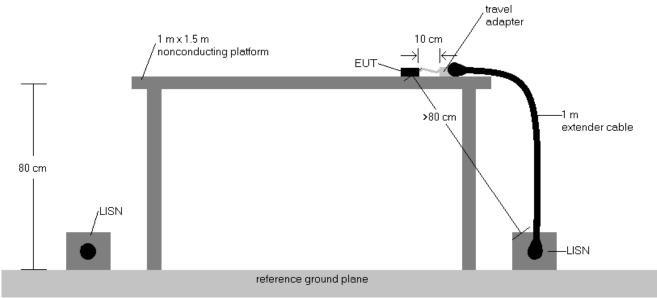


Figure 7-9. Test Instrument & Measurement Setup

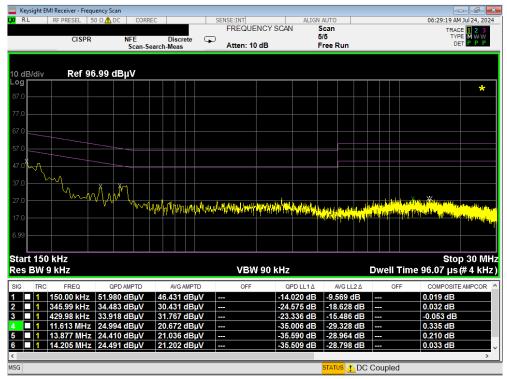
Test Notes

- 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. Corr. (dB) = Cable loss (dB) + LISN insertion factor (dB)
- 4. QP\\AV Level (dB μ V) = QP\\AV Analyzer\\Receiver Level (dB μ V) + Corr. (dB)
- 5. Margin (dB) = QP\\AV Limit (dB μ V) QP\\AV Level (dB μ V)
- 6. Traces shown in plot are made using a peak detector.
- 7. Deviations to the Specifications: None.

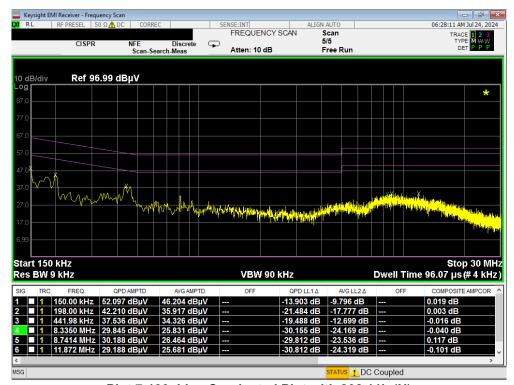
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Plot 7-192. Line Conducted Plot with 802.11b (L1)



Plot 7-193. Line Conducted Plot with 802.11b (N)

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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 Part 15 Subpart C (15.247) of the FCC Rules.

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