

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

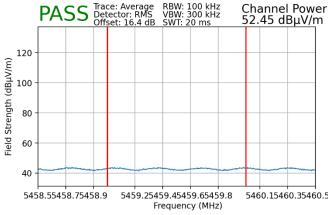
802.11ac

MCS0

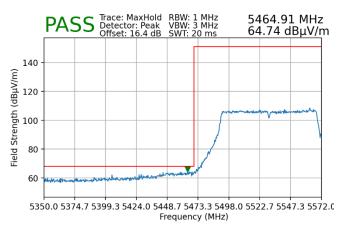
3 Meters

5530MHz

106



Plot 7-211. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 2C)



Plot 7-212. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 2C)

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

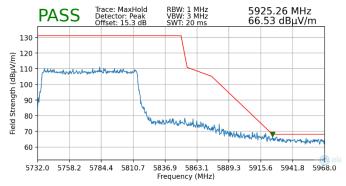
802.11ax

MCS0

3 Meters

5775MHz

155



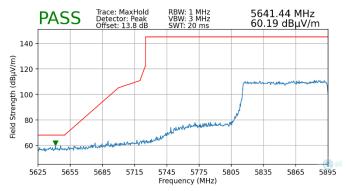
Plot 7-213. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 3)

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

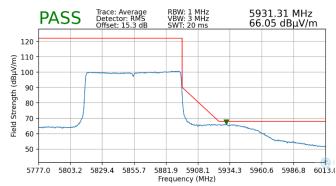
802.11ax
MCS0
3 Meters
5855MHz
171



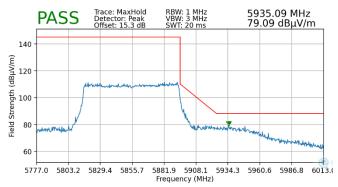
Plot 7-214. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 4)

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

802.11ax
MCS0
3 Meters
5855MHz
171



Plot 7-215. Radiated Upper Band Edge Plot MIMO (Average – UNII Band 4)



Plot 7-216. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 4)

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# 7.6.5 MIMO Radiated Band Edge Measurements (160MHz BW)

Worst Case Mode:

Worst Case Transfer Rate:

Distance of Measurements:

Operating Frequency:

Channel:

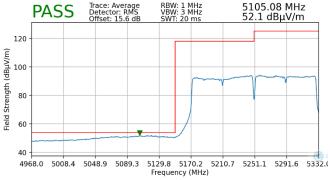
802.11ac

MCS0

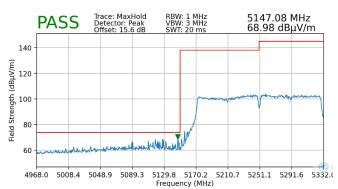
3 Meters

5250MHz

50



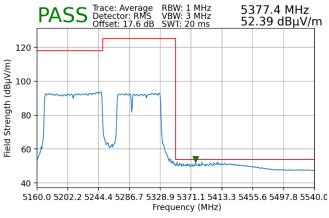
Plot 7-217. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 1)



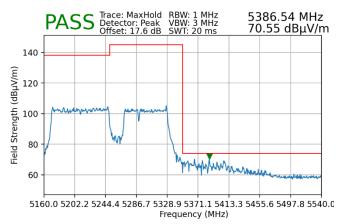
Plot 7-218. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 1)

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

802.11ac
MCS0
3 Meters
5250MHz
50



Plot 7-219. Radiated Upper Band Edge Plot MIMO (Average – UNII Band 2A)



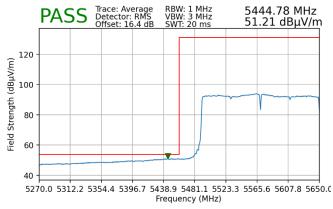
Plot 7-220. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 2A)

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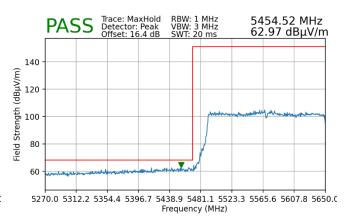


Worst Case Mode:
Worst Case Transfer Rate:
Distance of Measurements:
Operating Frequency:
Channel:

802.11be
MCS0
3 Meters
5570MHz
114



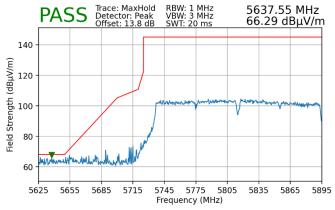
Plot 7-221. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 2C)



Plot 7-222. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 2C)

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

802.11ac
MCS0
3 Meters
5815MHz
163



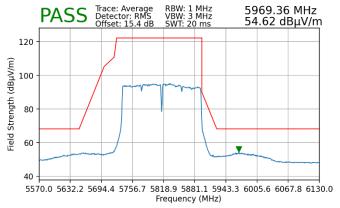
Plot 7-223. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 4)

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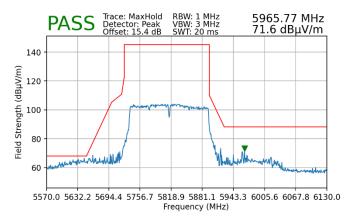


Worst Case Mode:
Worst Case Transfer Rate:
Distance of Measurements:
Operating Frequency:
Channel:

802.11ac
MCS0
3 Meters
5815MHz
163



Plot 7-224. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 4)



Plot 7-225. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 4)

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

Table 7-37. 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
- 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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<sup>\*</sup>Decreases with the logarithm of the frequency.



#### Test Setup

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

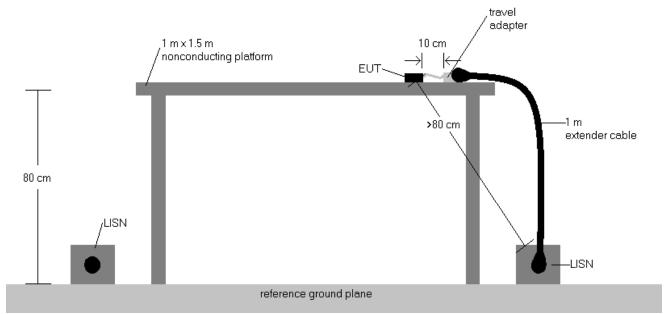


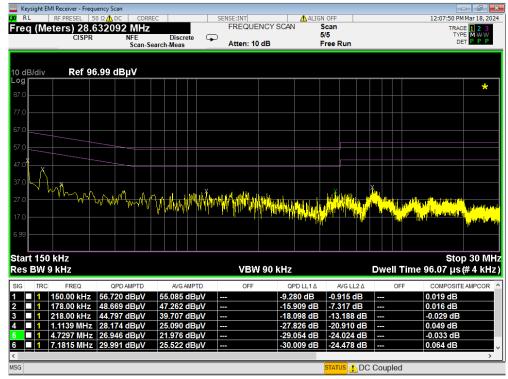
Figure 7-8. Test Instrument & Measurement Setup

#### **Test Notes**

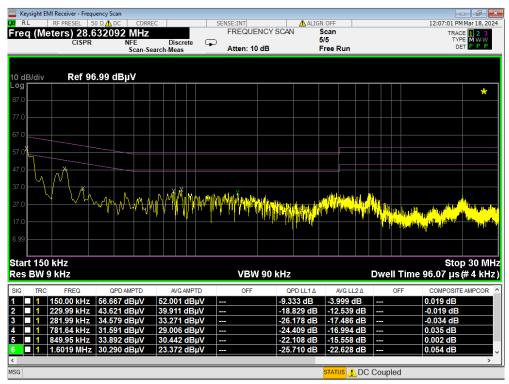
- 1. All modes of operation were investigated, and the worst-case emissions are reported using mid channel. The emissions found were not affected by the choice of channel used during testing.
- 2. The limit for an intentional radiator from 150kHz to 30MHz is specified in §15.207 and RSS-Gen (8.8).
-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

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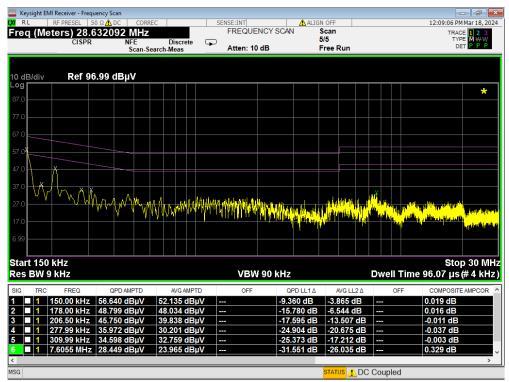
Plot 7-226. Line Conducted Plot with 802.11a UNII Band 1 (L1)



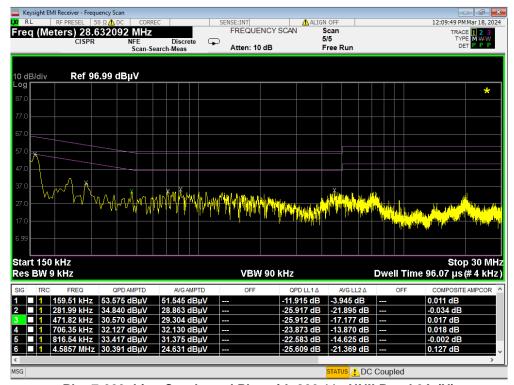
Plot 7-227. Line Conducted Plot with 802.11a UNII Band 1 (N)

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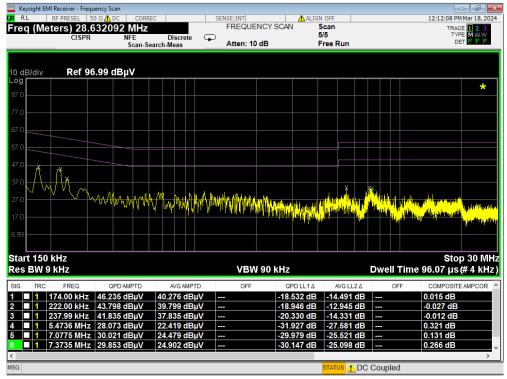
Plot 7-228. Line Conducted Plot with 802.11a UNII Band 2A (L1)



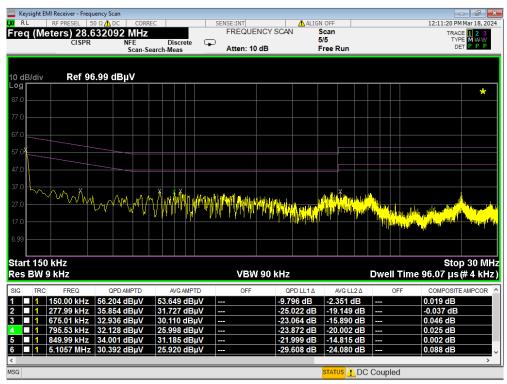
Plot 7-229. Line Conducted Plot with 802.11a UNII Band 2A (N)

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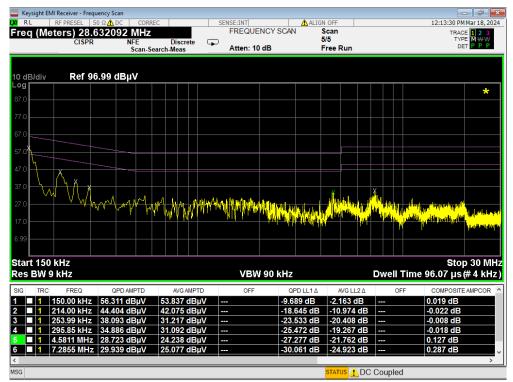
Plot 7-230. Line Conducted Plot with 802.11a UNII Band 2C (L1)



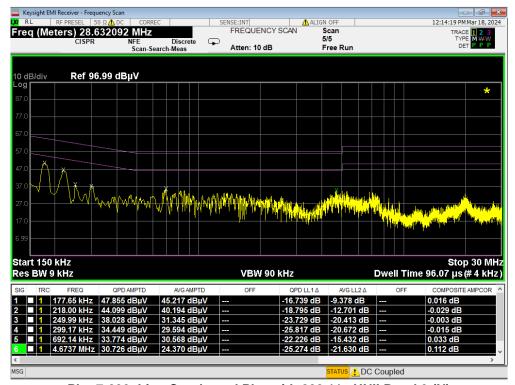
Plot 7-231. Line Conducted Plot with 802.11a UNII Band 2C (N)

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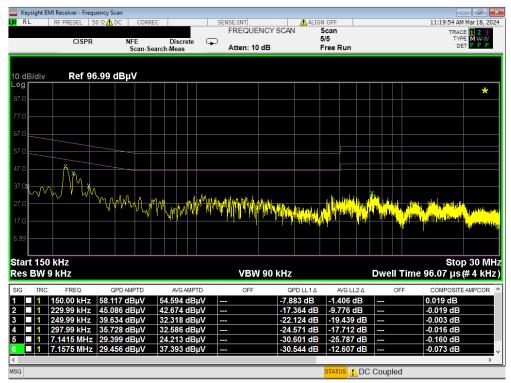
Plot 7-232. Line Conducted Plot with 802.11a UNII Band 3 (L1)



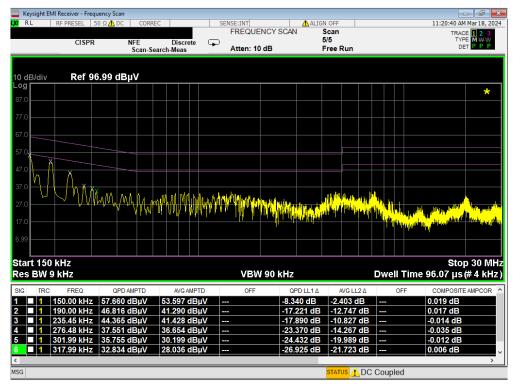
Plot 7-233. Line Conducted Plot with 802.11a UNII Band 3 (N)

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Plot 7-234. Line Conducted Plot with 802.11a UNII Band 4 (L1)



Plot 7-235. Line Conducted Plot with 802.11a UNII Band 4 (N)

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# 8.0 CONCLUSION

The data collected relate only the item(s) tested and show that the **Microsoft Corporation Portable Computing Device FCC ID: C3K2085** is in compliance with Part 15 Subpart E (15.407) of the FCC Rules.

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