

Worst Case Mode:

Worst Case Transfer Rate:

Distance of Measurements:
Operating Frequency:
Channel:

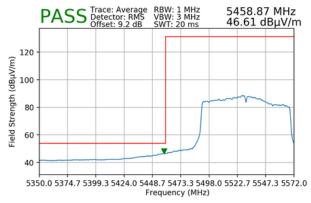
802.11ax

MCS0

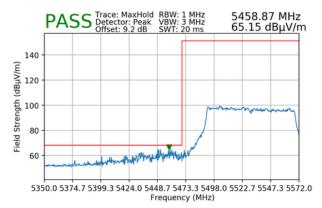
3 Meters

5530MHz

106



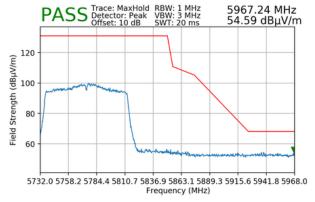
Plot 7-203. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 2C)



Plot 7-204. 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 7-205. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 3)

FCC ID: A3LSMF731B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 129 of 152
1M2303170032-11.A3L	3/4 - 5/30/2023	Portable Handset	Page 138 of 152

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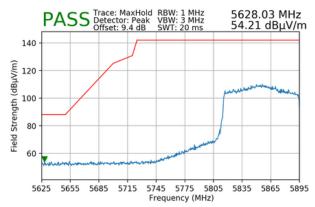


Worst Case Mode:
Worst Case Transfer Rate:
Distance of Measurements:
Operating Frequency:
Channel:

802.11ax
MCS0
3 Meters
5855MHz
171



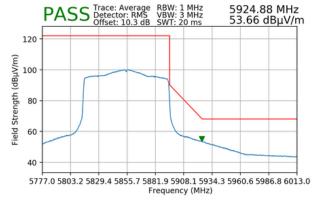
Plot 7-206. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 4)



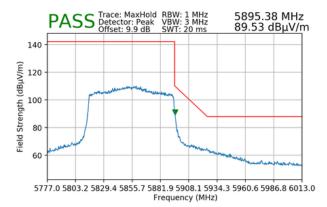
Plot 7-207. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 4)

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

802.11ac
MCS0
3 Meters
5855MHz
171



Plot 7-208. Radiated Upper Band Edge Plot MIMO (Average – UNII Band 4)



Plot 7-209. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 4)

FCC ID: A3LSMF731B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 120 of 152
1M2303170032-11.A3L	3/4 - 5/30/2023	Portable Handset	Page 139 of 152

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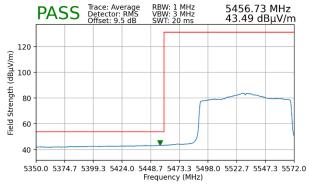
V9.0 02/01/2019

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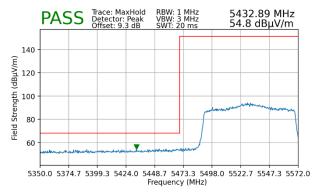


Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel:

802.11ax	
MCS0	_
3 Meters	
5530MHz	
106	



Plot 7-210. Radiated Lower Band Edge Plot MIMO (Average - UNII Band 2C) with WCP



Plot 7-211. Radiated Lower Band Edge Plot MIMO (Peak - UNII Band 2C) with WCP

FCC ID: A3LSMF731B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 140 of 152
1M2303170032-11.A3L	3/4 - 5/30/2023	Portable Handset	Page 140 of 152

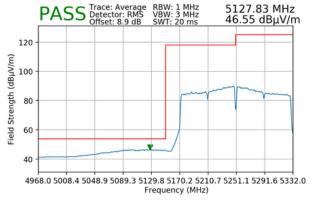
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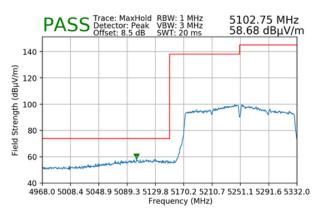
## 7.6.5 MIMO Radiated Band Edge Measurements (160MHz BW)

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

802.11ax
MCS0
3 Meters
5250MHz
50



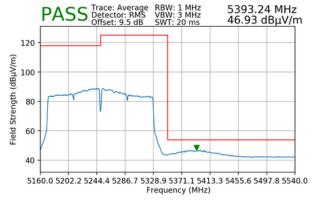
Plot 7-212. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 1)



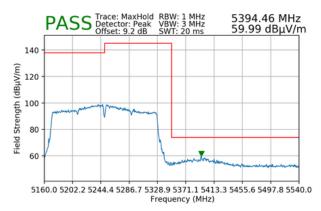
Plot 7-213. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 1)

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

802.11ax
MCS0
3 Meters
5250MHz
50



Plot 7-214. Radiated Upper Band Edge Plot MIMO (Average – UNII Band 2A)

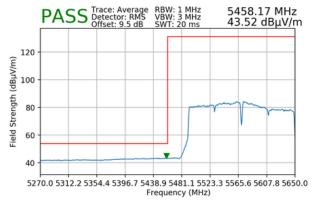


Plot 7-215. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 2A)

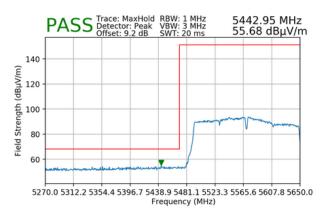
FCC ID: A3LSMF731B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 141 of 152
1M2303170032-11.A3L	3/4 - 5/30/2023	Portable Handset	Page 141 01 152



Worst Case Mode: 802.11ax Worst Case Transfer Rate: MCS<sub>0</sub> Distance of Measurements: 3 Meters Operating Frequency: 5570MHz Channel: 114

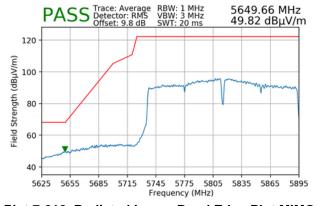


Plot 7-216. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 2C)

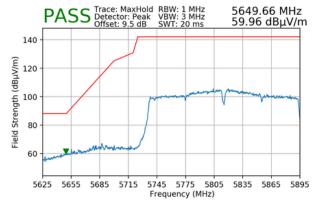


Plot 7-217. Radiated Lower Band Edge Plot MIMO (Peak - UNII Band 2C)

Worst Case Mode: 802.11ax Worst Case Transfer Rate: MCS<sub>0</sub> Distance of Measurements: 3 Meters Operating Frequency: 5815MHz Channel: 163



Plot 7-218. Radiated Lower Band Edge Plot MIMO (Average - UNII Band 4)



Plot 7-219. Radiated Lower Band Edge Plot MIMO (Peak - UNII Band 4)

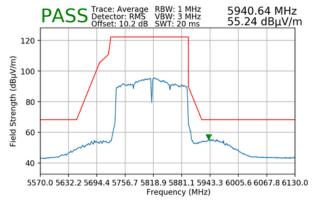
FCC ID: A3LSMF731B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 142 of 152
1M2303170032-11.A3L	3/4 - 5/30/2023	Portable Handset	Page 142 of 152

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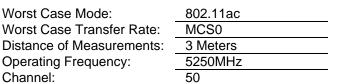


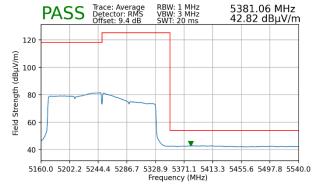
Worst Case Mode:
Worst Case Transfer Rate:
Distance of Measurements:
Operating Frequency:
Channel:

802.11ac
MCS0
3 Meters
5815MHz
163

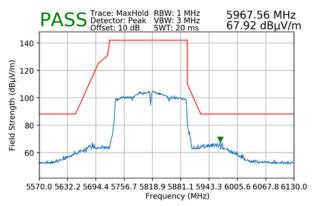


Plot 7-220. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 4)

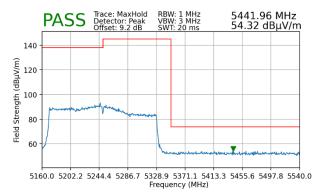




Plot 7-222. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 2A) with WCP



Plot 7-221. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 4)



Plot 7-223. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 2A) with WCP

FCC ID: A3LSMF731B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 143 of 152
1M2303170032-11.A3L	3/4 - 5/30/2023	Portable Handset	Page 143 01 132

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V9.0 02/01/2019

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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	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 7-36. 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
- 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

FCC ID: A3LSMF731B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 144 of 152
1M2303170032-11.A3L	3/4 - 5/30/2023	Portable Handset	Fage 144 01 152

<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.

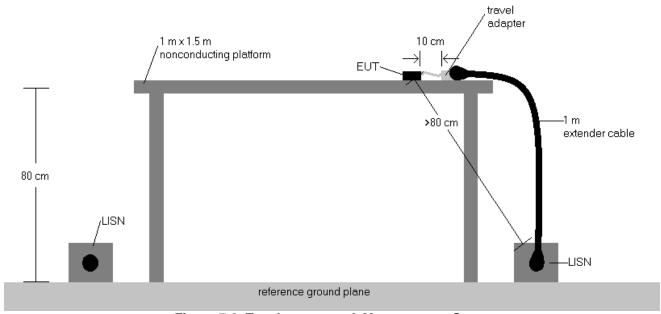


Figure 7-8. Test Instrument & Measurement Setup

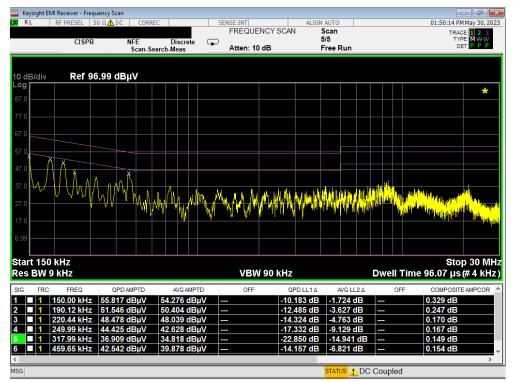
#### **Test Notes**

- 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.

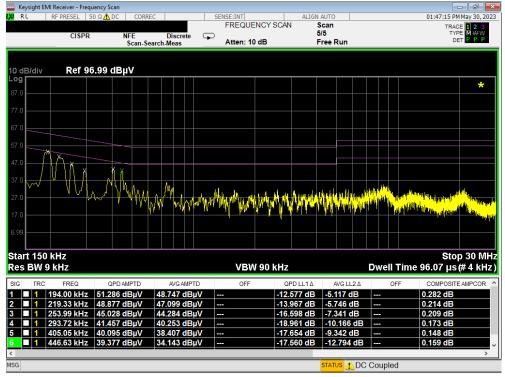
FCC ID: A3LSMF731B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 145 of 152
1M2303170032-11.A3L	3/4 - 5/30/2023	Portable Handset	Fage 145 01 152

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Plot 7-224. Line Conducted Plot with 802.11a UNII Band 1 (L1)



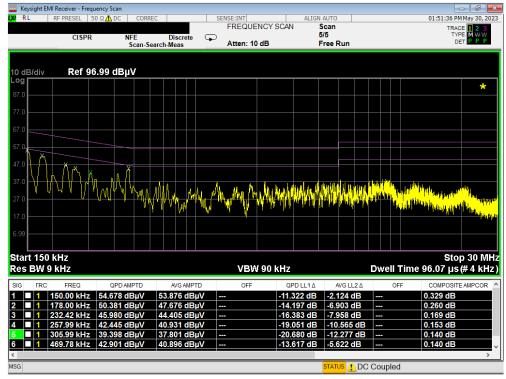
Plot 7-225. Line Conducted Plot with 802.11a UNII Band 1 (N)

FCC ID: A3LSMF731B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 146 of 152
1M2303170032-11.A3L	3/4 - 5/30/2023	Portable Handset	Page 146 of 152

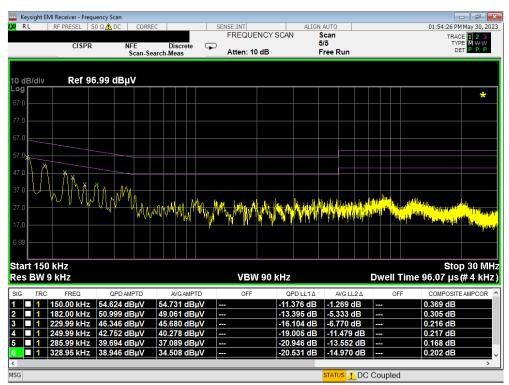
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Plot 7-226. Line Conducted Plot with 802.11a UNII Band 2A (L1)



Plot 7-227. Line Conducted Plot with 802.11a UNII Band 2A (N)

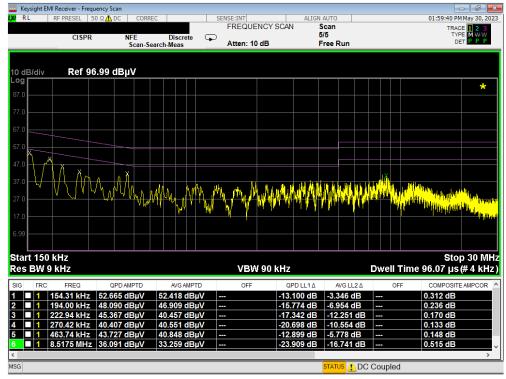
FCC ID: A3LSMF731B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 147 of 152
1M2303170032-11.A3L	3/4 - 5/30/2023	Portable Handset	Page 147 01 152

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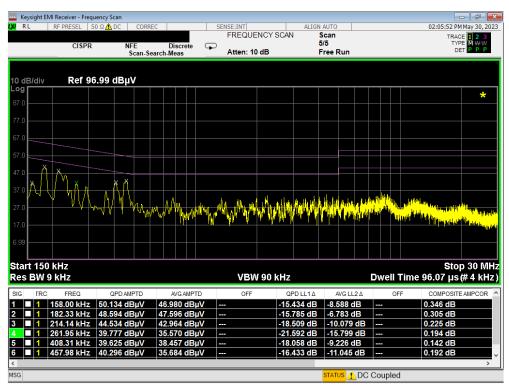
V9.0 02/01/2019

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



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

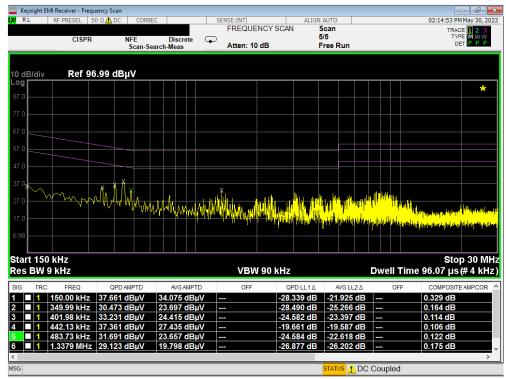
FCC ID: A3LSMF731B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 149 of 152
1M2303170032-11.A3L	3/4 - 5/30/2023	Portable Handset	Page 148 of 152

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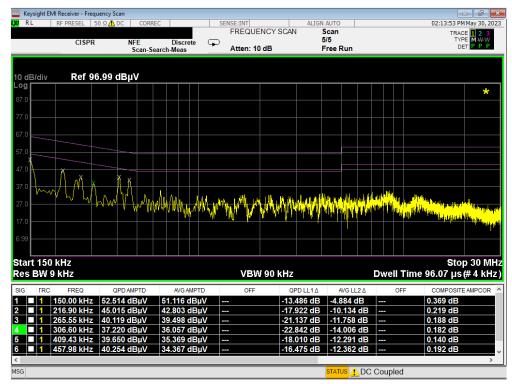
V9.0 02/01/2019

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Plot 7-230. Line Conducted Plot with 802.11a UNII Band 3 (L1)



Plot 7-231. Line Conducted Plot with 802.11a UNII Band 3 (N)

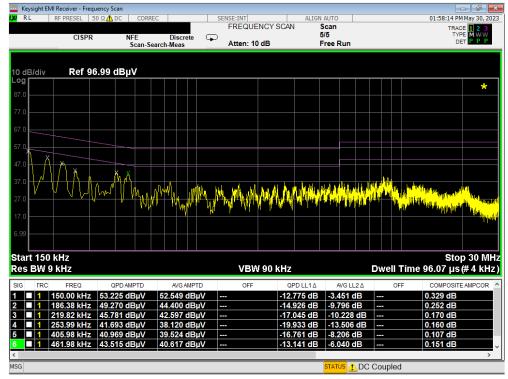
FCC ID: A3LSMF731B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 140 of 152
1M2303170032-11.A3L	3/4 - 5/30/2023	Portable Handset	Page 149 of 152

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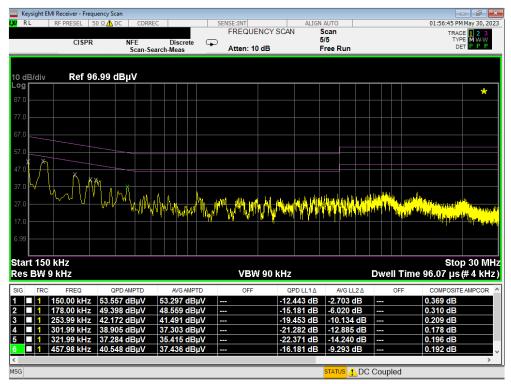
V9.0 02/01/2019

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Plot 7-232. Line Conducted Plot with 802.11a UNII Band 4 (L1)



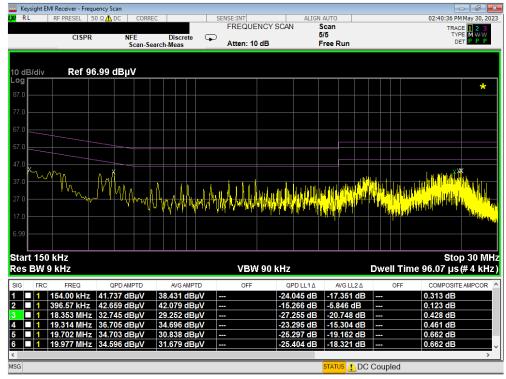
Plot 7-233. Line Conducted Plot with 802.11a UNII Band 4 (N)

FCC ID: A3LSMF731B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogg 450 of 450
1M2303170032-11.A3L	3/4 - 5/30/2023	Portable Handset	Page 150 of 152

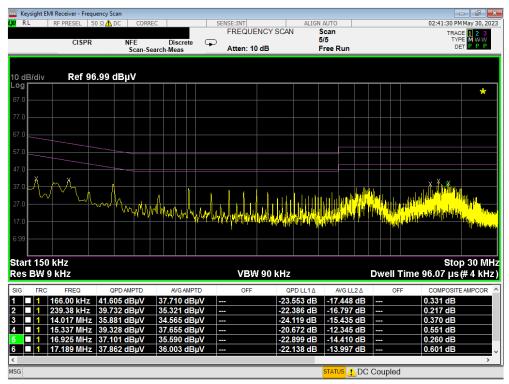
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Plot 7-234. Line Conducted Plot with 802.11a UNII Band 1 (L1) with WCP



Plot 7-235. Line Conducted Plot with 802.11a UNII Band 1 (N) with WCP

FCC ID: A3LSMF731B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 151 of 152
1M2303170032-11.A3L	3/4 - 5/30/2023	Portable Handset	Page 151 of 152

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V9.0 02/01/2019
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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: A3LSMF731B** is in compliance with Part 15 Subpart E (15.407) of the FCC Rules.

FCC ID: A3LSMF731B	MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 152 of 152
1M2303170032-11.A3L	3/4 - 5/30/2023	Portable Handset	Page 152 of 152