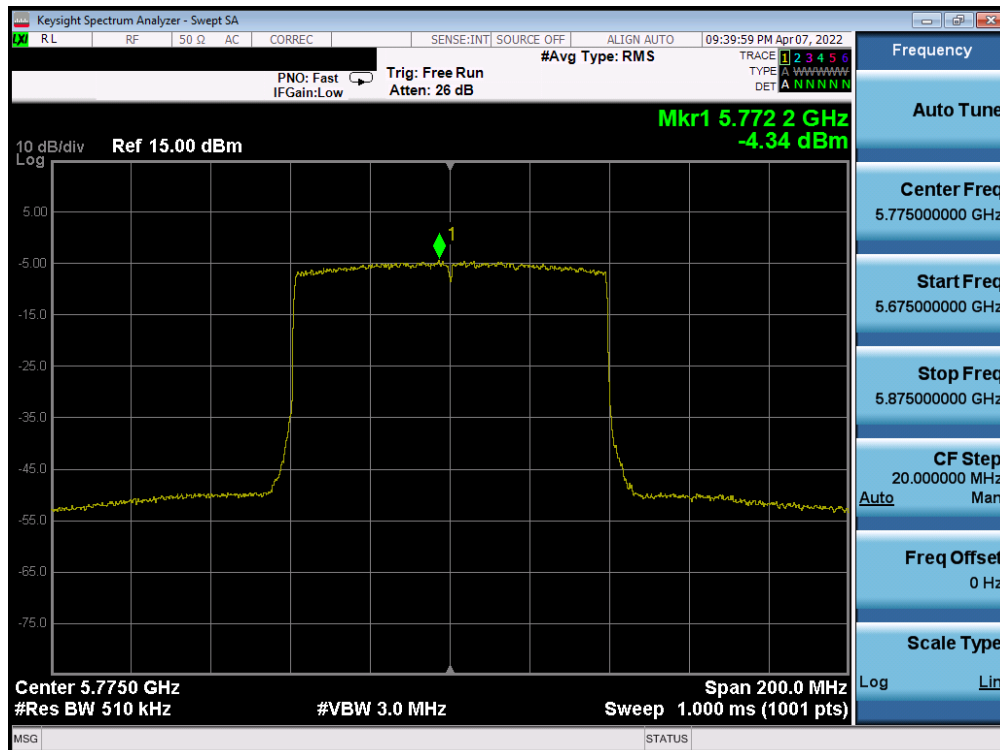
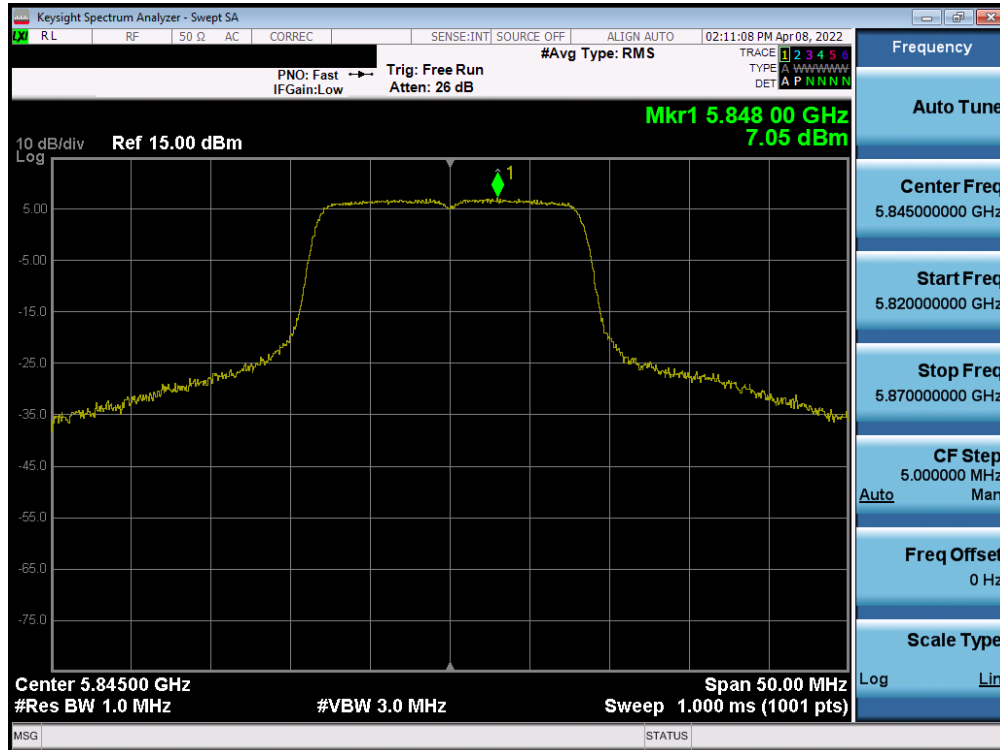


Plot 7-330. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ac (UNII Band 3) – Ch. 155)

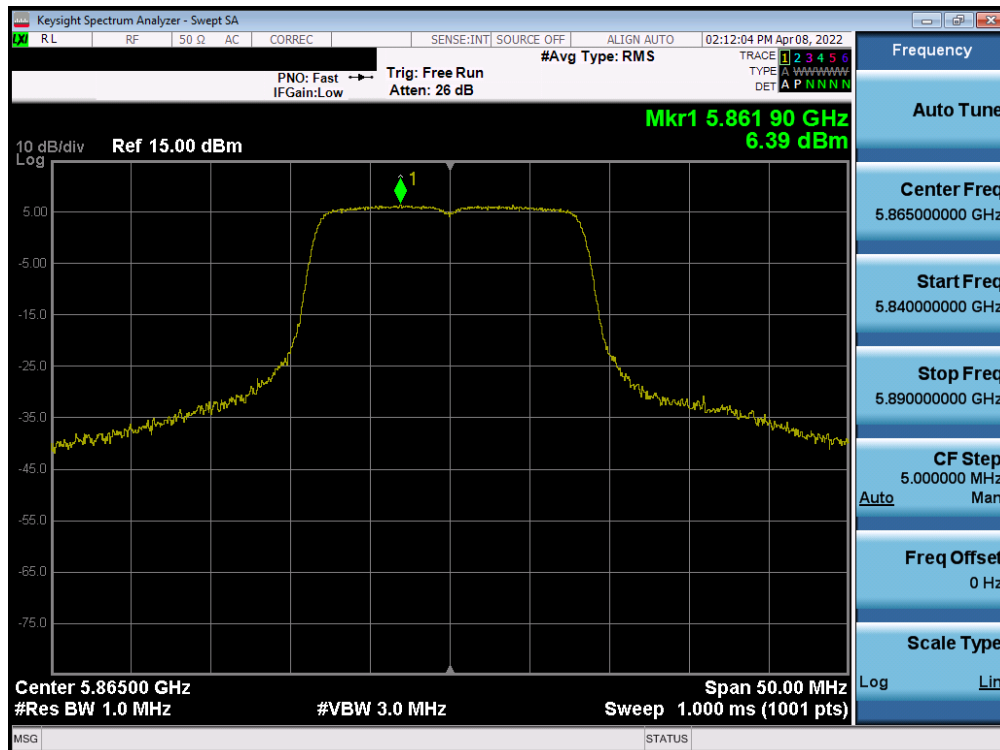


Plot 7-331. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ax (UNII Band 3) – Ch. 155)

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 196 of 253

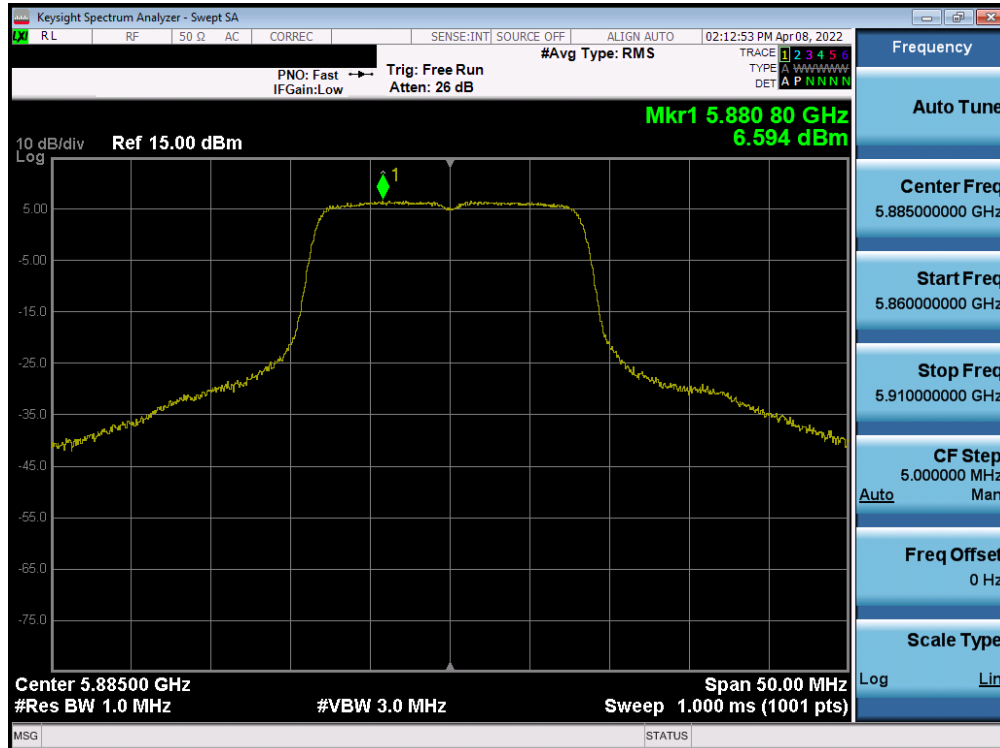


Plot 7-332. Power Spectral Density Plot MIMO ANT2 (802.11a (UNII Band 3/4) – Ch. 169)

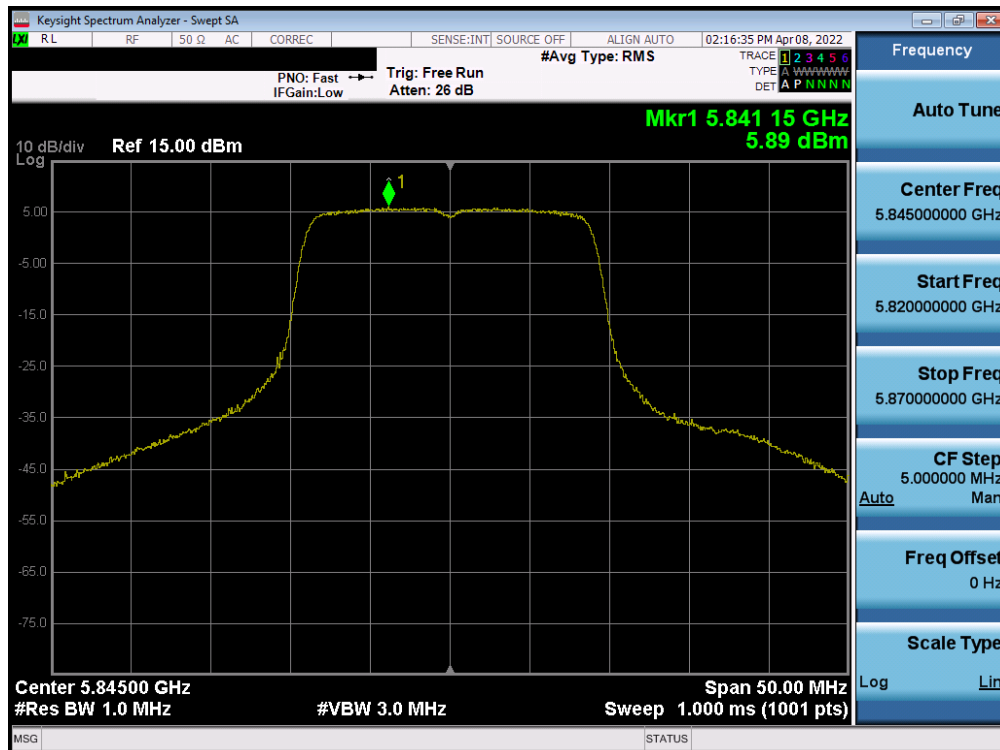


Plot 7-333. Power Spectral Density Plot MIMO ANT2 (802.11a (UNII Band 4) – Ch. 173)

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 197 of 253

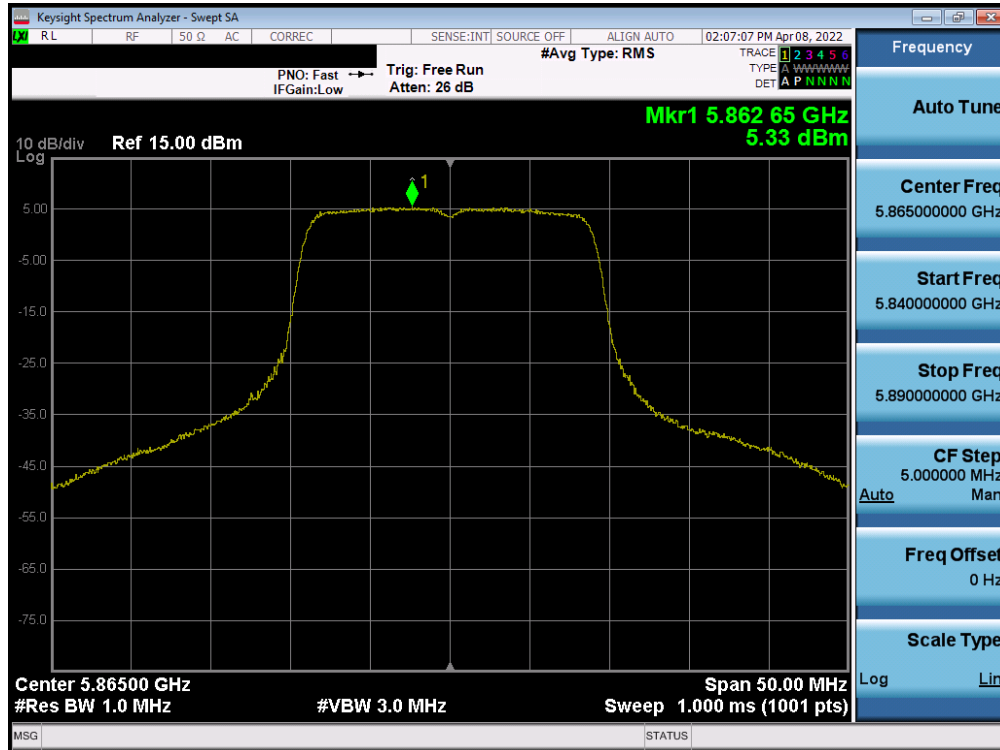


Plot 7-334. Power Spectral Density Plot MIMO ANT2 (802.11a (UNII Band 4) – Ch. 177)

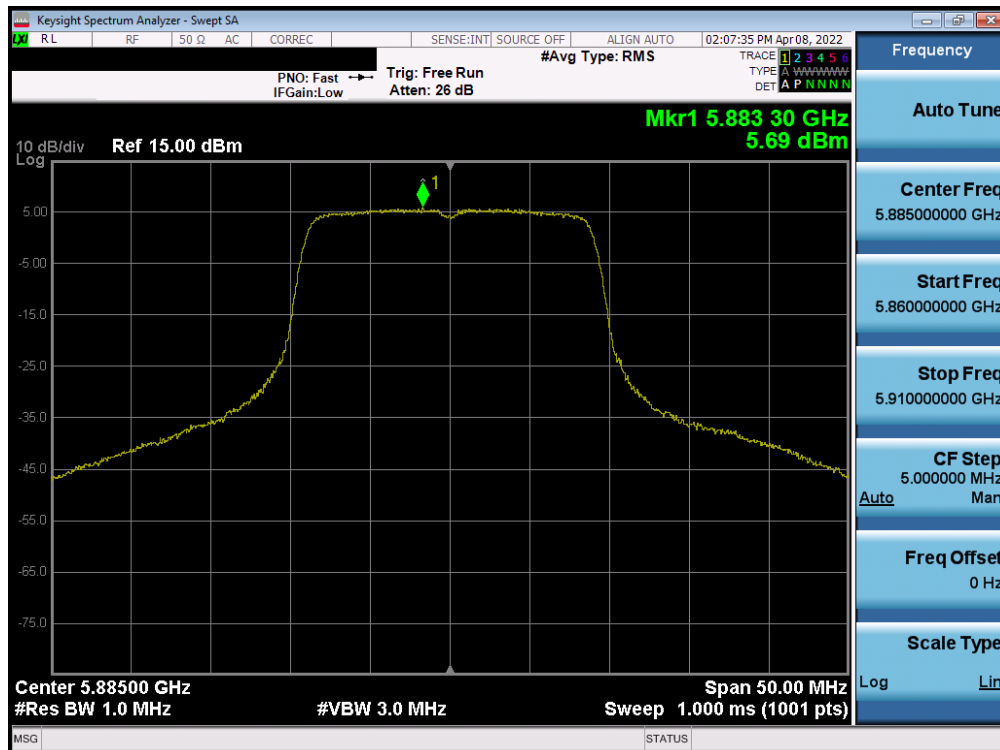


Plot 7-335. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 3/4) – Ch. 169)

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 198 of 253

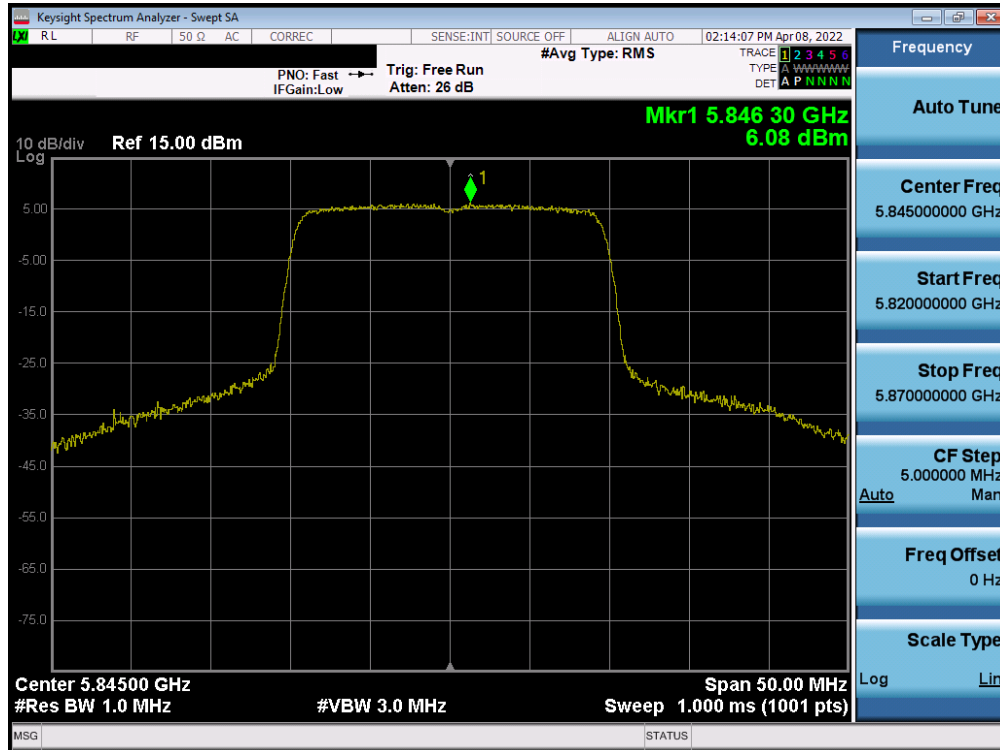


Plot 7-336. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 4) – Ch. 173)

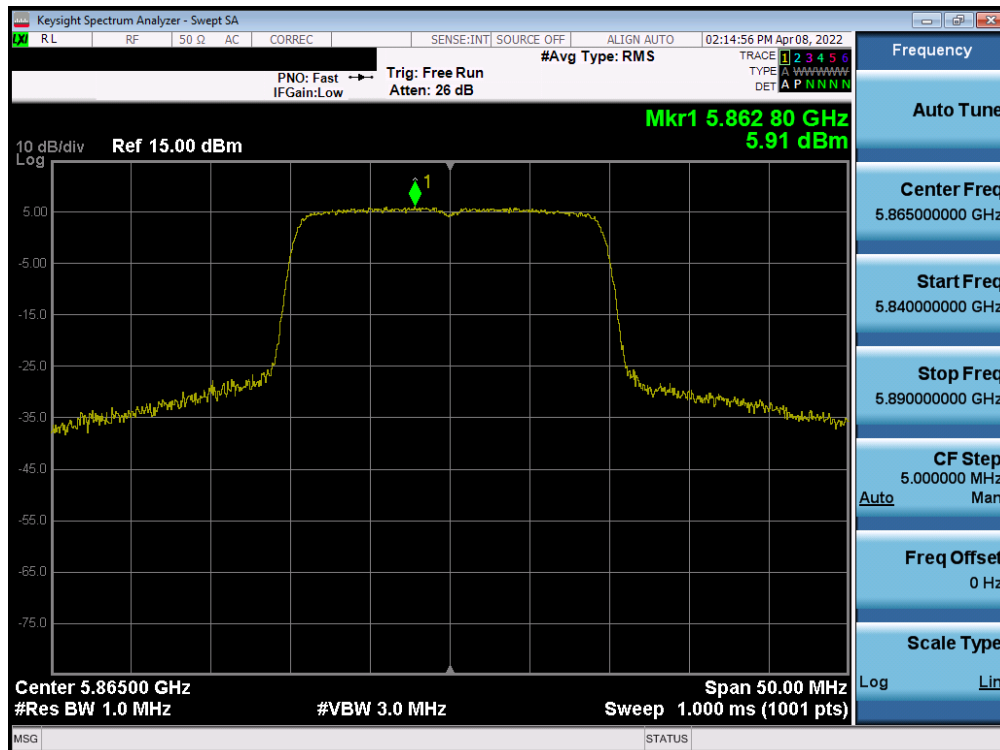


Plot 7-337. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 4) – Ch. 177)

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 199 of 253

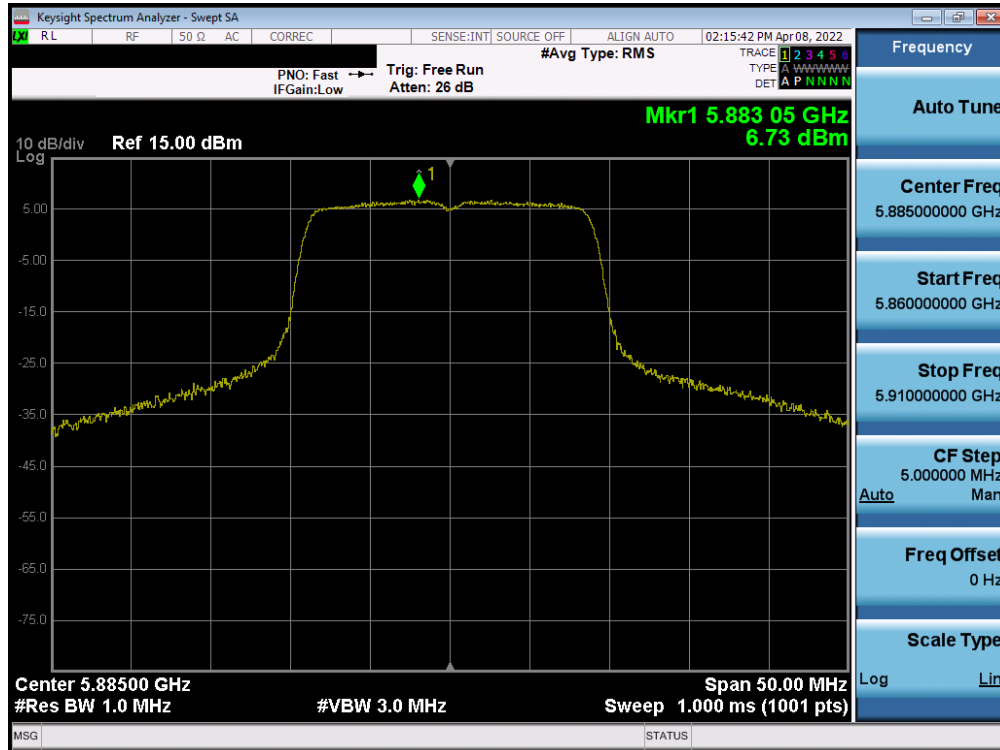


Plot 7-338. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 3/4) – Ch. 169)

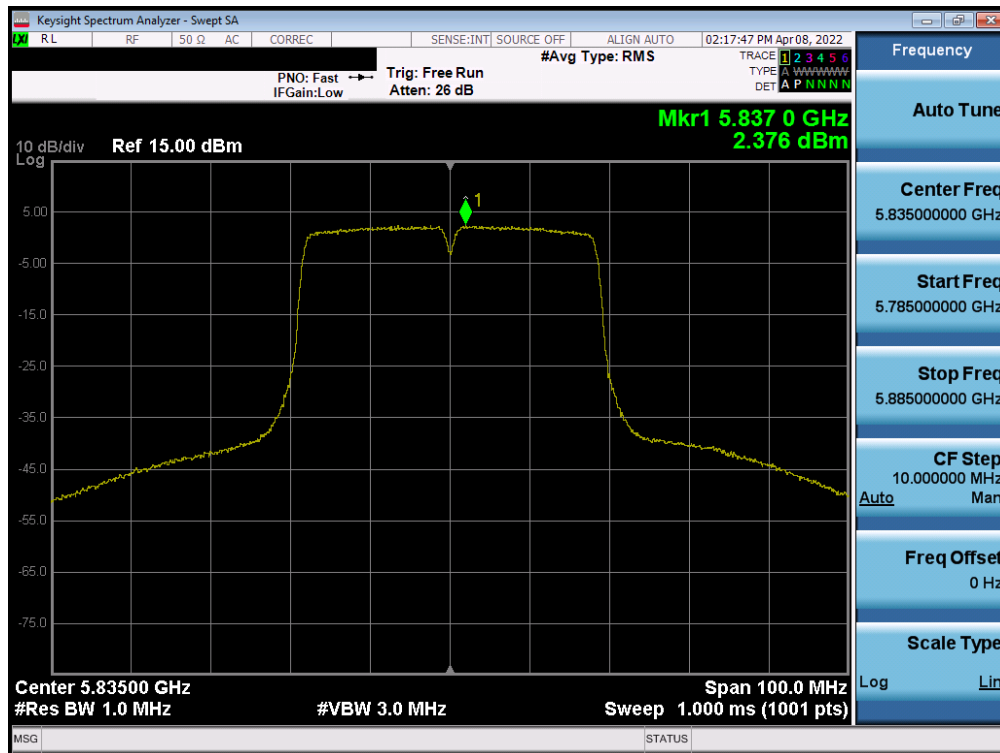


Plot 7-339. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 4) – Ch. 173)

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 200 of 253

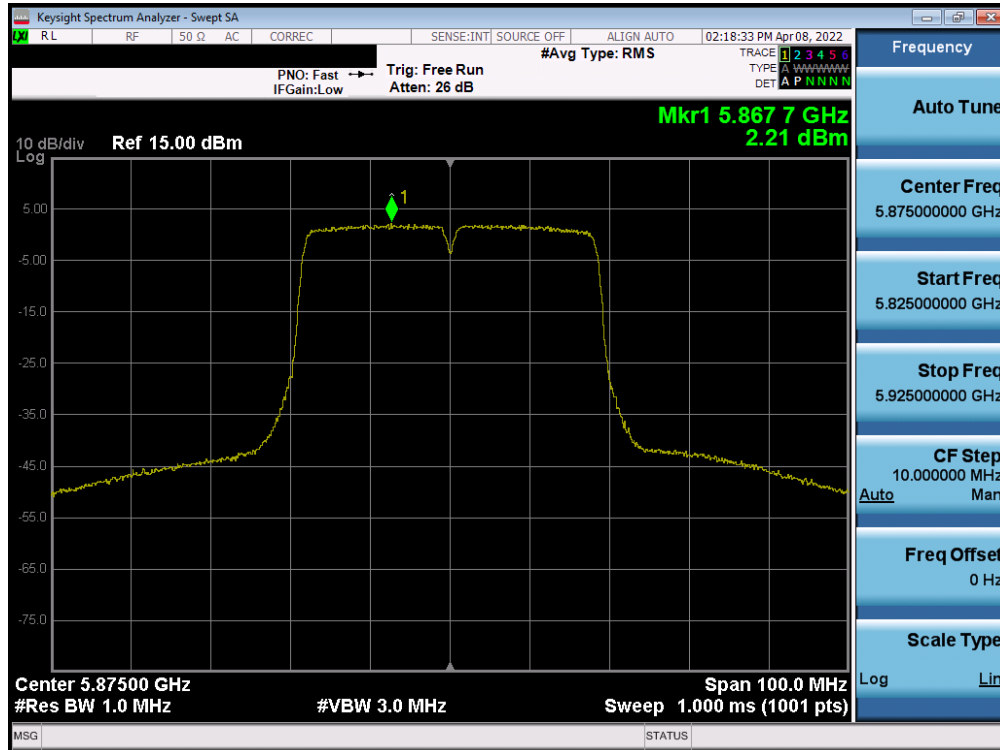


Plot 7-340. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 4) – Ch. 177)

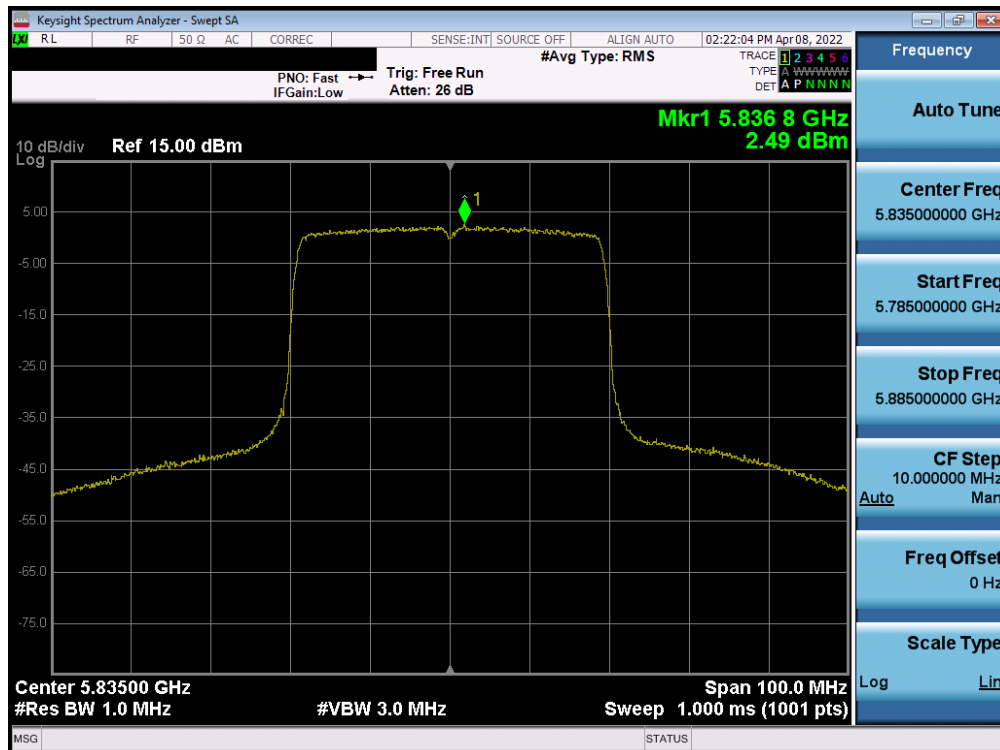


Plot 7-341. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11n (UNII Band 3/4) – Ch. 167)

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 201 of 253



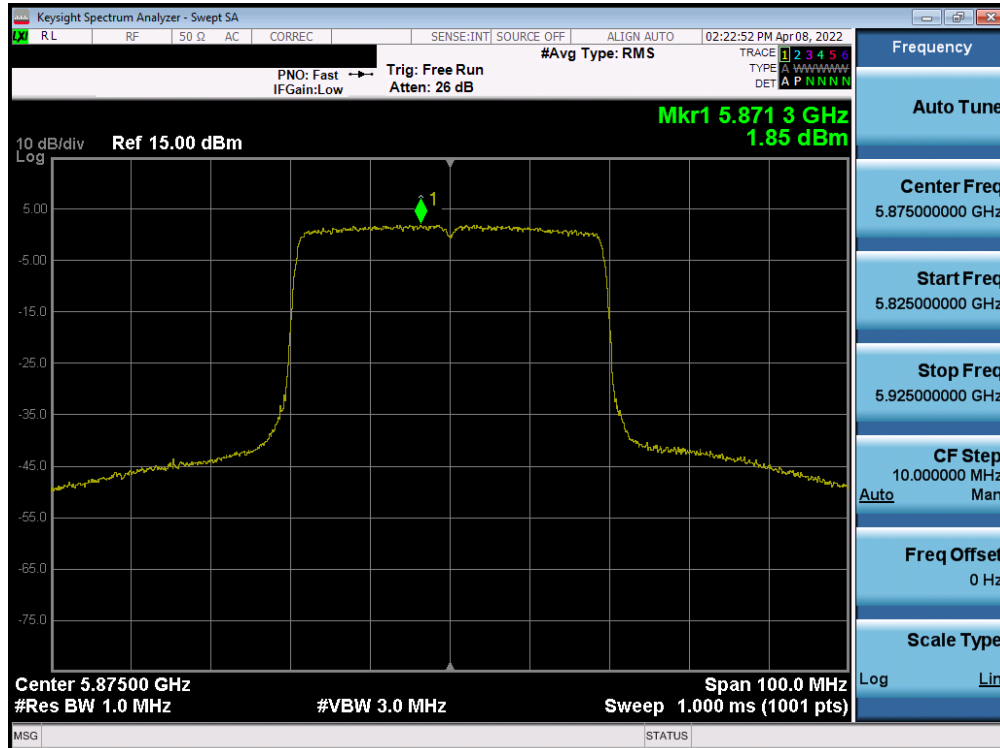
Plot 7-342. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11n (UNII Band 4) – Ch. 175)



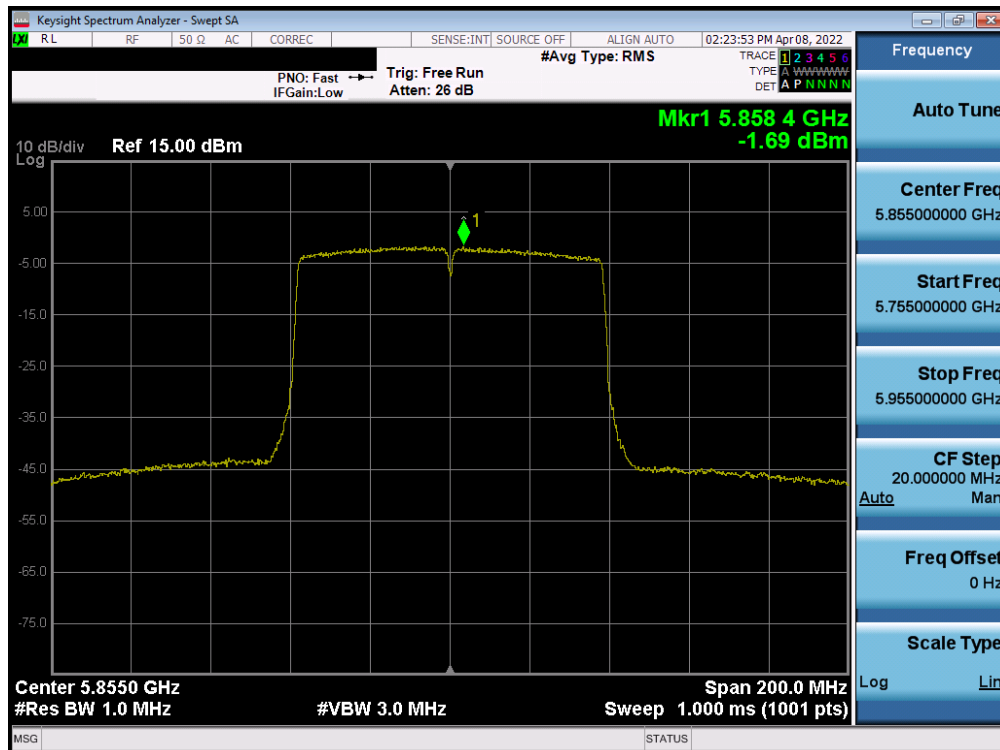
Plot 7-343. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 3/4) – Ch. 167)

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 202 of 253





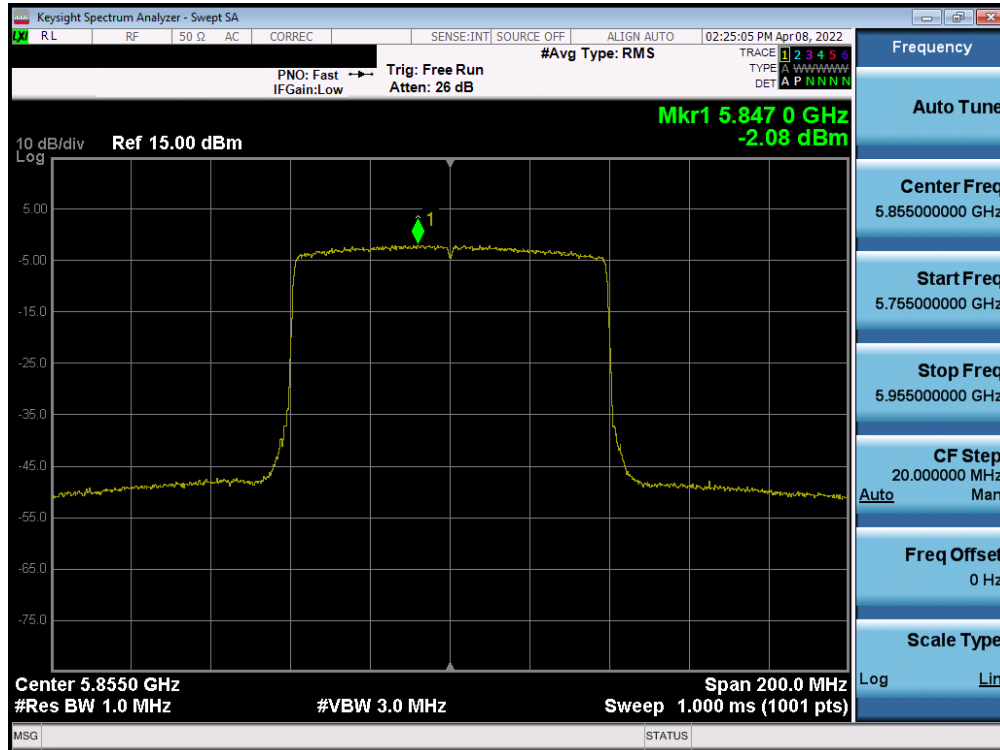
Plot 7-344. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 4) – Ch. 175)



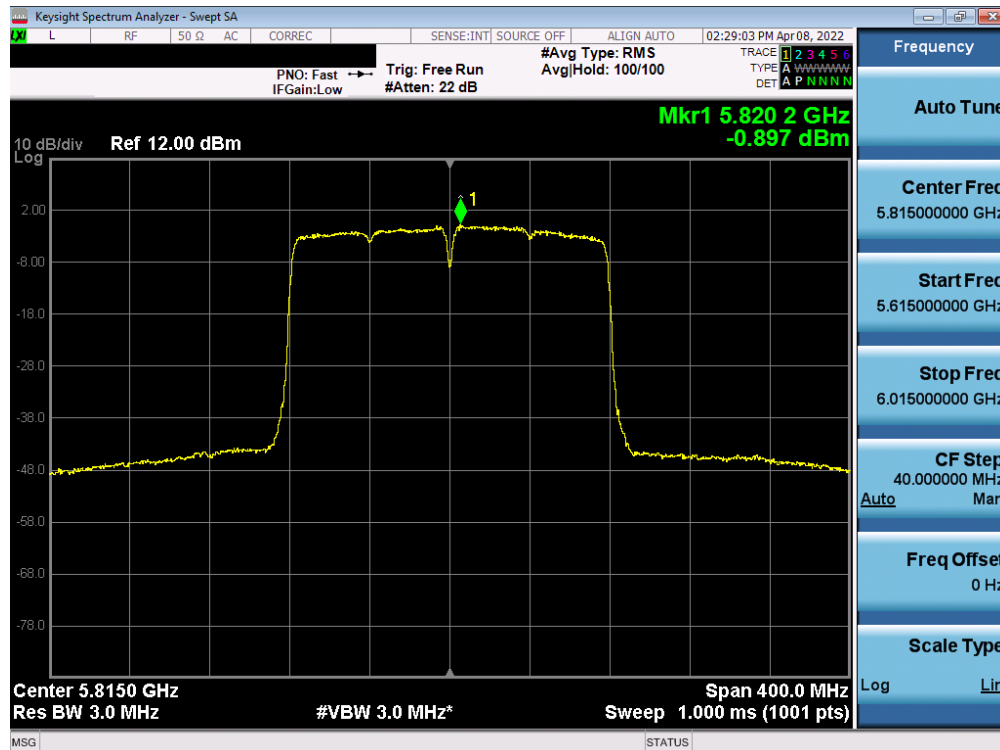
Plot 7-345. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ac (UNII Band 3/4) – Ch. 171)

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 203 of 253



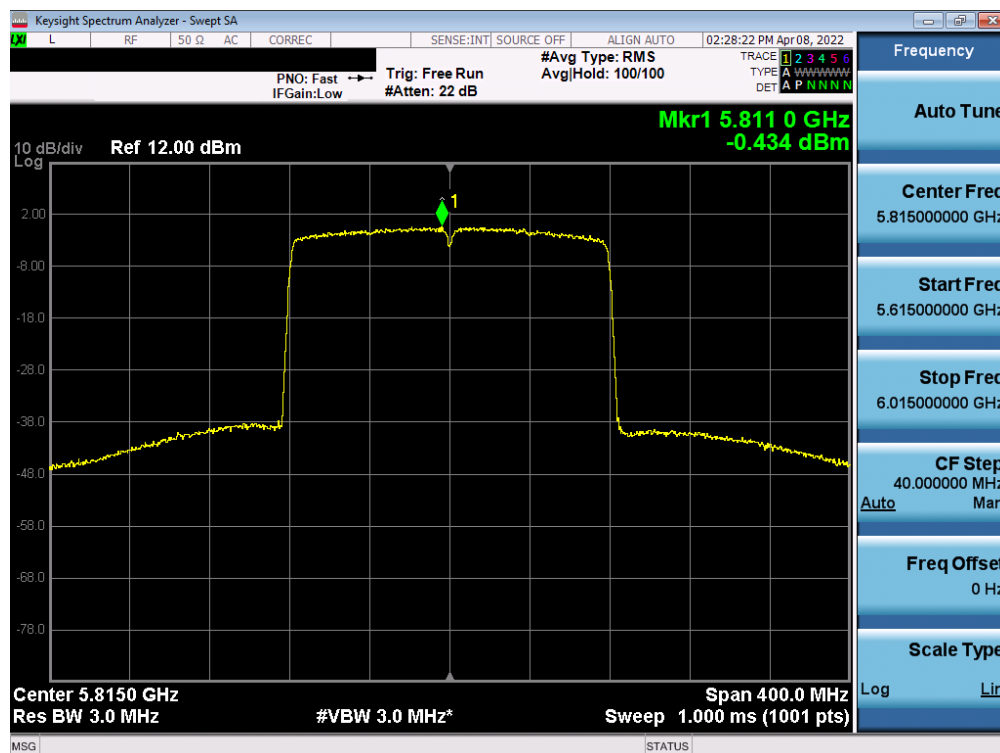


Plot 7-346. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ax (UNII Band 3/4) – Ch. 171)



Plot 7-347. Power Spectral Density Plot MIMO ANT2 (160MHz BW 802.11ac (UNII Band 3/4) – Ch. 163)

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 204 of 253



Plot 7-348. Power Spectral Density Plot MIMO ANT2 (160MHz BW 802.11ax (UNII Band 3/4) – Ch. 163)

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 205 of 253

V9.0 02/01/2019

**Note:**

Per ANSI C63.10-2013 Section 14.3.2.2 and KDB 662911 v02r01 Section E)2), the power spectral density at Antenna-1 and Antenna-2 were first measured separately as shown in the section above. The measured values were then summed in linear power units then converted back to dBm.

**Sample MIMO Calculation:**

At 5180MHz in 802.11n (20MHz BW) mode, the average conducted power spectral density was measured to be 6.71 dBm for Antenna 1 and 7.50 dBm for Antenna 2.

Antenna 1 + Antenna 2 = MIMO

$$(6.71 \text{ dBm} + 7.50 \text{ dBm}) = (4.688 \text{ mW} + 5.623 \text{ mW}) = 10.311 \text{ mW} = 10.13 \text{ dBm}$$

**Sample e.i.r.p Power Spectral Density Calculation:**

At 5180MHz in 802.11n (20MHz BW) mode, the average MIMO power density was calculated to be 10.13 dBm with directional gain of -1.96 dBi.

$$\text{e.i.r.p. Power Spectral Density(dBm)} = \text{Power Spectral Density (dBm)} + \text{Ant gain (dBi)}$$

$$10.13 \text{ dBm} + -1.96 \text{ dBi} = 8.17 \text{ dBm}$$

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 206 of 253

V9.0 02/01/2019

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without written permission from Element. If you have any questions about this or have an inquiry about obtaining additional rights to this report or assembly of contents thereof, please contact [ct.info@element.com](mailto:ct.info@element.com).

## 7.6 Radiated Spurious Emission Measurements – Above 1GHz

§15.407(b) §15.205 §15.209

### Test Overview and Limit

All out of band radiated spurious emissions are measured with a spectrum analyzer connected to a receive antenna while the EUT is operating at its maximum duty cycle, at its maximum power control level, as defined in ANSI C63.10-2013 and KDB 789033 D02 v02r01, and at the appropriate frequencies. All channels, modes (e.g. 802.11a, 802.11n (20MHz BW), 802.11n (40MHz BW), and 802.11ac (80MHz)), and modulations/data rates were investigated among all UNII bands. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.

***For transmitters operating in the 5.15-5.25 GHz and 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz.***

***For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.***

***For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.***

***All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR and Table 6 of RSS-Gen (8.10) must not exceed the limits shown in Table 7-22 per Section 15.209 and RSS-Gen (8.9).***

Frequency	Field Strength [ $\mu$ V/m]	Measured Distance [Meters]
Above 960.0 MHz	500	3

**Table 7-22. Radiated Limits**

### Test Procedures Used

ANSI C63.10-2013 – Sections 12.7.7.2, 12.7.6, 12.7.5  
KDB 789033 D02 v02r01 – Section G

### Test Settings

#### Average Measurements above 1GHz (Method AD)

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = power average (RMS)
5. Number of measurement points = 1001 (Number of points must be  $\geq 2 \times \text{span/RBW}$ )
6. Averaging type = power (RMS)
7. Sweep time = auto couple
8. Trace was averaged over 100 sweeps

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 207 of 253

V9.0 02/01/2019

### Peak Measurements above 1GHz

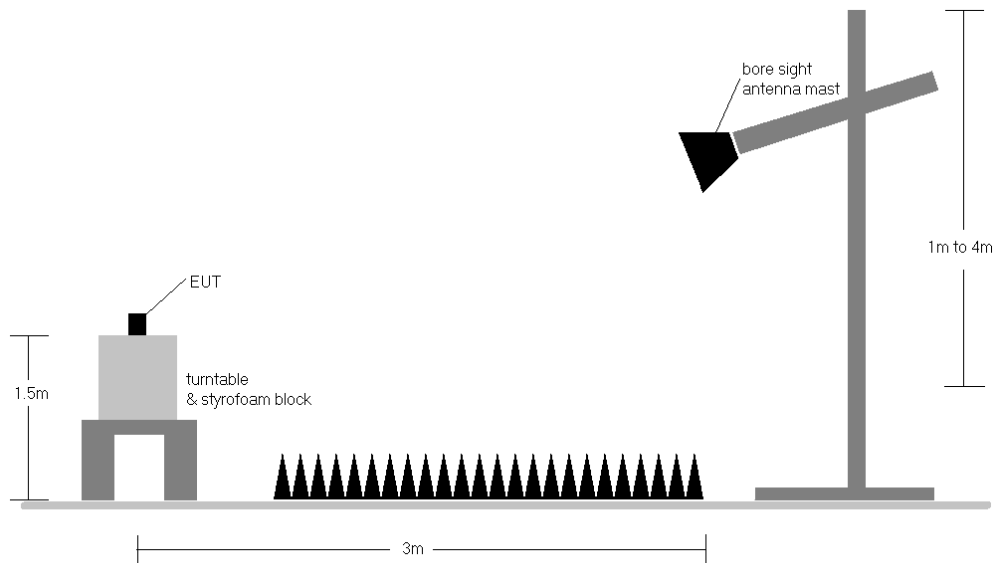
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

### Peak Measurements below 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = 120kHz
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

### Test Setup

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



**Figure 7-5. Test Instrument & Measurement Setup**

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 208 of 253

V9.0 02/01/2019

## **Test Notes**

1. All emissions that lie in the restricted bands (denoted by a \* next to the frequency) specified in §15.205 and Section 8.10 of RSS-Gen are below the limit shown in Table 7-22.
2. All spurious emissions lying in restricted bands specified in §15.205 and Section 8.10 of RSS-Gen are below the limit shown in Table 7-22. All spurious emissions that do not lie in a restricted band are subject to a peak limit of -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions of 68.2dB $\mu$ V/m.
3. The antenna is manipulated through typical positions, polarity and length during the tests. The EUT is manipulated through three orthogonal planes.
4. This unit was tested with its standard battery.
5. The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter using CISPR quasi peak detector below 1GHz. Above 1 GHz, average and peak measurements were taken using linearly polarized horn antennas. The worst-case emissions are reported however emissions whose levels were not within 20dB of the respective limits were not reported.
6. Emissions below 18GHz were measured at a 3 meter test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.
7. Radiated spurious emissions were investigated while operating in MIMO mode, however, it was determined that single antenna operation produced the worst case emissions. Since the emissions produced from MIMO operation were found to be more than 20dB below the limit, the MIMO emissions are not reported.
8. The wide spectrum spurious emissions plots shown on the following pages are used only for the purpose of emission identification. Any emissions found to be within 20dB of the limit are fully investigated and the results are shown in this section.
9. The "-" shown in the following RSE tables are used to denote a noise floor measurement.

## **Sample Calculations**

### **Determining Spurious Emissions Levels**

- Field Strength Level [dB $\mu$ V/m] = Analyzer Level [dBm] + 107 + AFCL [dB/m]
- AFCL [dB/m] = Antenna Factor [dB/m] + Cable Loss [dB]
- Margin [dB] = Field Strength Level [dB $\mu$ V/m] – Limit [dB $\mu$ V/m]

### **Radiated Band Edge Measurement Offset**

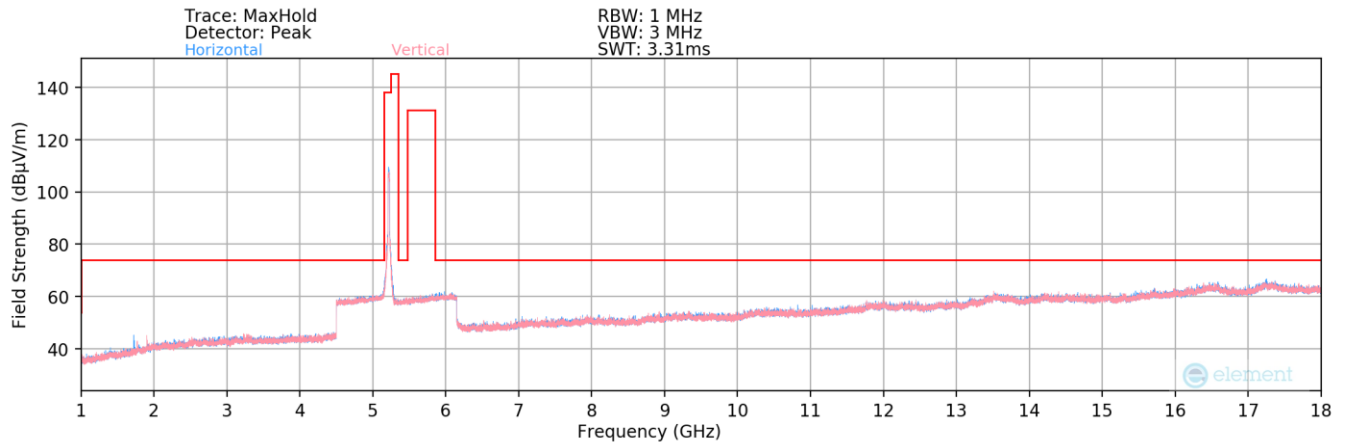
- The amplitude offset shown in the radiated restricted band edge plots was calculated using the formula:

$$\text{Offset (dB)} = (\text{Antenna Factor} + \text{Cable Loss} + \text{Attenuator}) - \text{Preamplifier Gain}$$

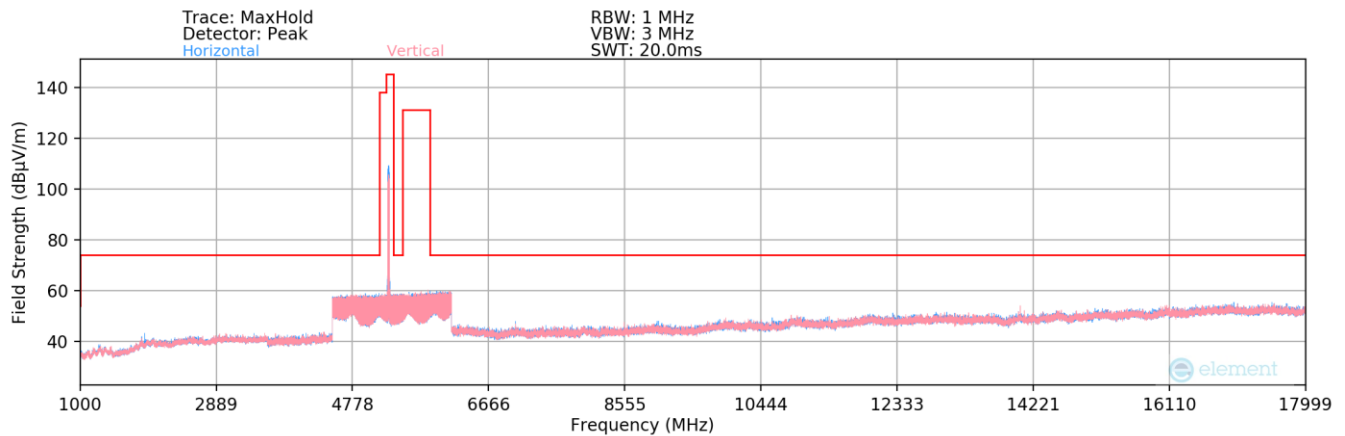
FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 209 of 253

V9.0 02/01/2019

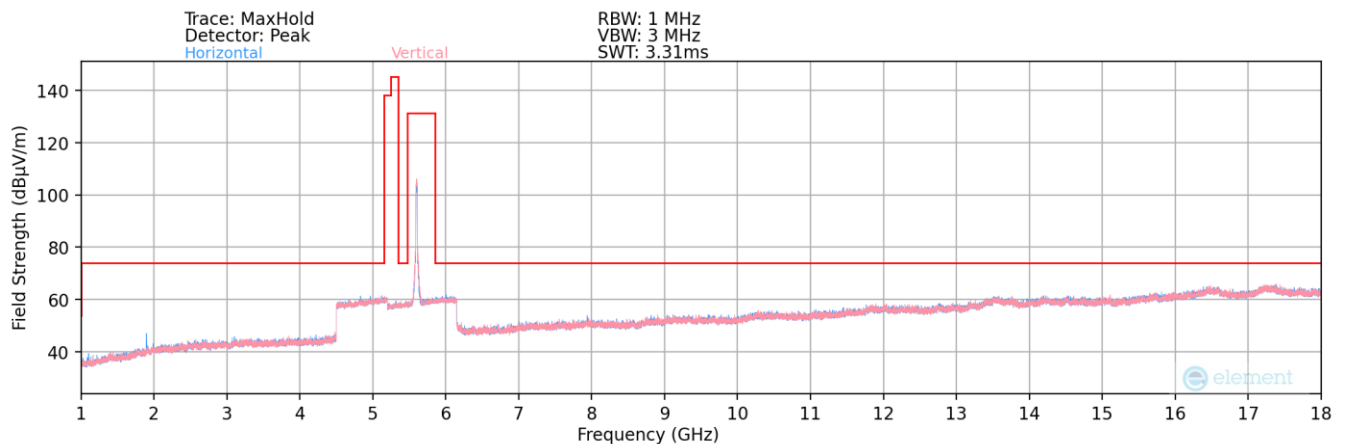
## 7.6.1 MIMO Radiated Spurious Emission Measurements



**Plot 7-349. Radiated Spurious Plot above 1GHz MIMO (802.11a – U1 Ch. 40)**



**Plot 7-350. Radiated Spurious Plot above 1GHz MIMO (802.11a – U2A Ch. 56)**



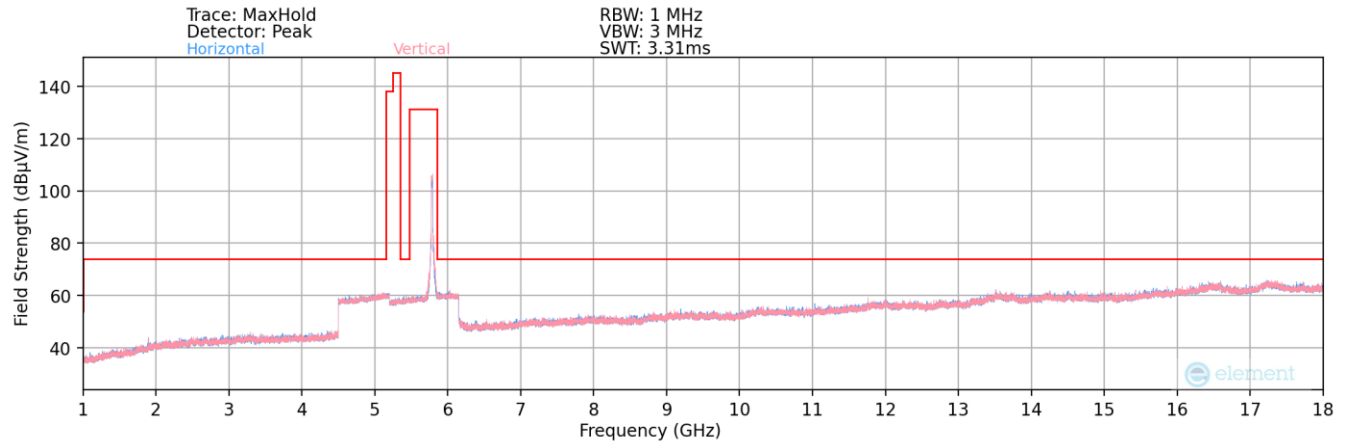
**Plot 7-351. Radiated Spurious Plot above 1GHz MIMO (802.11a – U2C Ch. 120)**

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 210 of 253

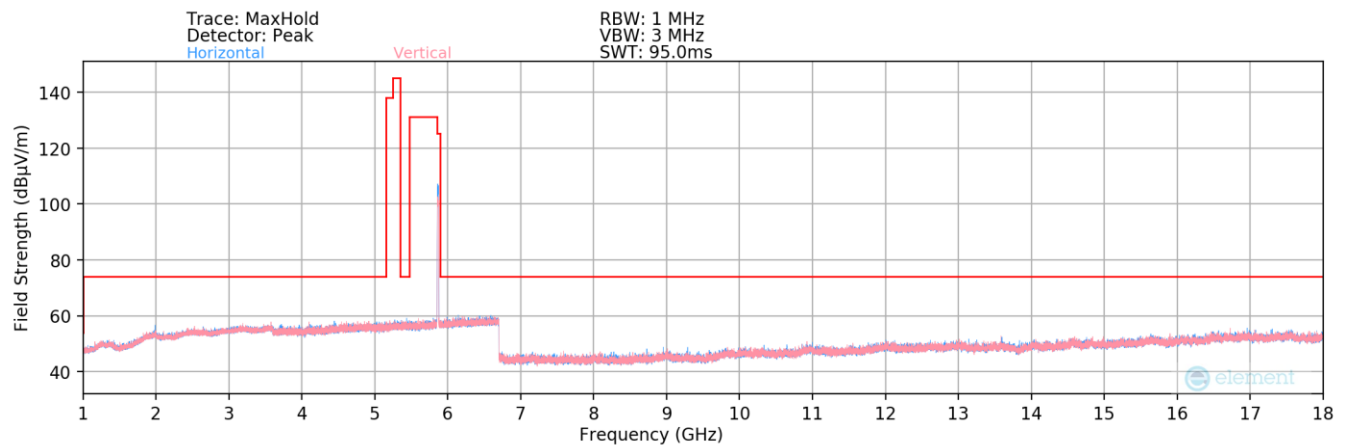
V9.0 02/01/2019

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without written permission from Element. If you have any questions about this or have an inquiry about obtaining additional rights to this report or assembly of contents thereof, please contact [ct.info@element.com](mailto:ct.info@element.com).





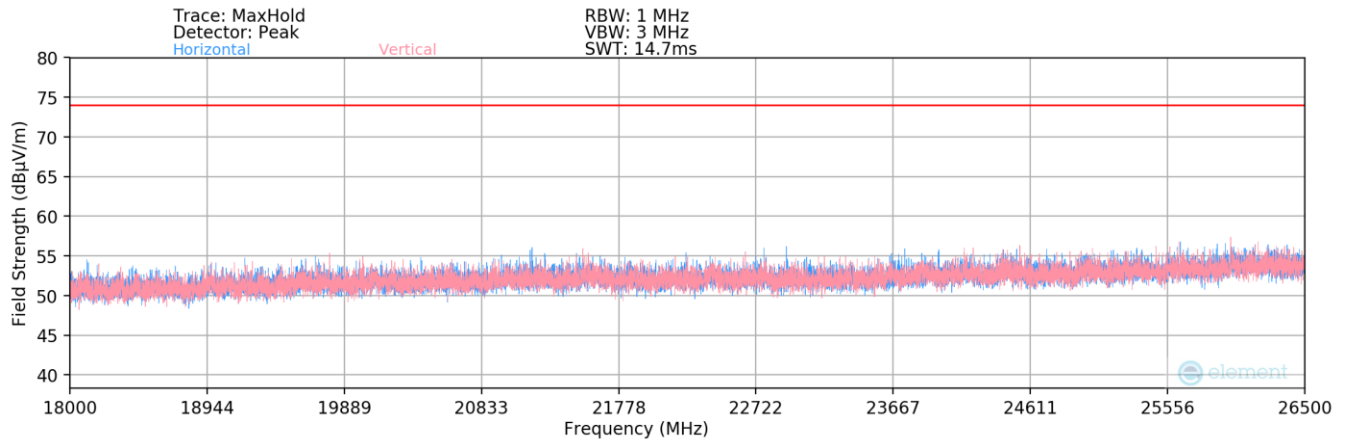
**Plot 7-352. Radiated Spurious Plot above 1GHz MIMO (802.11a – U3 Ch. 157)**



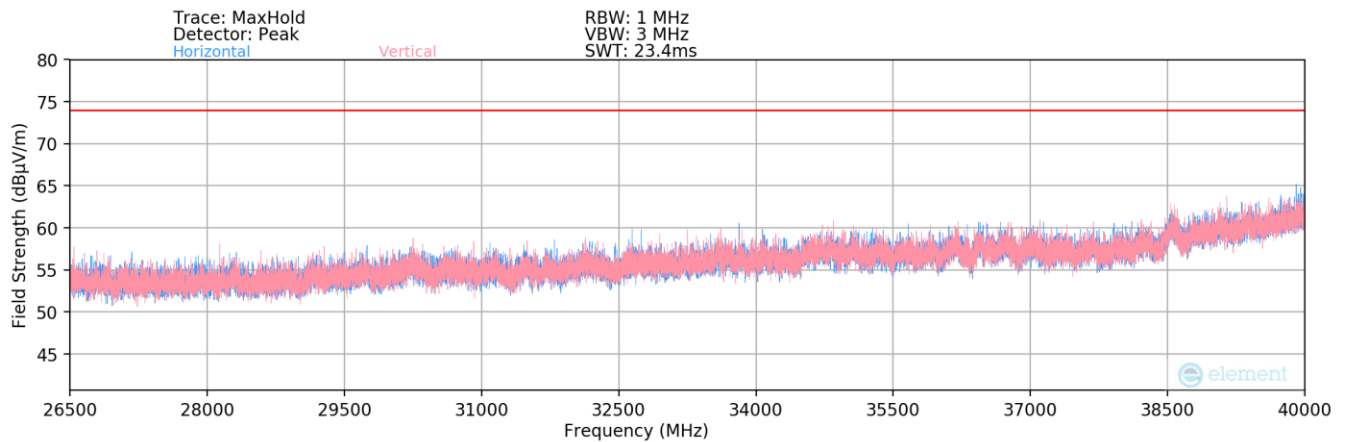
**Plot 7-353. Radiated Spurious Plot above 1GHz MIMO (802.11a – U4 Ch. 173)**

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 211 of 253

## MIMO Radiated Spurious Emissions Measurements (Above 18GHz)



**Plot 7-354. Radiated Spurious Plot 18GHz - 26.5GHz MIMO (802.11a)**



**Plot 7-355. Radiated Spurious Plot 26.5GHz - 40GHz MIMO (802.11a)**

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 212 of 253

V9.0 02/01/2019

## MIMO Radiated Spurious Emission Measurements

\$15.407(b) \$15.205 & \$15.209

Worst Case Mode:	802.11a
Worst Case Transfer Rate:	6Mbps
Distance of Measurements:	1 & 3 Meters
Operating Frequency:	5180MHz
Channel:	36

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]
10360.00	Peak	V	-	-	-73.04	20.16	0.00	54.12	68.20	-14.08
* 15540.00	Average	V	-	-	-88.42	29.71	0.00	48.29	53.98	-5.69
* 15540.00	Peak	V	-	-	-73.08	29.71	0.00	63.63	73.98	-10.35
* 20720.00	Average	V	-	-	-66.79	3.15	-9.54	33.82	53.98	-20.16
* 20720.00	Peak	V	-	-	-58.75	3.15	-9.54	41.86	73.98	-32.12
25900.00	Peak	V	-	-	-58.04	4.77	-9.54	44.19	68.20	-24.01

Table 7-23. Radiated Measurements MIMO

Worst Case Mode:	802.11a
Worst Case Transfer Rate:	6Mbps
Distance of Measurements:	1 & 3 Meters
Operating Frequency:	5200MHz
Channel:	40

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]
10400.00	Peak	V	-	-	-73.00	20.83	0.00	54.83	68.20	-13.37
* 15600.00	Average	V	-	-	-87.66	28.68	0.00	48.02	53.98	-5.96
* 15600.00	Peak	V	-	-	-73.82	28.68	0.00	61.86	73.98	-12.12
* 20800.00	Average	V	-	-	-67.63	3.48	-9.54	33.31	53.98	-20.67
* 20800.00	Peak	V	-	-	-57.50	3.48	-9.54	43.44	73.98	-30.54
26000.00	Peak	V	-	-	-57.14	5.15	-9.54	45.47	68.20	-22.73

Table 7-24. Radiated Measurements MIMO

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 213 of 253

V9.0 02/01/2019

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5240MHz  
 Channel: 48

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]
10480.00	Peak	V	-	-	-72.89	20.81	0.00	54.92	68.20	-13.28
* 15720.00	Average	V	-	-	-86.98	29.48	0.00	49.50	53.98	-4.48
* 15720.00	Peak	V	-	-	-74.01	29.48	0.00	62.47	73.98	-11.51
* 20960.00	Average	V	-	-	-67.45	3.48	-9.54	33.49	53.98	-20.49
* 20960.00	Peak	V	-	-	-58.52	3.48	-9.54	42.41	73.98	-31.57
26200.00	Peak	V	-	-	-58.89	4.78	-9.54	43.35	68.20	-24.85

Table 7-25. Radiated Measurements MIMO

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5260MHz  
 Channel: 52

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]
10520.00	Peak	V	-	-	-72.65	20.70	0.00	55.05	68.20	-13.15
* 15780.00	Average	V	-	-	-86.11	28.85	0.00	49.74	53.98	-4.24
* 15780.00	Peak	V	-	-	-74.16	28.85	0.00	61.69	73.98	-12.29
* 21040.00	Average	V	-	-	-68.20	3.53	-9.54	32.79	53.98	-21.19
* 21040.00	Peak	V	-	-	-58.88	3.53	-9.54	42.11	73.98	-31.87
26300.00	Peak	V	-	-	-57.74	4.64	-9.54	44.36	68.20	-23.84

Table 7-26. Radiated Measurements MIMO

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset		Page 214 of 253

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5280MHz  
 Channel: 56

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]
10560.00	Peak	V	-	-	-72.20	20.89	0.00	55.69	68.20	-12.51
10560.00	Peak	V	-	-	-72.20	20.89	0.00	55.69	68.20	-12.51
* 15840.00	Average	V	-	-	-86.32	29.33	0.00	50.01	53.98	-3.97
* 15840.00	Peak	V	-	-	-73.95	29.33	0.00	62.38	73.98	-11.60
* 21120.00	Average	V	-	-	-67.41	3.68	-9.54	33.73	53.98	-20.25
* 21120.00	Peak	V	-	-	-57.79	3.68	-9.54	43.35	73.98	-30.63
26400.00	Peak	V	-	-	-58.43	4.78	-9.54	43.81	68.20	-24.39

**Table 7-27. Radiated Measurements MIMO**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5320MHz  
 Channel: 64

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]
* 10640.00	Average	V	-	-	-84.13	20.73	0.00	43.60	53.98	-10.38
* 10640.00	Peak	V	-	-	-71.01	20.73	0.00	56.72	73.98	-17.26
* 15960.00	Average	V	-	-	-86.36	29.29	0.00	49.93	53.98	-4.04
* 15960.00	Peak	V	-	-	-73.30	29.29	0.00	62.99	73.98	-10.98
* 21280.00	Average	V	-	-	-67.87	3.72	-9.54	33.31	53.98	-20.67
* 21280.00	Peak	V	-	-	-58.39	3.72	-9.54	42.79	73.98	-31.19
26600.00	Peak	V	-	-	-58.07	4.72	-9.54	44.11	68.20	-24.09

**Table 7-28. Radiated Measurements MIMO**

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset		Page 215 of 253

Worst Case Mode: 802.11a  
Worst Case Transfer Rate: 6Mbps  
Distance of Measurements: 1 & 3 Meters  
Operating Frequency: 5500MHz  
Channel: 100

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]
* 11000.00	Average	V	-	-	-84.11	21.48	0.00	44.37	53.98	-9.61
* 11000.00	Peak	V	-	-	-84.03	21.48	0.00	44.45	73.98	-29.53
16500.00	Peak	V	-	-	-84.61	30.98	0.00	53.37	68.20	-14.83
22000.00	Peak	V	-	-	-58.63	3.83	-9.54	42.67	68.20	-25.53
27500.00	Peak	V	-	-	-56.39	4.97	-9.54	46.04	68.20	-22.16

Table 7-29. Radiated Measurements MIMO

Worst Case Mode: 802.11a  
Worst Case Transfer Rate: 6Mbps  
Distance of Measurements: 1 & 3 Meters  
Operating Frequency: 5600MHz  
Channel: 120

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]
* 11200.00	Average	V	-	-	-86.33	21.36	0.00	42.03	53.98	-11.95
* 11200.00	Peak	V	-	-	-69.77	21.36	0.00	58.59	73.98	-15.39
16800.00	Peak	V	-	-	-75.11	30.54	0.00	62.43	68.20	-5.77
* 22400.00	Average	V	-	-	-67.25	3.79	-9.54	34.00	53.98	-19.98
* 22400.00	Peak	V	-	-	-58.43	3.79	-9.54	42.82	73.98	-31.16
28000.00	Peak	V	-	-	-58.34	4.94	-9.54	44.06	68.20	-24.14

Table 7-30. Radiated Measurements MIMO

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset		Page 216 of 253

Worst Case Mode: 802.11a  
Worst Case Transfer Rate: 6Mbps  
Distance of Measurements: 1 & 3 Meters  
Operating Frequency: 5720MHz  
Channel: 144

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]
* 11440.00	Average	V	-	-	-84.41	22.14	0.00	44.73	53.98	-9.25
* 11440.00	Peak	V	-	-	-73.73	22.14	0.00	55.41	73.98	-18.57
17160.00	Peak	V	-	-	-84.27	31.03	0.00	53.76	68.20	-14.44
* 22880.00	Average	V	-	-	-67.84	3.79	-9.54	33.41	53.98	-20.57
* 22880.00	Peak	V	-	-	-57.87	3.79	-9.54	43.38	73.98	-30.60
28600.00	Peak	V	-	-	-57.49	5.27	-9.54	45.24	68.20	-22.96

Table 7-31. Radiated Measurements MIMO

Worst Case Mode: 802.11a  
Worst Case Transfer Rate: 6Mbps  
Distance of Measurements: 1 & 3 Meters  
Operating Frequency: 5745MHz  
Channel: 149

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]
* 11490.00	Average	V	-	-	-84.57	22.12	0.00	44.55	53.98	-9.43
* 11490.00	Peak	V	-	-	-71.52	22.12	0.00	57.60	73.98	-16.38
17235.00	Peak	V	-	-	-73.22	31.14	0.00	64.92	68.20	-3.28
* 22980.00	Average	V	-	-	-67.84	3.79	-9.54	33.41	53.98	-20.57
* 22980.00	Peak	V	-	-	-57.21	3.79	-9.54	44.04	73.98	-29.94
28725.00	Peak	V	-	-	-57.42	5.41	-9.54	45.45	69.20	-23.75

Table 7-32. Radiated Measurements MIMO

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset		Page 217 of 253



Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5785MHz  
 Channel: 157

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]
* 11570.00	Average	V	-	-	-84.77	22.50	0.00	44.73	53.98	-9.24
* 11570.00	Peak	V	-	-	-72.11	22.50	0.00	57.39	73.98	-16.58
17355.00	Peak	V	-	-	-73.62	31.16	0.00	64.54	68.20	-3.66
23140.00	Peak	V	-	-	-57.88	3.75	-9.54	43.33	68.20	-24.87
28925.00	Peak	V	-	-	-57.92	5.46	-9.54	44.99	68.20	-23.21

Table 7-33. Radiated Measurements MIMO

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5825MHz  
 Channel: 165

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]
* 11650.00	Average	V	-	-	-84.88	22.36	0.00	44.48	53.98	-9.50
* 11650.00	Peak	V	-	-	-72.89	22.36	0.00	56.47	73.98	-17.51
17475.00	Peak	V	-	-	-73.24	30.92	0.00	64.68	68.20	-3.52
23300.00	Peak	V	-	-	-58.44	3.76	-9.54	42.78	68.20	-25.42
29125.00	Peak	V	-	-	-58.21	5.54	-9.54	44.78	68.20	-23.42

Table 7-34. Radiated Measurements MIMO

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 218 of 253

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5845MHz  
 Channel: 169

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]
* 11690.00	Average	V	-	-	-85.46	18.45	0.00	39.99	53.98	-13.99
* 11690.00	Peak	V	-	-	-70.86	18.45	0.00	54.59	73.98	-19.39
17535.00	Peak	V	-	-	-74.48	26.24	0.00	58.76	68.20	-9.44
23380.00	Peak	V	-	-	-59.86	3.85	-9.54	50.99	68.20	-17.21
29225.00	Peak	V	-	-	-58.55	5.60	-9.54	54.05	68.20	-14.15
35070.00	Peak	V	-	-	-59.41	8.11	-9.54	55.70	68.20	-12.50

**Table 7-35. Radiated Measurements MIMO**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5865MHz  
 Channel: 173

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]
* 11730.00	Average	V	-	-	-86.22	18.22	0.00	39.00	53.98	-14.97
* 11730.00	Peak	V	-	-	-70.11	18.22	0.00	55.11	73.98	-18.86
17595.00	Peak	V	-	-	-73.29	26.24	0.00	59.95	68.20	-8.25
23460.00	Peak	V	-	-	-58.44	3.85	-9.54	52.41	68.20	-15.79
29325.00	Peak	V	-	-	-58.72	5.60	-9.54	53.88	68.20	-14.32
35190.00	Peak	V	-	-	-59.41	8.11	-9.54	55.70	68.20	-12.50

**Table 7-36. Radiated Measurements MIMO**

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset		Page 219 of 253

Worst Case Mode: 802.11a  
Worst Case Transfer Rate: 6Mbps  
Distance of Measurements: 1 & 3 Meters  
Operating Frequency: 5885MHz  
Channel: 177

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]
* 11770.00	Average	V	-	-	-87.41	18.30	0.00	37.89	53.98	-16.09
* 11770.00	Peak	V	-	-	-72.22	18.30	0.00	53.08	73.98	-20.90
17655.00	Peak	V	-	-	-74.01	26.11	0.00	59.10	68.20	-9.10
23540.00	Peak	V	-	-	-59.11	3.84	-9.54	51.73	68.20	-16.47
29425.00	Peak	V	-	-	-59.24	5.87	-9.54	53.63	68.20	-14.57
35310.00	Peak	V	-	-	-58.66	8.04	-9.54	56.38	68.20	-11.82

Table 7-37. Radiated Measurements MIMO

Worst Case Mode: 802.11a  
Worst Case Transfer Rate: 6Mbps  
Distance of Measurements: 1 & 3 Meters  
Operating Frequency: 5280MHz  
Channel: 56

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]
7039.88	Peak	V	-	-	-65.01	7.75	0.00	49.74	68.20	-18.46
10560.00	Peak	V	-	-	-69.11	12.39	0.00	50.28	68.20	-17.92
* 15840.00	Average	V	-	-	-80.55	16.71	0.00	43.16	53.98	-10.82
* 15840.00	Peak	V	-	-	-68.88	16.71	0.00	54.83	73.98	-19.15
* 21120.00	Average	V	-	-	-67.21	3.68	-9.54	33.93	53.98	-20.05
* 21120.00	Peak	V	-	-	-57.45	3.68	-9.54	43.69	73.98	-30.29
26400.00	Peak	V	-	-	-58.23	4.78	-9.54	44.01	68.20	-24.19

Table 7-38. Radiated Measurements MIMO with WCP

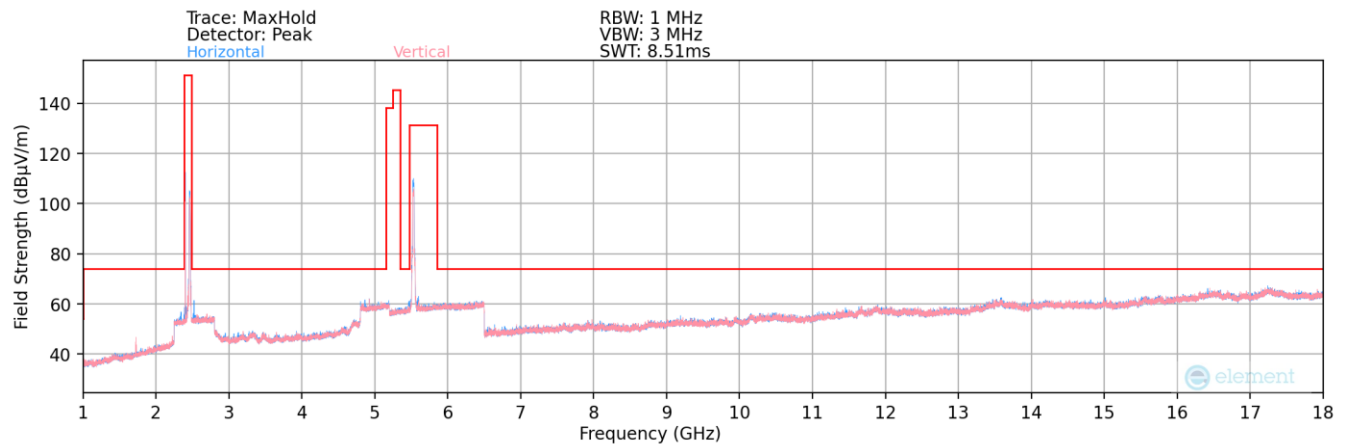
FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset		Page 220 of 253

## 7.6.2 Simultaneous Tx Radiated Spurious Emissions Measurements

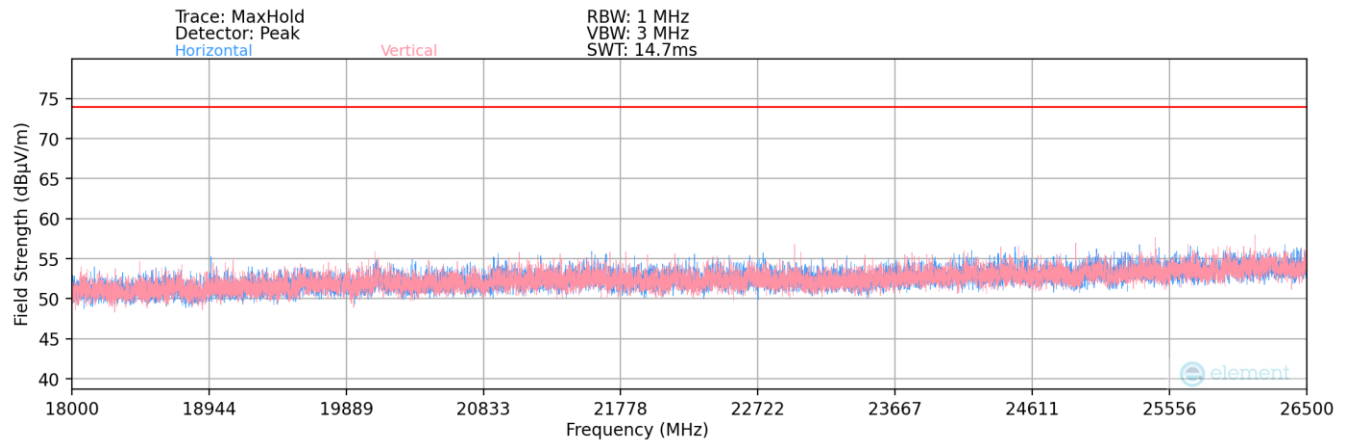
§15.407(b) §15.205 & §15.209

Description	2.4 GHz Emission	5 GHz Emission
Antenna	1	1,2
Channel	6	100
Operating Frequency (MHz)	2437	5500
Data Rate (Mbps)	1	6
Mode	802.11b	802.11a

Table 7-39. Simultaneous Transmission Config-1



Plot 7-356. Radiated Spurious Plot above 1GHz (2.4GHz – 5GHz)

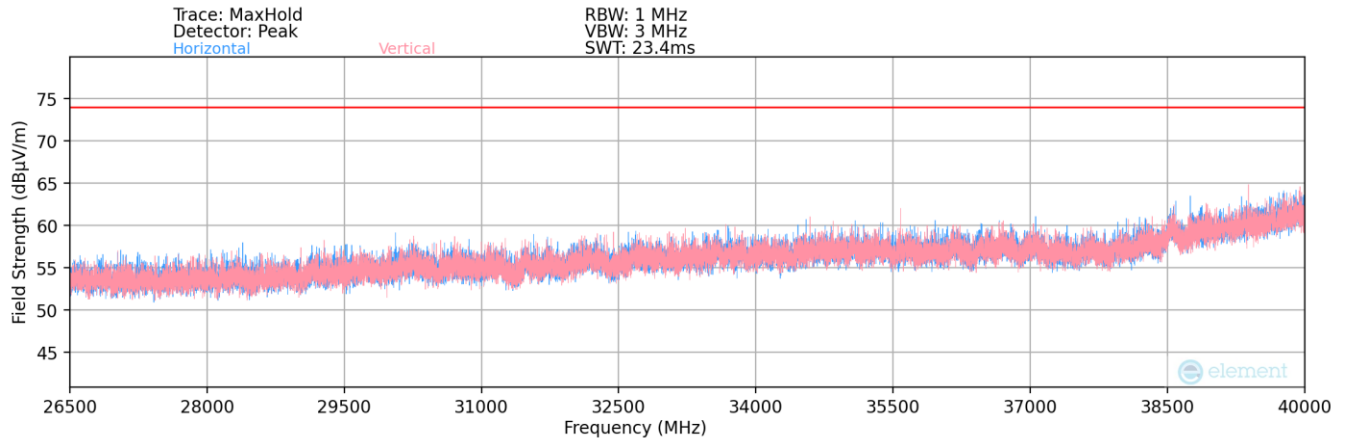


Plot 7-357. Radiated Spurious Plot 18GHz – 26.5GHz (2.4GHz – 5GHz)

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 221 of 253

V9.0 02/01/2019

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without written permission from Element. If you have any questions about this or have an inquiry about obtaining additional rights to this report or assembly of contents thereof, please contact [ct.info@element.com](mailto:ct.info@element.com).



**Plot 7-358. Radiated Spurious Plot above 26.5GHz (2.4GHz – 5GHz)**

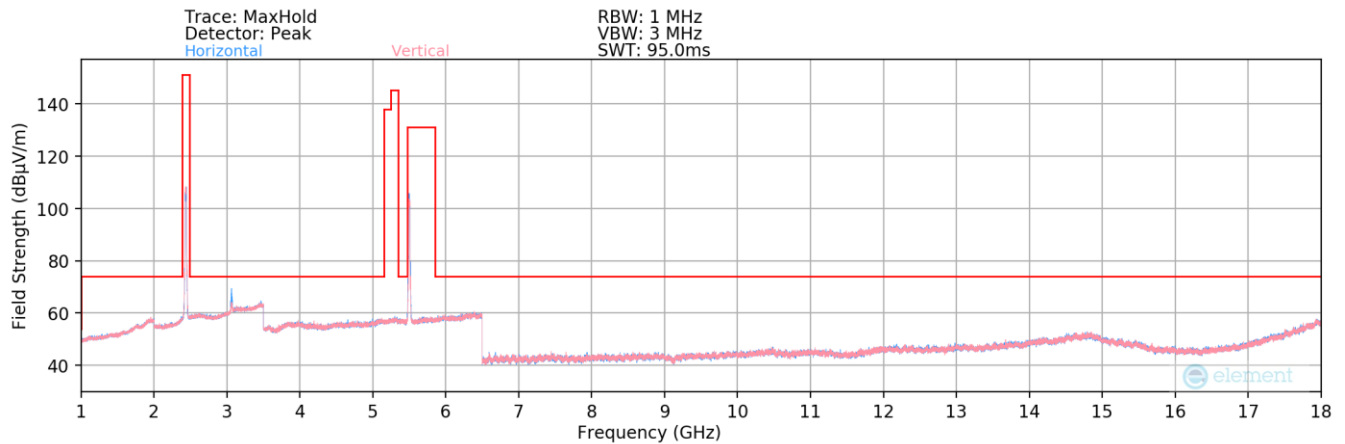
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
3814.00	Avg	H	-	-	-78.00	8.61	37.61	53.98	-16.37
3814.00	Peak	H	-	-	-65.21	8.61	50.40	73.98	-23.58
6952.00	Avg	H	-	-	-85.41	15.75	37.34	53.98	-16.64
6952.00	Peak	H	-	-	-78.99	15.75	43.76	73.98	-30.22
8738.00	Avg	H	-	-	-84.75	18.75	41.00	53.98	-12.98
8738.00	Peak	H	-	-	-74.69	18.75	51.06	73.98	-22.92

**Table 7-40. Radiated Measurements (2.4GHz – 5GHz)**

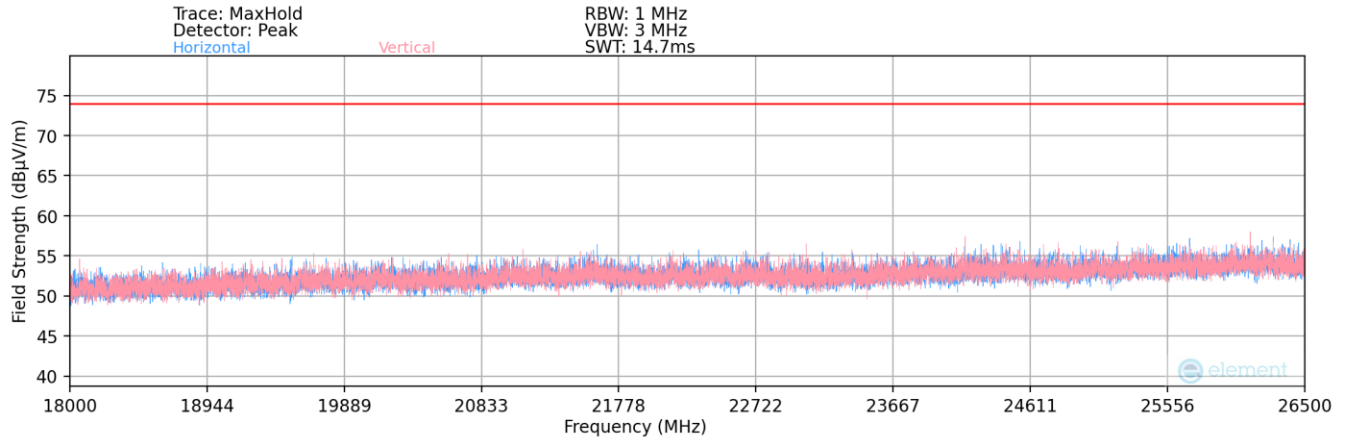
FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset		Page 222 of 253

Description	2.4 GHz Emission	5 GHz Emission
Antenna	1,2	1,2
Channel	6	120
Operating Frequency (MHz)	2437	5600
Data Rate (Mbps)	1Mbps	6Mbps
Mode	b	a

**Table 7-41. Dual Band Simultaneous Transmission**

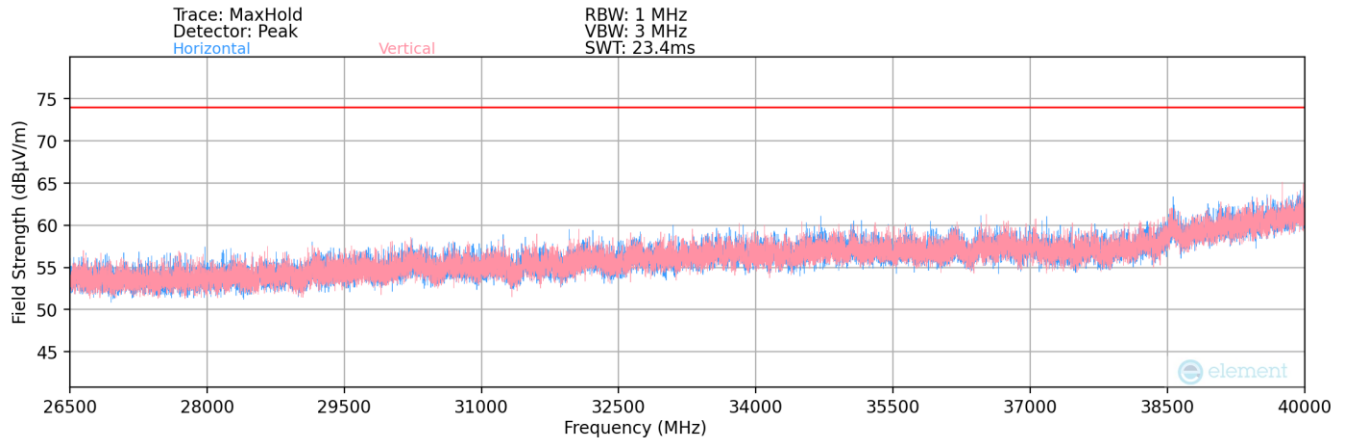


**Plot 7-359. Radiated Spurious Plot above 1GHz (Dual Band Simult. Tx)**



**Plot 7-360. Radiated Spurious Plot 18GHz – 26.5GHz (Dual Band Simult. Tx)**

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 223 of 253



**Plot 7-361. Radiated Spurious Plot above 26.5GHz (Dual Band Simult. Tx)**

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
4524.00	Avg	H	-	-	-77.69	9.71	39.02	53.98	-14.96
4524.00	Peak	H	-	-	-66.01	9.71	50.70	73.98	-23.28
9448.00	Avg	H	-	-	-84.99	19.65	41.66	53.98	-12.32
9448.00	Peak	H	-	-	-78.48	19.65	48.17	73.98	-25.81
11510.00	Avg	H	-	-	-84.39	23.89	46.50	53.98	-7.48
11510.00	Peak	H	-	-	-75.21	23.89	55.68	73.98	-18.30

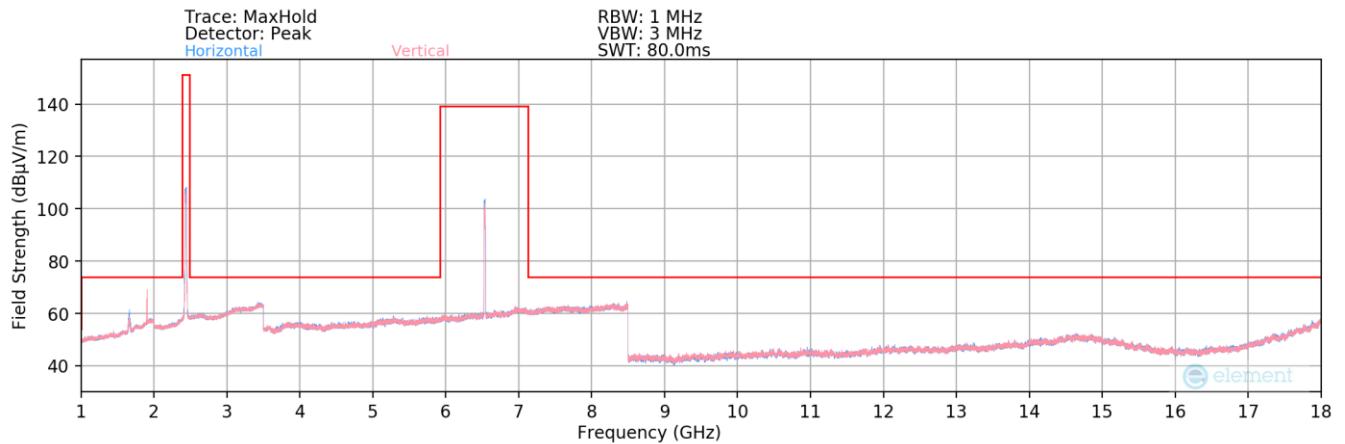
**Table 7-42. Radiated Measurements (Dual Band Simult. Tx)**

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset		Page 224 of 253

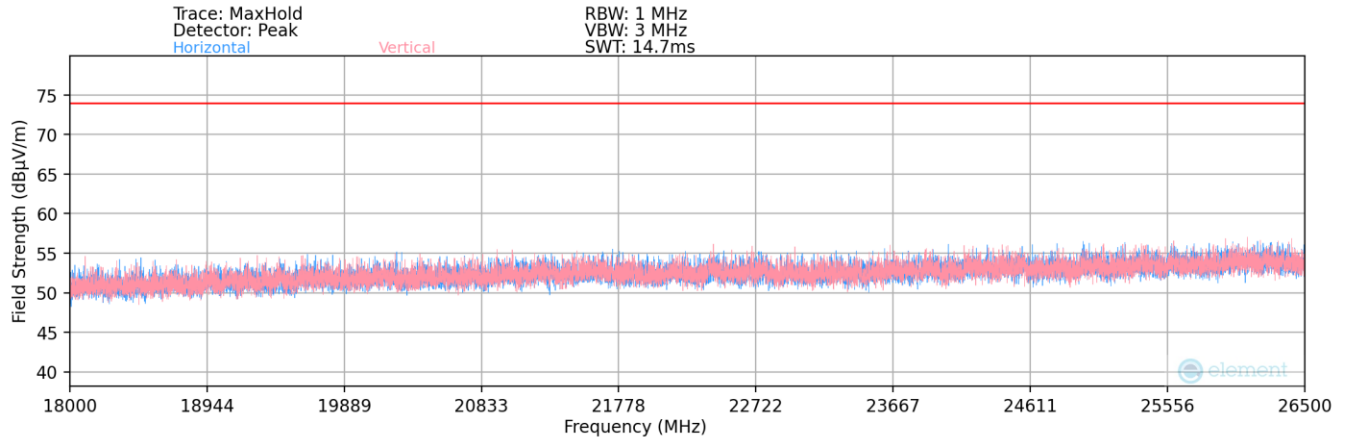


Description	2.4 GHz Emission	6 GHz Emission
Antenna	1,2	1,2
Channel	6	117
Operating Frequency (MHz)	2437	6535
Data Rate (Mbps)	1Mbps	6Mbps
Mode	b	a

**Table 7-43. Dual Band Simultaneous Transmission**

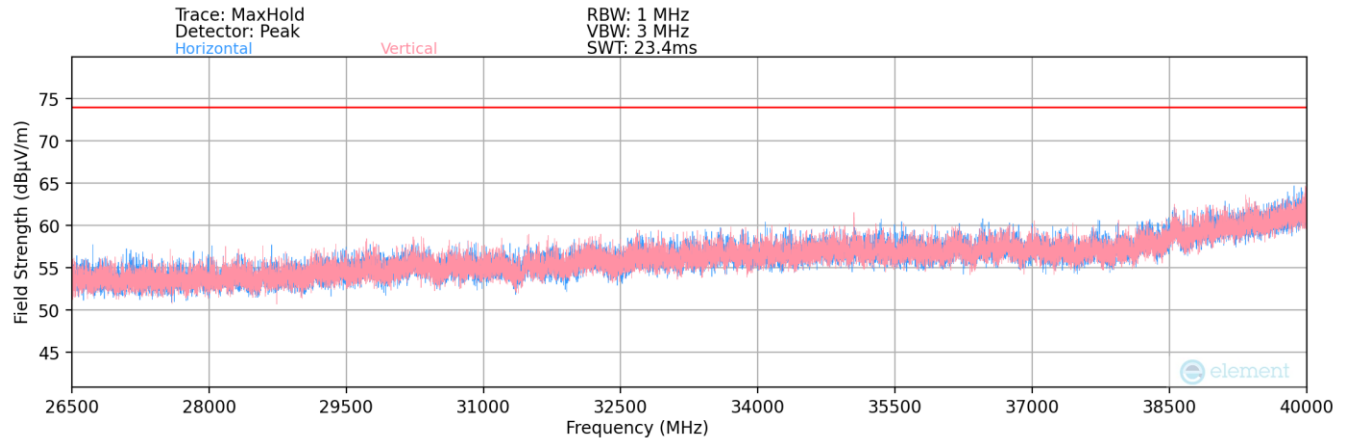


**Plot 7-362. Radiated Spurious Plot above 1GHz (Dual Band Simult. Tx)**



**Plot 7-363. Radiated Spurious Plot 18GHz – 26.5GHz (Dual Band Simult. Tx)**

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 225 of 253



**Plot 7-364. Radiated Spurious Plot above 26.5GHz (Dual Band Simult. Tx)**

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
3094.00	Avg	H	-	-	-78.11	7.95	36.84	53.98	-17.14
3094.00	Peak	H	-	-	-65.13	7.95	49.82	73.98	-24.16
7898.00	Avg	H	-	-	-85.36	16.45	38.09	53.98	-15.89
7898.00	Peak	H	-	-	-73.27	16.45	50.18	73.98	-23.80
10676.00	Avg	H	-	-	-85.99	20.30	41.31	53.98	-12.67
10676.00	Peak	H	-	-	-70.65	20.30	56.65	73.98	-17.33

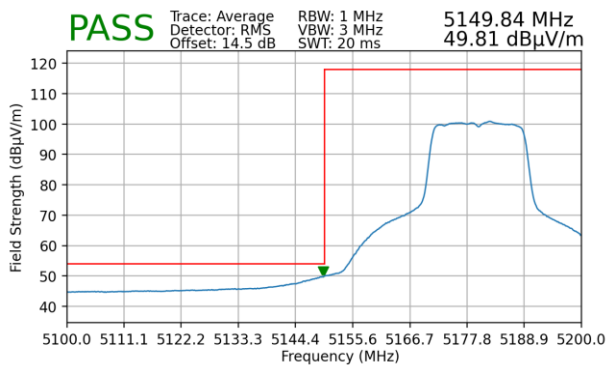
**Table 7-44. Radiated Measurements (Dual Band Simult. Tx)**

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset		Page 226 of 253

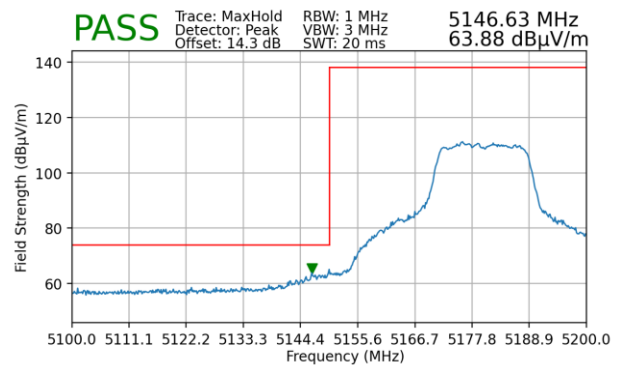
### 7.6.3 MIMO/CDD Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11n
Worst Case Transfer Rate:	MCS8
Distance of Measurements:	3 Meters
Operating Frequency:	5180MHz
Channel:	36

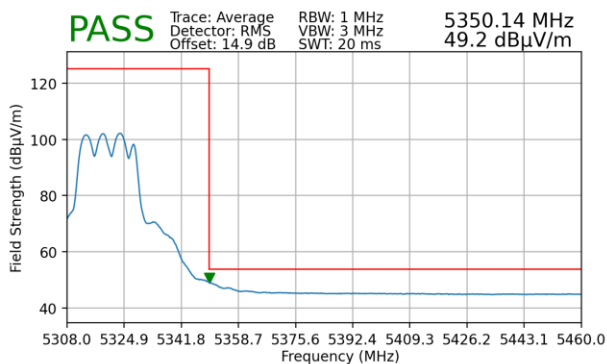


**Plot 7-365. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 1)**

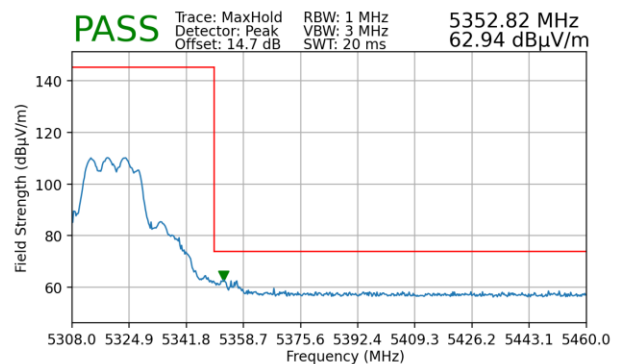


**Plot 7-366. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 1)**

Worst Case Mode:	802.11a
Worst Case Transfer Rate:	6Mbps
Distance of Measurements:	3 Meters
Operating Frequency:	5320MHz
Channel:	64



**Plot 7-367. Radiated Upper Band Edge Plot CDD (Average – UNII Band 2A)**



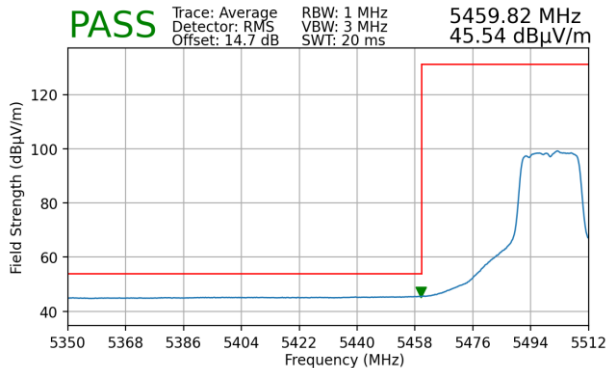
**Plot 7-368. Radiated Upper Band Edge Plot CDD (Peak – UNII Band 2A)**

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 227 of 253

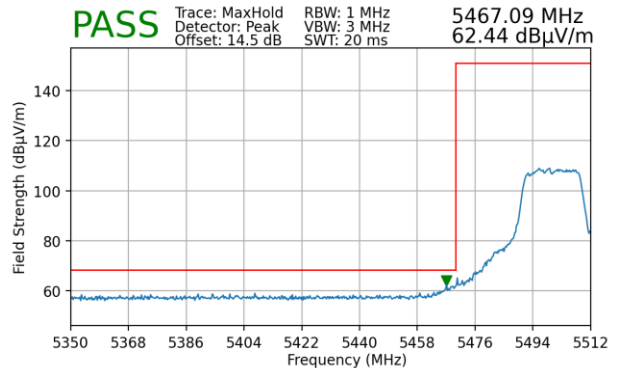
V9.0 02/01/2019

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without written permission from Element. If you have any questions about this or have an inquiry about obtaining additional rights to this report or assembly of contents thereof, please contact [ct.info@element.com](mailto:ct.info@element.com).

Worst Case Mode: 802.11n  
 Worst Case Transfer Rate: MCS8  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5500MHz  
 Channel: 100

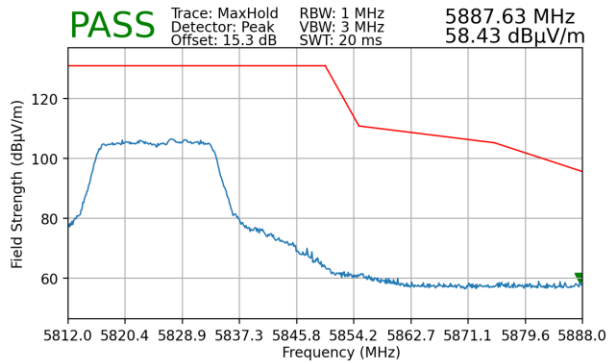


**Plot 7-369. Radiated Lower Band Edge Plot CDD  
(Average – UNII Band 2C)**



**Plot 7-370. Radiated Lower Band Edge Plot CDD  
(Peak – UNII Band 2C)**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5825MHz  
 Channel: 165

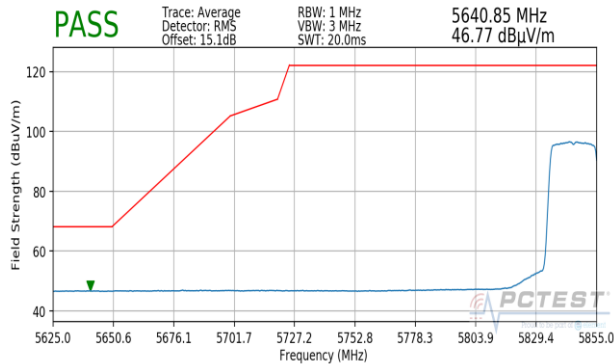


**Plot 7-371. Radiated Upper Band Edge Plot CDD  
(Peak – UNII Band 3)**

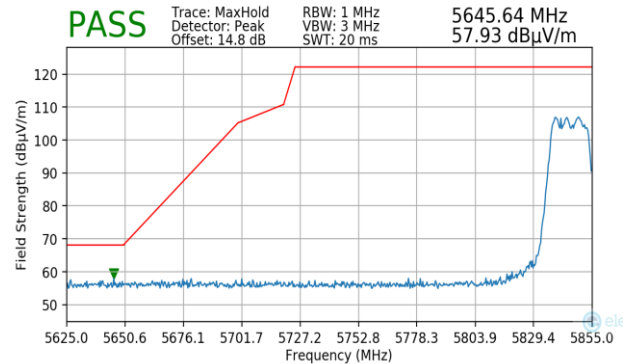
FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 228 of 253

V9.0 02/01/2019

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5845MHz
Channel:	169

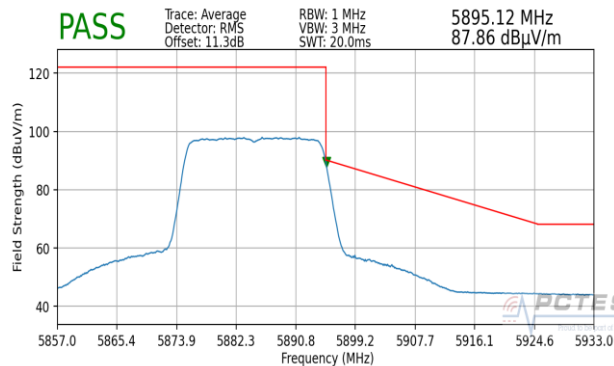


**Plot 7-372. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 4)**

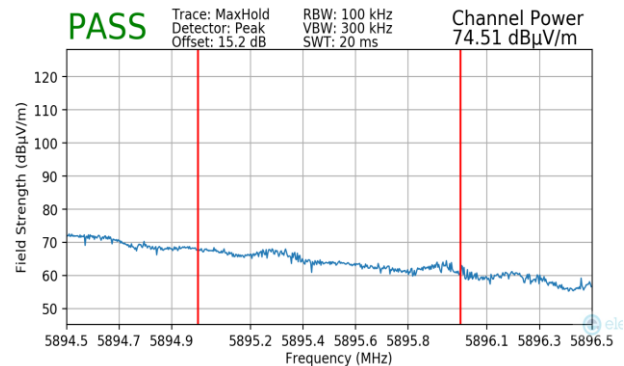


**Plot 7-373. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 4)**

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5885MHz
Channel:	177



**Plot 7-374. Radiated Upper Band Edge Plot MIMO (Average – UNII Band 4)**



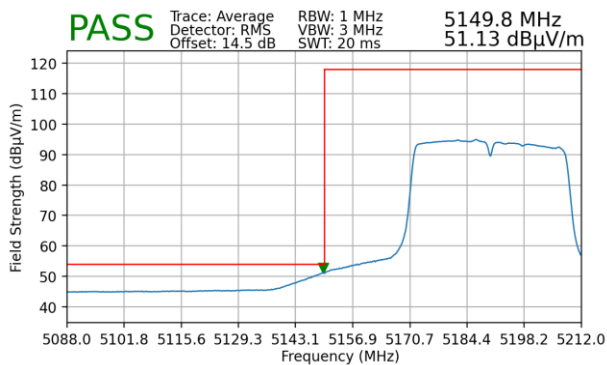
**Plot 7-375. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 4)**

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 229 of 253

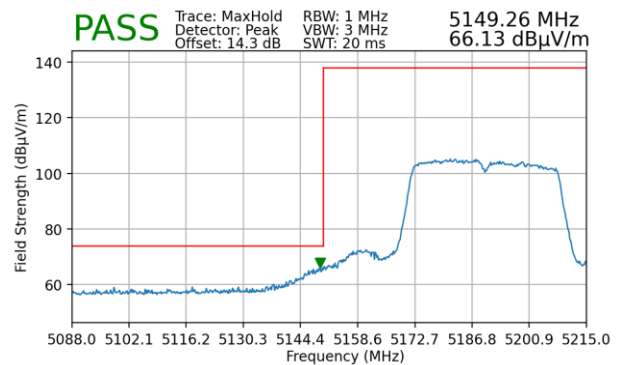
## 7.6.4 MIMO Radiated Band Edge Measurements (40MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11n
Worst Case Transfer Rate:	MCS8
Distance of Measurements:	3 Meters
Operating Frequency:	5190MHz
Channel:	38

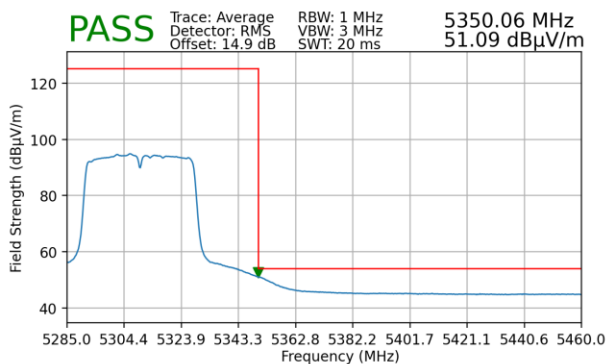


**Plot 7-376. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 1)**

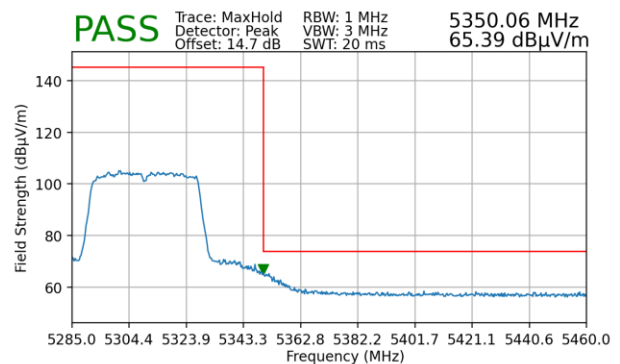


**Plot 7-377. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 1)**

Worst Case Mode:	802.11n
Worst Case Transfer Rate:	MCS8
Distance of Measurements:	3 Meters
Operating Frequency:	5310MHz
Channel:	62



**Plot 7-378. Radiated Upper Band Edge Plot MIMO (Average – UNII Band 2A)**

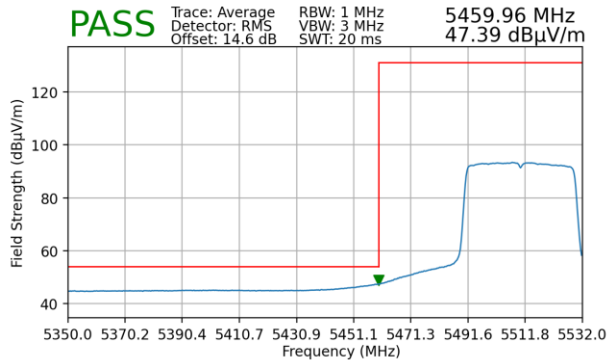


**Plot 7-379. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 2A)**

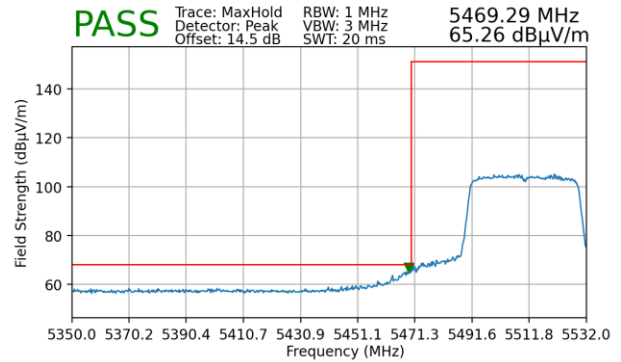
FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 230 of 253

V9.0 02/01/2019

Worst Case Mode: 802.11n  
 Worst Case Transfer Rate: MCS8  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5510MHz  
 Channel: 102

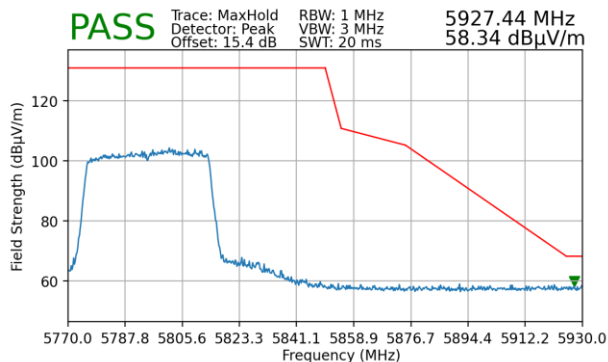


**Plot 7-380. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 2C)**



**Plot 7-381. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 2C)**

Worst Case Mode: 802.11n  
 Worst Case Transfer Rate: MCS8  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5795MHz  
 Channel: 159

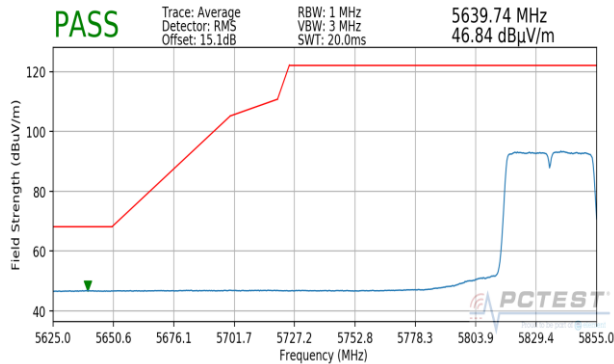


**Plot 7-382. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 3)**

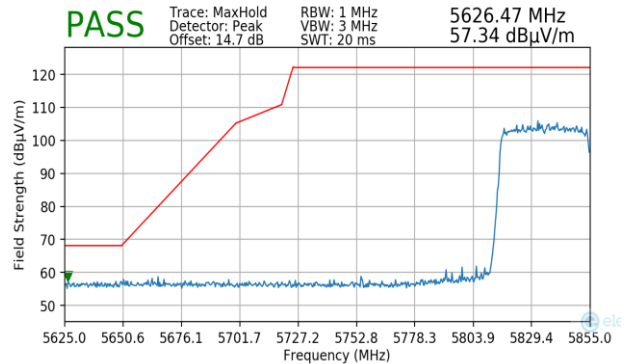
FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 231 of 253



Worst Case Mode: 802.11ax  
Worst Case Transfer Rate: MCS0  
Distance of Measurements: 3 Meters  
Operating Frequency: 5835MHz  
Channel: 167

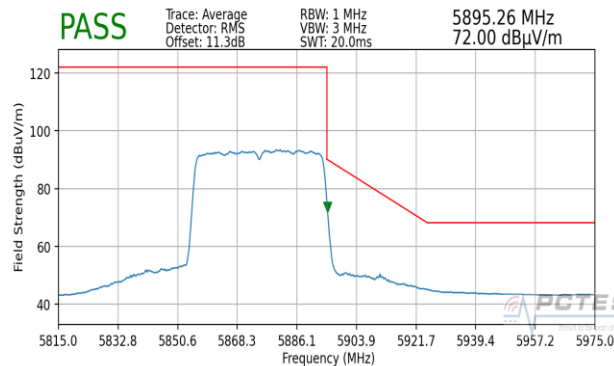


**Plot 7-383. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 4)**

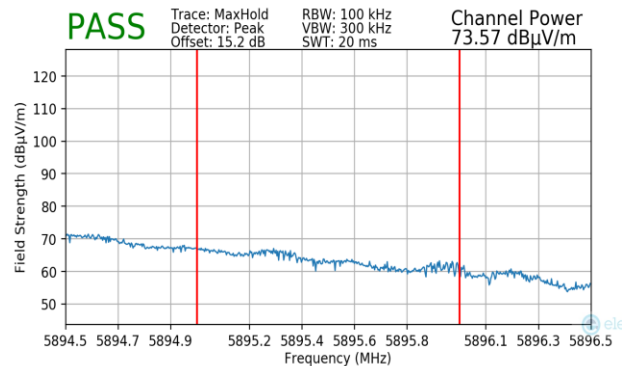


**Plot 7-384. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 4)**

Worst Case Mode: 802.11ax  
Worst Case Transfer Rate: MCS0  
Distance of Measurements: 3 Meters  
Operating Frequency: 5875MHz  
Channel: 175



**Plot 7-385. Radiated Upper Band Edge Plot MIMO (Average – UNII Band 4)**



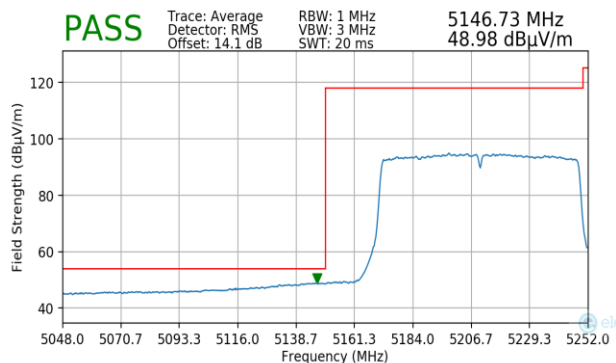
**Plot 7-386. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 4)**

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 232 of 253

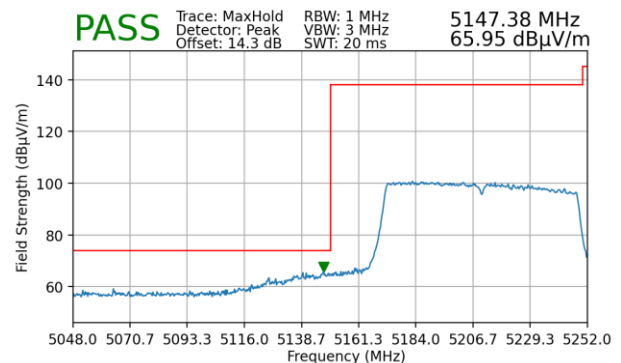
## 7.6.5 MIMO Radiated Band Edge Measurements (80MHz BW)

\$15.407(b.1)(b.2) \$15.205 \$15.209

Worst Case Mode:	802.11ac
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5210MHz
Channel:	42

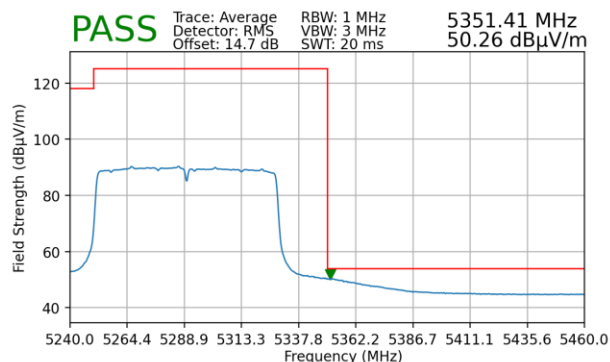


**Plot 7-387. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 1)**

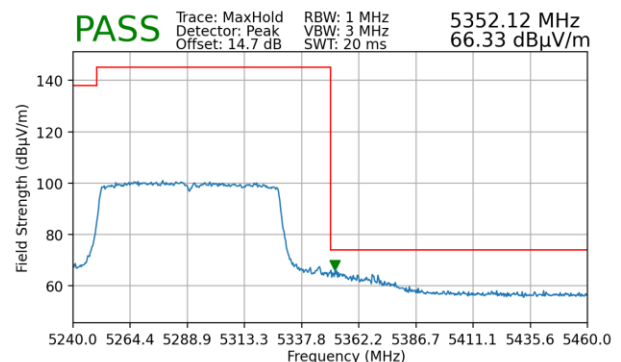


**Plot 7-388. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 1)**

Worst Case Mode:	802.11ac
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5290MHz
Channel:	58



**Plot 7-389. Radiated Upper Band Edge Plot MIMO (Average – UNII Band 2A)**



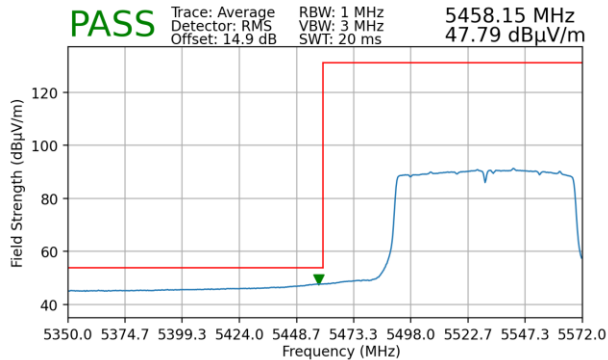
**Plot 7-390. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 2A)**

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 233 of 253

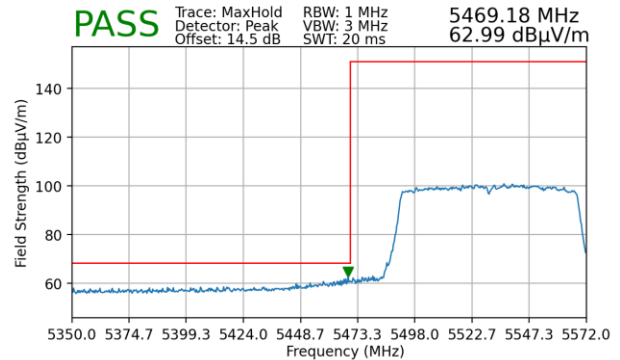
V9.0 02/01/2019

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without written permission from Element. If you have any questions about this or have an inquiry about obtaining additional rights to this report or assembly of contents thereof, please contact [ct.info@element.com](mailto:ct.info@element.com).

Worst Case Mode: 802.11ac  
 Worst Case Transfer Rate: MCS0  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5530MHz  
 Channel: 106

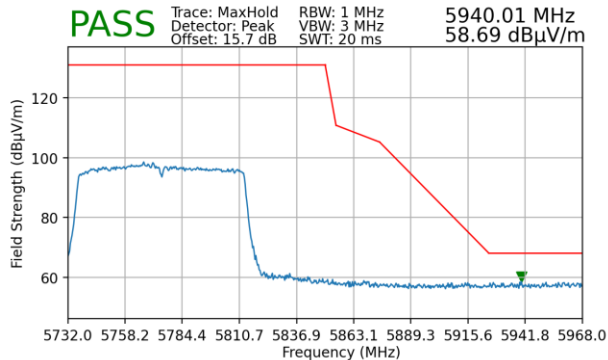


**Plot 7-391. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 2C)**



**Plot 7-392. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 2C)**

Worst Case Mode: 802.11ac  
 Worst Case Transfer Rate: MCS0  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5775MHz  
 Channel: 155

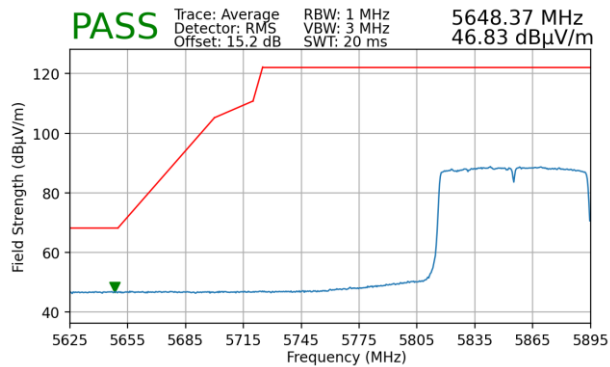


**Plot 7-393. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 3)**

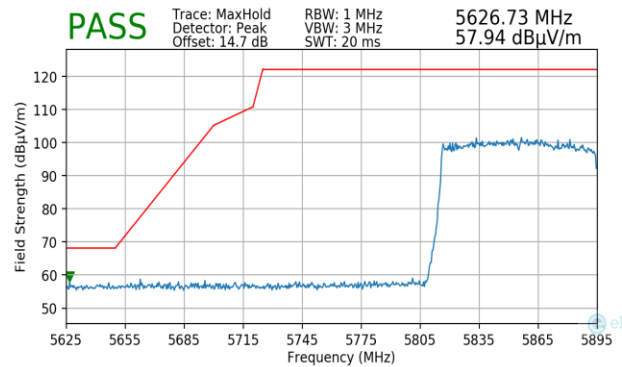
FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 234 of 253

V9.0 02/01/2019

Worst Case Mode: 802.11ax  
Worst Case Transfer Rate: MCS0  
Distance of Measurements: 3 Meters  
Operating Frequency: 5855MHz  
Channel: 171

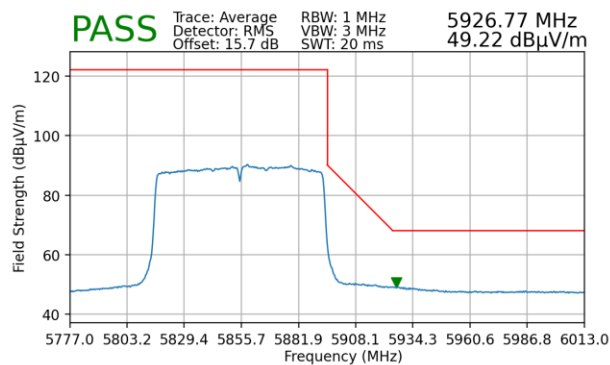


**Plot 7-394. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 4)**

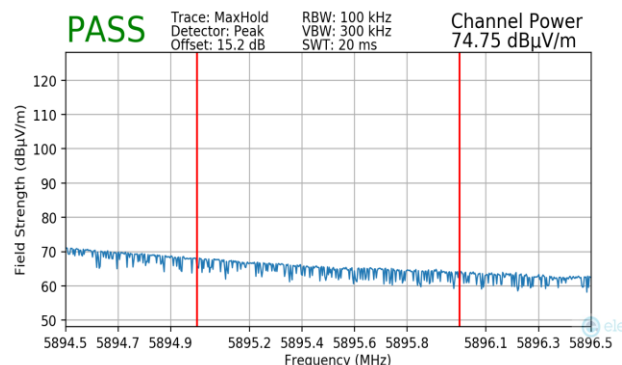


**Plot 7-395. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 4)**

Worst Case Mode: 802.11ax  
Worst Case Transfer Rate: MCS0  
Distance of Measurements: 3 Meters  
Operating Frequency: 5855MHz  
Channel: 171



**Plot 7-396. Radiated Upper Band Edge Plot MIMO (Average – UNII Band 4)**

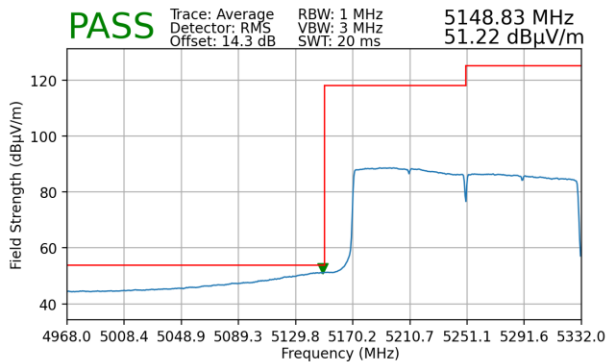


**Plot 7-397. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 4)**

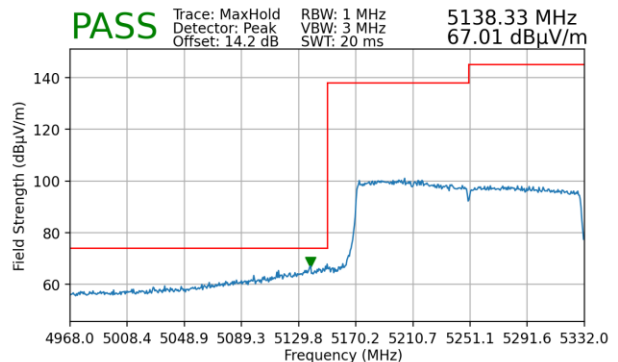
FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 235 of 253

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

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

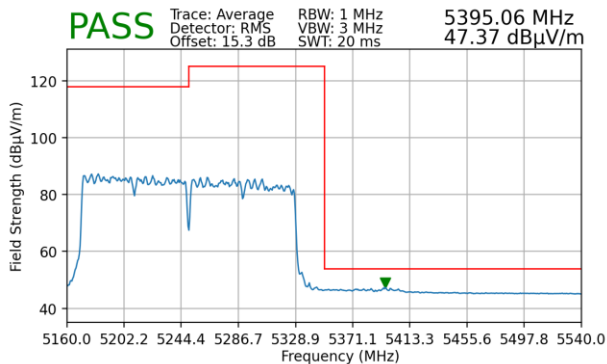


**Plot 7-398. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 1)**

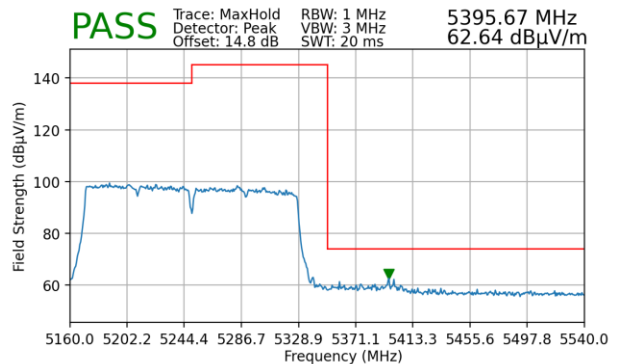


**Plot 7-399. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 1)**

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



**Plot 7-400. Radiated Upper Band Edge Plot MIMO (Average – UNII Band 2A)**

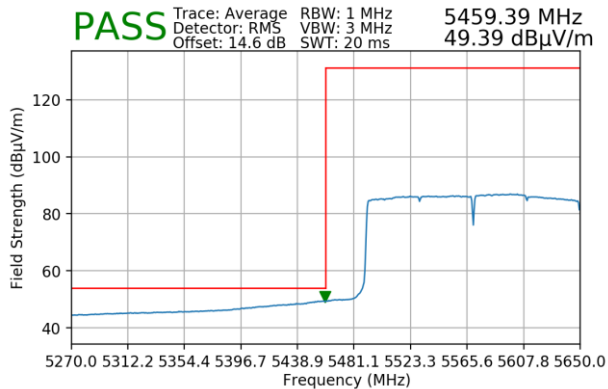


**Plot 7-401. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 2A)**

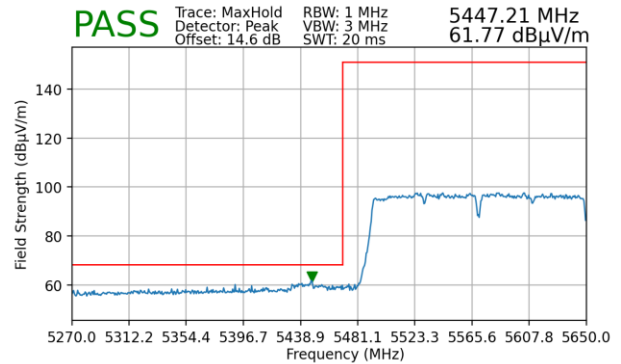
FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 236 of 253

V9.0 02/01/2019

Worst Case Mode: 802.11ax  
 Worst Case Transfer Rate: MCS0  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5570MHz  
 Channel: 114

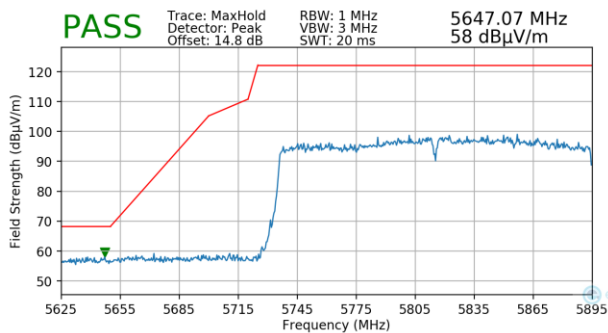


**Plot 7-402. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 2C)**



**Plot 7-403. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 2C)**

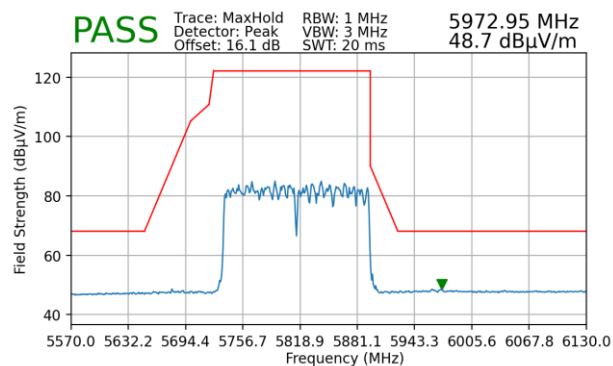
Worst Case Mode: 802.11ax  
 Worst Case Transfer Rate: MCS0  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5815MHz  
 Channel: 163



**Plot 7-404. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 4)**

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 237 of 253

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



**Plot 7-405. Radiated Upper Band Edge Plot MIMO  
(Peak – UNII Band 4)**

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 238 of 253

V9.0 02/01/2019

## 7.6.7 Radiated Spurious Emissions Measurements – Below 1GHz

### §15.209

#### Test Overview and Limit

All out of band radiated spurious emissions are measured with a spectrum analyzer connected to a receive antenna 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 radiated spurious emissions. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.

***All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR and Table 6 of RSS-Gen (8.10) must not exceed the limits shown in Table 7-45 per Section 15.209 and RSS-Gen (8.9).***

Frequency	Field Strength [μV/m]	Measured Distance [Meters]
0.009 – 0.490 MHz	2400/F (kHz)	300
0.490 – 1.705 MHz	24000/F (kHz)	30
1.705 – 30.00 MHz	30	30
30.00 – 88.00 MHz	100	3
88.00 – 216.0 MHz	150	3
216.0 – 960.0 MHz	200	3
Above 960.0 MHz	500	3

**Table 7-45. Radiated Limits**

#### Test Procedures Used

ANSI C63.10-2013

#### Test Settings

##### Quasi-Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 120kHz (for emissions from 30MHz – 1GHz)
3. Detector = quasi-peak
4. Sweep time = auto couple
5. Trace mode = max hold
6. Trace was allowed to stabilize

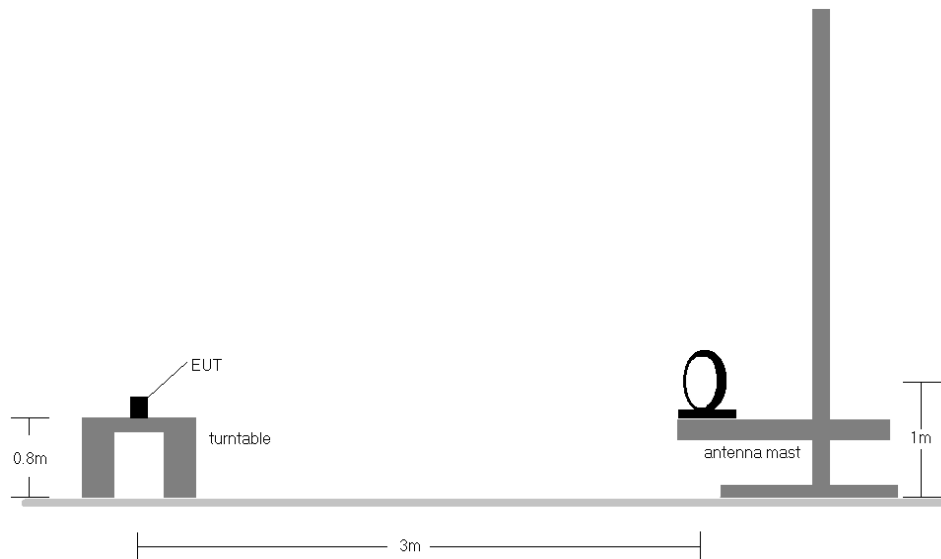
FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 239 of 253

V9.0 02/01/2019

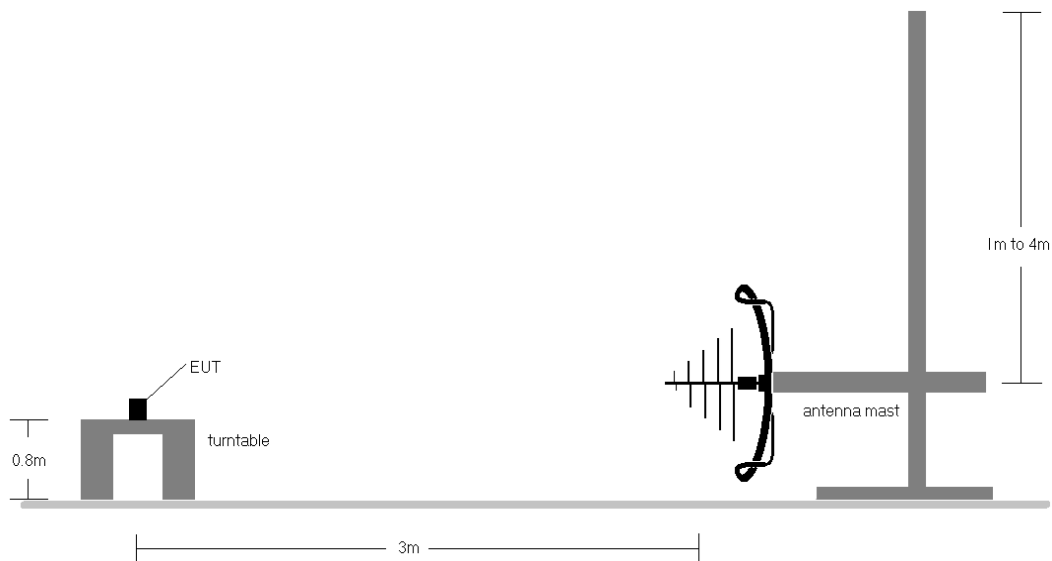


## Test Setup

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



**Figure 7-6. Radiated Test Setup < 30MHz**



**Figure 7-7. Radiated Test Setup < 1GHz**

<b>FCC ID:</b> A3LSMF936U	<b>MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Approved by:</b> Technical Manager
<b>Test Report S/N:</b> 1M2204010046-15-R1.A3L	<b>Test Dates:</b> 04/01 - 6/10/2022	<b>EUT Type:</b> Portable Handset	Page 240 of 253

V9.0 02/01/2019

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without written permission from Element. If you have any questions about this or have an inquiry about obtaining additional rights to this report or assembly of contents thereof, please contact [ct.info@element.com](mailto:ct.info@element.com).

## **Test Notes**

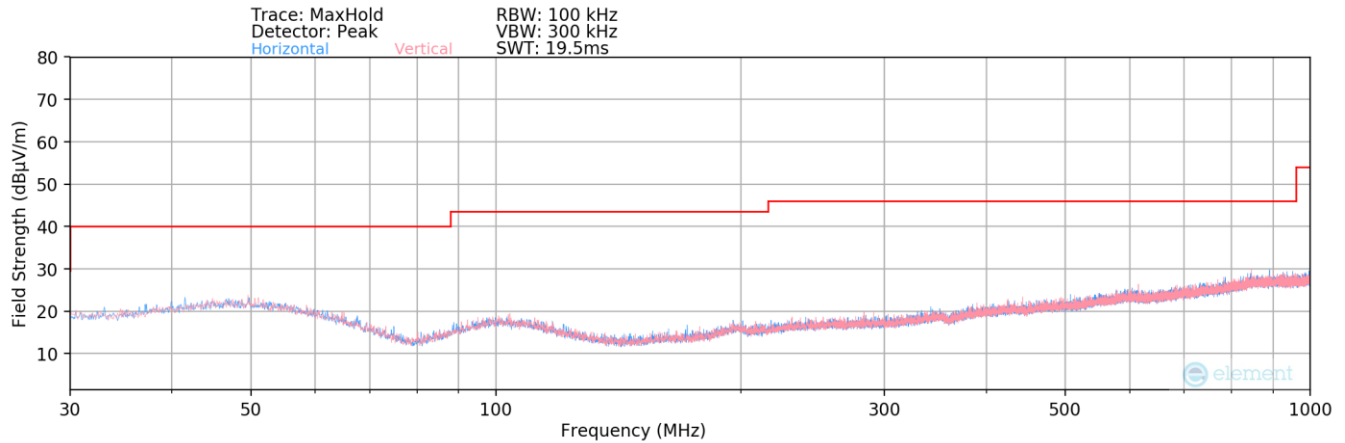
1. All emissions lying in restricted bands specified in §15.205 and RSS-Gen (8.10) are below the limit shown in Table 7-45.
2. The broadband receive antenna is manipulated through vertical and horizontal polarizations during the tests. The EUT is manipulated through three orthogonal planes.
3. This unit was tested with its standard battery.
4. The spectrum is investigated using a peak detector and final measurements are recorded using CISPR quasi peak detector. The worst-case emissions are reported however emissions whose levels were not within 20dB of the respective limits were not reported.
5. Emissions were measured at a 3 meter test distance.
6. Emissions are investigated while operating on the center channel of the mode, band, and modulation that produced the worst case results during the transmitter spurious emissions testing.
7. No spurious emissions were detected within 20dB of the limit below 30MHz.
8. The results recorded using the broadband antenna is known to correlate with the results obtained by using a tuned dipole with an acceptable degree of accuracy. The VSWR for the measurement antenna was found to be less than 2:1.
9. The wide spectrum spurious emissions plots shown on the following pages are used only for the purpose of emission identification. There were no emissions detected in the 30MHz – 1GHz frequency range, as shown in the subsequent plots.

<b>FCC ID:</b> A3LSMF936U	<b>MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Approved by:</b> Technical Manager
<b>Test Report S/N:</b> 1M2204010046-15-R1.A3L	<b>Test Dates:</b> 04/01 - 6/10/2022	<b>EUT Type:</b> Portable Handset	Page 241 of 253

V9.0 02/01/2019

## MIMO Radiated Spurious Emissions Measurements (Below 1GHz)

\$15.209



Plot 7-406. Radiated Spurious Plot below 1GHz MIMO (802.11a – U3 Ch. 157)

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
32.36	Quasi-Peak	V	-	-	-96.96	26.09	36.13	40.00	-3.87
35.98	Quasi-Peak	V	-	-	-98.32	22.54	31.22	40.00	-8.78
81.00	Quasi-Peak	V	-	-	-96.47	14.80	25.33	40.00	-14.67
711.00	Quasi-Peak	V	-	-	-95.24	28.85	40.61	46.02	-5.41

Table 7-46. Radiated Spurious Emissions below 1GHz MIMO

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset		Page 242 of 253

V9.0 02/01/2019

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without written permission from Element. If you have any questions about this or have an inquiry about obtaining additional rights to this report or assembly of contents thereof, please contact [ct.info@element.com](mailto:ct.info@element.com).

## 7.7 Line-Conducted Test Data

### §15.407

#### 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 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 7-47. 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

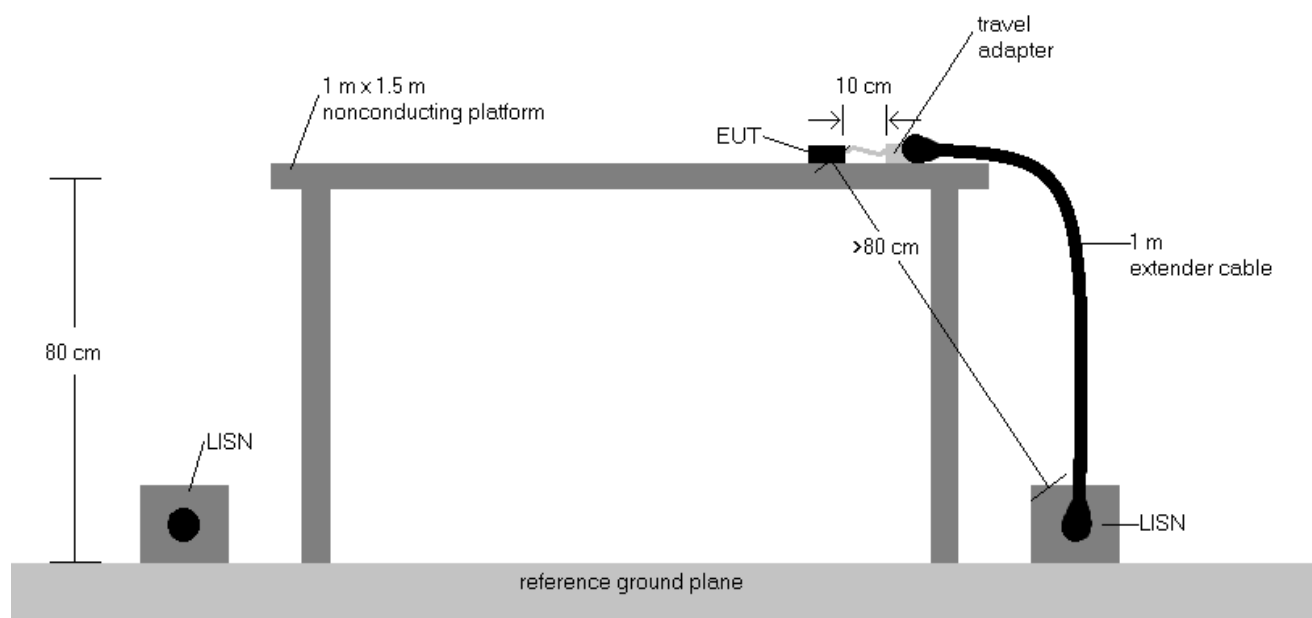
1. Analyzer center frequency was set to the frequency of the spurious emission of interest
2. RBW = 9kHz (for emissions from 150kHz – 30MHz)
3. Detector = RMS
4. Sweep time = auto couple
5. Trace mode = max hold
6. Trace was allowed to stabilize

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 243 of 253

V9.0 02/01/2019

## Test Setup

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



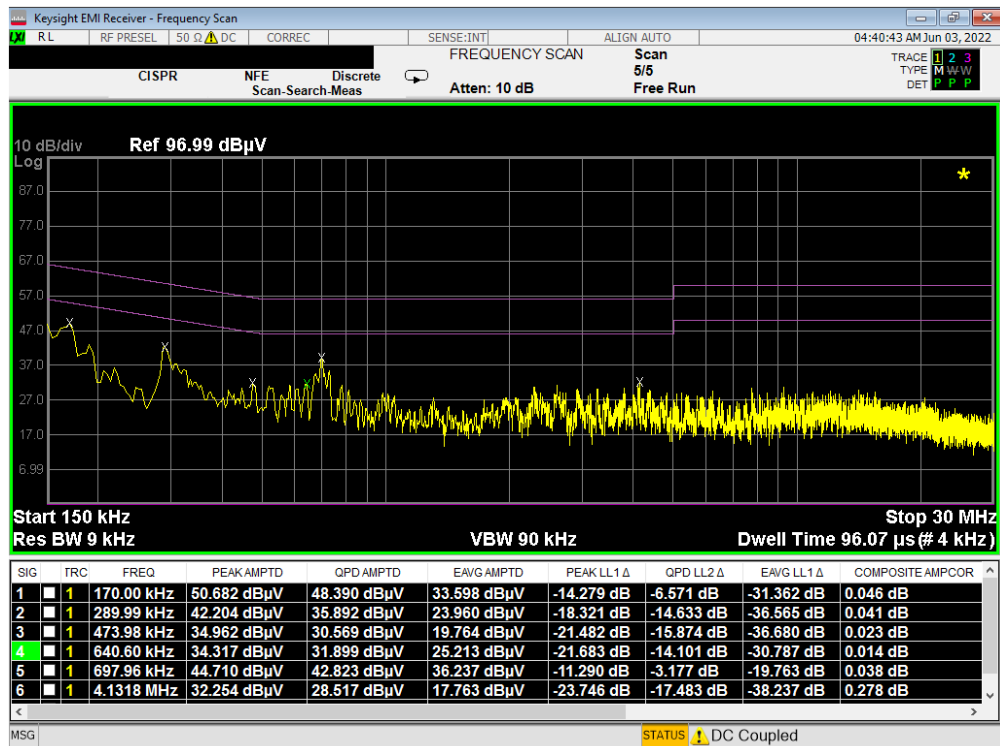
**Figure 7-8. Test Instrument & Measurement Setup**

## Test Notes

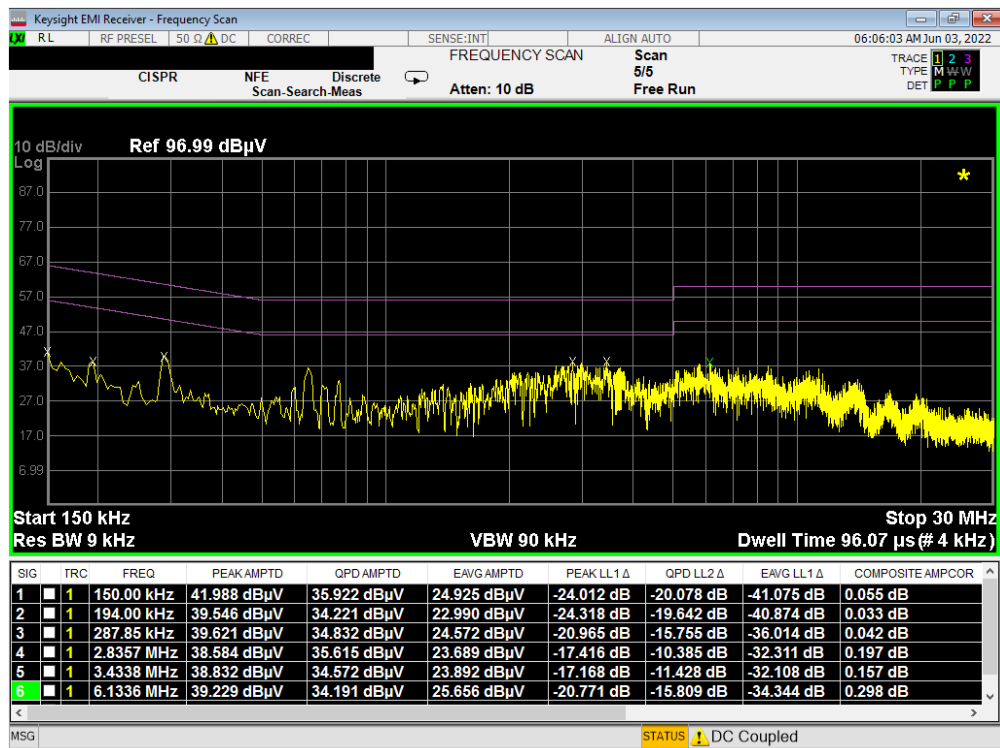
1. All modes of operation were investigated and the worst-case emissions are reported using mid channel. The emissions found were not affected by the choice of channel used during testing.
2. The limit for an intentional radiator from 150kHz to 30MHz are specified in 15.207 and RSS-Gen (8.8).
3.  $\text{Corr. (dB)} = \text{Cable loss (dB)} + \text{LISN insertion factor (dB)}$
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.

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 244 of 253

V9.0 02/01/2019

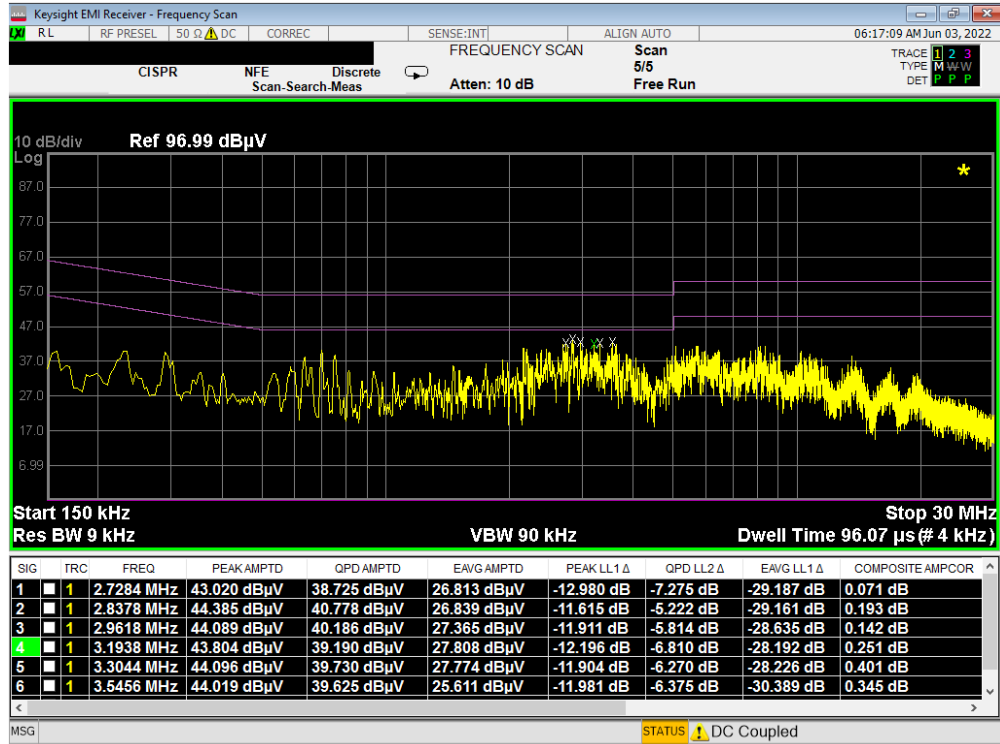


Plot 7-407. Line Conducted Plot with 802.11a UNII Band 1 (L1) - Open

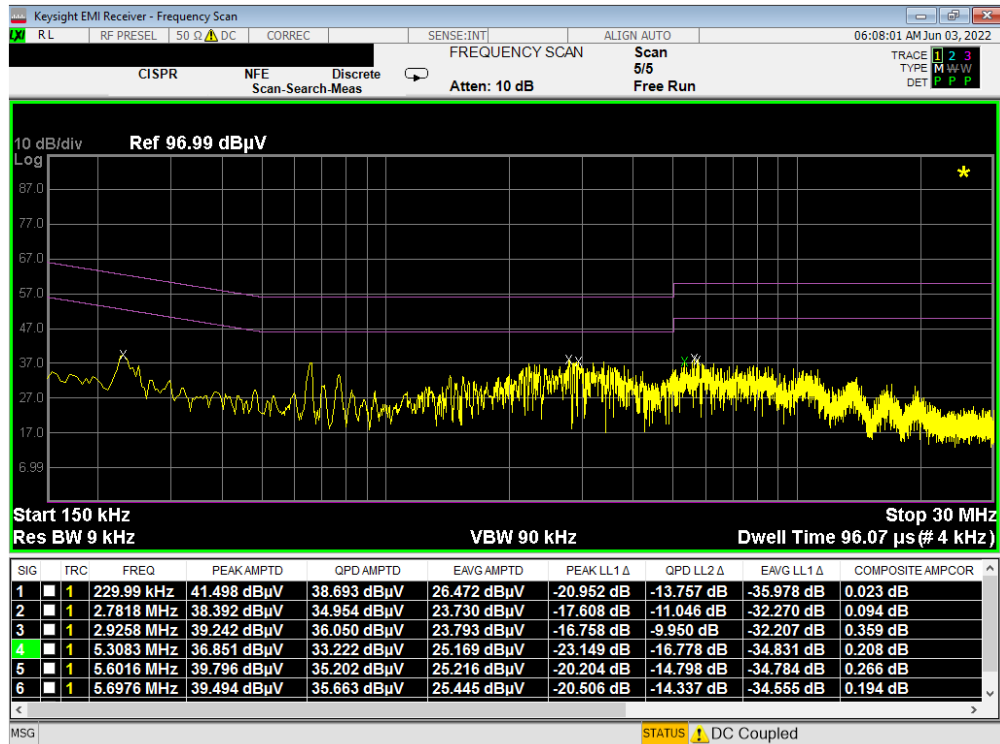


Plot 7-408. Line Conducted Plot with 802.11a UNII Band 1 (N) - Open

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 245 of 253



Plot 7-409. Line Conducted Plot with 802.11a UNII Band 2A (L1) - Open

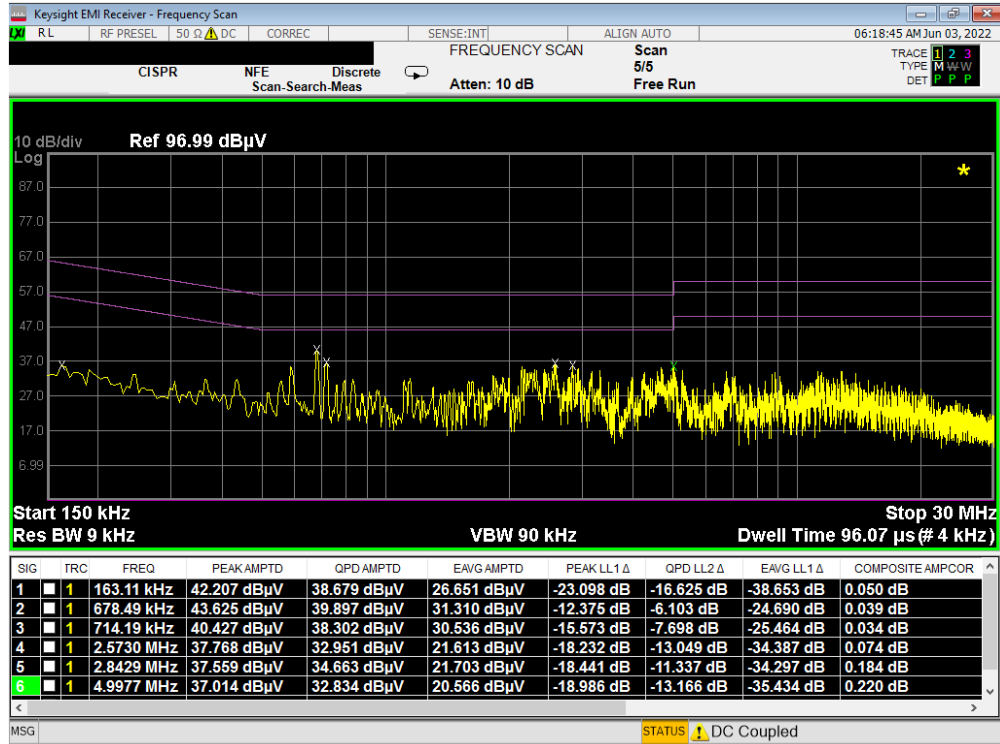


Plot 7-410. Line Conducted Plot with 802.11a UNII Band 2A (N) - Open

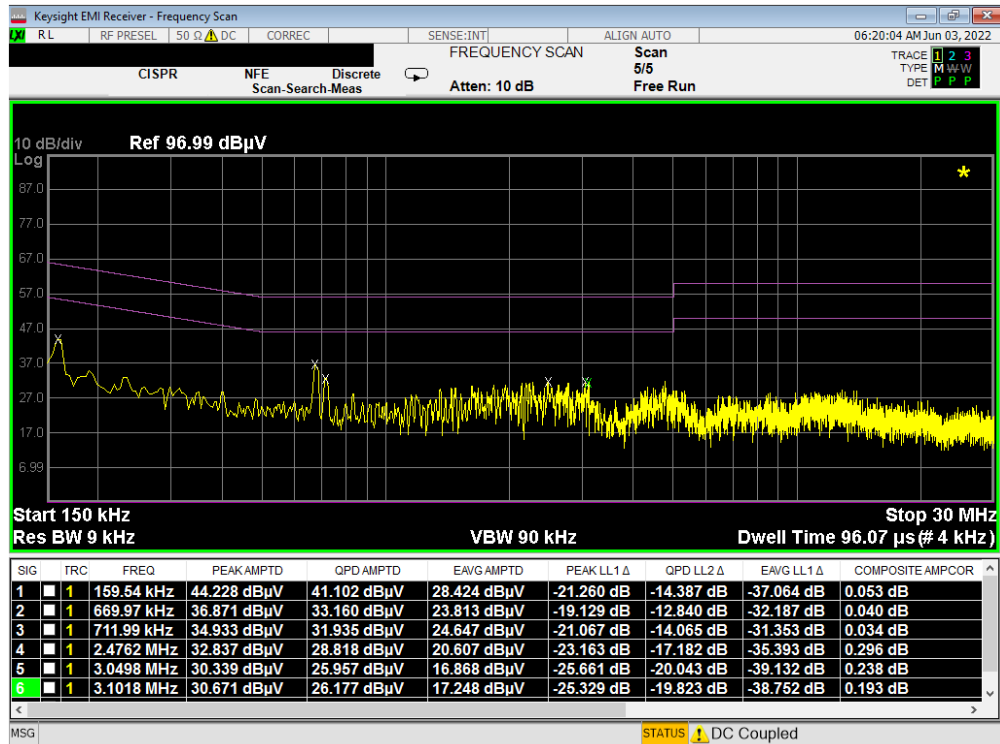
FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 246 of 253

V9.0 02/01/2019

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without written permission from Element. If you have any questions about this or have an inquiry about obtaining additional rights to this report or assembly of contents thereof, please contact [ct.info@element.com](mailto:ct.info@element.com).



Plot 7-411. Line Conducted Plot with 802.11a UNII Band 2C (L1) - Open



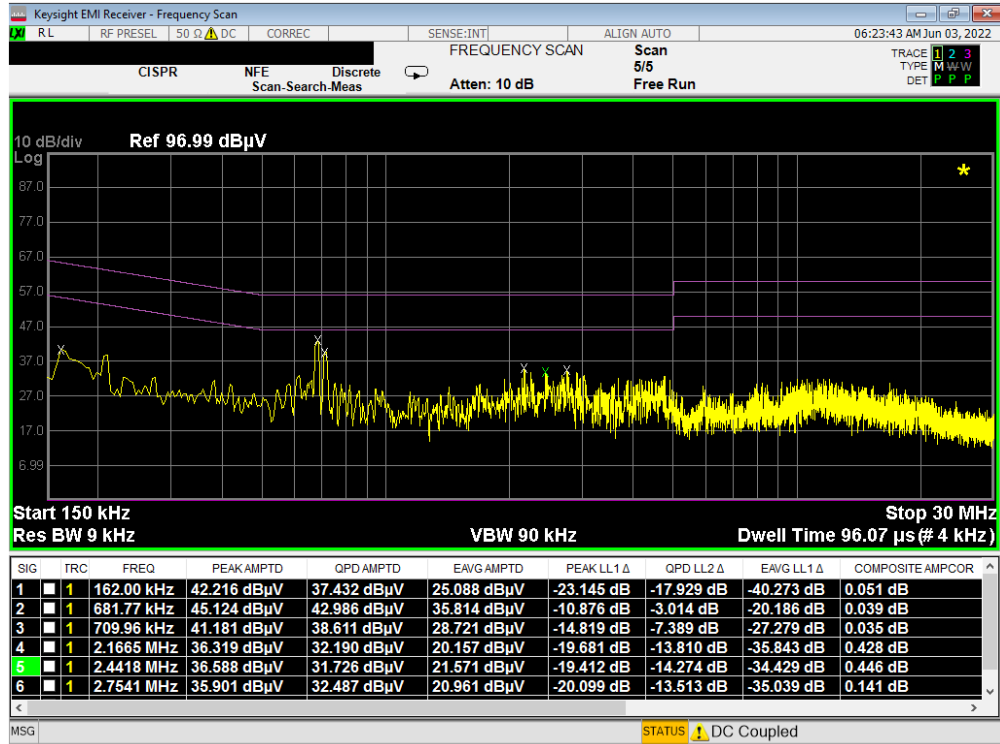
Plot 7-412. Line Conducted Plot with 802.11a UNII Band 2C (N) - Open

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 247 of 253

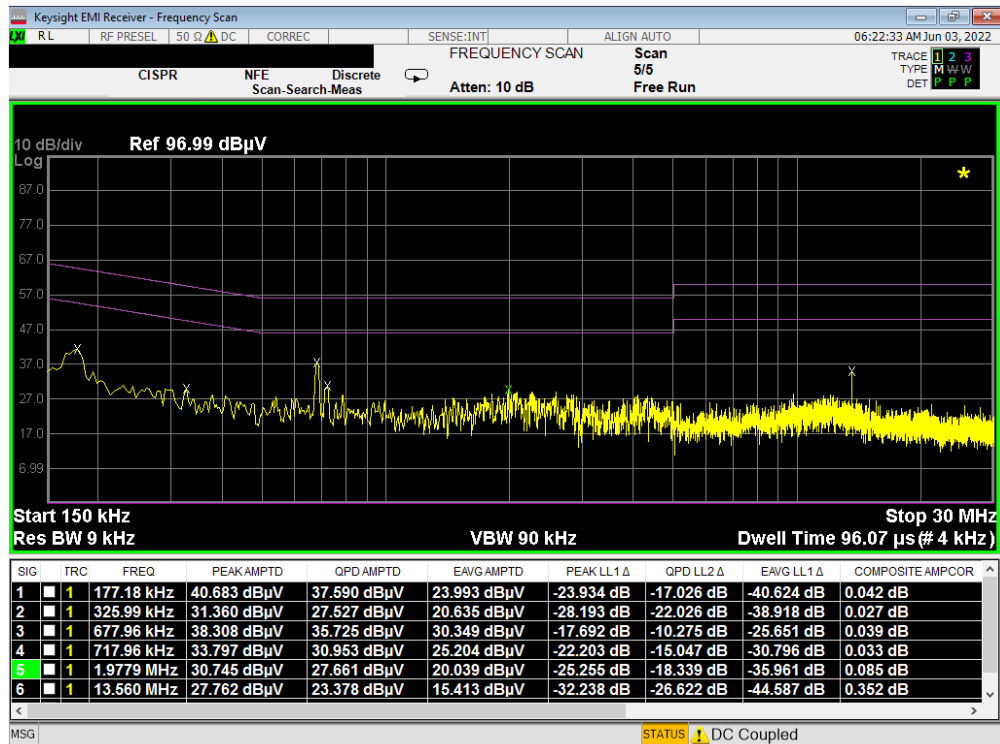
V9.0 02/01/2019

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without written permission from Element. If you have any questions about this or have an inquiry about obtaining additional rights to this report or assembly of contents thereof, please contact [ct.info@element.com](mailto:ct.info@element.com).



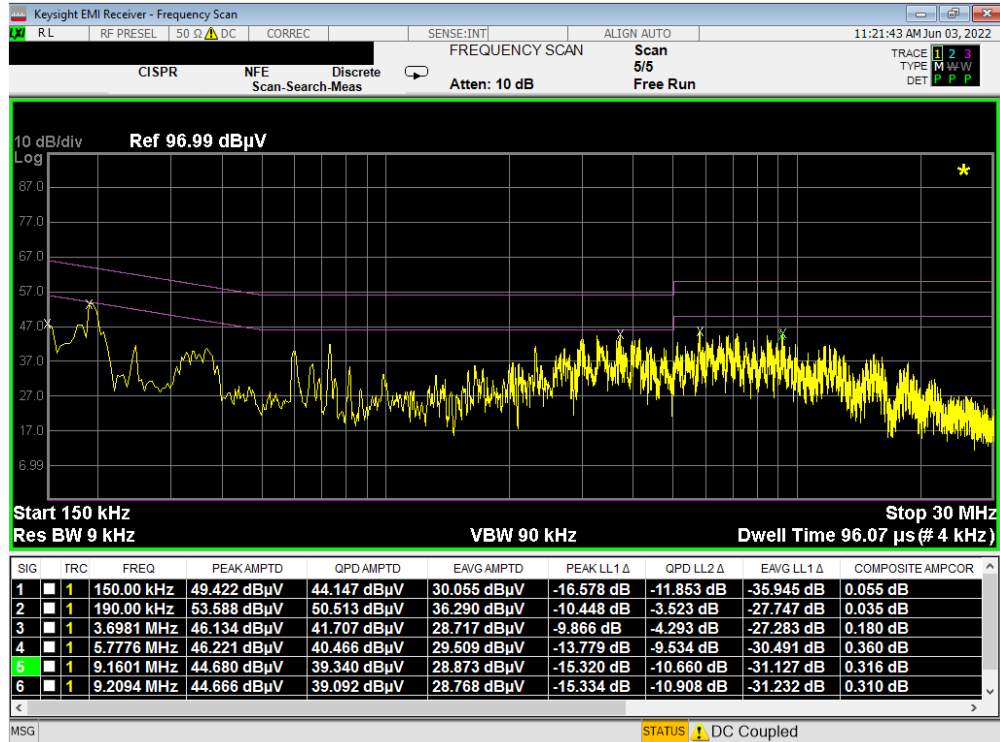


Plot 7-413. Line Conducted Plot with 802.11a UNII Band 3 (L1) - Open

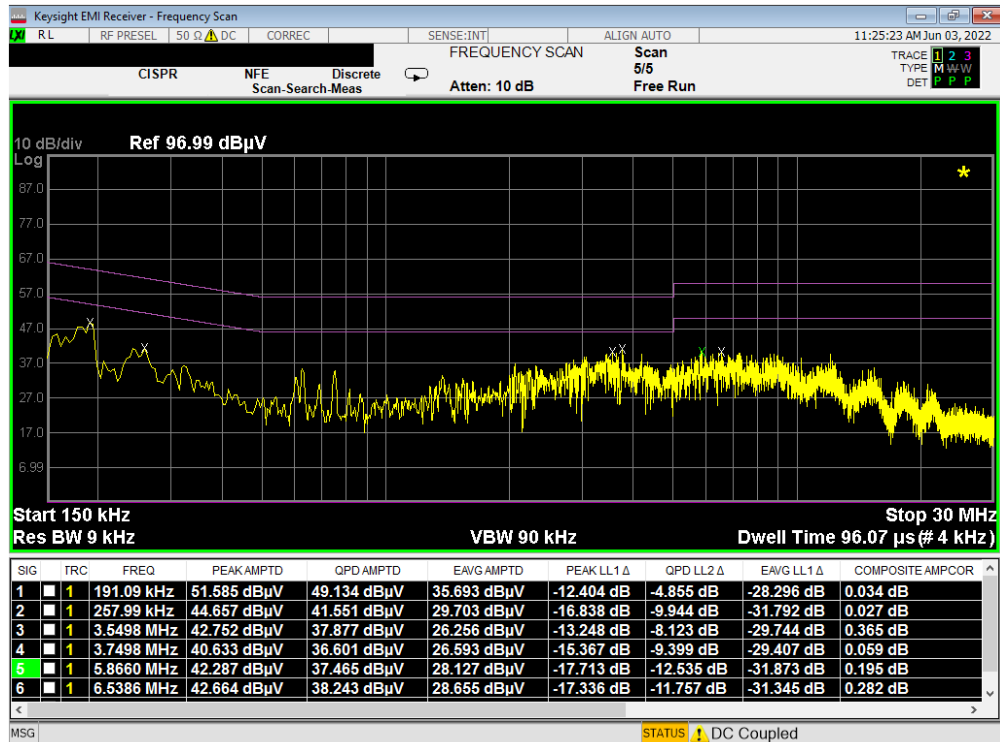


Plot 7-414. Line Conducted Plot with 802.11a UNII Band 3 (N) - Open

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 248 of 253



Plot 7-415. Line Conducted Plot with 802.11a UNII Band 1 (L1) - Closed



Plot 7-416. Line Conducted Plot with 802.11a UNII Band 1 (N) - Closed

FCC ID: A3LSMF936U	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2204010046-15-R1.A3L	Test Dates: 04/01 - 6/10/2022	EUT Type: Portable Handset	Page 249 of 253