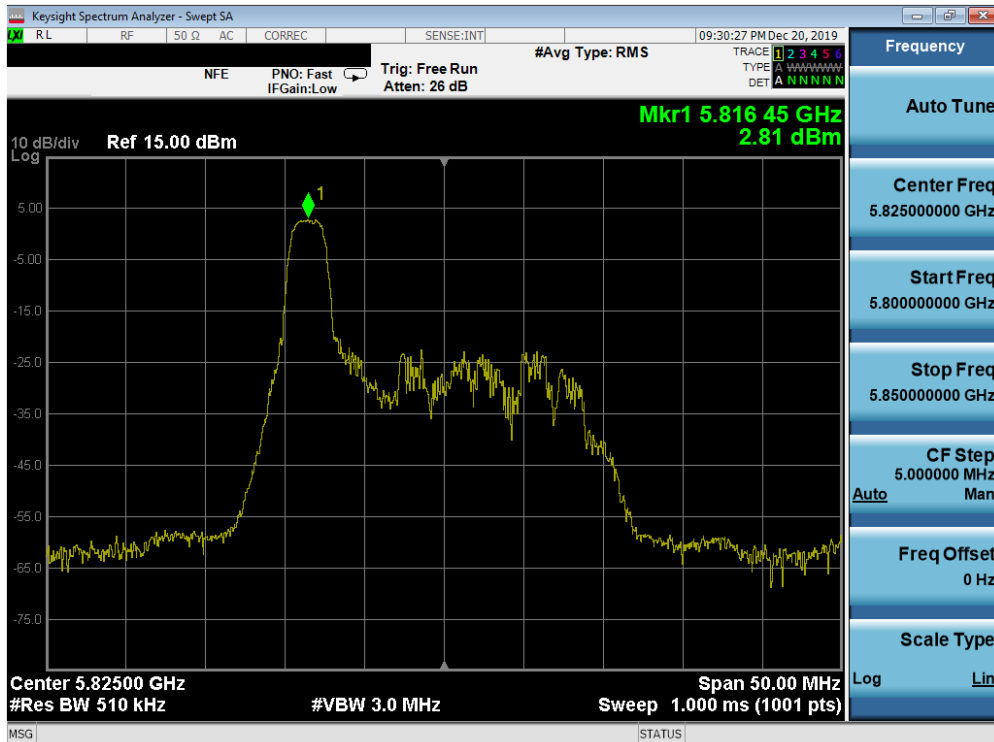
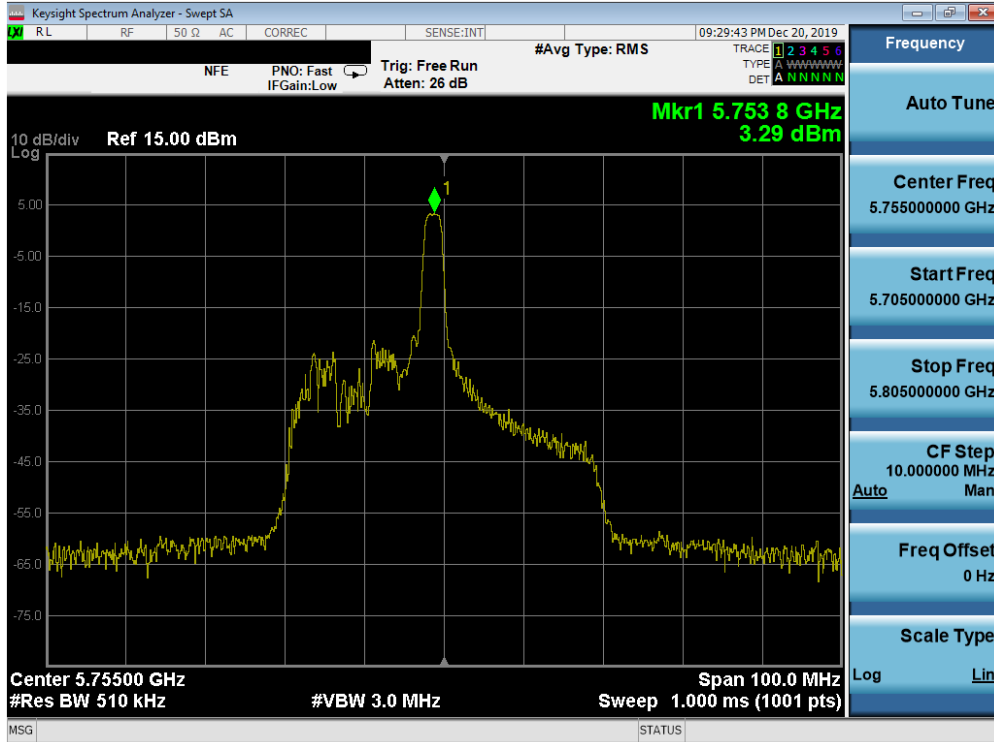


Plot 7-239. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 157)

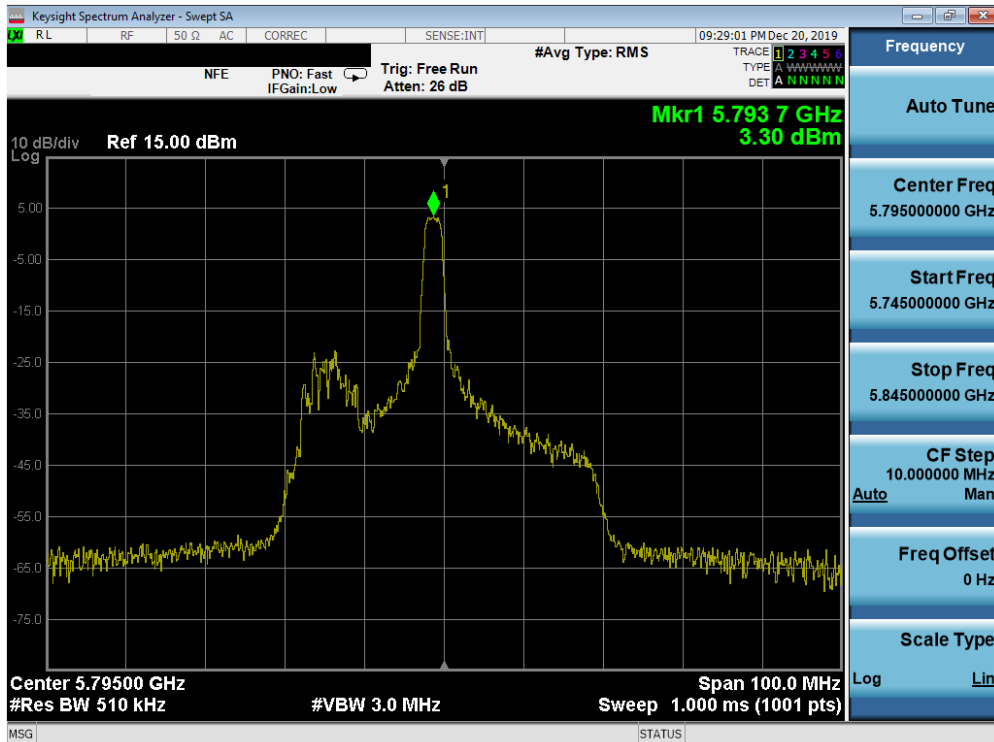


Plot 7-240. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 165)

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 175 of 270

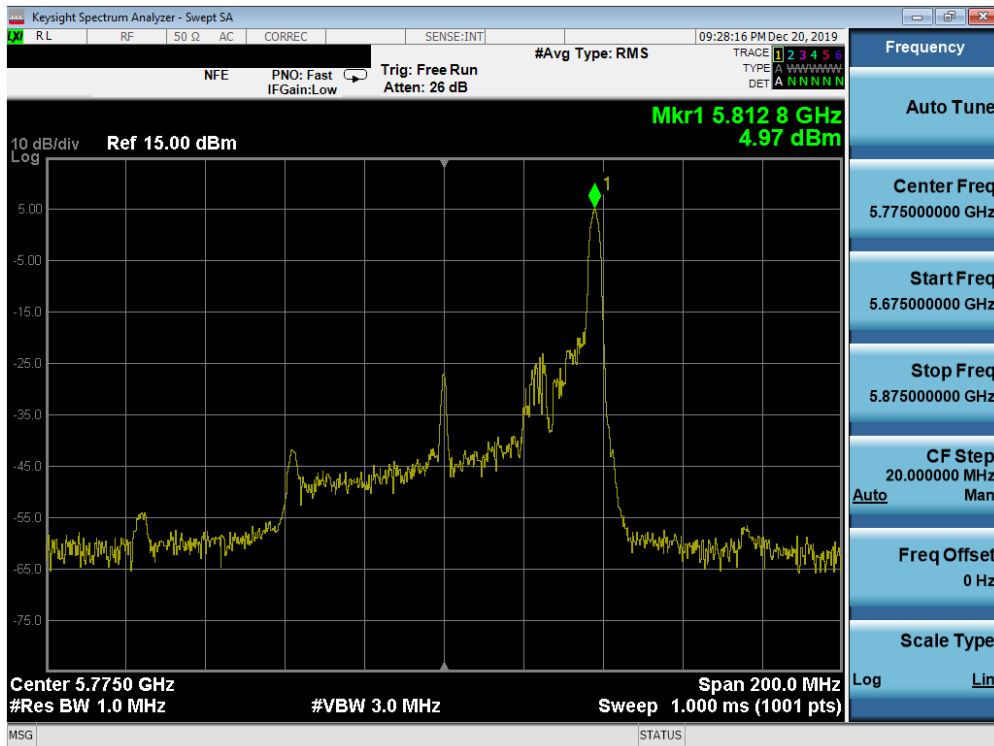


Plot 7-241. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 151)

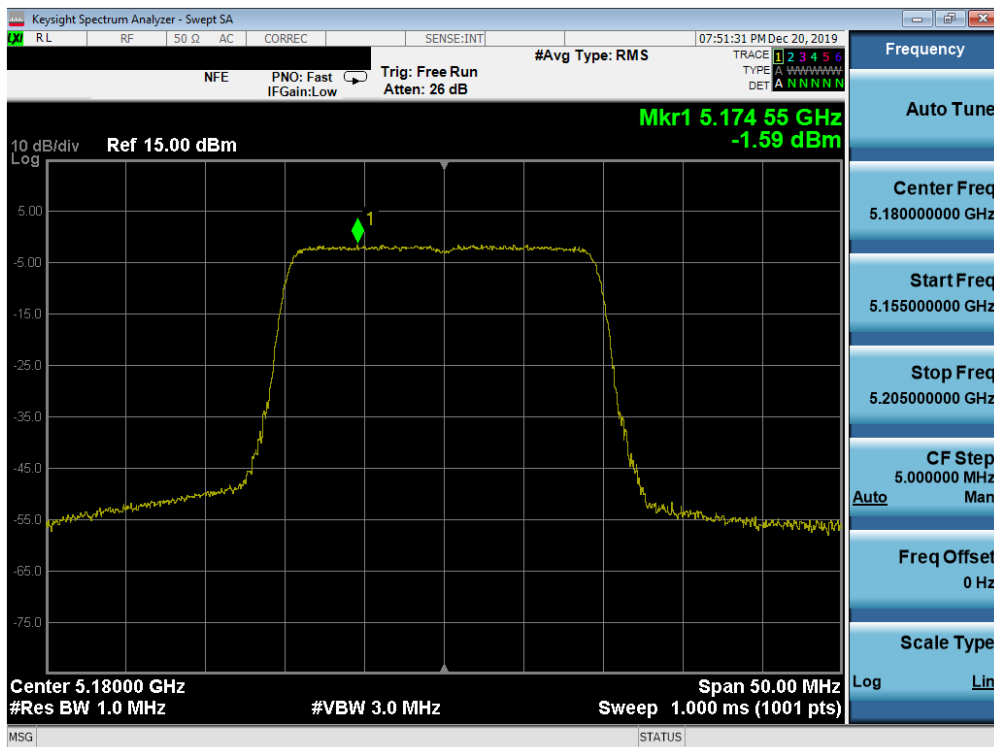


Plot 7-242. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 159)

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 176 of 270

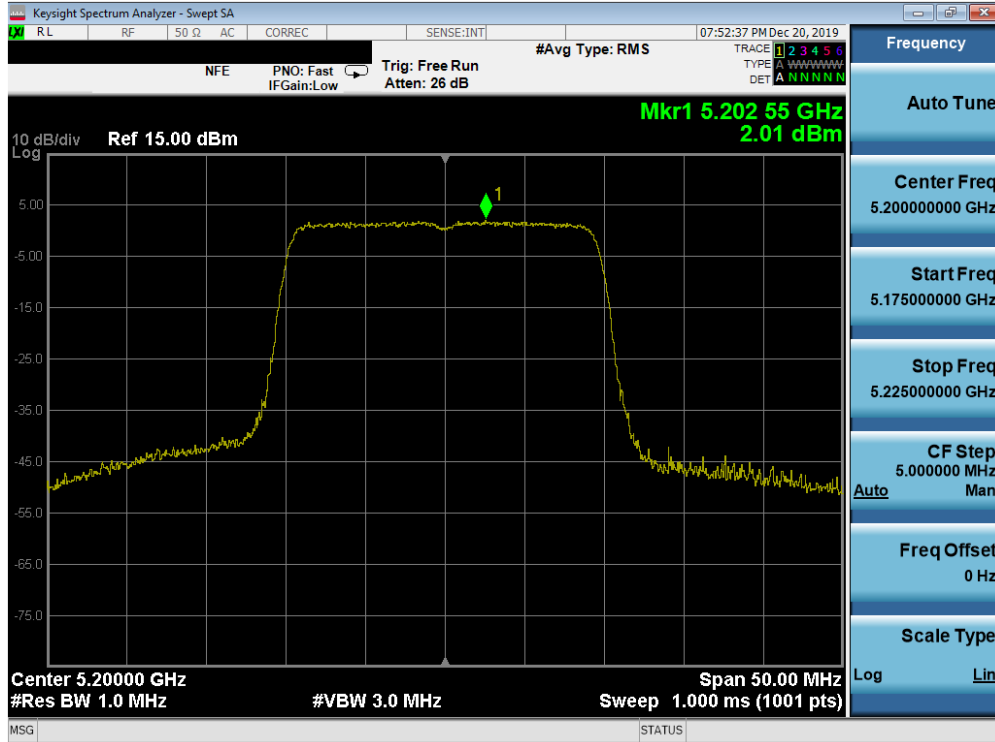


Plot 7-243. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 155)

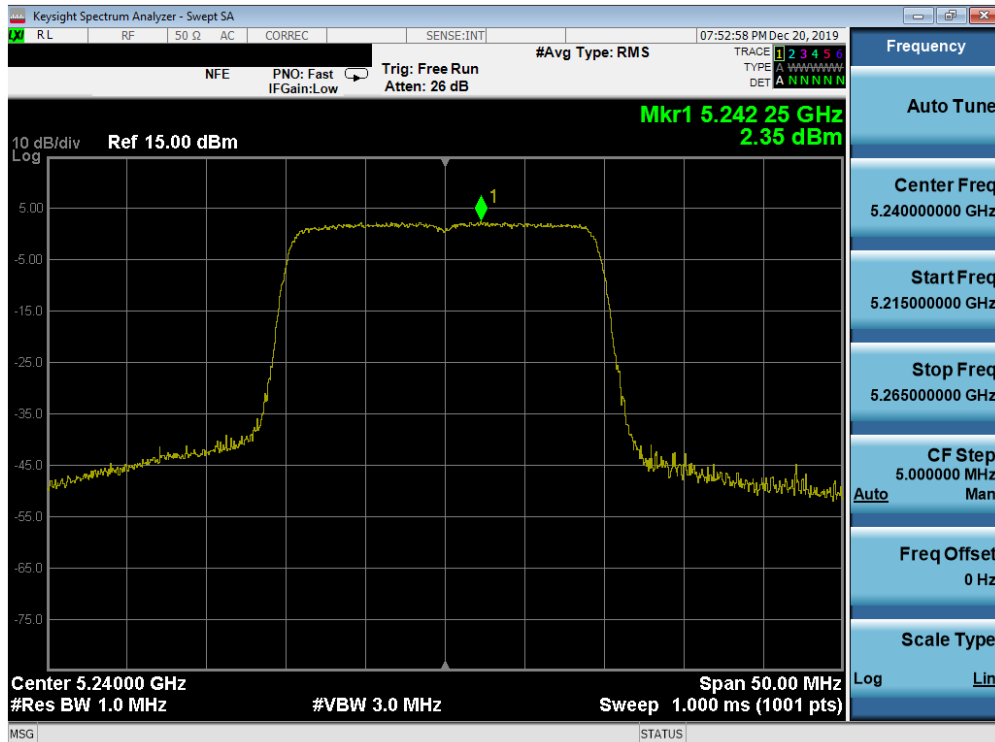


Plot 7-244. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 1) – Ch. 36)

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 177 of 270

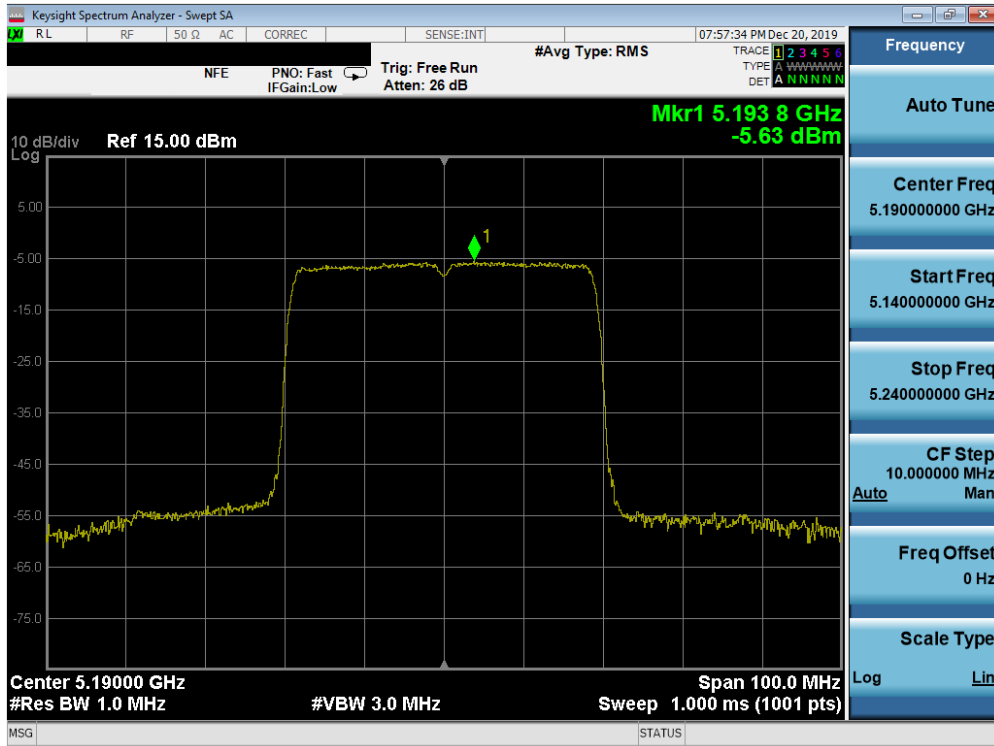


Plot 7-245. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 1) – Ch. 40)

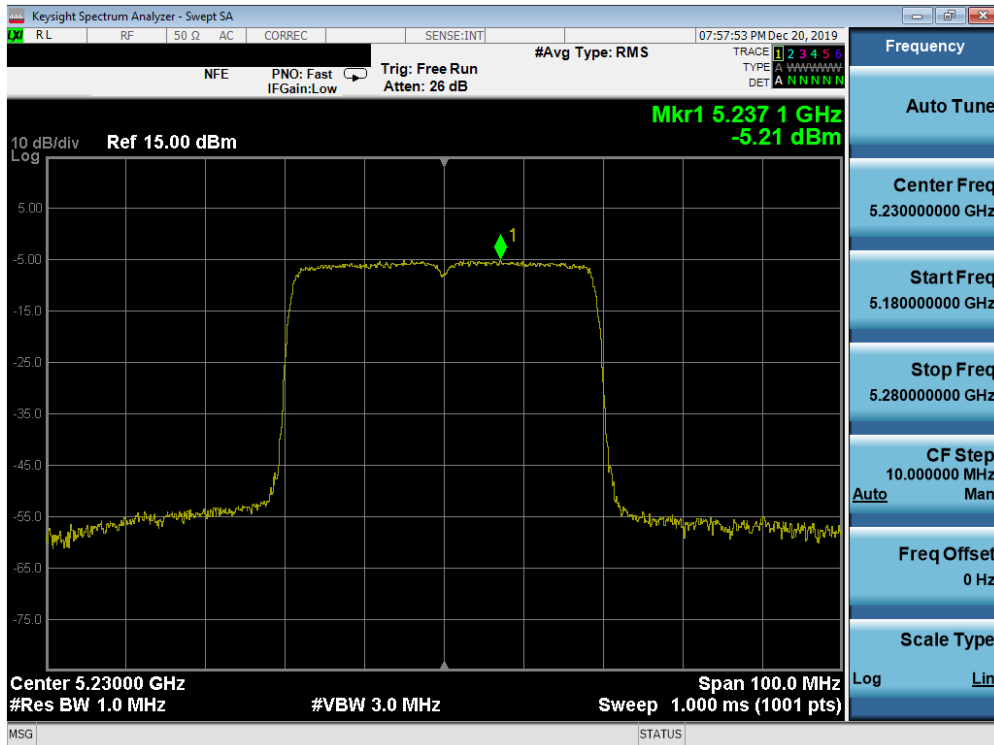


Plot 7-246. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 1) – Ch. 48)

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 178 of 270

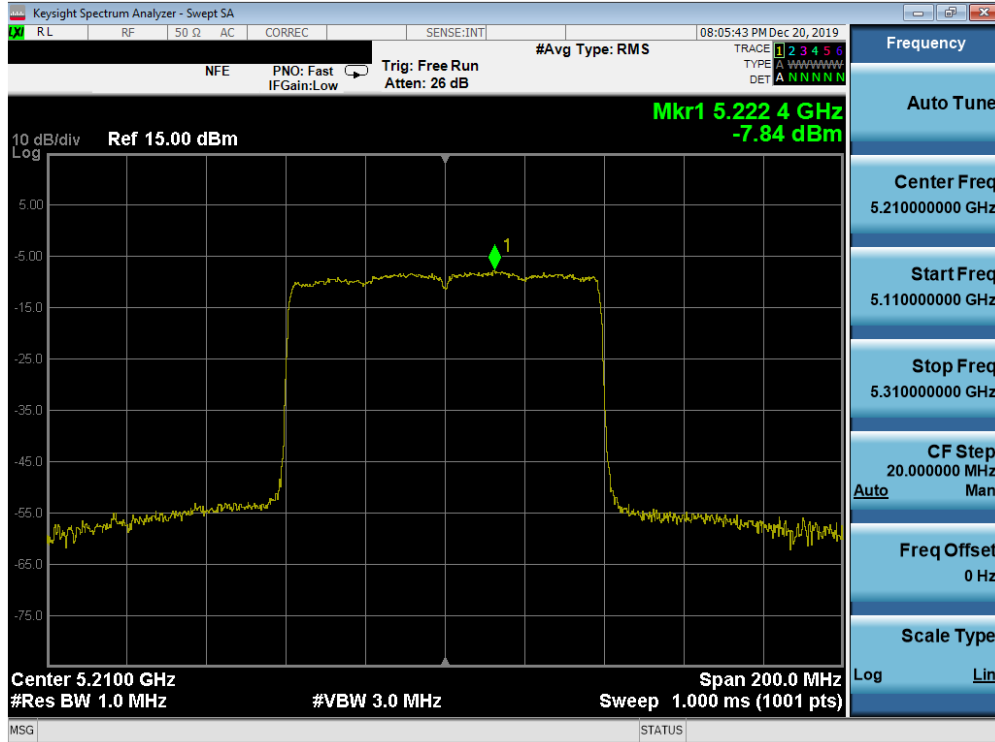


Plot 7-247. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax – Full Tones (UNII Band 1) – Ch. 38)

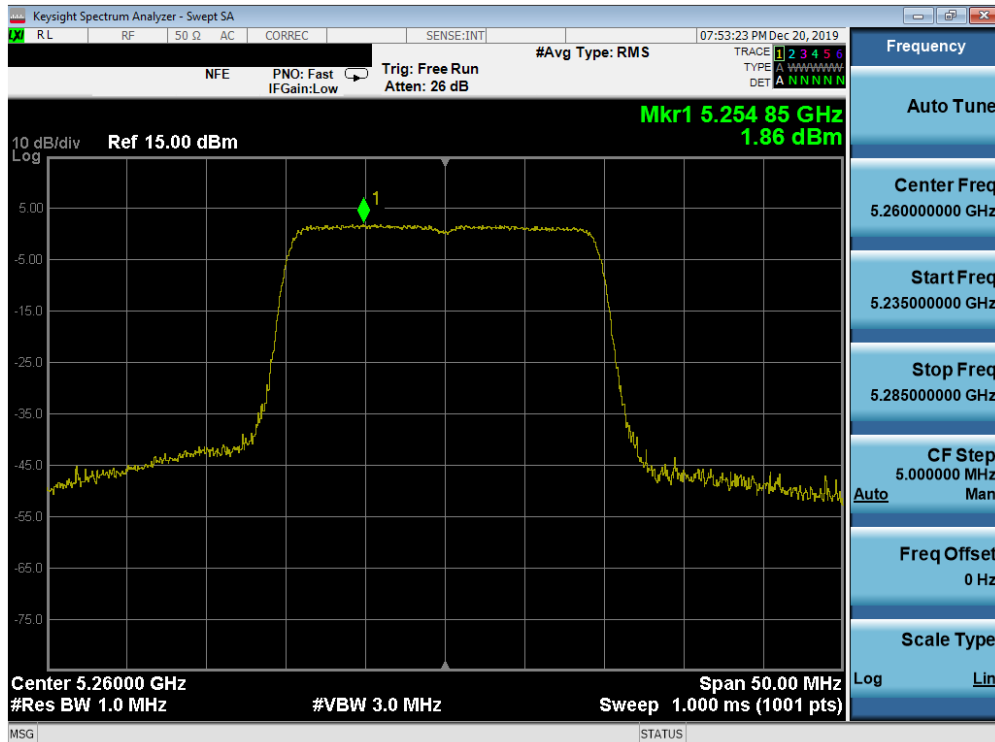


Plot 7-248. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax – Full Tones (UNII Band 1) – Ch. 46)

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 179 of 270

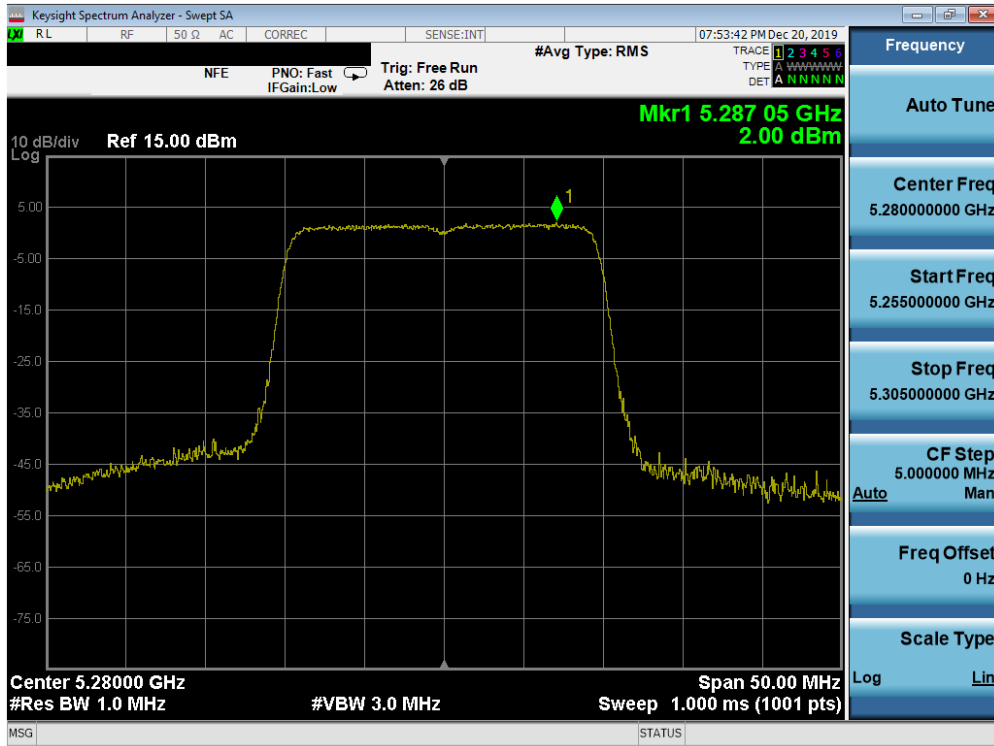


Plot 7-249. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ax – Full Tones (UNII Band 1) – Ch. 42)

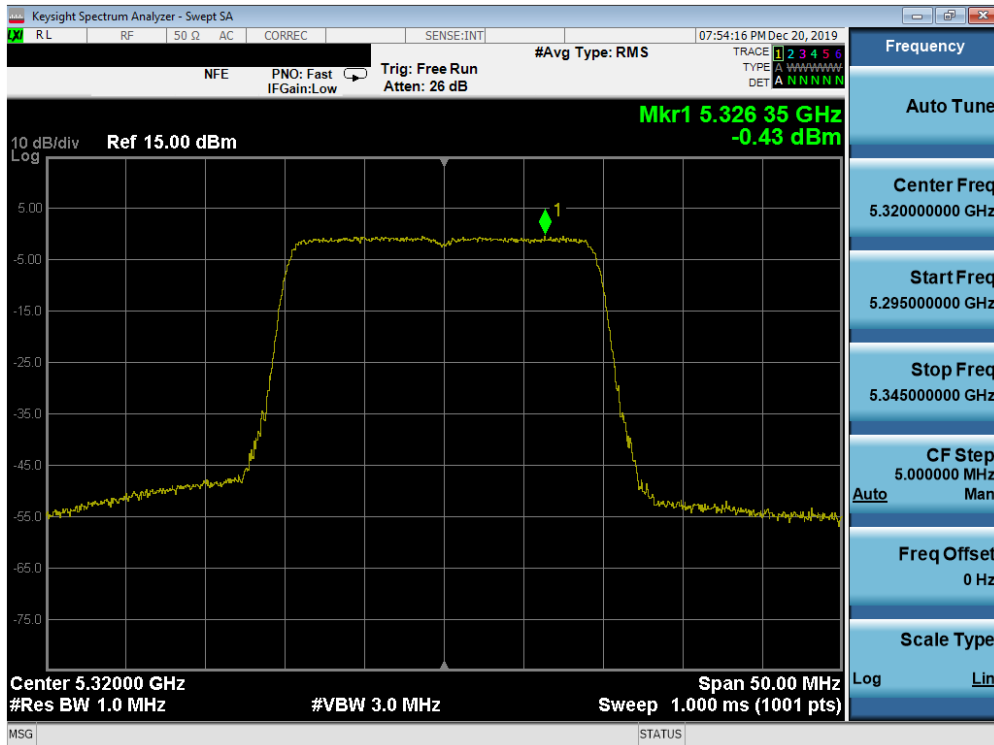


Plot 7-250. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 2A) – Ch. 52)

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 180 of 270

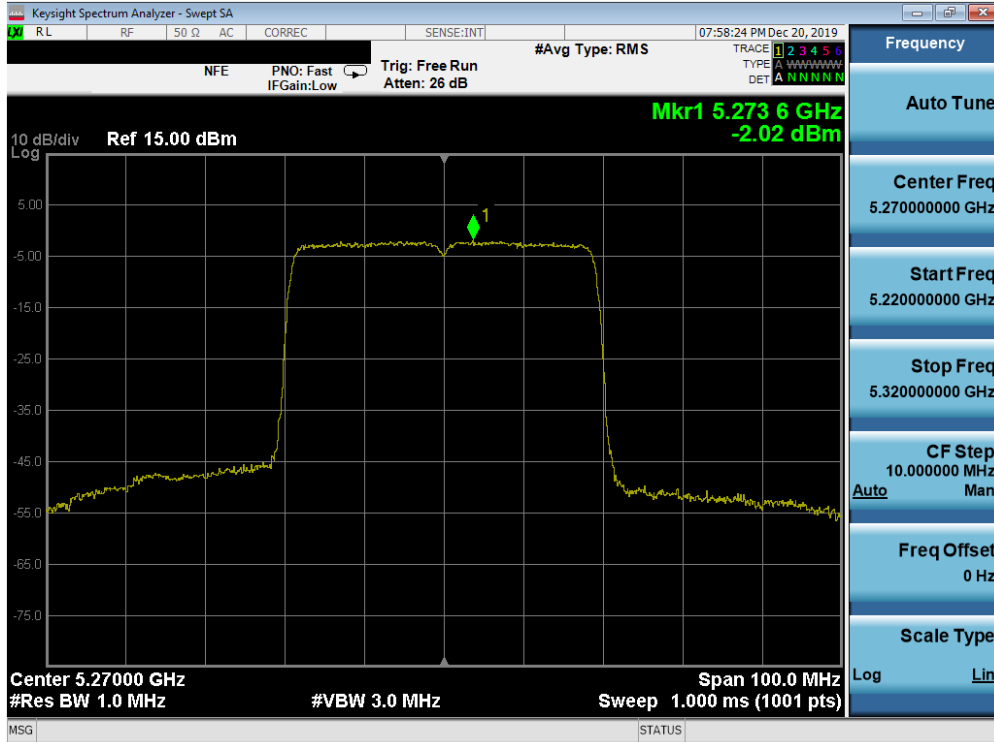


Plot 7-251. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 2A) – Ch. 56)

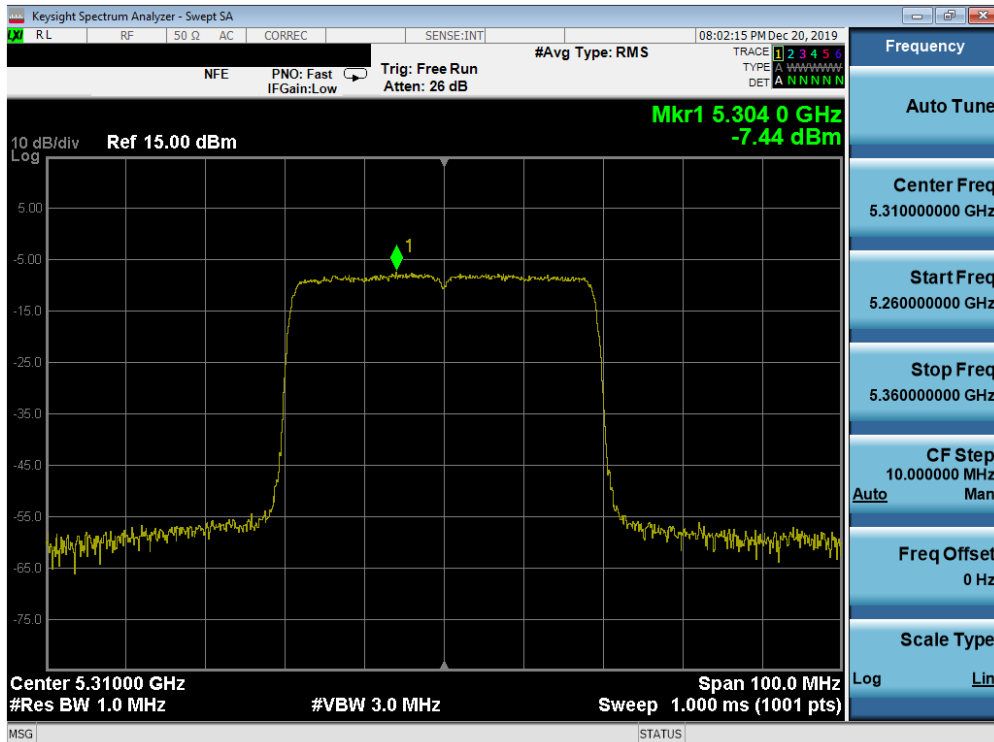


Plot 7-252. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 2A) – Ch. 64)

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 181 of 270



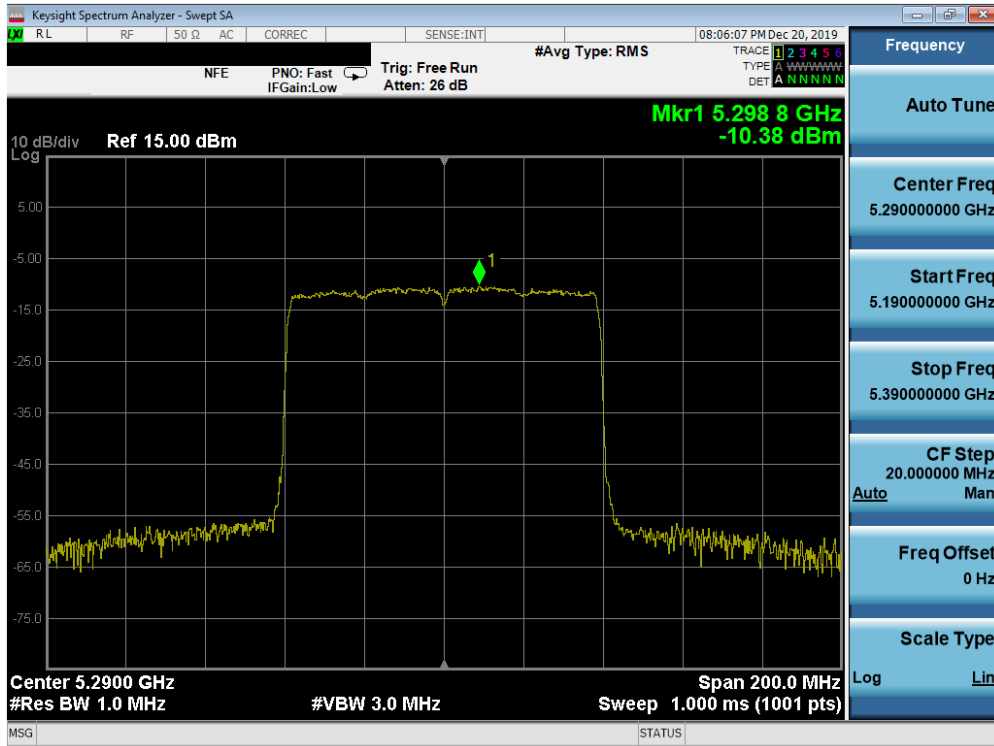
Plot 7-253. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax – Full Tones (UNII Band 2A) – Ch. 54)



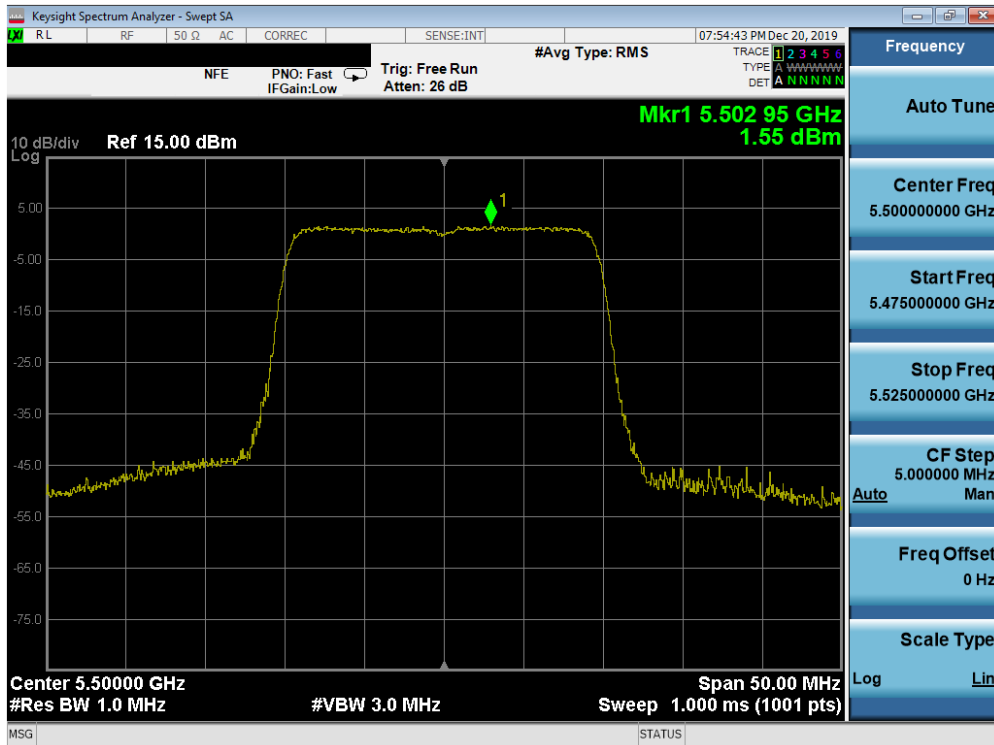
Plot 7-254. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax – Full Tones (UNII Band 2A) – Ch. 62)

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 182 of 270



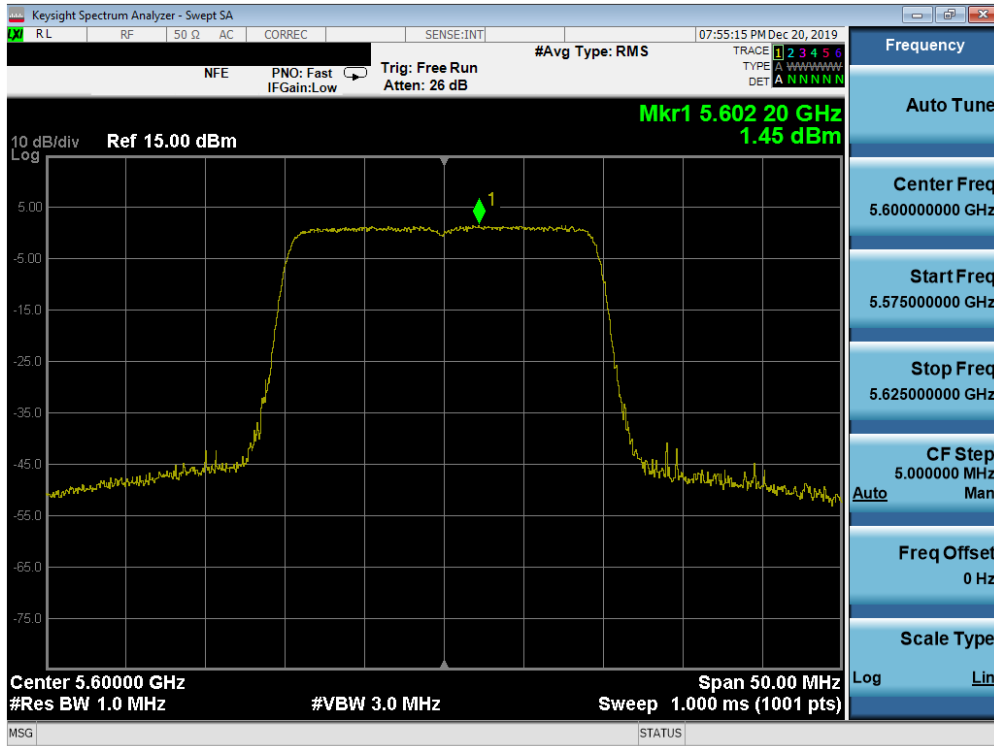


Plot 7-255. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ax – Full Tones (UNII Band 2A) – Ch. 58)

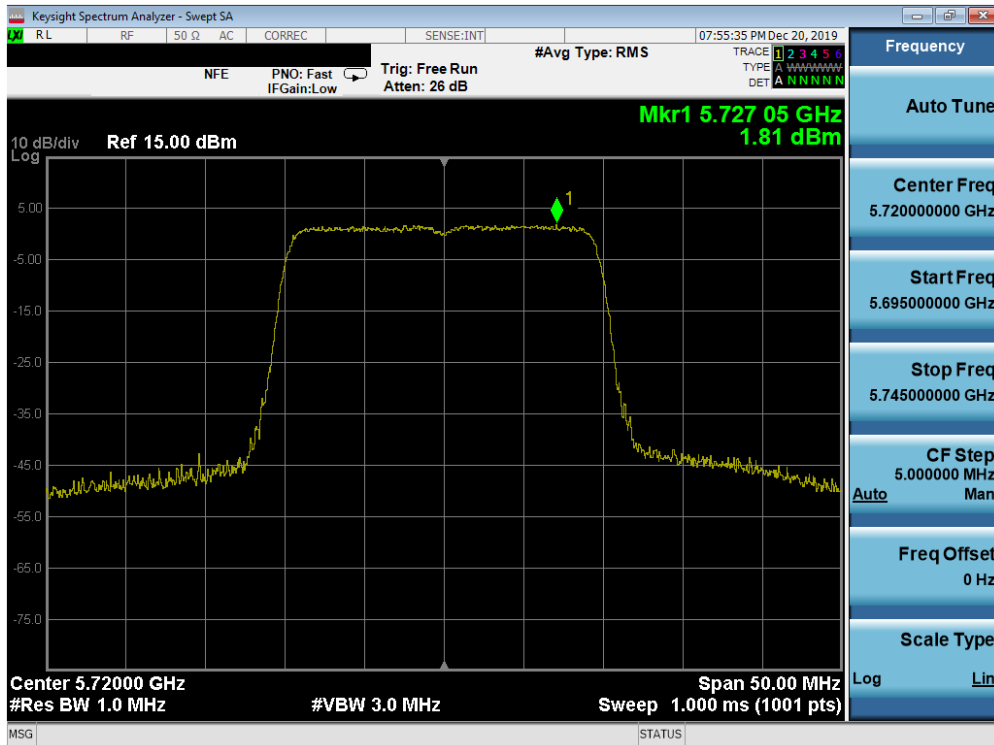


Plot 7-256. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 100)

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 183 of 270

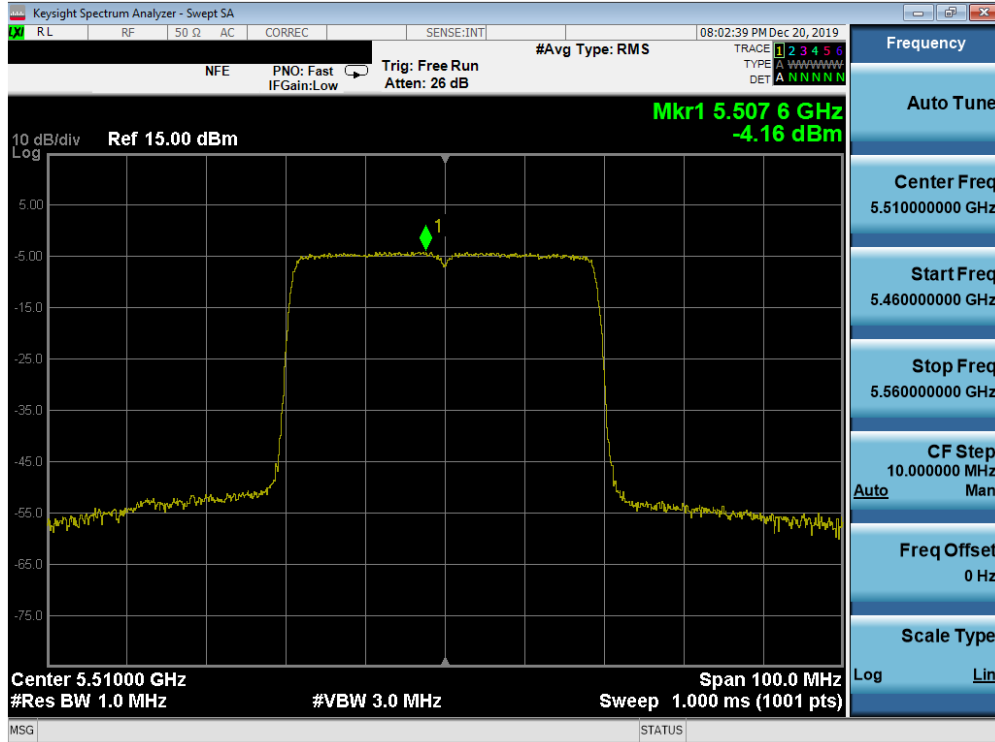


Plot 7-257. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 120)

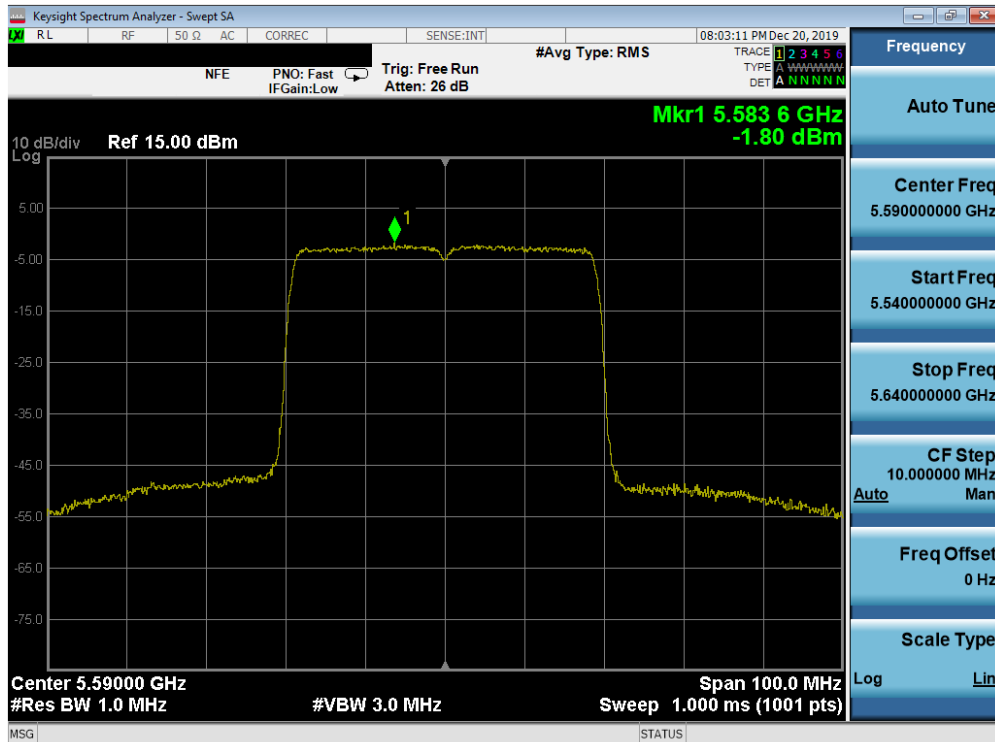


Plot 7-258. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 144)

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 184 of 270

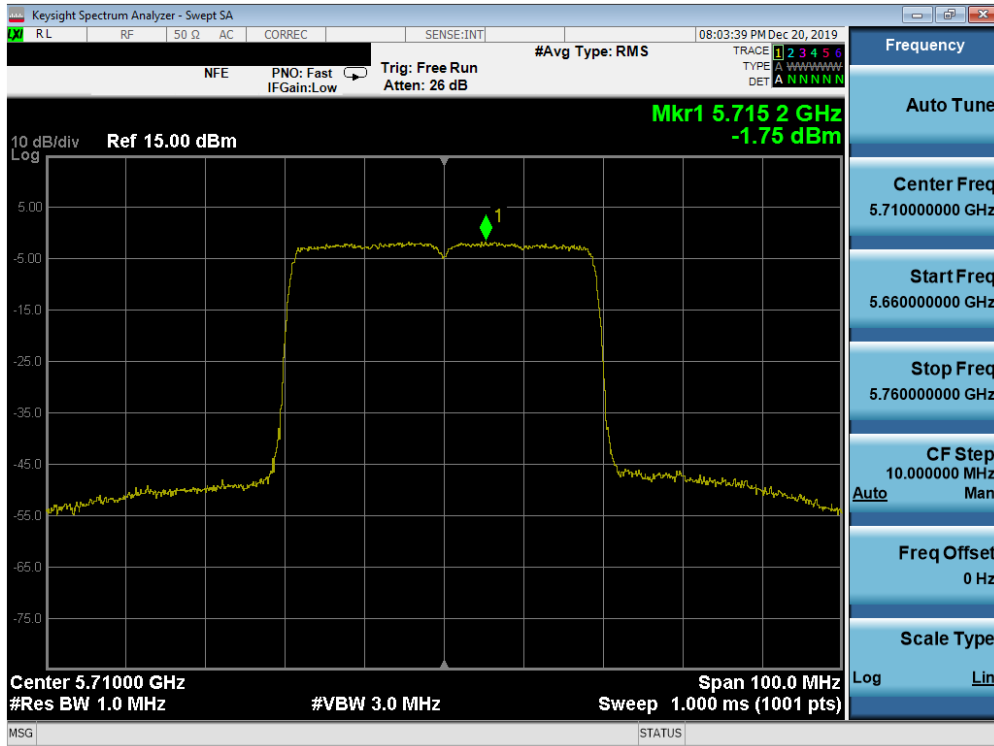


Plot 7-259. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 102)

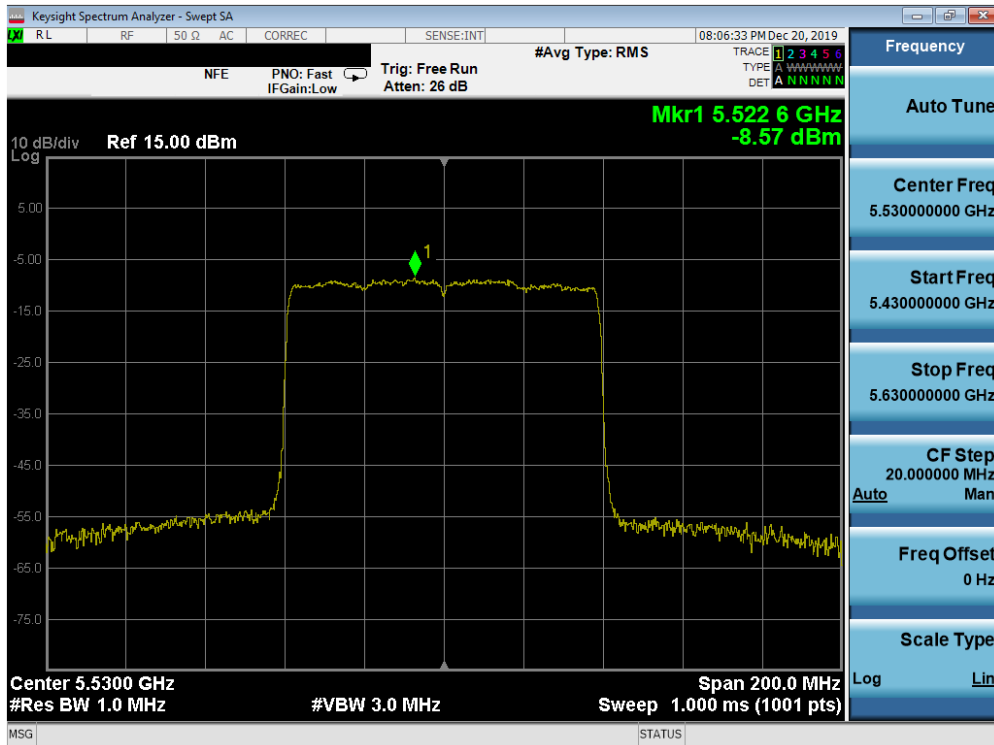


Plot 7-260. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 118)

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 185 of 270

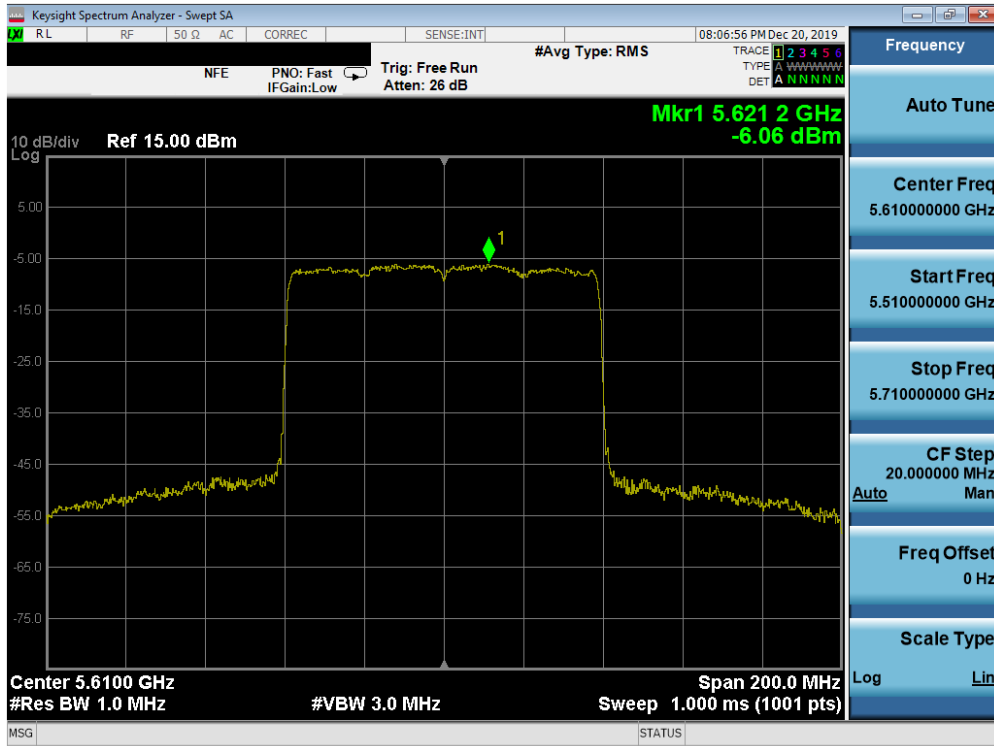


Plot 7-261. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 142)

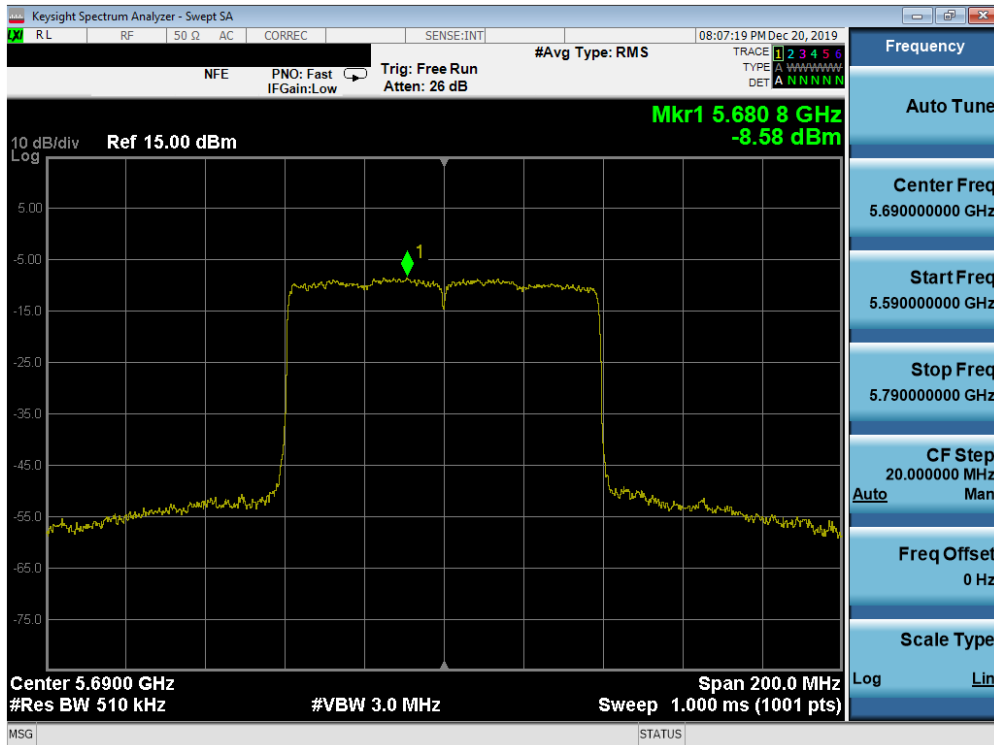


Plot 7-262. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 106)

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 186 of 270

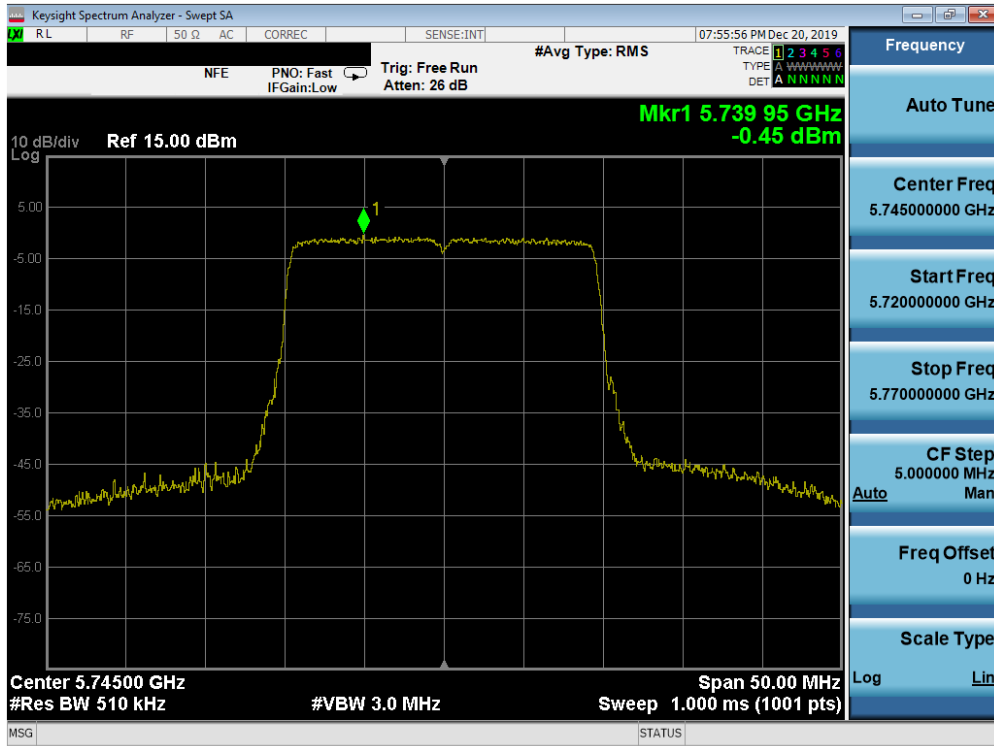


Plot 7-263. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 122)

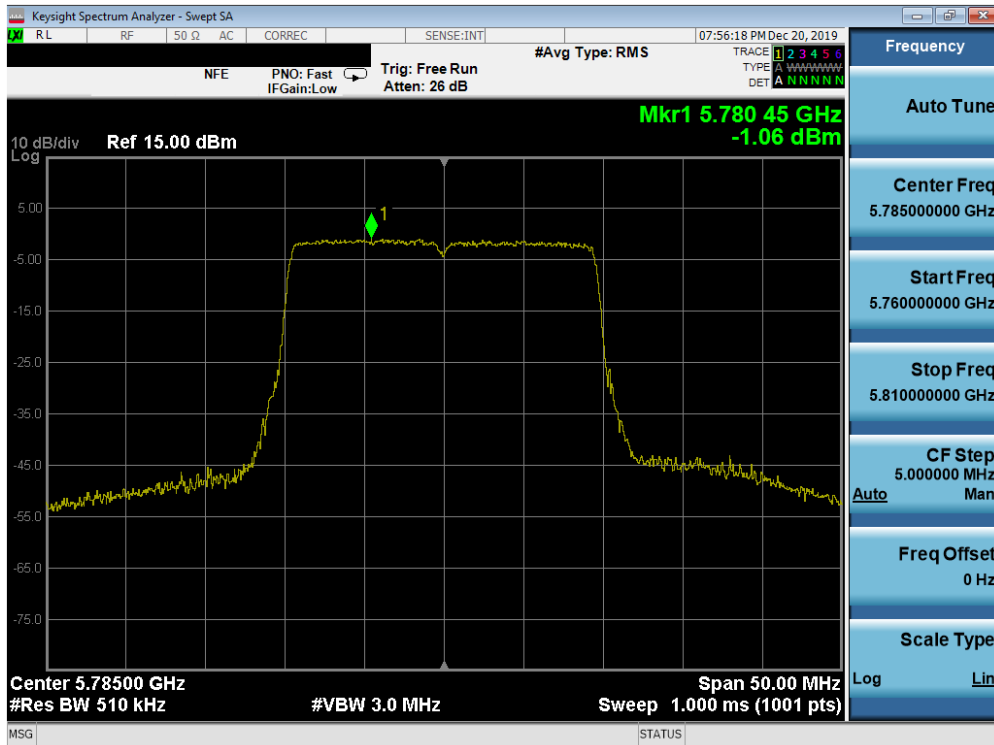


Plot 7-264. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 138)

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 187 of 270

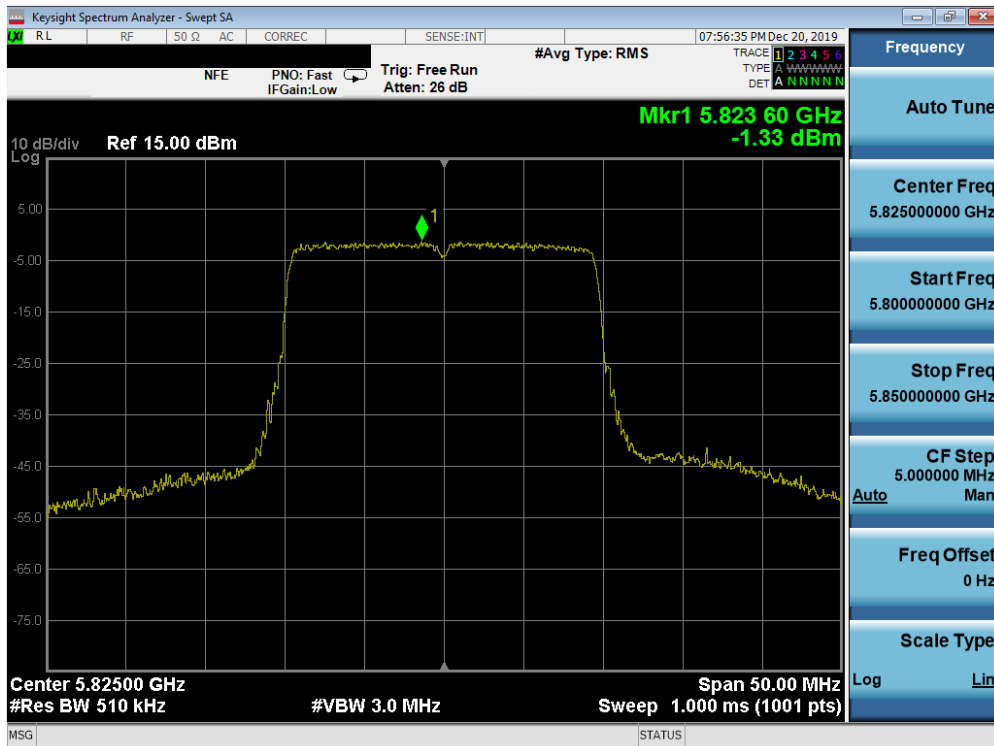


Plot 7-265. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 149)

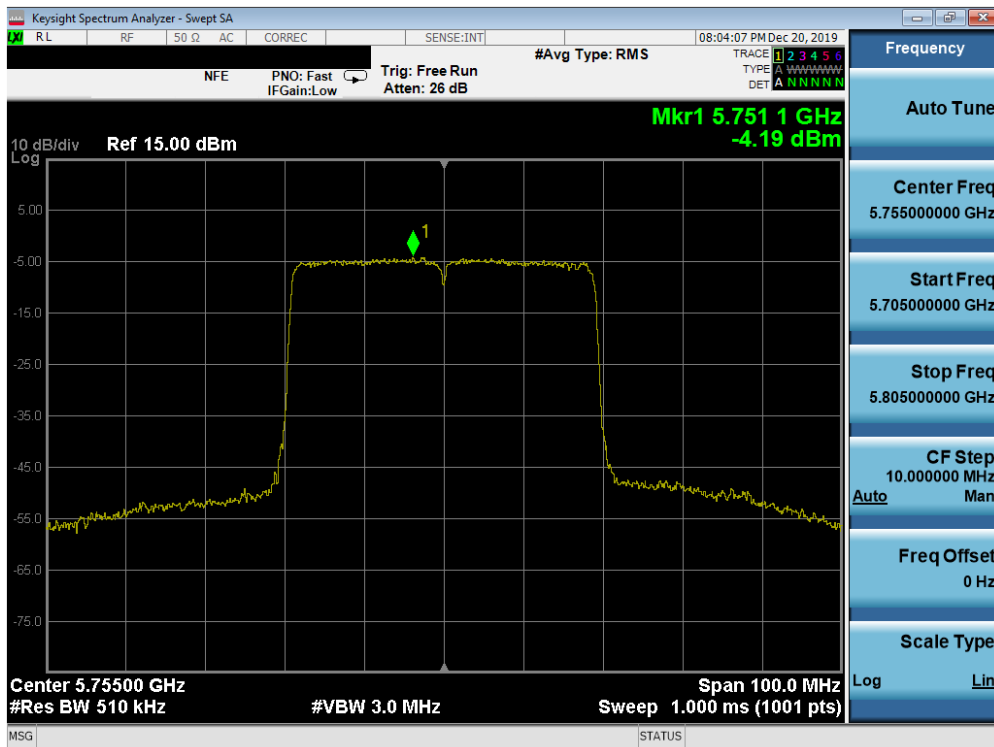


Plot 7-266. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 157)

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 188 of 270

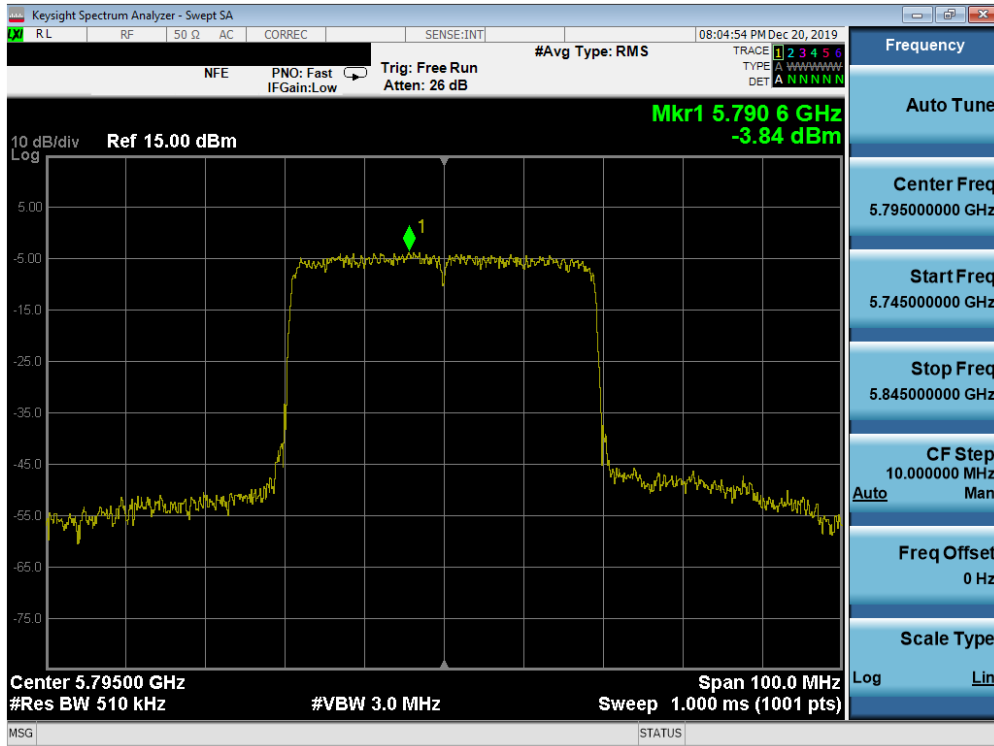


Plot 7-267. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 165)

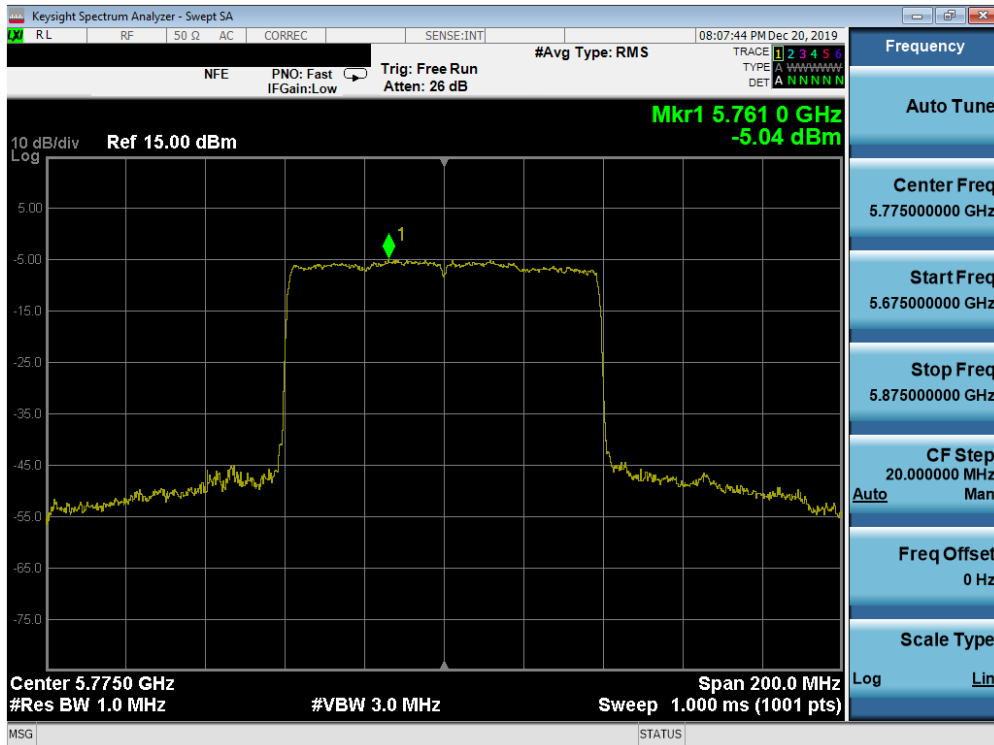


Plot 7-268. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 151)

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 189 of 270



Plot 7-269. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 159)



Plot 7-270. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 155)

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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## 7.6 Radiated Spurious Emission Measurements – Above 1GHz

§15.407(b) §15.205 §15.209; RSS-Gen [8.9]

### 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. 26 Tones, 52 Tones, 106 Tones, 242 Tones, 484 Tones and 996 Tones), 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 7-63 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 7-63. 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

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### Peak Measurements above 1GHz

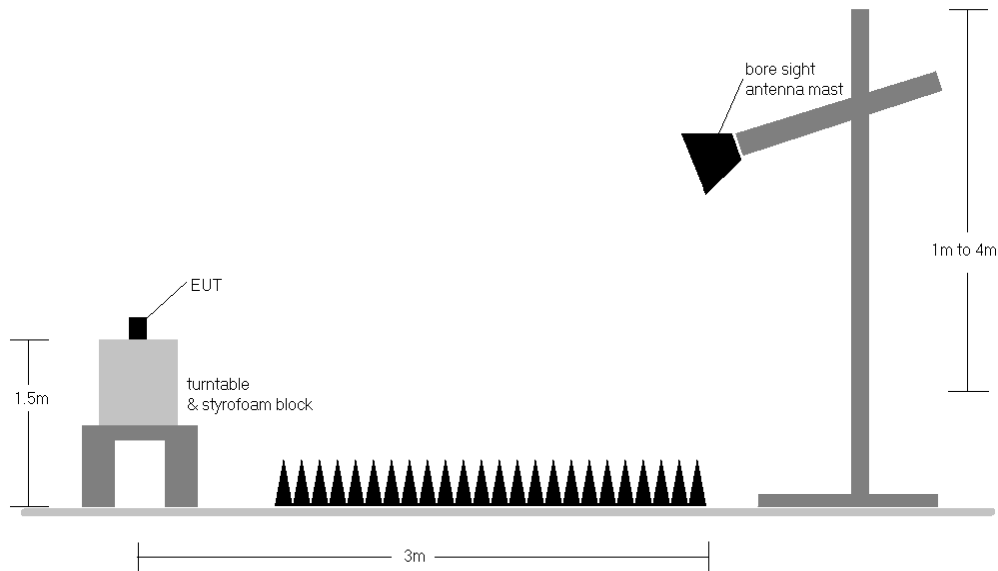
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

### 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: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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**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 7-30.
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 7-30. 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 dBµV/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 68.2dBµV/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. 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.
8. The "-" shown in the following RSE tables are used to denote a noise floor measurement.
9. For radiated measurements, emissions were investigated for the fully-loaded RU configuration and for all of the partially-loaded RU configurations. Among all of the available partially-loaded RU configurations, only the configuration with the worst case emissions is reported.

**Sample Calculations**

**Determining Spurious Emissions Levels**

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

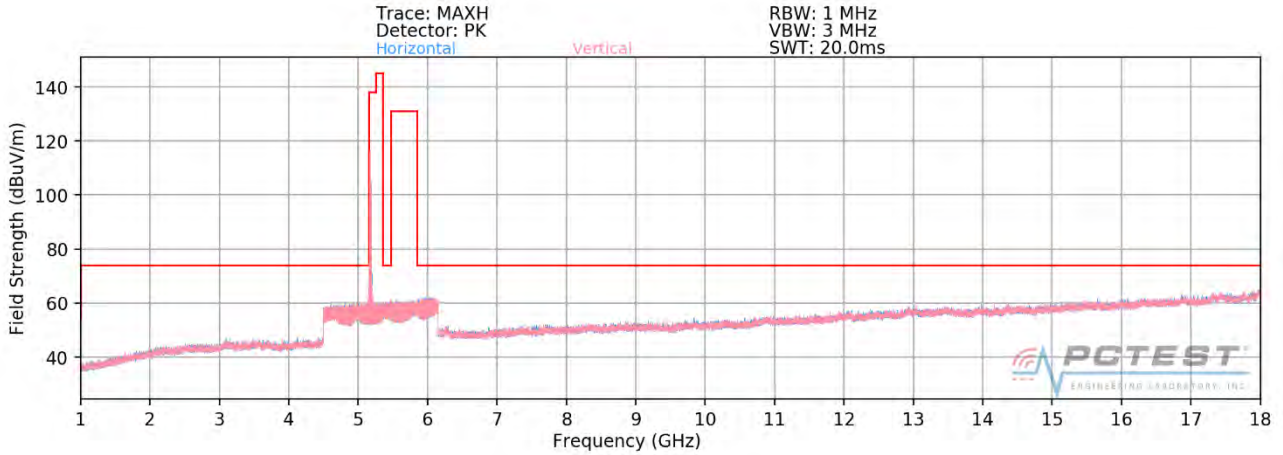
**Radiated Band Edge Measurement Offset**

- The amplitude offset shown in the radiated restricted band edge plots in Section Radiated Spurious Emission Measurements – Above 1GHz was calculated using the formula:  
Offset (dB) = (Antenna Factor + Cable Loss + Attenuator) – Preamplifier Gain

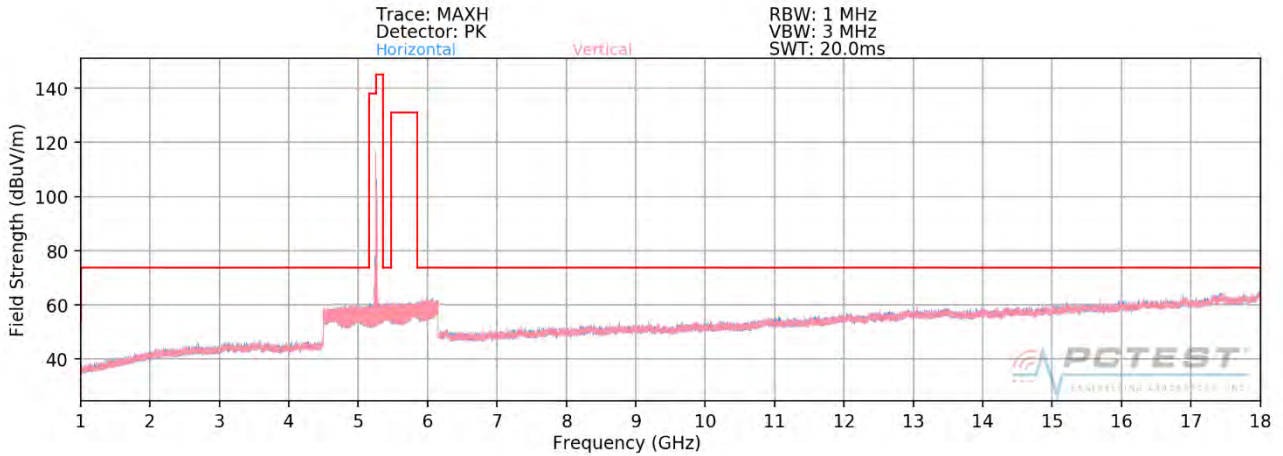
<b>FCC ID:</b> A3LSMG981JPN		<b>MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Approved by:</b> Quality Manager
<b>Test Report S/N:</b> 1M1911260209-06.A3L	<b>Test Dates:</b> 10/22/2019 - 1/28/2020	<b>EUT Type:</b> Portable Handset	Page 193 of 270	

## 7.6.1 SISO Antenna-1 Radiated Spurious Emission Measurements

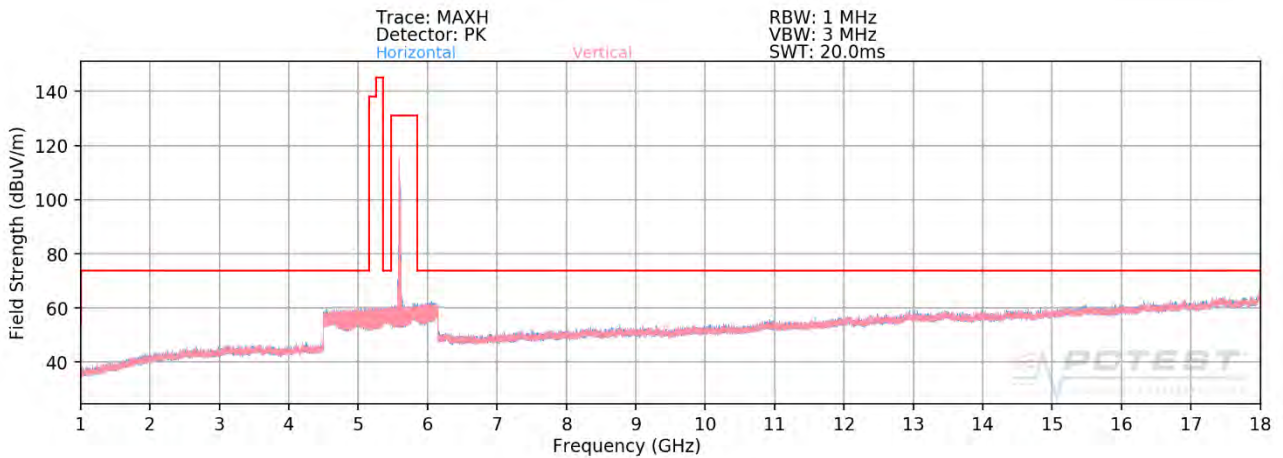
### 26 Tones



**Plot 7-271. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11ax – U1 Ch. 40 – 26 Tones)**

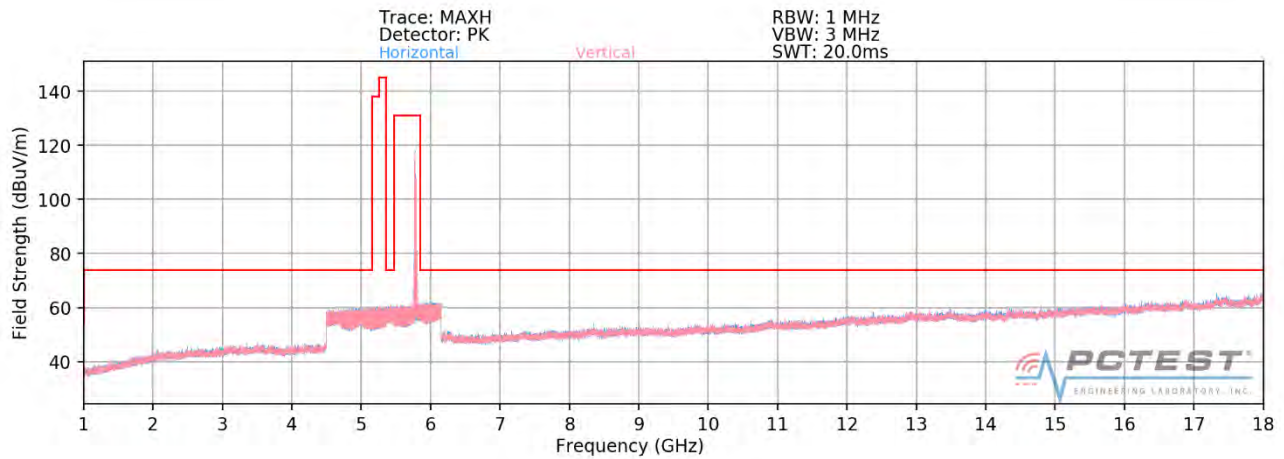


**Plot 7-272. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11ax – U2A Ch. 56 – 26 Tones)**



**Plot 7-273. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11ax – U2C Ch. 120 – 26 Tones)**

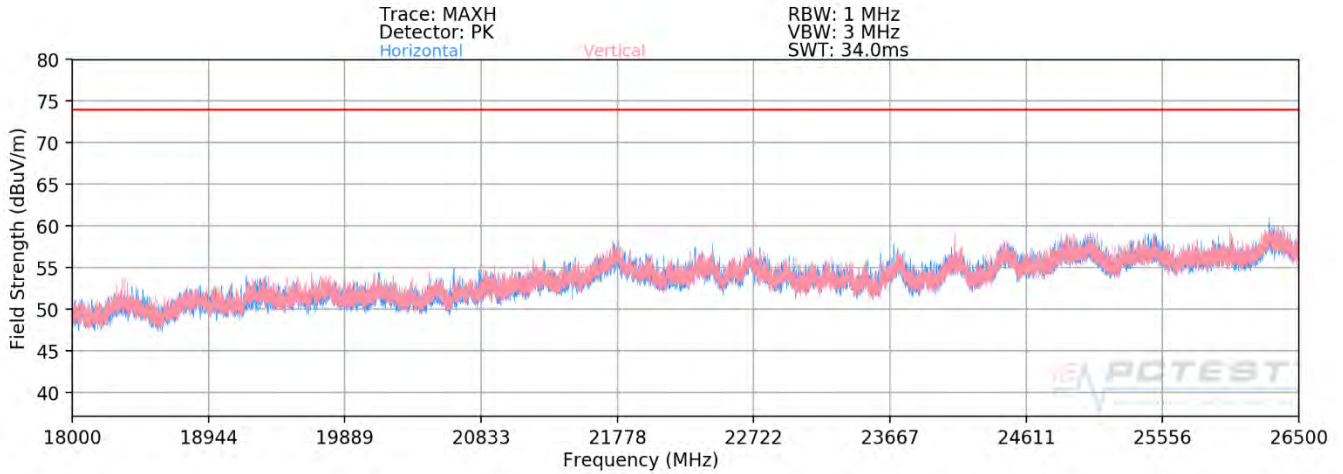
FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 194 of 270



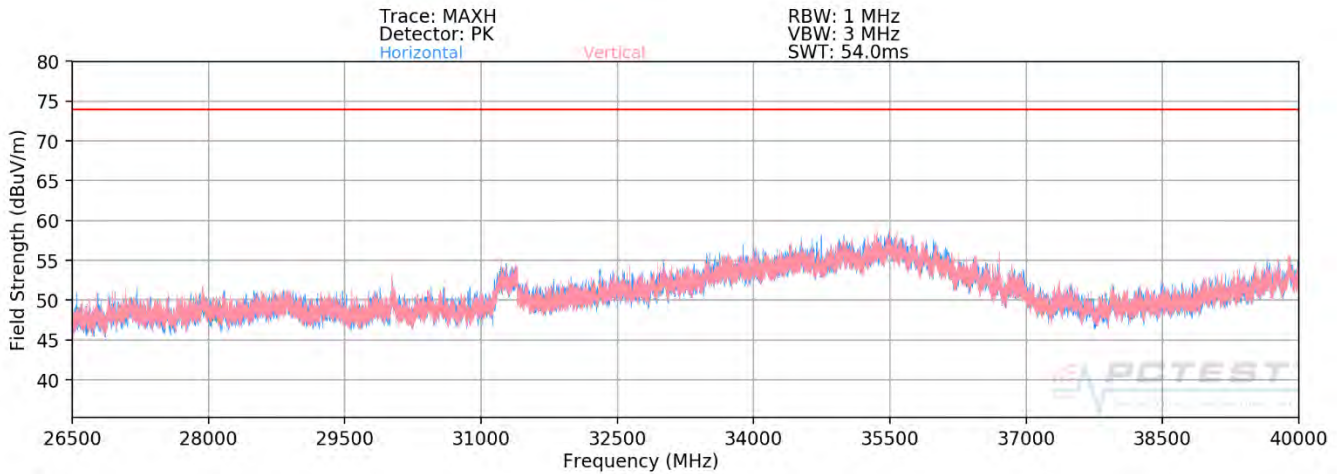
**Plot 7-274. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11ax – U3 Ch. 157 – 26 Tones)**

<b>FCC ID:</b> A3LSMG981JPN		<b>MEASUREMENT REPORT (CERTIFICATION)</b>	<b>Approved by:</b> Quality Manager
<b>Test Report S/N:</b> 1M1911260209-06.A3L	<b>Test Dates:</b> 10/22/2019 - 1/28/2020	<b>EUT Type:</b> Portable Handset	Page 195 of 270

### SISO Antenna-1 Radiated Spurious Emissions Measurements (Above 18GHz)



**Plot 7-275. Radiated Spurious Plot 18GHz - 26.5GHz SISO ANT1 (802.11ax – 26 Tones)**



**Plot 7-276. Radiated Spurious Plot 26.5GHz - 40GHz SISO ANT1 (802.11ax – 26 Tones)**

<b>FCC ID:</b> A3LSMG981JPN		<b>MEASUREMENT REPORT (CERTIFICATION)</b>	<b>Approved by:</b> Quality Manager
<b>Test Report S/N:</b> 1M1911260209-06.A3L	<b>Test Dates:</b> 10/22/2019 - 1/28/2020	<b>EUT Type:</b> Portable Handset	Page 196 of 270





## SISO Antenna-1 Radiated Spurious Emission Measurements (26 Tones)

§15.407(b) §15.205 & §15.209; RSS-Gen [8.9]

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	H	223	96	-70.02	11.41	0.00	48.39	68.20	-19.81
* 15540.00	Average	H	-	-	-81.26	13.23	0.00	38.97	53.98	-15.01
* 15540.00	Peak	H	-	-	-69.28	13.23	0.00	50.95	73.98	-23.03
* 20720.00	Average	H	-	-	-72.07	7.97	-9.54	33.36	53.98	-20.62
* 20720.00	Peak	H	-	-	-60.63	7.97	-9.54	44.80	73.98	-29.18
25900.00	Peak	H	-	-	-58.46	10.34	-9.54	49.34	68.20	-18.86

**Table 7-64. Radiated Measurements SISO ANT1 (26 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	H	241	106	-69.34	11.17	0.00	48.83	68.20	-19.37
* 15600.00	Average	H	-	-	-82.39	12.81	0.00	37.42	53.98	-16.56
* 15600.00	Peak	H	-	-	-70.28	12.81	0.00	49.53	73.98	-24.45
* 20800.00	Average	H	-	-	-72.19	8.33	-9.54	33.60	53.98	-20.38
* 20800.00	Peak	H	-	-	-60.75	8.33	-9.54	45.04	73.98	-28.94
26000.00	Peak	H	-	-	-58.58	10.61	-9.54	49.49	68.20	-18.71

**Table 7-65. Radiated Measurements SISO ANT1 (26 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 197 of 270

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	H	256	113	-70.25	11.37	0.00	48.12	68.20	-20.08
* 15720.00	Average	H	-	-	-80.46	15.18	0.00	41.72	53.98	-12.26
* 15720.00	Peak	H	-	-	-68.99	15.18	0.00	53.19	73.98	-20.79
* 20960.00	Average	H	-	-	-72.57	8.52	-9.54	33.41	53.98	-20.57
* 20960.00	Peak	H	-	-	-60.18	8.52	-9.54	45.80	73.98	-28.18
26200.00	Peak	H	-	-	-58.01	10.69	-9.54	50.14	68.20	-18.06

**Table 7-66. Radiated Measurements SISO ANT1 (26 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	H	246	123	-69.66	11.86	0.00	49.20	68.20	-19.00
* 15780.00	Average	H	-	-	-81.22	13.75	0.00	39.53	53.98	-14.45
* 15780.00	Peak	H	-	-	-69.46	13.75	0.00	51.29	73.98	-22.69
* 21040.00	Average	H	-	-	-71.91	8.82	-9.54	34.37	53.98	-19.61
* 21040.00	Peak	H	-	-	-60.23	8.82	-9.54	46.05	73.98	-27.93
26300.00	Peak	H	-	-	-57.31	11.42	-9.54	51.57	68.20	-16.63

**Table 7-67. Radiated Measurements SISO ANT1 (26 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset	Page 198 of 270	



Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	H	-	-	-70.23	12.47	0.00	49.24	68.20	-18.96
* 15840.00	Average	H	-	-	-79.66	15.16	0.00	42.50	53.98	-11.48
* 15840.00	Peak	H	-	-	-71.33	15.16	0.00	50.83	73.98	-23.15
* 21120.00	Average	H	-	-	-71.71	8.63	-9.54	34.38	53.98	-19.60
* 21120.00	Peak	H	-	-	-60.73	8.63	-9.54	45.36	73.98	-28.62
26400.00	Peak	H	-	-	-58.21	11.11	-9.54	50.36	68.20	-17.84

**Table 7-68. Radiated Measurements SISO ANT1 (26 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	H	110	55	-78.38	13.08	0.00	41.70	53.98	-12.28
* 10640.00	Peak	H	110	55	-68.36	13.08	0.00	51.72	73.98	-22.26
* 15960.00	Average	H	-	-	-82.33	13.43	0.00	38.10	53.98	-15.88
* 15960.00	Peak	H	-	-	-69.39	13.43	0.00	51.04	73.98	-22.94
* 21280.00	Average	H	-	-	-71.00	9.03	-9.54	35.49	53.98	-18.49
* 21280.00	Peak	H	-	-	-59.86	9.03	-9.54	46.63	73.98	-27.35
26600.00	Peak	H	-	-	-51.68	-4.38	-9.54	41.40	68.20	-26.80

**Table 7-69. Radiated Measurements SISO ANT1 (26 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset	Page 199 of 270	



Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	H	369	177	-78.66	12.53	0.00	40.87	53.98	-13.11
* 11000.00	Peak	H	369	177	-69.26	12.53	0.00	50.27	73.98	-23.71
16500.00	Peak	H	-	-	-71.29	15.04	0.00	50.75	68.20	-17.45
22000.00	Peak	H	-	-	-59.48	9.58	-9.54	47.56	68.20	-20.64
27500.00	Peak	H	-	-	-50.74	-5.56	-9.54	41.16	68.20	-27.04

**Table 7-70. Radiated Measurements SISO ANT1 (26 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	H	274	155	-80.33	12.67	0.00	39.34	53.98	-14.64
* 11200.00	Peak	H	274	155	-69.33	12.67	0.00	50.34	73.98	-23.64
16800.00	Peak	H	-	-	-67.86	16.04	0.00	55.18	68.20	-13.02
* 22400.00	Average	H	-	-	-71.33	10.49	-9.54	36.62	53.98	-17.36
* 22400.00	Peak	H	-	-	-59.96	10.49	-9.54	47.99	73.98	-25.99
28000.00	Peak	H	-	-	-50.59	-4.84	-9.54	42.03	68.20	-26.17

**Table 7-71. Radiated Measurements SISO ANT1 (26 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 200 of 270

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	H	-	-	-81.22	12.70	0.00	38.48	53.98	-15.50
* 11440.00	Peak	H	-	-	-69.04	12.70	0.00	50.66	73.98	-23.32
17160.00	Peak	H	-	-	-69.99	17.71	0.00	54.72	68.20	-13.48
* 22880.00	Average	H	-	-	-72.40	9.96	-9.54	35.02	53.98	-18.96
* 22880.00	Peak	H	-	-	-60.81	9.96	-9.54	46.61	73.98	-27.37
28600.00	Peak	H	-	-	-50.46	-4.40	-9.54	42.60	68.20	-25.60

**Table 7-72. Radiated Measurements SISO ANT1 (26 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	H	-	-	-80.13	13.38	0.00	40.25	53.98	-13.73
* 11490.00	Peak	H	-	-	-68.33	13.38	0.00	52.05	73.98	-21.93
17235.00	Peak	H	-	-	-69.38	17.44	0.00	55.06	68.20	-13.14
* 22980.00	Average	H	-	-	-72.19	10.35	-9.54	35.62	53.98	-18.36
* 22980.00	Peak	H	-	-	-60.81	10.35	-9.54	47.00	73.98	-26.98
28725.00	Peak	H	-	-	-50.47	-4.88	-9.54	42.11	68.20	-26.09

**Table 7-73. Radiated Measurements SISO ANT1 (26 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset	Page 201 of 270	

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	H	-	-	-79.33	12.70	0.00	40.37	53.98	-13.61
* 11570.00	Peak	H	-	-	-68.46	12.70	0.00	51.24	73.98	-22.74
17355.00	Peak	H	-	-	-69.62	19.46	0.00	56.84	68.20	-11.36
23140.00	Peak	H	-	-	-60.54	10.05	-9.54	46.97	68.20	-21.23
28925.00	Peak	H	-	-	-50.73	-5.11	-9.54	41.62	68.20	-26.58

**Table 7-74. Radiated Measurements SISO ANT1 (26 Tones)**

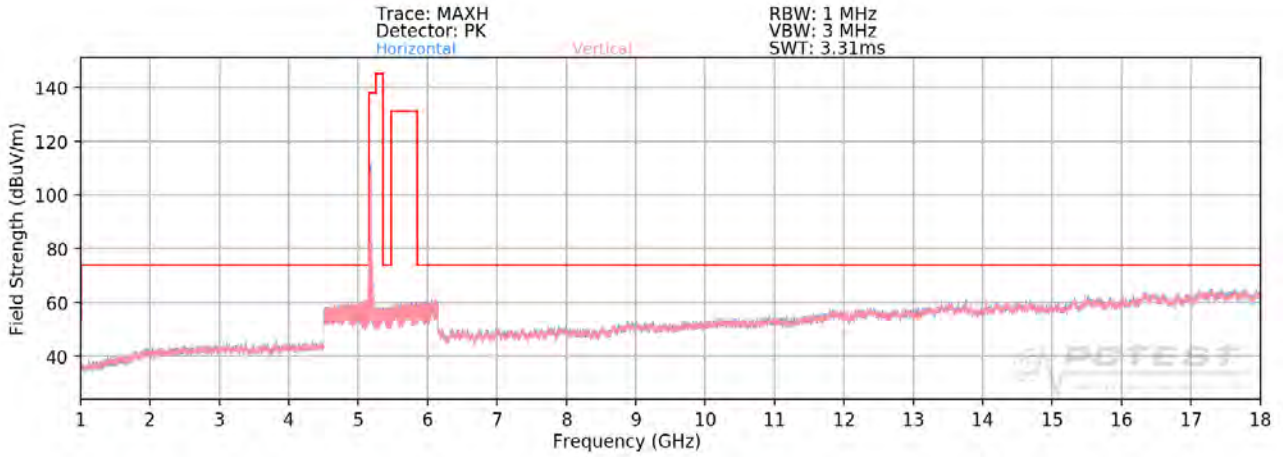
Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5825MHz  
 Channel: 165

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	H	-	-	-81.22	13.24	0.00	39.02	53.98	-14.96
* 11650.00	Peak	H	-	-	-69.76	13.24	0.00	50.48	73.98	-23.50
17475.00	Peak	H	-	-	-68.33	20.06	0.00	58.73	68.20	-9.47
23300.00	Peak	H	-	-	-60.53	9.39	-9.54	46.32	68.20	-21.88
29125.00	Peak	H	-	-	-50.14	-6.06	-9.54	41.26	68.20	-26.94

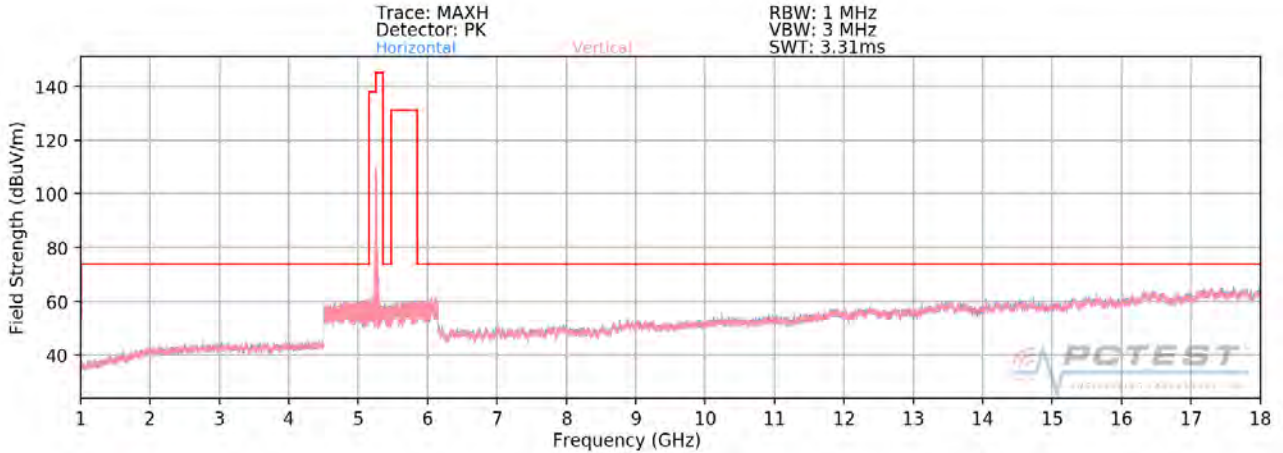
**Table 7-75. Radiated Measurements SISO ANT1 (26 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset	Page 202 of 270	

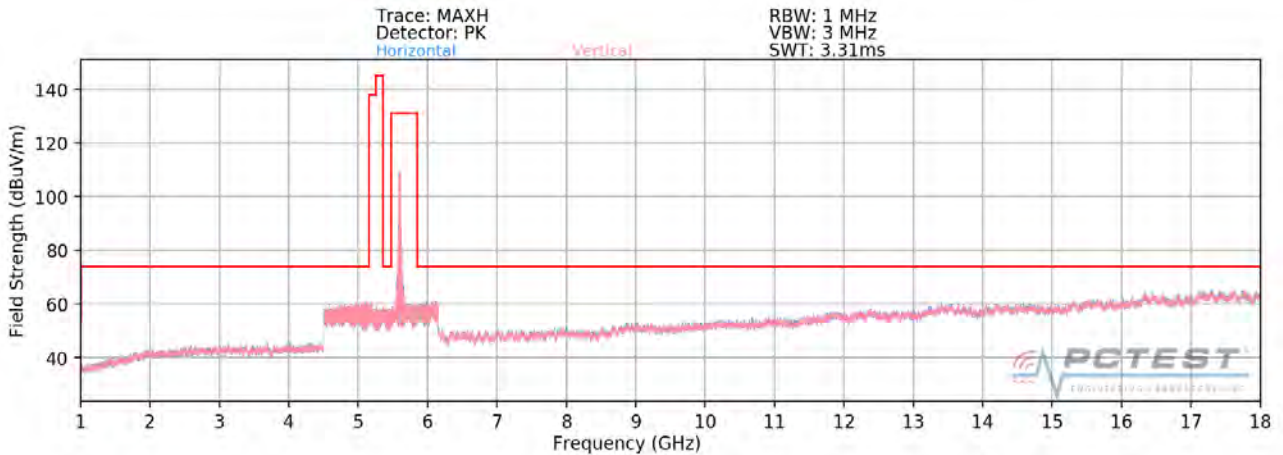
## 242 Tones



**Plot 7-277. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11ax – U1 Ch. 40 – 242 Tones)**

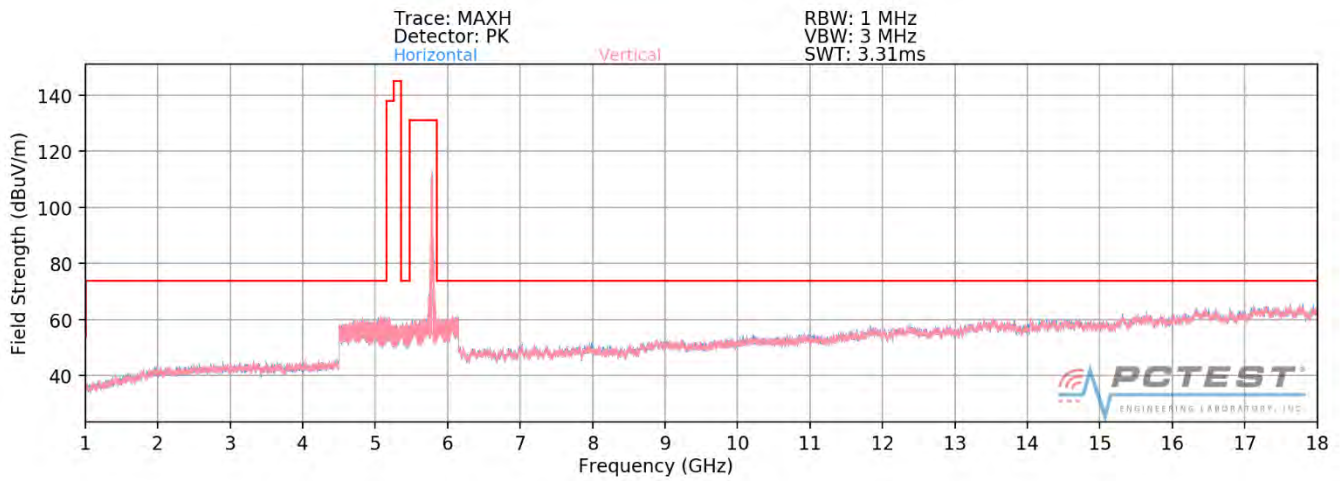


**Plot 7-278. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11ax – U2A Ch. 56 – 242 Tones)**



**Plot 7-279. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11ax – U2C Ch. 120 – 242 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 203 of 270

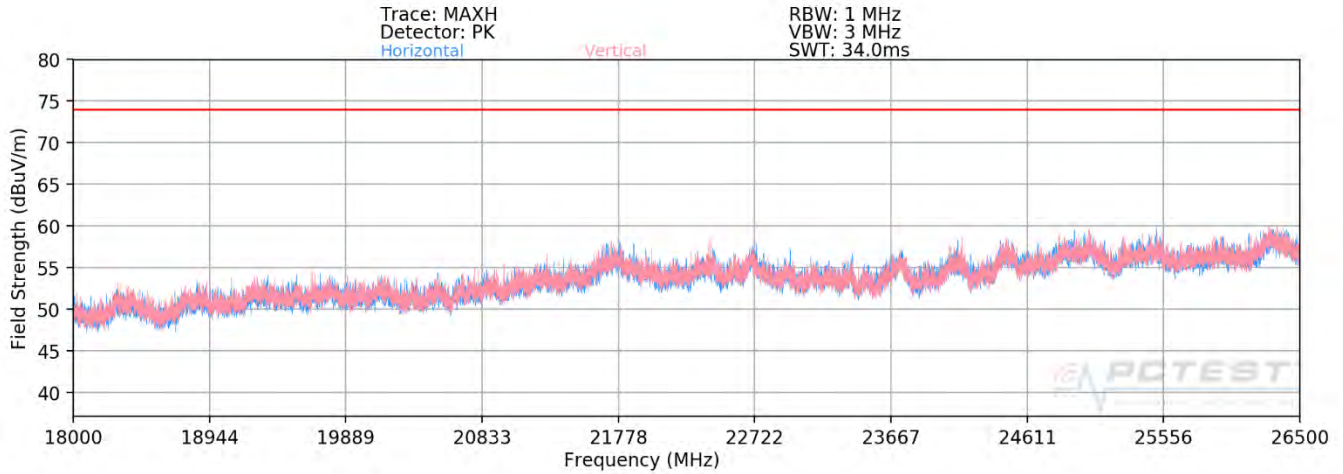


**Plot 7-280. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11ax – U3 Ch. 157 – 242 Tones)**

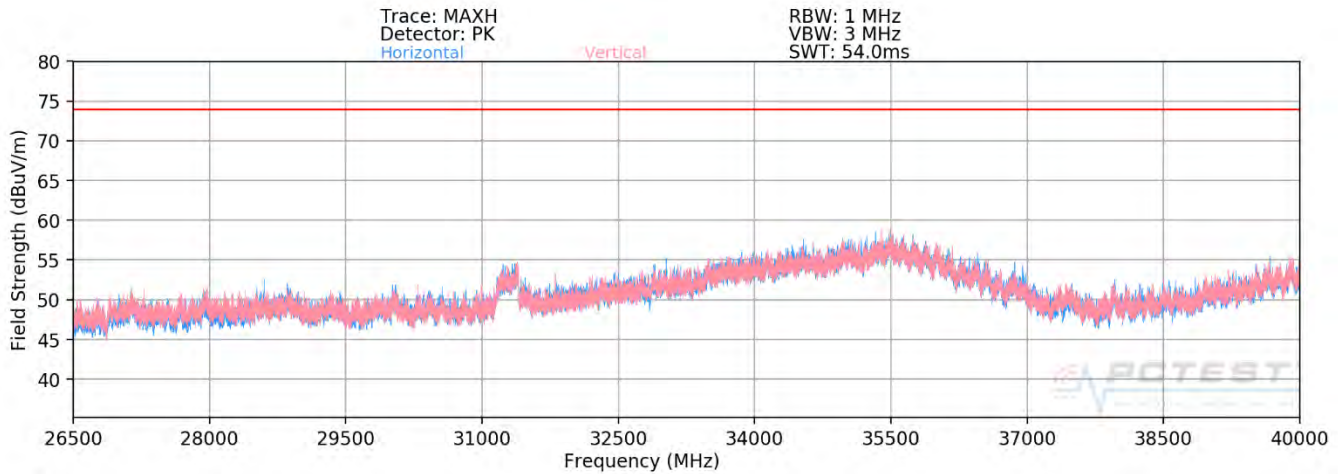
<b>FCC ID:</b> A3LSMG981JPN		<b>MEASUREMENT REPORT (CERTIFICATION)</b>	<b>Approved by:</b> Quality Manager
<b>Test Report S/N:</b> 1M1911260209-06.A3L	<b>Test Dates:</b> 10/22/2019 - 1/28/2020	<b>EUT Type:</b> Portable Handset	Page 204 of 270



## SISO Antenna-1 Radiated Spurious Emissions Measurements (Above 18GHz)



**Plot 7-281. Radiated Spurious Plot 18GHz - 26.5GHz SISO ANT1 (802.11ax – 242 Tones)**



**Plot 7-282. Radiated Spurious Plot 26.5GHz - 40GHz SISO ANT1 (802.11ax – 242 Tones)**

<b>FCC ID:</b> A3LSMG981JPN		<b>MEASUREMENT REPORT (CERTIFICATION)</b>	<b>Approved by:</b> Quality Manager
<b>Test Report S/N:</b> 1M1911260209-06.A3L	<b>Test Dates:</b> 10/22/2019 - 1/28/2020	<b>EUT Type:</b> Portable Handset	Page 205 of 270

## SISO Antenna-1 Radiated Spurious Emission Measurements (242 Tones)

§15.407(b) §15.205 & §15.209; RSS-Gen [8.9]

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	H	266	44	-68.57	11.41	0.00	49.84	68.20	-18.36
* 15540.00	Average	H	-	-	-83.42	13.23	0.00	36.81	53.98	-17.17
* 15540.00	Peak	H	-	-	-70.76	13.23	0.00	49.47	73.98	-24.51
* 20720.00	Average	H	-	-	-72.07	7.97	-9.54	33.36	53.98	-20.62
* 20720.00	Peak	H	-	-	-60.31	7.97	-9.54	45.12	73.98	-28.86
25900.00	Peak	H	-	-	-58.63	10.34	-9.54	49.17	68.20	-19.03

**Table 7-76. Radiated Measurements SISO ANT1 (242 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	H	282	47	-68.88	11.17	0.00	49.29	68.20	-18.91
* 15600.00	Average	H	-	-	-83.90	12.81	0.00	35.91	53.98	-18.07
* 15600.00	Peak	H	-	-	-70.78	12.81	0.00	49.03	73.98	-24.95
* 20800.00	Average	H	-	-	-72.24	8.33	-9.54	33.55	53.98	-20.43
* 20800.00	Peak	H	-	-	-61.06	8.33	-9.54	44.73	73.98	-29.25
26000.00	Peak	H	-	-	-58.36	10.61	-9.54	49.71	68.20	-18.49

**Table 7-77. Radiated Measurements SISO ANT1 (242 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 206 of 270



Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	H	278	35	-68.63	11.37	0.00	49.74	68.20	-18.46
* 15720.00	Average	H	-	-	-83.46	15.18	0.00	38.72	53.98	-15.26
* 15720.00	Peak	H	-	-	-69.90	15.18	0.00	52.28	73.98	-21.70
* 20960.00	Average	H	-	-	-72.55	8.52	-9.54	33.43	53.98	-20.55
* 20960.00	Peak	H	-	-	-61.14	8.52	-9.54	44.84	73.98	-29.14
26200.00	Peak	H	-	-	-59.18	10.69	-9.54	48.97	68.20	-19.23

**Table 7-78. Radiated Measurements SISO ANT1 (242 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	H	297	44	-68.89	11.86	0.00	49.97	68.20	-18.23
* 15780.00	Average	H	-	-	-84.04	13.75	0.00	36.71	53.98	-17.27
* 15780.00	Peak	H	-	-	-71.08	13.75	0.00	49.67	73.98	-24.31
* 21040.00	Average	H	-	-	-71.94	8.82	-9.54	34.34	53.98	-19.64
* 21040.00	Peak	H	-	-	-60.62	8.82	-9.54	45.66	73.98	-28.32
26300.00	Peak	H	-	-	-58.20	11.42	-9.54	50.68	68.20	-17.52

**Table 7-79. Radiated Measurements SISO ANT1 (242 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset	Page 207 of 270	

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	H	303	55	-68.34	12.47	0.00	51.13	68.20	-17.07
* 15840.00	Average	H	-	-	-83.35	15.16	0.00	38.81	53.98	-15.17
* 15840.00	Peak	H	-	-	-70.71	15.16	0.00	51.45	73.98	-22.53
* 21120.00	Average	H	-	-	-71.70	8.63	-9.54	34.39	53.98	-19.59
* 21120.00	Peak	H	-	-	-60.15	8.63	-9.54	45.94	73.98	-28.04
26400.00	Peak	H	-	-	-57.84	11.11	-9.54	50.73	68.20	-17.47

**Table 7-80. Radiated Measurements SISO ANT1 (242 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	H	279	35	-80.90	13.08	0.00	39.18	53.98	-14.80
* 10640.00	Peak	H	279	35	-68.06	13.08	0.00	52.02	73.98	-21.96
* 15960.00	Average	H	-	-	-84.17	13.43	0.00	36.26	53.98	-17.72
* 15960.00	Peak	H	-	-	-71.12	13.43	0.00	49.31	73.98	-24.67
* 21280.00	Average	H	-	-	-71.35	9.03	-9.54	35.14	53.98	-18.84
* 21280.00	Peak	H	-	-	-59.81	9.03	-9.54	46.68	73.98	-27.30
26600.00	Peak	H	-	-	-51.83	-4.38	-9.54	41.25	68.20	-26.95

**Table 7-81. Radiated Measurements SISO ANT1 (242 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset	Page 208 of 270	



Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	H	253	54	-83.59	12.53	0.00	35.94	53.98	-18.04
* 11000.00	Peak	H	253	54	-70.73	12.53	0.00	48.80	73.98	-25.18
16500.00	Peak	H	-	-	-71.80	15.04	0.00	50.24	68.20	-17.96
22000.00	Peak	H	-	-	-59.49	9.58	-9.54	47.55	68.20	-20.65
27500.00	Peak	H	-	-	-50.08	-5.56	-9.54	41.82	68.20	-26.38

**Table 7-82. Radiated Measurements SISO ANT1 (242 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	H	125	274	-83.64	12.67	0.00	36.03	53.98	-17.95
* 11200.00	Peak	H	125	274	-70.71	12.67	0.00	48.96	73.98	-25.02
16800.00	Peak	H	-	-	-71.64	16.04	0.00	51.40	68.20	-16.80
* 22400.00	Average	H	-	-	-71.52	10.49	-9.54	36.43	53.98	-17.55
* 22400.00	Peak	H	-	-	-60.26	10.49	-9.54	47.69	73.98	-26.29
28000.00	Peak	H	-	-	-50.72	-4.84	-9.54	41.90	68.20	-26.30

**Table 7-83. Radiated Measurements SISO ANT1 (242 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 209 of 270



Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	H	148	95	-83.50	12.70	0.00	36.20	53.98	-17.78
* 11440.00	Peak	H	148	95	-70.84	12.70	0.00	48.86	73.98	-25.12
17160.00	Peak	H	-	-	-70.91	17.71	0.00	53.80	68.20	-14.40
* 22880.00	Average	H	-	-	-72.37	9.96	-9.54	35.05	53.98	-18.93
* 22880.00	Peak	H	-	-	-61.43	9.96	-9.54	45.99	73.98	-27.99
28600.00	Peak	H	-	-	-50.01	-4.40	-9.54	43.05	68.20	-25.15

**Table 7-84. Radiated Measurements SISO ANT1 (242 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	H	152	78	-83.67	13.38	0.00	36.71	53.98	-17.27
* 11490.00	Peak	H	152	78	-71.18	13.38	0.00	49.20	73.98	-24.78
17235.00	Peak	H	-	-	-71.41	17.44	0.00	53.03	68.20	-15.17
* 22980.00	Average	H	-	-	-72.24	10.35	-9.54	35.57	53.98	-18.41
* 22980.00	Peak	H	-	-	-60.08	10.35	-9.54	47.73	73.98	-26.25
28725.00	Peak	H	-	-	-49.28	-4.88	-9.54	43.30	68.20	-24.90

**Table 7-85. Radiated Measurements SISO ANT1 (242 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset	Page 210 of 270	



Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	H	117	304	-83.24	12.70	0.00	36.46	53.98	-17.52
* 11570.00	Peak	H	117	304	-70.27	12.70	0.00	49.43	73.98	-24.55
17355.00	Peak	H	-	-	-71.77	19.46	0.00	54.69	68.20	-13.51
23140.00	Peak	H	-	-	-60.43	10.05	-9.54	47.08	68.20	-21.12
28925.00	Peak	H	-	-	-50.42	-5.11	-9.54	41.93	68.20	-26.27

**Table 7-86. Radiated Measurements SISO ANT1 (242 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5825MHz  
 Channel: 165

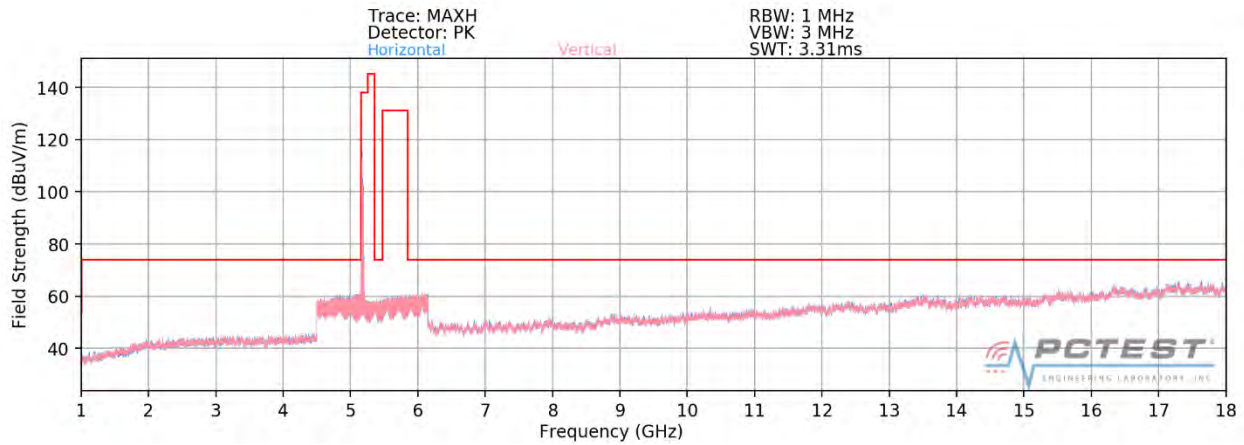
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11650.00	Average	H	139	349	-83.59	13.24	0.00	36.65	53.98	-17.33
* 11650.00	Peak	H	139	349	-70.39	13.24	0.00	49.85	73.98	-24.13
17475.00	Peak	H	-	-	-71.19	20.06	0.00	55.87	68.20	-12.33
23300.00	Peak	H	-	-	-61.17	9.39	-9.54	45.68	68.20	-22.52
29125.00	Peak	H	-	-	-49.54	-6.06	-9.54	41.86	68.20	-26.34

**Table 7-87. Radiated Measurements SISO ANT1 (242 Tones)**

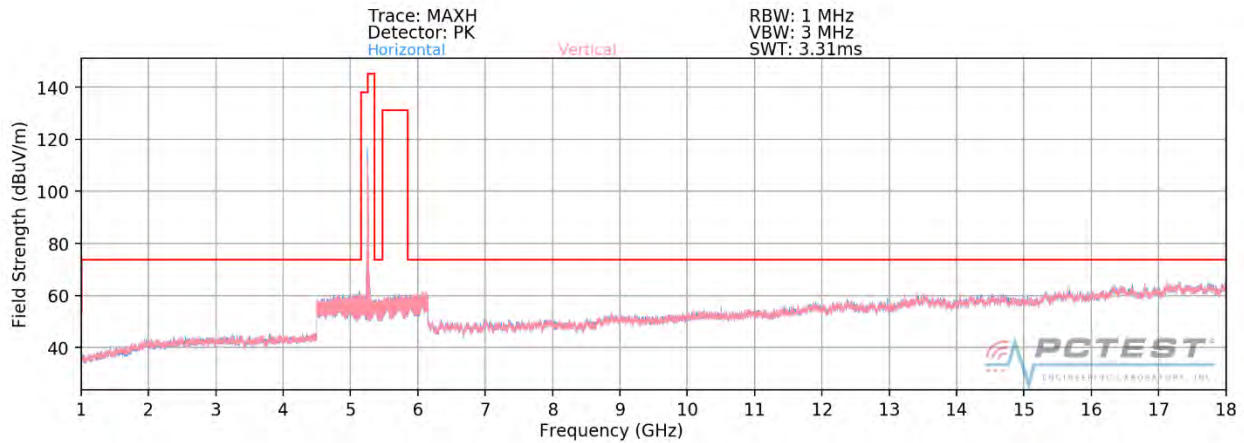
FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 211 of 270

## 7.6.2 SISO Antenna-2 Radiated Spurious Emission Measurements

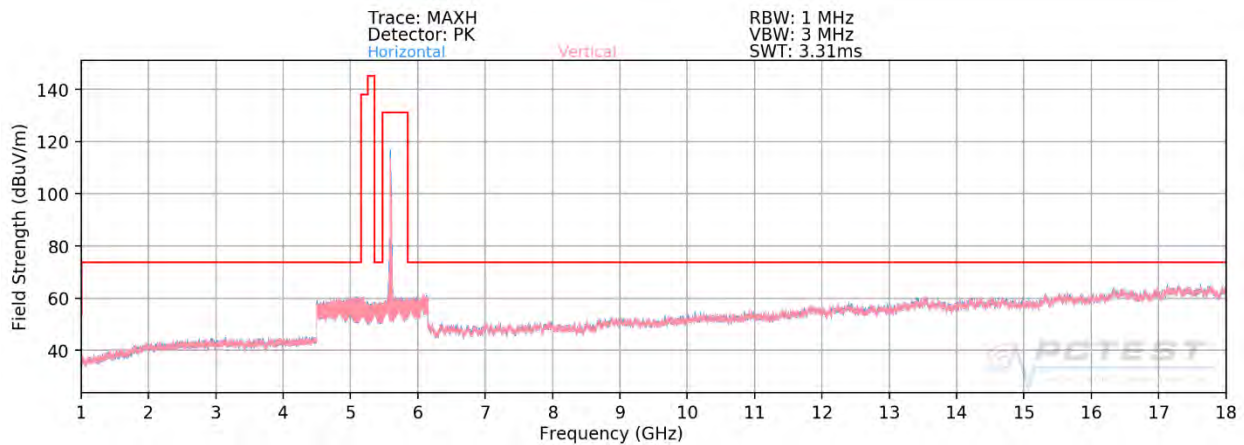
### 26 Tones



Plot 7-283. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U1 Ch. 40 – 26 Tones)

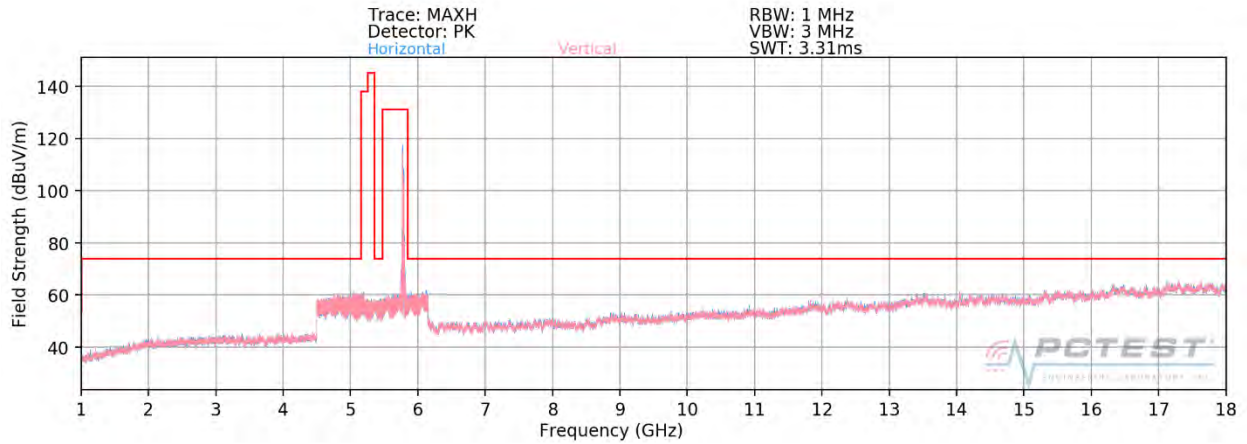


Plot 7-284. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U2A Ch. 56 – 26 Tones)



Plot 7-285. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U2C Ch. 120 – 26 Tones)

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 212 of 270

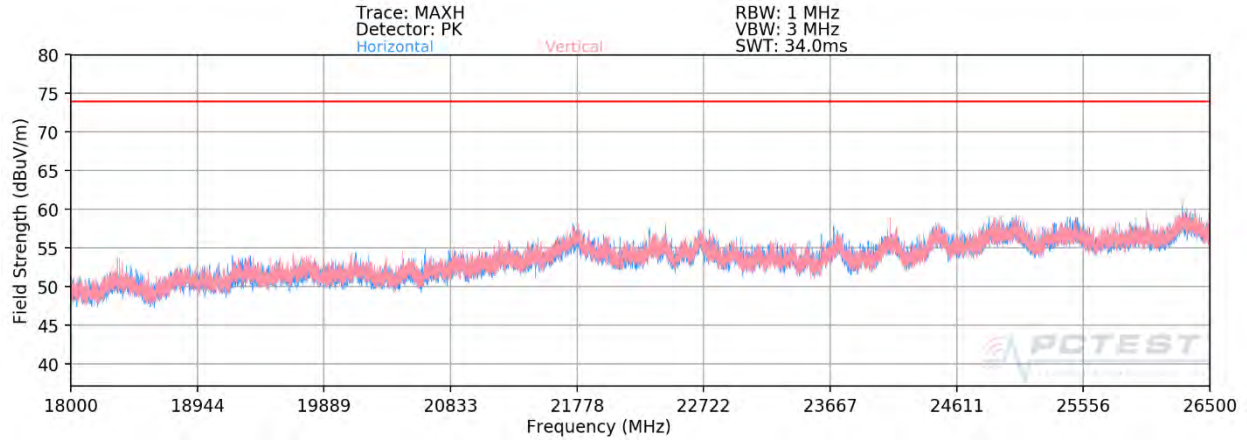


**Plot 7-286. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U3 Ch. 157 – 26 Tones)**

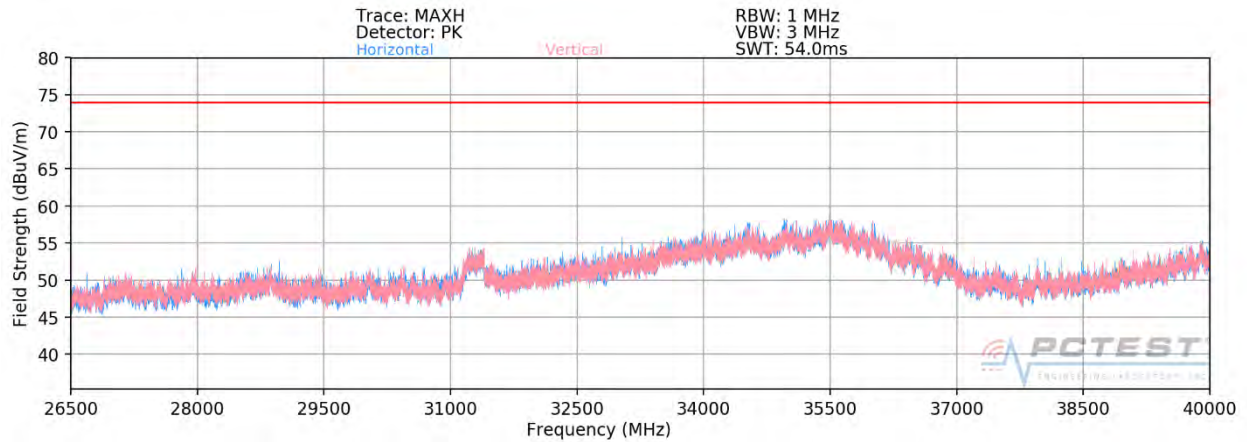
<b>FCC ID:</b> A3LSMG981JPN		<b>MEASUREMENT REPORT (CERTIFICATION)</b>	 <b>Approved by:</b> Quality Manager
<b>Test Report S/N:</b> 1M1911260209-06.A3L	<b>Test Dates:</b> 10/22/2019 - 1/28/2020	<b>EUT Type:</b> Portable Handset	Page 213 of 270



## SISO Antenna-2 Radiated Spurious Emissions Measurements (Above 18GHz)



**Plot 7-287. Radiated Spurious Plot 18GHz - 26.5GHz SISO ANT2 (802.11ax – 26 Tones)**



**Plot 7-288. Radiated Spurious Plot 26.5GHz - 40GHz SISO ANT2 (802.11ax – 26 Tones)**

<b>FCC ID:</b> A3LSMG981JPN	 <b>MEASUREMENT REPORT (CERTIFICATION)</b> 		<b>Approved by:</b> Quality Manager
<b>Test Report S/N:</b> 1M1911260209-06.A3L	<b>Test Dates:</b> 10/22/2019 - 1/28/2020	<b>EUT Type:</b> Portable Handset	Page 214 of 270





**SISO Antenna-2 Radiated Spurious Emission Measurements**  
 §15.407(b) §15.205 & §15.209; RSS-Gen [8.9]

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	H	100	352	-68.15	11.41	0.00	50.26	68.20	-17.94
* 15540.00	Average	H	-	-	-81.54	13.23	0.00	38.69	53.98	-15.29
* 15540.00	Peak	H	-	-	-69.33	13.23	0.00	50.90	73.98	-23.08
* 20720.00	Average	H	-	-	-72.13	7.97	-9.54	33.30	53.98	-20.68
* 20720.00	Peak	H	-	-	-60.64	7.97	-9.54	44.79	73.98	-29.19
25900.00	Peak	H	-	-	-58.78	10.34	-9.54	49.02	68.20	-19.18

**Table 7-88. Radiated Measurements SISO ANT2 (26 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	H	193	317	-69.66	11.17	0.00	48.51	68.20	-19.69
* 15600.00	Average	H	-	-	-81.05	12.81	0.00	38.76	53.98	-15.22
* 15600.00	Peak	H	-	-	-70.01	12.81	0.00	49.80	73.98	-24.18
* 20800.00	Average	H	-	-	-72.32	8.33	-9.54	33.47	53.98	-20.51
* 20800.00	Peak	H	-	-	-60.85	8.33	-9.54	44.94	73.98	-29.04
26000.00	Peak	H	-	-	-59.09	10.61	-9.54	48.98	68.20	-19.22

**Table 7-89. Radiated Measurements SISO ANT2 (26 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 215 of 270

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	H	101	355	-68.24	11.37	0.00	50.13	68.20	-18.07
* 15720.00	Average	H	-	-	-80.22	15.18	0.00	41.96	53.98	-12.02
* 15720.00	Peak	H	-	-	-69.77	15.18	0.00	52.41	73.98	-21.57
* 20960.00	Average	H	-	-	-72.56	8.52	-9.54	33.42	53.98	-20.56
* 20960.00	Peak	H	-	-	-61.54	8.52	-9.54	44.44	73.98	-29.54
26200.00	Peak	H	-	-	-59.48	10.69	-9.54	48.67	68.20	-19.53

**Table 7-90. Radiated Measurements SISO ANT2 (26 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	H	128	347	-70.06	11.86	0.00	48.80	68.20	-19.40
* 15780.00	Average	H	-	-	-81.29	13.75	0.00	39.46	53.98	-14.52
* 15780.00	Peak	H	-	-	-70.12	13.75	0.00	50.63	73.98	-23.35
* 21040.00	Average	H	-	-	-72.09	8.82	-9.54	34.19	53.98	-19.79
* 21040.00	Peak	H	-	-	-61.06	8.82	-9.54	45.22	73.98	-28.76
26300.00	Peak	H	-	-	-57.36	11.42	-9.54	51.52	68.20	-16.68

**Table 7-91. Radiated Measurements SISO ANT2 (26 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset	Page 216 of 270	

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	H	131	340	-71.28	12.47	0.00	48.19	68.20	-20.01
* 15840.00	Average	H	-	-	-80.01	15.16	0.00	42.15	53.98	-11.83
* 15840.00	Peak	H	-	-	-70.28	15.16	0.00	51.88	73.98	-22.10
* 21120.00	Average	H	-	-	-71.81	8.63	-9.54	34.28	53.98	-19.70
* 21120.00	Peak	H	-	-	-60.83	8.63	-9.54	45.26	73.98	-28.72
26400.00	Peak	H	-	-	-58.47	11.11	-9.54	50.10	68.20	-18.10

**Table 7-92. Radiated Measurements SISO ANT2 (26 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	H	310	287	-80.07	13.08	0.00	40.01	53.98	-13.97
* 10640.00	Peak	H	310	287	-68.21	13.08	0.00	51.87	73.98	-22.11
* 15960.00	Average	H	-	-	-79.19	13.43	0.00	41.24	53.98	-12.74
* 15960.00	Peak	H	-	-	-70.08	13.43	0.00	50.35	73.98	-23.63
* 21280.00	Average	H	-	-	-71.29	9.03	-9.54	35.20	53.98	-18.78
* 21280.00	Peak	H	-	-	-59.66	9.03	-9.54	46.83	73.98	-27.15
26600.00	Peak	H	-	-	-52.37	-4.38	-9.54	40.71	68.20	-27.49

**Table 7-93. Radiated Measurements SISO ANT2 (26 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset	Page 217 of 270	



Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	H	295	171	-80.73	12.53	0.00	38.80	53.98	-15.18
* 11000.00	Peak	H	295	171	-69.52	12.53	0.00	50.01	73.98	-23.97
16500.00	Peak	H	-	-	-69.99	15.04	0.00	52.05	68.20	-16.15
22000.00	Peak	H	-	-	-59.95	9.58	-9.54	47.09	68.20	-21.11
27500.00	Peak	H	-	-	-50.96	-5.56	-9.54	40.94	68.20	-27.26

**Table 7-94. Radiated Measurements SISO ANT2 (26 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	H	-	-	-80.34	12.67	0.00	39.33	53.98	-14.65
* 11200.00	Peak	H	-	-	-69.55	12.67	0.00	50.12	73.98	-23.86
16800.00	Peak	H	-	-	-68.89	16.04	0.00	54.15	68.20	-14.05
* 22400.00	Average	H	-	-	-71.50	10.49	-9.54	36.45	53.98	-17.53
* 22400.00	Peak	H	-	-	-59.04	10.49	-9.54	48.91	73.98	-25.07
28000.00	Peak	H	-	-	-51.52	-4.84	-9.54	41.10	68.20	-27.10

**Table 7-95. Radiated Measurements SISO ANT2 (26 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 218 of 270

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	H	240	277	-81.01	12.70	0.00	38.69	53.98	-15.29
* 11440.00	Peak	H	240	277	-69.49	12.70	0.00	50.21	73.98	-23.77
17160.00	Peak	H	-	-	-68.16	17.71	0.00	56.55	68.20	-11.65
* 22880.00	Average	H	-	-	-72.56	9.96	-9.54	34.86	53.98	-19.12
* 22880.00	Peak	H	-	-	-61.14	9.96	-9.54	46.28	73.98	-27.70
28600.00	Peak	H	-	-	-50.85	-4.40	-9.54	42.21	68.20	-25.99

**Table 7-96. Radiated Measurements SISO ANT2 (26 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	H	395	255	-81.36	13.38	0.00	39.02	53.98	-14.96
* 11490.00	Peak	H	395	255	-69.67	13.38	0.00	50.71	73.98	-23.27
17235.00	Peak	H	-	-	-70.31	17.44	0.00	54.13	68.20	-14.07
* 22980.00	Average	H	-	-	-72.43	10.35	-9.54	35.38	53.98	-18.60
* 22980.00	Peak	H	-	-	-60.95	10.35	-9.54	46.86	73.98	-27.12
28725.00	Peak	H	-	-	-50.64	-4.88	-9.54	41.94	68.20	-26.26

**Table 7-97. Radiated Measurements SISO ANT2 (26 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset	Page 219 of 270	

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	H	277	290	-80.22	12.70	0.00	39.48	53.98	-14.50
* 11570.00	Peak	H	277	290	-70.54	12.70	0.00	49.16	73.98	-24.82
17355.00	Peak	H	-	-	-69.18	19.46	0.00	57.28	68.20	-10.92
23140.00	Peak	H	-	-	-60.41	10.05	-9.54	47.10	68.20	-21.10
28925.00	Peak	H	-	-	-50.10	-5.11	-9.54	42.25	68.20	-25.95

**Table 7-98. Radiated Measurements SISO ANT2 (26 Tones)**

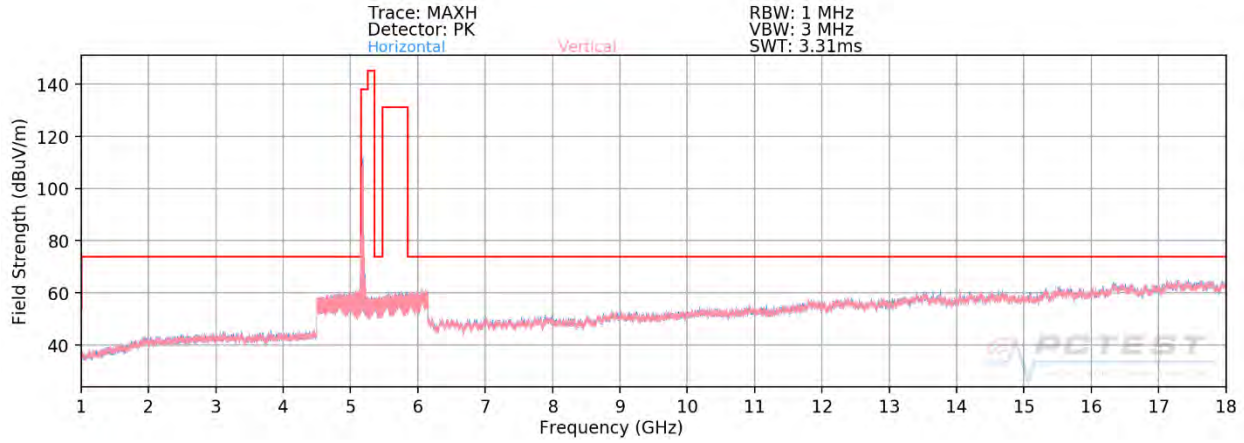
Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5825MHz  
 Channel: 165

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	H	261	302	-81.20	13.24	0.00	39.04	53.98	-14.94
* 11650.00	Peak	H	261	302	-80.00	13.24	0.00	40.24	73.98	-33.74
17475.00	Peak	H	-	-	-68.99	20.06	0.00	58.07	68.20	-10.13
23300.00	Peak	H	-	-	-60.63	9.39	-9.54	46.22	68.20	-21.98
29125.00	Peak	H	-	-	-50.61	-6.06	-9.54	40.79	68.20	-27.41

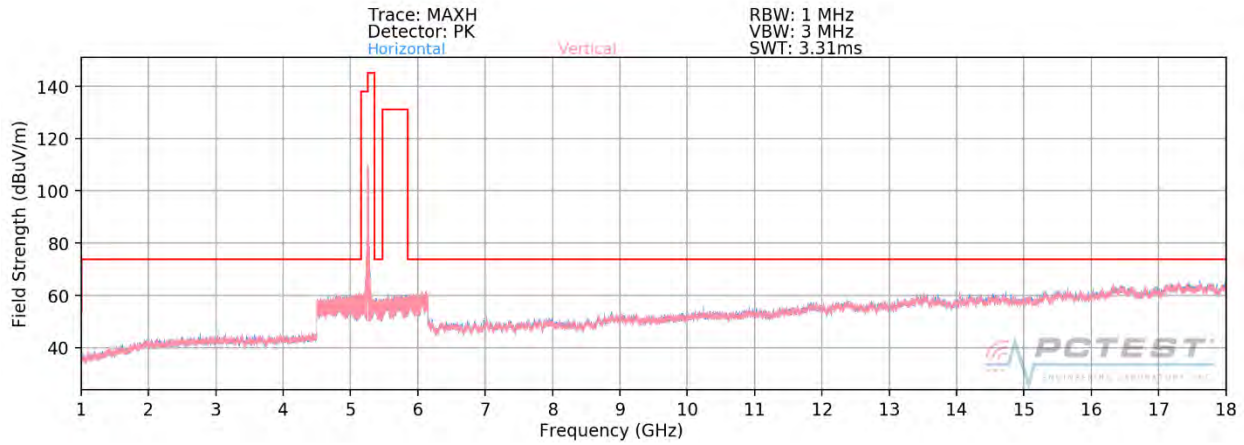
**Table 7-99. Radiated Measurements SISO ANT2 (26 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset	Page 220 of 270	

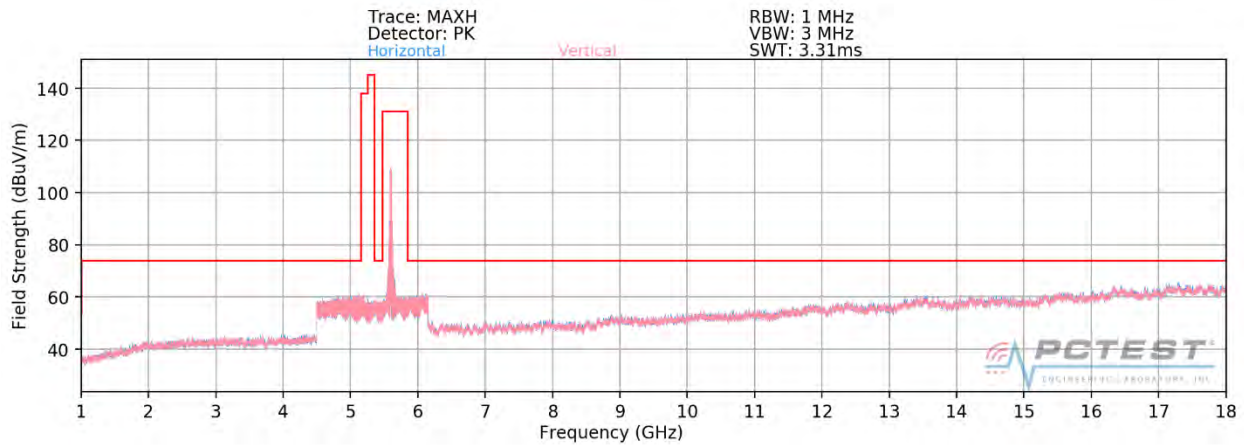
## 242 Tones



**Plot 7-289. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U1 Ch. 40 – 242 Tones)**



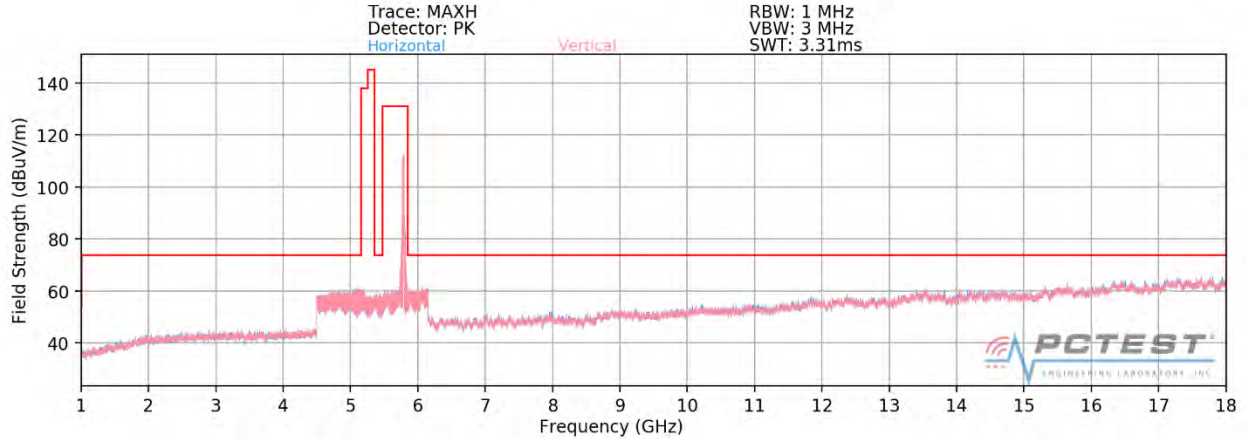
**Plot 7-290. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U2A Ch. 56 – 242 Tones)**



**Plot 7-291. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U2C Ch. 120 – 242 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 221 of 270

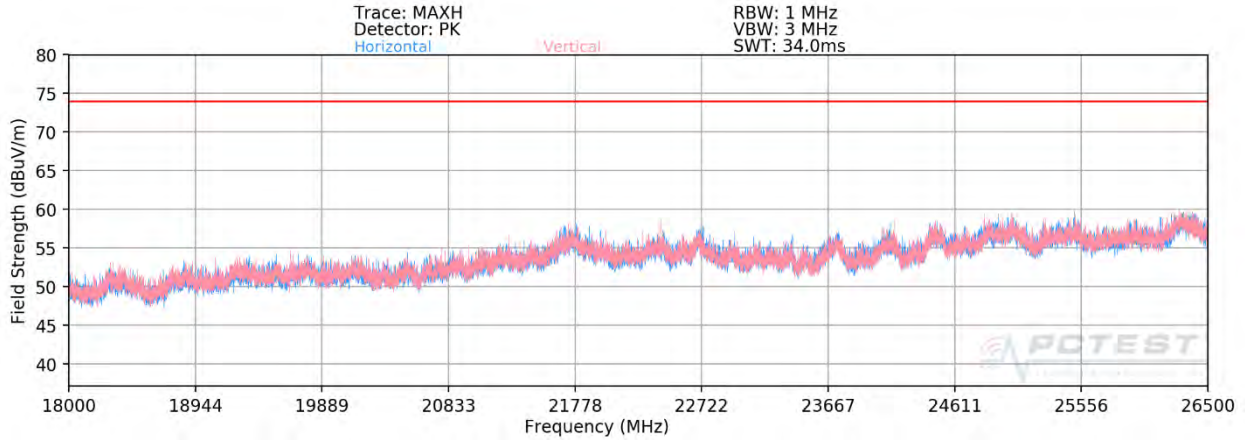




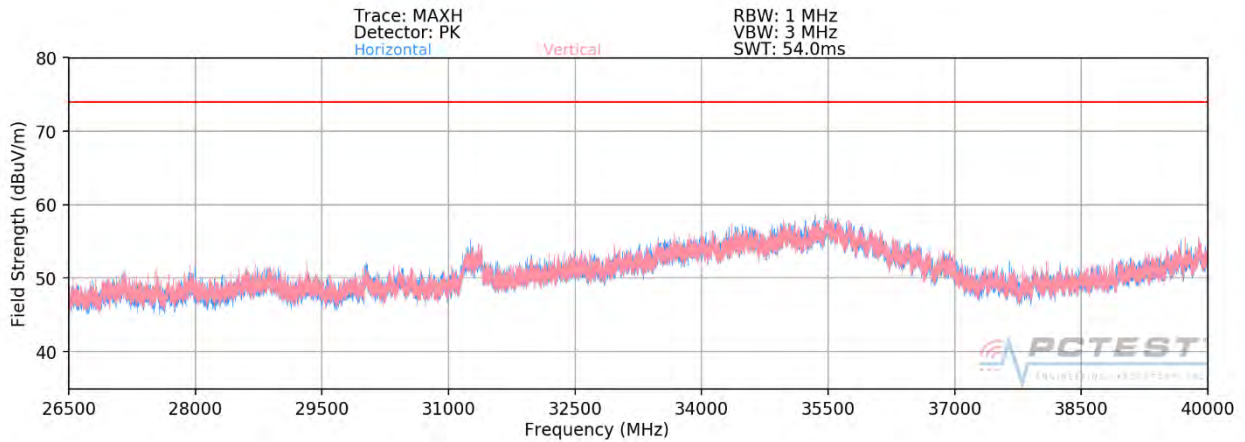
**Plot 7-292. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U3 Ch. 157 – 242 Tones)**

<b>FCC ID:</b> A3LSMG981JPN		<b>MEASUREMENT REPORT (CERTIFICATION)</b>	 <b>Approved by:</b> Quality Manager
<b>Test Report S/N:</b> 1M1911260209-06.A3L	<b>Test Dates:</b> 10/22/2019 - 1/28/2020	<b>EUT Type:</b> Portable Handset	Page 222 of 270

## SISO Antenna-2 Radiated Spurious Emissions Measurements (Above 18GHz)



**Plot 7-293. Radiated Spurious Plot 18GHz - 26.5GHz SISO ANT2 (802.11ax – 242 Tones)**



**Plot 7-294. Radiated Spurious Plot 26.5GHz - 40GHz SISO ANT2 (802.11ax – 242 Tones)**

<b>FCC ID:</b> A3LSMG981JPN		<b>MEASUREMENT REPORT (CERTIFICATION)</b>	<b>Approved by:</b> Quality Manager
<b>Test Report S/N:</b> 1M1911260209-06.A3L	<b>Test Dates:</b> 10/22/2019 - 1/28/2020	<b>EUT Type:</b> Portable Handset	Page 223 of 270

## SISO Antenna-2 Radiated Spurious Emission Measurements

§15.407(b) §15.205 & §15.209; RSS-Gen [8.9]

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	H	109	354	-69.69	15.23	0.00	52.54	68.20	-15.66
* 15540.00	Average	H	-	-	-83.36	22.71	0.00	46.35	53.98	-7.63
* 15540.00	Peak	H	-	-	-70.68	22.71	0.00	59.03	73.98	-14.95
* 20720.00	Average	H	-	-	-71.66	7.97	-9.54	33.77	53.98	-20.21
* 20720.00	Peak	H	-	-	-81.34	7.97	-9.54	24.09	73.98	-49.89
25900.00	Peak	H	-	-	-59.44	10.34	-9.54	48.36	68.20	-19.84

**Table 7-100. Radiated Measurements SISO ANT2 (242 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	H	-	-	-71.22	15.67	0.00	51.45	68.20	-16.75
* 15600.00	Average	H	-	-	-84.29	22.46	0.00	45.17	53.98	-8.81
* 15600.00	Peak	H	-	-	-70.98	22.46	0.00	58.48	73.98	-15.50
* 20800.00	Average	H	-	-	-71.98	8.33	-9.54	33.81	53.98	-20.17
* 20800.00	Peak	H	-	-	-61.23	8.33	-9.54	44.56	73.98	-29.42
26000.00	Peak	H	-	-	-60.01	10.61	-9.54	48.06	68.20	-20.14

**Table 7-101. Radiated Measurements SISO ANT2 (242 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset	Page 224 of 270	

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	H	285	182	-71.34	15.49	0.00	51.15	68.20	-17.05
* 15720.00	Average	H	-	-	-82.68	22.45	0.00	46.77	53.98	-7.21
* 15720.00	Peak	H	-	-	-69.94	22.45	0.00	59.51	73.98	-14.47
* 20960.00	Average	H	-	-	-71.48	8.52	-9.54	34.50	53.98	-19.48
* 20960.00	Peak	H	-	-	-62.36	8.52	-9.54	43.62	73.98	-30.36
26200.00	Peak	H	-	-	-59.06	10.69	-9.54	49.09	68.20	-19.11

**Table 7-102. Radiated Measurements SISO ANT2 (242 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	H	276	176	-70.04	15.86	0.00	52.82	68.20	-15.38
* 15780.00	Average	H	-	-	-81.59	22.77	0.00	48.18	53.98	-5.80
* 15780.00	Peak	H	-	-	-69.95	22.77	0.00	59.82	73.98	-14.16
* 21040.00	Average	H	-	-	-71.93	8.82	-9.54	34.35	53.98	-19.63
* 21040.00	Peak	H	-	-	-61.21	8.82	-9.54	45.07	73.98	-28.91
26300.00	Peak	H	-	-	-58.46	11.42	-9.54	50.42	68.20	-17.78

**Table 7-103. Radiated Measurements SISO ANT2 (242 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset	Page 225 of 270	



Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	H	246	190	-69.33	15.70	0.00	53.37	68.20	-14.83
* 15840.00	Average	H	-	-	-82.76	22.66	0.00	46.90	53.98	-7.08
* 15840.00	Peak	H	-	-	-69.54	22.66	0.00	60.12	73.98	-13.86
* 21120.00	Average	H	-	-	-72.24	8.63	-9.54	33.85	53.98	-20.13
* 21120.00	Peak	H	-	-	-61.37	8.63	-9.54	44.72	73.98	-29.26
26400.00	Peak	H	-	-	-59.09	11.11	-9.54	49.48	68.20	-18.72

**Table 7-104. Radiated Measurements SISO ANT2 (242 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	H	286	10	-82.37	16.03	0.00	40.66	53.98	-13.32
* 10640.00	Peak	H	286	10	-69.92	16.03	0.00	53.11	73.98	-20.87
* 15960.00	Average	H	-	-	-81.59	23.09	0.00	48.50	53.98	-5.48
* 15960.00	Peak	H	-	-	-71.61	23.09	0.00	58.48	73.98	-15.50
* 21280.00	Average	H	-	-	-71.56	9.03	-9.54	34.93	53.98	-19.05
* 21280.00	Peak	H	-	-	-61.27	9.03	-9.54	45.22	73.98	-28.76
26600.00	Peak	H	-	-	-53.19	-4.38	-9.54	39.89	68.20	-28.31

**Table 7-105. Radiated Measurements SISO ANT2 (242 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset	Page 226 of 270	



Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	H	-	-	-80.55	16.51	0.00	42.96	53.98	-11.02
* 11000.00	Peak	H	-	-	-68.96	16.51	0.00	54.55	73.98	-19.43
16500.00	Peak	H	-	-	-70.26	24.17	0.00	60.91	68.20	-7.29
22000.00	Peak	H	-	-	-61.08	9.58	-9.54	45.96	68.20	-22.24
27500.00	Peak	H	-	-	-51.11	-5.56	-9.54	40.79	68.20	-27.41

**Table 7-106. Radiated Measurements SISO ANT2 (242 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	H	-	-	-81.22	16.73	0.00	42.51	53.98	-11.47
* 11200.00	Peak	H	-	-	-69.21	16.73	0.00	54.52	73.98	-19.46
16800.00	Peak	H	-	-	-69.78	24.00	0.00	61.22	68.20	-6.98
* 22400.00	Average	H	-	-	-71.69	10.49	-9.54	36.26	53.98	-17.72
* 22400.00	Peak	H	-	-	-60.41	10.49	-9.54	47.54	73.98	-26.44
28000.00	Peak	H	-	-	-50.69	-4.84	-9.54	41.93	68.20	-26.27

**Table 7-107. Radiated Measurements SISO ANT2 (242 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 227 of 270



Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	H	275	14	-81.46	17.29	0.00	42.83	53.98	-11.15
* 11440.00	Peak	H	275	14	-69.28	17.29	0.00	55.01	73.98	-18.97
17160.00	Peak	H	-	-	-71.42	24.37	0.00	59.95	68.20	-8.25
* 22880.00	Average	H	-	-	-71.49	9.96	-9.54	35.93	53.98	-18.05
* 22880.00	Peak	H	-	-	-61.26	9.96	-9.54	46.16	73.98	-27.82
28600.00	Peak	H	-	-	-51.39	-4.40	-9.54	41.67	68.20	-26.53

**Table 7-108. Radiated Measurements SISO ANT2 (242 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	H	-	-	-82.19	17.63	0.00	42.44	53.98	-11.53
* 11490.00	Peak	H	-	-	-69.76	17.63	0.00	54.87	73.98	-19.10
17235.00	Peak	H	-	-	-81.76	25.01	0.00	50.25	68.20	-17.95
* 22980.00	Average	H	-	-	-71.98	10.35	-9.54	35.83	53.98	-18.15
* 22980.00	Peak	H	-	-	-62.09	10.35	-9.54	45.72	73.98	-28.26
28725.00	Peak	H	-	-	-51.37	-4.88	-9.54	41.21	68.20	-26.99

**Table 7-109. Radiated Measurements SISO ANT2 (242 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 228 of 270



Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	H	-	-	-81.56	17.35	0.00	42.79	53.98	-11.19
* 11570.00	Peak	H	-	-	-70.11	17.35	0.00	54.24	73.98	-19.74
17355.00	Peak	H	-	-	-82.04	26.08	0.00	51.04	68.20	-17.16
23140.00	Peak	H	-	-	-61.49	10.05	-9.54	46.02	68.20	-22.18
28925.00	Peak	H	-	-	-50.66	-5.11	-9.54	41.69	68.20	-26.51

**Table 7-110. Radiated Measurements SISO ANT2 (242 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5825MHz  
 Channel: 165

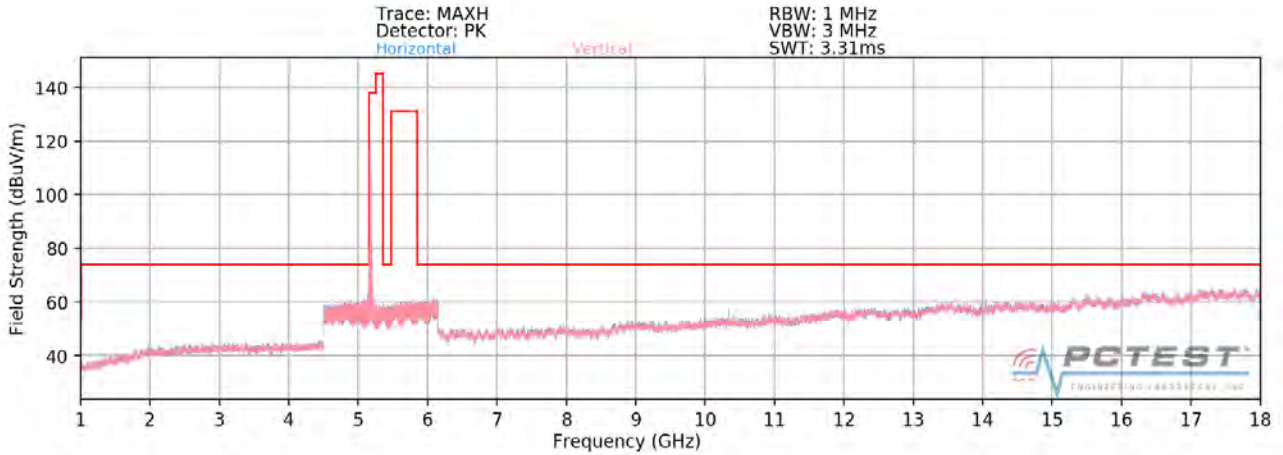
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11650.00	Average	H	204	150	-81.22	17.57	0.00	43.35	53.98	-10.62
* 11650.00	Peak	H	204	150	-69.69	17.57	0.00	54.88	73.98	-19.09
17475.00	Peak	H	-	-	-71.19	26.23	0.00	62.04	68.20	-6.16
23300.00	Peak	H	-	-	-60.29	9.39	-9.54	46.56	68.20	-21.64
29125.00	Peak	H	-	-	-51.69	-6.06	-9.54	39.71	68.20	-28.49

**Table 7-111. Radiated Measurements SISO ANT2 (242 Tones)**

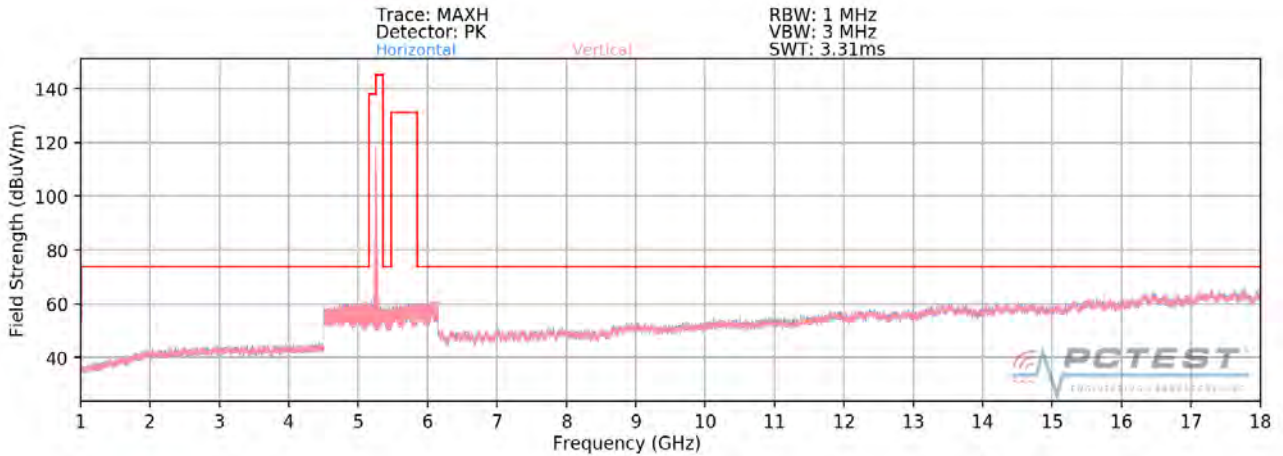
FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset	Page 229 of 270	

### 7.6.3 MIMO Radiated Spurious Emission Measurements

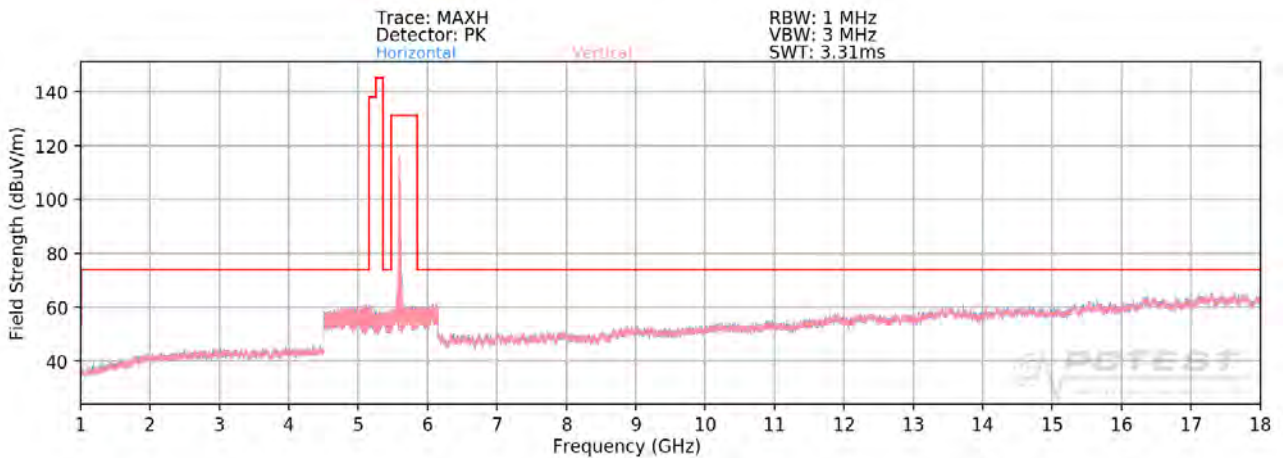
#### 26 Tones



Plot 7-295. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U1 Ch. 40 – 26 Tones)

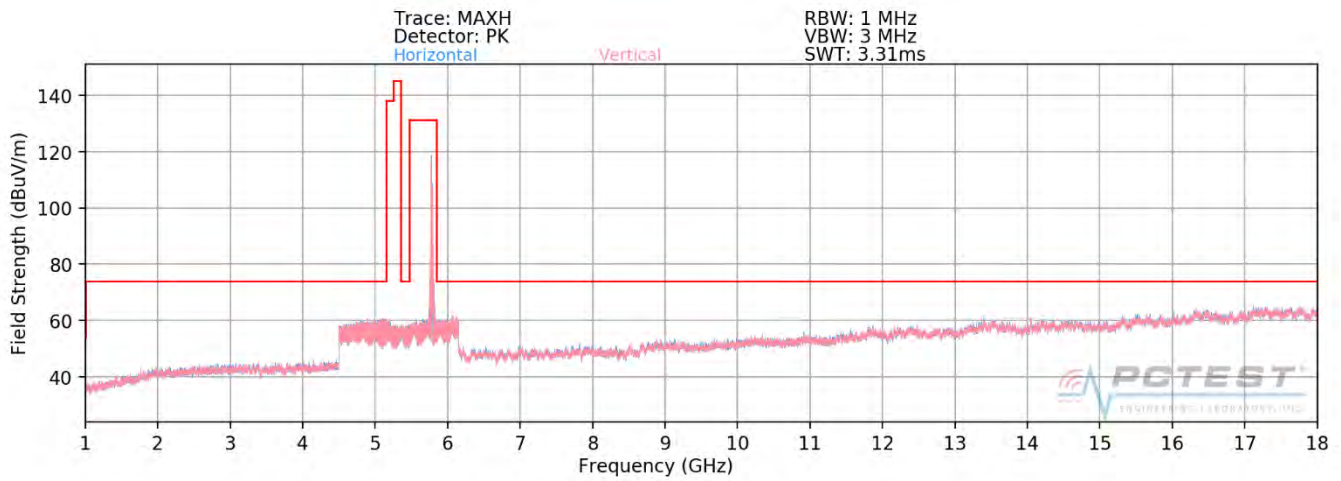


Plot 7-296. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U2A Ch. 56 – 26 Tones)



Plot 7-297. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U2C Ch. 120 – 26 Tones)

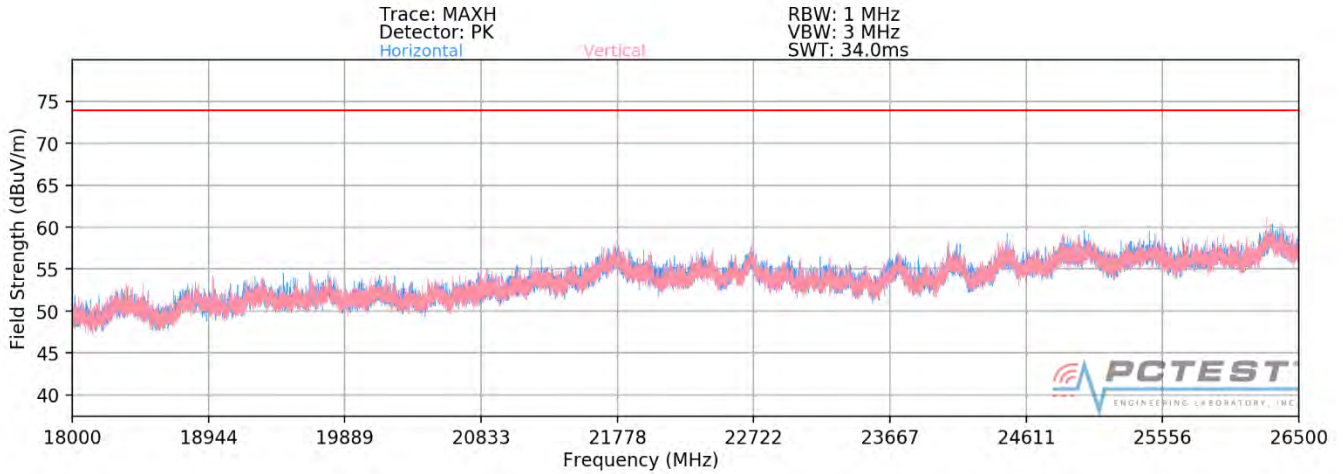
FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 230 of 270



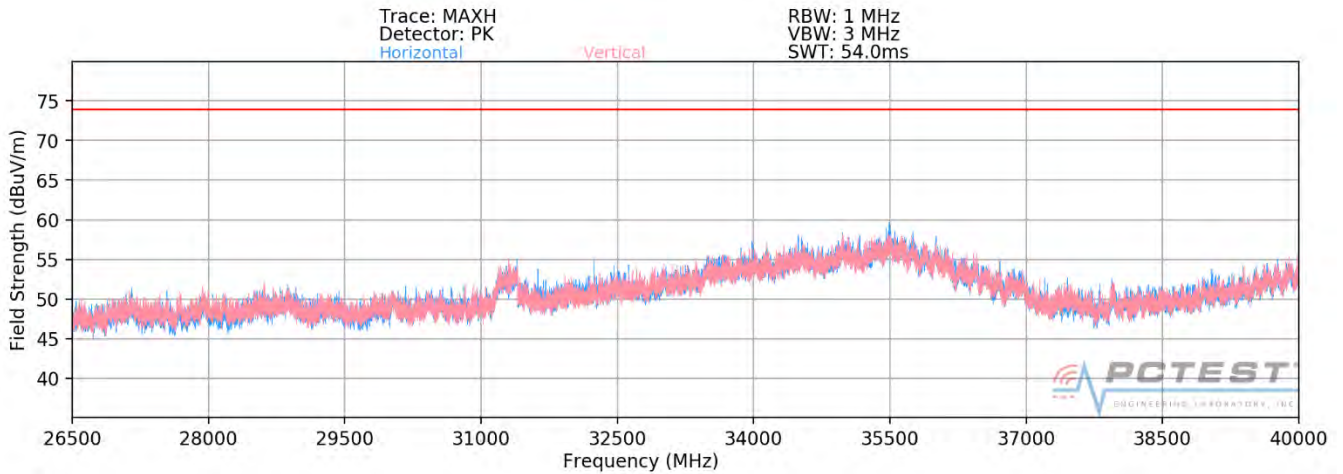
**Plot 7-298. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U3 Ch. 157 – 26 Tones)**

<b>FCC ID:</b> A3LSMG981JPN		<b>MEASUREMENT REPORT (CERTIFICATION)</b>	<b>Approved by:</b> Quality Manager
<b>Test Report S/N:</b> 1M1911260209-06.A3L	<b>Test Dates:</b> 10/22/2019 - 1/28/2020	<b>EUT Type:</b> Portable Handset	Page 231 of 270

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



**Plot 7-299. Radiated Spurious Plot 18GHz - 26.5GHz MIMO (802.11ax – 26 Tones)**



**Plot 7-300. Radiated Spurious Plot 26.5GHz - 40GHz MIMO (802.11ax – 26 Tones)**

<b>FCC ID:</b> A3LSMG981JPN		<b>MEASUREMENT REPORT (CERTIFICATION)</b>	 <b>Approved by:</b> Quality Manager
<b>Test Report S/N:</b> 1M1911260209-06.A3L	<b>Test Dates:</b> 10/22/2019 - 1/28/2020	<b>EUT Type:</b> Portable Handset	Page 232 of 270

## MIMO Radiated Spurious Emission Measurements (26 Tones)

§15.407(b) §15.205 & §15.209; RSS-Gen [8.9]

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	251	324	-69.47	11.41	0.00	48.94	68.20	-19.26
* 15540.00	Average	V	-	-	-80.22	13.23	0.00	40.01	53.98	-13.97
* 15540.00	Peak	V	-	-	-68.96	13.23	0.00	51.27	73.98	-22.71
* 20720.00	Average	V	-	-	-72.02	7.97	-9.54	33.41	53.98	-20.57
* 20720.00	Peak	V	-	-	-61.32	7.97	-9.54	44.11	73.98	-29.87
25900.00	Peak	V	-	-	-58.85	10.34	-9.54	48.95	68.20	-19.25

**Table 7-112. Radiated Measurements MIMO (26 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	241	306	-70.22	11.17	0.00	47.95	68.20	-20.25
* 15600.00	Average	V	-	-	-82.33	12.81	0.00	37.48	53.98	-16.50
* 15600.00	Peak	V	-	-	-69.98	12.81	0.00	49.83	73.98	-24.15
* 20800.00	Average	V	-	-	-72.26	8.33	-9.54	33.53	53.98	-20.45
* 20800.00	Peak	V	-	-	-61.44	8.33	-9.54	44.35	73.98	-29.63
26000.00	Peak	V	-	-	-58.80	10.61	-9.54	49.27	68.20	-18.93

**Table 7-113. Radiated Measurements MIMO (26 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset	Page 233 of 270	

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	-	-	-71.05	11.37	0.00	47.32	68.20	-20.88
* 15720.00	Average	V	-	-	-82.06	15.18	0.00	40.12	53.98	-13.86
* 15720.00	Peak	V	-	-	-69.97	15.18	0.00	52.21	73.98	-21.77
* 20960.00	Average	V	-	-	-72.31	8.52	-9.54	33.67	53.98	-20.31
* 20960.00	Peak	V	-	-	-61.31	8.52	-9.54	44.67	73.98	-29.31
* 26200.00	Peak	V	-	-	-58.80	10.69	-9.54	49.35	68.20	-18.85

**Table 7-114. Radiated Measurements MIMO (26 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	204	274	-71.28	11.86	0.00	47.58	68.20	-20.62
* 15780.00	Average	V	-	-	-81.26	13.75	0.00	39.49	53.98	-14.49
* 15780.00	Peak	V	-	-	-70.15	13.75	0.00	50.60	73.98	-23.38
* 21040.00	Average	V	-	-	-72.09	8.82	-9.54	34.19	53.98	-19.79
* 21040.00	Peak	V	-	-	-60.21	8.82	-9.54	46.07	73.98	-27.91
* 26300.00	Peak	V	-	-	-57.85	11.42	-9.54	51.03	68.20	-17.17

**Table 7-115. Radiated Measurements MIMO (26 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset	Page 234 of 270	



Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	216	248	-72.27	12.47	0.00	47.20	68.20	-21.00
* 15840.00	Average	V	-	-	-80.49	15.16	0.00	41.67	53.98	-12.31
* 15840.00	Peak	V	-	-	-68.54	15.16	0.00	53.62	73.98	-20.36
* 21120.00	Average	V	-	-	-72.03	8.63	-9.54	34.06	53.98	-19.92
* 21120.00	Peak	V	-	-	-60.43	8.63	-9.54	45.66	73.98	-28.32
* 26400.00	Peak	V	-	-	-57.64	11.11	-9.54	50.93	68.20	-17.27

**Table 7-116. Radiated Measurements MIMO (26 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	-	-	-81.72	13.08	0.00	38.36	53.98	-15.62
* 10640.00	Peak	V	-	-	-68.22	13.08	0.00	51.86	73.98	-22.12
* 15960.00	Average	V	-	-	-82.36	13.43	0.00	38.07	53.98	-15.91
* 15960.00	Peak	V	-	-	-71.07	13.43	0.00	49.36	73.98	-24.62
* 21280.00	Average	V	-	-	-71.26	9.03	-9.54	35.23	53.98	-18.75
* 21280.00	Peak	V	-	-	-60.03	9.03	-9.54	46.46	73.98	-27.52
* 26600.00	Peak	V	-	-	-52.70	-4.38	-9.54	40.38	68.20	-27.82

**Table 7-117. Radiated Measurements MIMO (26 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset	Page 235 of 270	



Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	388	103	-80.94	12.53	0.00	38.59	53.98	-15.39
* 11000.00	Peak	V	388	103	-69.19	12.53	0.00	50.34	73.98	-23.64
16500.00	Peak	V	-	-	-71.03	15.04	0.00	51.01	68.20	-17.19
22000.00	Peak	V	-	-	-60.45	9.58	-9.54	46.59	68.20	-21.61
27500.00	Peak	V	-	-	-51.06	-5.56	-9.54	40.84	68.20	-27.36

**Table 7-118. Radiated Measurements MIMO (26 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	347	146	-80.27	12.67	0.00	39.40	53.98	-14.58
* 11200.00	Peak	V	347	146	-68.74	12.67	0.00	50.93	73.98	-23.05
16800.00	Peak	V	-	-	-68.19	16.04	0.00	54.85	68.20	-13.35
* 22400.00	Average	V	-	-	-71.59	10.49	-9.54	36.36	53.98	-17.62
* 22400.00	Peak	V	-	-	-60.41	10.49	-9.54	47.54	73.98	-26.44
28000.00	Peak	V	-	-	-51.49	-4.84	-9.54	41.13	68.20	-27.07

**Table 7-119. Radiated Measurements MIMO (26 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset	Page 236 of 270	

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	-	-	-79.84	12.70	0.00	39.86	53.98	-14.12
* 11440.00	Peak	V	-	-	-69.41	12.70	0.00	50.29	73.98	-23.69
17160.00	Peak	V	-	-	-69.28	17.71	0.00	55.43	68.20	-12.77
* 22880.00	Average	V	-	-	-72.41	9.96	-9.54	35.01	53.98	-18.97
* 22880.00	Peak	V	-	-	-61.21	9.96	-9.54	46.21	73.98	-27.77
28600.00	Peak	V	-	-	-49.97	-4.40	-9.54	43.09	68.20	-25.11

**Table 7-120. Radiated Measurements MIMO (26 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	-	-	-78.26	13.38	0.00	42.12	53.98	-11.86
* 11490.00	Peak	V	-	-	-68.29	13.38	0.00	52.09	73.98	-21.89
17235.00	Peak	V	-	-	-69.92	17.44	0.00	54.52	68.20	-13.68
* 22980.00	Average	V	-	-	-72.45	10.35	-9.54	35.36	53.98	-18.62
* 22980.00	Peak	V	-	-	-61.43	10.35	-9.54	46.38	73.98	-27.60
28725.00	Peak	V	-	-	-50.45	-4.88	-9.54	42.13	68.20	-26.07

**Table 7-121. Radiated Measurements MIMO (26 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset	Page 237 of 270	



Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 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	184	346	-78.99	12.70	0.00	40.71	53.98	-13.27
* 11570.00	Peak	V	184	346	-69.90	12.70	0.00	49.80	73.98	-24.18
17355.00	Peak	V	-	-	-71.57	19.46	0.00	54.89	68.20	-13.31
23140.00	Peak	V	-	-	-61.09	10.05	-9.54	46.42	68.20	-21.78
28925.00	Peak	V	-	-	-49.88	-5.11	-9.54	42.47	68.20	-25.73

**Table 7-122. Radiated Measurements MIMO (26 Tones)**

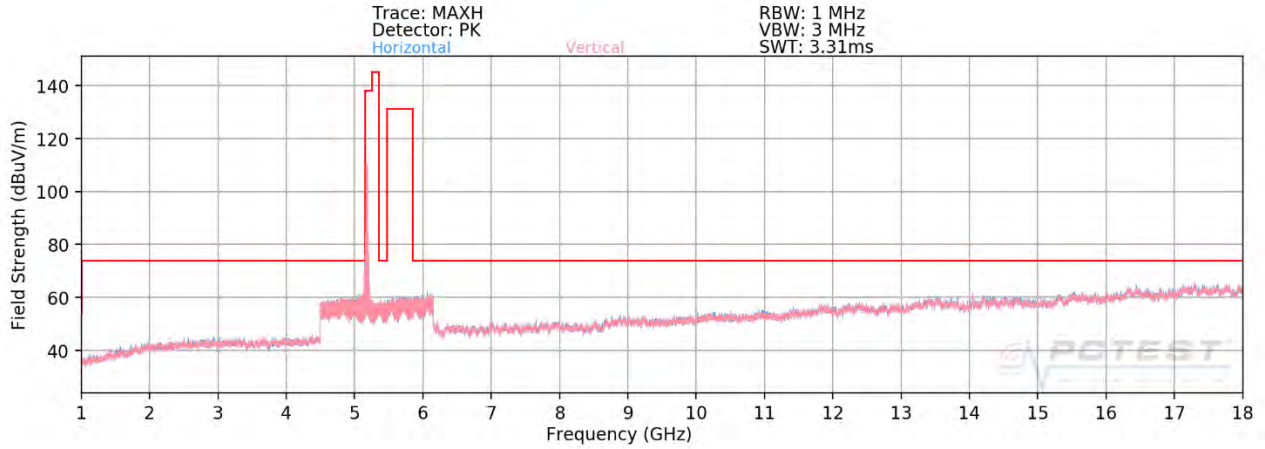
Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 54  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5825MHz  
 Channel: 165

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	176	324	-82.33	13.24	0.00	37.91	53.98	-16.07
* 11650.00	Peak	V	176	324	-70.25	13.24	0.00	49.99	73.98	-23.99
17475.00	Peak	V	-	-	-70.54	20.06	0.00	56.52	68.20	-11.68
23300.00	Peak	V	-	-	-60.78	9.39	-9.54	46.07	68.20	-22.13
29125.00	Peak	V	-	-	-50.37	-6.06	-9.54	41.03	68.20	-27.17

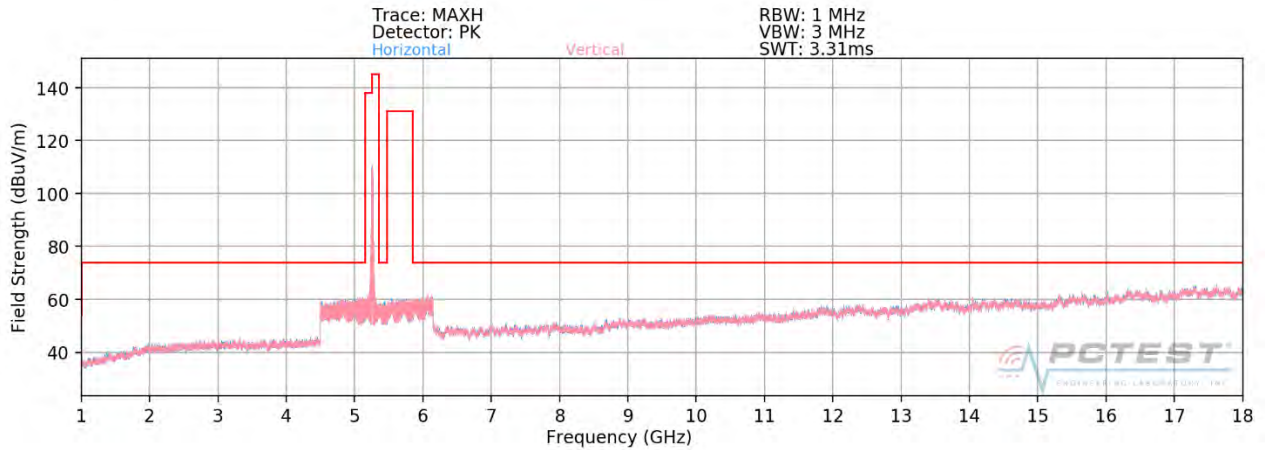
**Table 7-123. Radiated Measurements MIMO (26 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset	Page 238 of 270	

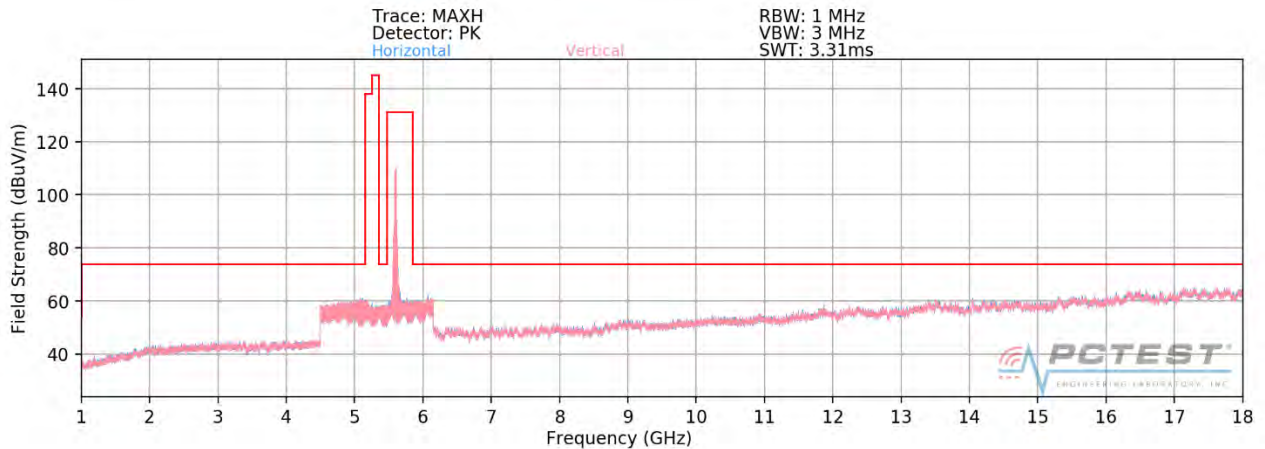
## 242 Tones



**Plot 7-301. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U1 Ch. 40 – 242 Tones)**

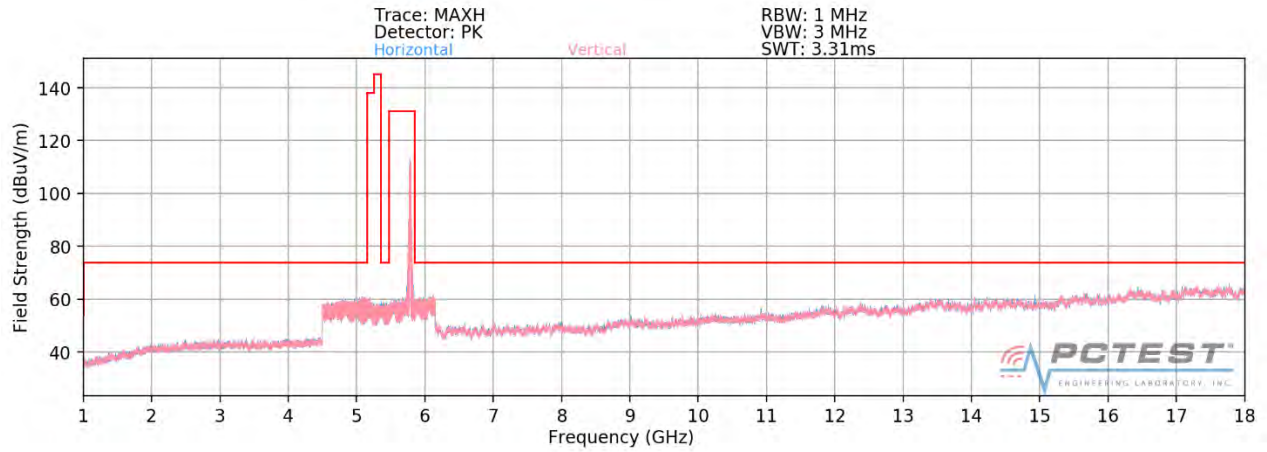


**Plot 7-302. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U2A Ch. 56 – 242 Tones)**



**Plot 7-303. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U2C Ch. 120 – 242 Tones)**

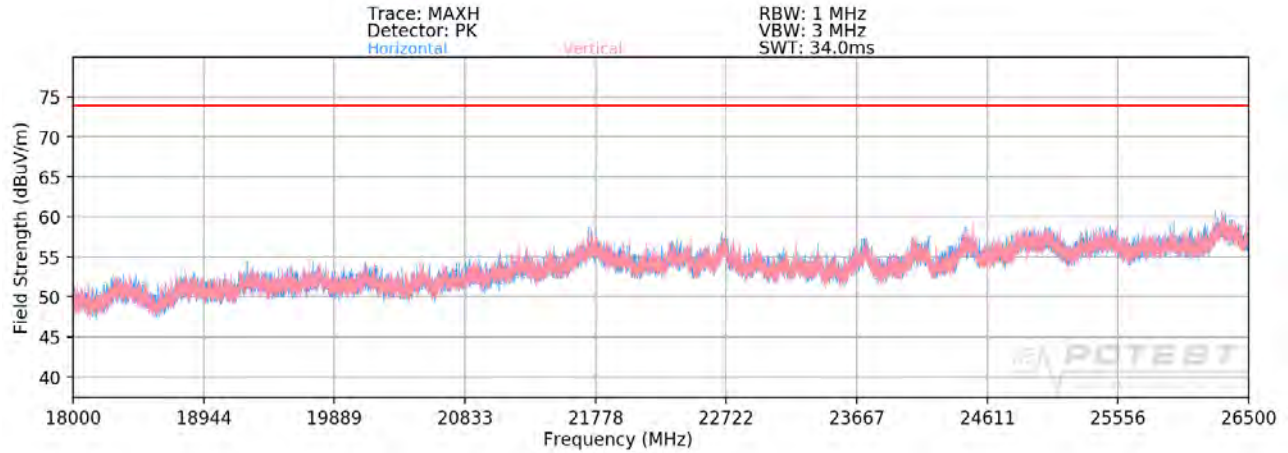
FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 239 of 270



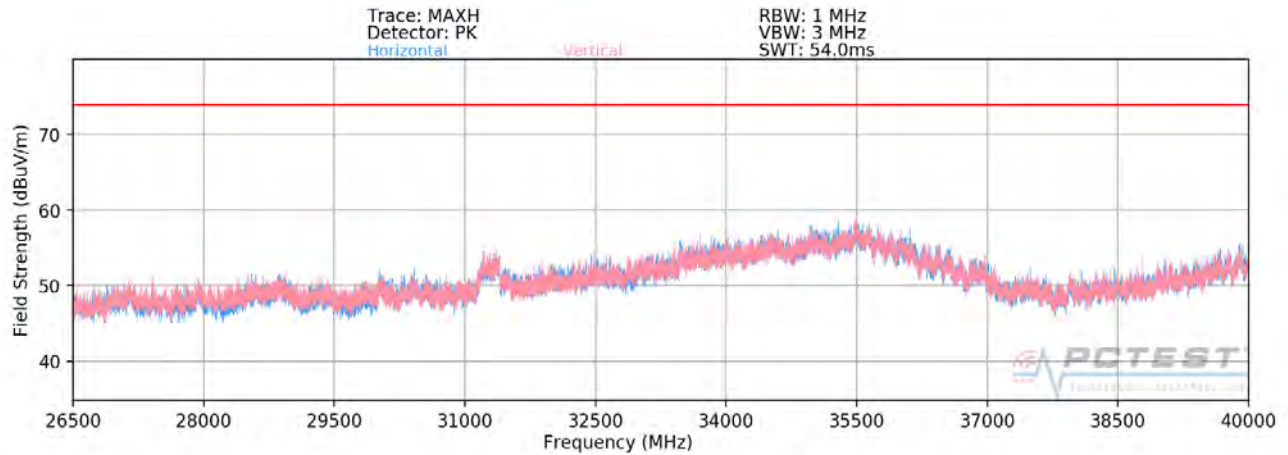
**Plot 7-304. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U3 Ch. 157 – 242 Tones)**

<b>FCC ID:</b> A3LSMG981JPN		<b>MEASUREMENT REPORT (CERTIFICATION)</b>	<b>Approved by:</b> Quality Manager
<b>Test Report S/N:</b> 1M1911260209-06.A3L	<b>Test Dates:</b> 10/22/2019 - 1/28/2020	<b>EUT Type:</b> Portable Handset	Page 240 of 270

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



**Plot 7-305. Radiated Spurious Plot 18GHz - 26.5GHz MIMO (802.11ax – 242 Tones)**



**Plot 7-306. Radiated Spurious Plot 26.5GHz - 40GHz MIMO (802.11ax – 242 Tones)**

<b>FCC ID:</b> A3LSMG981JPN	 <b>MEASUREMENT REPORT (CERTIFICATION)</b> 		<b>Approved by:</b> Quality Manager
<b>Test Report S/N:</b> 1M1911260209-06.A3L	<b>Test Dates:</b> 10/22/2019 - 1/28/2020	<b>EUT Type:</b> Portable Handset	Page 241 of 270



## MIMO Radiated Spurious Emission Measurements (242 Tones)

§15.407(b) §15.205 & §15.209; RSS-Gen [8.9]

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	115	307	-70.11	15.23	0.00	52.12	68.20	-16.08
* 15540.00	Average	V	-	-	-82.36	22.71	0.00	47.35	53.98	-6.63
* 15540.00	Peak	V	-	-	-71.22	22.71	0.00	58.49	73.98	-15.49
* 20720.00	Average	V	-	-	-72.26	7.97	-9.54	33.17	53.98	-20.81
* 20720.00	Peak	V	-	-	-61.05	7.97	-9.54	44.38	73.98	-29.60
25900.00	Peak	V	-	-	-58.87	10.34	-9.54	48.93	68.20	-19.27

**Table 7-124. Radiated Measurements MIMO (242 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	104	311	-69.50	15.67	0.00	53.17	68.20	-15.03
* 15600.00	Average	V	-	-	-81.22	22.46	0.00	48.24	53.98	-5.74
* 15600.00	Peak	V	-	-	-72.05	22.46	0.00	57.41	73.98	-16.57
* 20800.00	Average	V	-	-	-72.00	8.33	-9.54	33.79	53.98	-20.19
* 20800.00	Peak	V	-	-	-59.94	8.33	-9.54	45.85	73.98	-28.13
26000.00	Peak	V	-	-	-59.00	10.61	-9.54	49.07	68.20	-19.13

**Table 7-125. Radiated Measurements MIMO (242 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset	Page 242 of 270	



Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	122	289	-70.24	15.49	0.00	52.25	68.20	-15.95
* 15720.00	Average	V	-	-	-80.47	22.45	0.00	48.98	53.98	-5.00
* 15720.00	Peak	V	-	-	-71.68	22.45	0.00	57.77	73.98	-16.21
* 20960.00	Average	V	-	-	-72.52	8.52	-9.54	33.46	53.98	-20.52
* 20960.00	Peak	V	-	-	-61.52	8.52	-9.54	44.46	73.98	-29.52
26200.00	Peak	V	-	-	-58.59	10.69	-9.54	49.56	68.20	-18.64

**Table 7-126. Radiated Measurements MIMO (242 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	118	287	-70.41	15.86	0.00	52.45	68.20	-15.75
* 15780.00	Average	V	-	-	-80.69	22.77	0.00	49.08	53.98	-4.90
* 15780.00	Peak	V	-	-	-72.01	22.77	0.00	57.76	73.98	-16.22
* 21040.00	Average	V	-	-	-72.10	8.82	-9.54	34.18	53.98	-19.80
* 21040.00	Peak	V	-	-	-60.83	8.82	-9.54	45.45	73.98	-28.53
26300.00	Peak	V	-	-	-57.95	11.42	-9.54	50.93	68.20	-17.27

**Table 7-127. Radiated Measurements MIMO (242 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset	Page 243 of 270	

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	221	159	-68.21	15.70	0.00	54.49	68.20	-13.71
* 15840.00	Average	V	-	-	-80.29	22.66	0.00	49.37	53.98	-4.61
* 15840.00	Peak	V	-	-	-70.49	22.66	0.00	59.17	73.98	-14.81
* 21120.00	Average	V	-	-	-71.95	8.63	-9.54	34.14	53.98	-19.84
* 21120.00	Peak	V	-	-	-60.58	8.63	-9.54	45.51	73.98	-28.47
* 26400.00	Peak	V	-	-	-58.28	11.11	-9.54	50.29	68.20	-17.91

**Table 7-128. Radiated Measurements MIMO (242 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	330	241	-82.01	16.03	0.00	41.02	53.98	-12.96
* 10640.00	Peak	V	330	241	-69.25	16.03	0.00	53.78	73.98	-20.20
* 15960.00	Average	V	-	-	-82.47	23.09	0.00	47.62	53.98	-6.36
* 15960.00	Peak	V	-	-	-70.12	23.09	0.00	59.97	73.98	-14.01
* 21280.00	Average	V	-	-	-71.30	9.03	-9.54	35.19	53.98	-18.79
* 21280.00	Peak	V	-	-	-60.18	9.03	-9.54	46.31	73.98	-27.67
* 26600.00	Peak	V	-	-	-52.74	-4.38	-9.54	40.34	68.20	-27.86

**Table 7-129. Radiated Measurements MIMO (242 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset	Page 244 of 270	

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	321	208	-80.33	16.51	0.00	43.18	53.98	-10.80
* 11000.00	Peak	V	-	-	-68.30	16.51	0.00	55.21	73.98	-18.77
16500.00	Peak	V	-	-	-69.36	24.17	0.00	61.81	68.20	-6.39
22000.00	Peak	V	-	-	-60.46	9.58	-9.54	46.58	68.20	-21.62
27500.00	Peak	V	-	-	-50.37	-5.56	-9.54	41.53	68.20	-26.67

**Table 7-130. Radiated Measurements MIMO (242 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	270	244	-79.22	16.73	0.00	44.51	53.98	-9.47
* 11200.00	Peak	V	270	244	-67.95	16.73	0.00	55.78	73.98	-18.20
16800.00	Peak	V	-	-	-69.25	24.00	0.00	61.75	68.20	-6.45
* 22400.00	Average	V	-	-	-71.41	10.49	-9.54	36.54	53.98	-17.44
* 22400.00	Peak	V	-	-	-60.34	10.49	-9.54	47.61	73.98	-26.37
28000.00	Peak	V	-	-	-50.55	-4.84	-9.54	42.07	68.20	-26.13

**Table 7-131. Radiated Measurements MIMO (242 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset	Page 245 of 270	

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	-	-	-80.45	17.29	0.00	43.84	53.98	-10.14
* 11440.00	Peak	V	-	-	-68.95	17.29	0.00	55.34	73.98	-18.64
17160.00	Peak	V	-	-	-69.36	24.37	0.00	62.01	68.20	-6.19
* 22880.00	Average	V	-	-	-72.45	9.96	-9.54	34.97	53.98	-19.01
* 22880.00	Peak	V	-	-	-60.86	9.96	-9.54	46.56	73.98	-27.42
28600.00	Peak	V	-	-	-50.76	-4.40	-9.54	42.30	68.20	-25.90

**Table 7-132. Radiated Measurements MIMO (242 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	-	-	-80.04	17.63	0.00	44.59	53.98	-9.38
* 11490.00	Peak	V	-	-	-68.25	17.63	0.00	56.38	73.98	-17.59
17235.00	Peak	V	-	-	-70.89	25.01	0.00	61.12	68.20	-7.08
* 22980.00	Average	V	-	-	-72.43	10.35	-9.54	35.38	53.98	-18.60
* 22980.00	Peak	V	-	-	-61.12	10.35	-9.54	46.69	73.98	-27.29
28725.00	Peak	V	-	-	-50.82	-4.88	-9.54	41.76	68.20	-26.44

**Table 7-133. Radiated Measurements MIMO (242 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset	Page 246 of 270	

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	-	-	-80.22	17.35	0.00	44.13	53.98	-9.85
* 11570.00	Peak	V	-	-	-69.36	17.35	0.00	54.99	73.98	-18.99
17355.00	Peak	V	-	-	-71.05	26.08	0.00	62.03	68.20	-6.17
23140.00	Peak	V	-	-	-60.98	10.05	-9.54	46.53	68.20	-21.67
28925.00	Peak	V	-	-	-50.36	-5.11	-9.54	41.99	68.20	-26.21

**Table 7-134. Radiated Measurements MIMO (242 Tones)**

Worst Case Mode: 802.11ax (20MHz BW)  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 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	-	-	-81.06	17.57	0.00	43.51	53.98	-10.46
* 11650.00	Peak	V	-	-	-70.33	17.57	0.00	54.24	73.98	-19.73
17475.00	Peak	V	-	-	-71.41	26.23	0.00	61.82	68.20	-6.38
23300.00	Peak	V	-	-	-60.24	9.39	-9.54	46.61	68.20	-21.59
29125.00	Peak	V	-	-	-50.44	-6.06	-9.54	40.96	68.20	-27.24

**Table 7-135. Radiated Measurements MIMO (242 Tones)**

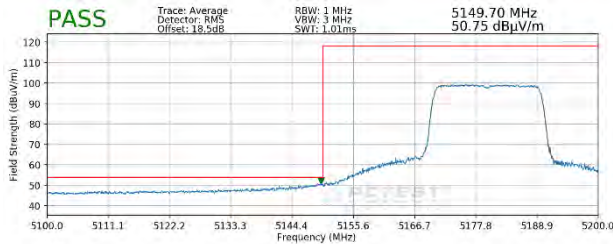
FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset	Page 247 of 270	

## 7.6.4 SISO Antenna-1 Radiated Band Edge Measurements (20MHz BW)

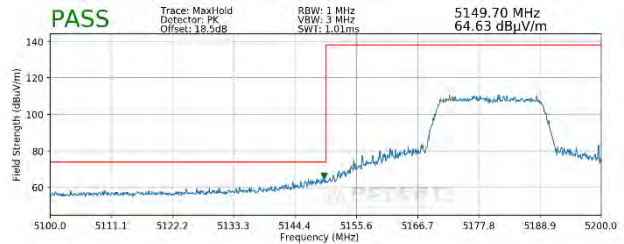
§15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]; RSS-Gen [8.9]

### 242 Tones

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	61
Distance of Measurements:	3 Meters
Operating Frequency:	5180MHz
Channel:	36

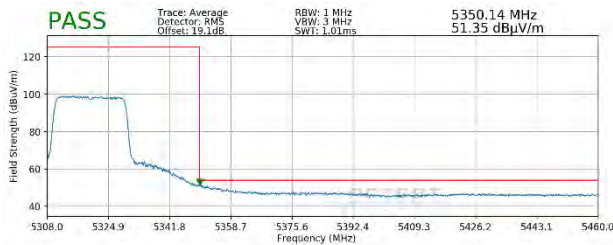


**Plot 7-307. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 1 – 242 Tones)**

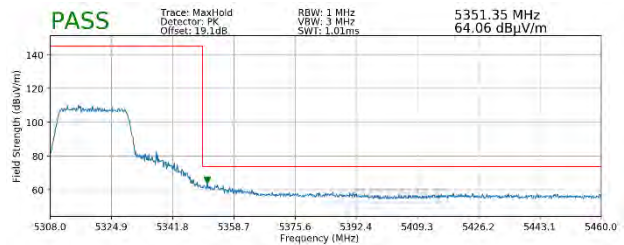


**Plot 7-308. Radiated Lower Band Edge Plot SISO ANT1 (Peak – UNII Band 1 – 242 Tones)**

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	61
Distance of Measurements:	3 Meters
Operating Frequency:	5320MHz
Channel:	64



**Plot 7-309. Radiated Upper Band Edge Plot SISO ANT1 (Average – UNII Band 2A – 242 Tones)**

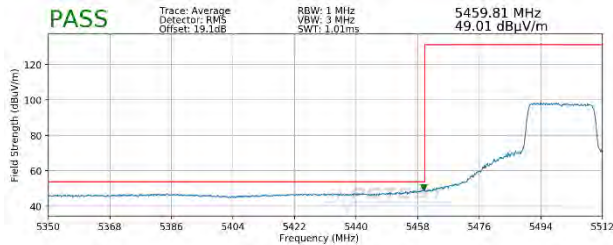


**Plot 7-310. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 2A – 242 Tones)**

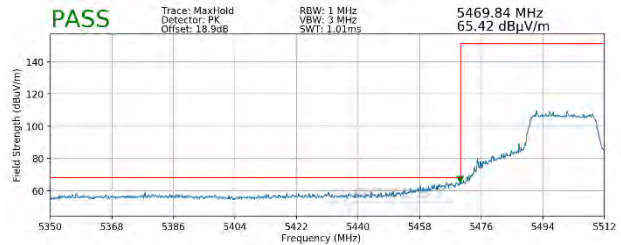
FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 248 of 270



Worst Case Mode: 802.11ax  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5500MHz  
 Channel: 100

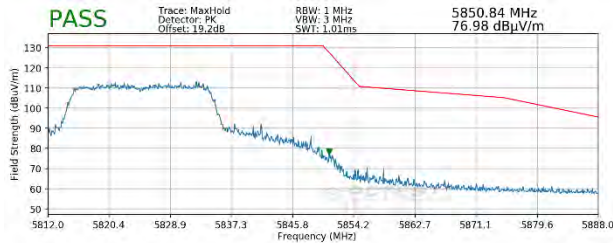


**Plot 7-311. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 2C – 242 Tones)**



**Plot 7-312. Radiated Lower Band Edge Plot SISO ANT1 (Peak – UNII Band 2C – 242 Tones)**

Worst Case Mode: 802.11ax  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5825MHz  
 Channel: 165



**Plot 7-313. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 3 – 242 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 249 of 270

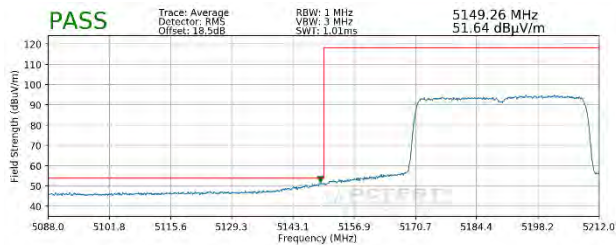


## 7.6.5 SISO Antenna-1 Radiated Band Edge Measurements (40MHz BW)

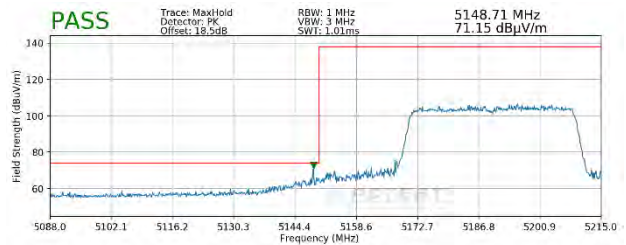
§15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

### 484 Tones

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	62
Distance of Measurements:	3 Meters
Operating Frequency:	5190MHz
Channel:	38

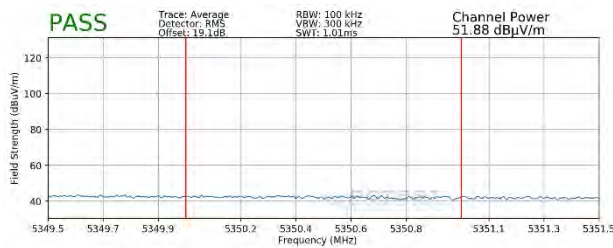


**Plot 7-314. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 1 – 484 Tones)**

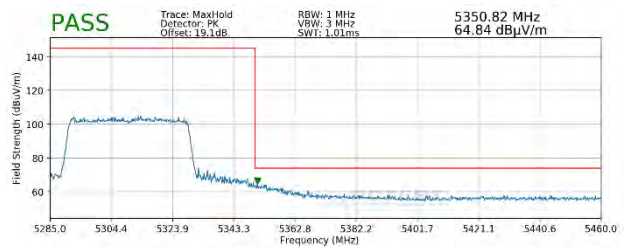


**Plot 7-315. Radiated Lower Band Edge Plot SISO ANT1 (Peak – UNII Band 1 – 484 Tones)**

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	62
Distance of Measurements:	3 Meters
Operating Frequency:	5310MHz
Channel:	62



**Plot 7-316. Radiated Upper Band Edge Plot SISO ANT1 (Average – UNII Band 2A – 484 Tones)**

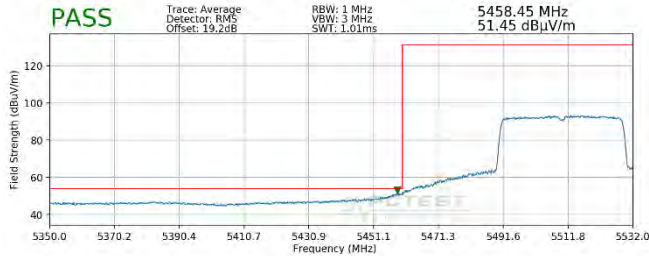


**Plot 7-317. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 2A – 484 Tones)**

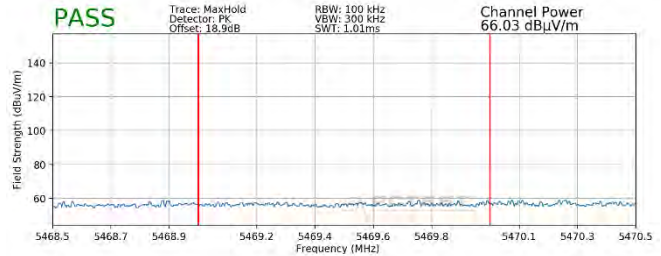
FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 250 of 270



Worst Case Mode: 802.11ax  
 Worst Case Transfer Rate: MCS0  
 RU Index: 62  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5510MHz  
 Channel: 102

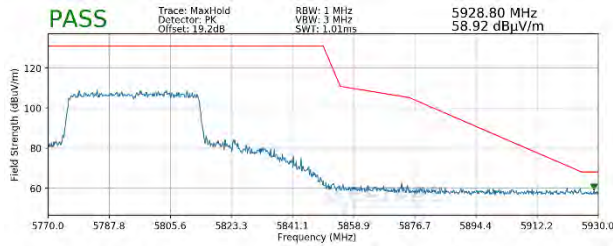


**Plot 7-318. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 2C – 484 Tones)**



**Plot 7-319. Radiated Lower Band Edge Plot SISO ANT1 (Peak – UNII Band 2C – 484 Tones)**

Worst Case Mode: 802.11ax  
 Worst Case Transfer Rate: MCS0  
 RU Index: 62  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5795MHz  
 Channel: 159



**Plot 7-320. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 3 – 484 Tones)**

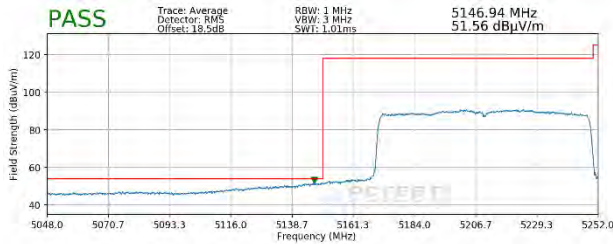
FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 251 of 270

## 7.6.6 SISO Antenna-1 Radiated Band Edge Measurements (80MHz BW)

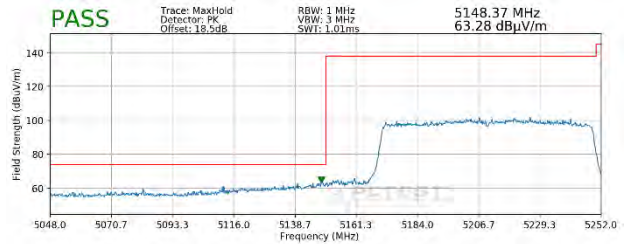
\$15.407(b.1)(b.2) \$15.205 \$15.209; RSS-Gen [8.9]

### 996 Tones

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	64
Distance of Measurements:	3 Meters
Operating Frequency:	5210MHz
Channel:	42

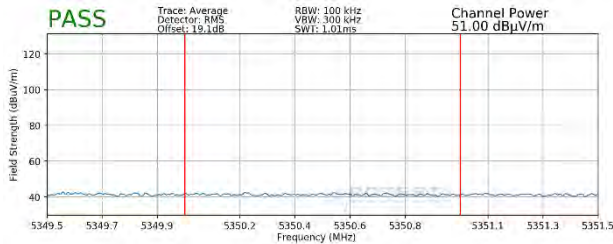


**Plot 7-321. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 1 – 996 Tones)**

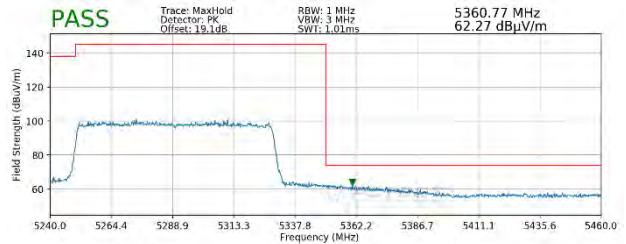


**Plot 7-322. Radiated Lower Band Edge Plot SISO ANT1 (Peak – UNII Band 1 – 996 Tones)**

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	64
Distance of Measurements:	3 Meters
Operating Frequency:	5290MHz
Channel:	58



**Plot 7-323. Radiated Upper Band Edge Plot SISO ANT1 (Average – UNII Band 2A – 996 Tones)**

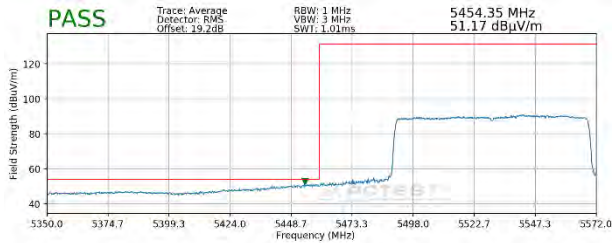


**Plot 7-324. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 2A – 996 Tones)**

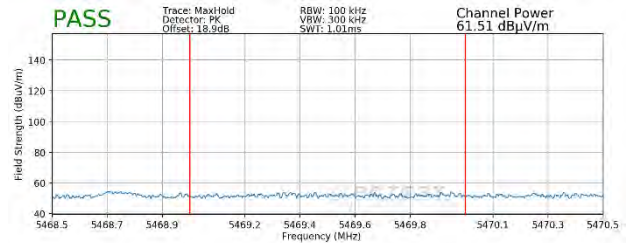
FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 252 of 270



Worst Case Mode: 802.11ax  
 Worst Case Transfer Rate: MCS0  
 RU Index: 64  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5530MHz  
 Channel: 106

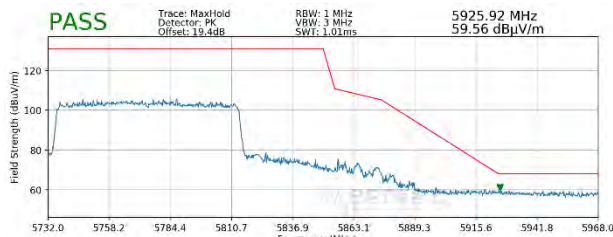


**Plot 7-325. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 2C – 996 Tones)**



**Plot 7-326. Radiated Lower Band Edge Plot SISO ANT1 (Peak – UNII Band 2C – 996 Tones)**

Worst Case Mode: 802.11ax  
 Worst Case Transfer Rate: MCS0  
 RU Index: 64  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5775MHz  
 Channel: 155



**Plot 7-327. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 3 – 996 Tones)**

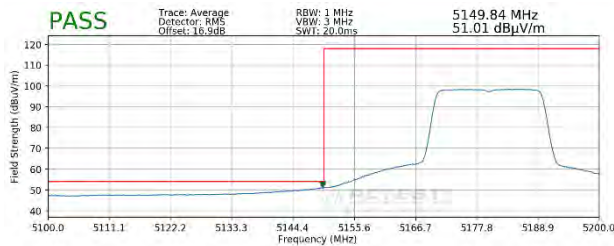
FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 253 of 270

## 7.6.7 SISO Antenna-2 Radiated Band Edge Measurements (20MHz BW)

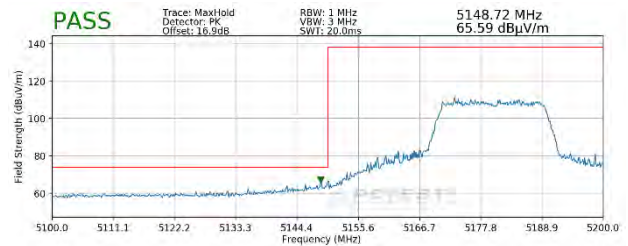
§15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

### 242 Tones

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	61
Distance of Measurements:	3 Meters
Operating Frequency:	5180MHz
Channel:	36

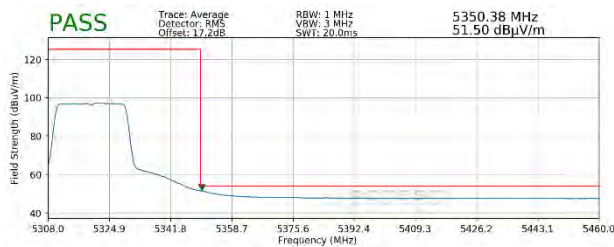


**Plot 7-328. Radiated Lower Band Edge Plot SISO ANT2 (Average – UNII Band 1 – 242 Tones)**

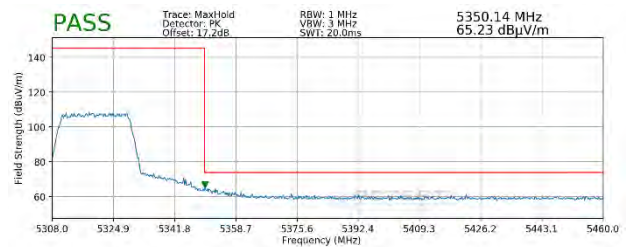


**Plot 7-329. Radiated Lower Band Edge Plot SISO ANT2 (Peak – UNII Band 1 – 242 Tones)**

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	61
Distance of Measurements:	3 Meters
Operating Frequency:	5320MHz
Channel:	64



**Plot 7-330. Radiated Upper Band Edge Plot SISO ANT2 (Average – UNII Band 2A – 242 Tones)**



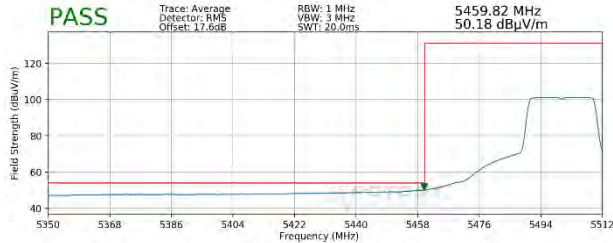
**Plot 7-331. Radiated Upper Band Edge Plot SISO ANT2 (Peak – UNII Band 2A – 242 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 254 of 270

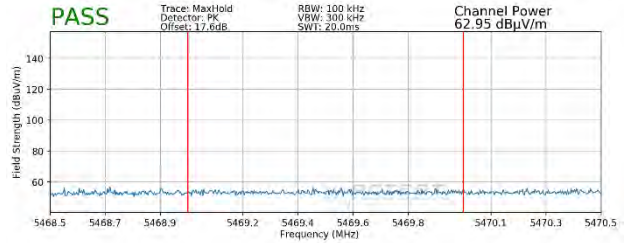




Worst Case Mode: 802.11ax  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5500MHz  
 Channel: 100

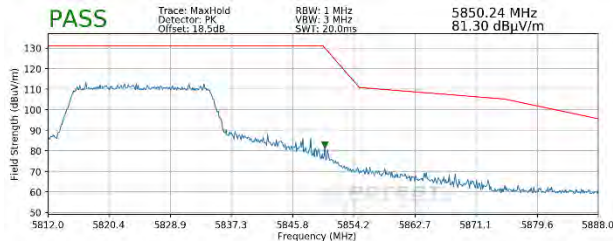


**Plot 7-332. Radiated Lower Band Edge Plot SISO ANT2 (Average – UNII Band 2C – 242 Tones)**



**Plot 7-333. Radiated Lower Band Edge Plot SISO ANT2 (Peak – UNII Band 2C – 242 Tones)**

Worst Case Mode: 802.11ax  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5825MHz  
 Channel: 165



**Plot 7-334. Radiated Upper Band Edge Plot SISO ANT2 (Peak – UNII Band 3 – 242 Tones)**

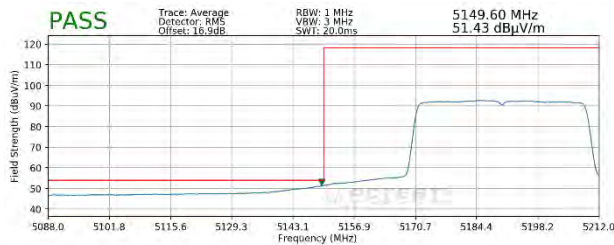
FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 255 of 270

## 7.6.8 SISO Antenna-2 Radiated Band Edge Measurements (40MHz BW)

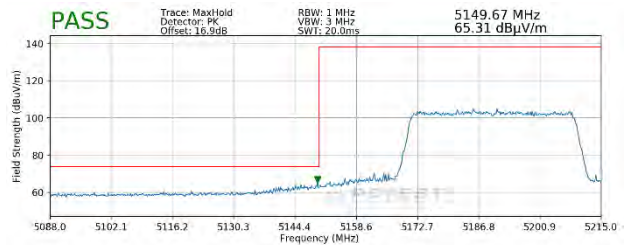
§15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

### 484 Tones

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	62
Distance of Measurements:	3 Meters
Operating Frequency:	5190MHz
Channel:	38

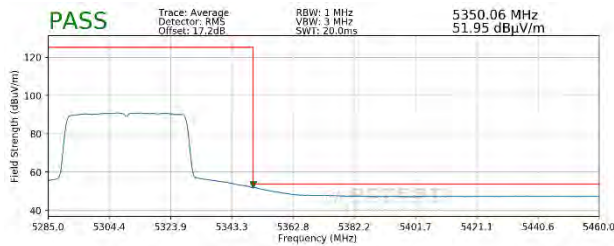


**Plot 7-335. Radiated Lower Band Edge Plot SISO ANT2 (Average – UNII Band 1 – 484 Tones)**

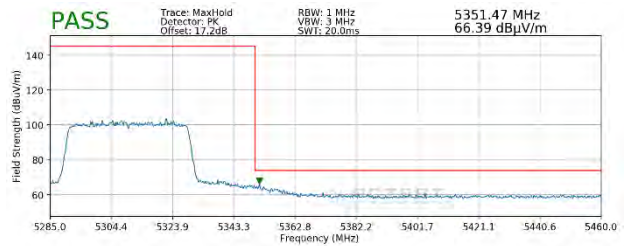


**Plot 7-336. Radiated Lower Band Edge Plot SISO ANT2 (Peak – UNII Band 1 – 484 Tones)**

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	62
Distance of Measurements:	3 Meters
Operating Frequency:	5310MHz
Channel:	62



**Plot 7-337. Radiated Upper Band Edge Plot SISO ANT2 (Average – UNII Band 2A – 484 Tones)**



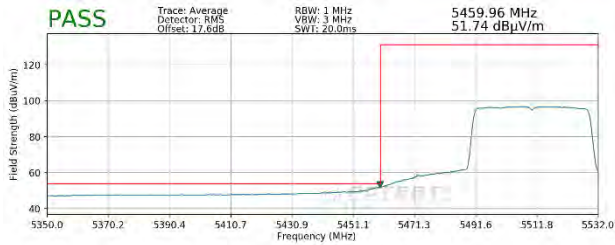
**Plot 7-338. Radiated Upper Band Edge Plot SISO ANT2 (Peak – UNII Band 2A – 484 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 256 of 270

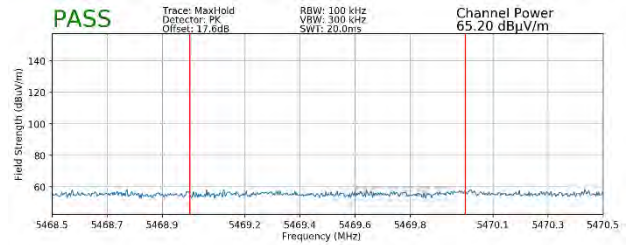




Worst Case Mode: 802.11ax  
 Worst Case Transfer Rate: MCS0  
 RU Index: 62  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5510MHz  
 Channel: 102

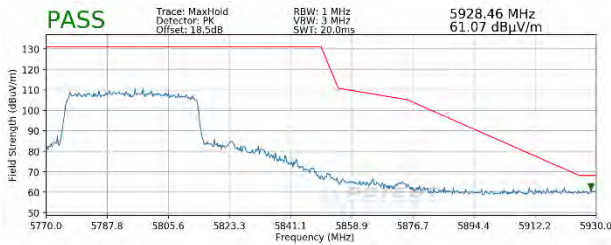


**Plot 7-339. Radiated Lower Band Edge Plot SISO ANT2 (Average – UNII Band 2C – 484 Tones)**



**Plot 7-340. Radiated Lower Band Edge Plot SISO ANT2 (Peak – UNII Band 2C – 484 Tones)**

Worst Case Mode: 802.11ax  
 Worst Case Transfer Rate: MCS0  
 RU Index: 62  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5795MHz  
 Channel: 159



**Plot 7-341. Radiated Upper Band Edge Plot SISO ANT2 (Peak – UNII Band 3 – 484 Tones)**

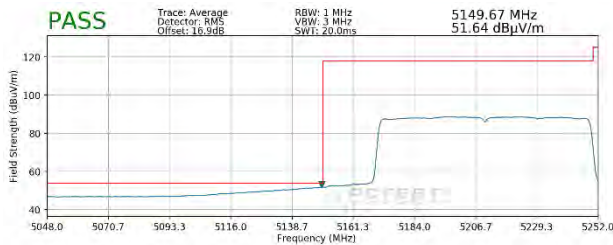
FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 257 of 270



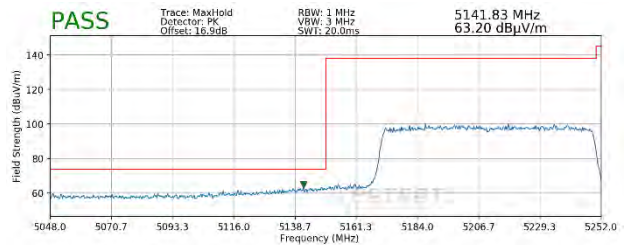
**7.6.9 SISO Antenna-2 Radiated Band Edge Measurements (80MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]**

**996 Tones**

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	64
Distance of Measurements:	3 Meters
Operating Frequency:	5210MHz
Channel:	42

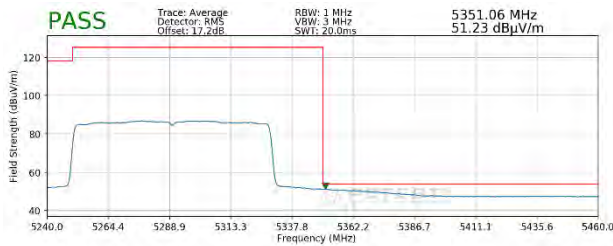


**Plot 7-342. Radiated Lower Band Edge Plot SISO ANT2 (Average – UNII Band 1 – 996 Tones)**

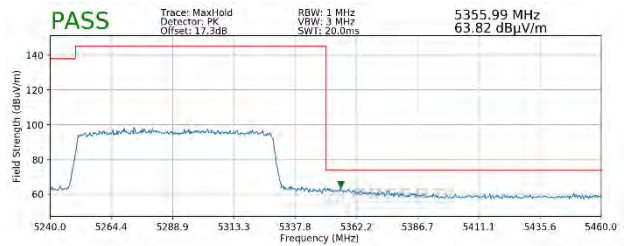


**Plot 7-343. Radiated Lower Band Edge Plot SISO ANT2 (Peak – UNII Band 1 – 996 Tones)**

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	64
Distance of Measurements:	3 Meters
Operating Frequency:	5290MHz
Channel:	58



**Plot 7-344. Radiated Upper Band Edge Plot SISO ANT2 (Average – UNII Band 2A – 996 Tones)**

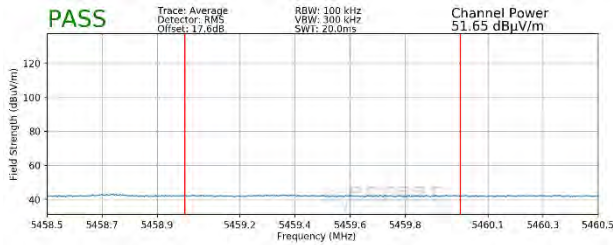


**Plot 7-345. Radiated Upper Band Edge Plot SISO ANT2 (Peak – UNII Band 2A – 996 Tones)**

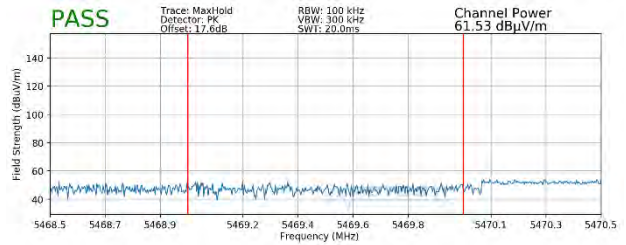
FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 258 of 270



Worst Case Mode: 802.11ax  
 Worst Case Transfer Rate: MCS0  
 RU Index: 64  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5530MHz  
 Channel: 106

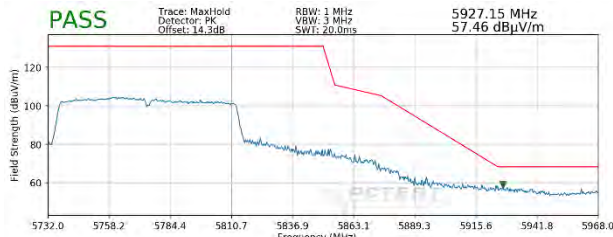


**Plot 7-346. Radiated Lower Band Edge Plot SISO ANT2 (Average – UNII Band 2C – 996 Tones)**



**Plot 7-347. Radiated Lower Band Edge Plot SISO ANT2 (Peak – UNII Band 2C – 996 Tones)**

Worst Case Mode: 802.11ax  
 Worst Case Transfer Rate: MCS0  
 RU Index: 64  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5775MHz  
 Channel: 155



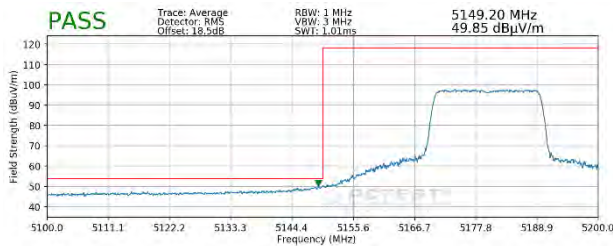
**Plot 7-348. Radiated Upper Band Edge Plot SISO ANT2 (Peak – UNII Band 3 – 996 Tones)**

FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 259 of 270

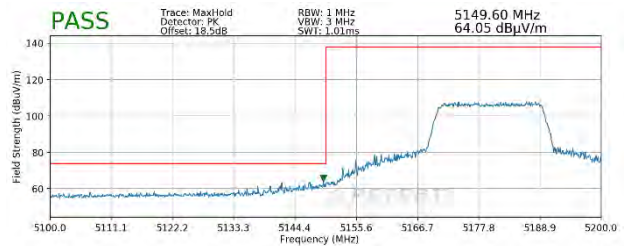
**7.6.10 MIMO Radiated Band Edge Measurements (20MHz BW)**  
**\$15.407(b.1)(b.2) \$15.205 \$15.209; RSS-Gen [8.9]**

**242 Tones**

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	61
Distance of Measurements:	3 Meters
Operating Frequency:	5180MHz
Channel:	36

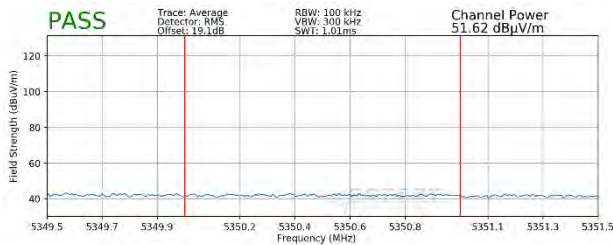


**Plot 7-349. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 1 – 242 Tones)**

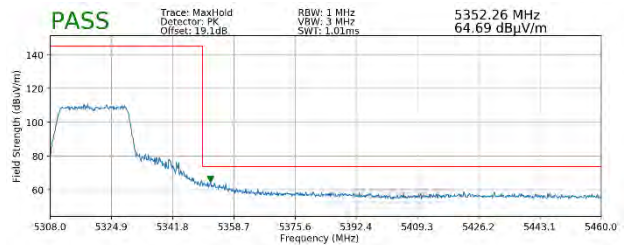


**Plot 7-350. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 1 – 242 Tones)**

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	61
Distance of Measurements:	3 Meters
Operating Frequency:	5320MHz
Channel:	64



**Plot 7-351. Radiated Upper Band Edge Plot MIMO (Average – UNII Band 2A – 242 Tones)**

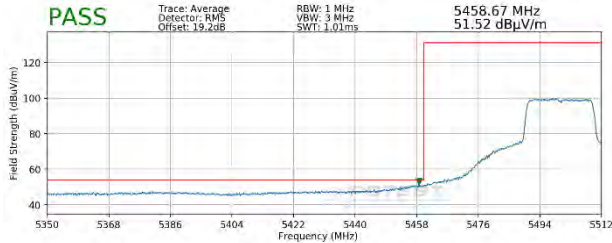


**Plot 7-352. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 2A – 242 Tones)**

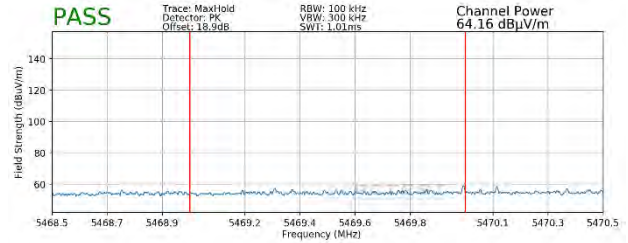
FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 260 of 270



Worst Case Mode: 802.11ax  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5500MHz  
 Channel: 100

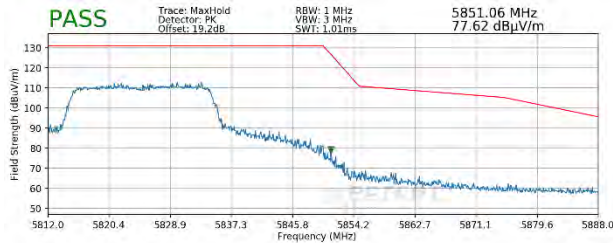


**Plot 7-353. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 2C – 242 Tones)**



**Plot 7-354. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 2C – 242 Tones)**

Worst Case Mode: 802.11ax  
 Worst Case Transfer Rate: MCS0  
 RU Index: 61  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5825MHz  
 Channel: 165



**Plot 7-355. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 3 – 242 Tones)**

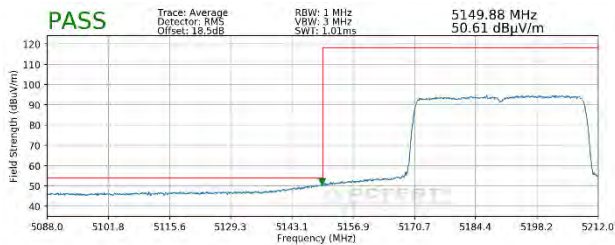
FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 261 of 270



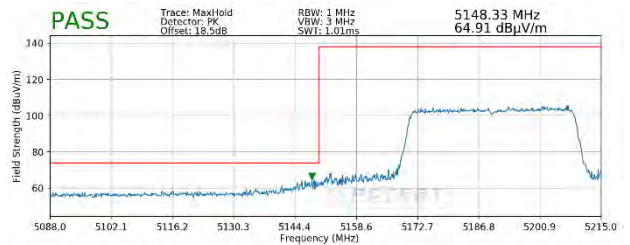
### 7.6.11 MIMO Radiated Band Edge Measurements (40MHz BW) §15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

#### 484 Tones

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	62
Distance of Measurements:	3 Meters
Operating Frequency:	5190MHz
Channel:	38

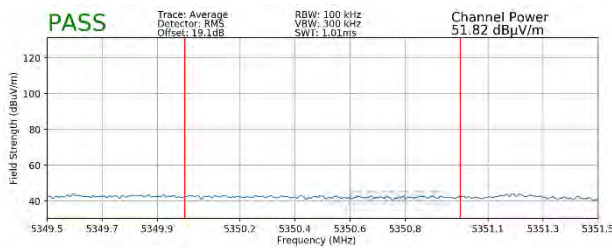


**Plot 7-356. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 1 – 484 Tones)**

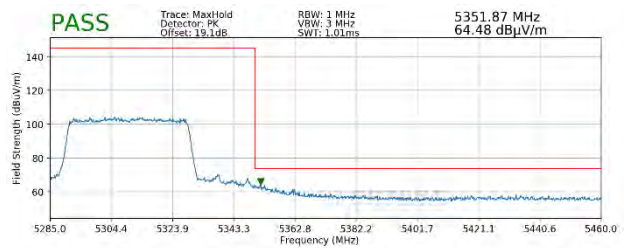


**Plot 7-357. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 1 – 484 Tones)**

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	62
Distance of Measurements:	3 Meters
Operating Frequency:	5310MHz
Channel:	62



**Plot 7-358. Radiated Upper Band Edge Plot MIMO (Average – UNII Band 2A – 484 Tones)**

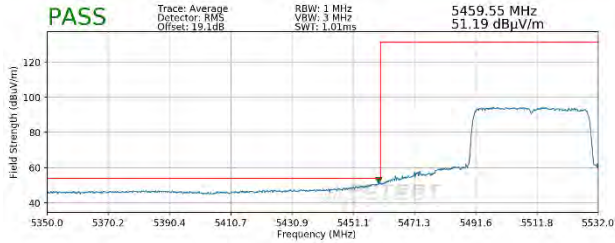


**Plot 7-359. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 2A – 484 Tones)**

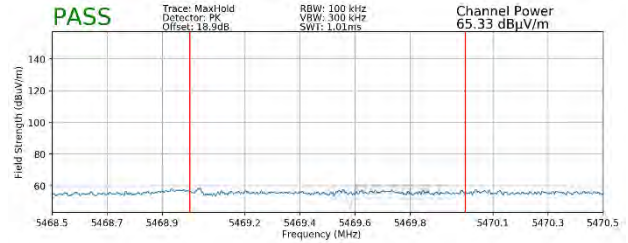
FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911260209-06.A3L	Test Dates: 10/22/2019 - 1/28/2020	EUT Type: Portable Handset		Page 262 of 270



Worst Case Mode: 802.11ax  
 Worst Case Transfer Rate: MCS0  
 RU Index: 62  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5510MHz  
 Channel: 102

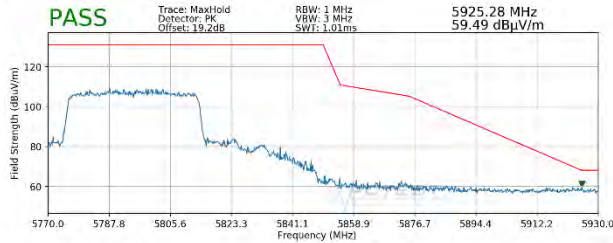


**Plot 7-360. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 2C – 484 Tones)**



**Plot 7-361. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 2C – 484 Tones)**

Worst Case Mode: 802.11ax  
 Worst Case Transfer Rate: MCS0  
 RU Index: 62  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5795MHz  
 Channel: 159



**Plot 7-362. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 3 – 484 Tones)**

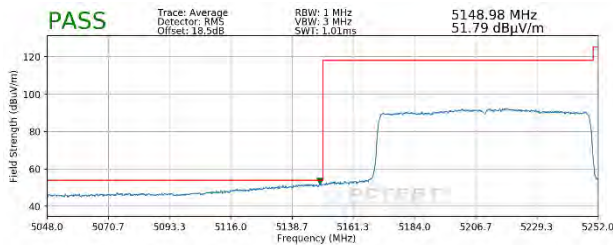
<b>FCC ID:</b> A3LSMG981JPN		<b>MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Approved by:</b> Quality Manager
<b>Test Report S/N:</b> 1M1911260209-06.A3L	<b>Test Dates:</b> 10/22/2019 - 1/28/2020	<b>EUT Type:</b> Portable Handset	Page 263 of 270	



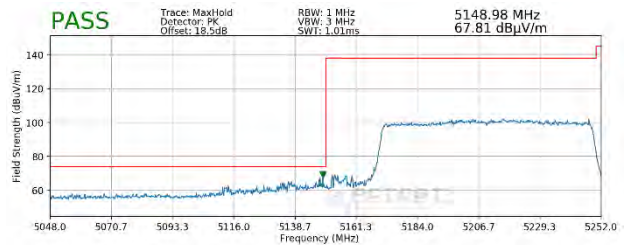
## 7.6.12 MIMO Radiated Band Edge Measurements (80MHz BW) §15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

### 996 Tones

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	64
Distance of Measurements:	3 Meters
Operating Frequency:	5210MHz
Channel:	42

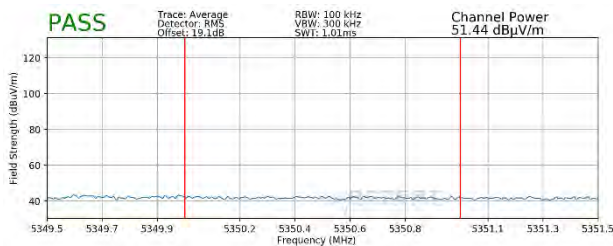


**Plot 7-363. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 1 – 996 Tones)**

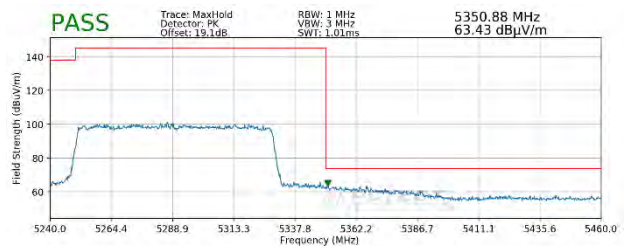


**Plot 7-364. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 1 – 996 Tones)**

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	64
Distance of Measurements:	3 Meters
Operating Frequency:	5290MHz
Channel:	58



**Plot 7-365. Radiated Upper Band Edge Plot MIMO (Average – UNII Band 2A – 996 Tones)**

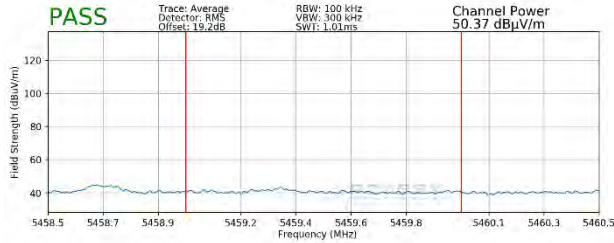


**Plot 7-366. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 2A – 996 Tones)**

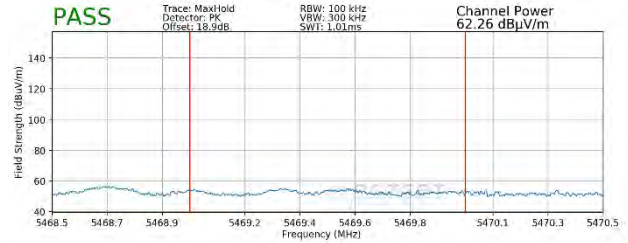
FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Worst Case Mode: 802.11ax  
 Worst Case Transfer Rate: MCS0  
 RU Index: 64  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5530MHz  
 Channel: 106

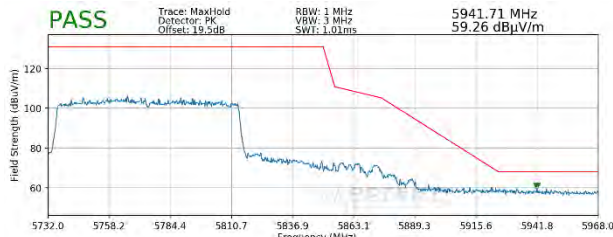


**Plot 7-367. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 2C – 996 Tones)**



**Plot 7-368. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 2C – 996 Tones)**

Worst Case Mode: 802.11ax  
 Worst Case Transfer Rate: MCS0  
 RU Index: 64  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5775MHz  
 Channel: 155



**Plot 7-369. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 3 – 996 Tones)**

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## 7.7 Radiated Spurious Emissions Measurements – Below 1GHz

§15.209; RSS-Gen [8.9]

### 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 7-136 per Section 15.209 and RSS-Gen (8.9).**

Frequency	Field Strength [ $\mu$ V/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 7-136. Radiated Limits**

### Test Procedures Used

ANSI C63.10-2013

### Test Settings

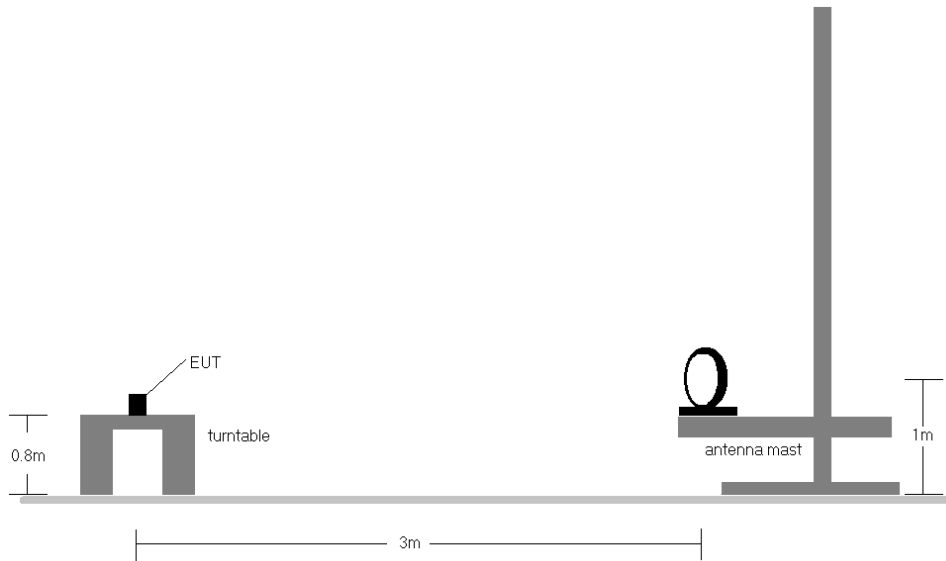
#### Quasi-Peak Field Strength Measurements

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

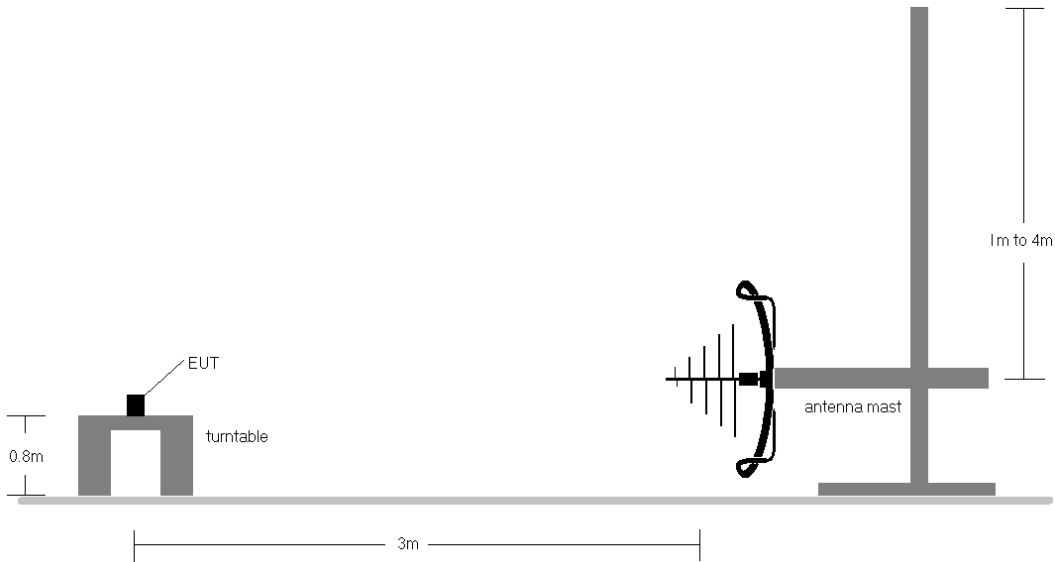
FCC ID: A3LSMG981JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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**Test Setup**

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**

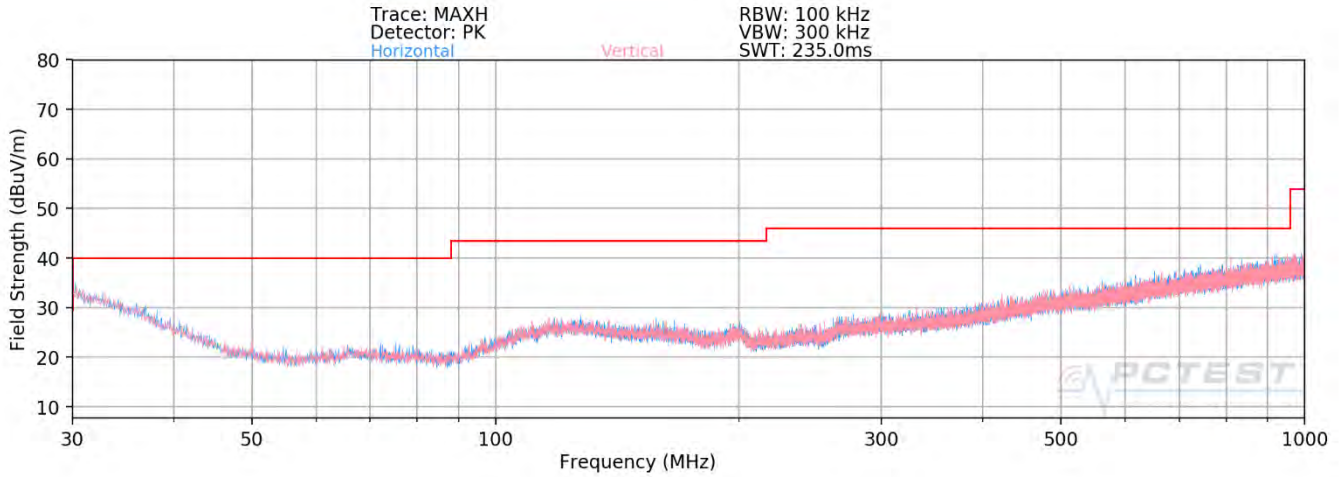
<b>FCC ID:</b> A3LSMG981JPN		<b>MEASUREMENT REPORT (CERTIFICATION)</b>	 <b>Approved by:</b> Quality Manager
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**Test Notes**

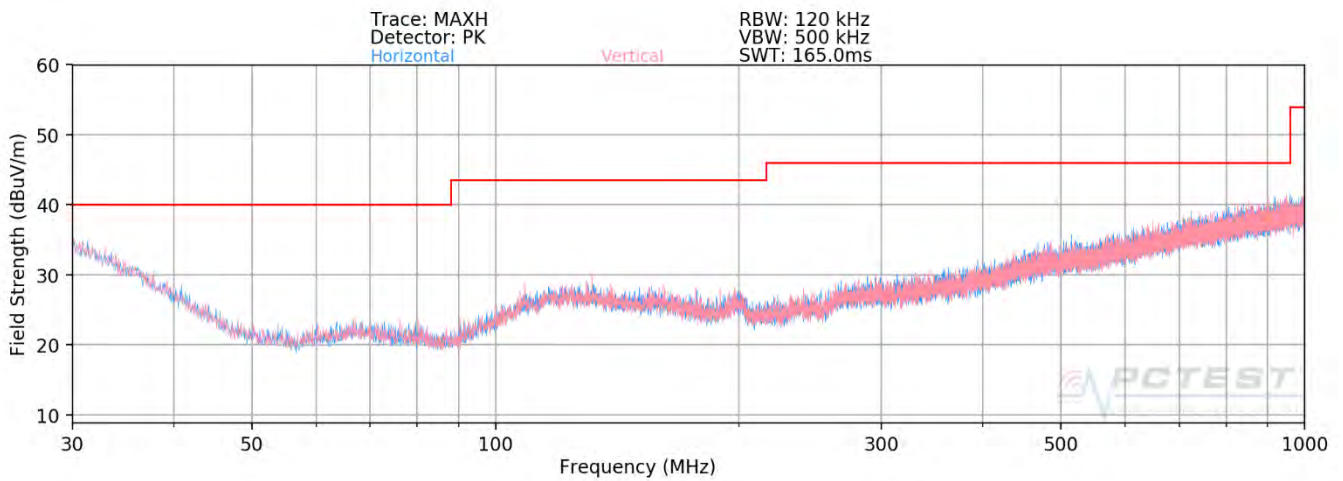
1. All emissions lying in restricted bands specified in §15.205 and RSS-Gen (8.10) are below the limit shown in Table 7-65.
2. The broadband receive antenna is manipulated through vertical and horizontal polarizations during the tests. The EUT is manipulated through three orthogonal planes.
3. This unit 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.

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**MIMO Radiated Spurious Emissions Measurements (Below 1GHz)**  
§15.209; RSS-Gen [8.9]



**Plot 7-370. Radiated Spurious Plot below 1GHz MIMO (802.11ax – 26 Tones – U3 Ch. 157)**



**Plot 7-371. Radiated Spurious Plot below 1GHz MIMO (802.11ax – 242 Tones – U3 Ch. 157)**

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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: A3LSMG981JPN** is in compliance with Part 15 Subpart E (15.407) of the FCC Rules.

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