

## 7.6 Frequency Stability

### §15.407(g)

The EUT was placed inside of an environmental chamber as the temperature in the chamber was varied between -30°C and +50°C. The temperature was incremented by 10° intervals and the unit was allowed to stabilize at each temperature before each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channel's center frequency was recorded. Data for the worst case channel is shown below.



OPERATING FREQUENCY: 5,180,000,000 Hz  
 CHANNEL: 36  
 REFERENCE VOLTAGE: 3.85 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.85	+ 20 (Ref)	5,179,999,525	-475	-0.00000917
100 %		- 30	5,179,999,673	-327	-0.00000631
100 %		- 20	5,179,999,948	-52	-0.00000100
100 %		- 10	5,179,999,801	-199	-0.00000384
100 %		0	5,179,999,615	-385	-0.00000743
100 %		+ 10	5,180,000,375	375	0.00000724
100 %		+ 20	5,179,999,775	-225	-0.00000434
100 %		+ 30	5,180,000,078	78	0.00000151
100 %		+ 40	5,179,999,933	-67	-0.00000129
100 %		+ 50	5,179,999,928	-72	-0.00000139
BATT. ENDPOINT		3.45	+ 20	5,180,000,030	30

**Table 7-24. Frequency Stability Measurements for UNII Band 1 (Ch. 36)**

**Note:**

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 110 of 258	

## Frequency Stability

### §15.407(g)

The EUT was placed inside of an environmental chamber as the temperature in the chamber was varied between -30°C and +50°C. The temperature was incremented by 10° intervals and the unit was allowed to stabilize at each temperature before each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channel's center frequency was recorded. Data for the worst case channel is shown below.



OPERATING FREQUENCY: 5,260,000,000 Hz  
 CHANNEL: 52  
 REFERENCE VOLTAGE: 3.85 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.85	+ 20 (Ref)	5,259,999,959	-41	-0.0000078
100 %		- 30	5,259,999,851	-149	-0.0000283
100 %		- 20	5,260,000,424	424	0.0000806
100 %		- 10	5,259,999,816	-184	-0.0000350
100 %		0	5,260,000,216	216	0.0000411
100 %		+ 10	5,259,999,982	-18	-0.0000034
100 %		+ 20	5,259,999,863	-137	-0.0000260
100 %		+ 30	5,260,000,184	184	0.0000350
100 %		+ 40	5,259,999,908	-92	-0.0000175
100 %		+ 50	5,260,000,005	5	0.0000010
BATT. ENDPOINT		3.45	+ 20	5,260,000,061	61

**Table 7-25. Frequency Stability Measurements for UNII Band 2A (Ch. 52)**

#### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 111 of 258	

## Frequency Stability

### §15.407(g)

The EUT was placed inside of an environmental chamber as the temperature in the chamber was varied between -30°C and +50°C. The temperature was incremented by 10° intervals and the unit was allowed to stabilize at each temperature before each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channel's center frequency was recorded. Data for the worst case channel is shown below.


OPERATING FREQUENCY: 5,500,000,000 Hz  
 CHANNEL: 100  
 REFERENCE VOLTAGE: 3.85 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.85	+ 20 (Ref)	5,500,000,187	187	0.00000340
100 %		- 30	5,500,000,189	189	0.00000344
100 %		- 20	5,500,000,271	271	0.00000493
100 %		- 10	5,500,000,050	50	0.00000091
100 %		0	5,500,000,155	155	0.00000282
100 %		+ 10	5,500,000,014	14	0.00000025
100 %		+ 20	5,499,999,610	-390	-0.00000709
100 %		+ 30	5,500,000,024	24	0.00000044
100 %		+ 40	5,499,999,896	-104	-0.00000189
100 %		+ 50	5,499,999,988	-12	-0.00000022
BATT. ENDPOINT		3.45	+ 20	5,499,999,777	-223

**Table 7-26. Frequency Stability Measurements for UNII Band 2C (Ch. 100)**

**Note:**

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 112 of 258	

## Frequency Stability

§15.407(g)

The EUT was placed inside of an environmental chamber as the temperature in the chamber was varied between -30°C and +50°C. The temperature was incremented by 10° intervals and the unit was allowed to stabilize at each temperature before each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channel's center frequency was recorded. Data for the worst case channel is shown below.



OPERATING FREQUENCY: 5,745,000,000 Hz  
 CHANNEL: 149  
 REFERENCE VOLTAGE: 3.85 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.85	+ 20 (Ref)	5,744,999,987	-13	-0.00000023
100 %		- 30	5,745,000,165	165	0.00000287
100 %		- 20	5,745,000,040	40	0.00000070
100 %		- 10	5,745,000,078	78	0.00000136
100 %		0	5,744,999,832	-168	-0.00000292
100 %		+ 10	5,744,999,944	-56	-0.00000097
100 %		+ 20	5,744,999,995	-5	-0.00000009
100 %		+ 30	5,745,000,000	0	0.00000000
100 %		+ 40	5,744,999,988	-12	-0.00000021
100 %		+ 50	5,745,000,381	381	0.00000663
BATT. ENDPOINT		3.45	+ 20	5,745,000,033	33

**Table 7-27. Frequency Stability Measurements for UNII Band 3 (Ch. 149)**

**Note:**

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 113 of 258	

## 7.7 Radiated Spurious Emission Measurements – Above 1GHz

§15.407(b) §15.205 §15.209

### Test Overview and Limit

All out of band radiated spurious emissions are measured with a spectrum analyzer connected to a receive antenna while the EUT is operating at its maximum duty cycle, at its maximum power control level, as defined in KDB 789033 D02 v01r04, and at the appropriate frequencies. All channels, modes (e.g. 802.11a, 802.11n (20MHz BW), 802.11n (40MHz BW), and 802.11ac (80MHz)), and modulations/data rates were investigated among all UNII bands. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.

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

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

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

***All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table 7-28 per Section 15.209.***

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

Table 7-28. Radiated Limits



### Test Procedures Used

KDB 789033 D02 v01r04 – Section G

### Test Settings

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

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

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 114 of 258	

### Peak Measurements above 1GHz

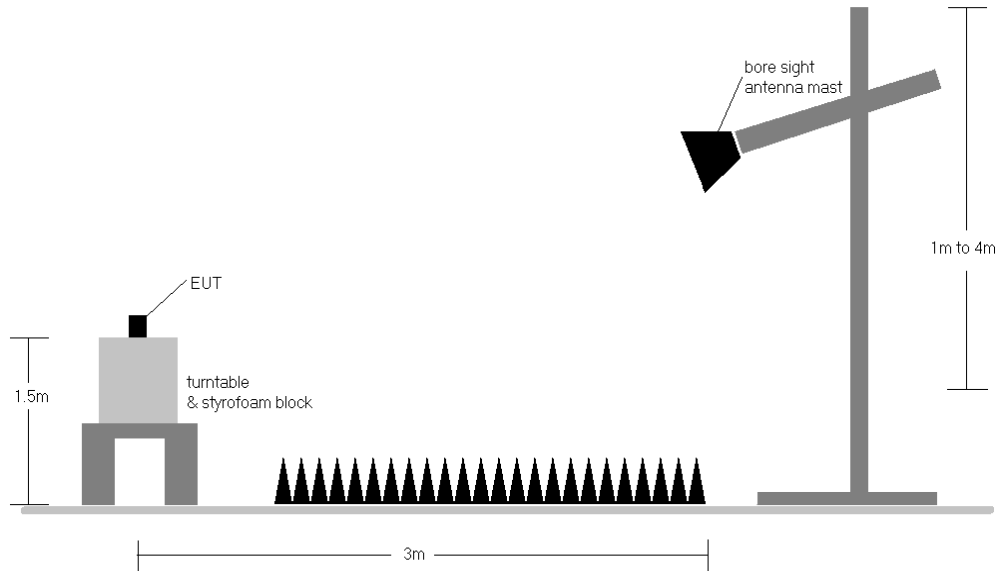
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

### 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: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 115 of 258	

## Test Notes

1. All radiated spurious emissions levels were measured in a radiated test setup per the guidance of KDB 789033 D02 v01r04 Section G.
2. All emissions that lie in the restricted bands (denoted by a \* next to the frequency) specified in §15.205 are below the limit shown in Table 7-28.
3. All spurious emissions lying in restricted bands specified in §15.205 are below the limit shown in Table 7-28. All spurious emissions that do not lie in a restricted band are subject to a peak limit of -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions of 68.2dB $\mu$ V/m.
4. The antenna is manipulated through typical positions, polarity and length during the tests. The EUT is manipulated through three orthogonal planes.
5. This unit was tested with its standard battery.
6. 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.
7. 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.
8. Radiated spurious emissions were investigated while operating in MIMO mode, however, it was determined that single antenna operation produced the worst case emissions. Since the emissions produced from MIMO operation were found to be more than 20dB below the limit, the MIMO emissions are not reported.
9. 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. Rohde & Schwarz EMC32, Version 9.15.00 automated test software was used to perform the Radiated Spurious Emissions Pre-Scan testing.
10. The "-" shown in the following RSE tables are used to denote a noise floor measurement.



## Sample Calculations

### Determining Spurious Emissions Levels

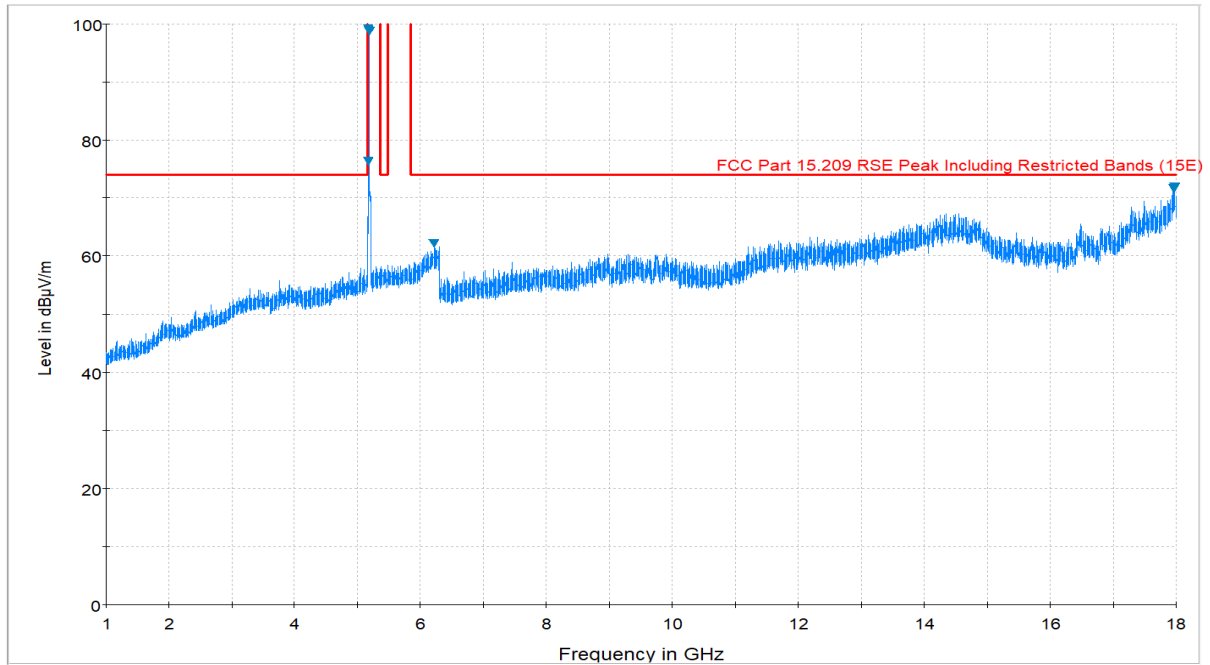
- o Field Strength Level [dB $\mu$ V/m] = Analyzer Level [dBm] + 107 + AFCL [dB/m]
- o AFCL [dB/m] = Antenna Factor [dB/m] + Cable Loss [dB]
- o Margin [dB] = Field Strength Level [dB $\mu$ V/m] – Limit [dB $\mu$ V/m]

### Radiated Band Edge Measurement Offset

- o The amplitude offset shown in the radiated restricted band edge plots in Section 7.7 was calculated using the formula:  
Offset (dB) = (Antenna Factor + Cable Loss + Attenuator) – Preamplifier Gain

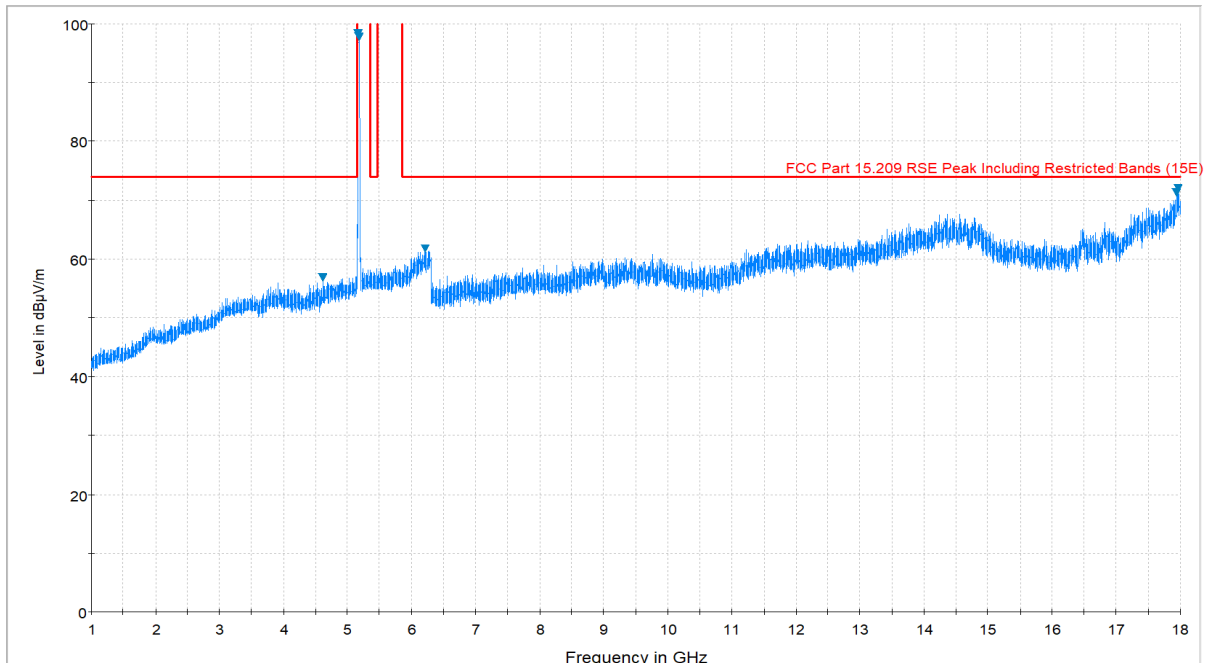
FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 116 of 258	

## 7.7.1 Antenna-1 Radiated Spurious Emission Measurements



— Preview Result 1-PK+    — FCC Part 15.209 RSE Peak Including Restricted Bands (15E)    ▼ Final\_Result PK+

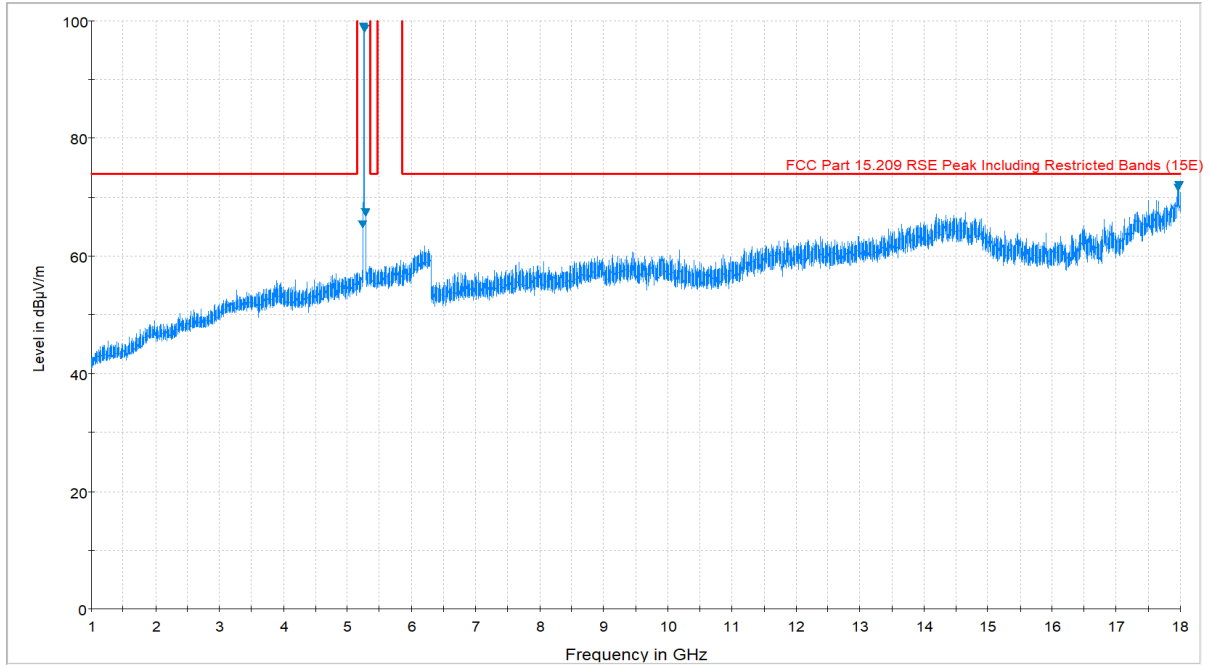
**Plot 7-157. Radiated Spurious Plot above 1GHz (802.11a – U1 Ch. 40, Ant. Pol. H)**



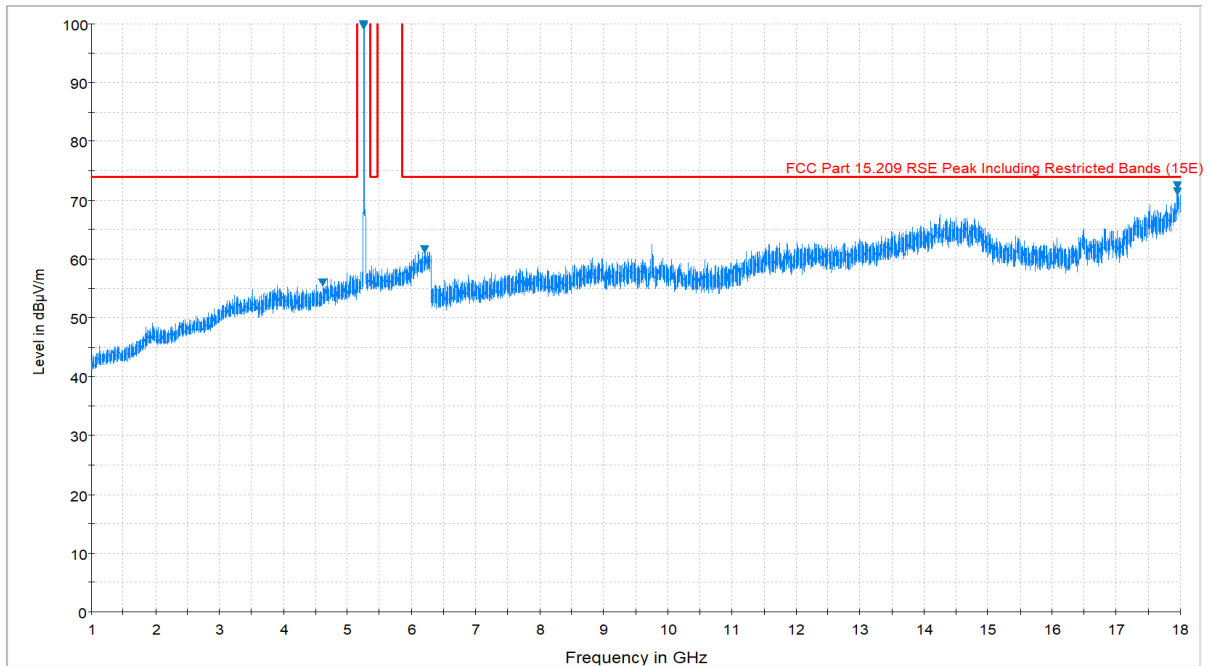
— Preview Result 1-PK+    — FCC Part 15.209 RSE Peak Including Restricted Bands (15E)    ▼ Final\_Result PK+

**Plot 7-158. Radiated Spurious Plot above 1GHz (802.11a – U1 Ch. 40, Ant. Pol. V)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 117 of 258	

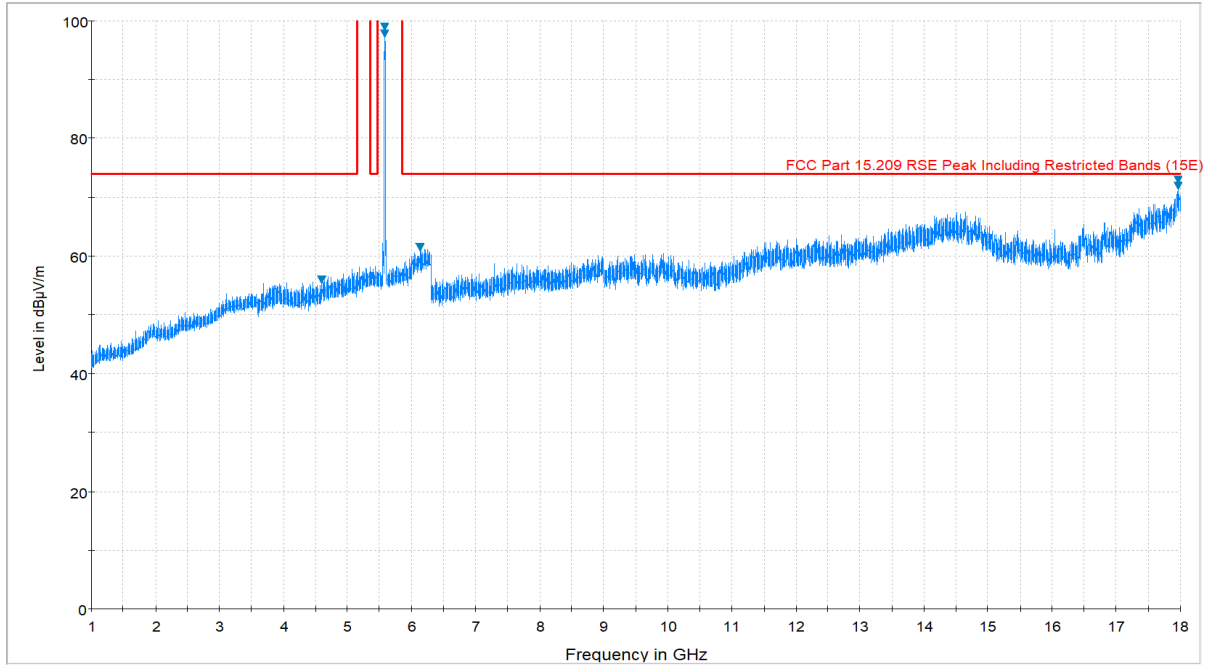


**Plot 7-159. Radiated Spurious Plot above 1GHz (802.11a – U2A Ch. 56, Ant. Pol. H)**



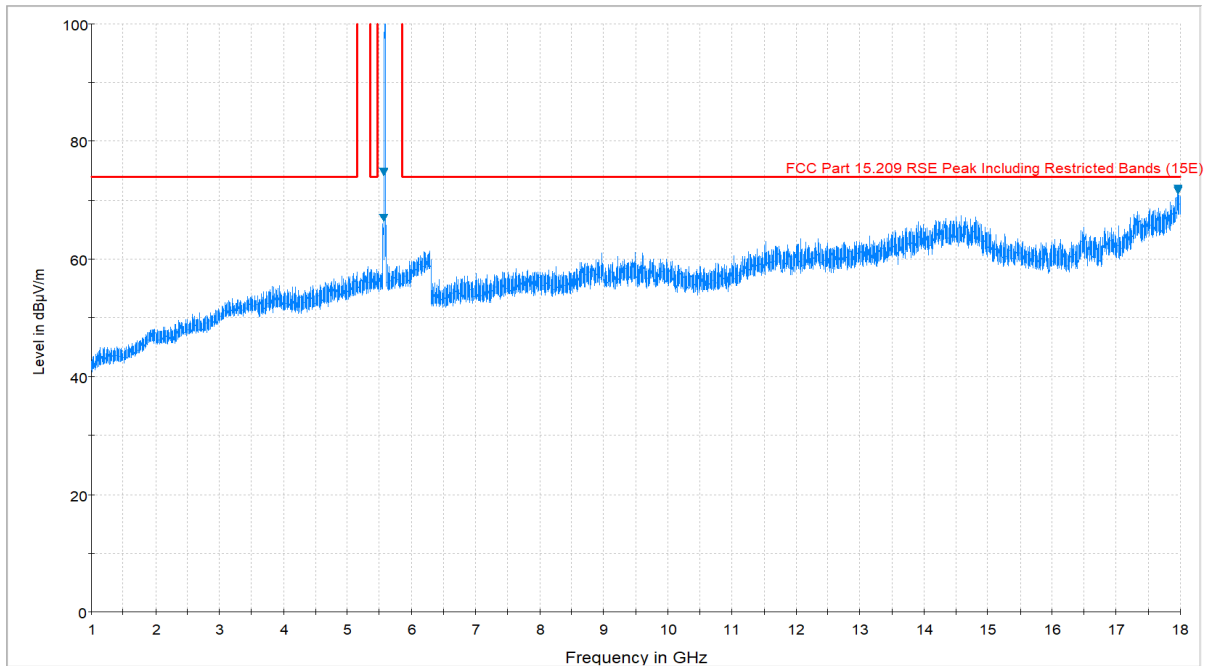
**Plot 7-160. Radiated Spurious Plot above 1GHz (802.11a – U2A Ch. 56, Ant. Pol. V)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 118 of 258	



Preview Result 1-PK+    FCC Part 15.209 RSE Peak Including Restricted Bands (15E)    Final\_Result PK+

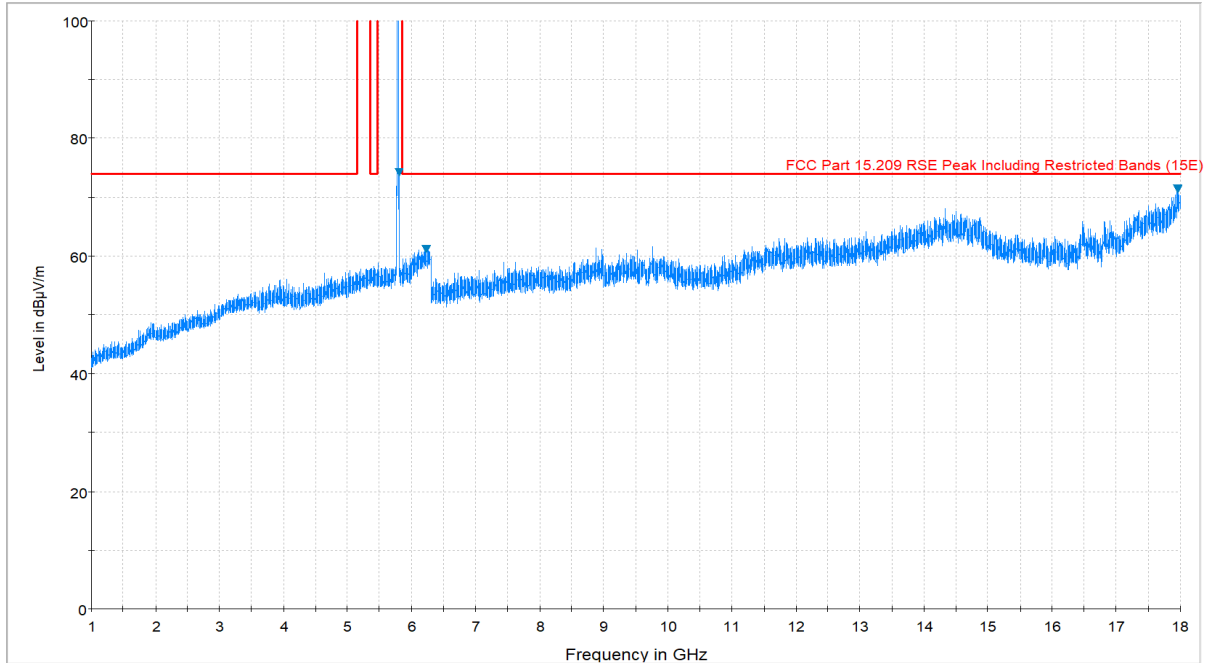
**Plot 7-161. Radiated Spurious Plot above 1GHz (802.11a – U2C Ch. 120, Ant. Pol. H)**



Preview Result 1-PK+    FCC Part 15.209 RSE Peak Including Restricted Bands (15E)    Final\_Result PK+

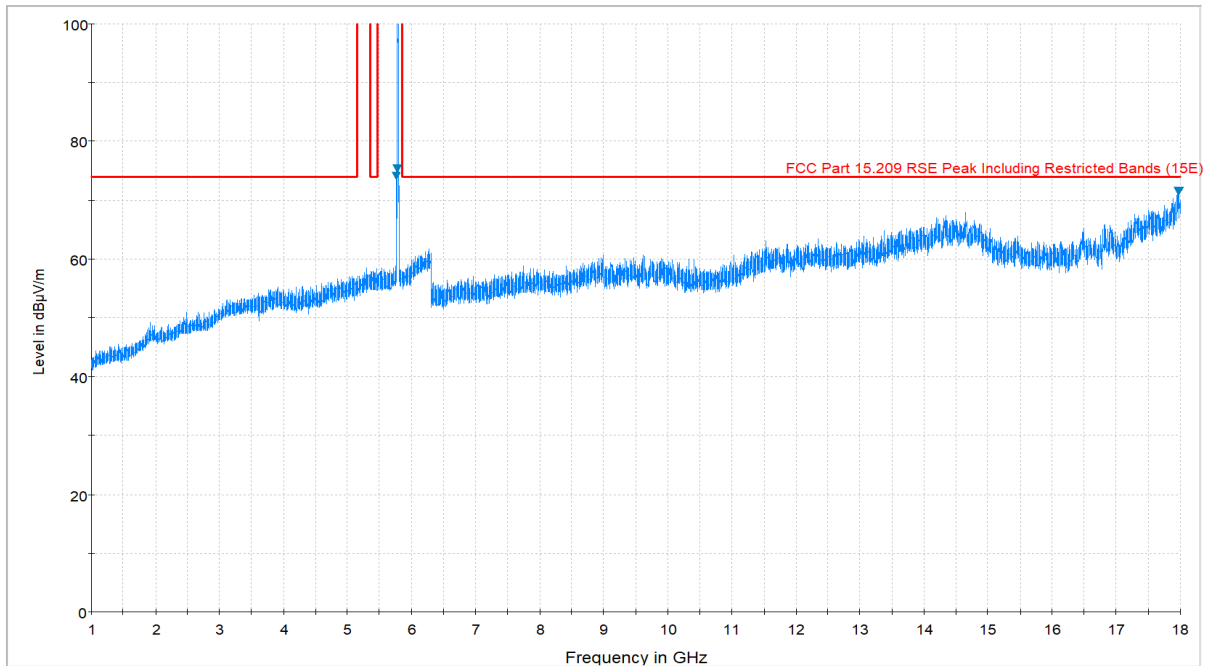
**Plot 7-162. Radiated Spurious Plot above 1GHz (802.11a – U2C Ch. 120, Ant. Pol. V)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 119 of 258	



— Preview Result 1-PK+    — FCC Part 15.209 RSE Peak Including Restricted Bands (15E)    ▼ Final\_Result PK+

**Plot 7-163. Radiated Spurious Plot above 1GHz (802.11a – U3 Ch. 157, Ant. Pol. H)**



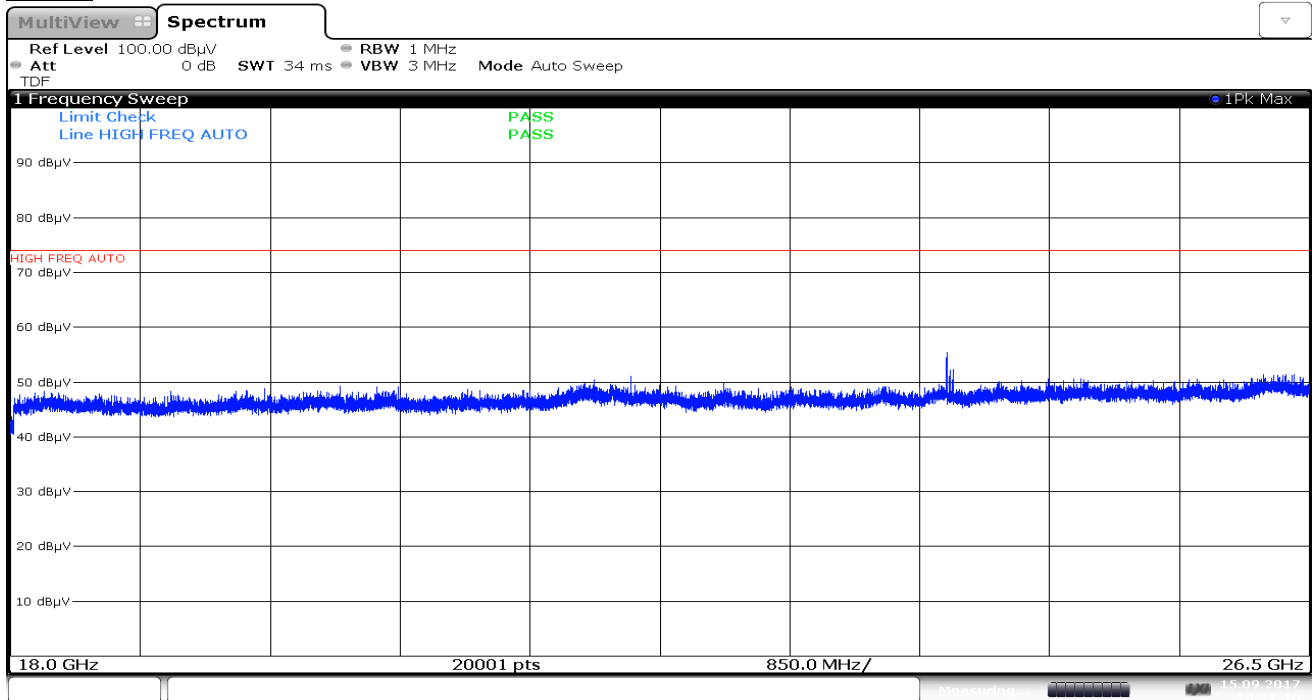
— Preview Result 1-PK+    — FCC Part 15.209 RSE Peak Including Restricted Bands (15E)    ▼ Final\_Result PK+

**Plot 7-164. Radiated Spurious Plot above 1GHz (802.11a – U3 Ch. 157, Ant. Pol. V)**

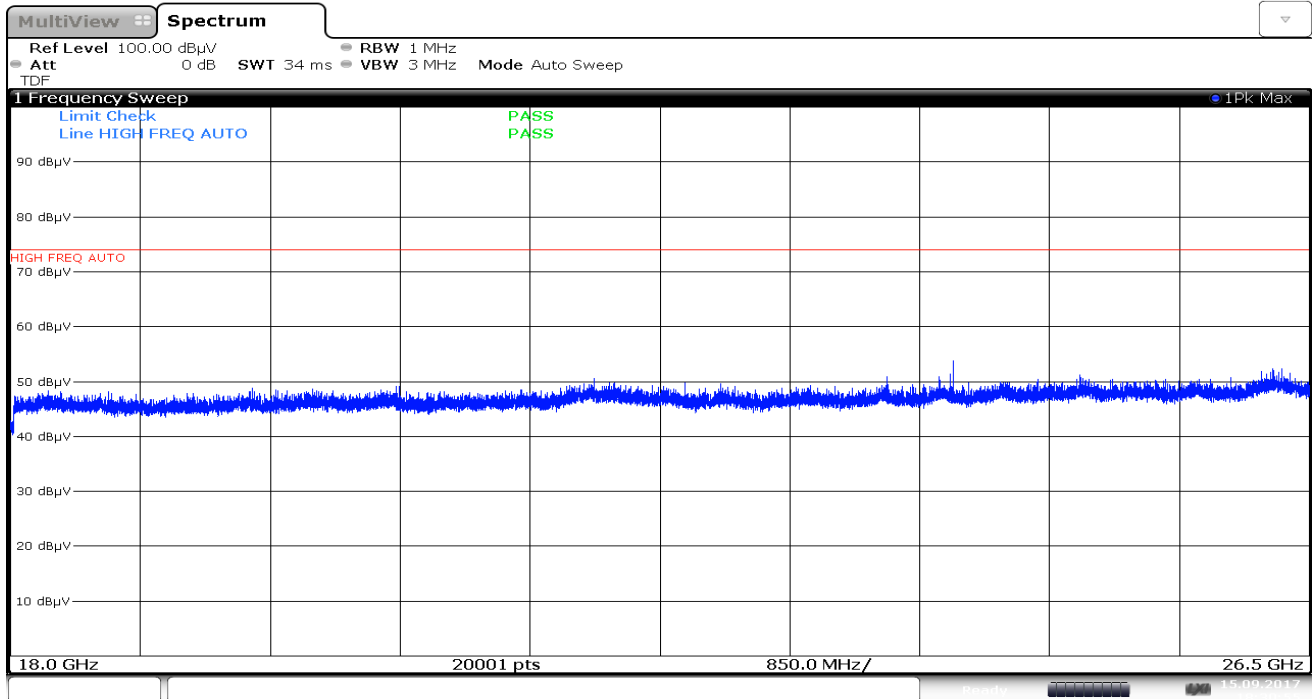
<b>FCC ID:</b> A3LSMG892U		<b>FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Approved by:</b> Quality Manager
<b>Test Report S/N:</b> 1M1709080250-06.A3L	<b>Test Dates:</b> 09/08/2017-10/04/2017	<b>EUT Type:</b> Portable Handset	Page 120 of 258	

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

\$15.209



**Plot 7-165. Radiated Spurious Plot 18GHz - 26.5GHz (802.11a – Ant. Pol. H)**

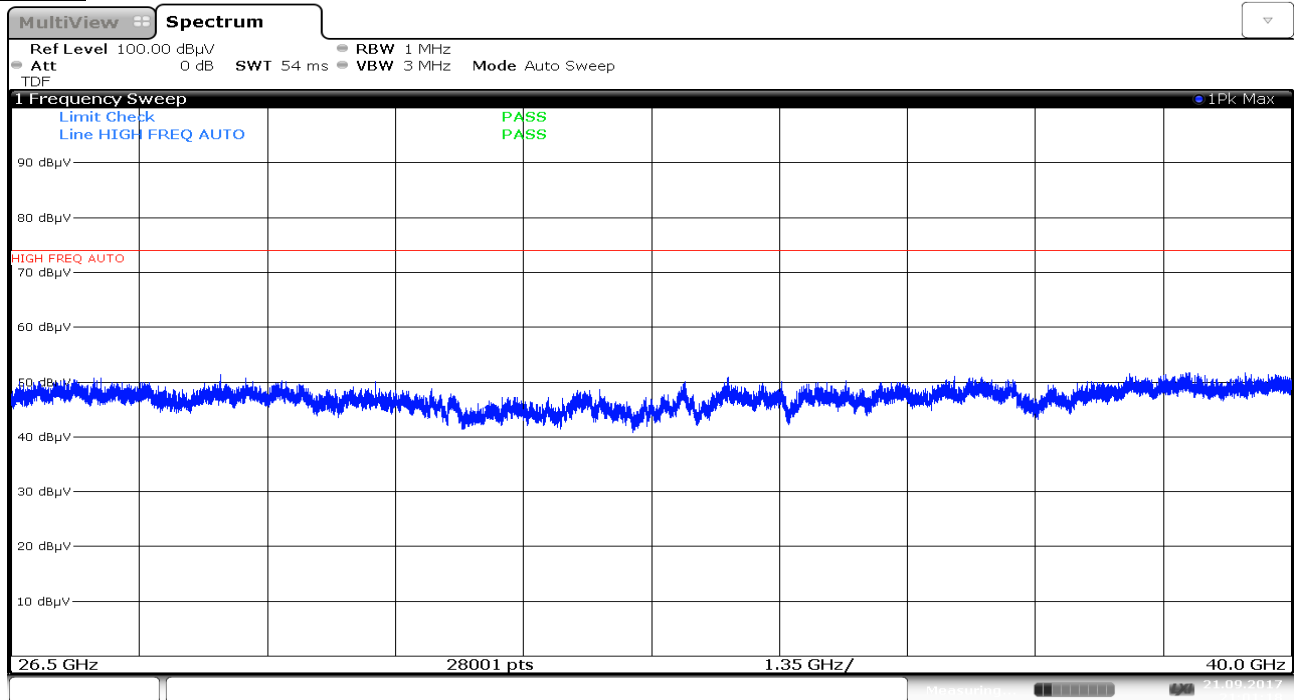


**Plot 7-166. Radiated Spurious Plot above 18GHz - 26.5GHz (802.11a – Ant. Pol. V)**

FCC ID: A3L5MG892U	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 121 of 258	

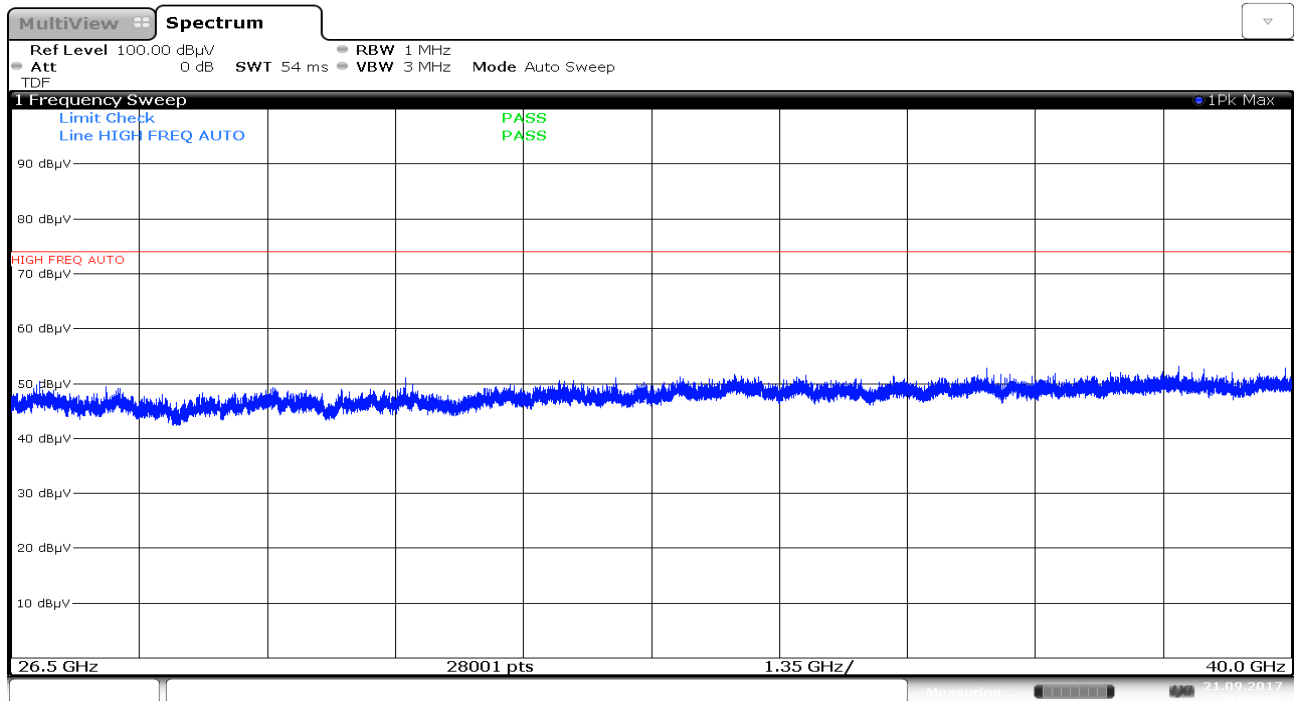
# Antenna-1 Radiated Spurious Emissions Measurements (Above 18GHz)

\$15.209



21:01:19 21.09.2017

Plot 7-167. Radiated Spurious Plot 26.5GHz - 40GHz (802.11a – Ant. Pol. H)



21:03:55 21.09.2017

Plot 7-168. Radiated Spurious Plot above 26.5GHz - 40GHz (802.11a – Ant. Pol. V)

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 122 of 258	

## Antenna-1 Radiated Spurious Emission Measurements

§15.247(d) §15.205 & §15.209

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	294	-52.30	12.13	-9.54	57.29	68.20	-10.91
* 15540.00	Average	V	-	-	-74.35	14.49	-9.54	37.60	53.98	-16.38
* 15540.00	Peak	V	-	-	-63.04	14.49	-9.54	48.91	73.98	-25.07
* 20720.00	Average	V	-	-	-76.61	7.94	-9.54	28.79	53.98	-25.19
* 20720.00	Peak	V	-	-	-64.46	7.94	-9.54	40.94	73.98	-33.04
25900.00	Peak	V	-	-	-63.68	8.46	-9.54	42.24	68.20	-25.96

**Table 7-29. Radiated Measurements**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	283	-71.21	12.12	-9.54	38.37	68.20	-29.83
* 15600.00	Average	V	100	238	-73.46	14.31	-9.54	38.31	53.98	-15.67
* 15600.00	Peak	V	100	238	-60.60	14.31	-9.54	51.17	73.98	-22.81
* 20800.00	Average	V	-	-	-76.05	7.95	-9.54	29.36	53.98	-24.62
* 20800.00	Peak	V	-	-	-64.31	7.95	-9.54	41.10	73.98	-32.88
26000.00	Peak	V	-	-	-63.52	8.60	-9.54	42.54	68.20	-25.66

**Table 7-30. Radiated Measurements**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 123 of 258	

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	309	-54.89	12.09	-9.54	54.66	68.20	-13.54
* 15720.00	Average	V	100	240	-73.49	14.02	-9.54	37.99	53.98	-15.99
* 15720.00	Peak	V	100	240	-60.88	14.02	-9.54	50.60	73.98	-23.38
* 20960.00	Average	V	-	-	-77.57	7.91	-9.54	27.80	53.98	-26.18
* 20960.00	Peak	V	-	-	-64.65	7.91	-9.54	40.72	73.98	-33.26
26200.00	Peak	V	-	-	-63.12	8.62	-9.54	42.96	68.20	-25.24

**Table 7-31. Radiated Measurements**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	149	-51.97	12.13	-9.54	57.62	68.20	-10.58
* 15540.00	Average	V	100	178	-75.76	14.49	-9.54	36.19	53.98	-17.79
* 15540.00	Peak	V	100	178	-61.78	14.49	-9.54	50.17	73.98	-23.81
* 20720.00	Average	V	-	-	-77.23	7.94	-9.54	28.17	53.98	-25.81
* 20720.00	Peak	V	-	-	-66.36	7.94	-9.54	39.04	73.98	-34.94
25900.00	Peak	V	-	-	-63.82	8.46	-9.54	42.10	68.20	-26.10

**Table 7-32. Radiated Measurements with WCP**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 124 of 258	

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	310	-56.41	12.16	-9.54	53.21	68.20	-14.99
* 15780.00	Average	V	100	249	-72.90	14.03	-9.54	38.59	53.98	-15.39
* 15780.00	Peak	V	100	249	-59.11	14.03	-9.54	52.38	73.98	-21.60
* 21040.00	Average	V	-	-	-76.82	7.92	-9.54	28.56	53.98	-25.42
* 21040.00	Peak	V	-	-	-66.94	7.92	-9.54	38.44	73.98	-35.54
26300.00	Peak	V	-	-	-64.46	8.73	-9.54	41.73	68.20	-26.47

**Table 7-33. Radiated Measurements**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	233	-56.80	12.04	-9.54	52.70	68.20	-15.50
* 15840.00	Average	V	-	-	-73.54	14.25	-9.54	38.16	53.98	-15.82
* 15840.00	Peak	V	-	-	-61.38	14.25	-9.54	50.32	73.98	-23.66
* 21120.00	Average	V	-	-	-77.38	7.96	-9.54	28.04	53.98	-25.94
* 21120.00	Peak	V	-	-	-65.38	7.96	-9.54	40.04	73.98	-33.94
26400.00	Peak	V	-	-	-64.51	8.94	-9.54	41.89	68.20	-26.31

**Table 7-34. Radiated Measurements**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 125 of 258	

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	-	-	-70.13	12.06	-9.54	39.39	53.98	-14.59
* 10640.00	Peak	V	-	-	-59.28	12.06	-9.54	50.24	73.98	-23.74
* 15960.00	Average	V	-	-	-72.72	14.55	-9.54	39.29	53.98	-14.69
* 15960.00	Peak	V	-	-	-57.95	14.55	-9.54	54.06	73.98	-19.92
* 21280.00	Average	V	-	-	-76.58	8.04	-9.54	28.92	53.98	-25.06
* 21280.00	Peak	V	-	-	-64.87	8.04	-9.54	40.63	73.98	-33.35
26600.00	Peak	V	-	-	-64.32	-8.30	-9.54	24.83	68.20	-43.37

**Table 7-35. Radiated Measurements**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	100	-56.63	12.04	-9.54	52.87	68.20	-15.33
* 15840.00	Average	V	100	100	-75.78	14.25	-9.54	35.92	53.98	-18.06
* 15840.00	Peak	V	100	100	-61.85	14.25	-9.54	49.85	73.98	-24.13
* 21120.00	Average	V	-	-	-76.81	7.96	-9.54	28.61	53.98	-25.37
* 21120.00	Peak	V	-	-	-65.64	7.96	-9.54	39.78	73.98	-34.20
26400.00	Peak	V	-	-	-64.00	8.94	-9.54	42.40	68.20	-25.80

**Table 7-36. Radiated Measurements with WCP**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 126 of 258	

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	303	-67.66	12.87	-9.54	42.67	53.98	-11.31
* 11000.00	Peak	H	100	303	-55.78	12.87	-9.54	54.55	73.98	-19.43
16500.00	Peak	H	-	-	-60.15	16.61	-9.54	53.92	68.20	-14.28
22000.00	Peak	H	-	-	-64.39	8.43	-9.54	41.49	68.20	-26.71
27500.00	Peak	H	-	-	-58.58	-8.80	-9.54	30.08	68.20	-38.12

**Table 7-37. Radiated Measurements**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	295	-65.11	12.76	-9.54	45.11	53.98	-8.87
* 11200.00	Peak	H	100	295	-53.58	12.76	-9.54	56.64	73.98	-17.34
16800.00	Peak	H	-	-	-60.99	16.64	-9.54	53.11	68.20	-15.09
* 22400.00	Average	H	-	-	-75.85	8.08	-9.54	29.69	53.98	-24.29
* 22400.00	Peak	H	-	-	-64.65	8.08	-9.54	40.89	73.98	-33.09
28000.00	Peak	H	-	-	-57.23	-9.08	-9.54	31.15	68.20	-37.05

**Table 7-38. Radiated Measurements**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 127 of 258	

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	223	-69.98	12.57	-9.54	40.05	53.98	-13.93
* 11440.00	Peak	H	100	223	-58.35	12.57	-9.54	51.68	73.98	-22.30
17160.00	Peak	H	-	-	-61.18	18.31	-9.54	54.59	68.20	-13.61
* 22880.00	Average	H	-	-	-76.92	8.28	-9.54	28.82	53.98	-25.16
* 22880.00	Peak	H	-	-	-65.95	8.28	-9.54	39.79	73.98	-34.19
28600.00	Peak	H	-	-	-58.22	-9.08	-9.54	30.16	68.20	-38.04

**Table 7-39. Radiated Measurements**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	200	-67.15	12.64	-9.54	42.95	53.98	-11.03
* 11200.00	Peak	H	100	200	-55.94	12.64	-9.54	54.16	73.98	-19.82
16800.00	Peak	H	100	212	-64.18	16.21	-9.54	49.49	68.20	-18.71
* 22400.00	Average	H	-	-	-76.17	8.08	-9.54	29.37	53.98	-24.61
* 22400.00	Peak	H	-	-	-64.69	8.08	-9.54	40.85	73.98	-33.13
28000.00	Peak	H	-	-	-67.42	-9.08	-9.54	20.96	68.20	-47.24

**Table 7-40. Radiated Measurements with WCP**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 128 of 258	

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	249	-69.92	12.43	-9.54	39.97	53.98	-14.01
* 11490.00	Peak	H	100	249	-58.56	12.43	-9.54	51.33	73.98	-22.65
17235.00	Peak	H	-	-	-61.30	18.61	-9.54	54.77	68.20	-13.43
* 22980.00	Average	H	-	-	-77.06	8.16	-9.54	28.56	53.98	-25.42
* 22980.00	Peak	H	-	-	-65.72	8.16	-9.54	39.90	73.98	-34.08
28725.00	Peak	H	-	-	-57.88	-9.24	-9.54	30.34	68.20	-37.86

**Table 7-41. Radiated Measurements**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	309	-66.99	12.54	-9.54	43.01	53.98	-10.97
* 11570.00	Peak	H	100	309	-55.66	12.54	-9.54	54.34	73.98	-19.64
17355.00	Peak	H	-	-	-60.36	18.73	-9.54	55.83	68.20	-12.37
23140.00	Peak	H	-	-	-65.01	8.37	-9.54	40.82	68.20	-27.38
28925.00	Peak	H	-	-	-56.89	-9.65	-9.54	30.92	68.20	-37.28

**Table 7-42. Radiated Measurements**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 129 of 258	

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	248	-65.91	12.99	-9.54	44.53	53.98	-9.45
* 11650.00	Peak	H	100	248	-54.67	12.99	-9.54	55.77	73.98	-18.21
17475.00	Peak	H	-	-	-60.11	19.25	-9.54	56.59	68.20	-11.61
23300.00	Peak	H	-	-	-65.18	8.50	-9.54	40.77	68.20	-27.43
29125.00	Peak	H	-	-	-58.23	-9.87	-9.54	29.36	68.20	-38.84

**Table 7-43. Radiated Measurements**

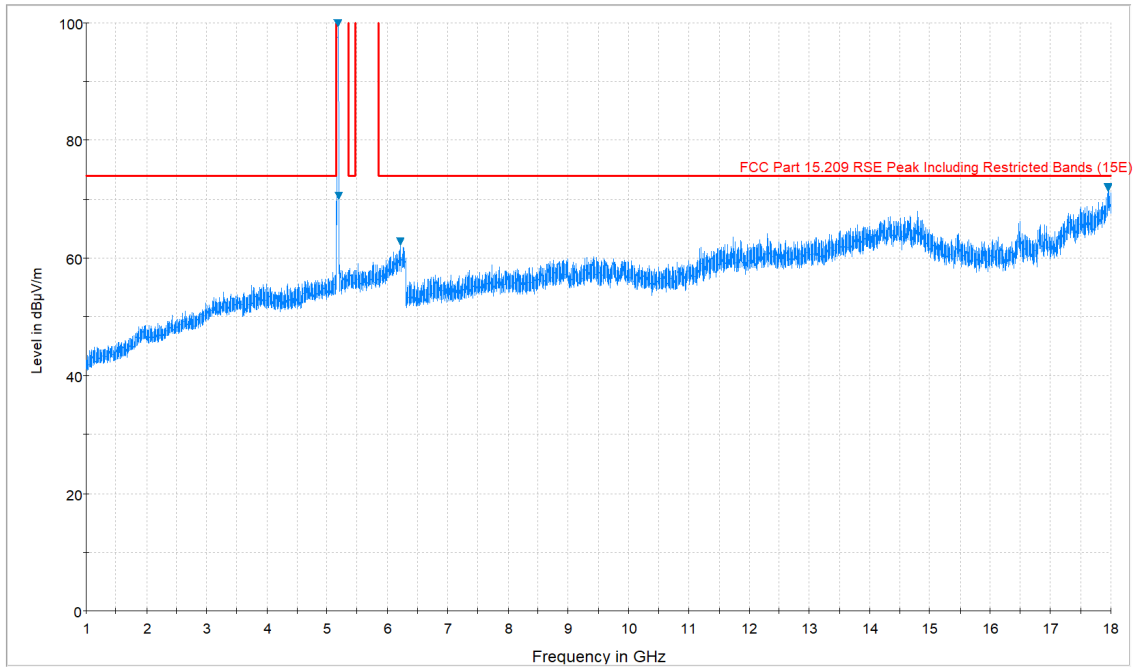
Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 Operating Frequency: 5825MHz  
 Channel: 165

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	100	202	-66.24	12.99	-9.54	44.20	53.98	-9.78
* 11650.00	Peak	H	100	202	-54.77	12.99	-9.54	55.67	73.98	-18.31
17475.00	Peak	H	-	-	-68.29	19.25	-9.54	48.41	68.20	-19.79
23300.00	Peak	H	-	-	-65.56	8.50	-9.54	40.39	68.20	-27.81
29125.00	Peak	H	-	-	-57.84	-9.87	-9.54	29.75	68.20	-38.45

**Table 7-44. Radiated Measurements with WCP**

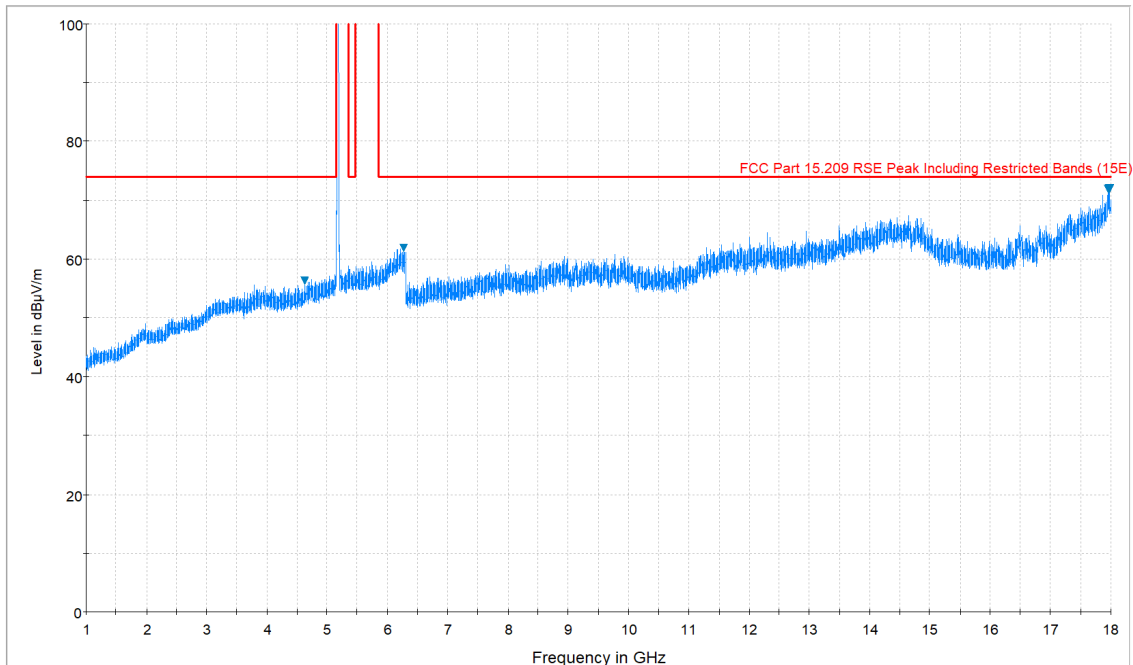
FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 130 of 258	

## 7.7.2 Antenna-2 Radiated Spurious Emission Measurements



Preview Result 1-PK+    FCC Part 15.209 RSE Peak Including Restricted Bands (15E)    Final\_Result PK+

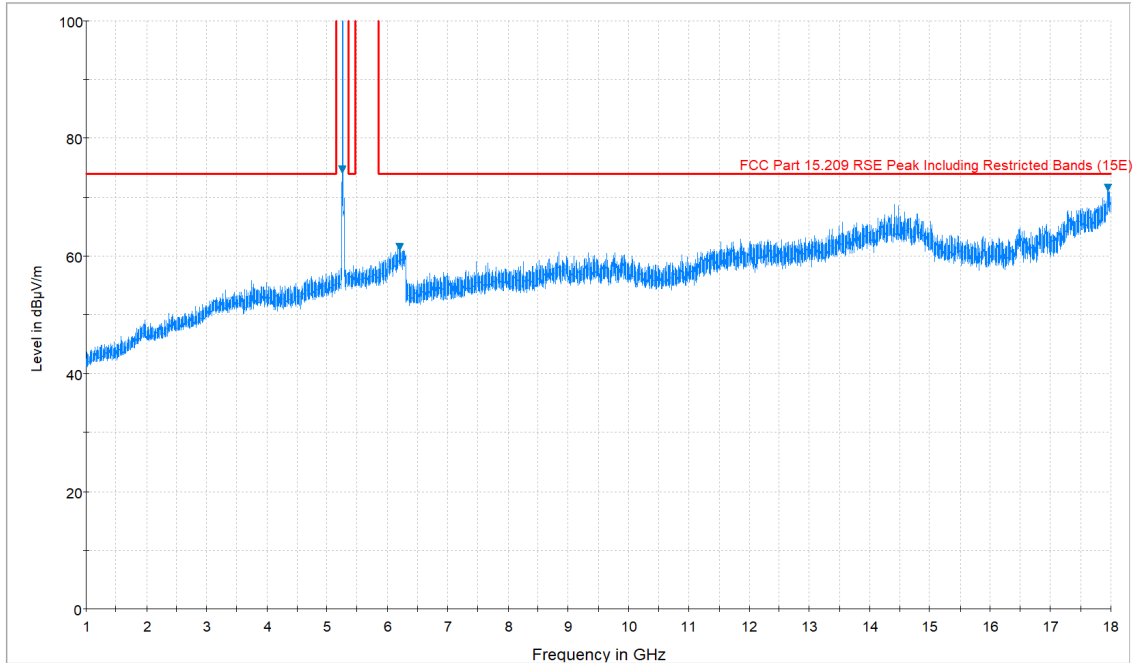
**Plot 7-169. Radiated Spurious Plot above 1GHz (802.11a – U1 Ch. 40, Ant. Pol. H)**



Preview Result 1-PK+    FCC Part 15.209 RSE Peak Including Restricted Bands (15E)    Final\_Result PK+

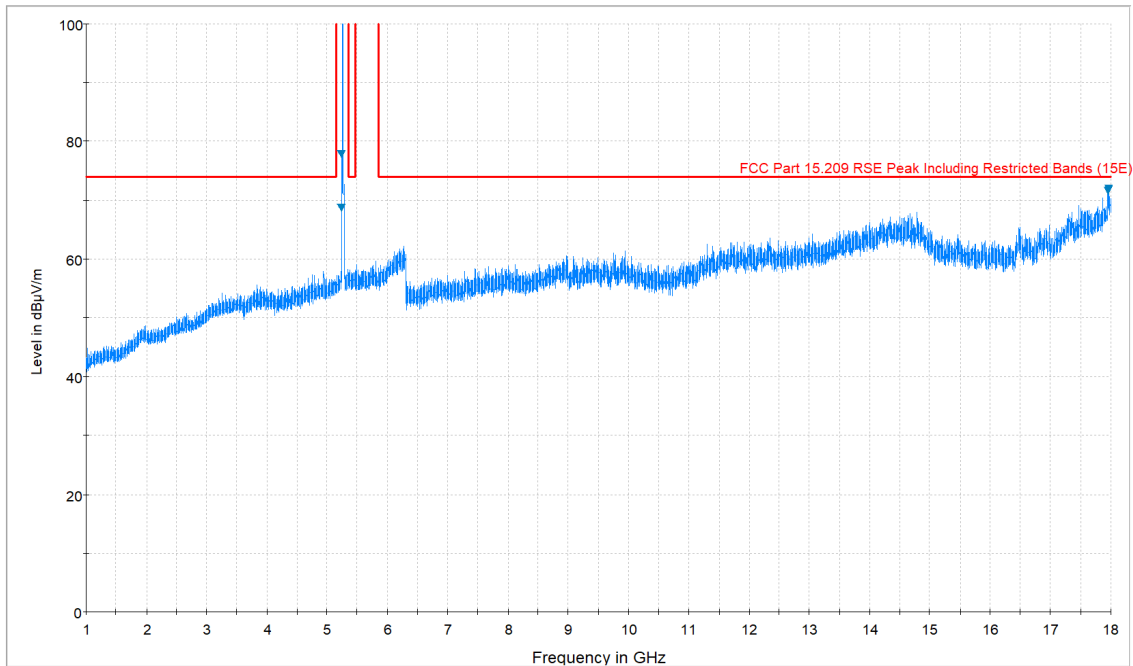
**Plot 7-170. Radiated Spurious Plot above 1GHz (802.11a – U1 Ch. 40, Ant. Pol. V)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 131 of 258



Preview Result 1-PK+    FCC Part 15.209 RSE Peak Including Restricted Bands (15E)    Final\_Result PK+

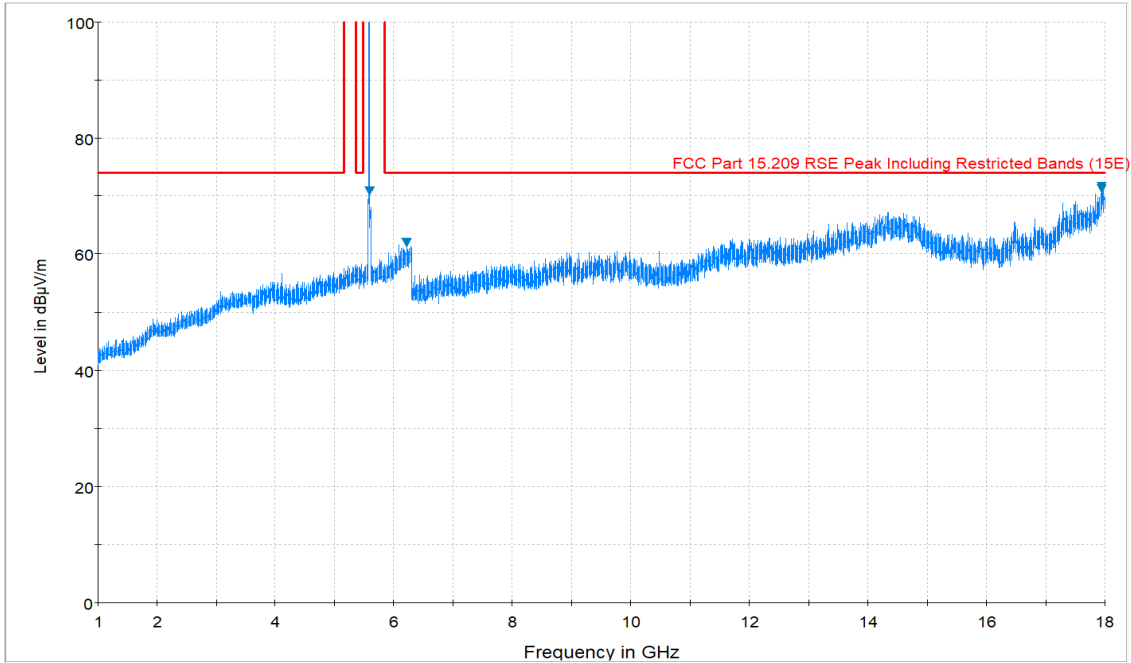
**Plot 7-171. Radiated Spurious Plot above 1GHz (802.11a – U2A Ch. 56, Ant. Pol. H)**



Preview Result 1-PK+    FCC Part 15.209 RSE Peak Including Restricted Bands (15E)    Final\_Result PK+

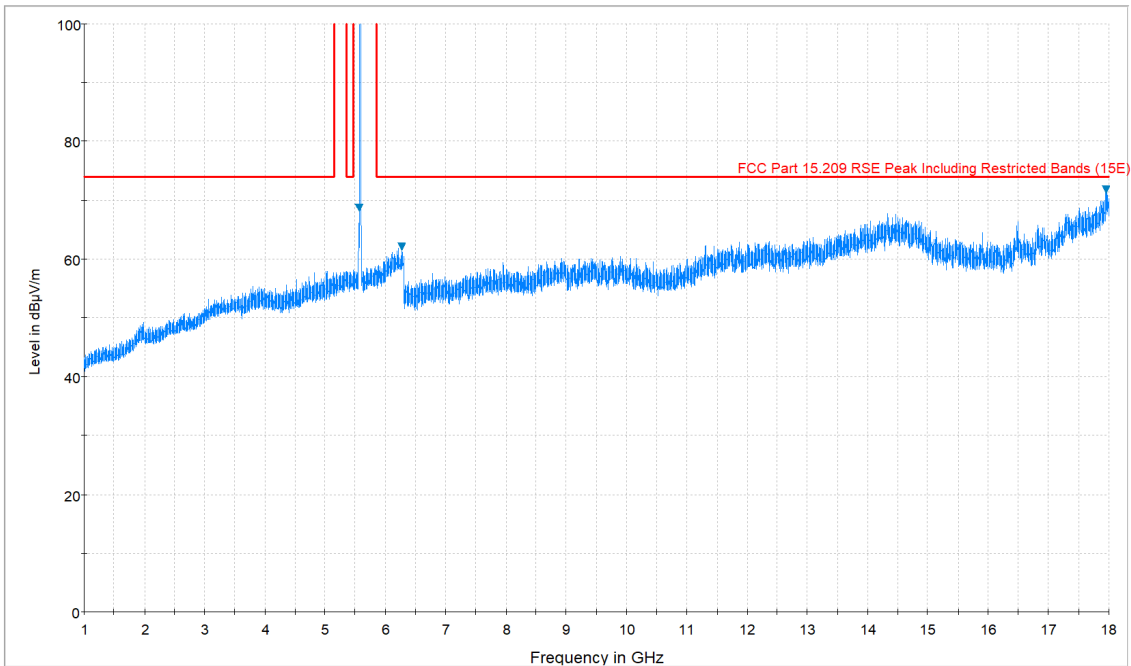
**Plot 7-172. Radiated Spurious Plot above 1GHz (802.11a – U2A Ch. 56, Ant. Pol. V)**

<b>FCC ID:</b> A3LSMG892U		<b>FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Approved by:</b> Quality Manager
<b>Test Report S/N:</b> 1M1709080250-06.A3L	<b>Test Dates:</b> 09/08/2017-10/04/2017	<b>EUT Type:</b> Portable Handset	Page 132 of 258	



Preview Result 1-PK+    FCC Part 15.209 RSE Peak Including Restricted Bands (15E)    Final\_Result PK+

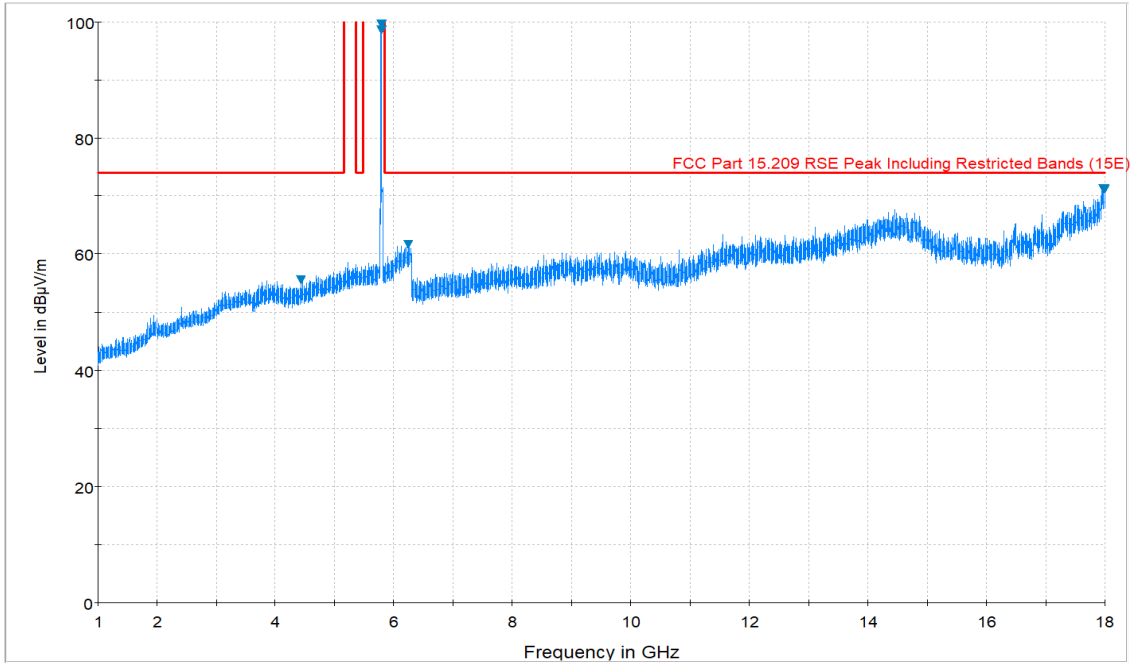
**Plot 7-173. Radiated Spurious Plot above 1GHz (802.11a – U2C Ch. 120, Ant. Pol. H)**



Preview Result 1-PK+    FCC Part 15.209 RSE Peak Including Restricted Bands (15E)    Final\_Result PK+

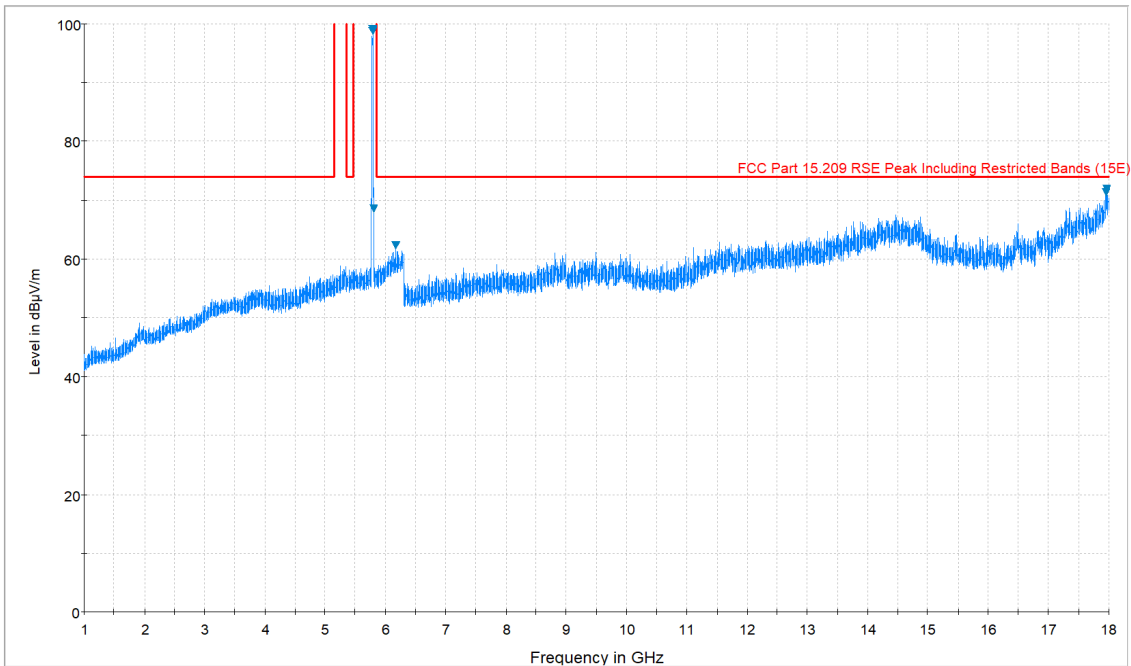
**Plot 7-174. Radiated Spurious Plot above 1GHz (802.11a – U2C Ch. 120, Ant. Pol. V)**

<b>FCC ID:</b> A3LSMG892U		<b>FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Approved by:</b> Quality Manager
<b>Test Report S/N:</b> 1M1709080250-06.A3L	<b>Test Dates:</b> 09/08/2017-10/04/2017	<b>EUT Type:</b> Portable Handset	Page 133 of 258	



Preview Result 1-PK+    FCC Part 15.209 RSE Peak Including Restricted Bands (15E)    Final\_Result PK+

**Plot 7-175. Radiated Spurious Plot above 1GHz (802.11a – U3 Ch. 157, Ant. Pol. H)**



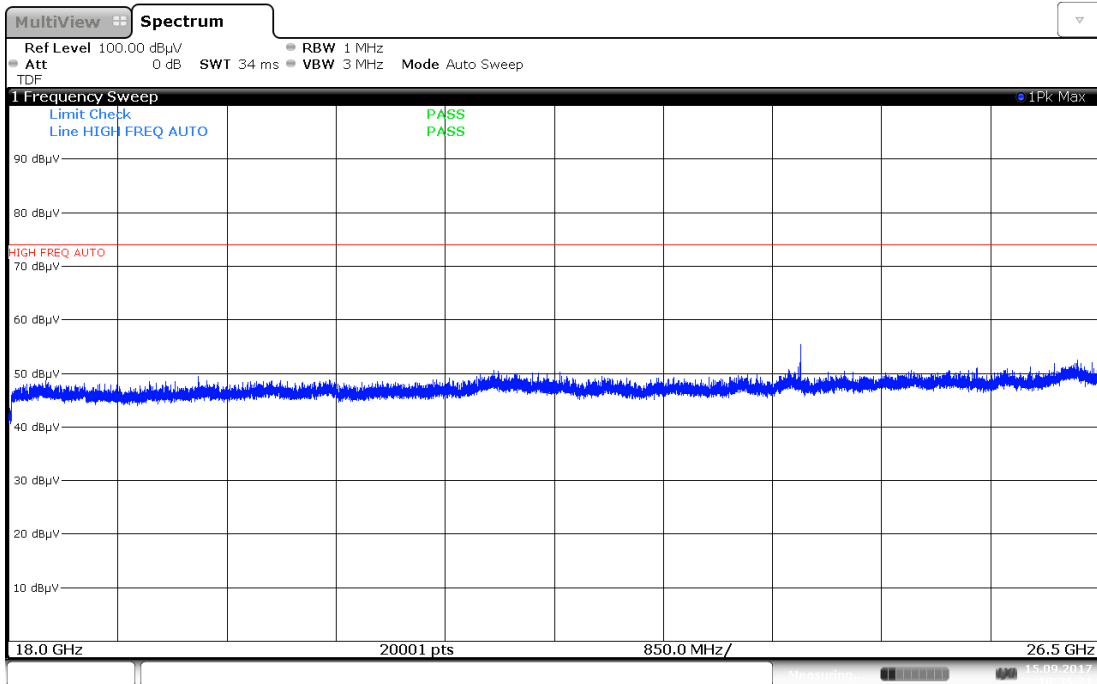
Preview Result 1-PK+    FCC Part 15.209 RSE Peak Including Restricted Bands (15E)    Final\_Result PK+

**Plot 7-176. Radiated Spurious Plot above 1GHz (802.11a – U3 Ch. 157, Ant. Pol. V)**

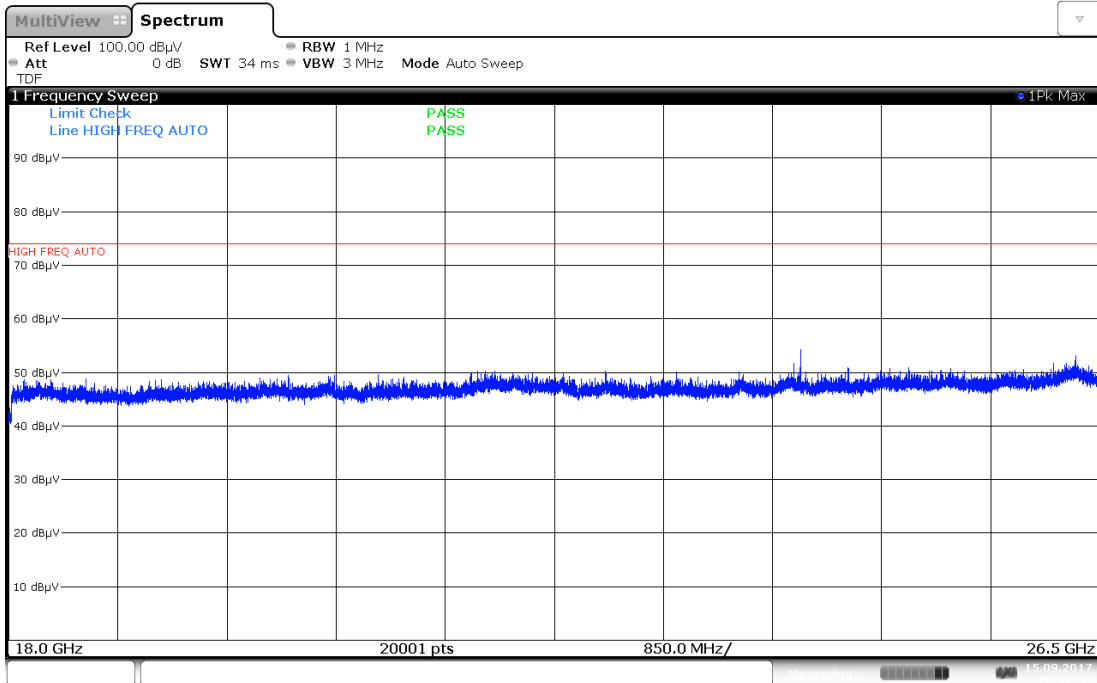
FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 134 of 258	

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

§15.209



Plot 7-177. Radiated Spurious Plot above 18GHz - 26.5GHz (802.11a – Ant. Pol. H)

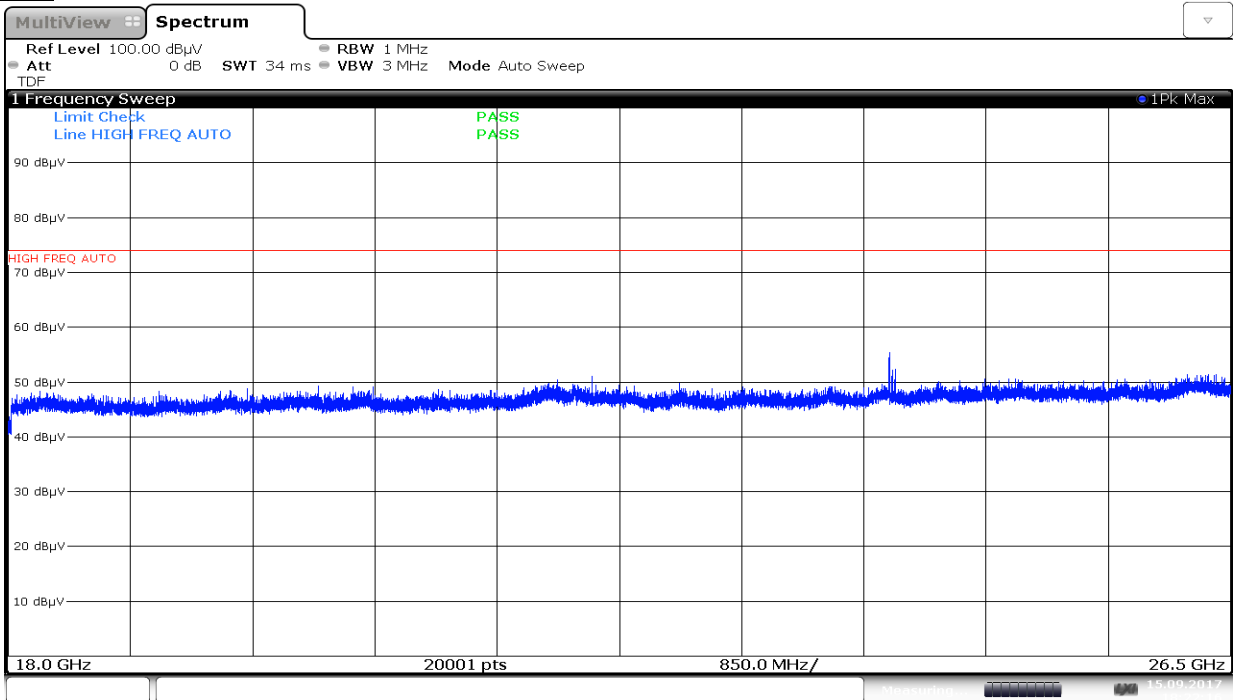


Plot 7-178. Radiated Spurious Plot above 18GHz - 26.5GHz (802.11a – Ant. Pol. V)

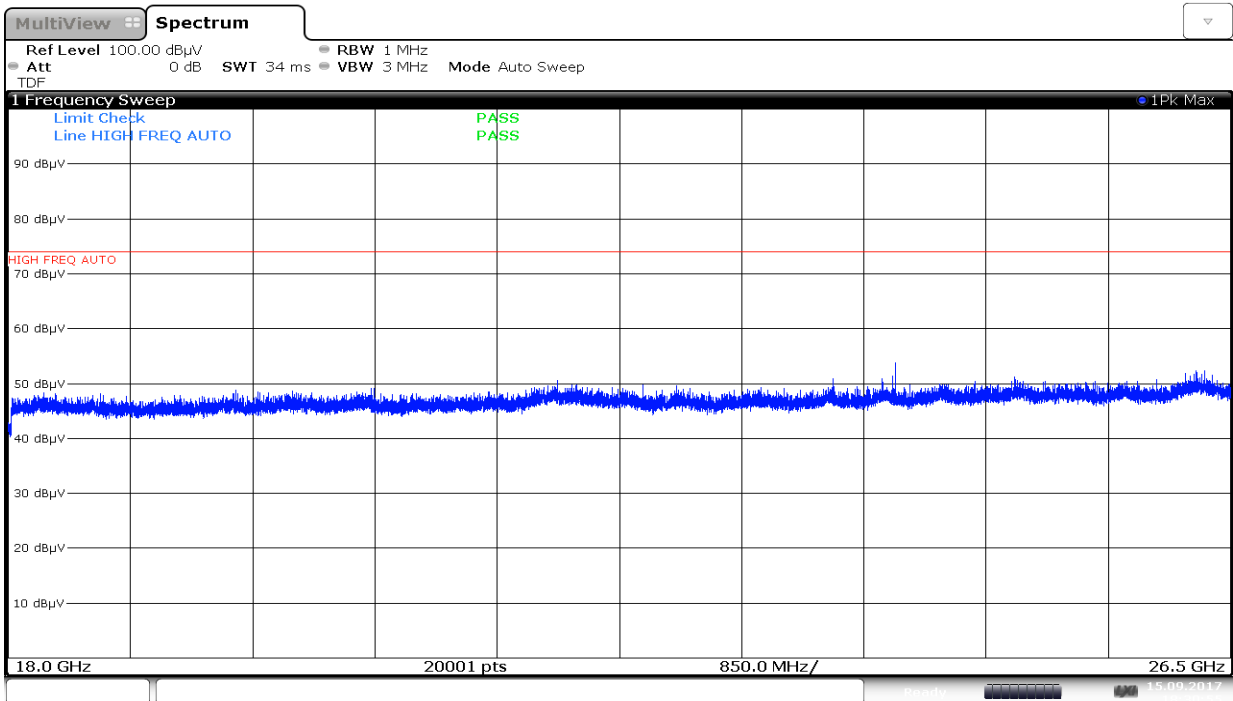
FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 135 of 258

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

§15.209



Plot 7-179. Radiated Spurious Plot 26.5GHz - 40GHz (802.11a – Ant. Pol. H)



Plot 7-180. Radiated Spurious Plot above 26.5GHz - 40GHz (802.11a – Ant. Pol. V)

FCC ID: A3L5MG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 136 of 258	

## Antenna-2 Radiated Spurious Emission Measurements

§15.247(d) §15.205 & §15.209

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	297	-58.88	12.13	-9.54	50.71	68.20	-17.49
* 15540.00	Average	H	100	251	-79.46	14.49	-9.54	32.49	53.98	-21.49
* 15540.00	Peak	H	100	251	-64.67	14.49	-9.54	47.28	73.98	-26.70
* 20720.00	Average	H	-	-	-77.18	7.94	-9.54	28.22	53.98	-25.76
* 20720.00	Peak	H	-	-	-65.95	7.94	-9.54	39.45	73.98	-34.53
25900.00	Peak	H	-	-	-69.96	8.46	-9.54	35.96	68.20	-32.24

**Table 7-45. Radiated Measurements**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	297	-59.68	12.12	-9.54	49.90	68.20	-18.30
* 15600.00	Average	H	100	340	-79.13	14.31	-9.54	32.64	53.98	-21.34
* 15600.00	Peak	H	100	340	-65.04	14.31	-9.54	46.73	73.98	-27.25
* 20800.00	Average	H	-	-	-77.13	7.95	-9.54	28.28	53.98	-25.70
* 20800.00	Peak	H	-	-	-66.42	7.95	-9.54	38.99	73.98	-34.99
26000.00	Peak	H	-	-	-65.01	8.60	-9.54	41.05	68.20	-27.15

**Table 7-46. Radiated Measurements**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 137 of 258	

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	291	-60.36	12.09	-9.54	49.19	68.20	-19.01
* 15720.00	Average	H	100	263	-79.11	14.02	-9.54	32.37	53.98	-21.61
* 15720.00	Peak	H	100	263	-66.27	14.02	-9.54	45.21	73.98	-28.77
* 20960.00	Average	H	-	-	-76.64	7.91	-9.54	28.73	53.98	-25.25
* 20960.00	Peak	H	-	-	-65.86	7.91	-9.54	39.51	73.98	-34.47
26200.00	Peak	H	-	-	-64.54	8.62	-9.54	41.54	68.20	-26.66

**Table 7-47. Radiated Measurements**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	210	-57.69	12.13	-9.54	51.90	68.20	-16.30
* 15540.00	Average	H	100	172	-75.21	14.49	-9.54	36.74	53.98	-17.24
* 15540.00	Peak	H	100	172	-61.49	14.49	-9.54	50.46	73.98	-23.52
* 20720.00	Average	H	-	-	-77.26	7.94	-9.54	28.14	53.98	-25.84
* 20720.00	Peak	H	-	-	-65.78	7.94	-9.54	39.62	73.98	-34.36
25900.00	Peak	H	-	-	-64.17	8.46	-9.54	41.75	68.20	-26.45

**Table 7-48. Radiated Measurements with WCP**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 138 of 258	

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	296	-61.18	12.16	-9.54	48.44	68.20	-19.76
* 15780.00	Average	H	100	250	-78.60	14.03	-9.54	32.89	53.98	-21.09
* 15780.00	Peak	H	100	250	-64.57	14.03	-9.54	46.92	73.98	-27.06
* 21040.00	Average	H	-	-	-76.76	7.92	-9.54	28.62	53.98	-25.36
* 21040.00	Peak	H	-	-	-65.64	7.92	-9.54	39.74	73.98	-34.24
26300.00	Peak	H	-	-	-64.58	8.73	-9.54	41.61	68.20	-26.59

**Table 7-49. Radiated Measurements**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	300	-60.54	12.04	-9.54	48.96	68.20	-19.24
* 15840.00	Average	H	100	213	-78.97	14.25	-9.54	32.73	53.98	-21.25
* 15840.00	Peak	H	100	213	-64.39	14.25	-9.54	47.31	73.98	-26.67
* 21120.00	Average	H	-	-	-76.72	7.96	-9.54	28.70	53.98	-25.28
* 21120.00	Peak	H	-	-	-65.74	7.96	-9.54	39.68	73.98	-34.30
26400.00	Peak	H	-	-	-64.98	8.94	-9.54	41.42	68.20	-26.78

**Table 7-50. Radiated Measurements**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 139 of 258	

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	300	-73.83	12.06	-9.54	35.69	53.98	-18.29
* 10640.00	Peak	H	100	300	-58.82	12.06	-9.54	50.70	73.98	-23.28
* 15960.00	Average	H	100	338	-79.23	14.55	-9.54	32.78	53.98	-21.20
* 15960.00	Peak	H	100	338	-64.79	14.55	-9.54	47.22	73.98	-26.76
* 21280.00	Average	H	-	-	-76.80	8.04	-9.54	28.70	53.98	-25.28
* 21280.00	Peak	H	-	-	-65.79	8.04	-9.54	39.71	73.98	-34.27
26600.00	Peak	H	-	-	-59.21	-8.30	-9.54	29.94	68.20	-38.26

**Table 7-51. Radiated Measurements**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	208	-69.38	12.06	-9.54	40.14	53.98	-13.84
* 10640.00	Peak	H	100	208	-58.45	12.06	-9.54	51.07	73.98	-22.91
* 15960.00	Average	H	100	178	-75.50	14.55	-9.54	36.51	53.98	-17.47
* 15960.00	Peak	H	100	178	-61.88	14.55	-9.54	50.13	73.98	-23.85
* 21280.00	Average	H	-	-	-76.66	8.04	-9.54	28.84	53.98	-25.14
* 21280.00	Peak	H	-	-	-64.36	8.04	-9.54	41.14	73.98	-32.84
26600.00	Peak	H	-	-	-58.32	-8.30	-9.54	30.83	68.20	-37.37

**Table 7-52. Radiated Measurements with WCP**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 140 of 258	

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	256	-73.90	12.87	-9.54	36.43	53.98	-17.55
* 11000.00	Peak	H	100	256	-59.32	12.87	-9.54	51.01	73.98	-22.97
16500.00	Peak	H	100	320	-66.56	16.61	-9.54	47.51	68.20	-20.69
22000.00	Peak	H	-	-	-64.56	8.43	-9.54	41.32	68.20	-26.88
27500.00	Peak	H	-	-	-57.68	-8.80	-9.54	30.98	68.20	-37.22

**Table 7-53. Radiated Measurements**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	295	-65.11	12.76	-9.54	45.11	53.98	-8.87
* 11200.00	Peak	H	100	295	-53.58	12.76	-9.54	56.64	73.98	-17.34
16800.00	Peak	H	-	-	-60.99	16.64	-9.54	53.11	68.20	-15.09
* 22400.00	Average	H	-	-	-75.85	8.08	-9.54	29.69	53.98	-24.29
* 22400.00	Peak	H	-	-	-64.65	8.08	-9.54	40.89	73.98	-33.09
28000.00	Peak	H	-	-	-57.23	-9.08	-9.54	31.15	68.20	-37.05

**Table 7-54. Radiated Measurements**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 141 of 258	

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	261	-73.82	12.57	-9.54	36.21	53.98	-17.77
* 11440.00	Peak	H	100	261	-56.02	12.57	-9.54	54.01	73.98	-19.97
17160.00	Peak	H	-	-	-68.09	18.31	-9.54	47.68	68.20	-20.52
* 22880.00	Average	H	-	-	-76.84	8.28	-9.54	28.90	53.98	-25.08
* 22880.00	Peak	H	-	-	-65.66	8.28	-9.54	40.08	73.98	-33.90
28600.00	Peak	H	-	-	-58.23	-9.08	-9.54	30.15	68.20	-38.05

**Table 7-55. Radiated Measurements**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	200	-67.15	12.64	-9.54	42.95	53.98	-11.03
* 11200.00	Peak	H	100	200	-55.94	12.64	-9.54	54.16	73.98	-19.82
16800.00	Peak	H	100	212	-64.18	16.21	-9.54	49.49	68.20	-18.71
* 22400.00	Average	H	-	-	-76.17	8.08	-9.54	29.37	53.98	-24.61
* 22400.00	Peak	H	-	-	-64.69	8.08	-9.54	40.85	73.98	-33.13
28000.00	Peak	H	-	-	-67.42	-9.08	-9.54	20.96	68.20	-47.24

**Table 7-56. Radiated Measurements with WCP**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 142 of 258	

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	340	-70.24	12.43	-9.54	39.65	53.98	-14.33
* 11490.00	Peak	H	100	340	-56.77	12.43	-9.54	53.12	73.98	-20.86
17235.00	Peak	H	-	-	-67.23	18.61	-9.54	48.84	68.20	-19.36
* 22980.00	Average	H	-	-	-77.18	8.16	-9.54	28.44	53.98	-25.54
* 22980.00	Peak	H	-	-	-65.25	8.16	-9.54	40.37	73.98	-33.61
28725.00	Peak	H	-	-	-56.45	-9.24	-9.54	31.77	68.20	-36.43

**Table 7-57. Radiated Measurements**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	346	-69.60	12.54	-9.54	40.40	53.98	-13.58
* 11570.00	Peak	H	100	346	-56.23	12.54	-9.54	53.77	73.98	-20.21
17355.00	Peak	H	-	-	-67.61	18.73	-9.54	48.58	68.20	-19.62
23140.00	Peak	H	-	-	-64.91	8.37	-9.54	40.92	68.20	-27.28
28925.00	Peak	H	-	-	-57.54	-9.65	-9.54	30.27	68.20	-37.93

**Table 7-58. Radiated Measurements**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 143 of 258	

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	349	-69.97	12.99	-9.54	40.47	53.98	-13.51
* 11650.00	Peak	H	100	349	-56.23	12.99	-9.54	54.21	73.98	-19.77
17475.00	Peak	H	-	-	-68.25	19.25	-9.54	48.45	68.20	-19.75
23300.00	Peak	H	-	-	-65.35	8.50	-9.54	40.60	68.20	-27.60
29125.00	Peak	H	-	-	-56.87	-9.87	-9.54	30.72	68.20	-37.48

**Table 7-59. Radiated Measurements**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 Meter  
 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	100	200	-68.46	12.99	-9.54	41.98	53.98	-12.00
* 11650.00	Peak	H	100	200	-53.80	12.99	-9.54	56.64	73.98	-17.34
17475.00	Peak	H	-	-	-68.01	19.25	-9.54	48.69	68.20	-19.51
23300.00	Peak	H	-	-	-65.46	8.50	-9.54	40.49	68.20	-27.71
29125.00	Peak	H	-	-	-57.64	-9.87	-9.54	29.95	68.20	-38.25

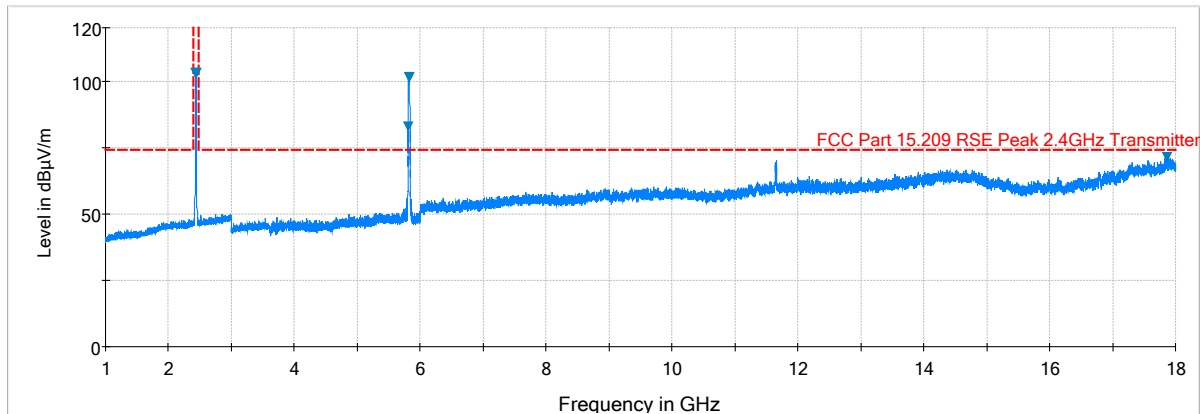
**Table 7-60. Radiated Measurements with WCP**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 144 of 258	

### 7.7.3 Simultaneous Tx Radiated Spurious Emissions Measurements §15.247(d) §15.205 & §15.209

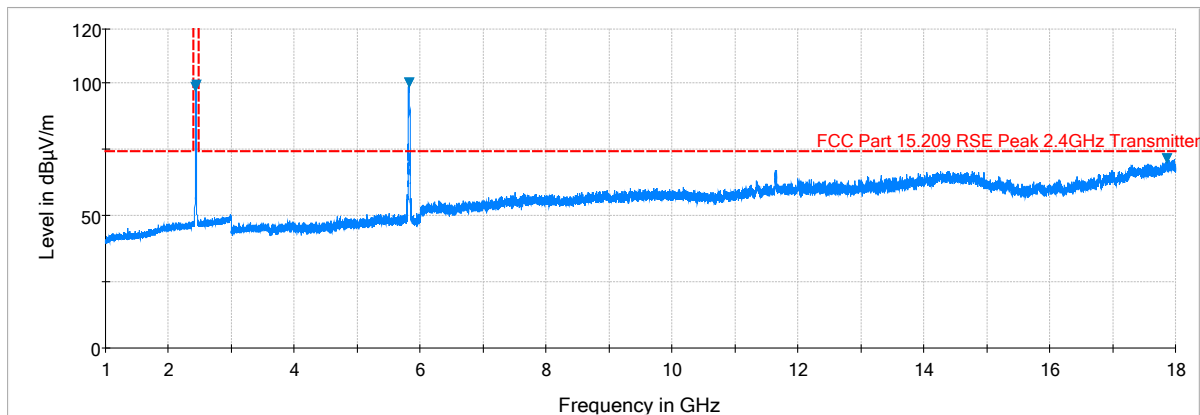
Description	2.4 GHz Emission	5 GHz Emission
Antenna	1	2
Channel	6	165
Operating Frequency (MHz)	2437	5825
Data Rate (Mbps)	1	6
Mode	b	a

**Table 7-61. Simultaneous Transmission Config-1**



Preview Result 1-PK+    FCC Part 15.209 RSE Peak 2.4GHz Transmitter    Final\_Result PK+

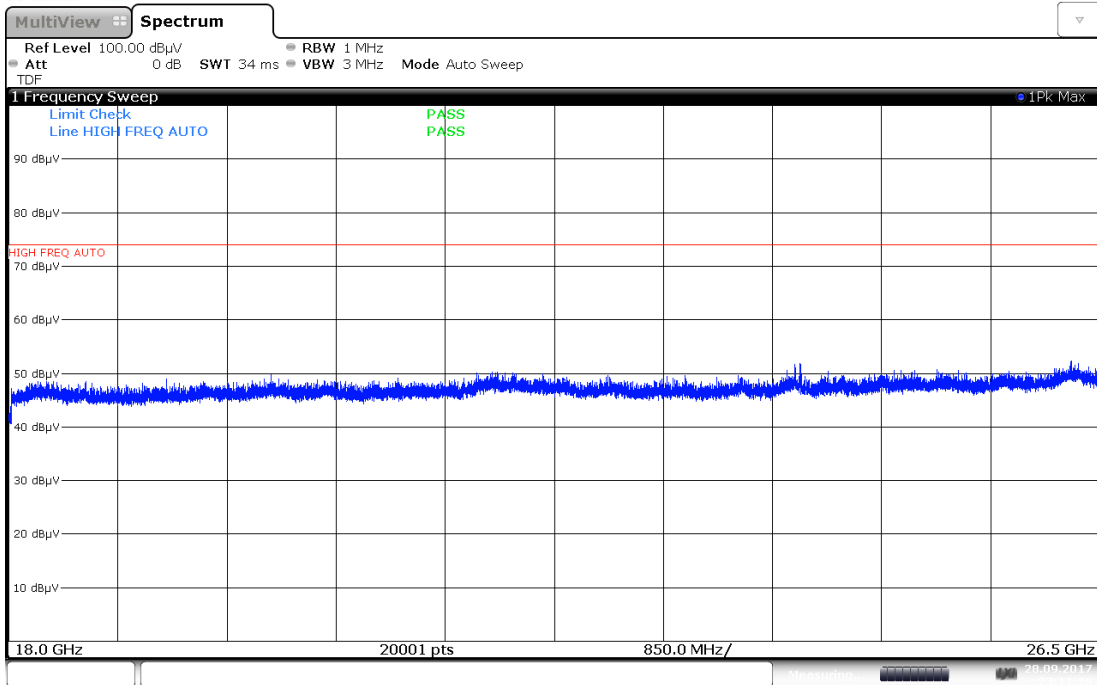
**Plot 7-181. Radiated Spurious Plot above 1GHz (2.4GHz – 5GHz, Ant. Pol. H)**



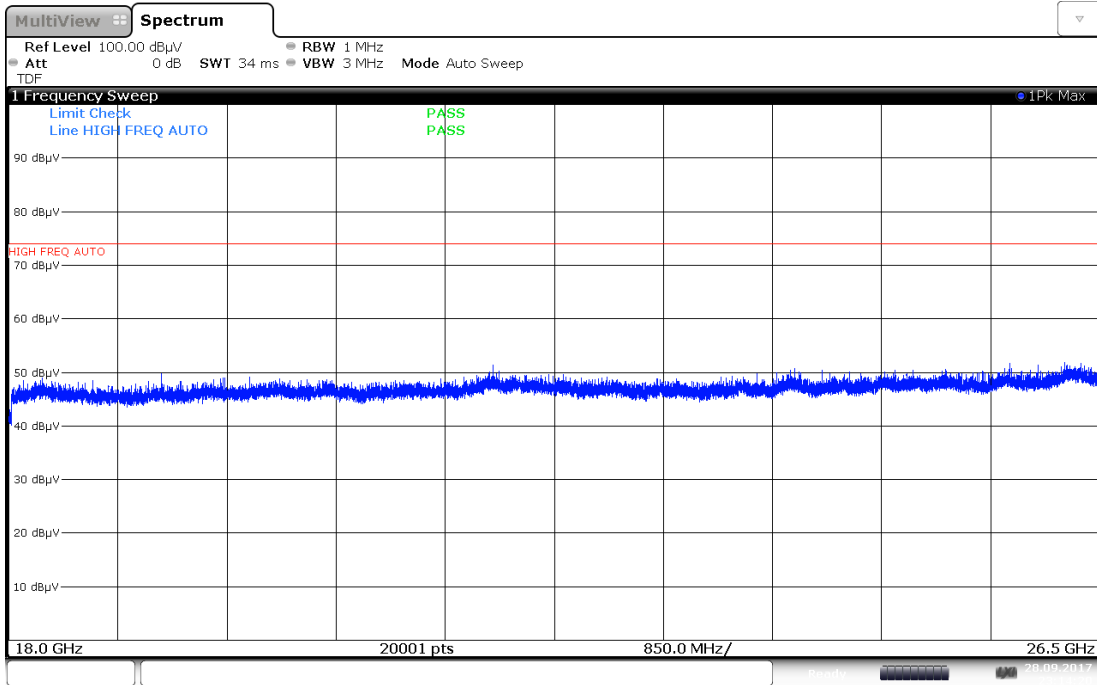
Preview Result 1-PK+    FCC Part 15.209 RSE Peak 2.4GHz Transmitter    Final\_Result PK+

**Plot 7-182. Radiated Spurious Plot above 1GHz (2.4GHz – 5GHz, Ant. Pol. V)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 145 of 258

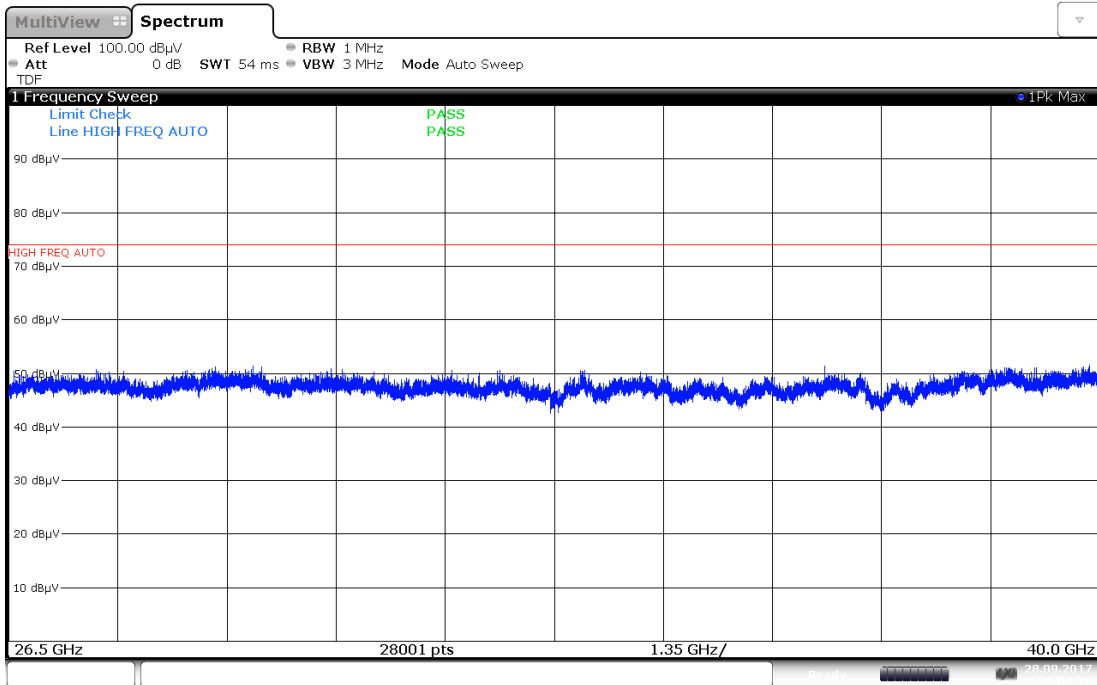


**Plot 7-183. Radiated Spurious Plot 18GHz – 26.5GHz (2.4GHz – 5GHz, Ant. Pol. H)**



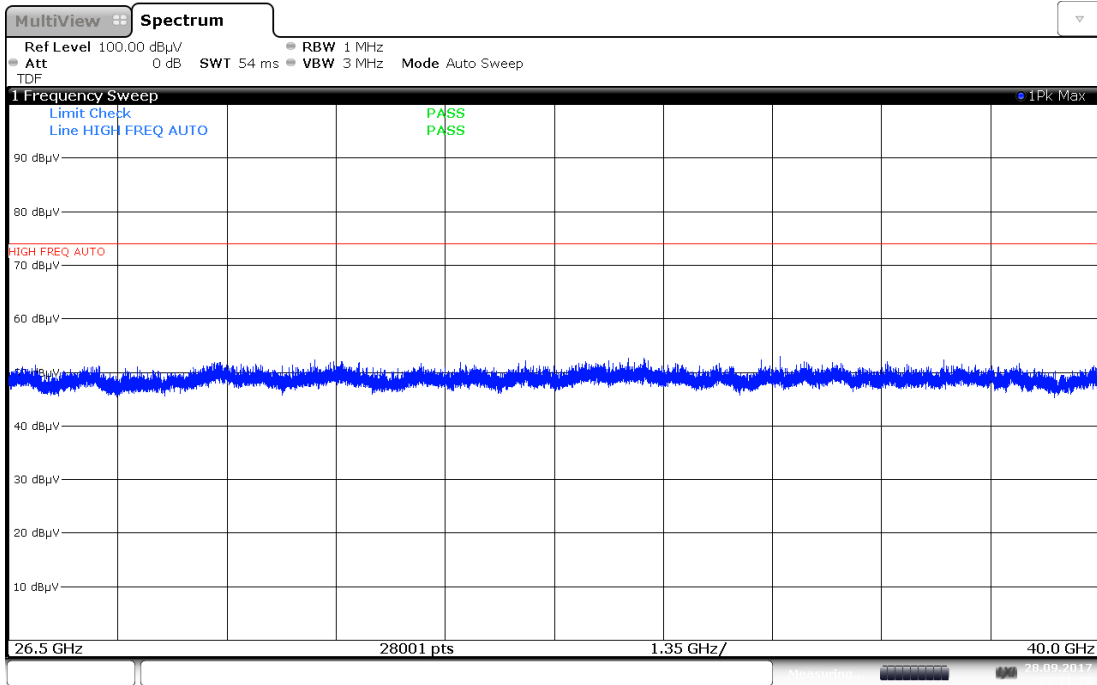
**Plot 7-184. Radiated Spurious Plot 18GHz – 26.5GHz (2.4GHz – 5GHz, Ant. Pol. V)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 146 of 258



22:06:27 28.09.2017

**Plot 7-185. Radiated Spurious Plot above 26.5GHz (2.4GHz – 5GHz, Ant. Pol. H)**





22:11:21 28.09.2017

**Plot 7-186. Radiated Spurious Plot above 26.5GHz (2.4GHz – 5GHz, Ant. Pol. V)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 147 of 258

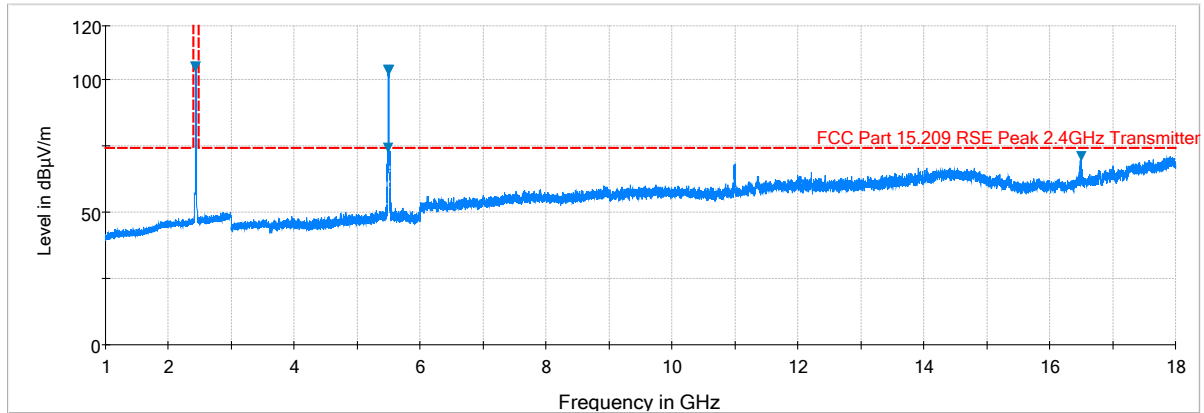
	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
*	4339.00	Peak	H	-	-	-57.38	-0.86	48.76	73.98	-25.22
*	4339.00	Average	H	-	-	-69.19	-0.86	36.95	53.98	-17.03
*	7727.00	Peak	H	-	-	-58.85	10.28	58.43	73.98	-15.55
*	7727.00	Average	H	-	-	-70.63	10.28	46.65	53.98	-7.33
	9213.00	Peak	H	-	-	-58.01	11.27	60.26	73.98	-13.72
*	11115.00	Peak	H	-	-	-59.23	13.15	60.92	73.98	-13.06
*	11115.00	Average	H	-	-	-70.79	13.15	49.36	53.98	-4.62
*	12601.00	Peak	H	-	-	-59.04	14.82	62.78	73.98	-11.20
*	12601.00	Average	H	-	-	-70.98	14.82	50.84	53.98	-3.14
*	15989.00	Peak	H	-	-	-59.11	17.11	65.00	73.98	-8.98
*	15989.00	Average	H	-	-	-73.26	17.11	50.85	53.98	-3.13

**Table 7-62. Radiated Measurements (ANT1 2.4GHz – ANT2 5GHz)**

<b>FCC ID:</b> A3LSMG892U		<b>FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Approved by:</b> Quality Manager
<b>Test Report S/N:</b> 1M1709080250-06.A3L	<b>Test Dates:</b> 09/08/2017-10/04/2017	<b>EUT Type:</b> Portable Handset		Page 148 of 258

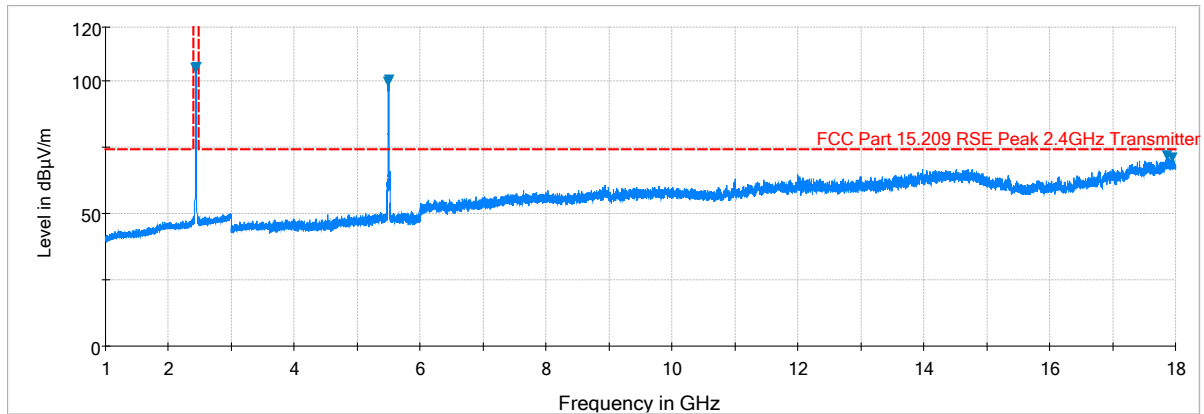
Description	2.4 GHz Emission	5 GHz Emission
Antenna	2	1
Channel	6	100
Operating Frequency (MHz)	2437	5500
Data Rate (Mbps)	1	6
Mode	b	a

**Table 7-63. Simultaneous Transmission Config-2**



Preview Result 1-PK+    FCC Part 15.209 RSE Peak 2.4GHz Transmitter    Final\_Result PK+

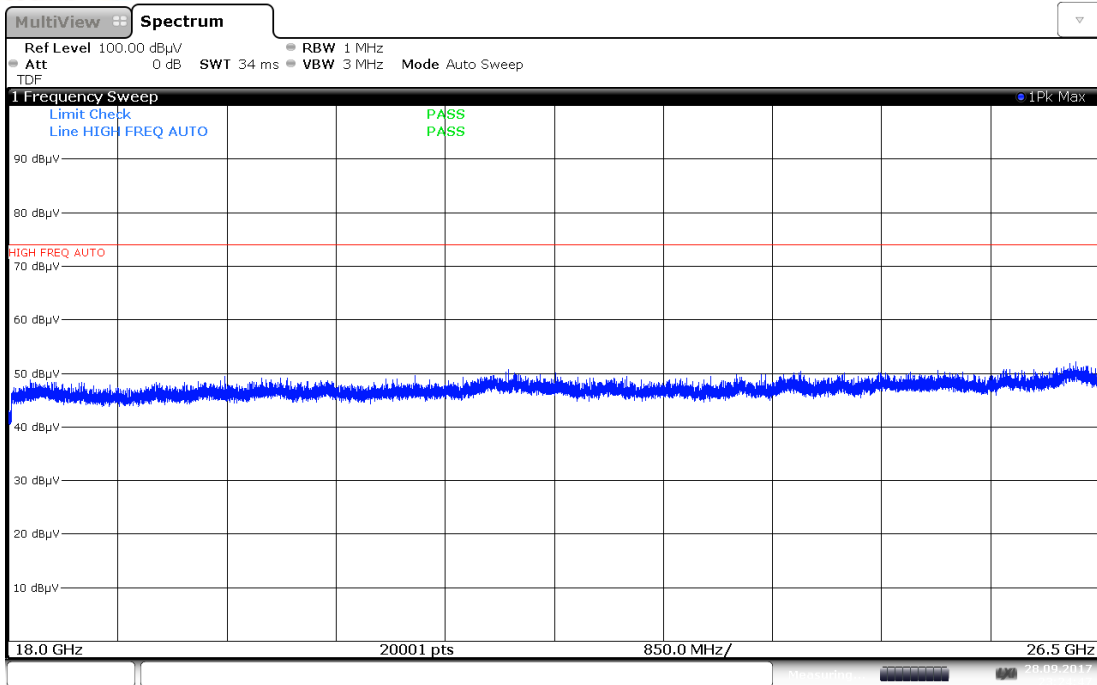
**Plot 7-187. Radiated Spurious Plot above 1GHz (5GHz – 2.4 GHz, Ant. Pol. H)**



Preview Result 1-PK+    FCC Part 15.209 RSE Peak 2.4GHz Transmitter    Final\_Result PK+

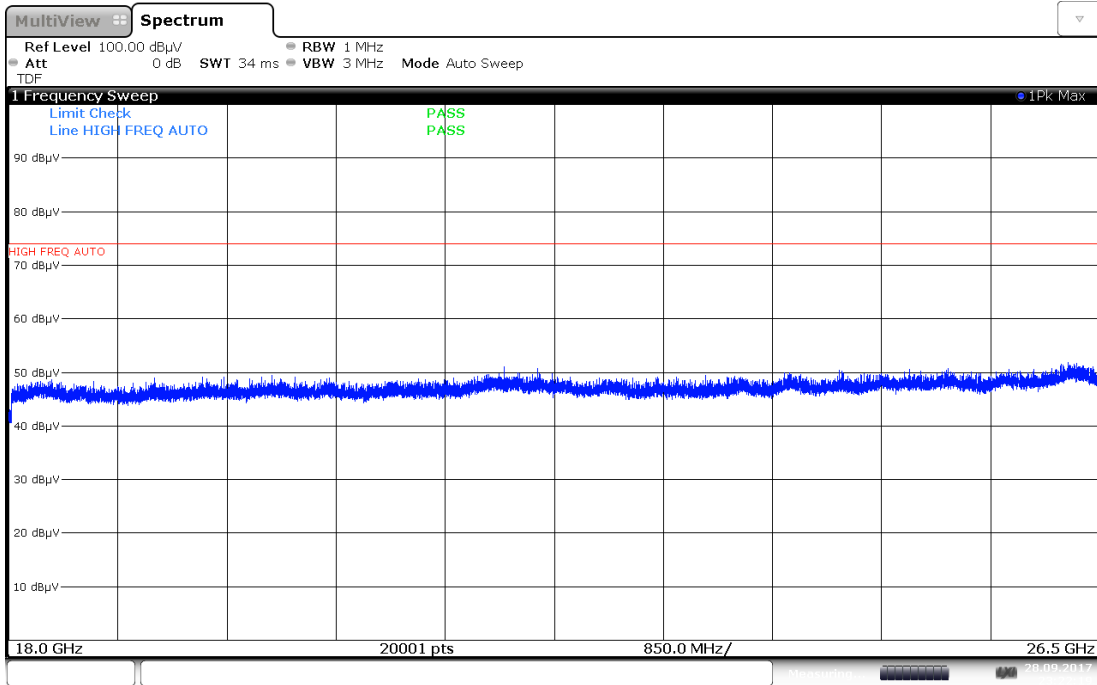
**Plot 7-188. Radiated Spurious Plot above 1GHz (5GHz – 2.4 GHz, Ant. Pol. V)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 149 of 258



23:24:48 28.09.2017

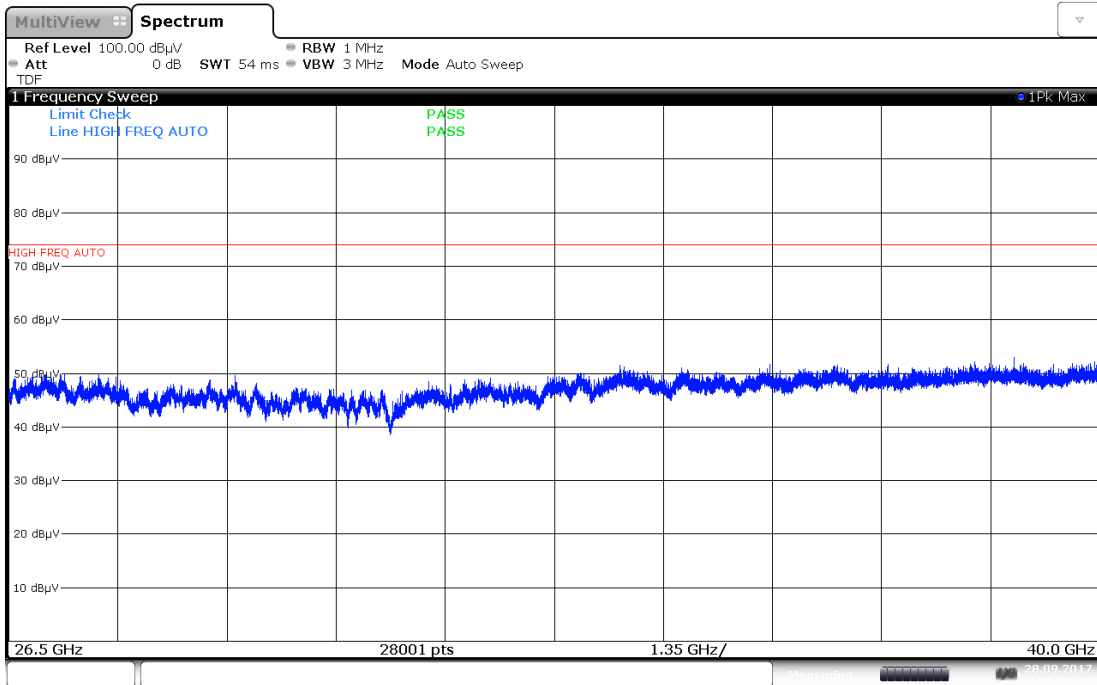
**Plot 7-189. Radiated Spurious Plot 18GHz – 26.5GHz (5GHz – 2.4 GHz, Ant. Pol. H)**



23:22:20 28.09.2017

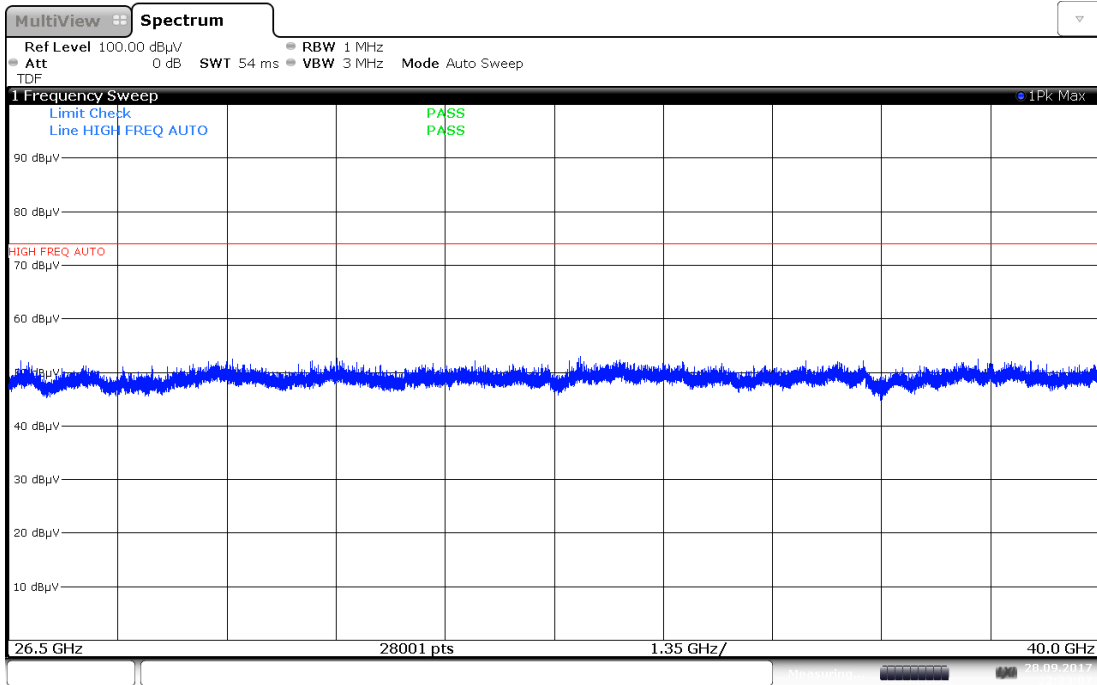
**Plot 7-190. Radiated Spurious Plot 18GHz – 26.5GHz (5GHz – 2.4 GHz, Ant. Pol. V)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 150 of 258



22:26:38 28.09.2017

**Plot 7-191. Radiated Spurious Plot above 26.5GHz (5GHz – 2.4 GHz, Ant. Pol. H)**





22:23:07 28.09.2017

**Plot 7-192. Radiated Spurious Plot above 26.5GHz (5GHz – 2.4 GHz, Ant. Pol. V)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 151 of 258

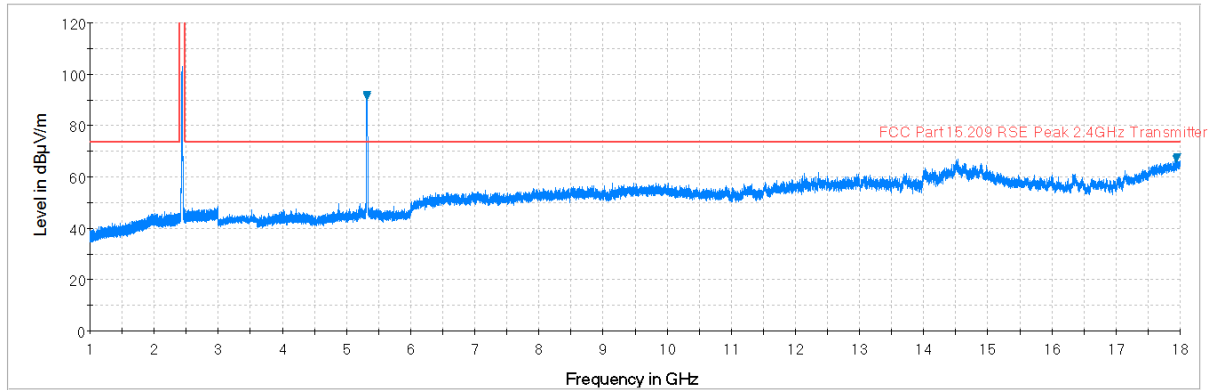
	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
*	3689.00	Average	V	-	-	-68.69	-1.61	36.70	53.98	-17.28
*	3689.00	Peak	V	-	-	-56.95	-1.61	48.44	73.98	-25.54
	6752.00	Peak	V	-	-	-58.29	8.46	57.17	73.98	-16.81
	8563.00	Peak	V	-	-	-59.76	11.92	59.16	73.98	-14.82
	9815.00	Peak	V	-	-	-58.11	11.71	60.60	73.98	-13.38
*	11626.00	Average	V	-	-	-70.58	14.49	50.91	53.98	-3.07
*	11626.00	Peak	V	-	-	-58.61	14.49	62.88	73.98	-11.10
*	17752.00	Average	V	-	-	-80.67	24.55	50.88	53.98	-3.10
*	17752.00	Peak	V	-	-	-60.91	24.55	70.64	73.98	-3.34

**Table 7-64. Radiated Measurements (ANT1 5GHz – ANT2 2.4GHz)**

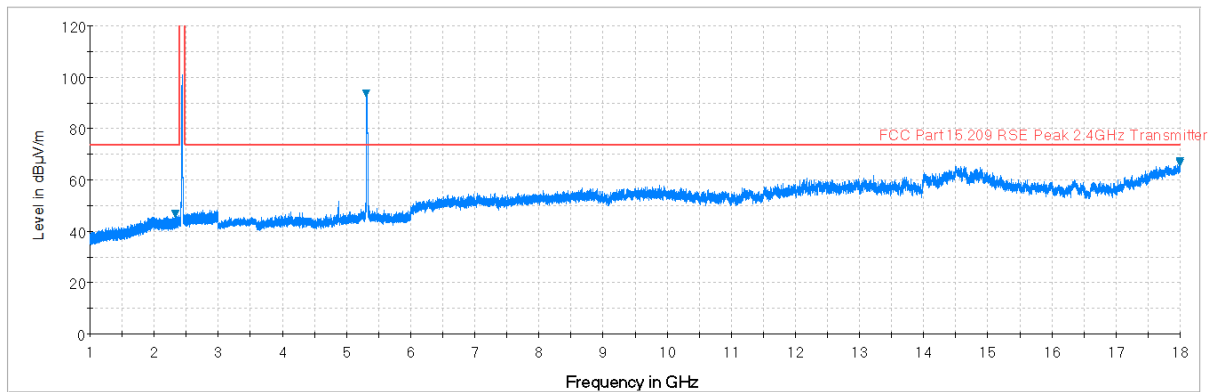
<b>FCC ID:</b> A3LSMG892U		<b>FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Approved by:</b> Quality Manager
<b>Test Report S/N:</b> 1M1709080250-06.A3L	<b>Test Dates:</b> 09/08/2017-10/04/2017	<b>EUT Type:</b> Portable Handset		Page 152 of 258

Description	2.4 GHz Emission	5 GHz Emission
Antenna	Both	Both
Channel	6	165
Operating Frequency (MHz)	2437	5825
Data Rate (Mbps)	MCS0	MCS0
Mode	n	n



**Table 7-65. Dual Band Simultaneous Transmission**

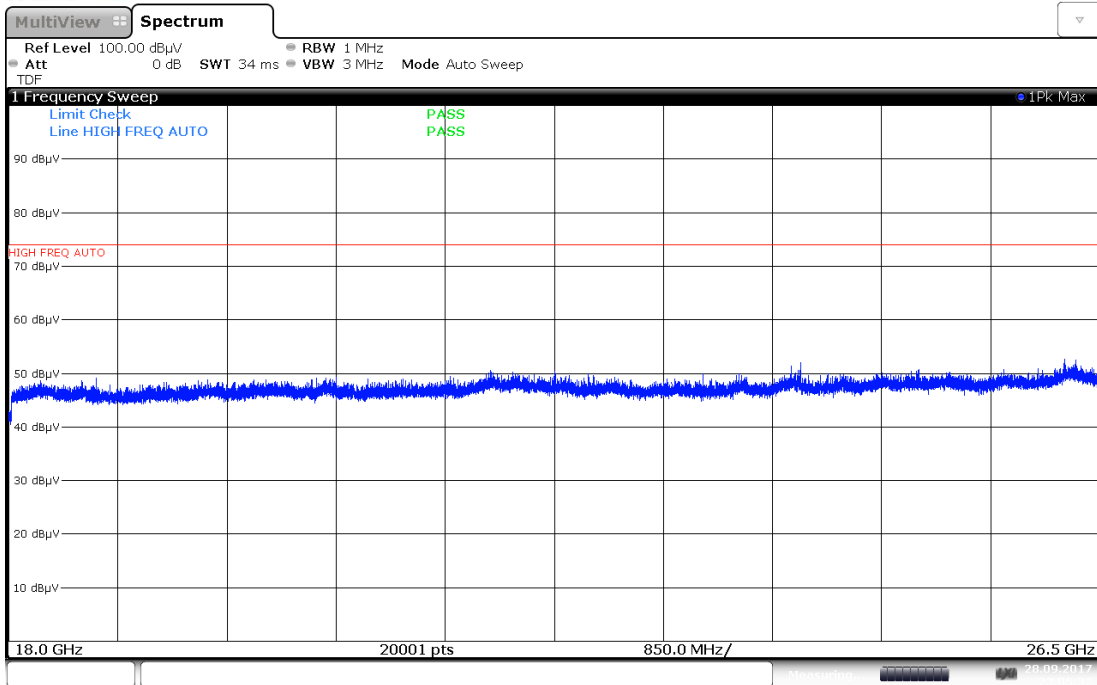


**Plot 7-193. Radiated Spurious Plot above 1GHz (Dual Band Simult. Tx, Ant. Pol. H)**



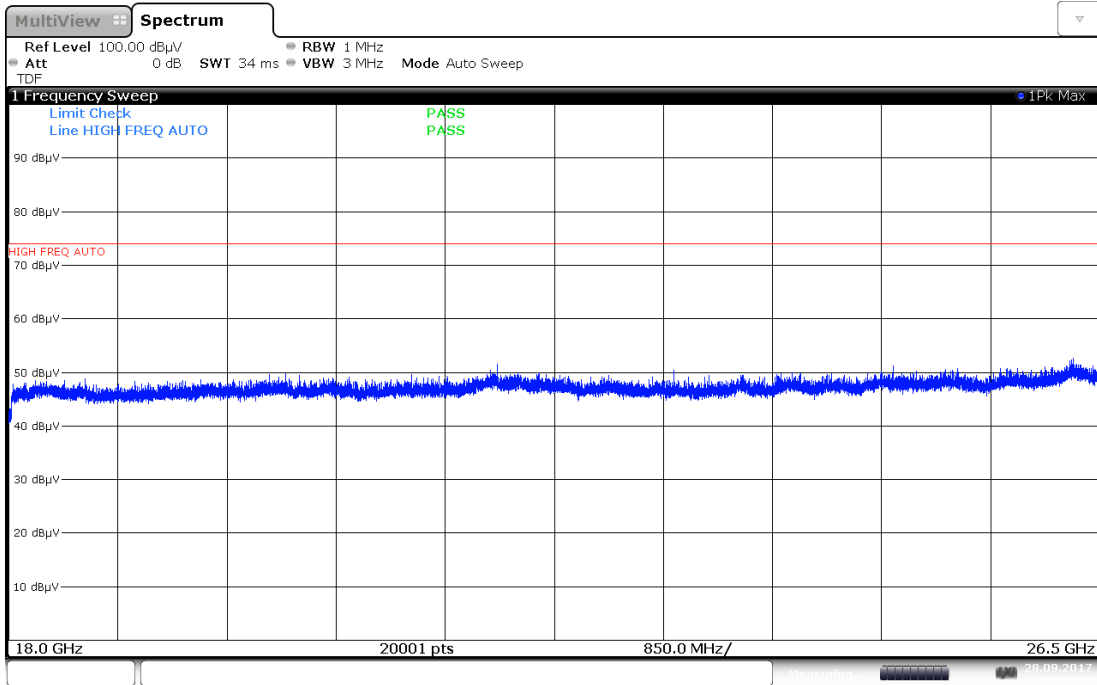
**Plot 7-194. Radiated Spurious Plot above 1GHz (Dual Band Simult. Tx, Ant. Pol. V)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 153 of 258



23:05:33 28.09.2017

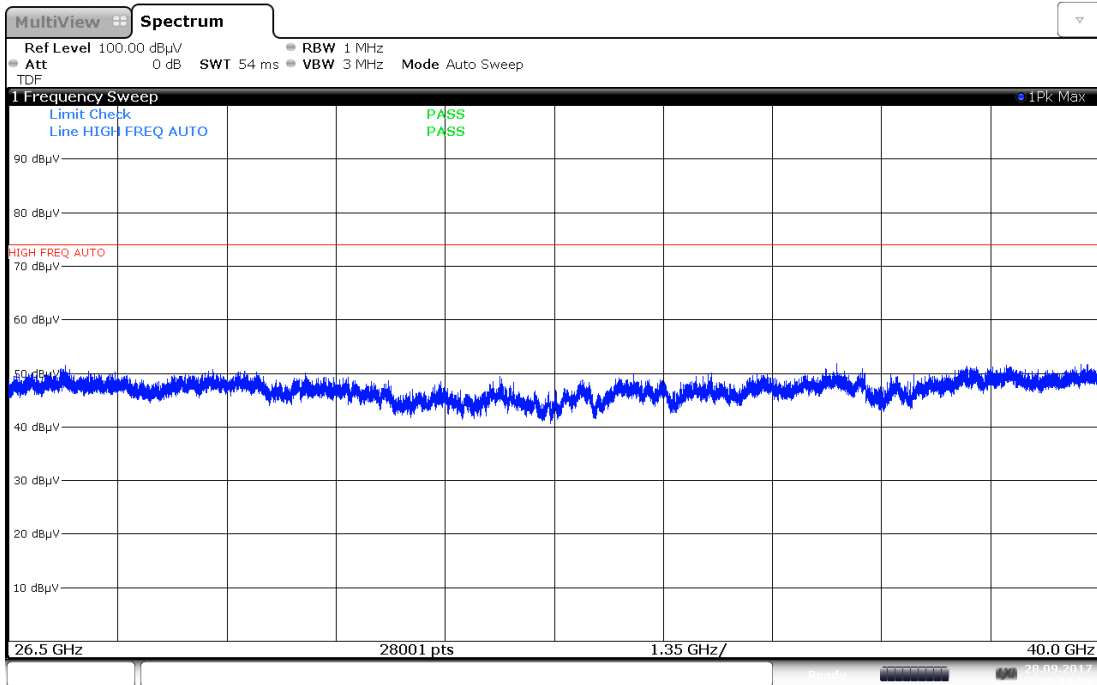
Plot 7-195. Radiated Spurious Plot 18GHz – 26.5GHz (Dual Band Simult. Tx, Ant. Pol. H)



22:57:09 28.09.2017

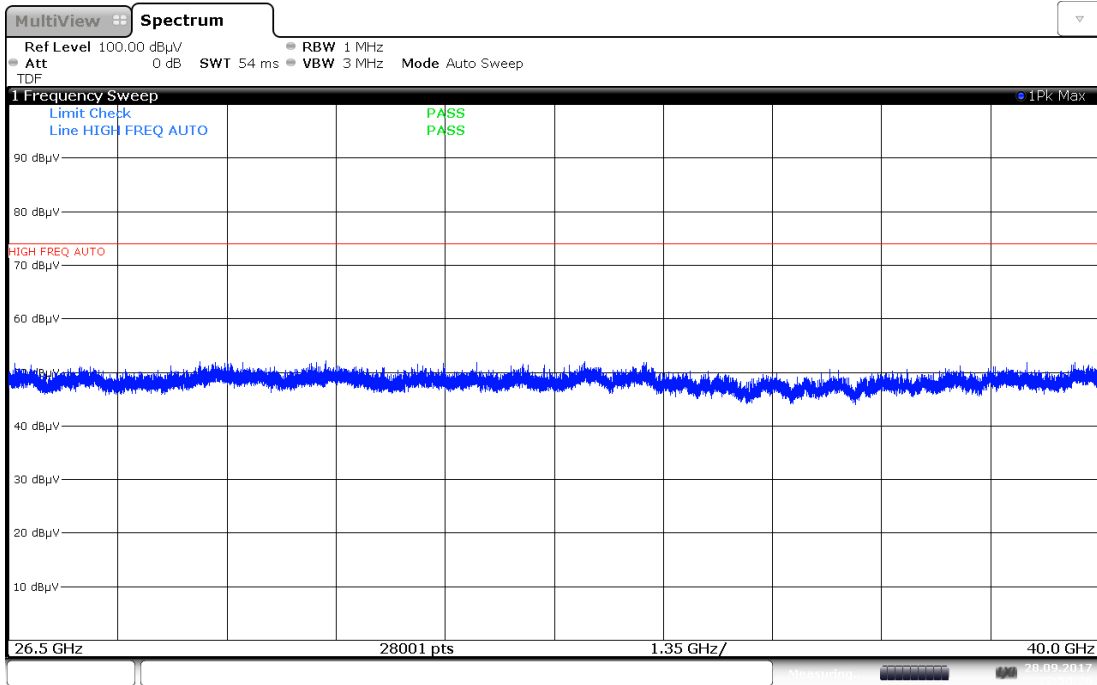
Plot 7-196. Radiated Spurious Plot 18GHz – 26.5GHz (Dual Band Simult. Tx, Ant. Pol. V)

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 154 of 258



22:45:30 28.09.2017

**Plot 7-197. Radiated Spurious Plot above 26.5GHz (Dual Band Simult. Tx, Ant. Pol. H)**





22:50:27 28.09.2017

**Plot 7-198. Radiated Spurious Plot above 26.5GHz (Dual Band Simult. Tx, Ant. Pol. V)**

<b>FCC ID:</b> A3LSMG892U		<b>FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Approved by:</b> Quality Manager
<b>Test Report S/N:</b> 1M1709080250-06.A3L	<b>Test Dates:</b> 09/08/2017-10/04/2017	<b>EUT Type:</b> Portable Handset	Page 155 of 258	

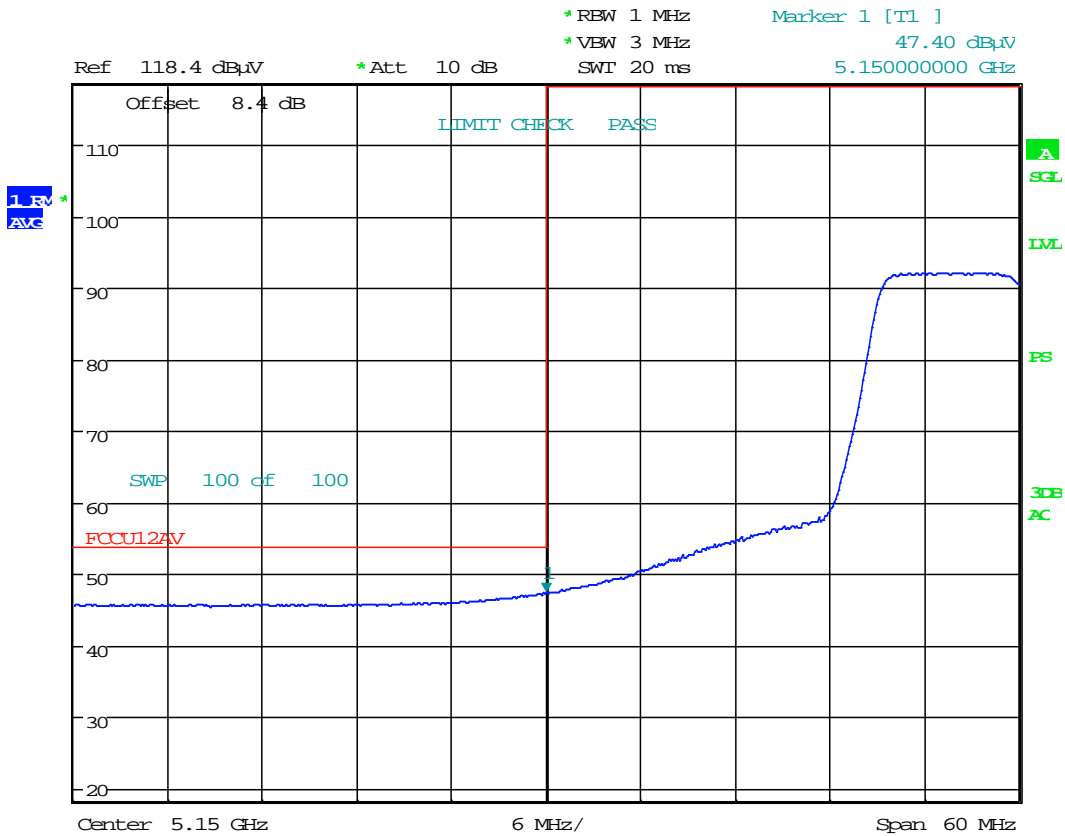
	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	4339.00	Peak	H	-	-	-57.38	-0.86	48.76	73.98	-25.22
*	4339.00	Average	H	-	-	-69.19	-0.86	36.95	53.98	-17.03
*	7727.00	Peak	H	-	-	-58.85	10.28	58.43	73.98	-15.55
*	7727.00	Average	H	-	-	-70.63	10.28	46.65	53.98	-7.33
	9213.00	Peak	H	-	-	-58.01	11.27	60.26	73.98	-13.72
*	11115.00	Peak	H	-	-	-59.23	13.15	60.92	73.98	-13.06
*	11115.00	Average	H	-	-	-70.79	13.15	49.36	53.98	-4.62
*	12601.00	Peak	H	-	-	-59.04	14.82	62.78	73.98	-11.20
*	12601.00	Average	H	-	-	-70.98	14.82	50.84	53.98	-3.14
*	15989.00	Peak	H	-	-	-59.11	17.11	65.00	73.98	-8.98
*	15989.00	Average	H	-	-	-73.16	17.11	50.95	53.98	-3.03

**Table 7-66. Radiated Measurements (Dual Band Simult. Tx)**

<b>FCC ID:</b> A3LSMG892U		<b>FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Approved by:</b> Quality Manager
<b>Test Report S/N:</b> 1M1709080250-06.A3L	<b>Test Dates:</b> 09/08/2017-10/04/2017	<b>EUT Type:</b> Portable Handset		Page 156 of 258

### 7.7.4 Antenna-1 Radiated Band Edge Measurements (20MHz BW) §15.407(b.1)(b.2) §15.205 §15.209

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



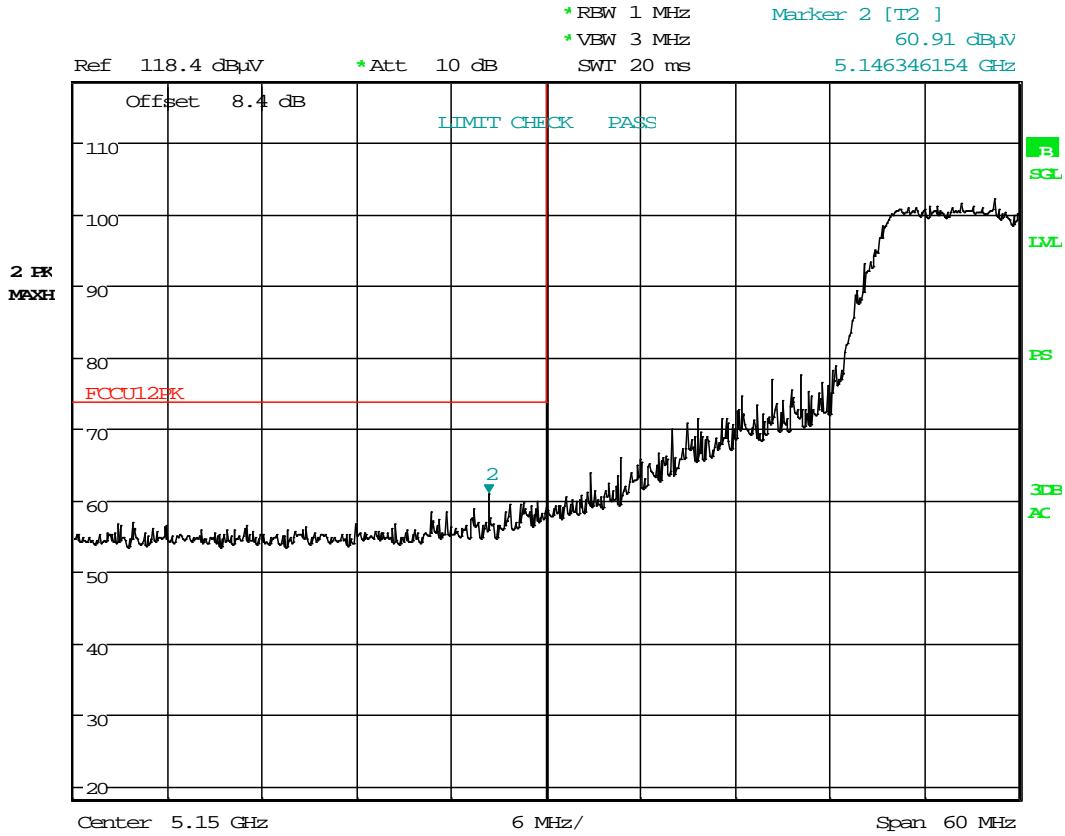
Date: 15.SEP.2017 02:05:36

**Plot 7-199. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 1)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 157 of 258

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

§15.407(b.1)(b.2) §15.205 §15.209



Date: 15.SEP.2017 02:05:57

**Plot 7-200. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 158 of 258	

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

§15.407(b.1)(b.2) §15.205 §15.209

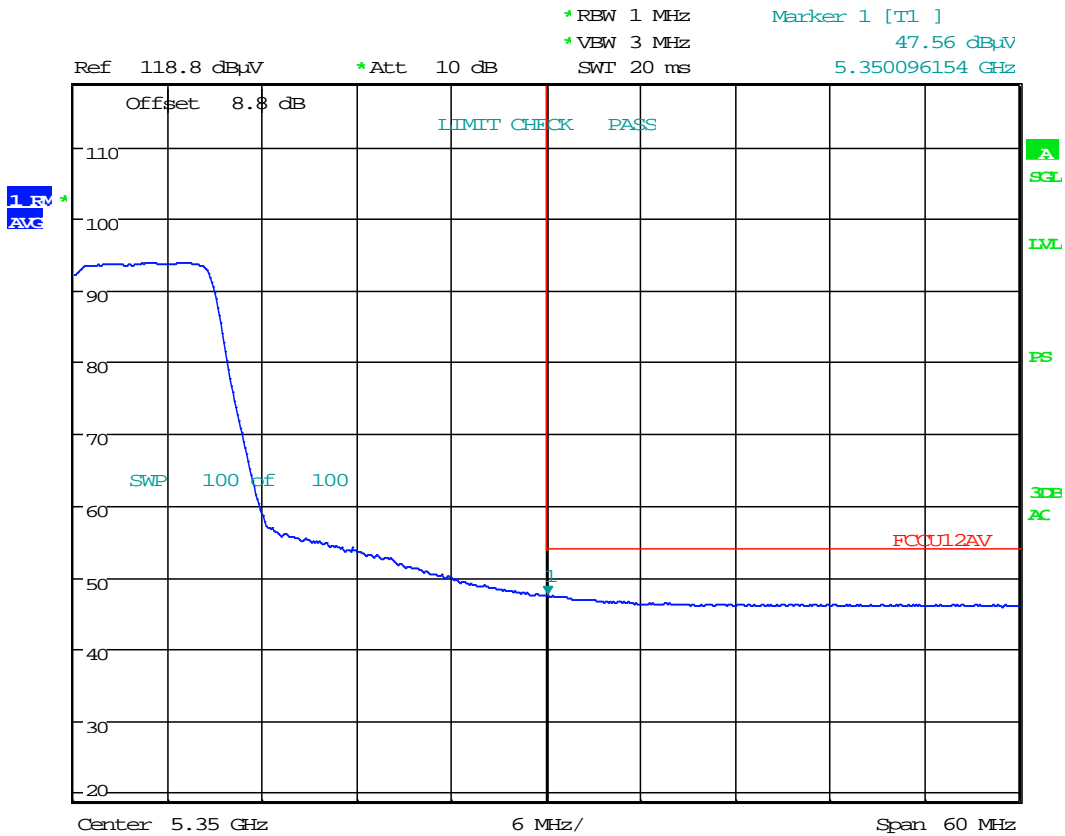
Worst Case Mode: 802.11a

Worst Case Transfer Rate: 6 Mbps

Distance of Measurements: 3 Meters

Operating Frequency: 5320MHz

Channel: 64



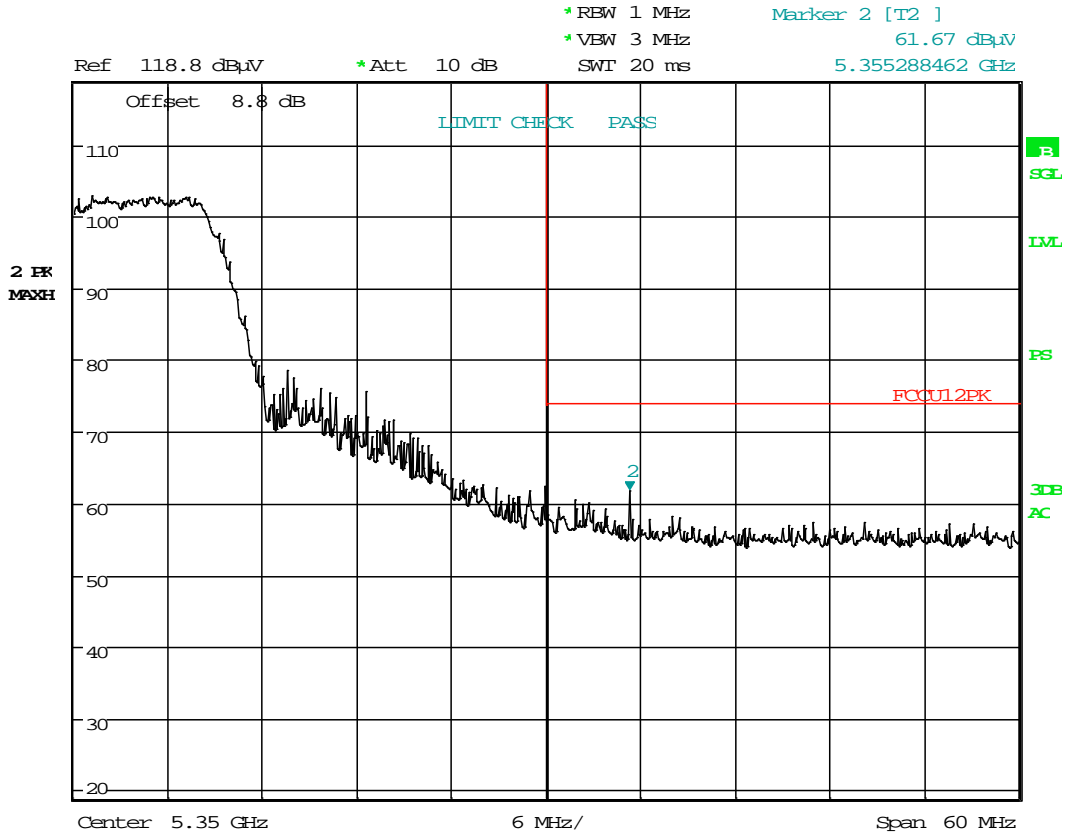
Date: 15.SEP.2017 02:14:50

**Plot 7-201. Radiated Restricted Upper Band Edge Plot (Average – UNII Band 2A)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 159 of 258

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

§15.407(b.1)(b.2) §15.205 §15.209



Date: 15.SEP.2017 02:15:09

**Plot 7-202. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 160 of 258

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

§15.407(b.1)(b.2) §15.205 §15.209

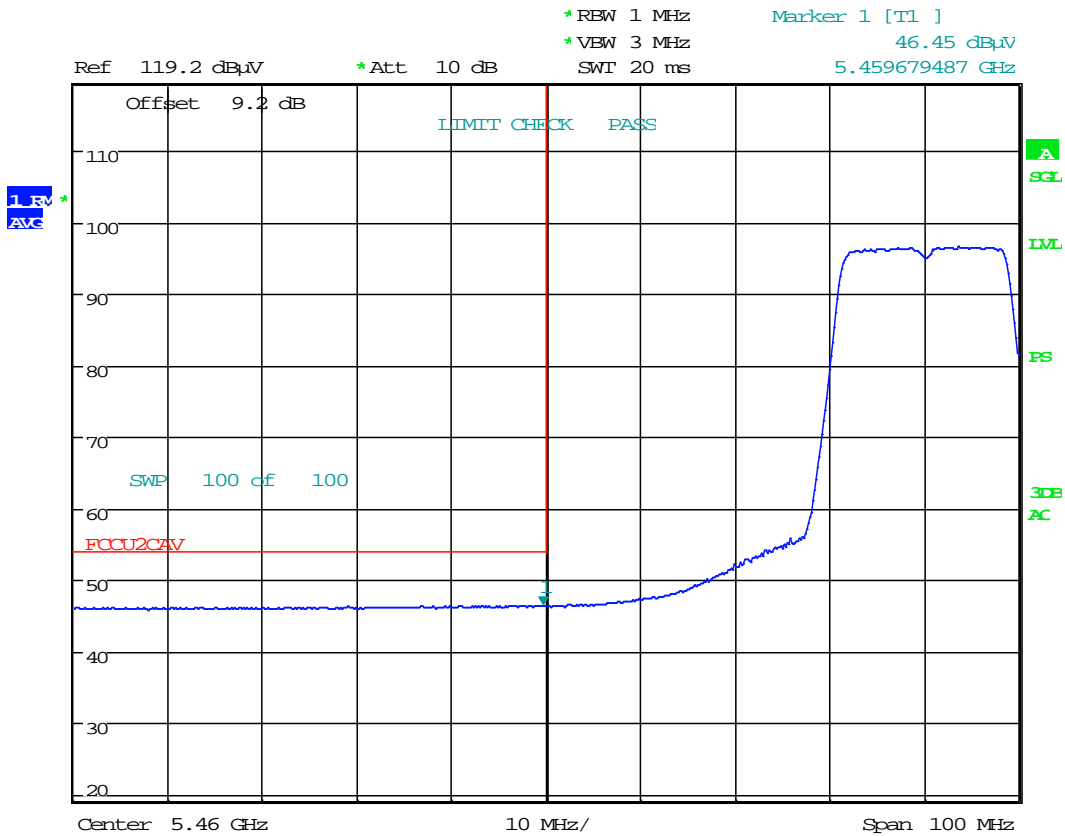
Worst Case Mode: 802.11a

Worst Case Transfer Rate: 6 Mbps

Distance of Measurements: 3 Meters

Operating Frequency: 5500MHz

Channel: 100



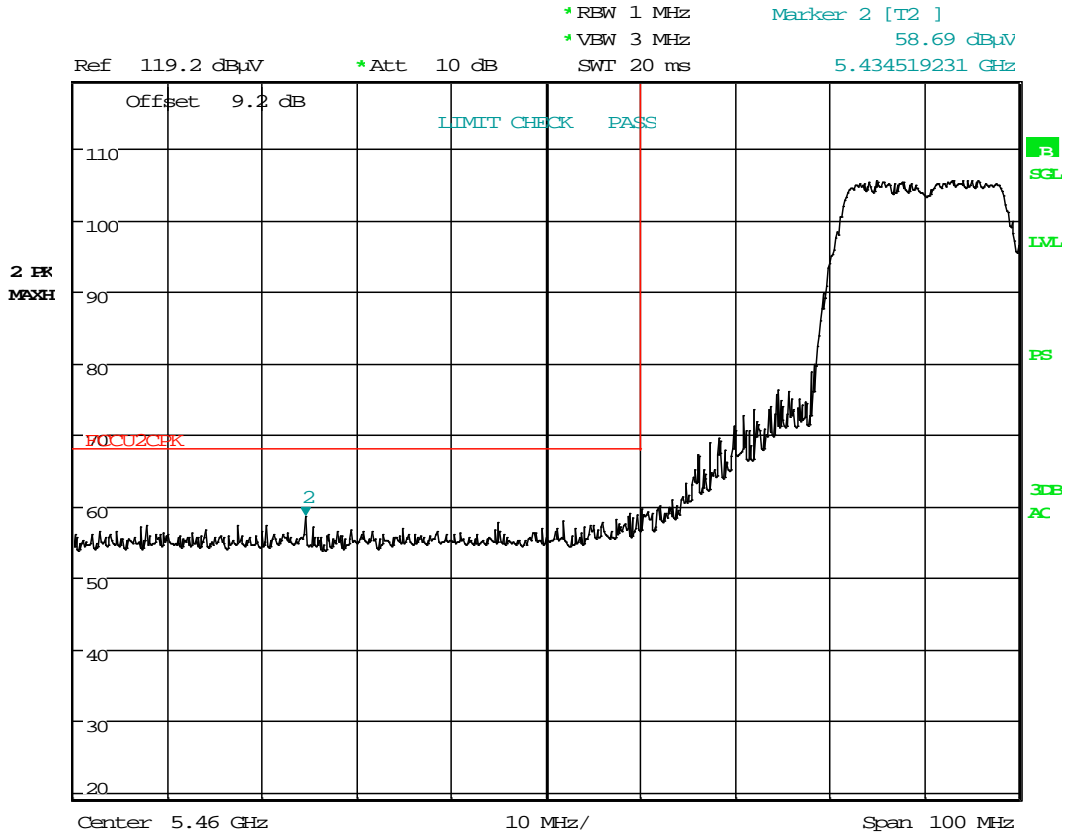
Date: 15.SEP.2017 02:24:17

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

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 161 of 258	

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

§15.407(b.1)(b.2) §15.205 §15.209



Date: 15.SEP.2017 02:24:35

**Plot 7-204. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 162 of 258

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

§15.407(b.1)(b.2) §15.205 §15.209

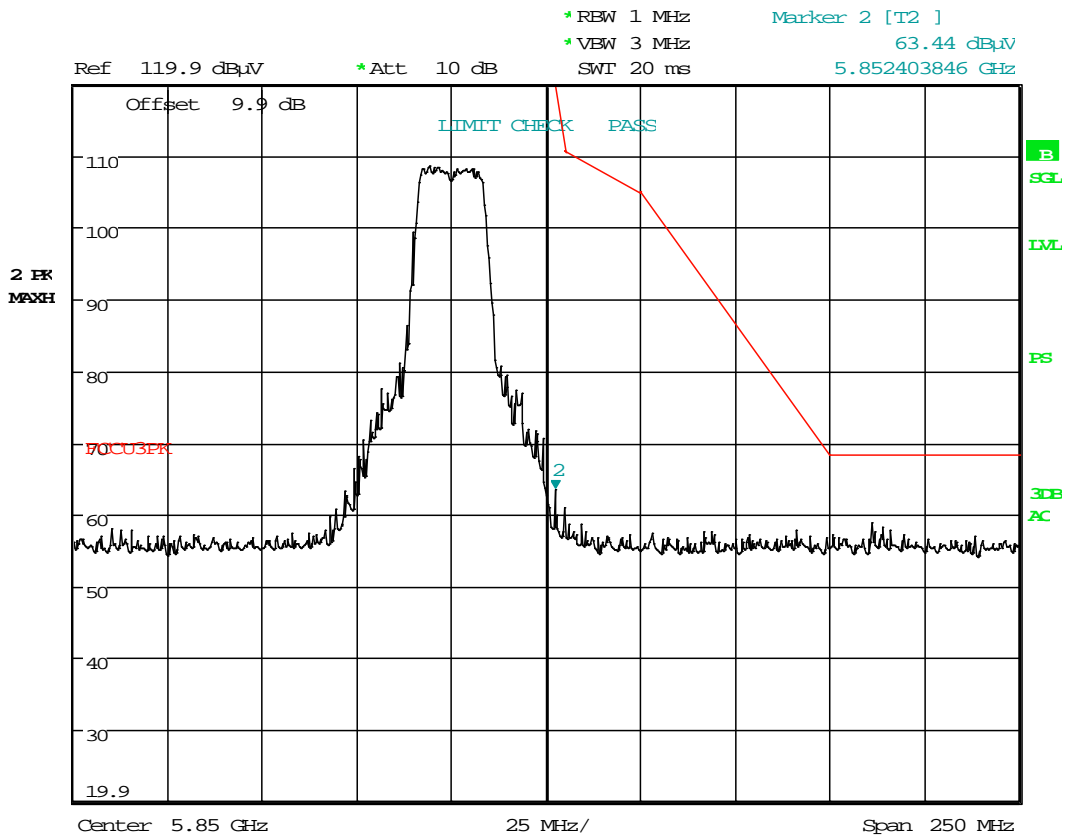
Worst Case Mode: 802.11a

Worst Case Transfer Rate: 6 Mbps

Distance of Measurements: 3 Meters

Operating Frequency: 5825MHz

Channel: 165



Date: 15.SEP.2017 04:33:23

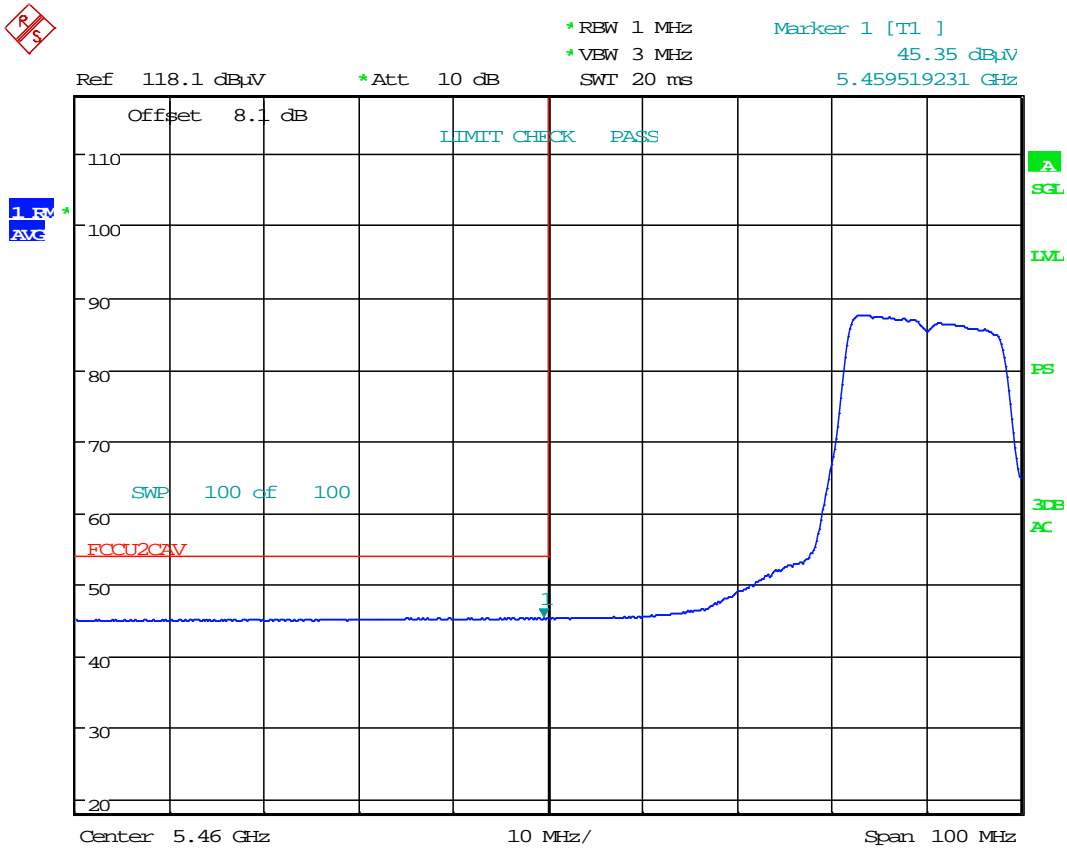
**Plot 7-205. Radiated Upper Band Edge Plot (Peak – UNII Band 3)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 163 of 258

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

§15.407(b.1)(b.2) §15.205 §15.209

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

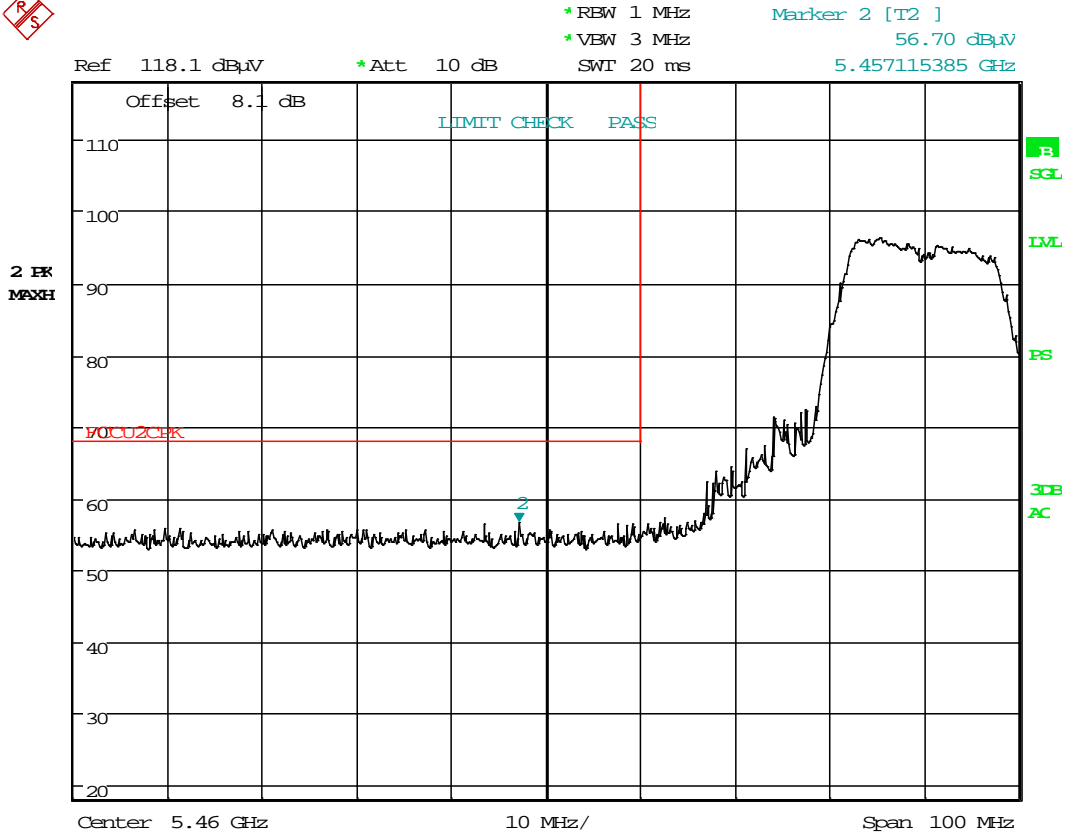


Date: 18.SEP.2017 22:36:26

Plot 7-206. Radiated Restricted Band Edge Plot with WCP

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 164 of 258

**Antenna-1 WCP Radiated Band Edge Measurements (20MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



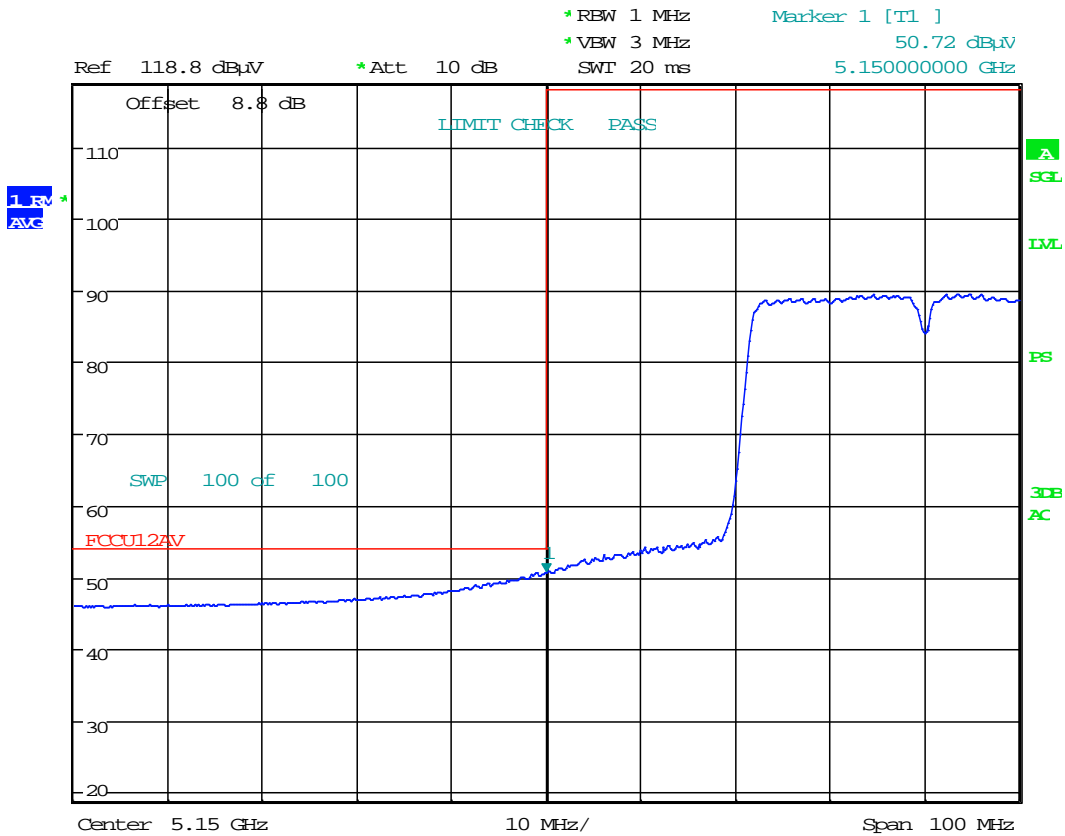
Date: 18.SEP.2017 22:36:45

**Plot 7-207. Radiated Restricted Band Edge Plot with WCP**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 165 of 258	

### 7.7.5 Antenna-1 Radiated Band Edge Measurements (40MHz BW) §15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11n (40MHz)  
 Worst Case Transfer Rate: MCS0  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5190MHz  
 Channel: 38

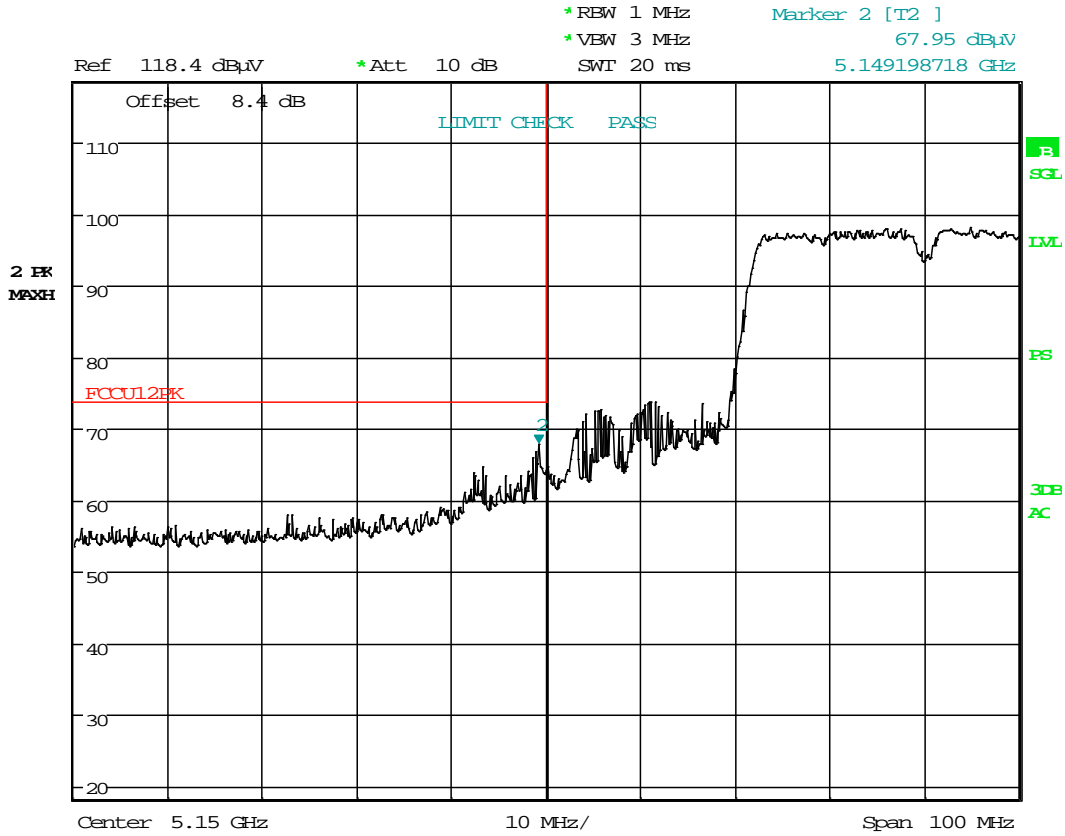


Date: 15.SEP.2017 02:08:46

**Plot 7-208. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 1)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 166 of 258

**Antenna-1 Radiated Band Edge Measurements (40MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



Date: 15.SEP.2017 02:09:03

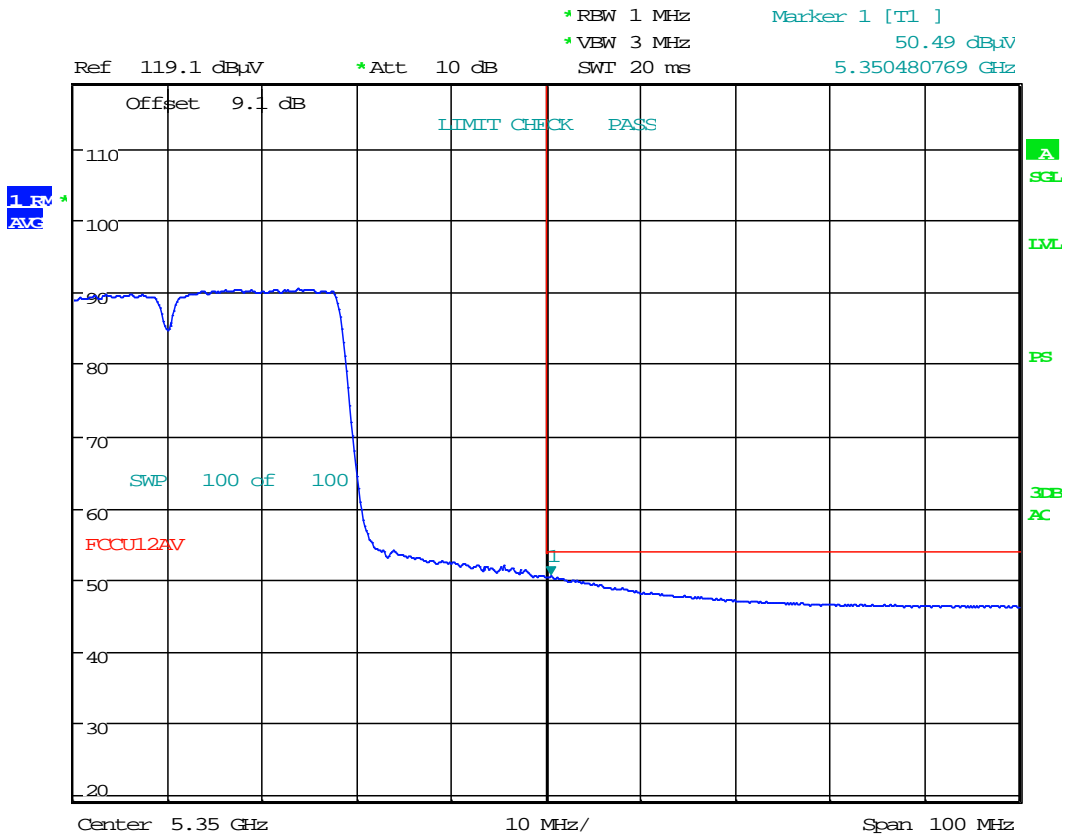
**Plot 7-209. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 167 of 258

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

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11n (40MHz)  
 Worst Case Transfer Rate: MCS0  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5310MHz  
 Channel: 62

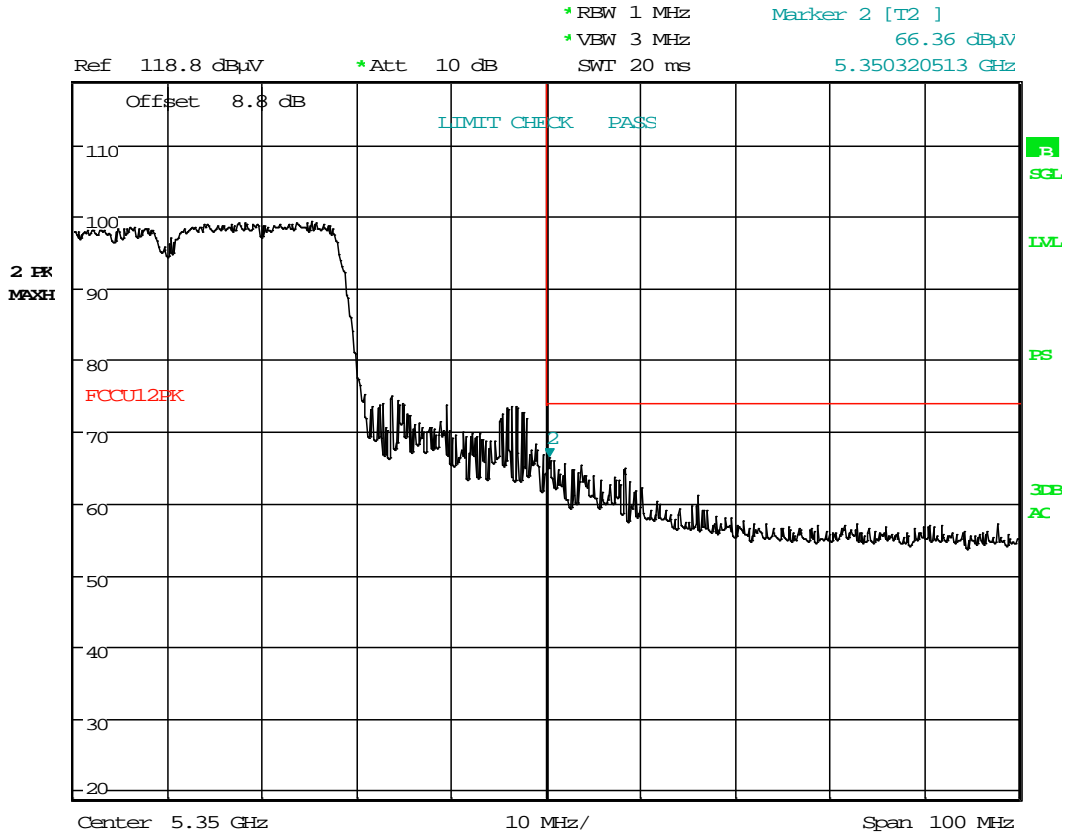


Date: 15.SEP.2017 02:16:34

**Plot 7-210. Radiated Restricted Upper Band Edge Plot (Average – UNII Band 2A)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 168 of 258

**Antenna-1 Radiated Band Edge Measurements (40MHz BW)**  
**\$15.407(b.1)(b.2) \$15.205 \$15.209**



Date: 15.SEP.2017 02:16:51

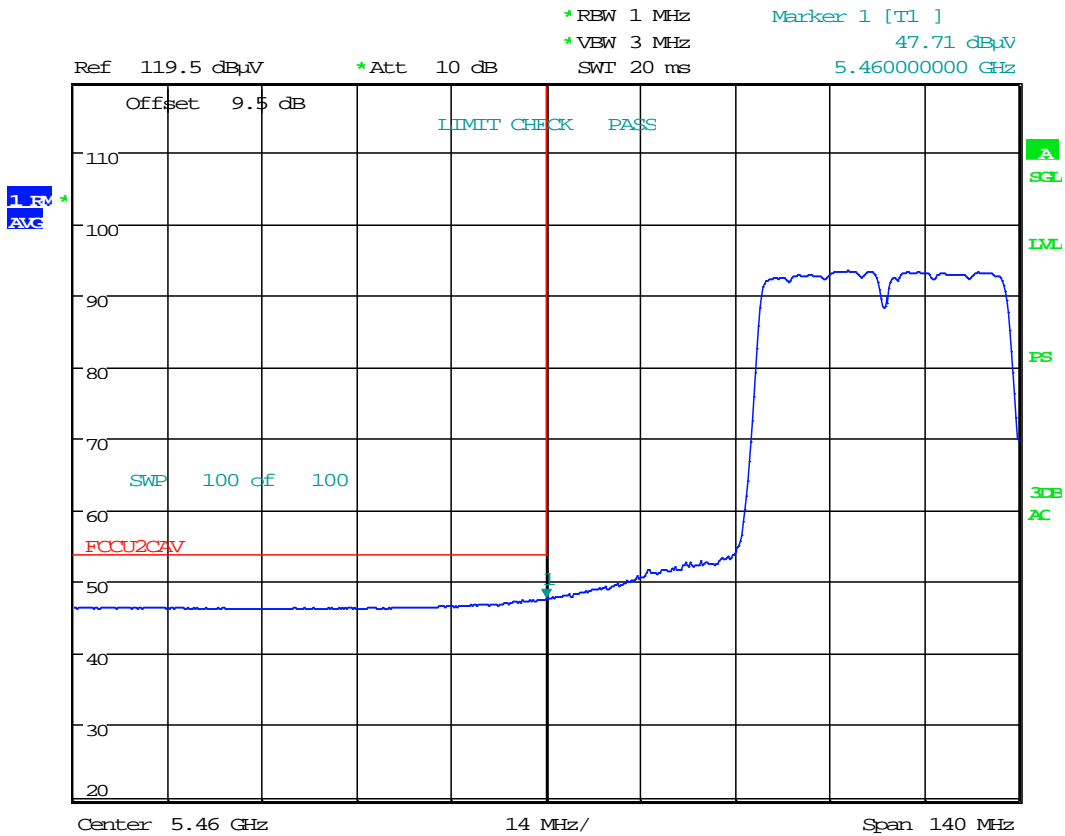
**Plot 7-211. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 169 of 258

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

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11n (40MHz)  
 Worst Case Transfer Rate: MCS0  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5510MHz  
 Channel: 102



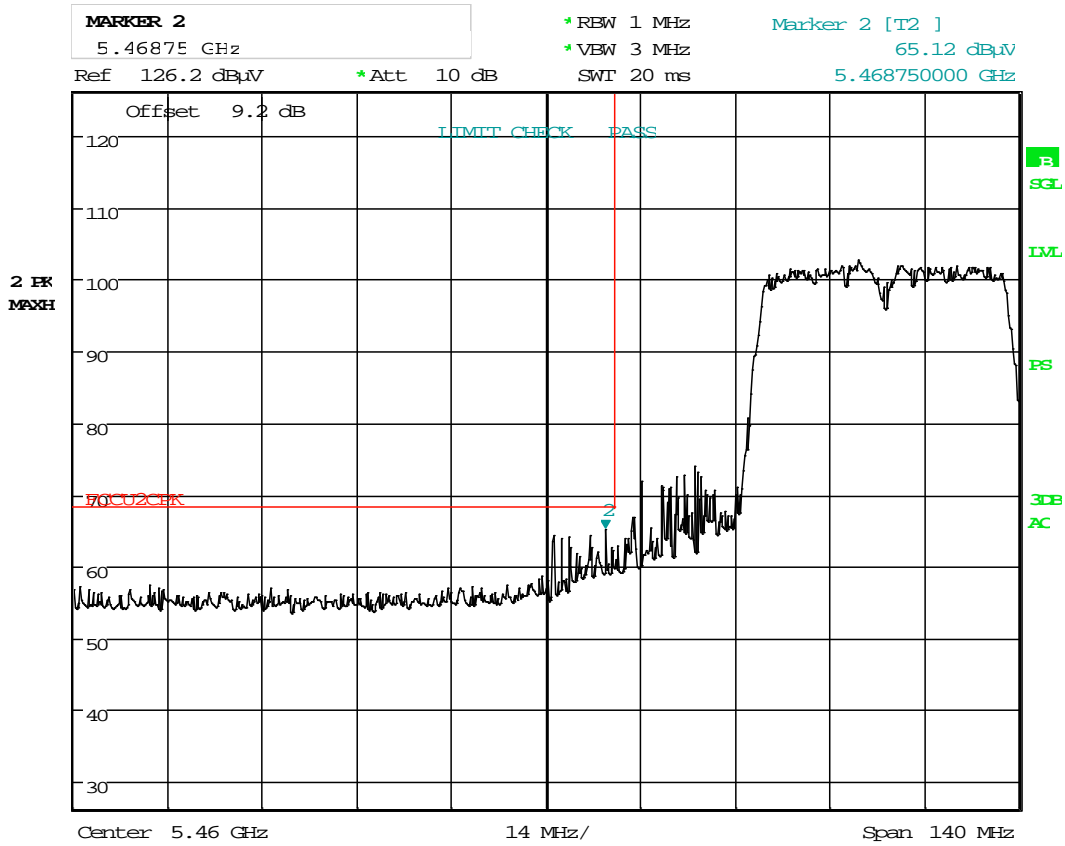
Date: 15.SEP.2017 02:25:53

**Plot 7-212. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 2C)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 170 of 258

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

§15.407(b.1)(b.2) §15.205 §15.209



Date: 15.SEP.2017 02:26:48

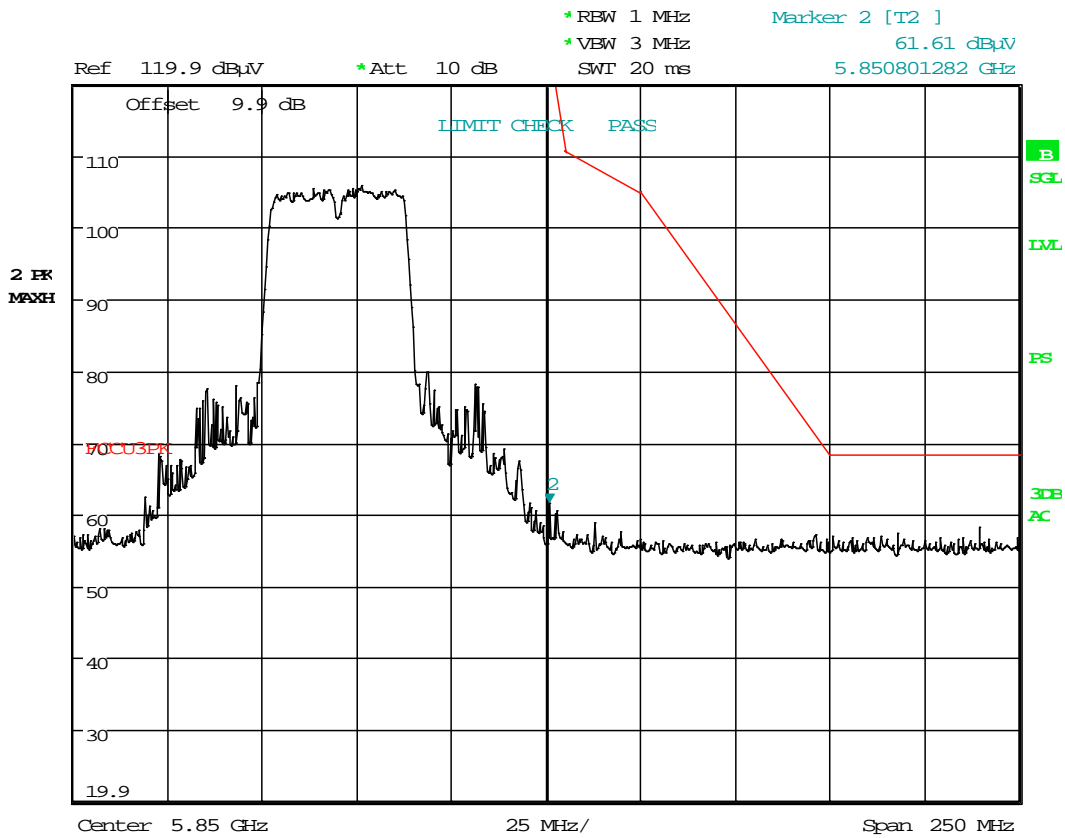
**Plot 7-213. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 171 of 258

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

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11n (40MHz)  
 Worst Case Transfer Rate: MCS0  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5795MHz  
 Channel: 159



Date: 15.SEP.2017 04:35:39

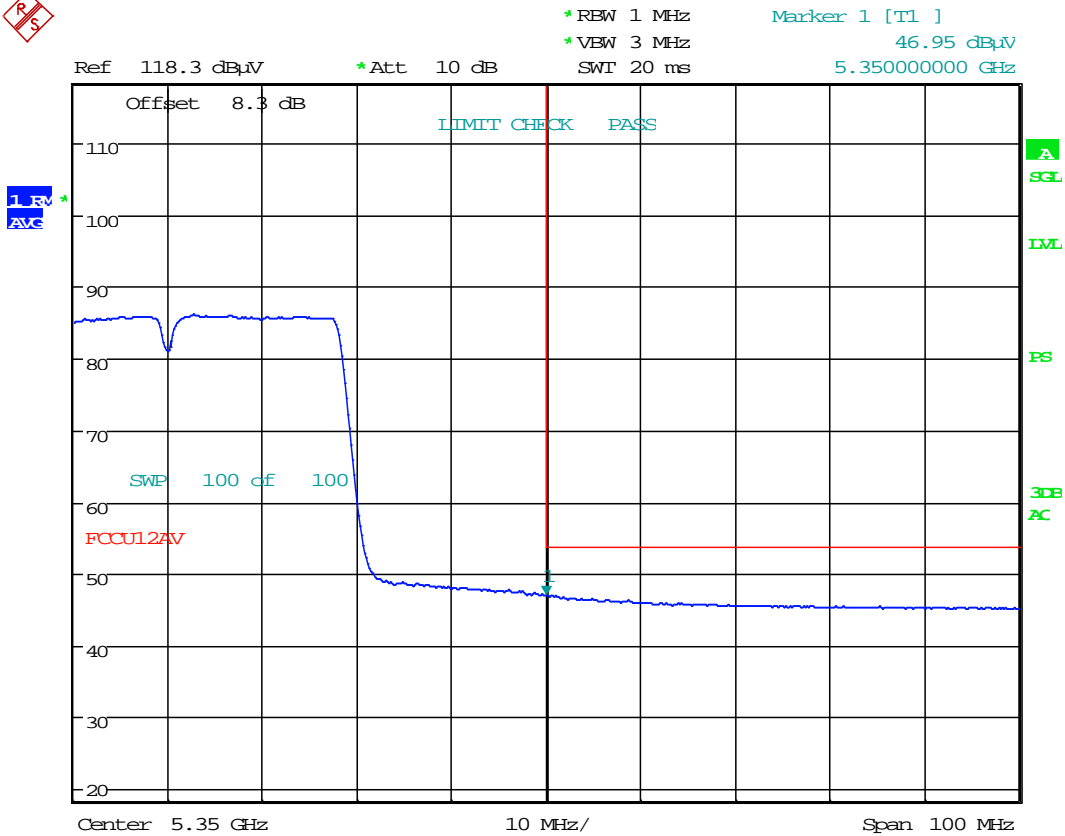
Plot 7-214. Radiated Upper Band Edge Plot (Peak – UNII Band 3)

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 172 of 258

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

§15.407(b.1)(b.2) §15.205 §15.209

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

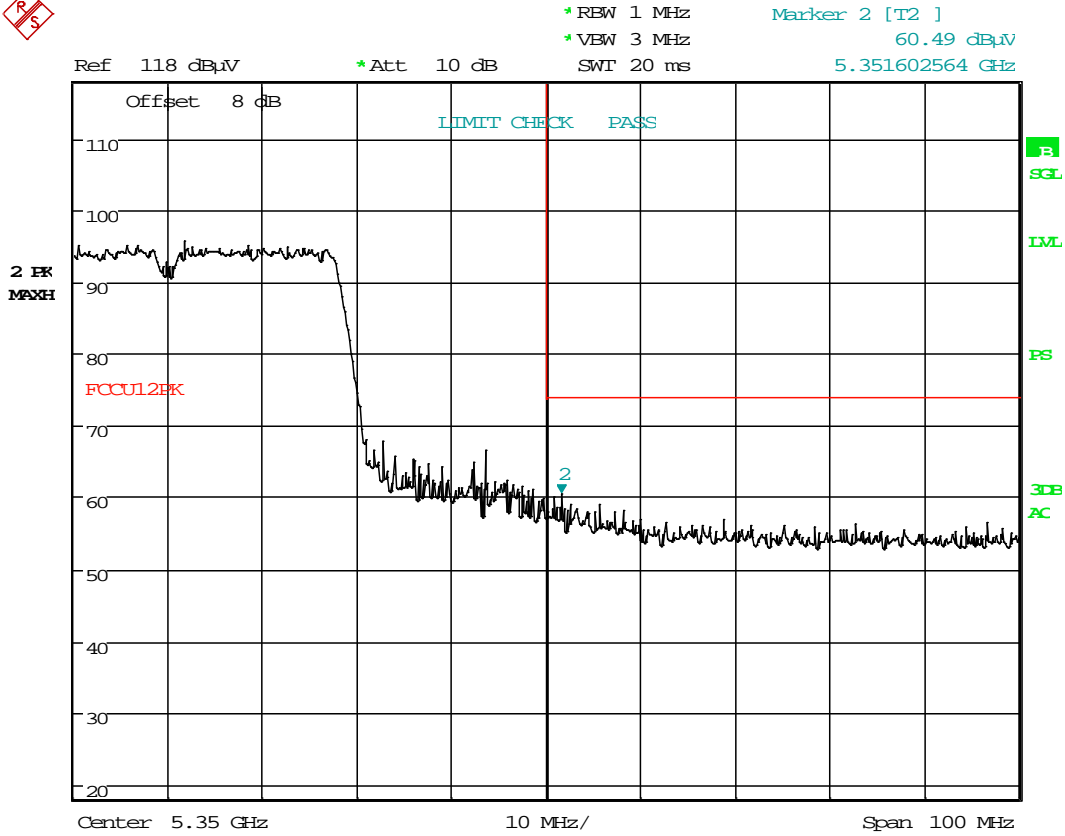


Date: 18.SEP.2017 22:44:19

**Plot 7-215. Radiated Restricted Band Edge Plot with WCP**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 173 of 258

**Antenna-1 WCP Radiated Band Edge Measurements (40MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



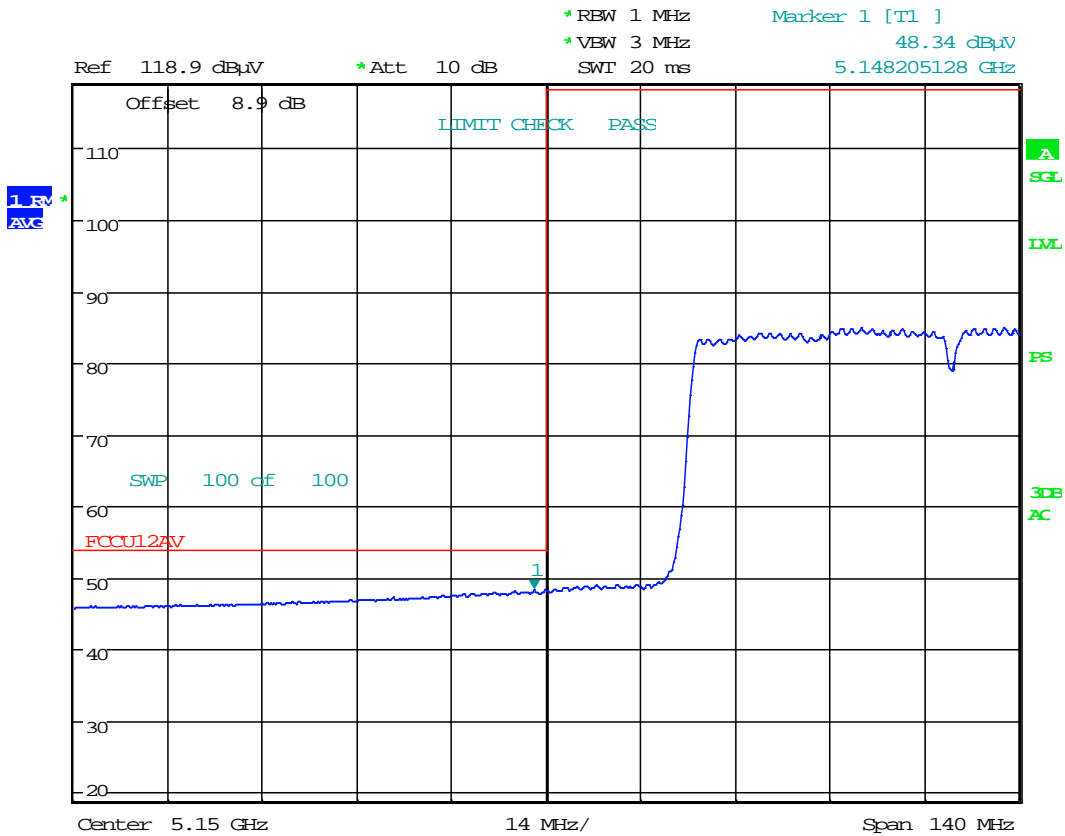
Date: 18.SEP.2017 22:44:39

**Plot 7-216. Radiated Restricted Band Edge Plot with WCP**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 174 of 258

### 7.7.6 Antenna-1 Radiated Band Edge Measurements (80MHz BW) §15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11ac (80MHz)  
 Worst Case Transfer Rate: MCS0  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5210MHz  
 Channel: 42

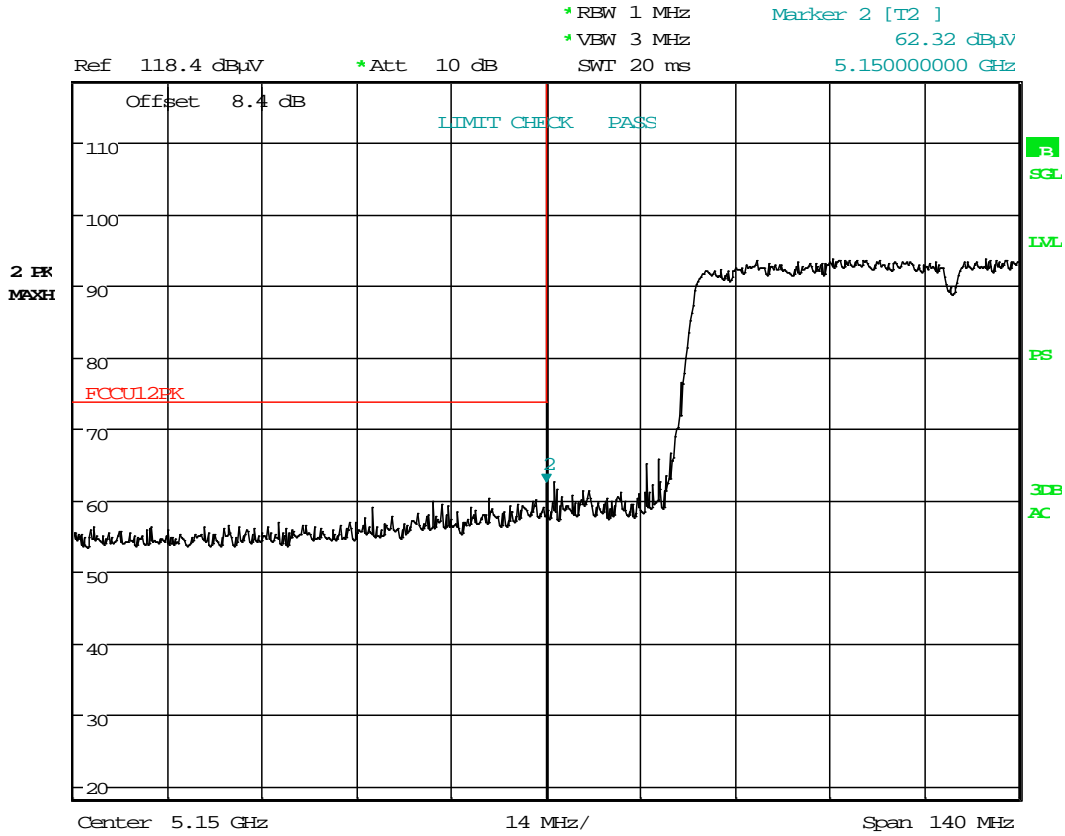


Date: 15.SEP.2017 02:10:24

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

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 175 of 258

**Antenna-1 Radiated Band Edge Measurements (80MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



Date: 15.SEP.2017 02:10:41

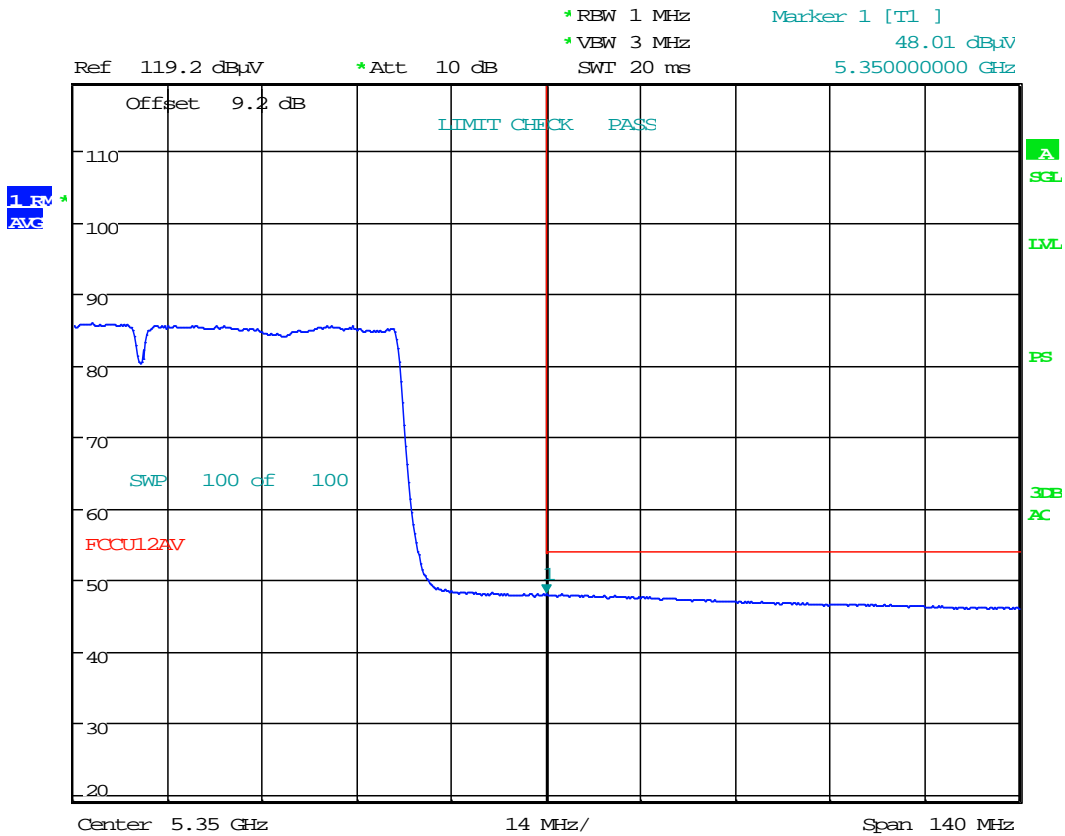
**Plot 7-218. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 176 of 258

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

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11ac (80MHz)  
 Worst Case Transfer Rate: MCS0  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5290MHz  
 Channel: 58



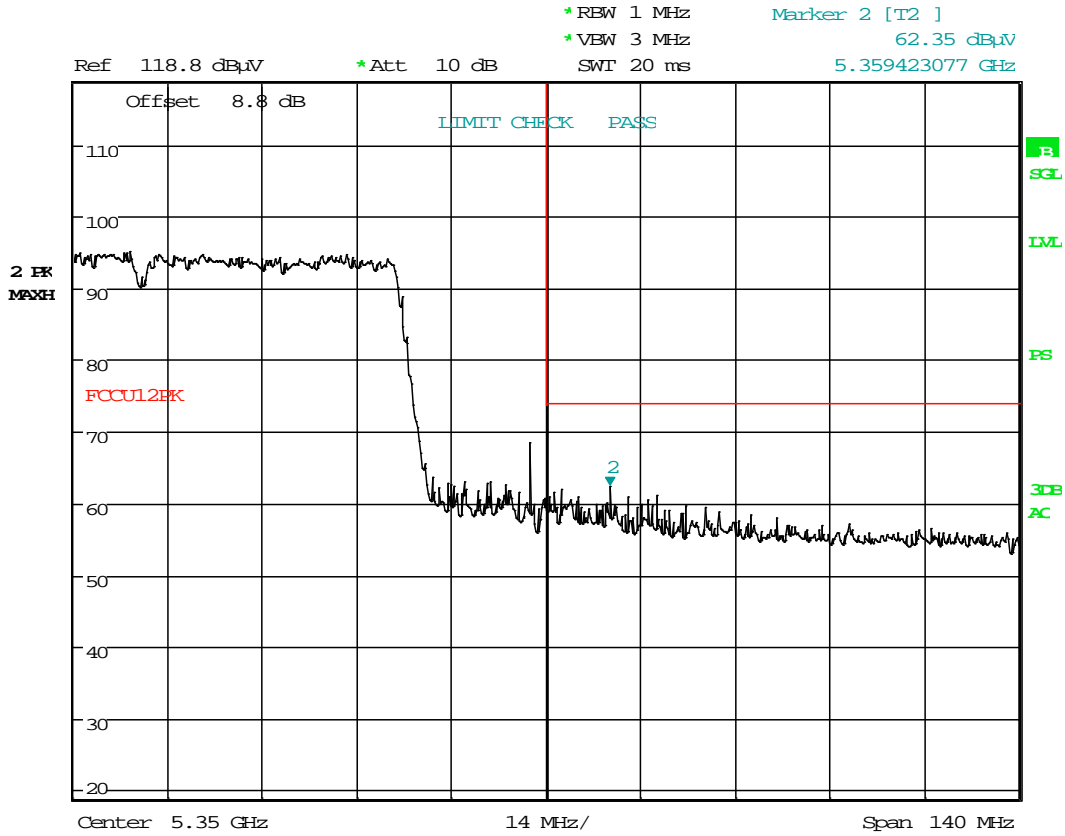
Date: 15.SEP.2017 02:19:26

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

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 177 of 258	

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

§15.407(b.1)(b.2) §15.205 §15.209



Date: 15.SEP.2017 02:19:42

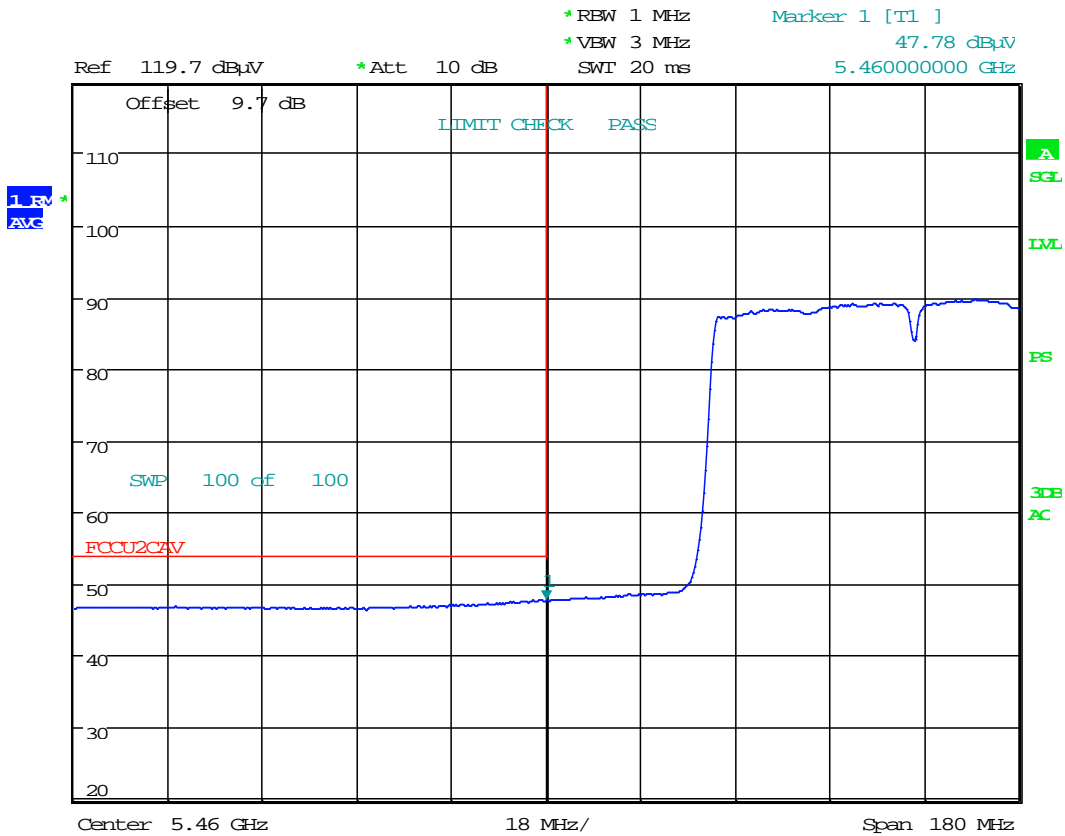
**Plot 7-220. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 178 of 258

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

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11ac (80MHz)  
 Worst Case Transfer Rate: MCS0  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5530MHz  
 Channel: 106

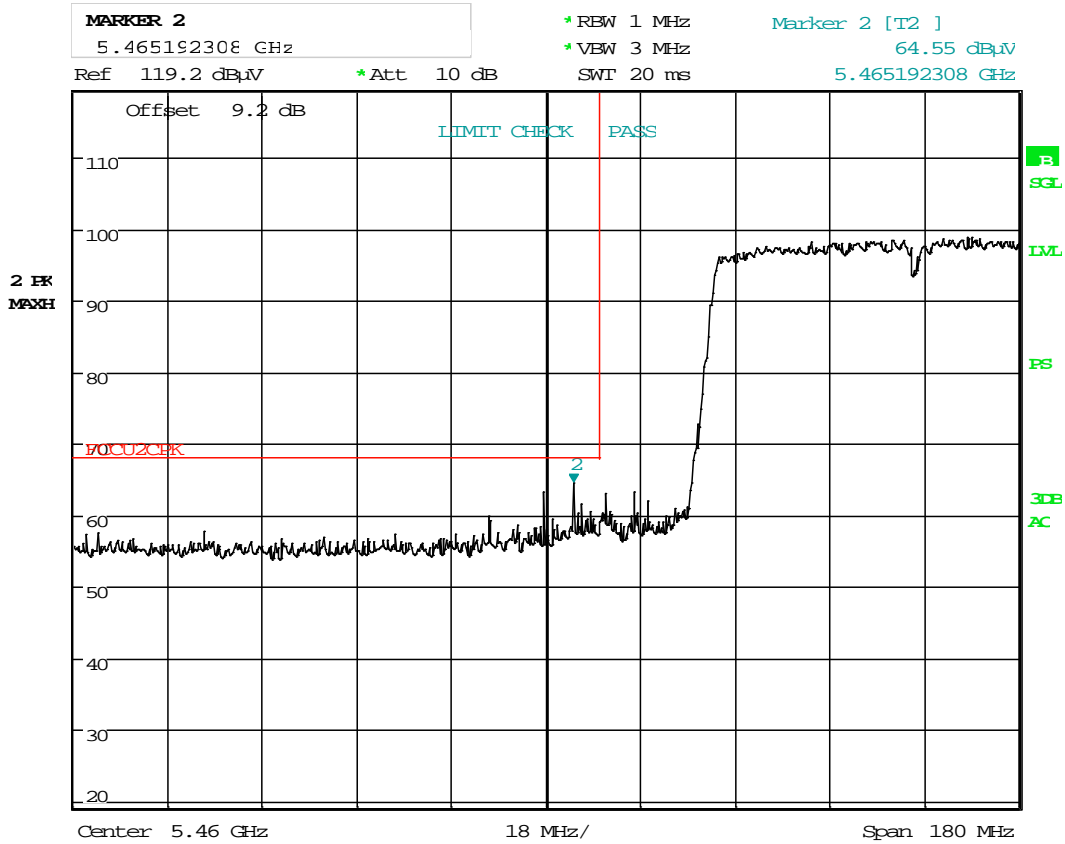


Date: 15.SEP.2017 02:27:57

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

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 179 of 258

**Antenna-1 Radiated Band Edge Measurements (80MHz BW)**  
**\$15.407(b.1)(b.2) \$15.205 \$15.209**



Date: 15.SEP.2017 02:28:24

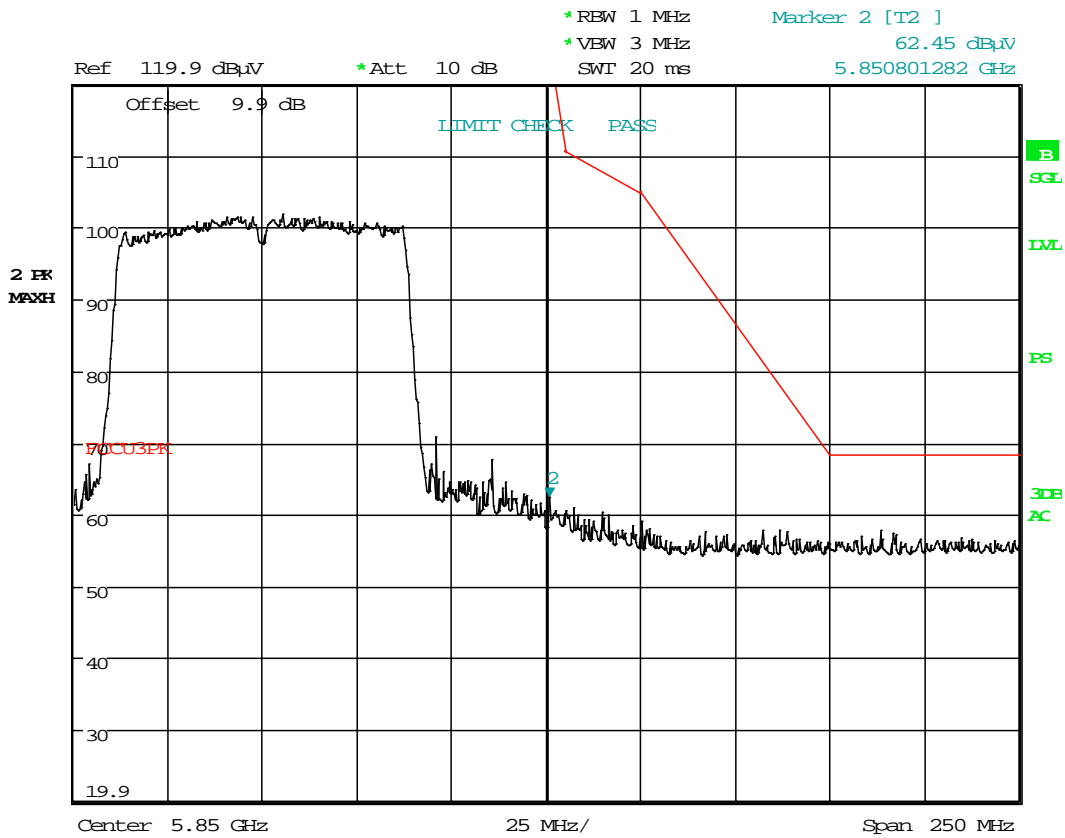
**Plot 7-222. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 180 of 258

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

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11ac (80MHz)  
 Worst Case Transfer Rate: MCS0  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5775MHz  
 Channel: 155



Date: 15.SEP.2017 04:36:51

Plot 7-223. Radiated Upper Band Edge Plot (Peak – UNII Band 3)

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 181 of 258

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

§15.407(b.1)(b.2) §15.205 §15.209

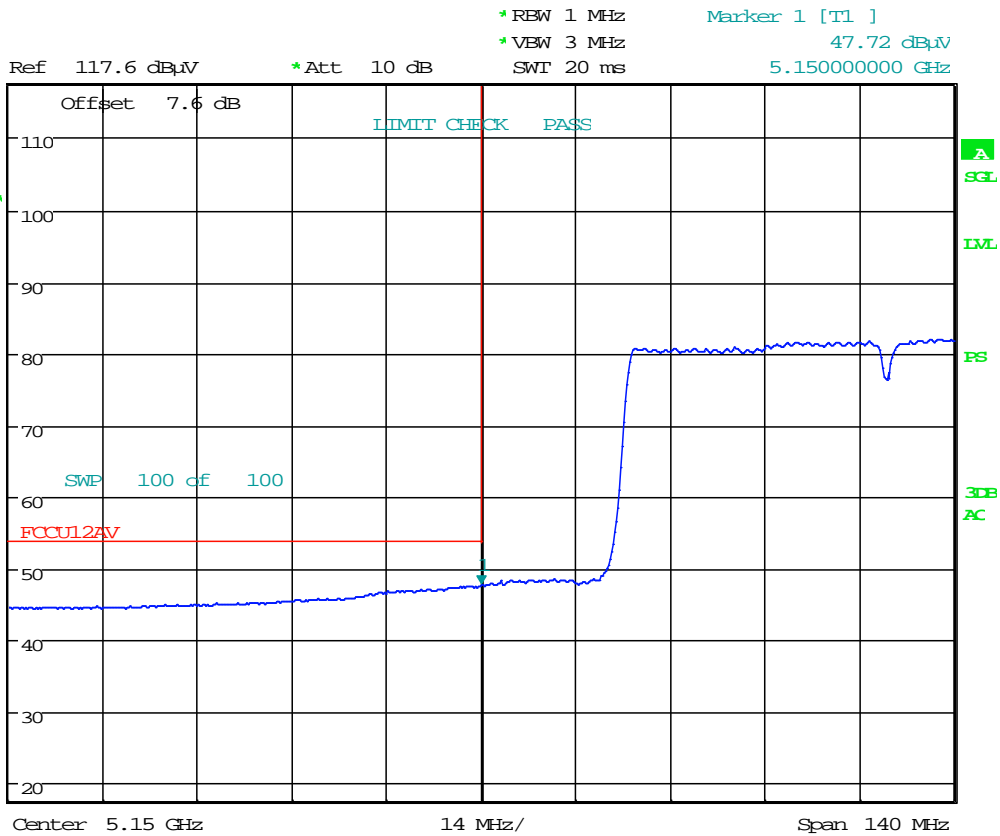
Worst Case Mode: 802.11ac

Worst Case Transfer Rate: MCS0

Distance of Measurements: 3 Meters

Operating Frequency: 5210MHz

Channel: 42

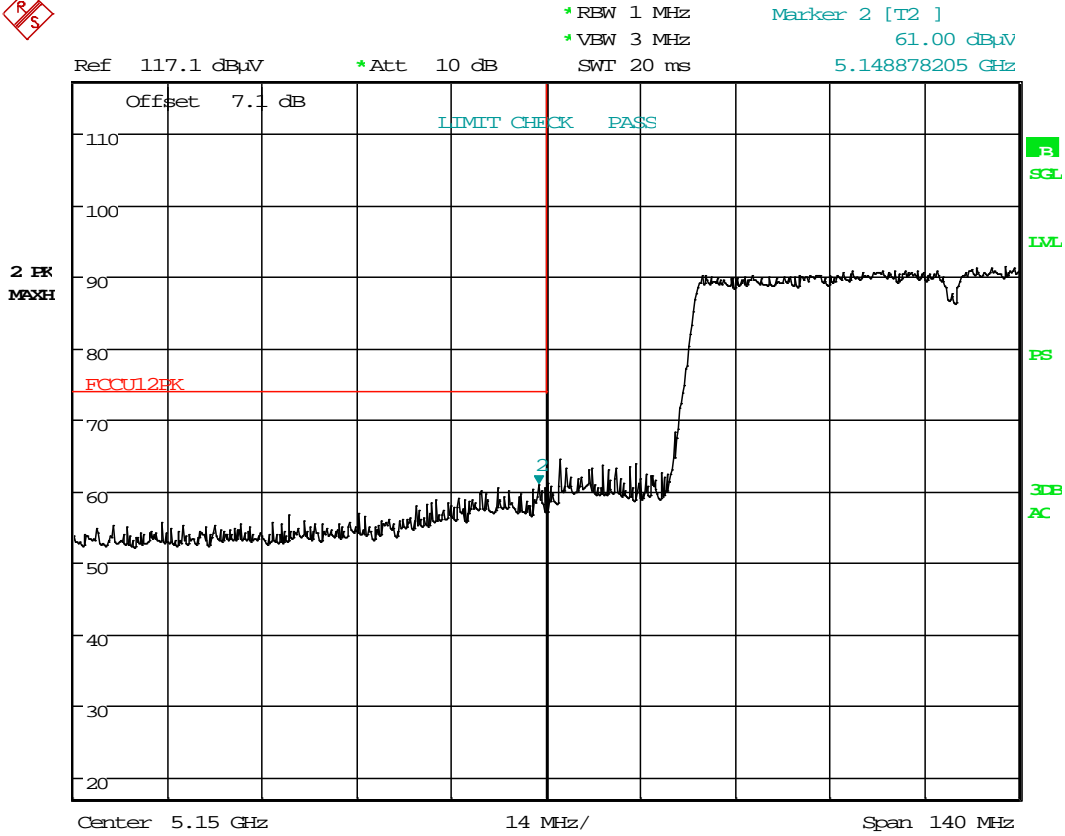


Date: 18.SEP.2017 23:02:01

**Plot 7-224. Radiated Restricted Band Edge Plot with WCP**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 182 of 258

**Antenna-1 WCP Radiated Band Edge Measurements (80MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



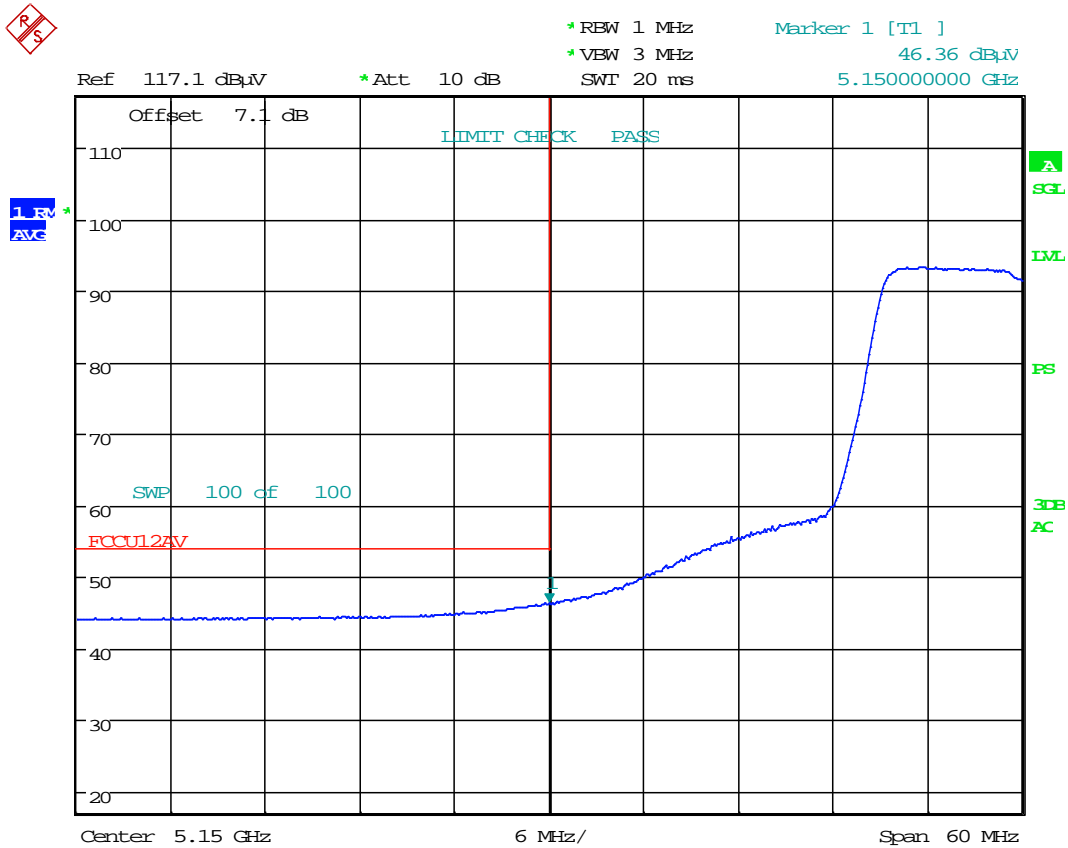
Date: 18.SEP.2017 23:02:19

**Plot 7-225. Radiated Restricted Band Edge Plot with WCP**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 183 of 258

### 7.7.7 Antenna-2 Radiated Band Edge Measurements (20MHz BW) §15.407(b.1)(b.2) §15.205 §15.209

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

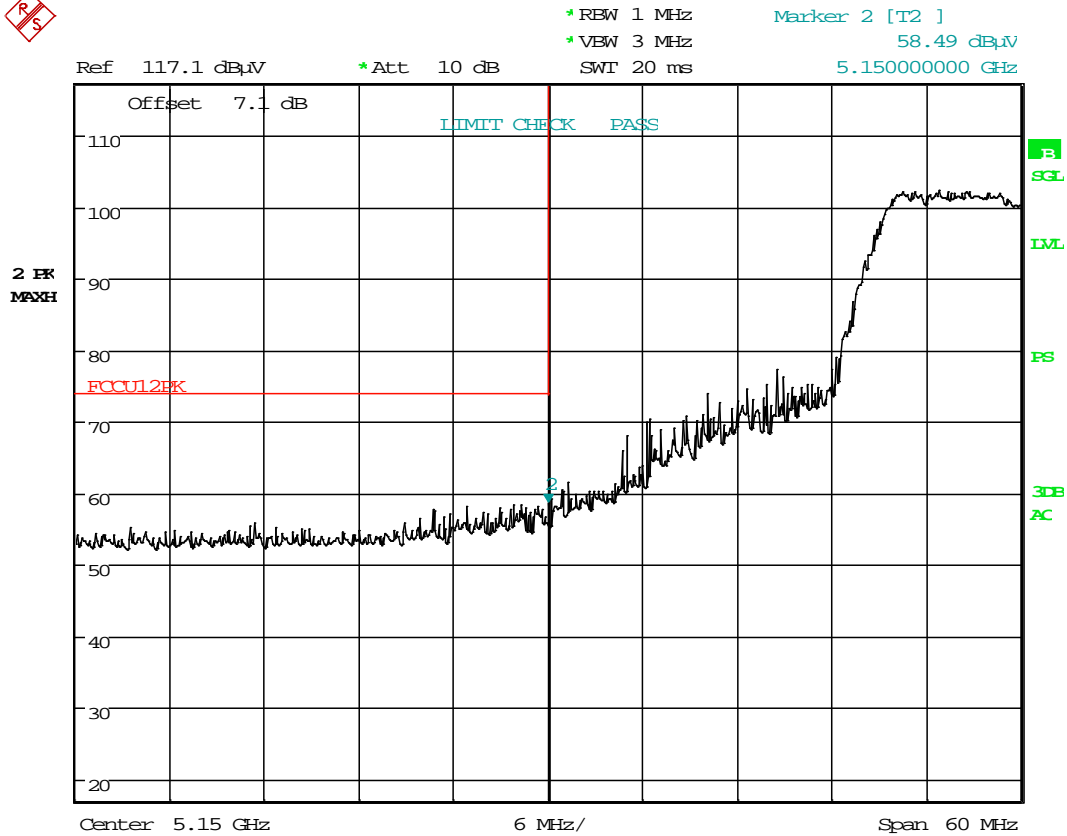


Date: 18.SEP.2017 20:43:22

**Plot 7-226. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 1)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 184 of 258	

**Antenna-2 Radiated Band Edge Measurements (20MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



Date: 18.SEP.2017 20:43:45

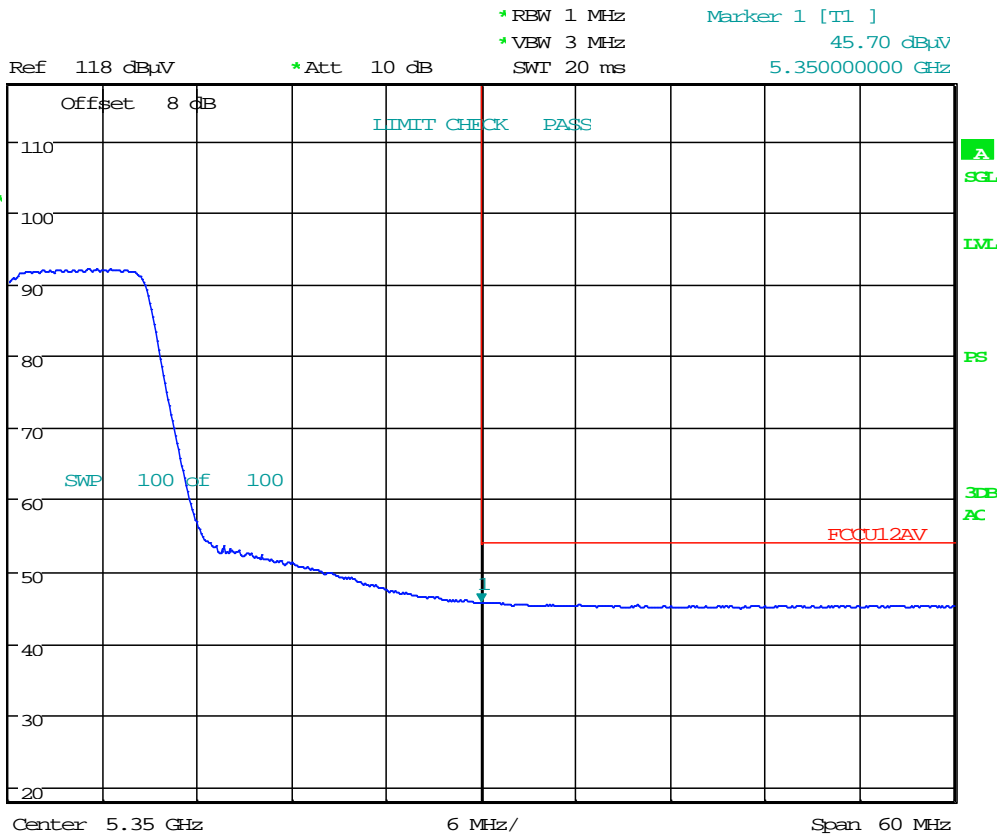
**Plot 7-227. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 185 of 258	

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

§15.407(b.1)(b.2) §15.205 §15.209

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

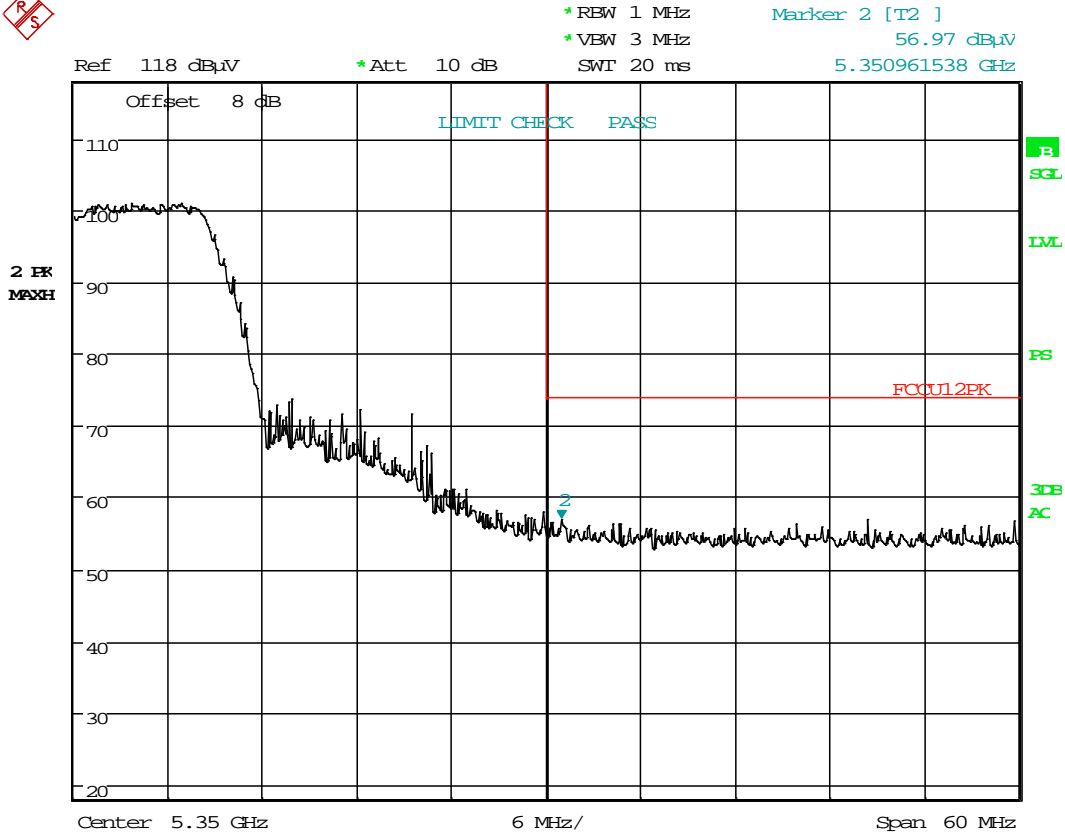


Date: 18.SEP.2017 21:02:47

**Plot 7-228. Radiated Restricted Upper Band Edge Plot (Average – UNII Band 2A)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 186 of 258

**Antenna-2 Radiated Band Edge Measurements (20MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



Date: 18.SEP.2017 21:03:04

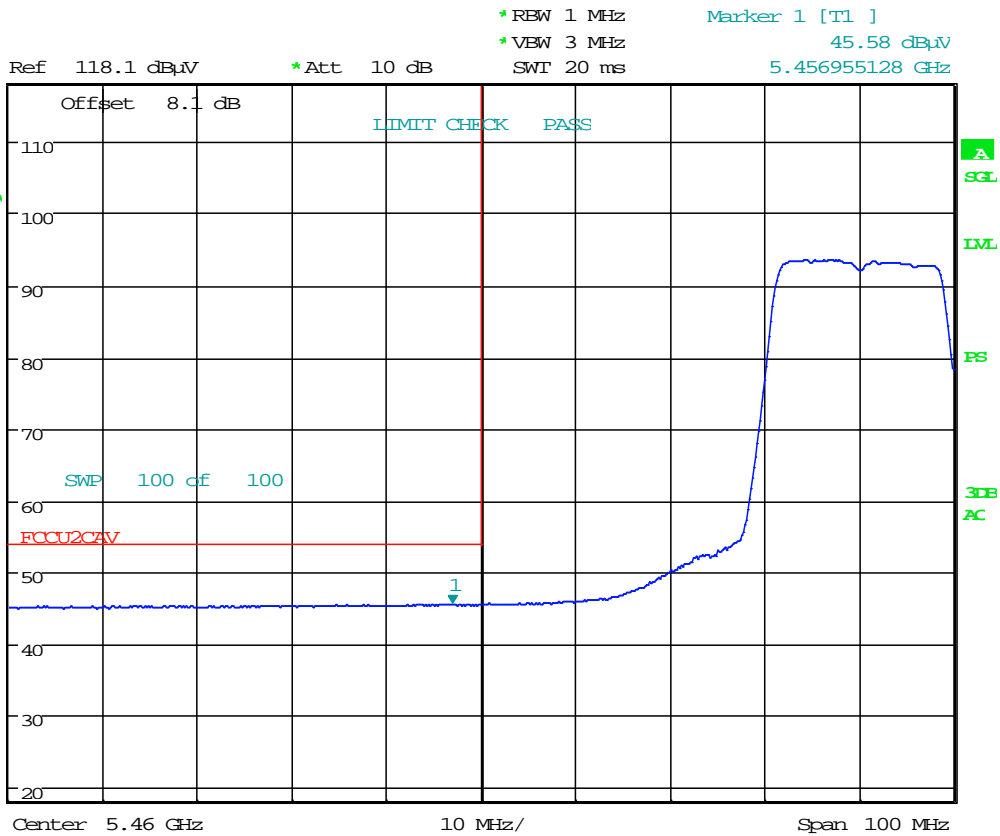
**Plot 7-229. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 187 of 258

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

§15.407(b.1)(b.2) §15.205 §15.209

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

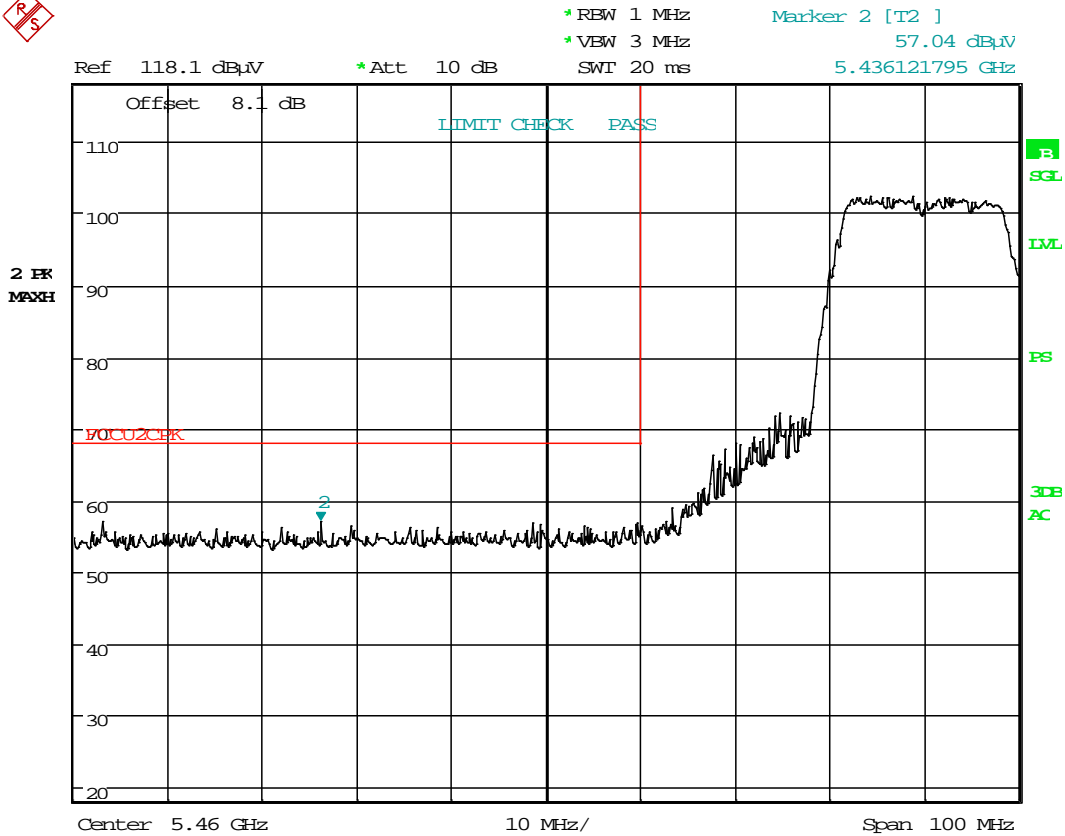


Date: 18.SEP.2017 21:19:17

**Plot 7-230. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 2C)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 188 of 258	

**Antenna-2 Radiated Band Edge Measurements (20MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



Date: 18.SEP.2017 21:19:36

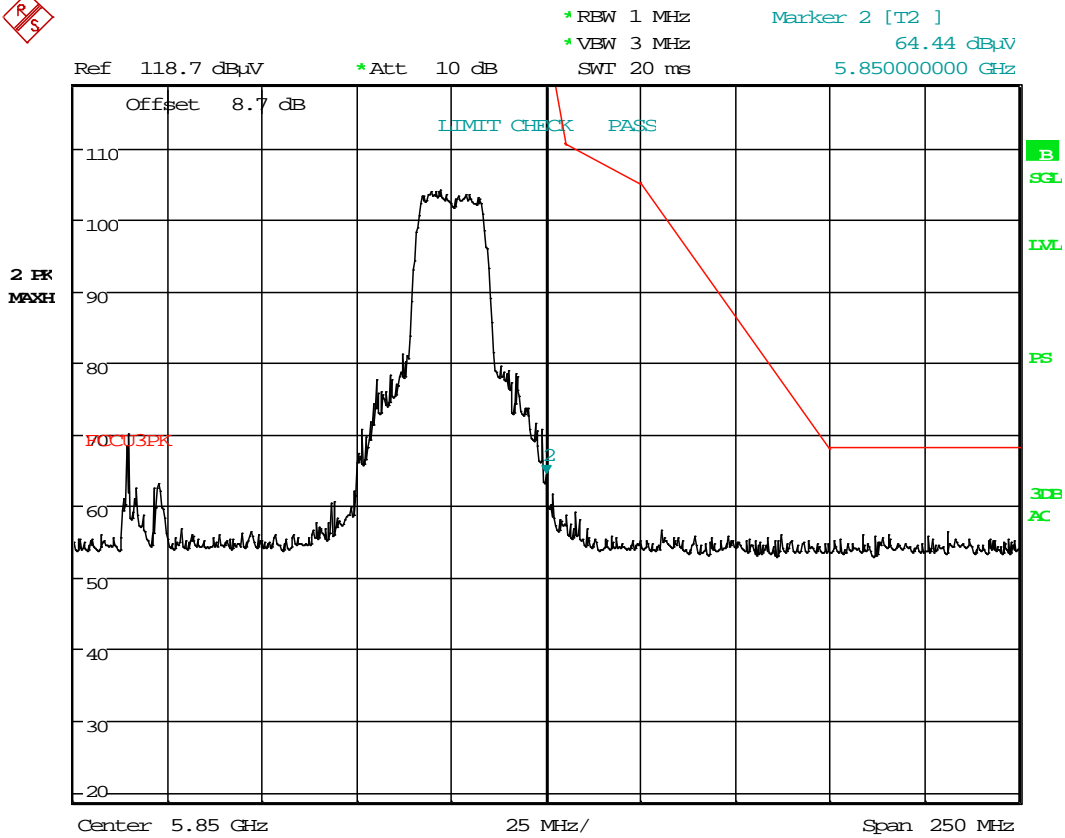
**Plot 7-231. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 189 of 258	

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

§15.407(b.1)(b.2) §15.205 §15.209

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



Date: 18.SEP.2017 21:48:44

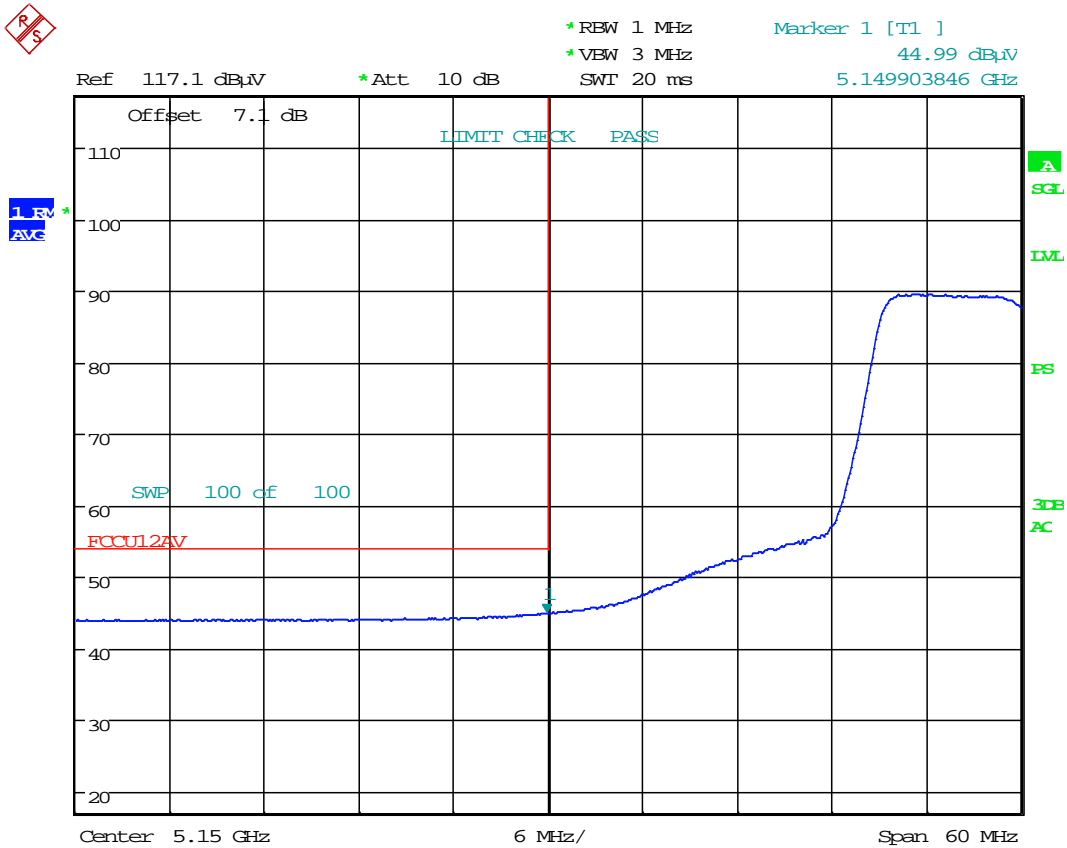
**Plot 7-232. Radiated Upper Band Edge Plot (Peak – UNII Band 3)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 190 of 258

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

§15.407(b.1)(b.2) §15.205 §15.209

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

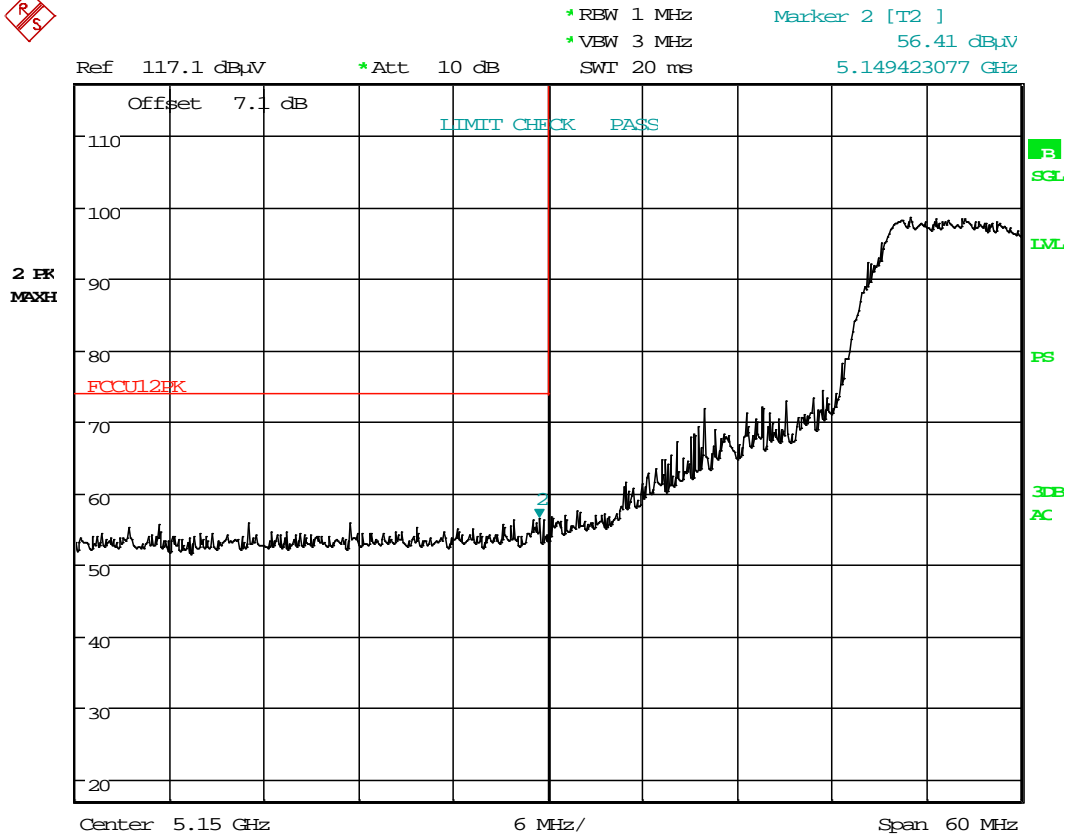


Date: 18.SEP.2017 23:10:33

**Plot 7-233. Radiated Restricted Band Edge Plot with WCP**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 191 of 258

**Antenna-2 WCP Radiated Band Edge Measurements (20MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



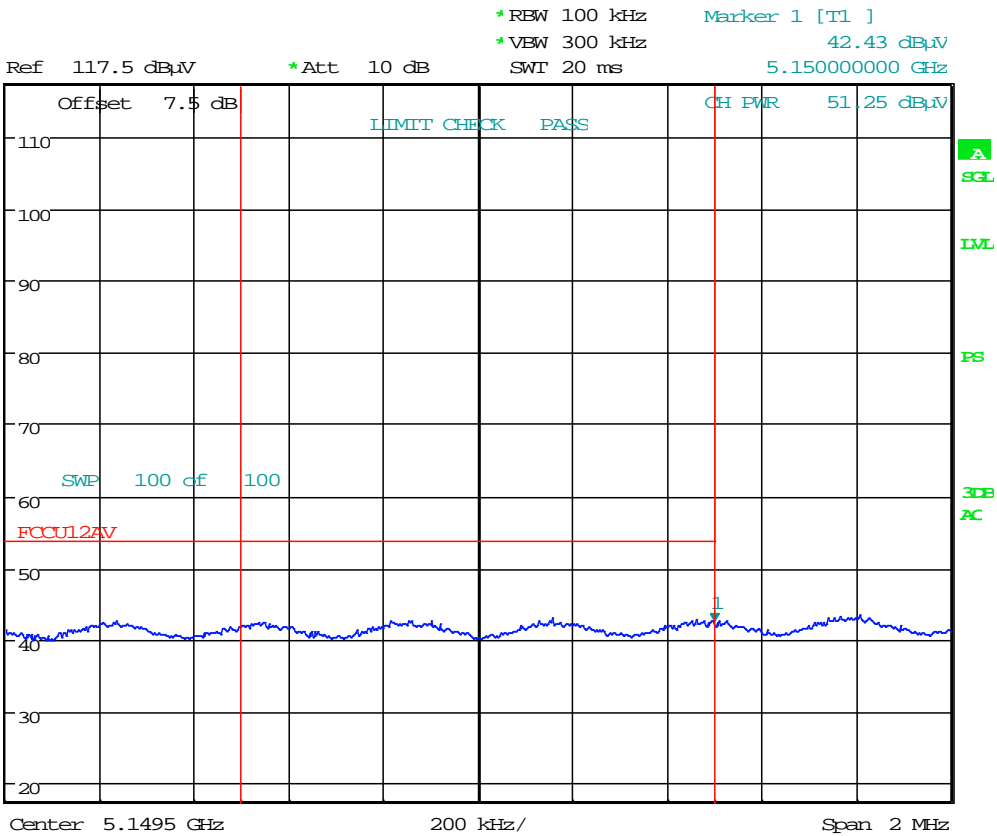
Date: 18.SEP.2017 23:10:55

**Plot 7-234. Radiated Restricted Band Edge Plot with WCP**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 192 of 258

### 7.7.8 Antenna-2 Radiated Band Edge Measurements (40MHz BW) §15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11n (40MHz)  
 Worst Case Transfer Rate: MCS0  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5190MHz  
 Channel: 38

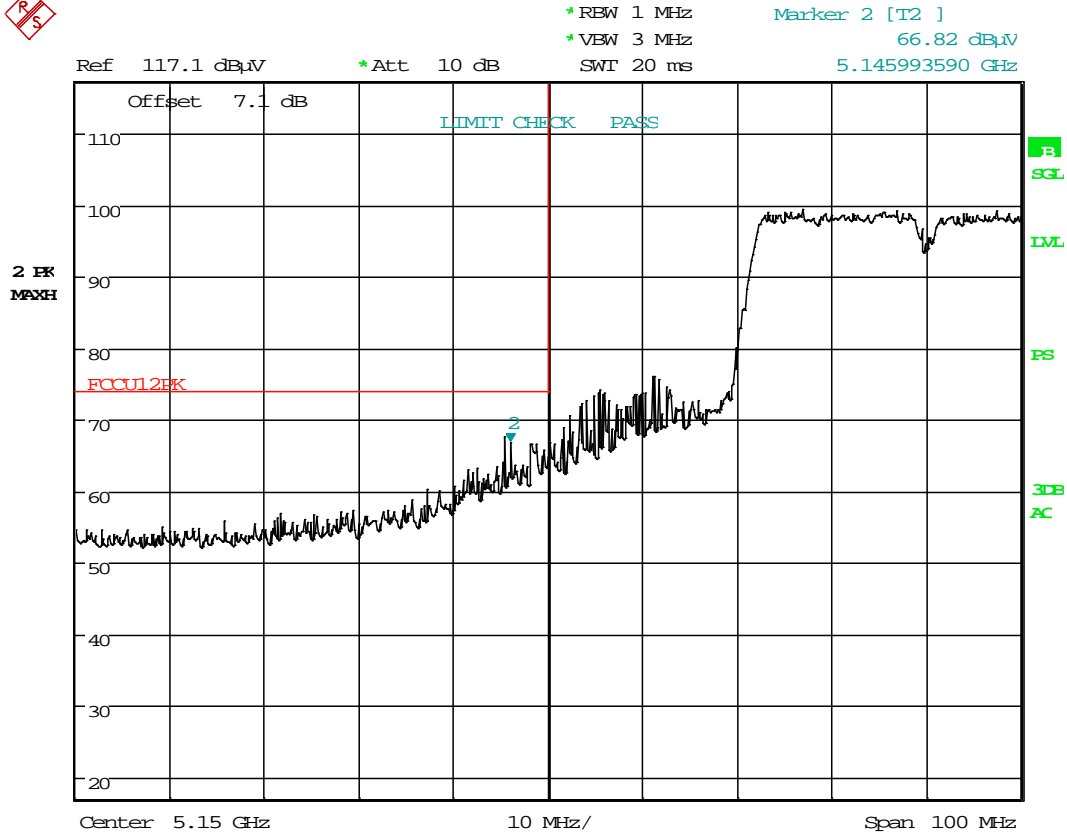


Date: 18.SEP.2017 20:48:56

**Plot 7-235. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 1)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 193 of 258

**Antenna-2 Radiated Band Edge Measurements (40MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



Date: 18.SEP.2017 20:49:31

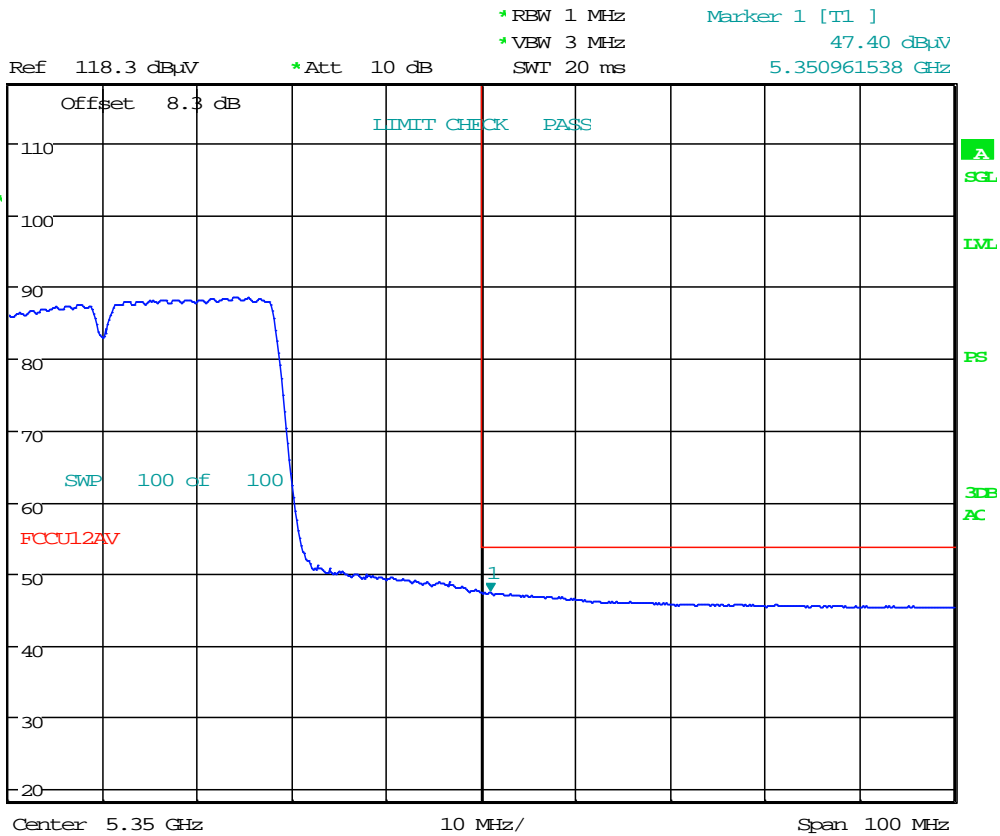
**Plot 7-236. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 194 of 258

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

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11n (40MHz)  
 Worst Case Transfer Rate: MCS0  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5310MHz  
 Channel: 62

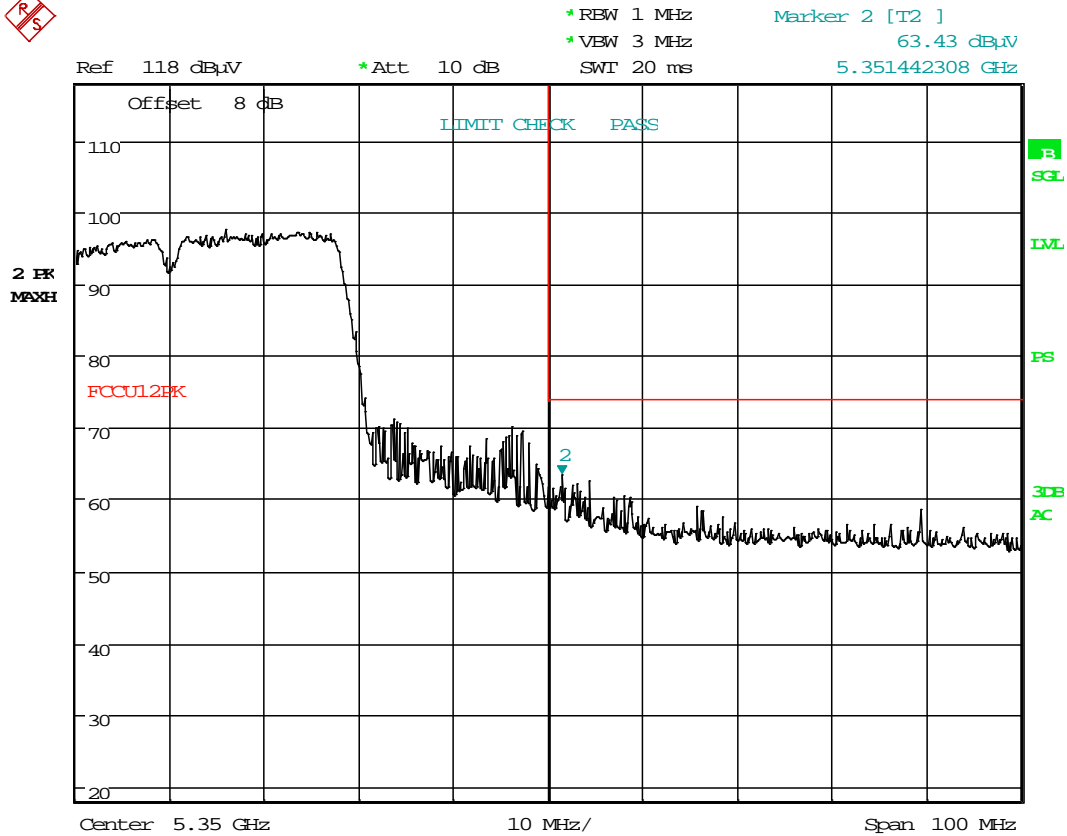


Date: 18.SEP.2017 21:07:51

**Plot 7-237. Radiated Restricted Upper Band Edge Plot (Average – UNII Band 2A)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 195 of 258	

**Antenna-2 Radiated Band Edge Measurements (40MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



Date: 18.SEP.2017 21:08:07

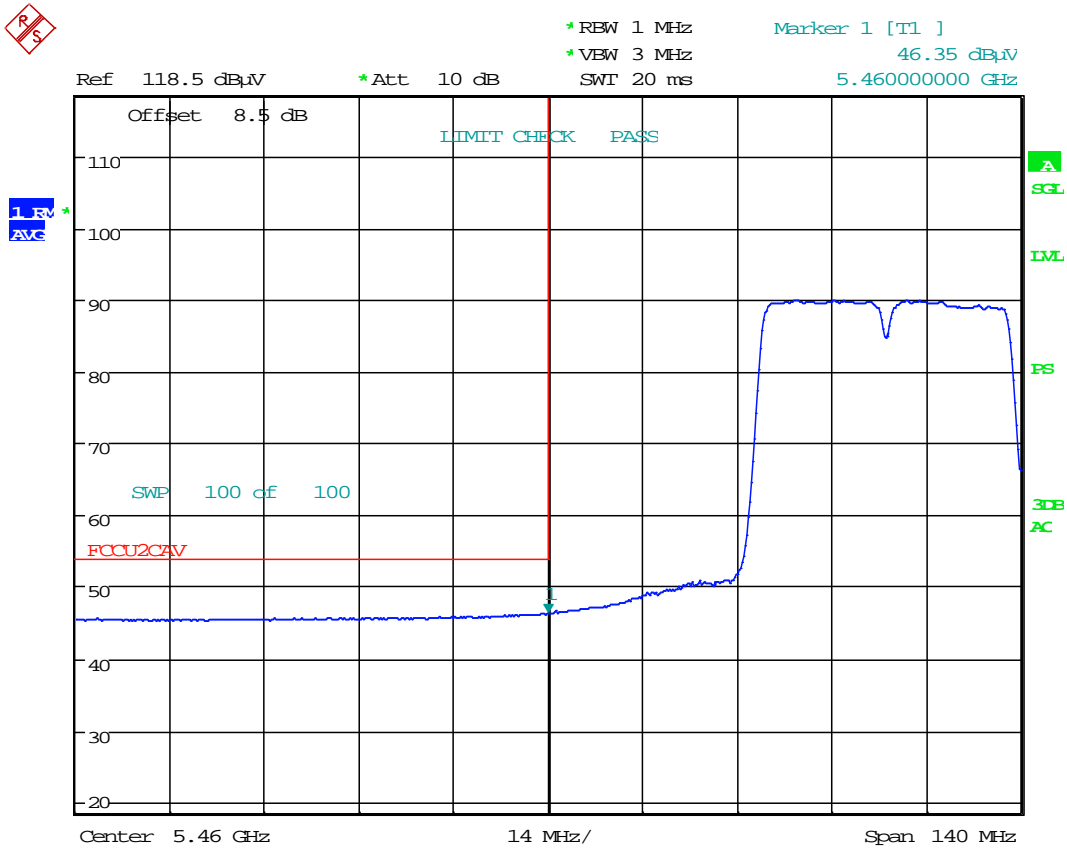
**Plot 7-238. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 196 of 258

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

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11n (40MHz)  
 Worst Case Transfer Rate: MCS0  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5510MHz  
 Channel: 102

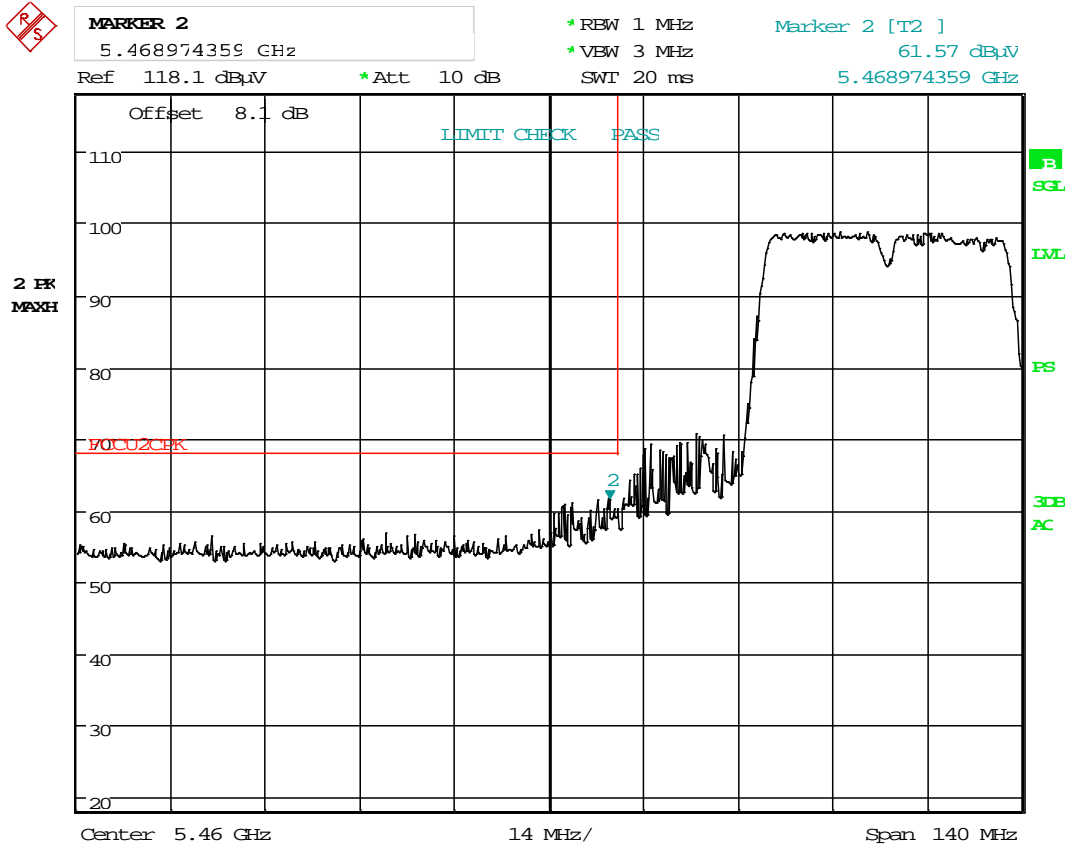


Date: 18.SEP.2017 21:33:18

**Plot 7-239. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 2C)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 197 of 258

**Antenna-2 Radiated Band Edge Measurements (40MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



Date: 18.SEP.2017 21:33:53

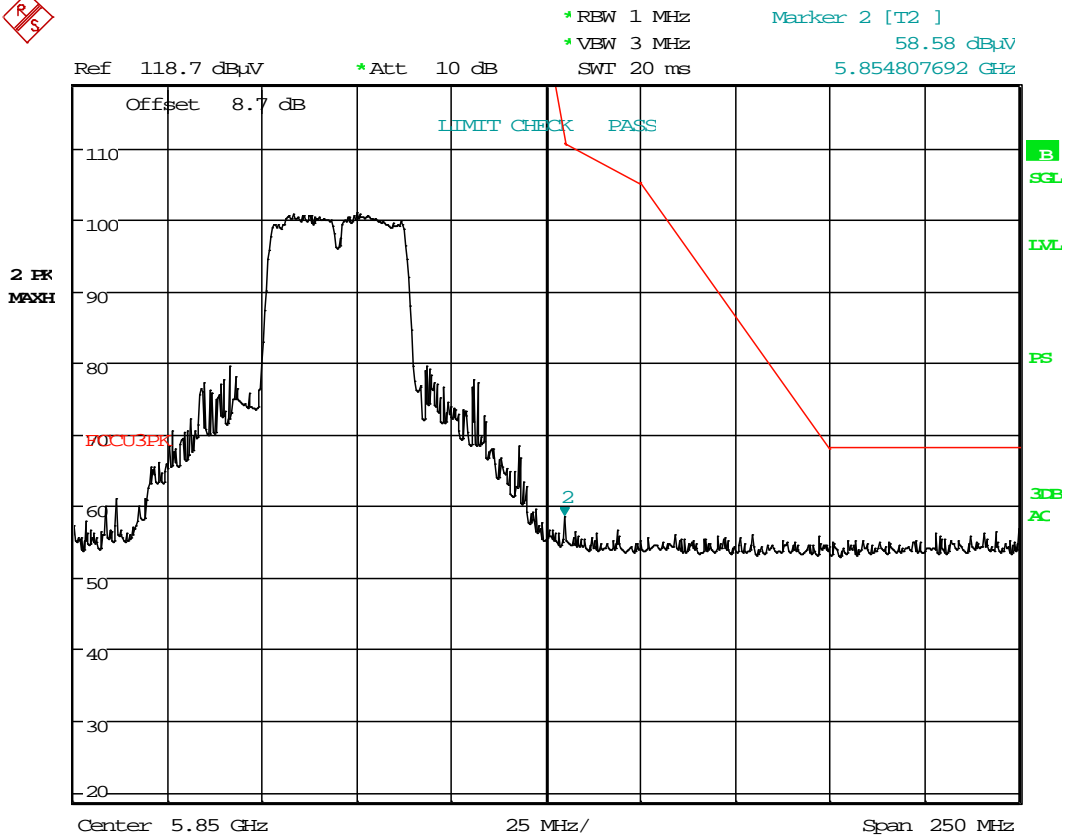
**Plot 7-240. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 198 of 258

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

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11n (40MHz)  
 Worst Case Transfer Rate: MCS0  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5795MHz  
 Channel: 159



Date: 18.SEP.2017 21:51:12

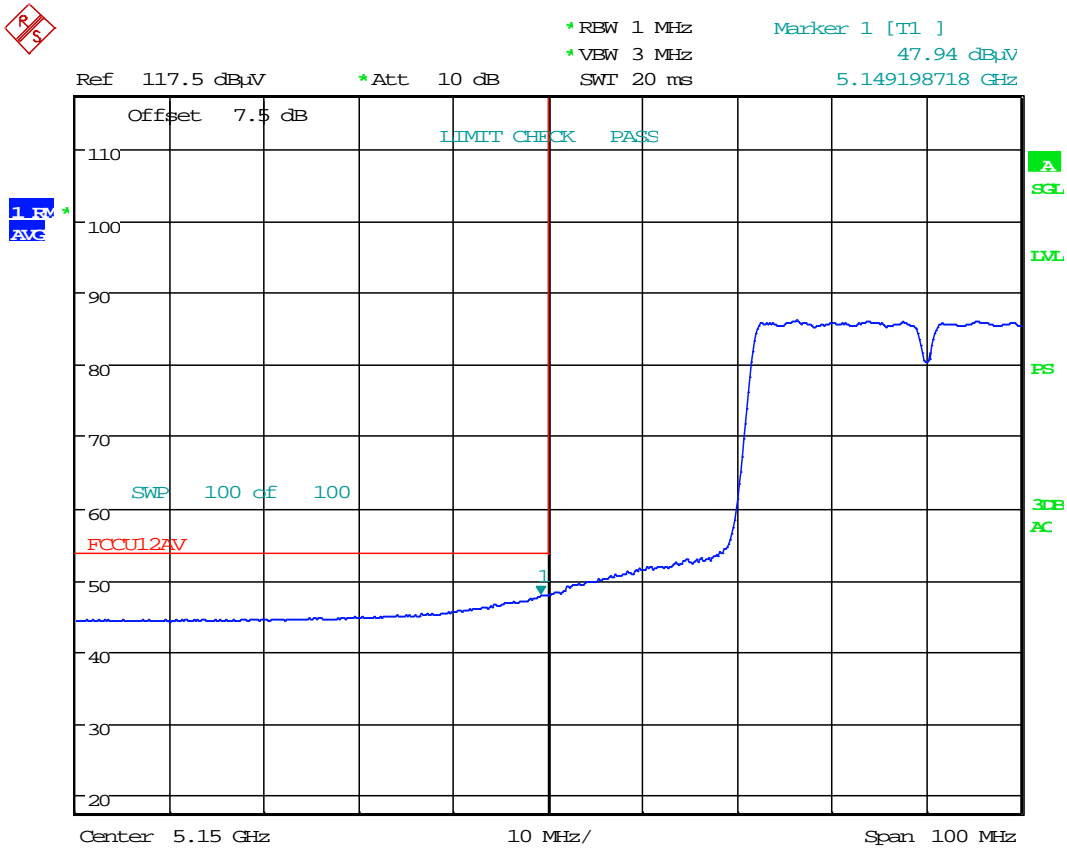
**Plot 7-241. Radiated Upper Band Edge Plot (Peak – UNII Band 3)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 199 of 258

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

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11n  
 Worst Case Transfer Rate: MCS0  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5190 MHz  
 Channel: 38

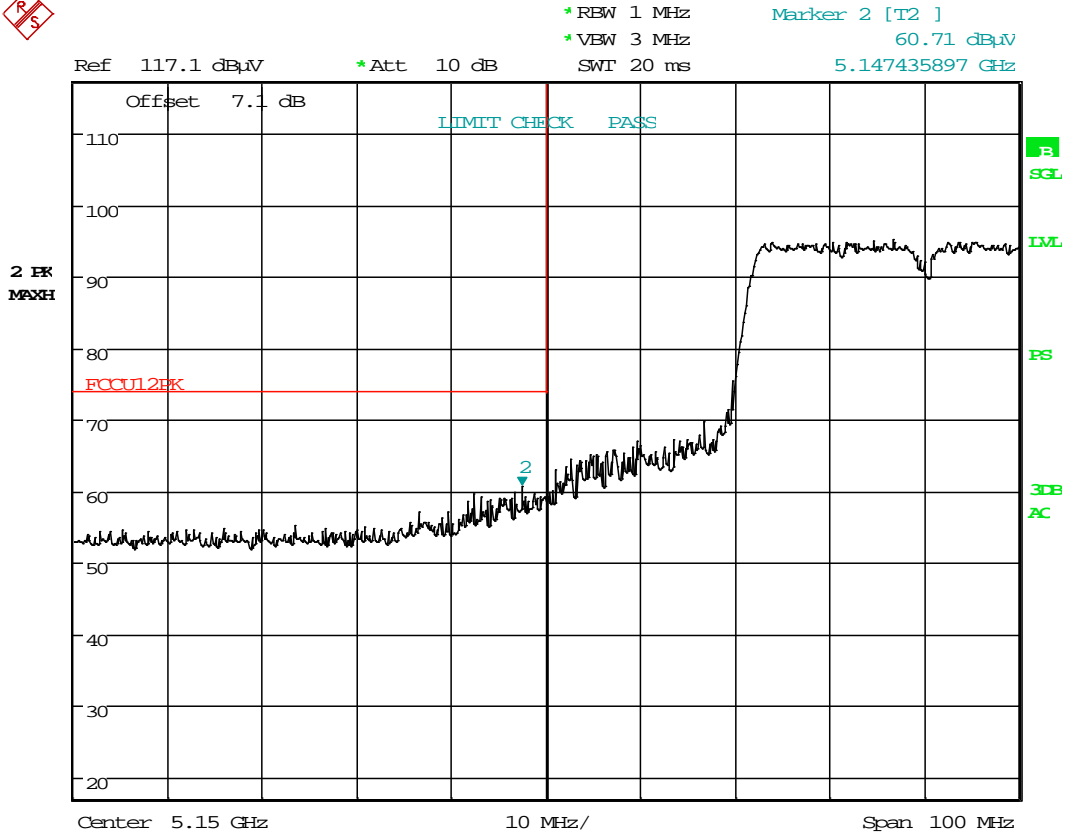


Date: 18.SEP.2017 23:20:30

**Plot 7-242. Radiated Restricted Band Edge Plot with WCP**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 200 of 258	

**Antenna-2 WCP Radiated Band Edge Measurements (40MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



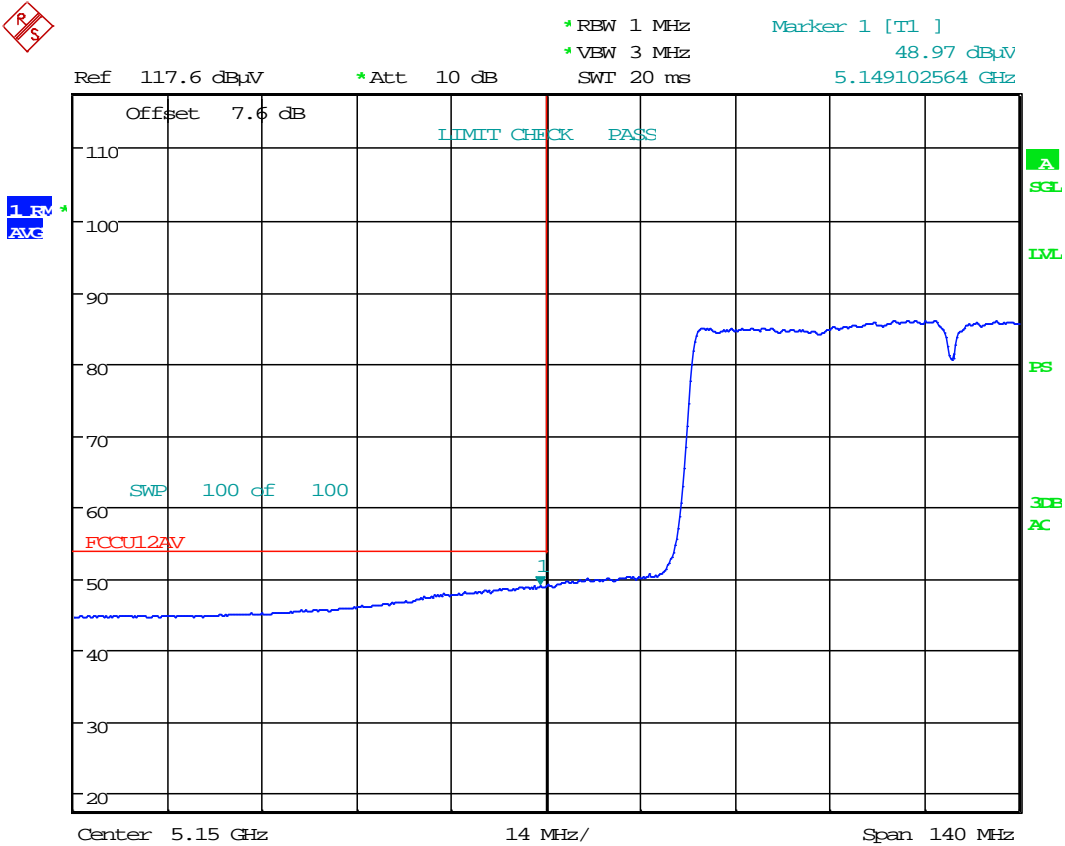
Date: 18.SEP.2017 23:20:47

**Plot 7-243. Radiated Restricted Band Edge Plot with WCP**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 201 of 258	

### 7.7.9 Antenna-2 Radiated Band Edge Measurements (80MHz BW) §15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11ac (80MHz)  
 Worst Case Transfer Rate: MCS0  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5210MHz  
 Channel: 42

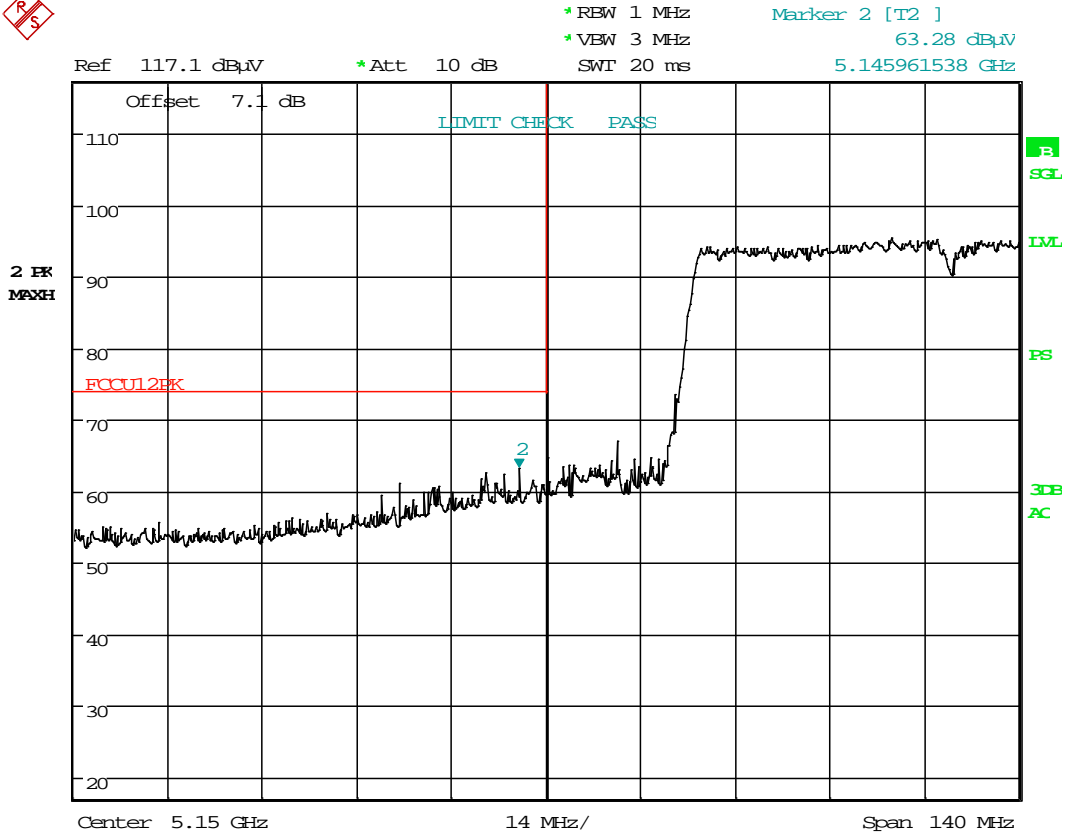


Date: 18.SEP.2017 20:56:09

**Plot 7-244. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 1)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 202 of 258	

**Antenna-2 Radiated Band Edge Measurements (80MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



Date: 18.SEP.2017 20:56:25

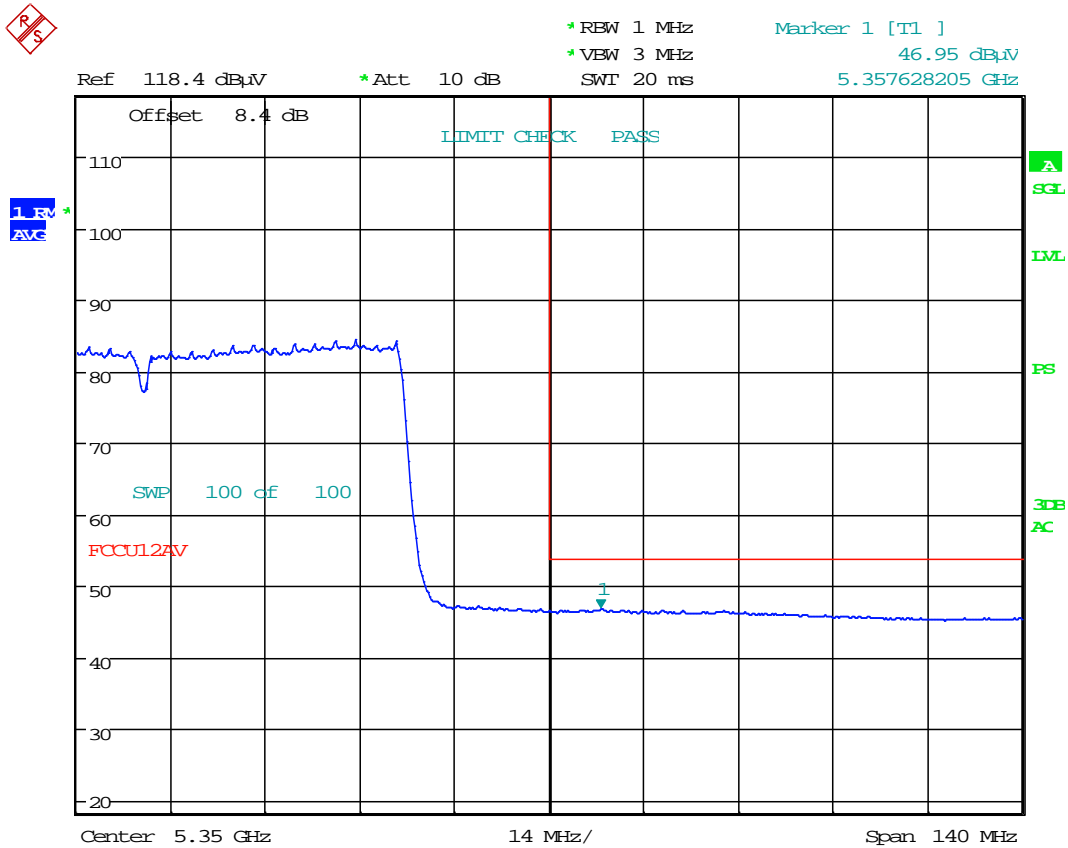
**Plot 7-245. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 203 of 258

# Antenna-2 Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11ac (80MHz)  
 Worst Case Transfer Rate: MCS0  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5290MHz  
 Channel: 58

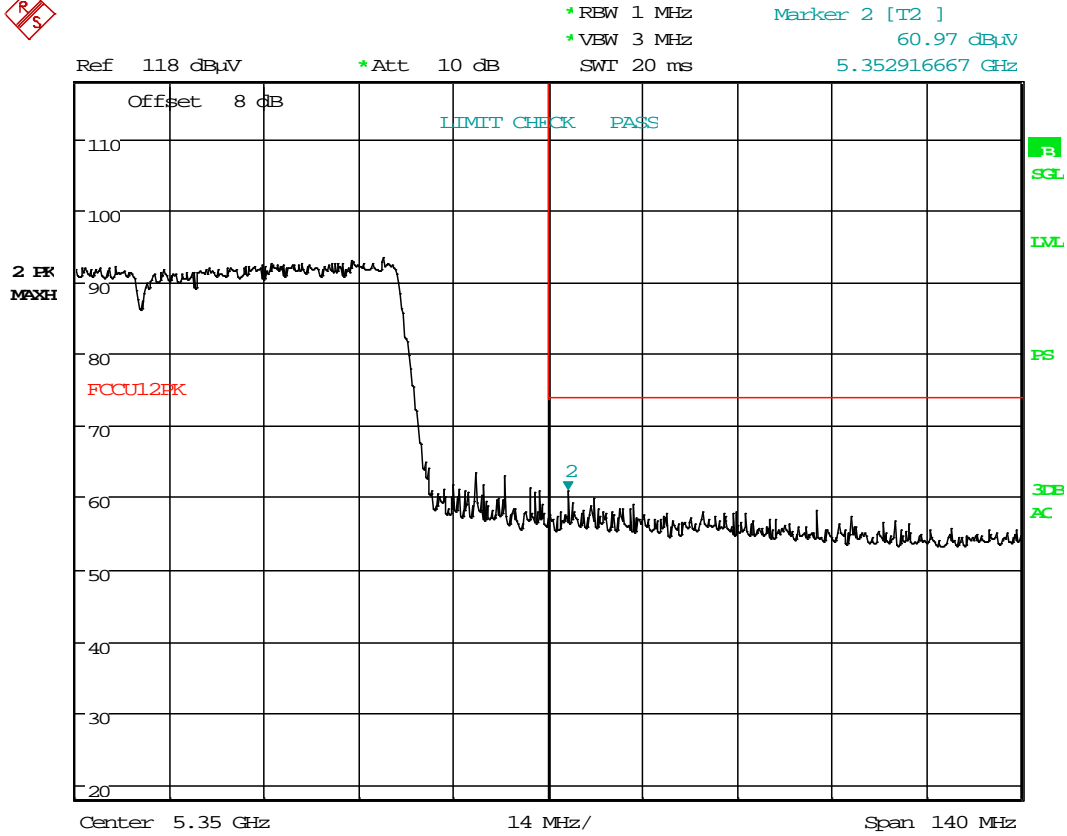


Date: 18.SEP.2017 21:13:19

**Plot 7-246. Radiated Restricted Upper Band Edge Plot (Average – UNII Band 2A)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 204 of 258

**Antenna-2 Radiated Band Edge Measurements (80MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



Date: 18.SEP.2017 21:13:37

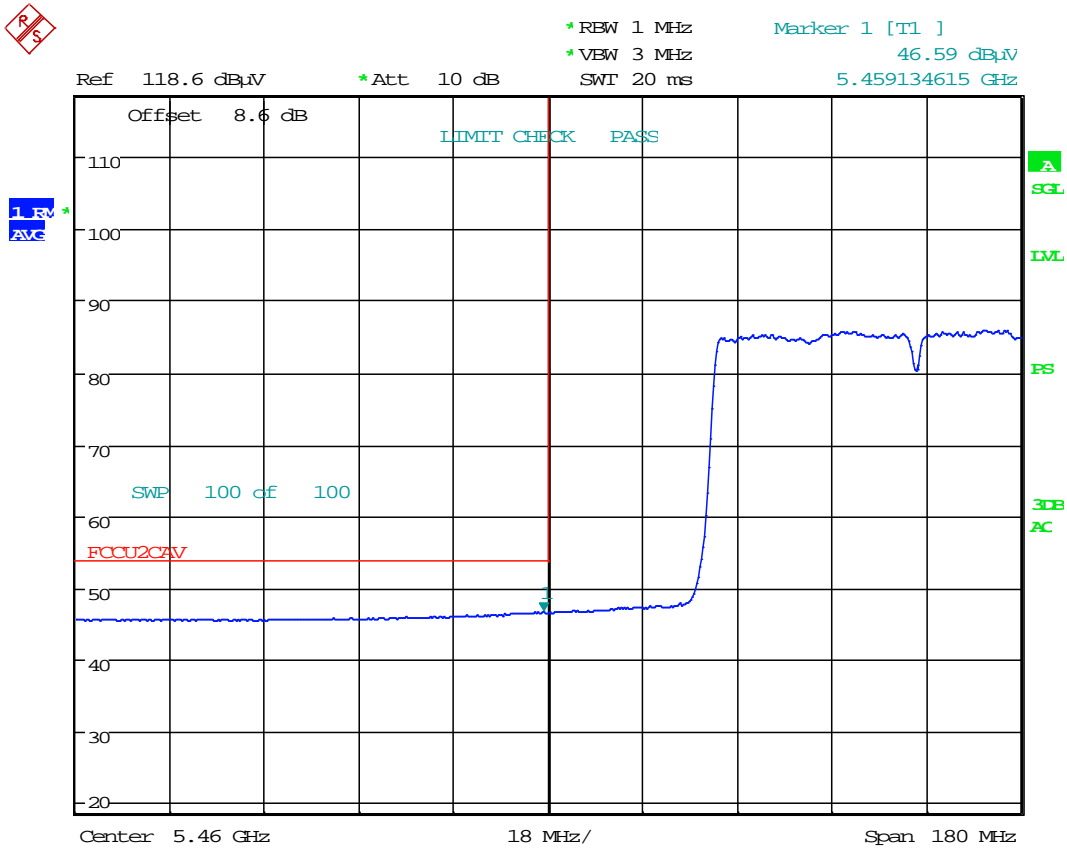
**Plot 7-247. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 205 of 258

# Antenna-2 Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11ac (80MHz)  
 Worst Case Transfer Rate: MCS0  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5530MHz  
 Channel: 106

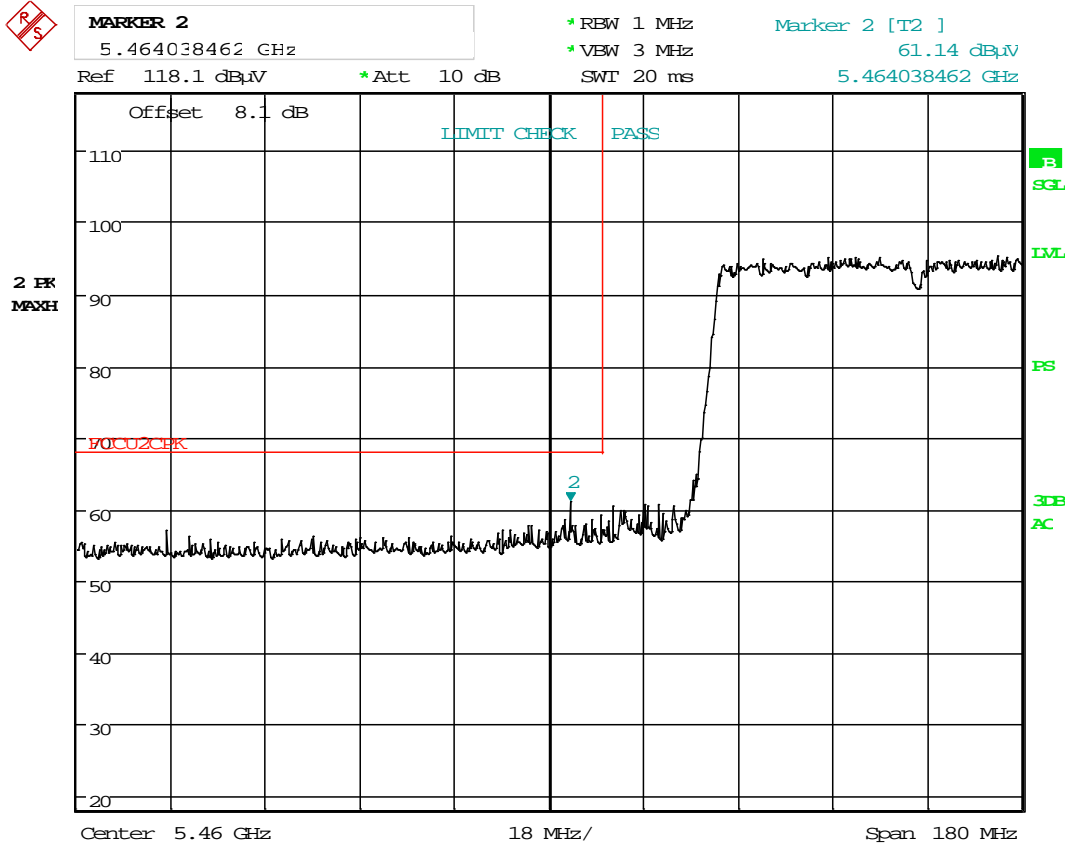


Date: 18.SEP.2017 21:42:03

**Plot 7-248. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 2C)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 206 of 258

**Antenna-2 Radiated Band Edge Measurements (80MHz BW)**  
**\$15.407(b.1)(b.2) \$15.205 \$15.209**



Date: 18.SEP.2017 21:42:31

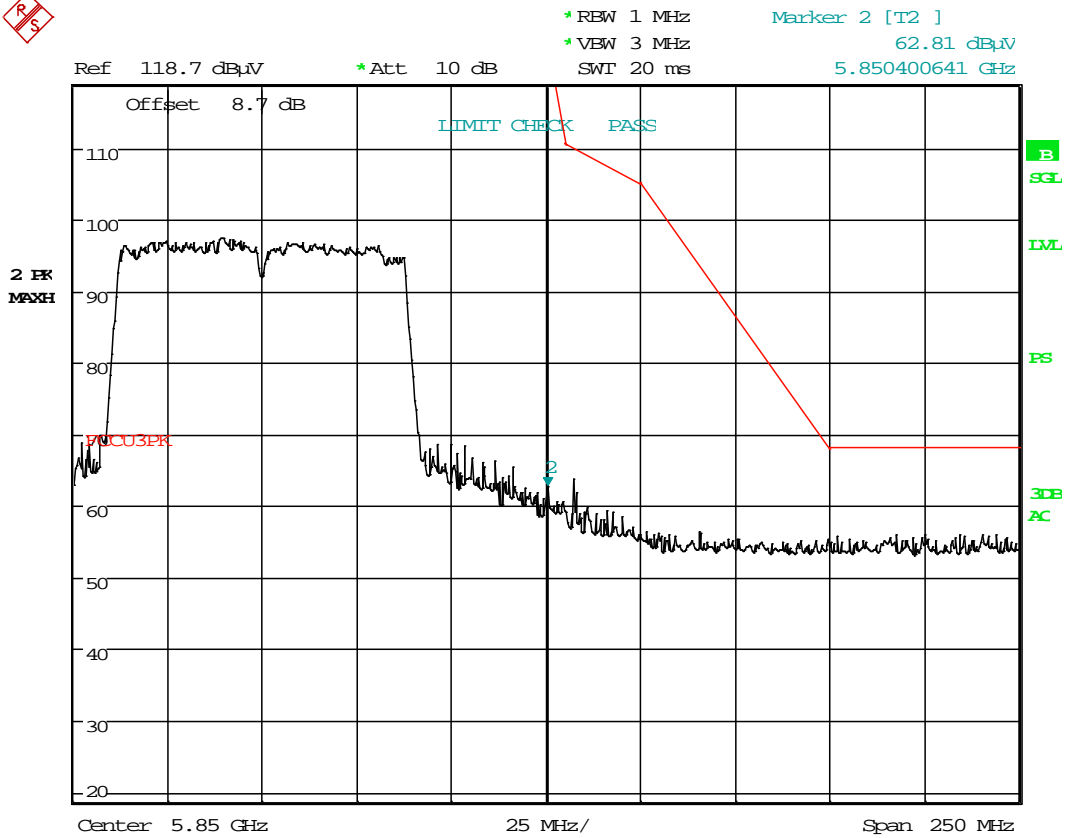
**Plot 7-249. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 207 of 258

# Antenna-2 Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11ac (80MHz)  
 Worst Case Transfer Rate: MCS0  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5775MHz  
 Channel: 155



Date: 18.SEP.2017 22:02:27

**Plot 7-250. Radiated Upper Band Edge Plot (Peak – UNII Band 3)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 208 of 258

# Antenna-2 WCP Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

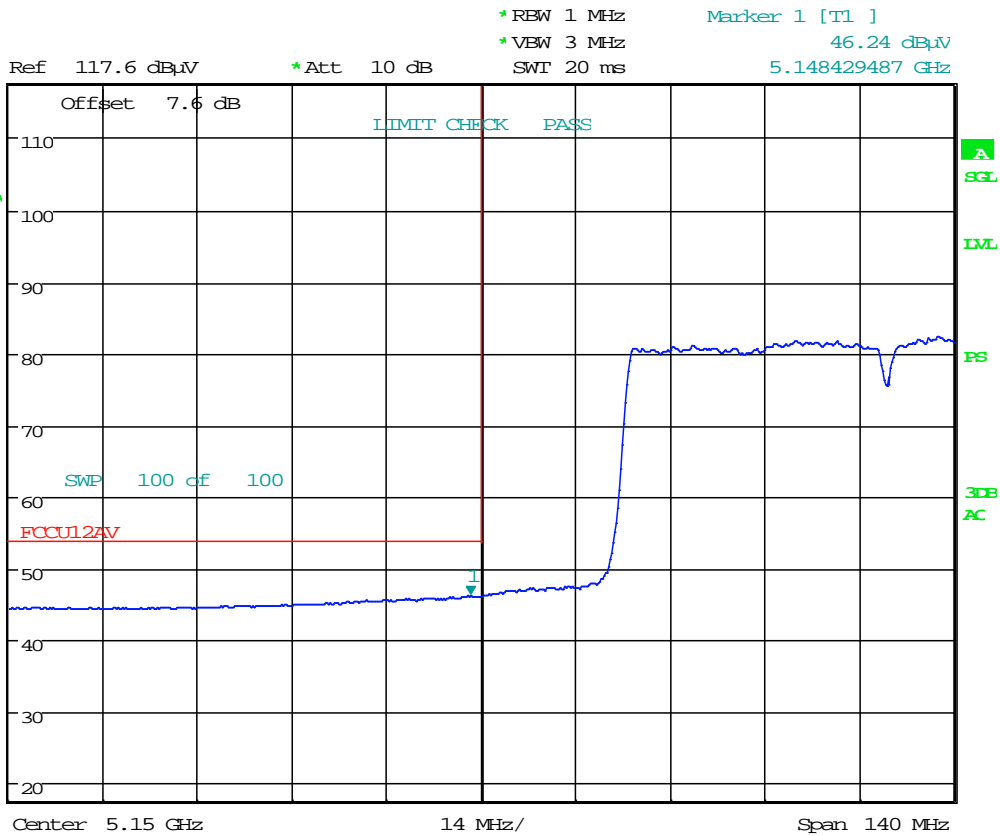
Worst Case Mode: 802.11ac

Worst Case Transfer Rate: MCS0

Distance of Measurements: 3 Meters

Operating Frequency: 5210MHz

Channel: 42

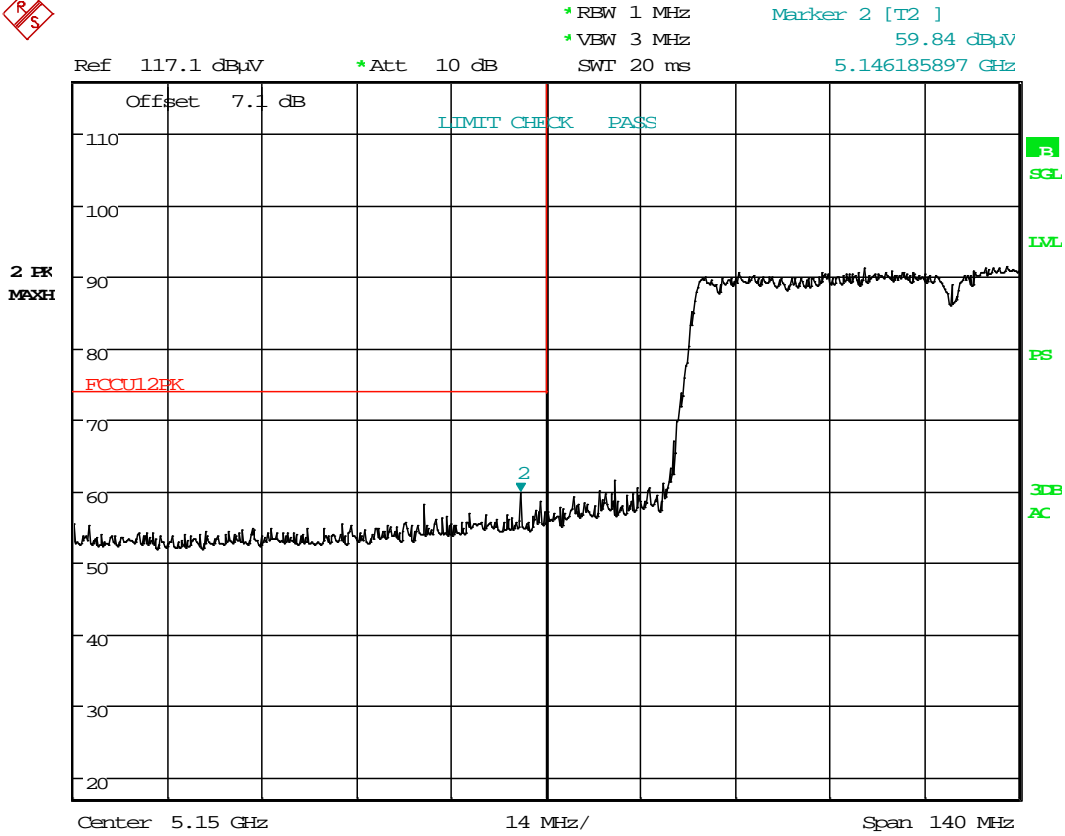


Date: 18.SEP.2017 23:22:39

**Plot 7-251. Radiated Restricted Band Edge Plot with WCP**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 209 of 258

**Antenna-2 WCP Radiated Band Edge Measurements (80MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



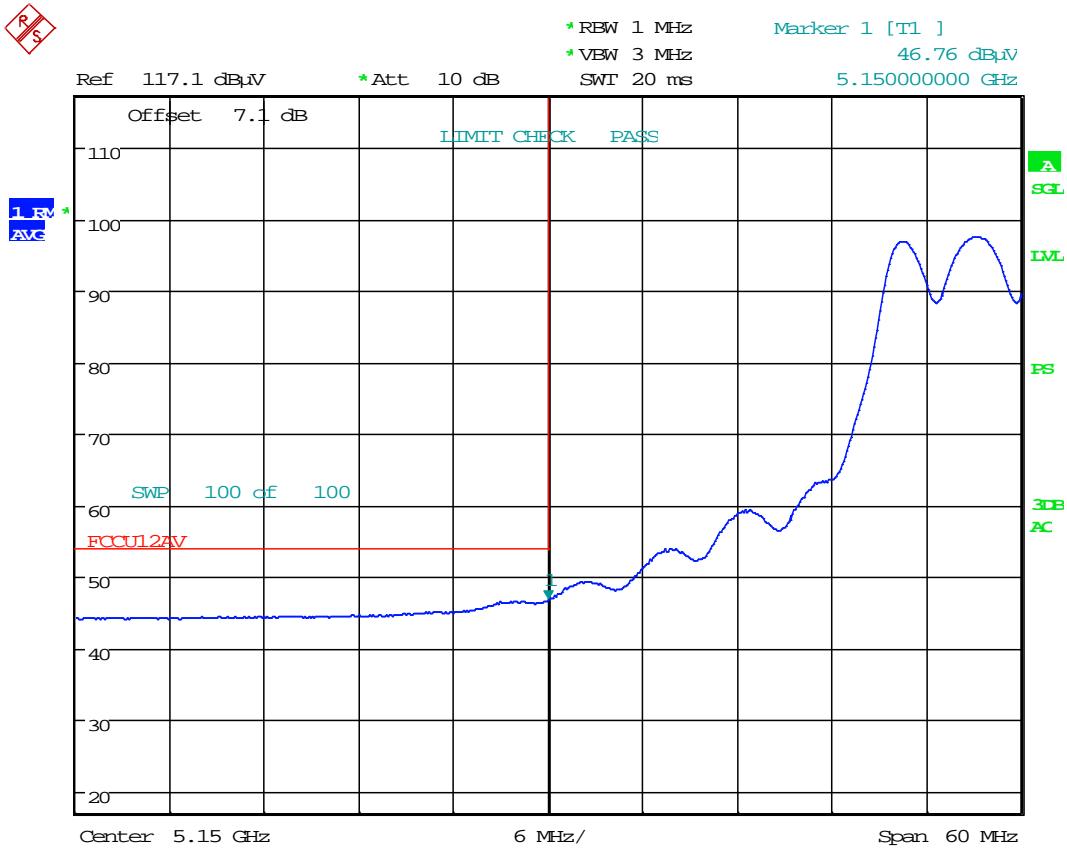
Date: 18.SEP.2017 23:23:36

**Plot 7-252. Radiated Restricted Band Edge Plot with WCP**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 210 of 258

### 7.7.10 CDD Radiated Band Edge Measurements (20MHz BW) §15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11a (20MHz)  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5180MHz  
 Channel: 36

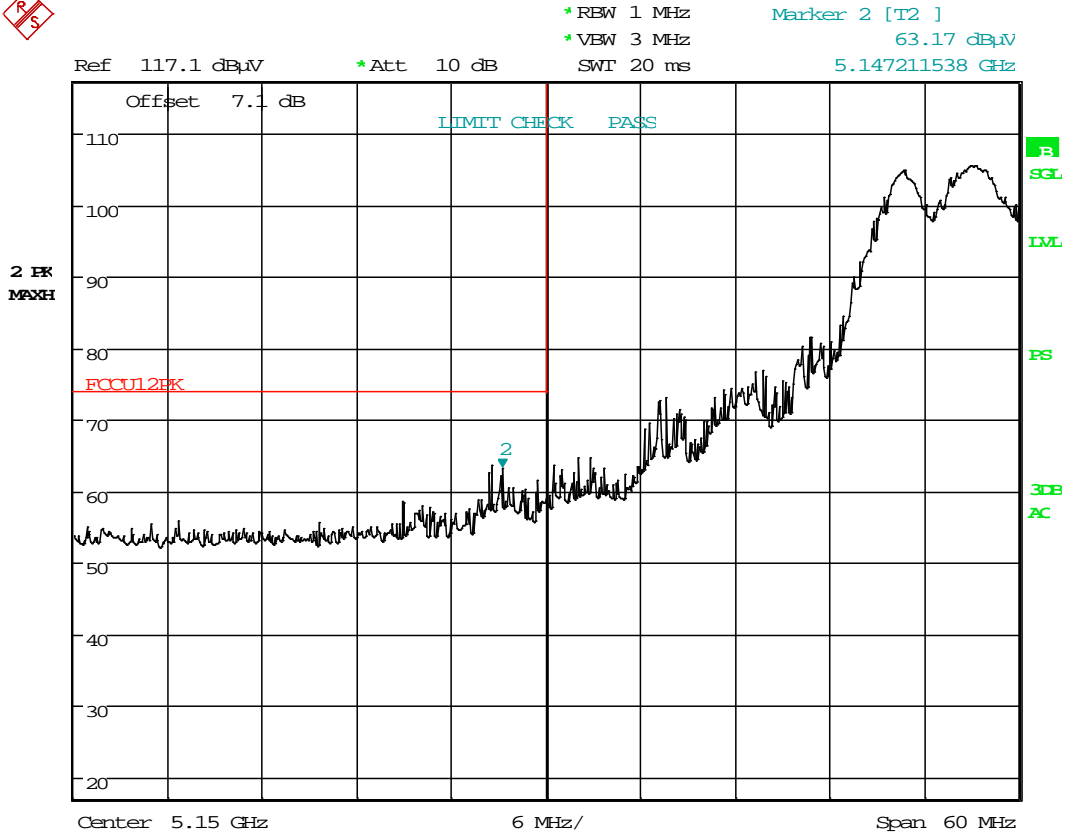


Date: 13.SEP.2017 00:38:59

**Plot 7-253. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 1)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 211 of 258	

**CDD Radiated Band Edge Measurements (20MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



Date: 13.SEP.2017 00:39:30

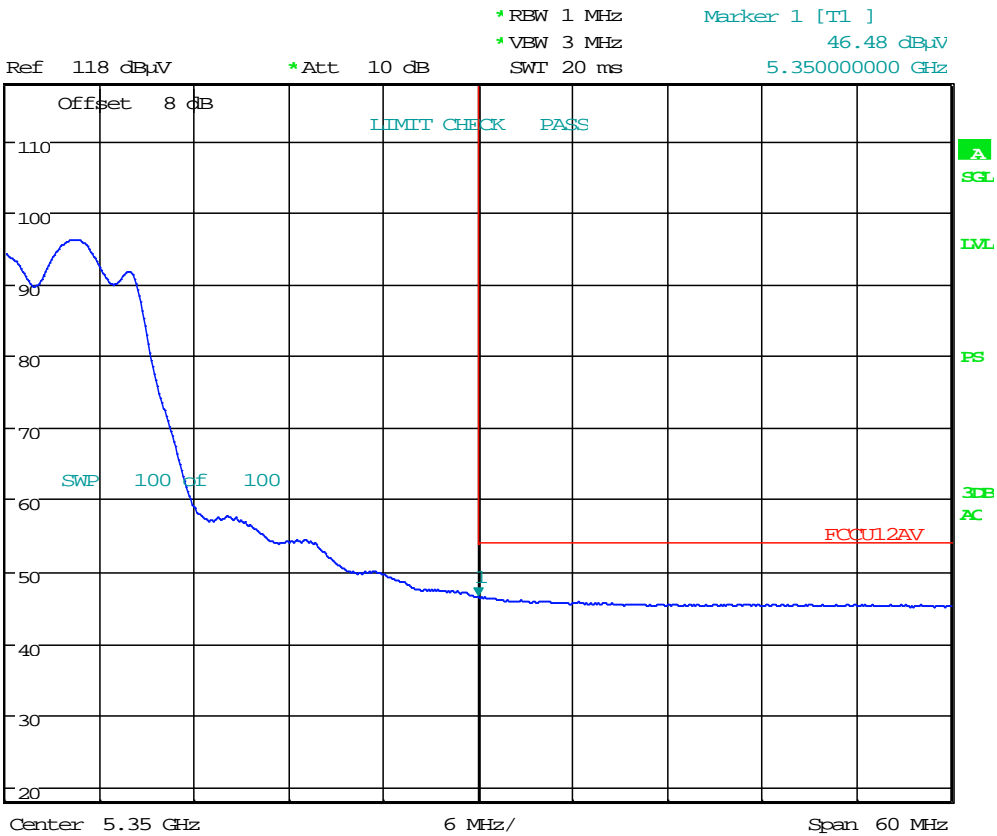
**Plot 7-254. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 212 of 258	

# CDD Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11a (20MHz)  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5320MHz  
 Channel: 64



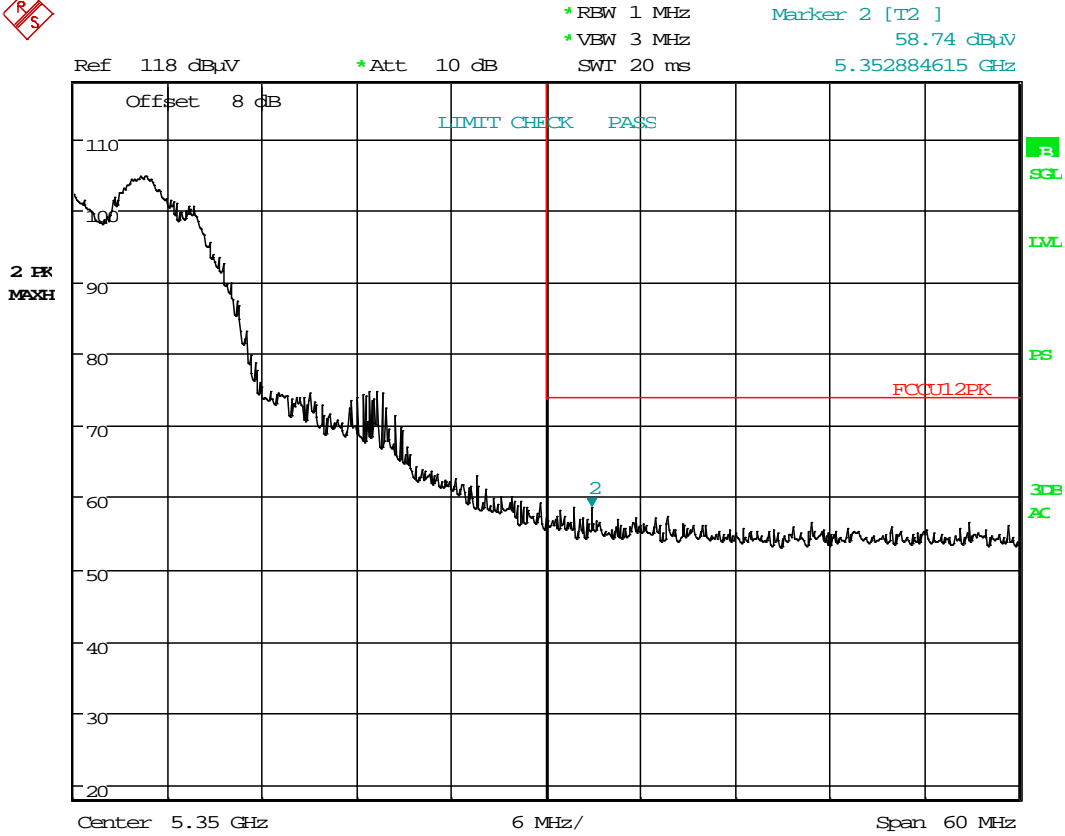
Date: 13.SEP.2017 00:46:11

**Plot 7-255. Radiated Restricted Upper Band Edge Plot (Average – UNII Band 2A)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 213 of 258

# CDD Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 13.SEP.2017 00:46:39

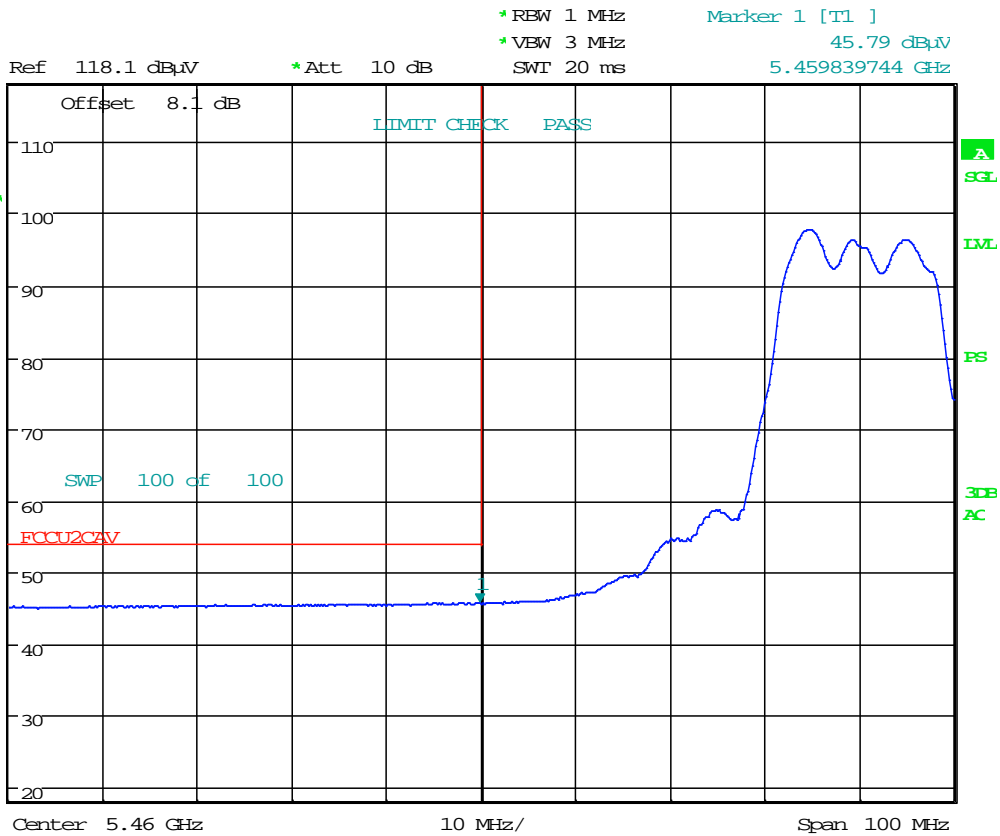
**Plot 7-256. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 214 of 258

# CDD Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11a (20MHz)  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5500MHz  
 Channel: 100



Date: 13.SEP.2017 01:04:46

**Plot 7-257. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 2C)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 215 of 258	

**CDD Radiated Band Edge Measurements (20MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



Date: 13.SEP.2017 01:05:06

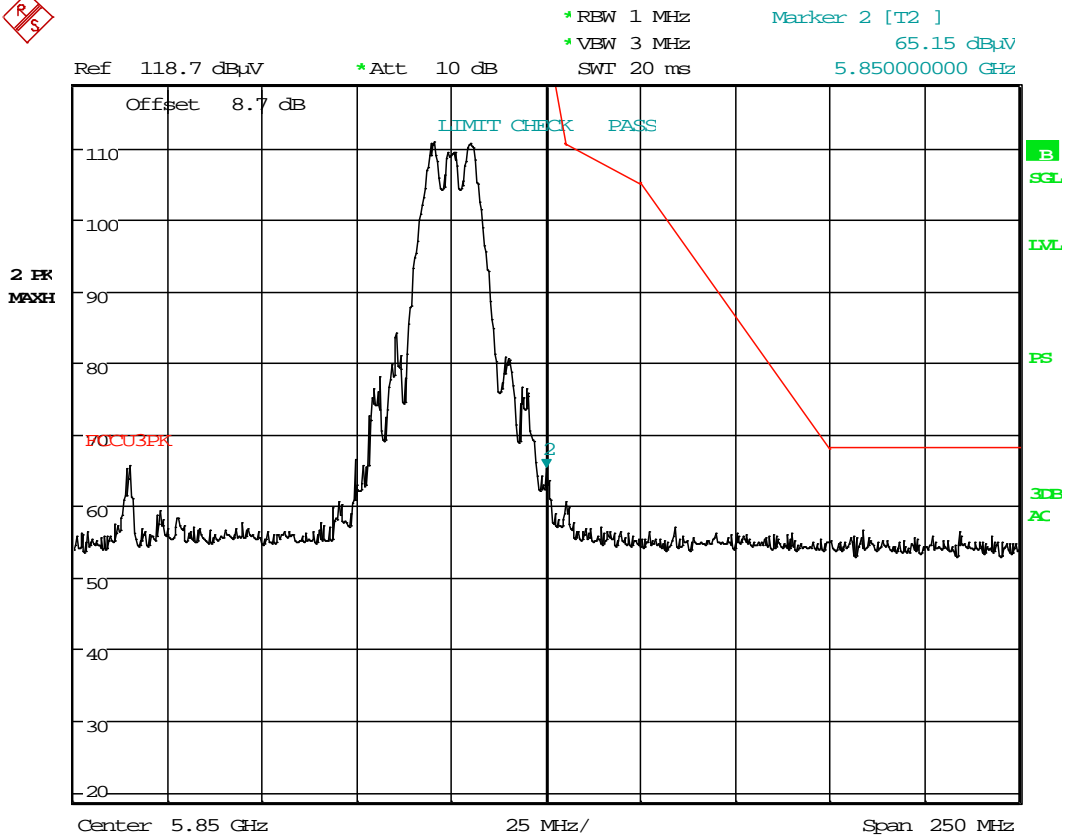
**Plot 7-258. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 216 of 258

# CDD Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11a (20MHz)  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5825MHz  
 Channel: 165



Date: 13.SEP.2017 01:08:41

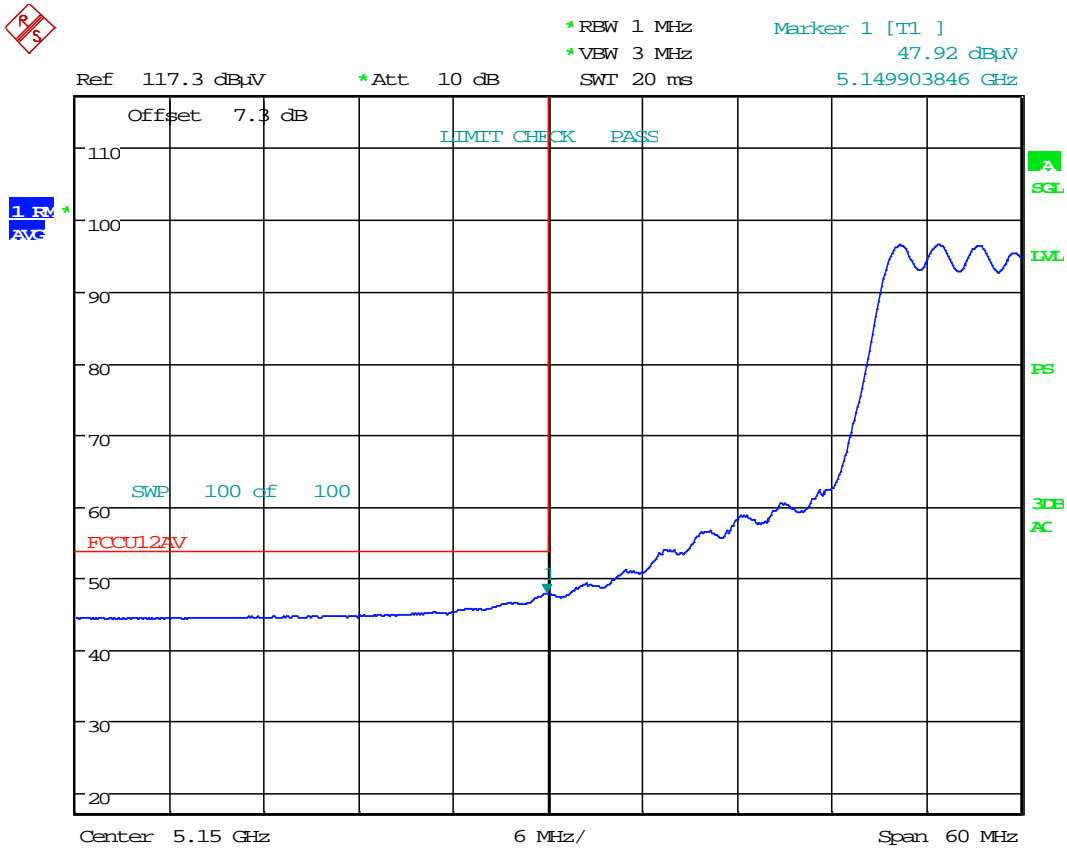
**Plot 7-259. Radiated Upper Band Edge Plot (Peak – UNII Band 3)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 217 of 258

### 7.7.11 MIMO Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11n (20MHz)  
 Worst Case Transfer Rate: MCS8  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5180MHz  
 Channel: 36

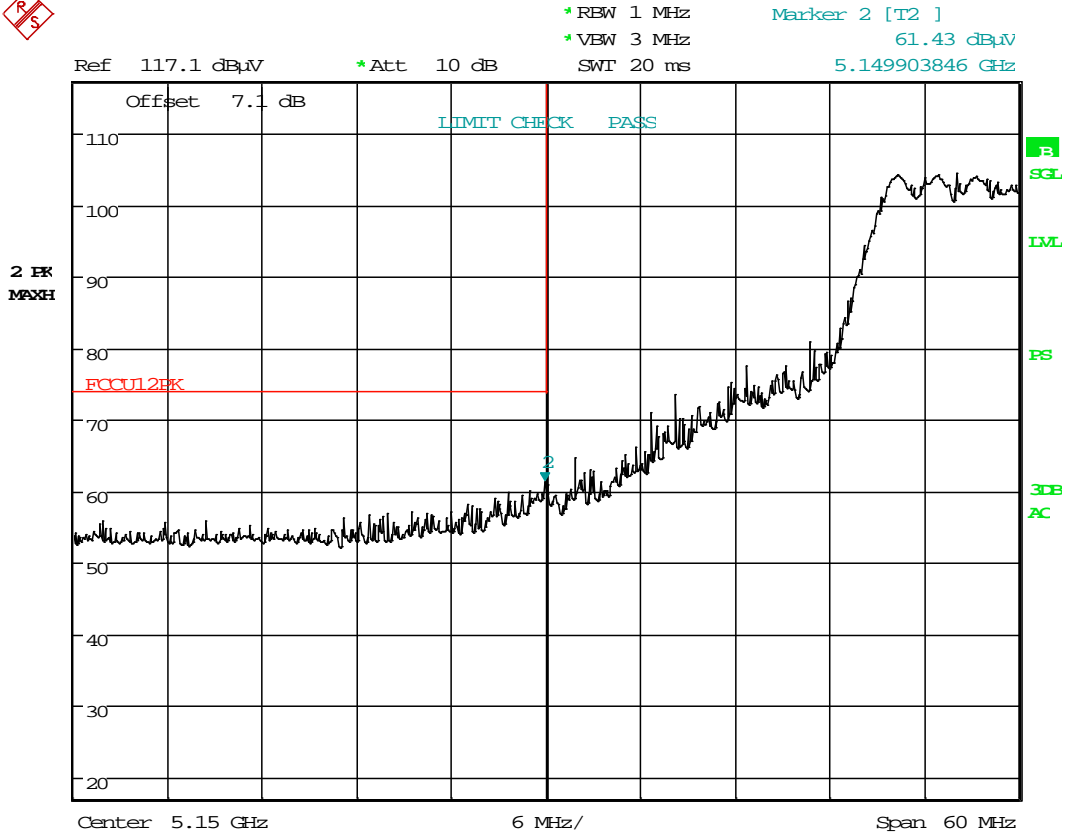


Date: 12.SEP.2017 23:49:29

**Plot 7-260. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 1)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 218 of 258	

**MIMO Radiated Band Edge Measurements (20MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



Date: 12.SEP.2017 23:49:45

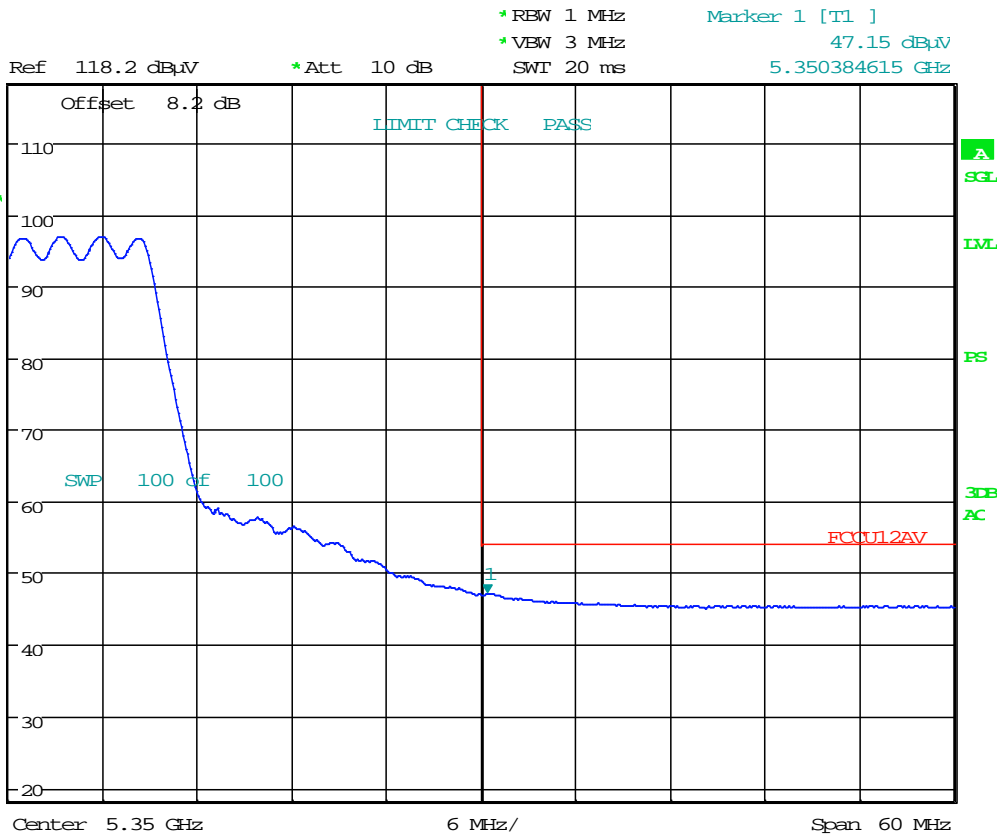
**Plot 7-261. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 219 of 258

# MIMO Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11n (20MHz)  
 Worst Case Transfer Rate: MCS8  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5320MHz  
 Channel: 64

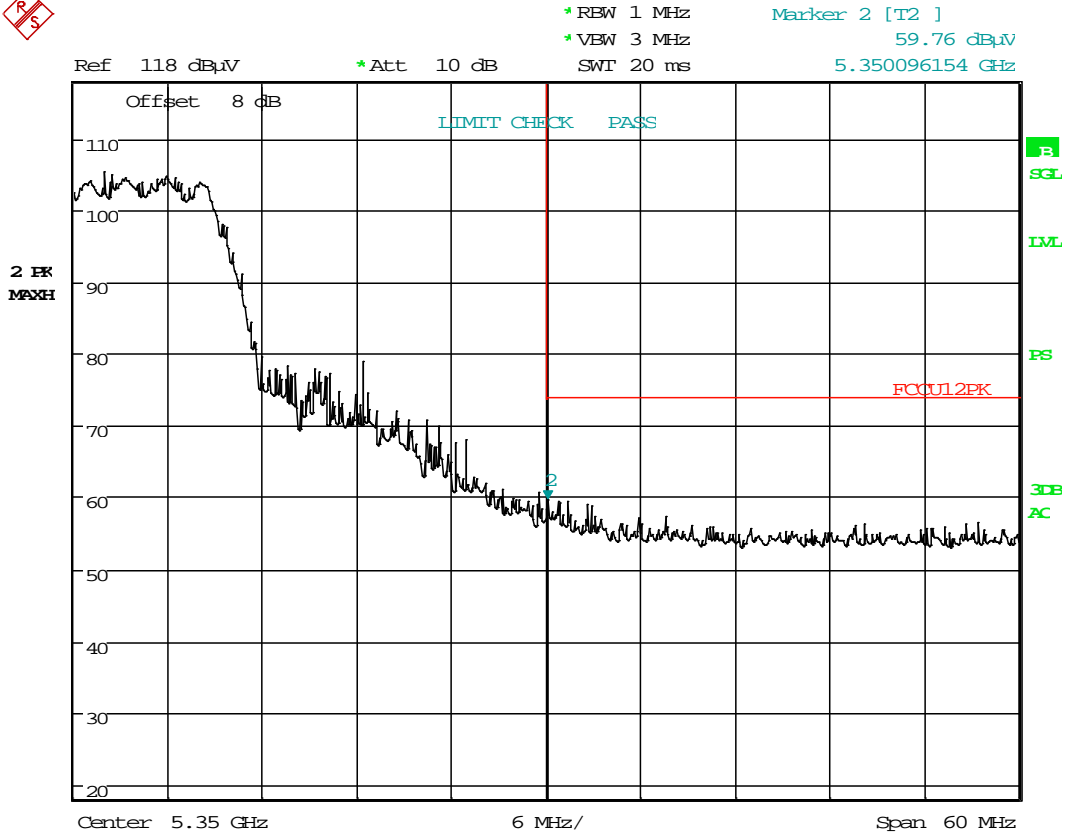


Date: 12.SEP.2017 23:54:00

**Plot 7-262. Radiated Restricted Upper Band Edge Plot (Average – UNII Band 2A)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 220 of 258

**MIMO Radiated Band Edge Measurements (20MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



Date: 12.SEP.2017 23:54:33

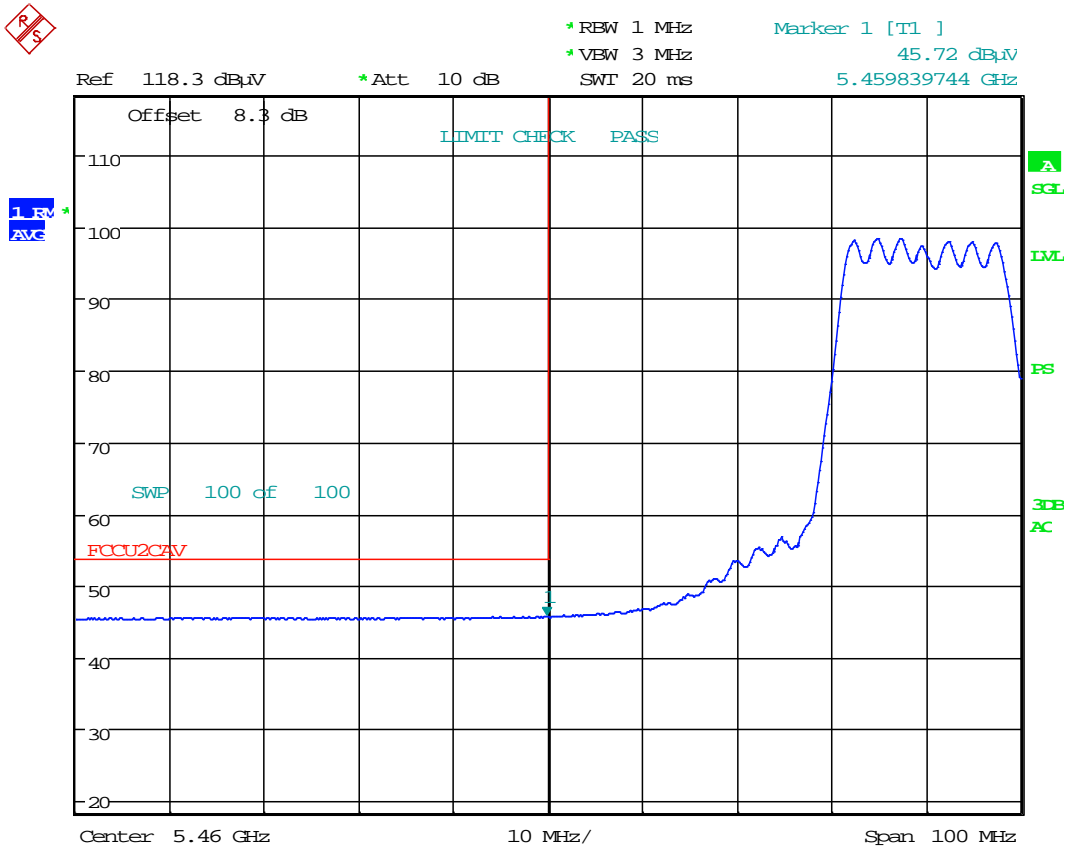
**Plot 7-263. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 221 of 258

# MIMO Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11n (20MHz)  
 Worst Case Transfer Rate: MCS8  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5500MHz  
 Channel: 100

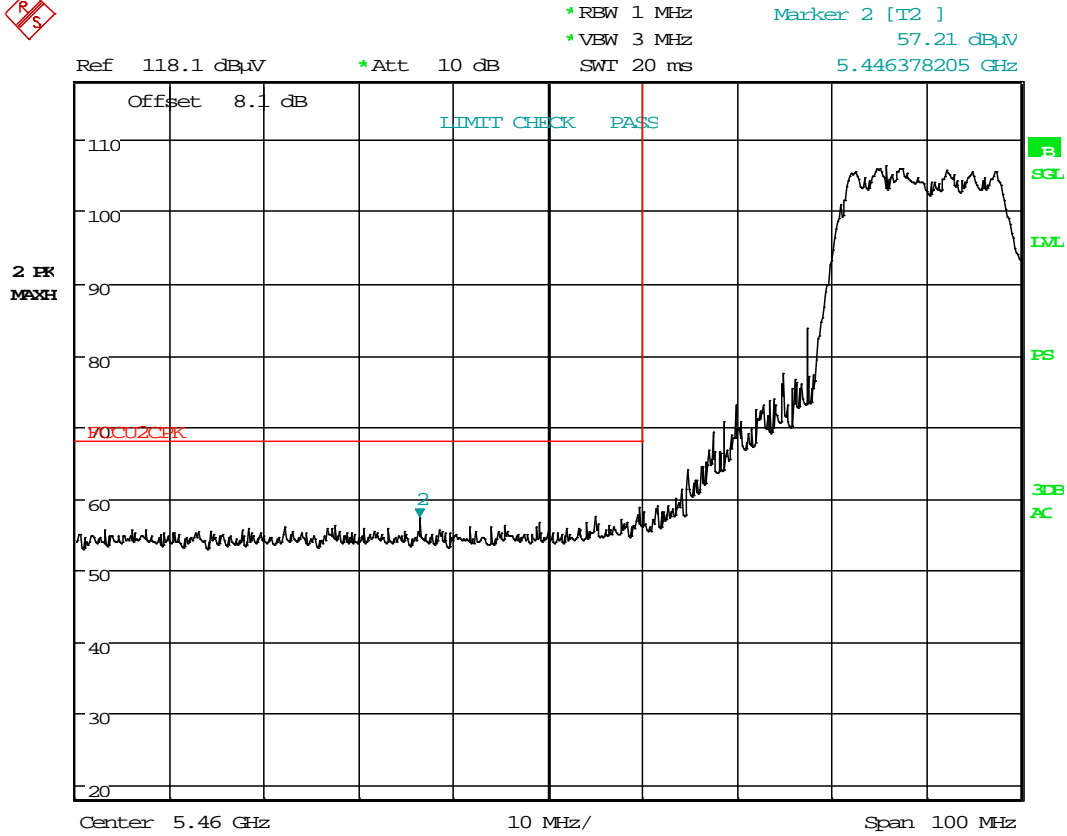


Date: 13.SEP.2017 00:17:27

**Plot 7-264. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 2C)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 222 of 258	

**MIMO Radiated Band Edge Measurements (20MHz BW)**  
**\$15.407(b.1)(b.2) \$15.205 \$15.209**



Date: 13.SEP.2017 00:18:49

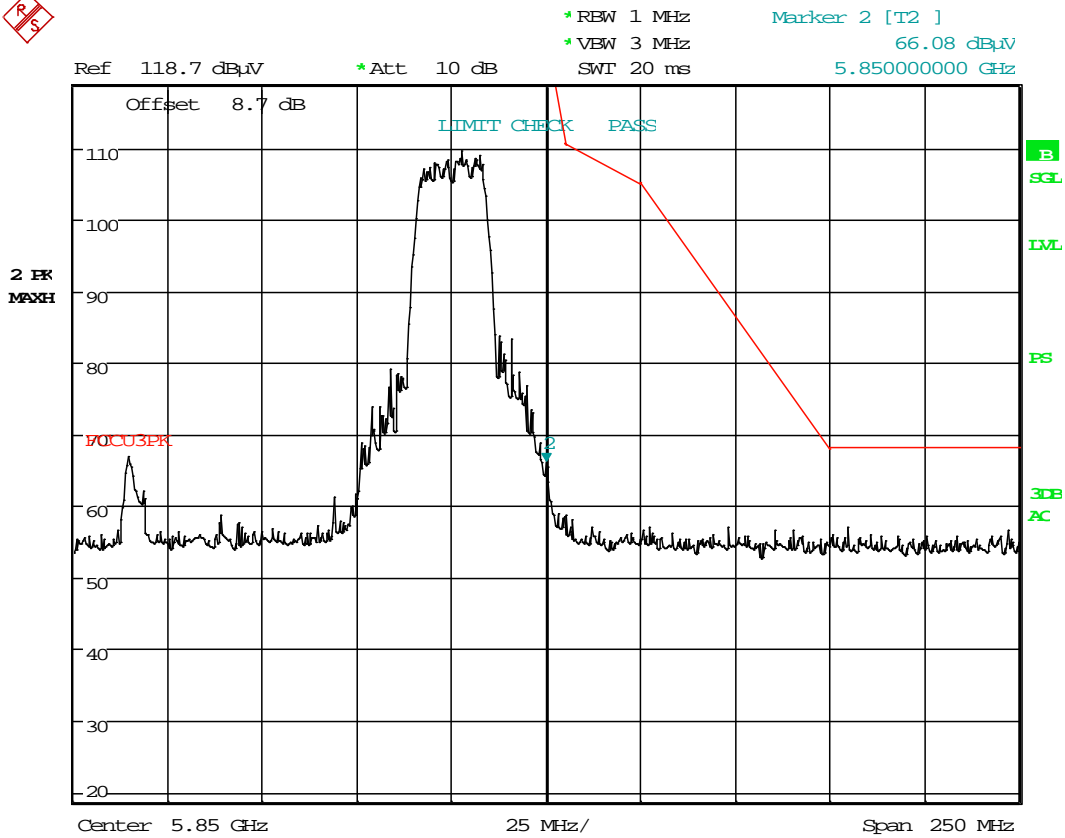
**Plot 7-265. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 223 of 258

# MIMO Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11n (20MHz)  
 Worst Case Transfer Rate: MCS8  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5825MHz  
 Channel: 165



Date: 13.SEP.2017 00:29:32

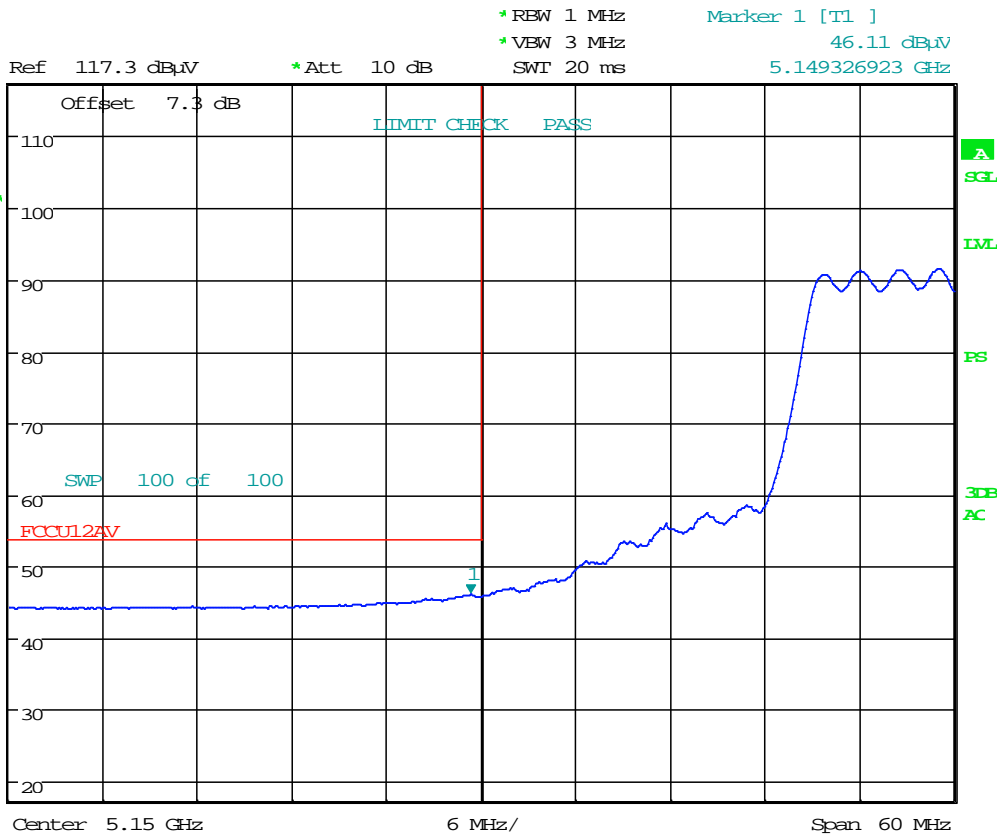
**Plot 7-266. Radiated Upper Band Edge Plot (Peak – UNII Band 3)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 224 of 258

# MIMO WCP Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11n (20MHz)  
 Worst Case Transfer Rate: MCS8  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5180MHz  
 Channel: 36

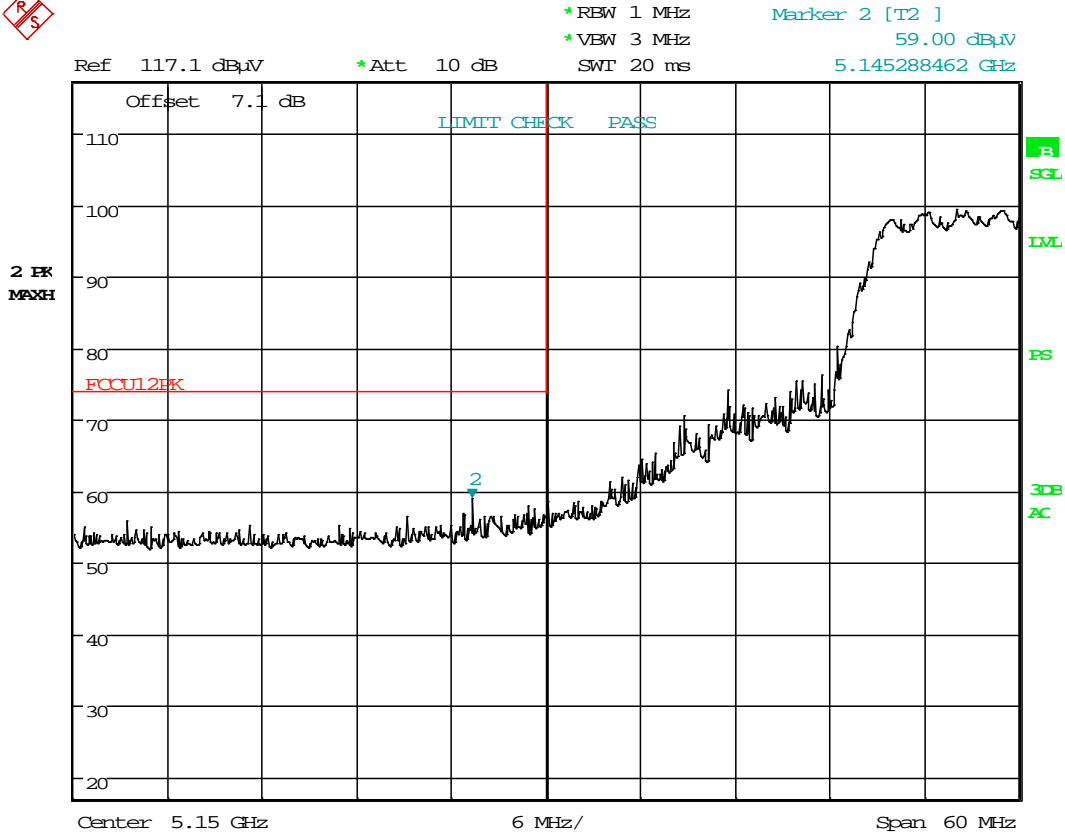


Date: 13.SEP.2017 01:14:28

**Plot 7-267. Radiated Restricted Band Edge Plot with WCP**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 225 of 258

**MIMO WCP Radiated Band Edge Measurements (20MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



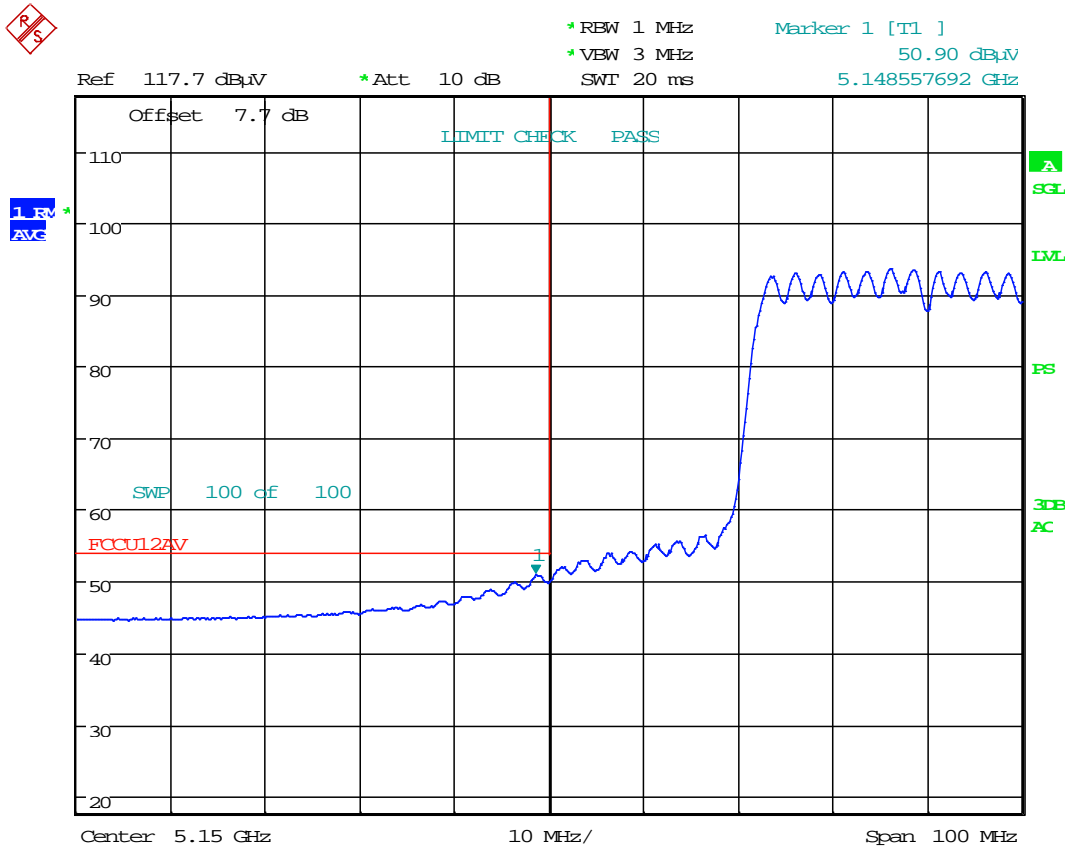
Date: 13.SEP.2017 01:15:16

**Plot 7-268. Radiated Restricted Band Edge Plot with WCP**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 226 of 258

### 7.7.12 MIMO Radiated Band Edge Measurements (40MHz BW) §15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11n (40MHz)  
 Worst Case Transfer Rate: MCS8  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5190MHz  
 Channel: 38

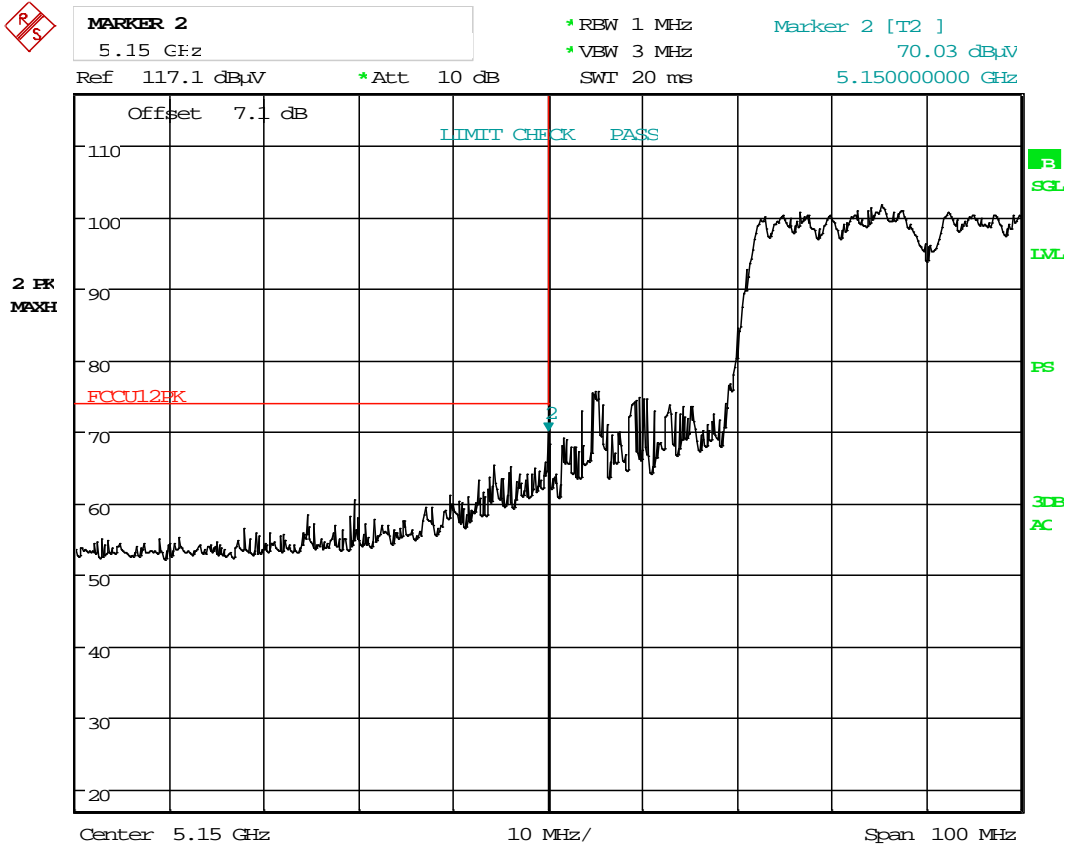


Date: 12.SEP.2017 23:31:30

**Plot 7-269. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 1)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 227 of 258

**MIMO Radiated Band Edge Measurements (40MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



Date: 12.SEP.2017 23:20:22

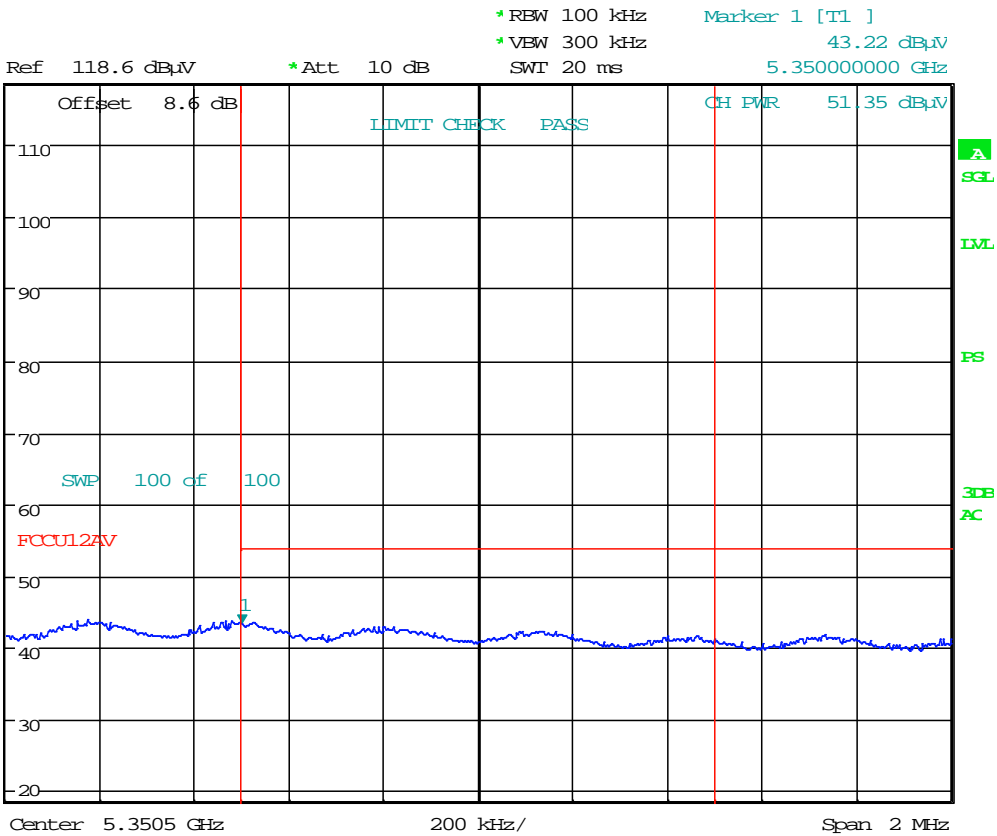
**Plot 7-270. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 228 of 258

# MIMO Radiated Band Edge Measurements (40MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11n (40MHz)  
 Worst Case Transfer Rate: MCS8  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5310MHz  
 Channel: 62

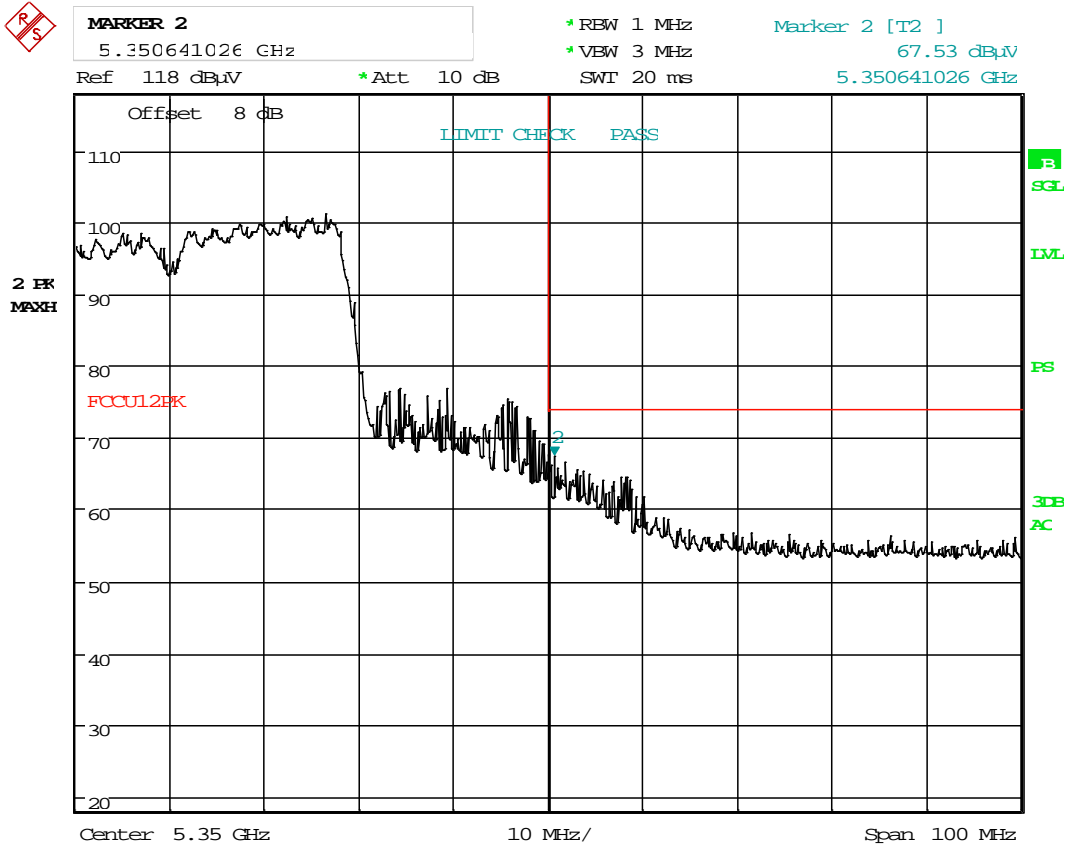


Date: 13.SEP.2017 00:09:35

**Plot 7-271. Radiated Restricted Upper Band Edge Plot (Average – UNII Band 2A)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 229 of 258	

**MIMO Radiated Band Edge Measurements (40MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



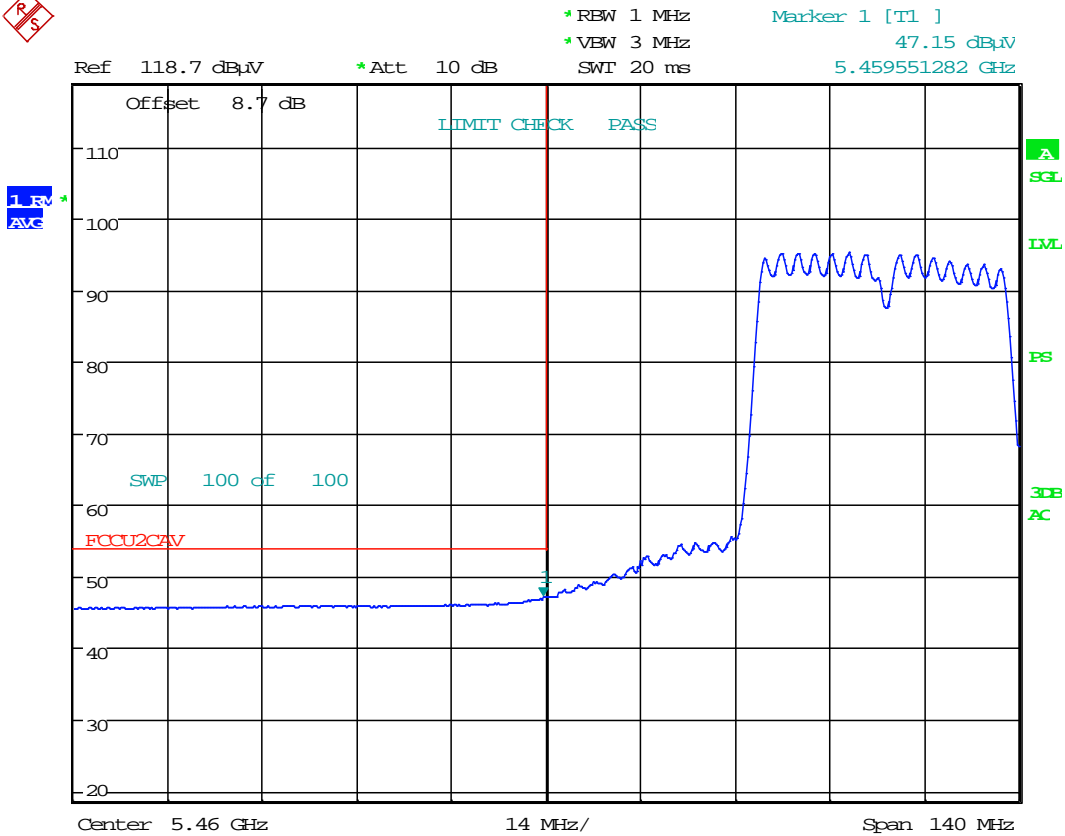
Date: 13.SEP.2017 00:10:19

**Plot 7-272. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)**

FCC ID: A3LSMG892U	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 230 of 258

**MIMO Radiated Band Edge Measurements (40MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**

Worst Case Mode: 802.11n (40MHz)  
 Worst Case Transfer Rate: MCS8  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5510MHz  
 Channel: 102

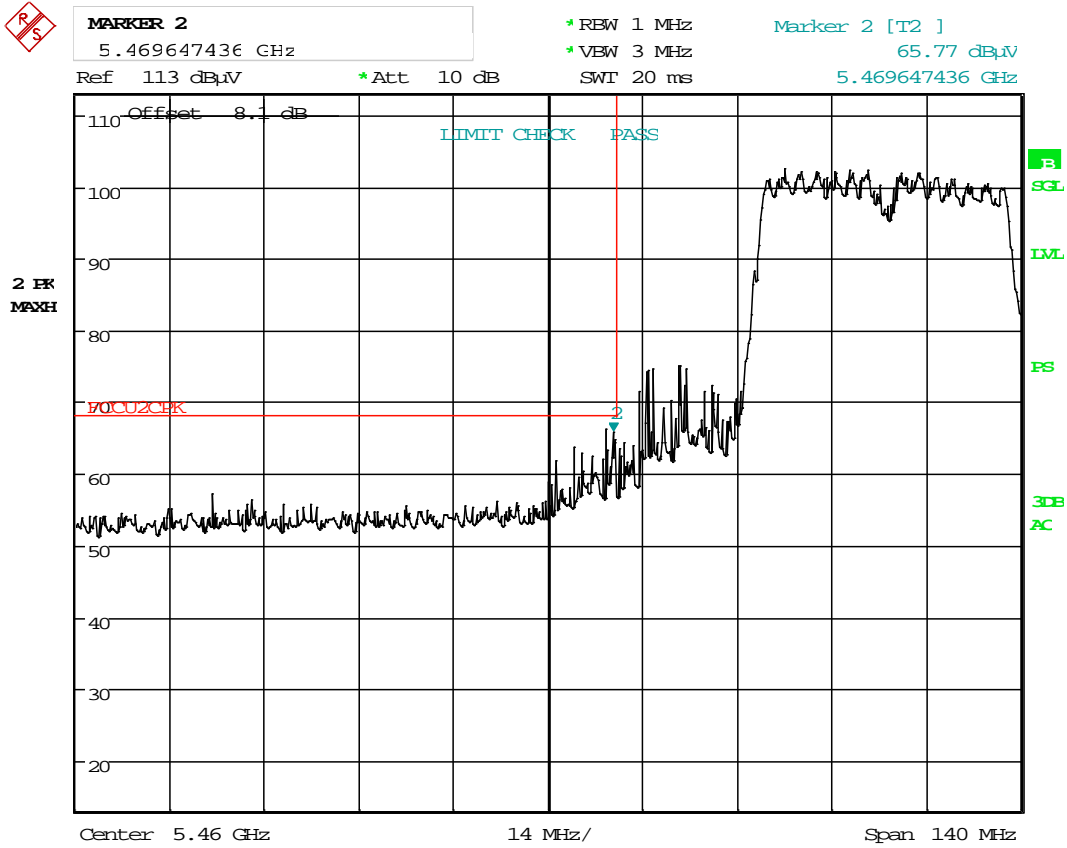


Date: 13.SEP.2017 00:20:31

**Plot 7-273. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 2C)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 231 of 258

**MIMO Radiated Band Edge Measurements (40MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



Date: 13.SEP.2017 00:22:36

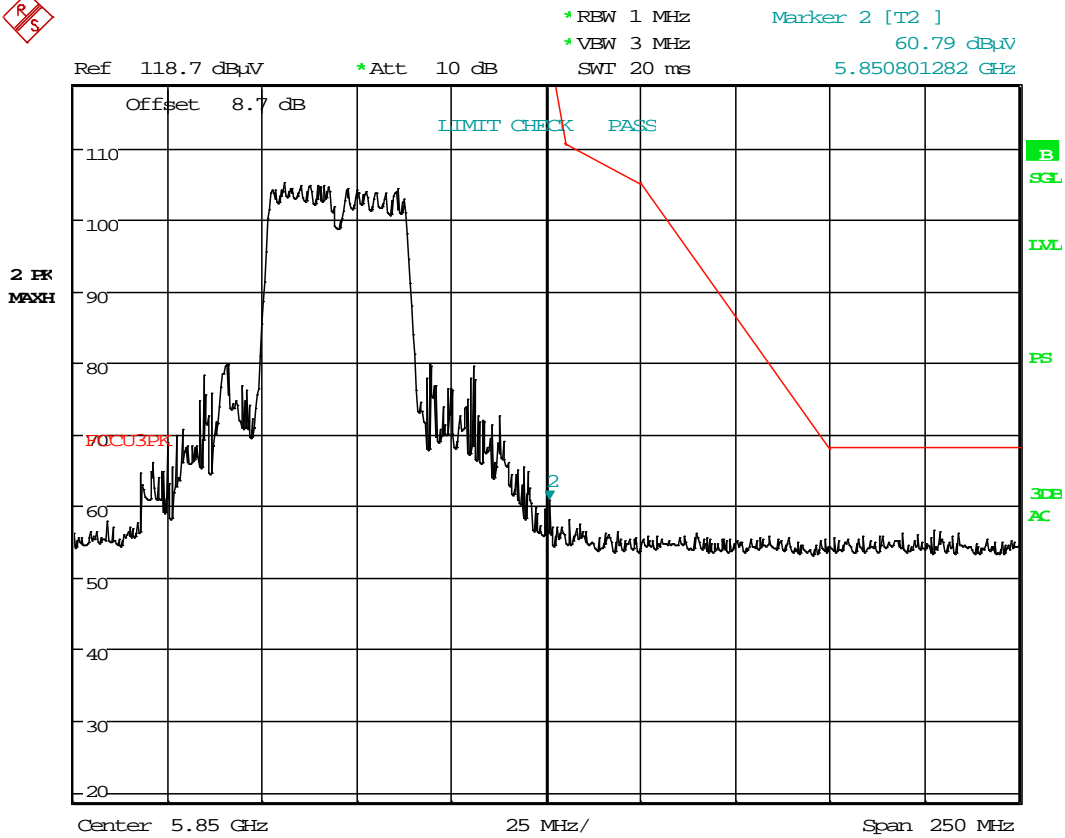
**Plot 7-274. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 232 of 258	

# MIMO Radiated Band Edge Measurements (40MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11n (40MHz)  
 Worst Case Transfer Rate: MCS8  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5795MHz  
 Channel: 159



Date: 13.SEP.2017 00:31:34

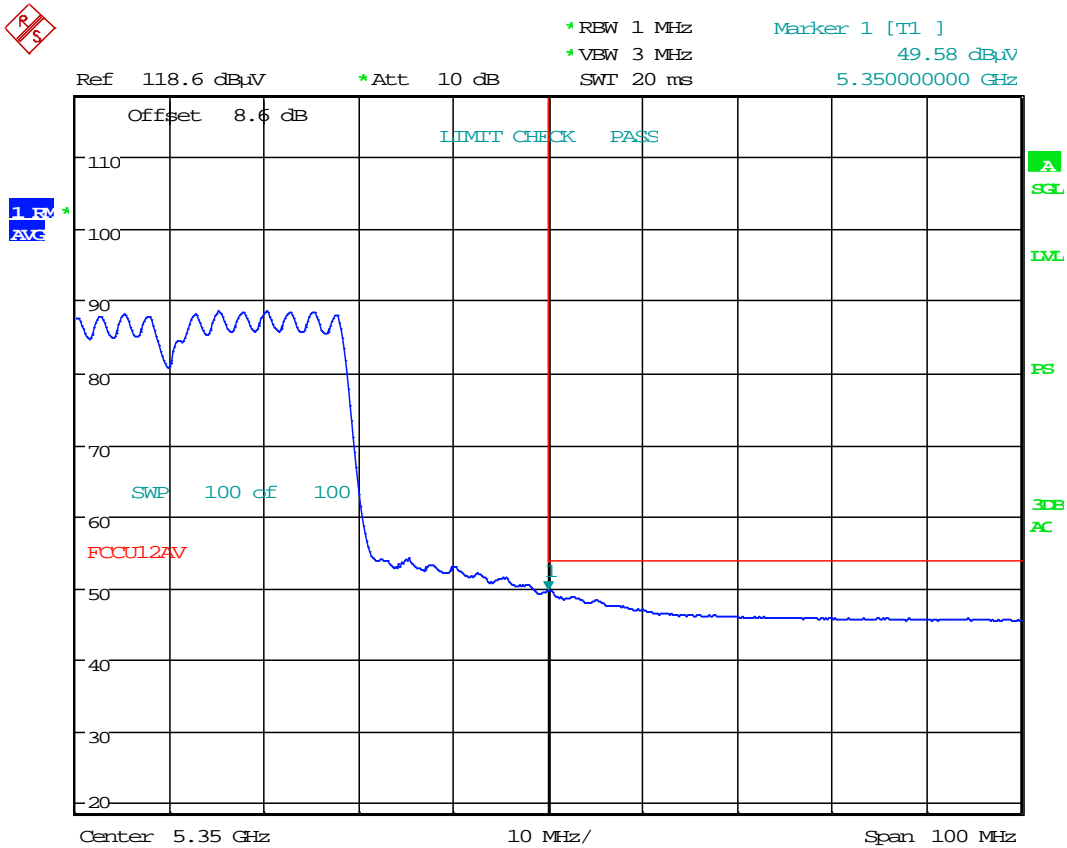
**Plot 7-275. Radiated Upper Band Edge Plot (Peak – UNII Band 3)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 233 of 258

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

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11n (40MHz)  
 Worst Case Transfer Rate: MCS8  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5310MHz  
 Channel: 62

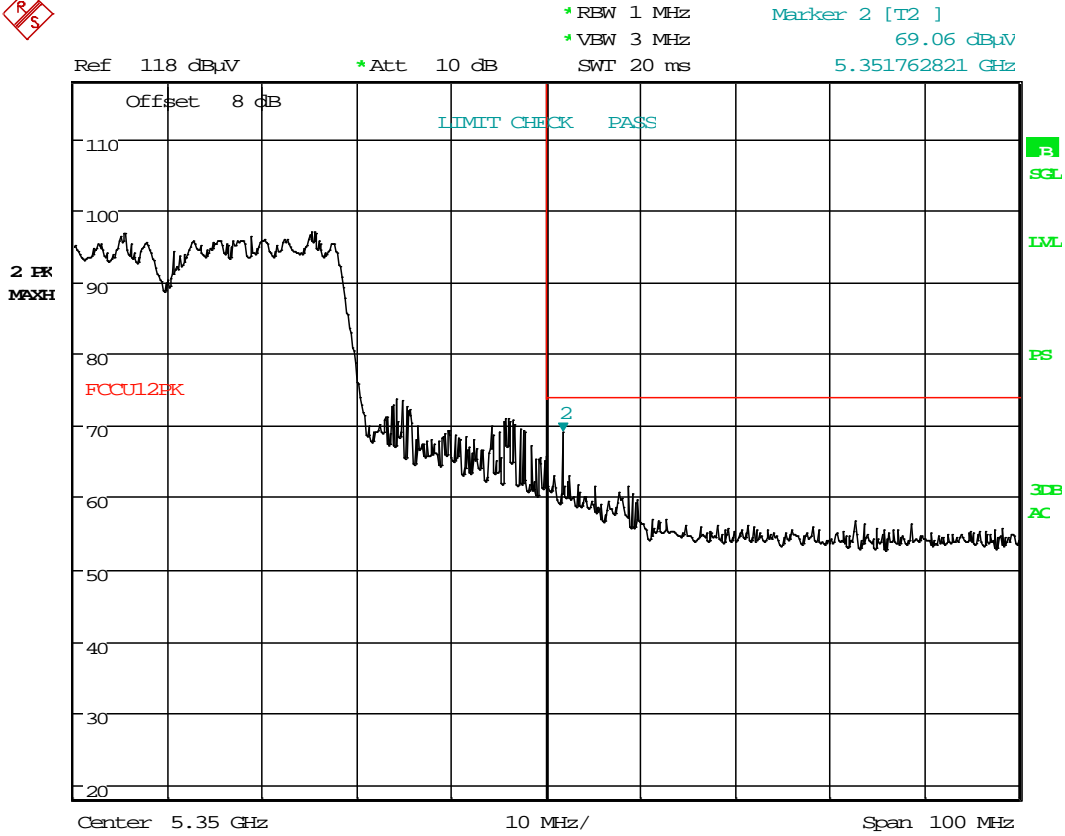


Date: 13.SEP.2017 01:21:53

**Plot 7-276. Radiated Restricted Band Edge Plot with WCP**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 234 of 258

**MIMO WCP Radiated Band Edge Measurements (40MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



Date: 13.SEP.2017 01:23:11

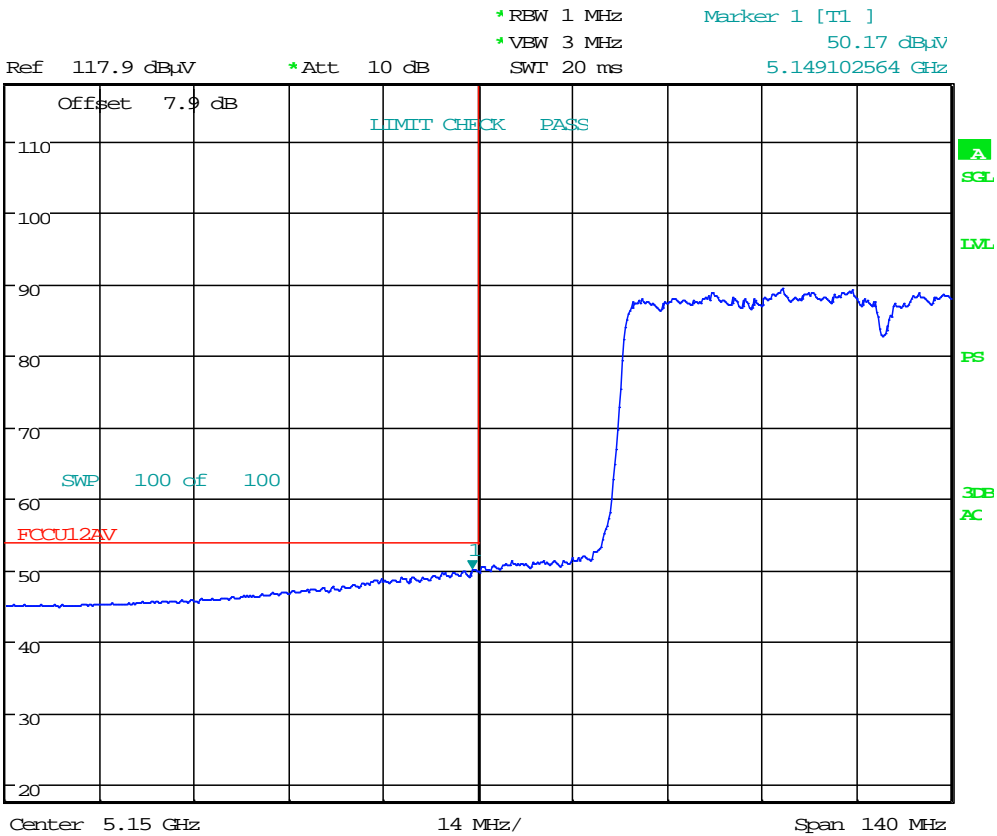
**Plot 7-277. Radiated Restricted Band Edge Plot with WCP**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 235 of 258

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

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11ac (80MHz)  
 Worst Case Transfer Rate: MCS0  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5210MHz  
 Channel: 42

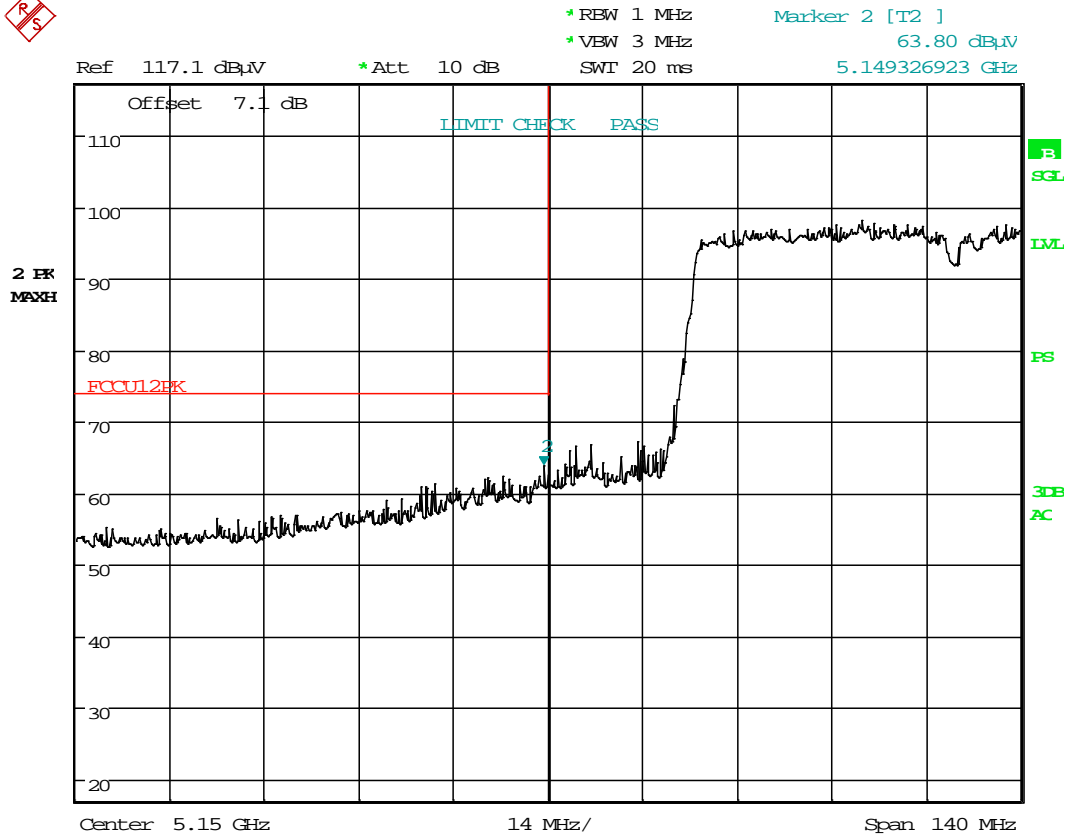


Date: 12.SEP.2017 23:25:30

**Plot 7-278. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 1)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 236 of 258

**MIMO Radiated Band Edge Measurements (80MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



Date: 12.SEP.2017 23:25:56

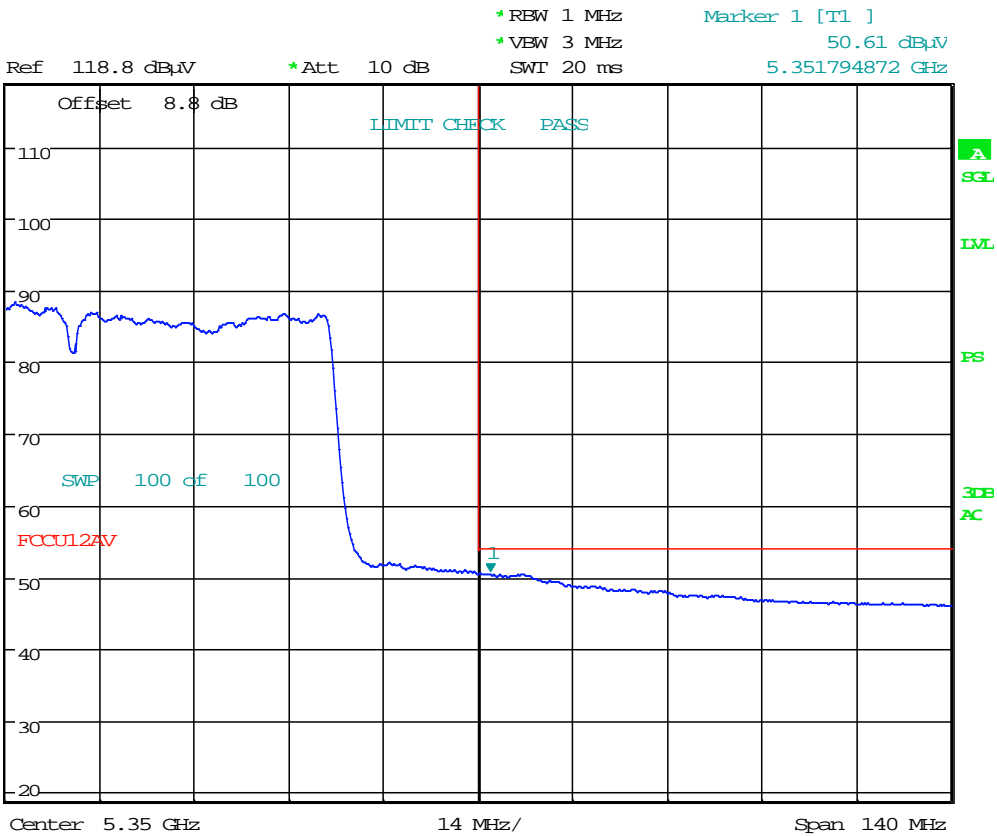
**Plot 7-279. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 237 of 258

# MIMO Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11ac (80MHz)  
 Worst Case Transfer Rate: MCS0  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5290MHz  
 Channel: 58

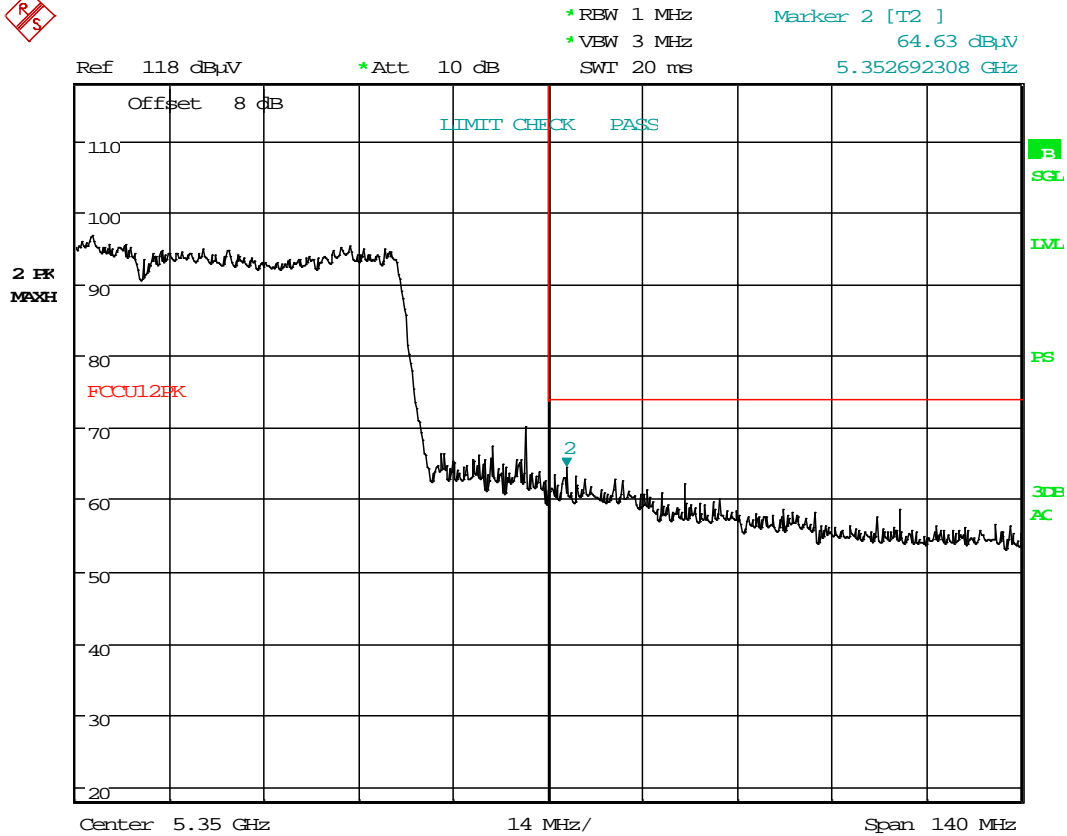


Date: 13.SEP.2017 00:12:55

**Plot 7-280. Radiated Restricted Upper Band Edge Plot (Average – UNII Band 2A)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 238 of 258	

**MIMO Radiated Band Edge Measurements (80MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



Date: 13.SEP.2017 00:13:32

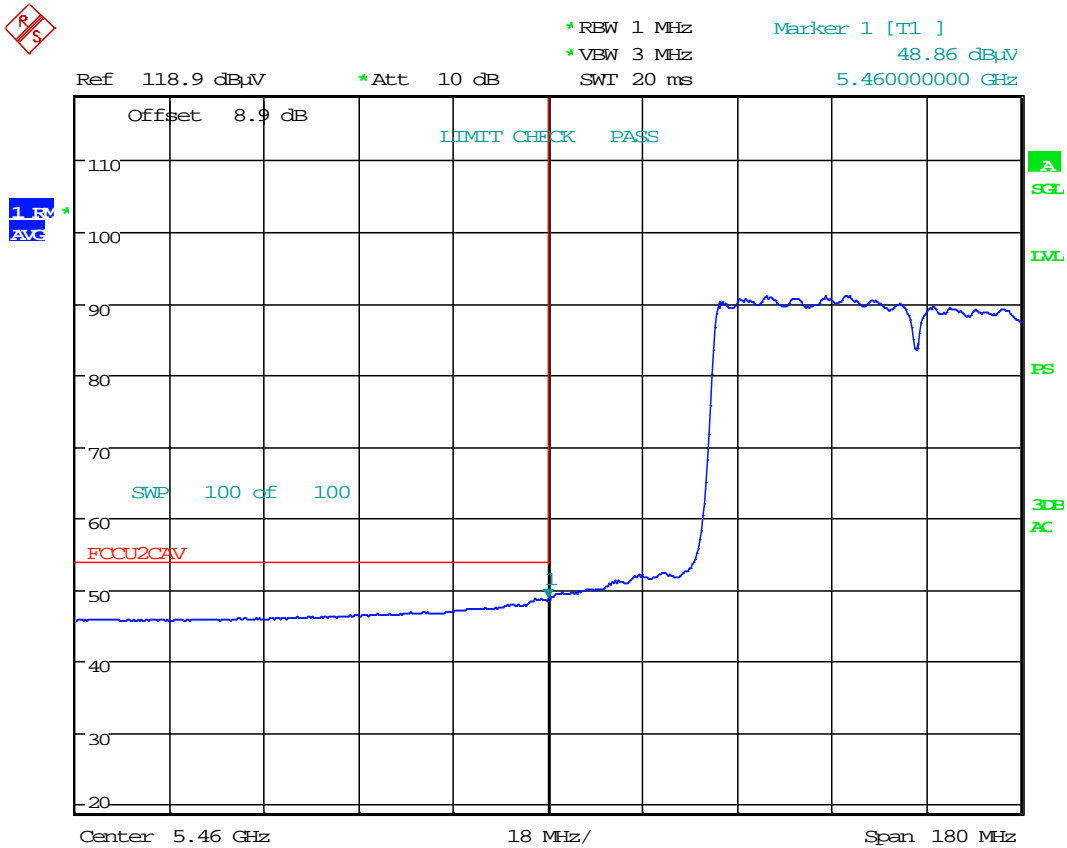
**Plot 7-281. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 239 of 258

# MIMO Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11ac (80MHz)  
 Worst Case Transfer Rate: MCS0  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5530MHz  
 Channel: 106

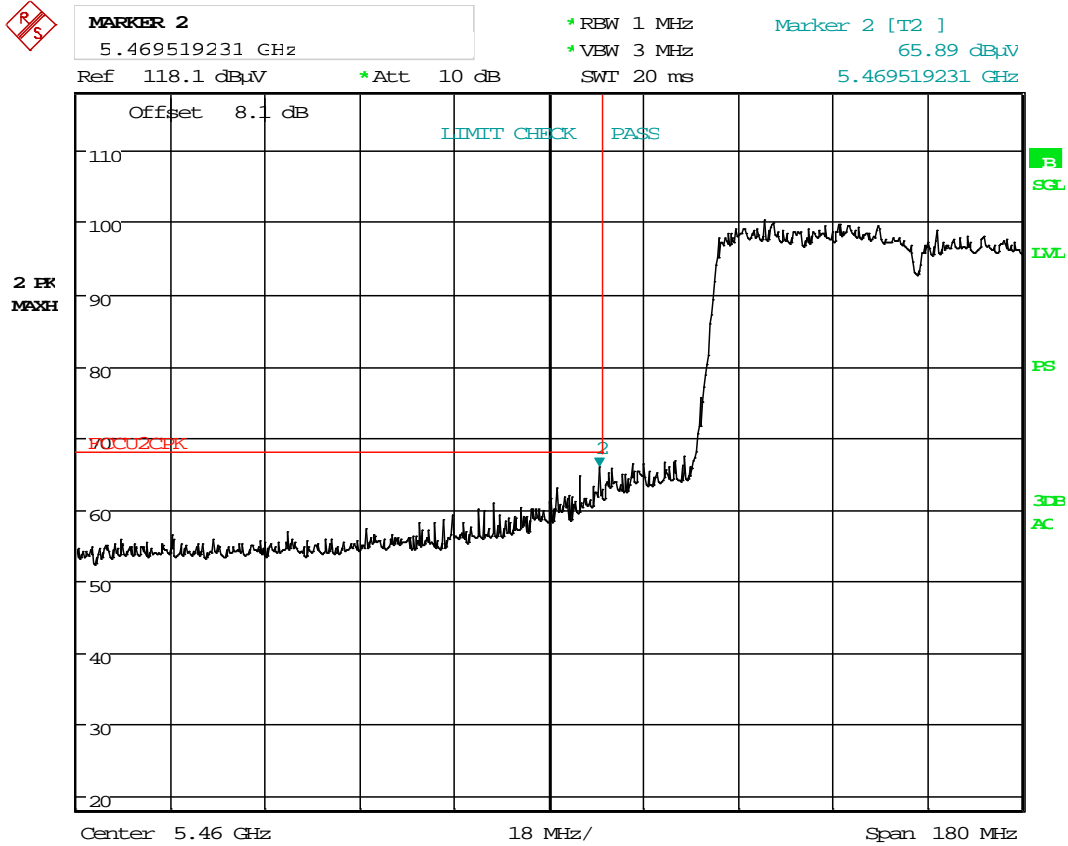


Date: 13.SEP.2017 00:24:10

**Plot 7-282. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 2C)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 240 of 258	

**MIMO Radiated Band Edge Measurements (80MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



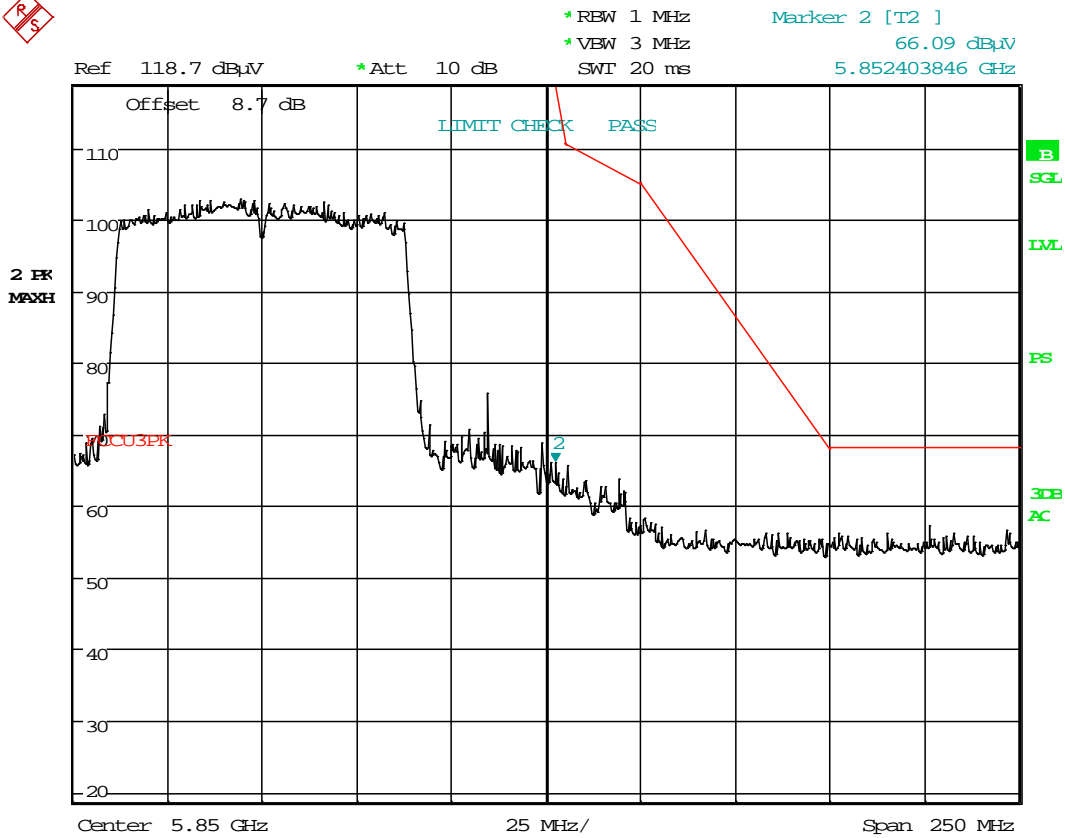
Date: 13.SEP.2017 00:24:45

**Plot 7-283. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 241 of 258

**MIMO Radiated Band Edge Measurements (80MHz BW)**  
§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11ac (80MHz)  
 Worst Case Transfer Rate: MCS0  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5775MHz  
 Channel: 155



Date: 13.SEP.2017 00:32:37

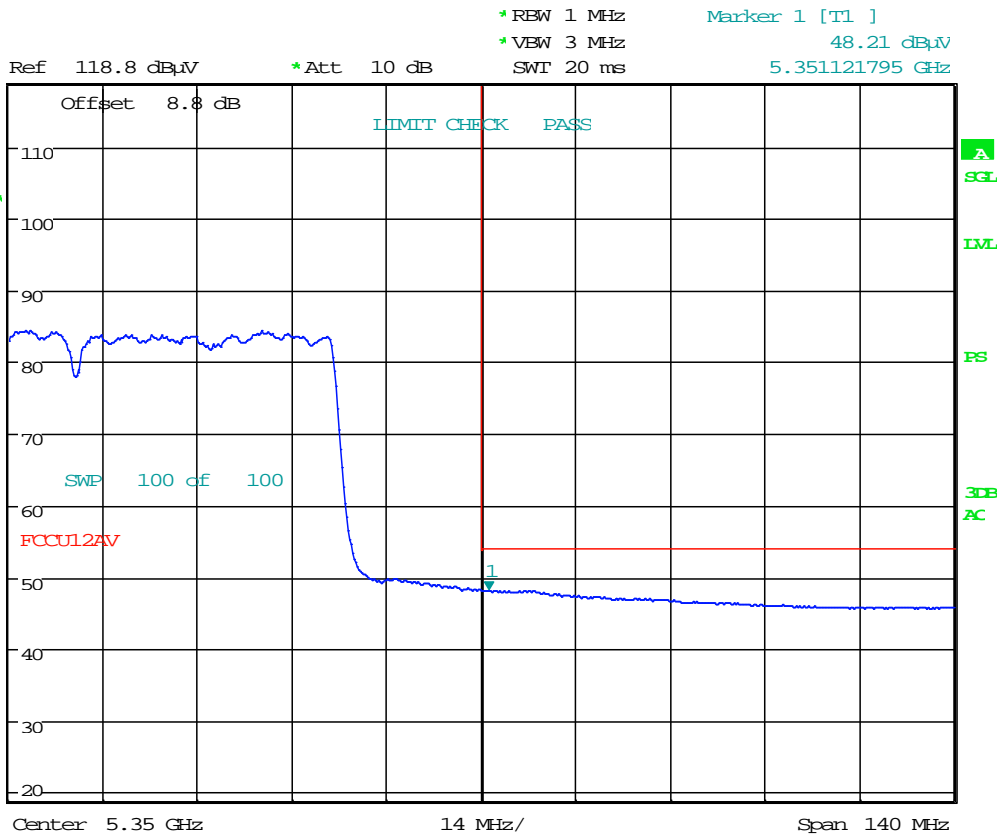
**Plot 7-284. Radiated Upper Band Edge Plot (Peak – UNII Band 3)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 242 of 258

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

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode: 802.11ac (80MHz)  
 Worst Case Transfer Rate: MCS0  
 Distance of Measurements: 3 Meters  
 Operating Frequency: 5290MHz  
 Channel: 58

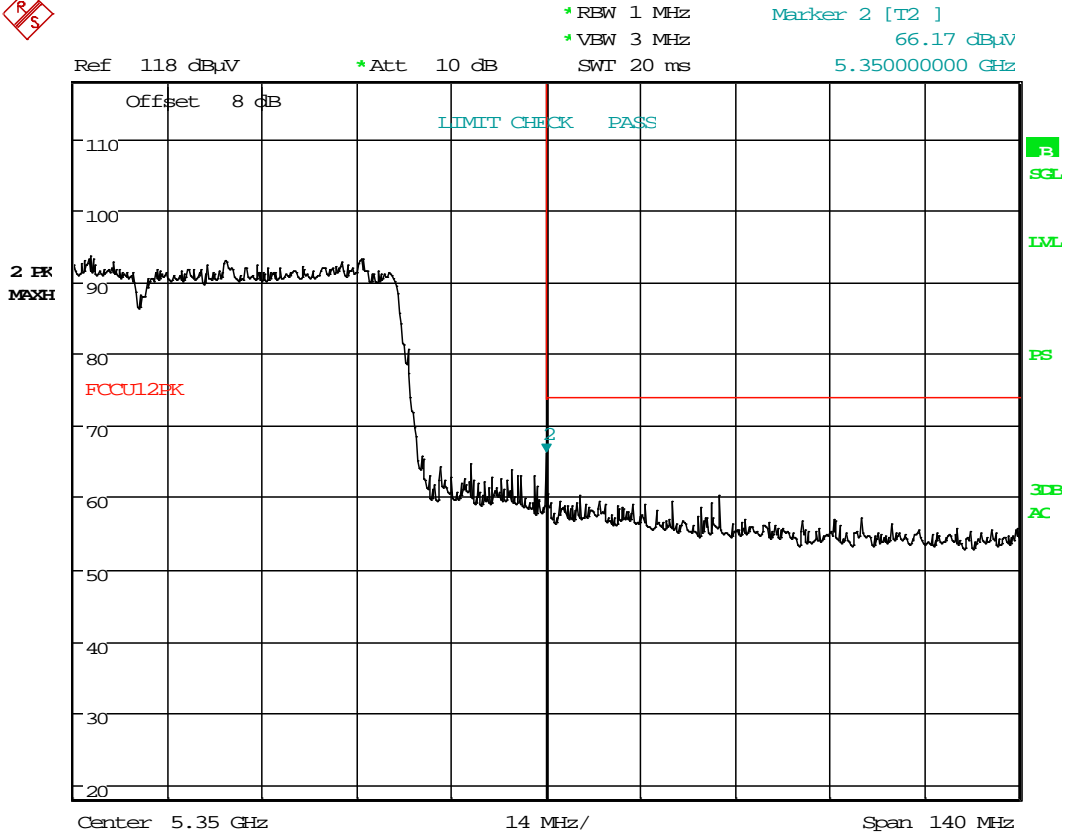


Date: 13.SEP.2017 01:30:56

**Plot 7-285. Radiated Restricted Band Edge Plot with WCP**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 243 of 258

**MIMO WCP Radiated Band Edge Measurements (80MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



Date: 13.SEP.2017 01:31:58

**Plot 7-286. Radiated Restricted Band Edge Plot with WCP**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 244 of 258	

## 7.8 Radiated Spurious Emissions Measurements – Below 1GHz

§15.209

### Test Overview and Limit

All out of band radiated spurious emissions are measured with a spectrum analyzer connected to a receive antenna while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates and modes were investigated for radiated spurious emissions. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.

***All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table 7-67 per Section 15.209.***

Frequency	Field Strength [ $\mu\text{V/m}$ ]	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 7-67. Radiated Limits**



### Test Procedures Used

ANSI C63.10-2013

### Test Settings

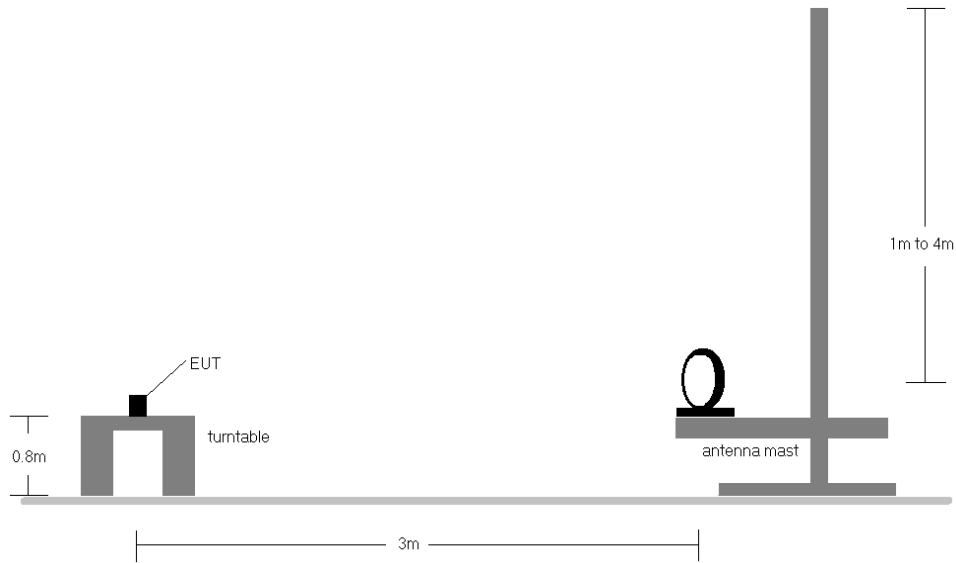
#### Quasi-Peak Field Strength Measurements

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

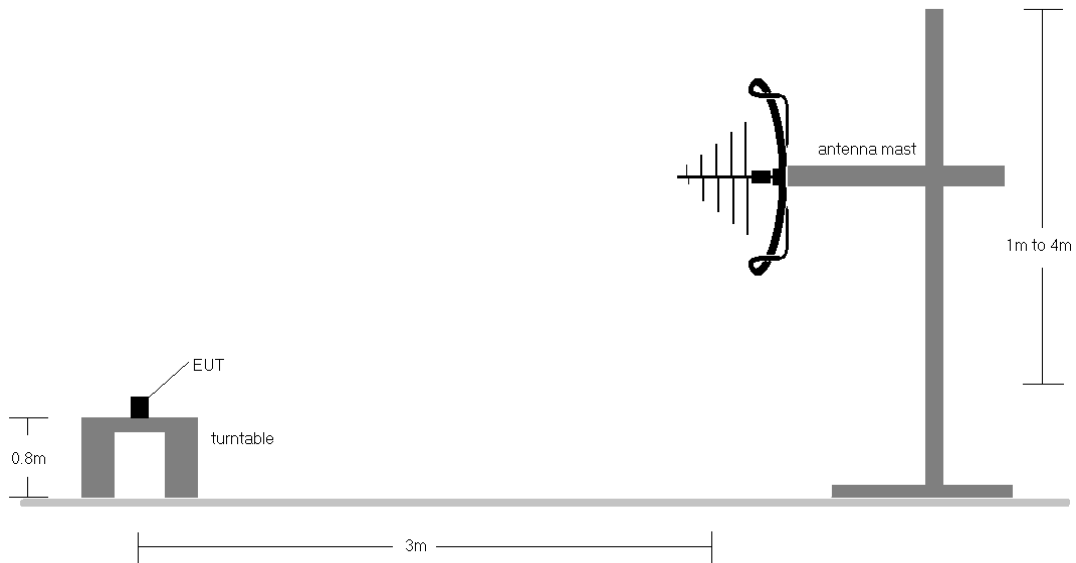
FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 245 of 258	

### 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**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	 Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 246 of 258

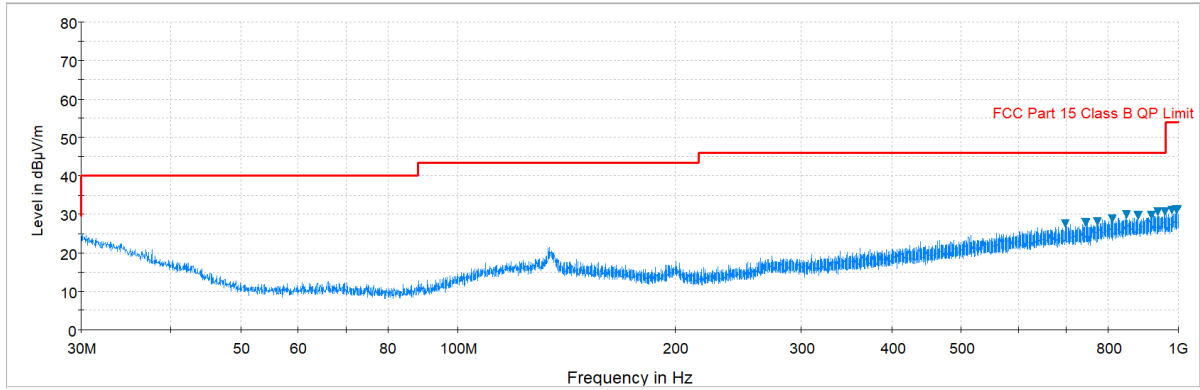
**Test Notes**

1. All emissions lying in restricted bands specified in §15.205 are below the limit shown in Table 7-67.
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.

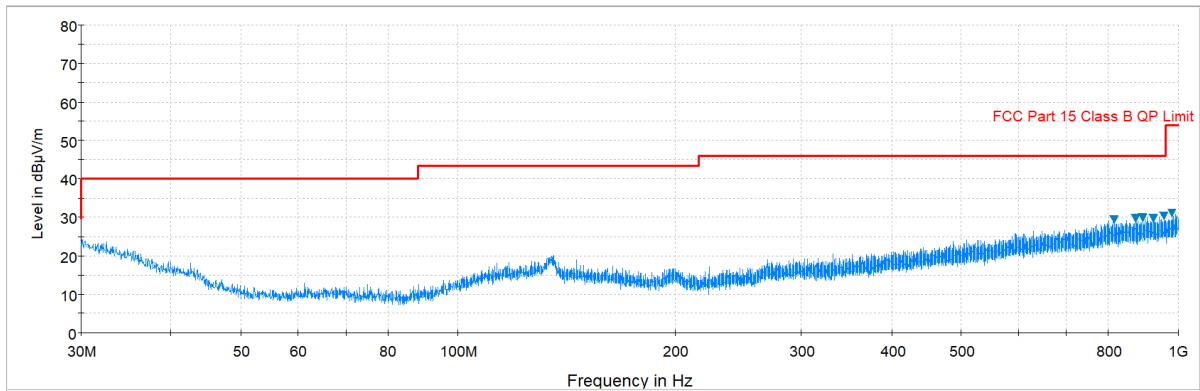
FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 247 of 258

## Antenna-1 Radiated Spurious Emissions Measurements (Below 1GHz)



§15.209



**Plot 7-287. Radiated Spurious Plot below 1GHz (802.11a – U3 Ch. 157, Ant. Pol. H)**

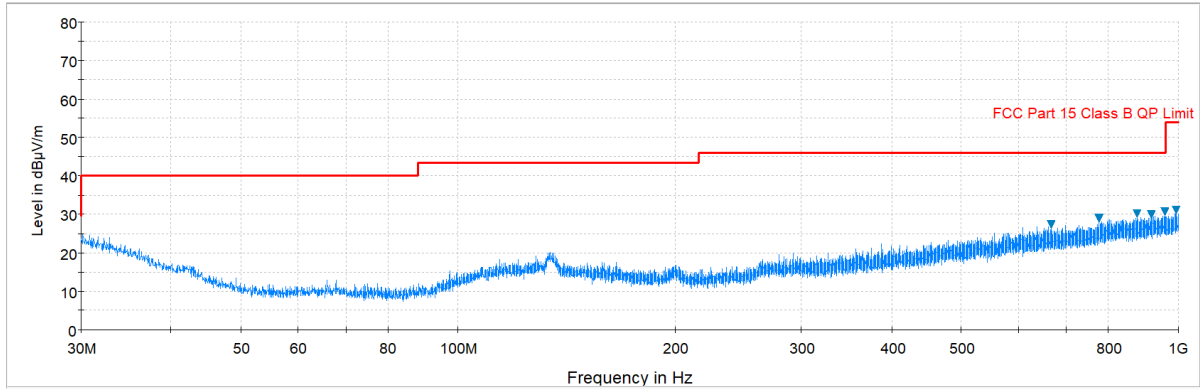


**Plot 7-288. Radiated Spurious Plot below 1GHz (802.11a – U3 Ch. 157, Ant. Pol. V)**

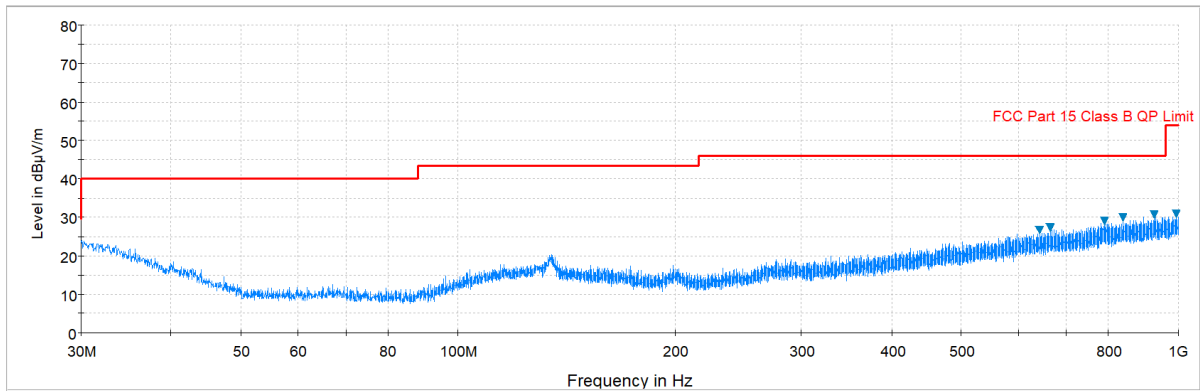
FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 248 of 258	

## Antenna-2 Radiated Spurious Emissions Measurements (Below 1GHz)



§15.209



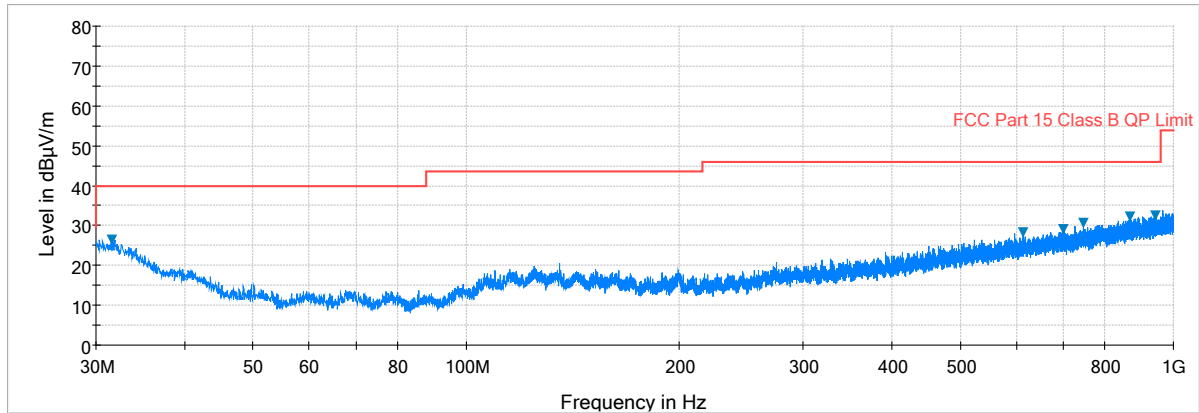
**Plot 7-289. Radiated Spurious Plot below 1GHz (802.11a – U3 Ch. 157, Ant. Pol. H)**



**Plot 7-290. Radiated Spurious Plot below 1GHz (802.11a – U3 Ch. 157, Ant. Pol. V)**

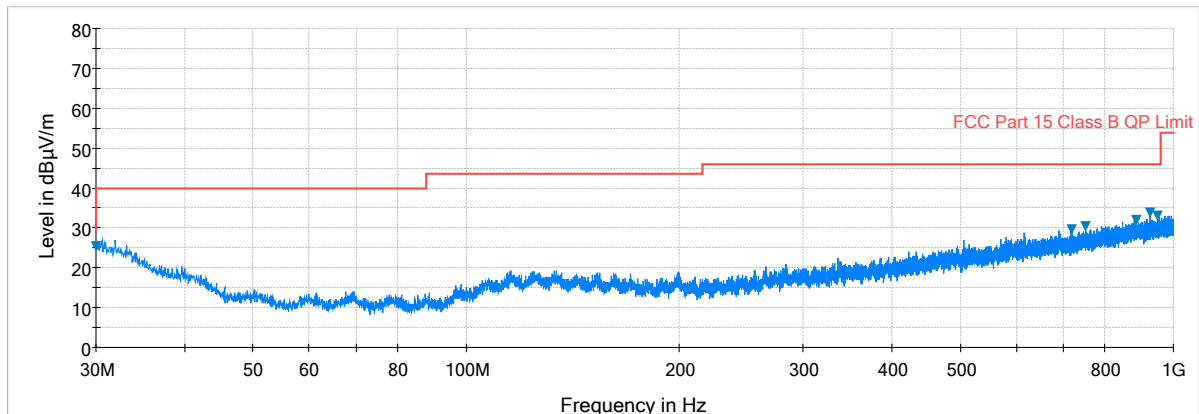
FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 249 of 258	

## Simultaneous Tx Radiated Spurious Emissions Measurements (Below 1GHz) §15.209



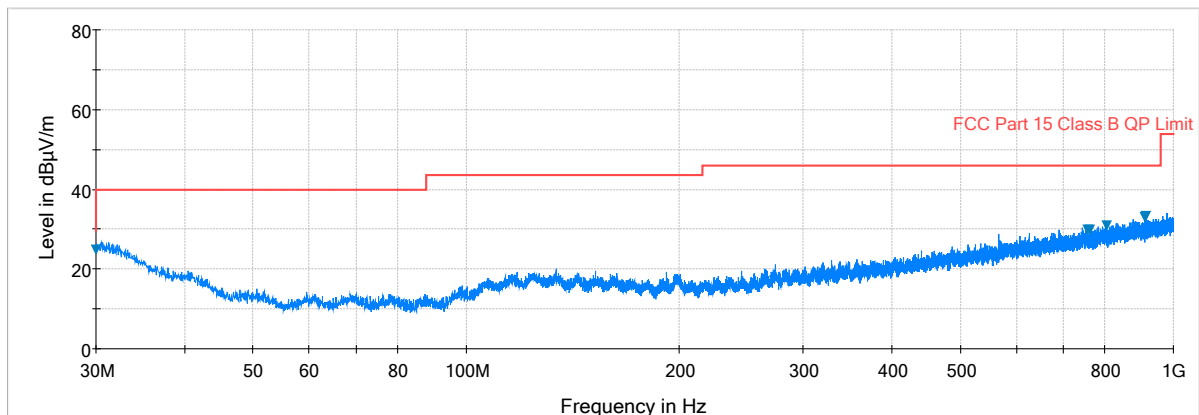
Preview Result 1H-PK+    FCC Part 15 Class B QP Limit    Final\_Result PK+

**Plot 7-291. Radiated Spurious Plot below 1GHz (2.4GHz – 5GHz, Ant. Pol. H)**





Preview Result 1H-PK+    FCC Part 15 Class B QP Limit    Final\_Result PK+

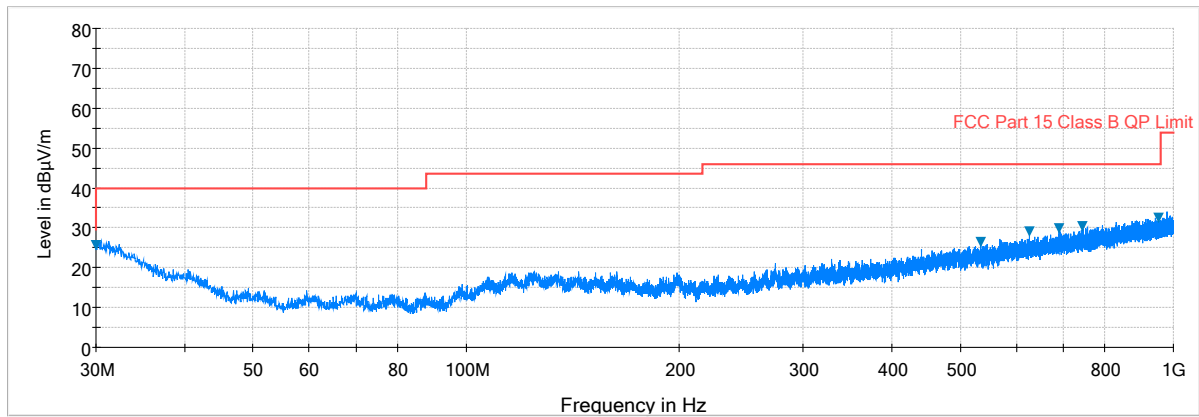
**Plot 7-292. Radiated Spurious Plot below 1GHz (2.4GHz – 5GHz, Ant. Pol. V)**



Preview Result 1H-PK+    FCC Part 15 Class B QP Limit    Final\_Result PK+

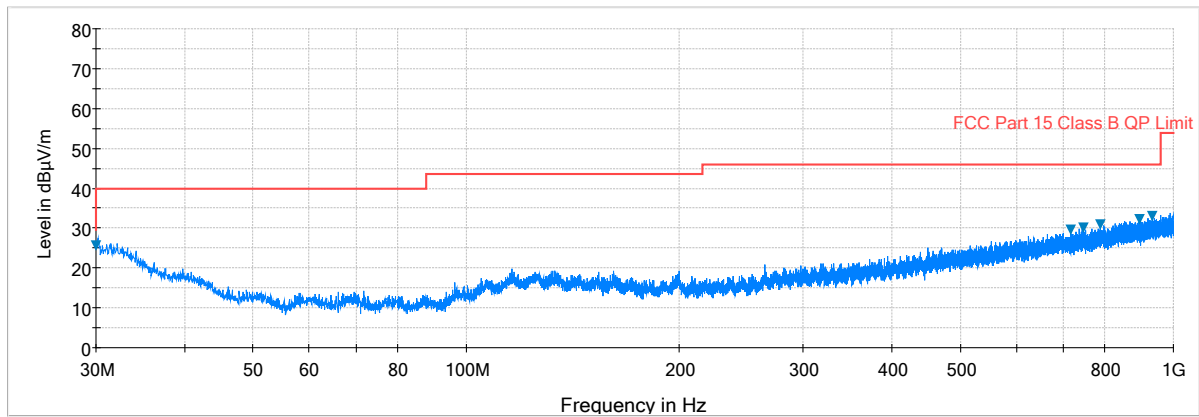
**Plot 7-293. Radiated Spurious Plot below 1GHz (5GHz – 2.4 GHz, Ant. Pol. H)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 250 of 258



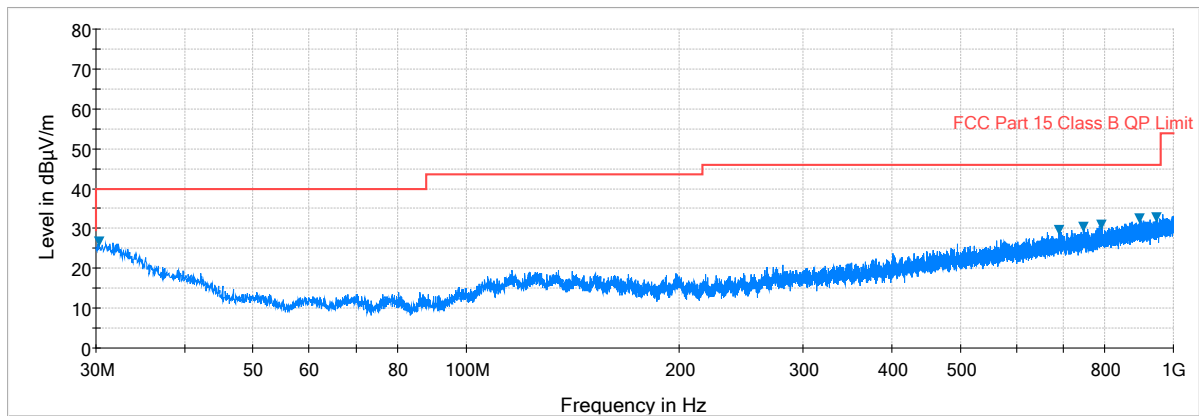
Preview Result 1H-PK+    FCC Part 15 Class B QP Limit    Final\_Result PK+

**Plot 7-294. Radiated Spurious Plot below 1GHz (5GHz – 2.4 GHz, Ant. Pol. V)**



Preview Result 1H-PK+    FCC Part 15 Class B QP Limit    Final\_Result PK+

**Plot 7-295. Radiated Spurious Plot below 1GHz (Dual Band Simult. Tx, Ant. Pol. H)**



Preview Result 1H-PK+    FCC Part 15 Class B QP Limit    Final\_Result PK+

**Plot 7-296. Radiated Spurious Plot below 1GHz (Dual Band Simult. Tx, Ant. Pol. V)**

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 251 of 258	

## 7.9 Line-Conducted Test Data

§15.407

### Test Overview and Limit

All AC line conducted spurious emissions are measured with a receiver connected to a grounded LISN while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates and modes were investigated for conducted spurious emissions. Only the conducted emissions of the configuration that produced the worst case emissions are reported in this section.

**All conducted emissions must not exceed the limits shown in the table below, per Section 15.207.**

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

**Table 7-68. Conducted Limits**

\*Decreases with the logarithm of the frequency.

### Test Procedures Used

ANSI C63.10-2013, Section 6.2



### Test Settings

#### Quasi-Peak Field Strength Measurements

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

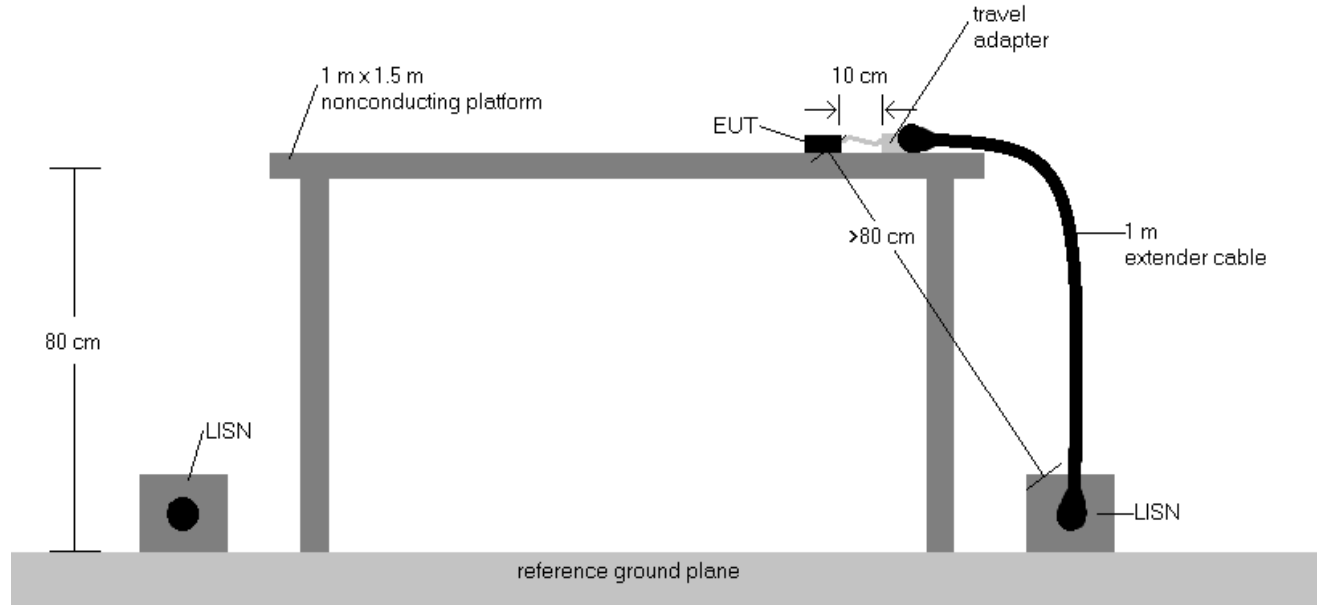
#### Average Field Strength Measurements

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

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset	Page 252 of 258	

## Test Setup



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

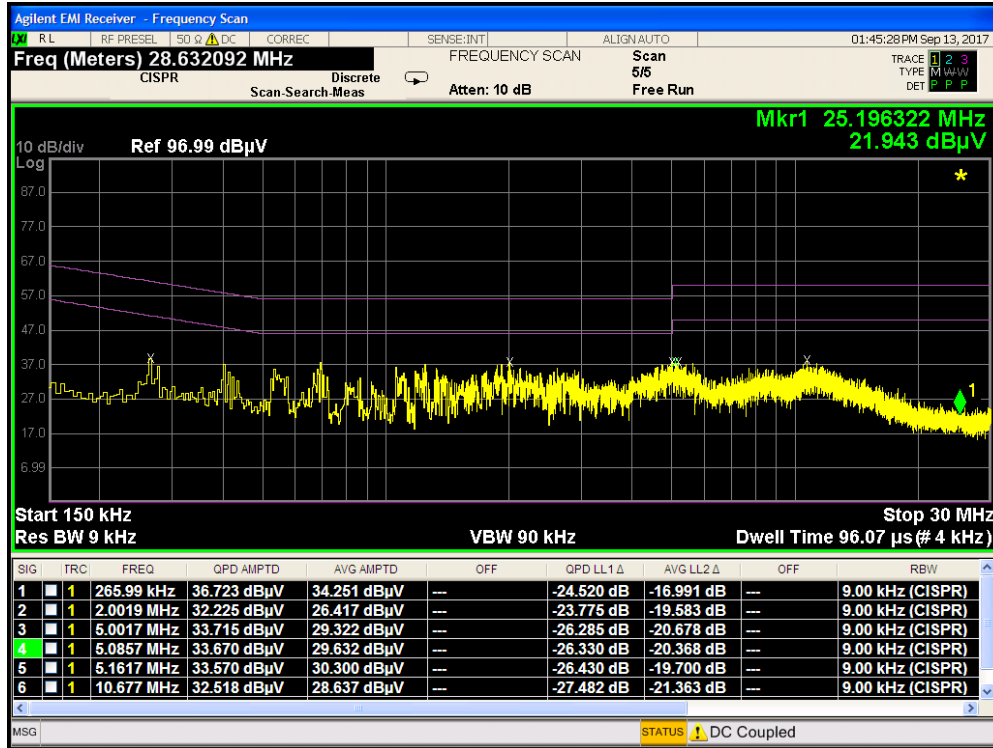


**Figure 7-8. Test Instrument & Measurement Setup**

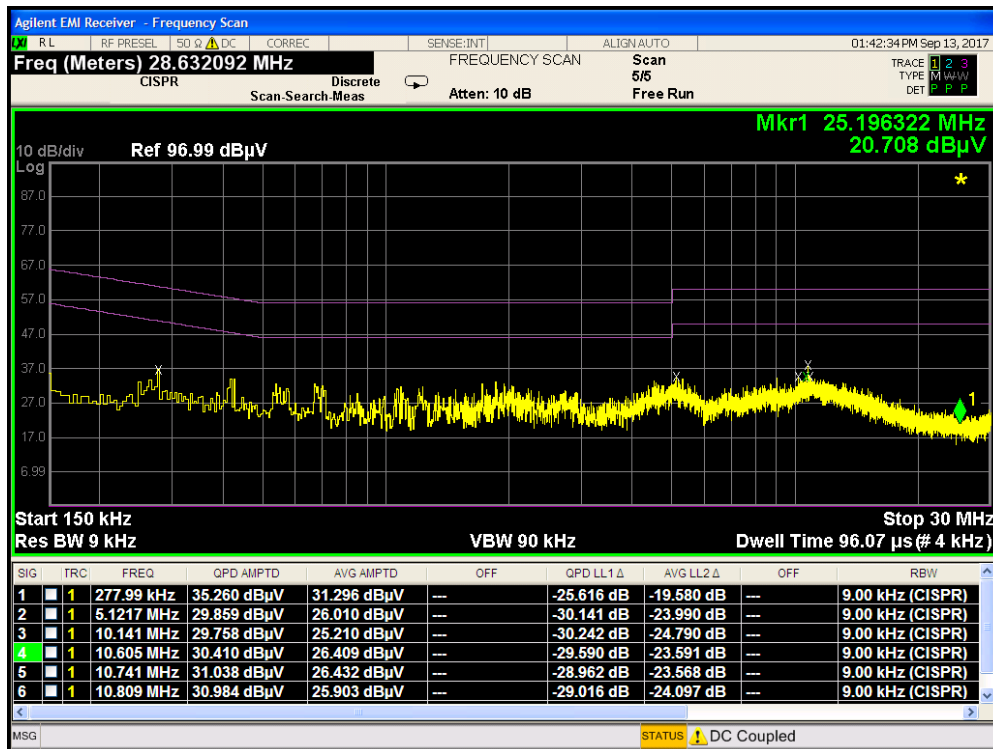
## Test Notes

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

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 253 of 258



Plot 7-297. Line Conducted Plot with 802.11a UNII Band 1 (L1)

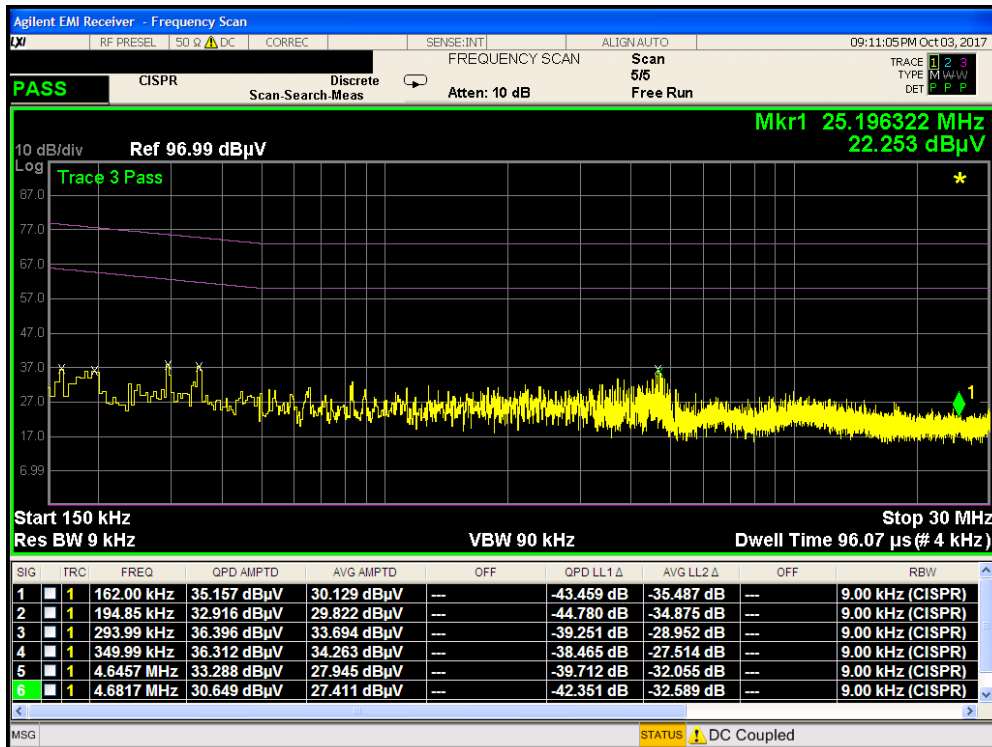


Plot 7-298. Line Conducted Plot with 802.11a UNII Band 1 (N)

FCC ID: A3L5MG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 254 of 258

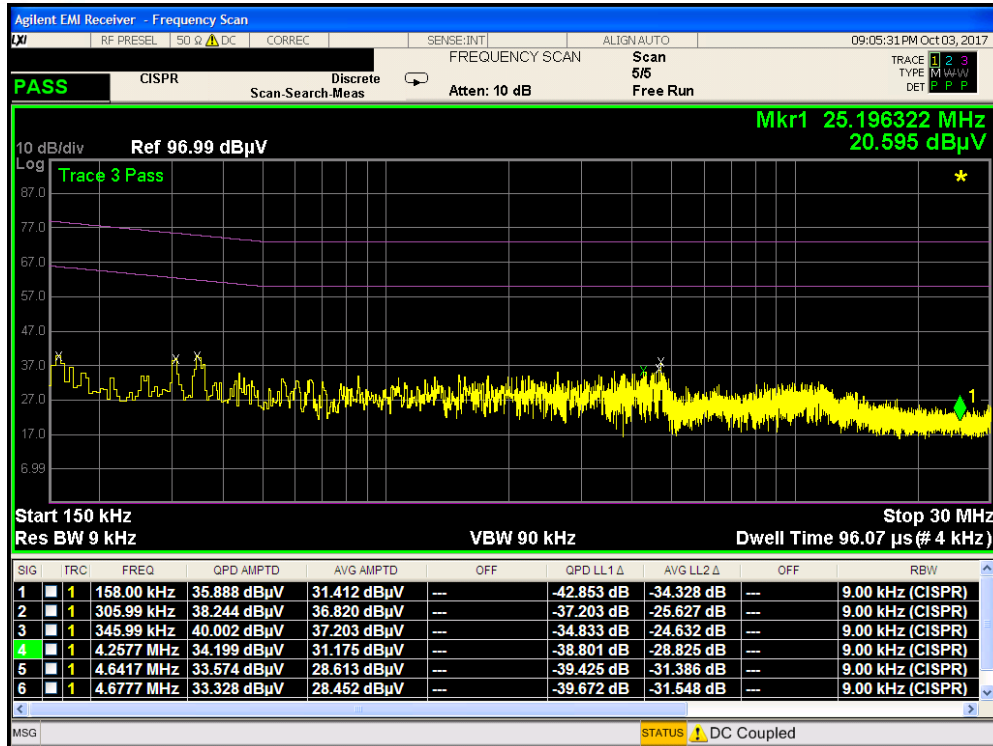


Plot 7-299. Line Conducted Plot with 802.11a UNII Band 2A (L1)



Plot 7-300. Line Conducted Plot with 802.11a UNII Band 2A (N)

FCC ID: A3LSMG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 255 of 258

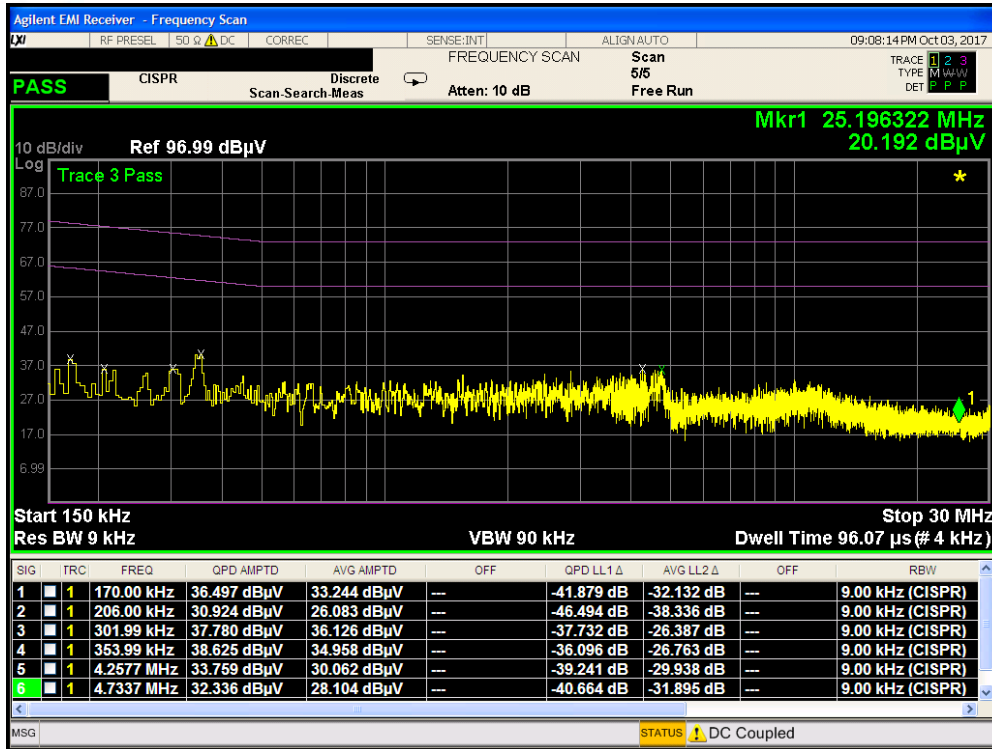


Plot 7-301. Line Conducted Plot with 802.11a UNII Band 2C (L1)

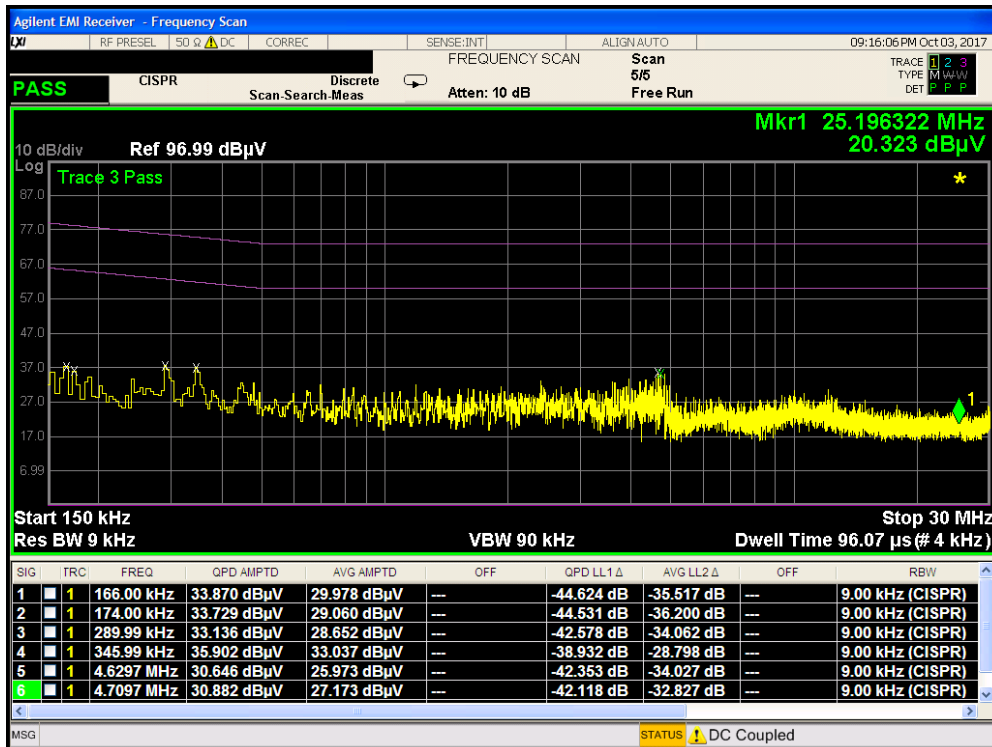


Plot 7-302. Line Conducted Plot with 802.11a UNII Band 2C (N)

FCC ID: A3L5MG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 256 of 258



Plot 7-303. Line Conducted Plot with 802.11a UNII Band 3 (L1)





Plot 7-304. Line Conducted Plot with 802.11a UNII Band 3 (N)

FCC ID: A3L5MG892U		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1709080250-06.A3L	Test Dates: 09/08/2017-10/04/2017	EUT Type: Portable Handset		Page 257 of 258

## 8.0 CONCLUSION

The data collected relate only the item(s) tested and show that the **Samsung Portable Handset FCC ID: A3LSMG892U** is in compliance with Part 15E of the FCC Rules.

<b>FCC ID:</b> A3LSMG892U		<b>FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Approved by:</b> Quality Manager
<b>Test Report S/N:</b> 1M1709080250-06.A3L	<b>Test Dates:</b> 09/08/2017-10/04/2017	<b>EUT Type:</b> Portable Handset	Page 258 of 258	