

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)	5,179,999,975	-25	-0.00000048
100 %		- 30	5,180,000,000	0	0.00000000
100 %		- 20	5,179,999,821	-179	-0.00000346
100 %		- 10	5,179,999,964	-36	-0.00000069
100 %		0	5,179,999,934	-66	-0.00000127
100 %		+ 10	5,179,999,596	-404	-0.00000780
100 %		+ 20	5,179,999,575	-425	-0.00000820
100 %		+ 30	5,179,999,768	-232	-0.00000448
100 %		+ 40	5,180,000,266	266	0.00000514
100 %		+ 50	5,180,000,005	5	0.00000010
BATT. ENDPOINT	3.45	+ 20	5,180,000,040	40	0.00000077

Table 7-9. 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.

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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)	5,260,000,156	156	0.00000297
100 %		- 30	5,260,000,213	213	0.00000405
100 %		- 20	5,260,000,226	226	0.00000430
100 %		- 10	5,260,000,272	272	0.00000517
100 %		0	5,259,999,839	-161	-0.00000306
100 %		+ 10	5,259,999,951	-49	-0.00000093
100 %		+ 20	5,260,000,041	41	0.00000078
100 %		+ 30	5,260,000,082	82	0.00000156
100 %		+ 40	5,260,000,223	223	0.00000424
100 %		+ 50	5,260,000,339	339	0.00000644
BATT. ENDPOINT	3.45	+ 20	5,259,999,675	-325	-0.00000618

Table 7-10. 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.

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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)	5,500,000,081	81	0.00000147
100 %		- 30	5,499,999,781	-219	-0.00000398
100 %		- 20	5,499,999,853	-147	-0.00000267
100 %		- 10	5,499,999,702	-298	-0.00000542
100 %		0	5,500,000,088	88	0.00000160
100 %		+ 10	5,500,000,161	161	0.00000293
100 %		+ 20	5,500,000,231	231	0.00000420
100 %		+ 30	5,500,000,036	36	0.00000065
100 %		+ 40	5,500,000,129	129	0.00000235
100 %		+ 50	5,500,000,084	84	0.00000153
BATT. ENDPOINT	3.45	+ 20	5,499,999,963	-37	-0.00000067

Table 7-11. 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.

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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)	5,744,999,878	-122	-0.00000212
100 %		- 30	5,744,999,812	-188	-0.00000327
100 %		- 20	5,745,000,061	61	0.00000106
100 %		- 10	5,744,999,961	-39	-0.00000068
100 %		0	5,744,999,919	-81	-0.00000141
100 %		+ 10	5,745,000,112	112	0.00000195
100 %		+ 20	5,744,999,998	-2	-0.00000003
100 %		+ 30	5,745,000,296	296	0.00000515
100 %		+ 40	5,745,000,036	36	0.00000063
100 %		+ 50	5,745,000,312	312	0.00000543
BATT. ENDPOINT	3.45	+ 20	5,744,999,959	-41	-0.00000071

Table 7-12. 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.

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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 v01r03, 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 7-13 per Section 15.209.

Frequency	Field Strength [μV/m]	Measured Distance [Meters]
Above 960.0 MHz	500	3

Table 7-13. Radiated Limits

Test Procedures Used

KDB 789033 D02 v01r03 – Section G

Test Settings

Average Measurements above 1GHz (Method AD)

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

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Peak Measurements above 1GHz

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

Peak Measurements below 1GHz

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

Test Setup

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

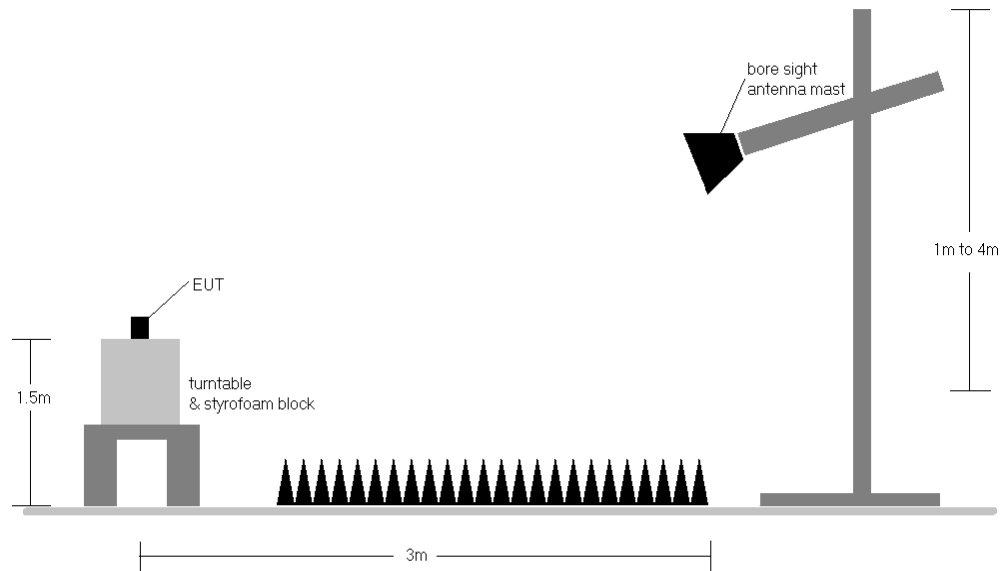


Figure 7-5. Test Instrument & Measurement Setup

Test Notes

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1. All radiated spurious emissions levels were measured in a radiated test setup per the guidance of KDB 789033 D02 v01r03 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 7-13.
3. All spurious emissions lying in restricted bands specified in §15.205 are below the limit shown in Table 7-13. All spurious emissions that do not lie in a restricted band are subject to a peak limit of -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions of 68.2dBμV/m.
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. 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.
9. The “-” shown in the following RSE tables are used to denote a noise floor measurement.

Sample Calculations

Determining Spurious Emissions Levels

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

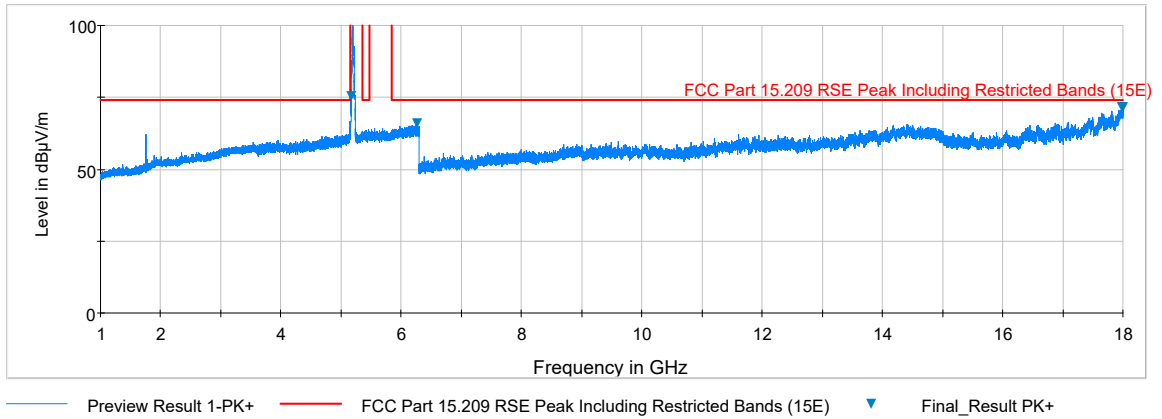
Radiated Band Edge Measurement Offset

- The amplitude offset shown in the radiated restricted band edge plots in Section 7.7.2 was calculated using the formula:

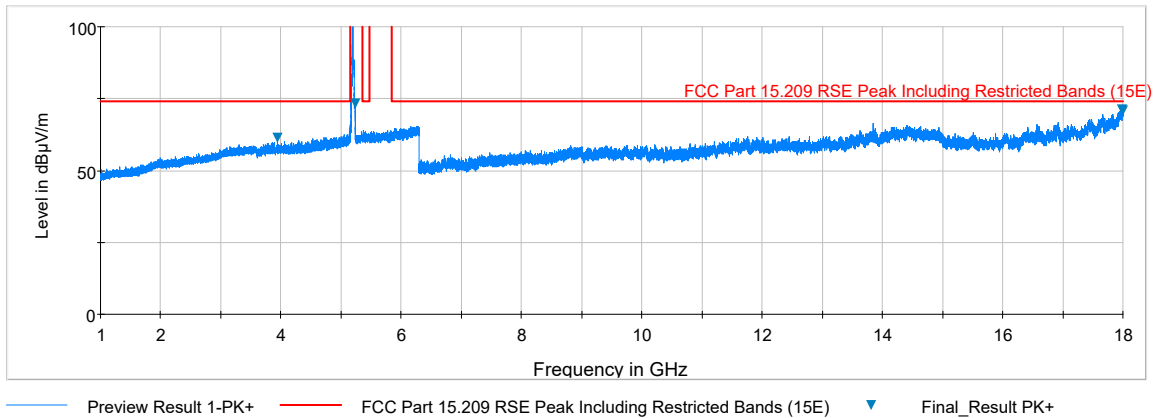
$$\text{Offset (dB)} = (\text{Antenna Factor} + \text{Cable Loss} + \text{Attenuator}) - \text{Preamplifier Gain}$$

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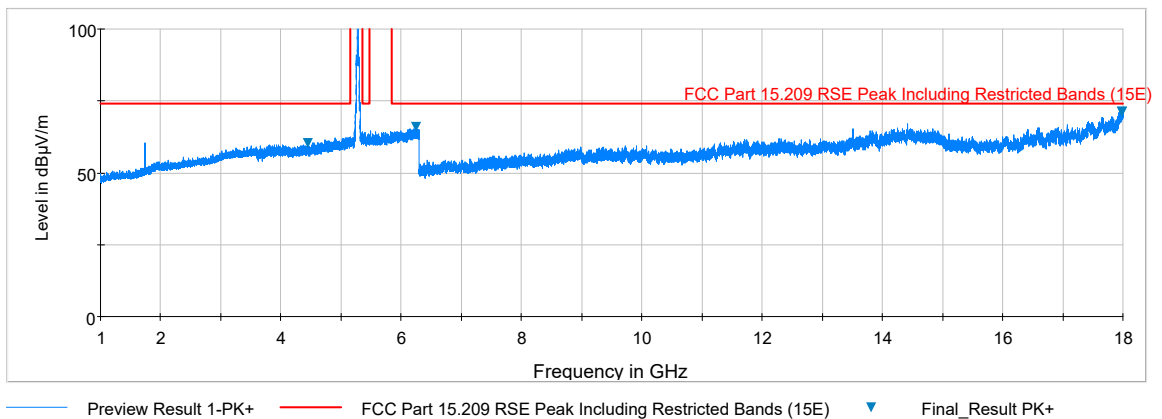
7.7.1 Radiated Spurious Emission Measurements



Plot 7-79. Radiated Spurious Plot above 1GHz (802.11a – U1 Ch. 40, Ant. Pol. H)

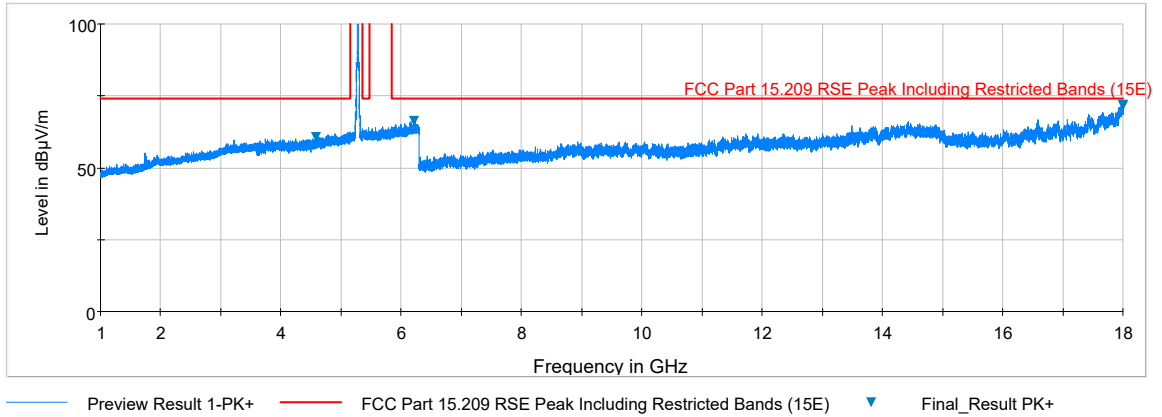


Plot 7-80. Radiated Spurious Plot above 1GHz (802.11a – U1 Ch. 40, Ant. Pol. V)

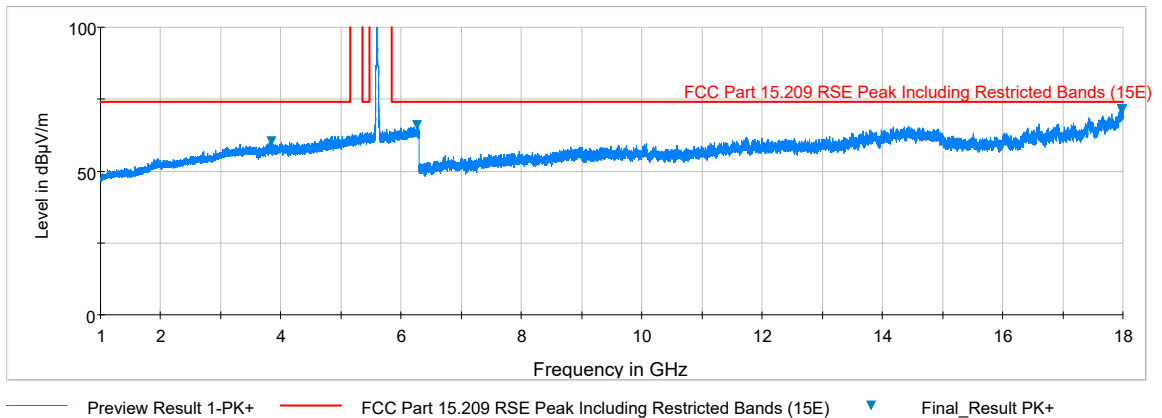


Plot 7-81. Radiated Spurious Plot above 1GHz (802.11a – U2A Ch. 56, Ant. Pol. H)

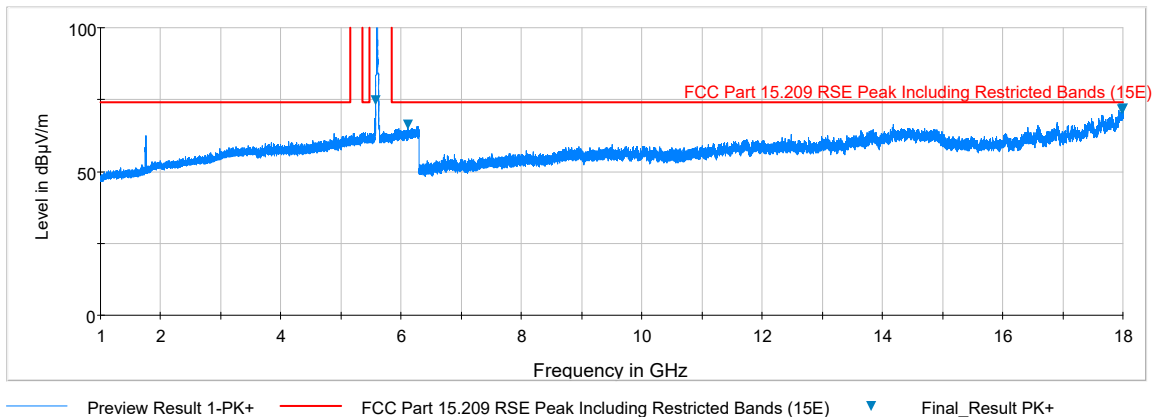
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Plot 7-82. Radiated Spurious Plot above 1GHz (802.11a – U2A Ch. 56, Ant. Pol. V)

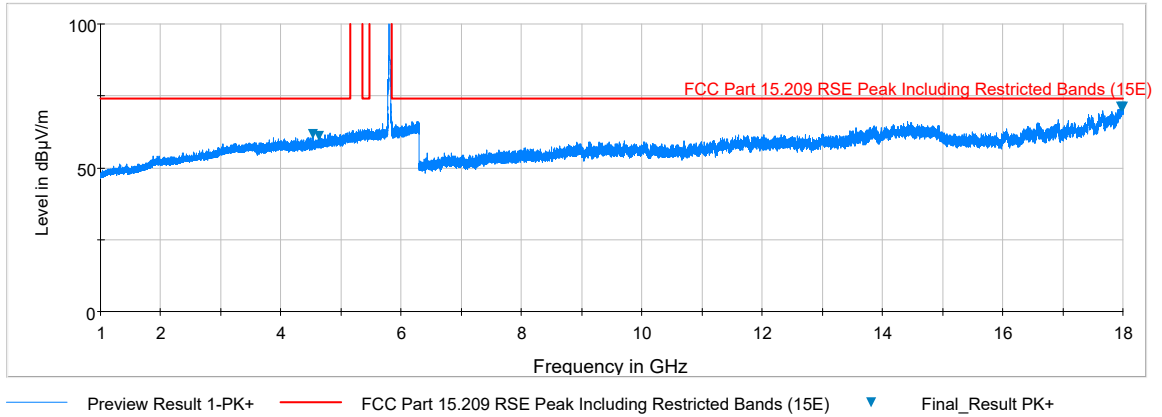


Plot 7-83. Radiated Spurious Plot above 1GHz (802.11a – U2C Ch. 116, Ant. Pol. H)

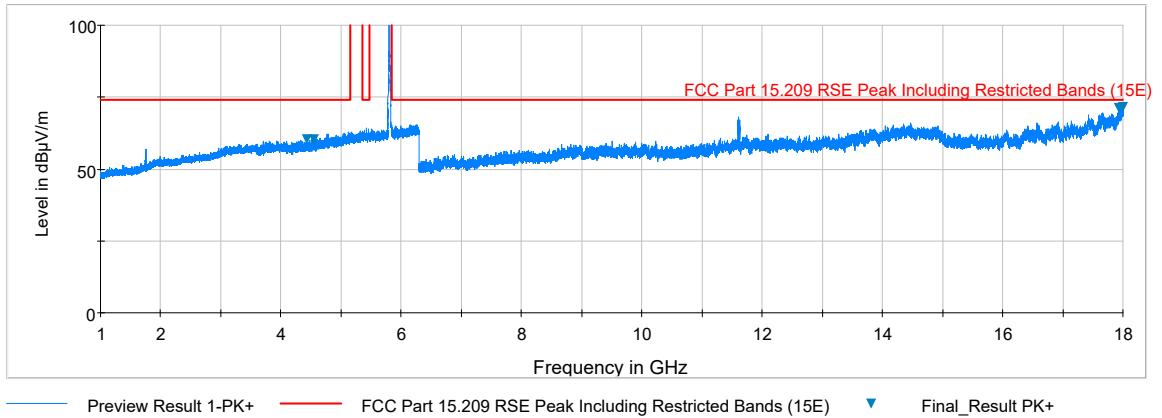


Plot 7-84. Radiated Spurious Plot above 1GHz (802.11a – U2C Ch. 116, Ant. Pol. V)

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Plot 7-85. Radiated Spurious Plot above 1GHz (802.11a – U3 Ch. 157, Ant. Pol. H)

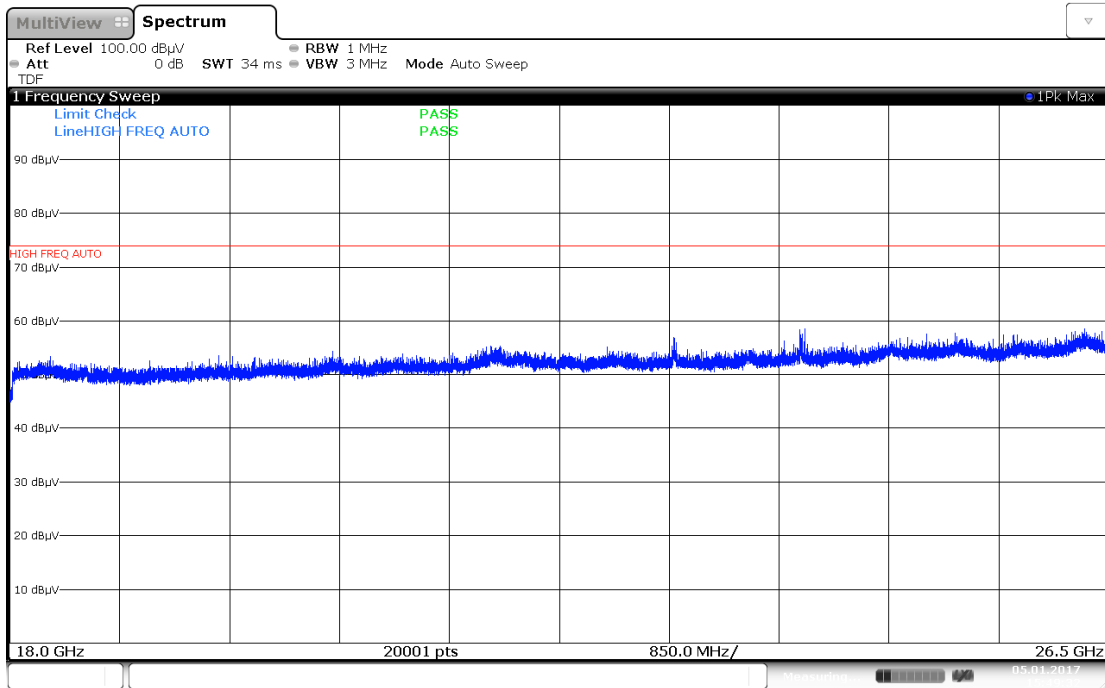


Plot 7-86. Radiated Spurious Plot above 1GHz (802.11a – U3 Ch. 157, Ant. Pol. V)

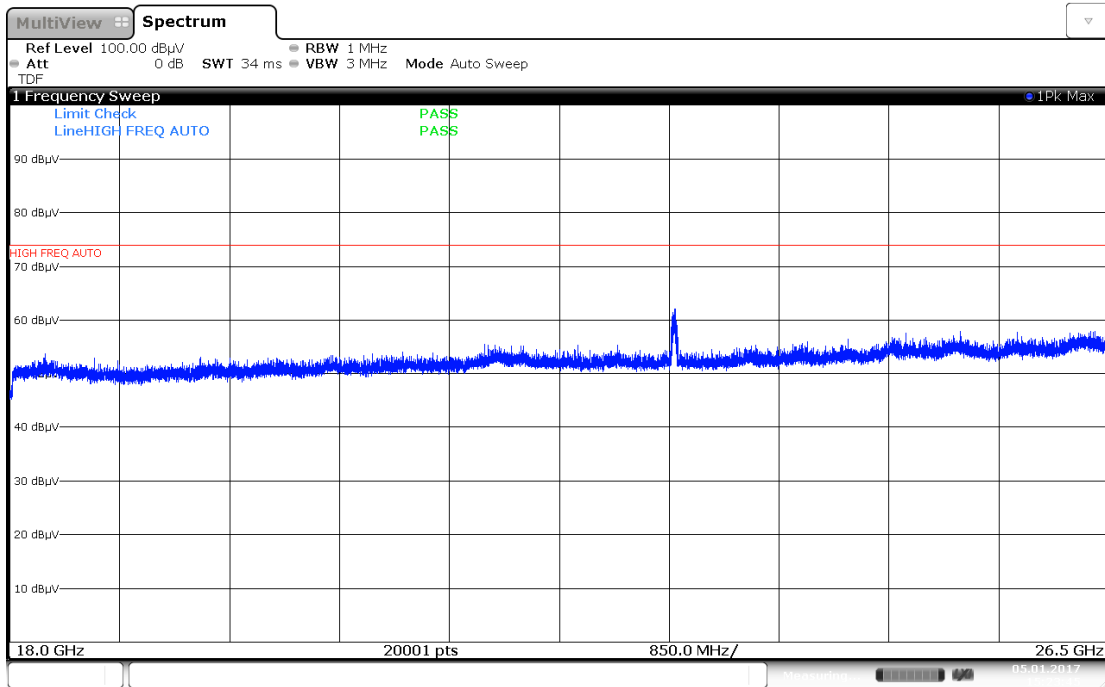
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Radiated Spurious Emissions Measurements (Above 18GHz)

\$15.209



Plot 7-87. Radiated Spurious Plot 18GHz - 26.5GHz (802.11a – Ant. Pol. H)



Plot 7-88. Radiated Spurious Plot above 18GHz - 26.5GHz (802.11a – Ant. Pol. V)

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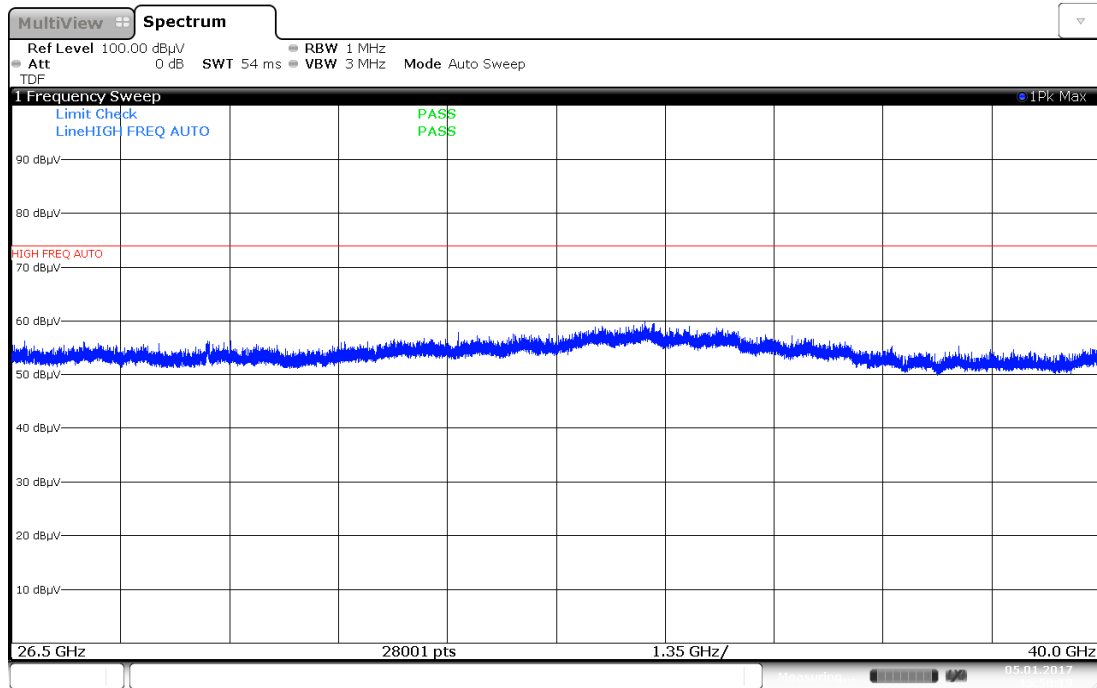
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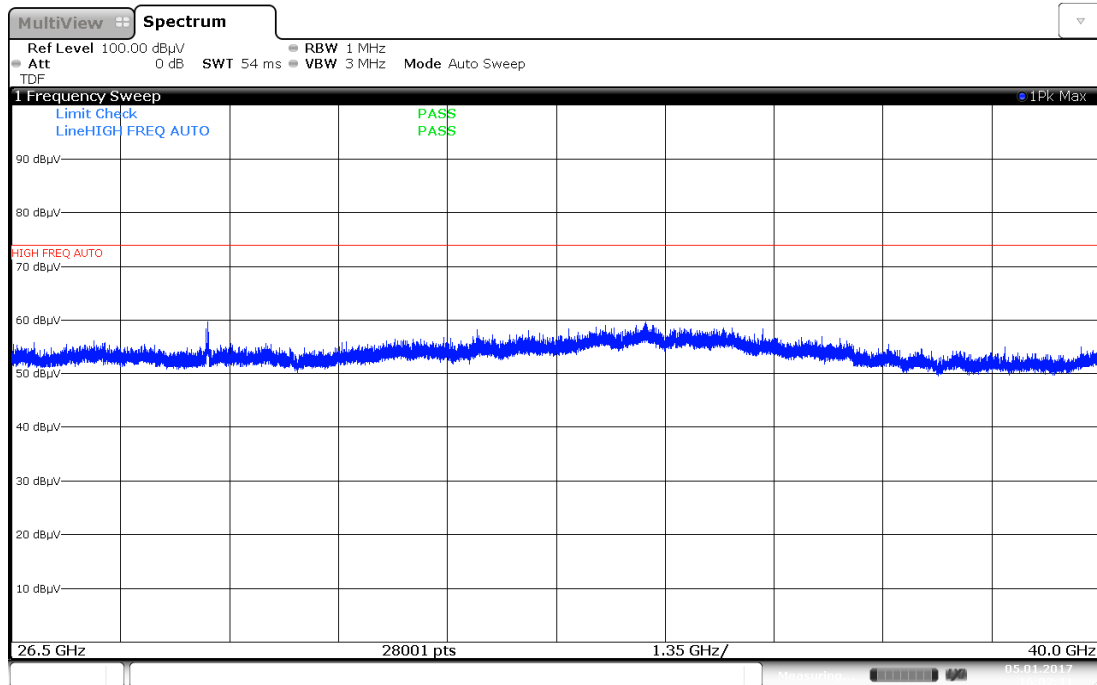
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Radiated Spurious Emissions Measurements (Above 18GHz)

\$15.209



Plot 7-89. Radiated Spurious Plot 26.5GHz - 40GHz (802.11a – Ant. Pol. H)



Plot 7-90. Radiated Spurious Plot above 26.5GHz - 40GHz (802.11a – Ant. Pol. V)

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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 & 3 Meters
Operating Frequency: 5180MHz
Channel: 36

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10360.00	Peak	H	-	-	-57.97	12.69	0.00	61.72	68.20	-6.48
* 15540.00	Average	H	-	-	-73.79	17.58	0.00	50.79	53.98	-3.19
* 15540.00	Peak	H	-	-	-61.05	17.58	0.00	63.53	73.98	-10.45
* 20720.00	Average	H	150	42	-98.12	44.23	-9.54	43.56	53.98	-10.42
* 20720.00	Peak	H	150	42	-91.50	44.23	-9.54	50.18	73.98	-23.80
25900.00	Peak	H	-	-	-92.71	45.08	-9.54	49.83	68.20	-18.37

Table 7-14. Radiated Measurements

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10400.00	Peak	H	-	-	-58.41	13.01	0.00	61.60	68.20	-6.60
* 15600.00	Average	H	-	-	-73.49	17.45	0.00	50.96	53.98	-3.02
* 15600.00	Peak	H	-	-	-61.17	17.45	0.00	63.28	73.98	-10.70
* 20800.00	Average	H	150	11	-99.06	44.12	-9.54	42.52	53.98	-11.46
* 20800.00	Peak	H	150	11	-92.26	44.12	-9.54	49.32	73.98	-24.66
26000.00	Peak	H	-	-	-93.40	45.22	-9.54	49.28	68.20	-18.92

Table 7-15. Radiated Measurements

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10480.00	Peak	H	-	-	-58.48	12.88	0.00	61.40	68.20	-6.80
* 15720.00	Average	H	-	-	-74.01	17.90	0.00	50.89	53.98	-3.09
* 15720.00	Peak	H	-	-	-61.81	17.90	0.00	63.09	73.98	-10.89
* 20960.00	Average	H	150	52	-100.10	44.20	-9.54	41.56	53.98	-12.42
* 20960.00	Peak	H	150	52	-92.84	44.20	-9.54	48.82	73.98	-25.16
26200.00	Peak	H	-	-	-92.29	45.04	-9.54	50.20	68.20	-18.00

Table 7-16. Radiated Measurements

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10520.00	Peak	H	-	-	-57.85	12.81	0.00	61.96	68.20	-6.24
* 15780.00	Average	H	-	-	-73.88	17.62	0.00	50.74	53.98	-3.24
* 15780.00	Peak	H	-	-	-61.27	17.62	0.00	63.35	73.98	-10.63
* 21040.00	Average	H	150	29	-100.85	44.45	-9.54	41.06	53.98	-12.92
* 21040.00	Peak	H	150	29	-92.78	44.45	-9.54	49.13	73.98	-24.85
26300.00	Peak	H	-	-	-91.91	45.21	-9.54	50.76	68.20	-17.44

Table 7-17. Radiated Measurements

FCC ID: A3LSMJ727P	 FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 0Y1612302086.A3L	Test Dates: 12/28/2016 - 01/26/2017	EUT Type: Portable Handset	Page 74 of 105

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10560.00	Peak	H	-	-	-58.69	13.19	0.00	61.50	68.20	-6.70
* 15840.00	Average	H	-	-	-74.25	18.14	0.00	50.89	53.98	-3.09
* 15840.00	Peak	H	-	-	-61.55	18.14	0.00	63.59	73.98	-10.39
* 21120.00	Average	H	150	46	-99.21	44.29	-9.54	42.54	53.98	-11.44
* 21120.00	Peak	H	150	46	-92.38	44.29	-9.54	49.37	73.98	-24.61
26400.00	Peak	H	-	-	-91.23	45.05	-9.54	51.28	68.20	-16.92

Table 7-18. Radiated Measurements

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 10640.00	Average	H	121	320	-70.88	13.63	0.00	49.75	53.98	-4.23
* 10640.00	Peak	H	121	320	-58.06	13.63	0.00	62.57	73.98	-11.41
* 15960.00	Average	H	-	-	-74.08	17.91	0.00	50.83	53.98	-3.15
* 15960.00	Peak	H	-	-	-61.54	17.91	0.00	63.37	73.98	-10.61
* 21280.00	Average	H	150	37	-98.10	44.23	-9.54	43.59	53.98	-10.38
* 21280.00	Peak	H	150	37	-91.69	44.23	-9.54	50.00	73.98	-23.97
26600.00	Peak	H	-	-	-101.78	47.89	-9.54	43.56	68.20	-24.64

Table 7-19. Radiated Measurements

FCC ID: A3LSMJ727P	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager	
Test Report S/N: 0Y1612302086.A3L	Test Dates: 12/28/2016 - 01/26/2017	EUT Type: Portable Handset				Page 75 of 105

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11000.00	Average	H	-	-	-71.09	13.98	0.00	49.89	53.98	-4.09
* 11000.00	Peak	H	-	-	-58.70	13.98	0.00	62.28	73.98	-11.70
16500.00	Peak	H	-	-	-62.19	19.93	0.00	64.74	68.20	-3.46
22000.00	Peak	H	150	28	-91.60	44.72	-9.54	50.58	68.20	-17.62
27500.00	Peak	H	-	-	-102.07	48.25	-9.54	43.64	68.20	-24.56

Table 7-20. Radiated Measurements

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11200.00	Average	H	-	-	-71.04	14.29	0.00	50.25	53.98	-3.73
* 11200.00	Peak	H	-	-	-59.81	14.29	0.00	61.48	73.98	-12.50
16800.00	Peak	H	-	-	-62.99	20.91	0.00	64.92	68.20	-3.28
* 22400.00	Average	H	150	223	-98.56	44.55	-9.54	43.45	53.98	-10.53
* 22400.00	Peak	H	150	223	-91.42	44.55	-9.54	50.59	73.98	-23.39
28000.00	Peak	H	-	-	-99.03	48.40	-9.54	46.82	68.20	-21.38

Table 7-21. Radiated Measurements

FCC ID: A3LSMJ727P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 0Y1612302086.A3L	Test Dates: 12/28/2016 - 01/26/2017	EUT Type: Portable Handset		Page 76 of 105

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11440.00	Average	H	-	-	-70.89	14.81	0.00	50.92	53.98	-3.06
* 11440.00	Peak	H	-	-	-63.53	14.81	0.00	58.28	73.98	-15.70
17160.00	Peak	H	-	-	-65.57	23.41	0.00	64.84	68.20	-3.36
* 22880.00	Average	H	150	347	-97.61	44.71	-9.54	44.56	53.98	-9.42
* 22880.00	Peak	H	150	347	-92.04	44.71	-9.54	50.13	73.98	-23.85
28600.00	Peak	H	-	-	-101.25	48.25	-9.54	44.46	68.20	-23.74

Table 7-22. Radiated Measurements

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11490.00	Average	H	-	-	-71.49	15.10	0.00	50.61	53.98	-3.37
* 11490.00	Peak	H	-	-	-63.47	15.10	0.00	58.63	73.98	-15.35
17235.00	Peak	H	-	-	-64.19	21.02	0.00	63.83	68.20	-4.37
* 22980.00	Average	H	150	343	-97.51	44.64	-9.54	44.59	53.98	-9.39
* 22980.00	Peak	H	150	343	-91.29	44.64	-9.54	50.81	73.98	-23.17
28725.00	Peak	H	-	-	-99.93	48.10	-9.54	45.62	68.20	-22.58

Table 7-23. Radiated Measurements

FCC ID: A3LSMJ727P	 FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION) 				Approved by: Quality Manager
Test Report S/N: 0Y1612302086.A3L	Test Dates: 12/28/2016 - 01/26/2017	EUT Type: Portable Handset			Page 77 of 105

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11570.00	Average	H	-	-	-71.43	15.26	0.00	50.83	53.98	-3.15
* 11570.00	Peak	H	-	-	-63.29	15.26	0.00	58.97	73.98	-15.01
17355.00	Peak	H	-	-	-64.88	22.34	0.00	64.46	68.20	-3.74
23140.00	Peak	H	150	326	-90.69	44.59	-9.54	51.35	68.20	-16.85
28925.00	Peak	H	-	-	-100.85	48.14	-9.54	44.75	68.20	-23.45

Table 7-24. Radiated Measurements

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11650.00	Average	H	-	-	-71.67	15.60	0.00	50.93	53.98	-3.05
* 11650.00	Peak	H	-	-	-64.09	15.60	0.00	58.51	73.98	-15.47
17475.00	Peak	H	-	-	-66.78	24.82	0.00	65.04	68.20	-3.16
23300.00	Peak	H	150	316	-91.19	44.53	-9.54	50.80	68.20	-17.40
29125.00	Peak	H	-	-	-100.91	48.12	-9.54	44.67	68.20	-23.53

Table 7-25. Radiated Measurements

FCC ID: A3LSMJ727P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 0Y1612302086.A3L	Test Dates: 12/28/2016 - 01/26/2017	EUT Type: Portable Handset		Page 78 of 105

7.7.2 Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

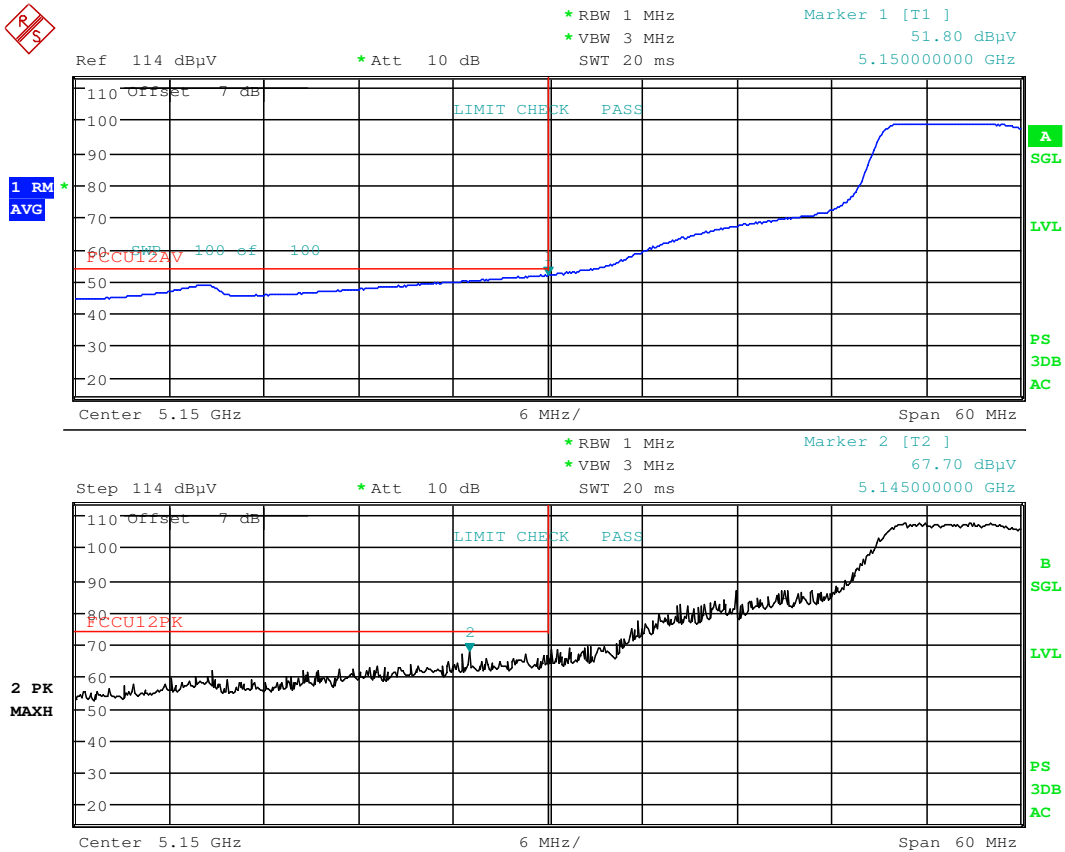
Worst Case Mode: 802.11a

Worst Case Transfer Rate: 6 Mbps

Distance of Measurements: 3 Meters

Operating Frequency: 5180MHz

Channel: 36



Date: 31.DEC.2016 15:13:03

Plot 7-91. Radiated Restricted Lower Band Edge Plot (AVG/PK – UNII Band 1)

FCC ID: A3LSMJ727P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 0Y1612302086.A3L	Test Dates: 12/28/2016 - 01/26/2017	EUT Type: Portable Handset		Page 79 of 105

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Radiated Band Edge Measurements (20MHz BW)

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

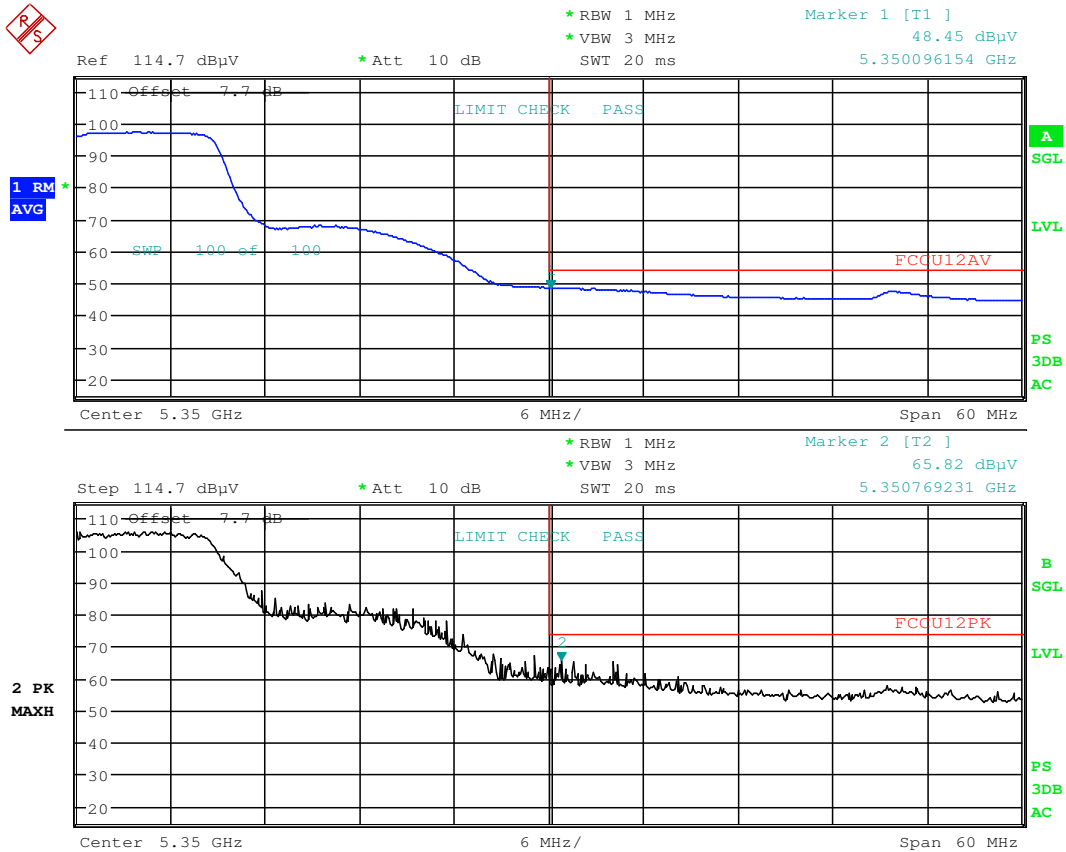
Worst Case Mode: 802.11a

Worst Case Transfer Rate: 6 Mbps

Distance of Measurements: 3 Meters

Operating Frequency: 5320MHz

Channel: 64



Date: 31.DEC.2016 15:20:23

Plot 7-92. Radiated Restricted Upper Band Edge Plot (AVG/PK – UNII Band 2A)

FCC ID: A3LSMJ727P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 0Y1612302086.A3L	Test Dates: 12/28/2016 - 01/26/2017	EUT Type: Portable Handset		Page 80 of 105

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Radiated Band Edge Measurements (20MHz BW)

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

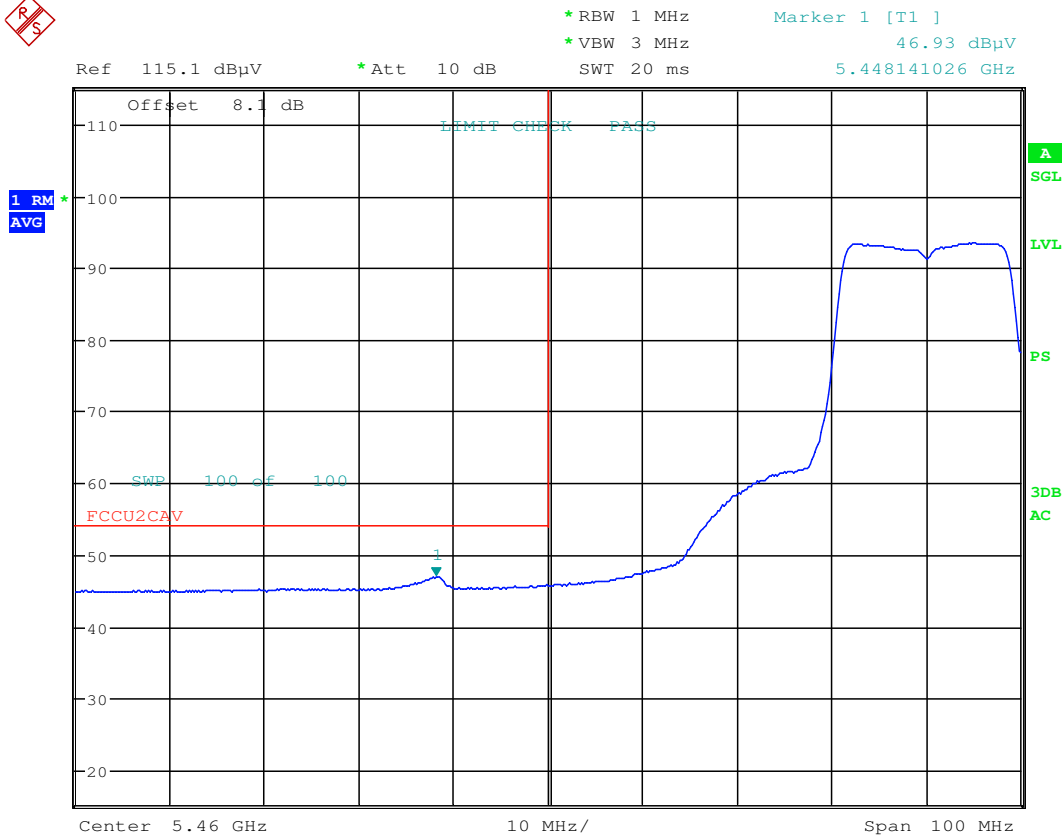
Worst Case Mode: 802.11a

Worst Case Transfer Rate: 6 Mbps

Distance of Measurements: 3 Meters

Operating Frequency: 5500MHz

Channel: 100



Date: 31.DEC.2016 15:27:54

Plot 7-93. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 2C)

FCC ID: A3LSMJ727P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 0Y1612302086.A3L	Test Dates: 12/28/2016 - 01/26/2017	EUT Type: Portable Handset		Page 81 of 105

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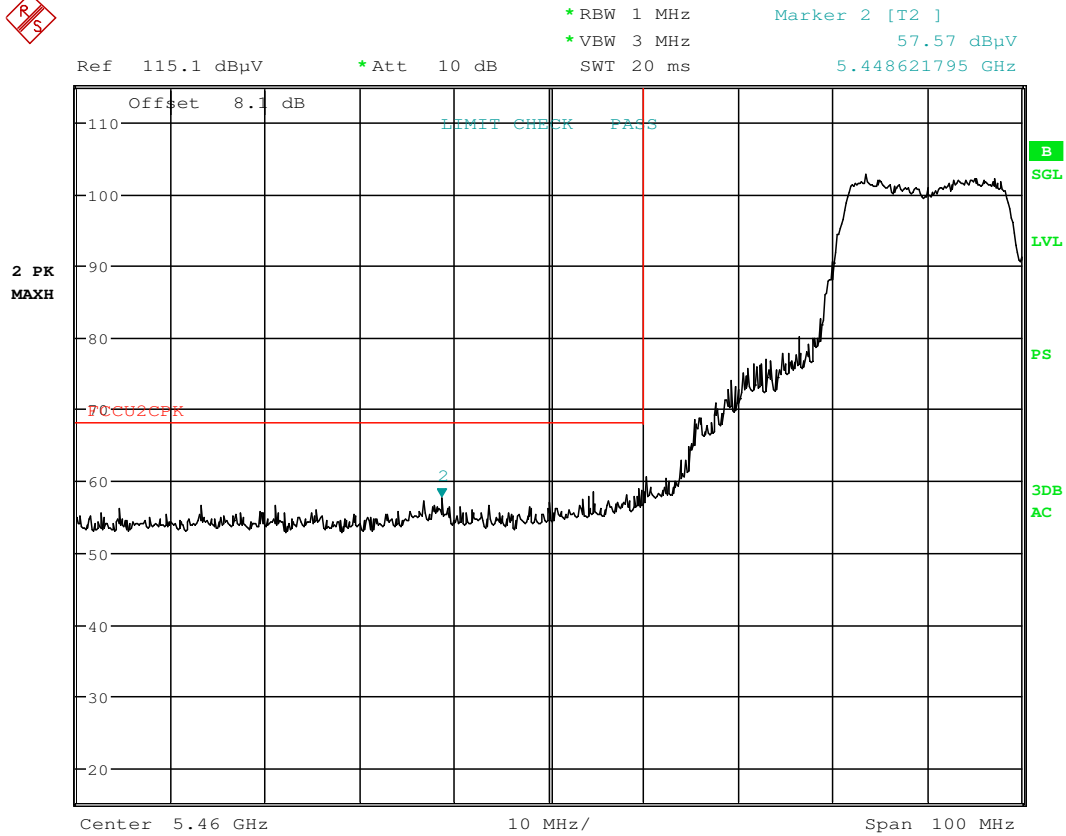
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Radiated Band Edge Measurements (20MHz BW)

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



Date: 31.DEC.2016 15:28:07

Plot 7-94. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)

FCC ID: A3LSMJ727P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 0Y1612302086.A3L	Test Dates: 12/28/2016 - 01/26/2017	EUT Type: Portable Handset		Page 82 of 105

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Radiated Band Edge Measurements (20MHz BW)

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

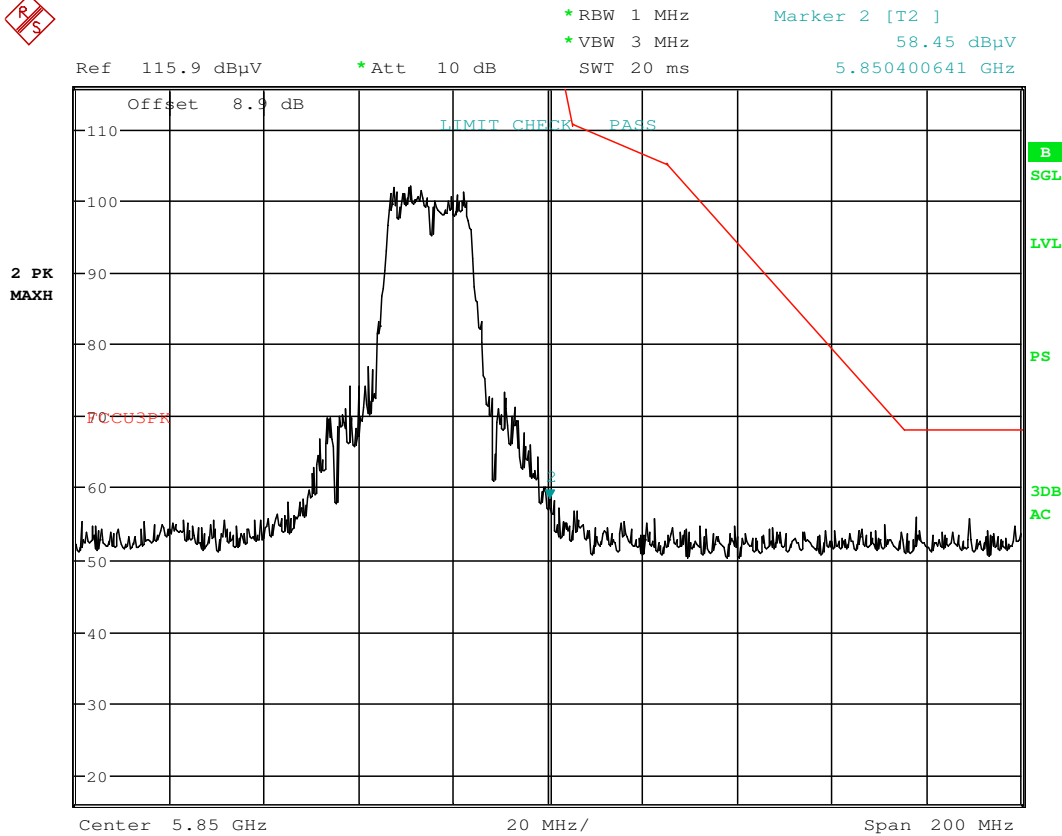
Worst Case Mode: 802.11a

Worst Case Transfer Rate: 6 Mbps

Distance of Measurements: 3 Meters

Operating Frequency: 5825MHz

Channel: 165



Date: 31.DEC.2016 15:37:16

Plot 7-95. Radiated Upper Band Edge Plot (Peak – UNII Band 3)

FCC ID: A3LSMJ727P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 0Y1612302086.A3L	Test Dates: 12/28/2016 - 01/26/2017	EUT Type: Portable Handset		Page 83 of 105

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7.7.3 Radiated Band Edge Measurements (40MHz BW)

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

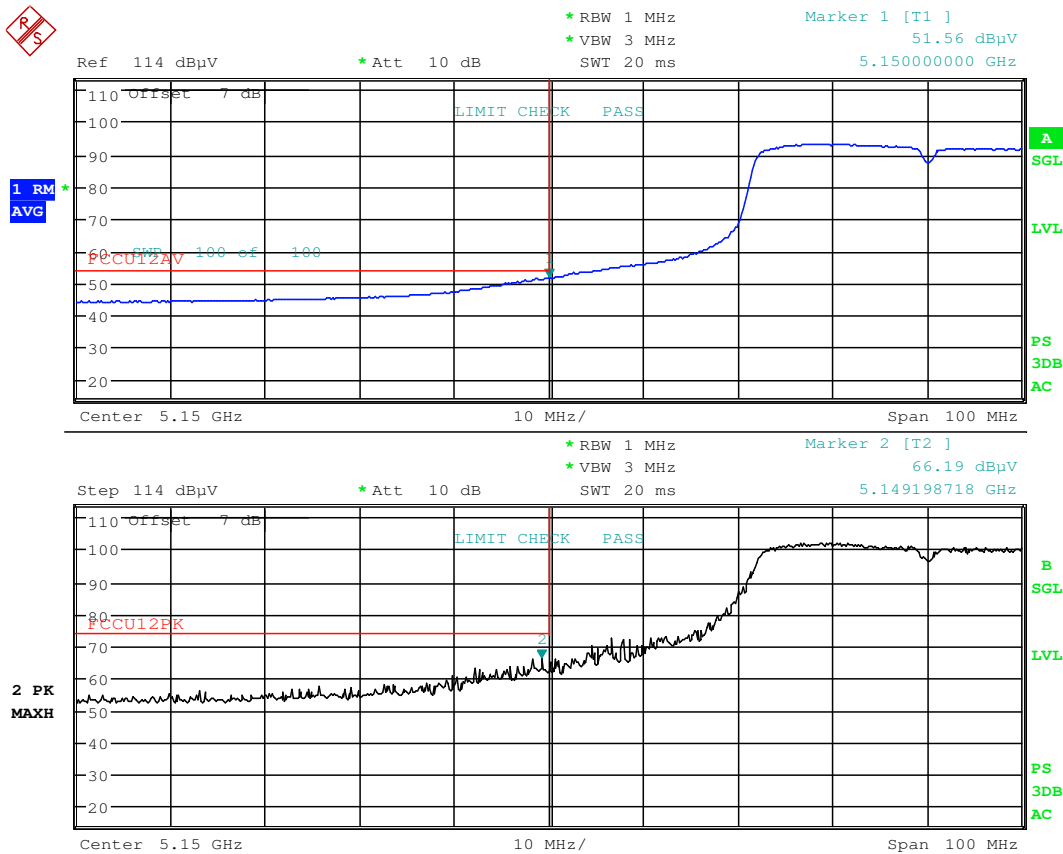
Worst Case Mode: 802.11n (40MHz)

Worst Case Transfer Rate: MCS0

Distance of Measurements: 3 Meters

Operating Frequency: 5190MHz

Channel: 38



Date: 31.DEC.2016 15:14:29

Plot 7-96. Radiated Restricted Lower Band Edge Plot (AVG/PK – UNII Band 1)

FCC ID: A3LSMJ727P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 0Y1612302086.A3L	Test Dates: 12/28/2016 - 01/26/2017	EUT Type: Portable Handset		Page 84 of 105

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Radiated Band Edge Measurements (40MHz BW)

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

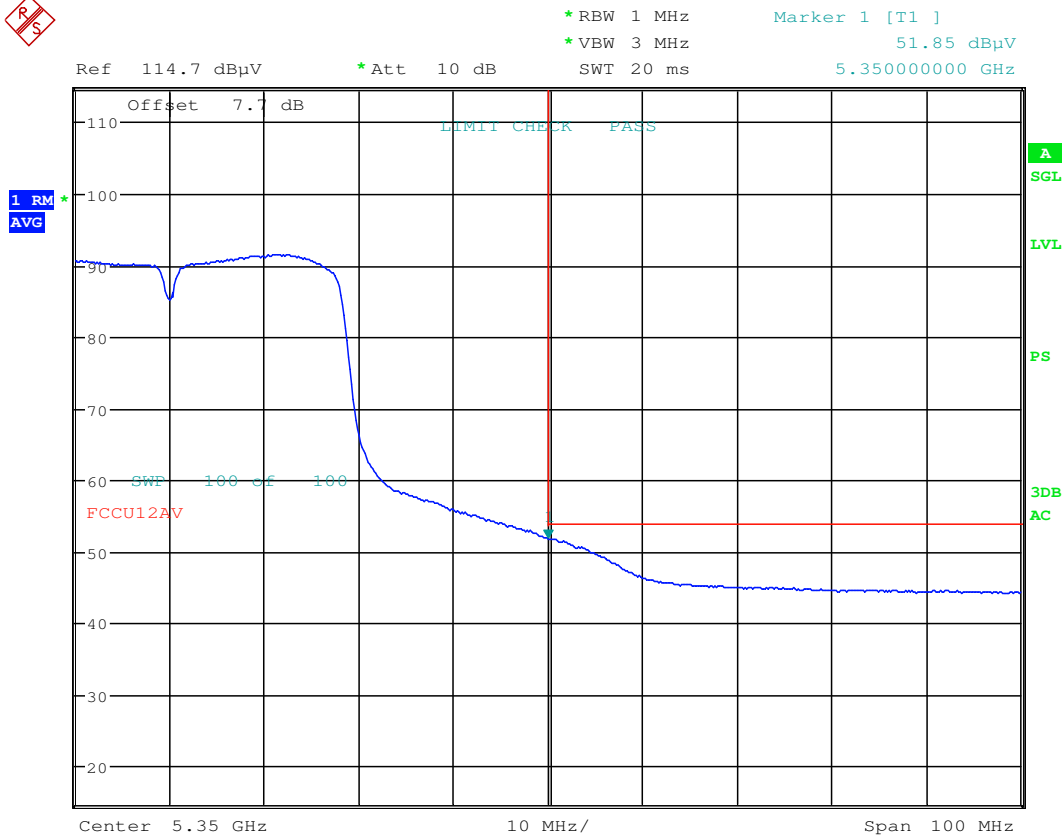
Worst Case Mode: 802.11n (40MHz)

Worst Case Transfer Rate: MCS0

Distance of Measurements: 3 Meters

Operating Frequency: 5310MHz

Channel: 62



Date: 31.DEC.2016 15:22:48

Plot 7-97. Radiated Restricted Upper Band Edge Plot (Average – UNII Band 2A)

FCC ID: A3LSMJ727P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 0Y1612302086.A3L	Test Dates: 12/28/2016 - 01/26/2017	EUT Type: Portable Handset		Page 85 of 105

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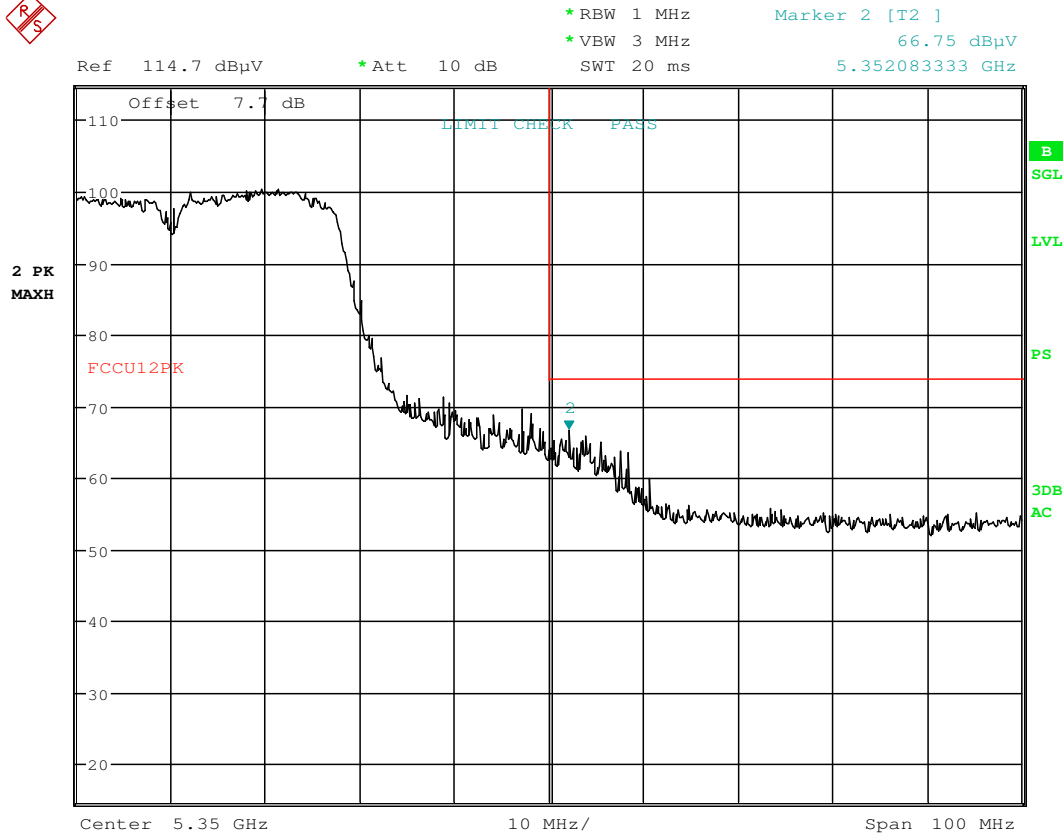
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Radiated Band Edge Measurements (40MHz BW)

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



Date: 31.DEC.2016 15:23:04

Plot 7-98. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)

FCC ID: A3LSMJ727P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 0Y1612302086.A3L	Test Dates: 12/28/2016 - 01/26/2017	EUT Type: Portable Handset		Page 86 of 105

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Radiated Band Edge Measurements (40MHz BW)

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

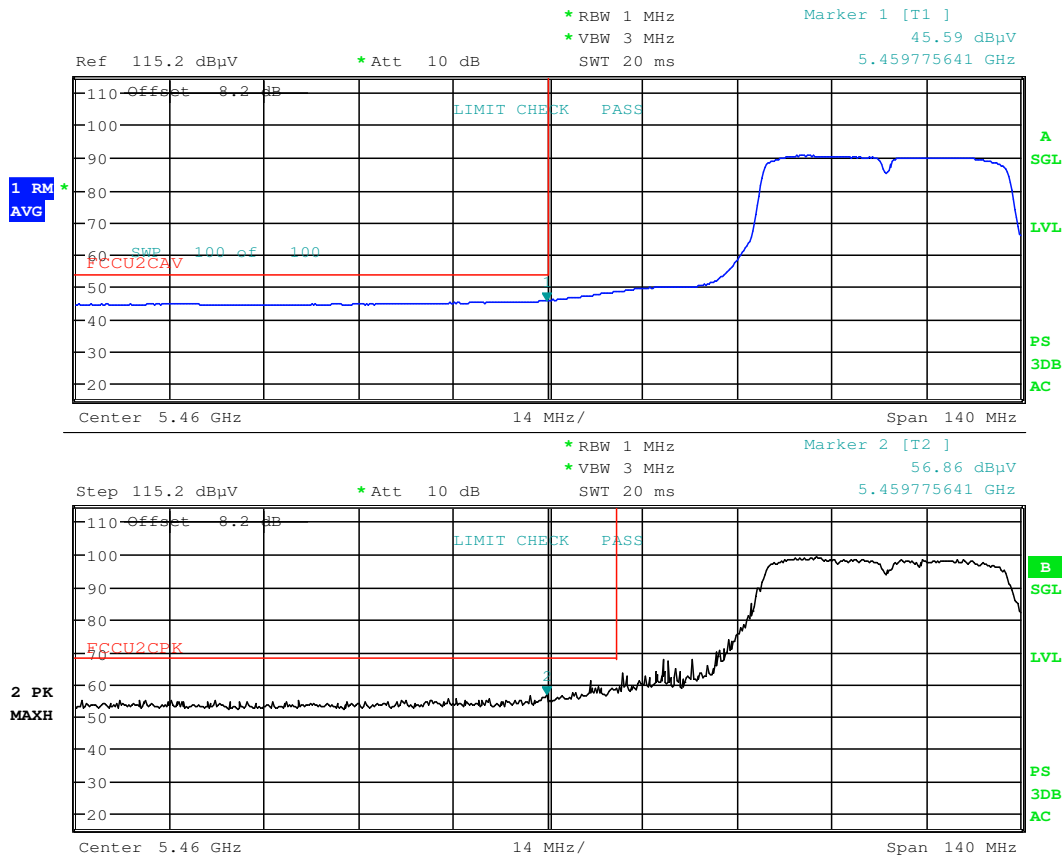
Worst Case Mode: 802.11n (40MHz)

Worst Case Transfer Rate: MCS0

Distance of Measurements: 3 Meters

Operating Frequency: 5510MHz

Channel: 102



Date: 25.JAN.2017 19:02:37

Plot 7-99. Radiated Restricted Lower Band Edge Plot (UNII Band 2C)

FCC ID: A3LSMJ727P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 0Y1612302086.A3L	Test Dates: 12/28/2016 - 01/26/2017	EUT Type: Portable Handset		Page 87 of 105

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Radiated Band Edge Measurements (40MHz BW)

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

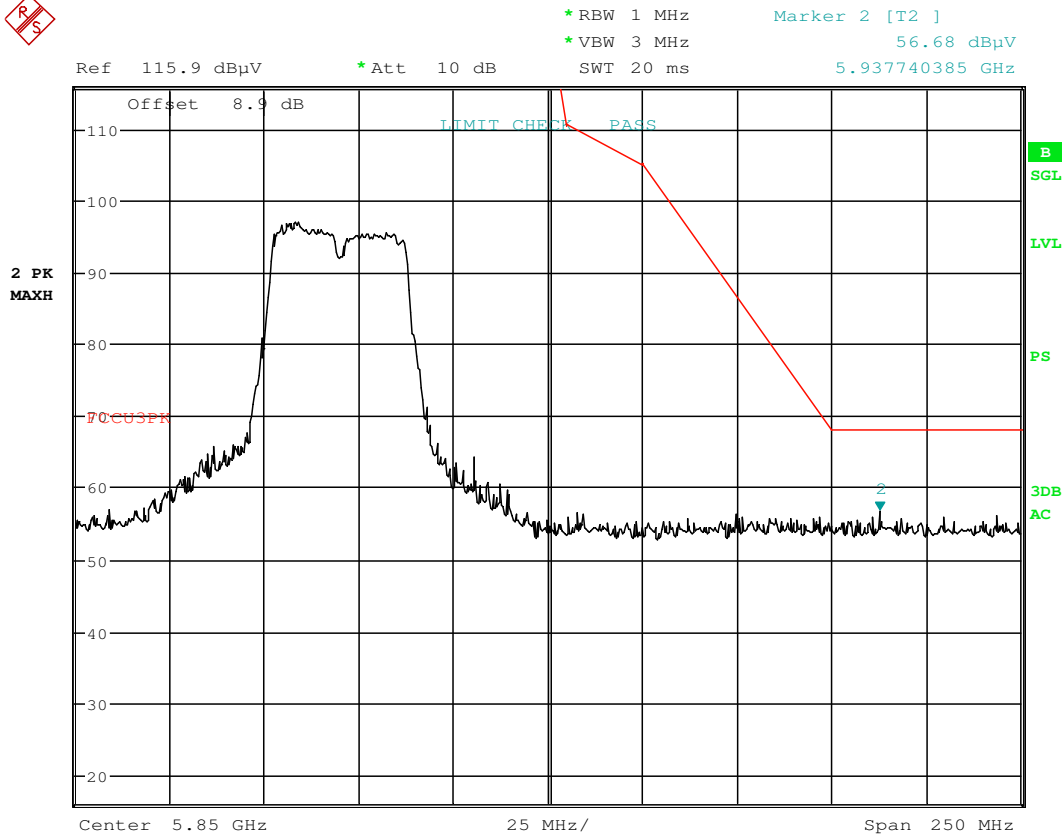
Worst Case Mode: 802.11n (40MHz)

Worst Case Transfer Rate: MCS0

Distance of Measurements: 3 Meters

Operating Frequency: 5795MHz

Channel: 159



Date: 31.DEC.2016 15:38:39

Plot 7-100. Radiated Upper Band Edge Plot (Peak – UNII Band 3)

FCC ID: A3LSMJ727P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 0Y1612302086.A3L	Test Dates: 12/28/2016 - 01/26/2017	EUT Type: Portable Handset		Page 88 of 105

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7.7.4 Radiated Band Edge Measurements (80MHz BW)

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

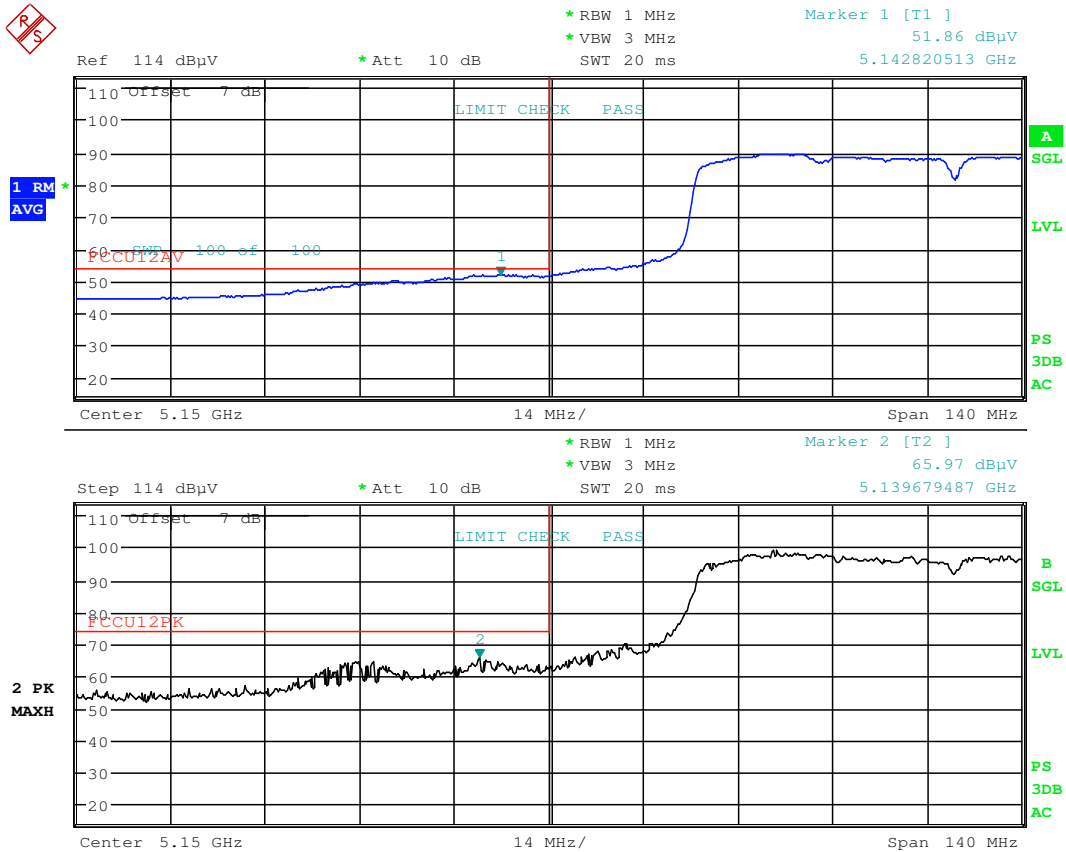
Worst Case Mode: 802.11n (80MHz)

Worst Case Transfer Rate: MCS0

Distance of Measurements: 3 Meters

Operating Frequency: 5210MHz

Channel: 42



Date: 31.DEC.2016 15:15:51

Plot 7-101. Radiated Restricted Lower Band Edge Plot (AVG/PK – UNII Band 1)

FCC ID: A3LSMJ727P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Radiated Band Edge Measurements (80MHz BW)

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

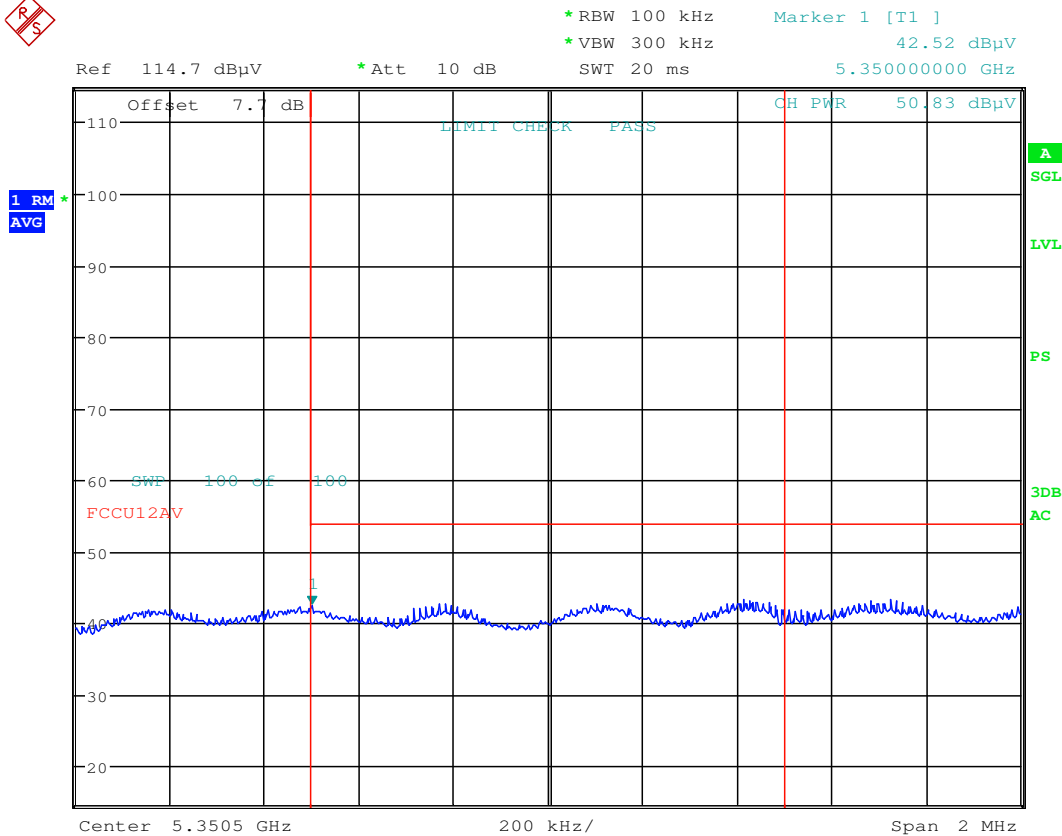
Worst Case Mode: 802.11ac (80MHz)

Worst Case Transfer Rate: MCS0

Distance of Measurements: 3 Meters

Operating Frequency: 5290MHz

Channel: 58



Date: 31.DEC.2016 15:25:05

Plot 7-102. Radiated Restricted Upper Band Edge Plot (Average – UNII Band 2A)

FCC ID: A3LSMJ727P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 0Y1612302086.A3L	Test Dates: 12/28/2016 - 01/26/2017	EUT Type: Portable Handset		Page 90 of 105

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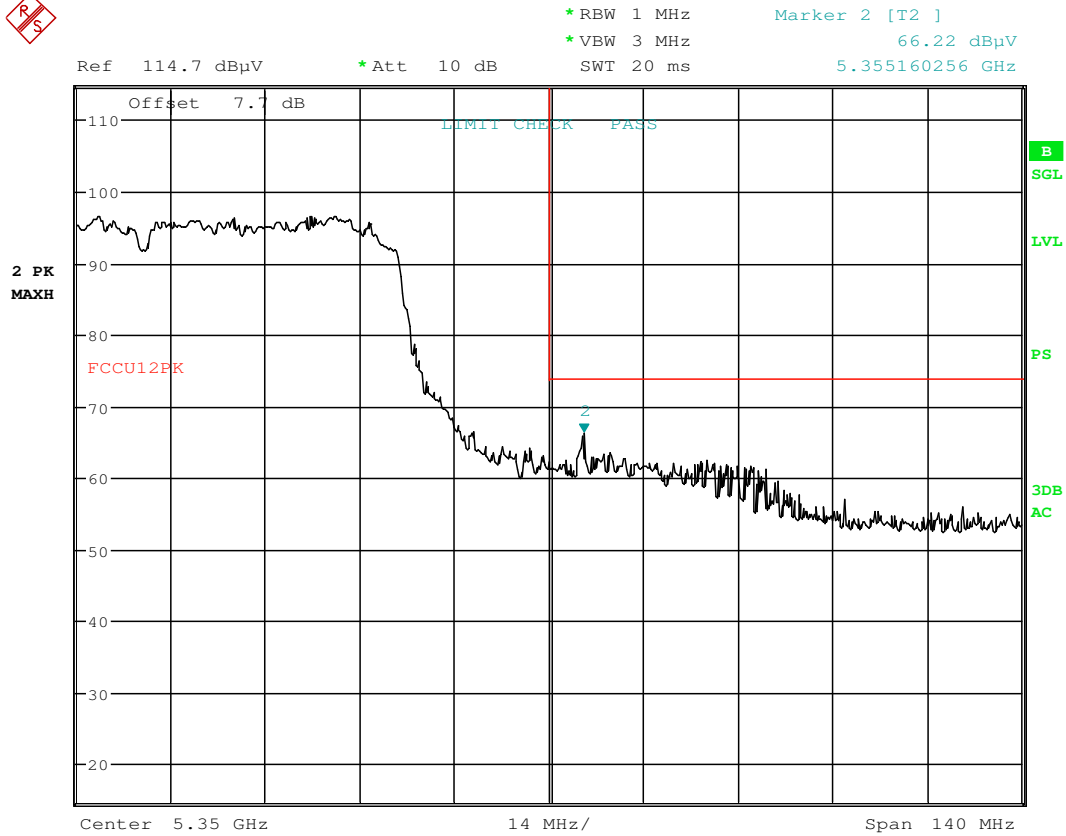
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Radiated Band Edge Measurements (80MHz BW)

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



Date: 31.DEC.2016 15:25:45

Plot 7-103. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)

FCC ID: A3LSMJ727P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Radiated Band Edge Measurements (80MHz BW)

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

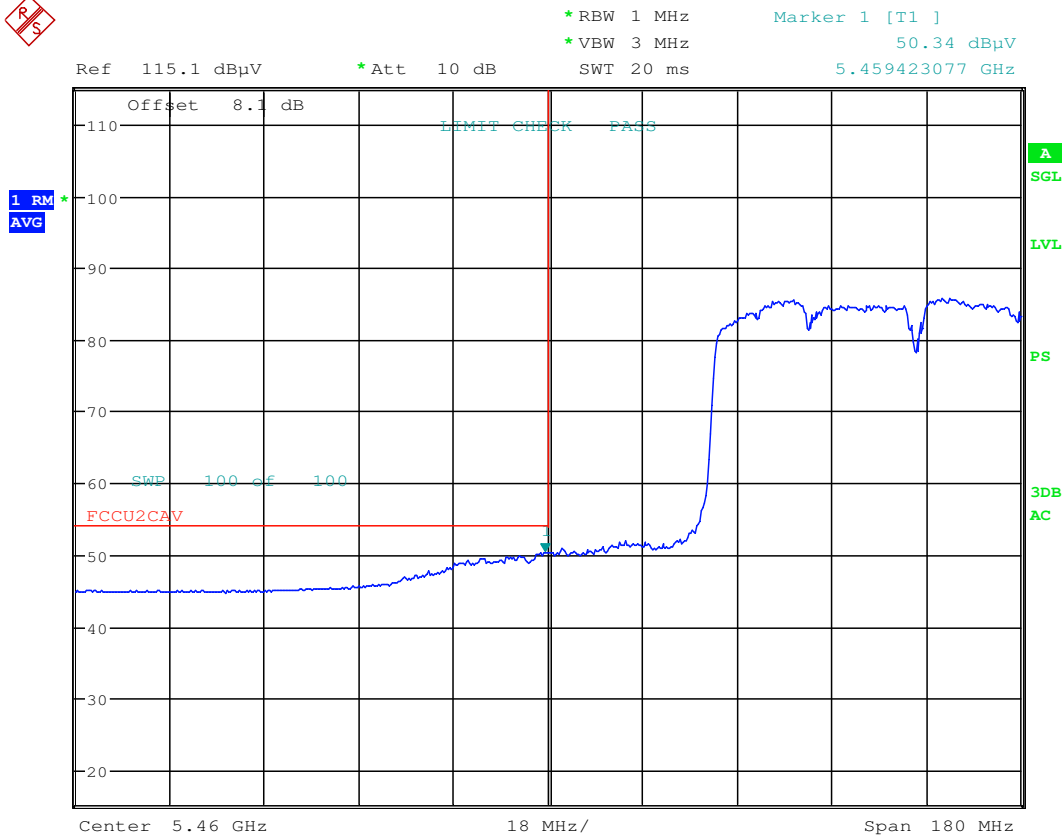
Worst Case Mode: 802.11ac (80MHz)

Worst Case Transfer Rate: MCS0

Distance of Measurements: 3 Meters

Operating Frequency: 5530MHz

Channel: 106



Date: 31.DEC.2016 15:34:46

Plot 7-104. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 2C)

FCC ID: A3LSMJ727P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 0Y1612302086.A3L	Test Dates: 12/28/2016 - 01/26/2017	EUT Type: Portable Handset		Page 92 of 105

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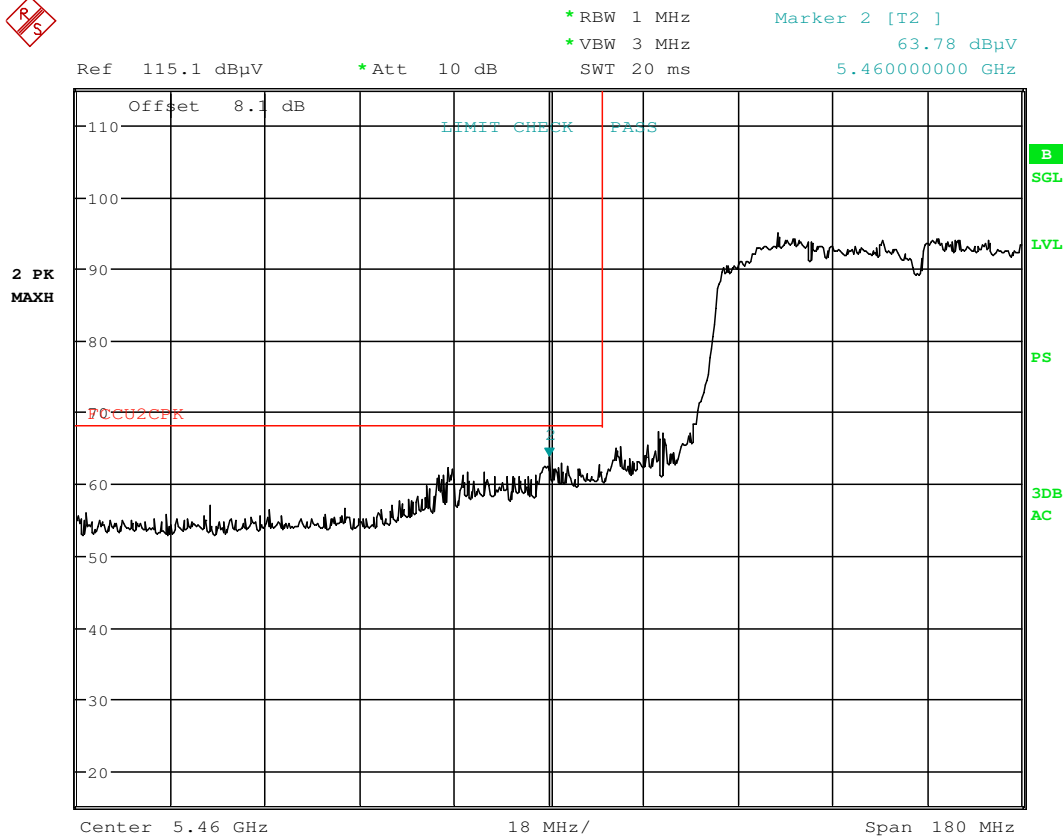
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Radiated Band Edge Measurements (80MHz BW)

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



Date: 31.DEC.2016 15:35:01

Plot 7-105. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)

FCC ID: A3LSMJ727P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 0Y1612302086.A3L	Test Dates: 12/28/2016 - 01/26/2017	EUT Type: Portable Handset		Page 93 of 105

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Radiated Band Edge Measurements (80MHz BW)

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

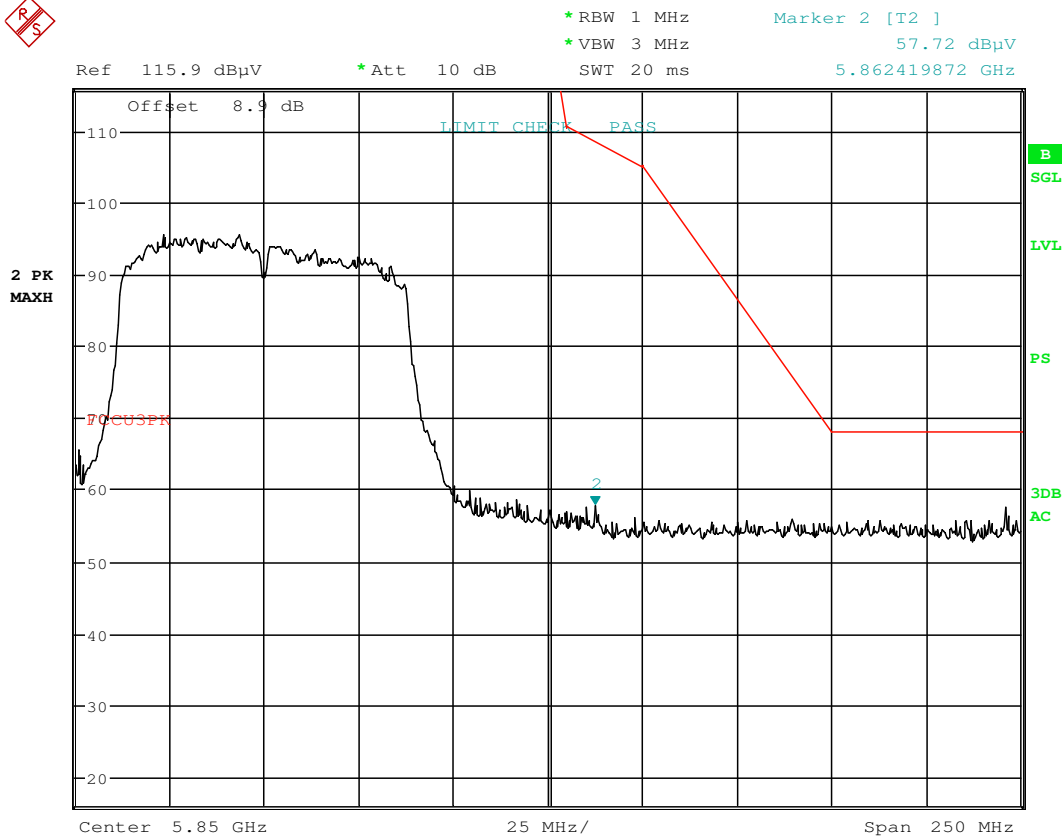
Worst Case Mode: 802.11ac (80MHz)

Worst Case Transfer Rate: MCS0

Distance of Measurements: 3 Meters

Operating Frequency: 5775MHz

Channel: 155



Date: 31.DEC.2016 15:39:35

Plot 7-106. Radiated Upper Band Edge Plot (Peak – UNII Band 3)

FCC ID: A3LSMJ727P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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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 7-26 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 7-26. 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

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Test Setup

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

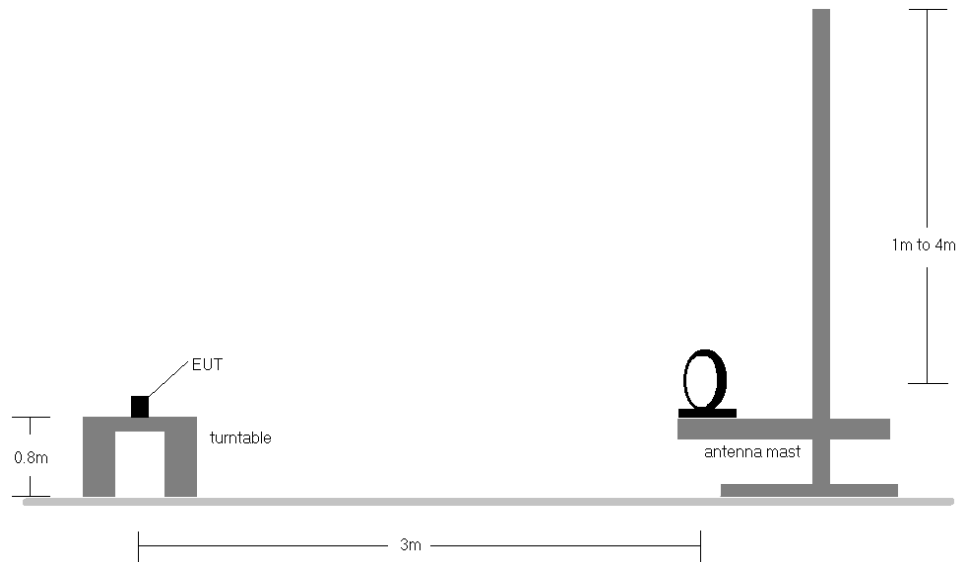


Figure 7-6. Radiated Test Setup < 30MHz

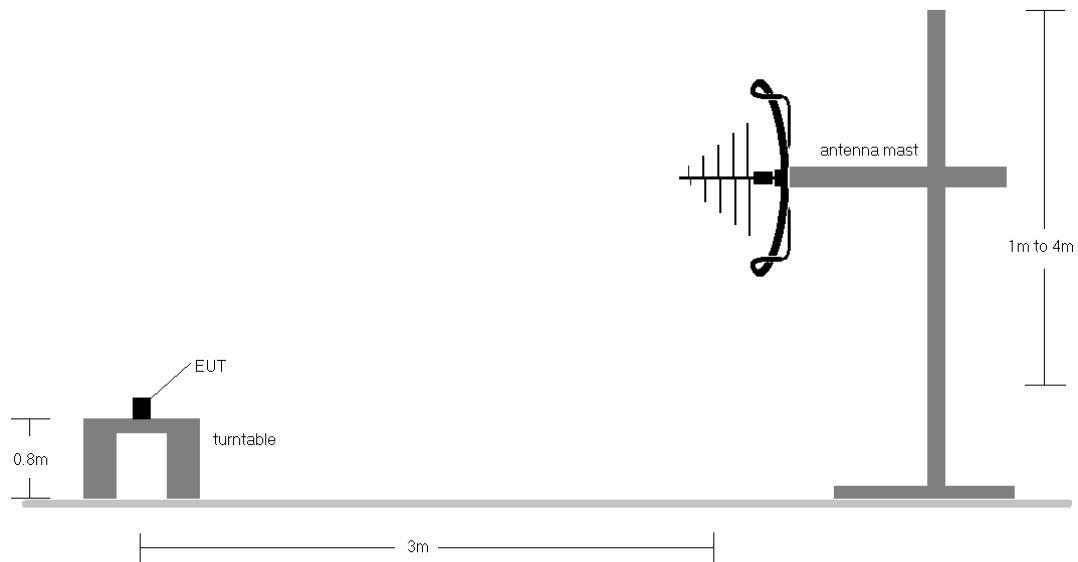


Figure 7-7. Radiated Test Setup < 1GHz

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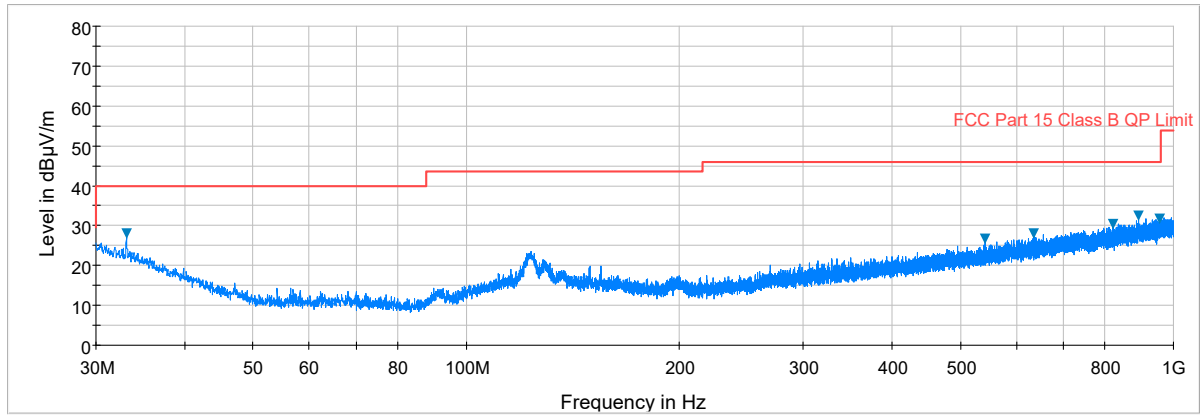
Test Notes

1. All emissions lying in restricted bands specified in §15.205 are below the limit shown in Table 7-26.
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.

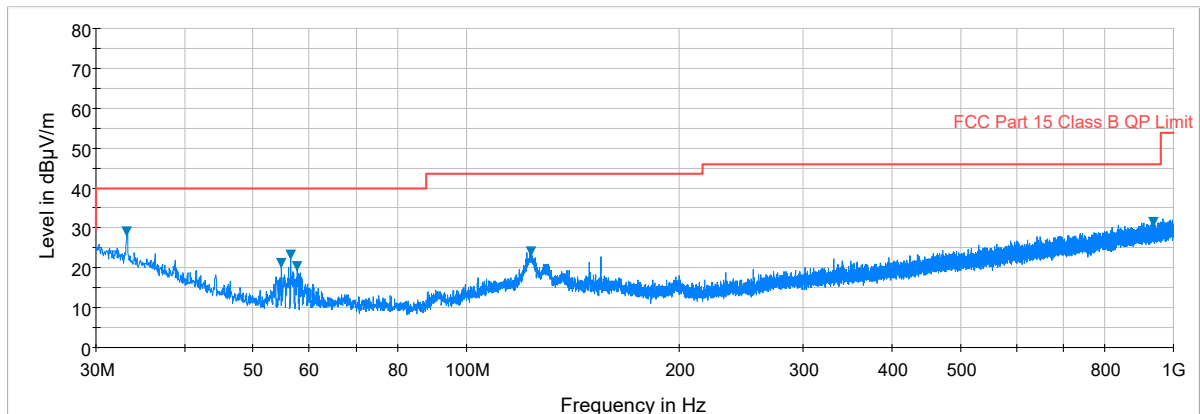
FCC ID: A3LSMJ727P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Radiated Spurious Emissions Measurements (Below 1GHz)

§15.209



Plot 7-107. Radiated Spurious Plot below 1GHz (802.11a – U3 Ch. 157, Ant. Pol. H)



Plot 7-108. Radiated Spurious Plot below 1GHz (802.11a – U3 Ch. 157, Ant. Pol. V)

FCC ID: A3LSMJ727P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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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 (dBμV)	
	Quasi-peak	Average
0.15 – 0.5	66 to 56*	56 to 46*
0.5 – 5	56	46
5 – 30	60	50

Table 7-27. 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

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Test Setup

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

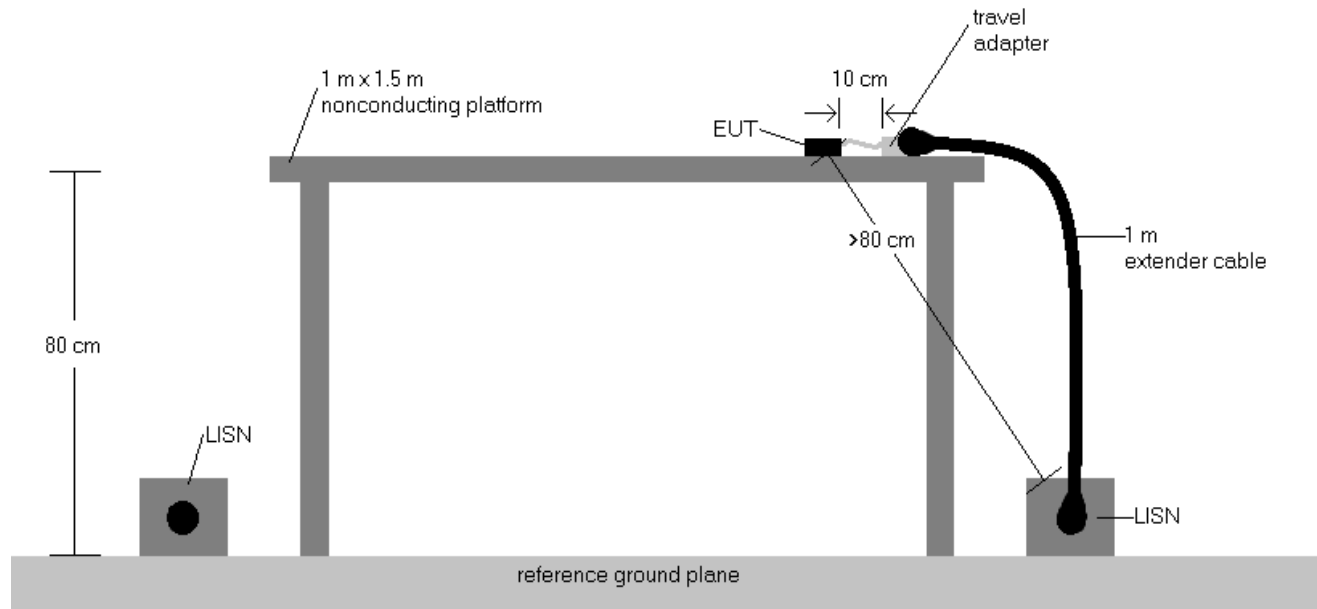


Figure 7-8. Test Instrument & Measurement Setup

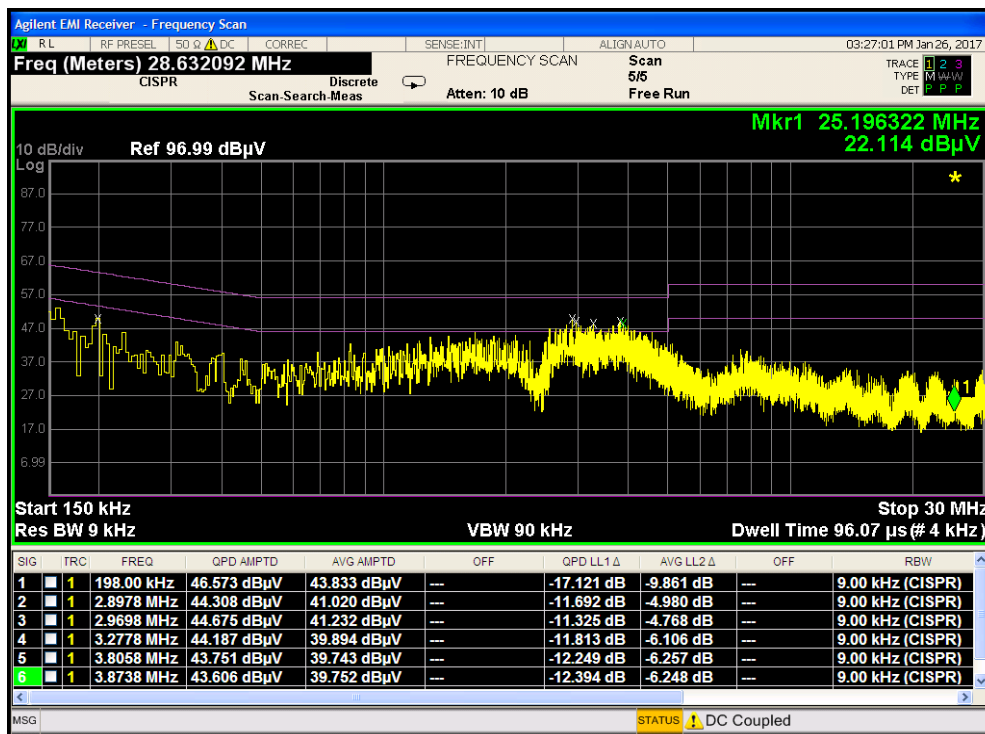
Test Notes

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.

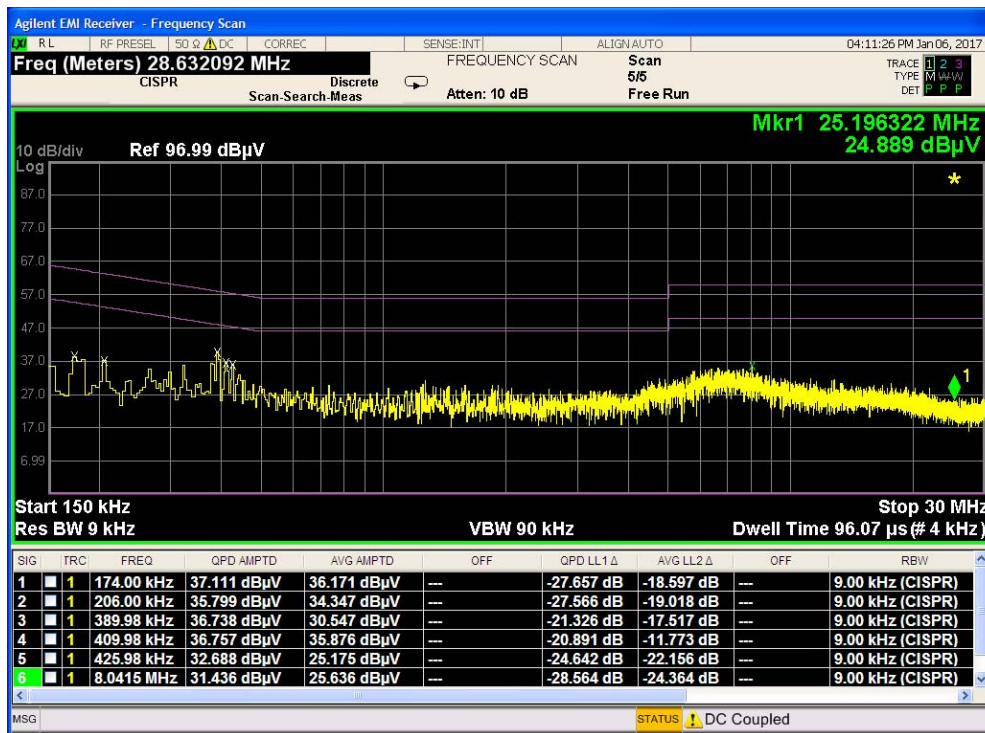
FCC ID: A3LSMJ727P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Line-Conducted Test Data

\$15.407



Plot 7-109. Line Conducted Plot with 802.11a UNII Band 1 (L1)

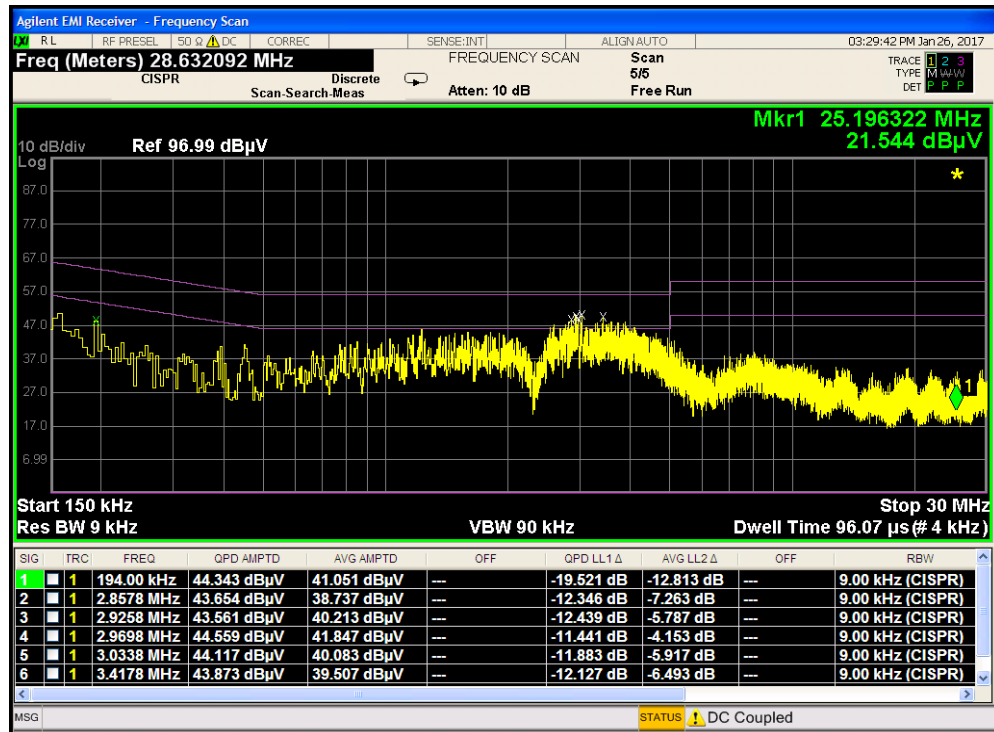


Plot 7-110. Line Conducted Plot with 802.11a UNII Band 1 (N)

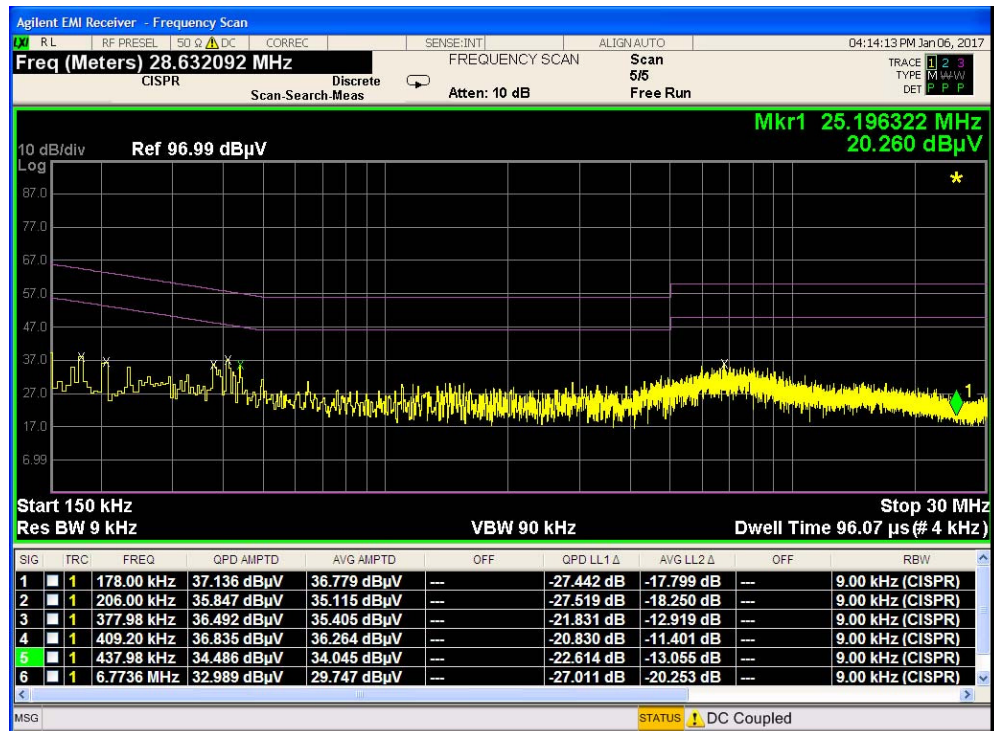
FCC ID: A3LSMJ727P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Line-Conducted Test Data

\$15.407



Plot 7-111. Line Conducted Plot with 802.11a UNII Band 2A (L1)

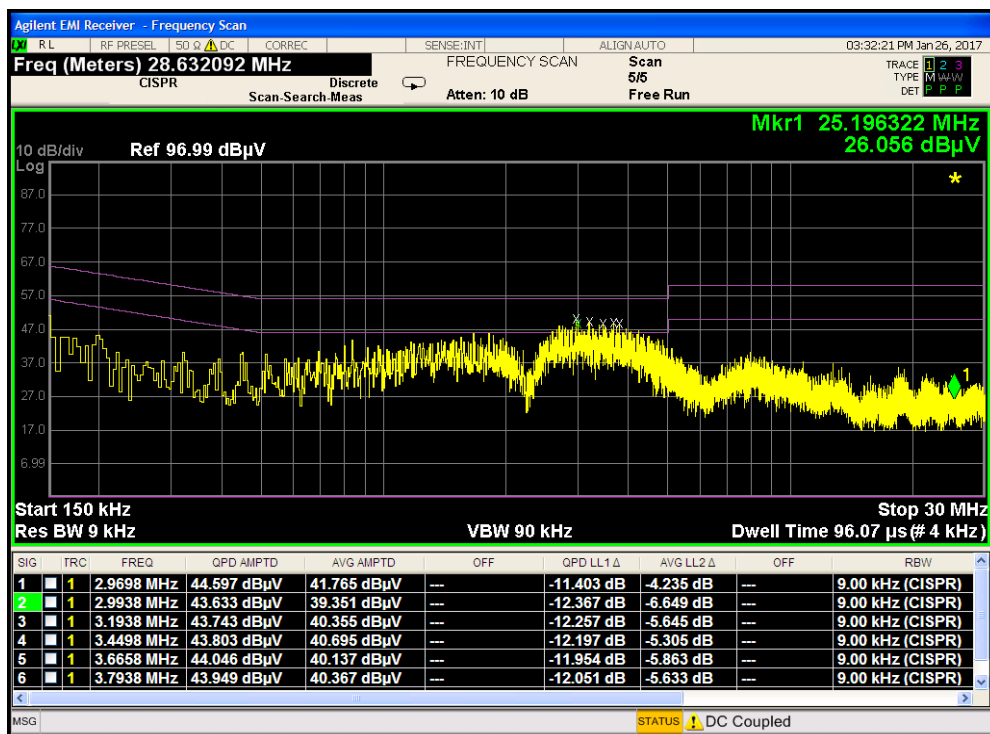


Plot 7-112. Line Conducted Plot with 802.11a UNII Band 2A (N)

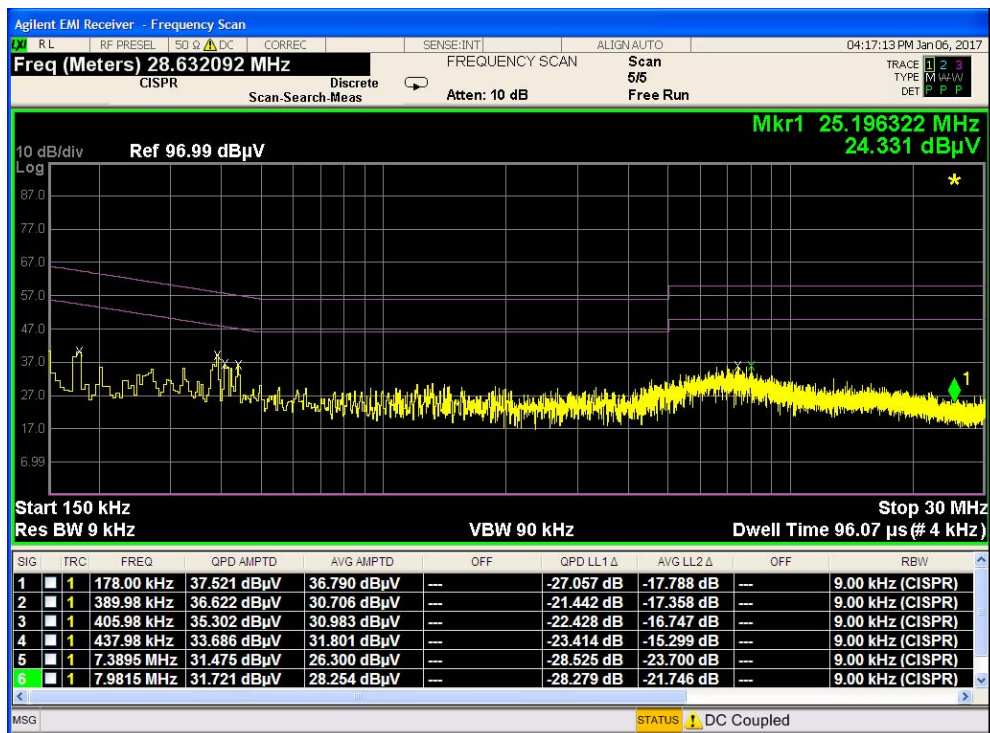
FCC ID: A3LSMJ727P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Line-Conducted Test Data

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Plot 7-113. Line Conducted Plot with 802.11a UNII Band 2C (L1)

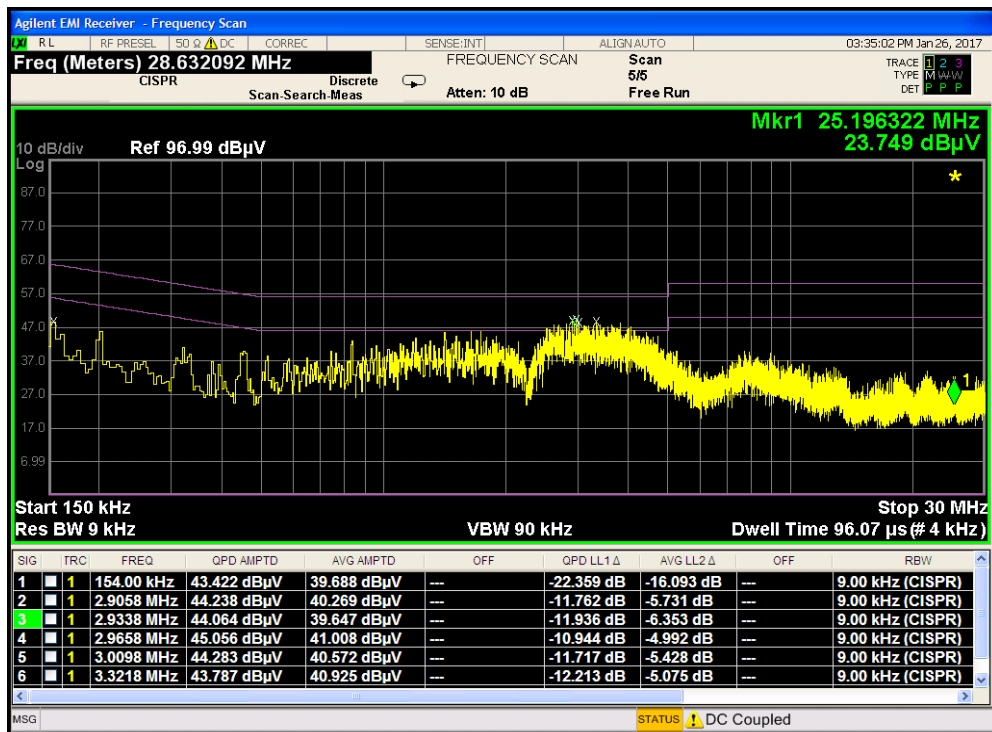


Plot 7-114. Line Conducted Plot with 802.11a UNII Band 2C (N)

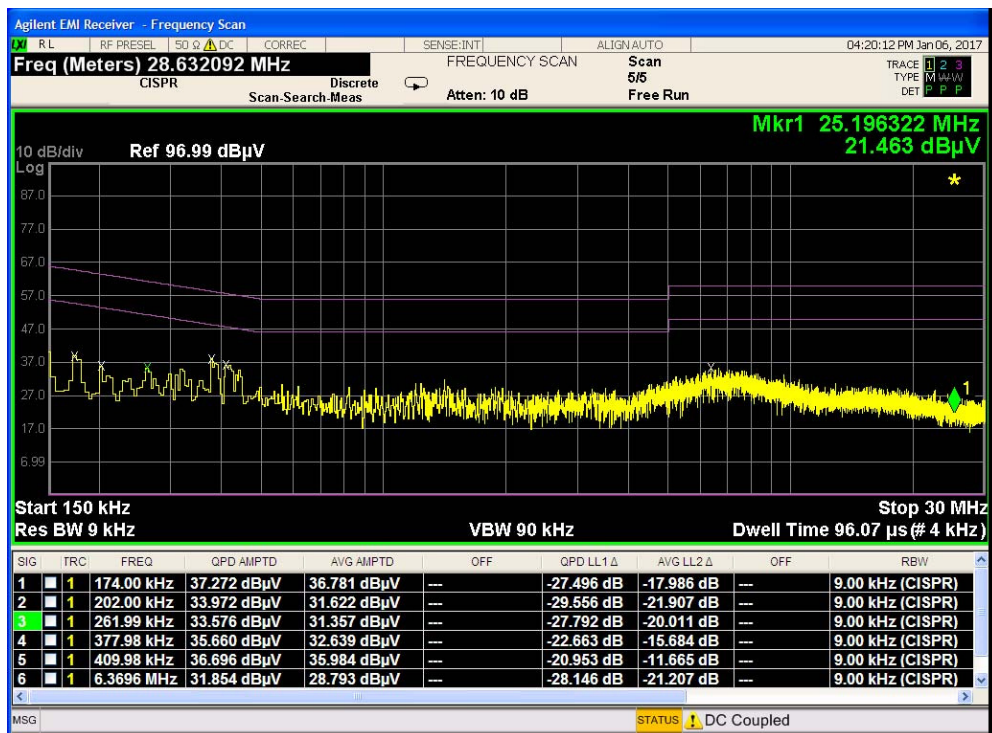
FCC ID: A3LSMJ727P			FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Line-Conducted Test Data

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Plot 7-115. Line Conducted Plot with 802.11a UNII Band 3 (L1)



Plot 7-116. Line Conducted Plot with 802.11a UNII Band 3 (N)

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8.0 CONCLUSION

The data collected relate only the item(s) tested and show that the **Samsung Portable Handset FCC ID: A3LSMJ727P** is in compliance with Part 15E of the FCC Rules.

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Test Report S/N: 0Y1612302086.A3L	Test Dates: 12/28/2016 - 01/26/2017	EUT Type: Portable Handset		Page 105 of 105