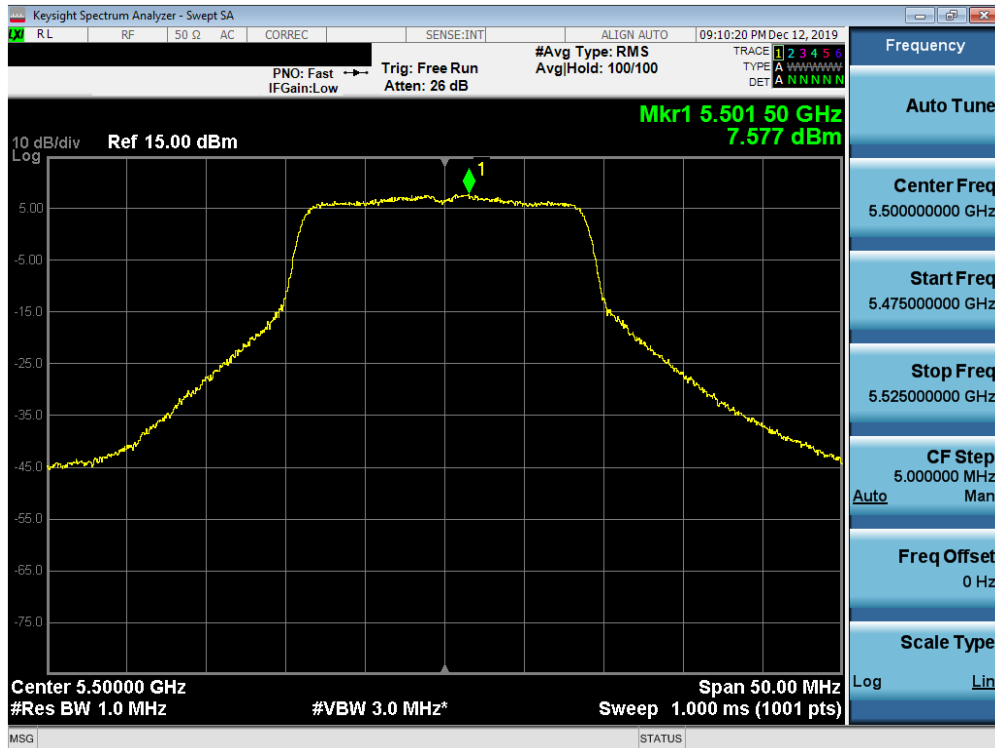
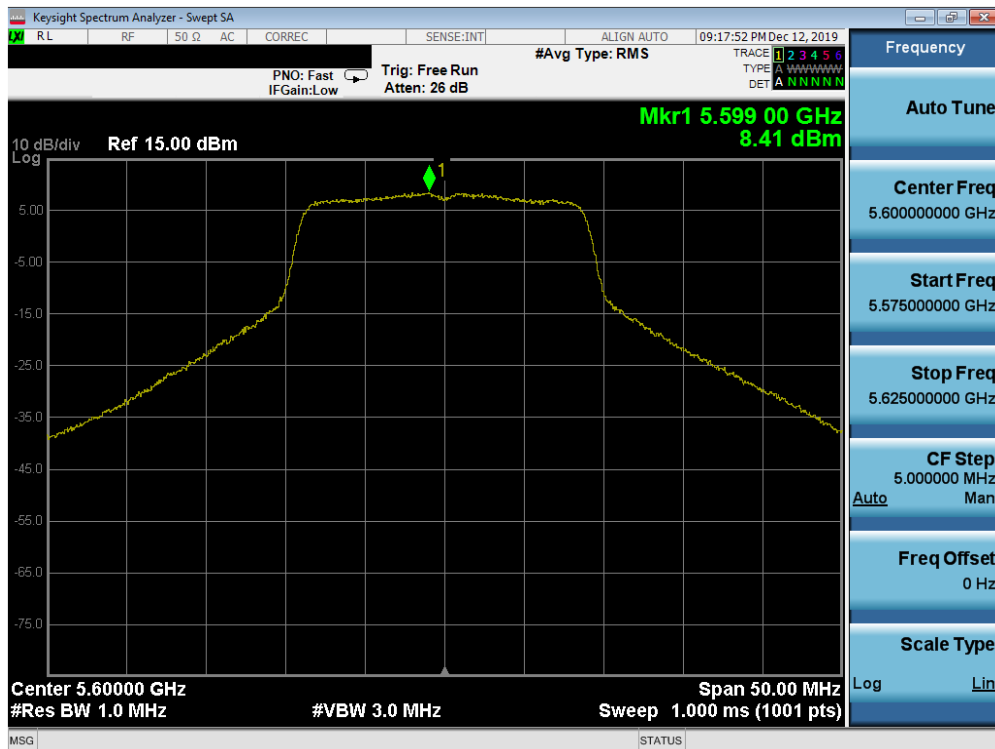


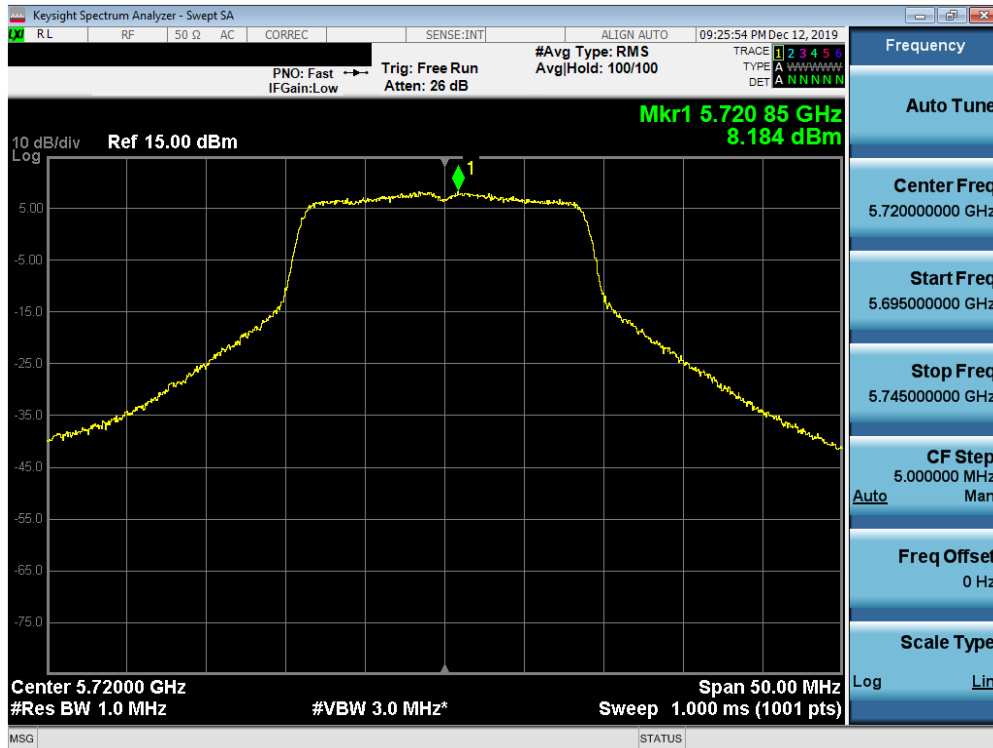


Plot 7-139. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) – Ch. 100)

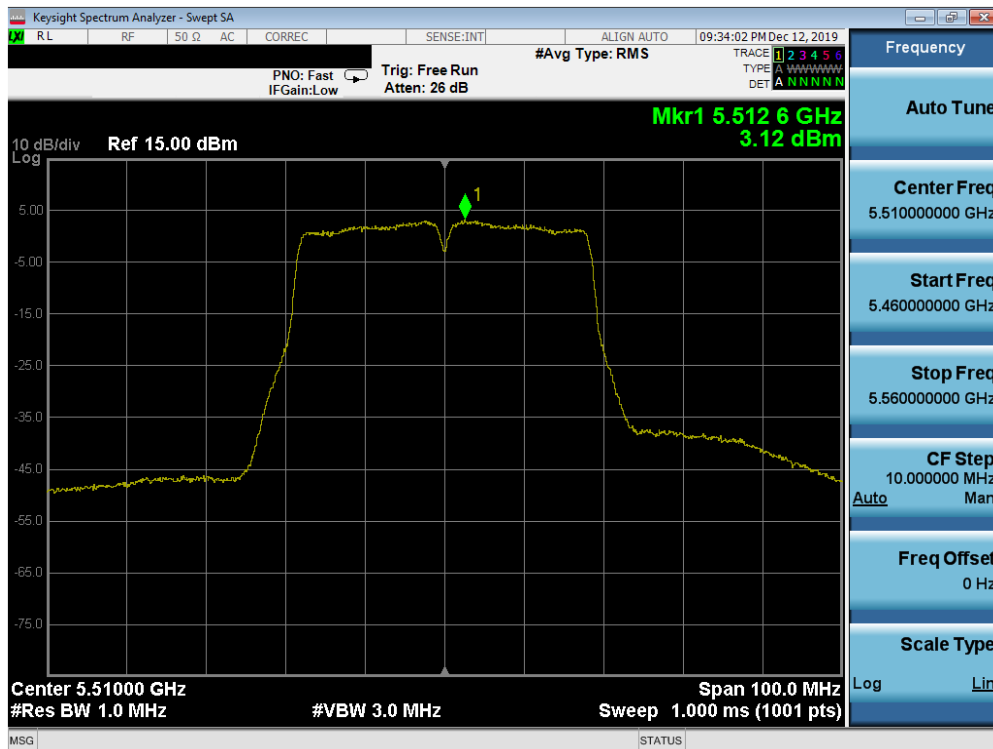


Plot 7-140. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) – Ch. 120)

FCC ID: A3LSMF700U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 99 of 195

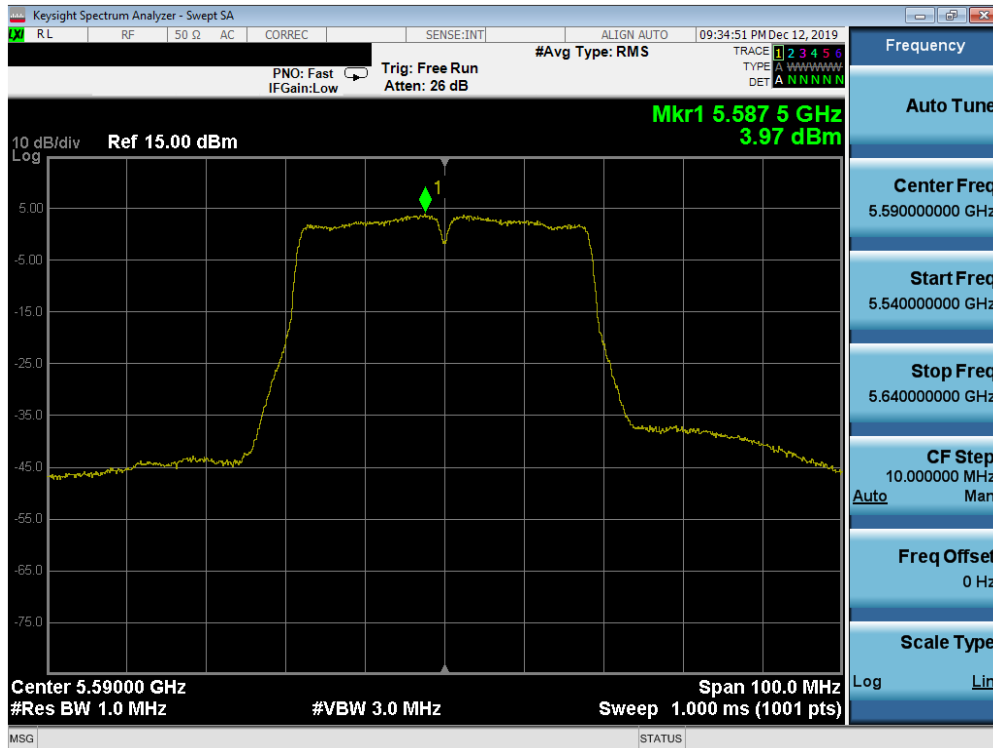


Plot 7-141. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) – Ch. 144)

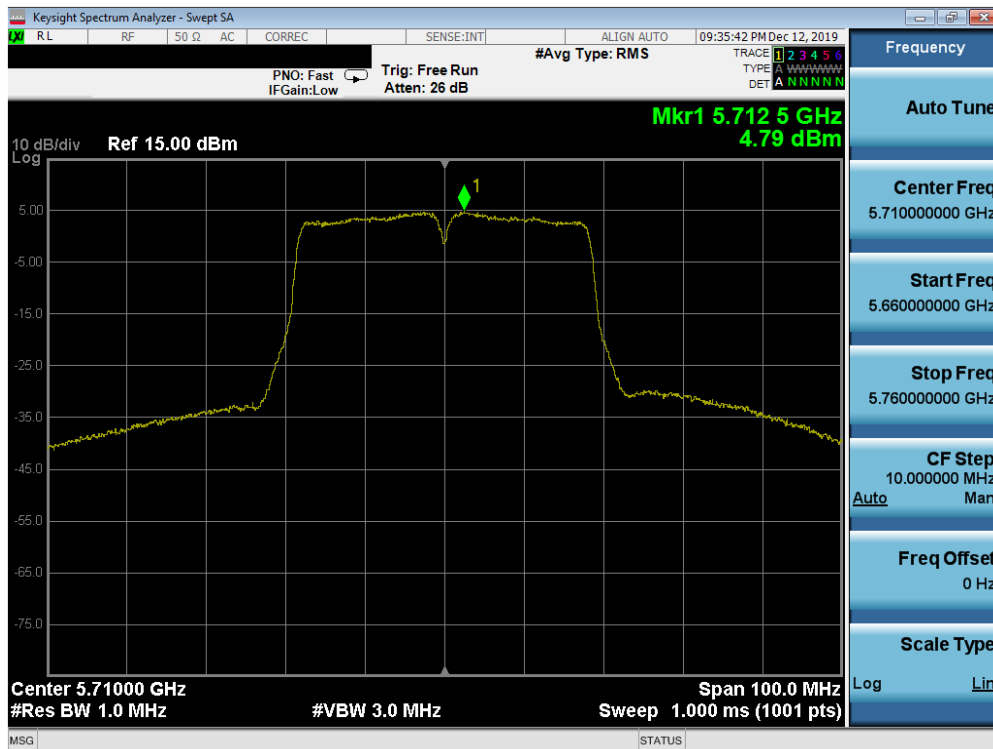


Plot 7-142. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) – Ch. 102)

FCC ID: A3LSMF700U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 100 of 195

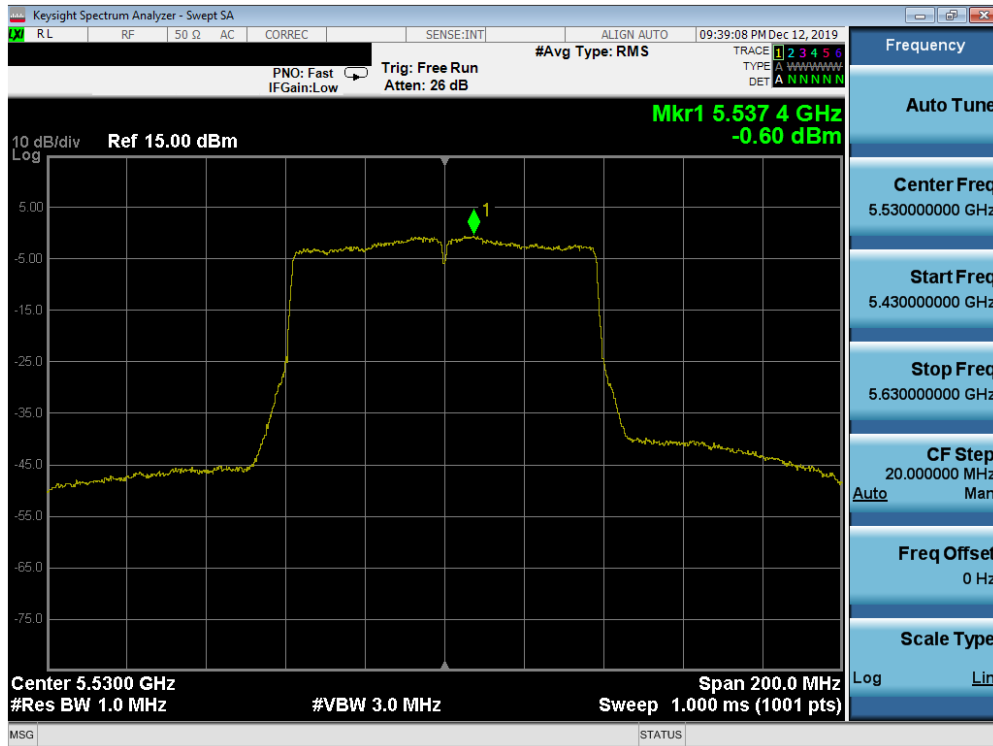


Plot 7-143. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) – Ch. 118)

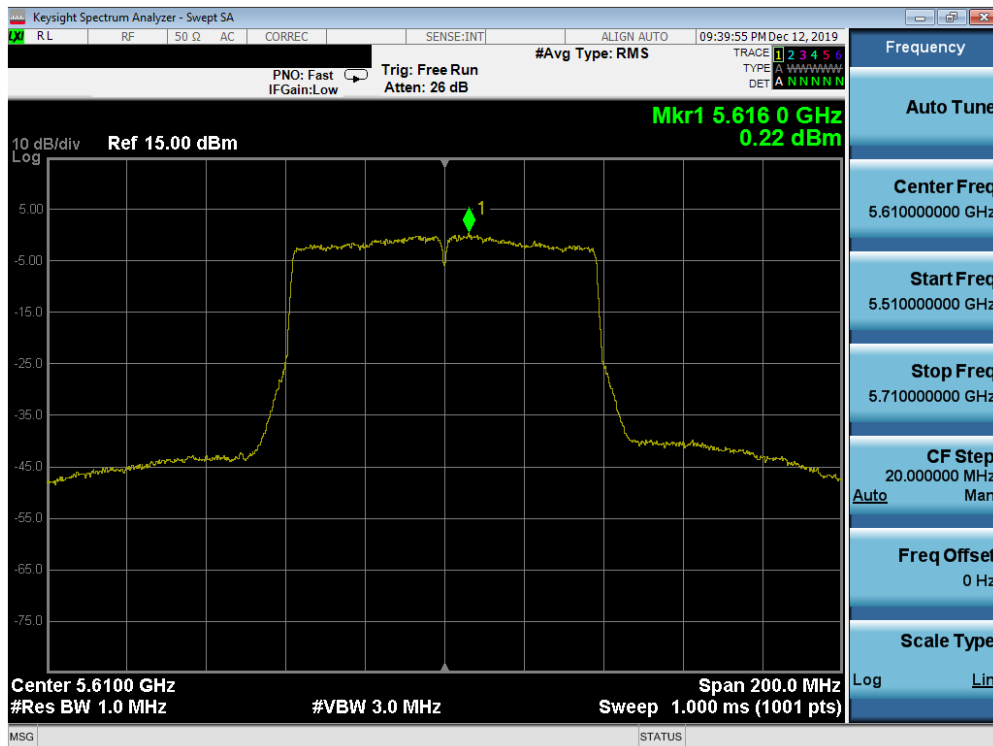


Plot 7-144. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) – Ch. 142)

FCC ID: A3LSMF700U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 101 of 195

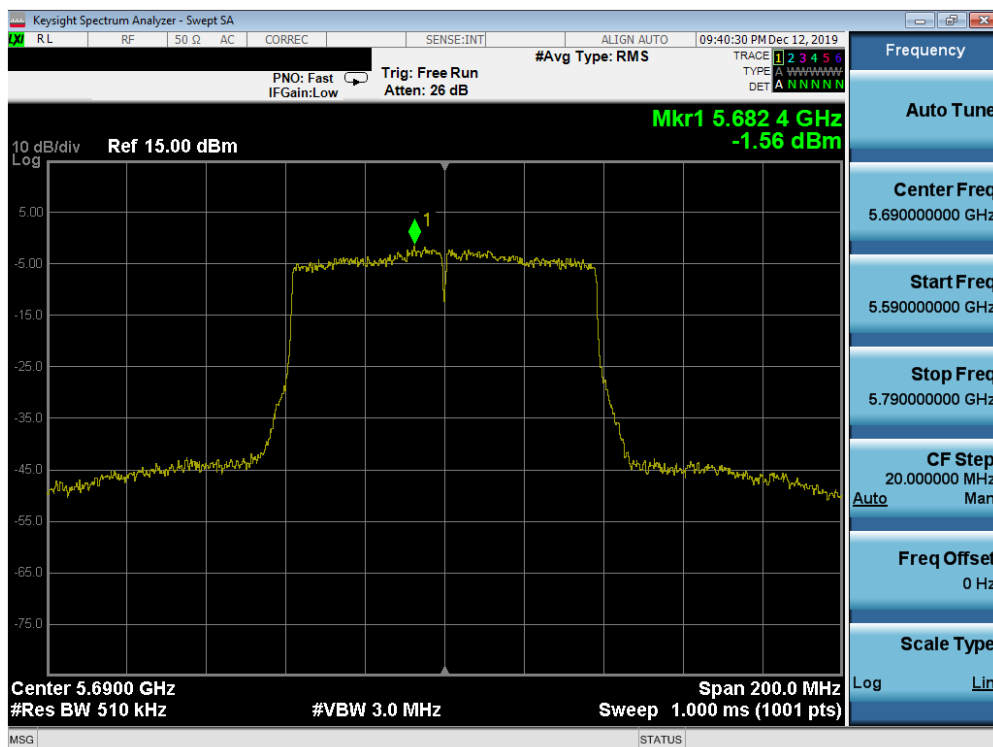


Plot 7-145. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 106)



Plot 7-146. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 122)

FCC ID: A3LSMF700U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 102 of 195

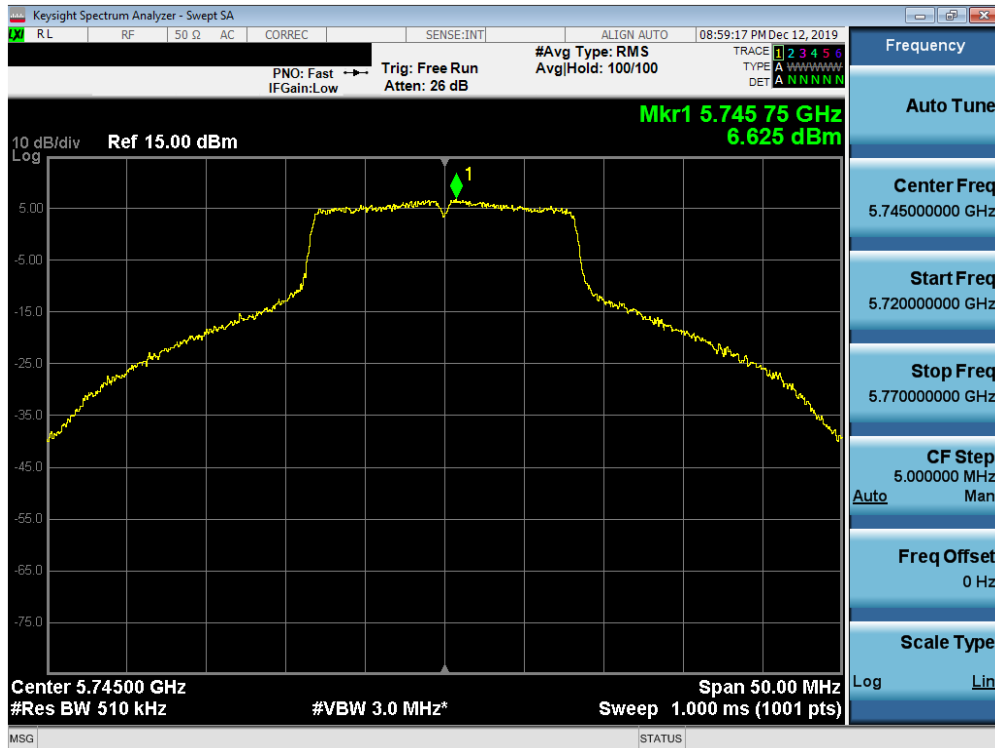


Plot 7-147. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 138)

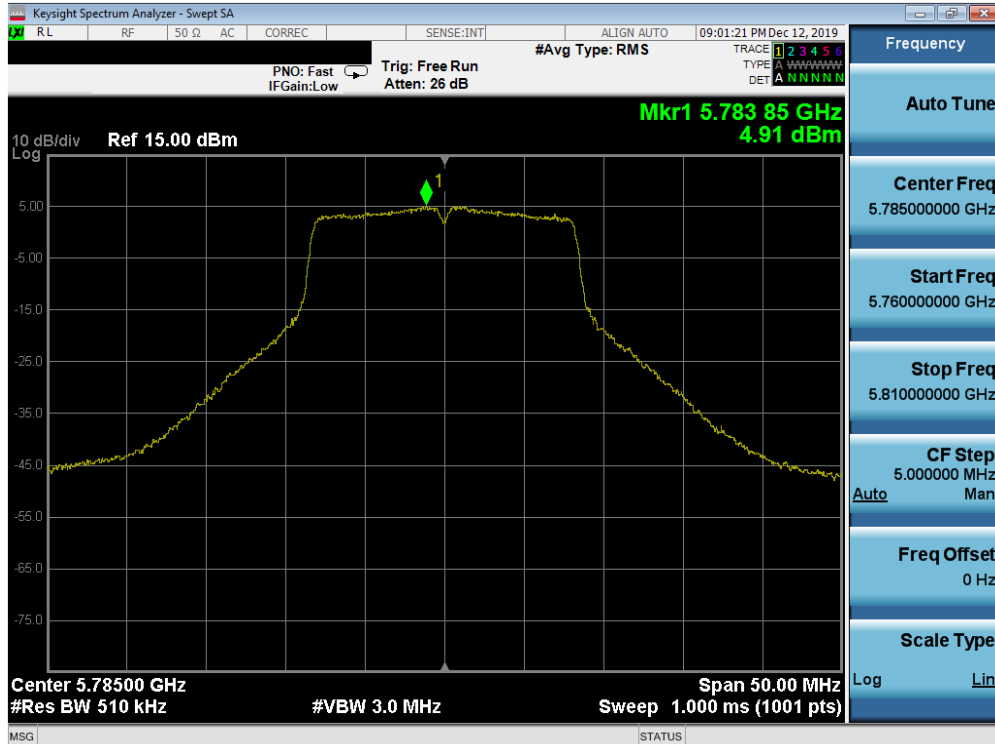
	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5745	149	a	6	6.63	30.0	-23.38
	5785	157	a	6	4.91	30.0	-25.09
	5825	165	a	6	4.39	30.0	-25.61
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	4.79	30.0	-25.21
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	4.82	30.0	-25.18
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	4.05	30.0	-25.95
	5755	151	n (40MHz)	13.5/15 (MCS0)	0.00	30.0	-30.00
	5795	159	n (40MHz)	13.5/15 (MCS0)	-0.68	30.0	-30.68
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-1.31	30.0	-31.31

Table 7-23. Band 3 Conducted Power Spectral Density Measurements SISO ANT2

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 103 of 195

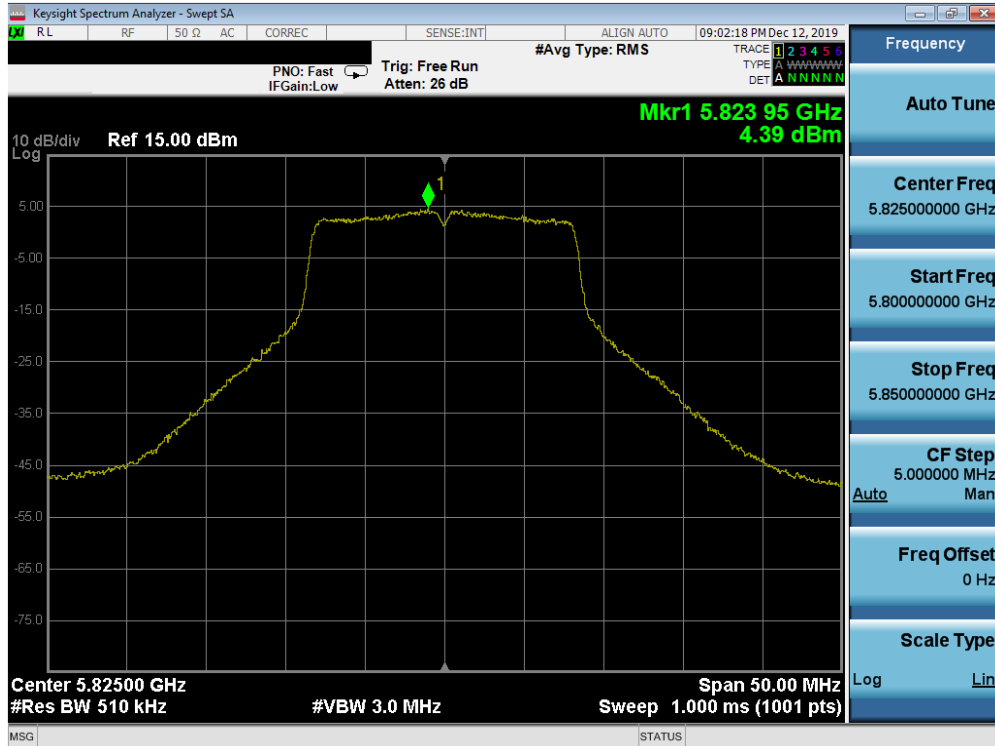


Plot 7-148. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 3) – Ch. 149)

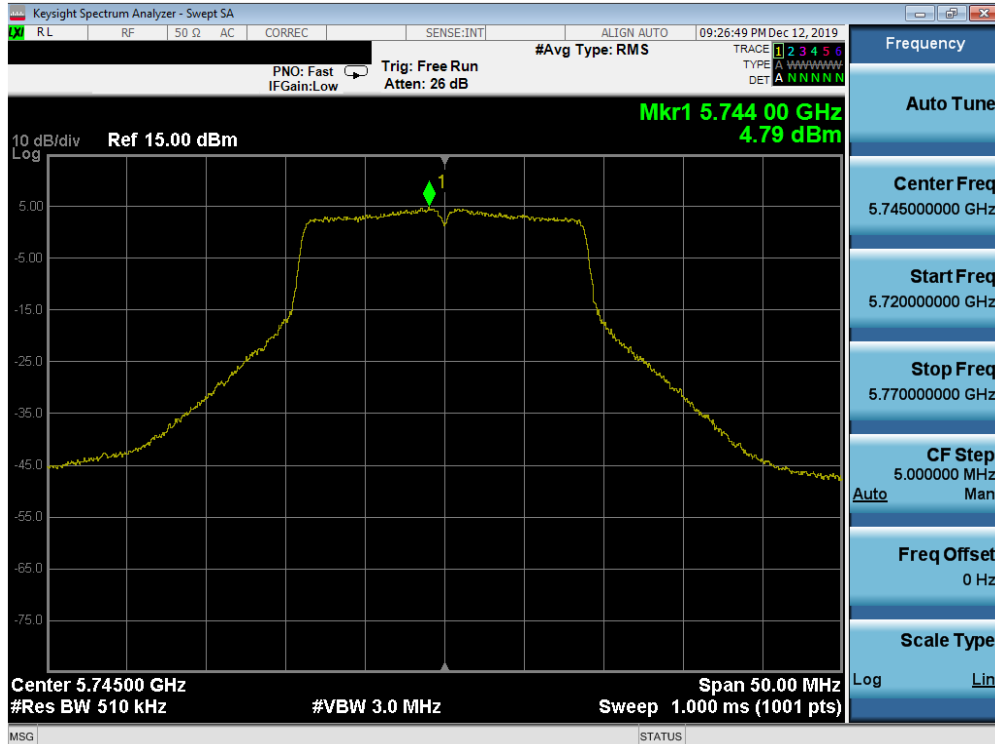


Plot 7-149. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 3) – Ch. 157)

FCC ID: A3LSMF700U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 104 of 195

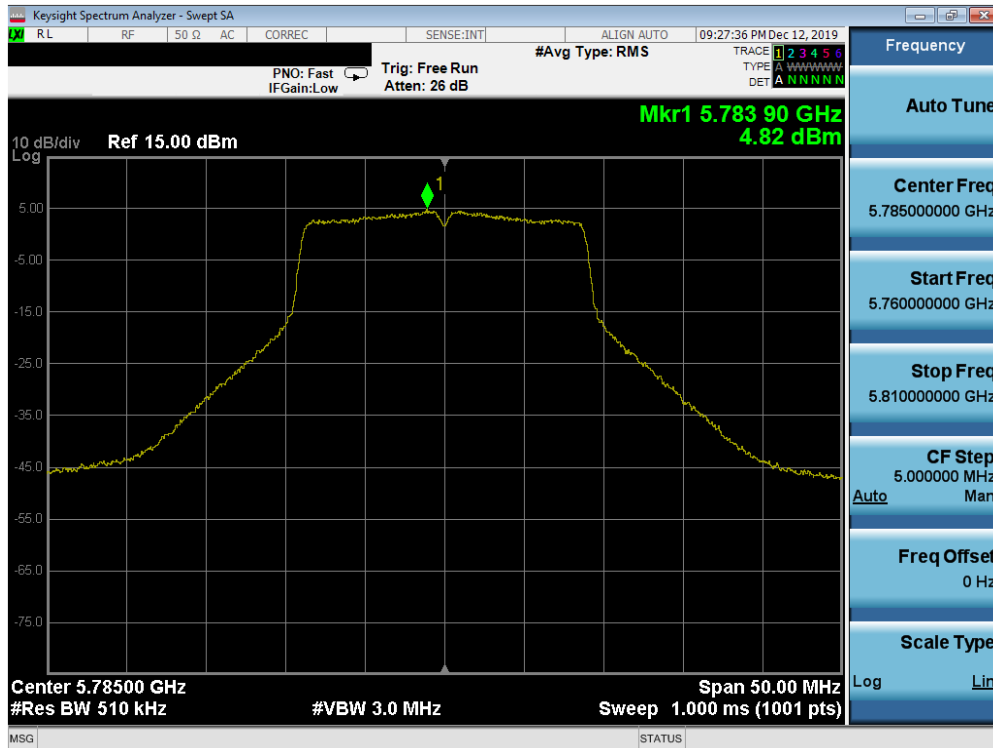


Plot 7-150. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 3) - Ch. 165)

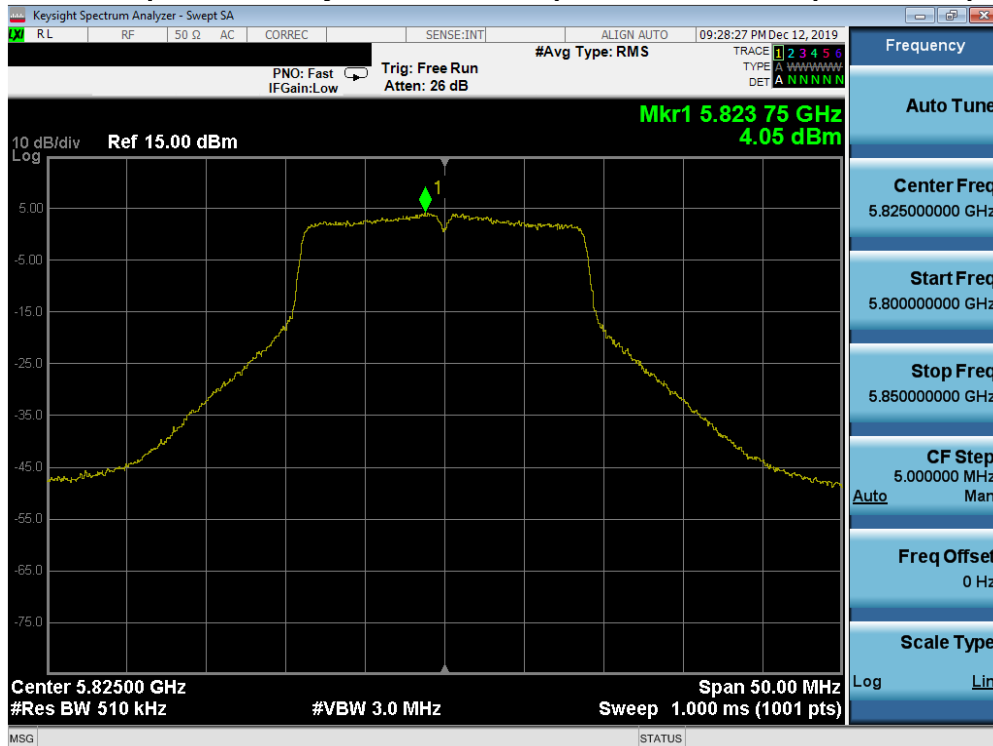


Plot 7-151. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 3) - Ch. 149)

FCC ID: A3LSMF700U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 - 01/16/2020	EUT Type: Portable Handset		Page 105 of 195

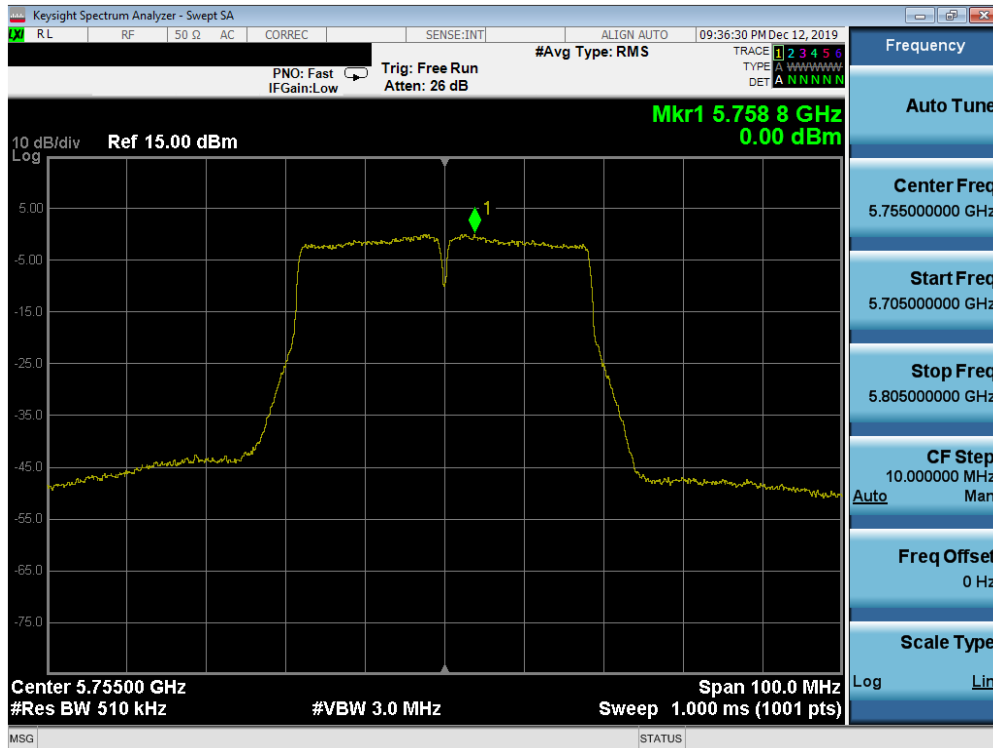


Plot 7-152. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 3) – Ch. 157)

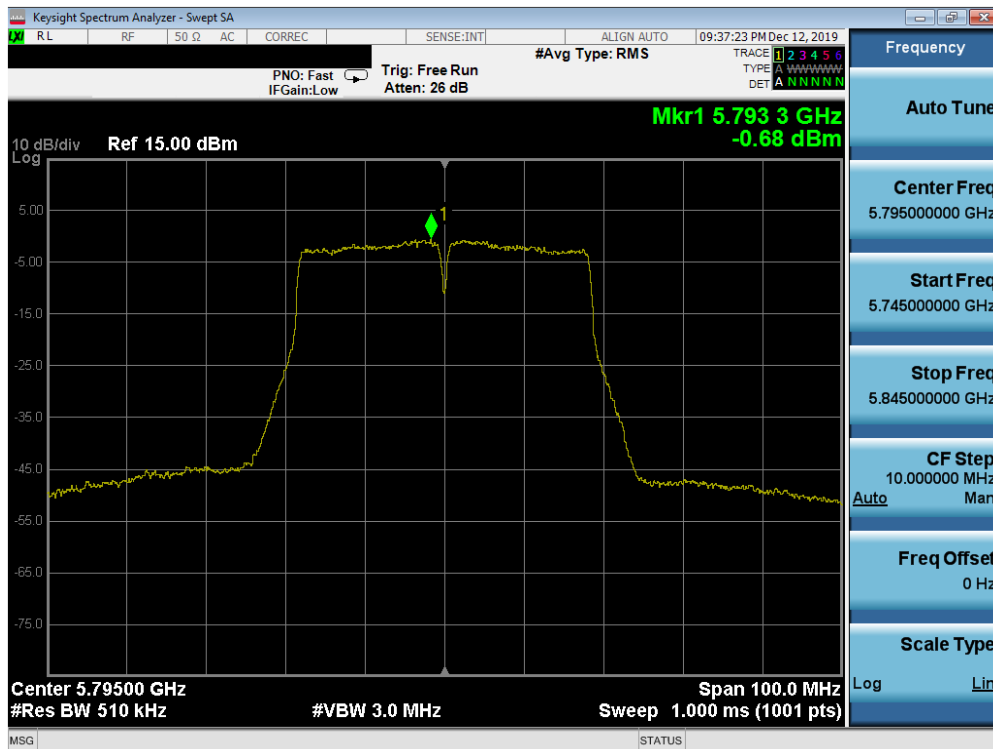


Plot 7-153. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 3) – Ch. 165)

FCC ID: A3LSMF700U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 106 of 195

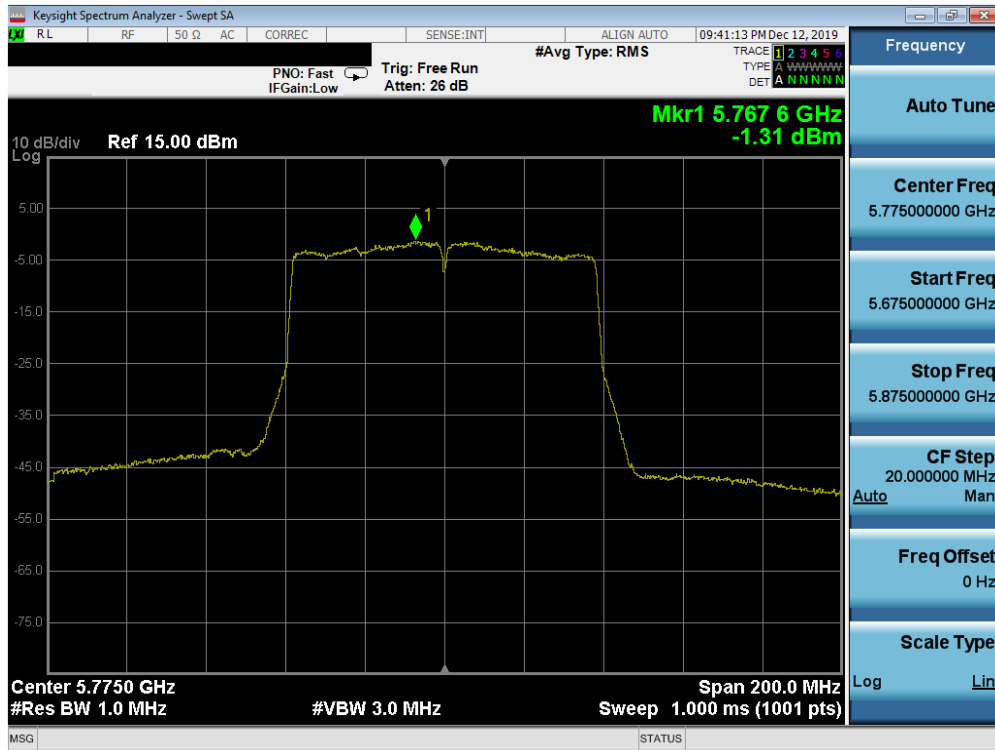


Plot 7-154. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 3) – Ch. 151)



Plot 7-155. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 3) – Ch. 159)

FCC ID: A3LSMF700U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 107 of 195



Plot 7-156. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 3) – Ch. 155)

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 108 of 195

Summed MIMO Power Spectral Density Measurements

	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	a	6	6.58	6.91	9.75	11.0	-1.25
	5200	40	a	6	6.81	7.07	9.95	11.0	-1.05
	5240	48	a	6	6.46	6.79	9.63	11.0	-1.37
	5180	36	n (20MHz)	6.5/7.2 (MCS0)	6.38	6.76	9.59	11.0	-1.41
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	6.11	6.72	9.44	11.0	-1.56
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	6.10	6.49	9.31	11.0	-1.69
	5190	38	n (40MHz)	13.5/15 (MCS0)	1.31	1.84	4.60	11.0	-6.40
	5230	46	n (40MHz)	13.5/15 (MCS0)	1.68	2.01	4.86	11.0	-6.14
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	-2.74	-3.97	-0.30	11.0	-11.30
Band 2A	5260	52	a	6	6.89	6.28	9.61	11.0	-1.39
	5280	56	a	6	6.48	6.92	9.72	11.0	-1.28
	5320	64	a	6	6.38	6.67	9.54	11.0	-1.46
	5260	52	n (20MHz)	6.5/7.2 (MCS0)	6.35	5.98	9.18	11.0	-1.82
	5280	56	n (20MHz)	6.5/7.2 (MCS0)	6.11	6.51	9.32	11.0	-1.68
	5320	64	n (20MHz)	6.5/7.2 (MCS0)	5.78	6.10	8.95	11.0	-2.05
	5270	54	n (40MHz)	13.5/15 (MCS0)	1.28	1.66	4.49	11.0	-6.51
	5310	62	n (40MHz)	13.5/15 (MCS0)	1.41	1.36	4.40	11.0	-6.60
	5290	58	ac (80MHz)	29.3/32.5 (MCS0)	-2.72	-1.83	0.76	11.0	-10.24
Band 2C	5500	100	a	6	6.75	7.91	10.38	11.0	-0.62
	5600	120	a	6	6.56	8.94	10.92	11.0	-0.08
	5720	144	a	6	6.67	8.39	10.63	11.0	-0.37
	5500	100	n (20MHz)	6.5/7.2 (MCS0)	6.12	7.58	9.92	11.0	-1.08
	5600	120	n (20MHz)	6.5/7.2 (MCS0)	6.20	8.42	10.46	11.0	-0.54
	5720	144	n (20MHz)	6.5/7.2 (MCS0)	6.62	8.18	10.48	11.0	-0.52
	5510	102	n (40MHz)	13.5/15 (MCS0)	1.34	3.12	5.33	11.0	-5.67
	5590	118	n (40MHz)	13.5/15 (MCS0)	1.49	3.97	5.92	11.0	-5.08
	5710	142	n (40MHz)	13.5/15 (MCS0)	2.39	4.79	6.76	11.0	-4.24
	5530	106	ac (80MHz)	29.3/32.5 (MCS0)	-2.58	-0.60	1.53	11.0	-9.47
	5610	122	ac (80MHz)	29.3/32.5 (MCS0)	-2.63	0.22	2.04	11.0	-8.96
	5690	138	ac (80MHz)	29.3/32.5 (MCS0)	-4.67	-1.57	0.16	11.0	-10.84

Table 7-24. Bands 1, 2A, 2C MIMO Conducted Power Spectral Density Measurements

	Frequency [MHz]	Ant. Pol. [H/V]	Channel No.	802.11 Mode	Data Rate [Mbps]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Band 1	5180	H	36	a	6.5/7.2 (MCS0)	225	330	-23.72	18.28	101.56	6.31	10.00	-3.69
	5200	H	40	a	6.5/7.2 (MCS0)	221	328	-24.59	19.05	101.46	6.20	10.00	-3.80
	5240	H	48	a	6.5/7.2 (MCS0)	224	336	-24.57	18.82	101.25	6.00	10.00	-4.00
	5180	H	36	n (20MHz)	6.5/7.2 (MCS0)	225	327	-24.73	18.28	100.55	5.30	10.00	-4.70
	5200	H	40	n (20MHz)	6.5/7.2 (MCS0)	227	325	-25.19	19.05	100.86	5.60	10.00	-4.40
	5240	H	48	n (20MHz)	6.5/7.2 (MCS0)	231	334	-24.93	18.82	100.89	5.64	10.00	-4.36
	5190	H	38	n (40MHz)	13.5/15 (MCS0)	222	327	-25.82	18.32	99.50	4.25	10.00	-5.75
	5230	H	46	n (40MHz)	13.5/15 (MCS0)	237	328	-26.94	18.96	99.02	3.76	10.00	-6.24
	5210	H	42	ac (80MHz)	29.3/32.5 (MCS0)	235	326	-28.82	19.35	97.53	2.28	10.00	-7.72

Table 7-25. Band 1 MIMO e.i.r.p. Radiated Power Spectral Density Measurements (ISED)

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	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Antenn-1 Power Density [dBm]	Antenn-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5745	149	a	6	3.73	6.63	8.43	30.0	-21.57
	5785	157	a	6	3.79	4.91	7.40	30.0	-22.60
	5825	165	a	6	3.65	4.39	7.05	30.0	-22.95
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	4.03	4.79	7.44	30.0	-22.56
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	3.55	4.82	7.24	30.0	-22.76
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	3.32	4.05	6.71	30.0	-23.29
	5755	151	n (40MHz)	13.5/15 (MCS0)	-0.99	0.00	2.54	30.0	-27.46
	5795	159	n (40MHz)	13.5/15 (MCS0)	-0.92	-0.68	2.21	30.0	-27.79
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-2.20	-1.31	1.28	30.0	-28.72

Table 7-26. Band 3 MIMO Conducted Power Spectral Density Measurements

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Note:

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

Sample MIMO Calculation:

At 5180MHz in 802.11n (20MHz BW) mode, the average conducted power spectral density was measured to be 6.38 dBm for Antenna-1 and 6.76 dBm for Antenna-2.

Antenna 1 + Antenna 2 = MIMO

$$(6.38 \text{ dBm} + 6.76 \text{ dBm}) = (4.35 \text{ mW} + 4.74 \text{ mW}) = 9.09 \text{ mW} = 9.59 \text{ dBm}$$

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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7.6 Radiated Spurious Emission Measurements – Above 1GHz

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

Test Overview and Limit

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

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

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

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

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR and Table 6 of RSS-Gen (8.10) must not exceed the limits shown in Table 7-27 per Section 15.209 and RSS-Gen (8.9).

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

Table 7-27. Radiated Limits

Test Procedures Used

ANSI C63.10-2013 – Sections 12.7.7.2, 12.7.6, 12.7.5

KDB 789033 D02 v02r01 – Section G

Test Settings

Average Measurements above 1GHz (Method AD)

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

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V 9.0 02/01/2019

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Peak Measurements above 1GHz

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

Peak Measurements below 1GHz

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

Test Setup

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

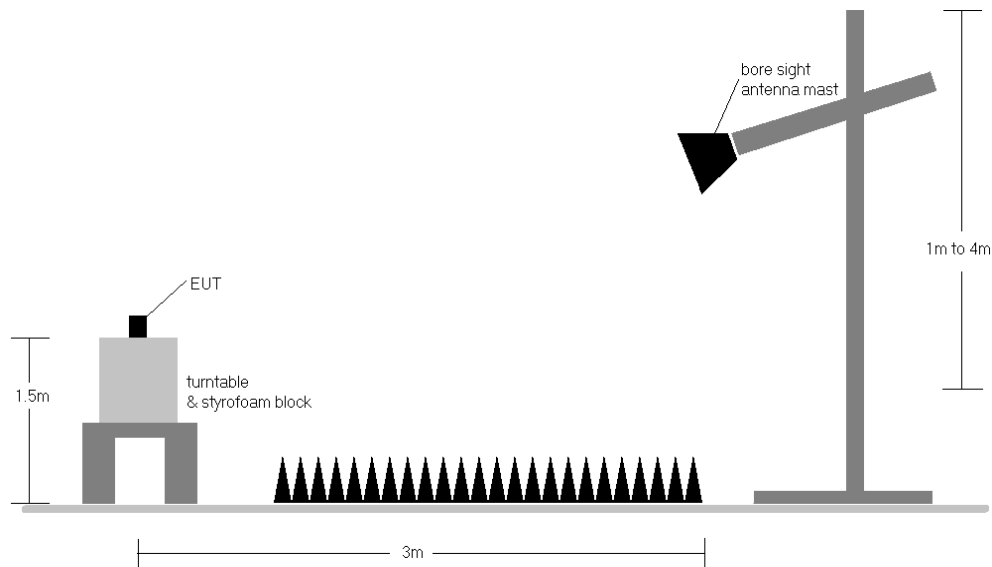


Figure 7-5. Test Instrument & Measurement Setup

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Test Notes

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

Sample Calculations

Determining Spurious Emissions Levels

- o Field Strength Level [dBμV/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 [dBμV/m] – Limit [dBμV/m]

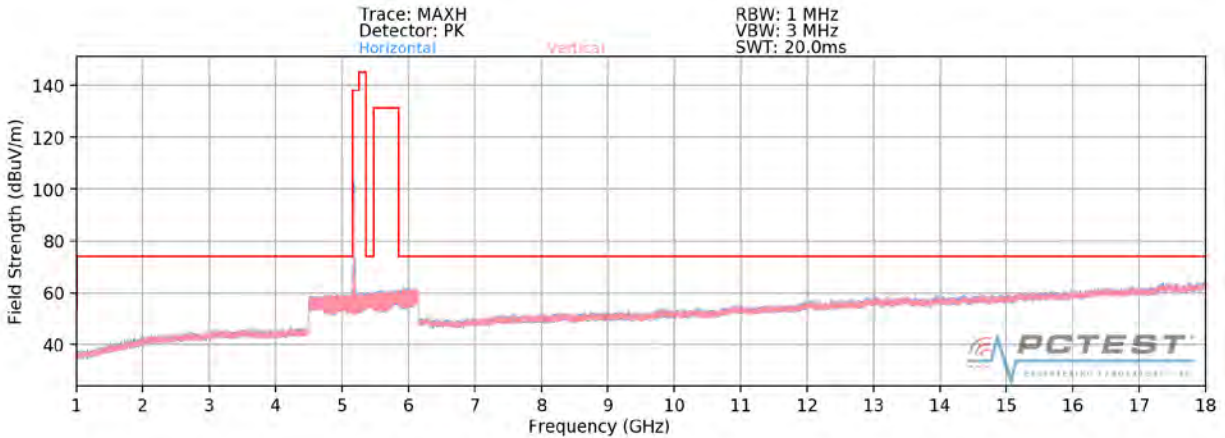
Radiated Band Edge Measurement Offset

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

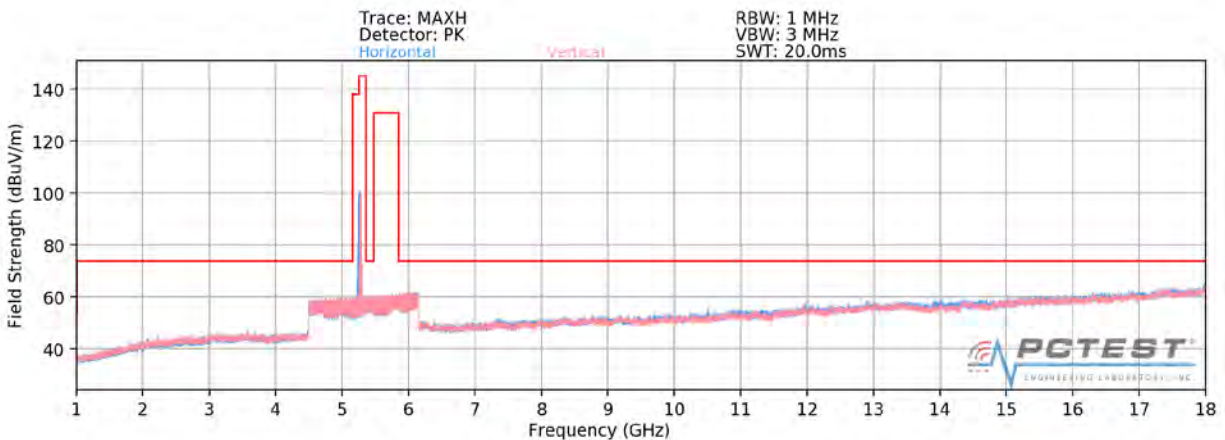
$$\text{Offset (dB)} = (\text{Antenna Factor} + \text{Cable Loss} + \text{Attenuator}) - \text{Preamplifier Gain}$$

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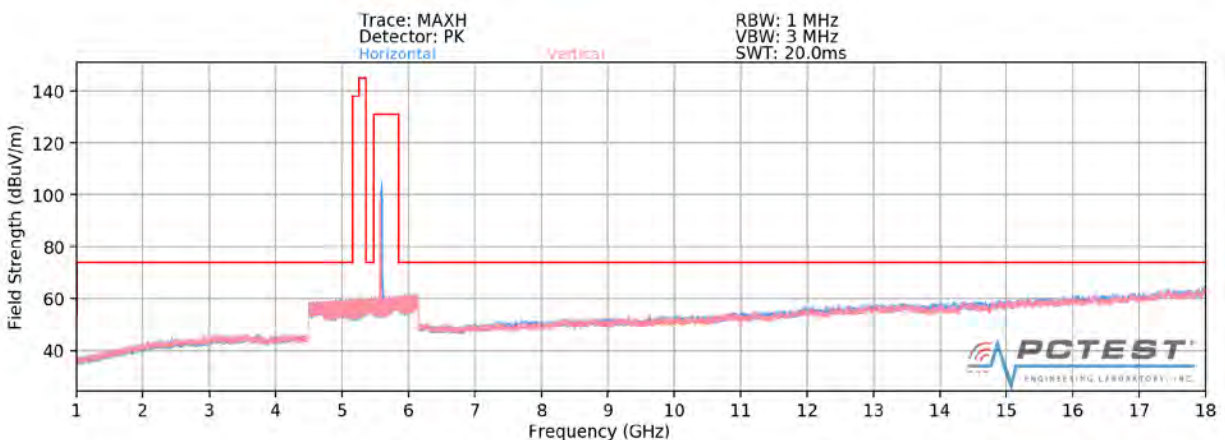
7.6.1 SISO Antenna-1 Radiated Spurious Emission Measurements



Plot 7-157. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11a – U1 Ch. 40) – OPEN

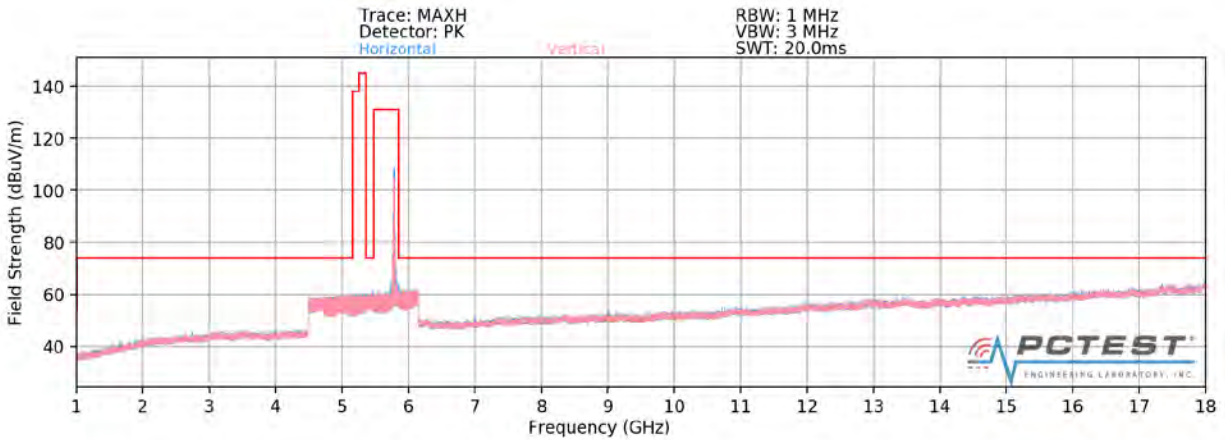


Plot 7-158. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11a – U2A Ch. 56) – OPEN

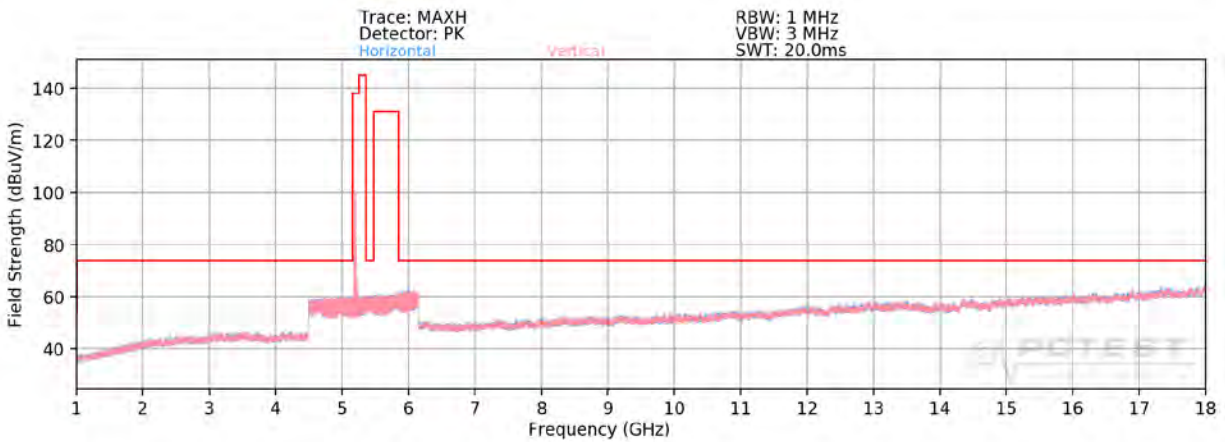


Plot 7-159. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11a – U2C Ch. 120) – OPEN

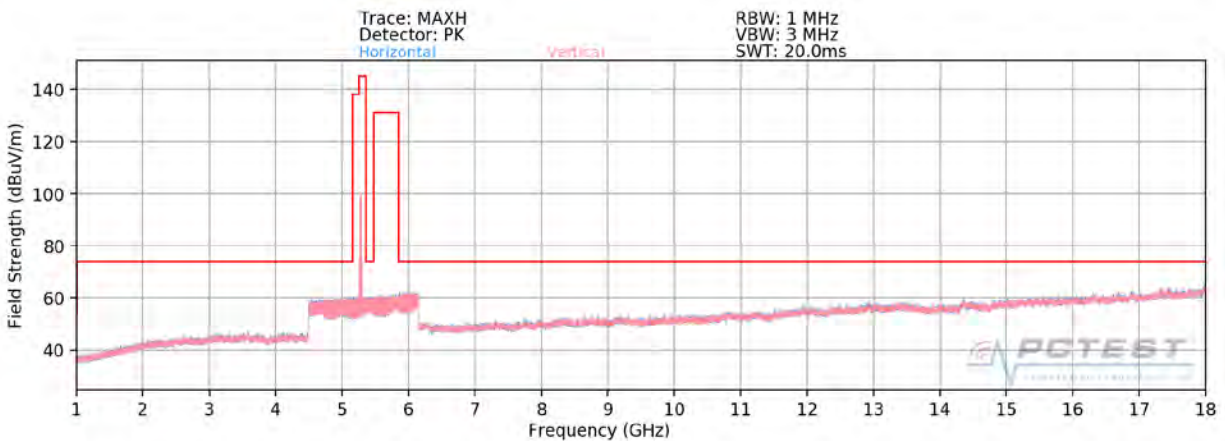
FCC ID: A3LSMF700U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 115 of 195



Plot 7-160. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11a - U3 Ch. 157) - OPEN

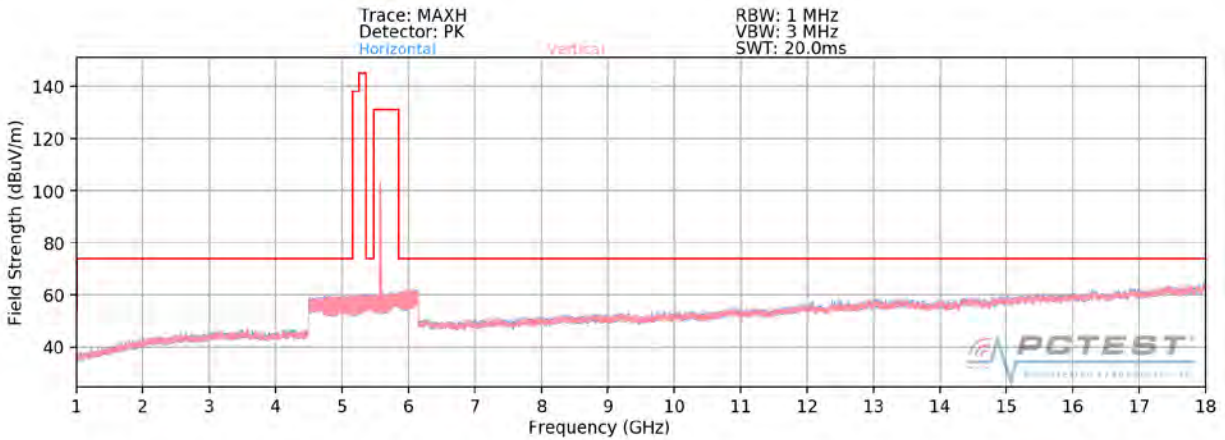


Plot 7-161. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11a - U1 Ch. 40) - CLOSED

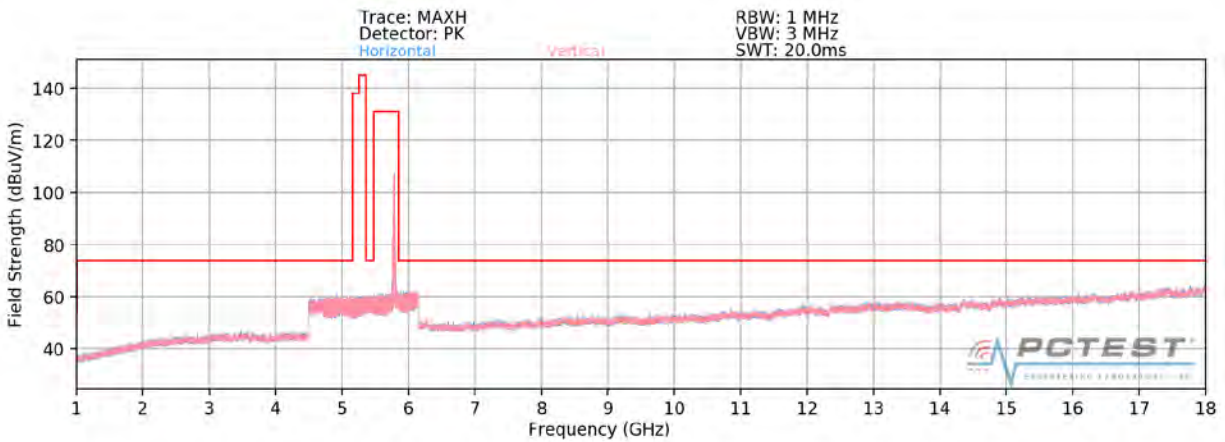


Plot 7-162. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11a - U2A Ch. 56) - CLOSED

FCC ID: A3LSMF700U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 - 01/16/2020	EUT Type: Portable Handset		Page 116 of 195



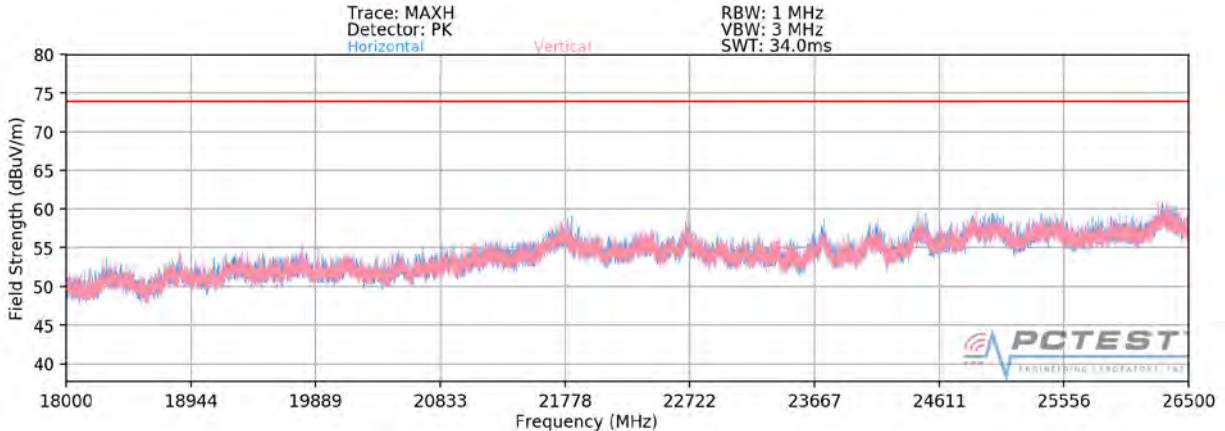
Plot 7-163. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11a – U2C Ch. 120) – CLOSED



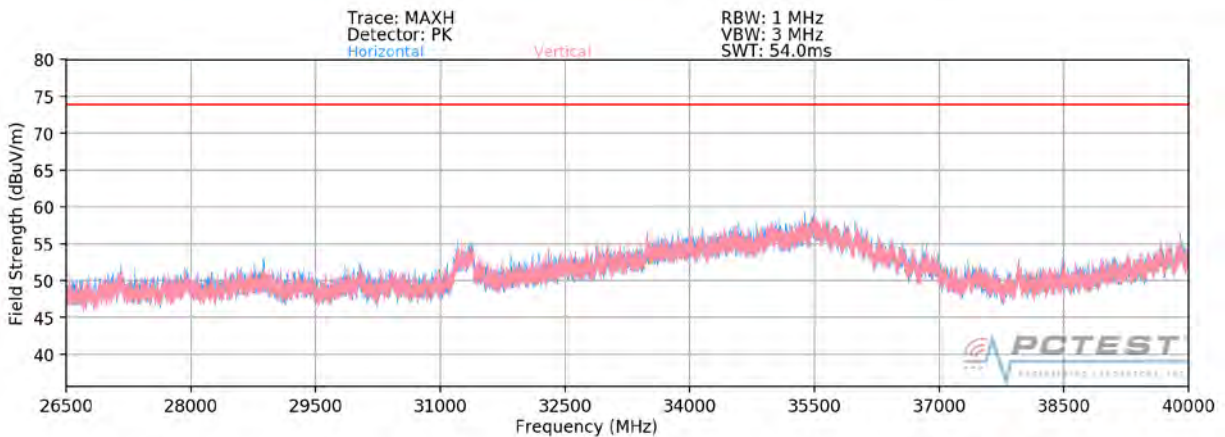
Plot 7-164. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11a – U3 Ch. 157) – CLOSED

FCC ID: A3LSMF700U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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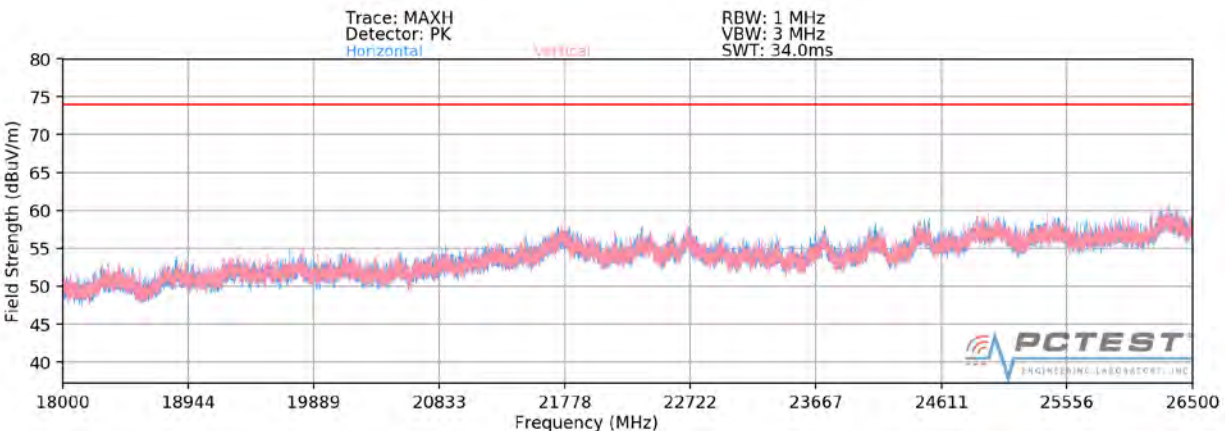
SISO Antenna-1 Radiated Spurious Emissions Measurements (Above 18GHz)



Plot 7-165. Radiated Spurious Plot 18GHz - 26.5GHz SISO ANT1 (802.11a) - OPEN

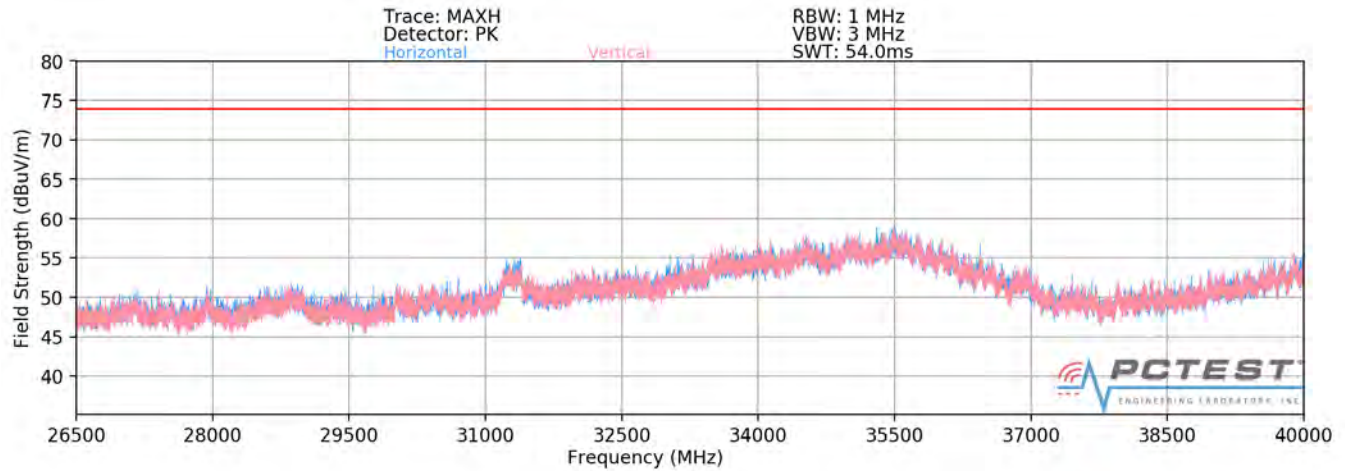


Plot 7-166. Radiated Spurious Plot 26.5GHz - 40GHz SISO ANT1 (802.11a) - OPEN



Plot 7-167. Radiated Spurious Plot 18GHz - 26.5GHz SISO ANT1 (802.11a) - CLOSED

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Plot 7-168. Radiated Spurious Plot 26.5GHz - 40GHz SISO ANT1 (802.11a) – CLOSED

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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SISO Antenna-1 Radiated Spurious Emission Measurements

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

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10360.00	Peak	H	146	331	-71.25	15.23	0.00	50.98	68.20	-17.22
* 15540.00	Average	H	-	-	-82.29	22.71	0.00	47.42	53.98	-6.56
* 15540.00	Peak	H	-	-	-70.17	22.71	0.00	59.54	73.98	-14.44
* 20720.00	Average	H	-	-	-78.79	17.51	-9.54	36.18	53.98	-17.80
* 20720.00	Peak	H	-	-	-67.63	17.51	-9.54	47.34	73.98	-26.64
25900.00	Peak	H	-	-	-65.40	19.88	-9.54	51.94	68.20	-16.26

Table 7-28. Radiated Measurements SISO ANT1

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10400.00	Peak	H	102	319	-70.45	15.67	0.00	52.22	68.20	-15.98
* 15600.00	Average	H	-	-	-81.47	22.46	0.00	47.99	53.98	-5.99
* 15600.00	Peak	H	-	-	-68.22	22.46	0.00	61.24	73.98	-12.74
* 20800.00	Average	H	-	-	-78.99	17.87	-9.54	36.33	53.98	-17.65
* 20800.00	Peak	H	-	-	-67.37	17.87	-9.54	47.95	73.98	-26.03
26000.00	Peak	H	-	-	-66.26	20.15	-9.54	51.34	68.20	-16.86

Table 7-29. Radiated Measurements SISO ANT1

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5240MHz
Channel: 48

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10480.00	Peak	H	100	319	-70.74	15.49	0.00	51.75	68.20	-16.45
* 15720.00	Average	H	-	-	-81.09	22.45	0.00	48.36	53.98	-5.62
* 15720.00	Peak	H	-	-	-66.56	22.45	0.00	62.89	73.98	-11.09
* 20960.00	Average	H	-	-	-79.01	18.06	-9.54	36.50	53.98	-17.47
* 20960.00	Peak	H	-	-	-67.21	18.06	-9.54	48.30	73.98	-25.67
26200.00	Peak	H	-	-	-65.95	20.23	-9.54	51.74	68.20	-16.46

Table 7-30. Radiated Measurements SISO ANT1

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10520.00	Peak	H	100	319	-63.70	15.86	0.00	59.16	68.20	-9.04
* 15780.00	Average	H	-	-	-80.26	22.77	0.00	49.51	53.98	-4.47
* 15780.00	Peak	H	-	-	-67.93	22.77	0.00	61.84	73.98	-12.14
* 21040.00	Average	H	-	-	-78.58	18.36	-9.54	37.23	53.98	-16.75
* 21040.00	Peak	H	-	-	-67.23	18.36	-9.54	48.58	73.98	-25.40
26300.00	Peak	H	-	-	-65.98	20.96	-9.54	52.43	68.20	-15.77

Table 7-31. Radiated Measurements SISO ANT1

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5280MHz
Channel: 56

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10560.00	Peak	H	100	319	-64.70	15.70	0.00	58.00	68.20	-10.20
* 15840.00	Average	H	-	-	-80.83	22.66	0.00	48.83	53.98	-5.15
* 15840.00	Peak	H	-	-	-69.19	22.66	0.00	60.47	73.98	-13.51
* 21120.00	Average	H	-	-	-78.60	18.17	-9.54	37.02	53.98	-16.95
* 21120.00	Peak	H	-	-	-67.27	18.17	-9.54	48.35	73.98	-25.62
26400.00	Peak	H	-	-	-66.05	20.65	-9.54	52.06	68.20	-16.14

Table 7-32. Radiated Measurements SISO ANT1

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 10640.00	Average	H	100	319	-79.96	16.03	0.00	43.07	53.98	-10.91
* 10640.00	Peak	H	100	319	-65.06	16.03	0.00	57.97	73.98	-16.01
* 15960.00	Average	H	-	-	-82.36	23.09	0.00	47.73	53.98	-6.25
* 15960.00	Peak	H	-	-	-70.57	23.09	0.00	59.52	73.98	-14.46
* 21280.00	Average	H	-	-	-78.29	18.57	-9.54	37.74	53.98	-16.24
* 21280.00	Peak	H	-	-	-67.33	18.57	-9.54	48.70	73.98	-25.28
26600.00	Peak	H	-	-	-52.54	5.16	-9.54	50.08	68.20	-18.12

Table 7-33. Radiated Measurements SISO ANT1

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Worst Case Mode: 802.11a
 Worst Case Transfer Rate: 6Mbps
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5500MHz
 Channel: 100

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11000.00	Average	H	107	338	-79.05	16.51	0.00	44.46	53.98	-9.52
* 11000.00	Peak	H	107	338	-67.12	16.51	0.00	56.39	73.98	-17.59
16500.00	Peak	H	-	-	-74.11	24.17	0.00	57.06	68.20	-11.14
22000.00	Peak	H	-	-	-67.21	19.12	-9.54	49.36	68.20	-18.84
27500.00	Peak	H	-	-	-51.58	3.98	-9.54	49.86	68.20	-18.34

Table 7-34. Radiated Measurements SISO ANT1

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11200.00	Average	H	104	344	-78.90	16.69	0.00	44.79	53.98	-9.19
* 11200.00	Peak	H	104	344	-66.80	16.69	0.00	56.89	73.98	-17.09
16800.00	Peak	H	-	-	-74.03	23.97	0.00	56.94	68.20	-11.26
* 22400.00	Average	H	-	-	-78.54	20.03	-9.54	38.95	53.98	-15.03
* 22400.00	Peak	H	-	-	-67.63	20.03	-9.54	49.86	73.98	-24.12
28000.00	Peak	H	-	-	-52.70	4.70	-9.54	49.46	68.20	-18.74

Table 7-35. Radiated Measurements SISO ANT1

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5720MHz
Channel: 144

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11440.00	Average	H	115	342	-79.34	17.29	0.00	44.95	53.98	-9.03
* 11440.00	Peak	H	115	342	-63.45	17.29	0.00	60.84	73.98	-13.14
17160.00	Peak	H	-	-	-77.13	24.37	0.00	54.24	68.20	-13.96
* 22880.00	Average	H	-	-	-79.25	19.50	-9.54	37.71	53.98	-16.27
* 22880.00	Peak	H	-	-	-67.75	19.50	-9.54	49.21	73.98	-24.77
28600.00	Peak	H	-	-	-52.02	5.14	-9.54	50.58	68.20	-17.62

Table 7-36. Radiated Measurements SISO ANT1

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11490.00	Average	H	114	342	-78.71	17.63	0.00	45.92	53.98	-8.05
* 11490.00	Peak	H	114	342	-62.78	17.63	0.00	61.85	73.98	-12.12
17235.00	Peak	H	-	-	-77.25	25.01	0.00	54.76	68.20	-13.44
* 22980.00	Average	H	-	-	-79.16	19.89	-9.54	38.18	53.98	-15.80
* 22980.00	Peak	H	-	-	-68.30	19.89	-9.54	49.04	73.98	-24.94
28725.00	Peak	H	-	-	-52.21	4.66	-9.54	49.91	68.20	-18.29

Table 7-37. Radiated Measurements SISO ANT1

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Worst Case Mode: 802.11a
 Worst Case Transfer Rate: 6Mbps
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5785MHz
 Channel: 157

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11570.00	Average	H	119	341	-80.17	17.35	0.00	44.18	53.98	-9.80
* 11570.00	Peak	H	119	341	-61.56	17.35	0.00	62.79	73.98	-11.19
17355.00	Peak	H	-	-	-73.21	26.08	0.00	59.87	68.20	-8.33
23140.00	Peak	H	-	-	-67.82	19.59	-9.54	49.23	68.20	-18.97
28925.00	Peak	H	-	-	-52.83	4.43	-9.54	49.06	68.20	-19.14

Table 7-38. Radiated Measurements SISO ANT1

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11650.00	Average	H	120	333	-80.02	17.57	0.00	44.55	53.98	-9.42
* 11650.00	Peak	H	120	333	-60.13	17.57	0.00	64.44	73.98	-9.53
17475.00	Peak	H	-	-	-73.33	26.23	0.00	59.90	68.20	-8.30
23300.00	Peak	H	-	-	-67.42	18.93	-9.54	48.97	68.20	-19.23
29125.00	Peak	H	-	-	-50.85	3.48	-9.54	50.09	68.20	-18.11

Table 7-39. Radiated Measurements SISO ANT1

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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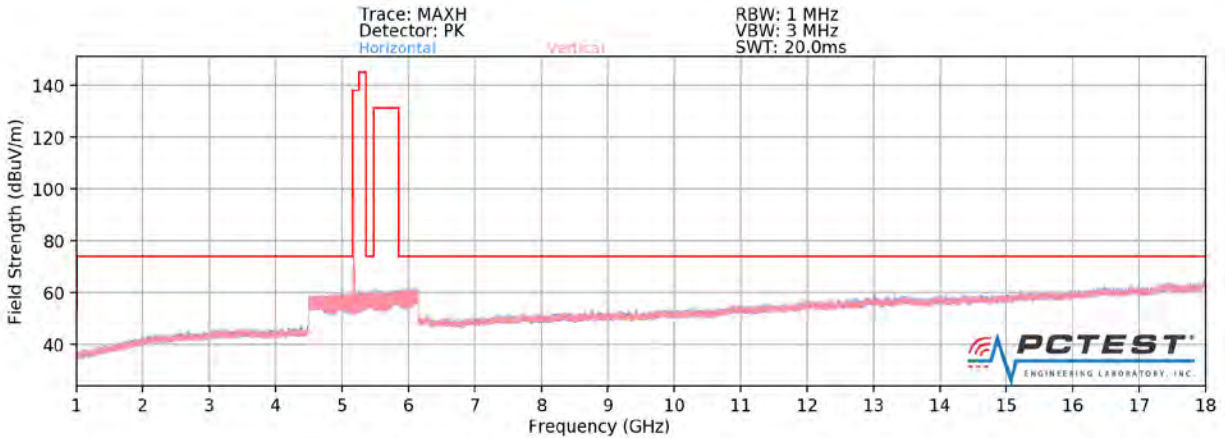
Worst Case Mode: 802.11a
 Worst Case Transfer Rate: 6Mbps
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5745MHz
 Channel: 149

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11490.00	Average	H	-	-	-80.15	17.63	0.00	44.48	53.98	-9.49
* 11490.00	Peak	H	-	-	-64.55	17.63	0.00	60.08	73.98	-13.89
17235.00	Peak	H	-	-	-77.01	25.01	0.00	55.00	68.20	-13.20
* 22980.00	Average	H	-	-	-79.35	19.89	-9.54	37.99	53.98	-15.99
* 22980.00	Peak	H	-	-	-69.14	19.89	-9.54	48.20	73.98	-25.78
28725.00	Peak	H	-	-	-53.35	4.66	-9.54	48.77	68.20	-19.43

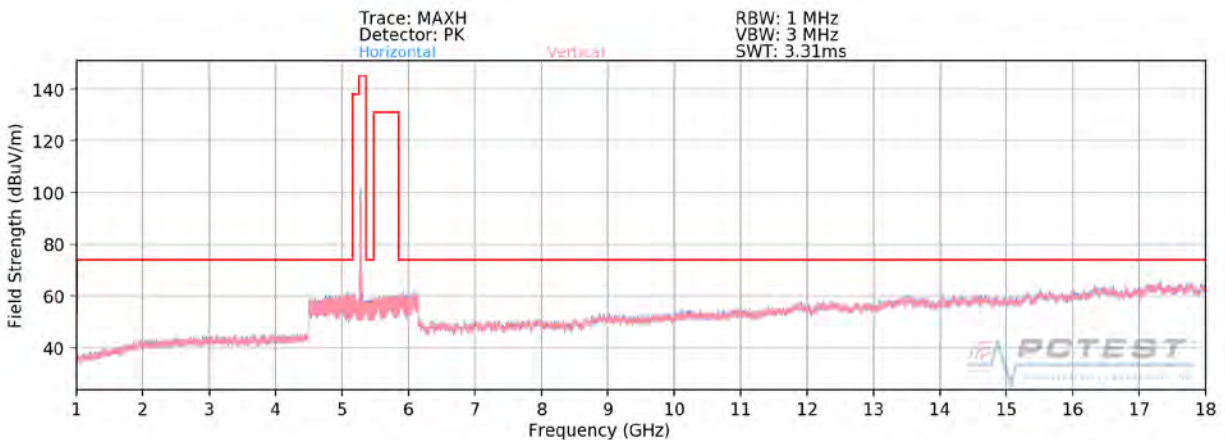
Table 7-40. Radiated Measurements SISO ANT1 with Wireless Charging Pad

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 126 of 195

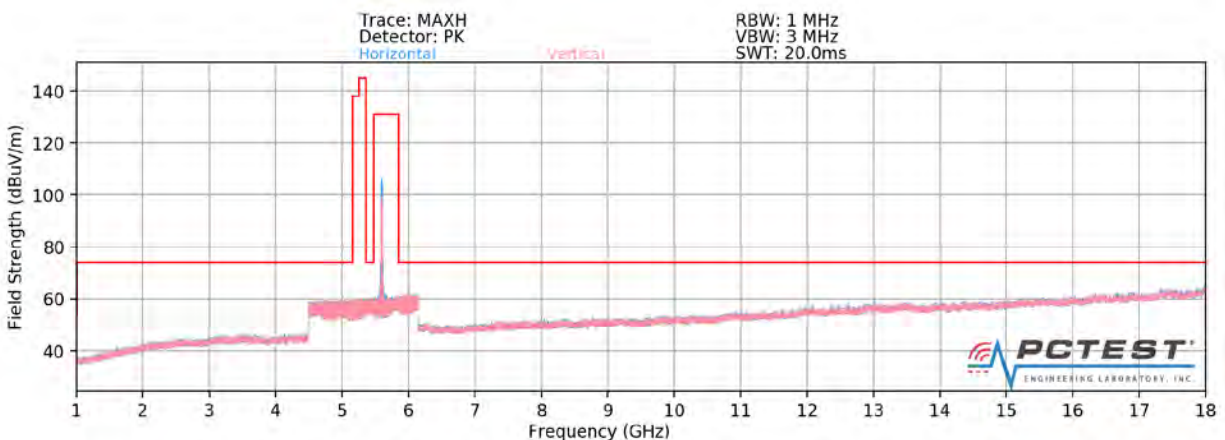
7.6.2 SISO Antenna-2 Radiated Spurious Emission Measurements



Plot 7-169. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11a – U1 Ch. 40) – OPEN

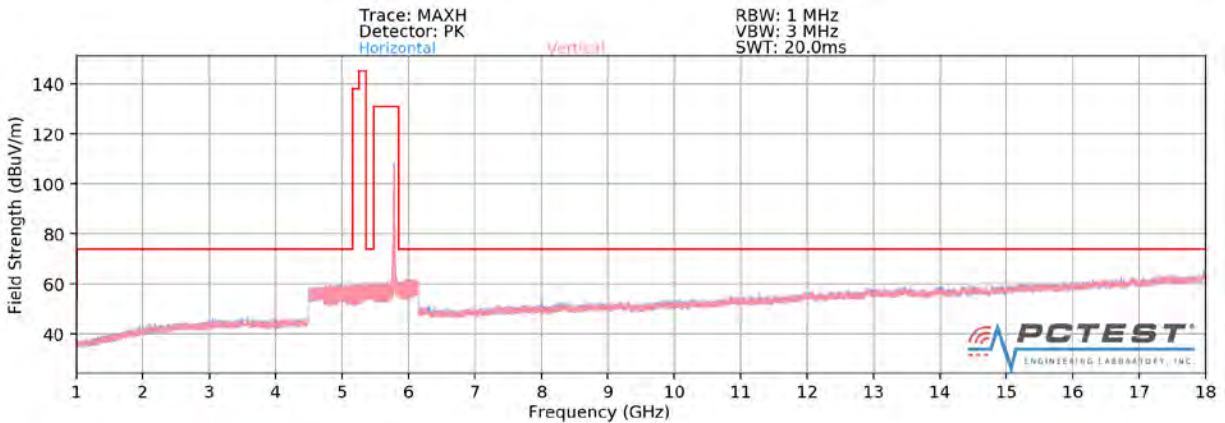


Plot 7-170. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11a – U2A Ch. 56) – OPEN

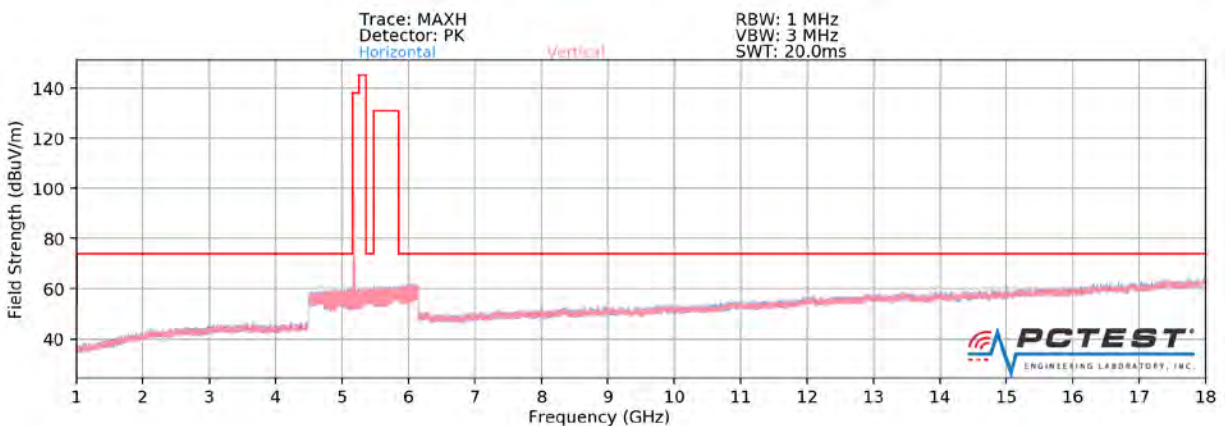


Plot 7-171. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11a – U2C Ch. 120) – OPEN

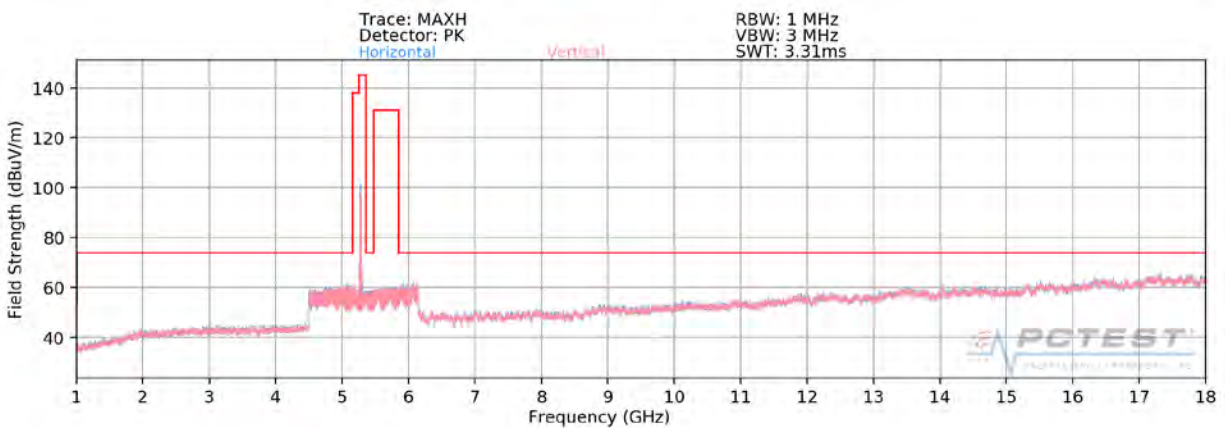
FCC ID: A3LSMF700U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 127 of 195



Plot 7-172. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11a – U3 Ch. 157) – OPEN

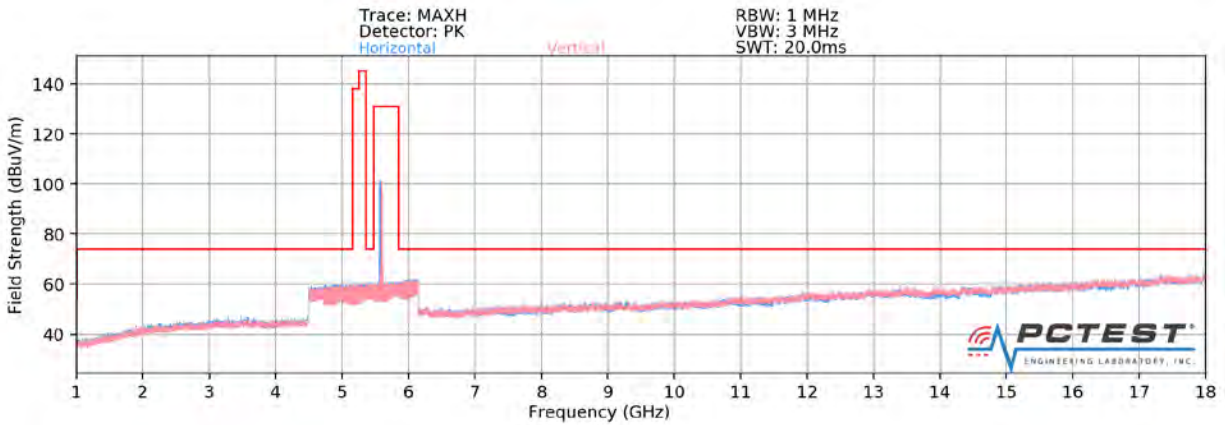


Plot 7-173. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11a – U1 Ch. 40) – CLOSED

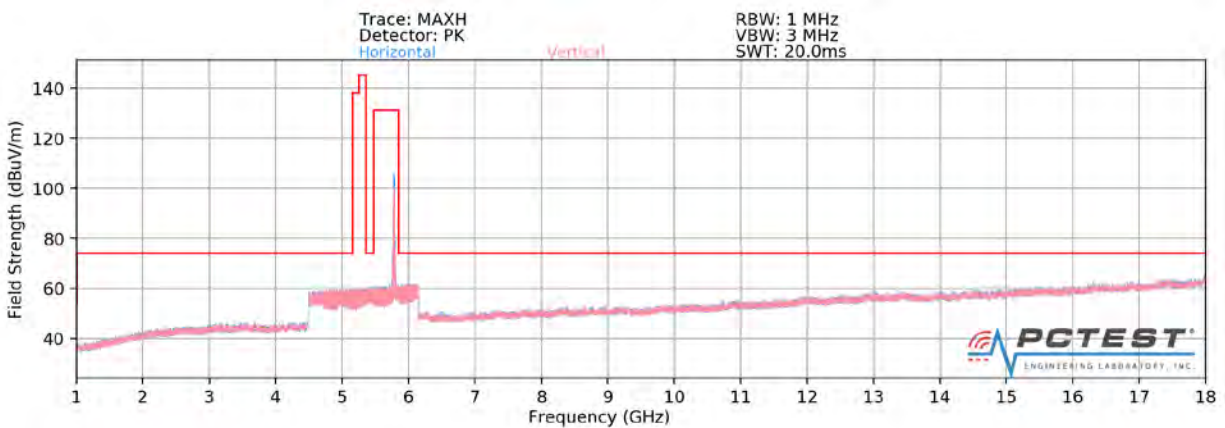


Plot 7-174. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11a – U2A Ch. 56) – CLOSED

FCC ID: A3LSMF700U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 128 of 195



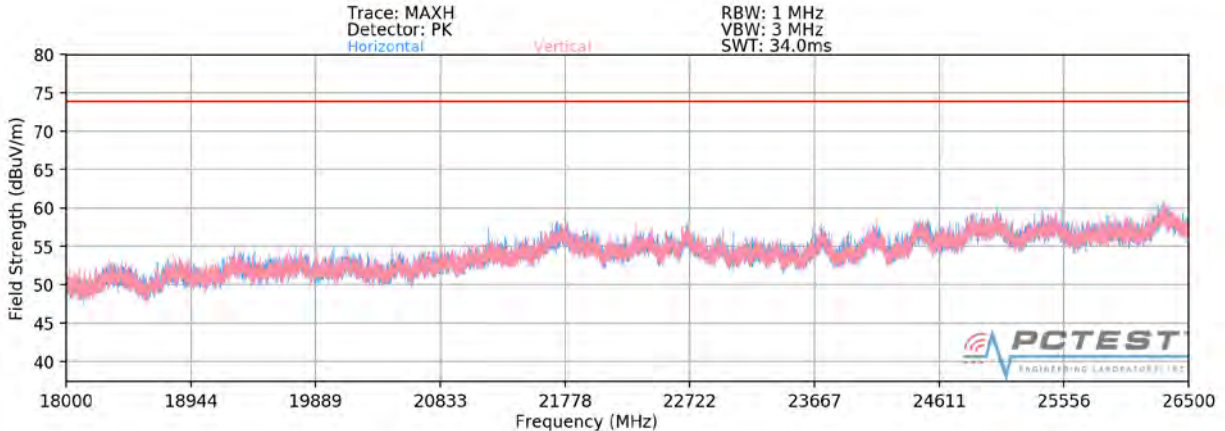
Plot 7-175. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11a – U2C Ch. 120) – CLOSED



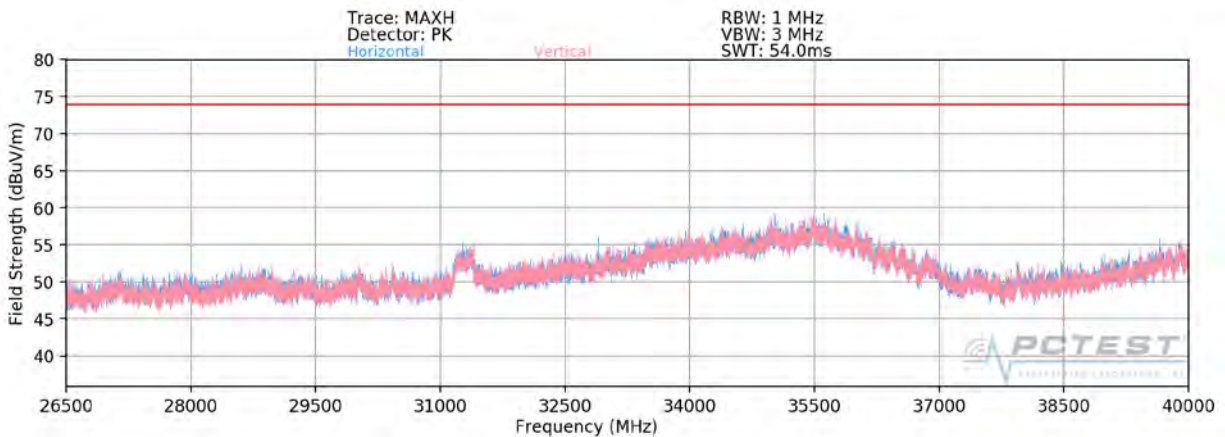
Plot 7-176. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11a – U3 Ch. 157) – CLOSED

FCC ID: A3LSMF700U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 129 of 195

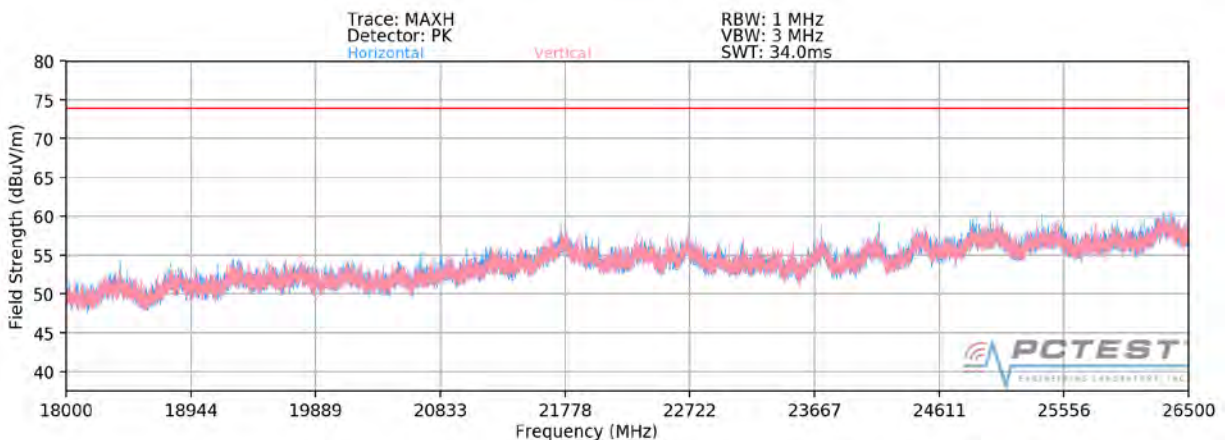
SISO Antenna-2 Radiated Spurious Emissions Measurements (Above 18GHz)



Plot 7-177. Radiated Spurious Plot above 18GHz - 26.5GHz SISO ANT2 (802.11a) – OPEN

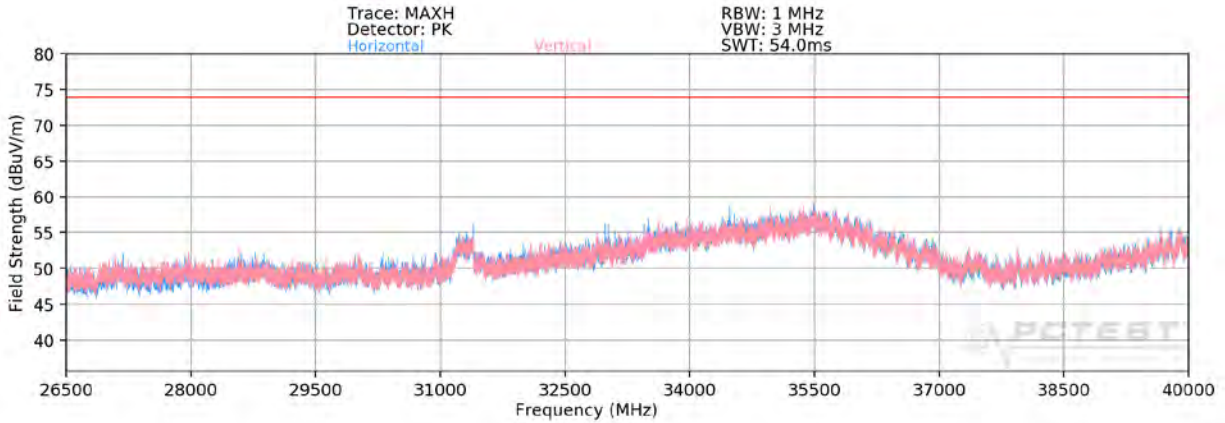


Plot 7-178. Radiated Spurious Plot 26.5GHz - 40GHz SISO ANT2 (802.11a) – OPEN



Plot 7-179. Radiated Spurious Plot above 18GHz - 26.5GHz SISO ANT2 (802.11a) – CLOSED

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 130 of 195



Plot 7-180. Radiated Spurious Plot 26.5GHz - 40GHz SISO ANT2 (802.11a) – CLOSED

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset	Page 131 of 195	

SISO Antenna-2 Radiated Spurious Emission Measurements

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

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10360.00	Peak	H	124	16	-68.74	15.23	0.00	53.49	68.20	-14.71
* 15540.00	Average	H	-	-	-83.03	22.71	0.00	46.68	53.98	-7.30
* 15540.00	Peak	H	-	-	-72.50	22.71	0.00	57.21	73.98	-16.77
* 20720.00	Average	H	-	-	-78.92	17.51	-9.54	36.05	53.98	-17.93
* 20720.00	Peak	H	-	-	-67.78	17.51	-9.54	47.19	73.98	-26.79
25900.00	Peak	H	-	-	-66.09	19.88	-9.54	51.25	68.20	-16.95

Table 7-41. Radiated Measurements SISO ANT2

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10400.00	Peak	H	282	299	-66.04	15.67	0.00	56.63	68.20	-11.57
* 15600.00	Average	H	-	-	-82.13	22.46	0.00	47.33	53.98	-6.65
* 15600.00	Peak	H	-	-	-71.03	22.46	0.00	58.43	73.98	-15.55
* 20800.00	Average	H	-	-	-79.04	17.87	-9.54	36.28	53.98	-17.70
* 20800.00	Peak	H	-	-	-67.29	17.87	-9.54	48.03	73.98	-25.95
26000.00	Peak	H	-	-	-66.52	20.15	-9.54	51.08	68.20	-17.12

Table 7-42. Radiated Measurements SISO ANT2

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 132 of 195

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10480.00	Peak	H	278	297	-64.91	15.49	0.00	57.58	68.20	-10.62
* 15720.00	Average	H	-	-	-82.98	22.45	0.00	46.47	53.98	-7.51
* 15720.00	Peak	H	-	-	-69.45	22.45	0.00	60.00	73.98	-13.98
* 20960.00	Average	H	-	-	-79.07	18.06	-9.54	36.44	53.98	-17.53
* 20960.00	Peak	H	-	-	-67.58	18.06	-9.54	47.93	73.98	-26.04
26200.00	Peak	H	-	-	-66.53	20.23	-9.54	51.16	68.20	-17.04

Table 7-43. Radiated Measurements SISO ANT2

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10520.00	Peak	H	271	299	-64.84	15.86	0.00	58.02	68.20	-10.18
* 15780.00	Average	H	-	-	-82.67	22.77	0.00	47.10	53.98	-6.88
* 15780.00	Peak	H	-	-	-69.28	22.77	0.00	60.49	73.98	-13.49
* 21040.00	Average	H	-	-	-78.68	18.36	-9.54	37.13	53.98	-16.85
* 21040.00	Peak	H	-	-	-67.18	18.36	-9.54	48.63	73.98	-25.35
26300.00	Peak	H	-	-	-65.48	20.96	-9.54	52.93	68.20	-15.27

Table 7-44. Radiated Measurements SISO ANT2

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 133 of 195

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10560.00	Peak	H	272	295	-65.35	15.70	0.00	57.35	68.20	-10.85
* 15840.00	Average	H	-	-	-83.01	22.66	0.00	46.65	53.98	-7.33
* 15840.00	Peak	H	-	-	-70.24	22.66	0.00	59.42	73.98	-14.56
* 21120.00	Average	H	-	-	-78.84	18.17	-9.54	36.78	53.98	-17.19
* 21120.00	Peak	H	-	-	-67.25	18.17	-9.54	48.37	73.98	-25.60
26400.00	Peak	H	-	-	-65.80	20.65	-9.54	52.31	68.20	-15.89

Table 7-45. Radiated Measurements SISO ANT2

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 10640.00	Average	H	286	299	-79.74	16.03	0.00	43.29	53.98	-10.69
* 10640.00	Peak	H	286	299	-64.51	16.03	0.00	58.52	73.98	-15.46
* 15960.00	Average	H	-	-	-82.12	23.09	0.00	47.97	53.98	-6.01
* 15960.00	Peak	H	-	-	-68.75	23.09	0.00	61.34	73.98	-12.64
* 21280.00	Average	H	-	-	-78.37	18.57	-9.54	37.66	53.98	-16.32
* 21280.00	Peak	H	-	-	-67.52	18.57	-9.54	48.51	73.98	-25.47
26600.00	Peak	H	-	-	-53.42	5.16	-9.54	49.20	68.20	-19.00

Table 7-46. Radiated Measurements SISO ANT2

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 134 of 195

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11000.00	Average	H	252	300	-78.65	16.51	0.00	44.86	53.98	-9.12
* 11000.00	Peak	H	-	-	-64.17	16.51	0.00	59.34	73.98	-14.64
16500.00	Peak	H	-	-	-69.47	24.17	0.00	61.70	68.20	-6.50
22000.00	Peak	H	-	-	-67.12	19.12	-9.54	49.45	68.20	-18.75
27500.00	Peak	H	-	-	-51.34	3.98	-9.54	50.10	68.20	-18.10

Table 7-47. Radiated Measurements SISO ANT2

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11200.00	Average	H	230	295	-79.22	16.73	0.00	44.51	53.98	-9.47
* 11200.00	Peak	H	-	-	-63.86	16.73	0.00	59.87	73.98	-14.11
16800.00	Peak	H	-	-	-69.49	24.00	0.00	61.51	68.20	-6.69
* 22400.00	Average	H	-	-	-79.02	20.03	-9.54	38.47	53.98	-15.51
* 22400.00	Peak	H	-	-	-68.05	20.03	-9.54	49.44	73.98	-24.54
28000.00	Peak	H	-	-	-52.66	4.70	-9.54	49.50	68.20	-18.70

Table 7-48. Radiated Measurements SISO ANT2

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 135 of 195

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11440.00	Average	H	249	300	-80.04	17.29	0.00	44.25	53.98	-9.73
* 11440.00	Peak	H	-	-	-63.27	17.29	0.00	61.02	73.98	-12.96
17160.00	Peak	H	-	-	-69.04	24.37	0.00	62.33	68.20	-5.87
* 22880.00	Average	H	-	-	-79.25	19.50	-9.54	37.71	53.98	-16.27
* 22880.00	Peak	H	-	-	-67.67	19.50	-9.54	49.29	73.98	-24.69
28600.00	Peak	H	-	-	-52.13	5.14	-9.54	50.47	68.20	-17.73

Table 7-49. Radiated Measurements SISO ANT2

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11490.00	Average	H	240	299	-80.31	17.63	0.00	44.32	53.98	-9.65
* 11490.00	Peak	H	-	-	-63.79	17.63	0.00	60.84	73.98	-13.13
17235.00	Peak	H	-	-	-69.93	25.01	0.00	62.08	68.20	-6.12
* 22980.00	Average	H	-	-	-79.15	19.89	-9.54	38.19	53.98	-15.79
* 22980.00	Peak	H	-	-	-67.81	19.89	-9.54	49.53	73.98	-24.45
28725.00	Peak	H	-	-	-50.93	4.66	-9.54	51.19	68.20	-17.01

Table 7-50. Radiated Measurements SISO ANT2

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 136 of 195

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11570.00	Average	H	246	351	-79.94	17.35	0.00	44.41	53.98	-9.57
* 11570.00	Peak	H	246	351	-63.16	17.35	0.00	61.19	73.98	-12.79
17355.00	Peak	H	-	-	-70.69	26.08	0.00	62.39	68.20	-5.81
23140.00	Peak	H	-	-	-67.95	19.59	-9.54	49.10	68.20	-19.10
28925.00	Peak	H	-	-	-53.20	4.43	-9.54	48.69	68.20	-19.51

Table 7-51. Radiated Measurements SISO ANT2

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11650.00	Average	H	224	351	-79.79	17.57	0.00	44.78	53.98	-9.19
* 11650.00	Peak	H	224	351	-63.33	17.57	0.00	61.24	73.98	-12.73
17475.00	Peak	H	-	-	-70.94	26.23	0.00	62.29	68.20	-5.91
23300.00	Peak	H	-	-	-67.85	18.93	-9.54	48.54	68.20	-19.66
29125.00	Peak	H	-	-	-50.19	3.48	-9.54	50.75	68.20	-17.45

Table 7-52. Radiated Measurements SISO ANT2

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 137 of 195

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11650.00	Average	H	-	-	-80.23	17.57	0.00	44.34	53.98	-9.63
* 11650.00	Peak	H	-	-	-63.57	17.57	0.00	61.00	73.98	-12.97
17475.00	Peak	H	-	-	-71.14	26.23	0.00	62.09	68.20	-6.11
23300.00	Peak	H	-	-	-67.25	18.93	-9.54	49.14	68.20	-19.06
29125.00	Peak	H	-	-	-50.36	3.48	-9.54	50.58	68.20	-17.62

Table 7-53. Radiated Measurements SISO ANT2 with Wireless Charging Pad

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 138 of 195

7.6.3 MIMO/CDD Radiated Spurious Emission Measurements

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

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10360.00	Peak	V	124	219	-71.47	18.27	0.00	53.80	68.20	-14.40
* 15540.00	Average	V	-	-	-85.71	28.22	0.00	49.51	53.98	-4.47
* 15540.00	Peak	V	-	-	-74.35	28.22	0.00	60.87	73.98	-13.11
* 20720.00	Average	V	-	-	-77.68	17.51	-9.54	37.29	53.98	-16.69
* 20720.00	Peak	V	-	-	-66.42	17.51	-9.54	48.55	73.98	-25.43
25900.00	Peak	V	-	-	-65.65	19.88	-9.54	51.69	68.20	-16.51

Table 7-54. Radiated Measurements MIMO/CDD

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10400.00	Peak	V	141	212	-71.22	18.76	0.00	54.54	68.20	-13.66
* 15600.00	Average	V	-	-	-85.85	27.97	0.00	49.12	53.98	-4.86
* 15600.00	Peak	V	-	-	-74.42	27.97	0.00	60.55	73.98	-13.43
* 20800.00	Average	V	-	-	-78.86	17.87	-9.54	36.46	53.98	-17.52
* 20800.00	Peak	V	-	-	-67.36	17.87	-9.54	47.96	73.98	-26.02
26000.00	Peak	V	-	-	-65.85	20.15	-9.54	51.75	68.20	-16.45

Table 7-55. Radiated Measurements MIMO/CDD

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 139 of 195

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10480.00	Peak	V	152	207	-72.17	19.02	0.00	53.85	68.20	-14.35
* 15720.00	Average	V	-	-	-85.97	27.74	0.00	48.77	53.98	-5.21
* 15720.00	Peak	V	-	-	-74.10	27.74	0.00	60.64	73.98	-13.34
* 20960.00	Average	V	-	-	-78.40	18.06	-9.54	37.11	53.98	-16.86
* 20960.00	Peak	V	-	-	-67.67	18.06	-9.54	47.84	73.98	-26.13
26200.00	Peak	V	-	-	-65.77	20.23	-9.54	51.92	68.20	-16.28

Table 7-56. Radiated Measurements MIMO/CDD

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10520.00	Peak	V	-	-	-72.53	18.89	0.00	53.36	68.20	-14.84
* 15780.00	Average	V	-	-	-85.93	27.43	0.00	48.50	53.98	-5.48
* 15780.00	Peak	V	-	-	-75.27	27.43	0.00	59.16	73.98	-14.82
* 21040.00	Average	V	-	-	-78.51	18.36	-9.54	37.30	53.98	-16.68
* 21040.00	Peak	V	-	-	-67.55	18.36	-9.54	48.26	73.98	-25.72
26300.00	Peak	V	-	-	-65.29	20.96	-9.54	53.12	68.20	-15.08

Table 7-57. Radiated Measurements MIMO/CDD

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 140 of 195

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10560.00	Peak	V	117	204	-71.57	18.87	0.00	54.30	68.20	-13.90
* 15840.00	Average	V	-	-	-85.71	28.80	0.00	50.09	53.98	-3.89
* 15840.00	Peak	V	-	-	-74.40	28.80	0.00	61.40	73.98	-12.58
* 21120.00	Average	V	-	-	-78.70	18.17	-9.54	36.92	53.98	-17.05
* 21120.00	Peak	V	-	-	-67.29	18.17	-9.54	48.33	73.98	-25.64
26400.00	Peak	V	-	-	-65.48	20.65	-9.54	52.63	68.20	-15.57

Table 7-58. Radiated Measurements MIMO/CDD

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 10640.00	Average	V	147	210	-83.76	19.05	0.00	42.29	53.98	-11.69
* 10640.00	Peak	V	147	210	-72.66	19.05	0.00	53.39	73.98	-20.59
* 15960.00	Average	V	-	-	-86.03	27.12	0.00	48.09	53.98	-5.89
* 15960.00	Peak	V	-	-	-74.80	27.12	0.00	59.32	73.98	-14.66
* 21280.00	Average	V	-	-	-78.39	18.57	-9.54	37.64	53.98	-16.34
* 21280.00	Peak	V	-	-	-67.10	18.57	-9.54	48.93	73.98	-25.05
26600.00	Peak	V	-	-	-52.17	5.16	-9.54	50.45	68.20	-17.75

Table 7-59. Radiated Measurements MIMO/CDD

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 141 of 195

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11000.00	Average	V	135	197	-83.80	19.60	0.00	42.80	53.98	-11.18
* 11000.00	Peak	V	135	197	-72.12	19.60	0.00	54.48	73.98	-19.50
16500.00	Peak	V	-	-	-74.17	28.33	0.00	61.16	68.20	-7.04
22000.00	Peak	V	-	-	-67.20	19.12	-9.54	49.37	68.20	-18.83
27500.00	Peak	V	-	-	-51.19	3.98	-9.54	50.25	68.20	-17.95

Table 7-60. Radiated Measurements MIMO/CDD

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11200.00	Average	V	137	211	-84.09	19.94	0.00	42.85	53.98	-11.13
* 11200.00	Peak	V	137	211	-72.91	19.94	0.00	54.03	73.98	-19.95
16800.00	Peak	V	-	-	-73.47	30.43	0.00	63.96	68.20	-4.24
* 22400.00	Average	V	-	-	-78.66	20.03	-9.54	38.83	53.98	-15.15
* 22400.00	Peak	V	-	-	-67.57	20.03	-9.54	49.92	73.98	-24.06
28000.00	Peak	V	-	-	-52.62	4.70	-9.54	49.54	68.20	-18.66

Table 7-61. Radiated Measurements MIMO/CDD

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 142 of 195

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11440.00	Average	V	127	212	-83.47	19.66	0.00	43.19	53.98	-10.79
* 11440.00	Peak	V	127	212	-71.76	19.66	0.00	54.90	73.98	-19.08
17160.00	Peak	V	-	-	-74.50	30.32	0.00	62.82	68.20	-5.38
* 22880.00	Average	V	-	-	-79.19	19.50	-9.54	37.77	53.98	-16.21
* 22880.00	Peak	V	-	-	-67.94	19.50	-9.54	49.02	73.98	-24.96
28600.00	Peak	V	-	-	-51.79	5.14	-9.54	50.81	68.20	-17.39

Table 7-62. Radiated Measurements MIMO/CDD

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11490.00	Average	V	129	206	-83.29	20.22	0.00	43.93	53.98	-10.05
* 11490.00	Peak	V	129	206	-72.11	20.22	0.00	55.11	73.98	-18.87
17235.00	Peak	V	-	-	-74.65	29.88	0.00	62.23	68.20	-5.97
* 22980.00	Average	V	-	-	-79.21	19.89	-9.54	38.13	53.98	-15.85
* 22980.00	Peak	V	-	-	-67.30	19.89	-9.54	50.04	73.98	-23.94
28725.00	Peak	V	-	-	-52.39	4.66	-9.54	49.73	69.20	-19.47

Table 7-63. Radiated Measurements MIMO/CDD

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 143 of 195

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11570.00	Average	V	121	211	-83.60	21.58	0.00	44.98	53.98	-9.00
* 11570.00	Peak	V	121	211	-71.94	21.58	0.00	56.64	73.98	-17.34
17355.00	Peak	V	-	-	-74.71	29.28	0.00	61.57	68.20	-6.63
23140.00	Peak	V	-	-	-68.07	19.59	-9.54	48.98	68.20	-19.22
28925.00	Peak	V	-	-	-52.67	4.43	-9.54	49.22	68.20	-18.98

Table 7-64. Radiated Measurements MIMO/CDD

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11650.00	Average	V	113	204	-84.80	21.22	0.00	43.42	53.98	-10.56
* 11650.00	Peak	V	113	204	-72.78	21.22	0.00	55.44	73.98	-18.54
17475.00	Peak	V	-	-	-75.40	30.91	0.00	62.51	68.20	-5.69
23300.00	Peak	V	-	-	-67.27	18.93	-9.54	49.12	68.20	-19.08
29125.00	Peak	V	-	-	-50.67	3.48	-9.54	50.27	68.20	-17.93

Table 7-65. Radiated Measurements MIMO/CDD

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 144 of 195

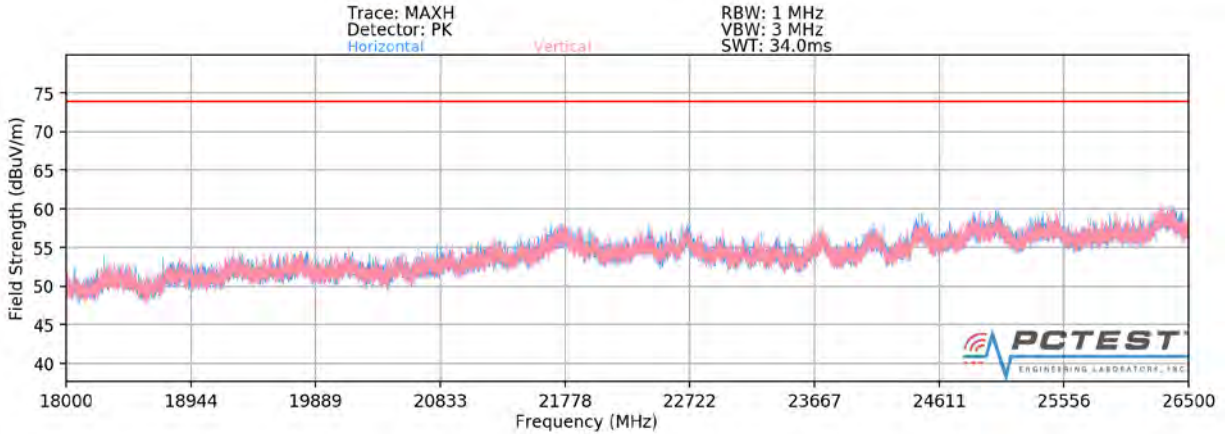
Worst Case Mode: 802.11a
 Worst Case Transfer Rate: 6Mbps
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5745MHz
 Channel: 149

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11570.00	Average	V	-	-	-85.99	21.58	0.00	42.59	53.98	-11.39
* 11570.00	Peak	V	-	-	-75.34	21.58	0.00	53.24	73.98	-20.74
17355.00	Peak	V	-	-	-74.71	29.28	0.00	61.57	68.20	-6.63
23140.00	Peak	V	-	-	-68.07	19.59	-9.54	48.98	68.20	-19.22
28925.00	Peak	V	-	-	-52.67	4.43	-9.54	49.22	68.20	-18.98

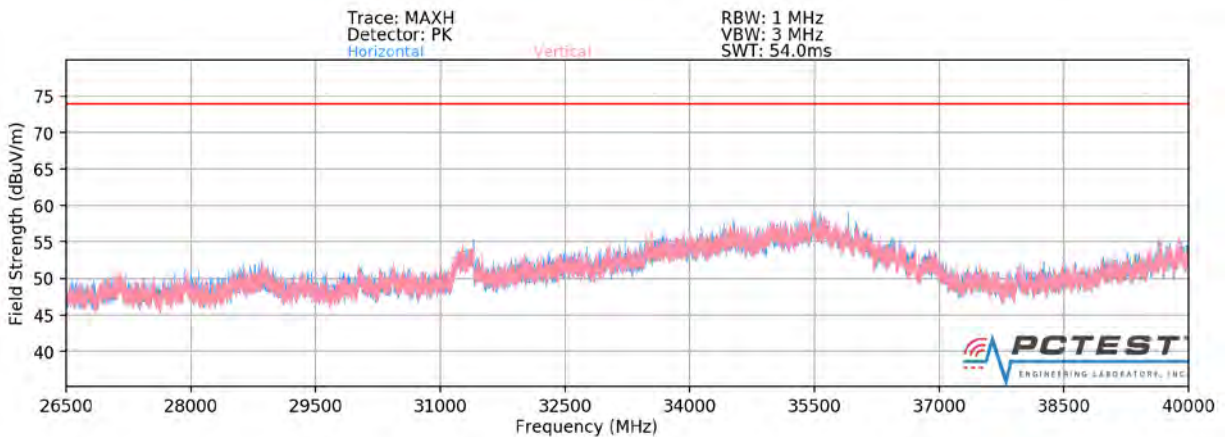
Table 7-66. Radiated Measurements MIMO/CDD with WCP

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 145 of 195

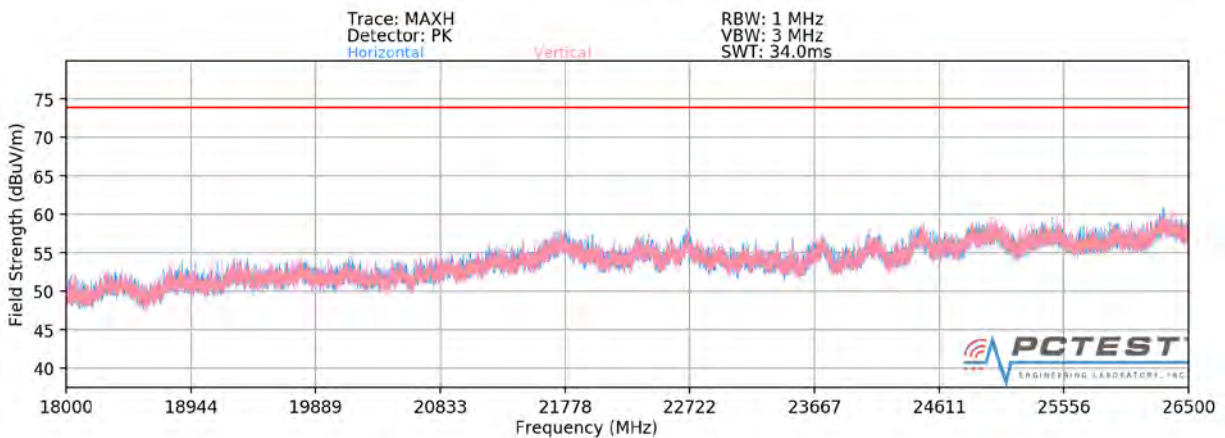
MIMO/CDD Radiated Spurious Emissions Measurements (Above 18GHz)



Plot 7-181. Radiated Spurious Plot above 18GHz - 26.5GHz MIMO/CDD (802.11a) – OPEN

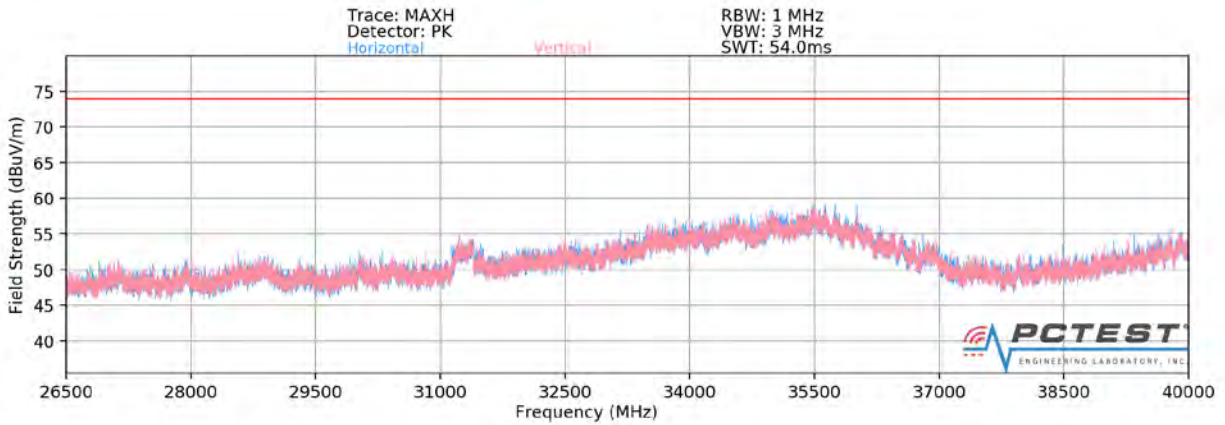


Plot 7-182. Radiated Spurious Plot 26.5GHz - 40GHz MIMO/CDD (802.11a) – OPEN



Plot 7-183. Radiated Spurious Plot above 18GHz - 26.5GHz MIMO/CDD (802.11a) – CLOSED

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06-A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 146 of 195



Plot 7-184. Radiated Spurious Plot 26.5GHz - 40GHz MIMO/CDD (802.11a) – CLOSED

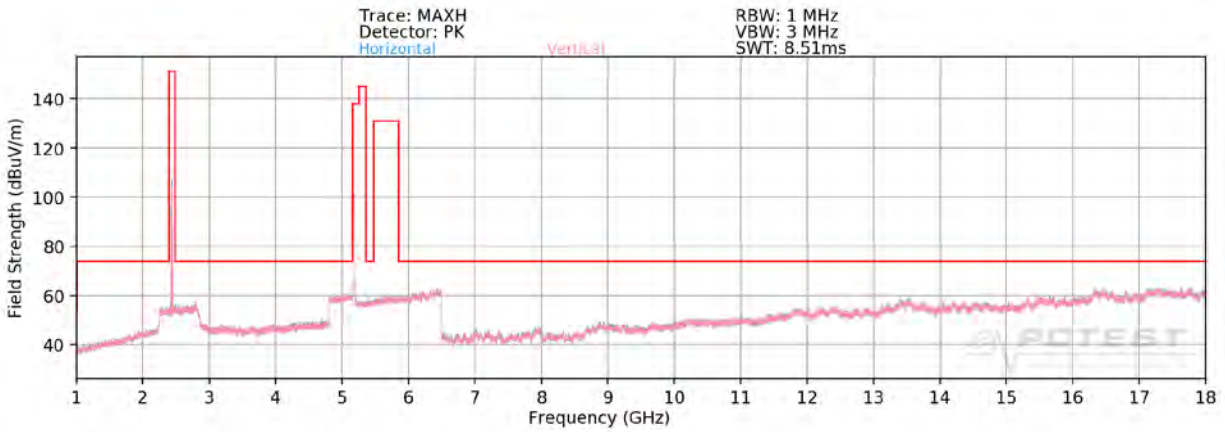
FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 147 of 195

7.6.4 Simultaneous Tx Radiated Spurious Emissions Measurements

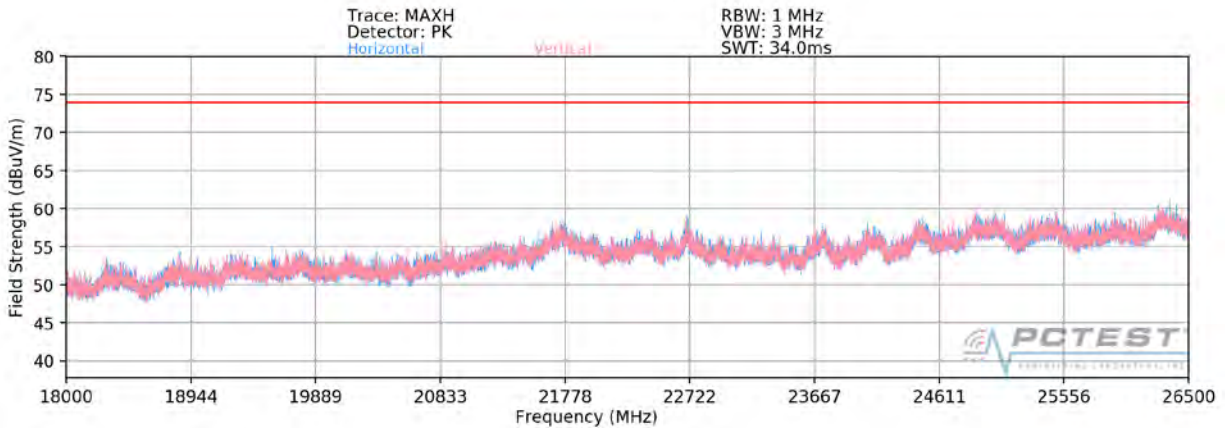
§15.407(b) §15.205 & §15.209; RSS-Gen [8.9]

Description	2.4 GHz Emission	5 GHz Emission
Antenna	1	2
Channel	6	40
Operating Frequency (MHz)	2437	5200
Data Rate (Mbps)	6	6
Mode	802.11g	802.11a

Table 7-67. Simultaneous Transmission Config-1

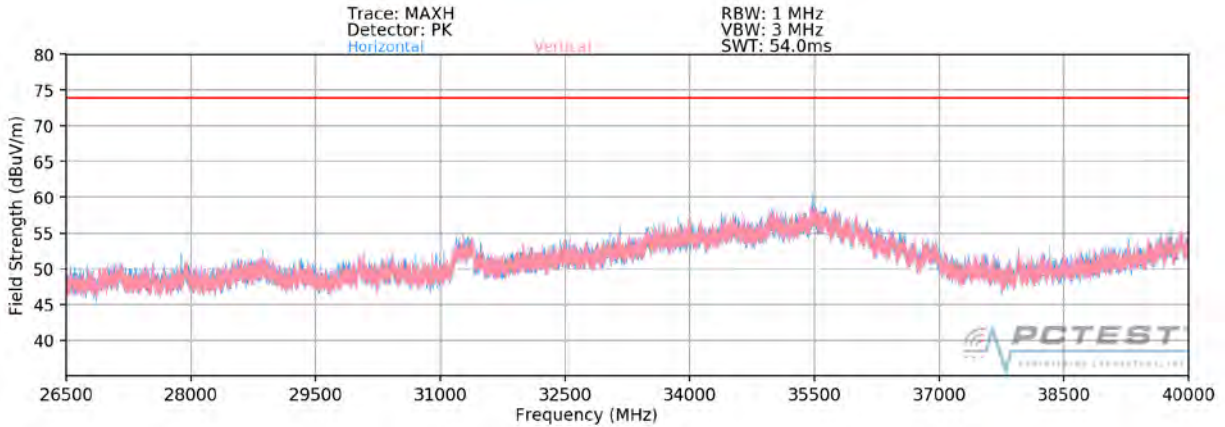


Plot 7-185. Radiated Spurious Plot above 1GHz (2.4GHz – 5GHz) – OPEN

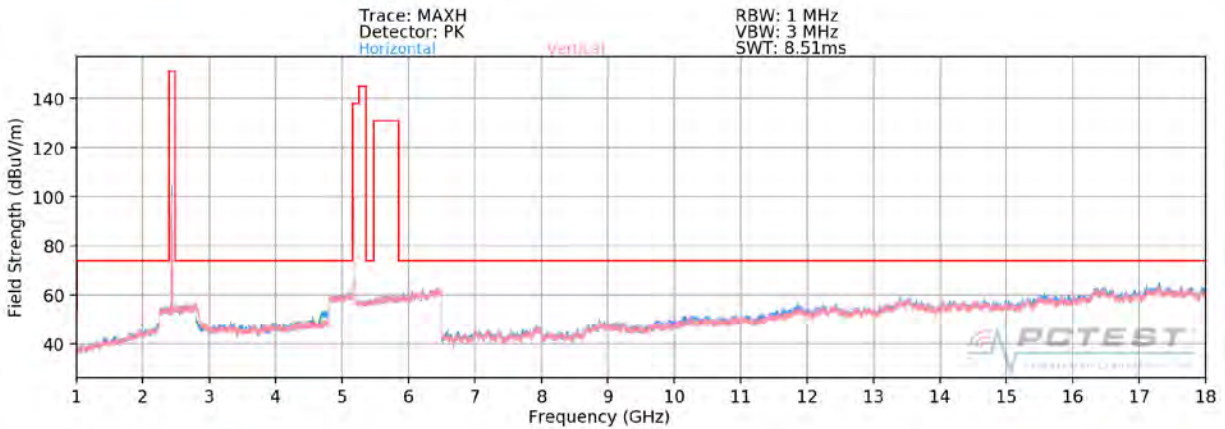


Plot 7-186. Radiated Spurious Plot 18GHz – 26.5GHz (2.4GHz – 5GHz) – OPEN

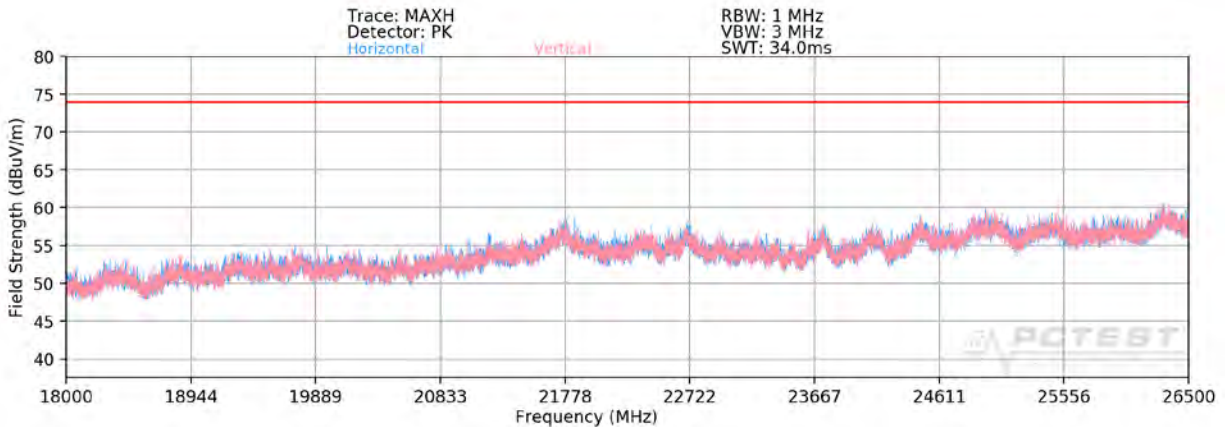
FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 148 of 195



Plot 7-187. Radiated Spurious Plot above 26.5GHz (2.4GHz – 5GHz) – OPEN

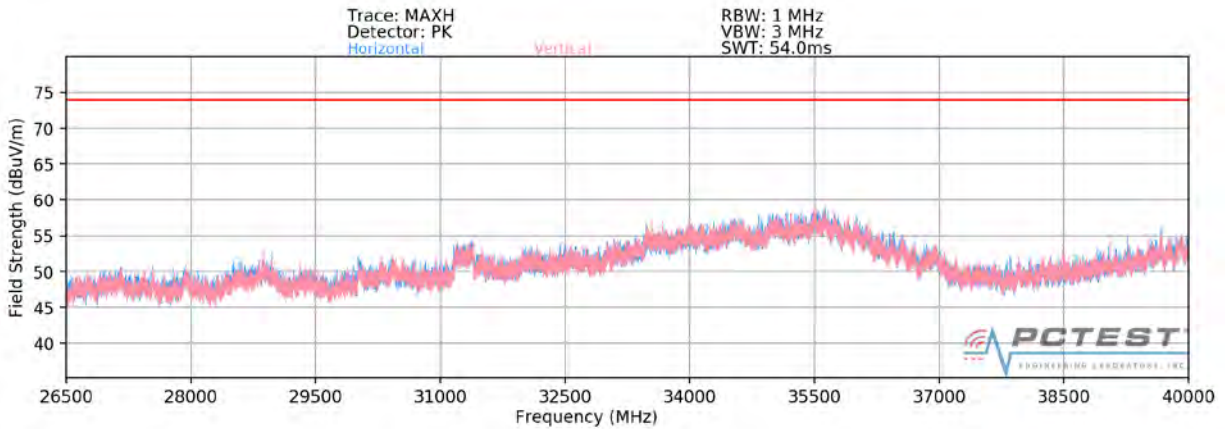


Plot 7-188. Radiated Spurious Plot above 1GHz (2.4GHz – 5GHz) – CLOSED



Plot 7-189. Radiated Spurious Plot 18GHz – 26.5GHz (2.4GHz – 5GHz) – CLOSED

FCC ID: A3LSMF700U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 149 of 195



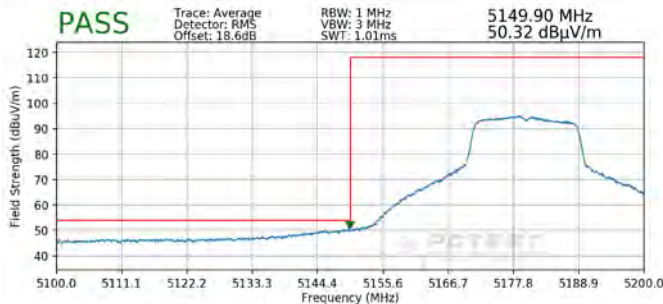
Plot 7-190. Radiated Spurious Plot above 26.5GHz (2.4GHz – 5GHz) – CLOSED

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 150 of 195

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

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

Worst Case Mode:	802.11n
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5180MHz
Channel:	36

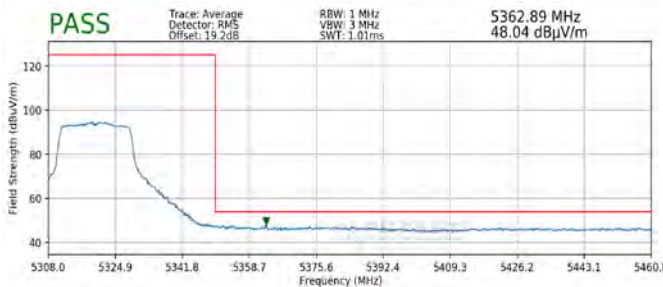


Plot 7-191. Radiated Lower Band Edge Plot SISO ANT1 (Average - UNII Band 1)

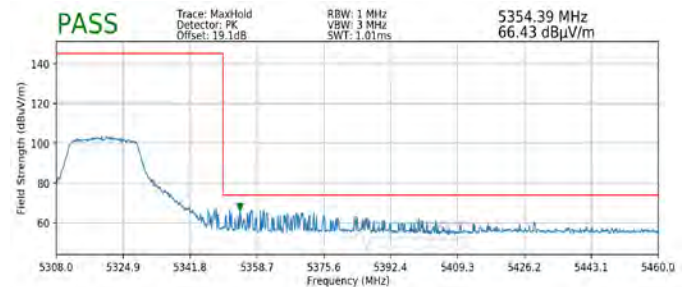


Plot 7-192. Radiated Lower Band Edge Plot SISO ANT1 (Peak - UNII Band 1)

Worst Case Mode:	802.11n
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5320MHz
Channel:	64



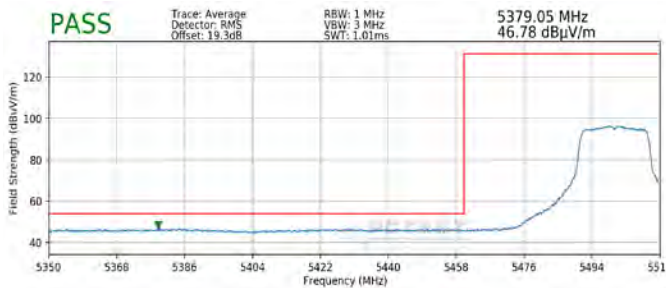
Plot 7-193. Radiated Upper Band Edge Plot SISO ANT1 (Average - UNII Band 2A)



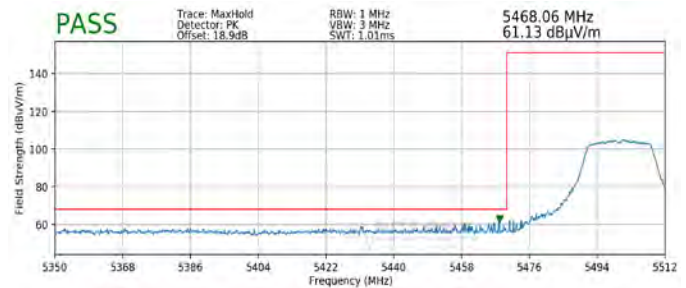
Plot 7-194. Radiated Upper Band Edge Plot SISO ANT1 (Peak - UNII Band 2A)

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 151 of 195

Worst Case Mode: 802.11n
 Worst Case Transfer Rate: MCS0
 Distance of Measurements: 3 Meters
 Operating Frequency: 5500MHz
 Channel: 100

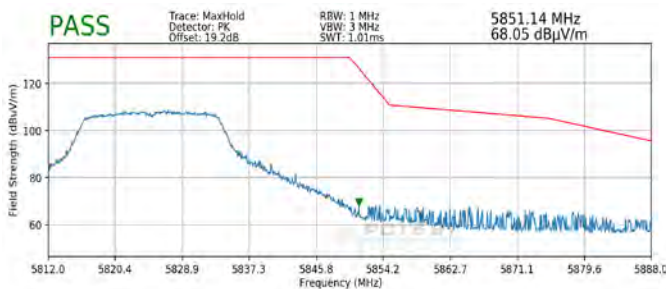


Plot 7-195. Radiated Lower Band Edge Plot SISO ANT1 (Average - UNII Band 2C)



Plot 7-196. Radiated Lower Band Edge Plot SISO ANT1 (Peak - UNII Band 2C)

Worst Case Mode: 802.11n
 Worst Case Transfer Rate: MCS0
 Distance of Measurements: 3 Meters
 Operating Frequency: 5825MHz
 Channel: 165



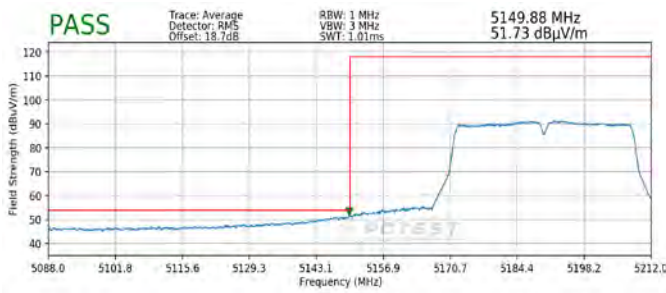
Plot 7-197. Radiated Upper Band Edge Plot SISO ANT1 (Peak - UNII Band 3)

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 152 of 195

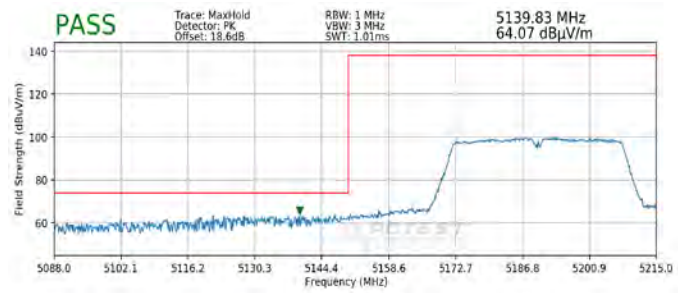
7.6.6 SISO Antenna-1 Radiated Band Edge Measurements (40MHz BW)

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

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

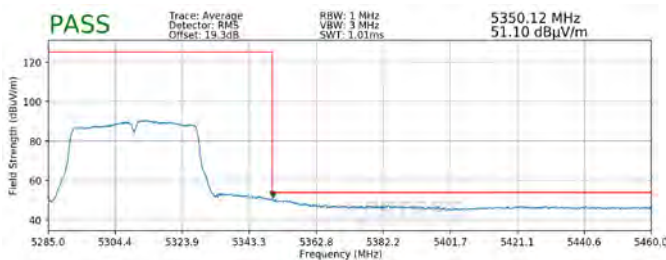


Plot 7-198. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 1)

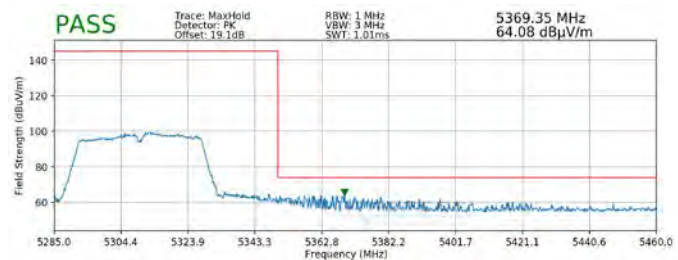


Plot 7-199. Radiated Lower Band Edge Plot SISO ANT1 (Peak – UNII Band 1)

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



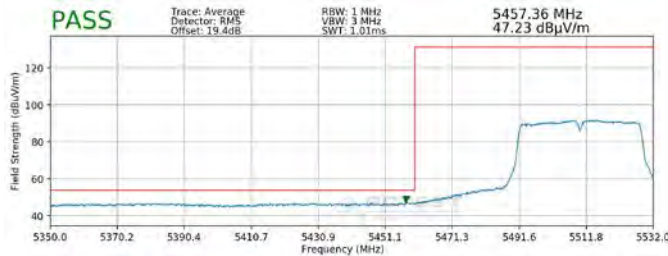
Plot 7-200. Radiated Upper Band Edge Plot SISO ANT1 (Average – UNII Band 2A)



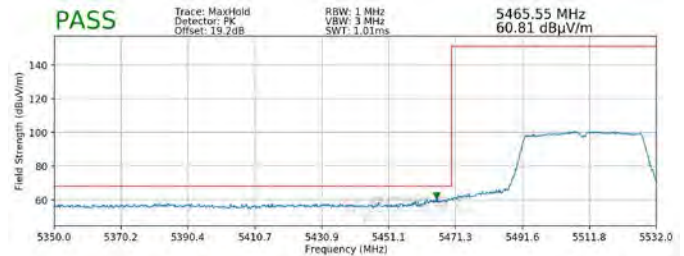
Plot 7-201. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 2A)

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06-A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 153 of 195

Worst Case Mode: 802.11ac
 Worst Case Transfer Rate: MCS0
 Distance of Measurements: 3 Meters
 Operating Frequency: 5510MHz
 Channel: 102

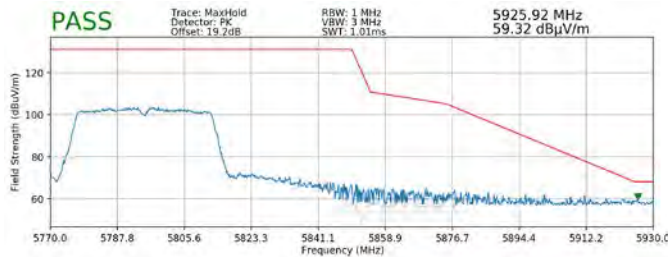


Plot 7-202. Radiated Lower Band Edge Plot SISO ANT1 (Average - UNII Band 2C)



Plot 7-203. Radiated Lower Band Edge Plot SISO ANT1 (Peak - UNII Band 2C)

Worst Case Mode: 802.11ac
 Worst Case Transfer Rate: MCS0
 Distance of Measurements: 3 Meters
 Operating Frequency: 5795MHz
 Channel: 159



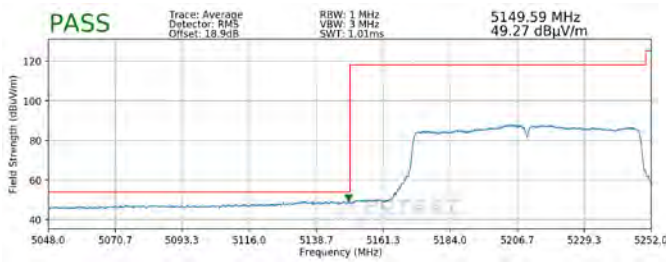
Plot 7-204. Radiated Upper Band Edge Plot SISO ANT1 (Peak - UNII Band 3)

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06-A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 154 of 195

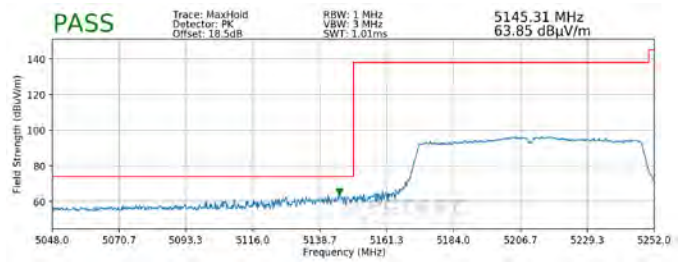
7.6.7 SISO Antenna-1 Radiated Band Edge Measurements (80MHz BW)

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

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

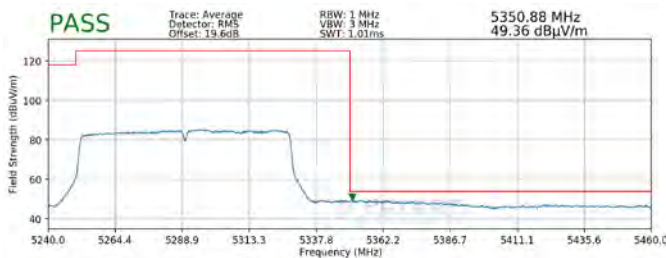


Plot 7-205. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 1)

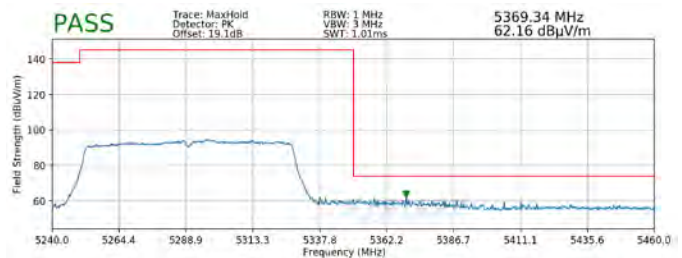


Plot 7-206. Radiated Lower Band Edge Plot SISO ANT1 (Peak – UNII Band 1)

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



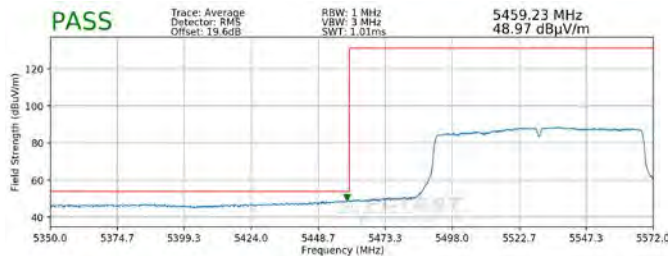
Plot 7-207. Radiated Upper Band Edge Plot SISO ANT1 (Average – UNII Band 2A)



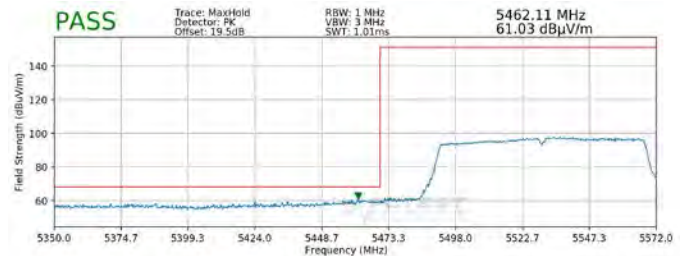
Plot 7-208. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 2A)

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 155 of 195

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

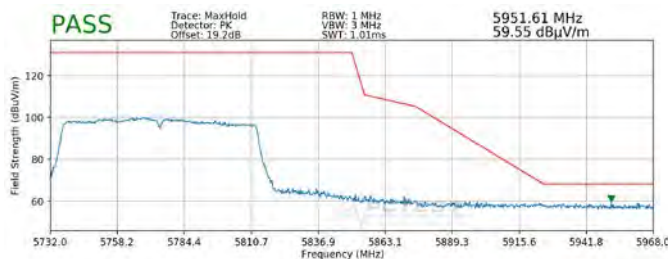


Plot 7-209. Radiated Lower Band Edge Plot SISO ANT1 (Average - UNII Band 2C)



Plot 7-210. Radiated Lower Band Edge Plot SISO ANT1 (Peak - UNII Band 2C)

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



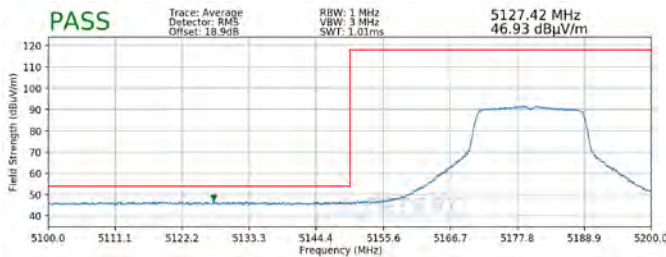
Plot 7-211. Radiated Upper Band Edge Plot SISO ANT1 (Peak - UNII Band 3)

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset	Page 156 of 195	

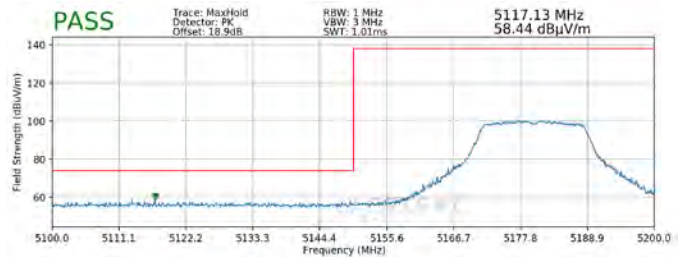
7.6.8 SISO Antenna-2 Radiated Band Edge Measurements (20MHz BW)

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

Worst Case Mode:	802.11ac
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5180MHz
Channel:	36



Plot 7-212. Radiated Lower Band Edge Plot SISO ANT2 (Average - UNII Band 1)



Plot 7-213. Radiated Lower Band Edge Plot SISO ANT2 (Peak - UNII Band 1)

Worst Case Mode:	802.11n
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5320MHz
Channel:	64



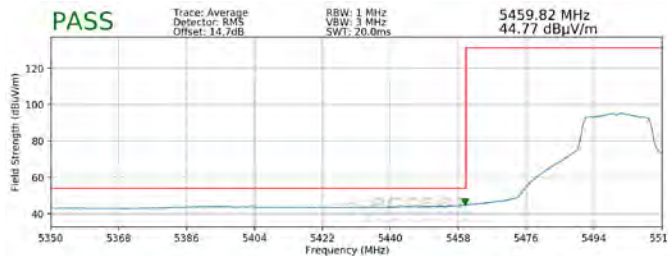
Plot 7-214. Radiated Upper Band Edge Plot SISO ANT2 (Average - UNII Band 2A)



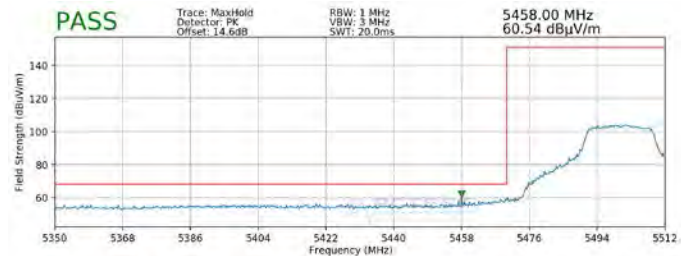
Plot 7-215. Radiated Upper Band Edge Plot SISO ANT2 (Peak - UNII Band 2A)

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 157 of 195

Worst Case Mode: 802.11n
Worst Case Transfer Rate: MCS0
Distance of Measurements: 3 Meters
Operating Frequency: 5500MHz
Channel: 100

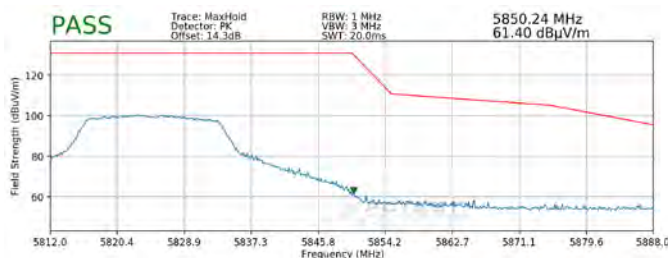


Plot 7-216. Radiated Lower Band Edge Plot SISO ANT2 (Average - UNII Band 2C)



Plot 7-217. Radiated Lower Band Edge Plot SISO ANT2 (Peak - UNII Band 2C)

Worst Case Mode: 802.11n
Worst Case Transfer Rate: MCS0
Distance of Measurements: 3 Meters
Operating Frequency: 5825MHz
Channel: 165



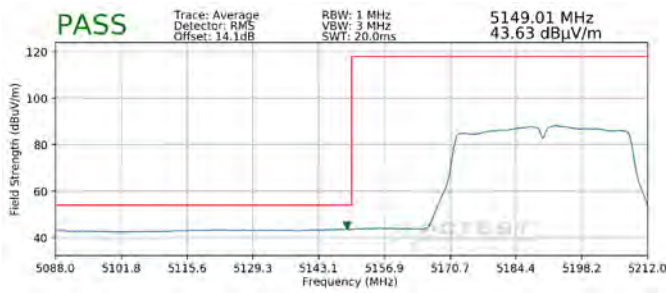
Plot 7-218. Radiated Upper Band Edge Plot SISO ANT2 (Peak - UNII Band 3)

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 158 of 195

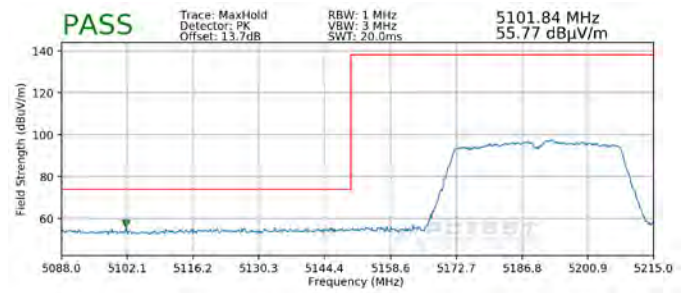
7.6.9 SISO Antenna-2 Radiated Band Edge Measurements (40MHz BW)

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

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

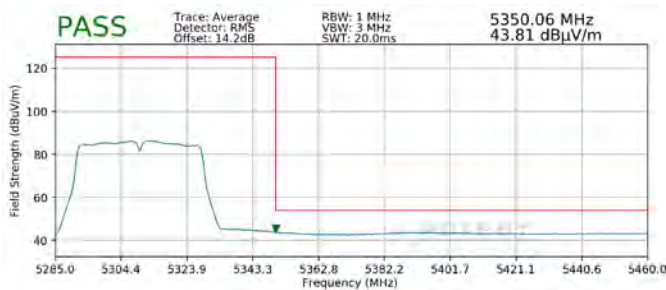


Plot 7-219. Radiated Lower Band Edge Plot SISO ANT2 (Average - UNII Band 1)

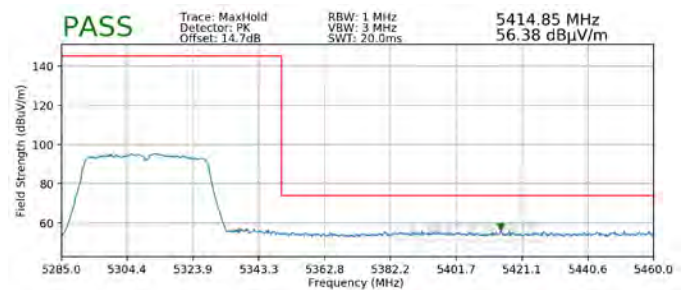


Plot 7-220. Radiated Lower Band Edge Plot SISO ANT2 (Peak - UNII Band 1)

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



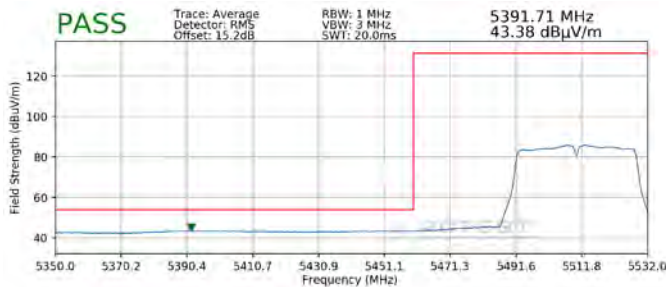
Plot 7-221. Radiated Upper Band Edge Plot SISO ANT2 (Average - UNII Band 2A)



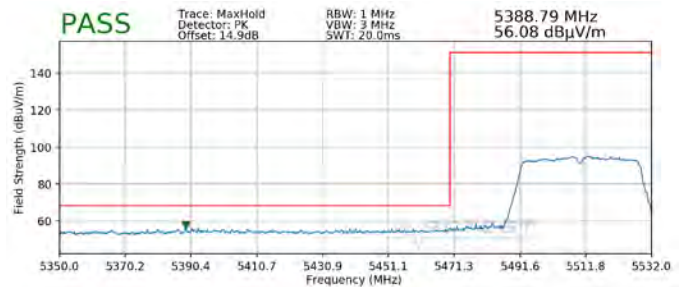
Plot 7-222. Radiated Upper Band Edge Plot SISO ANT2 (Peak - UNII Band 2A)

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 159 of 195

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

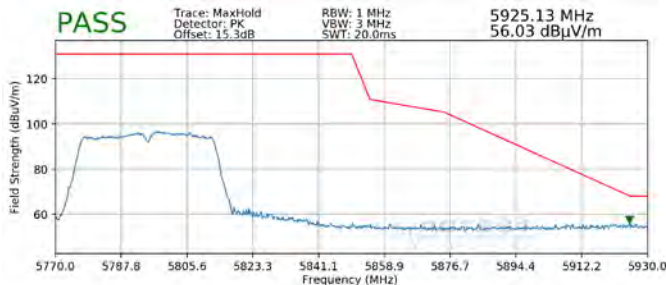


Plot 7-223. Radiated Lower Band Edge Plot SISO ANT2 (Average - UNII Band 2C)



Plot 7-224. Radiated Lower Band Edge Plot SISO ANT2 (Peak - UNII Band 2C)

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



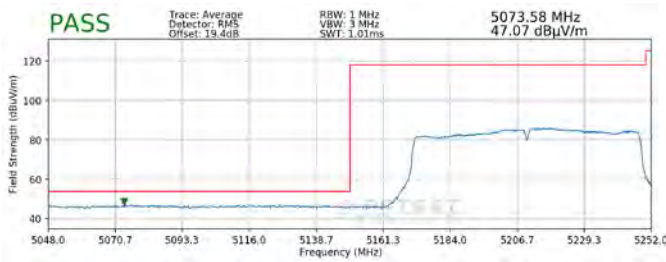
Plot 7-225. Radiated Upper Band Edge Plot SISO ANT2 (Peak - UNII Band 3)

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 160 of 195

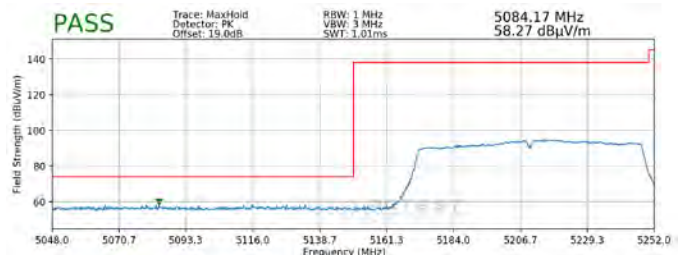
7.6.10 SISO Antenna-2 Radiated Band Edge Measurements (80MHz BW)

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

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

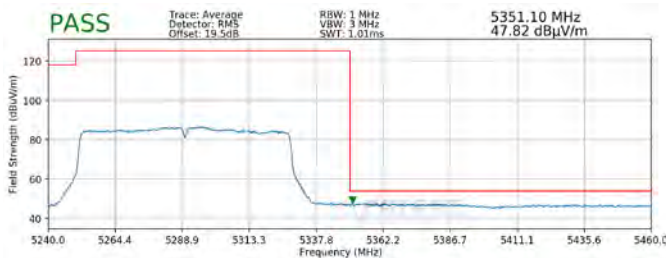


Plot 7-226. Radiated Lower Band Edge Plot SISO ANT2 (Average – UNII Band 1)

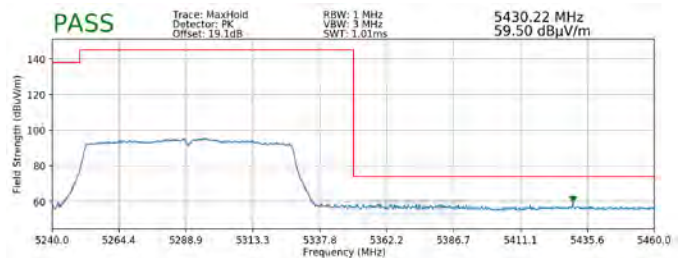


Plot 7-227. Radiated Lower Band Edge Plot SISO ANT2 (Peak – UNII Band 1)

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



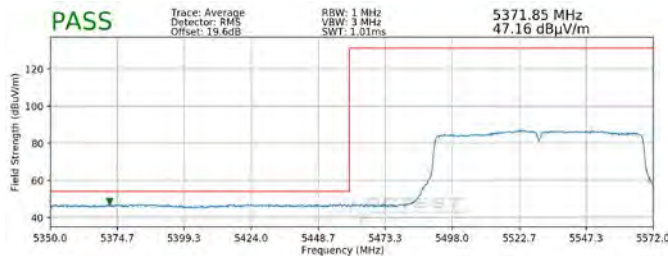
Plot 7-228. Radiated Upper Band Edge Plot SISO ANT2 (Average – UNII Band 2A)



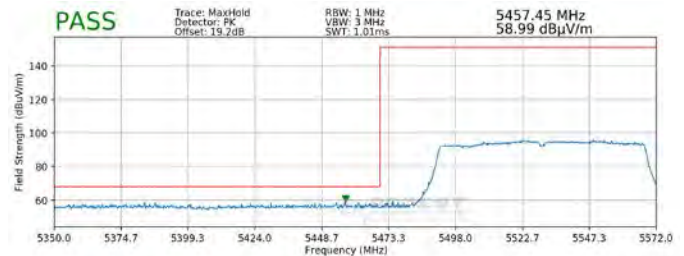
Plot 7-229. Radiated Upper Band Edge Plot SISO ANT2 (Peak – UNII Band 2A)

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 161 of 195

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

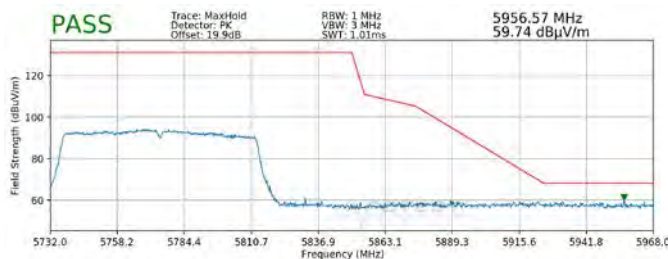


Plot 7-230. Radiated Lower Band Edge Plot SISO ANT2 (Average - UNII Band 2C)



Plot 7-231. Radiated Lower Band Edge Plot SISO ANT2 (Peak - UNII Band 2C)

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



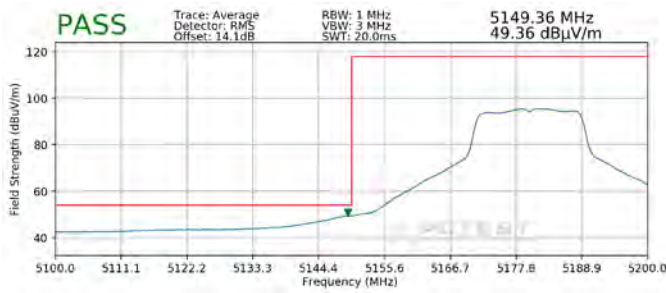
Plot 7-232. Radiated Upper Band Edge Plot SISO ANT2 (Peak - UNII Band 3)

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06-A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 162 of 195

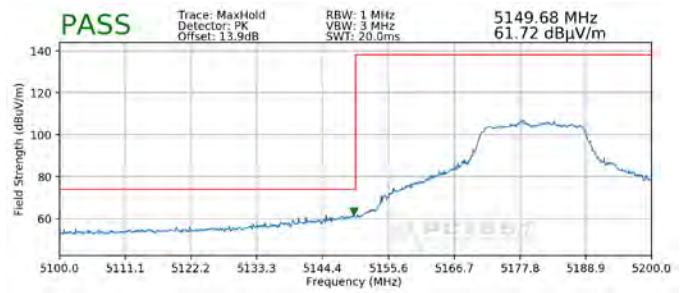
7.6.11 MIMO Radiated Band Edge Measurements (20MHz BW)

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

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

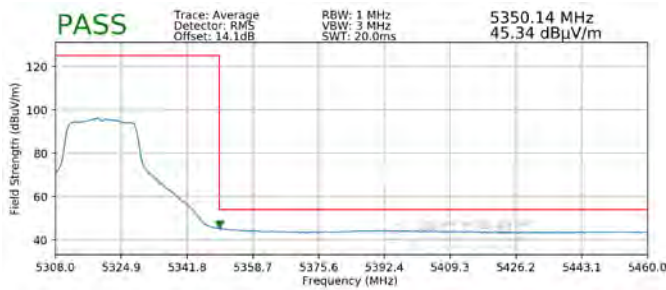


Plot 7-233. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 1)

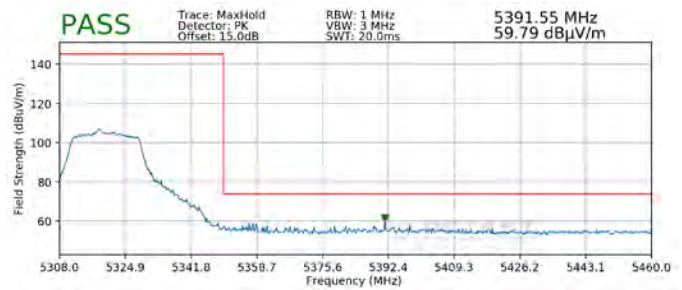


Plot 7-234. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 1)

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



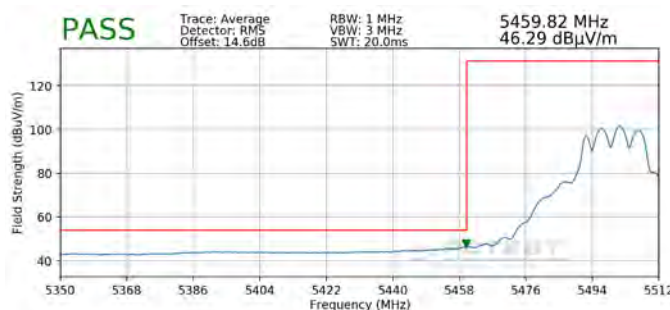
Plot 7-235. Radiated Upper Band Edge Plot MIMO (Average – UNII Band 2A)



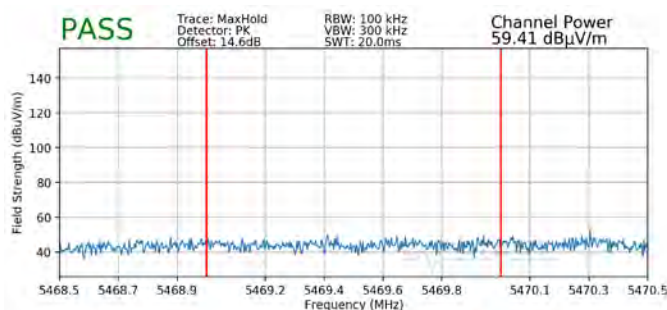
Plot 7-236. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 2A)

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 163 of 195

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

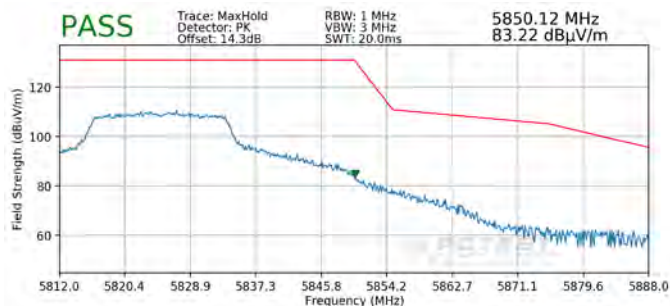


**Plot 7-237. Radiated Lower Band Edge Plot CDD
(Average – UNII Band 2C)**



**Plot 7-238. Radiated Lower Band Edge Plot CDD
(Peak – UNII Band 2C)**

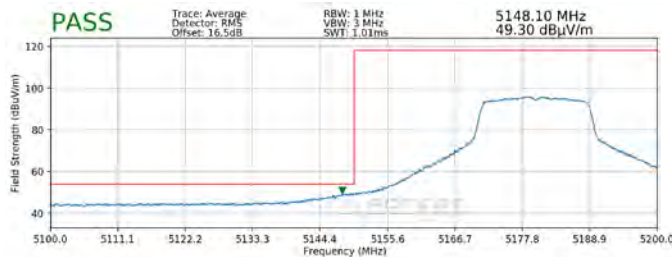
Worst Case Mode: 802.11n
Worst Case Transfer Rate: MCS8
Distance of Measurements: 3 Meters
Operating Frequency: 5825MHz
Channel: 165



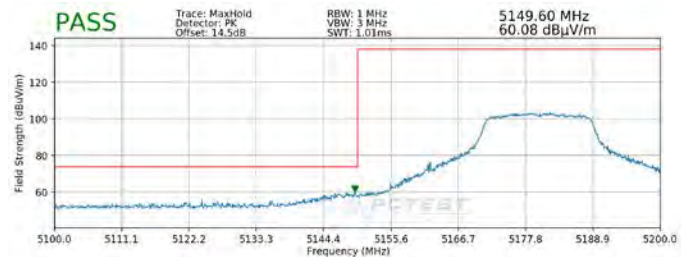
**Plot 7-239. Radiated Upper Band Edge Plot MIMO
(Peak – UNII Band 3)**

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06-A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 164 of 195

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



Plot 7-240. Radiated Band Edge Plot MIMO (Average – WCP)



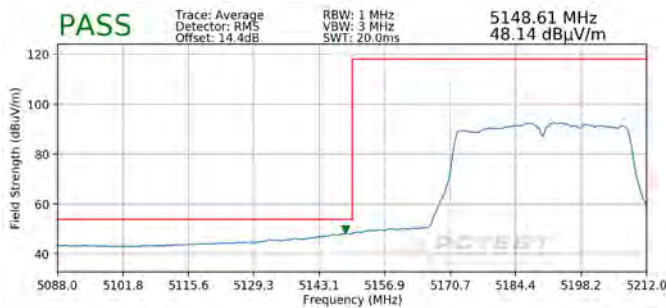
Plot 7-241. Radiated Band Edge Plot MIMO (Peak – WCP)

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 165 of 195

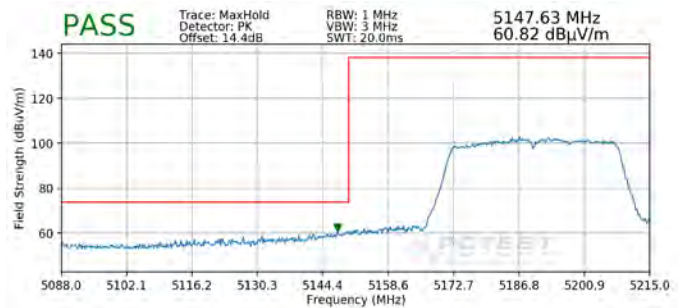
7.6.12 MIMO Radiated Band Edge Measurements (40MHz BW)

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

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

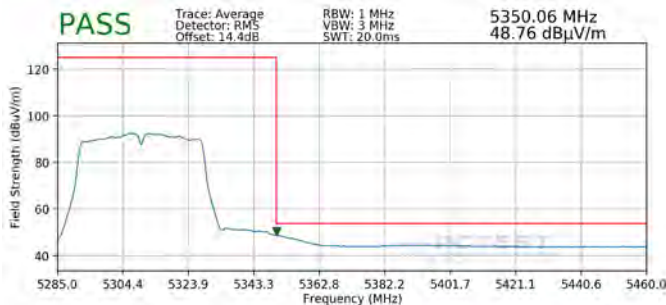


Plot 7-242. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 1)



Plot 7-243. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 1)

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



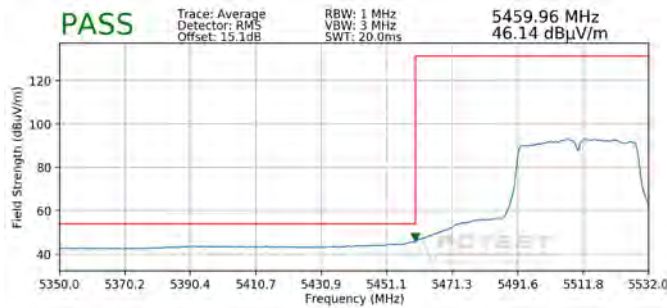
Plot 7-244. Radiated Upper Band Edge Plot MIMO (Average – UNII Band 2A)



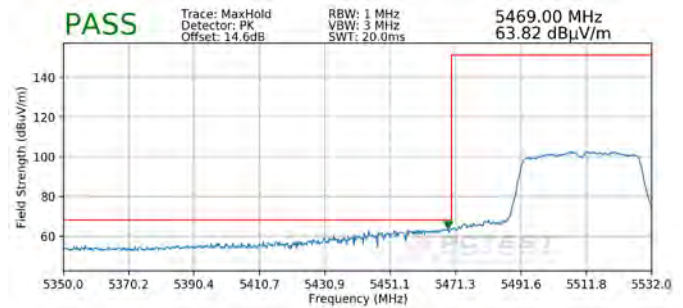
Plot 7-245. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 2A)

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Worst Case Mode: 802.11n
Worst Case Transfer Rate: MCS8
Distance of Measurements: 3 Meters
Operating Frequency: 5510MHz
Channel: 102

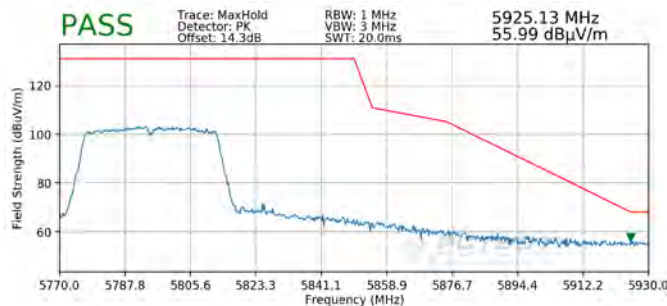


**Plot 7-246. Radiated Lower Band Edge Plot MIMO
(Average – UNII Band 2C)**



**Plot 7-247. Radiated Lower Band Edge Plot MIMO
(Peak – UNII Band 2C)**

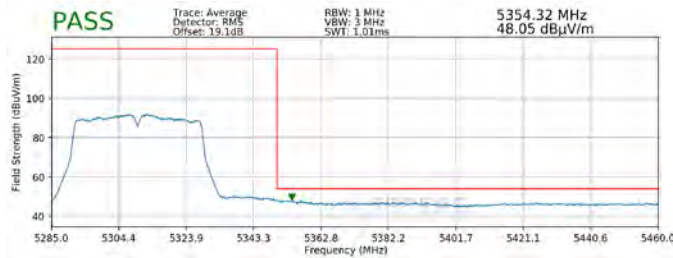
Worst Case Mode: 802.11ac
Worst Case Transfer Rate: MCS0
Distance of Measurements: 3 Meters
Operating Frequency: 5795MHz
Channel: 159



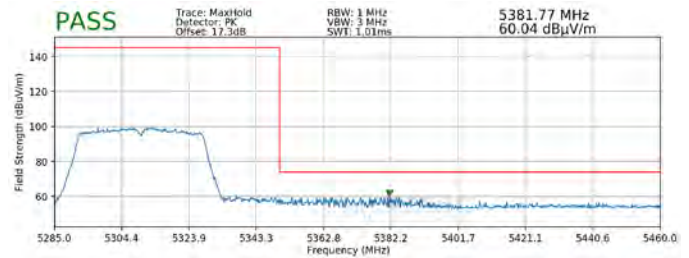
**Plot 7-248. Radiated Upper Band Edge Plot MIMO
(Peak – UNII Band 3)**

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Worst Case Mode: 802.11ac
 Worst Case Transfer Rate: MCS0
 Distance of Measurements: 3 Meters
 Operating Frequency: 5310MHz
 Channel: 62



Plot 7-249. Radiated Band Edge Plot MIMO (Average - WCP)



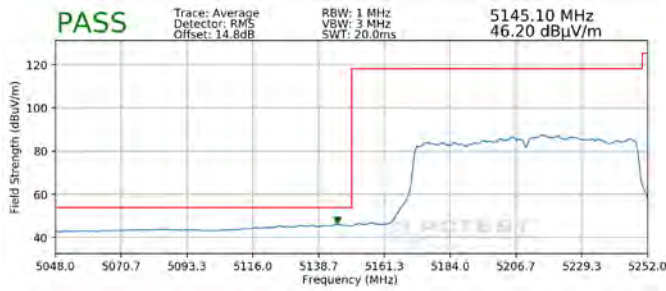
Plot 7-250. Radiated Band Edge Plot MIMO (Peak - WCP)

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 168 of 195

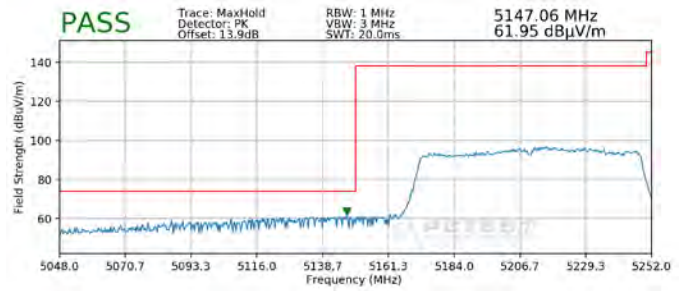
7.6.13 MIMO Radiated Band Edge Measurements (80MHz BW)

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

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

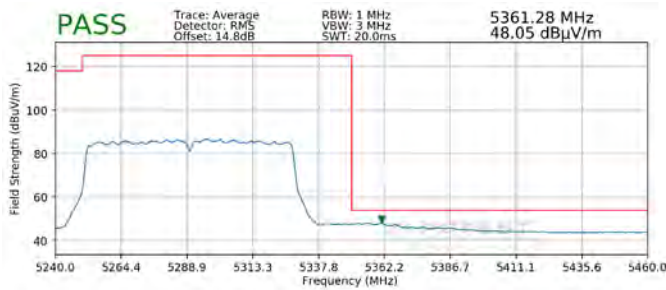


Plot 7-251. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 1)

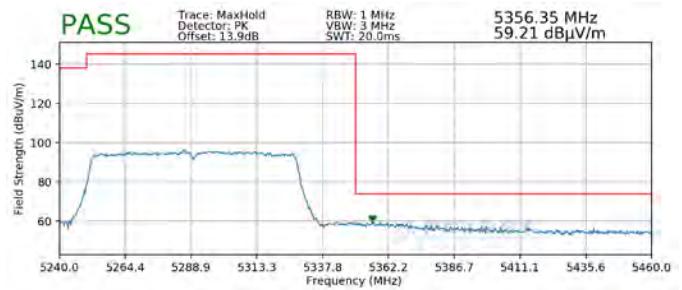


Plot 7-252. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 1)

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



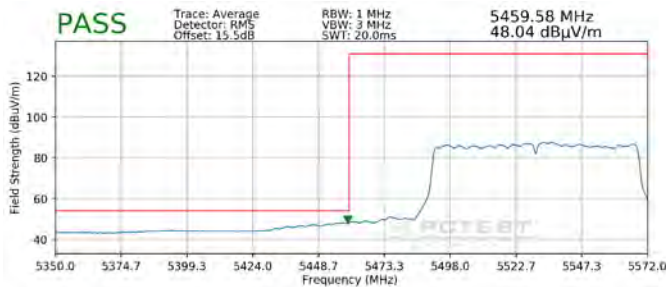
Plot 7-253. Radiated Upper Band Edge Plot MIMO (Average – UNII Band 2A)



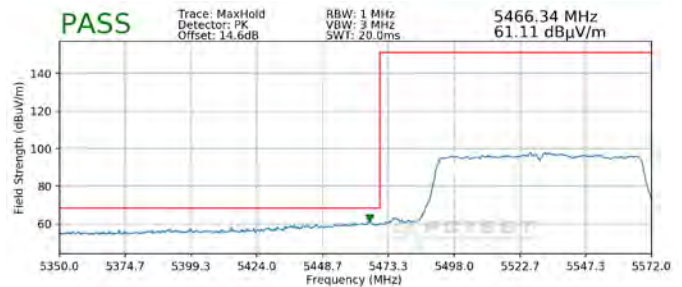
Plot 7-254. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 2A)

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Worst Case Mode: 802.11ac
 Worst Case Transfer Rate: MCS0
 Distance of Measurements: 3 Meters
 Operating Frequency: 5530MHz
 Channel: 106

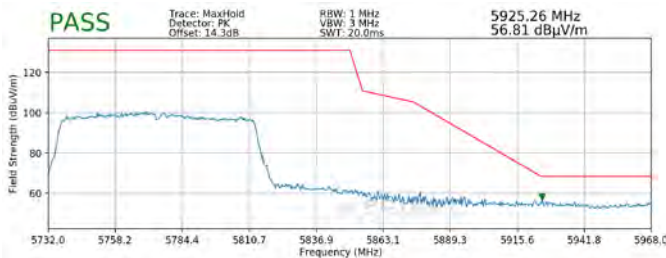


Plot 7-255. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 2C)



Plot 7-256. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 2C)

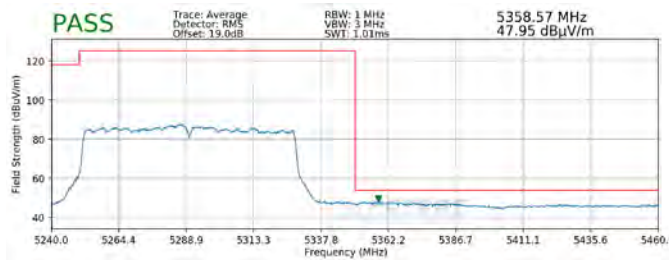
Worst Case Mode: 802.11ac
 Worst Case Transfer Rate: MCS0
 Distance of Measurements: 3 Meters
 Operating Frequency: 5775MHz
 Channel: 155



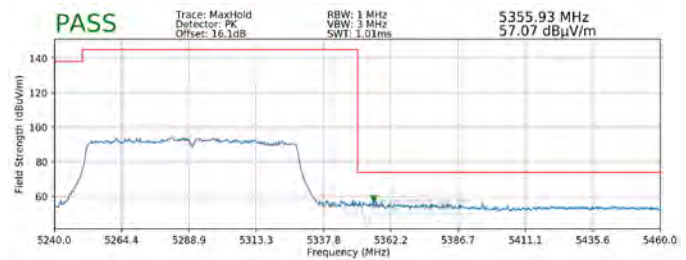
Plot 7-257. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 3)

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06-A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 170 of 195

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



Plot 7-258. Radiated Band Edge Plot MIMO (Average - WCP)



Plot 7-259. Radiated Band Edge Plot MIMO (Peak - WCP)

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 171 of 195

7.7 Radiated Spurious Emissions Measurements – Below 1GHz

§15.209; RSS-Gen [8.9]

Test Overview and Limit

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

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR and Table 6 of RSS-Gen (8.10) must not exceed the limits shown in Table 7-68 per Section 15.209 and RSS-Gen (8.9).

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

Table 7-68. 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.

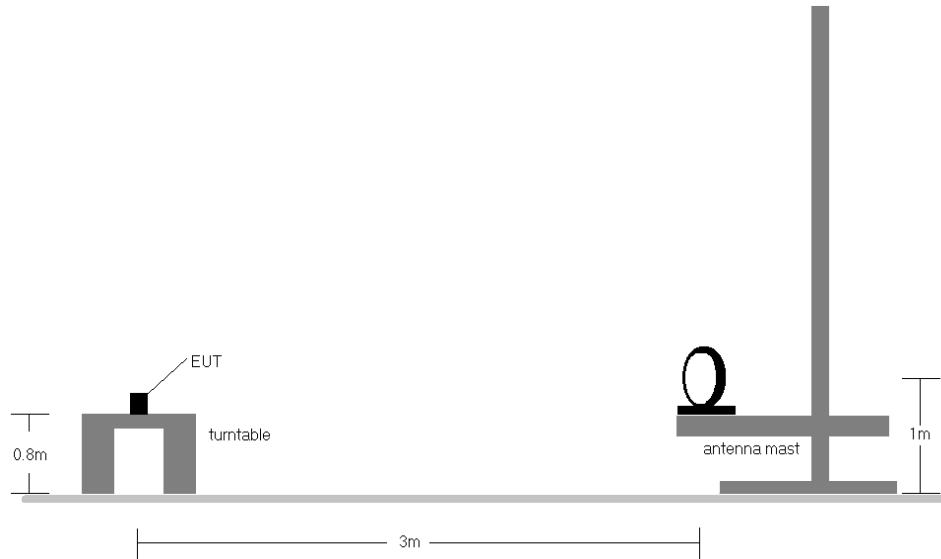


Figure 7-6. Radiated Test Setup < 30MHz

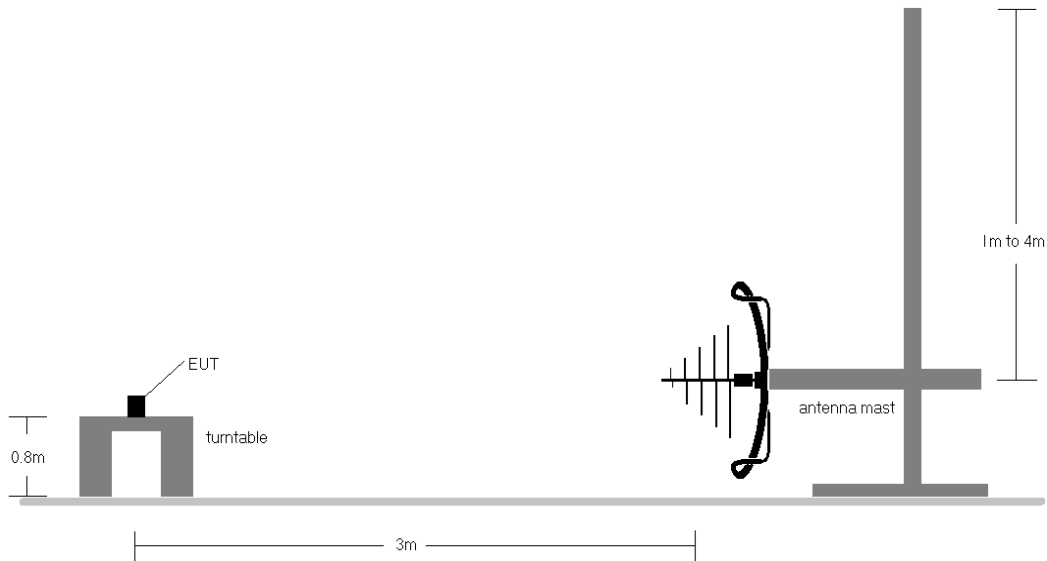


Figure 7-7. Radiated Test Setup < 1GHz

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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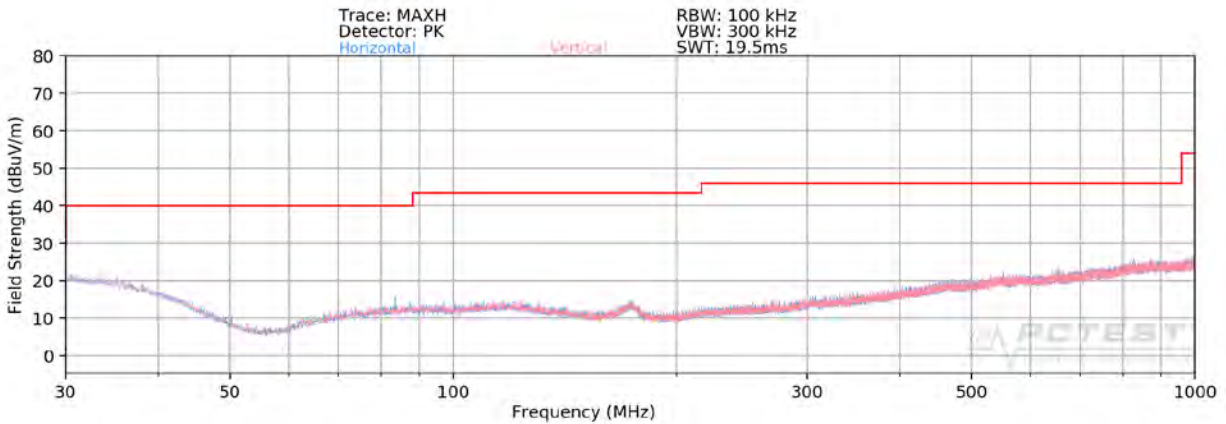
Test Notes

1. All emissions lying in restricted bands specified in §15.205 and RSS-Gen (8.10) are below the limit shown in Table 7-68.
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.

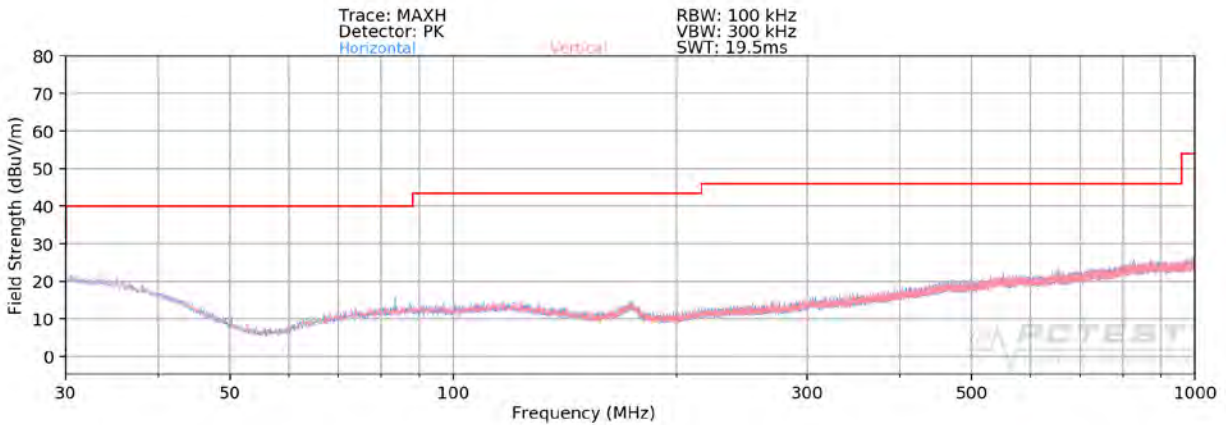
FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset	Page 174 of 195	

MIMO Radiated Spurious Emissions Measurements (Below 1GHz)

§15.209; RSS-Gen [8.9]



Plot 7-260. Radiated Spurious Plot below 1GHz MIMO (802.11a – U3 Ch. 157) – OPEN

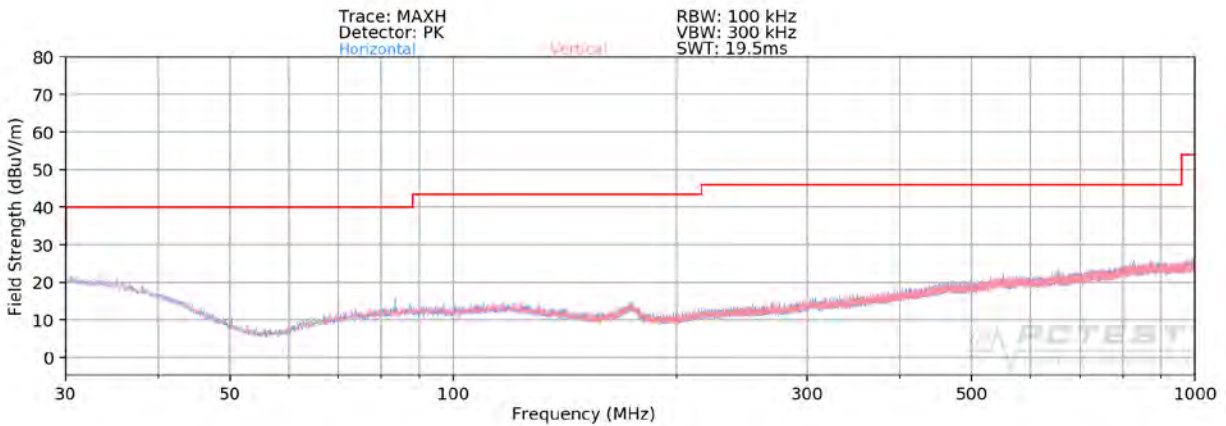


Plot 7-261. Radiated Spurious Plot below 1GHz MIMO (802.11a – U3 Ch. 157) – CLOSED

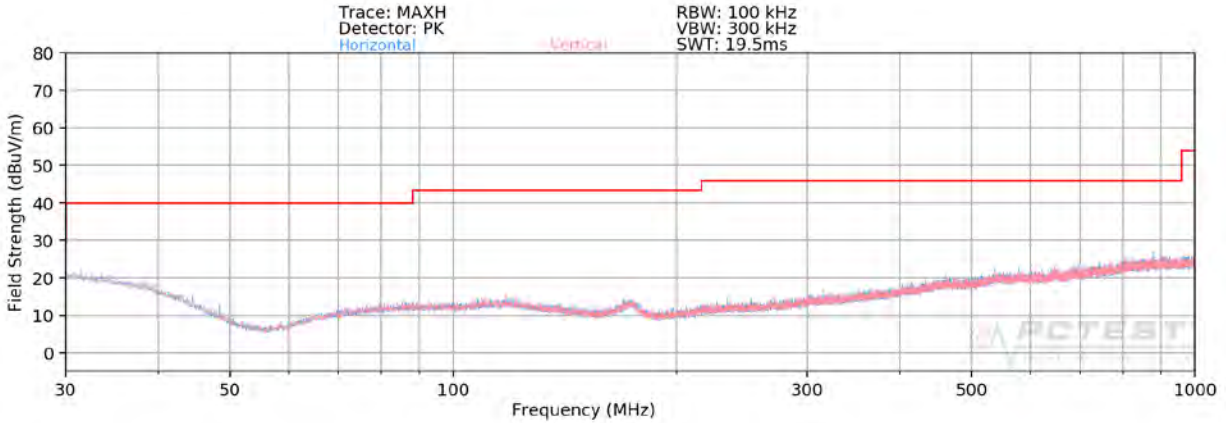
FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 175 of 195

Simultaneous Tx Radiated Spurious Emissions Measurements (Below 1GHz)

§15.209; RSS-Gen [8.9]



Plot 7-262. Radiated Spurious Plot below 1GHz (2.4GHz – 5GHz) – OPEN



Plot 7-263. Radiated Spurious Plot below 1GHz (2.4GHz – 5GHz) – CLOSED

FCC ID: A3LSMF700U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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7.8 Line-Conducted Test Data

§15.407; RSS-Gen [8.8]

Test Overview and Limit

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

All conducted emissions must not exceed the limits shown in the table below, per Section 15.207 and RSS-Gen (8.8).

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

Table 7-69. 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.

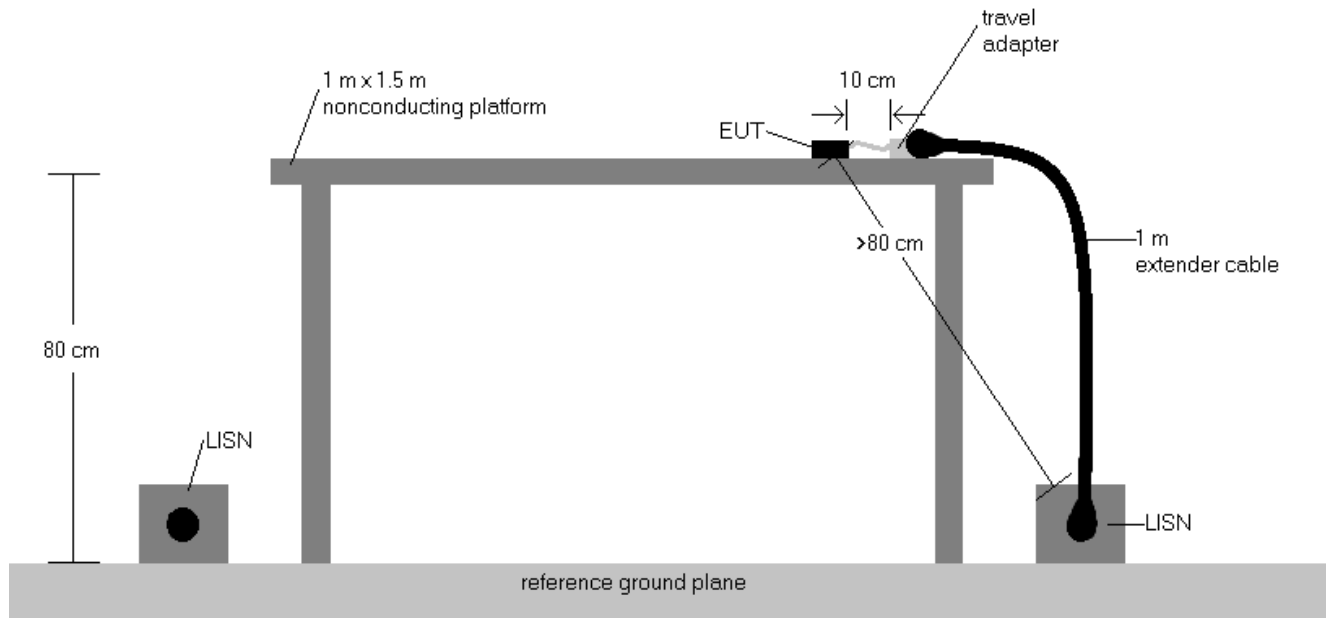
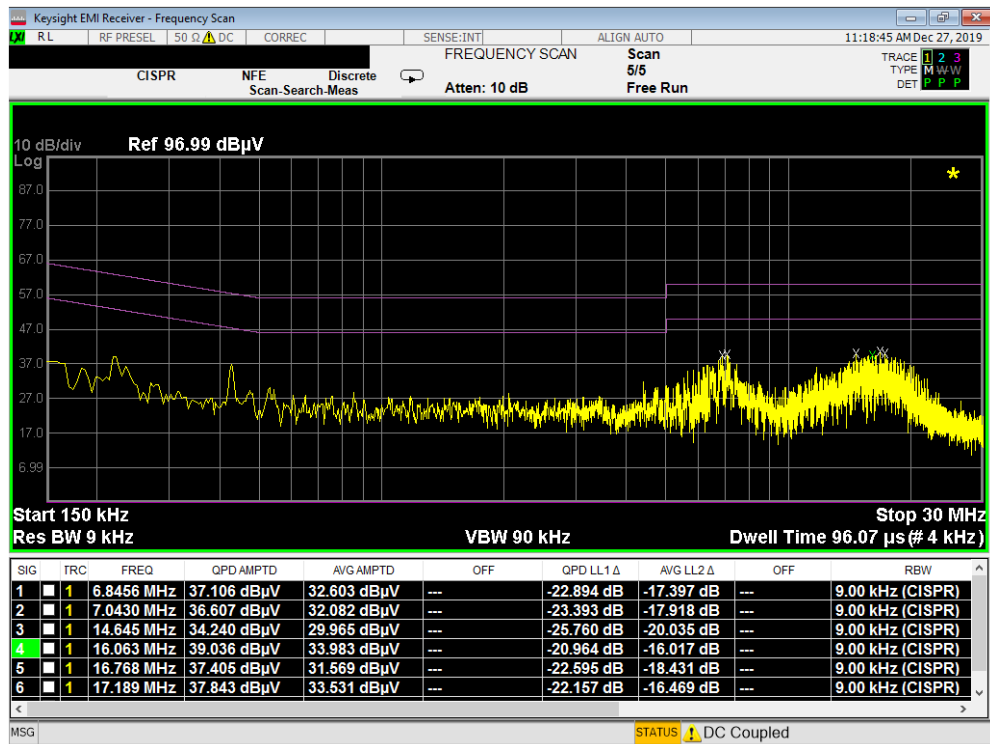


Figure 7-8. Test Instrument & Measurement Setup

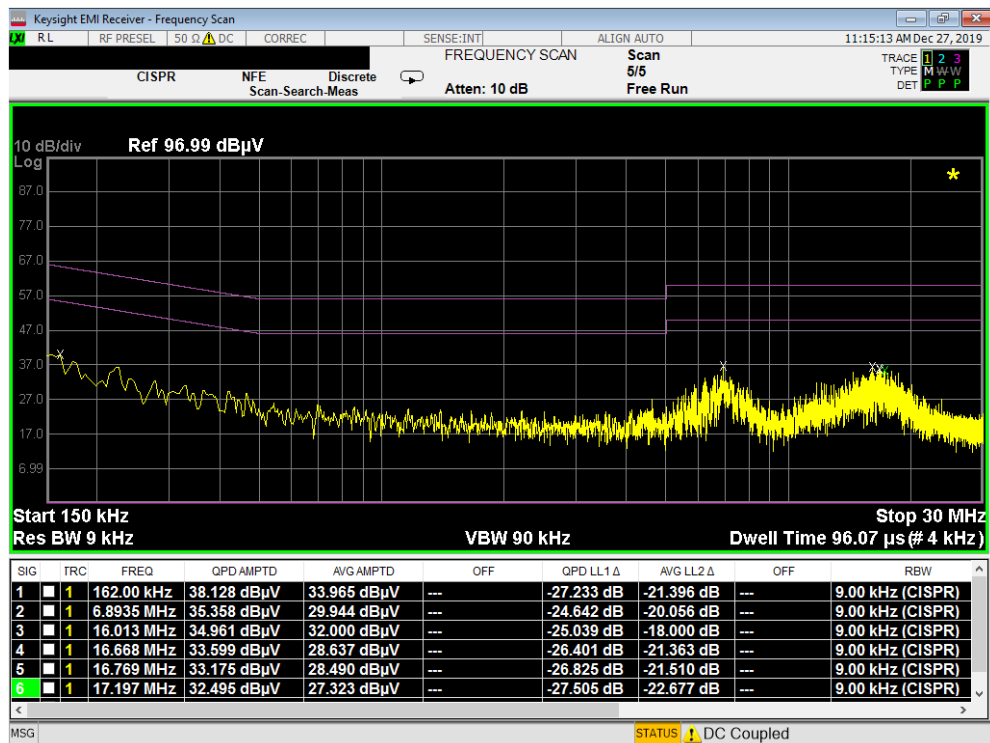
Test Notes

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 and RSS-Gen (8.8).
3. $\text{Corr. (dB)} = \text{Cable loss (dB)} + \text{LISN insertion factor (dB)}$
4. $\text{QP/AV Level (dB}\mu\text{V)} = \text{QP/AV Analyzer/Receiver Level (dB}\mu\text{V)} + \text{Corr. (dB)}$
5. $\text{Margin (dB)} = \text{QP/AV Limit (dB}\mu\text{V)} - \text{QP/AV Level (dB}\mu\text{V)}$
6. Traces shown in plot are made using a peak detector.
7. Deviations to the Specifications: None.

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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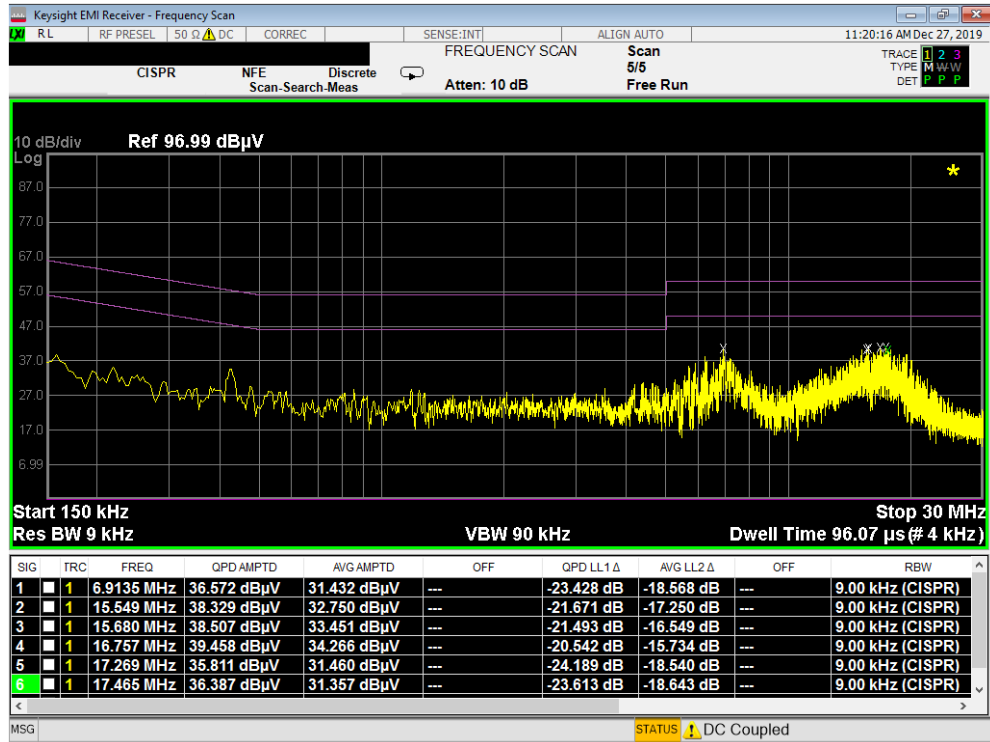


Plot 7-264. Line Conducted Plot with 802.11a UNII Band 1 (L1) – OPEN

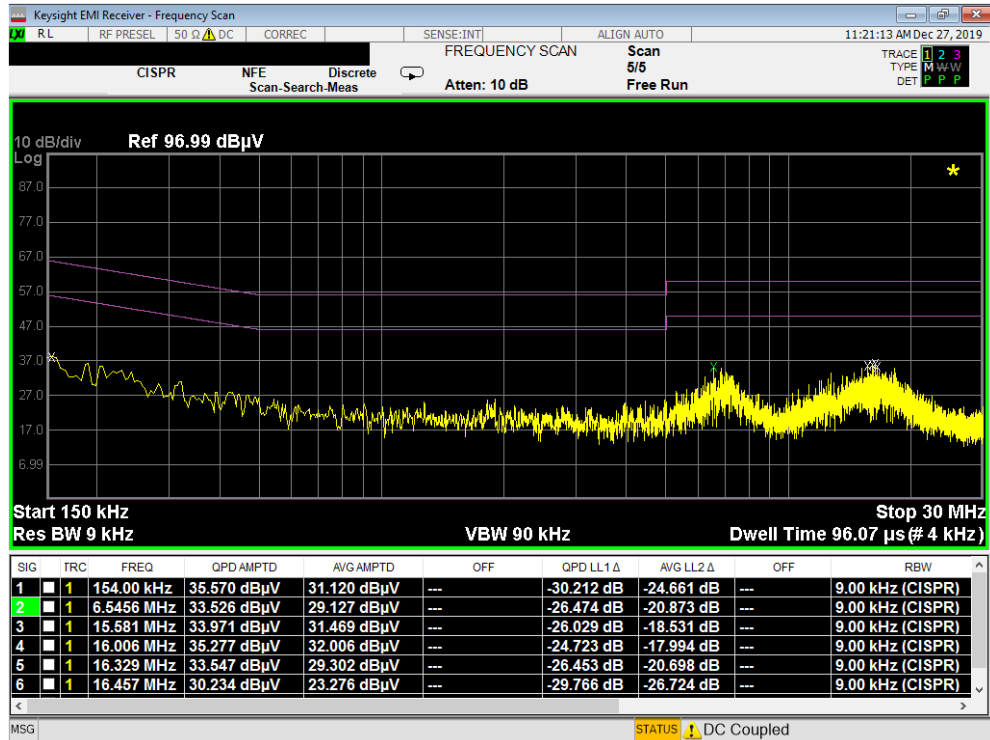


Plot 7-265. Line Conducted Plot with 802.11a UNII Band 1 (N) – OPEN

FCC ID: A3LSMF700U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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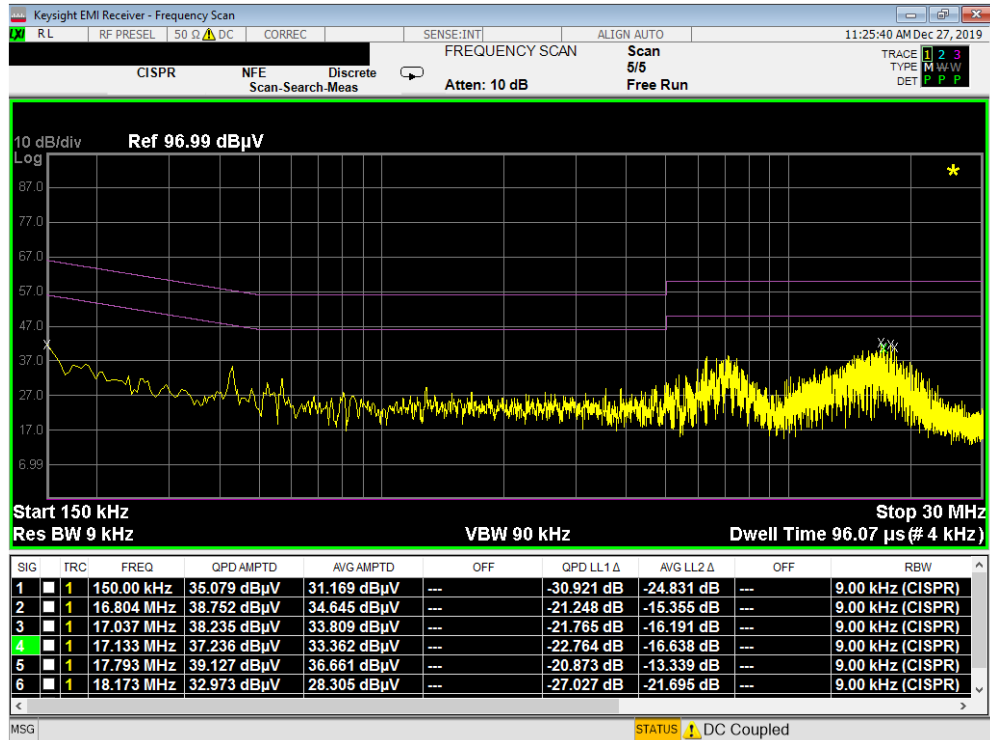


Plot 7-266. Line Conducted Plot with 802.11a UNII Band 2A (L1) – OPEN

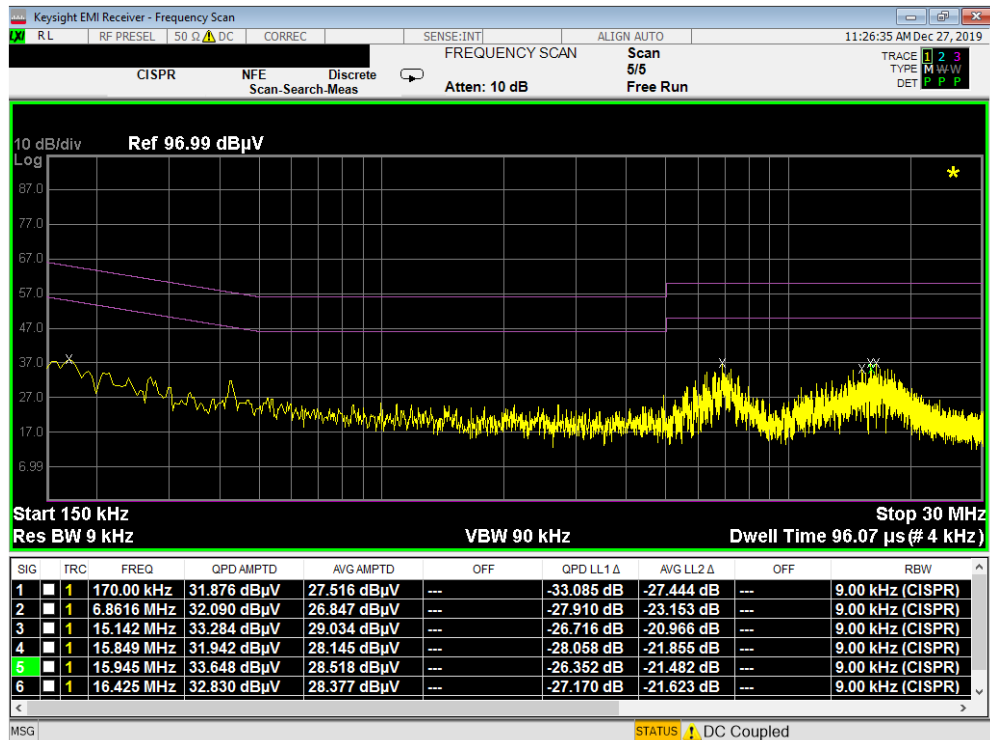


Plot 7-267. Line Conducted Plot with 802.11a UNII Band 2A (N) – OPEN

FCC ID: A3LSMF700U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1912020212-06.A3L	Test Dates: 10/25/2019 – 01/16/2020	EUT Type: Portable Handset		Page 180 of 195

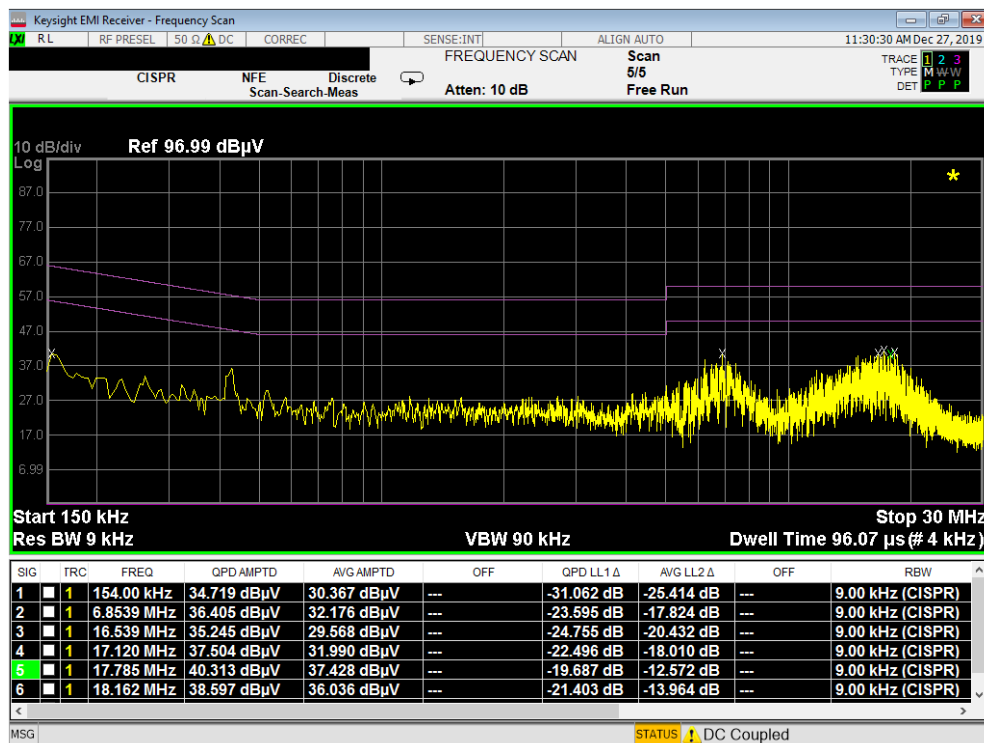


Plot 7-268. Line Conducted Plot with 802.11a UNII Band 2C (L1) – OPEN

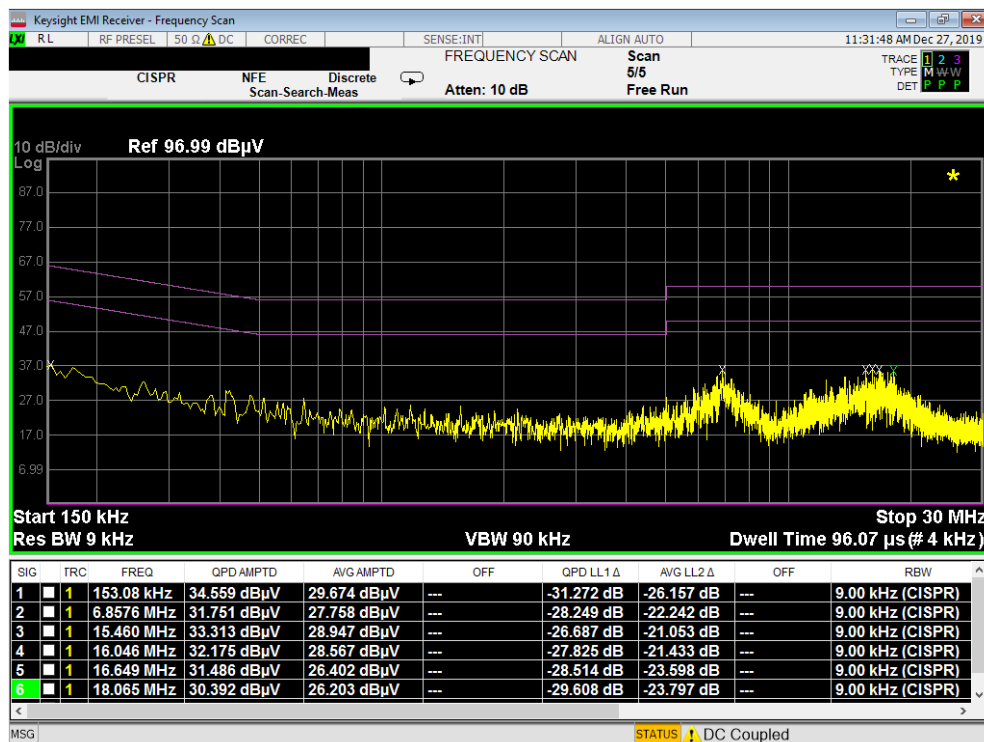


Plot 7-269. Line Conducted Plot with 802.11a UNII Band 2C (N) – OPEN

FCC ID: A3LSMF700U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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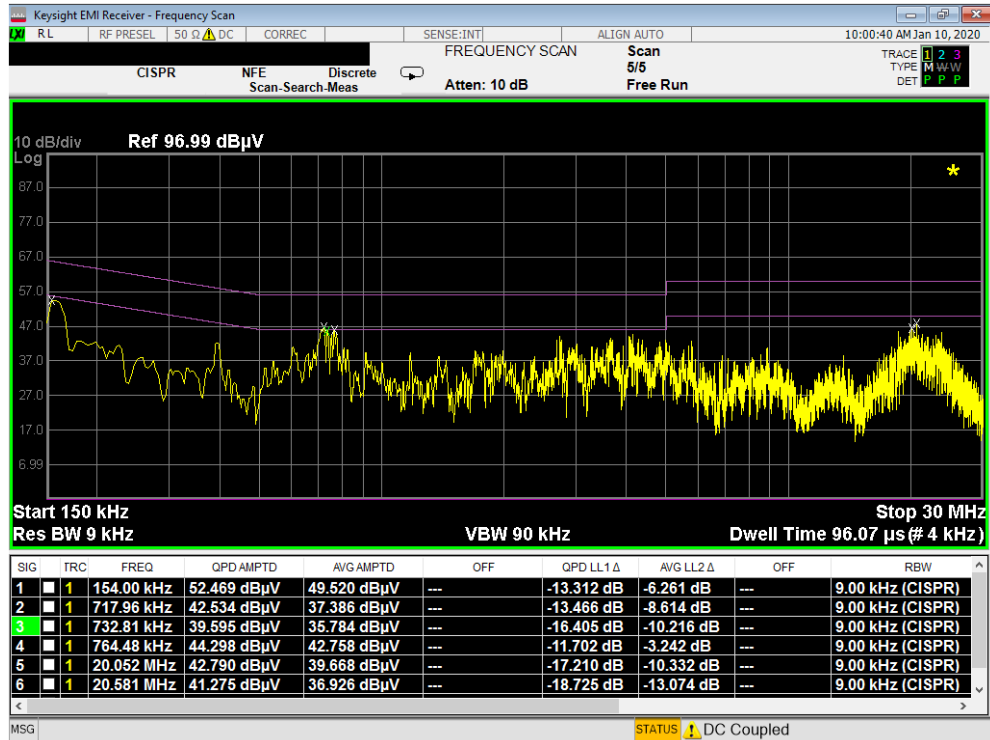


Plot 7-270. Line Conducted Plot with 802.11a UNII Band 3 (L1) – OPEN

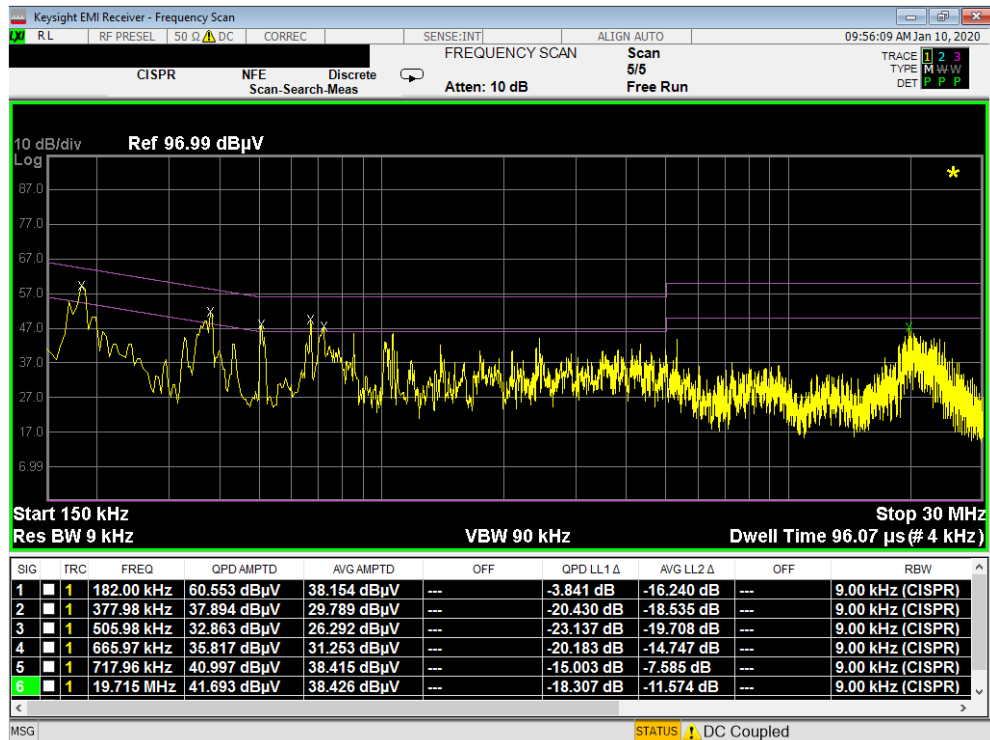


Plot 7-271. Line Conducted Plot with 802.11a UNII Band 3 (N) – OPEN

FCC ID: A3LSMF700U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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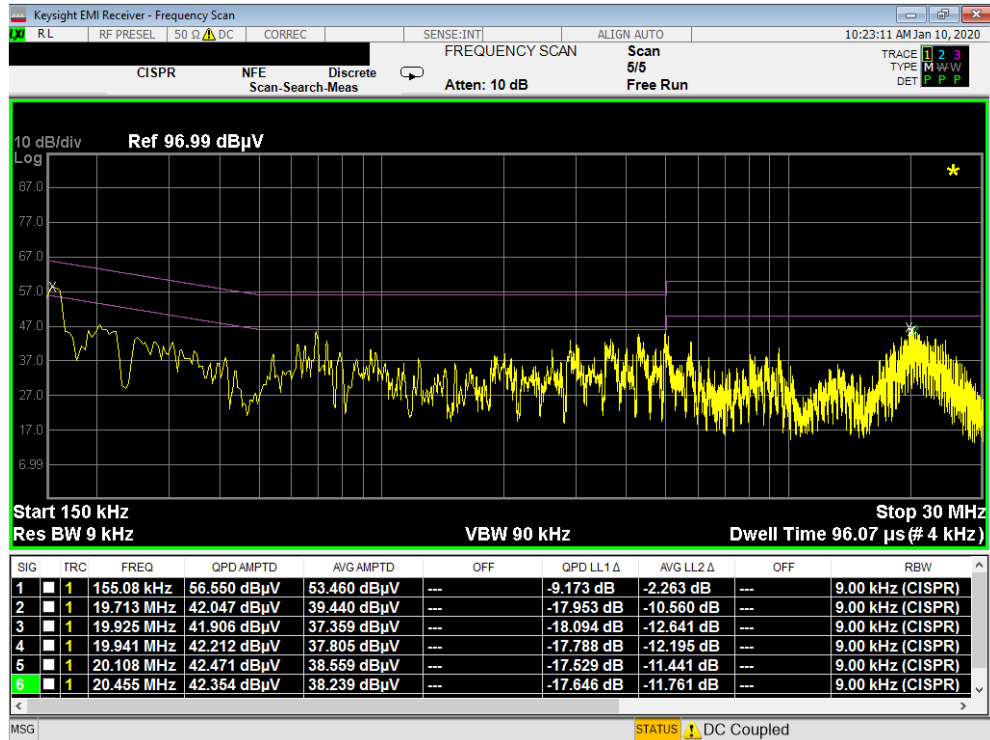


Plot 7-272. Line Conducted Plot with 802.11a UNII Band 1 with WCP (L1) – OPEN

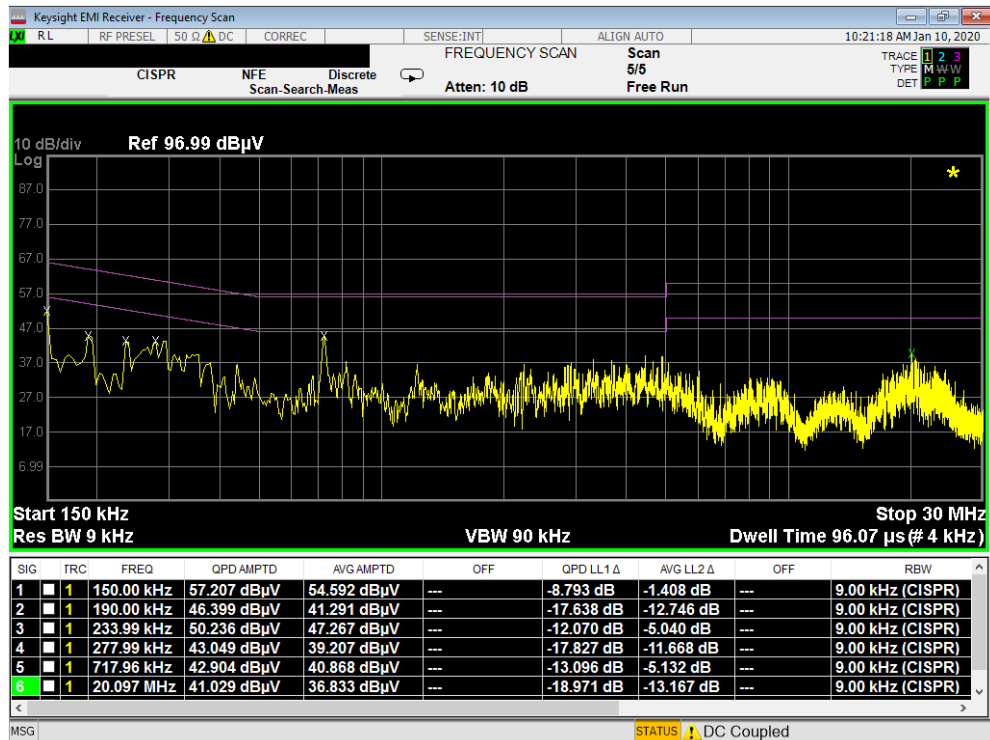


Plot 7-273. Line Conducted Plot with 802.11a UNII Band 1 with WCP (N) – OPEN

FCC ID: A3LSMF700U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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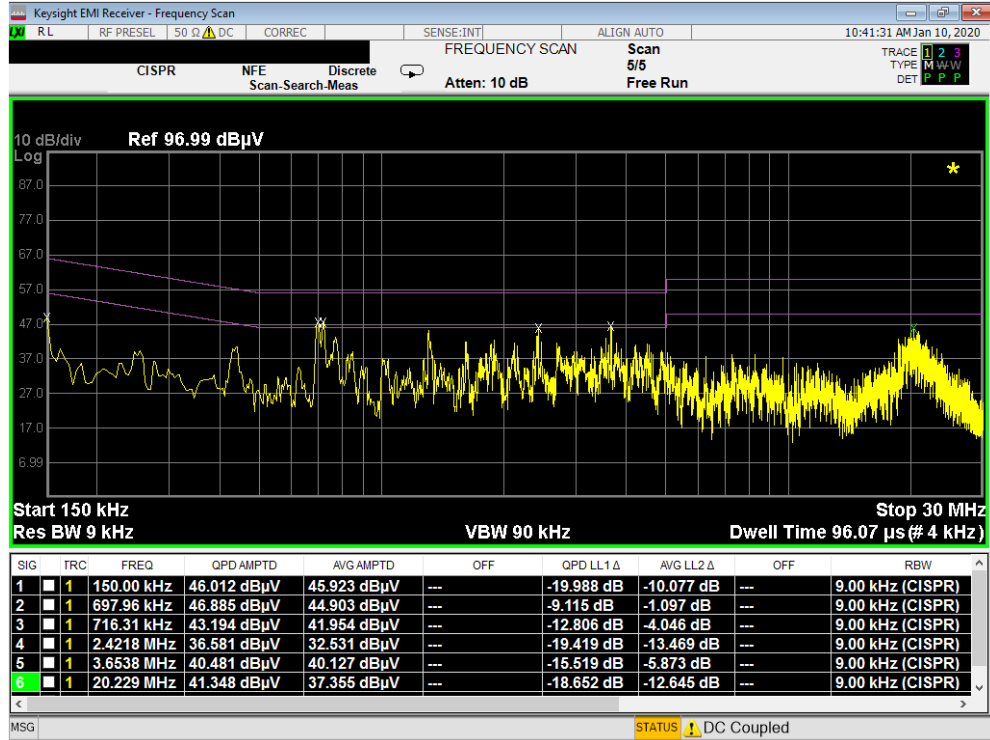


Plot 7-274. Line Conducted Plot with 802.11a UNII Band 2A with WCP (L1) – OPEN

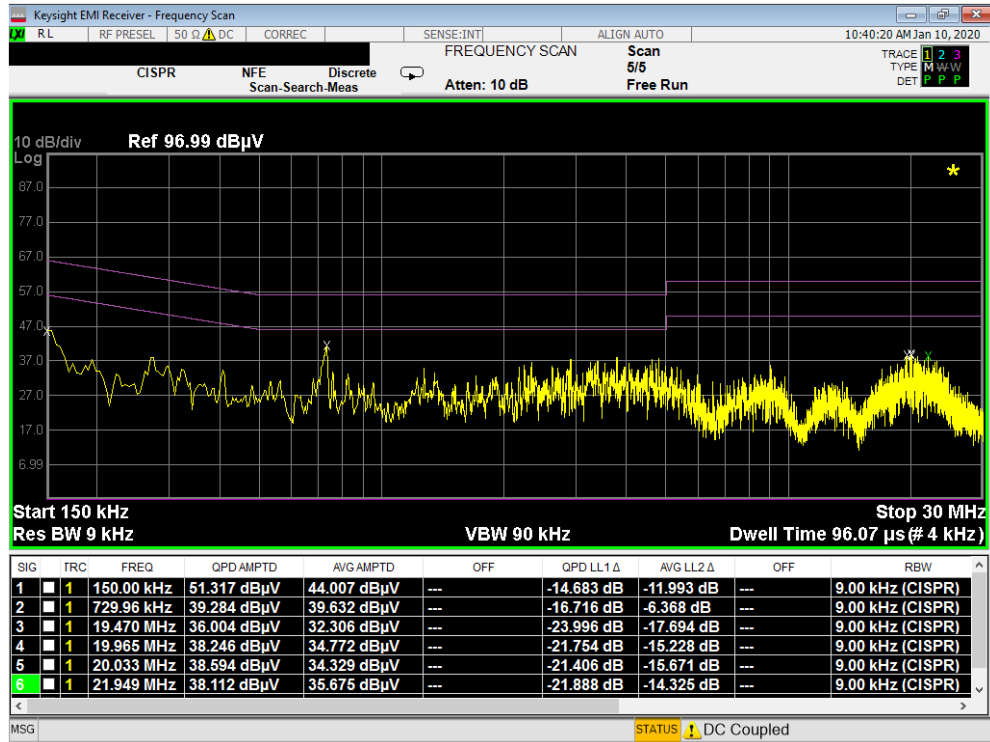


Plot 7-275. Line Conducted Plot with 802.11a UNII Band 2A with WCP (N) – OPEN

FCC ID: A3LSMF700U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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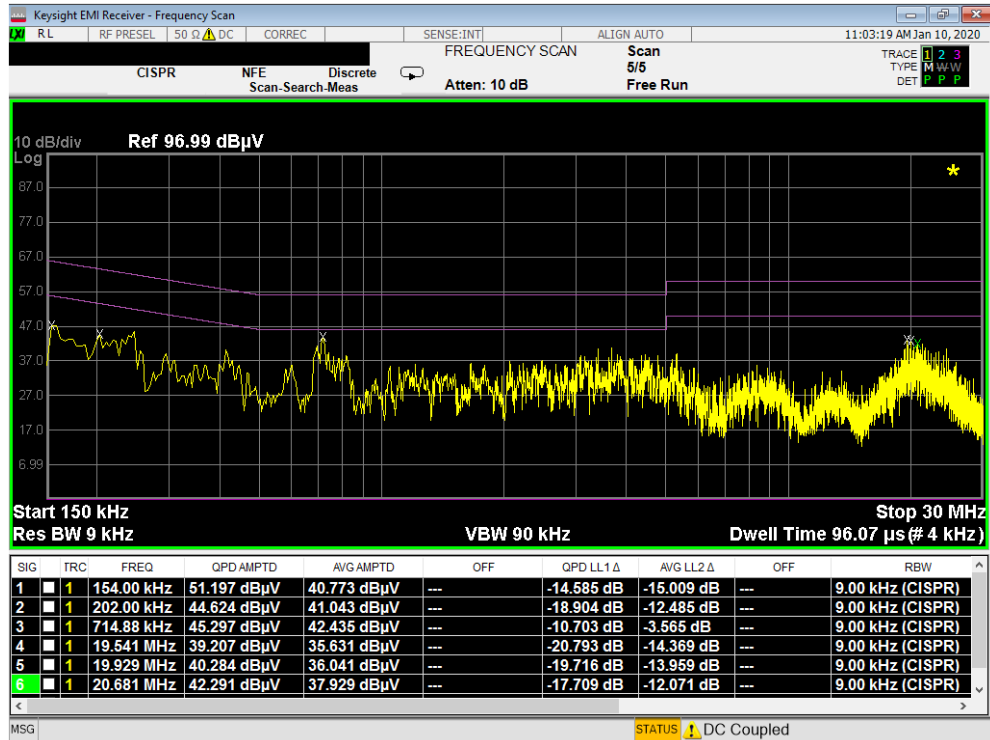


Plot 7-276. Line Conducted Plot with 802.11a UNII Band 2C with WCP (L1) – OPEN

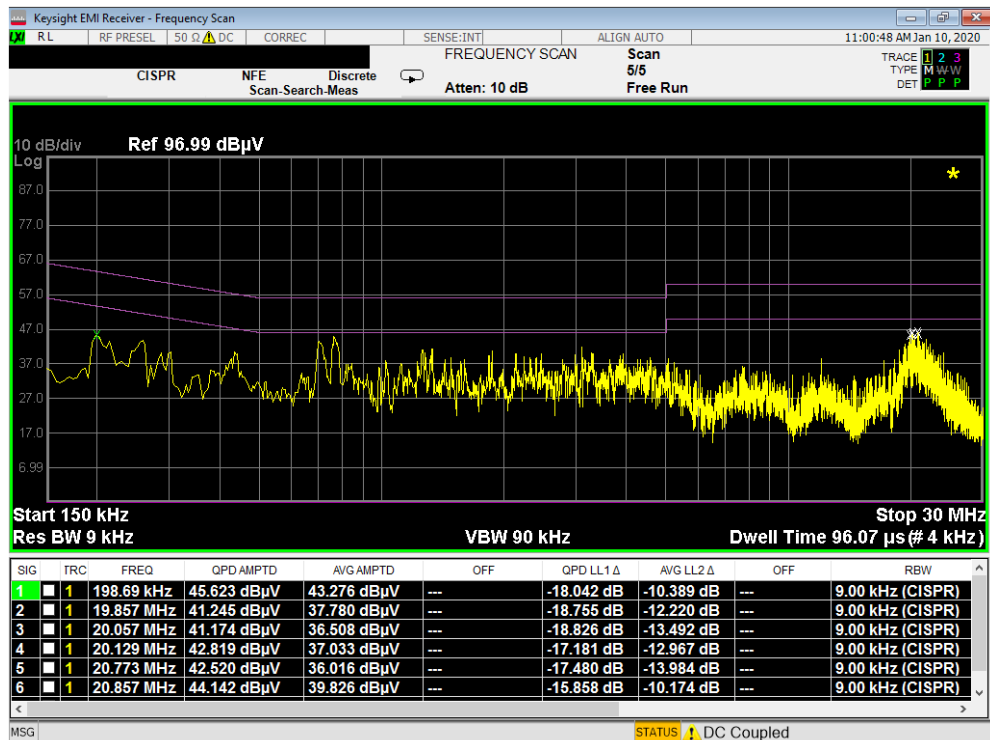


Plot 7-277. Line Conducted Plot with 802.11a UNII Band 2C with WCP (N) – OPEN

FCC ID: A3LSMF700U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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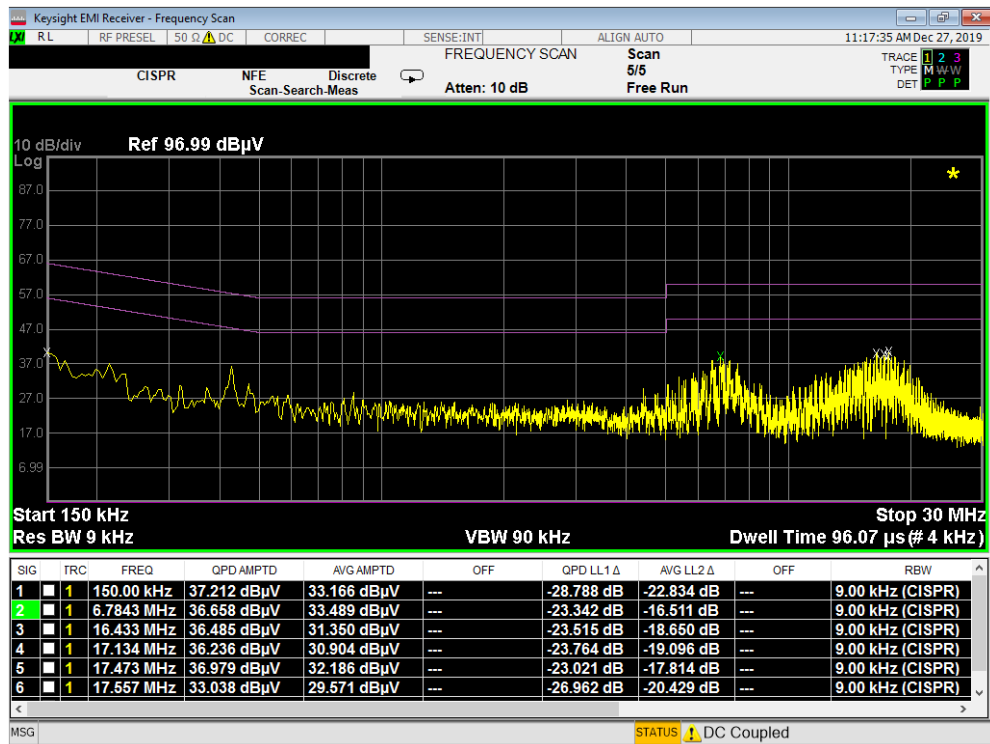


Plot 7-278. Line Conducted Plot with 802.11a UNII Band 3 with WCP (L1) – OPEN

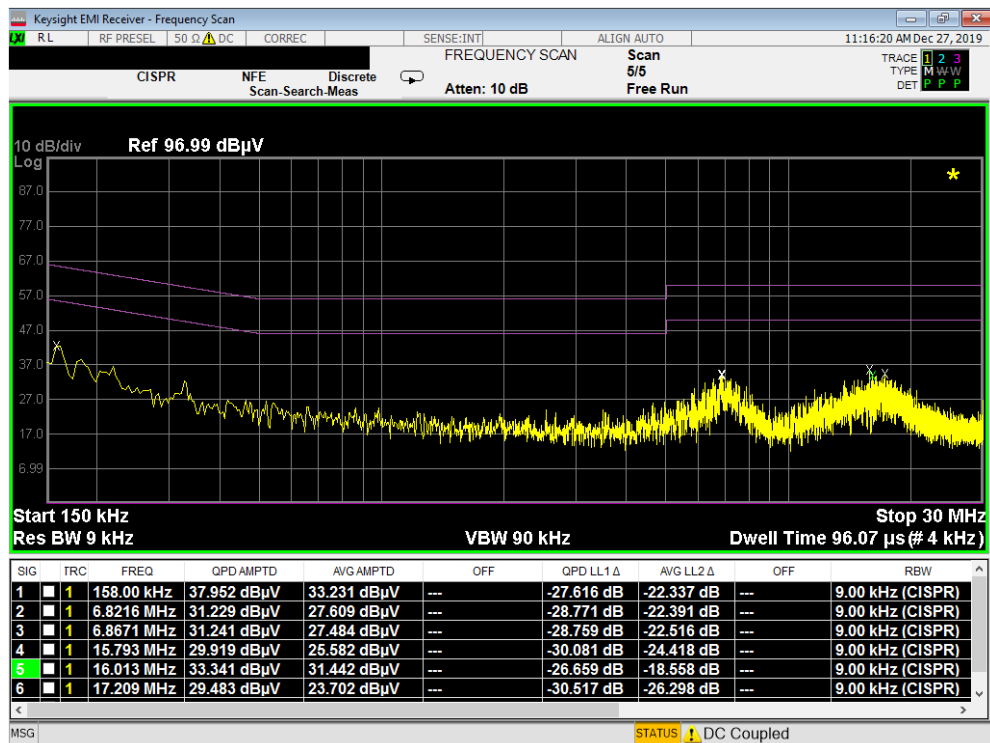


Plot 7-279. Line Conducted Plot with 802.11a UNII Band 3 with WCP (N) – OPEN

FCC ID: A3LSMF700U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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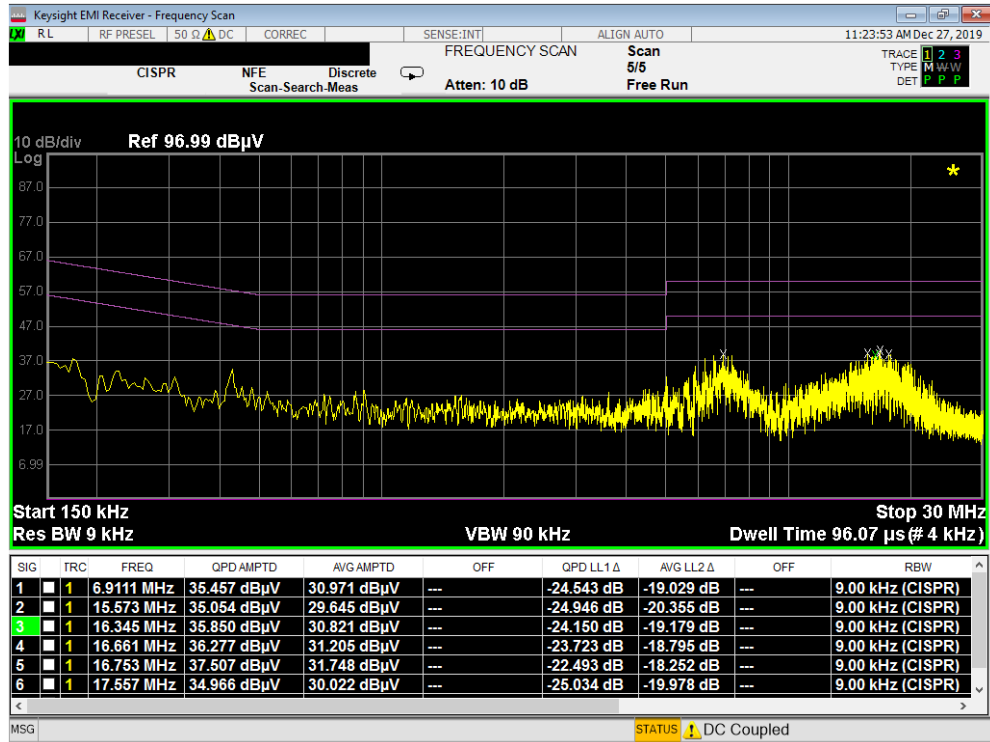


Plot 7-280. Line Conducted Plot with 802.11a UNII Band 1 (L1) – CLOSED

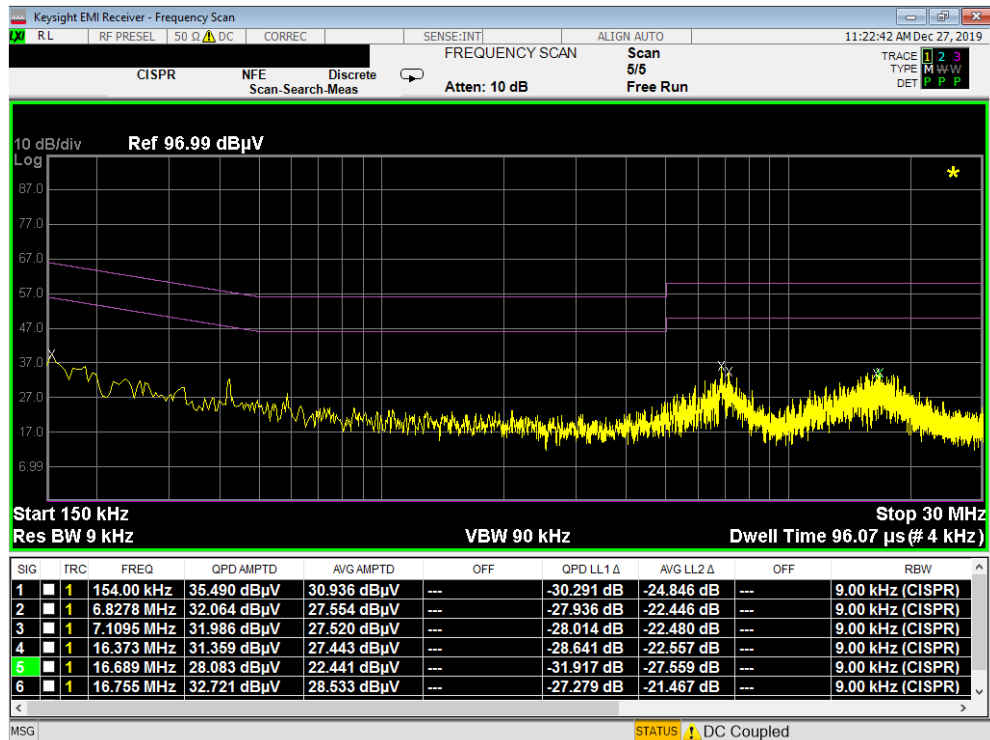


Plot 7-281. Line Conducted Plot with 802.11a UNII Band 1 (N) – CLOSED

FCC ID: A3LSMF700U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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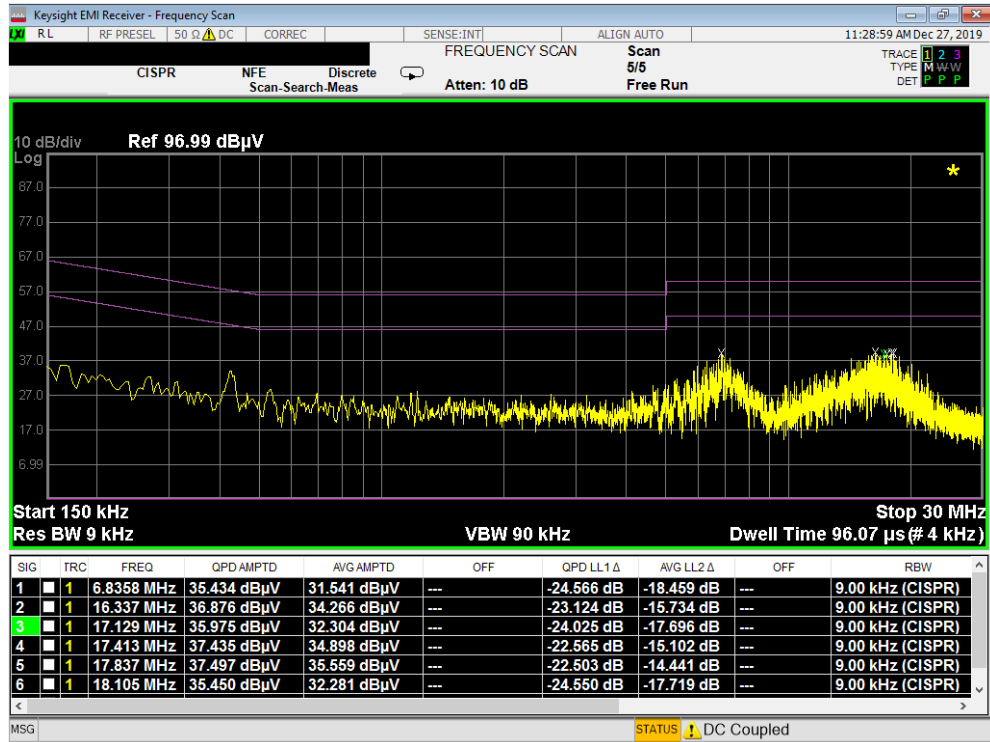


Plot 7-282. Line Conducted Plot with 802.11a UNII Band 2A (L1) – CLOSED

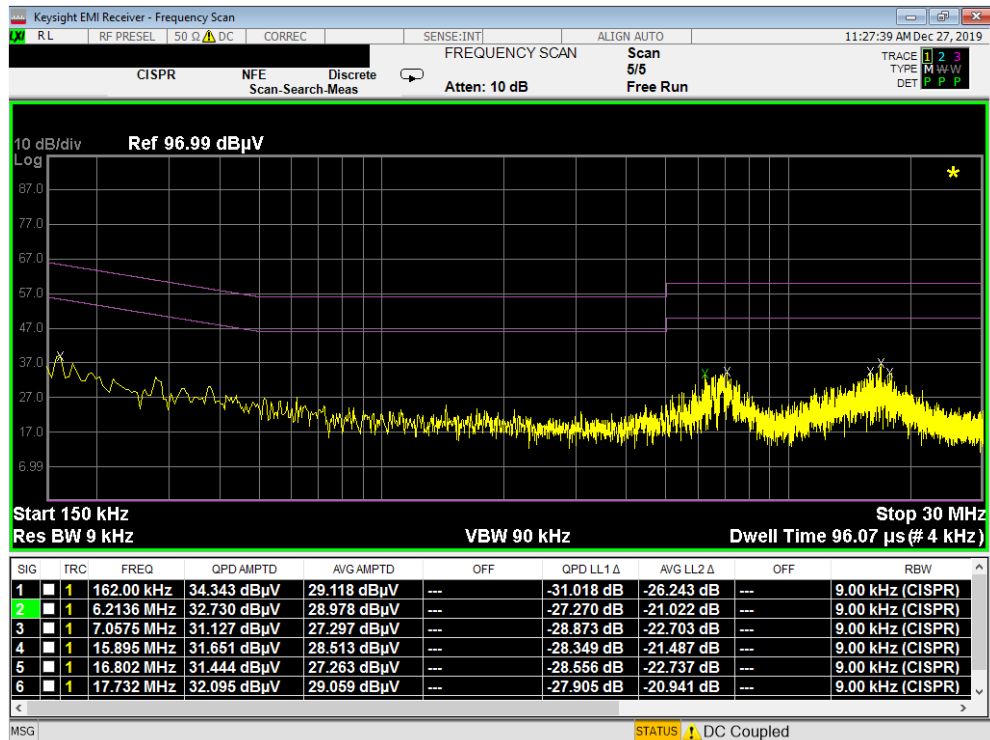


Plot 7-283. Line Conducted Plot with 802.11a UNII Band 2A (N) – CLOSED

FCC ID: A3LSMF700U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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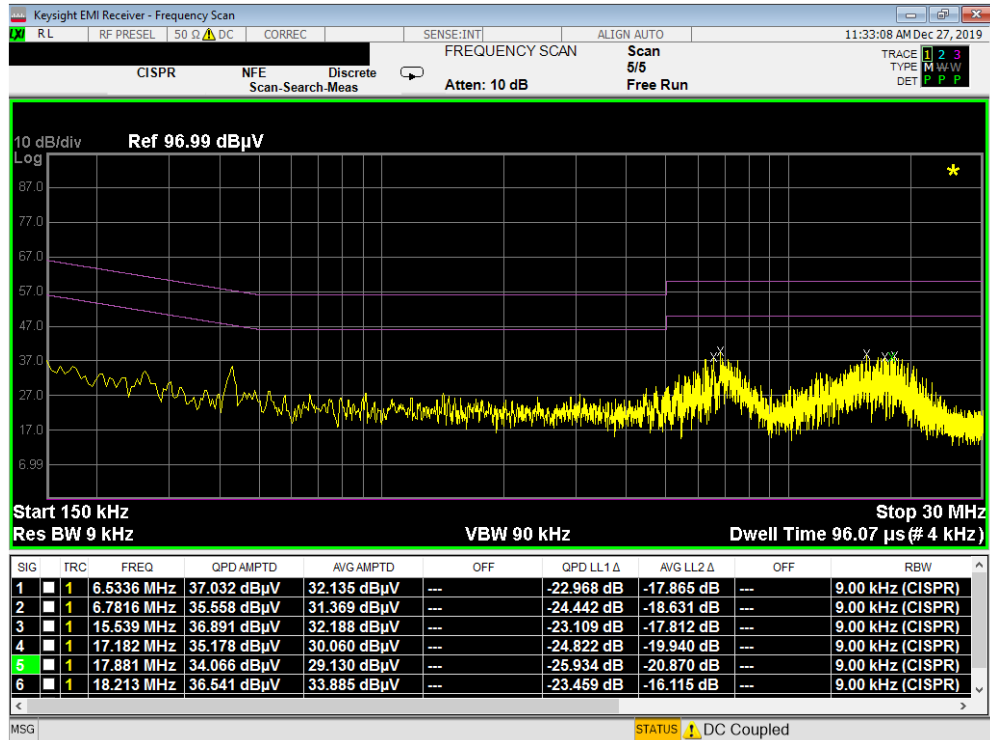


Plot 7-284. Line Conducted Plot with 802.11a UNII Band 2C (L1) – CLOSED

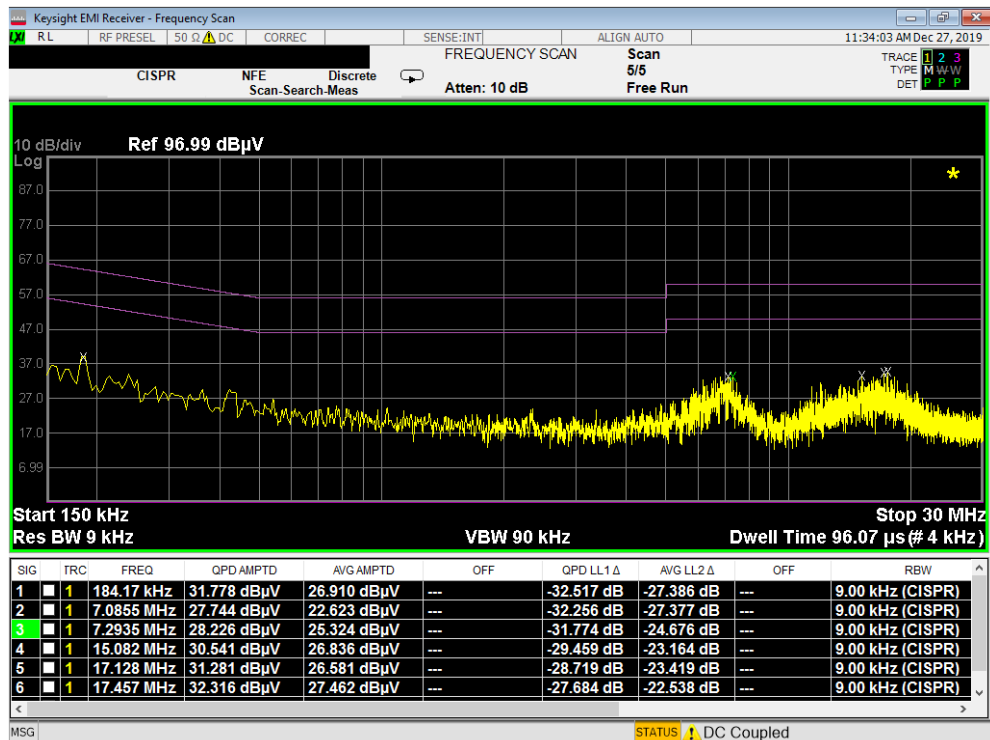


Plot 7-285. Line Conducted Plot with 802.11a UNII Band 2C (N) – CLOSED

FCC ID: A3LSMF700U			MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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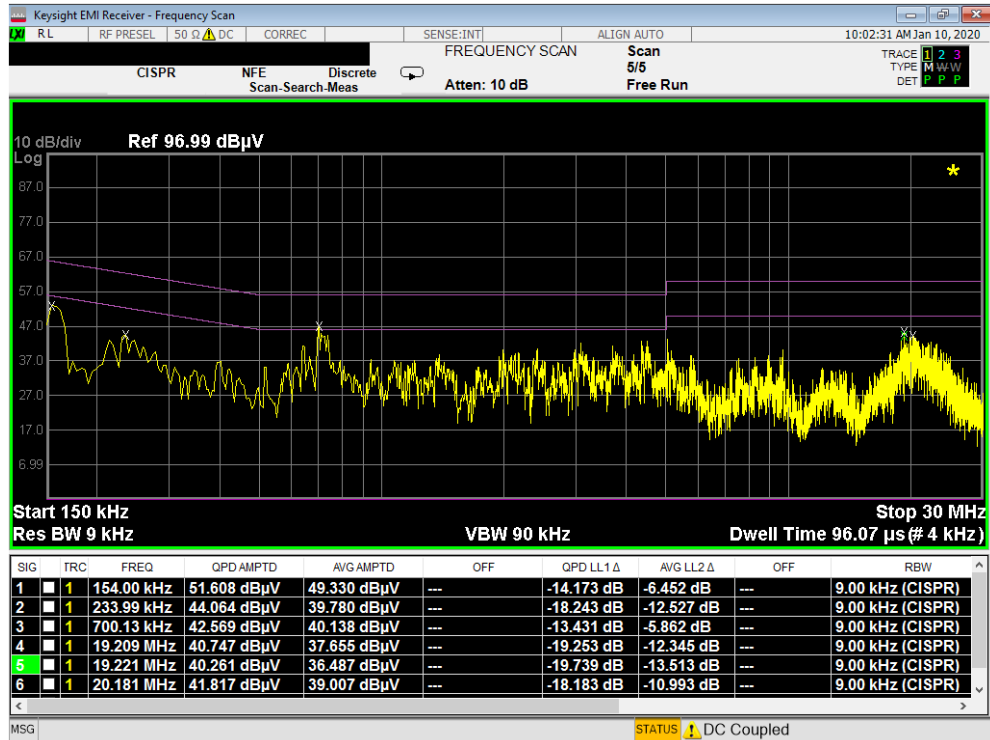


Plot 7-286. Line Conducted Plot with 802.11a UNII Band 3 (L1) – CLOSED

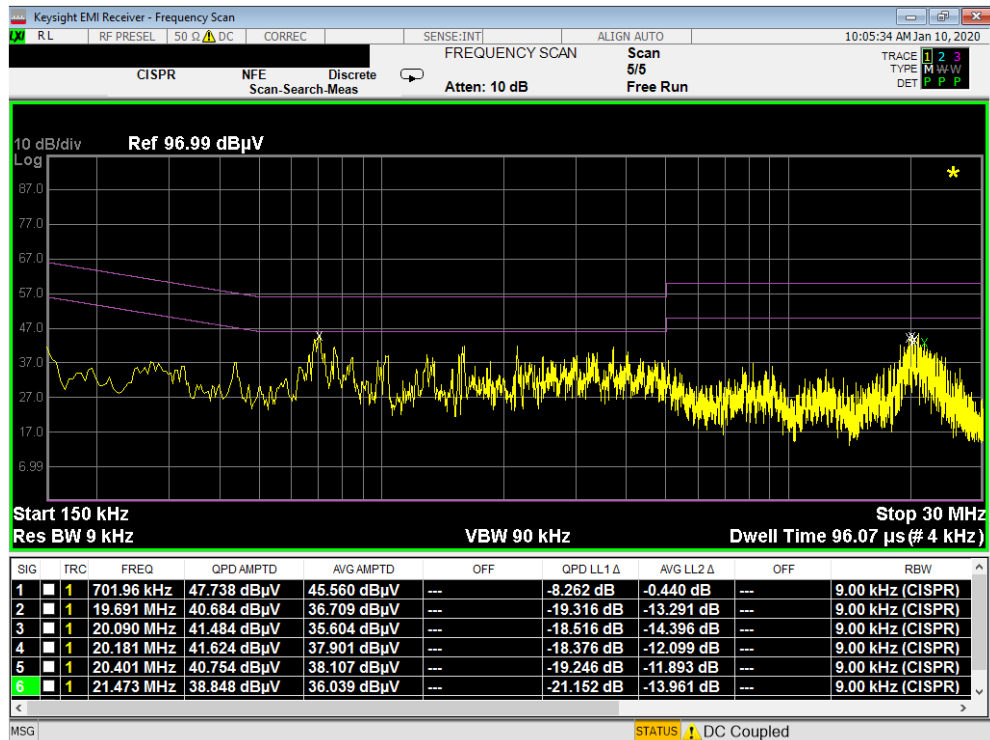


Plot 7-287. Line Conducted Plot with 802.11a UNII Band 3 (N) – CLOSED

FCC ID: A3LSMF700U			MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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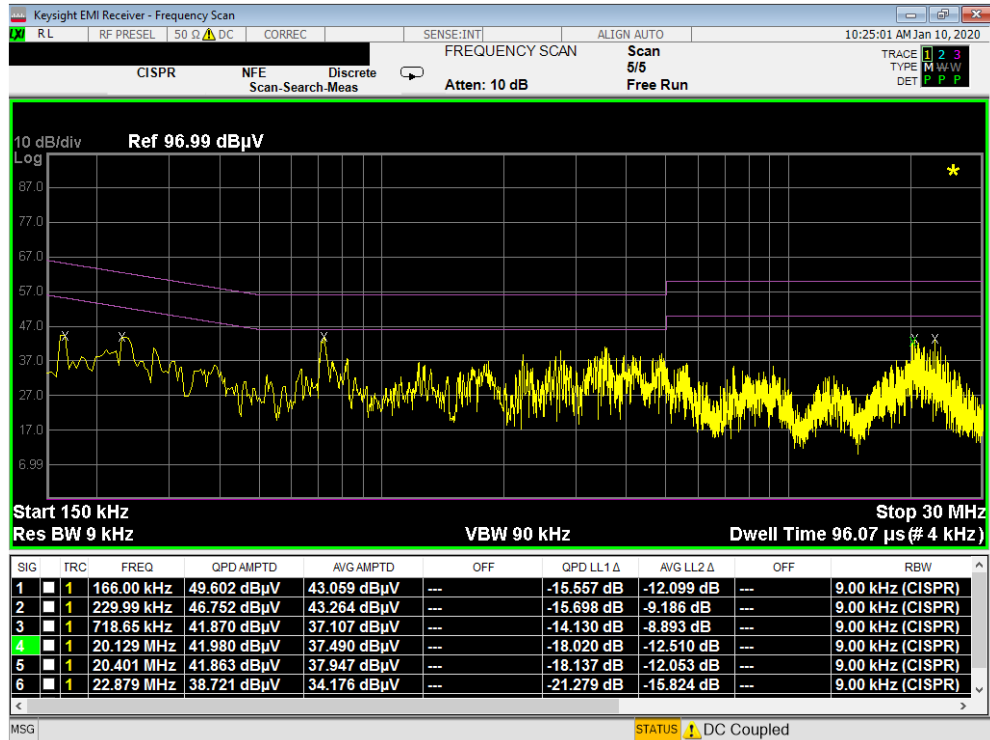


Plot 7-288. Line Conducted Plot with 802.11a UNII Band 1 with WCP (L1) – CLOSED

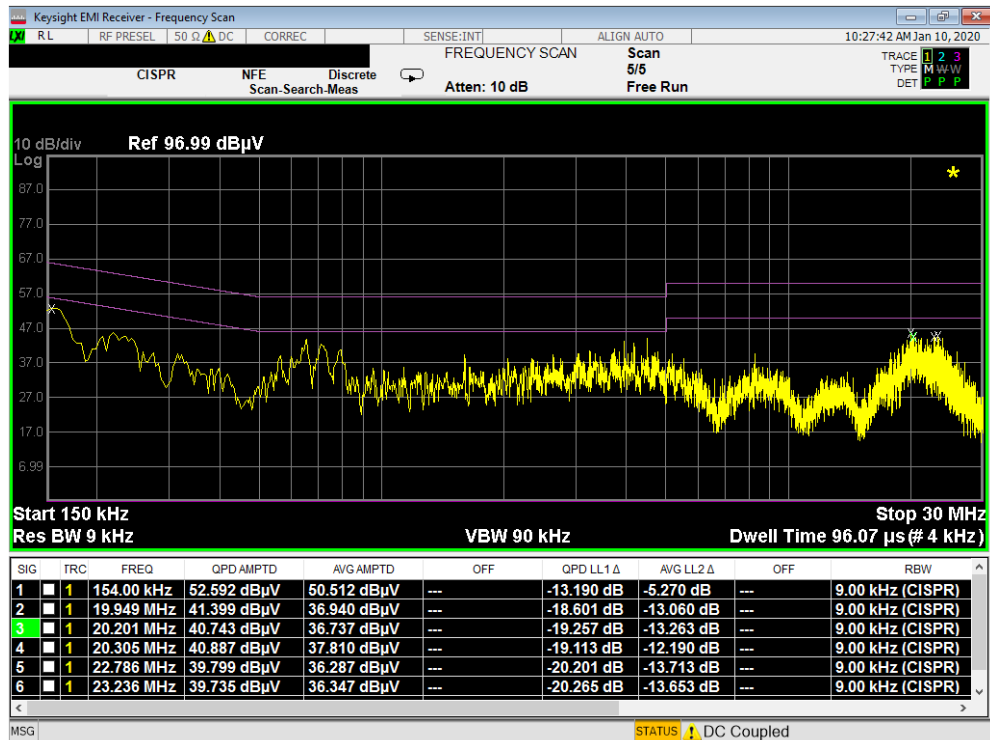


Plot 7-289. Line Conducted Plot with 802.11a UNII Band 1 with WCP (N) – CLOSED

FCC ID: A3LSMF700U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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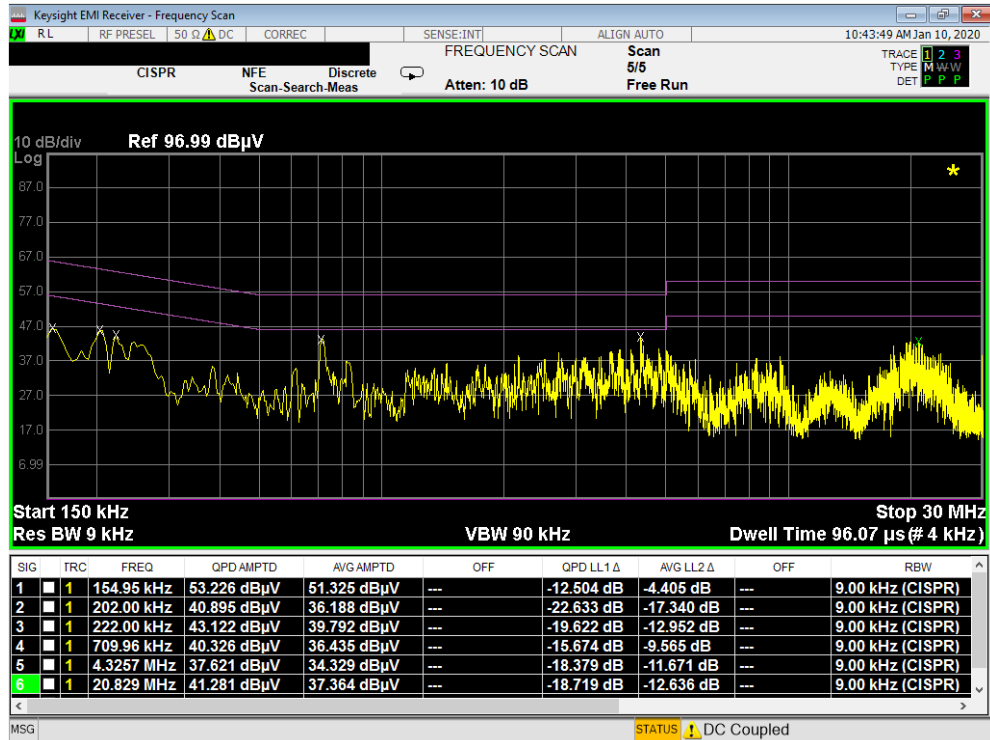


Plot 7-290. Line Conducted Plot with 802.11a UNII Band 2A with WCP (L1) – CLOSED

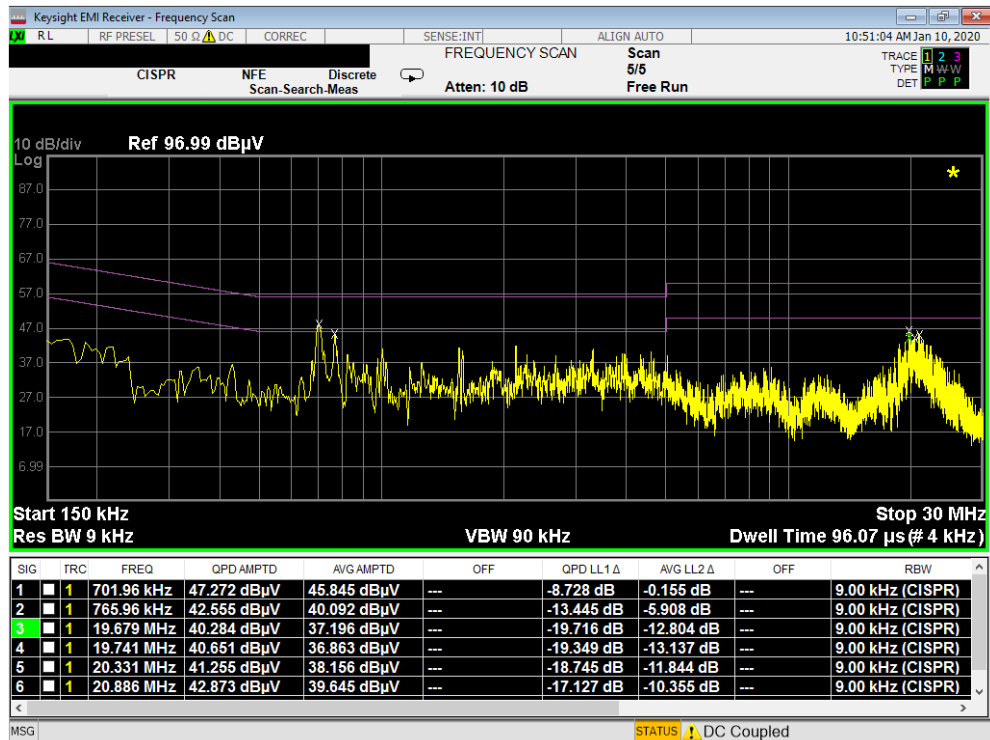


Plot 7-291. Line Conducted Plot with 802.11a UNII Band 2A with WCP (N) – CLOSED

FCC ID: A3LSMF700U			MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
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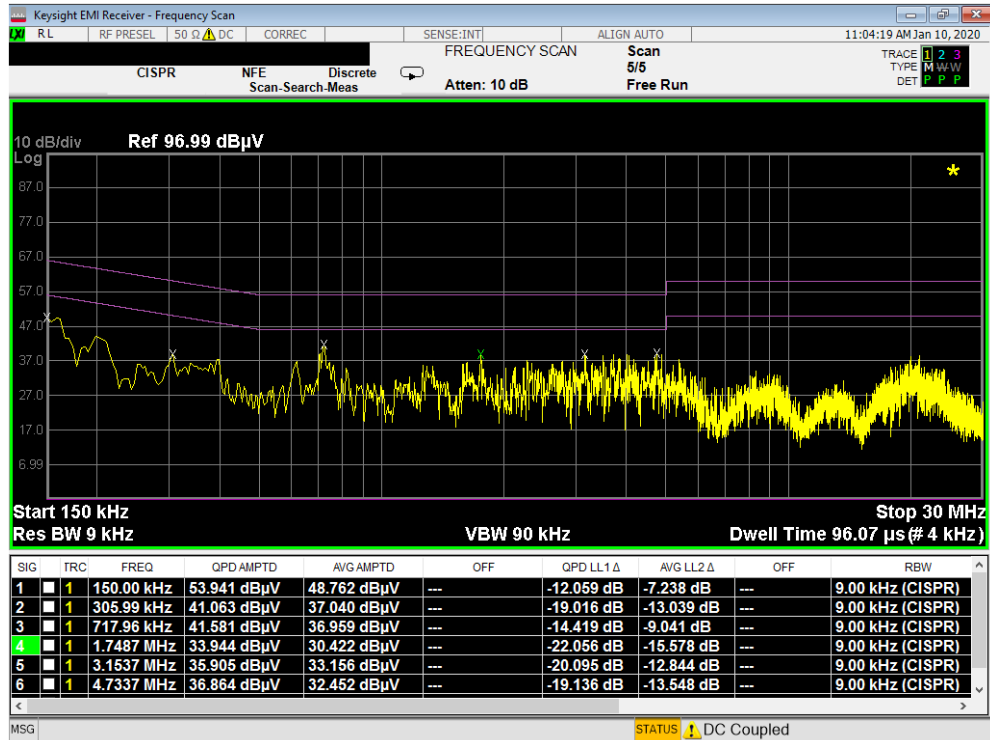


Plot 7-292. Line Conducted Plot with 802.11a UNII Band 2C with WCP (L1) – CLOSED

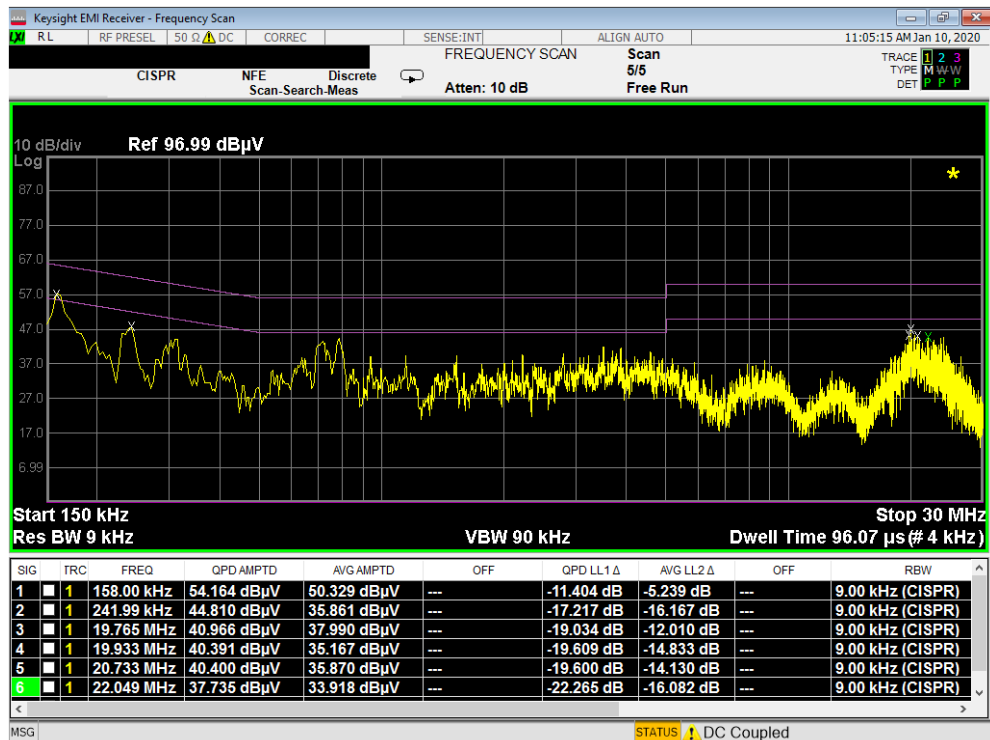


Plot 7-293. Line Conducted Plot with 802.11a UNII Band 2C with WCP (N) – CLOSED

FCC ID: A3LSMF700U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Plot 7-294. Line Conducted Plot with 802.11a UNII Band 3 with WCP (L1) – CLOSED



Plot 7-295. Line Conducted Plot with 802.11a UNII Band 3 with WCP (N) – CLOSED

FCC ID: A3LSMF700U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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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: A3LSMF700U** is in compliance with Part 15 Subpart E (15.407) of the FCC Rules and RSS-247 of the Innovation, Science and Economic Development Canada Rules.

FCC ID: A3LSMF700U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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