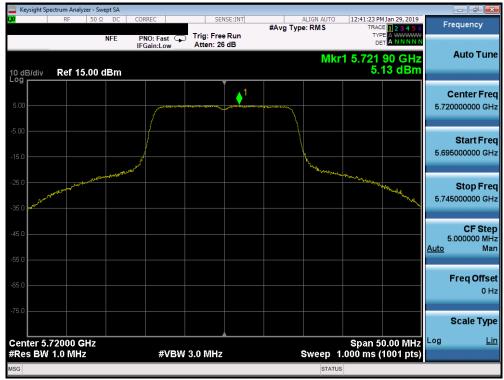


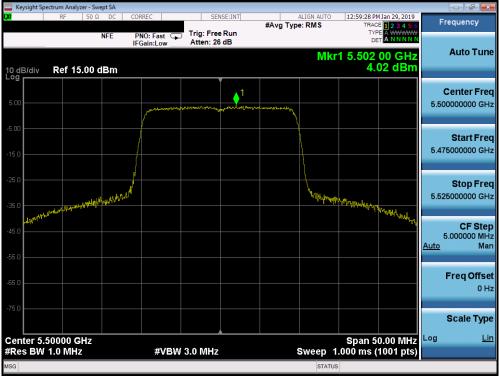
Plot 7-233. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) - Ch. 120)



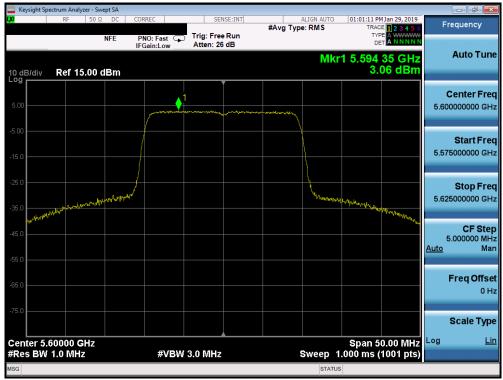
Plot 7-234. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) - Ch. 144)

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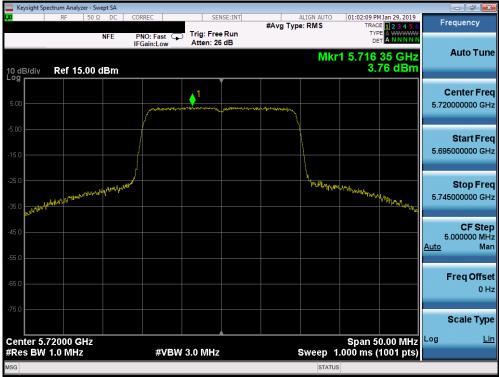
Plot 7-235. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2C) - Ch. 100)



Plot 7-236. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2C) - Ch. 120)

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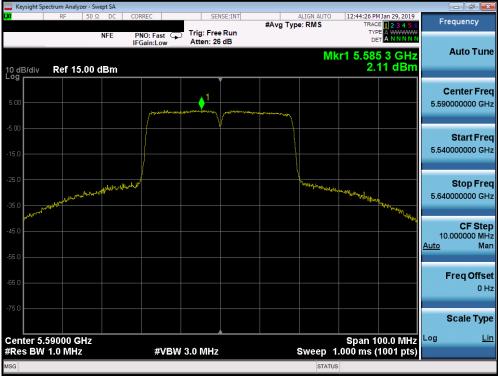
Plot 7-237. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2C) - Ch. 144)



Plot 7-238. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) - Ch. 102)

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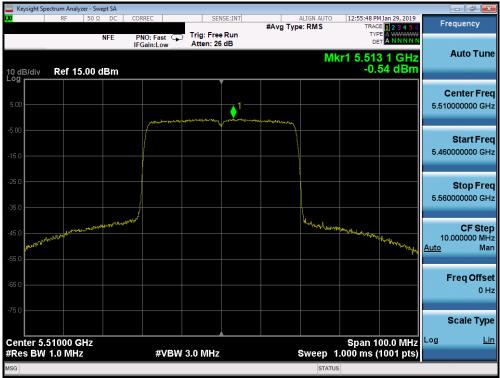
Plot 7-239. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) - Ch. 118)



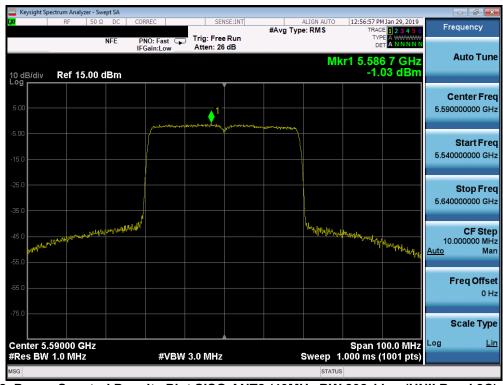
Plot 7-240. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) - Ch. 142)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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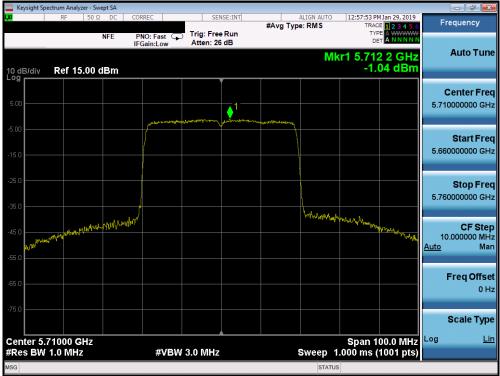
Plot 7-241. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 102)



Plot 7-242. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 118)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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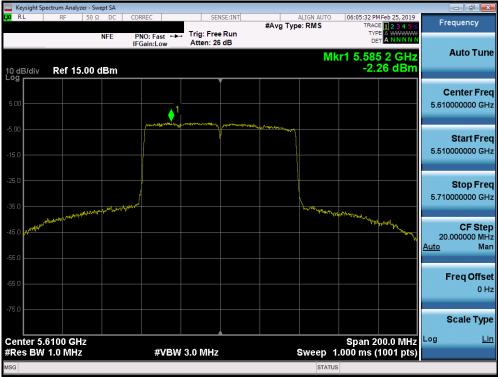
Plot 7-243. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 142)



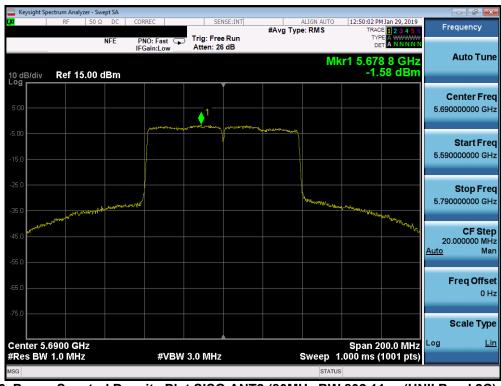
Plot 7-244. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 106)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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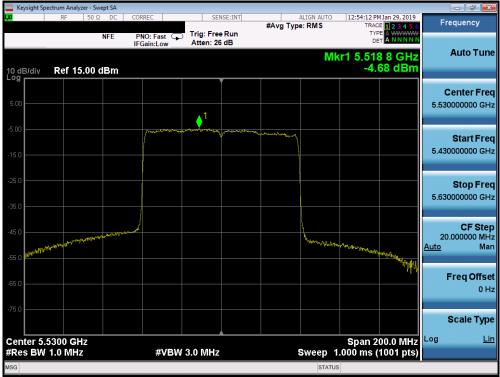
Plot 7-245. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 122)



Plot 7-246. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 138)

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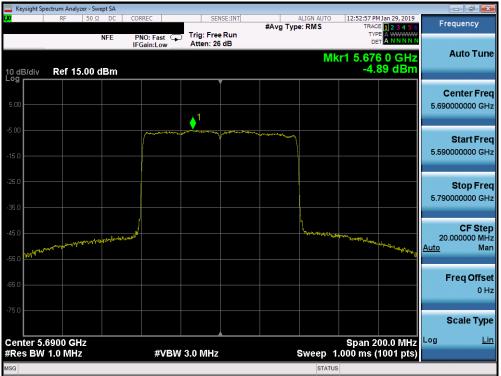
Plot 7-247. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 2C) - Ch. 106)



Plot 7-248. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 2C) - Ch. 122)

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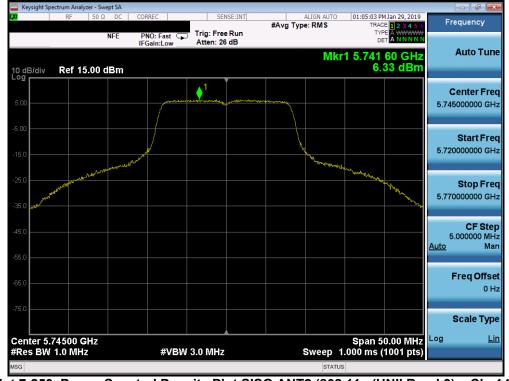
Plot 7-249. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 2C) - Ch. 138)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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·	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
	5745	149	а	6	6.33	30.0	-23.67
	5785	157	а	6	6.47	30.0	-23.53
	5825	165	а	6	3.91	30.0	-26.09
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	6.00	30.0	-24.00
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	6.16	30.0	-23.84
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	6.12	30.0	-23.88
e	5745	149	ax (20MHz)	6.5/7.2 (MCS0)	4.54	30.0	-25.46
Band	5785	157	ax (20MHz)	6.5/7.2 (MCS0)	4.33	30.0	-25.67
ä	5825	165	ax (20MHz)	6.5/7.2 (MCS0)	3.78	30.0	-26.22
	5755	151	n (40MHz)	13.5/15 (MCS0)	2.81	30.0	-27.19
	5795	159	n (40MHz)	13.5/15 (MCS0)	2.37	30.0	-27.63
	5755	151	ax (40MHz)	13.5/15 (MCS0)	-0.44	30.0	-30.44
	5795	159	ax (40MHz)	13.5/15 (MCS0)	-0.80	30.0	-30.80
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-1.29	30.0	-31.29
	5775	155	ax (80MHz)	29.3/32.5 (MCS0)	-4.31	30.0	-34.31

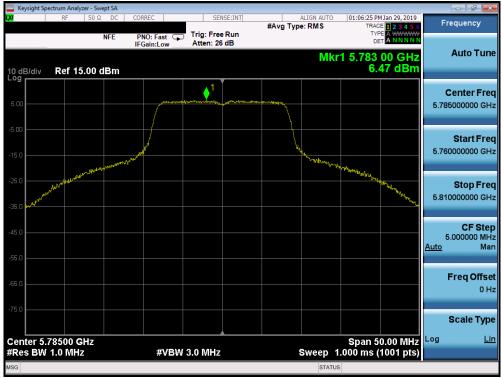
 Table 7-24. Band 3 Conducted Power Spectral Density Measurements SISO ANT2



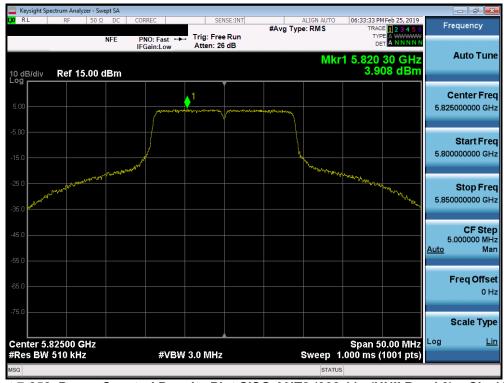
Plot 7-250. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 3) – Ch. 149)

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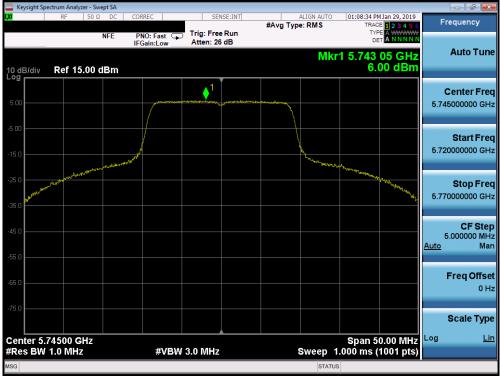
Plot 7-251. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 3) – Ch. 157)



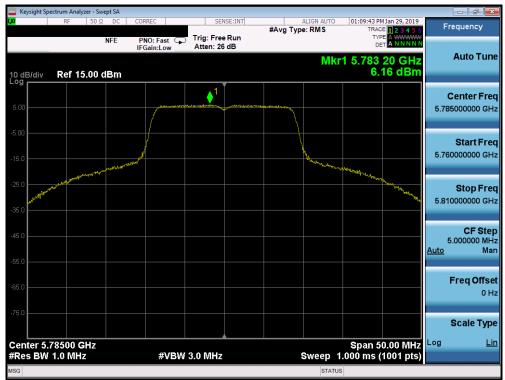
Plot 7-252. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 3) - Ch. 165)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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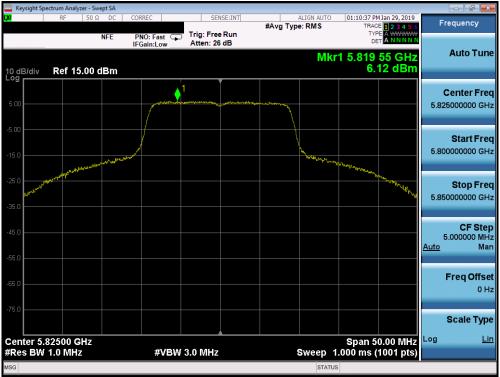
Plot 7-253. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 3) - Ch. 149)



Plot 7-254. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 3) - Ch. 157)

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Plot 7-255. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 3) - Ch. 165)

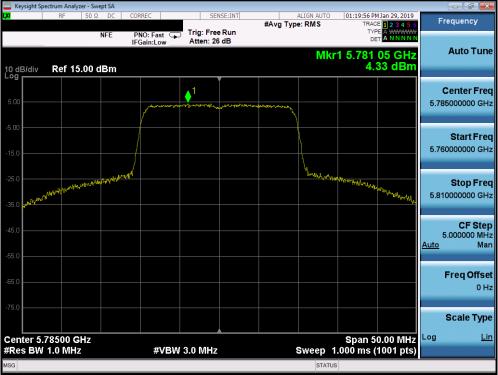


Plot 7-256. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 3) - Ch. 149)

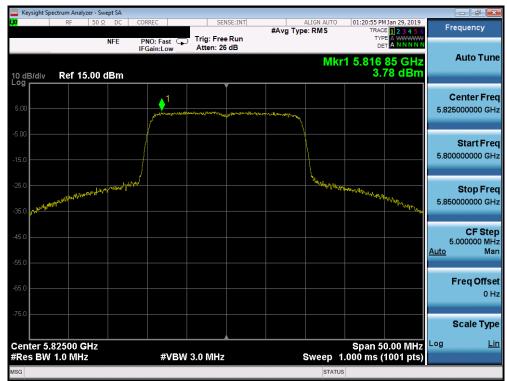
FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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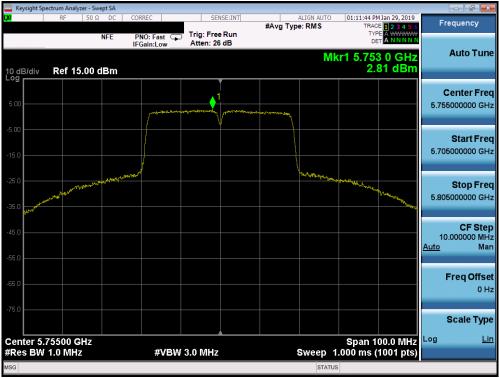
Plot 7-257. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 3) - Ch. 157)



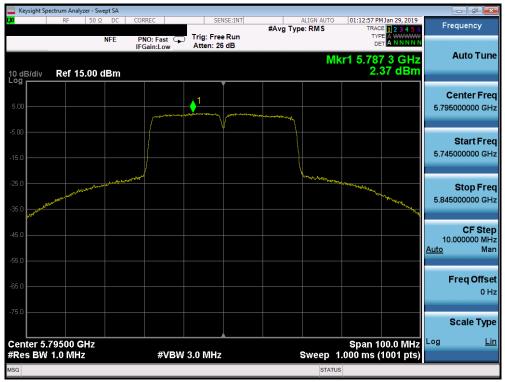
Plot 7-258. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 3) - Ch. 165)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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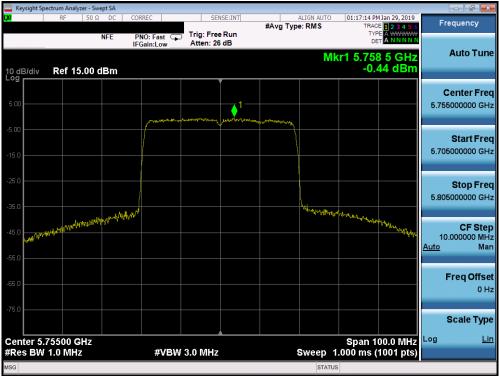
Plot 7-259. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 3) - Ch. 151)



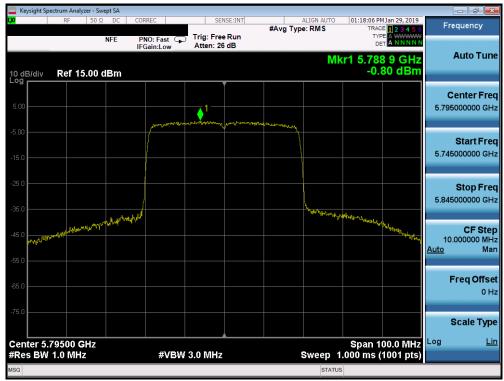
Plot 7-260. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 3) - Ch. 159)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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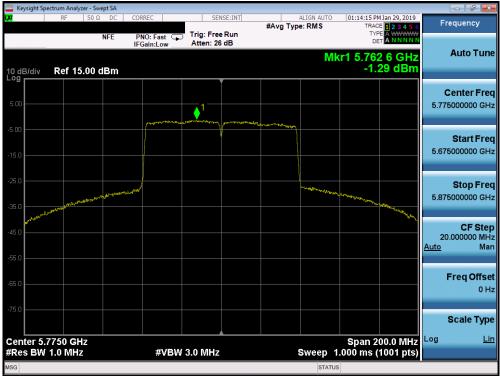
Plot 7-261. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 3) - Ch. 151)



Plot 7-262. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 3) - Ch. 159)

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Plot 7-263. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 3) - Ch. 155)



Plot 7-264. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 3) - Ch. 155)

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## **Summed MIMO Power Spectral Density Measurements**

	Frequency	Channel			Antenna-1	Antenna-2	Summed MIMO	Max Power	Margin
	[MHz]	No.	802.11 Mode	Data Rate [Mbps]	Power Density [dBm]	Power Density [dBm]	Power Density [dBm]	Density [dBm/MHz]	[dB]
	5180	36	а	6.5/7.2 (MCS0)	6.35	5.68	9.04	11.0	-1.96
	5200	40	а	6.5/7.2 (MCS0)	5.30	4.74	8.04	11.0	-2.96
	5240	48	а	6.5/7.2 (MCS0)	5.80	5.20	8.52	11.0	-2.48
	5180	36	n (20MHz)	6.5/7.2 (MCS0)	6.40	5.82	9.13	11.0	-1.87
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	4.87	4.87	7.88	11.0	-3.12
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	5.48	5.77	8.64	11.0	-2.36
F	5180	36	ax (20MHz)	6.5/7.2 (MCS0)	2.89	2.37	5.65	11.0	-5.35
Band 1	5200	40	ax (20MHz)	6.5/7.2 (MCS0)	3.11	2.52	5.84	11.0	-5.16
ä	5240	48	ax (20MHz)	6.5/7.2 (MCS0)	3.37	3.41	6.40	11.0	-4.60
	5190	38	n (40MHz)	13.5/15 (MCS0)	3.29	2.81	6.07	11.0	-4.93
	5230	46	n (40MHz)	13.5/15 (MCS0)	2.57	2.46	5.53	11.0	-5.47
	5190	38	ax (40MHz)	13.5/15 (MCS0)	-1.21	-1.57	1.62	11.0	-9.38
	5230	46	ax (40MHz)	13.5/15 (MCS0)	-0.86	-0.76	2.20	11.0	-8.80
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	-0.56	-1.15	2.17	11.0	-8.83
	5210	42	ax (80MHz)	29.3/32.5 (MCS0)	-4.63	-4.79	-1.70	11.0	-12.70
	5260	52	а	6.5/7.2 (MCS0)	5.97	5.44	8.72	11.0	-2.28
	5280	56	а	6.5/7.2 (MCS0)	5.91	5.61	8.77	11.0	-2.23
	5320	64	а	6.5/7.2 (MCS0)	6.44	6.28	9.37	11.0	-1.63
	5260	52	n (20MHz)	6.5/7.2 (MCS0)	5.56	5.65	8.62	11.0	-2.38
	5280	56	n (20MHz)	6.5/7.2 (MCS0)	5.50	5.81	8.67	11.0	-2.33
	5320	64	n (20MHz)	6.5/7.2 (MCS0)	7.01	6.88	9.96	11.0	-1.04
2A	5260	52	ax (20MHz)	6.5/7.2 (MCS0)	3.48	3.49	6.50	11.0	-4.50
Band 2A	5280	56	ax (20MHz)	6.5/7.2 (MCS0)	3.35	3.16	6.27	11.0	-4.73
Ba	5320	64	ax (20MHz)	6.5/7.2 (MCS0)	3.57	3.29	6.44	11.0	-4.56
	5270	54	n (40MHz)	13.5/15 (MCS0)	2.13	2.08	5.12	11.0	-5.88
	5310	62	n (40MHz)	13.5/15 (MCS0)	3.85	2.93	6.42	11.0	-4.58
	5270	54	ax (40MHz)	13.5/15 (MCS0)	-0.40	-1.07	2.29	11.0	-8.71
	5310	62	ax (40MHz)	13.5/15 (MCS0)	-1.10	-1.33	1.80	11.0	-9.20
	5290	58	ac (80MHz)	29.3/32.5 (MCS0)	-0.51	-0.57	2.47	11.0	-8.53
	5290	58	ax (80MHz)	29.3/32.5 (MCS0)	-4.98	-4.64	-1.80	11.0	-12.80
	5500	100	а	6.5/7.2 (MCS0)	6.90	6.86	9.89	11.0	-1.11
	5600	120	а	6.5/7.2 (MCS0)	5.59	5.04	8.33	11.0	-2.67
	5720	144	а	6.5/7.2 (MCS0)	5.49	5.44	8.48	11.0	-2.52
	5500	100	n (20MHz)	6.5/7.2 (MCS0)	6.68	7.25	9.98	11.0	-1.02
	5600	120	n (20MHz)	6.5/7.2 (MCS0)	5.29	5.38	8.35	11.0	-2.65
	5720	144	n (20MHz)	6.5/7.2 (MCS0)	5.27	5.13	8.21	11.0	-2.79
	5500	100	ax (20MHz)	6.5/7.2 (MCS0)	3.48	4.02	6.77	11.0	-4.23
	5600	120	ax (20MHz)	6.5/7.2 (MCS0)	2.89	3.06	5.99	11.0	-5.01
	5720	144	ax (20MHz)	6.5/7.2 (MCS0)	3.20	3.76	6.50	11.0	-4.50
2C	5510	102	n (40MHz)	13.5/15 (MCS0)	3.51	4.07	6.81	11.0	-4.19
Band 2C	5590	118	n (40MHz)	13.5/15 (MCS0)	1.49	2.11	4.82	11.0	-6.18
Ba	5710	142	n (40MHz)	13.5/15 (MCS0)	2.19	1.91	5.06	11.0	-5.94
	5510	102	ax (40MHz)	13.5/15 (MCS0)	-0.64	-0.54	2.42	11.0	-8.58
	5590	118	ax (40MHz)	13.5/15 (MCS0)	-1.04	-1.03	1.98	11.0	-9.02
	5710	142	ax (40MHz)	13.5/15 (MCS0)	-1.17	-1.04	1.91	11.0	-9.09
	5530	106	ac (80MHz)	29.3/32.5 (MCS0)	-0.29	-0.26	2.74	11.0	-8.26
	5610	122	ac (80MHz)	29.3/32.5 (MCS0)	-2.18	-2.26	0.79	11.0	-10.21
	5690	138	ac (80MHz)	29.3/32.5 (MCS0)	-2.07	-1.58	1.19	11.0	-9.81
	5530	106	ax (80MHz)	29.3/32.5 (MCS0)	-4.92	-4.68	-1.79	11.0	-12.79
	5610	122	ax (80MHz)	29.3/32.5 (MCS0)	-5.01	-5.07	-2.03	11.0	-13.03
	5690	138	ax (80MHz)	29.3/32.5 (MCS0)	-4.65	-4.89	-1.76	11.0	-12.76
	Tabla	7 95 D/	and $1.2$	2C MIMO Cor	adjusted Day	war Spaatra	Donoity M	aaauramanta	

Table 7-25. Bands 1, 2A, 2C MIMO Conducted Power Spectral Density Measurements

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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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]
	5745	149	а	6.5/7.2 (MCS0)	5.84	6.33	9.10	30.0	-20.90
	5785	157	а	6.5/7.2 (MCS0)	6.14	6.47	9.32	30.0	-20.68
	5825	165	а	6.5/7.2 (MCS0)	6.15	3.91	8.18	30.0	-21.82
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	6.01	6.00	9.02	30.0	-20.98
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	6.25	6.16	9.22	30.0	-20.78
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	5.73	6.12	8.94	30.0	-21.06
e	5745	149	ax (20MHz)	6.5/7.2 (MCS0)	3.70	4.54	7.15	30.0	-22.85
Band	5785	157	ax (20MHz)	6.5/7.2 (MCS0)	4.08	4.33	7.22	30.0	-22.78
ä	5825	165	ax (20MHz)	6.5/7.2 (MCS0)	3.34	3.78	6.58	30.0	-23.42
	5755	151	n (40MHz)	13.5/15 (MCS0)	2.15	2.81	5.50	30.0	-24.50
	5795	159	n (40MHz)	13.5/15 (MCS0)	2.20	2.37	5.30	30.0	-24.70
	5755	151	ax (40MHz)	13.5/15 (MCS0)	-0.80	-0.44	2.39	30.0	-27.61
	5795	159	ax (40MHz)	13.5/15 (MCS0)	-0.71	-0.80	2.26	30.0	-27.74
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-1.62	-1.29	1.56	30.0	-28.44
	5775	155	ax (80MHz)	29.3/32.5 (MCS0)	-4.60	-4.31	-1.44	30.0	-31.44

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

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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:

Assuming the average conducted power spectral density for Ant1 is measured to be 6.40 dBm for Antenna-1 and the average conducted power spectral density for Ant2 is 5.82 dBm.

Antenna 1 + Antenna 2 = MIMO

(6.40 dBm + 5.82 dBm) = (4.37 mW + 3.82 mW) = 8.18 mW = 9.13 dBm

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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 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 [μV/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 x span/RBW)
- 6. Averaging type = power (RMS)
- 7. Sweep time = auto couple
- 8. Trace was averaged over 100 sweeps

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#### Peak Measurements above 1GHz

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

#### Peak Measurements below 1GHz

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

#### Test Setup

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

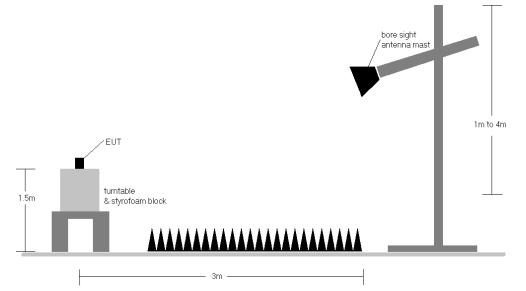


Figure 7-5. Test Instrument & Measurement Setup

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

#### Sample Calculations

#### **Determining Spurious Emissions Levels**

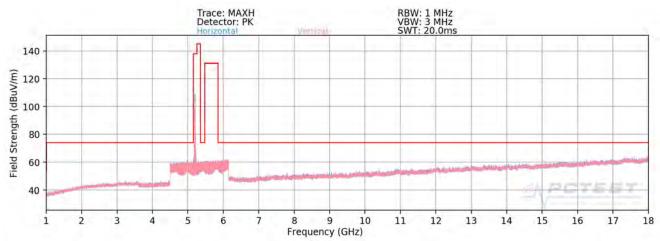
- ο Field Strength Level [dB<sub>μ</sub>V/m] = Analyzer Level [dBm] + 107 + AFCL [dB/m]
- AFCL [dB/m] = Antenna Factor [dB/m] + Cable Loss [dB]
- ο Margin [dB] = Field Strength Level [dBμV/m] Limit [dBμV/m]

#### Radiated Band Edge Measurement Offset

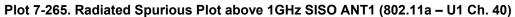
 The amplitude offset shown in the radiated restricted band edge plots in Section Radiated Spurious Emission Measurements – Above 1GHz was calculated using the formula:
 Offset (dB) = (Antenna Factor + Cable Loss + Attenuator) – Preamplifier Gain

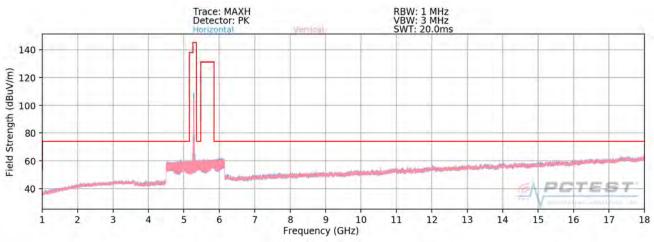
FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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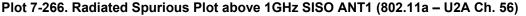


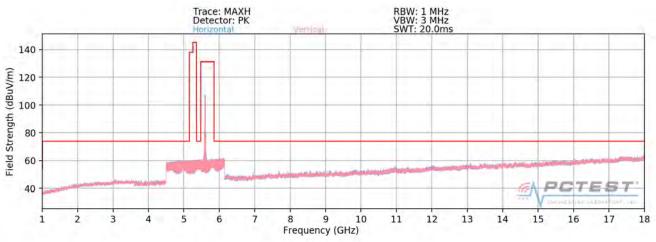


## 7.6.1 SISO Antenna-1 Radiated Spurious Emission Measurements





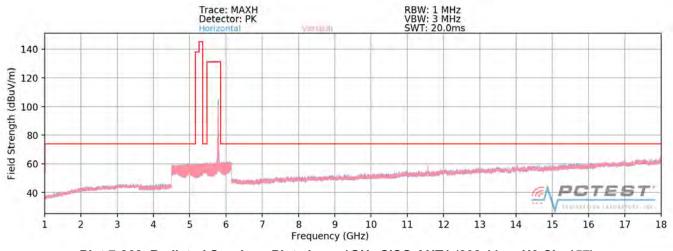




#### Plot 7-267. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11a – U2C Ch. 120)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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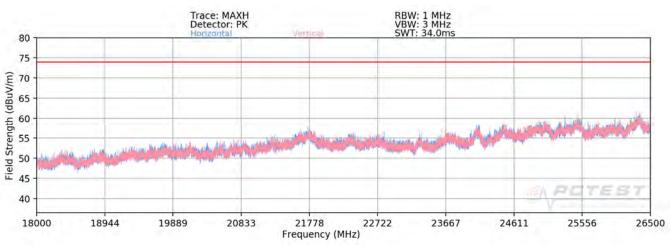




Plot 7-268. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11a - U3 Ch. 157)

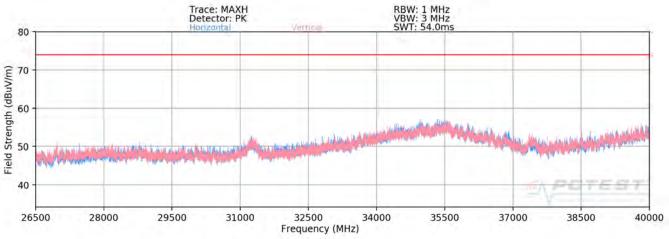
FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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## SISO Antenna-1 Radiated Spurious Emissions Measurements (Above 18GHz)





Plot 7-270. Radiated Spurious Plot 26.5GHz - 40GHz SISO ANT1 (802.11a)

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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	Н	253	361	-68.08	18.99	0.00	57.91	68.20	-10.29
*	15540.00	Average	н	-	-	-85.42	27.73	0.00	49.31	53.98	-4.67
*	15540.00	Peak	н	-	-	-74.07	27.73	0.00	60.66	73.98	-13.32
*	20720.00	Average	Н	-	-	-77.78	17.17	-9.54	36.85	53.98	-17.13
*	20720.00	Peak	Н	-	-	-65.71	17.17	-9.54	48.92	73.98	-25.06
	25900.00	Peak	Н	-	-	-65.32	19.93	-9.54	52.07	68.20	-16.13

Table 7-28. Radiated Measurements SISO ANT1

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel:

802.11a	
6Mbps	
1 & 3 Meters	
5200MHz	
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	н	254	359	-68.23	19.36	0.00	58.13	68.20	-10.07
*	15600.00	Average	Н	-	-	-85.38	27.61	0.00	49.23	53.98	-4.75
*	15600.00	Peak	Н	-	-	-74.29	27.61	0.00	60.32	73.98	-13.66
*	20800.00	Average	Н	-	-	-77.93	17.65	-9.54	37.18	53.98	-16.80
*	20800.00	Peak	Н	-	-	-66.47	17.65	-9.54	48.64	73.98	-25.34
	26000.00	Peak	Н	-	-	-65.32	20.68	-9.54	52.82	68.20	-15.38

#### Table 7-29. Radiated Measurements SISO ANT1

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	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	н	-	-	-72.75	19.72	0.00	53.97	68.20	-14.23
*	15720.00	Average	Н	-	-	-85.12	27.41	0.00	49.29	53.98	-4.69
*	15720.00	Peak	Н	-	-	-74.08	27.41	0.00	60.33	73.98	-13.65
*	20960.00	Average	Н	-	-	-77.98	17.53	-9.54	37.01	53.98	-16.97
*	20960.00	Peak	Н	-	-	-66.84	17.53	-9.54	48.15	73.98	-25.83
	26200.00	Peak	Н	-	-	-64.91	20.23	-9.54	52.78	68.20	-15.42

Table 7-30. Radiated Measurements SISO ANT1

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel: 802.11a 6Mbps 1 & 3 Meters 5200MHz 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	н	120	291	-63.10	12.24	0.00	56.14	68.20	-12.06
*	15600.00	Average	Н	-	-	-79.41	15.40	0.00	42.99	53.98	-10.98
*	15600.00	Peak	Н	-	-	-68.52	15.40	0.00	53.88	73.98	-20.09
*	20800.00	Average	Н	-	-	-77.72	17.65	-9.54	37.39	53.98	-16.59
*	20800.00	Peak	Н	-	-	-66.31	17.65	-9.54	48.80	73.98	-25.18
	26000.00	Peak	Н	-	-	-64.34	20.68	-9.54	53.80	68.20	-14.40

Table 7-31. Radiated Measurements SISO ANT1 with WCP

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	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:	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	н	-	-	-68.55	13.16	0.00	51.61	68.20	-16.59
*	15780.00	Average	Н	-	-	-80.06	16.21	0.00	43.15	53.98	-10.83
*	15780.00	Peak	Н	-	-	-68.64	16.21	0.00	54.57	73.98	-19.41
*	21040.00	Average	Н	-	-	-77.98	17.48	-9.54	36.95	53.98	-17.03
*	21040.00	Peak	Н	-	-	-66.29	17.48	-9.54	48.64	73.98	-25.34
	26300.00	Peak	Н	-	-	-64.43	20.33	-9.54	53.36	68.20	-14.84

Table 7-32. Radiated Measurements SISO ANT1

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel: 802.11a 6Mbps 1 & 3 Meters 5280MHz 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	Н	115	359	-68.14	13.66	0.00	52.52	68.20	-15.68
*	15840.00	Average	н	-	-	-79.81	15.64	0.00	42.83	53.98	-11.15
*	15840.00	Peak	н	-	-	-69.55	15.64	0.00	53.09	73.98	-20.89
*	21120.00	Average	н	-	-	-77.38	17.27	-9.54	37.34	53.98	-16.63
*	21120.00	Peak	Н	-	-	-66.08	17.27	-9.54	48.64	73.98	-25.33
	26400.00	Peak	Н	-	-	-64.56	20.27	-9.54	53.17	68.20	-15.03

Table 7-33. Radiated Measurements SISO ANT1

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	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:	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	н	117	8	-79.44	14.15	0.00	41.71	53.98	-12.27
*	10640.00	Peak	Н	117	8	-67.84	14.15	0.00	53.31	73.98	-20.67
*	15960.00	Average	Н	-	-	-79.69	15.01	0.00	42.32	53.98	-11.66
*	15960.00	Peak	н	-	-	-68.89	15.01	0.00	53.12	73.98	-20.86
*	21280.00	Average	Н	-	-	-77.38	17.58	-9.54	37.66	53.98	-16.32
*	21280.00	Peak	н	-	-	-65.99	17.58	-9.54	49.05	73.98	-24.93
	26600.00	Peak	Н	-	-	-51.36	3.11	-9.54	49.21	68.20	-18.99

Table 7-34. Radiated Measurements SISO ANT1

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: **Operating Frequency:** Channel:

802.11a 6Mbps 1 & 3 Meters 5320MHz 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	Н	-	-	-79.23	14.15	0.00	41.92	53.98	-12.06
*	10640.00	Peak	Н	-	-	-68.39	14.15	0.00	52.76	73.98	-21.22
*	15960.00	Average	н	-	-	-79.78	15.01	0.00	42.23	53.98	-11.75
*	15960.00	Peak	н	-	-	-68.94	15.01	0.00	53.07	73.98	-20.91
*	21280.00	Average	н	-	-	-77.23	17.58	-9.54	37.81	53.98	-16.17
*	21280.00	Peak	н	-	-	-65.51	17.58	-9.54	49.53	73.98	-24.45
	26600.00	Peak	Н	-	-	-47.78	3.11	-9.54	52.79	68.20	-15.41

Table 7-35. Radiated Measurements SISO ANT1 with WCP

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 191 of 250
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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	Н	-	-	-84.30	20.31	0.00	43.01	53.98	-10.97
*	11000.00	Peak	Н	-	-	-73.15	20.31	0.00	54.16	73.98	-19.82
	16500.00	Peak	н	-	-	-73.93	28.49	0.00	61.56	68.20	-6.64
	22000.00	Peak	н	-	-	-66.23	18.05	-9.54	49.28	68.20	-18.92
	27500.00	Peak	Н	-	-	-49.69	2.08	-9.54	49.85	68.20	-18.35

Table 7-36. Radiated Measurements SISO ANT1

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel: 802.11a 6Mbps 1 & 3 Meters 5600MHz 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	Н	-	-	-83.88	19.97	0.00	43.09	53.98	-10.89
*	11200.00	Peak	Н	-	-	-72.53	19.97	0.00	54.44	73.98	-19.54
	16800.00	Peak	Н	-	-	-73.40	28.82	0.00	62.42	68.20	-5.78
*	22400.00	Average	Н	-	-	-77.73	19.05	-9.54	38.78	53.98	-15.20
*	22400.00	Peak	Н	-	-	-65.86	19.05	-9.54	50.65	73.98	-23.33
	28000.00	Peak	Н	-	-	-50.36	3.19	-9.54	50.29	68.20	-17.91

Table 7-37. Radiated Measurements SISO ANT1

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 192 of 250
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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	Н	249	338	-80.32	20.26	0.00	46.94	53.98	-7.04
*	11440.00	Peak	Н	249	338	-67.62	20.26	0.00	59.64	73.98	-14.34
	17160.00	Peak	н	-	-	-73.34	29.62	0.00	63.28	68.20	-4.92
*	22880.00	Average	н	-	-	-77.84	18.60	-9.54	38.22	53.98	-15.76
*	22880.00	Peak	Н	-	-	-66.56	18.60	-9.54	49.50	73.98	-24.48
	28600.00	Peak	Н	-	-	-49.03	1.74	-9.54	50.17	68.20	-18.03

Table 7-38. Radiated Measurements SISO ANT1

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel:

802.11a 6Mbps 1 & 3 Meters 5720MHz 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	Н	126	322	-75.88	15.10	0.00	46.22	53.98	-7.76
*	11440.00	Peak	н	126	322	-64.59	15.10	0.00	57.51	73.98	-16.47
	17160.00	Peak	Н	-	-	-68.74	18.83	0.00	57.09	68.20	-11.11
*	22880.00	Average	Н	-	-	-78.25	18.60	-9.54	37.81	53.98	-16.17
*	22880.00	Peak	Н	-	-	-66.35	18.60	-9.54	49.71	73.98	-24.27
	28600.00	Peak	Н	-	-	-49.18	1.74	-9.54	50.02	68.20	-18.18

Table 7-39. Radiated Measurements SISO ANT1 with WCP

FCC ID: A3LSMG977U	PCTEST.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 192 of 250
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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	н	384	356	-80.70	20.36	0.00	46.66	53.98	-7.32
*	11490.00	Peak	н	384	356	-69.10	20.36	0.00	58.26	73.98	-15.72
	17235.00	Peak	н	-	-	-72.86	29.51	0.00	63.65	68.20	-4.55
*	22980.00	Average	н	-	-	-77.55	18.46	-9.54	38.37	53.98	-15.61
*	22980.00	Peak	Н	-	-	-66.29	18.46	-9.54	49.63	73.98	-24.35
	28725.00	Peak	Н	-	-	-49.90	2.47	-9.54	50.03	68.20	-18.17

Table 7-40. Radiated Measurements SISO ANT1

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel: 802.11a 6Mbps 1 & 3 Meters 5785MHz 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	Н	387	358	-79.50	21.02	0.00	48.52	53.98	-5.46
*	11570.00	Peak	Н	387	358	-67.27	21.02	0.00	60.75	73.98	-13.23
	17355.00	Peak	Н	-	-	-73.54	29.63	0.00	63.09	68.20	-5.11
	23140.00	Peak	н	-	-	-66.45	18.84	-9.54	49.85	68.20	-18.35
	28925.00	Peak	Н	-	-	-49.59	2.80	-9.54	50.67	68.20	-17.53

Table 7-41. Radiated Measurements SISO ANT1

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 194 of 250
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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	н	161	59	-83.42	21.21	0.00	44.79	53.98	-9.19
*	11650.00	Peak	Н	161	59	-71.78	21.21	0.00	56.43	73.98	-17.55
	17475.00	Peak	Н	-	-	-74.33	29.76	0.00	62.43	68.20	-5.77
	23300.00	Peak	н	-	-	-66.30	19.55	-9.54	50.71	68.20	-17.49
	29125.00	Peak	Н	-	-	-48.71	1.07	-9.54	49.82	68.20	-18.38

Table 7-42. Radiated Measurements SISO ANT1

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel:

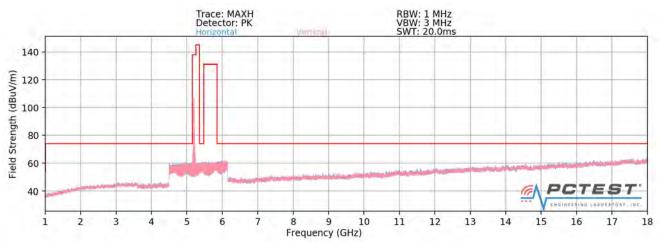
802.11a 6Mbps 1 & 3 Meters 5785MHz 157

	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	Н	116	325	-78.12	15.02	0.00	43.90	53.98	-10.08
*	11570.00	Peak	Н	116	325	-66.66	15.02	0.00	55.36	73.98	-18.62
	17355.00	Peak	Н	-	-	-70.06	23.41	0.00	60.35	68.20	-7.85
	23140.00	Peak	Н	-	-	-66.86	18.84	-9.54	49.44	68.20	-18.76
	28925.00	Peak	Н	-	-	-49.48	2.80	-9.54	50.78	68.20	-17.42

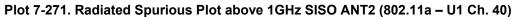
Table 7-43. Radiated Measurements SISO ANT1 with WCP

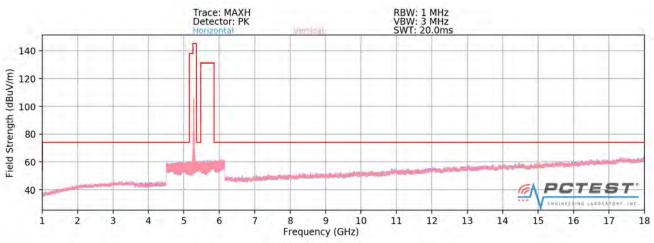
FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: Test Dates:		EUT Type:		Degra 195 of 250
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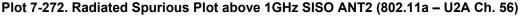


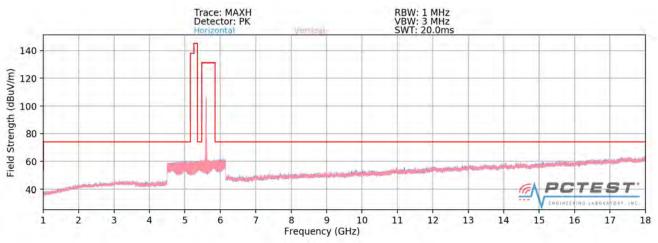


## 7.6.2 SISO Antenna-2 Radiated Spurious Emission Measurements





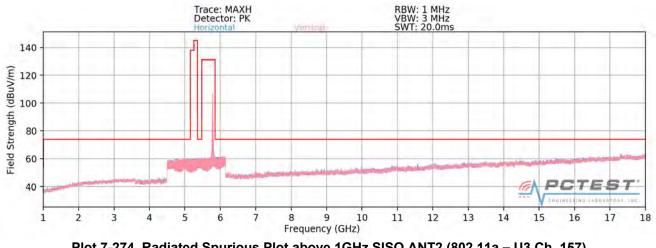




#### Plot 7-273. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11a – U2C Ch. 120)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Page 186 of 259	
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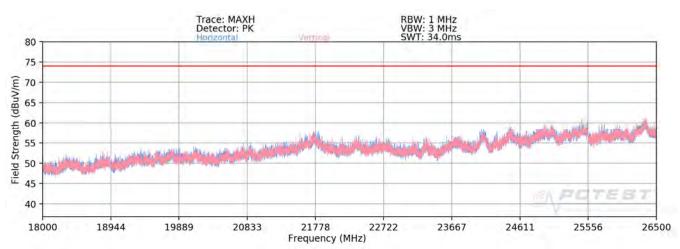




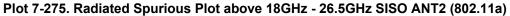
Plot 7-274. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11a - U3 Ch. 157)

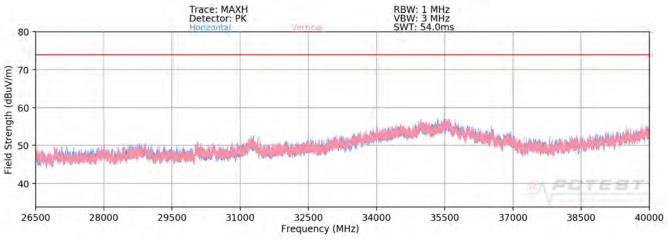
FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N: Test Dates:		EUT Type:		Daga 197 of 250	
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# SISO Antenna-2 Radiated Spurious Emissions Measurements (Above 18GHz)





Plot 7-276. Radiated Spurious Plot 26.5GHz - 40GHz SISO ANT2 (802.11a)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager					
Test Report S/N:	Test Dates:	EUT Type:		Dage 199 of 250					
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## 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	Н	111	60	-68.07	12.74	0.00	51.67	68.20	-16.53
*	15540.00	Average	н	-	-	-79.83	15.28	0.00	42.45	53.98	-11.53
*	15540.00	Peak	н	-	-	-69.16	15.28	0.00	53.12	73.98	-20.86
*	20720.00	Average	н	-	-	-77.67	17.17	-9.54	36.95	53.98	-17.03
*	20720.00	Peak	Н	-	-	-66.31	17.17	-9.54	48.31	73.98	-25.67
	25900.00	Peak	Н	-	-	-65.37	19.93	-9.54	52.01	68.20	-16.19

Table 7-44. Radiated Measurements SISO ANT2

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel:

802.11a
6Mbps
1 & 3 Meters
5200MHz
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	н	-	-	-67.95	12.24	0.00	51.29	68.20	-16.91
*	15600.00	Average	Н	-	-	-79.70	15.40	0.00	42.70	53.98	-11.27
*	15600.00	Peak	Н	-	-	-68.49	15.40	0.00	53.91	73.98	-20.06
*	20800.00	Average	Н	-	-	-77.79	17.65	-9.54	37.32	53.98	-16.66
*	20800.00	Peak	Н	-	-	-66.45	17.65	-9.54	48.66	73.98	-25.32
	26000.00	Peak	Н	-	-	-65.36	20.68	-9.54	52.78	68.20	-15.42

#### Table 7-45. Radiated Measurements SISO ANT2

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dage 190 of 250	
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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	н	-	-	-67.11	12.41	0.00	52.30	68.20	-15.90
*	15720.00	Average	Н	-	-	-79.81	16.70	0.00	43.89	53.98	-10.09
*	15720.00	Peak	Н	-	-	-68.57	16.70	0.00	55.13	73.98	-18.85
*	20960.00	Average	Н	-	-	-78.05	17.53	-9.54	36.94	53.98	-17.04
*	20960.00	Peak	Н	-	-	-66.71	17.53	-9.54	48.28	73.98	-25.70
	26200.00	Peak	Н	-	-	-65.74	20.23	-9.54	51.95	68.20	-16.25

Table 7-46. Radiated Measurements SISO ANT2

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel: 802.11a 6Mbps 1 & 3 Meters 5180MHz 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	н	117	293	-68.36	12.74	0.00	51.38	68.20	-16.82
*	15540.00	Average	Н	-	-	-79.68	15.28	0.00	42.60	53.98	-11.38
*	15540.00	Peak	Н	-	-	-68.96	15.28	0.00	53.32	73.98	-20.66
*	20720.00	Average	Н	-	-	-77.46	17.17	-9.54	37.16	53.98	-16.82
*	20720.00	Peak	Н	-	-	-65.99	17.17	-9.54	48.63	73.98	-25.35
	25900.00	Peak	Н	-	-	-64.72	19.93	-9.54	52.66	68.20	-15.54

Table 7-47. Radiated Measurements SISO ANT2 with WCP

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dage 100 of 250	
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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	н	-	-	-68.55	13.16	0.00	51.61	68.20	-16.59
*	15780.00	Average	н	-	-	-80.06	16.21	0.00	43.15	53.98	-10.83
*	15780.00	Peak	Н	-	-	-68.64	16.21	0.00	54.57	73.98	-19.41
*	21040.00	Average	Н	-	-	-77.98	17.48	-9.54	36.95	53.98	-17.03
*	21040.00	Peak	Н	-	-	-66.29	17.48	-9.54	48.64	73.98	-25.34
	26300.00	Peak	Н	-	-	-64.43	20.33	-9.54	53.36	68.20	-14.84

Table 7-48. Radiated Measurements SISO ANT2

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel: 802.11a 6Mbps 1 & 3 Meters 5280MHz 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	Н	115	359	-68.14	13.66	0.00	52.52	68.20	-15.68
*	15840.00	Average	н	-	-	-79.81	15.64	0.00	42.83	53.98	-11.15
*	15840.00	Peak	н	-	-	-69.55	15.64	0.00	53.09	73.98	-20.89
*	21120.00	Average	н	-	-	-77.38	17.27	-9.54	37.34	53.98	-16.63
*	21120.00	Peak	Н	-	-	-66.08	17.27	-9.54	48.64	73.98	-25.33
	26400.00	Peak	Н	-	-	-64.56	20.27	-9.54	53.17	68.20	-15.03

Table 7-49. Radiated Measurements SISO ANT2

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 101 of 250
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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	Н	117	8	-79.44	14.15	0.00	41.71	53.98	-12.27
*	10640.00	Peak	Н	117	8	-67.84	14.15	0.00	53.31	73.98	-20.67
*	15960.00	Average	н	-	-	-79.69	15.01	0.00	42.32	53.98	-11.66
*	15960.00	Peak	н	-	-	-68.89	15.01	0.00	53.12	73.98	-20.86
*	21280.00	Average	Н	-	-	-77.38	17.58	-9.54	37.66	53.98	-16.32
*	21280.00	Peak	н	-	-	-65.99	17.58	-9.54	49.05	73.98	-24.93
	26600.00	Peak	Н	-	-	-51.36	3.11	-9.54	49.21	68.20	-18.99

Table 7-50. Radiated Measurements SISO ANT2

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: **Operating Frequency:** Channel:

802.11a
6Mbps
1 & 3 Meters
5320MHz
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	Н	-	-	-79.23	14.15	0.00	41.92	53.98	-12.06
*	10640.00	Peak	н	-	-	-68.39	14.15	0.00	52.76	73.98	-21.22
*	15960.00	Average	н	-	-	-79.78	15.01	0.00	42.23	53.98	-11.75
*	15960.00	Peak	н	-	-	-68.94	15.01	0.00	53.07	73.98	-20.91
*	21280.00	Average	Н	-	-	-77.23	17.58	-9.54	37.81	53.98	-16.17
*	21280.00	Peak	н	-	-	-65.51	17.58	-9.54	49.53	73.98	-24.45
	26600.00	Peak	Н	-	-	-47.78	3.11	-9.54	52.79	68.20	-15.41

## Table 7-51. Radiated Measurements SISO ANT2 with WCP

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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802.11a
6Mbps
1 & 3 Meters
5500MHz
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	Н	116	328	-74.71	13.55	0.00	45.84	53.98	-8.14
*	11000.00	Peak	н	116	328	-62.85	13.55	0.00	57.70	73.98	-16.28
	16500.00	Peak	н	162	12	-67.95	16.10	0.00	55.15	68.20	-13.05
	22000.00	Peak	Н	-	-	-66.30	18.05	-9.54	49.21	68.20	-18.99
	27500.00	Peak	Н	-	-	-48.25	2.08	-9.54	51.29	68.20	-16.91

Table 7-52. Radiated Measurements SISO ANT2

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel: 802.11a 6Mbps 1 & 3 Meters 5600MHz 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	Н	113	326	-75.62	13.31	0.00	44.69	53.98	-9.29
*	11200.00	Peak	Н	113	326	-63.17	13.31	0.00	57.14	73.98	-16.84
	16800.00	Peak	Н	-	-	-67.41	17.53	0.00	57.12	68.20	-11.08
*	22400.00	Average	Н	-	-	-78.07	19.05	-9.54	38.44	53.98	-15.54
*	22400.00	Peak	Н	-	-	-66.33	19.05	-9.54	50.18	73.98	-23.80
	28000.00	Peak	Н	-	-	-49.61	3.19	-9.54	51.03	68.20	-17.17

Table 7-53. Radiated Measurements SISO ANT2

FCC ID: A3LSMG977U		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	н	115	321	-77.72	15.10	0.00	44.38	53.98	-9.60
*	11440.00	Peak	Н	115	321	-63.35	15.10	0.00	58.75	73.98	-15.23
	17160.00	Peak	Н	-	-	-68.87	18.83	0.00	56.96	68.20	-11.24
*	22880.00	Average	Н	-	-	-78.13	18.60	-9.54	37.92	53.98	-16.06
*	22880.00	Peak	Н	-	-	-67.05	18.60	-9.54	49.00	73.98	-24.98
	28600.00	Peak	Н	-	-	-46.11	1.74	-9.54	53.08	68.20	-15.12

Table 7-54. Radiated Measurements SISO ANT2

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel: 802.11a 6Mbps 1 & 3 Meters 5500MHz 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	Н	123	317	-78.88	13.55	0.00	41.67	53.98	-12.31
*	11000.00	Peak	Н	123	317	-67.28	13.55	0.00	53.27	73.98	-20.71
	16500.00	Peak	Н	-	-	-68.39	16.10	0.00	54.71	68.20	-13.49
	22000.00	Peak	Н	-	-	-66.41	18.05	-9.54	49.10	68.20	-19.10
	27500.00	Peak	Н	-	-	-47.49	2.08	-9.54	52.05	68.20	-16.15

Table 7-55. Radiated Measurements SISO ANT2 with WCP

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 104 of 250
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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	н	112	327	-76.02	15.22	0.00	46.20	53.98	-7.78
*	11490.00	Peak	Н	112	327	-62.18	15.22	0.00	60.04	73.98	-13.94
	17235.00	Peak	Н	-	-	-68.42	19.54	0.00	58.12	68.20	-10.08
*	22980.00	Average	Н	-	-	-77.56	18.46	-9.54	38.36	53.98	-15.62
*	22980.00	Peak	Н	-	-	-66.10	18.46	-9.54	49.82	73.98	-24.16
	28725.00	Peak	Н	-	-	-46.63	2.47	-9.54	53.30	68.20	-14.90

Table 7-56. Radiated Measurements SISO ANT2

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel: 802.11a 6Mbps 1 & 3 Meters 5785MHz 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	Н	117	324	-74.33	15.02	0.00	47.69	53.98	-6.29
*	11570.00	Peak	Н	117	324	-61.51	15.02	0.00	60.51	73.98	-13.47
	17355.00	Peak	Н	-	-	-69.93	23.41	0.00	60.48	68.20	-7.72
	23140.00	Peak	Н	-	-	-66.50	18.84	-9.54	49.80	68.20	-18.40
	28925.00	Peak	Н	-	-	-44.60	2.80	-9.54	55.66	68.20	-12.54

Table 7-57. Radiated Measurements SISO ANT2

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	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:	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	н	114	323	-74.31	14.92	0.00	47.61	53.98	-6.37
*	11650.00	Peak	Н	114	323	-61.39	14.92	0.00	60.53	73.98	-13.45
	17475.00	Peak	Н	-	-	-69.66	21.86	0.00	59.20	68.20	-9.00
	23300.00	Peak	Н	-	-	-65.84	19.55	-9.54	51.16	68.20	-17.04
	29125.00	Peak	н	-	-	-44.84	1.07	-9.54	53.69	68.20	-14.51

## Table 7-58. Radiated Measurements SISO ANT2

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel:

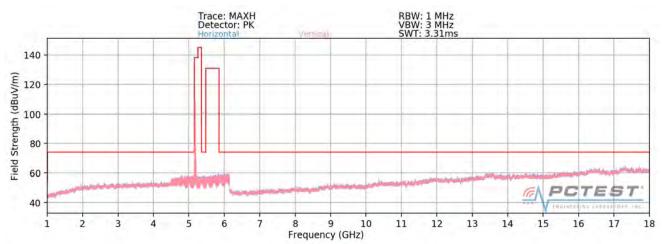
802.11a 6Mbps 1 & 3 Meters 5785MHz 157

	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	Н	119	30	-78.72	15.02	0.00	43.30	53.98	-10.68
*	11570.00	Peak	Н	119	30	-67.80	15.02	0.00	54.22	73.98	-19.76
	17355.00	Peak	Н	-	-	-70.12	23.41	0.00	60.29	68.20	-7.91
	23140.00	Peak	Н	-	-	-66.07	18.84	-9.54	50.23	68.20	-17.97
	28925.00	Peak	Н	-	-	-44.11	2.80	-9.54	56.15	68.20	-12.05

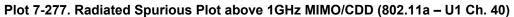
Table 7-59. Radiated Measurements SISO ANT2 with WCP

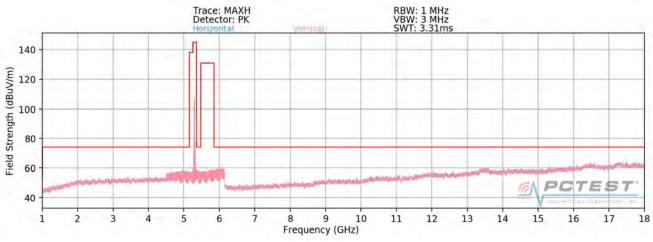
FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 106 of 250
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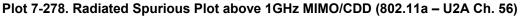


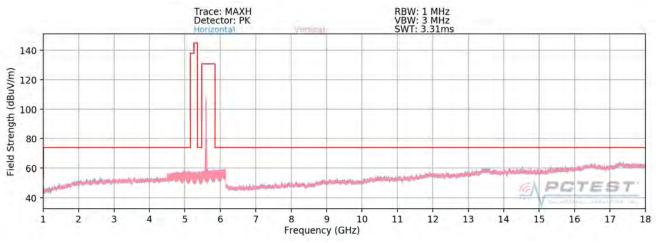


## 7.6.3 MIMO/CDD Radiated Spurious Emission Measurements





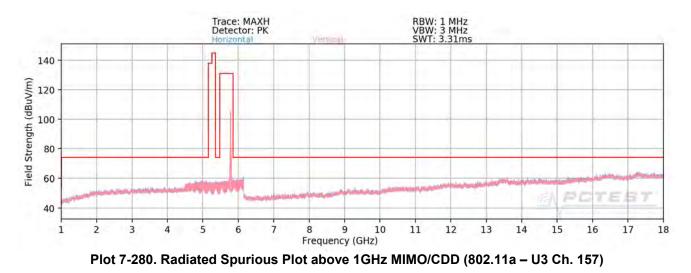




## Plot 7-279. Radiated Spurious Plot above 1GHz MIMO/CDD (802.11a – U2C Ch. 120)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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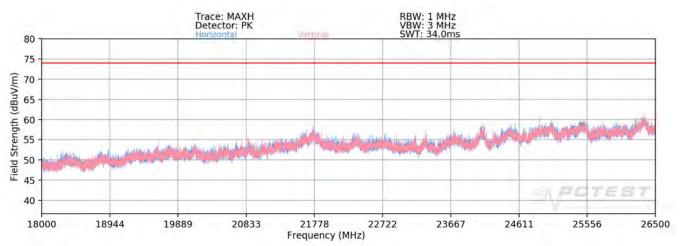




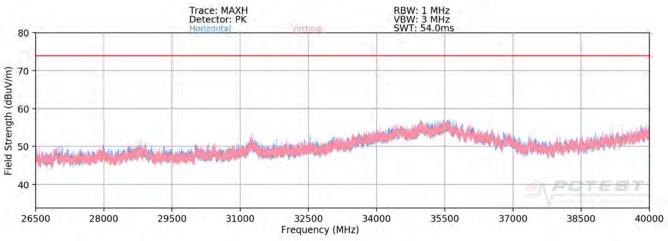
FCC ID: A3LSMG977U	PCTEST*	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 109 of 250
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# MIMO/CDD Radiated Spurious Emissions Measurements (Above 18GHz)







Plot 7-282. Radiated Spurious Plot 26.5GHz - 40GHz MIMO/CDD (802.11a)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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## MIMO/CDD Radiated Spurious Emission Measurements §15.407(b) §15.205 & §15.209; RSS-Gen [8.9]

802.11a
6Mbps
1 & 3 Meters
5180MHz
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	116	329	-58.68	12.74	0.00	61.06	68.20	-7.14
*	15540.00	Average	V	152	332	-78.77	15.28	0.00	43.51	53.98	-10.47
*	15540.00	Peak	V	152	332	-66.21	15.28	0.00	56.07	73.98	-17.91
*	20720.00	Average	V	-	-	-77.68	17.17	-9.54	36.94	53.98	-17.04
*	20720.00	Peak	V	-	-	-66.34	17.17	-9.54	48.28	73.98	-25.70
	25900.00	Peak	V	-	-	-65.28	19.93	-9.54	52.10	68.20	-16.10

Table 7-60. Radiated Measurements MIMO/CDD

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel:

802.11a
6Mbps
1 & 3 Meters
5200MHz
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	126	331	-59.09	12.24	0.00	60.15	68.20	-8.05
*	15600.00	Average	V	174	337	-78.69	15.40	0.00	43.71	53.98	-10.26
*	15600.00	Peak	V	174	337	-66.10	15.40	0.00	56.30	73.98	-17.67
*	20800.00	Average	V	-	-	-77.63	17.65	-9.54	37.48	53.98	-16.50
*	20800.00	Peak	V	-	-	-65.80	17.65	-9.54	49.31	73.98	-24.67
	26000.00	Peak	V	-	-	-65.24	20.68	-9.54	52.90	68.20	-15.30

Table 7-61. Radiated Measurements MIMO/CDD

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	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	V	117	325	-58.97	12.41	0.00	60.44	68.20	-7.76
*	15720.00	Average	V	124	5	-78.64	16.70	0.00	45.06	53.98	-8.92
*	15720.00	Peak	V	124	5	-67.38	16.70	0.00	56.32	73.98	-17.66
*	20960.00	Average	V	-	-	-77.43	17.53	-9.54	37.56	53.98	-16.42
*	20960.00	Peak	V	-	-	-65.57	17.53	-9.54	49.42	73.98	-24.56
	26200.00	Peak	V	-	-	-63.78	20.23	-9.54	53.91	68.20	-14.29

Table 7-62. Radiated Measurements MIMO/CDD

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel:

802.11a 6Mbps 1 & 3 Meters 5180MHz 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	114	337	-58.98	12.74	0.00	60.76	68.20	-7.44
*	15540.00	Average	V	137	346	-79.28	15.28	0.00	43.00	53.98	-10.98
*	15540.00	Peak	V	137	346	-68.64	15.28	0.00	53.64	73.98	-20.34
*	20720.00	Average	V	-	-	-77.89	17.17	-9.54	36.73	53.98	-17.25
*	20720.00	Peak	V	-	-	-66.50	17.17	-9.54	48.12	73.98	-25.86
	25900.00	Peak	V	-	-	-64.57	19.93	-9.54	52.81	68.20	-15.39

Table 7-63. Radiated Measurements MIMO/CDD with WCP

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	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:	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	112	326	-59.98	13.16	0.00	60.18	68.20	-8.02
*	15780.00	Average	V	192	10	-78.57	16.21	0.00	44.64	53.98	-9.34
*	15780.00	Peak	V	192	10	-65.19	16.21	0.00	58.02	73.98	-15.96
*	21040.00	Average	V	-	-	-77.82	17.48	-9.54	37.11	53.98	-16.87
*	21040.00	Peak	V	-	-	-65.94	17.48	-9.54	48.99	73.98	-24.99
	26300.00	Peak	V	-	-	-63.54	20.33	-9.54	54.25	68.20	-13.95

Table 7-64. Radiated Measurements MIMO/CDD

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel: 802.11a 6Mbps 1 & 3 Meters 5280MHz 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	113	322	-60.01	13.66	0.00	60.65	68.20	-7.55
*	15840.00	Average	V	187	1	-77.62	15.64	0.00	45.02	53.98	-8.96
*	15840.00	Peak	V	187	1	-63.56	15.64	0.00	59.08	73.98	-14.90
*	21120.00	Average	V	-	-	-77.33	17.27	-9.54	37.39	53.98	-16.58
*	21120.00	Peak	V	-	-	-65.50	17.27	-9.54	49.22	73.98	-24.75
	26400.00	Peak	V	-	-	-63.08	20.27	-9.54	54.65	68.20	-13.55

Table 7-65. Radiated Measurements MIMO/CDD

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: Test Dates:		EUT Type:		Dega 202 of 250
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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	116	327	-74.10	14.15	0.00	47.05	53.98	-6.93
*	10640.00	Peak	V	116	327	-62.90	14.15	0.00	58.25	73.98	-15.73
*	15960.00	Average	V	195	9	-76.70	15.01	0.00	45.31	53.98	-8.67
*	15960.00	Peak	V	195	9	-63.29	15.01	0.00	58.72	73.98	-15.26
*	21280.00	Average	V	-	-	-77.19	17.58	-9.54	37.85	53.98	-16.13
*	21280.00	Peak	V	-	-	-66.04	17.58	-9.54	49.00	73.98	-24.98
	26600.00	Peak	V	-	-	-50.07	3.11	-9.54	50.50	68.20	-17.70

Table 7-66. Radiated Measurements MIMO/CDD

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel:

	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	145	43	-78.53	14.15	0.00	42.62	53.98	-11.36	
*	10640.00	Peak	V	145	43	-67.85	14.15	0.00	53.30	73.98	-20.68	
*	15960.00	Average	V	114	342	-79.22	15.01	0.00	42.79	53.98	-11.19	
*	15960.00	Peak	V	114	342	-68.83	15.01	0.00	53.18	73.98	-20.80	
*	21280.00	Average	V	-	-	-77.20	17.58	-9.54	37.84	53.98	-16.14	
*	21280.00	Peak	V	-	-	-66.73	17.58	-9.54	48.31	73.98	-25.67	
	26600.00	Peak	V	-	-	-50.98	3.11	-9.54	49.59	68.20	-18.61	
L	Table 7-67 Radiated Measurements MIMO/CDD with WCP											

#### Table 7-67. Radiated Measurements MIMO/CDD with WCP

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 202 of 250
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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]		Margin [dB]
*	11000.00	Average	V	112	326	-77.21	13.55	0.00	43.34	53.98	-10.64
*	11000.00	Peak	V	112	326	-65.87	13.55	0.00	54.68	73.98	-19.30
	16500.00	Peak	V	169	339	-65.19	16.10	0.00	57.91	68.20	-10.29
	22000.00	Peak	V	-	-	-66.45	18.05	-9.54	49.06	68.20	-19.14
	27500.00	Peak	V	-	-	-43.99	2.08	-9.54	55.55	68.20	-12.65

 Table 7-68. Radiated Measurements MIMO/CDD

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel: 802.11a 6Mbps 1 & 3 Meters 5600MHz 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	396	36	-77.91	13.31	0.00	42.40	53.98	-11.58
*	11200.00	Peak	V	396	36	-66.84	13.31	0.00	53.47	73.98	-20.51
	16800.00	Peak	V	174	337	-62.62	17.53	0.00	61.91	68.20	-6.29
*	22400.00	Average	V	-	-	-77.87	19.05	-9.54	38.64	53.98	-15.34
*	22400.00	Peak	V	-	-	-66.44	19.05	-9.54	50.07	73.98	-23.91
	28000.00	Peak	V	-	-	-45.94	3.19	-9.54	54.70	68.20	-13.50

Table 7-69. Radiated Measurements MIMO/CDD

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Daga 204 of 250
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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	V	115	36	-76.83	15.10	0.00	45.27	53.98	-8.71
*	11440.00	Peak	V	115	36	-63.59	15.10	0.00	58.51	73.98	-15.47
	17160.00	Peak	V	123	335	-66.92	18.83	0.00	58.91	68.20	-9.29
*	22880.00	Average	V	-	-	-77.93	18.60	-9.54	38.12	53.98	-15.86
*	22880.00	Peak	V	-	-	-66.63	18.60	-9.54	49.42	73.98	-24.56
	28600.00	Peak	V	-	-	-44.54	1.74	-9.54	54.65	68.20	-13.55

Table 7-70. Radiated Measurements MIMO/CDD

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel: 802.11a 6Mbps 1 & 3 Meters 5600MHz 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	149	41	-72.56	13.31	0.00	47.75	53.98	-6.23
*	11200.00	Peak	V	149	41	-60.68	13.31	0.00	59.63	73.98	-14.35
	16800.00	Peak	V	142	315	-68.35	17.53	0.00	56.18	68.20	-12.02
*	22400.00	Average	V	-	-	-77.93	19.05	-9.54	38.58	53.98	-15.40
*	22400.00	Peak	V	-	-	-66.47	19.05	-9.54	50.04	73.98	-23.94
	28000.00	Peak	V	-	-	-45.73	3.19	-9.54	54.91	68.20	-13.29

Table 7-71. Radiated Measurements MIMO/CDD with WCP

FCC ID: A3LSMG977U	PCTEST.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 205 of 250
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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	V	112	44	-74.15	15.22	0.00	48.07	53.98	-5.91
*	11490.00	Peak	V	112	44	-60.86	15.22	0.00	61.36	73.98	-12.62
	17235.00	Peak	V	153	334	-66.35	19.54	0.00	60.19	68.20	-8.01
*	22980.00	Average	V	-	-	-77.14	18.46	-9.54	38.78	53.98	-15.20
*	22980.00	Peak	V	-	-	-65.67	18.46	-9.54	50.25	73.98	-23.73
	28725.00	Peak	V	-	-	-45.87	2.47	-9.54	54.06	69.20	-15.14

Table 7-72. Radiated Measurements MIMO/CDD

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	113	20	-71.43	15.02	0.00	50.59	53.98	-3.39
*	11570.00	Peak	V	113	20	-58.32	15.02	0.00	63.70	73.98	-10.28
	17355.00	Peak	V	-	-	-69.61	23.41	0.00	60.80	68.20	-7.40
	23140.00	Peak	V	-	-	-66.69	18.84	-9.54	49.61	68.20	-18.59
	28925.00	Peak	V	-	-	-44.93	2.80	-9.54	55.33	68.20	-12.87

Table 7-73. Radiated Measurements MIMO/CDD

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 206 of 259
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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	115	18	-71.43	14.92	0.00	50.49	53.98	-3.49
*	11650.00	Peak	V	115	18	-57.17	14.92	0.00	64.75	73.98	-9.23
	17475.00	Peak	V	122	342	-68.95	21.86	0.00	59.91	68.20	-8.29
	23300.00	Peak	V	-	-	-66.47	19.55	-9.54	50.53	68.20	-17.67
	29125.00	Peak	V	-	-	-44.60	1.07	-9.54	53.93	68.20	-14.27

Table 7-74. Radiated Measurements MIMO/CDD
--

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel: 802.11a 6Mbps 1 & 3 Meters 5785MHz 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	123	320	-74.09	15.02	0.00	47.93	53.98	-6.05
*	11570.00	Peak	V	123	320	-61.87	15.02	0.00	60.15	73.98	-13.83
	17355.00	Peak	V	-	-	-69.58	23.41	0.00	60.83	68.20	-7.37
	23140.00	Peak	V	-	-	-66.65	18.84	-9.54	49.65	68.20	-18.55
	28925.00	Peak	V	-	-	-43.26	2.80	-9.54	57.00	68.20	-11.20

Table 7-75. Radiated Measurements MIMO/CDD with WCP

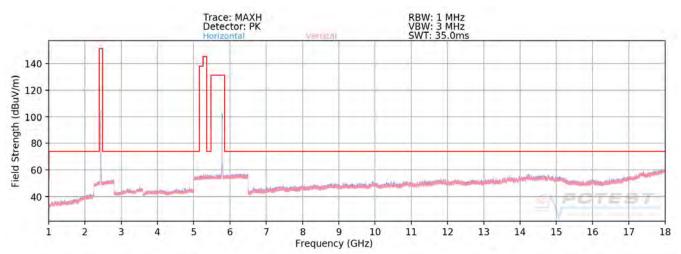
FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 207 of 250
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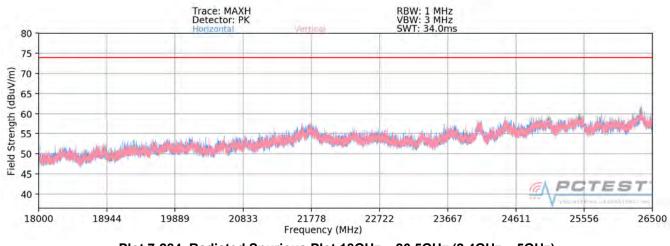
# 7.6.4 Simultaneous Tx Radiated Spurious Emissions Measurements §15.407(b) §15.205 & §15.209; RSS-Gen [8.9]

Description	2.4 GHz Emission	5 GHz Emission
Antenna	1	2
Channel	6	157
Operating Frequency (MHz)	2437	5785
Data Rate (Mbps)	1	6
Mode	802.11b	802.11a

Table 7-76. Simultaneous Transmission Config-1



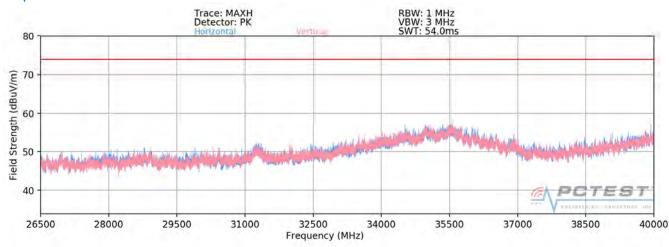
Plot 7-283. Radiated Spurious Plot above 1GHz (2.4GHz – 5GHz)



Plot 7-284. Radiated Spurious Plot 18GHz – 26.5GHz (2.4GHz – 5GHz)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 200 of 250
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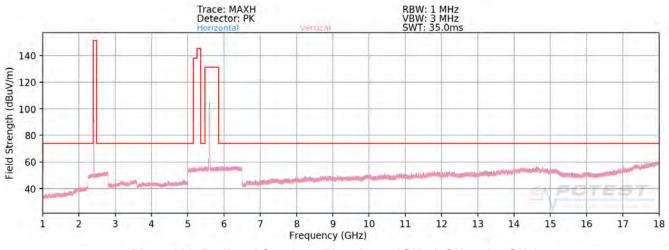
Plot 7-285. Radiated Spurious Plot above 26.5GHz (2.4GHz - 5GHz)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama 200 af 250
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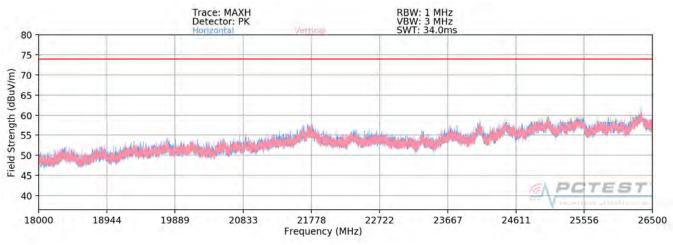


Description	2.4 GHz Emission	5 GHz Emission
Antenna	2	1
Channel	1	120
Operating Frequency (MHz)	2412	5600
Data Rate (Mbps)	1	6
Mode	802.11b	802.11a

Table 7-77. Simultaneous Transmission Config-2



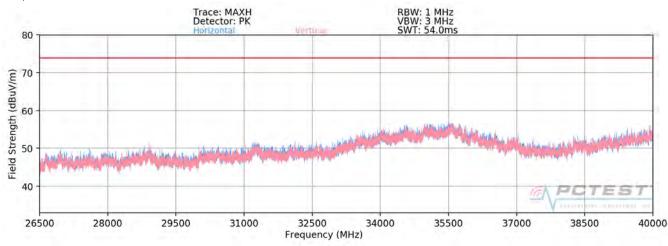




Plot 7-287. Radiated Spurious Plot 18GHz – 26.5GHz (5GHz – 2.4 GHz)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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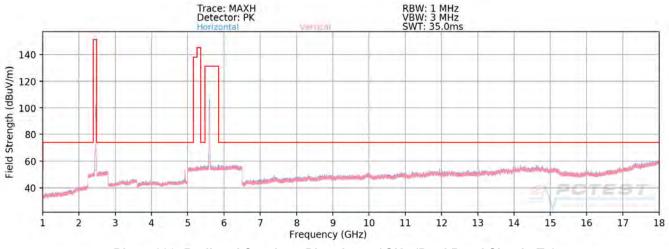
Plot 7-288. Radiated Spurious Plot above 26.5GHz (5GHz - 2.4 GHz)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Daga 211 of 250
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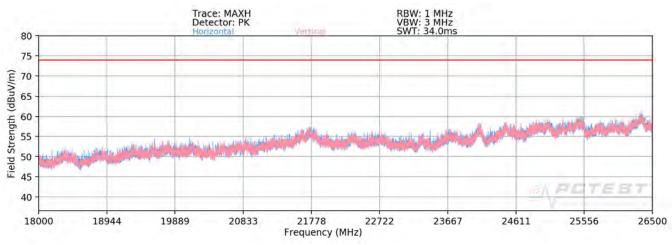


Description	2.4 GHz Emission	5 GHz Emission
Antenna	1, 2	1, 2
Channel	11	120
Operating Frequency (MHz)	2462	5600
Data Rate (Mbps)	6	6
Mode	802.11g	802.11a

Table 7-78. Dual Band Simultaneous Transmission



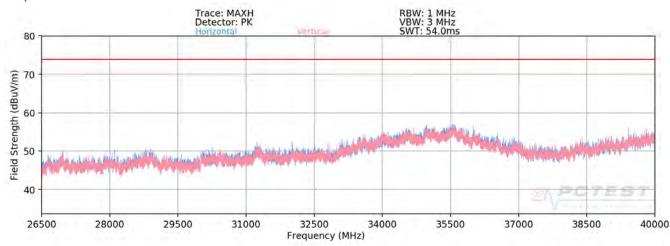
Plot 7-289. Radiated Spurious Plot above 1GHz (Dual Band Simult. Tx)



Plot 7-290. Radiated Spurious Plot 18GHz – 26.5GHz (Dual Band Simult. Tx)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 212 of 250
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Plot 7-291. Radiated Spurious Plot above 26.5GHz (Dual Band Simult. Tx)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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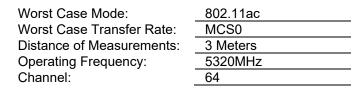


## 7.6.5 SISO Antenna-1 Radiated Band Edge Measurements (20MHz BW) §15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]; RSS-Gen [8.9]

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

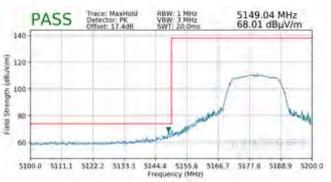


Plot 7-292. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 1)





Plot 7-294. Radiated Upper Band Edge Plot SISO ANT1 (Average – UNII Band 2A)



Plot 7-293. Radiated Lower Band Edge Plot SISO ANT1 (Peak – UNII Band 1)

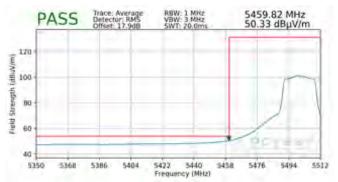


Plot 7-295. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 2A)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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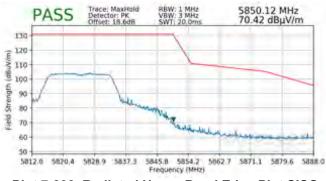


Worst Case Mode:	802.11ac	
Worst Case Transfer Rate:	MCS0	
Distance of Measurements:	3 Meters	
Operating Frequency:	5500MHz	
Channel:	100	

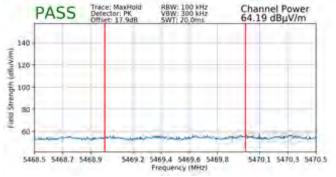


Plot 7-296. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 2C)

802.11ac
MCS0
3 Meters
5825MHz
165



Plot 7-298. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 3)

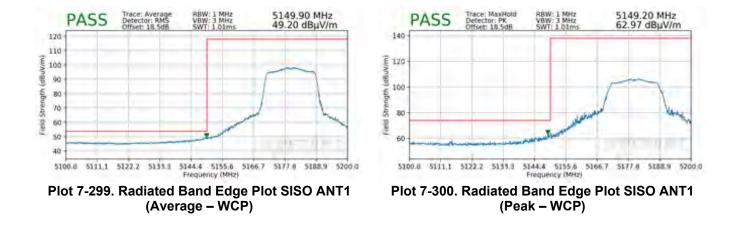


Plot 7-297. Radiated Lower Band Edge Plot SISO ANT1 (Peak – UNII Band 2C)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	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:	5180MHz
Channel:	36



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Test Report S/N:	Test Dates:	EUT Type:		Dage 216 of 250
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## 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]

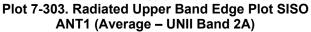
802.11ac
MCS0
3 Meters
5190MHz
38

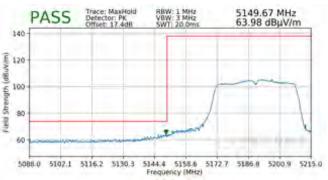


Plot 7-301. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 1)

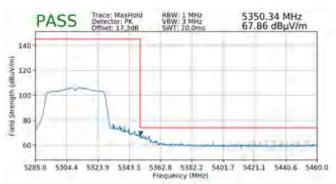
Worst Case Mode:	802.11ac
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5310MHz
Channel:	62







Plot 7-302. Radiated Lower Band Edge Plot SISO ANT1 (Peak – UNII Band 1)

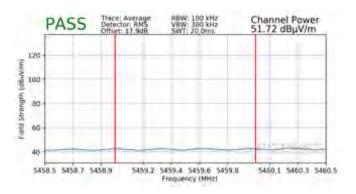


Plot 7-304. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 2A)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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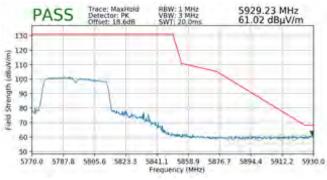


Worst Case Mode:	802.11ac	
Worst Case Transfer Rate:	MCS0	
Distance of Measurements:	3 Meters	
Operating Frequency:	5510MHz	
Channel:	102	

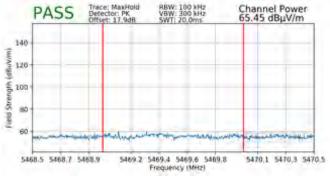


## Plot 7-305. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 2C)

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



Plot 7-307. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 3)

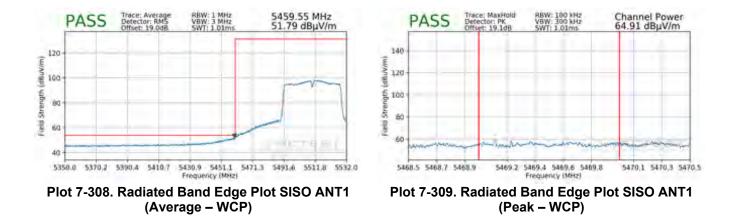


Plot 7-306. Radiated Lower Band Edge Plot SISO ANT1 (Peak – UNII Band 2C)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 218 of 259
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Worst Case Mode:	802.11ac
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5510MHz
Channel:	102



FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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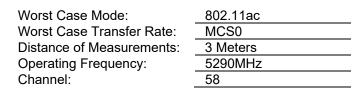


## 7.6.7 SISO Antenna-1 Radiated Band Edge Measurements (80MHz BW) §15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

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

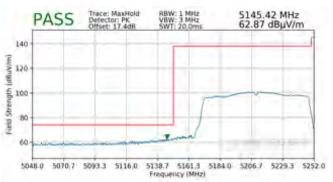


Plot 7-310. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 1)

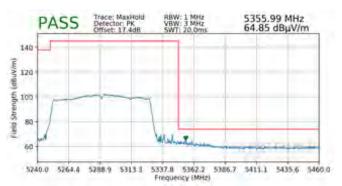




Plot 7-312. Radiated Upper Band Edge Plot SISO ANT1 (Average – UNII Band 2A)



Plot 7-311. Radiated Lower Band Edge Plot SISO ANT1 (Peak – UNII Band 1)



Plot 7-313. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 2A)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 220 of 250
1M1901100003-09.A3L	01/22/2019 - 03/25/2019	Portable Handset		Page 220 of 259
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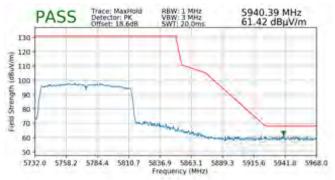


Worst Case Mode:	802.11ac
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5530MHz
Channel:	106

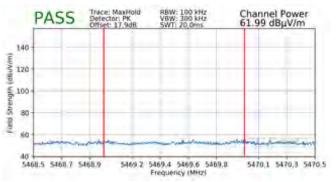


Plot 7-314. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 2C)

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



Plot 7-316. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 3)

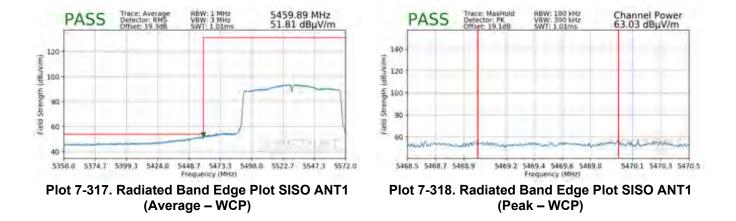


Plot 7-315. Radiated Lower Band Edge Plot SISO ANT1 (Peak – UNII Band 2C)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 221 of 250
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Worst Case Mode:	802.11ac
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5530MHz
Channel:	106

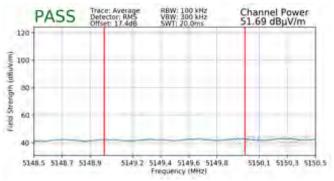


FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 222 of 250
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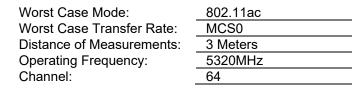


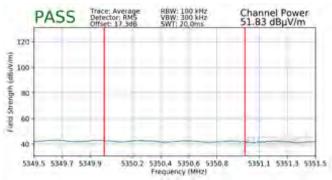
## 7.6.8 SISO Antenna-2 Radiated Band Edge Measurements (20MHz BW) §15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

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

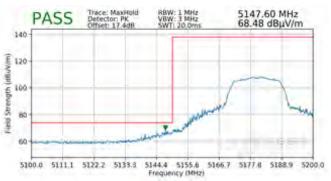


Plot 7-319. Radiated Lower Band Edge Plot SISO ANT2 (Average – UNII Band 1)





Plot 7-321. Radiated Upper Band Edge Plot SISO ANT2 (Average – UNII Band 2A)



Plot 7-320. Radiated Lower Band Edge Plot SISO ANT2 (Peak – UNII Band 1)



Plot 7-322. Radiated Upper Band Edge Plot SISO ANT2 (Peak – UNII Band 2A)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Daga 222 of 250
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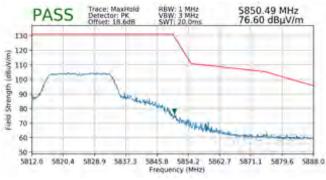


Worst Case Mode:	802.11ac
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5500MHz
Channel:	100

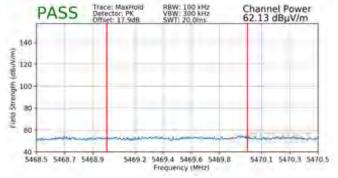


Plot 7-323. Radiated Lower Band Edge Plot SISO ANT2 (Average – UNII Band 2C)

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



Plot 7-325. Radiated Upper Band Edge Plot SISO ANT2 (Peak – UNII Band 3)

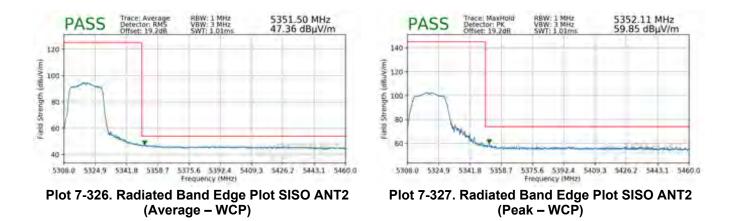


Plot 7-324. Radiated Lower Band Edge Plot SISO ANT2 (Peak – UNII Band 2C)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dago 224 of 250
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Worst Case Mode:	802.11ac
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5320MHz
Channel:	64

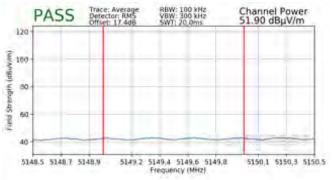


FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 225 of 250
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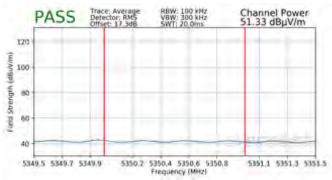
# 7.6.9 SISO Antenna-2 Radiated Band Edge Measurements (40MHz BW) §15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

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

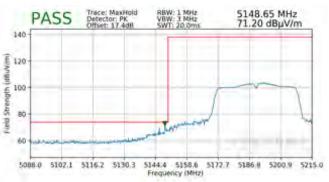


Plot 7-328. Radiated Lower Band Edge Plot SISO ANT2 (Average – UNII Band 1)

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



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



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



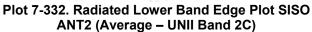
Plot 7-331. Radiated Upper Band Edge Plot SISO ANT2 (Peak – UNII Band 2A)

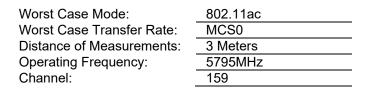
FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Daga 226 of 250
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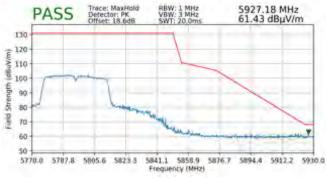


Worst Case Mode:	802.11ac
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5510MHz
Channel:	102

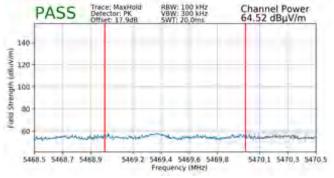








Plot 7-334. Radiated Upper Band Edge Plot SISO ANT2 (Peak – UNII Band 3)

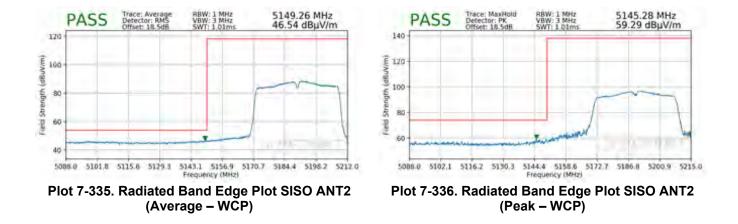


Plot 7-333. Radiated Lower Band Edge Plot SISO ANT2 (Peak – UNII Band 2C)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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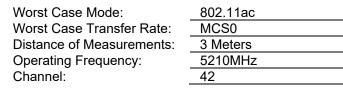
Worst Case Mode:	802.11ac
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5190MHz
Channel:	38



FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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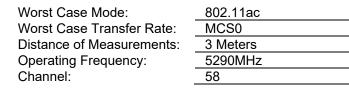


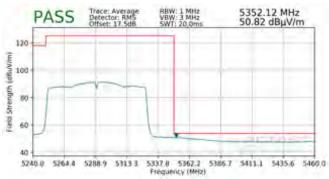
# 7.6.10 SISO Antenna-2 Radiated Band Edge Measurements (80MHz BW) §15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]



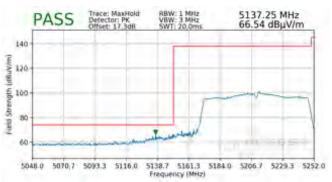


Plot 7-337. Radiated Lower Band Edge Plot SISO ANT2 (Average – UNII Band 1)

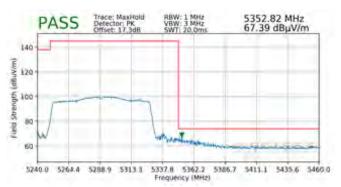




Plot 7-339. Radiated Upper Band Edge Plot SISO ANT2 (Average – UNII Band 2A)



Plot 7-338. Radiated Lower Band Edge Plot SISO ANT2 (Peak – UNII Band 1)

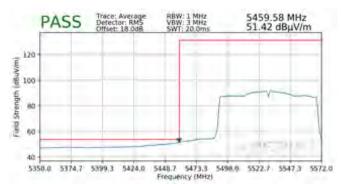


Plot 7-340. Radiated Upper Band Edge Plot SISO ANT2 (Peak – UNII Band 2A)

FCC ID: A3LSMG977U	MEASUREMENT REPORT (CERTIFICATION)		SAMSUNG	Approved by: Quality Manager
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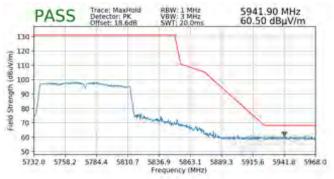


Worst Case Mode:	802.11ac
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5530MHz
Channel:	106

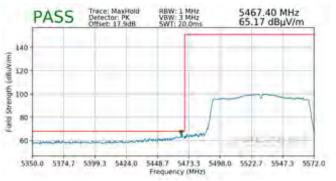


Plot 7-341. Radiated Lower Band Edge Plot SISO ANT2 (Average – UNII Band 2C)

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



Plot 7-343. Radiated Upper Band Edge Plot SISO ANT2 (Peak – UNII Band 3)

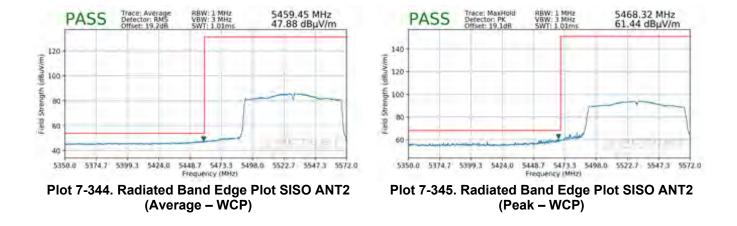


Plot 7-342. Radiated Lower Band Edge Plot SISO ANT2 (Peak – UNII Band 2C)

FCC ID: A3LSMG977U	MEASUREMENT REPORT (CERTIFICATION)		SAMSUNE	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 220 of 250
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Worst Case Mode:	802.11ac
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5530MHz
Channel:	106

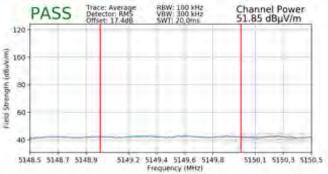


FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 221 of 250
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### 7.6.11 CDD Radiated Band Edge Measurements (20MHz BW) §15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

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



Plot 7-346. Radiated Lower Band Edge Plot CDD (Average – UNII Band 1)

3 Meters

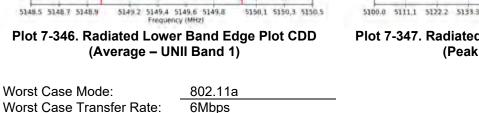
5320MHz

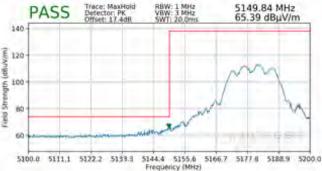
64

Distance of Measurements:

**Operating Frequency:** 

Channel:





Plot 7-347. Radiated Lower Band Edge Plot CDD (Peak – UNII Band 1)

PASS	Detector: RM5 Offset: 17,3dB	RBW: 100 kHz VBW: 300 kHz SWT: 20,0ms	Channel Power 51.95 dBµV/m
20			-
00			
80-	_		-
60			-
40			-

Plot 7-348. Radiated Upper Band Edge Plot CDD (Average - UNII Band 2A)



Plot 7-349. Radiated Upper Band Edge Plot CDD (Peak – UNII Band 2A)

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNE	Approved by: Quality Manager
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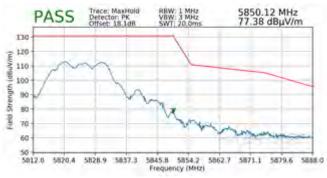


Worst Case Mode:	802.11a
Worst Case Transfer Rate:	6Mbps
Distance of Measurements:	3 Meters
Operating Frequency:	5500MHz
Channel:	100



Plot 7-350. Radiated Lower Band Edge Plot CDD (Average – UNII Band 2C)

802.11a
6Mbps
3 Meters
5825MHz
165



Plot 7-352. Radiated Upper Band Edge Plot CDD (Peak – UNII Band 3)



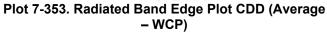
Plot 7-351. Radiated Lower Band Edge Plot CDD (Peak – UNII Band 2C)

FCC ID: A3LSMG977U	MEASUREMENT REPORT (CERTIFICATION)		SAMSUNG	Approved by: Quality Manager
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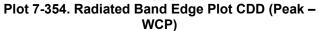


Worst Case Mode:	802.11a
Worst Case Transfer Rate:	6Mbps
Distance of Measurements:	3 Meters
Operating Frequency:	5320MHz
Channel:	64









FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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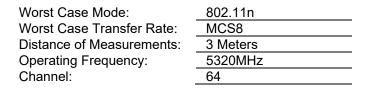


### 7.6.12 MIMO Radiated Band Edge Measurements (20MHz BW) §15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

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

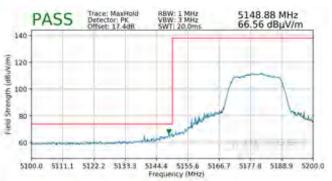


Plot 7-355. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 1)





Plot 7-357. Radiated Upper Band Edge Plot MIMO (Average – UNII Band 2A)



Plot 7-356. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 1)

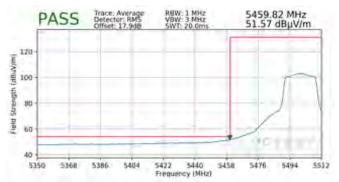


Plot 7-358. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 2A)

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

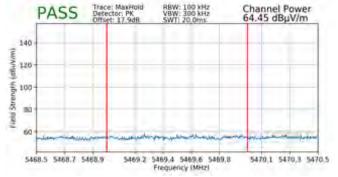


Plot 7-359. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 2C)

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



Plot 7-361. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 3)

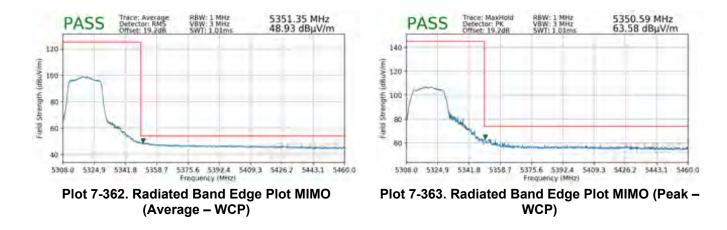


Plot 7-360. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 2C)

FCC ID: A3LSMG977U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Worst Case Mode:802.11nWorst Case Transfer Rate:MCS8Distance of Measurements:3 MetersOperating Frequency:5320MHzChannel:64



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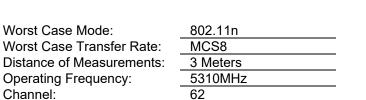


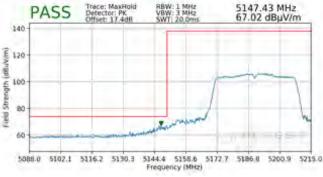
### 7.6.13 MIMO Radiated Band Edge Measurements (40MHz BW) §15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

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



Plot 7-364. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 1)

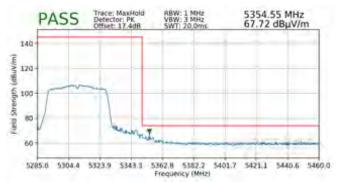




Plot 7-365. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 1)



Plot 7-366. Radiated Upper Band Edge Plot MIMO (Average – UNII Band 2A)



Plot 7-367. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 2A)

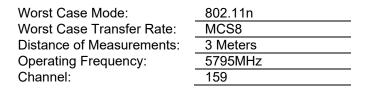
FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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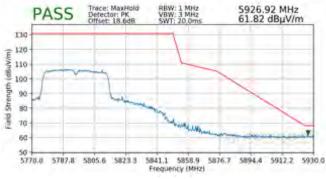


Worst Case Mode:	802.11n
Worst Case Transfer Rate:	MCS8
Distance of Measurements:	3 Meters
Operating Frequency:	5510MHz
Channel:	102

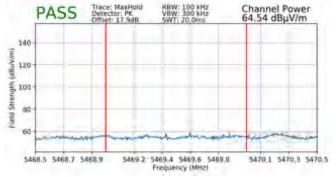


Plot 7-368. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 2C)





Plot 7-370. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 3)

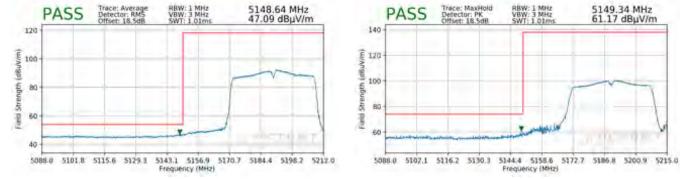


Plot 7-369. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 2C)

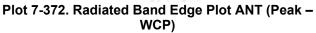
FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Worst Case Mode:	802.11n
Worst Case Transfer Rate:	MCS8
Distance of Measurements:	3 Meters
Operating Frequency:	5190MHz
Channel:	38



Plot 7-371. Radiated Band Edge Plot ANT (Average – WCP)



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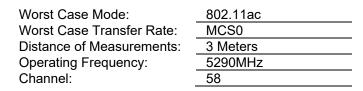


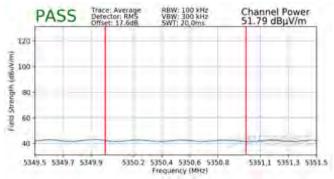
### 7.6.14 MIMO Radiated Band Edge Measurements (80MHz BW) §15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

802.11ac
MCS0
3 Meters
5210MHz
42

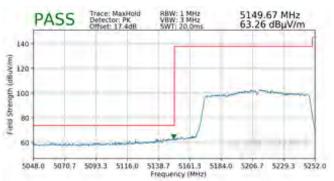


Plot 7-373. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 1)

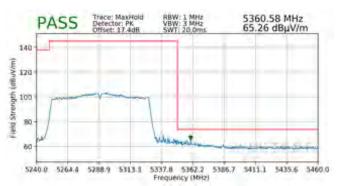




Plot 7-375. Radiated Upper Band Edge Plot MIMO (Average – UNII Band 2A)



Plot 7-374. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 1)

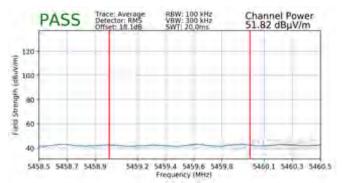


Plot 7-376. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 2A)

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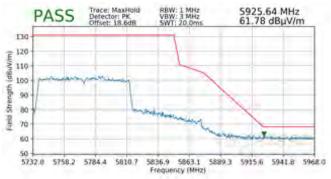


Worst Case Mode:	802.11ac
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5530MHz
Channel:	106



Plot 7-377. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 2C)

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



Plot 7-379. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 3)

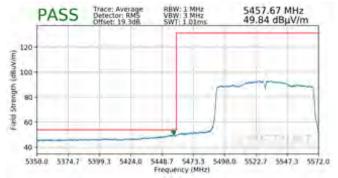


Plot 7-378. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 2C)

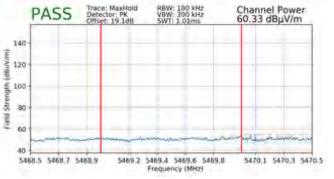
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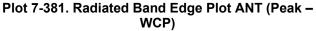


Worst Case Mode:	802.11ac
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5530MHz
Channel:	106



Plot 7-380. Radiated Band Edge Plot ANT (Average – WCP)





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### 7.7 Radiated Spurious Emissions Measurements – Below 1GHz §15.209; RSS-Gen [8.9]

# **Test Overview and Limit**

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

# All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR and Table 6 of RSS-Gen (8.10) must not exceed the limits shown in Table 7-79 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 7-79. 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.

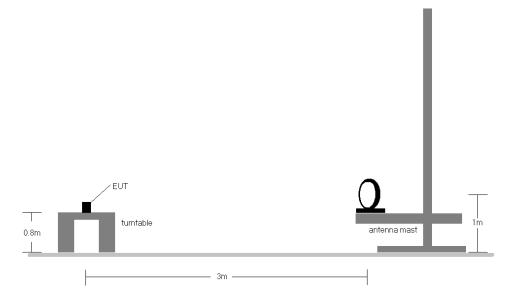
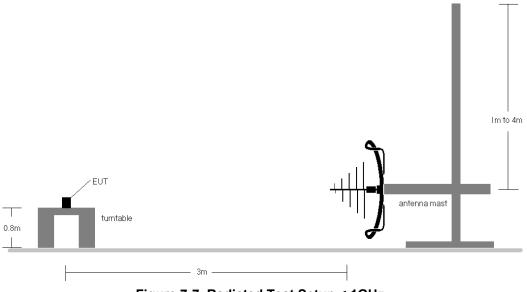
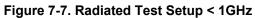


Figure 7-6. Radiated Test Setup < 30MHz





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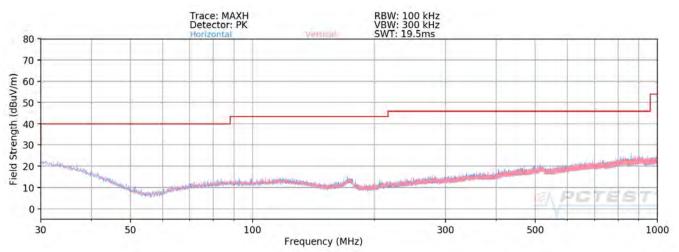


- 1. All emissions lying in restricted bands specified in §15.205 and RSS-Gen (8.10) are below the limit shown in Table 7-79.
- 2. The broadband receive antenna is manipulated through vertical and horizontal polarizations during the tests. The EUT is manipulated through three orthogonal planes.
- 3. 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.
- The wide spectrum spurious emissions plots shown on the following pages are used only for the purpose of emission identification. There were no emissions detected in the 30MHz – 1GHz frequency range, as shown in the subsequent plots.

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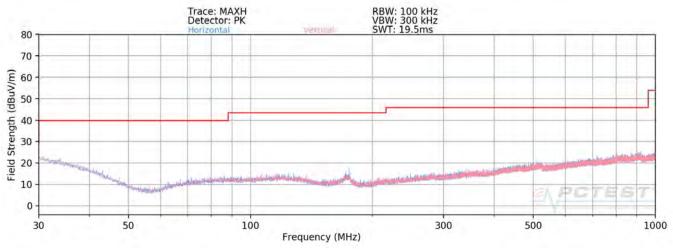


# SISO Antenna-1 Radiated Spurious Emissions Measurements (Below 1GHz) §15.209; RSS-Gen [8.9]



Plot 7-382. Radiated Spurious Plot below 1GHz SISO ANT1 (802.11a - U3 Ch. 157)

# SISO Antenna-2 Radiated Spurious Emissions Measurements (Below 1GHz) §15.209; RSS-Gen [8.9]

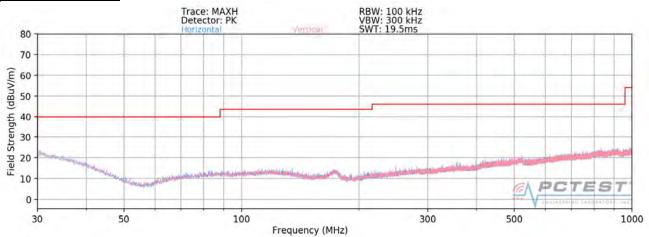


Plot 7-383. Radiated Spurious Plot below 1GHz SISO ANT2 (802.11a - U3 Ch. 157)

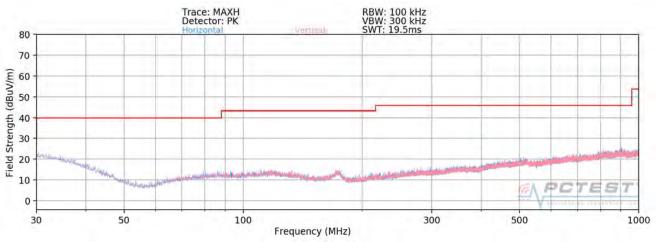
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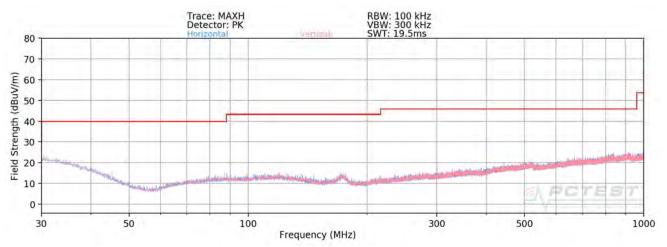
### Simultaneous Tx Radiated Spurious Emissions Measurements (Below 1GHz) §15.209; RSS-Gen [8.9]







Plot 7-385. Radiated Spurious Plot below 1GHz (5GHz – 2.4 GHz)



#### Plot 7-386. Radiated Spurious Plot below 1GHz (Dual Band Simult. Tx)

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

Table 7-80. 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

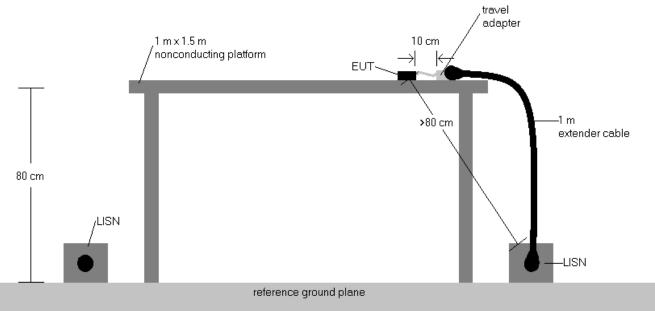
#### Average Field Strength Measurements

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



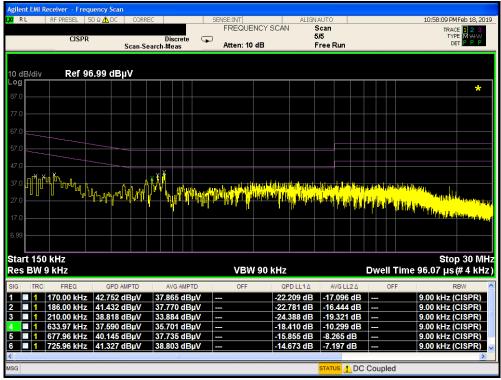


# Test Notes

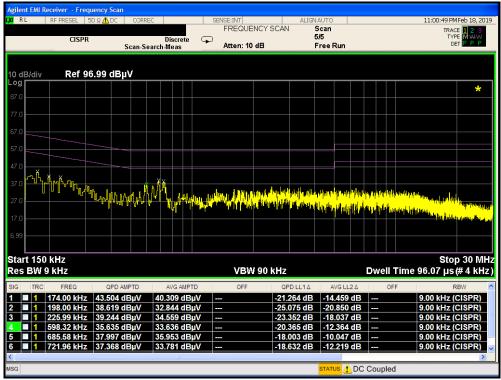
- All modes of operation were investigated and the worst-case emissions are reported using mid channel. The emissions found were not affected by the choice of channel used during testing.
- 2. The limit for an intentional radiator from 150kHz to 30MHz are specified in 15.207 and RSS-Gen (8.8).
- 3. Corr. (dB) = Cable loss (dB) + LISN insertion factor (dB)
- 4. QP/AV Level (dB $\mu$ V) = QP/AV Analyzer/Receiver Level (dB $\mu$ V) + Corr. (dB)
- 5. Margin (dB) = QP/AV Limit (dBµV) QP/AV Level (dBµV)
- 6. Traces shown in plot are made using a peak detector.
- 7. Deviations to the Specifications: None.

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Plot 7-387. Line Conducted Plot with 802.11a UNII Band 1 (L1) with Travel Adapter



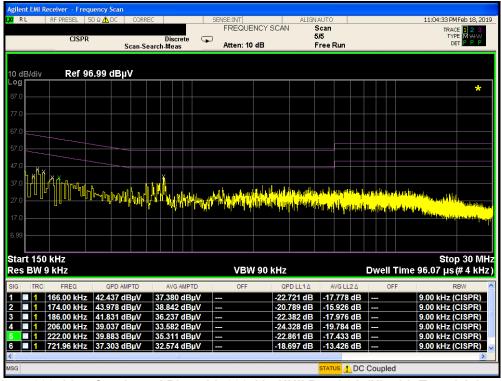
Plot 7-388. Line Conducted Plot with 802.11a UNII Band 1 (N) with Travel Adapter

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art 150	9 kHz 9 kHz	QP	PD AMP	Ϋ́́ΤD		AVG	AMP	TD		VB		kHz	DLL1Δ		AVG L				Tim	e 96	<sup>իվ</sup> սեղ Տ ծ.07	itop µs (i	<b># 4 k</b> ⊦ ™
art 150	9 KHz 9 KHz FREQ 178.00 KHz	QF 2 44.37	°D AMP <b>71 dB</b>	TD		AVG	AMP <sup>1</sup>	TD				kHz QF	D LL1 A 208 dE	3 -14	AVG L 4.985			ell .	Tim	e 96	5.07	itop µs († RE	# 4 kH sw sispr)
art 150	9 KHz 9 KHz FREQ 178.00 KHz 186.00 KHz	QF 2 44.37 2 42.43	°D AMP 71 dB 38 dB	TD HV	36	AVG .594	AMP <sup>1</sup> dB	το μV				KHz -20.1 -21.1	D LL1 A 208 dE 775 dE	3 -1/ 3 -1	AVG L 4.985 7.227	L2A dB	Dw	ell .	Tim	e 96	S 5.07 00 kH	itop µs († Iz (C	# 4 kH sw ISPR) ISPR)
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Plot 7-389. Line Conducted Plot with 802.11a UNII Band 2A (L1) with Travel Adapter



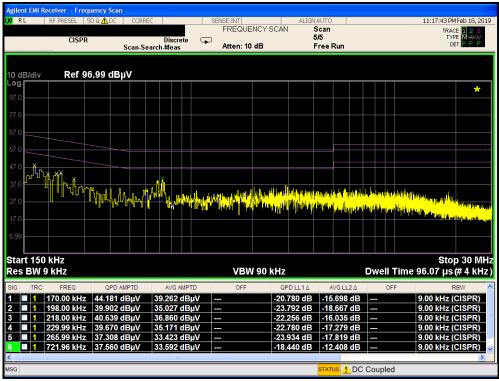
Plot 7-390. Line Conducted Plot with 802.11a UNII Band 2A (N) with Travel Adapter

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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2.0 99 cart 150 es BW	9 kHz FREQ 162.00 kHz 170.00 kHz 182.00 kHz	QP 2 41.65 2 44.10 2 43.97	D AMPT 9 dBµ 9 dBµ 19 dBµ		36.9 39.2 39.6	/G AMF 54 dE 63 dE 83 dE	<sup>р</sup> ТD 3µV 3µV		VBV		(Hz -23.7 -20.8 -20.4	02 dB 52 dB 23 dB	-18	AVG LL 3.407 5.697	2 A dB dB	Dwe	ell T	'ime	96.0 9.00 9.00	Sto )7 µs ) kHz ) kHz ) kHz	RBW (CISPF (CISPF (CISPF	k  R) R)
2.0 99 cart 150 es BW	9 kHz FREQ 162.00 kHz 170.00 kHz 182.00 kHz 206.00 kHz	QP z 41.65 z 44.10 z 43.97 z 40.11	D AMPT 9 dBµ 9 dBµ 1 dBµ 3 dBµ		36.9 39.2 39.6 34.6	/G AMF 54 dE 63 dE 83 dE 75 dE	<sup>2</sup> ТD ЗµV ЗµV ЗµV ЗµV		VBV		<hz -23.7 -20.8 -20.4 -23.2</hz 	02 dB 52 dB 23 dB		AVG LL 3.407 5.697 1.711 3.690	2∆ dB dB dB	Dwe	ell T	'ime	96.0 9.00 9.00 9.00	Sto )7 µs ) kHz ) kHz ) kHz ) kHz	RBW (CISPI (CISPI (CISPI (CISPI	K  R) R) R) R)
2.0 99 cart 150 es BW	9 kHz FREQ 162.00 kHz 170.00 kHz 182.00 kHz 206.00 kHz 229.99 kHz	QP z 41.65 z 44.10 z 43.97 z 40.11 z 40.01	D AMPT 9 dBµ 9 dBµ 1 dBµ 3 dBµ 2 dBµ		36.9 39.2 39.6 34.6 36.4	/G AMF 54 dE 63 dE 83 dE 75 dE 09 dE	<sup>р</sup> ТD ЗµV ЗµV ЗµV ЗµV ЗµV		VBV		<hz -23.7 -20.8 -20.4 -23.2 -22.4</hz 	02 dB 52 dB 23 dB 53 dB 38 dB	-18 -14 -18 -14 -18	AVG LL 3.407 5.697 1.711 3.690 5.041	2 A dB dB dB dB dB	Dwe	ell T	'ime	96.0 9.00 9.00 9.00 9.00 9.00	Sto )7 µs ) kHz ) kHz ) kHz ) kHz	(# 4 RBW (CISPI (CISPI (CISPI (CISPI (CISPI	K X X X X X
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Plot 7-391. Line Conducted Plot with 802.11a UNII Band 2C (L1) with Travel Adapter



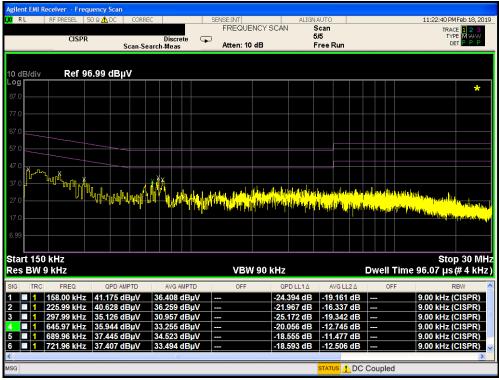
Plot 7-392. Line Conducted Plot with 802.11a UNII Band 2C (N) with Travel Adapter

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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BW 9 FRC 1 1	FREQ 166.00 kHz	43.601	dBµV dBµV	37. 40.	666 d	BμV BμV	OFF	QF -21. -19.	558 dB	-17.4 -14.5	92 dB	<b></b>		9.00 k 9.00 k	RBW	R)
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ESBW 9	FREQ 166.00 kHz 178.00 kHz 214.00 kHz 642.30 kHz 677.96 kHz	43.601 45.007 41.076 38.794 40.091	dBµV dBµV dBµV dBµV dBµV	37. 40. 36. 34. 37.	666 d 031 d 063 d 980 d 816 d	ΒμV ΒμV ΒμV ΒμV ΒμV	OFF	QF -21. -19. -21. -21. -17. -15.	558 dB 571 dB 973 dB 206 dB 909 dB	-17.4 -14.5 -16.9 -11.0 -8.18	92 dB 47 dB 86 dB 20 dB 4 dB			9.00 k 9.00 k 9.00 k 9.00 k 9.00 k 9.00 k	RBW Hz (CISPF Hz (CISPF Hz (CISPF Hz (CISPF Hz (CISPF	R) R) R) R)
B BW 9	FREQ 166.00 kHz 178.00 kHz 214.00 kHz 642.30 kHz	43.601 45.007 41.076 38.794	dBµV dBµV dBµV dBµV dBµV	37. 40. 36. 34. 37.	666 d 031 d 063 d 980 d	ΒμV ΒμV ΒμV ΒμV ΒμV	OFF	QF -21. -19. -21. -21. -17. -15.	558 dB 571 dB 973 dB 206 dB	-17.4 -14.5 -16.9 -11.0	92 dB 47 dB 86 dB 20 dB 4 dB			9.00 k 9.00 k 9.00 k 9.00 k 9.00 k 9.00 k	RBW Hz (CISPF Hz (CISPF Hz (CISPF Hz (CISPF	R) R) R) R)

Plot 7-393. Line Conducted Plot with 802.11a UNII Band 3 (L1) with Travel Adapter



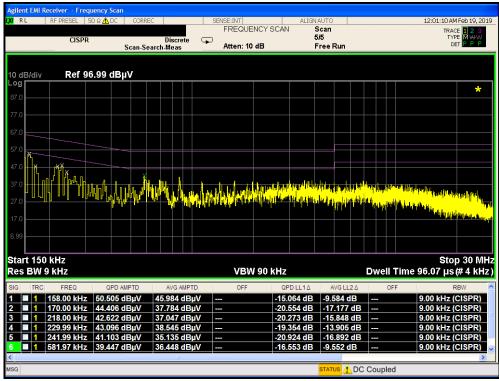
Plot 7-394. Line Conducted Plot with 802.11a UNII Band 3 (N) with Travel Adapter

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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	RF PRESEL	50 Ω <u>Å</u> DC	CORF	REC			SENSE:INT	JENCY S		NAUTO Scan				12:04:	21 AM Feb 19, 20 TRACE 1 2 3 TYPE M ##W
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art 15	9 kHz	39.610	dBµV	33.5	WG AMP 603 dE 694 dE	βµV				-21.8	G LL2 A 358 dB 170 dB	Dwe		e 96.07 9.00 ki	Stop 30 M µs(# 4 kH
art 15	9 kHz FREQ 162.00 kHz	39.610 43.016 40.924	dBµV dBµV dBµV	33.5 37.6 35.3	03 dE	BμV BμV BμV	OFI		QPD LL1 A	-21.8 -16.1	358 dB			e 96.07 9.00 ki 9.00 ki 9.00 ki	Stop 30 M µs (# 4 kH RBW Hz (CISPR)
7.0 99 tart 15 es BW 3 1 1 1 1 1 1 1 1 1 1 1 1	9 kHz FREQ 162.00 kHz 194.00 kHz 206.00 kHz	39.610 43.016 40.924 35.588 40.085	dBµV dBµV dBµV dBµV dBµV	33.5 37.6 35.3 32.9 36.0	603 dE 694 dE 894 dE	3μV 3μV 3μV 3μV 3μV	OFf 		QPD LL1A 25.751 dE 20.848 dE 22.441 dE	-21.8 -16.1 -17.9 -13.0 -9.93	358 dB 70 dB 72 dB			e 96.07 9.00 ki 9.00 ki 9.00 ki 9.00 ki 9.00 ki 9.00 ki	Stop 30 M µs (# 4 kH RBW Hz (CISPR) Hz (CISPR) Hz (CISPR)

Plot 7-395. Line Conducted Plot with 802.11a UNII Band 1 (L1) with Wireless Charging Pad



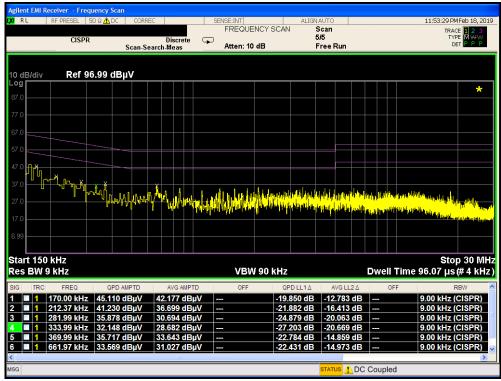
Plot 7-396. Line Conducted Plot with 802.11a UNII Band 1 (N) with Wireless Charging Pad

FCC ID: A3LSMG977U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dawa 055 af 050
1M1901100003-09.A3L	01/22/2019 - 03/25/2019	Portable Handset		Page 255 of 259
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RL	Receiver - Freq	50 Ω <u>Λ</u> D		CORREC					:INT REQUE	ENCY S	6CAN		VAUTO Scan 5/5						11:5	TRA	MFeb 18 .CE 1 2 'PE M ##	3
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1	174.00 kHz		50 dB			43 dE						18 dB		.924							(CISPF	
1	206.00 kHz		38 dB			28 dE						27 dB		.138							(CISPF	
	218.00 kHz 241.99 kHz		7 <u>8 dB</u> 13 dB			46 dE 17 dE						<u>17 dB</u> 84 dB		.849 .510							(CISPE (CISPE	
	1.5979 MHz					81 dE						34 dB		119 d							(CISPF	
		00.45	4 4 0		25.0	82 dE	Dui\/				170	40.10	40	.018	dD.				0.00		(OLOID)	100
	1.8459 MHz	38.15	94 U D	μν	35.9	62 U	σμν				-17.8	46 dB	-10	.010	uв				9.00	KHZ	(CISPF	()
3	1.8459 MHz	38.15	04 GB	μν	35.9	02 QI	σμν				-17.8	46 dB	_		_				9.00	kHz	CISPI	<)

Plot 7-397. Line Conducted Plot with 802.11a UNII Band 2A (L1) with Wireless Charging Pad



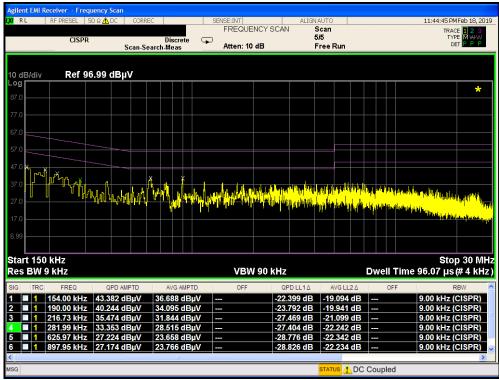
Plot 7-398. Line Conducted Plot with 802.11a UNII Band 2A (N) with Wireless Charging Pad

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a <mark>gilent EMI R</mark> <mark>0</mark> RL	eceiver - Fred RF PRESEL			RREC				SENSE FF	:INT REQUE	ENCY 5	5CAN		NAUTO Scan						11:47:	TRAC	Feb 18, 20 E <b>1 2 3</b>
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es BW 9	9 kHz								VB₩	V 90 I	кНz					Dwe	II T	ime 🤉	6.07	μs	# 4 kH
IG TRC	FREQ	QPE	O AMPTD	1	AVC	G AMP1	TD		OFF		QP	D LL1 A	A	WG LL	2 <b>A</b>	1	OFF			R	BW
1	170.00 kHz		6 dBµV			4 dB						i04 dB		.956							CISPR)
	194.00 kHz		9 dBµV			4 dB						65 dB		.280							CISPR)
	206.00 kHz 237.99 kHz		1 dBµV 5 dBµV			<u>0 dB</u> 0 dB						54 dB		.985							CISPR) CISPR)
	861.95 kHz		2 dBµV			6 dB						68 dB		954 d							CISPR)
	1.8499 MHz	38.04	4 dBµV	3	6.51	4 dB	μV				-17.9	56 dB	-9.4	486 d	В				9.00 k	Hz ((	CISPR)
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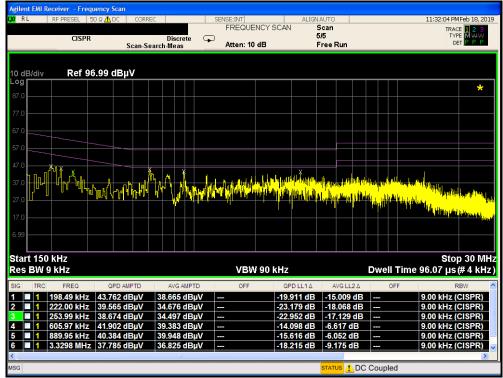
Plot 7-399. Line Conducted Plot with 802.11a UNII Band 2C (L1) with Wireless Charging Pad



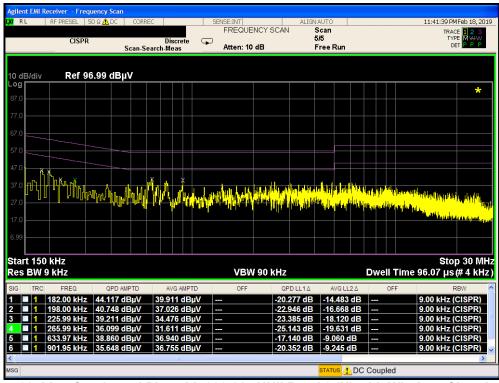
Plot 7-400. Line Conducted Plot with 802.11a UNII Band 2C (N) with Wireless Charging Pad

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Plot 7-401. Line Conducted Plot with 802.11a UNII Band 3 (L1) with Wireless Charging Pad



Plot 7-402. Line Conducted Plot with 802.11a UNII Band 3 (N) with Wireless Charging Pad

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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: A3LSMG977U** is in compliance with Part 15 Subpart E (15.407) of the FCC Rules.

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