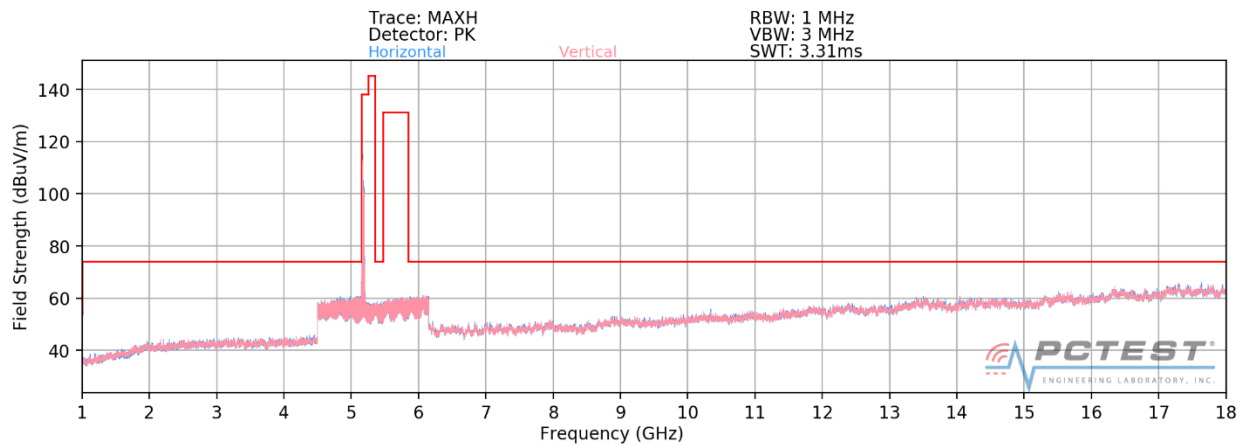
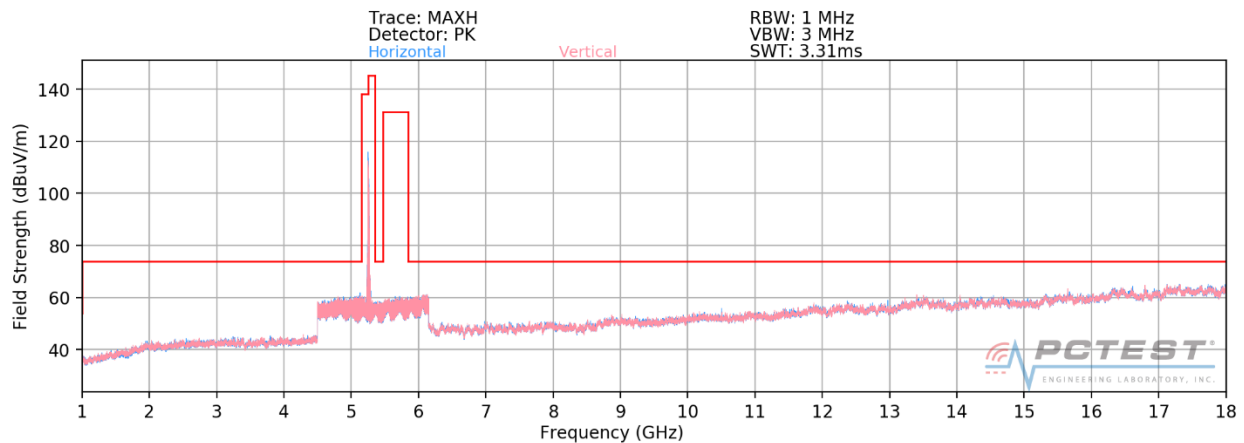


7.6.2 SISO Antenna-2 Radiated Spurious Emission Measurements

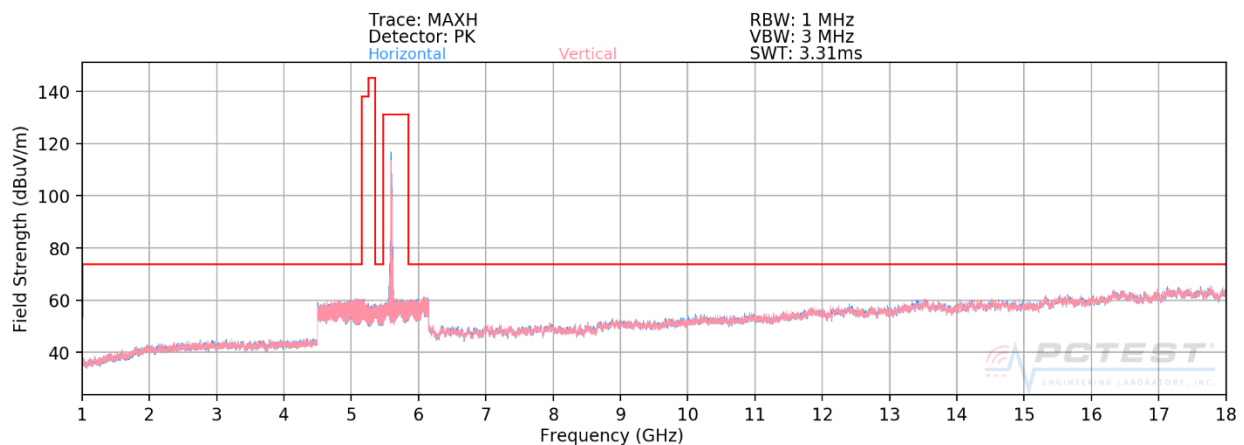
26 Tones



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

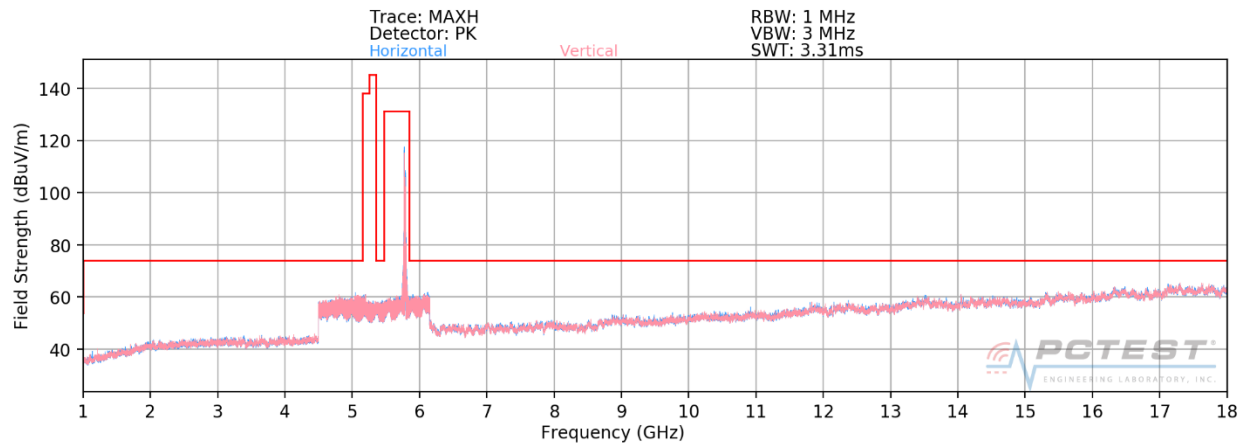


Plot 7-284. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U2A Ch. 56 – 26 Tones)



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

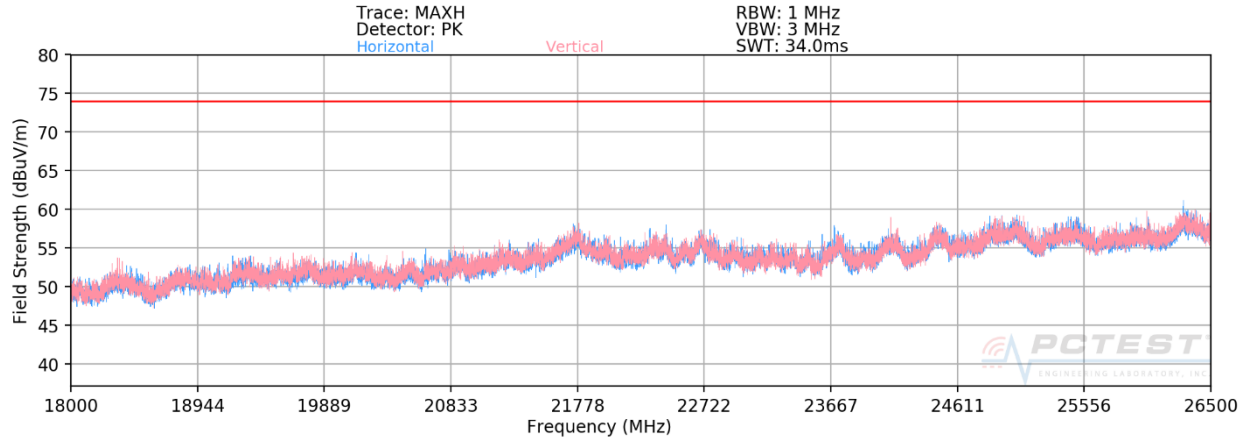
FCC ID: A3LSMG981U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 213 of 271



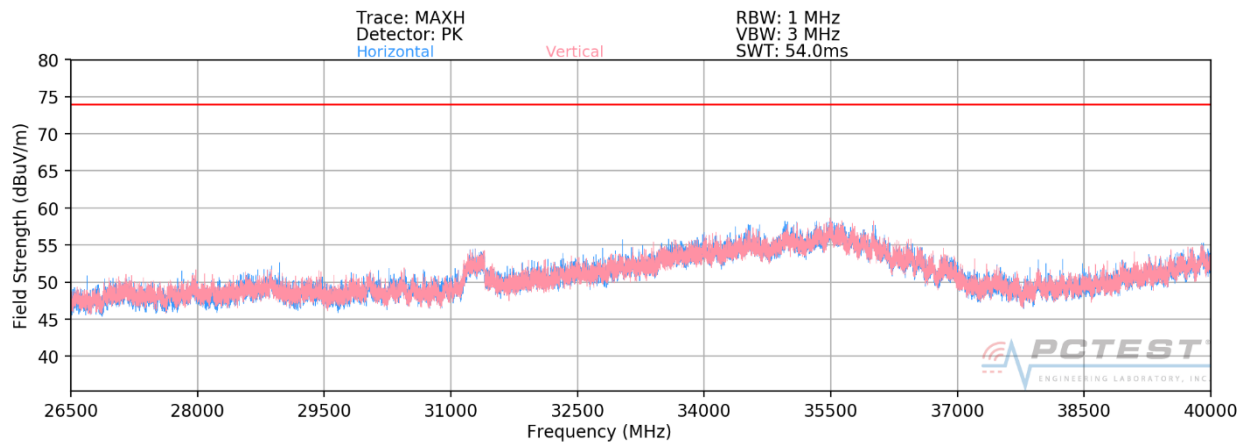
Plot 7-286. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U3 Ch. 157 – 26 Tones)

FCC ID: A3LSMG981U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 214 of 271

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



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



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

FCC ID: A3LSMG981U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 215 of 271

SISO Antenna-2 Radiated Spurious Emission Measurements

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

Worst Case Mode:	802.11ax (20MHz BW)
Worst Case Transfer Rate:	MCS0
RU Index:	54
Distance of Measurements:	1 & 3 Meters
Operating Frequency:	5180MHz
Channel:	36

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10360.00	Peak	H	100	352	-68.15	11.41	0.00	50.26	68.20	-17.94
* 15540.00	Average	H	-	-	-81.54	13.23	0.00	38.69	53.98	-15.29
* 15540.00	Peak	H	-	-	-69.33	13.23	0.00	50.90	73.98	-23.08
* 20720.00	Average	H	-	-	-72.13	7.97	-9.54	33.30	53.98	-20.68
* 20720.00	Peak	H	-	-	-60.64	7.97	-9.54	44.79	73.98	-29.19
25900.00	Peak	H	-	-	-58.78	10.34	-9.54	49.02	68.20	-19.18

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

Worst Case Mode:	802.11ax (20MHz BW)
Worst Case Transfer Rate:	MCS0
RU Index:	54
Distance of Measurements:	1 & 3 Meters
Operating Frequency:	5200MHz
Channel:	40

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10400.00	Peak	H	193	317	-69.66	11.17	0.00	48.51	68.20	-19.69
* 15600.00	Average	H	-	-	-81.05	12.81	0.00	38.76	53.98	-15.22
* 15600.00	Peak	H	-	-	-70.01	12.81	0.00	49.80	73.98	-24.18
* 20800.00	Average	H	-	-	-72.32	8.33	-9.54	33.47	53.98	-20.51
* 20800.00	Peak	H	-	-	-60.85	8.33	-9.54	44.94	73.98	-29.04
26000.00	Peak	H	-	-	-59.09	10.61	-9.54	48.98	68.20	-19.22

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

FCC ID: A3LSMG981U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 216 of 271

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 54
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5240MHz
 Channel: 48

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10480.00	Peak	H	101	355	-68.24	11.37	0.00	50.13	68.20	-18.07
* 15720.00	Average	H	-	-	-80.22	15.18	0.00	41.96	53.98	-12.02
* 15720.00	Peak	H	-	-	-69.77	15.18	0.00	52.41	73.98	-21.57
* 20960.00	Average	H	-	-	-72.56	8.52	-9.54	33.42	53.98	-20.56
* 20960.00	Peak	H	-	-	-61.54	8.52	-9.54	44.44	73.98	-29.54
26200.00	Peak	H	-	-	-59.48	10.69	-9.54	48.67	68.20	-19.53

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

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 54
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5260MHz
 Channel: 52

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10520.00	Peak	H	128	347	-70.06	11.86	0.00	48.80	68.20	-19.40
* 15780.00	Average	H	-	-	-81.29	13.75	0.00	39.46	53.98	-14.52
* 15780.00	Peak	H	-	-	-70.12	13.75	0.00	50.63	73.98	-23.35
* 21040.00	Average	H	-	-	-72.09	8.82	-9.54	34.19	53.98	-19.79
* 21040.00	Peak	H	-	-	-61.06	8.82	-9.54	45.22	73.98	-28.76
26300.00	Peak	H	-	-	-57.36	11.42	-9.54	51.52	68.20	-16.68

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

FCC ID: A3LSMG981U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset	Page 217 of 271

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 54
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5280MHz
 Channel: 56

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10560.00	Peak	H	131	340	-71.28	12.47	0.00	48.19	68.20	-20.01
* 15840.00	Average	H	-	-	-80.01	15.16	0.00	42.15	53.98	-11.83
* 15840.00	Peak	H	-	-	-70.28	15.16	0.00	51.88	73.98	-22.10
* 21120.00	Average	H	-	-	-71.81	8.63	-9.54	34.28	53.98	-19.70
* 21120.00	Peak	H	-	-	-60.83	8.63	-9.54	45.26	73.98	-28.72
26400.00	Peak	H	-	-	-58.47	11.11	-9.54	50.10	68.20	-18.10

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

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 54
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5320MHz
 Channel: 64

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 10640.00	Average	H	310	287	-80.07	13.08	0.00	40.01	53.98	-13.97
* 10640.00	Peak	H	310	287	-68.21	13.08	0.00	51.87	73.98	-22.11
* 15960.00	Average	H	-	-	-79.19	13.43	0.00	41.24	53.98	-12.74
* 15960.00	Peak	H	-	-	-70.08	13.43	0.00	50.35	73.98	-23.63
* 21280.00	Average	H	-	-	-71.29	9.03	-9.54	35.20	53.98	-18.78
* 21280.00	Peak	H	-	-	-59.66	9.03	-9.54	46.83	73.98	-27.15
26600.00	Peak	H	-	-	-52.37	-4.38	-9.54	40.71	68.20	-27.49

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

FCC ID: A3LSMG981U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 218 of 271

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 54
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5500MHz
 Channel: 100

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11000.00	Average	H	295	171	-80.73	12.53	0.00	38.80	53.98	-15.18
* 11000.00	Peak	H	295	171	-69.52	12.53	0.00	50.01	73.98	-23.97
16500.00	Peak	H	-	-	-69.99	15.04	0.00	52.05	68.20	-16.15
22000.00	Peak	H	-	-	-59.95	9.58	-9.54	47.09	68.20	-21.11
27500.00	Peak	H	-	-	-50.96	-5.56	-9.54	40.94	68.20	-27.26

Table 7-100. Radiated Measurements SISO ANT2 (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 54
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5600MHz
 Channel: 120

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11200.00	Average	H	-	-	-80.34	12.67	0.00	39.33	53.98	-14.65
* 11200.00	Peak	H	-	-	-69.55	12.67	0.00	50.12	73.98	-23.86
16800.00	Peak	H	-	-	-68.89	16.04	0.00	54.15	68.20	-14.05
* 22400.00	Average	H	-	-	-71.50	10.49	-9.54	36.45	53.98	-17.53
* 22400.00	Peak	H	-	-	-59.04	10.49	-9.54	48.91	73.98	-25.07
28000.00	Peak	H	-	-	-51.52	-4.84	-9.54	41.10	68.20	-27.10

Table 7-101. Radiated Measurements SISO ANT2 (26 Tones)

FCC ID: A3LSMG981U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 219 of 271

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 54
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5720MHz
 Channel: 144

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11440.00	Average	H	240	277	-81.01	12.70	0.00	38.69	53.98	-15.29
* 11440.00	Peak	H	240	277	-69.49	12.70	0.00	50.21	73.98	-23.77
17160.00	Peak	H	-	-	-68.16	17.71	0.00	56.55	68.20	-11.65
* 22880.00	Average	H	-	-	-72.56	9.96	-9.54	34.86	53.98	-19.12
* 22880.00	Peak	H	-	-	-61.14	9.96	-9.54	46.28	73.98	-27.70
28600.00	Peak	H	-	-	-50.85	-4.40	-9.54	42.21	68.20	-25.99

Table 7-102. Radiated Measurements SISO ANT2 (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 54
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5745MHz
 Channel: 149

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11490.00	Average	H	395	255	-81.36	13.38	0.00	39.02	53.98	-14.96
* 11490.00	Peak	H	395	255	-69.67	13.38	0.00	50.71	73.98	-23.27
17235.00	Peak	H	-	-	-70.31	17.44	0.00	54.13	68.20	-14.07
* 22980.00	Average	H	-	-	-72.43	10.35	-9.54	35.38	53.98	-18.60
* 22980.00	Peak	H	-	-	-60.95	10.35	-9.54	46.86	73.98	-27.12
28725.00	Peak	H	-	-	-50.64	-4.88	-9.54	41.94	68.20	-26.26

Table 7-103. Radiated Measurements SISO ANT2 (26 Tones)

FCC ID: A3LSMG981U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 220 of 271

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 54
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5785MHz
 Channel: 157

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11570.00	Average	H	277	290	-80.22	12.70	0.00	39.48	53.98	-14.50
* 11570.00	Peak	H	277	290	-70.54	12.70	0.00	49.16	73.98	-24.82
17355.00	Peak	H	-	-	-69.18	19.46	0.00	57.28	68.20	-10.92
23140.00	Peak	H	-	-	-60.41	10.05	-9.54	47.10	68.20	-21.10
28925.00	Peak	H	-	-	-50.10	-5.11	-9.54	42.25	68.20	-25.95

Table 7-104. Radiated Measurements SISO ANT2 (26 Tones)

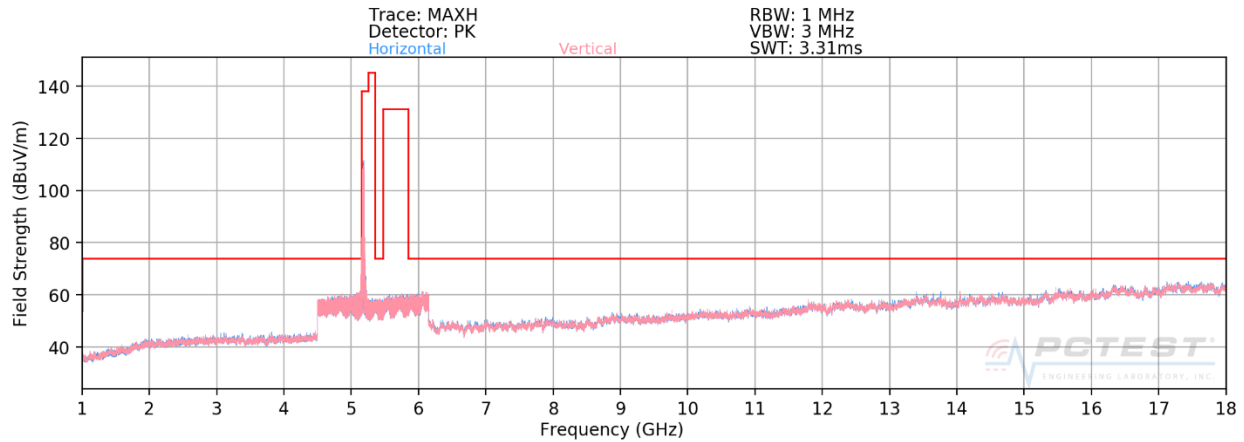
Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 54
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5825MHz
 Channel: 165

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11650.00	Average	H	261	302	-81.20	13.24	0.00	39.04	53.98	-14.94
* 11650.00	Peak	H	261	302	-80.00	13.24	0.00	40.24	73.98	-33.74
17475.00	Peak	H	-	-	-68.99	20.06	0.00	58.07	68.20	-10.13
23300.00	Peak	H	-	-	-60.63	9.39	-9.54	46.22	68.20	-21.98
29125.00	Peak	H	-	-	-50.61	-6.06	-9.54	40.79	68.20	-27.41

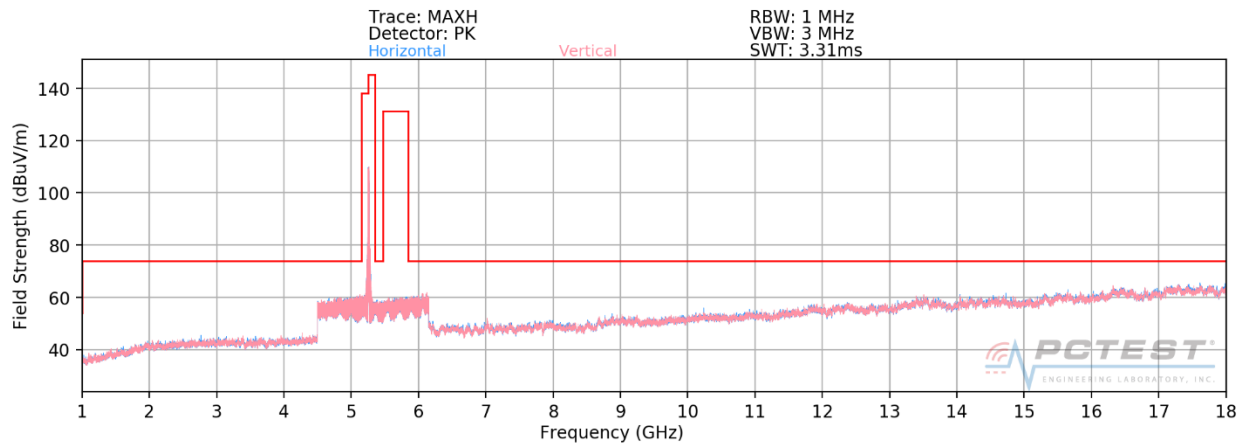
Table 7-105. Radiated Measurements SISO ANT2 (26 Tones)

FCC ID: A3LSMG981U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 221 of 271

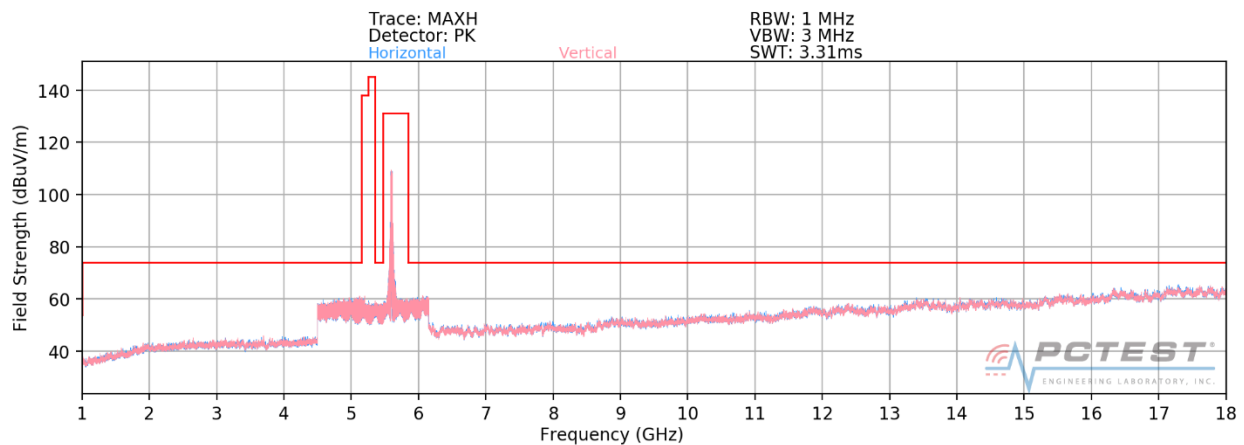
242 Tones



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

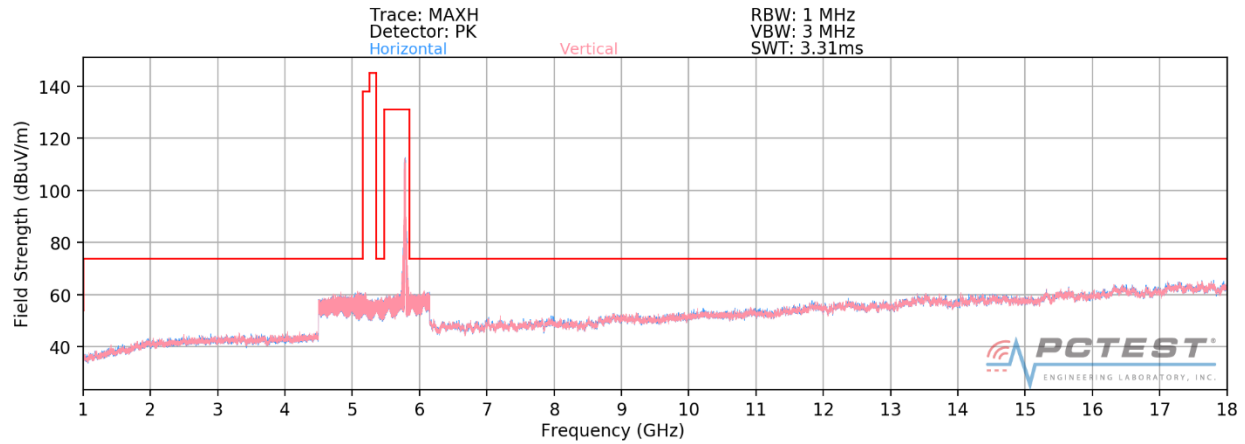


Plot 7-290. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U2A Ch. 56 – 242 Tones)



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

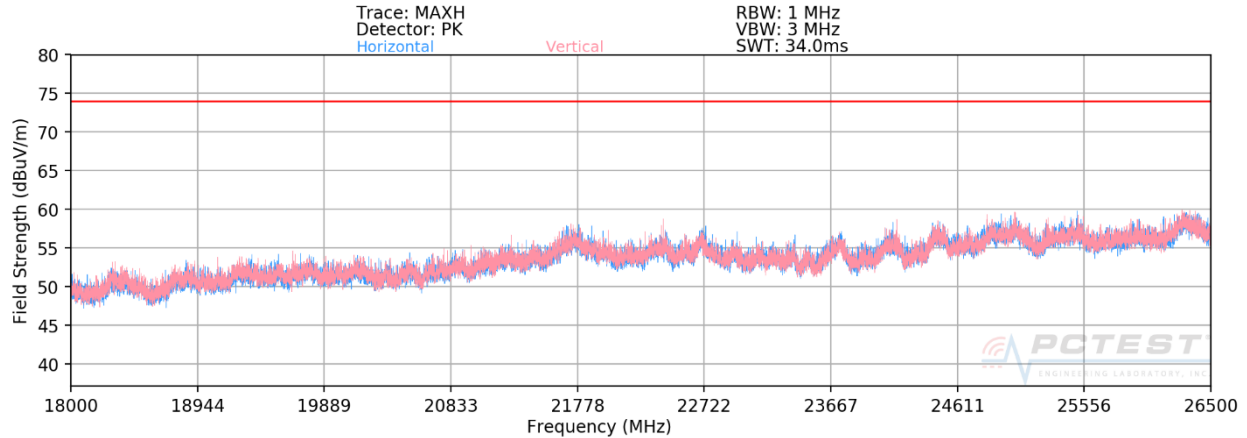
FCC ID: A3LSMG981U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 222 of 271



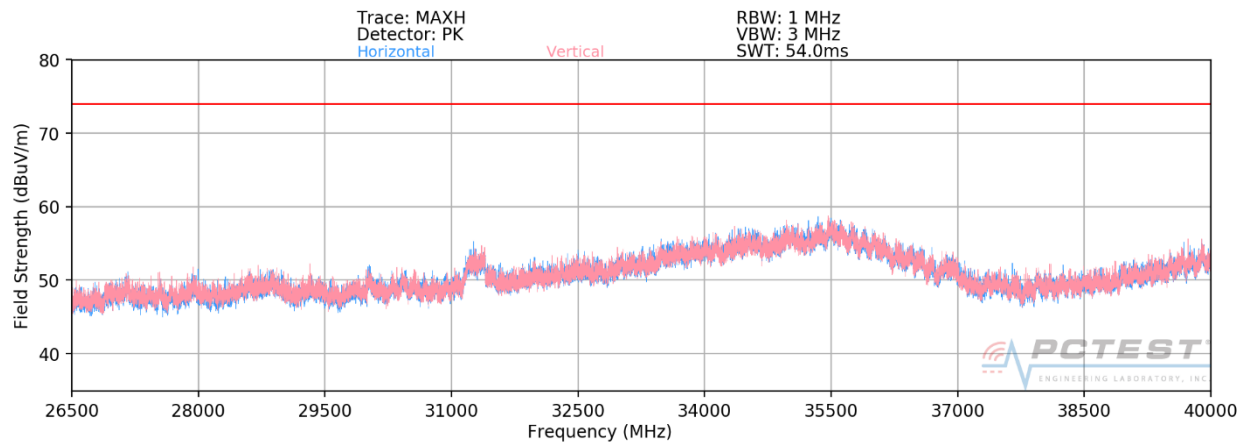
Plot 7-292. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U3 Ch. 157 – 242 Tones)

FCC ID: A3LSMG981U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 223 of 271

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



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



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

FCC ID: A3LSMG981U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 224 of 271

SISO Antenna-2 Radiated Spurious Emission Measurements

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

Worst Case Mode:	802.11ax (20MHz BW)
Worst Case Transfer Rate:	MCS0
RU Index:	61
Distance of Measurements:	1 & 3 Meters
Operating Frequency:	5180MHz
Channel:	36

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10360.00	Peak	H	109	354	-69.69	15.23	0.00	52.54	68.20	-15.66
* 15540.00	Average	H	-	-	-83.36	22.71	0.00	46.35	53.98	-7.63
* 15540.00	Peak	H	-	-	-70.68	22.71	0.00	59.03	73.98	-14.95
* 20720.00	Average	H	-	-	-71.66	7.97	-9.54	33.77	53.98	-20.21
* 20720.00	Peak	H	-	-	-81.34	7.97	-9.54	24.09	73.98	-49.89
25900.00	Peak	H	-	-	-59.44	10.34	-9.54	48.36	68.20	-19.84

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

Worst Case Mode:	802.11ax (20MHz BW)
Worst Case Transfer Rate:	MCS0
RU Index:	61
Distance of Measurements:	1 & 3 Meters
Operating Frequency:	5200MHz
Channel:	40

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10400.00	Peak	H	-	-	-71.22	15.67	0.00	51.45	68.20	-16.75
* 15600.00	Average	H	-	-	-84.29	22.46	0.00	45.17	53.98	-8.81
* 15600.00	Peak	H	-	-	-70.98	22.46	0.00	58.48	73.98	-15.50
* 20800.00	Average	H	-	-	-71.98	8.33	-9.54	33.81	53.98	-20.17
* 20800.00	Peak	H	-	-	-61.23	8.33	-9.54	44.56	73.98	-29.42
26000.00	Peak	H	-	-	-60.01	10.61	-9.54	48.06	68.20	-20.14

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

FCC ID: A3LSMG981U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 225 of 271

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5240MHz
 Channel: 48

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10480.00	Peak	H	285	182	-71.34	15.49	0.00	51.15	68.20	-17.05
* 15720.00	Average	H	-	-	-82.68	22.45	0.00	46.77	53.98	-7.21
* 15720.00	Peak	H	-	-	-69.94	22.45	0.00	59.51	73.98	-14.47
* 20960.00	Average	H	-	-	-71.48	8.52	-9.54	34.50	53.98	-19.48
* 20960.00	Peak	H	-	-	-62.36	8.52	-9.54	43.62	73.98	-30.36
26200.00	Peak	H	-	-	-59.06	10.69	-9.54	49.09	68.20	-19.11

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

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5260MHz
 Channel: 52

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10520.00	Peak	H	276	176	-70.04	15.86	0.00	52.82	68.20	-15.38
* 15780.00	Average	H	-	-	-81.59	22.77	0.00	48.18	53.98	-5.80
* 15780.00	Peak	H	-	-	-69.95	22.77	0.00	59.82	73.98	-14.16
* 21040.00	Average	H	-	-	-71.93	8.82	-9.54	34.35	53.98	-19.63
* 21040.00	Peak	H	-	-	-61.21	8.82	-9.54	45.07	73.98	-28.91
26300.00	Peak	H	-	-	-58.46	11.42	-9.54	50.42	68.20	-17.78

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

FCC ID: A3LSMG981U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset	Page 226 of 271

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5280MHz
 Channel: 56

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10560.00	Peak	H	246	190	-69.33	15.70	0.00	53.37	68.20	-14.83
* 15840.00	Average	H	-	-	-82.76	22.66	0.00	46.90	53.98	-7.08
* 15840.00	Peak	H	-	-	-69.54	22.66	0.00	60.12	73.98	-13.86
* 21120.00	Average	H	-	-	-72.24	8.63	-9.54	33.85	53.98	-20.13
* 21120.00	Peak	H	-	-	-61.37	8.63	-9.54	44.72	73.98	-29.26
26400.00	Peak	H	-	-	-59.09	11.11	-9.54	49.48	68.20	-18.72

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

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5320MHz
 Channel: 64

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 10640.00	Average	H	286	10	-82.37	16.03	0.00	40.66	53.98	-13.32
* 10640.00	Peak	H	286	10	-69.92	16.03	0.00	53.11	73.98	-20.87
* 15960.00	Average	H	-	-	-81.59	23.09	0.00	48.50	53.98	-5.48
* 15960.00	Peak	H	-	-	-71.61	23.09	0.00	58.48	73.98	-15.50
* 21280.00	Average	H	-	-	-71.56	9.03	-9.54	34.93	53.98	-19.05
* 21280.00	Peak	H	-	-	-61.27	9.03	-9.54	45.22	73.98	-28.76
26600.00	Peak	H	-	-	-53.19	-4.38	-9.54	39.89	68.20	-28.31

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

FCC ID: A3LSMG981U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 227 of 271

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5500MHz
 Channel: 100

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11000.00	Average	H	-	-	-80.55	16.51	0.00	42.96	53.98	-11.02
* 11000.00	Peak	H	-	-	-68.96	16.51	0.00	54.55	73.98	-19.43
16500.00	Peak	H	-	-	-70.26	24.17	0.00	60.91	68.20	-7.29
22000.00	Peak	H	-	-	-61.08	9.58	-9.54	45.96	68.20	-22.24
27500.00	Peak	H	-	-	-51.11	-5.56	-9.54	40.79	68.20	-27.41

Table 7-112. Radiated Measurements SISO ANT2 (242 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5600MHz
 Channel: 120

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11200.00	Average	H	-	-	-81.22	16.73	0.00	42.51	53.98	-11.47
* 11200.00	Peak	H	-	-	-69.21	16.73	0.00	54.52	73.98	-19.46
16800.00	Peak	H	-	-	-69.78	24.00	0.00	61.22	68.20	-6.98
* 22400.00	Average	H	-	-	-71.69	10.49	-9.54	36.26	53.98	-17.72
* 22400.00	Peak	H	-	-	-60.41	10.49	-9.54	47.54	73.98	-26.44
28000.00	Peak	H	-	-	-50.69	-4.84	-9.54	41.93	68.20	-26.27

Table 7-113. Radiated Measurements SISO ANT2 (242 Tones)

FCC ID: A3LSMG981U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 228 of 271

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5720MHz
 Channel: 144

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11440.00	Average	H	275	14	-81.46	17.29	0.00	42.83	53.98	-11.15
* 11440.00	Peak	H	275	14	-69.28	17.29	0.00	55.01	73.98	-18.97
17160.00	Peak	H	-	-	-71.42	24.37	0.00	59.95	68.20	-8.25
* 22880.00	Average	H	-	-	-71.49	9.96	-9.54	35.93	53.98	-18.05
* 22880.00	Peak	H	-	-	-61.26	9.96	-9.54	46.16	73.98	-27.82
28600.00	Peak	H	-	-	-51.39	-4.40	-9.54	41.67	68.20	-26.53

Table 7-114. Radiated Measurements SISO ANT2 (242 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5745MHz
 Channel: 149

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11490.00	Average	H	-	-	-82.19	17.63	0.00	42.44	53.98	-11.53
* 11490.00	Peak	H	-	-	-69.76	17.63	0.00	54.87	73.98	-19.10
17235.00	Peak	H	-	-	-81.76	25.01	0.00	50.25	68.20	-17.95
* 22980.00	Average	H	-	-	-71.98	10.35	-9.54	35.83	53.98	-18.15
* 22980.00	Peak	H	-	-	-62.09	10.35	-9.54	45.72	73.98	-28.26
28725.00	Peak	H	-	-	-51.37	-4.88	-9.54	41.21	68.20	-26.99

Table 7-115. Radiated Measurements SISO ANT2 (242 Tones)

FCC ID: A3LSMG981U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset	Page 229 of 271

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5785MHz
 Channel: 157

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11570.00	Average	H	-	-	-81.56	17.35	0.00	42.79	53.98	-11.19
* 11570.00	Peak	H	-	-	-70.11	17.35	0.00	54.24	73.98	-19.74
17355.00	Peak	H	-	-	-82.04	26.08	0.00	51.04	68.20	-17.16
23140.00	Peak	H	-	-	-61.49	10.05	-9.54	46.02	68.20	-22.18
28925.00	Peak	H	-	-	-50.66	-5.11	-9.54	41.69	68.20	-26.51

Table 7-116. Radiated Measurements SISO ANT2 (242 Tones)

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

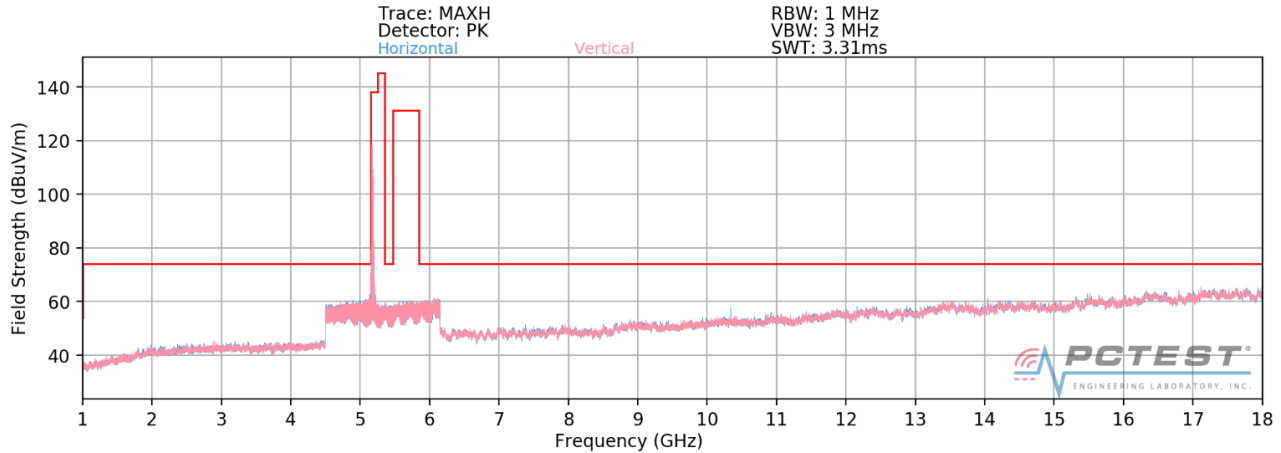
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11650.00	Average	H	204	150	-81.22	17.57	0.00	43.35	53.98	-10.62
* 11650.00	Peak	H	204	150	-69.69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

Table 7-117. Radiated Measurements SISO ANT2 (242 Tones)

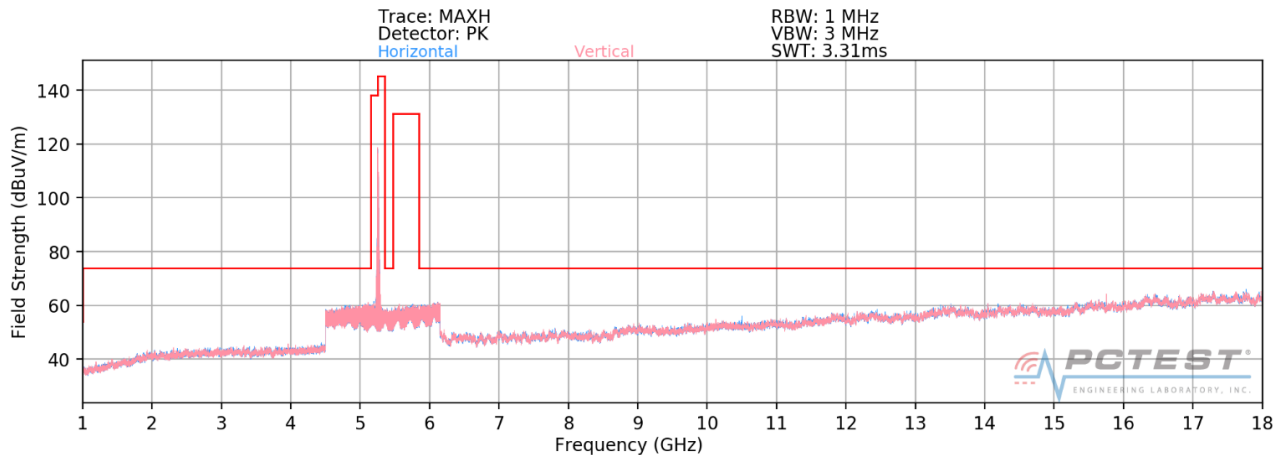
FCC ID: A3LSMG981U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 230 of 271

7.6.3 MIMO Radiated Spurious Emission Measurements

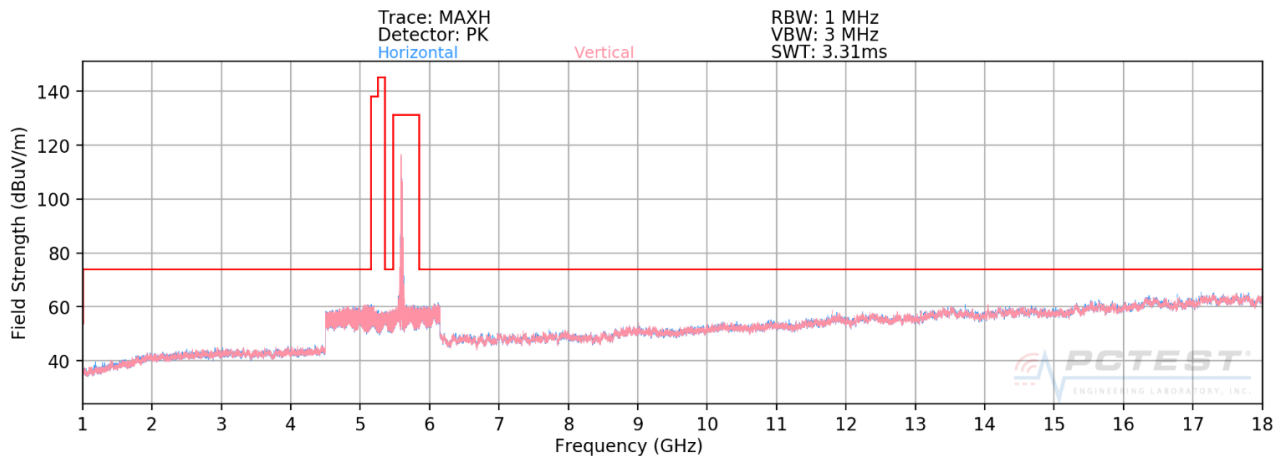
26 Tones



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

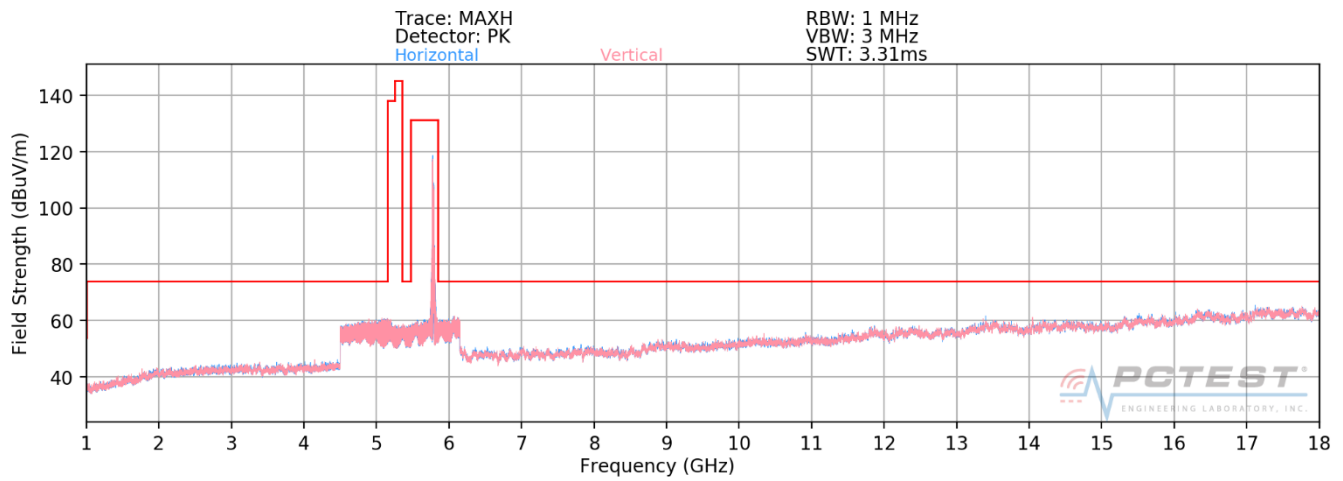


Plot 7-296. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U2A Ch. 56 – 26 Tones)



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

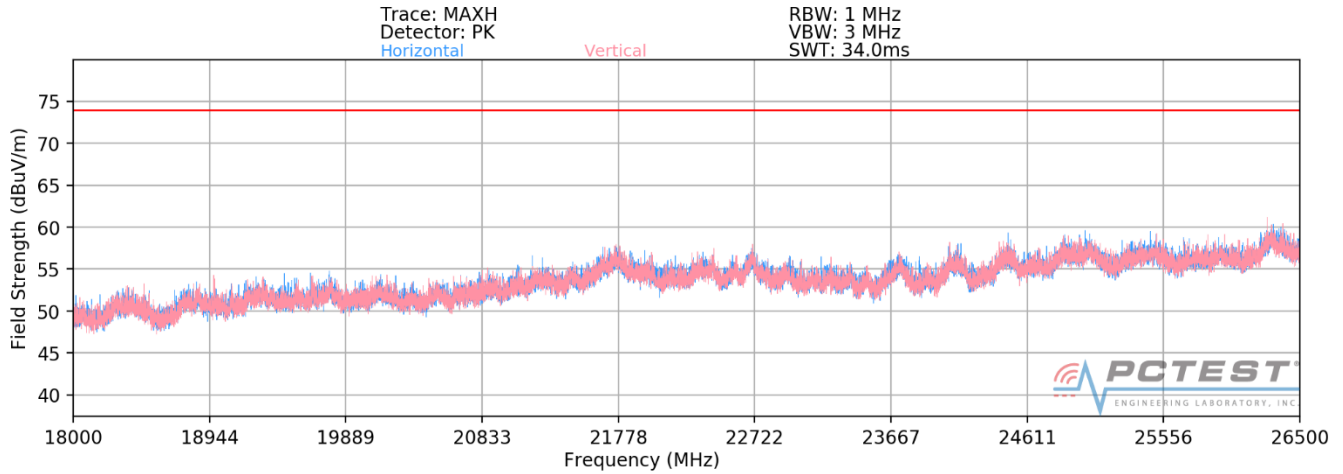
FCC ID: A3LSMG981U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 231 of 271



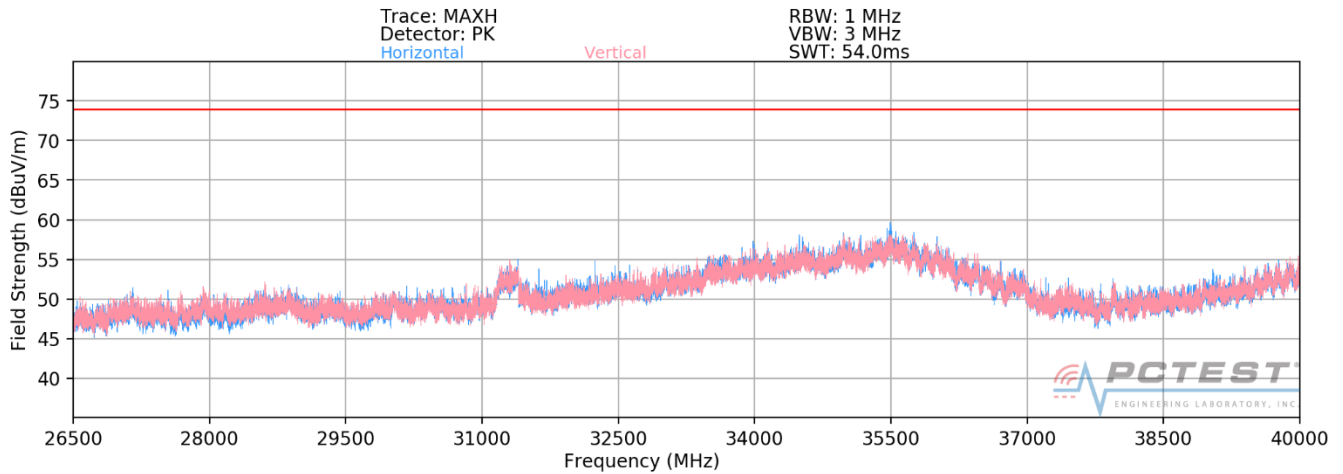
Plot 7-298. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U3 Ch. 157 – 26 Tones)

FCC ID: A3LSMG981U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 232 of 271

MIMO Radiated Spurious Emissions Measurements (Above 18GHz)



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



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

FCC ID: A3LSMG981U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 233 of 271

MIMO Radiated Spurious Emission Measurements (26 Tones)

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

Worst Case Mode: 802.11ax (20MHz BW)
Worst Case Transfer Rate: MCS0
RU Index: 54
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5180MHz
Channel: 36

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10360.00	Peak	V	251	324	-69.47	11.41	0.00	48.94	68.20	-19.26
* 15540.00	Average	V	-	-	-80.22	13.23	0.00	40.01	53.98	-13.97
* 15540.00	Peak	V	-	-	-68.96	13.23	0.00	51.27	73.98	-22.71
* 20720.00	Average	V	-	-	-72.02	7.97	-9.54	33.41	53.98	-20.57
* 20720.00	Peak	V	-	-	-61.32	7.97	-9.54	44.11	73.98	-29.87
25900.00	Peak	V	-	-	-58.85	10.34	-9.54	48.95	68.20	-19.25

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

Worst Case Mode: 802.11ax (20MHz BW)
Worst Case Transfer Rate: MCS0
RU Index: 54
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5200MHz
Channel: 40

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10400.00	Peak	V	241	306	-70.22	11.17	0.00	47.95	68.20	-20.25
* 15600.00	Average	V	-	-	-82.33	12.81	0.00	37.48	53.98	-16.50
* 15600.00	Peak	V	-	-	-69.98	12.81	0.00	49.83	73.98	-24.15
* 20800.00	Average	V	-	-	-72.26	8.33	-9.54	33.53	53.98	-20.45
* 20800.00	Peak	V	-	-	-61.44	8.33	-9.54	44.35	73.98	-29.63
26000.00	Peak	V	-	-	-58.80	10.61	-9.54	49.27	68.20	-18.93

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

FCC ID: A3LSMG981U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 234 of 271

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 54
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5240MHz
 Channel: 48

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10480.00	Peak	V	-	-	-71.05	11.37	0.00	47.32	68.20	-20.88
* 15720.00	Average	V	-	-	-82.06	15.18	0.00	40.12	53.98	-13.86
* 15720.00	Peak	V	-	-	-69.97	15.18	0.00	52.21	73.98	-21.77
* 20960.00	Average	V	-	-	-72.31	8.52	-9.54	33.67	53.98	-20.31
* 20960.00	Peak	V	-	-	-61.31	8.52	-9.54	44.67	73.98	-29.31
* 26200.00	Peak	V	-	-	-58.80	10.69	-9.54	49.35	68.20	-18.85

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

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 54
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5260MHz
 Channel: 52

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10520.00	Peak	V	204	274	-71.28	11.86	0.00	47.58	68.20	-20.62
* 15780.00	Average	V	-	-	-81.26	13.75	0.00	39.49	53.98	-14.49
* 15780.00	Peak	V	-	-	-70.15	13.75	0.00	50.60	73.98	-23.38
* 21040.00	Average	V	-	-	-72.09	8.82	-9.54	34.19	53.98	-19.79
* 21040.00	Peak	V	-	-	-60.21	8.82	-9.54	46.07	73.98	-27.91
* 26300.00	Peak	V	-	-	-57.85	11.42	-9.54	51.03	68.20	-17.17

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

FCC ID: A3LSMG981U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 235 of 271

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 54
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5280MHz
 Channel: 56

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10560.00	Peak	V	216	248	-72.27	12.47	0.00	47.20	68.20	-21.00
* 15840.00	Average	V	-	-	-80.49	15.16	0.00	41.67	53.98	-12.31
* 15840.00	Peak	V	-	-	-68.54	15.16	0.00	53.62	73.98	-20.36
* 21120.00	Average	V	-	-	-72.03	8.63	-9.54	34.06	53.98	-19.92
* 21120.00	Peak	V	-	-	-60.43	8.63	-9.54	45.66	73.98	-28.32
* 26400.00	Peak	V	-	-	-57.64	11.11	-9.54	50.93	68.20	-17.27

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

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 54
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5320MHz
 Channel: 64

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 10640.00	Average	V	-	-	-81.72	13.08	0.00	38.36	53.98	-15.62
* 10640.00	Peak	V	-	-	-68.22	13.08	0.00	51.86	73.98	-22.12
* 15960.00	Average	V	-	-	-82.36	13.43	0.00	38.07	53.98	-15.91
* 15960.00	Peak	V	-	-	-71.07	13.43	0.00	49.36	73.98	-24.62
* 21280.00	Average	V	-	-	-71.26	9.03	-9.54	35.23	53.98	-18.75
* 21280.00	Peak	V	-	-	-60.03	9.03	-9.54	46.46	73.98	-27.52
* 26600.00	Peak	V	-	-	-52.70	-4.38	-9.54	40.38	68.20	-27.82

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

FCC ID: A3LSMG981U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 236 of 271

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 54
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5500MHz
 Channel: 100

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11000.00	Average	V	388	103	-80.94	12.53	0.00	38.59	53.98	-15.39
* 11000.00	Peak	V	388	103	-69.19	12.53	0.00	50.34	73.98	-23.64
16500.00	Peak	V	-	-	-71.03	15.04	0.00	51.01	68.20	-17.19
22000.00	Peak	V	-	-	-60.45	9.58	-9.54	46.59	68.20	-21.61
27500.00	Peak	V	-	-	-51.06	-5.56	-9.54	40.84	68.20	-27.36

Table 7-124. Radiated Measurements MIMO (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 54
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5600MHz
 Channel: 120

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11200.00	Average	V	347	146	-80.27	12.67	0.00	39.40	53.98	-14.58
* 11200.00	Peak	V	347	146	-68.74	12.67	0.00	50.93	73.98	-23.05
16800.00	Peak	V	-	-	-68.19	16.04	0.00	54.85	68.20	-13.35
* 22400.00	Average	V	-	-	-71.59	10.49	-9.54	36.36	53.98	-17.62
* 22400.00	Peak	V	-	-	-60.41	10.49	-9.54	47.54	73.98	-26.44
28000.00	Peak	V	-	-	-51.49	-4.84	-9.54	41.13	68.20	-27.07

Table 7-125. Radiated Measurements MIMO (26 Tones)

FCC ID: A3LSMG981U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 237 of 271

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 54
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5720MHz
 Channel: 144

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11440.00	Average	V	-	-	-79.84	12.70	0.00	39.86	53.98	-14.12
* 11440.00	Peak	V	-	-	-69.41	12.70	0.00	50.29	73.98	-23.69
17160.00	Peak	V	-	-	-69.28	17.71	0.00	55.43	68.20	-12.77
* 22880.00	Average	V	-	-	-72.41	9.96	-9.54	35.01	53.98	-18.97
* 22880.00	Peak	V	-	-	-61.21	9.96	-9.54	46.21	73.98	-27.77
28600.00	Peak	V	-	-	-49.97	-4.40	-9.54	43.09	68.20	-25.11

Table 7-126. Radiated Measurements MIMO (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 54
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5745MHz
 Channel: 149

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11490.00	Average	V	-	-	-78.26	13.38	0.00	42.12	53.98	-11.86
* 11490.00	Peak	V	-	-	-68.29	13.38	0.00	52.09	73.98	-21.89
17235.00	Peak	V	-	-	-69.92	17.44	0.00	54.52	68.20	-13.68
* 22980.00	Average	V	-	-	-72.45	10.35	-9.54	35.36	53.98	-18.62
* 22980.00	Peak	V	-	-	-61.43	10.35	-9.54	46.38	73.98	-27.60
28725.00	Peak	V	-	-	-50.45	-4.88	-9.54	42.13	68.20	-26.07

Table 7-127. Radiated Measurements MIMO (26 Tones)

FCC ID: A3LSMG981U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 238 of 271

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 54
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5785MHz
 Channel: 157

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11570.00	Average	V	184	346	-78.99	12.70	0.00	40.71	53.98	-13.27
* 11570.00	Peak	V	184	346	-69.90	12.70	0.00	49.80	73.98	-24.18
17355.00	Peak	V	-	-	-71.57	19.46	0.00	54.89	68.20	-13.31
23140.00	Peak	V	-	-	-61.09	10.05	-9.54	46.42	68.20	-21.78
28925.00	Peak	V	-	-	-49.88	-5.11	-9.54	42.47	68.20	-25.73

Table 7-128. Radiated Measurements MIMO (26 Tones)

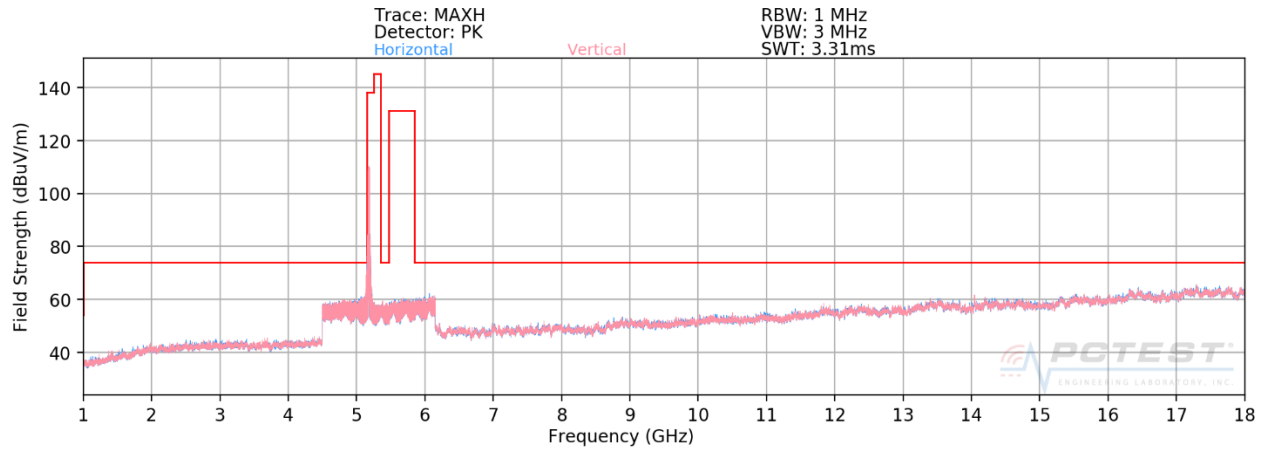
Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 54
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5825MHz
 Channel: 165

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11650.00	Average	V	176	324	-82.33	13.24	0.00	37.91	53.98	-16.07
* 11650.00	Peak	V	176	324	-70.25	13.24	0.00	49.99	73.98	-23.99
17475.00	Peak	V	-	-	-70.54	20.06	0.00	56.52	68.20	-11.68
23300.00	Peak	V	-	-	-60.78	9.39	-9.54	46.07	68.20	-22.13
29125.00	Peak	V	-	-	-50.37	-6.06	-9.54	41.03	68.20	-27.17

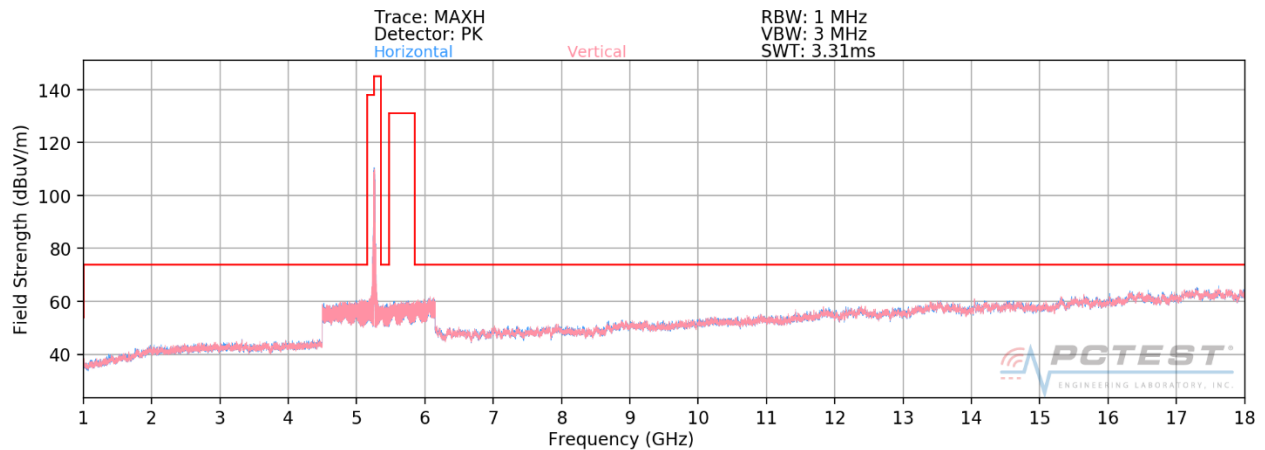
Table 7-129. Radiated Measurements MIMO (26 Tones)

FCC ID: A3LSMG981U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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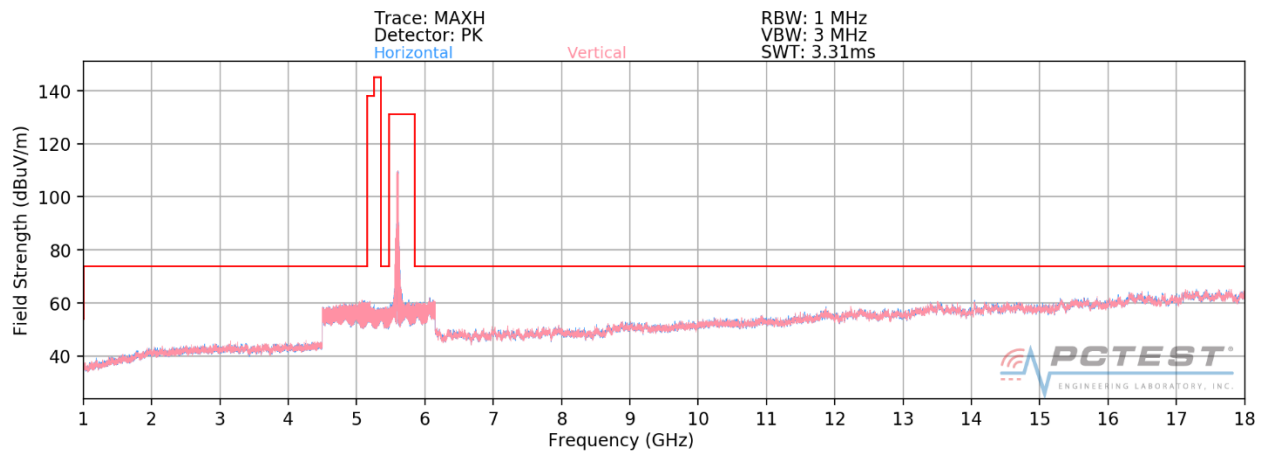
242 Tones



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

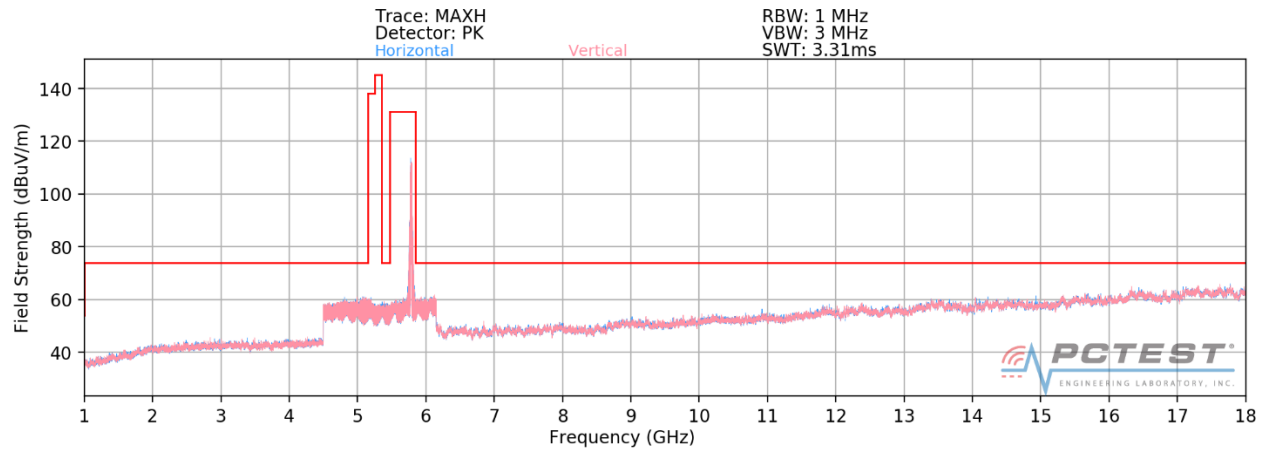


Plot 7-302. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U2A Ch. 56 – 242 Tones)



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

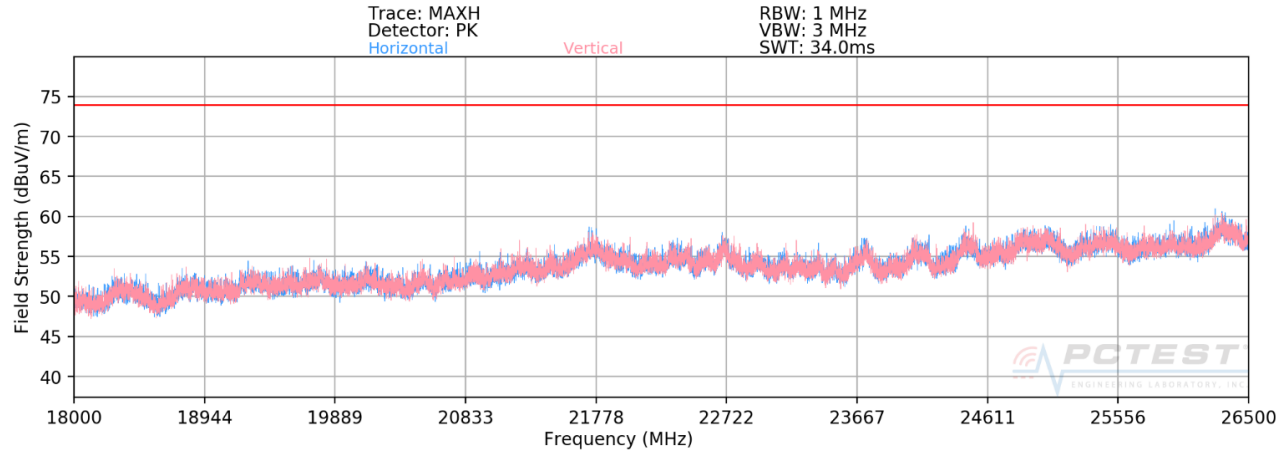
FCC ID: A3LSMG981U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset	Page 240 of 271



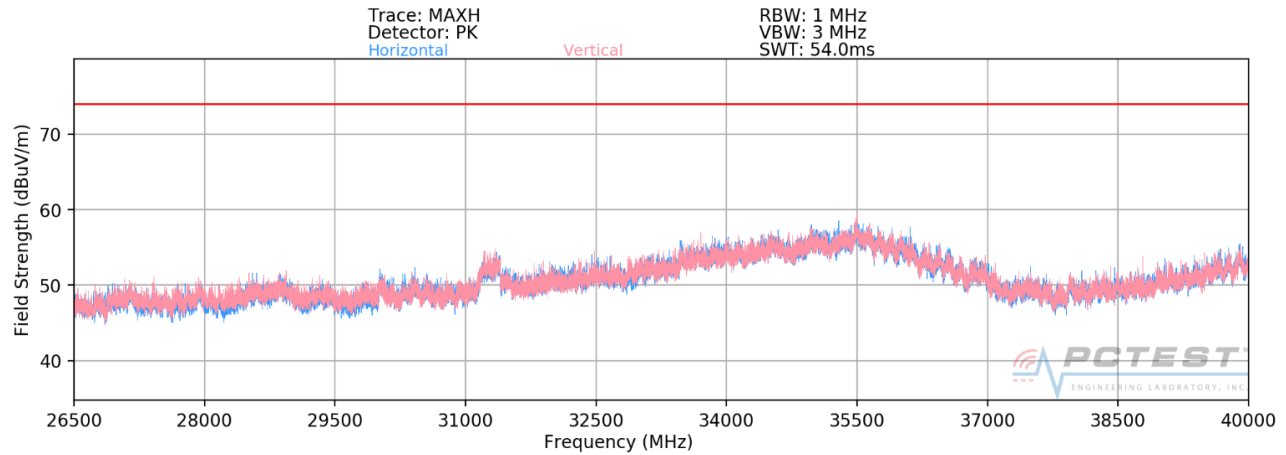
Plot 7-304. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U3 Ch. 157 – 242 Tones)

FCC ID: A3LSMG981U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 241 of 271

MIMO Radiated Spurious Emissions Measurements (Above 18GHz)



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



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

FCC ID: A3LSMG981U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 242 of 271

MIMO Radiated Spurious Emission Measurements (242 Tones)

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

Worst Case Mode: 802.11ax (20MHz BW)
Worst Case Transfer Rate: MCS0
RU Index: 61
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5180MHz
Channel: 36

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10360.00	Peak	V	115	307	-70.11	15.23	0.00	52.12	68.20	-16.08
* 15540.00	Average	V	-	-	-82.36	22.71	0.00	47.35	53.98	-6.63
* 15540.00	Peak	V	-	-	-71.22	22.71	0.00	58.49	73.98	-15.49
* 20720.00	Average	V	-	-	-72.26	7.97	-9.54	33.17	53.98	-20.81
* 20720.00	Peak	V	-	-	-61.05	7.97	-9.54	44.38	73.98	-29.60
25900.00	Peak	V	-	-	-58.87	10.34	-9.54	48.93	68.20	-19.27

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

Worst Case Mode: 802.11ax (20MHz BW)
Worst Case Transfer Rate: MCS0
RU Index: 61
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5200MHz
Channel: 40

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10400.00	Peak	V	104	311	-69.50	15.67	0.00	53.17	68.20	-15.03
* 15600.00	Average	V	-	-	-81.22	22.46	0.00	48.24	53.98	-5.74
* 15600.00	Peak	V	-	-	-72.05	22.46	0.00	57.41	73.98	-16.57
* 20800.00	Average	V	-	-	-72.00	8.33	-9.54	33.79	53.98	-20.19
* 20800.00	Peak	V	-	-	-59.94	8.33	-9.54	45.85	73.98	-28.13
26000.00	Peak	V	-	-	-59.00	10.61	-9.54	49.07	68.20	-19.13

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

FCC ID: A3LSMG981U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 243 of 271

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5240MHz
 Channel: 48

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10480.00	Peak	V	122	289	-70.24	15.49	0.00	52.25	68.20	-15.95
* 15720.00	Average	V	-	-	-80.47	22.45	0.00	48.98	53.98	-5.00
* 15720.00	Peak	V	-	-	-71.68	22.45	0.00	57.77	73.98	-16.21
* 20960.00	Average	V	-	-	-72.52	8.52	-9.54	33.46	53.98	-20.52
* 20960.00	Peak	V	-	-	-61.52	8.52	-9.54	44.46	73.98	-29.52
26200.00	Peak	V	-	-	-58.59	10.69	-9.54	49.56	68.20	-18.64

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

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5260MHz
 Channel: 52

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10520.00	Peak	V	118	287	-70.41	15.86	0.00	52.45	68.20	-15.75
* 15780.00	Average	V	-	-	-80.69	22.77	0.00	49.08	53.98	-4.90
* 15780.00	Peak	V	-	-	-72.01	22.77	0.00	57.76	73.98	-16.22
* 21040.00	Average	V	-	-	-72.10	8.82	-9.54	34.18	53.98	-19.80
* 21040.00	Peak	V	-	-	-60.83	8.82	-9.54	45.45	73.98	-28.53
26300.00	Peak	V	-	-	-57.95	11.42	-9.54	50.93	68.20	-17.27

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

FCC ID: A3LSMG981U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 244 of 271

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5280MHz
 Channel: 56

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10560.00	Peak	V	221	159	-68.21	15.70	0.00	54.49	68.20	-13.71
* 15840.00	Average	V	-	-	-80.29	22.66	0.00	49.37	53.98	-4.61
* 15840.00	Peak	V	-	-	-70.49	22.66	0.00	59.17	73.98	-14.81
* 21120.00	Average	V	-	-	-71.95	8.63	-9.54	34.14	53.98	-19.84
* 21120.00	Peak	V	-	-	-60.58	8.63	-9.54	45.51	73.98	-28.47
* 26400.00	Peak	V	-	-	-58.28	11.11	-9.54	50.29	68.20	-17.91

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

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5320MHz
 Channel: 64

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 10640.00	Average	V	330	241	-82.01	16.03	0.00	41.02	53.98	-12.96
* 10640.00	Peak	V	330	241	-69.25	16.03	0.00	53.78	73.98	-20.20
* 15960.00	Average	V	-	-	-82.47	23.09	0.00	47.62	53.98	-6.36
* 15960.00	Peak	V	-	-	-70.12	23.09	0.00	59.97	73.98	-14.01
* 21280.00	Average	V	-	-	-71.30	9.03	-9.54	35.19	53.98	-18.79
* 21280.00	Peak	V	-	-	-60.18	9.03	-9.54	46.31	73.98	-27.67
* 26600.00	Peak	V	-	-	-52.74	-4.38	-9.54	40.34	68.20	-27.86

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

FCC ID: A3LSMG981U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 245 of 271

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5500MHz
 Channel: 100

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11000.00	Average	V	321	208	-80.33	16.51	0.00	43.18	53.98	-10.80
* 11000.00	Peak	V	-	-	-68.30	16.51	0.00	55.21	73.98	-18.77
16500.00	Peak	V	-	-	-69.36	24.17	0.00	61.81	68.20	-6.39
22000.00	Peak	V	-	-	-60.46	9.58	-9.54	46.58	68.20	-21.62
27500.00	Peak	V	-	-	-50.37	-5.56	-9.54	41.53	68.20	-26.67

Table 7-136. Radiated Measurements MIMO (242 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5580MHz
 Channel: 116

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11200.00	Average	V	270	244	-79.22	16.73	0.00	44.51	53.98	-9.47
* 11200.00	Peak	V	270	244	-67.95	16.73	0.00	55.78	73.98	-18.20
16800.00	Peak	V	-	-	-69.25	24.00	0.00	61.75	68.20	-6.45
* 22400.00	Average	V	-	-	-71.41	10.49	-9.54	36.54	53.98	-17.44
* 22400.00	Peak	V	-	-	-60.34	10.49	-9.54	47.61	73.98	-26.37
28000.00	Peak	V	-	-	-50.55	-4.84	-9.54	42.07	68.20	-26.13

Table 7-137. Radiated Measurements MIMO (242 Tones)

FCC ID: A3LSMG981U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 246 of 271

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5700MHz
 Channel: 140

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11440.00	Average	V	-	-	-80.45	17.29	0.00	43.84	53.98	-10.14
* 11440.00	Peak	V	-	-	-68.95	17.29	0.00	55.34	73.98	-18.64
17160.00	Peak	V	-	-	-69.36	24.37	0.00	62.01	68.20	-6.19
* 22880.00	Average	V	-	-	-72.45	9.96	-9.54	34.97	53.98	-19.01
* 22880.00	Peak	V	-	-	-60.86	9.96	-9.54	46.56	73.98	-27.42
28600.00	Peak	V	-	-	-50.76	-4.40	-9.54	42.30	68.20	-25.90

Table 7-138. Radiated Measurements MIMO (242 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5745MHz
 Channel: 149

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11490.00	Average	V	-	-	-80.04	17.63	0.00	44.59	53.98	-9.38
* 11490.00	Peak	V	-	-	-68.25	17.63	0.00	56.38	73.98	-17.59
17235.00	Peak	V	-	-	-70.89	25.01	0.00	61.12	68.20	-7.08
* 22980.00	Average	V	-	-	-72.43	10.35	-9.54	35.38	53.98	-18.60
* 22980.00	Peak	V	-	-	-61.12	10.35	-9.54	46.69	73.98	-27.29
28725.00	Peak	V	-	-	-50.82	-4.88	-9.54	41.76	68.20	-26.44

Table 7-139. Radiated Measurements MIMO (242 Tones)

FCC ID: A3LSMG981U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 247 of 271

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5785MHz
 Channel: 157

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11570.00	Average	V	-	-	-80.22	17.35	0.00	44.13	53.98	-9.85
* 11570.00	Peak	V	-	-	-69.36	17.35	0.00	54.99	73.98	-18.99
17355.00	Peak	V	-	-	-71.05	26.08	0.00	62.03	68.20	-6.17
23140.00	Peak	V	-	-	-60.98	10.05	-9.54	46.53	68.20	-21.67
28925.00	Peak	V	-	-	-50.36	-5.11	-9.54	41.99	68.20	-26.21

Table 7-140. Radiated Measurements MIMO (242 Tones)

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11650.00	Average	V	-	-	-81.06	17.57	0.00	43.51	53.98	-10.46
* 11650.00	Peak	V	-	-	-70.33	17.57	0.00	54.24	73.98	-19.73
17475.00	Peak	V	-	-	-71.41	26.23	0.00	61.82	68.20	-6.38
23300.00	Peak	V	-	-	-60.24	9.39	-9.54	46.61	68.20	-21.59
29125.00	Peak	V	-	-	-50.44	-6.06	-9.54	40.96	68.20	-27.24

Table 7-141. Radiated Measurements MIMO (242 Tones)

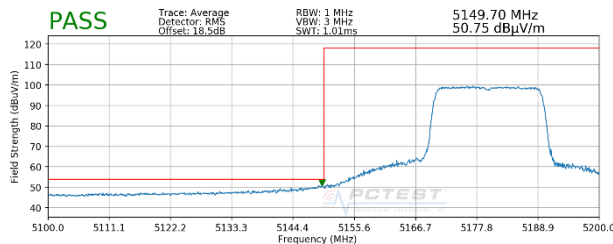
FCC ID: A3LSMG981U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 248 of 271

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

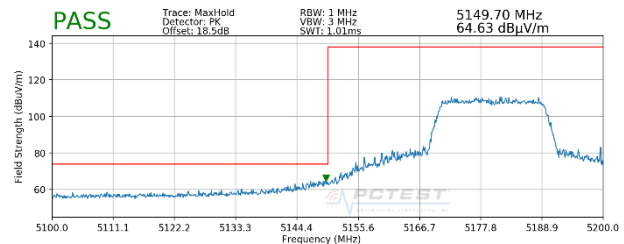
\$15.407(b.1)(b.2) \$15.205 \$15.209; RSS-Gen [8.9]; RSS-Gen [8.9]

242 Tones

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

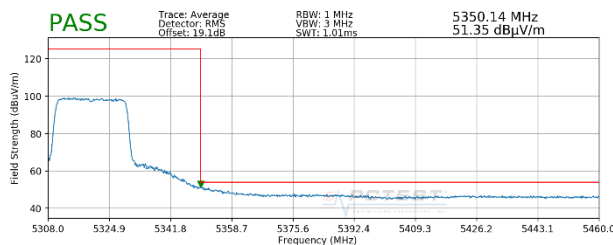


Plot 7-307. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 1 – 242 Tones)

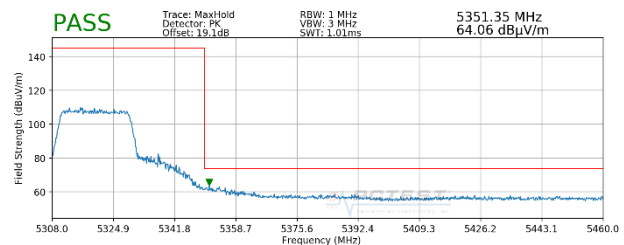


Plot 7-308. Radiated Lower Band Edge Plot SISO ANT1 (Peak – UNII Band 1 – 242 Tones)

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



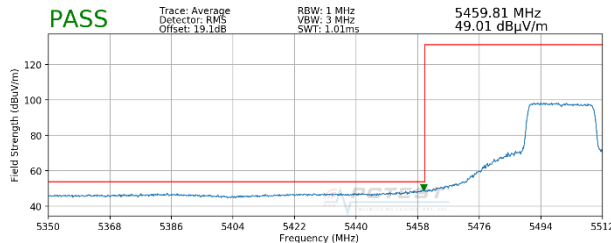
Plot 7-309. Radiated Upper Band Edge Plot SISO ANT1 (Average – UNII Band 2A – 242 Tones)



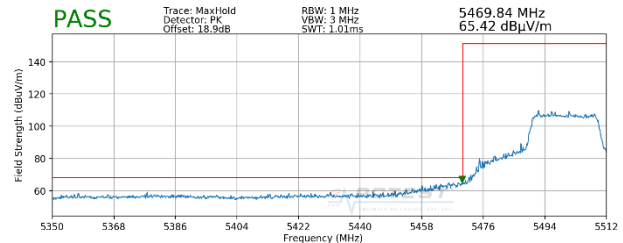
Plot 7-310. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 2A – 242 Tones)

FCC ID: A3LSMG981U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 249 of 271

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

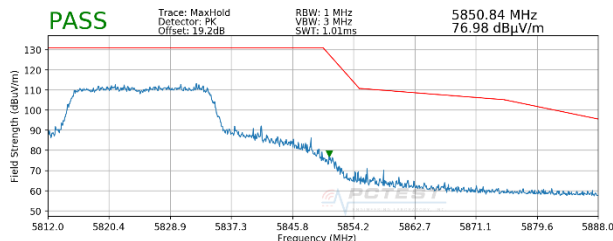


Plot 7-311. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 2C – 242 Tones)



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

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



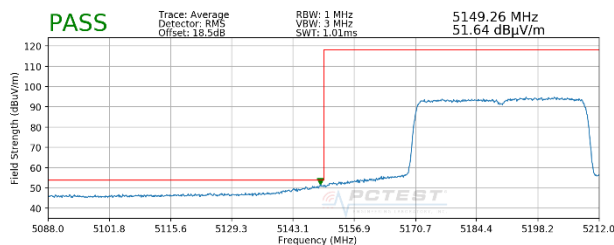
Plot 7-313. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 3 – 242 Tones)

FCC ID: A3LSMG981U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 250 of 271

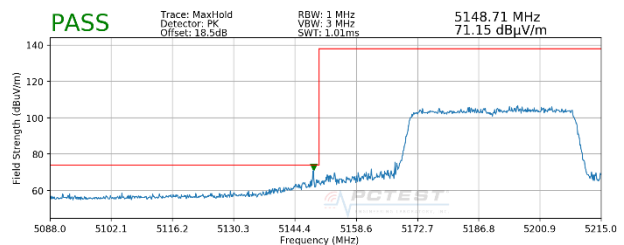
7.6.5 SISO Antenna-1 Radiated Band Edge Measurements (40MHz BW) §15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

484 Tones

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

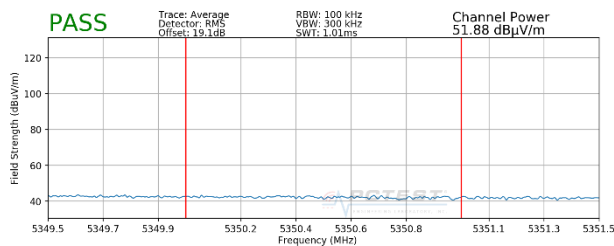


Plot 7-314. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 1 – 484 Tones)

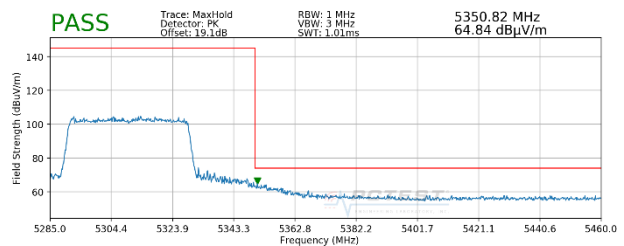


Plot 7-315. Radiated Lower Band Edge Plot SISO ANT1 (Peak – UNII Band 1 – 484 Tones)

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



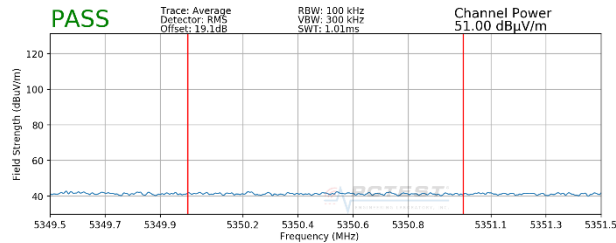
Plot 7-316. Radiated Upper Band Edge Plot SISO ANT1 (Average – UNII Band 2A – 484 Tones)



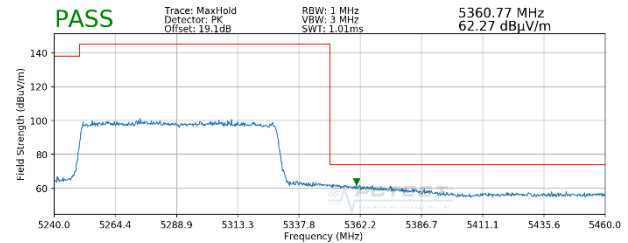
Plot 7-317. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 2A – 484 Tones)

FCC ID: A3LSMG981U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 251 of 271

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

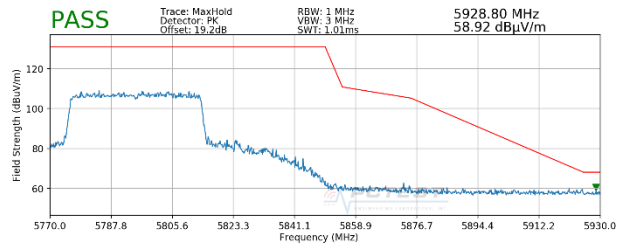


Plot 7-318. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 2C – 484 Tones)



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

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



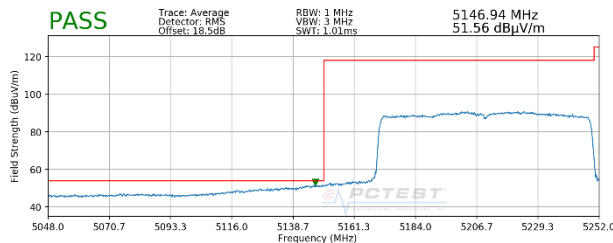
Plot 7-320. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 3 – 484 Tones)

FCC ID: A3LSMG981U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 252 of 271

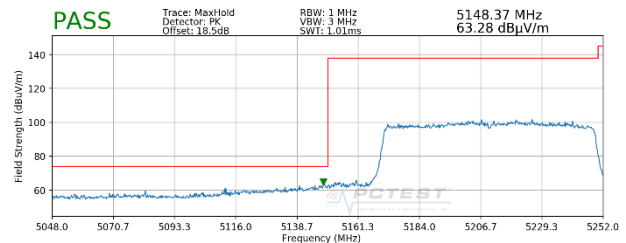
7.6.6 SISO Antenna-1 Radiated Band Edge Measurements (80MHz BW) §15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

996 Tones

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

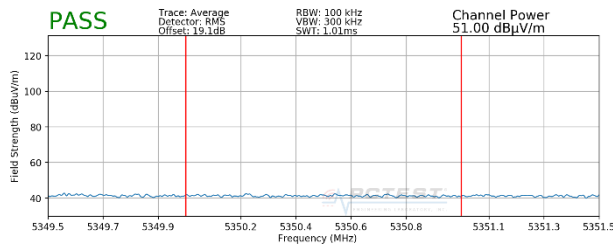


Plot 7-321. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 1 – 996 Tones)

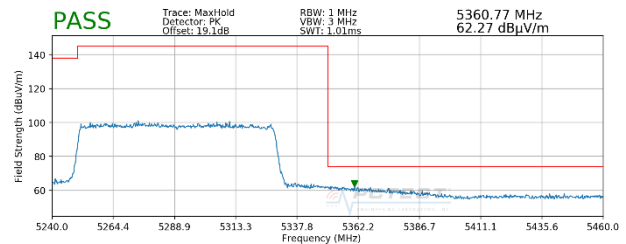


Plot 7-322. Radiated Lower Band Edge Plot SISO ANT1 (Peak – UNII Band 1 – 996 Tones)

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



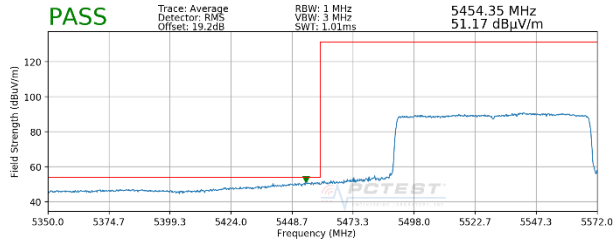
Plot 7-323. Radiated Upper Band Edge Plot SISO ANT1 (Average – UNII Band 2A – 996 Tones)



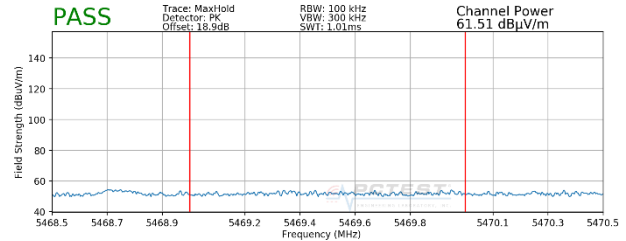
Plot 7-324. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 2A – 996 Tones)

FCC ID: A3LSMG981U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 253 of 271

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

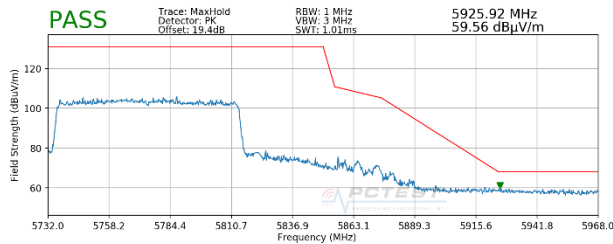


Plot 7-325. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 2C – 996 Tones)



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

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



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

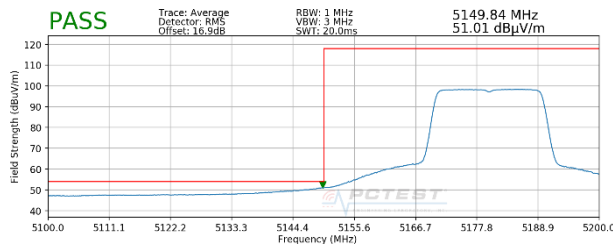
FCC ID: A3LSMG981U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 254 of 271

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

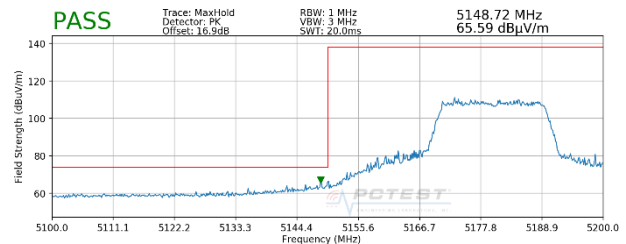
\$15.407(b.1)(b.2) \$15.205 \$15.209; RSS-Gen [8.9]

242 Tones

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

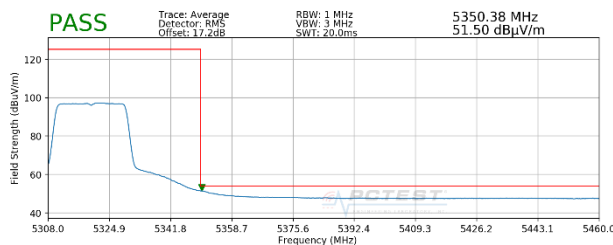


Plot 7-328. Radiated Lower Band Edge Plot SISO ANT2 (Average – UNII Band 1 – 242 Tones)

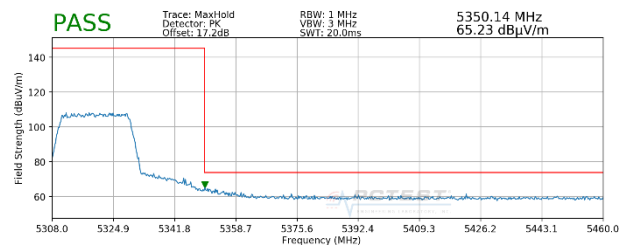


Plot 7-329. Radiated Lower Band Edge Plot SISO ANT2 (Peak – UNII Band 1 – 242 Tones)

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



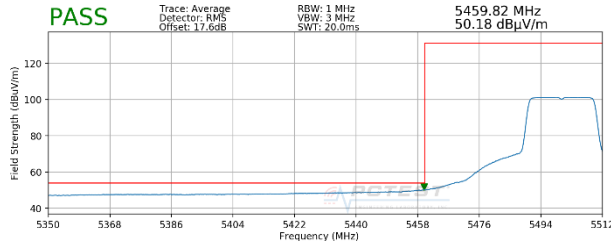
Plot 7-330. Radiated Upper Band Edge Plot SISO ANT2 (Average – UNII Band 2A – 242 Tones)



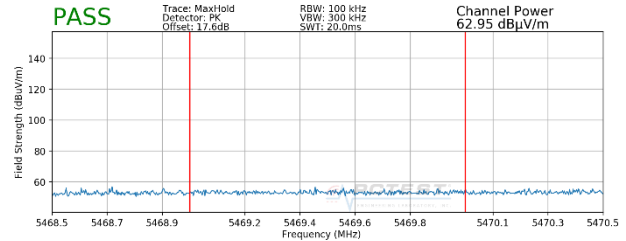
Plot 7-331. Radiated Upper Band Edge Plot SISO ANT2 (Peak – UNII Band 2A – 242 Tones)

FCC ID: A3LSMG981U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 255 of 271

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

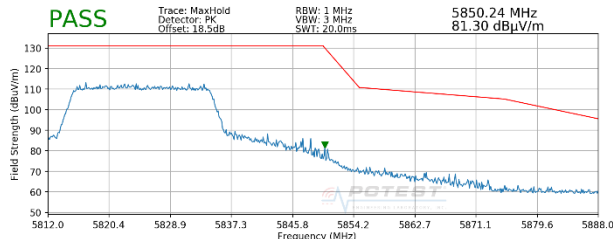


Plot 7-332. Radiated Lower Band Edge Plot SISO ANT2 (Average – UNII Band 2C – 242 Tones)



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

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



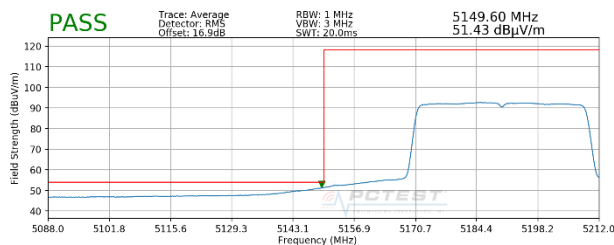
Plot 7-334. Radiated Upper Band Edge Plot SISO ANT2 (Peak – UNII Band 3 – 242 Tones)

FCC ID: A3LSMG981U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset	Page 256 of 271

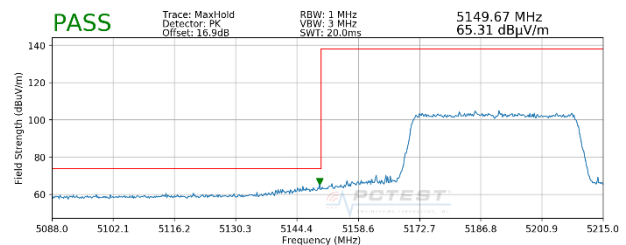
7.6.8 SISO Antenna-2 Radiated Band Edge Measurements (40MHz BW) §15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

484 Tones

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

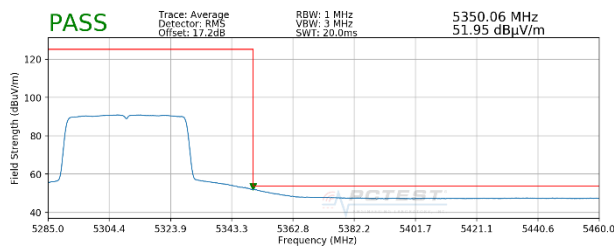


Plot 7-335. Radiated Lower Band Edge Plot SISO ANT2 (Average - UNII Band 1 - 484 Tones)

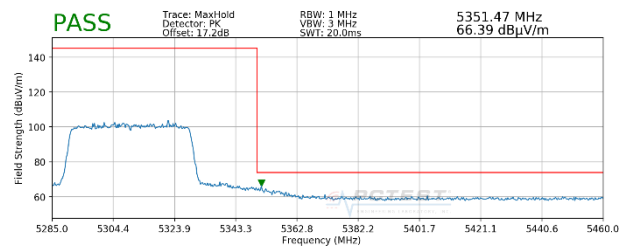


Plot 7-336. Radiated Lower Band Edge Plot SISO ANT2 (Peak - UNII Band 1 - 484 Tones)

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



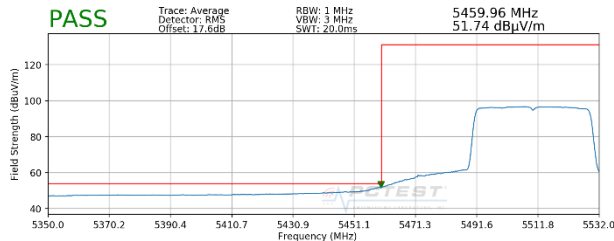
Plot 7-337. Radiated Upper Band Edge Plot SISO ANT2 (Average - UNII Band 2A - 484 Tones)



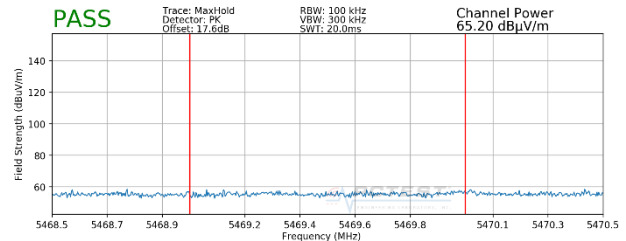
Plot 7-338. Radiated Upper Band Edge Plot SISO ANT2 (Peak - UNII Band 2A - 484 Tones)

FCC ID: A3LSMG981U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 257 of 271

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

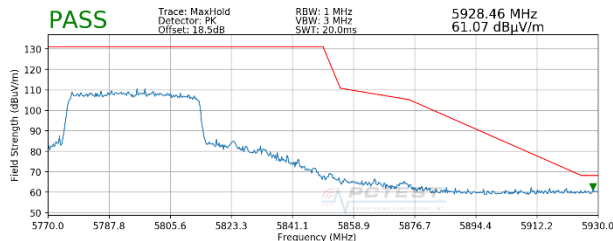


Plot 7-339. Radiated Lower Band Edge Plot SISO ANT2 (Average – UNII Band 2C – 484 Tones)



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

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



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

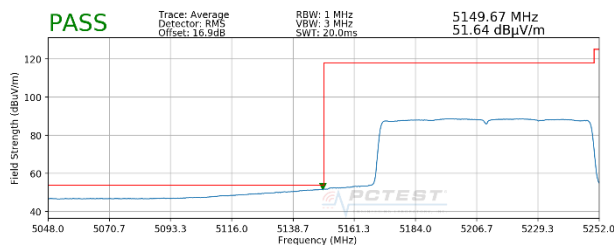
FCC ID: A3LSMG981U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 258 of 271

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

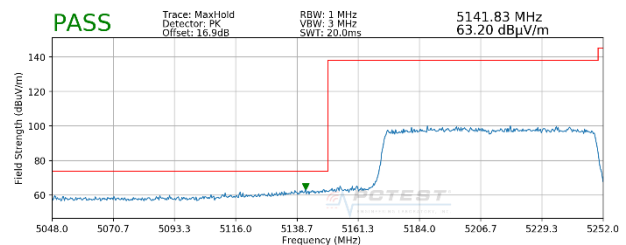
§15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

996 Tones

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

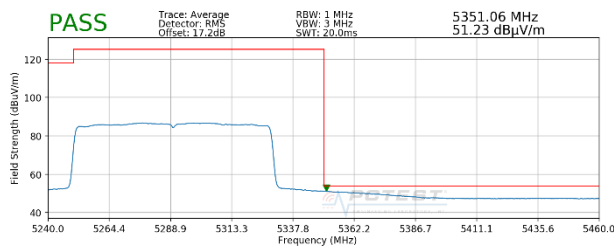


Plot 7-342. Radiated Lower Band Edge Plot SISO ANT2 (Average – UNII Band 1 – 996 Tones)

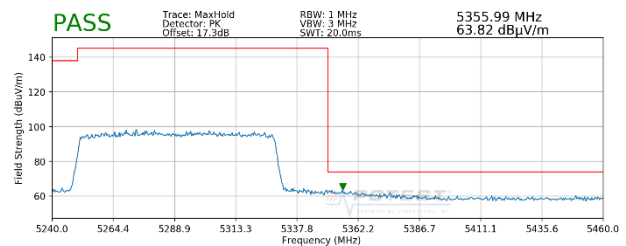


Plot 7-343. Radiated Lower Band Edge Plot SISO ANT2 (Peak – UNII Band 1 – 996 Tones)

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



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



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

FCC ID: A3LSMG981U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1910220165-06.A3L	Test Dates: 10/22 - 1/04/2020	EUT Type: Portable Handset		Page 259 of 271