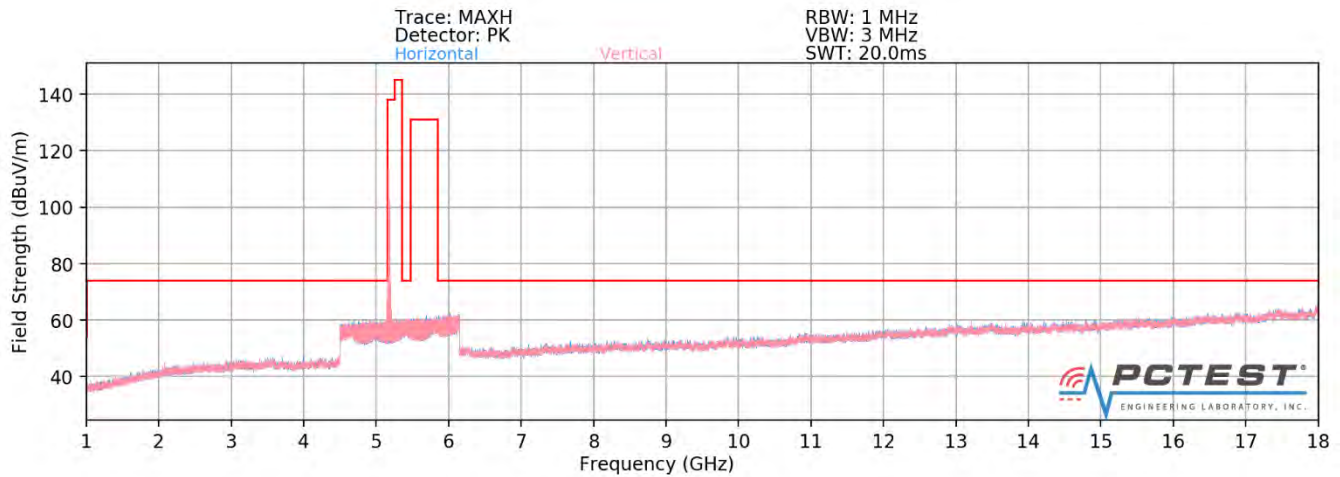
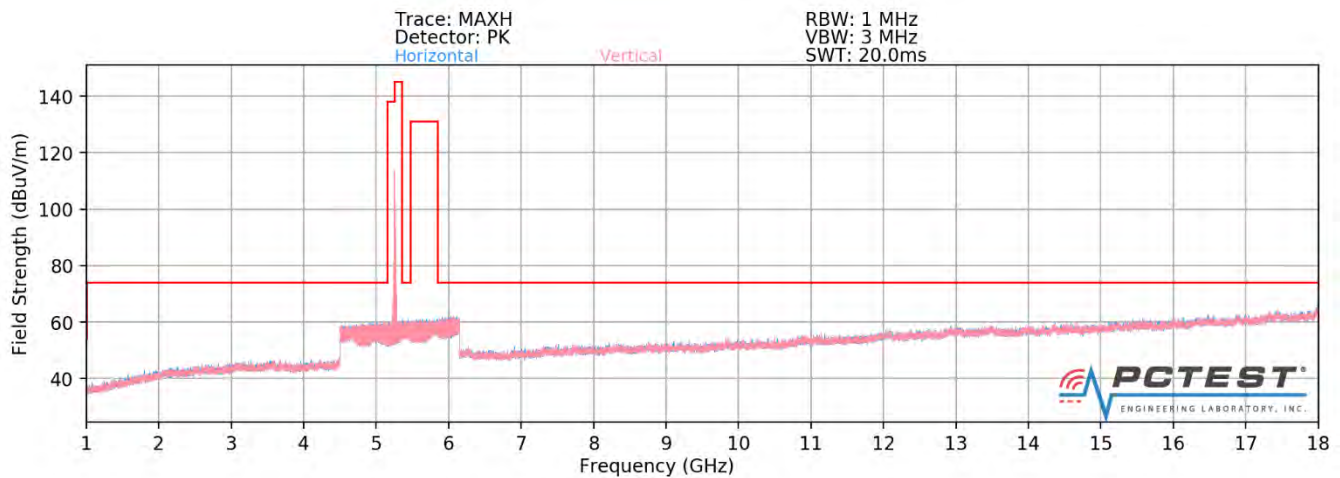


7.6.1 SISO Antenna-1 Radiated Spurious Emission Measurements

26 Tones

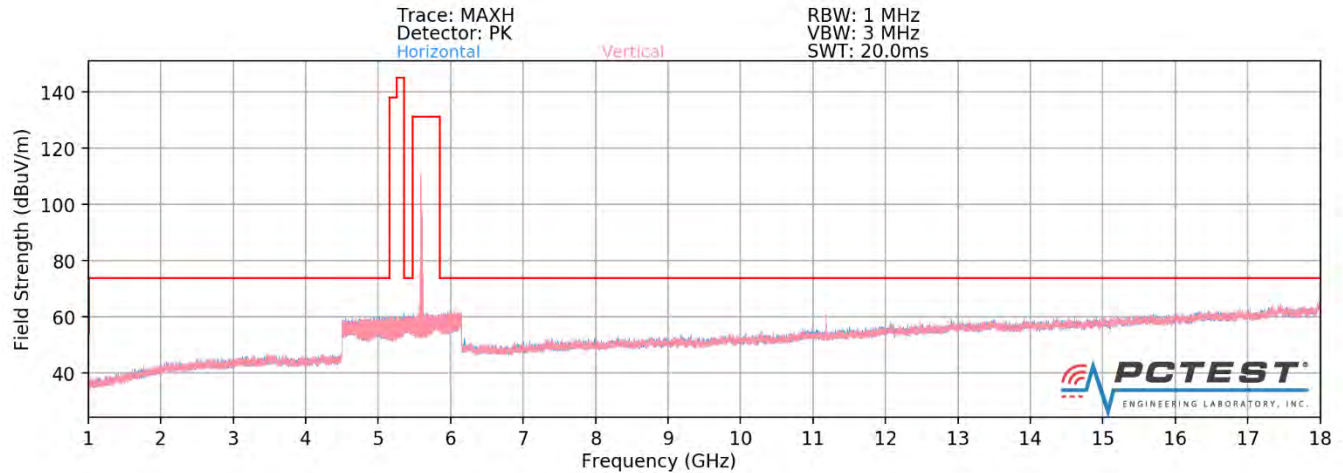


Plot 7-271. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11ax – U1 Ch. 40 – 26 Tones)

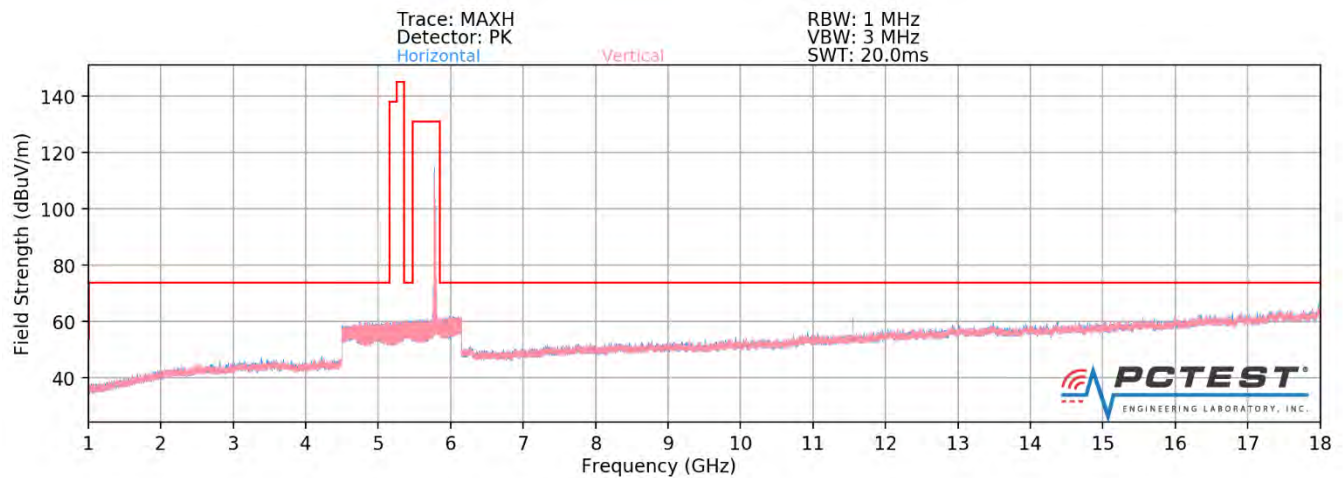


Plot 7-272. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11ax – U2A Ch. 56 – 26 Tones)

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 194 of 270



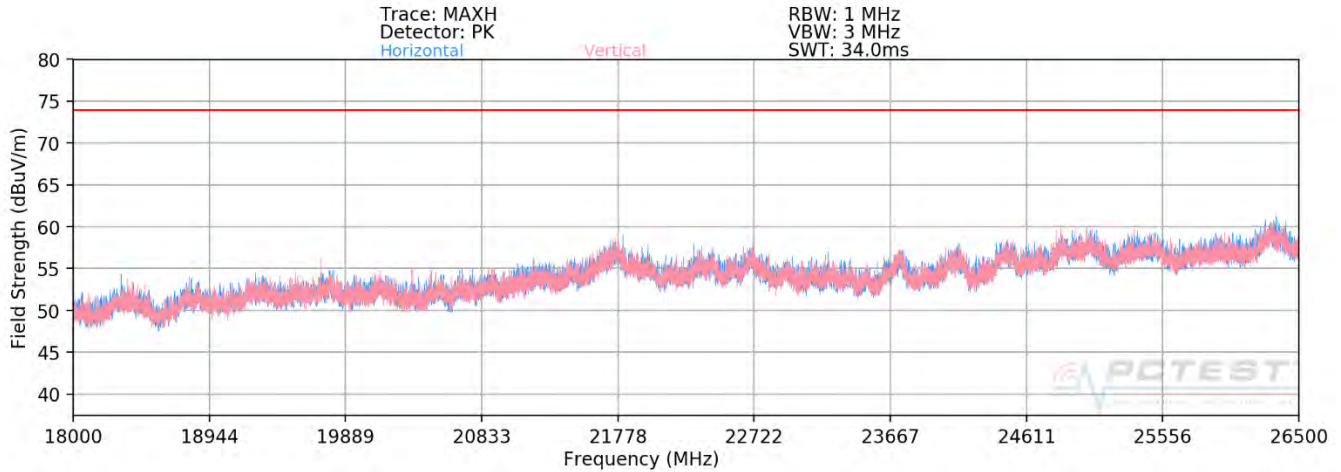
Plot 7-273. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11ax – U2C Ch. 120 – 26 Tones)



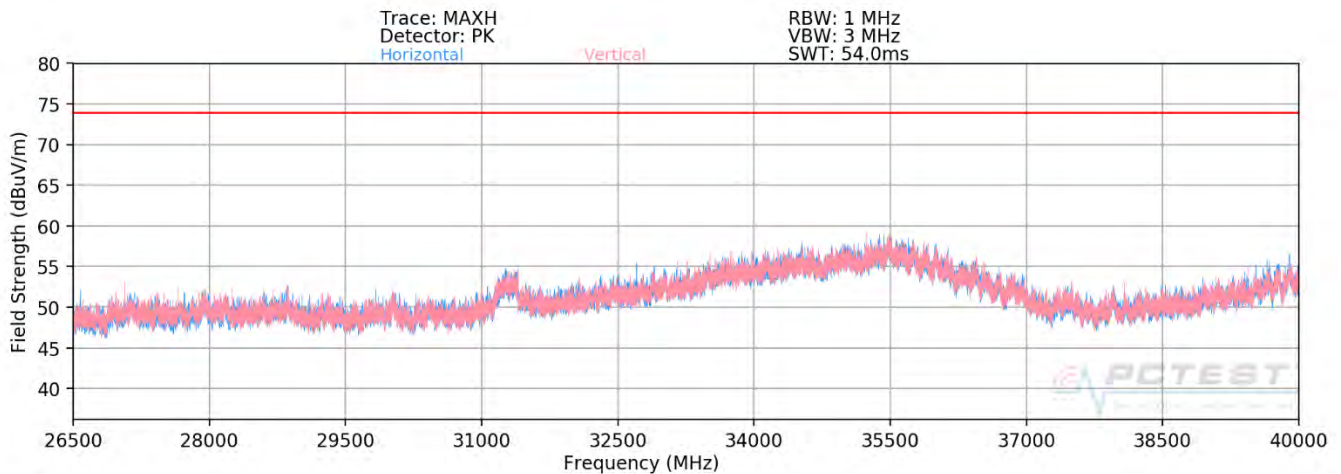
Plot 7-274. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11ax – U3 Ch. 157 – 26 Tones)

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 195 of 270

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



Plot 7-275. Radiated Spurious Plot 18GHz - 26.5GHz SISO ANT1 (802.11ax - 26 Tones)



Plot 7-276. Radiated Spurious Plot 26.5GHz - 40GHz SISO ANT1 (802.11ax - 26 Tones)

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 196 of 270

SISO Antenna-1 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: 4
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	143	25	-69.09	11.61	0.00	49.52	68.20	-18.68
* 15540.00	Average	V	-	-	-81.99	13.79	0.00	38.80	53.98	-15.18
* 15540.00	Peak	V	-	-	-64.51	13.79	0.00	56.28	73.98	-17.70
* 20720.00	Average	H	-	-	-79.29	17.51	-9.54	35.68	53.98	-18.30
* 20720.00	Peak	H	-	-	-67.06	17.51	-9.54	47.91	73.98	-26.07
25900.00	Peak	H	-	-	-65.38	19.88	-9.54	51.96	68.20	-16.24

Table 7-70. Radiated Measurements SISO ANT1 (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
Worst Case Transfer Rate: MCS0
RU Index: 4
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	191	51	-67.58	11.62	0.00	51.04	68.20	-17.16
* 15600.00	Average	V	-	-	-82.14	12.99	0.00	37.85	53.98	-16.13
* 15600.00	Peak	V	-	-	-69.08	12.99	0.00	50.91	73.98	-23.07
* 20800.00	Average	H	-	-	-79.37	17.87	-9.54	35.95	53.98	-18.03
* 20800.00	Peak	H	-	-	-66.40	17.87	-9.54	48.92	73.98	-25.06
26000.00	Peak	H	-	-	-66.13	20.15	-9.54	51.47	68.20	-16.73

Table 7-71. Radiated Measurements SISO ANT1 (26 Tones)

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 197 of 270

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 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	186	42	-66.38	11.91	0.00	52.53	68.20	-15.67
* 15720.00	Average	V	-	-	-81.84	14.48	0.00	39.64	53.98	-14.34
* 15720.00	Peak	V	-	-	-69.11	14.48	0.00	52.37	73.98	-21.61
* 20960.00	Average	H	-	-	-79.43	18.06	-9.54	36.08	53.98	-17.89
* 20960.00	Peak	H	-	-	-67.91	18.06	-9.54	47.60	73.98	-26.37
26200.00	Peak	H	-	-	-65.66	20.23	-9.54	52.03	68.20	-16.17

Table 7-72. Radiated Measurements SISO ANT1 (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 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	214	32	-66.42	12.28	0.00	52.86	68.20	-15.34
* 15780.00	Average	V	-	-	-82.17	13.45	0.00	38.28	53.98	-15.70
* 15780.00	Peak	V	-	-	-68.08	13.45	0.00	52.37	73.98	-21.61
* 21040.00	Average	H	-	-	-79.11	18.36	-9.54	36.70	53.98	-17.28
* 21040.00	Peak	H	-	-	-67.58	18.36	-9.54	48.23	73.98	-25.75
26300.00	Peak	H	-	-	-64.45	20.96	-9.54	53.96	68.20	-14.24

Table 7-73. Radiated Measurements SISO ANT1 (26 Tones)

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 198 of 270

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 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	211	23	-67.44	12.38	0.00	51.94	68.20	-16.26
* 15840.00	Average	V	-	-	-81.73	14.77	0.00	40.04	53.98	-13.94
* 15840.00	Peak	V	-	-	-68.21	14.77	0.00	53.56	73.98	-20.42
* 21120.00	Average	H	-	-	-79.03	18.17	-9.54	36.59	53.98	-17.38
* 21120.00	Peak	H	-	-	-67.08	18.17	-9.54	48.54	73.98	-25.43
26400.00	Peak	H	-	-	-65.86	20.65	-9.54	52.25	68.20	-15.95

Table 7-74. Radiated Measurements SISO ANT1 (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 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	237	28	-80.45	12.24	0.00	38.79	53.98	-15.19
* 10640.00	Peak	V	237	28	-66.80	12.24	0.00	52.44	73.98	-21.54
* 15960.00	Average	V	-	-	-82.21	14.16	0.00	38.95	53.98	-15.03
* 15960.00	Peak	V	-	-	-69.59	14.16	0.00	51.57	73.98	-22.41
* 21280.00	Average	H	-	-	-78.91	18.57	-9.54	37.12	53.98	-16.86
* 21280.00	Peak	H	-	-	-66.73	18.57	-9.54	49.30	73.98	-24.68
26600.00	Peak	H	-	-	-52.49	5.16	-9.54	50.13	68.20	-18.07

Table 7-75. Radiated Measurements SISO ANT1 (26 Tones)

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 199 of 270

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 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	131	30	-80.94	12.63	0.00	38.69	53.98	-15.28
* 11000.00	Peak	V	131	30	-69.08	12.63	0.00	50.55	73.98	-23.42
16500.00	Peak	V	-	-	-70.39	15.01	0.00	51.62	68.20	-16.58
22000.00	Peak	H	-	-	-67.23	19.12	-9.54	49.34	68.20	-18.86
27500.00	Peak	H	-	-	-50.66	3.98	-9.54	50.78	68.20	-17.42

Table 7-76. Radiated Measurements SISO ANT1 (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 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	138	36	-80.62	12.57	0.00	38.95	53.98	-15.03
* 11200.00	Peak	V	138	36	-65.29	12.57	0.00	54.28	73.98	-19.70
16800.00	Peak	V	-	-	-70.39	16.13	0.00	52.74	68.20	-15.46
* 22400.00	Average	H	-	-	-79.05	20.03	-9.54	38.44	53.98	-15.54
* 22400.00	Peak	H	-	-	-67.28	20.03	-9.54	50.21	73.98	-23.77
28000.00	Peak	H	-	-	-51.73	4.70	-9.54	50.43	68.20	-17.77

Table 7-77. Radiated Measurements SISO ANT1 (26 Tones)

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 200 of 270

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 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	150	25	-79.48	12.86	0.00	40.38	53.98	-13.60
* 11440.00	Peak	V	150	25	-64.37	12.86	0.00	55.49	73.98	-18.49
17160.00	Peak	V	-	-	-69.57	17.87	0.00	55.30	68.20	-12.90
* 22880.00	Average	H	-	-	-79.42	19.50	-9.54	37.54	53.98	-16.44
* 22880.00	Peak	H	-	-	-68.03	19.50	-9.54	48.93	73.98	-25.05
28600.00	Peak	H	-	-	-51.75	5.14	-9.54	50.85	68.20	-17.35

Table 7-78. Radiated Measurements SISO ANT1 (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 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	396	17	-78.06	13.52	0.00	42.46	53.98	-11.52
* 11490.00	Peak	V	396	17	-63.20	13.52	0.00	57.32	73.98	-16.66
17235.00	Peak	V	-	-	-69.40	17.74	0.00	55.34	68.20	-12.86
* 22980.00	Average	H	-	-	-79.46	19.89	-9.54	37.88	53.98	-16.10
* 22980.00	Peak	H	-	-	-67.32	19.89	-9.54	50.02	73.98	-23.96
28725.00	Peak	H	-	-	-51.54	4.66	-9.54	50.58	68.20	-17.62

Table 7-79. Radiated Measurements SISO ANT1 (26 Tones)

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 201 of 270

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 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	400	22	-77.16	12.59	0.00	42.43	53.98	-11.55
* 11570.00	Peak	V	400	22	-61.82	12.59	0.00	57.77	73.98	-16.21
17355.00	Peak	V	-	-	-69.79	19.47	0.00	56.68	68.20	-11.52
23140.00	Peak	H	-	-	-66.54	19.59	-9.54	50.51	68.20	-17.69
28925.00	Peak	H	-	-	-52.40	4.43	-9.54	49.49	68.20	-18.71

Table 7-80. Radiated Measurements SISO ANT1 (26 Tones)

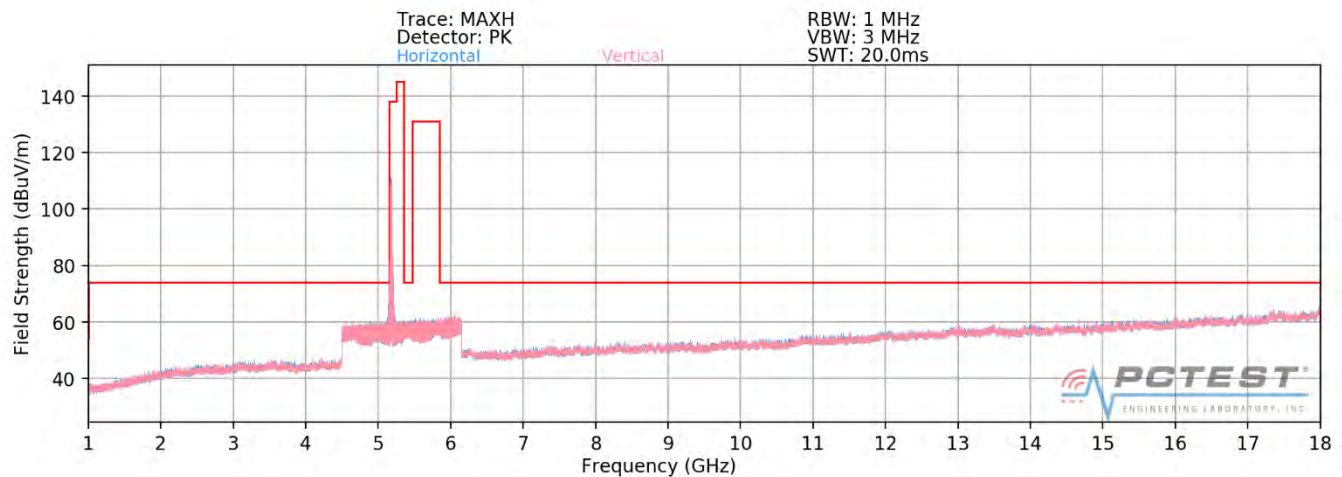
Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5825MHz
 Channel: 165

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	394	14	-77.21	13.51	0.00	43.30	53.98	-10.68
* 11650.00	Peak	V	394	14	-61.21	13.51	0.00	59.30	73.98	-14.68
17475.00	Peak	V	-	-	-69.32	19.87	0.00	57.55	68.20	-10.65
23300.00	Peak	H	-	-	-67.09	18.93	-9.54	49.30	68.20	-18.90
29125.00	Peak	H	-	-	-50.77	3.48	-9.54	50.17	68.20	-18.03

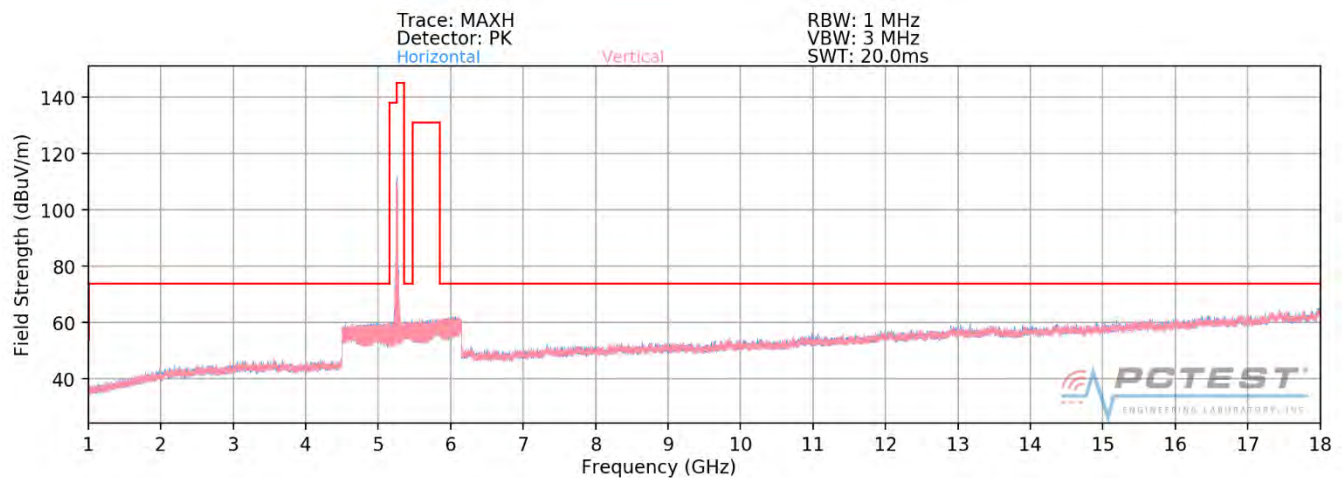
Table 7-81. Radiated Measurements SISO ANT1 (26 Tones)

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 202 of 270

242 Tones

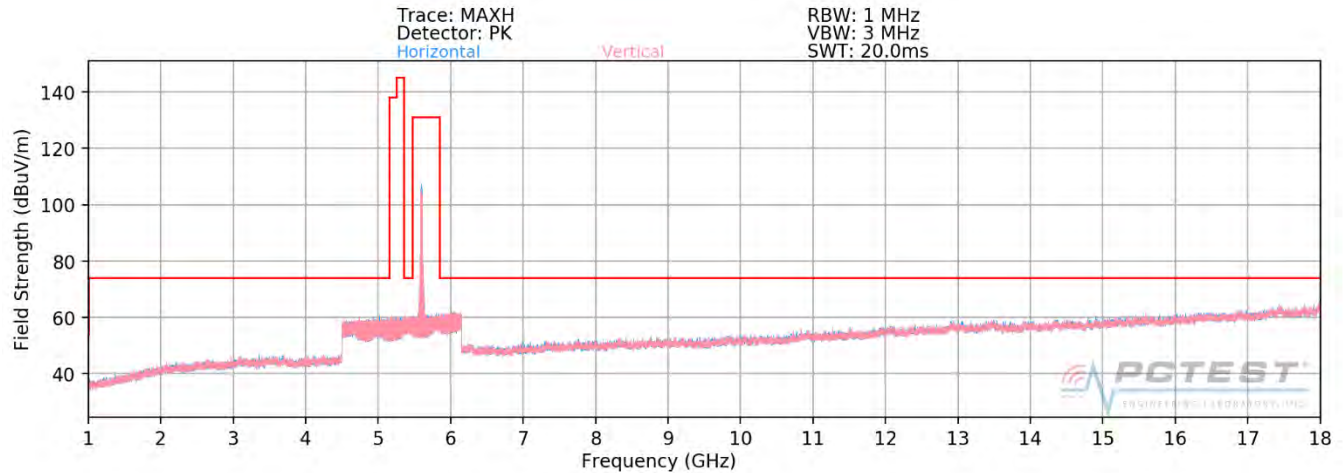


Plot 7-277. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11ax – U1 Ch. 40 – 242 Tones)

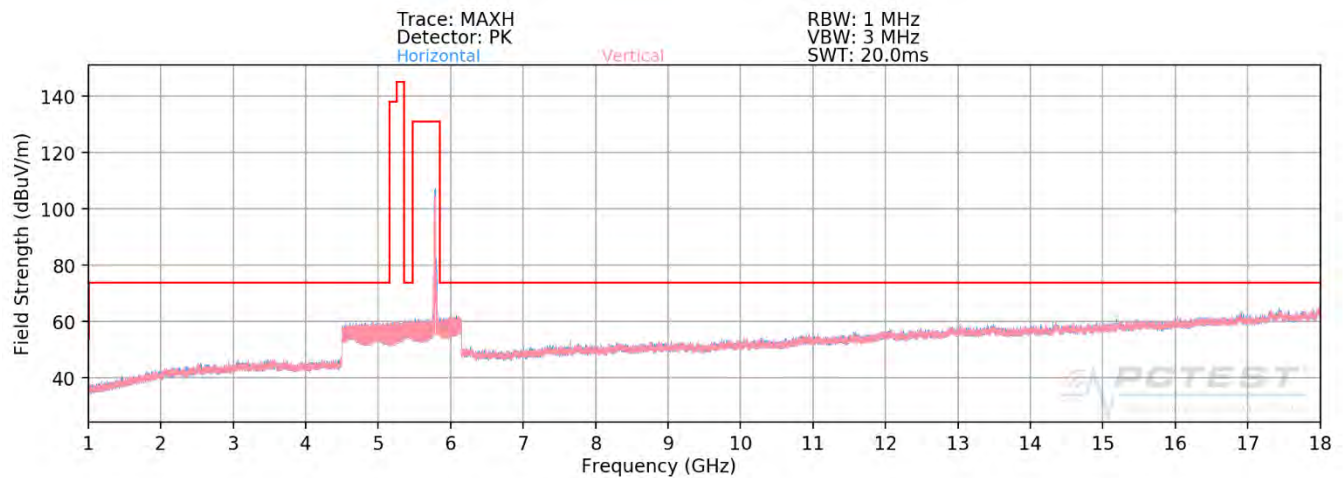


Plot 7-278. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11ax – U2A Ch. 56 – 242 Tones)

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 203 of 270



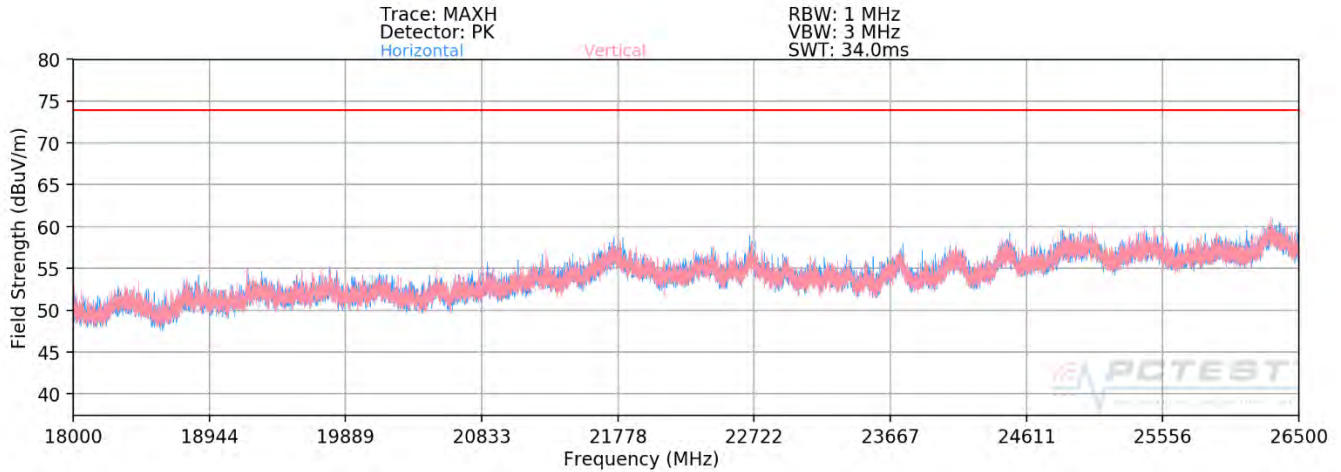
Plot 7-279. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11ax – U2C Ch. 120 – 242 Tones)



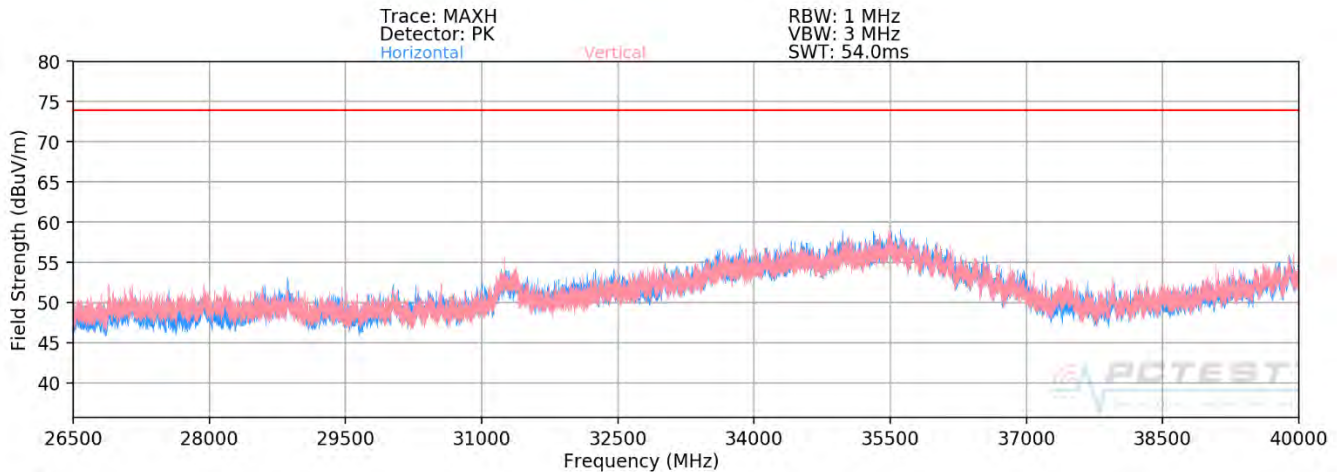
Plot 7-280. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11ax – U3 Ch. 157 – 242 Tones)

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 204 of 270

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



Plot 7-281. Radiated Spurious Plot 18GHz - 26.5GHz SISO ANT1 (802.11ax - 242 Tones)



Plot 7-282. Radiated Spurious Plot 26.5GHz - 40GHz SISO ANT1 (802.11ax - 242 Tones)

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 205 of 270

SISO Antenna-1 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	159	46	-68.86	11.61	0.00	49.75	68.20	-18.45
* 15540.00	Average	V	157	36	-79.72	13.79	0.00	41.07	53.98	-12.91
* 15540.00	Peak	V	157	36	-65.65	13.79	0.00	55.14	73.98	-18.84
* 20720.00	Average	H	-	-	-79.21	17.51	-9.54	35.76	53.98	-18.22
* 20720.00	Peak	H	-	-	-66.64	17.51	-9.54	48.33	73.98	-25.65
25900.00	Peak	H	-	-	-64.94	19.88	-9.54	52.40	68.20	-15.80

Table 7-82. Radiated Measurements SISO ANT1 (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	193	41	-68.06	11.62	0.00	50.56	68.20	-17.64
* 15600.00	Average	V	-	-	-80.36	12.99	0.00	39.63	53.98	-14.35
* 15600.00	Peak	V	-	-	-66.82	12.99	0.00	53.17	73.98	-20.81
* 20800.00	Average	H	-	-	-79.35	17.87	-9.54	35.97	53.98	-18.01
* 20800.00	Peak	H	-	-	-67.12	17.87	-9.54	48.20	73.98	-25.78
26000.00	Peak	H	-	-	-65.55	20.15	-9.54	52.05	68.20	-16.15

Table 7-83. Radiated Measurements SISO ANT1 (242 Tones)

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 206 of 270

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	208	39	-67.54	11.91	0.00	51.37	68.20	-16.83
* 15720.00	Average	V	195	44	-80.42	14.48	0.00	41.06	53.98	-12.92
* 15720.00	Peak	V	195	44	-67.32	14.48	0.00	54.16	73.98	-19.82
* 20960.00	Average	H	-	-	-79.19	18.06	-9.54	36.32	53.98	-17.65
* 20960.00	Peak	H	-	-	-67.03	18.06	-9.54	48.48	73.98	-25.49
26200.00	Peak	H	-	-	-65.59	20.23	-9.54	52.10	68.20	-16.10

Table 7-84. Radiated Measurements SISO ANT1 (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	198	35	-67.32	12.28	0.00	51.96	68.20	-16.24
* 15780.00	Average	V	211	39	-80.42	13.45	0.00	40.03	53.98	-13.95
* 15780.00	Peak	V	211	39	-66.96	13.45	0.00	53.49	73.98	-20.49
* 21040.00	Average	H	-	-	-78.92	18.36	-9.54	36.89	53.98	-17.09
* 21040.00	Peak	H	-	-	-67.27	18.36	-9.54	48.54	73.98	-25.44
26300.00	Peak	H	-	-	-65.56	20.96	-9.54	52.85	68.20	-15.35

Table 7-85. Radiated Measurements SISO ANT1 (242 Tones)

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 207 of 270

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	216	24	-67.55	12.38	0.00	51.83	68.20	-16.37
* 15840.00	Average	V	218	39	-79.91	14.77	0.00	41.86	53.98	-12.12
* 15840.00	Peak	V	218	39	-66.62	14.77	0.00	55.15	73.98	-18.83
* 21120.00	Average	H	-	-	-79.02	18.17	-9.54	36.60	53.98	-17.37
* 21120.00	Peak	H	-	-	-66.58	18.17	-9.54	49.04	73.98	-24.93
26400.00	Peak	H	-	-	-65.59	20.65	-9.54	52.52	68.20	-15.68

Table 7-86. Radiated Measurements SISO ANT1 (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	233	40	-79.29	12.24	0.00	39.95	53.98	-14.03
* 10640.00	Peak	V	233	40	-67.13	12.24	0.00	52.11	73.98	-21.87
* 15960.00	Average	V	222	37	-80.39	14.16	0.00	40.77	53.98	-13.21
* 15960.00	Peak	V	222	7	-67.61	14.16	0.00	53.55	73.98	-20.43
* 21280.00	Average	H	-	-	-78.96	18.57	-9.54	37.07	53.98	-16.91
* 21280.00	Peak	H	-	-	-67.01	18.57	-9.54	49.02	73.98	-24.96
26600.00	Peak	H	-	-	-51.59	5.16	-9.54	51.03	68.20	-17.17

Table 7-87. Radiated Measurements SISO ANT1 (242 Tones)

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 208 of 270

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	400	38	-81.75	12.63	0.00	37.88	53.98	-16.09
* 11000.00	Peak	V	-	-	-66.31	12.63	0.00	53.32	73.98	-20.65
16500.00	Peak	V	-	-	-69.00	15.01	0.00	53.01	68.20	-15.19
22000.00	Peak	H	-	-	-66.51	19.12	-9.54	50.06	68.20	-18.14
27500.00	Peak	H	-	-	-51.07	3.98	-9.54	50.37	68.20	-17.83

Table 7-88. Radiated Measurements SISO ANT1 (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	V	126	35	-78.50	12.57	0.00	41.07	53.98	-12.91
* 11200.00	Peak	V	126	35	-64.26	12.57	0.00	55.31	73.98	-18.67
16800.00	Peak	V	-	-	-70.18	16.13	0.00	52.95	68.20	-15.25
* 22400.00	Average	H	-	-	-79.30	20.03	-9.54	38.19	53.98	-15.79
* 22400.00	Peak	H	-	-	-67.52	20.03	-9.54	49.97	73.98	-24.01
28000.00	Peak	H	-	-	-52.05	4.70	-9.54	50.11	68.20	-18.09

Table 7-89. Radiated Measurements SISO ANT1 (242 Tones)

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 209 of 270

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	V	137	27	-78.07	12.86	0.00	41.79	53.98	-12.19
* 11440.00	Peak	V	137	27	-64.90	12.86	0.00	54.96	73.98	-19.02
17160.00	Peak	V	-	-	-70.22	17.87	0.00	54.65	68.20	-13.55
* 22880.00	Average	H	-	-	-79.57	19.50	-9.54	37.39	53.98	-16.59
* 22880.00	Peak	H	-	-	-67.33	19.50	-9.54	49.63	73.98	-24.35
28600.00	Peak	H	-	-	-51.94	5.14	-9.54	50.66	68.20	-17.54

Table 7-90. Radiated Measurements SISO ANT1 (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	394	21	-75.50	13.52	0.00	45.02	53.98	-8.96
* 11490.00	Peak	V	394	21	-62.17	13.52	0.00	58.35	73.98	-15.63
17235.00	Peak	V	-	-	-69.47	17.74	0.00	55.27	68.20	-12.93
* 22980.00	Average	H	-	-	-79.61	19.89	-9.54	37.73	53.98	-16.25
* 22980.00	Peak	H	-	-	-67.38	19.89	-9.54	49.96	73.98	-24.02
28725.00	Peak	H	-	-	-51.35	4.66	-9.54	50.77	68.20	-17.43

Table 7-91. Radiated Measurements SISO ANT1 (242 Tones)

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 210 of 270

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	400	23	-75.06	12.59	0.00	44.53	53.98	-9.45
* 11570.00	Peak	V	400	23	-61.64	12.59	0.00	57.95	73.98	-16.03
17355.00	Peak	V	-	-	-69.93	19.47	0.00	56.54	68.20	-11.66
23140.00	Peak	H	-	-	-66.79	19.59	-9.54	50.26	68.20	-17.94
28925.00	Peak	H	-	-	-52.48	4.43	-9.54	49.41	68.20	-18.79

Table 7-92. Radiated Measurements SISO ANT1 (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

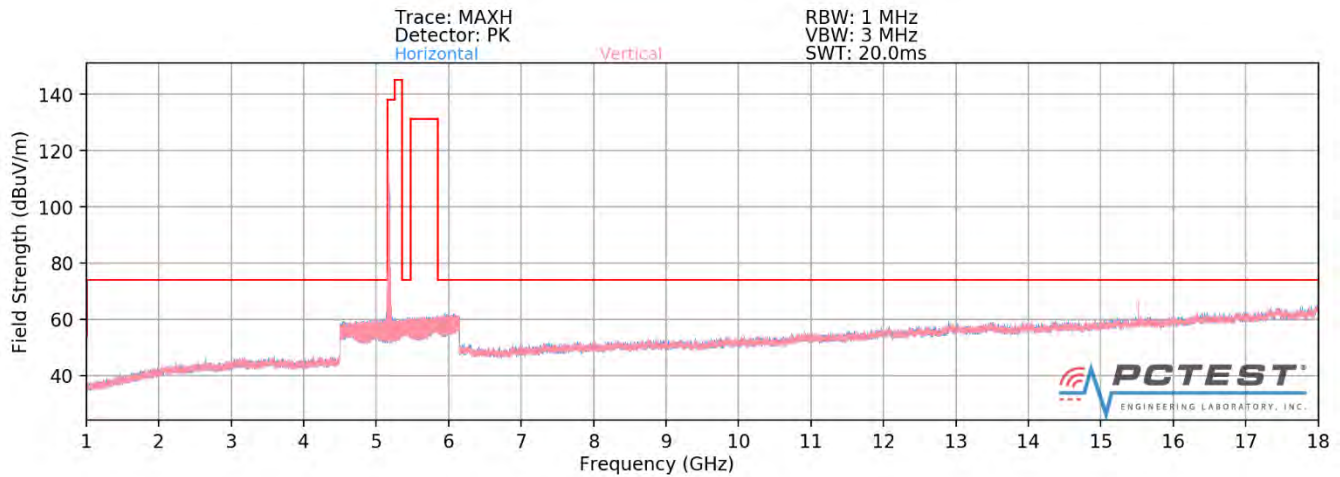
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11650.00	Average	V	390	21	-73.86	13.51	0.00	46.65	53.98	-7.33
* 11650.00	Peak	V	390	21	-60.96	13.51	0.00	59.55	73.98	-14.43
17475.00	Peak	V	-	-	-69.65	19.87	0.00	57.22	68.20	-10.98
23300.00	Peak	H	-	-	-67.56	18.93	-9.54	48.83	68.20	-19.37
29125.00	Peak	H	-	-	-50.08	3.48	-9.54	50.86	68.20	-17.34

Table 7-93. Radiated Measurements SISO ANT1 (242 Tones)

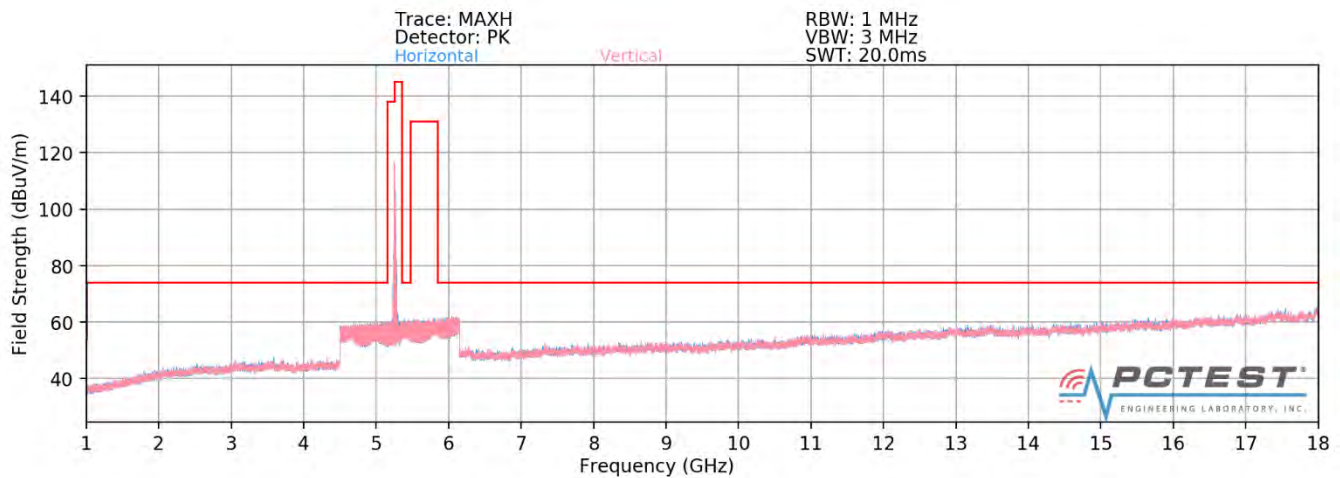
FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 211 of 270

7.6.2 SISO Antenna-2 Radiated Spurious Emission Measurements

26 Tones

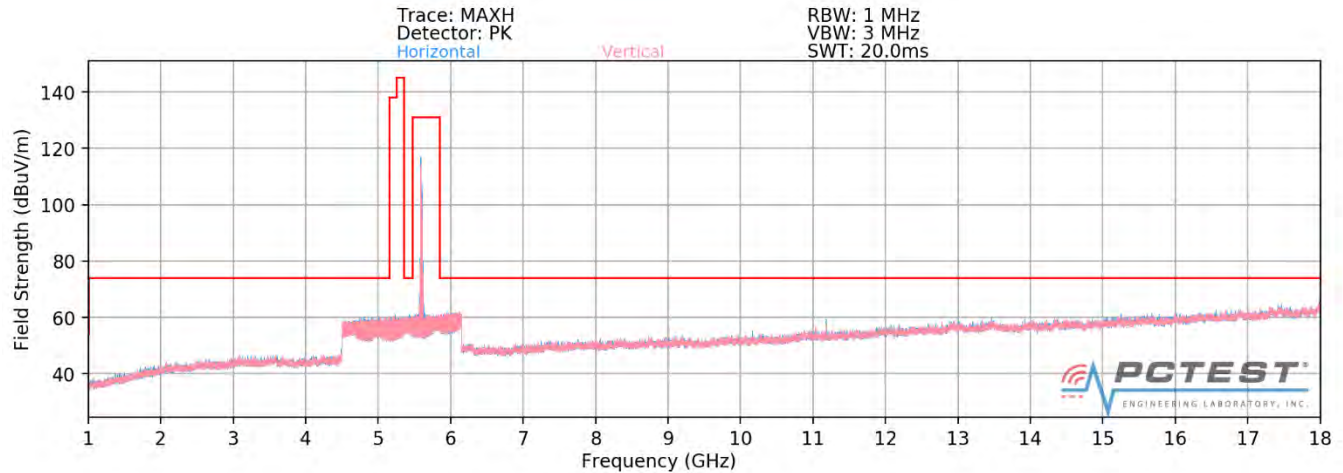


Plot 7-283. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U1 Ch. 40 – 26 Tones)

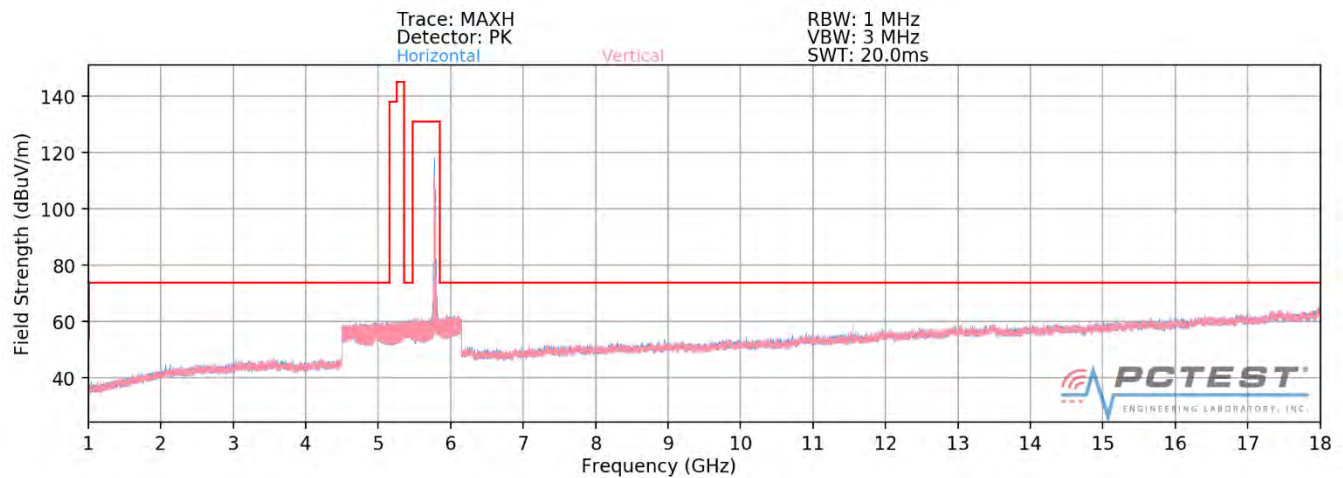


Plot 7-284. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U2A Ch. 56 – 26 Tones)

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 212 of 270



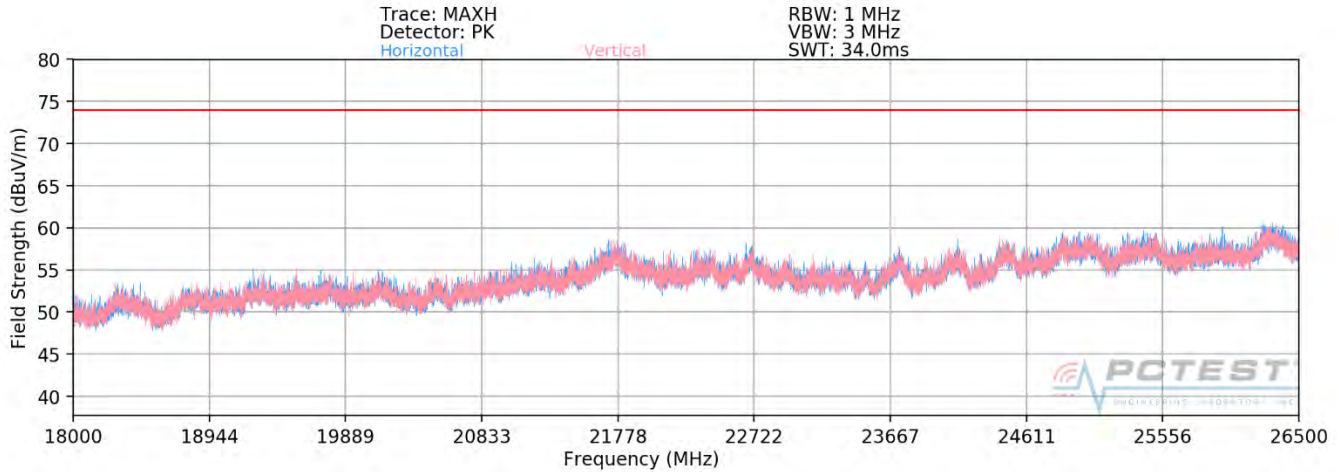
Plot 7-285. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U2C Ch. 120 – 26 Tones)



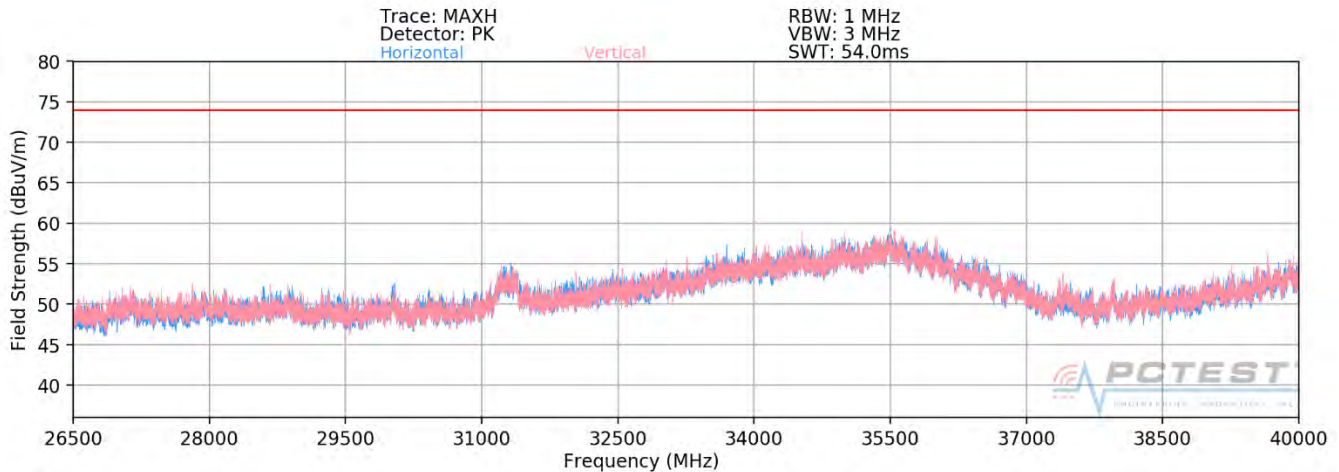
Plot 7-286. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U3 Ch. 157 – 26 Tones)

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 213 of 270

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: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 214 of 270

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: 4
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	-	-	-71.44	11.61	0.00	47.17	68.20	-21.03
* 15540.00	Average	H	-	-	-85.18	13.79	0.00	35.61	53.98	-18.37
* 15540.00	Peak	H	-	-	-73.06	13.79	0.00	47.73	73.98	-26.25
* 20720.00	Average	H	-	-	-79.10	17.51	-9.54	35.87	53.98	-18.11
* 20720.00	Peak	H	-	-	-67.96	17.51	-9.54	47.01	73.98	-26.97
25900.00	Peak	H	-	-	-66.58	19.88	-9.54	50.76	68.20	-17.44

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

Worst Case Mode: 802.11ax (20MHz BW)
Worst Case Transfer Rate: MCS0
RU Index: 4
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	-	-	-72.29	11.62	0.00	46.33	68.20	-21.87
* 15600.00	Average	H	-	-	-84.61	12.99	0.00	35.38	53.98	-18.60
* 15600.00	Peak	H	-	-	-73.88	12.99	0.00	46.11	73.98	-27.87
* 20800.00	Average	H	-	-	-78.97	17.87	-9.54	36.35	53.98	-17.63
* 20800.00	Peak	H	-	-	-67.53	17.87	-9.54	47.79	73.98	-26.19
26000.00	Peak	H	-	-	-66.56	20.15	-9.54	51.04	68.20	-17.16

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

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 215 of 270

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 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	-	-	-72.33	11.91	0.00	46.58	68.20	-21.62
* 15720.00	Average	H	-	-	-85.82	14.48	0.00	35.66	53.98	-18.32
* 15720.00	Peak	H	-	-	-73.68	14.48	0.00	47.80	73.98	-26.18
* 20960.00	Average	H	-	-	-79.03	18.06	-9.54	36.48	53.98	-17.49
* 20960.00	Peak	H	-	-	-68.03	18.06	-9.54	47.48	73.98	-26.49
26200.00	Peak	H	-	-	-66.06	20.23	-9.54	51.63	68.20	-16.57

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

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 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	-	-	-72.40	12.28	0.00	46.88	68.20	-21.32
* 15780.00	Average	H	-	-	-84.87	13.45	0.00	35.58	53.98	-18.40
* 15780.00	Peak	H	-	-	-73.32	13.45	0.00	47.13	73.98	-26.85
* 21040.00	Average	H	-	-	-78.67	18.36	-9.54	37.15	53.98	-16.83
* 21040.00	Peak	H	-	-	-67.90	18.36	-9.54	47.92	73.98	-26.06
26300.00	Peak	H	-	-	-65.46	20.96	-9.54	52.96	68.20	-15.24

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

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 216 of 270

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 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	-	-	-72.19	12.38	0.00	47.19	68.20	-21.01
* 15840.00	Average	H	-	-	-84.35	14.77	0.00	37.42	53.98	-16.56
* 15840.00	Peak	H	-	-	-72.81	14.77	0.00	48.96	73.98	-25.02
* 21120.00	Average	H	-	-	-78.81	18.17	-9.54	36.82	53.98	-17.16
* 21120.00	Peak	H	-	-	-67.47	18.17	-9.54	48.16	73.98	-25.82
26400.00	Peak	H	-	-	-66.23	20.65	-9.54	51.88	68.20	-16.32

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

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 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	-	-	-71.82	12.24	0.00	47.42	53.98	-6.56
* 10640.00	Peak	H	-	-	-83.37	12.24	0.00	35.87	73.98	-38.11
* 15960.00	Average	H	-	-	-73.08	14.16	0.00	48.08	53.98	-5.90
* 15960.00	Peak	H	-	-	-84.85	14.16	0.00	36.31	73.98	-37.67
* 21280.00	Average	H	-	-	-78.27	18.57	-9.54	37.76	53.98	-16.22
* 21280.00	Peak	H	-	-	-67.20	18.57	-9.54	48.83	73.98	-25.15
26600.00	Peak	H	-	-	-52.42	5.16	-9.54	50.20	68.20	-18.00

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

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 217 of 270

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 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	-	-	-83.74	12.63	0.00	35.89	53.98	-18.08
* 11000.00	Peak	H	-	-	-72.23	12.63	0.00	47.40	73.98	-26.57
16500.00	Peak	H	-	-	-73.38	15.01	0.00	48.63	68.20	-19.57
22000.00	Peak	H	-	-	-67.07	19.12	-9.54	49.51	68.20	-18.69
27500.00	Peak	H	-	-	-51.92	3.98	-9.54	49.52	68.20	-18.68

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

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 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	-	-	-83.54	12.57	0.00	36.03	53.98	-17.95
* 11200.00	Peak	H	-	-	-72.53	12.57	0.00	47.04	73.98	-26.94
16800.00	Peak	H	-	-	-72.98	16.13	0.00	50.15	68.20	-18.05
* 22400.00	Average	H	-	-	-78.99	20.03	-9.54	38.50	53.98	-15.48
* 22400.00	Peak	H	-	-	-67.38	20.03	-9.54	50.11	73.98	-23.87
28000.00	Peak	H	-	-	-52.39	4.70	-9.54	49.77	68.20	-18.43

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

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 218 of 270

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 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	-	-	-83.47	12.86	0.00	36.39	53.98	-17.59
* 11440.00	Peak	H	-	-	-71.91	12.86	0.00	47.95	73.98	-26.03
17160.00	Peak	H	-	-	-73.74	17.87	0.00	51.13	68.20	-17.07
* 22880.00	Average	H	-	-	-79.29	19.50	-9.54	37.67	53.98	-16.31
* 22880.00	Peak	H	-	-	-68.65	19.50	-9.54	48.31	73.98	-25.67
28600.00	Peak	H	-	-	-51.68	5.14	-9.54	50.92	68.20	-17.28

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

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 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	-	-	-83.37	13.52	0.00	37.15	53.98	-16.83
* 11490.00	Peak	H	-	-	-72.12	13.52	0.00	48.40	73.98	-25.58
17235.00	Peak	H	-	-	-72.57	17.74	0.00	52.17	68.20	-16.03
* 22980.00	Average	H	-	-	-79.22	19.89	-9.54	38.13	53.98	-15.85
* 22980.00	Peak	H	-	-	-66.95	19.89	-9.54	50.40	73.98	-23.58
28725.00	Peak	H	-	-	-52.21	4.66	-9.54	49.91	68.20	-18.29

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

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 219 of 270

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 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	-	-	-83.66	12.59	0.00	35.93	53.98	-18.05
* 11570.00	Peak	H	-	-	-72.45	12.59	0.00	47.14	73.98	-26.84
17355.00	Peak	H	-	-	-72.79	19.47	0.00	53.68	68.20	-14.52
23140.00	Peak	H	-	-	-67.64	19.59	-9.54	49.41	68.20	-18.79
28925.00	Peak	H	-	-	-52.97	4.43	-9.54	48.92	68.20	-19.28

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

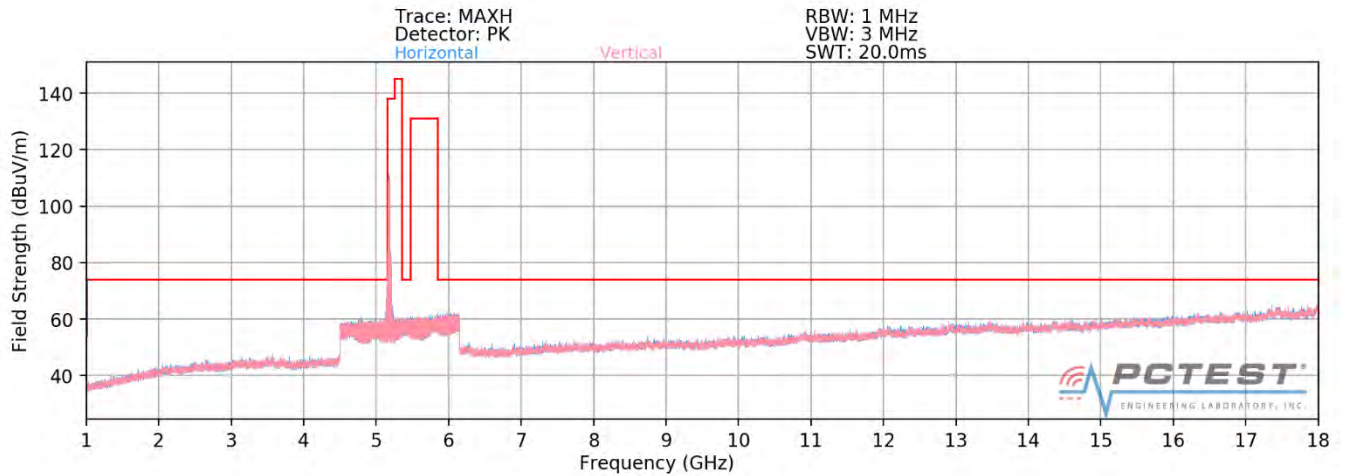
Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5825MHz
 Channel: 165

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	-	-	-83.66	13.51	0.00	36.85	53.98	-17.13
* 11650.00	Peak	H	-	-	-72.82	13.51	0.00	47.69	73.98	-26.29
17475.00	Peak	H	-	-	-73.73	19.87	0.00	53.14	68.20	-15.06
23300.00	Peak	H	-	-	-66.68	18.93	-9.54	49.71	68.20	-18.49
29125.00	Peak	H	-	-	-51.81	3.48	-9.54	49.13	68.20	-19.07

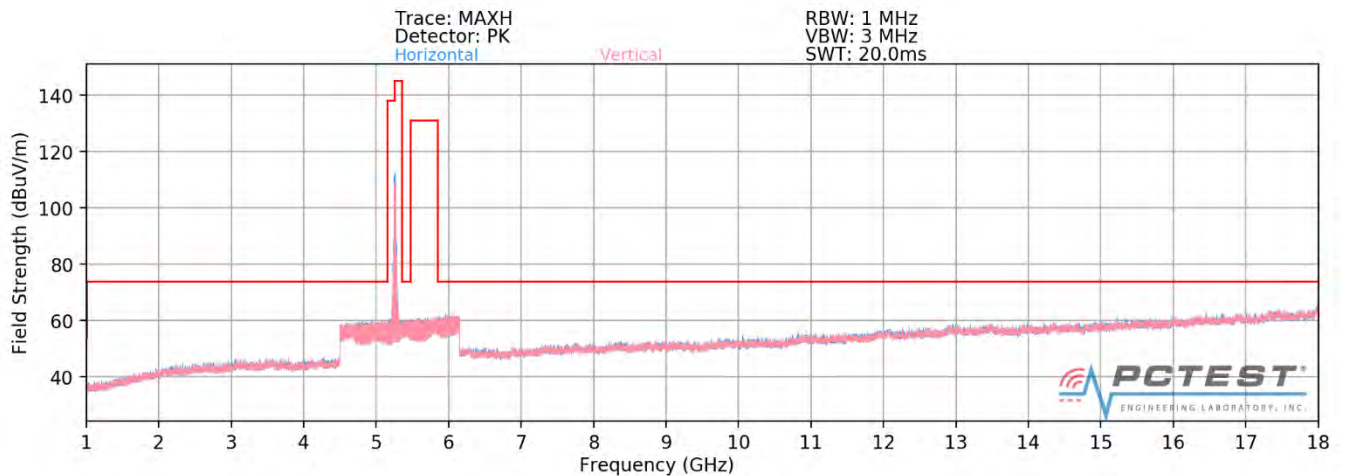
Table 7-105. Radiated Measurements SISO ANT2 (26 Tones)

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 220 of 270

242 Tones

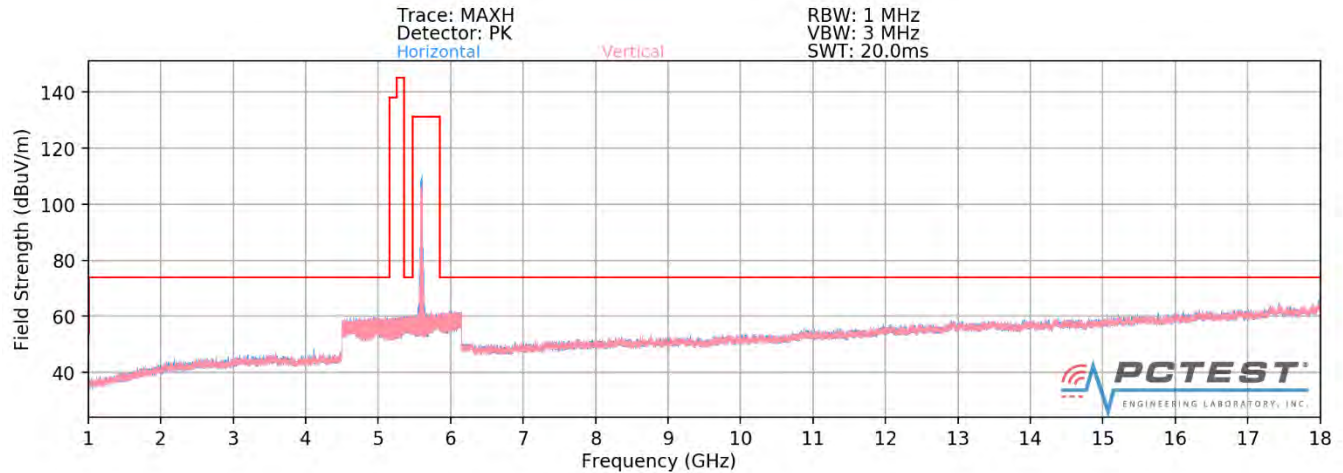


Plot 7-289. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U1 Ch. 40 – 242 Tones)

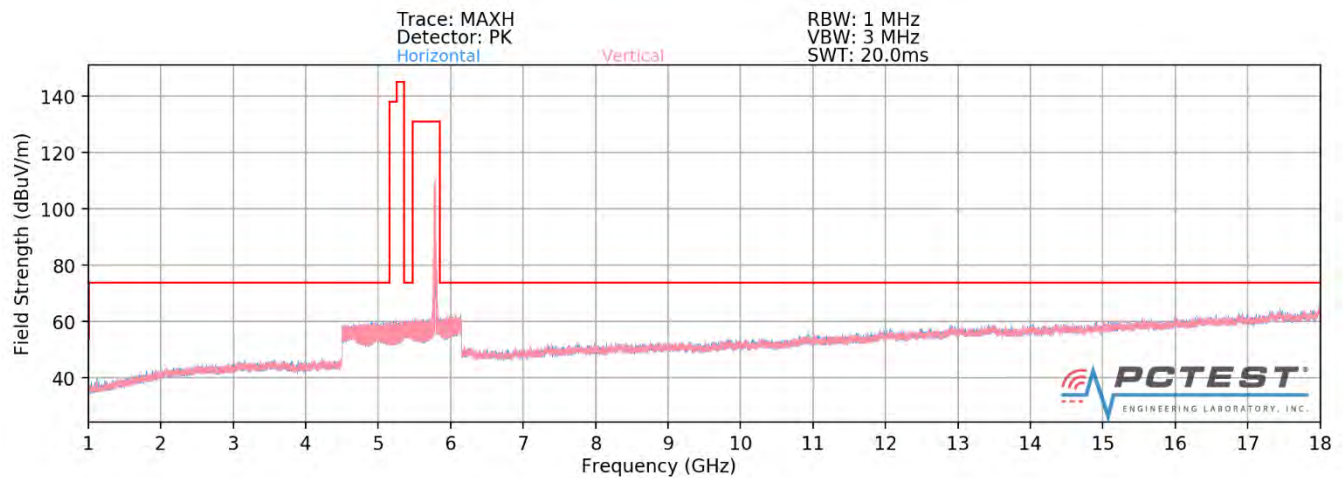


Plot 7-290. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U2A Ch. 56 – 242 Tones)

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 221 of 270



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

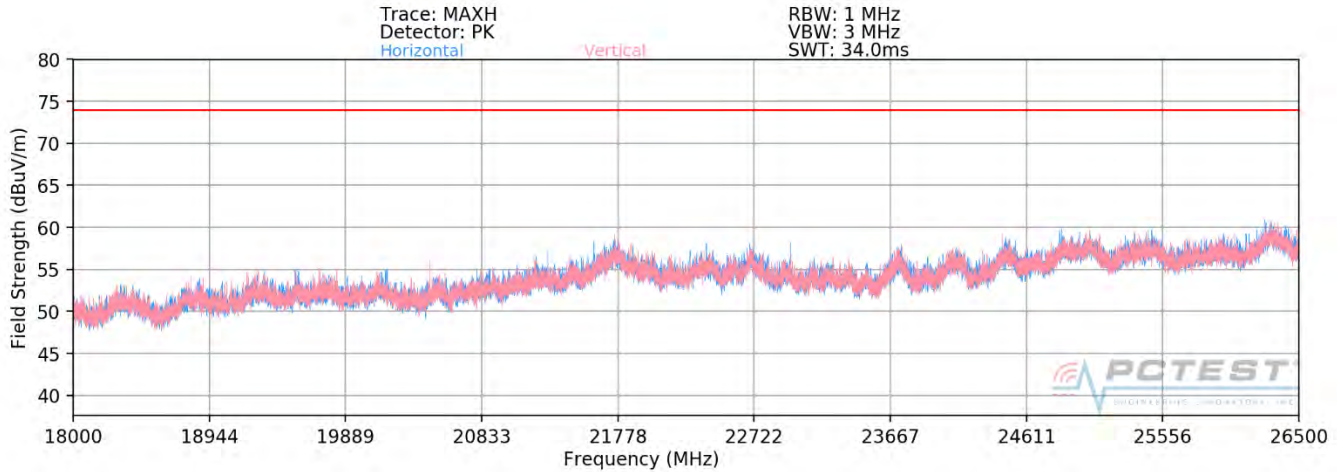


Plot 7-292. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U3 Ch. 157 – 242 Tones)

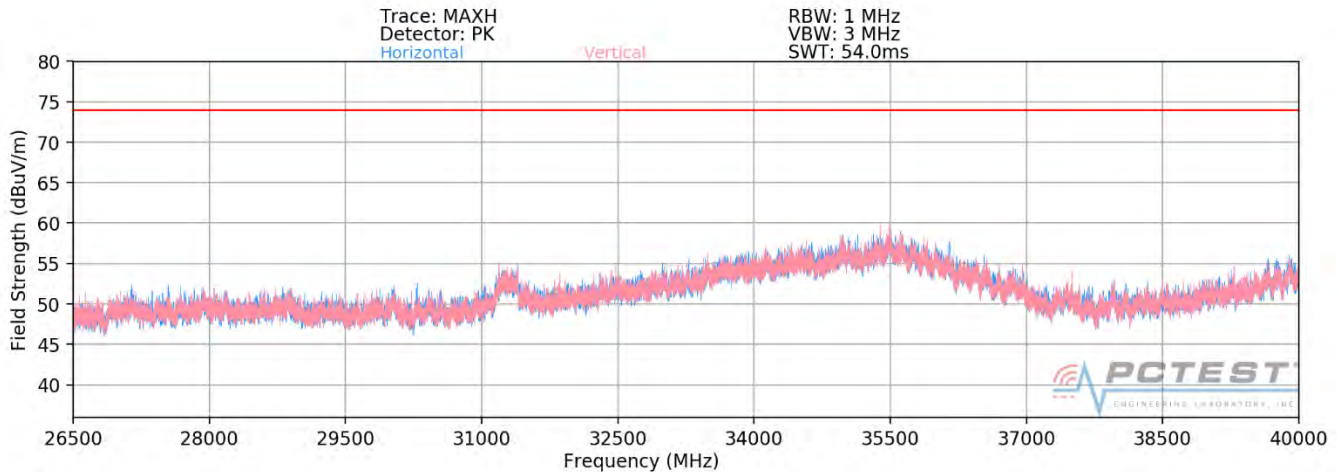
FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 222 of 270



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: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 223 of 270

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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: 802.11ax (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	112	284	-68.13	11.61	0.00	50.48	68.20	-17.72
* 15540.00	Average	H	119	269	-81.18	13.79	0.00	39.61	53.98	-14.37
* 15540.00	Peak	H	119	269	-68.66	13.79	0.00	52.13	73.98	-21.85
* 20720.00	Average	H	-	-	-78.71	17.51	-9.54	36.26	53.98	-17.72
* 20720.00	Peak	H	-	-	-67.39	17.51	-9.54	47.58	73.98	-26.40
25900.00	Peak	H	-	-	-66.17	19.88	-9.54	51.17	68.20	-17.03

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	120	286	-68.31	11.62	0.00	50.31	68.20	-17.89
* 15600.00	Average	H	-	-	-81.56	12.99	0.00	38.43	53.98	-15.55
* 15600.00	Peak	H	-	-	-69.21	12.99	0.00	50.78	73.98	-23.20
* 20800.00	Average	H	-	-	-78.99	17.87	-9.54	36.34	53.98	-17.64
* 20800.00	Peak	H	-	-	-67.38	17.87	-9.54	47.95	73.98	-26.03
26000.00	Peak	H	-	-	-66.64	20.15	-9.54	50.97	68.20	-17.23

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

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 224 of 270

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	116	285	-68.39	11.91	0.00	50.52	68.20	-17.68
* 15720.00	Average	H	116	275	-80.28	14.48	0.00	41.20	53.98	-12.78
* 15720.00	Peak	H	116	275	-67.28	14.48	0.00	54.20	73.98	-19.78
* 20960.00	Average	H	-	-	-78.94	18.06	-9.54	36.58	53.98	-17.40
* 20960.00	Peak	H	-	-	-67.24	18.06	-9.54	48.28	73.98	-25.70
26200.00	Peak	H	-	-	-65.49	20.23	-9.54	52.20	68.20	-16.00

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	111	285	-69.19	12.28	0.00	50.09	68.20	-18.11
* 15780.00	Average	H	121	277	-80.56	13.45	0.00	39.89	53.98	-14.09
* 15780.00	Peak	H	121	277	-67.10	13.45	0.00	53.35	73.98	-20.63
* 21040.00	Average	H	-	-	-78.65	18.36	-9.54	37.17	53.98	-16.81
* 21040.00	Peak	H	-	-	-67.71	18.36	-9.54	48.11	73.98	-25.87
26300.00	Peak	H	-	-	-65.74	20.96	-9.54	52.68	68.20	-15.52

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

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 225 of 270

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	115	284	-68.69	12.38	0.00	50.69	68.20	-17.51
* 15840.00	Average	H	117	277	-80.32	14.77	0.00	41.45	53.98	-12.53
* 15840.00	Peak	H	117	277	-67.22	14.77	0.00	54.55	73.98	-19.43
* 21120.00	Average	H	-	-	-78.85	18.17	-9.54	36.78	53.98	-17.20
* 21120.00	Peak	H	-	-	-66.56	18.17	-9.54	49.07	73.98	-24.91
26400.00	Peak	H	-	-	-65.12	20.65	-9.54	52.99	68.20	-15.21

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	116	287	-80.97	12.24	0.00	38.27	53.98	-15.71
* 10640.00	Peak	H	116	287	-69.03	12.24	0.00	50.21	73.98	-23.77
* 15960.00	Average	H	127	277	-81.23	14.16	0.00	39.93	53.98	-14.05
* 15960.00	Peak	H	127	277	-68.95	14.16	0.00	52.21	73.98	-21.77
* 21280.00	Average	H	-	-	-78.41	18.57	-9.54	37.62	53.98	-16.36
* 21280.00	Peak	H	-	-	-67.35	18.57	-9.54	48.68	73.98	-25.30
26600.00	Peak	H	-	-	-52.30	5.16	-9.54	50.32	68.20	-17.88

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

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 226 of 270

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	116	284	-79.74	12.63	0.00	39.89	53.98	-14.08
* 11000.00	Peak	H	116	284	-64.94	12.63	0.00	54.69	73.98	-19.28
16500.00	Peak	H	-	-	-69.85	15.01	0.00	52.16	68.20	-16.04
22000.00	Peak	H	-	-	-67.24	19.12	-9.54	49.34	68.20	-18.86
27500.00	Peak	H	-	-	-51.14	3.98	-9.54	50.30	68.20	-17.90

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	113	282	-77.06	12.57	0.00	42.51	53.98	-11.47
* 11200.00	Peak	H	113	282	-62.48	12.57	0.00	57.09	73.98	-16.89
16800.00	Peak	H	-	-	-69.26	16.13	0.00	53.87	68.20	-14.33
* 22400.00	Average	H	-	-	-78.69	20.03	-9.54	38.80	53.98	-15.18
* 22400.00	Peak	H	-	-	-67.84	20.03	-9.54	49.65	73.98	-24.33
28000.00	Peak	H	-	-	-51.71	4.70	-9.54	50.45	68.20	-17.75

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

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 227 of 270

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	111	281	-77.99	12.86	0.00	41.87	53.98	-12.11
* 11440.00	Peak	H	111	281	-64.08	12.86	0.00	55.78	73.98	-18.20
17160.00	Peak	H	-	-	-69.74	17.87	0.00	55.13	68.20	-13.07
* 22880.00	Average	H	-	-	-79.22	19.50	-9.54	37.74	53.98	-16.24
* 22880.00	Peak	H	-	-	-67.99	19.50	-9.54	48.97	73.98	-25.01
28600.00	Peak	H	-	-	-51.37	5.14	-9.54	51.23	68.20	-16.97

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	290	29	-76.25	13.52	0.00	44.27	53.98	-9.71
* 11490.00	Peak	H	290	29	-62.09	13.52	0.00	58.43	73.98	-15.55
17235.00	Peak	H	282	24	-69.44	17.74	0.00	55.30	68.20	-12.90
* 22980.00	Average	H	-	-	-79.31	19.89	-9.54	38.04	53.98	-15.94
* 22980.00	Peak	H	-	-	-67.96	19.89	-9.54	49.39	73.98	-24.59
28725.00	Peak	H	-	-	-52.23	4.66	-9.54	49.89	68.20	-18.31

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

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 228 of 270

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	276	28	-75.60	12.59	0.00	43.99	53.98	-9.99
* 11570.00	Peak	H	276	28	-61.04	12.59	0.00	58.55	73.98	-15.43
17355.00	Peak	H	-	-	-70.28	19.47	0.00	56.19	68.20	-12.01
23140.00	Peak	H	-	-	-67.47	19.59	-9.54	49.58	68.20	-18.62
28925.00	Peak	H	-	-	-52.85	4.43	-9.54	49.04	68.20	-19.16

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

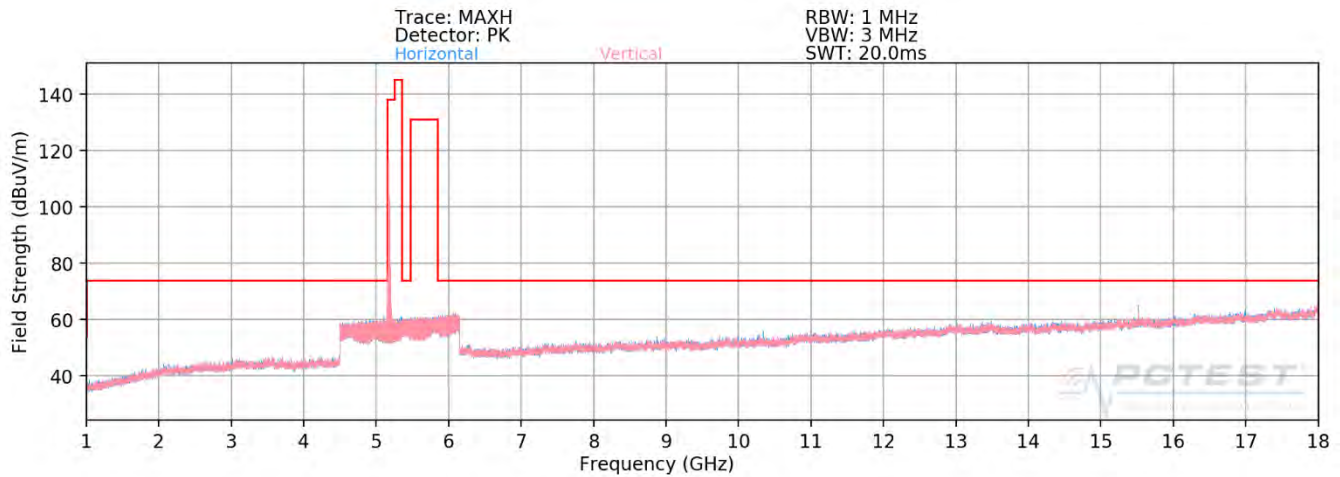
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11650.00	Average	H	269	39	-75.76	13.51	0.00	44.75	53.98	-9.23
* 11650.00	Peak	H	269	39	-61.39	13.51	0.00	59.12	73.98	-14.86
17475.00	Peak	H	-	-	-69.92	19.87	0.00	56.95	68.20	-11.25
23300.00	Peak	H	-	-	-67.54	18.93	-9.54	48.85	68.20	-19.35
29125.00	Peak	H	-	-	-50.90	3.48	-9.54	50.04	68.20	-18.16

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

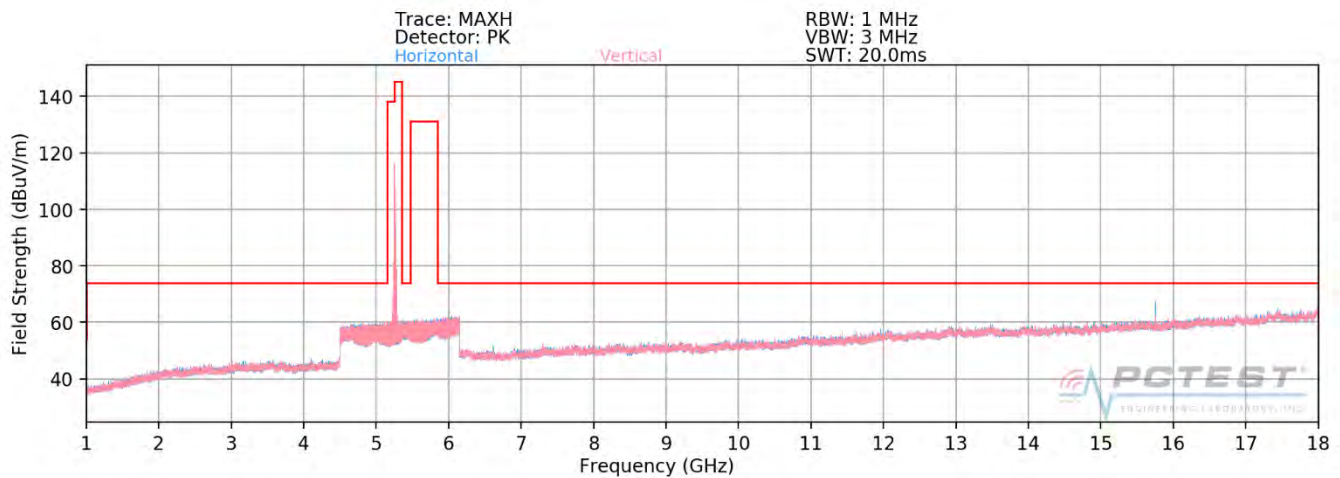
FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 229 of 270

7.6.3 MIMO Radiated Spurious Emission Measurements

26 Tones

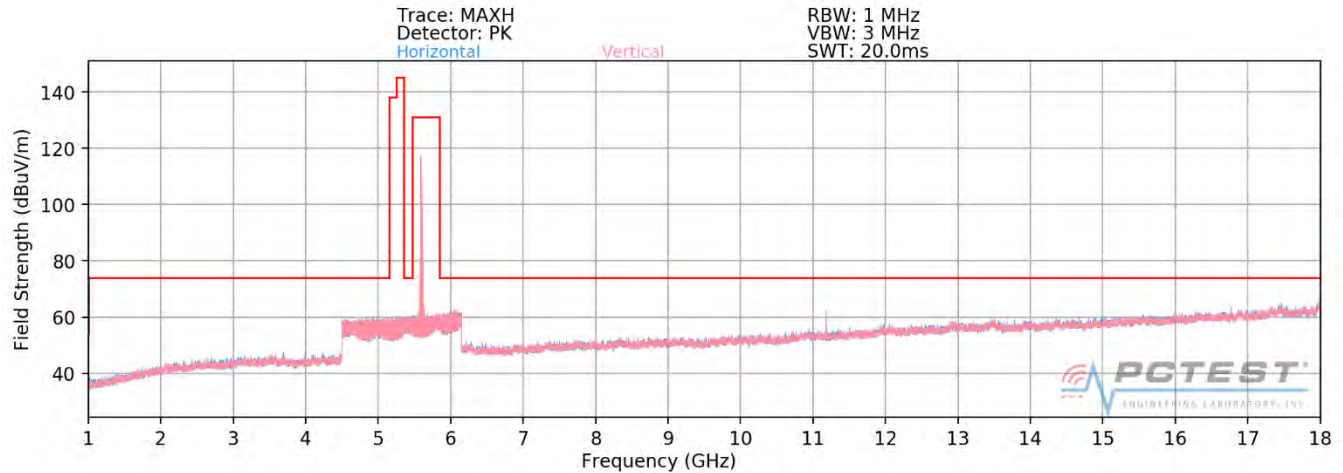


Plot 7-295. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U1 Ch. 40 – 26 Tones)

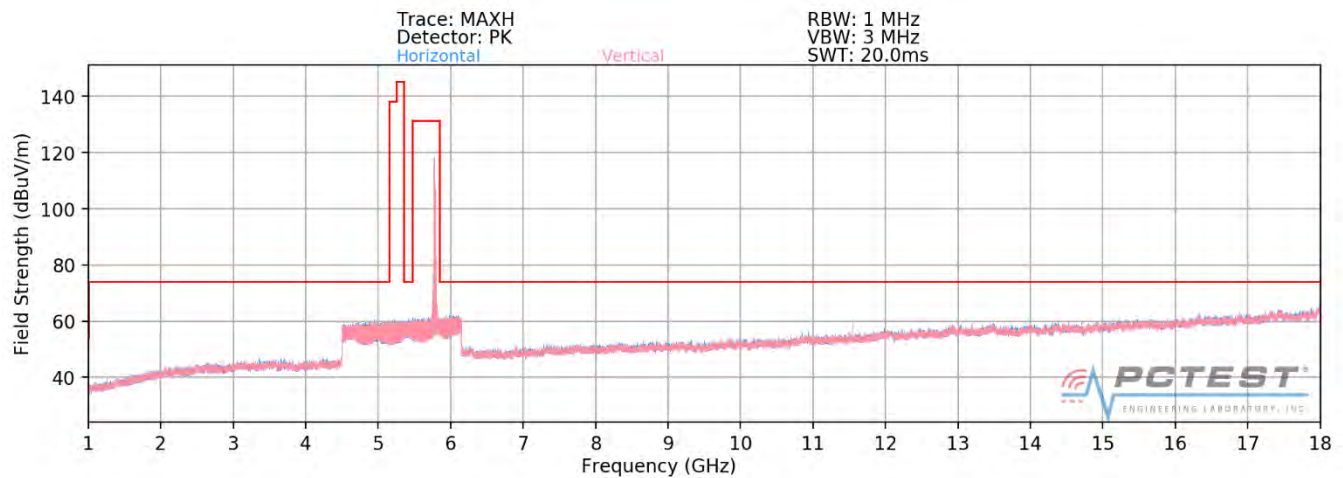


Plot 7-296. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U2A Ch. 56 – 26 Tones)

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 230 of 270



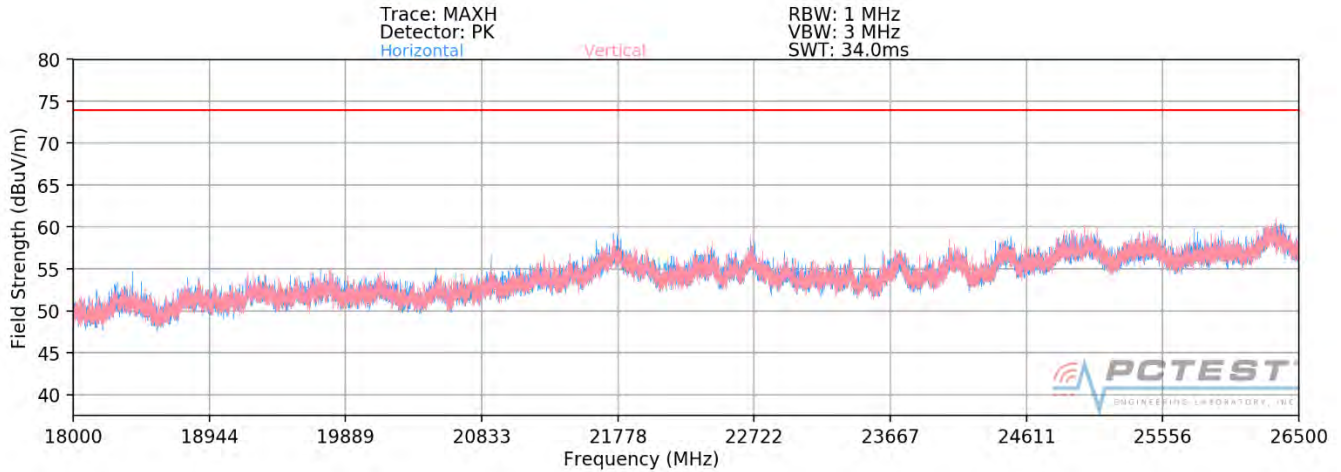
Plot 7-297. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U2C Ch. 120 – 26 Tones)



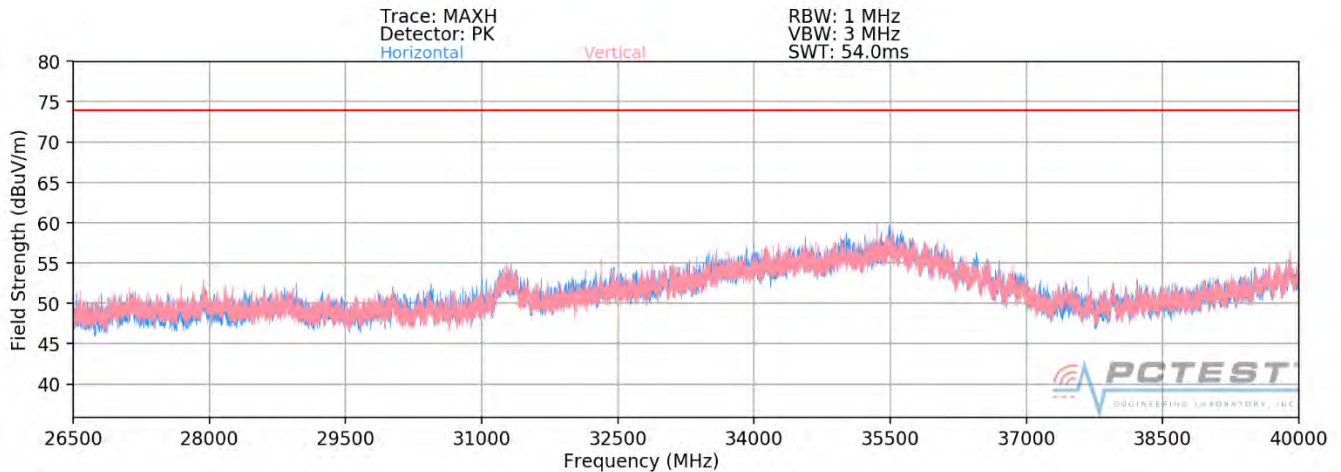
Plot 7-298. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U3 Ch. 157 – 26 Tones)

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 231 of 270

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: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 232 of 270

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: 4
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	-	-	-71.33	11.61	0.00	47.28	68.20	-20.92
* 15540.00	Average	H	-	-	-84.64	13.79	0.00	36.15	53.98	-17.83
* 15540.00	Peak	H	-	-	-73.02	13.79	0.00	47.77	73.98	-26.21
* 20720.00	Average	H	-	-	-79.00	17.51	-9.54	35.97	53.98	-18.01
* 20720.00	Peak	H	-	-	-68.08	17.51	-9.54	46.89	73.98	-27.09
25900.00	Peak	H	-	-	-66.39	19.88	-9.54	50.95	68.20	-17.25

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

Worst Case Mode: 802.11ax (20MHz BW)
Worst Case Transfer Rate: MCS0
RU Index: 4
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	-	-	-72.07	11.62	0.00	46.55	68.20	-21.65
* 15600.00	Average	H	-	-	-84.82	12.99	0.00	35.17	53.98	-18.81
* 15600.00	Peak	H	-	-	-73.86	12.99	0.00	46.13	73.98	-27.85
* 20800.00	Average	H	-	-	-79.03	17.87	-9.54	36.29	53.98	-17.69
* 20800.00	Peak	H	-	-	-67.75	17.87	-9.54	47.57	73.98	-26.41
26000.00	Peak	H	-	-	-66.51	20.15	-9.54	51.09	68.20	-17.11

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

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 233 of 270

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 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	-	-	-72.32	11.91	0.00	46.59	68.20	-21.61
* 15720.00	Average	H	-	-	-84.53	14.48	0.00	36.95	53.98	-17.03
* 15720.00	Peak	H	-	-	-73.87	14.48	0.00	47.61	73.98	-26.37
* 20960.00	Average	H	-	-	-79.06	18.06	-9.54	36.45	53.98	-17.52
* 20960.00	Peak	H	-	-	-67.38	18.06	-9.54	48.13	73.98	-25.84
26200.00	Peak	H	-	-	-66.25	20.23	-9.54	51.44	68.20	-16.76

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

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 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	-	-	-72.01	12.28	0.00	47.27	68.20	-20.93
* 15780.00	Average	H	-	-	-84.80	13.45	0.00	35.65	53.98	-18.33
* 15780.00	Peak	H	-	-	-73.63	13.45	0.00	46.82	73.98	-27.16
* 21040.00	Average	H	-	-	-78.63	18.36	-9.54	37.18	53.98	-16.80
* 21040.00	Peak	H	-	-	-67.67	18.36	-9.54	48.14	73.98	-25.84
26300.00	Peak	H	-	-	-65.26	20.96	-9.54	53.15	68.20	-15.05

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

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 234 of 270

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 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	-	-	-72.11	12.38	0.00	47.27	68.20	-20.93
* 15840.00	Average	H	-	-	-84.31	14.77	0.00	37.46	53.98	-16.52
* 15840.00	Peak	H	-	-	-73.28	14.77	0.00	48.49	73.98	-25.49
* 21120.00	Average	H	-	-	-78.67	18.17	-9.54	36.95	53.98	-17.02
* 21120.00	Peak	H	-	-	-67.49	18.17	-9.54	48.13	73.98	-25.84
26400.00	Peak	H	-	-	-65.93	20.65	-9.54	52.18	68.20	-16.02

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

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 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	-	-	-83.38	12.24	0.00	35.86	53.98	-18.12
* 10640.00	Peak	H	-	-	-72.42	12.24	0.00	46.82	73.98	-27.16
* 15960.00	Average	H	-	-	-84.74	14.16	0.00	36.42	53.98	-17.56
* 15960.00	Peak	H	-	-	-73.60	14.16	0.00	47.56	73.98	-26.42
* 21280.00	Average	H	-	-	-78.44	18.57	-9.54	37.59	53.98	-16.39
* 21280.00	Peak	H	-	-	-67.71	18.57	-9.54	48.32	73.98	-25.66
26600.00	Peak	H	-	-	-53.57	5.16	-9.54	49.05	68.20	-19.15

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

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 235 of 270

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 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	-	-	-72.10	12.63	0.00	47.53	53.98	-6.44
* 11000.00	Peak	H	-	-	-83.71	12.63	0.00	35.92	73.98	-38.05
16500.00	Peak	H	-	-	-72.83	15.01	0.00	49.18	68.20	-19.02
22000.00	Peak	H	-	-	-67.13	19.12	-9.54	49.44	68.20	-18.76
27500.00	Peak	H	-	-	-51.63	3.98	-9.54	49.81	68.20	-18.39

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

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 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	-	-	-83.04	12.57	0.00	36.53	53.98	-17.45
* 11200.00	Peak	H	-	-	-71.86	12.57	0.00	47.71	73.98	-26.27
16800.00	Peak	H	-	-	-72.43	16.13	0.00	50.70	68.20	-17.50
* 22400.00	Average	H	-	-	-79.03	20.03	-9.54	38.46	53.98	-15.52
* 22400.00	Peak	H	-	-	-67.68	20.03	-9.54	49.81	73.98	-24.17
28000.00	Peak	H	-	-	-52.56	4.70	-9.54	49.60	68.20	-18.60

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

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 236 of 270

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 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	-	-	-83.40	12.86	0.00	36.46	53.98	-17.52
*	11440.00	Peak	H	-	-	-72.69	12.86	0.00	47.17	73.98	-26.81
	17160.00	Peak	H	-	-	-73.19	17.87	0.00	51.68	68.20	-16.52
*	22880.00	Average	H	-	-	-79.21	19.50	-9.54	37.75	53.98	-16.23
*	22880.00	Peak	H	-	-	-68.01	19.50	-9.54	48.95	73.98	-25.03
	28600.00	Peak	H	-	-	-51.51	5.14	-9.54	51.09	68.20	-17.11

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

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 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	-	-	-83.23	13.52	0.00	37.29	53.98	-16.69
*	11490.00	Peak	H	-	-	-72.16	13.52	0.00	48.36	73.98	-25.62
	17235.00	Peak	H	-	-	-72.73	17.74	0.00	52.01	68.20	-16.19
*	22980.00	Average	H	-	-	-79.08	19.89	-9.54	38.26	53.98	-15.72
*	22980.00	Peak	H	-	-	-67.59	19.89	-9.54	49.75	73.98	-24.23
	28725.00	Peak	H	-	-	-52.53	4.66	-9.54	49.59	68.20	-18.61

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

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 237 of 270

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 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	-	-	-83.57	12.59	0.00	36.02	53.98	-17.96
* 11570.00	Peak	H	-	-	-72.17	12.59	0.00	47.42	73.98	-26.56
17355.00	Peak	H	-	-	-73.49	19.47	0.00	52.98	68.20	-15.22
23140.00	Peak	H	-	-	-67.89	19.59	-9.54	49.16	68.20	-19.04
28925.00	Peak	H	-	-	-52.76	4.43	-9.54	49.13	68.20	-19.07

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

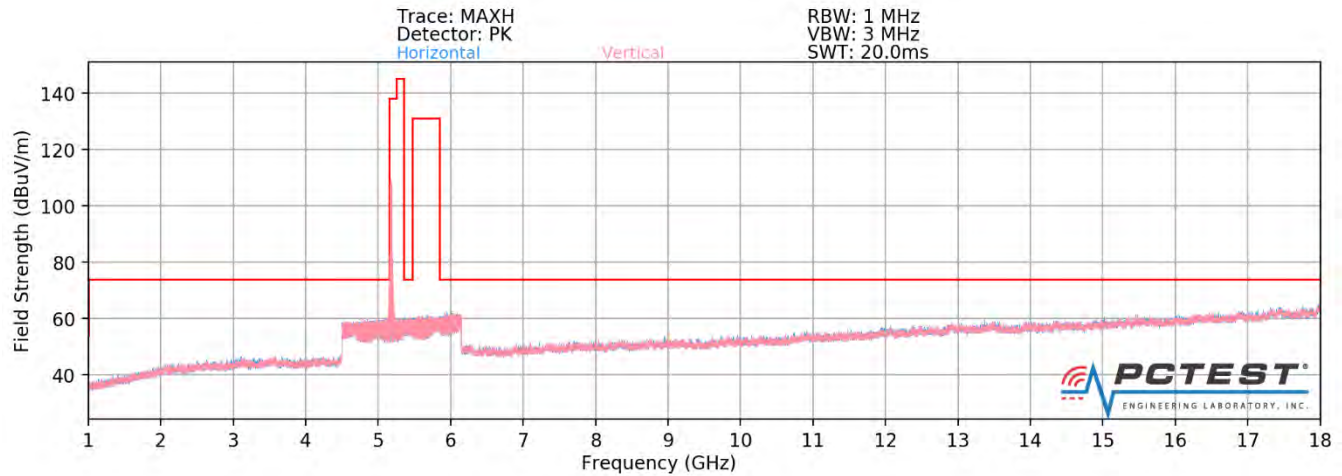
Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5825MHz
 Channel: 165

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	-	-	-84.37	13.51	0.00	36.14	53.98	-17.84
* 11650.00	Peak	H	-	-	-72.17	13.51	0.00	48.34	73.98	-25.64
17475.00	Peak	H	-	-	-73.14	19.87	0.00	53.73	68.20	-14.47
23300.00	Peak	H	-	-	-67.69	18.93	-9.54	48.70	68.20	-19.50
29125.00	Peak	H	-	-	-51.55	3.48	-9.54	49.39	68.20	-18.81

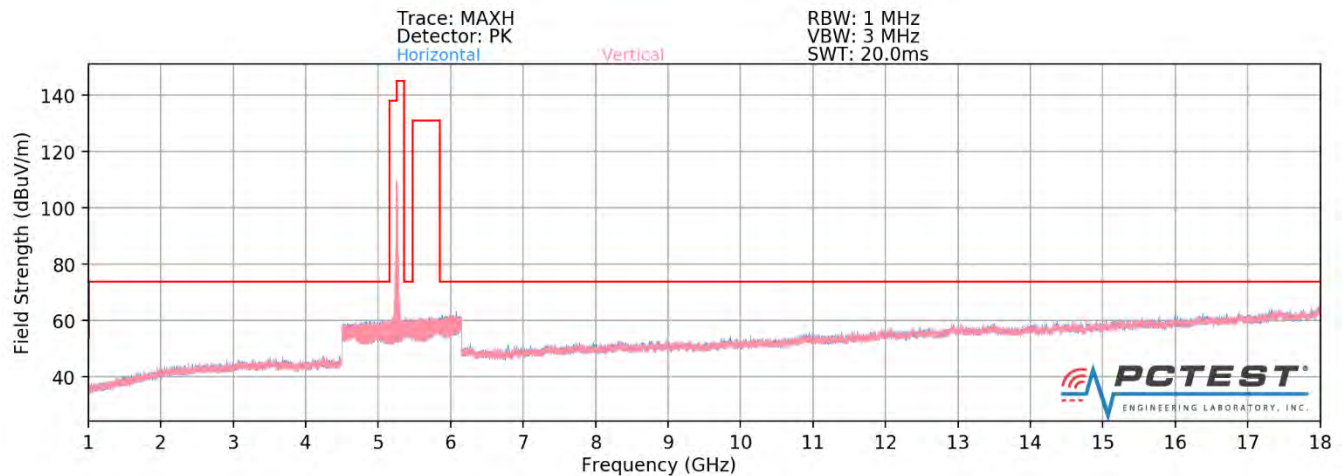
Table 7-129. Radiated Measurements MIMO (26 Tones)

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 238 of 270

242 Tones

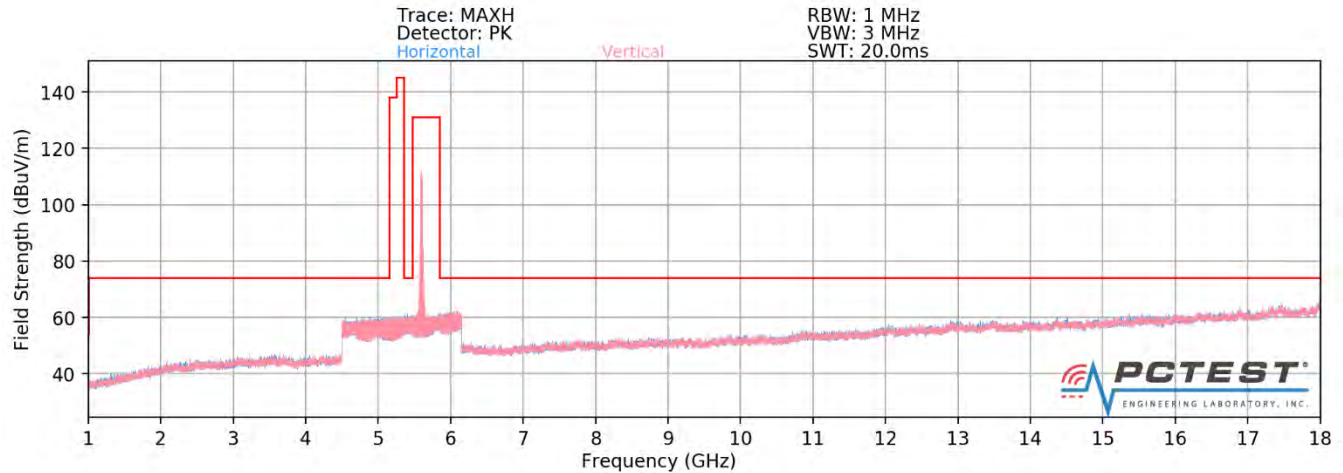


Plot 7-301. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U1 Ch. 40 – 242 Tones)

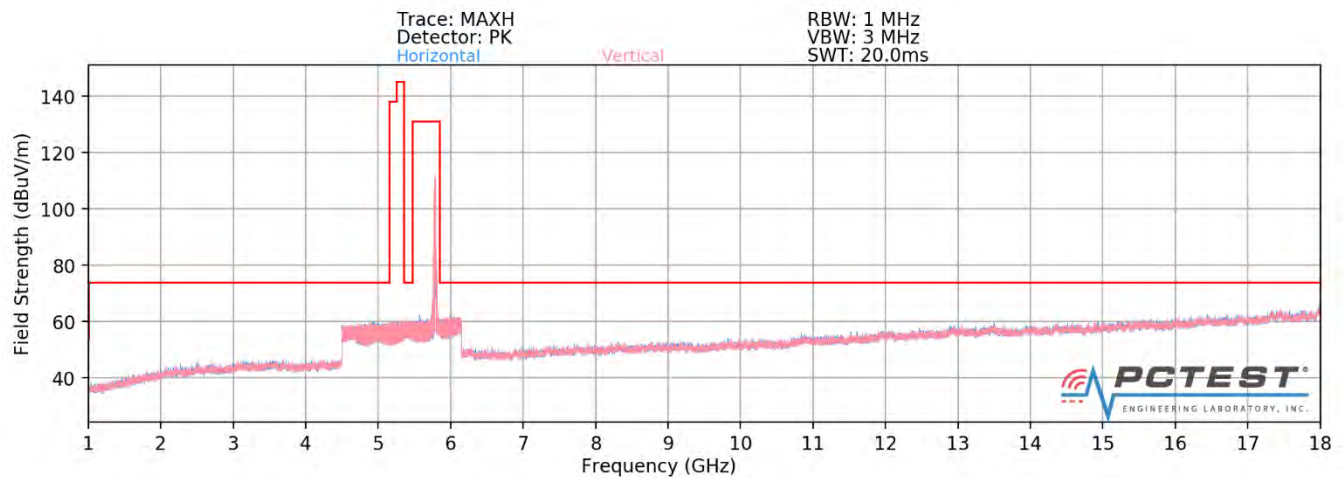


Plot 7-302. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U2A Ch. 56 – 242 Tones)

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 239 of 270



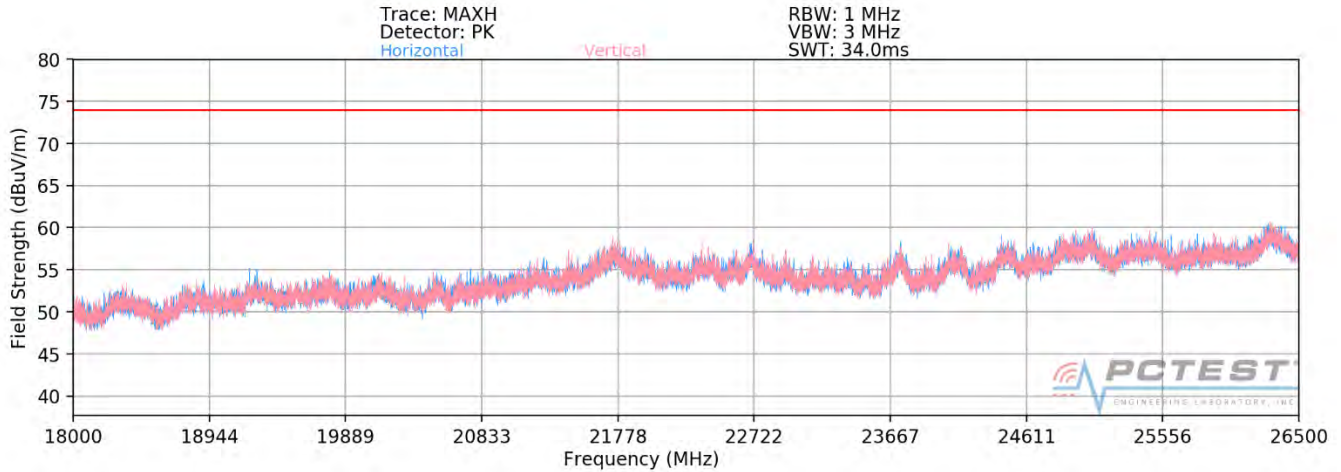
Plot 7-303. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U2C Ch. 120 – 242 Tones)



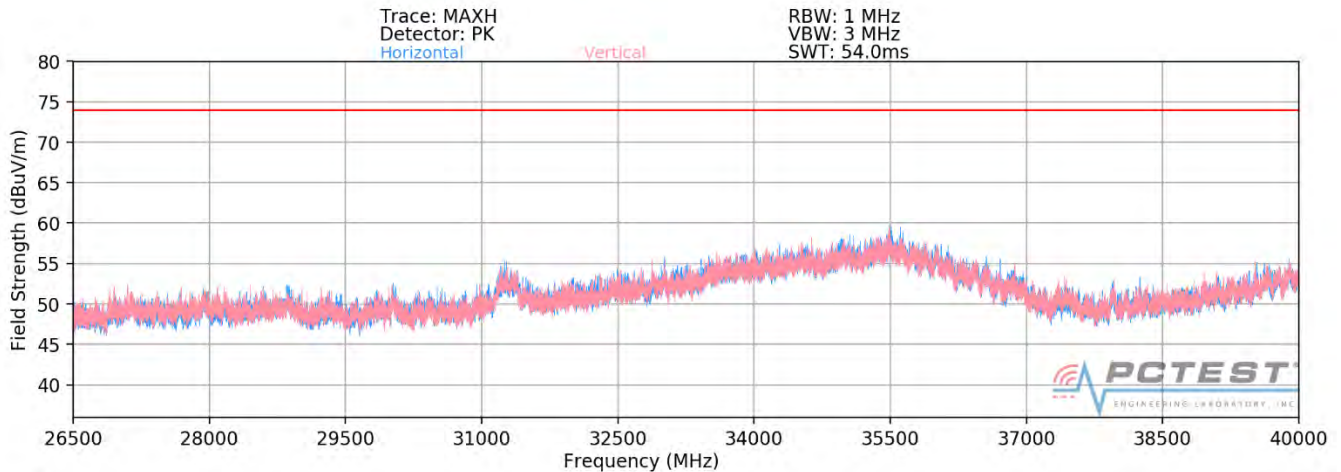
Plot 7-304. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U3 Ch. 157 – 242 Tones)

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 240 of 270

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: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 241 of 270

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	H	-	-	-67.76	11.61	0.00	50.85	68.20	-17.35
* 15540.00	Average	H	-	-	-78.73	13.79	0.00	42.06	53.98	-11.92
* 15540.00	Peak	H	-	-	-67.39	13.79	0.00	53.40	73.98	-20.58
* 20720.00	Average	H	-	-	-78.83	17.51	-9.54	36.14	53.98	-17.84
* 20720.00	Peak	H	-	-	-67.34	17.51	-9.54	47.63	73.98	-26.35
25900.00	Peak	H	-	-	-65.93	19.88	-9.54	51.41	68.20	-16.79

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	H	-	-	-67.58	11.62	0.00	51.04	68.20	-17.16
* 15600.00	Average	H	-	-	-79.07	12.99	0.00	40.92	53.98	-13.06
* 15600.00	Peak	H	-	-	-67.79	12.99	0.00	52.20	73.98	-21.78
* 20800.00	Average	H	-	-	-79.04	17.87	-9.54	36.28	53.98	-17.70
* 20800.00	Peak	H	-	-	-67.90	17.87	-9.54	47.42	73.98	-26.56
26000.00	Peak	H	-	-	-66.92	20.15	-9.54	50.68	68.20	-17.52

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

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 242 of 270

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	-	-	-67.98	11.91	0.00	50.93	68.20	-17.27
* 15720.00	Average	H	-	-	-79.47	14.48	0.00	42.01	53.98	-11.97
* 15720.00	Peak	H	-	-	-67.73	14.48	0.00	53.75	73.98	-20.23
* 20960.00	Average	H	-	-	-78.94	18.06	-9.54	36.57	53.98	-17.40
* 20960.00	Peak	H	-	-	-67.77	18.06	-9.54	47.74	73.98	-26.23
26200.00	Peak	H	-	-	-65.30	20.23	-9.54	52.39	68.20	-15.81

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	H	-	-	-67.52	12.28	0.00	51.76	68.20	-16.44
* 15780.00	Average	H	-	-	-79.38	13.45	0.00	41.07	53.98	-12.91
* 15780.00	Peak	H	-	-	-68.16	13.45	0.00	52.29	73.98	-21.69
* 21040.00	Average	H	-	-	-78.78	18.36	-9.54	37.03	53.98	-16.95
* 21040.00	Peak	H	-	-	-67.12	18.36	-9.54	48.69	73.98	-25.29
26300.00	Peak	H	-	-	-64.86	20.96	-9.54	53.55	68.20	-14.65

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

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 243 of 270

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	-	-	-67.41	12.38	0.00	51.97	68.20	-16.23
* 15840.00	Average	H	-	-	-78.91	14.77	0.00	42.86	53.98	-11.12
* 15840.00	Peak	H	-	-	-68.21	14.77	0.00	53.56	73.98	-20.42
* 21120.00	Average	H	-	-	-78.67	18.17	-9.54	36.95	53.98	-17.02
* 21120.00	Peak	H	-	-	-67.12	18.17	-9.54	48.50	73.98	-25.47
26400.00	Peak	H	-	-	-66.15	20.65	-9.54	51.96	68.20	-16.24

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	H	-	-	-83.58	12.24	0.00	35.66	53.98	-18.32
* 10640.00	Peak	H	-	-	-72.27	12.24	0.00	46.97	73.98	-27.01
* 15960.00	Average	H	-	-	-84.86	14.16	0.00	36.30	53.98	-17.68
* 15960.00	Peak	H	-	-	-73.78	14.16	0.00	47.38	73.98	-26.60
* 21280.00	Average	H	-	-	-78.30	18.57	-9.54	37.73	53.98	-16.25
* 21280.00	Peak	H	-	-	-67.33	18.57	-9.54	48.70	73.98	-25.28
26600.00	Peak	H	-	-	-53.01	5.16	-9.54	49.61	68.20	-18.59

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

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 244 of 270

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	-	-	-79.38	12.63	0.00	40.25	53.98	-13.72
* 11000.00	Peak	H	-	-	-68.24	12.63	0.00	51.39	73.98	-22.58
16500.00	Peak	H	-	-	-66.42	15.01	0.00	55.59	68.20	-12.61
22000.00	Peak	H	-	-	-66.91	19.12	-9.54	49.66	68.20	-18.54
27500.00	Peak	H	-	-	-52.07	3.98	-9.54	49.37	68.20	-18.83

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: 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	-	-	-79.27	12.57	0.00	40.30	53.98	-13.68
* 11200.00	Peak	H	-	-	-67.80	12.57	0.00	51.77	73.98	-22.21
16800.00	Peak	H	-	-	-66.73	16.13	0.00	56.40	68.20	-11.80
* 22400.00	Average	H	-	-	-78.94	20.03	-9.54	38.55	53.98	-15.43
* 22400.00	Peak	H	-	-	-67.56	20.03	-9.54	49.93	73.98	-24.05
28000.00	Peak	H	-	-	-53.10	4.70	-9.54	49.06	68.20	-19.14

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

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 245 of 270

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: 142

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	-	-	-79.07	12.86	0.00	40.79	53.98	-13.19
* 11440.00	Peak	H	-	-	-68.05	12.86	0.00	51.81	73.98	-22.17
17160.00	Peak	H	-	-	-67.16	17.87	0.00	57.71	68.20	-10.49
* 22880.00	Average	H	-	-	-79.45	19.50	-9.54	37.51	53.98	-16.47
* 22880.00	Peak	H	-	-	-68.24	19.50	-9.54	48.72	73.98	-25.26
28600.00	Peak	H	-	-	-51.91	5.14	-9.54	50.69	68.20	-17.51

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	H	-	-	-78.43	13.52	0.00	42.09	53.98	-11.89
* 11490.00	Peak	H	-	-	-67.53	13.52	0.00	52.99	73.98	-20.99
17235.00	Peak	H	-	-	-65.68	17.74	0.00	59.06	68.20	-9.14
* 22980.00	Average	H	-	-	-79.38	19.89	-9.54	37.96	53.98	-16.02
* 22980.00	Peak	H	-	-	-67.42	19.89	-9.54	49.92	73.98	-24.06
28725.00	Peak	H	-	-	-51.52	4.66	-9.54	50.60	68.20	-17.60

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

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 246 of 270

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	-	-	-78.55	12.59	0.00	41.04	53.98	-12.94
* 11570.00	Peak	H	-	-	-67.51	12.59	0.00	52.08	73.98	-21.90
17355.00	Peak	H	-	-	-66.31	19.47	0.00	60.16	68.20	-8.04
23140.00	Peak	H	-	-	-68.53	19.59	-9.54	48.52	68.20	-19.68
28925.00	Peak	H	-	-	-52.43	4.43	-9.54	49.46	68.20	-18.74

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	H	-	-	-78.68	13.51	0.00	41.83	53.98	-12.15
* 11650.00	Peak	H	-	-	-67.83	13.51	0.00	52.68	73.98	-21.30
17475.00	Peak	H	-	-	-67.32	19.87	0.00	59.55	68.20	-8.65
23300.00	Peak	H	-	-	-68.03	18.93	-9.54	48.36	68.20	-19.84
29125.00	Peak	H	-	-	-51.55	3.48	-9.54	49.38	68.20	-18.82

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

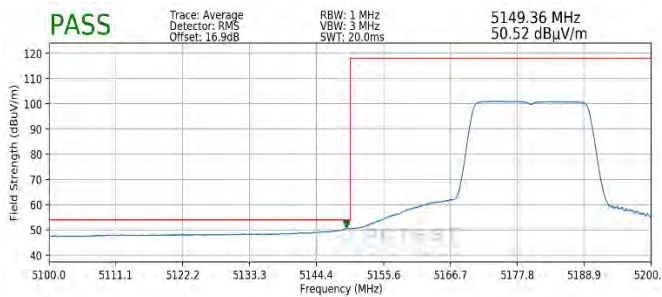
FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 247 of 270

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

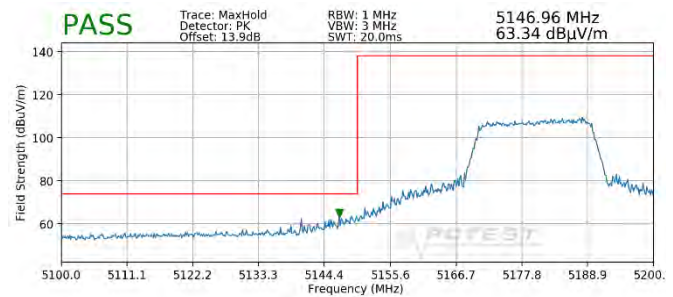
§15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]; RSS-Gen [8.9]

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

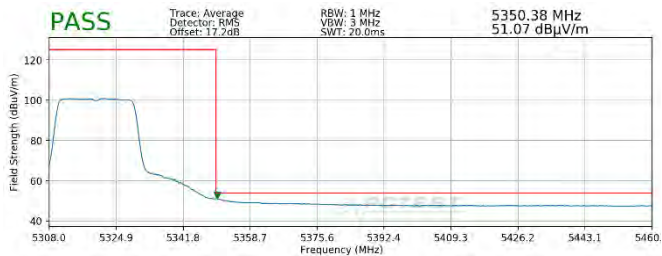


Plot 7-307. Radiated Lower Band Edge Plot SISO ANT1 (Average - UNII Band 1 - 242 Tones)

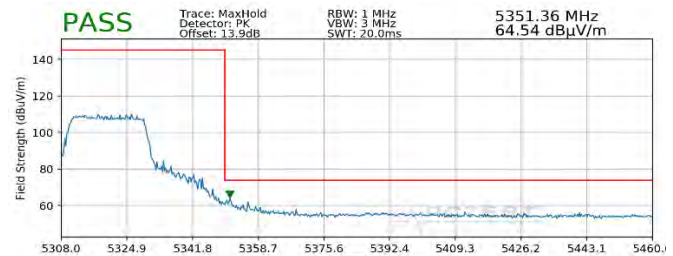


Plot 7-308. Radiated Lower Band Edge Plot SISO ANT1 (Peak - UNII Band 1 - 242 Tones)

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)

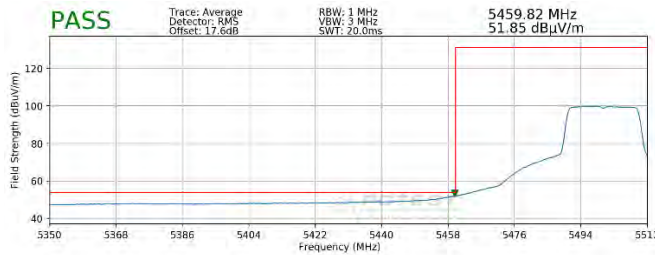


Plot 7-310. Radiated Upper Band Edge Plot SISO ANT1 (Peak - UNII Band 2A - 242 Tones)

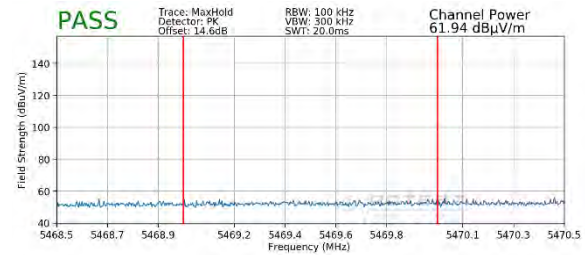
FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 248 of 270



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

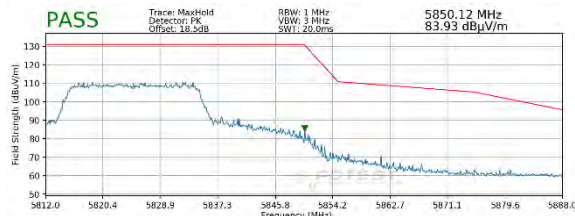


Plot 7-311. Radiated Lower Band Edge Plot SISO ANT1 (Average - UNII Band 2C - 242 Tones)



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)

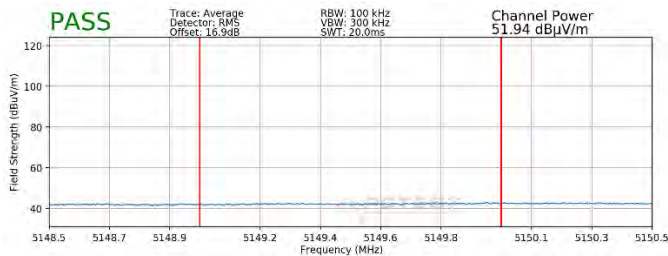
FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 249 of 270



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:	65
Distance of Measurements:	3 Meters
Operating Frequency:	5190MHz
Channel:	38

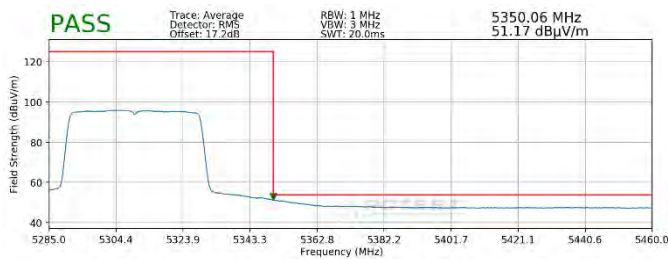


Plot 7-314. Radiated Lower Band Edge Plot SISO ANT1 (Average - UNII Band 1 - 484 Tones)



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:	65
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)

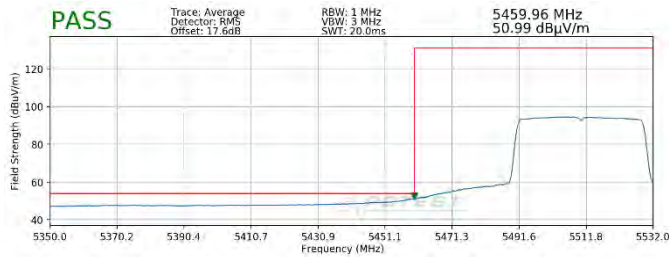


Plot 7-317. Radiated Upper Band Edge Plot SISO ANT1 (Peak - UNII Band 2A - 484 Tones)

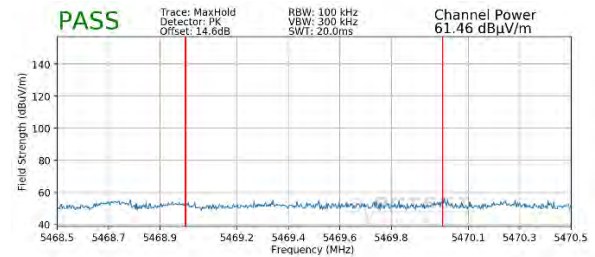
FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 250 of 270



Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	65
Distance of Measurements:	3 Meters
Operating Frequency:	5510MHz
Channel:	102

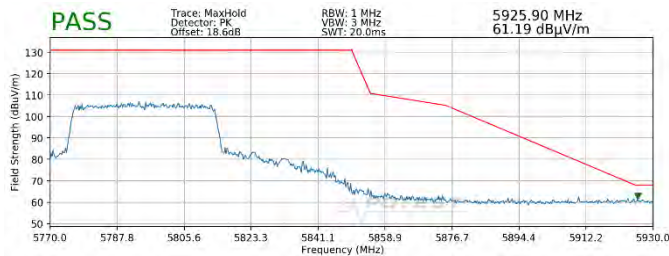


Plot 7-318. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 2C – 484 Tones)



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:	65
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)

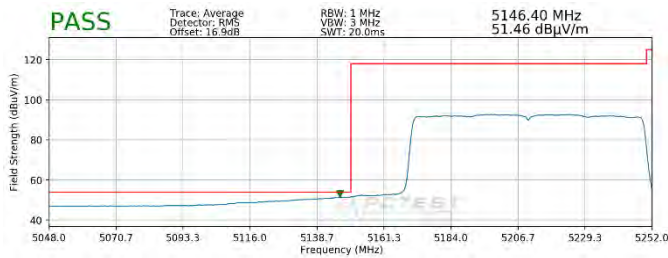
FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 251 of 270

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

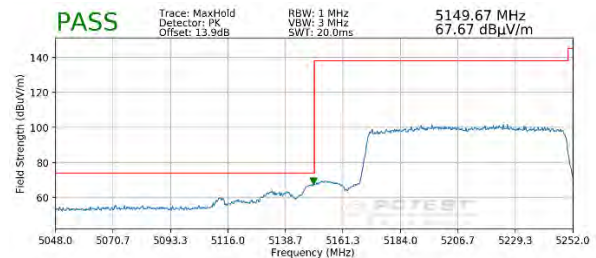
§15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

996 Tones

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	67
Distance of Measurements:	3 Meters
Operating Frequency:	5210MHz
Channel:	42

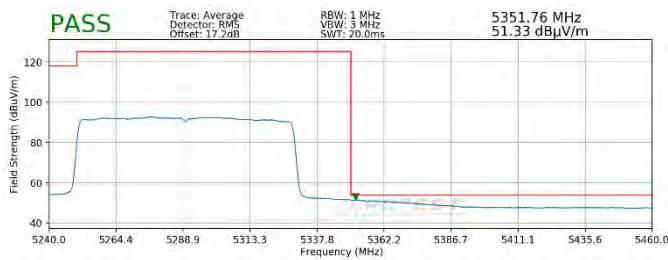


Plot 7-321. Radiated Lower Band Edge Plot SISO ANT1 (Average - UNII Band 1 - 996 Tones)

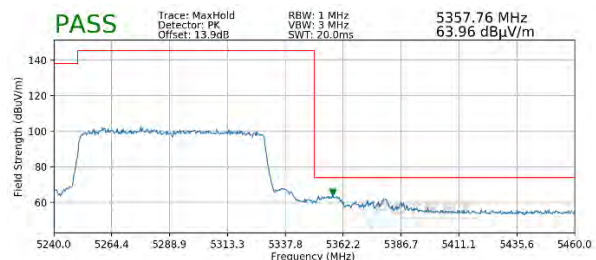


Plot 7-322. Radiated Lower Band Edge Plot SISO ANT1 (Peak - UNII Band 1 - 996 Tones)

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	67
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)

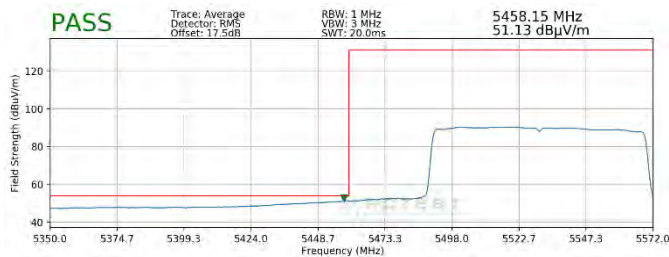


Plot 7-324. Radiated Upper Band Edge Plot SISO ANT1 (Peak - UNII Band 2A - 996 Tones)

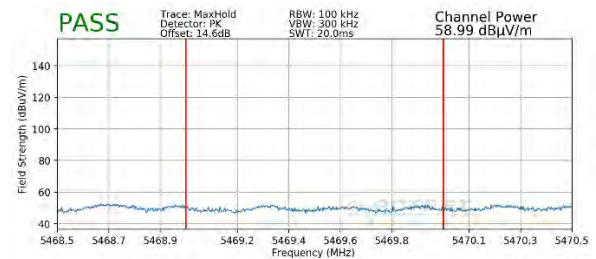
FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 252 of 270



Worst Case Mode: 802.11ax
Worst Case Transfer Rate: MCS0
RU Index: 67
Distance of Measurements: 3 Meters
Operating Frequency: 5530MHz
Channel: 106

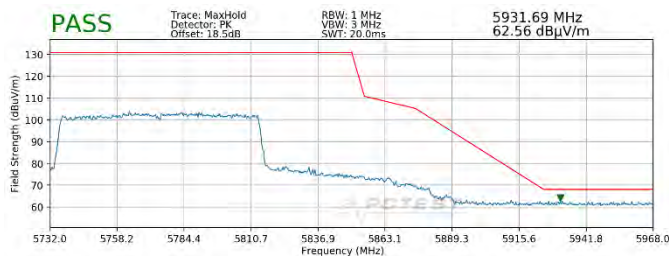


Plot 7-325. Radiated Lower Band Edge Plot SISO ANT1 (Average - UNII Band 2C - 996 Tones)



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: 67
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)

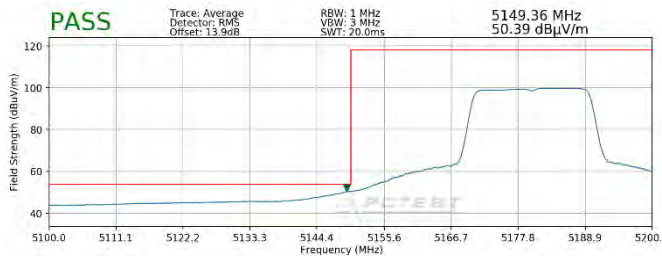
FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 253 of 270

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

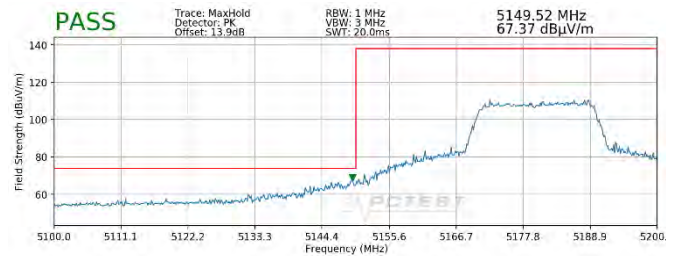
§15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

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

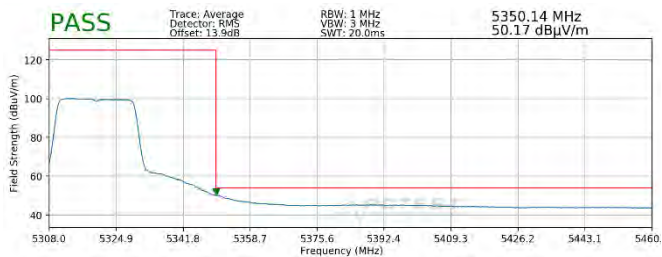


Plot 7-328. Radiated Lower Band Edge Plot SISO ANT2 (Average - UNII Band 1 - 242 Tones)

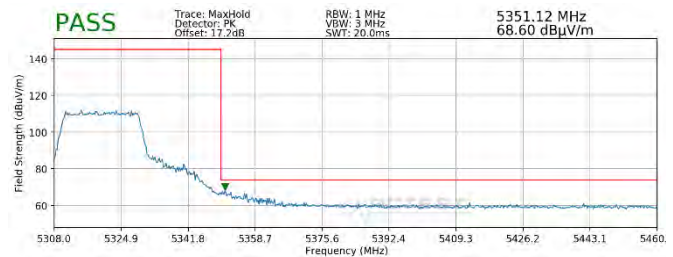


Plot 7-329. Radiated Lower Band Edge Plot SISO ANT2 (Peak - UNII Band 1 - 242 Tones)

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



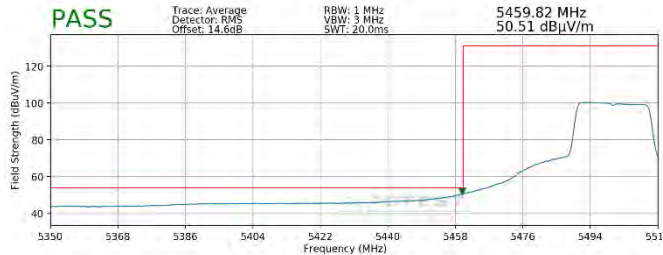
Plot 7-330. Radiated Upper Band Edge Plot SISO ANT2 (Average - UNII Band 2A - 242 Tones)



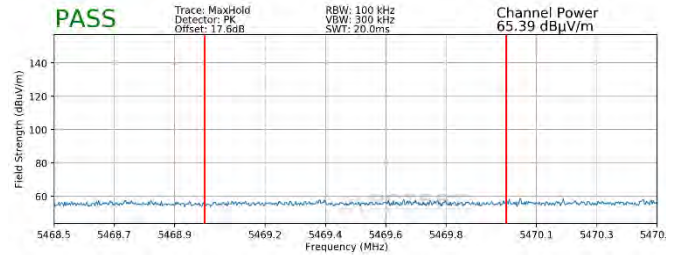
Plot 7-331. Radiated Upper Band Edge Plot SISO ANT2 (Peak - UNII Band 2A - 242 Tones)

FCC ID: A3LSMG988U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 254 of 270

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

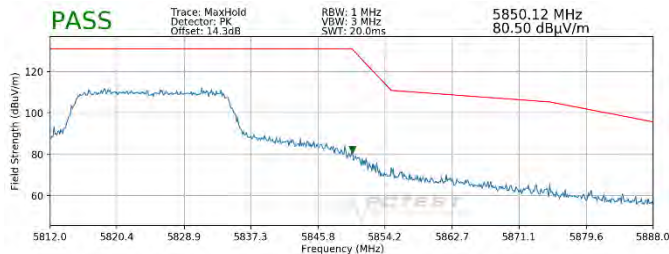


Plot 7-332. Radiated Lower Band Edge Plot SISO ANT2 (Average - UNII Band 2C - 242 Tones)



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)

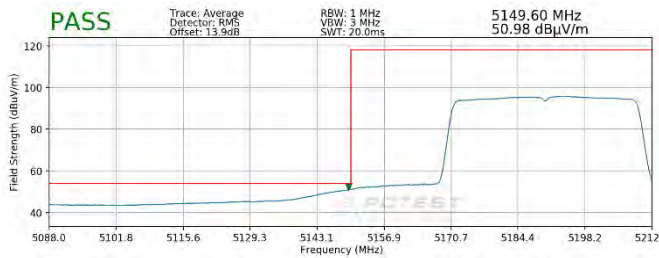
FCC ID: A3LSMG988U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 255 of 270

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

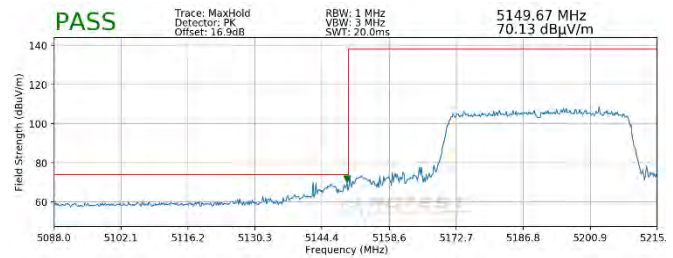
§15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

484 Tones

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	65
Distance of Measurements:	3 Meters
Operating Frequency:	5190MHz
Channel:	38

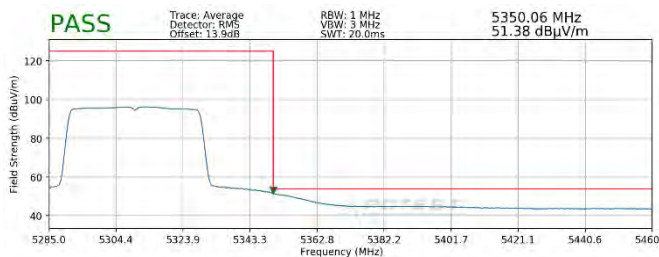


Plot 7-335. Radiated Lower Band Edge Plot SISO ANT2 (Average - UNII Band 1 - 484 Tones)

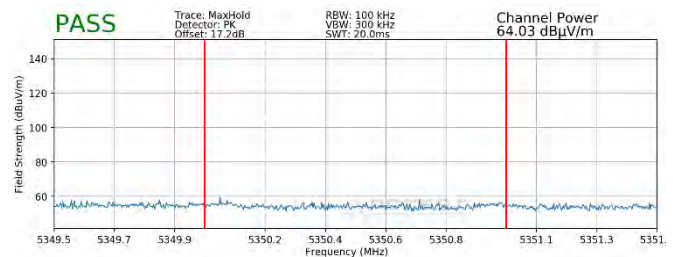


Plot 7-336. Radiated Lower Band Edge Plot SISO ANT2 (Peak - UNII Band 1 - 484 Tones)

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	65
Distance of Measurements:	3 Meters
Operating Frequency:	5310MHz
Channel:	62



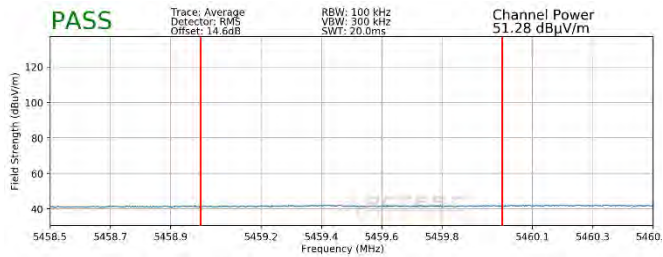
Plot 7-337. Radiated Upper Band Edge Plot SISO ANT2 (Average - UNII Band 2A - 484 Tones)



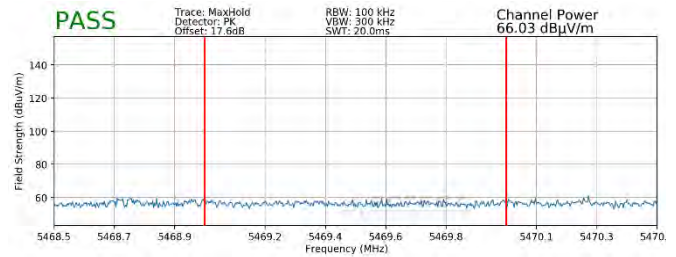
Plot 7-338. Radiated Upper Band Edge Plot SISO ANT2 (Peak - UNII Band 2A - 484 Tones)

FCC ID: A3LSMG988U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 256 of 270

Worst Case Mode: 802.11ax
Worst Case Transfer Rate: MCS0
RU Index: 65
Distance of Measurements: 3 Meters
Operating Frequency: 5510MHz
Channel: 102

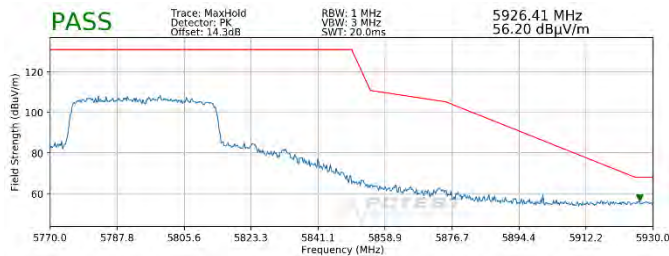


Plot 7-339. Radiated Lower Band Edge Plot SISO ANT2 (Average - UNII Band 2C - 484 Tones)



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: 65
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)

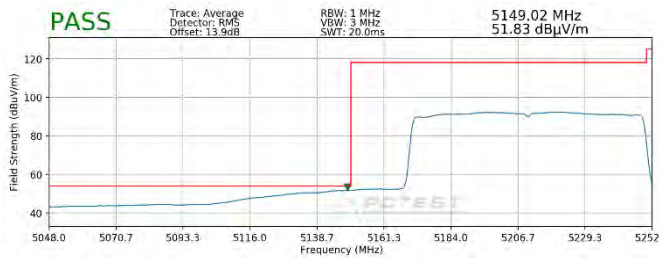
FCC ID: A3LSMG988U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 257 of 270

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

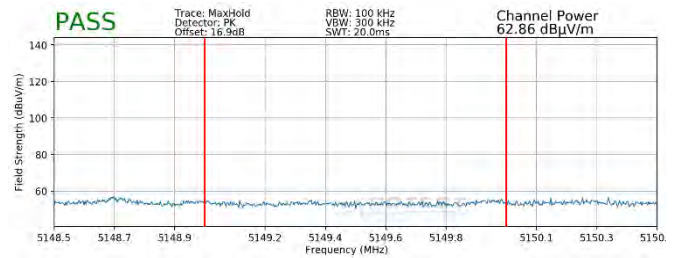
§15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

996 Tones

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	67
Distance of Measurements:	3 Meters
Operating Frequency:	5210MHz
Channel:	42

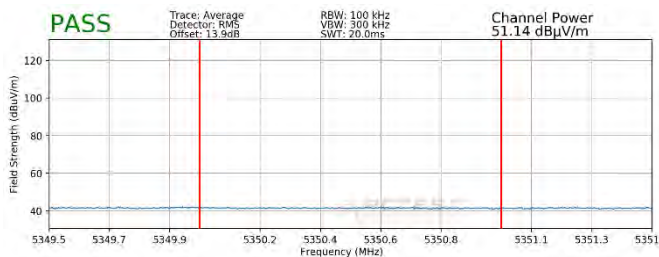


Plot 7-342. Radiated Lower Band Edge Plot SISO ANT2 (Average - UNII Band 1 - 996 Tones)

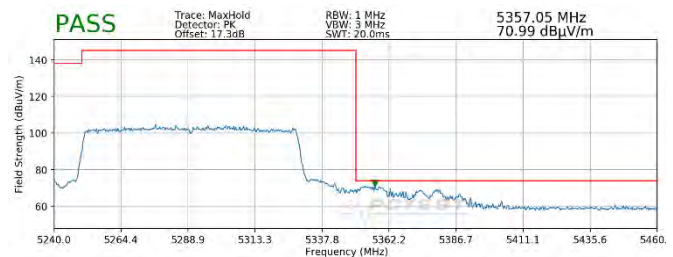


Plot 7-343. Radiated Lower Band Edge Plot SISO ANT2 (Peak - UNII Band 1 - 996 Tones)

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	67
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)



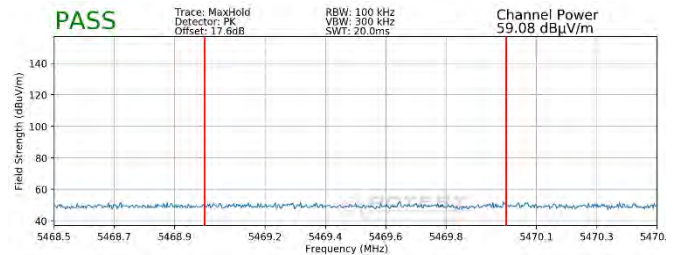
Plot 7-345. Radiated Upper Band Edge Plot SISO ANT2 (Peak - UNII Band 2A - 996 Tones)

FCC ID: A3LSMG988U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 258 of 270

Worst Case Mode: 802.11ax
Worst Case Transfer Rate: MCS0
RU Index: 67
Distance of Measurements: 3 Meters
Operating Frequency: 5530MHz
Channel: 106

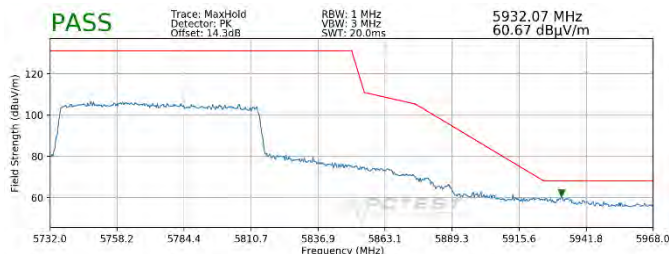


Plot 7-346. Radiated Lower Band Edge Plot SISO ANT2 (Average - UNII Band 2C - 996 Tones)



Plot 7-347. Radiated Lower Band Edge Plot SISO ANT2 (Peak - UNII Band 2C - 996 Tones)

Worst Case Mode: 802.11ax
Worst Case Transfer Rate: MCS0
RU Index: 67
Distance of Measurements: 3 Meters
Operating Frequency: 5775MHz
Channel: 155



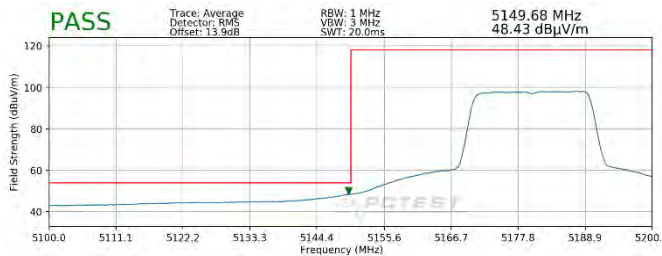
Plot 7-348. Radiated Upper Band Edge Plot SISO ANT2 (Peak - UNII Band 3 - 996 Tones)

FCC ID: A3LSMG988U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 259 of 270

7.6.10 MIMO 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

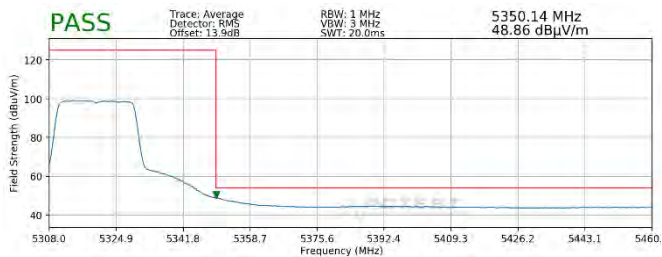


**Plot 7-349. Radiated Lower Band Edge Plot MIMO
(Average - UNII Band 1 - 242 Tones)**

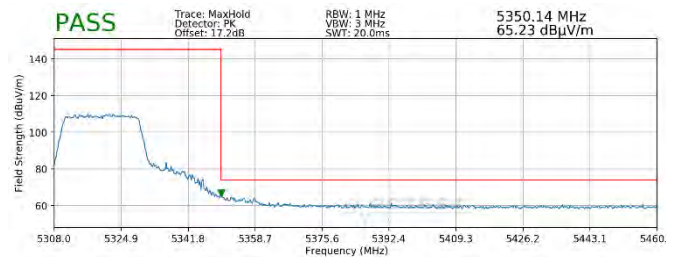


**Plot 7-350. Radiated Lower Band Edge Plot MIMO
(Peak - UNII Band 1 - 242 Tones)**

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



**Plot 7-351. Radiated Upper Band Edge Plot MIMO
(Average - UNII Band 2A - 242 Tones)**



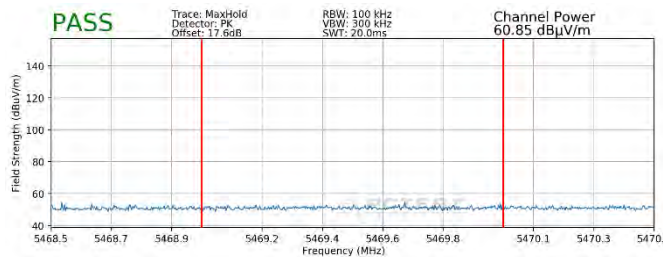
**Plot 7-352. Radiated Upper Band Edge Plot MIMO
(Peak - UNII Band 2A - 242 Tones)**

FCC ID: A3LSMG988U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 260 of 270

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

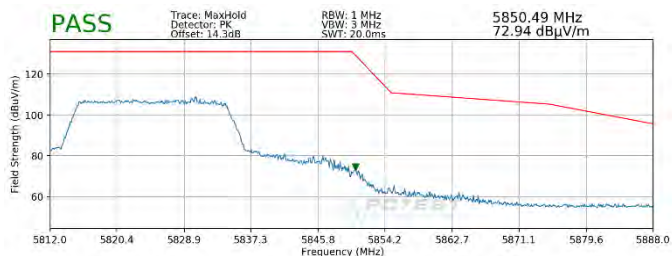


Plot 7-353. Radiated Lower Band Edge Plot MIMO (Average - UNII Band 2C - 242 Tones)



Plot 7-354. Radiated Lower Band Edge Plot MIMO (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



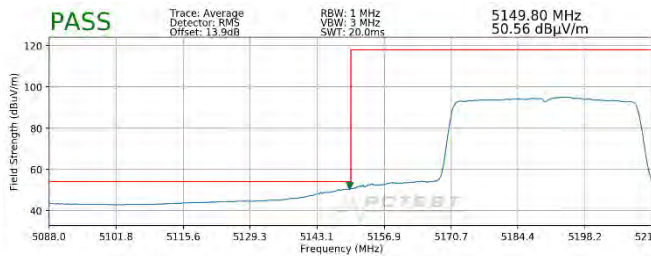
Plot 7-355. Radiated Upper Band Edge Plot MIMO (Peak - UNII Band 3 - 242 Tones)

FCC ID: A3LSMG988U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset	Page 261 of 270

7.6.11 MIMO 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:	65
Distance of Measurements:	3 Meters
Operating Frequency:	5190MHz
Channel:	38

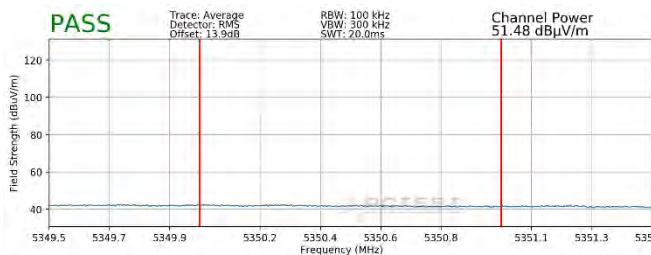


**Plot 7-356. Radiated Lower Band Edge Plot MIMO
(Average – UNII Band 1 – 484 Tones)**



**Plot 7-357. Radiated Lower Band Edge Plot MIMO
(Peak – UNII Band 1 – 484 Tones)**

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	65
Distance of Measurements:	3 Meters
Operating Frequency:	5310MHz
Channel:	62



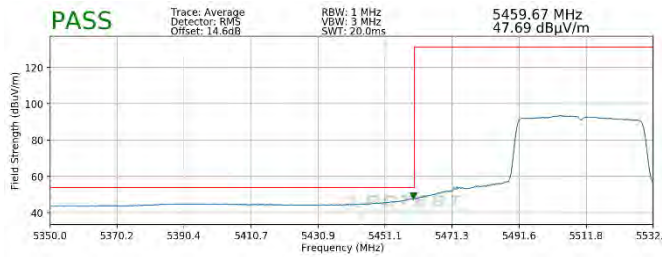
**Plot 7-358. Radiated Upper Band Edge Plot MIMO
(Average – UNII Band 2A – 484 Tones)**



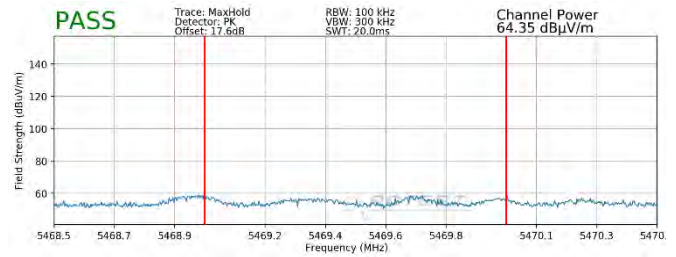
**Plot 7-359. Radiated Upper Band Edge Plot MIMO
(Peak – UNII Band 2A – 484 Tones)**

FCC ID: A3LSMG988U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 262 of 270

Worst Case Mode: 802.11ax
Worst Case Transfer Rate: MCS0
RU Index: 65
Distance of Measurements: 3 Meters
Operating Frequency: 5510MHz
Channel: 102

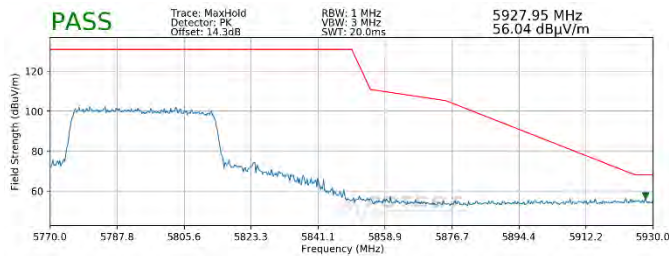


**Plot 7-360. Radiated Lower Band Edge Plot MIMO
(Average - UNII Band 2C - 484 Tones)**



**Plot 7-361. Radiated Lower Band Edge Plot MIMO
(Peak - UNII Band 2C - 484 Tones)**

Worst Case Mode: 802.11ax
Worst Case Transfer Rate: MCS0
RU Index: 65
Distance of Measurements: 3 Meters
Operating Frequency: 5795MHz
Channel: 159



**Plot 7-362. Radiated Upper Band Edge Plot MIMO
(Peak - UNII Band 3 - 484 Tones)**

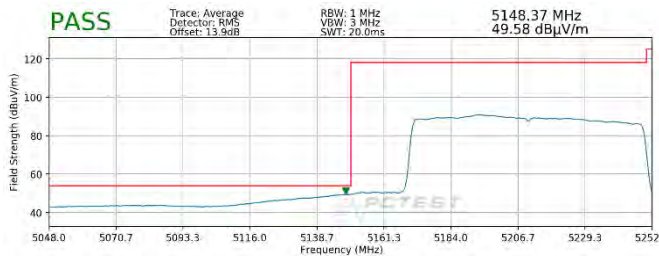
FCC ID: A3LSMG988U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 263 of 270

7.6.12 MIMO Radiated Band Edge Measurements (80MHz BW)

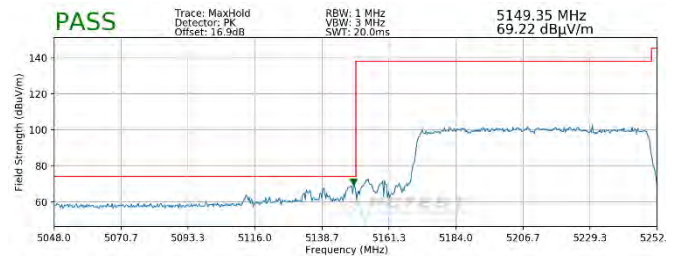
§15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

996 Tones

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	67
Distance of Measurements:	3 Meters
Operating Frequency:	5210MHz
Channel:	42

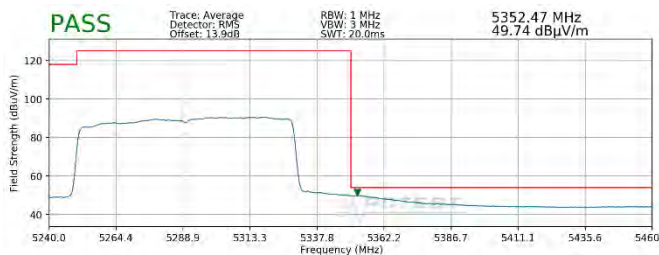


Plot 7-363. Radiated Lower Band Edge Plot MIMO (Average - UNII Band 1 - 996 Tones)

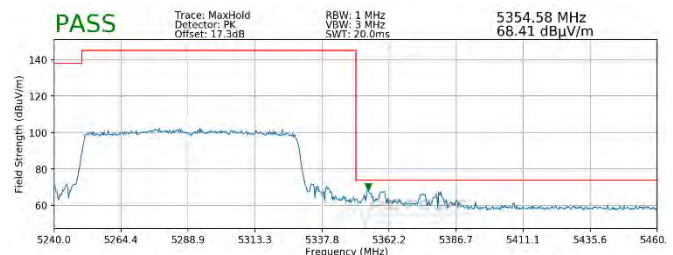


Plot 7-364. Radiated Lower Band Edge Plot MIMO (Peak - UNII Band 1 - 996 Tones)

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
RU Index:	67
Distance of Measurements:	3 Meters
Operating Frequency:	5290MHz
Channel:	58



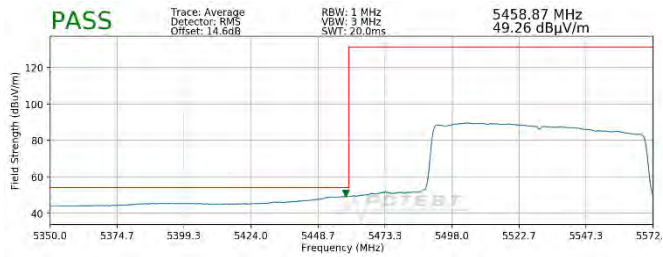
Plot 7-365. Radiated Upper Band Edge Plot MIMO (Average - UNII Band 2A - 996 Tones)



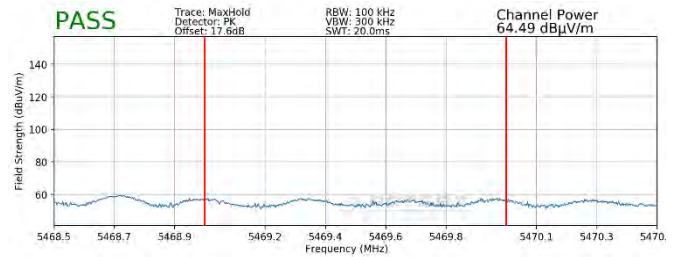
Plot 7-366. Radiated Upper Band Edge Plot MIMO (Peak - UNII Band 2A - 996 Tones)

FCC ID: A3LSMG988U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 264 of 270

Worst Case Mode: 802.11ax
Worst Case Transfer Rate: MCS0
RU Index: 67
Distance of Measurements: 3 Meters
Operating Frequency: 5530MHz
Channel: 106

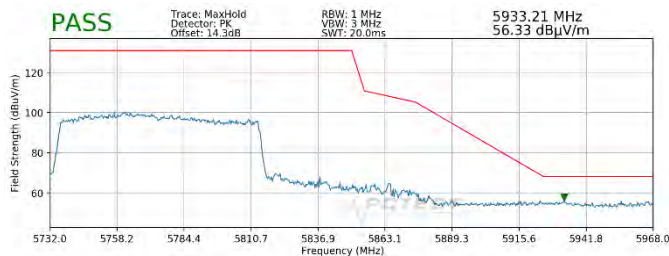


Plot 7-367. Radiated Lower Band Edge Plot MIMO (Average - UNII Band 2C - 996 Tones)



Plot 7-368. Radiated Lower Band Edge Plot MIMO (Peak - UNII Band 2C - 996 Tones)

Worst Case Mode: 802.11ax
Worst Case Transfer Rate: MCS0
RU Index: 67
Distance of Measurements: 3 Meters
Operating Frequency: 5775MHz
Channel: 155



Plot 7-369. Radiated Upper Band Edge Plot MIMO (Peak - UNII Band 3 - 996 Tones)

FCC ID: A3LSMG988U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1911140187-09-R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 265 of 270

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 7-142 per Section 15.209 and RSS-Gen (8.9).

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

Table 7-142. Radiated Limits

Test Procedures Used

ANSI C63.10-2013

Test Settings

Quasi-Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 120kHz (for emissions from 30MHz – 1GHz)
3. Detector = quasi-peak
4. Sweep time = auto couple
5. Trace mode = max hold
6. Trace was allowed to stabilize

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09- R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 266 of 270

Test Setup

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

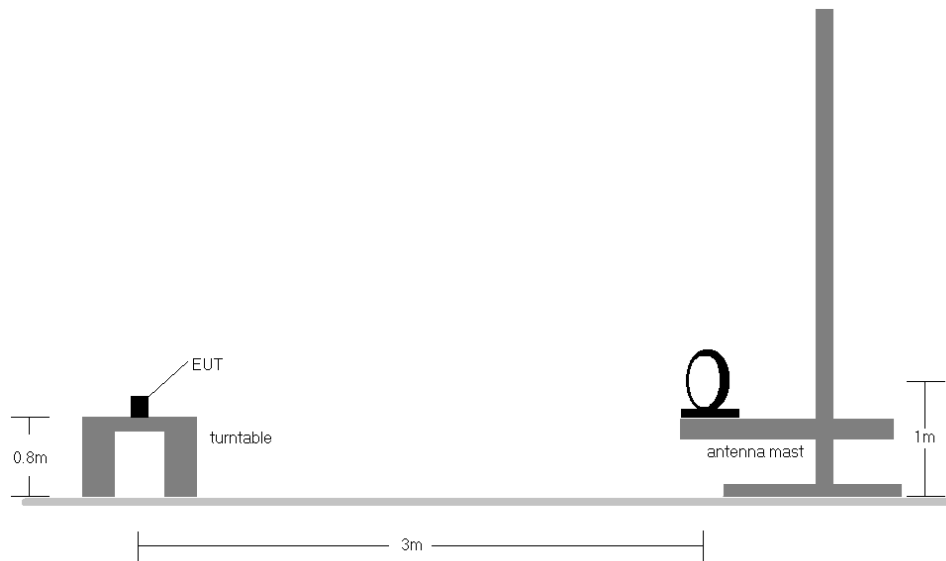


Figure 7-6. Radiated Test Setup < 30MHz

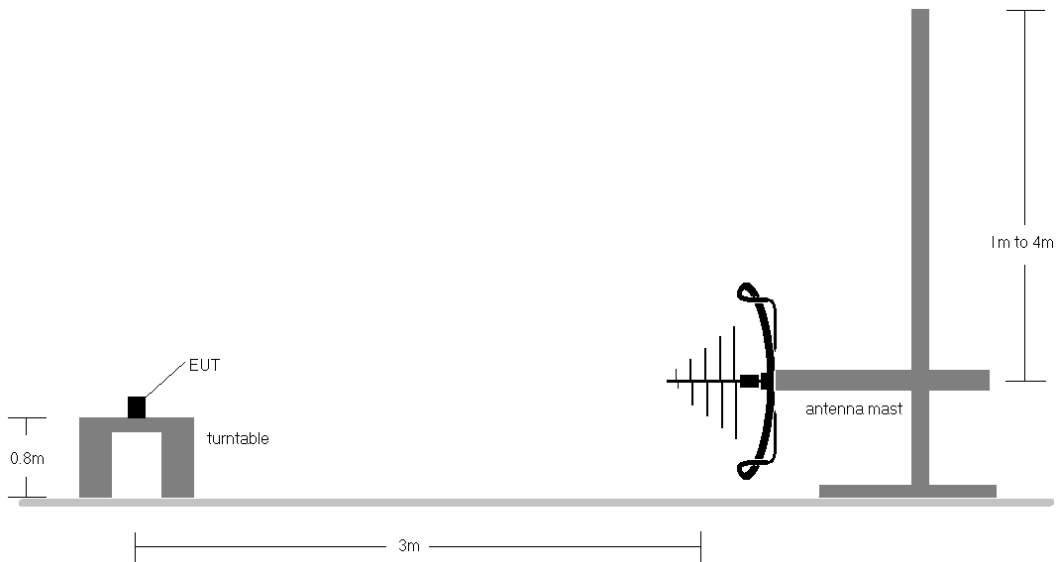


Figure 7-7. Radiated Test Setup < 1GHz

FCC ID: A3LSMG988U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1911140187-09- R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 267 of 270

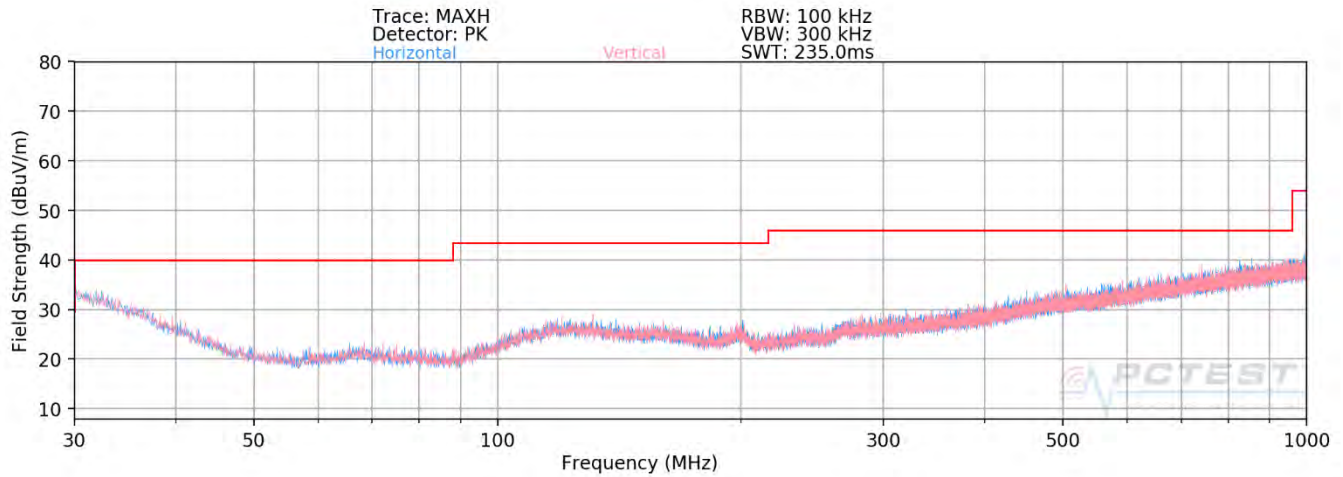
Test Notes

1. All emissions lying in restricted bands specified in §15.205 and RSS-Gen (8.10) are below the limit shown in Table 7-142.
2. The broadband receive antenna is manipulated through vertical and horizontal polarizations during the tests. The EUT is manipulated through three orthogonal planes.
3. This unit was tested with its standard battery.
4. The spectrum is investigated using a peak detector and final measurements are recorded using CISPR quasi peak detector. The worst-case emissions are reported however emissions whose levels were not within 20dB of the respective limits were not reported.
5. Emissions were measured at a 3 meter test distance.
6. Emissions are investigated while operating on the center channel of the mode, band, and modulation that produced the worst case results during the transmitter spurious emissions testing.
7. No spurious emissions were detected within 20dB of the limit below 30MHz.
8. The results recorded using the broadband antenna is known to correlate with the results obtained by using a tuned dipole with an acceptable degree of accuracy. The VSWR for the measurement antenna was found to be less than 2:1.
9. The wide spectrum spurious emissions plots shown on the following pages are used only for the purpose of emission identification. There were no emissions detected in the 30MHz – 1GHz frequency range, as shown in the subsequent plots.

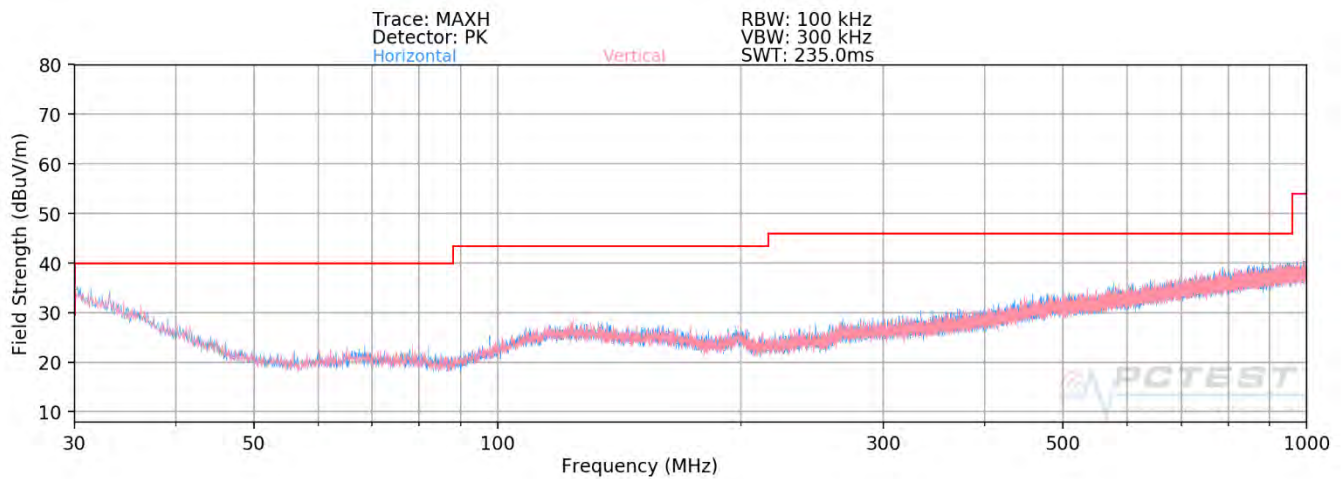
FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09- R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 268 of 270

MIMO Radiated Spurious Emissions Measurements (Below 1GHz)

§15.209; RSS-Gen [8.9]



Plot 7-370. Radiated Spurious Plot below 1GHz MIMO (802.11ax – 26 Tones – U3 Ch. 157)



Plot 7-371. Radiated Spurious Plot below 1GHz MIMO (802.11ax – 242 Tones – U3 Ch. 157)

FCC ID: A3LSMG988U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1911140187-09- R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 269 of 270

8.0 CONCLUSION

The data collected relate only the item(s) tested and show that the **Samsung Portable Handset FCC ID: A3LSMG988U** is in compliance with Part 15 Subpart E (15.407) of the FCC Rules and RSS-247 of the Innovation, Science and Economic Development Canada Rules.

FCC ID: A3LSMG988U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911140187-09- R1.A3L	Test Dates: 11/14/2019 - 1/31/2020	EUT Type: Portable Handset		Page 270 of 270