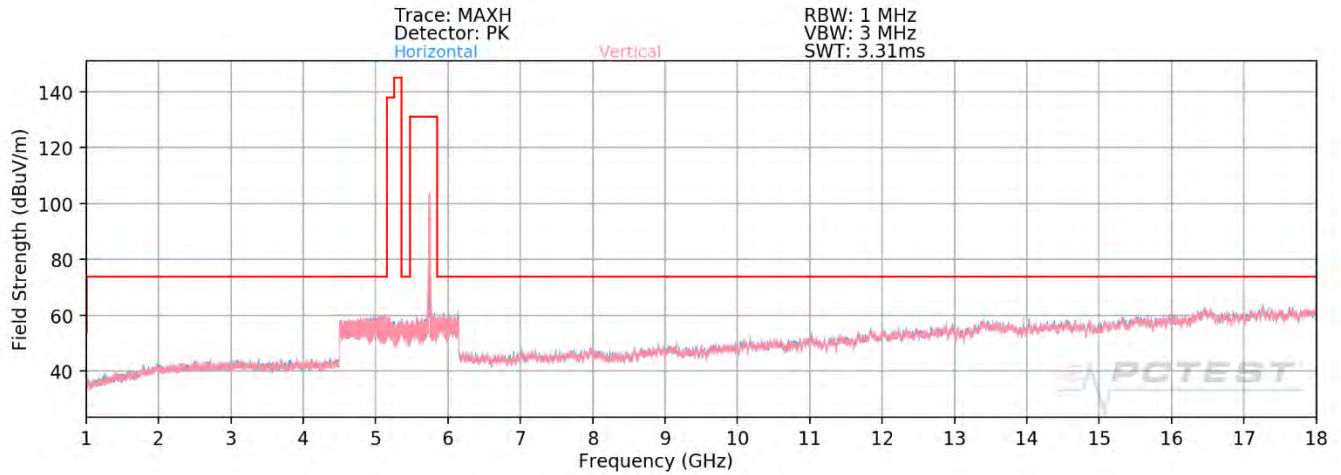
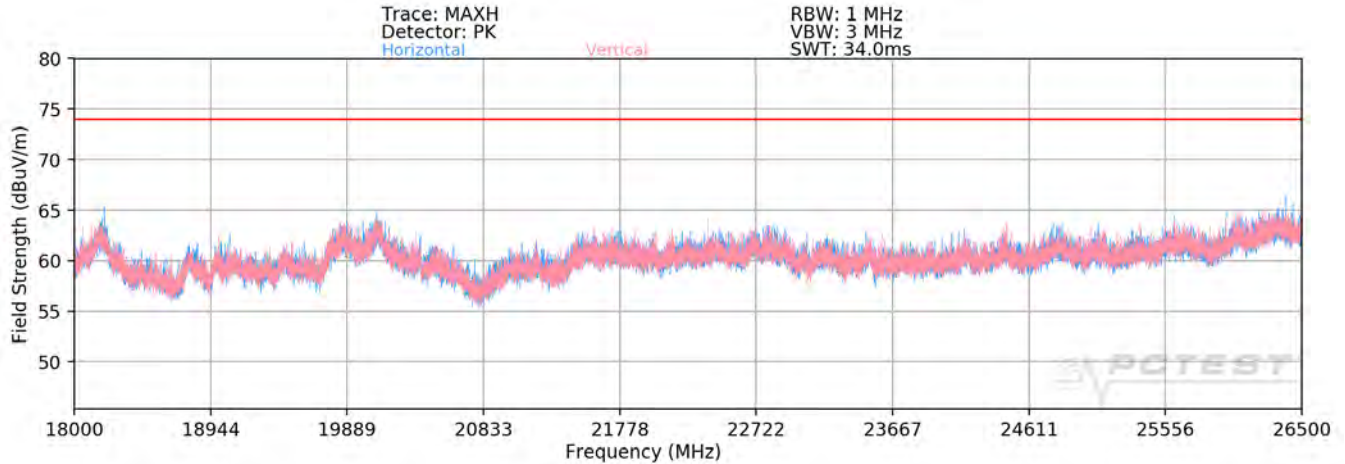




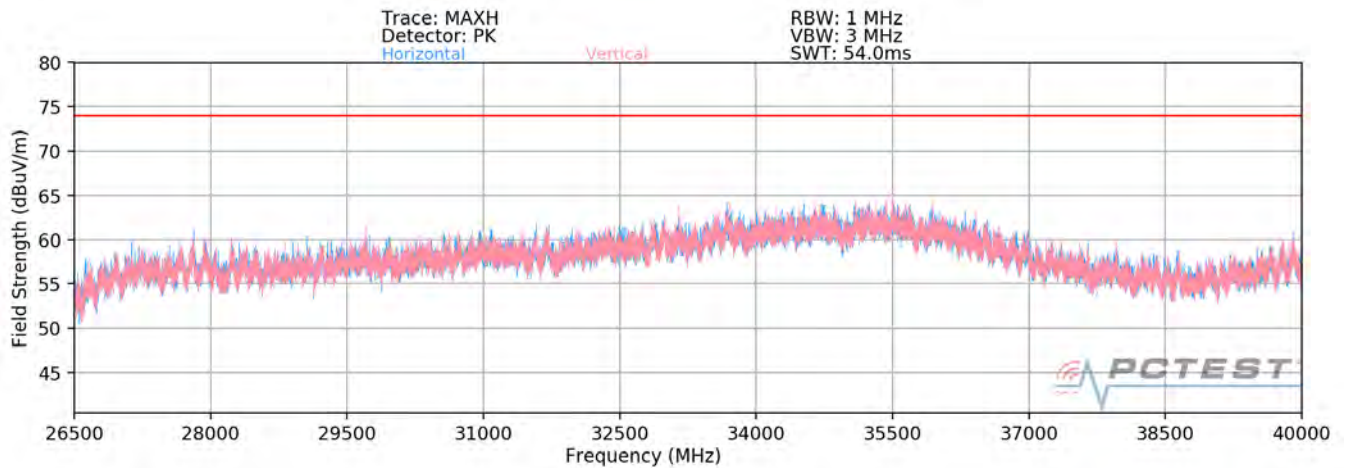
Plot 7-346. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U3 Ch. 157 – 242 Tones)

FCC ID: A3LSMG981V	PCTEST Proud to be part of Samsung	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 252 of 299

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



Plot 7-347. Radiated Spurious Plot 18GHz - 26.5GHz SISO ANT2 (802.11ax - 242 Tones)



Plot 7-348. Radiated Spurious Plot 26.5GHz - 40GHz SISO ANT2 (802.11ax - 242 Tones)

FCC ID: A3LSMG981V	PCTEST Proud to be part of Samsung	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 - 5/8/2020	EUT Type: Portable Handset		Page 253 of 299

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	-	-	-72.32	15.31	0.00	49.99	68.20	-18.21
15540.00	Average	H	-	-	-84.55	26.04	0.00	48.49	53.98	-5.48
15540.00	Peak	H	-	-	-73.69	26.04	0.00	59.35	73.98	-14.62
20720.00	Average	H	-	-	-80.56	17.97	-9.54	34.87	53.98	-19.11
20720.00	Peak	H	-	-	-68.27	17.97	-9.54	47.16	73.98	-26.82
25900.00	Peak	H	-	-	-67.07	20.19	-9.54	50.58	68.20	-17.62

Table 7-103. 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	-	-	-72.03	15.38	0.00	50.35	68.20	-17.85
15600.00	Average	H	-	-	-84.67	25.71	0.00	48.04	53.98	-5.94
15600.00	Peak	H	-	-	-73.91	25.71	0.00	58.80	73.98	-15.18
20800.00	Average	H	-	-	-80.57	18.41	-9.54	35.29	53.98	-18.69
20800.00	Peak	H	-	-	-67.82	18.41	-9.54	48.04	73.98	-25.94
26000.00	Peak	H	-	-	-65.65	20.23	-9.54	52.03	68.20	-16.17

Table 7-104. Radiated Measurements SISO ANT2 (242 Tones)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 254 of 299

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	-	-	-72.49	16.36	0.00	50.87	68.20	-17.33
15720.00	Average	H	-	-	-84.97	26.11	0.00	48.14	53.98	-5.84
15720.00	Peak	H	-	-	-73.13	26.11	0.00	59.98	73.98	-14.00
20960.00	Average	H	-	-	-80.36	18.69	-9.54	35.79	53.98	-18.19
20960.00	Peak	H	-	-	-67.47	18.69	-9.54	48.68	73.98	-25.30
26200.00	Peak	H	-	-	-66.98	20.69	-9.54	51.17	68.20	-17.03

Table 7-105. 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	-	-	-72.43	16.42	0.00	50.99	68.20	-17.21
15780.00	Average	H	-	-	-84.67	26.08	0.00	48.41	53.98	-5.57
15780.00	Peak	H	-	-	-73.90	26.08	0.00	59.18	73.98	-14.80
21040.00	Average	H	-	-	-80.32	19.25	-9.54	36.38	53.98	-17.60
21040.00	Peak	H	-	-	-67.60	19.25	-9.54	49.10	73.98	-24.88
26300.00	Peak	H	-	-	-66.32	21.24	-9.54	52.37	68.20	-15.83

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

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 255 of 299

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	-	-	-72.58	16.00	0.00	50.42	68.20	-17.78
15840.00	Average	H	-	-	-84.62	26.12	0.00	48.50	53.98	-5.48
15840.00	Peak	H	-	-	-73.80	26.12	0.00	59.32	73.98	-14.66
21120.00	Average	H	-	-	-78.88	18.74	-9.54	37.32	53.98	-16.66
21120.00	Peak	H	-	-	-66.32	18.74	-9.54	49.88	73.98	-24.10
26400.00	Peak	H	-	-	-66.21	20.98	-9.54	52.22	68.20	-15.98

Table 7-107. 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	-	-	-83.59	15.73	0.00	39.14	53.98	-14.84
10640.00	Peak	H	-	-	-72.70	15.73	0.00	50.03	73.98	-23.95
15960.00	Average	H	-	-	-84.68	26.81	0.00	49.13	53.98	-4.85
15960.00	Peak	H	-	-	-73.69	26.81	0.00	60.12	73.98	-13.86
21280.00	Average	H	-	-	-80.34	18.82	-9.54	35.93	53.98	-18.04
21280.00	Peak	H	-	-	-67.77	18.82	-9.54	48.50	73.98	-25.47
26600.00	Peak	H	-	-	-51.53	4.61	-9.54	50.54	68.20	-17.66

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

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 256 of 299

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	-	-	-83.68	17.60	0.00	40.92	53.98	-13.06
11000.00	Peak	H	-	-	-72.52	17.60	0.00	52.08	73.98	-21.90
16500.00	Peak	H	-	-	-73.40	26.50	0.00	60.10	68.20	-8.10
22000.00	Peak	H	-	-	-67.35	19.61	-9.54	49.72	68.20	-18.48
27500.00	Peak	H	-	-	-50.88	4.69	-9.54	51.26	68.20	-16.94

Table 7-109. 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	-	-	-83.39	18.24	0.00	41.85	53.98	-12.13
11200.00	Peak	H	-	-	-72.48	18.24	0.00	52.76	73.98	-21.22
16800.00	Peak	H	-	-	-73.55	27.63	0.00	61.08	68.20	-7.12
22400.00	Average	H	-	-	-80.67	20.03	-9.54	36.82	53.98	-17.16
22400.00	Peak	H	-	-	-68.06	20.03	-9.54	49.43	73.98	-24.55
28000.00	Peak	H	-	-	-50.33	6.43	-9.54	53.56	68.20	-14.64

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

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 257 of 299

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	-	-	-83.67	18.08	0.00	41.41	53.98	-12.57
11440.00	Peak	H	-	-	-72.24	18.08	0.00	52.84	73.98	-21.14
17160.00	Peak	H	-	-	-73.26	27.62	0.00	61.36	68.20	-6.84
22880.00	Average	H	-	-	-79.90	19.61	-9.54	37.17	53.98	-16.81
22880.00	Peak	H	-	-	-67.69	19.61	-9.54	49.38	73.98	-24.60
28600.00	Peak	H	-	-	-50.71	6.89	-9.54	53.64	68.20	-14.56

Table 7-111. 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	-	-	-83.59	17.85	0.00	41.26	53.98	-12.72
11490.00	Peak	H	-	-	-72.78	17.85	0.00	52.07	73.98	-21.91
17235.00	Peak	H	-	-	-73.41	27.70	0.00	61.29	68.20	-6.91
22980.00	Average	H	-	-	-79.87	19.47	-9.54	37.05	53.98	-16.93
22980.00	Peak	H	-	-	-67.36	19.47	-9.54	49.56	73.98	-24.42
28725.00	Peak	H	-	-	-49.29	6.44	-9.54	54.60	68.20	-13.60

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

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 258 of 299

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	-	-	-83.72	17.50	0.00	40.78	53.98	-13.20
11570.00	Peak	H	-	-	-72.83	17.50	0.00	51.67	73.98	-22.31
17355.00	Peak	H	-	-	-73.65	26.93	0.00	60.28	68.20	-7.92
23140.00	Peak	H	-	-	-67.76	19.99	-9.54	49.68	68.20	-18.52
28925.00	Peak	H	-	-	-51.63	7.15	-9.54	52.98	68.20	-15.22

Table 7-113. 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

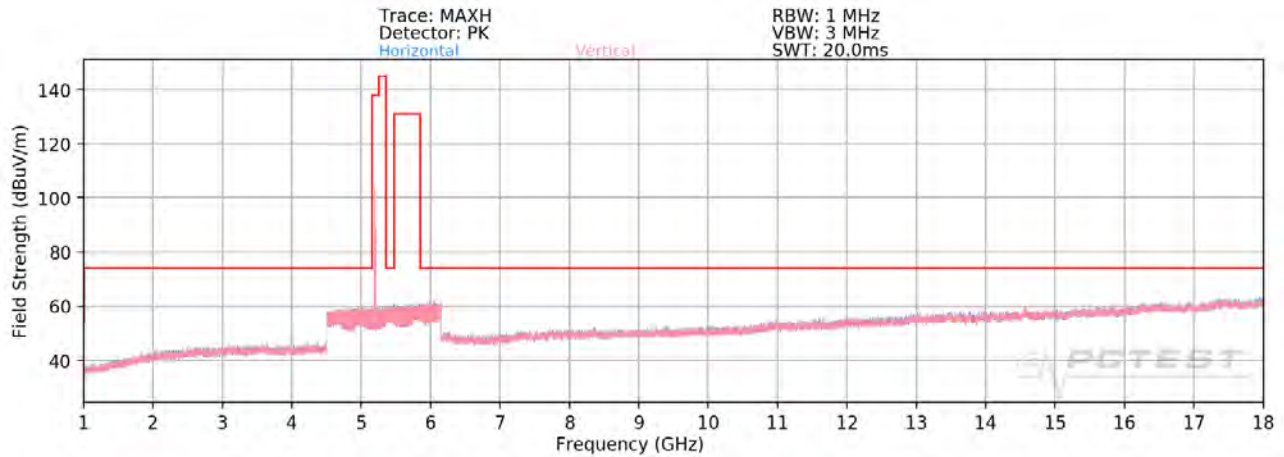
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
11650.00	Average	H	-	-	-83.77	18.48	0.00	41.71	53.98	-12.27
11650.00	Peak	H	-	-	-72.37	18.48	0.00	53.11	73.98	-20.87
17475.00	Peak	H	-	-	-73.84	28.62	0.00	61.78	68.20	-6.42
23300.00	Peak	H	-	-	-67.20	19.19	-9.54	49.44	68.20	-18.76
29125.00	Peak	H	-	-	-48.86	5.56	-9.54	54.16	68.20	-14.04

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

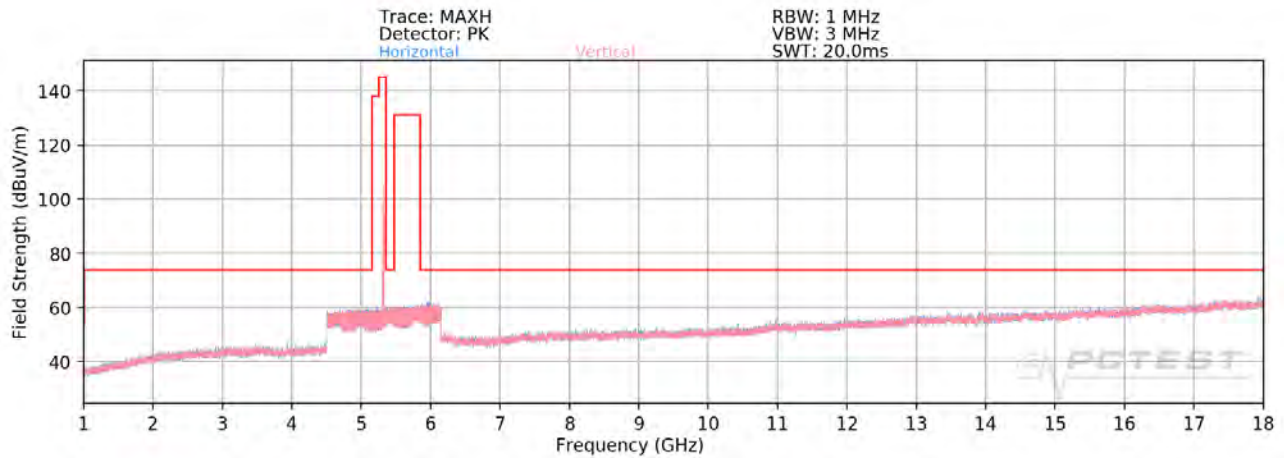
FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 259 of 299

7.6.3 MIMO Radiated Spurious Emission Measurements

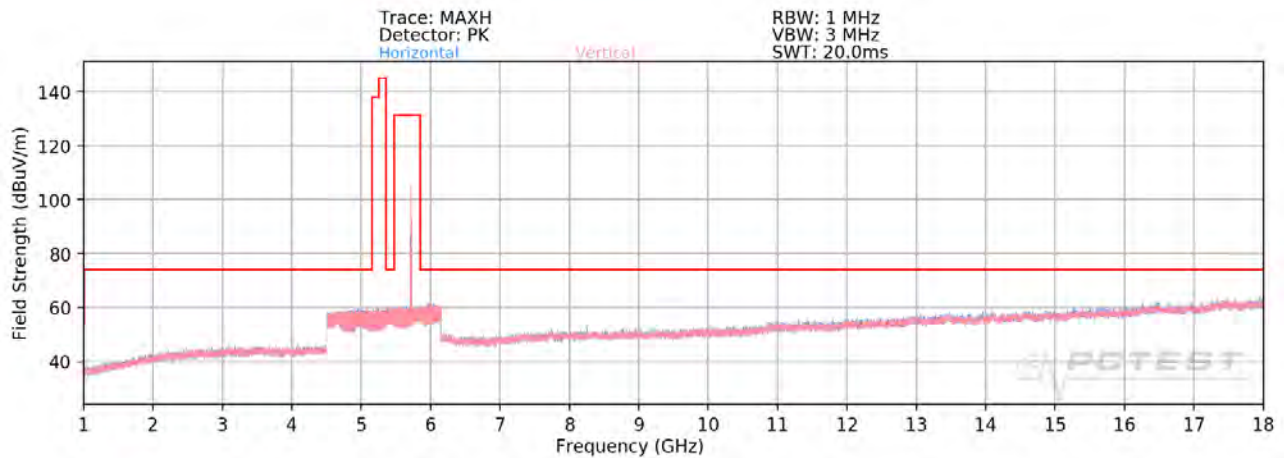
26 Tones



Plot 7-349. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U1 Ch. 40 – 26 Tones)

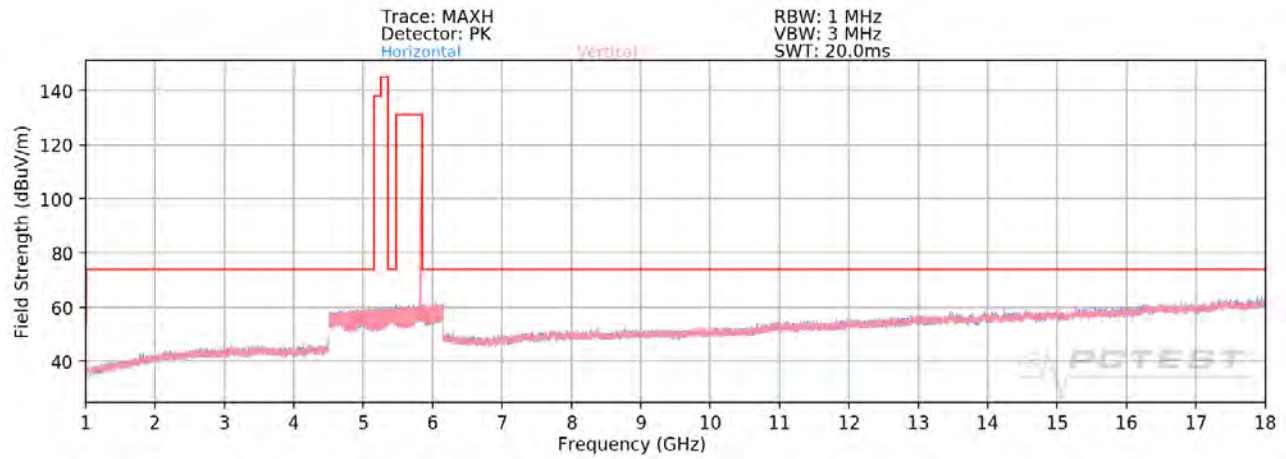


Plot 7-350. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U2A Ch. 56 – 26 Tones)



Plot 7-351. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U2C Ch. 120 – 26 Tones)

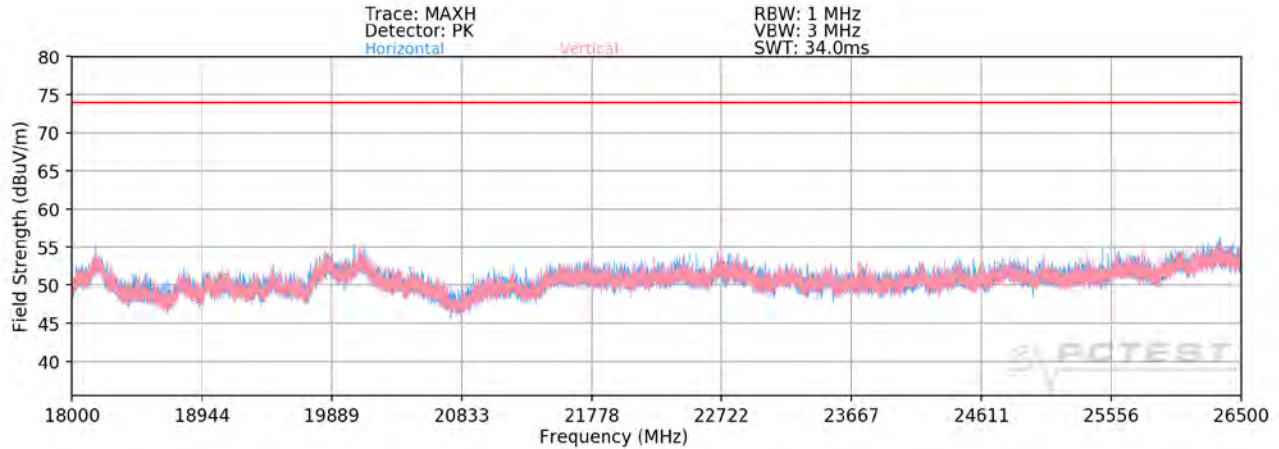
FCC ID: A3LSMG981V	PCTEST Proud to be part of Samsung	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 260 of 299



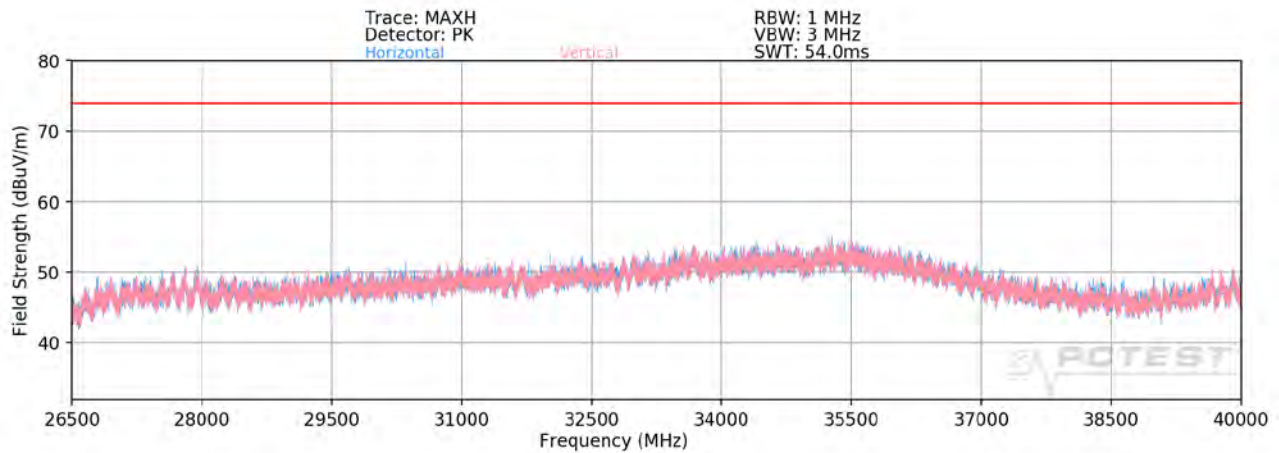
Plot 7-352. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U3 Ch. 157 – 26 Tones)

FCC ID: A3LSMG981V	PCTEST Proud to be part of Samsung	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 261 of 299

MIMO Radiated Spurious Emissions Measurements (Above 18GHz)



Plot 7-353. Radiated Spurious Plot 18GHz - 26.5GHz MIMO (802.11ax – 26 Tones)



Plot 7-354. Radiated Spurious Plot 26.5GHz - 40GHz MIMO (802.11ax – 26 Tones)

FCC ID: A3LSMG981V	PCTEST Proud to be part of Samsung	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 262 of 299

MIMO Radiated Spurious Emission Measurements (26 Tones)

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

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10360.00	Peak	V	-	-	-72.15	15.31	0.00	50.16	68.20	-18.04
15540.00	Average	V	-	-	-84.67	26.04	0.00	48.37	53.98	-5.60
15540.00	Peak	V	-	-	-73.68	26.04	0.00	59.36	73.98	-14.61
20720.00	Average	V	-	-	-80.33	17.97	-9.54	35.10	53.98	-18.88
20720.00	Peak	V	-	-	-68.31	17.97	-9.54	47.12	73.98	-26.86
25900.00	Peak	V	-	-	-66.99	20.19	-9.54	50.66	68.20	-17.54

Table 7-115. Radiated Measurements MIMO (26 Tones)

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10400.00	Peak	V	-	-	-72.44	15.38	0.00	49.94	68.20	-18.26
15600.00	Average	V	-	-	-84.91	25.71	0.00	47.80	53.98	-6.18
15600.00	Peak	V	-	-	-73.82	25.71	0.00	58.89	73.98	-15.09
20800.00	Average	V	-	-	-80.38	18.41	-9.54	35.48	53.98	-18.50
20800.00	Peak	V	-	-	-67.87	18.41	-9.54	47.99	73.98	-25.99
26000.00	Peak	V	-	-	-65.95	20.23	-9.54	51.73	68.20	-16.47

Table 7-116. Radiated Measurements MIMO (26 Tones)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 263 of 299

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10480.00	Peak	V	-	-	-72.46	16.36	0.00	50.90	68.20	-17.30
15720.00	Average	V	-	-	-84.67	26.11	0.00	48.44	53.98	-5.54
15720.00	Peak	V	-	-	-73.61	26.11	0.00	59.50	73.98	-14.48
20960.00	Average	V	-	-	-80.24	18.69	-9.54	35.91	53.98	-18.07
20960.00	Peak	V	-	-	-67.79	18.69	-9.54	48.36	73.98	-25.62
26200.00	Peak	V	-	-	-66.46	20.69	-9.54	51.69	68.20	-16.51

Table 7-117. Radiated Measurements MIMO (26 Tones)

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10520.00	Peak	V	-	-	-72.57	16.42	0.00	50.85	68.20	-17.35
15780.00	Average	V	-	-	-84.35	26.08	0.00	48.73	53.98	-5.25
15780.00	Peak	V	-	-	-73.19	26.08	0.00	59.89	73.98	-14.09
21040.00	Average	V	-	-	-79.90	19.25	-9.54	36.80	53.98	-17.18
21040.00	Peak	V	-	-	-66.87	19.25	-9.54	49.83	73.98	-24.15
26300.00	Peak	V	-	-	-66.11	21.24	-9.54	52.58	68.20	-15.62

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

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 264 of 299

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10560.00	Peak	V	-	-	-72.53	16.00	0.00	50.47	68.20	-17.73
15840.00	Average	V	-	-	-84.37	26.12	0.00	48.75	53.98	-5.23
15840.00	Peak	V	-	-	-73.43	26.12	0.00	59.69	73.98	-14.29
21120.00	Average	V	-	-	-79.97	18.74	-9.54	36.23	53.98	-17.75
21120.00	Peak	V	-	-	-66.75	18.74	-9.54	49.45	73.98	-24.53
26400.00	Peak	V	-	-	-66.39	20.98	-9.54	52.04	68.20	-16.16

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

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10640.00	Average	V	-	-	-83.42	15.73	0.00	39.31	53.98	-14.67
10640.00	Peak	V	-	-	-72.54	15.73	0.00	50.19	73.98	-23.79
15960.00	Average	V	-	-	-84.59	26.81	0.00	49.22	53.98	-4.76
15960.00	Peak	V	-	-	-73.51	26.81	0.00	60.30	73.98	-13.68
21280.00	Average	V	-	-	-80.02	18.82	-9.54	36.25	53.98	-17.72
21280.00	Peak	V	-	-	-67.44	18.82	-9.54	48.83	73.98	-25.14
26600.00	Peak	V	-	-	-51.58	4.61	-9.54	50.49	68.20	-17.71

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

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 265 of 299

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
11000.00	Average	V	-	-	-83.62	17.60	0.00	40.98	53.98	-13.00
11000.00	Peak	V	-	-	-72.52	17.60	0.00	52.08	73.98	-21.90
16500.00	Peak	V	-	-	-73.59	26.50	0.00	59.91	68.20	-8.29
22000.00	Peak	V	-	-	-67.26	19.61	-9.54	49.81	68.20	-18.39
27500.00	Peak	V	-	-	-49.98	4.69	-9.54	52.16	68.20	-16.04

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

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 54
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5580MHz
 Channel: 116

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
11200.00	Average	V	-	-	-83.38	18.24	0.00	41.86	53.98	-12.12
11200.00	Peak	V	-	-	-72.16	18.24	0.00	53.08	73.98	-20.90
16800.00	Peak	V	-	-	-73.26	27.63	0.00	61.37	68.20	-6.83
22400.00	Average	V	-	-	-80.10	20.03	-9.54	37.39	53.98	-16.59
22400.00	Peak	V	-	-	-67.75	20.03	-9.54	49.74	73.98	-24.24
28000.00	Peak	V	-	-	-49.66	6.43	-9.54	54.23	68.20	-13.97

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

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 266 of 299

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 54
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5700MHz
 Channel: 140

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
11440.00	Average	V	-	-	-83.41	18.08	0.00	41.67	53.98	-12.31
11440.00	Peak	V	-	-	-72.16	18.08	0.00	52.92	73.98	-21.06
17160.00	Peak	V	-	-	-73.32	27.62	0.00	61.30	68.20	-6.90
22880.00	Average	V	-	-	-79.57	19.61	-9.54	37.50	53.98	-16.48
22880.00	Peak	V	-	-	-66.57	19.61	-9.54	50.50	73.98	-23.48
28600.00	Peak	V	-	-	-50.57	6.89	-9.54	53.78	68.20	-14.42

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

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
11490.00	Average	V	-	-	-83.27	17.85	0.00	41.58	53.98	-12.40
11490.00	Peak	V	-	-	-72.48	17.85	0.00	52.37	73.98	-21.61
17235.00	Peak	V	-	-	-73.41	27.70	0.00	61.29	68.20	-6.91
22980.00	Average	V	-	-	-79.80	19.47	-9.54	37.12	53.98	-16.86
22980.00	Peak	V	-	-	-67.99	19.47	-9.54	48.93	73.98	-25.05
28725.00	Peak	V	-	-	-49.83	6.44	-9.54	54.06	68.20	-14.14

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

FCC ID: A3LSMG981V	 PCTEST Proud to be part of Samsung	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 267 of 299

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
11570.00	Average	V	-	-	-83.61	17.50	0.00	40.89	53.98	-13.09
11570.00	Peak	V	-	-	-72.48	17.50	0.00	52.02	73.98	-21.96
17355.00	Peak	V	-	-	-73.45	26.93	0.00	60.48	68.20	-7.72
23140.00	Peak	V	-	-	-67.15	19.99	-9.54	50.29	68.20	-17.91
28925.00	Peak	V	-	-	-51.23	7.15	-9.54	53.38	68.20	-14.82

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

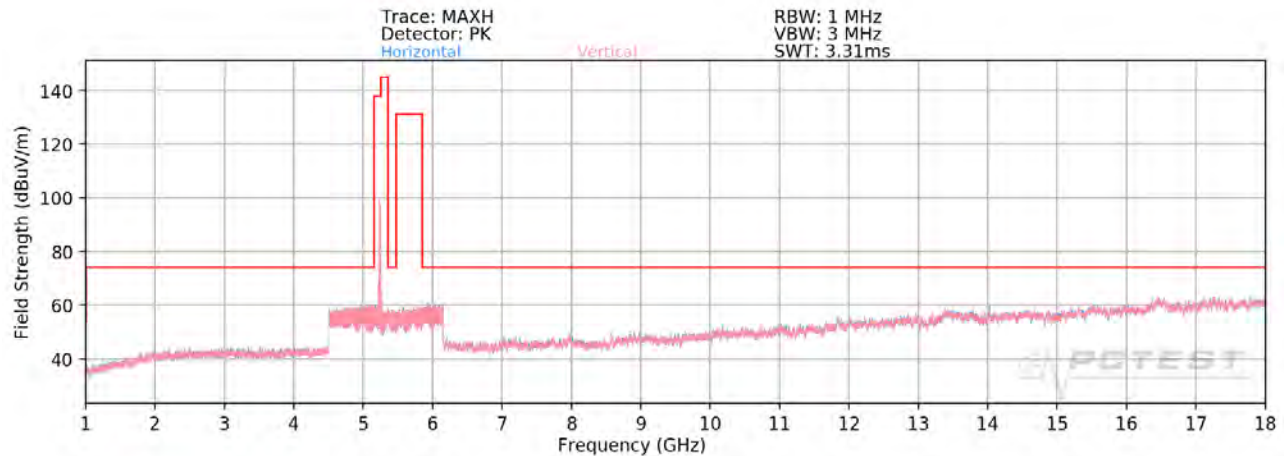
Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 54
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5825MHz
 Channel: 165

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
11650.00	Average	V	-	-	-83.70	18.48	0.00	41.78	53.98	-12.20
11650.00	Peak	V	-	-	-72.60	18.48	0.00	52.88	73.98	-21.10
17475.00	Peak	V	-	-	-73.69	28.62	0.00	61.93	68.20	-6.27
23300.00	Peak	V	-	-	-67.18	19.19	-9.54	49.46	68.20	-18.74
29125.00	Peak	V	-	-	-49.02	5.56	-9.54	54.00	68.20	-14.20

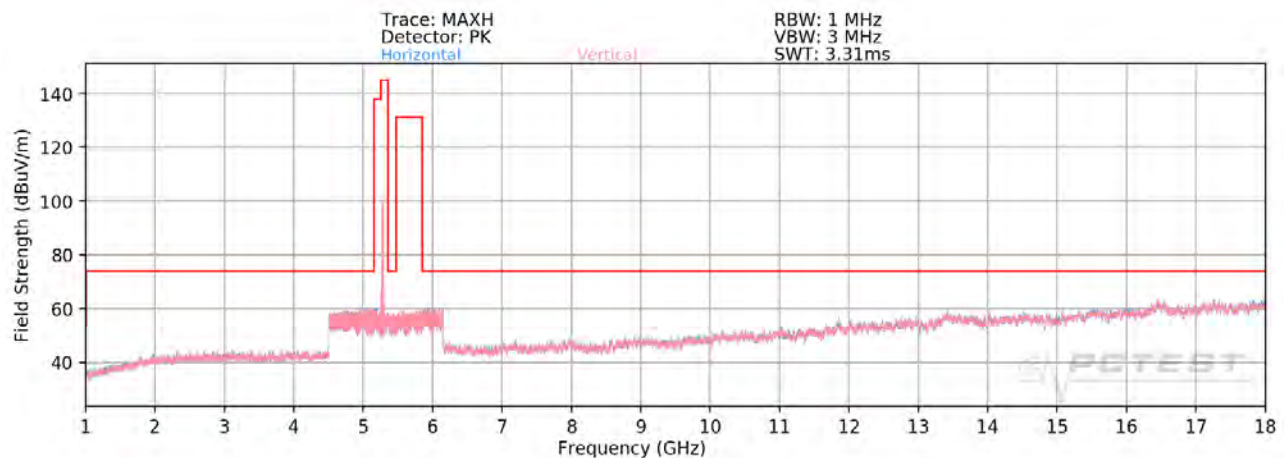
Table 7-126. Radiated Measurements MIMO (26 Tones)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 268 of 299

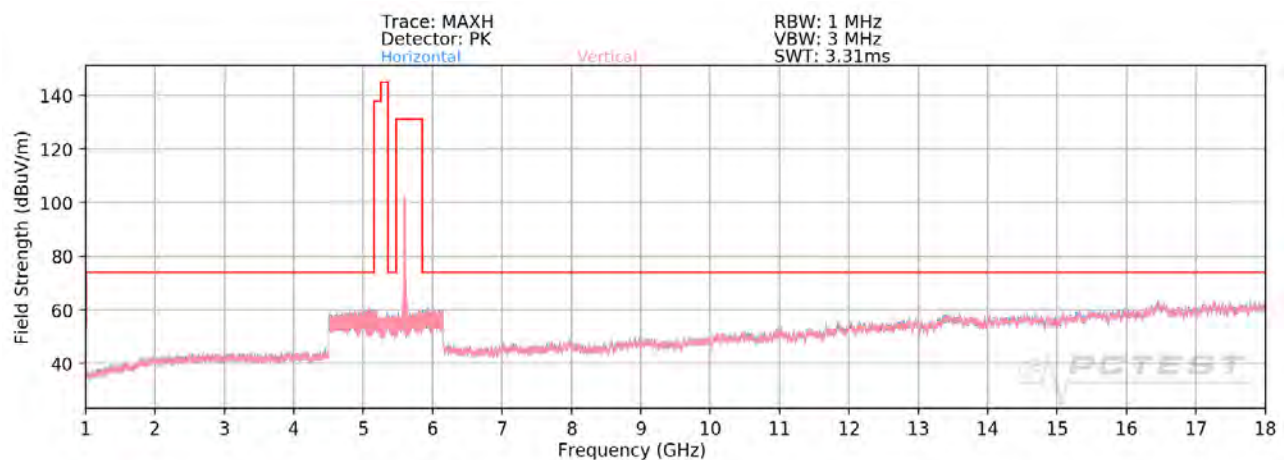
242 Tones



Plot 7-355. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U1 Ch. 40 – 242 Tones)

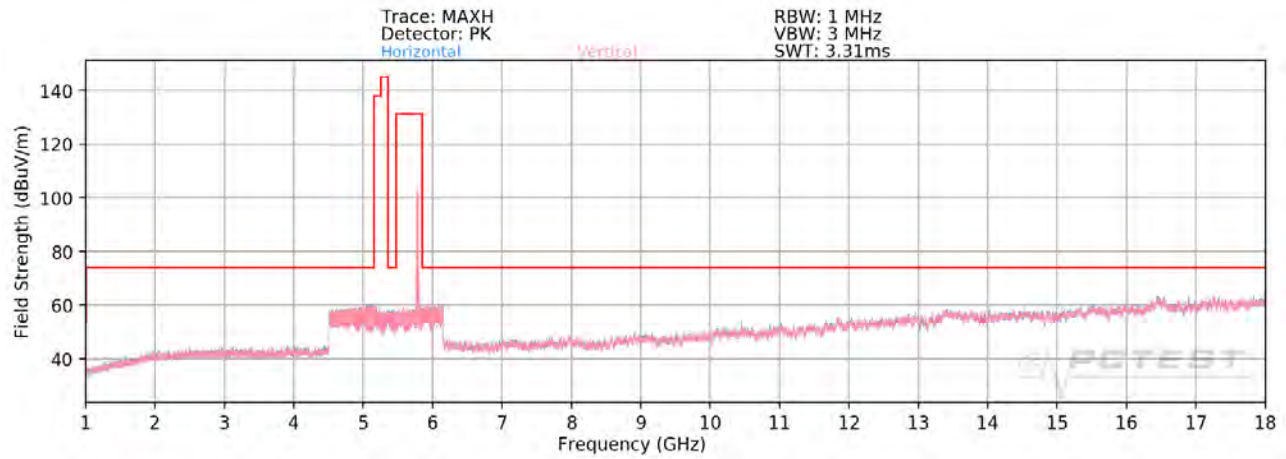


Plot 7-356. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U2A Ch. 56 – 242 Tones)



Plot 7-357. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U2C Ch. 120 – 242 Tones)

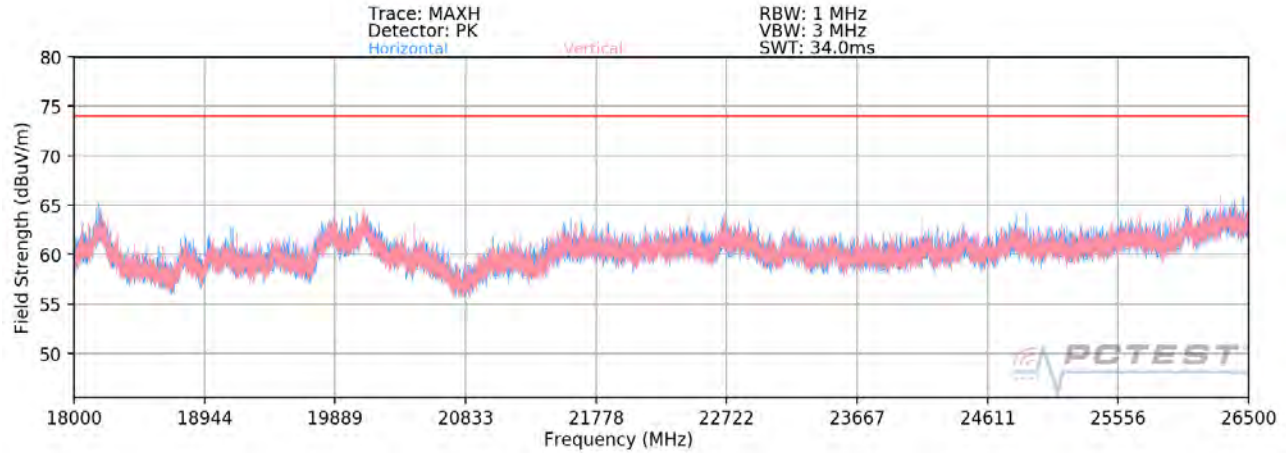
FCC ID: A3LSMG981V	PCTEST Proud to be part of Samsung	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 269 of 299



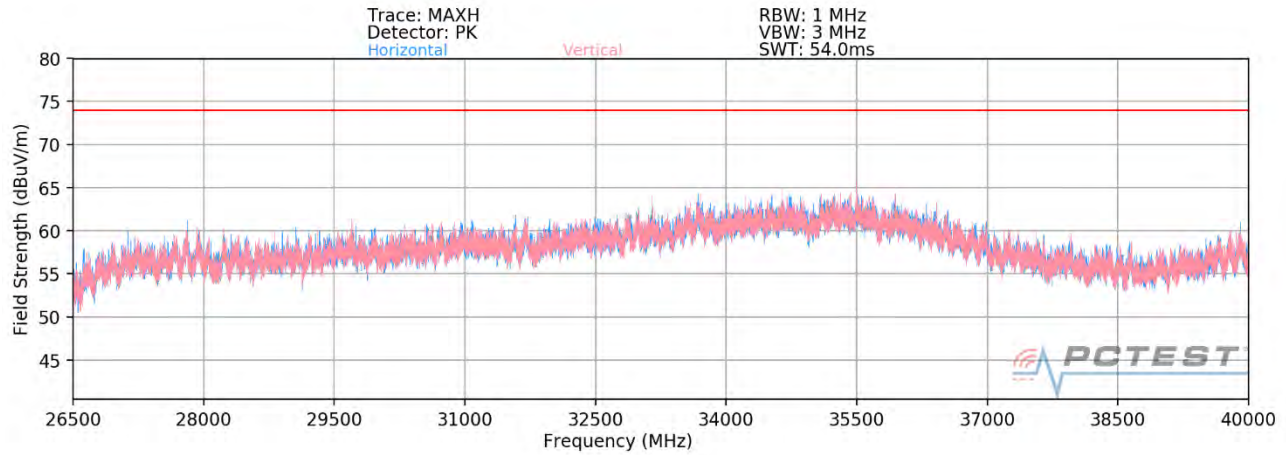
Plot 7-358. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U3 Ch. 157 – 242 Tones)

FCC ID: A3LSMG981V	PCTEST Proud to be part of Samsung	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 270 of 299

MIMO Radiated Spurious Emissions Measurements (Above 18GHz)



Plot 7-359. Radiated Spurious Plot 18GHz - 26.5GHz MIMO (802.11ax - 242 Tones)



Plot 7-360. Radiated Spurious Plot 26.5GHz - 40GHz MIMO (802.11ax - 242 Tones)

FCC ID: A3LSMG981V	PCTEST Proud to be part of Samsung	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 - 5/8/2020	EUT Type: Portable Handset		Page 271 of 299

MIMO Radiated Spurious Emission Measurements (242 Tones)

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

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10360.00	Peak	V	-	-	-72.03	15.31	0.00	50.28	68.20	-17.92
15540.00	Average	V	-	-	-84.71	26.04	0.00	48.33	53.98	-5.64
15540.00	Peak	V	-	-	-73.67	26.04	0.00	59.37	73.98	-14.60
20720.00	Average	V	-	-	-80.21	17.97	-9.54	35.22	53.98	-18.76
20720.00	Peak	V	-	-	-68.89	17.97	-9.54	46.54	73.98	-27.44
25900.00	Peak	V	-	-	-67.85	20.19	-9.54	49.80	68.20	-18.40

Table 7-127. Radiated Measurements MIMO (242 Tones)

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10400.00	Peak	V	-	-	-72.51	15.38	0.00	49.87	68.20	-18.33
15600.00	Average	V	-	-	-84.94	25.71	0.00	47.77	53.98	-6.21
15600.00	Peak	V	-	-	-73.69	25.71	0.00	59.02	73.98	-14.96
20800.00	Average	V	-	-	-80.17	18.41	-9.54	35.69	53.98	-18.29
20800.00	Peak	V	-	-	-68.22	18.41	-9.54	47.64	73.98	-26.34
26000.00	Peak	V	-	-	-66.71	20.23	-9.54	50.97	68.20	-17.23

Table 7-128. 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: 5240MHz
Channel: 48

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 272 of 299

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	-	-	-72.63	16.36	0.00	50.73	68.20	-17.47
15720.00	Average	V	-	-	-84.84	26.11	0.00	48.27	53.98	-5.71
15720.00	Peak	V	-	-	-73.73	26.11	0.00	59.38	73.98	-14.60
20960.00	Average	V	-	-	-80.11	18.69	-9.54	36.04	53.98	-17.94
20960.00	Peak	V	-	-	-68.01	18.69	-9.54	48.14	73.98	-25.84
26200.00	Peak	V	-	-	-67.24	20.69	-9.54	50.91	68.20	-17.29

Table 7-129. Radiated Measurements MIMO (242 Tones)

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10520.00	Peak	V	-	-	-72.21	16.42	0.00	51.21	68.20	-16.99
15780.00	Average	V	-	-	-84.64	26.08	0.00	48.44	53.98	-5.54
15780.00	Peak	V	-	-	-73.51	26.08	0.00	59.57	73.98	-14.41
21040.00	Average	V	-	-	-79.88	19.25	-9.54	36.82	53.98	-17.16
21040.00	Peak	V	-	-	-68.74	19.25	-9.54	47.96	73.98	-26.02
26300.00	Peak	V	-	-	-67.01	21.24	-9.54	51.68	68.20	-16.52

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: 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	-	-	-72.43	16.00	0.00	50.57	68.20	-17.63
15840.00	Average	V	-	-	-84.61	26.12	0.00	48.51	53.98	-5.47
15840.00	Peak	V	-	-	-73.37	26.12	0.00	59.75	73.98	-14.23
21120.00	Average	V	-	-	-80.16	18.74	-9.54	36.04	53.98	-17.94
21120.00	Peak	V	-	-	-68.68	18.74	-9.54	47.52	73.98	-26.46
26400.00	Peak	V	-	-	-67.28	20.98	-9.54	51.15	68.20	-17.05

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

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 273 of 299

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	-	-	-83.72	15.73	0.00	39.01	53.98	-14.97
10640.00	Peak	V	-	-	-72.63	15.73	0.00	50.10	73.98	-23.88
15960.00	Average	V	-	-	-84.78	26.81	0.00	49.03	53.98	-4.95
15960.00	Peak	V	-	-	-73.50	26.81	0.00	60.31	73.98	-13.67
21280.00	Average	V	-	-	-79.92	18.82	-9.54	36.35	53.98	-17.62
21280.00	Peak	V	-	-	-68.99	18.82	-9.54	47.28	73.98	-26.69
26600.00	Peak	V	-	-	-51.66	4.61	-9.54	50.41	68.20	-17.79

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: 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	-	-	-83.70	17.60	0.00	40.90	53.98	-13.08
11000.00	Peak	V	-	-	-72.90	17.60	0.00	51.70	73.98	-22.28
16500.00	Peak	V	-	-	-73.07	26.50	0.00	60.43	68.20	-7.77
22000.00	Peak	V	-	-	-67.46	19.61	-9.54	49.61	68.20	-18.59
27500.00	Peak	V	-	-	-51.00	4.69	-9.54	51.14	68.20	-17.06

Table 7-133. 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

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 274 of 299

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	-	-	-83.73	18.24	0.00	41.51	53.98	-12.47
11200.00	Peak	V	-	-	-72.74	18.24	0.00	52.50	73.98	-21.48
16800.00	Peak	V	-	-	-73.30	27.63	0.00	61.33	68.20	-6.87
22400.00	Average	V	-	-	-80.14	20.03	-9.54	37.35	53.98	-16.63
22400.00	Peak	V	-	-	-67.64	20.03	-9.54	49.85	73.98	-24.13
28000.00	Peak	V	-	-	-50.77	6.43	-9.54	53.12	68.20	-15.08

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: 5700MHz
 Channel: 140

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
11440.00	Average	V	-	-	-83.67	18.08	0.00	41.41	53.98	-12.57
11440.00	Peak	V	-	-	-72.62	18.08	0.00	52.46	73.98	-21.52
17160.00	Peak	V	-	-	-73.48	27.62	0.00	61.14	68.20	-7.06
22880.00	Average	V	-	-	-79.63	19.61	-9.54	37.44	53.98	-16.54
22880.00	Peak	V	-	-	-67.72	19.61	-9.54	49.35	73.98	-24.63
28600.00	Peak	V	-	-	-51.48	6.89	-9.54	52.87	68.20	-15.33

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

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
11490.00	Average	V	-	-	-83.35	17.85	0.00	41.50	53.98	-12.48
11490.00	Peak	V	-	-	-72.52	17.85	0.00	52.33	73.98	-21.65
17235.00	Peak	V	-	-	-73.55	27.70	0.00	61.15	68.20	-7.05
22980.00	Average	V	-	-	-79.85	19.47	-9.54	37.07	53.98	-16.91
22980.00	Peak	V	-	-	-68.58	19.47	-9.54	48.34	73.98	-25.64
28725.00	Peak	V	-	-	-51.18	6.44	-9.54	52.71	68.20	-15.49

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

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 275 of 299

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	-	-	-83.76	17.50	0.00	40.74	53.98	-13.24
11570.00	Peak	V	-	-	-72.24	17.50	0.00	52.26	73.98	-21.72
17355.00	Peak	V	-	-	-73.64	26.93	0.00	60.29	68.20	-7.91
23140.00	Peak	V	-	-	-68.65	19.99	-9.54	48.79	68.20	-19.41
28925.00	Peak	V	-	-	-52.36	7.15	-9.54	52.25	68.20	-15.95

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

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

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
11650.00	Average	V	-	-	-83.87	18.48	0.00	41.61	53.98	-12.37
11650.00	Peak	V	-	-	-73.30	18.48	0.00	52.18	73.98	-21.80
17475.00	Peak	V	-	-	-73.68	28.62	0.00	61.94	68.20	-6.26
23300.00	Peak	V	-	-	-68.01	19.19	-9.54	48.63	68.20	-19.57
29125.00	Peak	V	-	-	-49.95	5.56	-9.54	53.07	68.20	-15.13

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

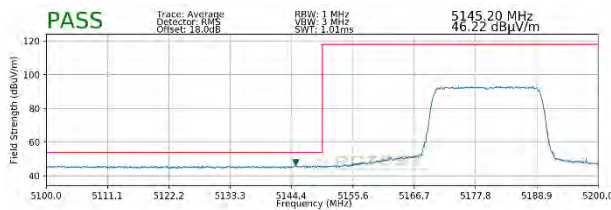
FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 276 of 299

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

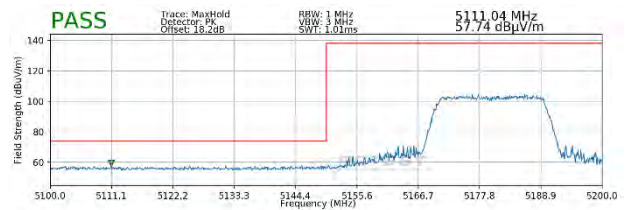
§15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]; RSS-Gen [8.9]

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 7-361. Radiated Lower Band Edge Plot SISO ANT1 (Average - UNII Band 1 - 242 Tones)

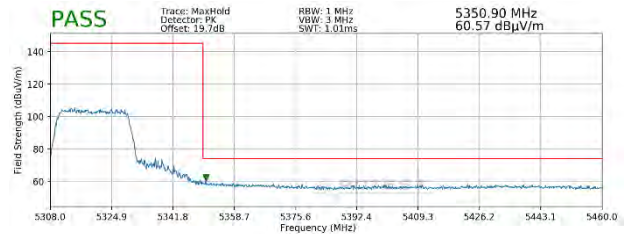


Plot 7-362. Radiated Lower Band Edge Plot SISO ANT1 (Peak - UNII Band 1 - 242 Tones)

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



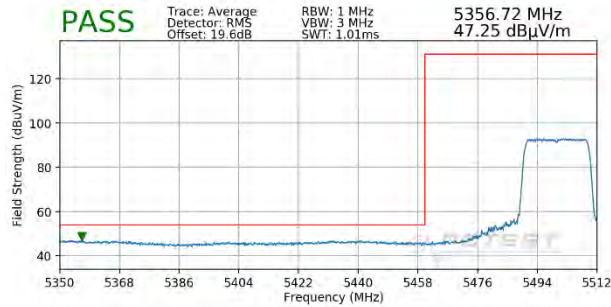
Plot 7-363. Radiated Upper Band Edge Plot SISO ANT1 (Average - UNII Band 2A - 242 Tones)



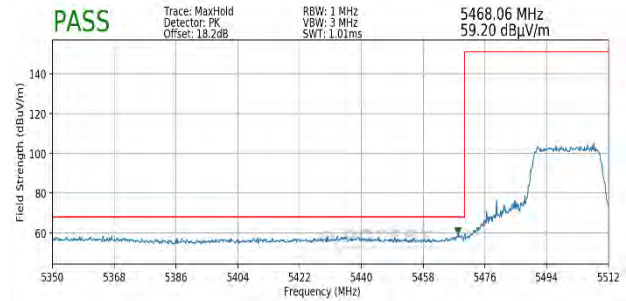
Plot 7-364. Radiated Upper Band Edge Plot SISO ANT1 (Peak - UNII Band 2A - 242 Tones)

FCC ID: A3LSMG981V	PCTEST Proud to be part of Samsung	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 - 5/8/2020	EUT Type: Portable Handset		Page 277 of 299

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

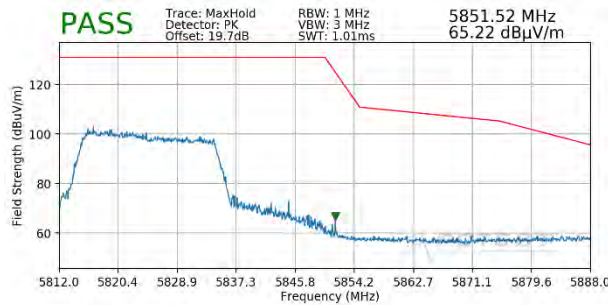


Plot 7-365. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 2C – 242 Tones)



Plot 7-366. 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 7-367. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 3 – 242 Tones)

FCC ID: A3LSMG981V	PCTEST Proud to be part of Samsung	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 278 of 299

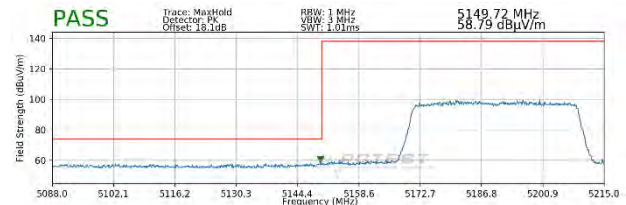
7.6.5 SISO Antenna-1 Radiated Band Edge Measurements (40MHz BW) §15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

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

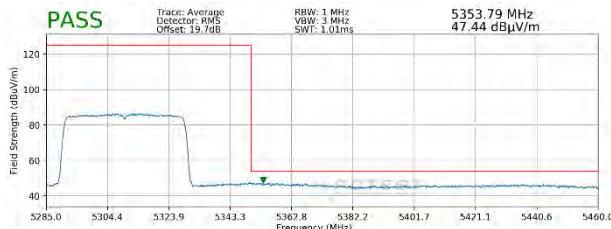


Plot 7-368. Radiated Lower Band Edge Plot SISO ANT1 (Average - UNII Band 1 - 484 Tones)

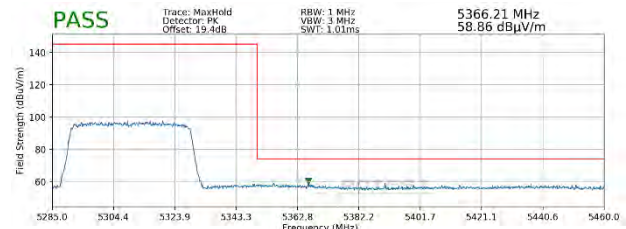


Plot 7-369. Radiated Lower Band Edge Plot SISO ANT1 (Peak - UNII Band 1 - 484 Tones)

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



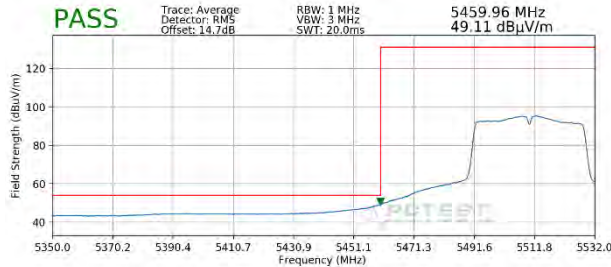
Plot 7-370. Radiated Upper Band Edge Plot SISO ANT1 (Average - UNII Band 2A - 484 Tones)



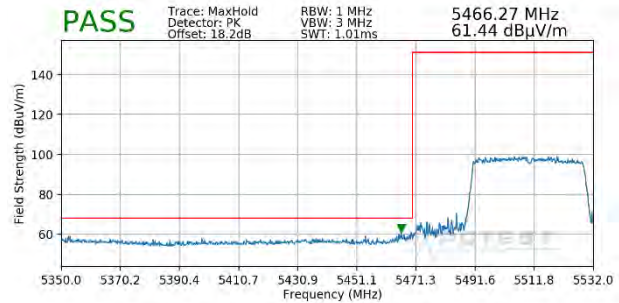
Plot 7-371. Radiated Upper Band Edge Plot SISO ANT1 (Peak - UNII Band 2A - 484 Tones)

FCC ID: A3LSMG981V	PCTEST Proud to be part of Samsung	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 - 5/8/2020	EUT Type: Portable Handset		Page 279 of 299

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

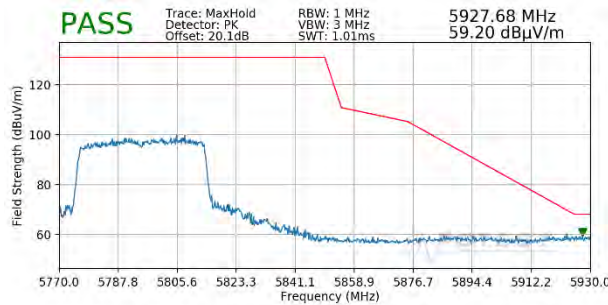


Plot 7-372. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 2C – 484 Tones)



Plot 7-373. 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 7-374. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 3 – 484 Tones)

FCC ID: A3LSMG981V	PCTEST Proud to be part of Samsung	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 280 of 299

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

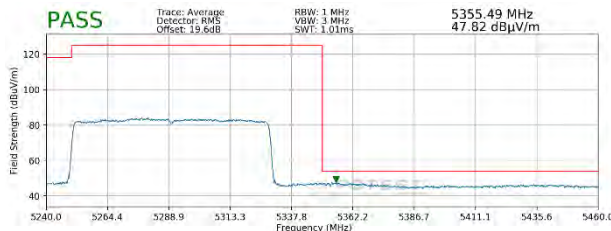


Plot 7-375. Radiated Lower Band Edge Plot SISO ANT1 (Average - UNII Band 1 - 996 Tones)



Plot 7-376. 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 7-377. Radiated Upper Band Edge Plot SISO ANT1 (Average - UNII Band 2A - 996 Tones)

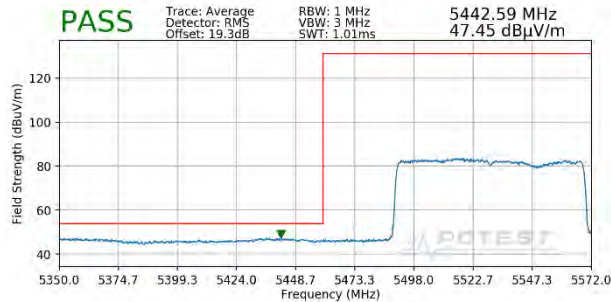


Plot 7-378. Radiated Upper Band Edge Plot SISO ANT1 (Peak - UNII Band 2A - 996 Tones)

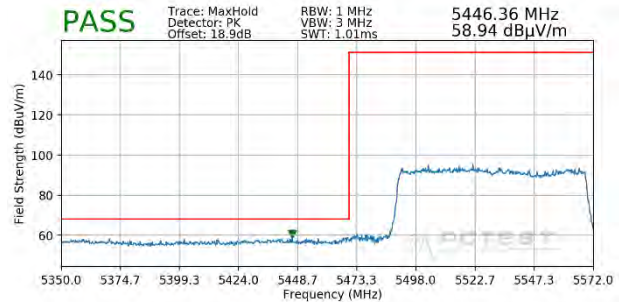
Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0

FCC ID: A3LSMG981V	PCTEST Proud to be part of Samsung	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 - 5/8/2020	EUT Type: Portable Handset		Page 281 of 299

RU Index:	67
Distance of Measurements:	3 Meters
Operating Frequency:	5530MHz
Channel:	106

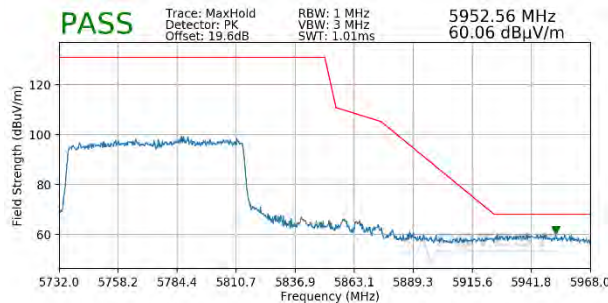


Plot 7-379. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 2C – 996 Tones)



Plot 7-380. 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 7-381. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 3 – 996 Tones)

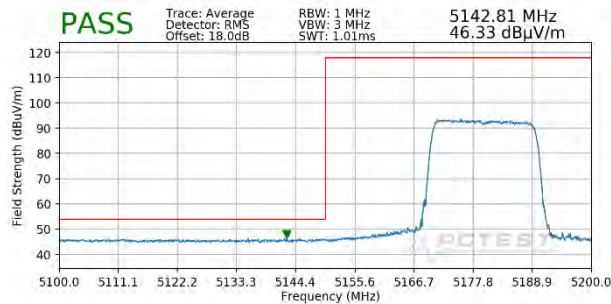
FCC ID: A3LSMG981V	PCTEST Proud to be part of Samsung	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 282 of 299

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

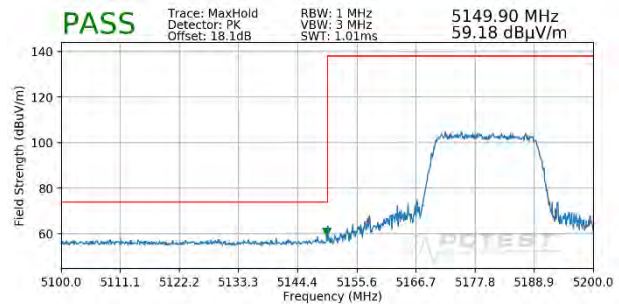
§15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

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

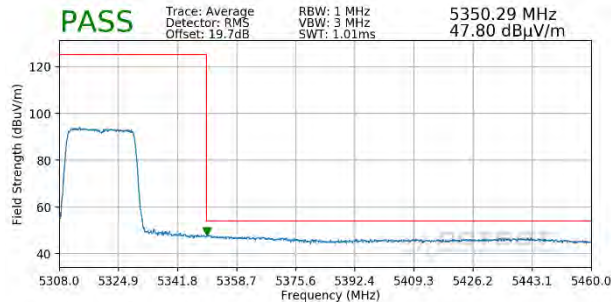


Plot 7-382. Radiated Lower Band Edge Plot SISO ANT2 (Average - UNII Band 1 - 242 Tones)

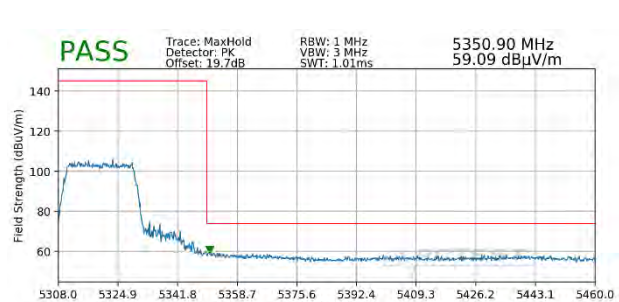


Plot 7-383. Radiated Lower Band Edge Plot SISO ANT2 (Peak - UNII Band 1 - 242 Tones)

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



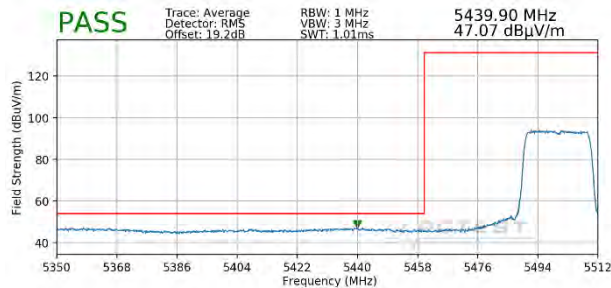
Plot 7-384. Radiated Upper Band Edge Plot SISO ANT2 (Average - UNII Band 2A - 242 Tones)



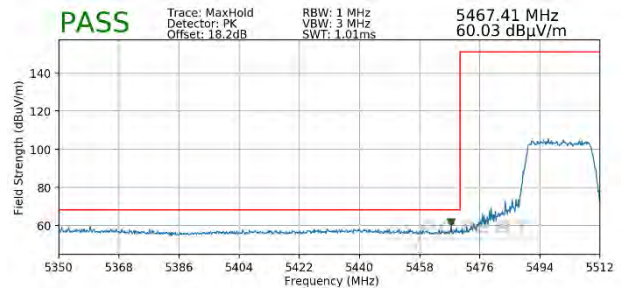
Plot 7-385. Radiated Upper Band Edge Plot SISO ANT2 (Peak - UNII Band 2A - 242 Tones)

FCC ID: A3LSMG981V	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 - 5/8/2020	EUT Type: Portable Handset	Page 283 of 299

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

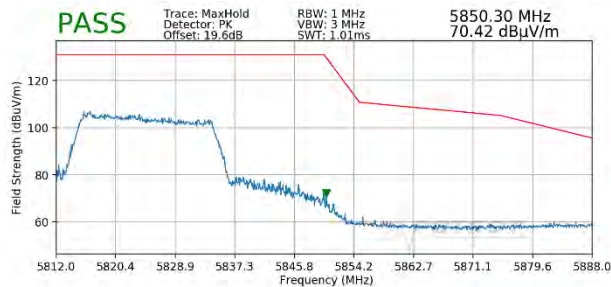


Plot 7-386. Radiated Lower Band Edge Plot SISO ANT2 (Average - UNII Band 2C - 242 Tones)



Plot 7-387. 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



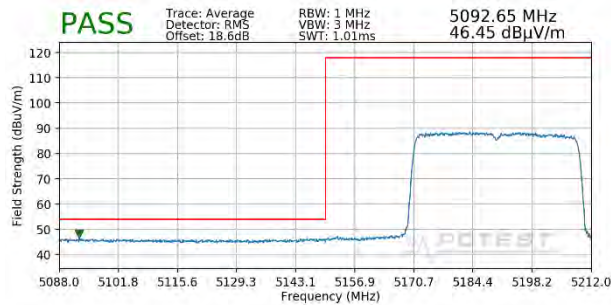
Plot 7-388. Radiated Upper Band Edge Plot SISO ANT2 (Peak - UNII Band 3 - 242 Tones)

FCC ID: A3LSMG981V	PCTEST Proud to be part of Samsung	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 - 5/8/2020	EUT Type: Portable Handset		Page 284 of 299

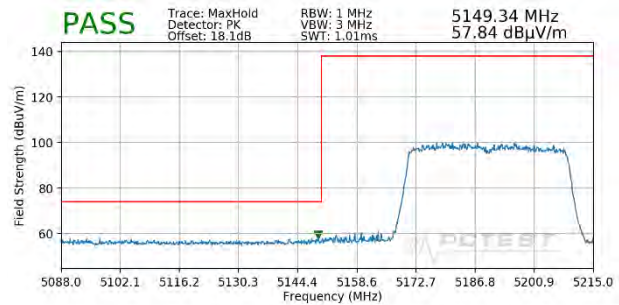
7.6.8 SISO Antenna-2 Radiated Band Edge Measurements (40MHz BW) §15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

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

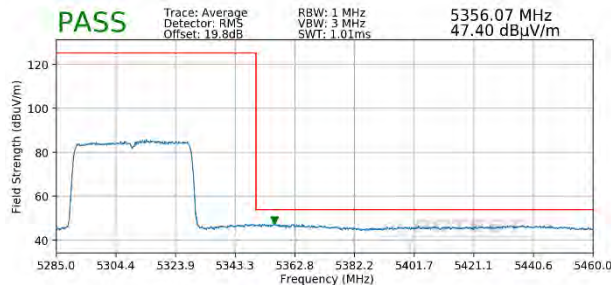


Plot 7-389. Radiated Lower Band Edge Plot SISO ANT2 (Average - UNII Band 1 - 484 Tones)

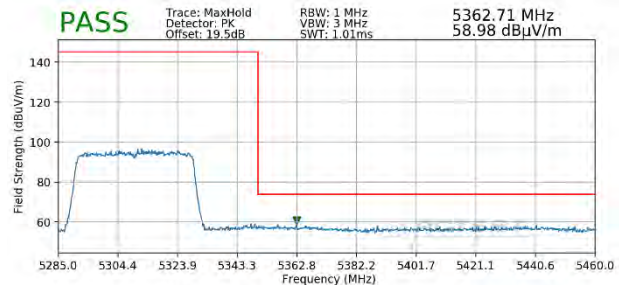


Plot 7-390. Radiated Lower Band Edge Plot SISO ANT2 (Peak - UNII Band 1 - 484 Tones)

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



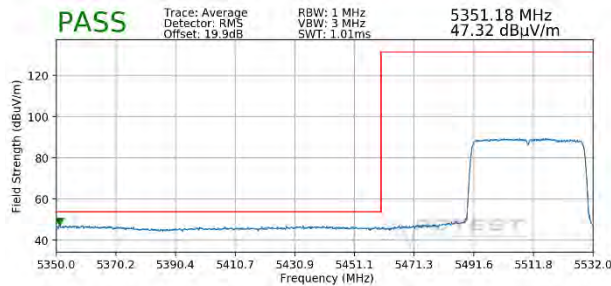
Plot 7-391. Radiated Upper Band Edge Plot SISO ANT2 (Average - UNII Band 2A - 484 Tones)



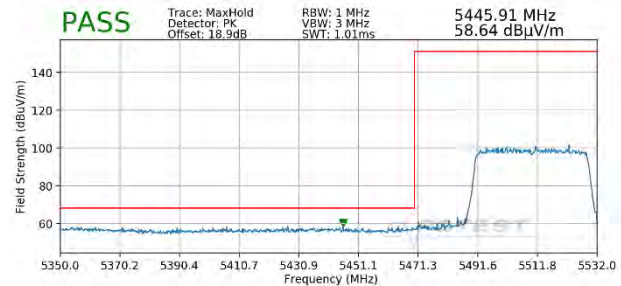
Plot 7-392. Radiated Upper Band Edge Plot SISO ANT2 (Peak - UNII Band 2A - 484 Tones)

FCC ID: A3LSMG981V	PCTEST Proud to be part of Samsung	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 - 5/8/2020	EUT Type: Portable Handset		Page 285 of 299

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

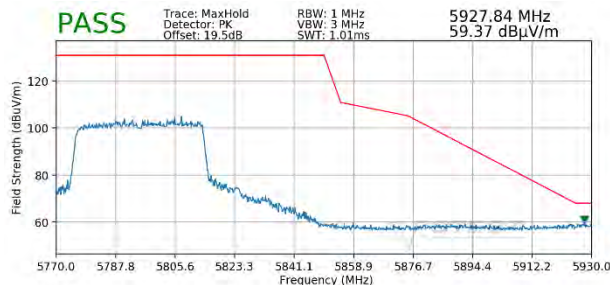


Plot 7-393. Radiated Lower Band Edge Plot SISO ANT2 (Average - UNII Band 2C - 484 Tones)



Plot 7-394. 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



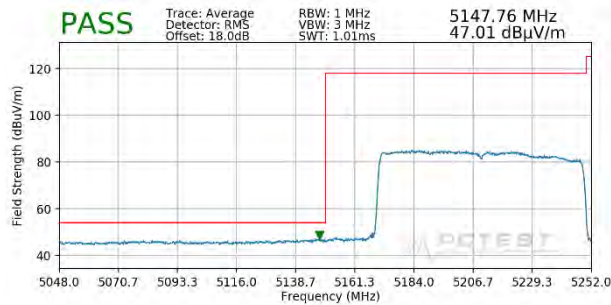
Plot 7-395. Radiated Upper Band Edge Plot SISO ANT2 (Peak - UNII Band 3 - 484 Tones)

FCC ID: A3LSMG981V	PCTEST Proud to be part of Samsung	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 - 5/8/2020	EUT Type: Portable Handset		Page 286 of 299

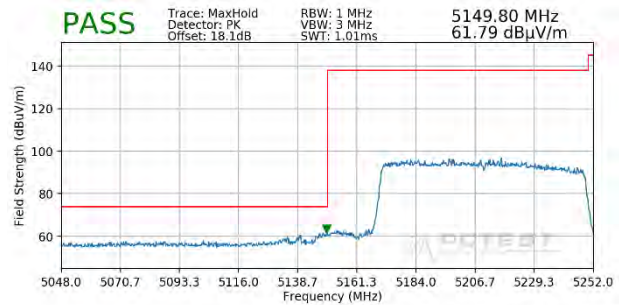
7.6.9 SISO Antenna-2 Radiated Band Edge Measurements (80MHz BW) §15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

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

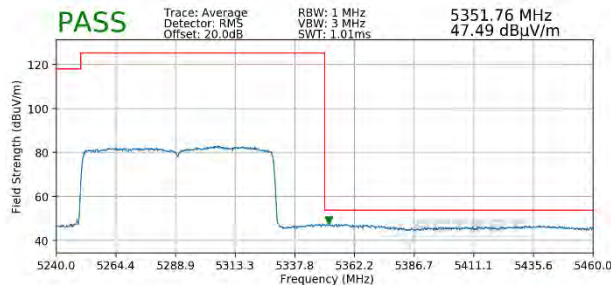


Plot 7-396. Radiated Lower Band Edge Plot SISO ANT2 (Average - UNII Band 1 - 996 Tones)

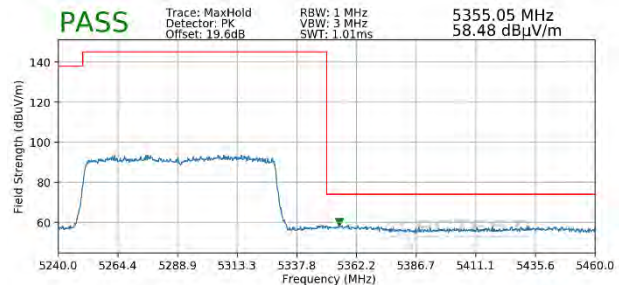


Plot 7-397. Radiated Lower Band Edge Plot SISO ANT2 (Peak - UNII Band 1 - 996 Tones)

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



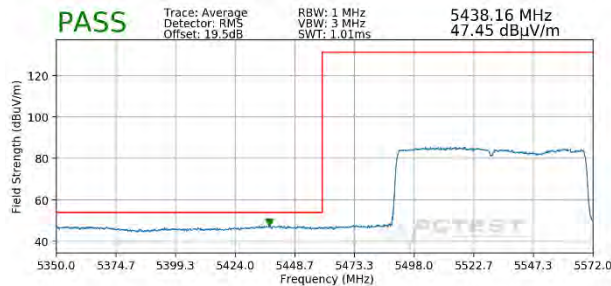
Plot 7-398. Radiated Upper Band Edge Plot SISO ANT2 (Average - UNII Band 2A - 996 Tones)



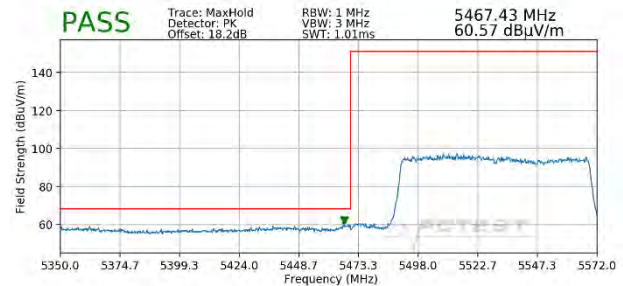
Plot 7-399. Radiated Upper Band Edge Plot SISO ANT2 (Peak - UNII Band 2A - 996 Tones)

FCC ID: A3LSMG981V	PCTEST Proud to be part of Samsung	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 - 5/8/2020	EUT Type: Portable Handset		Page 287 of 299

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

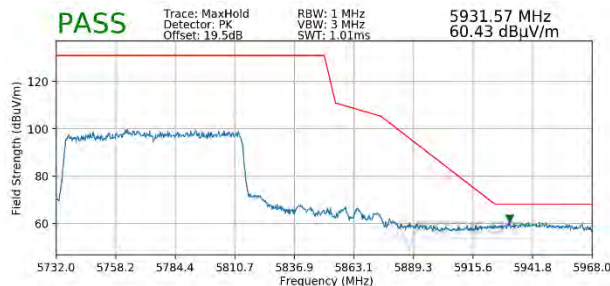


Plot 7-400. Radiated Lower Band Edge Plot SISO ANT2 (Average - UNII Band 2C - 996 Tones)



Plot 7-401. 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 7-402. Radiated Upper Band Edge Plot SISO ANT2 (Peak - UNII Band 3 - 996 Tones)

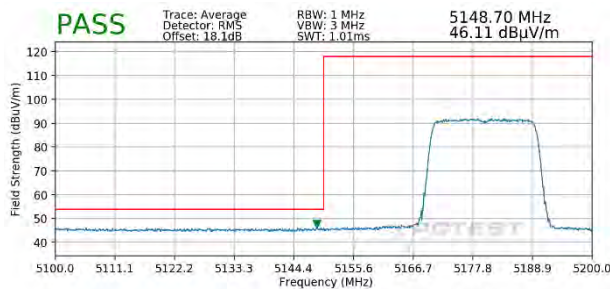
FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 - 5/8/2020	EUT Type: Portable Handset		Page 288 of 299

7.6.10 MIMO Radiated Band Edge Measurements (20MHz BW)

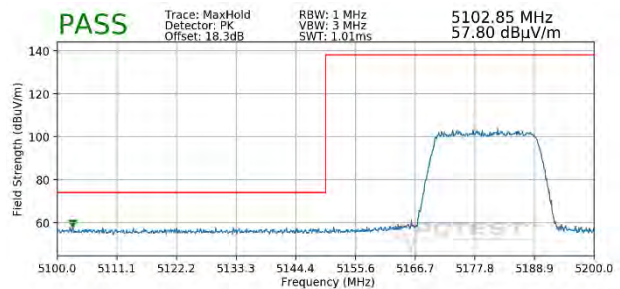
§15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

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

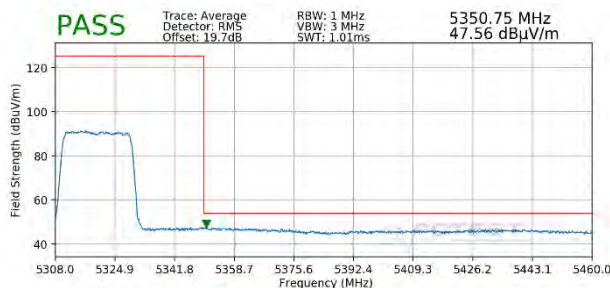


Plot 7-403. Radiated Lower Band Edge Plot MIMO (Average - UNII Band 1 - 242 Tones)

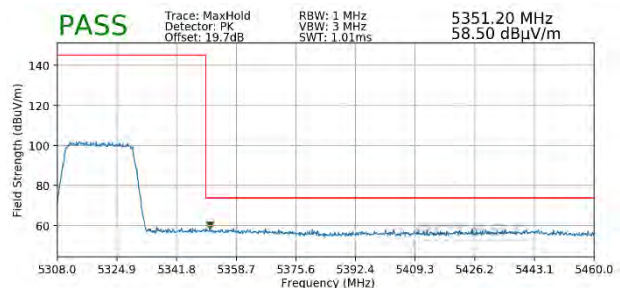


Plot 7-404. Radiated Lower Band Edge Plot MIMO (Peak - UNII Band 1 - 242 Tones)

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



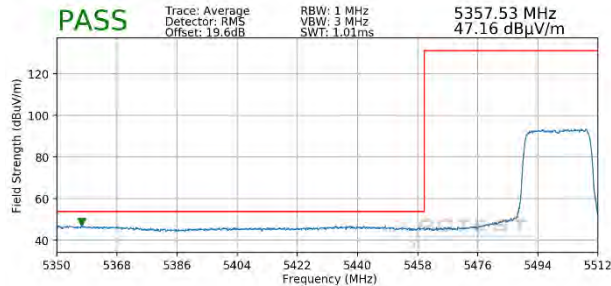
Plot 7-405. Radiated Upper Band Edge Plot MIMO (Average - UNII Band 2A - 242 Tones)



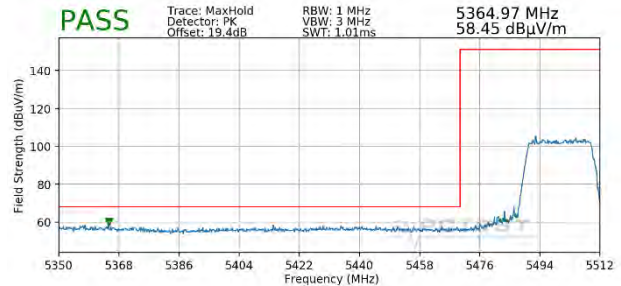
Plot 7-406. Radiated Upper Band Edge Plot MIMO (Peak - UNII Band 2A - 242 Tones)

FCC ID: A3LSMG981V	PCTEST Proud to be part of Samsung	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 - 5/8/2020	EUT Type: Portable Handset		Page 289 of 299

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

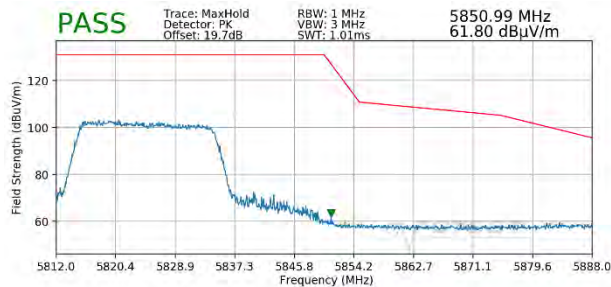


Plot 7-407. Radiated Lower Band Edge Plot MIMO (Average - UNII Band 2C - 242 Tones)



Plot 7-408. 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



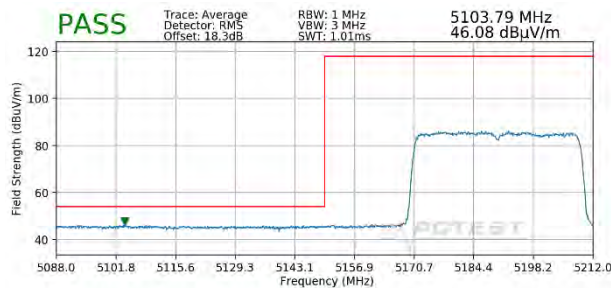
Plot 7-409. Radiated Upper Band Edge Plot MIMO (Peak - UNII Band 3 - 242 Tones)

FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 - 5/8/2020	EUT Type: Portable Handset		Page 290 of 299

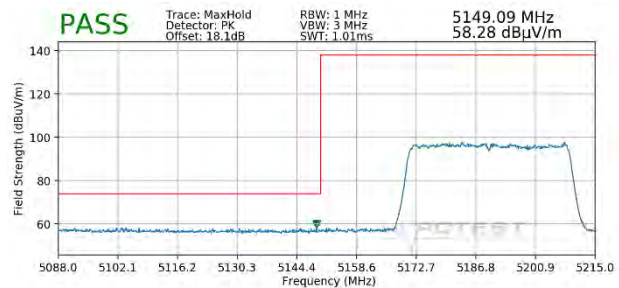
7.6.11 MIMO Radiated Band Edge Measurements (40MHz BW) §15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

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

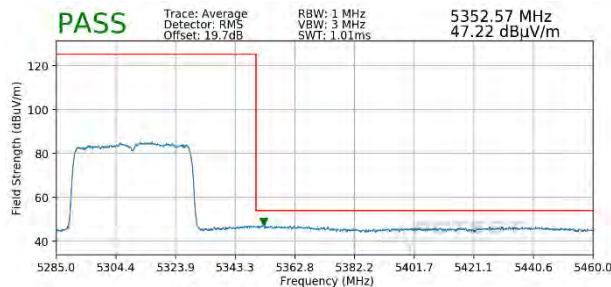


**Plot 7-410. Radiated Lower Band Edge Plot MIMO
(Average – UNII Band 1 – 484 Tones)**

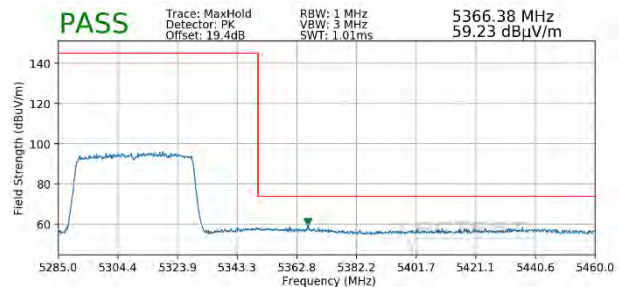


**Plot 7-411. Radiated Lower Band Edge Plot MIMO
(Peak – UNII Band 1 – 484 Tones)**

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



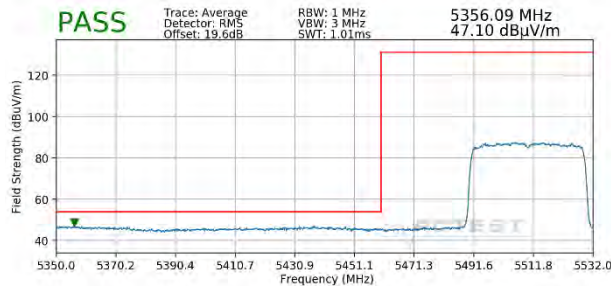
**Plot 7-412. Radiated Upper Band Edge Plot MIMO
(Average – UNII Band 2A – 484 Tones)**



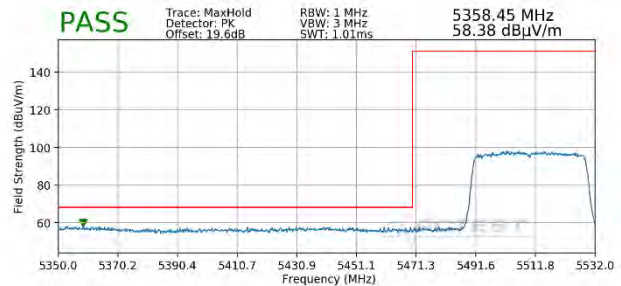
**Plot 7-413. Radiated Upper Band Edge Plot MIMO
(Peak – UNII Band 2A – 484 Tones)**

FCC ID: A3LSMG981V	PCTEST Proud to be part of Samsung	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 291 of 299

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

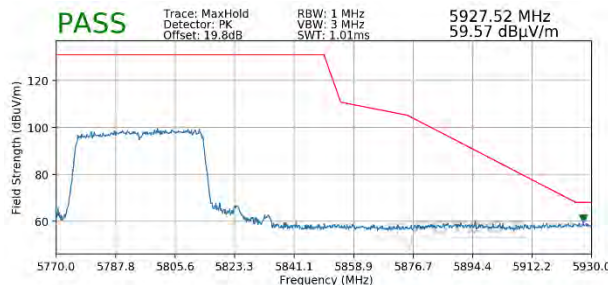


Plot 7-414. Radiated Lower Band Edge Plot MIMO (Average - UNII Band 2C - 484 Tones)



Plot 7-415. 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 7-416. Radiated Upper Band Edge Plot MIMO (Peak - UNII Band 3 - 484 Tones)

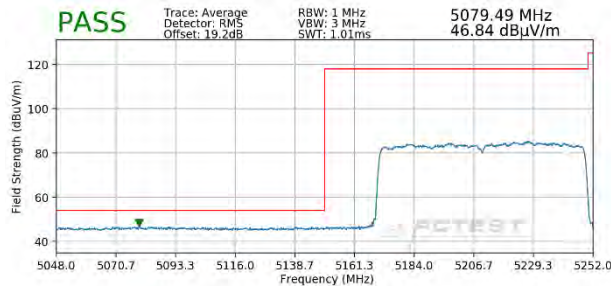
FCC ID: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 - 5/8/2020	EUT Type: Portable Handset		Page 292 of 299

7.6.12 MIMO Radiated Band Edge Measurements (80MHz BW)

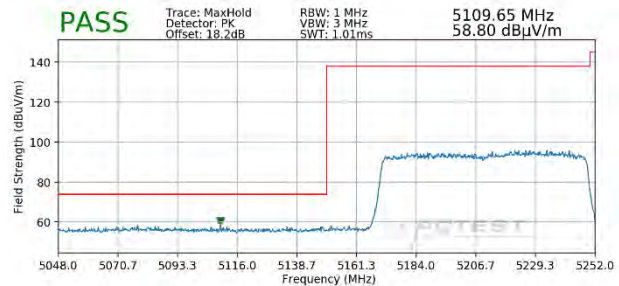
§15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

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

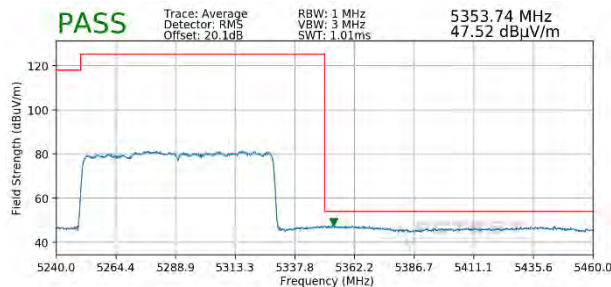


Plot 7-417. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 1 – 996 Tones)

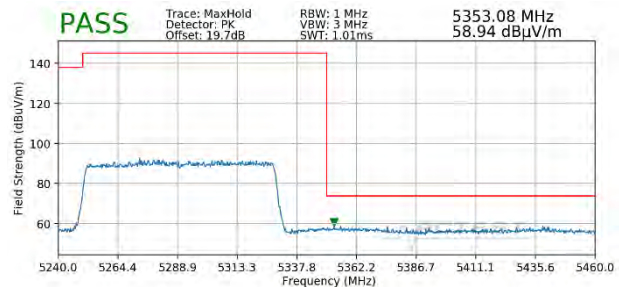


Plot 7-418. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 1 – 996 Tones)

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



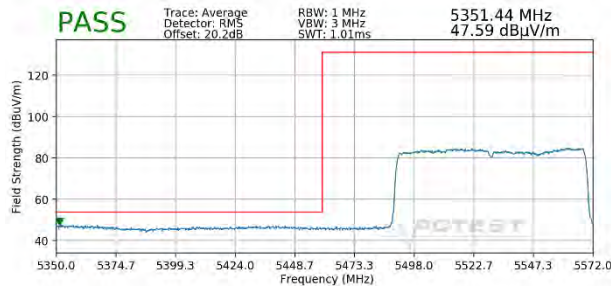
Plot 7-419. Radiated Upper Band Edge Plot MIMO (Average – UNII Band 2A – 996 Tones)



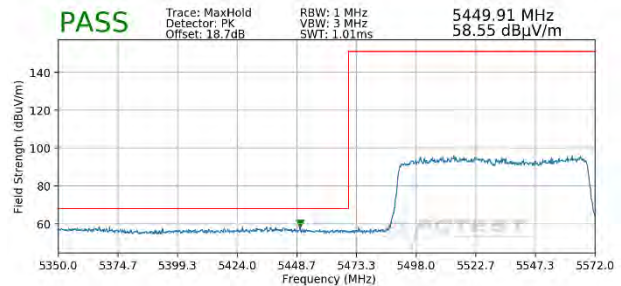
Plot 7-420. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 2A – 996 Tones)

FCC ID: A3LSMG981V	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset	Page 293 of 299

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

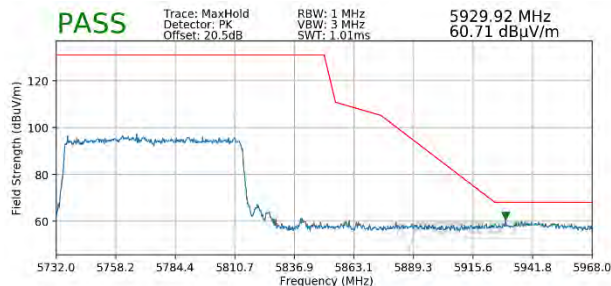


**Plot 7-421. Radiated Lower Band Edge Plot MIMO
(Average - UNII Band 2C - 996 Tones)**



**Plot 7-422. 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 7-423. Radiated Upper Band Edge Plot MIMO
(Peak - UNII Band 3 - 996 Tones)**

FCC ID: A3LSMG981V	PCTEST Proud to be part of Samsung	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 - 5/8/2020	EUT Type: Portable Handset		Page 294 of 299

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 7-139 per Section 15.209 and RSS-Gen (8.9).

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

Table 7-139. 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: A3LSMG981V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 295 of 299

Test Setup

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

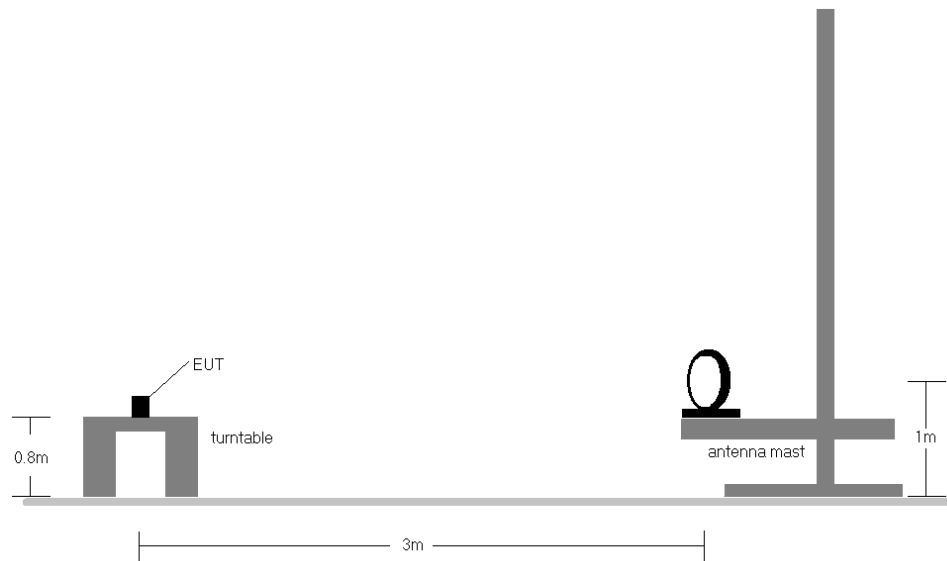


Figure 7-6. Radiated Test Setup < 30MHz

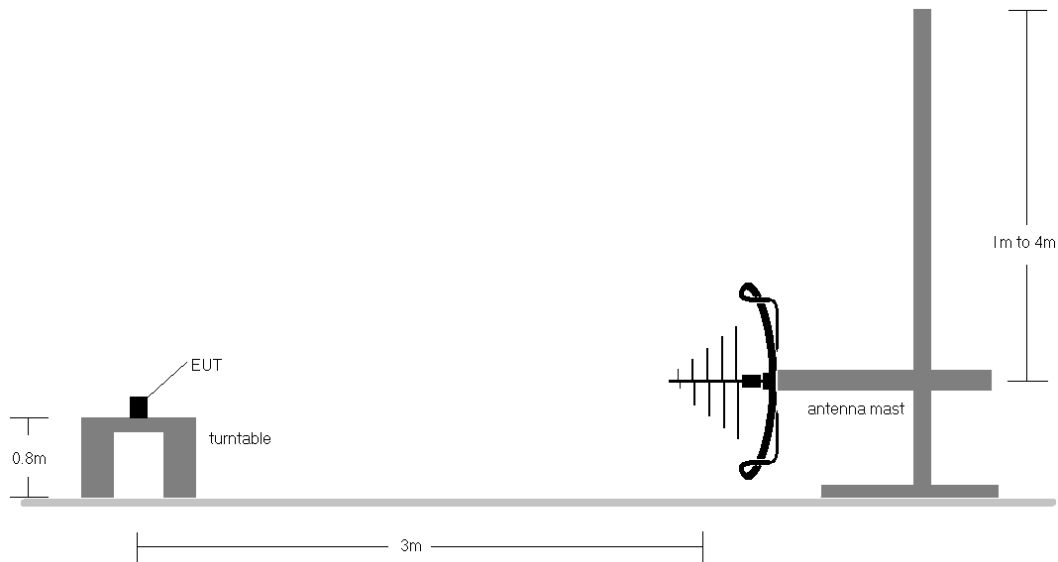


Figure 7-7. Radiated Test Setup < 1GHz

FCC ID: A3LSMG981V	PCTEST Proud to be part of Samsung	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 296 of 299

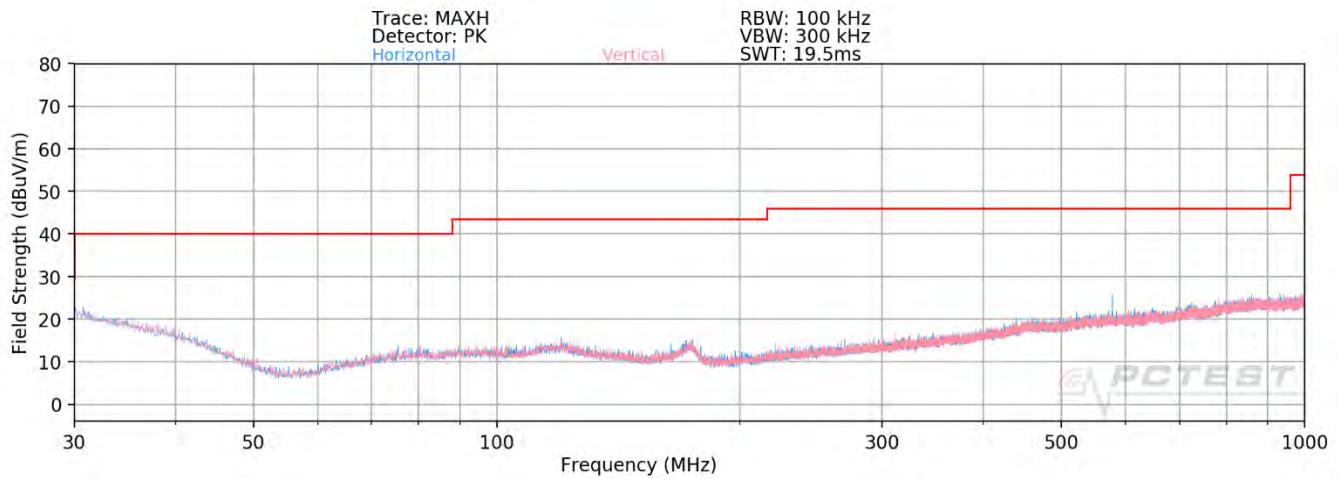
Test Notes

1. All emissions lying in restricted bands specified in §15.205 and RSS-Gen (8.10) are below the limit shown in Table 7-139.
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: A3LSMG981V	 PCTEST Proud to be part of Samsung	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 297 of 299

MIMO Radiated Spurious Emissions Measurements (Below 1GHz)

§15.209; RSS-Gen [8.9]



FCC ID: A3LSMG981V	PCTEST Proud to be part of Samsung	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 298 of 299

8.0 CONCLUSION

The data collected relate only the item(s) tested and show that the **Samsung Portable Handset FCC ID: A3LSMG981V** is in compliance with Part 15 Subpart E (15.407) of the FCC Rules.

FCC ID: A3LSMG981V	 PCTEST® Proud to be part of Samsung	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2003090034-08.A3L	Test Dates: 3/17 – 5/8/2020	EUT Type: Portable Handset		Page 299 of 299