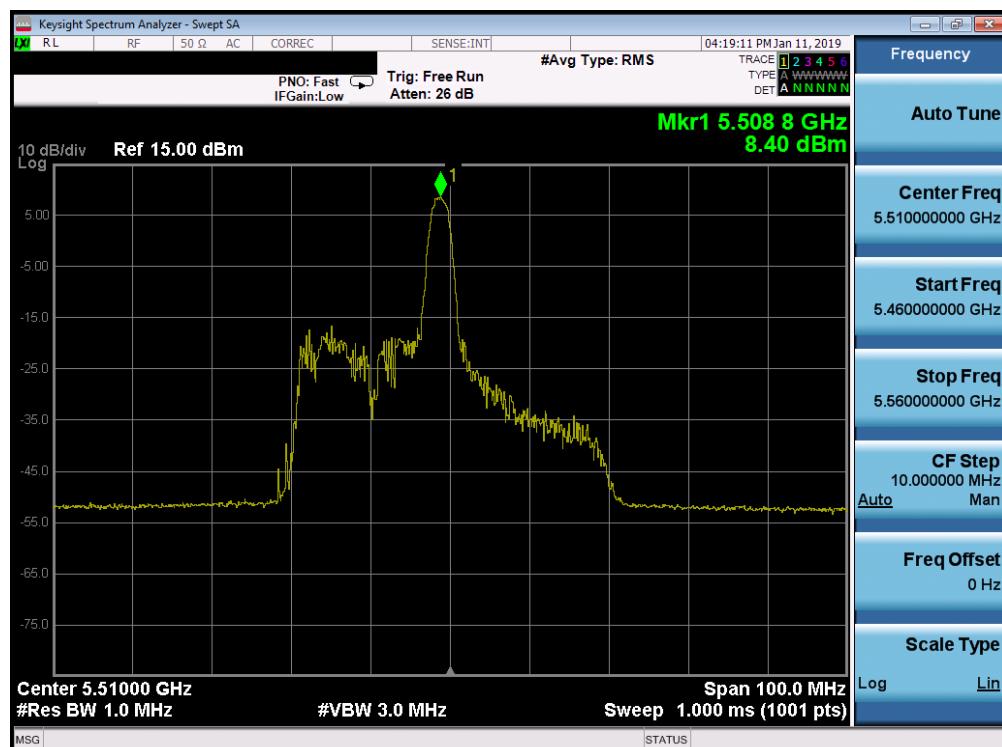


Plot 7-252. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 144)

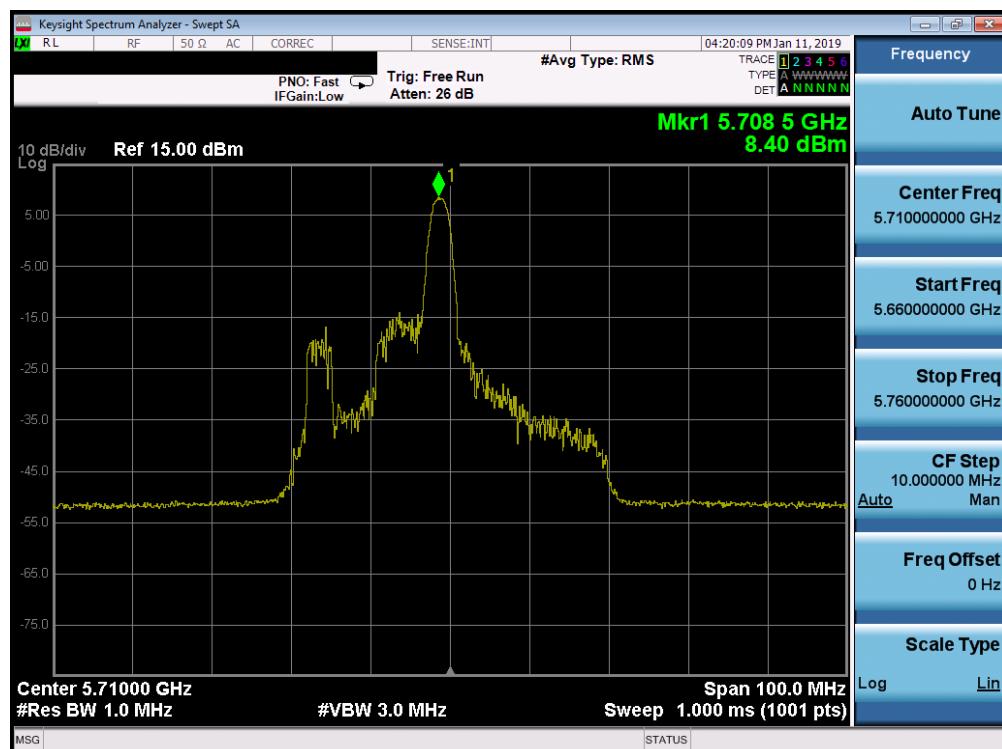


Plot 7-253. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 102)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 190 of 514

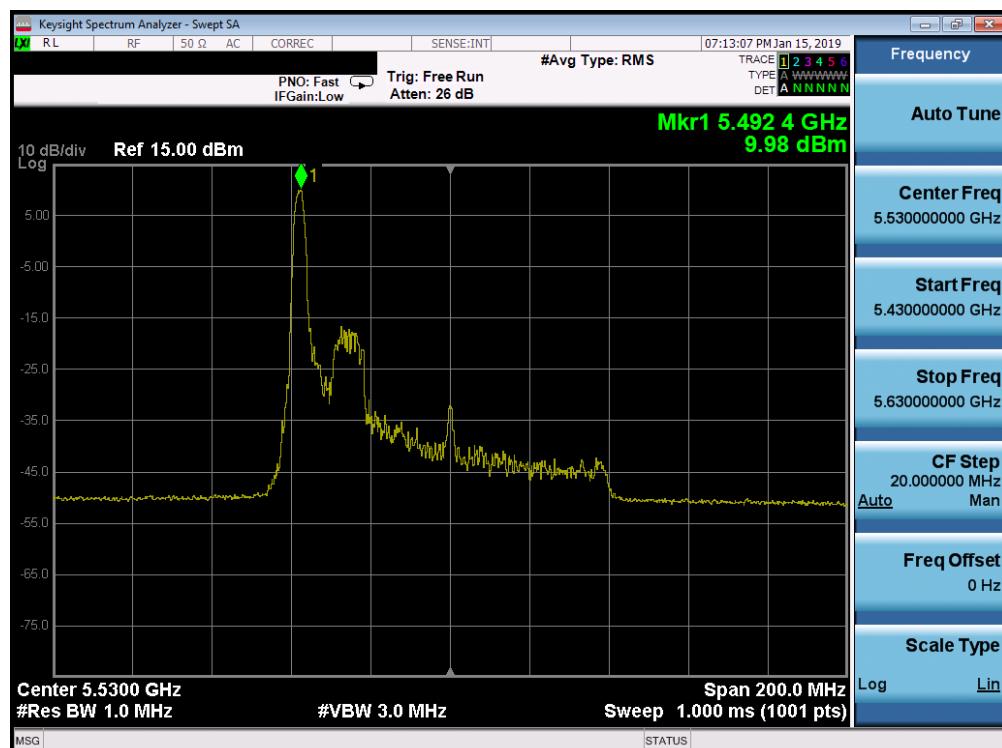


Plot 7-254. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 118)

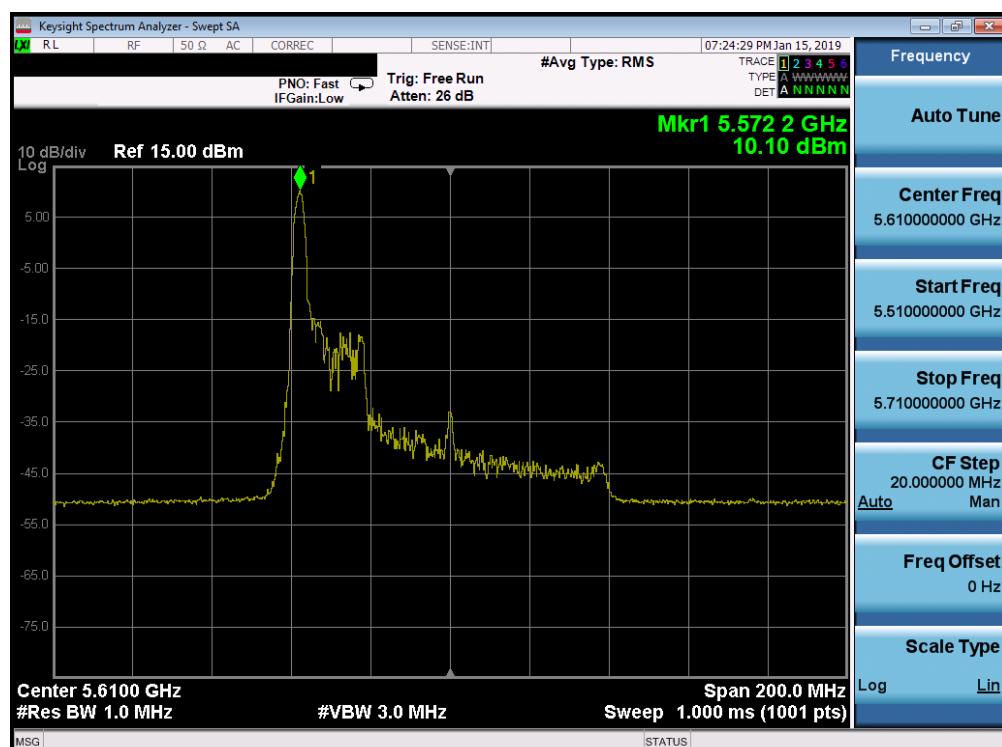


Plot 7-255. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 142)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 191 of 514

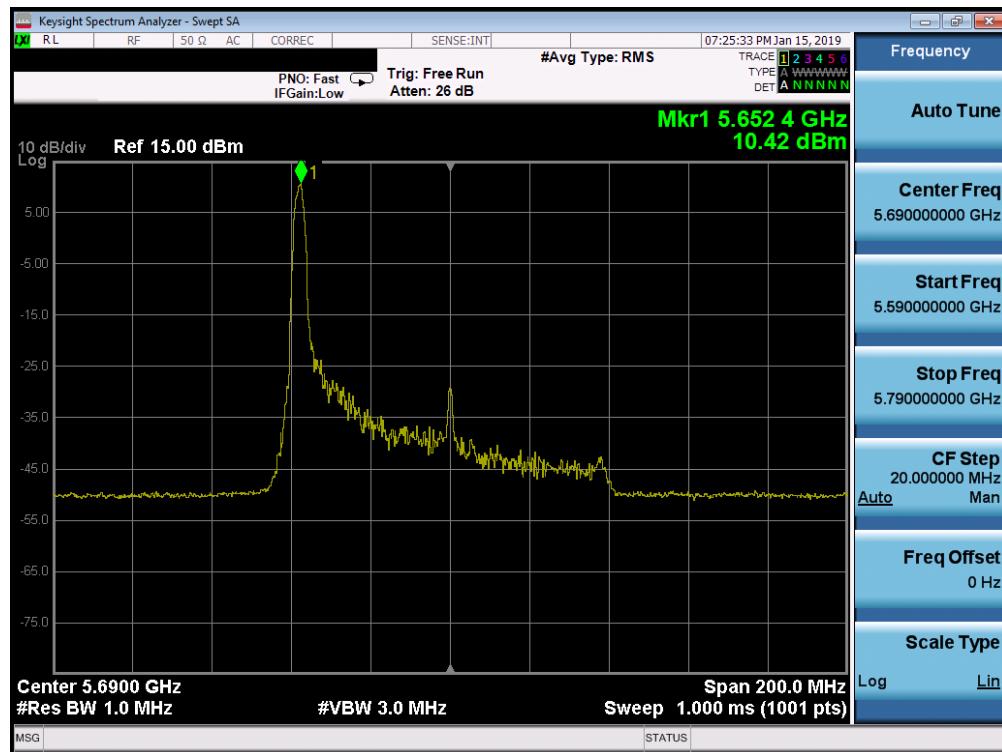


Plot 7-256. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 106)



Plot 7-257. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 122)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 192 of 514

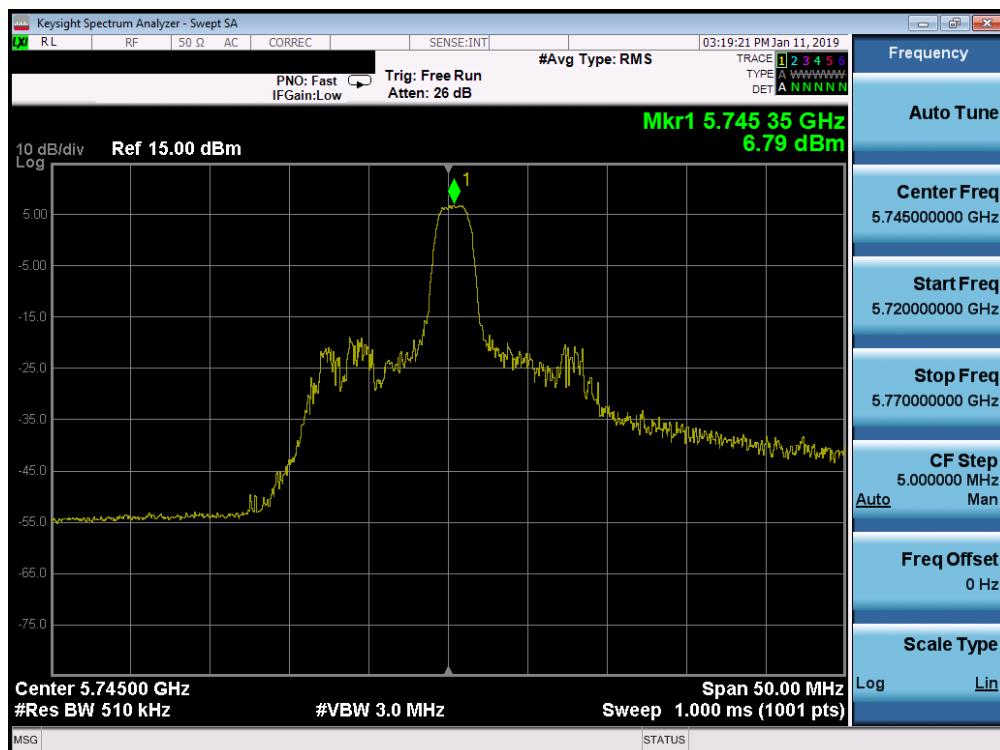


Plot 7-258. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 138)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 193 of 514

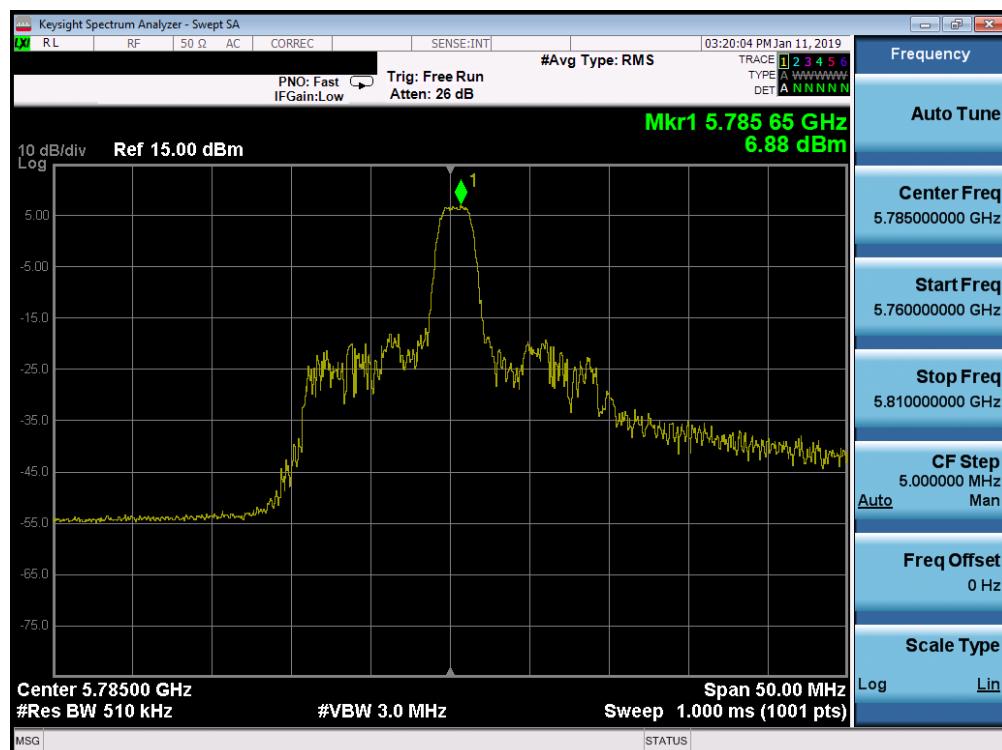
	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5745	149	ax (20MHz)	26T	MCS0	6.79	30.00	-23.21
	5785	157	ax (20MHz)	26T	MCS0	6.88	30.00	-23.12
	5825	165	ax (20MHz)	26T	MCS0	6.63	30.00	-23.37
	5755	151	ax (40MHz)	26T	MCS0	6.34	30.00	-23.66
	5795	159	ax (40MHz)	26T	MCS0	6.34	30.00	-23.66
	5775	155	ax (80MHz)	26T	MCS0	10.52	30.00	-19.48

Table 7-83. Band 3 Conducted Power Spectral Density Measurements SISO ANT2 (26 Tones)

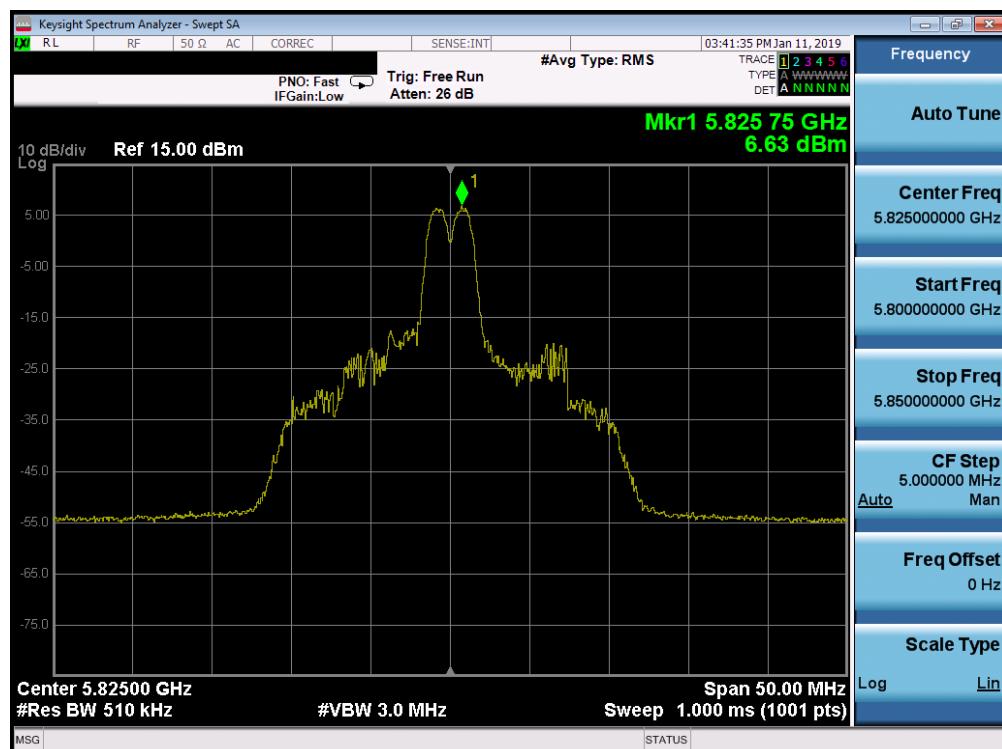


Plot 7-259. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 149)

FCC ID: A3LSC03L		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 194 of 514

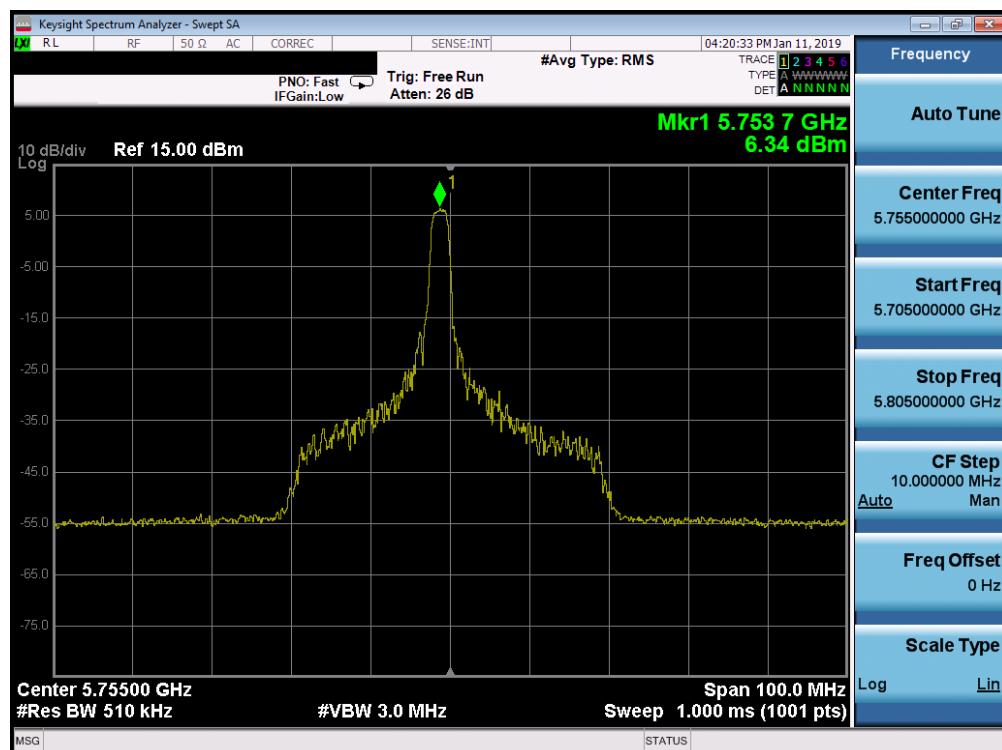


Plot 7-260. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 157)

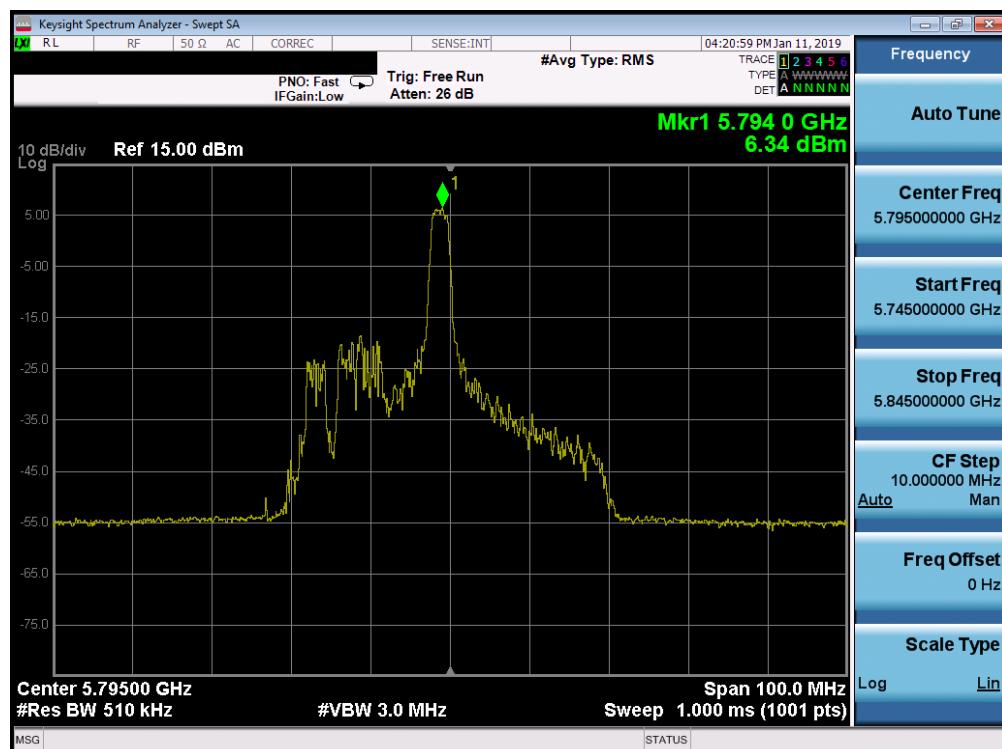


Plot 7-261. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 165)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 195 of 514

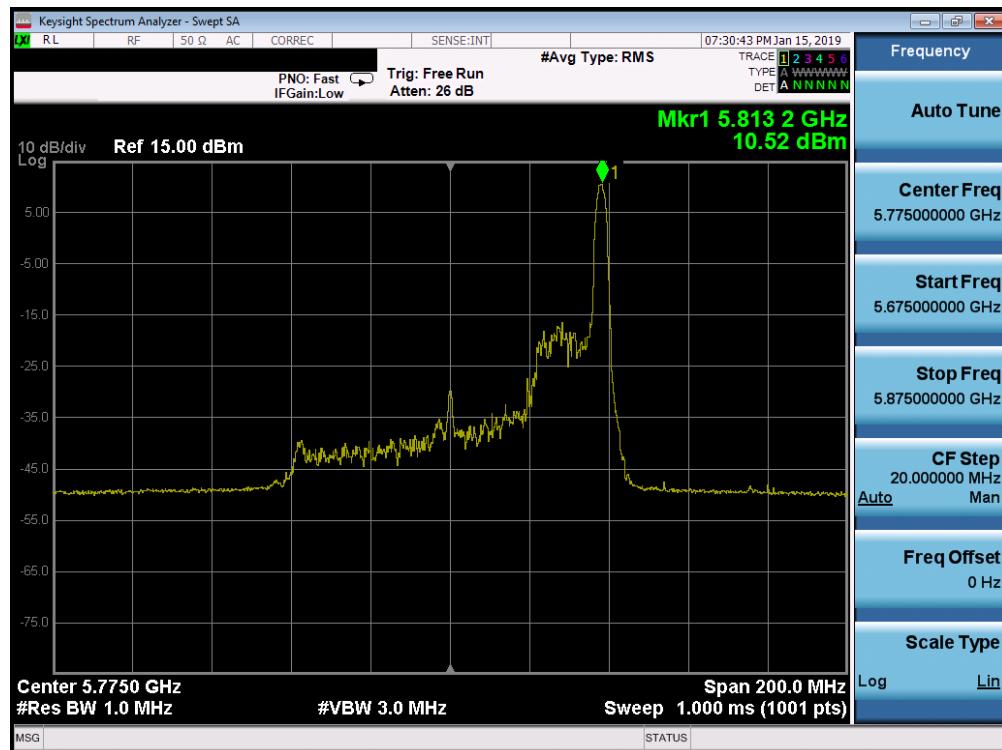


Plot 7-262. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 151)



Plot 7-263. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 159)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 196 of 514



Plot 7-264. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 155)

FCC ID: A3LSC03L	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 197 of 514

SISO Antenna-2 Power Spectral Density Measurements (52 Tones)

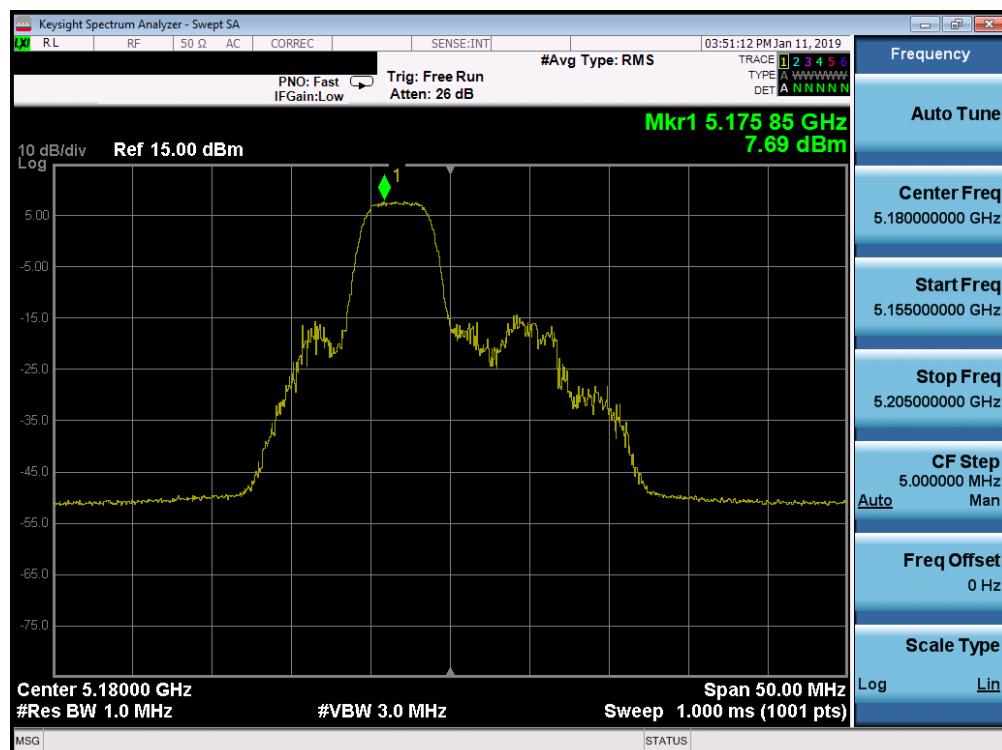
	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	ax (20MHz)	52T	MCS0	7.69	11.00	-3.31
	5200	40	ax (20MHz)	52T	MCS0	7.79	11.00	-3.21
	5240	48	ax (20MHz)	52T	MCS0	7.88	11.00	-3.12
	5190	38	ax (40MHz)	52T	MCS0	7.60	11.00	-3.40
	5230	46	ax (40MHz)	52T	MCS0	7.79	11.00	-3.21
	5210	42	ax (80MHz)	52T	MCS0	9.40	11.00	-1.60
Band 2A	5260	52	ax (20MHz)	52T	MCS0	7.63	11.00	-3.37
	5280	56	ax (20MHz)	52T	MCS0	7.64	11.00	-3.36
	5320	64	ax (20MHz)	52T	MCS0	8.06	11.00	-2.94
	5270	54	ax (40MHz)	52T	MCS0	7.29	11.00	-3.71
	5310	62	ax (40MHz)	52T	MCS0	7.65	11.00	-3.35
	5290	58	ax (80MHz)	52T	MCS0	8.76	11.00	-2.24
Band 2C	5500	100	ax (20MHz)	52T	MCS0	8.60	11.00	-2.40
	5600	120	ax (20MHz)	52T	MCS0	8.60	11.00	-2.40
	5720	144	ax (20MHz)	52T	MCS0	8.19	11.00	-2.81
	5510	102	ax (40MHz)	52T	MCS0	7.78	11.00	-3.22
	5590	118	ax (40MHz)	52T	MCS0	7.78	11.00	-3.22
	5710	142	ax (40MHz)	52T	MCS0	7.53	11.00	-3.47
	5530	106	ax (80MHz)	52T	MCS0	9.03	11.00	-1.97
	5610	122	ax (80MHz)	52T	MCS0	9.70	11.00	-1.30
	5690	138	ax (80MHz)	52T	MCS0	9.50	11.00	-1.50

Table 7-84. Bands 1, 2A, 2C Conducted Power Spectral Density Measurements SISO ANT2 (52 Tones)

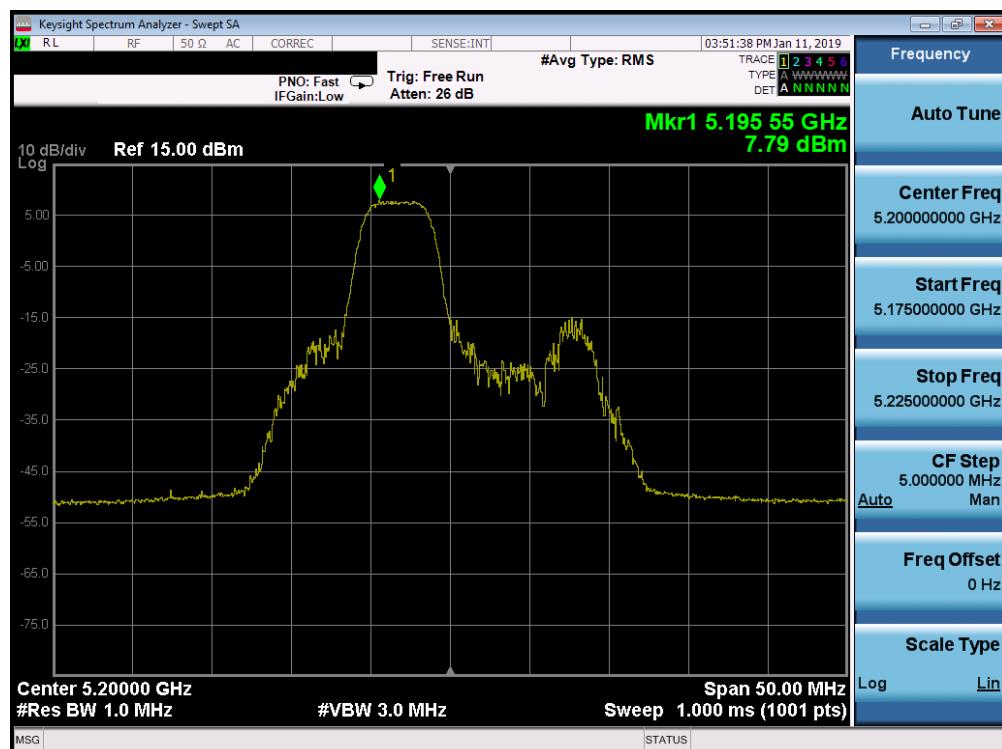
	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured Power Density [dBm]	Antenna Gain [dBi]	e.i.r.p. Power Density [dBm/MHz]	ISED Max e.i.r.p. Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	ax (20MHz)	52T	MCS0	7.69	-7.70	-0.01	10.0	-10.01
	5200	40	ax (20MHz)	52T	MCS0	7.79	-7.57	0.22	10.0	-9.78
	5240	48	ax (20MHz)	52T	MCS0	7.88	-8.01	-0.13	10.0	-10.13
	5190	38	ax (40MHz)	52T	MCS0	7.60	-7.57	0.03	10.0	-9.97
	5230	46	ax (40MHz)	52T	MCS0	7.79	-8.01	-0.22	10.0	-10.22
	5210	42	ax (80MHz)	52T	MCS0	9.40	-7.57	1.83	10.0	-8.17

Table 7-85. Bands 1 e.r.i.p Conducted Power Spectral Density Measurements (ISED 52 Tones)

FCC ID: A3LSC03L	MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset			Page 198 of 514

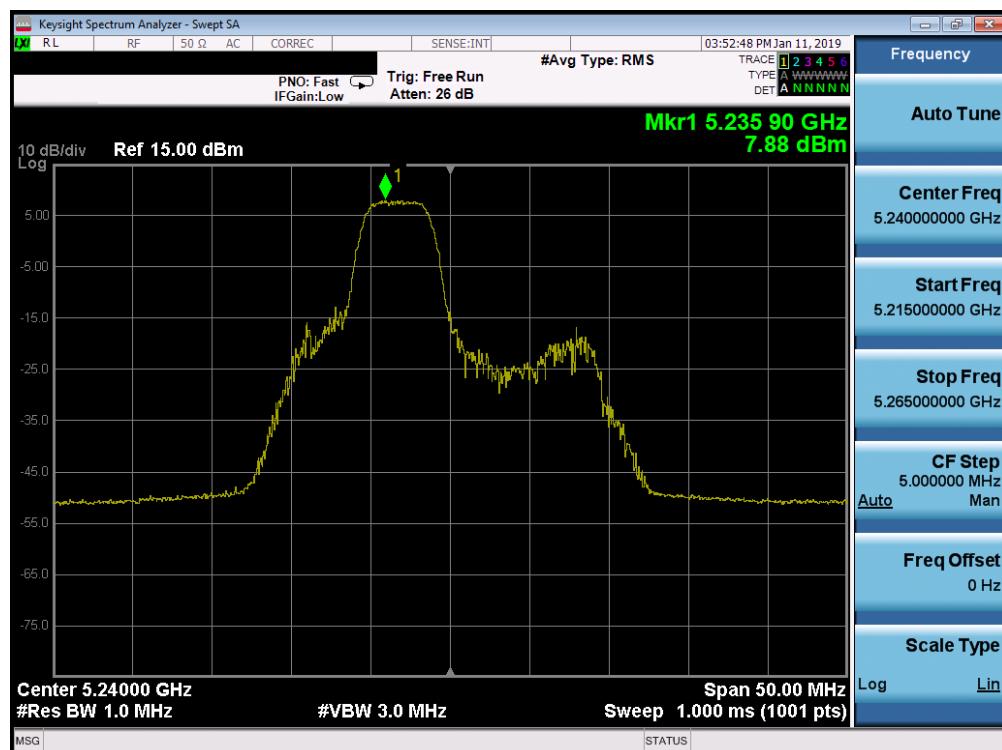


Plot 7-265. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 52 Tones (UNII Band 1) – Ch. 36)

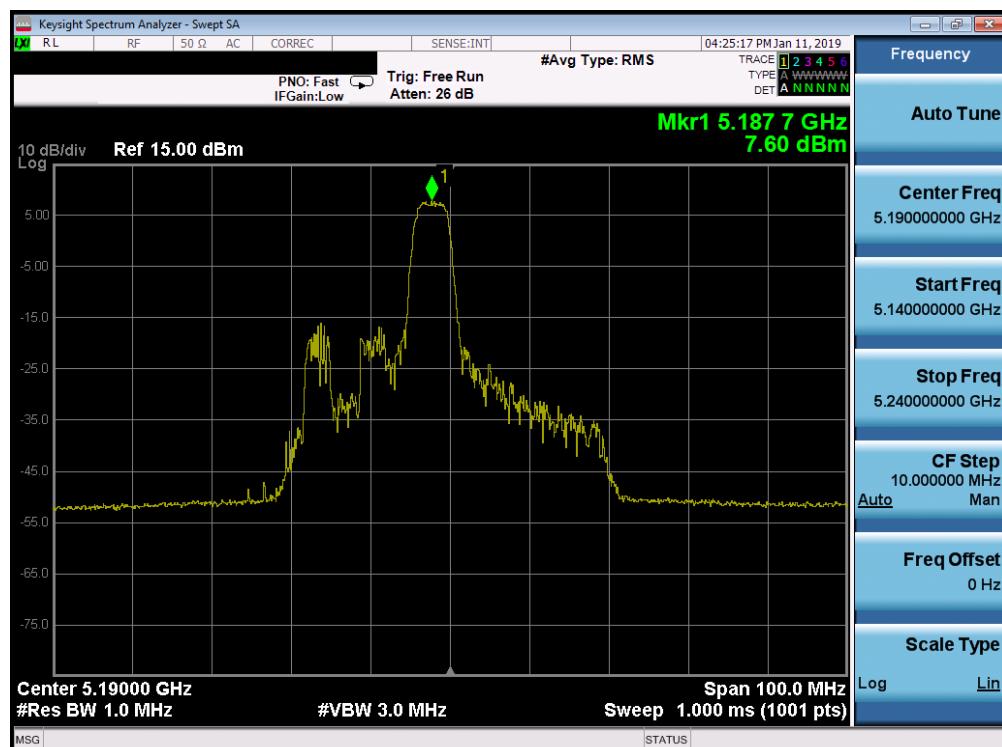


Plot 7-266. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 52 Tones (UNII Band 1) – Ch. 40)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 199 of 514

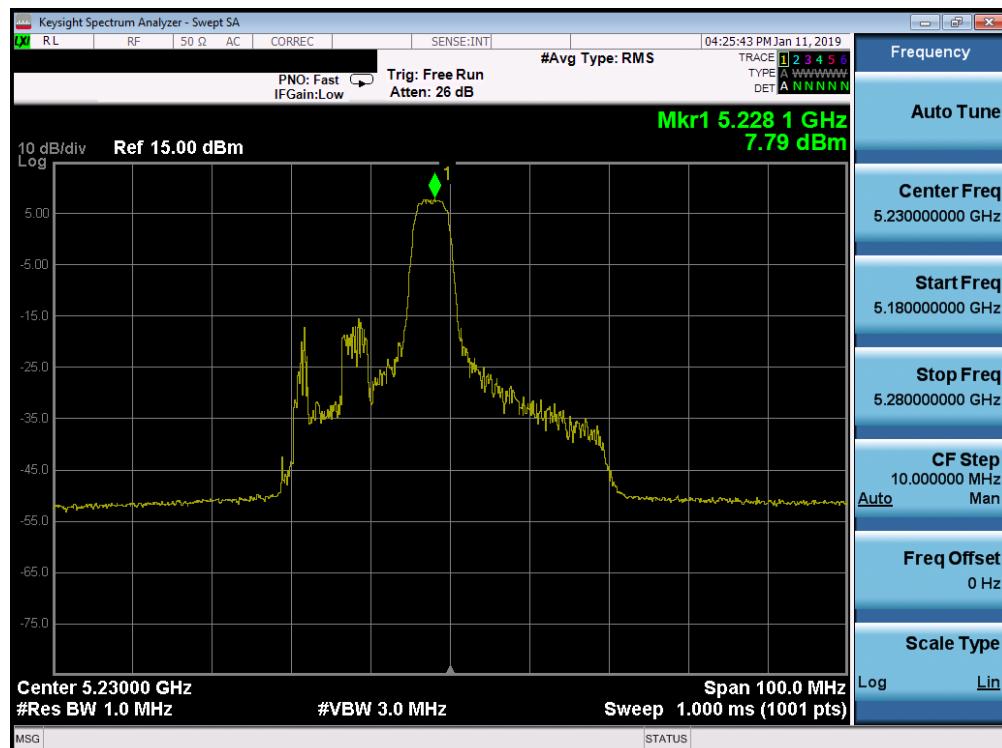


Plot 7-267. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 52 Tones (UNII Band 1) – Ch. 48)

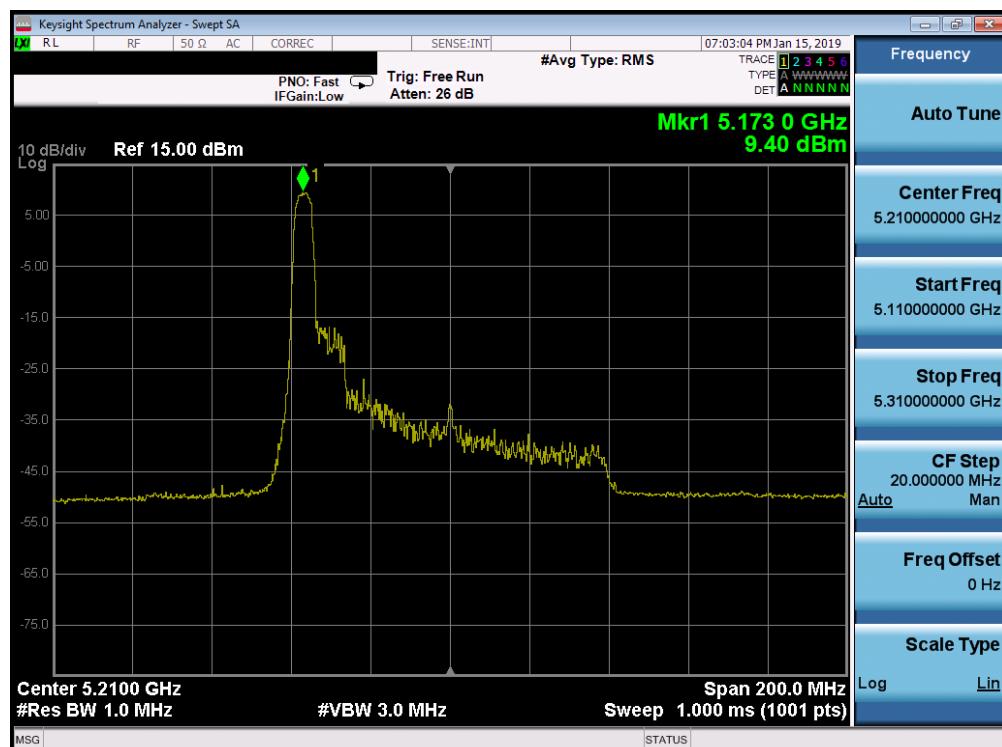


Plot 7-268. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 52 Tones (UNII Band 1) – Ch. 38)

FCC ID: A3LSC03L	PCTEST ENGINEERING LABORATORY, INC.			MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset				Page 200 of 514

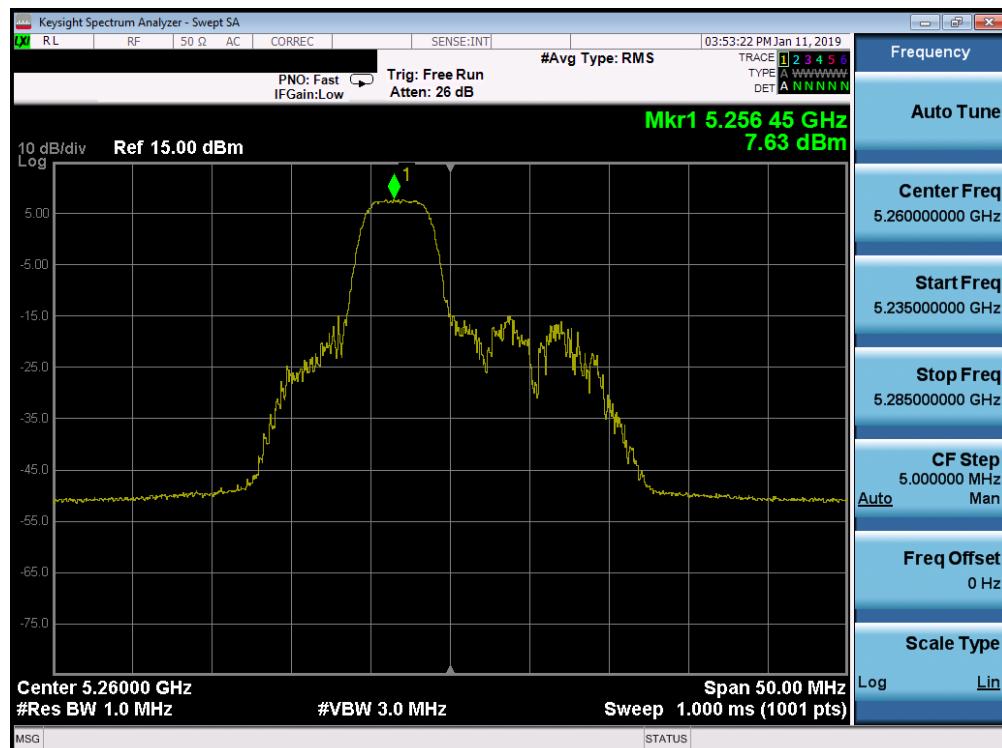


Plot 7-269. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 52 Tones (UNII Band 1) – Ch. 46)

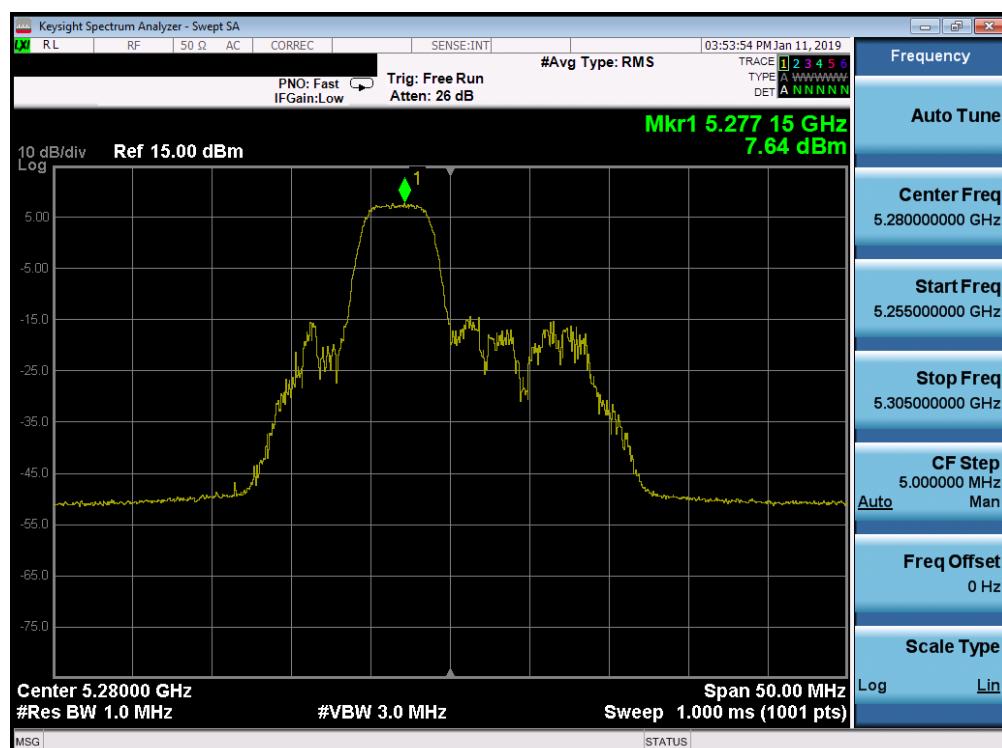


Plot 7-270. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 52 Tones (UNII Band 1) – Ch. 42)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 201 of 514

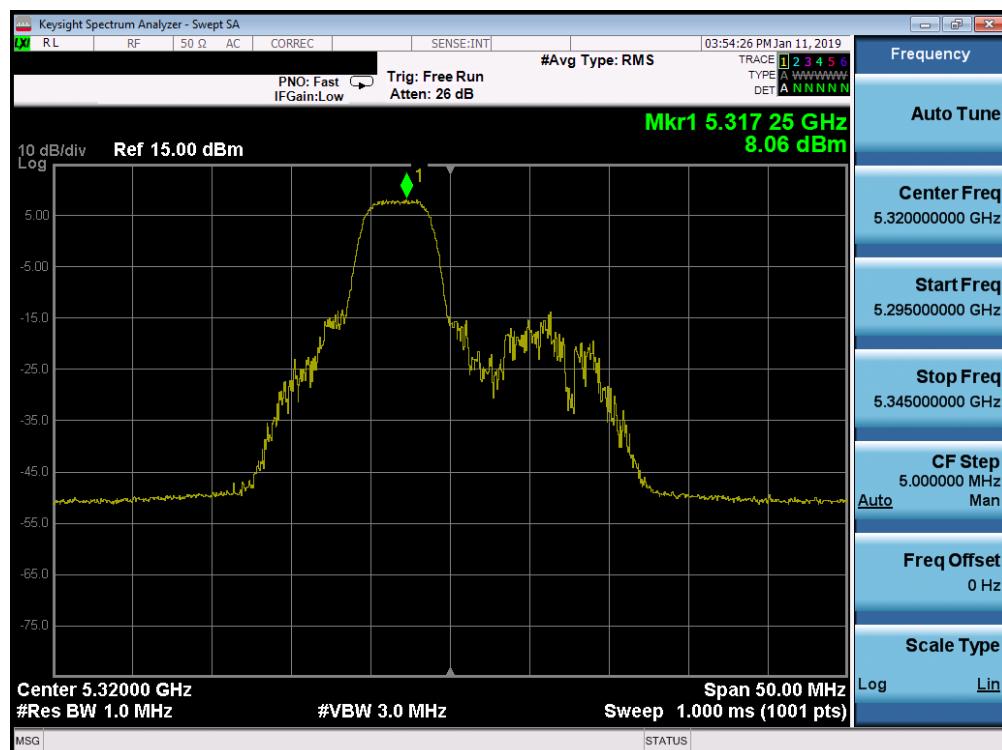


Plot 7-271. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 52 Tones (UNII Band 2A) – Ch. 52)

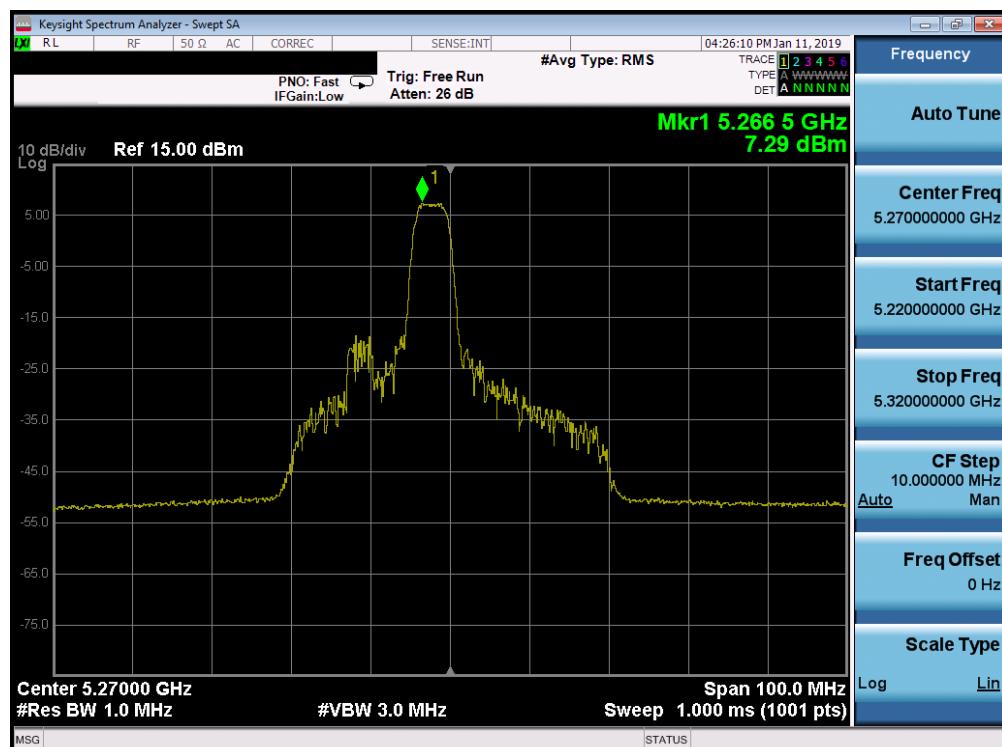


Plot 7-272. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 52 Tones (UNII Band 2A) – Ch. 56)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 202 of 514

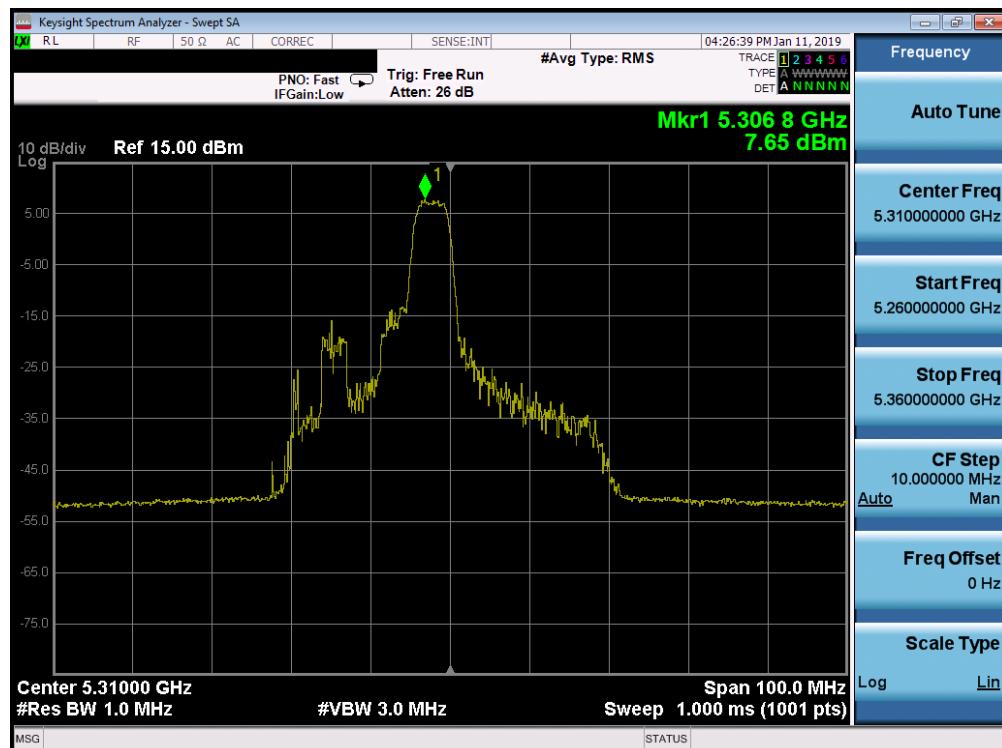


Plot 7-273. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 52 Tones (UNII Band 2A) – Ch. 64)

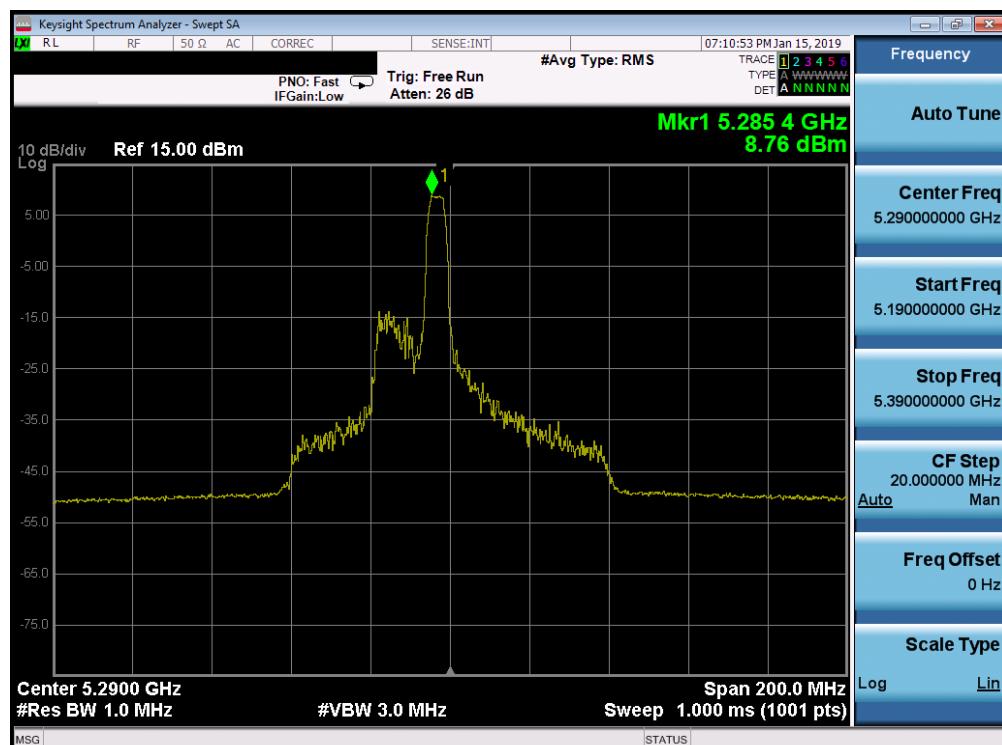


Plot 7-274. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 52 Tones (UNII Band 2A) – Ch. 54)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 203 of 514

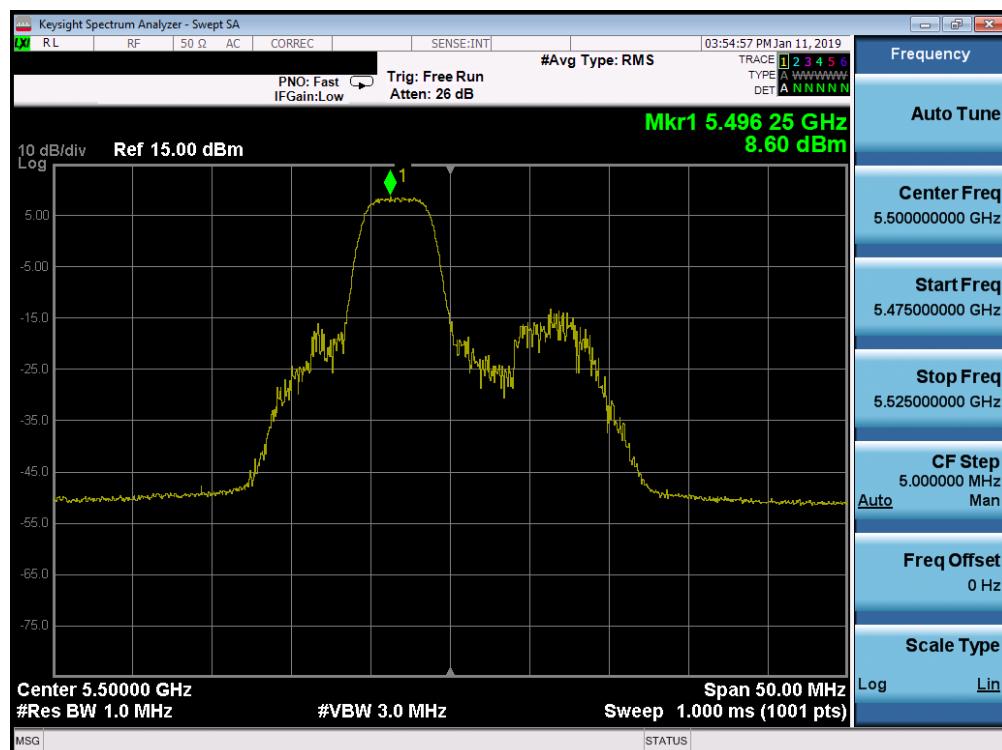


Plot 7-275. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 52 Tones (UNII Band 2A) – Ch. 62)

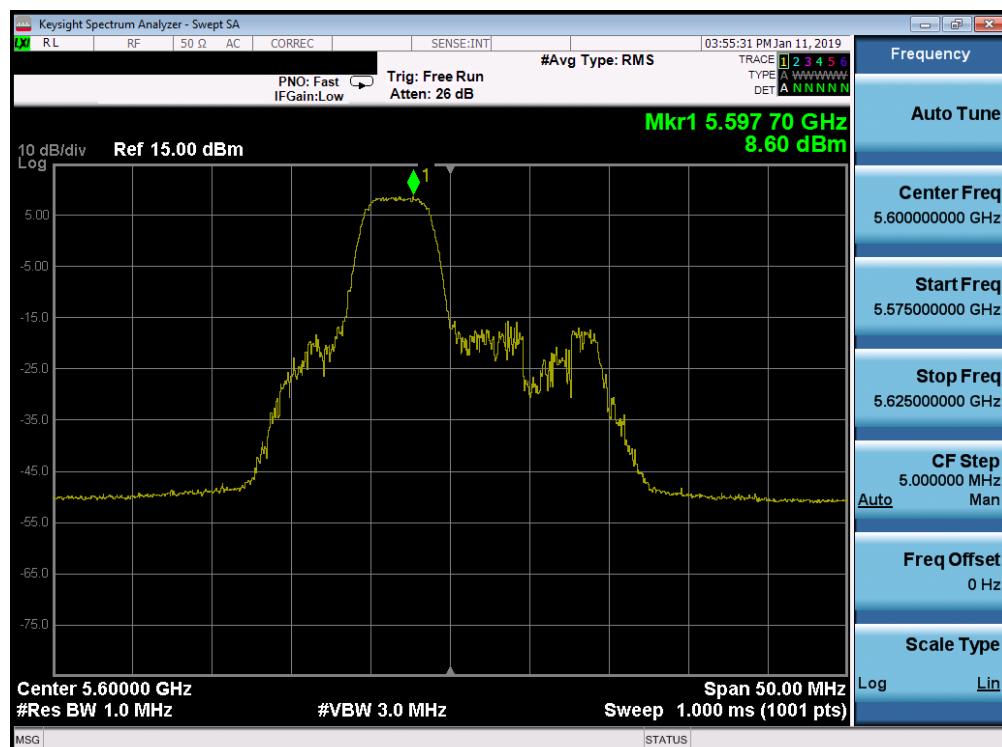


Plot 7-276. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 52 Tones (UNII Band 2A) – Ch. 58)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 204 of 514

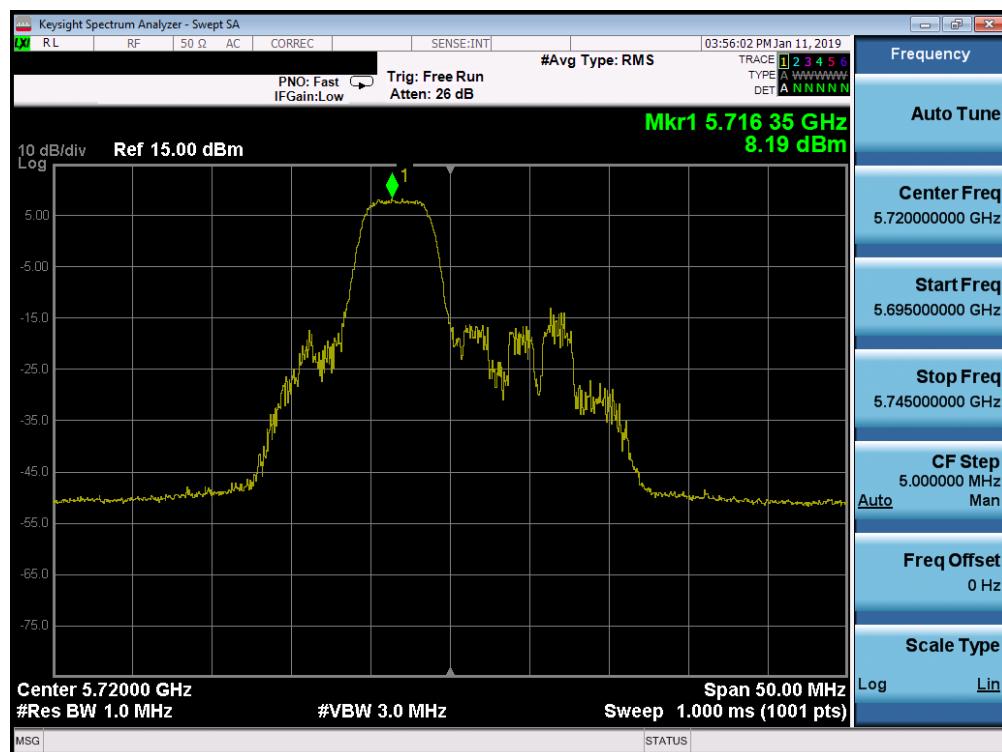


Plot 7-277. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 52 Tones (UNII Band 2C) – Ch. 100)

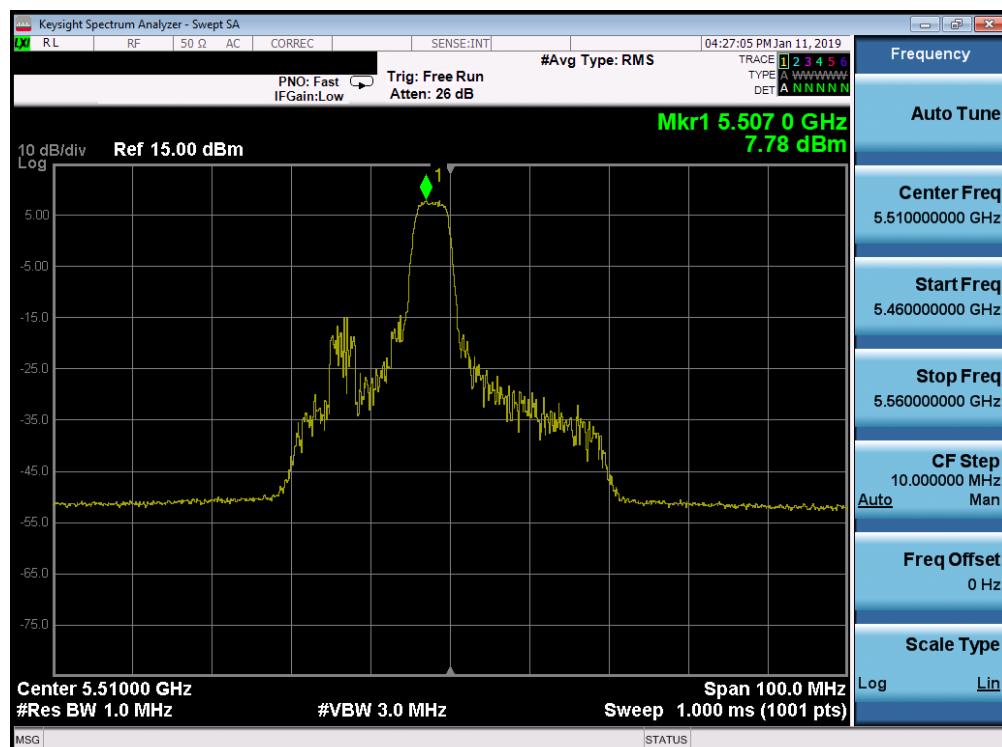


Plot 7-278. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 52 Tones (UNII Band 2C) – Ch. 120)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 205 of 514

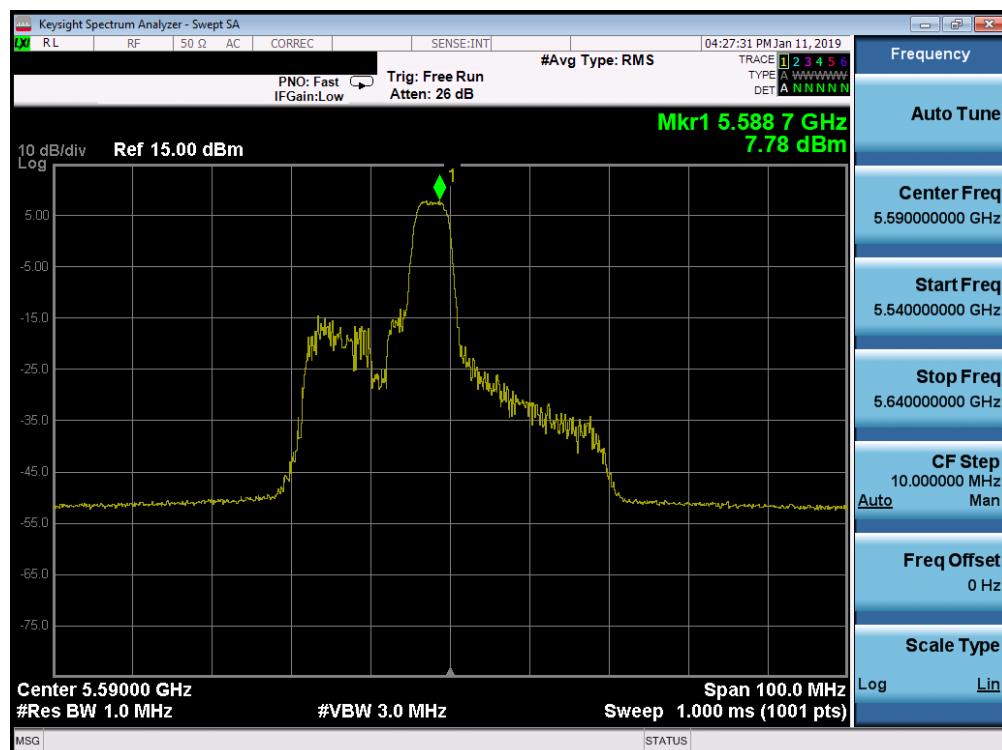


Plot 7-279. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 52 Tones (UNII Band 2C) – Ch. 144)

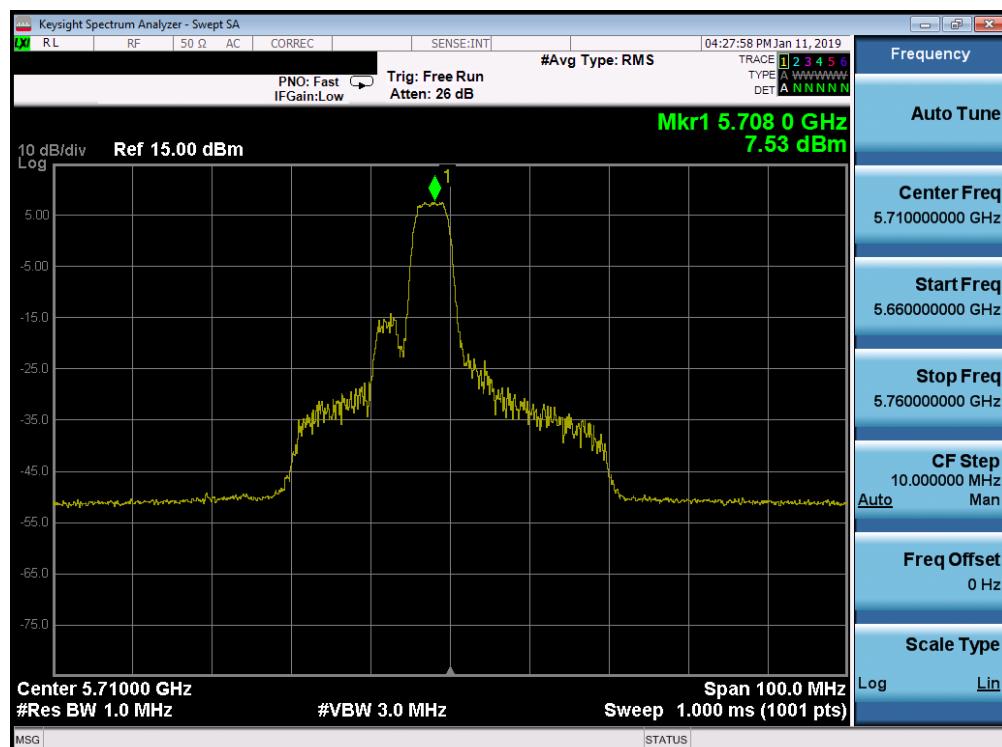


Plot 7-280. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 52 Tones (UNII Band 2C) – Ch. 102)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 206 of 514

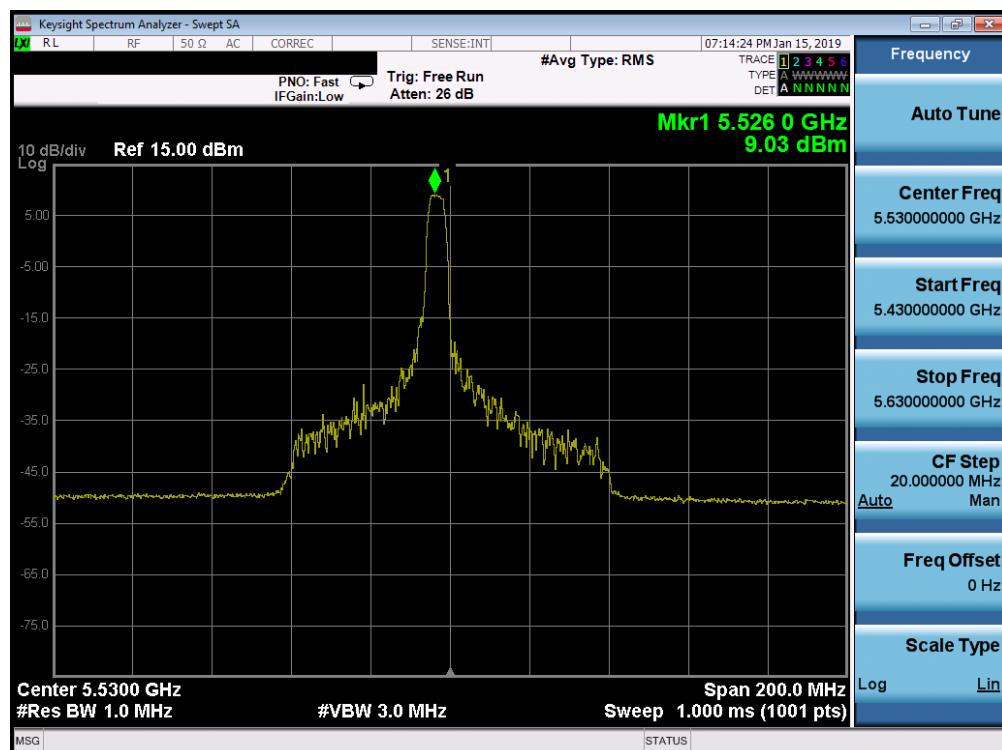


Plot 7-281. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 52 Tones (UNII Band 2C) – Ch. 118)

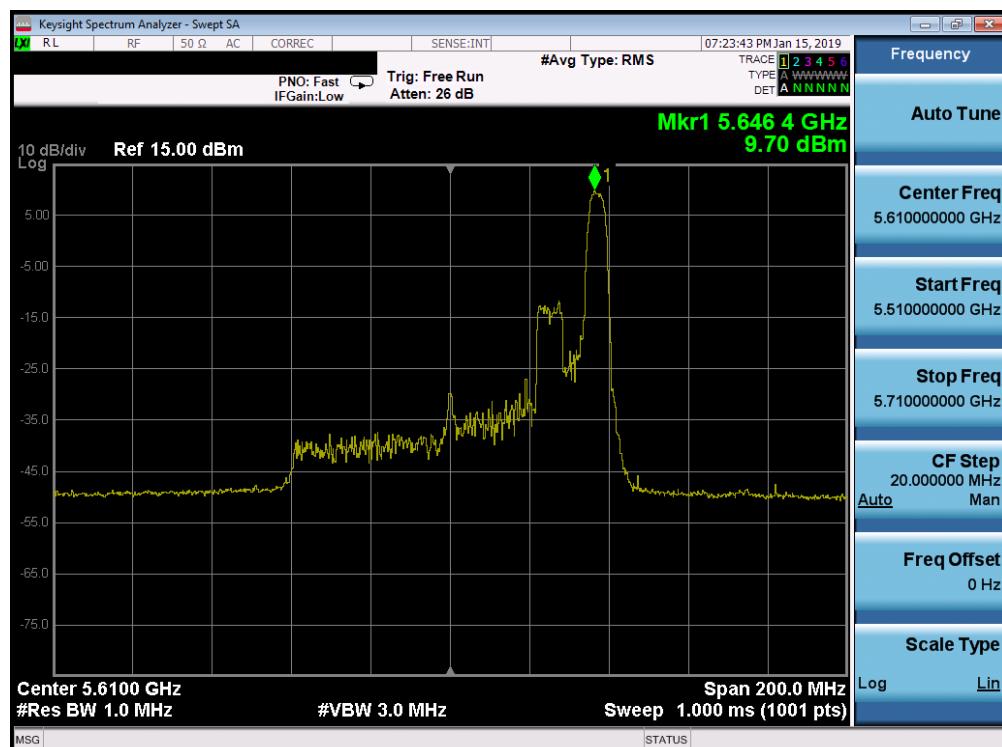


Plot 7-282. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 52 Tones (UNII Band 2C) – Ch. 142)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 207 of 514

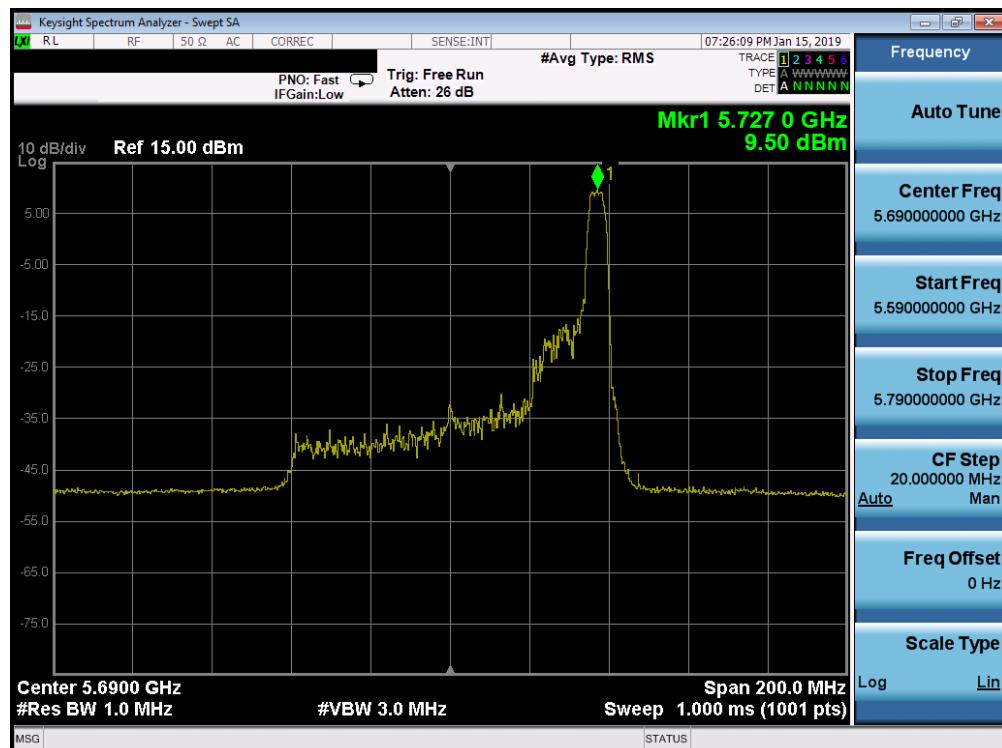


Plot 7-283. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 52 Tones (UNII Band 2C) – Ch. 106)



Plot 7-284. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 52 Tones (UNII Band 2C) – Ch. 122)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 208 of 514

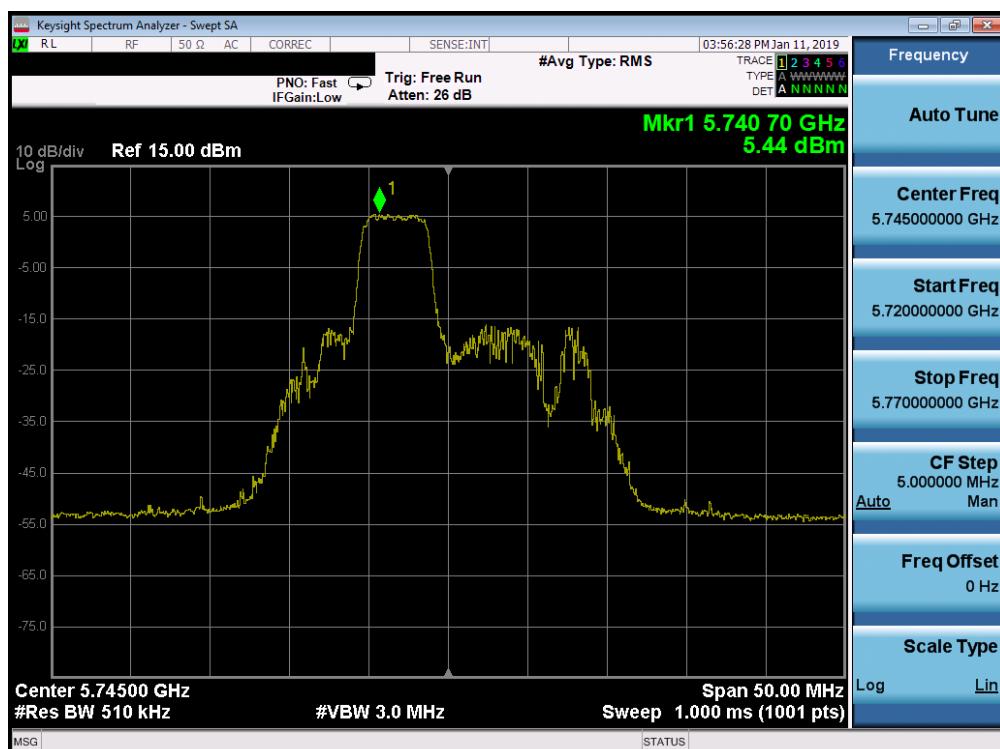


Plot 7-285. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 52 Tones (UNII Band 2C) – Ch. 138)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset	Samsung	

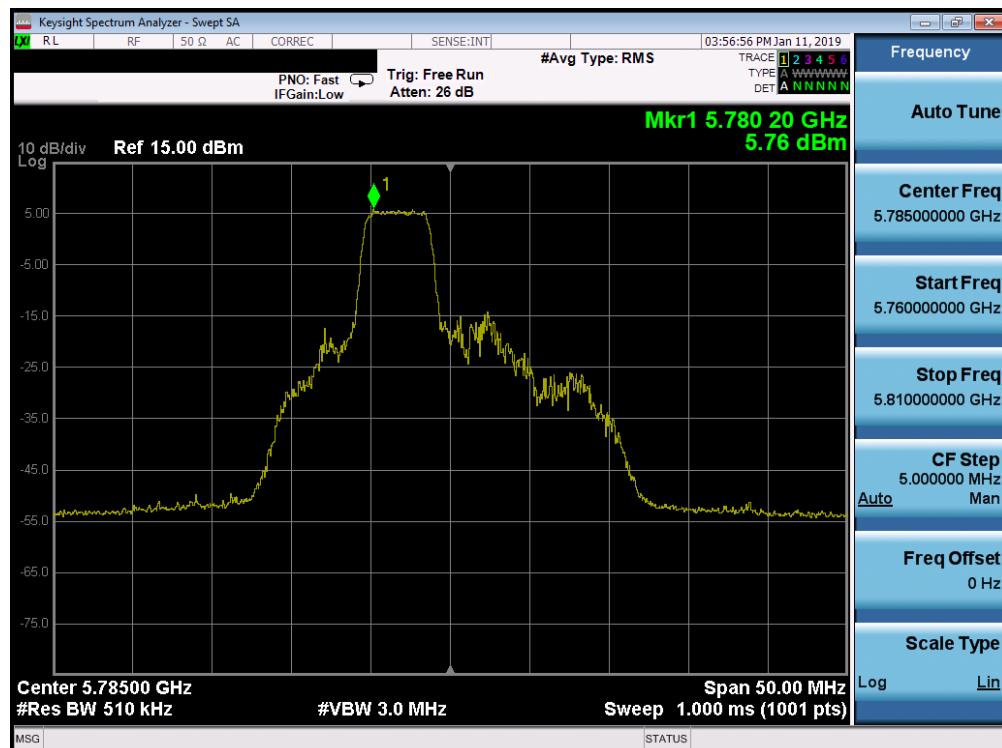
	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5745	149	ax (20MHz)	52T	MCS0	5.44	30.00	-24.56
	5785	157	ax (20MHz)	52T	MCS0	5.76	30.00	-24.24
	5825	165	ax (20MHz)	52T	MCS0	5.47	30.00	-24.53
	5755	151	ax (40MHz)	52T	MCS0	5.18	30.00	-24.82
	5795	159	ax (40MHz)	52T	MCS0	5.03	30.00	-24.97
	5775	155	ax (80MHz)	52T	MCS0	10.24	30.00	-19.76

Table 7-86. Band 3 Conducted Power Spectral Density Measurements SISO ANT2 (52 Tones)

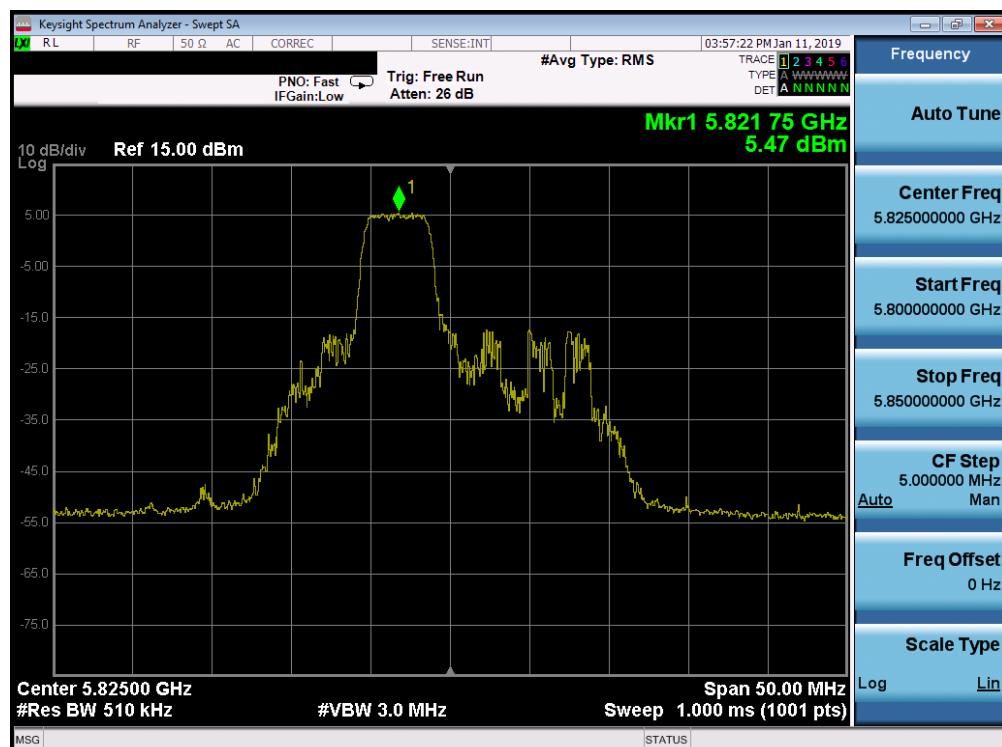


Plot 7-286. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 52 Tones (UNII Band 3) – Ch. 149)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset	Page 210 of 514	

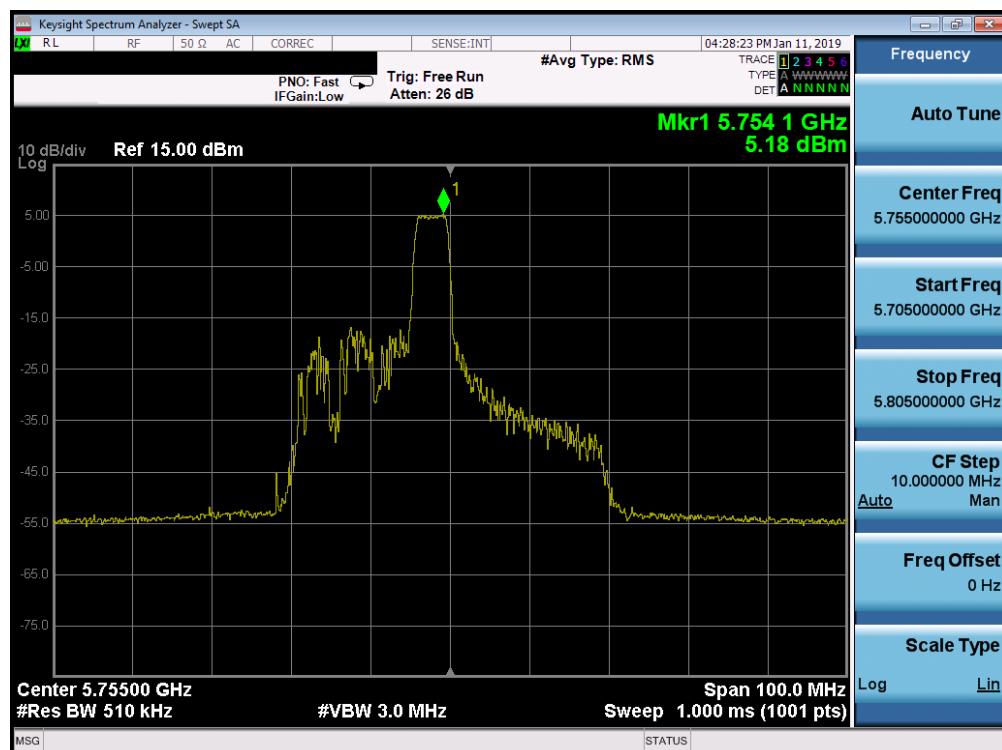


Plot 7-287. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 52 Tones (UNII Band 3) – Ch. 157)

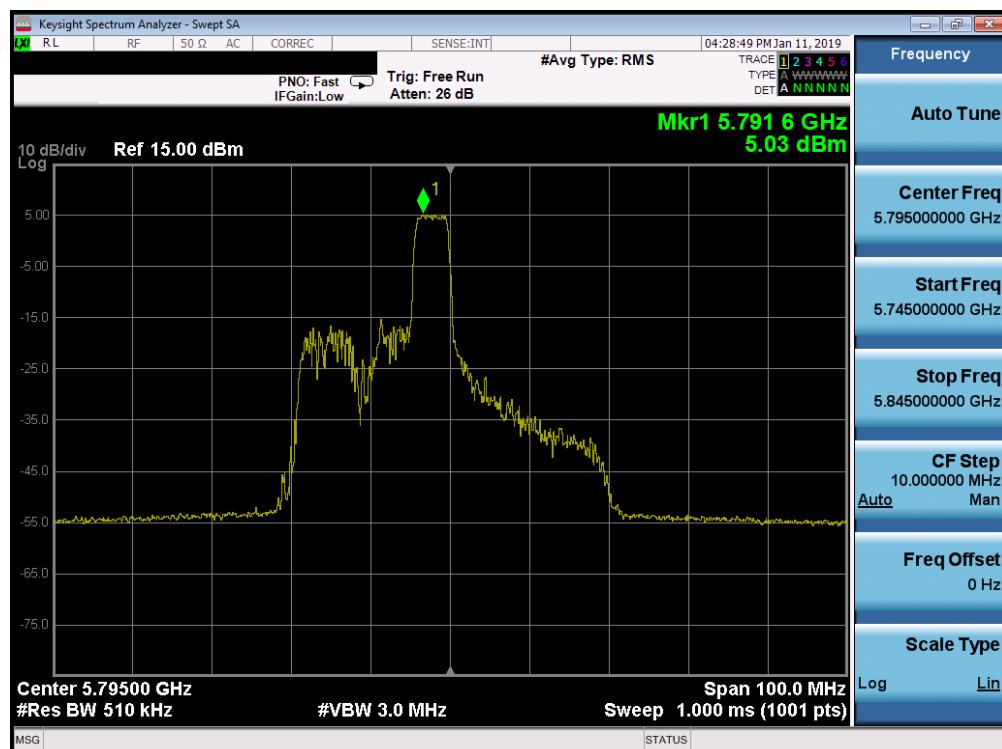


Plot 7-288. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 52 Tones (UNII Band 3) – Ch. 165)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 211 of 514

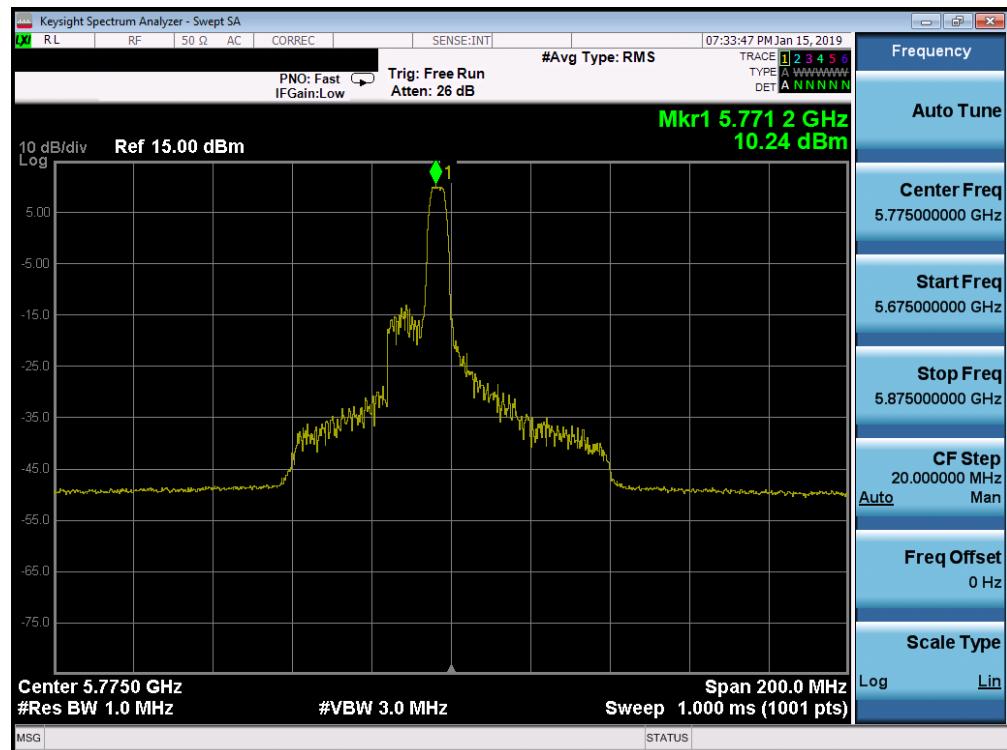


Plot 7-289. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 52 Tones (UNII Band 3) – Ch. 151)



Plot 7-290. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 52 Tones (UNII Band 3) – Ch. 159)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 212 of 514



Plot 7-291. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 52 Tones (UNII Band 3) – Ch. 155)

FCC ID: A3LSC03L		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 213 of 514

SISO Antenna-2 Power Spectral Density Measurements (106 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	ax (20MHz)	106T	MCS0	6.54	11.00	-4.46
	5200	40	ax (20MHz)	106T	MCS0	6.72	11.00	-4.28
	5240	48	ax (20MHz)	106T	MCS0	6.82	11.00	-4.18
	5190	38	ax (40MHz)	106T	MCS0	6.40	11.00	-4.60
	5230	46	ax (40MHz)	106T	MCS0	6.88	11.00	-4.12
	5210	42	ax (80MHz)	106T	MCS0	8.17	11.00	-2.83
Band 2A	5260	52	ax (20MHz)	106T	MCS0	6.44	11.00	-4.56
	5280	56	ax (20MHz)	106T	MCS0	6.46	11.00	-4.54
	5320	64	ax (20MHz)	106T	MCS0	6.72	11.00	-4.28
	5270	54	ax (40MHz)	106T	MCS0	6.37	11.00	-4.63
	5310	62	ax (40MHz)	106T	MCS0	6.70	11.00	-4.30
	5290	58	ax (80MHz)	106T	MCS0	8.16	11.00	-2.84
Band 2C	5500	100	ax (20MHz)	106T	MCS0	7.54	11.00	-3.46
	5600	120	ax (20MHz)	106T	MCS0	7.40	11.00	-3.60
	5720	144	ax (20MHz)	106T	MCS0	7.01	11.00	-3.99
	5510	102	ax (40MHz)	106T	MCS0	6.88	11.00	-4.12
	5590	118	ax (40MHz)	106T	MCS0	6.92	11.00	-4.08
	5710	142	ax (40MHz)	106T	MCS0	6.96	11.00	-4.04
	5530	106	ax (80MHz)	106T	MCS0	8.27	11.00	-2.73
	5610	122	ax (80MHz)	106T	MCS0	8.71	11.00	-2.29
	5690	138	ax (80MHz)	106T	MCS0	8.62	11.00	-2.38

Table 7-87. Bands 1, 2A, 2C Conducted Power Spectral Density Measurements SISO ANT2 (106 Tones)

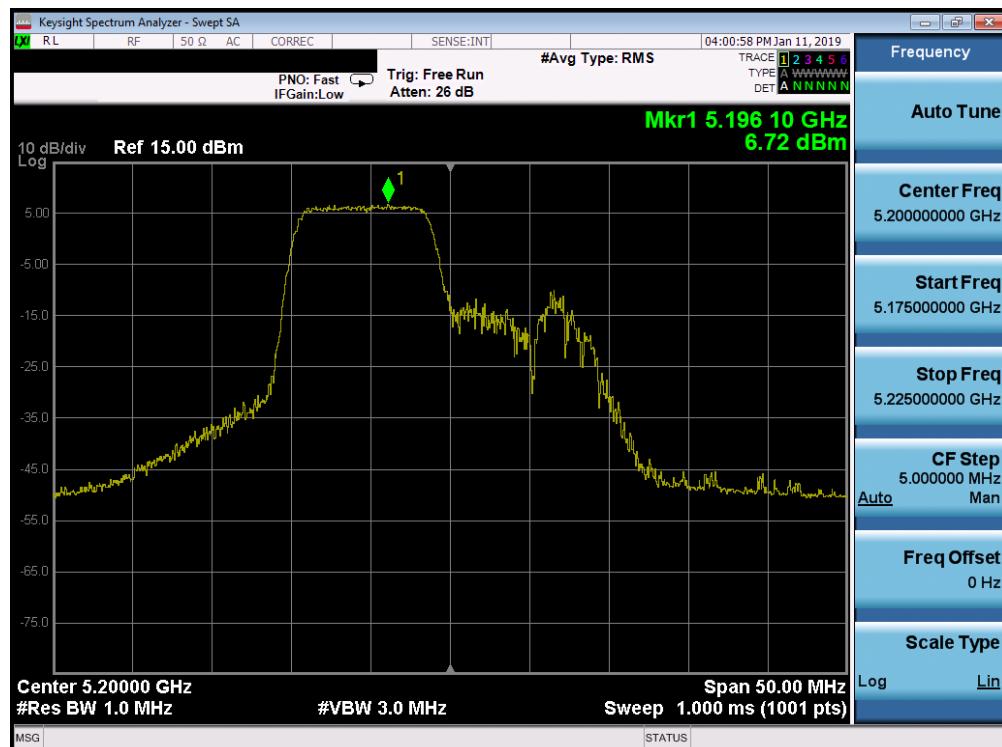
	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured Power Density [dBm]	Antenna Gain [dBi]	e.i.r.p. Power Density [dBm/MHz]	ISED Max e.i.r.p. Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	ax (20MHz)	106T	MCS0	6.54	-7.70	-1.16	10.0	-11.16
	5200	40	ax (20MHz)	106T	MCS0	6.72	-7.57	-0.85	10.0	-10.85
	5240	48	ax (20MHz)	106T	MCS0	6.82	-8.01	-1.19	10.0	-11.19
	5190	38	ax (40MHz)	106T	MCS0	6.40	-7.57	-1.17	10.0	-11.17
	5230	46	ax (40MHz)	106T	MCS0	6.88	-8.01	-1.13	10.0	-11.13
	5210	42	ax (80MHz)	106T	MCS0	8.17	-7.57	0.60	10.0	-9.40

Table 7-88. Bands 1 e.r.i.p Conducted Power Spectral Density Measurements (ISED 106 Tones)

FCC ID: A3LSC03L		MEASUREMENT REPORT (CERTIFICATION)					Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset					Page 214 of 514

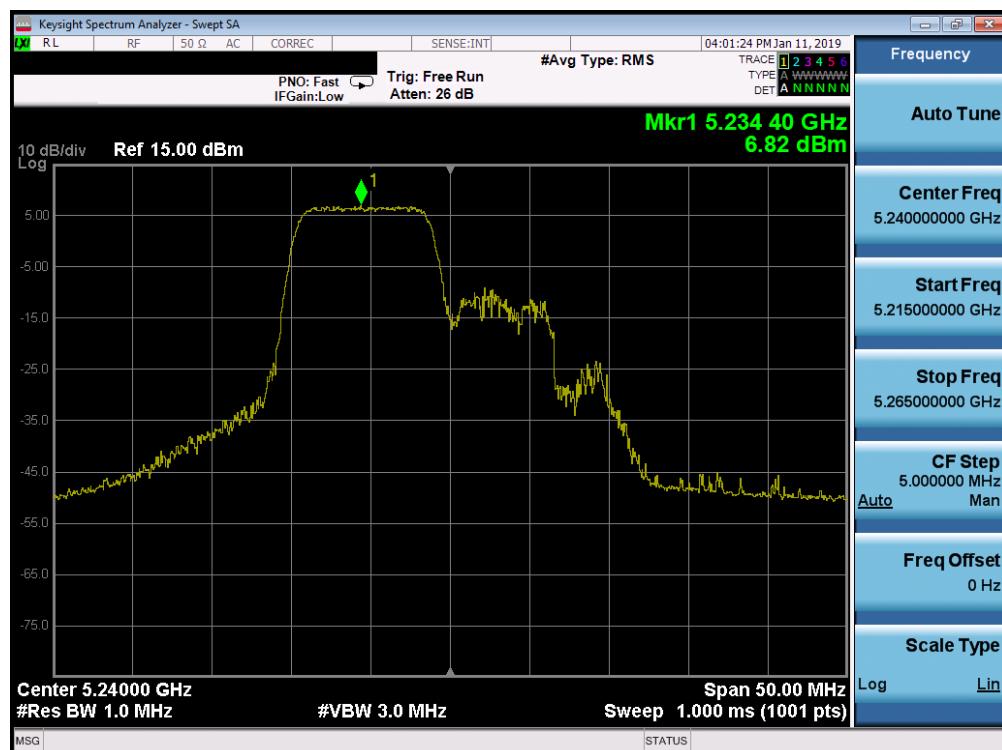


Plot 7-292. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 106 Tones (UNII Band 1) – Ch. 36)

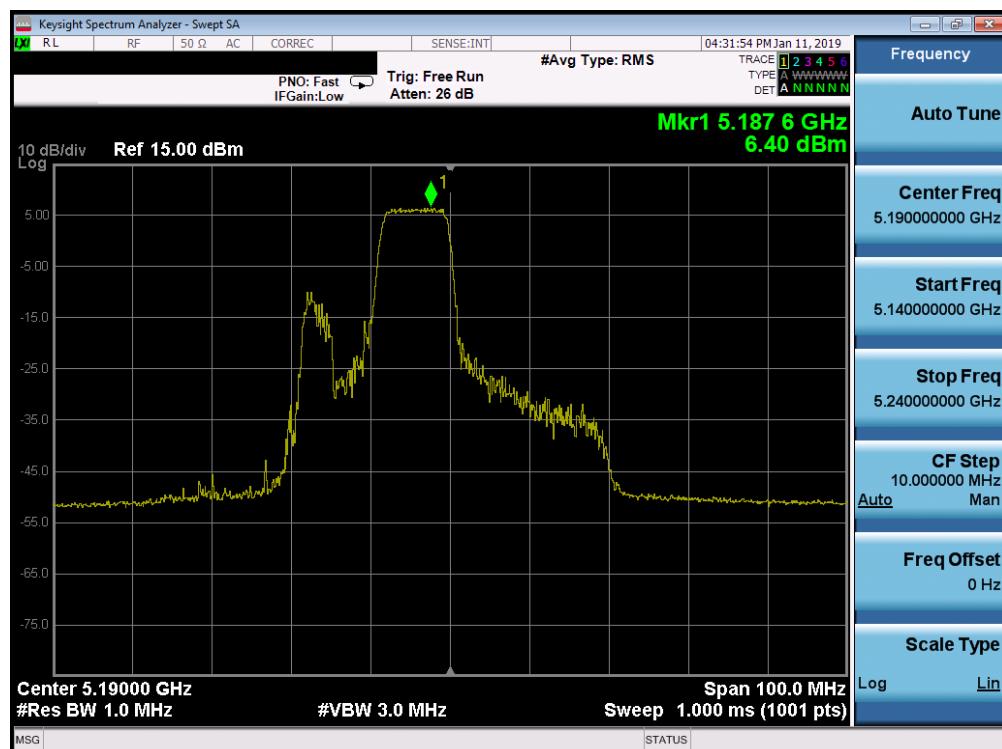


Plot 7-293. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 106 Tones (UNII Band 1) – Ch. 40)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 215 of 514



Plot 7-294. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 106 Tones (UNII Band 1) – Ch. 48)

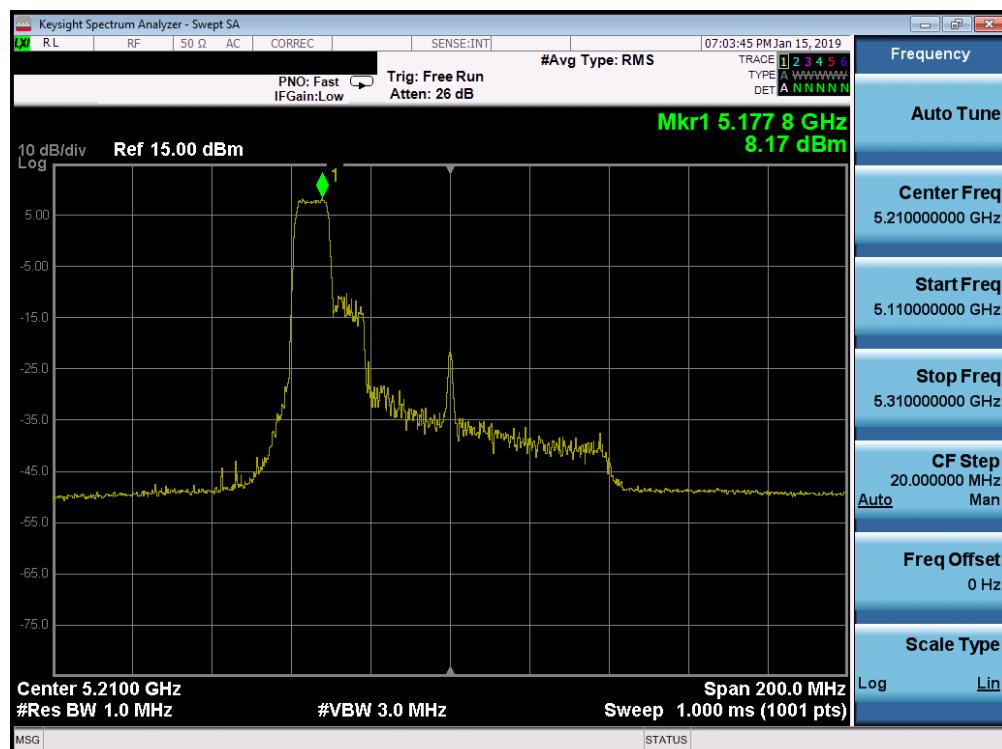


Plot 7-295. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 106 Tones (UNII Band 1) – Ch. 38)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 216 of 514

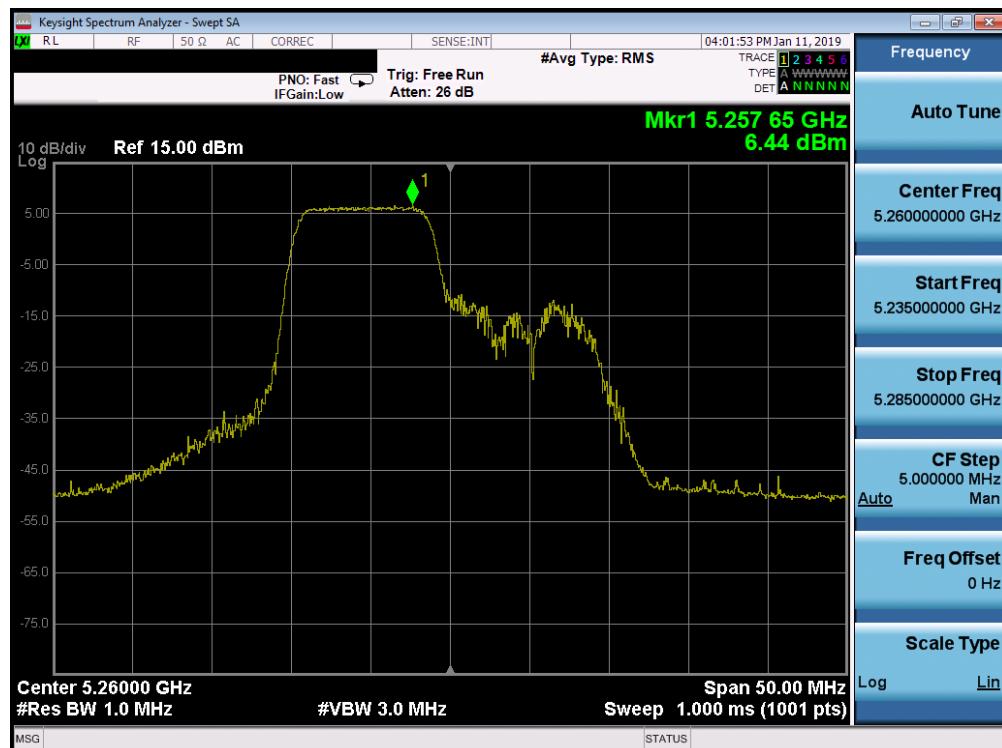


Plot 7-296. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 106 Tones (UNII Band 1) – Ch. 46)

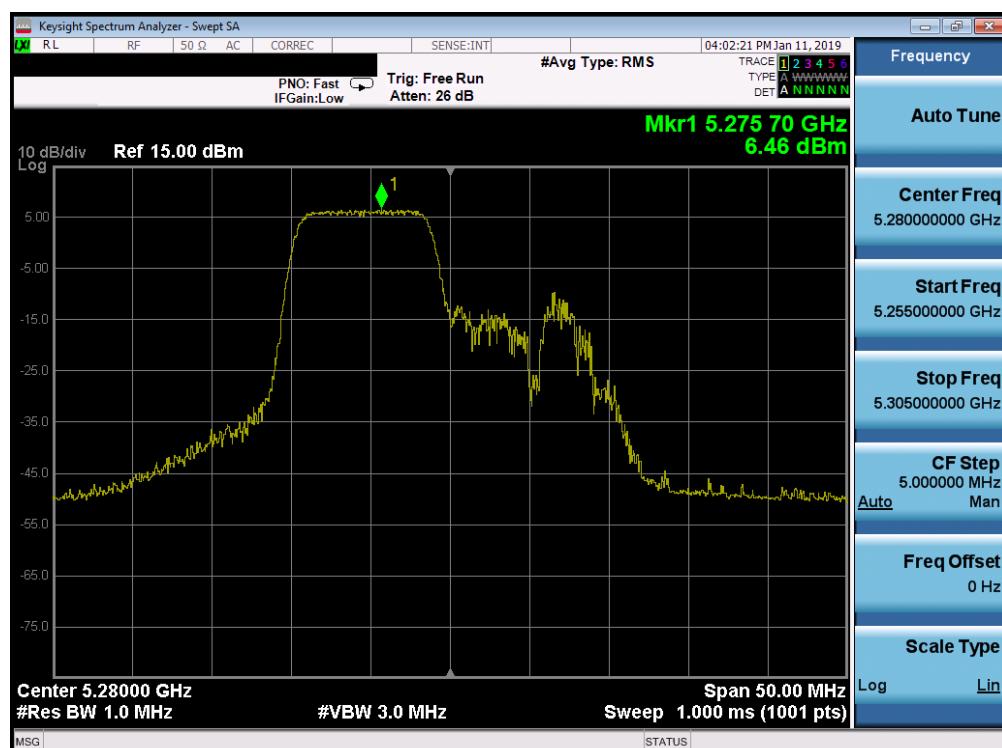


Plot 7-297. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 106 Tones (UNII Band 1) – Ch. 42)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 217 of 514

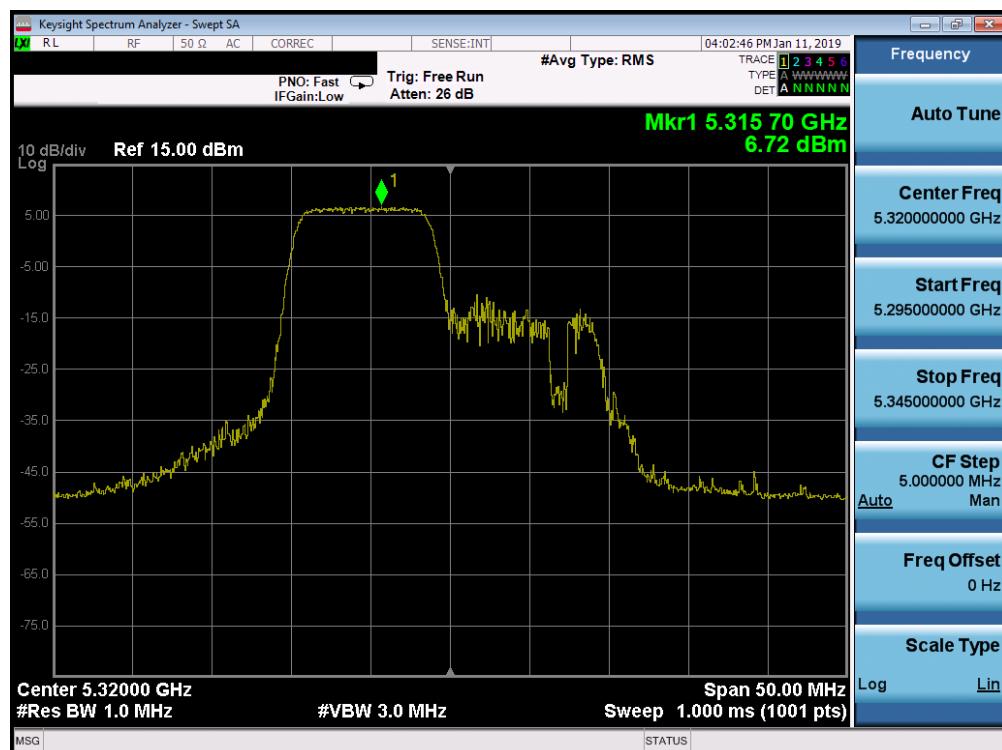


Plot 7-298. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 106 Tones (UNII Band 2A) – Ch. 52)

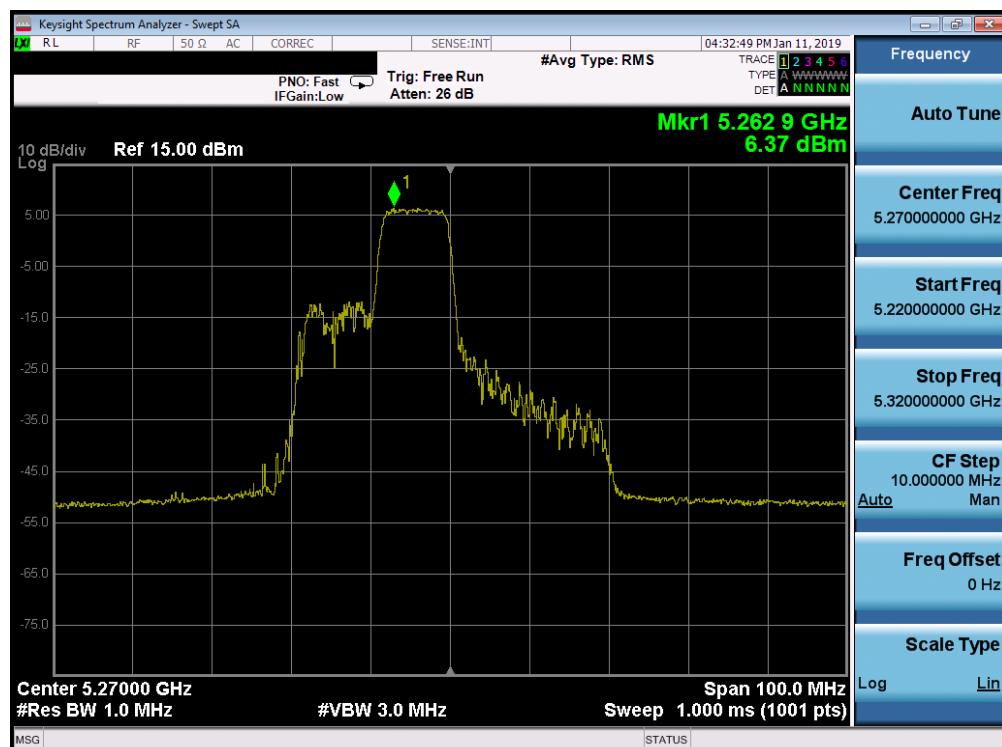


Plot 7-299. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 106 Tones (UNII Band 2A) – Ch. 56)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 218 of 514

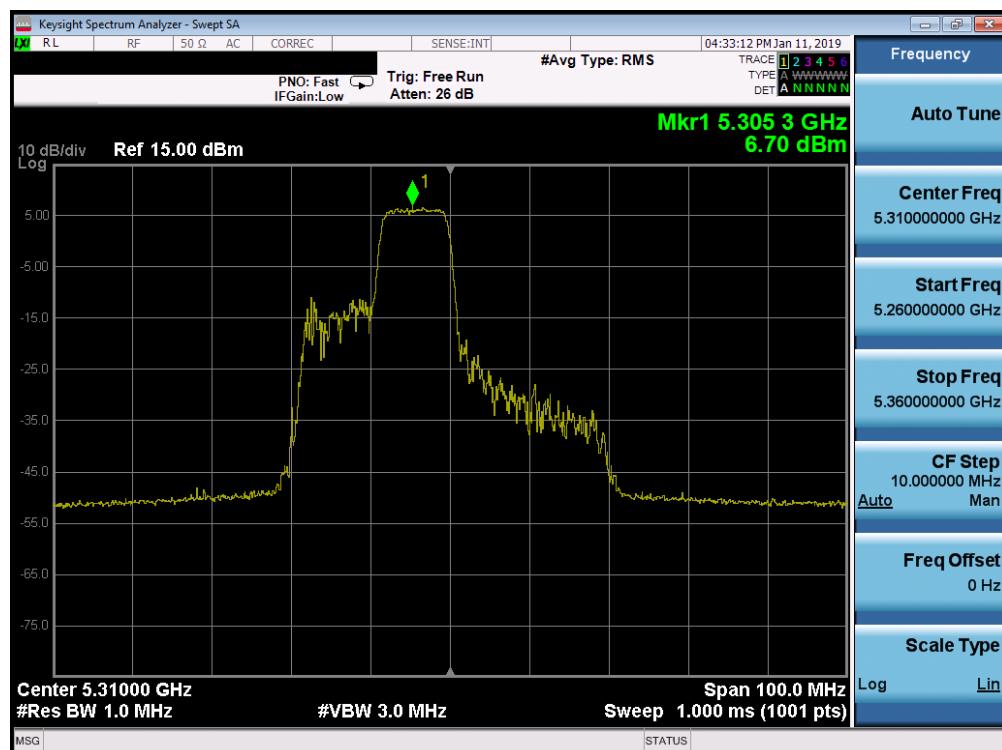


Plot 7-300. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 106 Tones (UNII Band 2A) – Ch. 64)

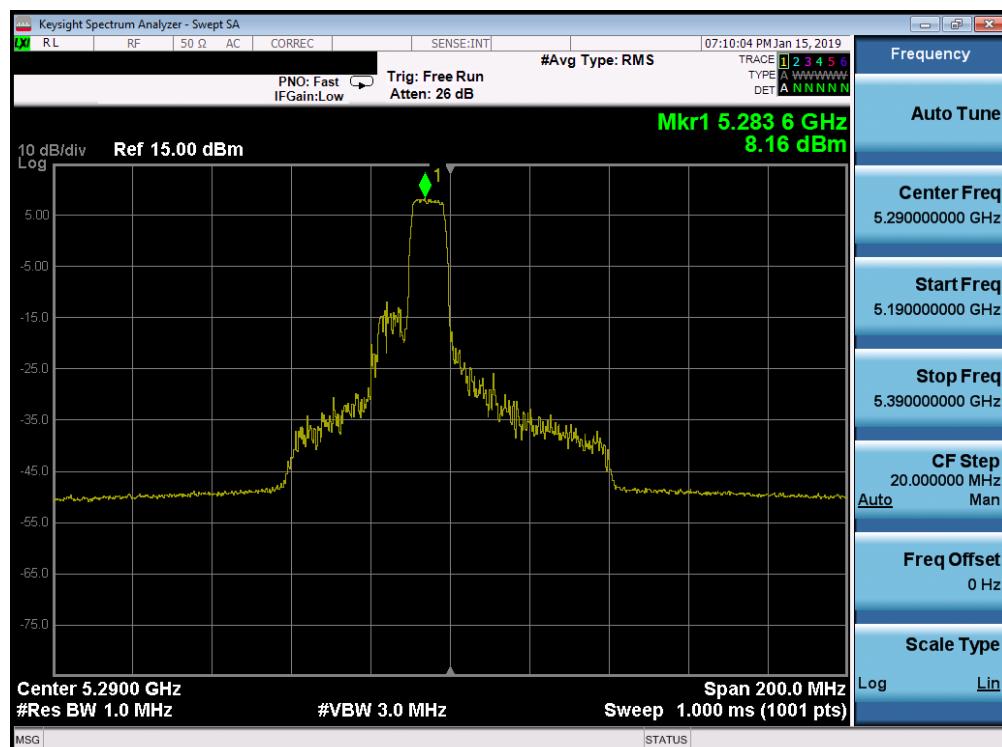


Plot 7-301. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 106 Tones (UNII Band 2A) – Ch. 54)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-7.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 219 of 514

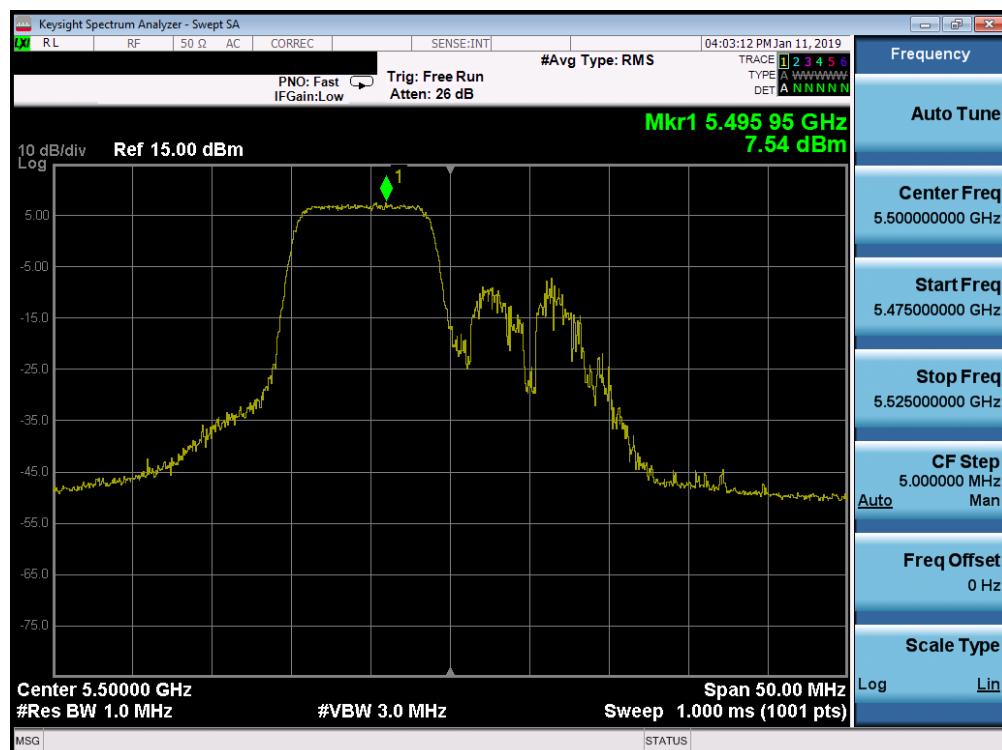


Plot 7-302. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 106 Tones (UNII Band 2A) – Ch. 62)



Plot 7-303. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 106 Tones (UNII Band 2A) – Ch. 58)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 220 of 514

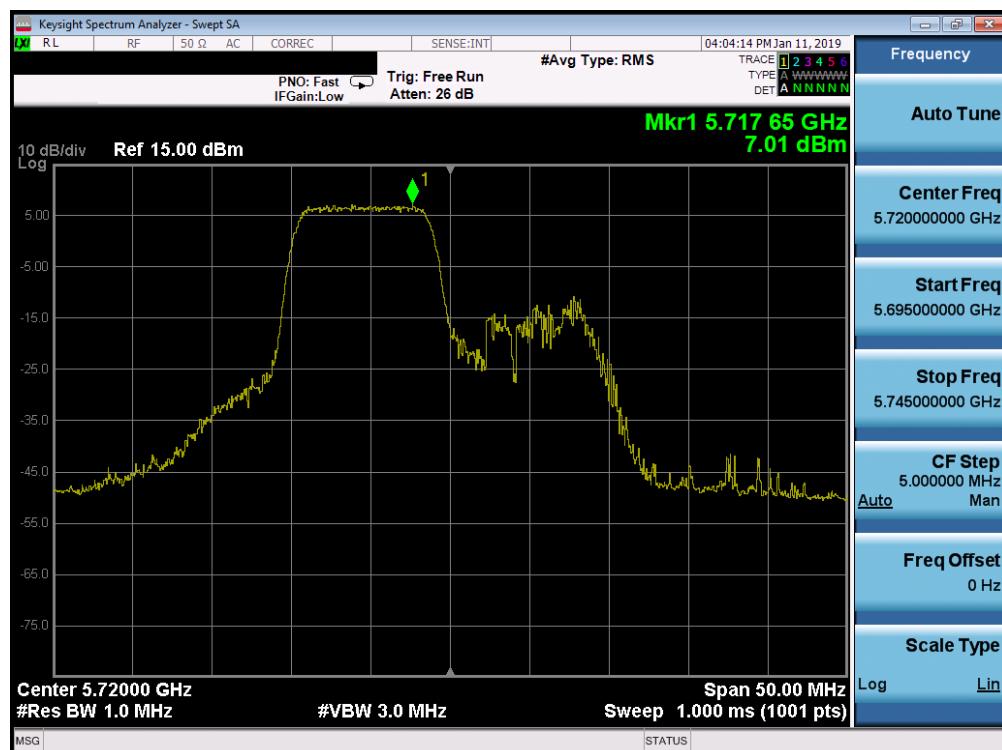


Plot 7-304. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 106 Tones (UNII Band 2C) – Ch. 100)



Plot 7-305. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 106 Tones (UNII Band 2C) – Ch. 120)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 221 of 514

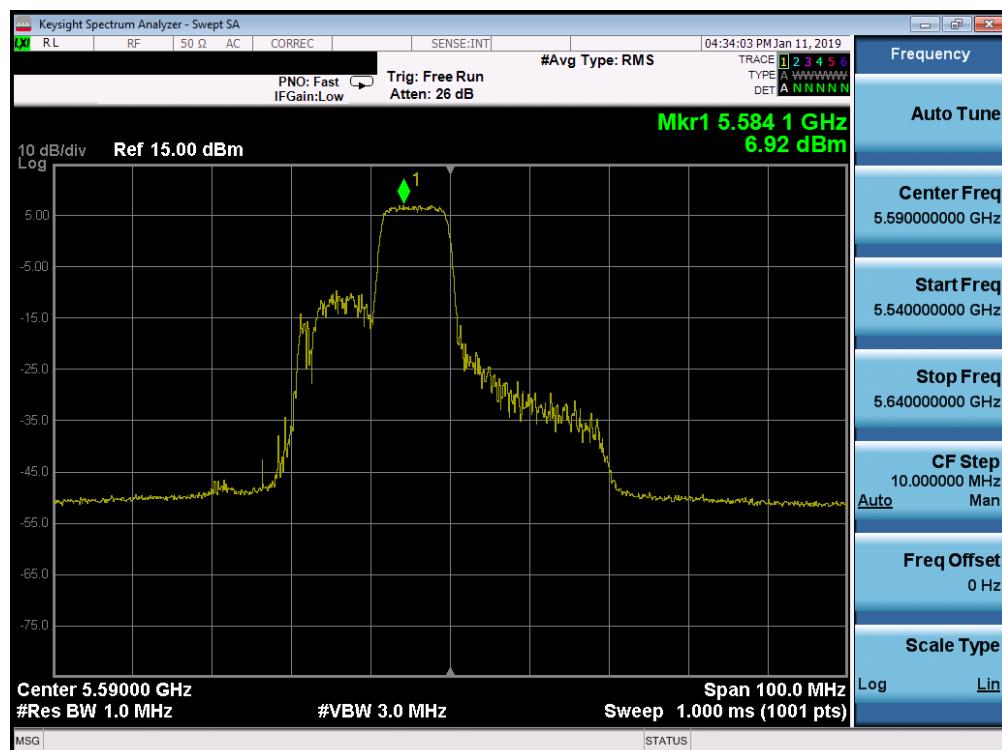


Plot 7-306. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 106 Tones (UNII Band 2C) – Ch. 144)



Plot 7-307. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 106 Tones (UNII Band 2C) – Ch. 102)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 222 of 514

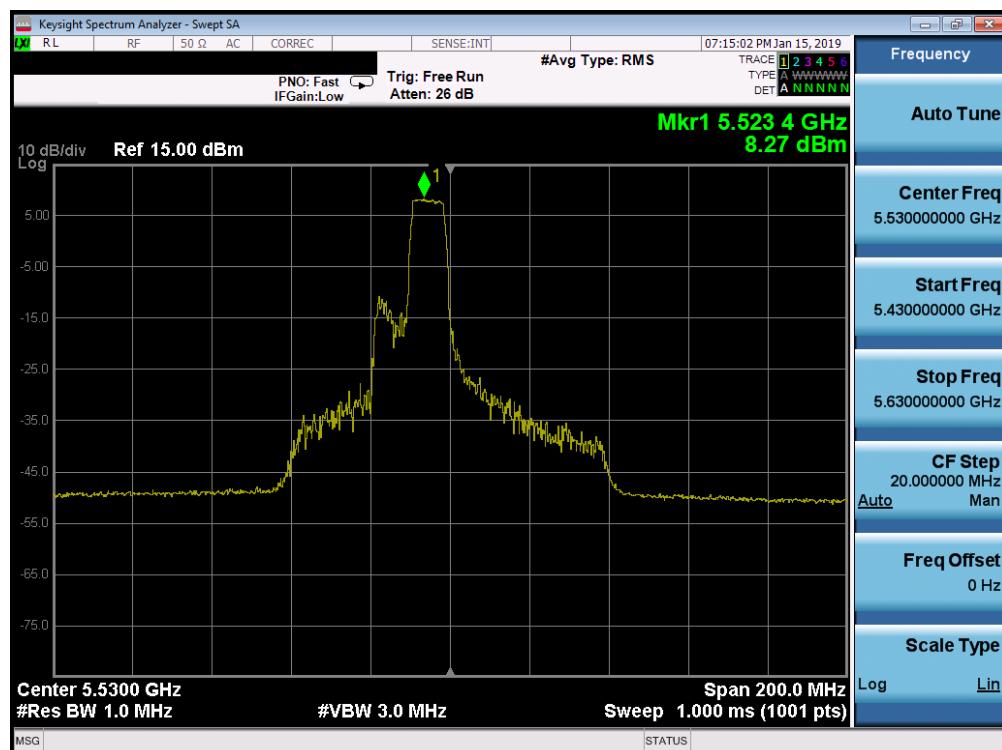


Plot 7-308. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 106 Tones (UNII Band 2C) – Ch. 118)

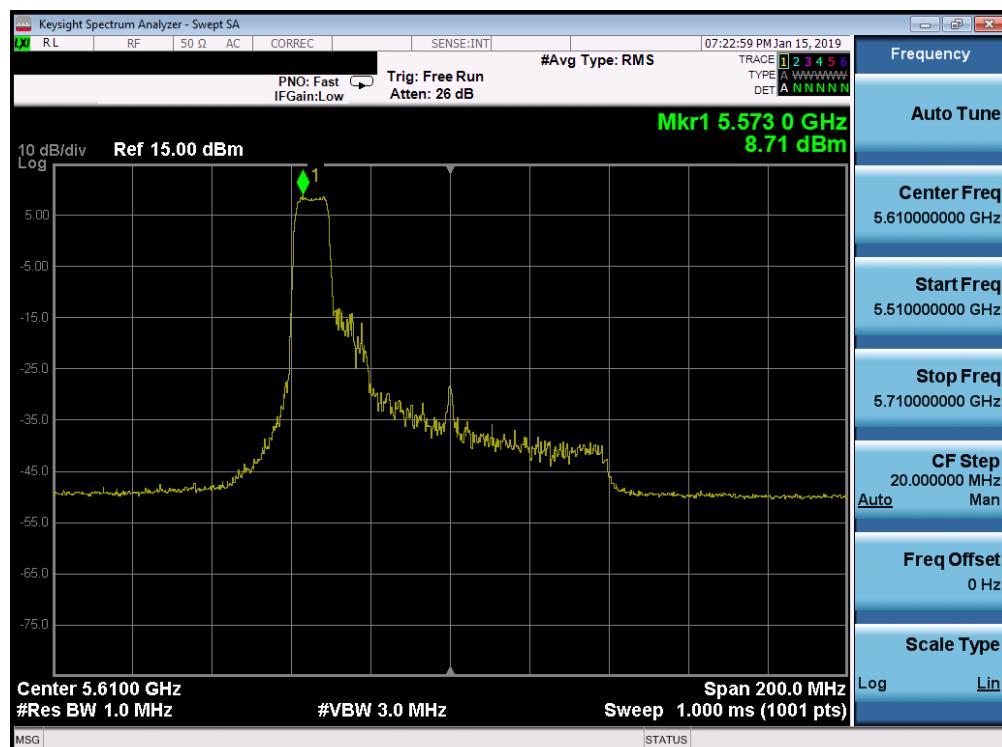


Plot 7-309. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 106 Tones (UNII Band 2C) – Ch. 142)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 223 of 514

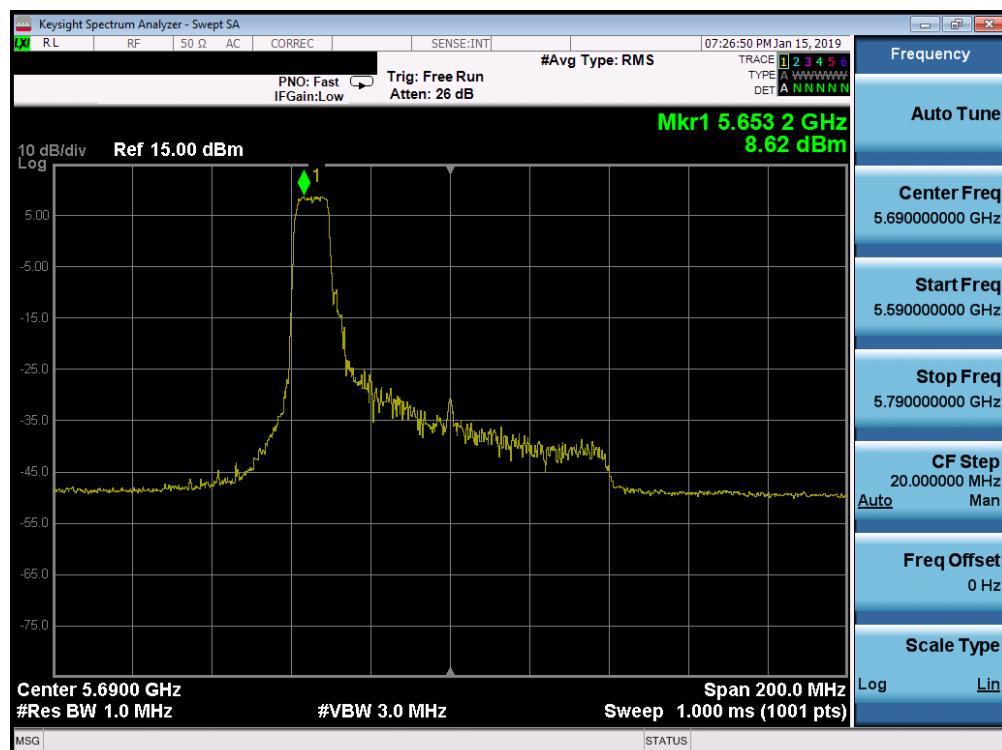


Plot 7-310. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 106 Tones (UNII Band 2C) – Ch. 106)



Plot 7-311. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 106 Tones (UNII Band 2C) – Ch. 122)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 224 of 514

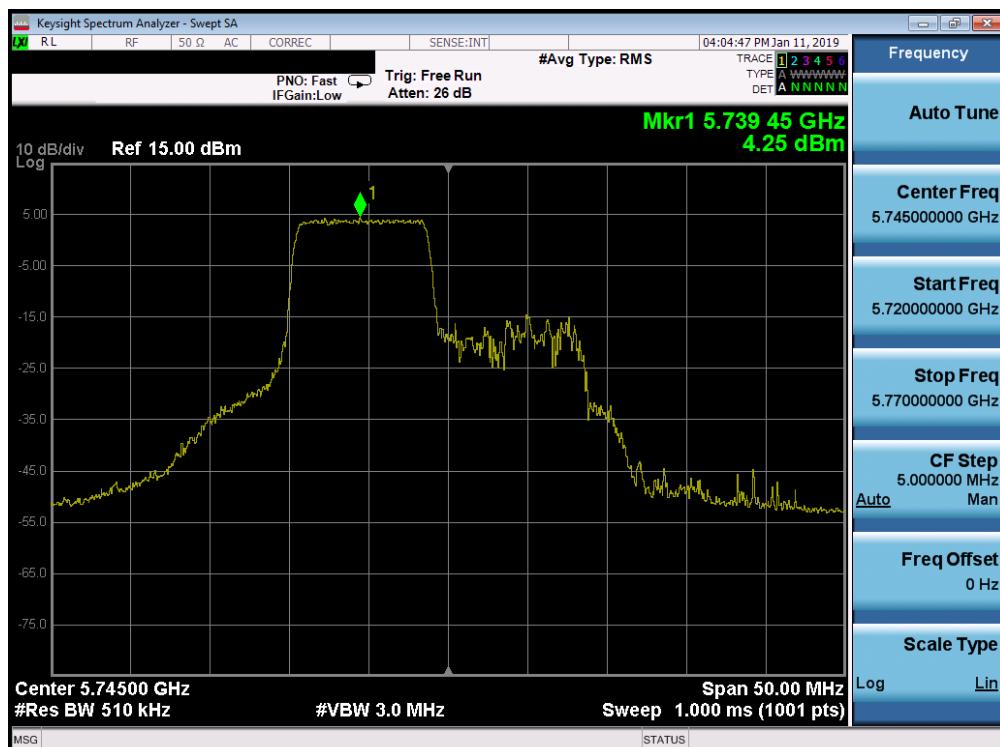


Plot 7-312. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 106 Tones (UNII Band 2C) – Ch. 138)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 225 of 514

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5745	149	ax (20MHz)	106T	MCS0	4.25	30.00	-25.75
	5785	157	ax (20MHz)	106T	MCS0	4.52	30.00	-25.48
	5825	165	ax (20MHz)	106T	MCS0	4.21	30.00	-25.79
	5755	151	ax (40MHz)	106T	MCS0	4.10	30.00	-25.90
	5795	159	ax (40MHz)	106T	MCS0	4.33	30.00	-25.67
	5775	155	ax (80MHz)	106T	MCS0	9.08	30.00	-20.92

Table 7-89. Band 3 Conducted Power Spectral Density Measurements SISO ANT2 (106 Tones)

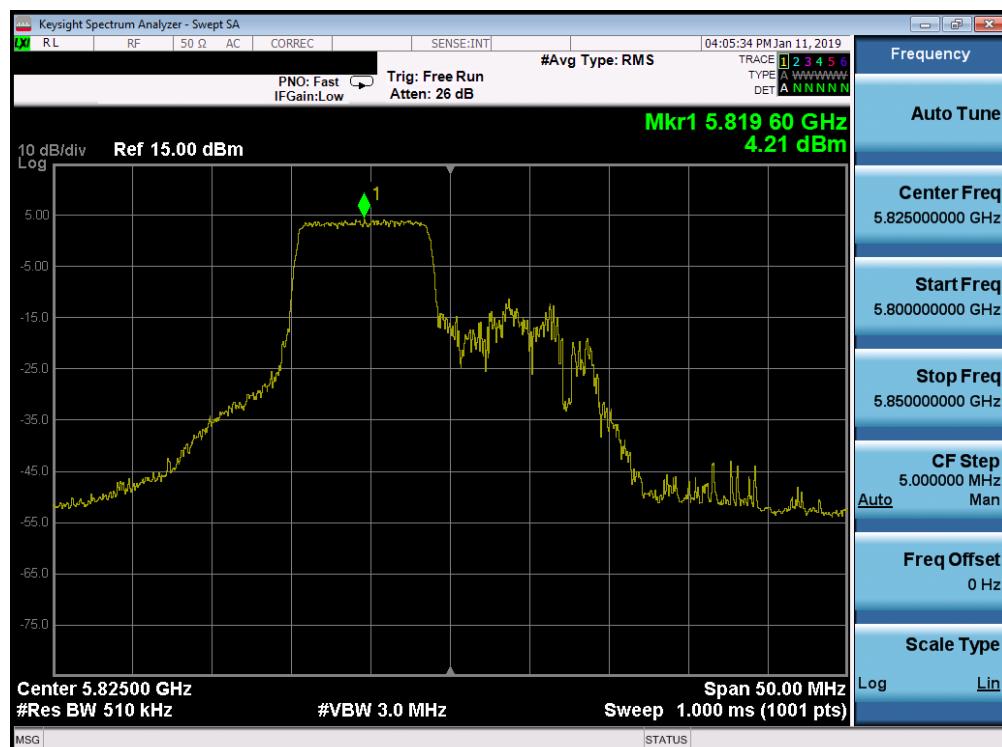


Plot 7-313. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 106 Tones (UNII Band 3) – Ch. 149)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset	Page 226 of 514	



Plot 7-314. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 106 Tones (UNII Band 3) – Ch. 157)

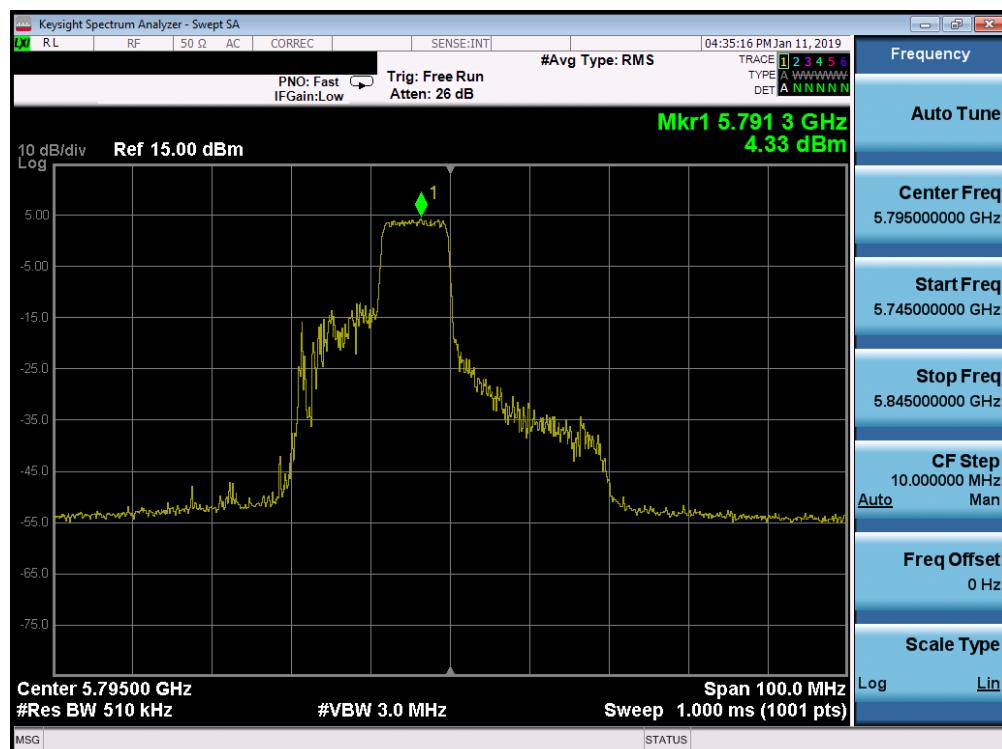


Plot 7-315. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 106 Tones (UNII Band 3) – Ch. 165)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 227 of 514



Plot 7-316. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 106 Tones (UNII Band 3) – Ch. 151)



Plot 7-317. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 106 Tones (UNII Band 3) – Ch. 159)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 228 of 514



Plot 7-318. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 106 Tones (UNII Band 3) – Ch. 155)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 229 of 514

SISO Antenna-2 Power Spectral Density Measurements (242 Tones)

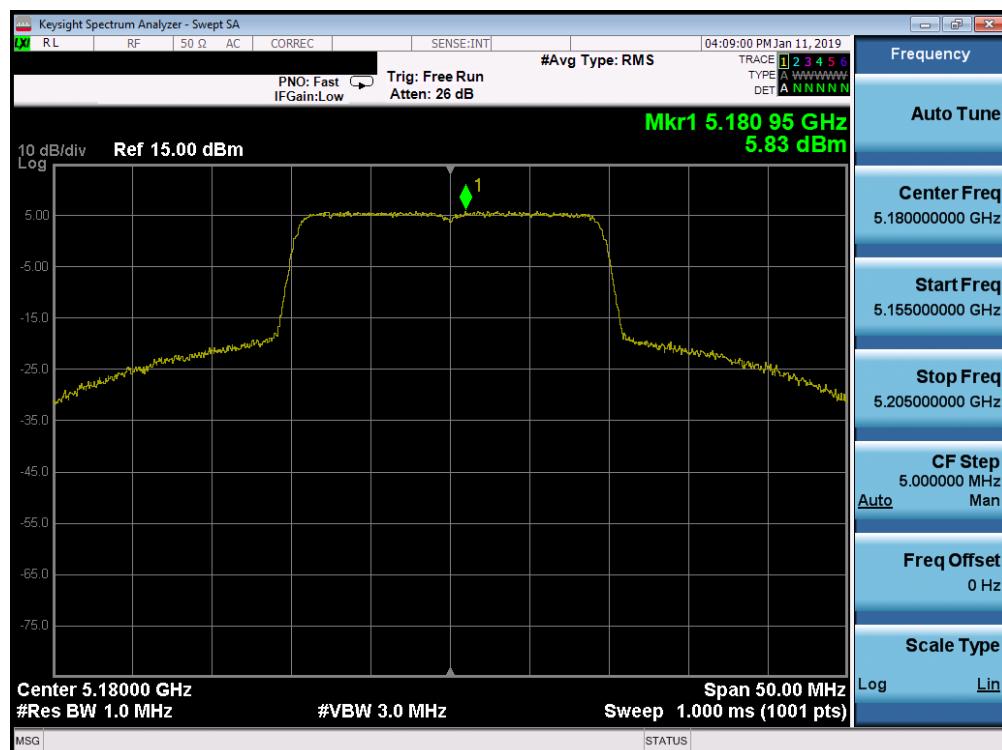
	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	ax (20MHz)	242T	MCS0	5.83	11.00	-5.17
	5200	40	ax (20MHz)	242T	MCS0	5.94	11.00	-5.06
	5240	48	ax (20MHz)	242T	MCS0	6.44	11.00	-4.56
	5190	38	ax (40MHz)	242T	MCS0	6.79	11.00	-4.21
	5230	46	ax (40MHz)	242T	MCS0	7.12	11.00	-3.88
	5210	42	ax (80MHz)	242T	MCS0	1.74	11.00	-9.26
Band 2A	5260	52	ax (20MHz)	242T	MCS0	5.79	11.00	-5.21
	5280	56	ax (20MHz)	242T	MCS0	5.81	11.00	-5.19
	5320	64	ax (20MHz)	242T	MCS0	6.14	11.00	-4.86
	5270	54	ax (40MHz)	242T	MCS0	6.52	11.00	-4.48
	5310	62	ax (40MHz)	242T	MCS0	6.90	11.00	-4.10
	5290	58	ax (80MHz)	242T	MCS0	2.23	11.00	-8.77
Band 2C	5500	100	ax (20MHz)	242T	MCS0	6.53	11.00	-4.47
	5600	120	ax (20MHz)	242T	MCS0	6.73	11.00	-4.27
	5720	144	ax (20MHz)	242T	MCS0	6.13	11.00	-4.87
	5510	102	ax (40MHz)	242T	MCS0	7.13	11.00	-3.87
	5590	118	ax (40MHz)	242T	MCS0	6.89	11.00	-4.11
	5710	142	ax (40MHz)	242T	MCS0	7.01	11.00	-3.99
	5530	106	ax (80MHz)	242T	MCS0	7.77	11.00	-3.23
	5610	122	ax (80MHz)	242T	MCS0	7.95	11.00	-3.05
	5690	138	ax (80MHz)	242T	MCS0	8.03	11.00	-2.97

Table 7-90. Bands 1, 2A, 2C Conducted Power Spectral Density Measurements SISO ANT2 (242 Tones)

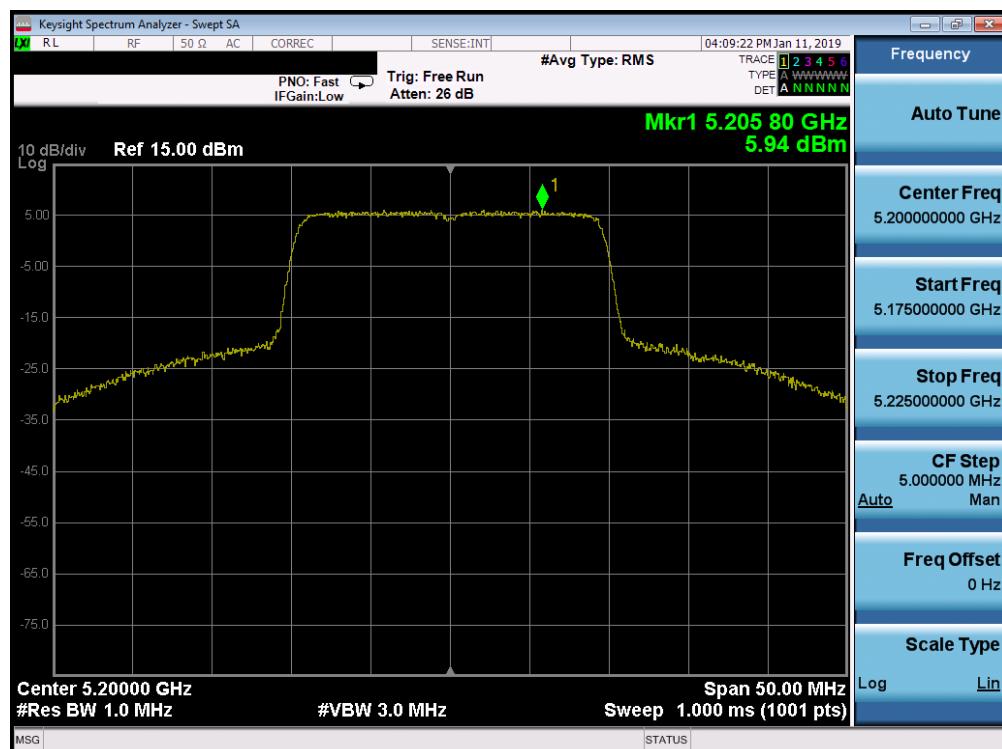
	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured Power Density [dBm]	Antenna Gain [dBi]	e.i.r.p. Power Density [dBm/MHz]	ISED Max e.i.r.p. Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	ax (20MHz)	242T	MCS0	5.83	-7.70	-1.87	10.0	-11.87
	5200	40	ax (20MHz)	242T	MCS0	5.94	-7.57	-1.63	10.0	-11.63
	5240	48	ax (20MHz)	242T	MCS0	6.44	-8.01	-1.57	10.0	-11.57
	5190	38	ax (40MHz)	242T	MCS0	6.79	-7.57	-0.78	10.0	-10.78
	5230	46	ax (40MHz)	242T	MCS0	7.12	-8.01	-0.89	10.0	-10.89
	5210	42	ax (80MHz)	242T	MCS0	1.74	-7.57	-5.83	10.0	-15.83

Table 7-91. Bands 1 e.r.i.p Conducted Power Spectral Density Measurements (ISED 242 Tones)

FCC ID: A3LSC03L	MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset			Page 230 of 514

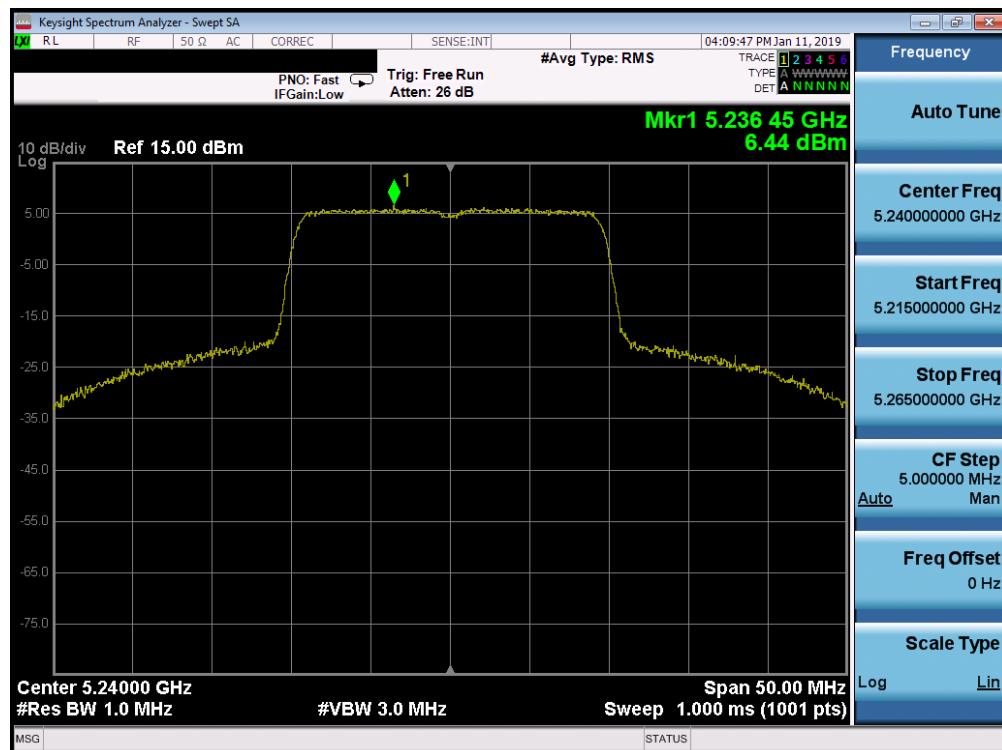


Plot 7-319. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 242 Tones (UNII Band 1) – Ch. 36)

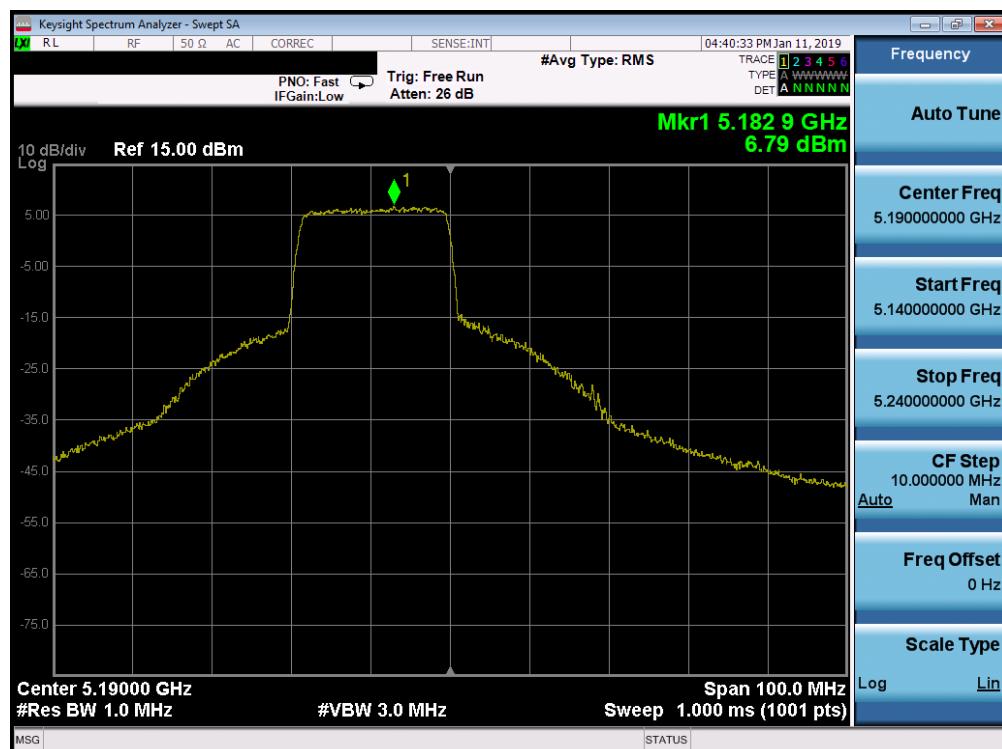


Plot 7-320. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 242 Tones (UNII Band 1) – Ch. 40)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 231 of 514

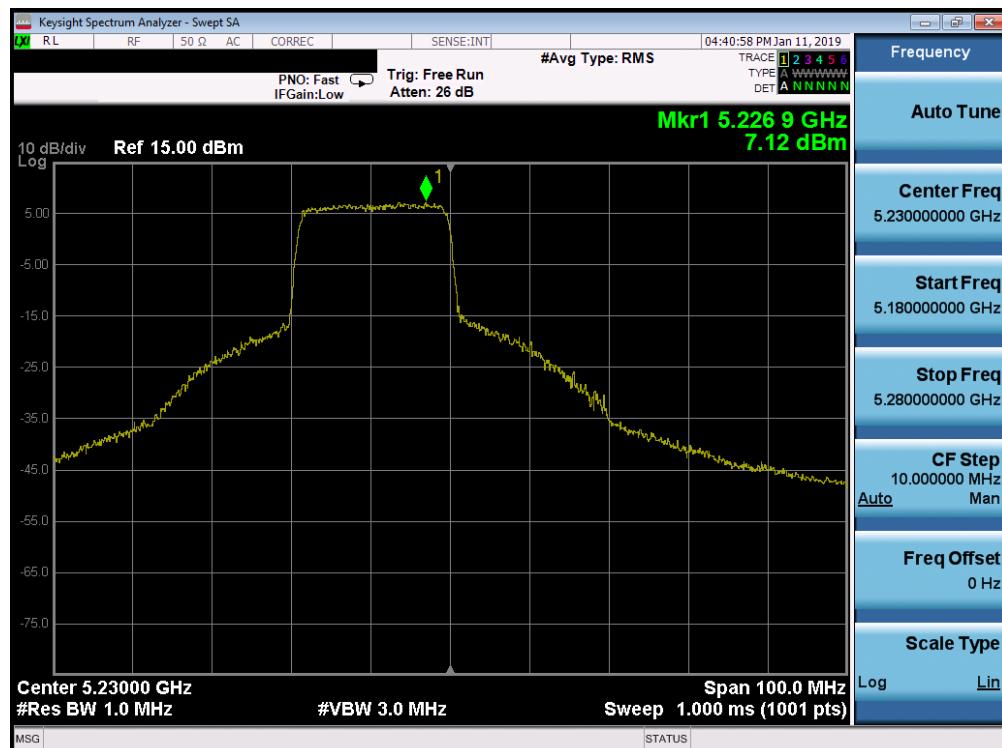


Plot 7-321. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 242 Tones (UNII Band 1) – Ch. 48)

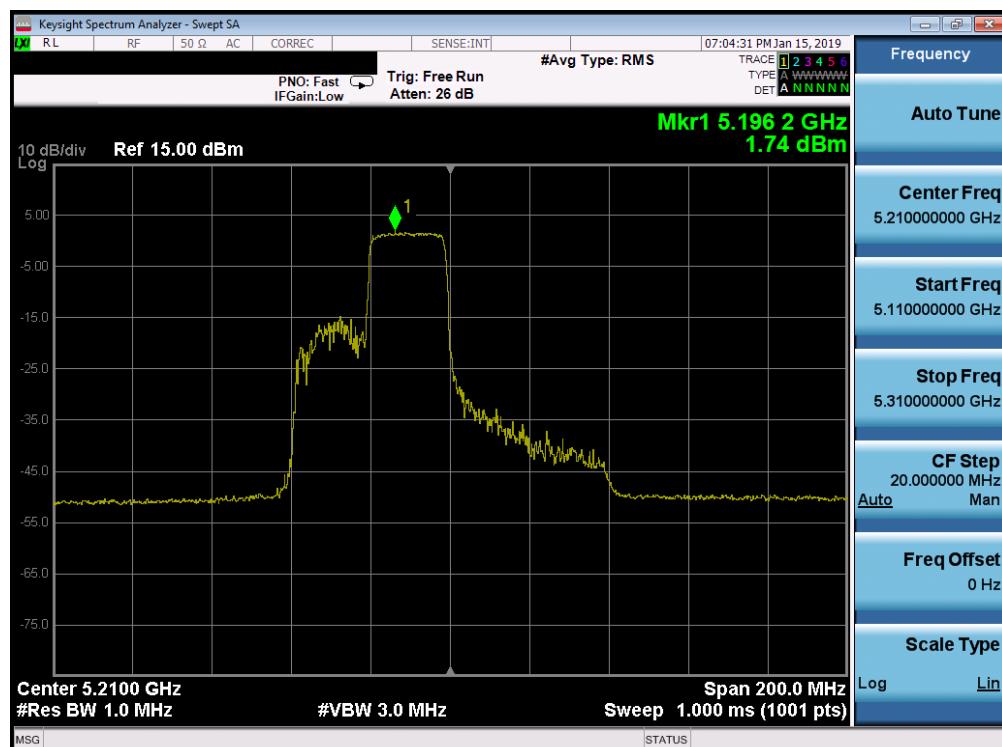


Plot 7-322. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 242 Tones (UNII Band 1) – Ch. 38)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 232 of 514

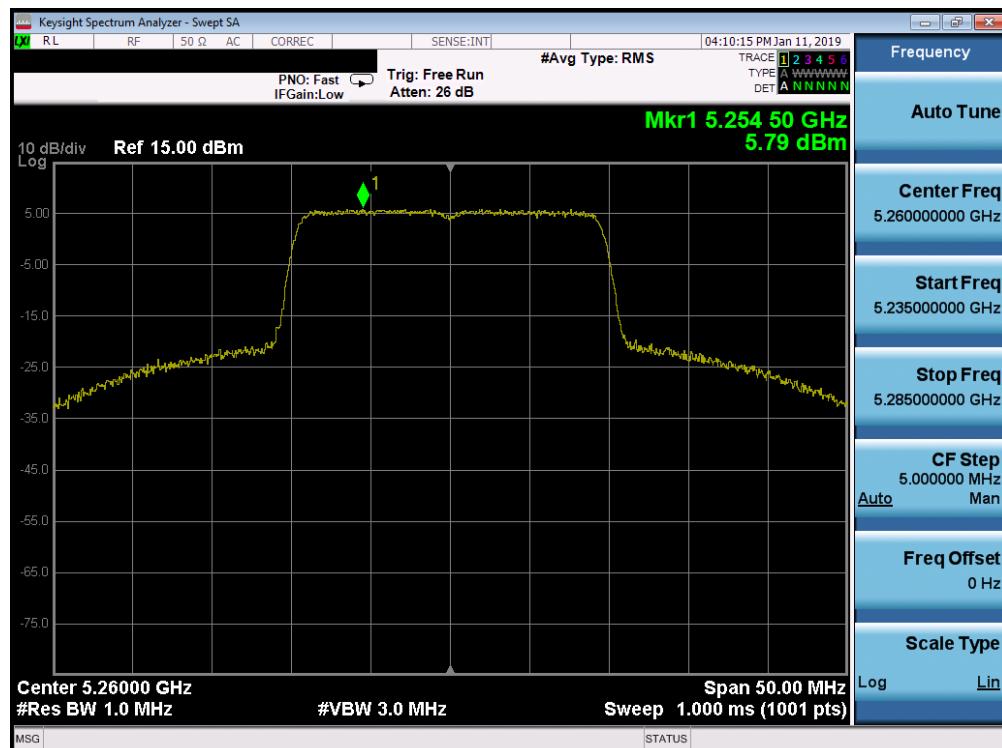


Plot 7-323. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 242 Tones (UNII Band 1) – Ch. 46)

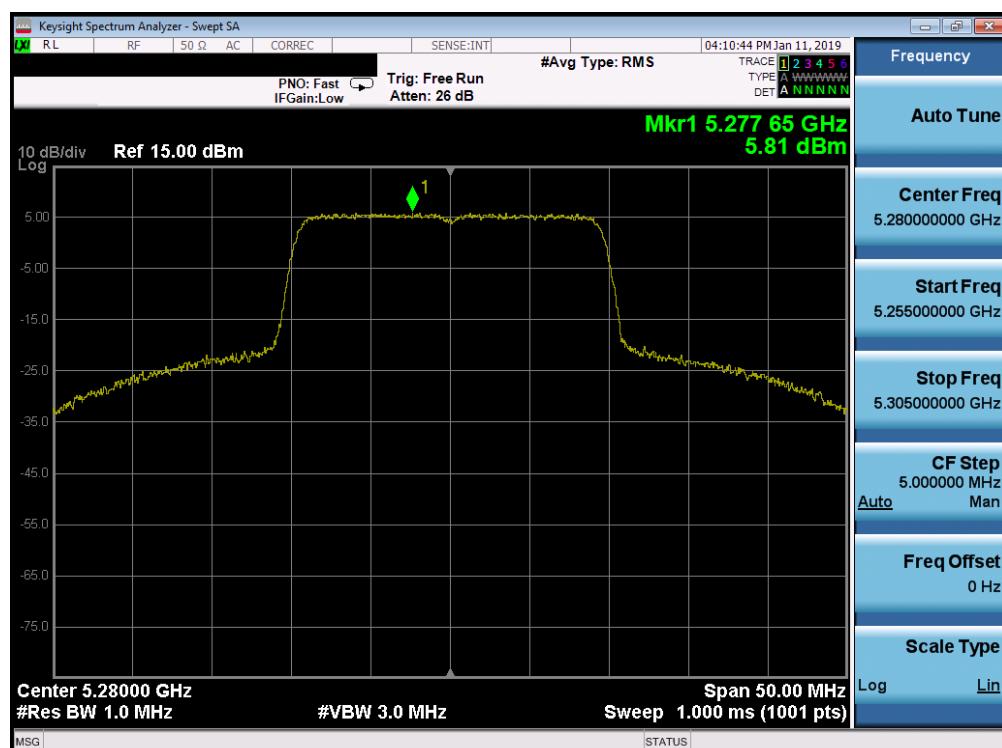


Plot 7-324. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 242 Tones (UNII Band 1) – Ch. 42)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 233 of 514

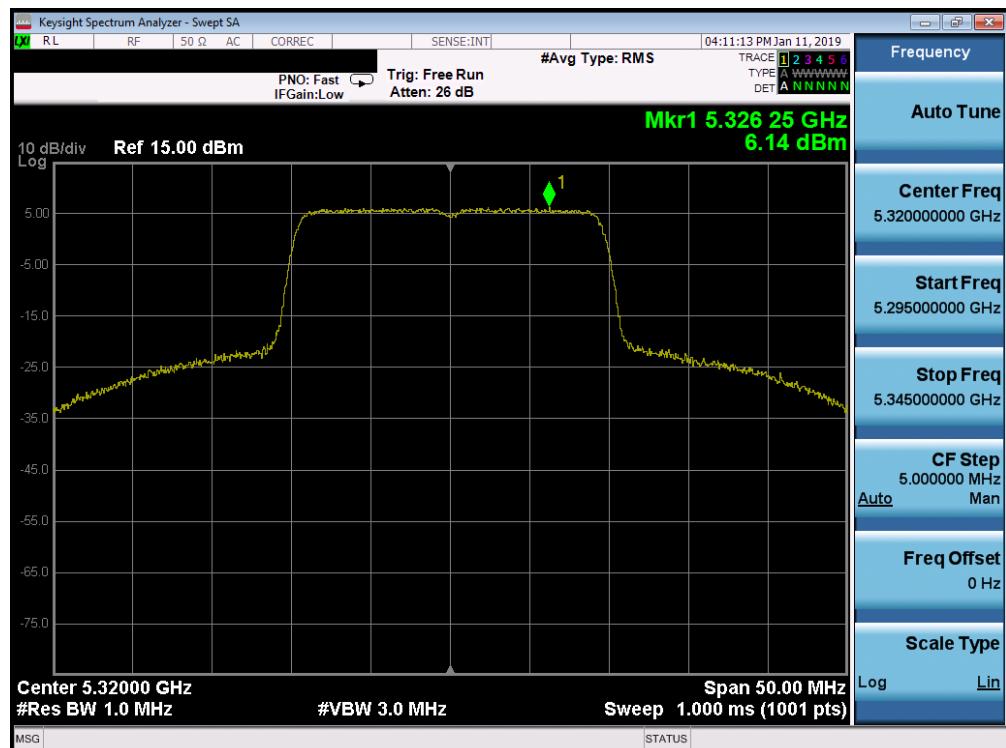


Plot 7-325. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 242 Tones (UNII Band 2A) – Ch. 52)

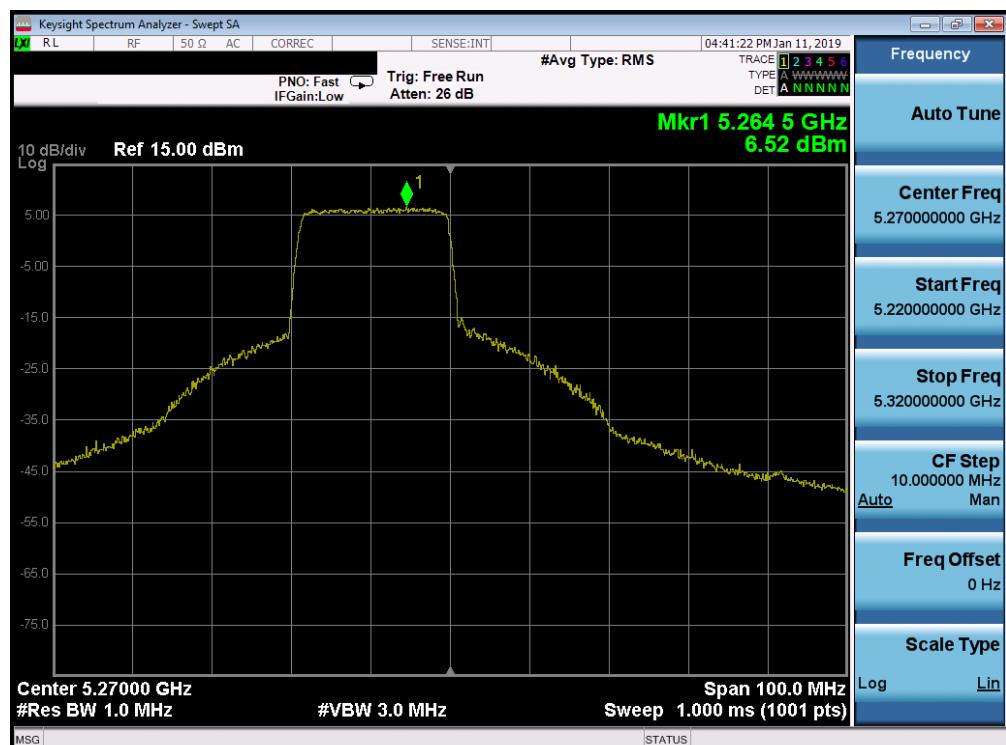


Plot 7-326. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 242 Tones (UNII Band 2A) – Ch. 56)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 234 of 514

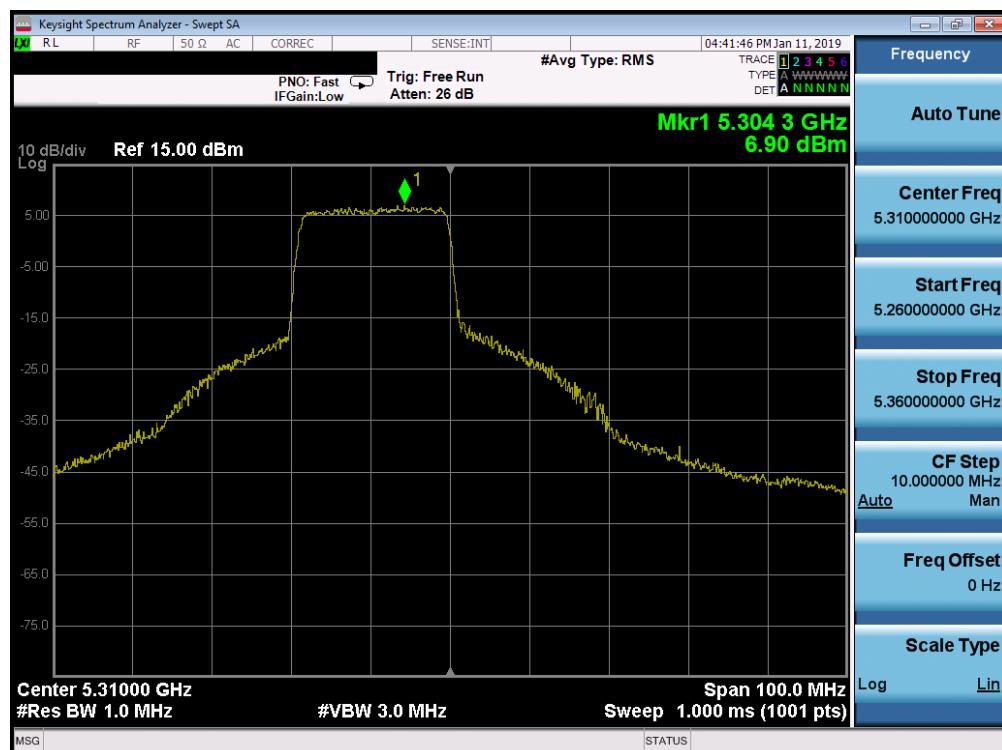


Plot 7-327. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 242 Tones (UNII Band 2A) – Ch. 64)

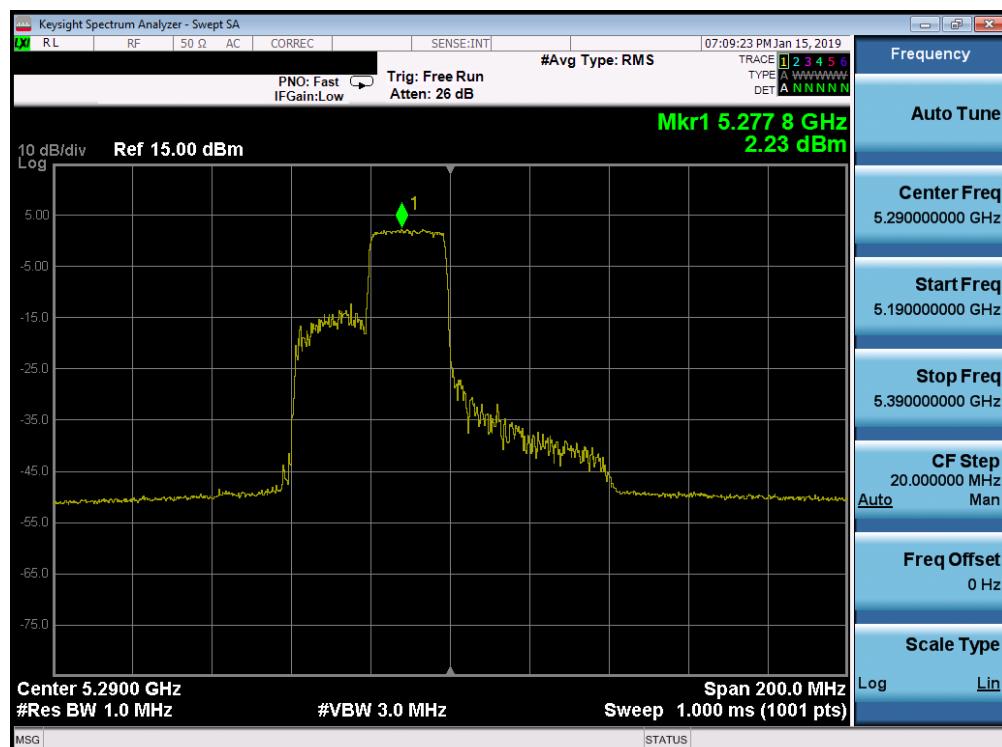


Plot 7-328. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 242 Tones (UNII Band 2A) – Ch. 54)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 235 of 514

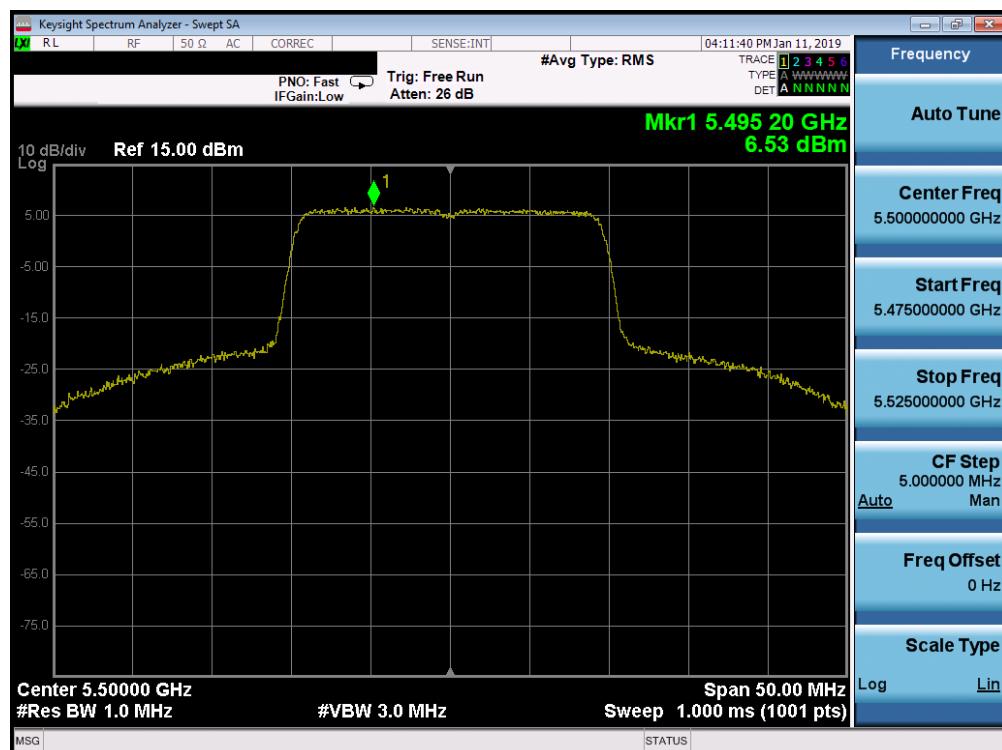


Plot 7-329. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 242 Tones (UNII Band 2A) – Ch. 62)

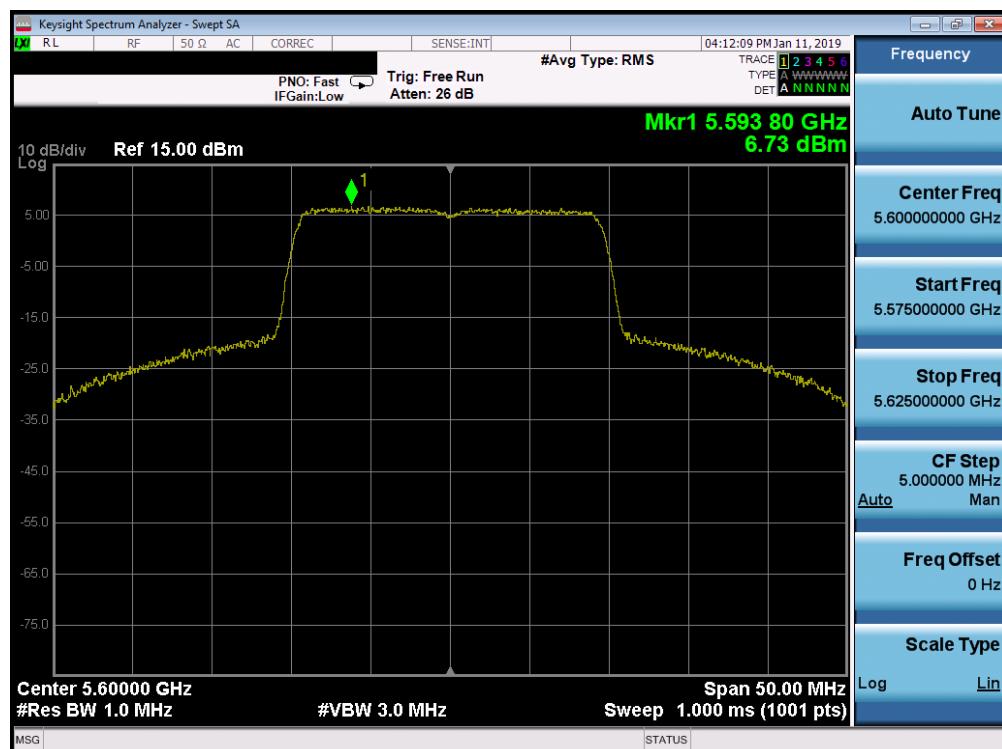


Plot 7-330. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 242 Tones (UNII Band 2A) – Ch. 58)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-7.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 236 of 514

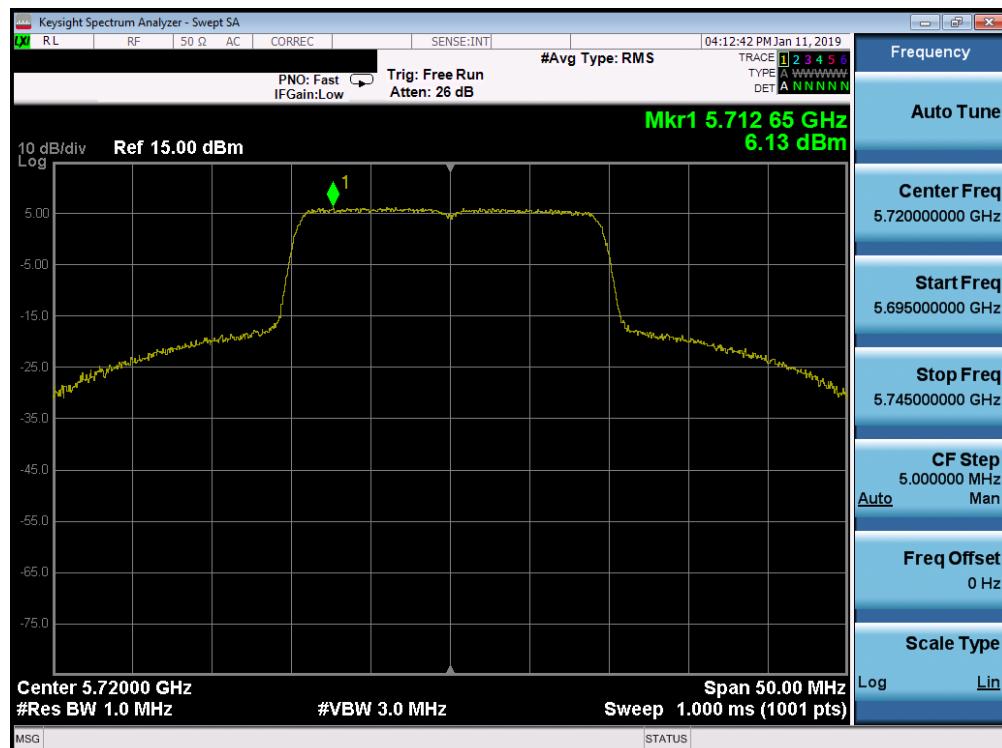


Plot 7-331. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 242 Tones (UNII Band 2C) – Ch. 100)

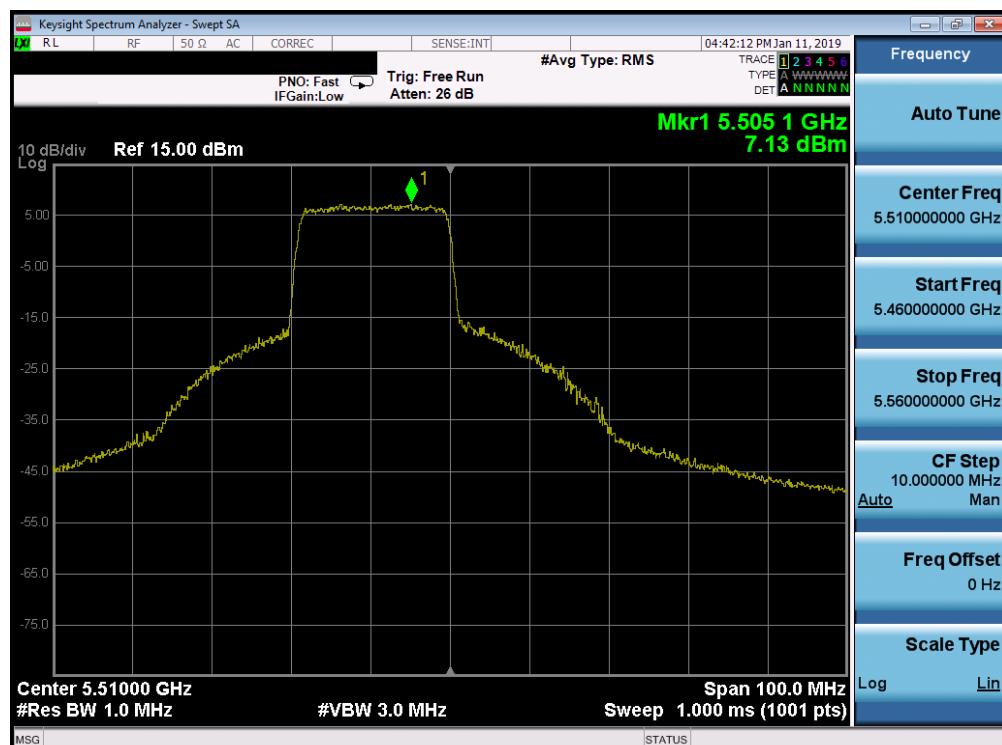


Plot 7-332. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 242 Tones (UNII Band 2C) – Ch. 120)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 237 of 514

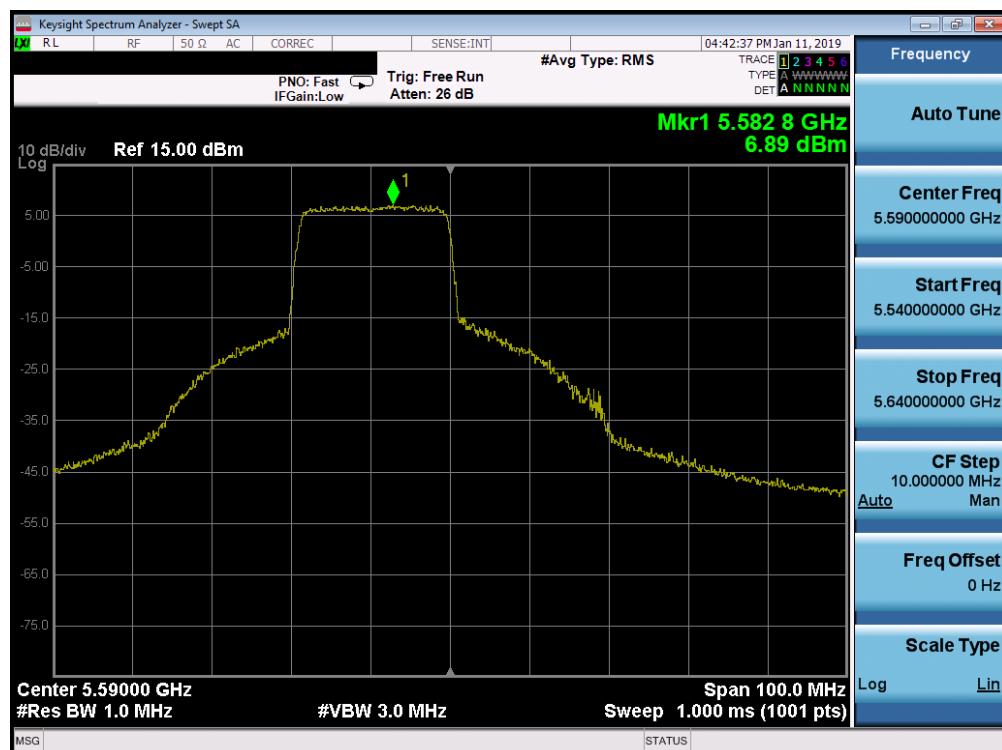


Plot 7-333. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 242 Tones (UNII Band 2C) – Ch. 144)

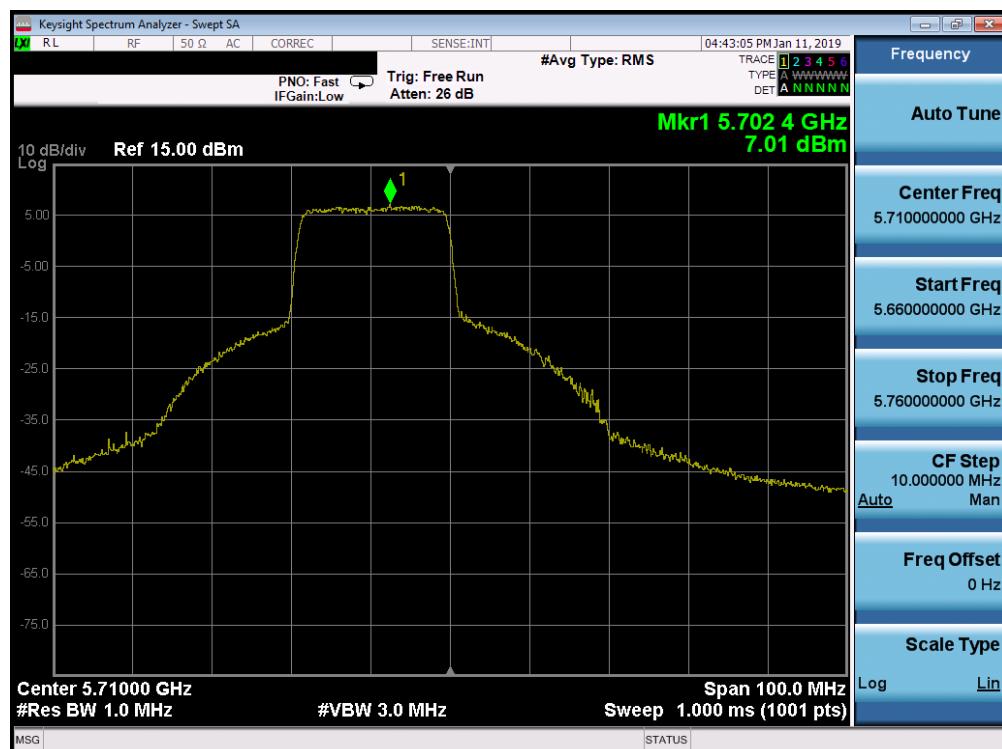


Plot 7-334. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 242 Tones (UNII Band 2C) – Ch. 102)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 238 of 514



Plot 7-335. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 242 Tones (UNII Band 2C) – Ch. 118)

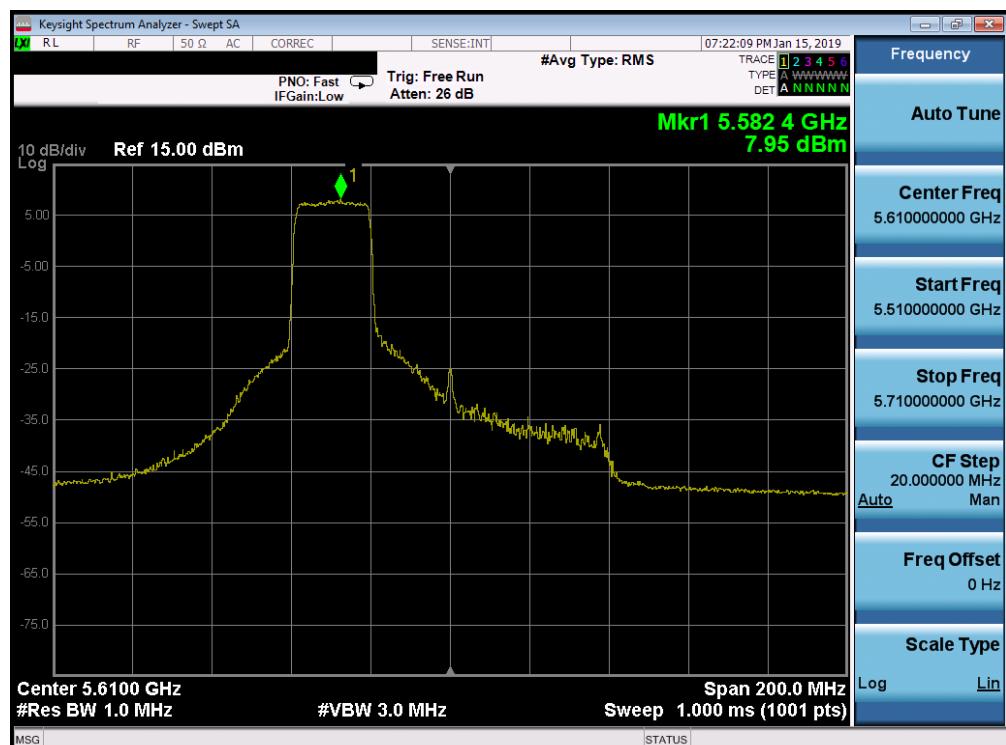


Plot 7-336. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 242 Tones (UNII Band 2C) – Ch. 142)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 239 of 514

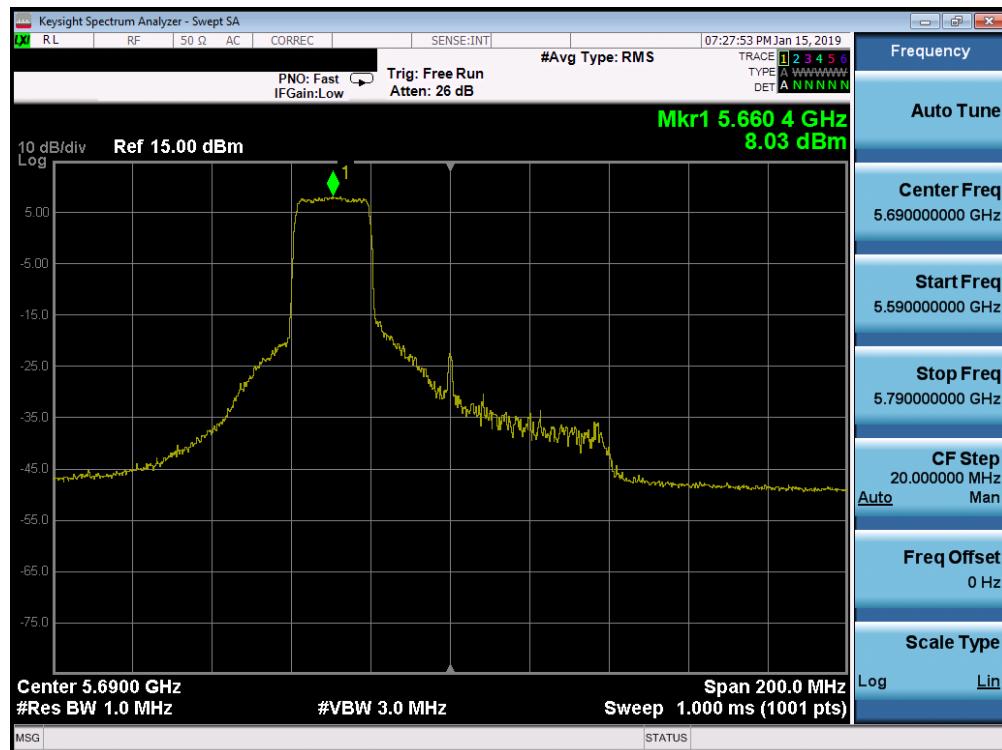


Plot 7-337. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 242 Tones (UNII Band 2C) – Ch. 106)



Plot 7-338. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 242 Tones (UNII Band 2C) – Ch. 122)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 240 of 514

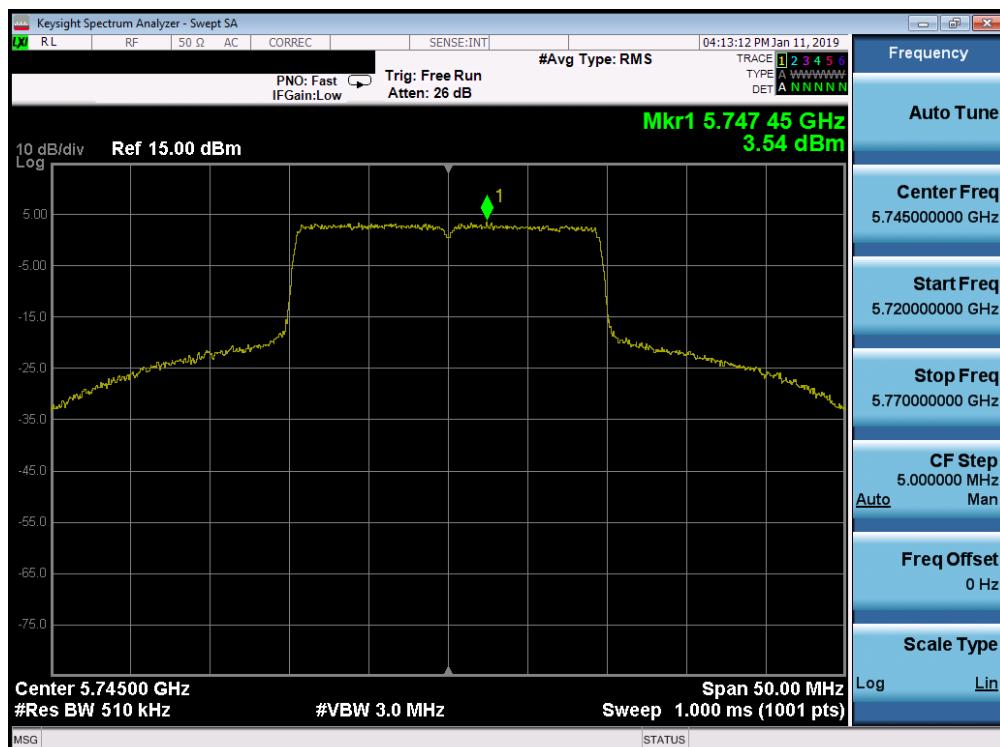


Plot 7-339. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 242 Tones (UNII Band 2C) – Ch. 138)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 241 of 514

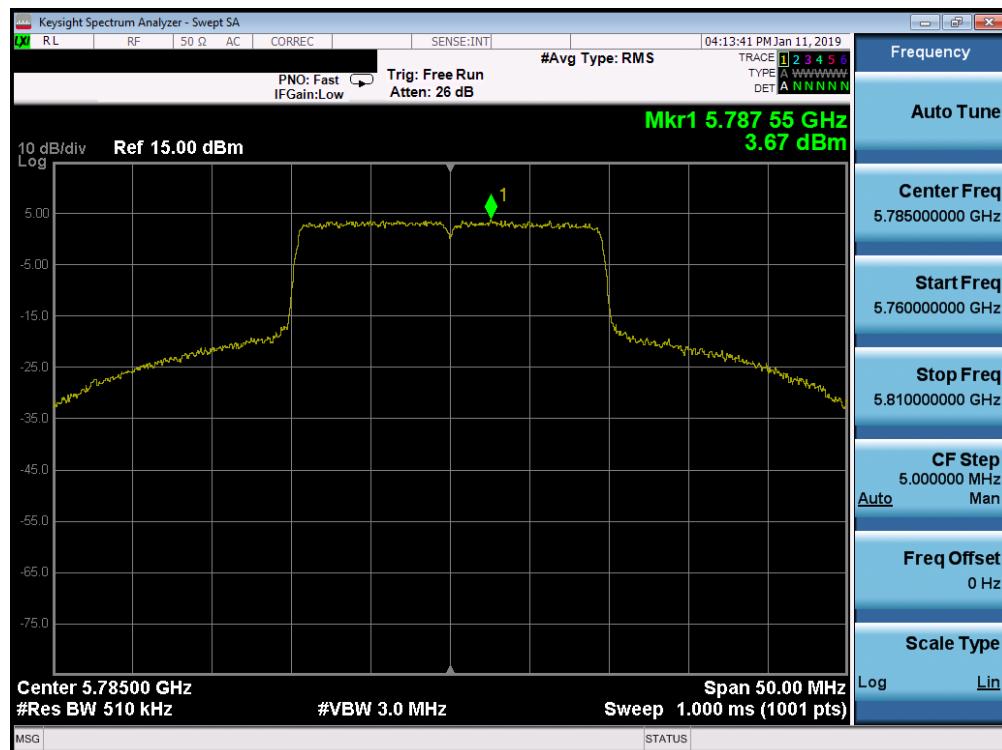
	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5745	149	ax (20MHz)	242T	MCS0	3.54	30.00	-26.46
	5785	157	ax (20MHz)	242T	MCS0	3.67	30.00	-26.33
	5825	165	ax (20MHz)	242T	MCS0	3.19	30.00	-26.81
	5755	151	ax (40MHz)	242T	MCS0	4.28	30.00	-25.72
	5795	159	ax (40MHz)	242T	MCS0	4.75	30.00	-25.25
	5775	155	ax (80MHz)	242T	MCS0	9.33	30.00	-20.67

Table 7-92. Band 3 Conducted Power Spectral Density Measurements SISO ANT2 (242 Tones)

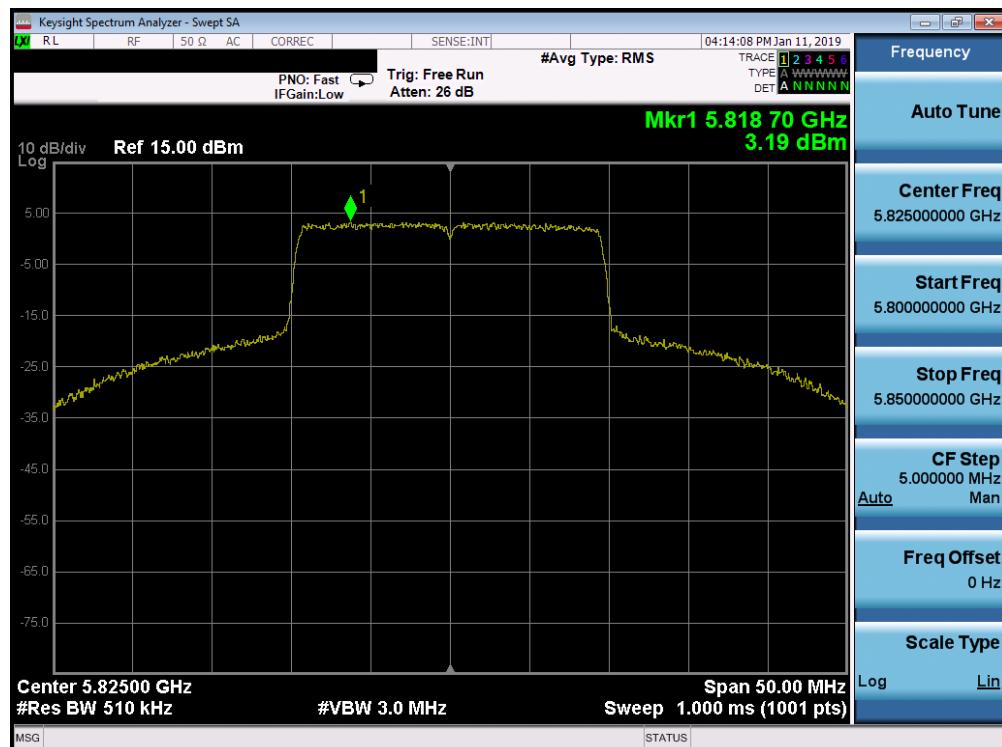


Plot 7-340. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 242 Tones (UNII Band 3) – Ch. 149)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset	Page 242 of 514	

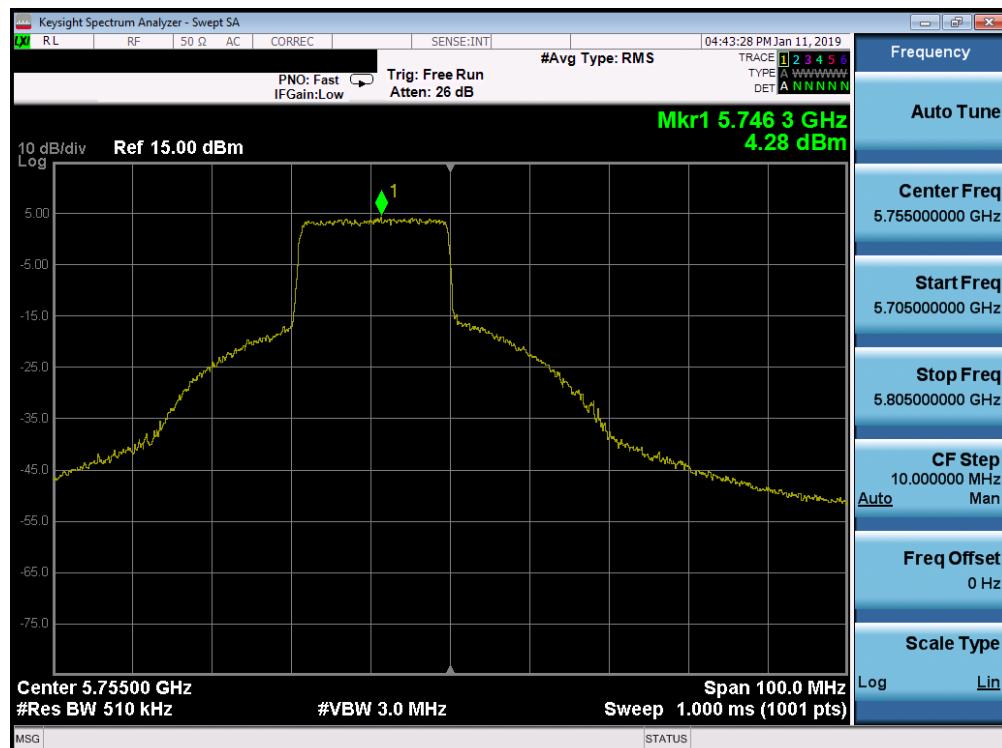


Plot 7-341. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 242 Tones (UNII Band 3) – Ch. 157)

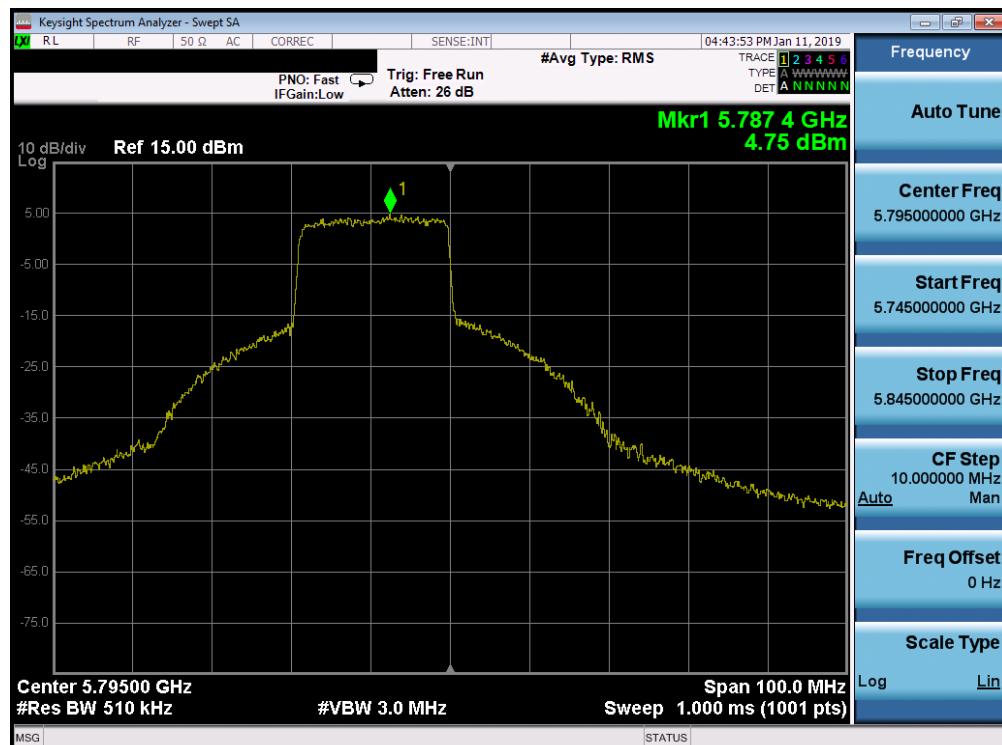


Plot 7-342. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 242 Tones (UNII Band 3) – Ch. 165)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 243 of 514



Plot 7-343. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 242 Tones (UNII Band 3) – Ch. 151)



Plot 7-344. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 242 Tones (UNII Band 3) – Ch. 159)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 244 of 514



Plot 7-345. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 242 Tones (UNII Band 3) – Ch. 155)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 245 of 514

SISO Antenna-2 Power Spectral Density Measurements (484 Tones)

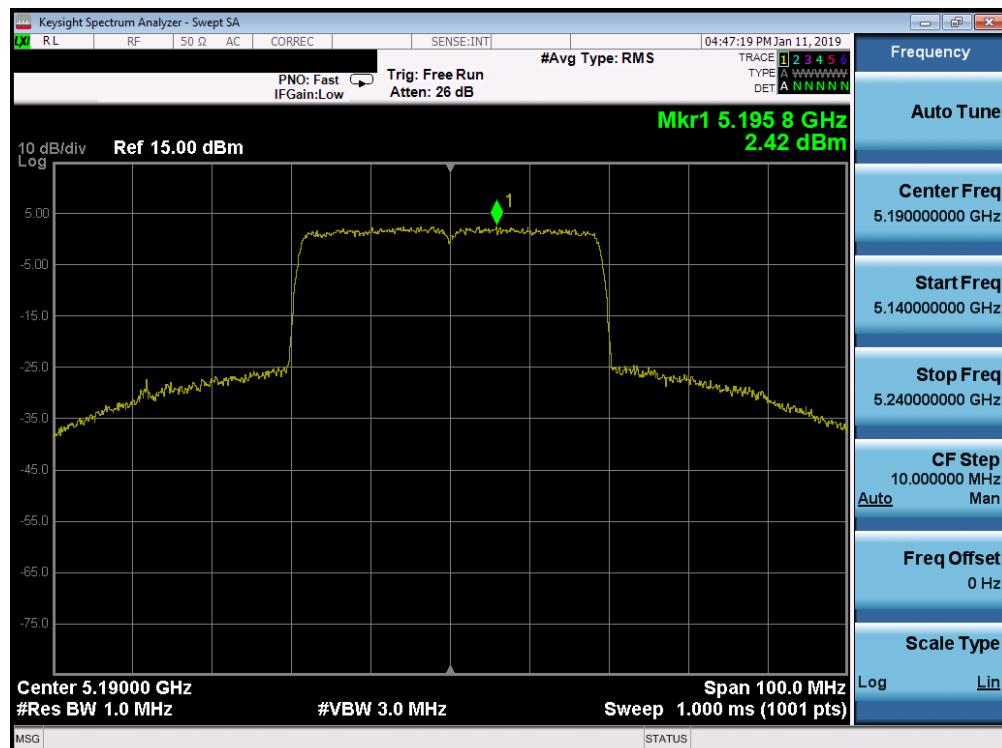
	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]
Band 1	5190	38	ax (40MHz)	484T	MCS0	2.42	11.00	-8.58
	5230	46	ax (40MHz)	484T	MCS0	2.52	11.00	-8.48
	5210	42	ax (80MHz)	484T	MCS0	-0.40	11.00	-11.40
Band 2A	5270	54	ax (40MHz)	484T	MCS0	2.52	11.00	-8.48
	5310	62	ax (40MHz)	484T	MCS0	2.84	11.00	-8.16
	5290	58	ax (80MHz)	484T	MCS0	0.00	11.00	-11.00
Band 2C	5510	102	ax (40MHz)	484T	MCS0	3.16	11.00	-7.84
	5590	118	ax (40MHz)	484T	MCS0	2.81	11.00	-8.19
	5710	142	ax (40MHz)	484T	MCS0	2.75	11.00	-8.25
	5530	106	ax (80MHz)	484T	MCS0	-0.30	11.00	-11.30
	5610	122	ax (80MHz)	484T	MCS0	5.01	11.00	-5.99
	5690	138	ax (80MHz)	484T	MCS0	6.04	11.00	-4.96

Table 7-93. Bands 1, 2A, 2C Conducted Power Spectral Density Measurements SISO ANT2 (484 Tones)

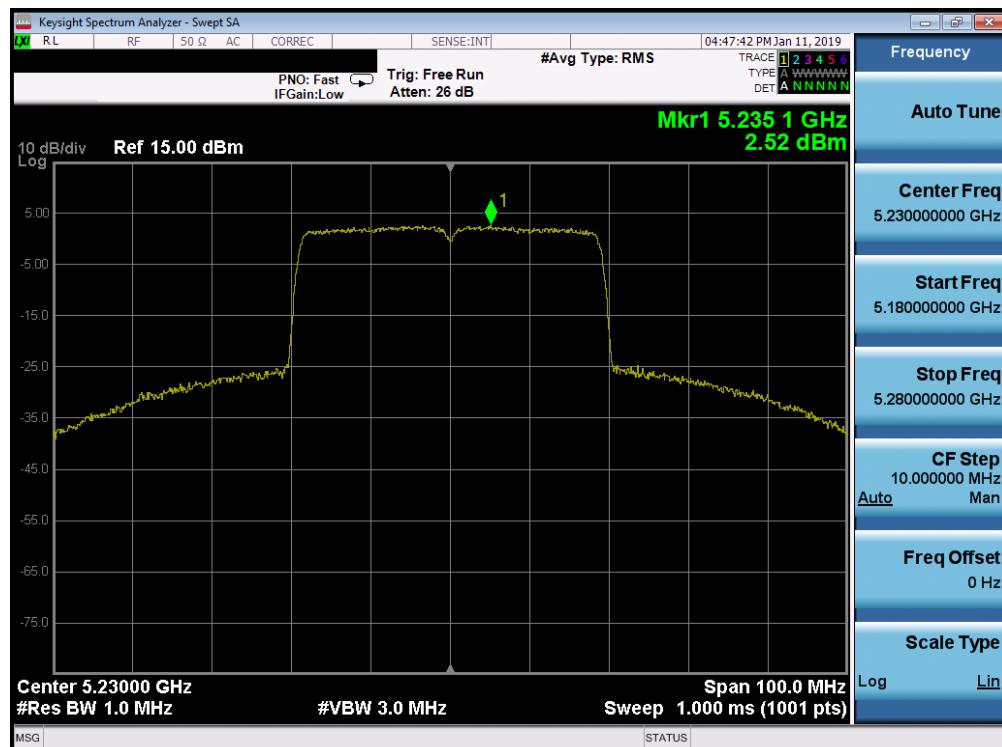
	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured Power Density [dBm]	Antenna Gain [dBi]	e.i.r.p. Power Density [dBm/MHz]	ISED Max e.i.r.p. Power Density [dBm/MHz]	Margin [dB]
Band 1	5190	38	ax (40MHz)	484T	MCS0	2.42	-7.57	-5.15	10.0	-15.15
	5230	46	ax (40MHz)	484T	MCS0	2.52	-8.01	-5.49	10.0	-15.49
	5210	42	ax (80MHz)	484T	MCS0	-0.40	-7.57	-7.97	10.0	-17.97

Table 7-94. Bands 1 e.r.i.p Conducted Power Spectral Density Measurements (ISED 484 Tones)

FCC ID: A3LSC03L		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 246 of 514

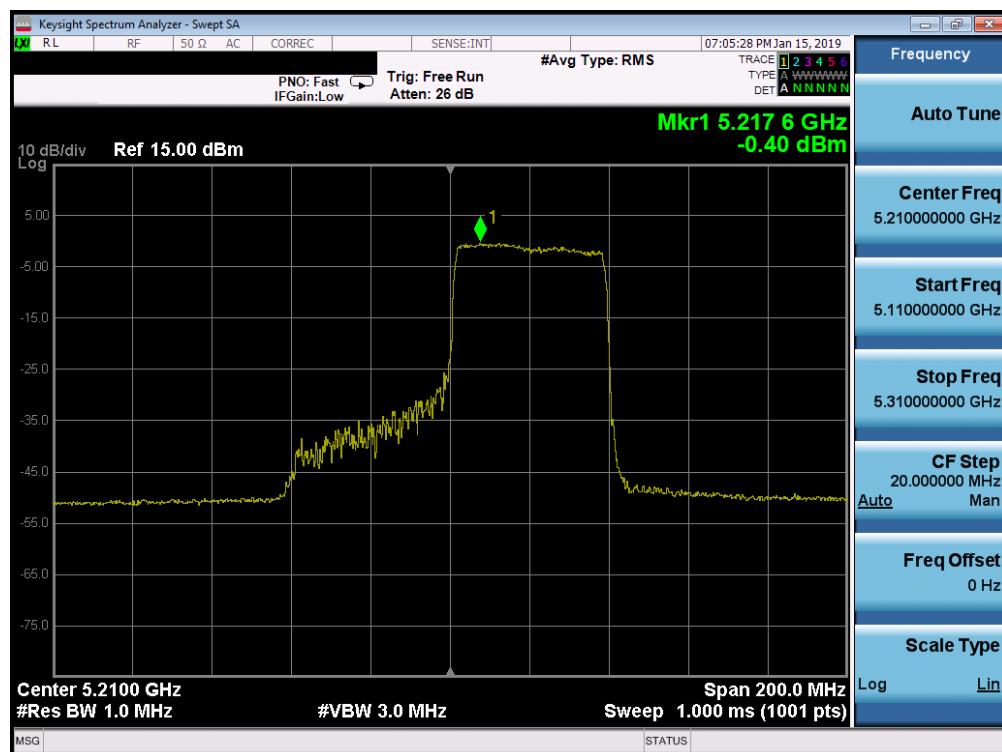


Plot 7-346. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 484 Tones (UNII Band 1) – Ch. 38)

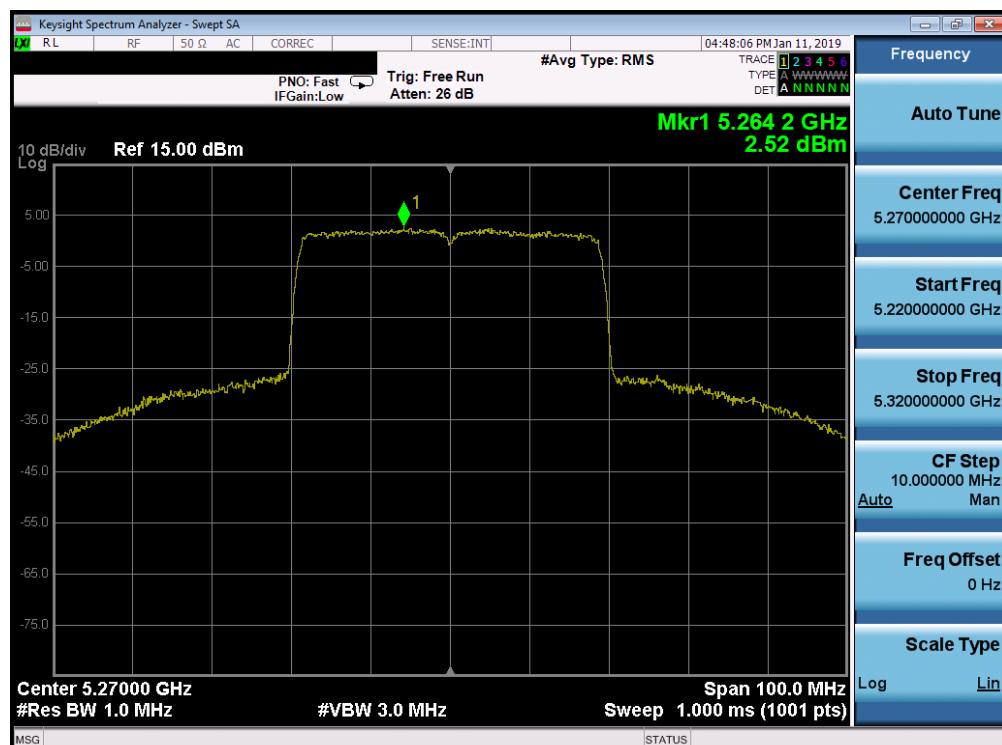


Plot 7-347. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 484 Tones (UNII Band 1) – Ch. 46)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 247 of 514

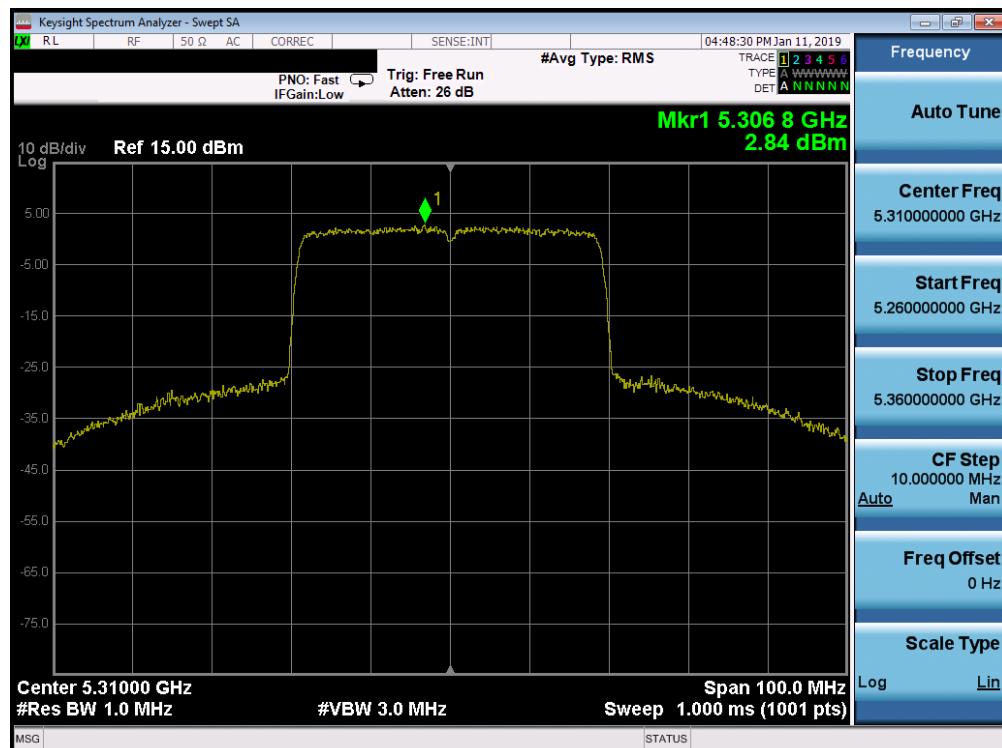


Plot 7-348. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 484 Tones (UNII Band 1) – Ch. 42)

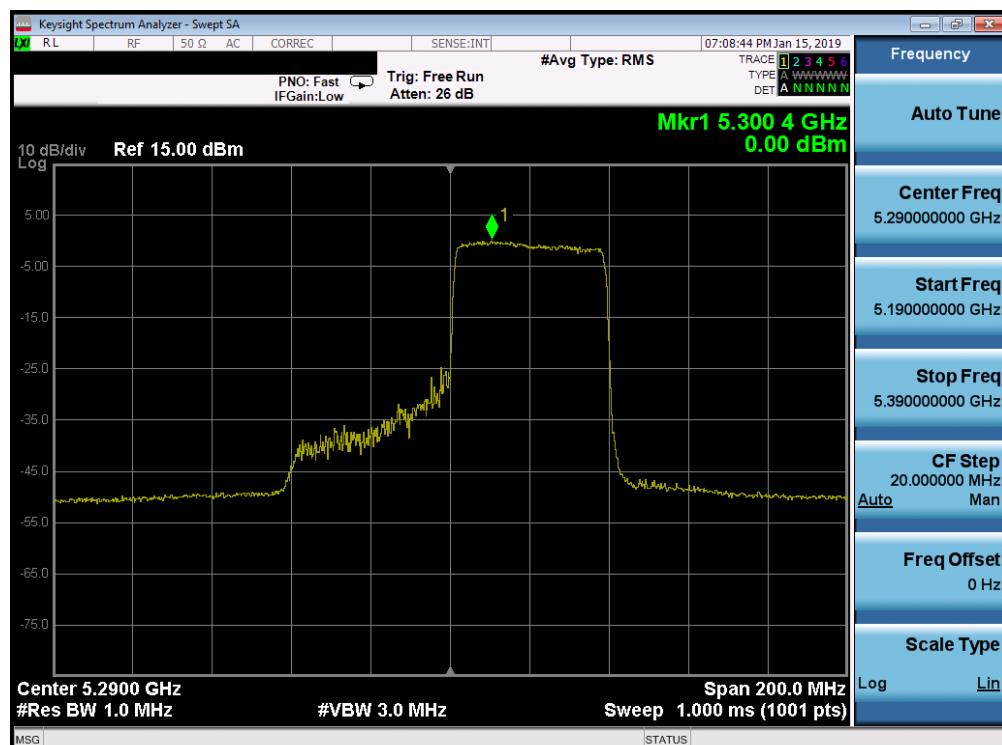


Plot 7-349. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 484 Tones (UNII Band 2A) – Ch. 54)

FCC ID: A3LSC03L	PCTEST ENGINEERING LABORATORY, INC.			MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset				Page 248 of 514

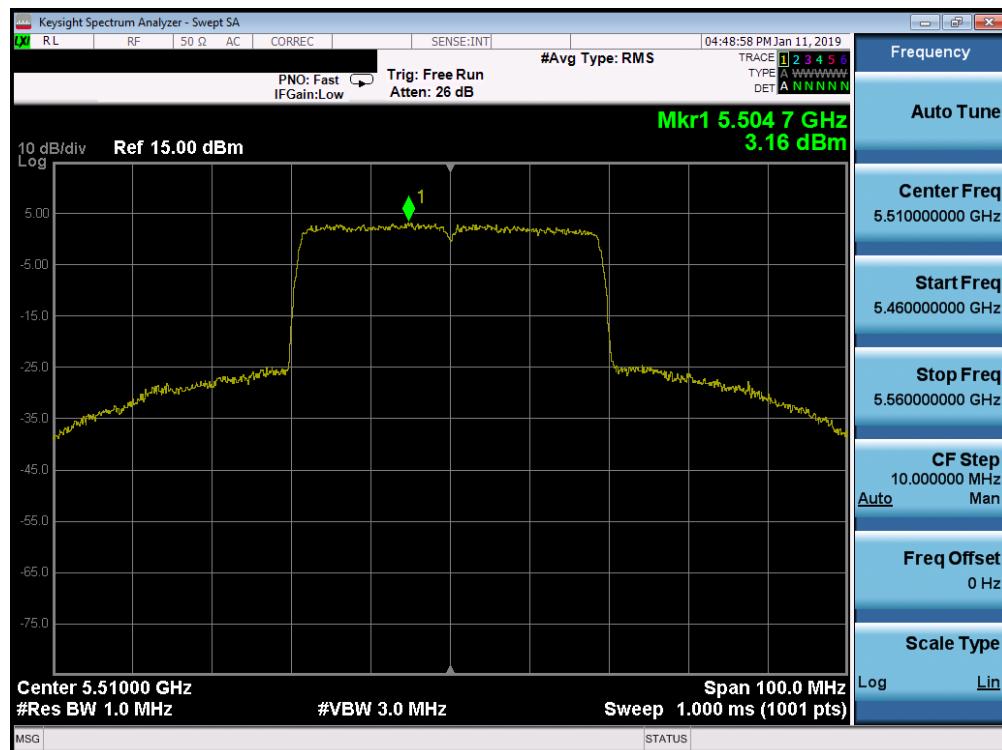


Plot 7-350. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 484 Tones (UNII Band 2A) – Ch. 62)

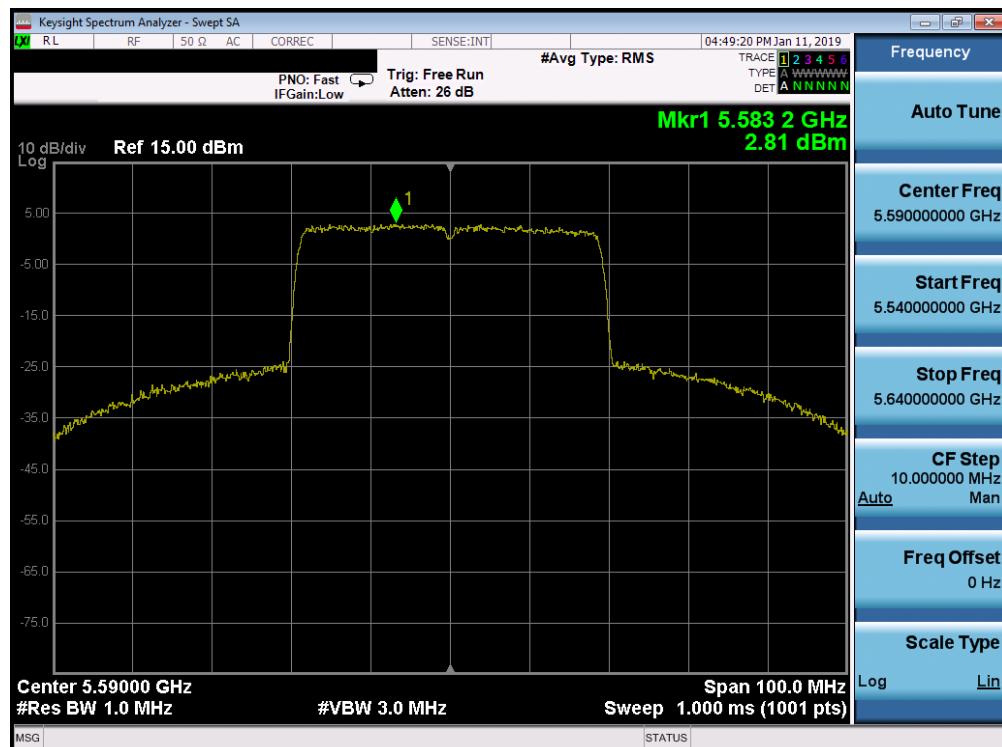


Plot 7-351. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 484 Tones (UNII Band 2A) – Ch. 58)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 249 of 514

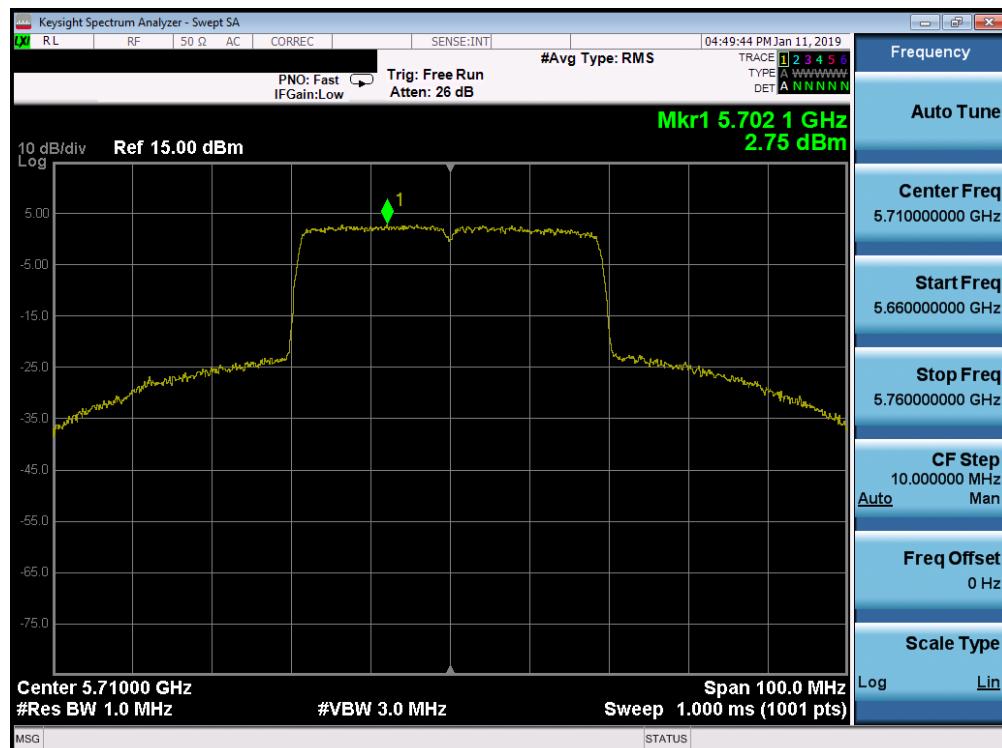


Plot 7-352. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 484 Tones (UNII Band 2C) – Ch. 102)

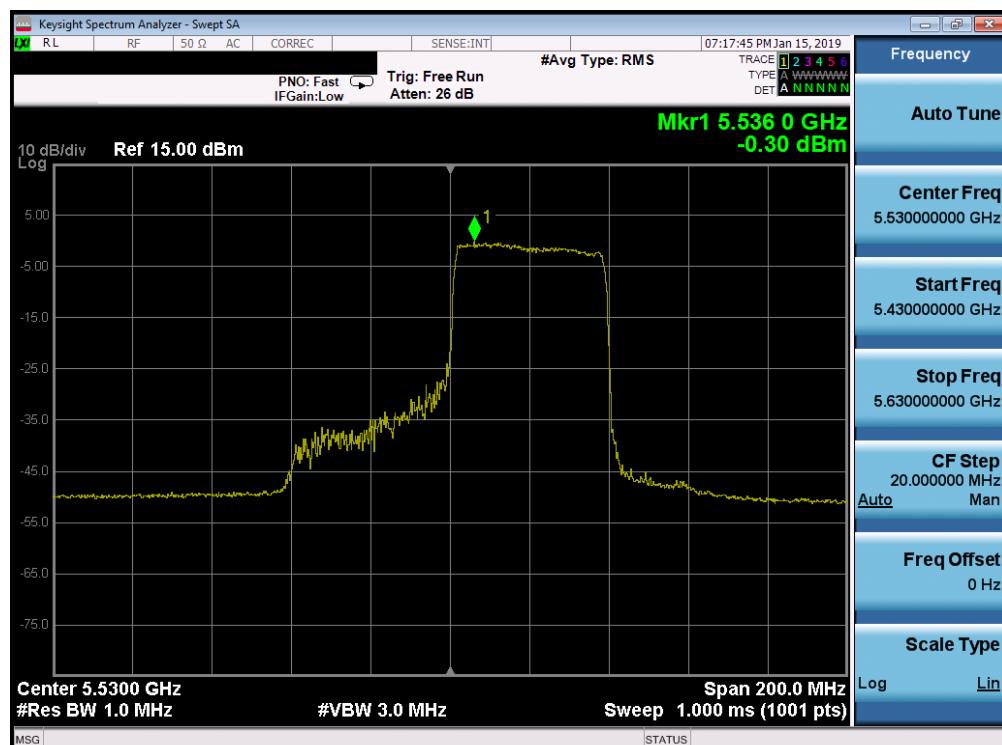


Plot 7-353. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 484 Tones (UNII Band 2C) – Ch. 118)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-17.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 250 of 514

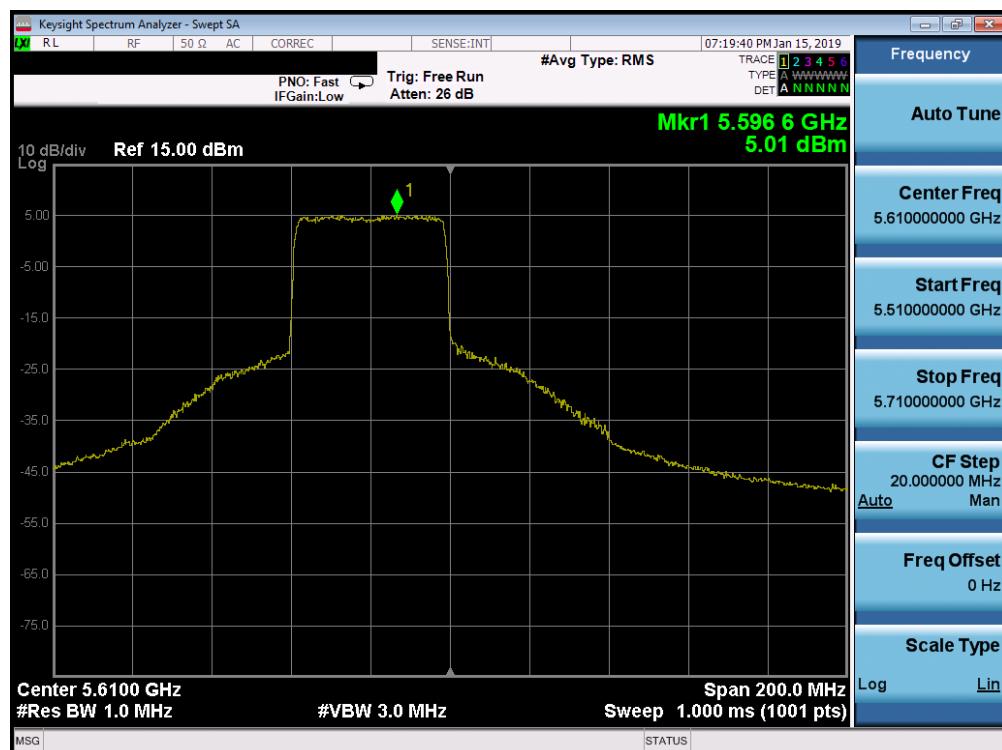


Plot 7-354. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 484 Tones (UNII Band 2C) – Ch. 142)



Plot 7-355. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 484 Tones (UNII Band 2C) – Ch. 106)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 251 of 514



Plot 7-356. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 484 Tones (UNII Band 2C) – Ch. 122)

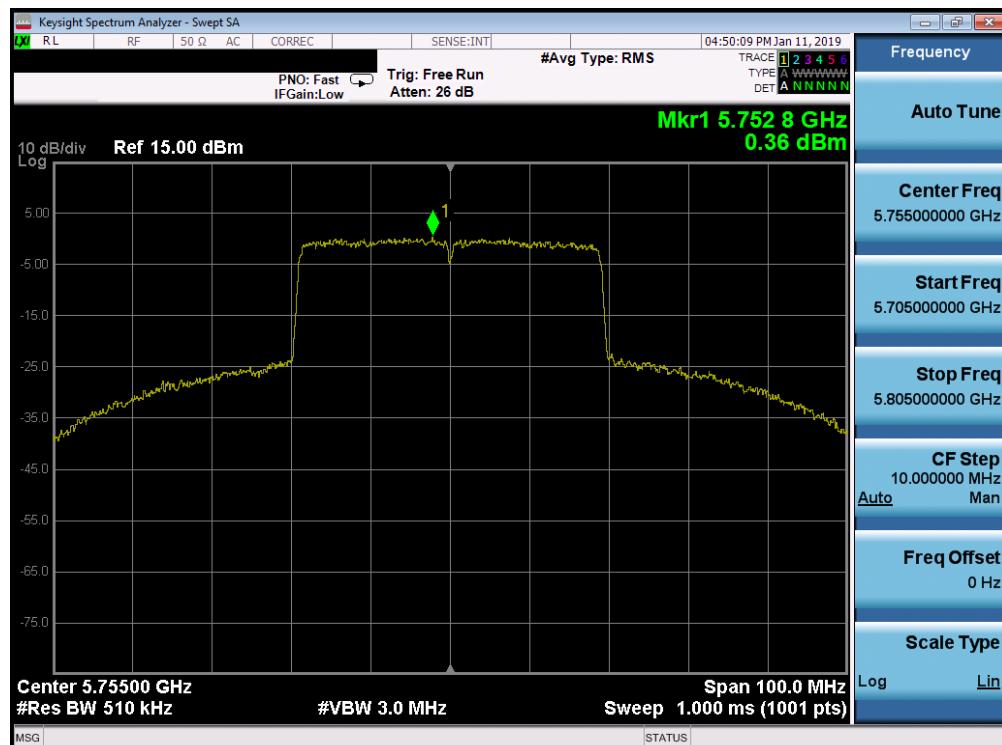


Plot 7-357. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 484 Tones (UNII Band 2C) – Ch. 138)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 252 of 514

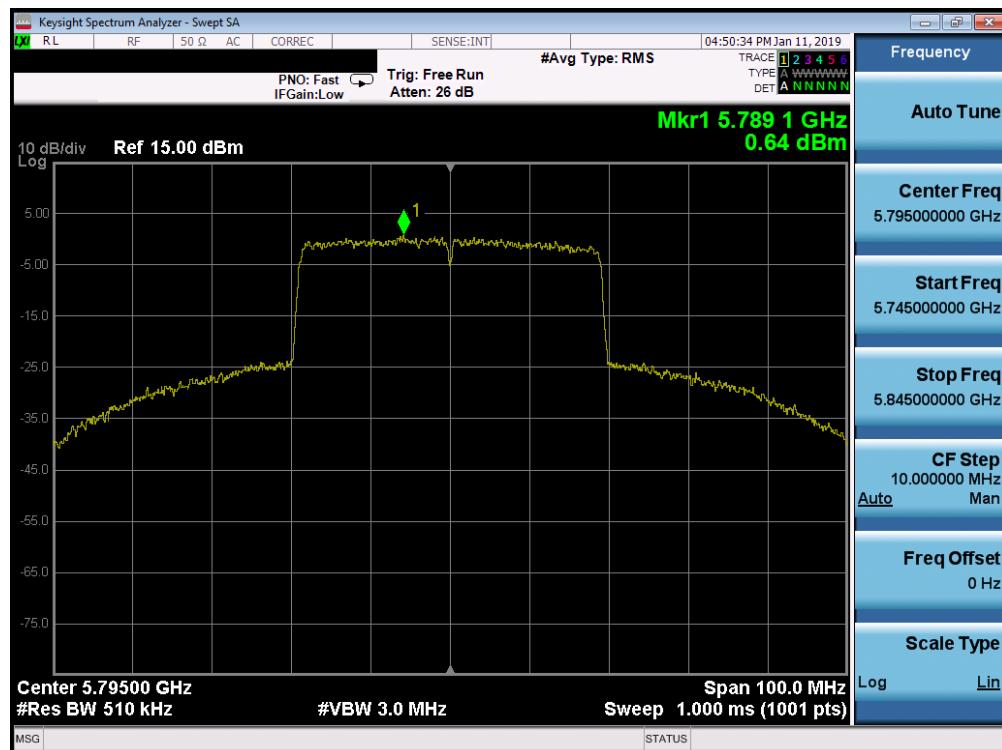
	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5755	151	ax (40MHz)	484T	MCS0	0.36	30.00	-29.64
	5795	159	ax (40MHz)	484T	MCS0	0.64	30.00	-29.36
	5775	155	ax (80MHz)	484T	MCS0	6.20	30.00	-23.80

Table 7-95. Band 3 Conducted Power Spectral Density Measurements SISO ANT2 (484 Tones)



Plot 7-358. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 484 Tones (UNII Band 3) – Ch. 151)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 253 of 514



Plot 7-359. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 484 Tones (UNII Band 3) – Ch. 159)



Plot 7-360. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 484 Tones (UNII Band 3) – Ch. 155)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 254 of 514

SISO Antenna-2 Power Spectral Density Measurements (996 Tones)

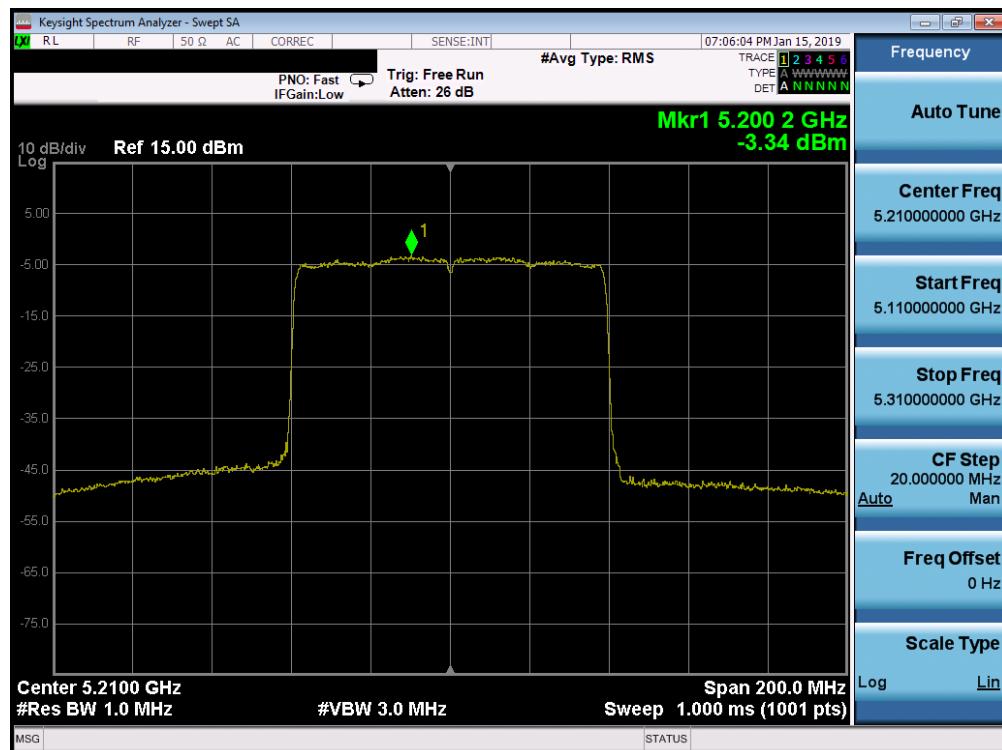
	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]
Band 1	5210	42	ax (80MHz)	996T	MCS0	-3.34	11.00	-14.34
Band 2A	5290	58	ax (80MHz)	996T	MCS0	-3.25	11.00	-14.25
Band 2C	5530	106	ax (80MHz)	996T	MCS0	-3.94	11.00	-14.94
	5610	122	ax (80MHz)	996T	MCS0	2.26	11.00	-8.74
	5690	138	ax (80MHz)	996T	MCS0	2.77	11.00	-8.23

Table 7-96. Bands 1, 2A, 2C Conducted Power Spectral Density Measurements SISO ANT2 (996 Tones)

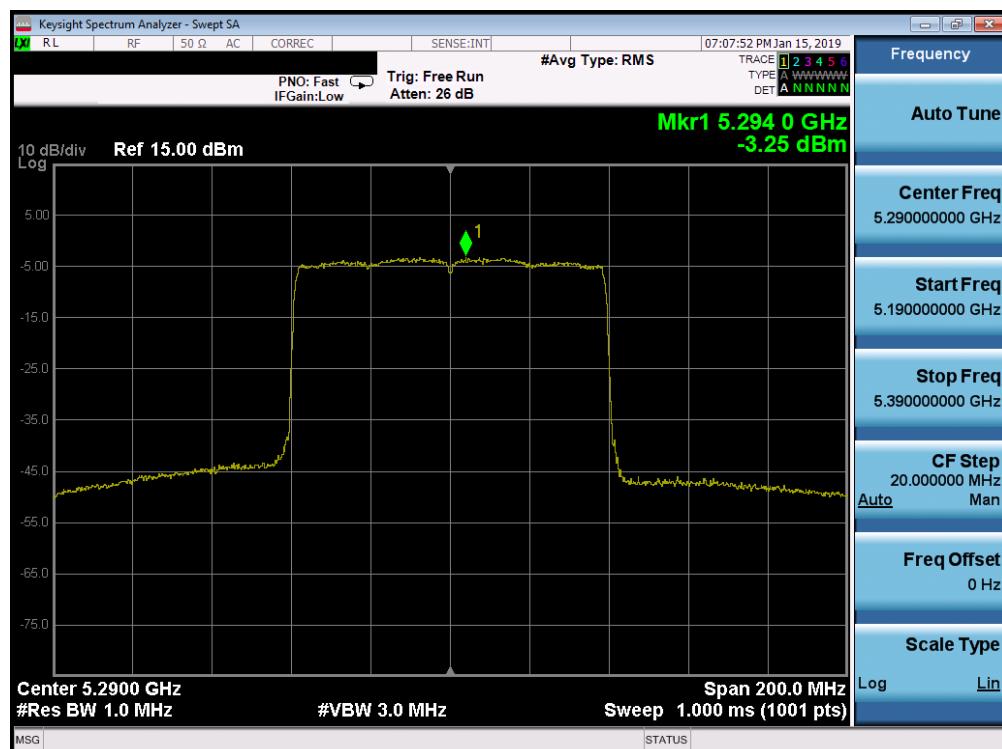
	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured Power Density [dBm]	Antenna Gain [dBi]	e.i.r.p. Power Density [dBm/MHz]	ISED Max e.i.r.p. Power Density [dBm/MHz]	Margin [dB]
Band 1	5210	42	ax (80MHz)	996T	MCS0	-3.34	-7.57	-10.91	10.0	-20.91

Table 7-97. Bands 1 e.r.i.p Conducted Power Spectral Density Measurements (ISED 996 Tones)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset			

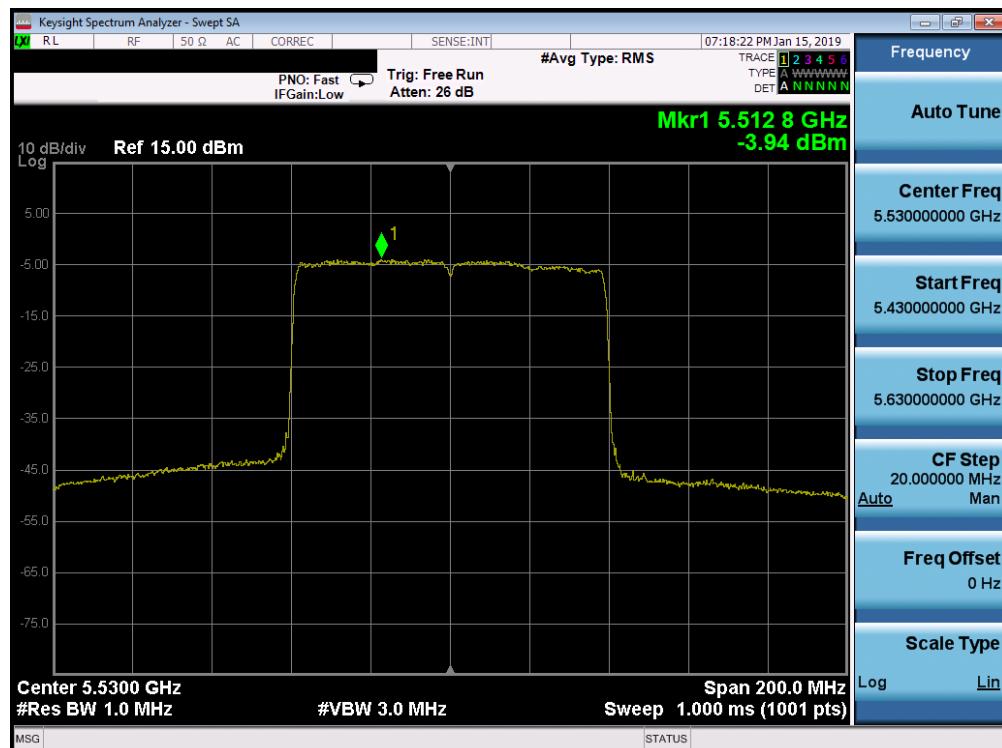


Plot 7-361. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 996 Tones (UNII Band 1) – Ch. 42)

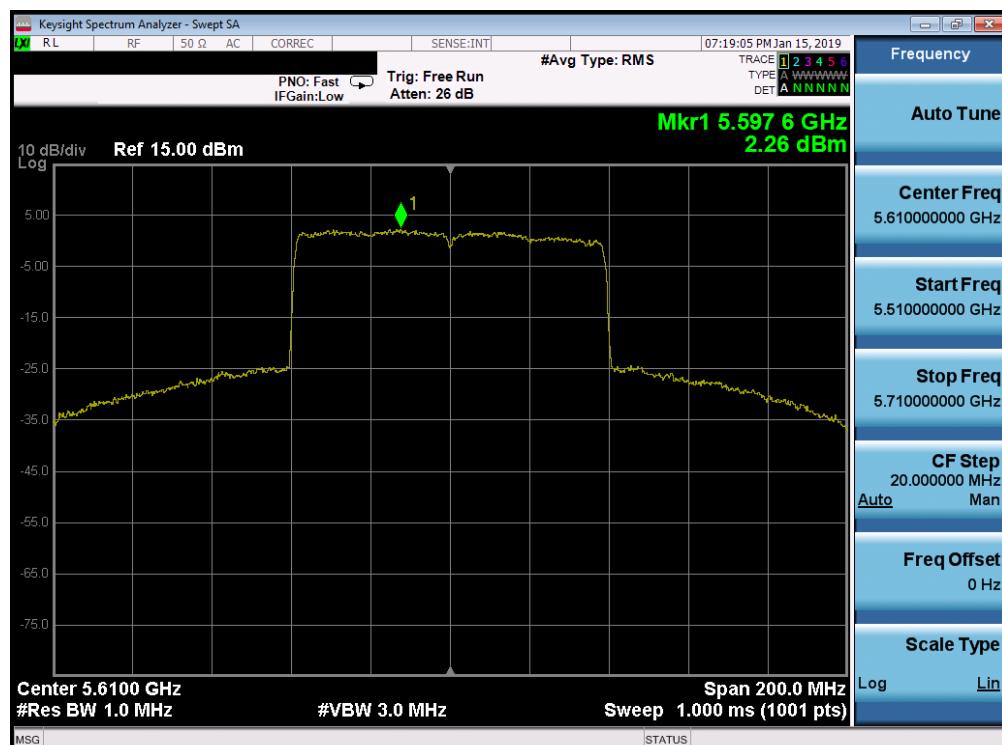


Plot 7-362. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 996 Tones (UNII Band 2A) – Ch. 58)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 256 of 514

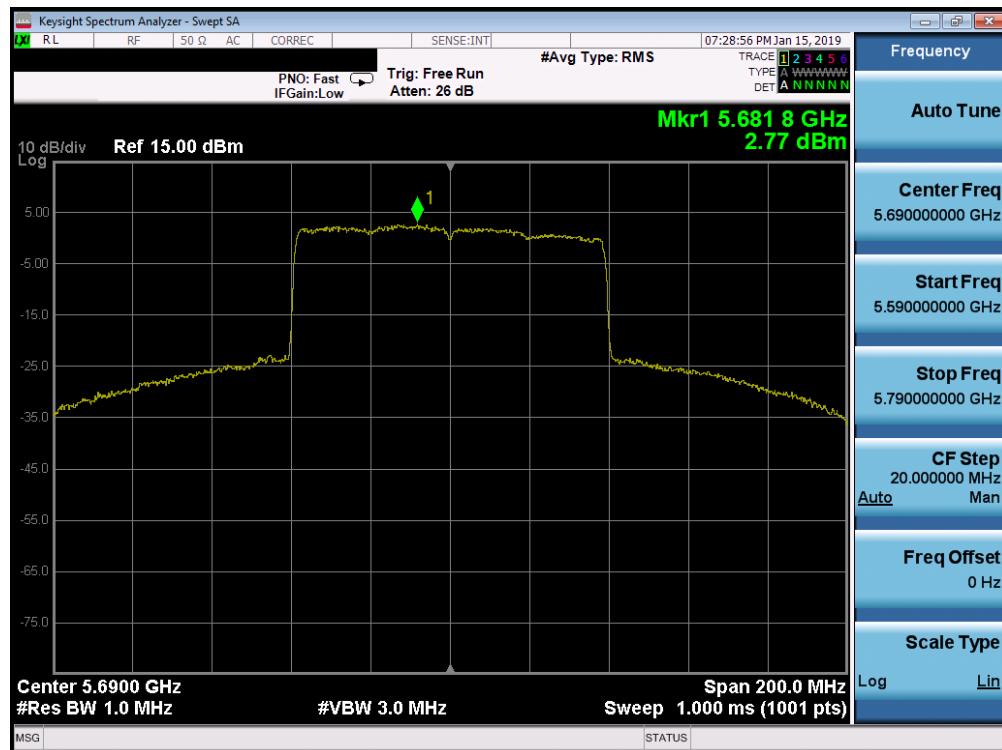


Plot 7-363. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 996 Tones (UNII Band 2C) – Ch. 106)



Plot 7-364. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 996 Tones (UNII Band 2C) – Ch. 122)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 257 of 514

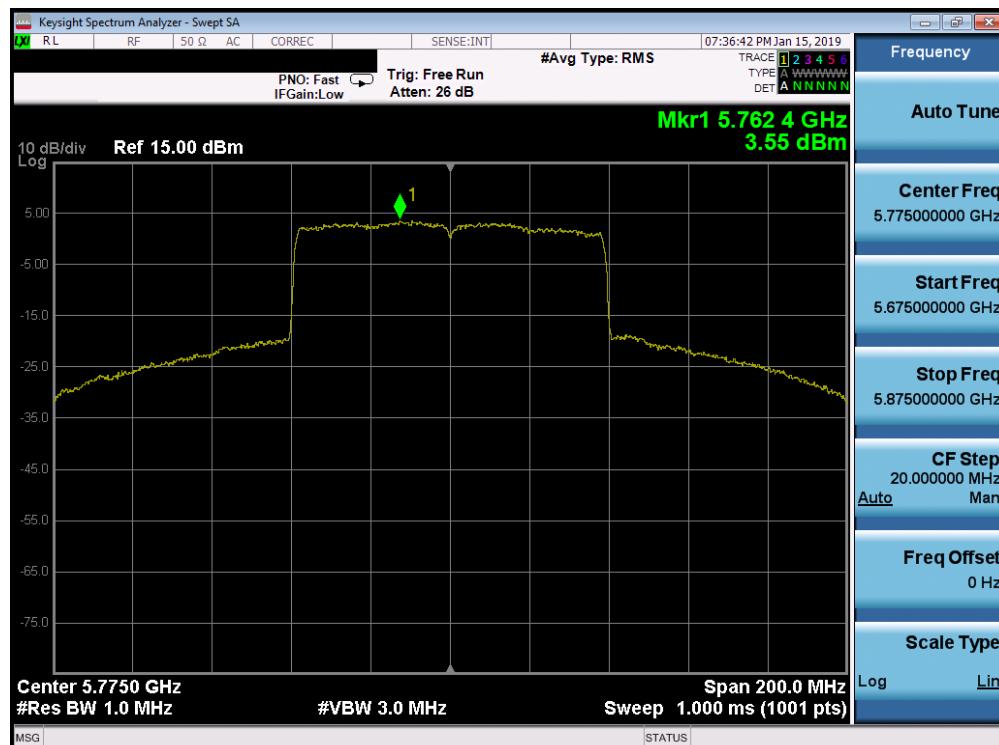


Plot 7-365. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 996 Tones (UNII Band 2C) – Ch. 138)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 258 of 514

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5775	155	ax (80MHz)	996T	MCS0	3.55	30.00	-26.45

Table 7-98. Band 3 Conducted Power Spectral Density Measurements SISO ANT2 (996 Tones)



Plot 7-366. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 996 Tones (UNII Band 3) – Ch. 155)

FCC ID: A3LSC03L		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 259 of 514

MIMO Power Spectral Density Measurements (26 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	ax (20MHz)	26T	MCS0	5.76	6.08	8.93	11.00	-2.07
	5200	40	ax (20MHz)	26T	MCS0	5.51	5.53	8.53	11.00	-2.47
	5240	48	ax (20MHz)	26T	MCS0	5.45	5.70	8.59	11.00	-2.41
	5190	38	ax (40MHz)	26T	MCS0	5.51	6.78	9.20	11.00	-1.80
	5230	46	ax (40MHz)	26T	MCS0	4.59	7.45	9.26	11.00	-1.74
	5210	42	ax (80MHz)	26T	MCS0	6.87	6.80	9.85	11.00	-1.15
Band 2A	5260	52	ax (20MHz)	26T	MCS0	6.34	7.30	9.86	11.00	-1.14
	5280	56	ax (20MHz)	26T	MCS0	6.12	6.06	9.10	11.00	-1.90
	5320	64	ax (20MHz)	26T	MCS0	5.38	6.37	8.91	11.00	-2.09
	5270	54	ax (40MHz)	26T	MCS0	7.40	5.06	9.40	11.00	-1.60
	5310	62	ax (40MHz)	26T	MCS0	5.77	3.76	7.89	11.00	-3.11
	5290	58	ax (80MHz)	26T	MCS0	5.54	5.84	8.70	11.00	-2.30
Band 2C	5500	100	ax (20MHz)	26T	MCS0	4.68	4.80	7.75	11.00	-3.25
	5600	120	ax (20MHz)	26T	MCS0	6.10	5.20	8.68	11.00	-2.32
	5720	144	ax (20MHz)	26T	MCS0	5.63	4.97	8.32	11.00	-2.68
	5510	102	ax (40MHz)	26T	MCS0	4.50	2.73	6.71	11.00	-4.29
	5590	118	ax (40MHz)	26T	MCS0	4.66	1.59	6.40	11.00	-4.60
	5710	142	ax (40MHz)	26T	MCS0	4.42	1.00	6.05	11.00	-4.95
	5530	106	ax (80MHz)	26T	MCS0	6.10	5.43	8.79	11.00	-2.21
	5610	122	ax (80MHz)	26T	MCS0	5.42	5.60	8.52	11.00	-2.48
	5690	138	ax (80MHz)	26T	MCS0	6.75	7.12	9.95	11.00	-1.05

Table 7-99. Bands 1, 2A, 2C Conducted Power Spectral Density Measurements MIMO (26 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Directional Antenna Gain [dBi]	e.i.r.p. Power Density [dBm/MHz]	ISED Max e.i.r.p. Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	ax (20MHz)	26T	MCS0	5.76	6.08	8.93	-4.81	4.13	10.0	-5.87
	5200	40	ax (20MHz)	26T	MCS0	5.51	5.53	8.53	-4.53	4.00	10.0	-6.00
	5240	48	ax (20MHz)	26T	MCS0	5.45	5.70	8.59	-4.71	3.88	10.0	-6.12
	5190	38	ax (40MHz)	26T	MCS0	5.51	6.78	9.20	-4.53	4.67	10.0	-5.33
	5230	46	ax (40MHz)	26T	MCS0	4.59	7.45	9.26	-4.71	4.56	10.0	-5.44
	5210	42	ax (80MHz)	26T	MCS0	6.87	6.80	9.85	-4.53	5.32	10.0	-4.68

Table 7-100. Bands 1 e.r.i.p Conducted Power Spectral Density Measurements (ISED 26 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5745	149	ax (20MHz)	26T	MCS0	5.63	5.97	8.81	30.00	-21.19
	5785	157	ax (20MHz)	26T	MCS0	5.88	5.54	8.72	30.00	-21.28
	5825	165	ax (20MHz)	26T	MCS0	4.61	4.34	7.49	30.00	-22.51
	5755	151	ax (40MHz)	26T	MCS0	5.59	7.53	9.68	30.00	-20.32
	5795	159	ax (40MHz)	26T	MCS0	4.54	6.32	8.53	30.00	-21.47
	5775	155	ax (80MHz)	26T	MCS0	7.37	7.61	10.50	30.00	-19.50

Table 7-101. Bands 3 Conducted Power Spectral Density Measurements MIMO (26 Tones)

FCC ID: A3LSC03L	MEASUREMENT REPORT (CERTIFICATION)					Approved by:
Test Report S/N:	Test Dates:	EUT Type:				Quality Manager
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MIMO Power Spectral Density Measurements (52 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	ax (20MHz)	52T	MCS0	5.59	6.19	8.91	11.00	-2.09
	5200	40	ax (20MHz)	52T	MCS0	6.18	6.97	9.60	11.00	-1.40
	5240	48	ax (20MHz)	52T	MCS0	5.54	6.87	9.27	11.00	-1.73
	5190	38	ax (40MHz)	52T	MCS0	4.71	6.01	8.42	11.00	-2.58
	5230	46	ax (40MHz)	52T	MCS0	3.66	4.93	7.35	11.00	-3.65
	5210	42	ax (80MHz)	52T	MCS0	6.45	6.13	9.30	11.00	-1.70
Band 2A	5260	52	ax (20MHz)	52T	MCS0	5.26	3.48	7.47	11.00	-3.53
	5280	56	ax (20MHz)	52T	MCS0	5.86	6.45	9.18	11.00	-1.82
	5320	64	ax (20MHz)	52T	MCS0	6.04	6.38	9.22	11.00	-1.78
	5270	54	ax (40MHz)	52T	MCS0	5.10	3.37	7.33	11.00	-3.67
	5310	62	ax (40MHz)	52T	MCS0	5.19	3.08	7.27	11.00	-3.73
	5290	58	ax (80MHz)	52T	MCS0	6.55	5.90	9.25	11.00	-1.75
Band 2C	5500	100	ax (20MHz)	52T	MCS0	5.42	5.00	8.23	11.00	-2.77
	5600	120	ax (20MHz)	52T	MCS0	5.43	4.53	8.01	11.00	-2.99
	5720	144	ax (20MHz)	52T	MCS0	4.83	4.60	7.73	11.00	-3.27
	5510	102	ax (40MHz)	52T	MCS0	3.82	2.09	6.05	11.00	-4.95
	5590	118	ax (40MHz)	52T	MCS0	2.67	1.54	5.15	11.00	-5.85
	5710	142	ax (40MHz)	52T	MCS0	3.81	1.21	5.71	11.00	-5.29
	5530	106	ax (80MHz)	52T	MCS0	6.24	6.71	9.49	11.00	-1.51
	5610	122	ax (80MHz)	52T	MCS0	5.88	6.38	9.15	11.00	-1.85
	5690	138	ax (80MHz)	52T	MCS0	5.89	6.17	9.04	11.00	-1.96

Table 7-102. Bands 1, 2A, 2C Conducted Power Spectral Density Measurements MIMO (52 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Directional Antenna Gain [dBi]	e.i.r.p. Power Density [dBm/MHz]	ISED Max e.i.r.p. Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	ax (20MHz)	52T	MCS0	5.59	6.19	8.91	-4.81	4.10	10.0	-5.90
	5200	40	ax (20MHz)	52T	MCS0	6.18	6.97	9.60	-4.53	5.07	10.0	-4.93
	5240	48	ax (20MHz)	52T	MCS0	5.54	6.87	9.27	-4.71	4.56	10.0	-5.44
	5190	38	ax (40MHz)	52T	MCS0	4.71	6.01	8.42	-4.53	3.89	10.0	-6.11
	5230	46	ax (40MHz)	52T	MCS0	3.66	4.93	7.35	-4.71	2.65	10.0	-7.35
	5210	42	ax (80MHz)	52T	MCS0	6.45	6.13	9.30	-4.53	4.77	10.0	-5.23

Table 7-103. Bands 1 e.r.p Conducted Power Spectral Density Measurements (ISED 52 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5745	149	ax (20MHz)	52T	MCS0	5.15	4.69	7.94	30.00	-22.06
	5785	157	ax (20MHz)	52T	MCS0	4.97	5.01	8.00	30.00	-22.00
	5825	165	ax (20MHz)	52T	MCS0	4.65	5.09	7.89	30.00	-22.11
	5755	151	ax (40MHz)	52T	MCS0	3.58	5.37	7.58	30.00	-22.42
	5795	159	ax (40MHz)	52T	MCS0	4.54	5.61	8.12	30.00	-21.88
	5775	155	ax (80MHz)	52T	MCS0	7.19	7.18	10.20	30.00	-19.80

Table 7-104. Bands 3 Conducted Power Spectral Density Measurements MIMO (52 Tones)

FCC ID: A3LSC03L		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 261 of 514

MIMO Power Spectral Density Measurements (106 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	ax (20MHz)	106T	MCS0	5.53	6.00	8.78	11.00	-2.22
	5200	40	ax (20MHz)	106T	MCS0	4.48	5.72	8.15	11.00	-2.85
	5240	48	ax (20MHz)	106T	MCS0	4.45	5.62	8.08	11.00	-2.92
	5190	38	ax (40MHz)	106T	MCS0	6.29	4.50	8.50	11.00	-2.50
	5230	46	ax (40MHz)	106T	MCS0	2.68	4.14	6.48	11.00	-4.52
	5210	42	ax (80MHz)	106T	MCS0	5.23	5.53	8.39	11.00	-2.61
Band 2A	5260	52	ax (20MHz)	106T	MCS0	4.33	5.37	7.89	11.00	-3.11
	5280	56	ax (20MHz)	106T	MCS0	4.51	5.40	7.99	11.00	-3.01
	5320	64	ax (20MHz)	106T	MCS0	5.00	5.55	8.29	11.00	-2.71
	5270	54	ax (40MHz)	106T	MCS0	4.79	2.68	6.87	11.00	-4.13
	5310	62	ax (40MHz)	106T	MCS0	5.26	2.79	7.21	11.00	-3.79
	5290	58	ax (80MHz)	106T	MCS0	4.91	5.27	8.10	11.00	-2.90
Band 2C	5500	100	ax (20MHz)	106T	MCS0	4.35	4.29	7.33	11.00	-3.67
	5600	120	ax (20MHz)	106T	MCS0	4.52	3.96	7.26	11.00	-3.74
	5720	144	ax (20MHz)	106T	MCS0	4.28	3.51	6.92	11.00	-4.08
	5510	102	ax (40MHz)	106T	MCS0	3.39	1.17	5.43	11.00	-5.57
	5590	118	ax (40MHz)	106T	MCS0	3.40	0.63	5.24	11.00	-5.76
	5710	142	ax (40MHz)	106T	MCS0	3.53	0.12	5.16	11.00	-5.84
	5530	106	ax (80MHz)	106T	MCS0	4.51	5.16	7.86	11.00	-3.14
	5610	122	ax (80MHz)	106T	MCS0	4.62	5.22	7.94	11.00	-3.06
	5690	138	ax (80MHz)	106T	MCS0	4.89	5.34	8.13	11.00	-2.87

Table 7-105. Bands 1, 2A, 2C Conducted Power Spectral Density Measurements MIMO (106 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Directional Antenna Gain [dBi]	e.i.r.p. Power Density [dBm/MHz]	ISED Max e.i.r.p. Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	ax (20MHz)	106T	MCS0	5.53	6.00	8.78	-4.81	3.97	10.0	-6.03
	5200	40	ax (20MHz)	106T	MCS0	4.48	5.72	8.15	-4.53	3.62	10.0	-6.38
	5240	48	ax (20MHz)	106T	MCS0	4.45	5.62	8.08	-4.71	3.38	10.0	-6.62
	5190	38	ax (40MHz)	106T	MCS0	6.29	4.50	8.50	-4.53	3.97	10.0	-6.03
	5230	46	ax (40MHz)	106T	MCS0	2.68	4.14	6.48	-4.71	1.78	10.0	-8.22
	5210	42	ax (80MHz)	106T	MCS0	5.23	5.53	8.39	-4.53	3.86	10.0	-6.14

Table 7-106. Bands 1 e.r.i.p Conducted Power Spectral Density Measurements (ISED 106 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5745	149	ax (20MHz)	106T	MCS0	4.15	4.10	7.14	30.00	-22.86
	5785	157	ax (20MHz)	106T	MCS0	4.22	4.29	7.27	30.00	-22.73
	5825	165	ax (20MHz)	106T	MCS0	4.26	3.59	6.95	30.00	-23.05
	5755	151	ax (40MHz)	106T	MCS0	2.31	4.24	6.39	30.00	-23.61
	5795	159	ax (40MHz)	106T	MCS0	2.60	4.76	6.82	30.00	-23.18
	5775	155	ax (80MHz)	106T	MCS0	5.48	5.99	8.75	30.00	-21.25

Table 7-107. Bands 3 Conducted Power Spectral Density Measurements MIMO (106 Tones)

FCC ID: A3LSC03L	MEASUREMENT REPORT (CERTIFICATION)							Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset						Page 262 of 514

MIMO Power Spectral Density Measurements (242 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	ax (20MHz)	242T	MCS0	1.67	2.58	5.16	11.00	-5.84
	5200	40	ax (20MHz)	242T	MCS0	4.43	5.30	7.90	11.00	-3.10
	5240	48	ax (20MHz)	242T	MCS0	4.57	5.61	8.13	11.00	-2.87
	5190	38	ax (40MHz)	242T	MCS0	-1.01	-0.06	2.50	11.00	-8.50
	5230	46	ax (40MHz)	242T	MCS0	2.70	3.85	6.32	11.00	-4.68
	5210	42	ax (80MHz)	242T	MCS0	-0.64	-0.83	2.28	11.00	-8.72
Band 2A	5260	52	ax (20MHz)	242T	MCS0	3.79	5.30	7.62	11.00	-3.38
	5280	56	ax (20MHz)	242T	MCS0	4.36	5.07	7.74	11.00	-3.26
	5320	64	ax (20MHz)	242T	MCS0	2.70	3.62	6.19	11.00	-4.81
	5270	54	ax (40MHz)	242T	MCS0	4.23	2.37	6.41	11.00	-4.59
	5310	62	ax (40MHz)	242T	MCS0	-0.59	-2.62	1.52	11.00	-9.48
	5290	58	ax (80MHz)	242T	MCS0	-0.62	-0.68	2.36	11.00	-8.64
Band 2C	5500	100	ax (20MHz)	242T	MCS0	3.21	3.51	6.37	11.00	-4.63
	5600	120	ax (20MHz)	242T	MCS0	4.17	3.94	7.07	11.00	-3.93
	5720	144	ax (20MHz)	242T	MCS0	4.06	4.13	7.11	11.00	-3.89
	5510	102	ax (40MHz)	242T	MCS0	-2.38	-4.15	-0.17	11.00	-11.17
	5590	118	ax (40MHz)	242T	MCS0	-2.54	0.70	2.39	11.00	-8.61
	5710	142	ax (40MHz)	242T	MCS0	2.44	-0.09	4.37	11.00	-6.63
	5530	106	ax (80MHz)	242T	MCS0	4.49	-1.01	5.57	11.00	-5.43
	5610	122	ax (80MHz)	242T	MCS0	4.69	5.03	7.87	11.00	-3.13
	5690	138	ax (80MHz)	242T	MCS0	4.89	5.02	7.97	11.00	-3.03

Table 7-108. Bands 1, 2A, 2C Conducted Power Spectral Density Measurements MIMO (242 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Directional Antenna Gain [dBi]	e.i.r.p. Power Density [dBm/MHz]	ISED Max e.i.r.p. Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	ax (20MHz)	242T	MCS0	1.67	2.58	5.16	-4.81	0.35	10.0	-9.65
	5200	40	ax (20MHz)	242T	MCS0	4.43	5.30	7.90	-4.53	3.37	10.0	-6.63
	5240	48	ax (20MHz)	242T	MCS0	4.57	5.61	8.13	-4.71	3.43	10.0	-6.57
	5190	38	ax (40MHz)	242T	MCS0	-1.01	-0.06	2.50	-4.53	-2.03	10.0	-12.03
	5230	46	ax (40MHz)	242T	MCS0	2.70	3.85	6.32	-4.71	1.62	10.0	-8.38
	5210	42	ax (80MHz)	242T	MCS0	-0.64	-0.83	2.28	-4.53	-2.25	10.0	-12.25

Table 7-109. Bands 1 e.r.i.p Conducted Power Spectral Density Measurements (ISED 242 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5745	149	ax (20MHz)	242T	MCS0	3.54	3.75	6.66	30.00	-23.34
	5785	157	ax (20MHz)	242T	MCS0	3.78	4.14	6.97	30.00	-23.03
	5825	165	ax (20MHz)	242T	MCS0	3.12	3.83	6.50	30.00	-23.50
	5755	151	ax (40MHz)	242T	MCS0	2.13	4.07	6.22	30.00	-23.78
	5795	159	ax (40MHz)	242T	MCS0	-0.04	5.07	6.24	30.00	-23.76
	5775	155	ax (80MHz)	242T	MCS0	5.07	5.50	8.30	30.00	-21.70

Table 7-110. Bands 3 Conducted Power Spectral Density Measurements MIMO (242 Tones)

FCC ID: A3LSC03L	MEASUREMENT REPORT (CERTIFICATION)						Approved by:
Test Report S/N:	Test Dates:	EUT Type:					Quality Manager
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MIMO Power Spectral Density Measurements (484 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]
Band 1	5190	38	ax (40MHz)	484T	MCS0	-3.37	-3.74	-0.54	11.00	-11.54
	5230	46	ax (40MHz)	484T	MCS0	-0.38	-0.78	2.43	11.00	-8.57
	5210	42	ax (80MHz)	484T	MCS0	-3.90	-3.47	-0.67	11.00	-11.67
Band 2A	5270	54	ax (40MHz)	484T	MCS0	0.13	-2.33	2.08	11.00	-8.92
	5310	62	ax (40MHz)	484T	MCS0	-3.29	-5.59	-1.28	11.00	-12.28
	5290	58	ax (80MHz)	484T	MCS0	-3.28	-2.95	-0.10	11.00	-11.10
Band 2C	5510	102	ax (40MHz)	484T	MCS0	-5.40	-8.00	-3.50	11.00	-14.50
	5590	118	ax (40MHz)	484T	MCS0	-1.44	-3.96	0.49	11.00	-10.51
	5710	142	ax (40MHz)	484T	MCS0	-1.36	-4.74	0.28	11.00	-10.72
	5530	106	ax (80MHz)	484T	MCS0	-3.24	-3.36	-0.29	11.00	-11.29
	5610	122	ax (80MHz)	484T	MCS0	0.94	0.99	3.98	11.00	-7.02
	5690	138	ax (80MHz)	484T	MCS0	0.91	0.63	3.78	11.00	-7.22

Table 7-111. Bands 1, 2A, 2C Conducted Power Spectral Density Measurements MIMO (484 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Directional Antenna Gain [dBi]	e.i.r.p. Power Density [dBm/MHz]	ISED Max e.i.r.p. Power Density [dBm/MHz]	Margin [dB]
Band 1	5190	38	ax (40MHz)	484T	MCS0	-3.37	-3.74	-0.54	-4.53	-5.07	10.0	-15.07
	5230	46	ax (40MHz)	484T	MCS0	-0.38	-0.78	2.43	-4.71	-2.27	10.0	-12.27
	5210	42	ax (80MHz)	484T	MCS0	-3.90	-3.47	-0.67	-4.53	-5.20	10.0	-15.20

Table 7-112. Bands 1 e.r.i.p Conducted Power Spectral Density Measurements (ISED 484 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5755	151	ax (40MHz)	484T	MCS0	-1.90	-0.50	1.87	30.00	-28.13
	5795	159	ax (40MHz)	484T	MCS0	-1.32	0.11	2.46	30.00	-27.54
	5775	155	ax (80MHz)	484T	MCS0	1.35	1.45	4.41	30.00	-25.59

Table 7-113. Bands 3 Conducted Power Spectral Density Measurements MIMO (484 Tones)

FCC ID: A3LSC03L	MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
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MIMO Power Spectral Density Measurements (996 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]
Band 1	5210	42	ax (80MHz)	996T	MCS0	-7.18	-6.68	-3.91	11.00	-14.91
Band 2A	5290	58	ax (80MHz)	996T	MCS0	-6.81	-6.67	-3.73	11.00	-14.73
Band 2C	5530	106	ax (80MHz)	996T	MCS0	-7.15	-6.27	-3.68	11.00	-14.68
	5610	122	ax (80MHz)	996T	MCS0	-3.20	-2.39	0.23	11.00	-10.77
	5690	138	ax (80MHz)	996T	MCS0	-3.02	-2.31	0.36	11.00	-10.64

Table 7-114. Bands 1, 2A, 2C Conducted Power Spectral Density Measurements MIMO (996 Tones)

Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Directional Antenna Gain [dBi]	e.i.r.p. Power Density [dBm/MHz]	ISED Max e.i.r.p. Power Density [dBm/MHz]	Margin [dB]
5210	42	ax (80MHz)	996T	MCS0	-7.18	-6.68	-3.91	-4.53	-8.44	10.0	-18.44

Table 7-115. Bands 1 e.r.i.p Conducted Power Spectral Density Measurements (ISED 996 Tones)

	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5775	155	ax (80MHz)	996T	MCS0	-2.56	-1.67	0.92	30.00	-29.08

Table 7-116. Bands 3 Conducted Power Spectral Density Measurements MIMO (996 Tones)

FCC ID: A3LSC03L		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Note:

Per ANSI C63.10-2013 Section 14.3.2.2 and KDB 662911 v02r01 Section E)2), the power spectral density at Antenna 1 and Antenna 2 were first measured separately with reduced Antenna 1 and Antenna 2 powers per manufacturer's tune-up document. The measured values were then summed in linear power units then converted back to dBm.

Sample Directional Gain Calculation:

Assuming the antenna gain is -7.94 dBi for Antenna-1 and -7.70 dBi for Antenna-2.

$$\begin{aligned}
 \text{Directional gain} &= 10 \log[(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20})^2 / N_{\text{ANT}}] \text{ dBi} \\
 &= 10 \log[(10^{-7.94/20} + 10^{-7.70/20} / 2] \text{ dBi} \\
 &= (-4.81) \text{ dBi}
 \end{aligned}$$

Sample MIMO Calculation:

Assuming the average conducted power spectral density was measured to be 5.76 dBm for Antenna-1 and 6.08 dBm for Antenna-2.

$$\text{Antenna 1 + Antenna 2} = \text{MIMO}$$

$$(5.76 \text{ dBm} + 6.08 \text{ dBm}) = (3.77 \text{ mW} + 4.06 \text{ mW}) = 8.93 \text{ mW} = \text{dBm}$$

Sample e.i.r.p Power Spectral Density Calculation:

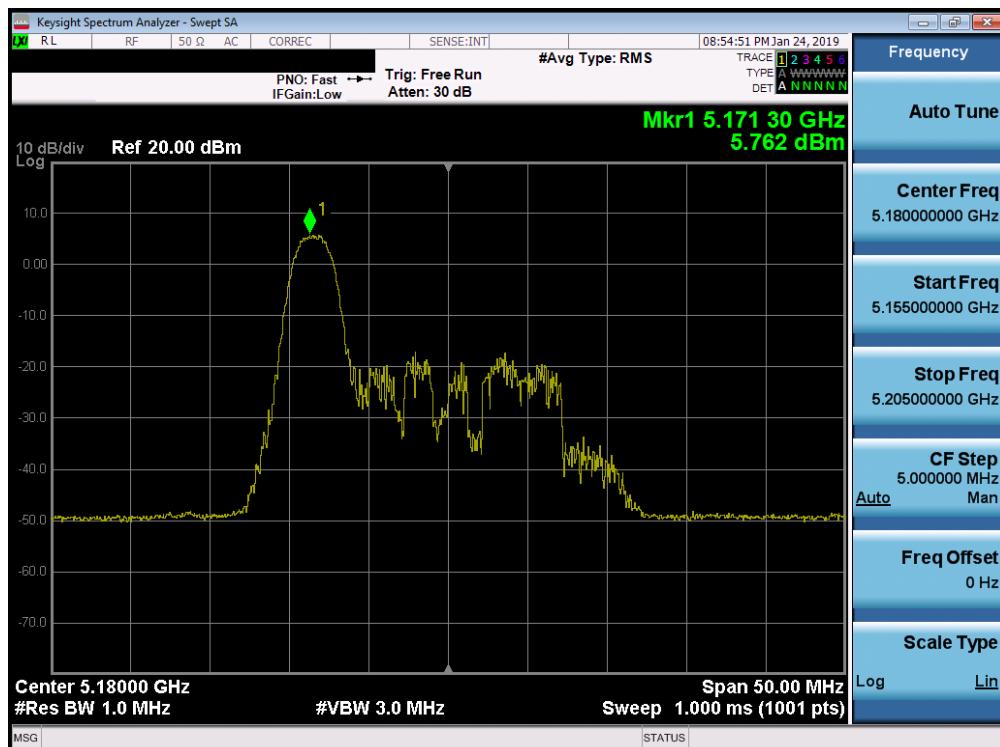
Assuming the average MIMO power density was calculated to be 8.93 dBm with directional gain of -4.81 dBi.

$$\text{e.i.r.p. Power Spectral Density(dBm)} = \text{Power Spectral Density (dBm)} + \text{directional gain (dBi)}$$

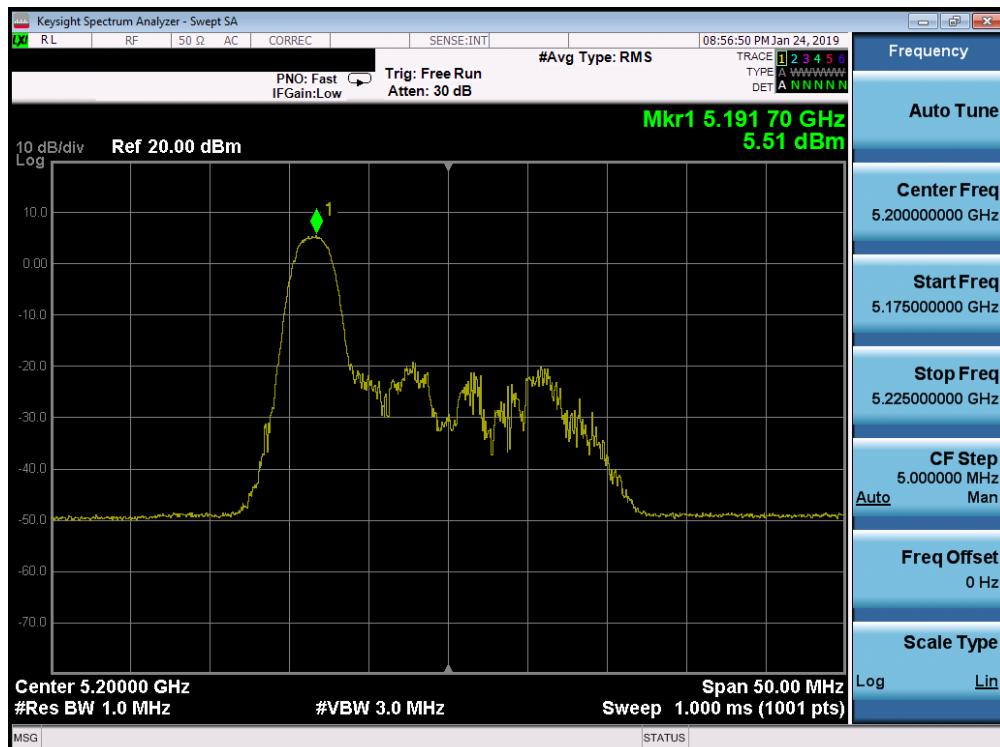
$$8.93 \text{ dBm} + (-4.81) \text{ dBi} = 4.12 \text{ dBm}$$

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MIMO Antenna-1 Power Spectral Density Measurements (26 Tones)

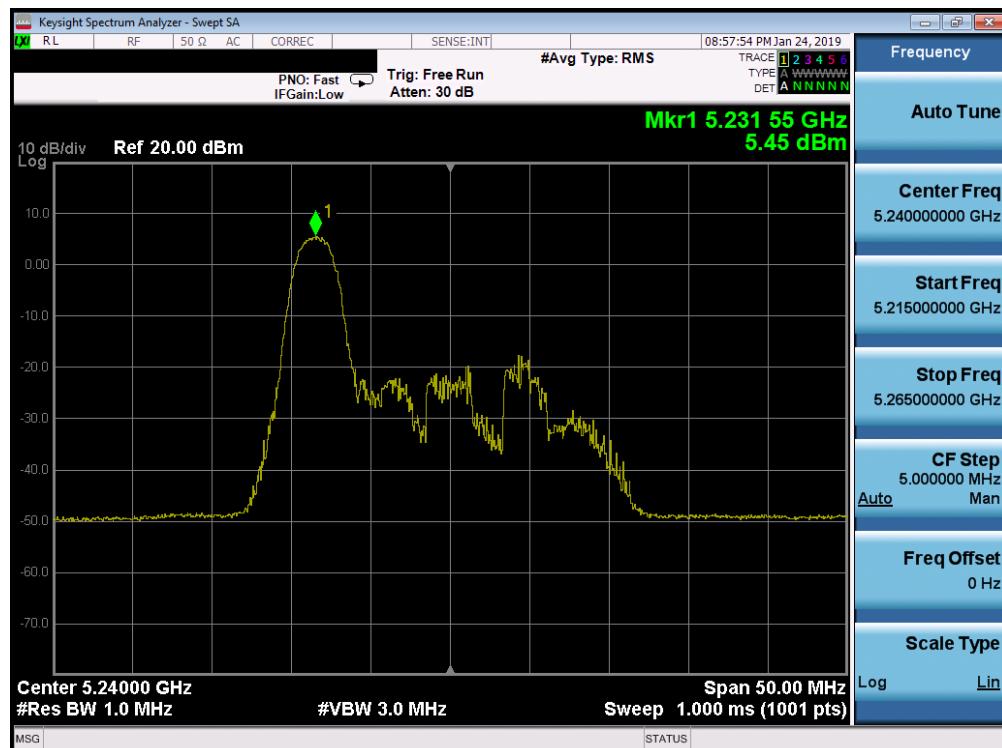


Plot 7-367. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – 26 Tones (UNII Band 1) – Ch. 36)

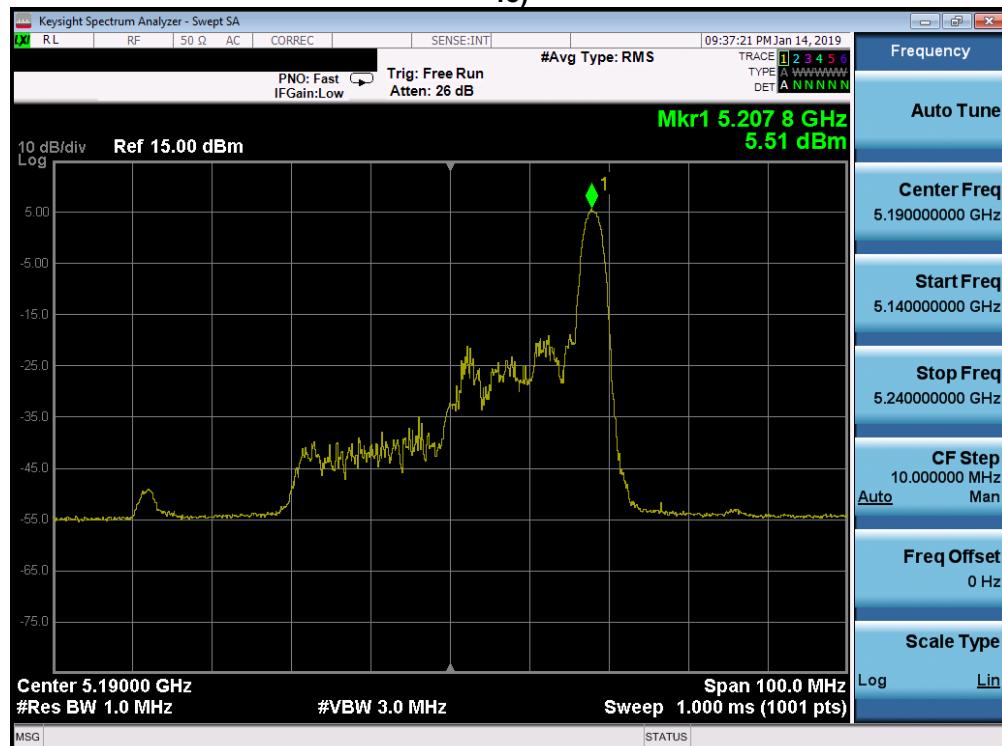


Plot 7-368. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – 26 Tones (UNII Band 1) – Ch. 40)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
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Plot 7-369. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – 26 Tones (UNII Band 1) – Ch. 48)

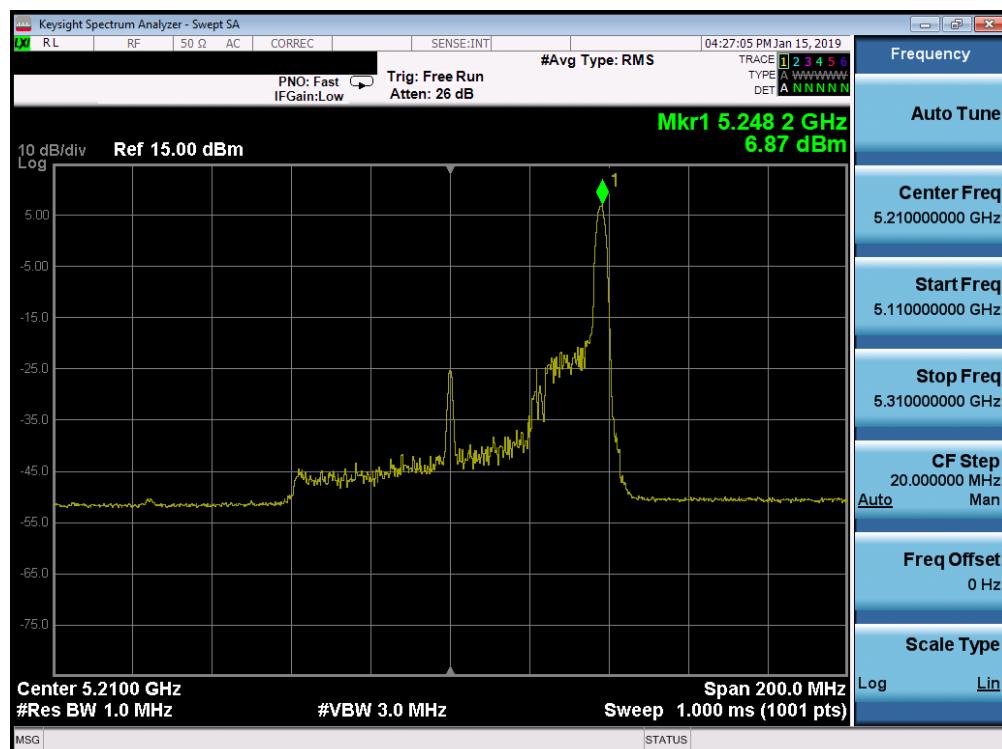


Plot 7-370. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – 26 Tones (UNII Band 1) – Ch. 38)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
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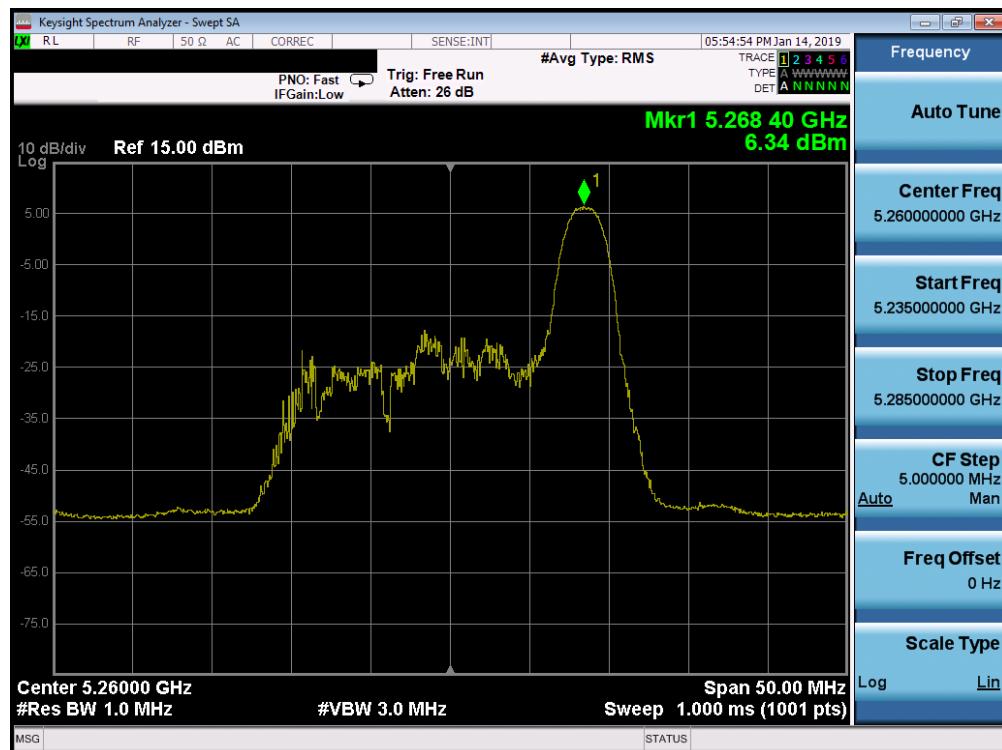


Plot 7-371. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – 26 Tones (UNII Band 1) – Ch. 46)

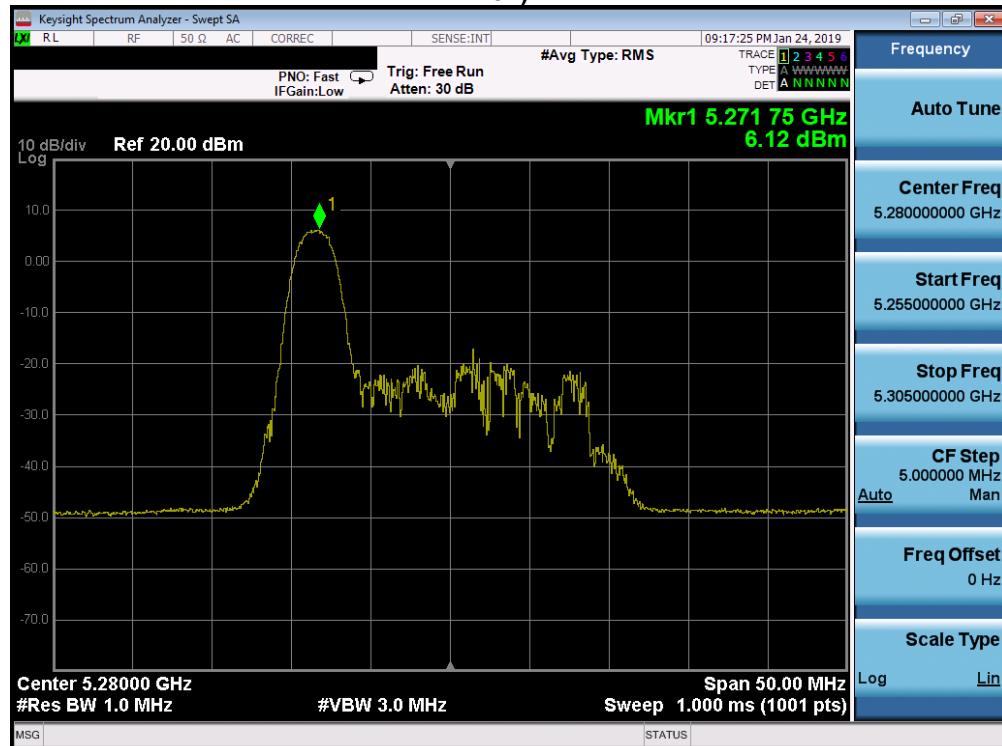


Plot 7-372. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax – 26 Tones (UNII Band 1) – Ch. 42)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 269 of 514

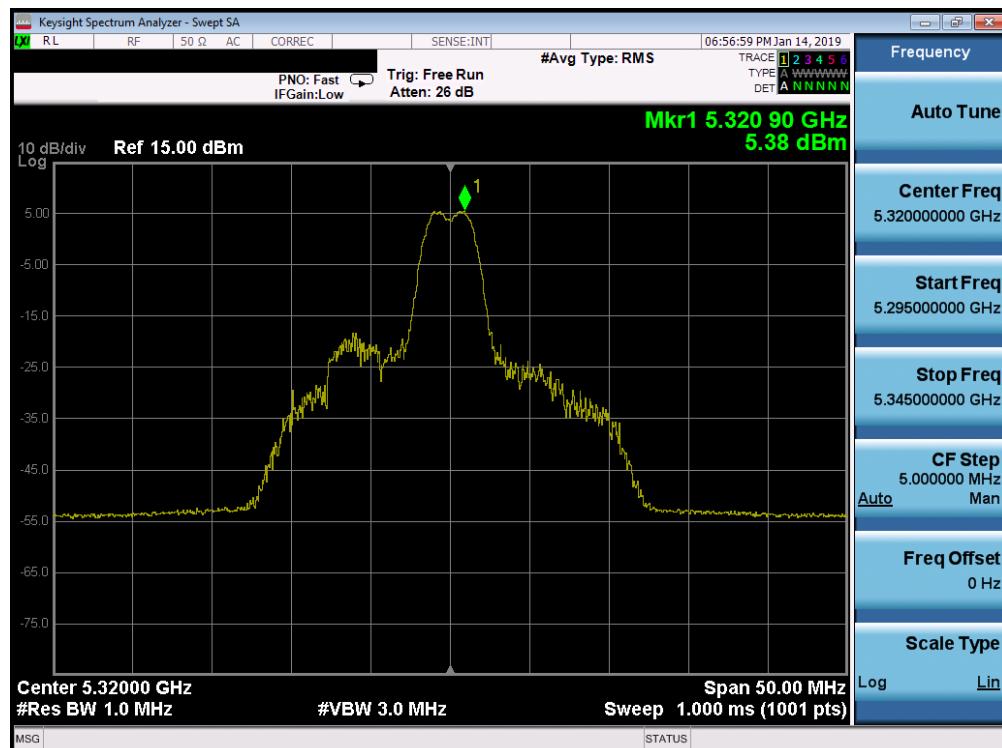


Plot 7-373. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – 26 Tones (UNII Band 2A) – Ch. 52)

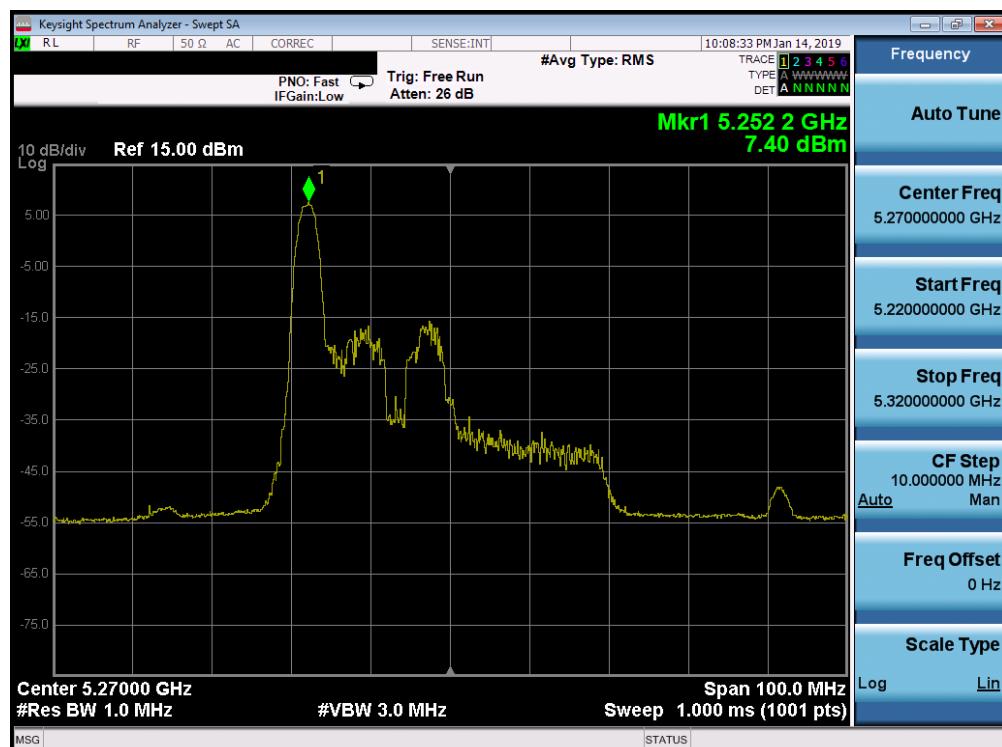


Plot 7-374. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – 26 Tones (UNII Band 2A) – Ch. 56)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
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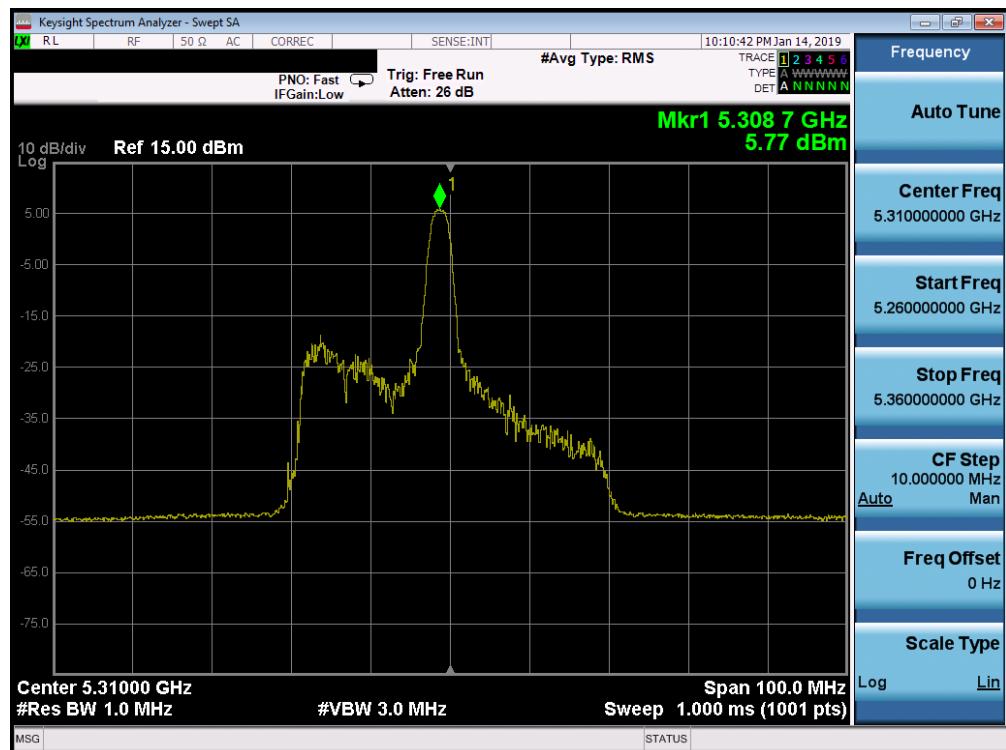


Plot 7-375. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – 26 Tones (UNII Band 2A) – Ch. 64)

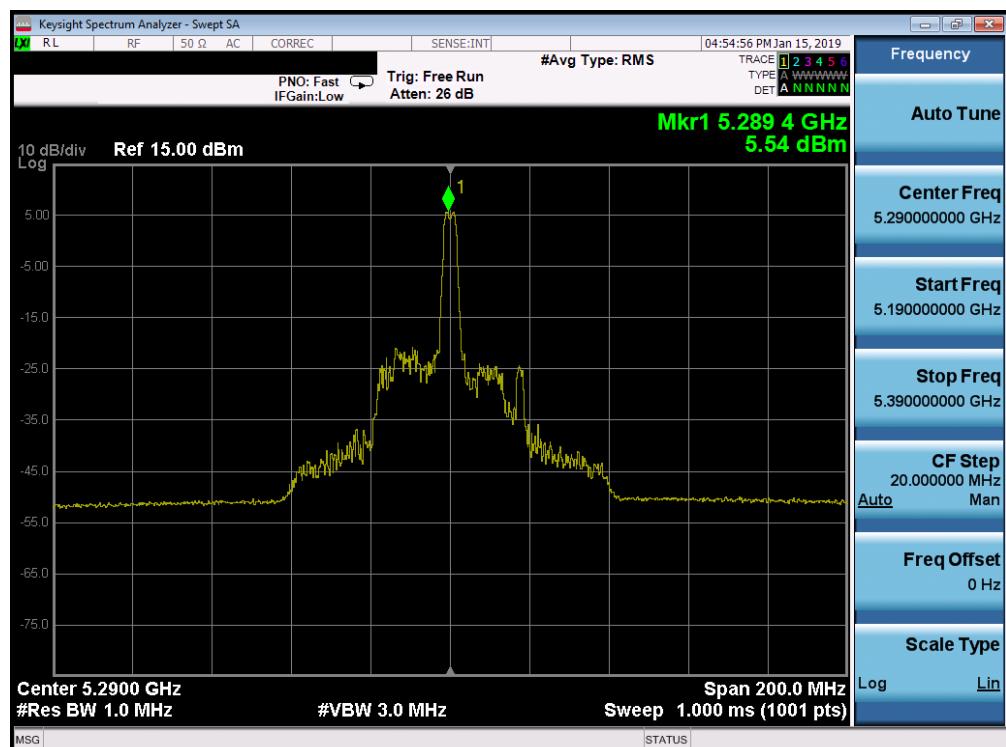


Plot 7-376. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – 26 Tones (UNII Band 2A) – Ch. 54)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
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Plot 7-377. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – 26 Tones (UNII Band 2A) – Ch. 62)



Plot 7-378. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax – 26 Tones (UNII Band 2A) – Ch. 58)

FCC ID: A3LSC03L	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240017-07.A3L	Test Dates: 10/23/2018 - 1/18/2019	EUT Type: Portable Handset		Page 272 of 514