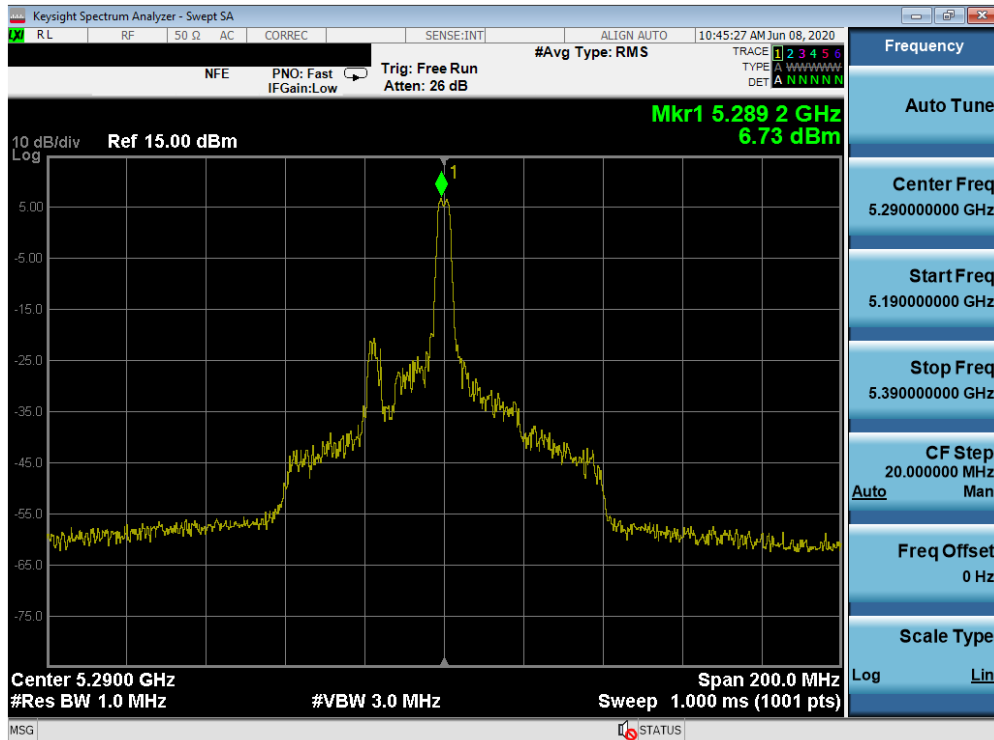
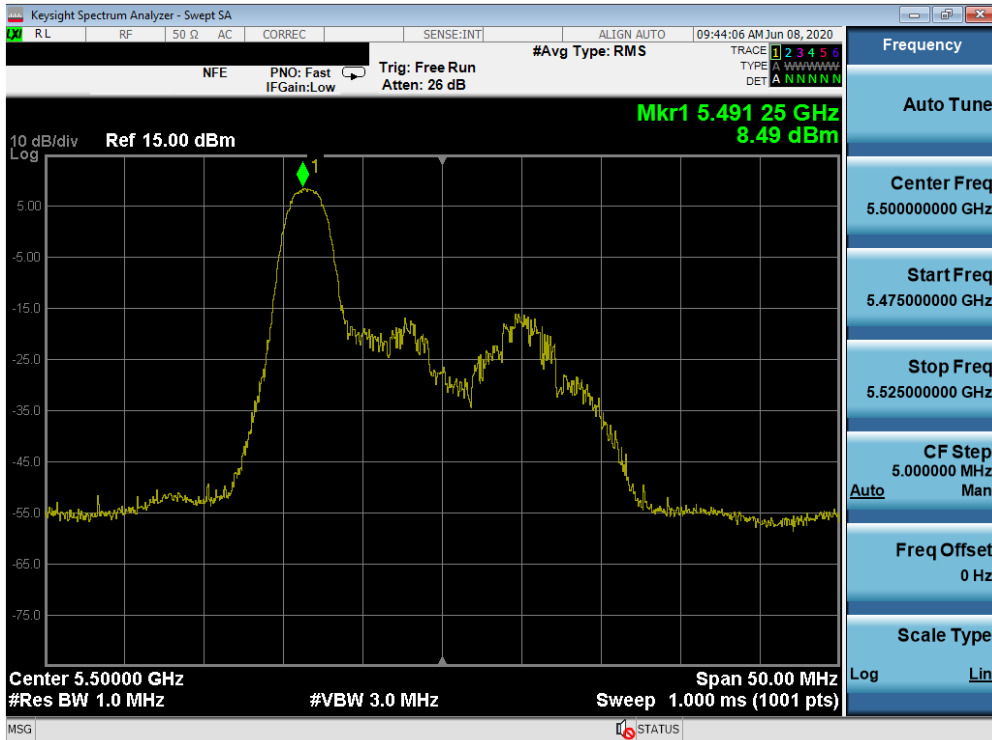


Plot 7-173. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 26 Tones (UNII Band 2A) – Ch. 62)

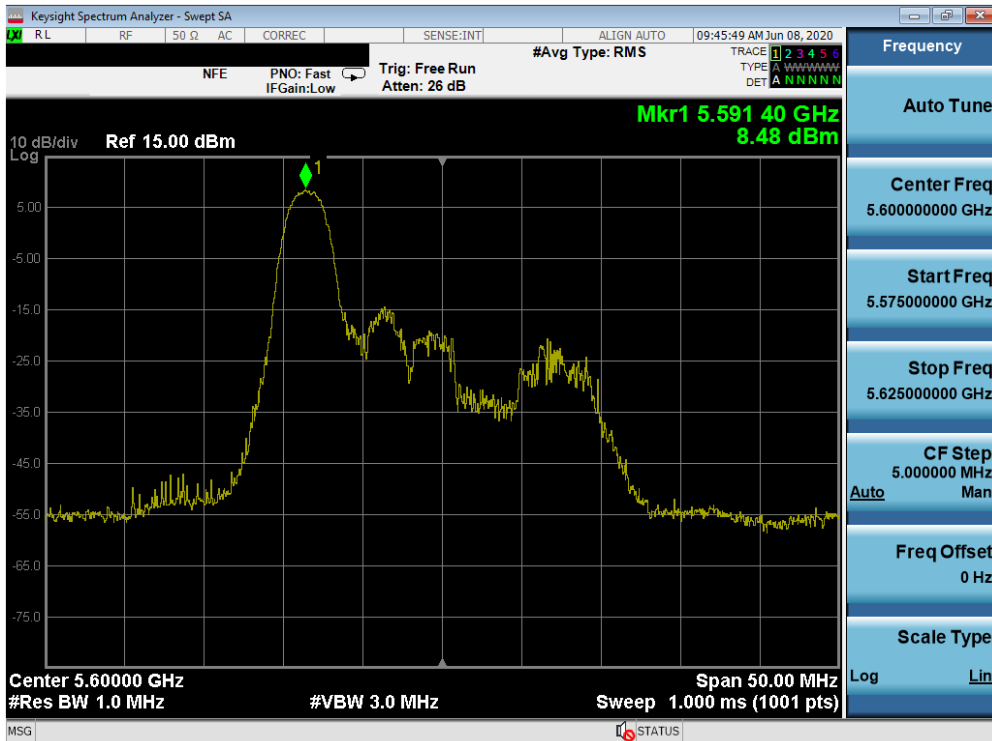


Plot 7-174. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 26 Tones (UNII Band 2A) – Ch. 58)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 139 of 292

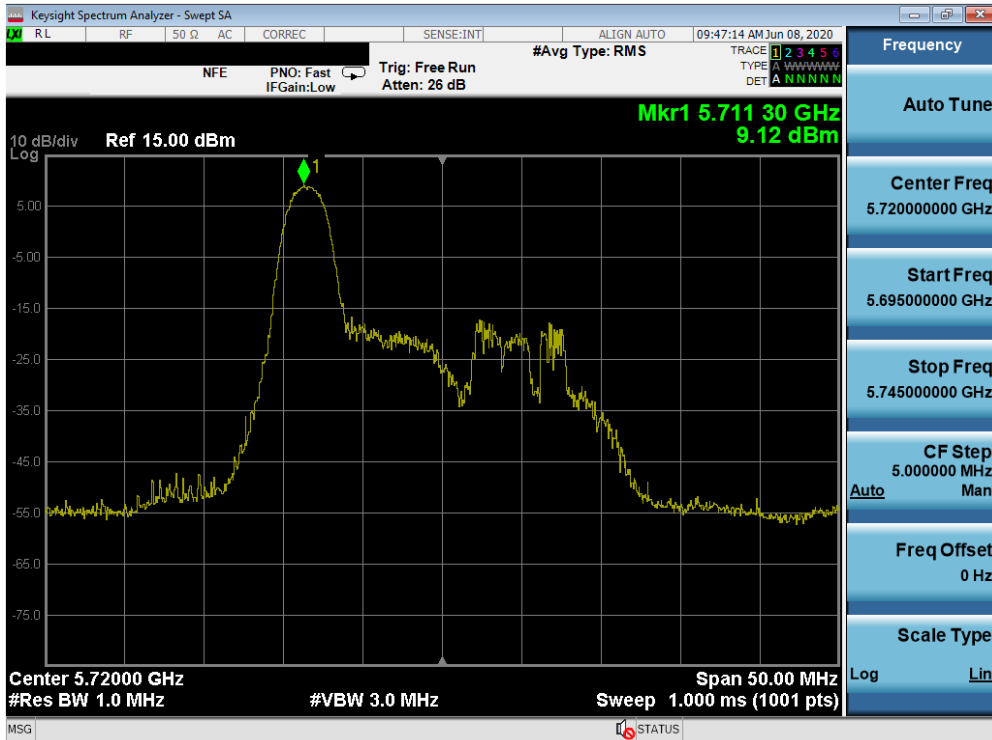


Plot 7-175. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 100)

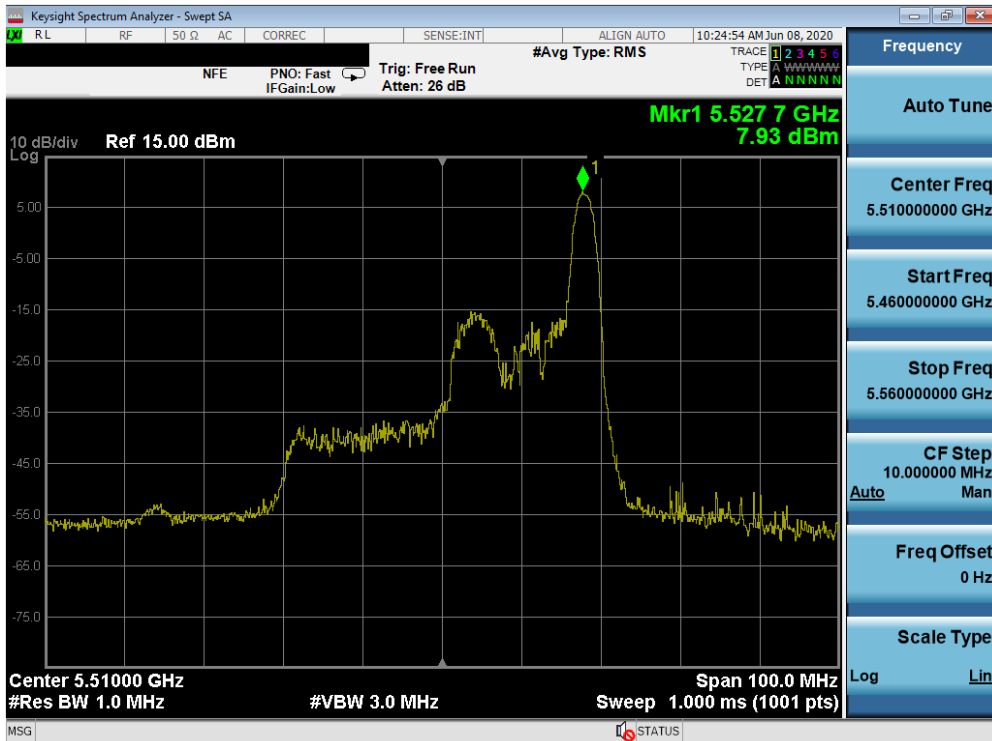


Plot 7-176. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 120)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 140 of 292



Plot 7-177. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 144)

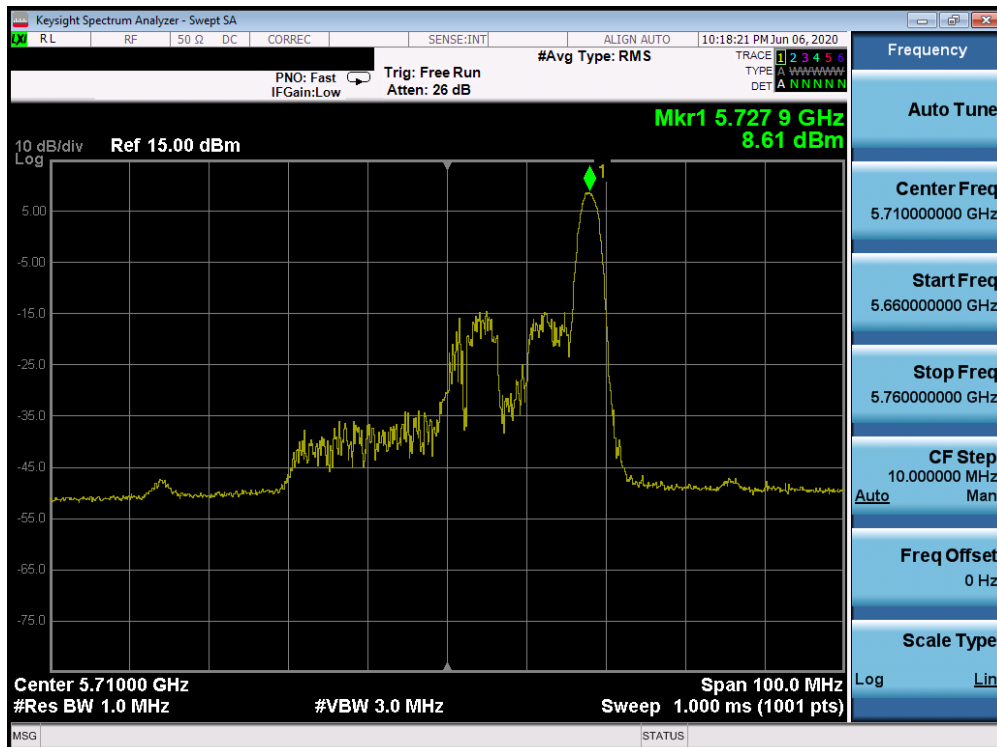


Plot 7-178. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 102)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 141 of 292

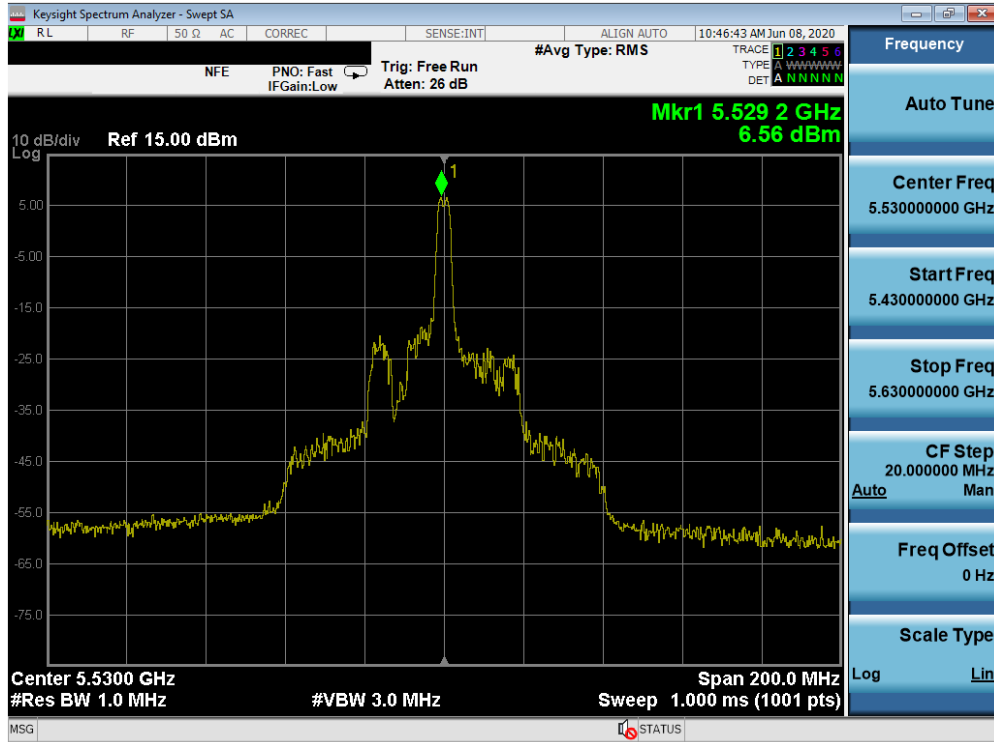


Plot 7-179. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 118)

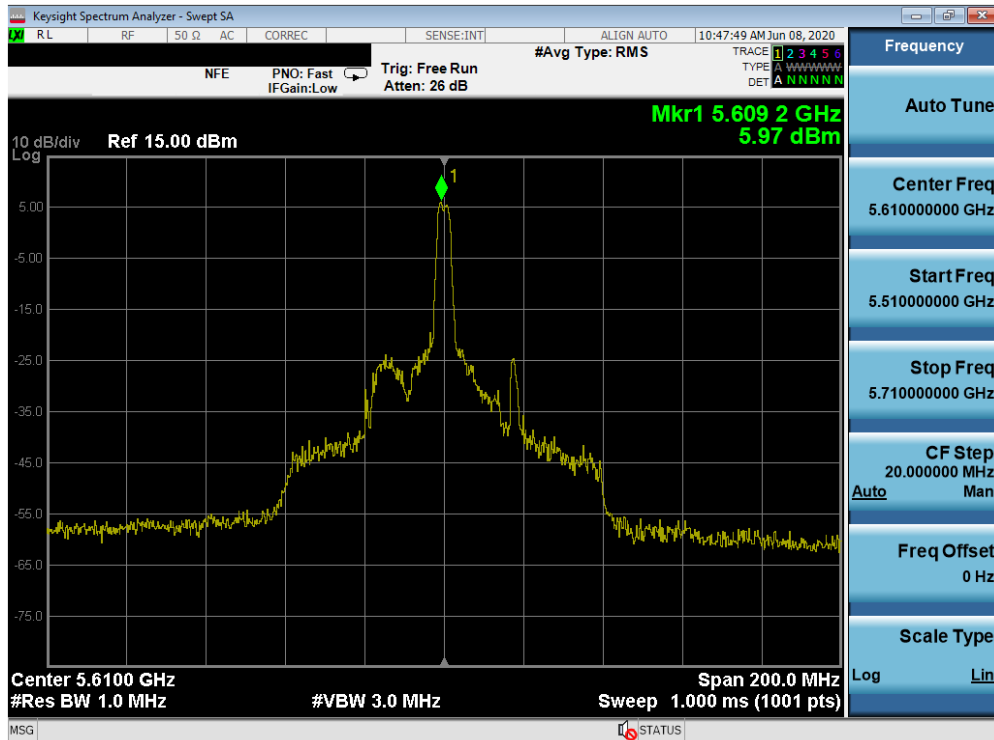


Plot 7-180. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 142)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 142 of 292

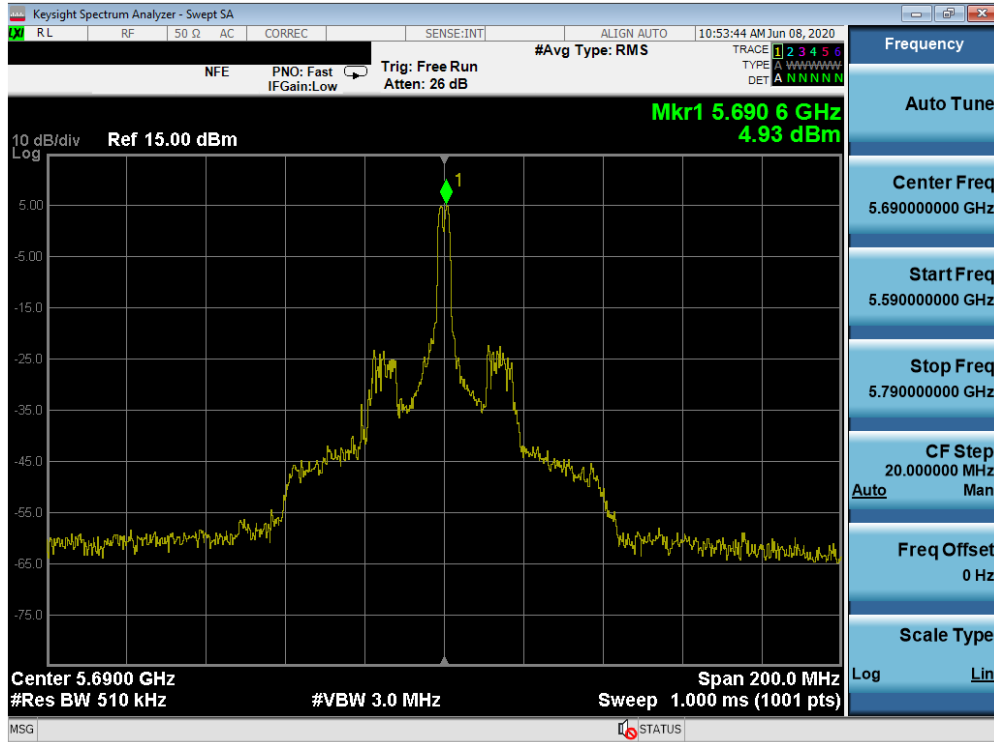


Plot 7-181. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 106)



Plot 7-182. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 122)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 143 of 292



Plot 7-183. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 138)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 144 of 292

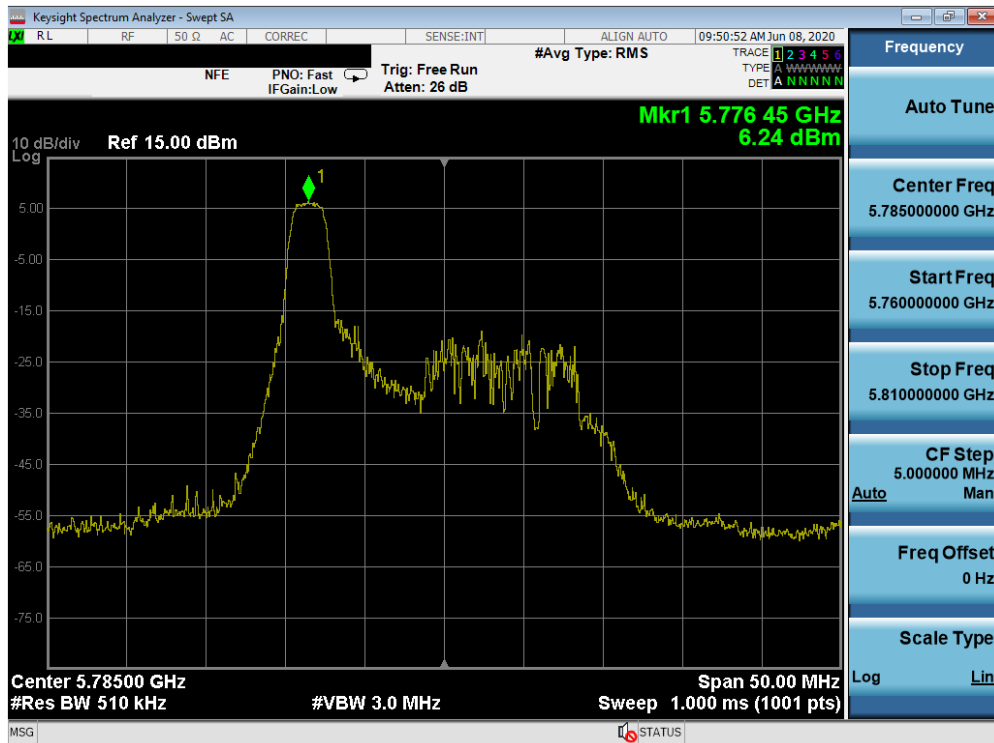
	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density	Margin [dB]
Band 3	5745	149	ax (20MHz)	26T	MCS0	6.26	30.00	-23.74
	5785	157	ax (20MHz)	26T	MCS0	6.24	30.00	-23.76
	5825	165	ax (20MHz)	26T	MCS0	6.10	30.00	-23.90
	5755	151	ax (40MHz)	26T	MCS0	6.19	30.00	-23.81
	5795	159	ax (40MHz)	26T	MCS0	6.67	30.00	-23.33
	5775	155	ax (80MHz)	26T	MCS0	7.99	30.00	-22.01

Table 7-60. Band 3 Conducted Power Spectral Density Measurements SISO ANT2 (26 Tones)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 145 of 292



Plot 7-184. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 149)

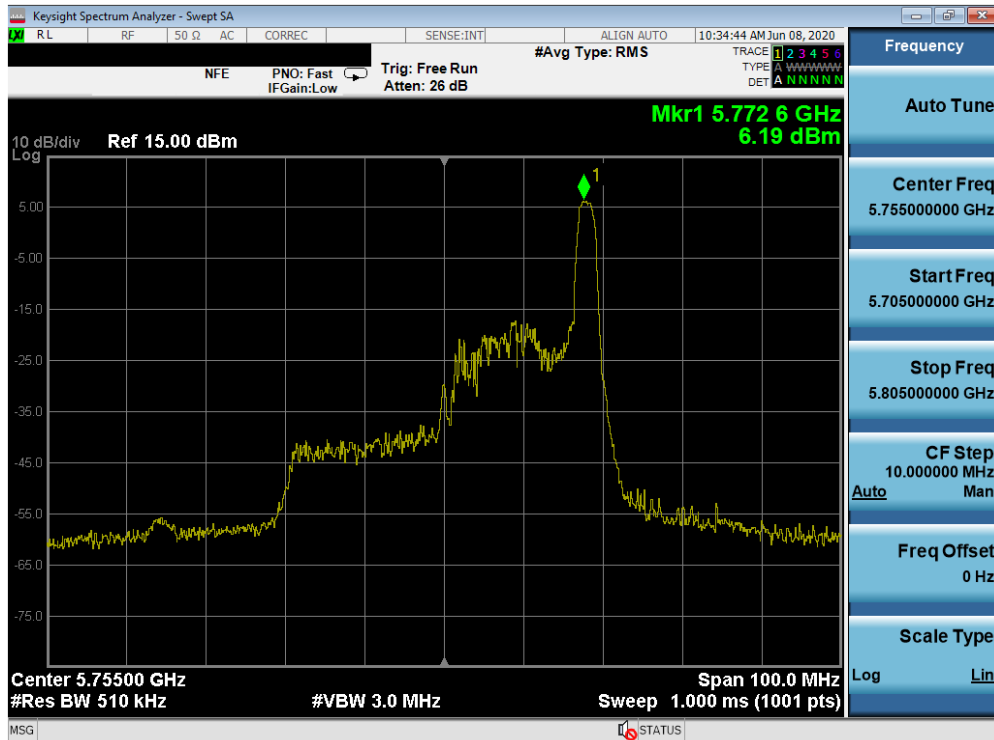


Plot 7-185. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 157)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 146 of 292

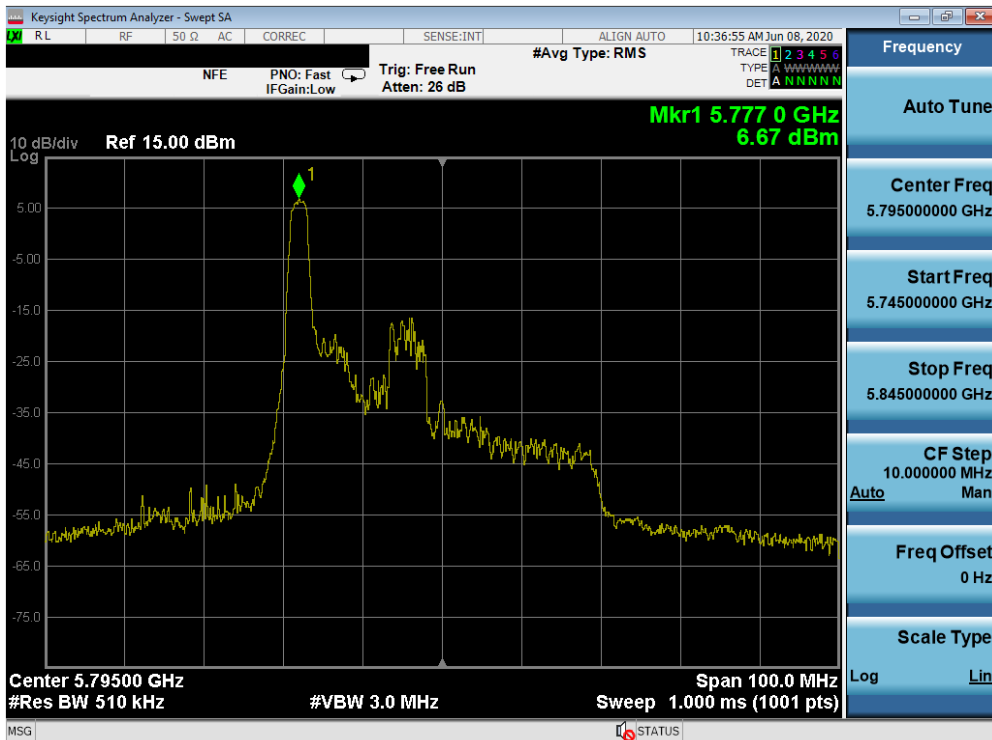


Plot 7-186. Power Spectral Density Plot SISO ANT2 (20 MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 165)

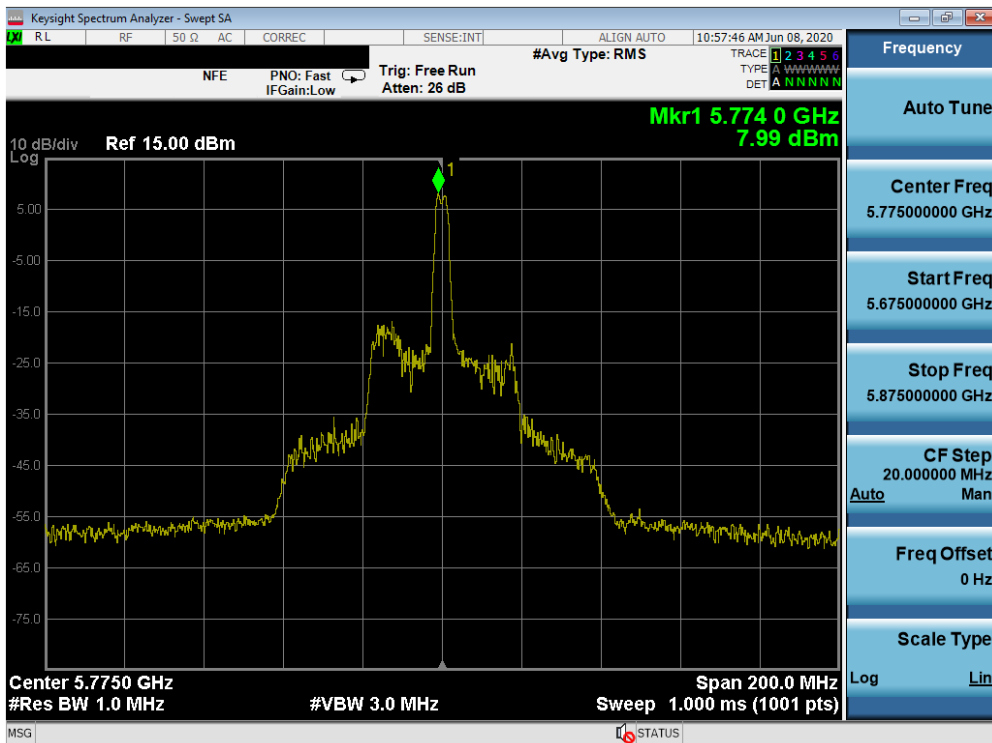


Plot 7-187. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 151)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 147 of 292



Plot 7-188. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 159)



Plot 7-189. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 155)

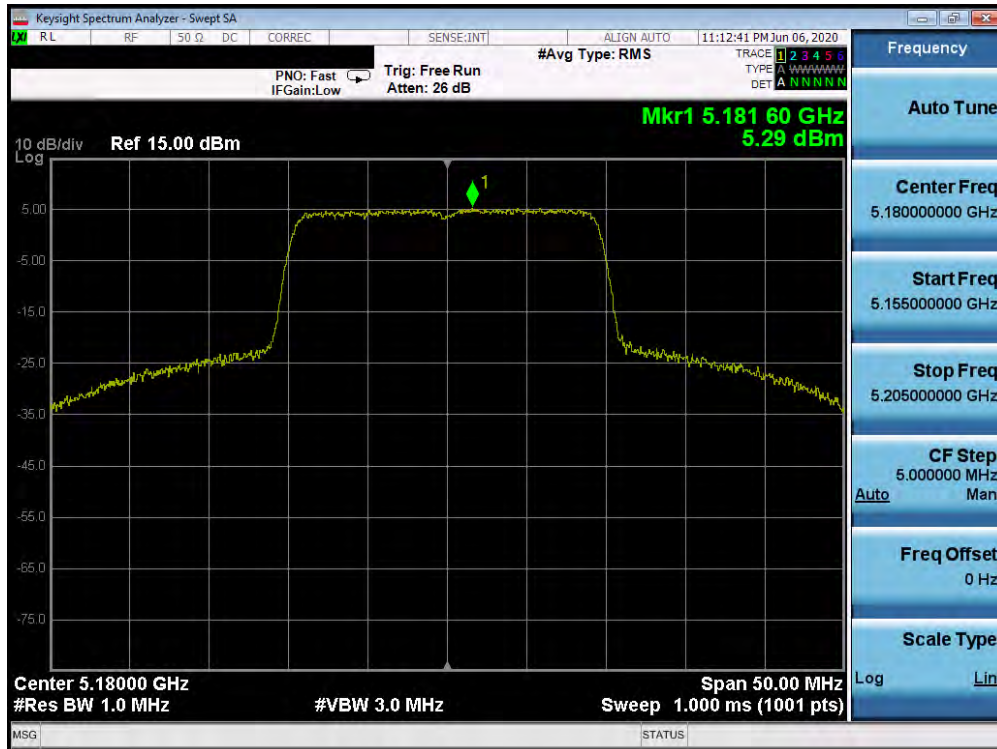
FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 148 of 292

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

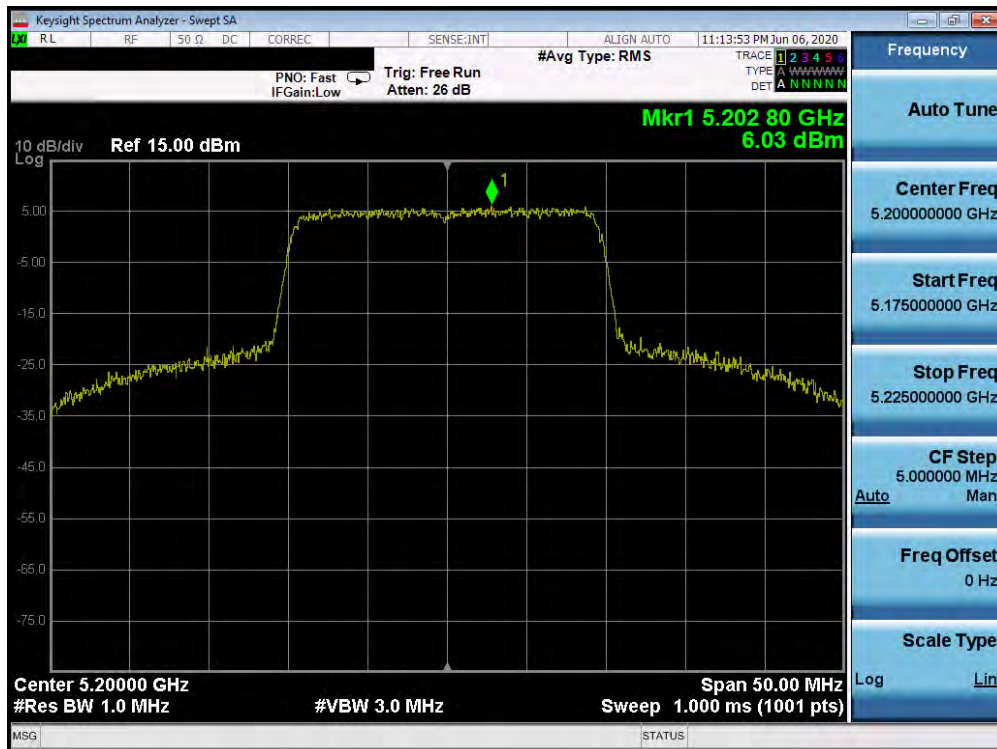
	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	ax (20MHz)	242T	MCS0	5.29	11.0	-5.71
	5200	40	ax (20MHz)	242T	MCS0	6.03	11.0	-4.97
	5240	48	ax (20MHz)	242T	MCS0	5.87	11.0	-5.13
	5190	38	ax (40MHz)	484T	MCS0	2.11	11.0	-8.89
	5230	46	ax (40MHz)	484T	MCS0	2.14	11.0	-8.86
	5210	42	ax (80MHz)	996T	MCS0	-1.43	11.0	-12.43
Band 2A	5260	52	ax (20MHz)	242T	MCS0	6.33	11.0	-4.67
	5280	56	ax (20MHz)	242T	MCS0	6.35	11.0	-4.65
	5320	64	ax (20MHz)	242T	MCS0	5.38	11.0	-5.62
	5270	54	ax (40MHz)	484T	MCS0	2.64	11.0	-8.36
	5310	62	ax (40MHz)	484T	MCS0	1.56	11.0	-9.44
	5290	58	ax (80MHz)	996T	MCS0	-2.44	11.0	-13.44
Band 2C	5500	100	ax (20MHz)	242T	MCS0	5.45	11.0	-5.55
	5580	116	ax (20MHz)	242T	MCS0	4.63	11.0	-6.37
	5700	140	ax (20MHz)	242T	MCS0	5.91	11.0	-5.09
	5510	102	ax (40MHz)	484T	MCS0	2.37	11.0	-8.63
	5590	118	ax (40MHz)	484T	MCS0	1.47	11.0	-9.53
	5710	142	ax (40MHz)	484T	MCS0	2.05	11.0	-8.95
	5530	106	ax (80MHz)	996T	MCS0	-1.74	11.0	-12.74
	5610	122	ax (80MHz)	996T	MCS0	-1.88	11.0	-12.88
	5690	138	ax (80MHz)	996T	MCS0	-4.32	11.0	-15.32

Table 7-61. Conducted Power Spectral Density Measurements SISO ANT2 (Full Tones)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 149 of 292

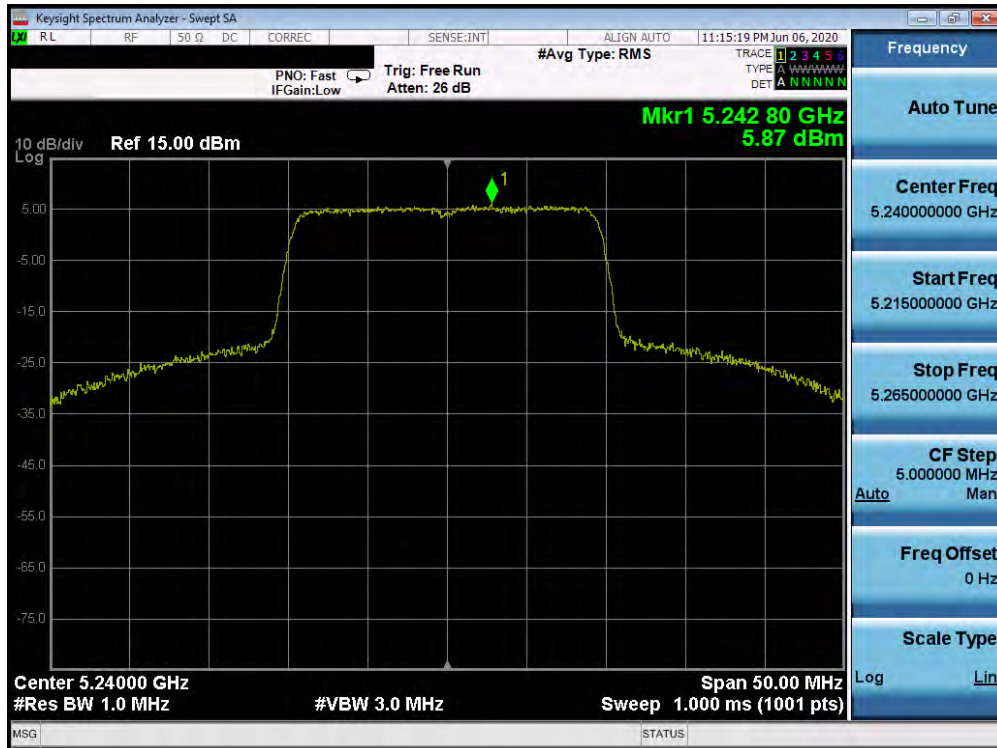


Plot 7-190. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 1) – Ch. 36)

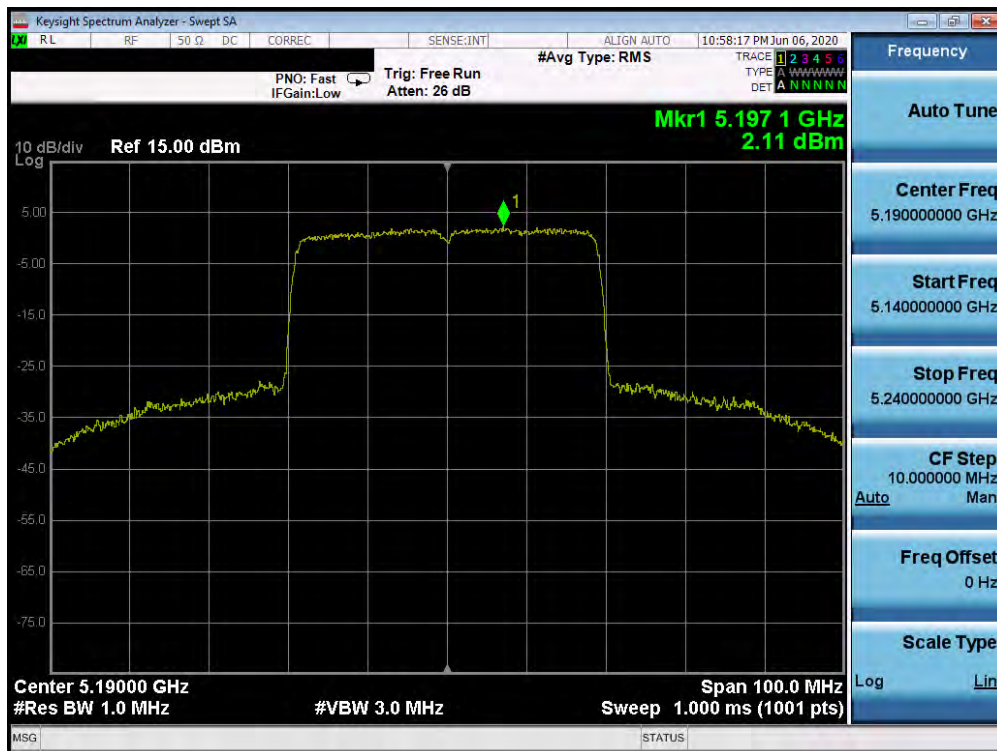


Plot 7-191. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 1) – Ch. 40)

FCC ID: A3LSMN986U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 150 of 292

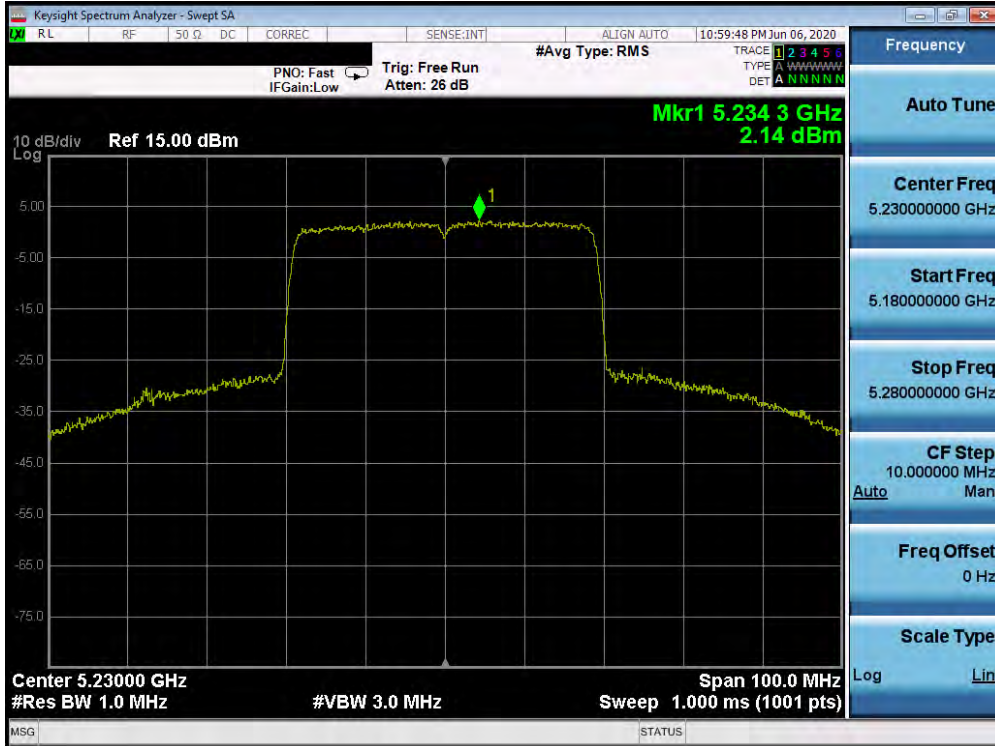


Plot 7-192. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 1) – Ch. 48)

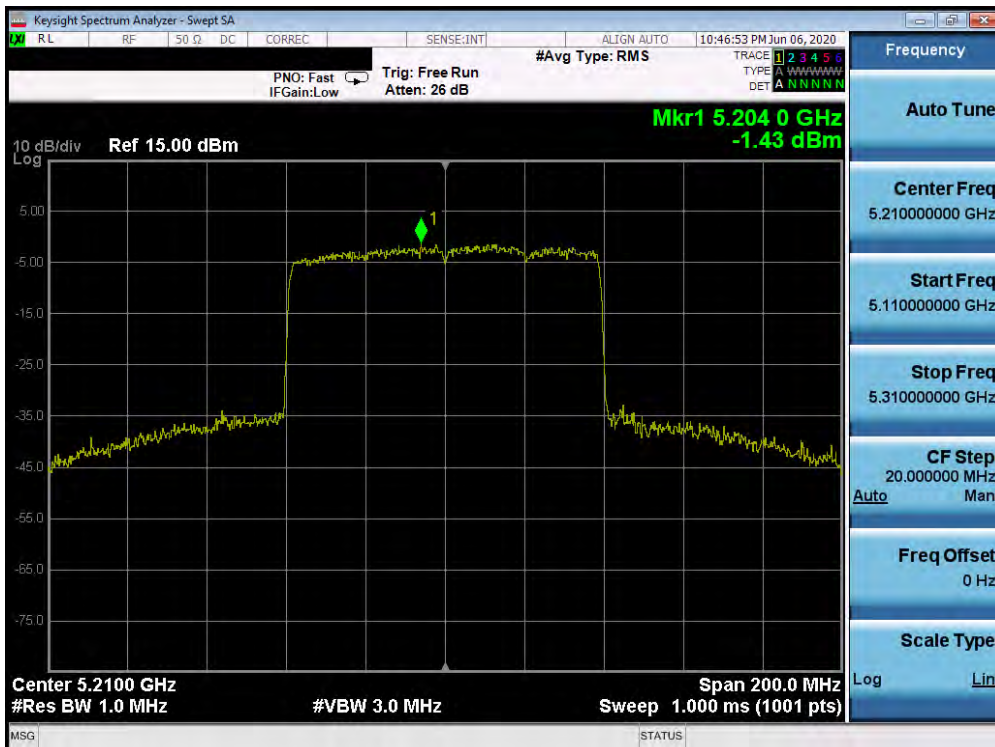


Plot 7-193. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – Full Tones (UNII Band 1) – Ch. 38)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 151 of 292

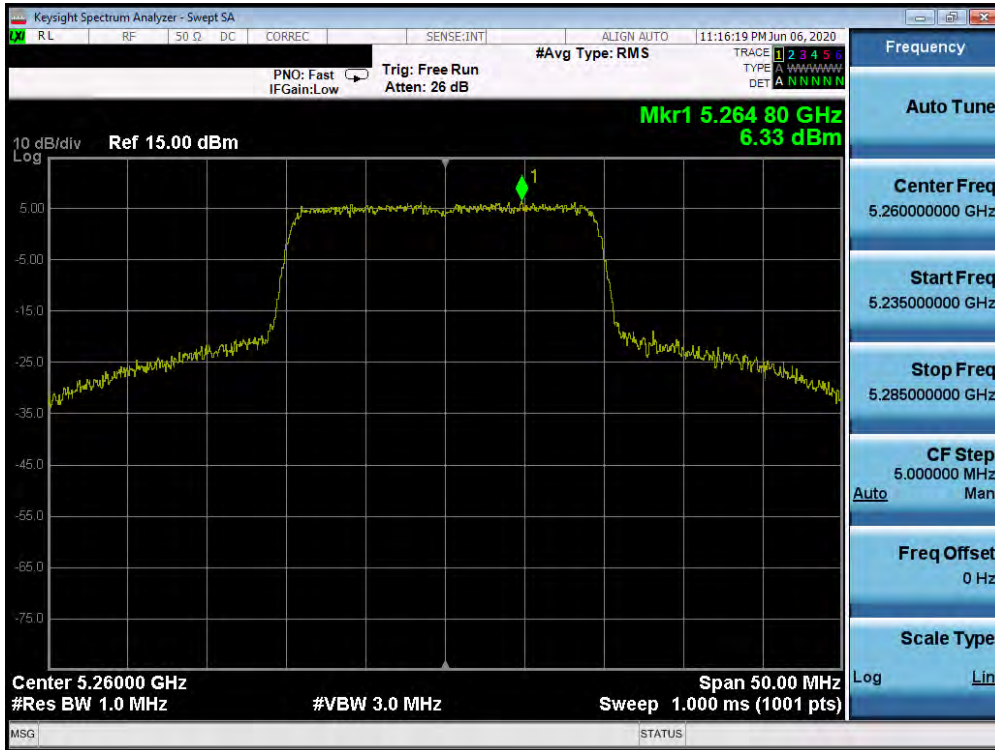


Plot 7-194. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – Full Tones (UNII Band 1) – Ch. 46)

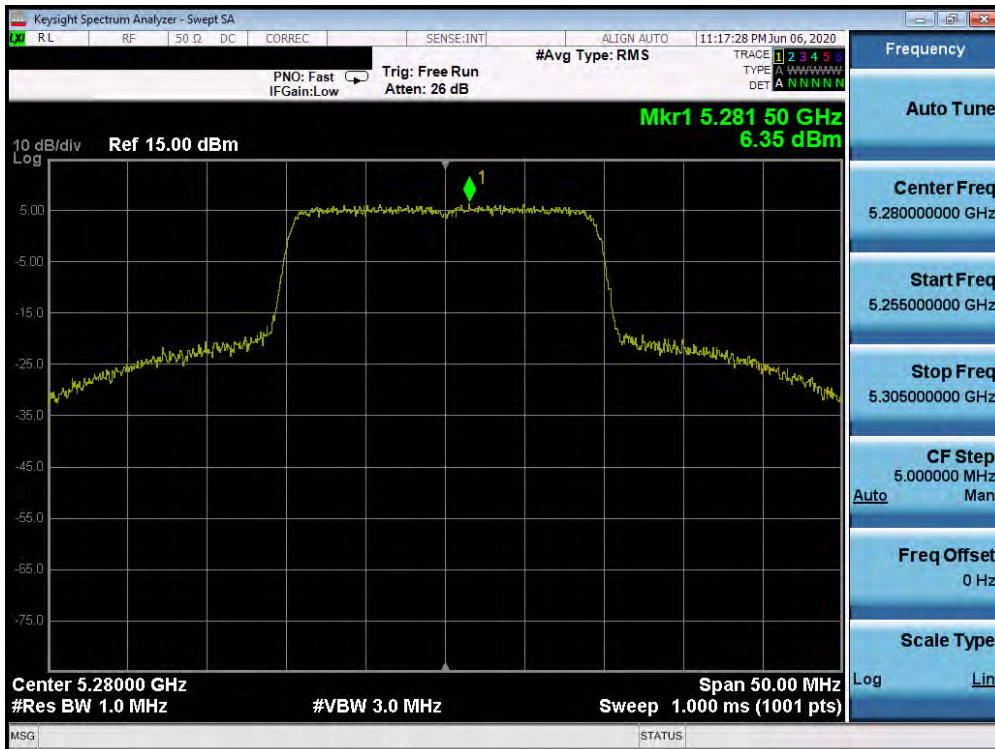


Plot 7-195. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – Full Tones (UNII Band 1) – Ch. 42)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 152 of 292

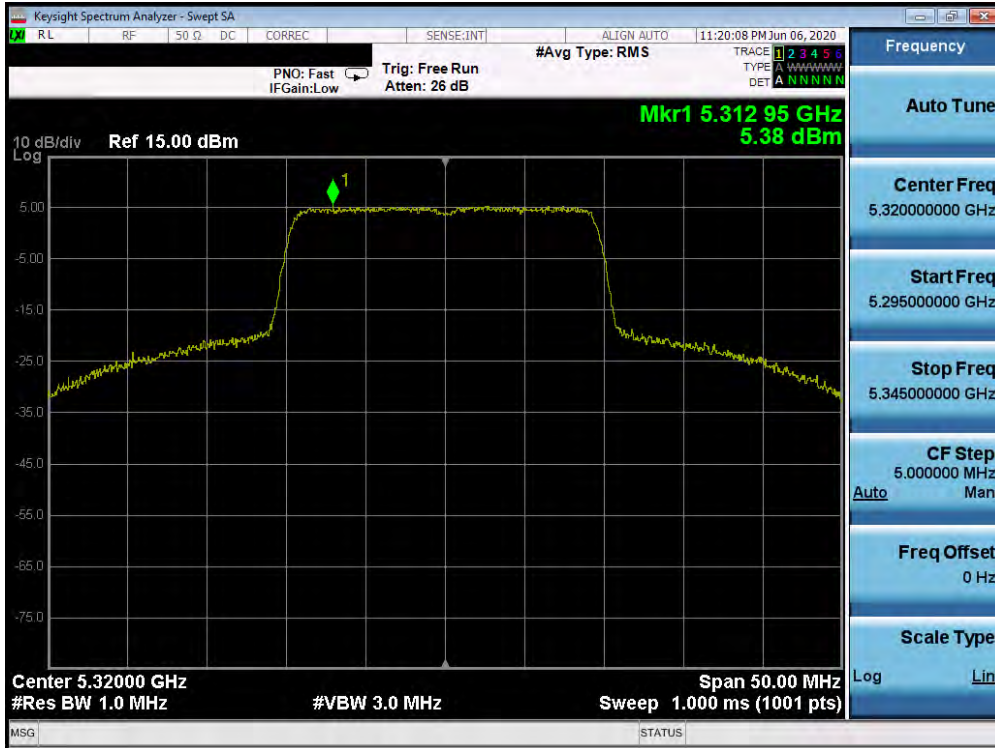


Plot 7-196. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 2A) – Ch. 52)

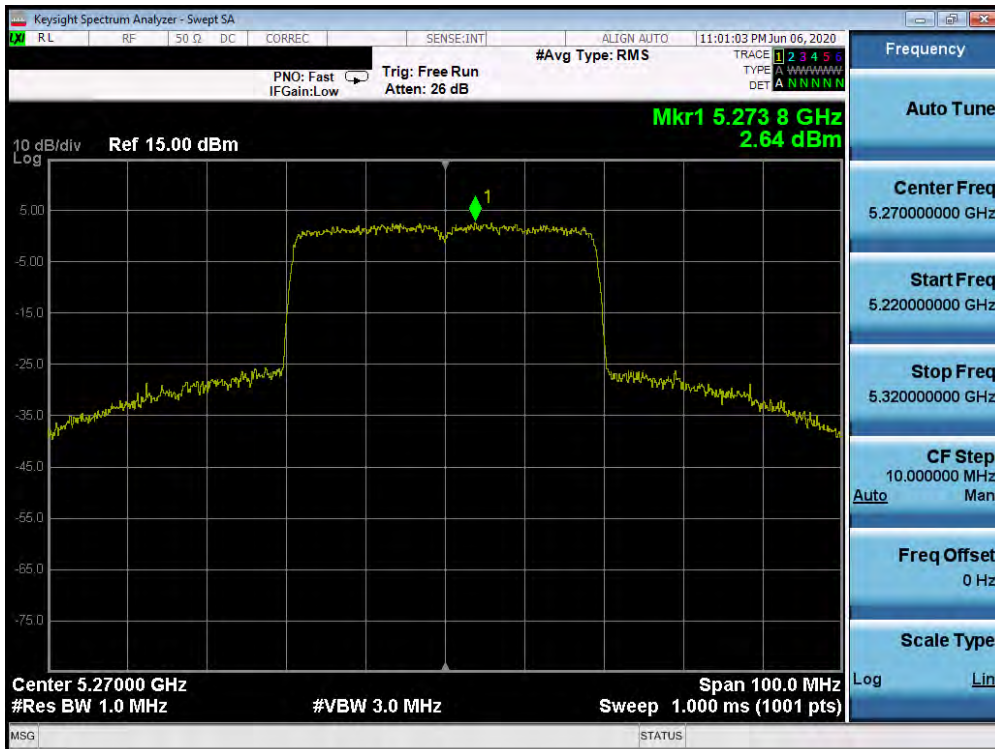


Plot 7-197. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 2A) – Ch. 56)

FCC ID: A3LSMN986U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 153 of 292

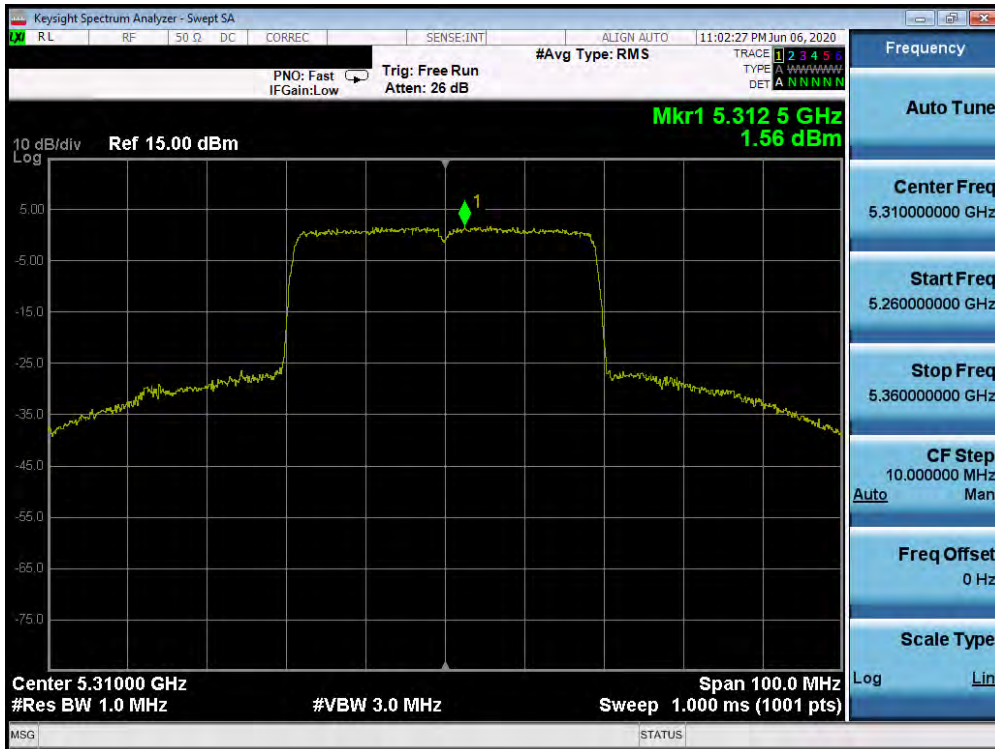


Plot 7-198. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 2A) – Ch. 64)

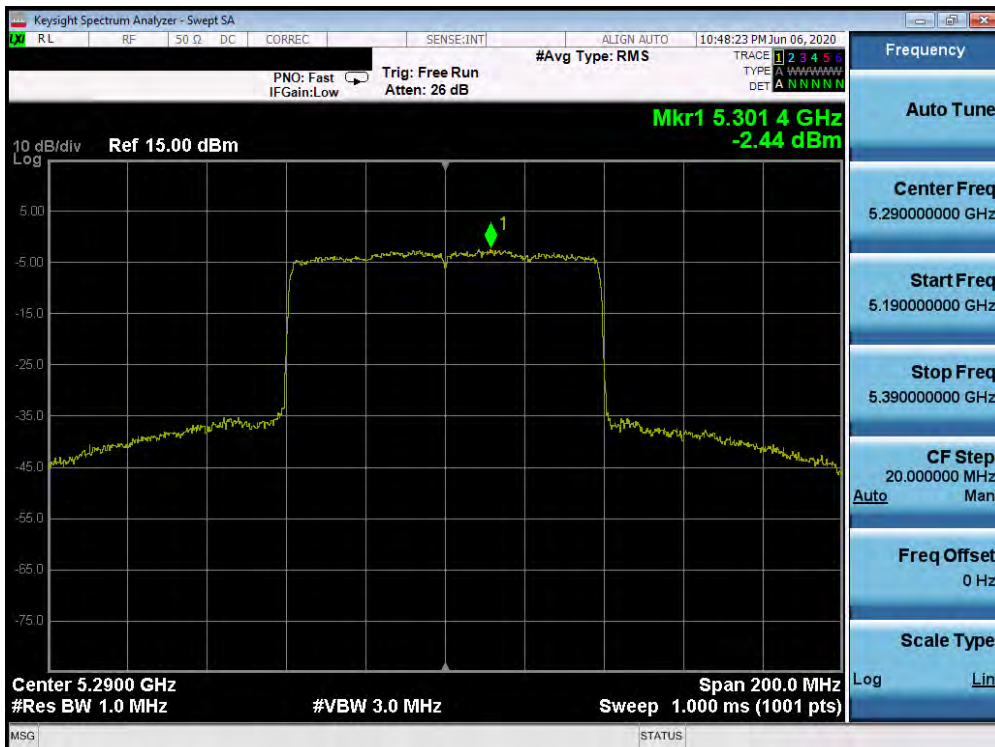


Plot 7-199. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – Full Tones (UNII Band 2A) – Ch. 54)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 154 of 292

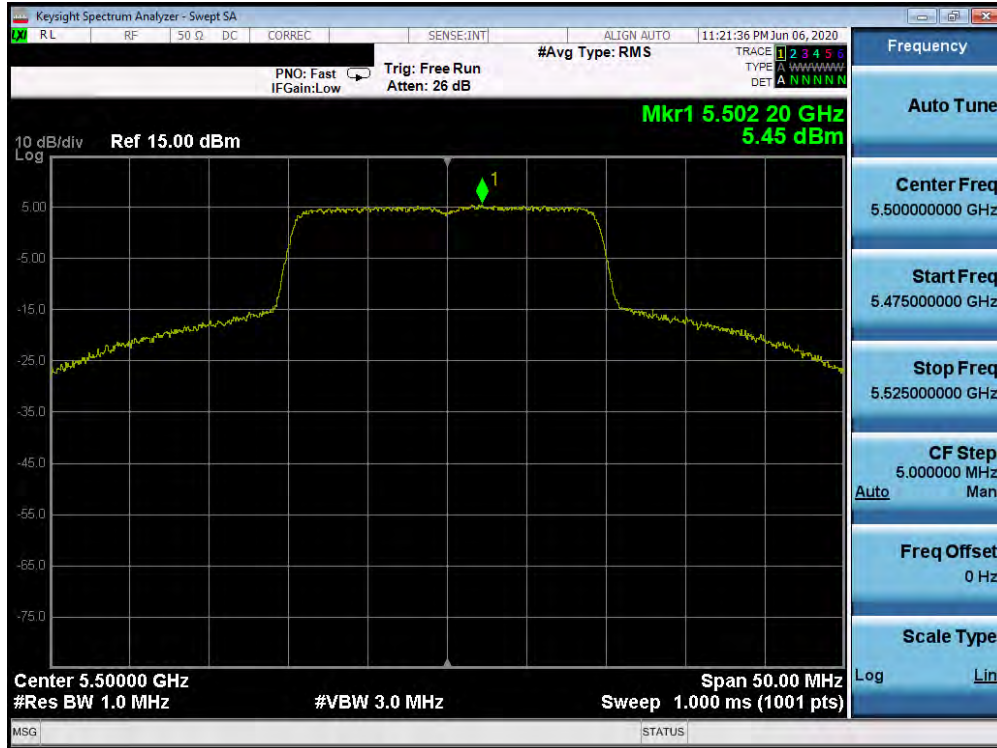


Plot 7-200. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – Full Tones (UNII Band 2A) – Ch. 62)

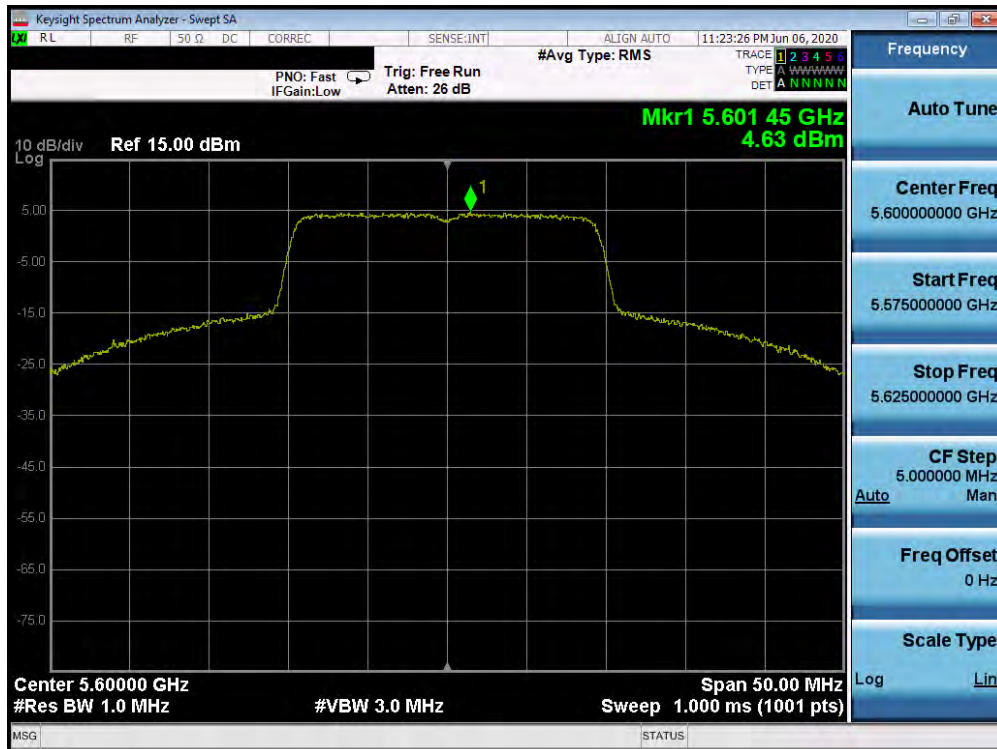


Plot 7-201. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – Full Tones (UNII Band 2A) – Ch. 58)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 155 of 292

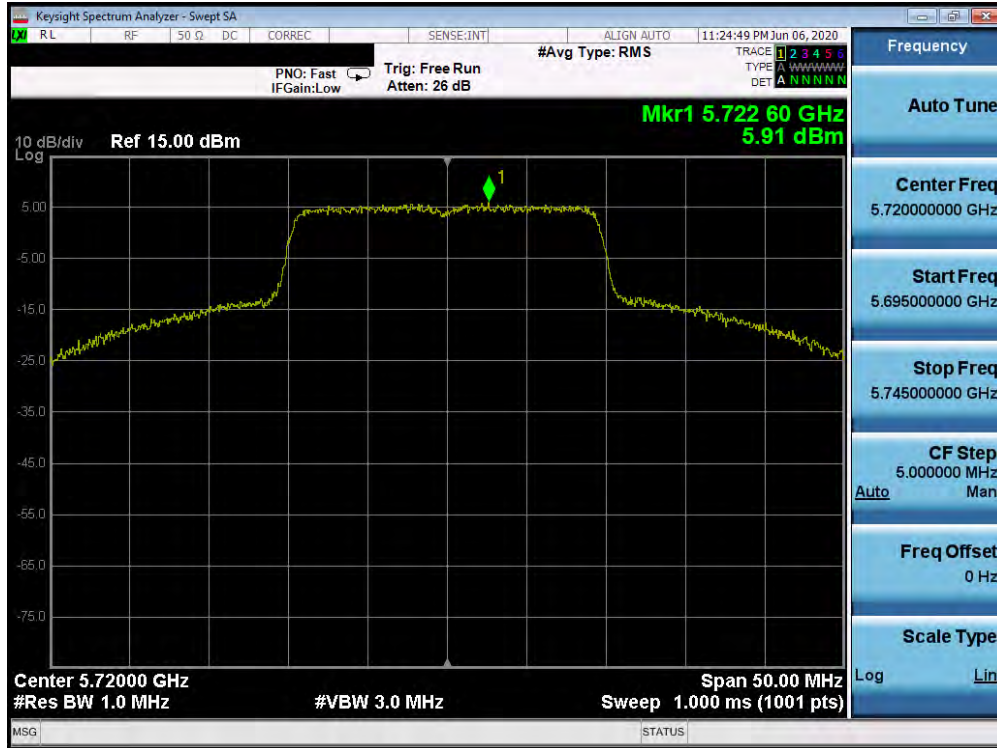


Plot 7-202. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 100)

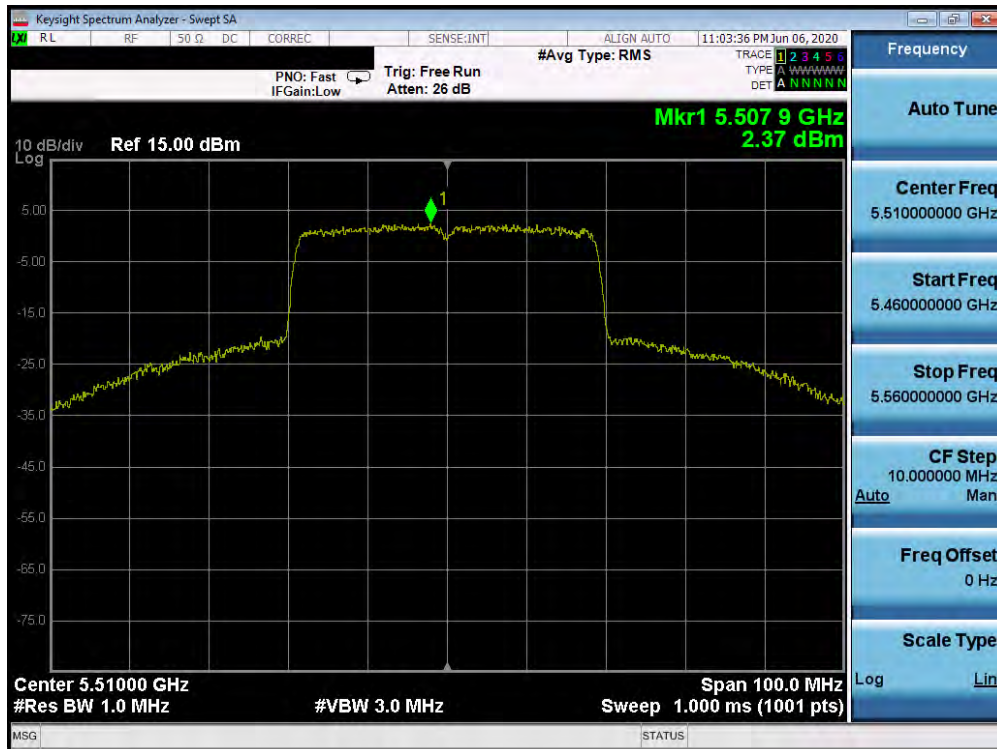


Plot 7-203. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 120)

FCC ID: A3LSMN986U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 156 of 292

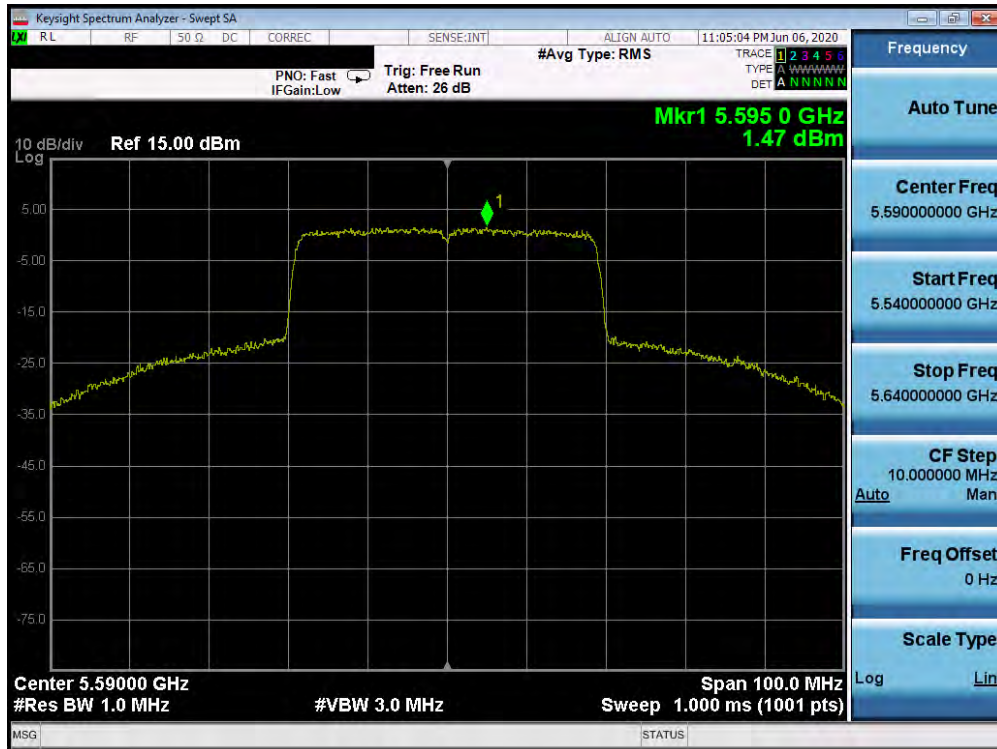


Plot 7-204. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 144)

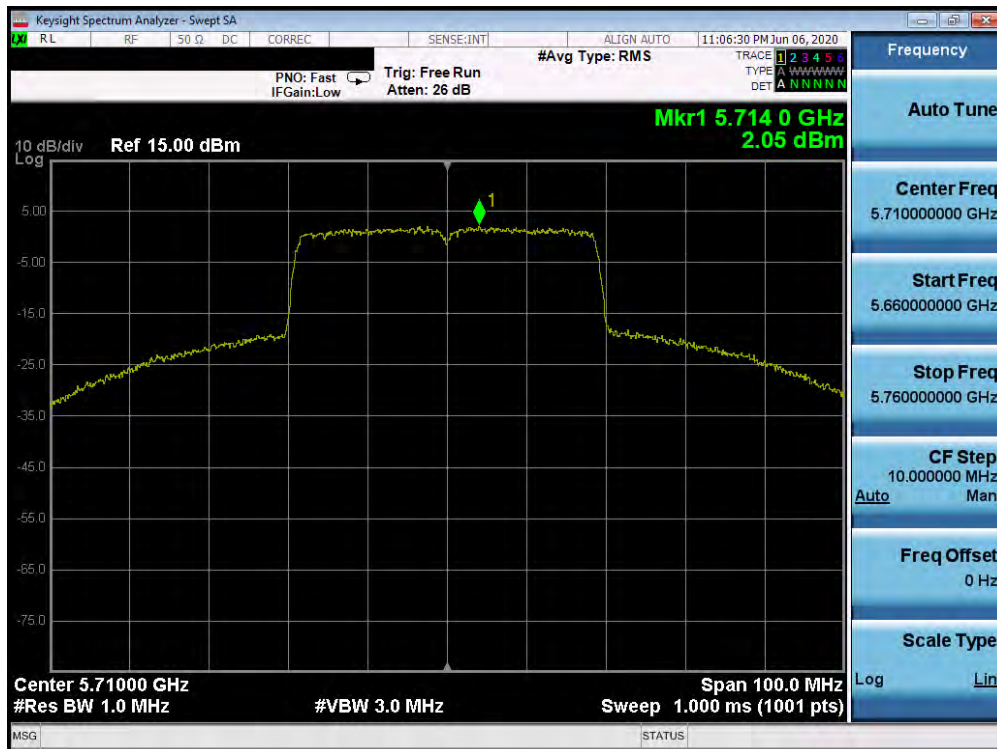


Plot 7-205. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 102)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 157 of 292

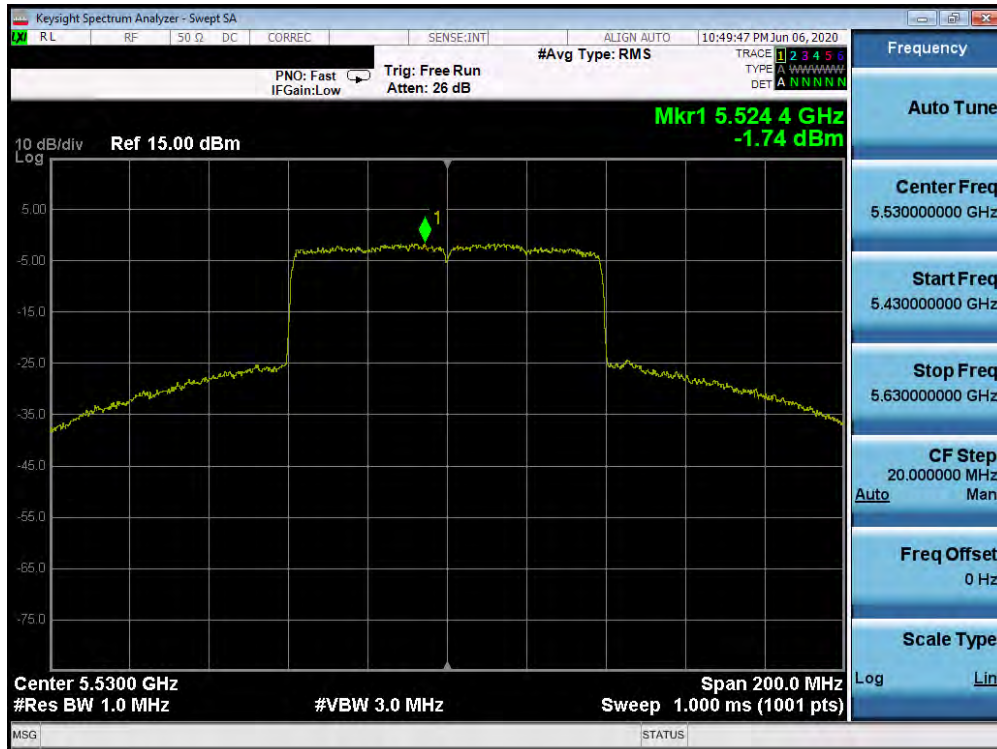


Plot 7-206. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 118)

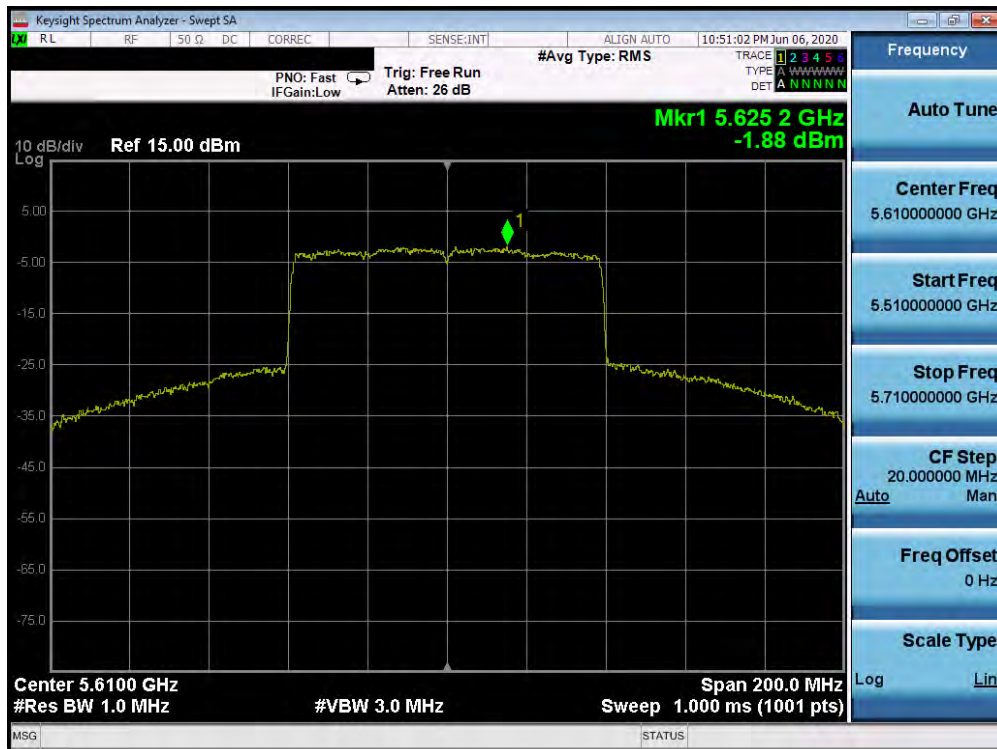


Plot 7-207. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 142)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 158 of 292

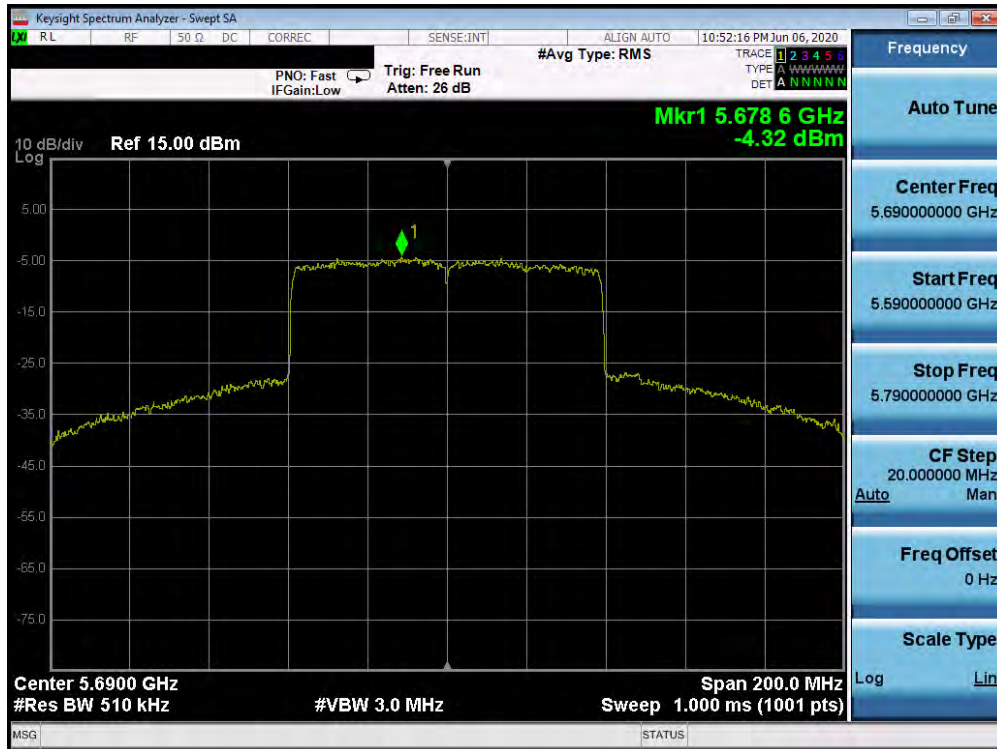


Plot 7-208. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 106)



Plot 7-209. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 122)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 159 of 292



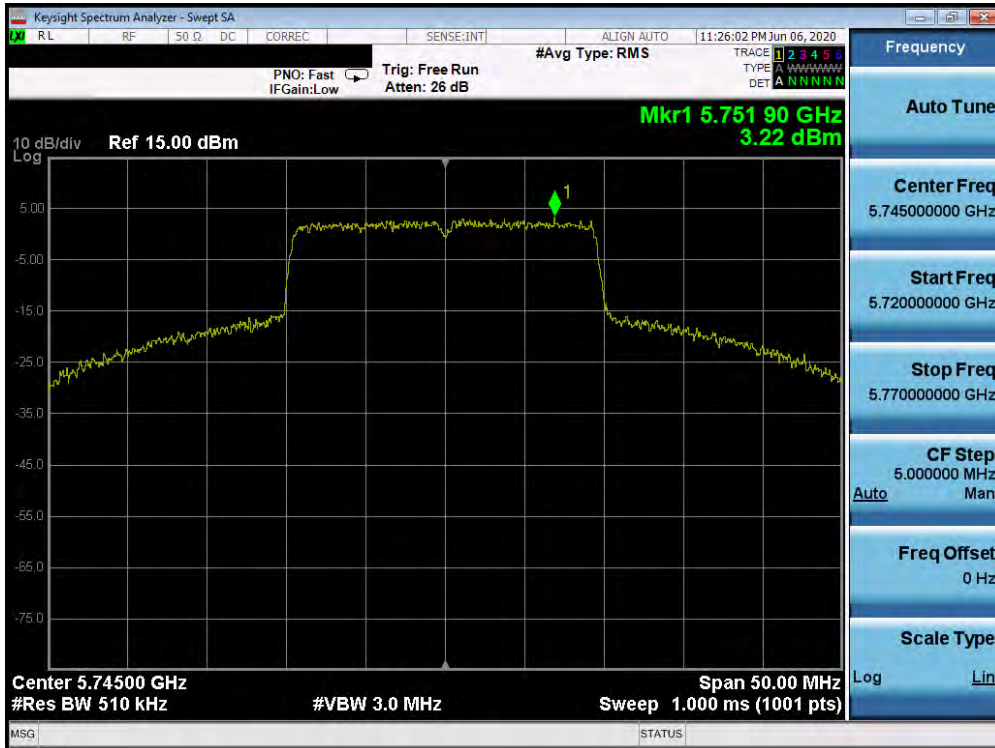
Plot 7-210. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 138)

FCC ID: A3LSMN986U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 160 of 292

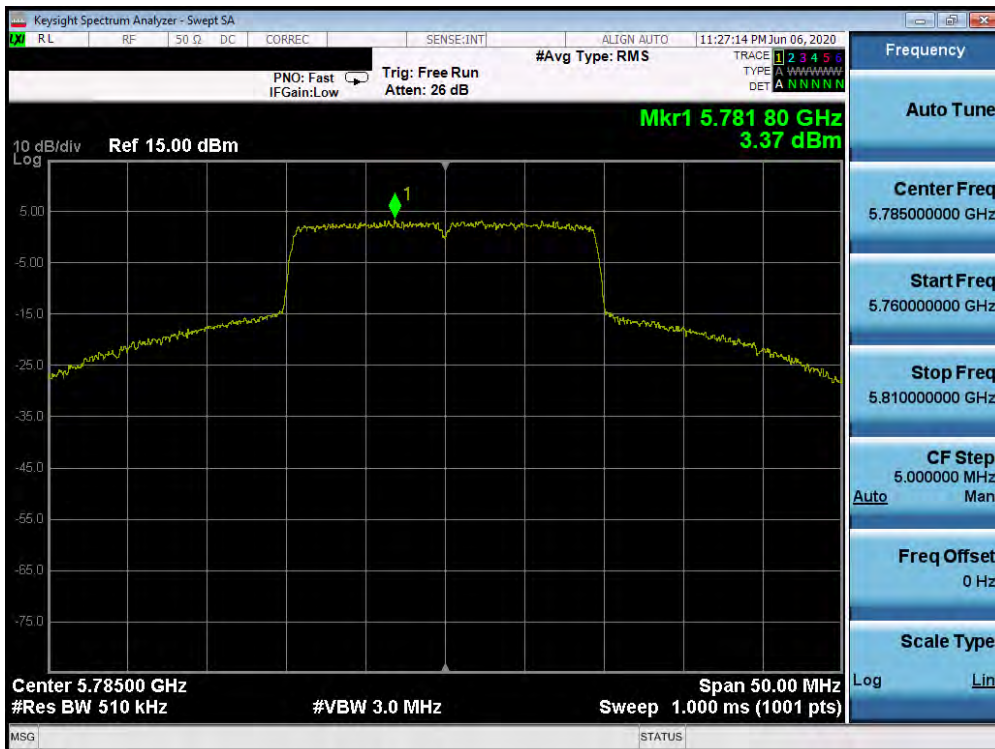
	Frequency [MHz]	Channel No.	802.11 Mode	Tones	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density	Margin [dB]
Band 3	5745	149	ax (20MHz)	242T	MCS0	3.22	30.00	-26.78
	5785	157	ax (20MHz)	242T	MCS0	3.37	30.00	-26.63
	5825	165	ax (20MHz)	242T	MCS0	2.93	30.00	-27.07
	5755	151	ax (40MHz)	484T	MCS0	-0.28	30.00	-30.28
	5795	159	ax (40MHz)	484T	MCS0	-0.24	30.00	-30.24
	5775	155	ax (80MHz)	996T	MCS0	-1.64	30.00	-31.64

Table 7-62. Band 3 Conducted Power Spectral Density Measurements SISO ANT2 (Full Tones)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 161 of 292

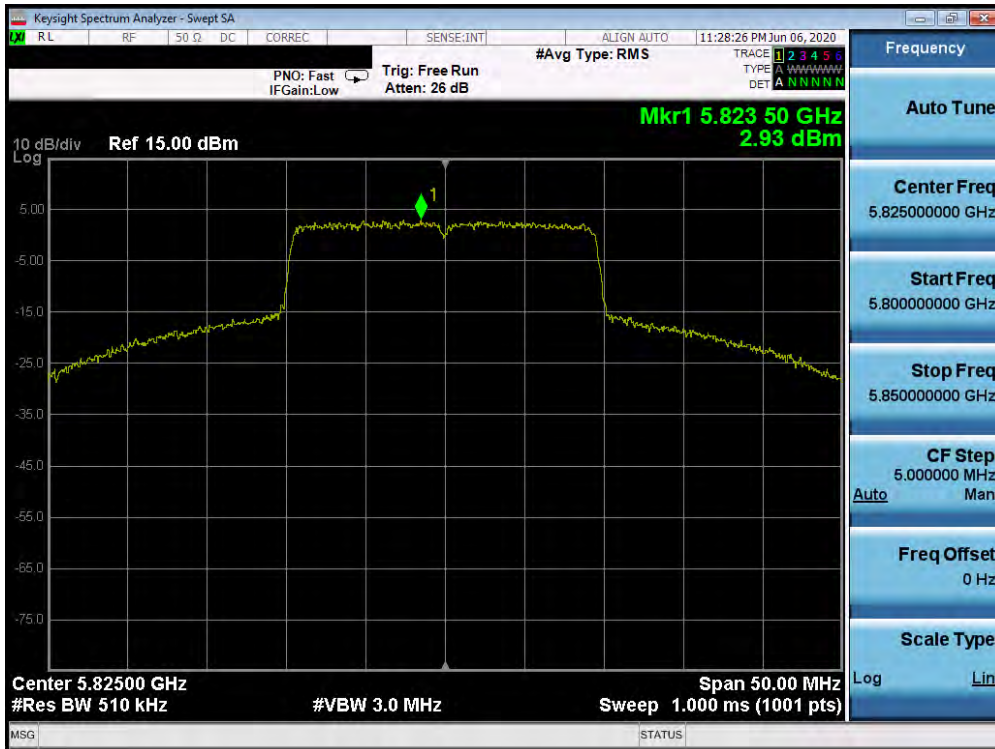


Plot 7-211. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 149)

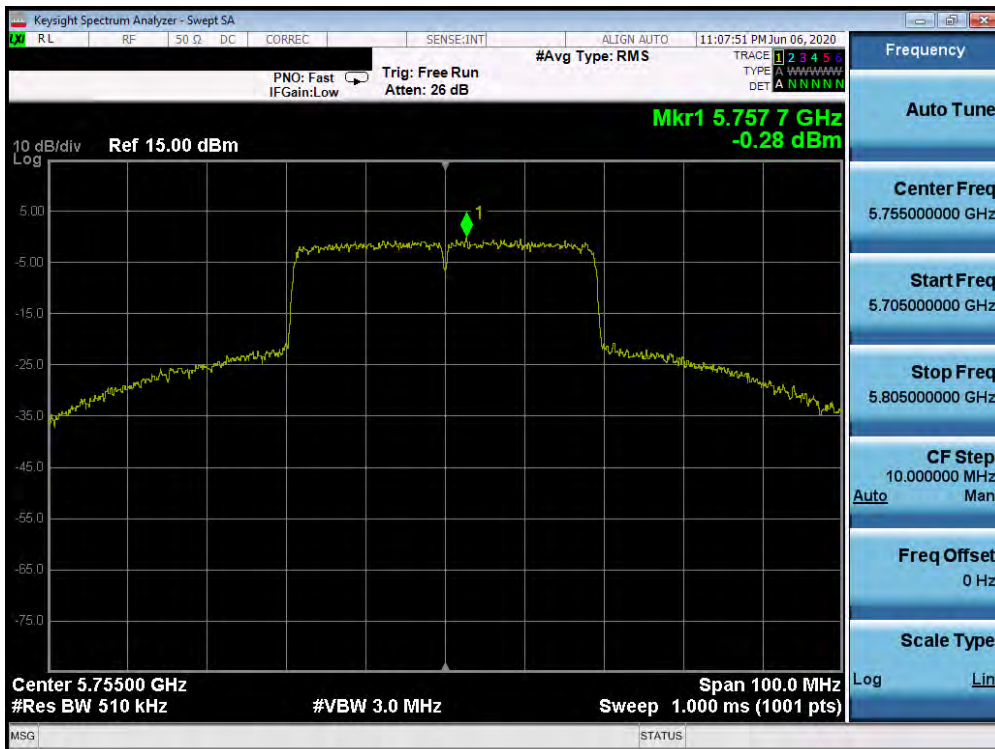


Plot 7-212. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 157)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 162 of 292

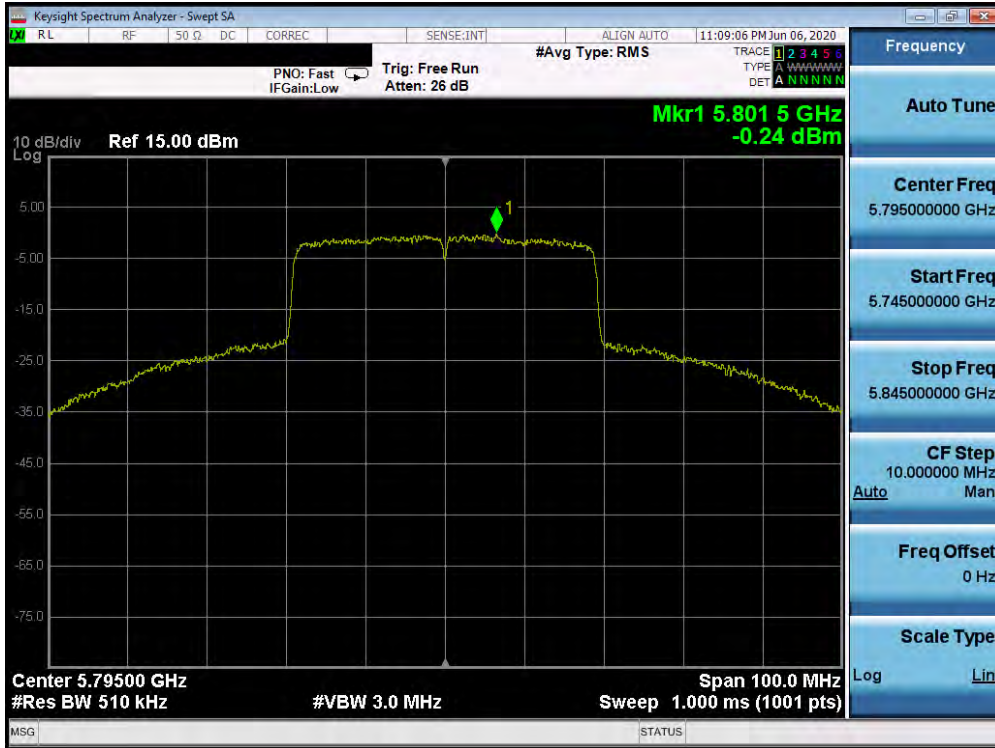


Plot 7-213. Power Spectral Density Plot SISO ANT2 (20 MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 165)

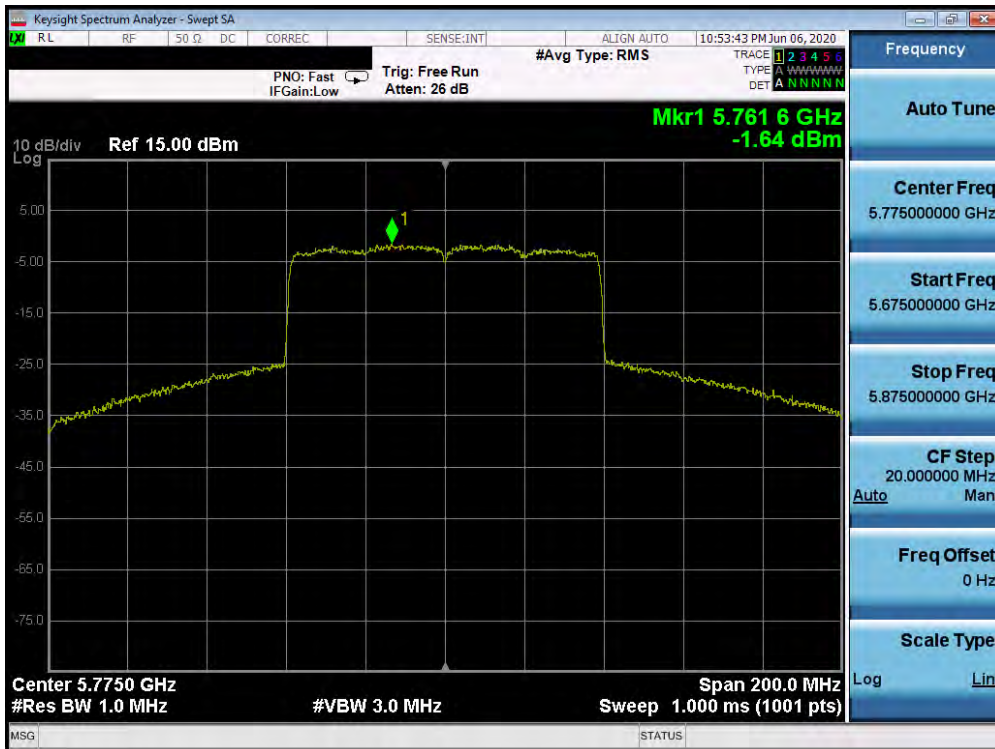


Plot 7-214. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 151)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 163 of 292



Plot 7-215. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 159)



Plot 7-216. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 155)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 164 of 292

Summed 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	4.19	5.01	7.63	11.00	-3.37
	5200	40	ax (20MHz)	26T	MCS0	4.33	5.17	7.78	11.00	-3.22
	5240	48	ax (20MHz)	26T	MCS0	4.61	5.23	7.94	11.00	-3.06
	5190	38	ax (40MHz)	26T	MCS0	4.56	5.21	7.91	11.00	-3.09
	5230	46	ax (40MHz)	26T	MCS0	5.18	5.55	8.38	11.00	-2.62
	5210	42	ax (80MHz)	26T	MCS0	3.89	4.48	7.21	11.00	-3.79
Band 2A	5260	52	ax (20MHz)	26T	MCS0	4.57	5.13	7.87	11.00	-3.13
	5280	56	ax (20MHz)	26T	MCS0	4.31	4.83	7.59	11.00	-3.41
	5320	64	ax (20MHz)	26T	MCS0	4.45	4.44	7.46	11.00	-3.54
	5270	54	ax (40MHz)	26T	MCS0	4.50	4.86	7.69	11.00	-3.31
	5310	62	ax (40MHz)	26T	MCS0	4.56	4.62	7.60	11.00	-3.40
	5290	58	ax (80MHz)	26T	MCS0	3.43	3.78	6.62	11.00	-4.38
Band 2C	5500	100	ax (20MHz)	26T	MCS0	5.03	4.69	7.87	11.00	-3.13
	5600	120	ax (20MHz)	26T	MCS0	5.13	4.51	7.84	11.00	-3.16
	5720	144	ax (20MHz)	26T	MCS0	5.10	5.45	8.29	11.00	-2.71
	5510	102	ax (40MHz)	26T	MCS0	5.38	4.35	7.91	11.00	-3.09
	5590	118	ax (40MHz)	26T	MCS0	5.10	4.73	7.93	11.00	-3.07
	5710	142	ax (40MHz)	26T	MCS0	4.86	4.90	7.89	11.00	-3.11
	5530	106	ax (80MHz)	26T	MCS0	4.27	3.95	7.12	11.00	-3.88
	5610	122	ax (80MHz)	26T	MCS0	4.84	4.11	7.50	11.00	-3.50
	5690	138	ax (80MHz)	26T	MCS0	-10.45	-9.87	-7.14	11.00	-18.14

Table 7-63. Bands 1, 2A, 2C MIMO 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]	Max Permissible Power Density	Margin [dB]
Band 3	5745	149	ax (20MHz)	26T	MCS0	3.29	3.50	6.41	30.00	-23.59
	5785	157	ax (20MHz)	26T	MCS0	3.14	4.11	6.66	30.00	-23.34
	5825	165	ax (20MHz)	26T	MCS0	2.86	3.69	6.31	30.00	-23.69
	5755	151	ax (40MHz)	26T	MCS0	2.51	2.99	5.77	30.00	-24.23
	5795	159	ax (40MHz)	26T	MCS0	3.51	4.30	6.93	30.00	-23.07
	5775	155	ax (80MHz)	26T	MCS0	4.53	5.21	7.89	30.00	-22.11

Table 7-64. Band 3 MIMO Conducted Power Spectral Density Measurements MIMO (26 Tones)


FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 165 of 292

	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	1.65	1.69	4.68	11.00	-6.32
	5200	40	ax (20MHz)	242T	MCS0	2.70	2.66	5.69	11.00	-5.31
	5240	48	ax (20MHz)	242T	MCS0	2.58	3.21	5.92	11.00	-5.08
	5190	38	ax (40MHz)	484T	MCS0	-2.90	-2.52	0.30	11.00	-10.70
	5230	46	ax (40MHz)	484T	MCS0	-2.48	-2.56	0.49	11.00	-10.51
	5210	42	ax (80MHz)	996T	MCS0	-7.68	-7.44	-4.55	11.00	-15.55
Band 2A	5260	52	ax (20MHz)	242T	MCS0	2.48	2.69	5.60	11.00	-5.40
	5280	56	ax (20MHz)	242T	MCS0	2.52	2.68	5.61	11.00	-5.39
	5320	64	ax (20MHz)	242T	MCS0	2.66	2.29	5.49	11.00	-5.51
	5270	54	ax (40MHz)	484T	MCS0	-3.00	-2.62	0.20	11.00	-10.80
	5310	62	ax (40MHz)	484T	MCS0	-4.03	-4.17	-1.09	11.00	-12.09
	5290	58	ax (80MHz)	996T	MCS0	-7.74	-8.00	-4.86	11.00	-15.86
Band 2C	5500	100	ax (20MHz)	242T	MCS0	2.75	2.53	5.65	11.00	-5.35
	5580	116	ax (20MHz)	242T	MCS0	2.89	2.12	5.53	11.00	-5.47
	5700	140	ax (20MHz)	242T	MCS0	2.83	2.67	5.76	11.00	-5.24
	5510	102	ax (40MHz)	484T	MCS0	-1.78	-1.93	1.16	11.00	-9.84
	5590	118	ax (40MHz)	484T	MCS0	-1.98	-2.53	0.76	11.00	-10.24
	5710	142	ax (40MHz)	484T	MCS0	-1.82	-1.51	1.35	11.00	-9.65
	5530	106	ax (80MHz)	996T	MCS0	-7.94	-6.94	-4.40	11.00	-15.40
	5610	122	ax (80MHz)	996T	MCS0	-8.05	-7.56	-4.79	11.00	-15.79
5690	138	ax (80MHz)	996T	MCS0	-9.42	-9.76	-6.58	11.00	-17.58	

Table 7-65. Bands 1, 2A, 2C MIMO Conducted Power Spectral Density Measurements MIMO (Full 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	Margin [dB]
Band 3	5745	149	ax (20MHz)	242T	MCS0	0.33	-0.12	3.12	30.00	-26.88
	5785	157	ax (20MHz)	242T	MCS0	-0.07	0.04	3.00	30.00	-27.00
	5825	165	ax (20MHz)	242T	MCS0	-0.62	-0.20	2.61	30.00	-27.39
	5755	151	ax (40MHz)	484T	MCS0	-3.99	-3.89	-0.93	30.00	-30.93
	5795	159	ax (40MHz)	484T	MCS0	-4.28	-3.72	-0.98	30.00	-30.98
	5775	155	ax (80MHz)	996T	MCS0	-6.33	-6.17	-3.24	30.00	-33.24

Table 7-66. Band 3 MIMO Conducted Power Spectral Density Measurements MIMO (Full Tones)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 166 of 292

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 manufacture's tune-up document. The measured values were then summed in linear power units then converted back to dBm.

Sample MIMO Calculation:

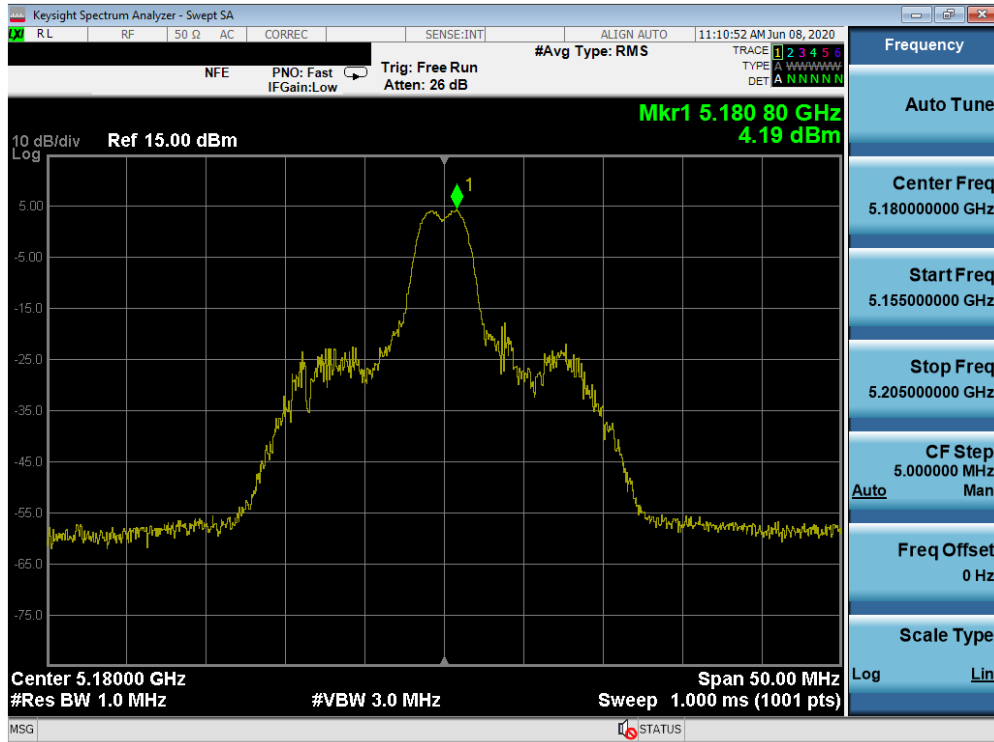
Assuming the average conducted power spectral density was measured to be 5.88 dBm for Antenna-1 and 6.27 dBm for Antenna-2.

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

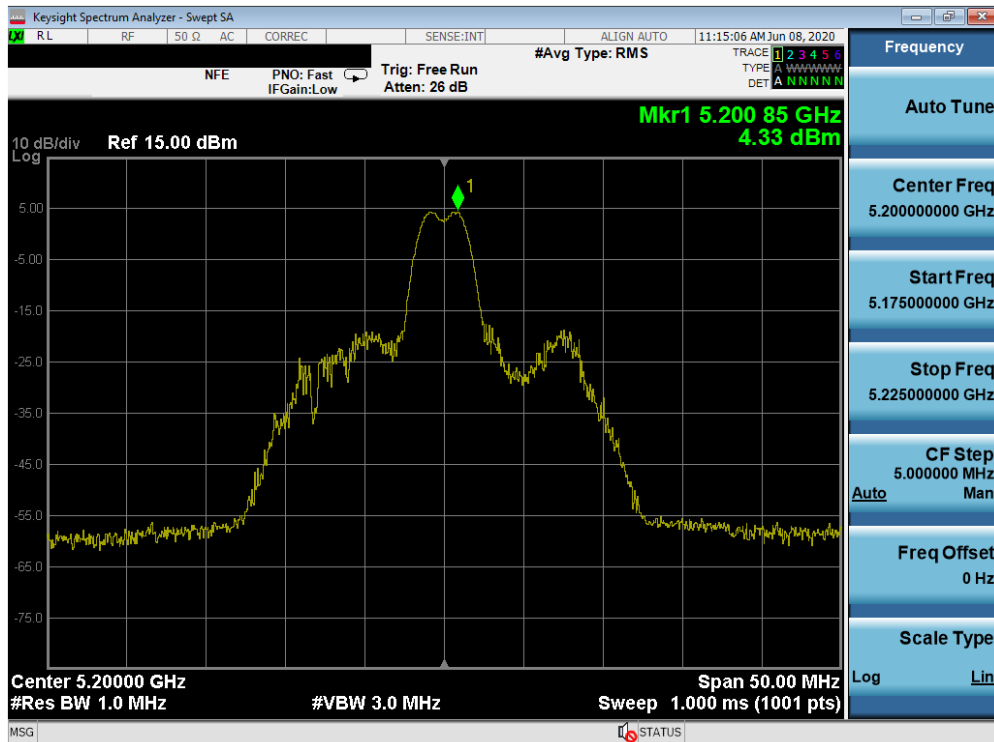
$$(5.88 \text{ dBm} + 6.27 \text{ dBm}) = (3.87 \text{ mW} + 4.24 \text{ mW}) = 8.11 \text{ mW} = 9.09 \text{ dBm}$$

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 167 of 292

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

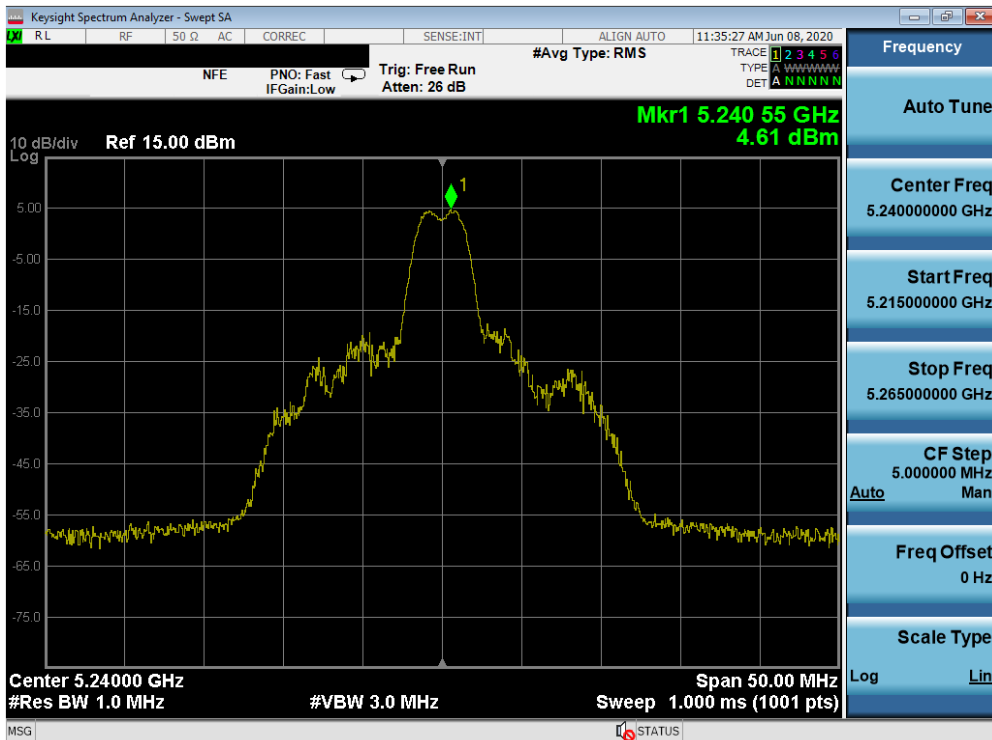


Plot 7-217. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – 26 Tones (UNII Band 1) – Ch. 36)

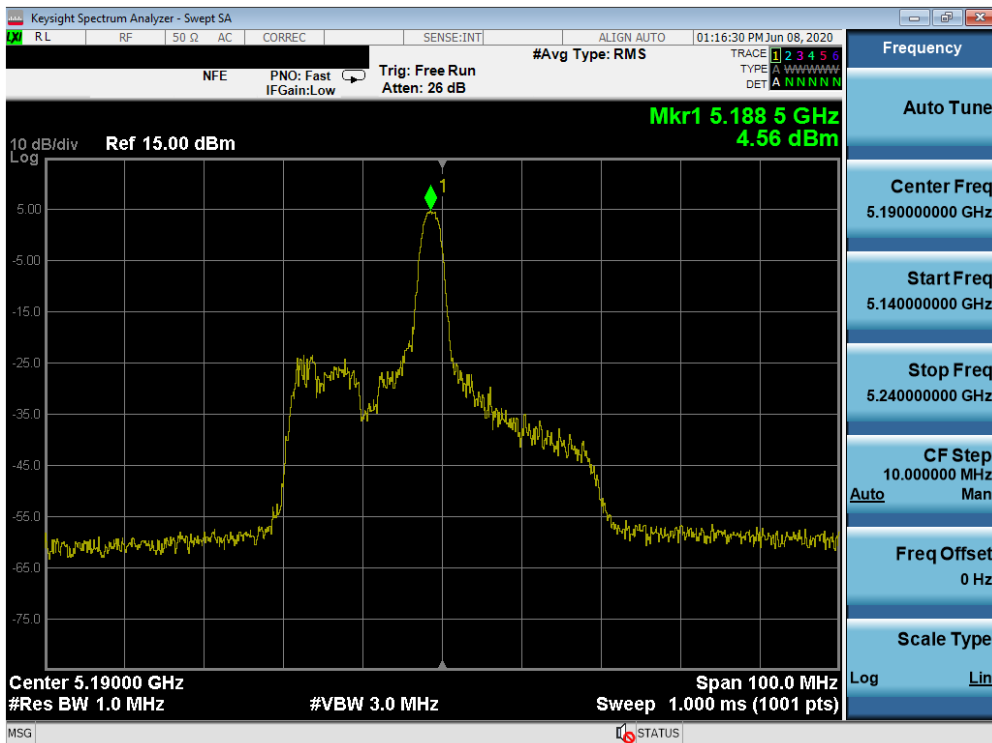


Plot 7-218. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – 26 Tones (UNII Band 1) – Ch. 40)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 168 of 292

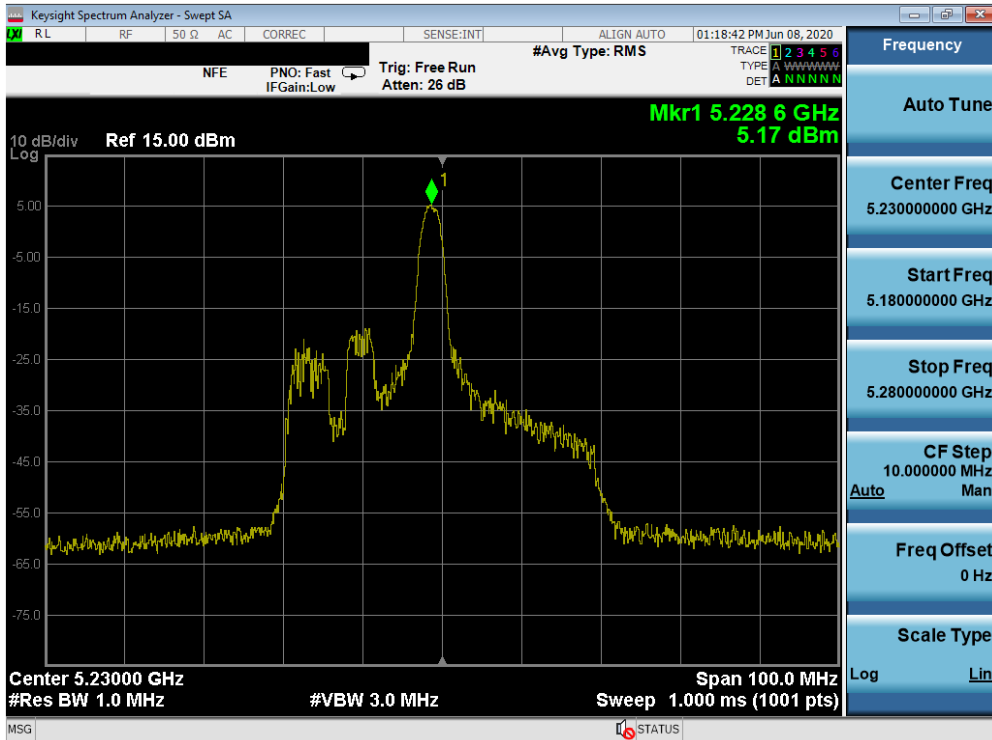


Plot 7-219. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – 26 Tones (UNII Band 1) – Ch. 48)

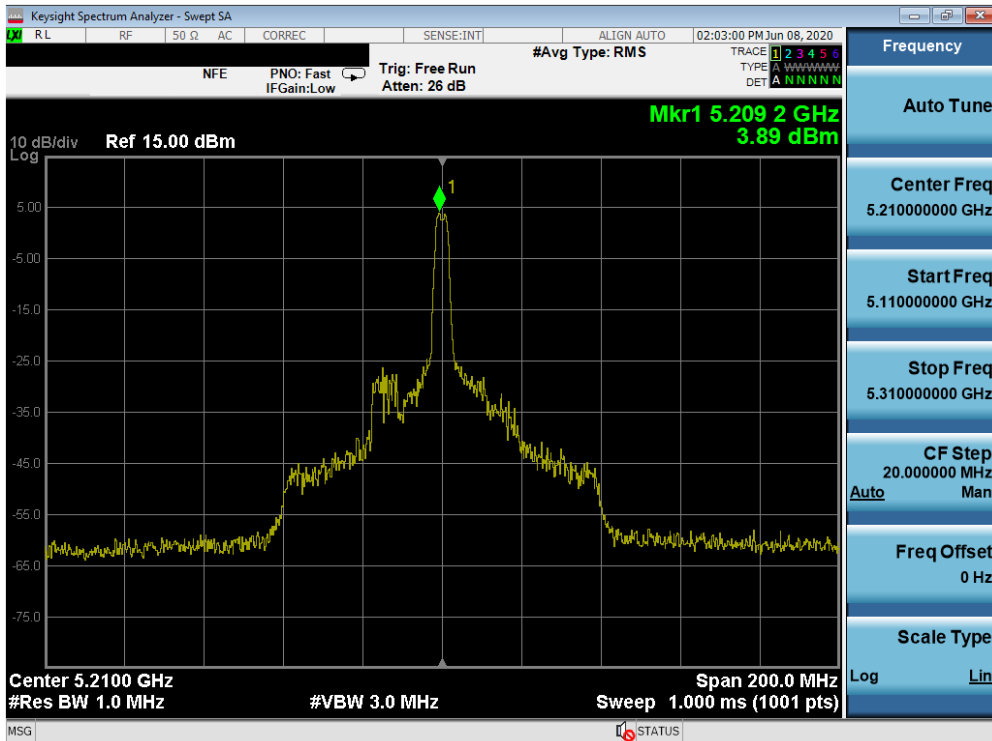


Plot 7-220. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – 26 Tones (UNII Band 1) – Ch. 38)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 169 of 292

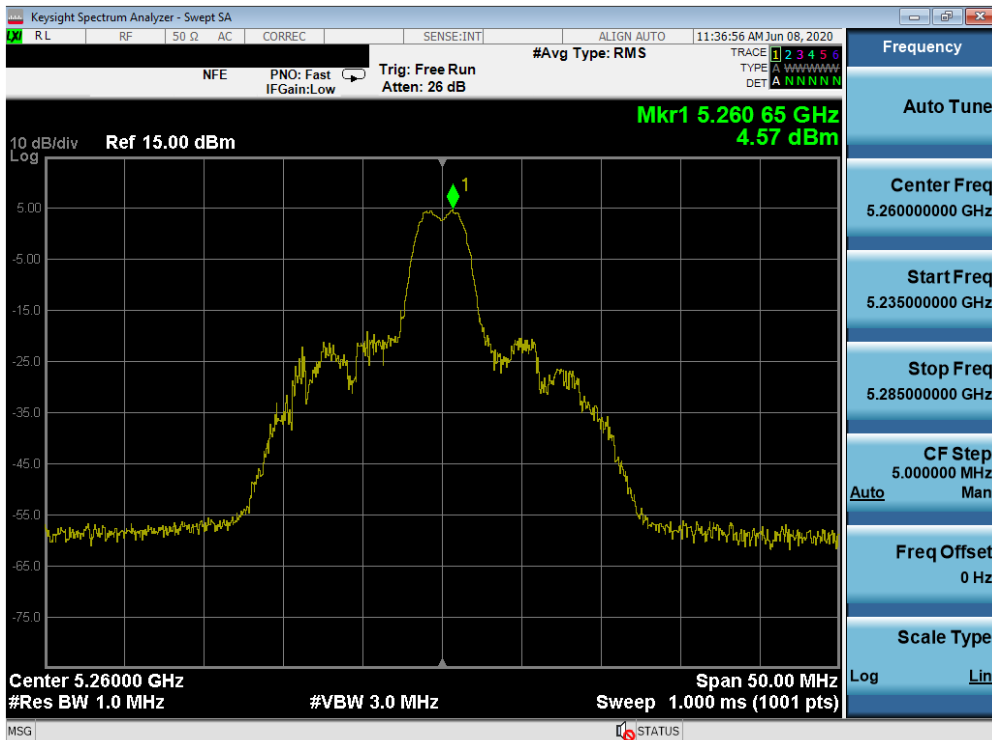


Plot 7-221. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – 26 Tones (UNII Band 1) – Ch. 46)

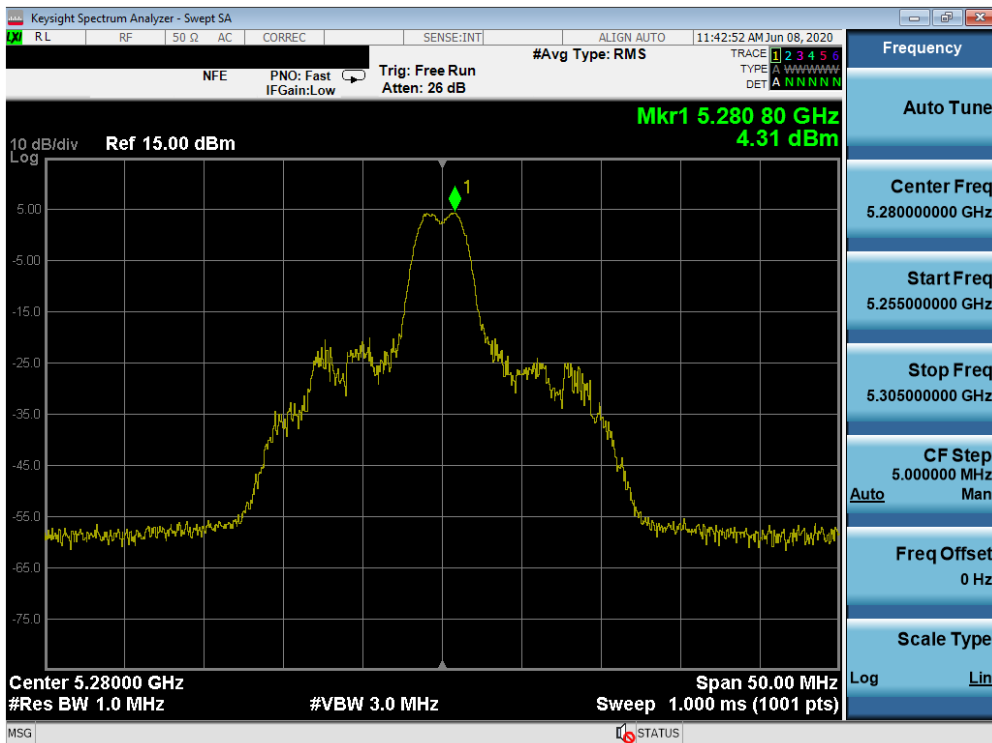


Plot 7-222. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax – 26 Tones (UNII Band 1) – Ch. 42)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 170 of 292

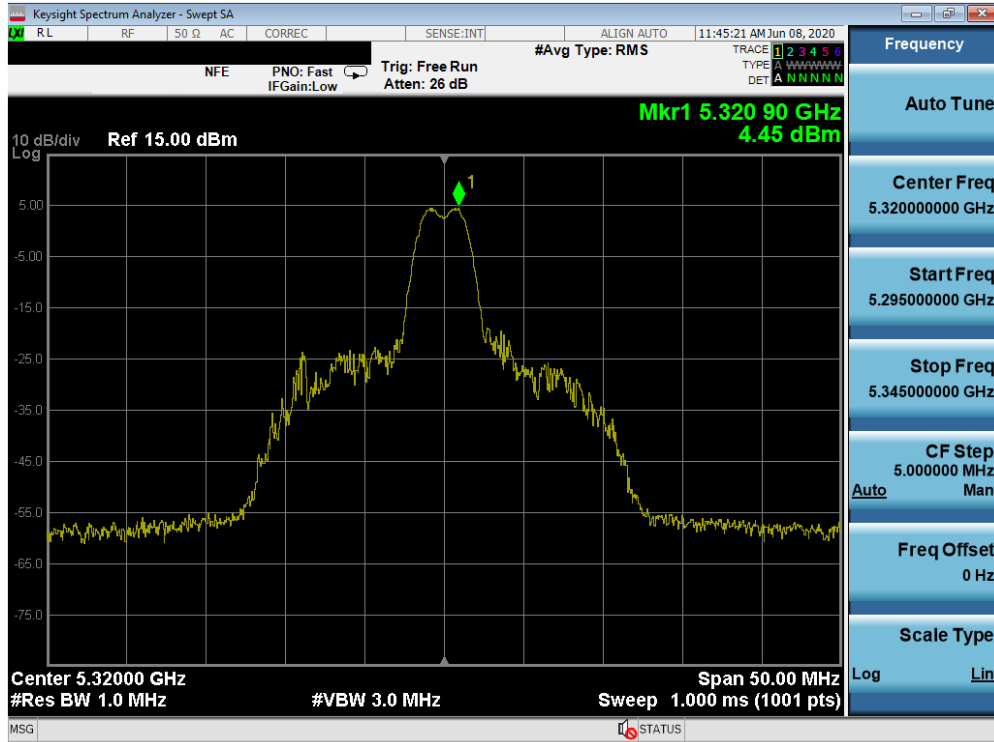


Plot 7-223. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – 26 Tones (UNII Band 2A) – Ch. 52)

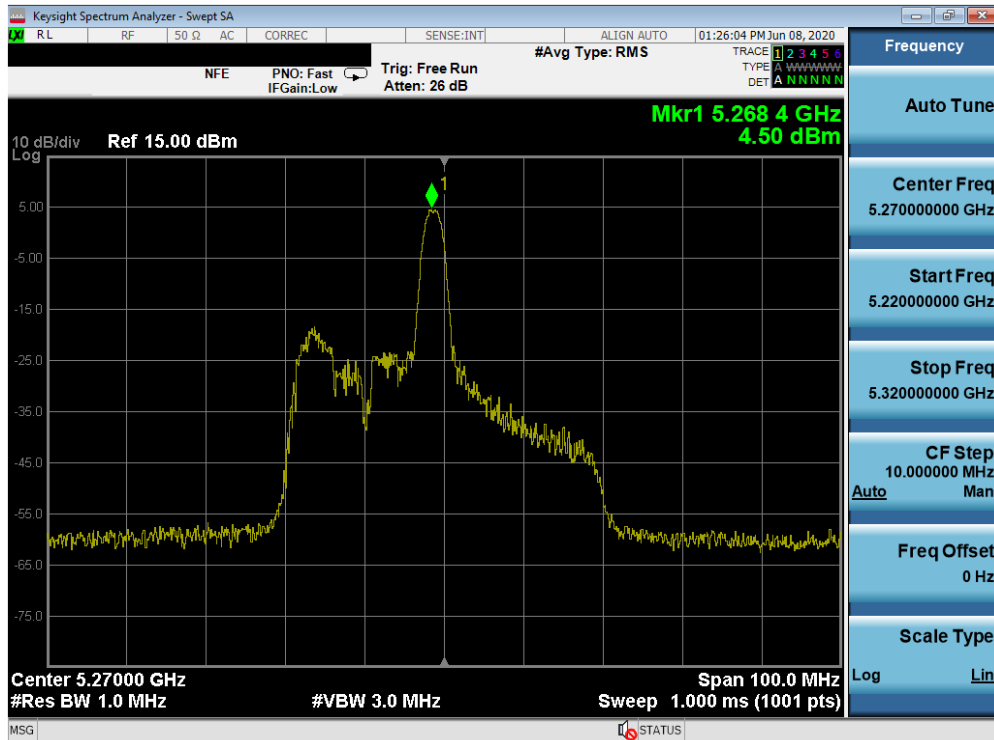


Plot 7-224. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – 26 Tones (UNII Band 2A) – Ch. 56)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 171 of 292

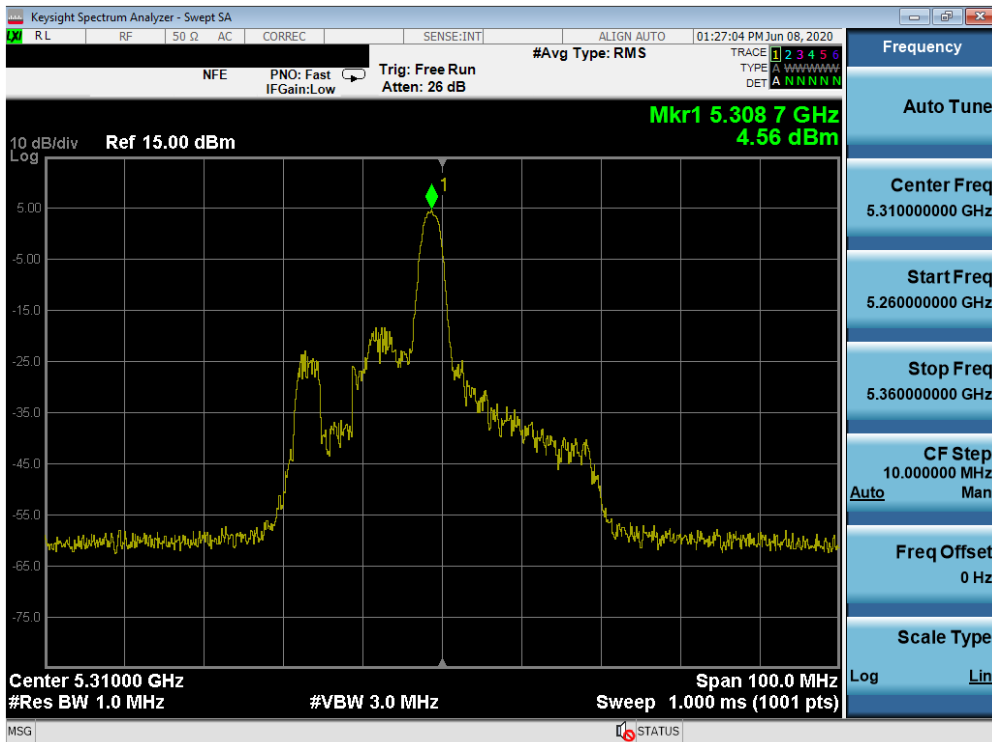


Plot 7-225. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – 26 Tones (UNII Band 2A) – Ch. 64)

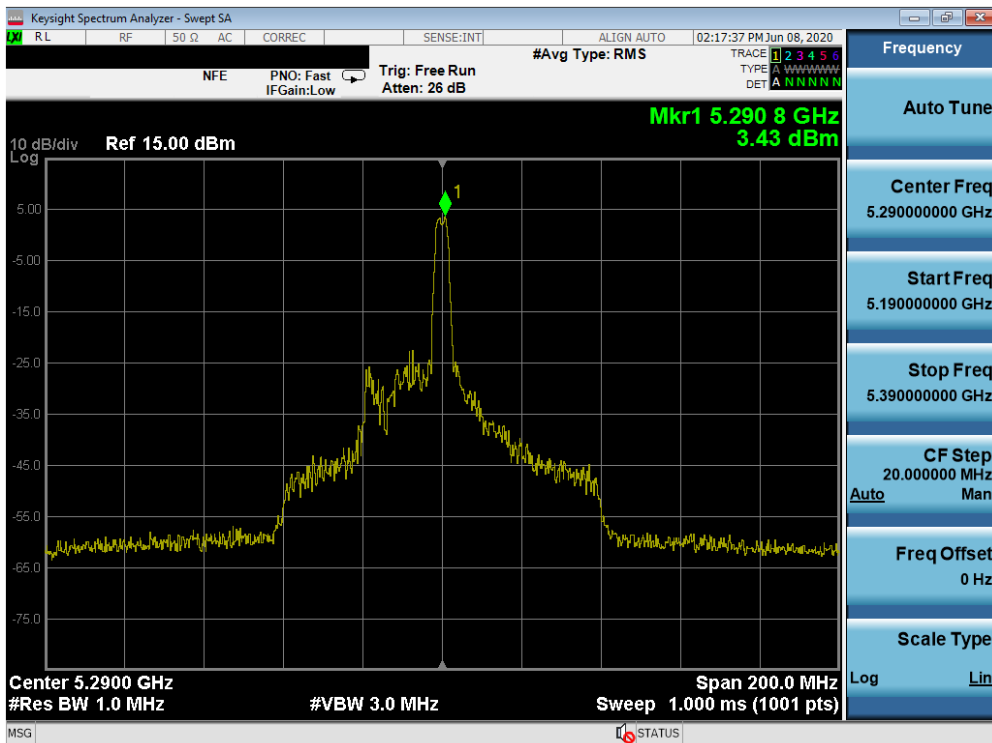


Plot 7-226. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – 26 Tones (UNII Band 2A) – Ch. 54)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 172 of 292

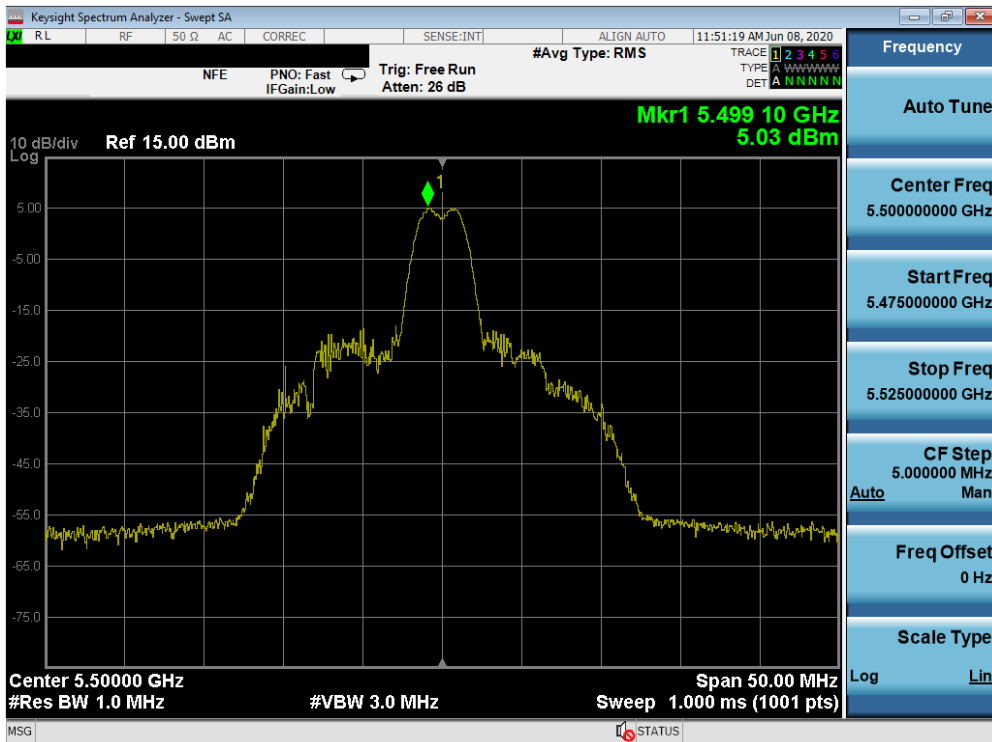


Plot 7-227. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – 26 Tones (UNII Band 2A) – Ch. 62)

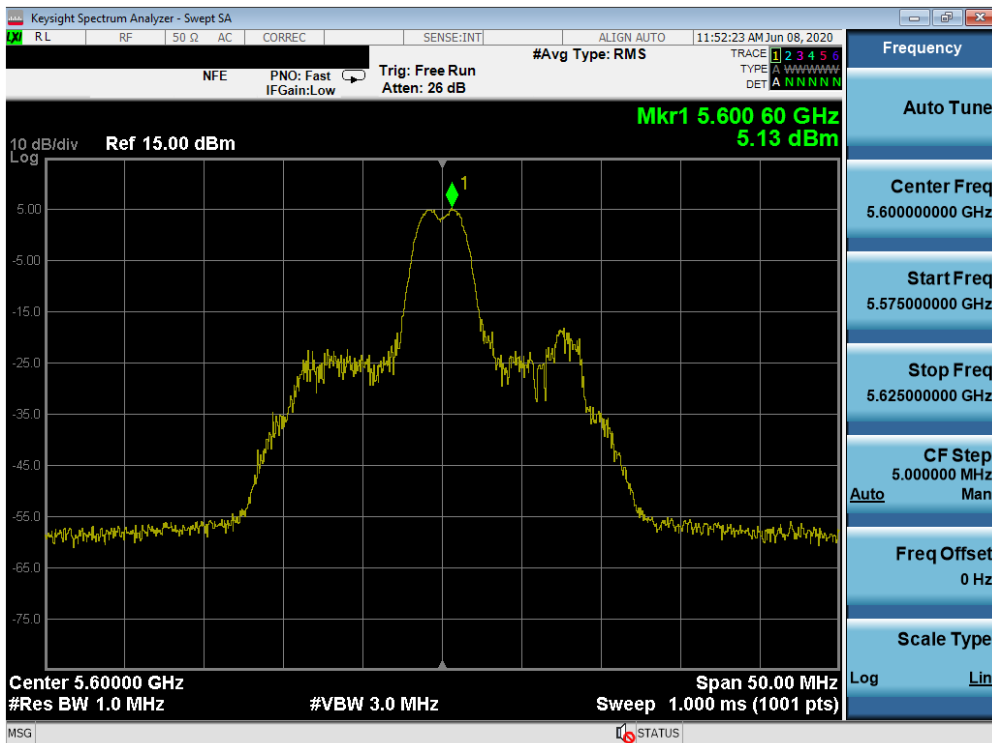


Plot 7-228. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax – 26 Tones (UNII Band 2A) – Ch. 58)

FCC ID: A3LSMN986U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 173 of 292

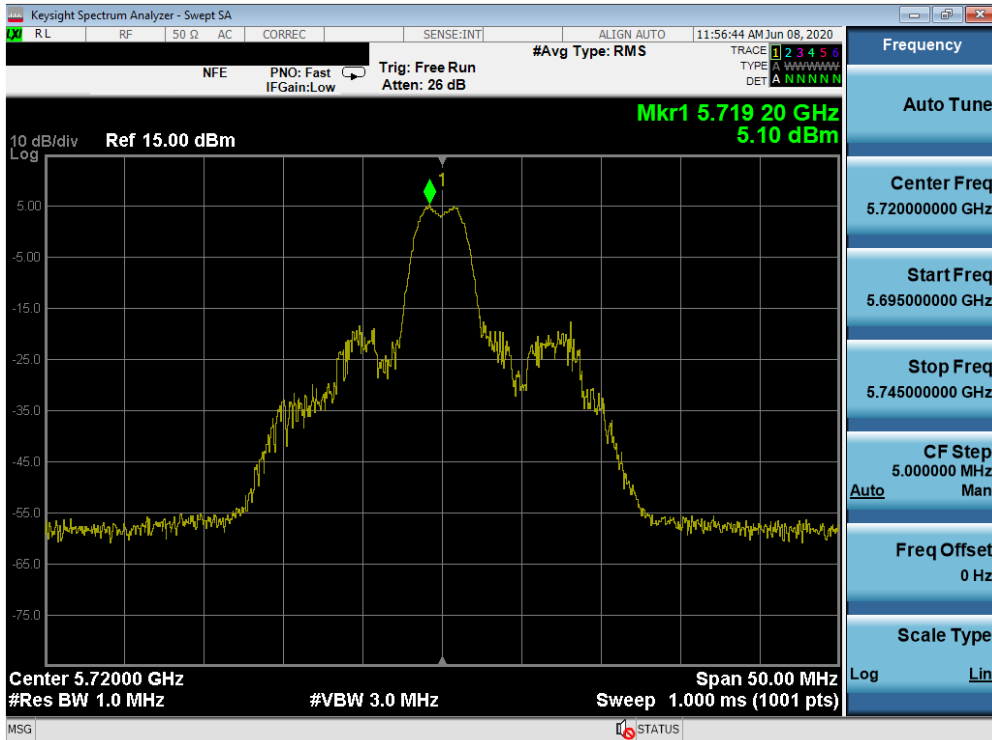


Plot 7-229. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 100)

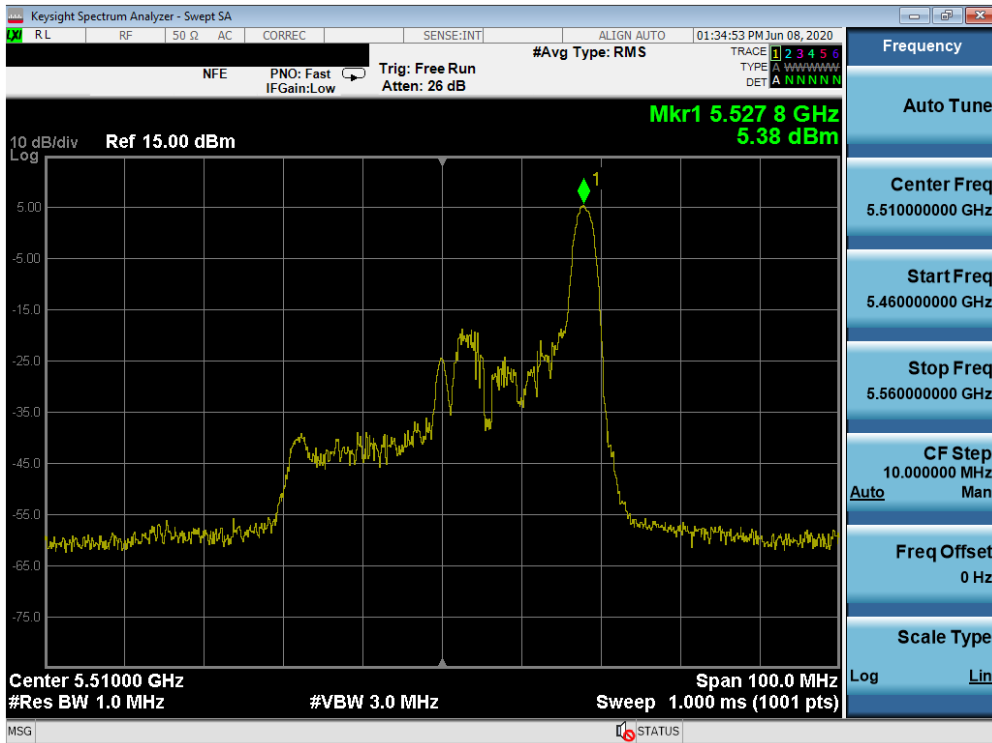


Plot 7-230. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 120)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 174 of 292

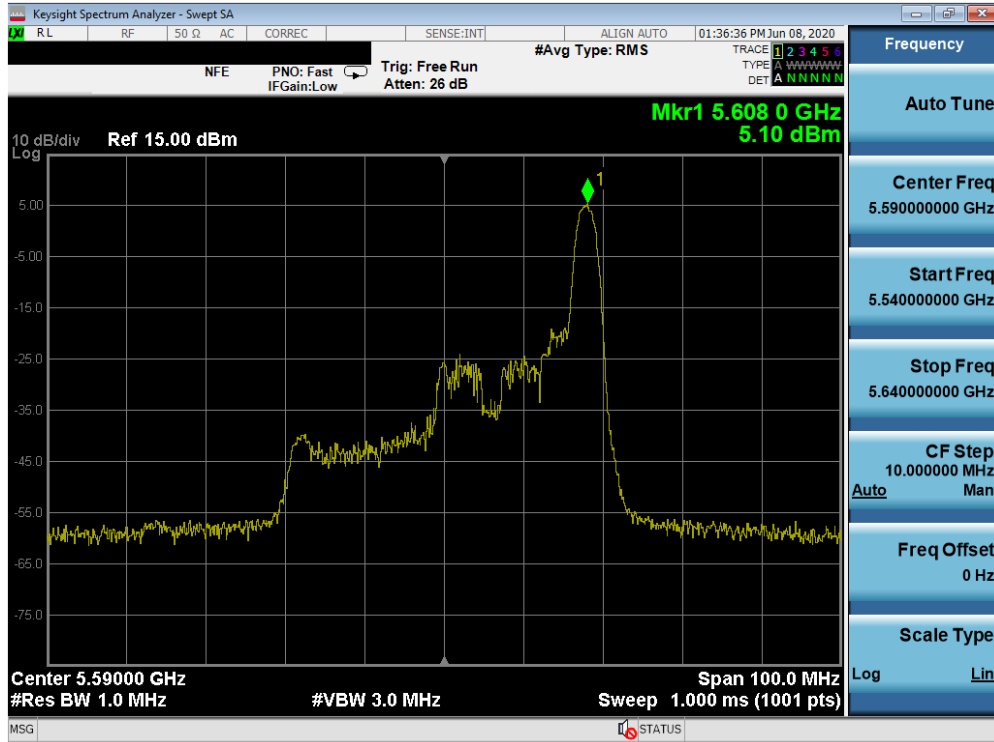


Plot 7-231. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 144)

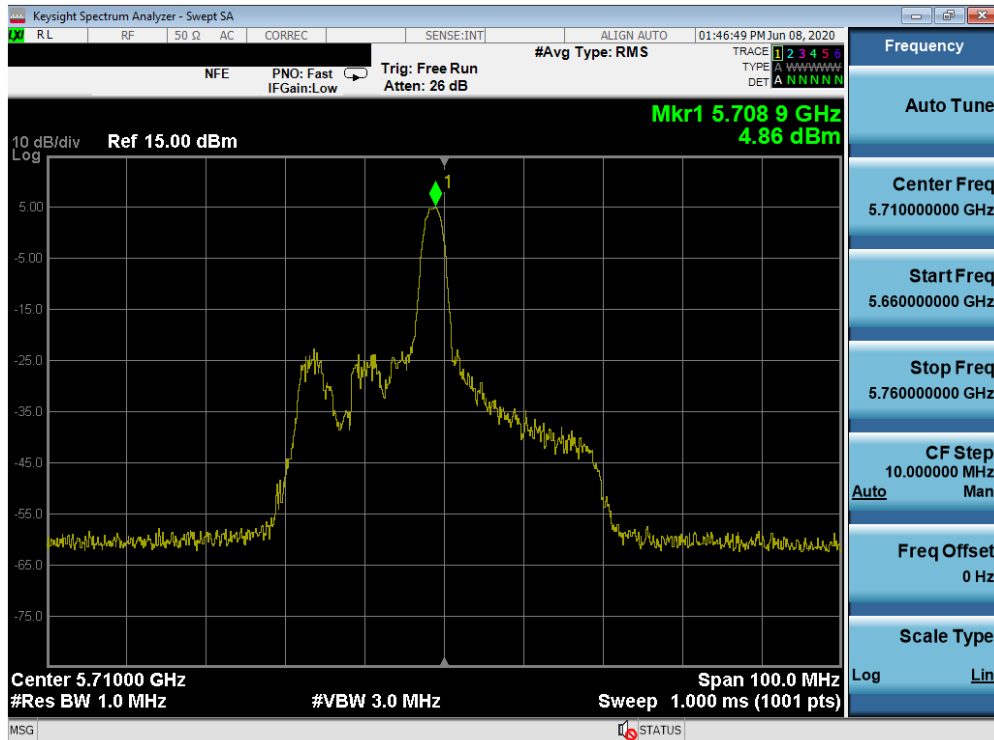


Plot 7-232. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 102)

FCC ID: A3LSMN986U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 175 of 292

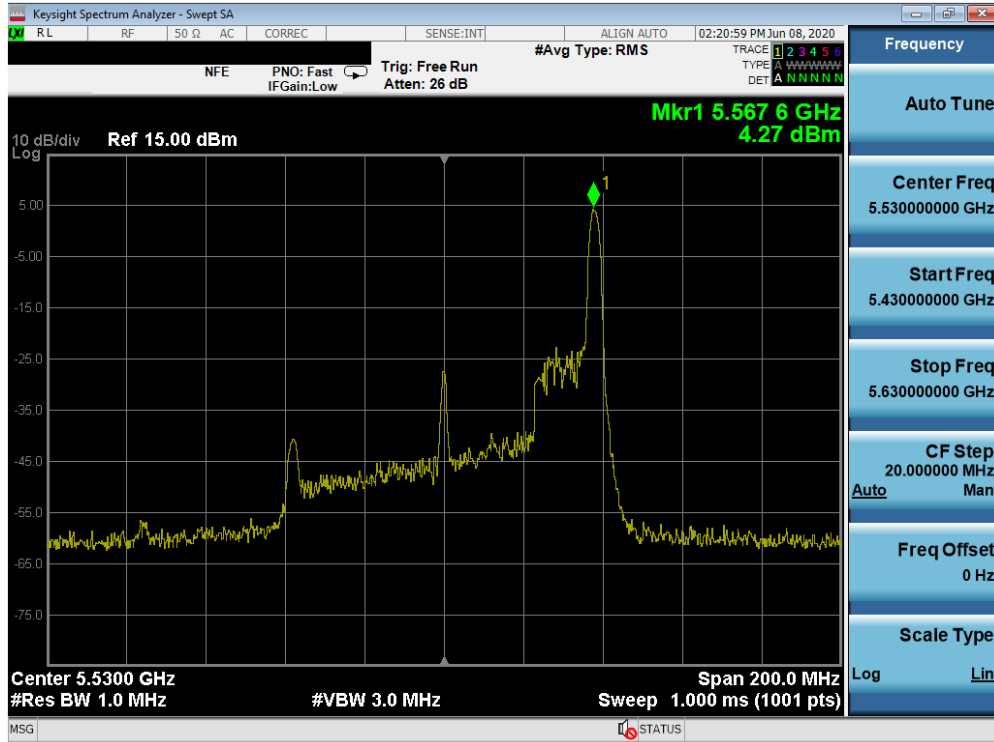


Plot 7-233. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 118)

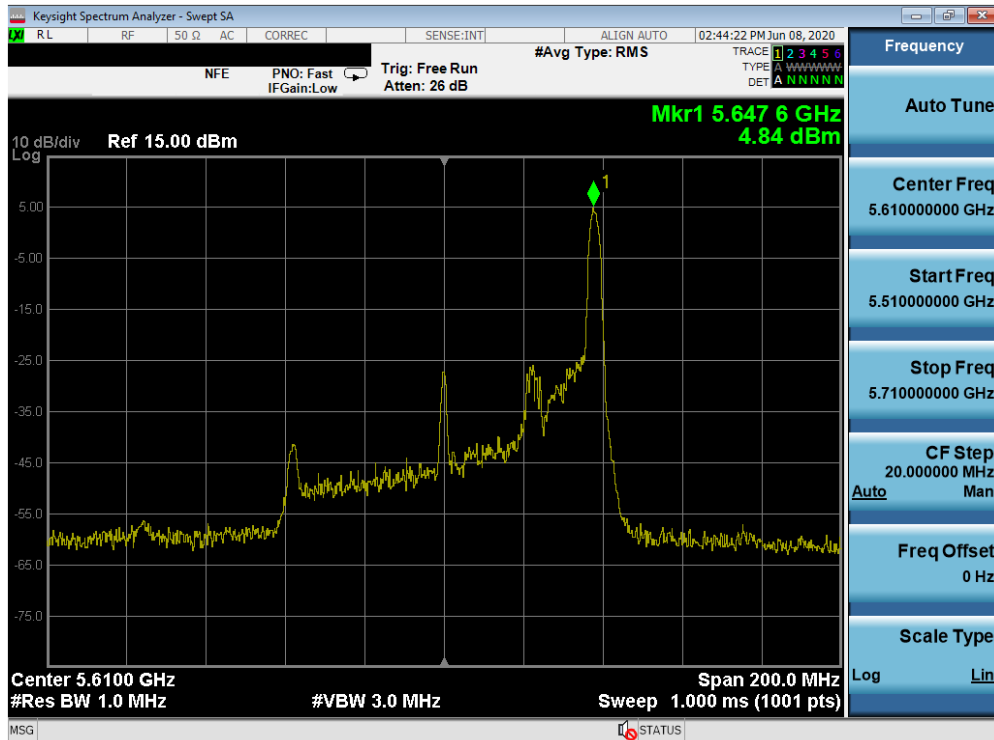


Plot 7-234. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 142)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 176 of 292

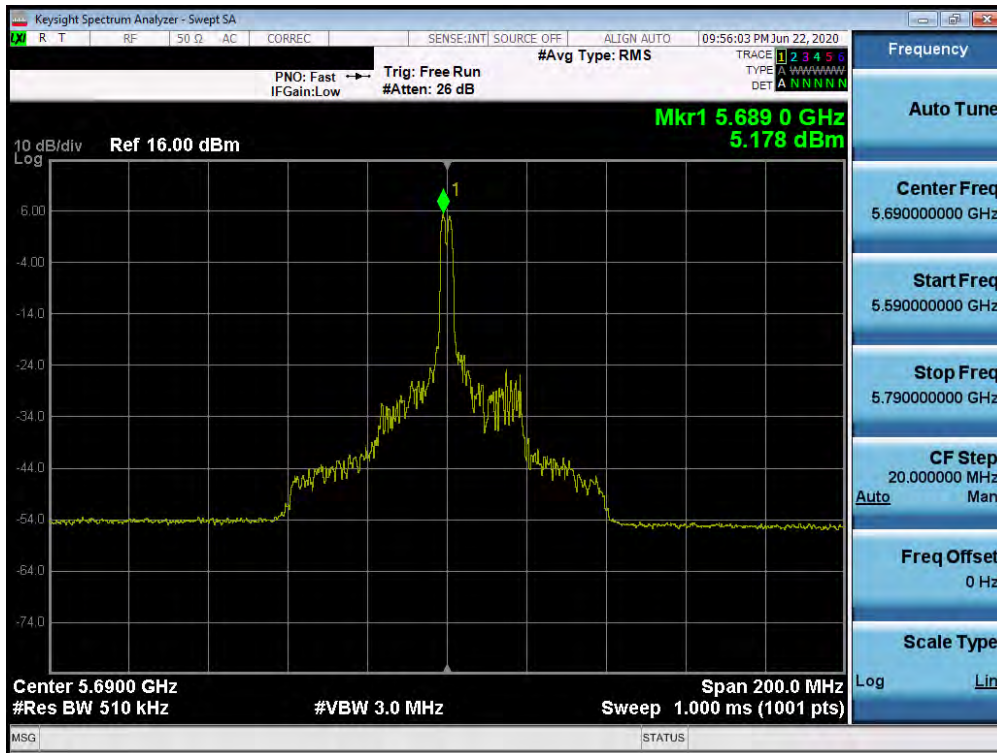


Plot 7-235. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 106)

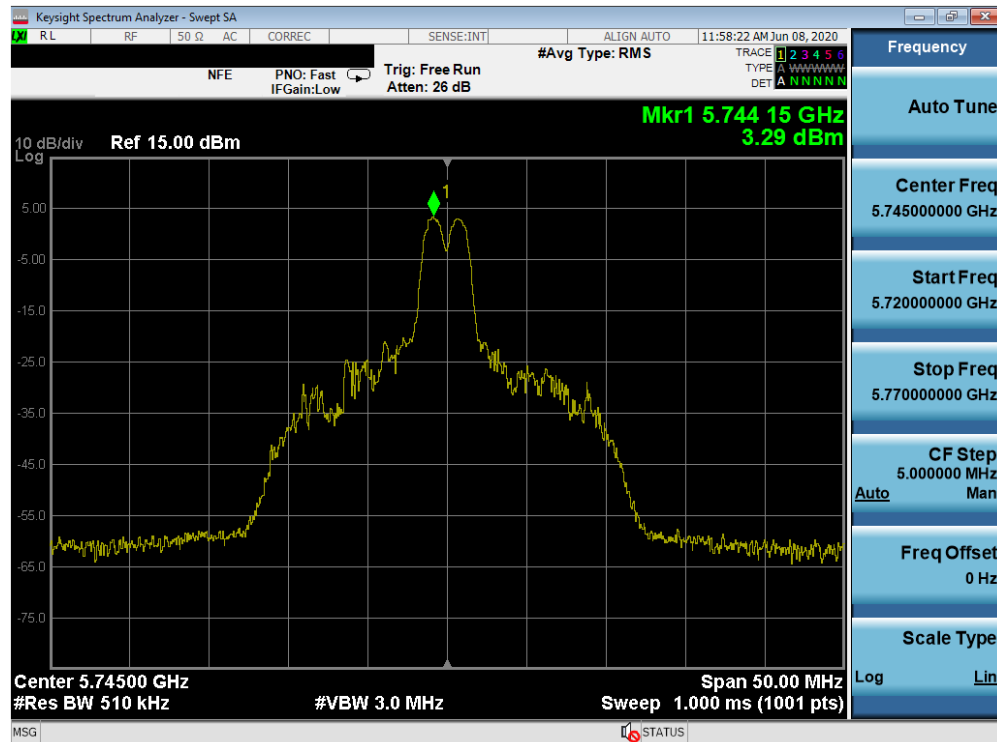


Plot 7-236. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 122)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 177 of 292

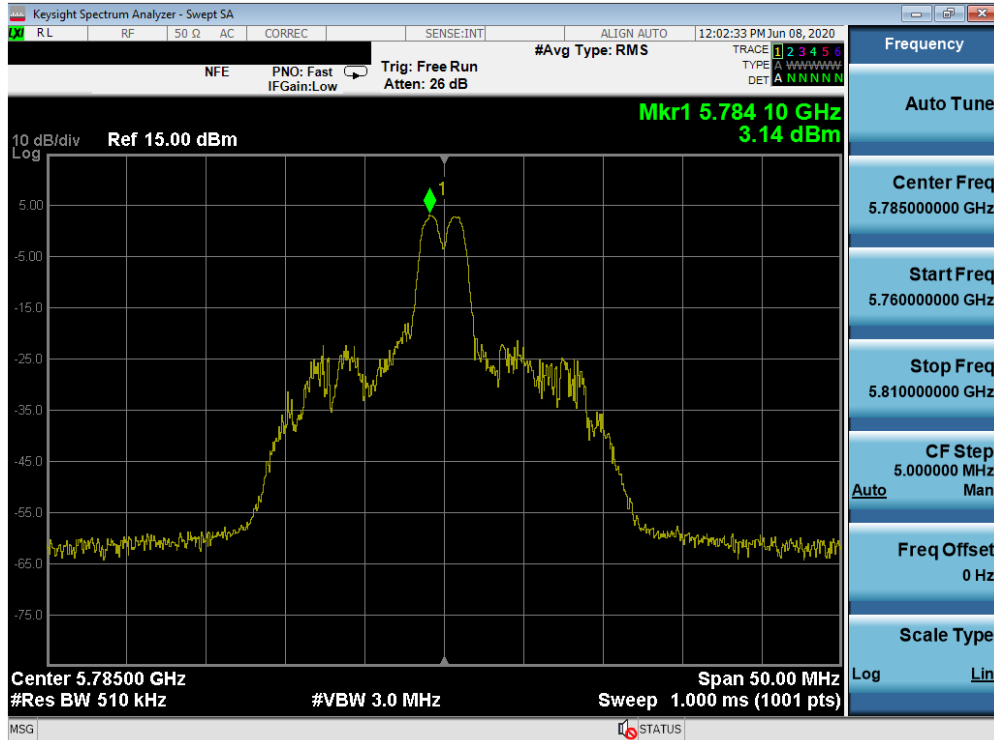


Plot 7-237. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 138)

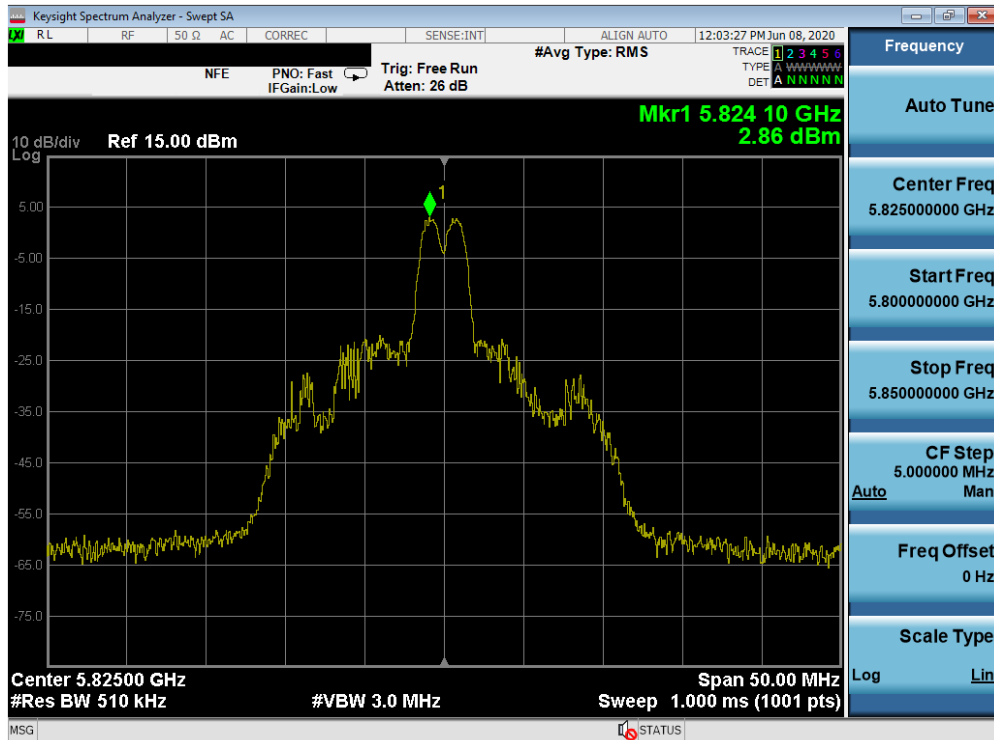


Plot 7-238. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 149)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 178 of 292

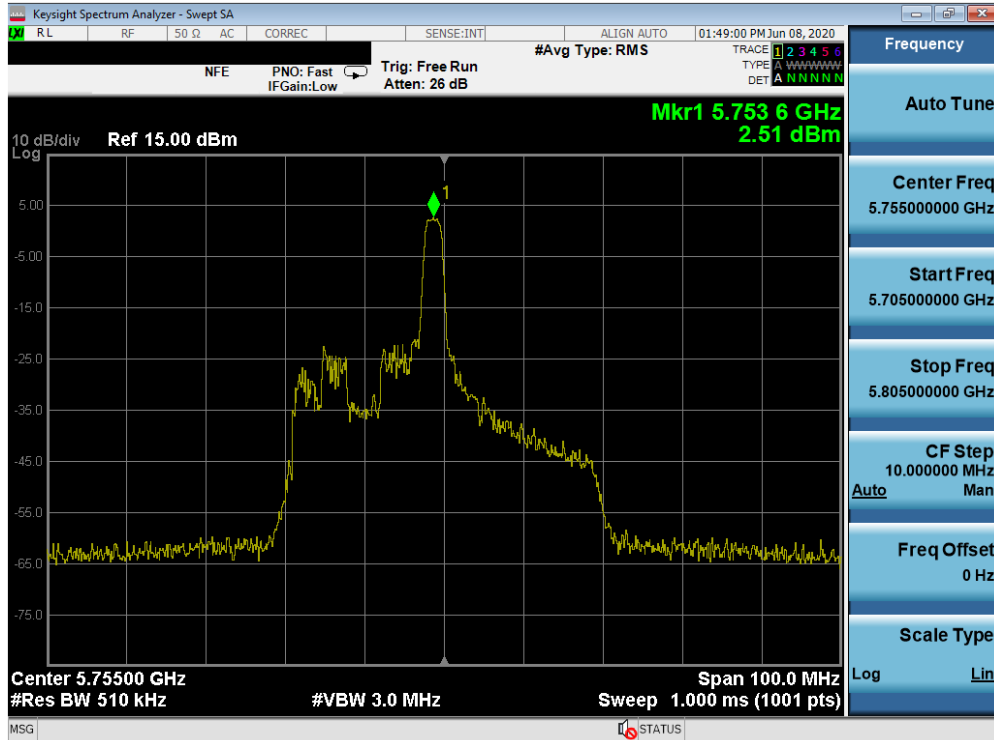


Plot 7-239. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 157)

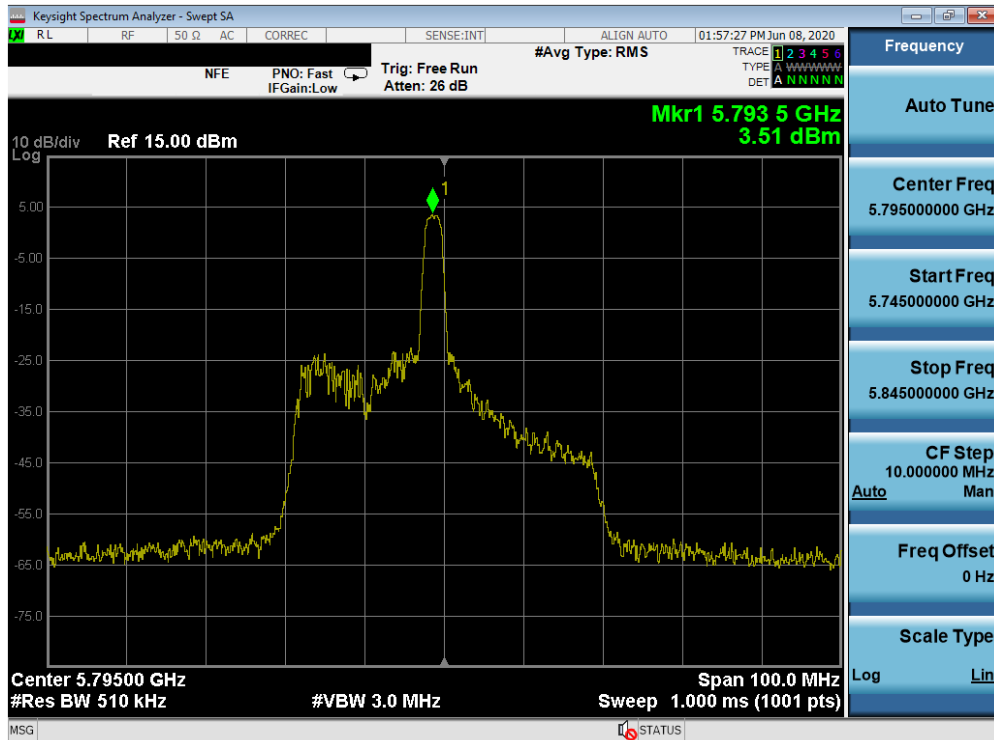


Plot 7-240. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 165)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 179 of 292

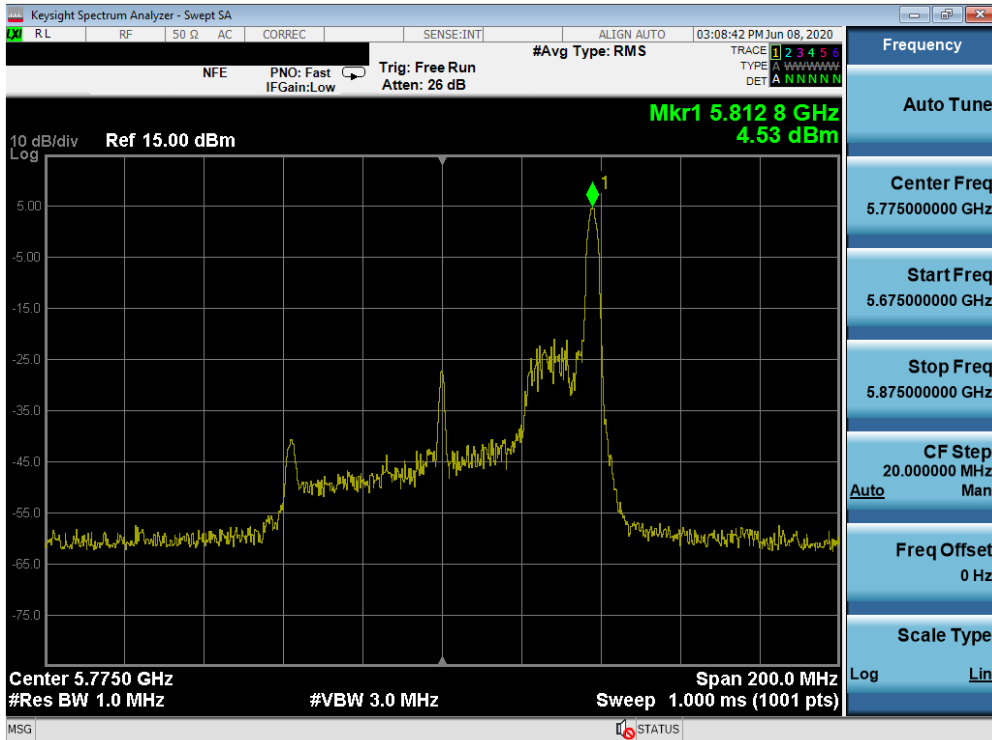


Plot 7-241. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 151)

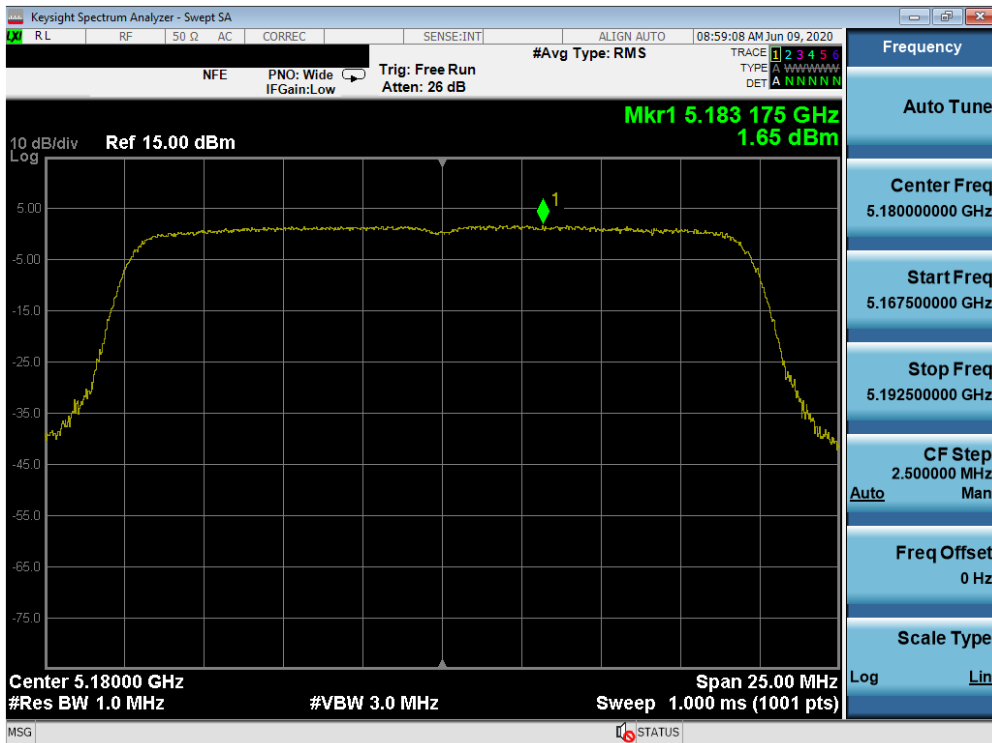


Plot 7-242. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 159)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 180 of 292

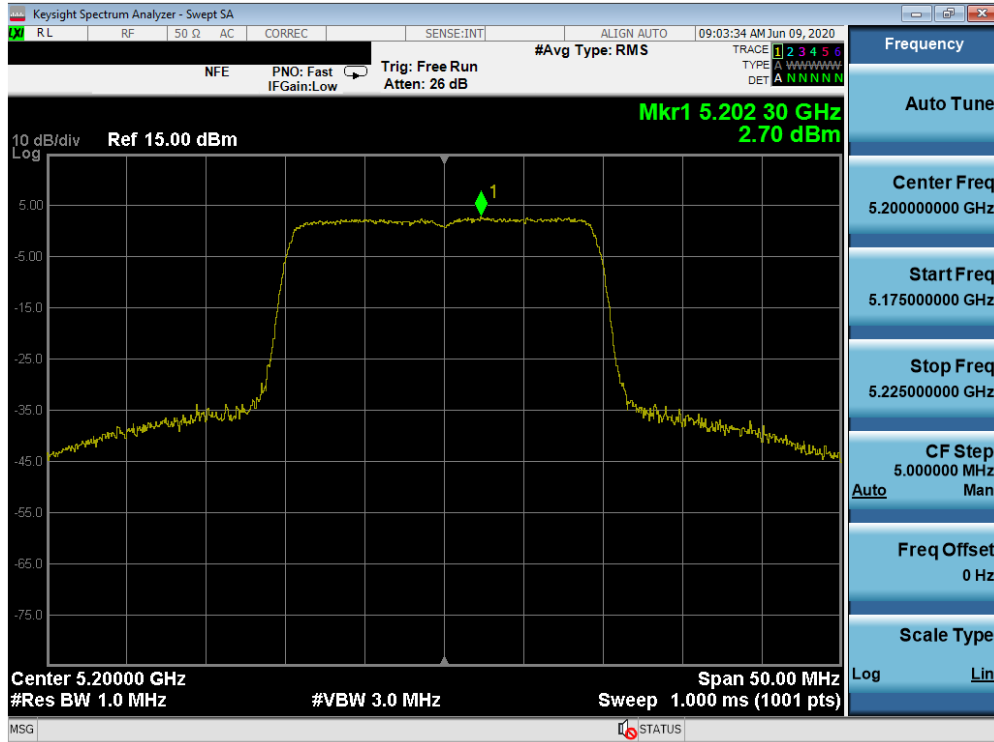


Plot 7-243. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 155)

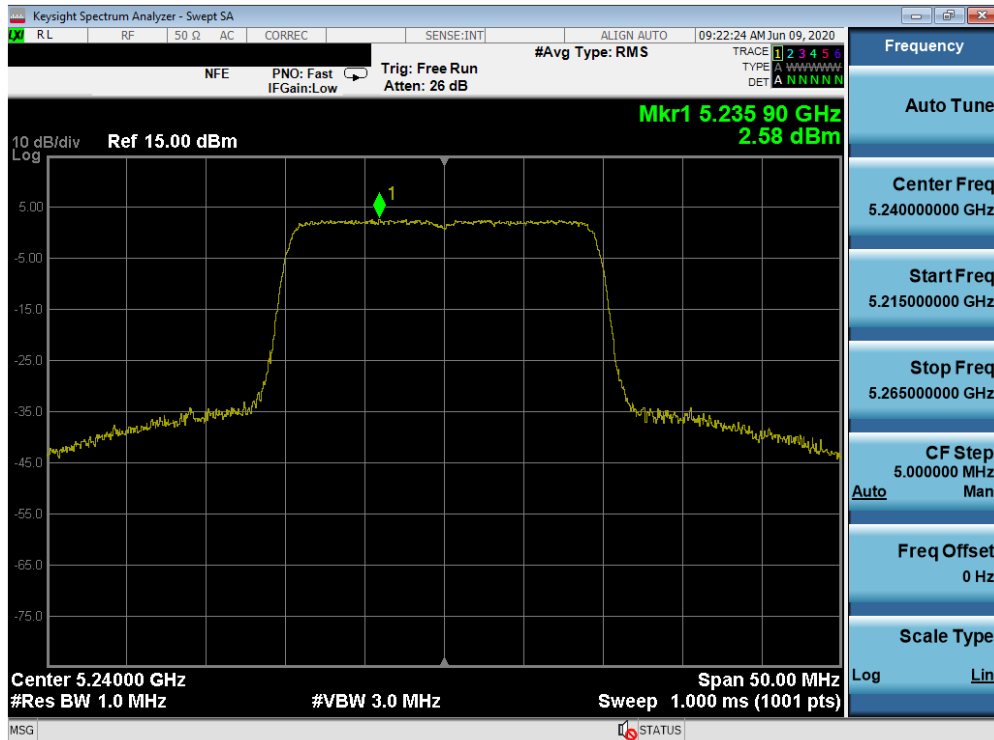


Plot 7-244. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – Full Tones (UNII Band 1) – Ch. 36)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 181 of 292

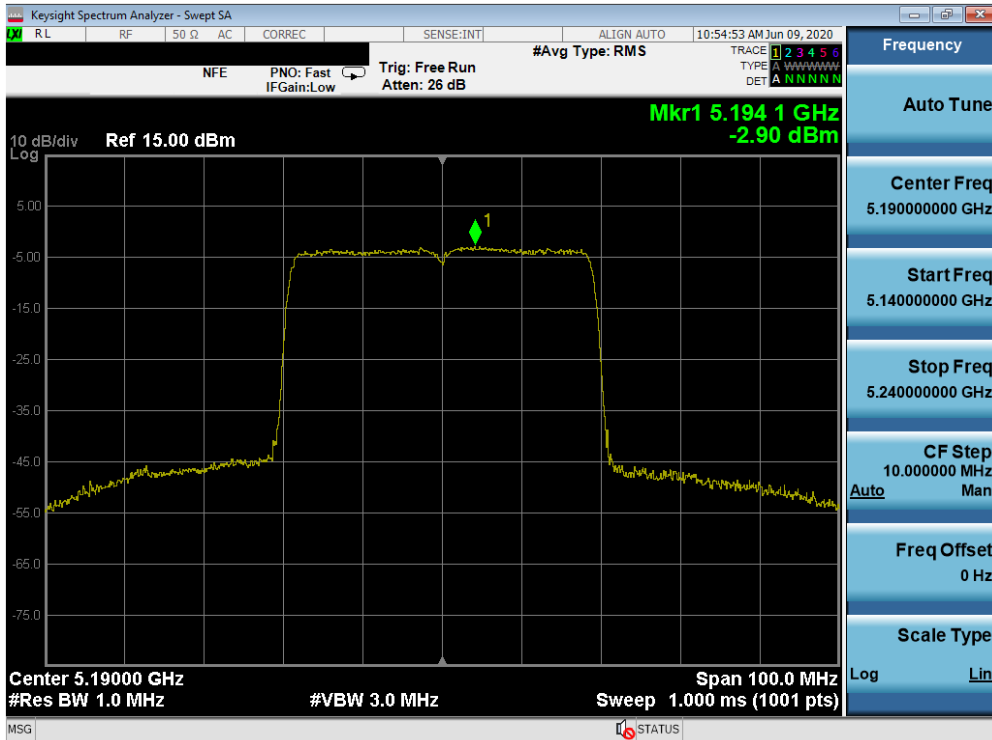


Plot 7-245. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – Full Tones (UNII Band 1) – Ch. 40)

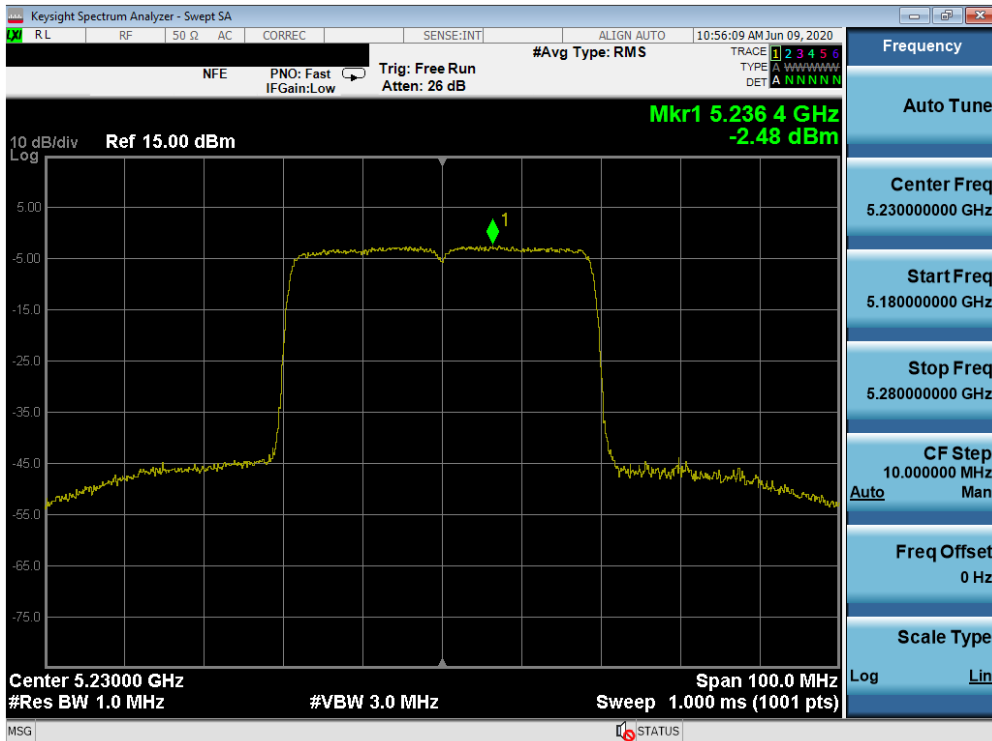


Plot 7-246. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – Full Tones (UNII Band 1) – Ch. 48)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 182 of 292

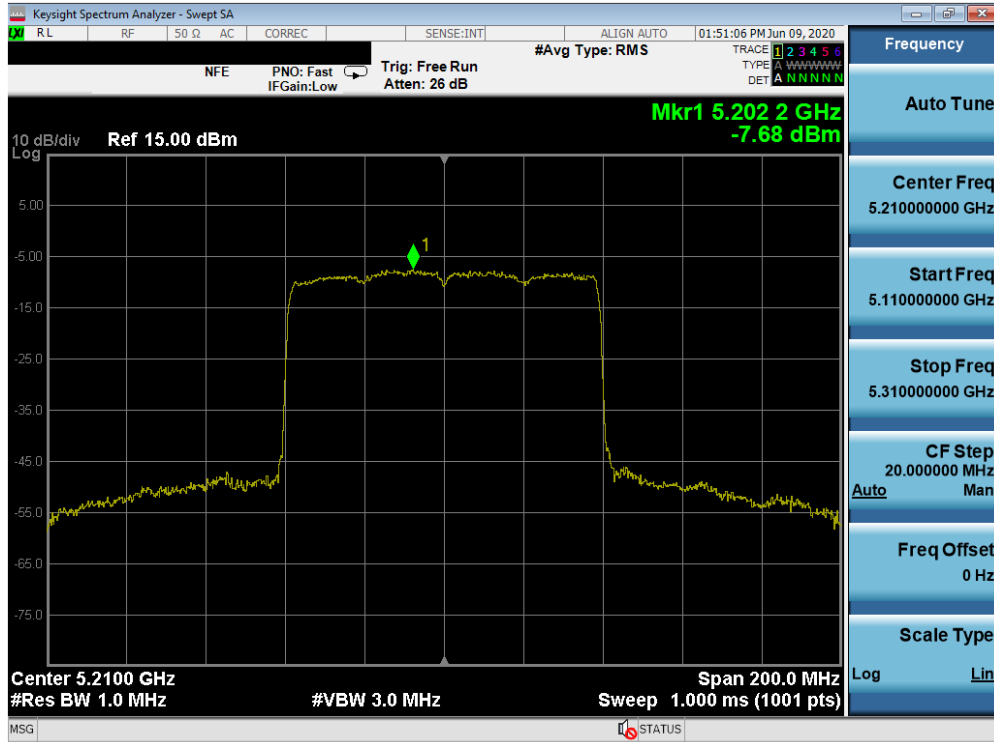


Plot 7-247. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – Full Tones (UNII Band 1) – Ch. 38)

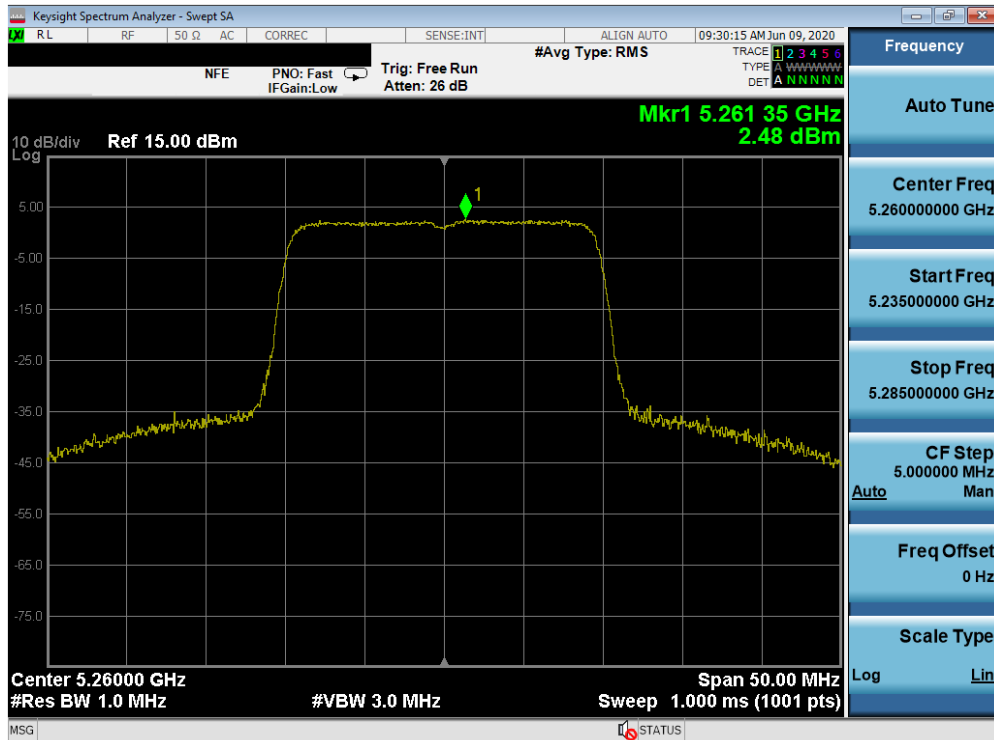


Plot 7-248. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – Full Tones (UNII Band 1) – Ch. 46)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 183 of 292

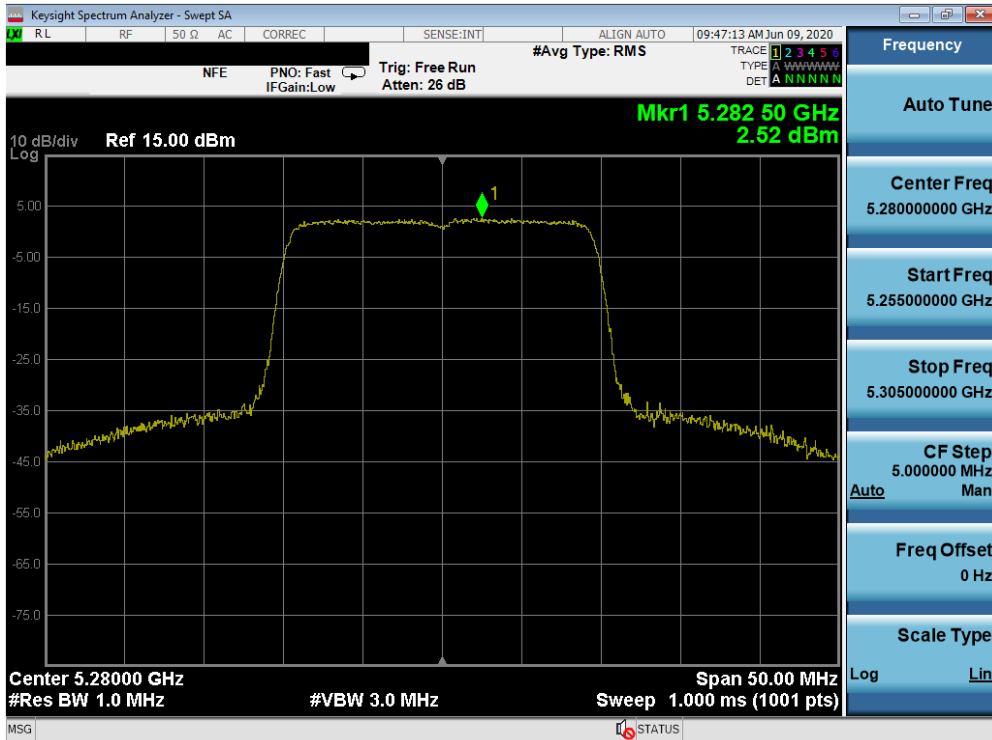


Plot 7-249. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax – Full Tones (UNII Band 1) – Ch. 42)

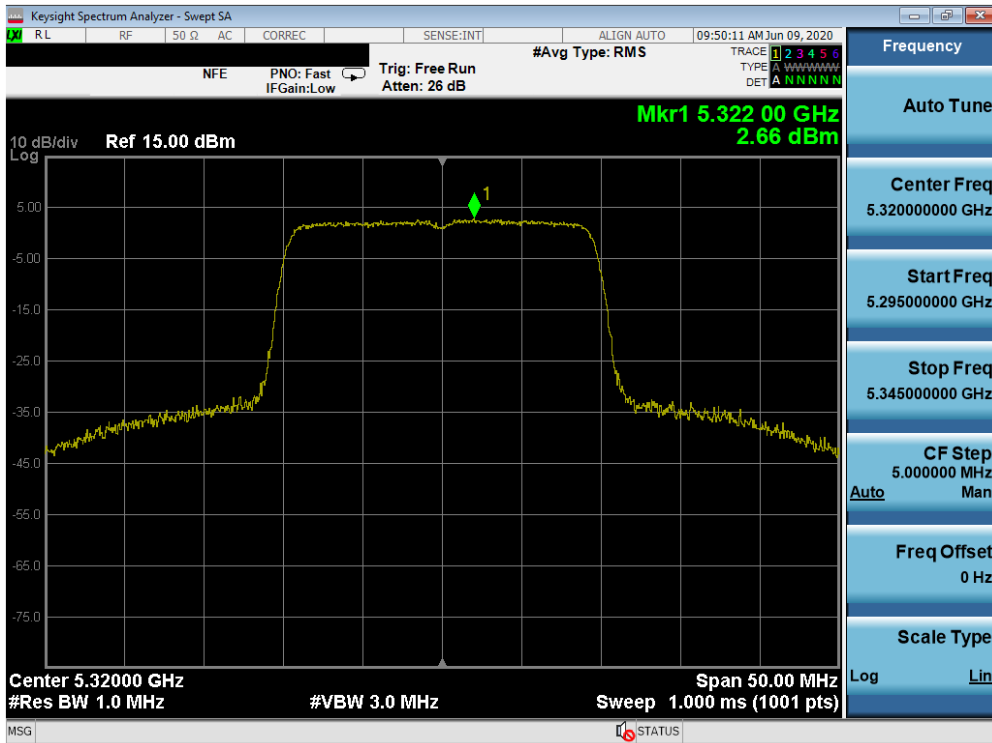


Plot 7-250. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – Full Tones (UNII Band 2A) – Ch. 52)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 184 of 292

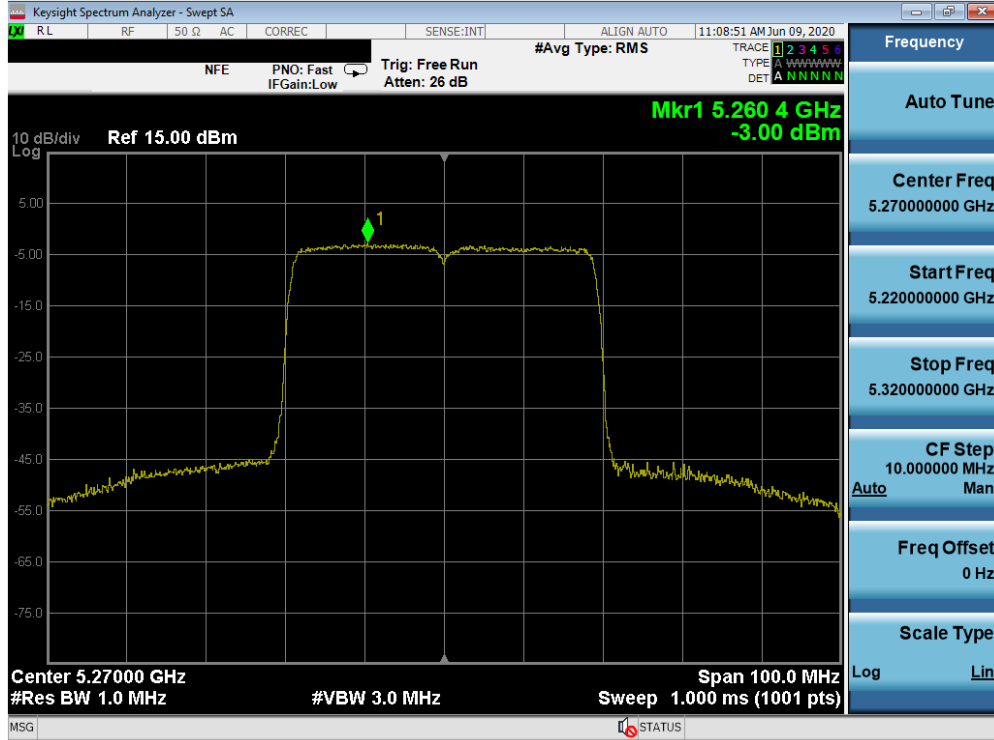


Plot 7-251. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – Full Tones (UNII Band 2A) – Ch. 56)

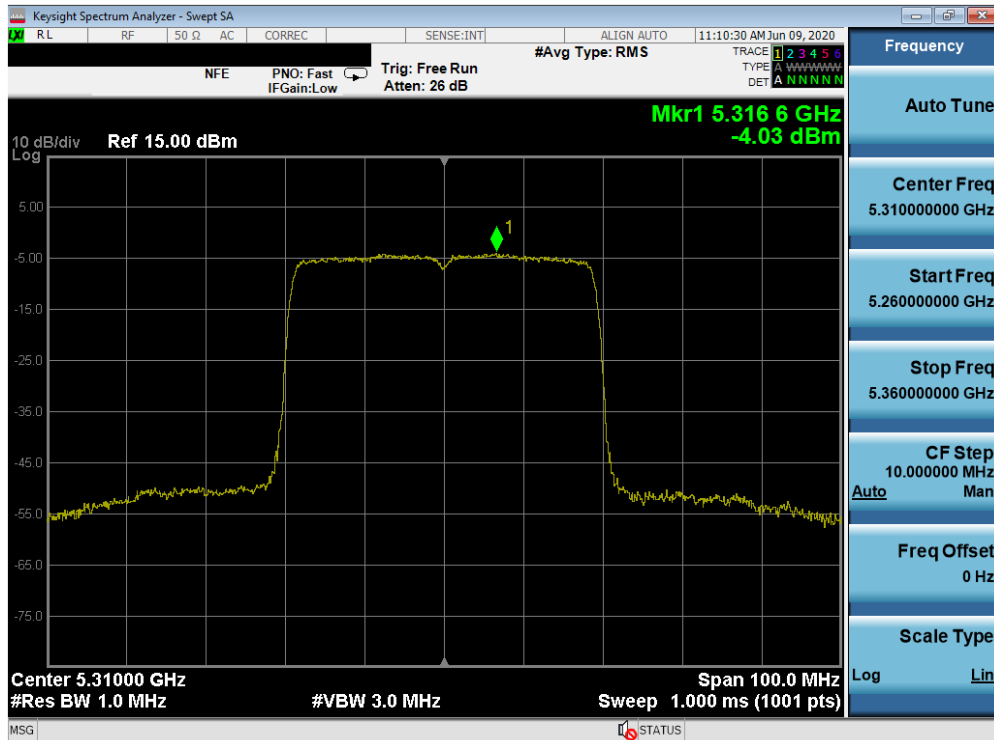


Plot 7-252. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – Full Tones (UNII Band 2A) – Ch. 64)

FCC ID: A3LSMN986U	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 185 of 292

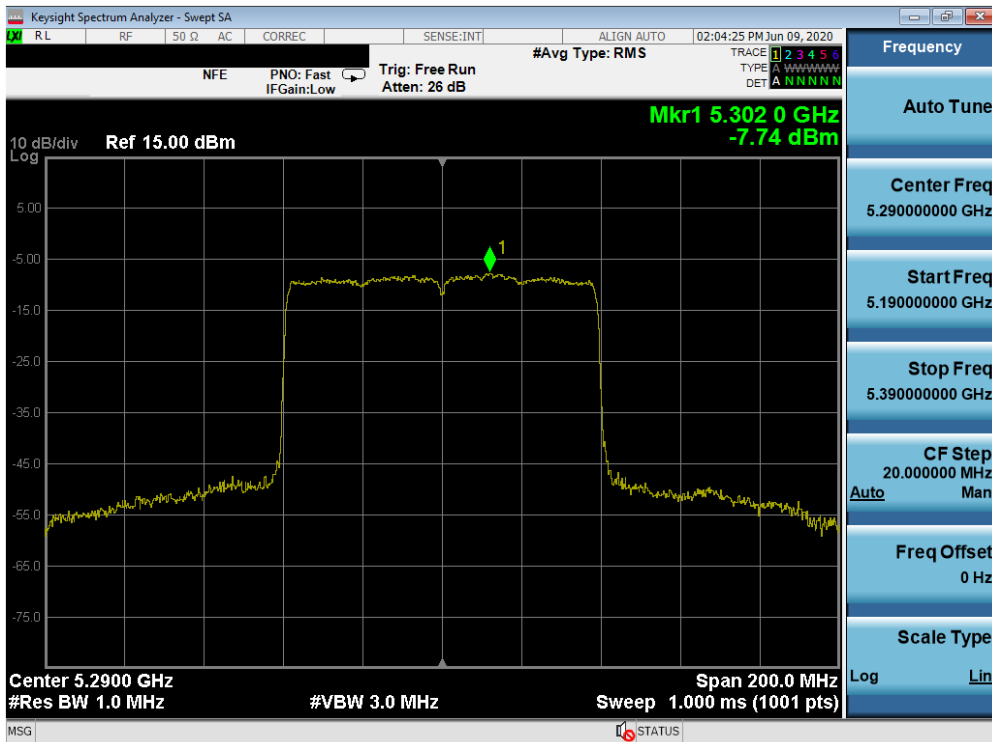


Plot 7-253. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – Full Tones (UNII Band 2A) – Ch. 54)

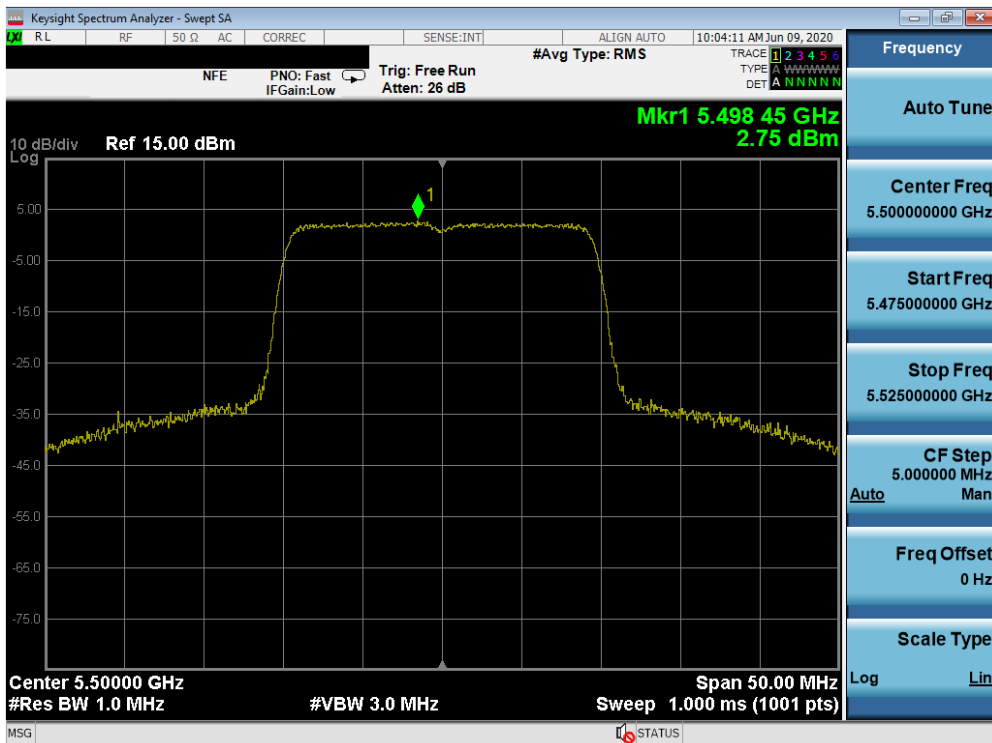


Plot 7-254. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – Full Tones (UNII Band 2A) – Ch. 62)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 186 of 292

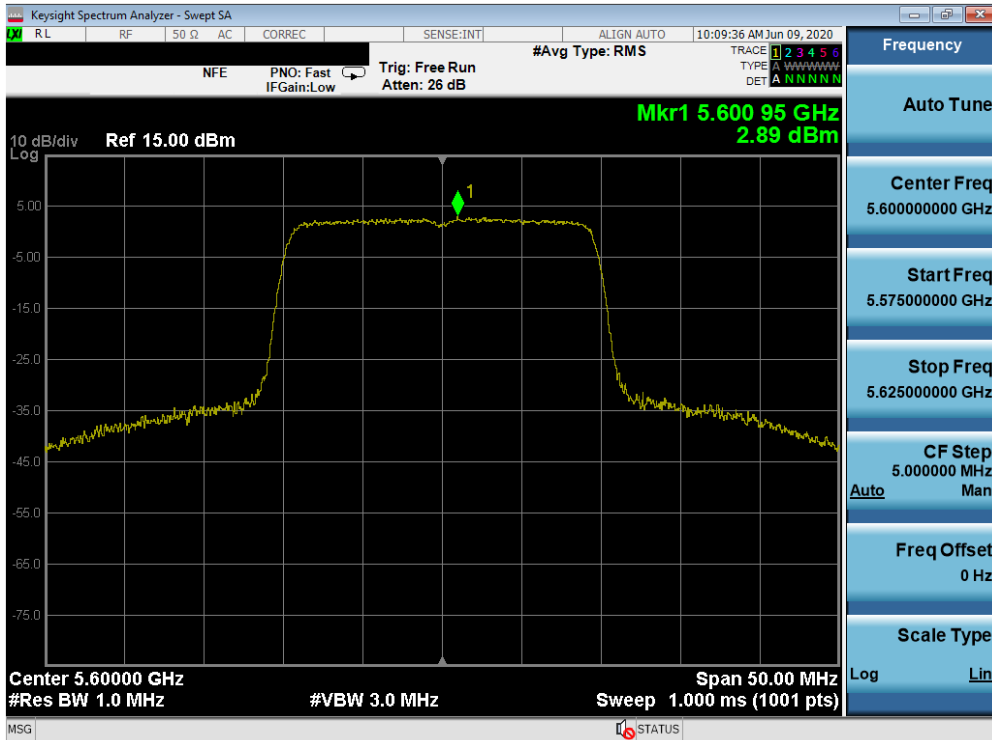


Plot 7-255. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax – Full Tones (UNII Band 2A) – Ch. 58)

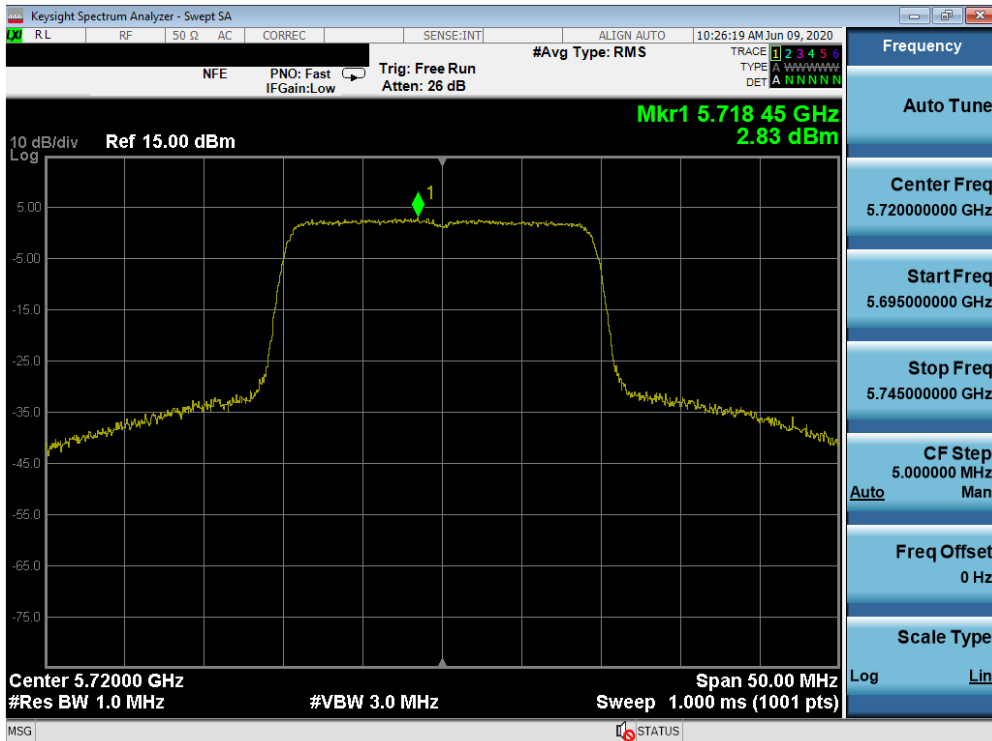


Plot 7-256. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 100)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 187 of 292

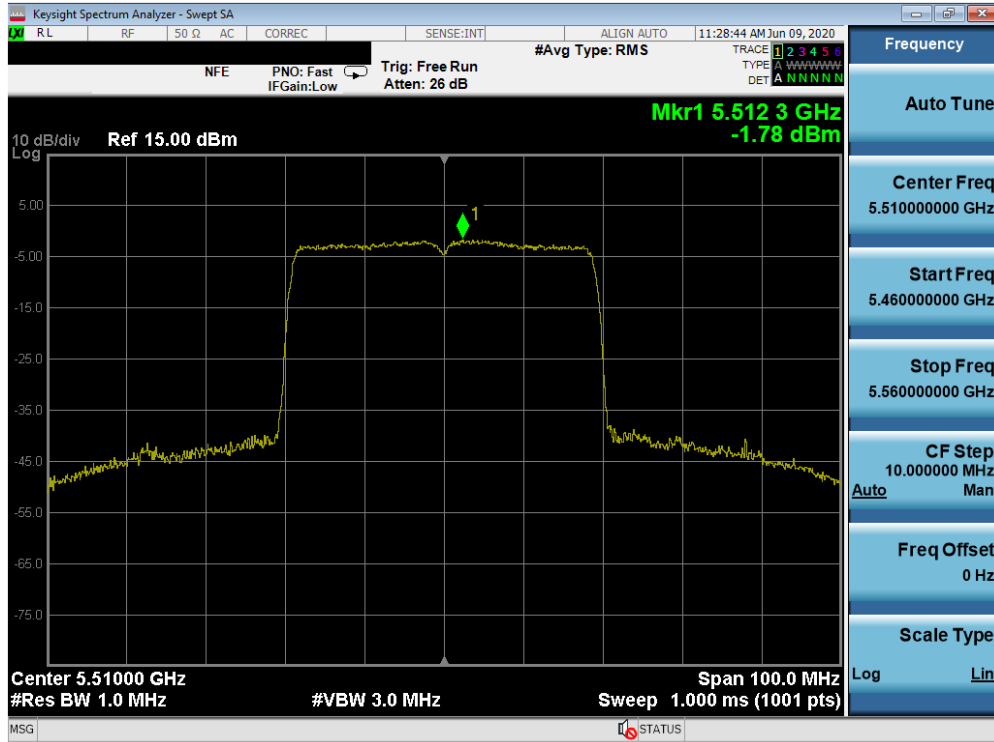


Plot 7-257. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 120)

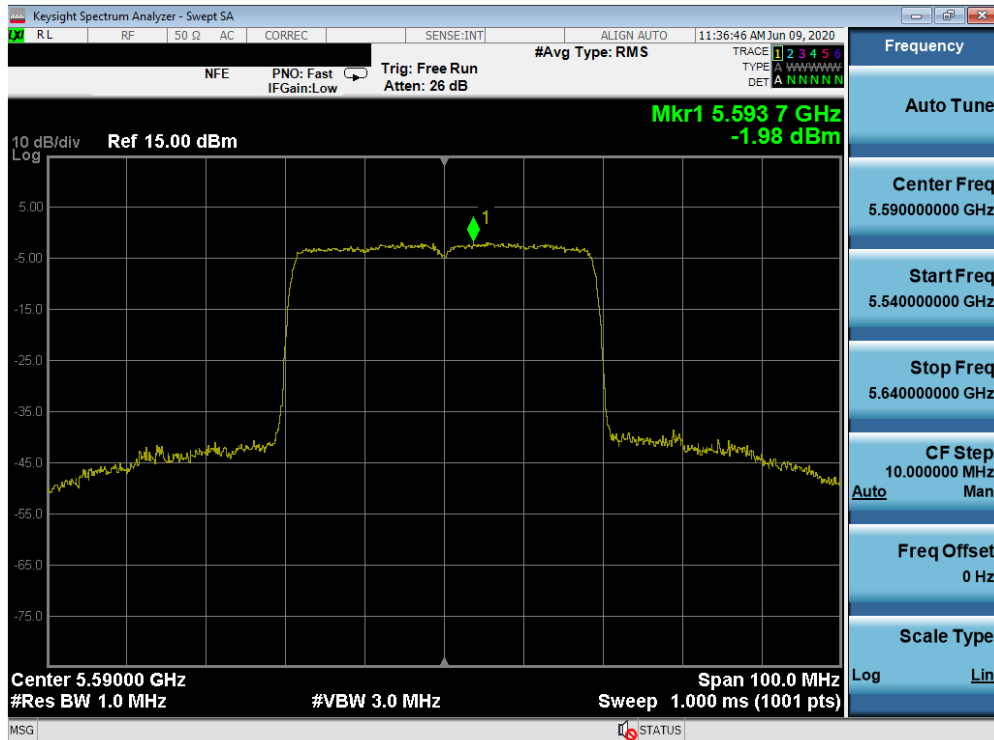


Plot 7-258. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 144)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 188 of 292

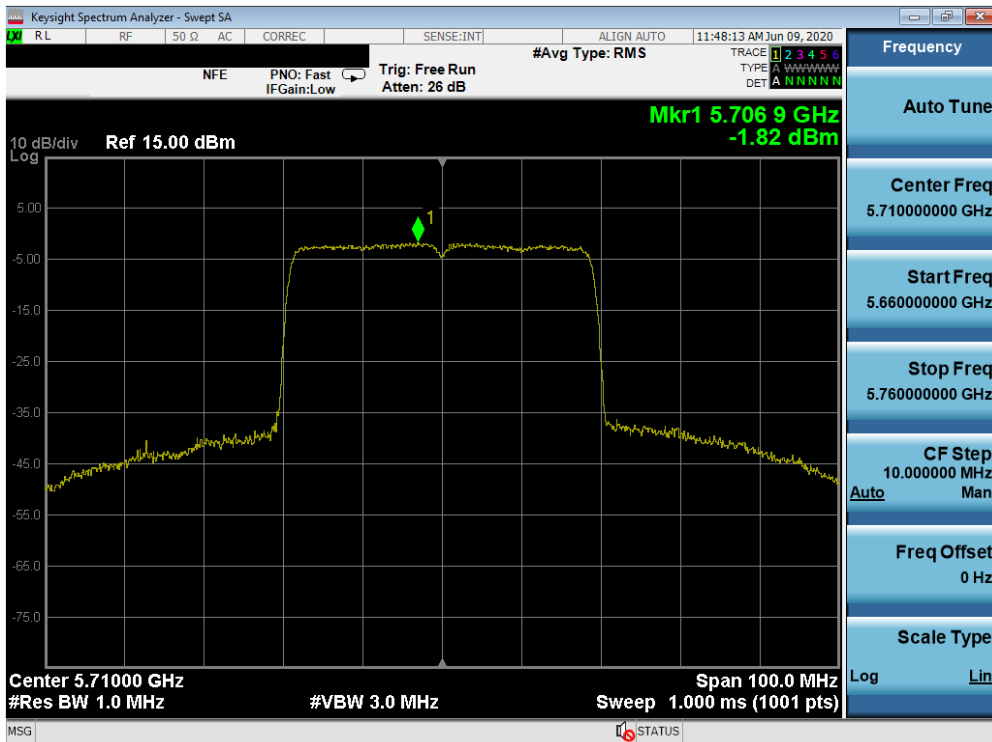


Plot 7-259. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 102)

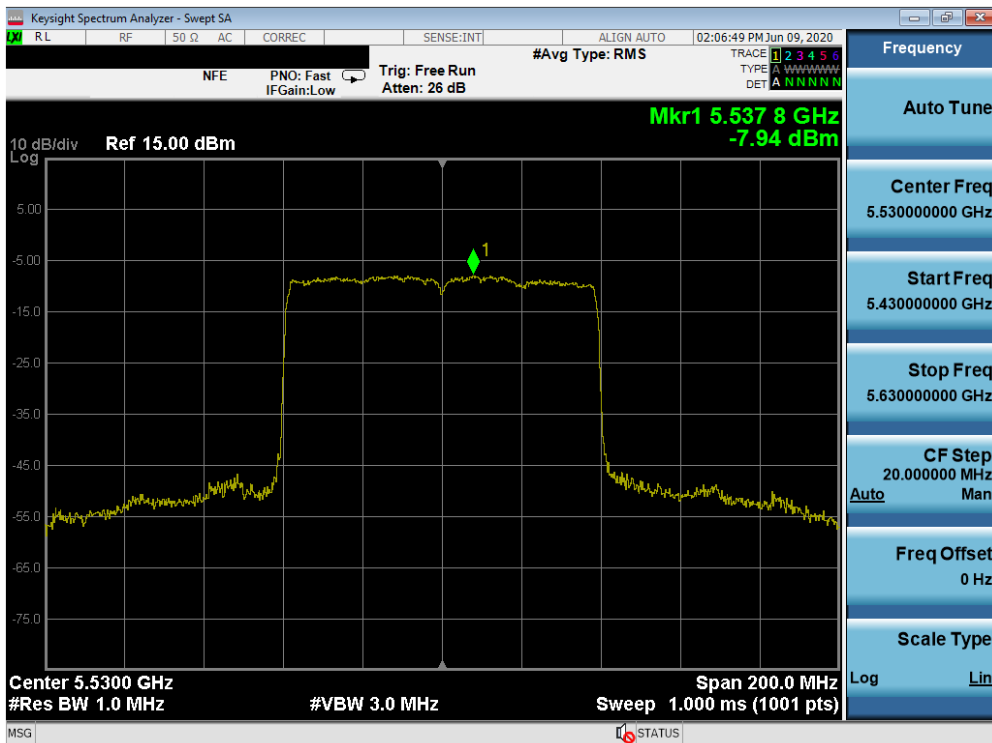


Plot 7-260. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 118)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 189 of 292

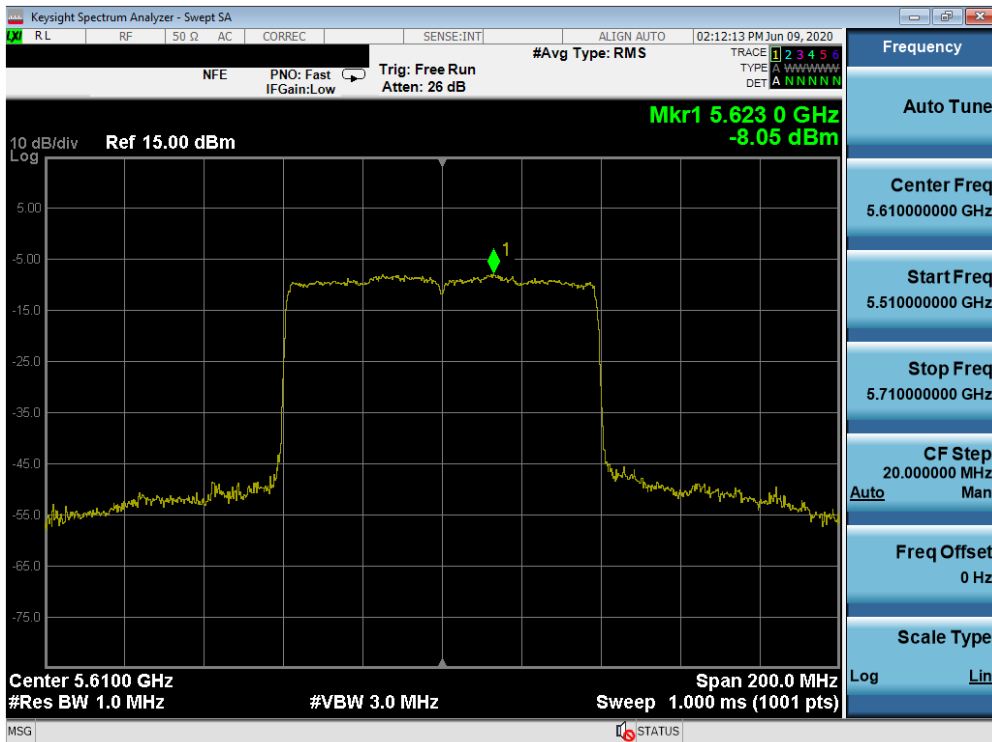


Plot 7-261. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 142)

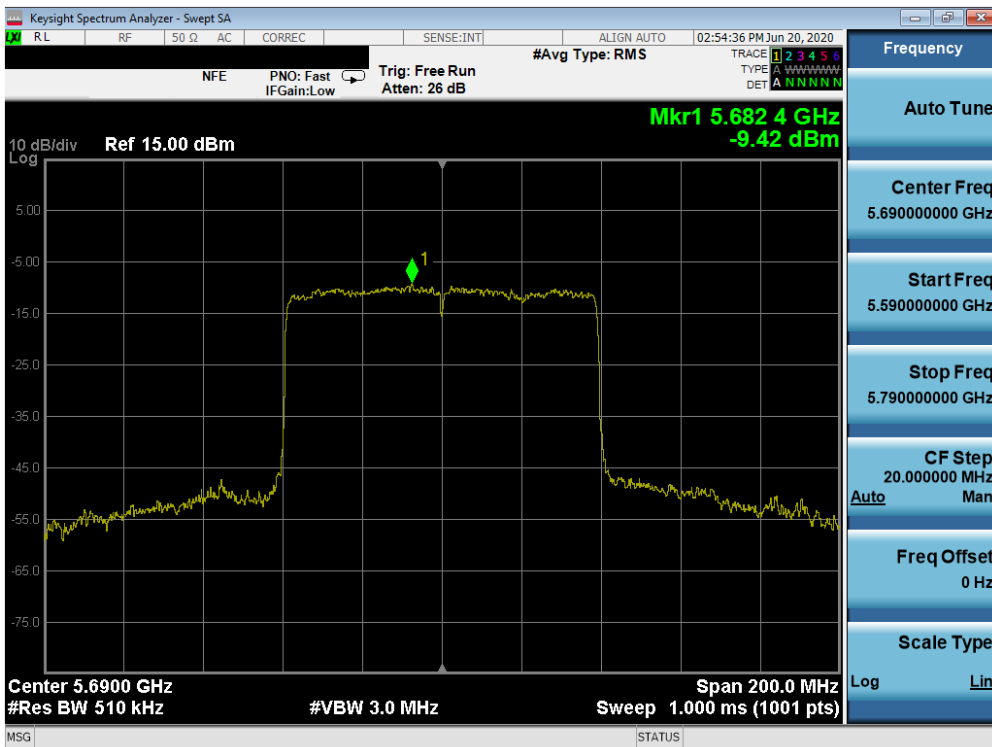


Plot 7-262. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 106)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 190 of 292

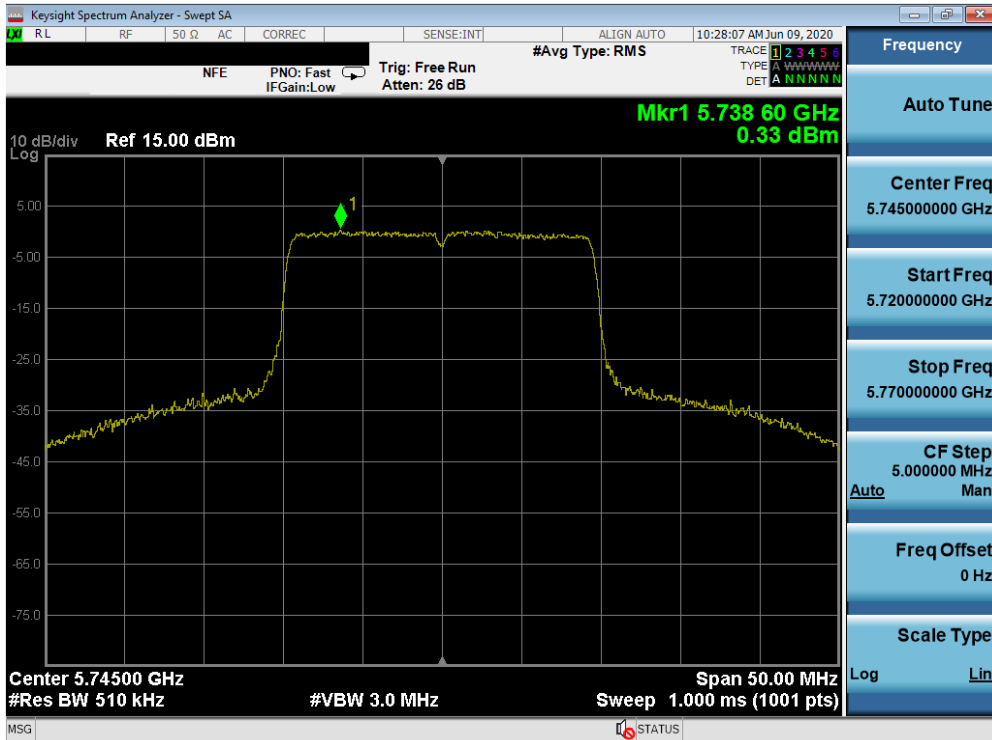


Plot 7-263. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 122)

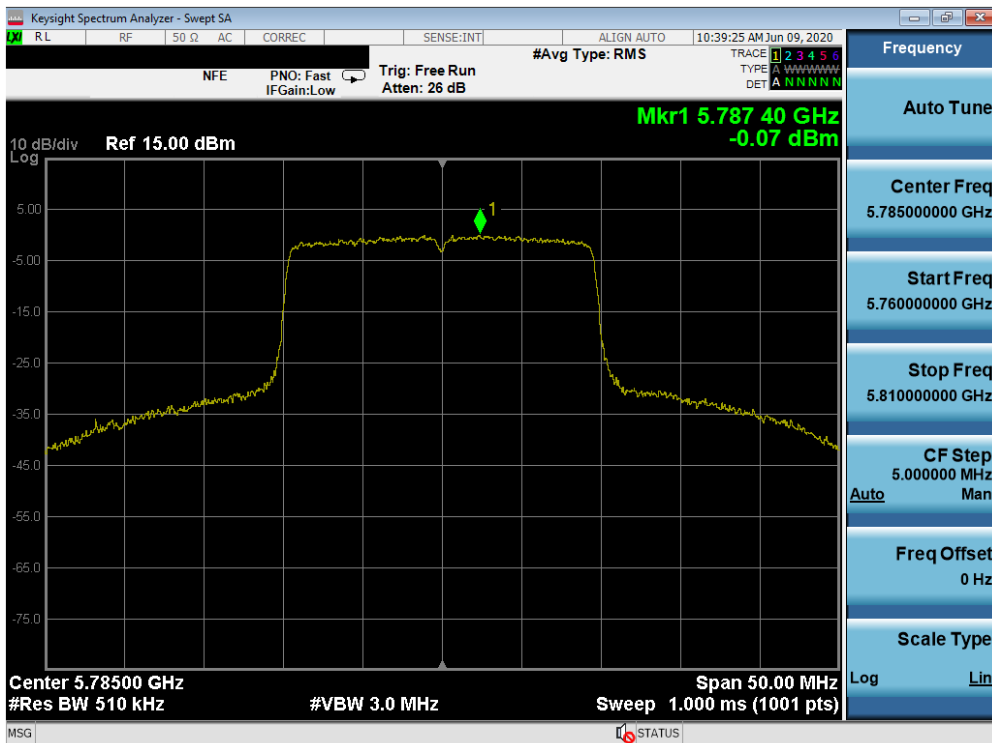


Plot 7-264. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 138)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 191 of 292

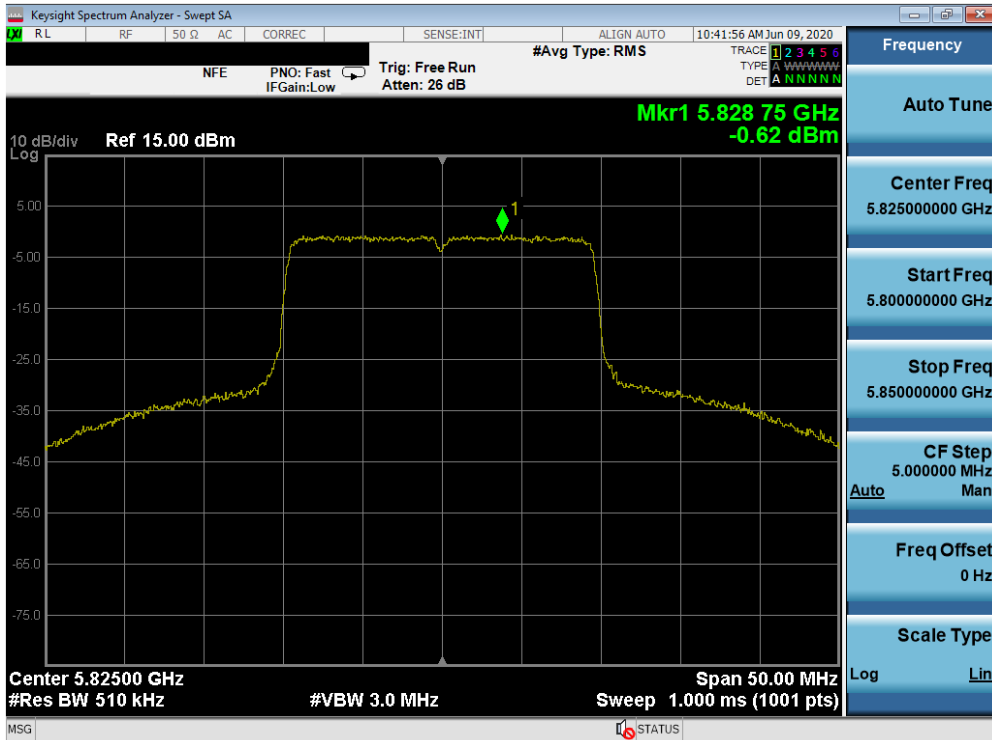


Plot 7-265. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 149)



Plot 7-266. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 157)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 192 of 292

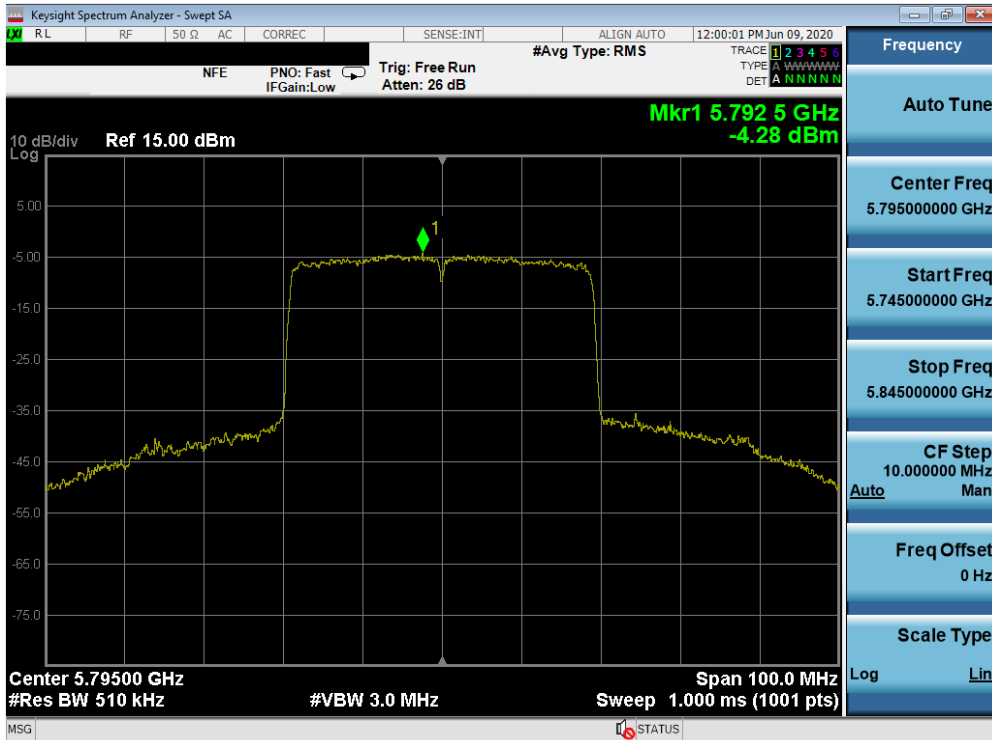


Plot 7-267. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 165)

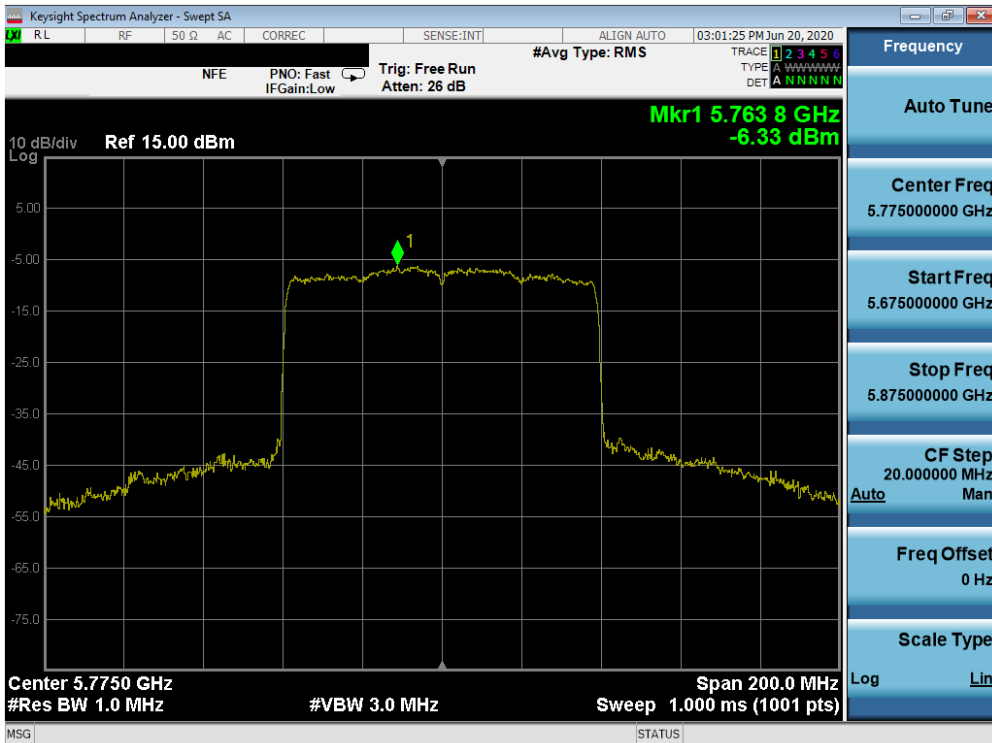


Plot 7-268. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 151)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 193 of 292



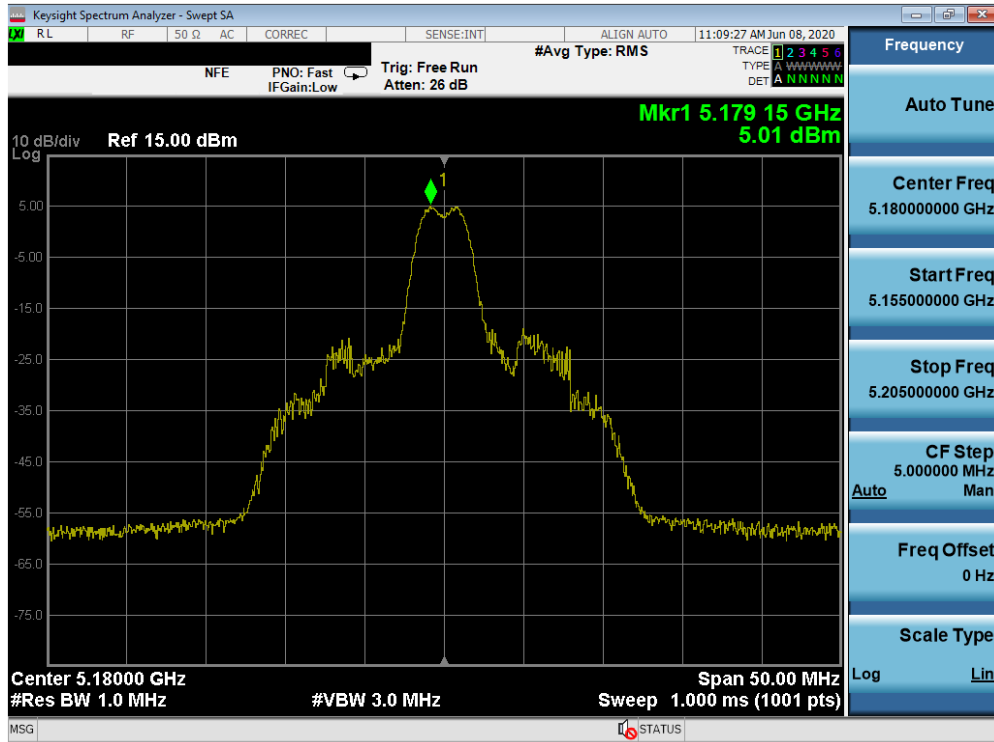
Plot 7-269. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 159)



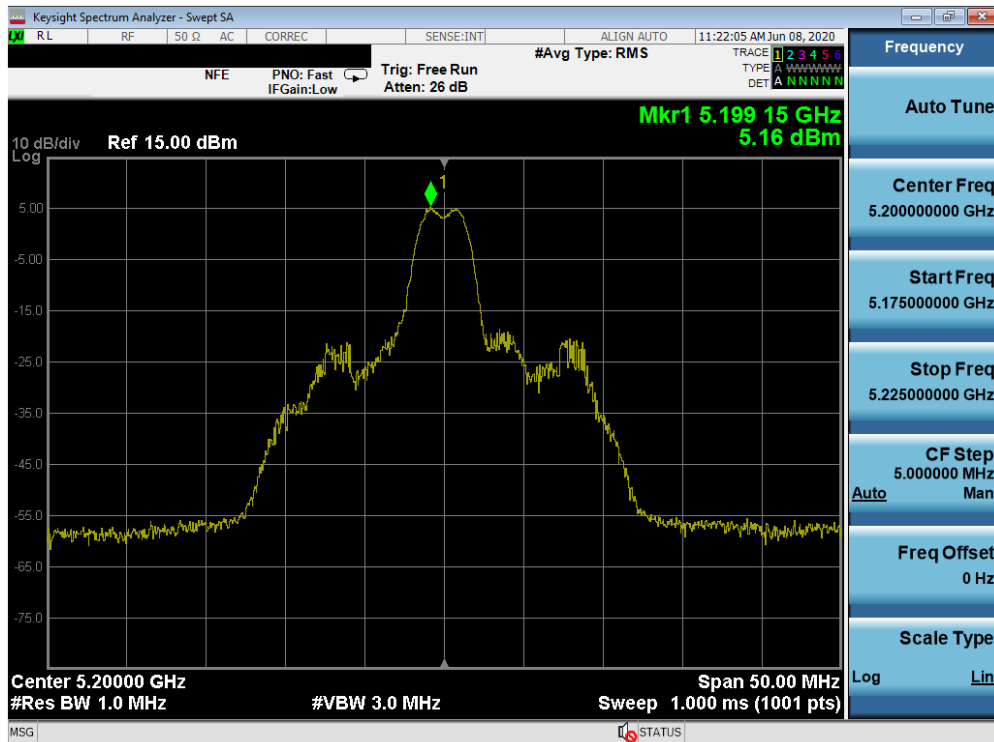
Plot 7-270. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 155)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 194 of 292

MIMO Antenna-2 Power Spectral Density Measurements (26 Tones)

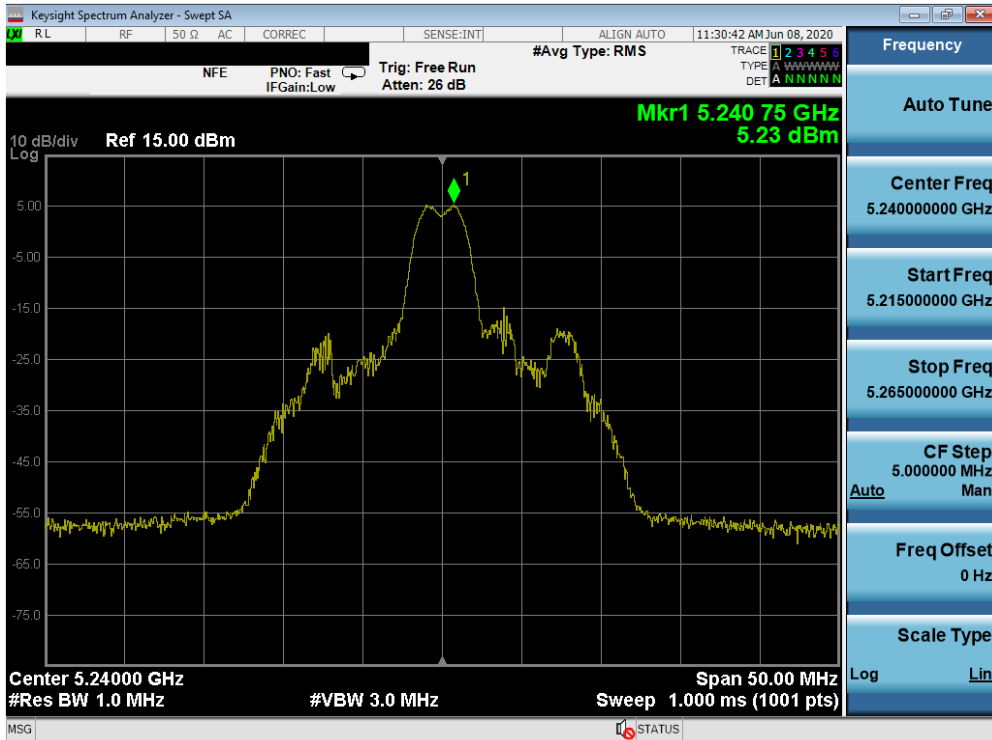


Plot 7-271. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax – 26 Tones (UNII Band 1) – Ch. 36)

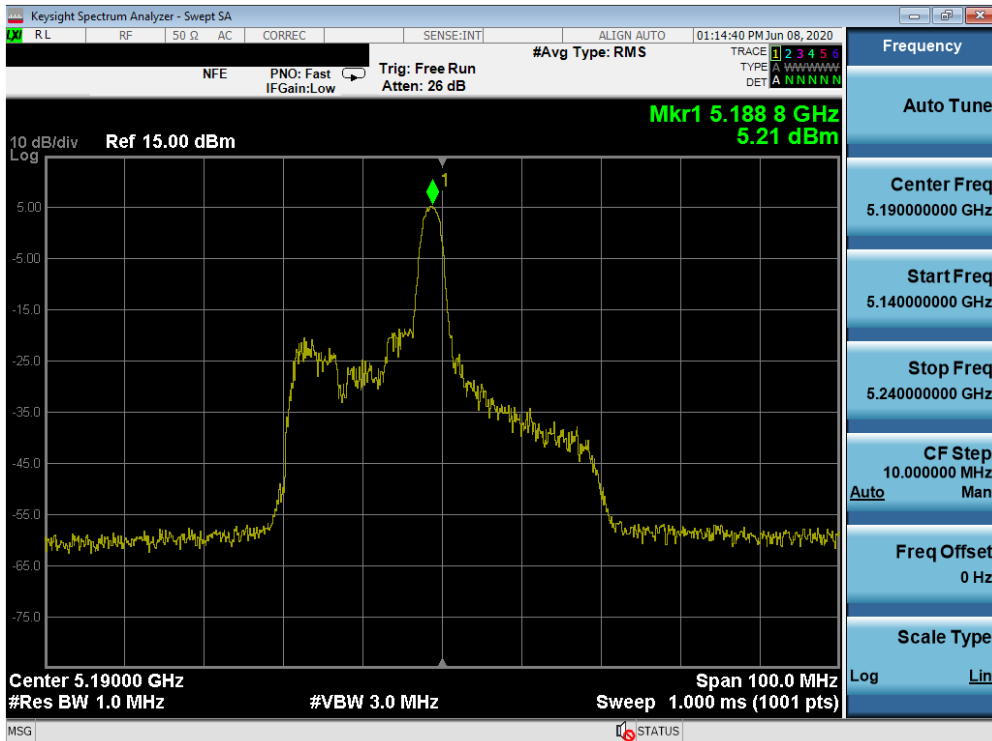


Plot 7-272. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax – 26 Tones (UNII Band 1) – Ch. 40)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 195 of 292

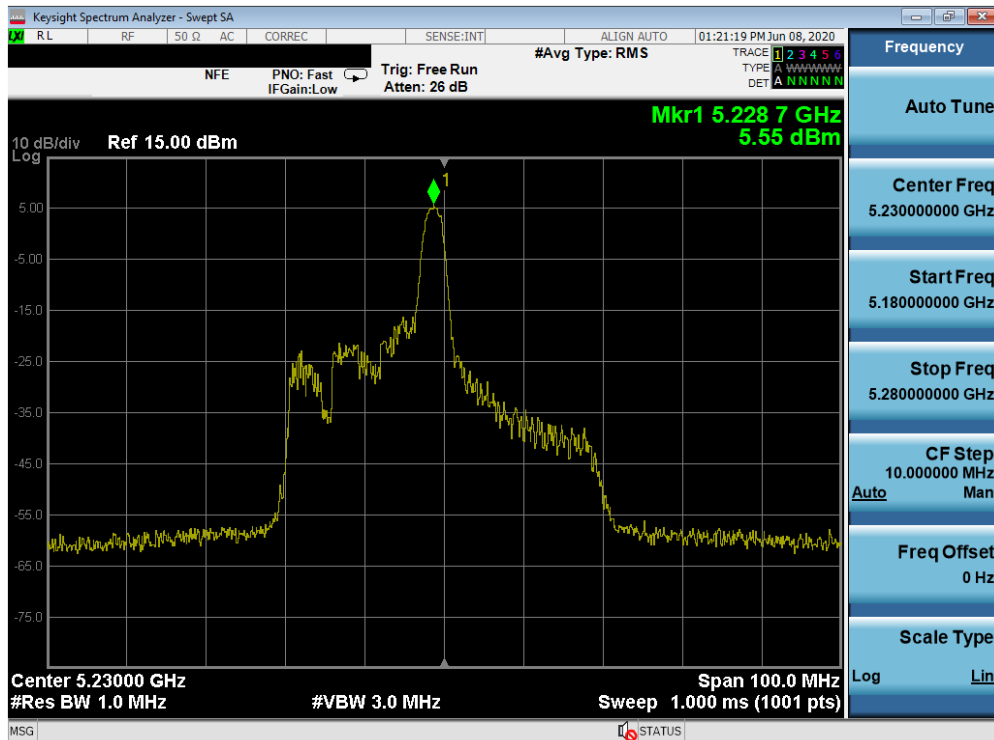


Plot 7-273. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11ax – 26 Tones (UNII Band 1) – Ch. 48)

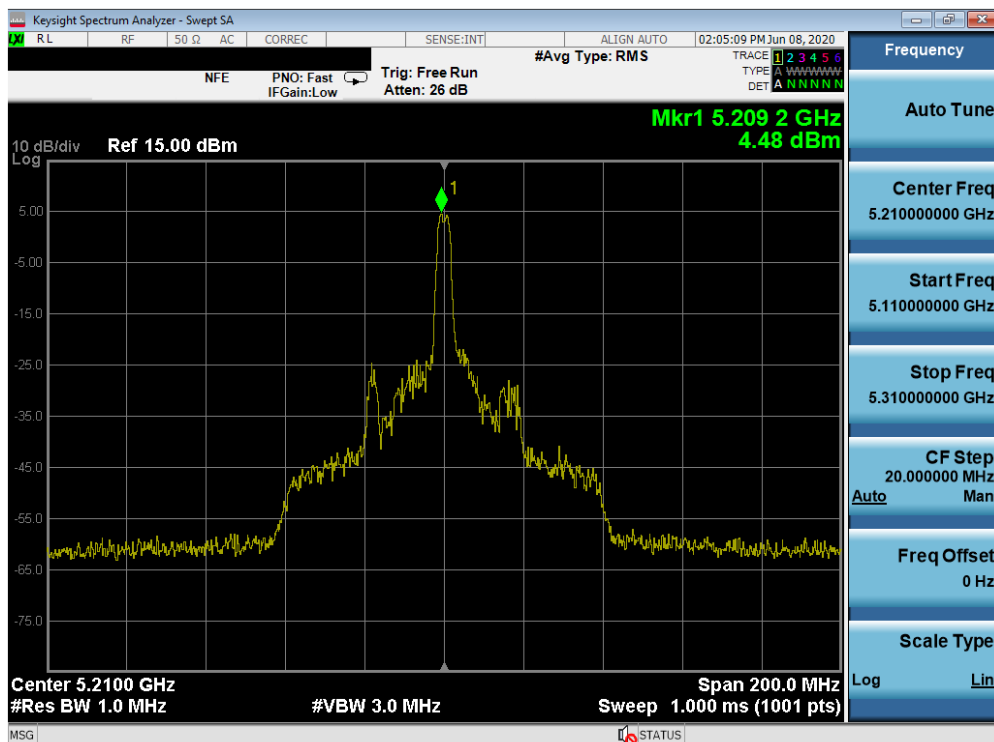


Plot 7-274. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax – 26 Tones (UNII Band 1) – Ch. 38)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 196 of 292



Plot 7-275. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11ax – 26 Tones (UNII Band 1) – Ch. 46)



Plot 7-276. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ax – 26 Tones (UNII Band 1) – Ch. 42)

FCC ID: A3LSMN986U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M2004170065-10-R1.A3L	Test Dates: 4/17 - 6/22/2020	EUT Type: Portable Handset		Page 197 of 292