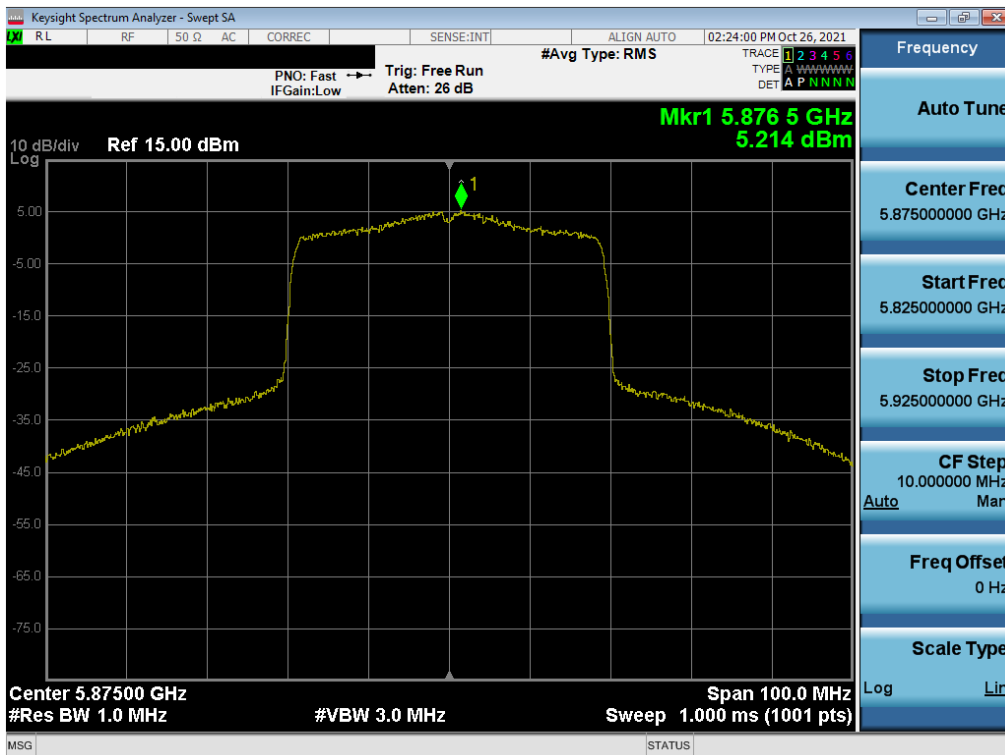
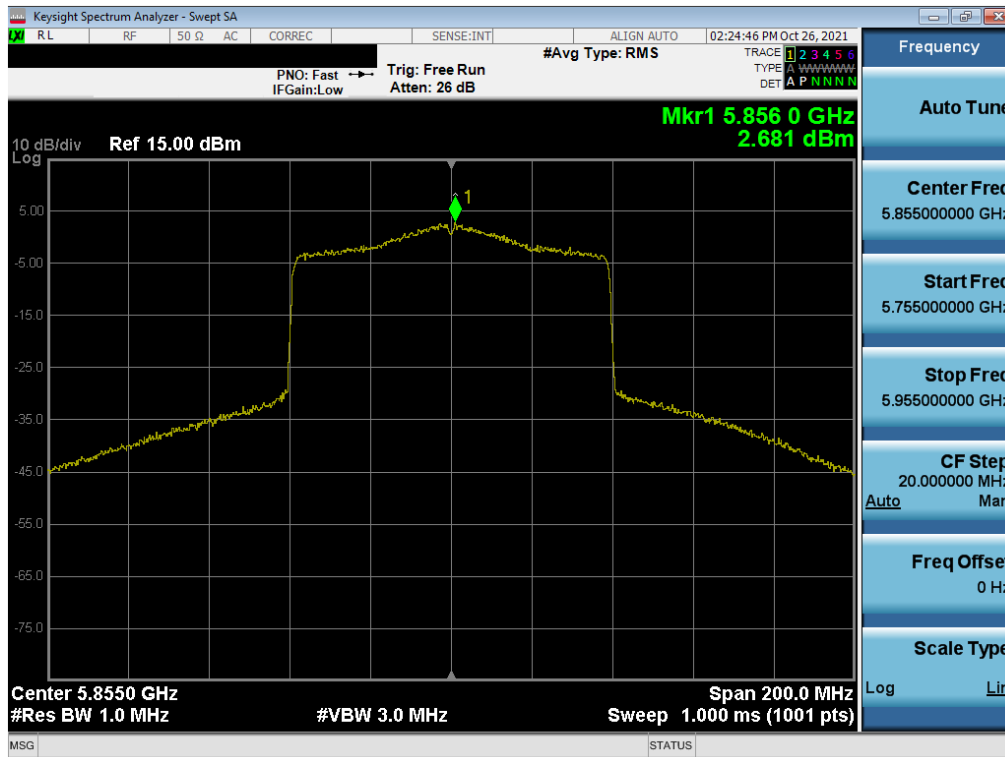


Plot 7-238. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 3/4) – Ch. 167)



Plot 7-239. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 4) – Ch. 175)

FCC ID: A3LSMS901JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 156 of 295



Plot 7-240. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 3/4) – Ch. 171)

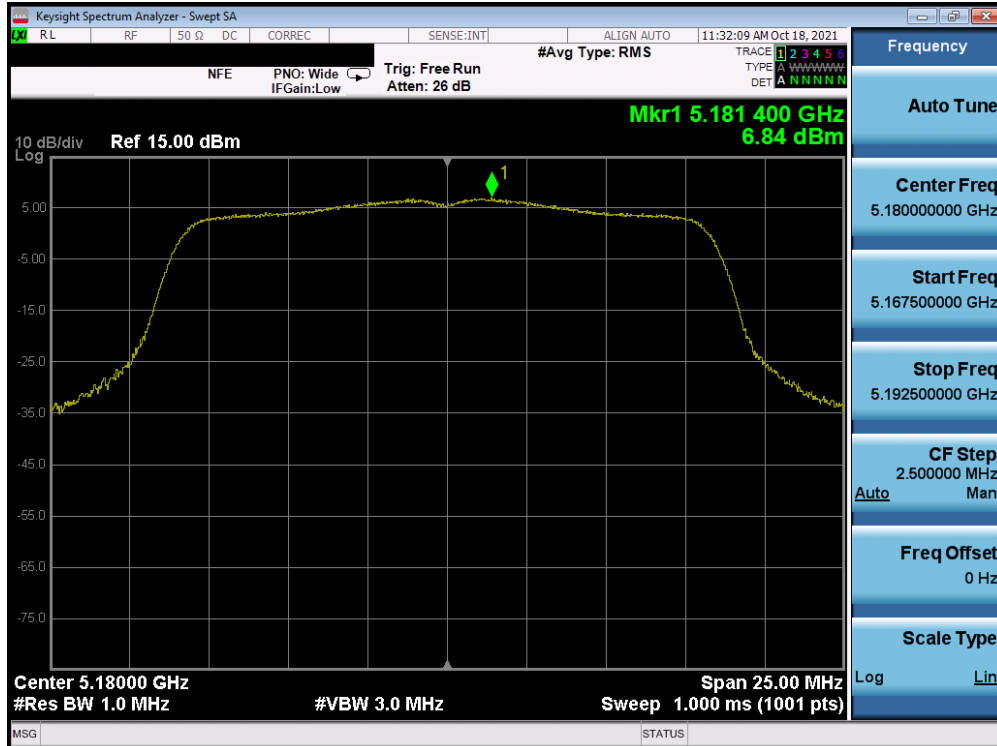
FCC ID: A3LSMS901JPN	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 157 of 295

## SISO Antenna-2 Power Spectral Density Measurements

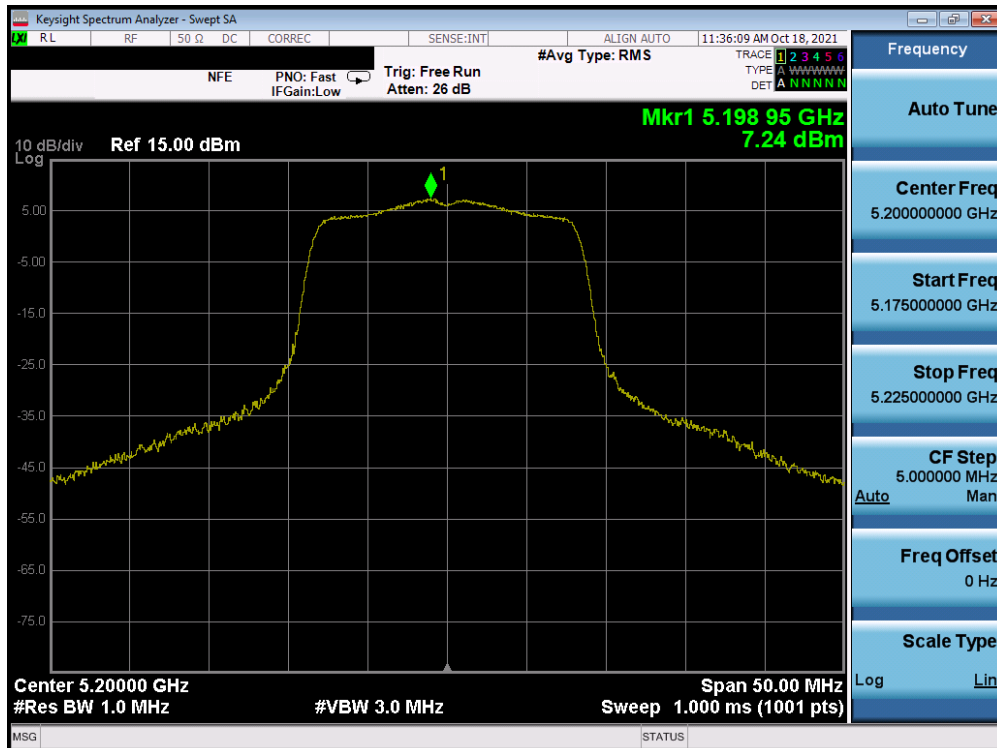
	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	a	6	6.84	11.0	-4.16
	5200	40	a	6	7.24	11.0	-3.76
	5240	48	a	6	7.02	11.0	-3.98
	5180	36	n (20MHz)	6.5/7.2 (MCS0)	8.06	11.0	-2.94
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	8.25	11.0	-2.75
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	7.91	11.0	-3.09
	5180	36	ax (20MHz)	6.5/7.2 (MCS0)	7.87	11.0	-3.13
	5200	40	ax (20MHz)	6.5/7.2 (MCS0)	8.10	11.0	-2.90
	5240	48	ax (20MHz)	6.5/7.2 (MCS0)	8.05	11.0	-2.95
	5190	38	n (40MHz)	13.5/15 (MCS0)	4.04	11.0	-6.96
	5230	46	n (40MHz)	13.5/15 (MCS0)	3.83	11.0	-7.17
	5190	38	ax (40MHz)	13.5/15 (MCS0)	4.47	11.0	-6.53
	5230	46	ax (40MHz)	13.5/15 (MCS0)	4.32	11.0	-6.68
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	-0.02	11.0	-11.02
	5210	42	ax (80MHz)	29.3/32.5 (MCS0)	1.91	11.0	-9.09
Band 2A	5260	52	a	6	7.54	11.0	-3.46
	5280	56	a	6	7.31	11.0	-3.69
	5320	64	a	6	6.45	11.0	-4.55
	5260	52	n (20MHz)	6.5/7.2 (MCS0)	8.26	11.0	-2.74
	5280	56	n (20MHz)	6.5/7.2 (MCS0)	7.72	11.0	-3.28
	5320	64	n (20MHz)	6.5/7.2 (MCS0)	6.98	11.0	-4.02
	5260	52	ax (20MHz)	6.5/7.2 (MCS0)	7.99	11.0	-3.01
	5280	56	ax (20MHz)	6.5/7.2 (MCS0)	7.74	11.0	-3.26
	5320	64	ax (20MHz)	6.5/7.2 (MCS0)	7.47	11.0	-3.53
	5270	54	n (40MHz)	13.5/15 (MCS0)	3.02	11.0	-7.98
	5310	62	n (40MHz)	13.5/15 (MCS0)	3.76	11.0	-7.24
	5270	54	ax (40MHz)	13.5/15 (MCS0)	4.47	11.0	-6.53
	5310	62	ax (40MHz)	13.5/15 (MCS0)	3.91	11.0	-7.09
	5290	58	ac (80MHz)	29.3/32.5 (MCS0)	0.60	11.0	-10.40
	5290	58	ax (80MHz)	29.3/32.5 (MCS0)	2.37	11.0	-8.63
Band 2C	5500	100	a	6	6.62	11.0	-4.38
	5600	120	a	6	6.29	11.0	-4.71
	5720	144	a	6	6.94	11.0	-4.07
	5500	100	n (20MHz)	6.5/7.2 (MCS0)	7.79	11.0	-3.21
	5600	120	n (20MHz)	6.5/7.2 (MCS0)	7.73	11.0	-3.27
	5720	144	n (20MHz)	6.5/7.2 (MCS0)	7.73	11.0	-3.27
	5500	100	ax (20MHz)	6.5/7.2 (MCS0)	7.22	11.0	-3.78
	5600	120	ax (20MHz)	6.5/7.2 (MCS0)	7.67	11.0	-3.33
	5720	144	ax (20MHz)	6.5/7.2 (MCS0)	7.59	11.0	-3.41
	5510	102	n (40MHz)	13.5/15 (MCS0)	3.72	11.0	-7.28
	5590	118	n (40MHz)	13.5/15 (MCS0)	4.17	11.0	-6.83
	5710	142	n (40MHz)	13.5/15 (MCS0)	4.98	11.0	-6.02
	5510	102	ax (40MHz)	13.5/15 (MCS0)	4.62	11.0	-6.38
	5590	118	ax (40MHz)	13.5/15 (MCS0)	4.69	11.0	-6.31
	5710	142	ax (40MHz)	13.5/15 (MCS0)	4.94	11.0	-6.06
	5530	106	ac (80MHz)	29.3/32.5 (MCS0)	-0.02	11.0	-11.02
	5610	122	ac (80MHz)	29.3/32.5 (MCS0)	1.20	11.0	-9.80
	5690	138	ac (80MHz)	29.3/32.5 (MCS0)	-1.73	11.0	-12.73
	5530	106	ax (80MHz)	29.3/32.5 (MCS0)	2.01	11.0	-8.99
	5610	122	ax (80MHz)	29.3/32.5 (MCS0)	2.44	11.0	-8.56
5690	138	ax (80MHz)	29.3/32.5 (MCS0)	-0.14	11.0	-11.14	

Table 7-32. Conducted Power Spectral Density Measurements SISO ANT2

FCC ID: A3LSMS901JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 158 of 295

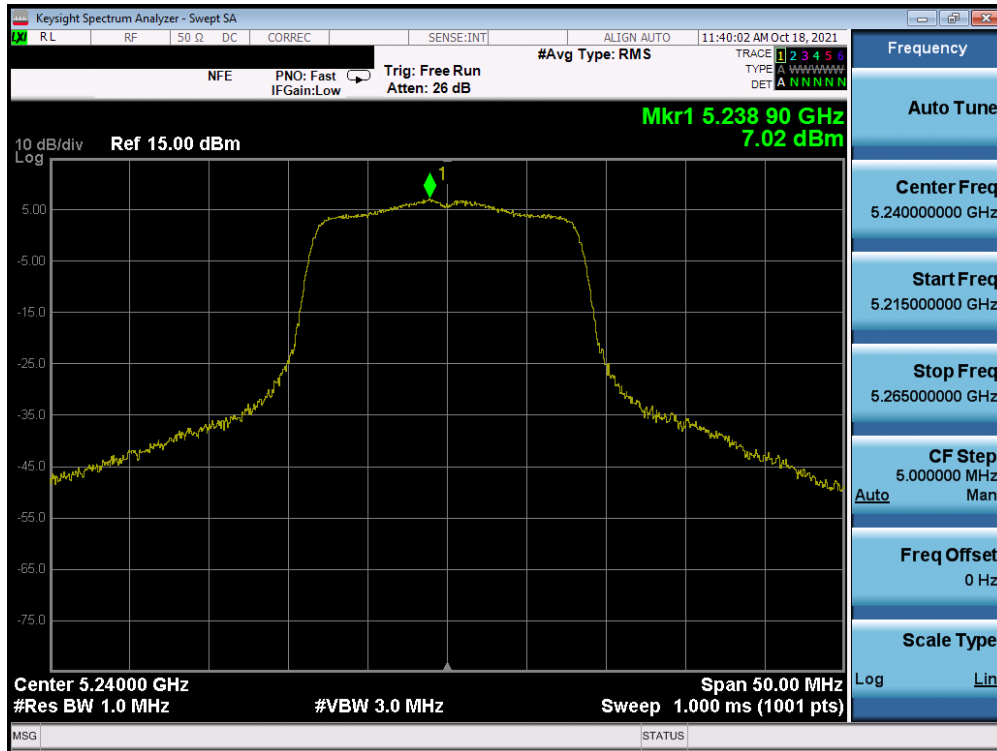


Plot 7-241. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 1) – Ch. 36)

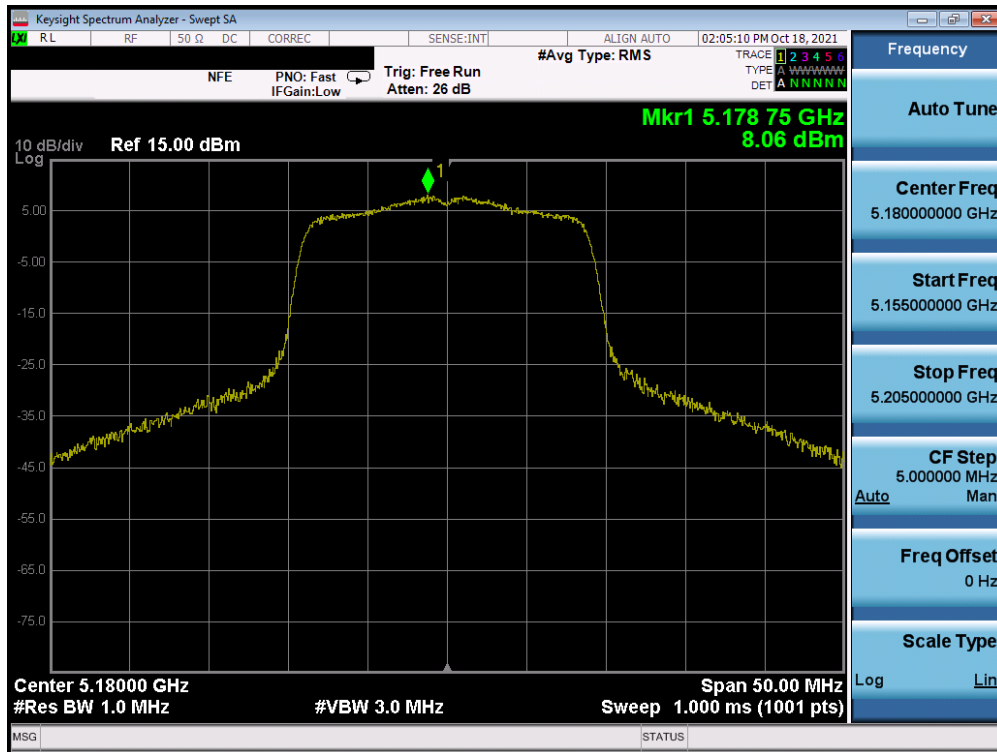


Plot 7-242. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 1) – Ch. 40)

FCC ID: A3LSMS901JPN	Proud to be part of  element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 159 of 295

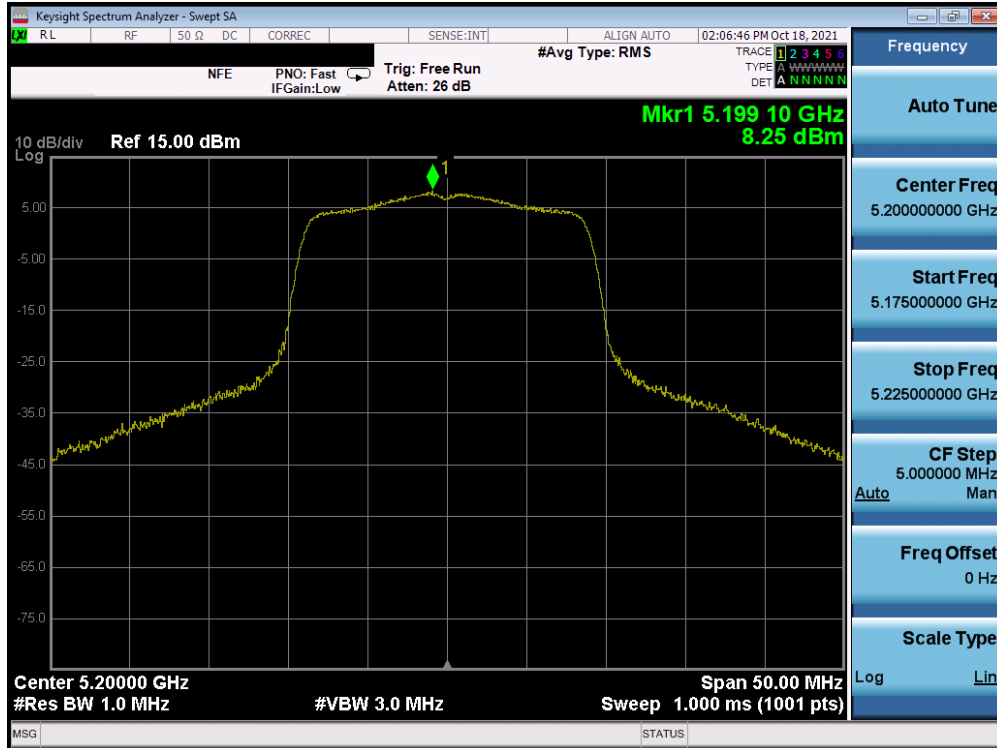


Plot 7-243. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 1) – Ch. 48)

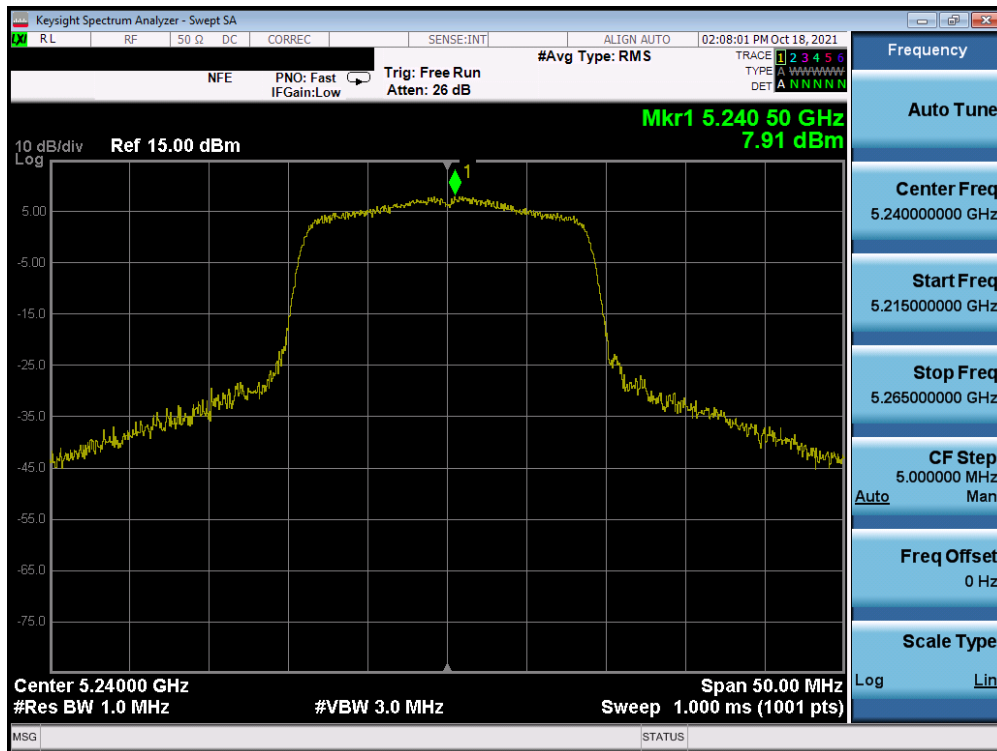


Plot 7-244. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 1) – Ch. 36)

FCC ID: A3LSMS901JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 160 of 295

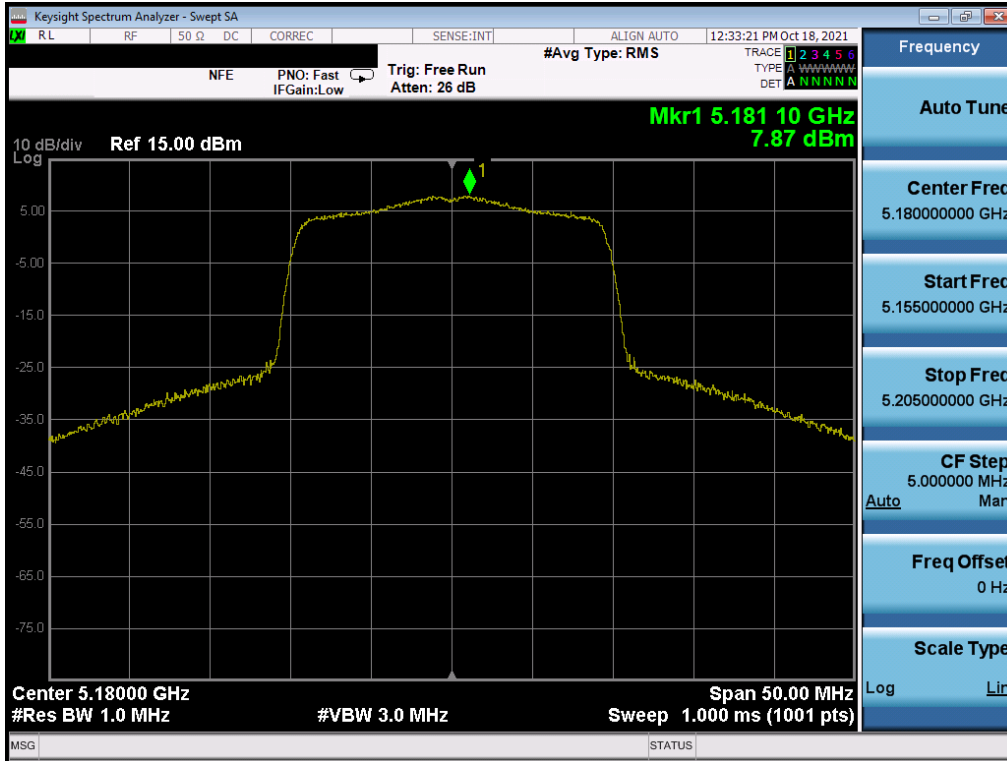


Plot 7-245. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 1) – Ch. 40)

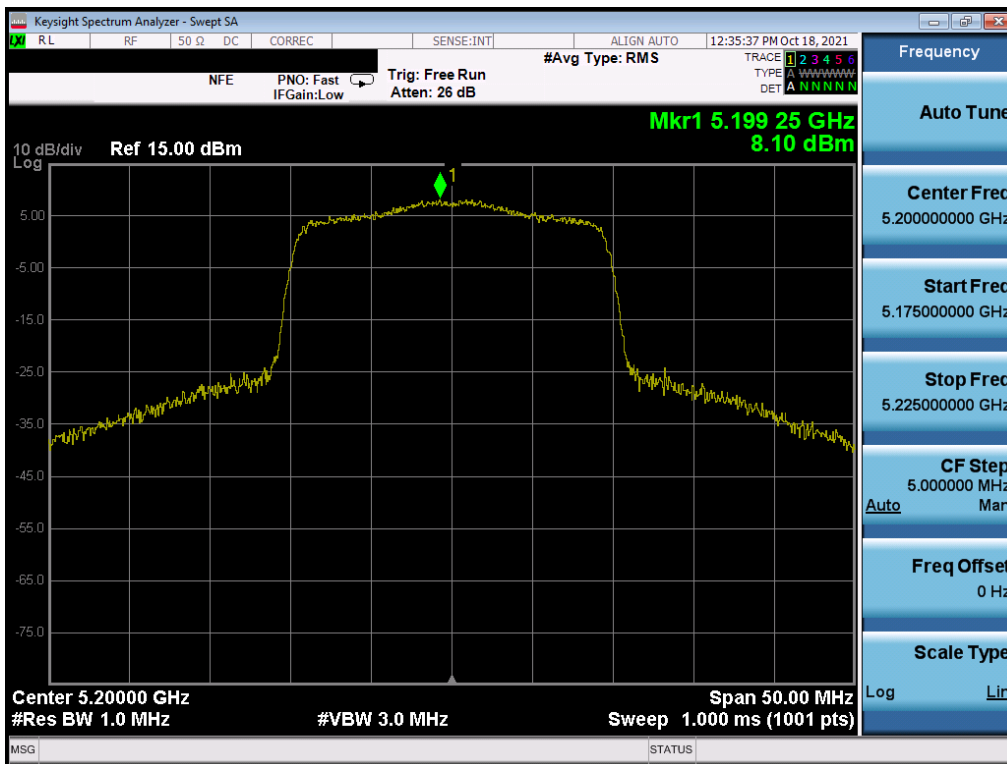


Plot 7-246. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 1) – Ch. 48)

FCC ID: A3LSMS901JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 161 of 295

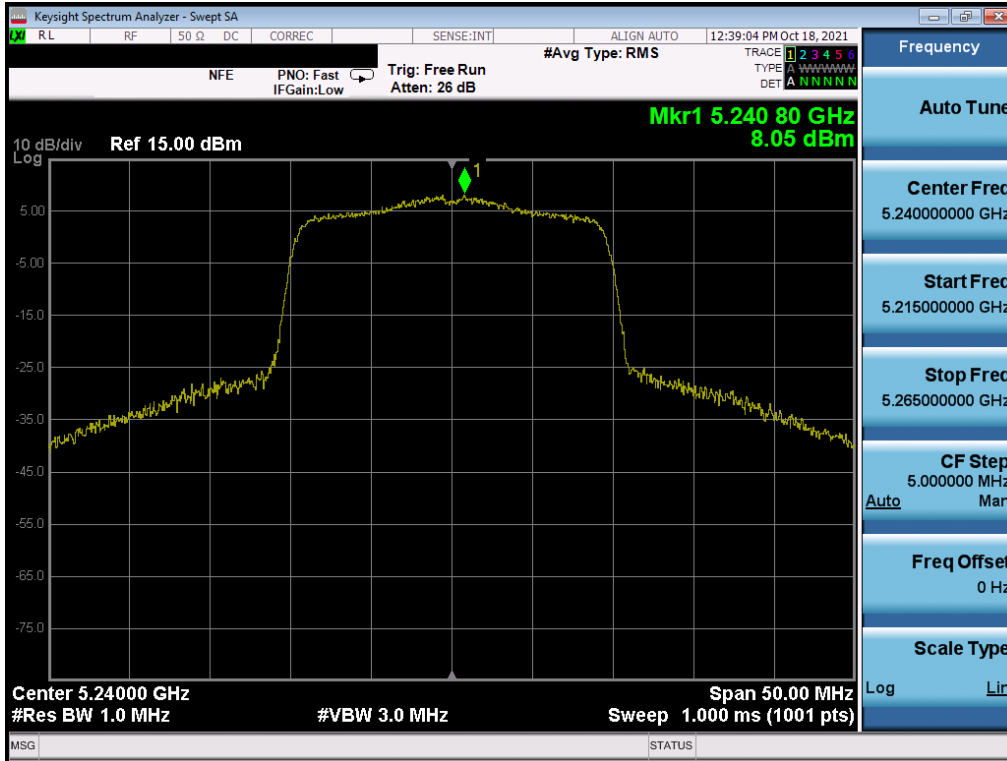


Plot 7-247. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 1) – Ch. 36)

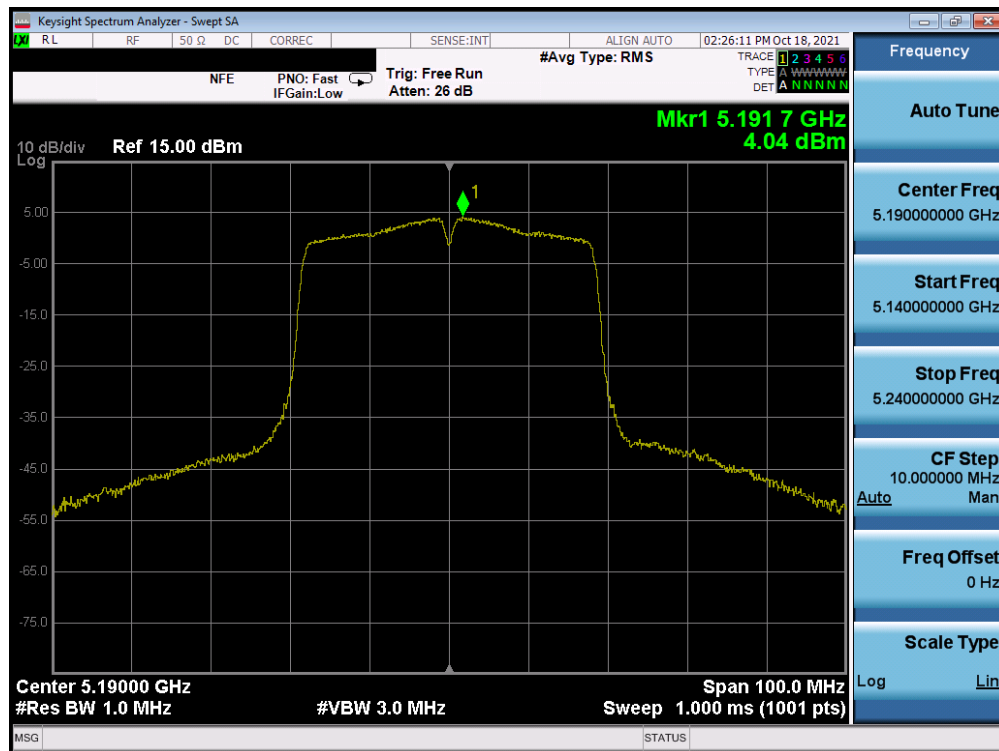


Plot 7-248. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 1) – Ch. 40)

FCC ID: A3LSMS901JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 162 of 295



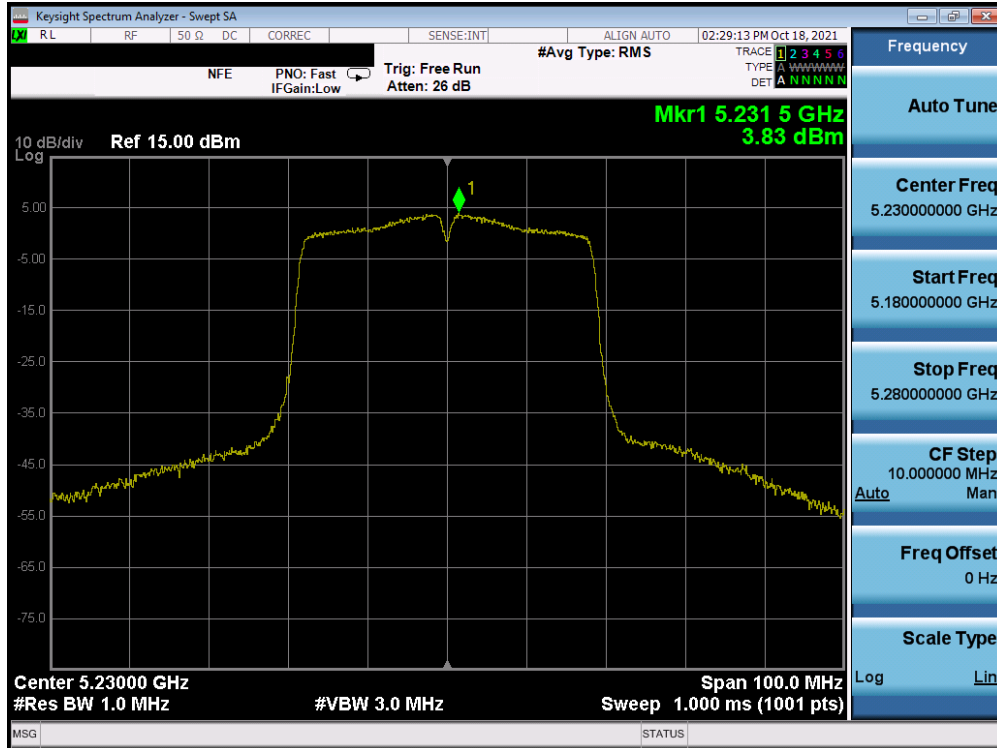
Plot 7-249. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 1) – Ch. 48)



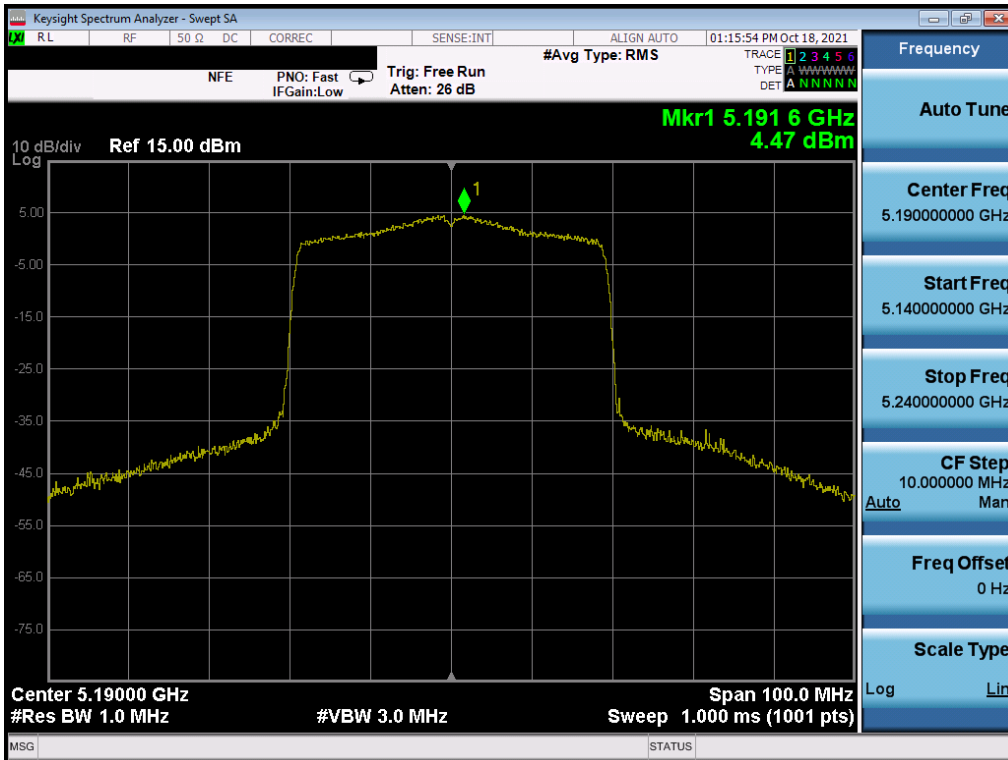
Plot 7-250. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 1) – Ch. 38)

FCC ID: A3LSMS901JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 163 of 295



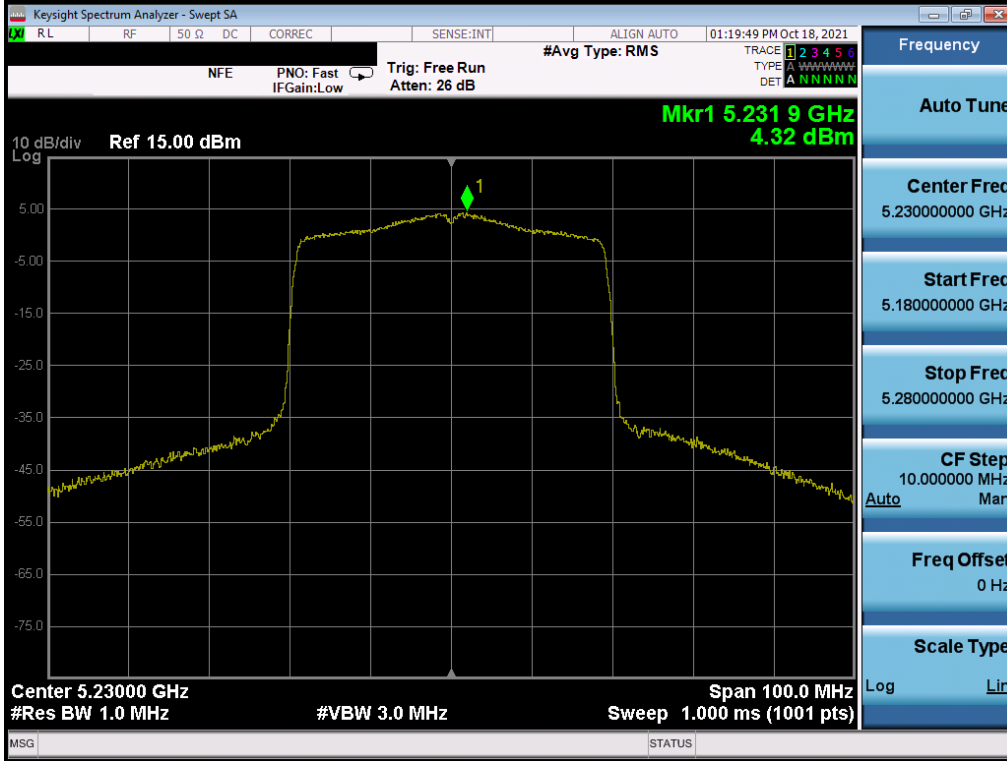


Plot 7-251. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 1) – Ch. 46)

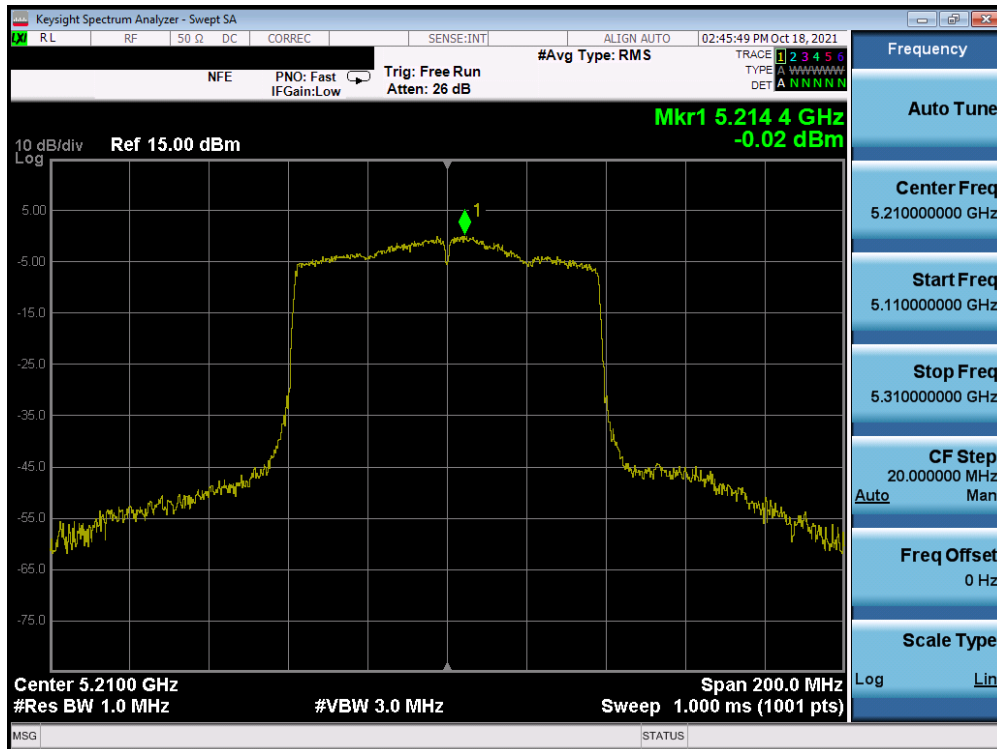


Plot 7-252. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 1) – Ch. 38)

FCC ID: A3LSMS901JPN	Proud to be part of  element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 164 of 295

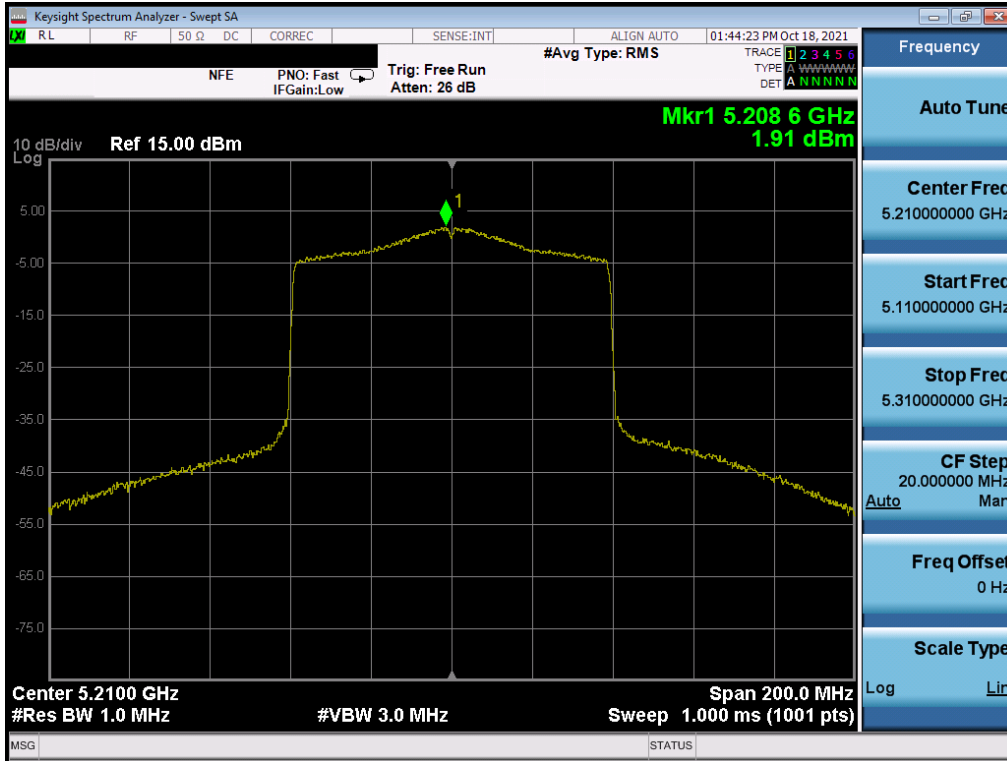


Plot 7-253. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 1) – Ch. 46)

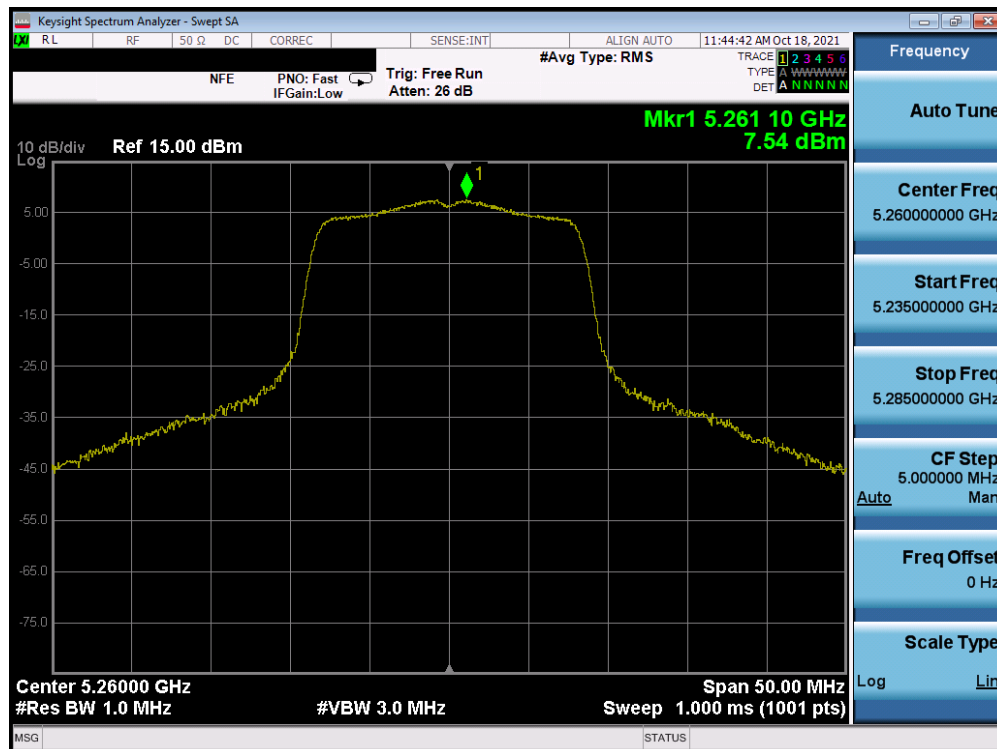


Plot 7-254. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 1) – Ch. 42)

FCC ID: A3LSMS901JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 165 of 295

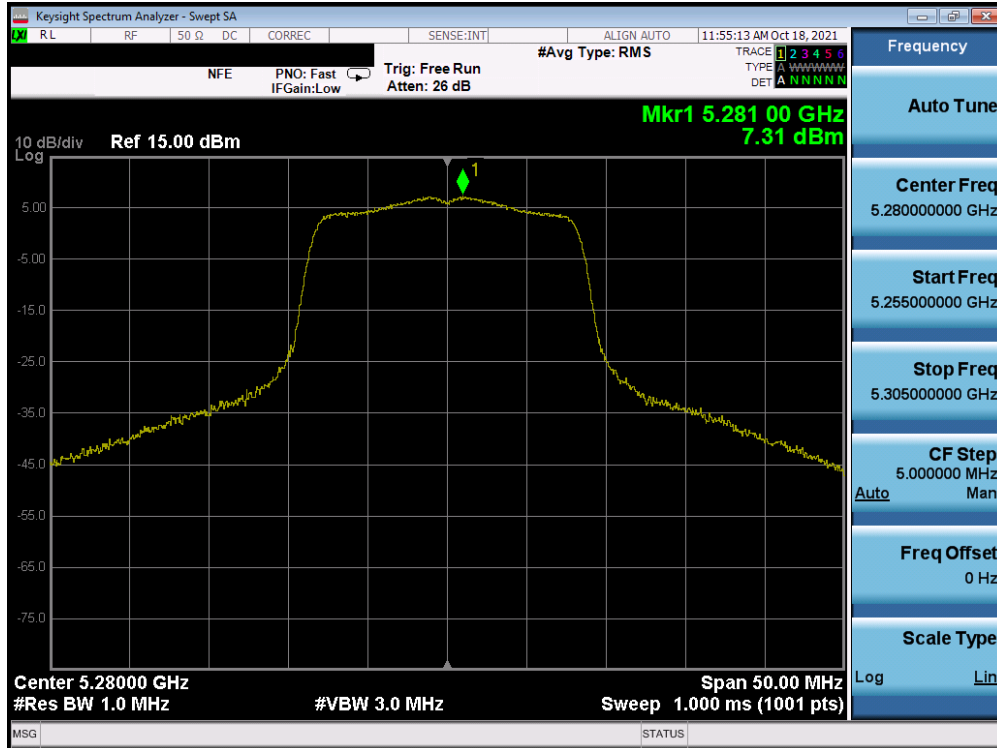


Plot 7-255. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 1) – Ch. 42)

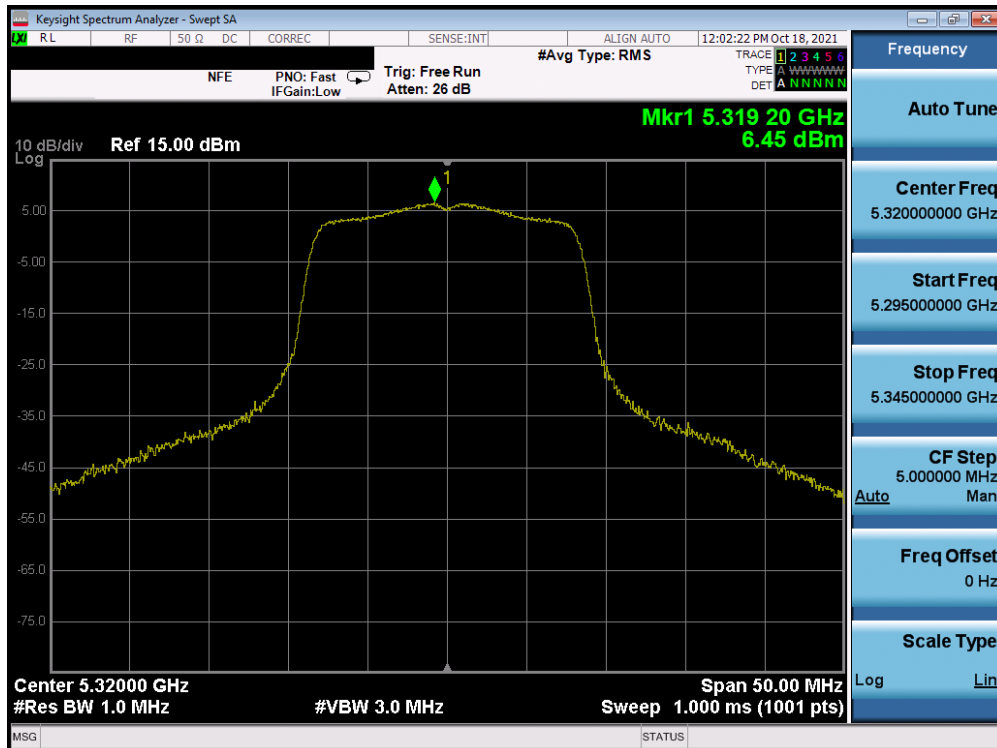


Plot 7-256. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2A) – Ch. 52)

FCC ID: A3LSMS901JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 166 of 295

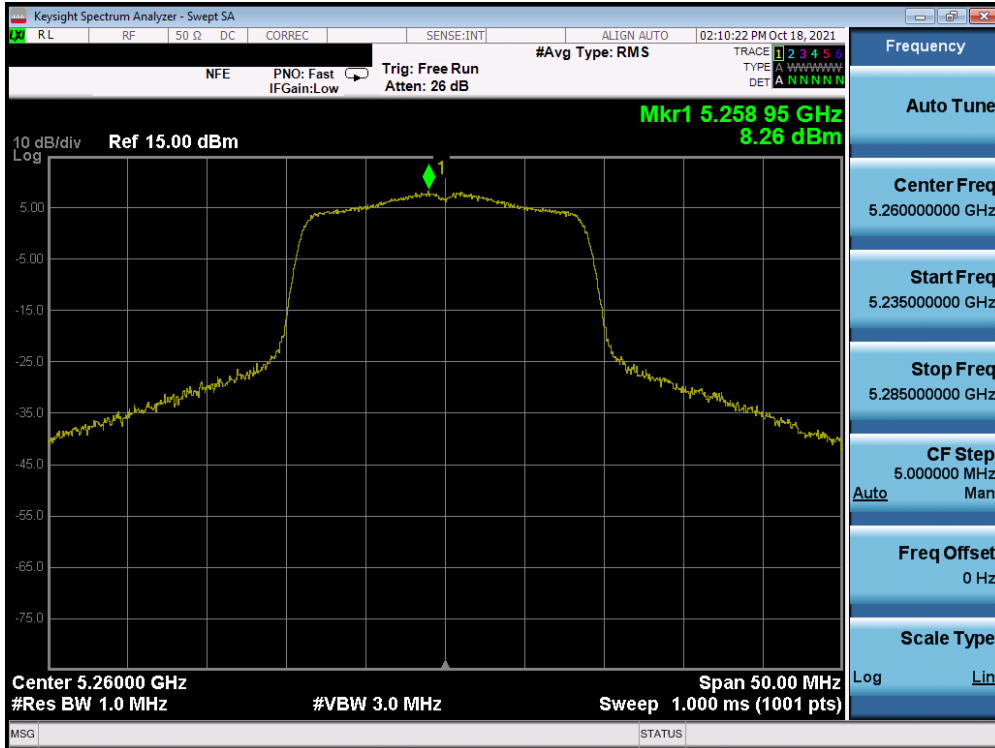


Plot 7-257. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2A) – Ch. 56)

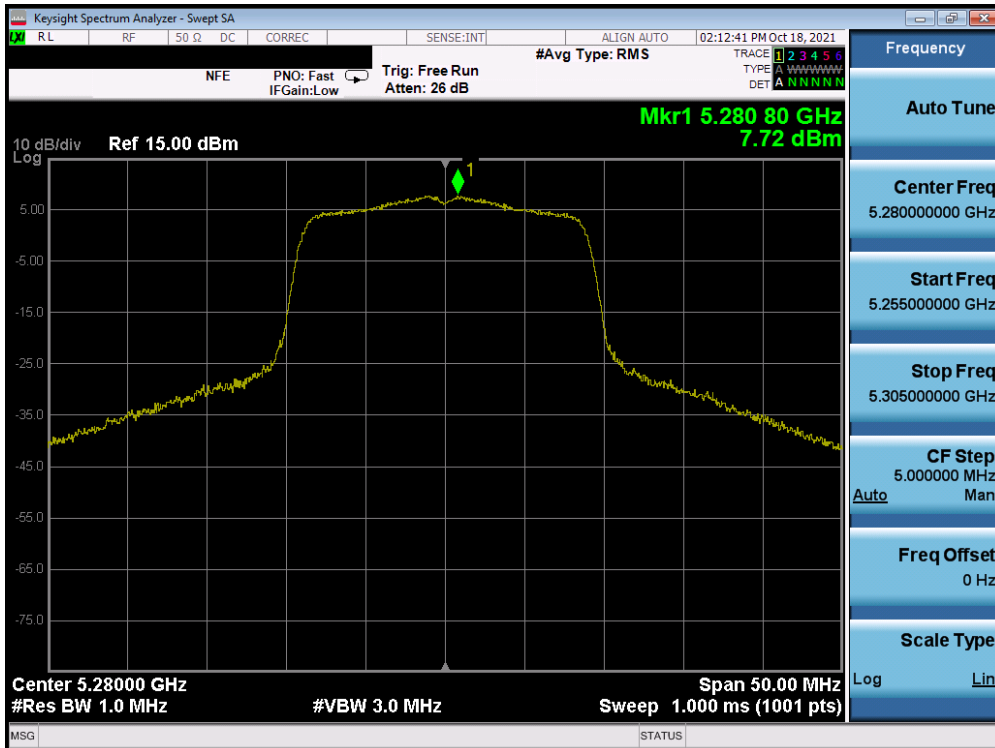


Plot 7-258. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2A) – Ch. 64)

FCC ID: A3LSMS901JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 167 of 295

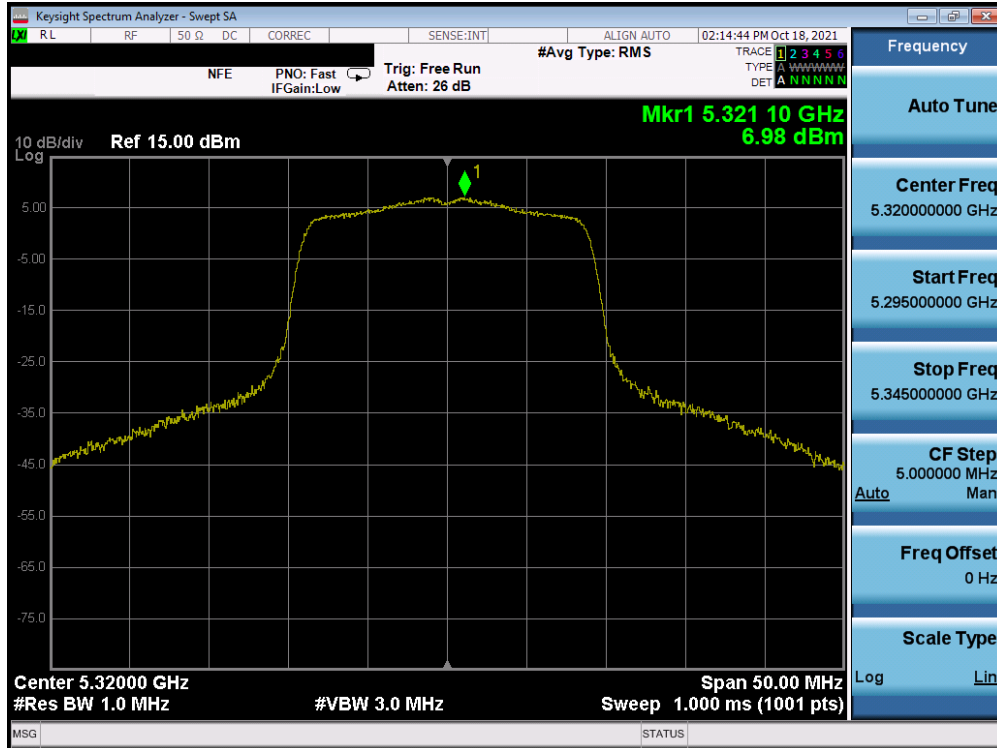


Plot 7-259. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2A) – Ch. 52)

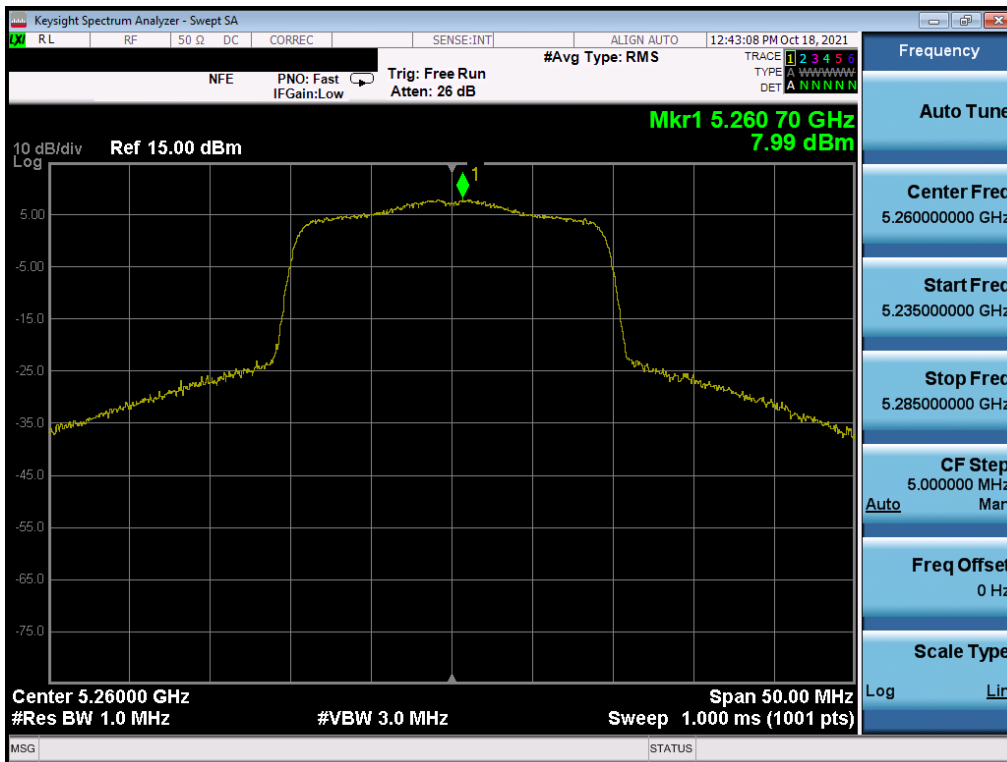


Plot 7-260. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2A) – Ch. 56)

FCC ID: A3LSMS901JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 168 of 295

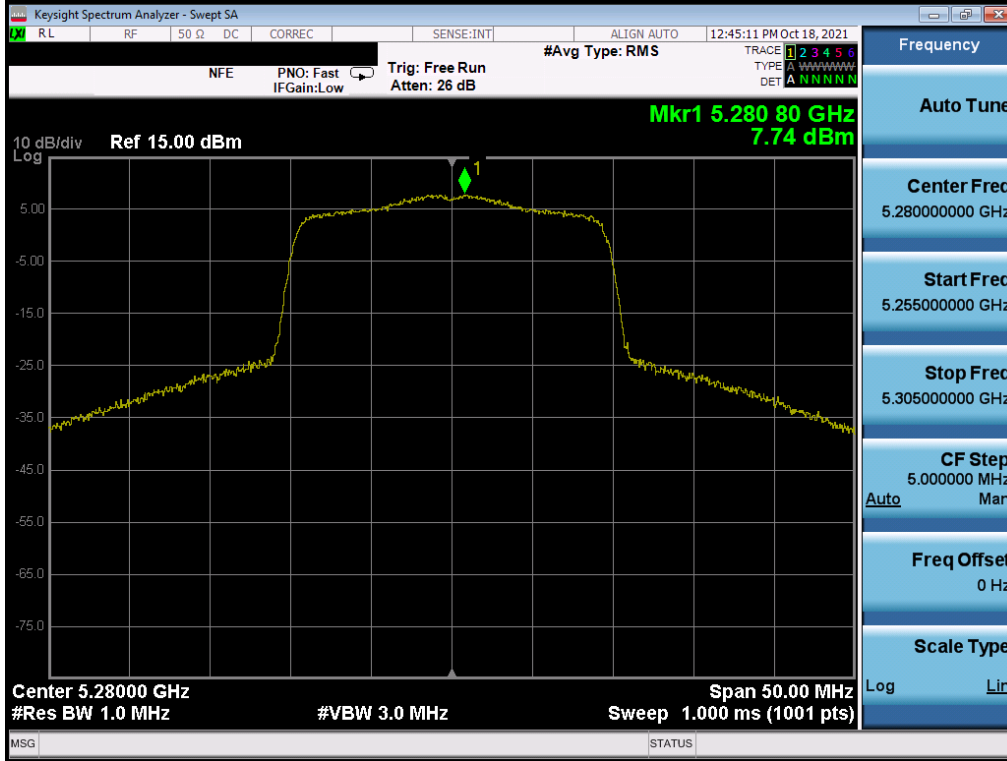


Plot 7-261. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2A) – Ch. 64)

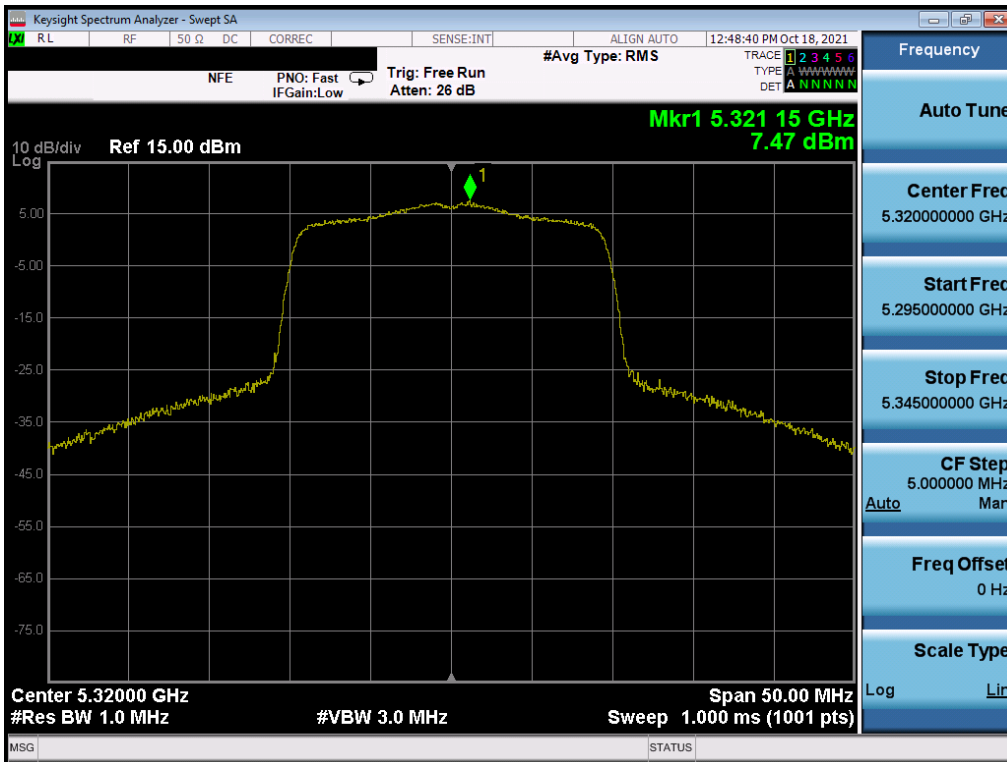


Plot 7-262. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2A) – Ch. 52)

FCC ID: A3LSMS901JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 169 of 295



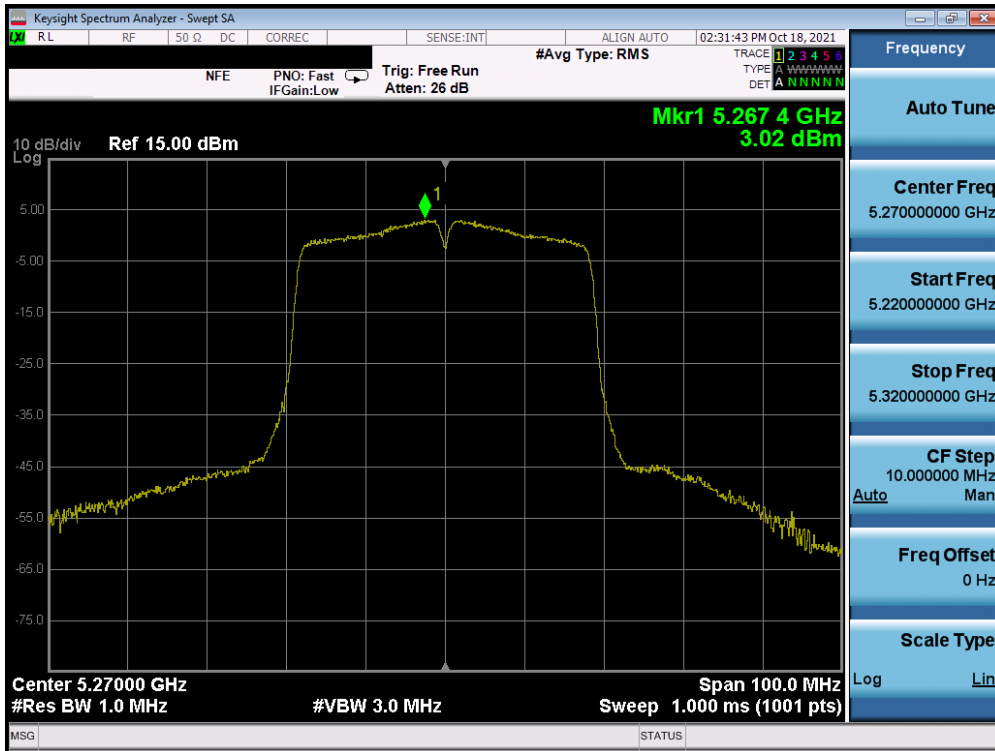
Plot 7-263. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2A) – Ch. 56)



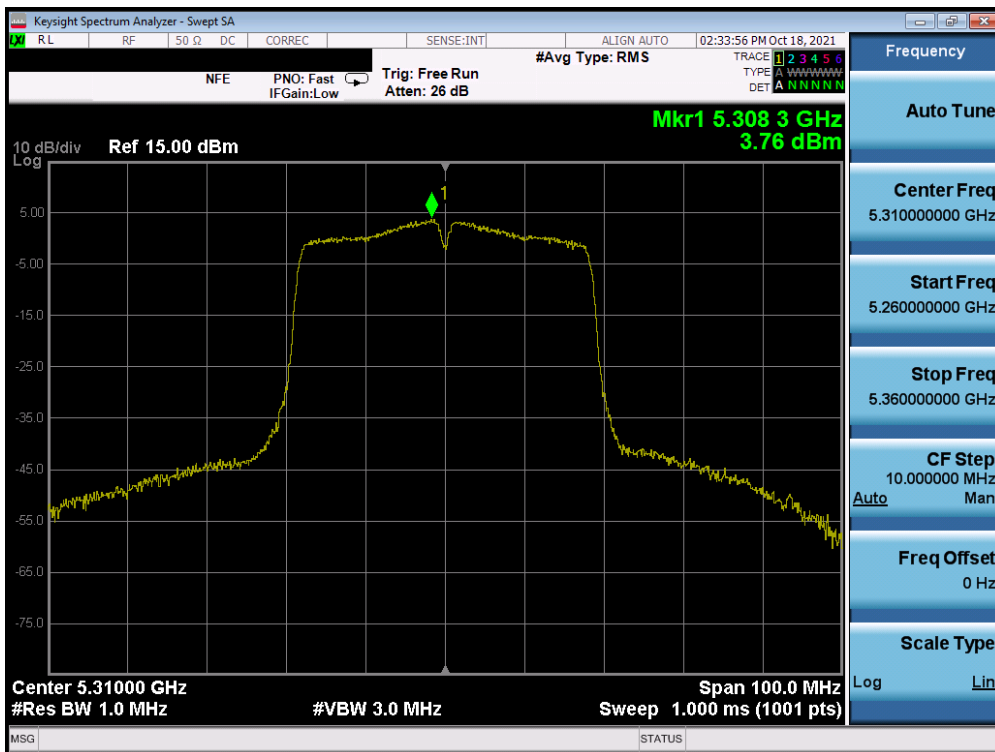
Plot 7-264. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2A) – Ch. 64)

FCC ID: A3LSMS901JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 170 of 295





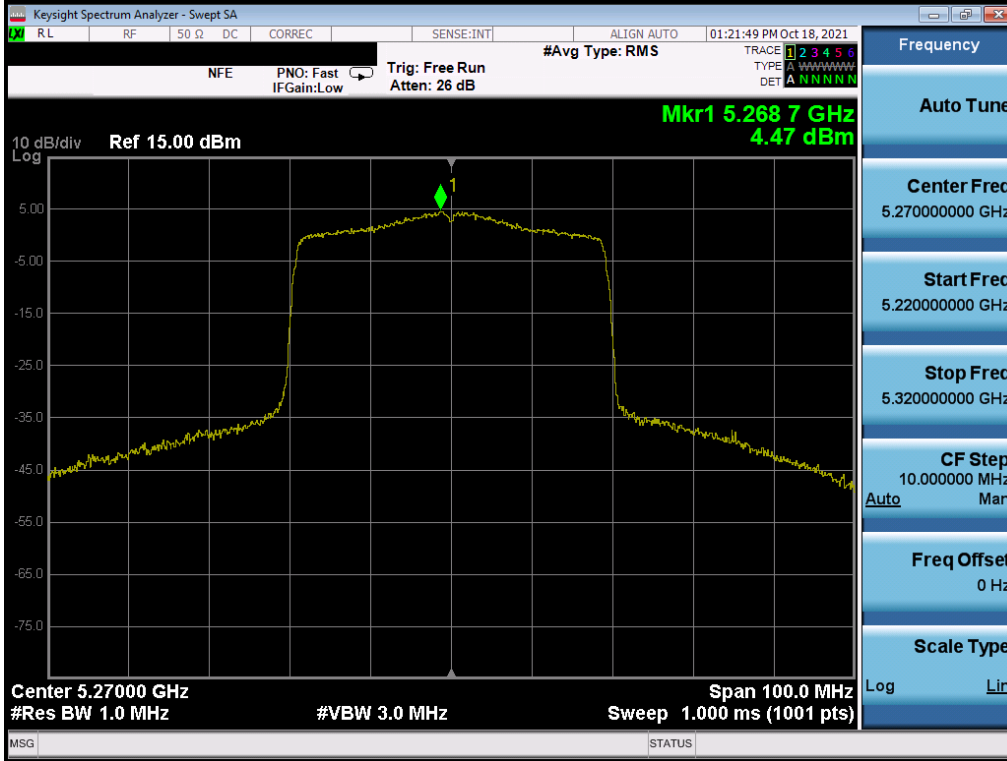
Plot 7-265. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2A) – Ch. 54)



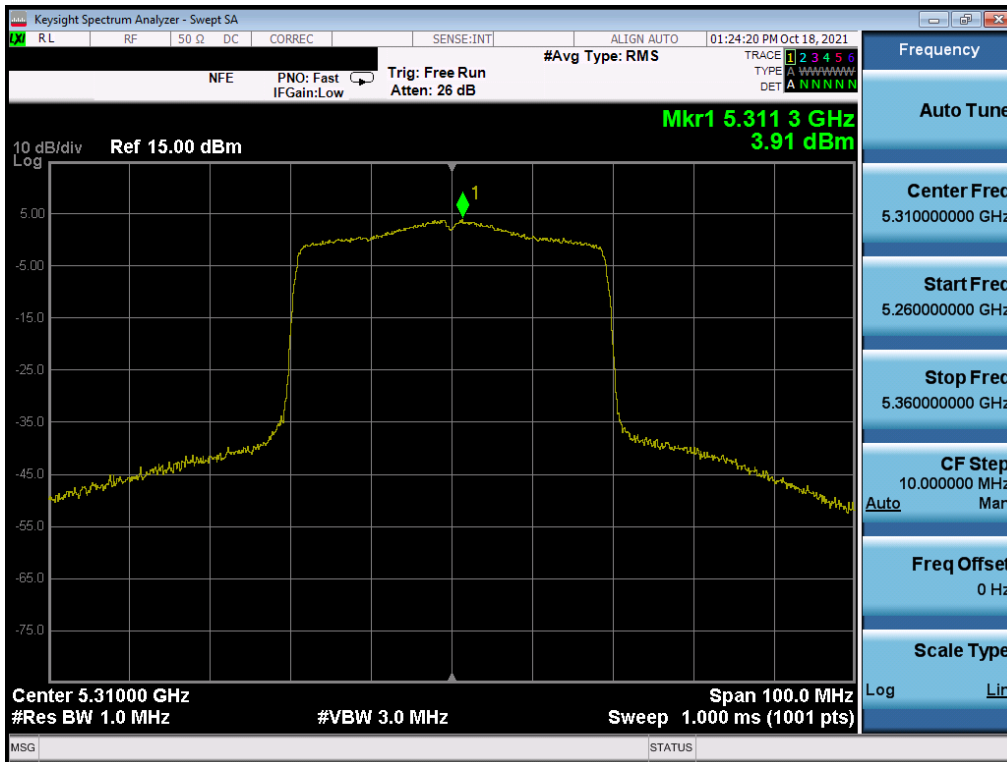
Plot 7-266. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2A) – Ch. 62)

FCC ID: A3LSMS901JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 171 of 295



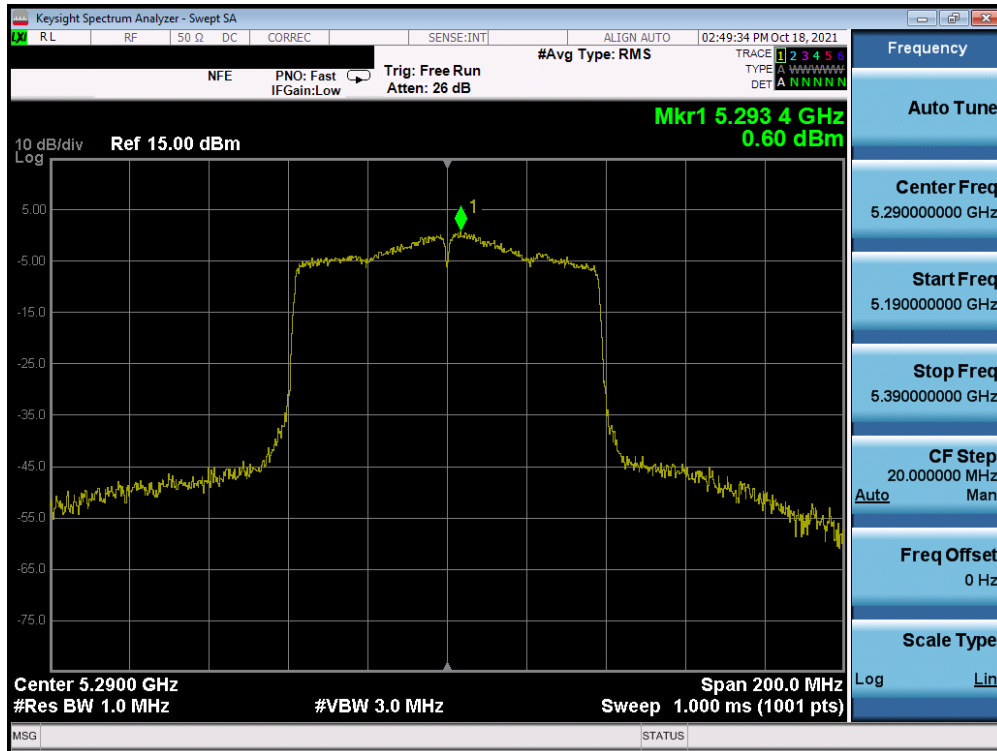


Plot 7-267. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2A) – Ch. 54)

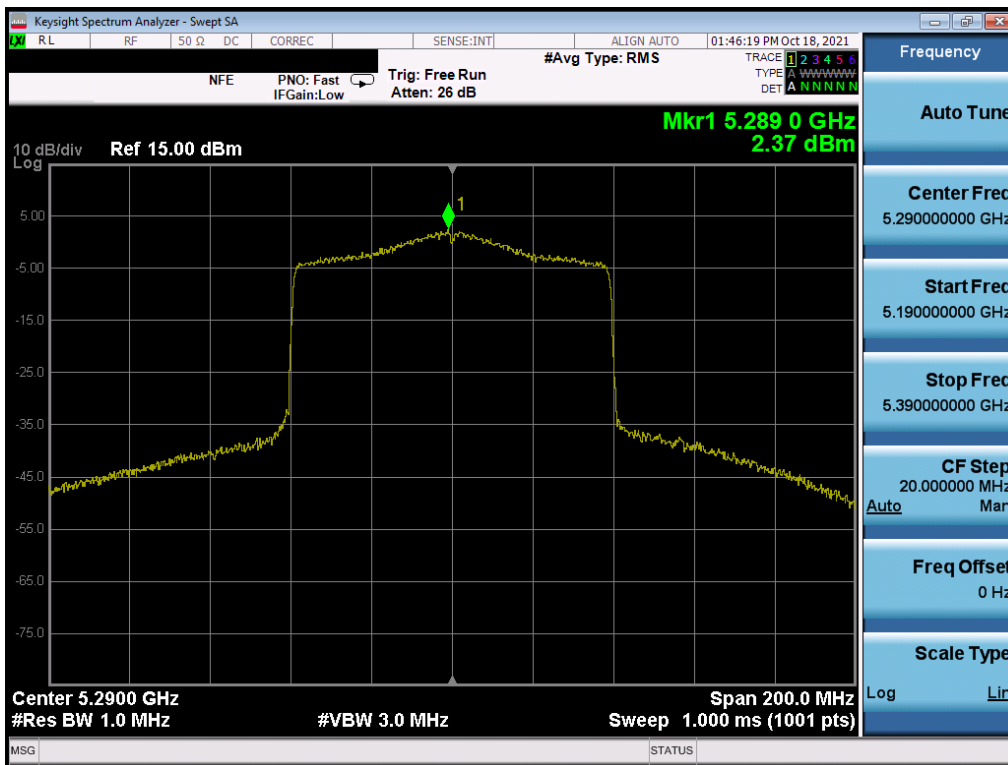


Plot 7-268. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2A) – Ch. 62)

FCC ID: A3LSMS901JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 172 of 295

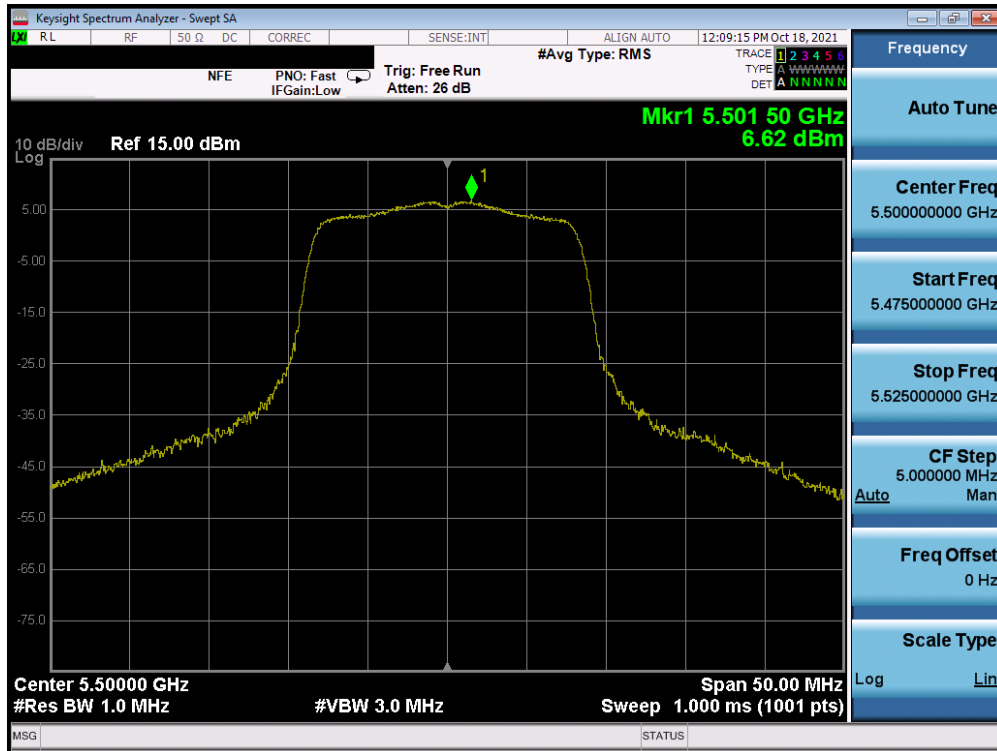


Plot 7-269. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2A) – Ch. 58)

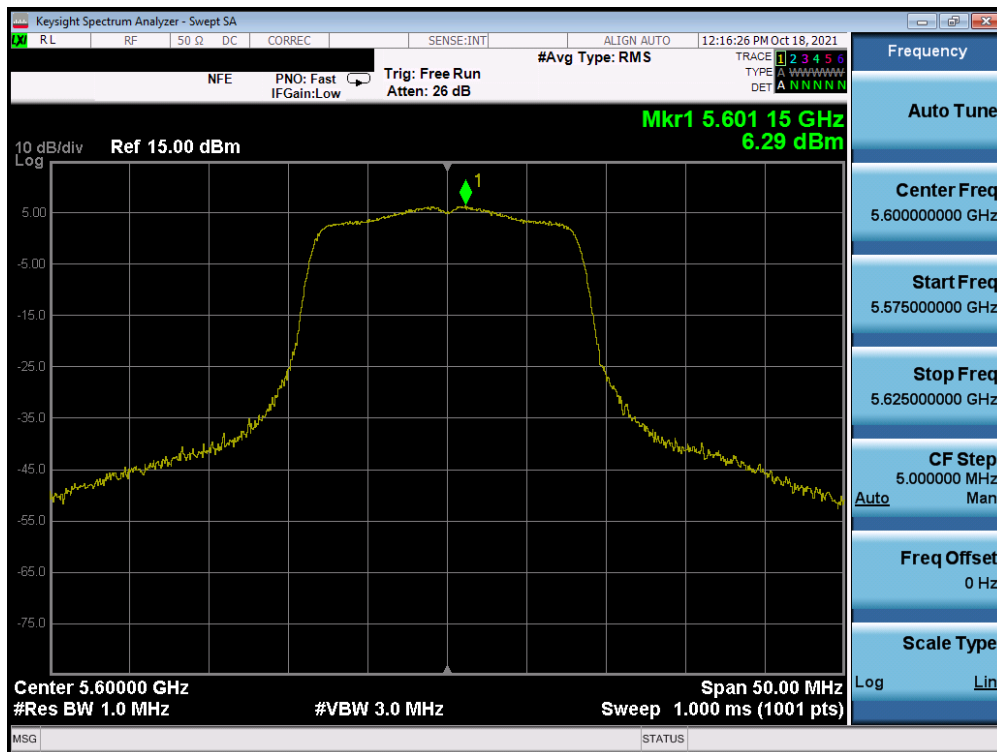


Plot 7-270. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 2A) – Ch. 58)

FCC ID: A3LSMS901JPN	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 173 of 295

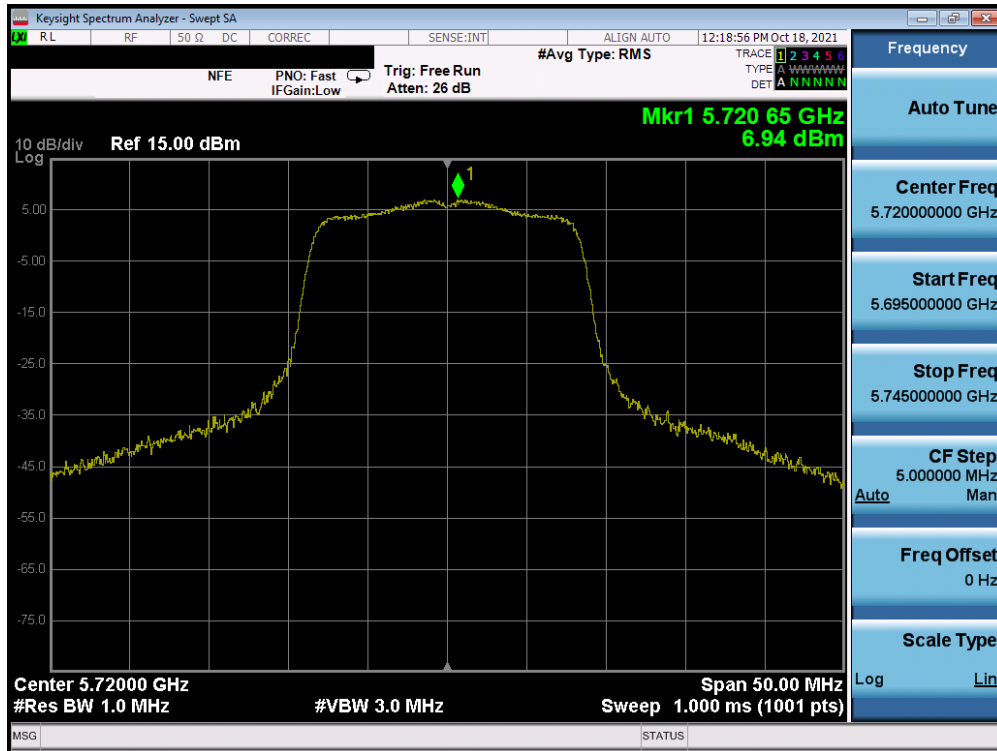


Plot 7-271. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2C) – Ch. 100)

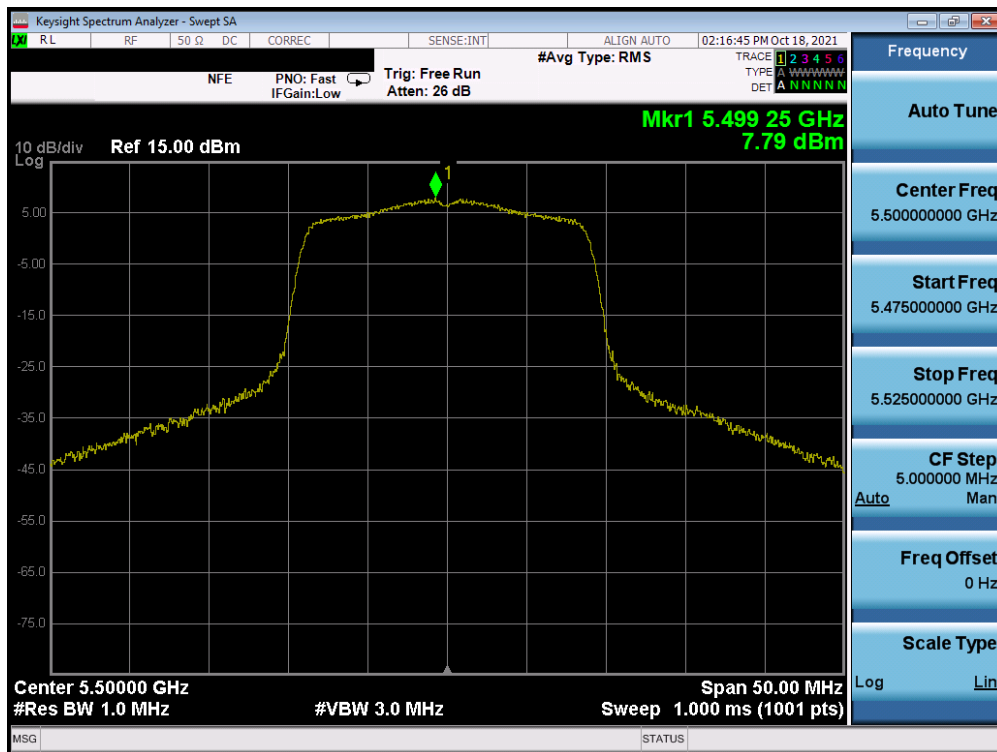


Plot 7-272. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2C) – Ch. 120)

FCC ID: A3LSMS901JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 174 of 295

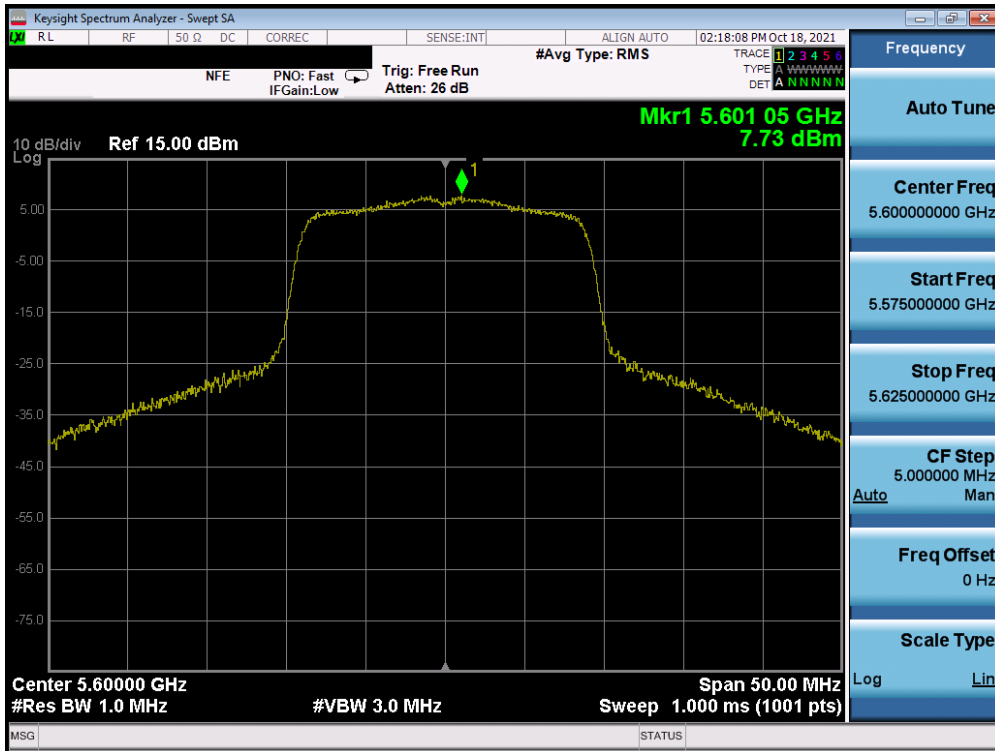


Plot 7-273. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2C) – Ch. 144)

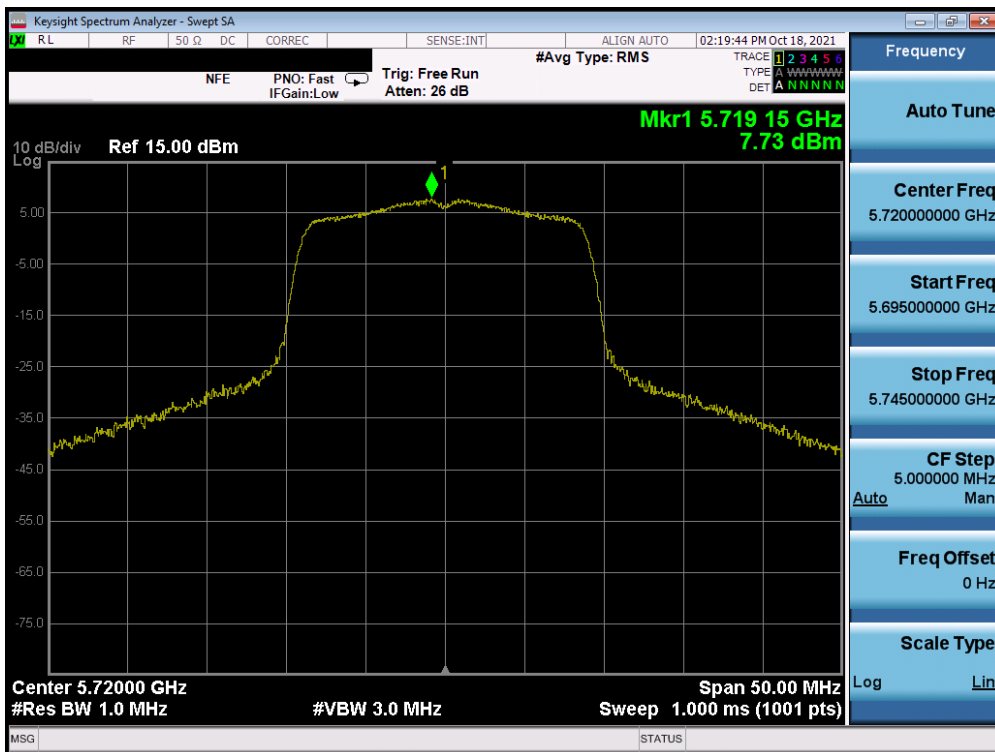


Plot 7-274. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) – Ch. 100)

FCC ID: A3LSMS901JPN	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 175 of 295

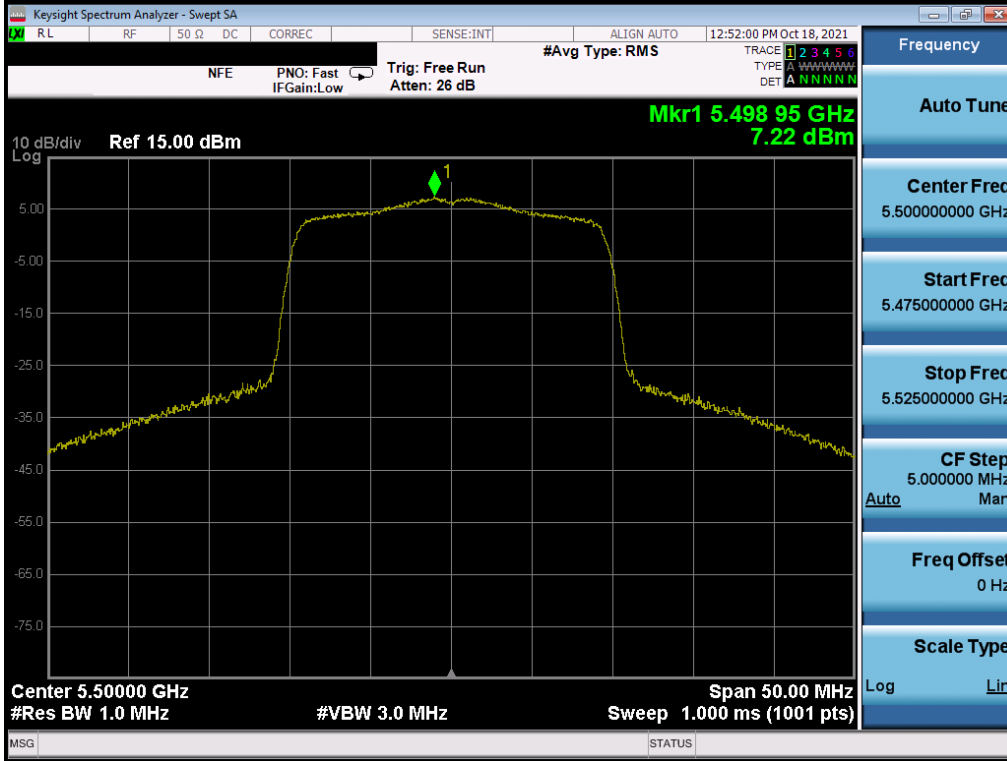


Plot 7-275. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) – Ch. 120)

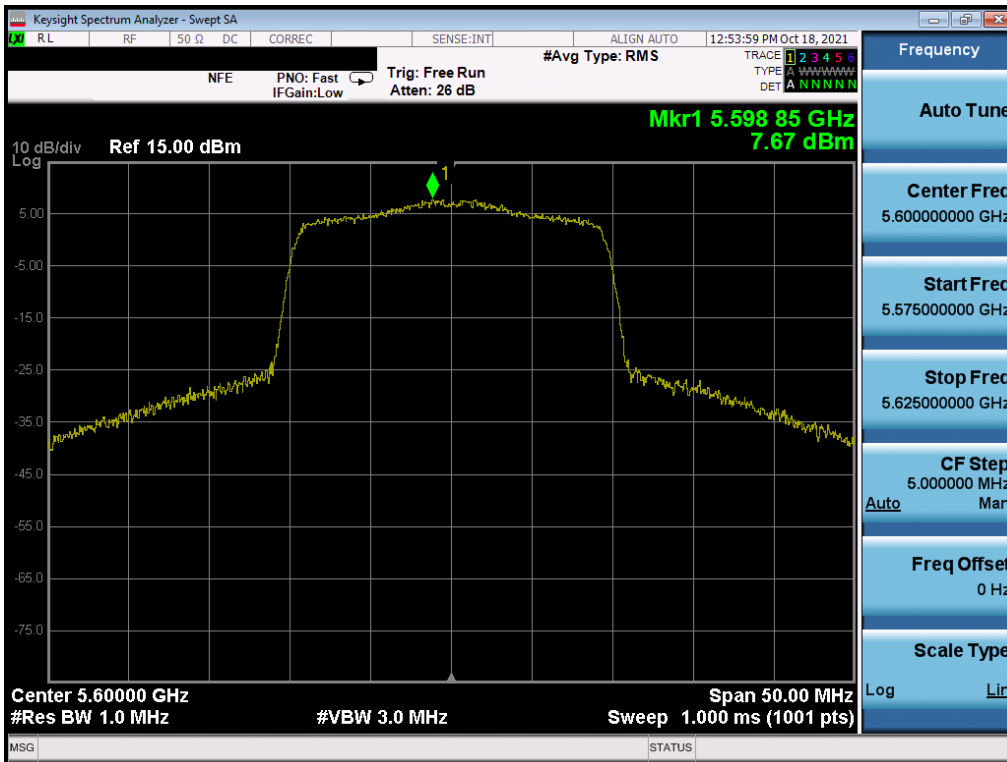


Plot 7-276. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) – Ch. 144)

FCC ID: A3LSMS901JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 176 of 295

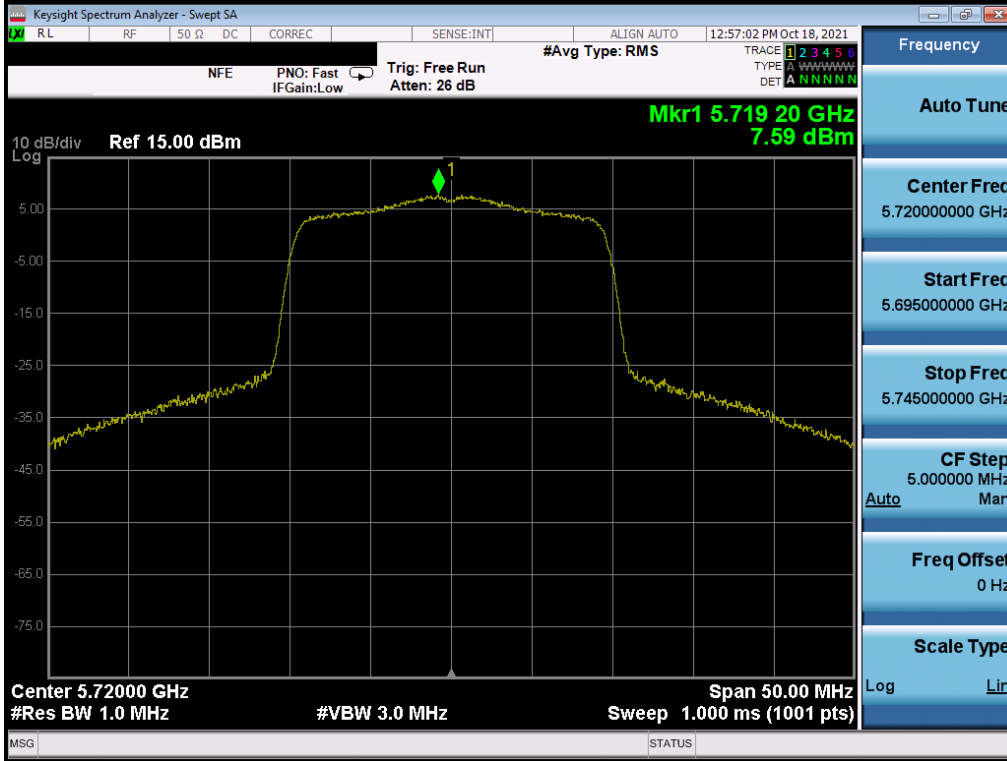


Plot 7-277. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2C) – Ch. 100)

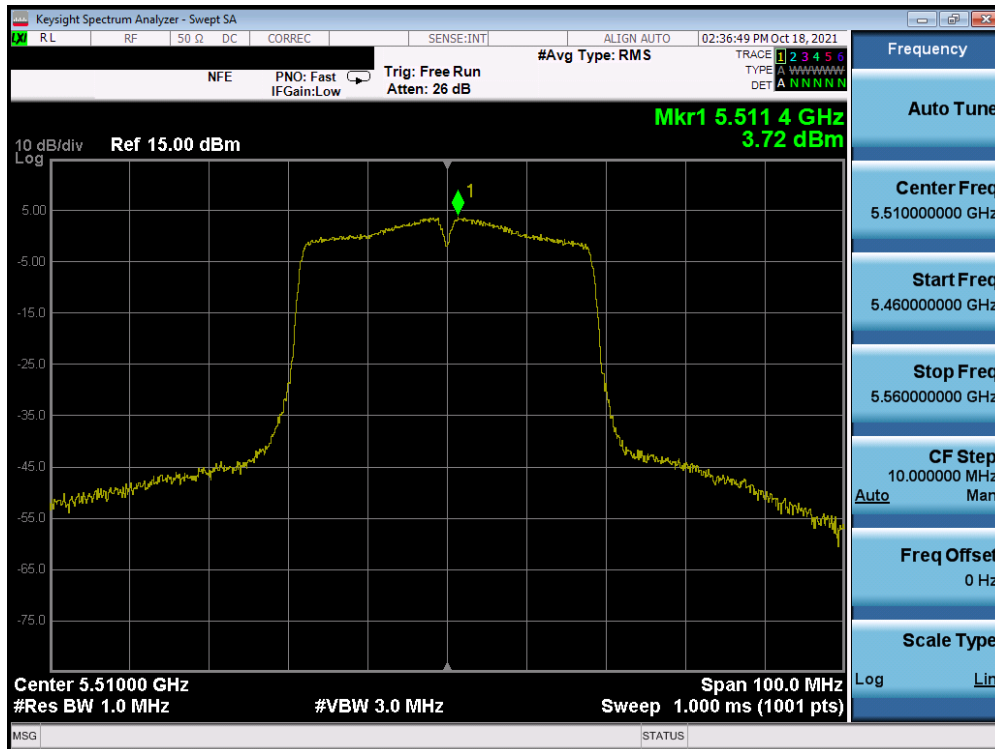


Plot 7-278. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2C) – Ch. 120)

FCC ID: A3LSMS901JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 177 of 295



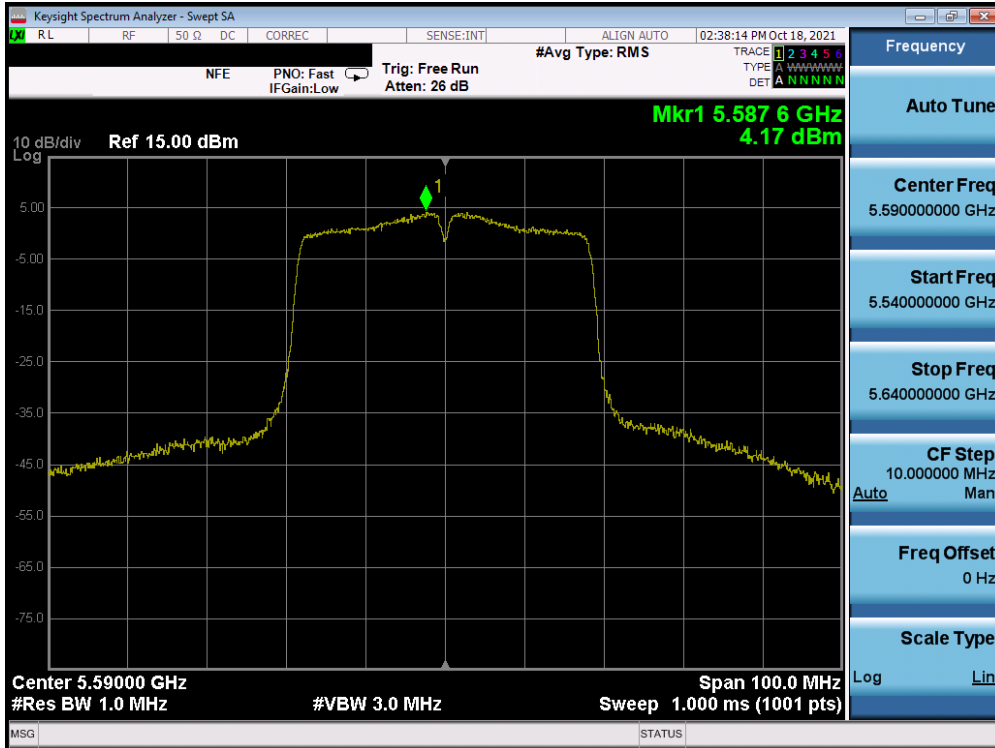
Plot 7-279. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2C) – Ch. 144)



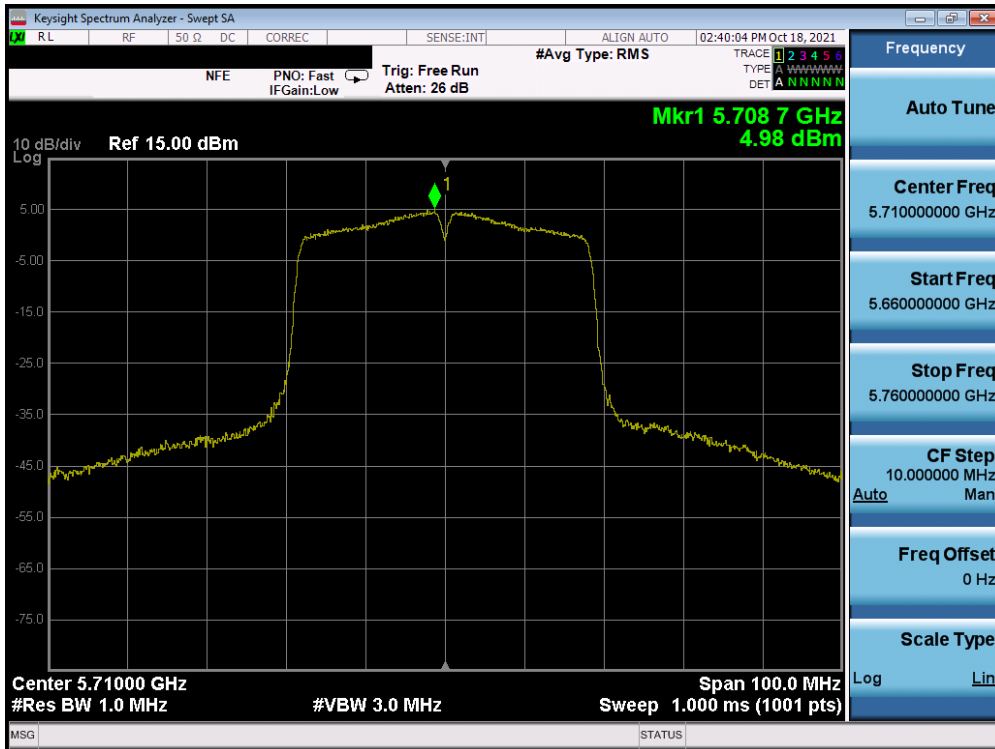
Plot 7-280. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) – Ch. 102)

FCC ID: A3LSMS901JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 178 of 295





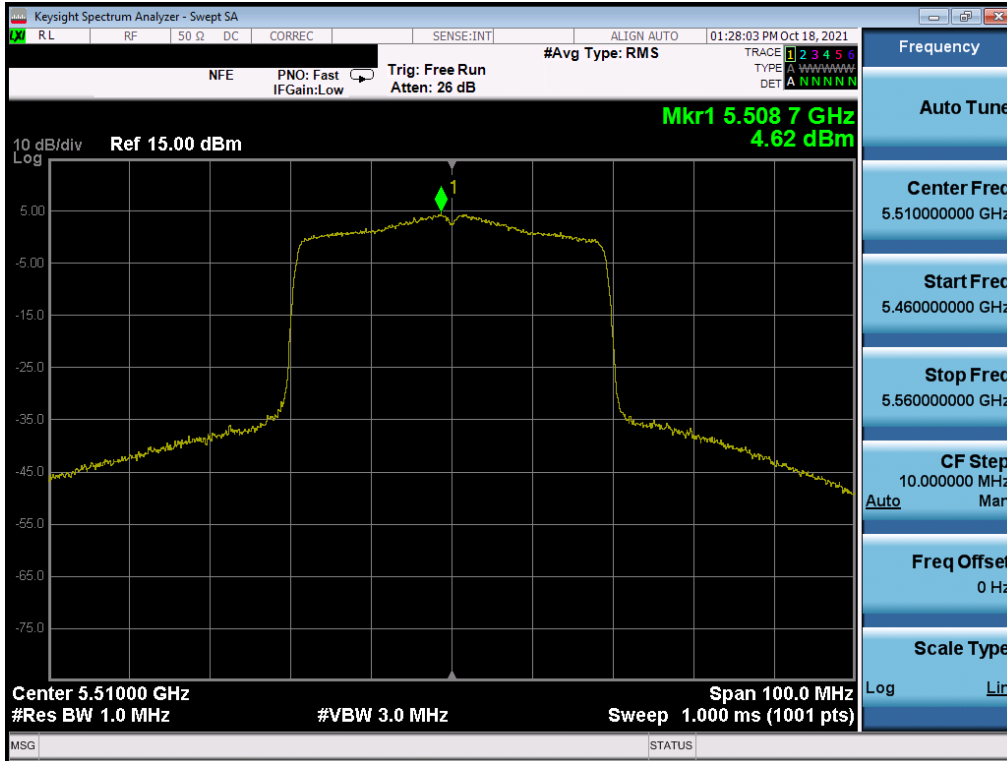
Plot 7-281. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) – Ch. 118)



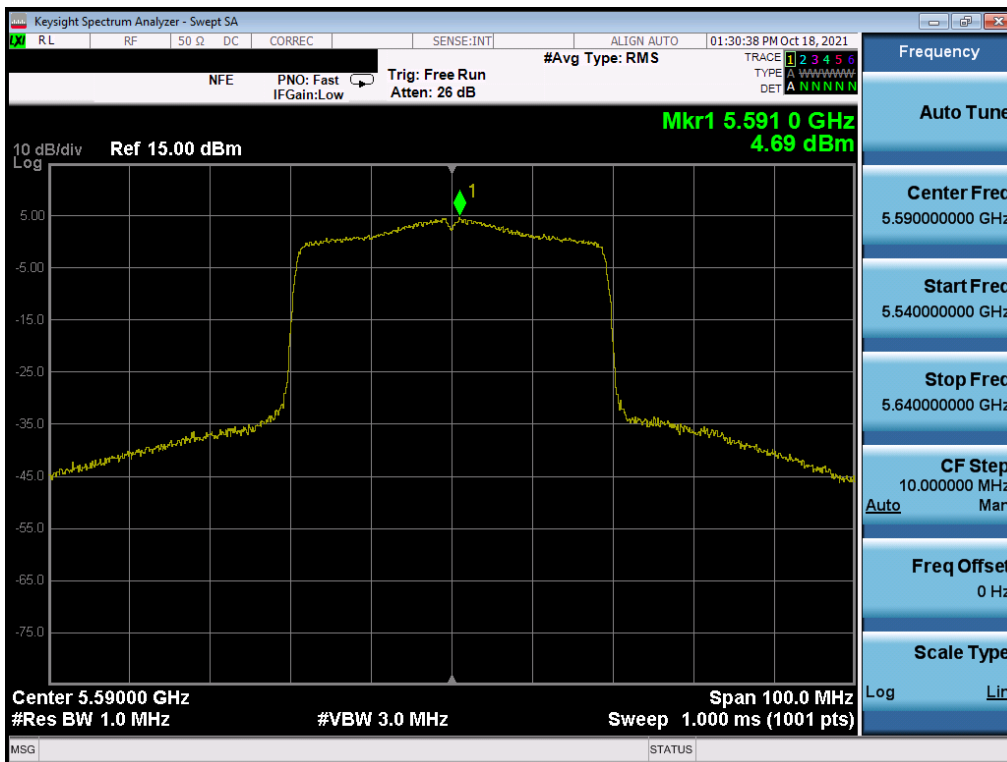
Plot 7-282. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) – Ch. 142)

FCC ID: A3LSMS901JPN	 <b>PCTEST</b> Proud to be part of 	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 179 of 295



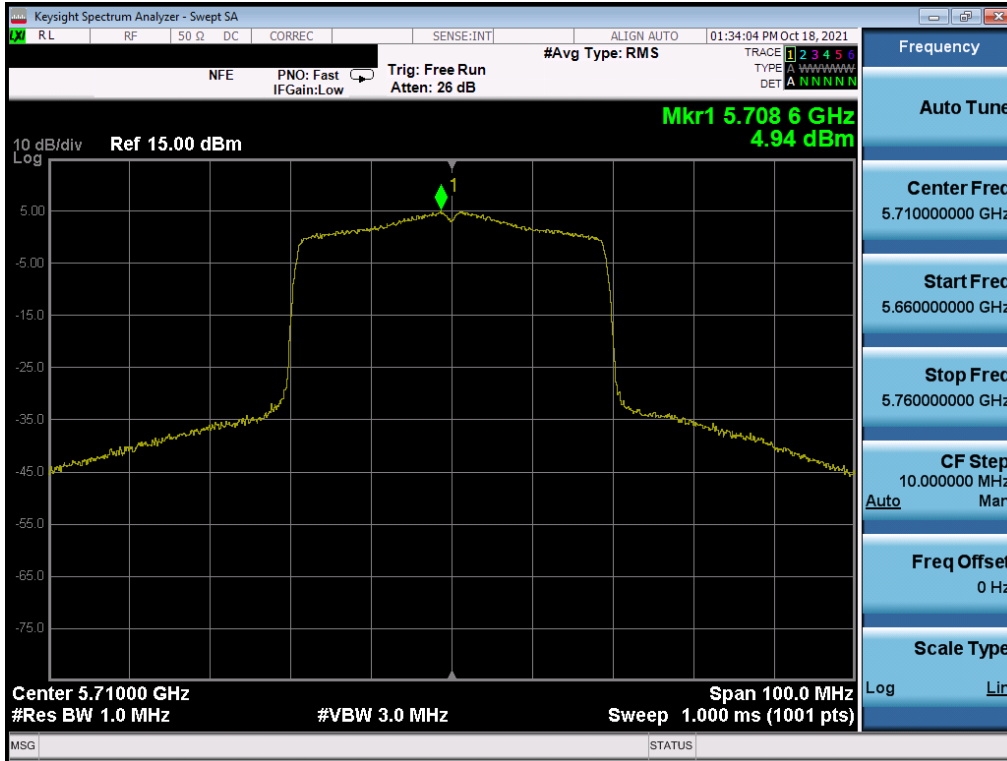


Plot 7-283. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2C) – Ch. 102)

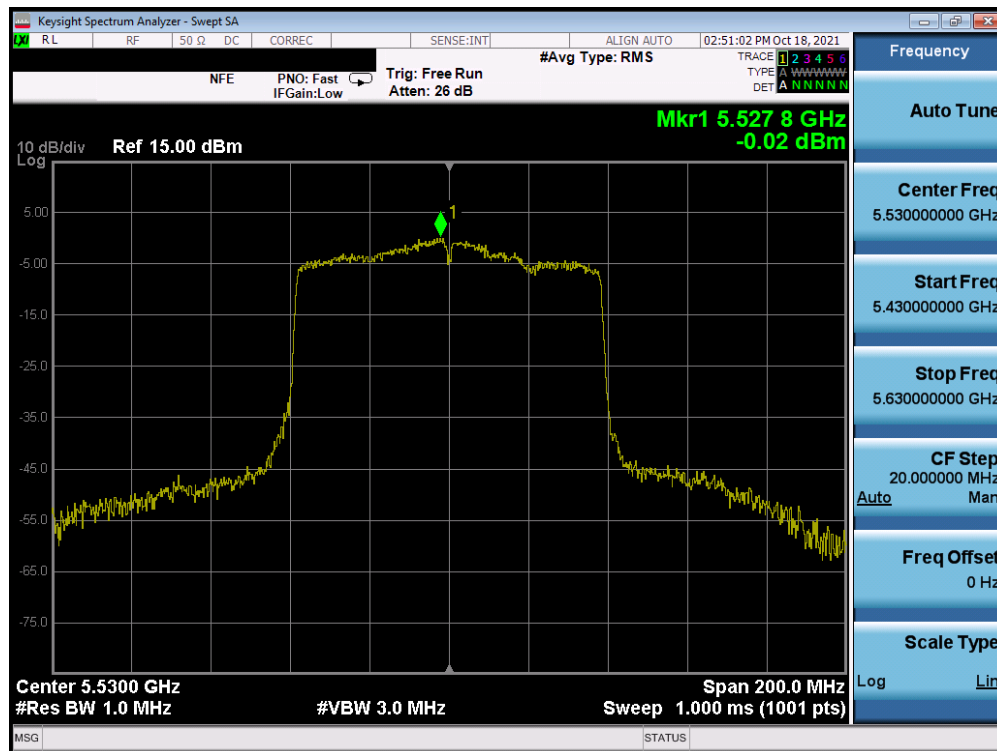


Plot 7-284. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2C) – Ch. 118)

FCC ID: A3LSMS901JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 180 of 295

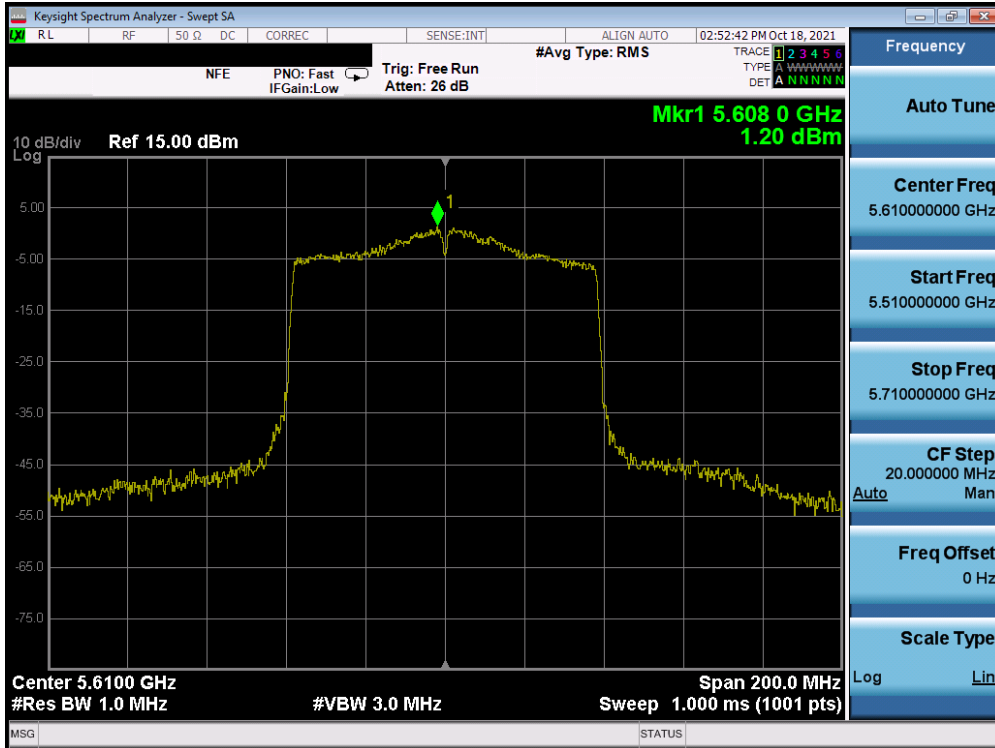


Plot 7-285. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11 ax (UNII Band 2C) – Ch. 142)

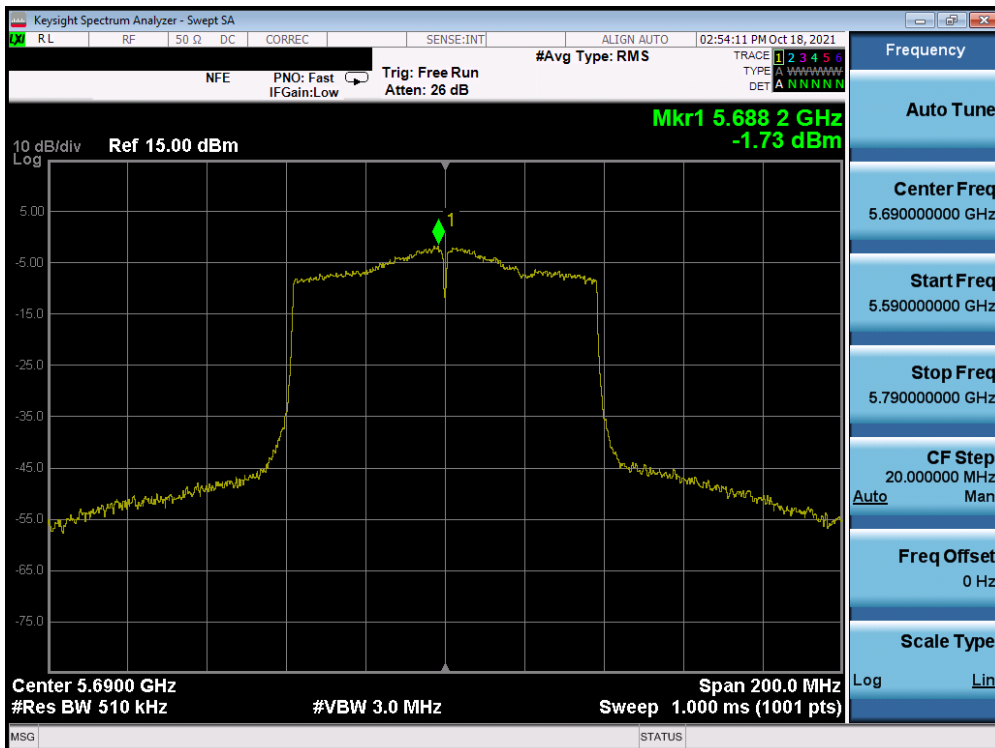


Plot 7-286. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11 ac (UNII Band 2C) – Ch. 106)

FCC ID: A3LSMS901JPN	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 181 of 295

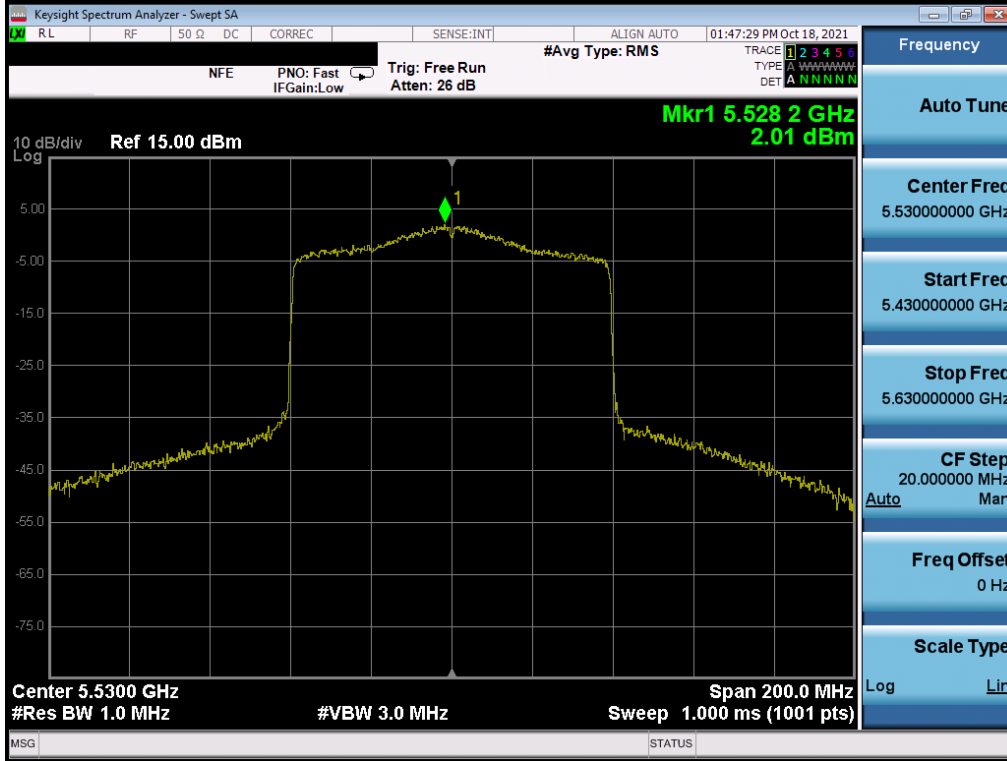


Plot 7-287. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 122)

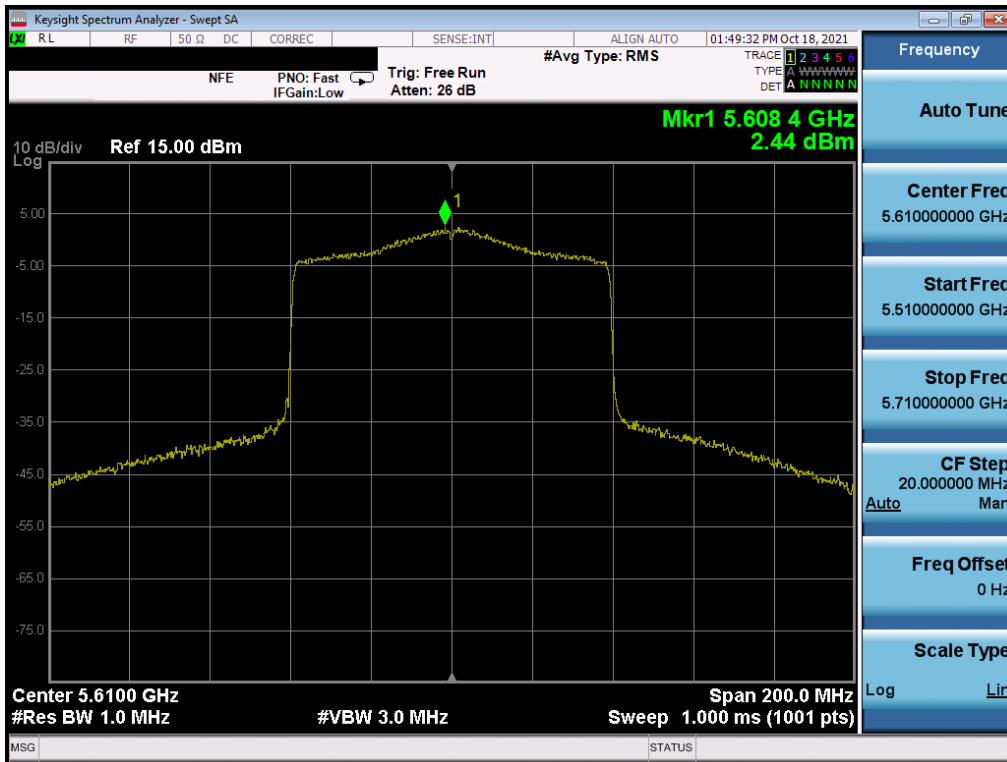


Plot 7-288. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 138)

FCC ID: A3LSMS901JPN	<b>PCTEST</b> Proud to be part of  element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 182 of 295

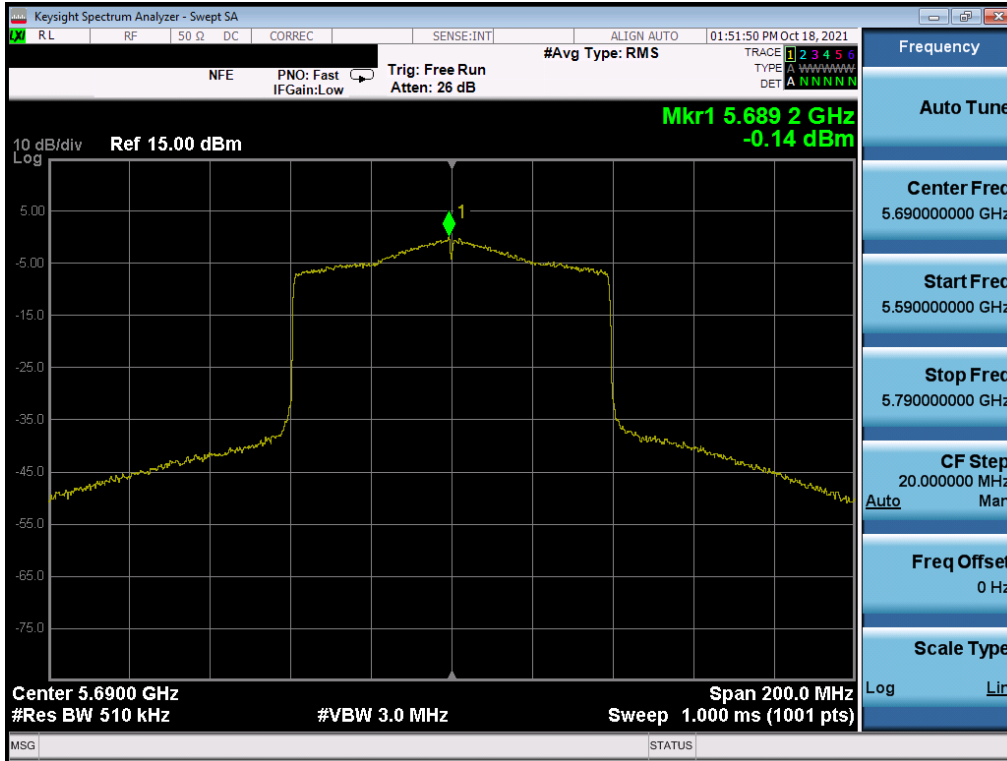


Plot 7-289. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 2C) – Ch. 106)



Plot 7-290. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 2C) – Ch. 122)

FCC ID: A3LSMS901JPN	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 183 of 295

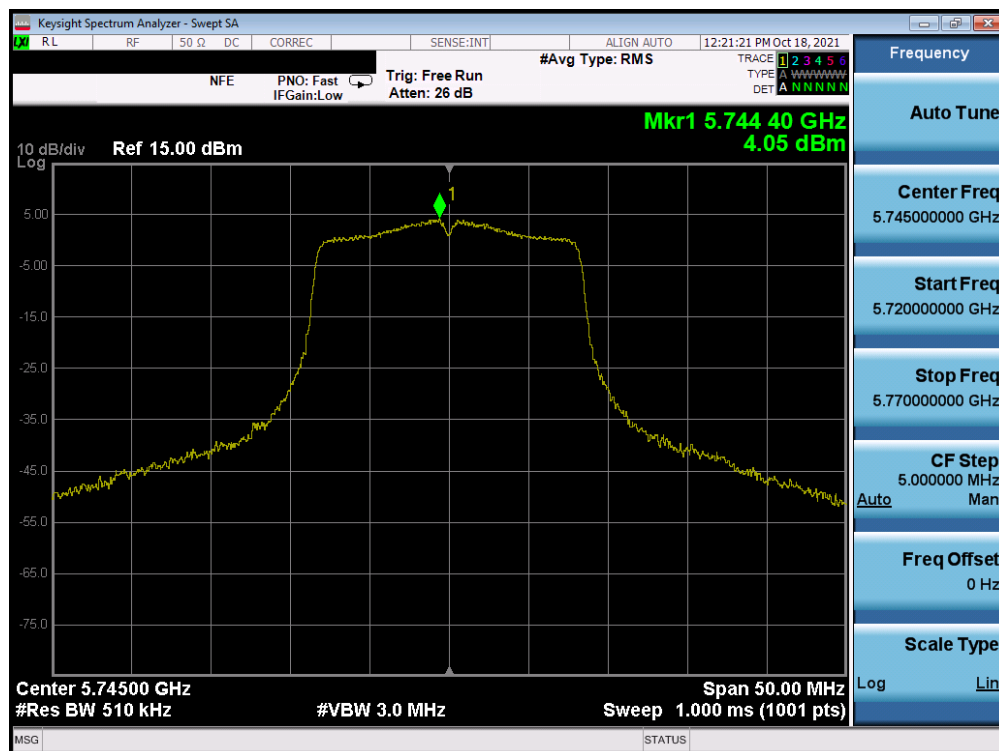


Plot 7-291. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 2C) – Ch. 138)

FCC ID: A3LSMS901JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 184 of 295

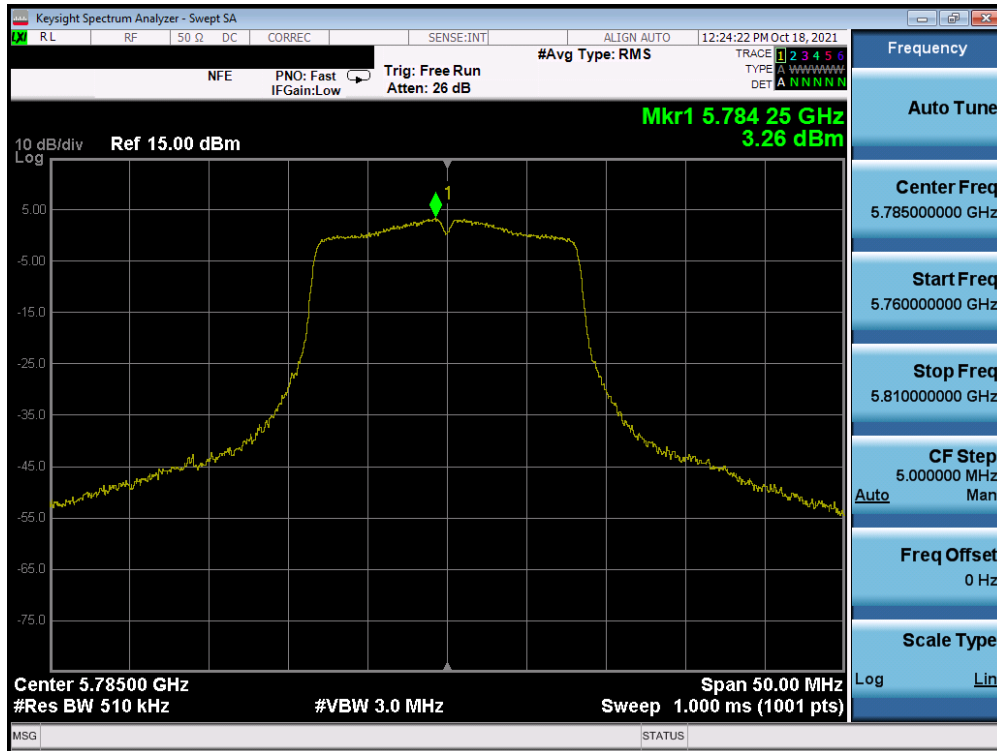
	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
<b>Band 3</b>	5745	149	a	6	4.05	30.0	-25.95
	5785	157	a	6	3.26	30.0	-26.74
	5825	165	a	6	3.88	30.0	-26.12
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	4.37	30.0	-25.63
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	4.38	30.0	-25.62
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	4.62	30.0	-25.38
	5745	149	ax (20MHz)	6.5/7.2 (MCS0)	4.58	30.0	-25.42
	5785	157	ax (20MHz)	6.5/7.2 (MCS0)	4.55	30.0	-25.45
	5825	165	ax (20MHz)	6.5/7.2 (MCS0)	4.29	30.0	-25.71
	5755	151	n (40MHz)	13.5/15 (MCS0)	1.07	30.0	-28.93
	5795	159	n (40MHz)	13.5/15 (MCS0)	0.21	30.0	-29.79
	5755	151	ax (40MHz)	13.5/15 (MCS0)	1.89	30.0	-28.11
	5795	159	ax (40MHz)	13.5/15 (MCS0)	1.45	30.0	-28.55
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-0.72	30.0	-30.72
	5775	155	ax (80MHz)	29.3/32.5 (MCS0)	-0.24	30.0	-30.24

Table 7-33. Band 3 Conducted Power Spectral Density Measurements SISO ANT2

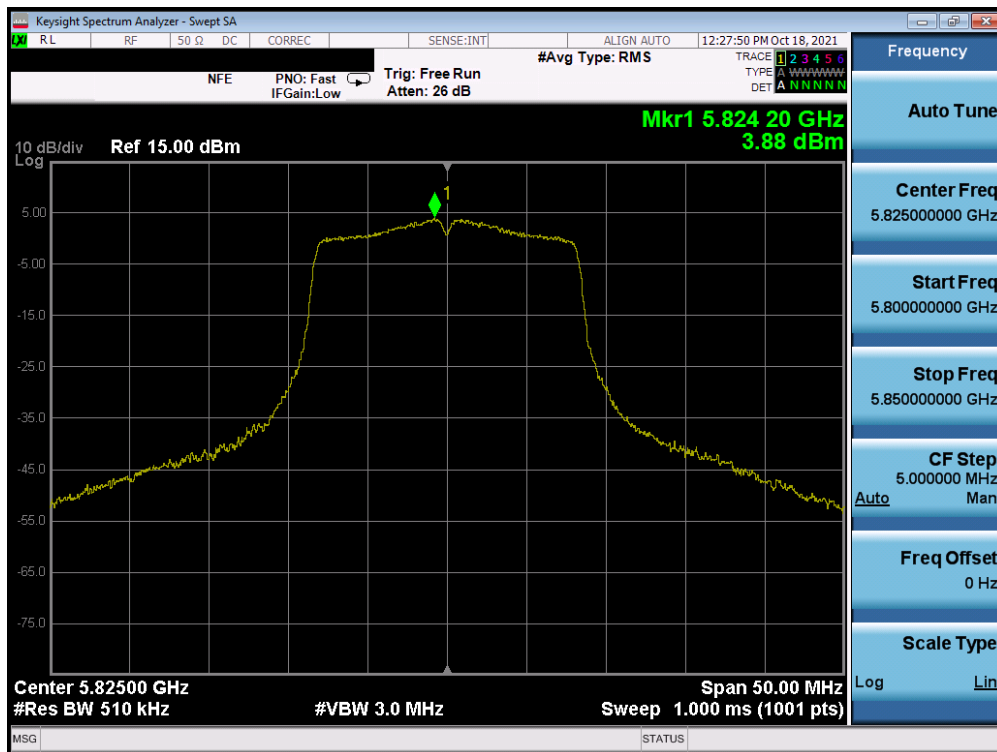


Plot 7-292. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 3) – Ch. 149)

FCC ID: A3LSMS901JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 185 of 295

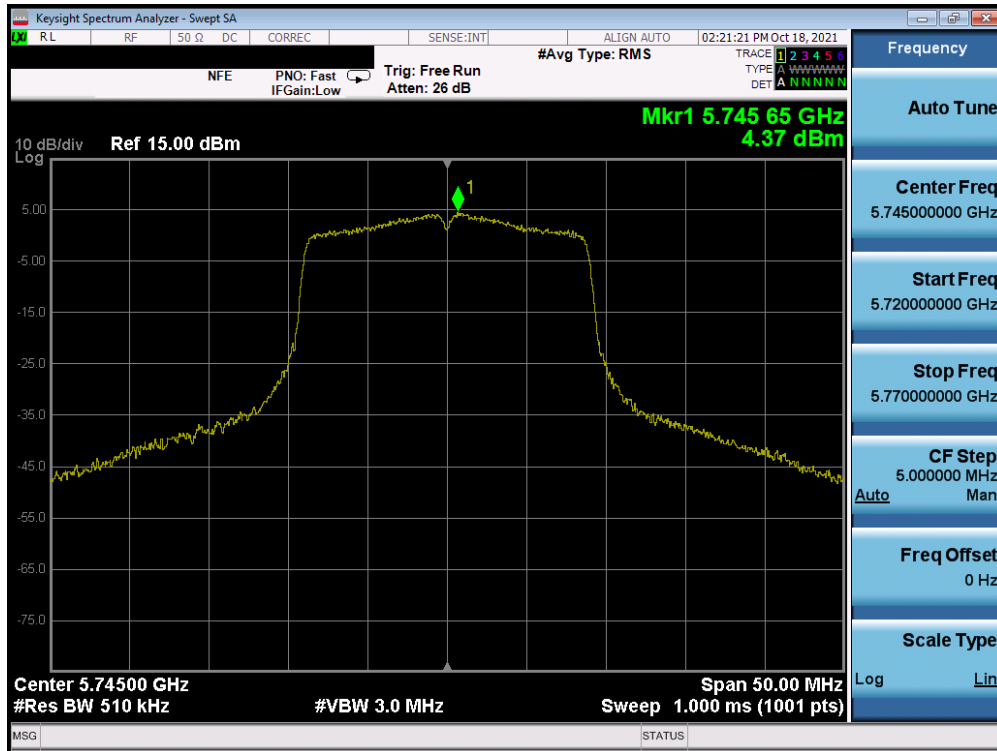


Plot 7-293. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 3) – Ch. 157)

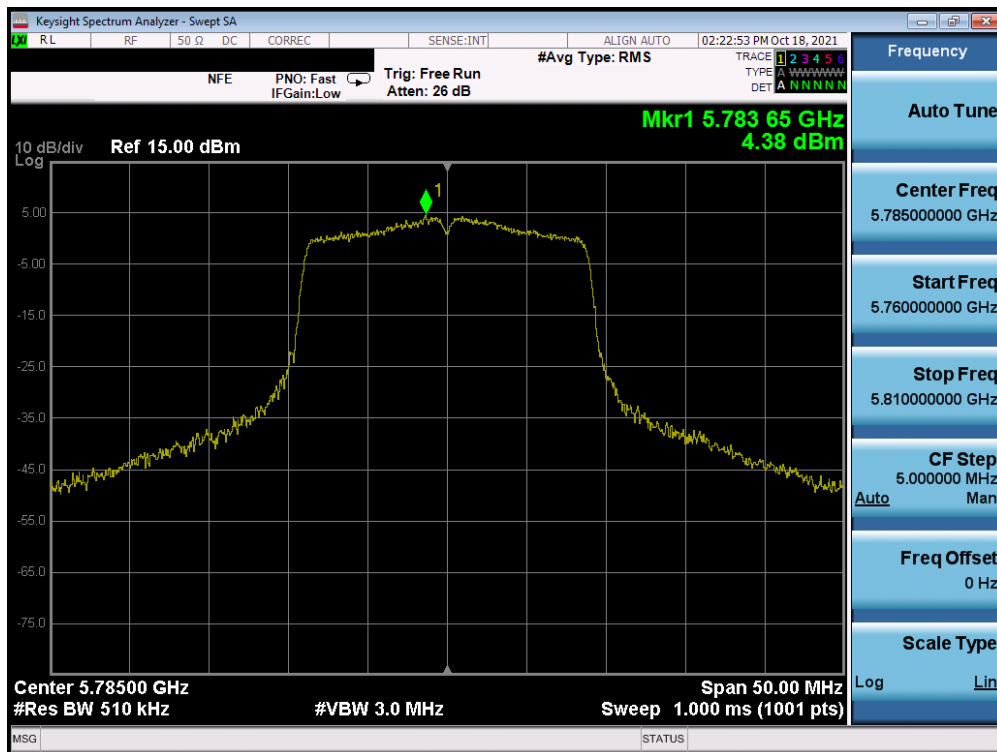


Plot 7-294. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 3) – Ch. 165)

FCC ID: A3LSMS901JPN	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 186 of 295



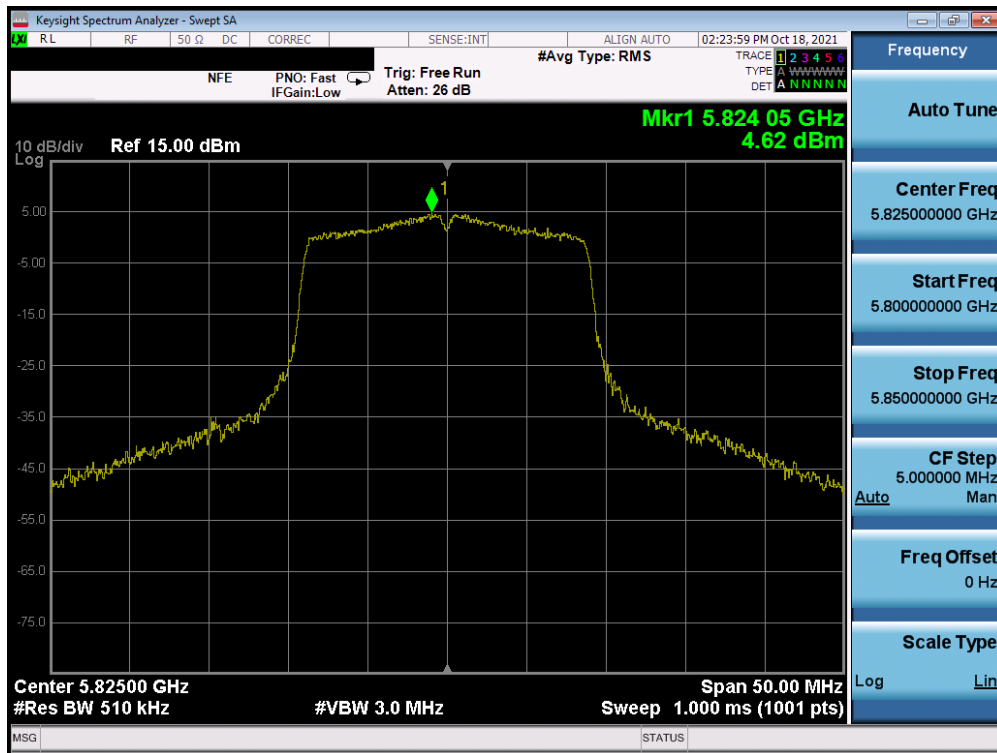
Plot 7-295. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 3) – Ch. 149)



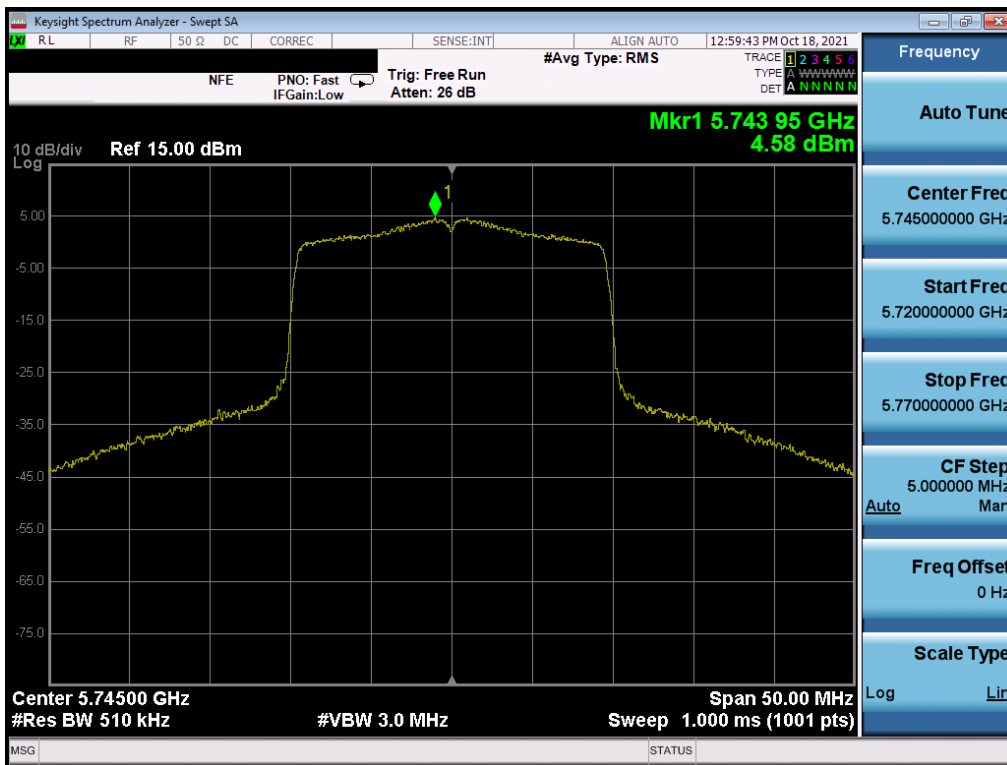
Plot 7-296. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 3) – Ch. 157)

FCC ID: A3LSMS901JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 187 of 295



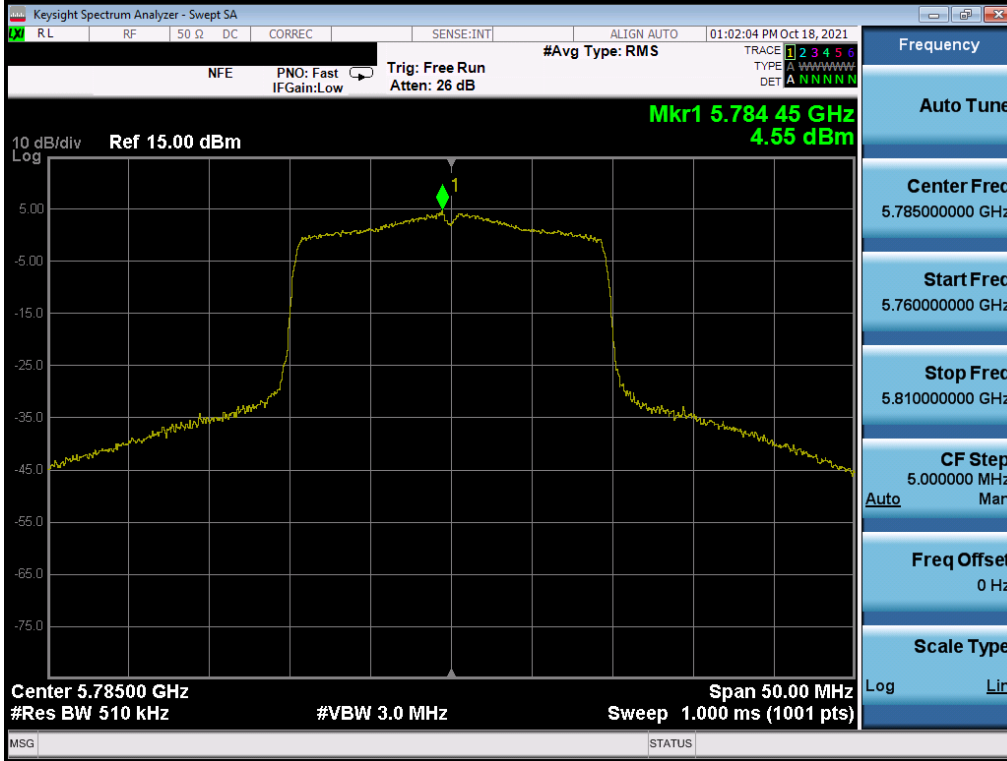


Plot 7-297. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 3) – Ch. 165)

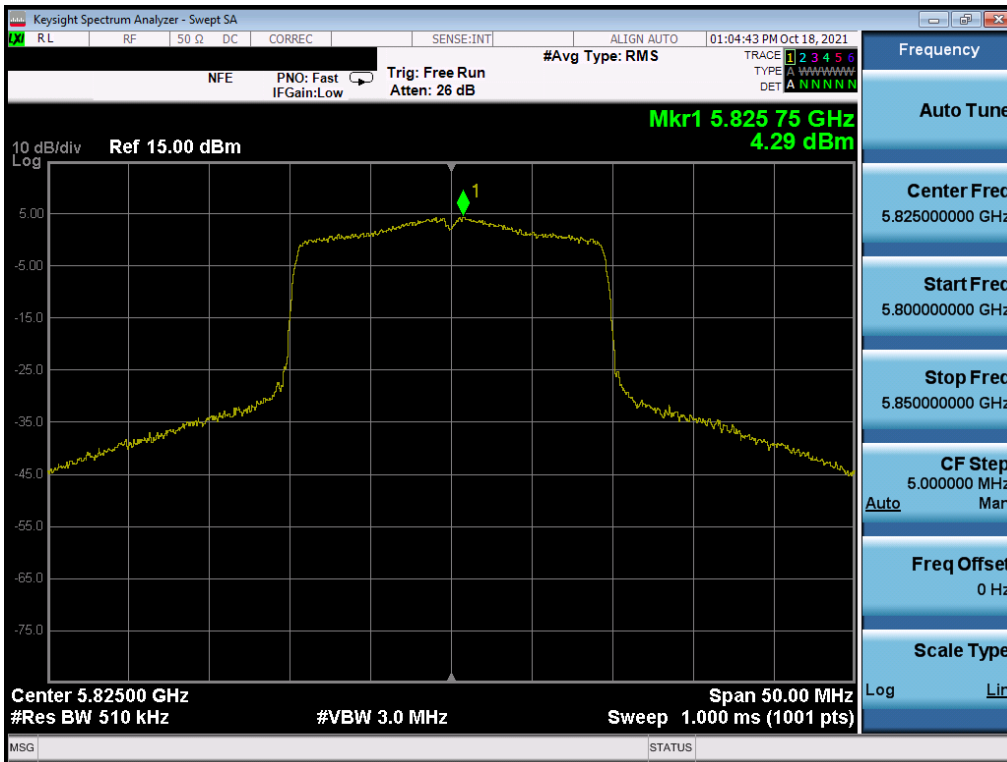


Plot 7-298. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 3) – Ch. 149)

FCC ID: A3LSMS901JPN	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 188 of 295

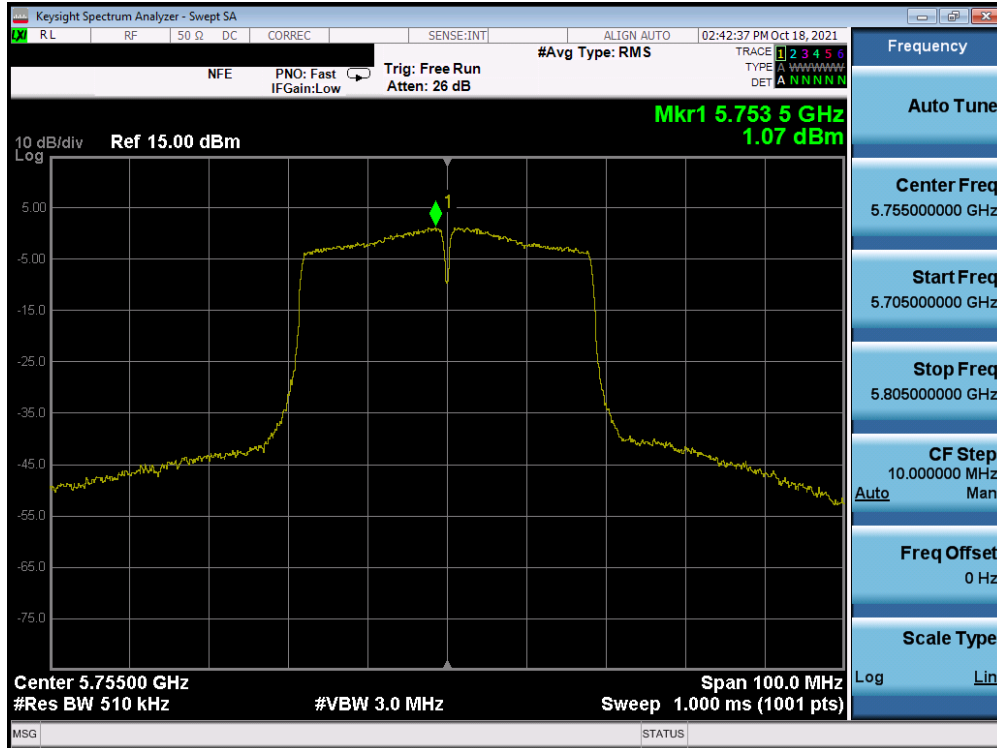


Plot 7-299. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 3) – Ch. 157)

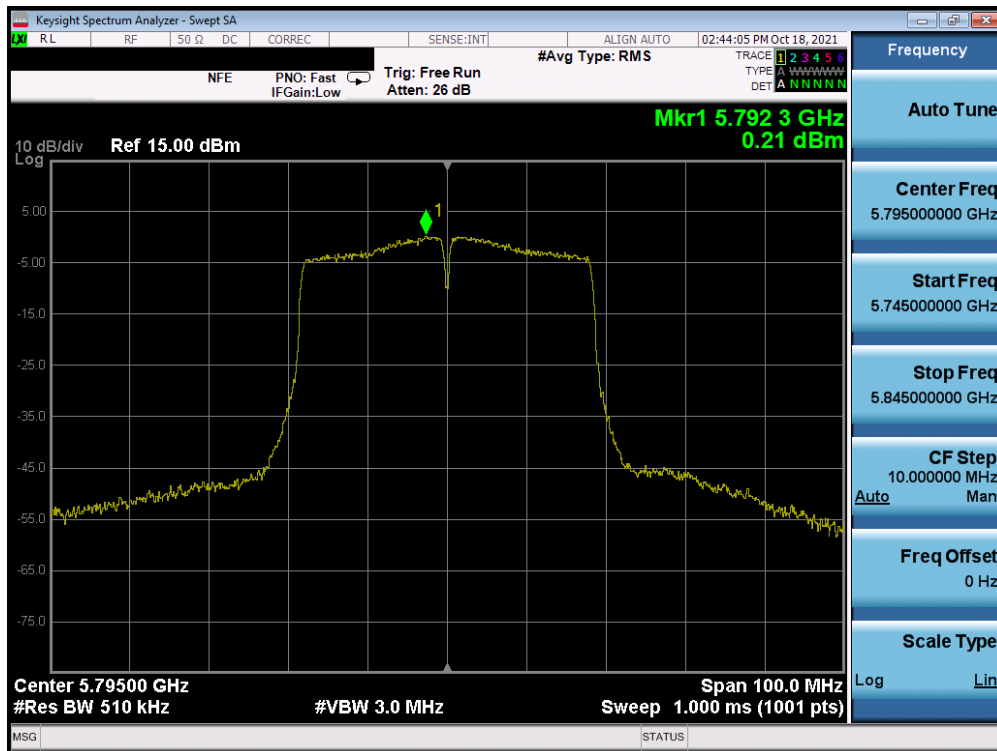


Plot 7-300. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 3) – Ch. 165)

FCC ID: A3LSMS901JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 189 of 295

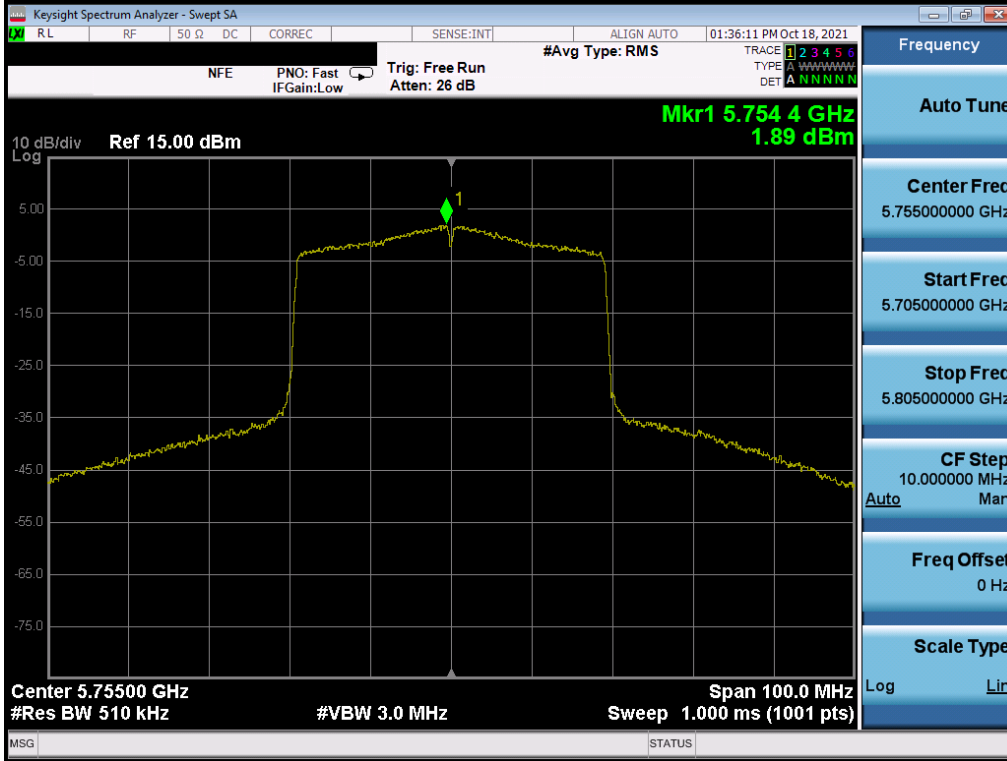


Plot 7-301. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 3) – Ch. 151)

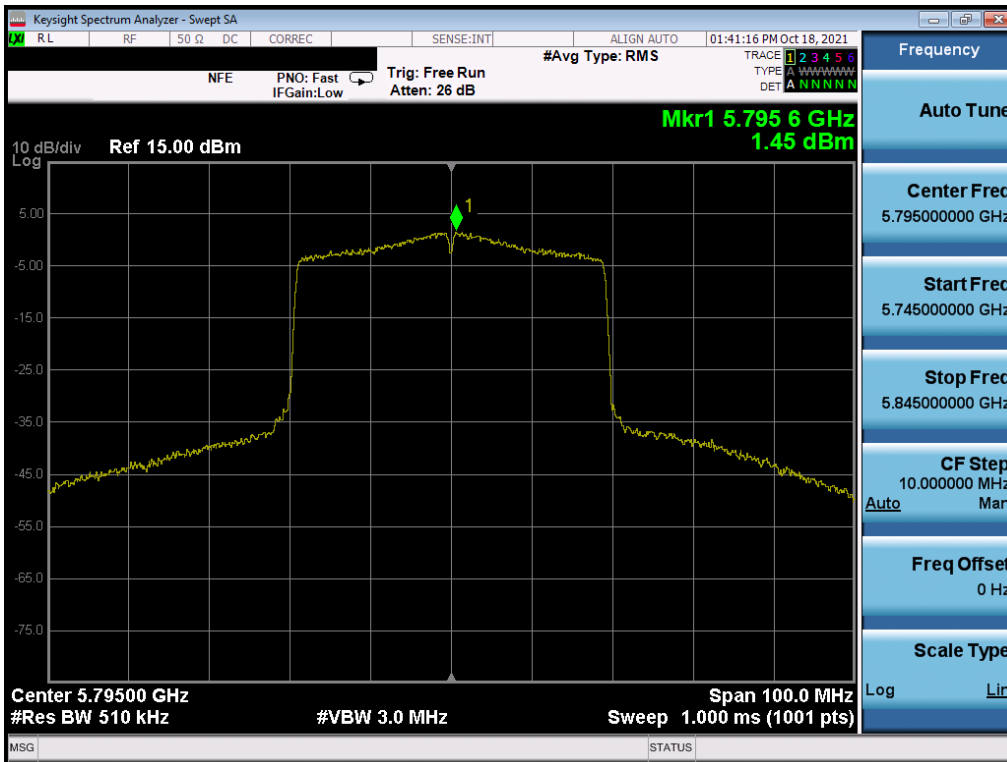


Plot 7-302. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 3) – Ch. 159)

FCC ID: A3LSMS901JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 190 of 295

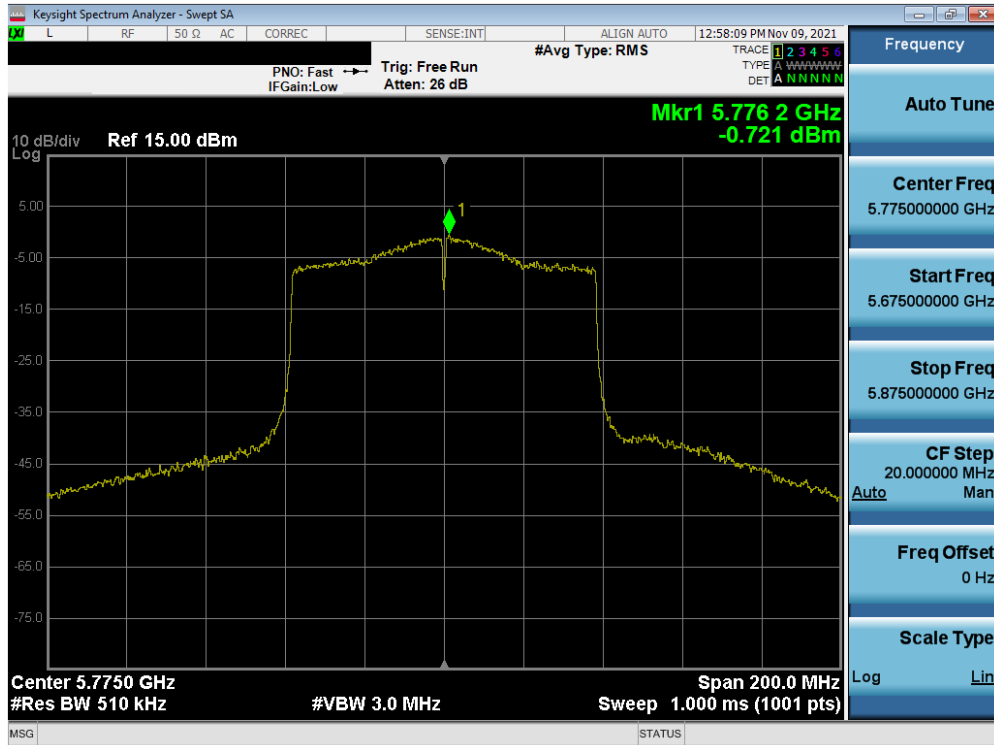


Plot 7-303. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 3) – Ch. 151)

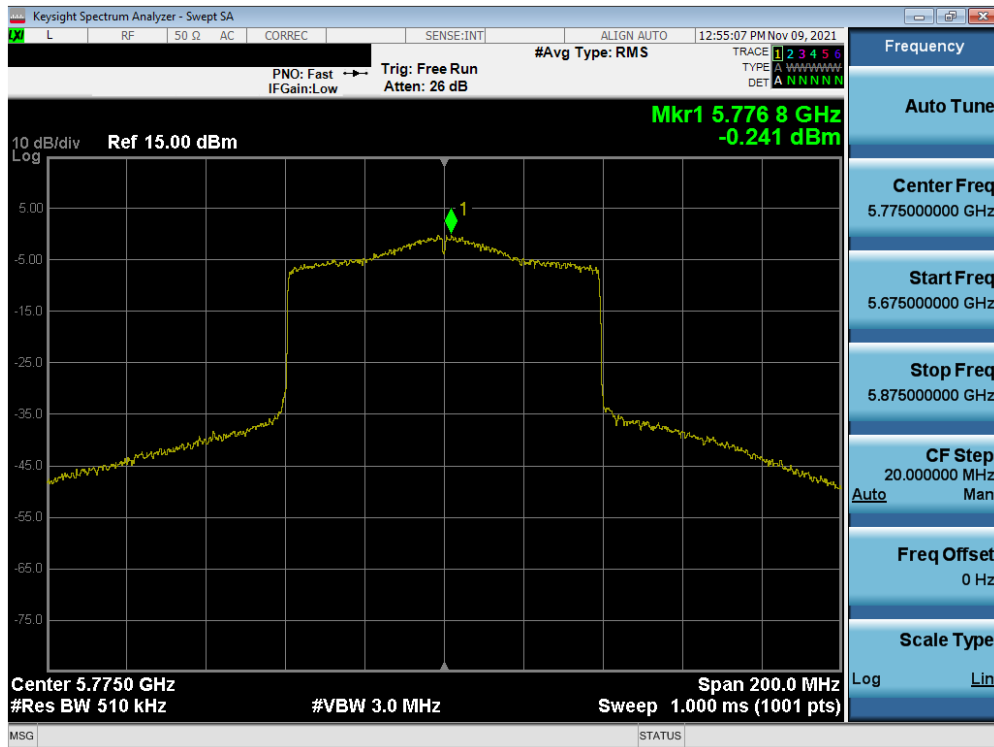


Plot 7-304. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 3) – Ch. 159)

FCC ID: A3LSMS901JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 191 of 295



Plot 7-305. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 3) – Ch. 155)

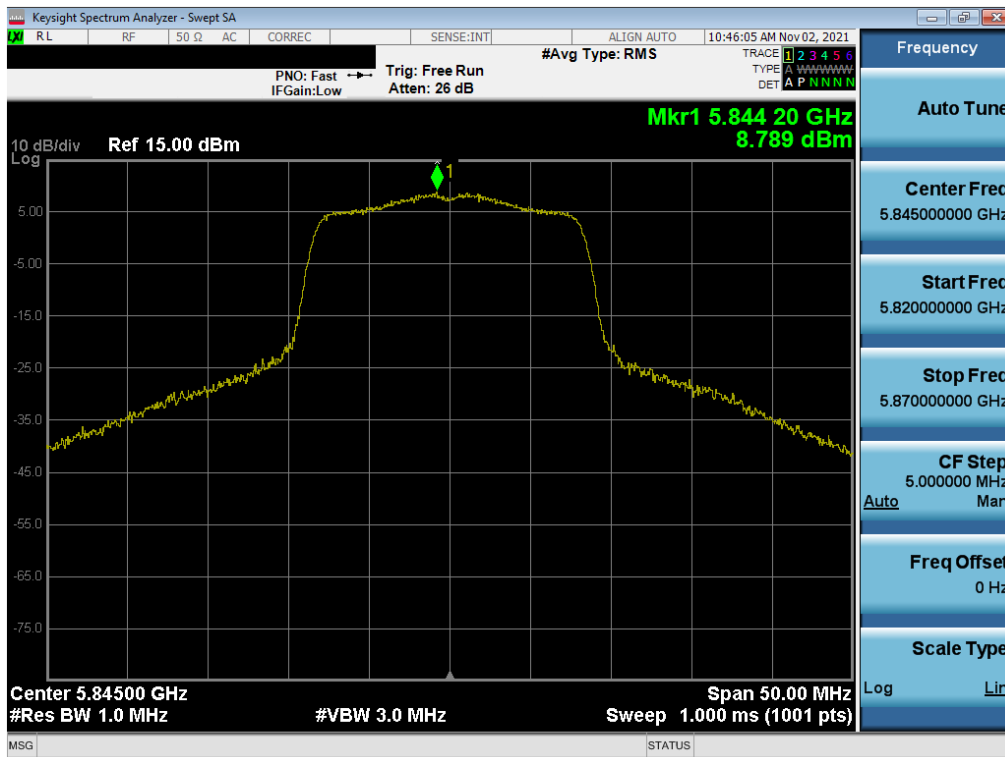


Plot 7-306. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 3) – Ch. 155)

FCC ID: A3LSMS901JPN	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 192 of 295

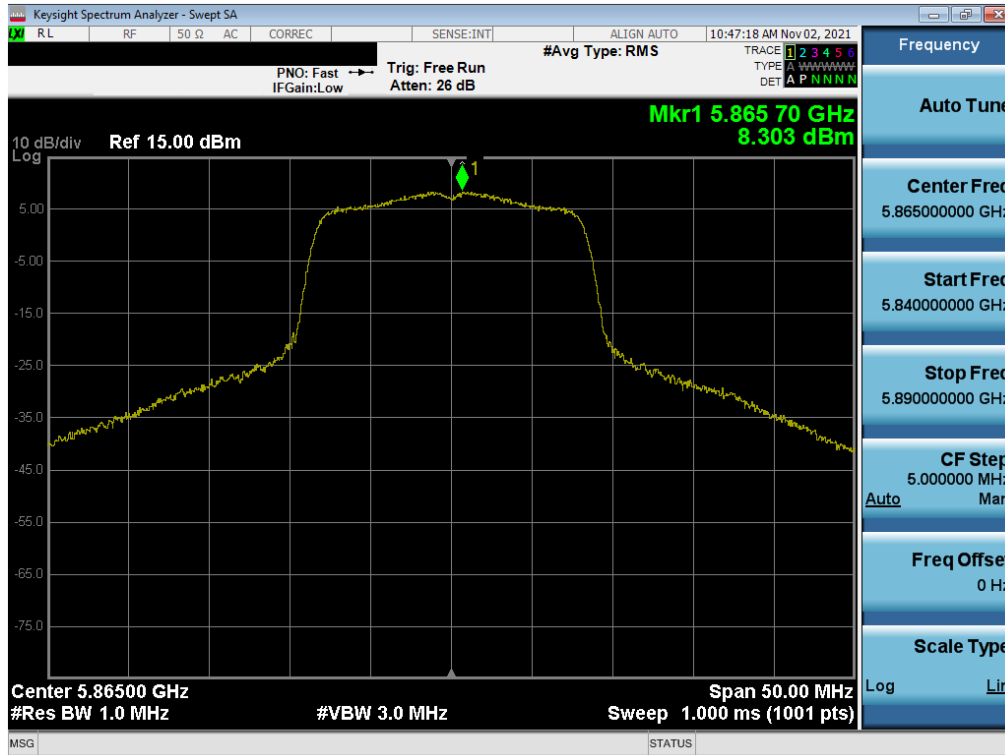
	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm/MHz]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]	Antenna Gain [dBi]	EIRP Power Density [dBm/MHz]	Max EIRP Power Density [dBm/MHz]	Margin [dB]
Band 3/4	5845	169	a	6	8.79	30.00	-21.21	-7.80	0.99	14.00	-13.01
Band 4	5865	173	a	6	8.30			-7.80	0.50	14.00	-13.50
	5885	177	a	6	10.36			-7.80	2.56	14.00	-11.44
Band 3/4	5845	169	n (20MHz)	6.5/7.2 (MCS0)	8.21	30.00	-21.79	-7.80	0.41	14.00	-13.59
Band 4	5865	173	n (20MHz)	6.5/7.2 (MCS0)	8.11			-7.80	0.31	14.00	-13.69
	5885	177	n (20MHz)	6.5/7.2 (MCS0)	9.82			-7.80	2.02	14.00	-11.98
Band 3/4	5845	169	ax (20MHz)	6.5/7.2 (MCS0)	8.36	30.00	-21.64	-7.80	0.56	14.00	-13.44
Band 4	5865	173	ax (20MHz)	6.5/7.2 (MCS0)	8.41			-7.80	0.61	14.00	-13.39
	5885	177	ax (20MHz)	6.5/7.2 (MCS0)	9.17			-7.80	1.37	14.00	-12.63
Band 3/4	5835	167	n (40MHz)	13.5/15 (MCS0)	4.75	30.00	-25.25	-7.80	-3.05	14.00	-17.05
Band 4	5875	175	n (40MHz)	13.5/15 (MCS0)	4.48			-7.80	-3.33	14.00	-17.33
Band 3/4	5835	167	ax (40MHz)	13.5/15 (MCS0)	5.81	30.00	-24.20	-7.80	-2.00	14.00	-16.00
Band 4	5875	175	ax (40MHz)	13.5/15 (MCS0)	5.34			-7.80	-2.46	14.00	-16.46
Band 3/4	5855	171	ax (80MHz)	29.3/32.5 (MCS0)	3.52	30.00	-26.48	-7.80	-4.28	14.00	-18.28

Table 7-34. Band 3 e.i.r.p. Spectral Density Measurements UNII 4 SISO ANT2

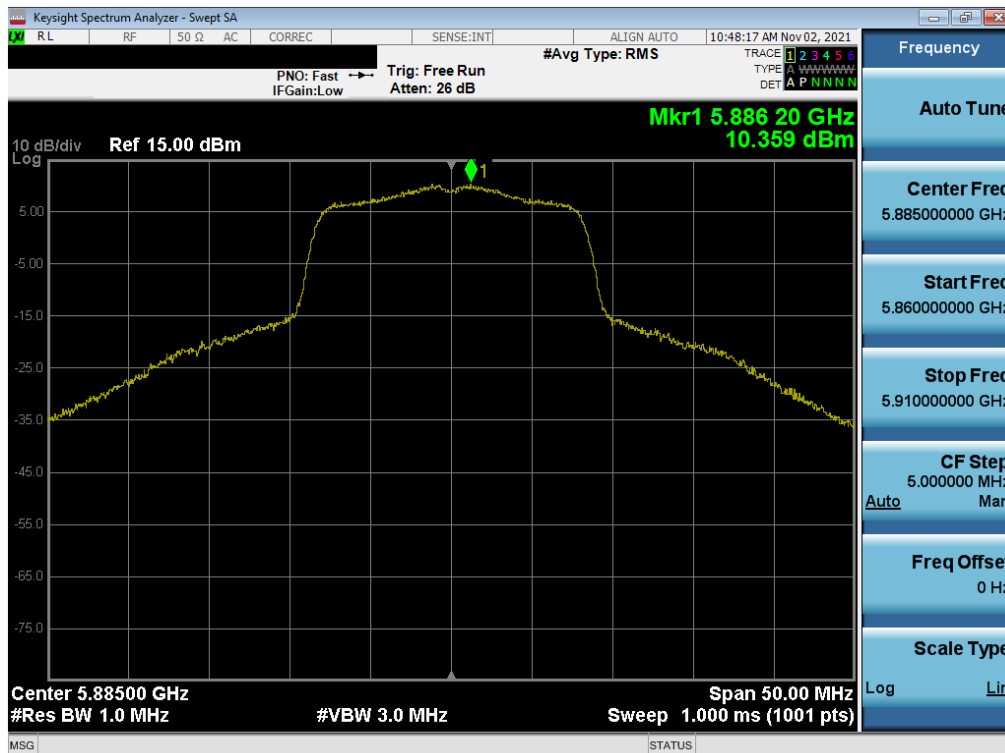


Plot 7-307. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 3/4) – Ch. 169)

FCC ID: A3LSMS901JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 193 of 295

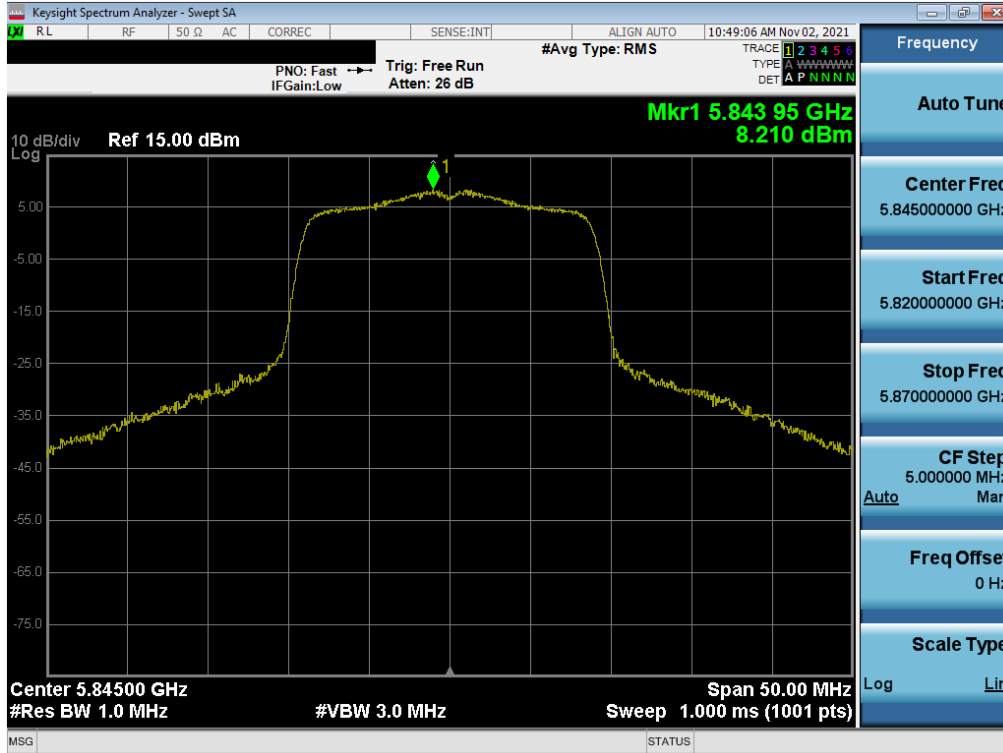


Plot 7-308. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 4) – Ch. 173)

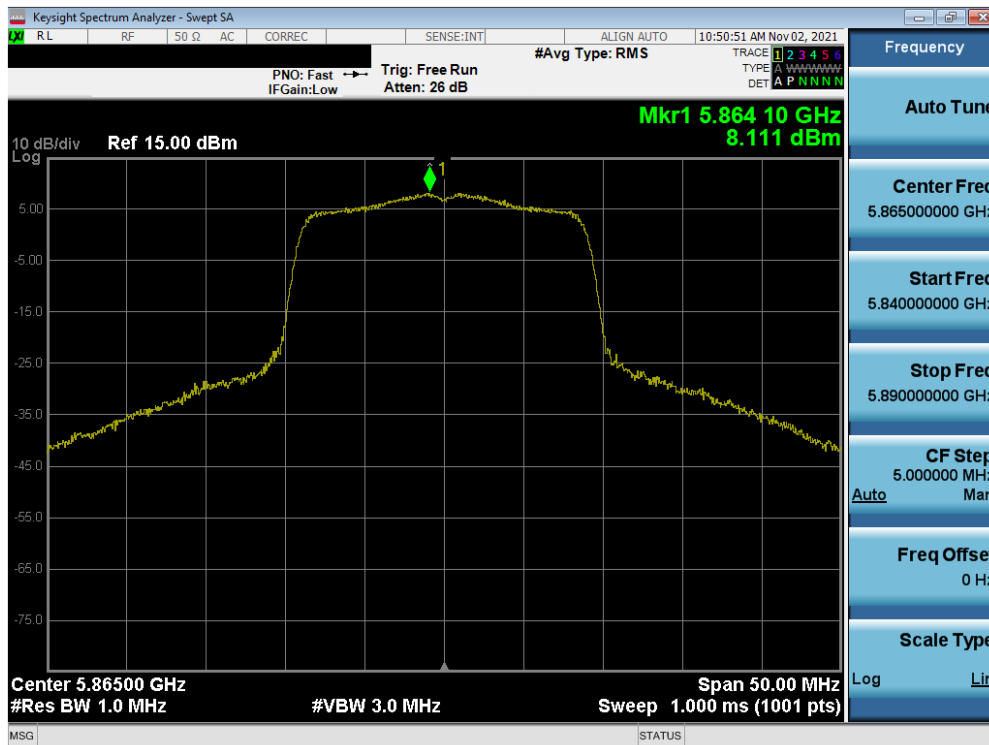


Plot 7-309. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 4) – Ch. 177)

FCC ID: A3LSMS901JPN	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 194 of 295



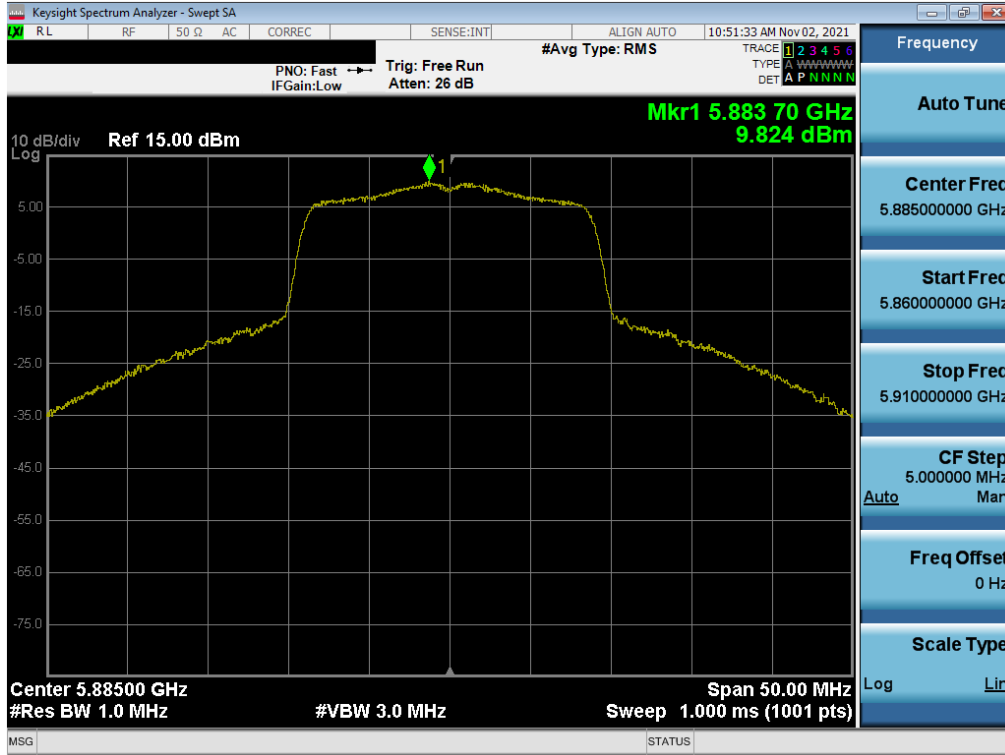
Plot 7-310. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 3/4) – Ch. 169)



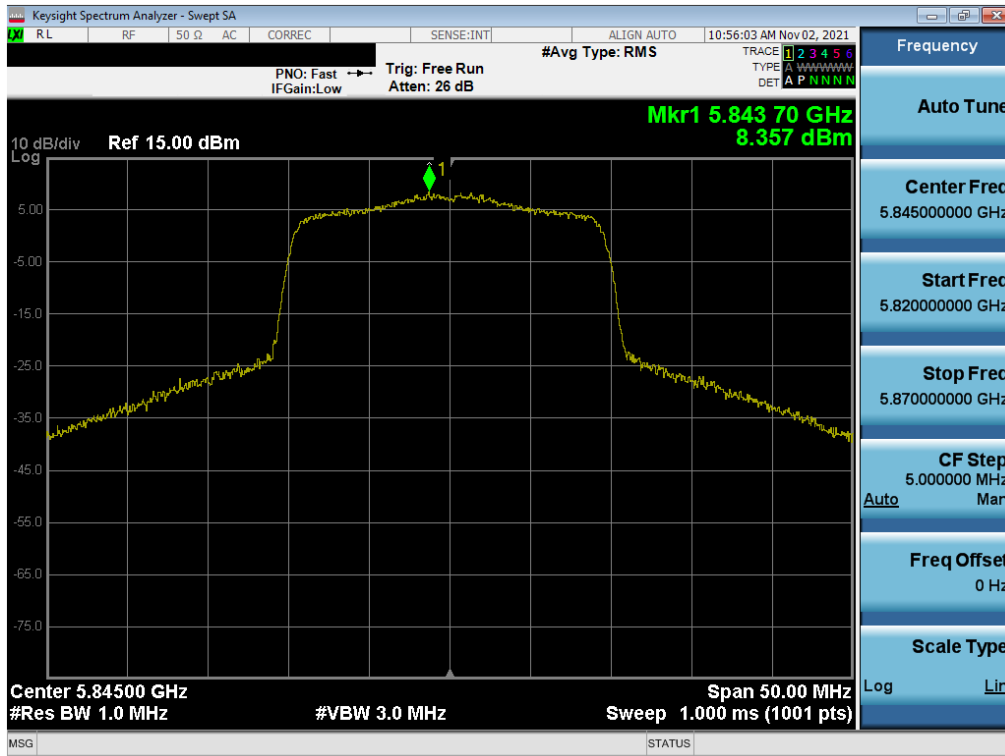
Plot 7-311. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 4) – Ch. 173)

FCC ID: A3LSMS901JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 195 of 295



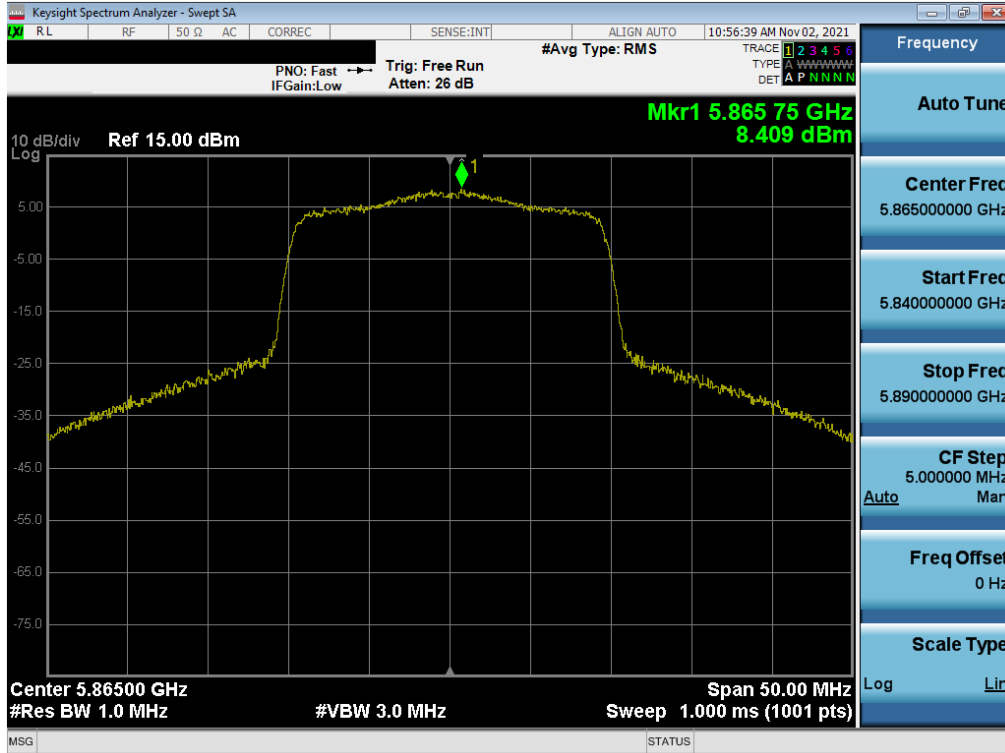


Plot 7-312. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 4) – Ch. 177)

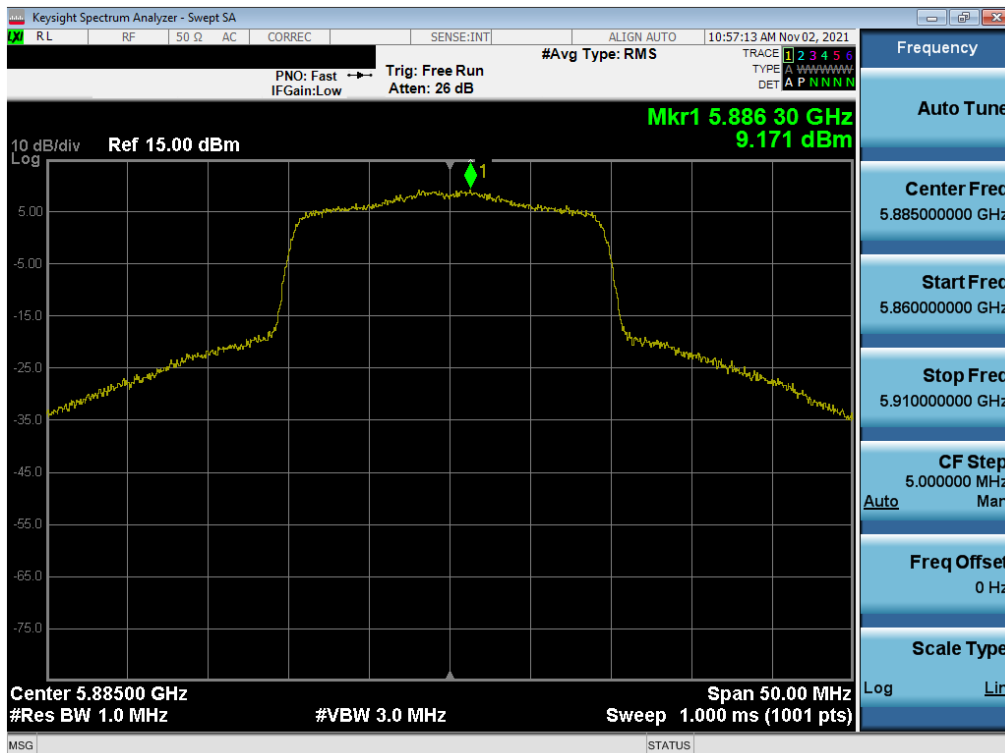


Plot 7-313. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 3/4) – Ch. 169)

FCC ID: A3LSMS901JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 196 of 295

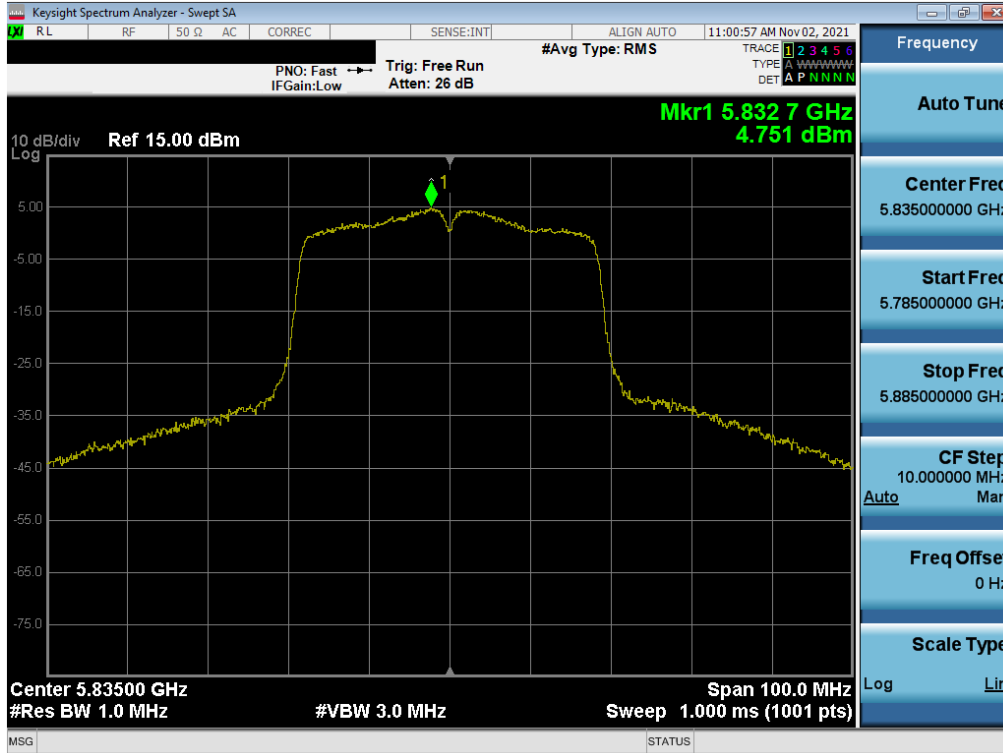


Plot 7-314. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 4) – Ch. 173)

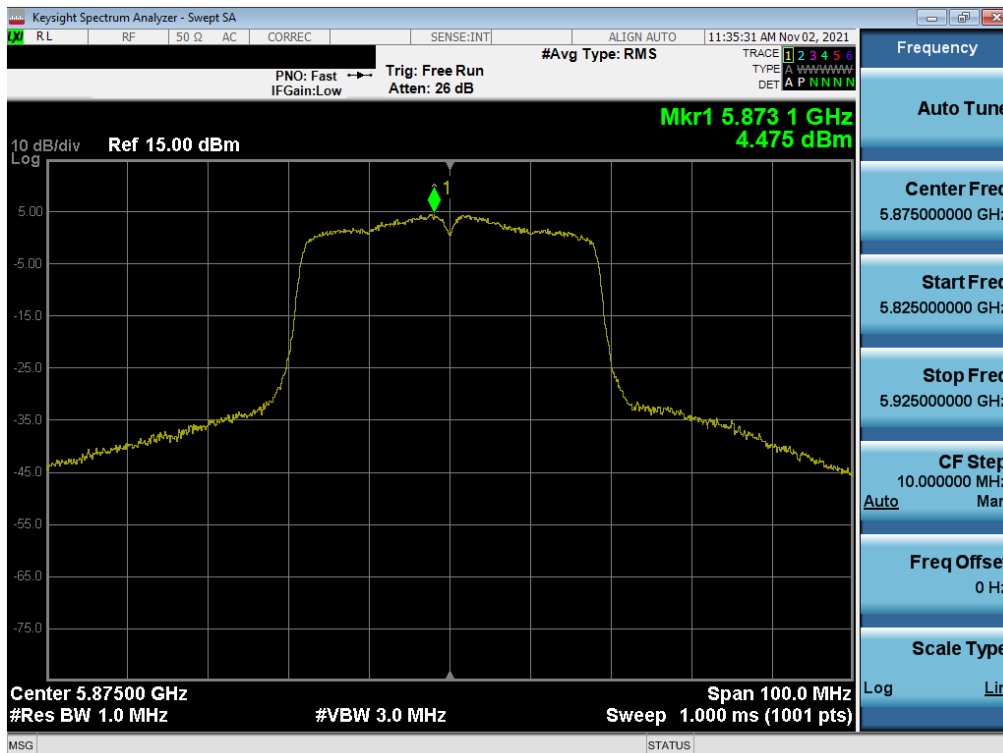


Plot 7-315. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 4) – Ch. 177)

FCC ID: A3LSMS901JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 197 of 295

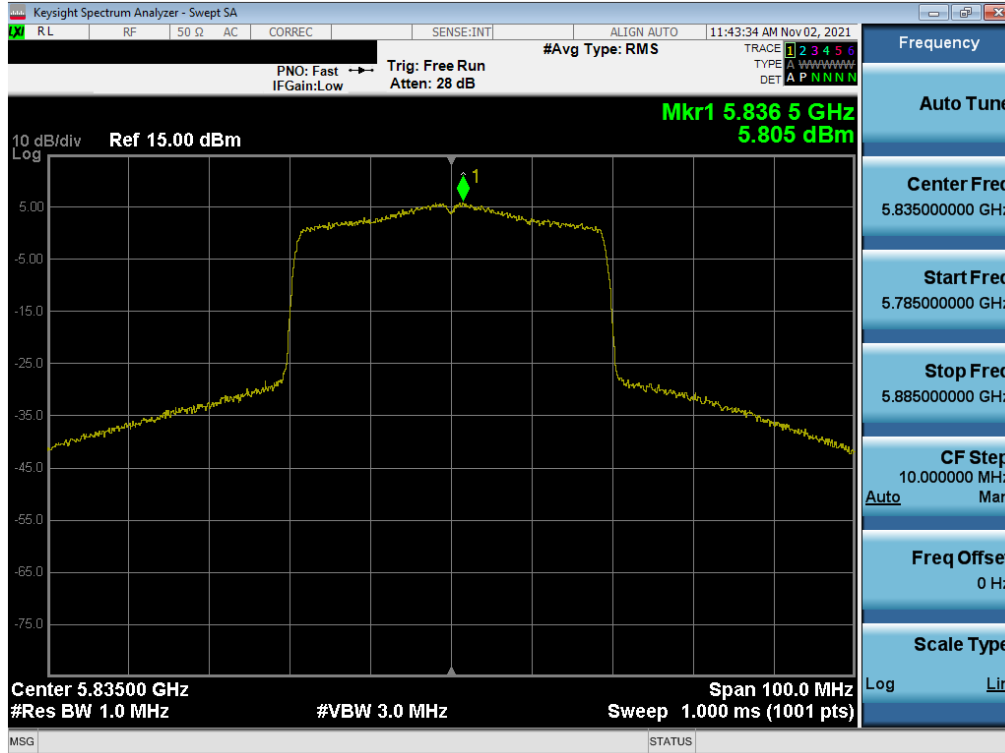


Plot 7-316. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 3/4) – Ch. 167)

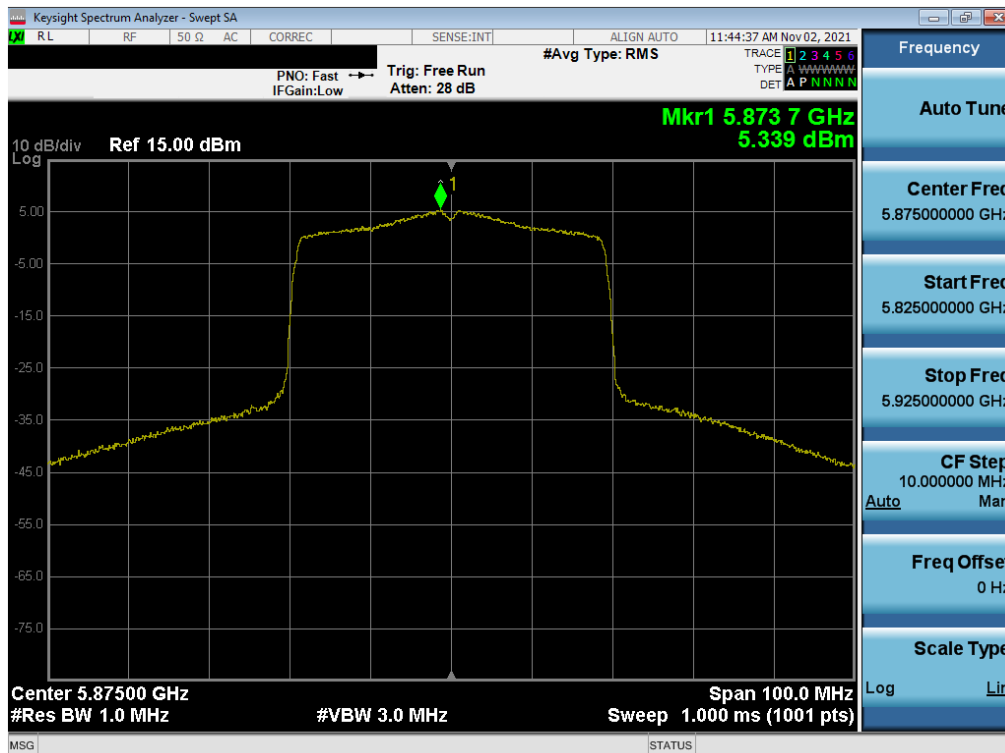


Plot 7-317. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 4) – Ch. 175)

FCC ID: A3LSMS901JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 198 of 295

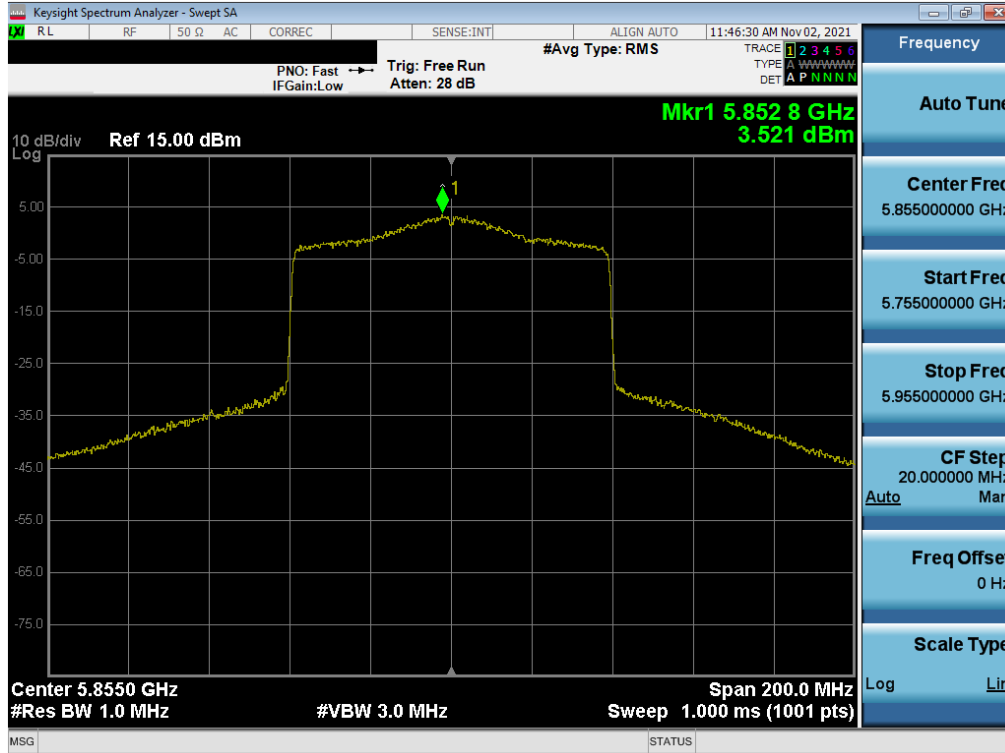


Plot 7-318. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 3/4) – Ch. 167)



Plot 7-319. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 4) – Ch. 175)

FCC ID: A3LSMS901JPN	Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 199 of 295



Plot 7-320. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 3/4) – Ch. 171)

FCC ID: A3LSMS901JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 200 of 295

## Summed MIMO Power Spectral Density Measurements

	Frequency [MHz]	Channel No.	802.11 Mode	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	a	6	7.93	6.84	10.43	11.0	-0.57
	5200	40	a	6	8.01	7.24	10.65	11.0	-0.35
	5240	48	a	6	7.85	7.02	10.47	11.0	-0.53
	5180	36	n (20MHz)	6.5/7.2 (MCS0)	7.77	8.06	10.93	11.0	-0.07
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	7.42	8.25	10.87	11.0	-0.13
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	7.36	7.91	10.66	11.0	-0.34
	5180	36	ax (20MHz)	6.5/7.2 (MCS0)	7.91	7.87	10.90	11.0	-0.10
	5200	40	ax (20MHz)	6.5/7.2 (MCS0)	7.40	8.10	10.77	11.0	-0.23
	5240	48	ax (20MHz)	6.5/7.2 (MCS0)	7.89	8.05	10.98	11.0	-0.02
	5190	38	n (40MHz)	13.5/15 (MCS0)	4.38	4.04	7.22	11.0	-3.78
	5230	46	n (40MHz)	13.5/15 (MCS0)	4.29	3.83	7.08	11.0	-3.92
	5190	38	ax (40MHz)	13.5/15 (MCS0)	5.05	4.47	7.78	11.0	-3.22
	5230	46	ax (40MHz)	13.5/15 (MCS0)	4.64	4.32	7.49	11.0	-3.51
5210	42	ac (80MHz)	29.3/32.5 (MCS0)	0.50	-0.02	3.26	11.0	-7.74	
5210	42	ax (80MHz)	29.3/32.5 (MCS0)	2.16	1.91	5.04	11.0	-5.96	
Band 2A	5260	52	a	6	8.00	7.54	10.79	11.0	-0.21
	5280	56	a	6	7.93	7.31	10.64	11.0	-0.36
	5320	64	a	6	7.35	6.45	9.93	11.0	-1.07
	5260	52	n (20MHz)	6.5/7.2 (MCS0)	7.12	8.26	10.74	11.0	-0.26
	5280	56	n (20MHz)	6.5/7.2 (MCS0)	7.99	7.72	10.87	11.0	-0.13
	5320	64	n (20MHz)	6.5/7.2 (MCS0)	7.15	6.98	10.07	11.0	-0.93
	5260	52	ax (20MHz)	6.5/7.2 (MCS0)	7.29	7.99	10.66	11.0	-0.34
	5280	56	ax (20MHz)	6.5/7.2 (MCS0)	7.56	7.74	10.66	11.0	-0.34
	5320	64	ax (20MHz)	6.5/7.2 (MCS0)	7.70	7.47	10.60	11.0	-0.40
	5270	54	n (40MHz)	13.5/15 (MCS0)	4.02	3.02	6.56	11.0	-4.44
	5310	62	n (40MHz)	13.5/15 (MCS0)	3.84	3.76	6.81	11.0	-4.19
	5270	54	ax (40MHz)	13.5/15 (MCS0)	4.99	4.47	7.75	11.0	-3.25
	5310	62	ax (40MHz)	13.5/15 (MCS0)	4.50	3.91	7.23	11.0	-3.77
5290	58	ac (80MHz)	29.3/32.5 (MCS0)	0.82	0.60	3.72	11.0	-7.28	
5290	58	ax (80MHz)	29.3/32.5 (MCS0)	2.17	2.37	5.28	11.0	-5.72	
Band 2C	5500	100	a	6	7.60	6.62	10.15	11.0	-0.85
	5600	120	a	6	7.52	6.29	9.96	11.0	-1.04
	5720	144	a	6	8.11	6.94	10.57	11.0	-0.43
	5500	100	n (20MHz)	6.5/7.2 (MCS0)	7.42	7.79	10.62	11.0	-0.38
	5600	120	n (20MHz)	6.5/7.2 (MCS0)	7.28	7.73	10.52	11.0	-0.48
	5720	144	n (20MHz)	6.5/7.2 (MCS0)	7.96	7.73	10.86	11.0	-0.14
	5500	100	ax (20MHz)	6.5/7.2 (MCS0)	7.79	7.22	10.52	11.0	-0.48
	5600	120	ax (20MHz)	6.5/7.2 (MCS0)	8.24	7.67	10.98	11.0	-0.02
	5720	144	ax (20MHz)	6.5/7.2 (MCS0)	8.03	7.59	10.83	11.0	-0.17
	5510	102	n (40MHz)	13.5/15 (MCS0)	4.03	3.72	6.89	11.0	-4.11
	5590	118	n (40MHz)	13.5/15 (MCS0)	4.63	4.17	7.42	11.0	-3.58
	5710	142	n (40MHz)	13.5/15 (MCS0)	4.23	4.98	7.63	11.0	-3.37
	5510	102	ax (40MHz)	13.5/15 (MCS0)	5.56	4.62	8.13	11.0	-2.87
	5590	118	ax (40MHz)	13.5/15 (MCS0)	5.33	4.69	8.03	11.0	-2.97
	5710	142	ax (40MHz)	13.5/15 (MCS0)	5.92	4.94	8.47	11.0	-2.53
	5530	106	ac (80MHz)	29.3/32.5 (MCS0)	0.56	-0.02	3.29	11.0	-7.71
	5610	122	ac (80MHz)	29.3/32.5 (MCS0)	0.85	1.20	4.04	11.0	-6.96
	5690	138	ac (80MHz)	29.3/32.5 (MCS0)	-2.23	-1.73	1.04	11.0	-9.96
	5530	106	ax (80MHz)	29.3/32.5 (MCS0)	2.45	2.01	5.24	11.0	-5.76
5610	122	ax (80MHz)	29.3/32.5 (MCS0)	2.72	2.44	5.59	11.0	-5.41	
5690	138	ax (80MHz)	29.3/32.5 (MCS0)	-0.28	-0.14	2.80	11.0	-8.20	

Table 7-35. Bands 1, 2A, 2C MIMO Conducted Power Spectral Density Measurements

FCC ID: A3LSMS901JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 201 of 295

	Frequency [MHz]	Channel No.	802.11 Mode	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	a	6	5.32	4.05	7.74	30.0	-22.26
	5785	157	a	6	5.17	3.26	7.33	30.0	-22.67
	5825	165	a	6	5.37	3.88	7.70	30.0	-22.30
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	5.39	4.37	7.92	30.0	-22.08
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	4.81	4.38	7.61	30.0	-22.39
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	5.06	4.62	7.86	30.0	-22.14
	5745	149	ax (20MHz)	6.5/7.2 (MCS0)	5.06	4.58	7.84	30.0	-22.16
	5785	157	ax (20MHz)	6.5/7.2 (MCS0)	5.37	4.55	7.99	30.0	-22.01
	5825	165	ax (20MHz)	6.5/7.2 (MCS0)	5.07	4.29	7.71	30.0	-22.29
	5755	151	n (40MHz)	13.5/15 (MCS0)	2.21	1.07	4.69	30.0	-25.31
	5795	159	n (40MHz)	13.5/15 (MCS0)	1.73	0.21	4.05	30.0	-25.95
	5755	151	ax (40MHz)	13.5/15 (MCS0)	2.79	1.89	5.38	30.0	-24.62
	5795	159	ax (40MHz)	13.5/15 (MCS0)	2.52	1.45	5.03	30.0	-24.97
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-0.67	0.44	2.93	30.0	-27.07
	5775	155	ax (80MHz)	29.3/32.5 (MCS0)	2.10	1.25	4.71	30.0	-25.29

Table 7-36. Band 3 MIMO Conducted Power Spectral Density Measurements

	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Antenna-1 Power Density [dBm/MHz]	Antenna-2 Power Density [dBm/MHz]	MIMO Summed Power Density [dBm/MHz]	Directional Antenna Gain [dBi]	EIRP Power Density [dBm/MHz]	Max EIRP Power Density [dBm/MHz]	Margin [dB]
Band 3/4	5845	169	a	6	8.19	8.79	11.51	-3.95	7.56	14.00	-6.44
Band 4	5865	173	a	6	8.16	8.30	11.24	-3.95	7.29	14.00	-6.71
	5885	177	a	6	8.61	10.36	12.58	-3.95	8.63	14.00	-5.37
Band 3/4	5845	169	n (20MHz)	6.5/7.2 (MCS0)	8.71	8.21	11.48	-3.95	7.52	14.00	-6.48
Band 4	5865	173	n (20MHz)	6.5/7.2 (MCS0)	8.92	8.11	11.55	-3.95	7.59	14.00	-6.41
	5885	177	n (20MHz)	6.5/7.2 (MCS0)	8.56	9.82	12.25	-3.95	8.30	14.00	-5.70
Band 3/4	5845	169	ac (20MHz)	6.5/7.2 (MCS0)	8.83	8.61	11.73	-3.95	7.78	14.00	-6.22
Band 4	5865	173	ac (20MHz)	6.5/7.2 (MCS0)	8.58	8.07	11.34	-3.95	7.39	14.00	-6.61
	5885	177	ac (20MHz)	6.5/7.2 (MCS0)	8.15	9.91	12.13	-3.95	8.18	14.00	-5.82
Band 3/4	5845	169	ax (20MHz)	6.5/7.2 (MCS0)	7.85	8.36	11.12	-3.95	7.17	14.00	-6.83
Band 4	5865	173	ax (20MHz)	6.5/7.2 (MCS0)	8.00	8.41	11.22	-3.95	7.27	14.00	-6.73
	5885	177	ax (20MHz)	6.5/7.2 (MCS0)	7.68	9.17	11.50	-3.95	7.55	14.00	-6.45
Band 3/4	5835	167	n (40MHz)	13.5/15 (MCS0)	4.32	4.75	7.55	-3.95	3.60	14.00	-10.40
Band 4	5875	175	n (40MHz)	13.5/15 (MCS0)	4.49	4.48	7.49	-3.95	3.54	14.00	-10.46
Band 3/4	5835	167	ac (40MHz)	13.5/15 (MCS0)	5.65	5.55	8.61	-3.95	4.66	14.00	-9.34
Band 4	5875	175	ac (40MHz)	13.5/15 (MCS0)	5.44	5.46	8.46	-3.95	4.51	14.00	-9.49
Band 3/4	5835	167	ax (40MHz)	13.5/15 (MCS0)	5.27	5.81	8.56	-3.95	4.60	14.00	-9.40
Band 4	5875	175	ax (40MHz)	13.5/15 (MCS0)	5.21	5.34	8.29	-3.95	4.33	14.00	-9.67
Band 3/4	5855	171	ac (80MHz)	29.3/32.5 (MCS0)	2.85	2.57	5.72	-3.95	1.77	14.00	-12.23
	5855	171	ax (80MHz)	29.3/32.5 (MCS0)	2.68	3.52	6.13	-3.95	2.18	14.00	-11.82

Table 7-37. Band 4 MIMO e.i.r.p Spectral Density Measurements

FCC ID: A3LSMS901JPN	 PCTEST® Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 202 of 295

**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 as shown in the section above. The measured values were then summed in linear power units then converted back to dBm.

**Sample MIMO Calculation:**

At 5180MHz in 802.11n (20MHz BW) mode, the average conducted power spectral density was measured to be 7.77 dBm for Antenna-1 and 8.06 dBm for Antenna-2.

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

$$(7.77 \text{ dBm} + 8.06 \text{ dBm}) = (5.99 \text{ mW} + 6.40 \text{ mW}) = 12.39 \text{ mW} = 10.93 \text{ dBm}$$

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

At 5180MHz in 802.11n (20MHz BW) mode, the average MIMO power density was calculated to be 10.93 dBm with directional gain of -3.72 dBi.

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

$$10.93 \text{ dBm} + (-3.72) \text{ dBi} = 7.21 \text{ dBm}$$

<b>FCC ID:</b> A3LSMS901JPN		<b>MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Approved by:</b> Technical Manager
<b>Test Report S/N:</b> 1M2112090153-11.A3L	<b>Test Dates:</b> 09/22 – 12/22/2021	<b>EUT Type:</b> Portable Handset	Page 203 of 295	



## 7.6 Radiated Spurious Emission Measurements – Above 1GHz

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

### Test Overview and Limit

All out of band radiated spurious emissions are measured with a spectrum analyzer connected to a receive antenna while the EUT is operating at its maximum duty cycle, at its maximum power control level, as defined in ANSI C63.10-2013 and KDB 789033 D02 v02r01, and at the appropriate frequencies. All channels, modes (e.g. 802.11a, 802.11n (20MHz BW), 802.11n (40MHz BW), 802.11ac (80MHz), and 802.11ax (80MHz)), and modulations/data rates were investigated among all UNII bands. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.

**For transmitters operating in the 5.15-5.25 GHz and 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz.**

**For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.**

**For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.**

**For transmitters operating in the 5.850 – 5.895 GHz band: all emissions at or above 5.895GHz shall not exceed an e.i.r.p. of -5dBm/MHz and shall decrease linearly up to an e.i.r.p. of -27dBm/MHz at or above 5.925GHz, and all emissions below 5.725 GHz shall not exceed an e.i.r.p. of -27dBm/MHz at 5.65 GHz increasing linearly to 10dBm/MHz at 5.7GHz and from 5.7GHz increasing linearly to a level of 15.6dBm/MHz at 5.72GHz, and from 5.72GHz increasing linearly to a level of 27dBm/MHz at 5.725GHz.**

**All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR and Table 6 of RSS-Gen (8.10) must not exceed the limits shown in Table 7-38 per Section 15.209 and RSS-Gen (8.9).**

Frequency	Field Strength [ $\mu$ V/m]	Measured Distance [Meters]
Above 960.0 MHz	500	3

Table 7-38. Radiated Limits

### Test Procedures Used

ANSI C63.10-2013 – Sections 12.7.7.2, 12.7.6, 12.7.5  
KDB 789033 D02 v02r01 – Section G

### Test Settings

#### Average Measurements above 1GHz (Method AD)

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = power average (RMS)

FCC ID: A3LSMS901JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 204 of 295

5. Number of measurement points = 1001 (Number of points must be  $\geq 2 \times \text{span/RBW}$ )
6. Averaging type = power (RMS)
7. Sweep time = auto couple
8. Trace was averaged over 100 sweeps

**Peak Measurements above 1GHz**

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

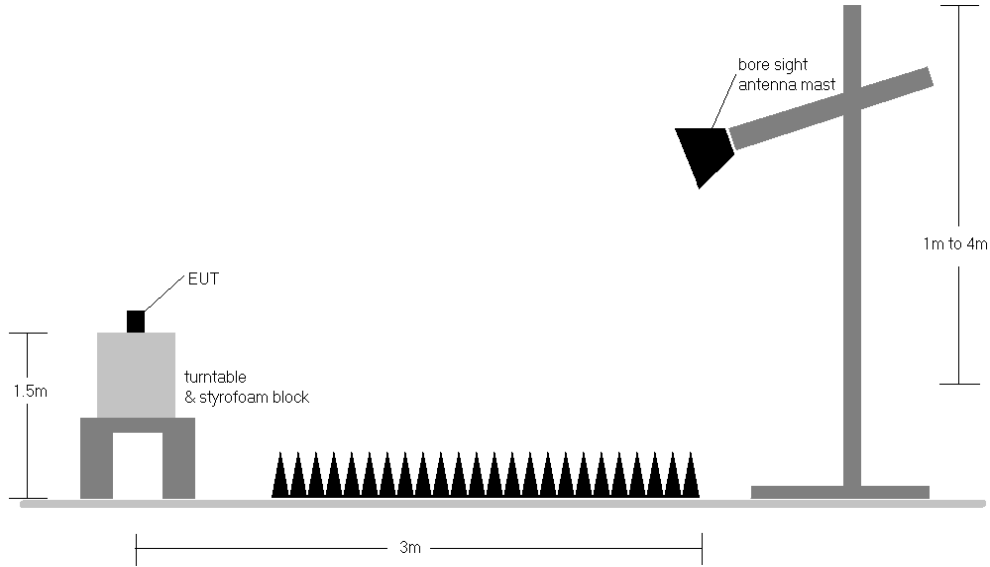
**Peak Measurements below 1GHz**

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = 120kHz
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

**Test Setup**

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

<b>FCC ID:</b> A3LSMS901JPN	 Proud to be part of  element	<b>MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Approved by:</b> Technical Manager
<b>Test Report S/N:</b> 1M2112090153-11.A3L	<b>Test Dates:</b> 09/22 – 12/22/2021	<b>EUT Type:</b> Portable Handset	Page 205 of 295	



**Figure 7-5. Test Instrument & Measurement Setup**

<b>FCC ID:</b> A3LSMS901JPN		<b>MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Approved by:</b> Technical Manager
<b>Test Report S/N:</b> 1M2112090153-11.A3L	<b>Test Dates:</b> 09/22 – 12/22/2021	<b>EUT Type:</b> Portable Handset	Page 206 of 295	

## Test Notes

1. All emissions that lie in the restricted bands (denoted by a \* next to the frequency) specified in §15.205 and Section 8.10 of RSS-Gen are below the limit shown in Table 7-38.
2. All UNII Band 1 – 3 that do not lie in a restricted band are subject to a peak limit of -27dBm/MHz. For UNII Band 4, the -27dBm/MHz limit is measured with an RMS detector. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions of 68.2dB $\mu$ V/m.
3. The antenna is manipulated through typical positions, polarity and length during the tests. The EUT is manipulated through three orthogonal planes.
4. This unit was tested with its standard battery.
5. The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter using CISPR quasi peak detector below 1GHz. Above 1 GHz, average and peak measurements were taken using linearly polarized horn antennas. The worst-case emissions are reported however emissions whose levels were not within 20dB of the respective limits were not reported.
6. Emissions below 18GHz were measured at a 3 meter test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.
7. Radiated spurious emissions were investigated while operating in MIMO mode, however, it was determined that single antenna operation produced the worst case emissions. Since the emissions produced from MIMO operation were found to be more than 20dB below the limit, the MIMO emissions are not reported.
8. The wide spectrum spurious emissions plots shown on the following pages are used only for the purpose of emission identification. Any emissions found to be within 20dB of the limit are fully investigated and the results are shown in this section.
9. The "-" shown in the following RSE tables are used to denote a noise floor measurement.

## Sample Calculations

### Determining Spurious Emissions Levels

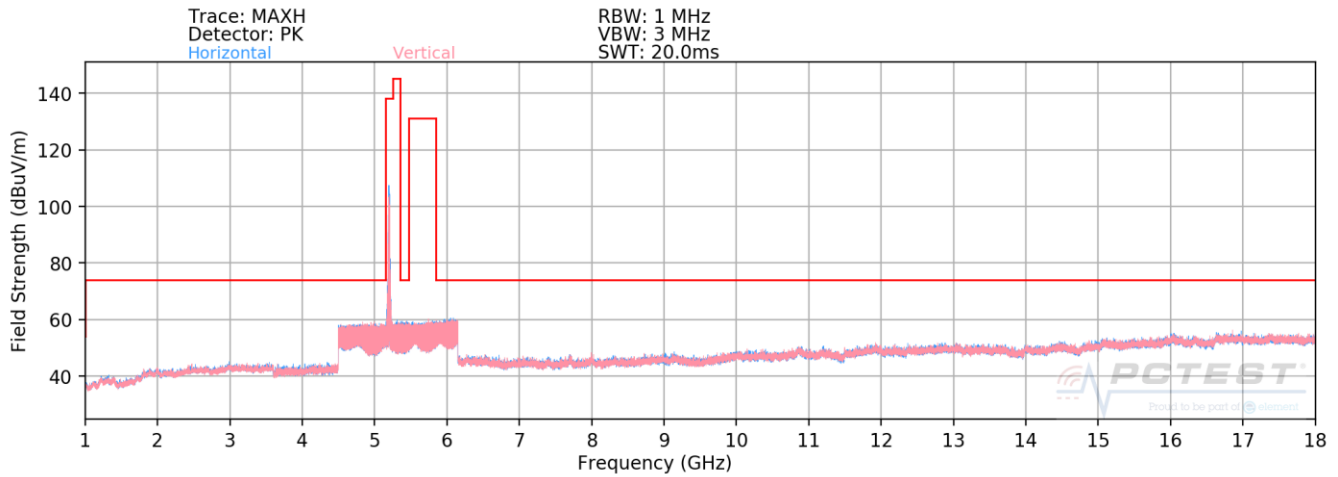
- Field Strength Level [dB $\mu$ V/m] = Analyzer Level [dBm] + 107 + AFCL [dB/m]
- AFCL [dB/m] = Antenna Factor [dB/m] + Cable Loss [dB]
- Margin [dB] = Field Strength Level [dB $\mu$ V/m] – Limit [dB $\mu$ V/m]

### Radiated Band Edge Measurement Offset

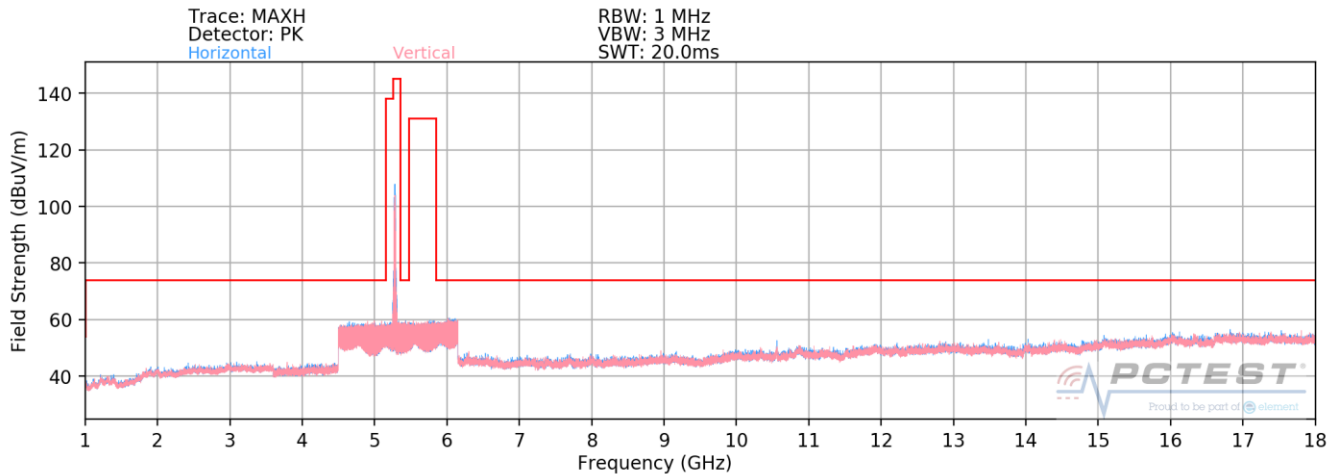
- The amplitude offset shown in the radiated restricted band edge plots was calculated using the formula:  
Offset (dB) = (Antenna Factor + Cable Loss + Attenuator) – Pre-amplifier Gain

FCC ID: A3LSMS901JPN	 Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 207 of 295

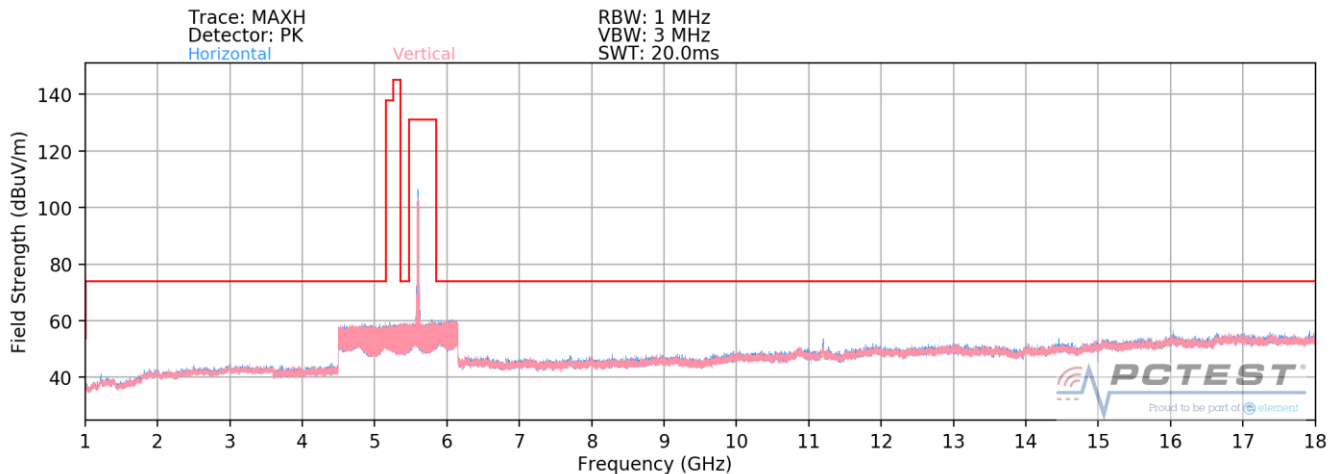
## 7.6.1 SISO Antenna-1 Radiated Spurious Emission Measurements



**Plot 7-321. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11a – U1 Ch. 40)**

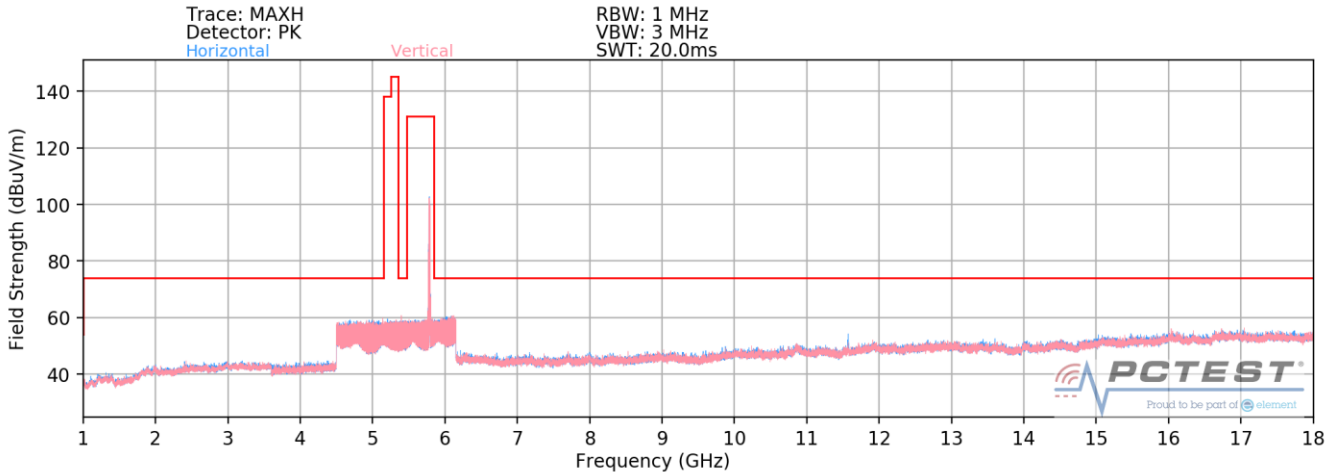


**Plot 7-322. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11a – U2A Ch. 56)**

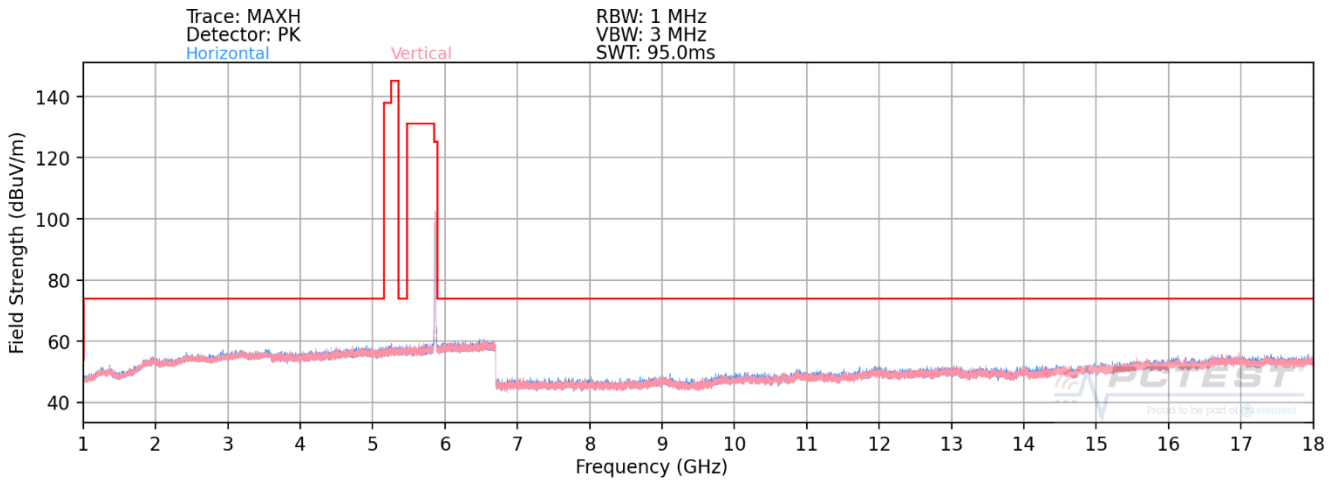


**Plot 7-323. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11a – U2C Ch. 120)**

FCC ID: A3LSMS901JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 208 of 295



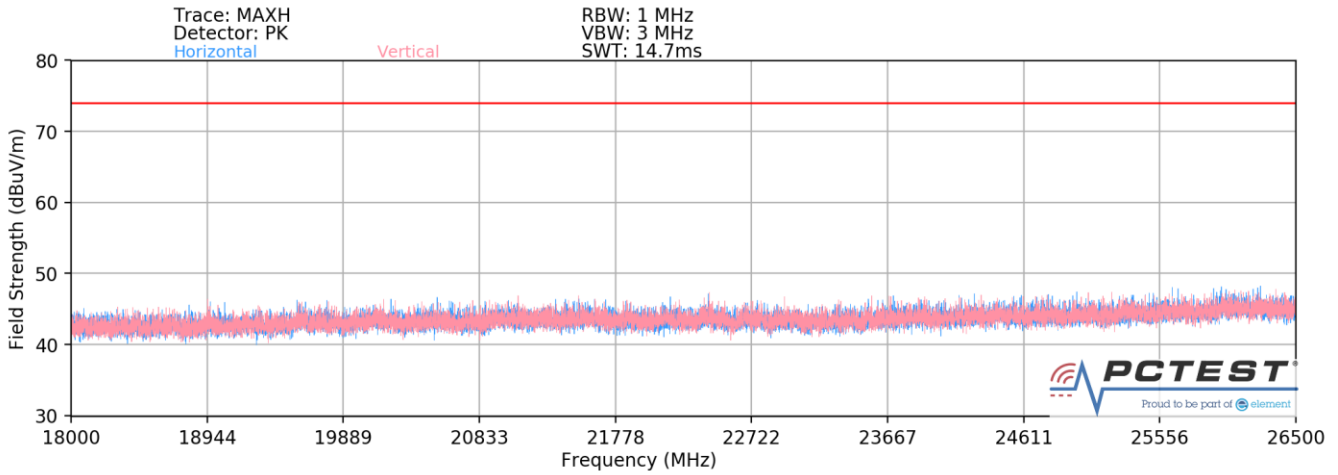
**Plot 7-324. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11a – U3 Ch. 157)**



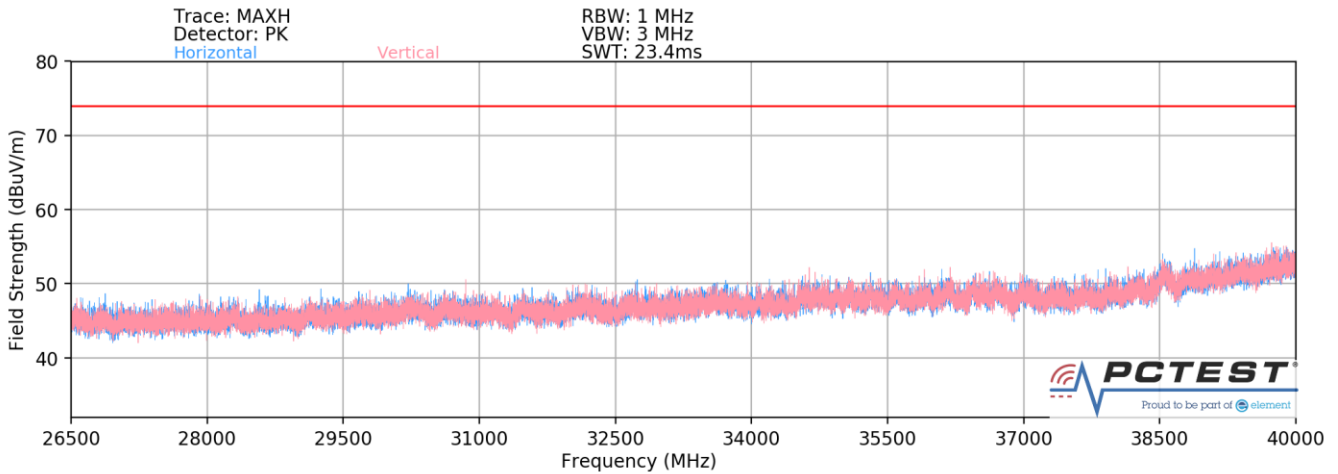
**Plot 7-325. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11a – U4 Ch. 173)**

FCC ID: A3LSMS901JPN	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 209 of 295

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



**Plot 7-326. Radiated Spurious Plot 18GHz - 26.5GHz SISO ANT1 (802.11a)**



**Plot 7-327. Radiated Spurious Plot 26.5GHz - 40GHz SISO ANT1 (802.11a)**

<b>FCC ID:</b> A3LSMS901JPN		<b>MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Approved by:</b> Technical Manager
<b>Test Report S/N:</b> 1M2112090153-11.A3L	<b>Test Dates:</b> 09/22 – 12/22/2021	<b>EUT Type:</b> Portable Handset	Page 210 of 295	

## SISO Antenna-1 Radiated Spurious Emission Measurements

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

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5180MHz  
 Channel: 36

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
10360.00	Peak	H	270	297	-65.54	12.16	0.00	53.62	68.20	-14.58
* 15540.00	Average	H	-	-	-82.04	16.69	0.00	41.65	53.98	-12.33
* 15540.00	Peak	H	-	-	-69.73	16.69	0.00	53.96	73.98	-20.02
* 20720.00	Average	H	150	308	-66.96	4.37	-9.54	34.87	53.98	-19.11
* 20720.00	Peak	H	150	308	-57.62	4.37	-9.54	44.22	73.98	-29.76
25900.00	Peak	H	-	-	-56.95	5.87	-9.54	46.38	68.20	-21.82

Table 7-39. Radiated Measurements SISO ANT1

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5200MHz  
 Channel: 40

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
10400.00	Peak	H	268	295	-64.34	11.75	0.00	54.41	68.20	-13.79
* 15600.00	Average	H	-	-	-82.39	17.47	0.00	42.08	53.98	-11.90
* 15600.00	Peak	H	-	-	-70.40	17.47	0.00	54.07	73.98	-19.91
* 20800.00	Average	H	150	309	-65.63	4.47	-9.54	36.30	53.98	-17.68
* 20800.00	Peak	H	150	309	-56.64	4.47	-9.54	45.29	73.98	-28.69
26000.00	Peak	H	-	-	-57.35	6.04	-9.54	46.14	68.20	-22.06

Table 7-40. Radiated Measurements SISO ANT1

FCC ID: A3LSMS901JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset	Page 211 of 295	



Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5240MHz  
 Channel: 48

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
10480.00	Peak	H	193	291	-65.76	12.40	0.00	53.64	68.20	-14.56
* 15720.00	Average	H	-	-	-82.95	17.59	0.00	41.64	53.98	-12.34
* 15720.00	Peak	H	-	-	-71.03	17.59	0.00	53.56	73.98	-20.42
* 20960.00	Average	H	150	312	-66.86	4.65	-9.54	35.25	53.98	-18.73
* 20960.00	Peak	H	150	312	-57.54	4.65	-9.54	44.57	73.98	-29.41
26200.00	Peak	H	-	-	-57.12	5.76	-9.54	46.09	68.20	-22.11

Table 7-41. Radiated Measurements SISO ANT1

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5260MHz  
 Channel: 52

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
10520.00	Peak	H	130	297	-65.77	12.54	0.00	53.77	68.20	-14.43
* 15780.00	Average	H	-	-	-82.98	17.26	0.00	41.28	53.98	-12.70
* 15780.00	Peak	H	-	-	-71.32	17.26	0.00	52.94	73.98	-21.04
* 21040.00	Average	H	150	308	-66.29	4.68	-9.54	35.85	53.98	-18.13
* 21040.00	Peak	H	150	308	-57.17	4.68	-9.54	44.97	73.98	-29.01
26300.00	Peak	H	-	-	-57.78	5.68	-9.54	45.36	68.20	-22.84

Table 7-42. Radiated Measurements SISO ANT1

FCC ID: A3LSMS901JPN	 PCTEST® Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset	Page 212 of 295	

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5280MHz  
 Channel: 56

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
10560.00	Peak	H	135	295	-64.48	12.54	0.00	55.06	68.20	-13.14
* 15840.00	Average	H	-	-	-82.95	17.42	0.00	41.47	53.98	-12.50
* 15840.00	Peak	H	-	-	-70.54	17.42	0.00	53.88	73.98	-20.09
* 21120.00	Average	H	150	315	-66.16	4.78	-9.54	36.08	53.98	-17.90
* 21120.00	Peak	H	150	315	-57.00	4.78	-9.54	45.23	73.98	-28.75
26400.00	Peak	H	-	-	-57.45	5.75	-9.54	45.76	68.20	-22.44

Table 7-43. Radiated Measurements SISO ANT1

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5320MHz  
 Channel: 64

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
* 10640.00	Average	H	120	297	-77.17	12.65	0.00	42.48	53.98	-11.50
* 10640.00	Peak	H	120	297	-65.02	12.65	0.00	54.63	73.98	-19.35
* 15960.00	Average	H	-	-	-83.15	18.41	0.00	42.26	53.98	-11.72
* 15960.00	Peak	H	-	-	-70.90	18.41	0.00	54.51	73.98	-19.47
* 21280.00	Average	H	150	312	-66.86	4.92	-9.54	35.52	53.98	-18.46
* 21280.00	Peak	H	150	312	-57.81	4.92	-9.54	44.57	73.98	-29.41
26600.00	Peak	H	-	-	-58.15	5.78	-9.54	45.09	68.20	-23.11

Table 7-44. Radiated Measurements SISO ANT1

FCC ID: A3LSMS901JPN	 PCTEST® Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset	Page 213 of 295	

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5500MHz  
 Channel: 100

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
* 11000.00	Average	H	112	22	-75.09	12.80	0.00	44.71	53.98	-9.27
* 11000.00	Peak	H	112	22	-62.38	12.80	0.00	57.42	73.98	-16.56
16500.00	Peak	H	-	-	-70.52	18.36	0.00	54.84	68.20	-13.36
22000.00	Peak	H	150	28	-56.89	4.80	-9.54	45.36	68.20	-22.84
27500.00	Peak	H	-	-	-56.67	5.93	-9.54	46.71	68.20	-21.49

Table 7-45. Radiated Measurements SISO ANT1

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5600MHz  
 Channel: 120

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
* 11200.00	Average	H	250	335	-73.13	12.90	0.00	46.77	53.98	-7.21
* 11200.00	Peak	H	250	335	-60.45	12.90	0.00	59.45	73.98	-14.53
16800.00	Peak	H	-	-	-70.26	18.52	0.00	55.26	68.20	-12.94
* 22400.00	Average	H	-	-	-66.99	4.84	-9.54	35.31	53.98	-18.67
* 22400.00	Peak	H	-	-	-56.52	4.84	-9.54	45.77	73.98	-28.21
28000.00	Peak	H	-	-	-57.09	6.12	-9.54	46.49	68.20	-21.71

Table 7-46. Radiated Measurements SISO ANT1

FCC ID: A3LSMS901JPN	 PCTEST® Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset	Page 214 of 295	

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5720MHz  
 Channel: 144

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
* 11440.00	Average	H	250	331	-71.38	12.86	0.00	48.48	53.98	-5.50
* 11440.00	Peak	H	250	331	-59.30	12.86	0.00	60.56	73.98	-13.42
17160.00	Peak	H	-	-	-70.10	18.02	0.00	54.92	68.20	-13.28
* 22880.00	Average	H	-	-	-67.55	4.77	-9.54	34.68	53.98	-19.30
* 22880.00	Peak	H	-	-	-57.11	4.77	-9.54	45.12	73.98	-28.86
28600.00	Peak	H	-	-	-57.92	6.32	-9.54	45.86	68.20	-22.34

Table 7-47. Radiated Measurements SISO ANT1

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5745MHz  
 Channel: 149

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
* 11490.00	Average	H	179	325	-73.90	13.58	0.00	46.68	53.98	-7.30
* 11490.00	Peak	H	179	325	-60.66	13.58	0.00	59.92	73.98	-14.06
17235.00	Peak	H	-	-	-69.84	17.76	0.00	54.92	68.20	-13.28
* 22980.00	Average	H	-	-	-68.06	4.67	-9.54	34.07	53.98	-19.91
* 22980.00	Peak	H	-	-	-57.81	4.67	-9.54	44.32	73.98	-29.66
28725.00	Peak	H	-	-	-58.09	6.42	-9.54	45.78	68.20	-22.42

Table 7-48. Radiated Measurements SISO ANT1

Worst Case Mode: 802.11a

FCC ID: A3LSMS901JPN	 PCTEST® Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset	Page 215 of 295	

Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5785MHz  
 Channel: 157

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11570.00	Average	H	254	331	-73.77	13.03	0.00	46.26	53.98	-7.72
* 11570.00	Peak	H	254	331	-61.53	13.03	0.00	58.50	73.98	-15.48
17355.00	Peak	H	-	-	-70.34	18.72	0.00	55.38	68.20	-12.82
23140.00	Peak	H	-	-	-57.32	4.61	-9.54	44.74	68.20	-23.46
28925.00	Peak	H	-	-	-57.98	6.50	-9.54	45.97	68.20	-22.23

**Table 7-49. Radiated Measurements SISO ANT1**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5825MHz  
 Channel: 165

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11650.00	Average	H	185	332	-76.98	13.65	0.00	43.67	53.98	-10.31
* 11650.00	Peak	H	185	332	-63.96	13.65	0.00	56.69	73.98	-17.29
17475.00	Peak	H	-	-	-69.97	17.76	0.00	54.79	68.20	-13.41
23300.00	Peak	H	-	-	-57.68	4.72	-9.54	44.51	68.20	-23.69
29125.00	Peak	H	-	-	-57.66	6.86	-9.54	46.66	68.20	-21.54

**Table 7-50. Radiated Measurements SISO ANT1**

FCC ID: A3LSMS901JPN	 PCTEST® Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 216 of 295

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5845MHz  
 Channel: 169

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11690.00	Average	H	160	332	-78.09	14.34	0.00	43.25	53.98	-10.72
* 11690.00	Peak	H	160	332	-65.83	14.34	0.00	55.51	73.98	-18.46
17535.00	Peak	H	-	-	-70.15	18.43	0.00	55.28	68.20	-12.92
23380.00	Peak	H	-	-	-55.24	4.67	-9.54	46.89	68.20	-21.31
29225.00	Peak	H	-	-	-55.70	6.67	-9.54	48.43	68.20	-19.77
35070.00	Peak	H	-	-	-54.33	8.56	-9.54	51.69	68.20	-16.51

**Table 7-51. Radiated Measurements SISO ANT1**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5865MHz  
 Channel: 173

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11730.00	Average	H	238	46	-77.83	13.97	0.00	43.14	53.98	-10.84
* 11730.00	Peak	H	238	46	-65.41	13.97	0.00	55.56	73.98	-18.42
17595.00	Peak	H	-	-	-70.42	18.25	0.00	54.83	68.20	-13.37
23460.00	Peak	H	-	-	-56.23	4.62	-9.54	45.85	68.20	-22.35
29325.00	Peak	H	-	-	-55.71	6.99	-9.54	48.73	68.20	-19.47
35190.00	Peak	H	-	-	-55.48	8.73	-9.54	50.71	68.20	-17.49

**Table 7-52. Radiated Measurements SISO ANT1**

FCC ID: A3LSMS901JPN	 PCTEST® Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset	Page 217 of 295	

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5885MHz  
 Channel: 177

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
* 11770.00	Average	H	235.00	46.00	-77.76	14.09	0.00	43.33	53.98	-10.65
* 11770.00	Peak	H	235	46	-65.88	14.09	0.00	55.21	73.98	-18.77
17655.00	Peak	H	-	-	-70.21	18.05	0.00	54.84	68.20	-13.36
23540.00	Peak	H	-	-	-55.60	4.71	-9.54	56.11	68.20	-12.09
29425.00	Peak	H	-	-	-55.52	7.01	-9.54	58.49	68.20	-9.71
35310.00	Peak	H	-	-	-54.30	8.79	-9.54	61.49	68.20	-6.71

Table 7-53. Radiated Measurements SISO ANT1

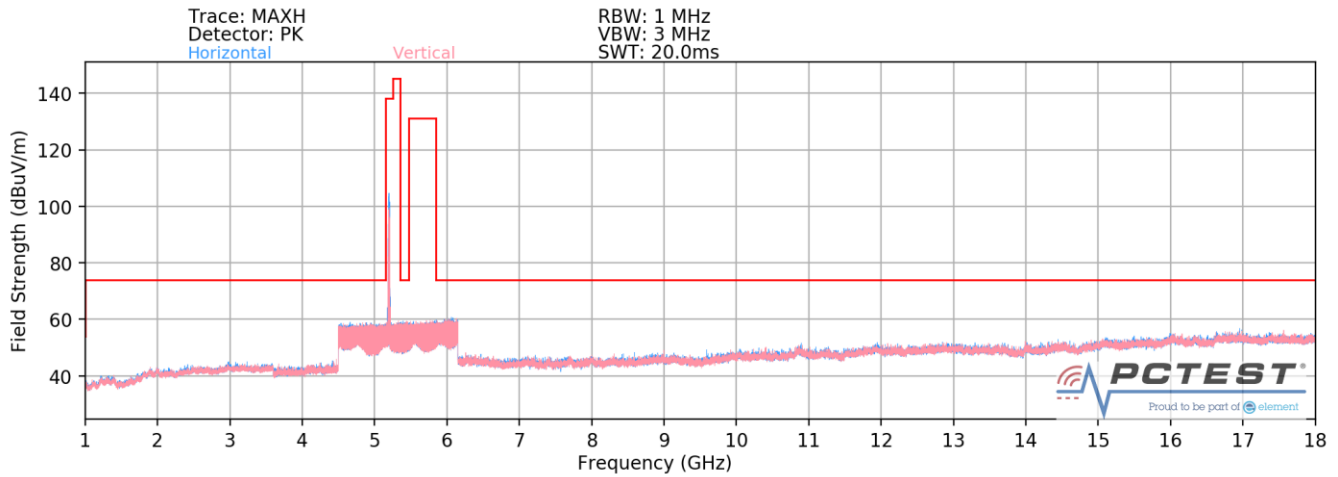
Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5745MHz  
 Channel: 149

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
* 11490.00	Average	H	157	6	-79.21	13.58	0.00	41.37	53.98	-12.61
* 11490.00	Peak	H	157	6	-66.97	13.58	0.00	53.61	73.98	-20.37
17235.00	Peak	H	-	-	-69.70	17.76	0.00	55.06	68.20	-13.14
* 22980.00	Average	H	-	-	-66.89	4.67	-9.54	35.24	53.98	-18.74
* 22980.00	Peak	H	-	-	-58.98	4.67	-9.54	43.15	73.98	-30.83
28725.00	Peak	H	-	-	-59.42	6.42	-9.54	44.46	68.20	-23.74

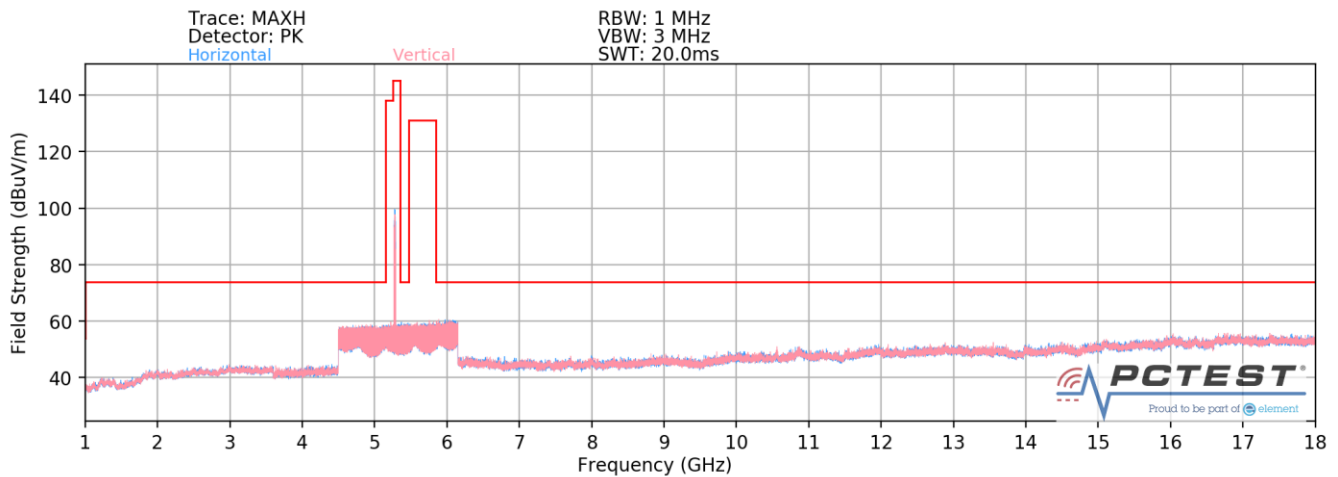
Table 7-54. Radiated Measurements SISO ANT1 with WCP

FCC ID: A3LSMS901JPN	 PCTEST® Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset	Page 218 of 295	

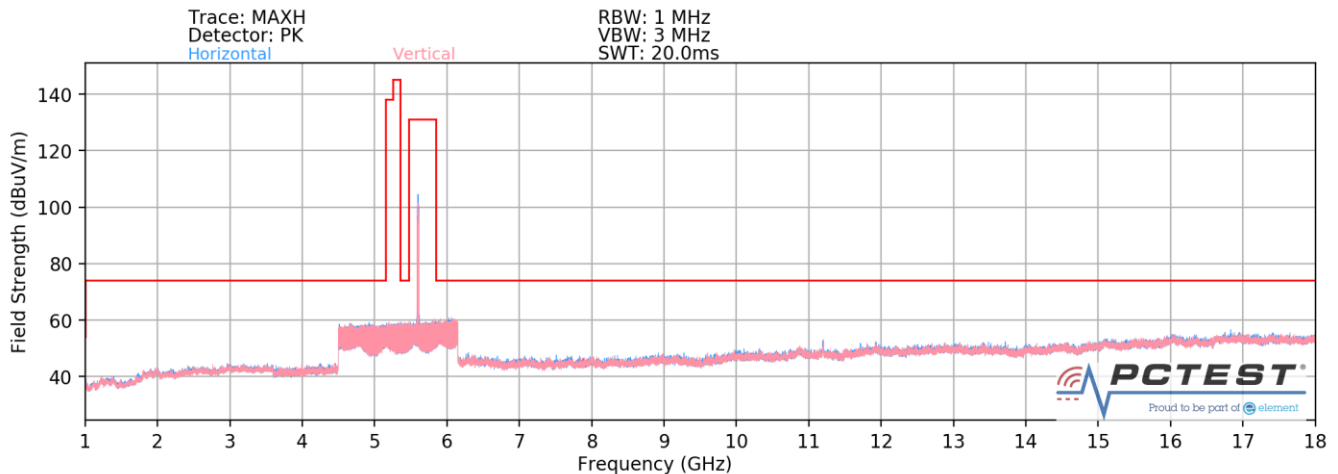
## 7.6.2 SISO Antenna-2 Radiated Spurious Emission Measurements



**Plot 7-328. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11a – U1 Ch. 40)**



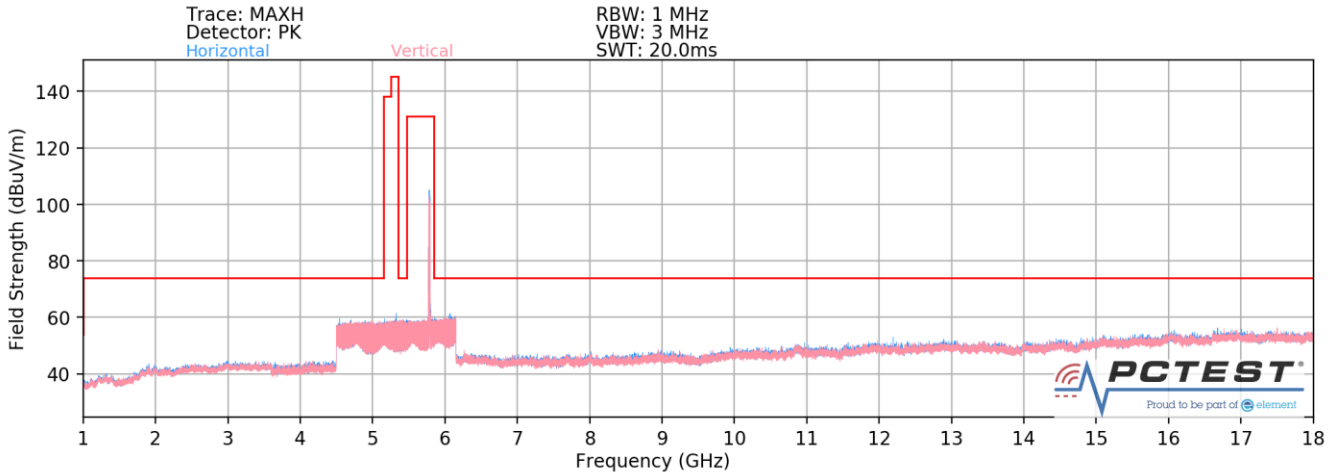
**Plot 7-329. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11a – U2A Ch. 56)**



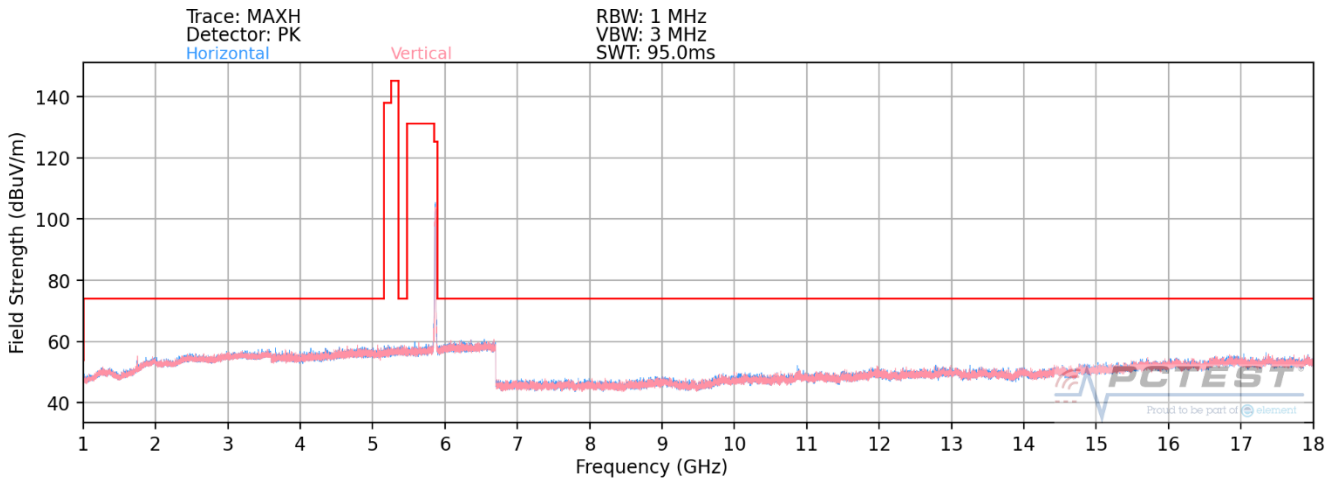
**Plot 7-330. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11a – U2C Ch. 120)**

FCC ID: A3LSMS901JPN		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 219 of 295





**Plot 7-331. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11a – U3 Ch. 157)**



**Plot 7-332. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11a – U4 Ch. 173)**

FCC ID: A3LSMS901JPN	<b>PCTEST</b> Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	<b>SAMSUNG</b>	Approved by: Technical Manager
Test Report S/N: 1M2112090153-11.A3L	Test Dates: 09/22 – 12/22/2021	EUT Type: Portable Handset		Page 220 of 295