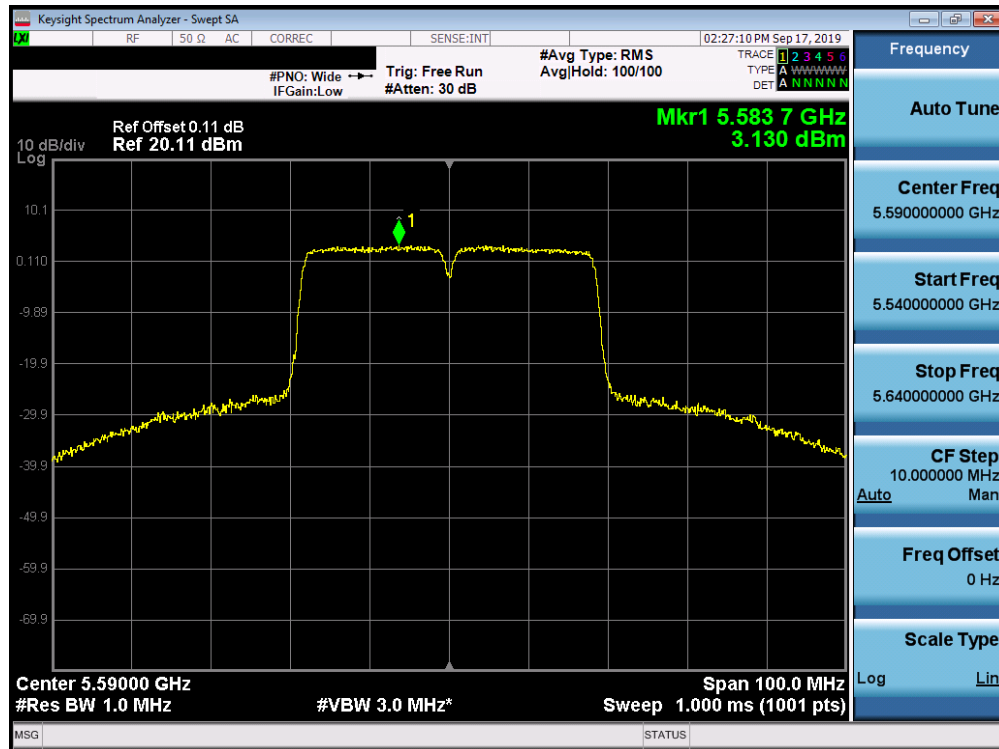
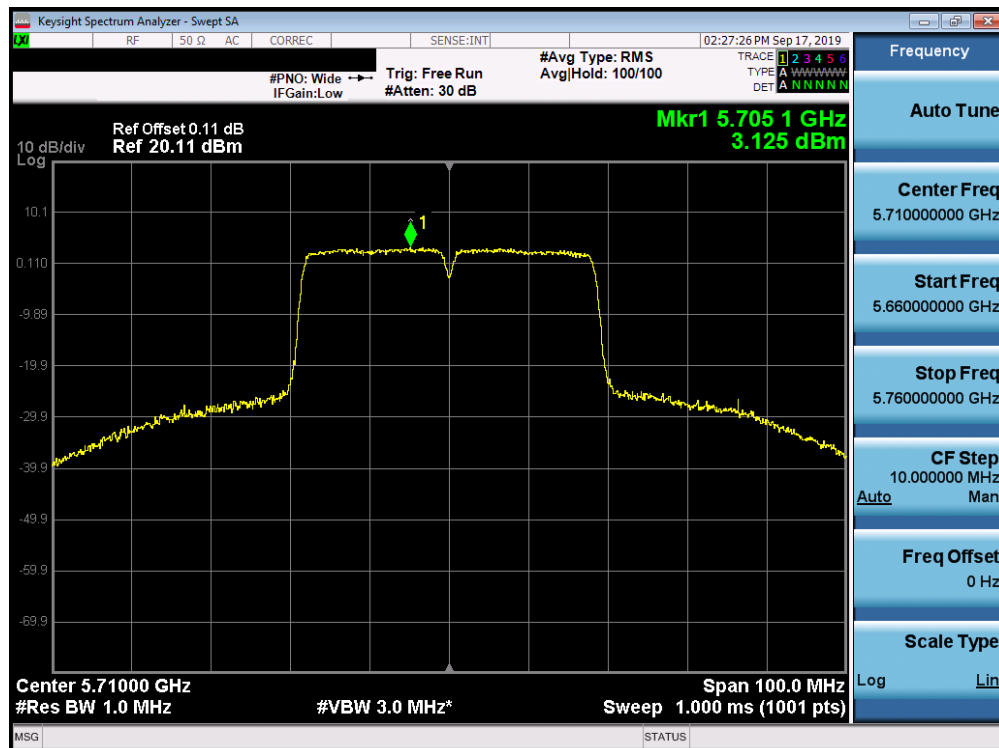


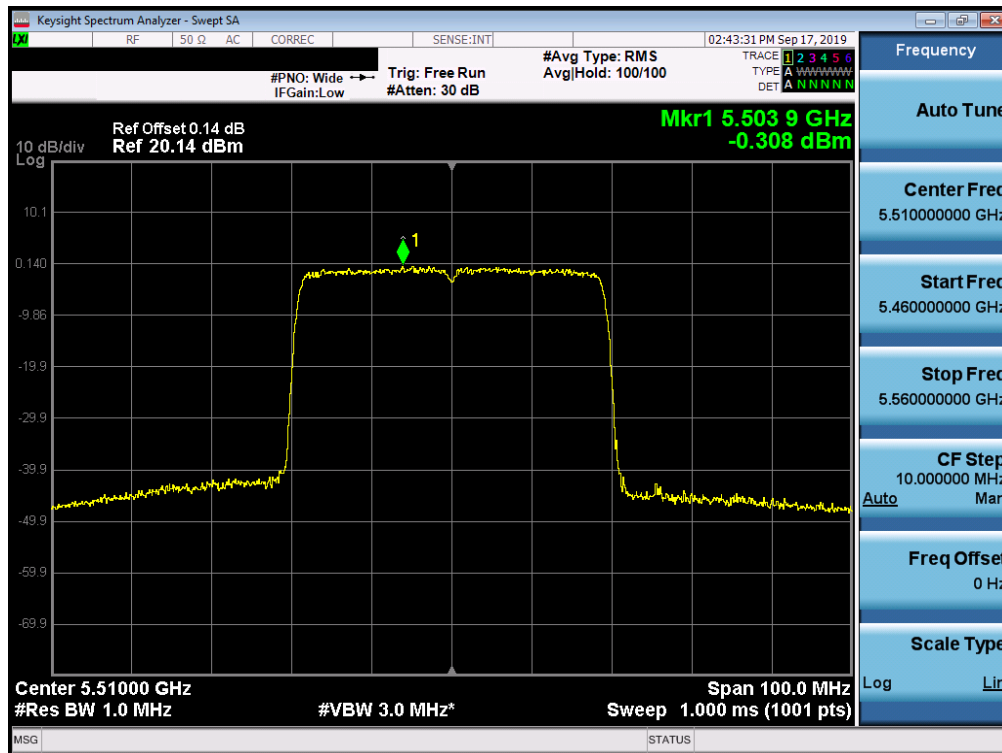


Plot 7-173. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2C) – Ch. 118)

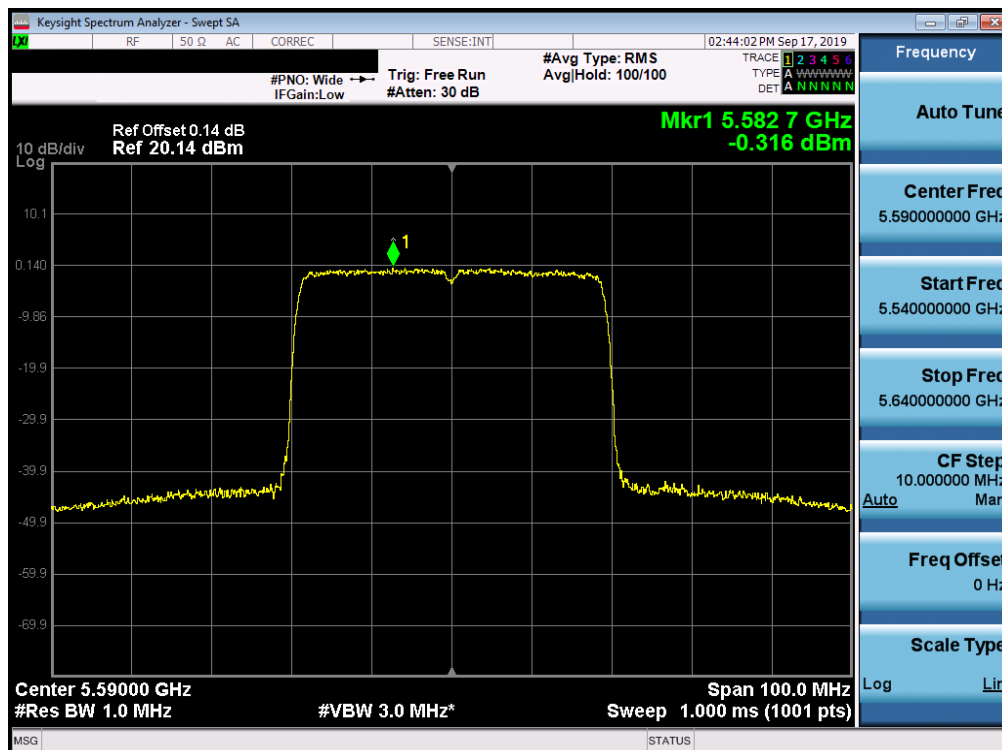


Plot 7-174. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2C) – Ch. 142)

FCC ID: A3LSMN976U	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 118 of 245

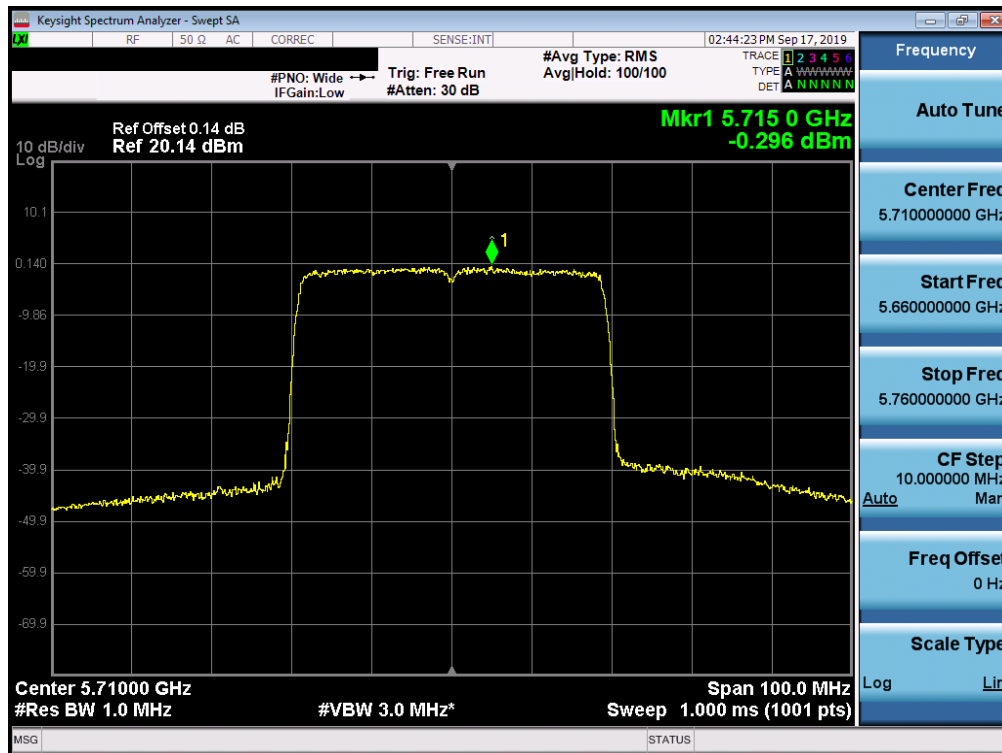


Plot 7-175. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 2C) – Ch. 102)

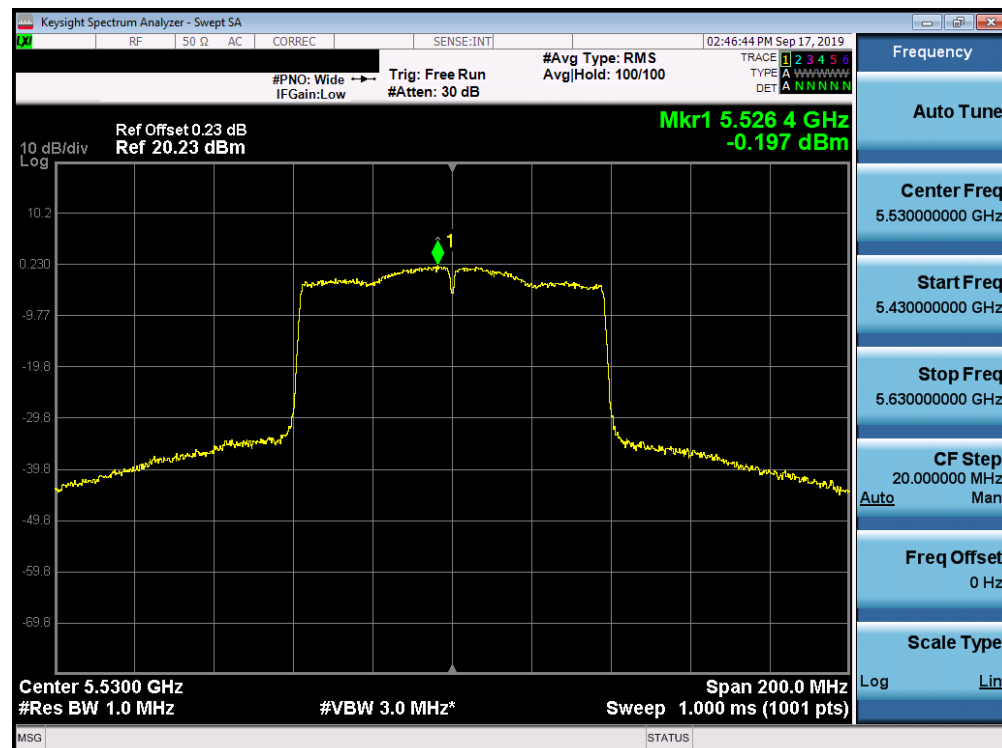


Plot 7-176. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 2C) – Ch. 118)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 119 of 245

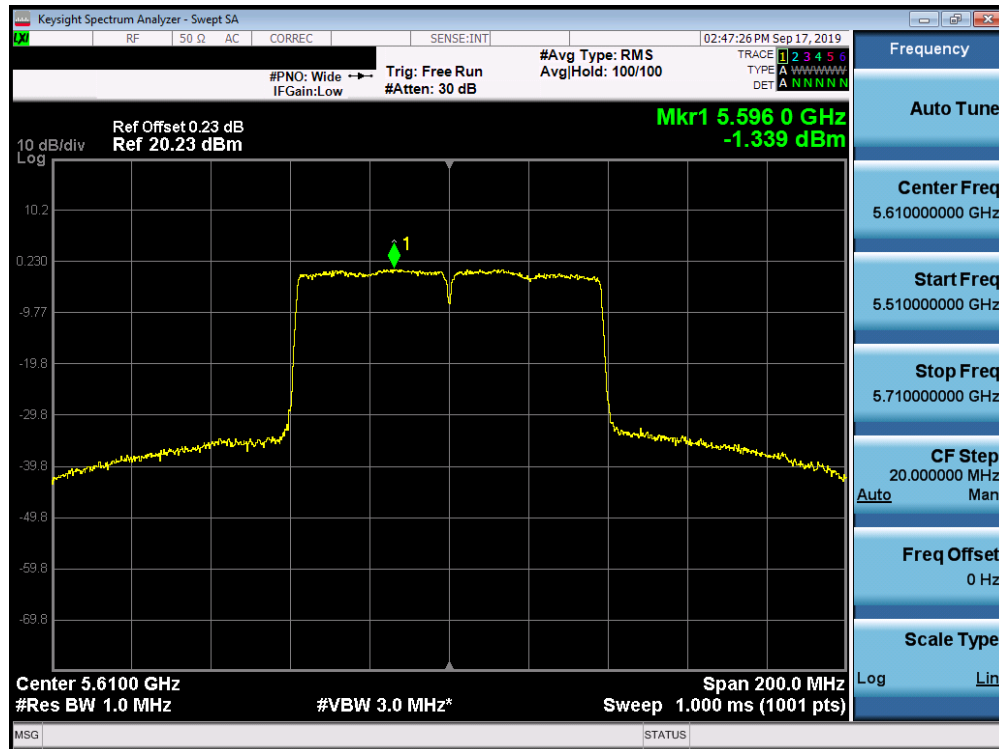


Plot 7-177. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 2C) – Ch. 142)

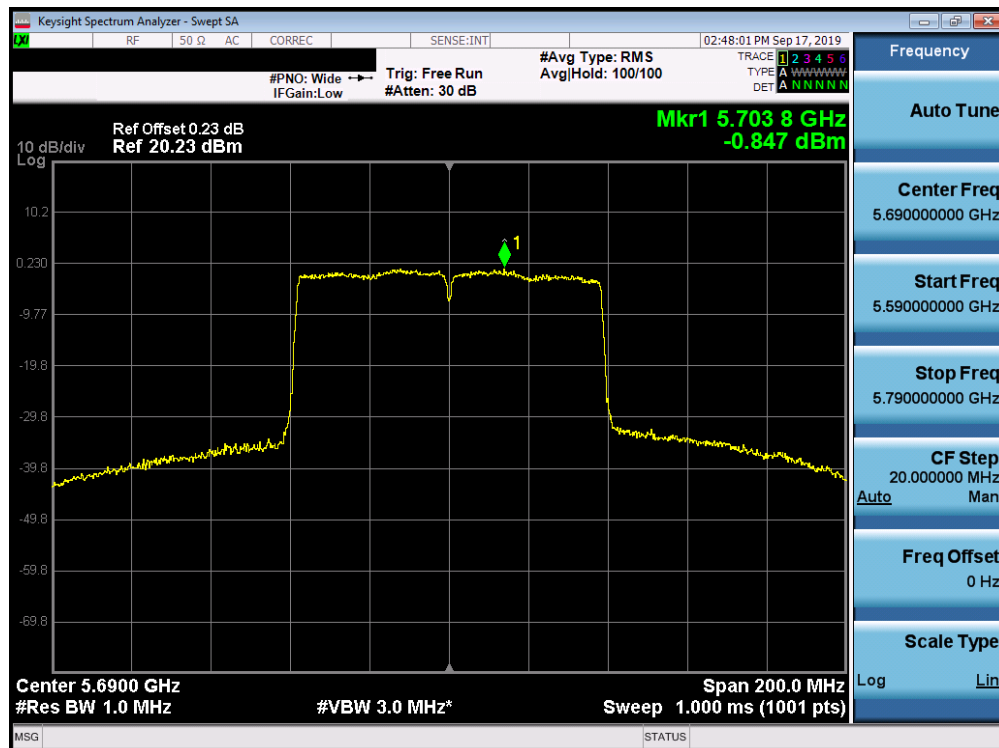


Plot 7-178. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 106)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 120 of 245

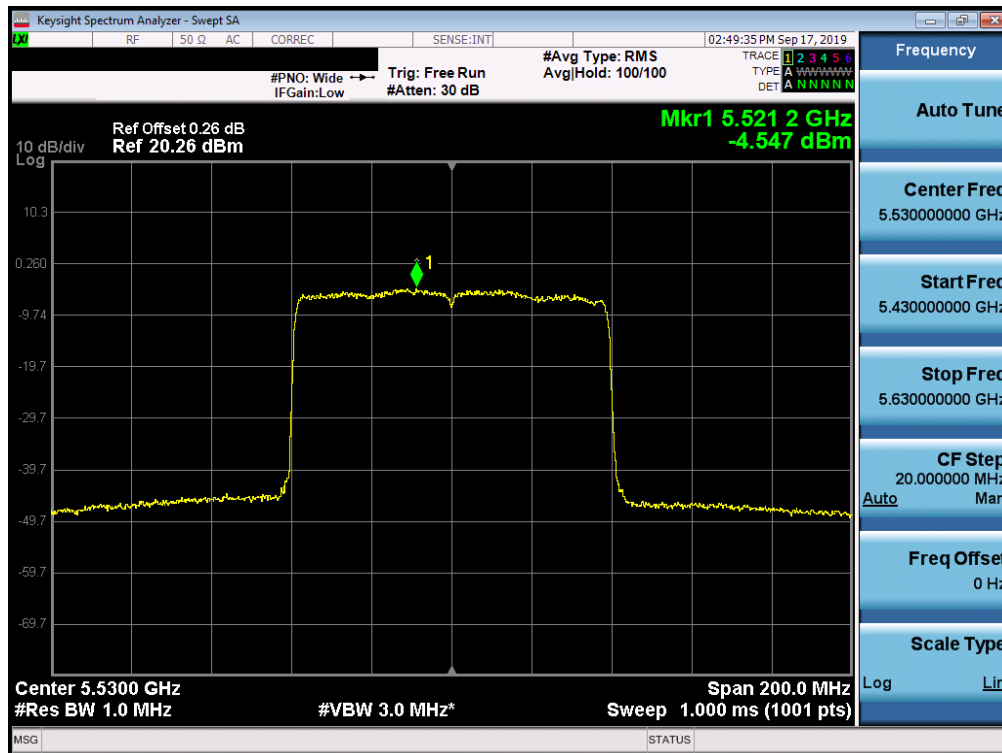


Plot 7-179. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 122)

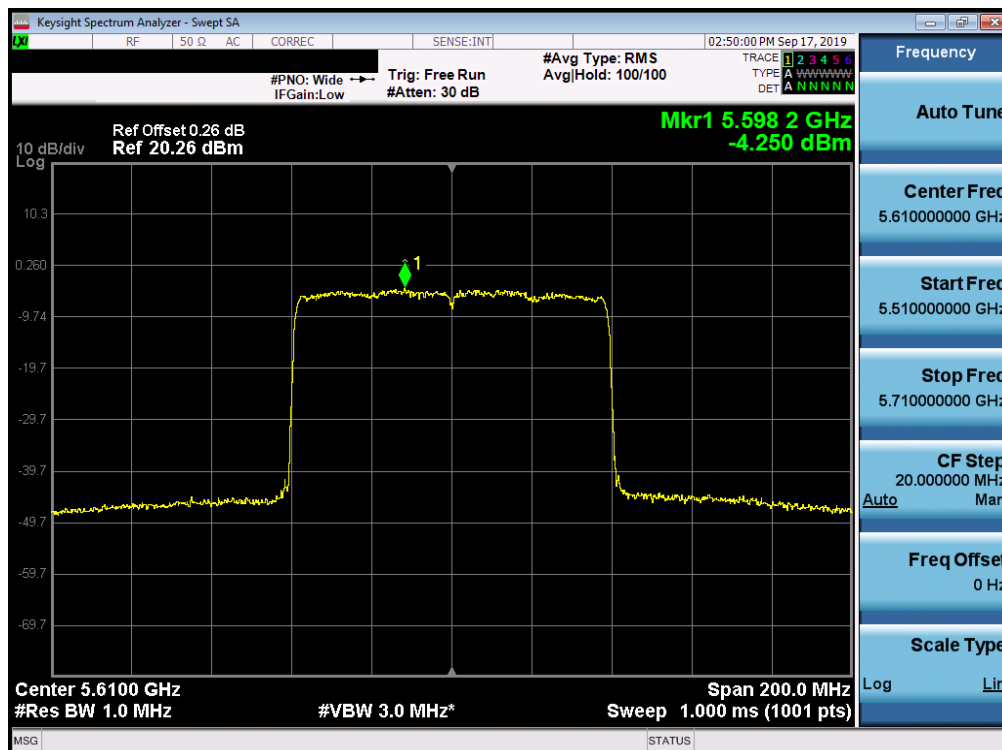


Plot 7-180. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 138)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 121 of 245

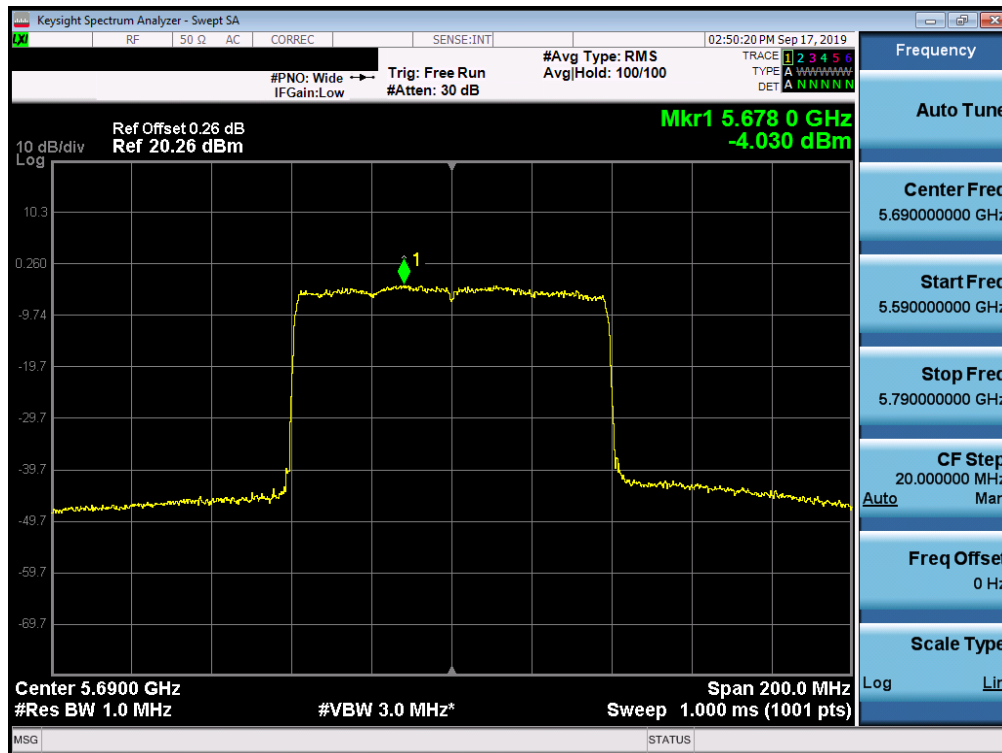


Plot 7-181. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 2C) – Ch. 106)



Plot 7-182. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 2C) – Ch. 122)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 122 of 245

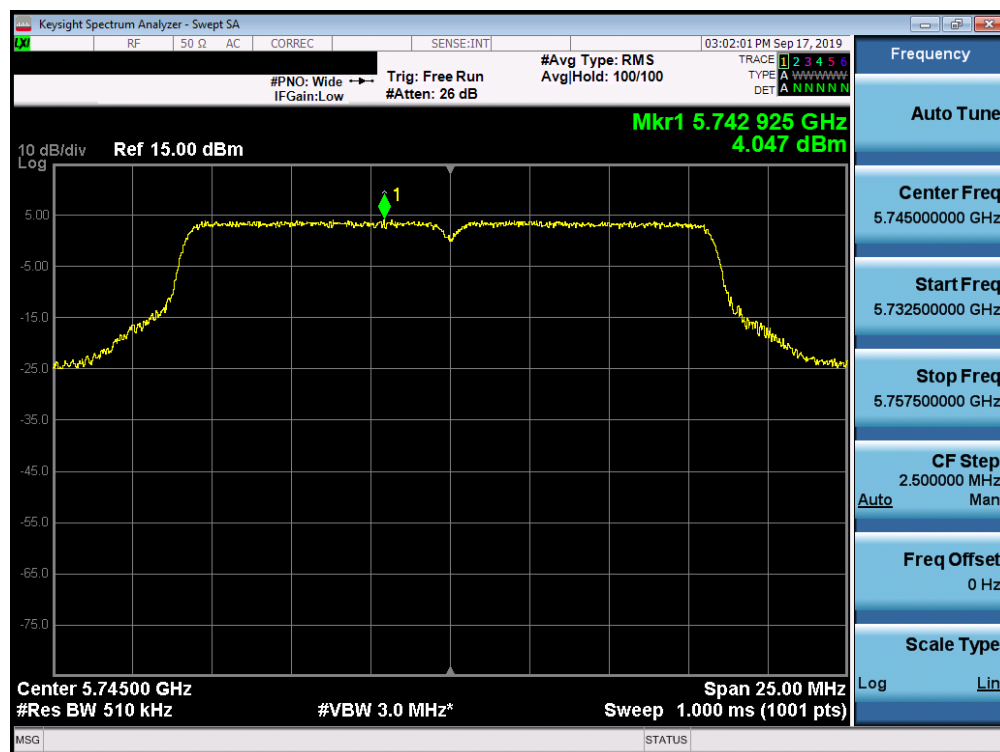


Plot 7-183. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 2C) – Ch. 138)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 123 of 245

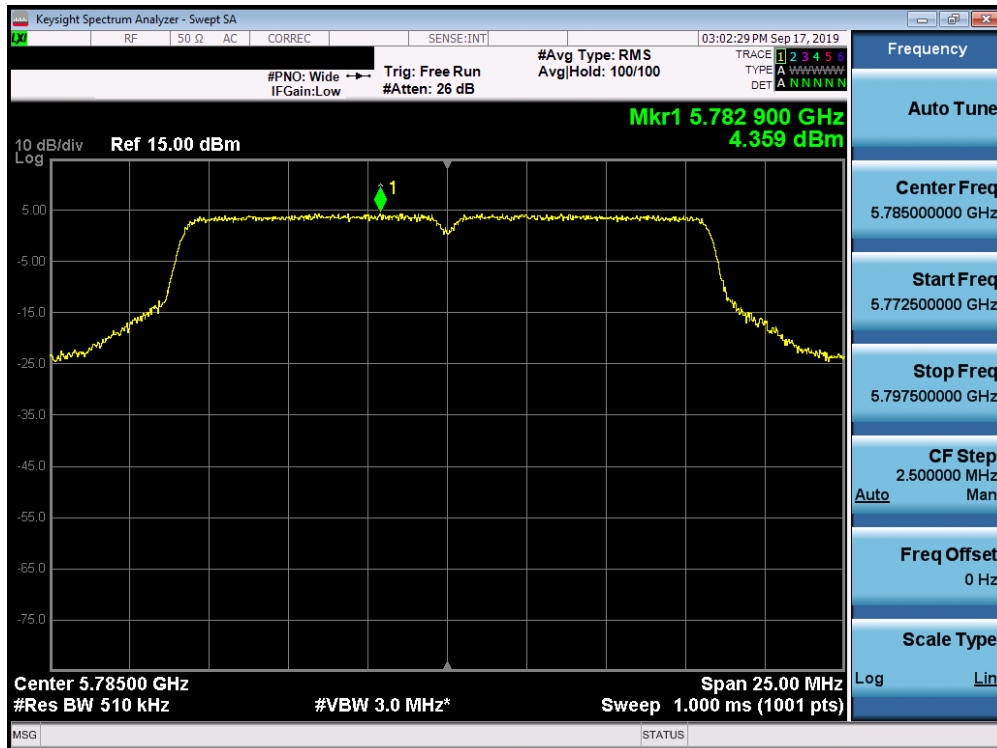
	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5745	149	a	6	4.05	30.0	-25.95
	5785	157	a	6	4.36	30.0	-25.64
	5825	165	a	6	4.25	30.0	-25.75
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	3.77	30.0	-26.23
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	4.06	30.0	-25.94
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	4.40	30.0	-25.60
	5745	149	ax (20MHz)	6.5/7.2 (MCS0)	1.42	30.0	-28.59
	5785	157	ax (20MHz)	6.5/7.2 (MCS0)	2.02	30.0	-27.98
	5825	165	ax (20MHz)	6.5/7.2 (MCS0)	2.12	30.0	-27.88
	5755	151	n (40MHz)	13.5/15 (MCS0)	0.28	30.0	-29.72
	5795	159	n (40MHz)	13.5/15 (MCS0)	0.15	30.0	-29.85
	5755	151	ax (40MHz)	13.5/15 (MCS0)	-3.03	30.0	-33.03
	5795	159	ax (40MHz)	13.5/15 (MCS0)	2.53	30.0	-27.47
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-3.25	30.0	-33.25
	5775	155	ax (80MHz)	29.3/32.5 (MCS0)	-6.79	30.0	-36.79

Table 7-22. Band 3 Conducted Power Spectral Density Measurements SISO ANT1

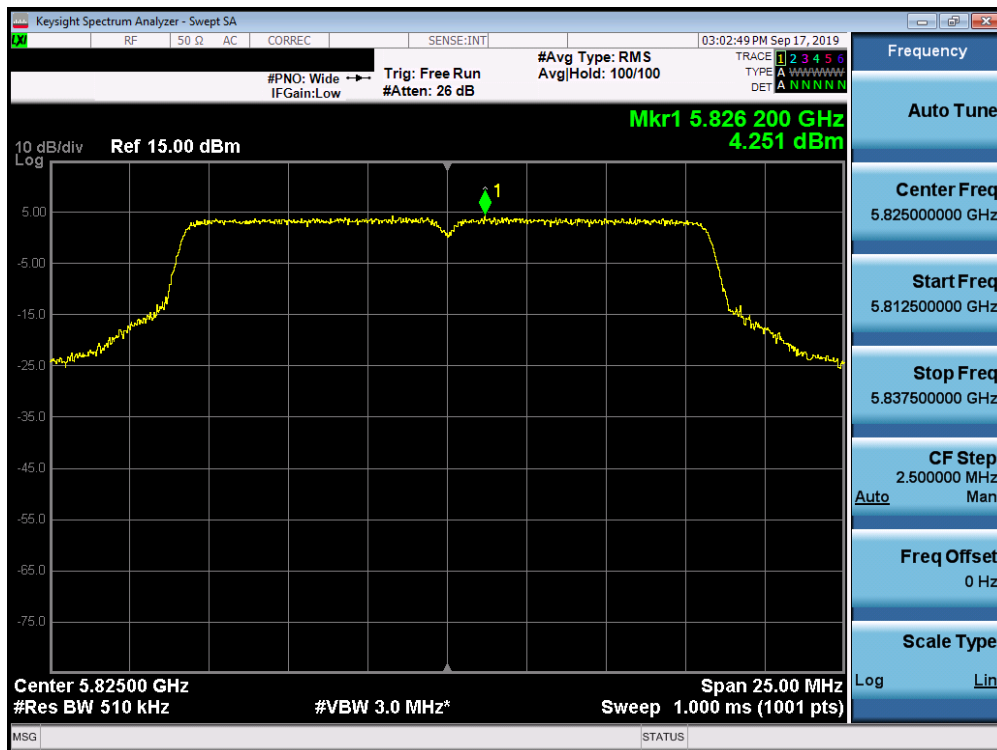


Plot 7-184. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 3) – Ch. 149)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 124 of 245

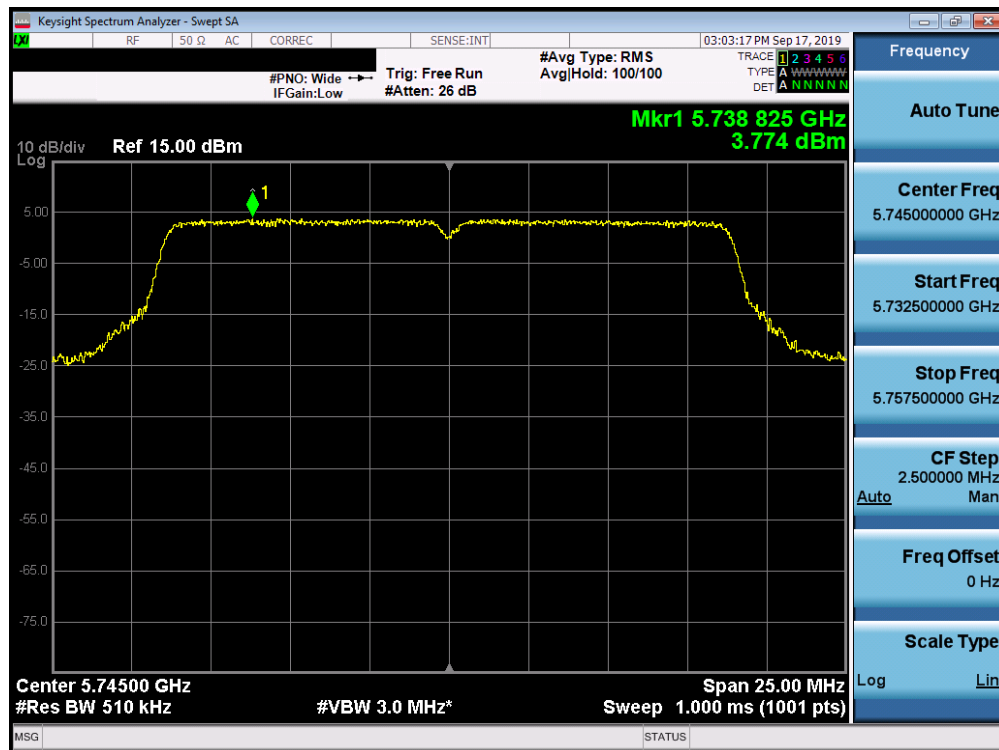


Plot 7-185. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 3) – Ch. 157)

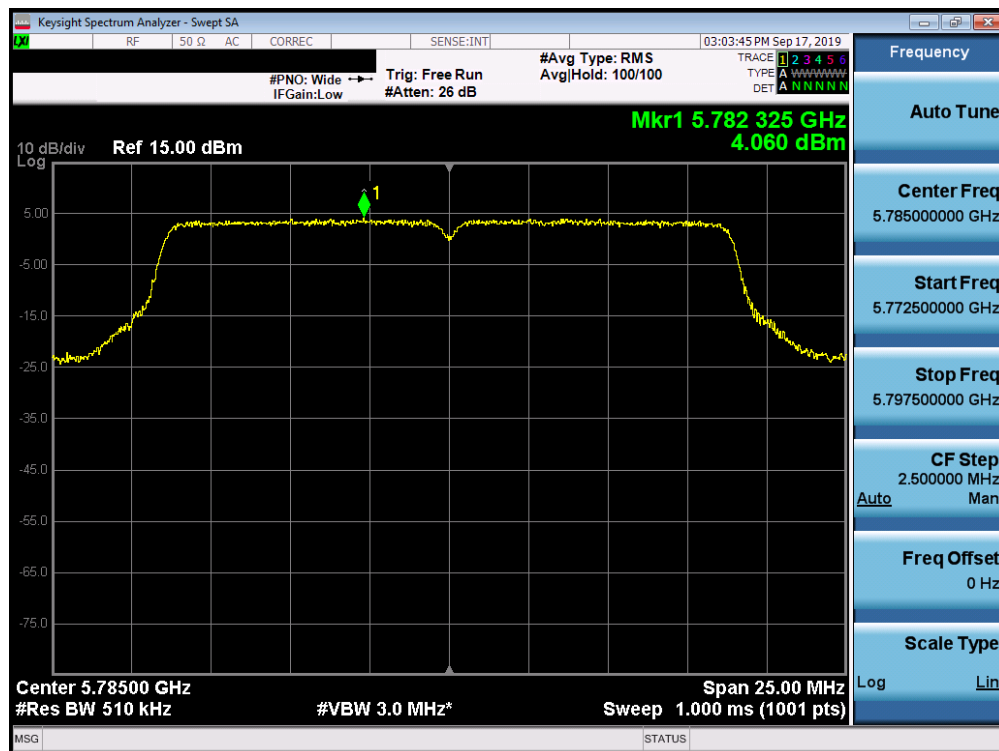


Plot 7-186. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 3) – Ch. 165)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 125 of 245

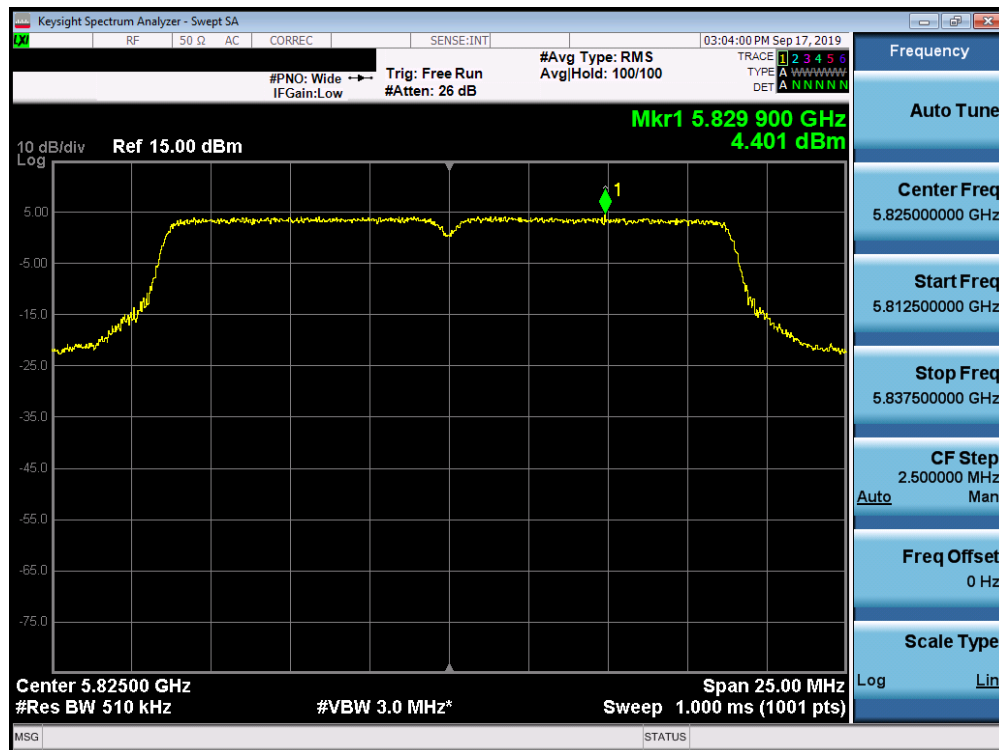


Plot 7-187. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 3) – Ch. 149)

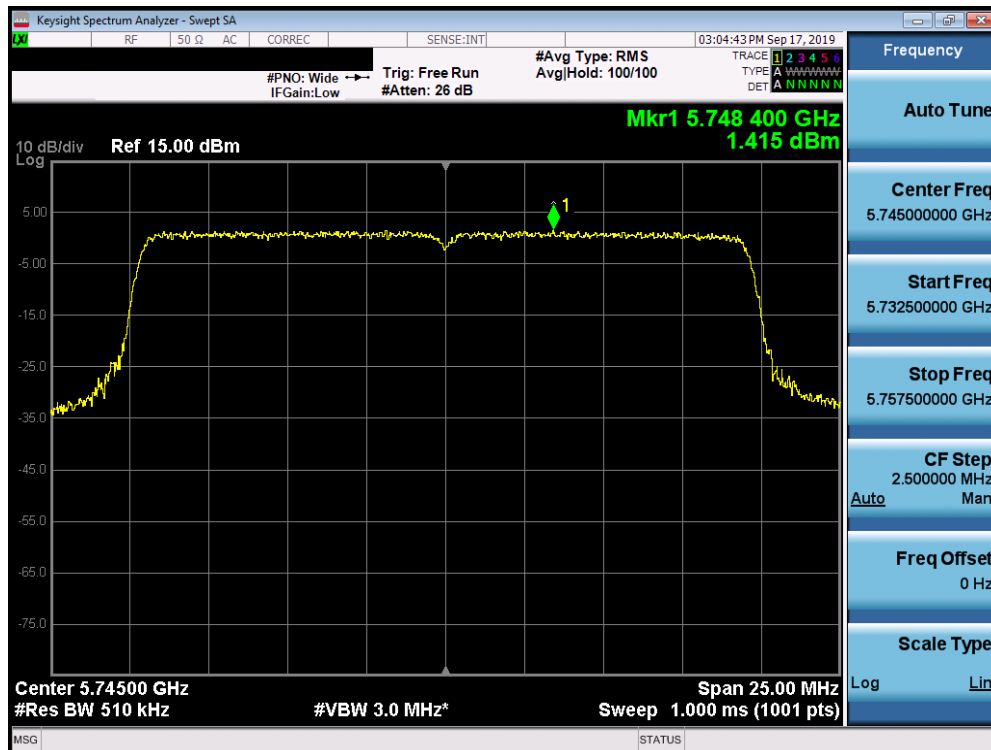


Plot 7-188. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 3) – Ch. 157)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 126 of 245

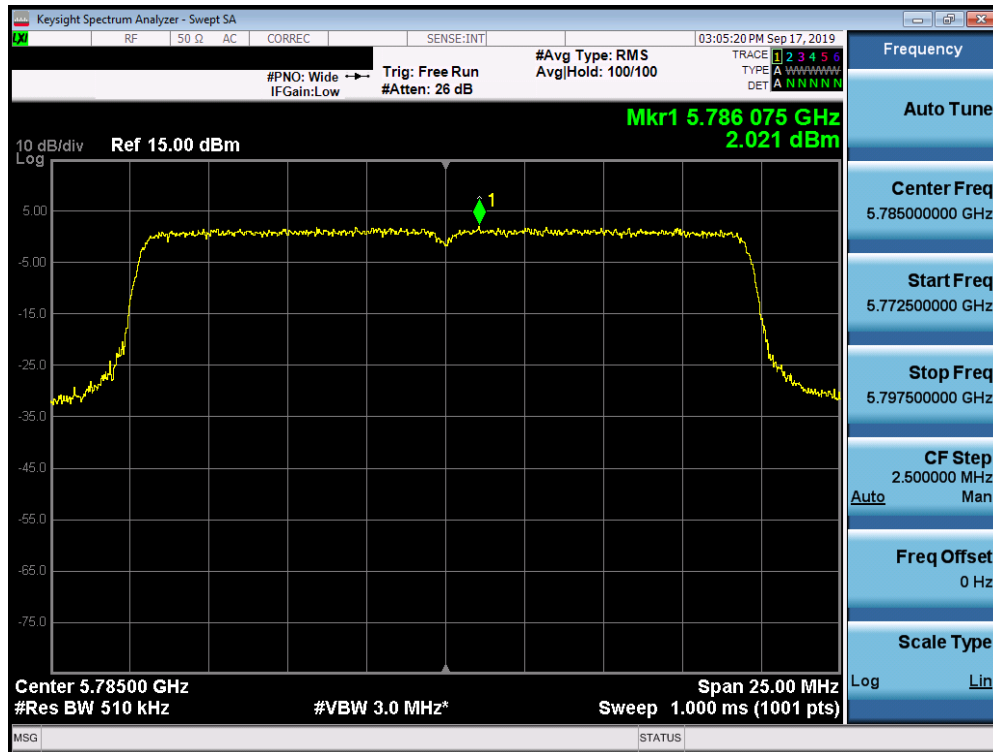


Plot 7-189. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 3) – Ch. 165)

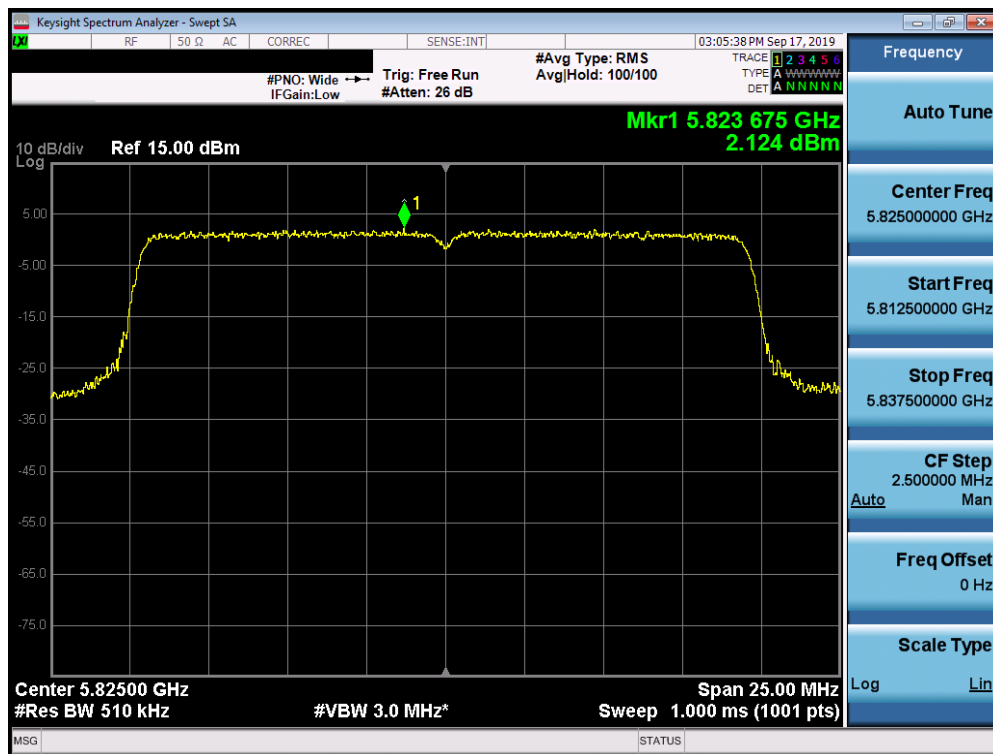


Plot 7-190. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 3) – Ch. 149)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 127 of 245

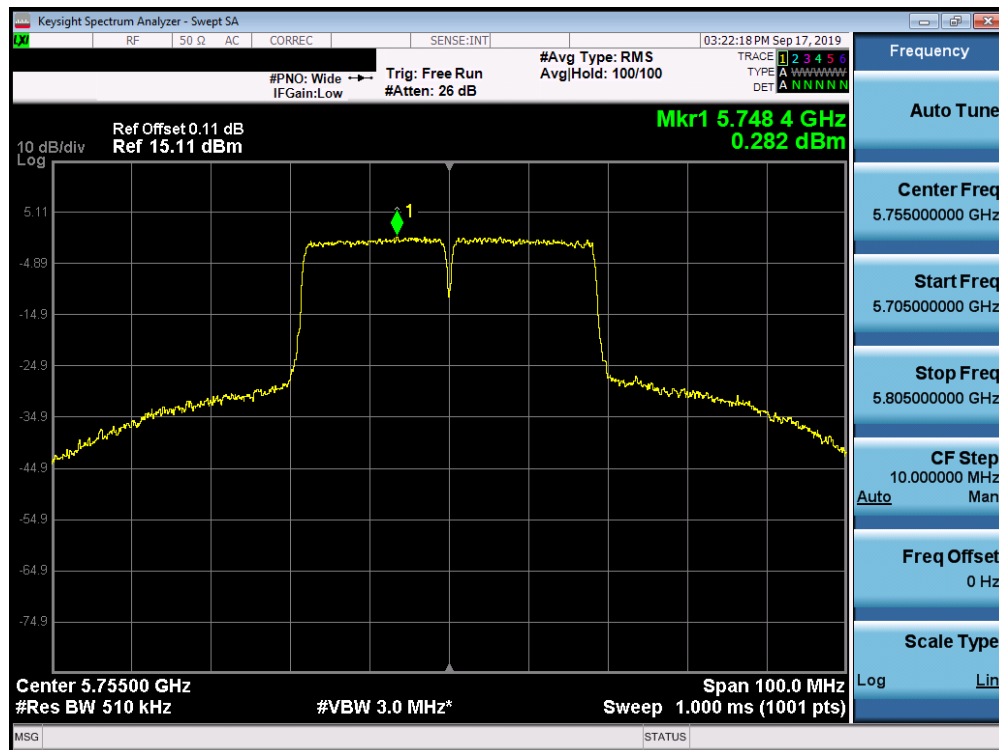


Plot 7-191. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 3) – Ch. 157)

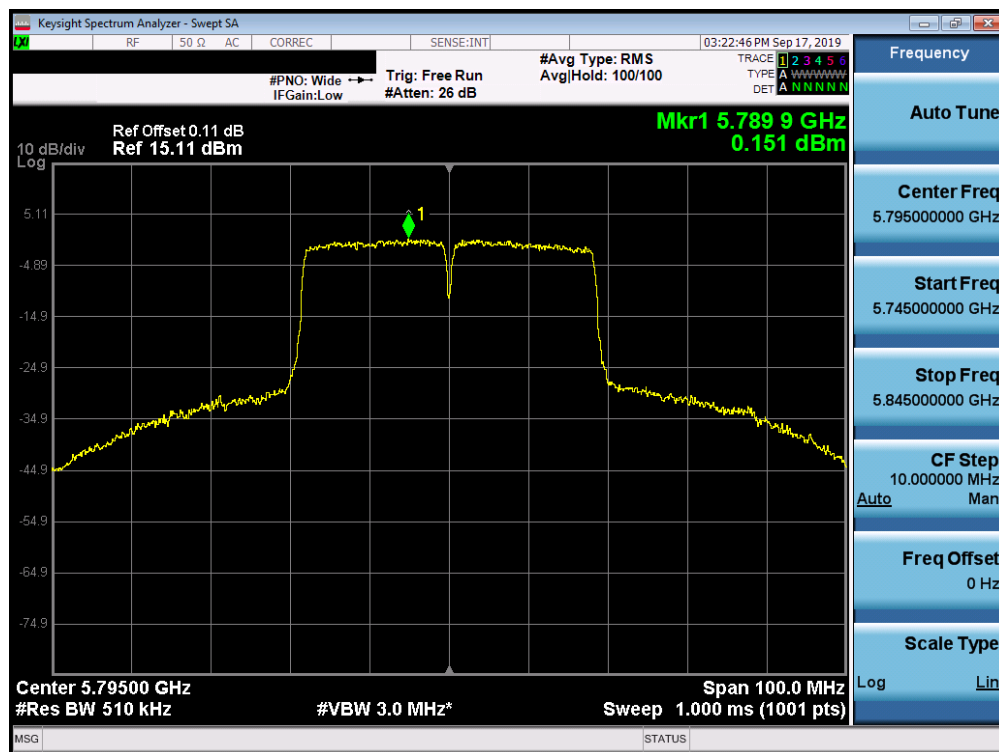


Plot 7-192. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 3) – Ch. 165)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 128 of 245

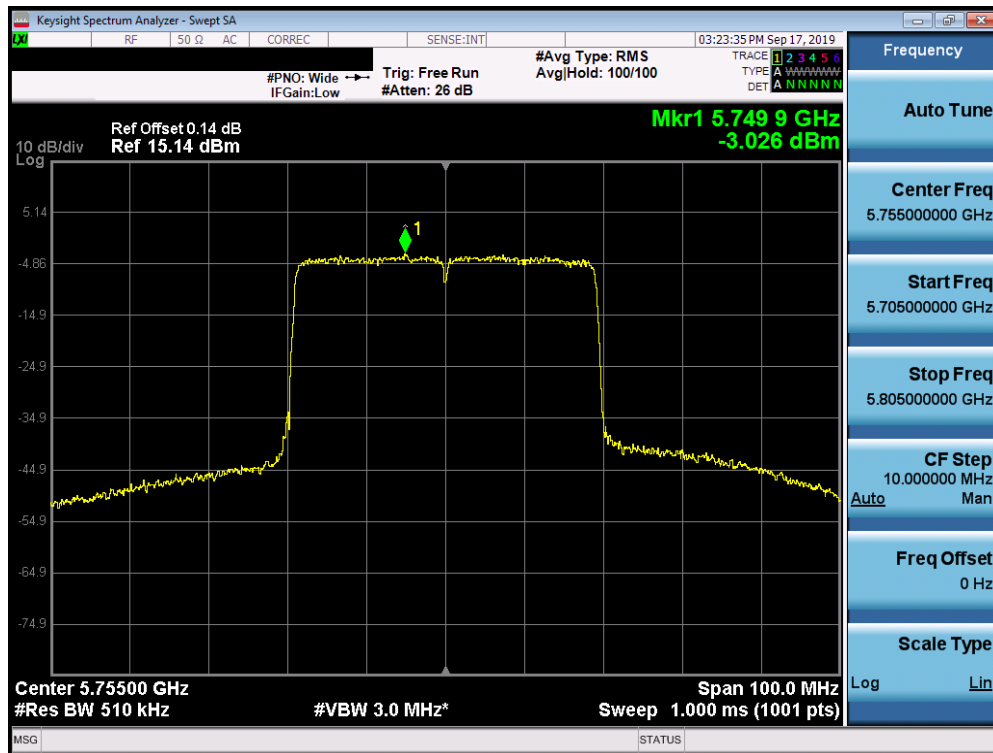


Plot 7-193. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 3) – Ch. 151)

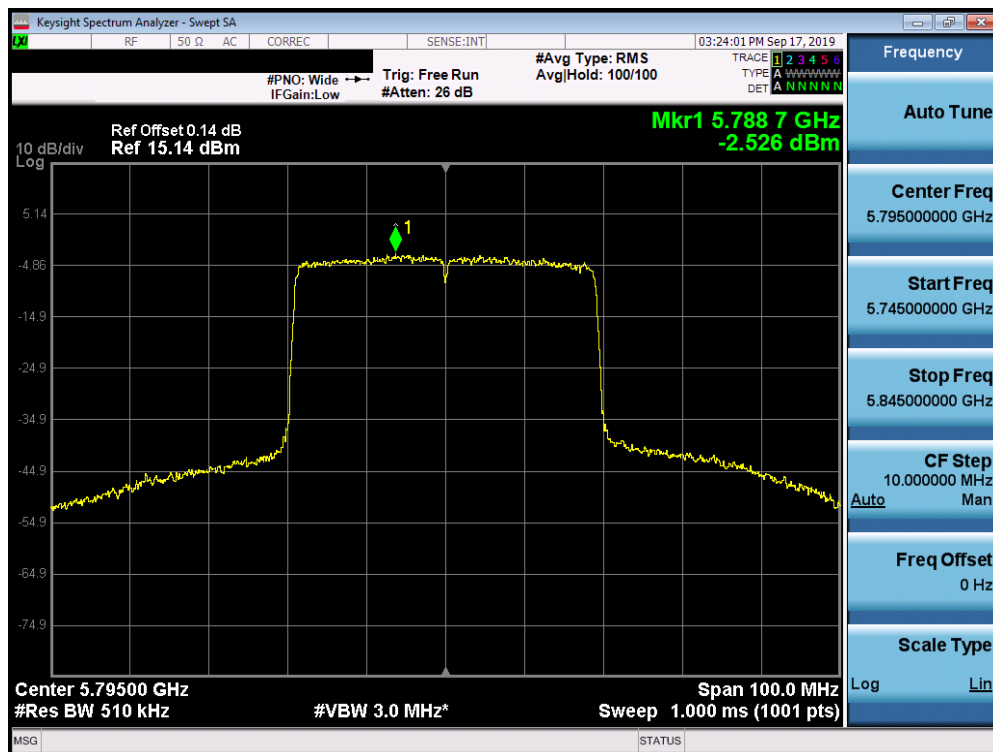


Plot 7-194. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 3) – Ch. 159)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 129 of 245

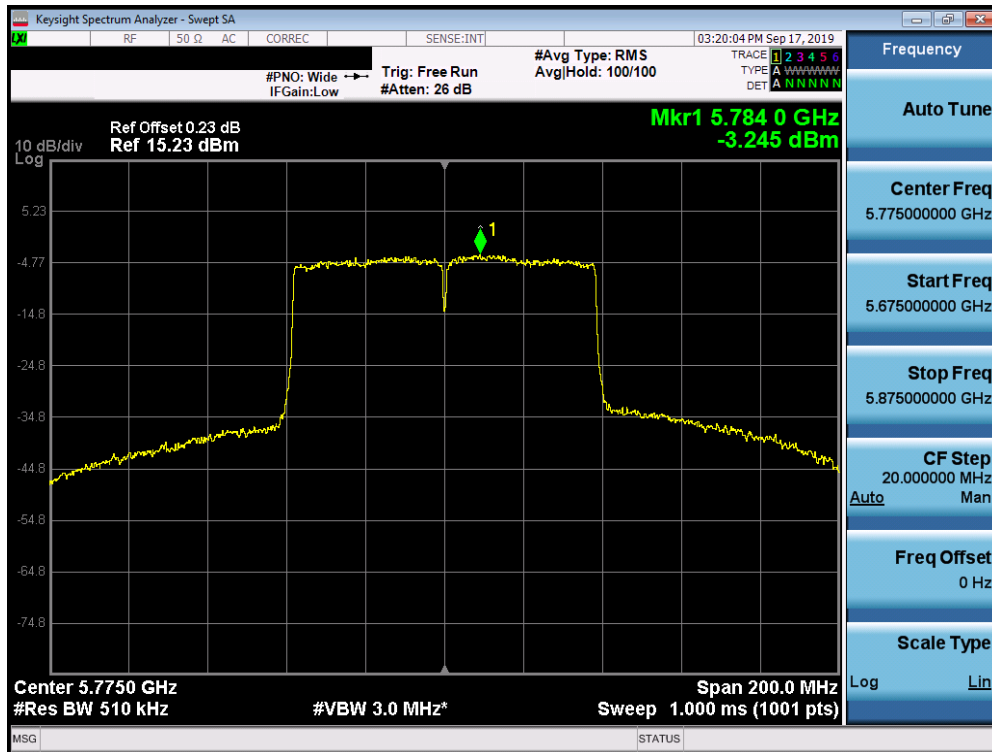


Plot 7-195. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 3) – Ch. 151)

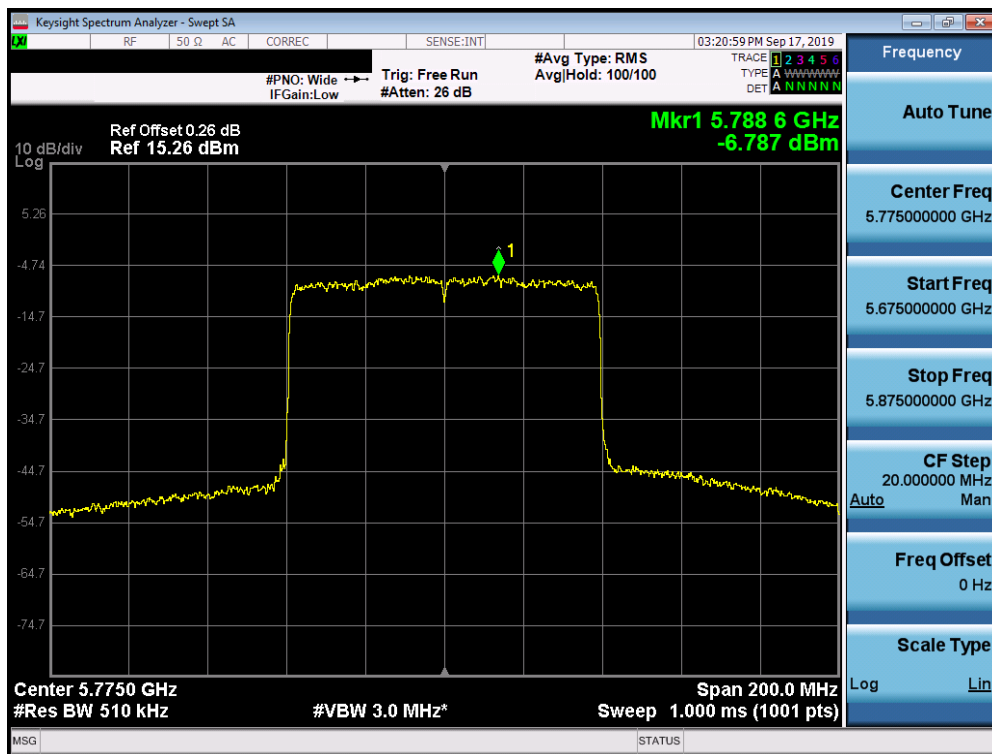


Plot 7-196. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 3) – Ch. 159)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 130 of 245



Plot 7-197. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 3) – Ch. 155)



Plot 7-198. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 3) – Ch. 155)

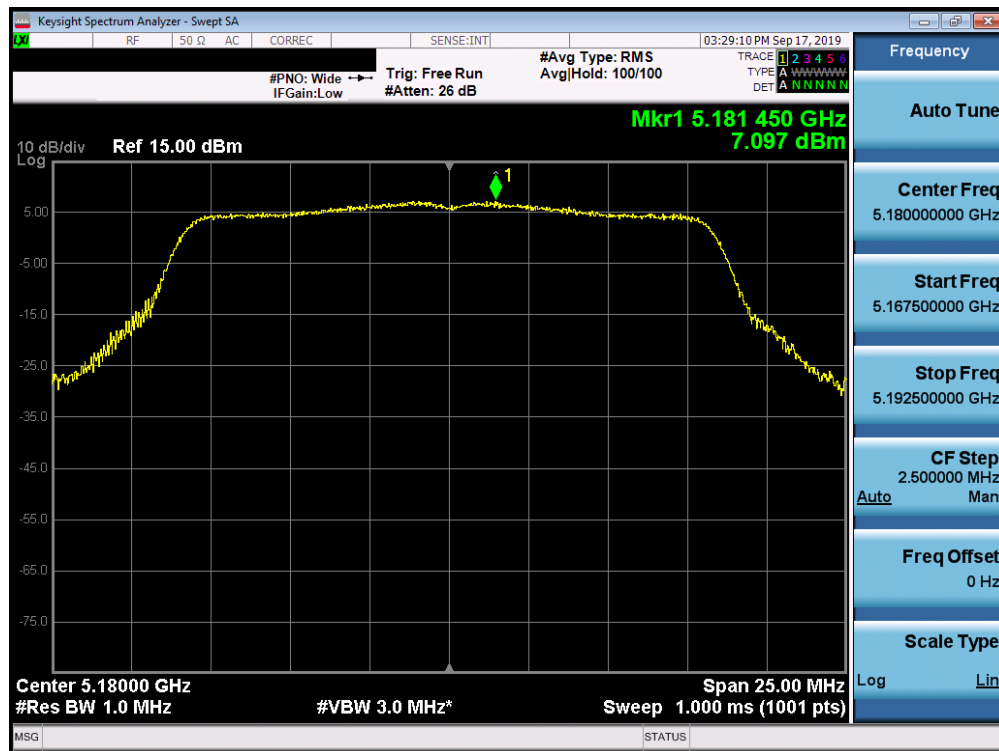
FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 131 of 245

SISO Antenna-2 Power Spectral Density Measurements

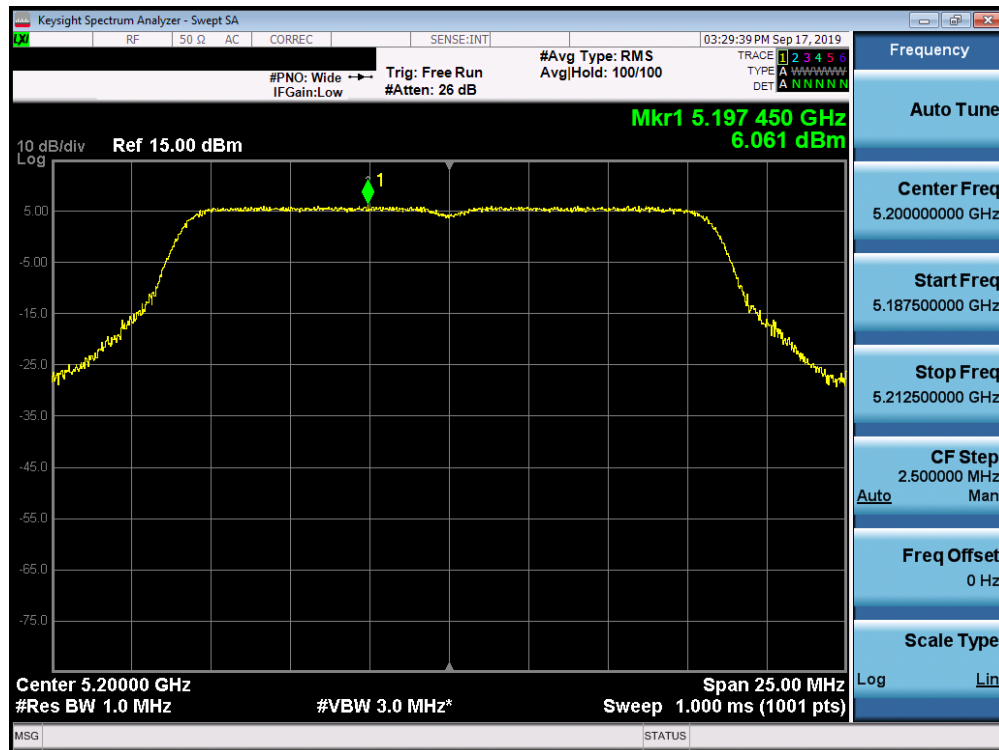
	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	a	6	7.10	11.0	-3.90
	5200	40	a	6	6.06	11.0	-4.94
	5240	48	a	6	6.23	11.0	-4.77
	5180	36	n (20MHz)	6.5/7.2 (MCS0)	7.12	11.0	-3.88
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	5.82	11.0	-5.18
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	5.76	11.0	-5.25
	5180	36	ax (20MHz)	6.5/7.2 (MCS0)	4.00	11.0	-7.00
	5200	40	ax (20MHz)	6.5/7.2 (MCS0)	2.72	11.0	-8.28
	5240	48	ax (20MHz)	6.5/7.2 (MCS0)	2.65	11.0	-8.35
	5190	38	n (40MHz)	13.5/15 (MCS0)	2.07	11.0	-8.94
	5230	46	n (40MHz)	13.5/15 (MCS0)	0.95	11.0	-10.05
	5190	38	ax (40MHz)	13.5/15 (MCS0)	-2.55	11.0	-13.55
	5230	46	ax (40MHz)	13.5/15 (MCS0)	-2.02	11.0	-13.02
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	-1.63	11.0	-12.63
	5210	42	ax (80MHz)	29.3/32.5 (MCS0)	-4.64	11.0	-15.64
Band 2A	5260	52	a	6	6.25	11.0	-4.75
	5280	56	a	6	6.35	11.0	-4.65
	5320	64	a	6	7.81	11.0	-3.19
	5260	52	n (20MHz)	6.5/7.2 (MCS0)	5.94	11.0	-5.06
	5280	56	n (20MHz)	6.5/7.2 (MCS0)	6.03	11.0	-4.97
	5320	64	n (20MHz)	6.5/7.2 (MCS0)	7.13	11.0	-3.87
	5260	52	ax (20MHz)	6.5/7.2 (MCS0)	2.42	11.0	-8.58
	5280	56	ax (20MHz)	6.5/7.2 (MCS0)	2.42	11.0	-8.59
	5320	64	ax (20MHz)	6.5/7.2 (MCS0)	2.70	11.0	-8.30
	5270	54	n (40MHz)	13.5/15 (MCS0)	0.82	11.0	-10.19
	5310	62	n (40MHz)	13.5/15 (MCS0)	2.54	11.0	-8.47
	5270	54	ax (40MHz)	13.5/15 (MCS0)	-1.92	11.0	-12.92
	5310	62	ax (40MHz)	13.5/15 (MCS0)	-2.12	11.0	-13.12
	5290	58	ac (80MHz)	29.3/32.5 (MCS0)	-1.50	11.0	-12.50
	5290	58	ax (80MHz)	29.3/32.5 (MCS0)	-5.02	11.0	-16.02
Band 2C	5500	100	a	6	7.82	11.0	-3.18
	5600	120	a	6	7.06	11.0	-3.94
	5720	144	a	6	6.85	11.0	-4.15
	5500	100	n (20MHz)	6.5/7.2 (MCS0)	7.66	11.0	-3.34
	5600	120	n (20MHz)	6.5/7.2 (MCS0)	6.61	11.0	-4.39
	5720	144	n (20MHz)	6.5/7.2 (MCS0)	6.04	11.0	-4.97
	5500	100	ax (20MHz)	6.5/7.2 (MCS0)	2.34	11.0	-8.66
	5600	120	ax (20MHz)	6.5/7.2 (MCS0)	2.94	11.0	-8.06
	5720	144	ax (20MHz)	6.5/7.2 (MCS0)	2.57	11.0	-8.43
	5510	102	n (40MHz)	13.5/15 (MCS0)	1.98	11.0	-9.02
	5590	118	n (40MHz)	13.5/15 (MCS0)	1.10	11.0	-9.90
	5710	142	n (40MHz)	13.5/15 (MCS0)	1.44	11.0	-9.56
	5510	102	ax (40MHz)	13.5/15 (MCS0)	-2.37	11.0	-13.37
	5590	118	ax (40MHz)	13.5/15 (MCS0)	-2.10	11.0	-13.10
	5710	142	ax (40MHz)	13.5/15 (MCS0)	-1.62	11.0	-12.62
	5530	106	ac (80MHz)	29.3/32.5 (MCS0)	-1.33	11.0	-12.33
	5610	122	ac (80MHz)	29.3/32.5 (MCS0)	-2.33	11.0	-13.33
	5690	138	ac (80MHz)	29.3/32.5 (MCS0)	-1.81	11.0	-12.81
	5530	106	ax (80MHz)	29.3/32.5 (MCS0)	-4.49	11.0	-15.49
	5610	122	ax (80MHz)	29.3/32.5 (MCS0)	-6.39	11.0	-17.39
	5690	138	ax (80MHz)	29.3/32.5 (MCS0)	-5.98	11.0	-16.98

Table 7-23. Conducted Power Spectral Density Measurements SISO ANT2

FCC ID: A3LSMN976U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 132 of 245

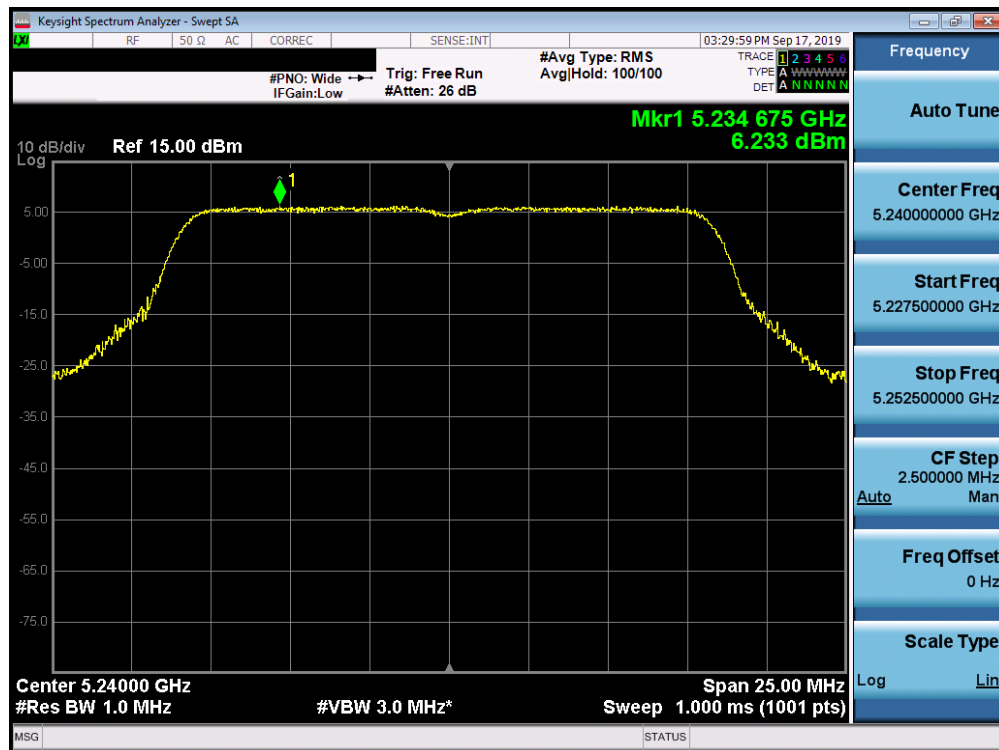


Plot 7-199. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 1) – Ch. 36)

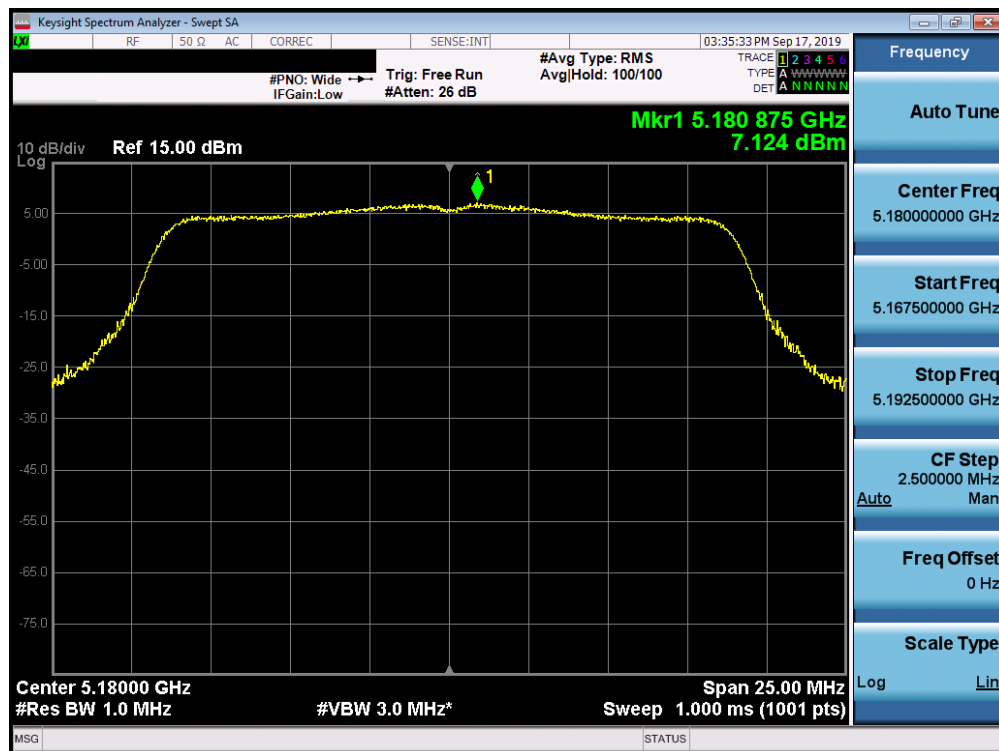


Plot 7-200. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 1) – Ch. 40)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 133 of 245

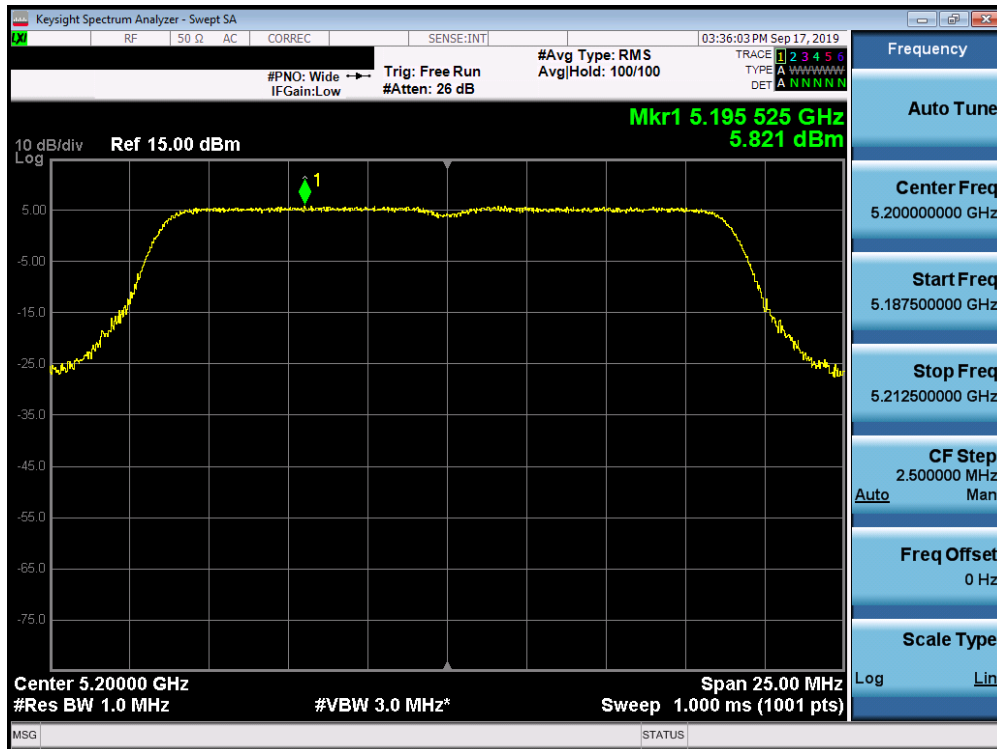


Plot 7-201. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 1) – Ch. 48)

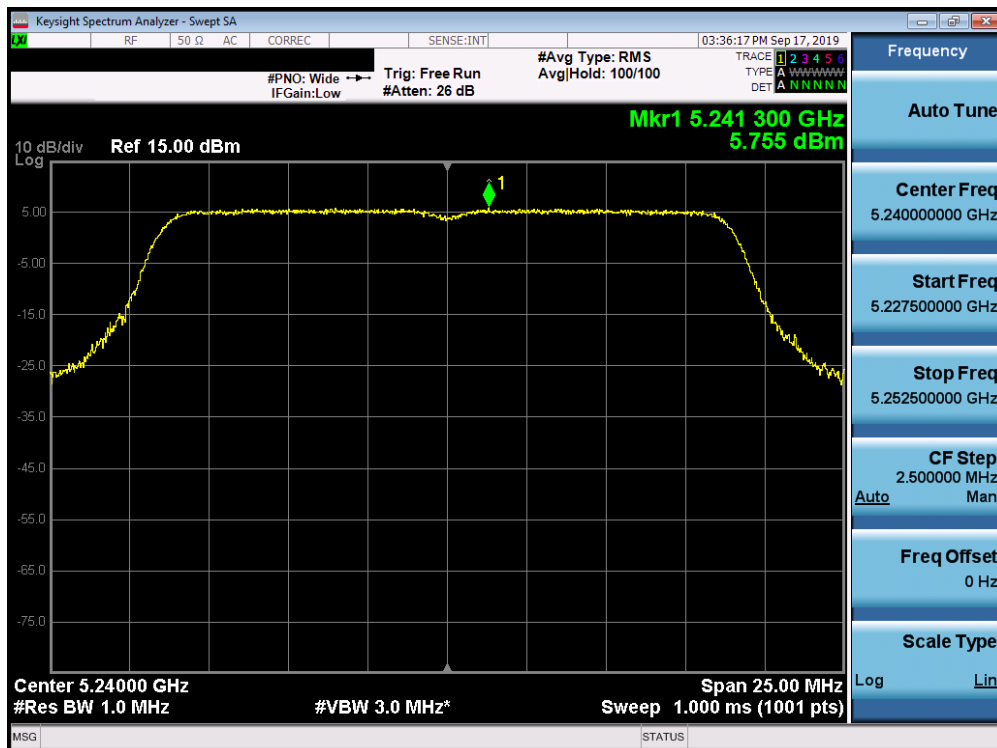


Plot 7-202. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 1) – Ch. 36)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 134 of 245

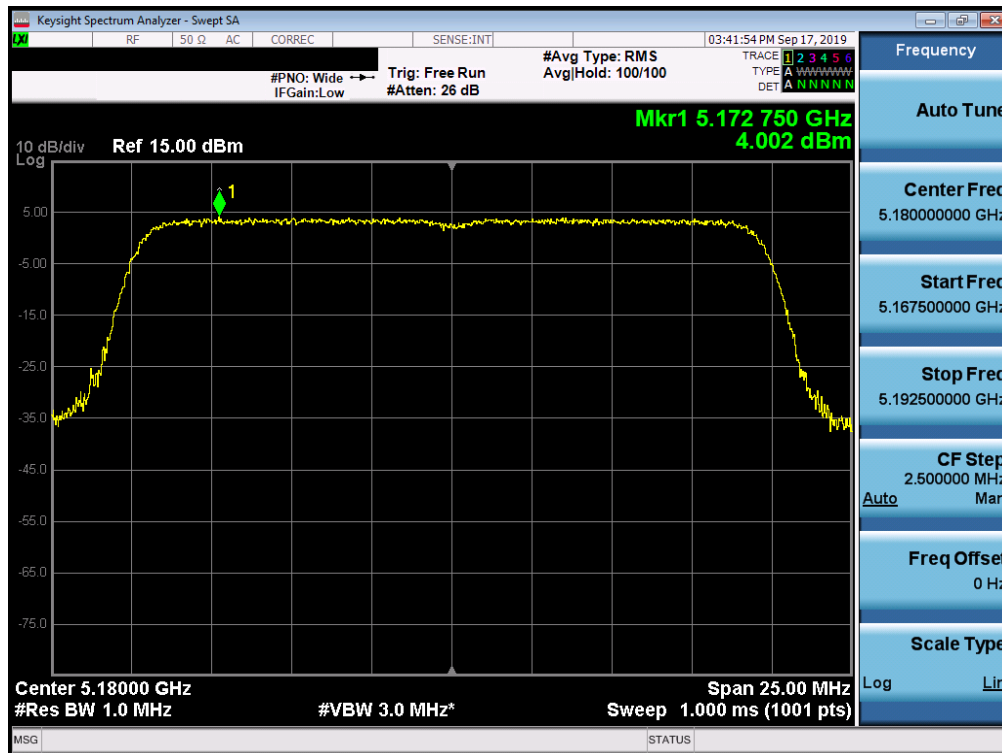


Plot 7-203. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 1) – Ch. 40)

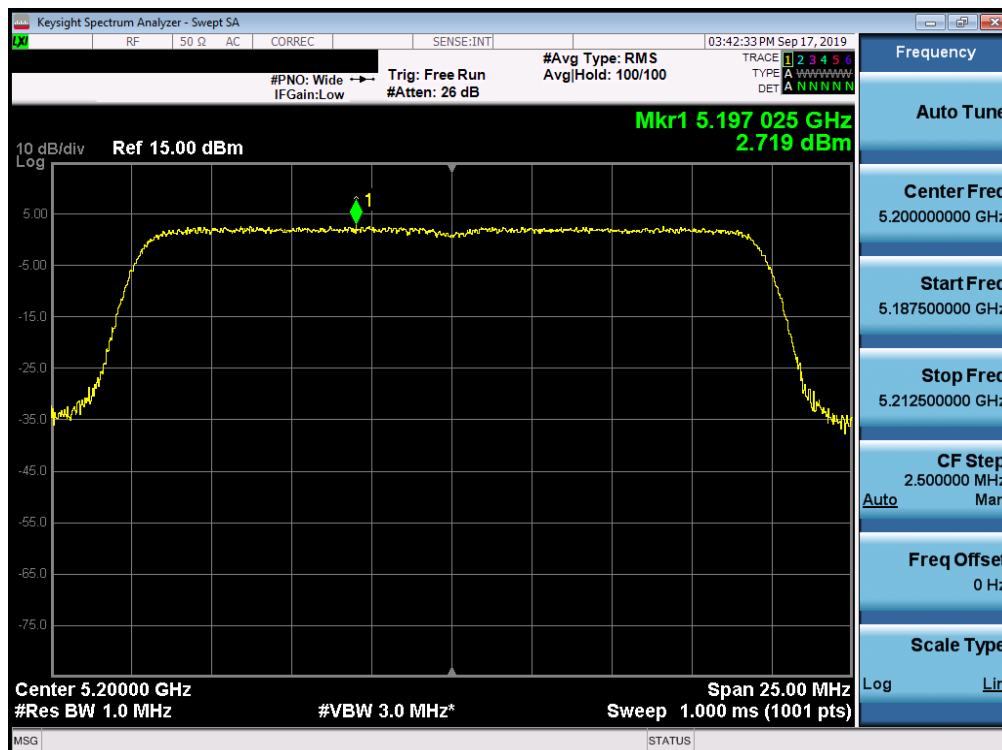


Plot 7-204. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 1) – Ch. 48)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 135 of 245

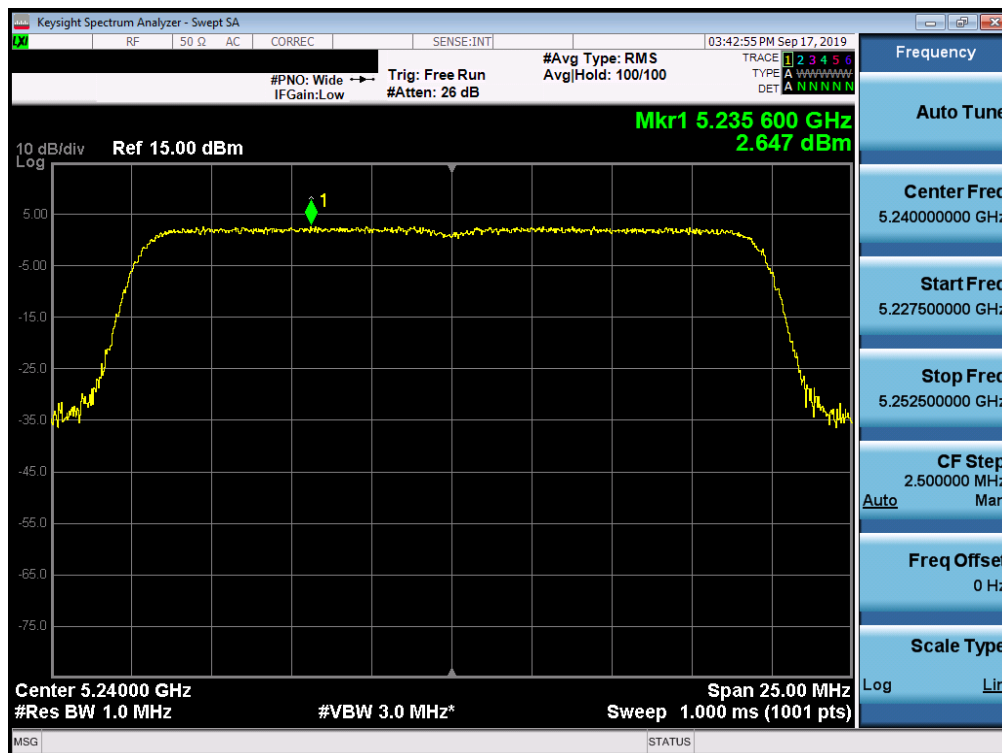


Plot 7-205. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 1) – Ch. 36)

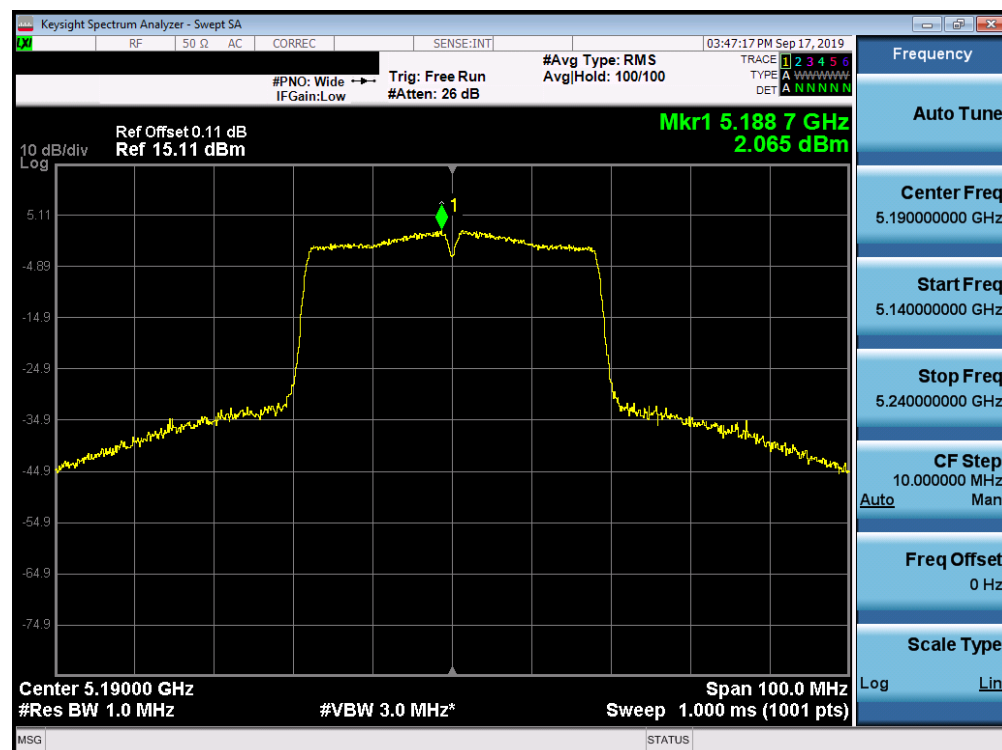


Plot 7-206. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 1) – Ch. 40)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 136 of 245

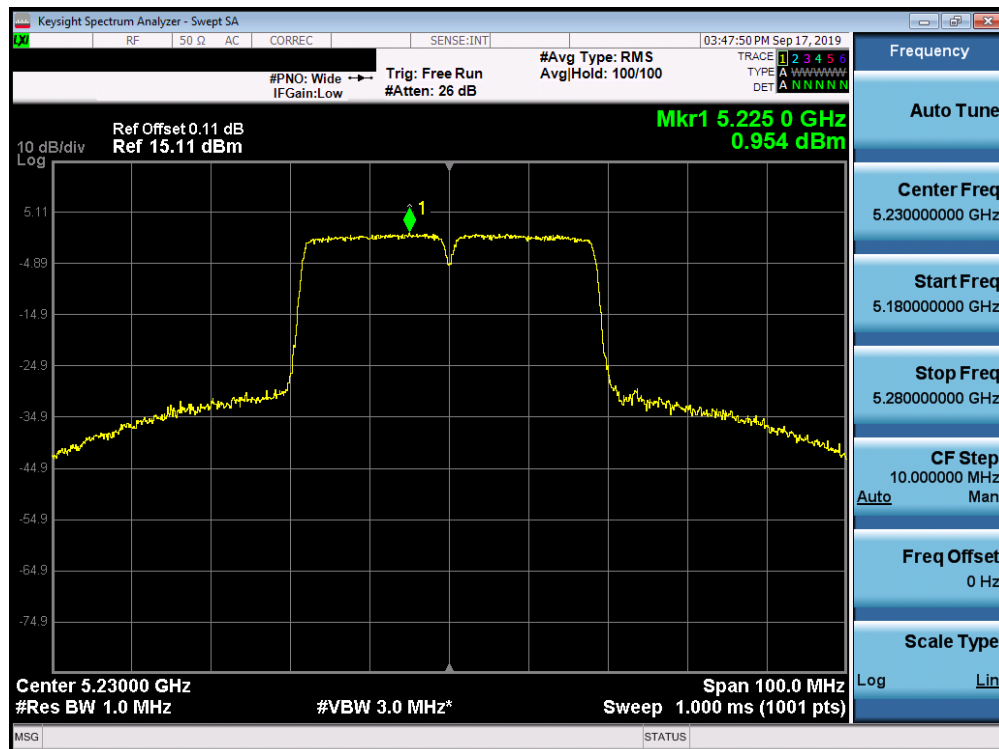


Plot 7-207. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 1) – Ch. 48)

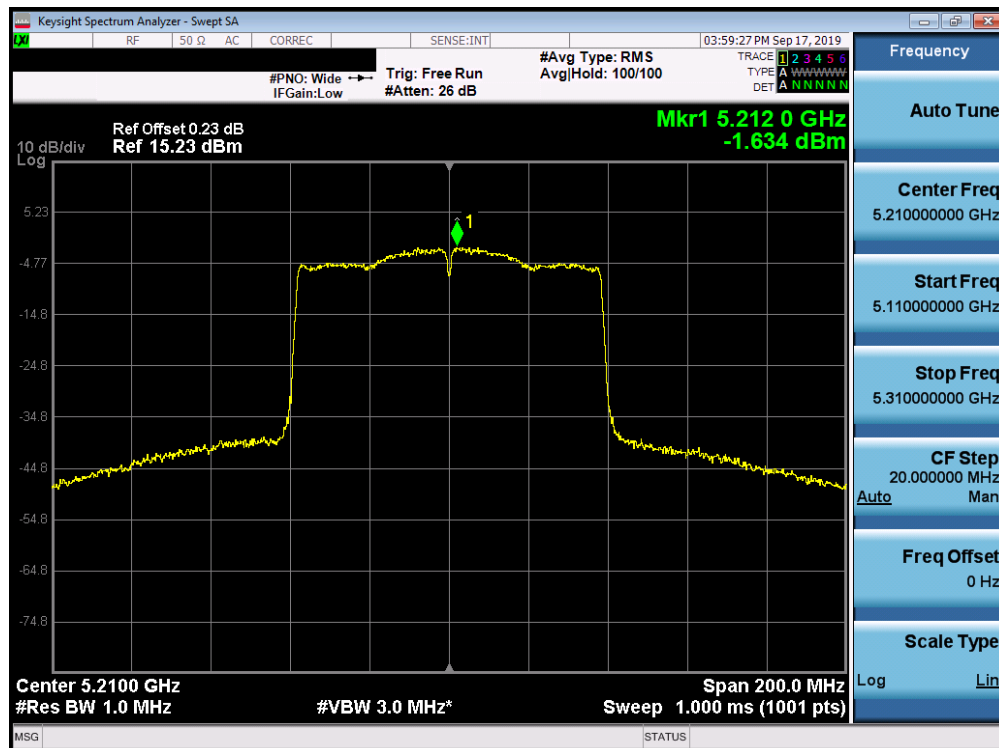


Plot 7-208. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 1) – Ch. 38)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 137 of 245

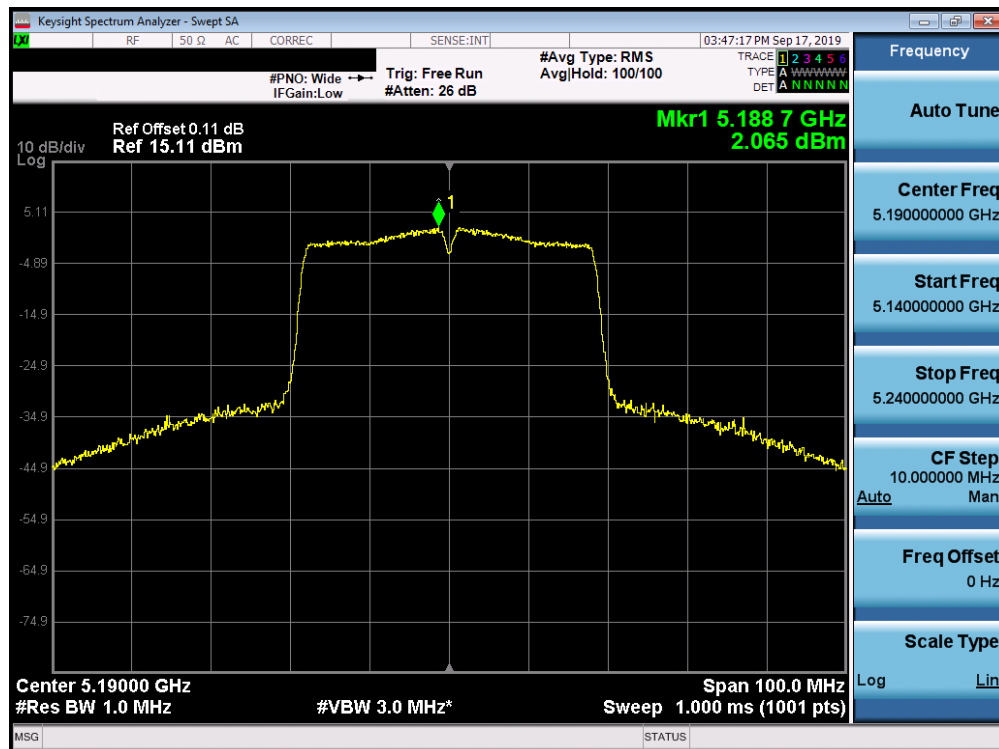


Plot 7-209. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 1) – Ch. 46)

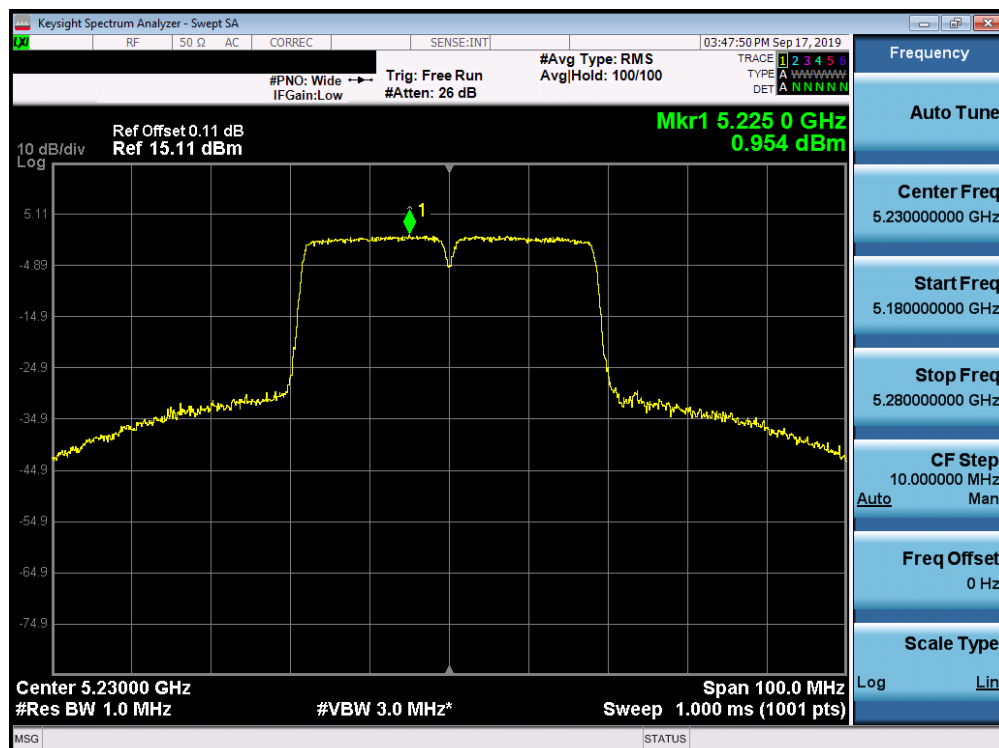


Plot 7-210. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 1) – Ch. 42)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 138 of 245

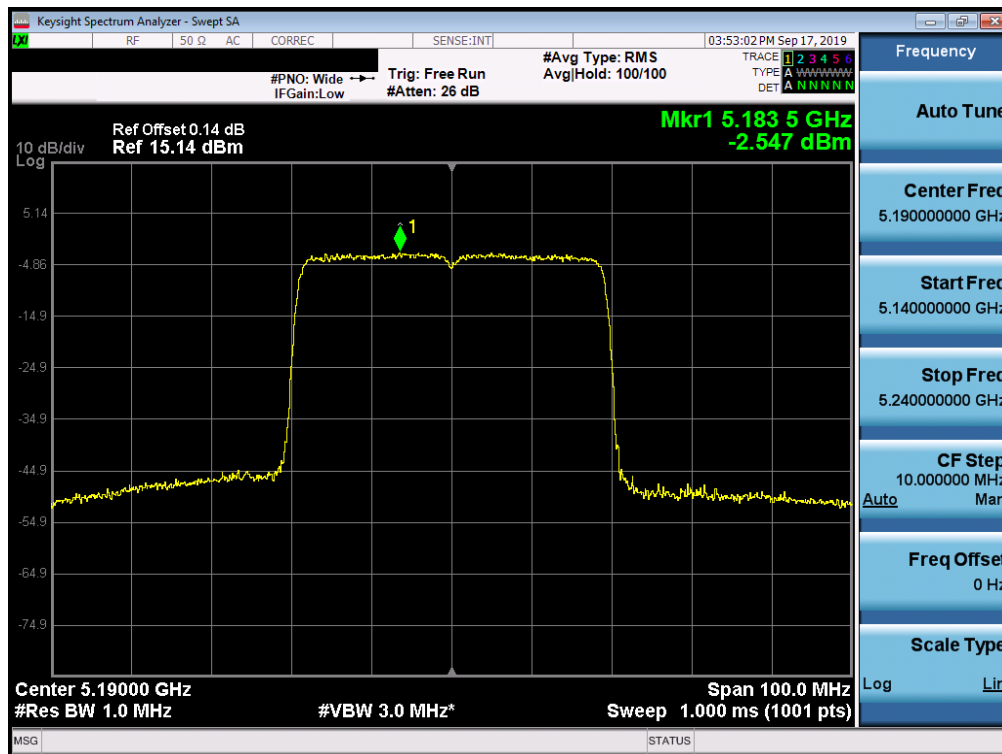


Plot 7-211. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 1) – Ch. 38)

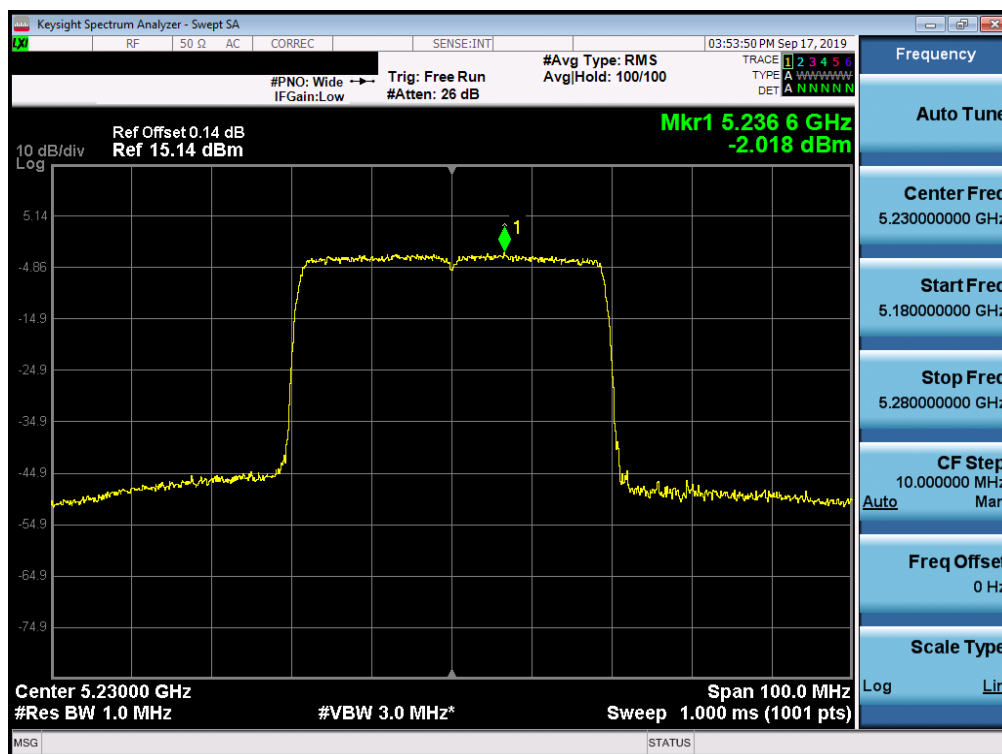


Plot 7-212. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 1) – Ch. 46)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 139 of 245

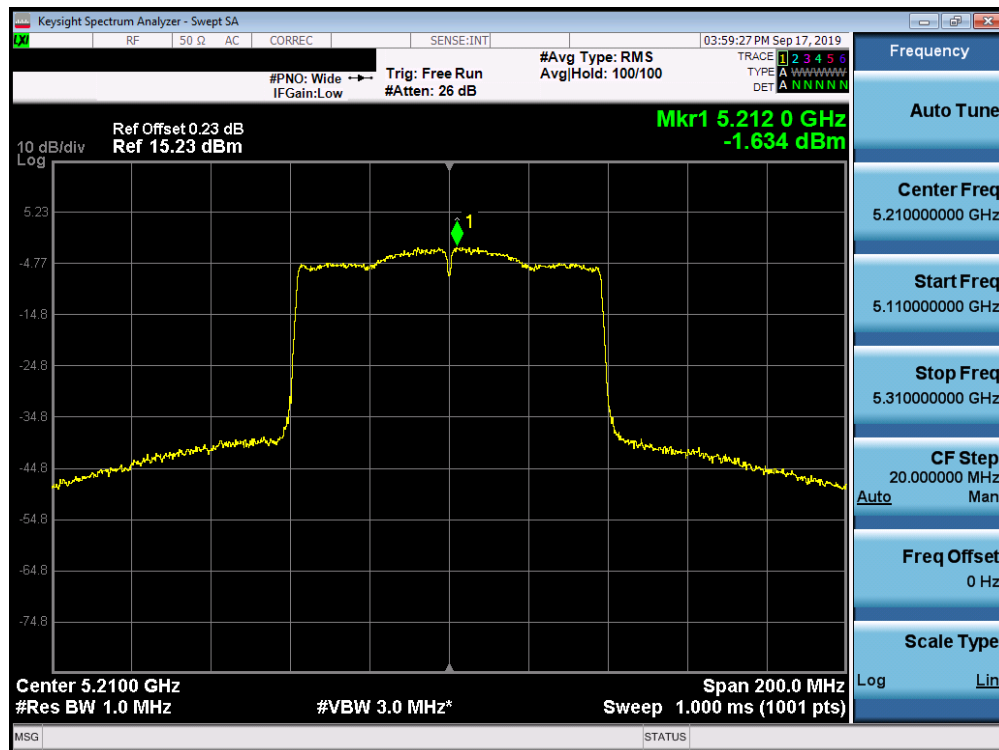


Plot 7-213. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 1) – Ch. 38)

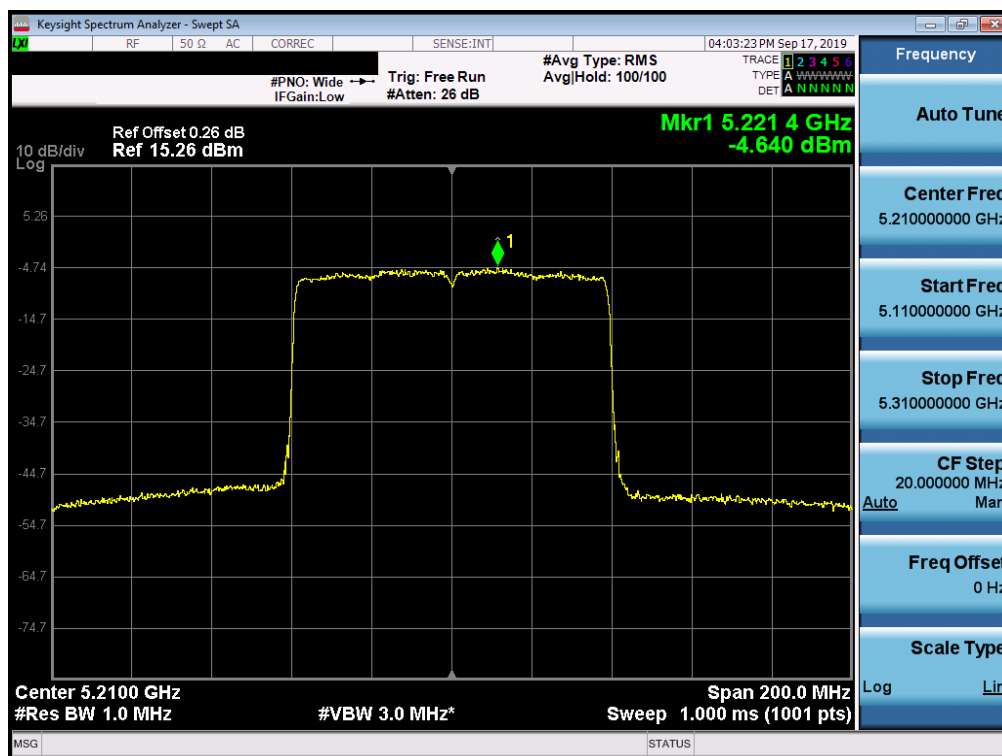


Plot 7-214. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 1) – Ch. 46)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 140 of 245

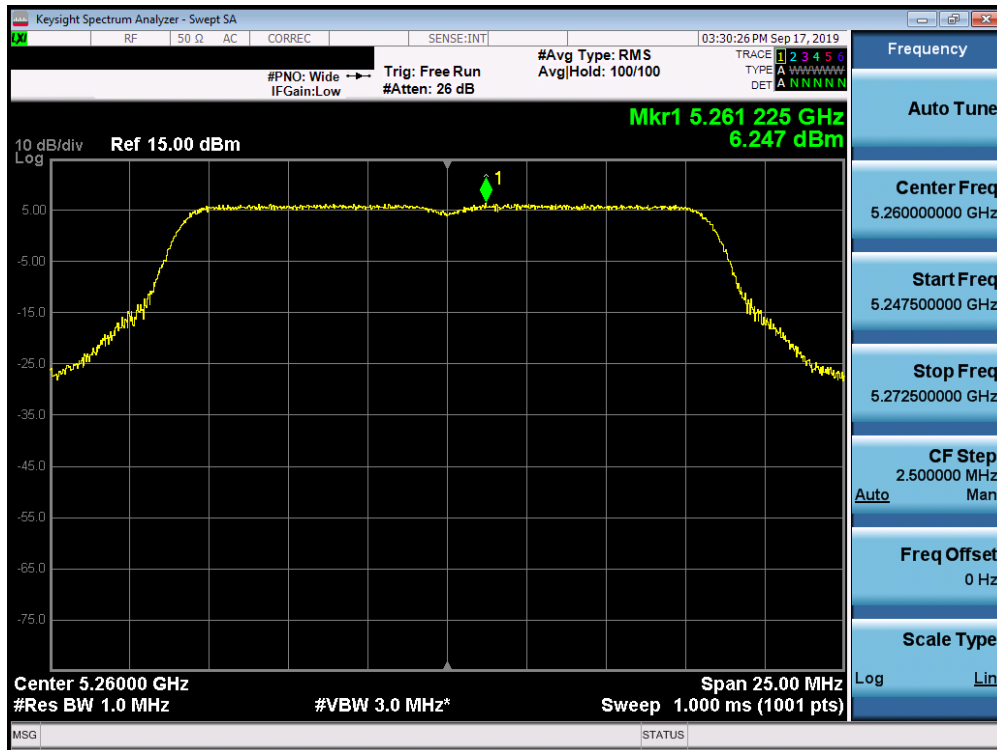


Plot 7-215. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 1) – Ch. 42)

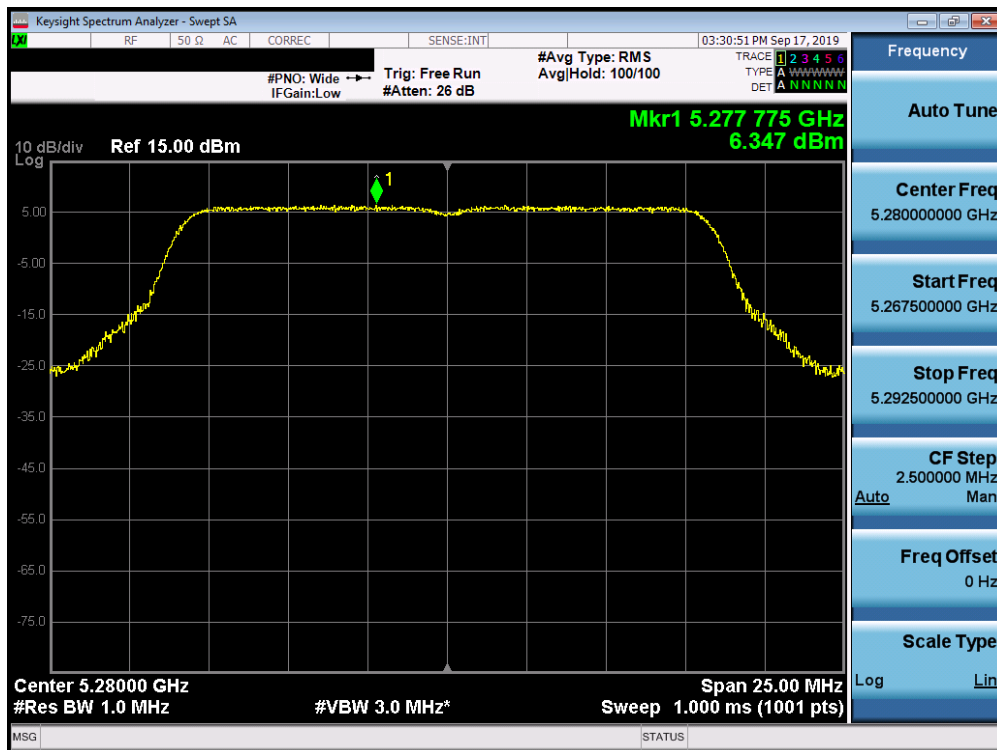


Plot 7-216. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 1) – Ch. 42)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 141 of 245

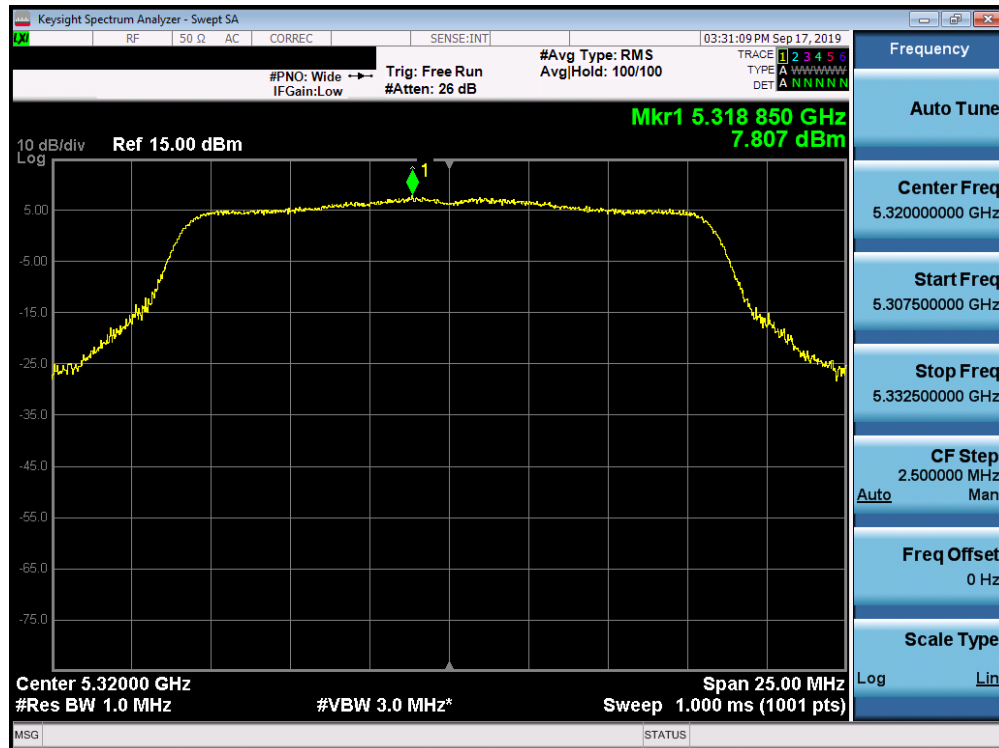


Plot 7-217. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2A) – Ch. 52)

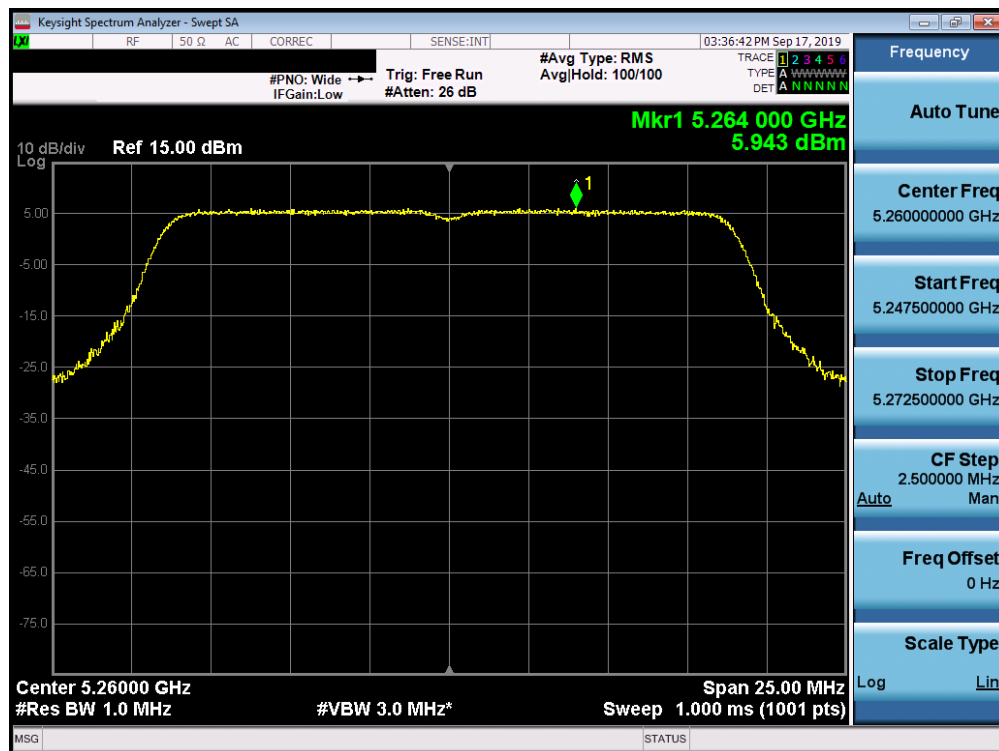


Plot 7-218. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2A) – Ch. 56)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 142 of 245

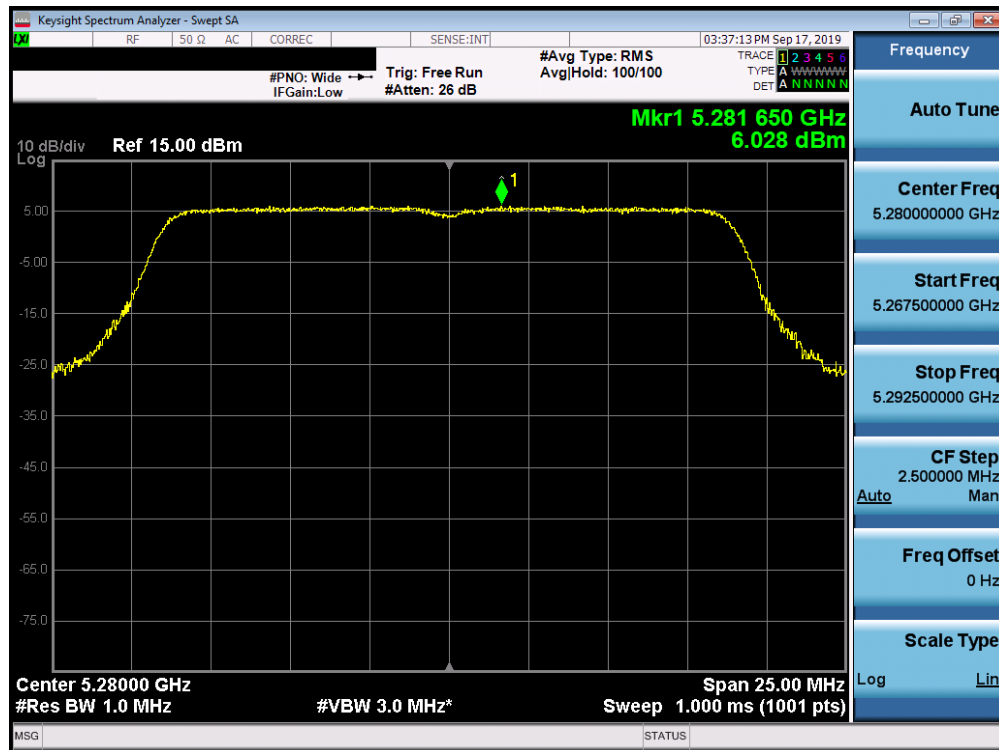


Plot 7-219. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2A) – Ch. 64)

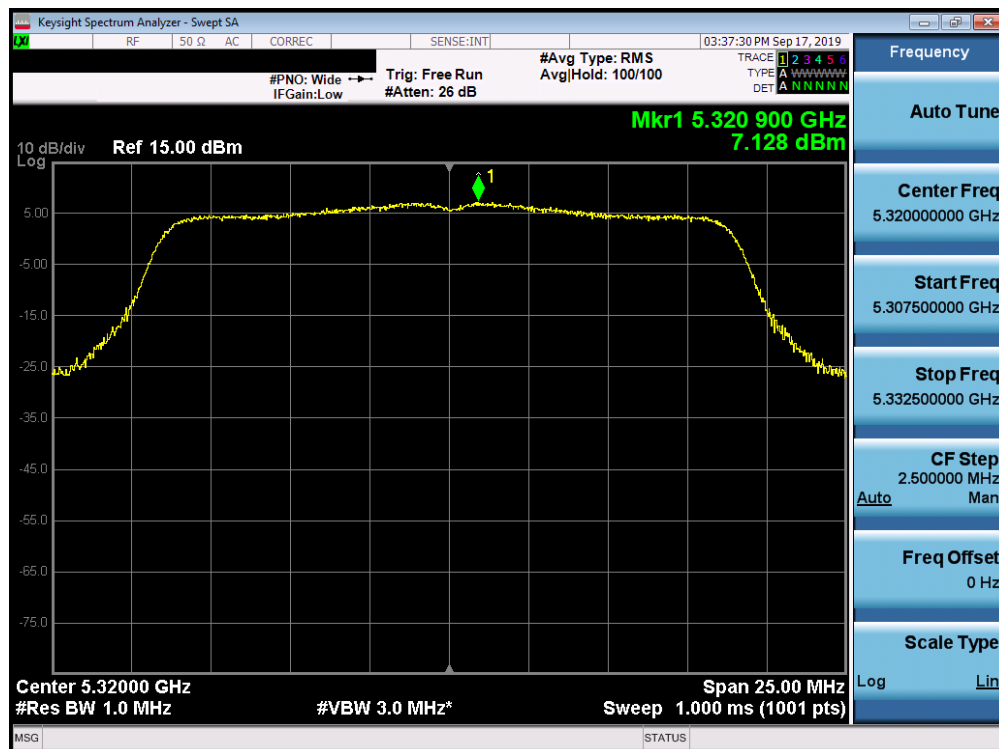


Plot 7-220. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2A) – Ch. 52)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 143 of 245

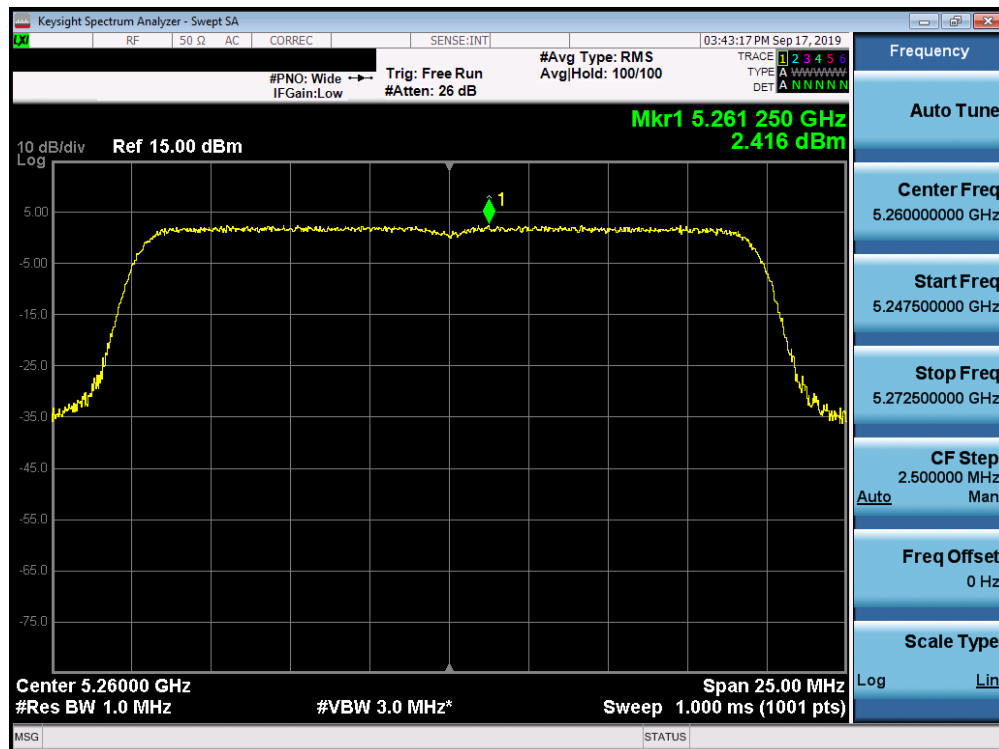


Plot 7-221. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2A) – Ch. 56)

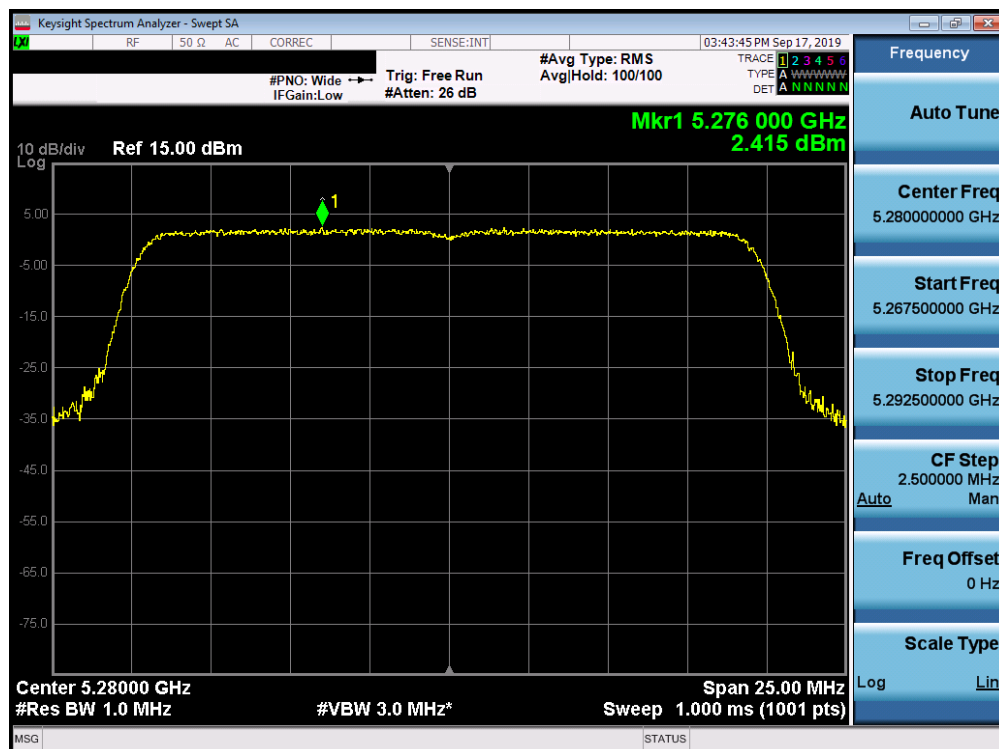


Plot 7-222. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2A) – Ch. 64)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 144 of 245

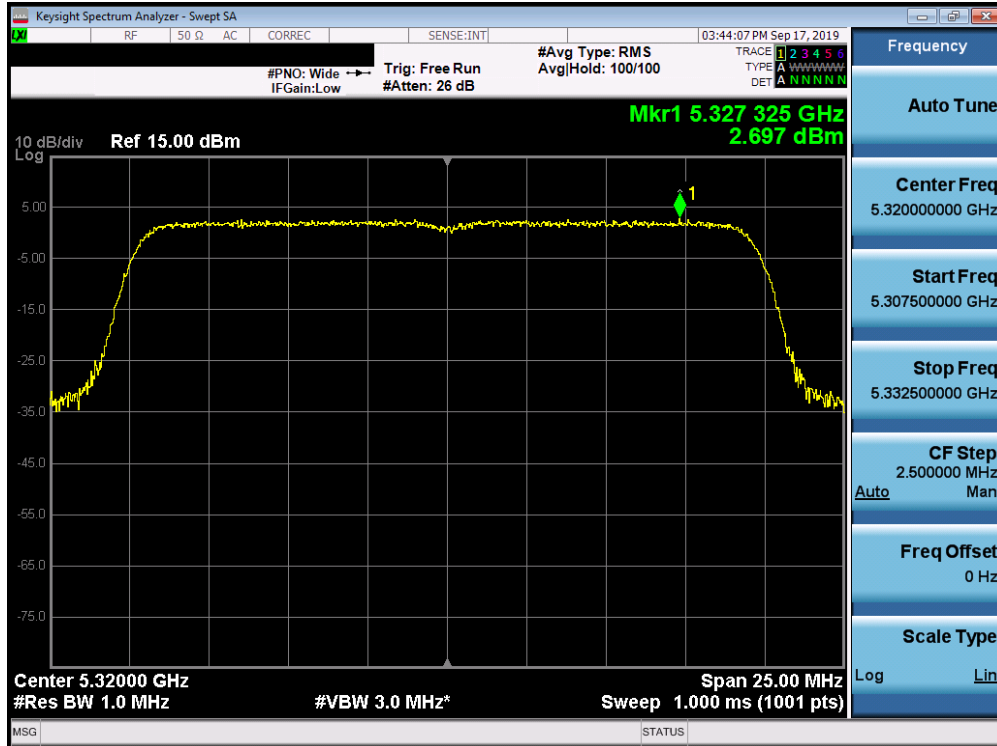


Plot 7-223. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2A) – Ch. 52)

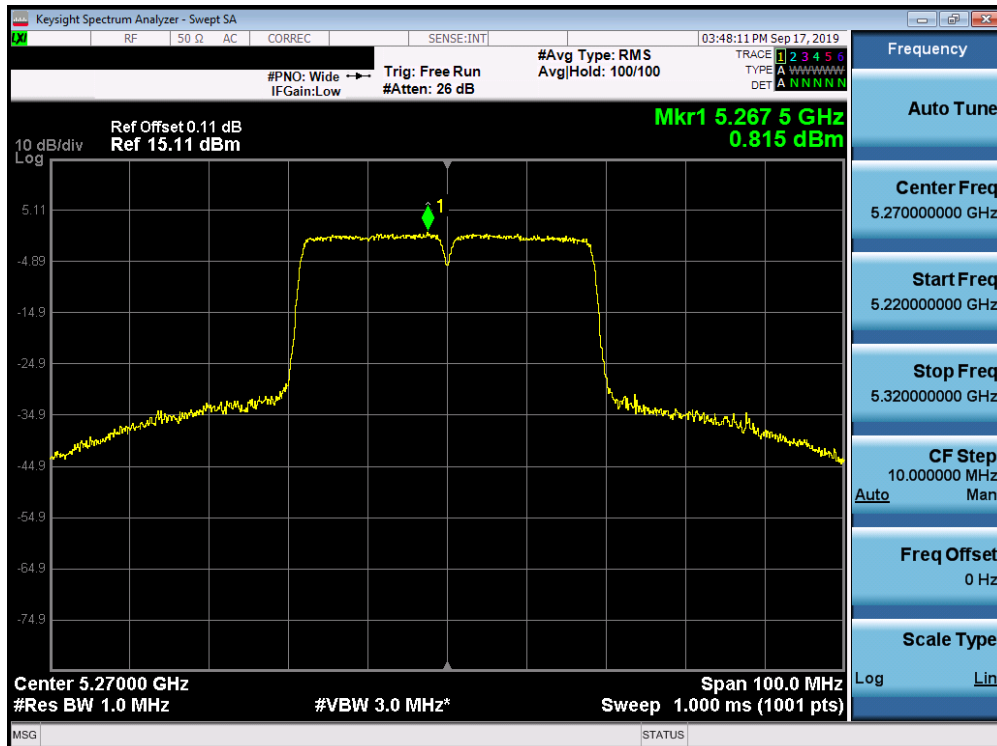


Plot 7-224. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2A) – Ch. 56)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 145 of 245

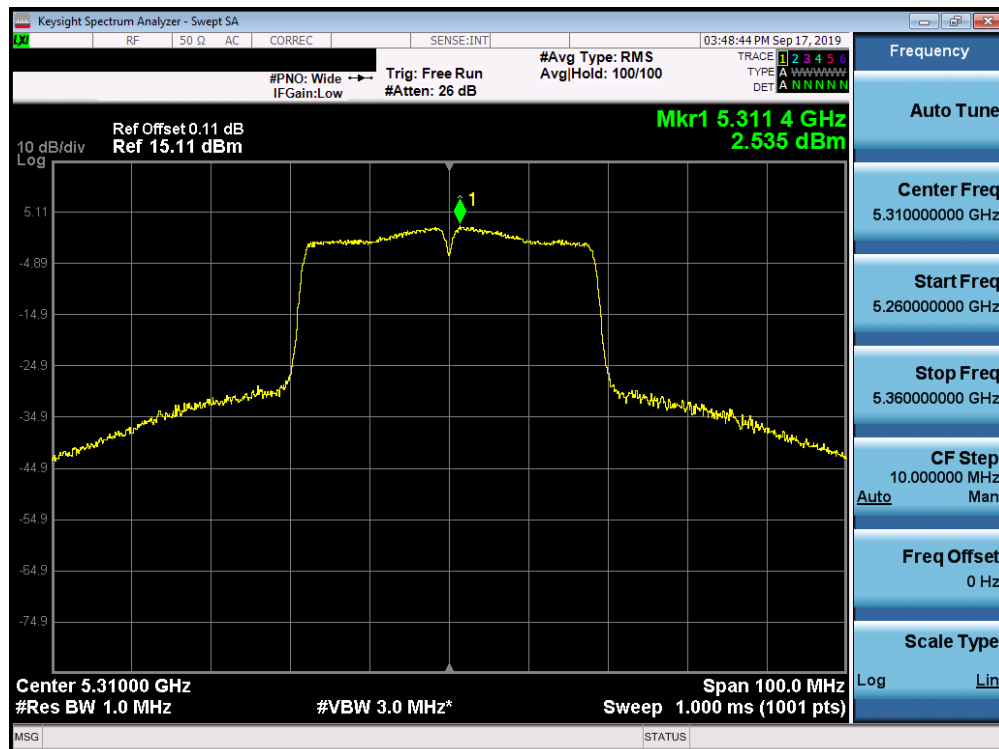


Plot 7-225. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2A) – Ch. 64)

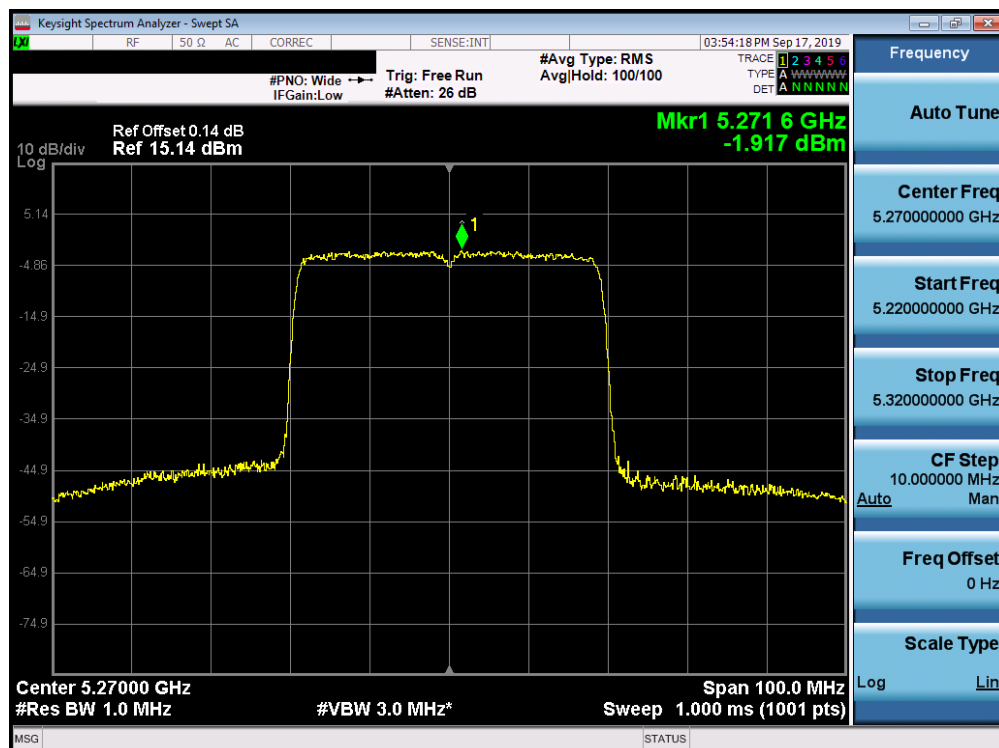


Plot 7-226. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2A) – Ch. 54)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 146 of 245

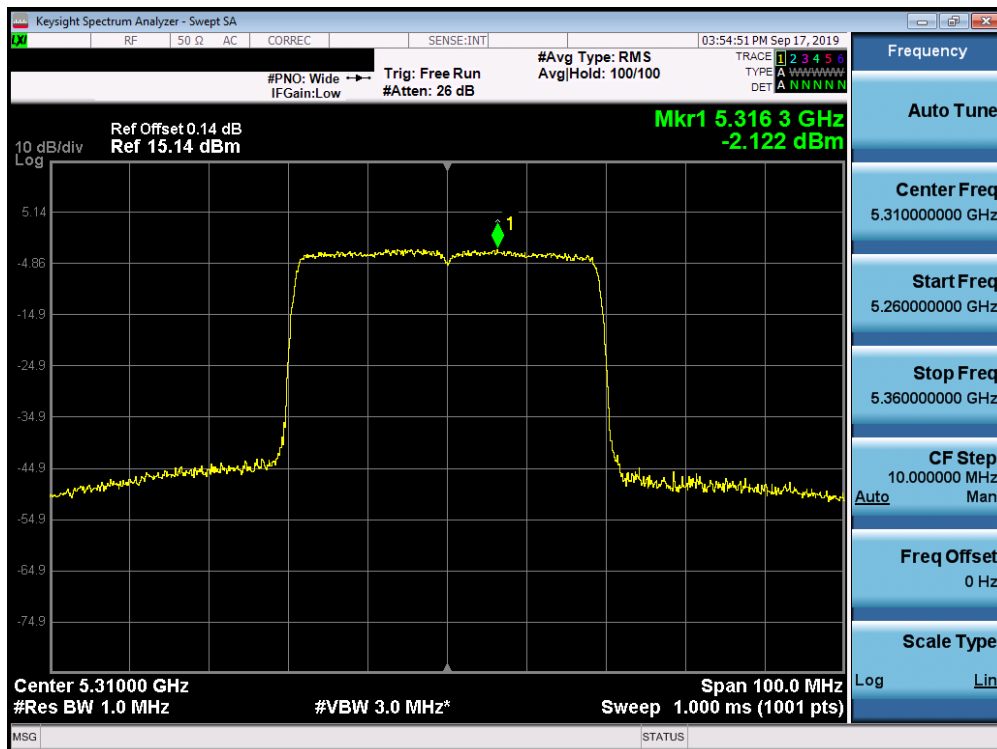


Plot 7-227. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2A) – Ch. 62)

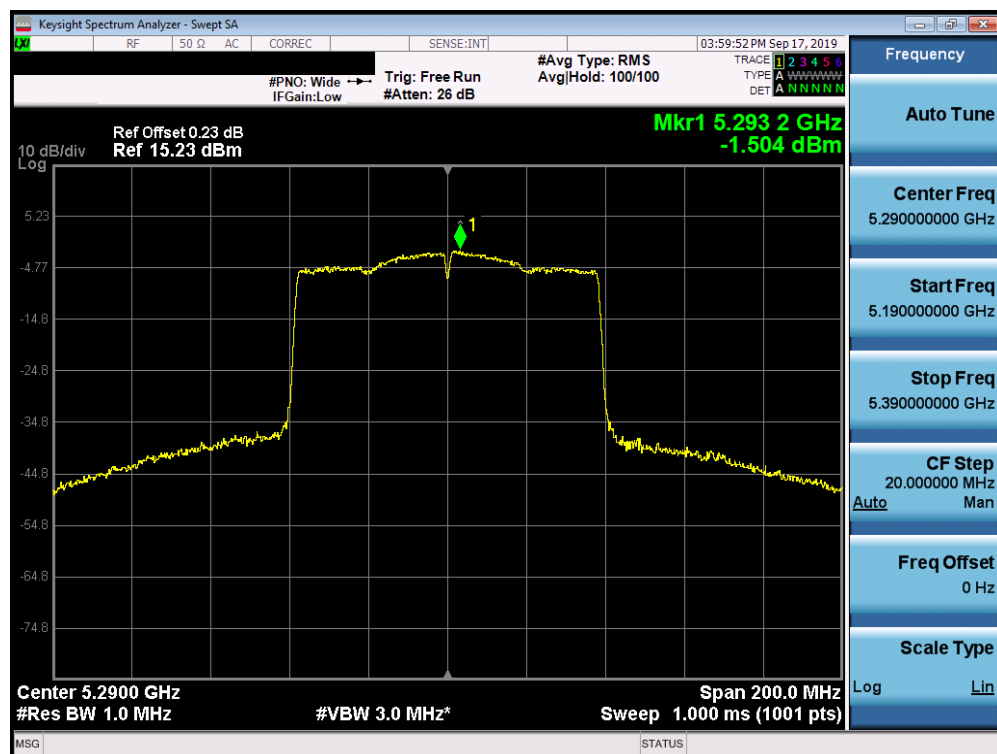


Plot 7-228. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2A) – Ch. 54)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 147 of 245

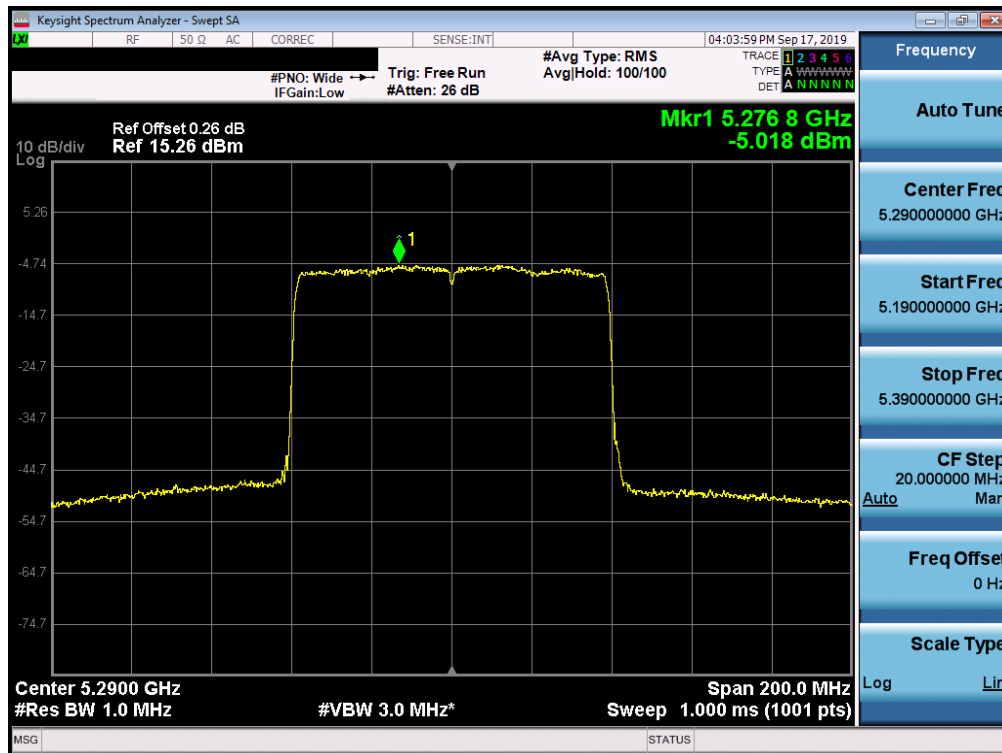


Plot 7-229. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2A) – Ch. 62)



Plot 7-230. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2A) – Ch. 58)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 148 of 245

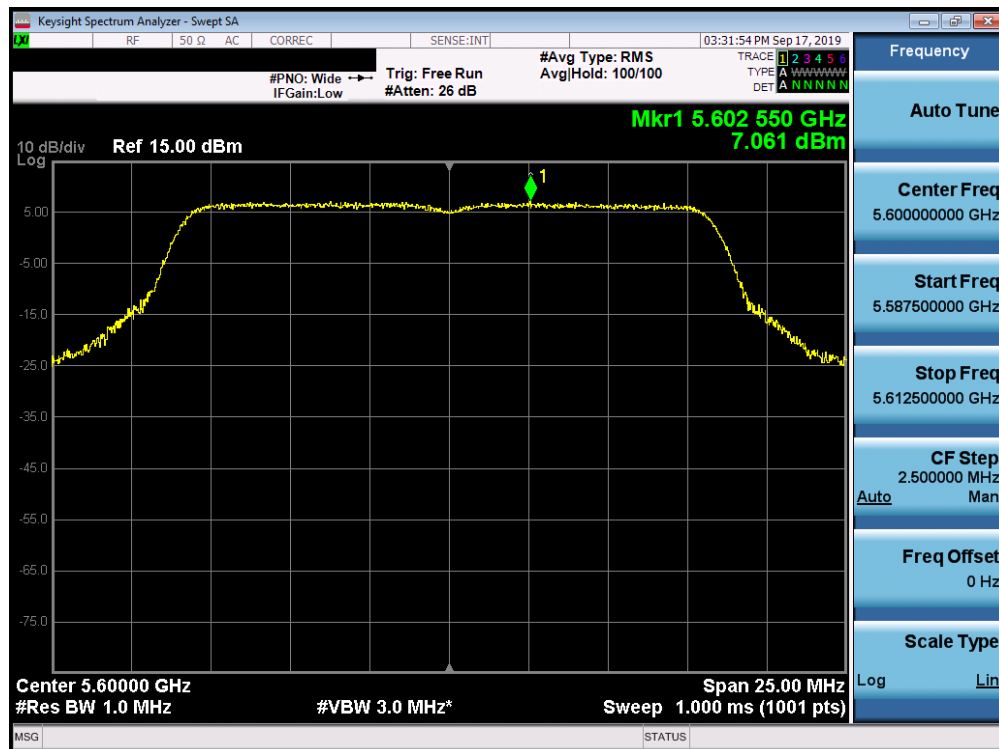


Plot 7-231. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 2A) – Ch. 58)

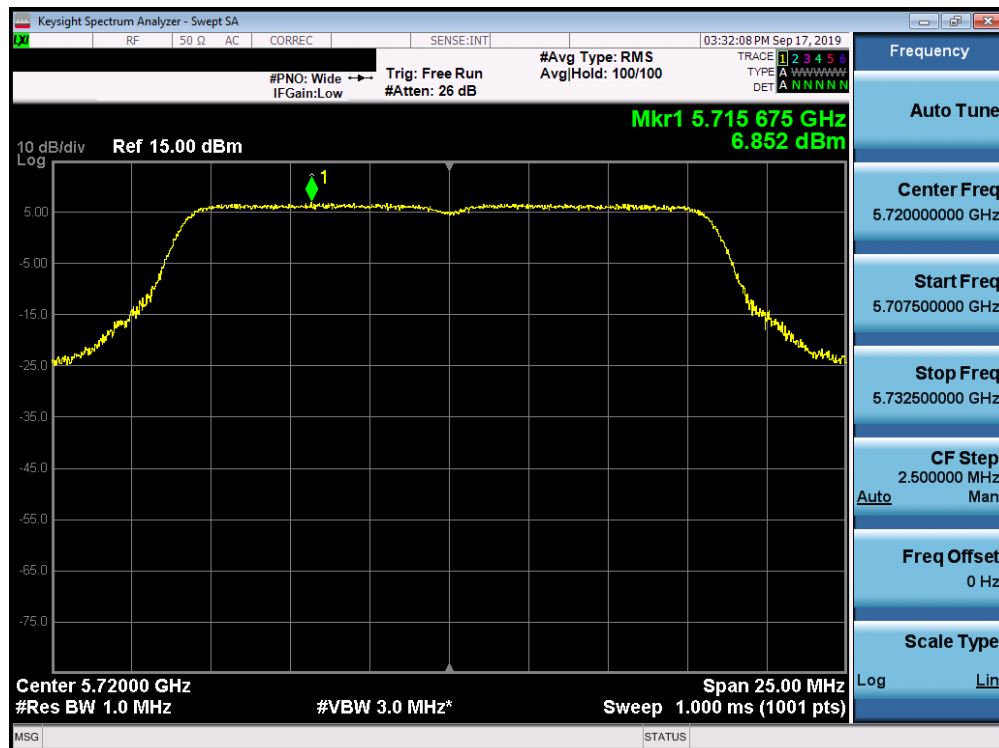


Plot 7-232. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2C) – Ch. 100)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 149 of 245

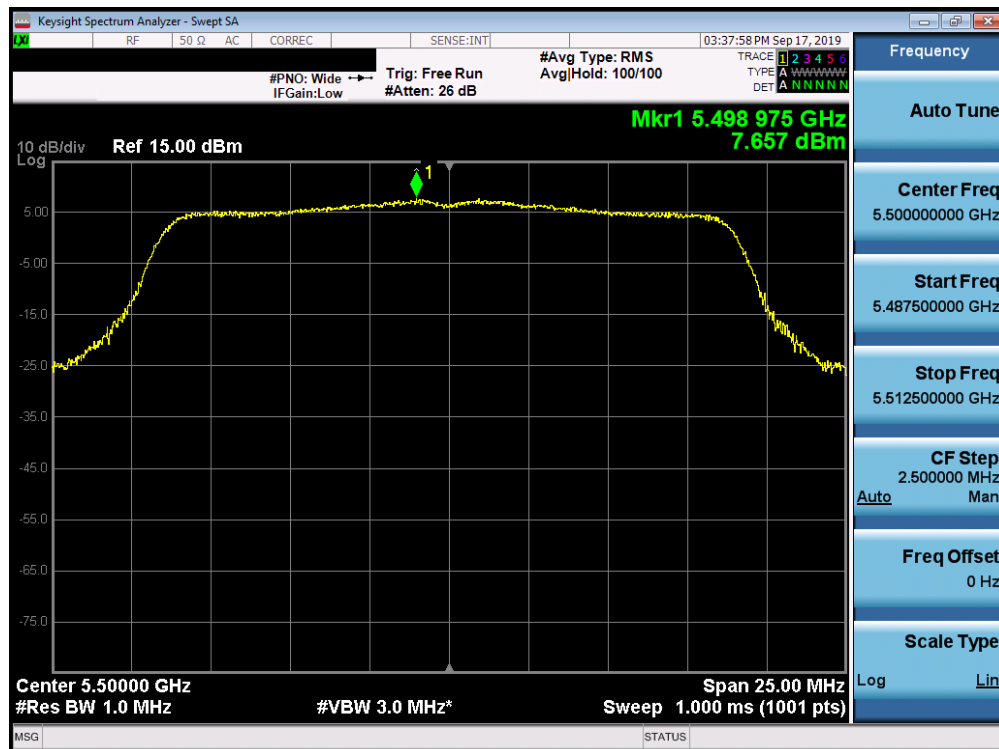


Plot 7-233. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2C) – Ch. 120)

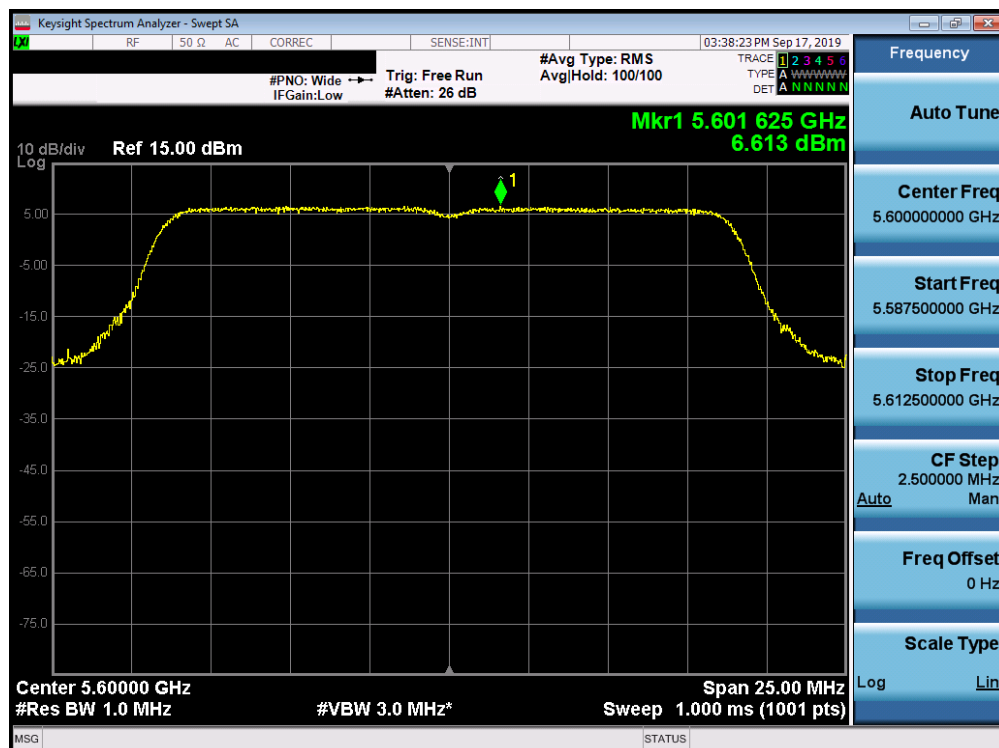


Plot 7-234. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2C) – Ch. 144)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 150 of 245

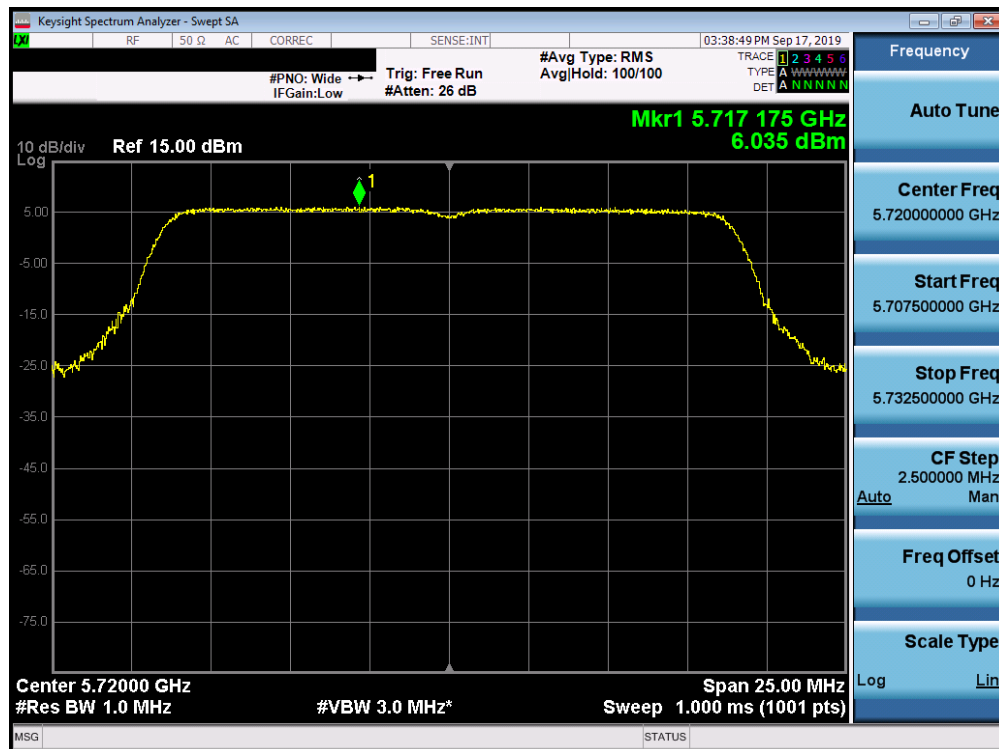


Plot 7-235. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) – Ch. 100)

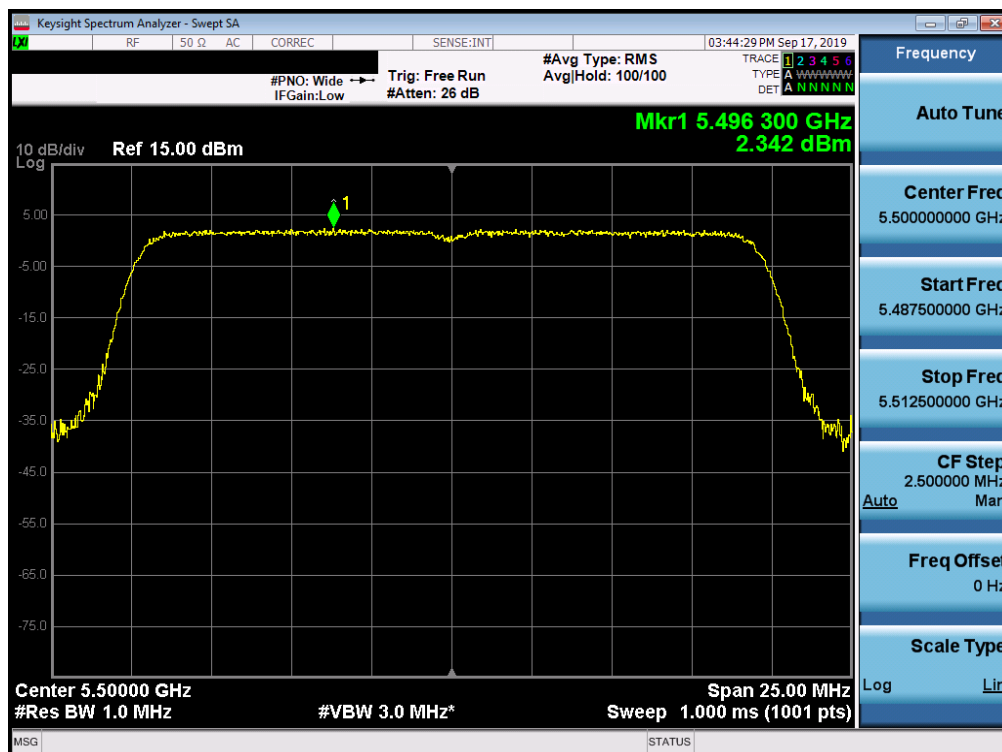


Plot 7-236. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) – Ch. 120)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 151 of 245

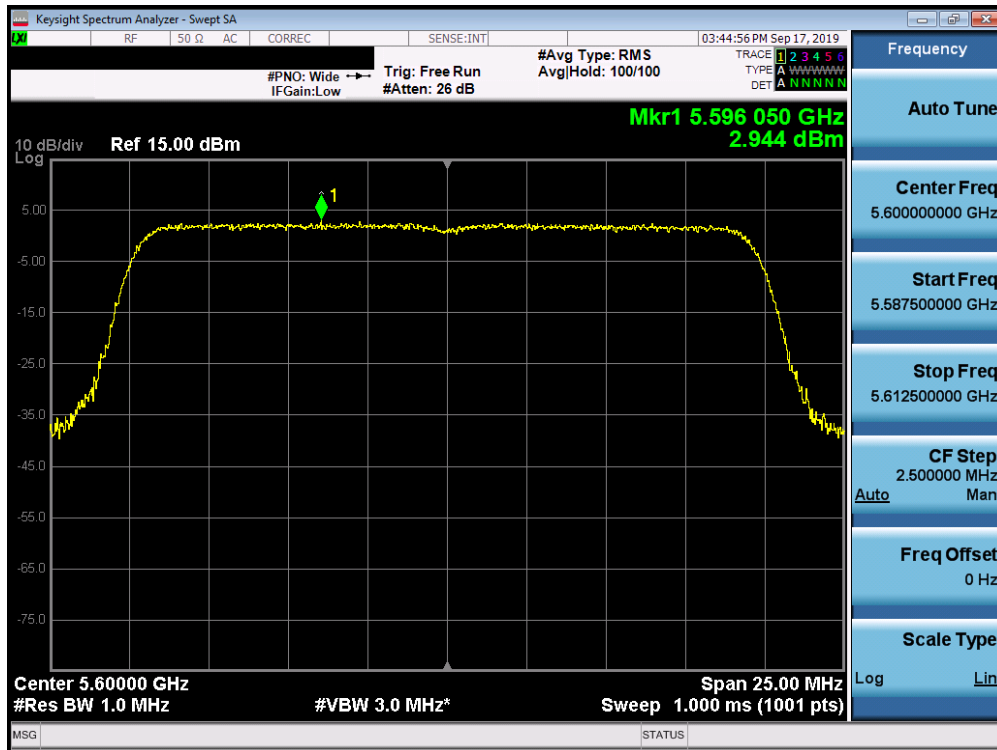


Plot 7-237. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) – Ch. 144)

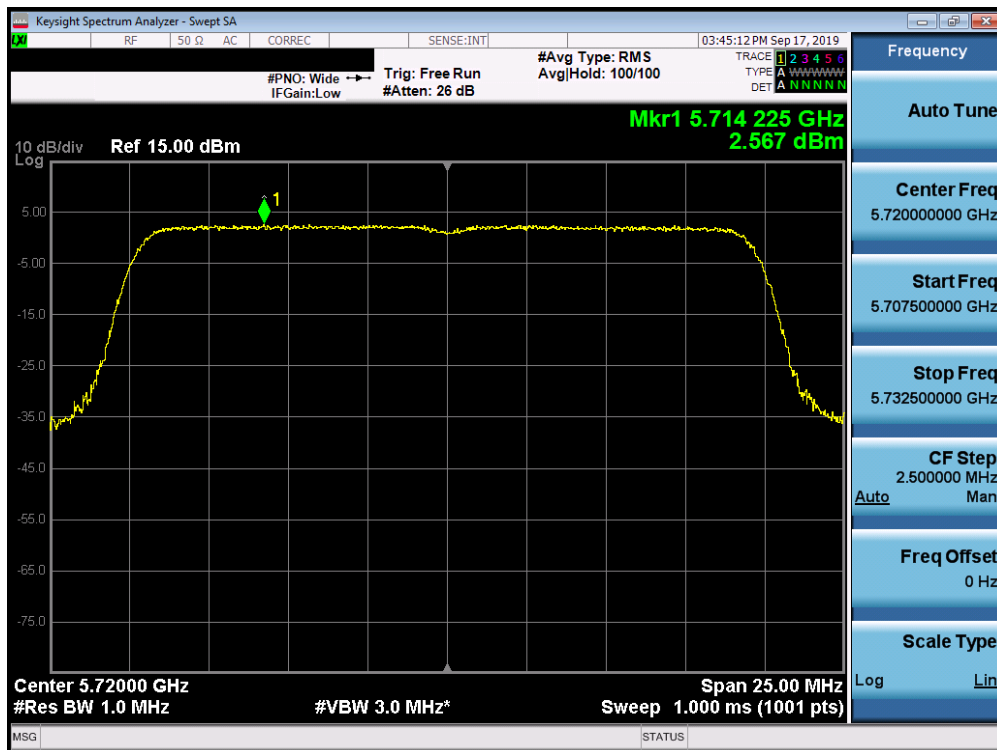


Plot 7-238. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2C) – Ch. 100)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 152 of 245

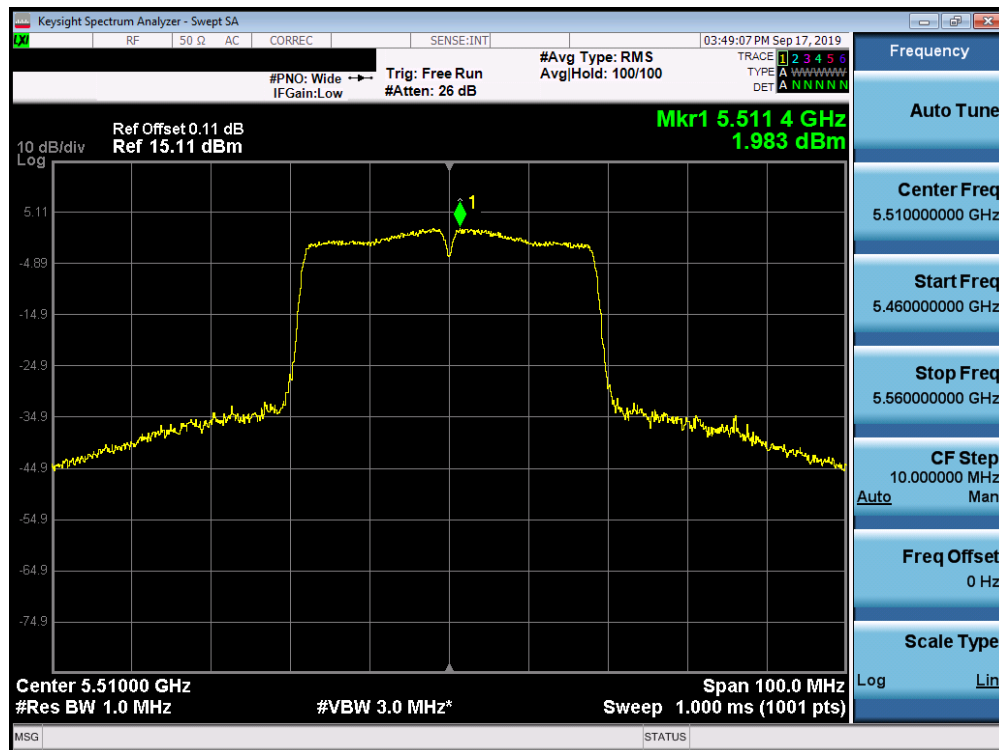


Plot 7-239. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2C) – Ch. 120)

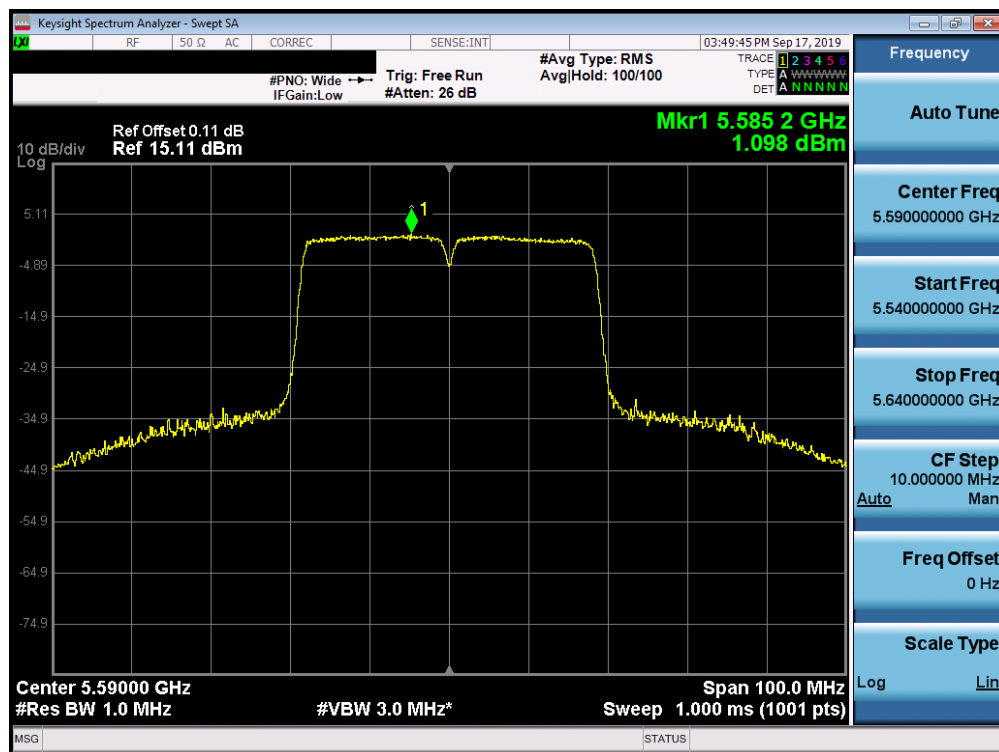


Plot 7-240. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2C) – Ch. 144)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 153 of 245

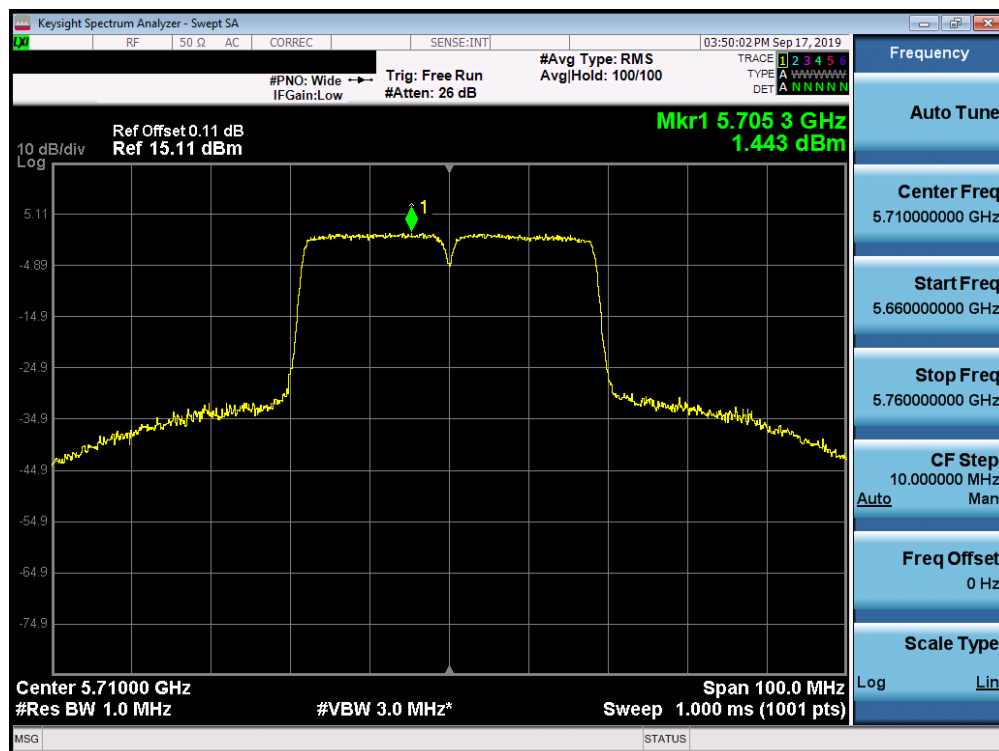


Plot 7-241. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) – Ch. 102)

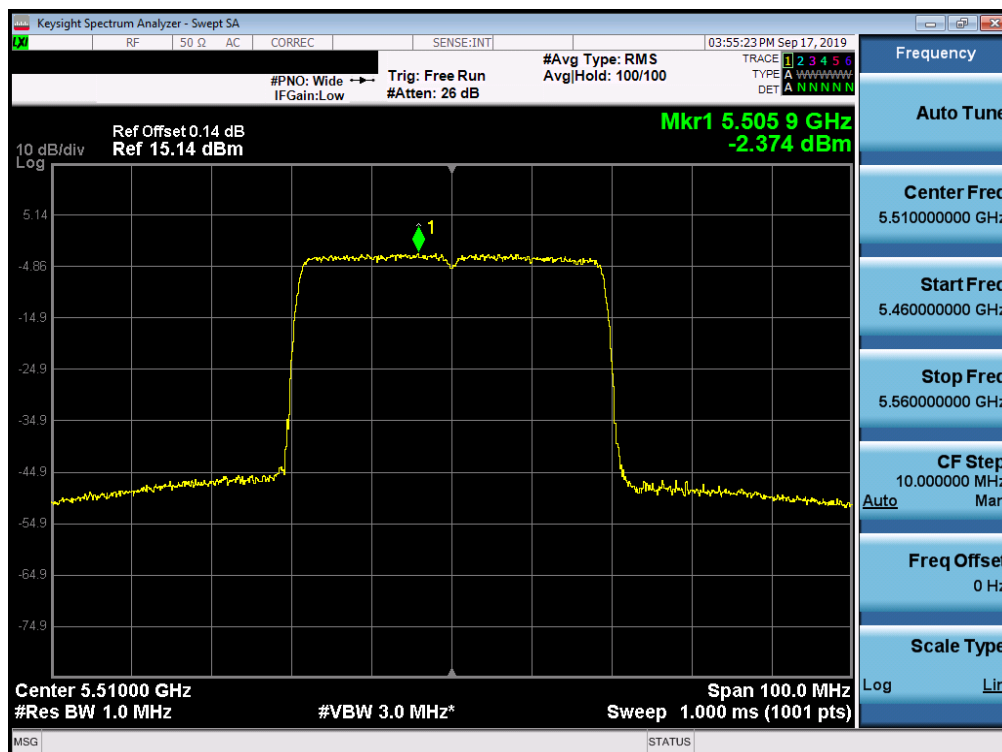


Plot 7-242. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) – Ch. 118)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 154 of 245

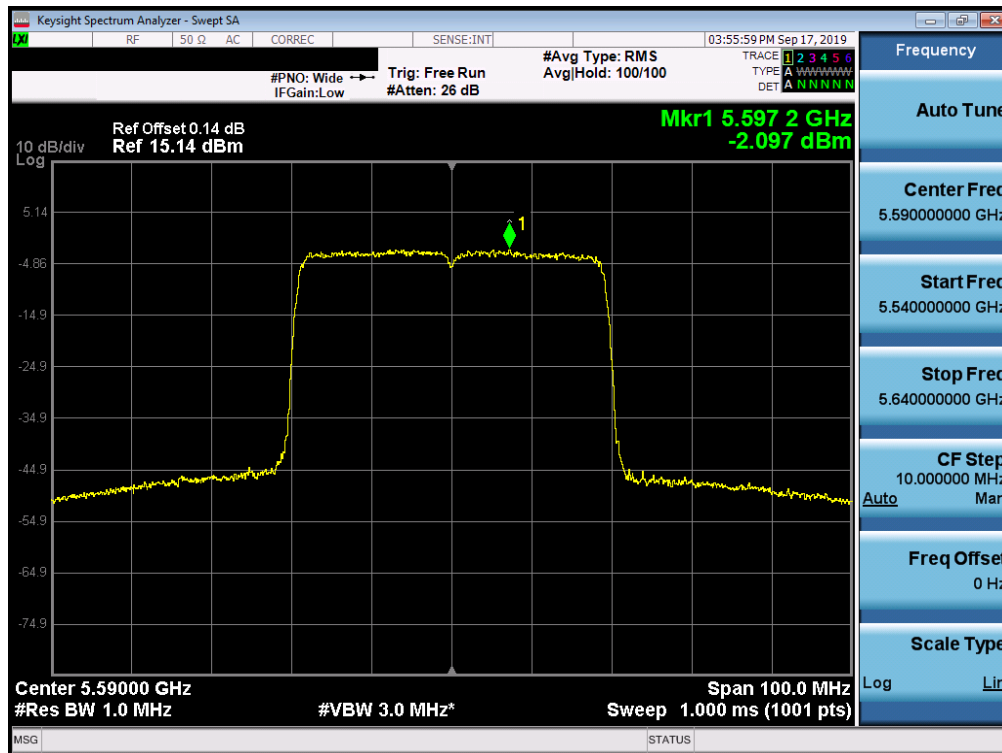


Plot 7-243. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) – Ch. 142)

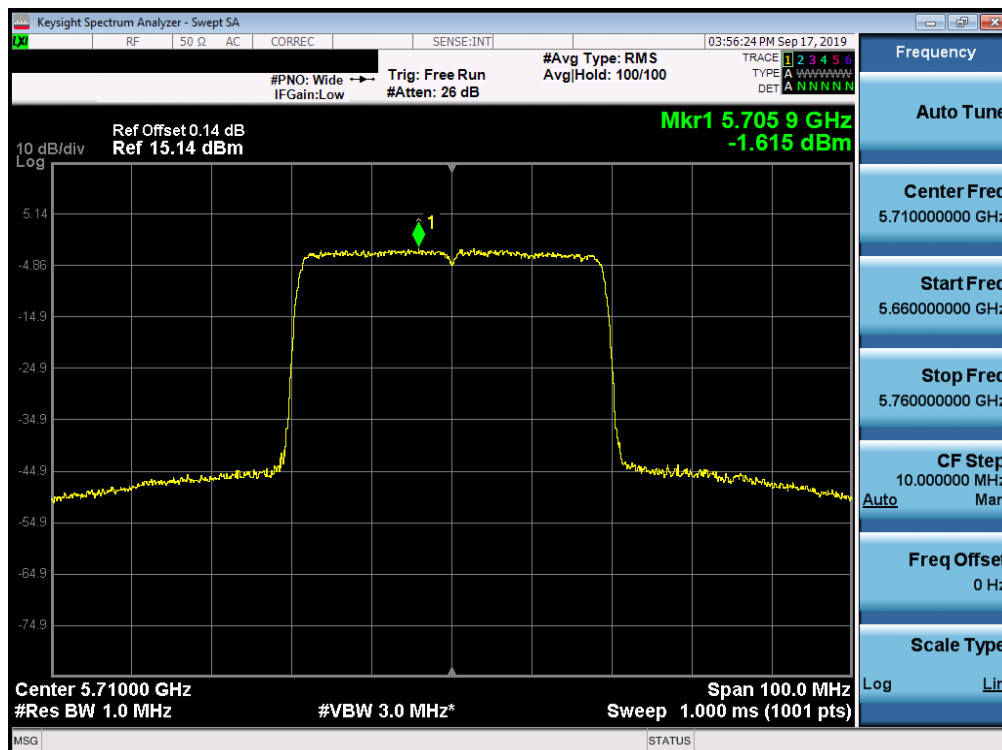


Plot 7-244. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2C) – Ch. 102)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 155 of 245

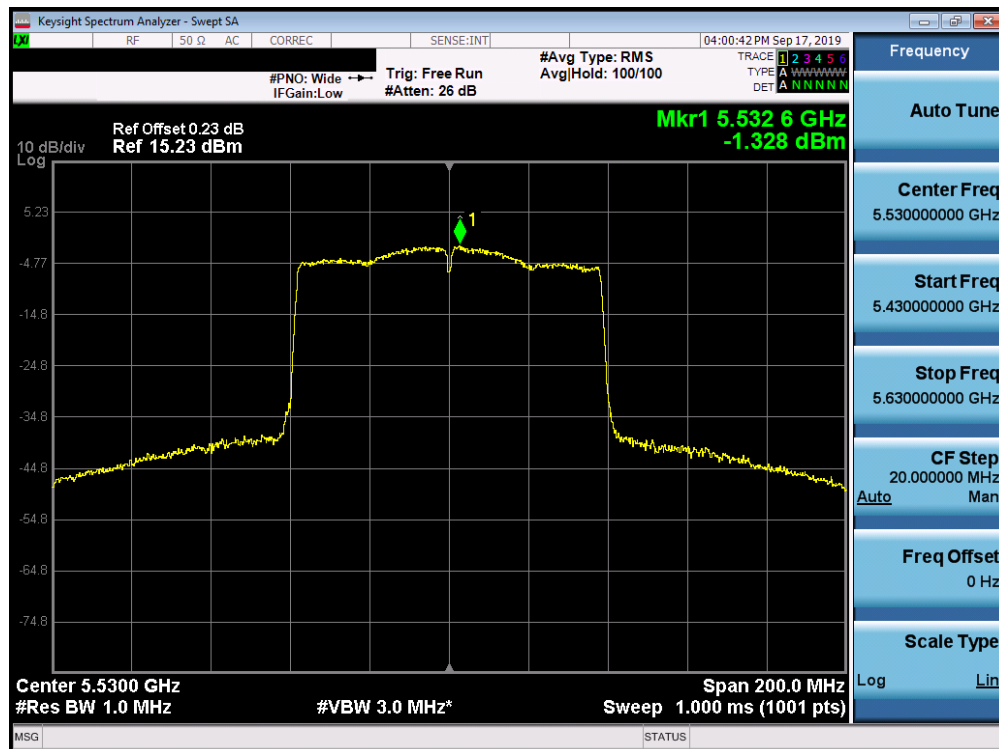


Plot 7-245. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2C) – Ch. 118)

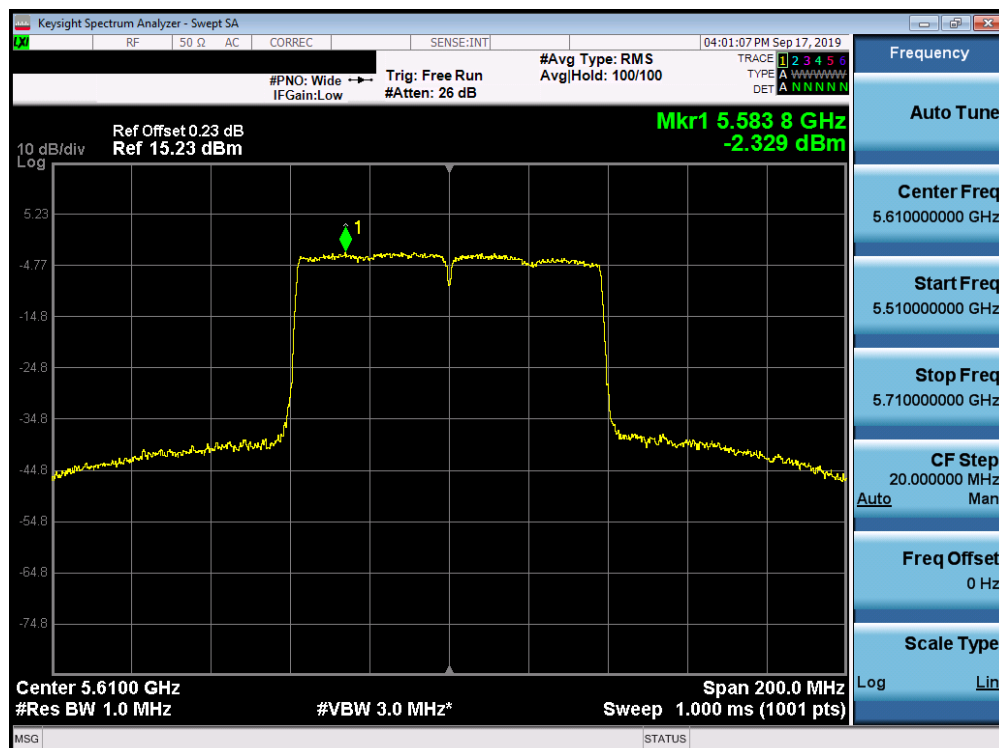


Plot 7-246. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2C) – Ch. 142)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 156 of 245

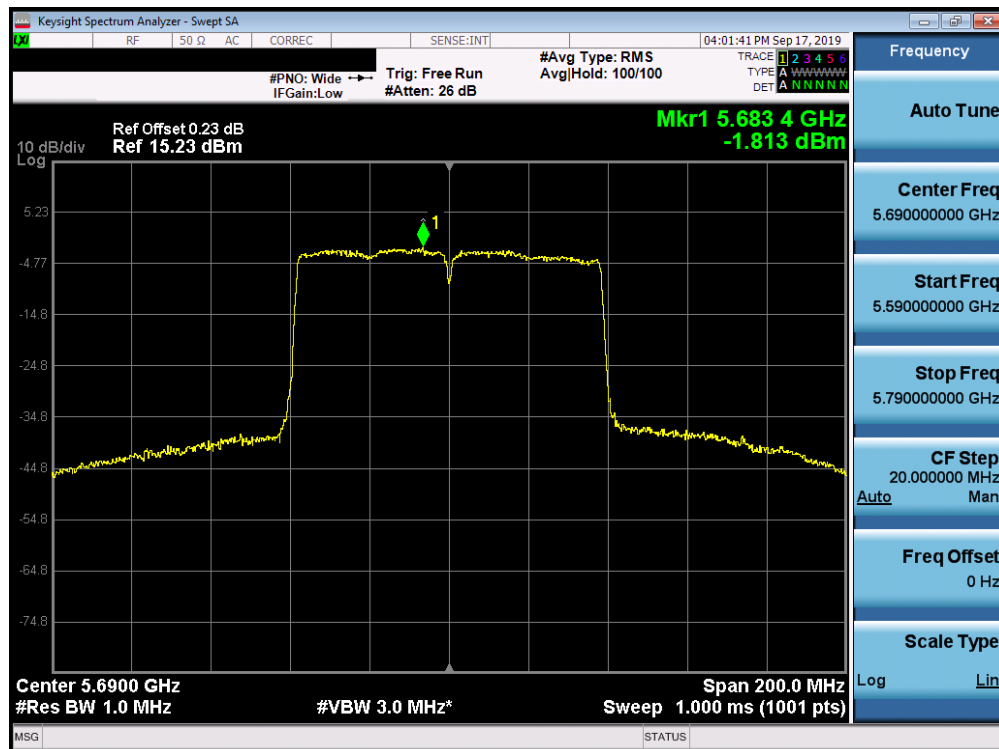


Plot 7-247. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 106)

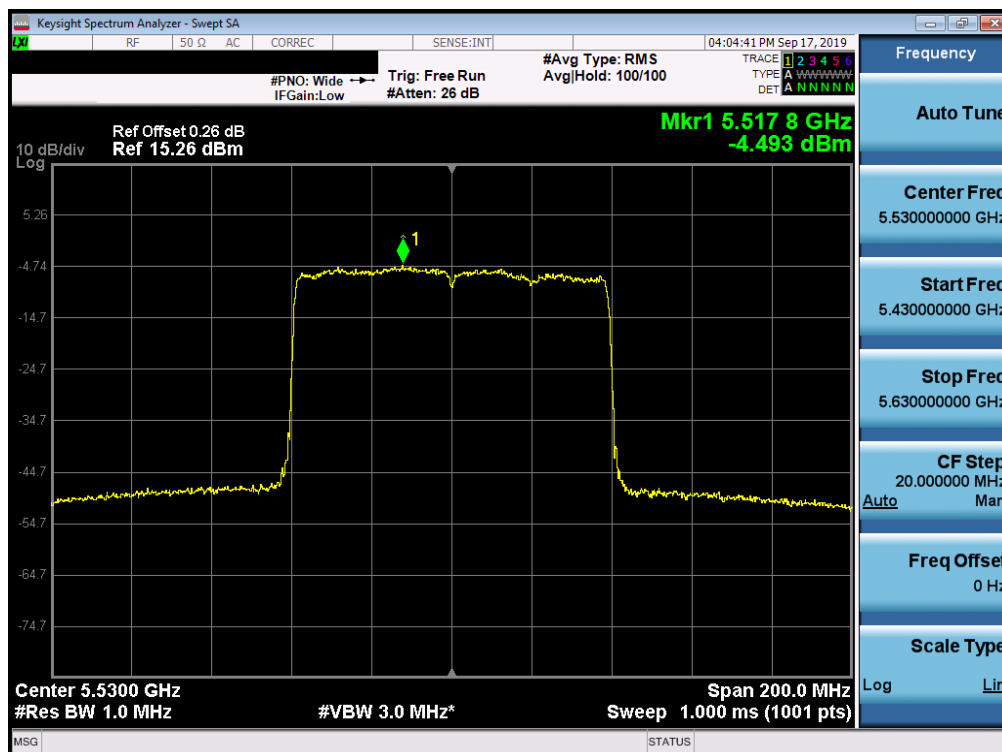


Plot 7-248. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 122)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 157 of 245

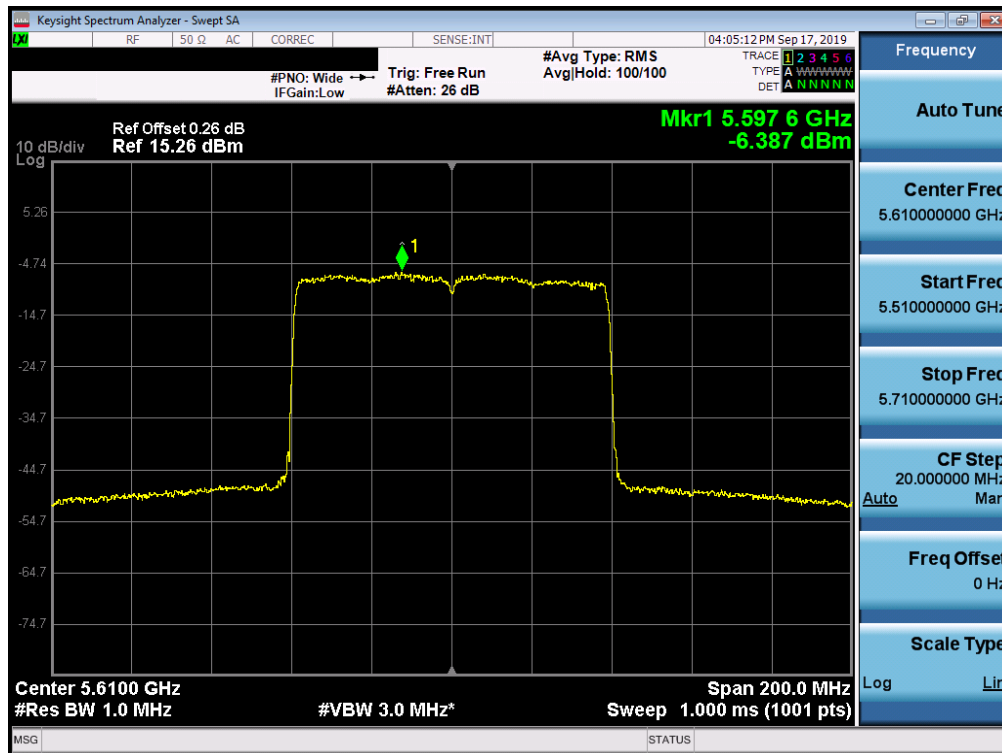


Plot 7-249. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 138)

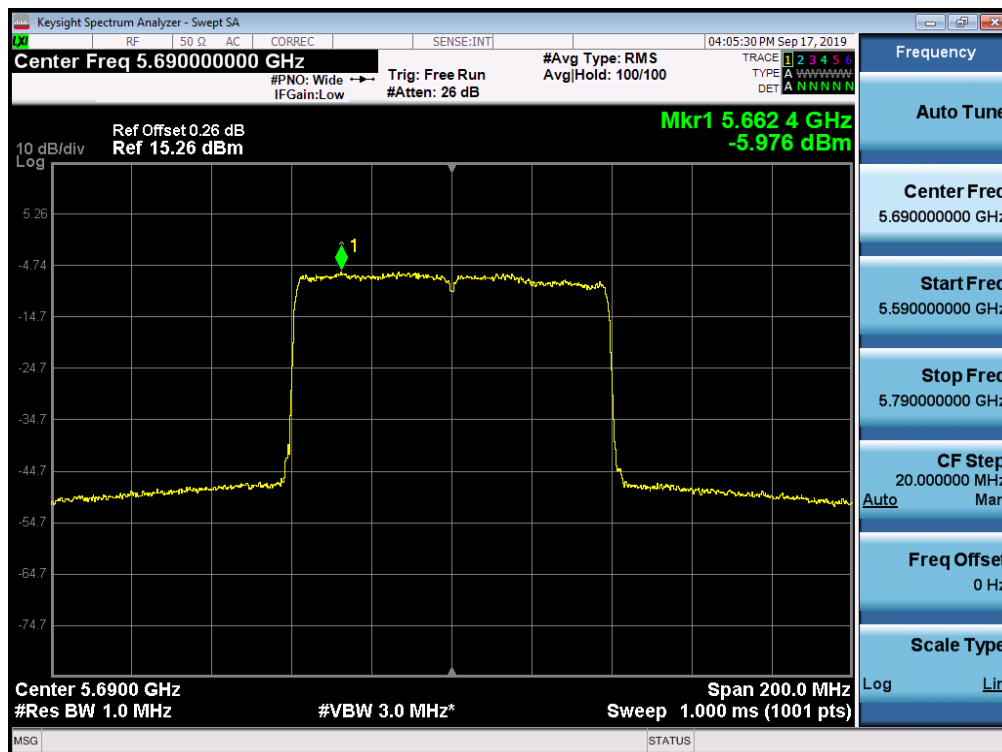


Plot 7-250. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 2C) – Ch. 106)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 158 of 245



Plot 7-251. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 2C) – Ch. 122)

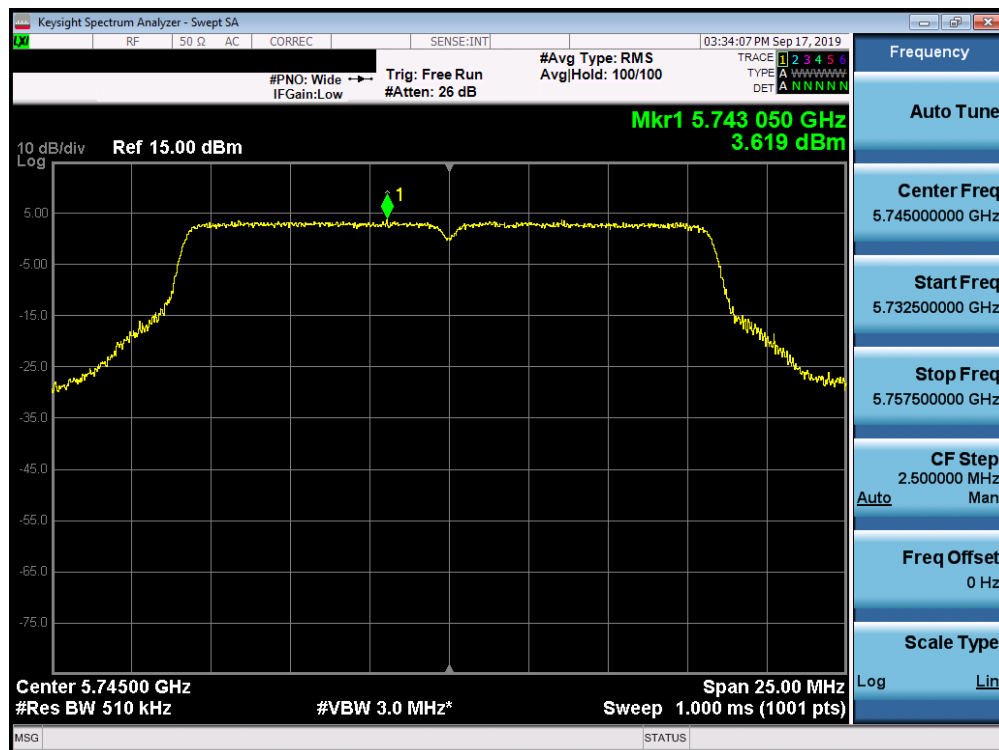


Plot 7-252. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 2C) – Ch. 138)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 159 of 245

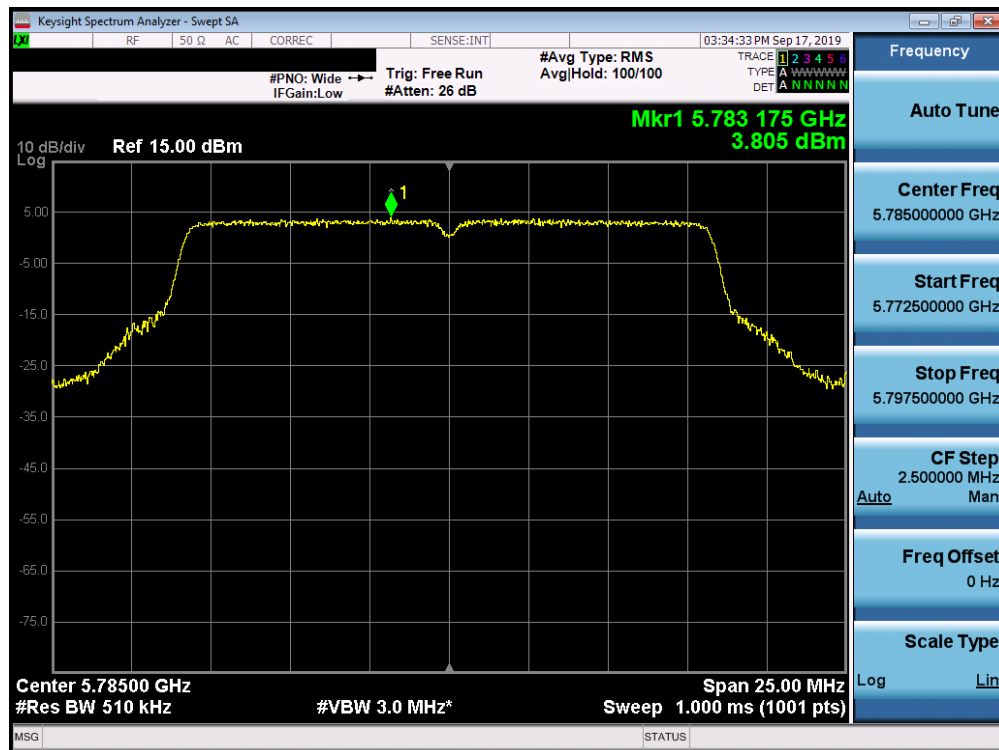
	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5745	149	a	6	3.62	30.0	-26.38
	5785	157	a	6	3.81	30.0	-26.20
	5825	165	a	6	3.55	30.0	-26.45
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	3.25	30.0	-26.76
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	2.21	30.0	-27.79
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	3.82	30.0	-26.18
	5745	149	ax (20MHz)	6.5/7.2 (MCS0)	0.28	30.0	-29.72
	5785	157	ax (20MHz)	6.5/7.2 (MCS0)	0.63	30.0	-29.37
	5825	165	ax (20MHz)	6.5/7.2 (MCS0)	0.47	30.0	-29.54
	5755	151	n (40MHz)	13.5/15 (MCS0)	-1.38	30.0	-31.38
	5795	159	n (40MHz)	13.5/15 (MCS0)	-1.20	30.0	-31.20
	5755	151	ax (40MHz)	13.5/15 (MCS0)	-4.55	30.0	-34.55
	5795	159	ax (40MHz)	13.5/15 (MCS0)	-4.07	30.0	-34.07
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-3.93	30.0	-33.93
	5775	155	ax (80MHz)	29.3/32.5 (MCS0)	-7.92	30.0	-37.92

Table 7-24. Band 3 Conducted Power Spectral Density Measurements SISO ANT2

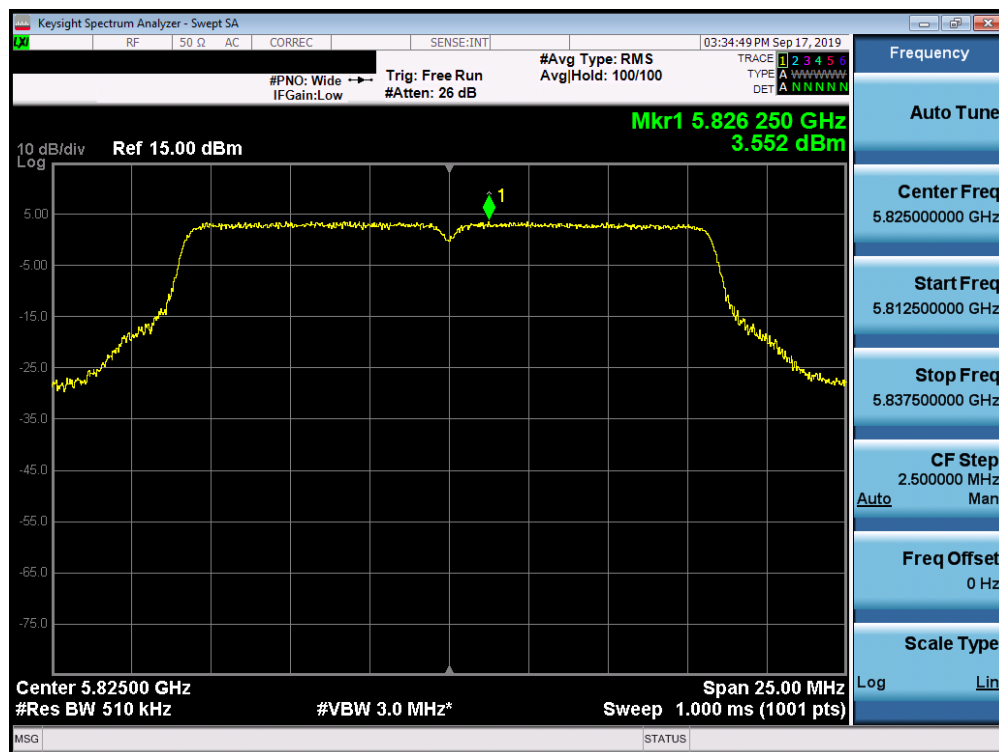


Plot 7-253. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 3) – Ch. 149)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 160 of 245

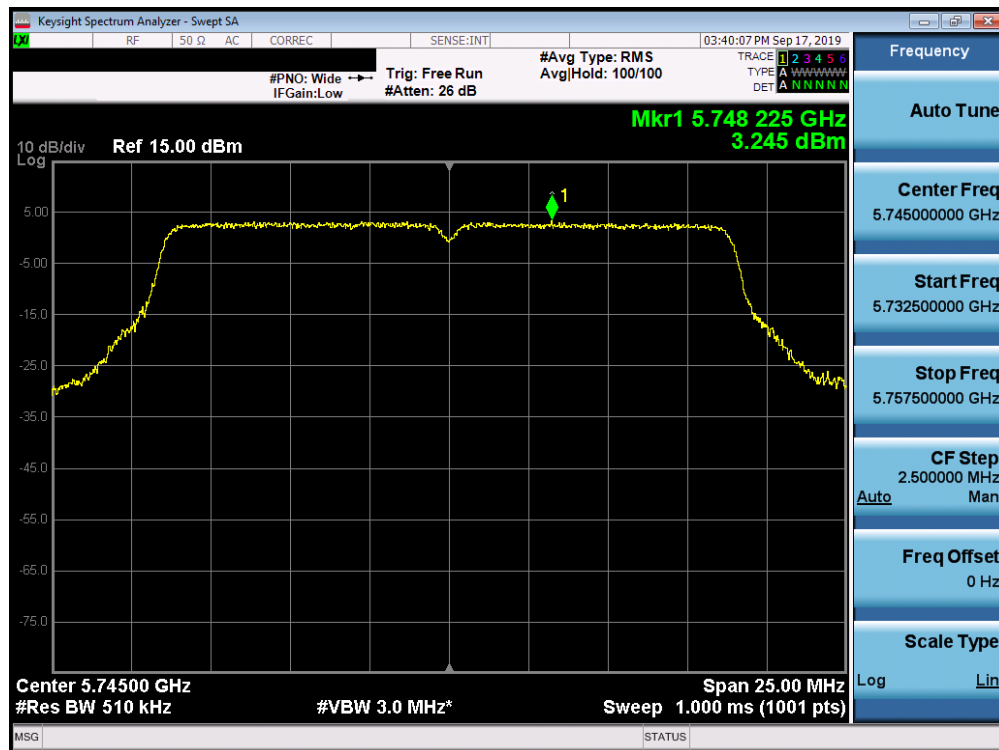


Plot 7-254. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 3) – Ch. 157)

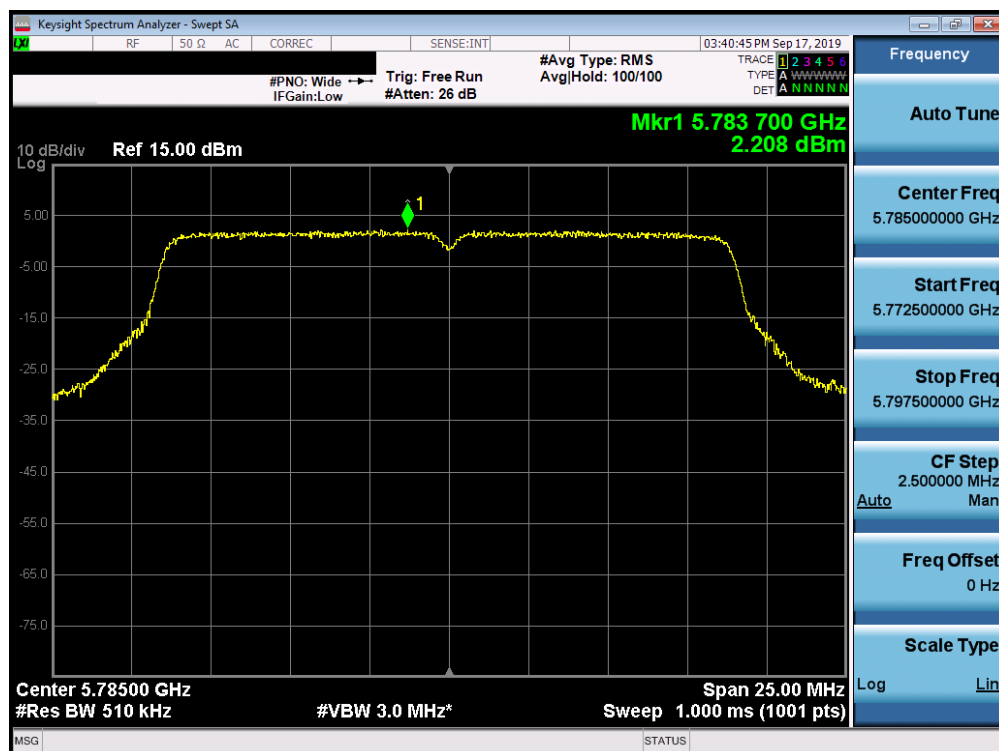


Plot 7-255. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 3) – Ch. 165)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 161 of 245

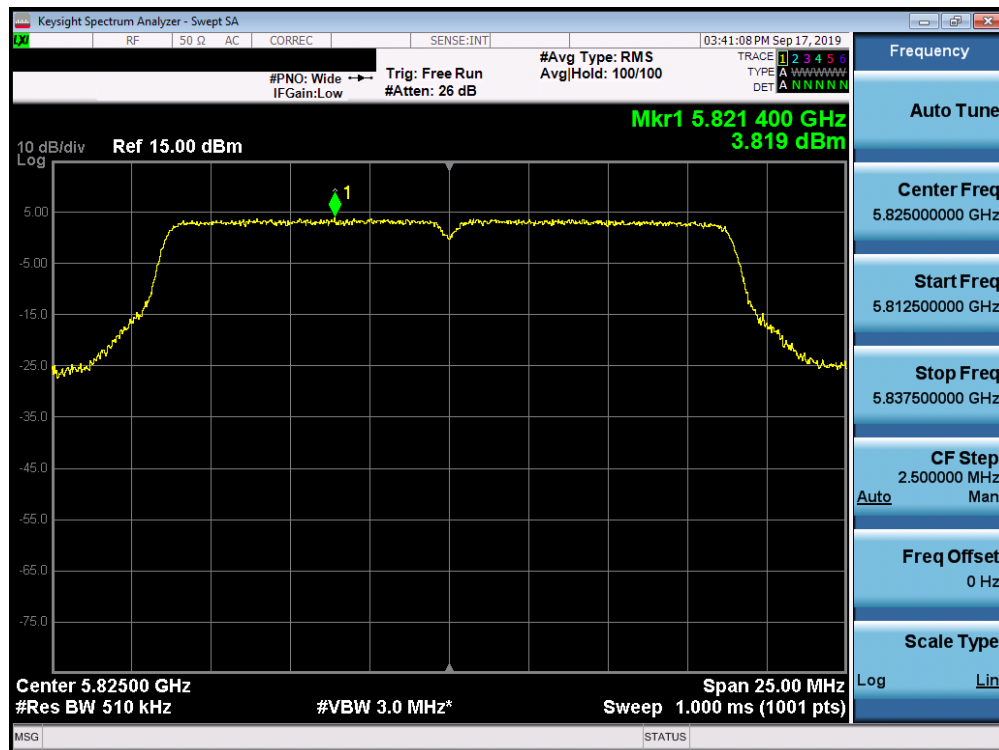


Plot 7-256. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 3) – Ch. 149)

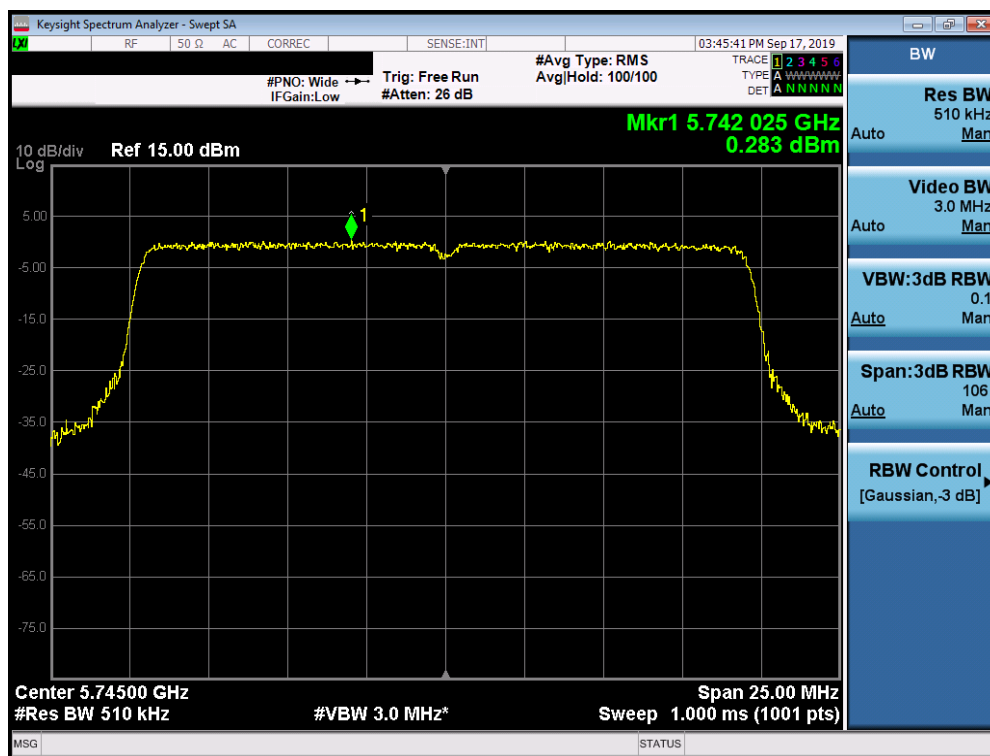


Plot 7-257. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 3) – Ch. 157)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 162 of 245

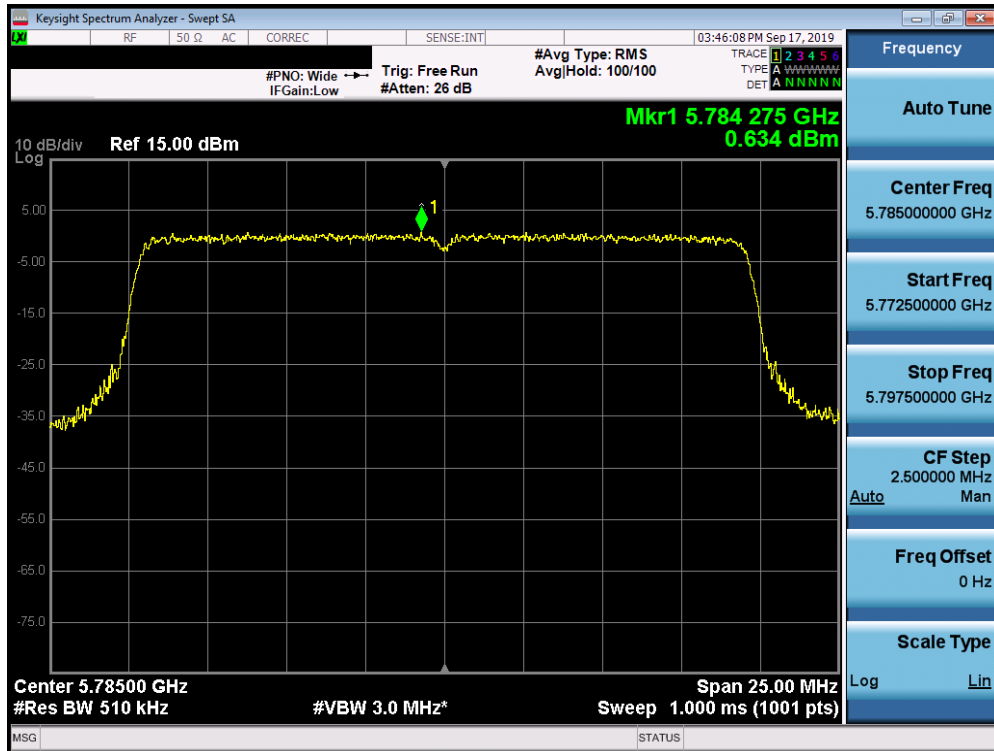


Plot 7-258. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 3) – Ch. 165)

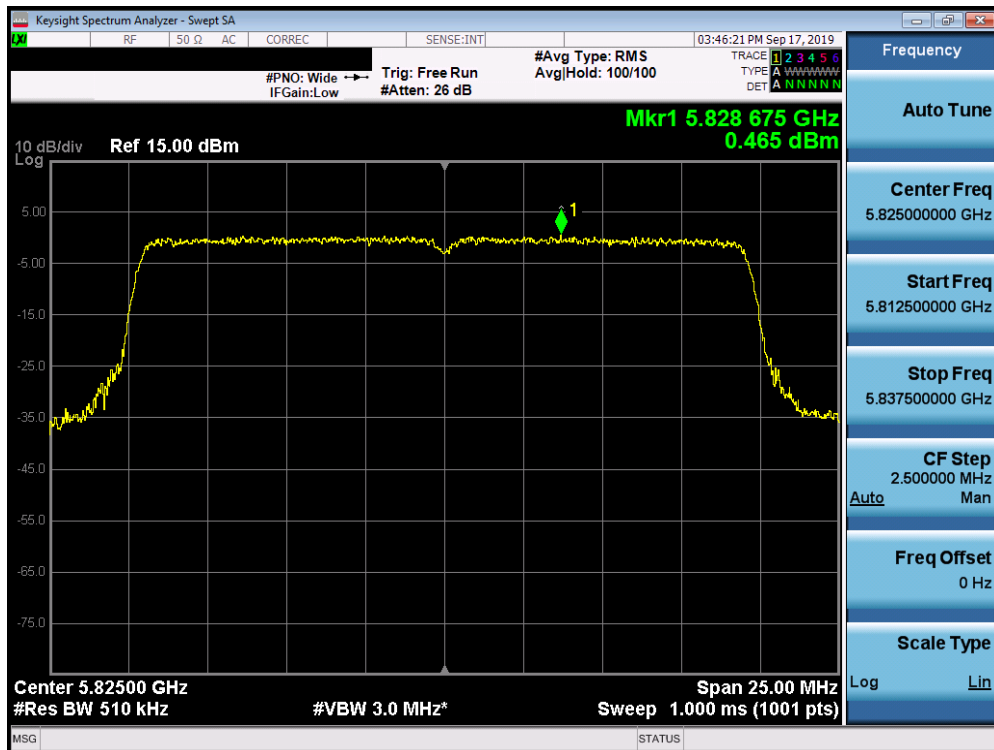


Plot 7-259. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 3) – Ch. 149)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 163 of 245

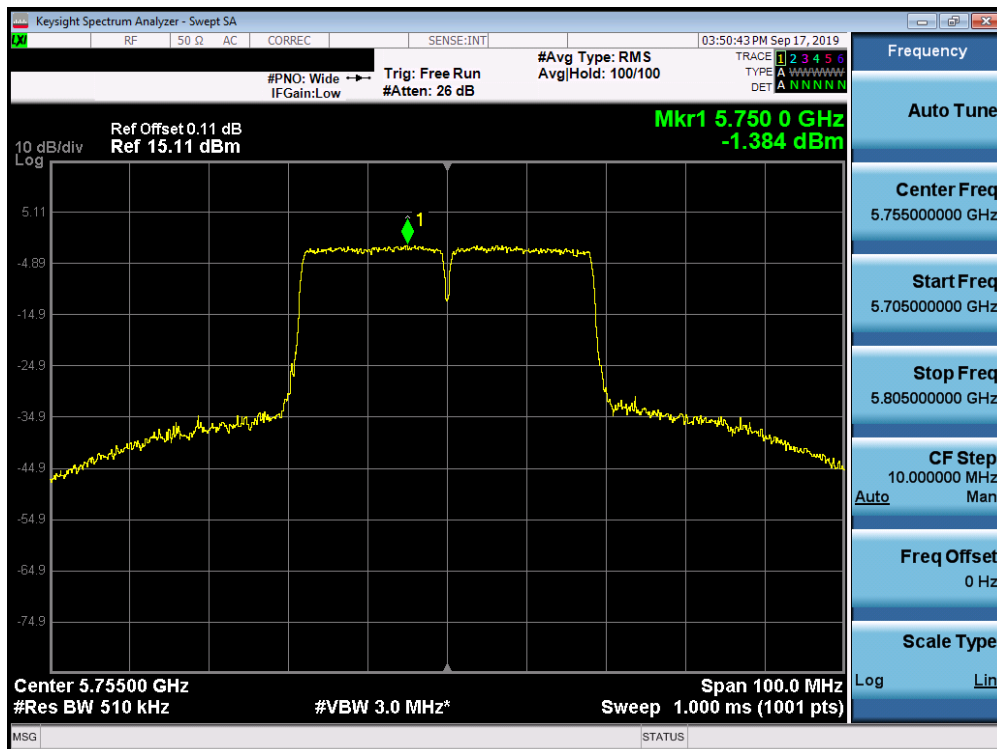


Plot 7-260. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 3) – Ch. 157)

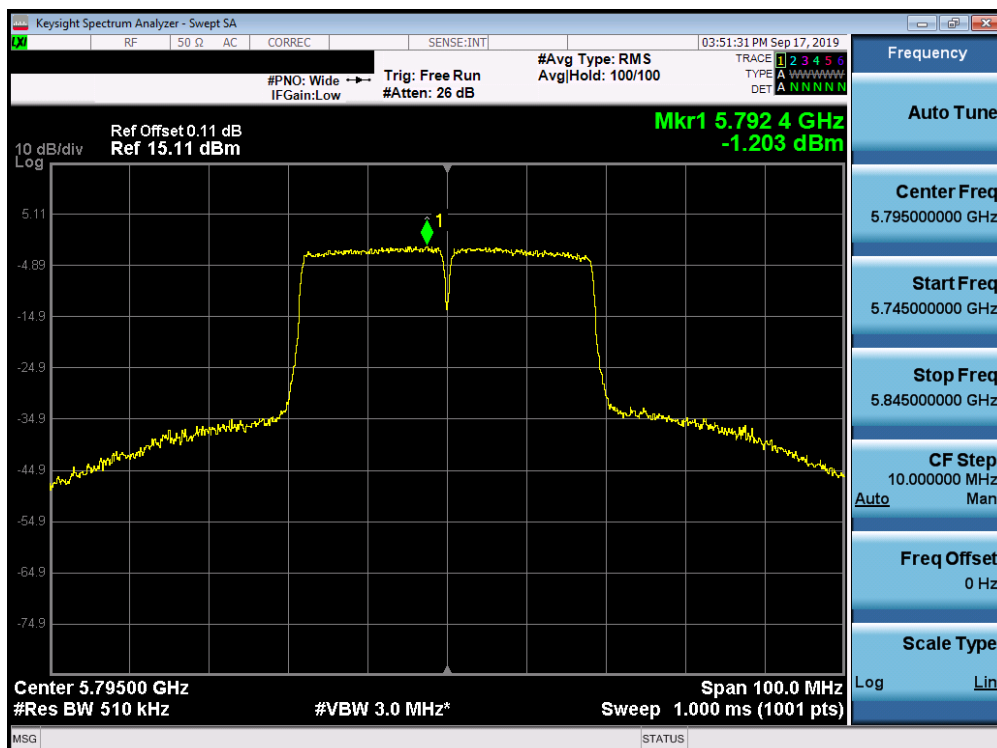


Plot 7-261. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 3) – Ch. 165)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 164 of 245

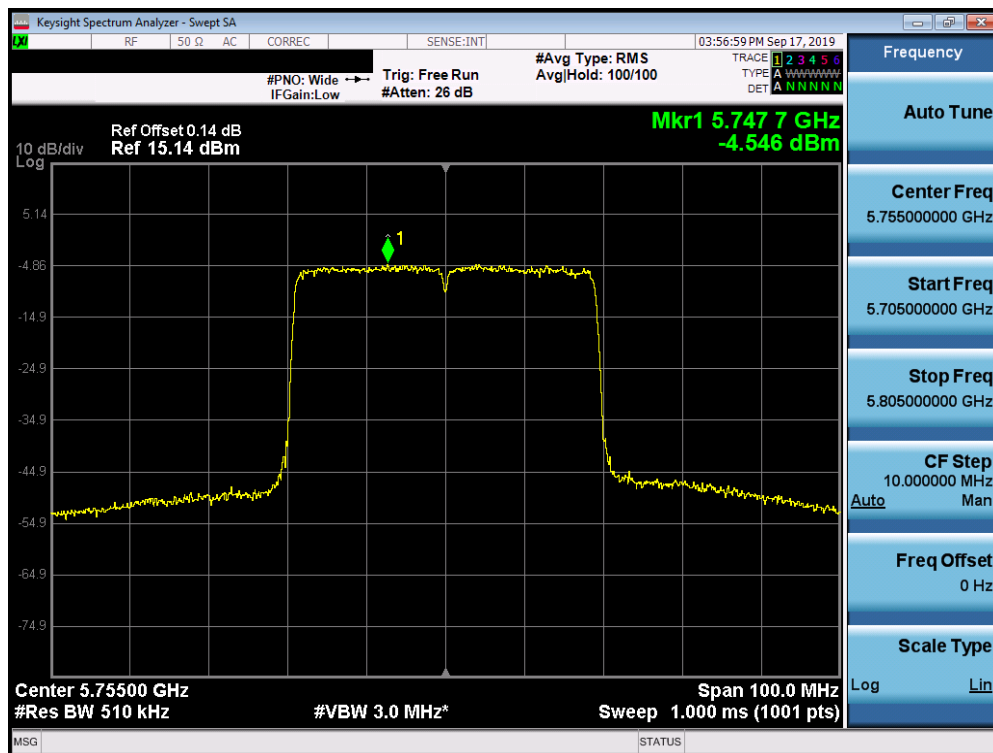


Plot 7-262. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 3) – Ch. 151)

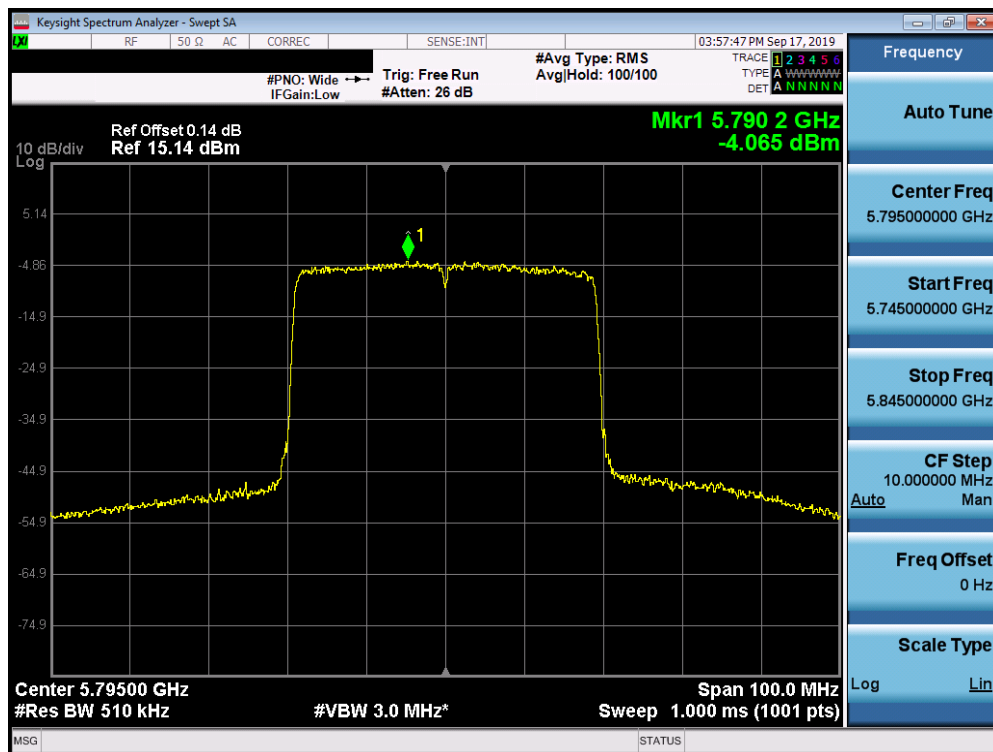


Plot 7-263. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 3) – Ch. 159)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 165 of 245

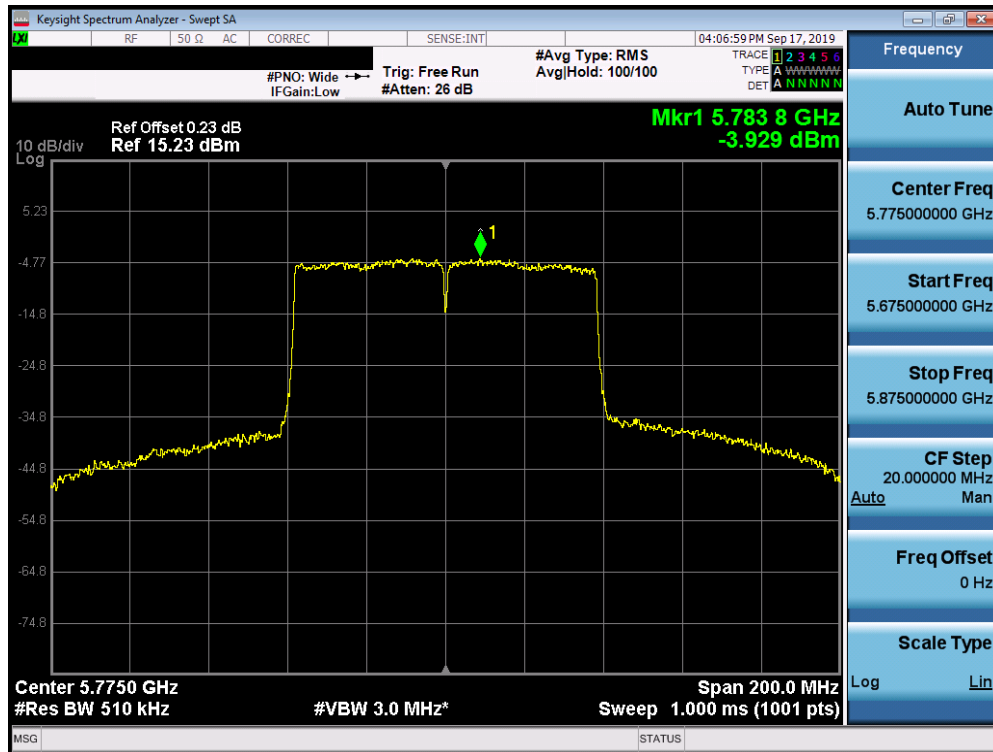


Plot 7-264. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 3) – Ch. 151)

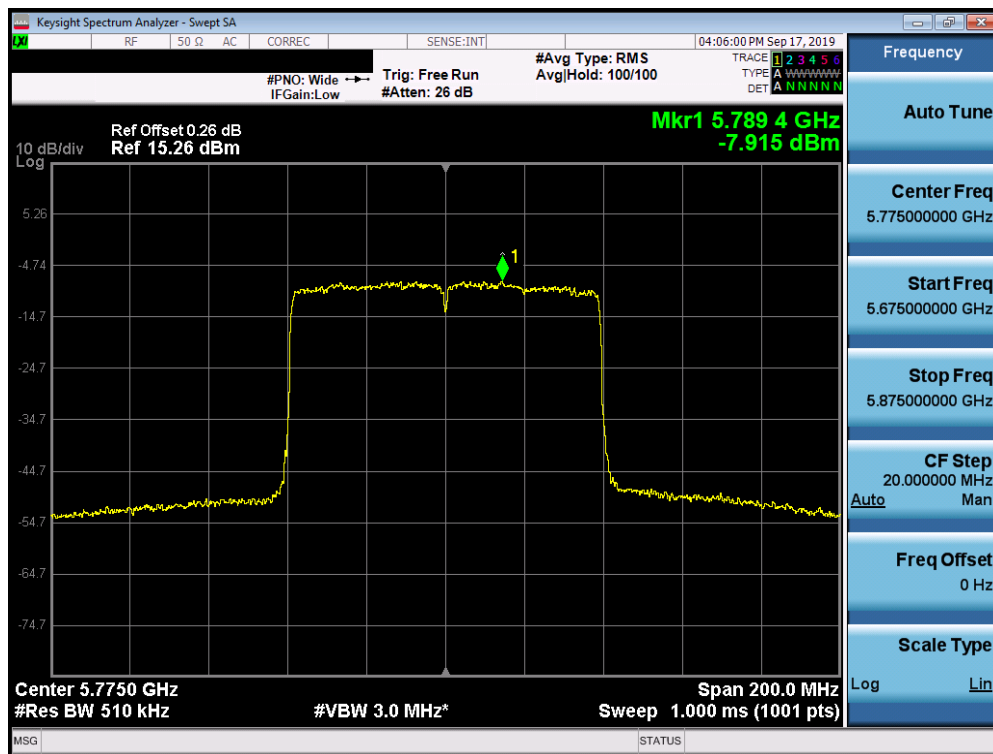


Plot 7-265. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 3) – Ch. 159)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 166 of 245



Plot 7-266. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 3) – Ch. 155)



Plot 7-267. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 3) – Ch. 155)

FCC ID: A3LSMN976U	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset		Page 167 of 245

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	6.5/7.2 (MCS0)	8.36	7.10	10.79	11.0	-0.21
	5200	40	a	6.5/7.2 (MCS0)	7.34	6.06	9.76	11.0	-1.24
	5240	48	a	6.5/7.2 (MCS0)	7.55	6.23	9.95	11.0	-1.05
	5180	36	n (20MHz)	6.5/7.2 (MCS0)	8.11	7.12	10.66	11.0	-0.34
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	6.83	5.82	9.36	11.0	-1.64
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	7.01	5.76	9.44	11.0	-1.56
	5180	36	ax (20MHz)	6.5/7.2 (MCS0)	4.54	4.00	7.29	11.0	-3.71
	5200	40	ax (20MHz)	6.5/7.2 (MCS0)	4.41	2.72	6.66	11.0	-4.34
	5240	48	ax (20MHz)	6.5/7.2 (MCS0)	4.32	2.65	6.57	11.0	-4.43
	5190	38	n (40MHz)	13.5/15 (MCS0)	4.82	2.07	6.67	11.0	-4.33
	5230	46	n (40MHz)	13.5/15 (MCS0)	3.49	0.95	5.42	11.0	-5.58
	5190	38	ax (40MHz)	13.5/15 (MCS0)	-0.73	-2.55	1.47	11.0	-9.53
	5230	46	ax (40MHz)	13.5/15 (MCS0)	-0.32	-2.02	1.93	11.0	-9.07
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	0.87	-1.63	2.81	11.0	-8.19
Band 2A	5210	42	ax (80MHz)	29.3/32.5 (MCS0)	-4.28	-4.64	-1.45	11.0	-12.45
	5260	52	a	6.5/7.2 (MCS0)	7.18	6.25	9.75	11.0	-1.25
	5280	56	a	6.5/7.2 (MCS0)	6.94	6.35	9.66	11.0	-1.34
	5320	64	a	6.5/7.2 (MCS0)	8.00	7.81	10.91	11.0	-0.09
	5260	52	n (20MHz)	6.5/7.2 (MCS0)	6.49	5.94	9.24	11.0	-1.76
	5280	56	n (20MHz)	6.5/7.2 (MCS0)	6.58	6.03	9.32	11.0	-1.68
	5320	64	n (20MHz)	6.5/7.2 (MCS0)	7.74	7.13	10.46	11.0	-0.54
	5260	52	ax (20MHz)	6.5/7.2 (MCS0)	4.34	2.42	6.50	11.0	-4.50
	5280	56	ax (20MHz)	6.5/7.2 (MCS0)	4.41	2.42	6.54	11.0	-4.46
	5320	64	ax (20MHz)	6.5/7.2 (MCS0)	4.41	2.70	6.65	11.0	-4.35
	5270	54	n (40MHz)	13.5/15 (MCS0)	3.28	0.82	5.23	11.0	-5.77
	5310	62	n (40MHz)	13.5/15 (MCS0)	4.30	2.54	6.52	11.0	-4.48
	5270	54	ax (40MHz)	13.5/15 (MCS0)	-0.57	-1.92	1.82	11.0	-9.18
	5310	62	ax (40MHz)	13.5/15 (MCS0)	-0.62	-2.12	1.71	11.0	-9.29
Band 2C	5290	58	ac (80MHz)	29.3/32.5 (MCS0)	1.19	-1.50	3.06	11.0	-7.94
	5290	58	ax (80MHz)	29.3/32.5 (MCS0)	-3.65	-5.02	-1.27	11.0	-12.27
	5500	100	a	6.5/7.2 (MCS0)	7.86	7.82	10.85	11.0	-0.15
	5600	120	a	6.5/7.2 (MCS0)	7.03	7.06	10.05	11.0	-0.95
	5720	144	a	6.5/7.2 (MCS0)	6.75	6.85	9.81	11.0	-1.19
	5500	100	n (20MHz)	6.5/7.2 (MCS0)	7.55	7.66	10.61	11.0	-0.39
	5600	120	n (20MHz)	6.5/7.2 (MCS0)	6.75	6.61	9.69	11.0	-1.31
	5720	144	n (20MHz)	6.5/7.2 (MCS0)	6.93	6.04	9.52	11.0	-1.48
	5500	100	ax (20MHz)	6.5/7.2 (MCS0)	4.87	2.34	6.80	11.0	-4.20
	5600	120	ax (20MHz)	6.5/7.2 (MCS0)	5.13	2.94	7.19	11.0	-3.81
	5720	144	ax (20MHz)	6.5/7.2 (MCS0)	4.94	2.57	6.92	11.0	-4.08
	5510	102	n (40MHz)	13.5/15 (MCS0)	4.42	1.98	6.38	11.0	-4.62
	5590	118	n (40MHz)	13.5/15 (MCS0)	3.13	1.10	5.24	11.0	-5.76
	5710	142	n (40MHz)	13.5/15 (MCS0)	3.13	1.44	5.38	11.0	-5.62
	5510	102	ax (40MHz)	13.5/15 (MCS0)	-0.31	-2.37	1.79	11.0	-9.21
	5590	118	ax (40MHz)	13.5/15 (MCS0)	-0.32	-2.10	1.89	11.0	-9.11
	5710	142	ax (40MHz)	13.5/15 (MCS0)	-0.30	-1.62	2.10	11.0	-8.90
	5530	106	ac (80MHz)	29.3/32.5 (MCS0)	-0.20	-1.33	2.28	11.0	-8.72
	5610	122	ac (80MHz)	29.3/32.5 (MCS0)	-1.34	-2.33	1.20	11.0	-9.80
	5690	138	ac (80MHz)	29.3/32.5 (MCS0)	-0.85	-1.81	1.71	11.0	-9.29
	5530	106	ax (80MHz)	29.3/32.5 (MCS0)	-4.55	-4.49	-1.51	11.0	-12.51
	5610	122	ax (80MHz)	29.3/32.5 (MCS0)	-4.25	-6.39	-2.18	11.0	-13.18
	5690	138	ax (80MHz)	29.3/32.5 (MCS0)	-4.03	-5.98	-1.88	11.0	-12.88

Table 7-25. Bands 1, 2A, 2C MIMO Conducted Power Spectral Density Measurements

FCC ID: A3LSMN976U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset	Page 168 of 245	

	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Antenn-1 Power Density [dBm]	Antenn-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5745	149	a	6.5/7.2 (MCS0)	4.05	3.62	6.85	30.0	-23.15
	5785	157	a	6.5/7.2 (MCS0)	4.36	3.81	7.10	30.0	-22.90
	5825	165	a	6.5/7.2 (MCS0)	4.25	3.55	6.93	30.0	-23.07
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	3.77	3.25	6.53	30.0	-23.47
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	4.06	2.21	6.24	30.0	-23.76
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	4.40	3.82	7.13	30.0	-22.87
	5745	149	ax (20MHz)	6.5/7.2 (MCS0)	1.42	0.28	3.90	30.0	-26.10
	5785	157	ax (20MHz)	6.5/7.2 (MCS0)	2.02	0.63	4.39	30.0	-25.61
	5825	165	ax (20MHz)	6.5/7.2 (MCS0)	2.12	0.47	4.38	30.0	-25.62
	5755	151	n (40MHz)	13.5/15 (MCS0)	0.28	0.28	3.29	30.0	-26.71
	5795	159	n (40MHz)	13.5/15 (MCS0)	0.15	-1.38	2.46	30.0	-27.54
	5755	151	ax (40MHz)	13.5/15 (MCS0)	-3.03	-1.20	0.99	30.0	-29.01
	5795	159	ax (40MHz)	13.5/15 (MCS0)	2.53	-4.55	3.30	30.0	-26.70
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-3.25	-1.20	0.91	30.0	-29.09
	5775	155	ax (80MHz)	29.3/32.5 (MCS0)	-6.79	-7.92	-4.31	30.0	-34.31

Table 7-26. Band 3 MIMO Conducted Power Spectral Density Measurements

FCC ID: A3LSMN976U	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset	Page 169 of 245

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 8.11 dBm for Antenna-1 and 7.12 dBm for Antenna-2.

Antenna 1 + Antenna 2 = MIMO

$$(8.11 \text{ dBm} + 7.12 \text{ dBm}) = (6.48 \text{ mW} + 5.16 \text{ mW}) = 11.63 \text{ mW} = 10.66 \text{ dBm}$$

FCC ID: A3LSMN976U		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1909040147-08.A3L	Test Dates: 9/09 - 10/30/2019	EUT Type: Portable Handset	Page 170 of 245	