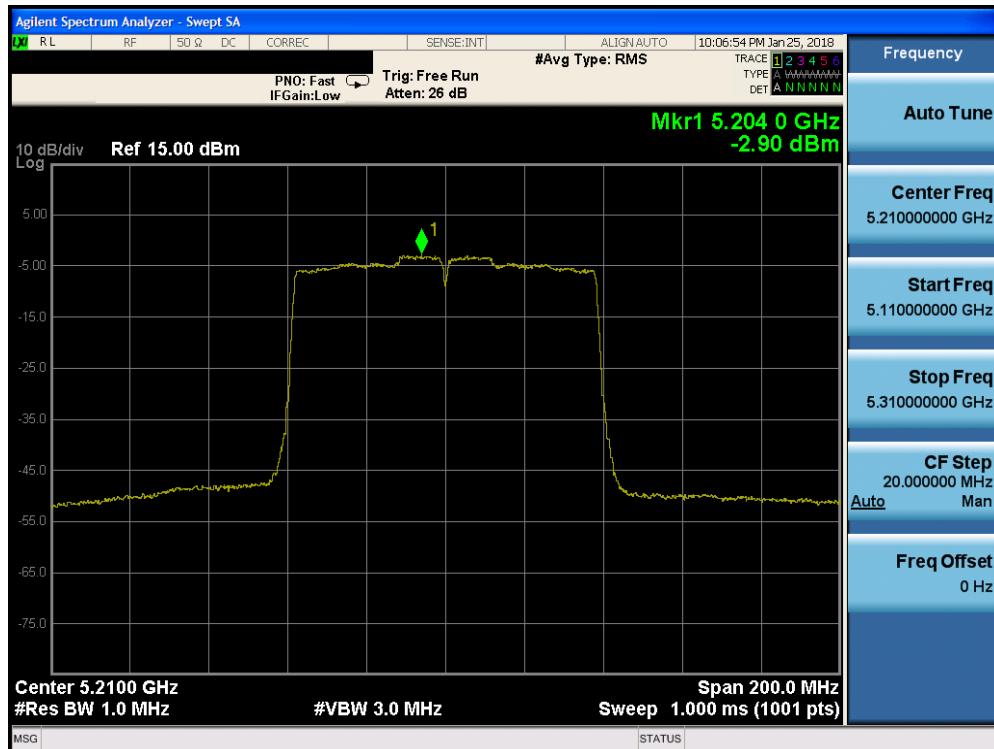
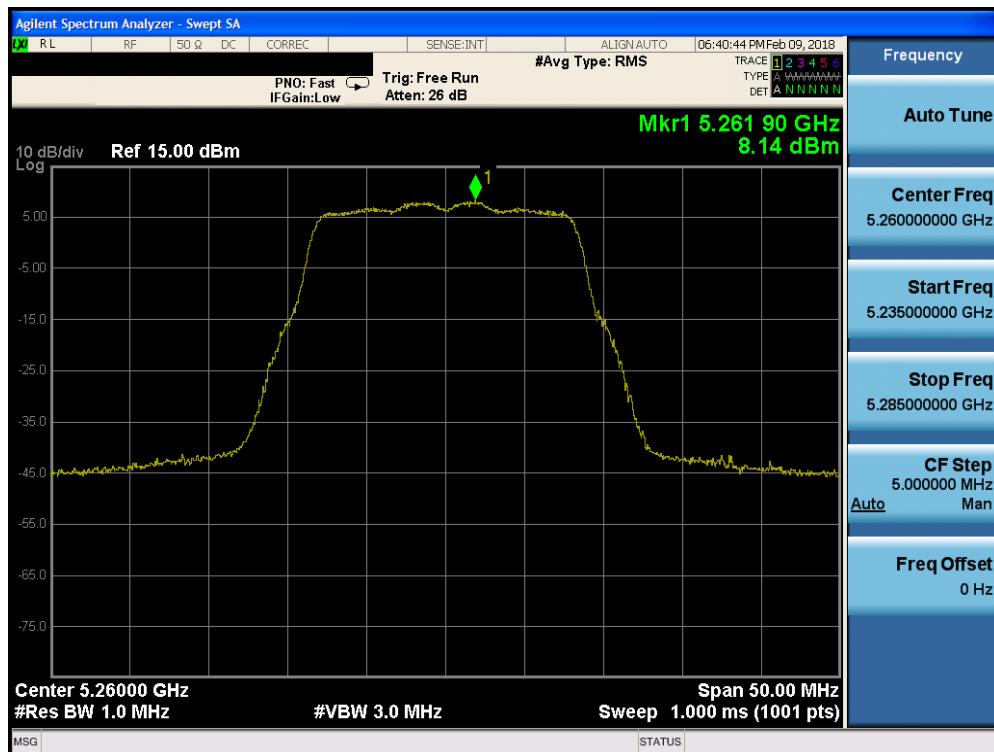


Plot 7-179. Power Spectral Density Plot FCC SISO ANT2 (40MHz BW 802.11n (UNII Band 1) – Ch. 46)

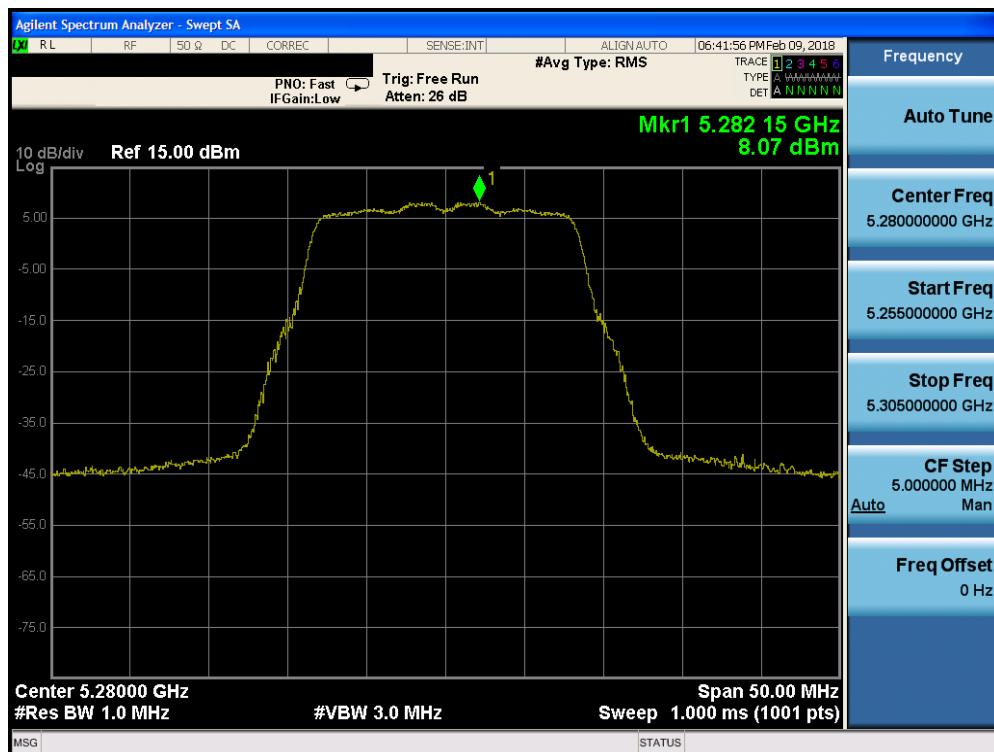


Plot 7-180. Power Spectral Density Plot FCC SISO ANT2 (80MHz BW 802.11ac (UNII Band 1) – Ch. 42)

FCC ID: BCGA1954	PCTEST ENGINEERING LABORATORY, INC.		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 128 of 259	

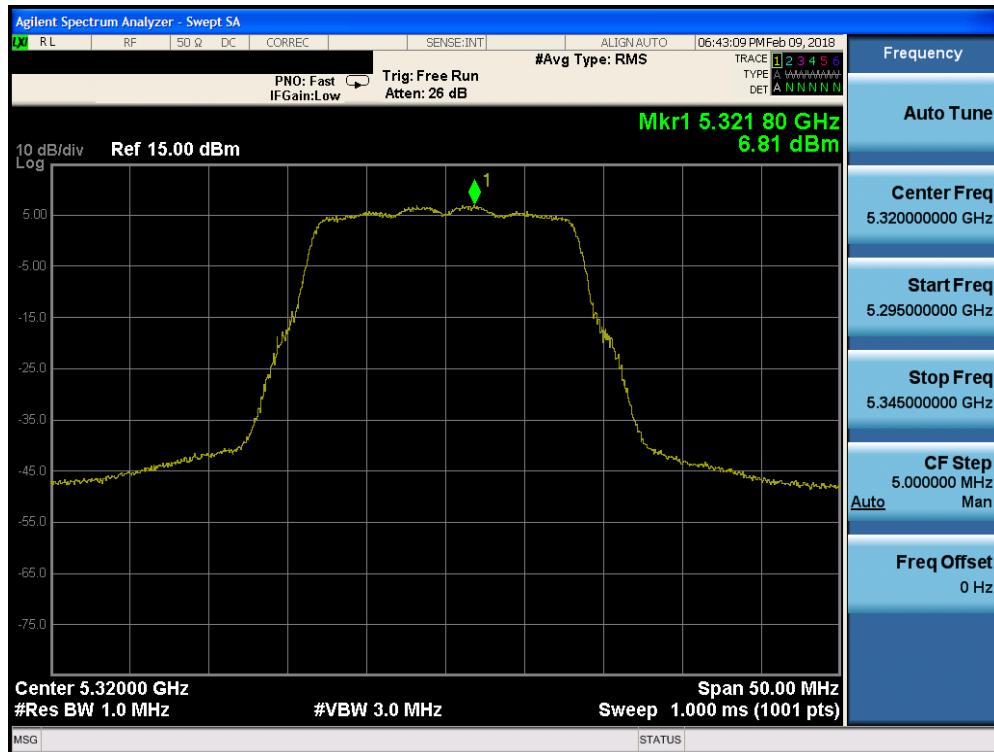


Plot 7-181. Power Spectral Density Plot FCC SISO ANT2 (802.11a (UNII Band 2A) – Ch. 52)

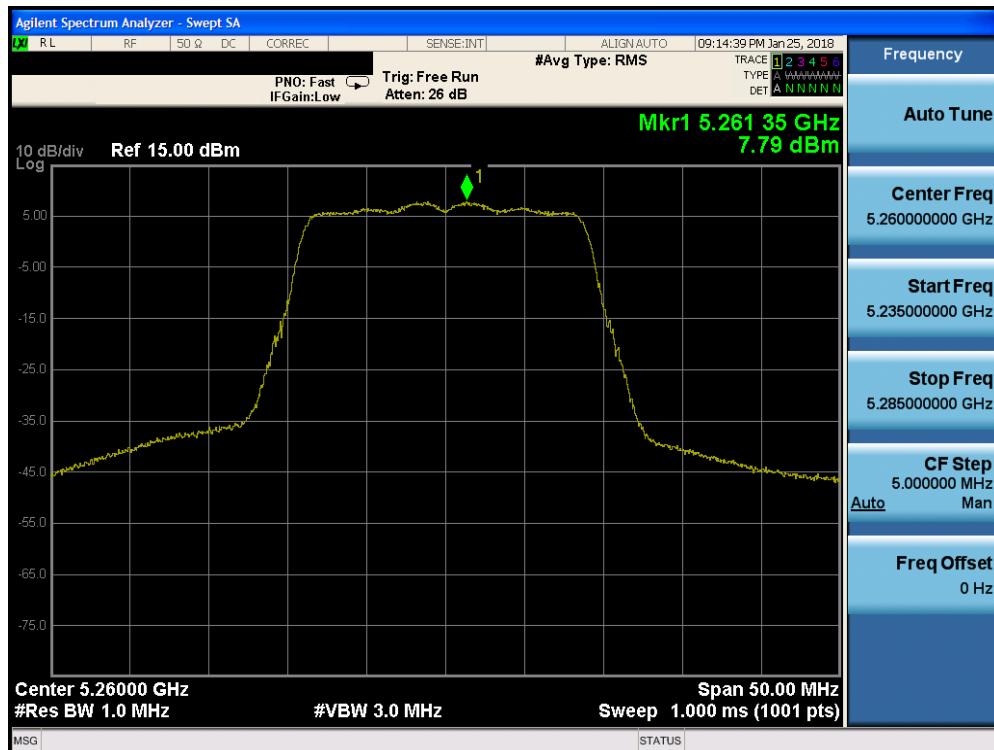


Plot 7-182. Power Spectral Density Plot FCC SISO ANT2 (802.11a (UNII Band 2A) – Ch. 56)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 129 of 259

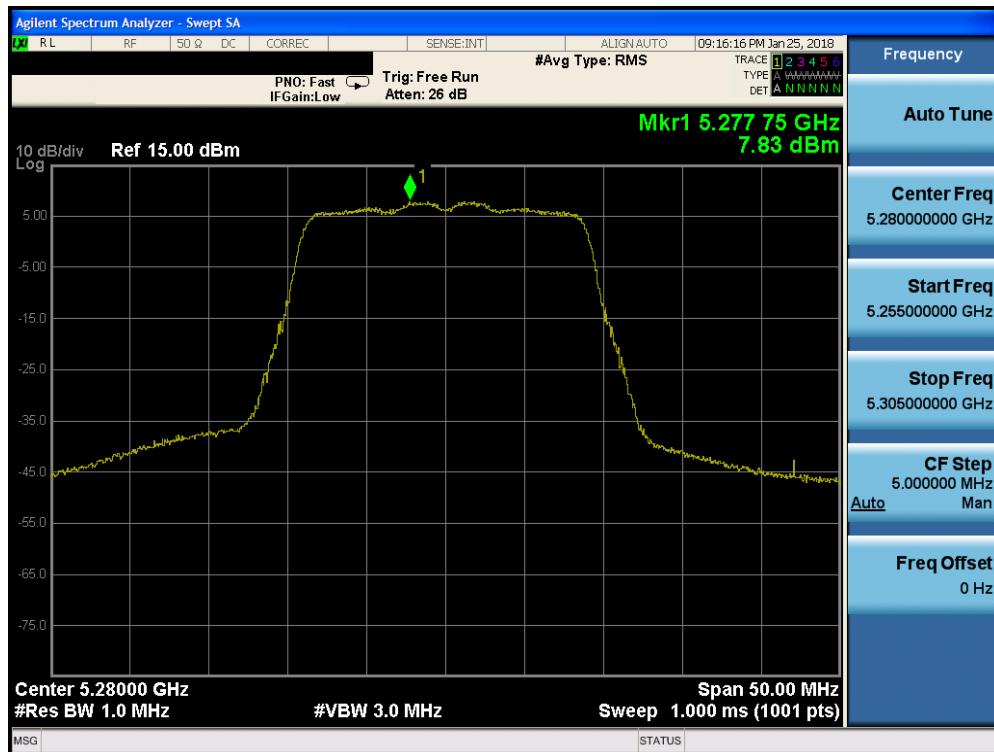


Plot 7-183. Power Spectral Density Plot FCC SISO ANT2 (802.11a) (UNII Band 2A) – Ch. 64

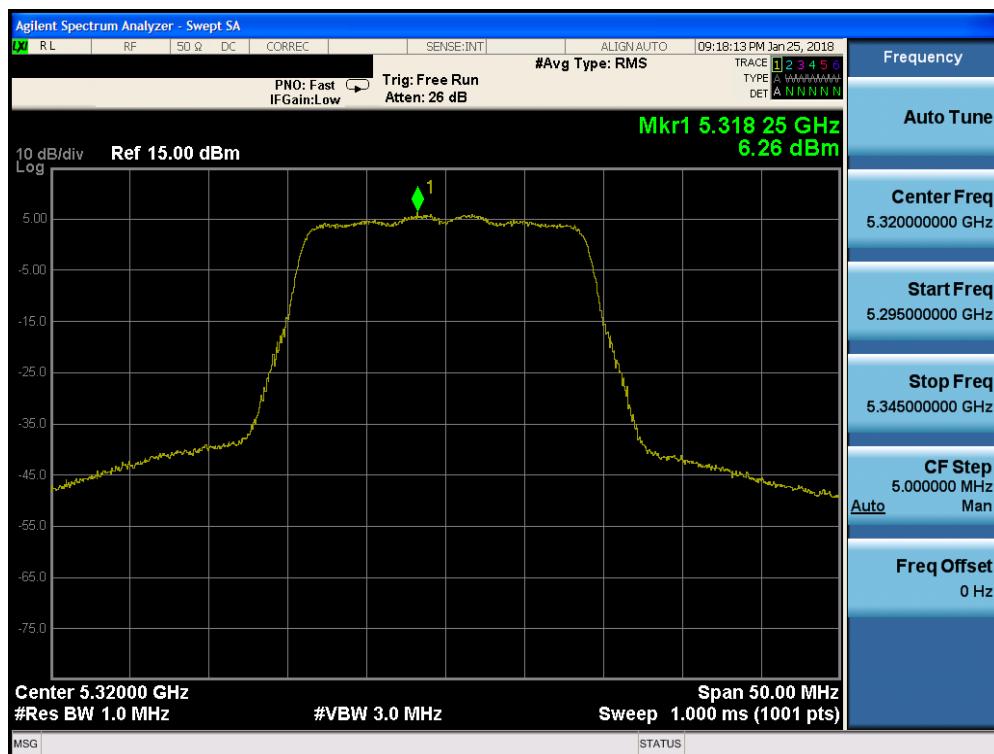


Plot 7-184. Power Spectral Density Plot FCC SISO ANT2 (20MHz BW 802.11n) (UNII Band 2A) – Ch. 52

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device		Page 130 of 259

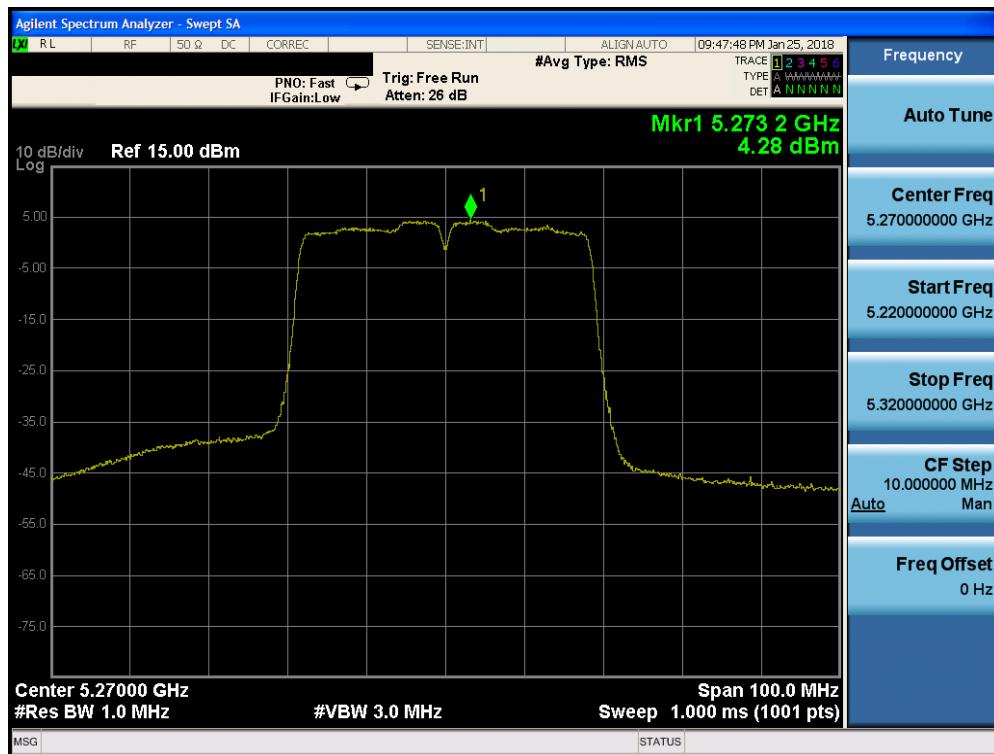


Plot 7-185. Power Spectral Density Plot FCC SISO ANT2 (20MHz BW 802.11n (UNII Band 2A) – Ch. 56)



Plot 7-186. Power Spectral Density Plot FCC SISO ANT2 (20MHz BW 802.11n (UNII Band 2A) – Ch. 64)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 131 of 259

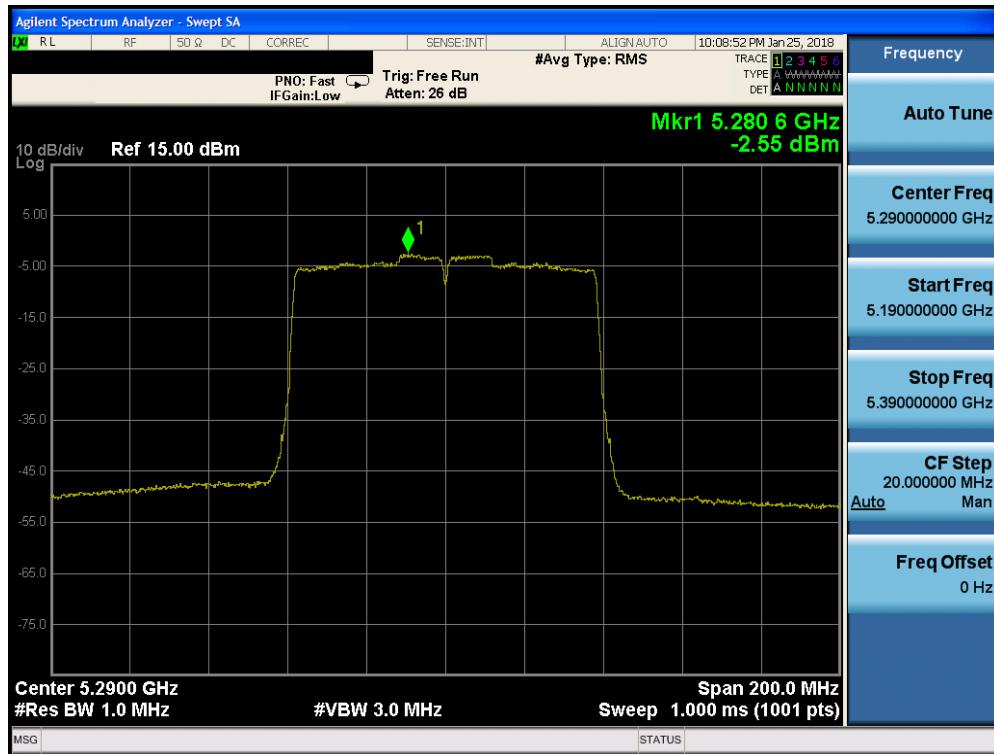


Plot 7-187. Power Spectral Density Plot FCC SISO ANT2 (40MHz BW 802.11n (UNII Band 2A) – Ch. 54)

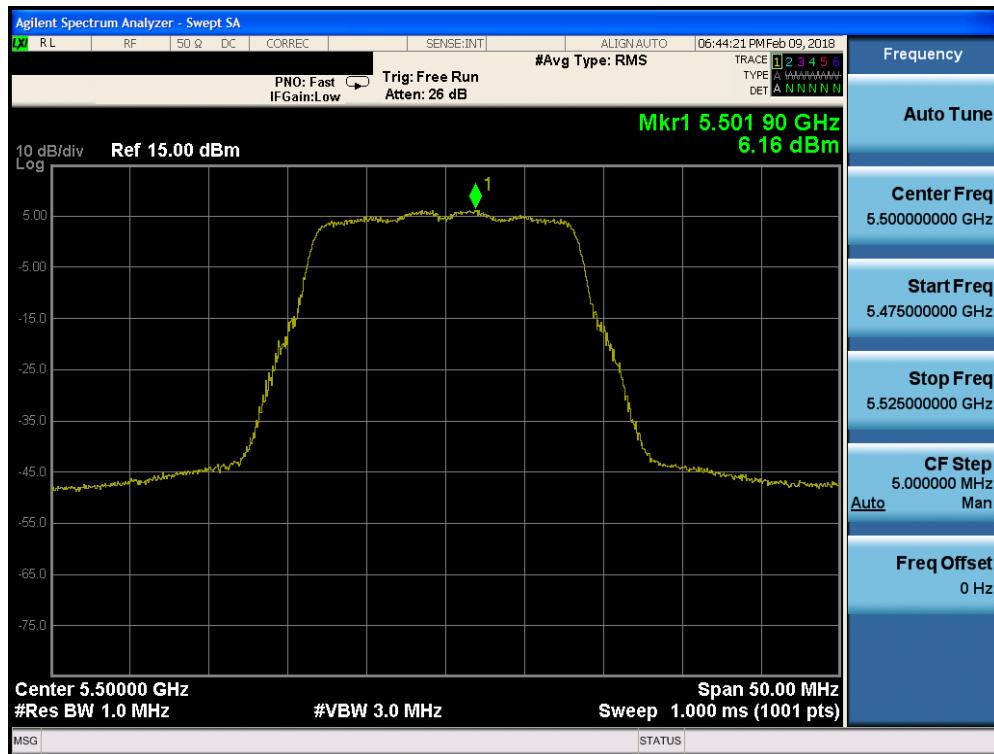


Plot 7-188. Power Spectral Density Plot FCC SISO ANT2 (40MHz BW 802.11n (UNII Band 2A) – Ch. 62)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 132 of 259	

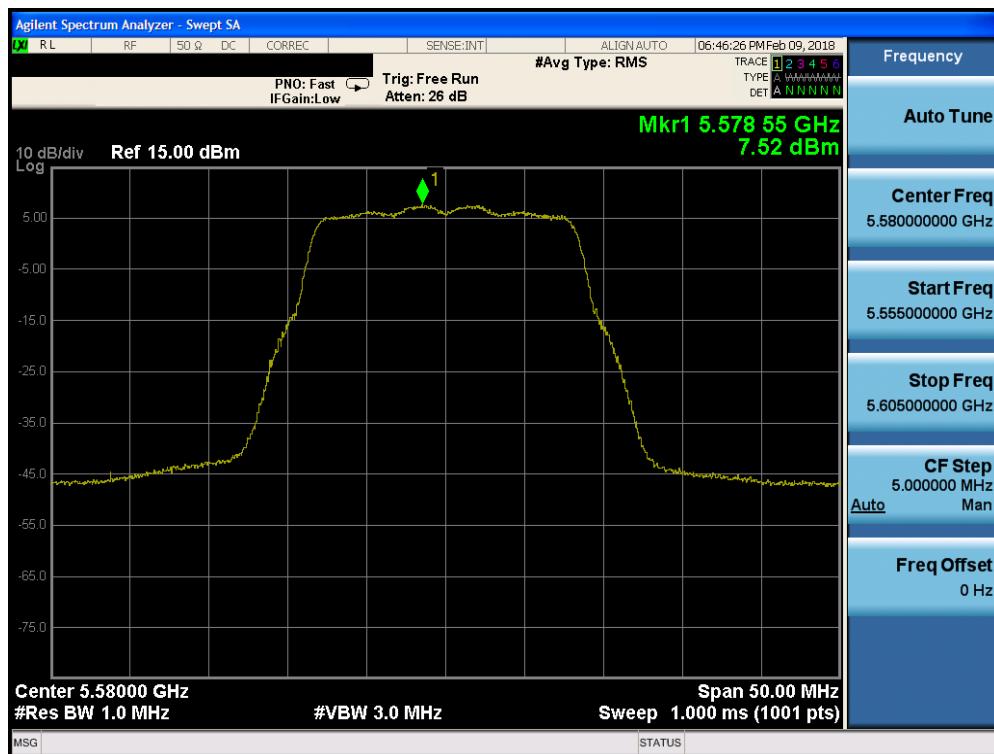


Plot 7-189. Power Spectral Density Plot FCC SISO ANT2 (80MHz BW 802.11ac (UNII Band 2A) – Ch. 58)

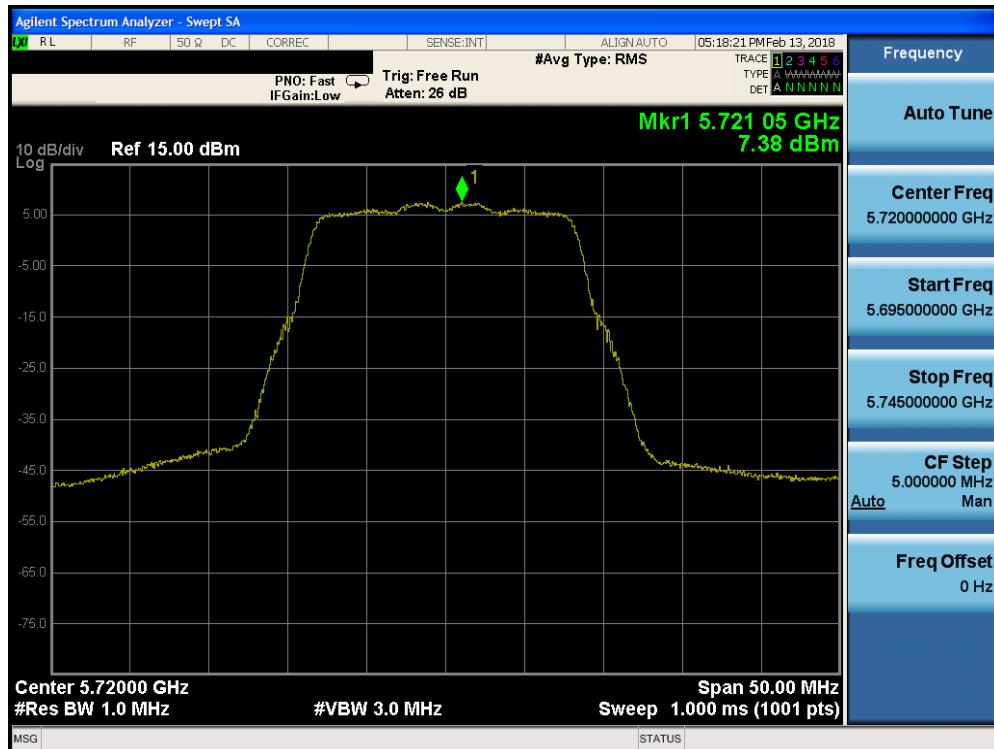


Plot 7-190. Power Spectral Density Plot FCC SISO ANT2 (802.11a (UNII Band 2C) – Ch. 100)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 133 of 259

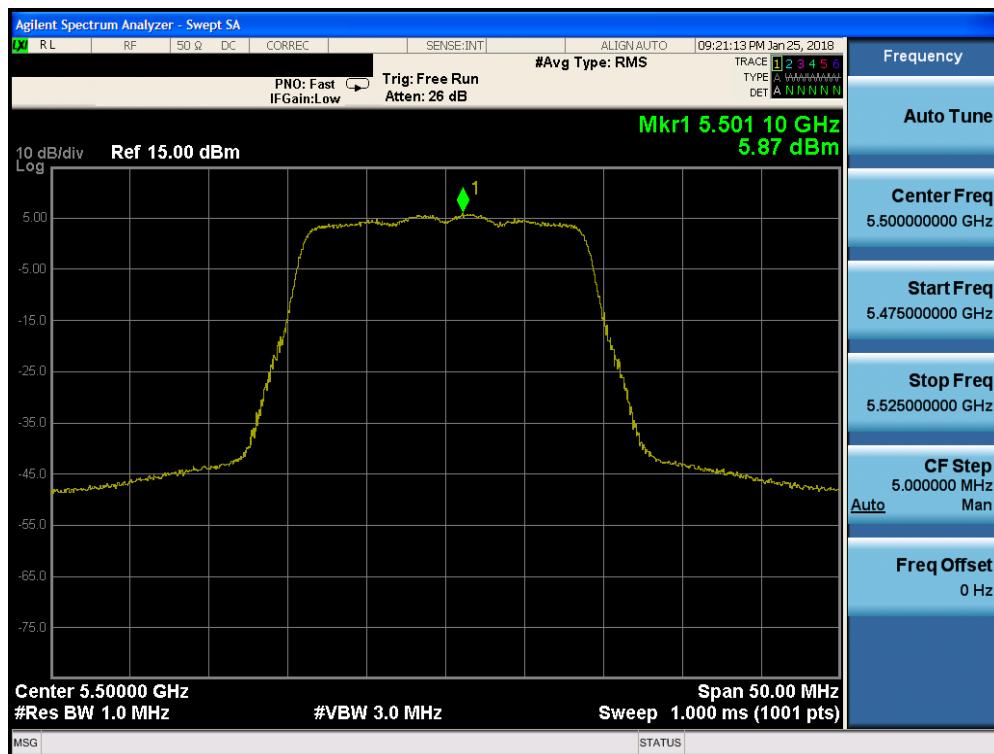


Plot 7-191. Power Spectral Density Plot FCC SISO ANT2 (802.11a (UNII Band 2C) – Ch. 116)

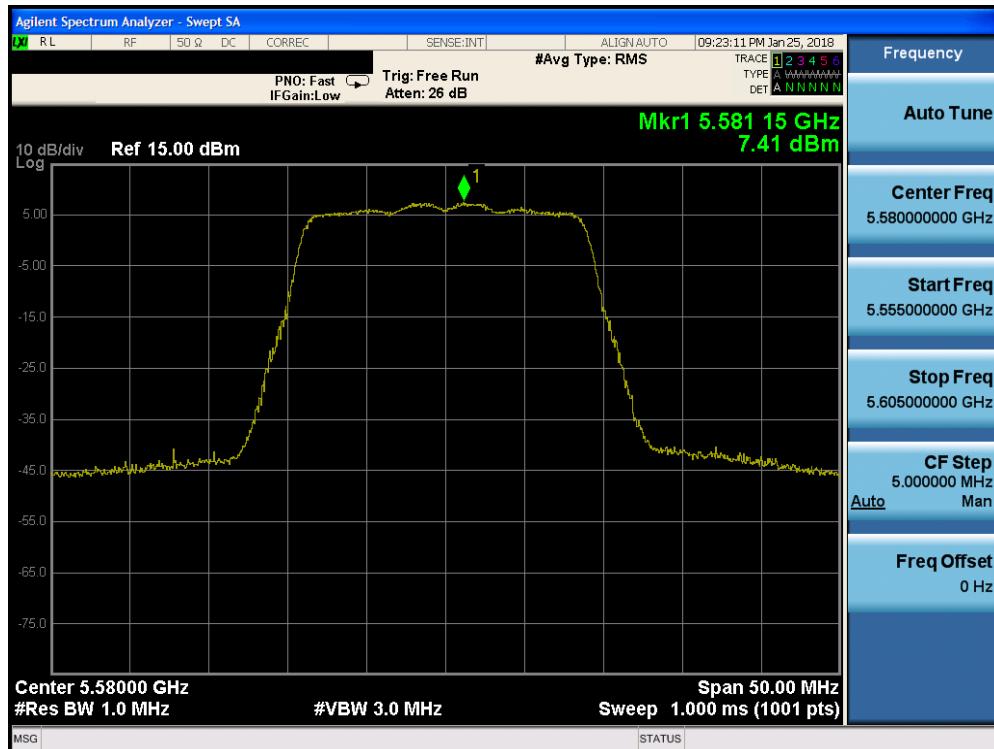


Plot 7-192. Power Spectral Density Plot FCC SISO ANT2 (802.11a (UNII Band 2C) – Ch. 144)

FCC ID: BCGA1954	PCTEST ENGINEERING LABORATORY, INC.		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 134 of 259	

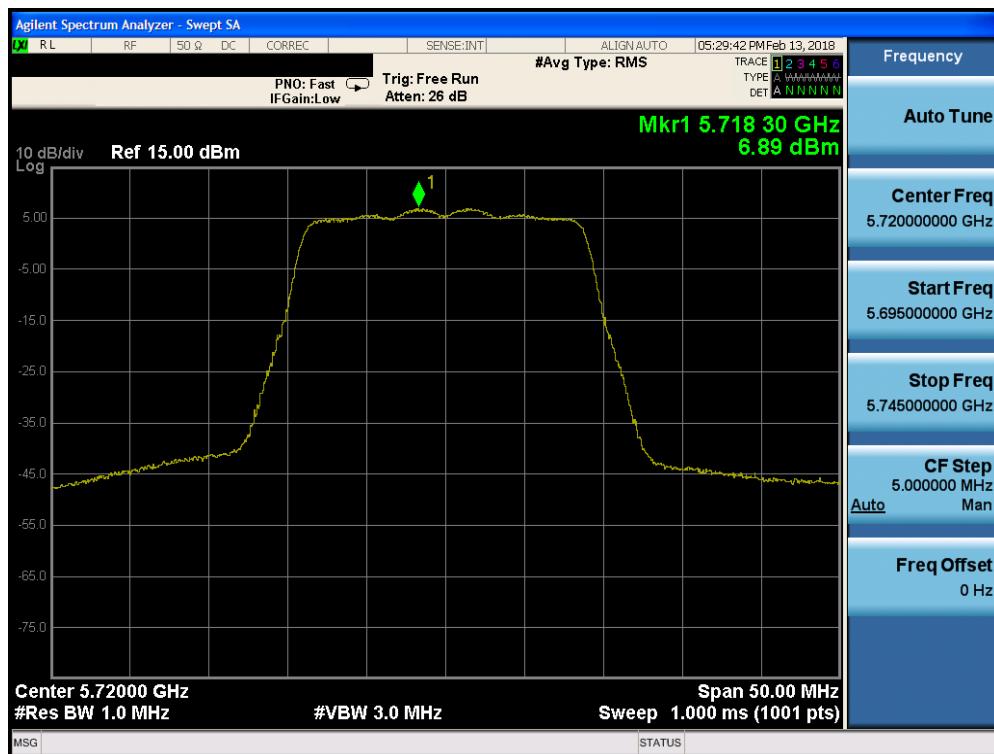


Plot 7-193. Power Spectral Density Plot FCC SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) – Ch. 100)

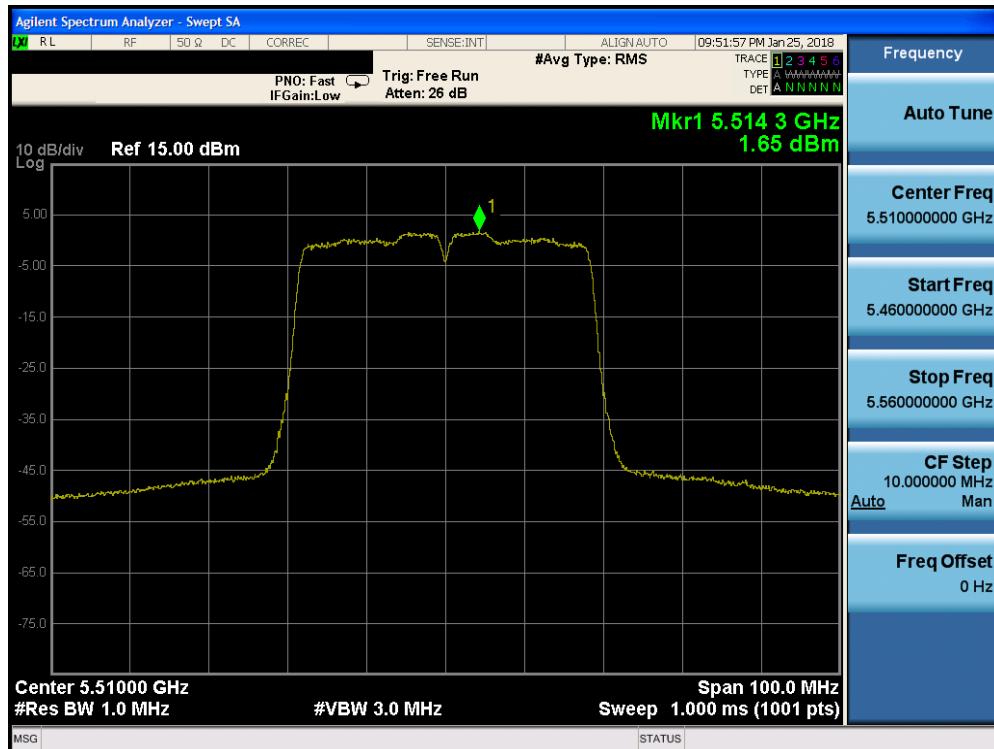


Plot 7-194. Power Spectral Density Plot FCC SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) – Ch. 116)

FCC ID: BCGA1954	PCTEST ENGINEERING LABORATORY, INC.		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device		Page 135 of 259

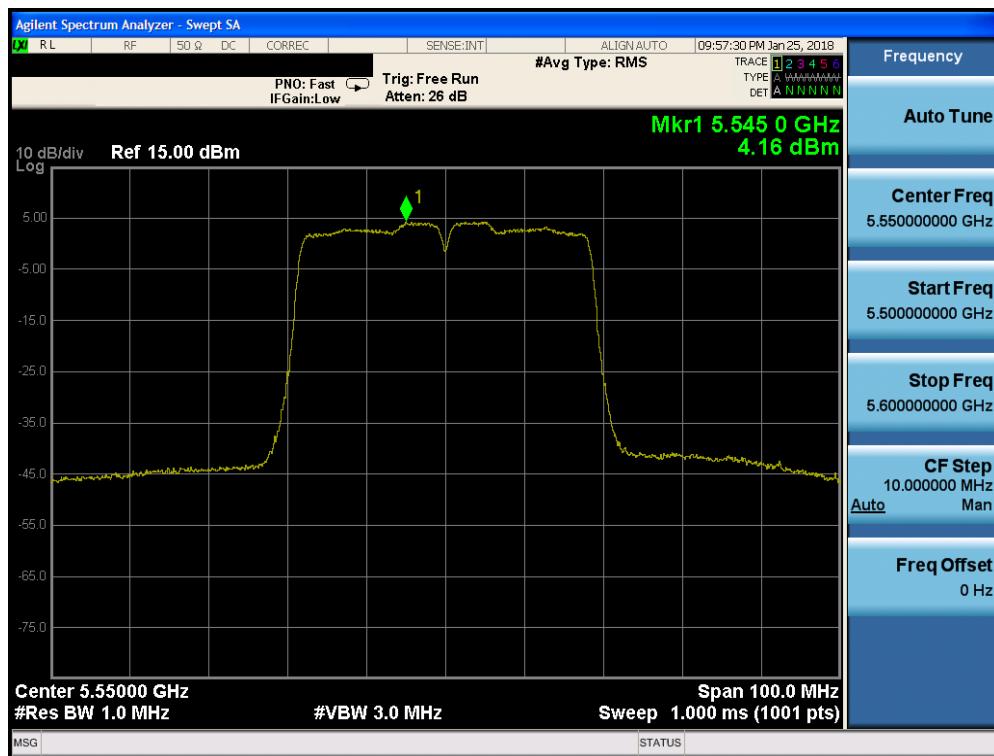


Plot 7-195. Power Spectral Density Plot FCC SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) – Ch. 144)

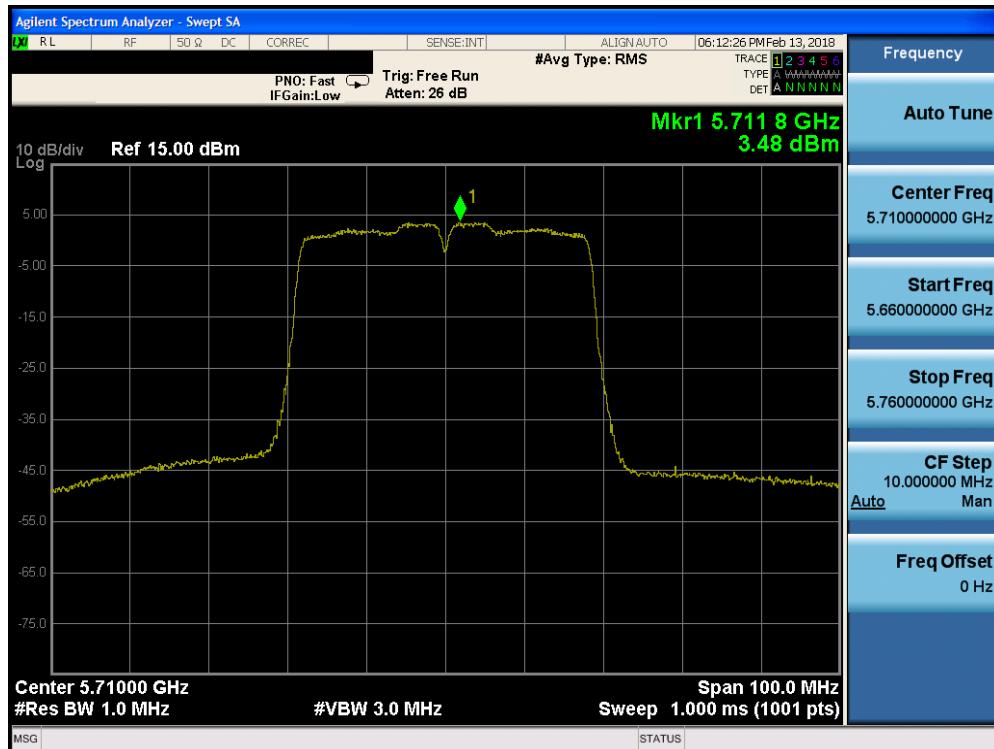


Plot 7-196. Power Spectral Density Plot FCC SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) – Ch. 102)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 136 of 259

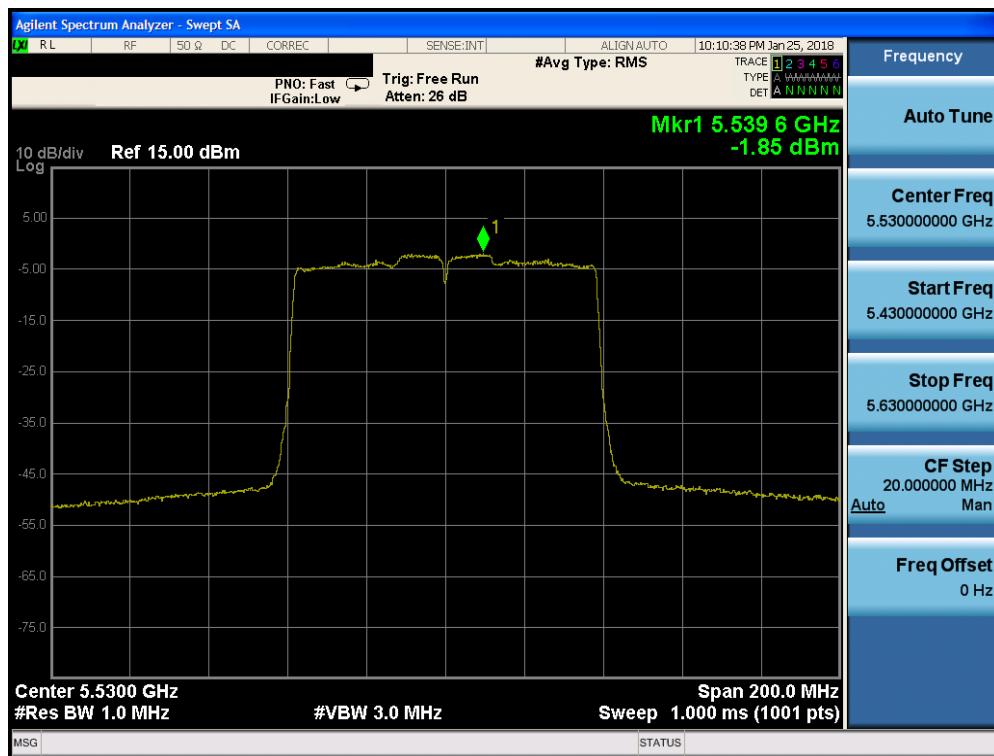


Plot 7-197. Power Spectral Density Plot FCC SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) – Ch. 110)

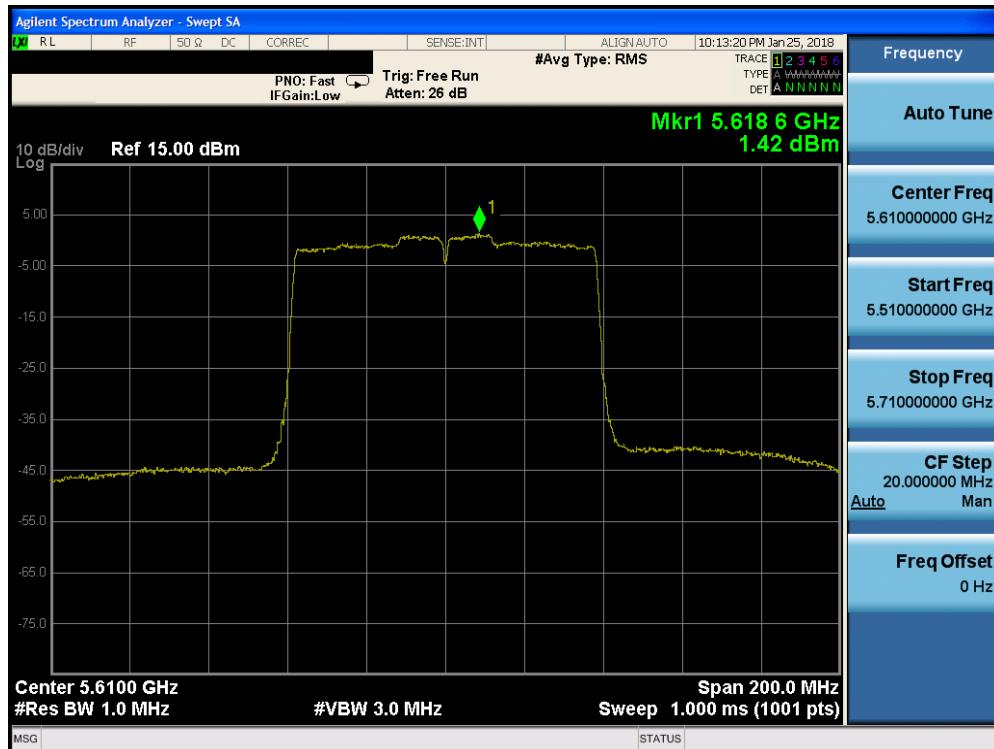


Plot 7-198. Power Spectral Density Plot FCC SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) – Ch. 142)

FCC ID: BCGA1954	PCTEST ENGINEERING LABORATORY, INC.		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device		Page 137 of 259



Plot 7-199. Power Spectral Density Plot FCC SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 106)



Plot 7-200. Power Spectral Density Plot FCC SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 122)

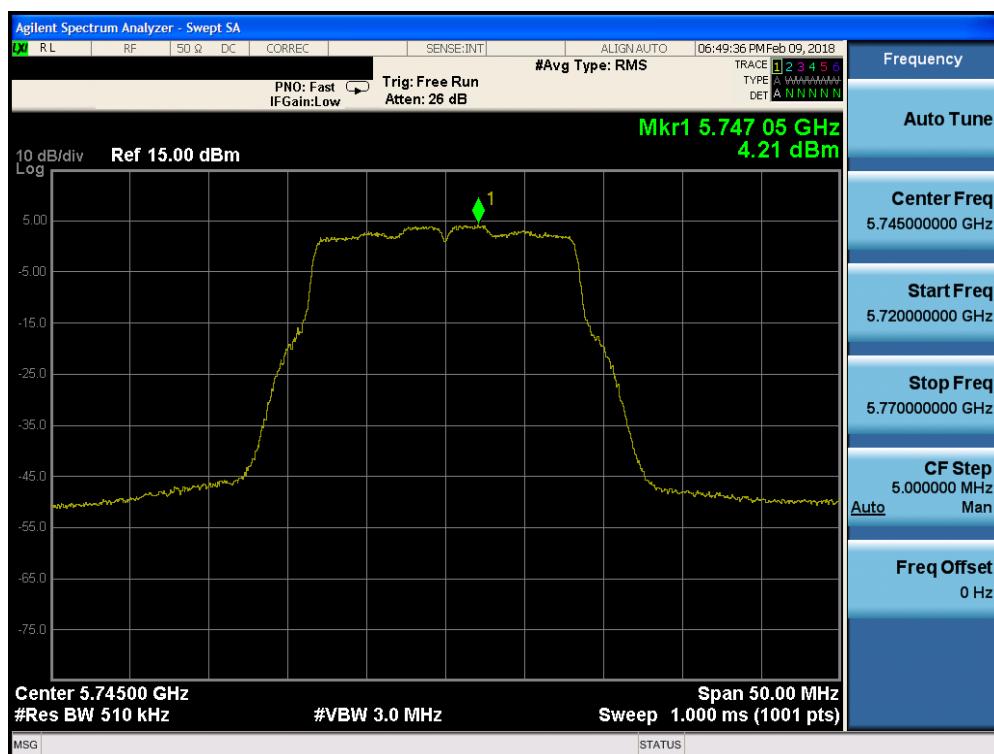
FCC ID: BCGA1954	PCTEST ENGINEERING LABORATORY, INC.		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device		Page 138 of 259



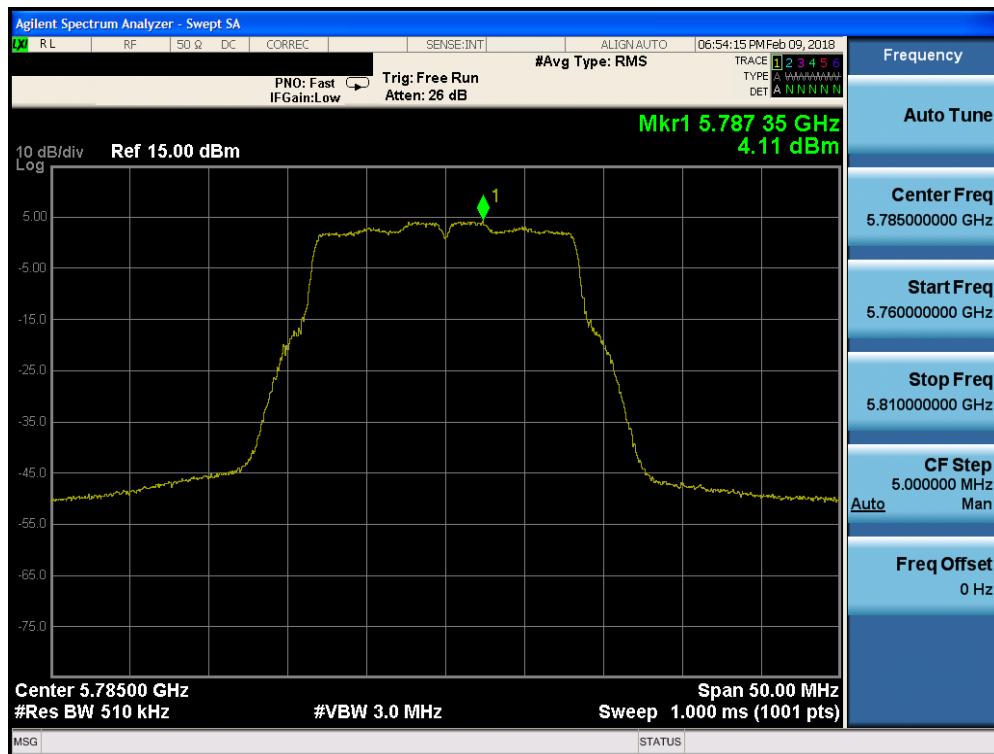
Plot 7-201. Power Spectral Density Plot FCC SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 138)

FCC ID: BCGA1954	PCTEST ENGINEERING LABORATORY, INC.		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 139 of 259	

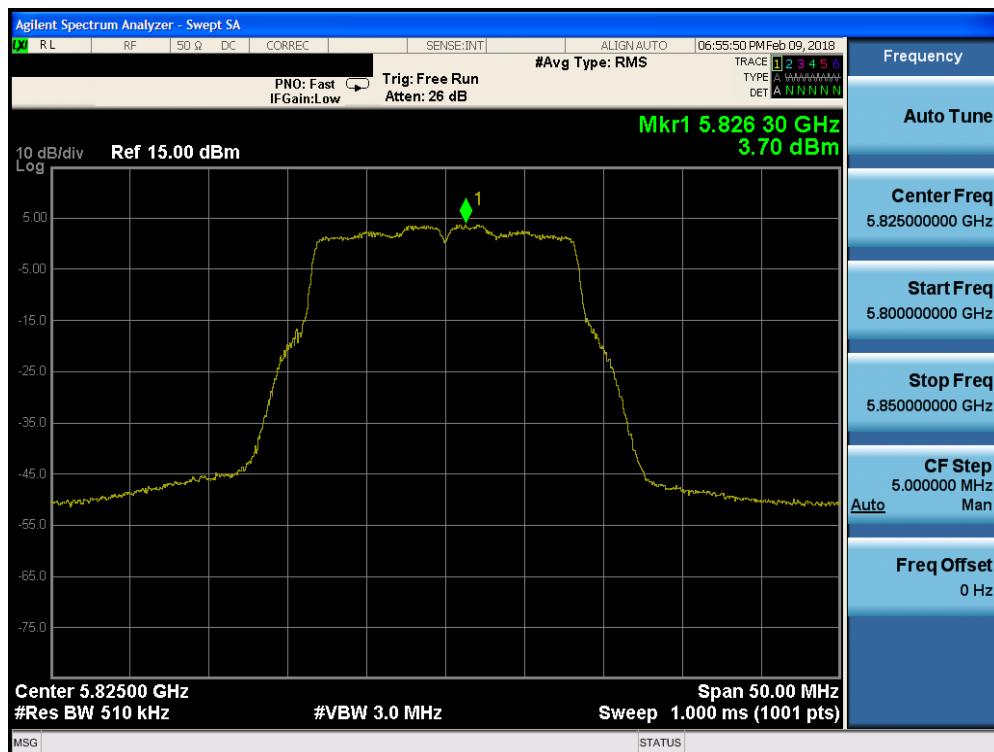
	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5745	149	a	6	4.21	30.0	-25.79
	5785	157	a	6	4.11	30.0	-25.89
	5825	165	a	6	3.70	30.0	-26.30
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	4.18	30.0	-25.82
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	3.59	30.0	-26.41
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	3.97	30.0	-26.03
	5755	151	n (40MHz)	13.5/15 (MCS0)	0.54	30.0	-29.46
	5795	159	n (40MHz)	13.5/15 (MCS0)	0.18	30.0	-29.82
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	0.14	30.0	-29.86

Table 7-31. Band 3 Conducted Power Spectral Density Measurements SISO ANT2

Plot 7-202. Power Spectral Density Plot FCC SISO ANT2 (802.11a (UNII Band 3) – Ch. 149)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 140 of 259	



Plot 7-203. Power Spectral Density Plot FCC SISO ANT2 (802.11a (UNII Band 3) – Ch. 157)

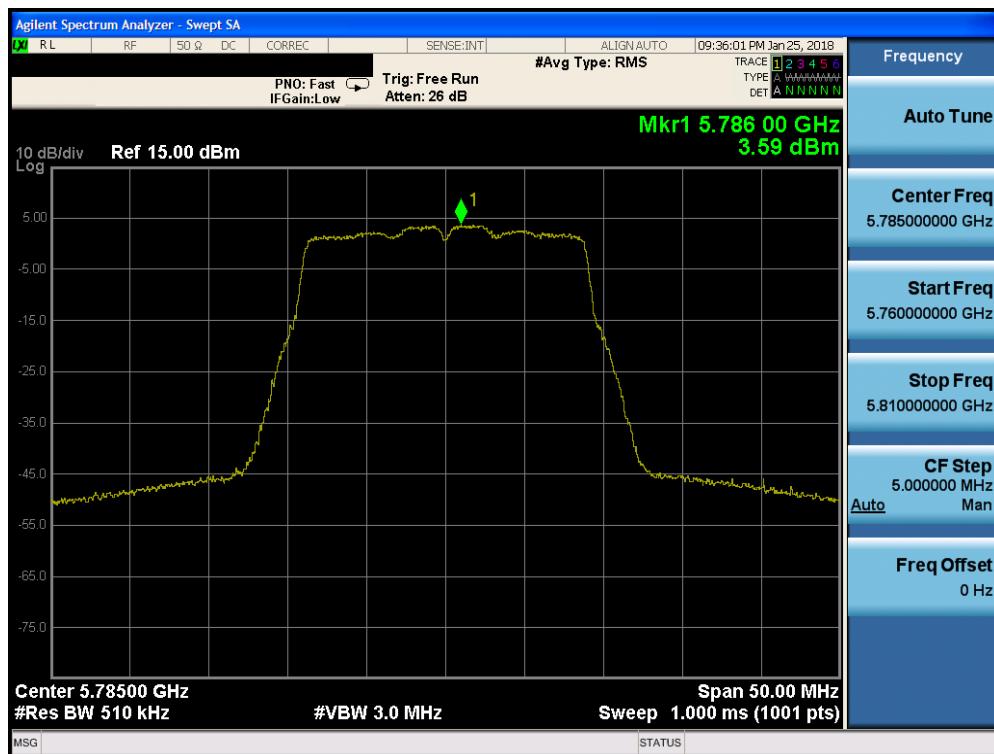


Plot 7-204. Power Spectral Density Plot FCC SISO ANT2 (802.11a (UNII Band 3) – Ch. 165)

FCC ID: BCGA1954	 PCTEST ENGINEERING LABORATORY, INC.		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device		Page 141 of 259

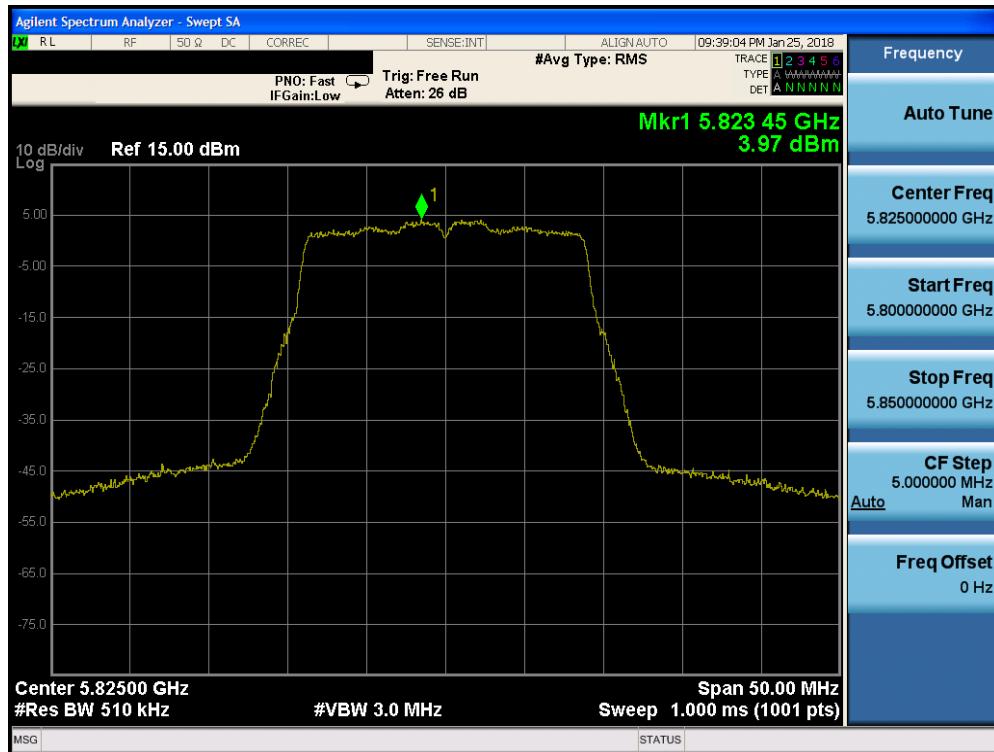


Plot 7-205. Power Spectral Density Plot FCC SISO ANT2 (20MHz BW 802.11n (UNII Band 3) – Ch. 149)

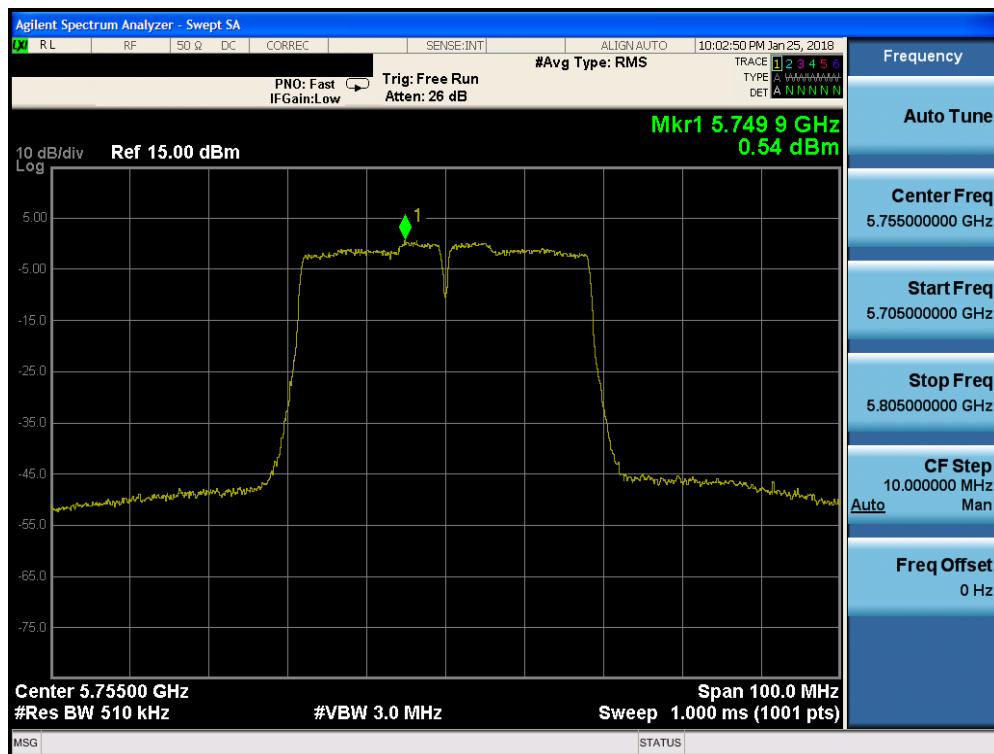


Plot 7-206. Power Spectral Density Plot FCC SISO ANT2 (20MHz BW 802.11n (UNII Band 3) – Ch. 157)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 142 of 259

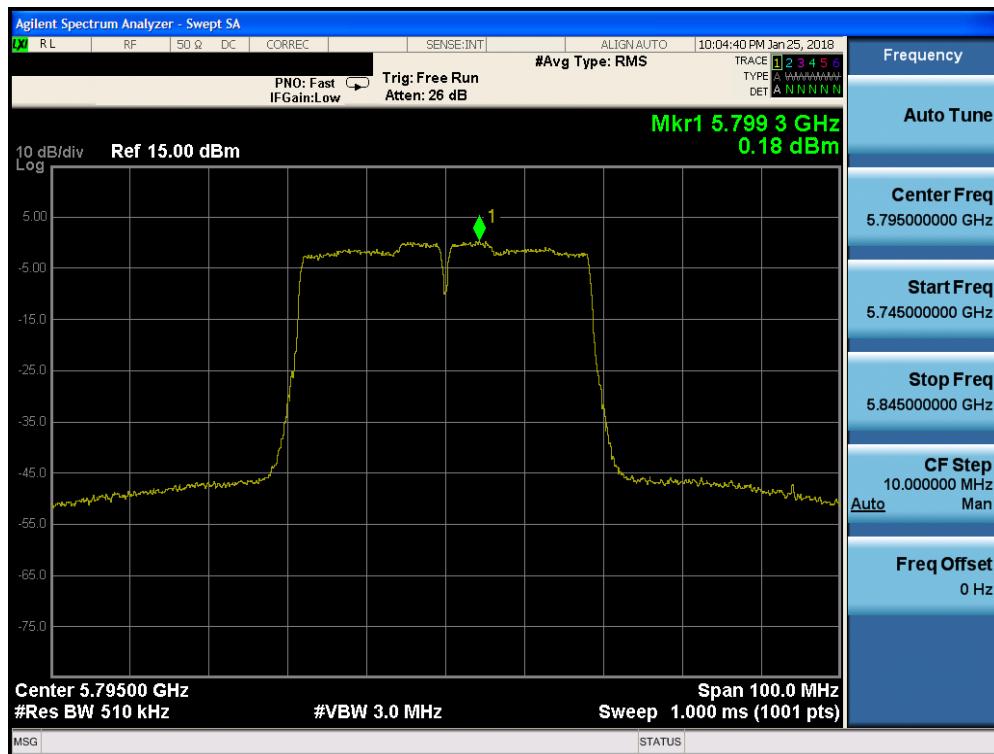


Plot 7-207. Power Spectral Density Plot FCC SISO ANT2 (20MHz BW 802.11n (UNII Band 3) – Ch. 165)



Plot 7-208. Power Spectral Density Plot FCC SISO ANT2 (40MHz BW 802.11n (UNII Band 3) – Ch. 151)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 143 of 259



Plot 7-209. Power Spectral Density Plot FCC SISO ANT2 (40MHz BW 802.11n (UNII Band 3) – Ch. 161)



Plot 7-210. Power Spectral Density Plot FCC SISO ANT2 (80MHz BW 802.11ac (UNII Band 3) – Ch. 155)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 144 of 259	

Summed MIMO Power Spectral Density Measurements

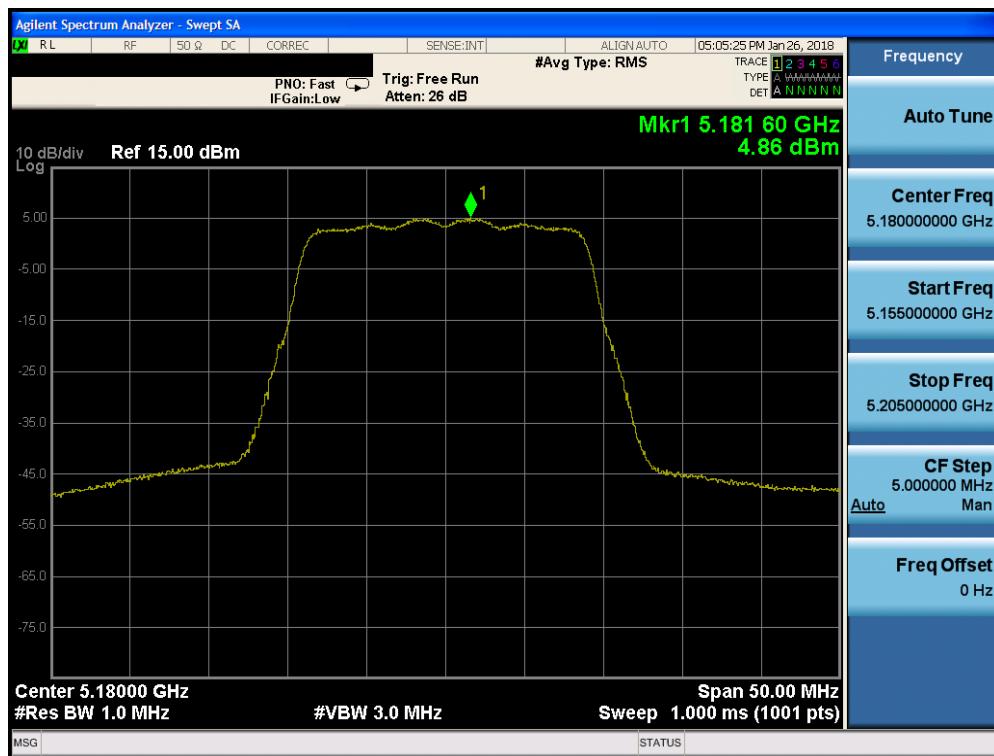
	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Antenn-1 Power Density [dBm]	Antenn-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	n (20MHz)	6.5/7.2 (MCS0)	4.86	4.57	7.73	11.0	-3.27
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	7.30	6.85	10.09	11.0	-0.91
	5220	44	n (20MHz)	6.5/7.2 (MCS0)	6.85	7.03	9.95	11.0	-1.05
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	7.50	6.98	10.26	11.0	-0.74
	5190	38	n (40MHz)	13.5/15 (MCS0)	0.41	0.53	3.48	11.0	-7.52
	5230	46	n (40MHz)	13.5/15 (MCS0)	4.51	3.87	7.21	11.0	-3.79
Band 2A	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	-3.26	-3.19	-0.21	11.0	-11.21
	5260	52	n (20MHz)	6.5/7.2 (MCS0)	7.20	6.95	10.09	11.0	-0.91
	5280	56	n (20MHz)	6.5/7.2 (MCS0)	7.20	7.07	10.15	11.0	-0.85
	5300	60	n (20MHz)	6.5/7.2 (MCS0)	6.55	7.26	9.93	11.0	-1.07
	5320	64	n (20MHz)	6.5/7.2 (MCS0)	4.94	4.45	7.71	11.0	-3.29
	5270	54	n (40MHz)	13.5/15 (MCS0)	4.51	4.21	7.37	11.0	-3.63
Band 2C	5310	62	n (40MHz)	13.5/15 (MCS0)	0.76	0.59	3.69	11.0	-7.31
	5290	58	ac (80MHz)	29.3/32.5 (MCS0)	-3.31	-3.84	-0.56	11.0	-11.56
	5500	100	n (20MHz)	6.5/7.2 (MCS0)	5.28	5.56	8.43	11.0	-2.57
	5520	104	n (20MHz)	6.5/7.2 (MCS0)	6.23	6.36	9.31	11.0	-1.69
	5580	116	n (20MHz)	6.5/7.2 (MCS0)	6.31	5.89	9.12	11.0	-1.88
	5680	136	n (20MHz)	6.5/7.2 (MCS0)	5.72	5.28	8.52	11.0	-2.48
	5720	144	n (20MHz)	6.5/7.2 (MCS0)	7.12	6.77	9.96	11.0	-1.04
	5510	102	n (40MHz)	13.5/15 (MCS0)	0.72	0.83	3.79	11.0	-7.21
	5500	110	n (40MHz)	13.5/15 (MCS0)	4.56	4.52	7.55	11.0	-3.45
	5590	118	n (40MHz)	13.5/15 (MCS0)	4.35	4.10	7.24	11.0	-3.76
	5630	126	n (40MHz)	13.5/15 (MCS0)	4.15	4.02	7.09	11.0	-3.91
	5710	142	n (40MHz)	13.5/15 (MCS0)	4.33	3.95	7.15	11.0	-3.85
	5530	106	ac (80MHz)	29.3/32.5 (MCS0)	-2.53	-2.64	0.43	11.0	-10.57
	5610	122	ac (80MHz)	29.3/32.5 (MCS0)	1.51	1.13	4.33	11.0	-6.67
	5690	138	ac (80MHz)	29.3/32.5 (MCS0)	1.32	1.42	4.38	11.0	-6.62

Table 7-32. Bands 1, 2A, 2C MIMO Conducted Power Spectral Density Measurements

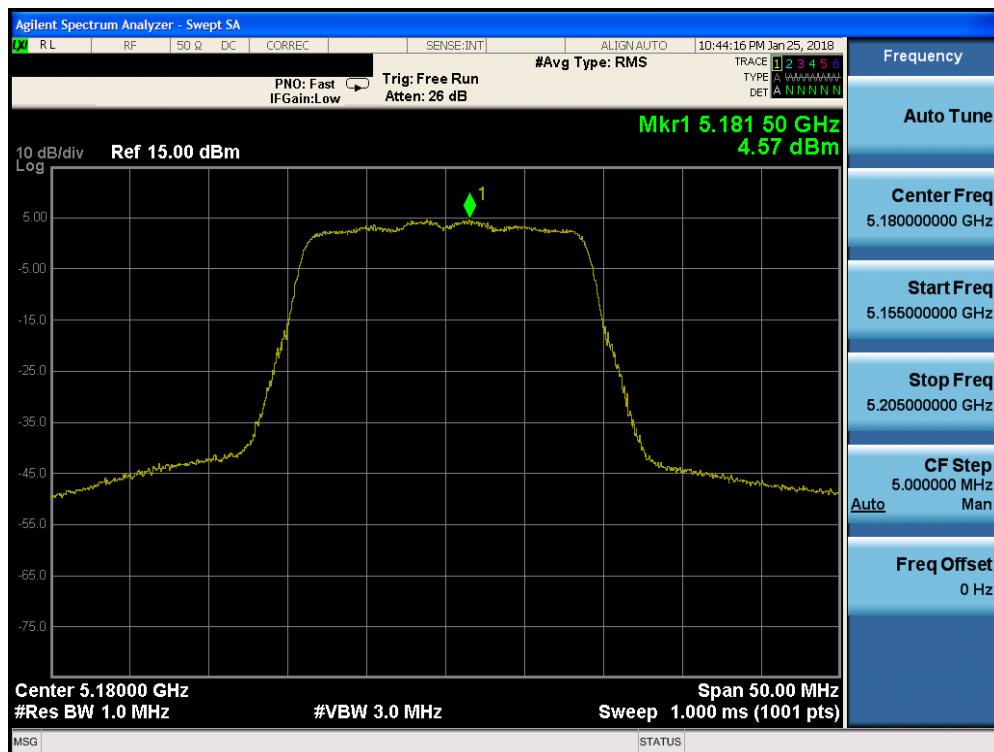
	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Antenn-1 Power Density [dBm]	Antenn-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Ant Gain [dBi]	e.i.r.p Power Density [dBm/MHz]	Max e.i.r.p Power Density	e.i.r.p Power Density Margin [dB]	Margin [dB]
Band 1	5180	36	n (20MHz)	6.5/7.2 (MCS0)	1.13	1.29	4.22	4.48	8.7	10.00	-1.3	-4.48
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	1.87	2.01	4.95	4.50	9.5	10.00	-0.5	-4.50
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	1.85	1.64	4.76	4.90	9.7	10.00	-0.3	-4.90
	5190	38	n (40MHz)	13.5/15 (MCS0)	0.41	0.53	3.48	4.50	8.0	10.00	-2.0	-4.50
	5230	46	n (40MHz)	13.5/15 (MCS0)	-2.08	-0.53	1.77	4.99	6.8	10.00	-3.2	-4.99
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	-3.26	-3.19	-0.21	4.99	4.8	10.00	-5.2	-4.99

Table 7-33. Band 1 MIMO e.i.r.p. Conducted Power Spectral Density Measurements (ISED)

FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)					Approved by:
Test Report S/N:	Test Dates:	EUT Type:				Quality Manager
1C1710060006-06.BCG	10/31-2/15/2018	Tablet Device				Page 145 of 259



Plot 7-211. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 1) – Ch. 36)

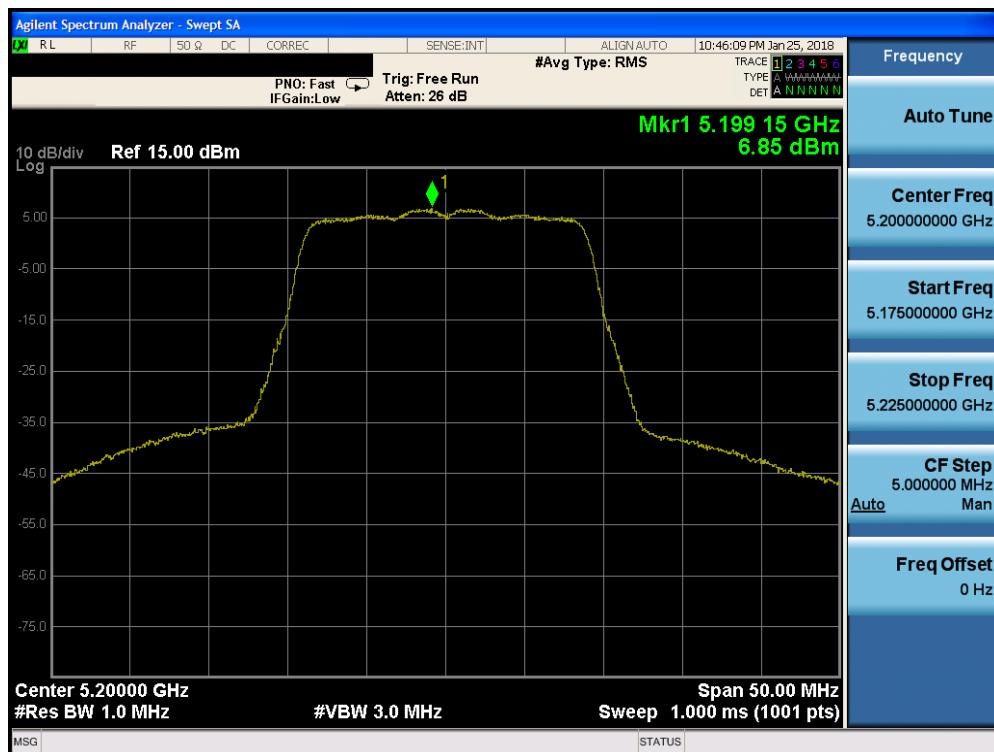


Plot 7-212. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 1) – Ch. 36)

FCC ID: BCGA1954	PCTEST ENGINEERING LABORATORY, INC.		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device		Page 146 of 259

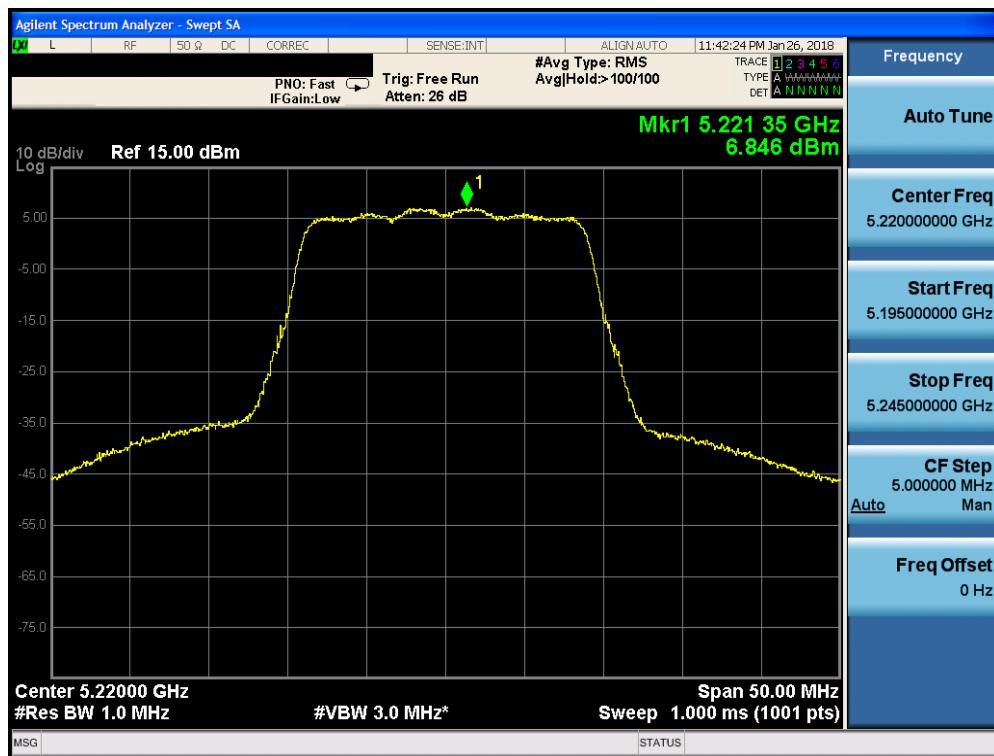


Plot 7-213. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 1) – Ch. 40)

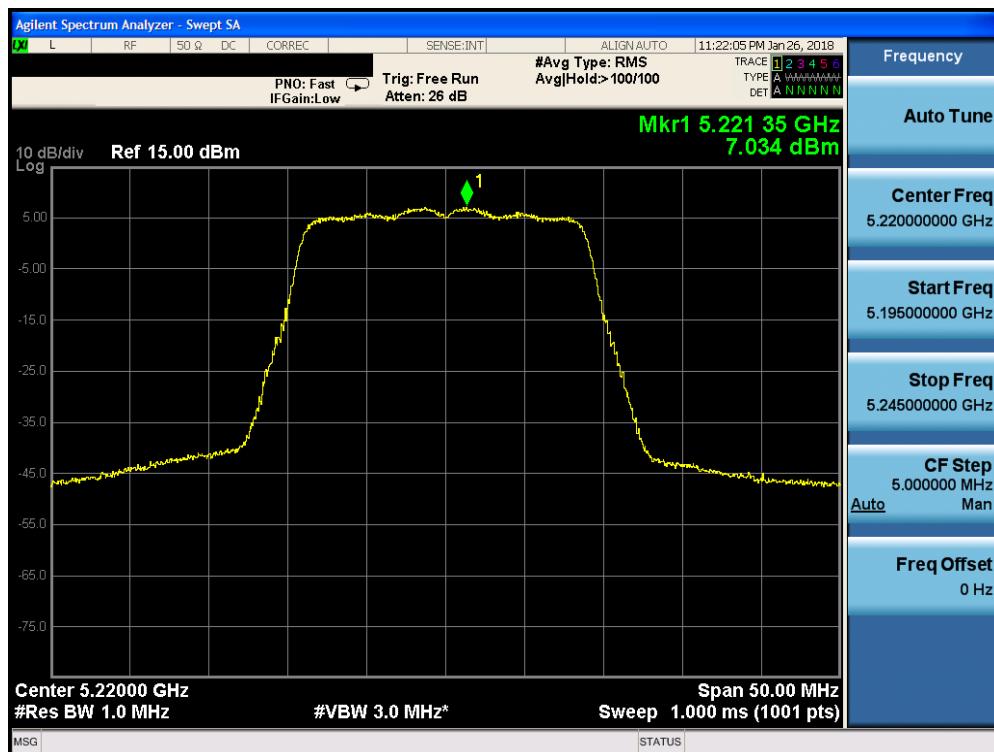


Plot 7-214. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 1) – Ch. 40)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device		Page 147 of 259



Plot 7-215. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 1) – Ch. 44)

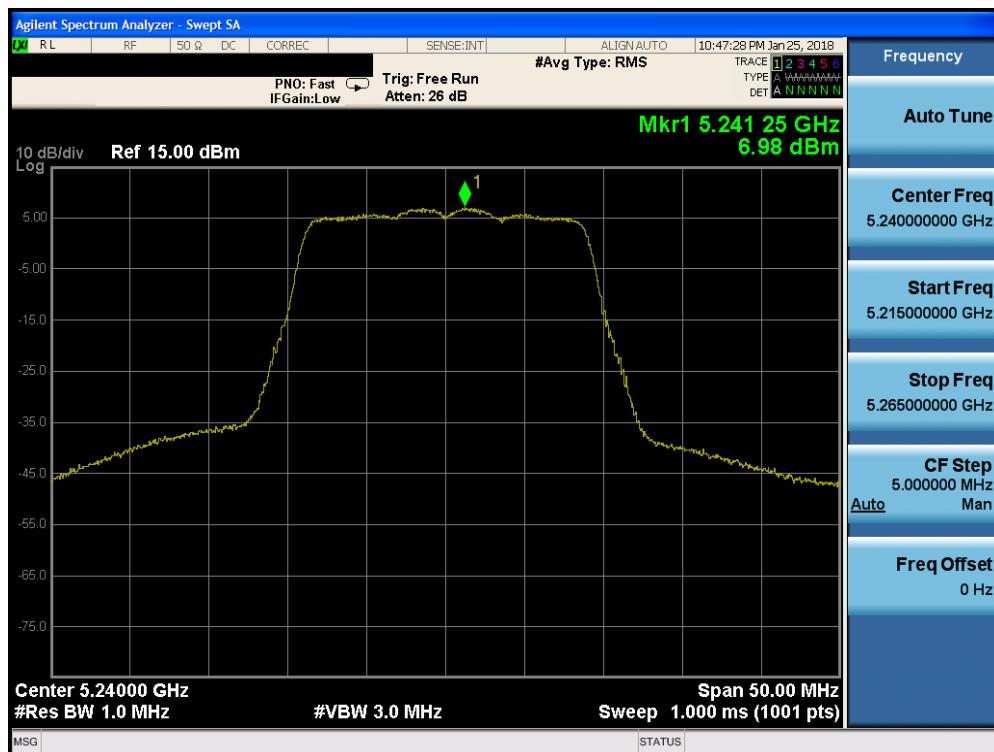


Plot 7-216. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 1) – Ch. 44)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device		Page 148 of 259

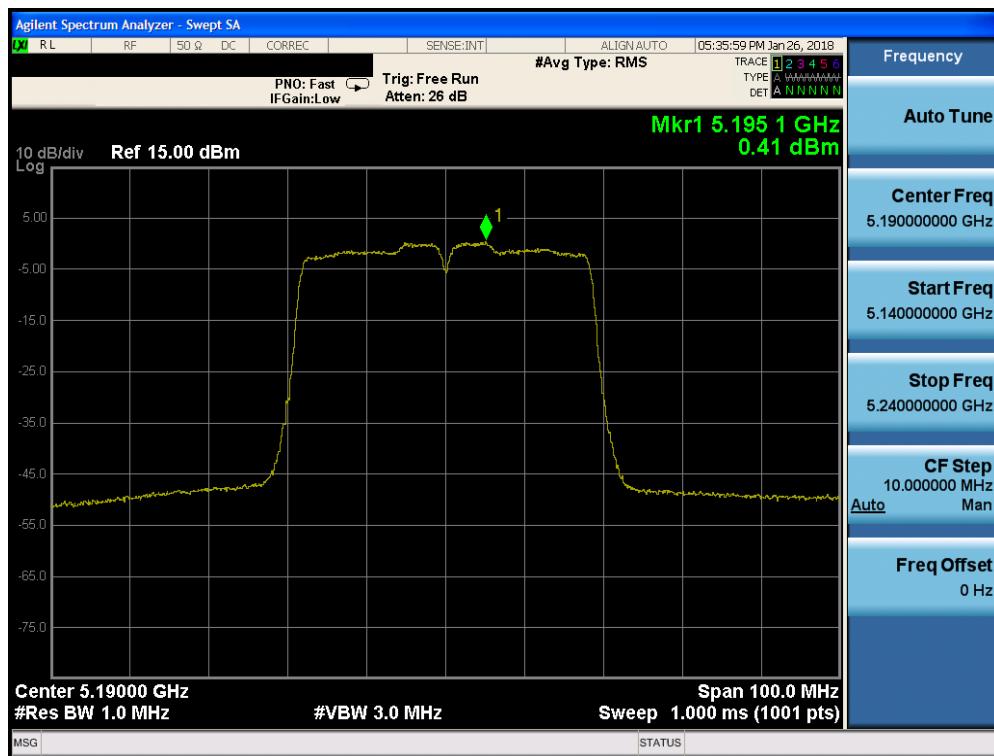


Plot 7-217. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 1) – Ch. 48)

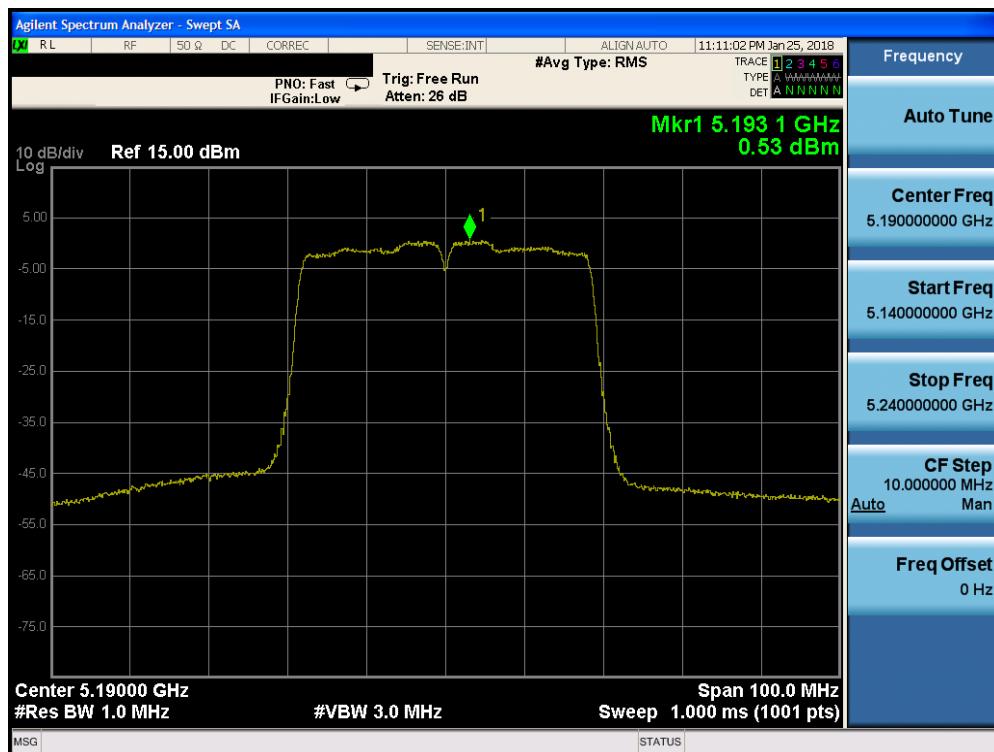


Plot 7-218. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 1) – Ch. 48)

FCC ID: BCGA1954	PCTEST ENGINEERING LABORATORY, INC.		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device		Page 149 of 259



Plot 7-219. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 1) – Ch. 38)

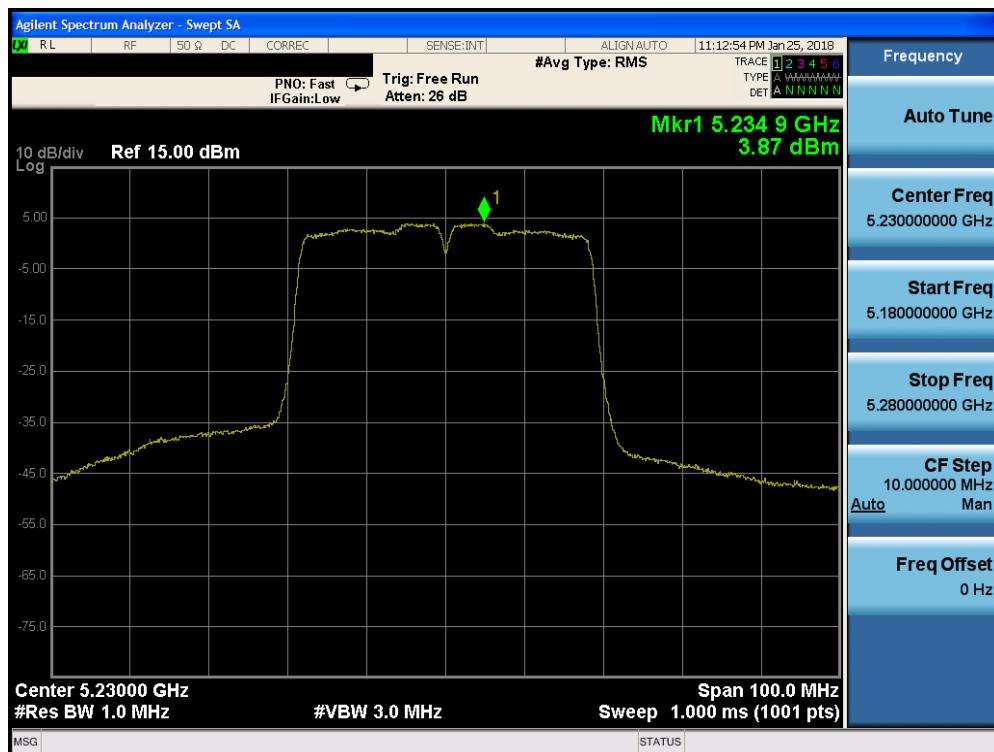


Plot 7-220. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11n (UNII Band 1) – Ch. 38)

FCC ID: BCGA1954	PCTEST ENGINEERING LABORATORY, INC.		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 150 of 259	

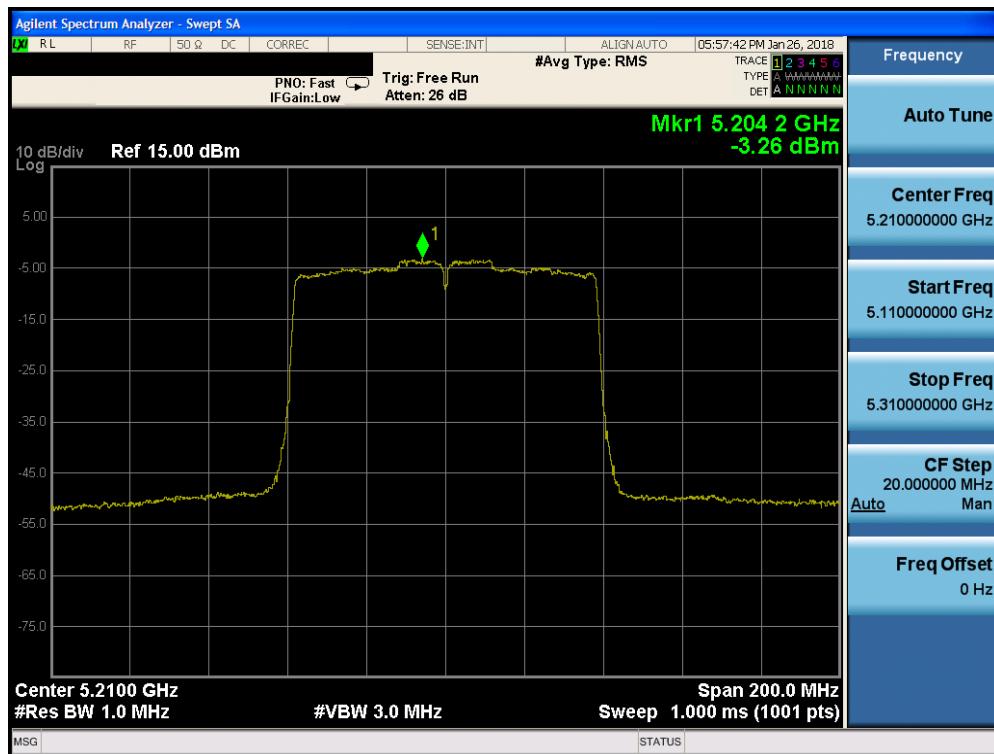


Plot 7-221. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 1) – Ch. 46)

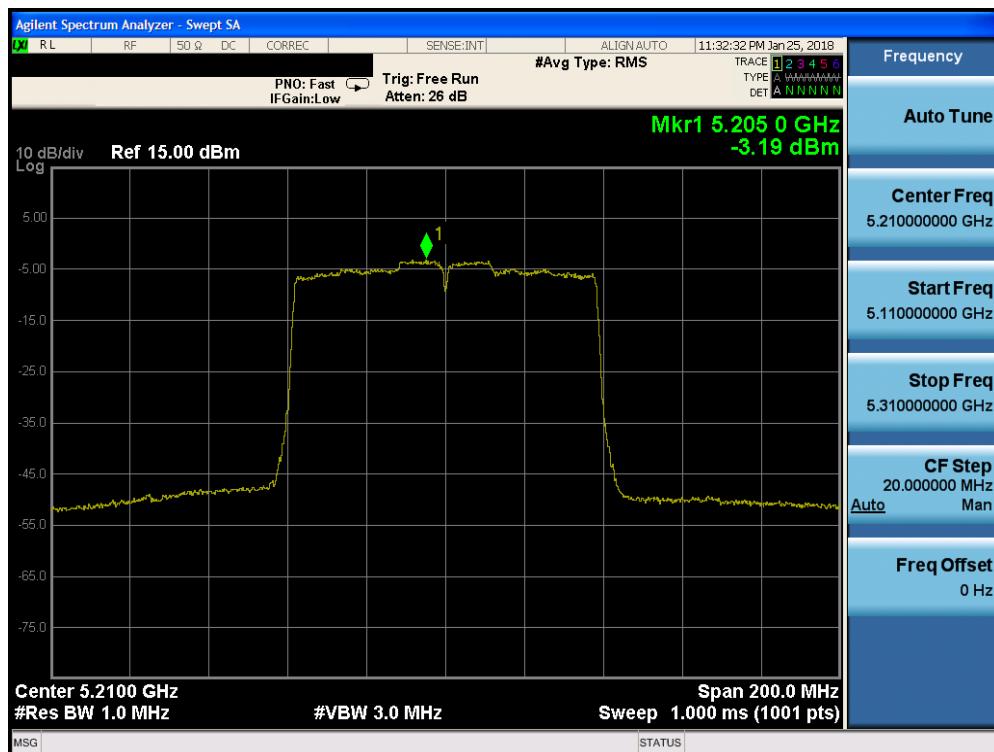


Plot 7-222. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11n (UNII Band 1) – Ch. 46)

FCC ID: BCGA1954	PCTEST ENGINEERING LABORATORY, INC.		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device		Page 151 of 259

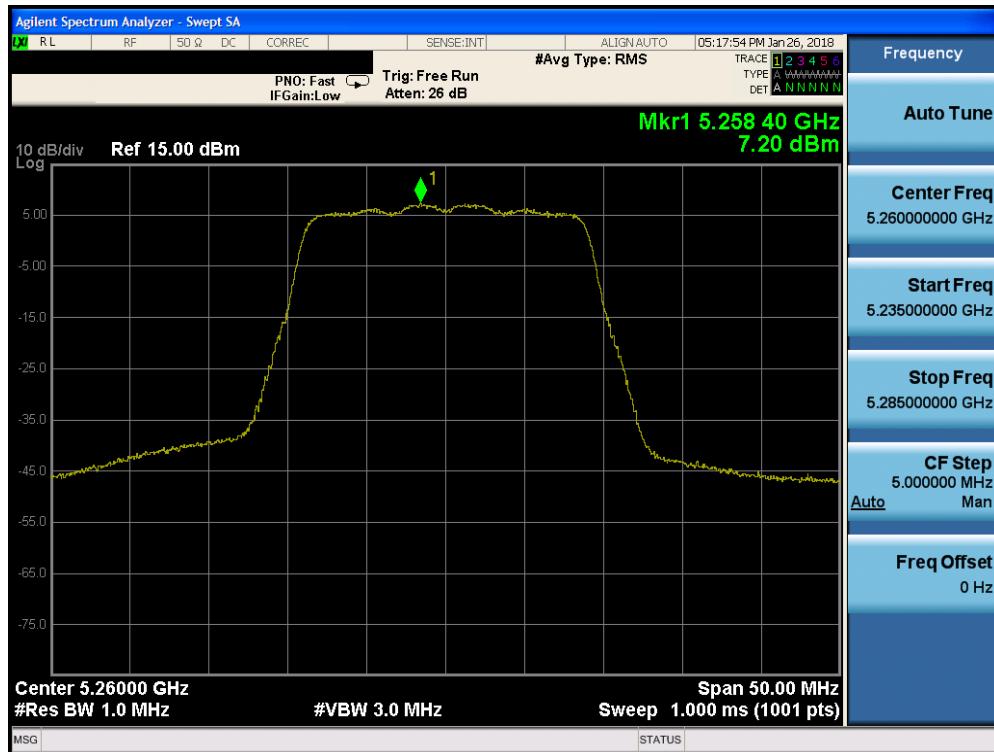


Plot 7-223. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ac (UNII Band 1) – Ch. 42)

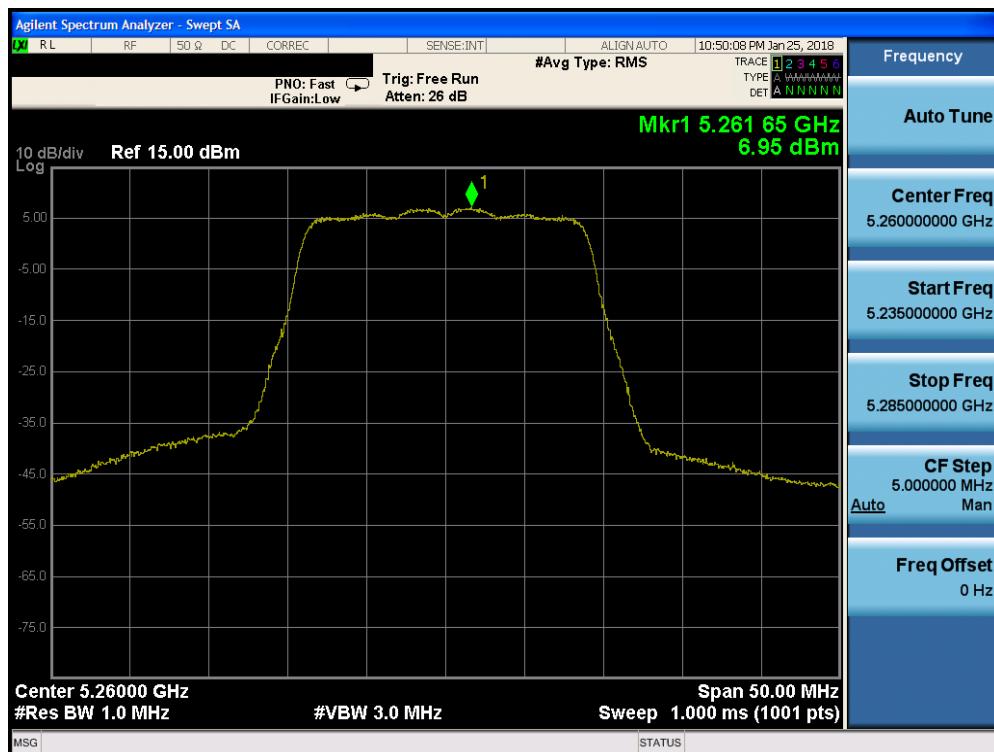


Plot 7-224. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ac (UNII Band 1) – Ch. 42)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 152 of 259	

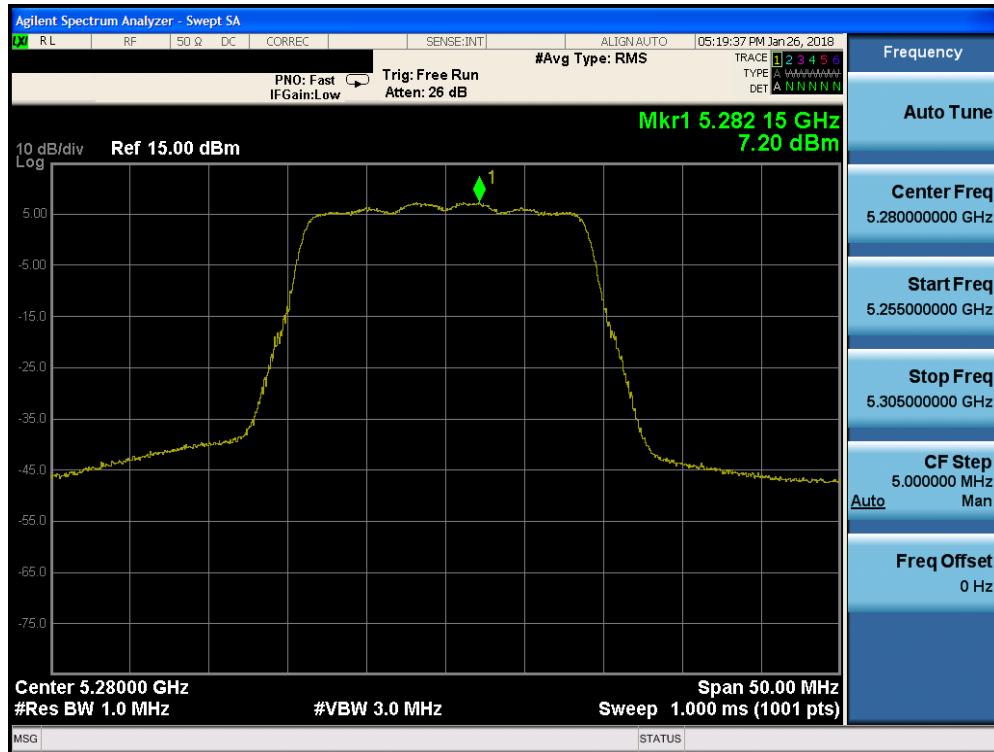


Plot 7-225. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 2A) – Ch. 52)



Plot 7-226. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 2A) – Ch. 52)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 153 of 259

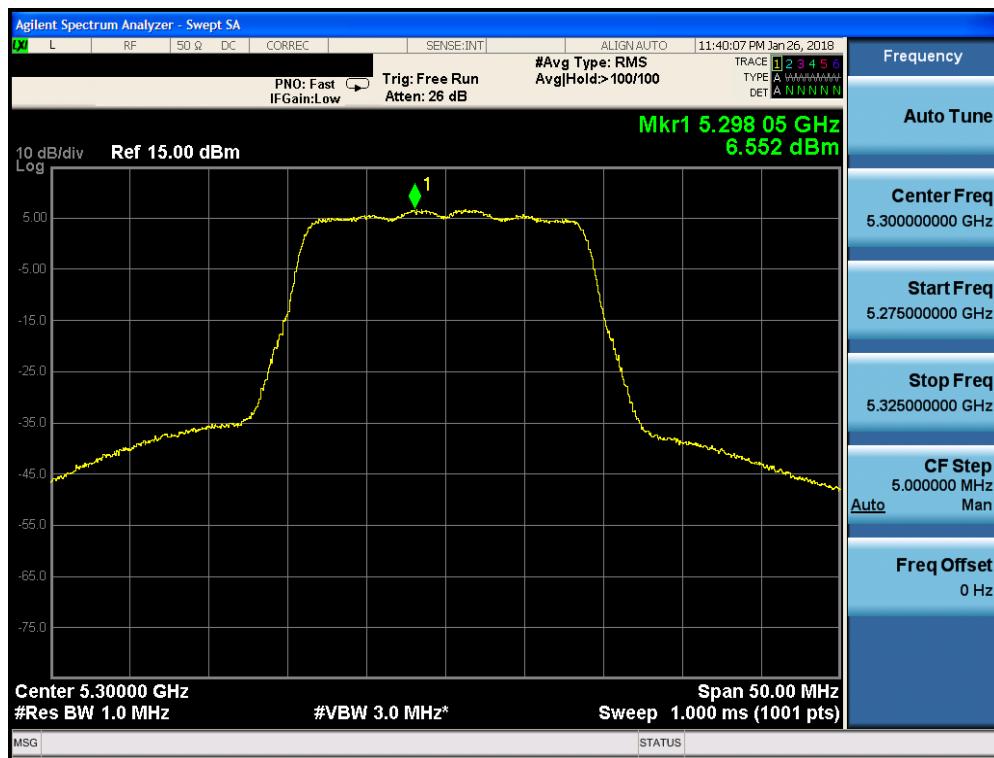


Plot 7-227. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 2A) – Ch. 56)

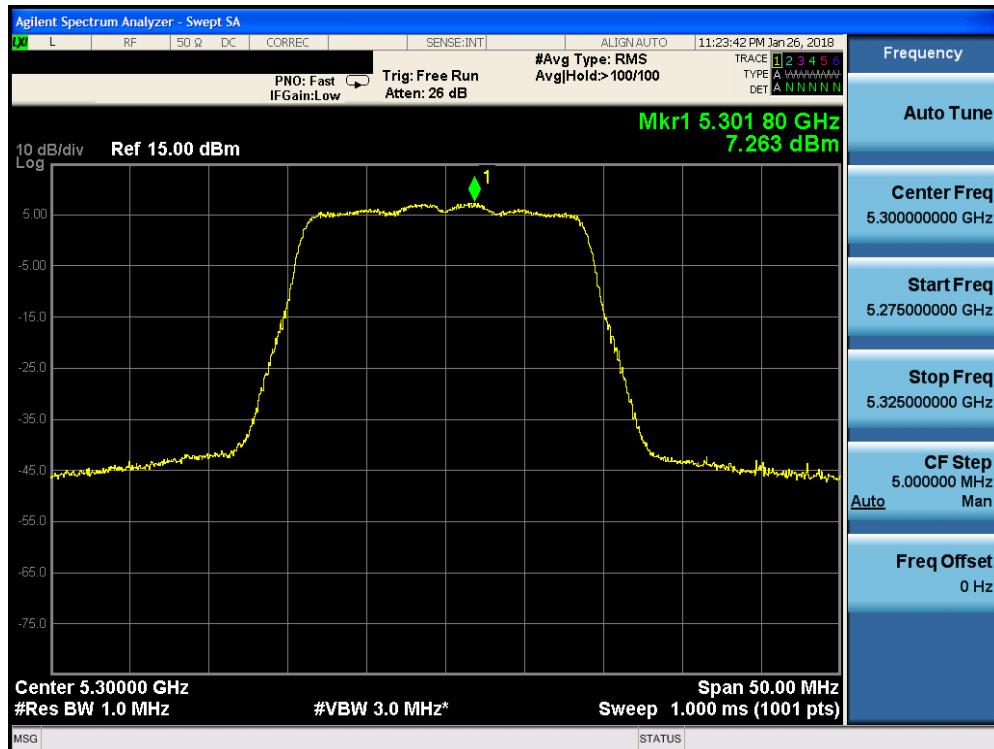


Plot 7-228. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 2A) – Ch. 56)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 154 of 259	

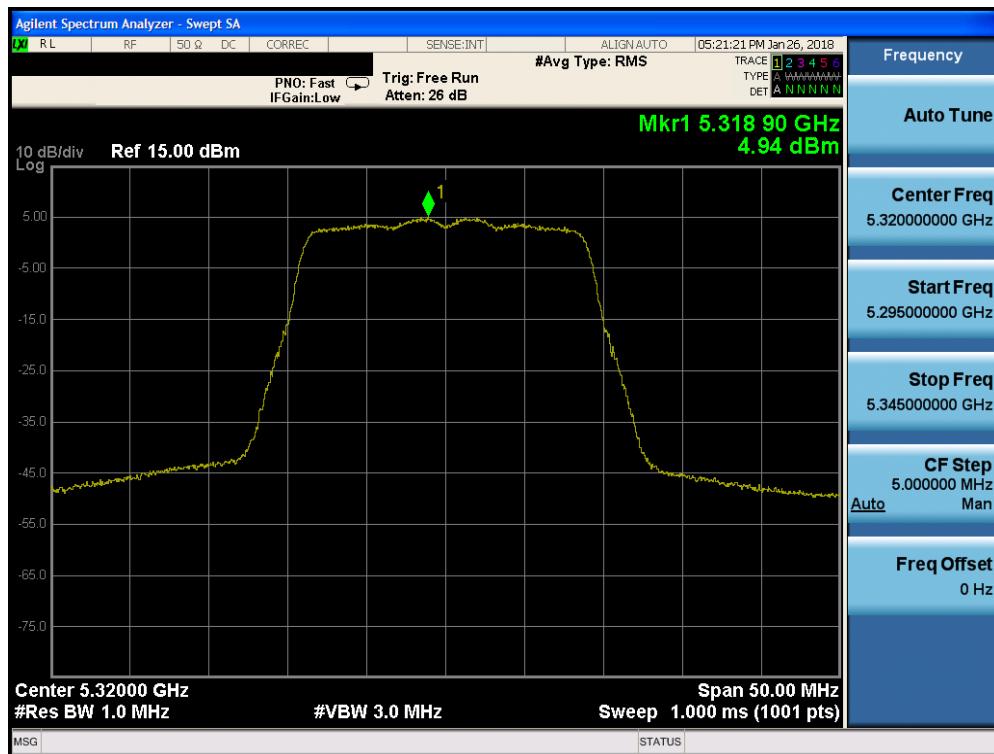


Plot 7-229. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 2A) – Ch. 60)

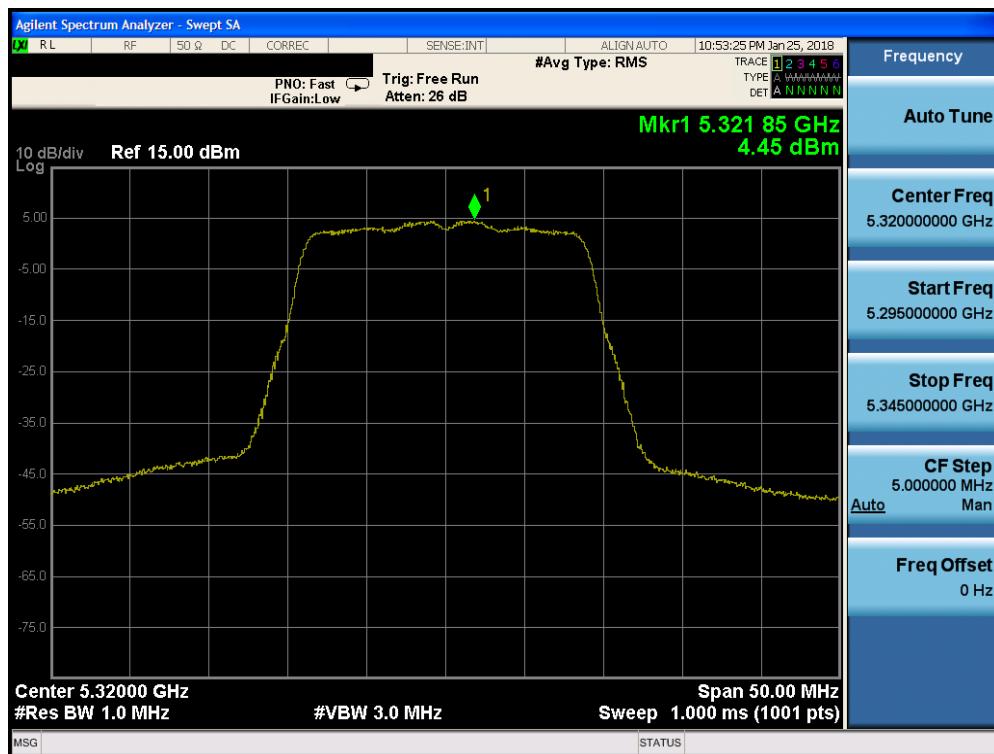


Plot 7-230. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 2A) – Ch. 60)

FCC ID: BCGA1954	PCTEST ENGINEERING LABORATORY, INC.		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device		Page 155 of 259

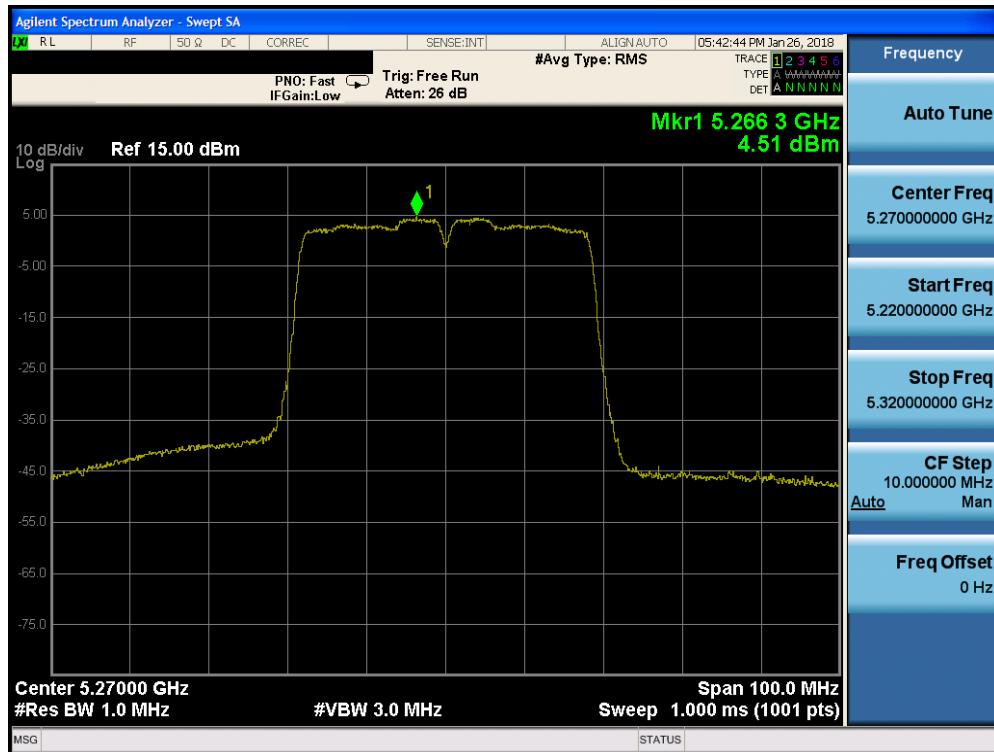


Plot 7-231. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 2A) – Ch. 64)



Plot 7-232. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 2A) – Ch. 64)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 156 of 259

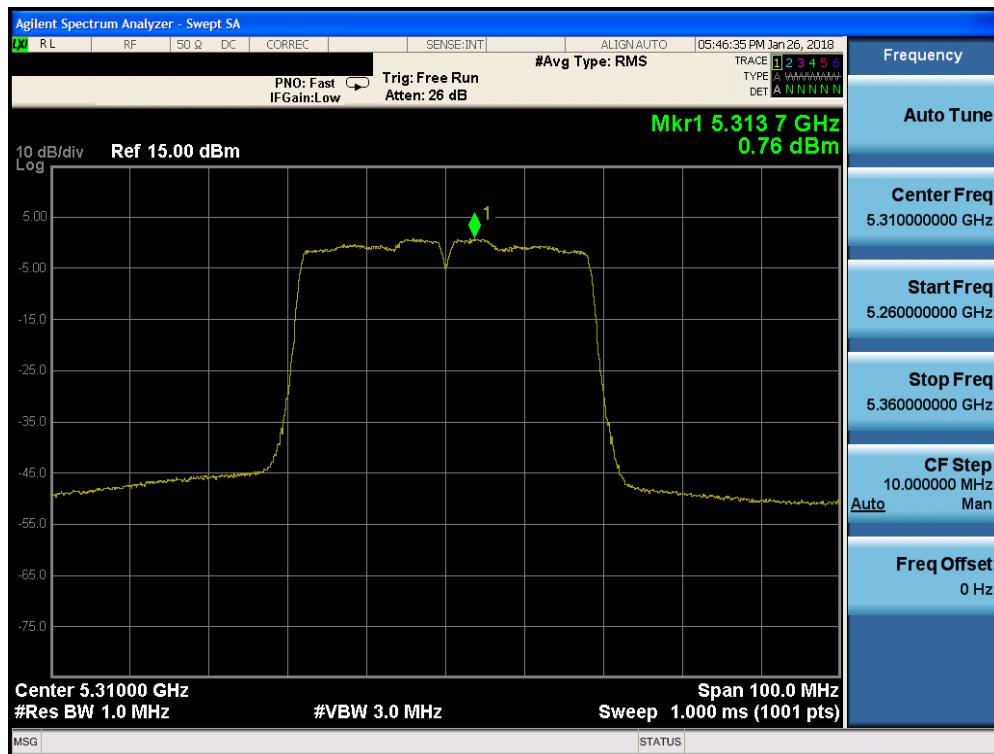


Plot 7-233. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 2A) – Ch. 54)

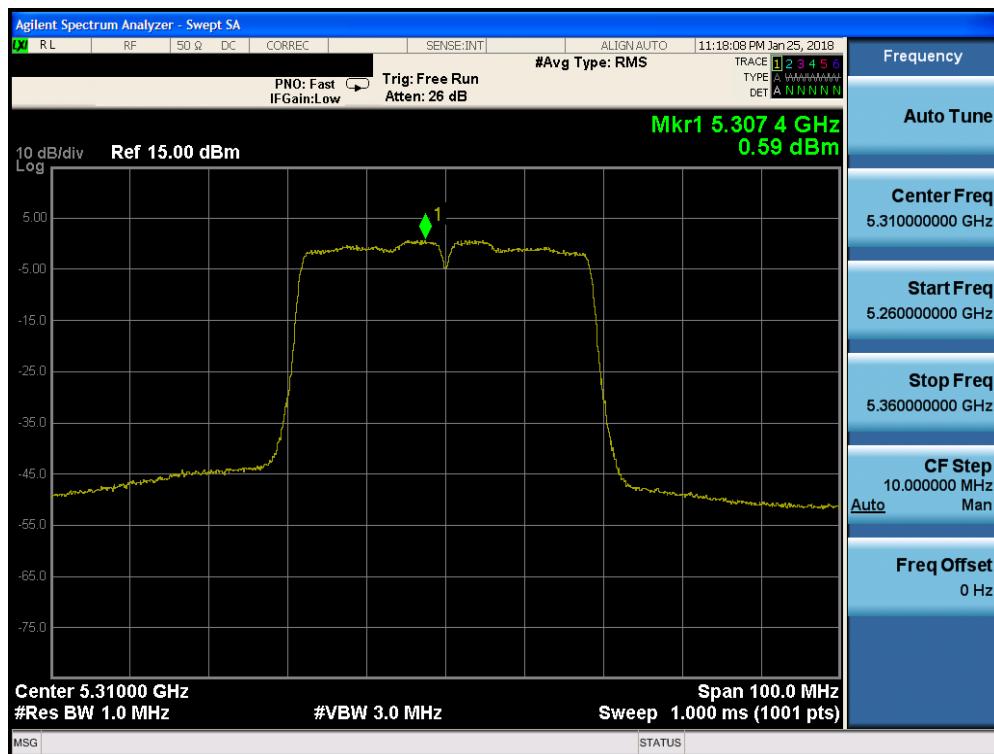


Plot 7-234. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11n (UNII Band 2A) – Ch. 54)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 157 of 259

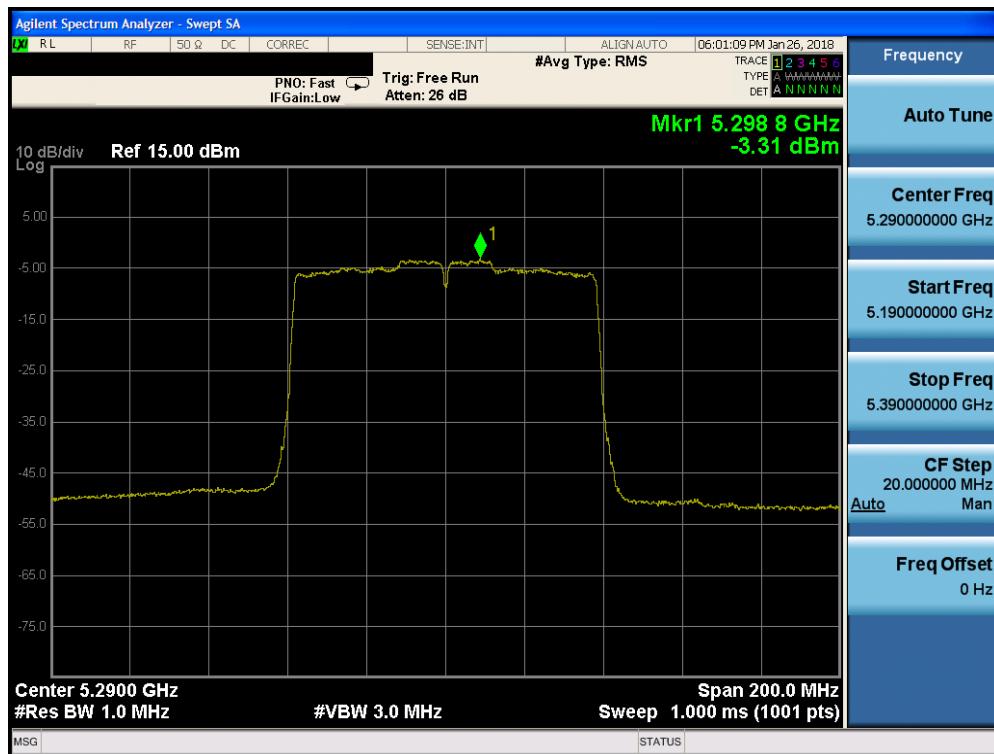


Plot 7-235. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 2A) – Ch. 62)

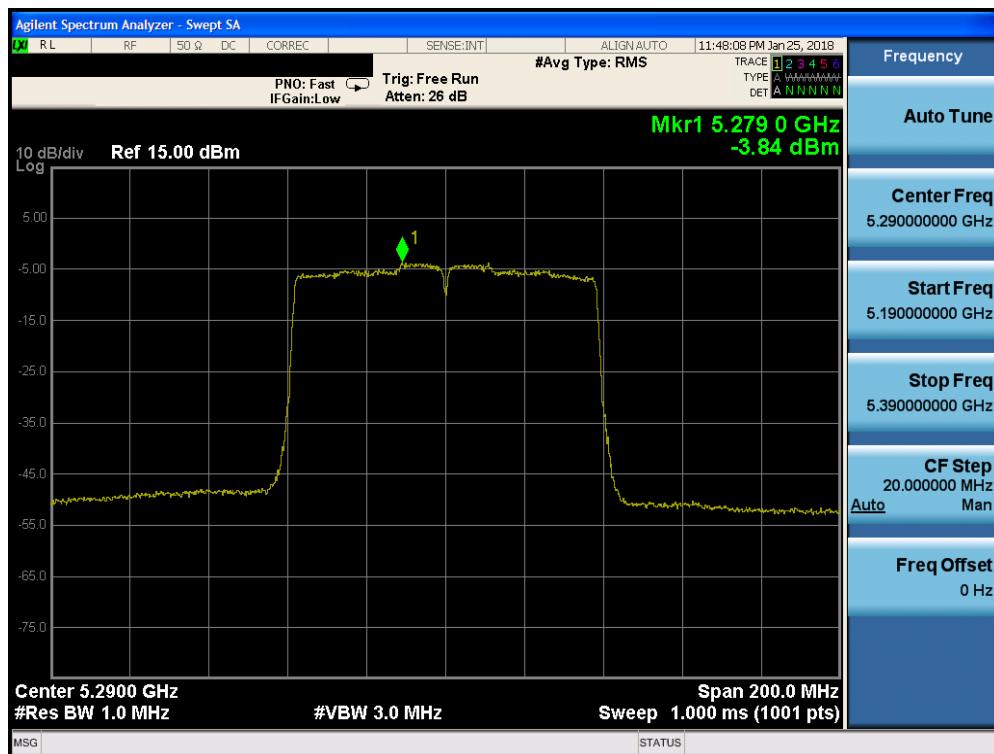


Plot 7-236. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11n (UNII Band 2A) – Ch. 62)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 158 of 259

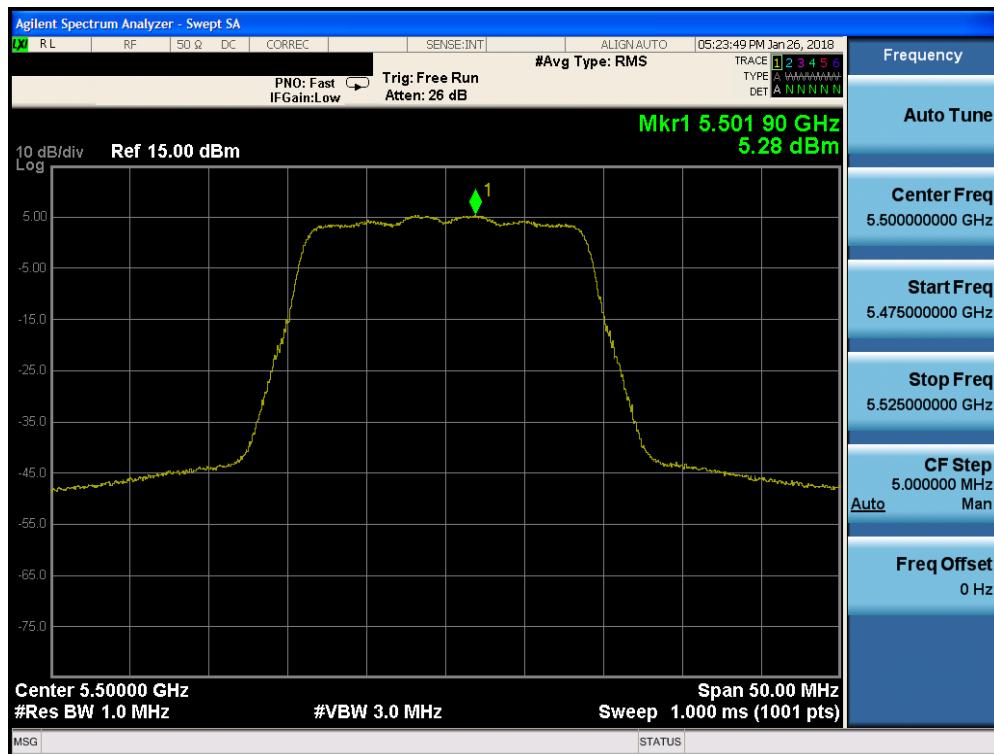


Plot 7-237. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ac (UNII Band 2A) – Ch. 58)

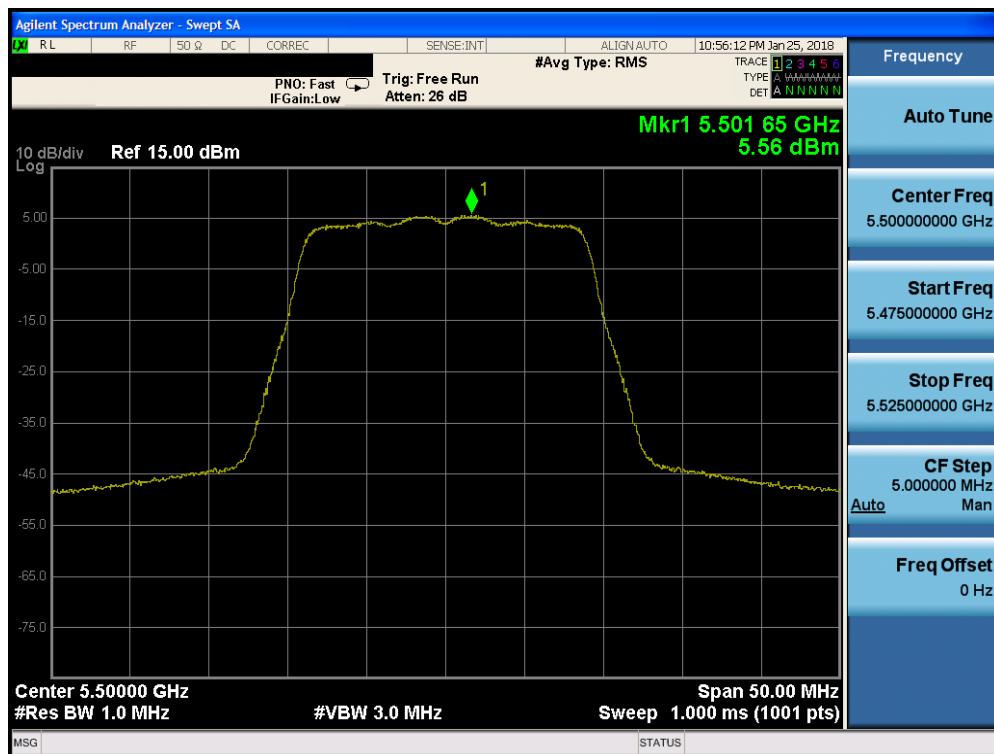


Plot 7-238. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ac (UNII Band 2A) – Ch. 58)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 159 of 259

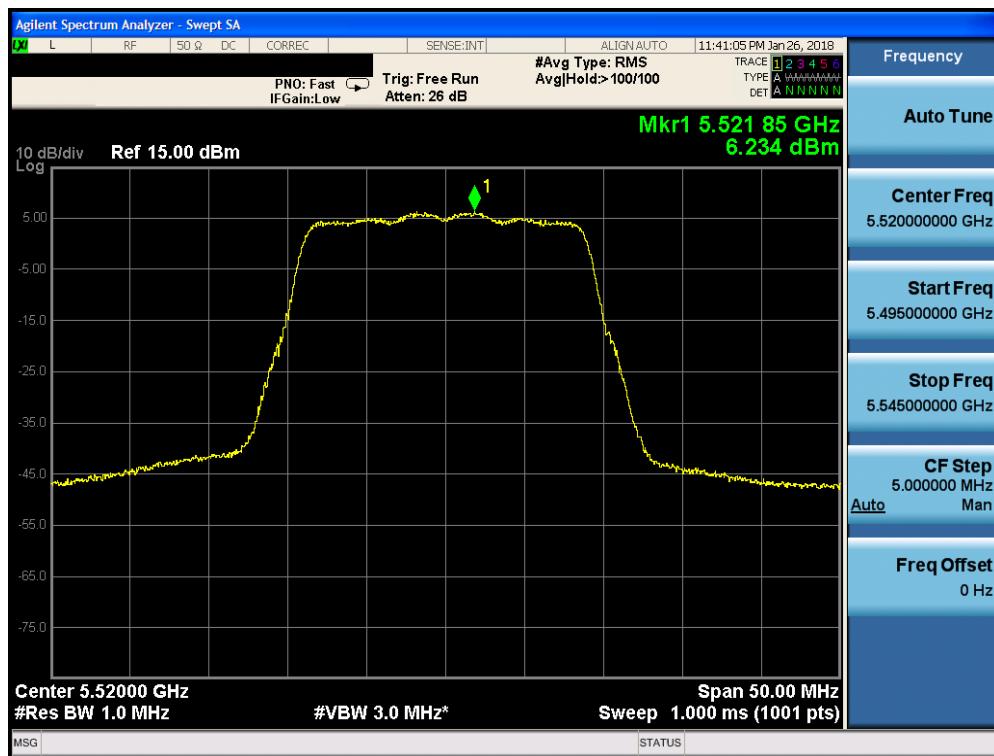


Plot 7-239. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 2C) – Ch. 100)

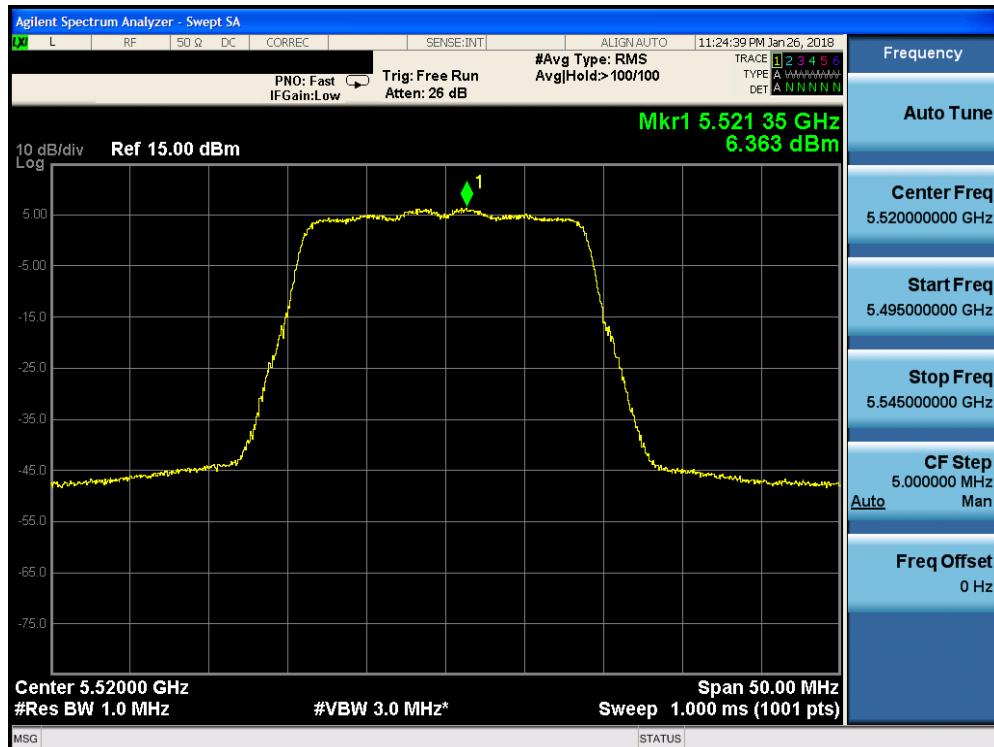


Plot 7-240. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 2C) – Ch. 100)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 160 of 259

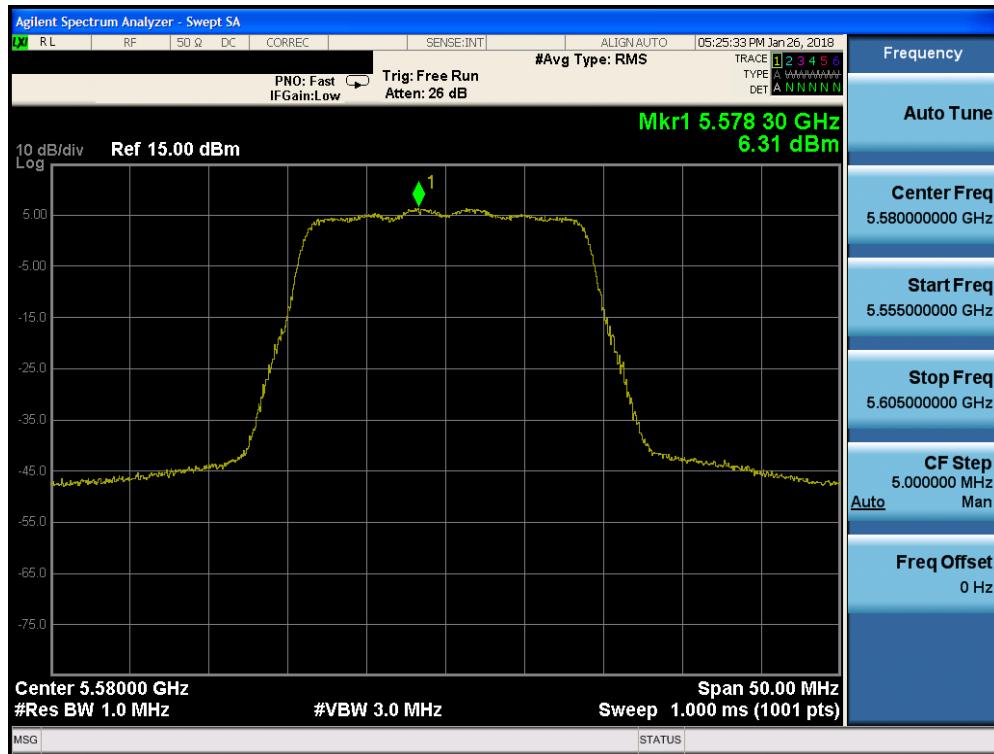


Plot 7-241. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 2C) – Ch. 104)

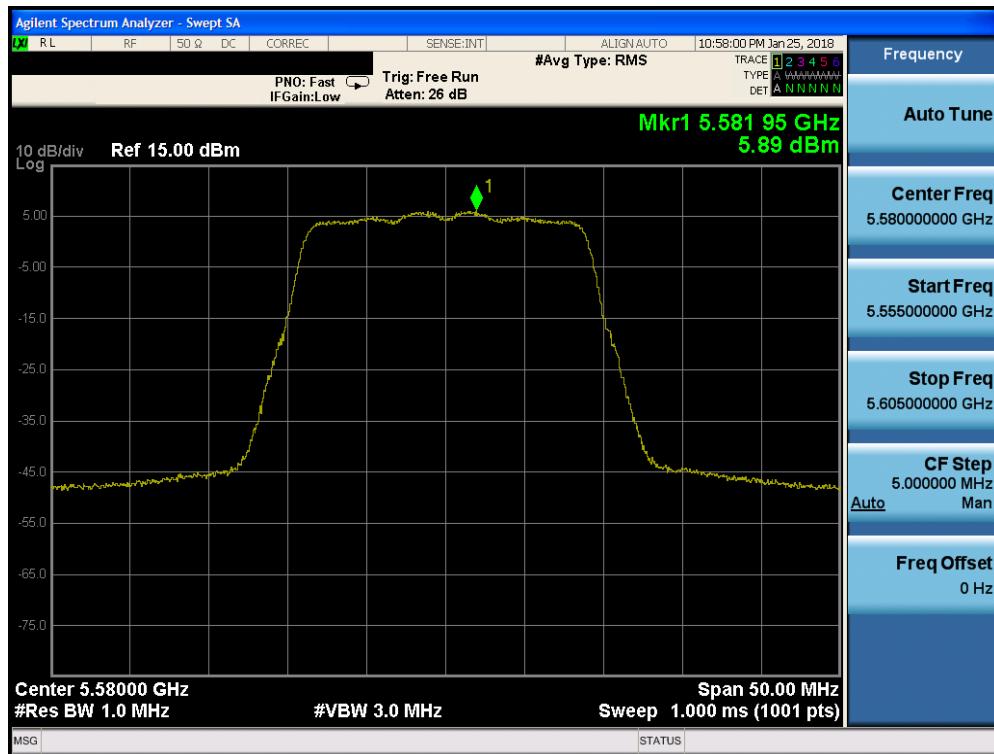


Plot 7-242. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 2C) – Ch. 104)

FCC ID: BCGA1954	PCTEST ENGINEERING LABORATORY, INC.		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 161 of 259	

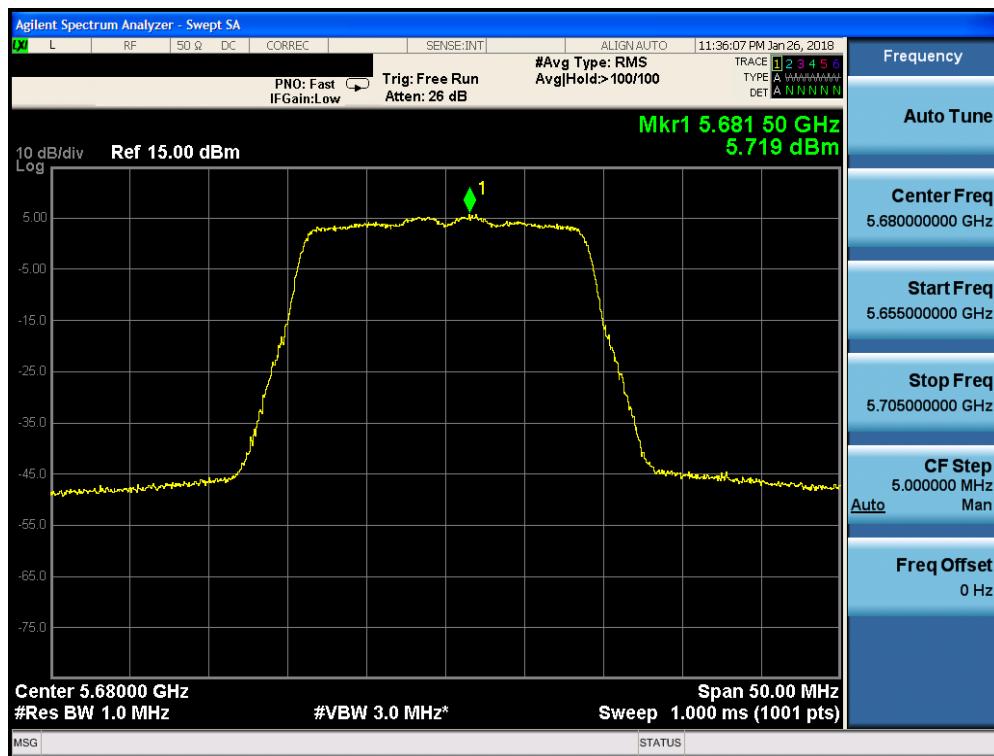


Plot 7-243. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 2C) – Ch. 116)

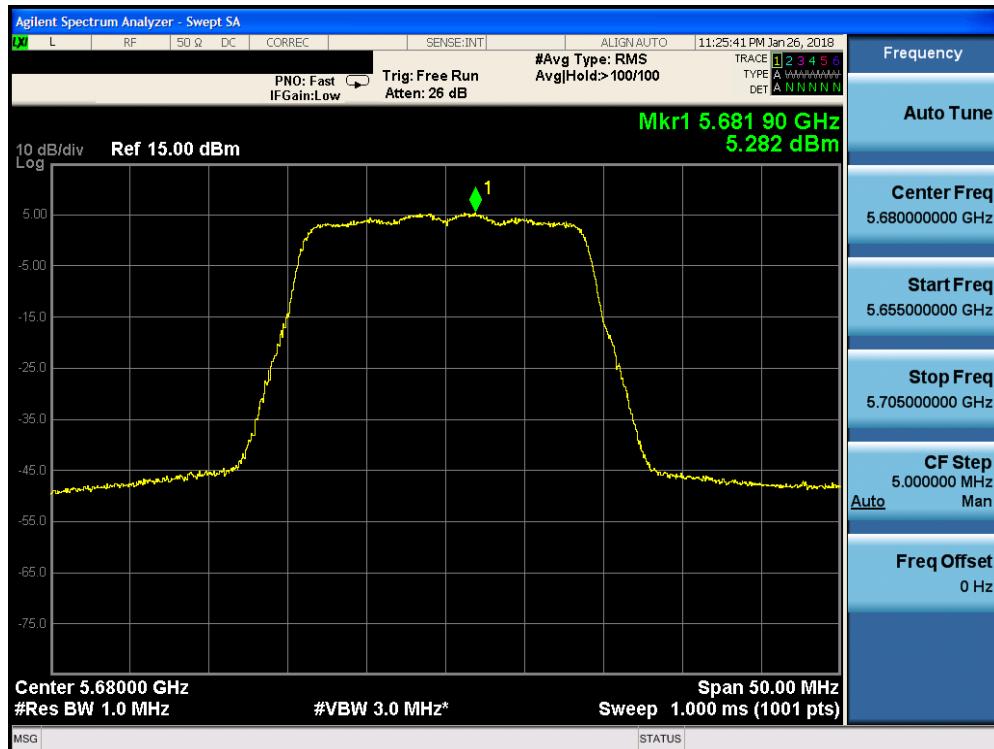


Plot 7-244. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 2C) – Ch. 116)

FCC ID: BCGA1954	 PCTEST ENGINEERING LABORATORY, INC.		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device		Page 162 of 259

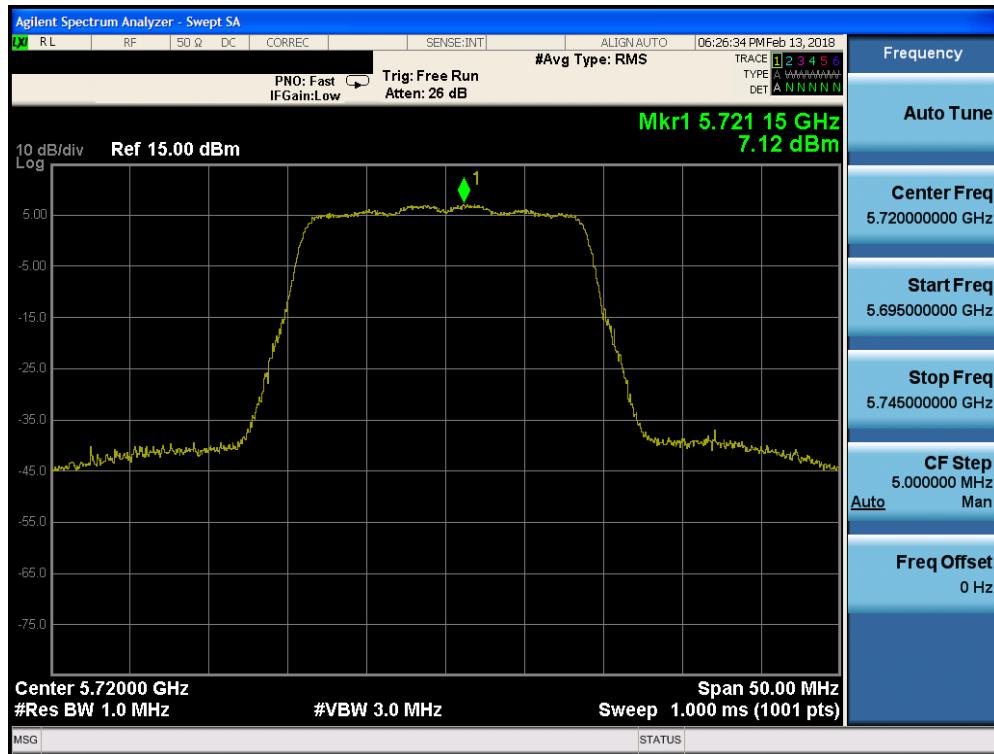


Plot 7-245. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 2C) – Ch. 136)

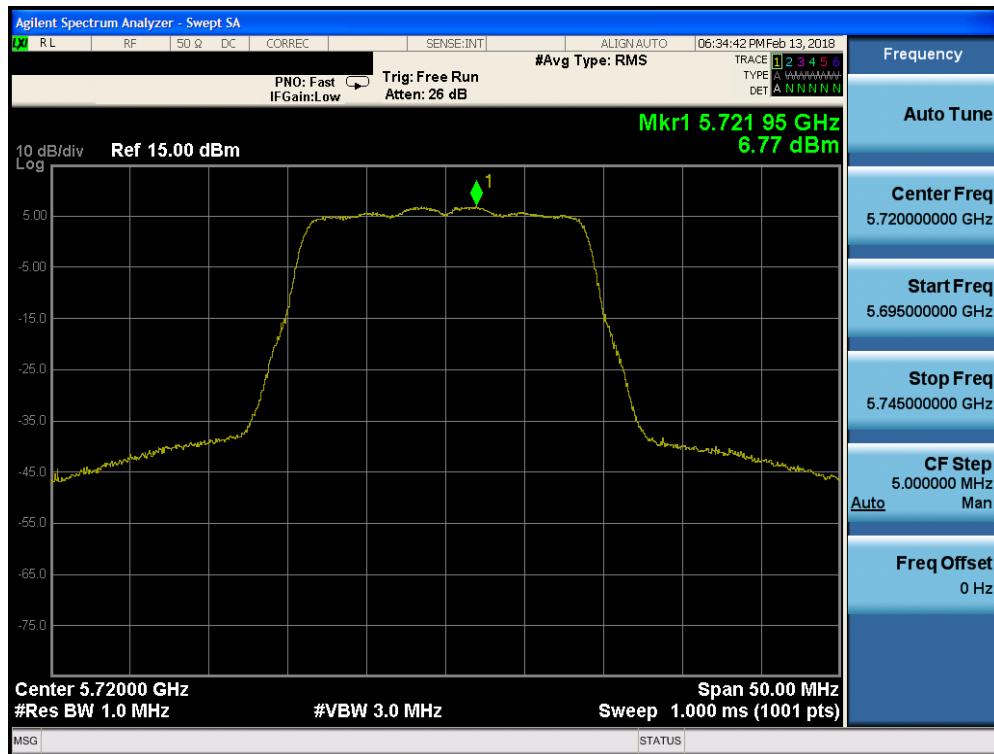


Plot 7-246. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 2C) – Ch. 136)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device		Page 163 of 259

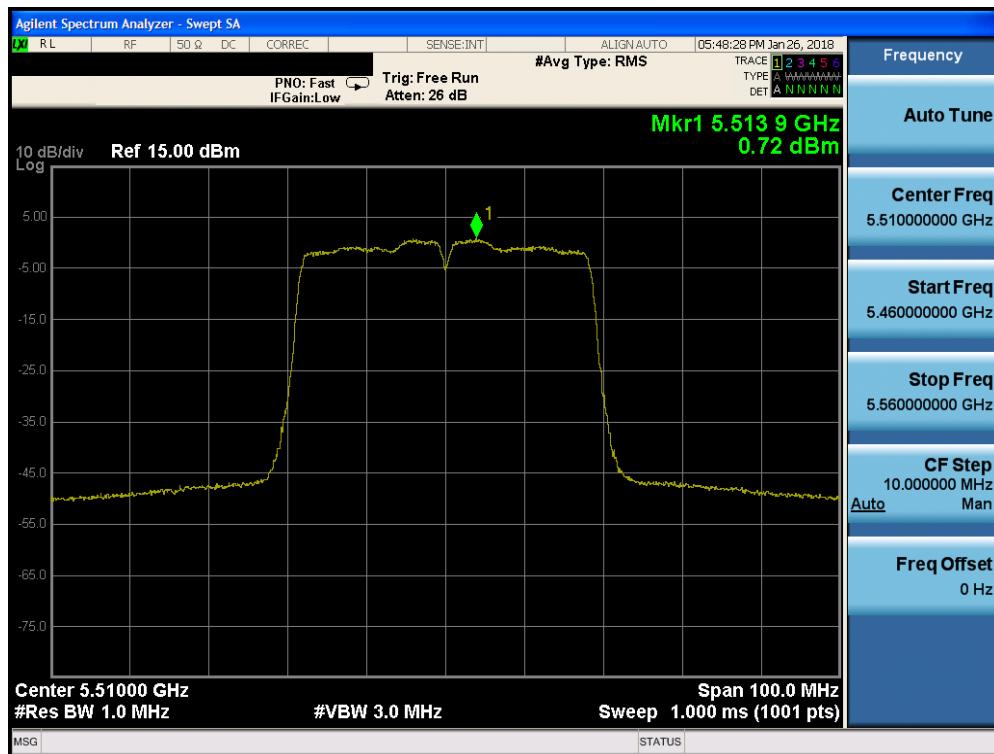


Plot 7-247. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 2C) – Ch. 144)

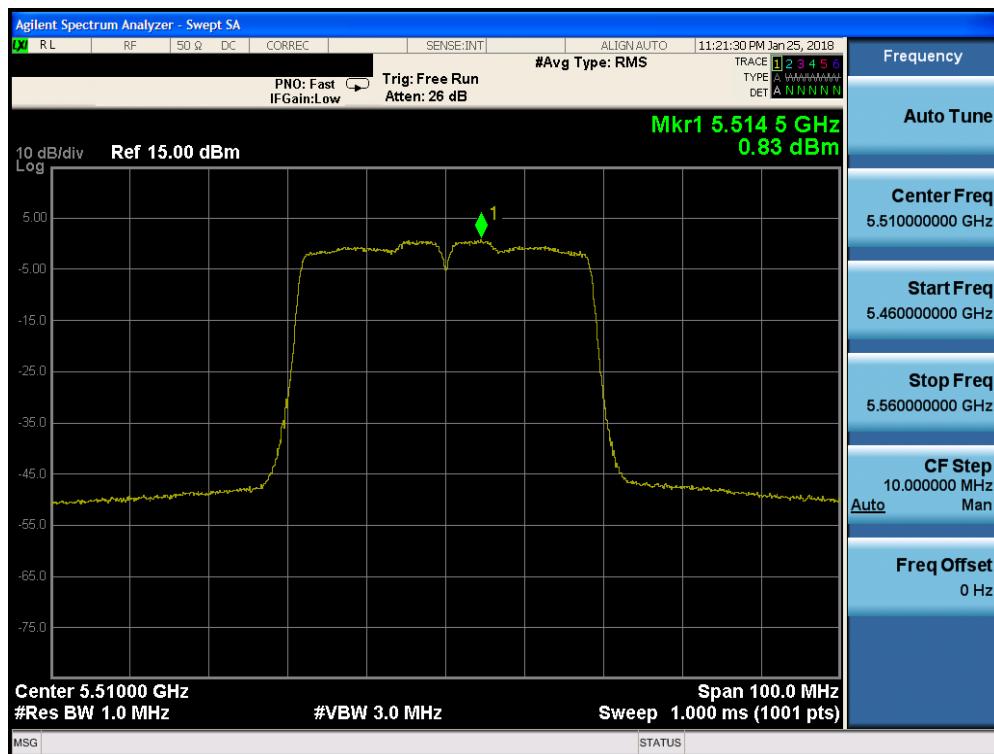


Plot 7-248. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 2C) – Ch. 144)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 164 of 259

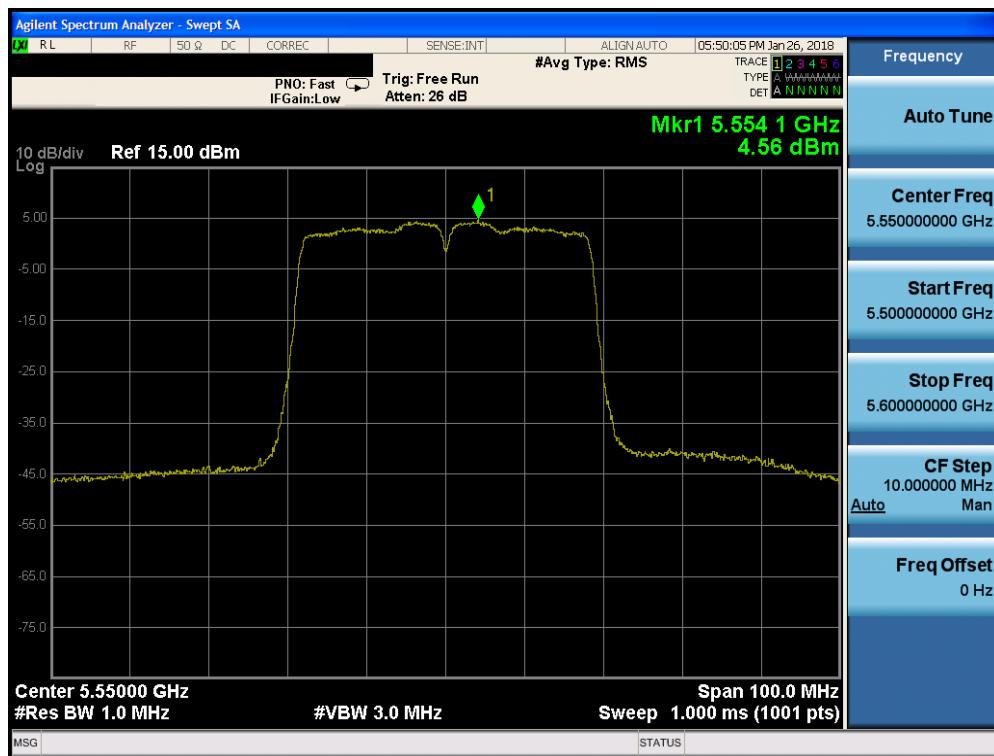


Plot 7-249. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 2C) – Ch. 102)

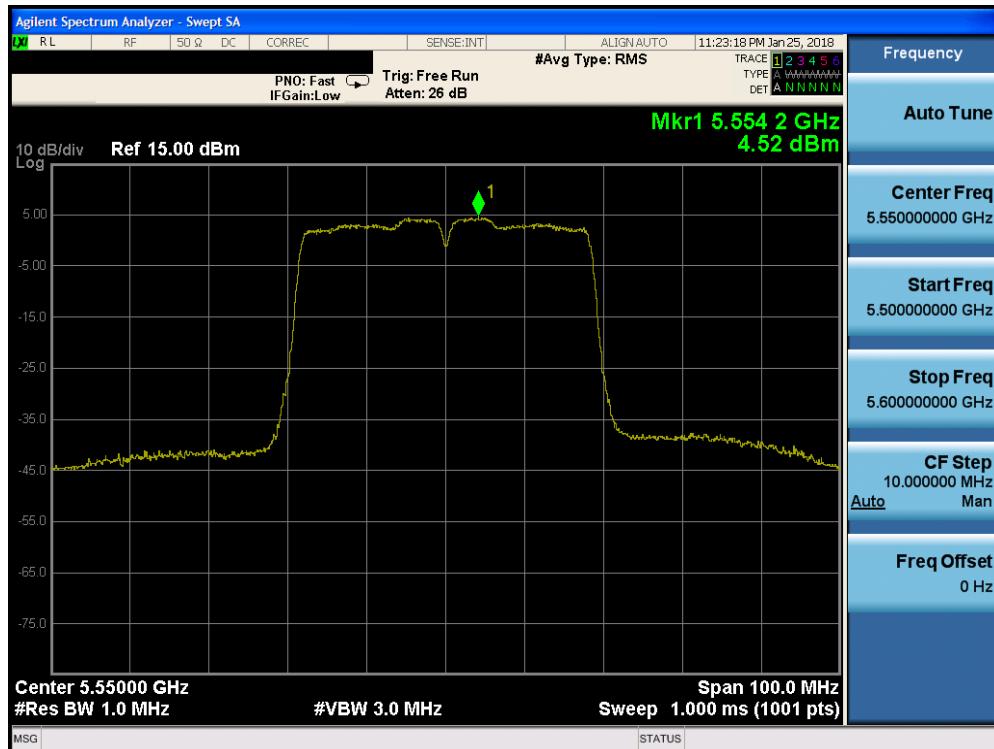


Plot 7-250. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11n (UNII Band 2C) – Ch. 102)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 165 of 259

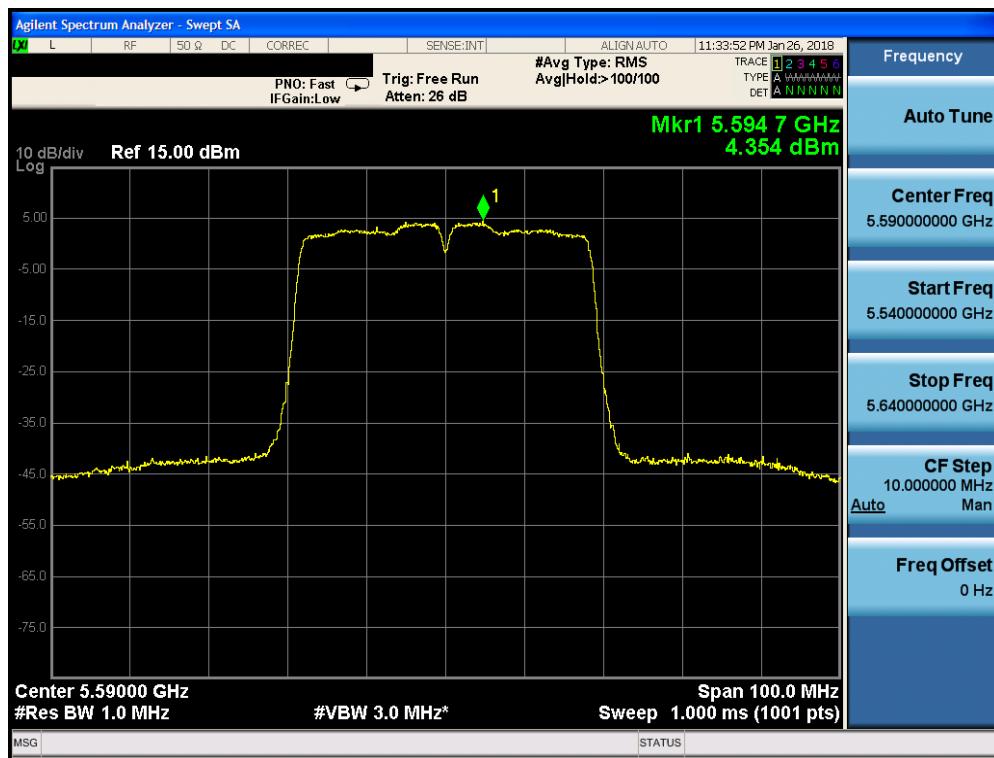


Plot 7-251. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 2C) – Ch. 110)

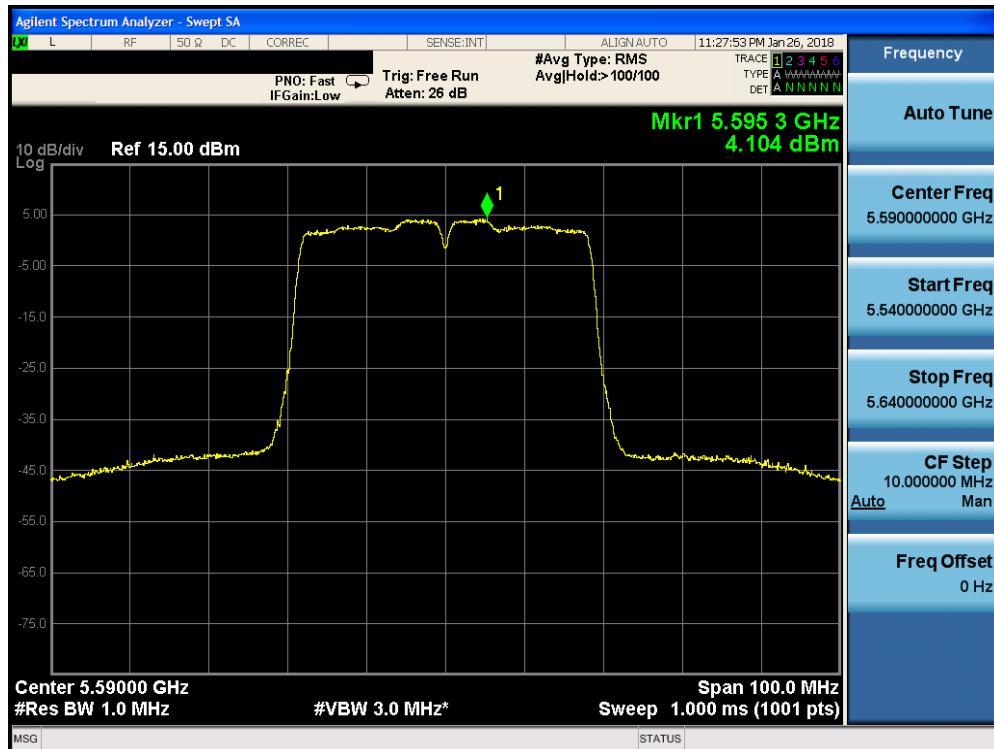


Plot 7-252. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11n (UNII Band 2C) – Ch. 110)

FCC ID: BCGA1954	PCTEST ENGINEERING LABORATORY, INC.		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 166 of 259	

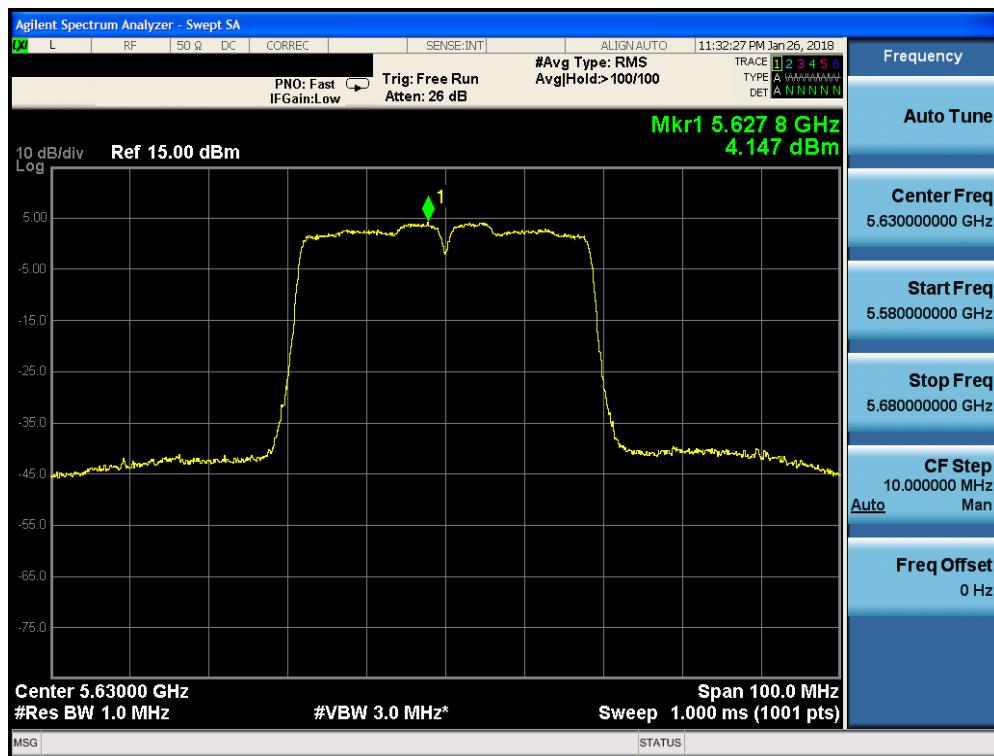


Plot 7-253. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 2C) – Ch. 118)

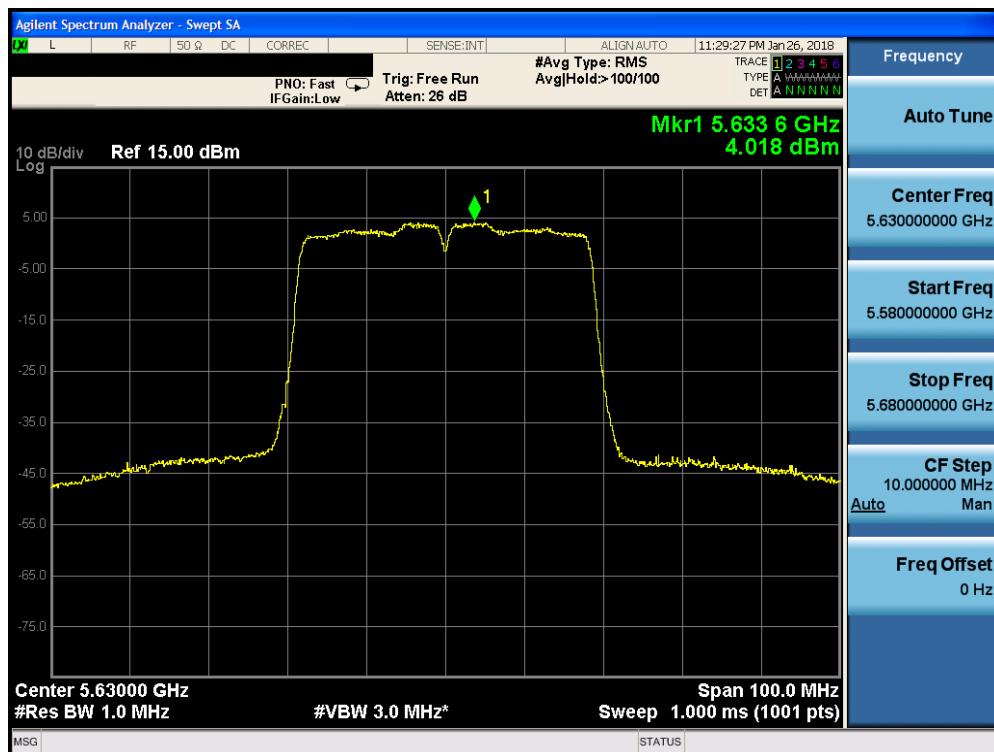


Plot 7-254. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11n (UNII Band 2C) – Ch. 118)

FCC ID: BCGA1954	PCTEST ENGINEERING LABORATORY, INC.		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device		Page 167 of 259

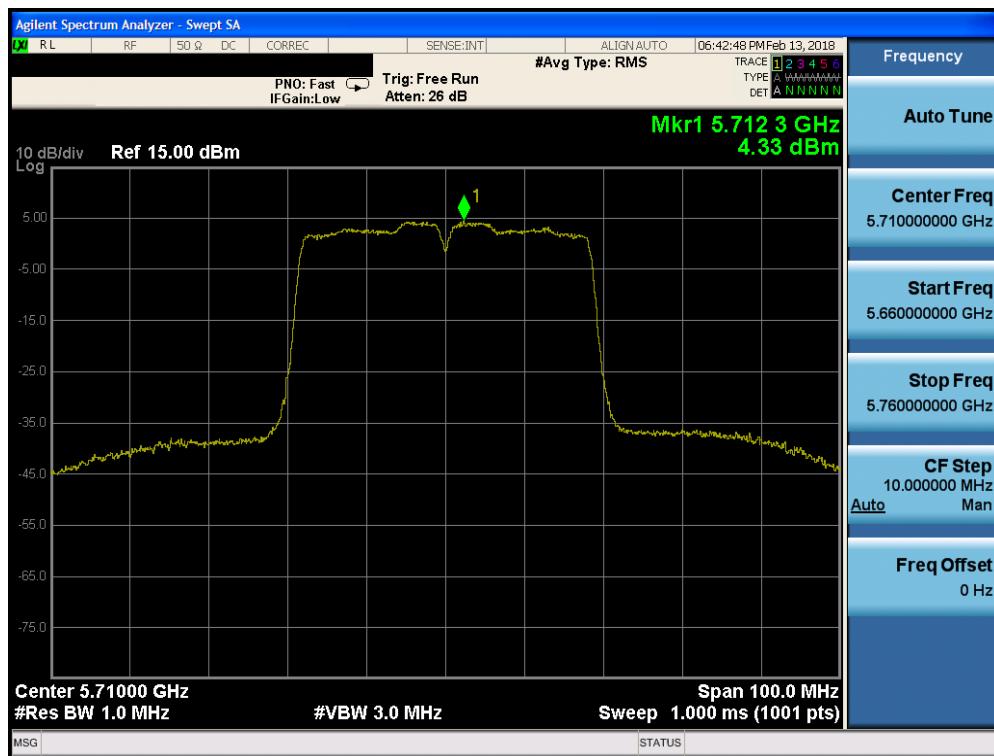


Plot 7-255. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 2C) – Ch. 126)

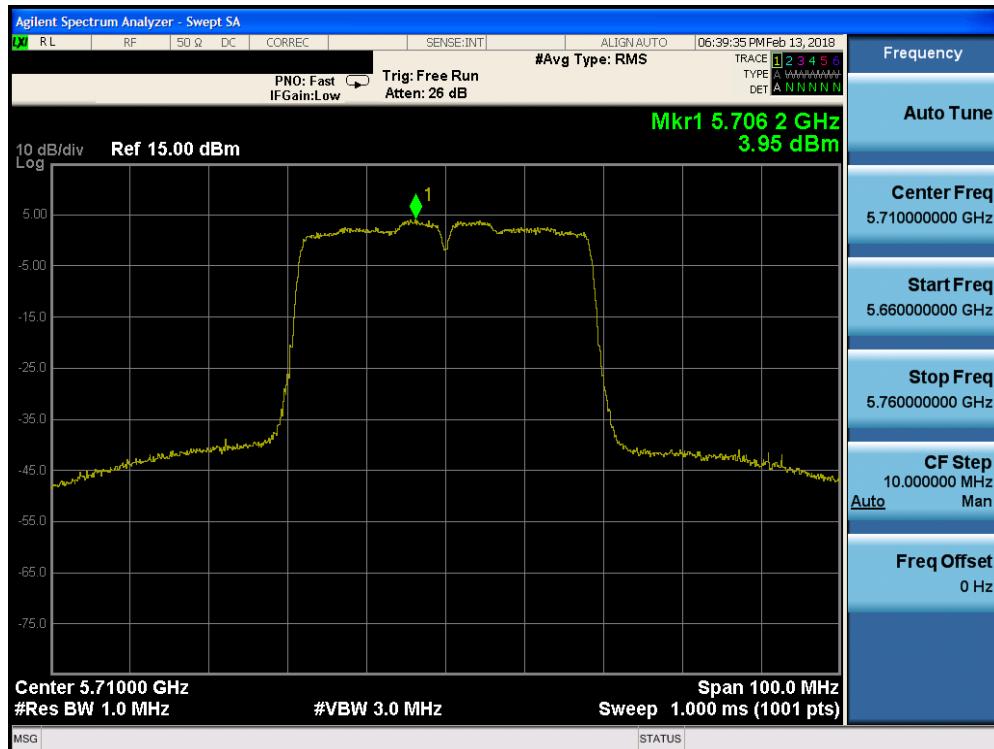


Plot 7-256. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11n (UNII Band 2C) – Ch. 126)

FCC ID: BCGA1954	PCTEST ENGINEERING LABORATORY, INC.		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device		Page 168 of 259

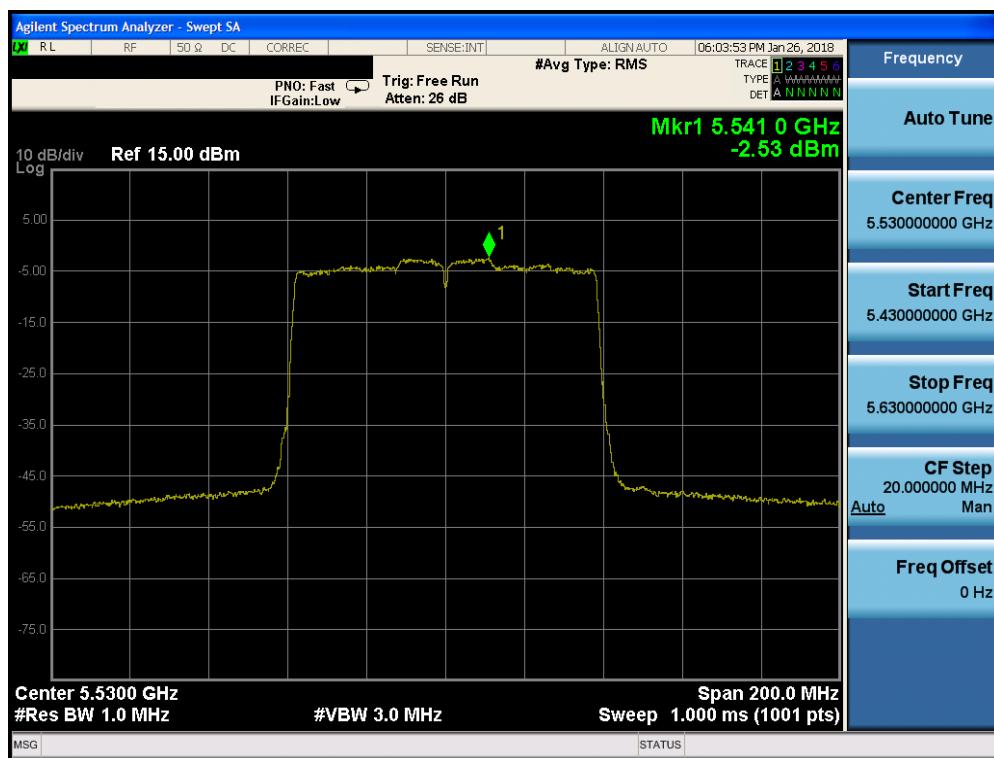


Plot 7-257. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 2C) – Ch. 142)

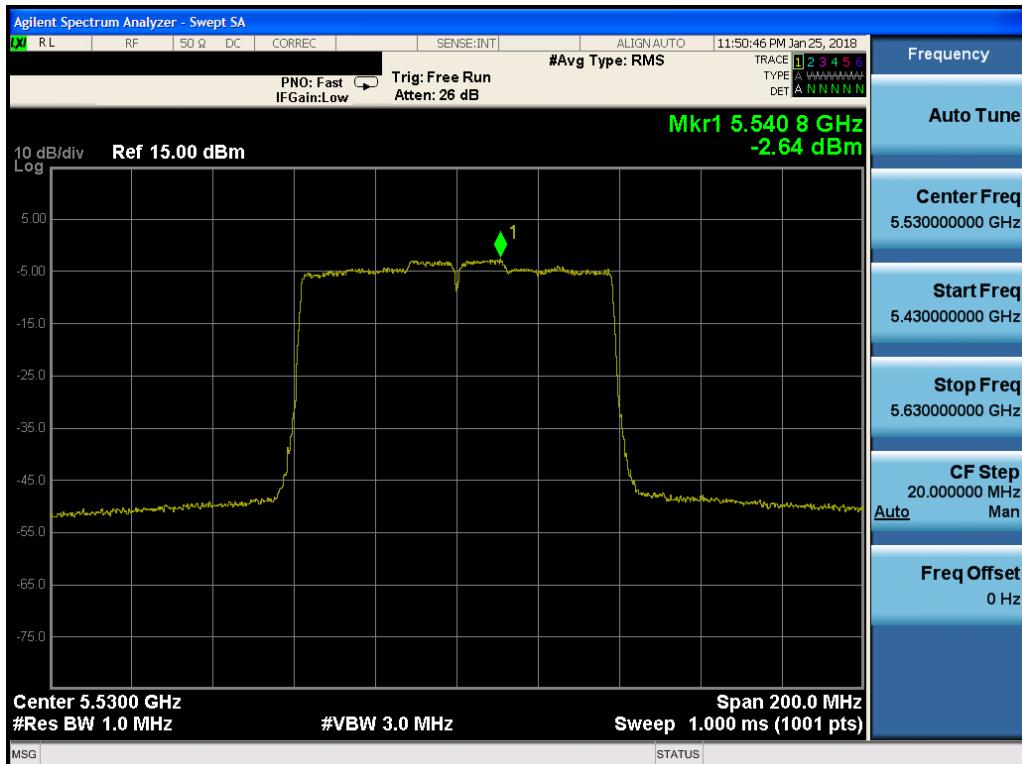


Plot 7-258. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11n (UNII Band 2C) – Ch. 142)

FCC ID: BCGA1954	PCTEST ENGINEERING LABORATORY, INC.		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 169 of 259	

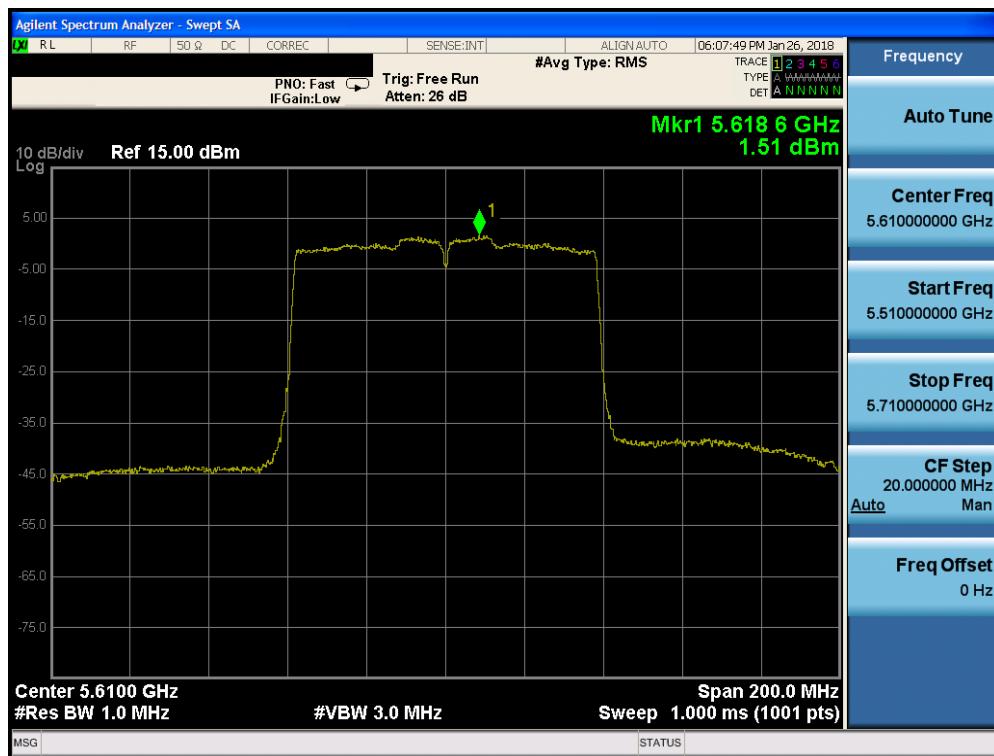


Plot 7-259. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 106)

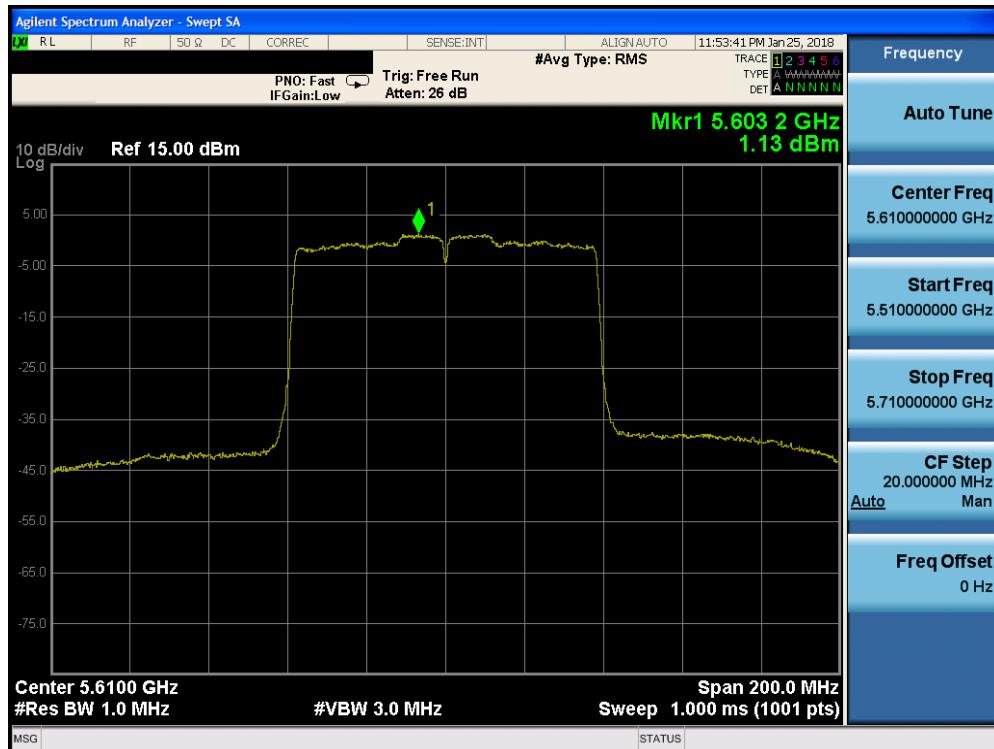


Plot 7-260. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 106)

FCC ID: BCGA1954	PCTEST ENGINEERING LABORATORY, INC.		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 170 of 259	



Plot 7-261. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 122)

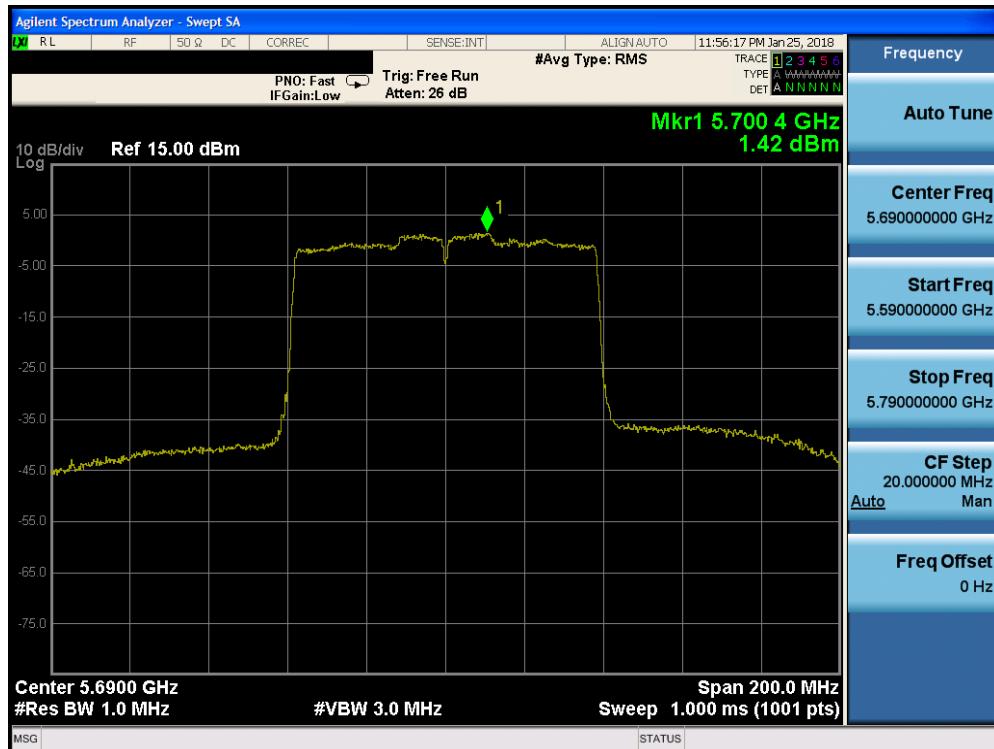


Plot 7-262. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 122)

FCC ID: BCGA1954	PCTEST ENGINEERING LABORATORY, INC.		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device		Page 171 of 259



Plot 7-263. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 138)



Plot 7-264. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 138)

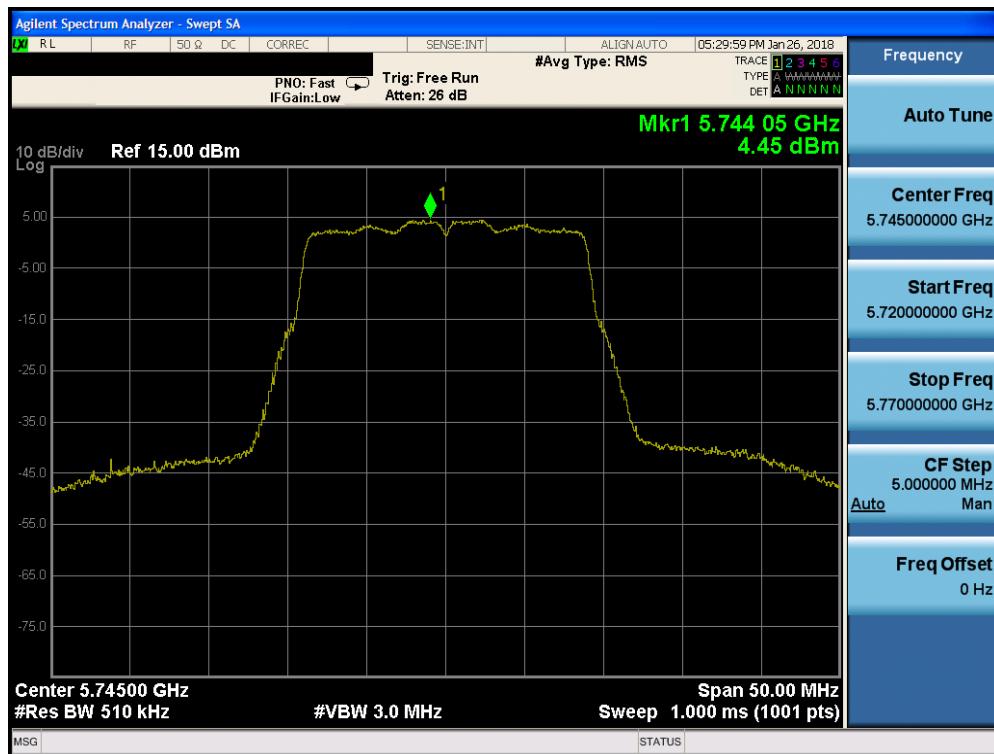
FCC ID: BCGA1954	PCTEST ENGINEERING LABORATORY, INC.		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 172 of 259	

Summed MIMO Power Spectral Density Measurements

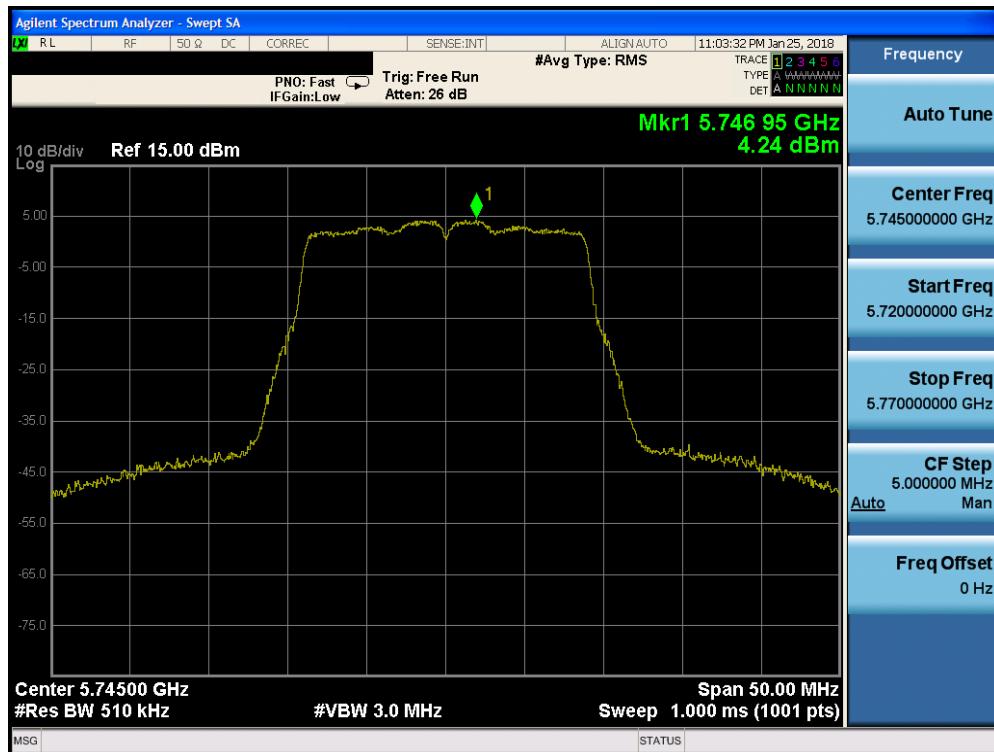
	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Antenn-1 Power Density [dBm]	Antenn-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5745	149	n (20MHz)	6.5/7.2 (MCS0)	4.45	4.24	7.36	30.0	-22.64
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	4.25	3.95	7.11	30.0	-22.89
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	4.09	4.02	7.07	30.0	-22.93
	5755	151	n (40MHz)	13.5/15 (MCS0)	1.41	0.82	4.14	30.0	-25.86
	5795	159	n (40MHz)	13.5/15 (MCS0)	1.25	0.25	3.79	30.0	-26.21
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	0.64	0.21	3.44	30.0	-26.56

Table 7-34. Band 3 MIMO Conducted Power Spectral Density Measurements

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 173 of 259	

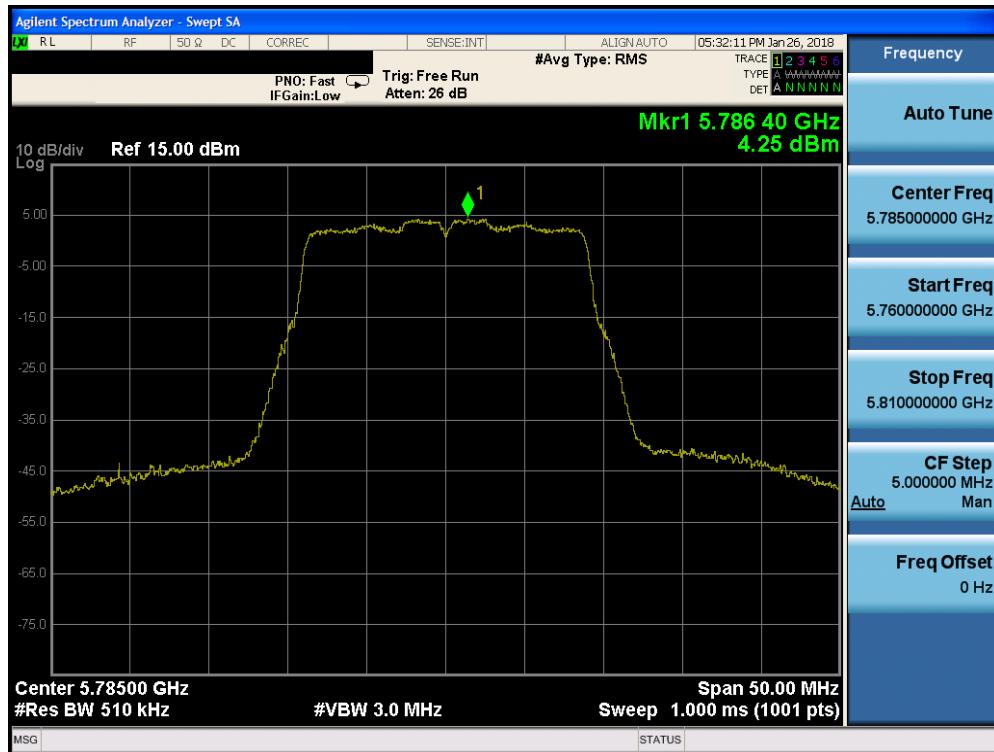


Plot 7-265. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 3) – Ch. 149)

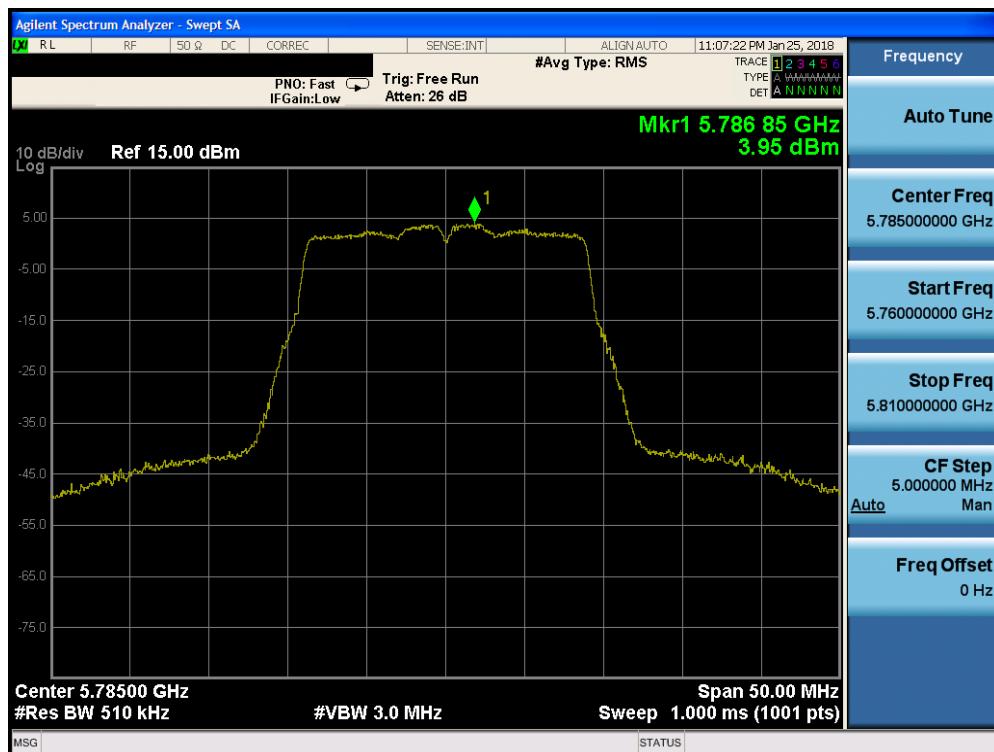


Plot 7-266. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 3) – Ch. 149)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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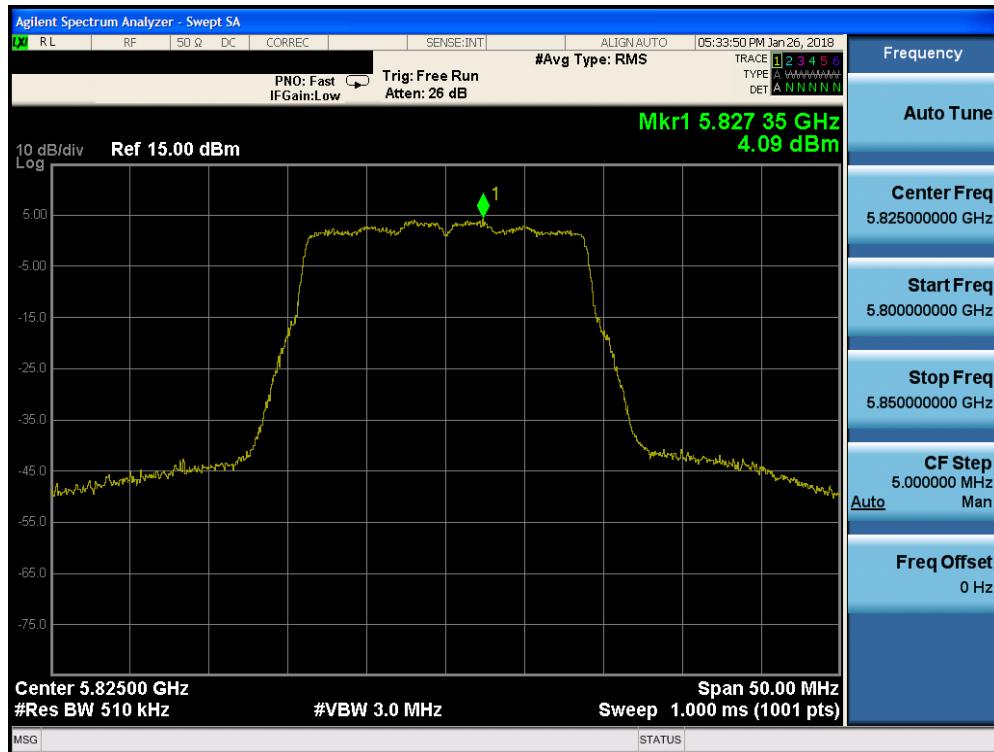


Plot 7-267. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 3) – Ch. 157)

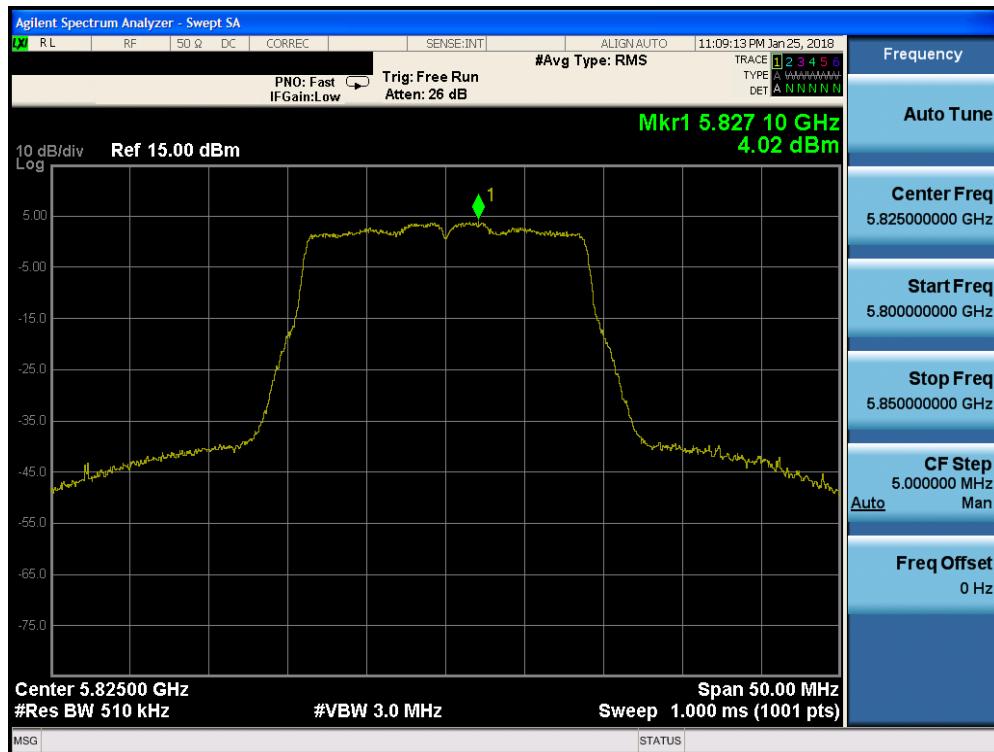


Plot 7-268. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 3) – Ch. 157)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device		Page 175 of 259

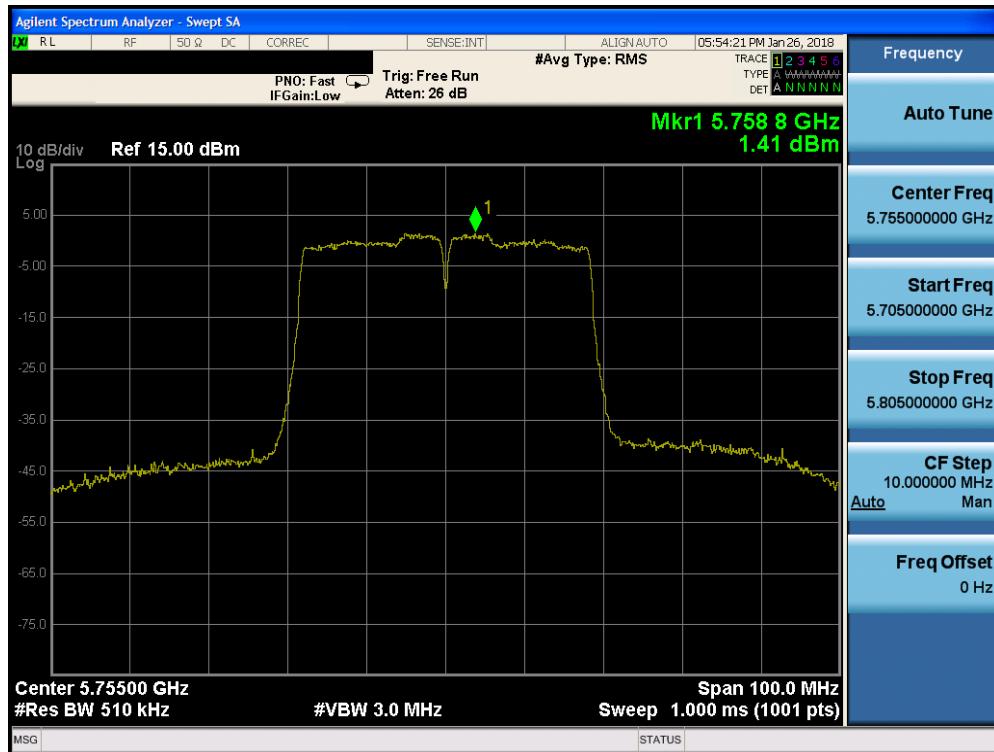


Plot 7-269. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11n (UNII Band 3) – Ch. 165)



Plot 7-270. Power Spectral Density Plot MIMO ANT2 (20MHz BW 802.11n (UNII Band 3) – Ch. 165)

FCC ID: BCGA1954	PCTEST® ENGINEERING LABORATORY, INC.		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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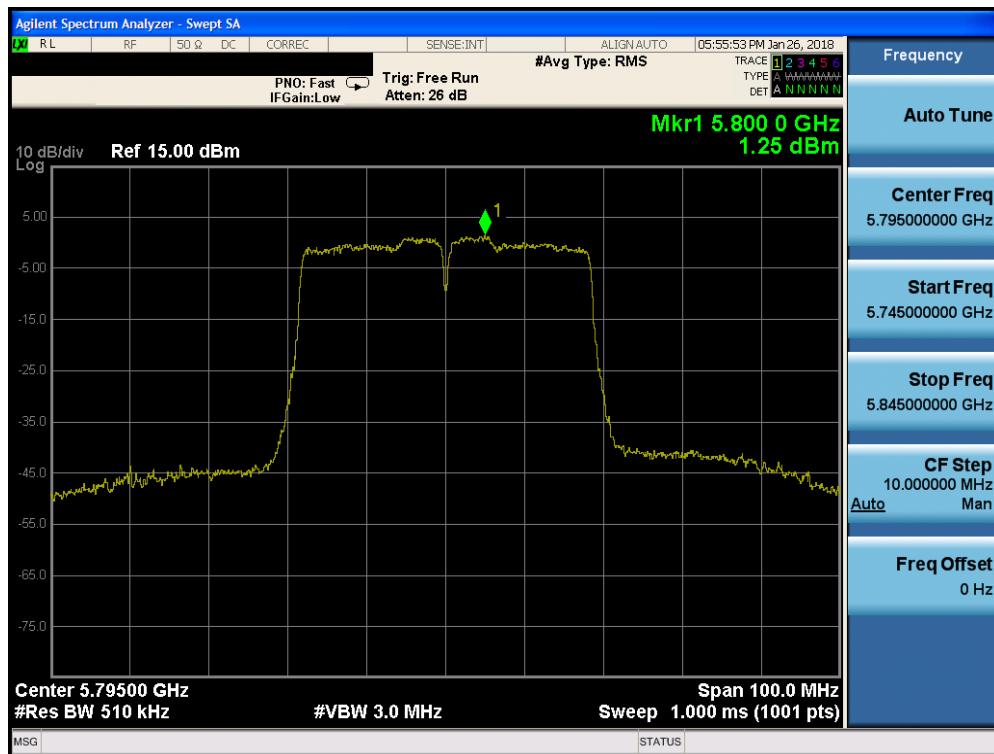


Plot 7-271. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 3) – Ch. 151)

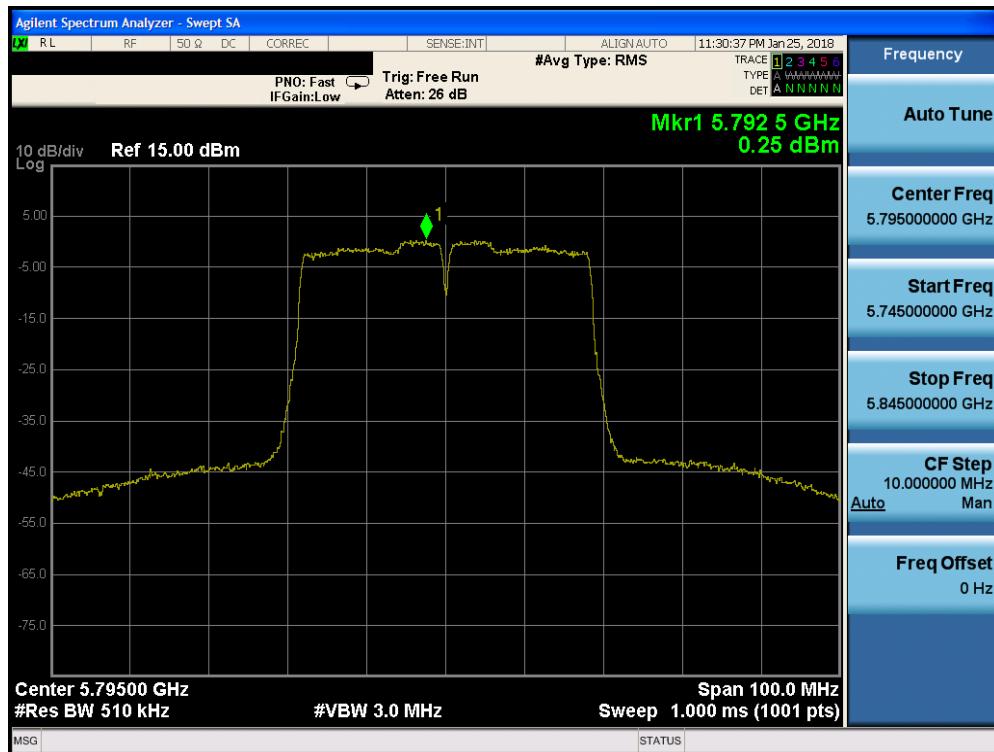


Plot 7-272. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11n (UNII Band 3) – Ch. 151)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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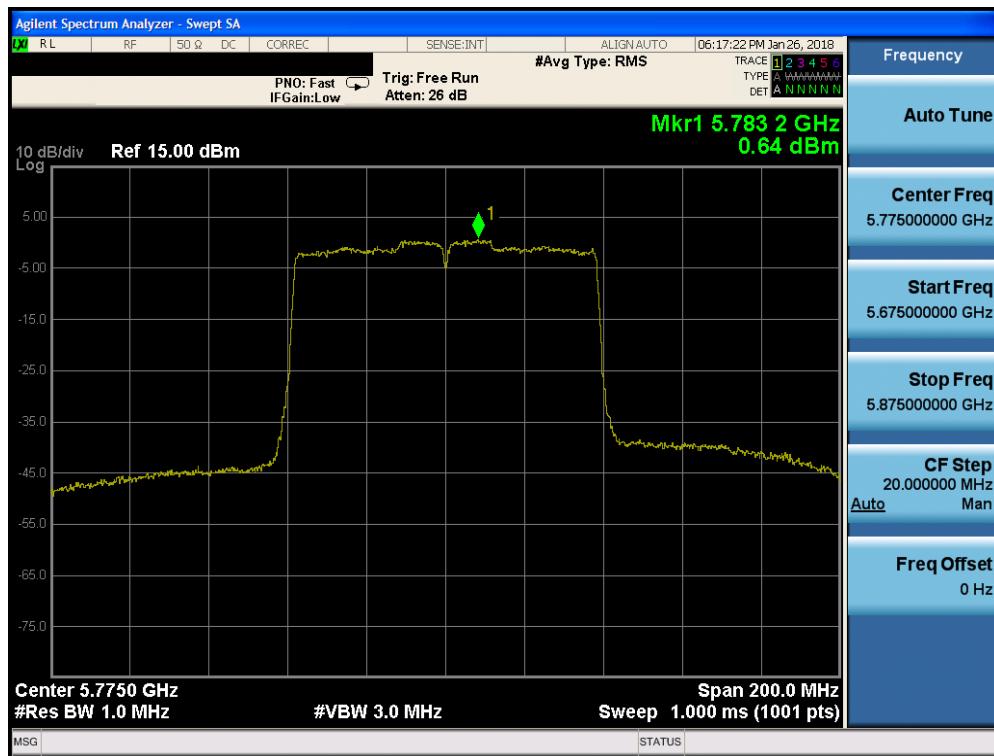


Plot 7-273. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11n (UNII Band 3) – Ch. 159)



Plot 7-274. Power Spectral Density Plot MIMO ANT2 (40MHz BW 802.11n (UNII Band 3) – Ch. 159)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-06.BCG	Test Dates: 10/31-2/15/2018	EUT Type: Tablet Device	Page 178 of 259



Plot 7-275. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ac (UNII Band 3) – Ch. 155)



Plot 7-276. Power Spectral Density Plot MIMO ANT2 (80MHz BW 802.11ac (UNII Band 3) – Ch. 155)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Note:

Per ANSI C63.10-2013 Section 14.3.2.2 and KDB 662911 v02r01 Section E)2), the power spectral density at Antenna 1 and Antenna 2 were first measured separately 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 7.60 dBm for Antenna-1 and 9.65 dBm for Antenna-2.

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

$$(4.86 \text{ dBm} + 4.57 \text{ dBm}) = (3.06 \text{ mW} + 2.86 \text{ mW}) = 5.92 \text{ mW} = 7.72 \text{ dBm}$$

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 4.22 dBm with directional gain of 4.48 dBi.

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

$$4.22 \text{ dBm} + 4.48 \text{ dBi} = 8.70 \text{ dBm}$$

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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