



Figure 9-255. Maximum Conducted Output Power and PSD MIMO Chain A 802.11ac VHT20 (Ch. 149)

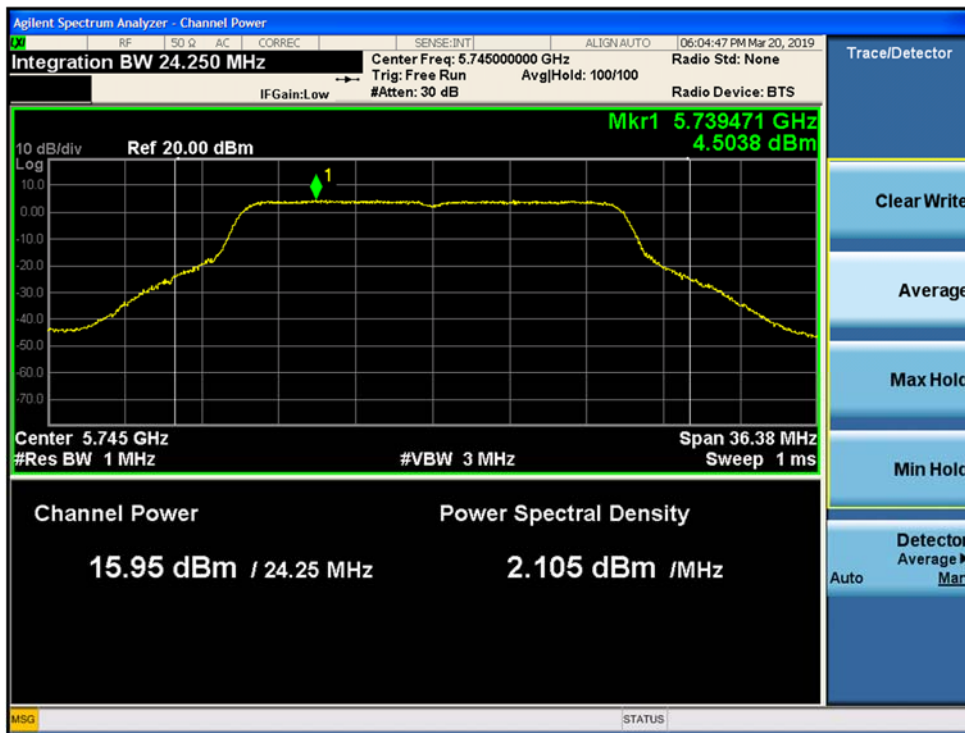


Figure 9-256. Maximum Conducted Output Power and PSD MIMO Chain B 802.11ac VHT20 (Ch. 149)

9.5.5.25 SISO Chain A 802.11ac VHT40 Maximum Conducted Output Power

Chain A 802.11ac VHT40 Maximum Conducted Output Power								
Chan. No.	Freq. (MHz)	Chain A (dBm)	Chain B (dBm)	Total Power (dBm)	15.407 Limit (dBm)	RSS-247 Limit (dBm)	15.407 Margin (dB)	RSS-247 Margin (dB)
38	5190	15.10	--	15.25	24.00	--	-8.75	--
46	5230	14.80	--	14.95	24.00	--	-9.05	--
54	5270	15.54	--	15.69	24.00	24.00	-8.31	-8.31
62	5310	15.53	--	15.68	24.00	24.00	-8.32	-8.32
102	5510	15.56	--	15.71	24.00	24.00	-8.29	-8.29
110	5550	16.06	--	16.21	24.00	24.00	-7.79	-7.79
134	5670	15.77	--	15.92	24.00	24.00	-8.08	-8.08
142	5710	15.63	--	15.78	24.00	24.00	-8.22	-8.22
151	5755	15.70	--	15.85	30.00	30.00	-14.15	-14.15
159	5795	15.79	--	15.94	30.00	30.00	-14.06	-14.06

Chain A 802.11ac VHT40 E.I.R.P						
Channel No.	Frequency (MHz)	Total Power (dBm)	Antenna Gain (dBi)	E.I.R.P (dBm)	RSS-247 E.I.R.P Limit (dBm)	RSS-247 E.I.R.P. Margin (dB)
38	5190	15.25	4.70	19.95	23.00	-3.05
46	5230	14.95	4.70	19.65	23.00	-3.35
54	5270	15.69	5.00	20.69	30.00	-9.31
62	5310	15.68	5.00	20.68	30.00	-9.32
102	5510	15.71	4.90	20.61	30.00	-9.39
110	5550	16.21	4.90	21.11	30.00	-8.89
134	5670	15.92	4.90	20.82	30.00	-9.18
142	5710	15.78	4.90	20.68	30.00	-9.32
151	5755	15.85	4.30	20.15	--	--
159	5795	15.94	4.30	20.24	--	--

9.5.5.26 Chain A 802.11ac VHT40 Maximum Spectral Density

UNII-1 Chain A 802.11ac VHT40 Maximum Power Spectral Density/MHz										
Chan. No.	Freq. (MHz)	Chain A (dBm)	Chain B (dBm)	Total PSD $\frac{dBm}{MHz}$	Total Ant. Gain (dBi)	Total EIRP PSD $\frac{dBm}{MHz}$	15.407 Limit $\frac{dBm}{MHz}$	RSS-247 EIRP PSD Limit $\frac{dBm}{MHz}$	15.407 Margin (dB)	RSS-247 Margin (dB)
38	5190	0.55	--	0.70	4.70	5.40	11.00	10.00	-10.30	-4.60
46	5230	0.40	--	0.55	4.70	5.25	11.00	10.00	-10.45	-4.75

UNII-2A and UNII-2C Chain A 802.11ac VHT40 Maximum Power Spectral Density/MHz									
Channel No.	Frequency (MHz)	Chain A (dBm)	Chain B (dBm)	Total PSD $\frac{dBm}{MHz}$	15.407 Limit $\frac{dBm}{MHz}$	RSS-247 Limit $\frac{dBm}{MHz}$	15.407 Margin (dB)	RSS-247 Margin (dB)	
54	5270	0.92	--	1.07	11.00	11.00	-9.93	-9.93	
62	5310	1.13	--	1.28	11.00	11.00	-9.72	-9.72	
102	5510	0.79	--	0.94	11.00	11.00	-10.06	-10.06	
110	5550	1.65	--	1.79	11.00	11.00	-9.21	-9.21	
134	5670	1.27	--	1.42	11.00	11.00	-9.58	-9.58	
142	5710	0.96	--	1.11	11.00	11.00	-9.89	-9.89	

UNII-3 Chain A 802.11ac VHT40 Maximum Power Spectral Density/500kHz								
Chan. No.	Freq. (MHz)	Chain A (dBm)	Chain B (dBm)	Total PSD $\frac{dBm}{500 kHz}$	15.407 Limit $\frac{dBm}{500 kHz}$	RSS-247 Limit $\frac{dBm}{500 kHz}$	15.407 Margin (dB)	RSS-247 Margin (dB)
151	5755	-0.68	--	-0.53	30.00	30.00	-30.53	-30.53
159	5795	-0.43	--	-0.28	30.00	30.00	-30.28	-30.28
142	5710	-1.34	--	-1.19	30.00	30.00	-12.19	-12.19

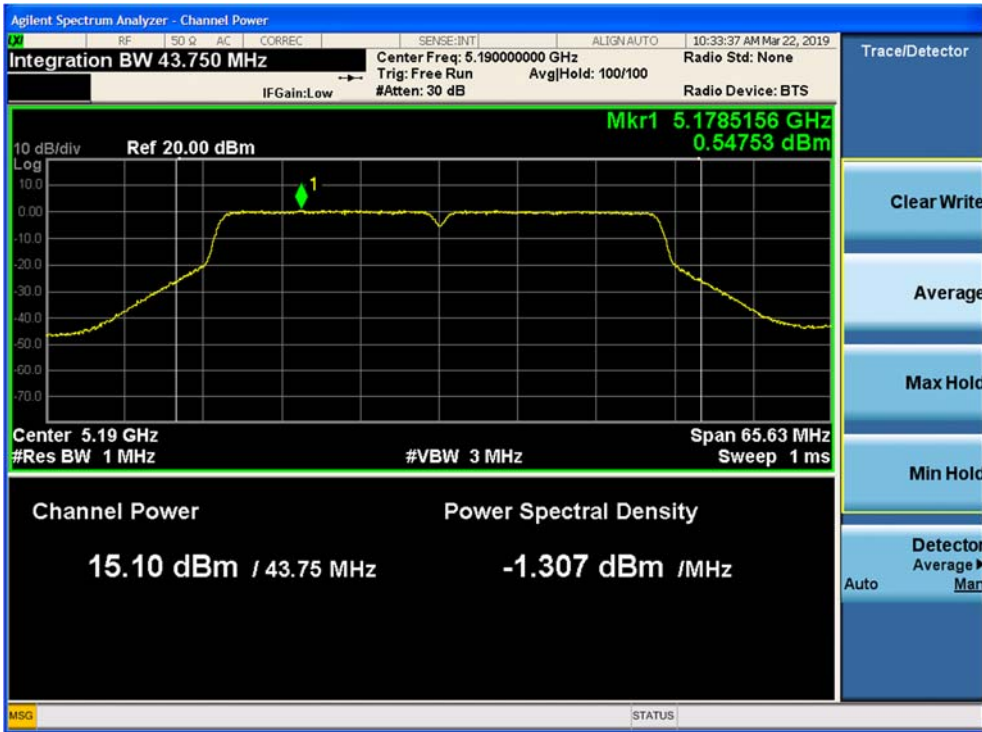


Figure 9-257. Maximum Conducted Output Power and PSD MIMO Chain A 802.11ac VHT40 (Ch. 38)

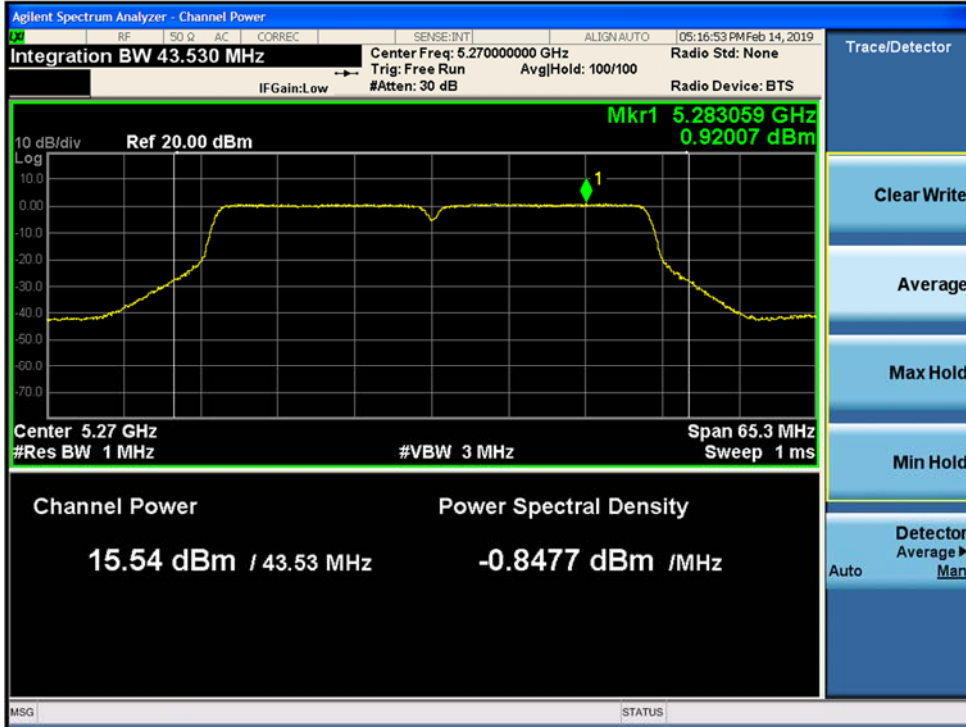


Figure 9-258. Maximum Conducted Output Power and PSD MIMO Chain A 802.11ac VHT40 (Ch. 54)

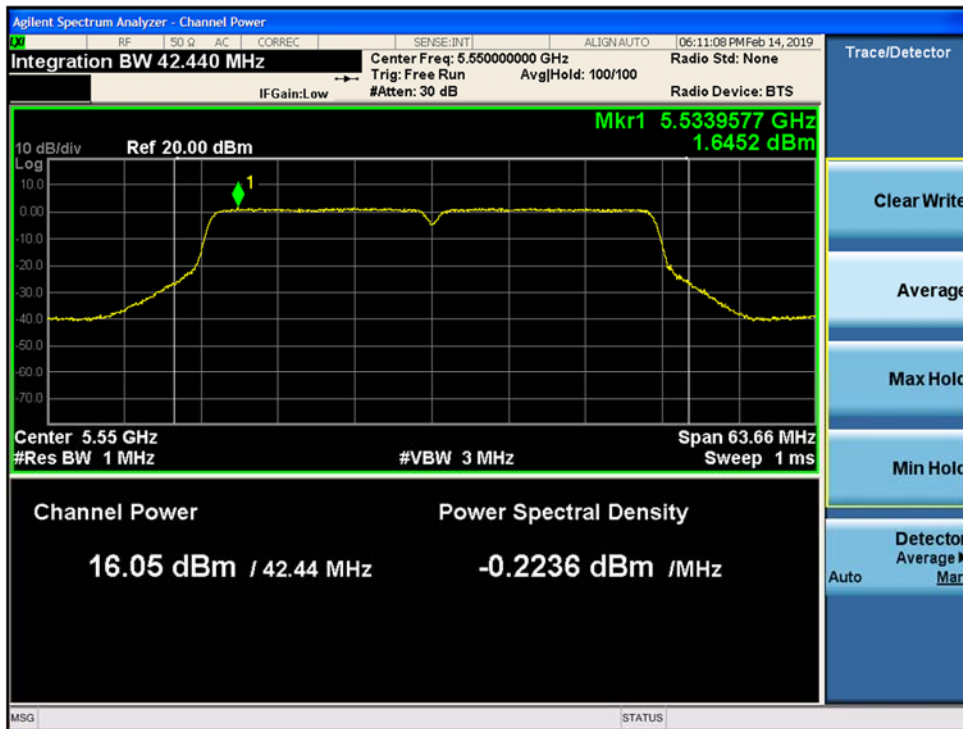


Figure 9-259. Maximum Conducted Output Power and PSD MIMO Chain A 802.11ac VHT40 (Ch. 110)

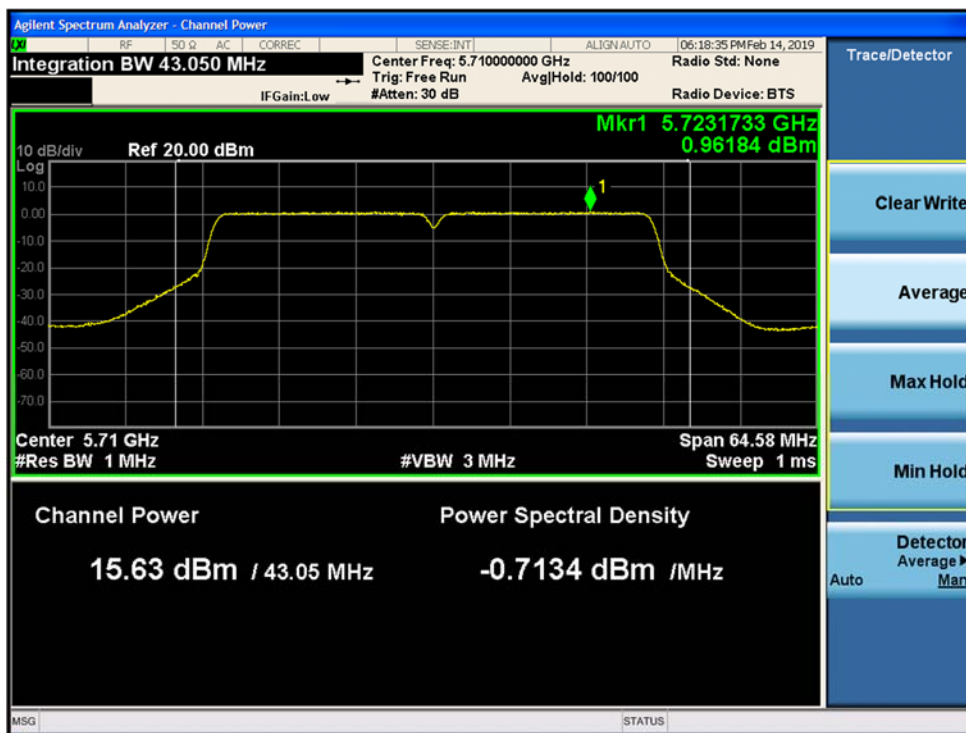


Figure 9-260. Maximum Conducted Output Power and PSD MIMO Chain A 802.11ac VHT40 (Ch. 142)

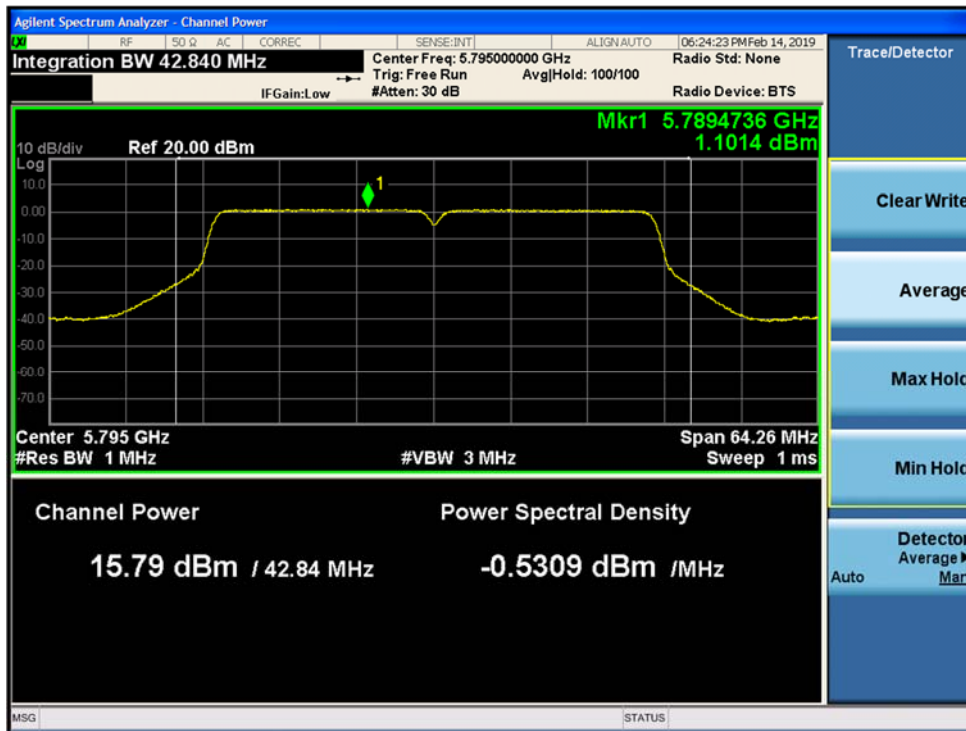


Figure 9-261. Maximum Conducted Output Power and PSD MIMO Chain A 802.11ac VHT40 (Ch. 159)

9.5.5.27 SISO Chain B 802.11ac VHT40 Maximum Conducted Output Power

Chain A 802.11ac VHT40 Maximum Conducted Output Power								
Chan. No.	Freq. (MHz)	Chain A (dBm)	Chain B (dBm)	Total Power (dBm)	15.407 Limit (dBm)	RSS-247 Limit (dBm)	15.407 Margin (dB)	RSS-247 Margin (dB)
38	5190	--	15.07	15.22	24.00	--	-8.78	--
46	5230	--	14.89	15.04	24.00	--	-8.96	--
54	5270	--	15.75	15.90	24.00	24.00	-8.10	-8.10
62	5310	--	15.78	15.93	24.00	24.00	-8.07	-8.07
102	5510	--	16.51	16.66	24.00	24.00	-7.34	-7.34
110	5550	--	16.25	16.40	24.00	24.00	-7.60	-7.60
134	5670	--	16.06	16.21	24.00	24.00	-7.79	-7.79
142	5710	--	16.11	16.26	24.00	24.00	-7.74	-7.74
151	5755	--	16.25	16.40	30.00	30.00	-13.60	-13.60
159	5795	--	16.14	16.29	30.00	30.00	-13.71	-13.71

Chain B 802.11ac VHT40 E.I.R.P						
Channel No.	Frequency (MHz)	Total Power (dBm)	Antenna Gain (dBi)	E.I.R.P (dBm)	RSS-247 E.I.R.P Limit (dBm)	RSS-247 E.I.R.P. Margin (dB)
38	5190	15.22	4.20	19.42	23.00	-3.58
46	5230	15.04	4.20	19.24	23.00	-3.76
54	5270	15.90	4.70	20.60	30.00	-9.40
62	5310	15.93	4.70	20.63	30.00	-9.37
102	5510	16.66	4.50	21.16	30.00	-8.84
110	5550	16.40	4.50	20.90	30.00	-9.10
134	5670	16.21	4.50	20.71	30.00	-9.29
142	5710	16.26	4.50	20.76	30.00	-9.24
151	5755	16.40	3.60	20.00	--	--
159	5795	16.29	3.60	19.89	--	--

9.5.5.28 SISO Chain B 802.11ac VHT40 Maximum Spectral Density

UNII-1 Chain B 802.11ac VHT40 Maximum Power Spectral Density/MHz										
Chan. No.	Freq. (MHz)	Chain A (dBm)	Chain B (dBm)	Total PSD $\frac{dBm}{MHz}$	Total Ant. Gain (dBi)	Total EIRP PSD $\frac{dBm}{MHz}$	15.407 Limit $\frac{dBm}{MHz}$	RSS-247 EIRP PSD Limit $\frac{dBm}{MHz}$	15.407 Margin (dB)	RSS-247 Margin (dB)
38	5190	--	0.33	0.48	4.20	4.68	11.00	10.00	-10.52	-5.32
46	5230	--	0.47	0.62	4.20	4.82	11.00	10.00	-10.38	-5.18

UNII-2A and UNII-2C ChainB 802.11ac VHT40 Maximum Power Spectral Density/MHz									
Channel No.	Frequency (MHz)	Chain A (dBm)	Chain B (dBm)	Total PSD $\frac{dBm}{MHz}$	15.407 Limit $\frac{dBm}{MHz}$	RSS-247 Limit $\frac{dBm}{MHz}$	15.407 Margin (dB)	RSS-247 Margin (dB)	
54	5270	--	1.01	1.15	11.00	11.00	-9.85	-9.85	
62	5310	--	1.22	1.36	11.00	11.00	-9.64	-9.64	
102	5510	--	1.83	1.97	11.00	11.00	-9.03	-9.03	
110	5550	--	1.88	2.03	11.00	11.00	-8.97	-8.97	
134	5670	--	1.28	1.43	11.00	11.00	-9.57	-9.57	
142	5710	--	1.58	1.73	11.00	11.00	-9.27	-9.27	

UNII-3 Chain B 802.11ac VHT40 Maximum Power Spectral Density/500kHz								
Chan. No.	Freq. (MHz)	Chain A (dBm)	Chain B (dBm)	Total PSD $\frac{dBm}{500 kHz}$	15.407 Limit $\frac{dBm}{500 kHz}$	RSS-247 Limit $\frac{dBm}{500 kHz}$	15.407 Margin (dB)	RSS-247 Margin (dB)
151	5755	--	-0.29	-0.14	30.00	30.00	-30.14	-30.14
159	5795	--	-0.46	-0.31	30.00	30.00	-30.31	-30.31
142	5710	--	-0.85	-0.77	30.00	30.00	-11.77	-11.77

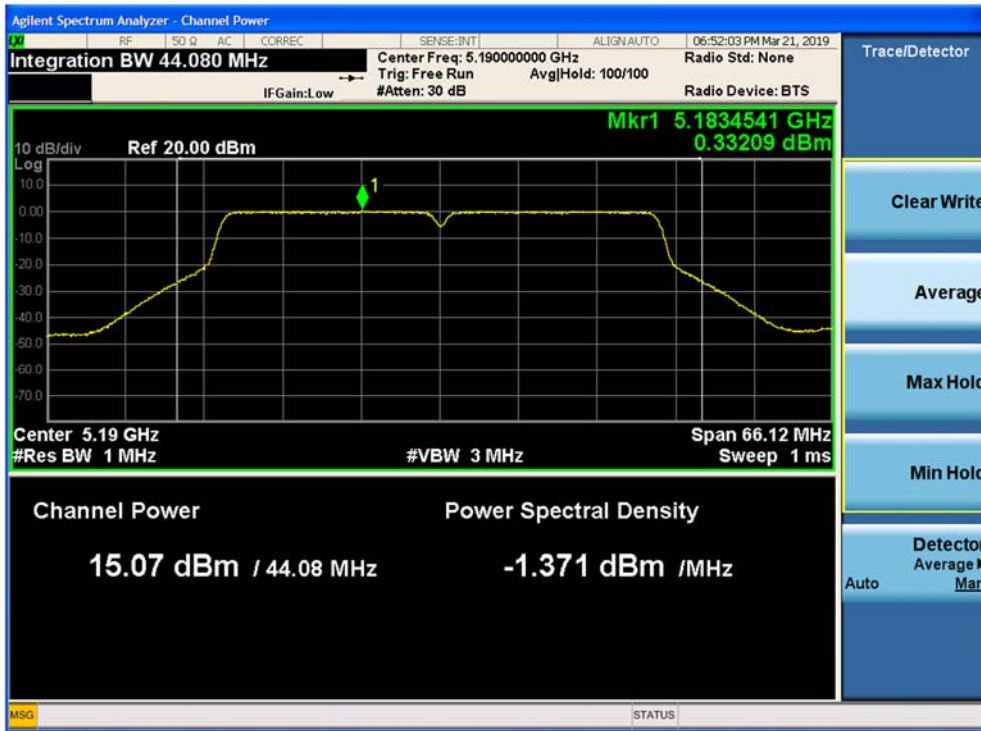


Figure 9-262. Maximum Conducted Output Power and PSD MIMO Chain B 802.11ac VHT40 (Ch. 38)

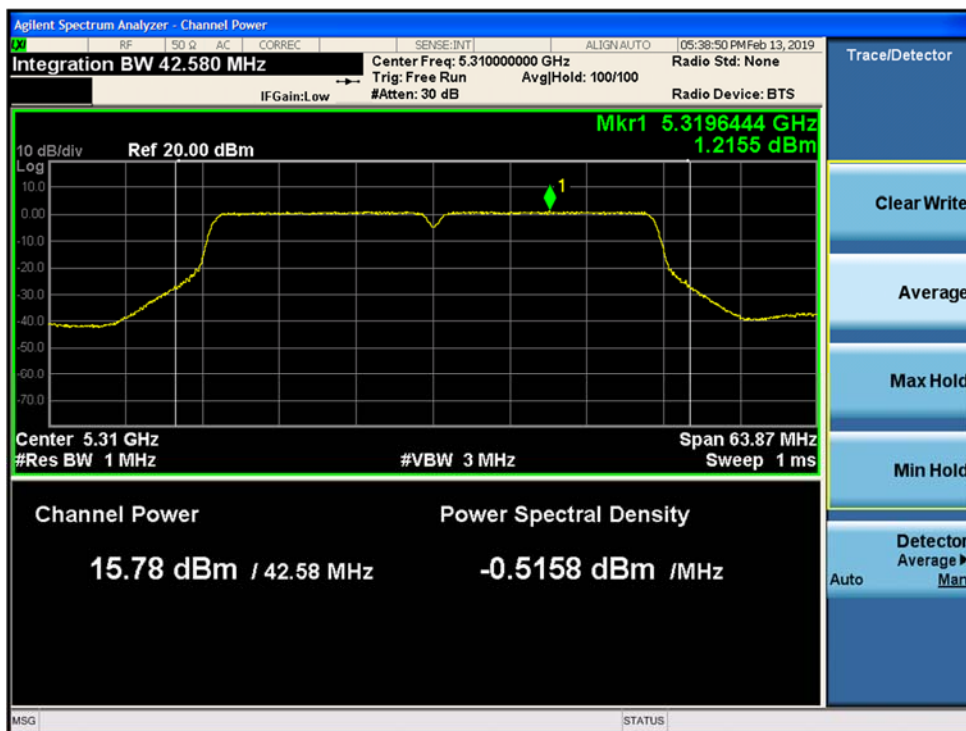


Figure 9-263. Maximum Conducted Output Power and PSD MIMO Chain B 802.11ac VHT40 (Ch. 62)

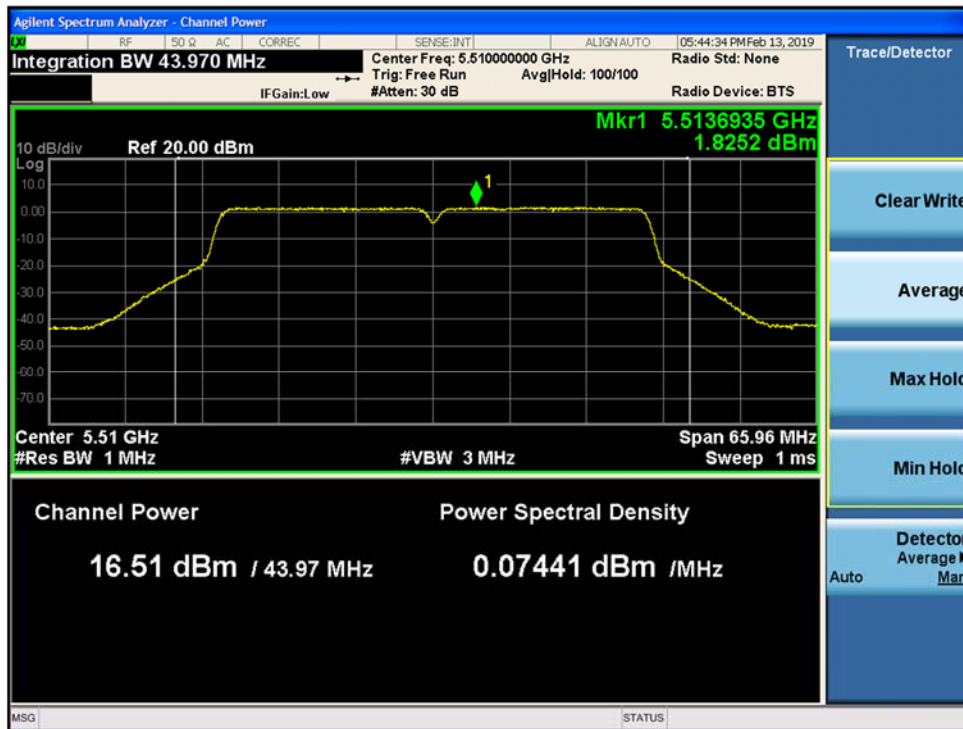


Figure 9-264. Maximum Conducted Output Power and PSD MIMO Chain B 802.11ac VHT40 (Ch. 102)

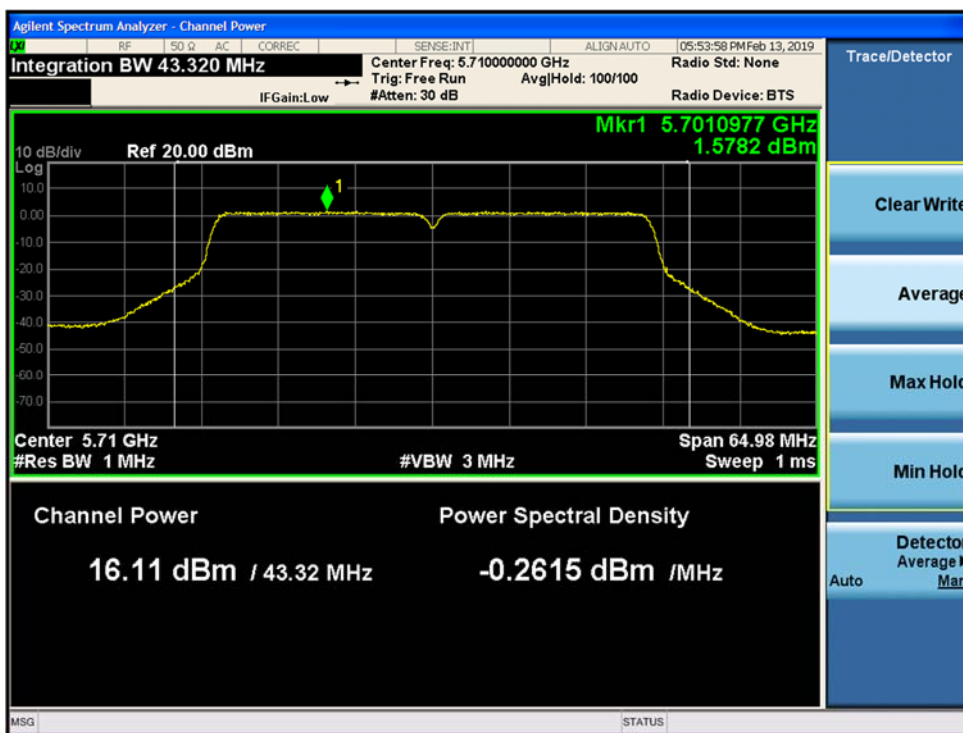


Figure 9-265. Maximum Conducted Output Power and PSD MIMO Chain B 802.11ac VHT40 (Ch. 142)

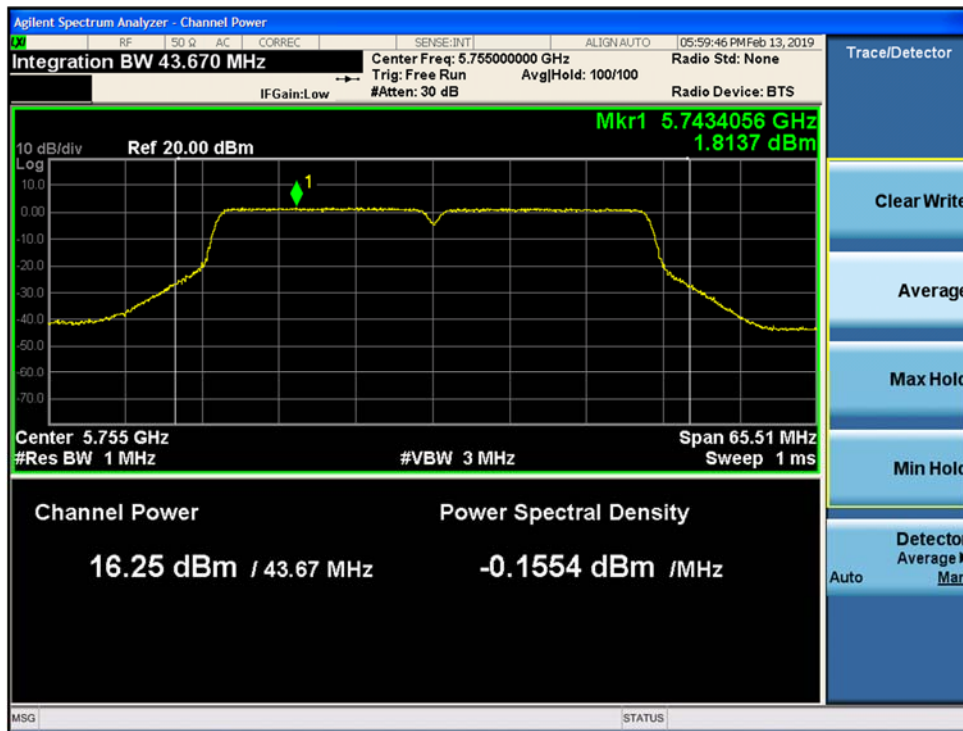


Figure 9-266. Maximum Conducted Output Power and PSD MIMO Chain B 802.11ac VHT40 (Ch. 151)

9.5.5.29 Chain A+B 802.11ac VHT40 Maximum Conducted Output Power

Chain A+B 802.11ac VHT40 Maximum Conducted Output Power								
Chan. No.	Freq. (MHz)	Chain A (dBm)	Chain B (dBm)	Total Power (dBm)	15.407 Limit (dBm)	RSS-247 Limit (dBm)	15.407 Margin (dB)	RSS-247 Margin (dB)
38	5190	11.76	11.96	15.21	24.00	--	-8.79	--
46	5230	12.73	12.45	15.94	24.00	--	-8.06	--
54	5270	15.37	15.56	18.81	24.00	24.00	-5.19	-5.19
62	5310	14.42	14.46	17.79	24.00	24.00	-6.21	-6.21
102	5510	15.45	16.23	19.20	24.00	24.00	-4.80	-4.80
110	5550	16.04	15.86	19.30	24.00	24.00	-4.70	-4.70
134	5670	15.62	15.87	19.09	24.00	24.00	-4.91	-4.91
142	5710	15.53	15.76	18.99	24.00	24.00	-5.01	-5.01
151	5755	15.86	16.03	19.29	30.00	30.00	-10.71	-10.71
159	5795	15.67	15.92	19.14	30.00	30.00	-10.86	-10.86

Chain A+B 802.11ac VHT40 E.I.R.P						
Channel No.	Frequency (MHz)	Total Power (dBm)	Antenna Gain (dBi)	E.I.R.P (dBm)	RSS-247 E.I.R.P Limit (dBm)	RSS-247 E.I.R.P. Margin (dB)
38	5190	15.21	4.46	19.67	23.00	-3.33
46	5230	15.94	4.46	20.40	23.00	-2.60
54	5270	18.81	4.85	23.67	30.00	-6.33
62	5310	17.79	4.85	22.64	30.00	-7.36
102	5510	19.20	4.70	23.91	30.00	-6.09
110	5550	19.30	4.70	24.00	30.00	-6.00
134	5670	19.09	4.70	23.80	30.00	-6.20
142	5710	18.99	4.70	23.70	30.00	-6.30
151	5755	19.29	3.96	23.26	--	--
159	5795	19.14	3.96	23.11	--	--

9.5.5.30 Chain A+B 802.11ac VHT40 Maximum Spectral Density

UNII-1 Chain A+B 802.11ac VHT40 Maximum Power Spectral Density/MHz										
Chan. No.	Freq. (MHz)	Chain A (dBm)	Chain B (dBm)	Total PSD ($\frac{dBm}{MHz}$)	Total Ant. Gain (dBi)	Total EIRP PSD ($\frac{dBm}{MHz}$)	15.407 Limit ($\frac{dBm}{MHz}$)	RSS-247 EIRP PSD Limit ($\frac{dBm}{MHz}$)	15.407 Margin (dB)	RSS-247 Margin (dB)
38	5190	-2.79	-2.45	0.73	4.46	5.19	11.00	10.00	-10.27	-4.81
46	5230	-1.87	-2.03	1.40	4.46	5.85	11.00	10.00	-9.60	-4.15

UNII-2A and UNII-2C Chain A+B 802.11ac VHT40 Maximum Power Spectral Density/MHz									
Channel No.	Frequency (MHz)	Chain A (dBm)	Chain B (dBm)	Total PSD ($\frac{dBm}{MHz}$)	15.407 Limit ($\frac{dBm}{MHz}$)	RSS-247 Limit ($\frac{dBm}{MHz}$)	15.407 Margin (dB)	RSS-247 Margin (dB)	
54	5270	0.82	1.19	4.35	11.00	11.00	-6.65	-6.65	
62	5310	-0.23	-0.12	3.17	11.00	11.00	-7.83	-7.83	
102	5510	0.94	2.14	4.93	11.00	11.00	-6.07	-6.07	
110	5550	1.54	1.47	4.85	11.00	11.00	-6.15	-6.15	
134	5670	1.27	1.44	4.70	11.00	11.00	-6.30	-6.30	
142	5710	0.96	1.32	4.49	11.00	11.00	-6.51	-6.51	

UNII-3 Chain A+B 802.11ac VHT40 Maximum Power Spectral Density/500kHz								
Chan. No.	Freq. (MHz)	Chain A (dBm)	Chain B (dBm)	Total PSD ($\frac{dBm}{500 kHz}$)	15.407 Limit ($\frac{dBm}{500 kHz}$)	RSS-247 Limit ($\frac{dBm}{500 kHz}$)	15.407 Margin (dB)	RSS-247 Margin (dB)
151	5755	-0.16	0.04	3.29	30.00	30.00	-26.71	-26.71
159	5795	-0.50	-0.37	2.91	30.00	30.00	-27.09	-27.09
142	5710	-0.92	-0.50	2.64	30.00	30.00	-8.36	-8.36

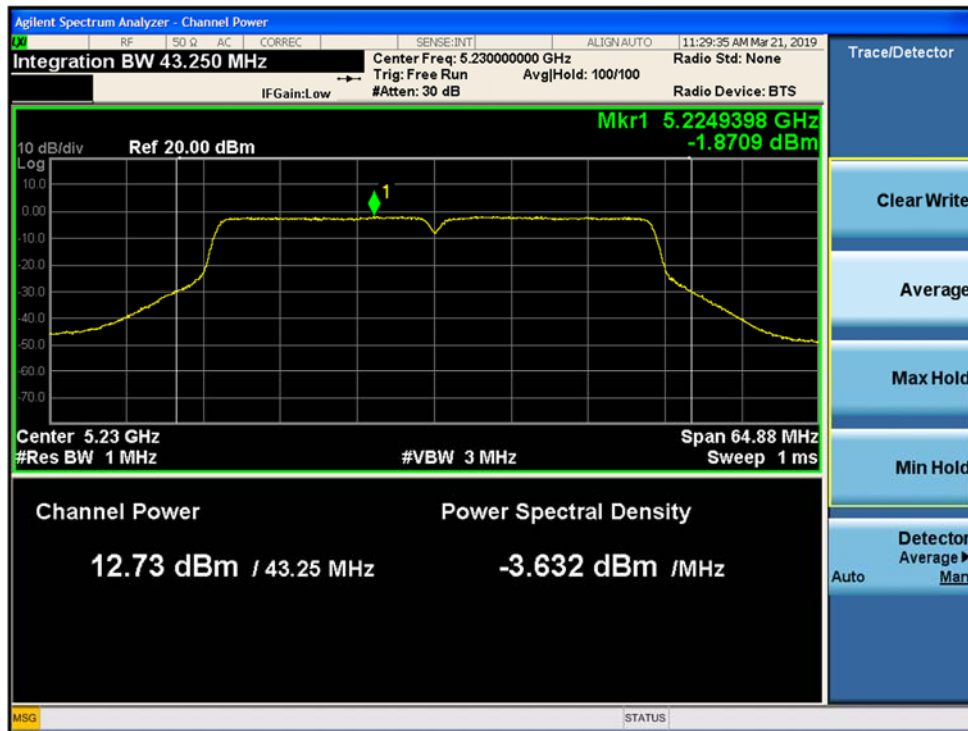


Figure 9-267. Maximum Conducted Output Power and PSD MIMO Chain A 802.11ac VHT40 (Ch. 46)

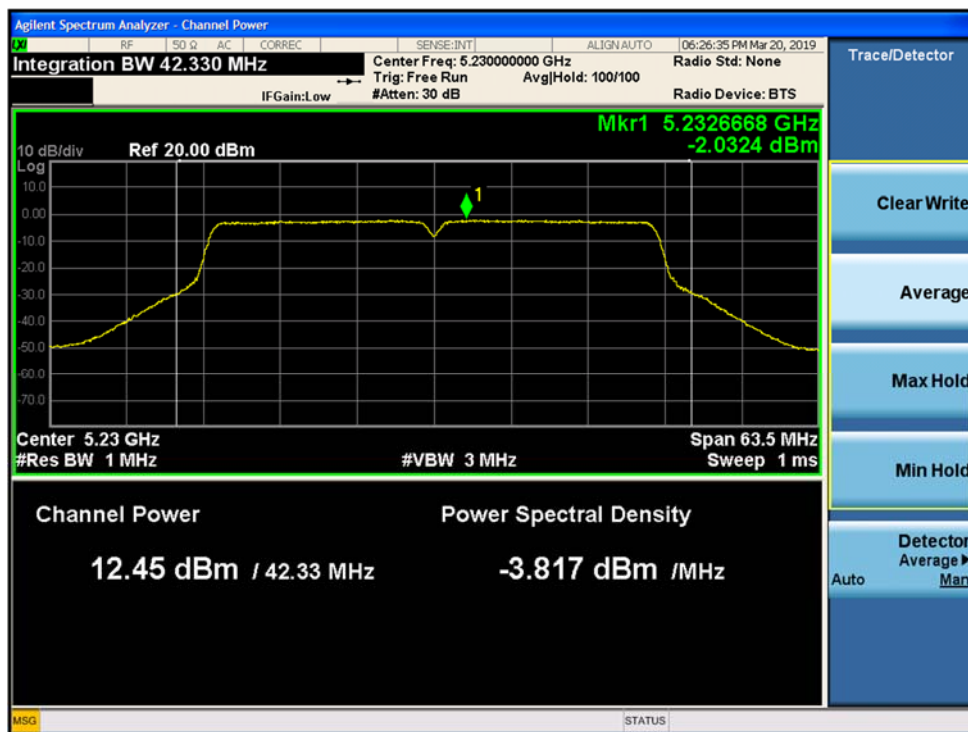


Figure 9-268. Maximum Conducted Output Power and PSD MIMO Chain B 802.11ac VHT40 (Ch. 46)

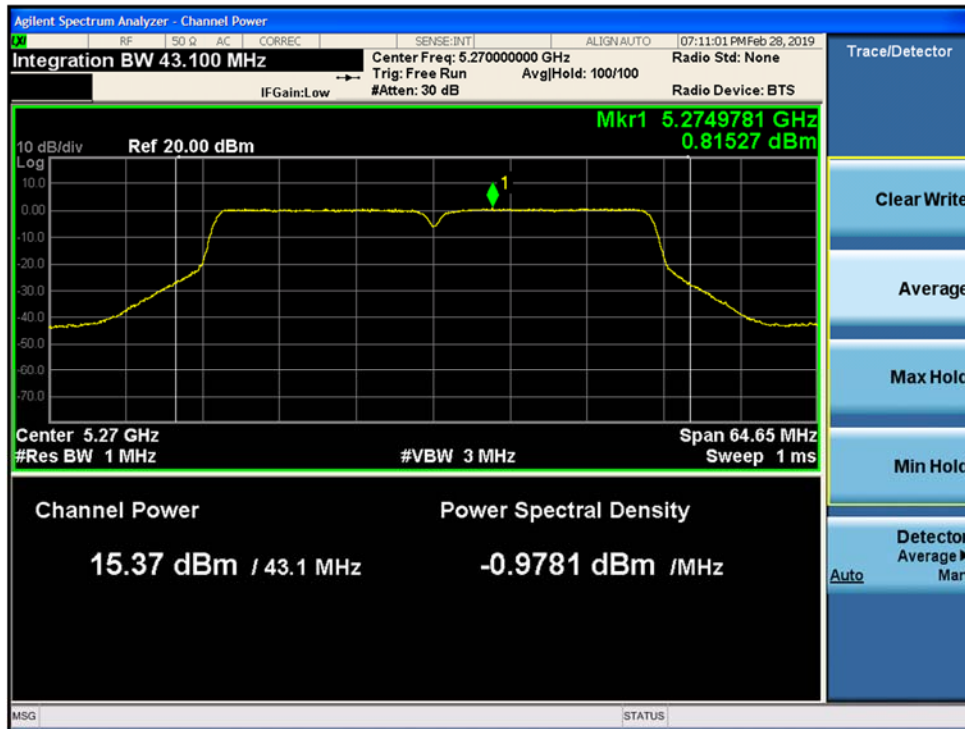


Figure 9-269. Maximum Conducted Output Power and PSD MIMO Chain A 802.11ac VHT40 (Ch. 54)

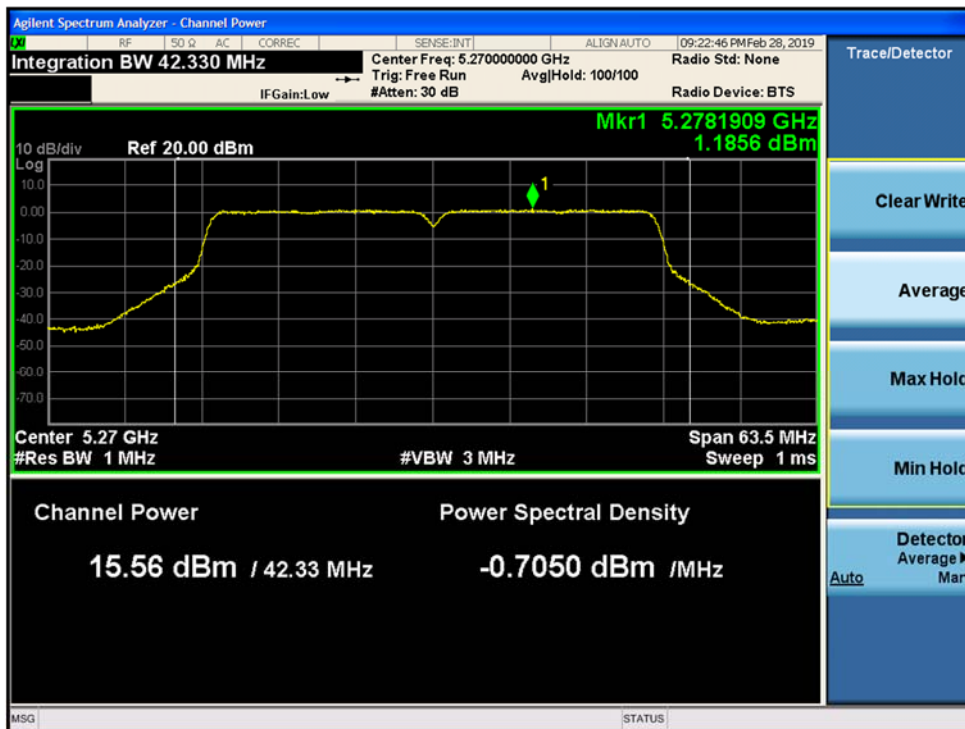


Figure 9-270. Maximum Conducted Output Power and PSD MIMO Chain B 802.11ac VHT40 (Ch. 54)

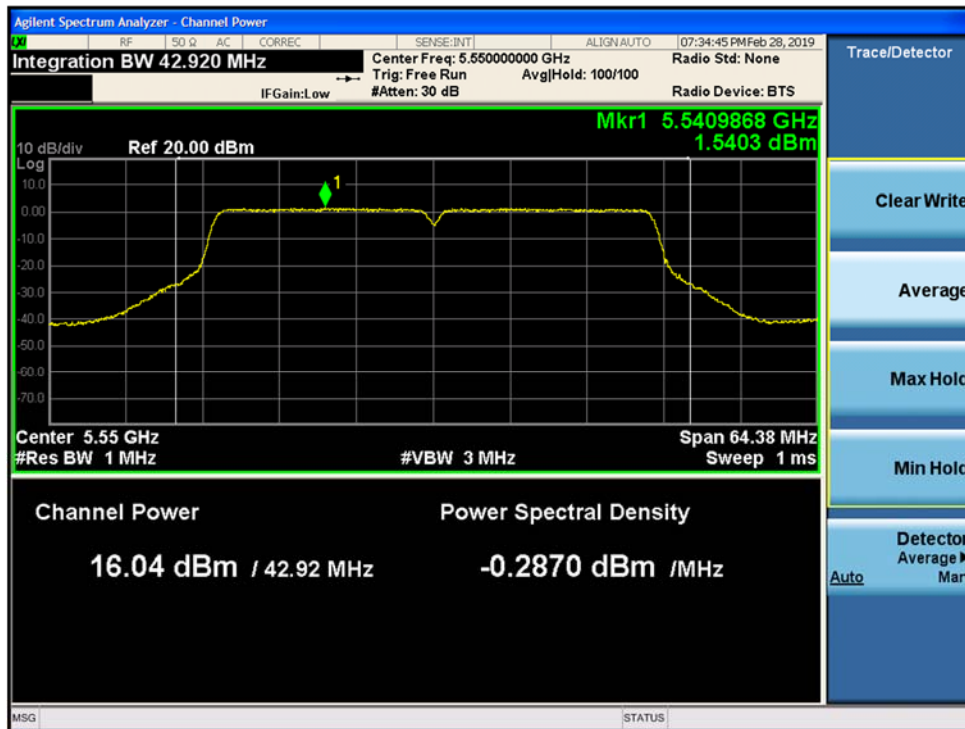


Figure 9-271. Maximum Conducted Output Power and PSD MIMO Chain A 802.11ac VHT40 (Ch. 110)

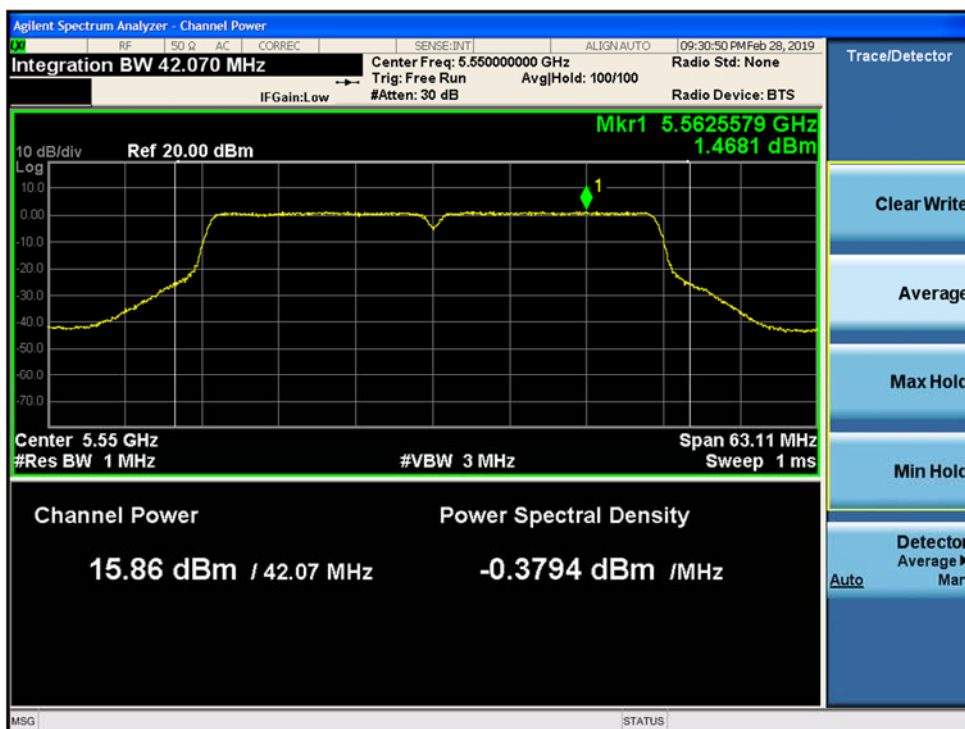


Figure 9-272. Maximum Conducted Output Power and PSD MIMO Chain B 802.11ac VHT40 (Ch. 110)

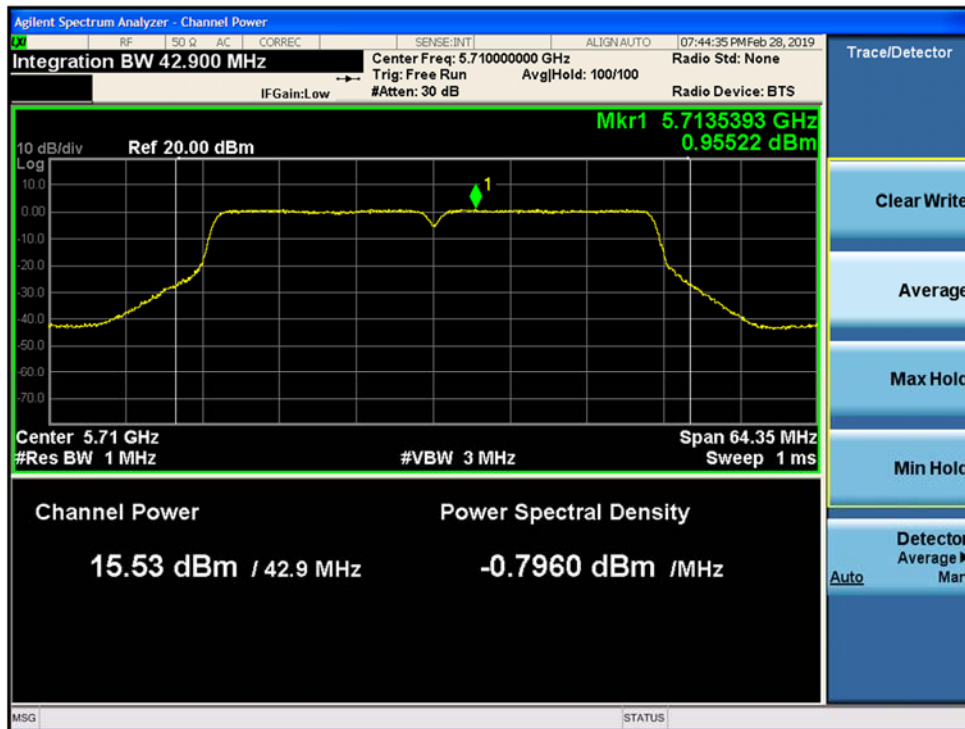


Figure 9-273. Max Conducted Output Power and PSD MIMO Chain A 802.11ac VHT40 (Ch. 142)

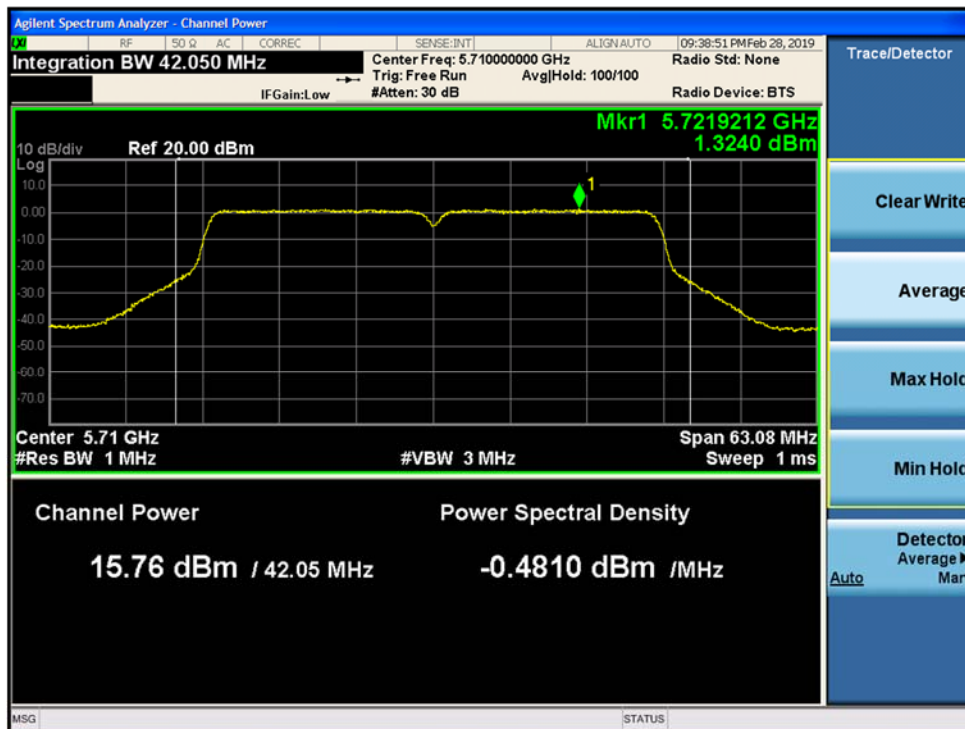


Figure 9-274. Maximum Conducted Output Power and PSD MIMO Chain B 802.11ac VHT40 (Ch. 142)

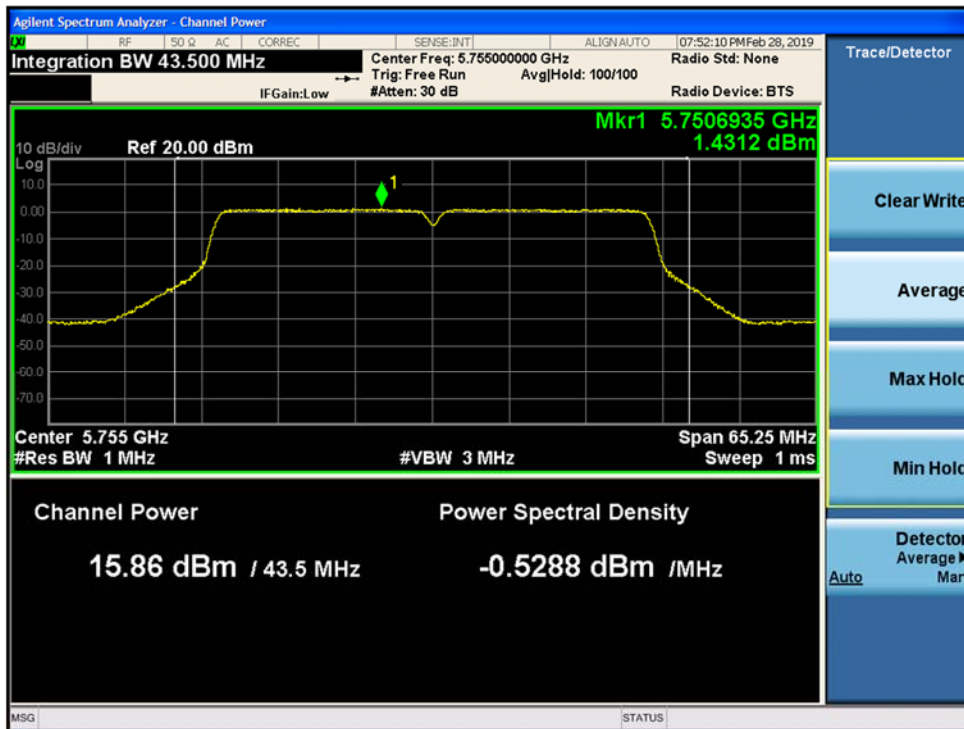


Figure 9-275. Max Conducted Output Power and PSD MIMO Chain A 802.11ac VHT40 (Ch. 151)

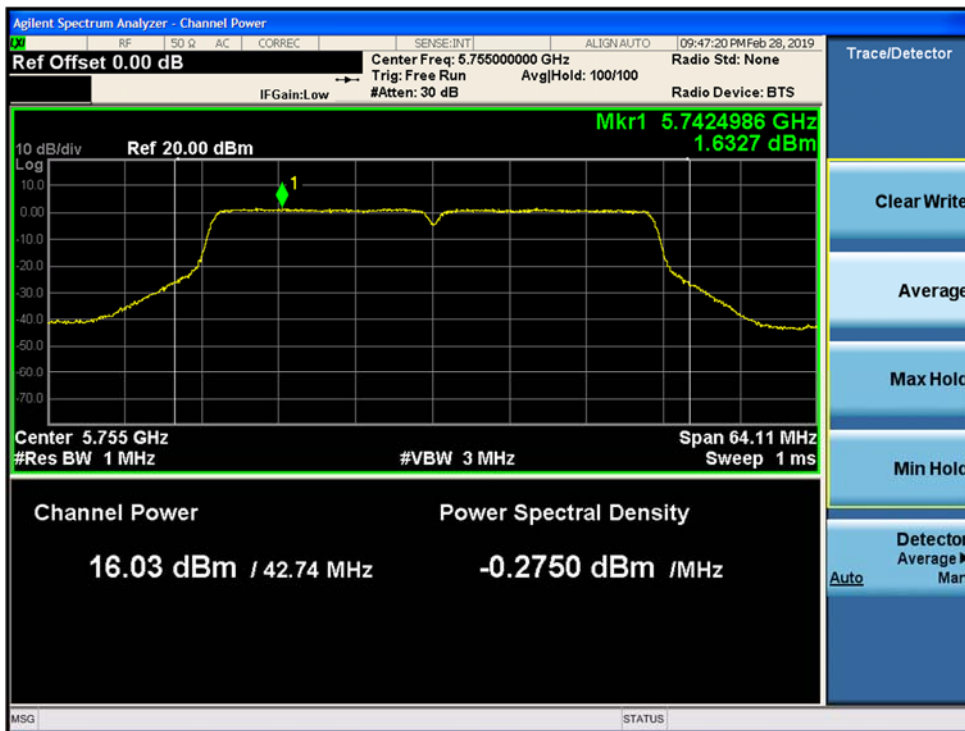


Figure 9-276. Maximum Conducted Output Power and PSD MIMO Chain B 802.11ac VHT40 (Ch. 151)

9.5.5.31 SISO Chain A 802.11ac VHT80 Maximum Conducted Output Power

Chain A 802.11ac VHT80 Maximum Conducted Output Power								
Chan. No.	Freq. (MHz)	Chain A (dBm)	Chain B (dBm)	Total Power (dBm)	15.407 Limit (dBm)	RSS-247 Limit (dBm)	15.407 Margin (dB)	RSS-247 Margin (dB)
42	5210	13.03	--	13.32	24.00	--	-10.68	--
58	5290	14.44	--	14.73	24.00	24.00	-9.27	-9.27
106	5530	15.68	--	15.97	24.00	24.00	-8.03	-8.03
122	5610	15.77	--	16.06	24.00	24.00	-7.94	-7.94
138	5690	15.79	--	16.08	24.00	24.00	-7.92	-7.92
155	5775	15.85	--	16.14	30.00	30.00	-13.86	-13.86

Chain A 802.11ac VHT80 E.I.R.P						
Channel No.	Frequency (MHz)	Total Power (dBm)	Antenna Gain (dBi)	E.I.R.P (dBm)	RSS-247 E.I.R.P Limit (dBm)	RSS-247 E.I.R.P. Margin (dB)
42	5210	13.32	4.70	18.02	23.00	-4.98
58	5290	14.73	5.00	19.73	30.00	-10.27
106	5530	15.97	4.90	20.87	30.00	-9.13
122	5610	16.06	4.90	20.96	30.00	-9.04
138	5690	16.08	4.90	20.98	30.00	-9.02
155	5775	16.14	4.30	20.44	--	--

9.5.5.32 Chain A 802.11ac VHT80 Maximum Power Spectral Density

UNII-1 Chain A+B 802.11ac VHT80 Maximum Power Spectral Density/MHz										
Chan. No.	Freq. (MHz)	Chain A (dBm)	Chain B (dBm)	Total PSD $\frac{dBm}{MHz}$	Total Ant. Gain (dBi)	Total EIRP PSD $\frac{dBm}{MHz}$	15.407 Limit $\frac{dBm}{MHz}$	RSS-247 EIRP PSD Limit $\frac{dBm}{MHz}$	15.407 Margin (dB)	RSS-247 Margin (dB)
42	5210	-3.72	--	-3.43	4.70	1.27	11.00	10.00	-14.43	-8.73

UNII-2A and UNII-2C Chain A 802.11ac VHT80 Maximum Power Spectral Density/MHz									
Channel No.	Frequency (MHz)	Chain A (dBm)	Chain B (dBm)	Total PSD $\frac{dBm}{MHz}$	15.407 Limit $\frac{dBm}{MHz}$	RSS-247 Limit $\frac{dBm}{MHz}$	15.407 Margin (dB)	RSS-247 Margin (dB)	
58	5290	-2.52	--	-2.23	11.00	11.00	-13.23	-13.23	
106	5530	-1.18	--	-0.89	11.00	11.00	-11.89	-11.89	
122	5610	-1.06	--	-0.77	11.00	11.00	-11.77	-11.77	
138	5690	-1.02	--	-0.73	11.00	11.00	-11.73	-11.73	

UNII-3 Chain A 802.11ac VHT80 Maximum Power Spectral Density/500kHz								
Chan. No.	Freq. (MHz)	Chain A (dBm)	Chain B (dBm)	Total PSD $\frac{dBm}{500 kHz}$	15.407 Limit $\frac{dBm}{500 kHz}$	RSS-247 Limit $\frac{dBm}{500 kHz}$	15.407 Margin (dB)	RSS-247 Margin (dB)
155	5775	-2.96	--	-2.66	30.00	30.00	-32.66	-32.66
138	5690	-6.92	--	-6.63	11.00	11.00	-17.63	-17.63

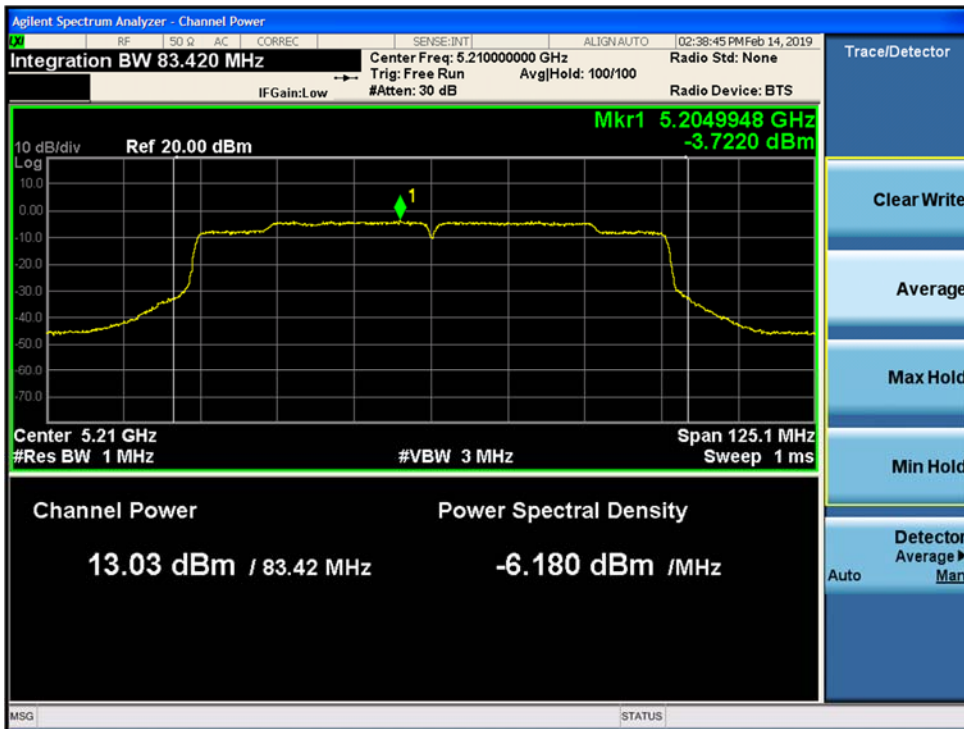


Figure 9-277. Maximum Conducted Output Power and PSD SISO Chain A 802.11ac VHT80 (Ch. 42)

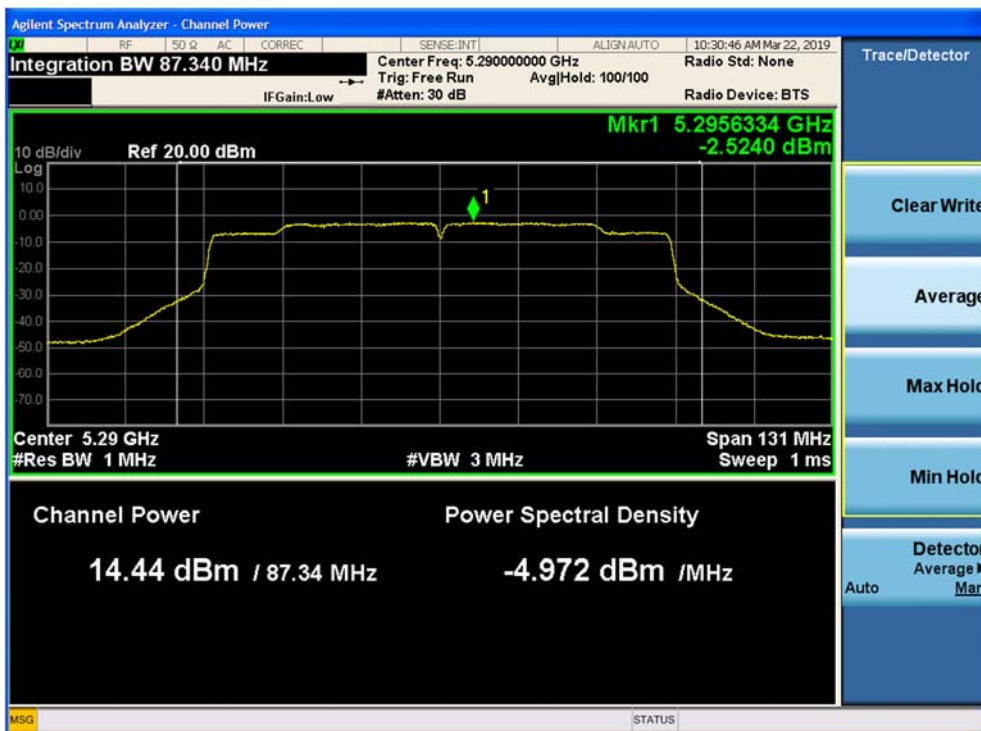


Figure 9-278. Maximum Conducted Output Power and PSD SISO Chain A 802.11ac VHT80 (Ch. 58)

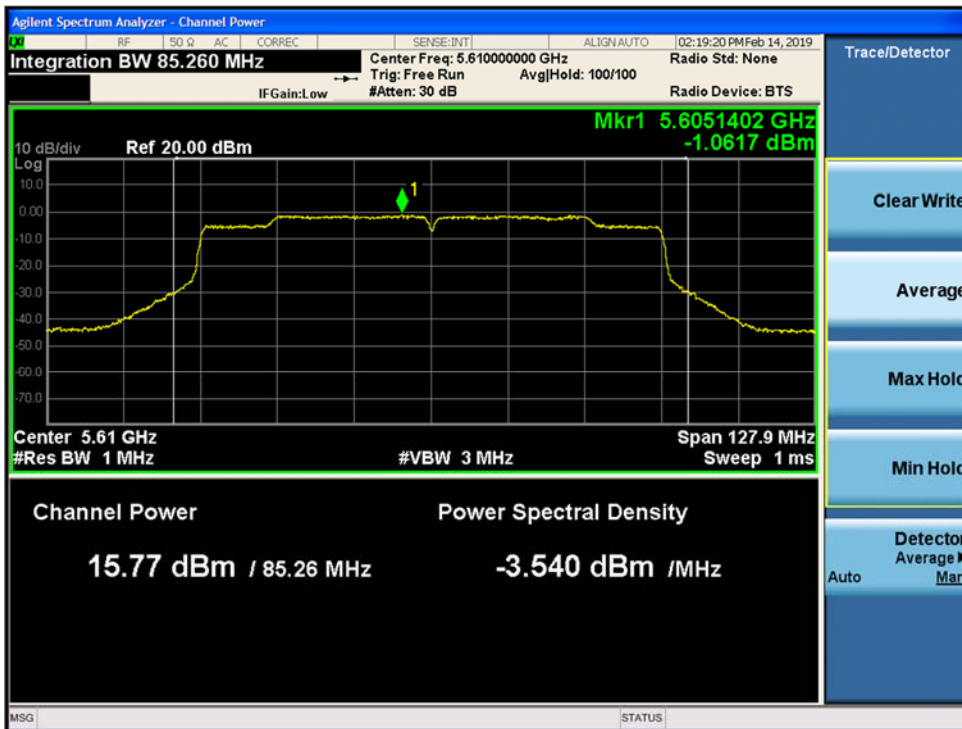


Figure 9-279. Maximum Conducted Output Power and PSD SISO Chain A 802.11ac VHT80 (Ch. 122)

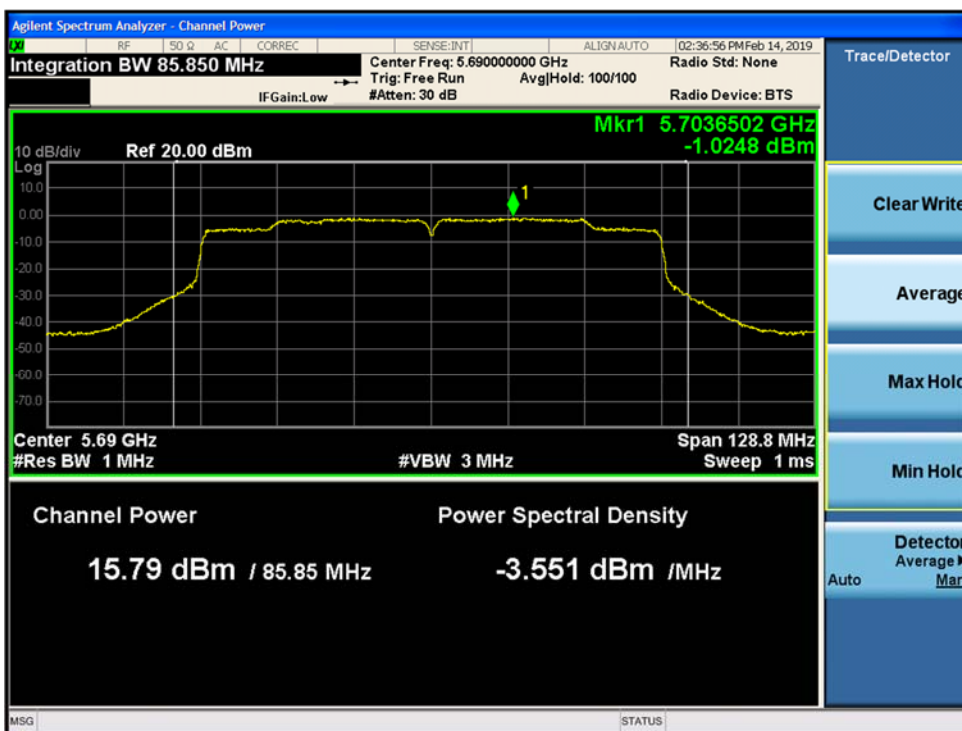


Figure 9-280. Maximum Conducted Output Power and PSD SISO Chain A 802.11ac VHT80 (Ch. 138)

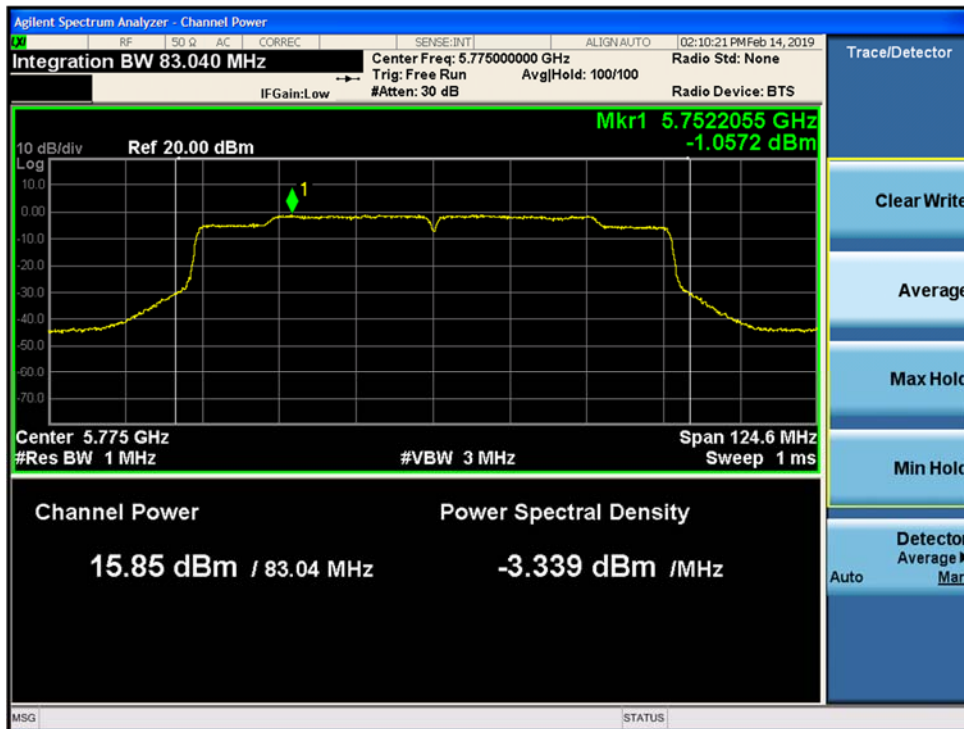


Figure 9-281. Maximum Conducted Output Power and PSD SISO Chain A 802.11ac VHT80 (Ch. 155)

9.5.5.33 SISO Chain B 802.11ac VHT80 Maximum Conducted Output Power

Chain A 802.11ac VHT80 Maximum Conducted Output Power								
Chan. No.	Freq. (MHz)	Chain A (dBm)	Chain B (dBm)	Total Power (dBm)	15.407 Limit (dBm)	RSS-247 Limit (dBm)	15.407 Margin (dB)	RSS-247 Margin (dB)
42	5210	--	12.70	12.99	24.00	--	-11.01	--
58	5290	--	14.86	15.15	24.00	24.00	-8.85	-8.85
106	5530	--	16.38	16.67	24.00	24.00	-7.33	-7.33
122	5610	--	16.14	16.43	24.00	24.00	-7.57	-7.57
138	5690	--	16.05	16.34	24.00	24.00	-7.66	-7.66
155	5775	--	16.09	16.38	30.00	30.00	-13.62	-13.62

Chain B 802.11ac VHT80 E.I.R.P						
Channel No.	Frequency (MHz)	Total Power (dBm)	Antenna Gain (dBi)	E.I.R.P (dBm)	RSS-247 E.I.R.P Limit (dBm)	RSS-247 E.I.R.P. Margin (dB)
42	5210	12.99	4.20	17.19	23.00	-5.81
58	5290	15.15	4.70	19.85	30.00	-10.15
106	5530	16.67	4.50	21.17	30.00	-8.83
122	5610	16.43	4.50	20.93	30.00	-9.07
138	5690	16.34	4.50	20.84	30.00	-9.16
155	5775	16.38	3.60	19.98	--	--

9.5.5.34 SISO Chain B 802.11ac VHT80 Maximum Power Spectral Density

UNII-1 Chain A+B 802.11ac VHT80 Maximum Power Spectral Density/MHz										
Chan. No.	Freq. (MHz)	Chain A (dBm)	Chain B (dBm)	Total PSD ($\frac{dBm}{MHz}$)	Total Ant. Gain (dBi)	Total EIRP PSD ($\frac{dBm}{MHz}$)	15.407 Limit ($\frac{dBm}{MHz}$)	RSS-247 EIRP PSD Limit ($\frac{dBm}{MHz}$)	15.407 Margin (dB)	RSS-247 Margin (dB)
42	5210	--	-4.38	-4.08	4.20	0.12	11.00	10.00	-15.08	-9.88

UNII-2A and UNII-2C Chain B 802.11ac VHT80 Maximum Power Spectral Density/MHz									
Channel No.	Frequency (MHz)	Chain A (dBm)	Chain B (dBm)	Total PSD ($\frac{dBm}{MHz}$)	15.407 Limit ($\frac{dBm}{MHz}$)	RSS-247 Limit ($\frac{dBm}{MHz}$)	15.407 Margin (dB)	RSS-247 Margin (dB)	
58	5290	--	-2.05	-1.76	11.00	11.00	-12.76	-12.76	
106	5530	--	-0.62	-0.33	11.00	11.00	-11.33	-11.33	
122	5610	--	-0.66	-0.37	11.00	11.00	-11.37	-11.37	
138	5690	--	-0.61	-0.32	11.00	11.00	-11.32	-11.32	

UNII-3 Chain B 802.11ac VHT80 Maximum Power Spectral Density/500kHz								
Chan. No.	Freq. (MHz)	Chain A (dBm)	Chain B (dBm)	Total PSD ($\frac{dBm}{500 kHz}$)	15.407 Limit ($\frac{dBm}{500 kHz}$)	RSS-247 Limit ($\frac{dBm}{500 kHz}$)	15.407 Margin (dB)	RSS-247 Margin (dB)
155	5775	--	-2.64	-2.35	30.00	30.00	-32.35	-32.35
138	5690	--	-7.3	-7.22	11.00	11.00	-18.22	-18.22

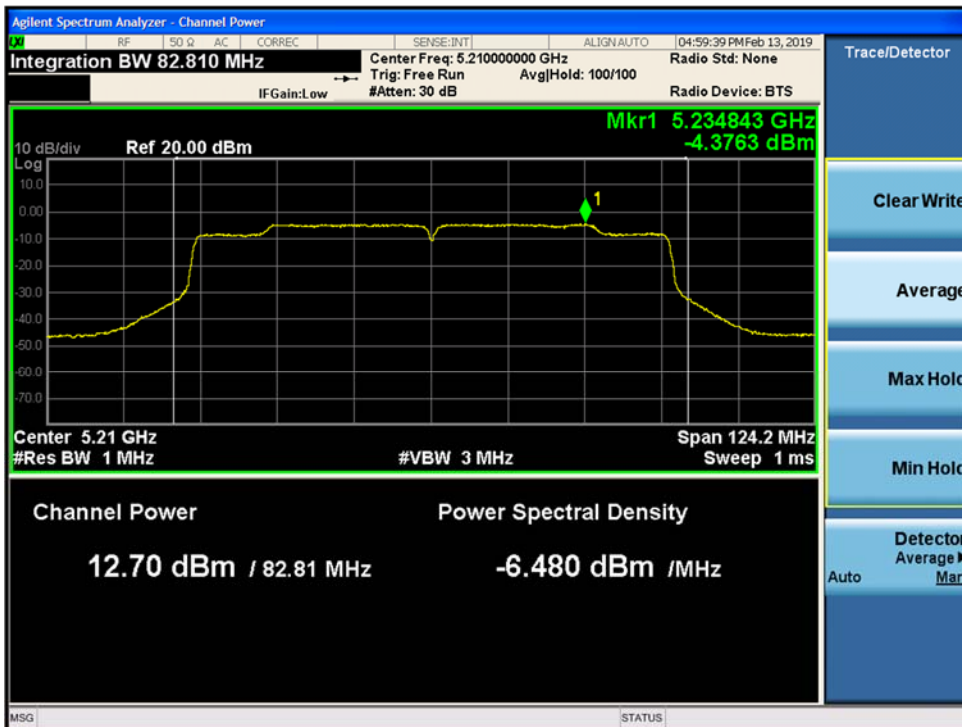


Figure 9-282. Maximum Conducted Output Power and PSD SISO Chain B 802.11ac VHT80 (Ch. 42)

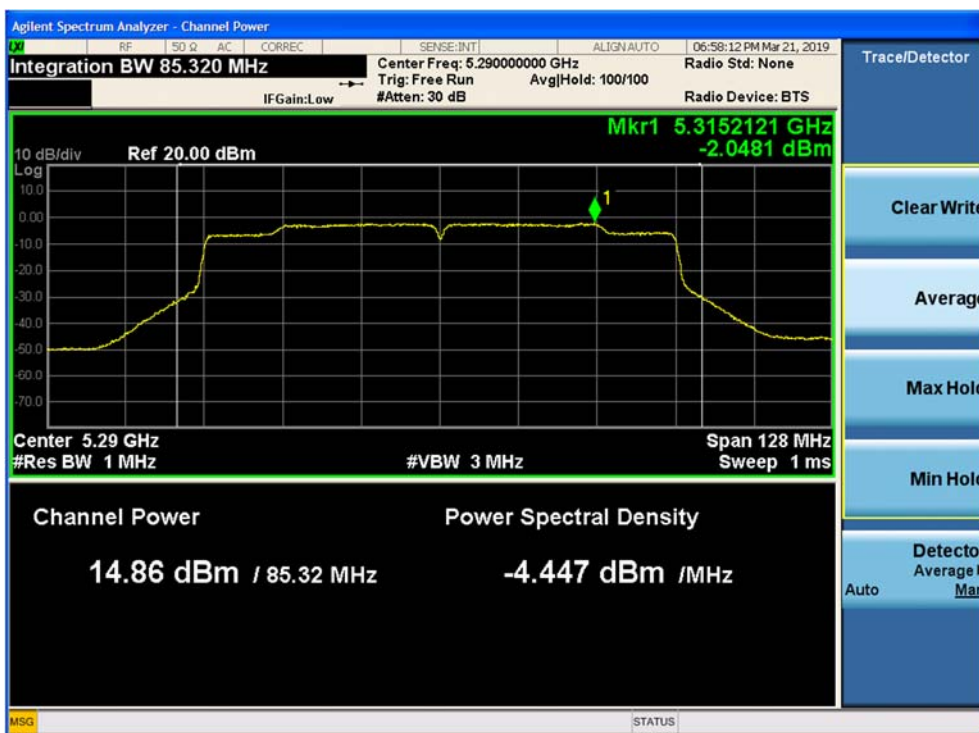


Figure 9-283. Maximum Conducted Output Power and PSD SISO Chain B 802.11ac VHT80 (Ch. 58)

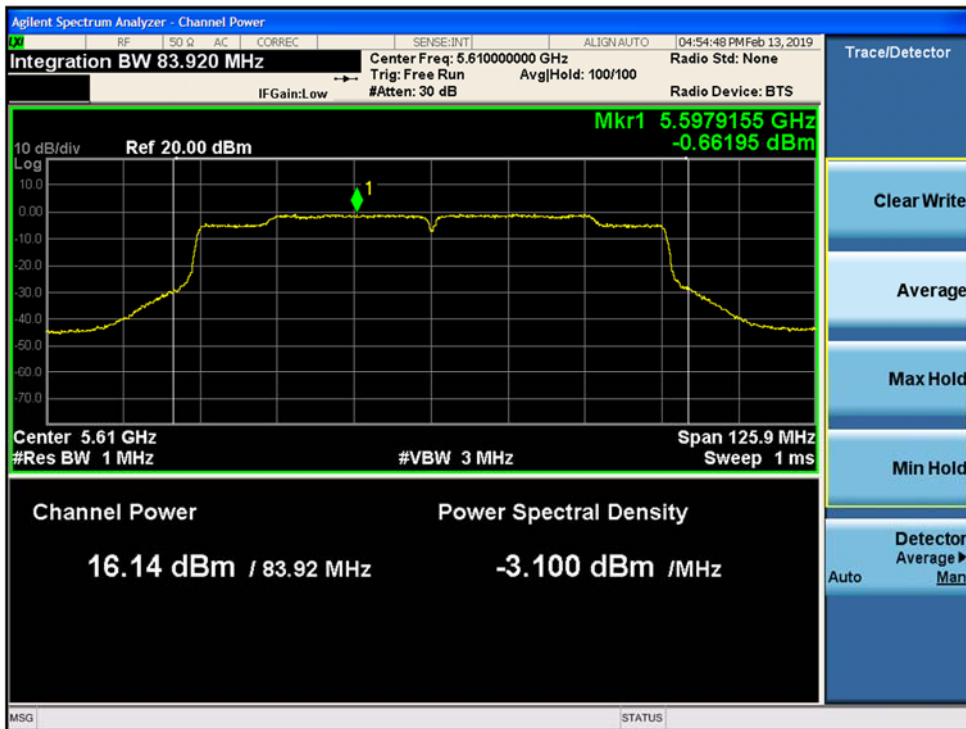


Figure 9-284. Maximum Conducted Output Power and PSD SISO Chain B 802.11ac VHT80 (Ch. 122)

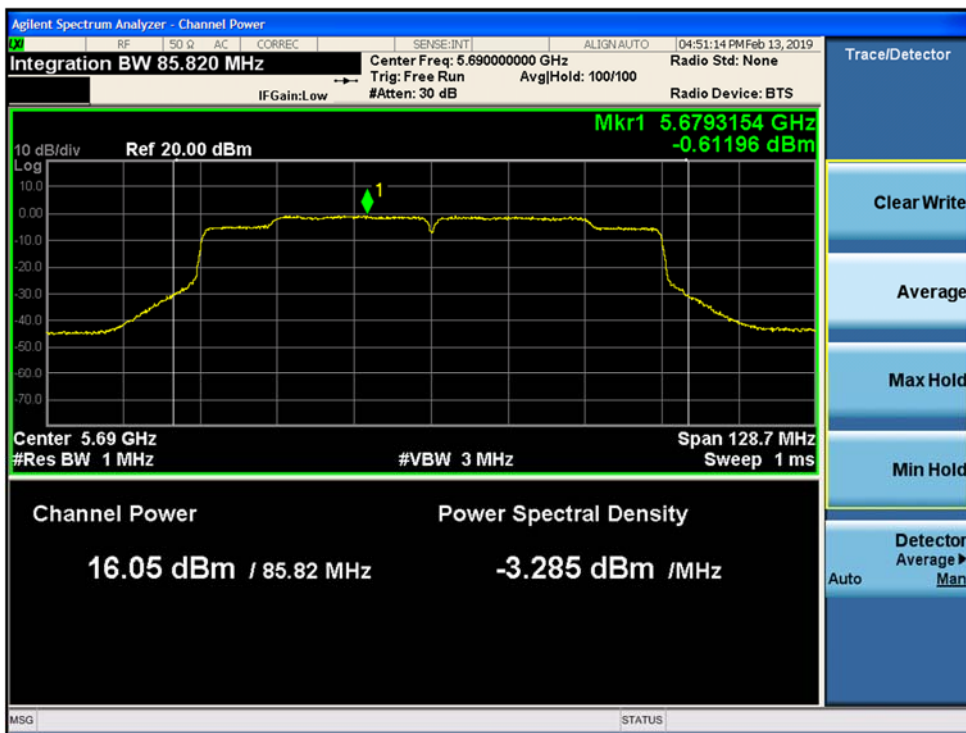


Figure 9-285. Maximum Conducted Output Power and PSD SISO Chain B 802.11ac VHT80 (Ch. 138)

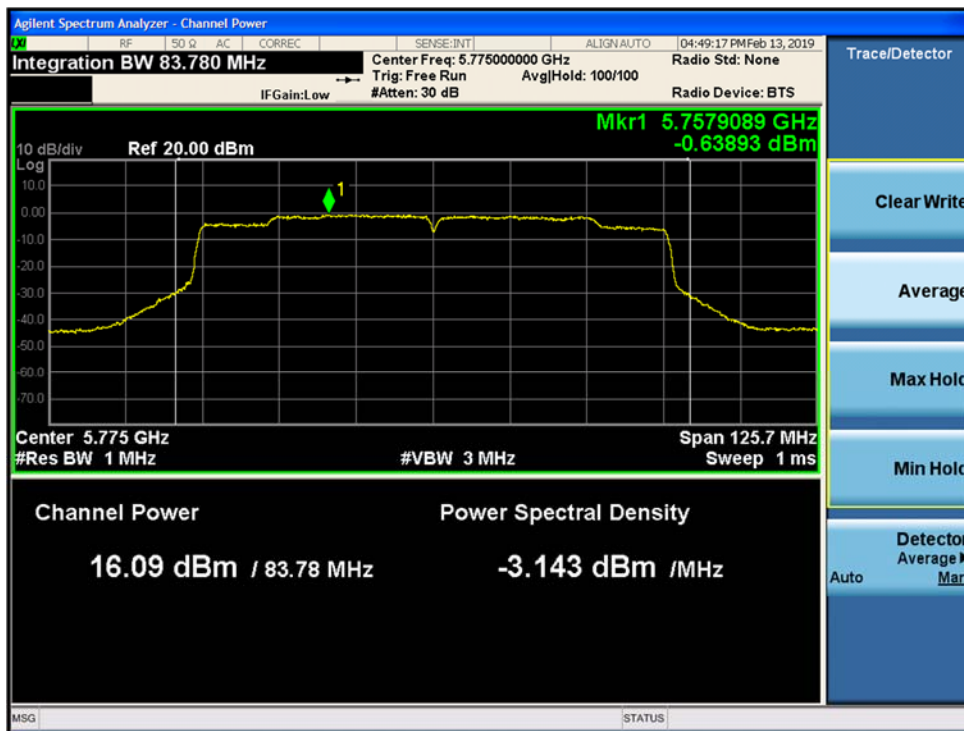


Figure 9-286. Maximum Conducted Output Power and PSD SISO Chain B 802.11ac VHT80 (Ch. 155)

9.5.5.35 Chain A+B 802.11ac VHT80 Maximum Conducted Output Power

Chain A+B 802.11ac VHT80 Maximum Conducted Output Power								
Chan. No.	Freq. (MHz)	Chain A (dBm)	Chain B (dBm)	Total Power (dBm)	15.407 Limit (dBm)	RSS-247 Limit (dBm)	15.407 Margin (dB)	RSS-247 Margin (dB)
42	5210	12.71	12.35	16.22	24.00	--	-7.78	--
58	5290	13.12	13.33	16.91	24.00	24.00	-7.09	-7.09
106	5530	15.37	16.14	19.46	24.00	24.00	-4.54	-4.54
122	5610	15.5	15.72	19.30	24.00	24.00	-4.70	-4.70
138	5690	15.57	15.71	19.33	24.00	24.00	-4.67	-4.67
155	5775	15.49	15.8	19.33	30.00	30.00	-10.67	-10.67

Chain A+B 802.11ac VHT80 E.I.R.P						
Channel No.	Frequency (MHz)	Total Power (dBm)	Antenna Gain (dBi)	E.I.R.P (dBm)	RSS-247 E.I.R.P Limit (dBm)	RSS-247 E.I.R.P. Margin (dB)
42	5210	16.22	4.46	20.68	23.00	-2.32
58	5290	16.91	4.85	21.76	30.00	-8.24
106	5530	19.46	4.70	24.16	30.00	-5.84
122	5610	19.30	4.70	24.00	30.00	-6.00
138	5690	19.33	4.70	24.03	30.00	-5.97
155	5775	19.33	3.96	23.30	--	--

9.5.5.36 Chain A+B 802.11ac VHT80 Maximum Power Spectral Density

UNII-1 Chain A+B 802.11ac VHT80 Maximum Power Spectral Density/MHz										
Chan. No.	Freq. (MHz)	Chain A (dBm)	Chain B (dBm)	Total PSD ($\frac{dBm}{MHz}$)	Total Ant. Gain (dBi)	Total EIRP PSD ($\frac{dBm}{MHz}$)	15.407 Limit ($\frac{dBm}{MHz}$)	RSS-247 EIRP PSD Limit ($\frac{dBm}{MHz}$)	15.407 Margin (dB)	RSS-247 Margin (dB)
42	5210	-4.19	-4.54	-0.67	4.46	3.78	11.00	10.00	-11.67	-6.22

UNII-2A and UNII-2C Chain A+B 802.11ac VHT80 Maximum Power Spectral Density/MHz									
Channel No.	Frequency (MHz)	Chain A (dBm)	Chain B (dBm)	Total PSD ($\frac{dBm}{MHz}$)	15.407 Limit ($\frac{dBm}{MHz}$)	RSS-247 Limit ($\frac{dBm}{MHz}$)	15.407 Margin (dB)	RSS-247 Margin (dB)	
58	5290	-3.84	-3.45	0.05	11.00	11.00	-10.95	-10.95	
106	5530	-1.42	-0.50	2.75	11.00	11.00	-8.25	-8.25	
122	5610	-1.23	-1.16	2.49	11.00	11.00	-8.51	-8.51	
138	5690	-1.15	-1.19	2.52	11.00	11.00	-8.48	-8.48	

UNII-3 Chain A+B 802.11ac VHT80 Maximum Power Spectral Density/500kHz									
Chan. No.	Freq. (MHz)	Chain A (dBm)	Chain B (dBm)	Total PSD ($\frac{dBm}{500 kHz}$)	15.407 Limit ($\frac{dBm}{500 kHz}$)	RSS-247 Limit ($\frac{dBm}{500 kHz}$)	15.407 Margin (dB)	RSS-247 Margin (dB)	
155	5775	-2.796	-1.919	1.35	30.00	30.00	-28.65	-28.65	
138	5690	-6.20	-7.25	-3.01	11.00	11.00	-14.01	-14.01	

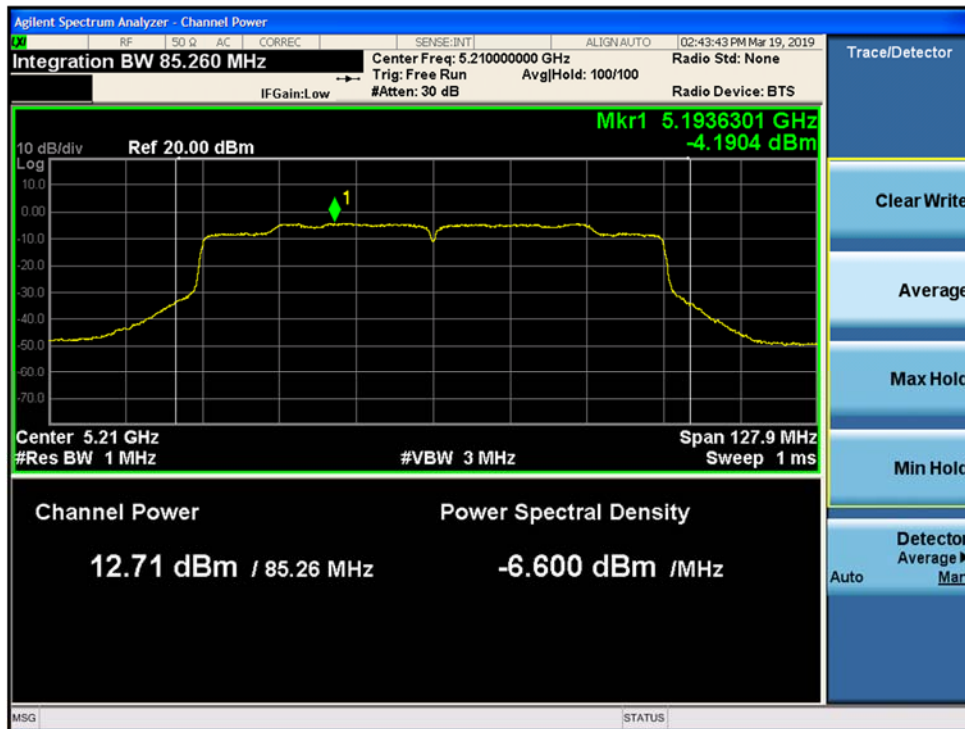


Figure 9-287. Maximum Conducted Output Power and PSD MIMO Chain A 802.11ac VHT80 (Ch. 42)

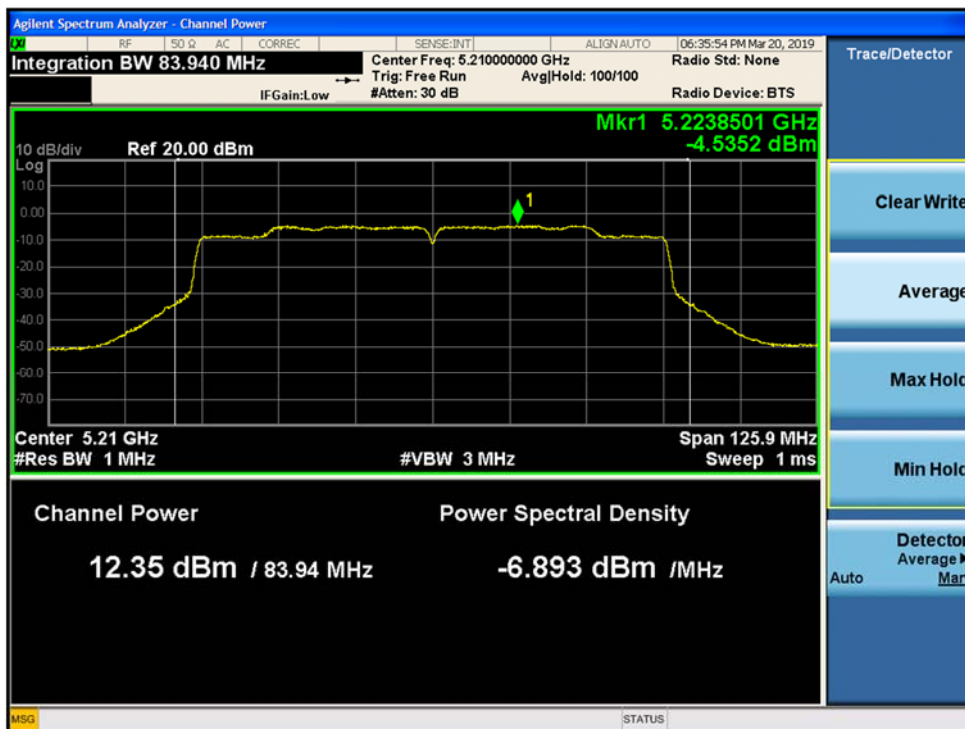


Figure 9-288. Maximum Conducted Output Power and PSD MIMO Chain B 802.11ac VHT80 (Ch. 42)

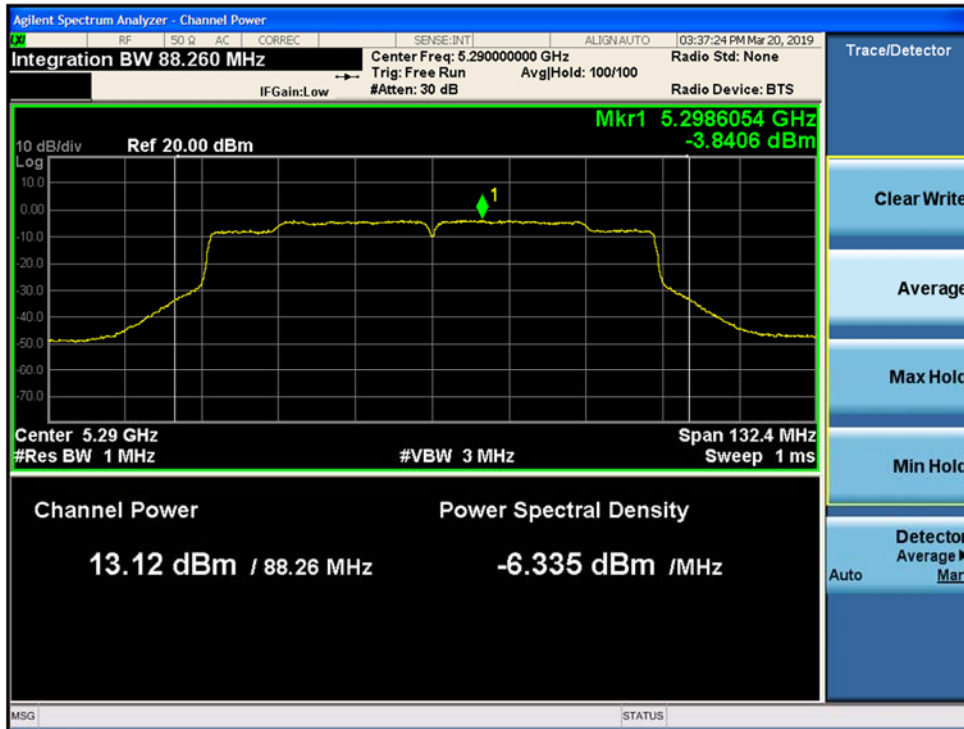


Figure 9-289. Maximum Conducted Output Power and PSD MIMO Chain A 802.11ac VHT80 (Ch. 58)

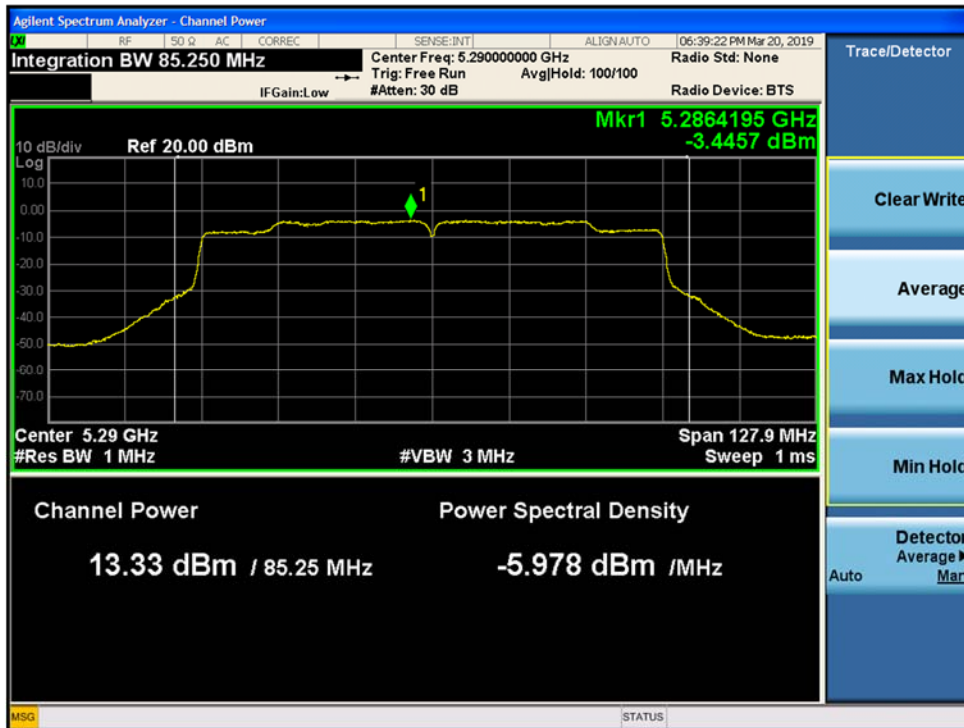


Figure 9-290. Maximum Conducted Output Power and PSD MIMO Chain B 802.11ac VHT80 (Ch. 58)

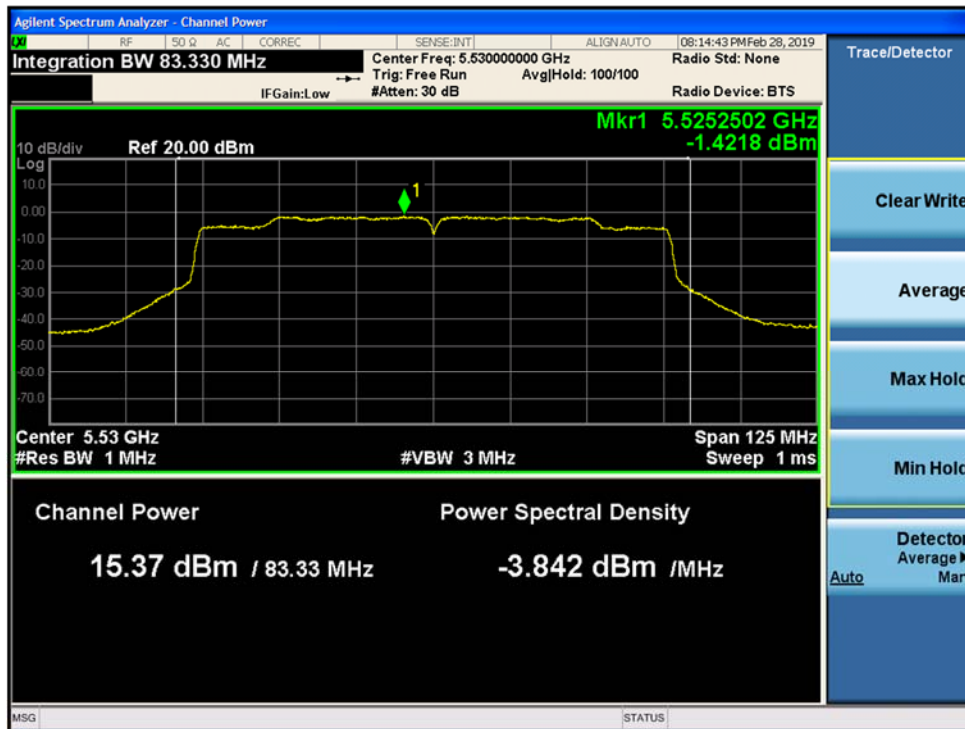


Figure 9-291. Max Conducted Output Power and PSD MIMO Chain A 802.11ac VHT80 (Ch. 106)

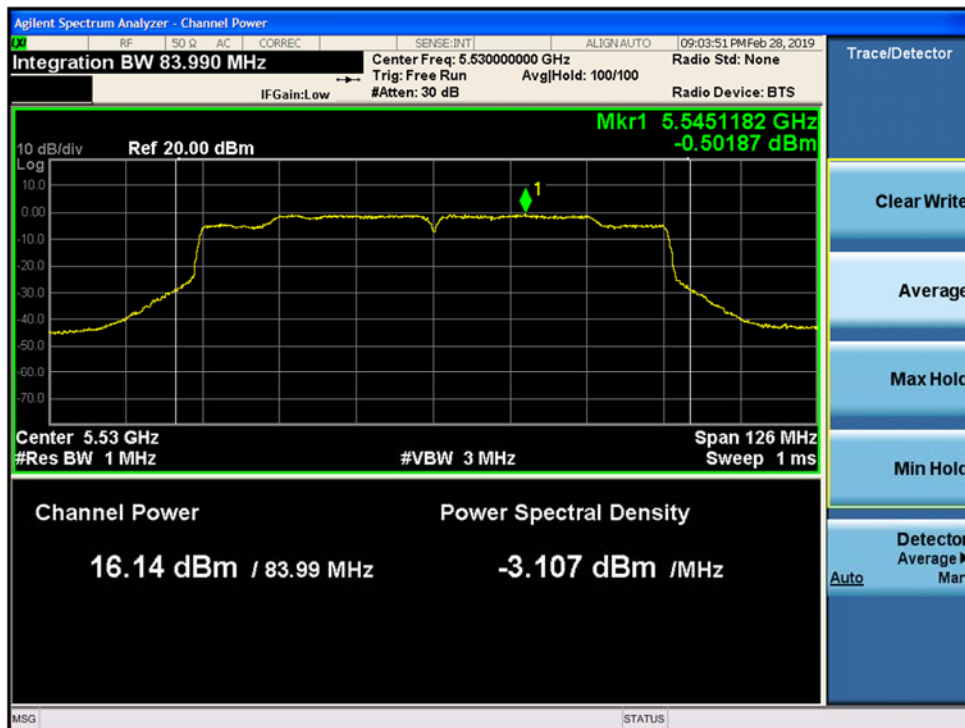


Figure 9-292. Max Conducted Output Power and PSD MIMO Chain B 802.11ac VHT80 (Ch. 106)

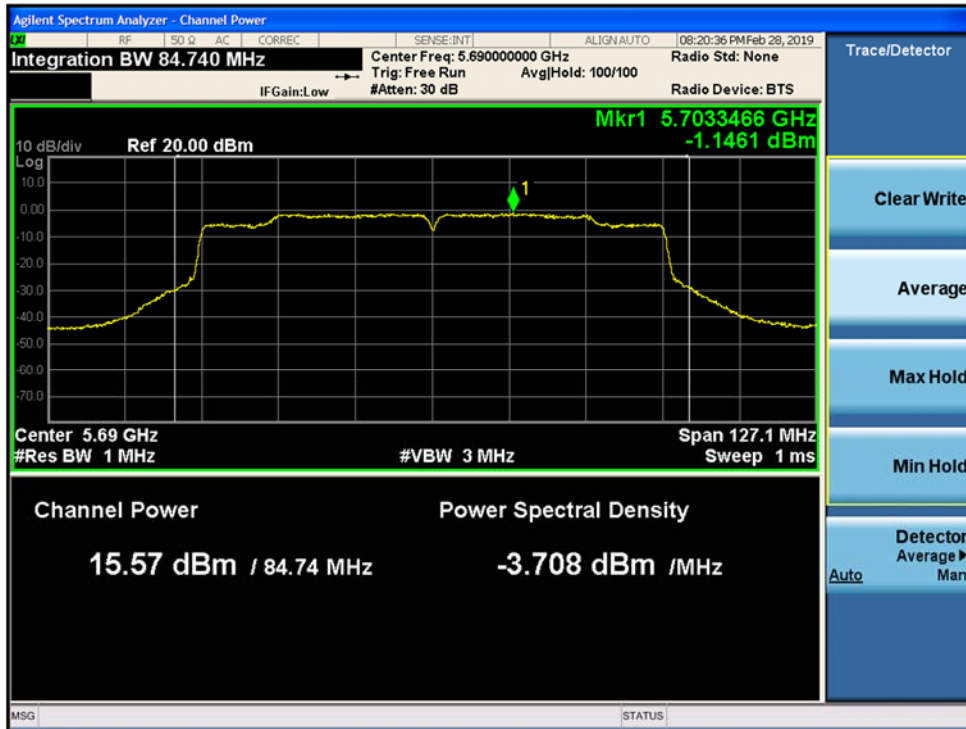


Figure 9-293. Max Conducted Output Power and PSD MIMO Chain A 802.11ac VHT80 (Ch. 138)

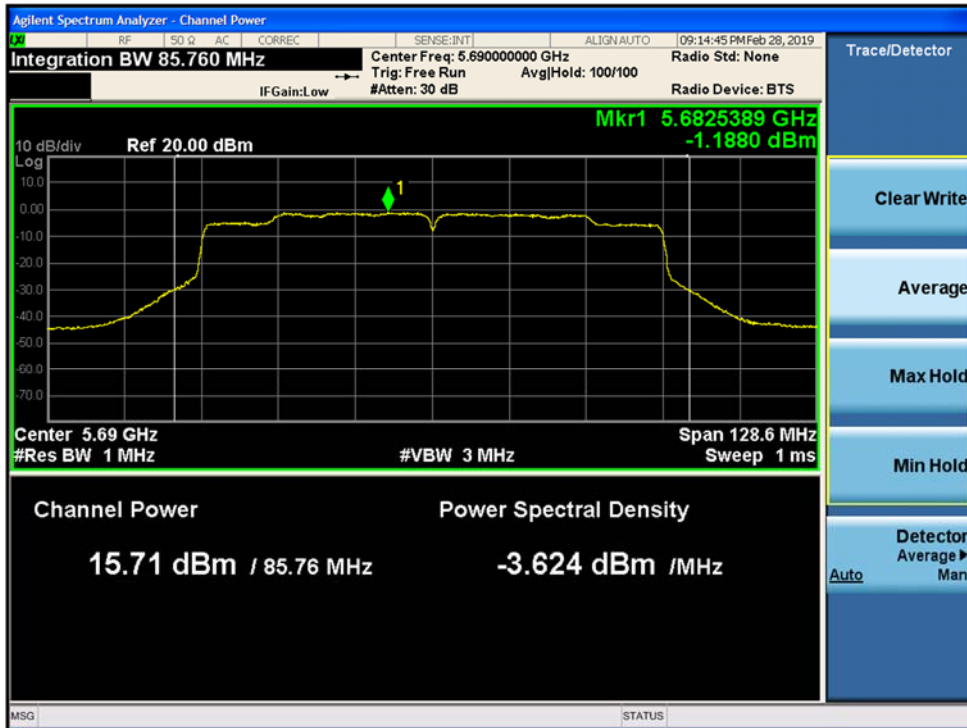


Figure 9-294. Max Conducted Output Power and PSD MIMO Chain B 802.11ac VHT80 (Ch. 138)

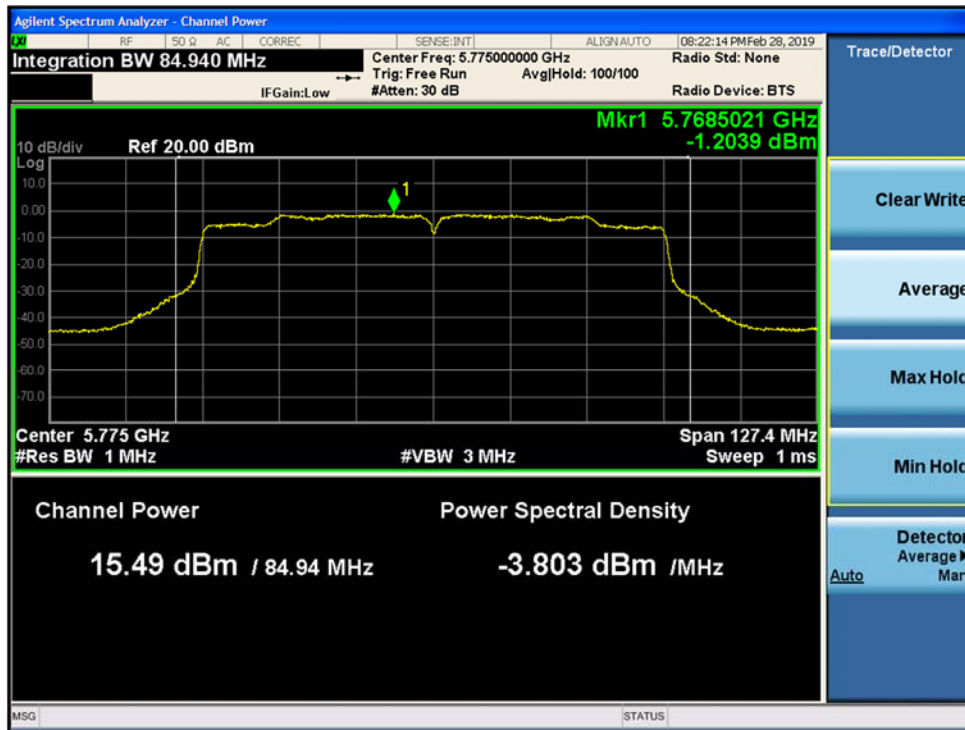


Figure 9-295. Max Conducted Output Power and PSD MIMO Chain A 802.11ac VHT80 (Ch. 155)

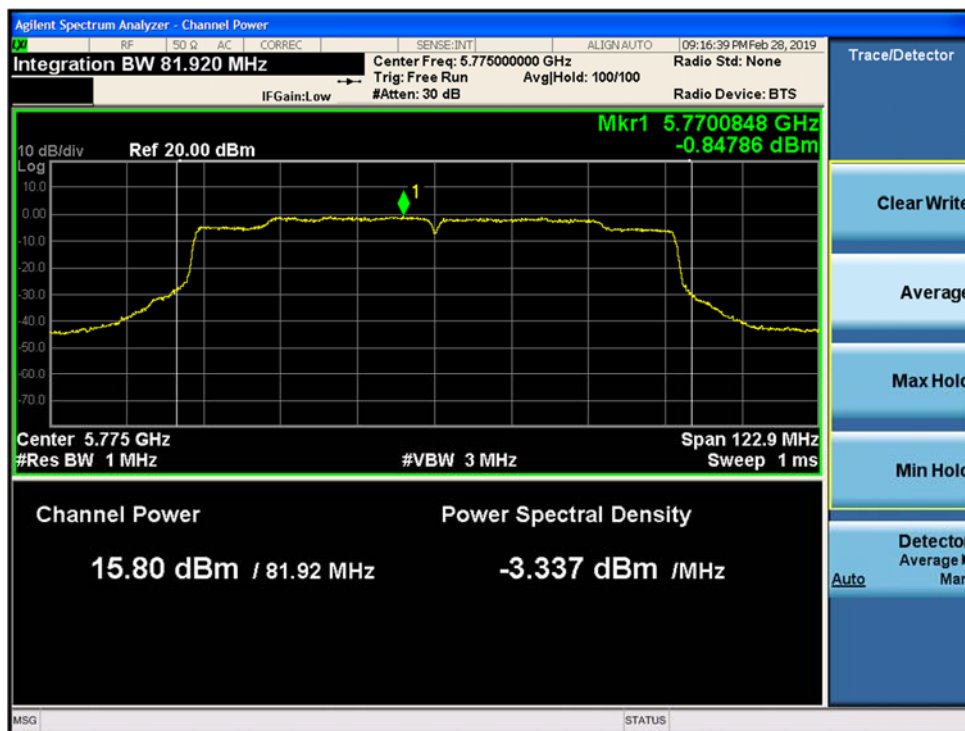


Figure 9-296. Max Conducted Output Power and PSD MIMO Chain B 802.11ac VHT80 (Ch. 155)

9.5.5.37 SISO CHAIN A 802.11ac VHT160 Maximum Power Spectral Density

Chain A 802.11ac VHT160 Maximum Conducted Output Power								
Chan. No.	Freq. (MHz)	Chain A (dBm)	Chain B (dBm)	Total Power (dBm)	15.407 Limit (dBm)	RSS-247 Limit (dBm)	15.407 Margin (dB)	RSS-247 Margin (dB)
50	5250	12.2	--	12.73	24.00	24.00	-11.27	-11.27
114	5570	15.17	--	15.70	24.00	24.00	-8.30	-8.30

Chain A 802.11ac160 VHT80 E.I.R.P						
Channel No.	Frequency (MHz)	Total Power (dBm)	Antenna Gain (dBi)	E.I.R.P (dBm)	RSS-247 E.I.R.P Limit (dBm)	RSS-247 E.I.R.P. Margin (dB)
50	5250	12.73	5.00	17.73	23.00	-5.27
114	5570	15.70	4.90	20.60	30.00	-9.40

UNII-1 Chain A 802.11ac VHT160 Maximum Power Spectral Density/MHz										
Chan. No.	Freq. (MHz)	Chain A (dBm)	Chain B (dBm)	Total PSD ($\frac{dBm}{MHz}$)	Total Ant. Gain (dBi)	Total EIRP PSD ($\frac{dBm}{MHz}$)	15.407 Limit ($\frac{dBm}{MHz}$)	RSS-247 EIRP PSD Limit ($\frac{dBm}{MHz}$)	15.407 Margin (dB)	RSS-247 Margin (dB)
50	5250	-7.53	--	-7.00	5.00	-2.00	11.00	10.00	-18.00	-12.00

UNII-2A and UNII-2C Chain A 802.11ac VHT160 Maximum Power Spectral Density/MHz									
Channel No.	Frequency (MHz)	Chain A (dBm)	Chain B (dBm)	Total PSD ($\frac{dBm}{MHz}$)	15.407 Limit ($\frac{dBm}{MHz}$)	RSS-247 Limit ($\frac{dBm}{MHz}$)	15.407 Margin (dB)	RSS-247 Margin (dB)	
114	5570	-4.35	--	-3.83	11.00	10.00	-14.83	-14.83	

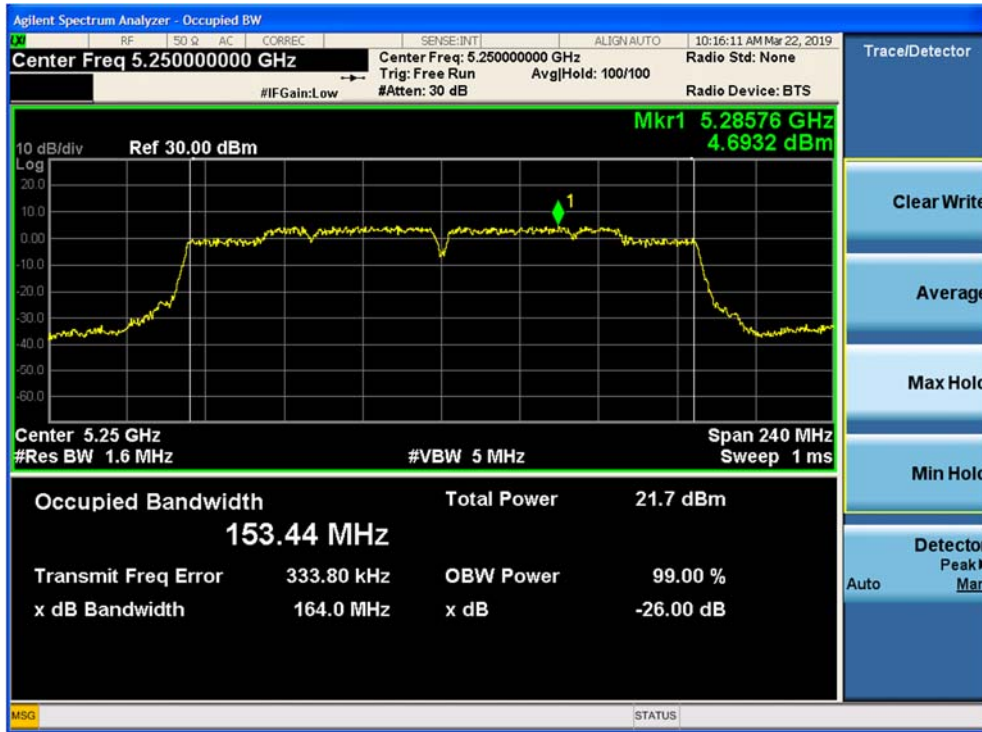


Figure 9-297. Max Conducted Output Power and PSD SISO Chain A 802.11ac VHT160 (Ch. 50)

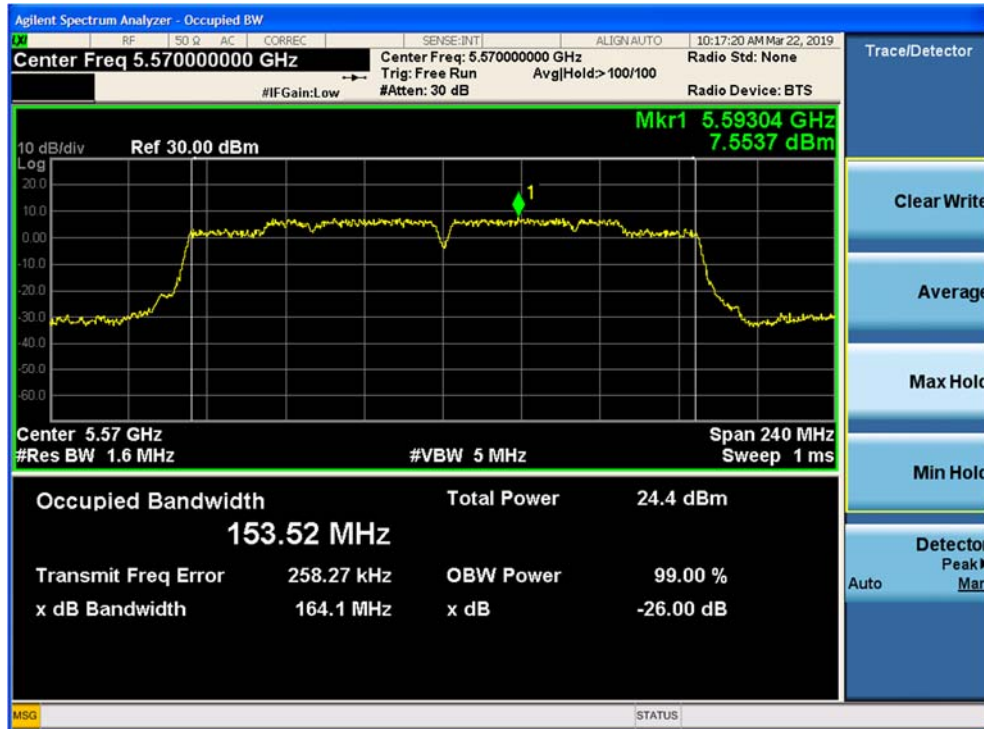


Figure 9-298. Max Conducted Output Power and PSD SISO Chain A 802.11ac VHT160 (Ch. 114)

9.5.5.38 SISO CHAIN B 802.11ac VHT160 Maximum Power Spectral Density

Chain B 802.11ac VHT160 Maximum Conducted Output Power								
Chan. No.	Freq. (MHz)	Chain A (dBm)	Chain B (dBm)	Total Power (dBm)	15.407 Limit (dBm)	RSS-247 Limit (dBm)	15.407 Margin (dB)	RSS-247 Margin (dB)
50	5250	--	12.73	13.26	24.00	24.00	-10.74	-10.74
114	5570	--	14.82	15.35	24.00	24.00	-8.65	-8.65

Chain B 802.11ac160 VHT80 E.I.R.P						
Channel No.	Frequency (MHz)	Total Power (dBm)	Antenna Gain (dBi)	E.I.R.P (dBm)	RSS-247 E.I.R.P Limit (dBm)	RSS-247 E.I.R.P. Margin (dB)
50	5250	13.26	4.70	17.96	23.00	-5.04
114	5570	15.35	4.50	19.85	30.00	-10.15

UNII-1 Chain B 802.11ac VHT160 Maximum Power Spectral Density/MHz										
Chan. No.	Freq. (MHz)	Chain A (dBm)	Chain B (dBm)	Total PSD ($\frac{dBm}{MHz}$)	Total Ant. Gain (dBi)	Total EIRP PSD ($\frac{dBm}{MHz}$)	15.407 Limit ($\frac{dBm}{MHz}$)	RSS-247 EIRP PSD Limit ($\frac{dBm}{MHz}$)	15.407 Margin (dB)	RSS-247 Margin (dB)
50	5250	--	-6.74	-6.22	4.7	-1.52	11.00	10.00	-17.22	-11.52

UNII-2A and UNII-2C Chain B 802.11ac VHT160 Maximum Power Spectral Density/MHz									
Channel No.	Frequency (MHz)	Chain A (dBm)	Chain B (dBm)	Total PSD ($\frac{dBm}{MHz}$)	15.407 Limit ($\frac{dBm}{MHz}$)	RSS-247 Limit ($\frac{dBm}{MHz}$)	15.407 Margin (dB)	RSS-247 Margin (dB)	
114	5570	--	-4.73	-4.20	11.00	10.00	-15.20	-15.20	

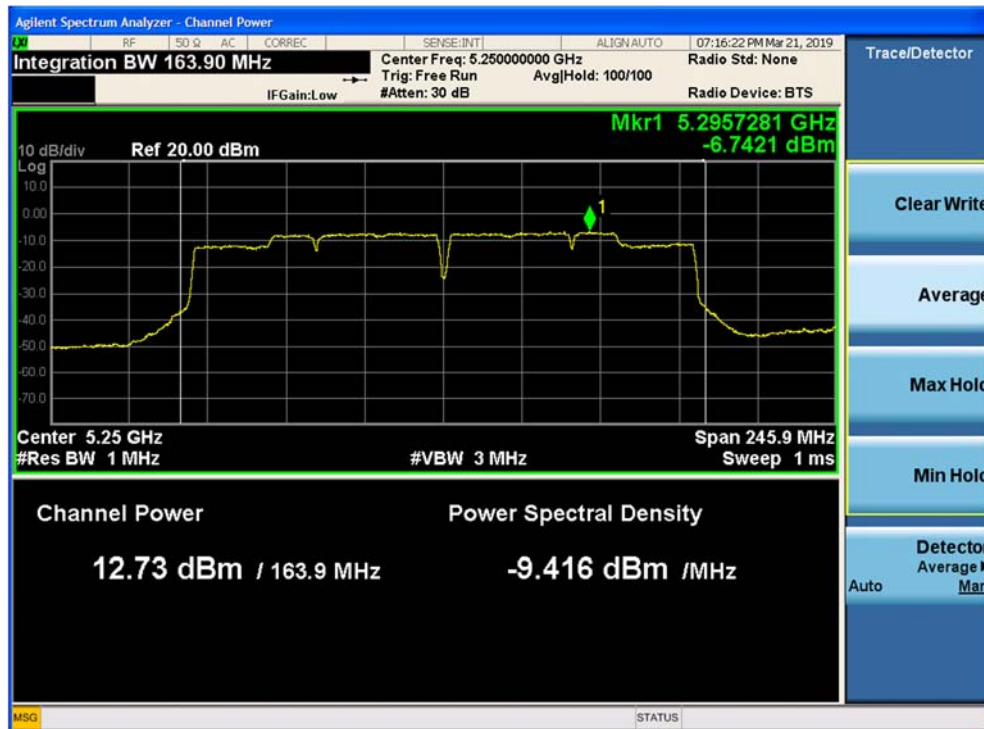


Figure 9-299. Max Conducted Output Power and PSD SISO Chain B 802.11ac VHT160 (Ch. 50)

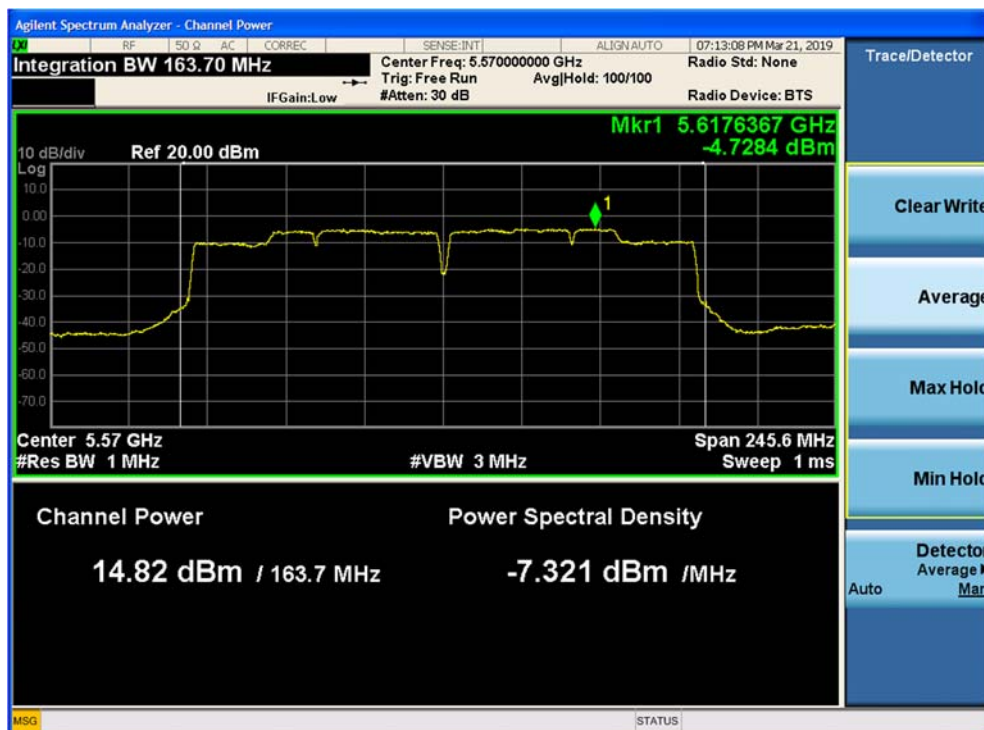


Figure 9-300. Max Conducted Output Power and PSD SISO Chain B 802.11ac VHT160 (Ch. 114)

9.5.5.39 MIMO CHAIN A+B 802.11ac VHT160 Maximum Power Spectral Density

Chain A+B 802.11ac VHT160 Maximum Conducted Output Power								
Chan. No.	Freq. (MHz)	Chain A (dBm)	Chain B (dBm)	Total Power (dBm)	15.407 Limit (dBm)	RSS-247 Limit (dBm)	15.407 Margin (dB)	RSS-247 Margin (dB)
50	5250	9.68	9.83	13.76	24.00	24.00	-10.24	-10.24
114	5570	11.51	11.22	15.37	24.00	24.00	-8.63	-8.63

Chain A+B 802.11ac160 VHT80 E.I.R.P						
Channel No.	Frequency (MHz)	Total Power (dBm)	Antenna Gain (dBi)	E.I.R.P (dBm)	RSS-247 E.I.R.P Limit (dBm)	RSS-247 E.I.R.P. Margin (dB)
50	5250	13.76	4.85	18.61	23.00	-4.39
114	5570	15.37	4.70	20.08	30.00	-9.92

UNII-1 Chain A+B 802.11ac VHT160 Maximum Power Spectral Density/MHz										
Chan. No.	Freq. (MHz)	Chain A (dBm)	Chain B (dBm)	Total PSD ($\frac{dBm}{MHz}$)	Total Ant. Gain (dBi)	Total EIRP PSD ($\frac{dBm}{MHz}$)	15.407 Limit ($\frac{dBm}{MHz}$)	RSS-247 EIRP PSD Limit ($\frac{dBm}{MHz}$)	15.407 Margin (dB)	RSS-247 Margin (dB)
50	5250	-9.926	-9.46	-5.68	4.85	-0.83	11.00	10.00	-16.68	-10.83

UNII-2A and UNII-2C Chain A+B 802.11ac VHT160 Maximum Power Spectral Density/MHz									
Channel No.	Frequency (MHz)	Chain A (dBm)	Chain B (dBm)	Total PSD ($\frac{dBm}{MHz}$)	15.407 Limit ($\frac{dBm}{MHz}$)	RSS-247 Limit ($\frac{dBm}{MHz}$)	15.407 Margin (dB)	RSS-247 Margin (dB)	
114	5570	-7.83	-8.25	-4.03	11.00	11.00	-15.03	-15.03	

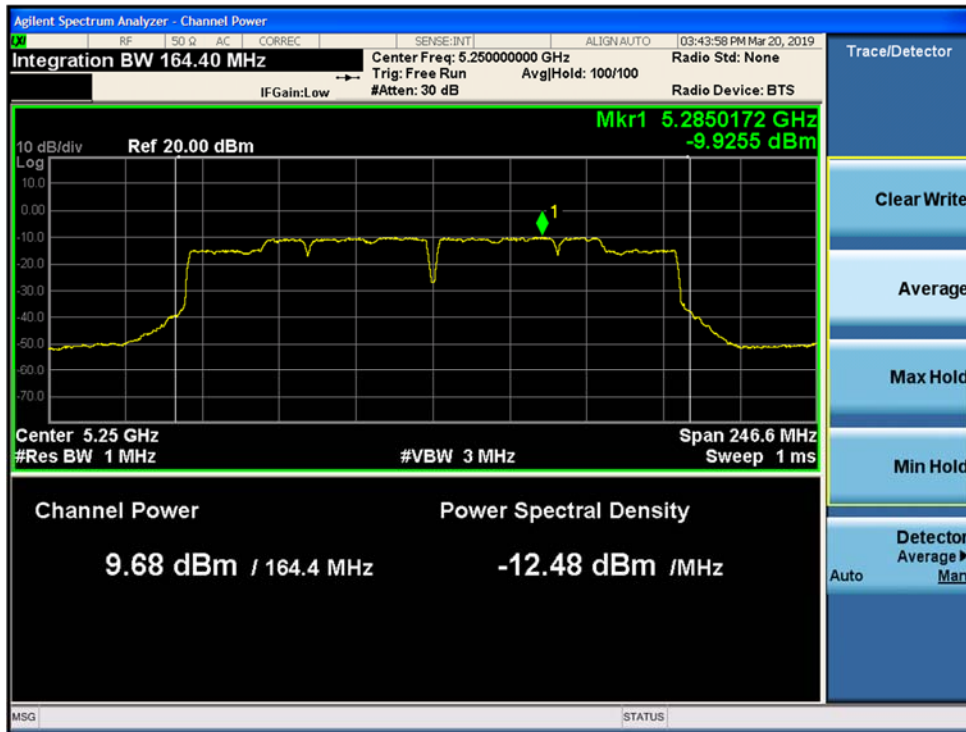


Figure 9-301. Max Conducted Output Power and PSD MIMO Chain A 802.11ac VHT160 (Ch. 50)

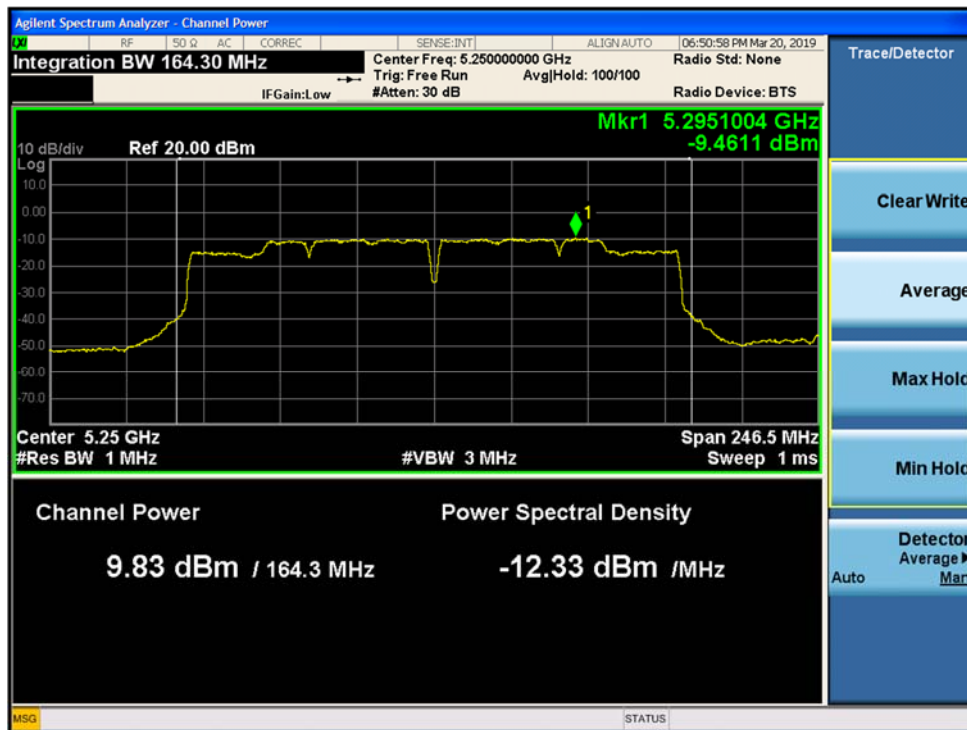


Figure 9-302. Max Conducted Output Power and PSD MIMO Chain B 802.11ac VHT160 (Ch. 50)

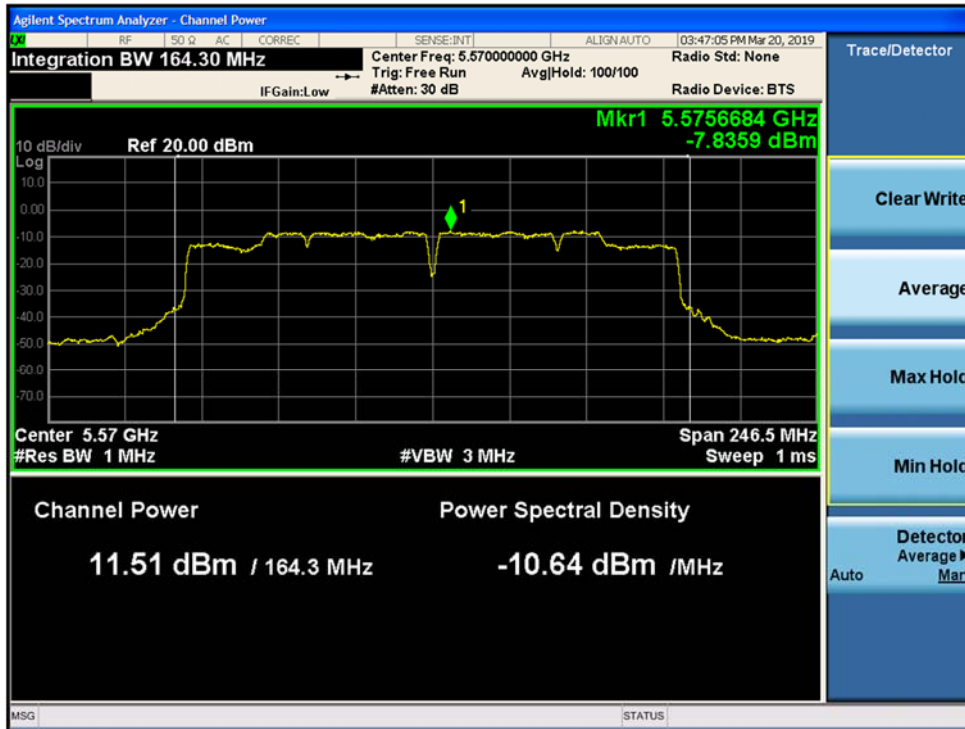


Figure 9-303. Max Conducted Output Power and PSD MIMO Chain A 802.11ac VHT160 (Ch. 114)

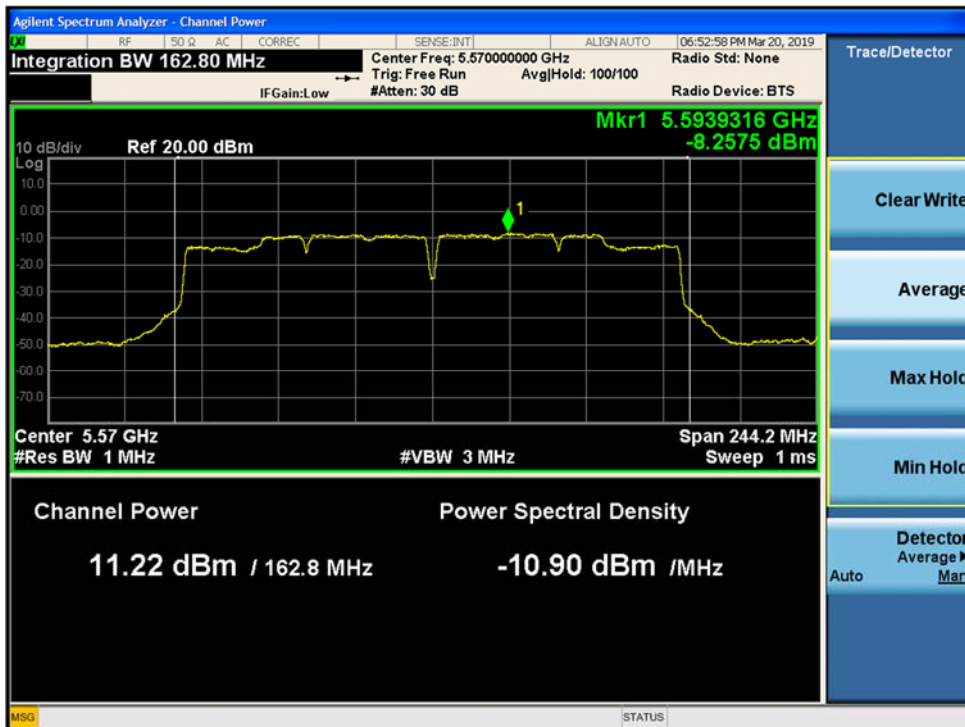


Figure 9-304. Max Conducted Output Power and PSD MIMO Chain B 802.11ac VHT160 (Ch. 114)

9.6 Radiated Spurious and Band Edge Emissions

9.6.1 Test Requirement:

FCC CFR 47 Rule Part 15.407 (b)
ISED RSS-247 [6.2] and RSS GEN [8.9]

9.6.2 Test Method:

Measurements were performed according to the procedure defined in KDB 789033 D02 v02r01 - Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E and ANSI C63.10 2013.

Radiated spurious measurements are made from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The limit for radiated spurious emissions is per 15.209 and RSS-247 [5.5]. Additionally, emissions found in the restricted bands as listed in 15.205 and RSS-Gen were tested for compliance per limits in 15.209 and RSS-Gen.

The EUT was tested near the low, middle and high channels of operation in each sub band. Guidelines in ANSI C63.10:2013 were followed with respect to maximizing the emissions.

A pre-amp and a high pass filter were required for this test, to provide the measuring system with sufficient sensitivity. The peak reading of the emission, after being corrected by the antenna factor, cable loss, pre-amp gain, etc., is the peak field strength. All tests were performed in MIMO transmission mode to measure the worst case for both antennas.

Both horizontal and vertical antenna polarizations were investigated. Worst case maximized data for both polarizations is shown in this test report.

Radiated Spurious Emissions

Spectrum Analyzer Settings:**30 MHz- 1 GHz:**

RBW= 120 kHz

VBW \geq 3 X RBW

Trace Mode: Peak Detector (Max Hold). Final measurements performed using QP Detector.

Span= 30 MHz- 1 GHz

Sweep time= Auto Couple

Sweep points \geq 2 x Span/RBW**Above 1 GHz:**

RBW= 1 MHz

VBW= 10 MHz

Trace Mode: Peak Detector (Max Hold) and RMS Average Detector (Max Hold) (Pre-scan Only)

Span= 1- 18 GHz, 18- 26.5 GHz and 26.5- 40 GHz

Sweep time= Auto Couple

Sweep points \geq 2 x Span/RBW**Final Peak Measurements above 1 GHz****Spectrum Analyzer Settings:**

RBW= 1 MHz

VBW \geq 3 \times RBW

Detector= Peak

Span= wide enough to encompass the emission

Sweep points \geq 2 \times Span/RBW

Sweep time = Auto Couple

Trace= Max Hold

Final RMS Average Measurements above 1 GHz**Spectrum Analyzer Settings:**

RBW= 1 MHz

VBW \geq 3 \times RBW

Detector= RMS

Span= wide enough to encompass the emission

Sweep points \geq 2 \times Span/RBW

Sweep time = Auto Couple

Trace= Average at least 100 traces

Trace Averaging type= power (RMS)

The duty cycle correction factor is added to the emission level.

Restricted Band-Edge Emissions