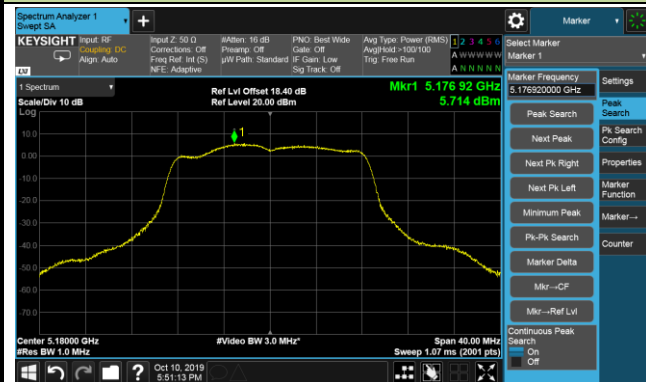
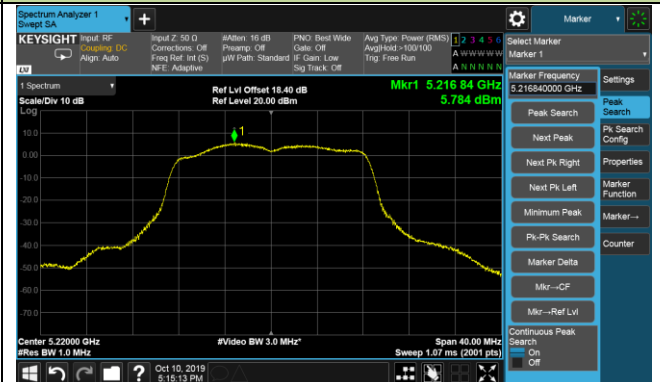


## 802.11a Power Spectral Density - Ant 4 / Ant 1 + 2 + 3 + 4

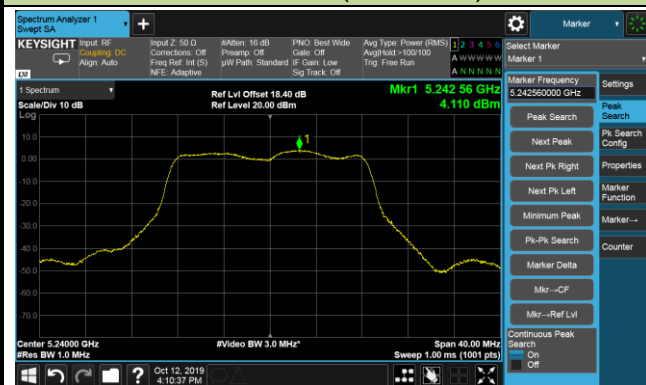
Channel 36 (5180MHz)



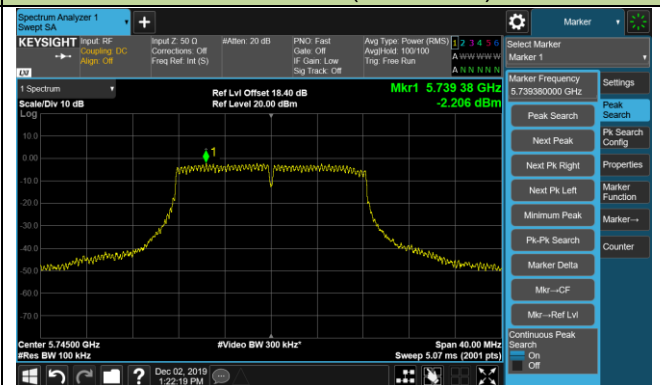
Channel 44 (5220MHz)



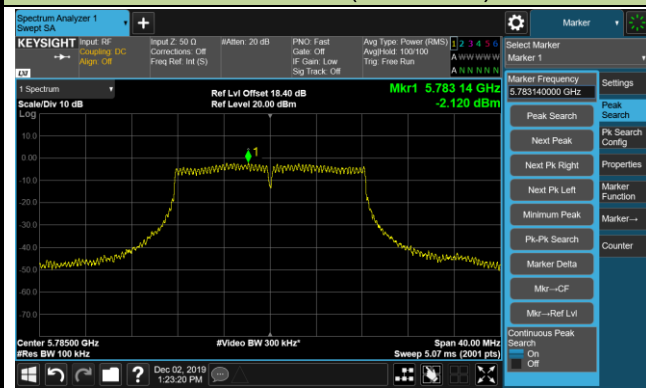
Channel 48 (5240MHz)



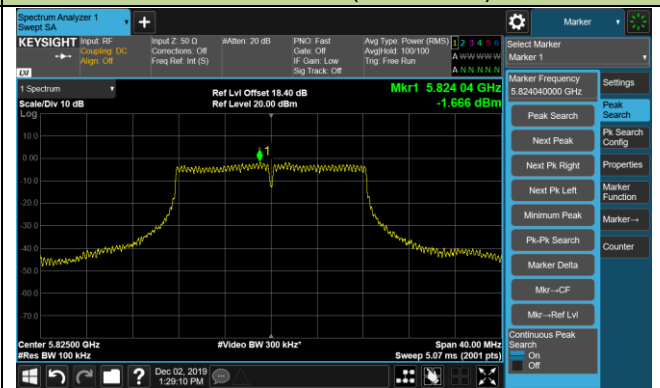
Channel 149 (5745MHz)



Channel 157 (5785MHz)

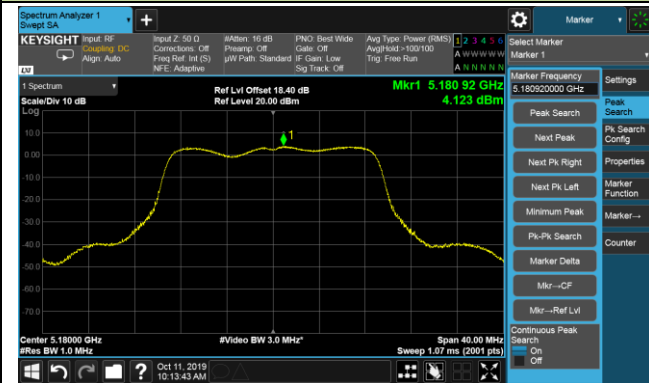


Channel 165 (5825MHz)



802.11n-HT20 Power Spectral Density - Ant 4 / Ant 1 + 2 + 3 + 4

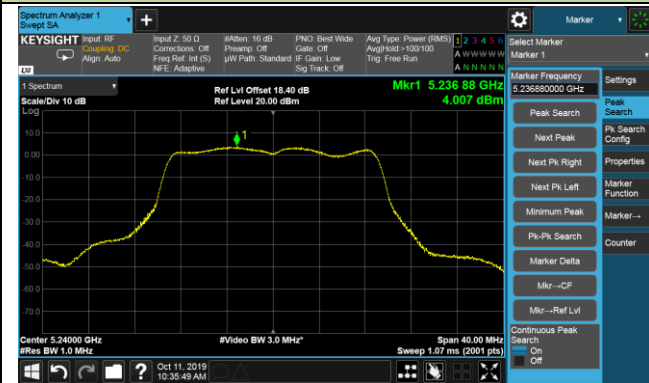
Channel 36 (5180MHz)



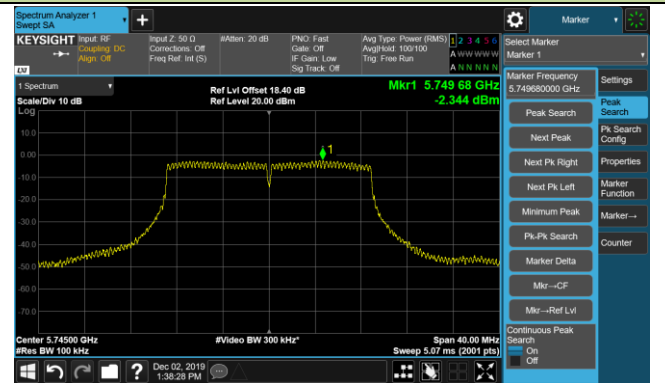
Channel 44 (5220MHz)



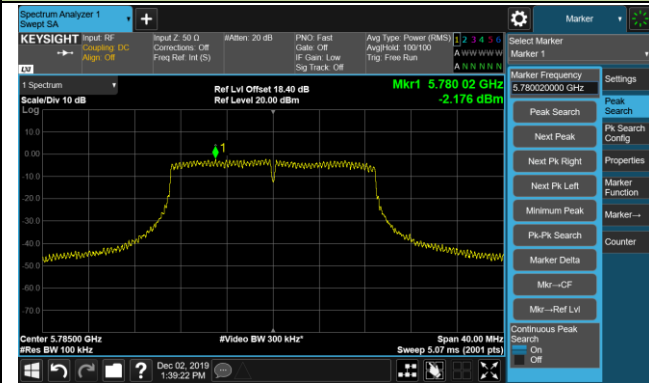
Channel 48 (5240MHz)



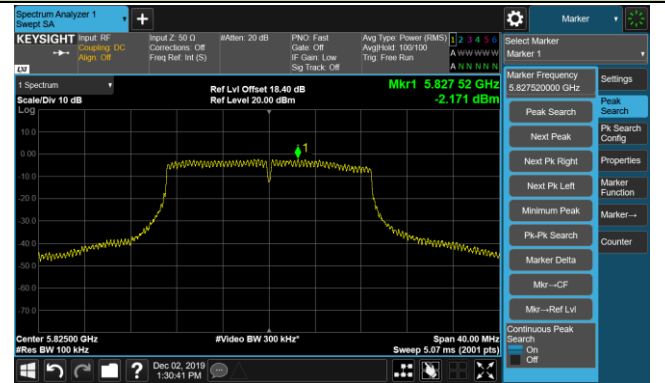
Channel 149 (5745MHz)



Channel 157 (5785MHz)

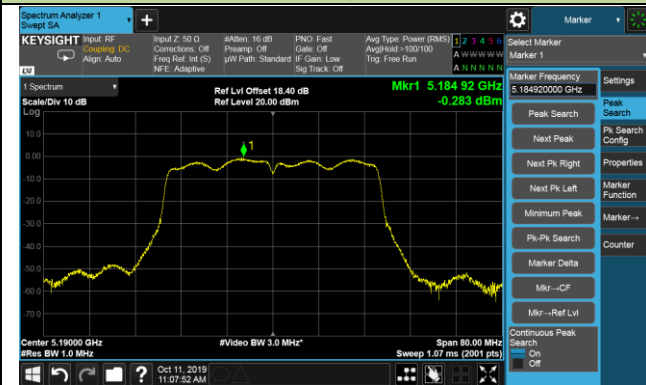


Channel 165 (5825MHz)



802.11n-HT40 Power Spectral Density - Ant 4 / Ant 1 + 2 + 3 + 4

Channel 38 (5190MHz)



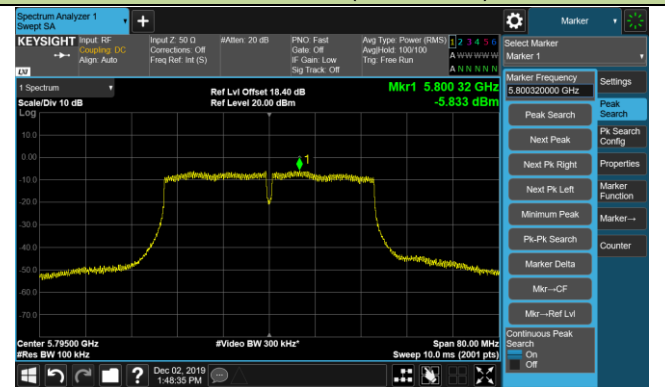
Channel 46 (5230MHz)



Channel 151 (5755MHz)

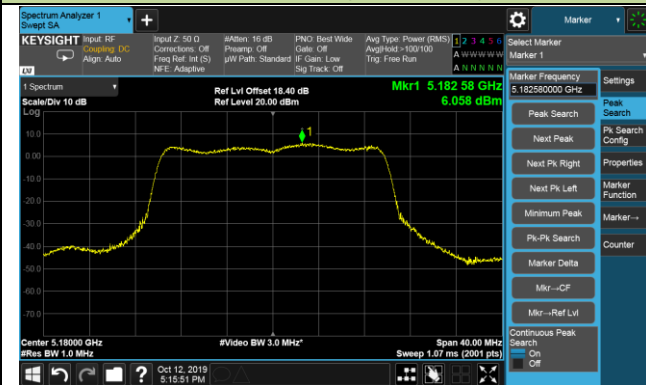


Channel 159 (5795MHz)



## 802.11ax-HE20 Power Spectral Density - Ant 4 / Ant 1 + 2 + 3 + 4

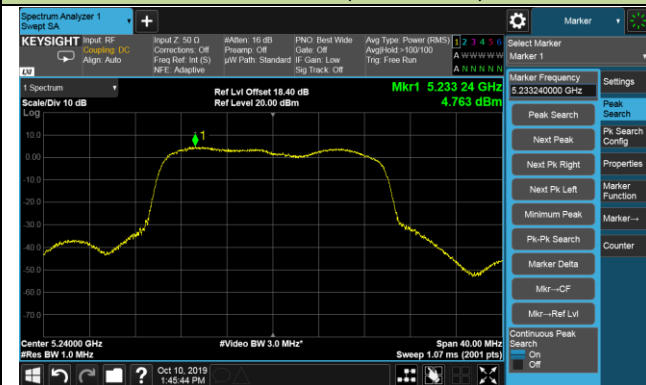
Channel 36 (5180MHz)



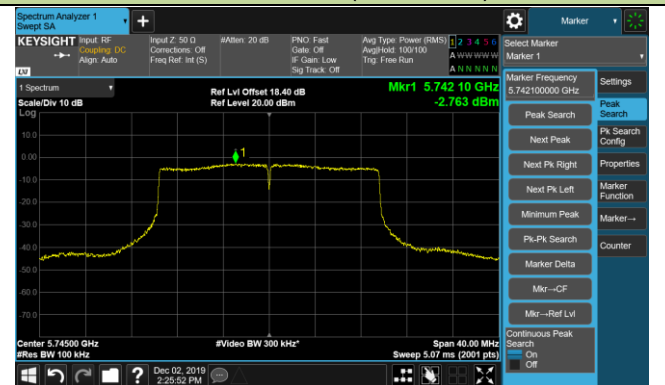
Channel 44 (5220MHz)



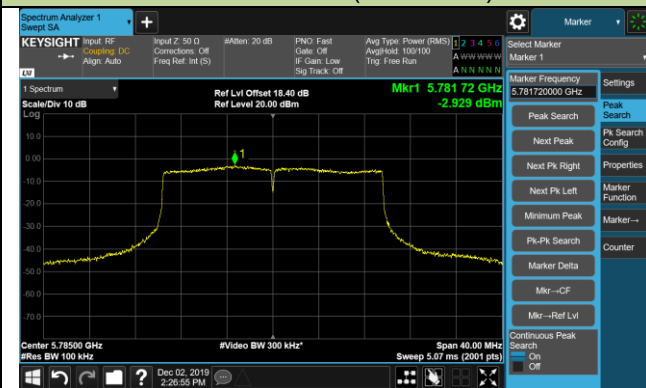
Channel 48 (5240MHz)



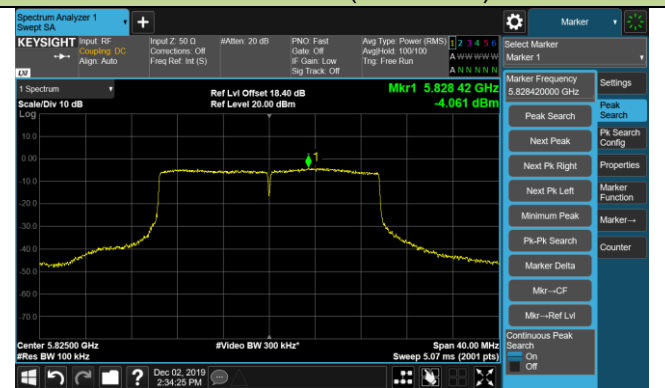
Channel 149 (5745MHz)



Channel 157 (5785MHz)

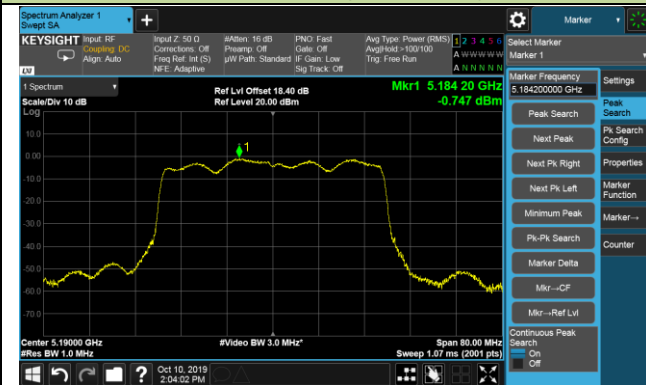


Channel 165 (5825MHz)



## 802.11ax-HE40 Power Spectral Density - Ant 4 / Ant 1 + 2 + 3 + 4

Channel 38 (5190MHz)



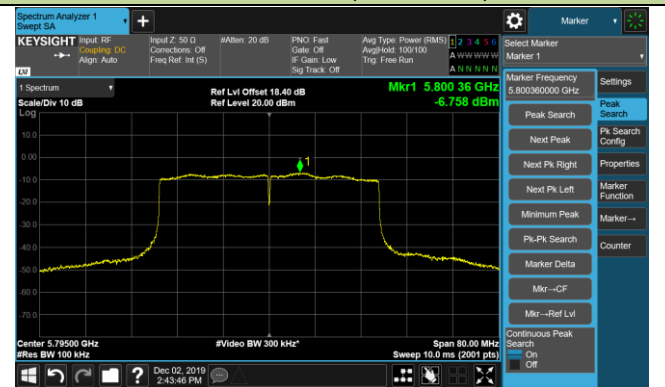
Channel 46 (5230MHz)



Channel 151 (5755MHz)

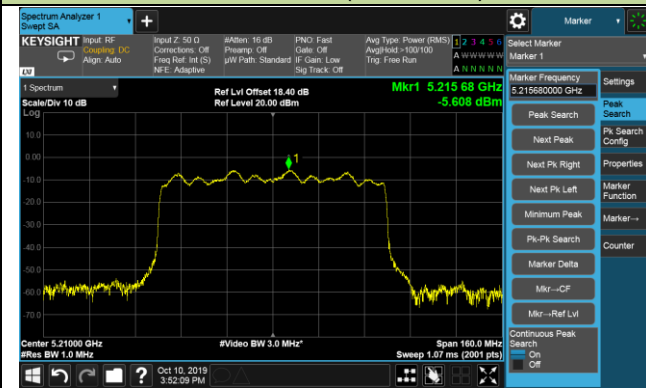


Channel 159 (5795MHz)

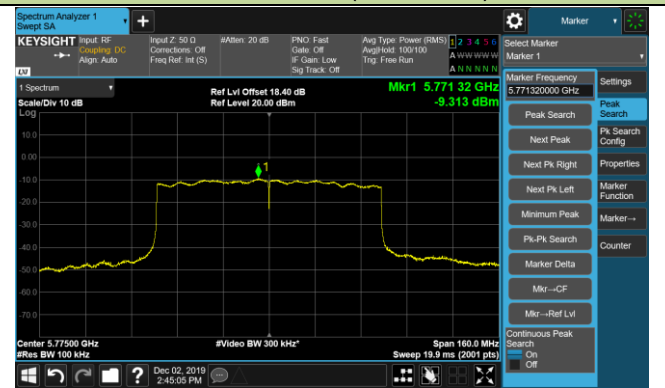


## 802.11ax-HE80 Power Spectral Density - Ant 4 / Ant 1 + 2 + 3 + 4

Channel 42 (5210MHz)



Channel 155 (5775MHz)

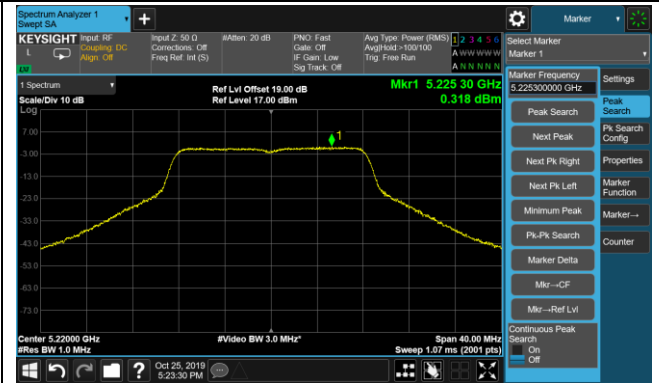


### 802.11a Power Spectral Density – Scan Antenna

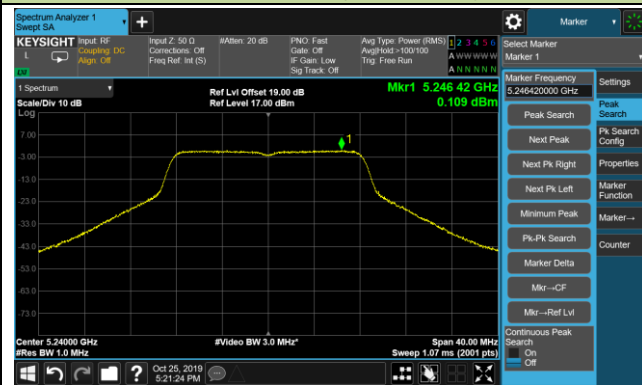
Channel 36 (5180MHz)



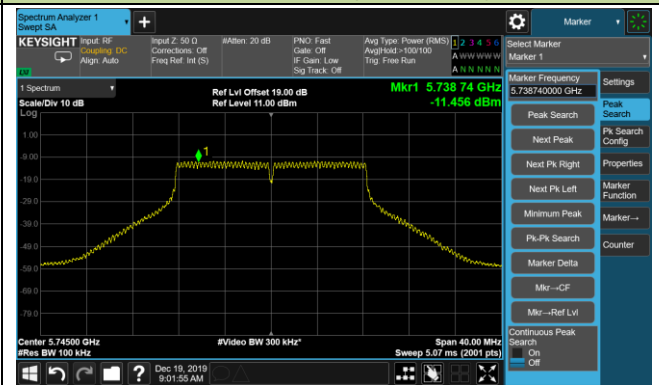
Channel 44 (5220MHz)



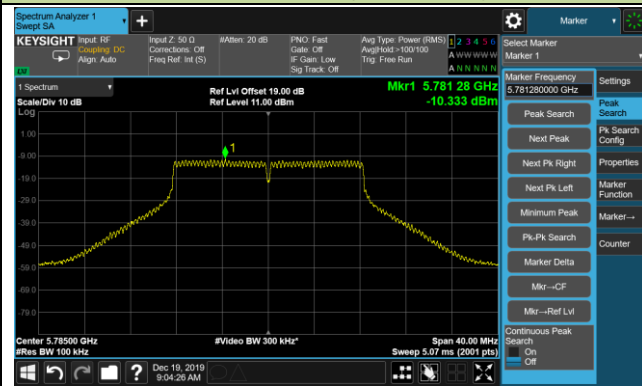
Channel 48 (5240MHz)



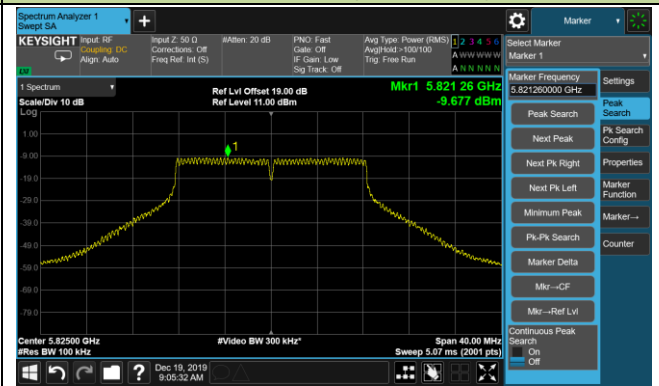
Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)





Product	HAN Access Point	Temperature	22°C
Test Engineer	Messiah Li	Relative Humidity	54%
Test Site	TR3	Test Date	2019/10/12
Configuration	AP 321e	Test Item	Power Spectral Density

Test Mode	Data Rate/MCS	Channel No.	Freq. (MHz)	Ant 1 PSD (dBm/MHz)	Ant 2 PSD (dBm/MHz)	Ant 3 PSD (dBm/MHz)	Ant 4 PSD (dBm/MHz)	Duty Cycle (%)	Total PSD (dBm/MHz)	PSD Limit (dBm/MHz)	Result
11a	6Mbps	36	5180	4.87	3.85	4.14	3.34	91.70	10.48	≤ 10.98	Pass
11a	6Mbps	44	5220	4.69	3.67	3.72	4.44	91.70	10.55	≤ 10.98	Pass
11a	6Mbps	48	5240	4.39	2.94	3.91	3.62	91.70	10.14	≤ 10.98	Pass
11n-HT20	MCS0	36	5180	5.21	4.49	4.49	4.80	95.09	10.78	≤ 10.98	Pass
11n-HT20	MCS0	44	5220	4.45	4.57	3.87	3.84	95.09	10.22	≤ 10.98	Pass
11n-HT20	MCS0	48	5240	4.53	3.98	3.96	4.12	95.09	10.17	≤ 10.98	Pass
11n-HT40	MCS0	38	5190	-3.84	-3.74	-3.39	-4.28	87.10	2.82	≤ 10.98	Pass
11n-HT40	MCS0	46	5230	4.03	3.28	3.93	3.95	87.10	10.43	≤ 10.98	Pass
11ax-HE20	MCS0	36	5180	3.87	3.60	3.71	3.73	94.76	9.99	≤ 10.98	Pass
11ax-HE20	MCS0	44	5220	4.74	3.65	3.60	4.13	94.76	10.31	≤ 10.98	Pass
11ax-HE20	MCS0	48	5240	3.98	4.18	3.42	3.70	94.76	10.08	≤ 10.98	Pass
11ax-HE40	MCS0	38	5190	-3.03	-3.96	-2.99	-3.97	94.25	2.81	≤ 10.98	Pass
11ax-HE40	MCS0	46	5230	4.25	3.71	3.86	3.88	94.25	10.21	≤ 10.98	Pass
11ax-HE80	MCS0	42	5210	-7.90	-8.17	-7.22	-7.98	93.92	-1.51	≤ 10.98	Pass

Note 1: When EUT duty cycle ≥ 98%, the total PSD (dBm/MHz) =  $10 \cdot \log \{10^{(\text{Ant 1 PSD}/10)} + 10^{(\text{Ant 2 PSD}/10)} + 10^{(\text{Ant 3 PSD}/10)} + 10^{(\text{Ant 4 PSD}/10)}\}$  (dBm/MHz).

Note 2: When EUT duty cycle < 98%, the total PSD (dBm/MHz) =  $10 \cdot \log \{10^{(\text{Ant 1 PSD}/10)} + 10^{(\text{Ant 2 PSD}/10)} + 10^{(\text{Ant 3 PSD}/10)} + 10^{(\text{Ant 4 PSD}/10)}\}$  (dBm/MHz) +  $10 \cdot \log(1/\text{duty cycle})$

Note 3: PSD Limit (dBm/MHz) = 17dBm/MHz - (12.02dBi - 6dBi) = 10.98dBm/MHz.

Product	HAN Access Point	Temperature	22°C
Test Engineer	Messiah Li	Relative Humidity	54%
Test Site	TR3	Test Date	2019/10/12
Configuration	AP 321e	Test Item	Power Spectral Density

Test Mode	Data Rate/MCS	Channel No.	Freq. (MHz)	Ant 1 PSD (dBm/100kHz)	Ant 2 PSD (dBm/100kHz)	Ant 3 PSD (dBm/100kHz)	Ant 4 PSD (dBm/100kHz)	Duty Cycle (%)	Constant Factor	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Result
11a	6Mbps	149	5745	-4.00	-4.71	-3.59	-4.53	91.70	6.99	9.20	≤23.98	Pass
11a	6Mbps	157	5785	-3.76	-4.40	-3.47	-4.31	91.70	6.99	9.42	≤23.98	Pass
11a	6Mbps	165	5825	-4.43	-5.28	-3.48	-4.19	91.70	6.99	9.09	≤23.98	Pass
11n-HT20	MCS0	149	5745	-5.30	-5.35	-5.64	-4.93	95.09	6.99	7.71	≤23.98	Pass
11n-HT20	MCS0	157	5785	-4.36	-4.97	-4.70	-3.82	95.09	6.99	8.57	≤23.98	Pass
11n-HT20	MCS0	165	5825	-5.56	-6.28	-5.22	-5.01	95.09	6.99	7.52	≤23.98	Pass
11n-HT40	MCS0	151	5755	-7.21	-7.38	-7.50	-7.13	87.10	6.99	6.31	≤23.98	Pass
11n-HT40	MCS0	159	5795	-7.59	-7.76	-7.53	-7.33	87.10	6.99	6.06	≤23.98	Pass
11ax-HE20	MCS0	149	5745	-5.09	-9.01	-5.54	-5.06	94.76	6.99	7.34	≤23.98	Pass
11ax-HE20	MCS0	157	5785	-5.26	-7.43	-4.35	-5.27	94.76	6.99	7.81	≤23.98	Pass
11ax-HE20	MCS0	165	5825	-5.37	-7.22	-5.35	-4.87	94.76	6.99	7.63	≤23.98	Pass
11ax-HE40	MCS0	151	5755	-8.37	-8.88	-7.67	-8.27	94.25	6.99	4.99	≤23.98	Pass
11ax-HE40	MCS0	159	5795	-7.96	-8.29	-7.95	-7.65	94.25	6.99	5.31	≤23.98	Pass
11ax-HE80	MCS0	155	5775	-12.02	-12.14	-11.08	-11.74	93.92	6.99	1.56	≤23.98	Pass

Note 1: When EUT duty cycle ≥ 98%, the total PSD (dBm/500kHz) =  $10 \cdot \log \{10^{(\text{Ant 1 PSD}/10)} + 10^{(\text{Ant 2 PSD}/10)} + 10^{(\text{Ant 3 PSD}/10)} + 10^{(\text{Ant 4 PSD}/10)}\}$  (dBm/100kHz) + Constant Factor.

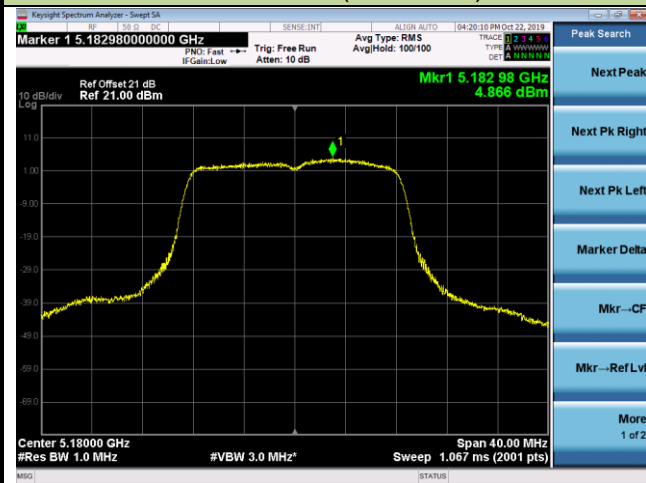
Note 2: When EUT duty cycle < 98%, the total PSD (dBm/500kHz) =  $10 \cdot \log \{10^{(\text{Ant 1 PSD}/10)} + 10^{(\text{Ant 2 PSD}/10)} + 10^{(\text{Ant 3 PSD}/10)} + 10^{(\text{Ant 4 PSD}/10)}\}$  (dBm/100kHz) + Constant Factor +  $10 \cdot \log (1/\text{Duty Cycle})$ .

Note 3: PSD Limit (dBm/500kHz) = 30dBm/500kHz - (12.02dBi - 6dBi) = 23.98dBm/500kHz.

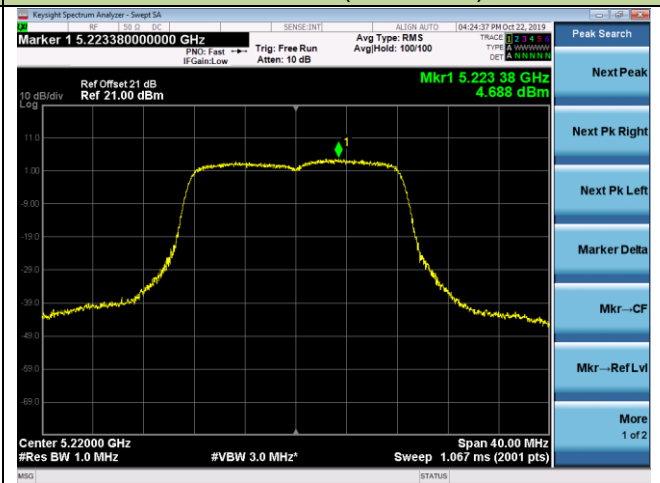


802.11a Power Spectral Density - Ant 1 / Ant 1 + 2 + 3 + 4

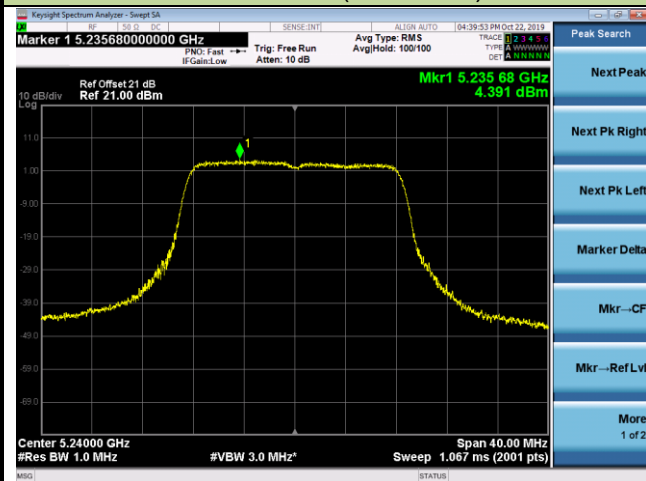
Channel 36 (5180MHz)



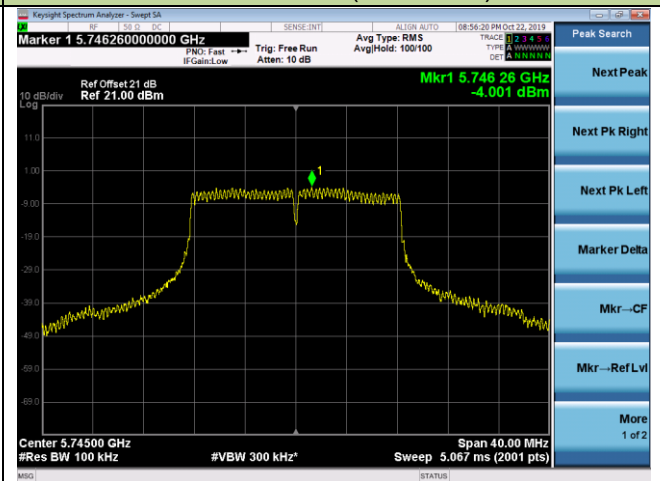
Channel 44 (5220MHz)



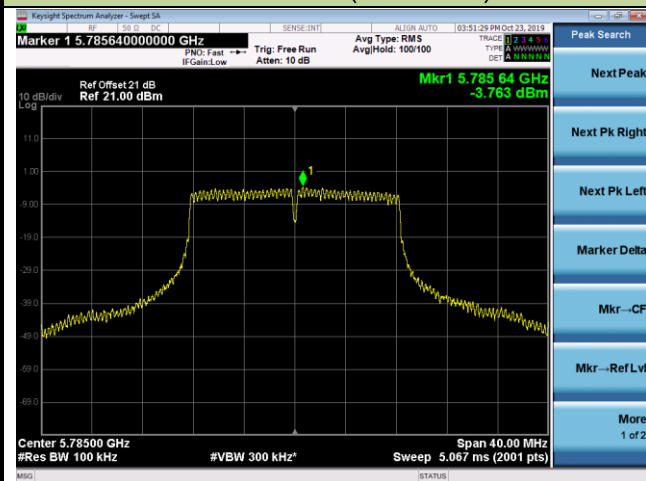
Channel 48 (5240MHz)



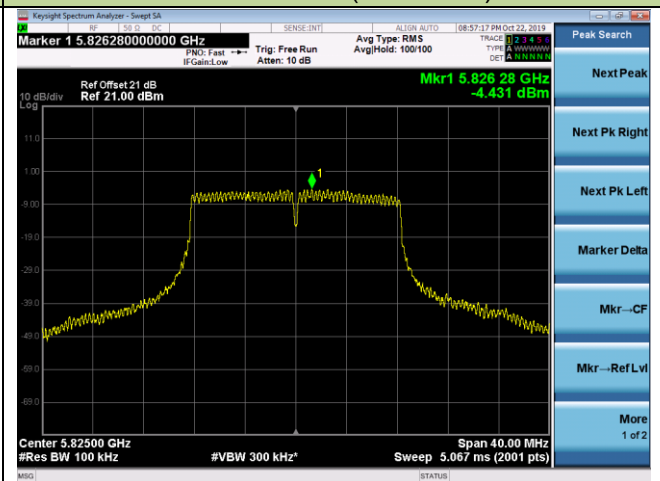
Channel 149 (5745MHz)



Channel 157 (5785MHz)

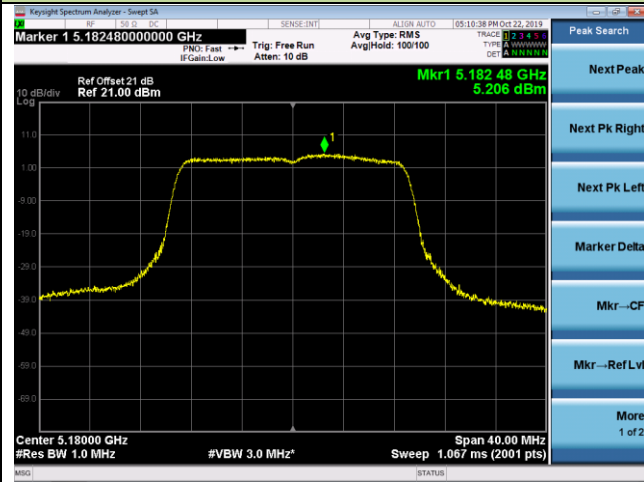


Channel 165 (5825MHz)

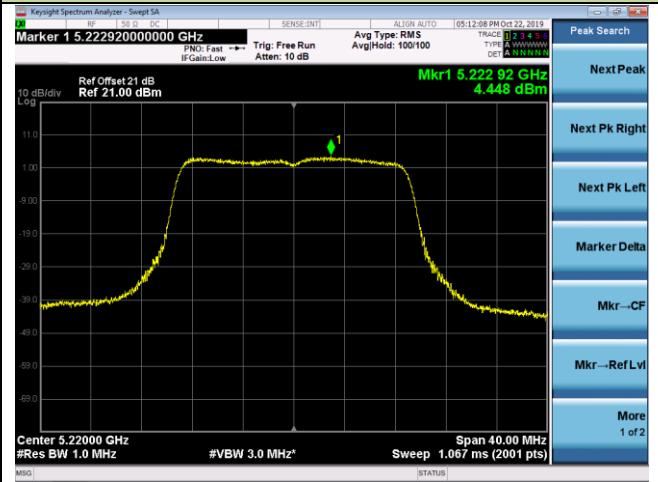


## 802.11n-HT20 Power Spectral Density - Ant 1 / Ant 1 + 2 + 3 + 4

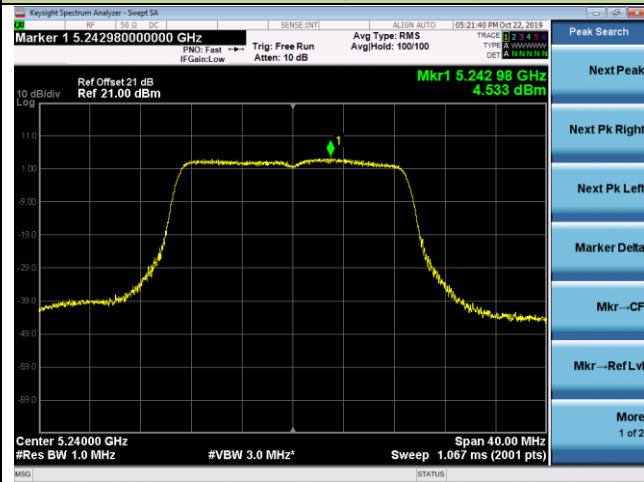
Channel 36 (5180MHz)



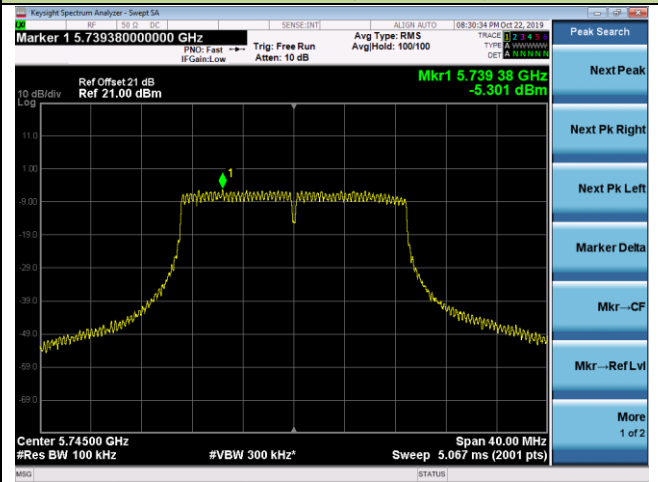
Channel 44 (5220MHz)



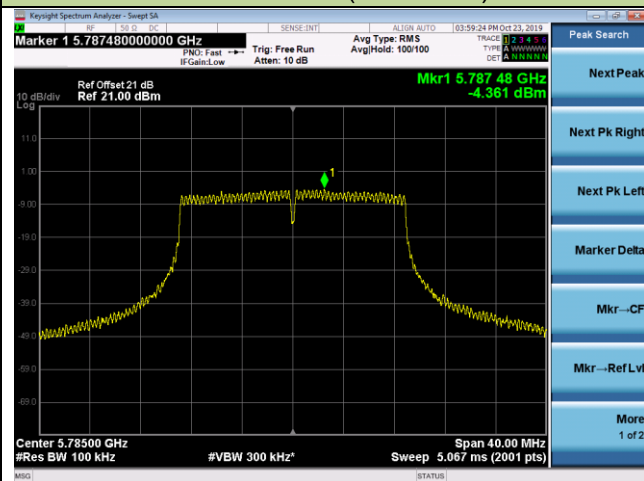
Channel 48 (5240MHz)



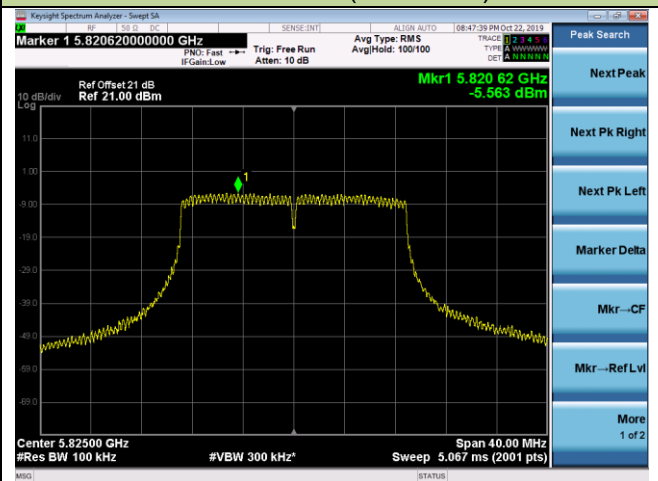
Channel 149 (5745MHz)



Channel 157 (5785MHz)

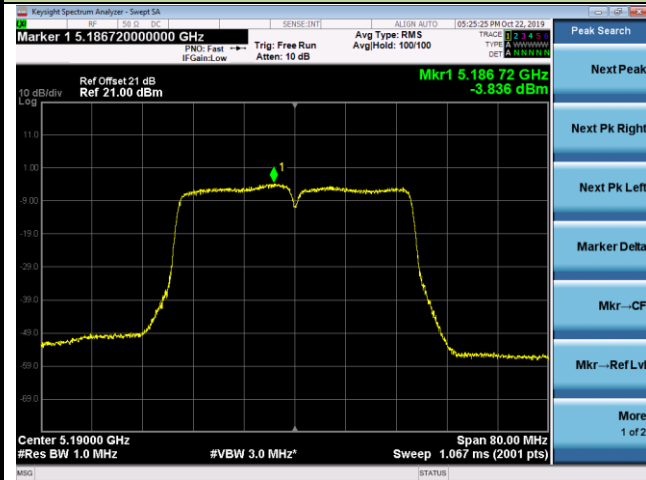


Channel 165 (5825MHz)

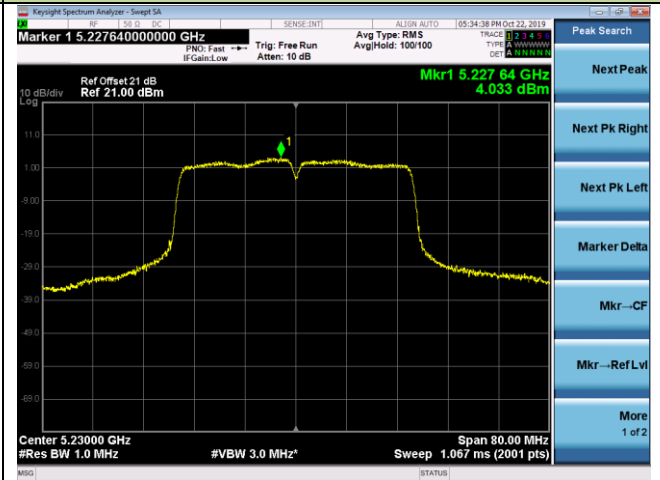


802.11n-HT40 Power Spectral Density - Ant 1 / Ant 1 + 2 + 3 + 4

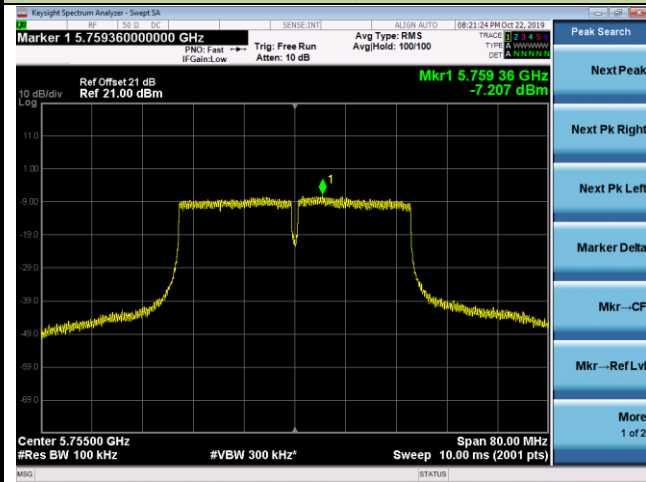
Channel 38 (5190MHz)



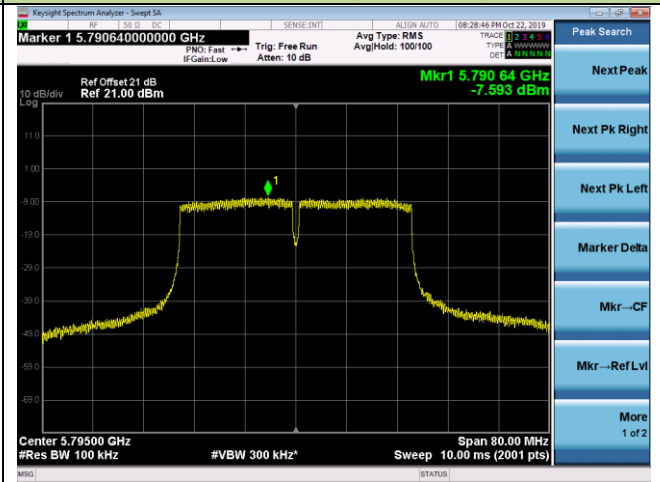
Channel 46 (5230MHz)



Channel 151 (5755MHz)

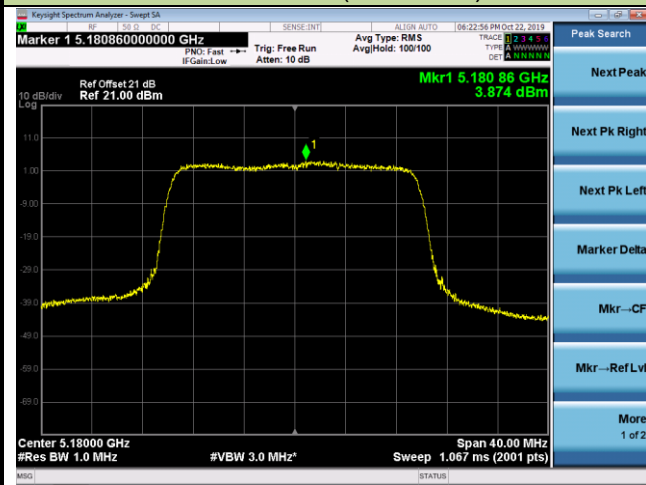


Channel 159 (5795MHz)

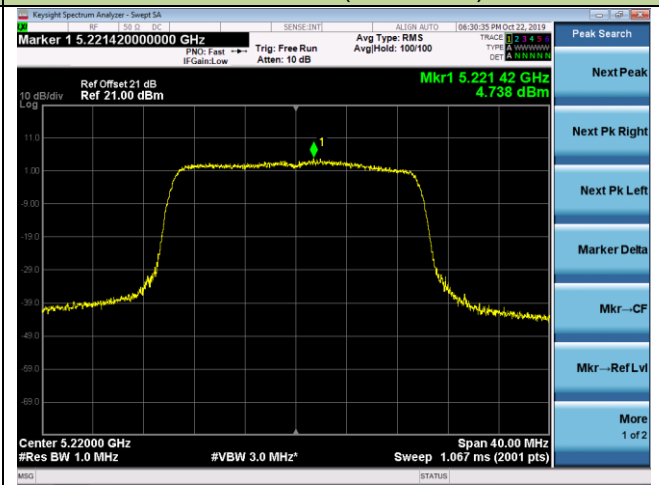


## 802.11ax-HE20 Power Spectral Density - Ant 1 / Ant 1 + 2 + 3 + 4

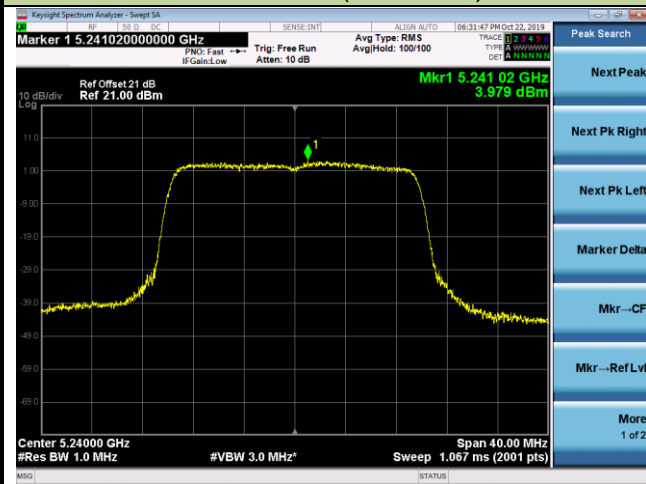
Channel 36 (5180MHz)



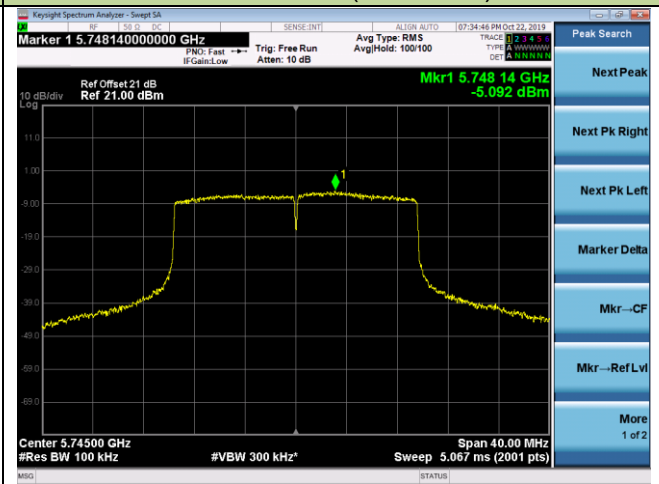
Channel 44 (5220MHz)



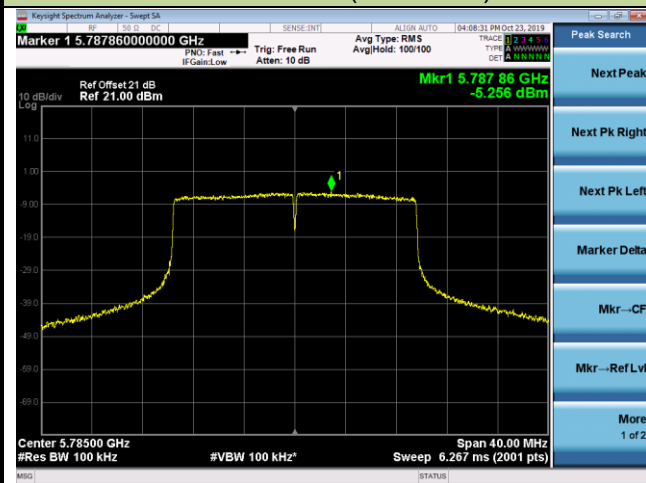
Channel 48 (5240MHz)



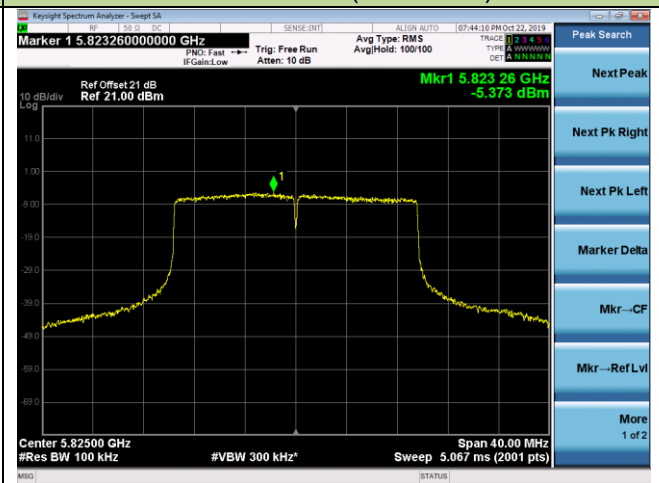
Channel 149 (5745MHz)



Channel 157 (5785MHz)

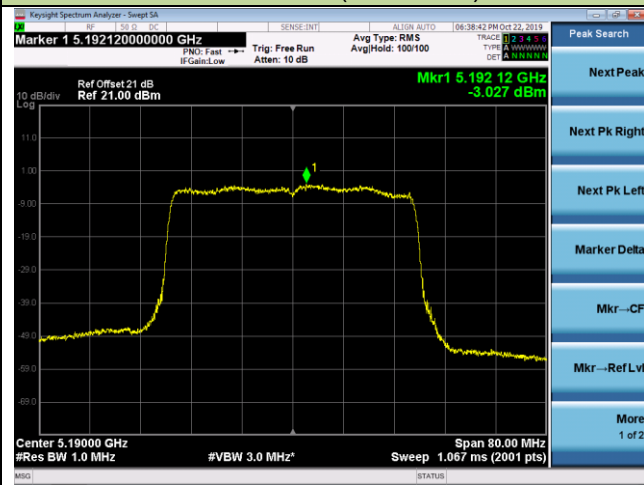


Channel 165 (5825MHz)

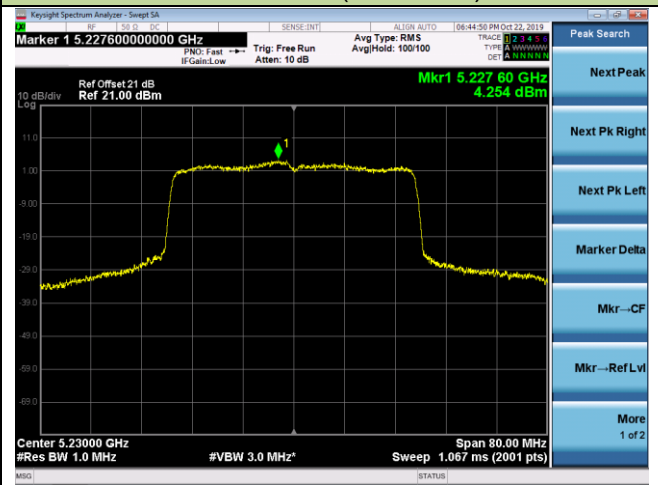


## 802.11ax-HE40 Power Spectral Density - Ant 1 / Ant 1 + 2 + 3 + 4

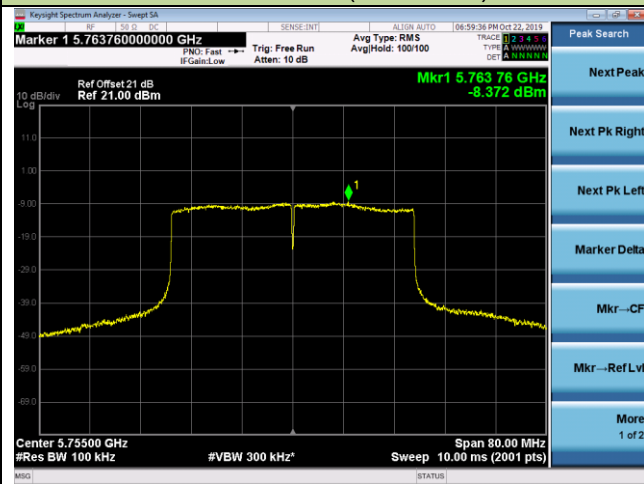
Channel 38 (5190MHz)



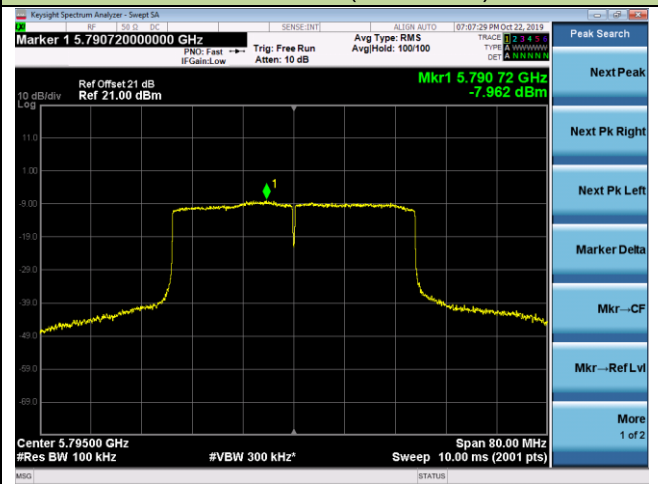
Channel 46 (5230MHz)



Channel 151 (5755MHz)

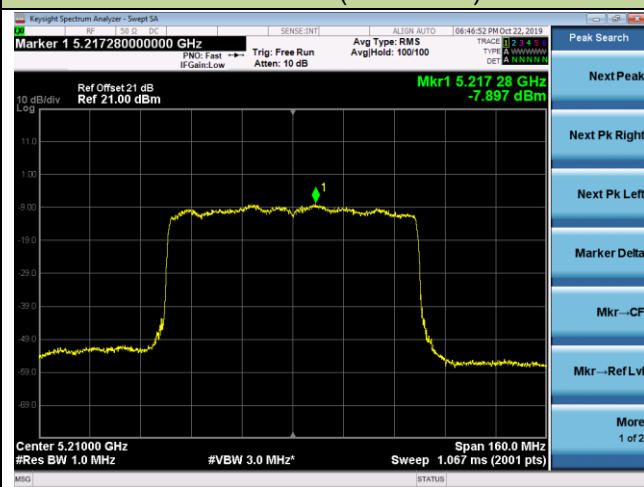


Channel 159 (5795MHz)

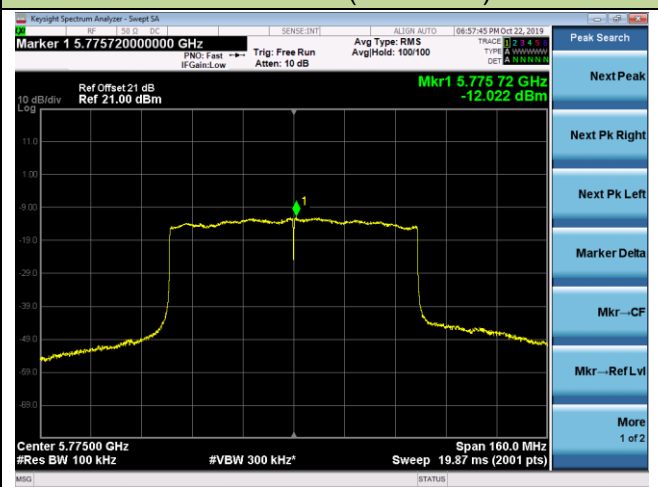


## 802.11ax-HE80 Power Spectral Density - Ant 1 / Ant 1 + 2 + 3 + 4

Channel 42 (5210MHz)

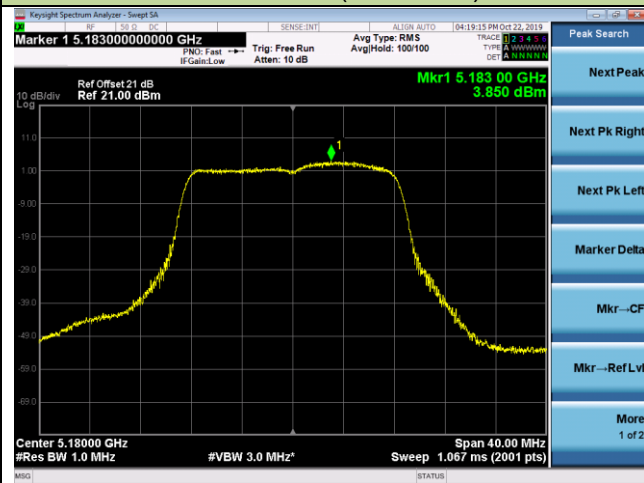


Channel 155 (5775MHz)

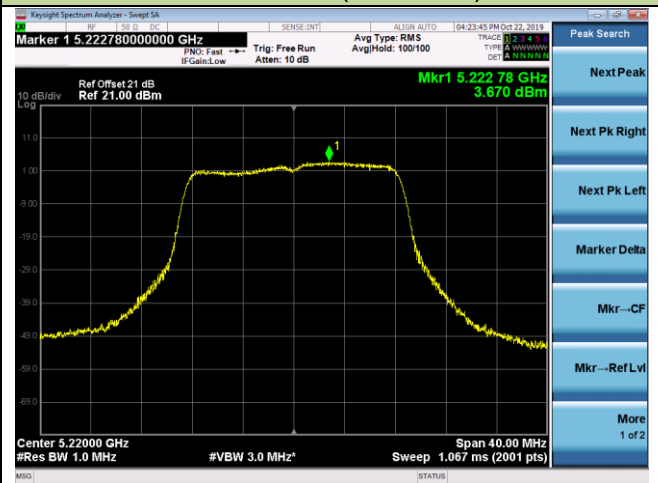


## 802.11a Power Spectral Density - Ant 2 / Ant 1 + 2 + 3 + 4

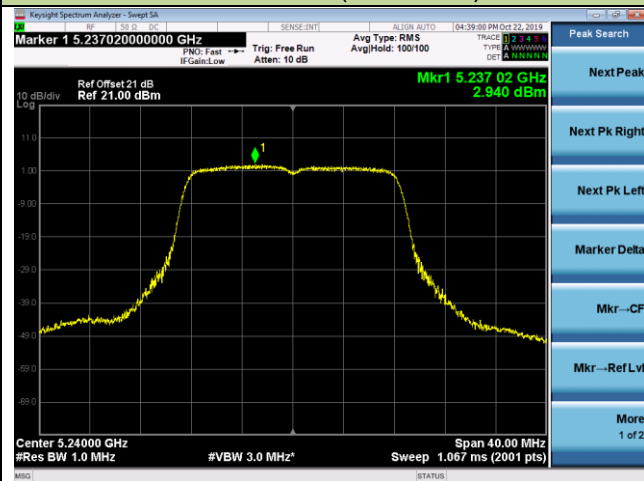
Channel 36 (5180MHz)



Channel 44 (5220MHz)



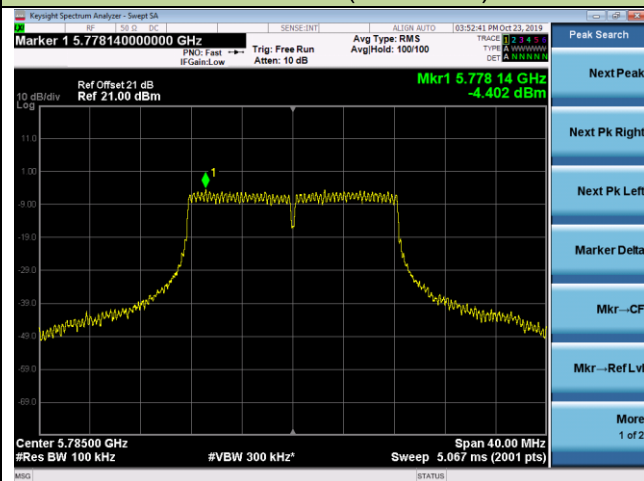
Channel 48 (5240MHz)



Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)

