

4.3.3 最大傳導功率頻譜密度之要求

合格標準：

依據 NCC 低功率射頻電機技術規範(LP0002)之 4.7.3 節之要求：

1. 5.15-5.25 GHz 頻帶

(1) 供戶外操作使用：

- 在任何 1 MHz 頻帶中最大功率頻譜密度不能超過 17 dBm。
- 使用超過 6 dBi 方向增益之發射天線時，應依超過 6 dBi 天線方向增益的 dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。
- 在水平面仰角超過 30 度時，其最大 EIRP 不能超過 21 dBm。

(2) 供室內操作使用：

- 在任何 1 MHz 頻帶中最大功率頻譜密度不能超過 17 dBm。
- 使用超過 6 dBi 方向增益之發射天線時，應依超過 6 dBi 天線方向增益的 dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。

(3) 供固定式點對點操作使用：

- 在任何 1 MHz 頻帶中最大功率頻譜密度不能超過 17 dBm。
- 使用超過 23 dBi 方向增益之指向性天線時，應依超過 23 dBi 天線方向增益的 dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。
- 固定式點對點操作，不包括點對多點系統、全方向性應用及多台共站發射機傳送相同資訊。

(4) 供行動或可攜式裝置操作使用：

- 在任何 1 MHz 頻帶中最大功率頻譜密度不能超過 11 dBm。
- 使用超過 6 dBi 方向增益之發射天線時，應依超過 6 dBi 天線方向增益的 dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。

2. 5.25-5.35 GHz 與 5.470-5.725 GHz 頻帶

(1) 最大功率頻譜密度在任何 1 MHz 頻帶中不能超過 11 dBm。

(2) 使用超過 6 dBi 方向增益之發射天線時，應依超過 6 dBi 天線方向增益的 dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。

3. 5.725-5.850 GHz 頻帶

(1) 在任何 500 kHz 頻帶中最大功率頻譜密度不能超過 30 dBm。

(2) 供固定式點對點操作時，使用方向增益超過 6 dBi 之發射天線，可不需對應減少發射器之傳導輸出功率限制值。

(3) 除(2)外，使用超過 6 dBi 方向增益之發射天線時，應依超過 6 dBi 天線方向增益的 dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。

4. 最大功率頻譜密度量測規定：

(1) 應將量測儀器直接連接待測物，以傳導方式執行。

(2) 5.15 GHz~5.25 GHz、5.25 GHz~5.35 GHz 及 5.47 GHz~5.725 GHz 頻帶，量測儀器之頻寬應設定為 1 MHz 頻寬或待測物之 26 dB 發射頻寬，兩者取較小者。

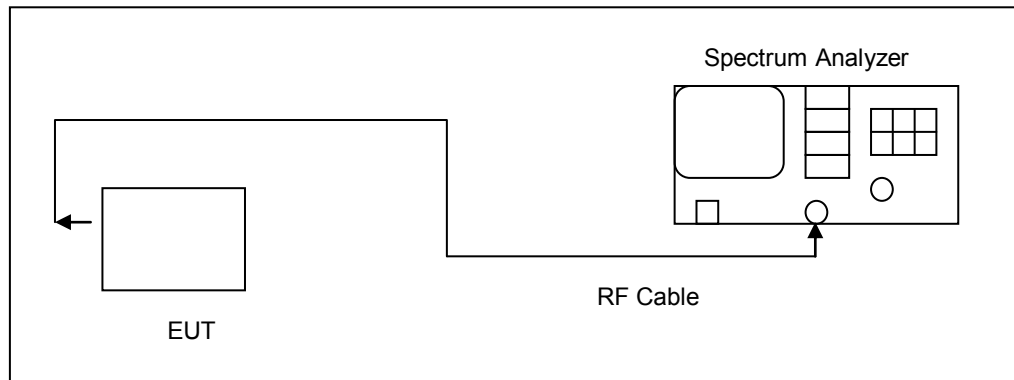
(3) 5.725 GHz~5.850 GHz 頻帶，量測器之頻寬應設定為 500 kHz 或待測物之 26 dB 發射頻寬，兩者取較小者。

(4) 解析頻寬小於(2)或(3)時，應以補償方式計算總功率頻譜密度。

CDD / MIMO mode:

$$\text{Directional Gain} = 10 \cdot \log\{[10^{G1/20} + 10^{G2/20} + \dots + 10^{Gn/20}]^2 / NANT\} = 1.96 \text{ dBi} < 6 \text{ dBi}$$

測試架構圖：



測試結果:

操作模式	: Mode 8 / Mode 11 / Mode 12 / Mode 13 / Mode 14 / Mode 15 / Mode 16 / Mode 17 / Mode 18
測試結果	: 合格

ANT-0						
操作模式	頻道 (CH)	頻率 (MHz)	量測值 (dBm/MHz)	Duty Factor (dB)	轉換值 (dBm/MHz)	限制值 (dBm/MHz)
Mode 8	36	5180.0	-4.682	0.005	-4.677	11.00
	40	5200.0	2.751	0.005	2.756	11.00
	48	5240.0	2.493	0.005	2.498	11.00
	52	5260.0	2.244	0.005	2.249	11.00
	56	5280.0	2.148	0.005	2.153	11.00
	64	5320.0	-5.323	0.005	-5.318	11.00
	100	5500.0	-4.676	0.005	-4.671	11.00
	112	5560.0	3.290	0.005	3.295	11.00
	140	5700.0	-5.016	0.005	-5.011	11.00
Mode 11	36	5180.0	-5.145	0.020	-5.125	11.00
	40	5200.0	2.437	0.020	2.457	11.00
	48	5240.0	2.214	0.020	2.234	11.00
	52	5260.0	1.841	0.020	1.861	11.00
	56	5280.0	1.899	0.020	1.919	11.00
	64	5320.0	-5.600	0.020	-5.580	11.00
	100	5500.0	-4.994	0.020	-4.974	11.00
	112	5560.0	2.855	0.020	2.875	11.00
	140	5700.0	-5.506	0.020	-5.486	11.00
Mode 12	38	5190.0	-8.260	0.055	-8.205	11.00
	46	5230.0	-0.988	0.055	-0.933	11.00
	54	5270.0	-1.493	0.055	-1.438	11.00
	62	5310.0	-8.573	0.055	-8.518	11.00
	102	5510.0	-7.588	0.055	-7.533	11.00
	110	5550.0	-0.445	0.055	-0.390	11.00
	134	5670.0	-8.318	0.055	-8.263	11.00
Mode 13	42	5210.0	-11.388	0.085	-11.303	11.00
	58	5290.0	-11.697	0.085	-11.612	11.00
	106	5530.0	-11.105	0.085	-11.020	11.00
	122	5610.0	-11.131	0.085	-11.046	11.00
Mode 14	50	5250.0	-16.388	0.171	-16.217	11.00
	114	5570.0	-15.871	0.171	-15.700	11.00

Note: Power Density = measured result + 10 log (1/duty cycle) + Conversion ratio = measured result + duty factory.

Conversion ration = 10*Log(500 k/100 k)

操作模式	: Mode 8 / Mode 11 / Mode 12 / Mode 13 / Mode 14 / Mode 15 / Mode 16 / Mode 17 / Mode 18
測試結果	: 合格

ANT-0						
操作模式	頻道 (CH)	頻率 (MHz)	量測值 (dBm/MHz)	Duty Factor (dB)	轉換值 (dBm/MHz)	限制值 (dBm/MHz)
Mode 15	36	5180.0	-4.795	0.013	-4.782	11.00
	40	5200.0	2.878	0.013	2.891	11.00
	48	5240.0	2.462	0.013	2.475	11.00
	52	5260.0	2.106	0.013	2.119	11.00
	56	5280.0	2.312	0.013	2.325	11.00
	64	5320.0	-5.377	0.013	-5.364	11.00
	100	5500.0	-4.668	0.013	-4.655	11.00
	112	5560.0	3.316	0.013	3.329	11.00
Mode 16	140	5700.0	-5.366	0.013	-5.353	11.00
	38	5190.0	-8.104	0.076	-8.028	11.00
	46	5230.0	-0.554	0.076	-0.478	11.00
	54	5270.0	-1.080	0.076	-1.004	11.00
	62	5310.0	-8.660	0.076	-8.584	11.00
	102	5510.0	-7.844	0.076	-7.768	11.00
	110	5550.0	-0.287	0.076	-0.211	11.00
Mode 17	134	5670.0	-8.002	0.076	-7.926	11.00
	42	5210.0	-11.219	0.102	-11.117	11.00
	58	5290.0	-10.939	0.102	-10.837	11.00
	106	5530.0	-11.019	0.102	-10.917	11.00
Mode 18	122	5610.0	-10.917	0.102	-10.815	11.00
	50	5250.0	-15.862	0.190	-15.672	11.00
	114	5570.0	-15.753	0.190	-15.563	11.00

Note: Power Density = measured result + 10 log (1/duty cycle) + Conversion ratio = measured result + duty factory.

Conversion ration = 10*Log(500 k/100 k)

操作模式	: Mode 8 / Mode 11 / Mode 12 / Mode 13 / Mode 15 / Mode 16 / Mode 17
測試結果	: 合格

ANT-0						
操作模式	頻道 (CH)	頻率 (MHz)	量測值 (dBm/100 kHz)	Duty Factor (dB)	轉換值 (dBm/500 kHz)	限制值 (dBm/500 kHz)
Mode 8	149	5745.0	-6.206	0.005	0.788	30.00
	157	5785.0	-6.502	0.005	0.492	30.00
	165	5825.0	-6.190	0.005	0.804	30.00
Mode 11	149	5745.0	-6.282	0.020	0.728	30.00
	157	5785.0	-6.169	0.020	0.841	30.00
	165	5825.0	-6.682	0.020	0.328	30.00
Mode 12	151	5755.0	-9.876	0.055	-2.831	30.00
	159	5795.0	-10.093	0.055	-3.048	30.00
Mode 13	155	5775.0	-13.355	0.085	-6.280	30.00
Mode 15	149	5745.0	-7.584	0.013	-0.581	30.00
	157	5785.0	-7.172	0.013	-0.169	30.00
	165	5825.0	-7.463	0.013	-0.460	30.00
Mode 16	151	5755.0	-10.820	0.076	-3.754	30.00
	159	5795.0	-10.607	0.076	-3.541	30.00
Mode 17	155	5775.0	-14.051	0.102	-6.959	30.00

Note: Power Density = measured result + 10 log (1/duty cycle) + Conversion ratio = measured result + duty factory.

Conversion ratio = 10*Log(500 k/100 k)

操作模式	: Mode 8 / Mode 11 / Mode 12 / Mode 13 / Mode 14 / Mode 15 / Mode 16 / Mode 17 / Mode 18
測試結果	: 合格

ANT-1						
操作模式	頻道 (CH)	頻率 (MHz)	量測值 (dBm/MHz)	Duty Factor (dB)	轉換值 (dBm/MHz)	限制值 (dBm/MHz)
Mode 8	36	5180.0	-5.592	0.005	-5.587	11.00
	40	5200.0	1.889	0.005	1.894	11.00
	48	5240.0	1.617	0.005	1.622	11.00
	52	5260.0	1.792	0.005	1.797	11.00
	56	5280.0	1.459	0.005	1.464	11.00
	64	5320.0	-5.861	0.005	-5.856	11.00
	100	5500.0	-5.265	0.005	-5.260	11.00
	112	5560.0	2.523	0.005	2.528	11.00
	140	5700.0	-6.065	0.005	-6.060	11.00
Mode 11	36	5180.0	-5.722	0.020	-5.702	11.00
	40	5200.0	1.534	0.020	1.554	11.00
	48	5240.0	1.489	0.020	1.509	11.00
	52	5260.0	1.157	0.020	1.177	11.00
	56	5280.0	1.296	0.020	1.316	11.00
	64	5320.0	-6.221	0.020	-6.201	11.00
	100	5500.0	-5.663	0.020	-5.643	11.00
	112	5560.0	2.267	0.020	2.287	11.00
	140	5700.0	-6.222	0.020	-6.202	11.00
Mode 12	38	5190.0	-9.661	0.055	-9.606	11.00
	46	5230.0	-1.980	0.055	-1.925	11.00
	54	5270.0	-2.053	0.055	-1.998	11.00
	62	5310.0	-9.835	0.055	-9.780	11.00
	102	5510.0	-9.098	0.055	-9.043	11.00
	110	5550.0	-1.008	0.055	-0.953	11.00
	134	5670.0	-9.595	0.055	-9.540	11.00
Mode 13	42	5210.0	-12.612	0.085	-12.527	11.00
	58	5290.0	-12.629	0.085	-12.544	11.00
	106	5530.0	-11.633	0.085	-11.548	11.00
	122	5610.0	-11.378	0.085	-11.293	11.00
Mode 14	50	5250.0	-17.272	0.171	-17.101	11.00
	114	5570.0	-16.279	0.171	-16.108	11.00

Note: Power Density = measured result + 10 log (1/duty cycle) + Conversion ratio = measured result + duty factory.

Conversion ratio = 10*Log(500 k/100 k)

操作模式	: Mode 8 / Mode 11 / Mode 12 / Mode 13 / Mode 14 / Mode 15 / Mode 16 / Mode 17 / Mode 18
測試結果	: 合格

ANT-1						
操作模式	頻道 (CH)	頻率 (MHz)	量測值 (dBm/MHz)	Duty Factor (dB)	轉換值 (dBm/MHz)	限制值 (dBm/MHz)
Mode 15	36	5180.0	-5.704	0.013	-5.691	11.00
	40	5200.0	2.225	0.013	2.238	11.00
	48	5240.0	1.778	0.013	1.791	11.00
	52	5260.0	1.824	0.013	1.837	11.00
	56	5280.0	1.671	0.013	1.684	11.00
	64	5320.0	-5.595	0.013	-5.582	11.00
	100	5500.0	-4.859	0.013	-4.846	11.00
	112	5560.0	2.706	0.013	2.719	11.00
Mode 16	140	5700.0	-6.153	0.013	-6.140	11.00
	38	5190.0	-9.343	0.076	-9.267	11.00
	46	5230.0	-1.302	0.076	-1.226	11.00
	54	5270.0	-1.773	0.076	-1.697	11.00
	62	5310.0	-9.534	0.076	-9.458	11.00
	102	5510.0	-8.707	0.076	-8.631	11.00
	110	5550.0	-0.849	0.076	-0.773	11.00
Mode 17	134	5670.0	-9.729	0.076	-9.653	11.00
	42	5210.0	-12.562	0.102	-12.460	11.00
	58	5290.0	-12.386	0.102	-12.284	11.00
	106	5530.0	-11.453	0.102	-11.351	11.00
Mode 18	122	5610.0	-11.208	0.102	-11.106	11.00
	50	5250.0	-16.942	0.190	-16.752	11.00
	114	5570.0	-16.165	0.190	-15.975	11.00

Note: Power Density = measured result + 10 log (1/duty cycle) + Conversion ratio = measured result + duty factory.

Conversion ration = 10*Log(500 k/100 k)

操作模式	: Mode 8 / Mode 11 / Mode 12 / Mode 13 / Mode 15 / Mode 16 / Mode 17
測試結果	: 合格

ANT-1						
操作模式	頻道 (CH)	頻率 (MHz)	量測值 (dBm/100 kHz)	Duty Factor (dB)	轉換值 (dBm/500 kHz)	限制值 (dBm/500 kHz)
Mode 8	149	5745.0	-7.068	0.005	-0.074	30.00
	157	5785.0	-7.295	0.005	-0.301	30.00
	165	5825.0	-7.157	0.005	-0.163	30.00
Mode 11	149	5745.0	-7.534	0.020	-0.524	30.00
	157	5785.0	-7.561	0.020	-0.551	30.00
	165	5825.0	-7.670	0.020	-0.660	30.00
Mode 12	151	5755.0	-10.704	0.055	-3.659	30.00
	159	5795.0	-10.747	0.055	-3.702	30.00
Mode 13	155	5775.0	-13.734	0.085	-6.659	30.00
Mode 15	149	5745.0	-8.091	0.013	-1.088	30.00
	157	5785.0	-8.104	0.013	-1.101	30.00
	165	5825.0	-8.187	0.013	-1.184	30.00
Mode 16	151	5755.0	-11.165	0.076	-4.099	30.00
	159	5795.0	-10.943	0.076	-3.877	30.00
Mode 17	155	5775.0	-14.012	0.102	-6.920	30.00

Note: Power Density = measured result + 10 log (1/duty cycle) + Conversion ratio = measured result + duty factory.

Conversion ratio = 10*Log(500 k/100 k)

操作模式	: Mode 8 / Mode 11 / Mode 12 / Mode 13 / Mode 14 / Mode 15 / Mode 16 / Mode 17 / Mode 18
測試結果	: 合格

ANT-0+1				
操作模式	頻道 (CH)	頻率 (MHz)	轉換值(dBm/MHz)	限制值 (dBm/MHz)
Mode 8	36	5180.0	-2.098	11.00
	40	5200.0	5.356	11.00
	48	5240.0	5.092	11.00
	52	5260.0	5.039	11.00
	56	5280.0	4.832	11.00
	64	5320.0	-2.569	11.00
	100	5500.0	-1.945	11.00
	112	5560.0	5.938	11.00
	140	5700.0	-2.494	11.00
Mode 11	36	5180.0	-2.393	11.00
	40	5200.0	5.040	11.00
	48	5240.0	4.897	11.00
	52	5260.0	4.543	11.00
	56	5280.0	4.639	11.00
	64	5320.0	-2.869	11.00
	100	5500.0	-2.285	11.00
	112	5560.0	5.602	11.00
	140	5700.0	-2.819	11.00
Mode 12	38	5190.0	-5.839	11.00
	46	5230.0	1.609	11.00
	54	5270.0	1.301	11.00
	62	5310.0	-6.093	11.00
	102	5510.0	-5.213	11.00
	110	5550.0	2.348	11.00
	134	5670.0	-5.845	11.00
Mode 13	42	5210.0	-8.862	11.00
	58	5290.0	-9.043	11.00
	106	5530.0	-8.266	11.00
	122	5610.0	-8.157	11.00
Mode 14	50	5250.0	-13.626	11.00
	114	5570.0	-12.889	11.00

Note: Power Density = measured result + 10 log (1/duty cycle) + Conversion ratio = measured result + duty factory.

Conversion ratio = 10*Log(500 k/100 k)

操作模式	: Mode 8 / Mode 11 / Mode 12 / Mode 13 / Mode 14 / Mode 15 / Mode 16 / Mode 17 / Mode 18
測試結果	: 合格

ANT-0+1				
操作模式	頻道 (CH)	頻率 (MHz)	轉換值(dBm/MHz)	限制值 (dBm/MHz)
Mode 15	36	5180.0	-2.202	11.00
	40	5200.0	5.587	11.00
	48	5240.0	5.157	11.00
	52	5260.0	4.991	11.00
	56	5280.0	5.027	11.00
	64	5320.0	-2.461	11.00
	100	5500.0	-1.739	11.00
	112	5560.0	6.045	11.00
	140	5700.0	-2.718	11.00
Mode 16	38	5190.0	-5.593	11.00
	46	5230.0	2.175	11.00
	54	5270.0	1.674	11.00
	62	5310.0	-5.988	11.00
	102	5510.0	-5.167	11.00
	110	5550.0	2.528	11.00
	134	5670.0	-5.693	11.00
Mode 17	42	5210.0	-8.727	11.00
	58	5290.0	-8.490	11.00
	106	5530.0	-8.118	11.00
	122	5610.0	-7.948	11.00
Mode 18	50	5250.0	-13.168	11.00
	114	5570.0	-12.753	11.00

Note: Power Density = measured result + 10 log (1/duty cycle) + Conversion ratio = measured result + duty factory.

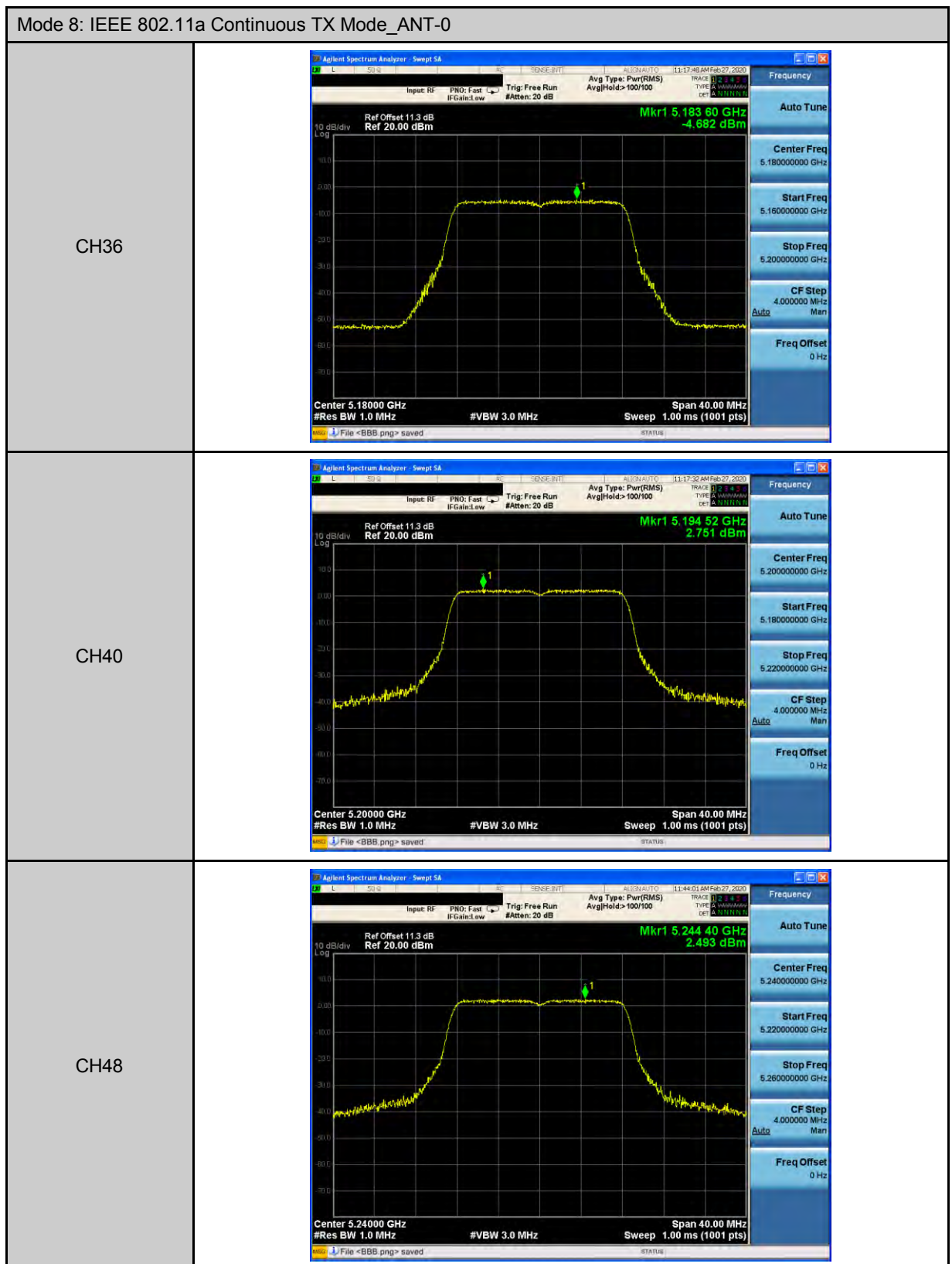
Conversion ration = 10*Log(500 k/100 k)

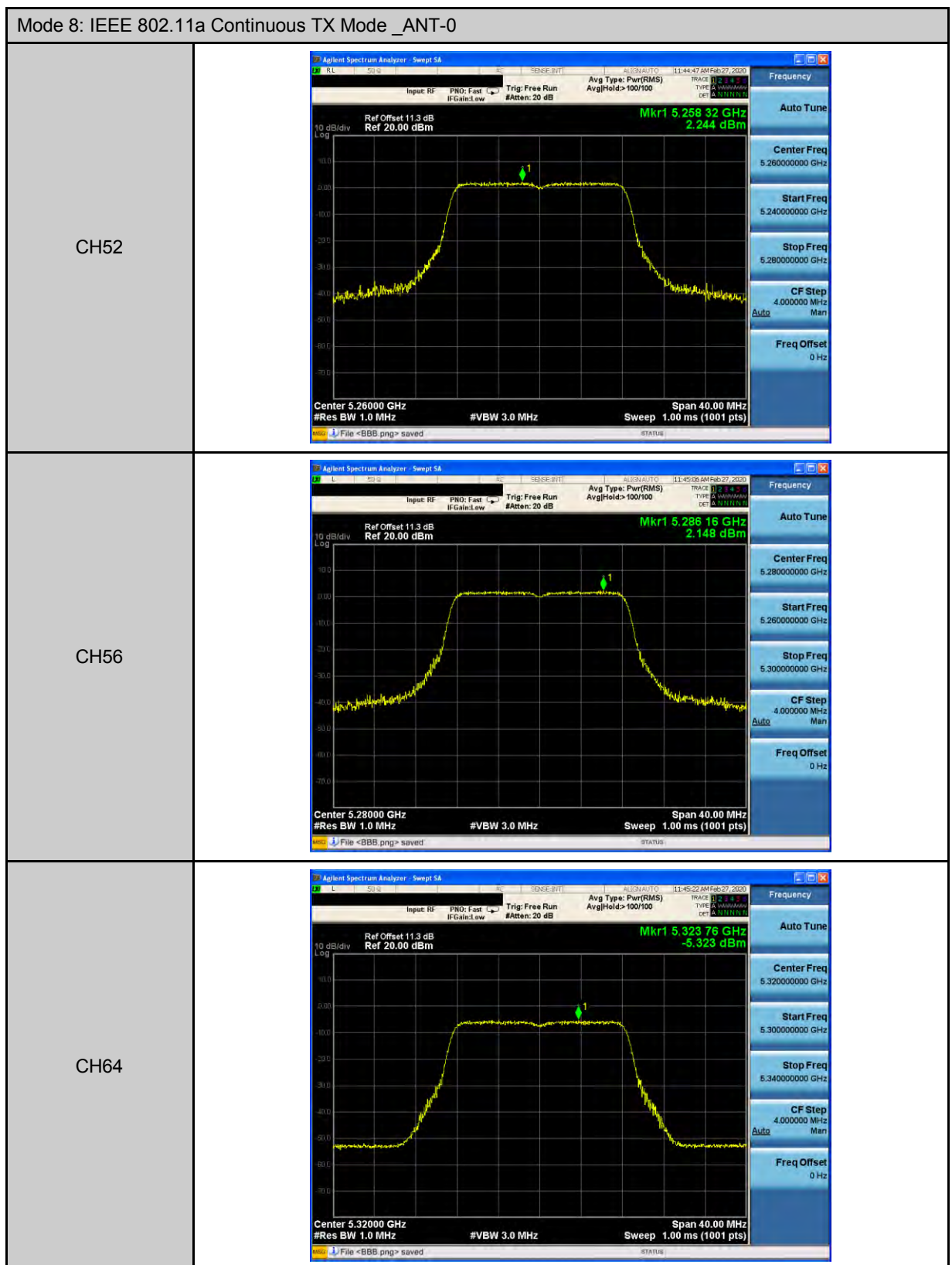
操作模式	: Mode 8 / Mode 11 / Mode 12 / Mode 13 / Mode 15 / Mode 16 / Mode 17
測試結果	: 合格

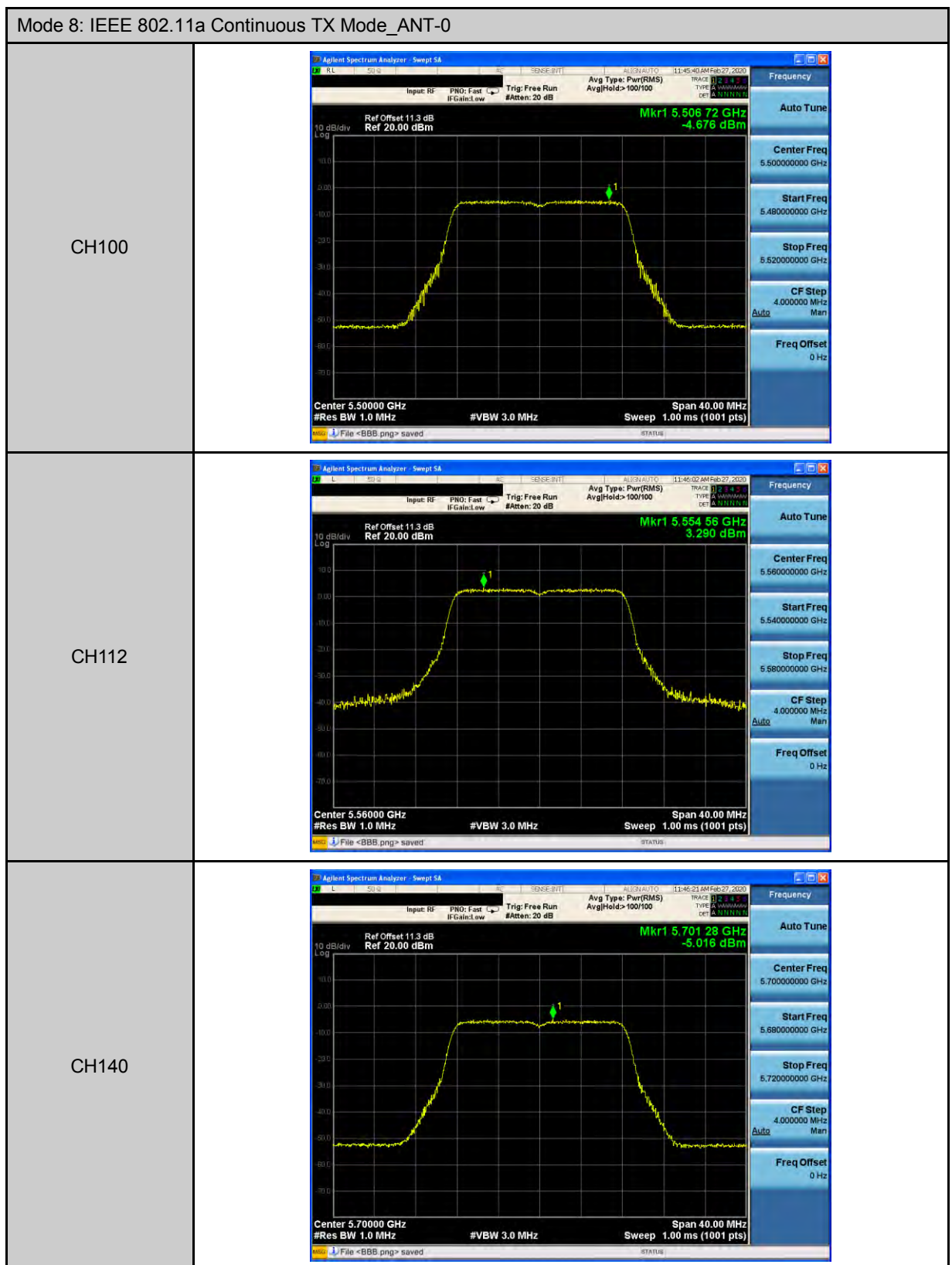
ANT-0+1				
操作模式	頻道 (CH)	頻率 (MHz)	轉換值(dBm/500 kHz)	限制值 (dBm/500 kHz)
Mode 8	149	5745.0	3.389	30.00
	157	5785.0	3.124	30.00
	165	5825.0	3.358	30.00
Mode 11	149	5745.0	3.157	30.00
	157	5785.0	3.211	30.00
	165	5825.0	2.872	30.00
Mode 12	151	5755.0	-0.215	30.00
	159	5795.0	-0.353	30.00
Mode 13	155	5775.0	-3.455	30.00
Mode 15	149	5745.0	2.183	30.00
	157	5785.0	2.400	30.00
	165	5825.0	2.203	30.00
Mode 16	151	5755.0	-0.913	30.00
	159	5795.0	-0.695	30.00
Mode 17	155	5775.0	-3.930	30.00

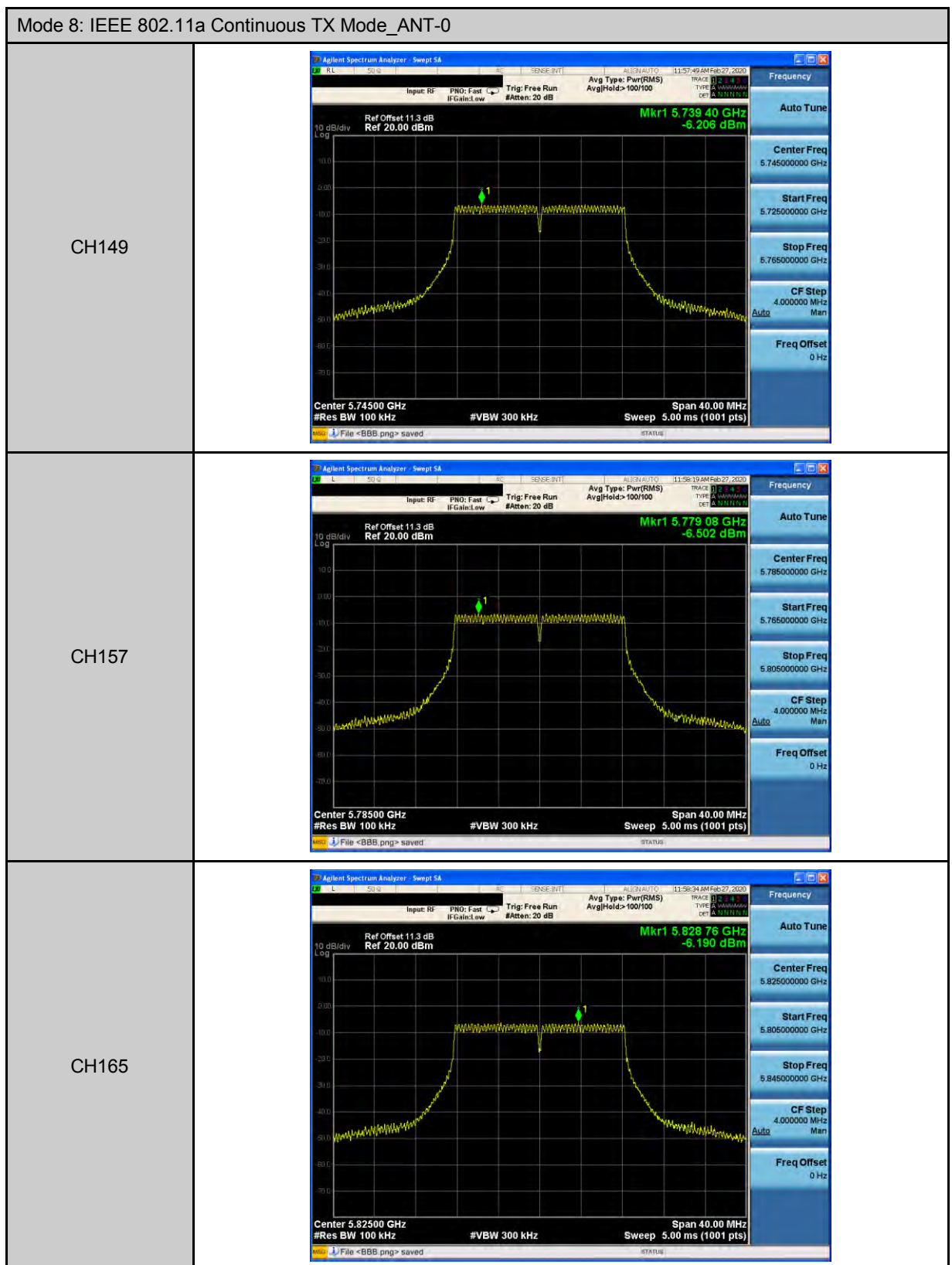
Note: Power Density = measured result + 10 log (1/duty cycle) + Conversion ratio = measured result + duty factory.

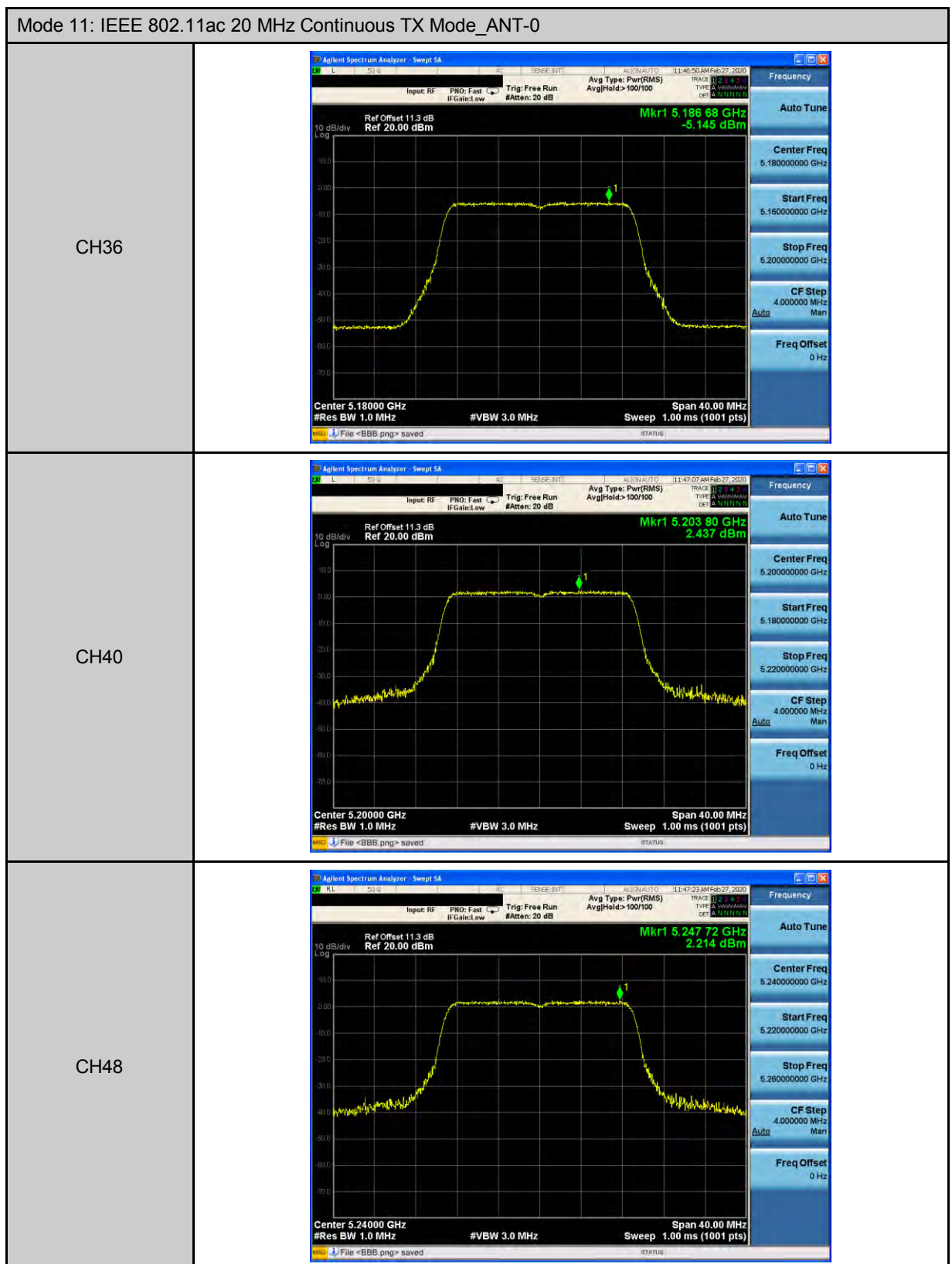
Conversion ratio = 10*Log(500 k/100 k)

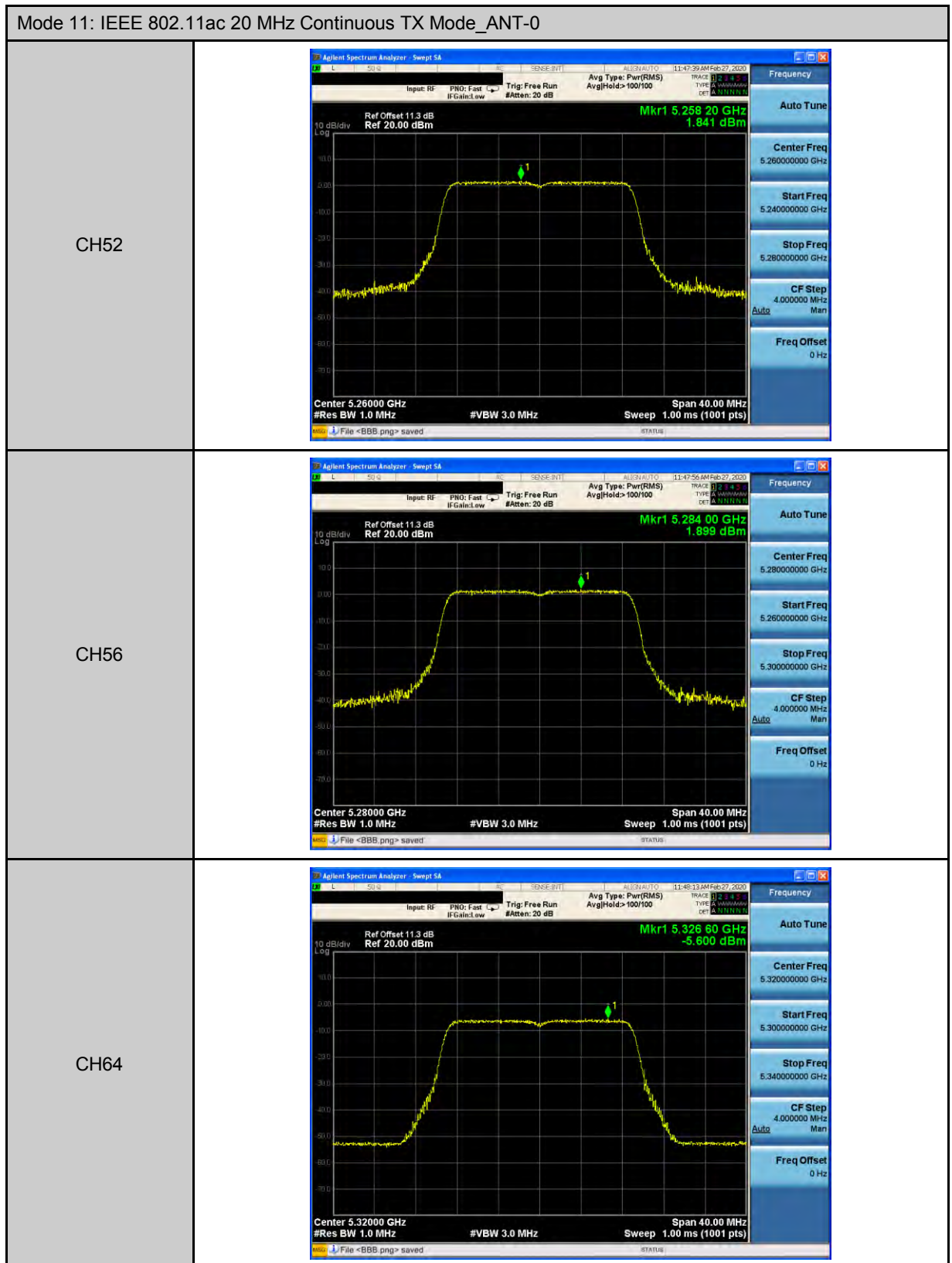




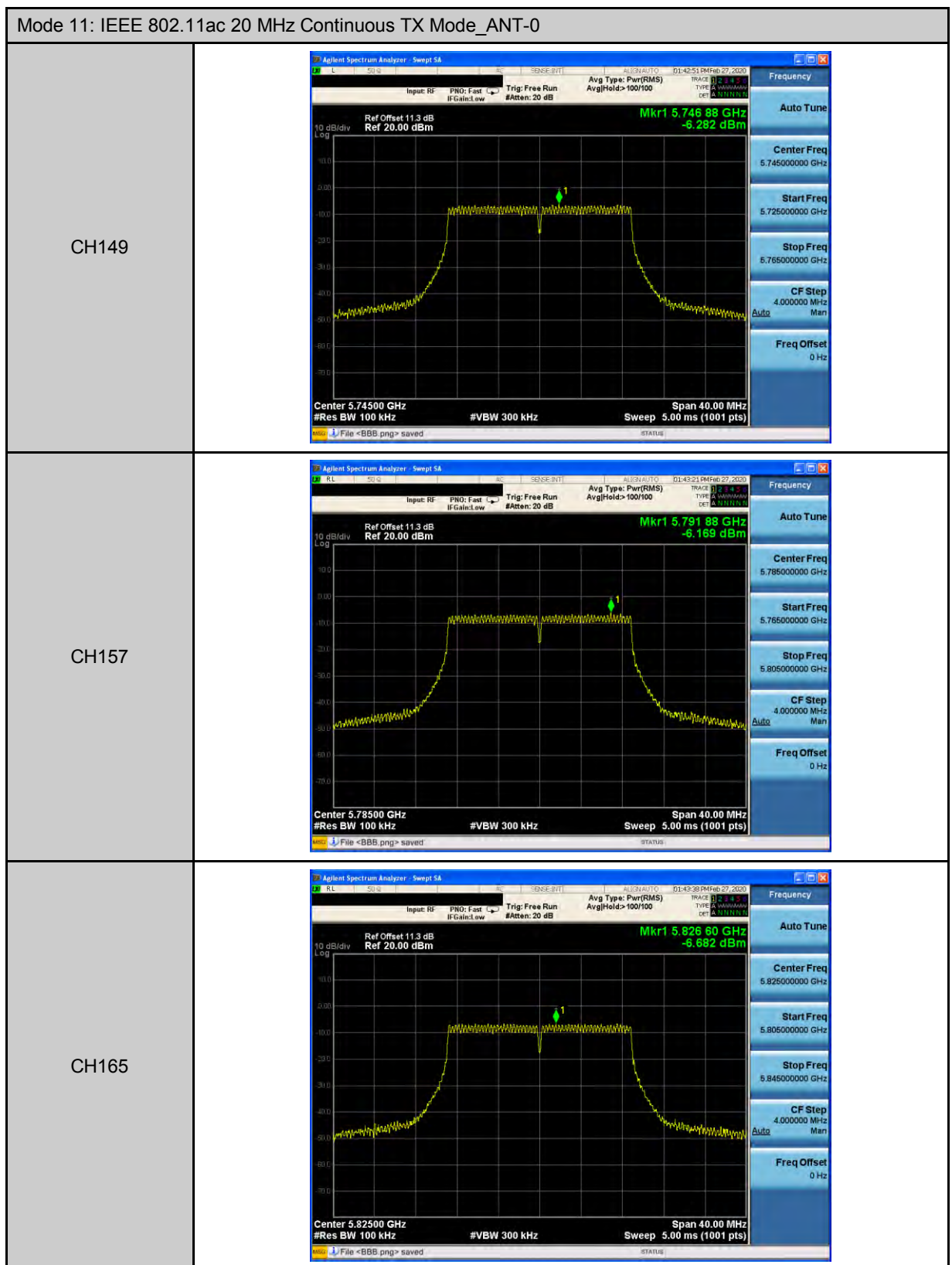


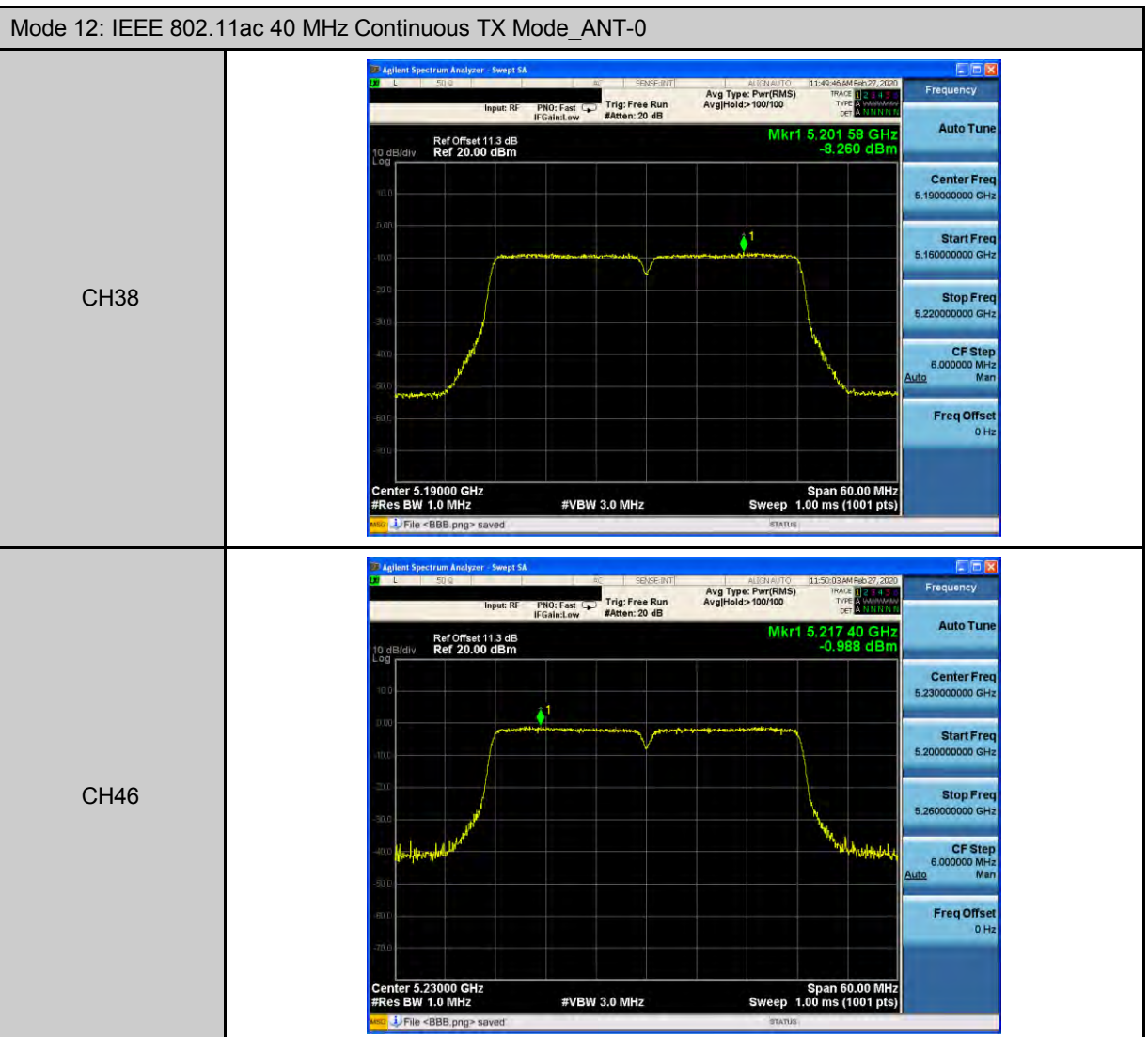


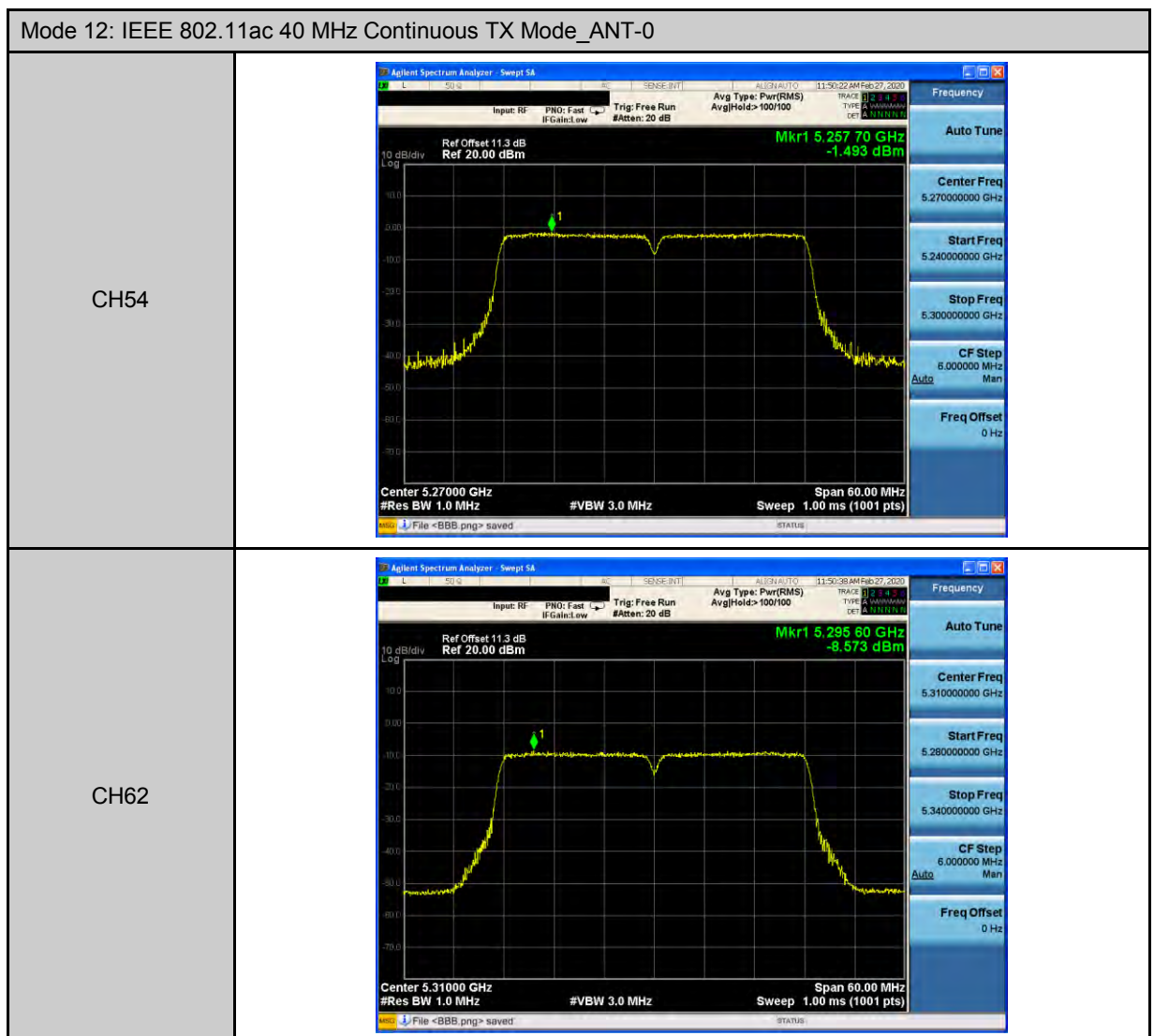


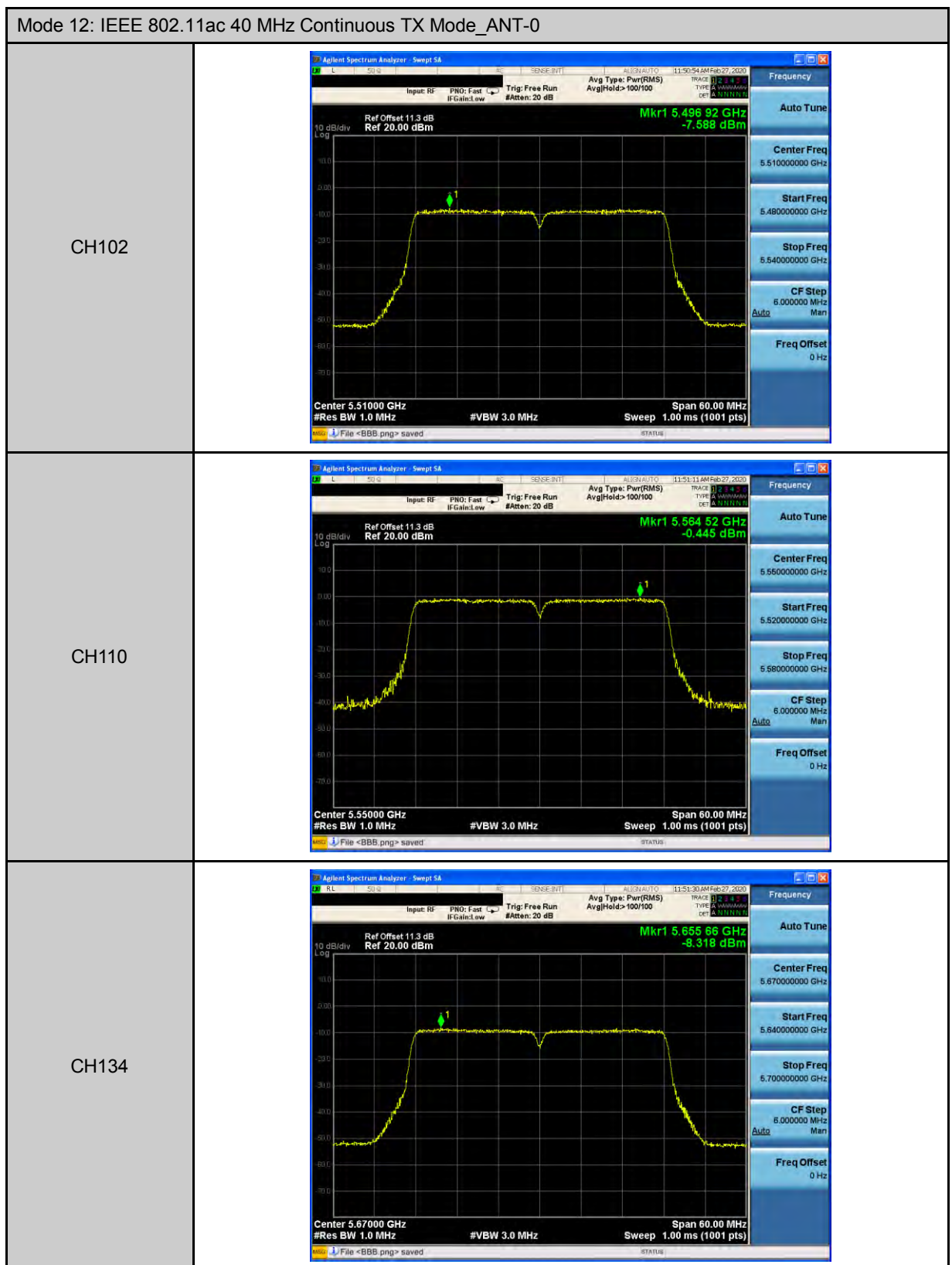


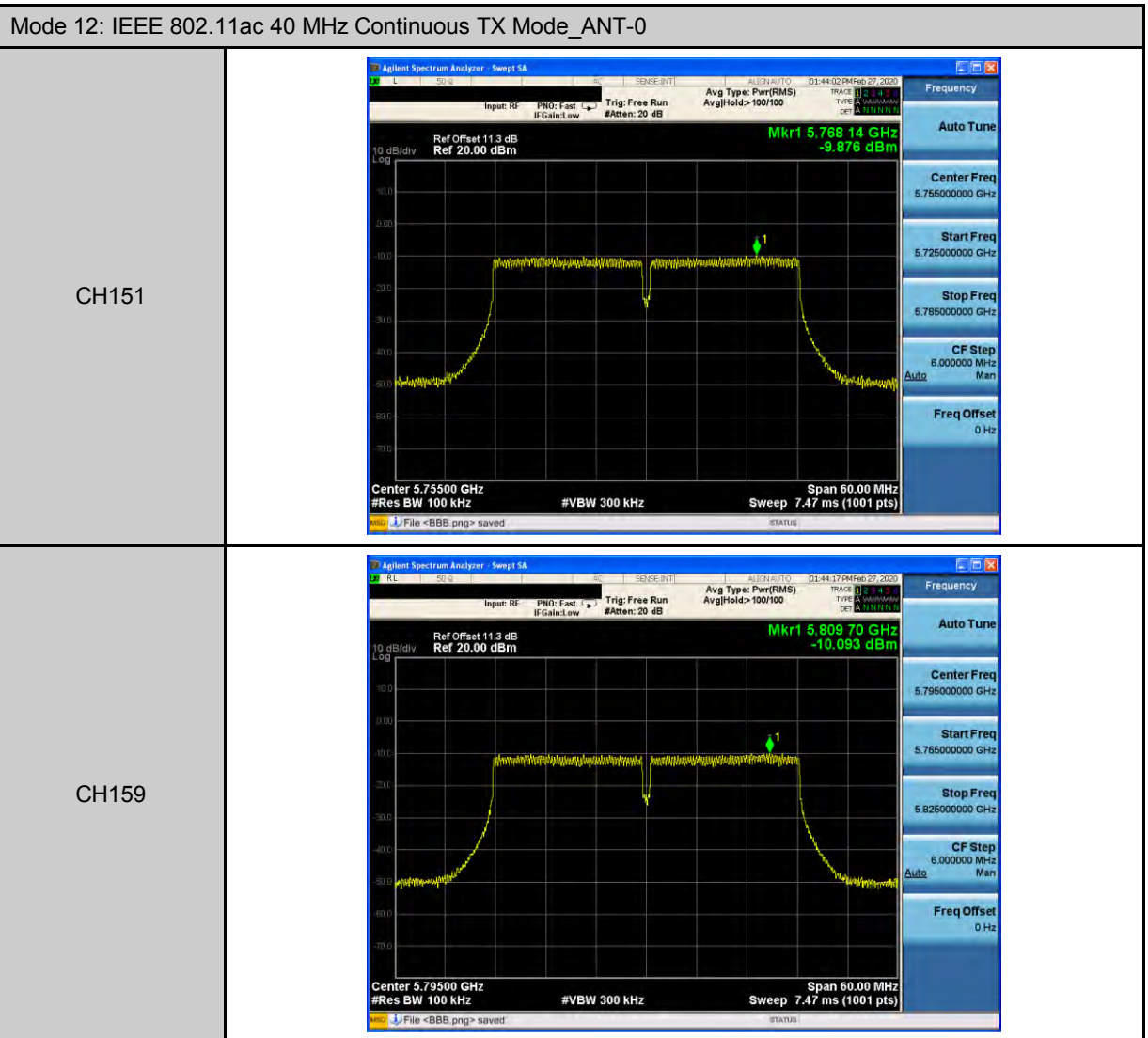
Mode 11: IEEE 802.11ac 20 MHz Continuous TX Mode_ANT-0	
CH100	
CH112	
CH140	

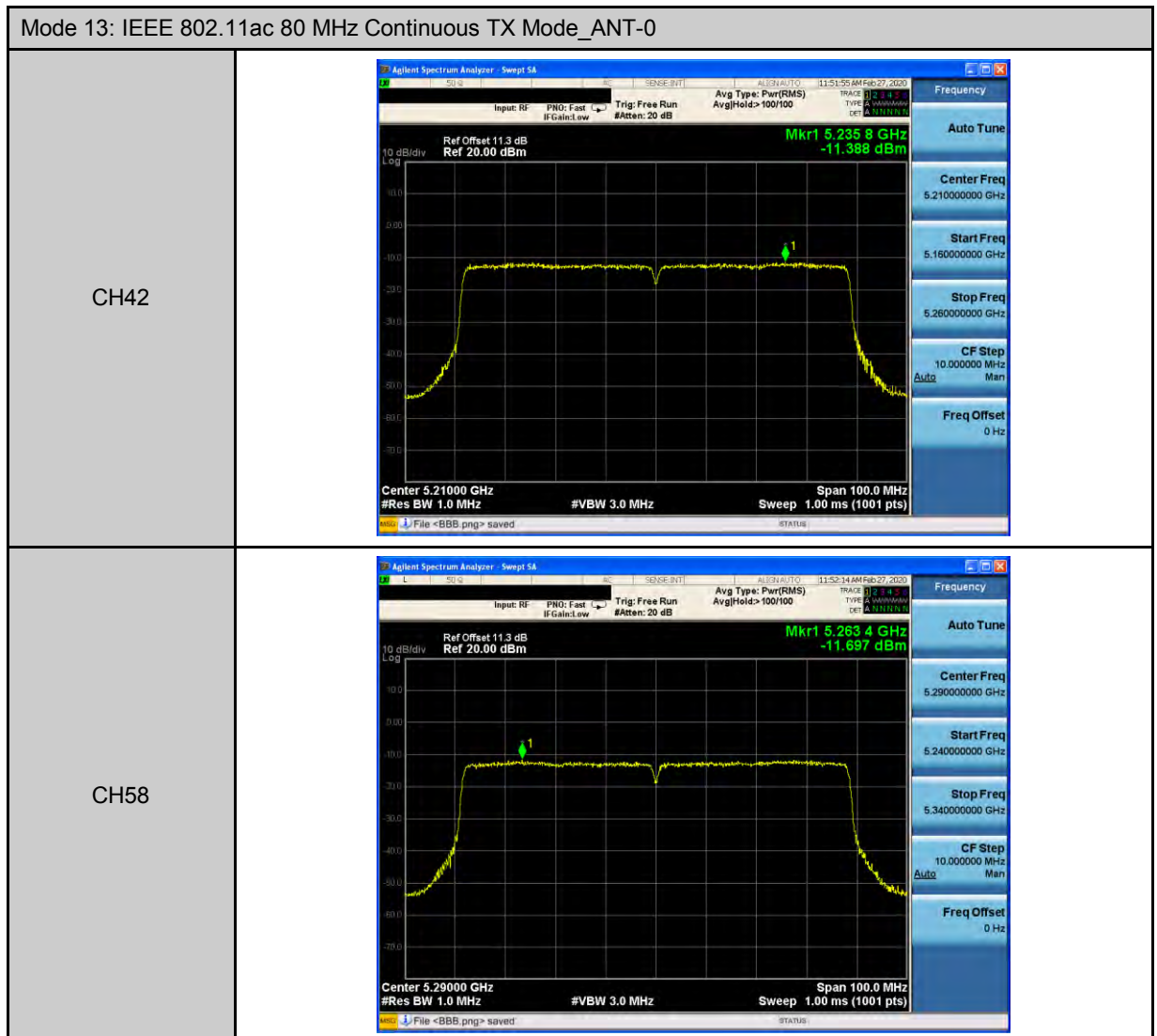




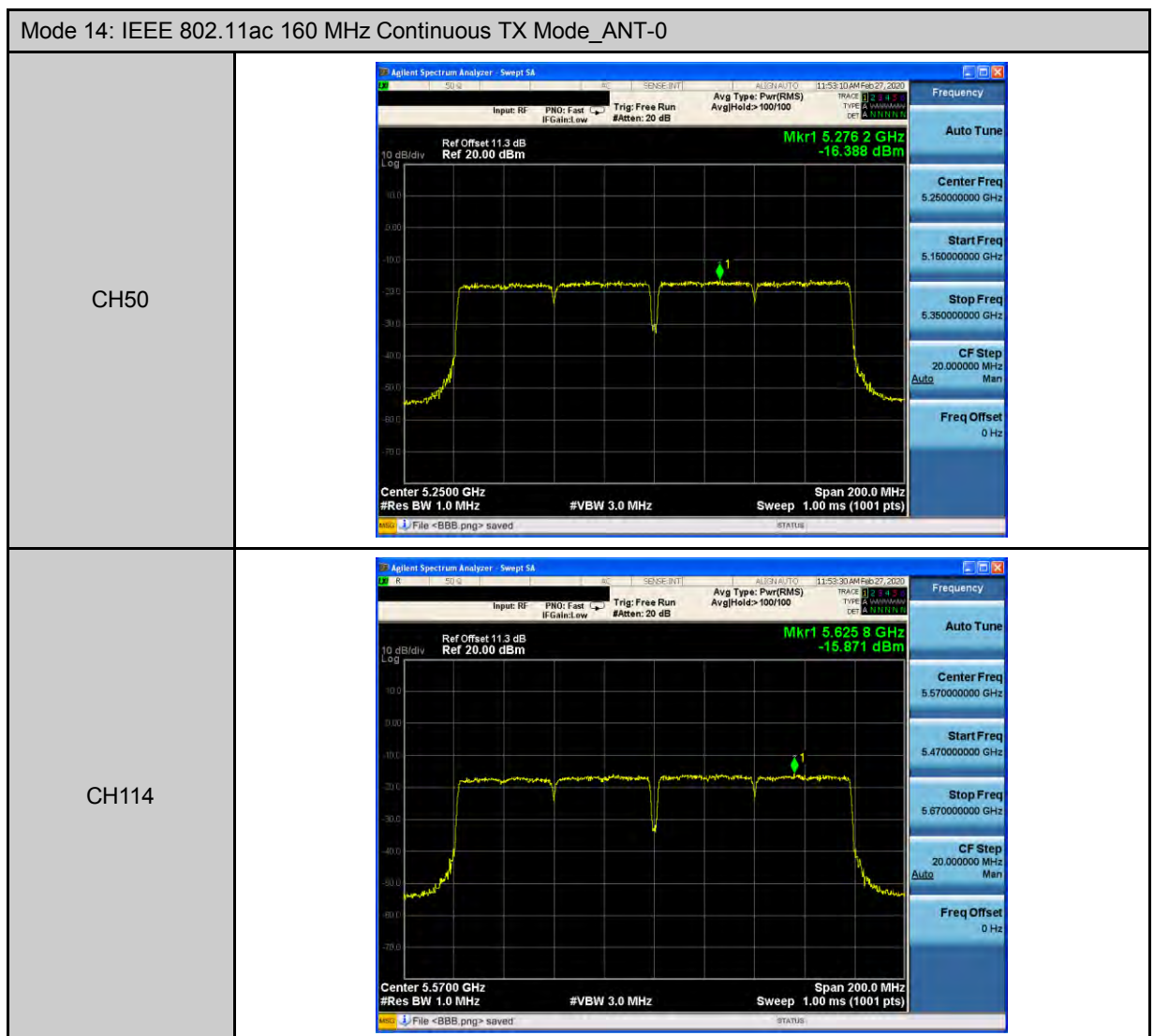


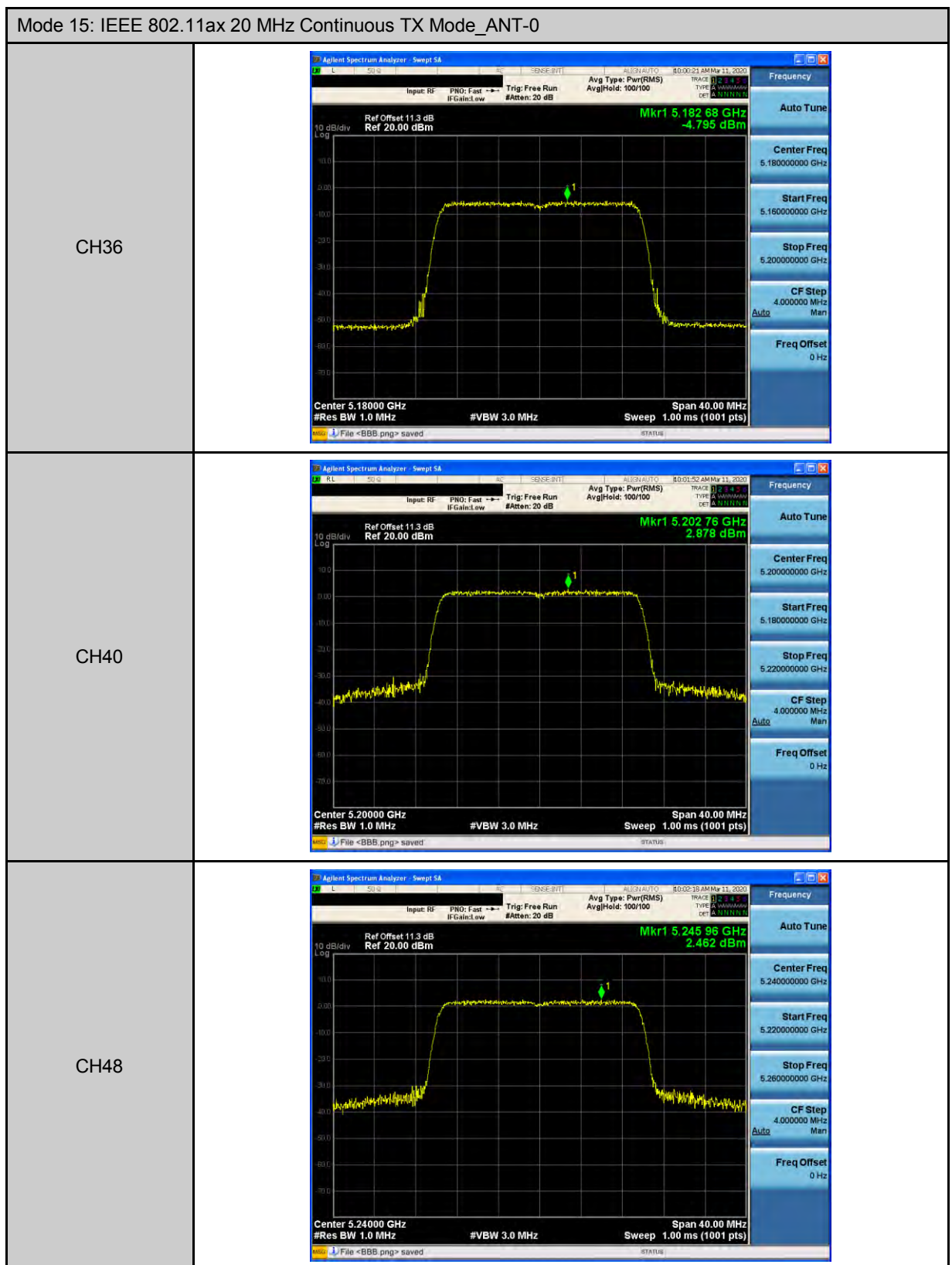


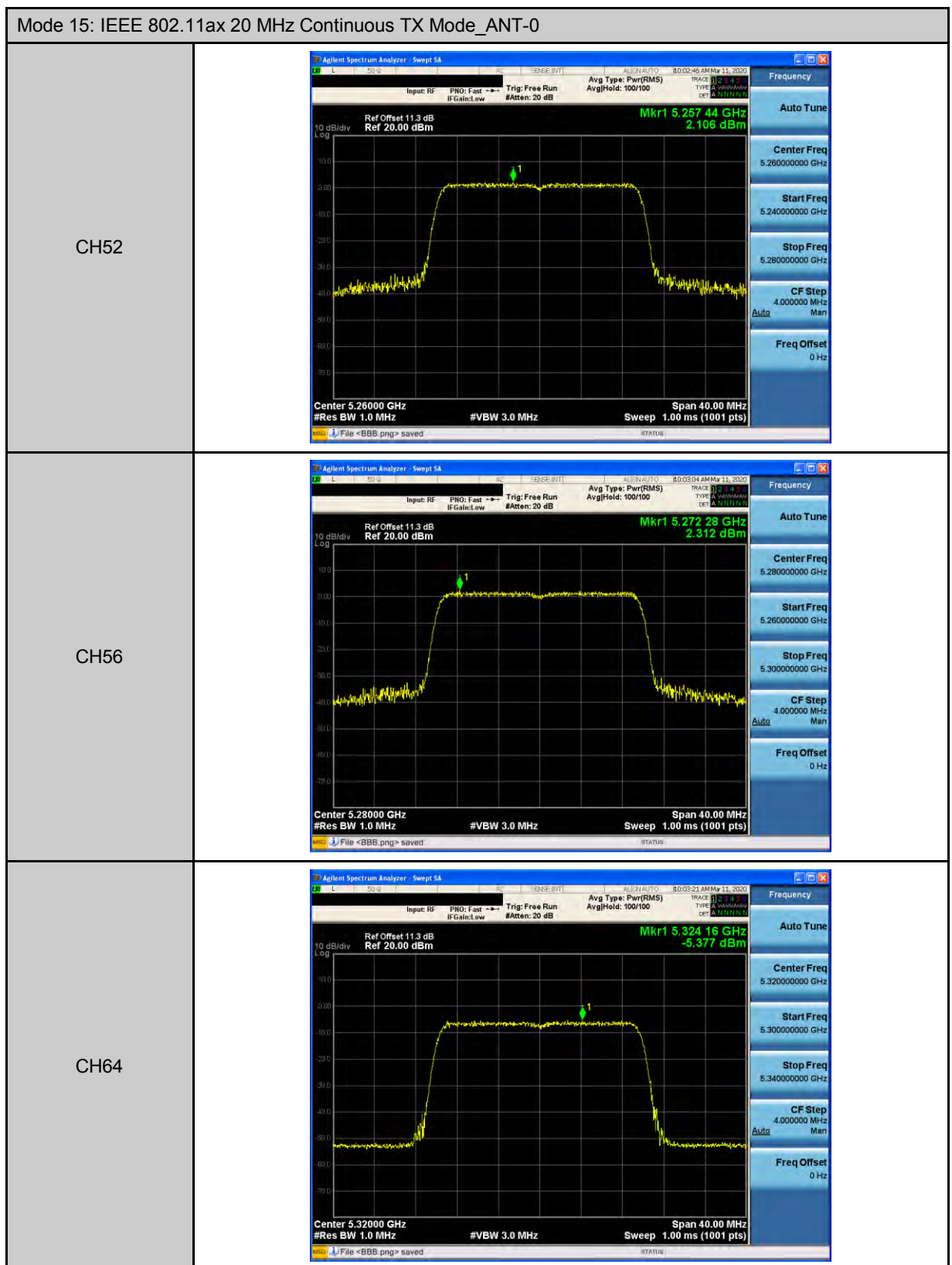


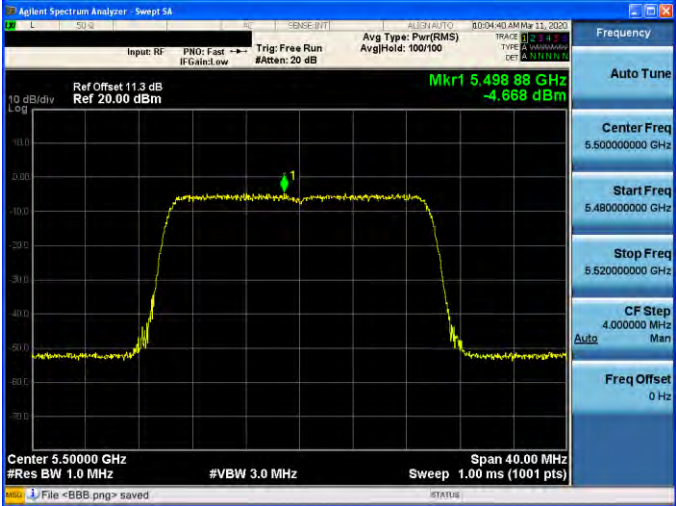
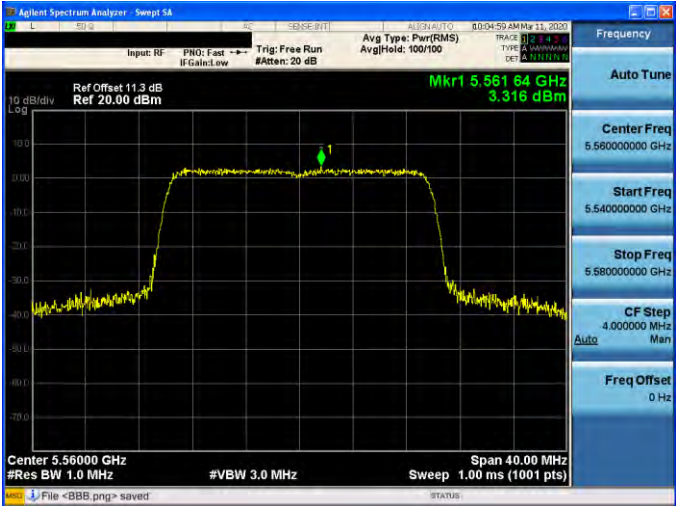
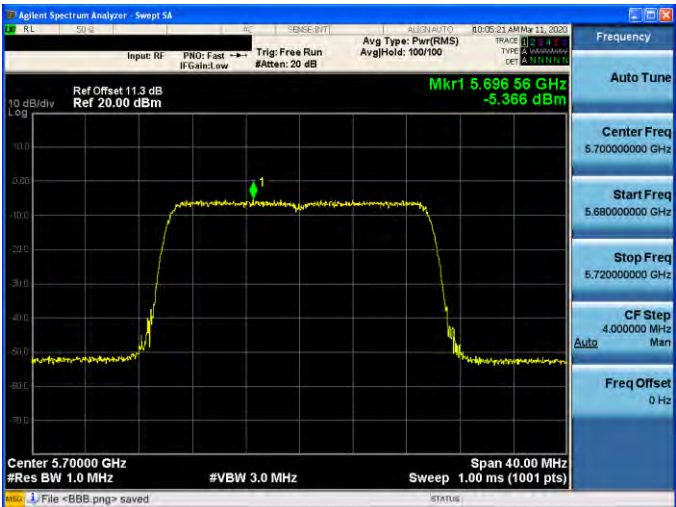


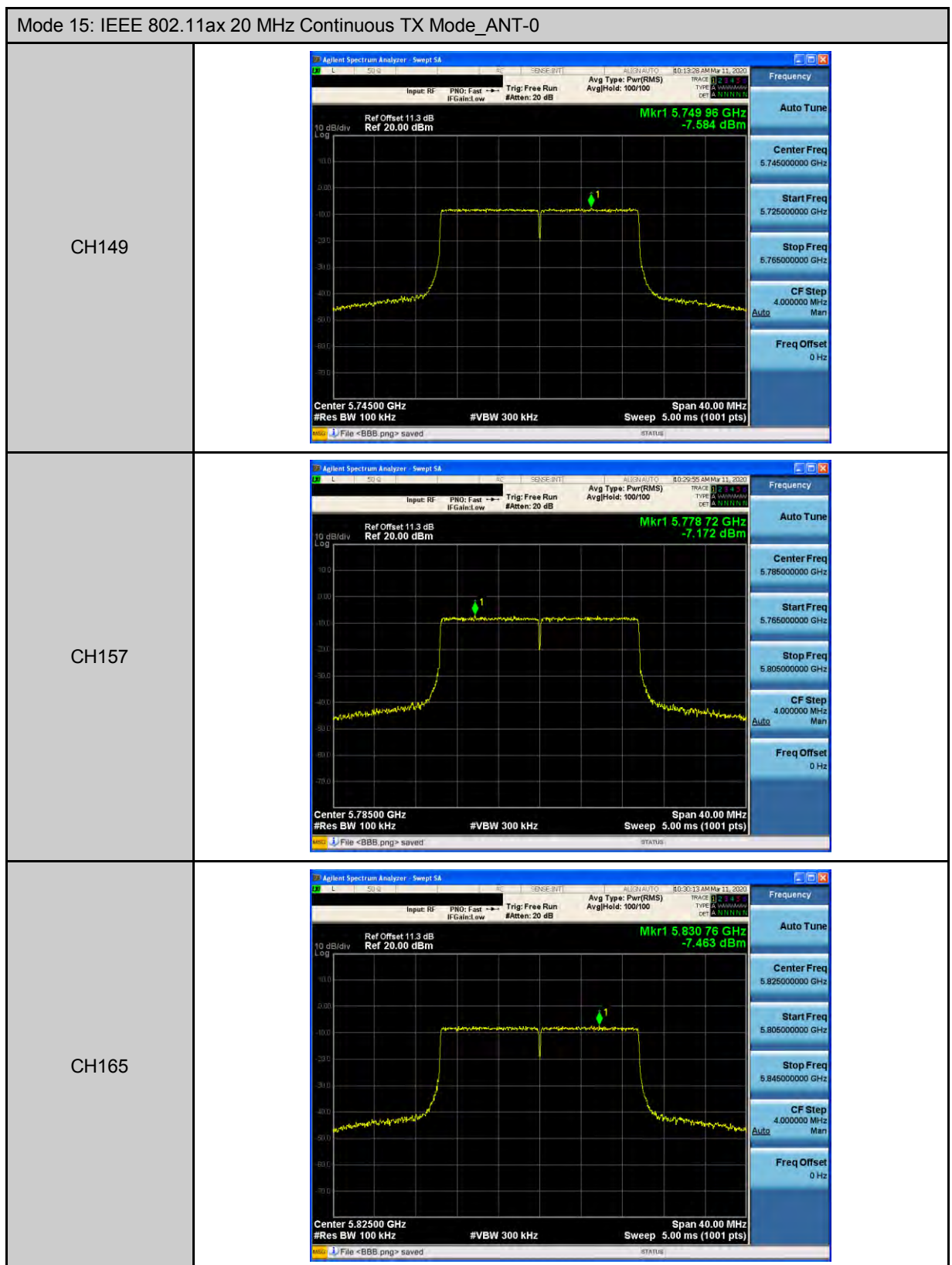
Mode 13: IEEE 802.11ac 80 MHz Continuous TX Mode_ANT-0	
CH106	Agilent Spectrum Analyzer - Swept SA Input: RF PNO: Fast IF Gain: Low Trig: Free Run #Atten: 20 dB Avg Type: Pwr(RMS) Avg Hold: 100/100 Ref Offset: 11.3 dB Ref: 20.00 dBm Mkr1 5.504 3 GHz -11.105 dBm Center 5.53000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 100.0 MHz Sweep 1.00 ms (1001 pts) File <BBB.png> saved
CH122	Agilent Spectrum Analyzer - Swept SA Input: RF PNO: Fast IF Gain: Low Trig: Free Run #Atten: 20 dB Avg Type: Pwr(RMS) Avg Hold: 100/100 Ref Offset: 11.3 dB Ref: 20.00 dBm Mkr1 5.635 9 GHz -11.131 dBm Center 5.61000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 100.0 MHz Sweep 1.00 ms (1001 pts) File <BBB.png> saved
CH155	Agilent Spectrum Analyzer - Swept SA Input: RF PNO: Fast IF Gain: Low Trig: Free Run #Atten: 20 dB Avg Type: Pwr(RMS) Avg Hold: 100/100 Ref Offset: 11.3 dB Ref: 20.00 dBm Mkr1 5.801 2 GHz -13.355 dBm Center 5.77500 GHz #Res BW 100 kHz #VBW 300 kHz Span 100.0 MHz Sweep 12.4 ms (1001 pts) File <BBB.png> saved

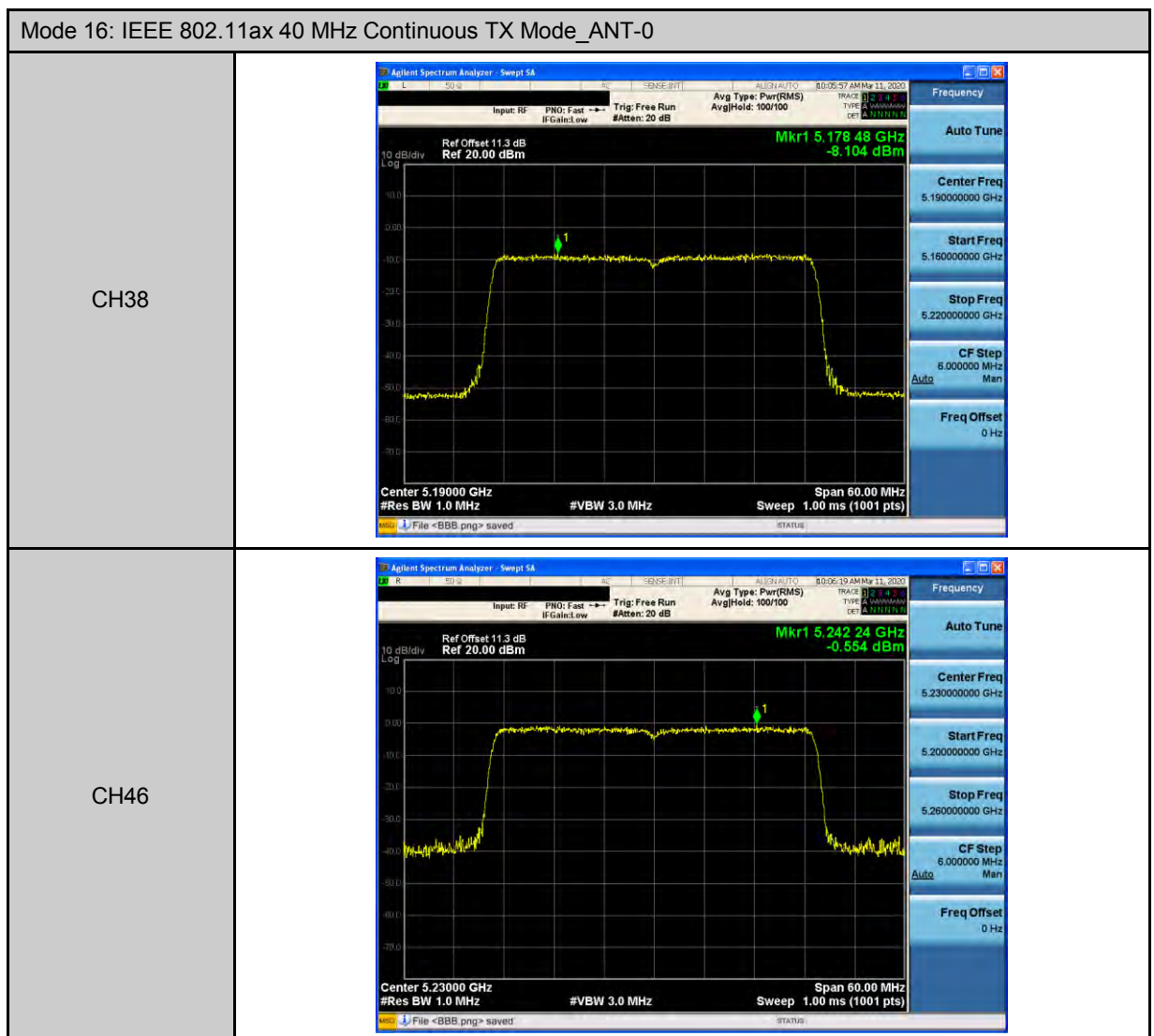


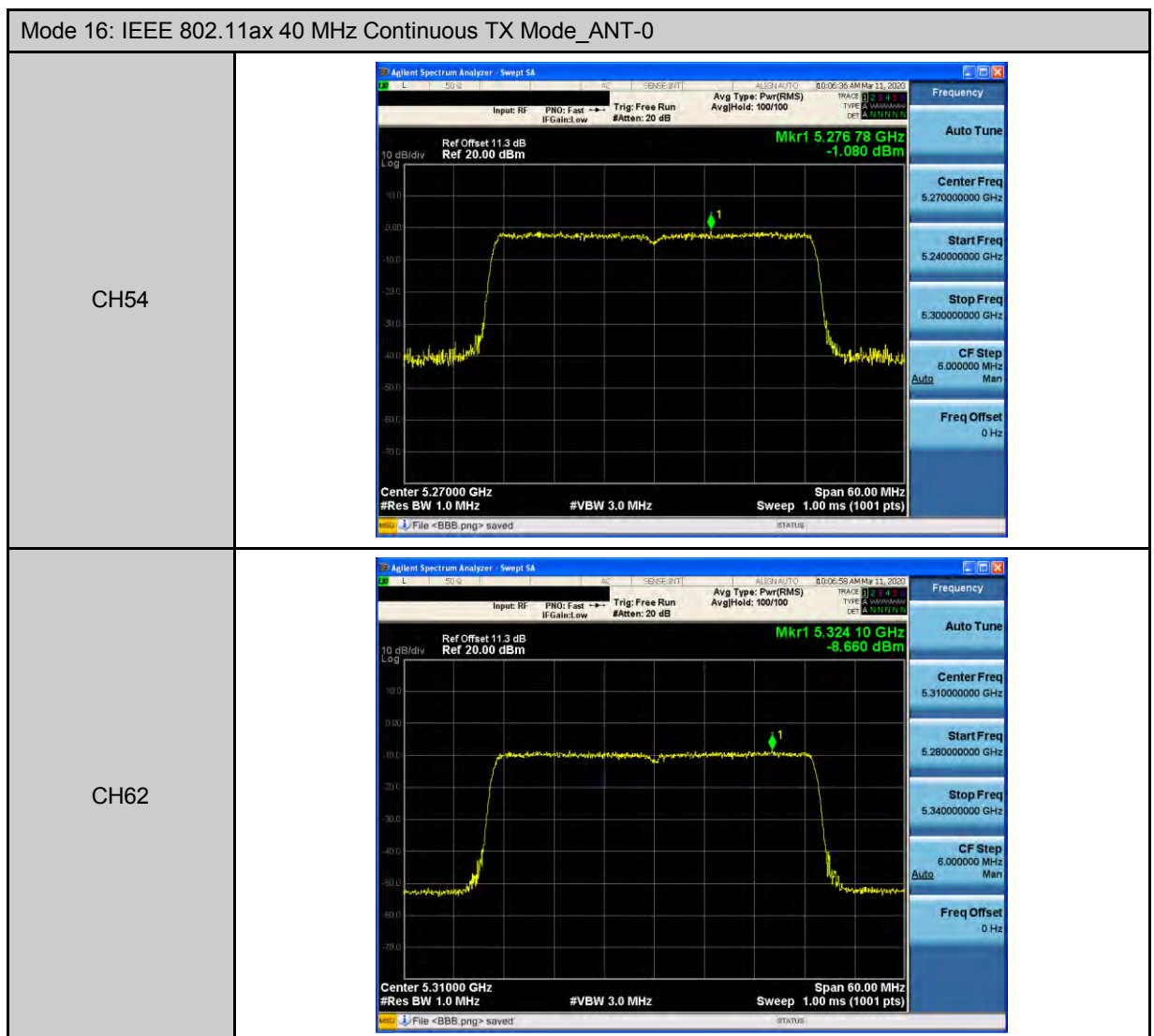


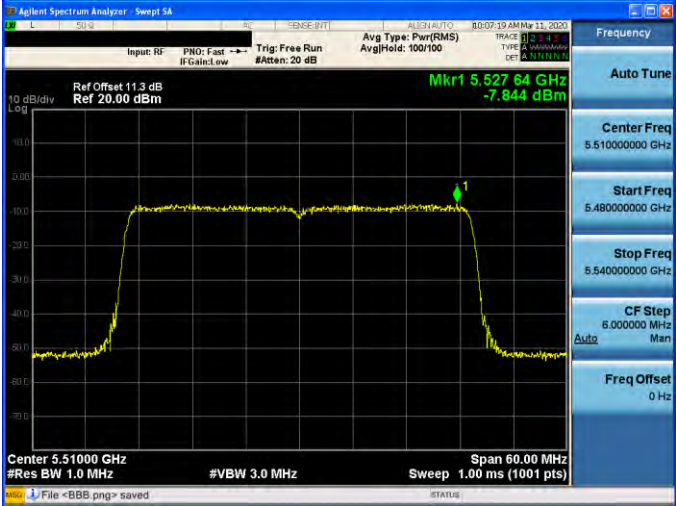
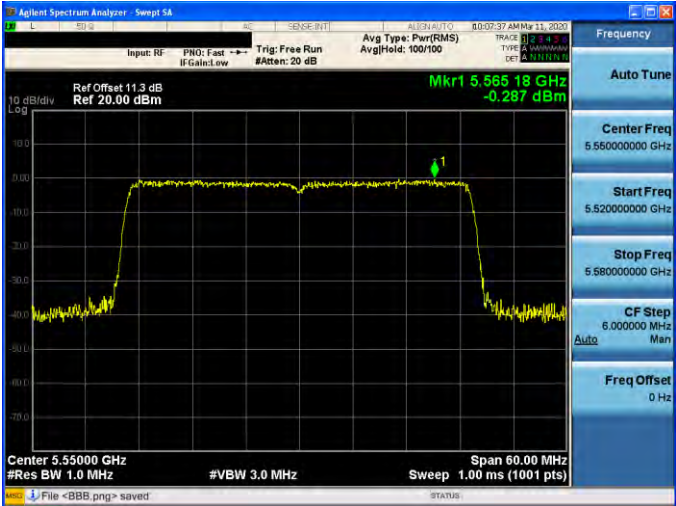
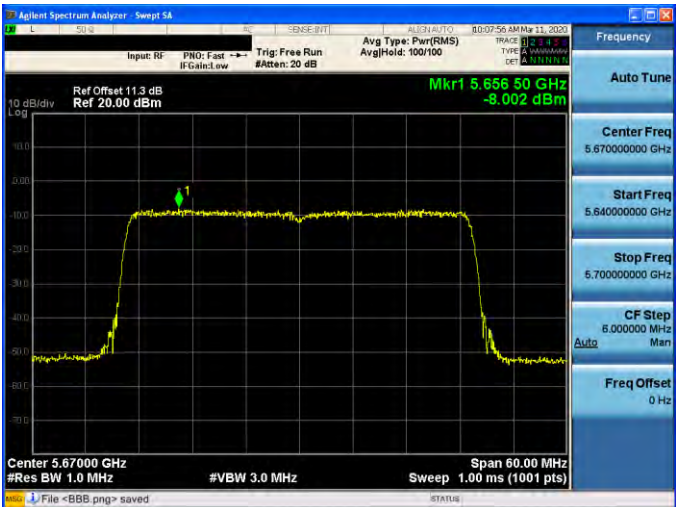


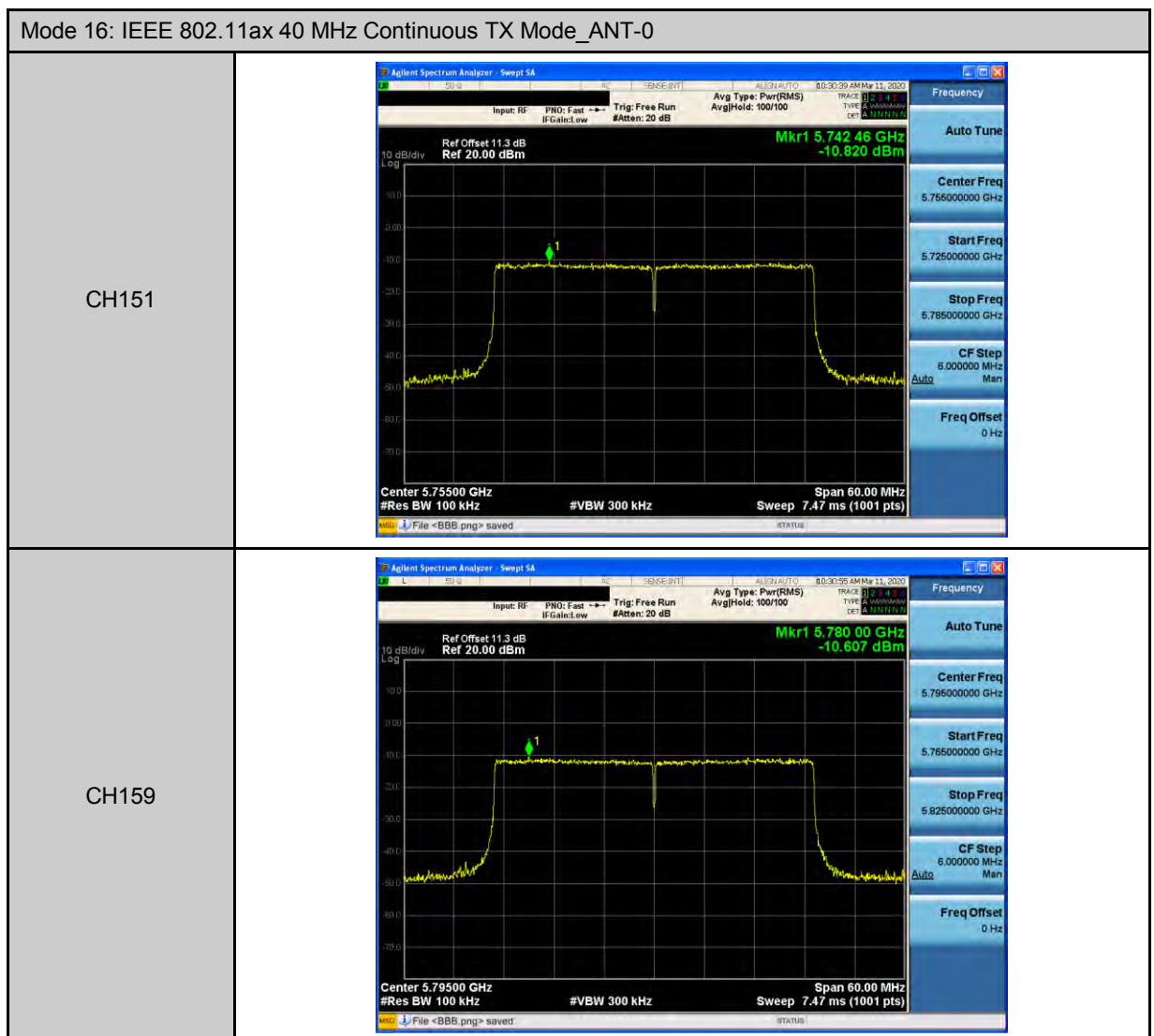
Mode 15: IEEE 802.11ax 20 MHz Continuous TX Mode_ANT-0	
CH100	 Agilent Spectrum Analyzer - Swept SA Input: RF PNO: Fast Trig: Free Run Avg Type: Par(SMS) Avg Hold: 100/100 Ref Offset: 11.3 dB Ref: 20.00 dBm Mkr1 5.498 89 GHz -4.688 dBm Center 5.50000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 40.00 MHz Sweep 1.00 ms (1001 pts) File <BBB.png> saved
CH112	 Agilent Spectrum Analyzer - Swept SA Input: RF PNO: Fast Trig: Free Run Avg Type: Par(SMS) Avg Hold: 100/100 Ref Offset: 11.3 dB Ref: 20.00 dBm Mkr1 5.561 64 GHz 3.316 dBm Center 5.56000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 40.00 MHz Sweep 1.00 ms (1001 pts) File <BBB.png> saved
CH140	 Agilent Spectrum Analyzer - Swept SA Input: RF PNO: Fast Trig: Free Run Avg Type: Par(SMS) Avg Hold: 100/100 Ref Offset: 11.3 dB Ref: 20.00 dBm Mkr1 5.696 56 GHz -5.366 dBm Center 5.70000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 40.00 MHz Sweep 1.00 ms (1001 pts) File <BBB.png> saved

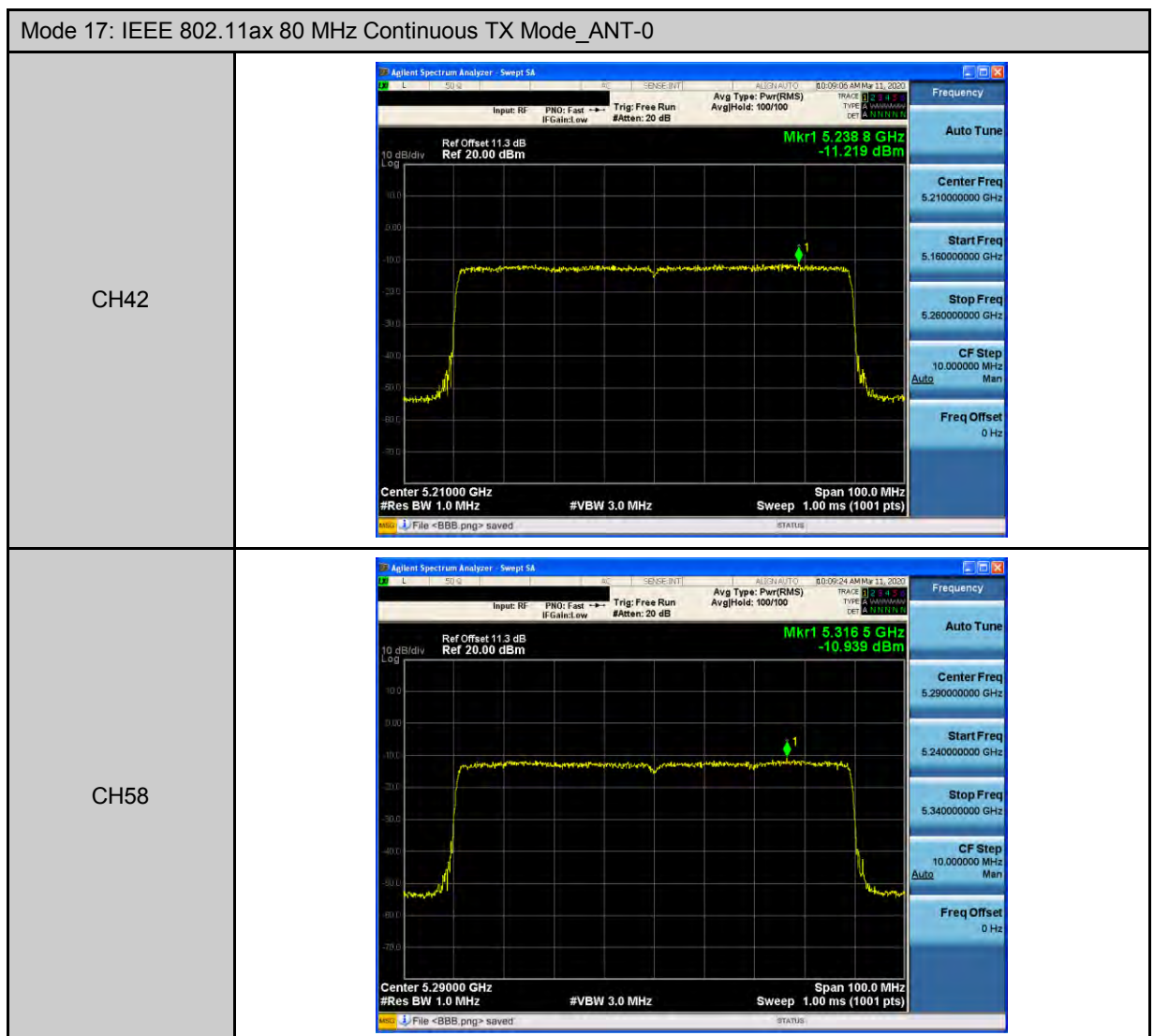




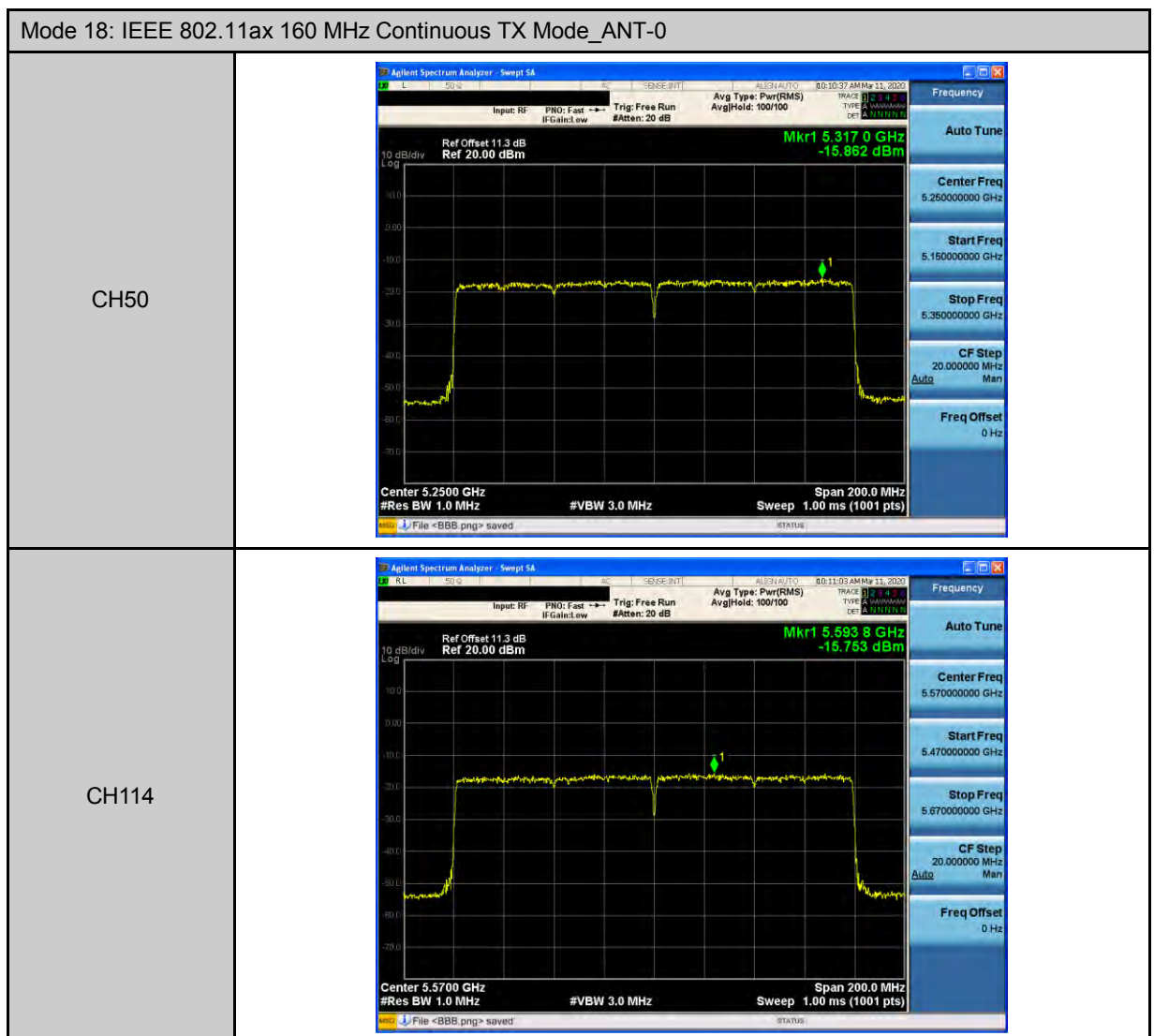


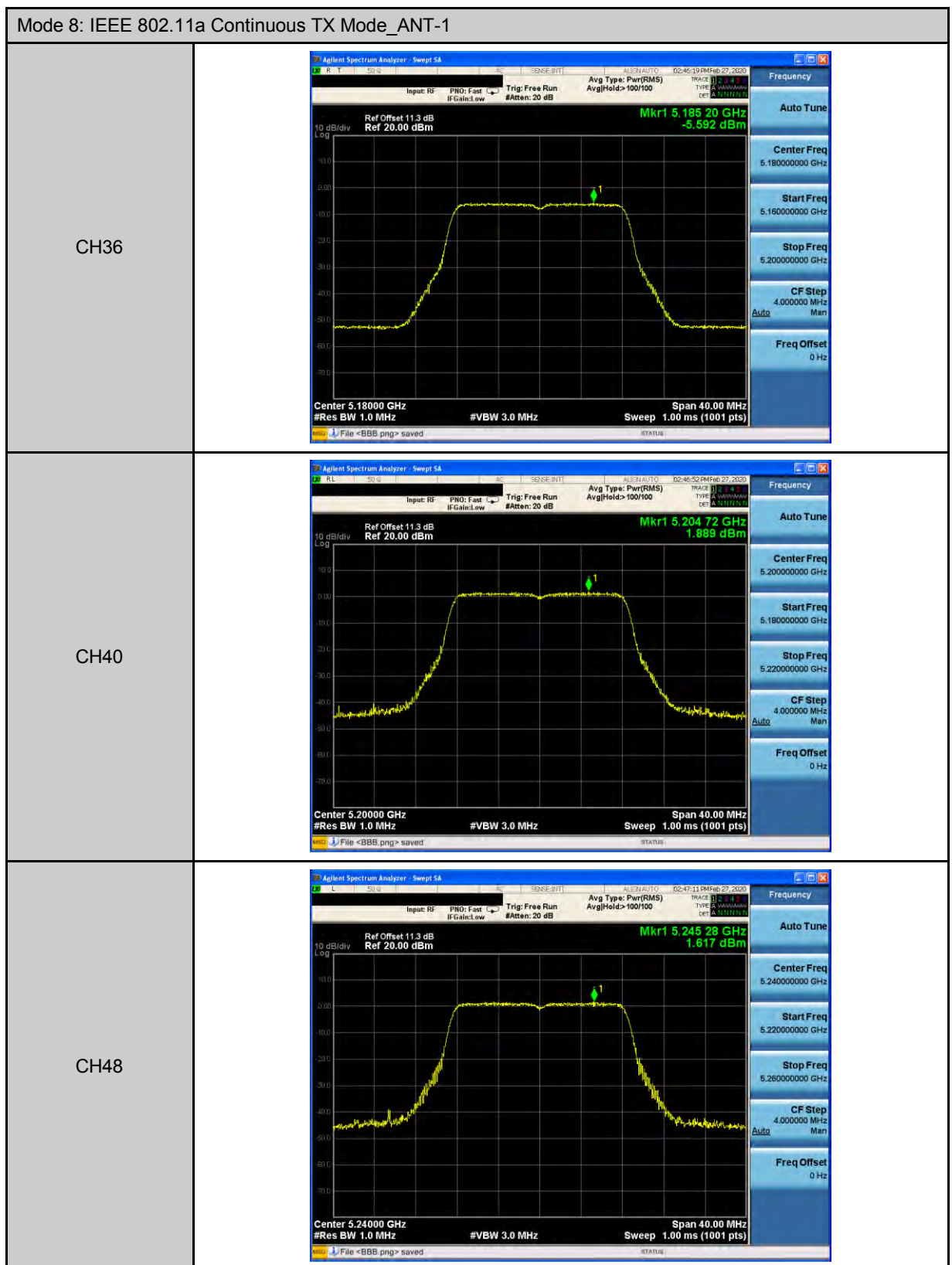
Mode 16: IEEE 802.11ax 40 MHz Continuous TX Mode_ANT-0	
CH102	 Agilent Spectrum Analyzer - Swept SA Input: RF PNO: Fast Trig: Free Run Avg Type: Pwr(SMS) Avg Hold: 100/100 Ref Offset: 11.3 dB Ref: 20.00 dBm Mkr1 5.52764 GHz -7.844 dBm Center 5.51000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 60.00 MHz Sweep 1.00 ms (1001 pts) File <BBB.png> saved
CH110	 Agilent Spectrum Analyzer - Swept SA Input: RF PNO: Fast Trig: Free Run Avg Type: Pwr(SMS) Avg Hold: 100/100 Ref Offset: 11.3 dB Ref: 20.00 dBm Mkr1 5.56518 GHz -0.287 dBm Center 5.55000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 60.00 MHz Sweep 1.00 ms (1001 pts) File <BBB.png> saved
CH134	 Agilent Spectrum Analyzer - Swept SA Input: RF PNO: Fast Trig: Free Run Avg Type: Pwr(SMS) Avg Hold: 100/100 Ref Offset: 11.3 dB Ref: 20.00 dBm Mkr1 5.65650 GHz -8.002 dBm Center 5.67000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 60.00 MHz Sweep 1.00 ms (1001 pts) File <BBB.png> saved

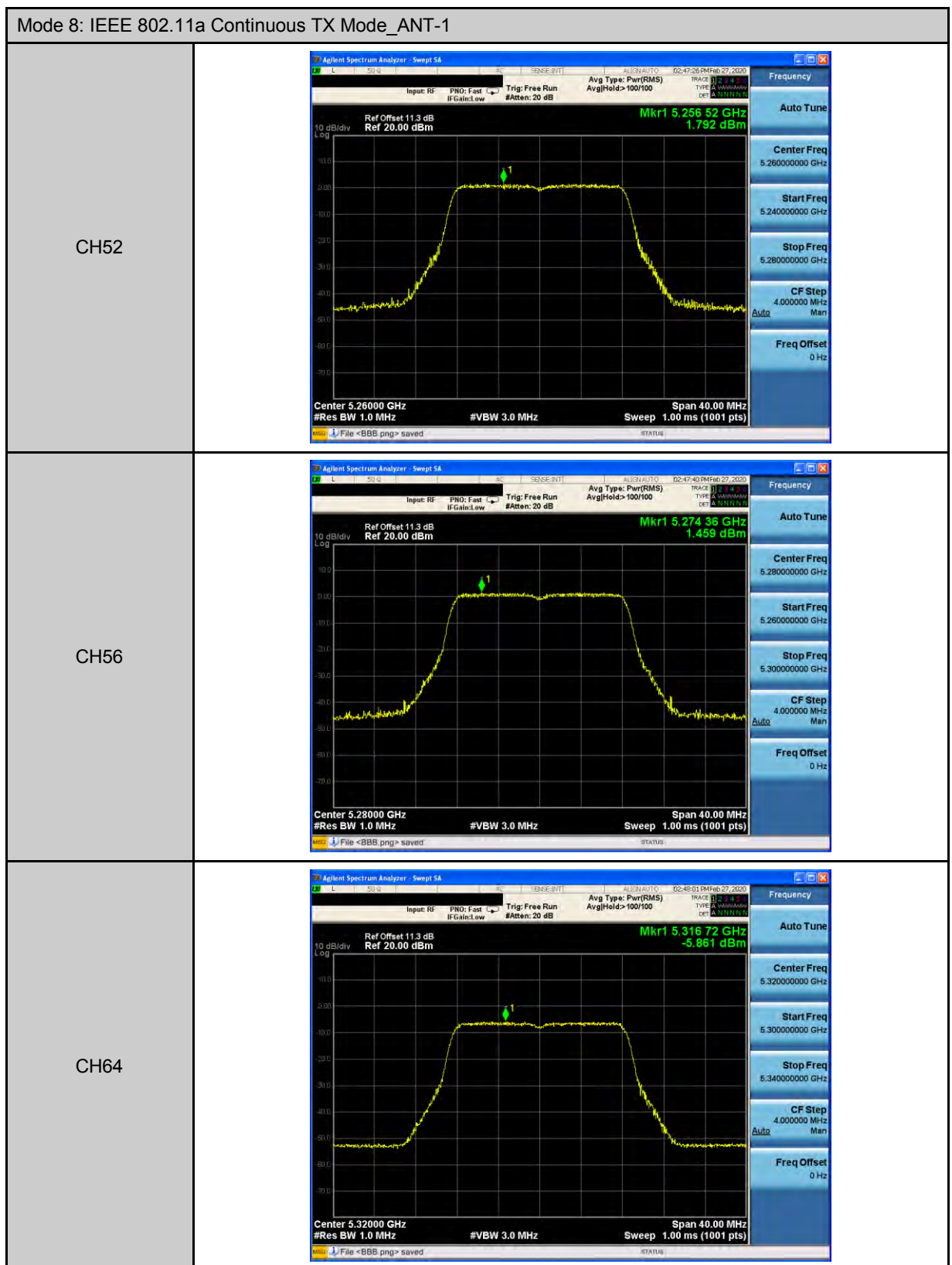


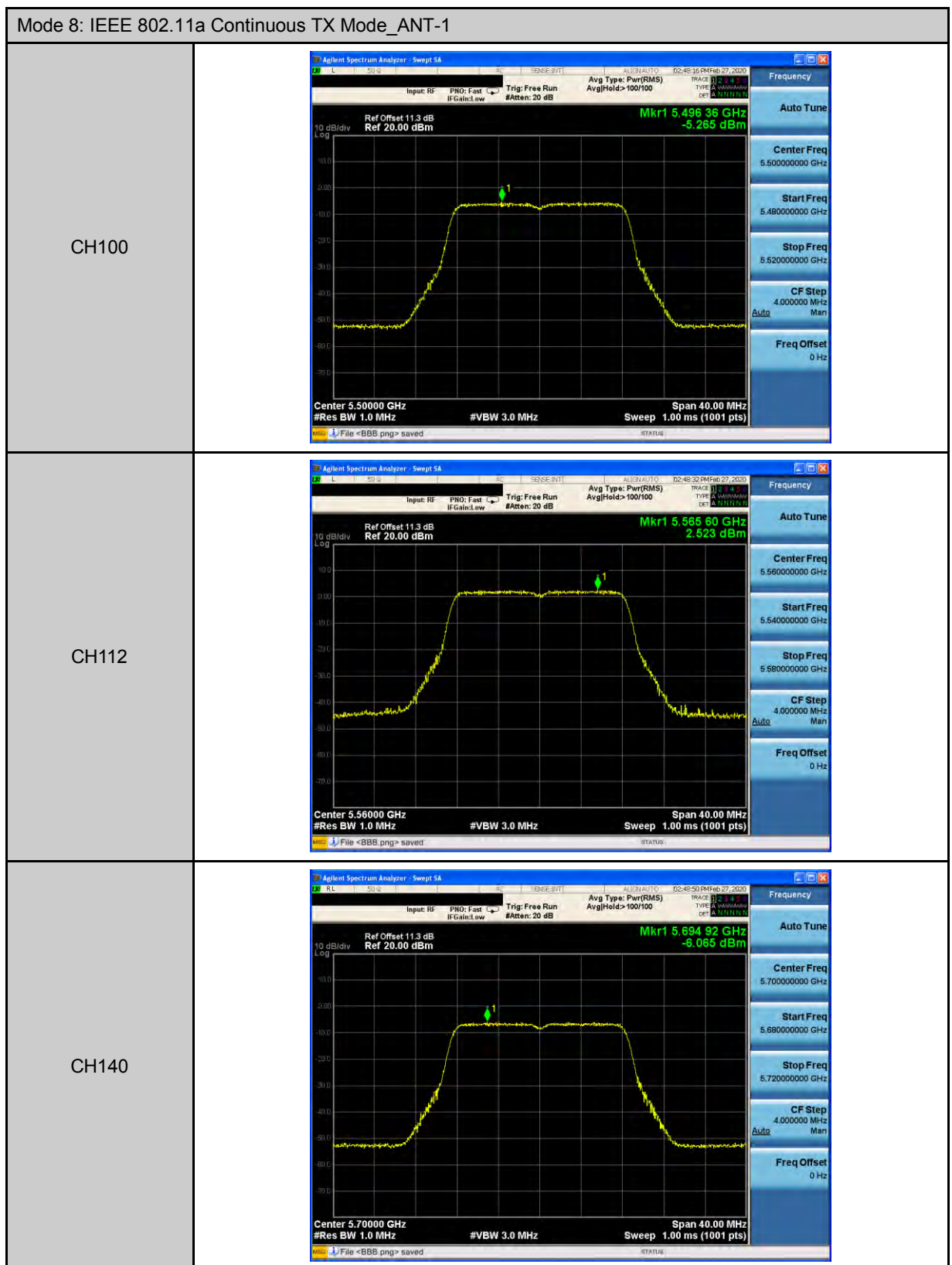


Mode 17: IEEE 802.11ax 80 MHz Continuous TX Mode_ANT-0	
CH106	 Agilent Spectrum Analyzer - Swept SA Input: RF PNO: Fast Trig: Free Run Avg Type: Pwr(RMS) Avg Hold: 100/100 Ref Offset: 11.3 dB Ref: 20.00 dBm Mkr1 5.558 9 GHz -11.019 dBm Center 5.53000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 100.0 MHz Sweep 1.00 ms (1001 pts) File <BBB.png> saved Frequency Auto Tune Center Freq 5.53000000 GHz Start Freq 5.48000000 GHz Stop Freq 5.58000000 GHz CF Step 10.000000 MHz Freq Offset 0 Hz
CH122	 Agilent Spectrum Analyzer - Swept SA Input: RF PNO: Fast Trig: Free Run Avg Type: Pwr(RMS) Avg Hold: 100/100 Ref Offset: 11.3 dB Ref: 20.00 dBm Mkr1 5.577 3 GHz -10.917 dBm Center 5.61000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 100.0 MHz Sweep 1.00 ms (1001 pts) File <BBB.png> saved Frequency Auto Tune Center Freq 5.61000000 GHz Start Freq 5.56000000 GHz Stop Freq 5.66000000 GHz CF Step 10.000000 MHz Freq Offset 0 Hz
CH155	 Agilent Spectrum Analyzer - Swept SA Input: RF PNO: Fast Trig: Free Run Avg Type: Pwr(RMS) Avg Hold: 100/100 Ref Offset: 11.3 dB Ref: 20.00 dBm Mkr1 5.786 2 GHz -14.051 dBm Center 5.77500 GHz #Res BW 100 kHz #VBW 300 kHz Span 100.0 MHz Sweep 12.4 ms (1001 pts) File <BBB.png> saved Frequency Auto Tune Center Freq 5.77500000 GHz Start Freq 5.72500000 GHz Stop Freq 5.82500000 GHz CF Step 10.000000 MHz Freq Offset 0 Hz



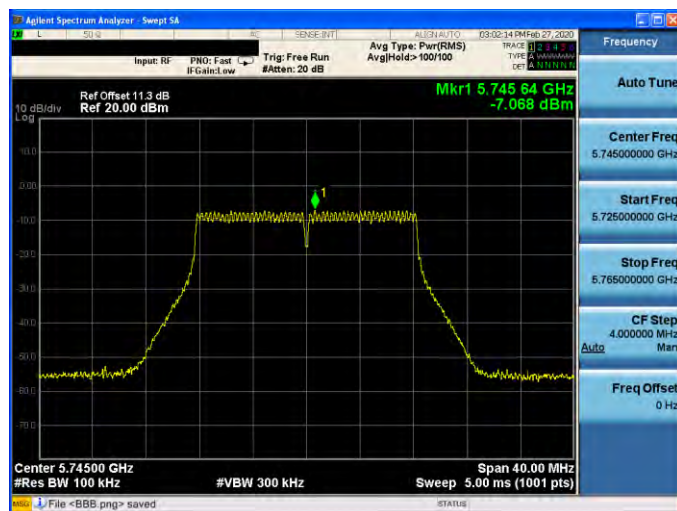




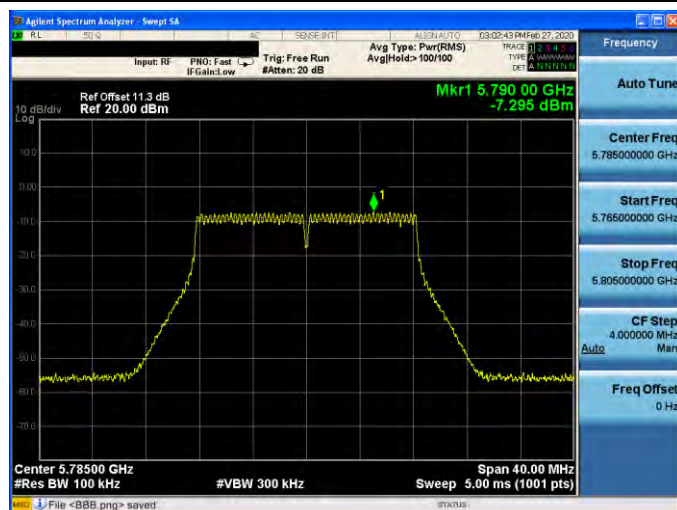


Mode 8: IEEE 802.11a Continuous TX Mode_ANT-1

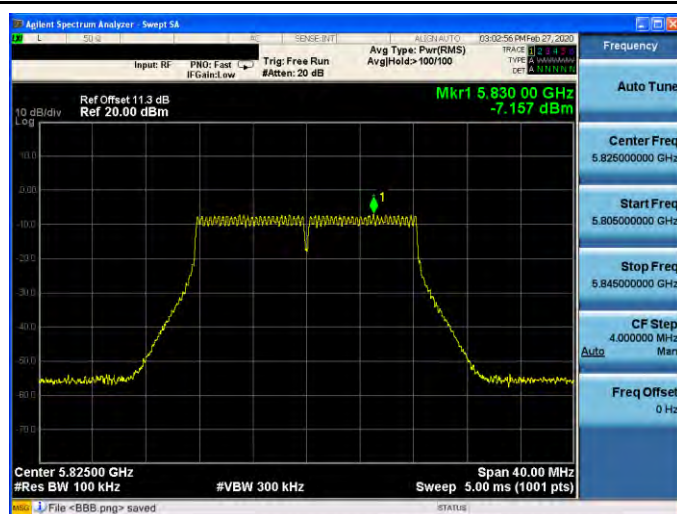
CH149

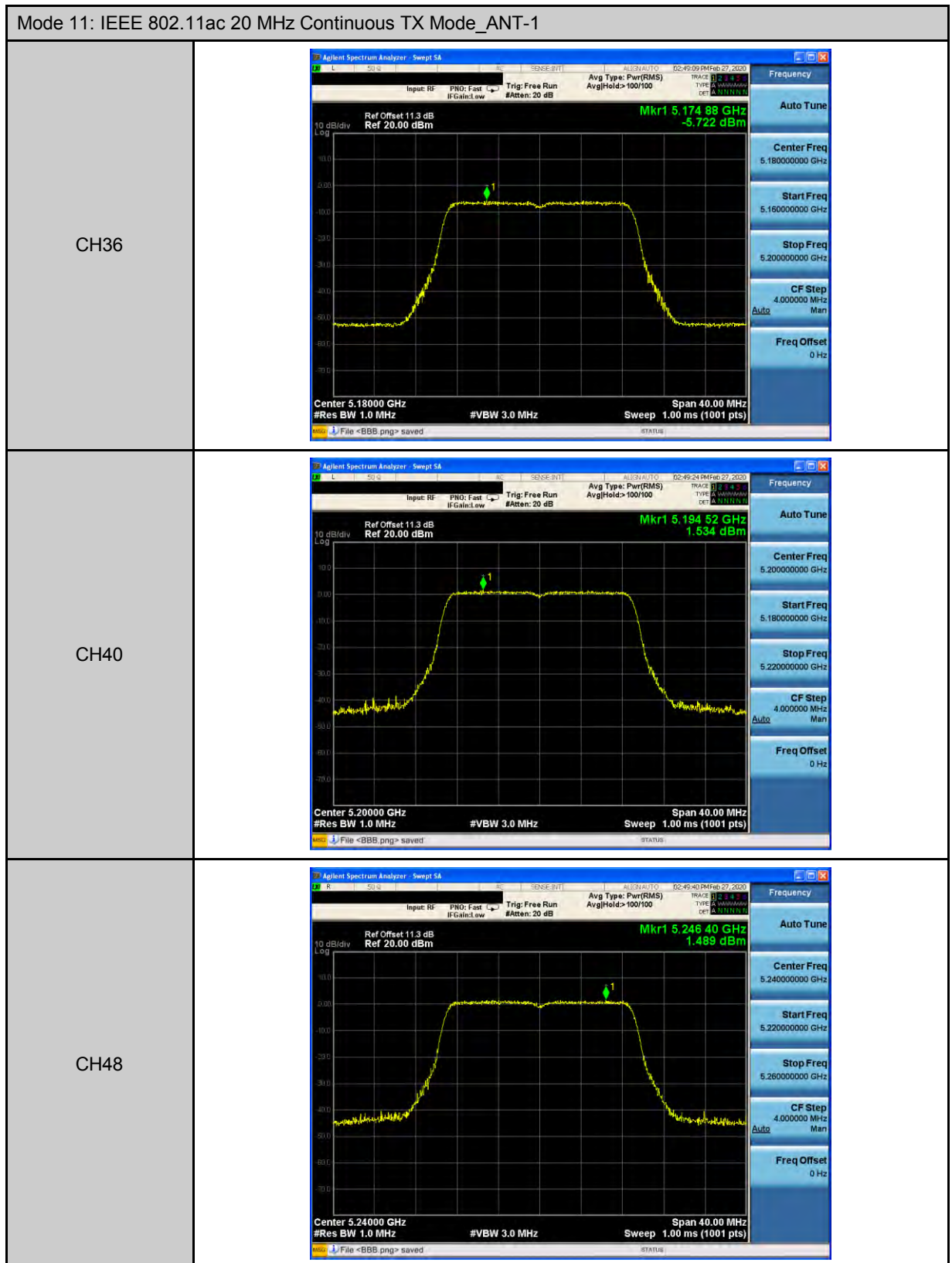


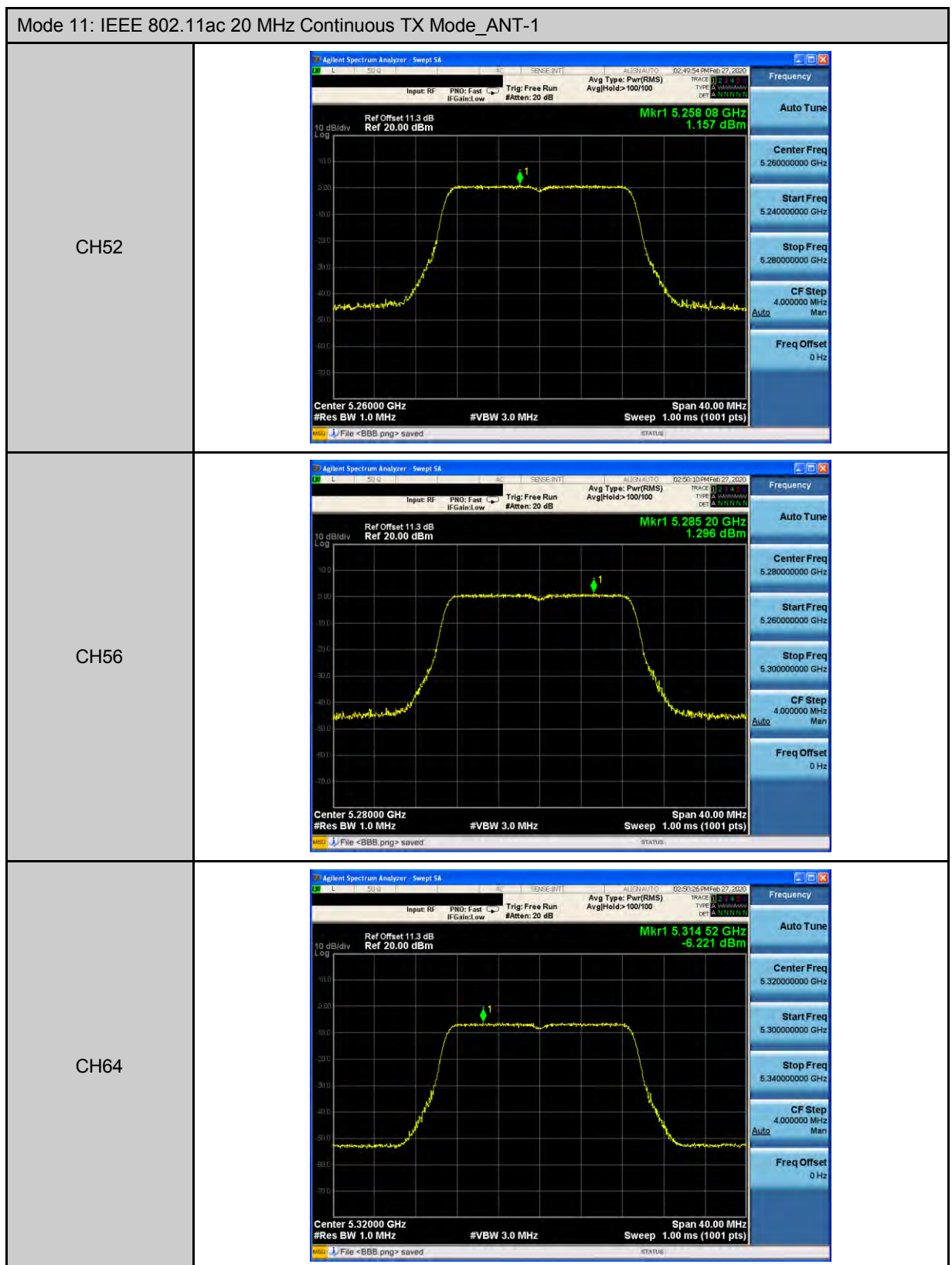
CH157

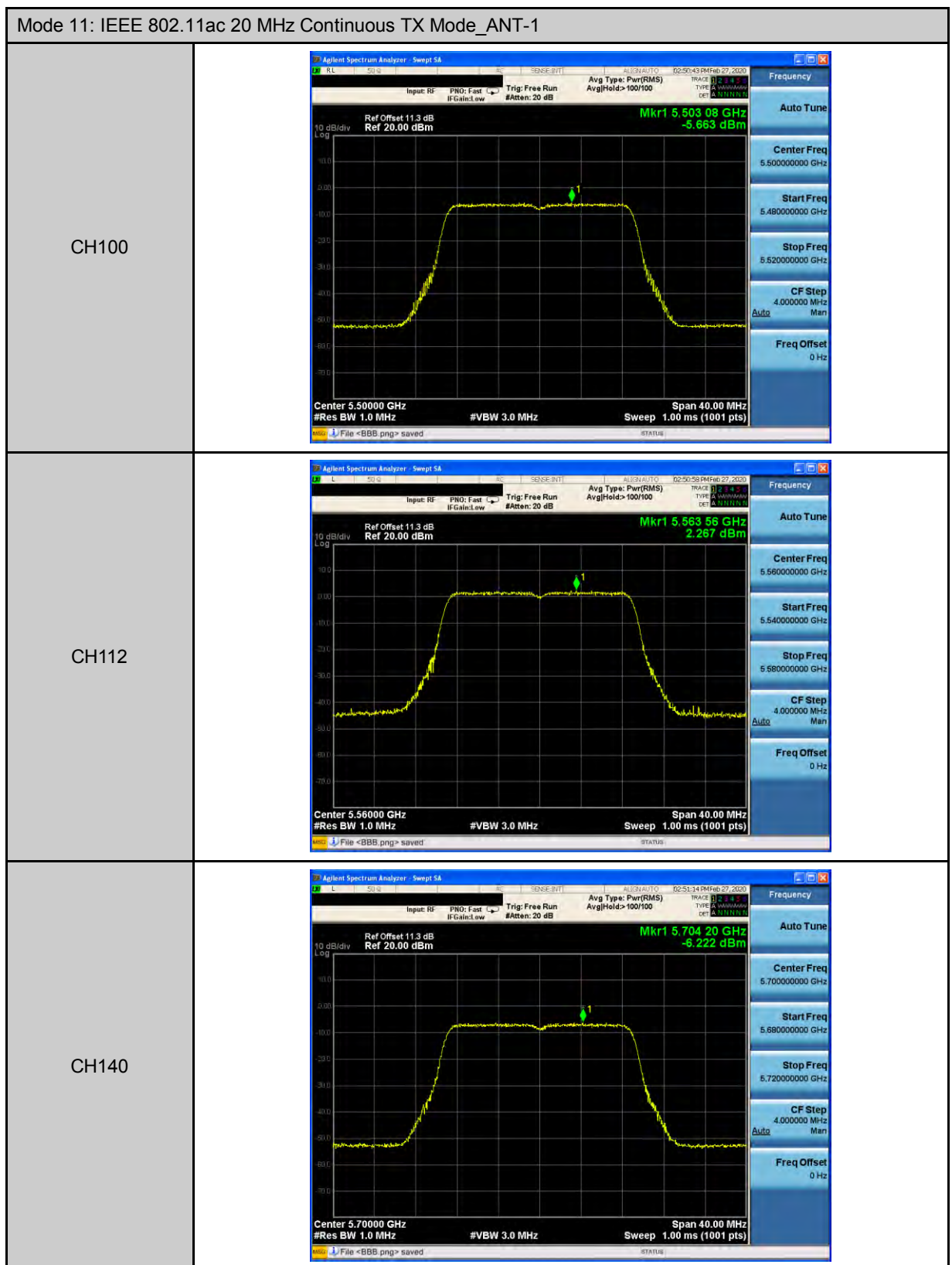


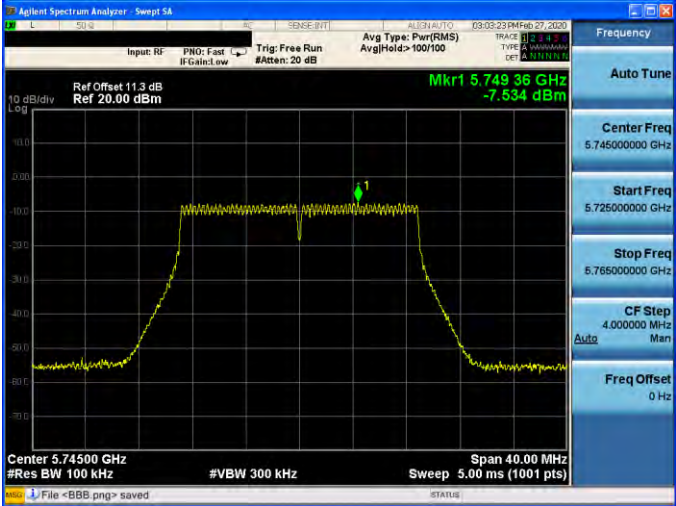
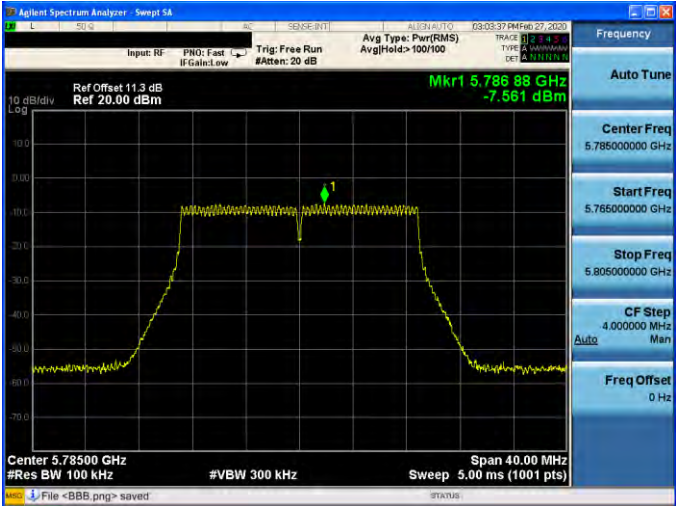
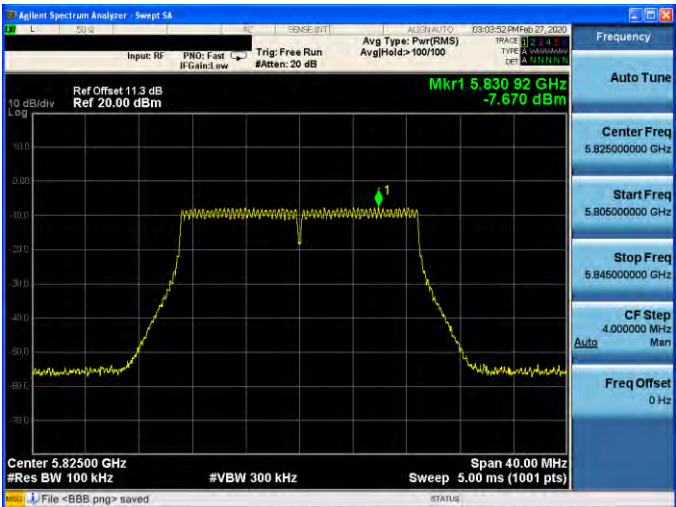
CH165

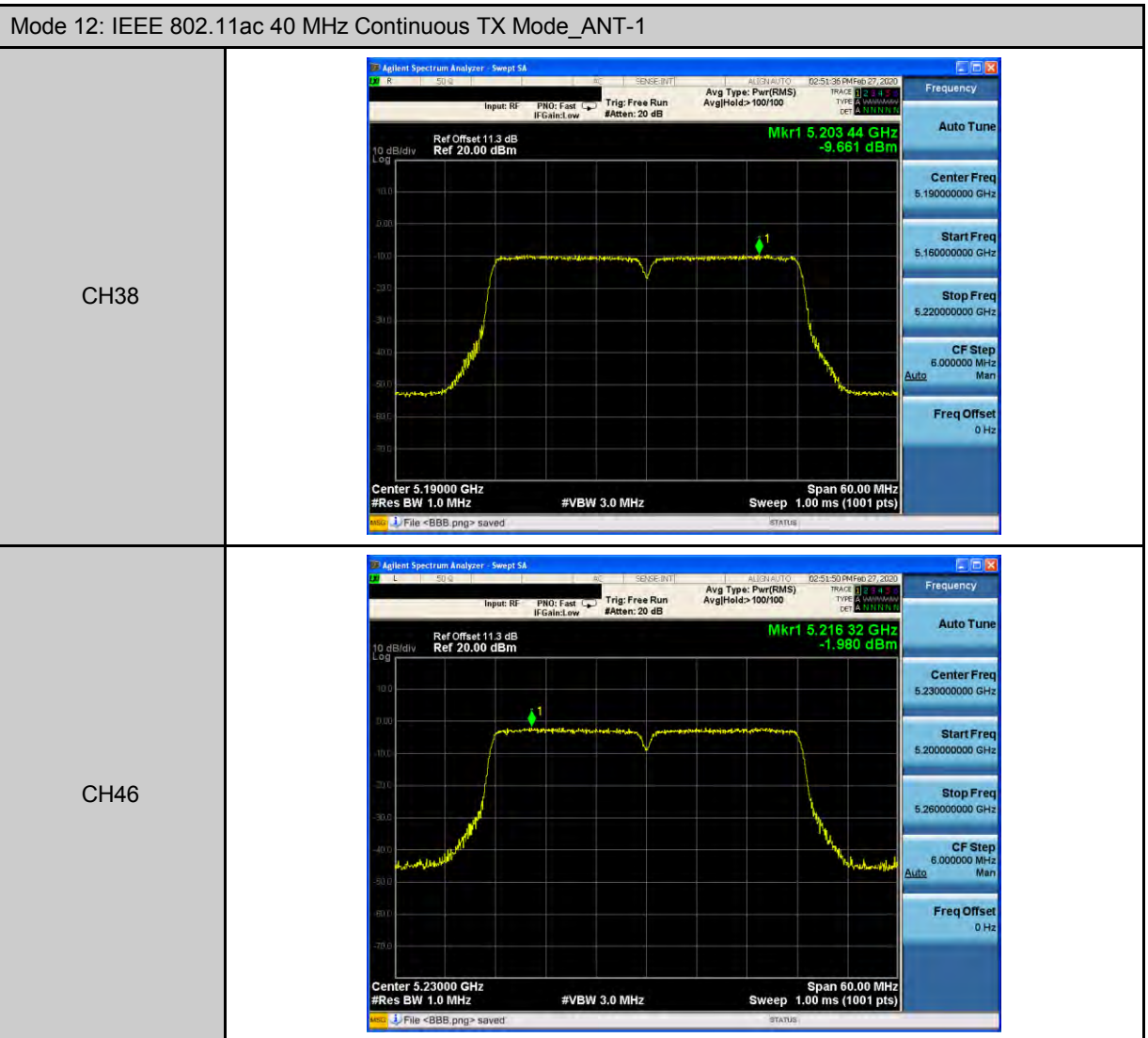


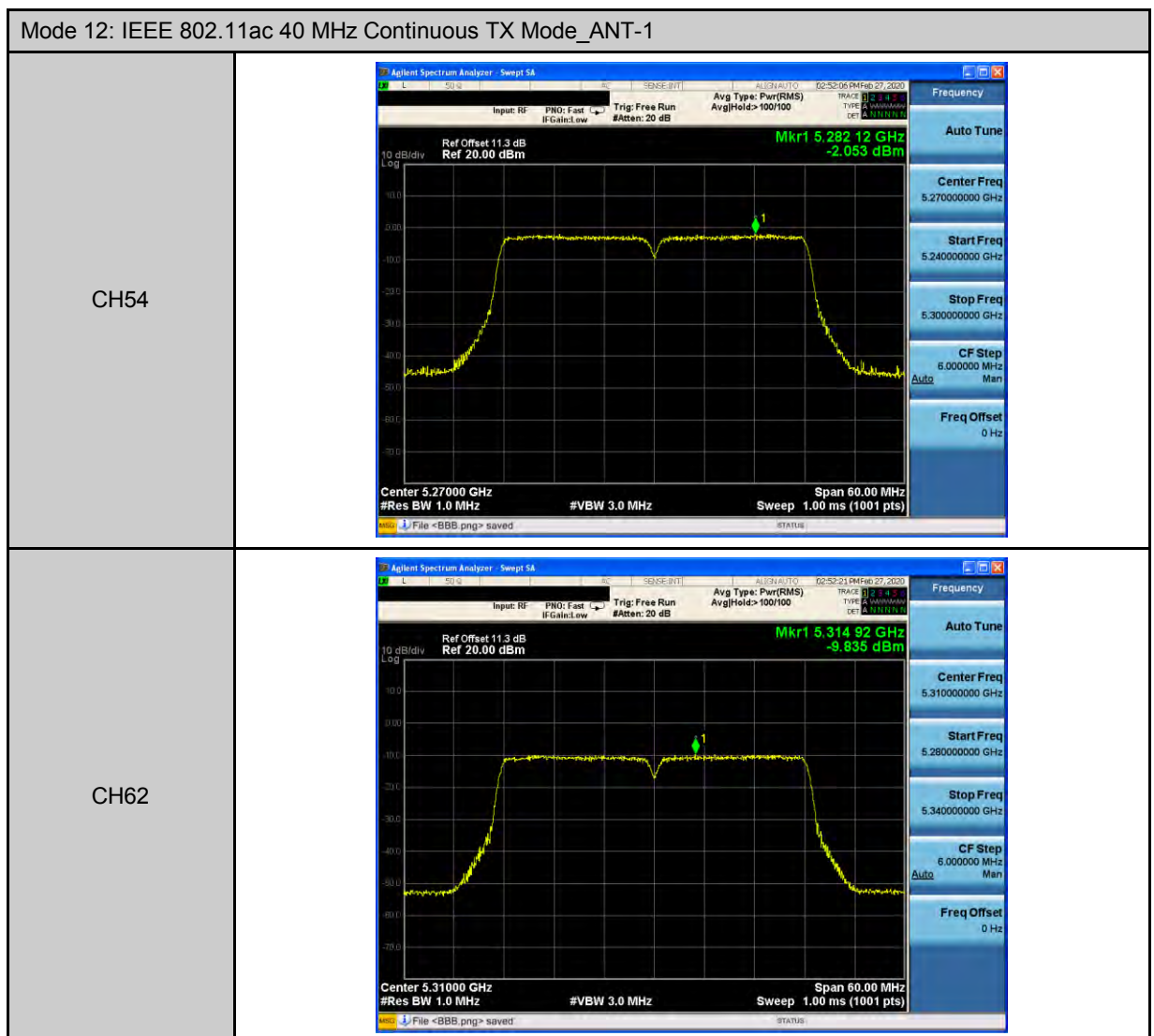


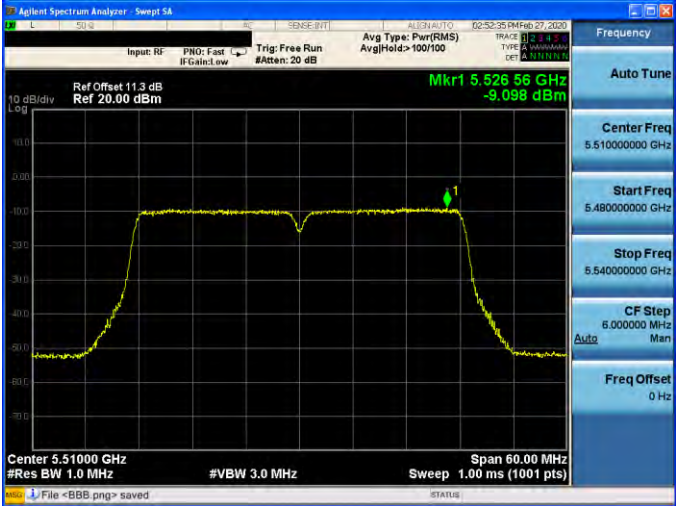
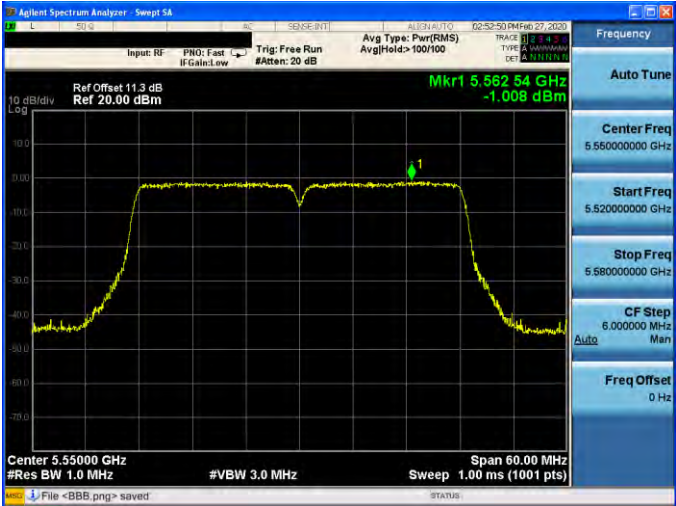
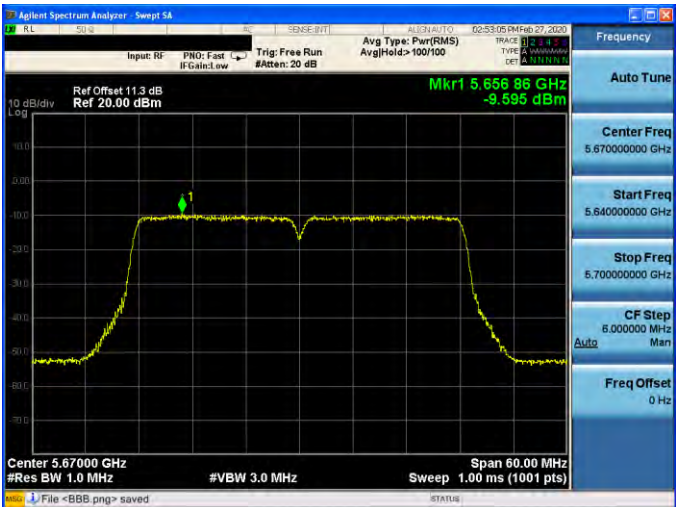


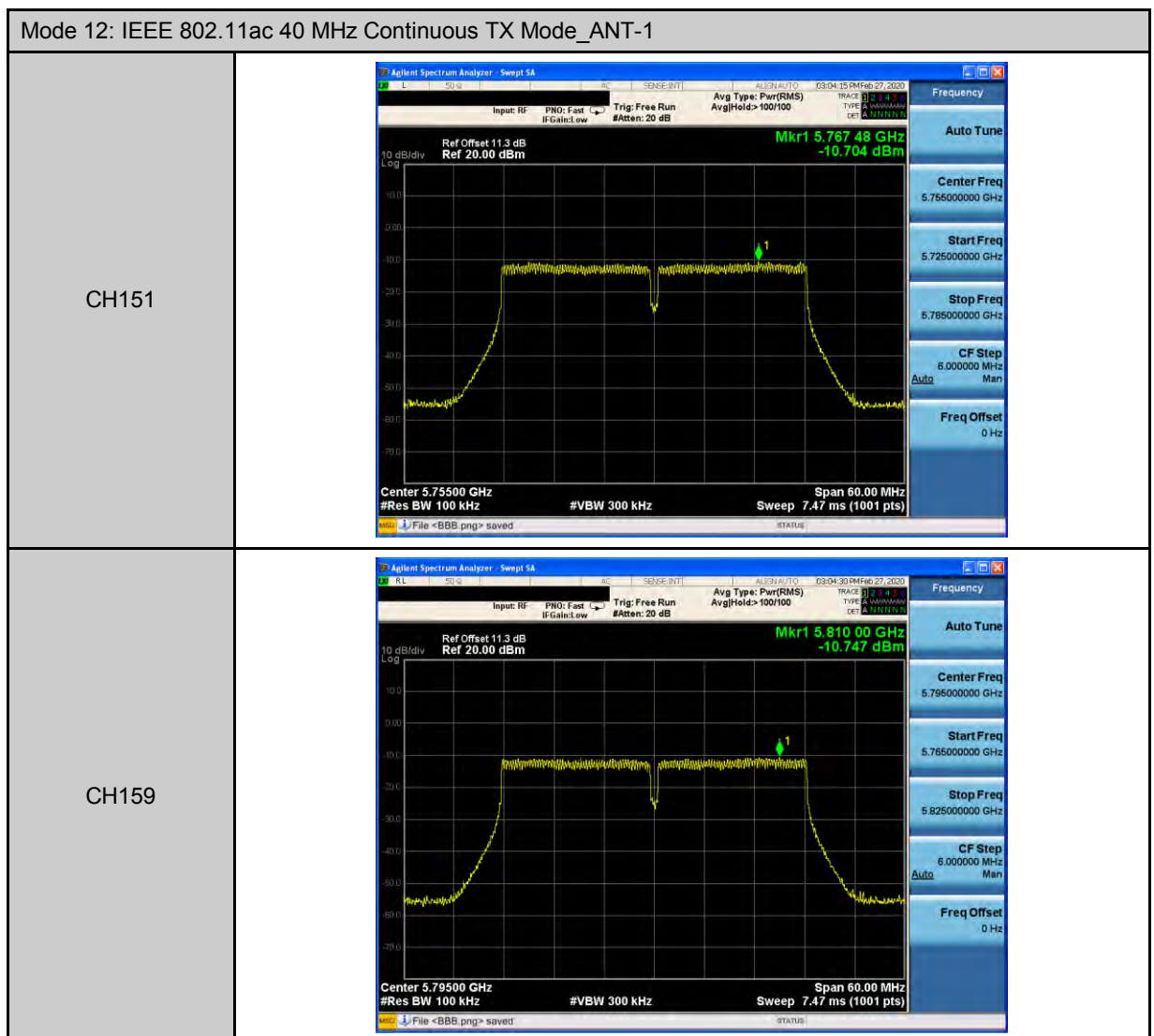


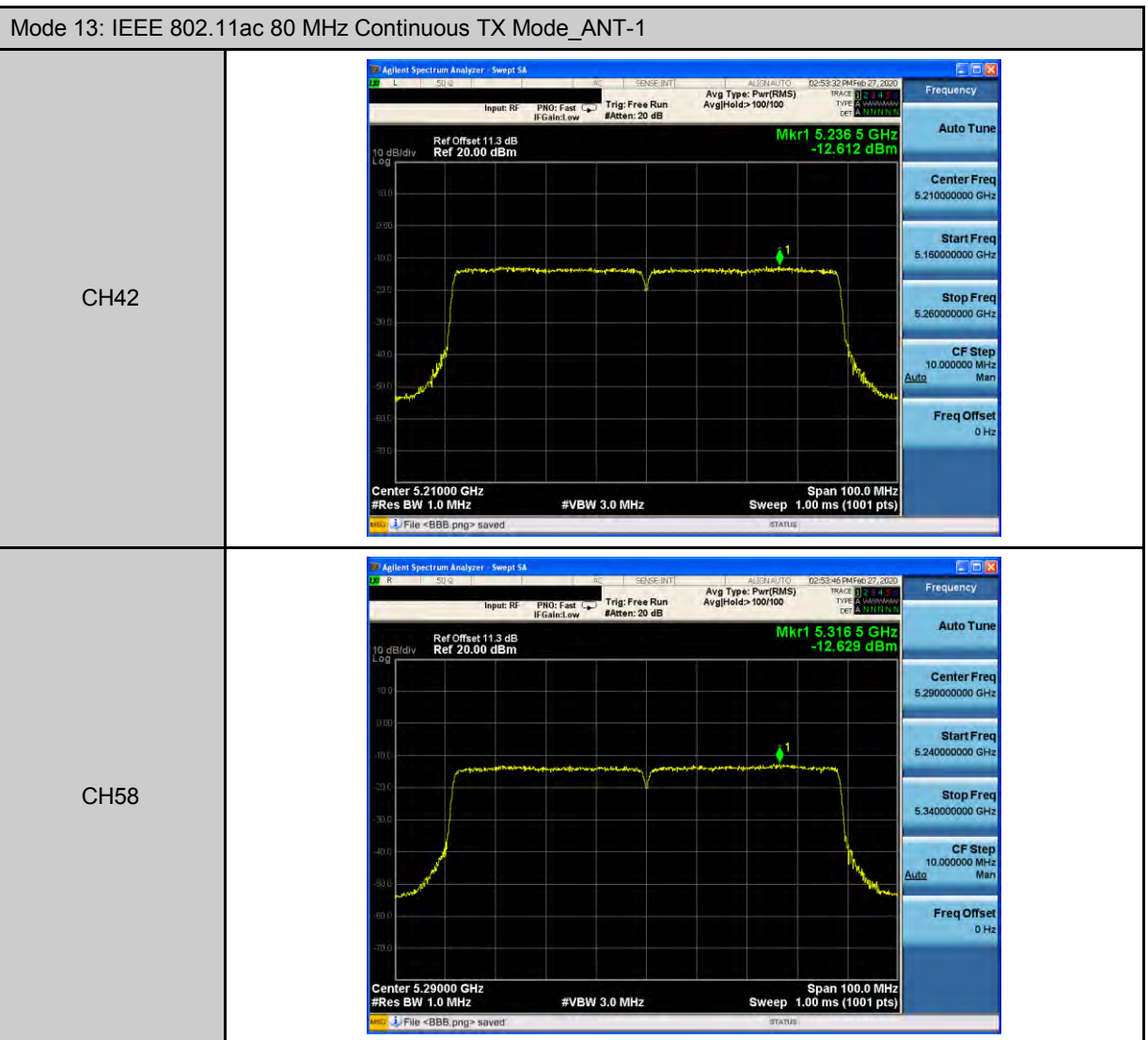
Mode 11: IEEE 802.11ac 20 MHz Continuous TX Mode_ANT-1	
CH149	
CH157	
CH165	

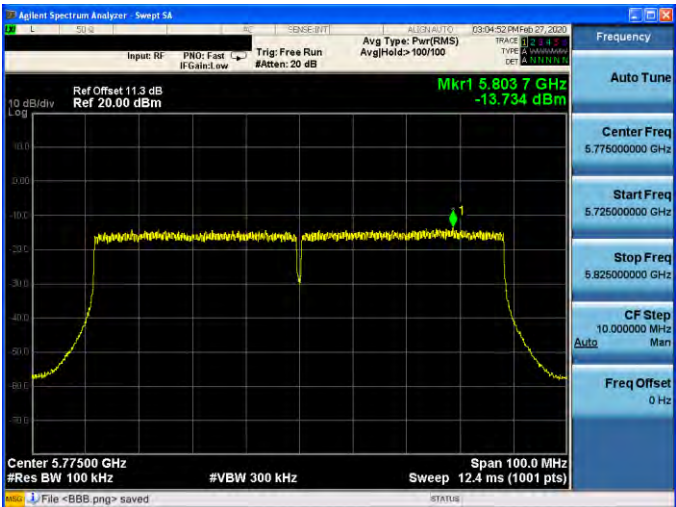


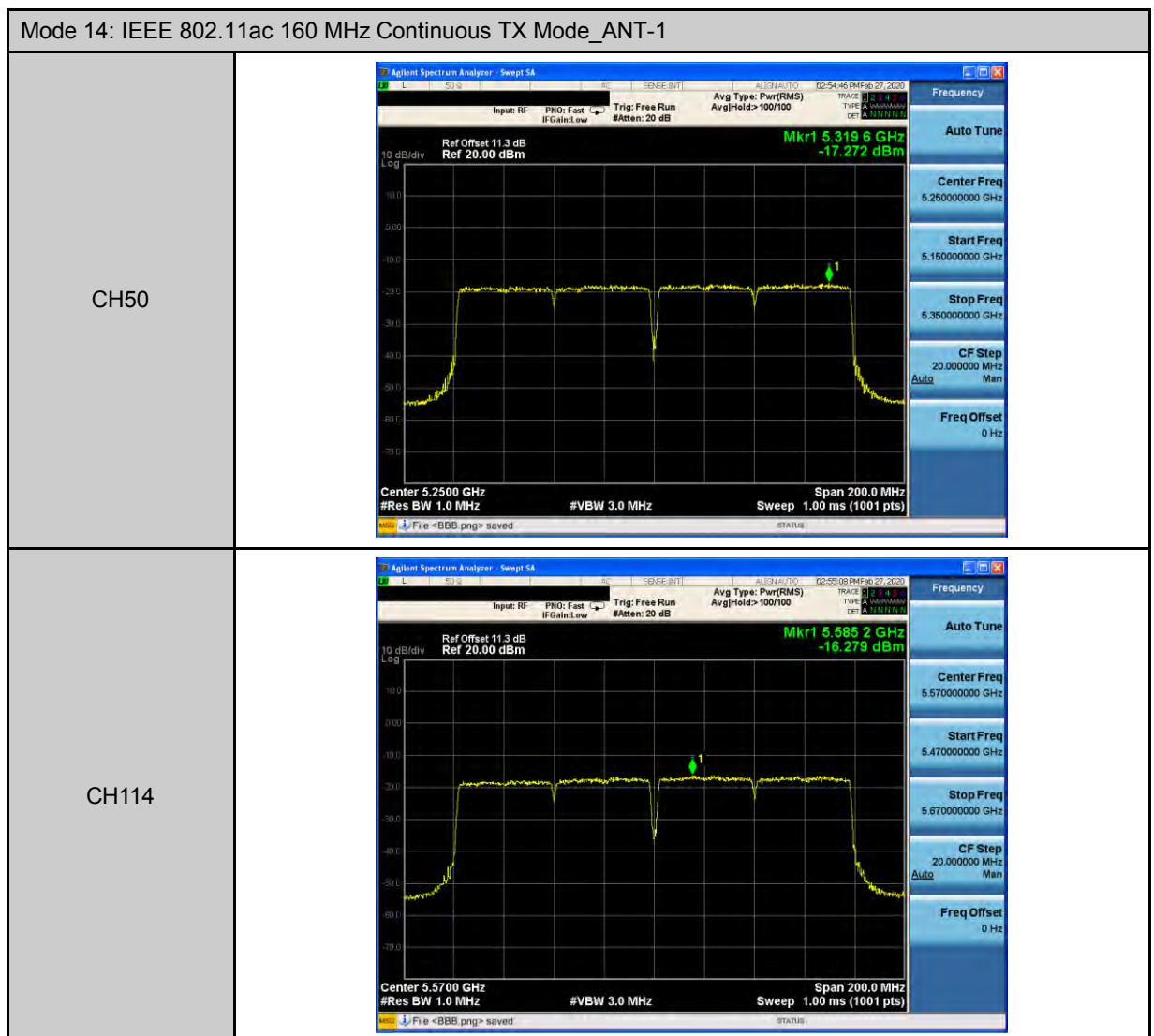


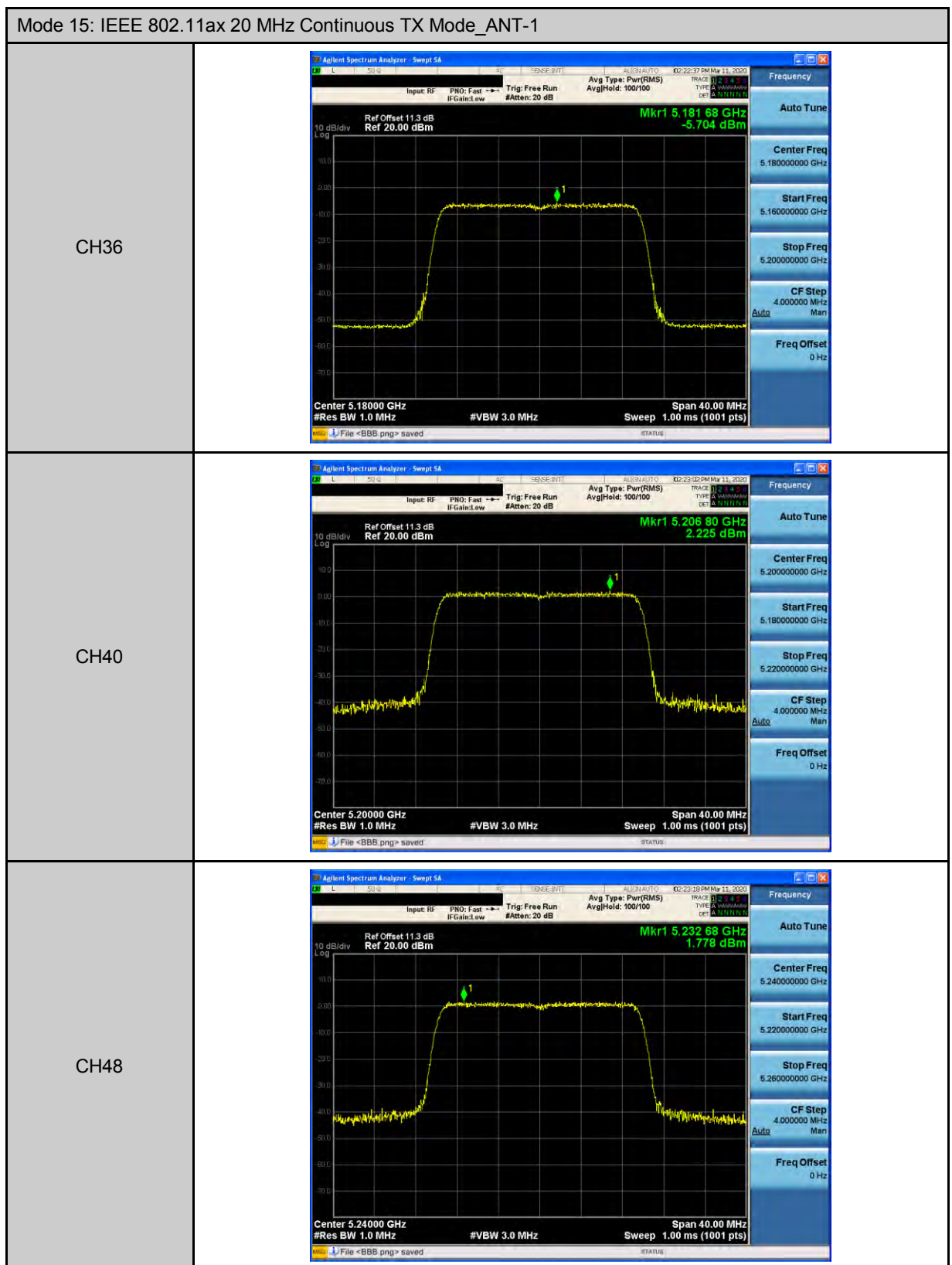
Mode 12: IEEE 802.11ac 40 MHz Continuous TX Mode_ANT-1	
CH102	 Agilent Spectrum Analyzer - Swept SA Input: RF PNO: Fast IF Gain: Low Trig: Free Run #Atten: 20 dB Avg Type: Pwr(RMS) Avg Hold: 100/100 Ref Offset: 11.3 dB Ref: 20.00 dBm Mkr1 5.526 56 GHz -9.098 dBm Center 5.51000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 60.00 MHz Sweep 1.00 ms (1001 pts) File <BBB.png> saved Frequency Auto Tune Center Freq 5.510000000 GHz Start Freq 5.480000000 GHz Stop Freq 5.540000000 GHz CF Step 6.000000 MHz Man Freq Offset 0 Hz
CH110	 Agilent Spectrum Analyzer - Swept SA Input: RF PNO: Fast IF Gain: Low Trig: Free Run #Atten: 20 dB Avg Type: Pwr(RMS) Avg Hold: 100/100 Ref Offset: 11.3 dB Ref: 20.00 dBm Mkr1 5.562 54 GHz -1.008 dBm Center 5.55000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 60.00 MHz Sweep 1.00 ms (1001 pts) File <BBB.png> saved Frequency Auto Tune Center Freq 5.550000000 GHz Start Freq 5.520000000 GHz Stop Freq 5.580000000 GHz CF Step 6.000000 MHz Man Freq Offset 0 Hz
CH134	 Agilent Spectrum Analyzer - Swept SA Input: RF PNO: Fast IF Gain: Low Trig: Free Run #Atten: 20 dB Avg Type: Pwr(RMS) Avg Hold: 100/100 Ref Offset: 11.3 dB Ref: 20.00 dBm Mkr1 5.656 86 GHz -9.595 dBm Center 5.67000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 60.00 MHz Sweep 1.00 ms (1001 pts) File <BBB.png> saved Frequency Auto Tune Center Freq 5.670000000 GHz Start Freq 5.640000000 GHz Stop Freq 5.700000000 GHz CF Step 6.000000 MHz Man Freq Offset 0 Hz



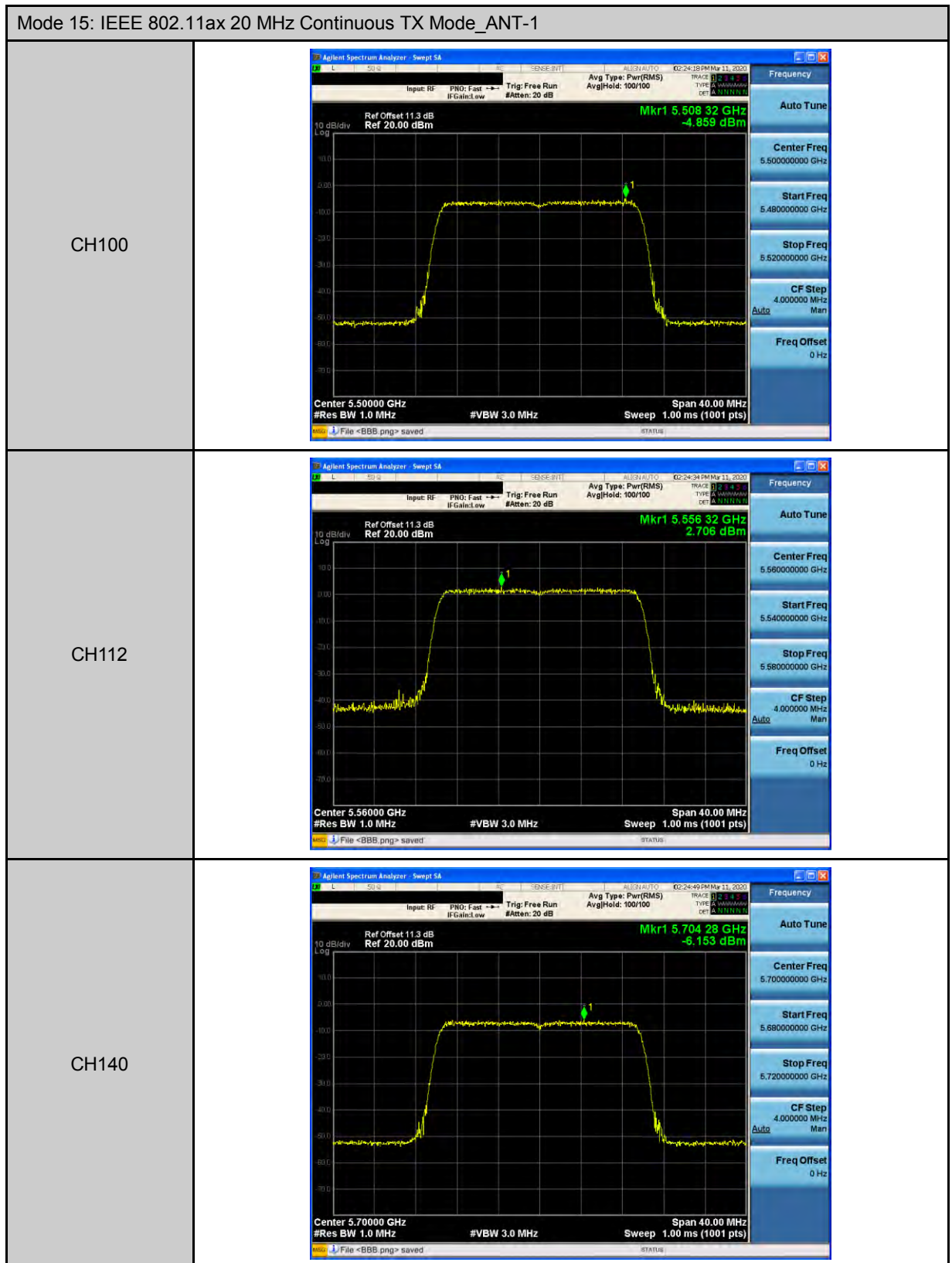


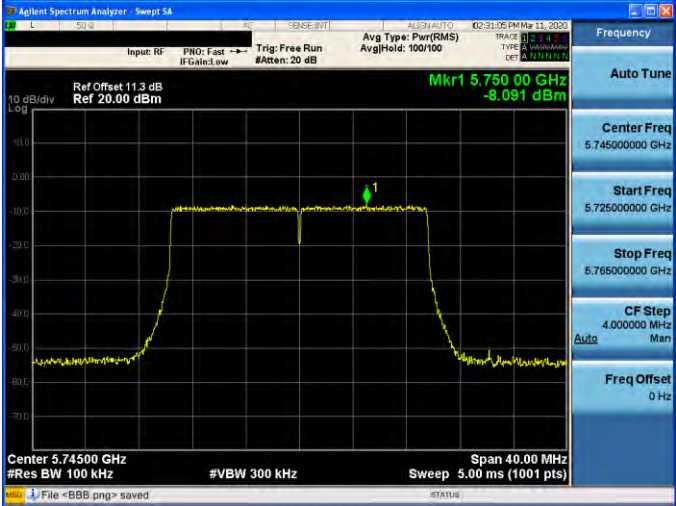
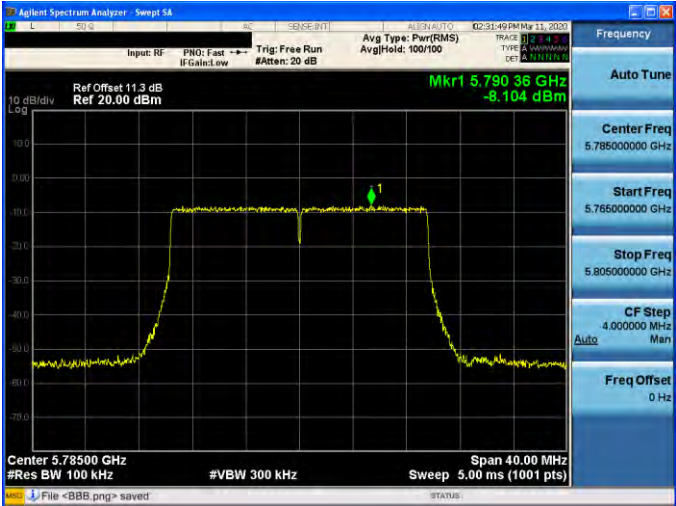
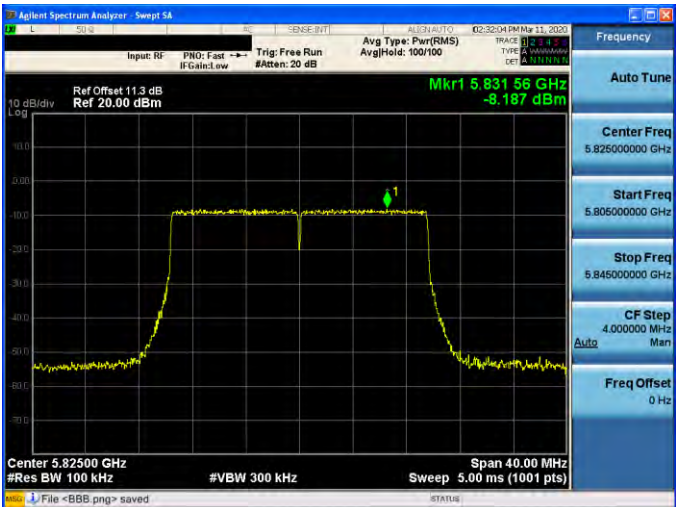
Mode 13: IEEE 802.11ac 80 MHz Continuous TX Mode_ANT-1	
CH106	 Agilent Spectrum Analyzer - Swept SA Input: RF PNO: Fast Trig: Free Run Avg Type: Pwr(RMS) Avg Hold: 100/100 Ref Offset: 11.3 dB Ref: 20.00 dBm Mkr1 5.558 7 GHz -11.633 dBm Center 5.53000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 100.0 MHz Sweep 1.00 ms (1001 pts) File <BBB.png> saved
CH122	 Agilent Spectrum Analyzer - Swept SA Input: RF PNO: Fast Trig: Free Run Avg Type: Pwr(RMS) Avg Hold: 100/100 Ref Offset: 11.3 dB Ref: 20.00 dBm Mkr1 5.582 0 GHz -11.378 dBm Center 5.61000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 100.0 MHz Sweep 1.00 ms (1001 pts) File <BBB.png> saved
CH155	 Agilent Spectrum Analyzer - Swept SA Input: RF PNO: Fast Trig: Free Run Avg Type: Pwr(RMS) Avg Hold: 100/100 Ref Offset: 11.3 dB Ref: 20.00 dBm Mkr1 5.803 7 GHz -13.734 dBm Center 5.77500 GHz #Res BW 100 kHz #VBW 300 kHz Span 100.0 MHz Sweep 12.4 ms (1001 pts) File <BBB.png> saved

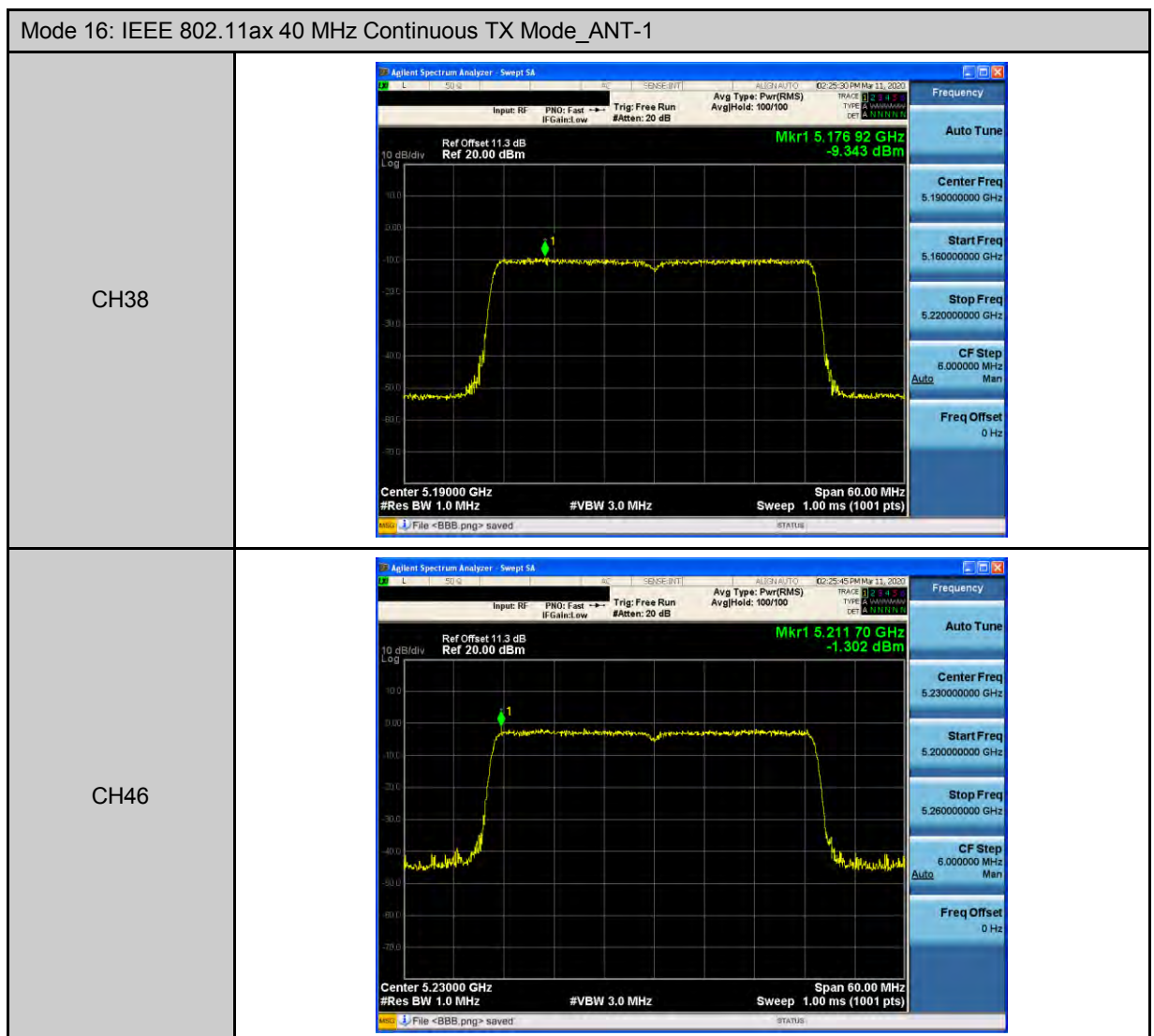


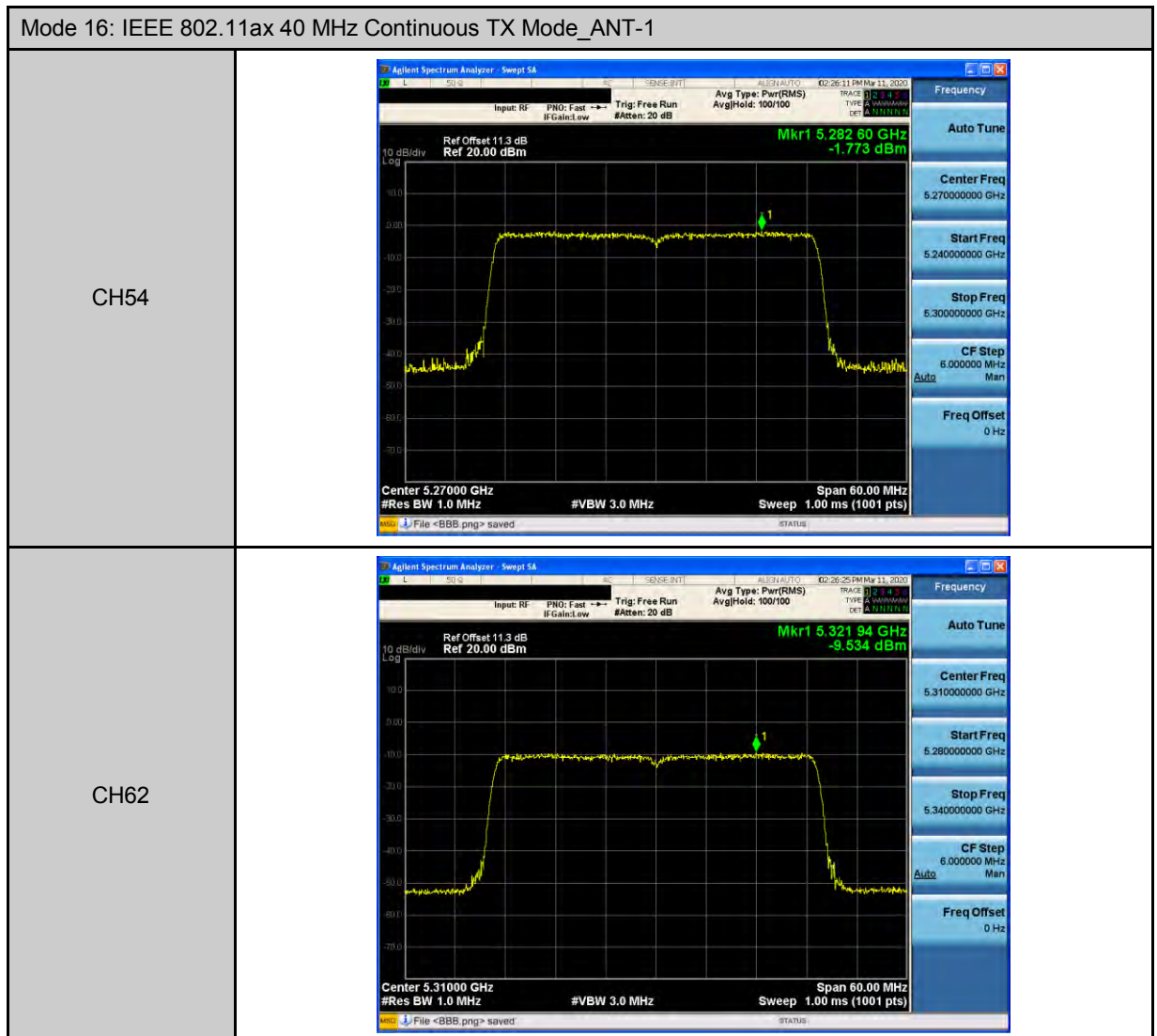


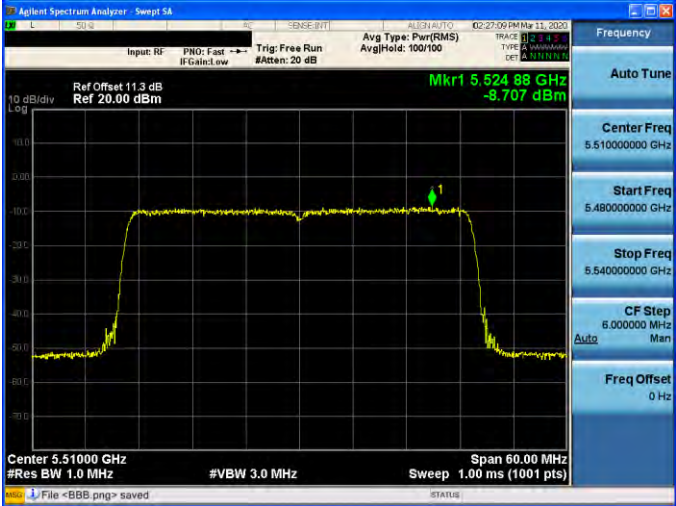
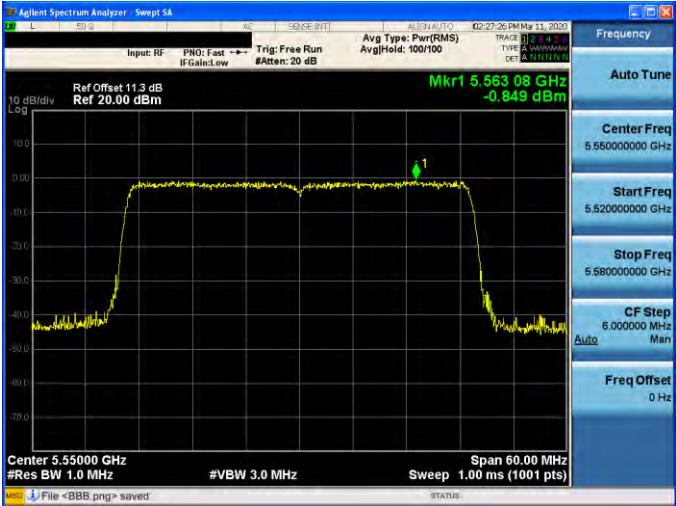
Mode 15: IEEE 802.11ax 20 MHz Continuous TX Mode_ANT-1	
CH52	Agilent Spectrum Analyzer - Swept SA Input: RF PNO: Fast Trig: Free Run Avg Type: Par(SMS) Avg Hold: 100/100 Ref Offset: 11.3 dB Ref: 20.00 dBm Mkr1 5.263 24 GHz 1.824 dBm Center 5.26000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 40.00 MHz Sweep 1.00 ms (1001 pts) File <BBB.png> saved
CH56	Agilent Spectrum Analyzer - Swept SA Input: RF PNO: Fast Trig: Free Run Avg Type: Par(SMS) Avg Hold: 100/100 Ref Offset: 11.3 dB Ref: 20.00 dBm Mkr1 5.287 16 GHz 1.671 dBm Center 5.28000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 40.00 MHz Sweep 1.00 ms (1001 pts) File <BBB.png> saved
CH64	Agilent Spectrum Analyzer - Swept SA Input: RF PNO: Fast Trig: Free Run Avg Type: Par(SMS) Avg Hold: 100/100 Ref Offset: 11.3 dB Ref: 20.00 dBm Mkr1 5.326 36 GHz -5.595 dBm Center 5.32000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 40.00 MHz Sweep 1.00 ms (1001 pts) File <BBB.png> saved

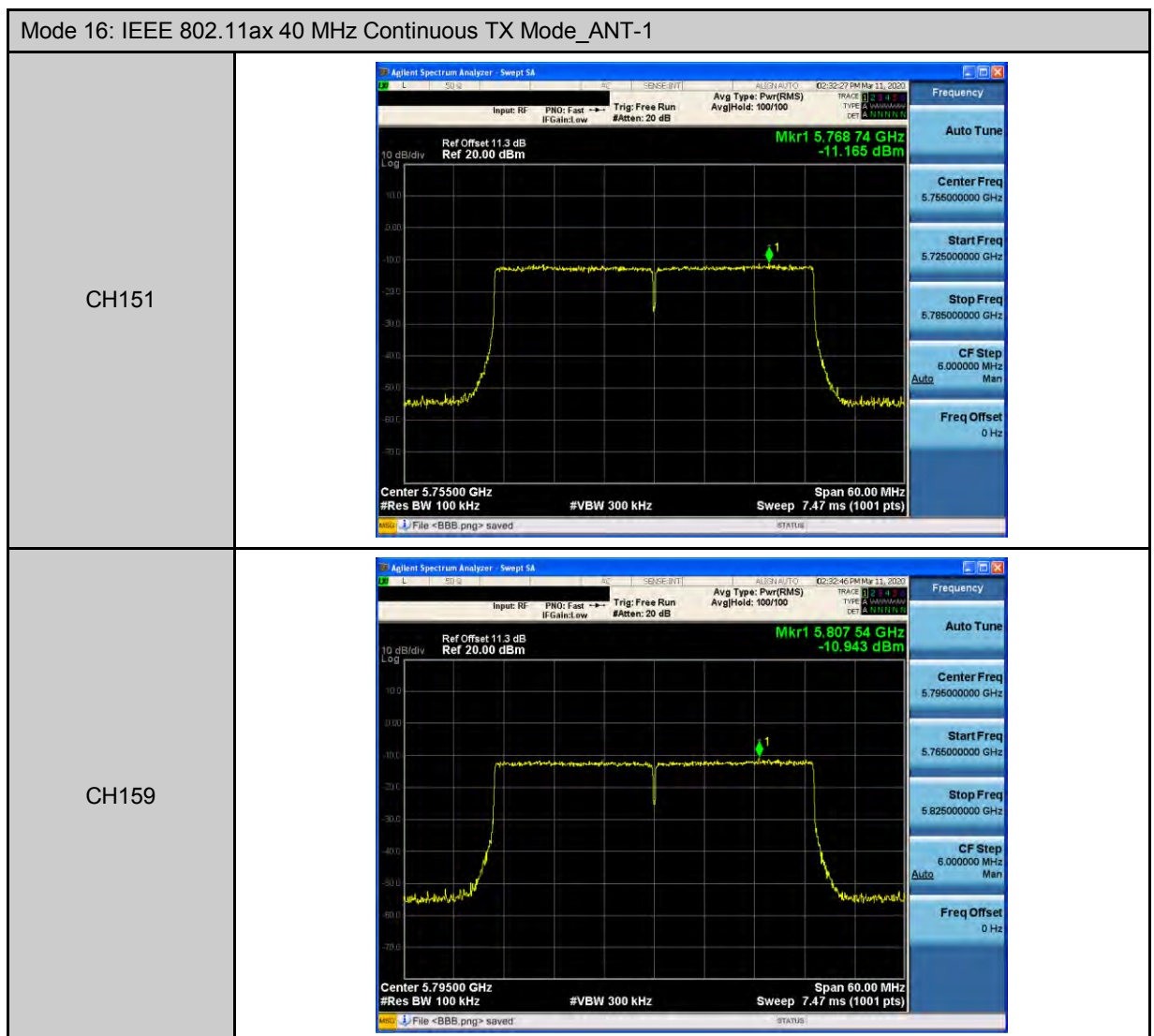


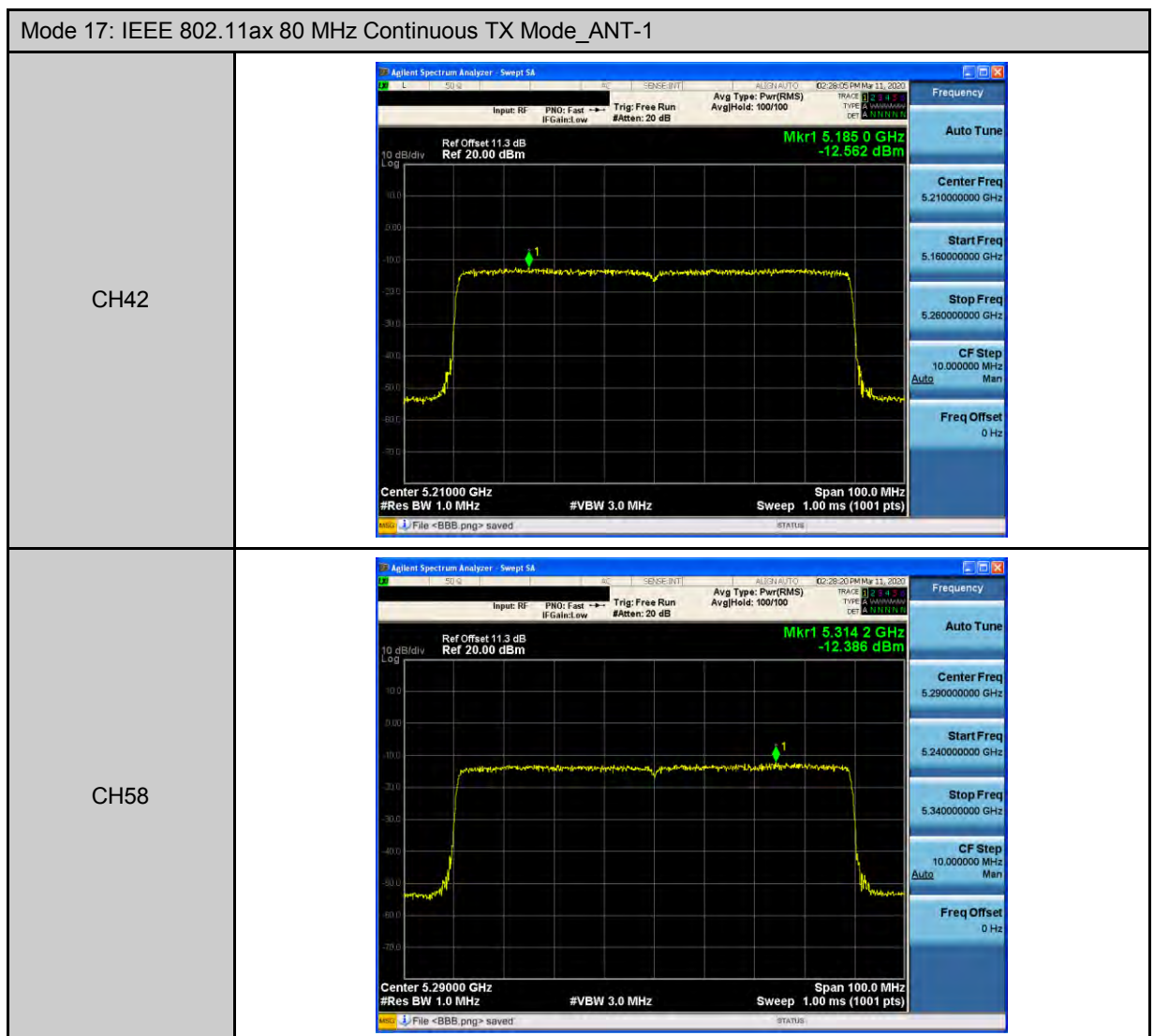
Mode 15: IEEE 802.11ax 20 MHz Continuous TX Mode_ANT-1	
CH149	 Agilent Spectrum Analyzer - Swept SA Input: RF PNO: Fast Trig: Free Run Avg Type: Par(SMS) Avg Hold: 100/100 Ref Offset: 11.3 dB Ref: 20.00 dBm Mkr1 5.750 00 GHz -8.091 dBm Center 5.74500 GHz #Res BW 100 kHz #VBW 300 kHz Span 40.00 MHz Sweep 5.00 ms (1001 pts) File <BBB.png> saved Frequency Auto Tune Center Freq 5.745000000 GHz Start Freq 5.725000000 GHz Stop Freq 5.765000000 GHz CF Step 4.000000 MHz Freq Offset 0 Hz
CH157	 Agilent Spectrum Analyzer - Swept SA Input: RF PNO: Fast Trig: Free Run Avg Type: Par(SMS) Avg Hold: 100/100 Ref Offset: 11.3 dB Ref: 20.00 dBm Mkr1 5.790 36 GHz -8.104 dBm Center 5.78500 GHz #Res BW 100 kHz #VBW 300 kHz Span 40.00 MHz Sweep 5.00 ms (1001 pts) File <BBB.png> saved Frequency Auto Tune Center Freq 5.785000000 GHz Start Freq 5.765000000 GHz Stop Freq 5.805000000 GHz CF Step 4.000000 MHz Freq Offset 0 Hz
CH165	 Agilent Spectrum Analyzer - Swept SA Input: RF PNO: Fast Trig: Free Run Avg Type: Par(SMS) Avg Hold: 100/100 Ref Offset: 11.3 dB Ref: 20.00 dBm Mkr1 5.831 56 GHz -8.187 dBm Center 5.82500 GHz #Res BW 100 kHz #VBW 300 kHz Span 40.00 MHz Sweep 5.00 ms (1001 pts) File <BBB.png> saved Frequency Auto Tune Center Freq 5.825000000 GHz Start Freq 5.805000000 GHz Stop Freq 5.845000000 GHz CF Step 4.000000 MHz Freq Offset 0 Hz

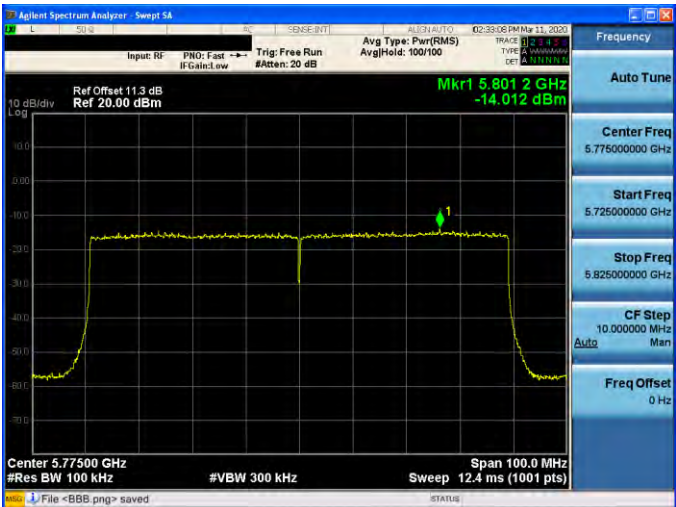


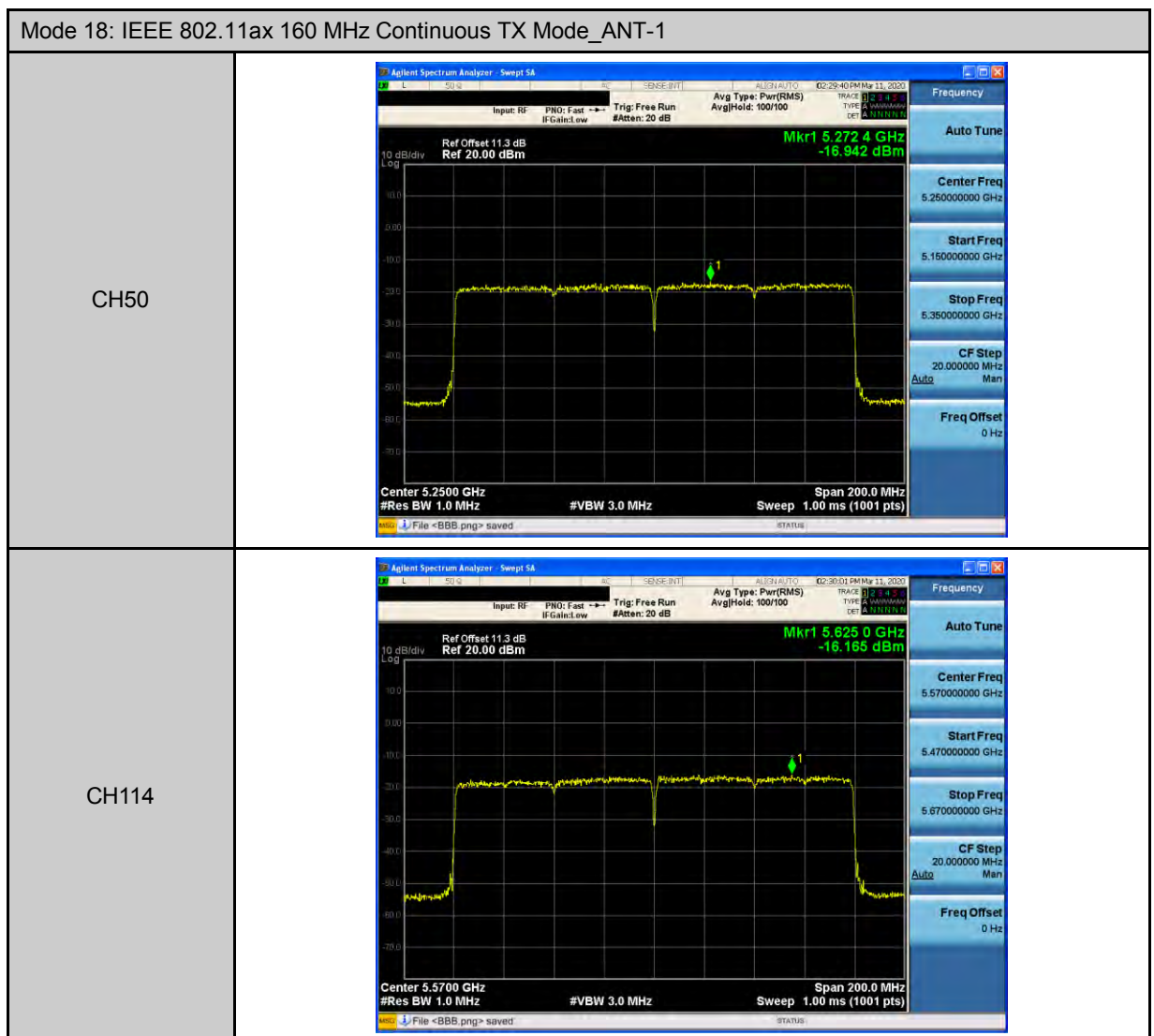


Mode 16: IEEE 802.11ax 40 MHz Continuous TX Mode_ANT-1	
CH102	 Agilent Spectrum Analyzer - Swept SA Input: RF PNO: Fast Trig: Free Run Avg Type: Pwr(SMS) Avg Hold: 100/100 Ref Offset: 11.3 dB Ref: 20.00 dBm Mkr1 5.524 89 GHz -8.707 dBm Center 5.51000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 60.00 MHz Sweep 1.00 ms (1001 pts) File <BBB.png> saved
CH110	 Agilent Spectrum Analyzer - Swept SA Input: RF PNO: Fast Trig: Free Run Avg Type: Pwr(SMS) Avg Hold: 100/100 Ref Offset: 11.3 dB Ref: 20.00 dBm Mkr1 5.563 08 GHz -0.849 dBm Center 5.55000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 60.00 MHz Sweep 1.00 ms (1001 pts) File <BBB.png> saved
CH134	 Agilent Spectrum Analyzer - Swept SA Input: RF PNO: Fast Trig: Free Run Avg Type: Pwr(SMS) Avg Hold: 100/100 Ref Offset: 11.3 dB Ref: 20.00 dBm Mkr1 5.661 54 GHz -9.729 dBm Center 5.67000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 60.00 MHz Sweep 1.00 ms (1001 pts) File <BBB.png> saved





Mode 17: IEEE 802.11ax 80 MHz Continuous TX Mode_ANT-1	
CH106	
CH122	
CH155	

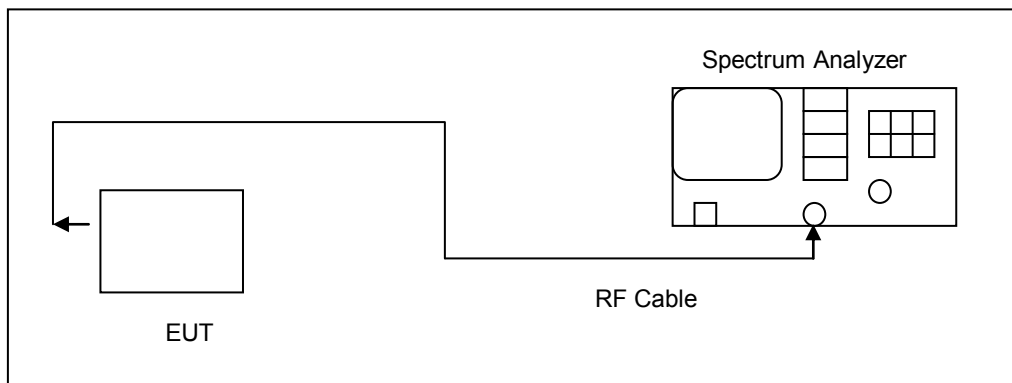


4.3.4 26 dB頻寬之要求

合格標準:

N/A

測試架構圖：



測試結果:

操作模式	: Mode 8 / Mode 9 / Mode 10 / Mode 11 / Mode 12 / Mode 13 / Mode 14 / Mode 15 / Mode 16 / Mode 17 / Mode 18
測試結果	: 合格

操作模式	頻道 (CH)	頻率 (MHz)	26 dB 頻寬量測值 (MHz)	
			ANT-0	ANT-1
Mode 8	36	5180.0	20.933	20.552
	40	5200.0	20.845	20.741
	48	5240.0	20.625	20.639
	52	5260.0	20.976	20.669
	56	5280.0	21.724	20.552
	64	5320.0	21.175	20.184
	100	5500.0	20.832	20.651
	112	5560.0	20.527	20.597
Mode 9	140	5700.0	20.943	20.694
	52	5260.0	21.472	21.020
	56	5280.0	21.586	21.073
	64	5320.0	21.448	21.018
	100	5500.0	21.323	20.994
	112	5560.0	21.433	20.953
Mode 10	140	5700.0	21.248	20.998
	54	5270.0	60.485	42.550
	62	5310.0	43.429	42.051
	102	5510.0	43.375	42.155
	110	5550.0	60.338	42.707
Mode 11	134	5670.0	43.355	42.763
	36	5180.0	21.489	20.977
	40	5200.0	21.627	20.788
	48	5240.0	21.589	21.194
	52	5260.0	21.550	21.009
	56	5280.0	22.224	21.078
	64	5320.0	21.480	21.161
	100	5500.0	21.223	20.958
	112	5560.0	21.507	21.284
	140	5700.0	21.452	21.057

操作模式	: Mode 8 / Mode 9 / Mode 10 / Mode 11 / Mode 12 / Mode 13 / Mode 14 / Mode 15 / Mode 16 / Mode 17 / Mode 18
測試結果	: 合格

操作模式	頻道 (CH)	頻率 (MHz)	26 dB 頻寬量測值 (MHz)	
			ANT-0	ANT-1
Mode 12	38	5190.0	43.364	42.283
	46	5230.0	60.176	43.323
	54	5270.0	48.635	42.771
	62	5310.0	43.249	42.364
	102	5510.0	43.210	41.848
	110	5550.0	60.086	42.700
	134	5670.0	42.873	41.993
Mode 13	42	5210.0	85.770	84.423
	58	5290.0	85.612	84.139
	106	5530.0	85.849	84.259
	122	5610.0	86.149	83.975
Mode 14	50	5250.0	171.847	169.882
	114	5570.0	171.419	170.942
Mode 15	36	5180.0	21.263	20.892
	40	5200.0	21.095	21.170
	48	5240.0	21.220	21.287
	52	5260.0	21.162	21.309
	56	5280.0	21.332	20.845
	64	5320.0	21.082	21.065
	100	5500.0	21.157	21.153
	112	5560.0	21.174	21.058
	140	5700.0	21.028	21.092
Mode 16	38	5190.0	42.060	41.580
	46	5230.0	44.172	41.496
	54	5270.0	44.057	41.695
	62	5310.0	41.837	41.688
	102	5510.0	41.753	41.796
	110	5550.0	41.937	41.558
	134	5670.0	41.528	41.947
Mode 17	42	5210.0	82.229	82.398
	58	5290.0	82.714	81.839
	106	5530.0	82.487	82.321
	122	5610.0	82.833	81.397
Mode 18	50	5250.0	164.170	164.656
	114	5570.0	164.177	164.163