

APPENDIX REPORT

Project No.	SHT1911084903EW	Radio Specification	WIFI 5G
Test sample No.	YPHT19110849003	Model No.	T3.0
Start test date	2019/9/11	Finish date	2019/9/11
Temperature	25°C	Humidity	50%
Test Engineer	Ximing Huang	Auditor	<i>William.wang</i>

Appendix clause	Test item	Result
A	Maximum Conducted Output Power	PASS
B	Maximum Power Spectral Density	PASS
C	26 dB Bandwidth	PASS
D	99% Occupy bandwidth	PASS
E	6 dB Bandwidth	PASS
F	Frequency stability	PASS

Appendix A: Maximum Conducted Output Power

Band	Bandwidth (MHz)	Type	Channel	Conducted Output Power (dBm)	Limit (dBm)	Result
I	20	802.11ac	CH _L	19.20	24.00	Pass
			CH _M	20.15		
			CH _H	20.01		
		802.11n	CH _L	19.28	24.00	Pass
			CH _M	20.18		
			CH _H	19.32		
		802.11a	CH _L	19.37	24.00	Pass
			CH _M	20.34		
			CH _H	20.12		
	40	802.11ac	CH _L	19.37	24.00	Pass
			CH _H	19.93		
	80	802.11ac	CH _M	19.58	24.00	Pass

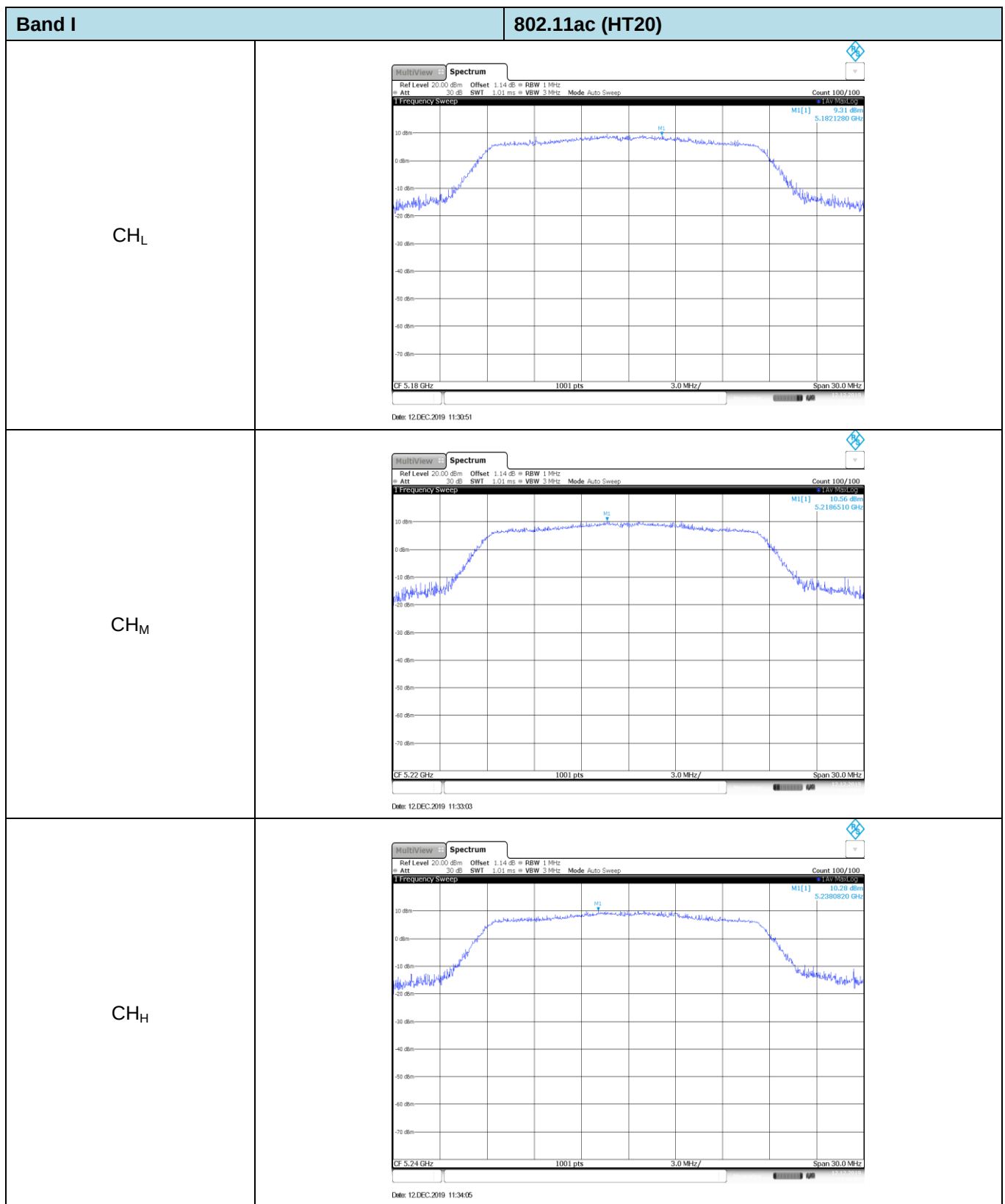
Band	Bandwidth (MHz)	Type	Channel	Conducted Output Power (dBm)	Limit (dBm)	Result
IV	20	802.11ac	CH _L	8.89	30.00	Pass
			CH _M	7.71		
			CH _H	7.94		
		802.11n	CH _L	8.95	30.00	Pass
			CH _M	7.69		
			CH _H	7.93		
		802.11a	CH _L	9.16	30.00	Pass
			CH _M	7.84		
			CH _H	8.03		
	40	802.11ac	CH _L	6.89	30.00	Pass
			CH _H	6.38		
	80	802.11ac	CH _M	6.69	30.00	Pass

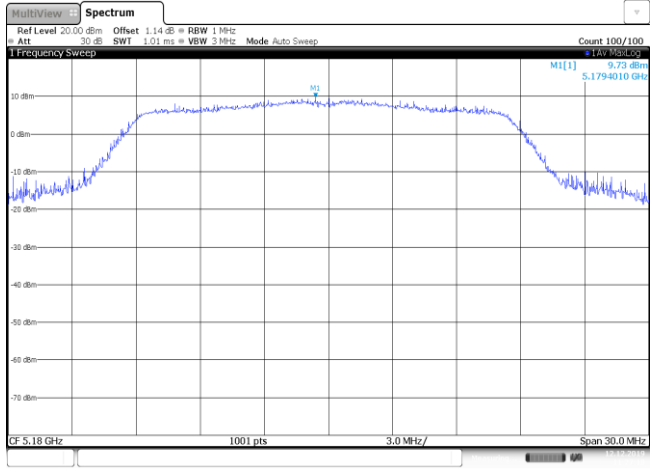
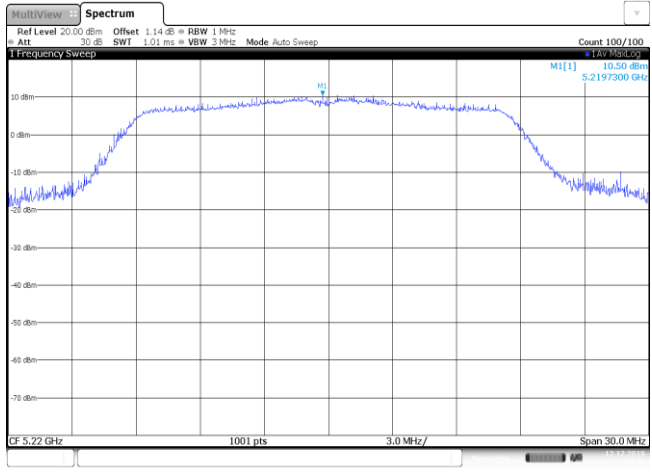
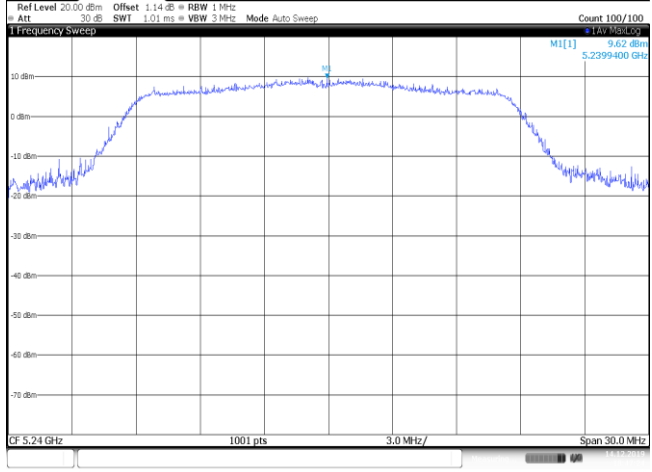
Appendix B: Maximum Power Spectral Density

Band	Bandwidth (MHz)	Type	Channel	Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
I	20	802.11ac	CH _L	9.31	11.00	Pass
			CH _M	10.56		
			CH _H	10.28		
		802.11n	CH _L	9.73	11.00	Pass
			CH _M	10.50		
			CH _H	9.62		
		802.11a	CH _L	9.76	11.00	Pass
			CH _M	10.85		
			CH _H	10.58		
	40	802.11ac	CH _L	6.83	11.00	Pass
			CH _H	7.60		
	80	802.11ac	CH _M	4.70	11.00	Pass

Band	Bandwidth (MHz)	Type	Channel	Power Spectral Density (dBm/500kHz)	Limit (dBm/500KHz)	Result
IV	20	802.11ac	CH _L	-2.47	30.00	Pass
			CH _M	-4.16		
			CH _H	-4.70		
		802.11n	CH _L	-2.14	30.00	Pass
			CH _M	-4.07		
			CH _H	-4.27		
		802.11a	CH _L	-2.00	30.00	Pass
			CH _M	-3.73		
			CH _H	-4.07		
	40	802.11ac	CH _L	-7.63	30.00	Pass
			CH _H	-8.33		
	80	802.11ac	CH _M	-10.24	30.00	Pass

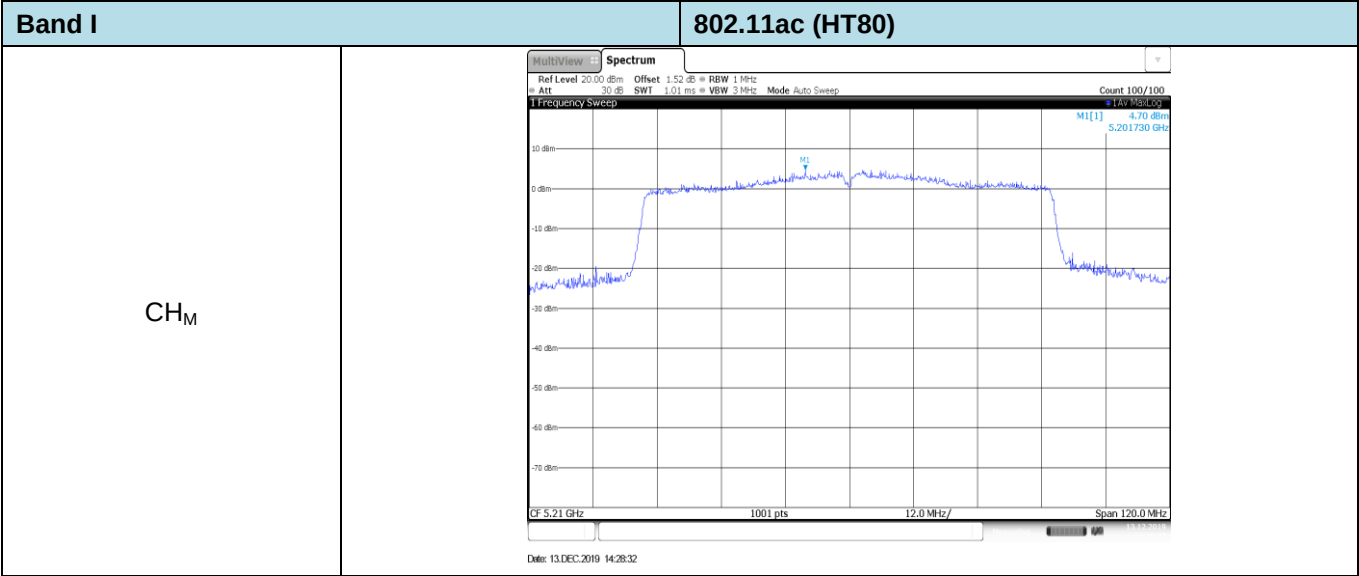
Test plot as follows:

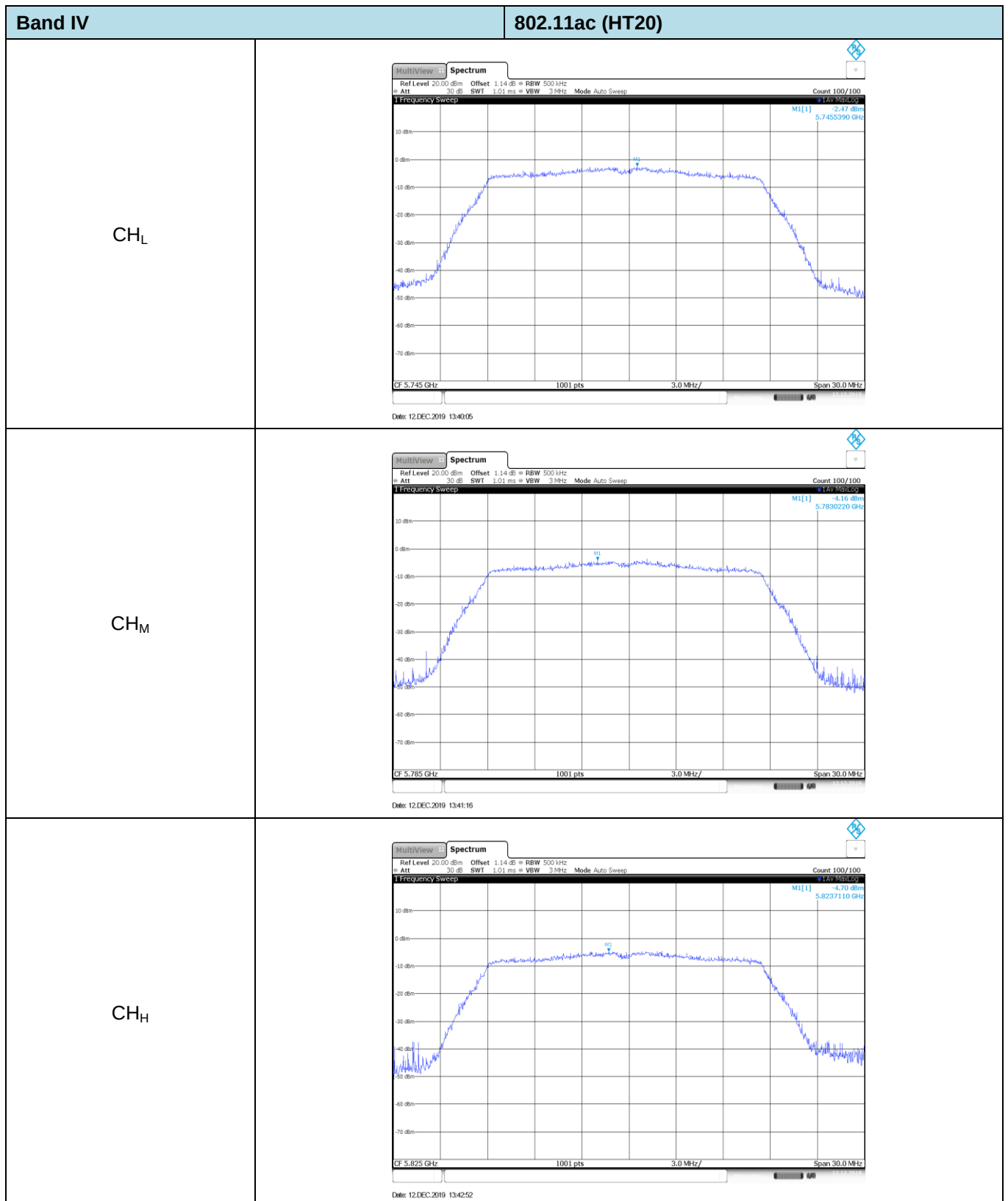


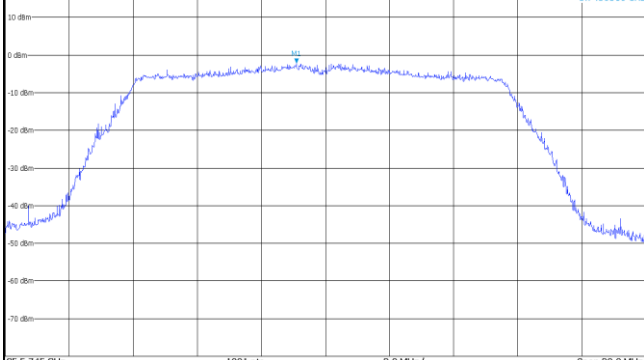
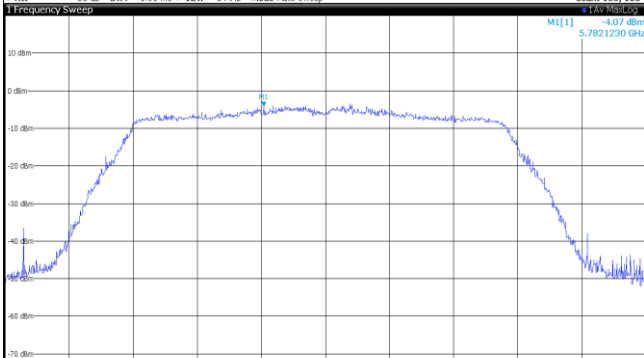
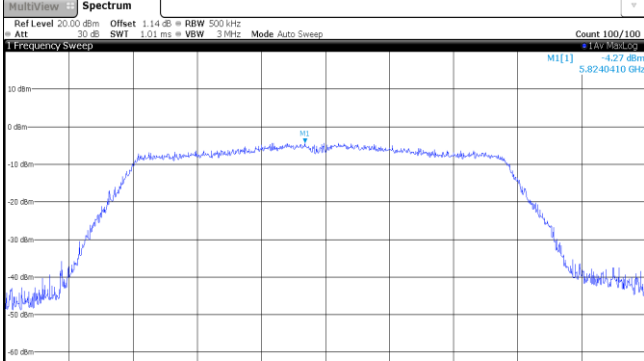
Band I	802.11n (HT20)
CH _L	 Ref Level 20.00 dBm Offset 1.14 dB RBW 1 MHz Att 30 dB SWI 1.01 ms VBW 3 MHz Mode Auto Sweep Count 100/100 M1[1] 9.73 dBm 5.1794010 GHz CF 5.18 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 12.DEC.2019 11:27:18
CH _M	 Ref Level 20.00 dBm Offset 1.14 dB RBW 1 MHz Att 30 dB SWI 1.01 ms VBW 3 MHz Mode Auto Sweep Count 100/100 M1[1] 10.50 dBm 5.2197300 GHz CF 5.22 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 12.DEC.2019 11:28:30
CH _H	 Ref Level 20.00 dBm Offset 1.14 dB RBW 1 MHz Att 30 dB SWI 1.01 ms VBW 3 MHz Mode Auto Sweep Count 100/100 M1[1] 9.62 dBm 5.2399400 GHz CF 5.24 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 14.DEC.2019 18:47:24

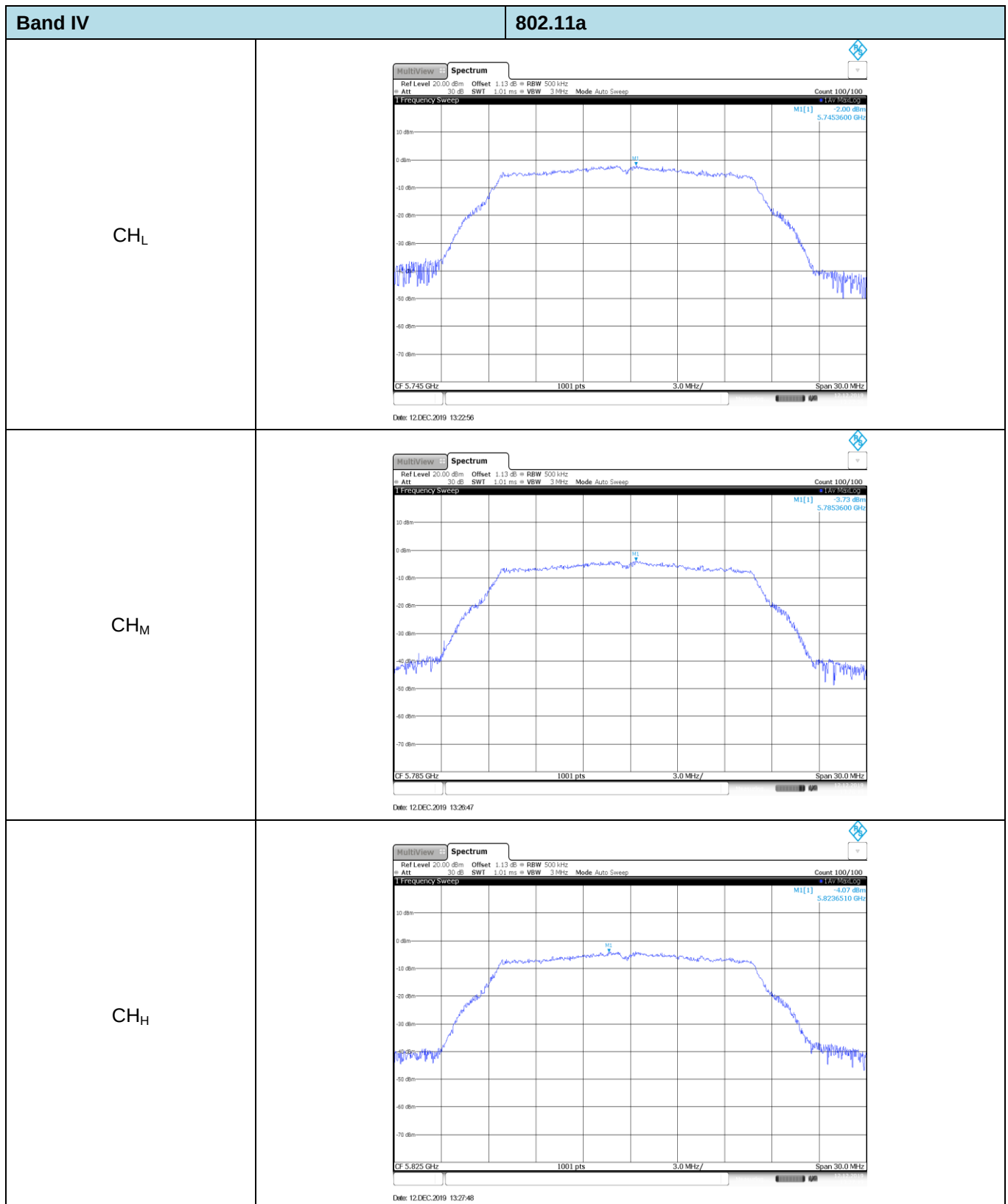
Band I		802.11a
CH _L		

Band I		802.11ac (HT40)
CH _L	MultiView Spectrum Ref Level 20.00 dBm Att 30 dB Offset 1.27 dB RBW 1 MHz SWT 1.01 ms VBW 3 MHz Mode Auto Sweep Count 100/100 1 Frequency Sweep 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.19 GHz 1001 pts 6.0 MHz/ Span 60.0 MHz MI[1] 6.83 dBm 5.1879020 GHz Date: 13.DEC.2019 14:21:26	
CH _H	MultiView Spectrum Ref Level 20.00 dBm Att 30 dB Offset 1.27 dB RBW 1 MHz SWT 1.01 ms VBW 3 MHz Mode Auto Sweep Count 100/100 1 Frequency Sweep 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.23 GHz 1001 pts 6.0 MHz/ Span 60.0 MHz MI[1] 7.60 dBm 5.2257440 GHz Date: 13.DEC.2019 14:24:38	

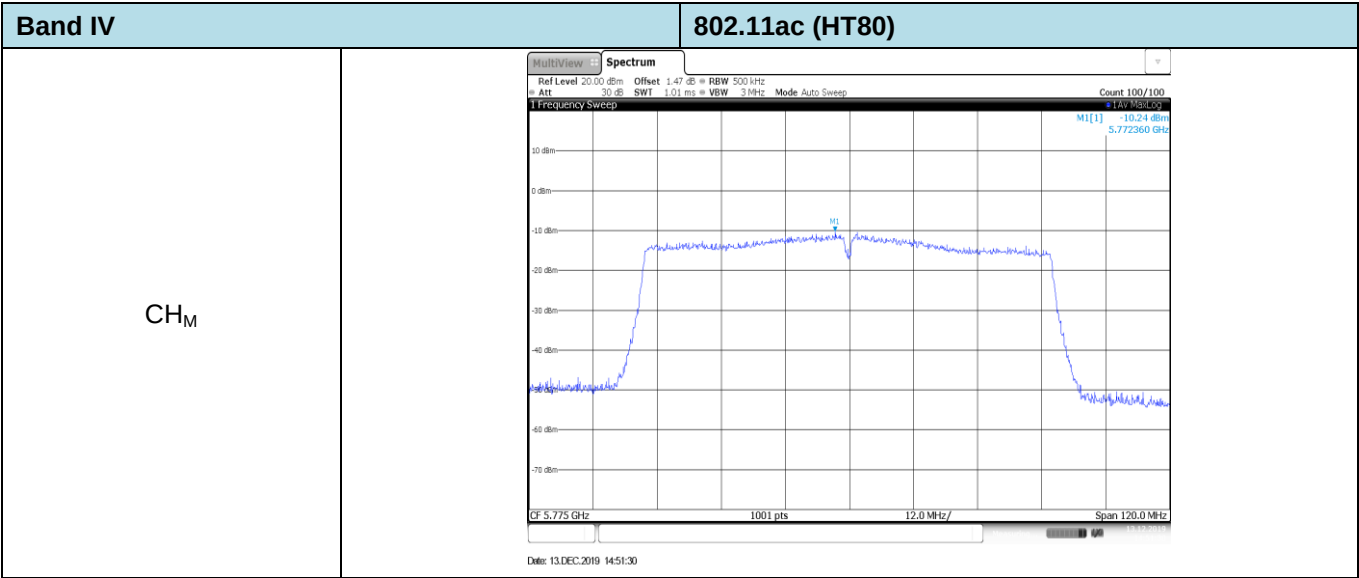




Band IV		802.11n (HT20)	
CH _L	MultiView Spectrum Ref Level 20.00 dBm Offset 1.14 dB RBW 500 kHz Att 30 dB SWT 1.01 ms VBW 3 MHz Mode Auto Sweep Count 100/100 1 Frequency Sweep M1[1] -2.14 dBm 5.7436510 GHz  CF 5.745 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 12.DEC.2019 13:29:11		
CH _M	MultiView Spectrum Ref Level 20.00 dBm Offset 1.14 dB RBW 500 kHz Att 30 dB SWT 1.01 ms VBW 3 MHz Mode Auto Sweep Count 100/100 1 Frequency Sweep M1[1] -4.07 dBm 5.7821230 GHz  CF 5.785 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 12.DEC.2019 13:31:57		
CH _H	MultiView Spectrum Ref Level 20.00 dBm Offset 1.14 dB RBW 500 kHz Att 30 dB SWT 1.01 ms VBW 3 MHz Mode Auto Sweep Count 100/100 1 Frequency Sweep M1[1] -4.27 dBm 5.8240410 GHz  CF 5.825 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 12.DEC.2019 13:33:00		



Band IV		802.11ac (HT40)
CH _L	MultiView Spectrum Ref Level 20.00 dBm Offset 1.27 dB RBW 500 kHz Att 30 dB SWF 1.01 ms VBW 3 MHz Mode Auto Sweep Count 100/100 1 Frequency Sweep 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm M1[1] -7.63 dBm 5.7499050 GHz M2 CF 5.755 GHz 1001 pts 6.0 MHz/ Span 60.0 MHz Date: 13.DEC.2019 14:45:09	
CH _H	MultiView Spectrum Ref Level 20.00 dBm Offset 1.27 dB RBW 500 kHz Att 30 dB SWF 1.01 ms VBW 3 MHz Mode Auto Sweep Count 100/100 1 Frequency Sweep 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm M1[1] -8.33 dBm 5.7912240 GHz M1 CF 5.795 GHz 1001 pts 6.0 MHz/ Span 60.0 MHz Date: 13.DEC.2019 14:48:53	

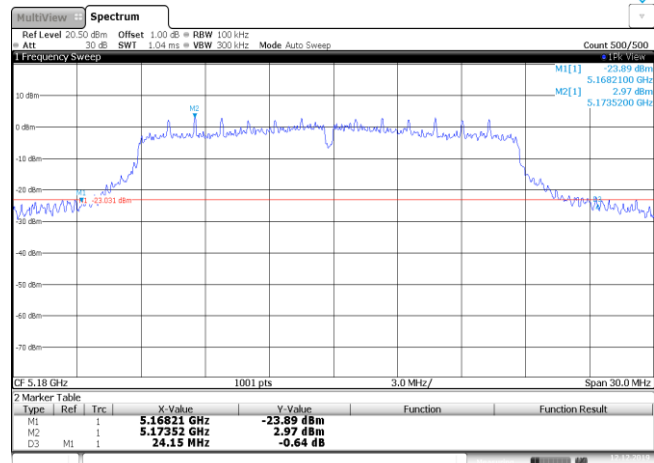


Appendix C: 26dB bandwidth

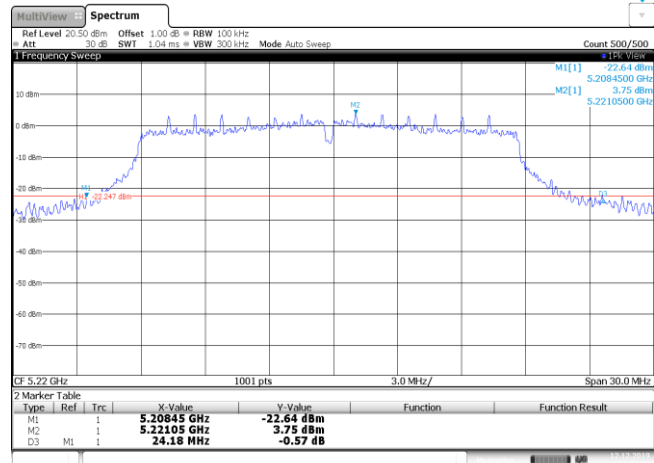
Band	Bandwidth (MHz)	Type	Channel	26dB bandwidth (MHz)	Result
I	20	802.11ac	CH _L	24.15	Pass
			CH _M	24.18	
			CH _H	24.63	
		802.11n	CH _L	26.34	Pass
			CH _M	25.14	
			CH _H	26.07	
		802.11a	CH _L	24.87	Pass
			CH _M	22.50	
			CH _H	23.25	
	40	802.11ac	CH _L	47.76	Pass
			CH _H	47.70	
	80	802.11ac	CH _M	85.92	Pass

Band I

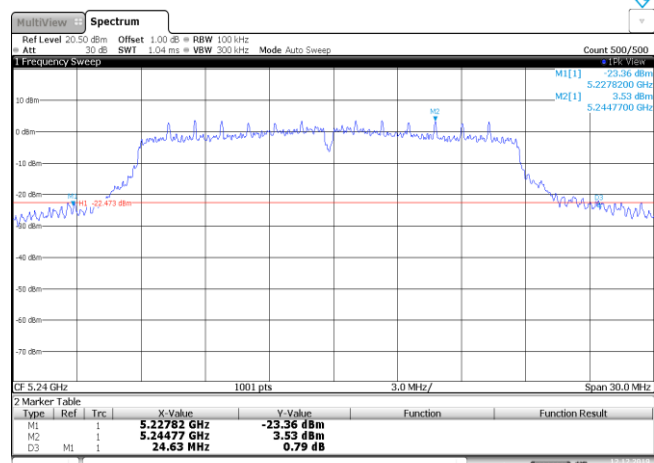
802.11ac (HT20)

CH_L

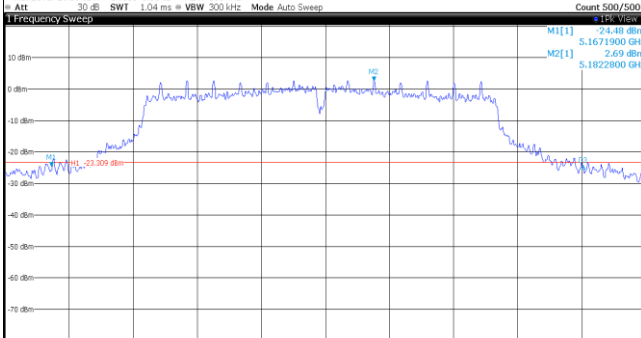
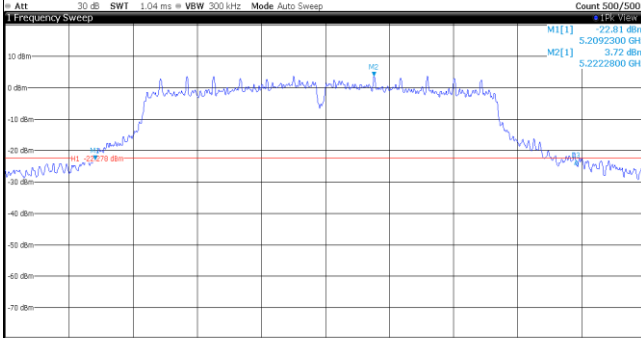
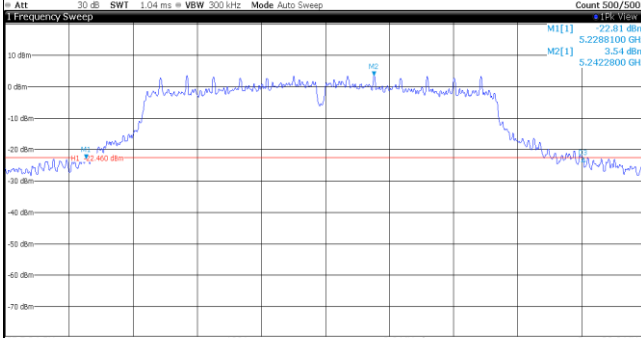
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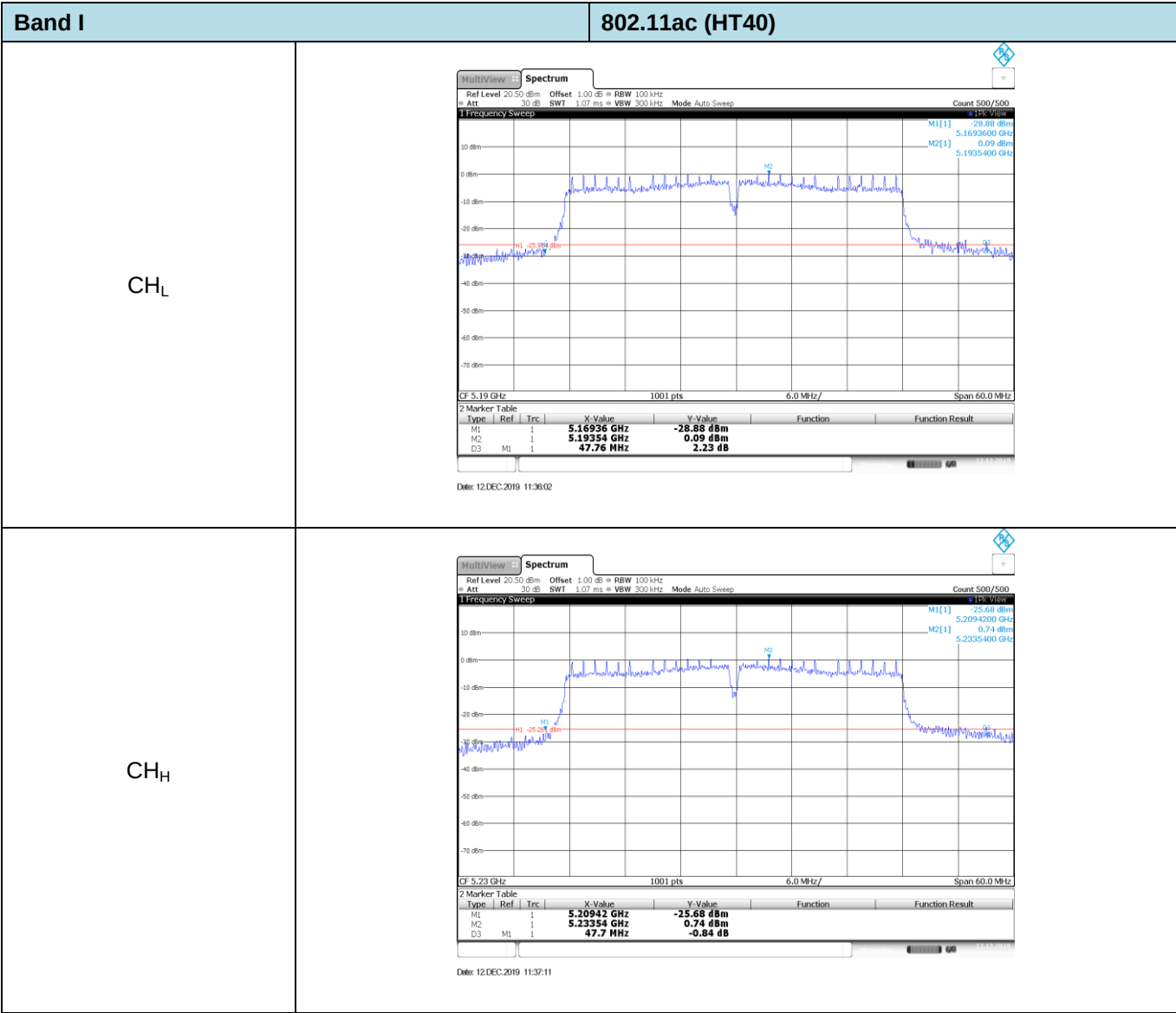
CH_M

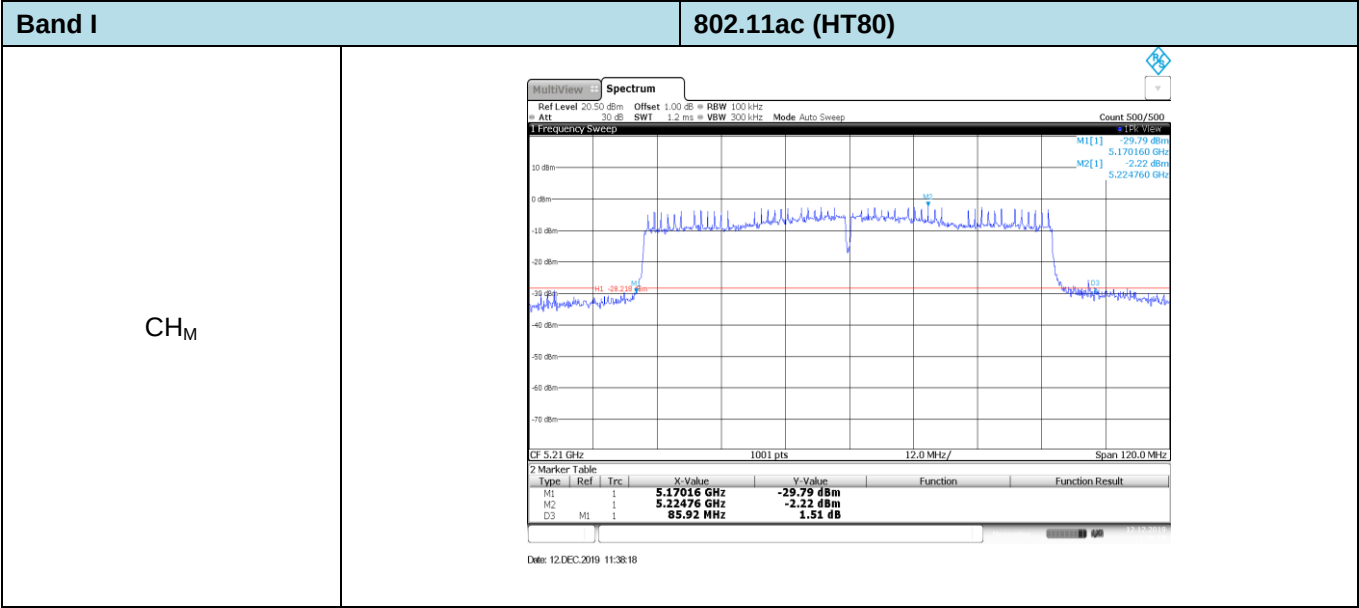
Date: 12.DEC.2019 11:32:20

CH_H

Date: 12.DEC.2019 11:33:34

Band I	802.11a																												
CH _L	MultiViewSpectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWI 1.04 ms VBW 300 kHz Mode Auto Sweep Count 500/500 1 Frequency Sweep  CF 5.18 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz 2 Marker Table <table><tr><th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr><tr><td>M1</td><td>1</td><td></td><td>5.16719 GHz</td><td>-24.48 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>5.18228 GHz</td><td>2.69 dBm</td><td></td><td></td></tr><tr><td>D3</td><td>M1</td><td>1</td><td>24.87 MHz</td><td>0.33 dB</td><td></td><td></td></tr></table> Date: 12.DEC.2019 11:20:27	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		5.16719 GHz	-24.48 dBm			M2	1		5.18228 GHz	2.69 dBm			D3	M1	1	24.87 MHz	0.33 dB		
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																							
M1	1		5.16719 GHz	-24.48 dBm																									
M2	1		5.18228 GHz	2.69 dBm																									
D3	M1	1	24.87 MHz	0.33 dB																									
CH _M	MultiViewSpectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWI 1.04 ms VBW 300 kHz Mode Auto Sweep Count 500/500 1 Frequency Sweep  CF 5.22 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz 2 Marker Table <table><tr><th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr><tr><td>M1</td><td>1</td><td></td><td>5.20923 GHz</td><td>-22.81 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>5.22228 GHz</td><td>3.72 dBm</td><td></td><td></td></tr><tr><td>D3</td><td>M1</td><td>1</td><td>22.5 MHz</td><td>-0.19 dB</td><td></td><td></td></tr></table> Date: 12.DEC.2019 11:22:36	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		5.20923 GHz	-22.81 dBm			M2	1		5.22228 GHz	3.72 dBm			D3	M1	1	22.5 MHz	-0.19 dB		
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																							
M1	1		5.20923 GHz	-22.81 dBm																									
M2	1		5.22228 GHz	3.72 dBm																									
D3	M1	1	22.5 MHz	-0.19 dB																									
CH _H	MultiViewSpectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWI 1.04 ms VBW 300 kHz Mode Auto Sweep Count 500/500 1 Frequency Sweep  CF 5.24 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz 2 Marker Table <table><tr><th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr><tr><td>M1</td><td>1</td><td></td><td>5.22881 GHz</td><td>-22.81 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>5.24228 GHz</td><td>3.54 dBm</td><td></td><td></td></tr><tr><td>D3</td><td>M1</td><td>1</td><td>23.25 MHz</td><td>0.27 dB</td><td></td><td></td></tr></table> Date: 12.DEC.2019 11:23:55	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		5.22881 GHz	-22.81 dBm			M2	1		5.24228 GHz	3.54 dBm			D3	M1	1	23.25 MHz	0.27 dB		
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																							
M1	1		5.22881 GHz	-22.81 dBm																									
M2	1		5.24228 GHz	3.54 dBm																									
D3	M1	1	23.25 MHz	0.27 dB																									





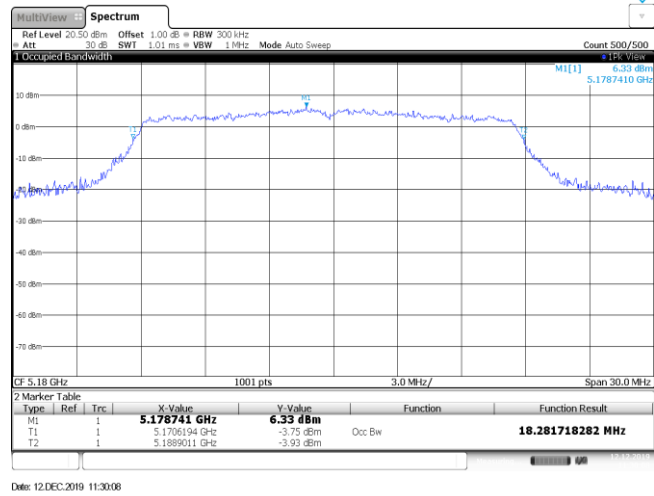
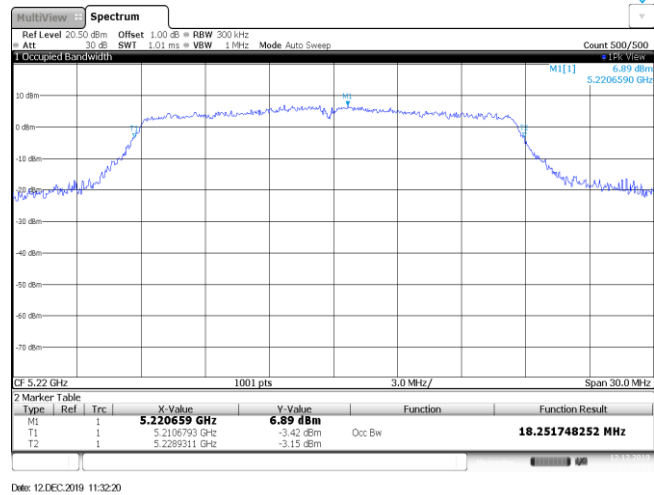
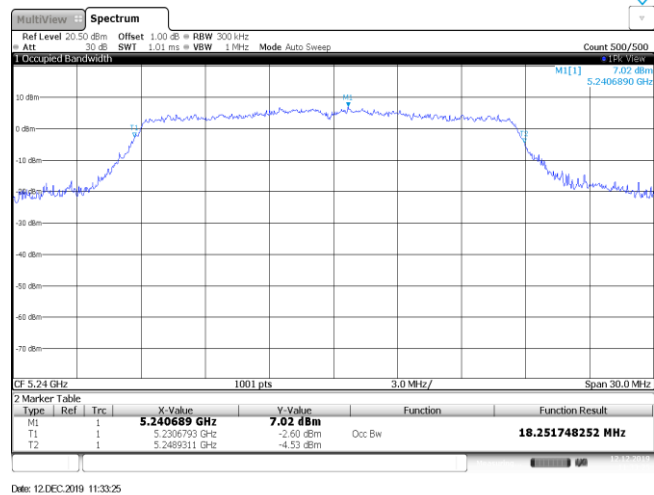
Appendix D: 99% Occupy bandwidth

Band	Bandwidth (MHz)	Type	Channel	99% Occupy bandwidth (MHz)	Result
I	20	802.11ac	CH _L	18.28	Pass
			CH _M	18.25	
			CH _H	18.25	
		802.11n	CH _L	18.25	Pass
			CH _M	18.25	
			CH _H	18.34	
		802.11a	CH _L	17.38	Pass
			CH _M	17.29	
			CH _H	17.38	
	40	802.11ac	CH _L	36.62	Pass
			CH _H	36.50	
	80	802.11ac	CH _M	75.76	Pass

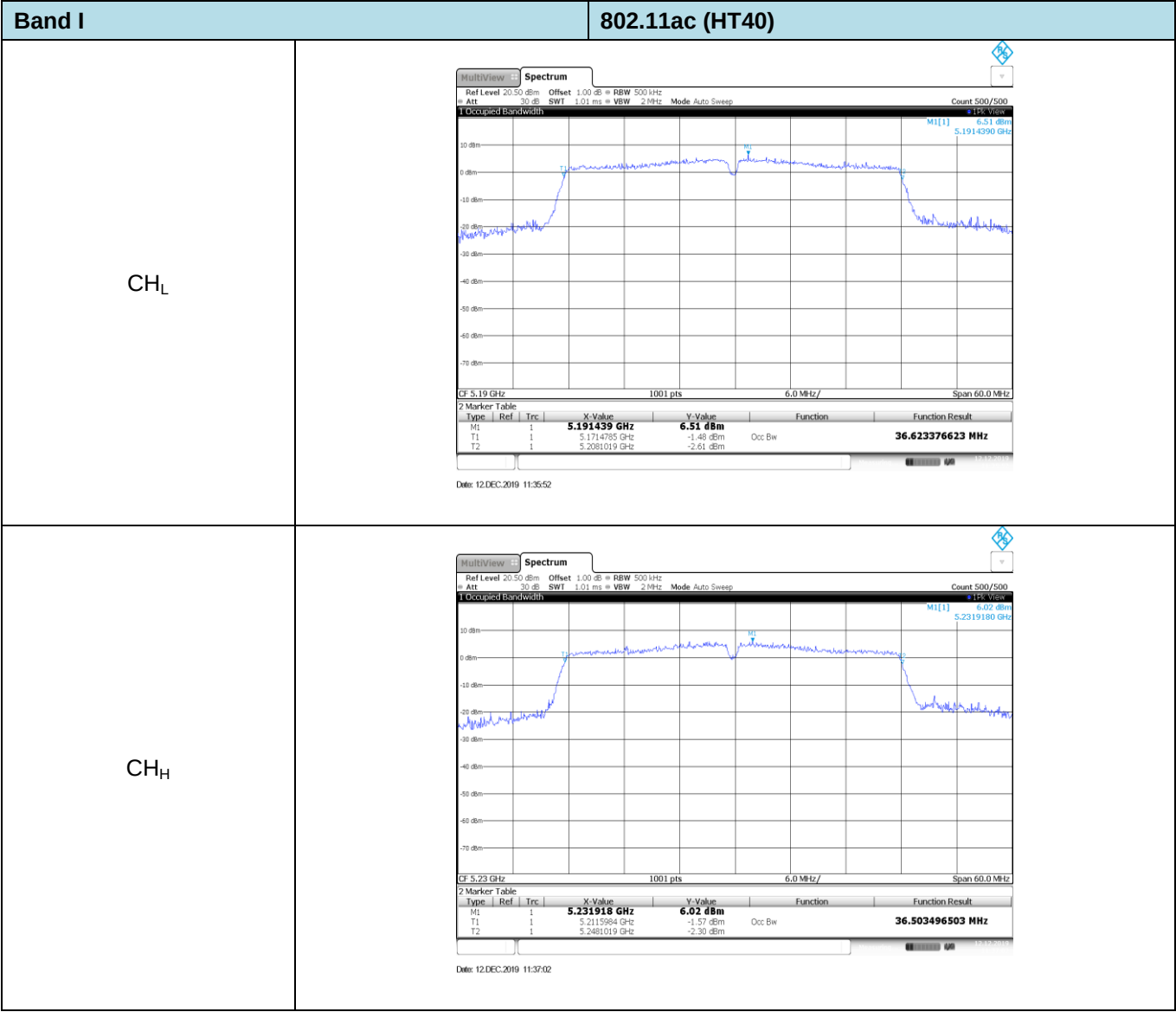
Band	Bandwidth (MHz)	Type	Channel	99% Occupy bandwidth (MHz)	Result
IV	20	802.11ac	CH _L	17.37	Pass
			CH _M	17.58	
			CH _H	17.37	
		802.11n	CH _L	17.61	Pass
			CH _M	17.34	
			CH _H	17.64	
		802.11a	CH _L	16.38	Pass
			CH _M	16.38	
			CH _H	16.38	
	40	802.11ac	CH _L	36.06	Pass
			CH _H	36.42	
	80	802.11ac	CH _M	75.72	Pass

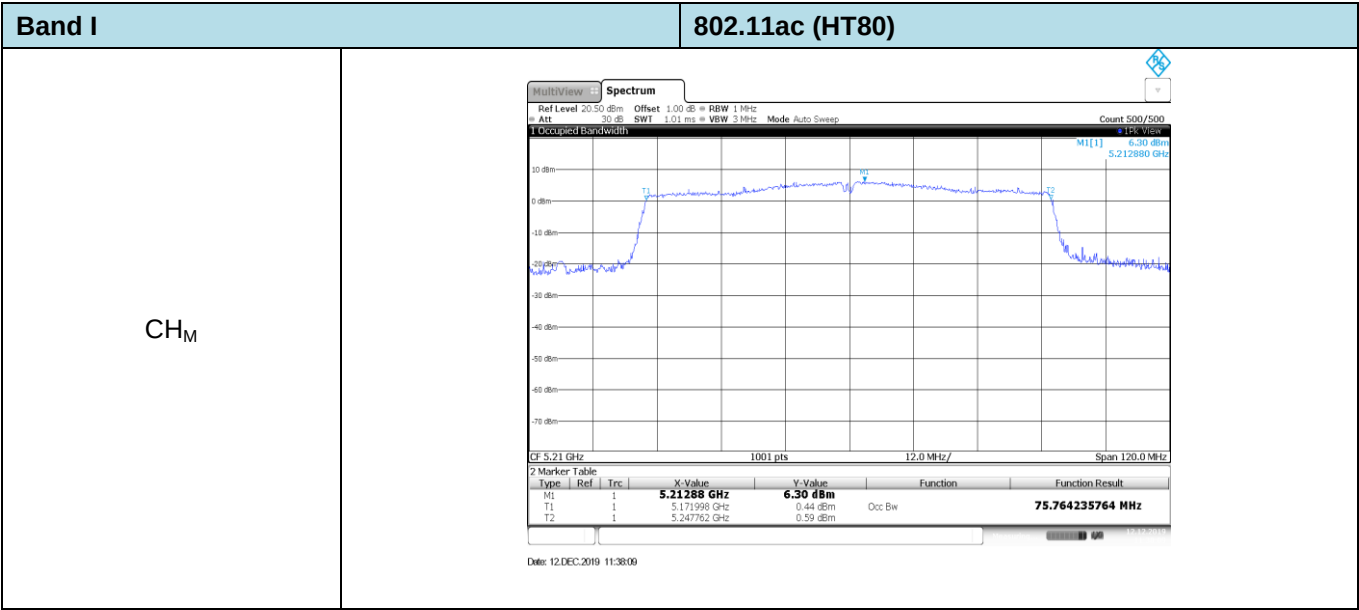
Band I

802.11ac (HT20)

CH_LCH_MCH_H

Band I		802.11n (HT20)																											
CH _L	MultiView Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 300 kHz Att 30 dB SWT 1.01 ms VBW 1 MHz Mode Auto Sweep Count 500/500 1 Occupied Bandwidth 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm 5.178262 GHz 5.178262 GHz CF 5.18 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz 2 Marker Table <table><tr><th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr><tr><td>M1</td><td>1</td><td></td><td>5.178262 GHz</td><td>5.93 dBm</td><td></td><td></td></tr><tr><td>T1</td><td>1</td><td></td><td>5.1706793 GHz</td><td>-3.68 dBm</td><td>Occ Bw</td><td>18.251748252 MHz</td></tr><tr><td>T2</td><td>1</td><td></td><td>5.1889311 GHz</td><td>-5.68 dBm</td><td></td><td></td></tr></table> Date: 12.DEC.2019 11:26:35	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		5.178262 GHz	5.93 dBm			T1	1		5.1706793 GHz	-3.68 dBm	Occ Bw	18.251748252 MHz	T2	1		5.1889311 GHz	-5.68 dBm		
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																							
M1	1		5.178262 GHz	5.93 dBm																									
T1	1		5.1706793 GHz	-3.68 dBm	Occ Bw	18.251748252 MHz																							
T2	1		5.1889311 GHz	-5.68 dBm																									
CH _M	MultiView Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 300 kHz Att 30 dB SWT 1.01 ms VBW 1 MHz Mode Auto Sweep Count 500/500 1 Occupied Bandwidth 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm 5.2187710 GHz 5.2187710 GHz CF 5.22 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz 2 Marker Table <table><tr><th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr><tr><td>M1</td><td>1</td><td></td><td>5.218771 GHz</td><td>6.66 dBm</td><td></td><td></td></tr><tr><td>T1</td><td>1</td><td></td><td>5.2107093 GHz</td><td>-3.61 dBm</td><td>Occ Bw</td><td>18.251748252 MHz</td></tr><tr><td>T2</td><td>1</td><td></td><td>5.228961 GHz</td><td>-4.61 dBm</td><td></td><td></td></tr></table> Date: 12.DEC.2019 11:27:47	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		5.218771 GHz	6.66 dBm			T1	1		5.2107093 GHz	-3.61 dBm	Occ Bw	18.251748252 MHz	T2	1		5.228961 GHz	-4.61 dBm		
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																							
M1	1		5.218771 GHz	6.66 dBm																									
T1	1		5.2107093 GHz	-3.61 dBm	Occ Bw	18.251748252 MHz																							
T2	1		5.228961 GHz	-4.61 dBm																									
CH _H	MultiView Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 300 kHz Att 30 dB SWT 1.01 ms VBW 1 MHz Mode Auto Sweep Count 500/500 1 Occupied Bandwidth 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm 5.2389210 GHz 5.2389210 GHz CF 5.24 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz 2 Marker Table <table><tr><th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr><tr><td>M1</td><td>1</td><td></td><td>5.238921 GHz</td><td>7.17 dBm</td><td></td><td></td></tr><tr><td>T1</td><td>1</td><td></td><td>5.2306494 GHz</td><td>-2.52 dBm</td><td>Occ Bw</td><td>18.341658342 MHz</td></tr><tr><td>T2</td><td>1</td><td></td><td>5.248991 GHz</td><td>-5.91 dBm</td><td></td><td></td></tr></table> Date: 12.DEC.2019 11:29:01	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		5.238921 GHz	7.17 dBm			T1	1		5.2306494 GHz	-2.52 dBm	Occ Bw	18.341658342 MHz	T2	1		5.248991 GHz	-5.91 dBm		
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																							
M1	1		5.238921 GHz	7.17 dBm																									
T1	1		5.2306494 GHz	-2.52 dBm	Occ Bw	18.341658342 MHz																							
T2	1		5.248991 GHz	-5.91 dBm																									



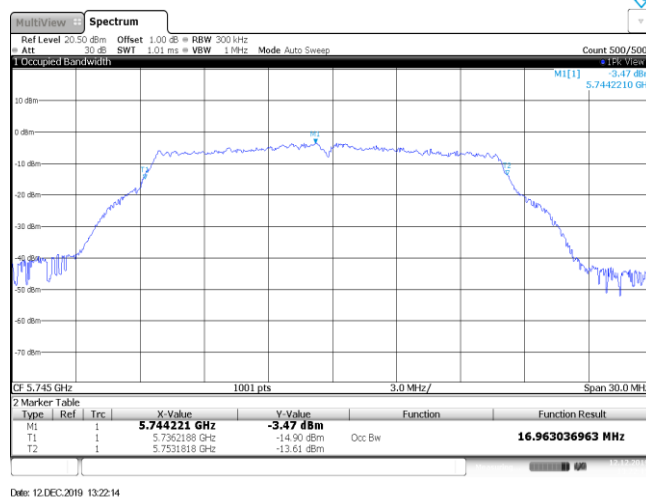
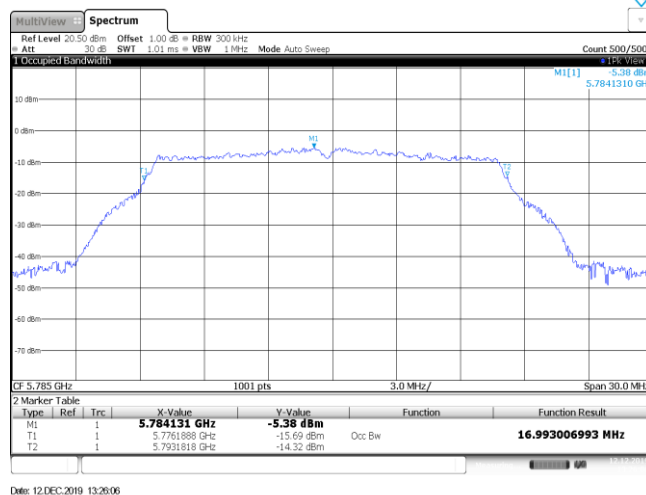
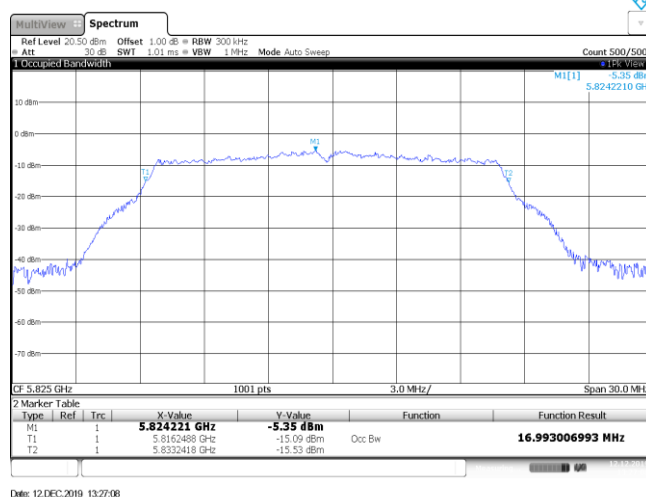


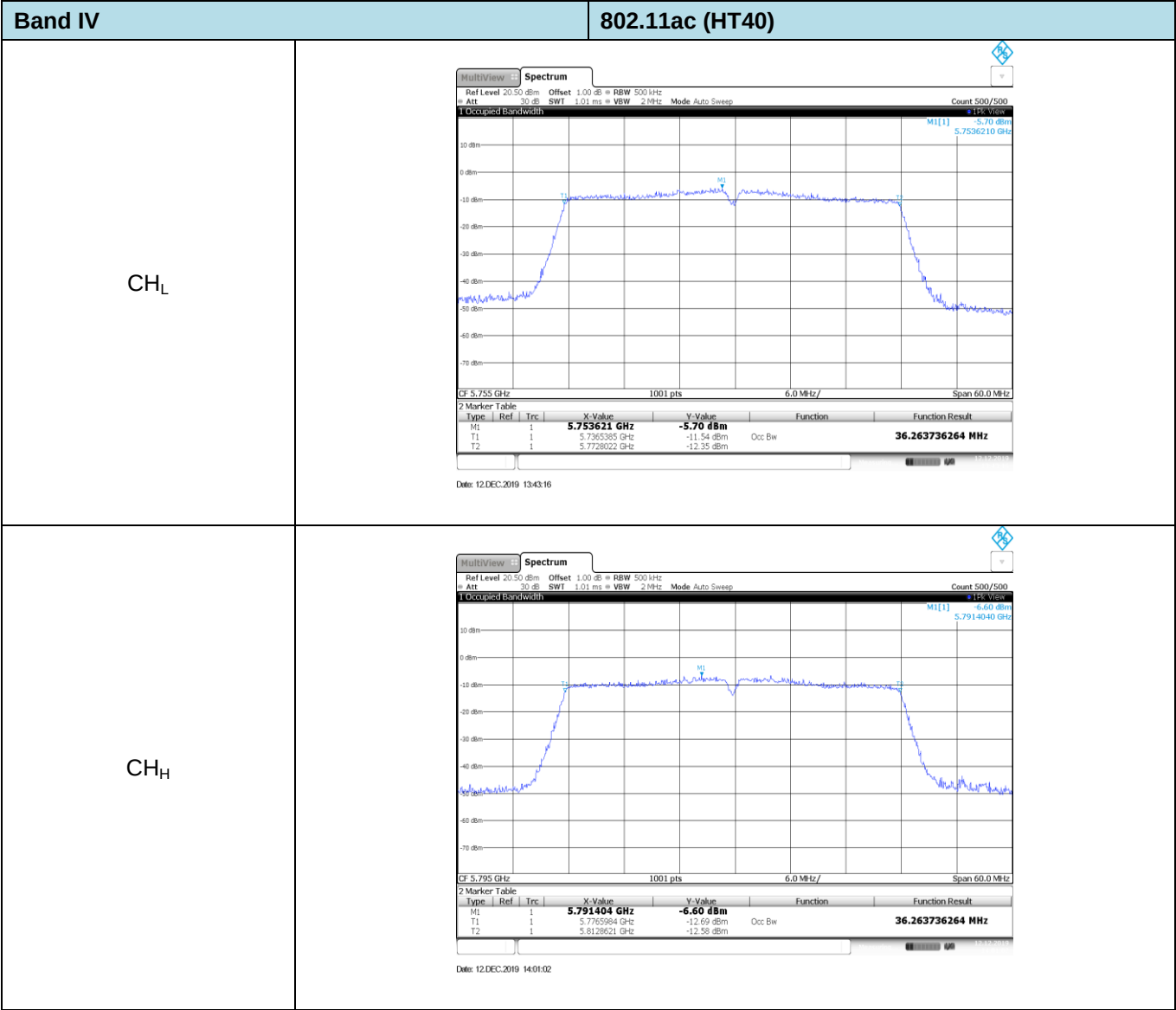
Band IV		802.11ac (HT20)																											
CH _L	MultiView Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 300 kHz Att 30 dB SWT 1.01 ms VBW 1 MHz Mode Auto Sweep Count 500/500 1 Occupied Bandwidth 13.43 dBm M1[1] 5.7438910 GHz CF 5.745 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz 2 Marker Table <table><tr><th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr><tr><td>M1</td><td>1</td><td></td><td>5.743891 GHz</td><td>-3.43 dBm</td><td></td><td></td></tr><tr><td>T1</td><td>1</td><td></td><td>5.7357093 GHz</td><td>-13.21 dBm</td><td>Occ Bw</td><td>18.071928072 MHz</td></tr><tr><td>T2</td><td>1</td><td></td><td>5.7537812 GHz</td><td>-13.11 dBm</td><td></td><td></td></tr></table> Date: 12.DEC.2019 13:39:23	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		5.743891 GHz	-3.43 dBm			T1	1		5.7357093 GHz	-13.21 dBm	Occ Bw	18.071928072 MHz	T2	1		5.7537812 GHz	-13.11 dBm		
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																							
M1	1		5.743891 GHz	-3.43 dBm																									
T1	1		5.7357093 GHz	-13.21 dBm	Occ Bw	18.071928072 MHz																							
T2	1		5.7537812 GHz	-13.11 dBm																									
CH _M	MultiView Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 300 kHz Att 30 dB SWT 1.01 ms VBW 1 MHz Mode Auto Sweep Count 500/500 1 Occupied Bandwidth 15.07 dBm M1[1] 5.7826320 GHz CF 5.785 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz 2 Marker Table <table><tr><th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr><tr><td>M1</td><td>1</td><td></td><td>5.782632 GHz</td><td>-6.07 dBm</td><td></td><td></td></tr><tr><td>T1</td><td>1</td><td></td><td>5.7757093 GHz</td><td>-15.16 dBm</td><td>Occ Bw</td><td>18.041958042 MHz</td></tr><tr><td>T2</td><td>1</td><td></td><td>5.7937512 GHz</td><td>-15.34 dBm</td><td></td><td></td></tr></table> Date: 12.DEC.2019 13:40:33	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		5.782632 GHz	-6.07 dBm			T1	1		5.7757093 GHz	-15.16 dBm	Occ Bw	18.041958042 MHz	T2	1		5.7937512 GHz	-15.34 dBm		
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																							
M1	1		5.782632 GHz	-6.07 dBm																									
T1	1		5.7757093 GHz	-15.16 dBm	Occ Bw	18.041958042 MHz																							
T2	1		5.7937512 GHz	-15.34 dBm																									
CH _H	MultiView Spectrum Ref Level 20.50 dBm Offset 1.00 dB RBW 300 kHz Att 30 dB SWT 1.01 ms VBW 1 MHz Mode Auto Sweep Count 500/500 1 Occupied Bandwidth 15.66 dBm M1[1] 5.8263790 GHz CF 5.825 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz 2 Marker Table <table><tr><th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr><tr><td>M1</td><td>1</td><td></td><td>5.826379 GHz</td><td>-5.66 dBm</td><td></td><td></td></tr><tr><td>T1</td><td>1</td><td></td><td>5.8157393 GHz</td><td>-15.19 dBm</td><td>Occ Bw</td><td>18.071928072 MHz</td></tr><tr><td>T2</td><td>1</td><td></td><td>5.8338112 GHz</td><td>-14.23 dBm</td><td></td><td></td></tr></table> Date: 12.DEC.2019 13:42:07	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		5.826379 GHz	-5.66 dBm			T1	1		5.8157393 GHz	-15.19 dBm	Occ Bw	18.071928072 MHz	T2	1		5.8338112 GHz	-14.23 dBm		
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																							
M1	1		5.826379 GHz	-5.66 dBm																									
T1	1		5.8157393 GHz	-15.19 dBm	Occ Bw	18.071928072 MHz																							
T2	1		5.8338112 GHz	-14.23 dBm																									

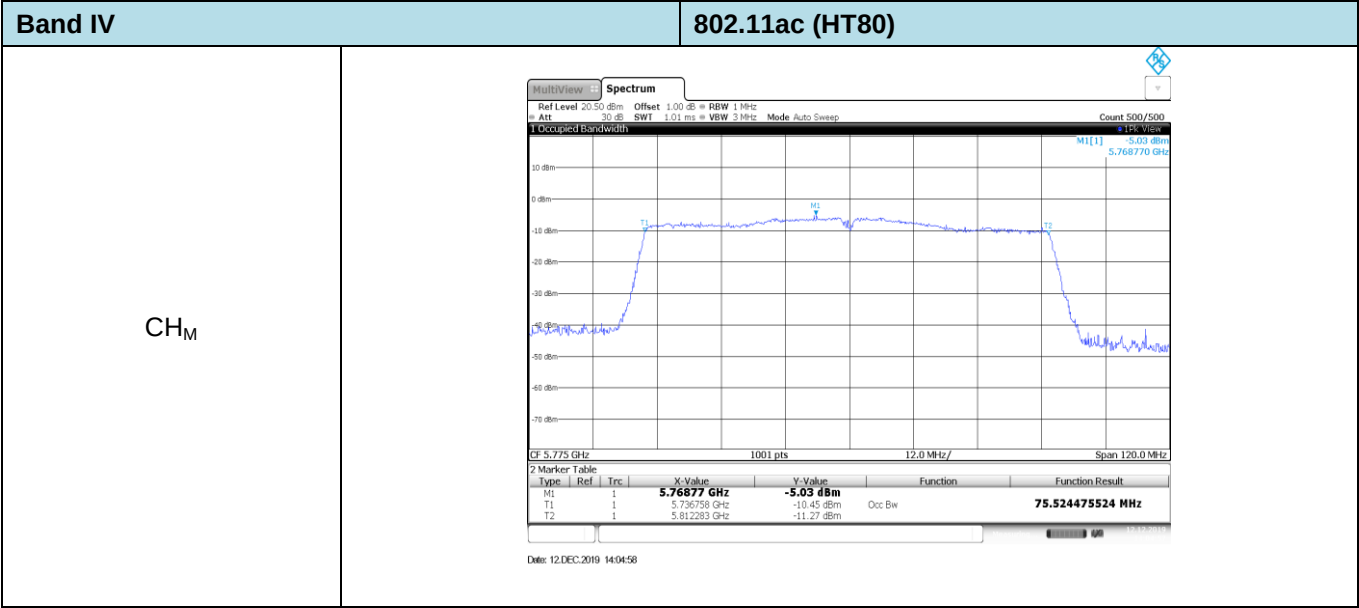
Band IV		802.11n (HT20)																												
CH _L	MultiView Spectrum Ref Level 20.50 dBm Att 30 dB Offset 1.00 dB RBW 300 kHz SWI 1.01 ms VBW 1 MHz Mode Auto Sweep Count 500/500 1 Occupied Bandwidth M1[1] 5.7443410 GHz -4.36 dBm CF 5.745 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz 2 Marker Table <table><tr><th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr><tr><td>M1</td><td>1</td><td></td><td>5.744341 GHz</td><td>-4.36 dBm</td><td></td><td></td></tr><tr><td>T1</td><td>1</td><td></td><td>5.7356793 GHz</td><td>-13.58 dBm</td><td>Occ Bw</td><td>18.101898102 MHz</td></tr><tr><td>T2</td><td>1</td><td></td><td>5.7537812 GHz</td><td>-13.68 dBm</td><td></td><td></td></tr></table> Date: 12.DEC.2019 13:28:28	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		5.744341 GHz	-4.36 dBm			T1	1		5.7356793 GHz	-13.58 dBm	Occ Bw	18.101898102 MHz	T2	1		5.7537812 GHz	-13.68 dBm			
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																								
M1	1		5.744341 GHz	-4.36 dBm																										
T1	1		5.7356793 GHz	-13.58 dBm	Occ Bw	18.101898102 MHz																								
T2	1		5.7537812 GHz	-13.68 dBm																										
CH _M	MultiView Spectrum Ref Level 20.50 dBm Att 30 dB Offset 1.00 dB RBW 300 kHz SWI 1.01 ms VBW 1 MHz Mode Auto Sweep Count 500/500 1 Occupied Bandwidth M1[1] 5.7833820 GHz -5.29 dBm CF 5.785 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz 2 Marker Table <table><tr><th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr><tr><td>M1</td><td>1</td><td></td><td>5.783382 GHz</td><td>-5.29 dBm</td><td></td><td></td></tr><tr><td>T1</td><td>1</td><td></td><td>5.7757093 GHz</td><td>-13.80 dBm</td><td>Occ Bw</td><td>18.041958042 MHz</td></tr><tr><td>T2</td><td>1</td><td></td><td>5.7937512 GHz</td><td>-14.25 dBm</td><td></td><td></td></tr></table> Date: 12.DEC.2019 13:31:13	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		5.783382 GHz	-5.29 dBm			T1	1		5.7757093 GHz	-13.80 dBm	Occ Bw	18.041958042 MHz	T2	1		5.7937512 GHz	-14.25 dBm			
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																								
M1	1		5.783382 GHz	-5.29 dBm																										
T1	1		5.7757093 GHz	-13.80 dBm	Occ Bw	18.041958042 MHz																								
T2	1		5.7937512 GHz	-14.25 dBm																										
CH _H	MultiView Spectrum Ref Level 20.50 dBm Att 30 dB Offset 1.00 dB RBW 300 kHz SWI 1.01 ms VBW 1 MHz Mode Auto Sweep Count 500/500 1 Occupied Bandwidth M1[1] 5.8225720 GHz -5.10 dBm CF 5.825 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz 2 Marker Table <table><tr><th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr><tr><td>M1</td><td>1</td><td></td><td>5.822572 GHz</td><td>-5.10 dBm</td><td></td><td></td></tr><tr><td>T1</td><td>1</td><td></td><td>5.8157393 GHz</td><td>-14.60 dBm</td><td>Occ Bw</td><td>18.041958042 MHz</td></tr><tr><td>T2</td><td>1</td><td></td><td>5.8337812 GHz</td><td>-15.05 dBm</td><td></td><td></td></tr></table> Date: 12.DEC.2019 13:32:17	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		5.822572 GHz	-5.10 dBm			T1	1		5.8157393 GHz	-14.60 dBm	Occ Bw	18.041958042 MHz	T2	1		5.8337812 GHz	-15.05 dBm			
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																								
M1	1		5.822572 GHz	-5.10 dBm																										
T1	1		5.8157393 GHz	-14.60 dBm	Occ Bw	18.041958042 MHz																								
T2	1		5.8337812 GHz	-15.05 dBm																										

Band IV

802.11a

$$\text{CH}_L$$

$$\text{CH}_M$$

$$\text{CH}_H$$




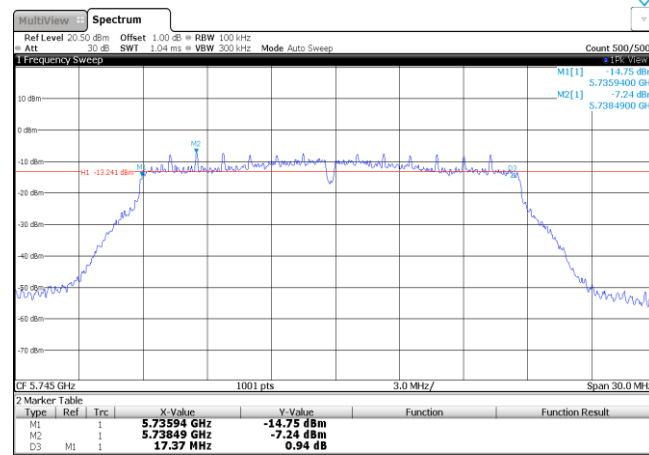


Appendix E: 6dB Bandwidth

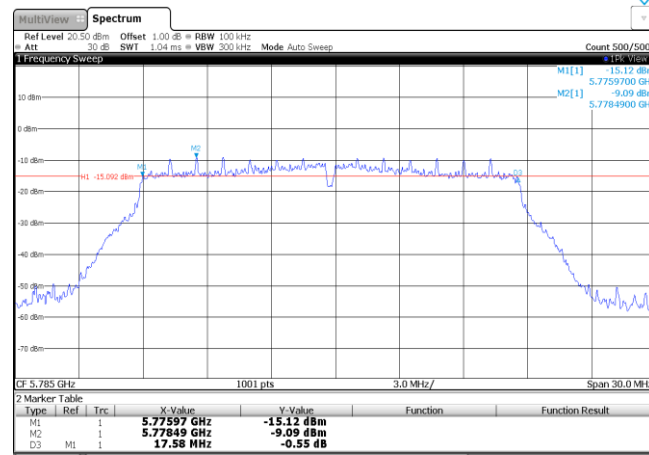
Band	Bandwidth (MHz)	Type	Channel	6dB bandwidth (MHz)	Result
IV	20	802.11ac	CH _L	17.37	Pass
			CH _M	17.58	
			CH _H	17.37	
		802.11n	CH _L	17.61	Pass
			CH _M	17.34	
			CH _H	17.64	
		802.11a	CH _L	16.38	Pass
			CH _M	16.38	
			CH _H	16.38	
	40	802.11ac	CH _L	36.06	Pass
			CH _H	36.42	
	80	802.11ac	CH _M	75.72	Pass

Band IV

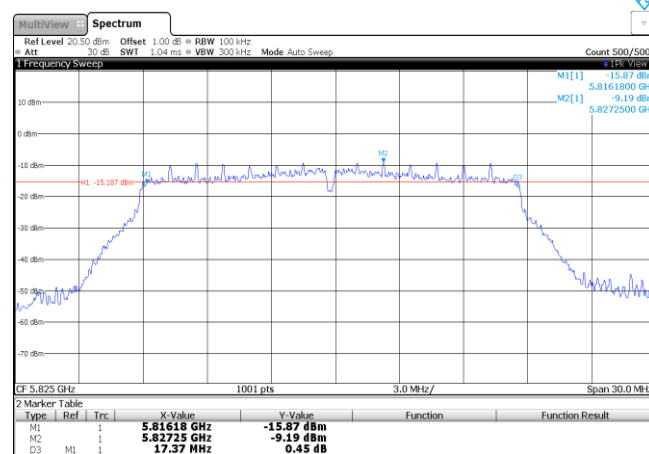
802.11ac (HT20)

$$\text{CH}_L$$


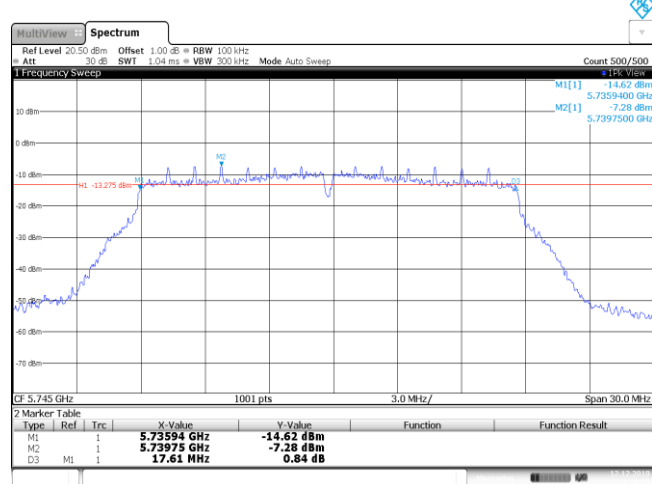
Date: 12.DEC.2019 13:39:32

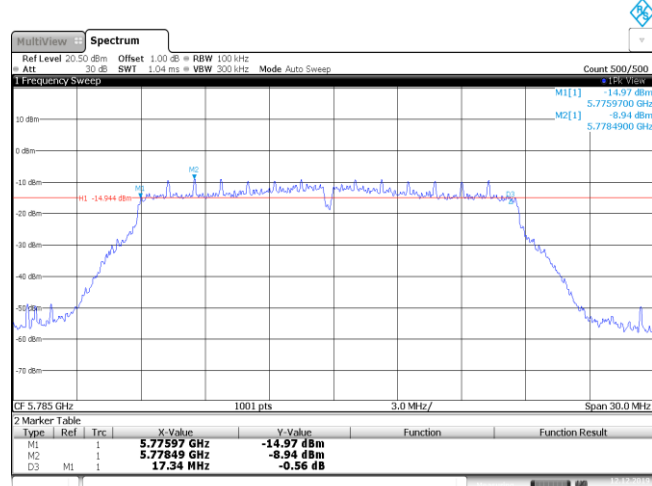
$$\text{CH}_M$$


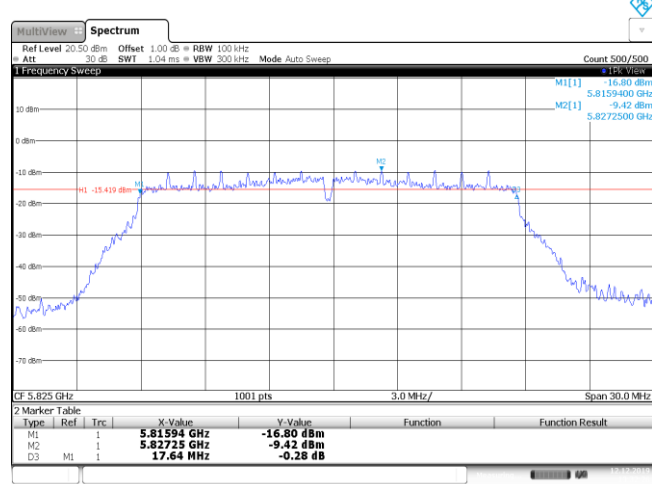
Date: 12.DEC.2019 13:40:42

$$\text{CH}_H$$


Date: 12 DEC 2019 13:42:16

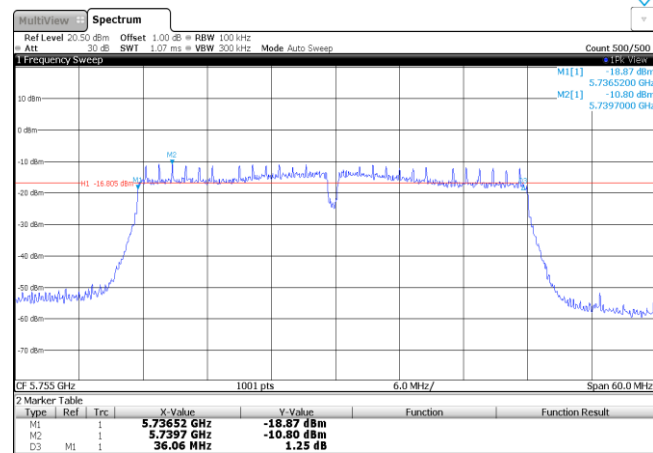
Band IV	802.11n (HT20)																												
CH _L	 Ref Level 20.50 dBm Offset 1.00 dB BW 100 kHz Att 30 dB SWT 1.04 ms VSW 300 kHz Mode Auto Sweep Count 500/500 1 Frequency Sweep Y-axis: 10 dBm, 0 dBm, -10 dBm, -20 dBm, -30 dBm, -40 dBm, -50 dBm, -60 dBm, -70 dBm X-axis: 5.745 GHz, 1001 pts, 3.0 MHz, Span 30.0 MHz Marker Table <table> <tr> <th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr> <tr> <td>M1</td><td>1</td><td></td><td>5.73594 GHz</td><td>-14.62 dBm</td><td></td><td></td></tr> <tr> <td>M2</td><td>1</td><td></td><td>5.73975 GHz</td><td>-7.28 dBm</td><td></td><td></td></tr> <tr> <td>D3</td><td>M1</td><td>1</td><td>17.61 MHz</td><td>0.84 dB</td><td></td><td></td></tr> </table> Date: 12.DEC.2019 13:28:37	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		5.73594 GHz	-14.62 dBm			M2	1		5.73975 GHz	-7.28 dBm			D3	M1	1	17.61 MHz	0.84 dB		
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																							
M1	1		5.73594 GHz	-14.62 dBm																									
M2	1		5.73975 GHz	-7.28 dBm																									
D3	M1	1	17.61 MHz	0.84 dB																									

CH _M	 Ref Level 20.50 dBm Offset 1.00 dB BW 100 kHz Att 30 dB SWT 1.04 ms VSW 300 kHz Mode Auto Sweep Count 500/500 1 Frequency Sweep Y-axis: 10 dBm, 0 dBm, -10 dBm, -20 dBm, -30 dBm, -40 dBm, -50 dBm, -60 dBm, -70 dBm X-axis: 5.785 GHz, 1001 pts, 3.0 MHz, Span 30.0 MHz Marker Table <table> <tr> <th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr> <tr> <td>M1</td><td>1</td><td></td><td>5.77597 GHz</td><td>-14.97 dBm</td><td></td><td></td></tr> <tr> <td>M2</td><td>1</td><td></td><td>5.77849 GHz</td><td>-8.94 dBm</td><td></td><td></td></tr> <tr> <td>D3</td><td>M1</td><td>1</td><td>17.34 MHz</td><td>-0.56 dB</td><td></td><td></td></tr> </table> Date: 12.DEC.2019 13:31:23	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		5.77597 GHz	-14.97 dBm			M2	1		5.77849 GHz	-8.94 dBm			D3	M1	1	17.34 MHz	-0.56 dB		
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																							
M1	1		5.77597 GHz	-14.97 dBm																									
M2	1		5.77849 GHz	-8.94 dBm																									
D3	M1	1	17.34 MHz	-0.56 dB																									

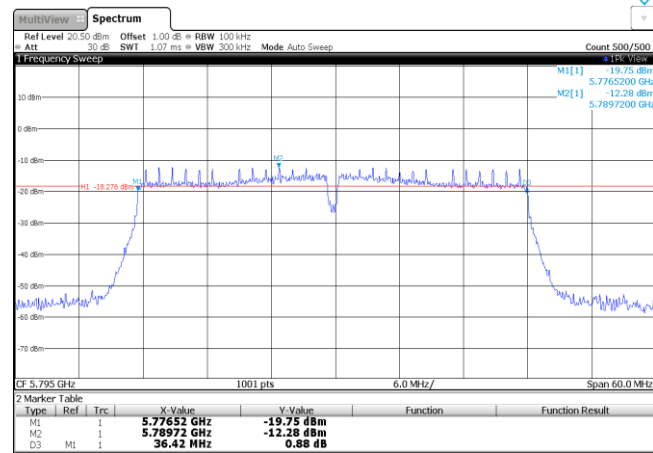
CH _H	 Ref Level 20.50 dBm Offset 1.00 dB BW 100 kHz Att 30 dB SWT 1.04 ms VSW 300 kHz Mode Auto Sweep Count 500/500 1 Frequency Sweep Y-axis: 10 dBm, 0 dBm, -10 dBm, -20 dBm, -30 dBm, -40 dBm, -50 dBm, -60 dBm, -70 dBm X-axis: 5.825 GHz, 1001 pts, 3.0 MHz, Span 30.0 MHz Marker Table <table> <tr> <th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr> <tr> <td>M1</td><td>1</td><td></td><td>5.81594 GHz</td><td>-16.80 dBm</td><td></td><td></td></tr> <tr> <td>M2</td><td>1</td><td></td><td>5.82725 GHz</td><td>-9.42 dBm</td><td></td><td></td></tr> <tr> <td>D3</td><td>M1</td><td>1</td><td>17.64 MHz</td><td>-0.28 dB</td><td></td><td></td></tr> </table> Date: 12.DEC.2019 13:32:26	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		5.81594 GHz	-16.80 dBm			M2	1		5.82725 GHz	-9.42 dBm			D3	M1	1	17.64 MHz	-0.28 dB		
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																							
M1	1		5.81594 GHz	-16.80 dBm																									
M2	1		5.82725 GHz	-9.42 dBm																									
D3	M1	1	17.64 MHz	-0.28 dB																									

Band IV

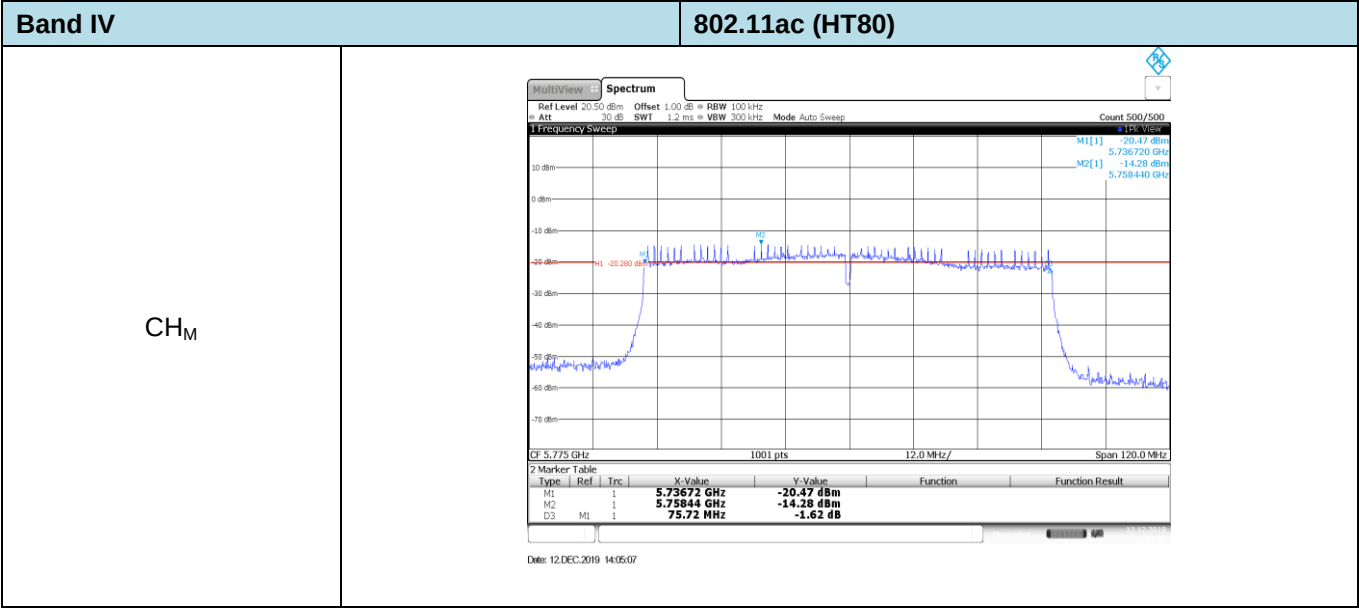
802.11ac (HT40)

$$\text{CH}_L$$


Date: 12.DEC.2019 13:43:25

$$\text{CH}_H$$


Date: 12.DEC.2019 14:01:11



Appendix F: Frequency stability

Voltage VS Frequency stability

Band: I			Test Frequency: 5180.00MHz	
Temperature (°C)	Voltage (V)	Frequency Deviation (Hz)	Frequency Deviation (ppm)	Result
25	V _L	-200800.00	-38.76448	PASS
25	V _N	-199800.00	-38.57143	PASS
25	V _H	-200800.00	-38.76448	PASS

Band: IV			Test Frequency: 5745.00MHz	
Temperature (°C)	Voltage (V)	Frequency Deviation (Hz)	Frequency Deviation (ppm)	Result
25	V _L	-221800.00	-38.60748	PASS
25	V _N	-221800.00	-38.60748	PASS
25	V _H	-221800.00	-38.60748	PASS

Temperature VS Frequency stability

Band: I			Test Frequency: 5180.00MHz	
Voltage (V)	Temperature (°C)	Frequency Deviation (Hz)	Frequency Deviation (ppm)	Result
V _N	-20	-199800.00	-38.57143	PASS
V _N	-10	-199800.00	-38.57143	PASS
V _N	0	-200800.00	-38.76448	PASS
V _N	10	-199800.00	-38.57143	PASS
V _N	20	-199800.00	-38.57143	PASS
V _N	30	-199800.00	-38.57143	PASS
V _N	40	-199800.00	-38.57143	PASS
V _N	50	-200800.00	-38.76448	PASS

Band: IV			Test Frequency: 5745.00MHz	
Voltage (V)	Temperature (°C)	Frequency Deviation (Hz)	Frequency Deviation (ppm)	Result
V _N	-20	-221800.00	-38.60748	PASS
V _N	-10	-221800.00	-38.60748	PASS
V _N	0	-221800.00	-38.60748	PASS
V _N	10	-221800.00	-38.60748	PASS
V _N	20	-221800.00	-38.60748	PASS
V _N	30	-221800.00	-38.60748	PASS
V _N	40	-221800.00	-38.60748	PASS
V _N	50	-221800.00	-38.60748	PASS

-----End of Report-----