

APPENDIX REPORT

Project No.	SHT2012127503EW	Radio Specification	WIFI 2.4G
Test sample No.	YPHT20121275002	Model No.	SE-200P
Start test date	2021-01-11	Finish date	2021-01-11
Temperature	22.3°C	Humidity	21%
Test Engineer	Hailey Chen	Auditor	Xiaodong Zheo

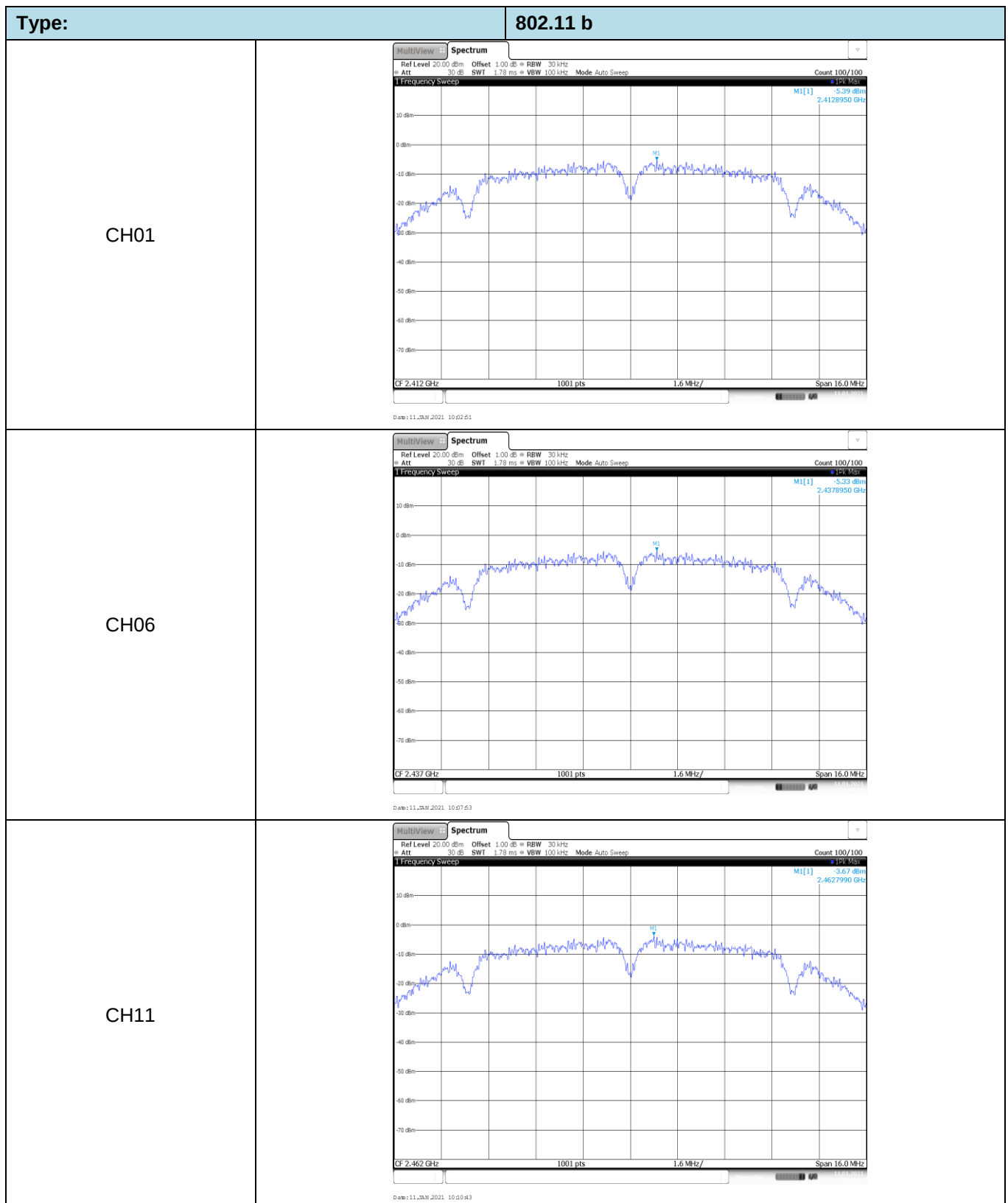
Appendix clause	Test item	Result
A	Conducted Peak Output Power	PASS
B	Power Spectral Density	PASS
C	6 dB Bandwidth	PASS
D	99% Occupied Bandwidth	PASS
E	Duty Cycle	PASS
F	Band edge and Spurious Emissions (conducted)	PASS

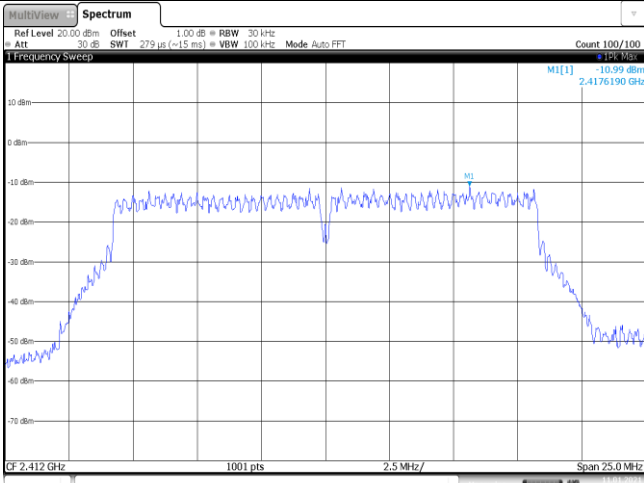
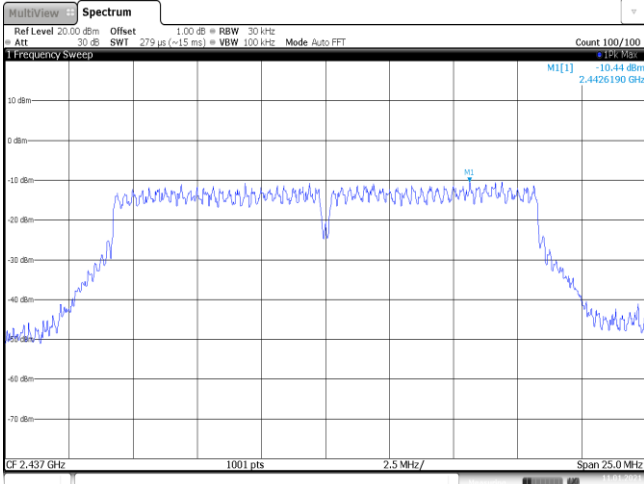
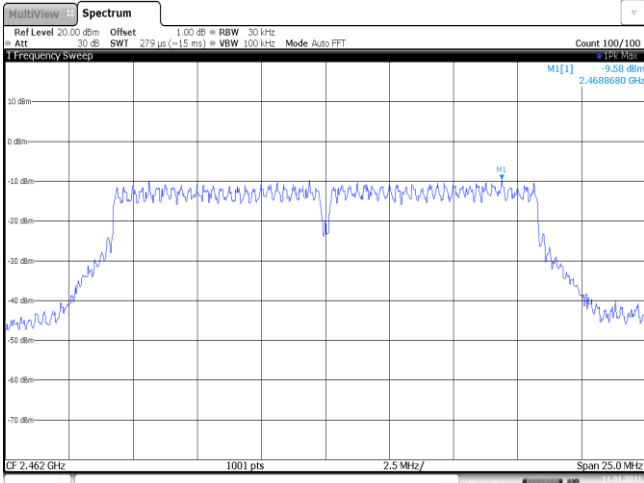
Appendix A: Conducted Peak Output Power

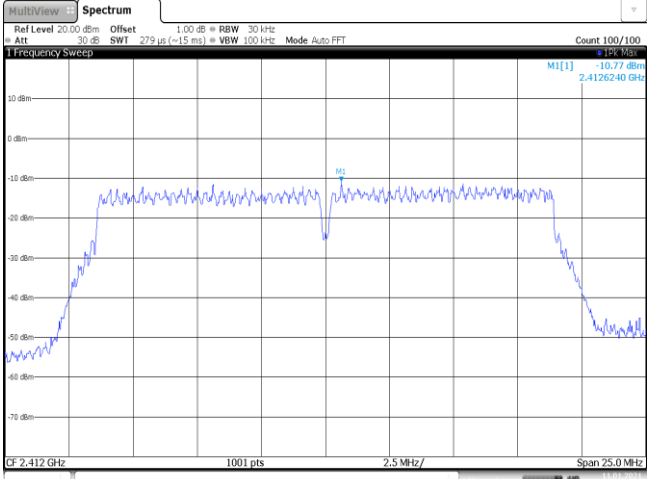
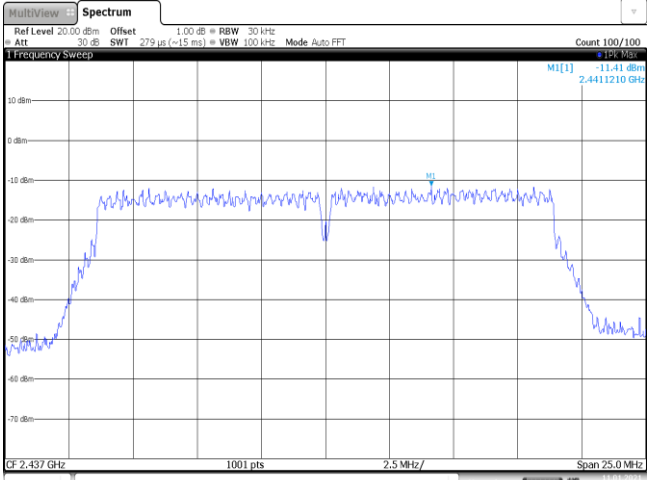
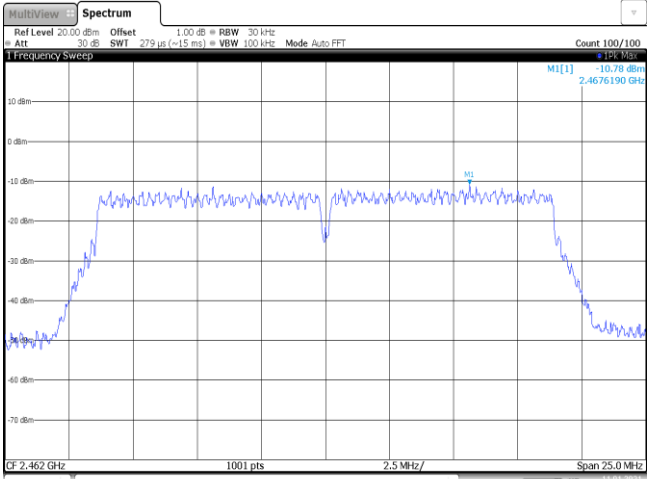
Type	Channel	Peak Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
802.11b	01	14.24	11.66	≤ 30.00	Pass
	06	14.72	12.22		
	11	14.66	12.17		
802.11g	01	14.52	11.56	≤ 30.00	Pass
	06	15.40	12.41		
	11	15.35	12.33		
802.11n (HT20)	01	14.97	11.96	≤ 30.00	Pass
	06	14.60	11.69		
	11	14.50	11.43		

Appendix B: Power Spectral Density

Type	Channel	Power Spectral Density (dBm/30KHz)	Limit (dBm/3KHz)	Result
802.11b	01	-5.39	≤8.00	Pass
	06	-5.33		
	11	-3.67		
802.11g	01	-10.99	≤8.00	Pass
	06	-10.44		
	11	-9.58		
802.11n(HT20)	01	-10.77	≤8.00	Pass
	06	-11.41		
	11	-10.78		

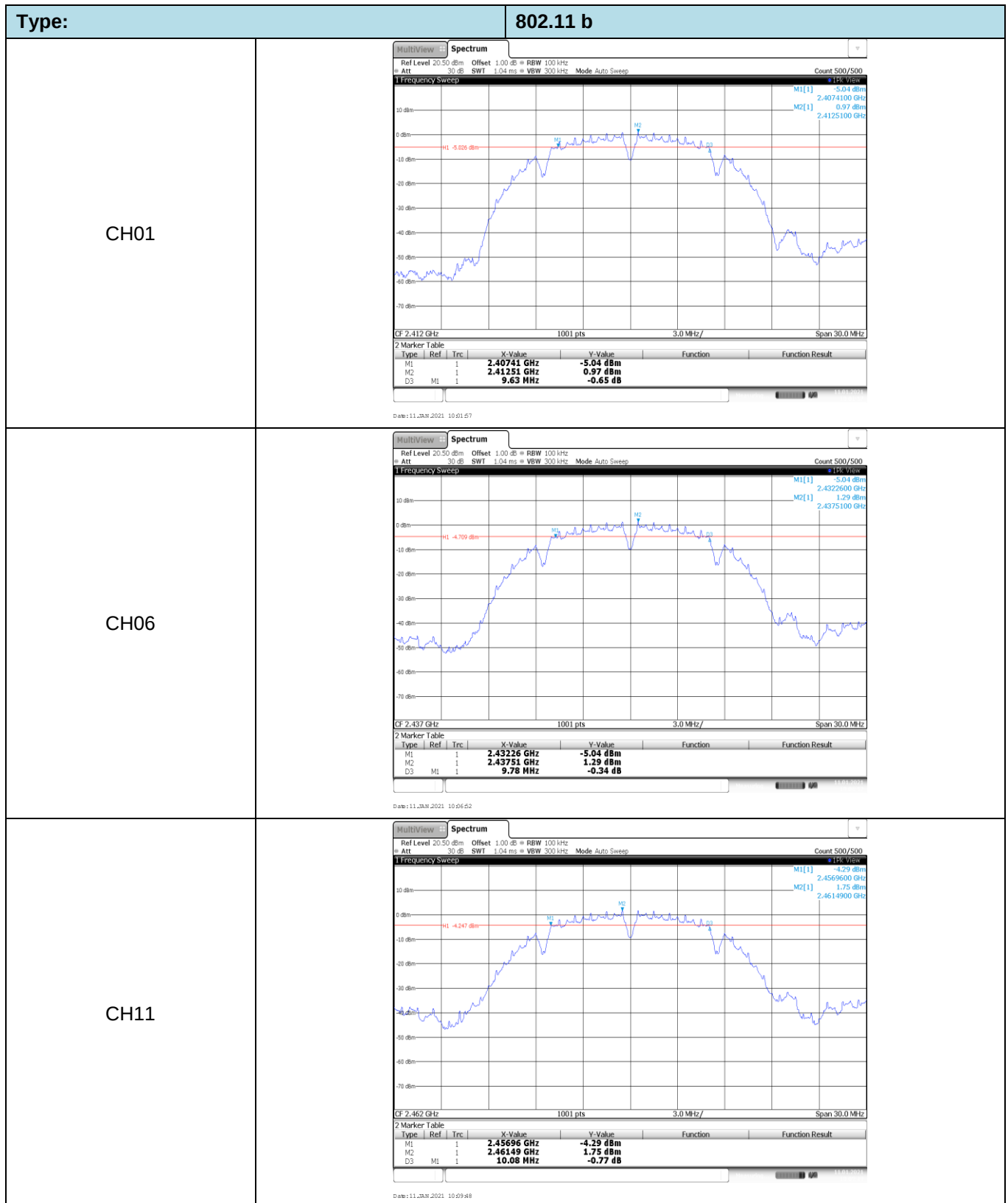


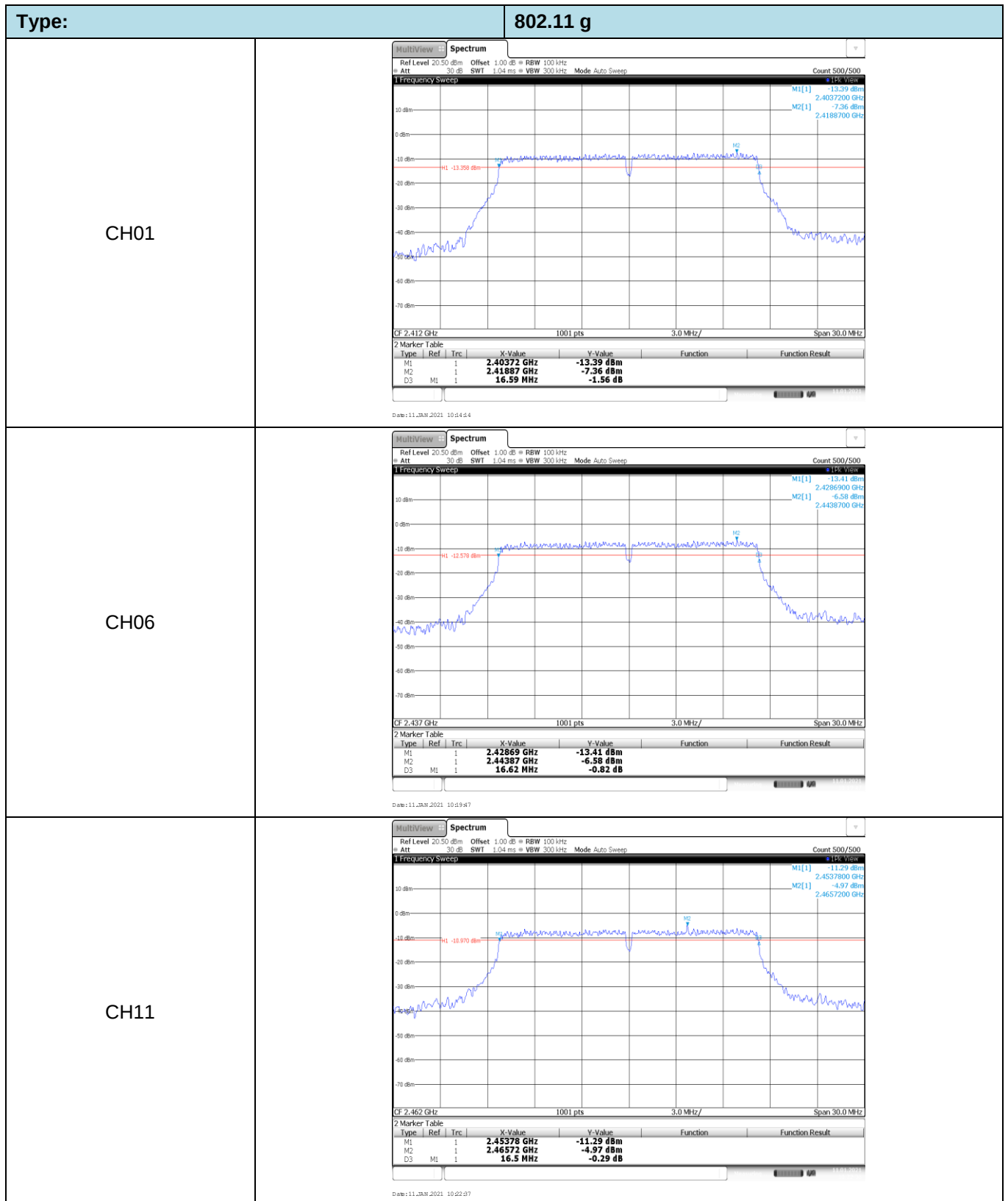
Type:	802.11 g
CH01	 The spectrum plot for CH01 shows a signal centered around 2.417 GHz. The y-axis represents power in dBm, ranging from -70 to 10. The x-axis represents frequency in GHz, ranging from 2.412 to 2.417. A peak is labeled M1[1] at 2.4176190 GHz with a power of -10.99 dBm. The plot includes a frequency sweep and a count of 100/100.
CH06	 The spectrum plot for CH06 shows a signal centered around 2.442 GHz. The y-axis represents power in dBm, ranging from -70 to 10. The x-axis represents frequency in GHz, ranging from 2.437 to 2.442. A peak is labeled M1[1] at 2.4426190 GHz with a power of -10.44 dBm. The plot includes a frequency sweep and a count of 100/100.
CH11	 The spectrum plot for CH11 shows a signal centered around 2.467 GHz. The y-axis represents power in dBm, ranging from -70 to 10. The x-axis represents frequency in GHz, ranging from 2.462 to 2.467. A peak is labeled M1[1] at 2.4668680 GHz with a power of -9.58 dBm. The plot includes a frequency sweep and a count of 100/100.

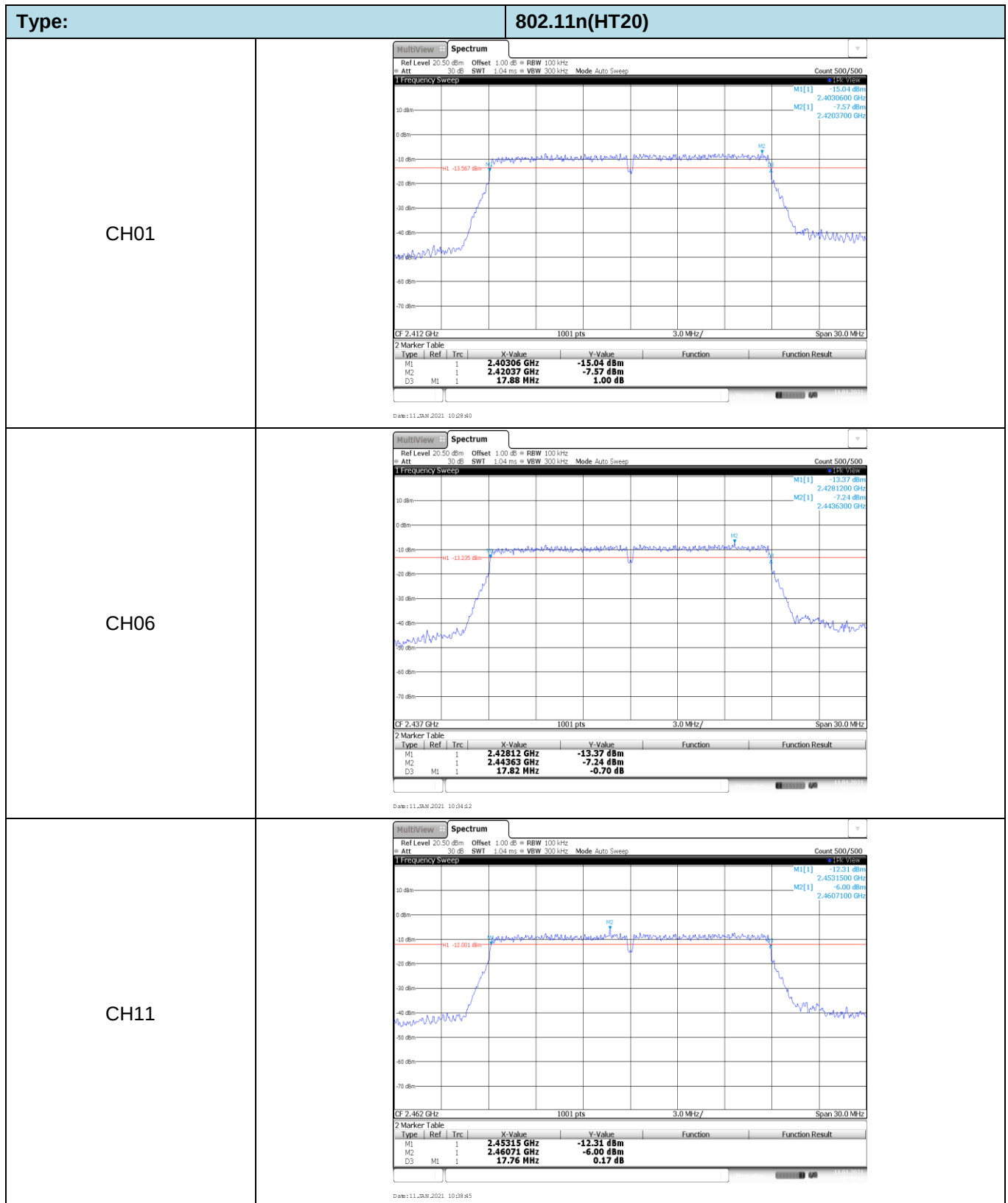
Type:	802.11n(HT20)
CH01	 11_JAN_2021 10:30:42
CH06	 11_JAN_2021 10:06:02
CH11	 11_JAN_2021 10:41:44

Appendix C: 6dB bandwidth

Type	Channel	6dB Bandwidth (MHz)	Limit (MHz)	Result
802.11b	01	9.63	≥0.5	Pass
	06	9.78		
	11	10.08		
802.11g	01	16.59	≥0.5	Pass
	06	16.62		
	11	16.50		
802.11n(HT20)	01	17.88	≥0.5	Pass
	06	17.82		
	11	17.76		

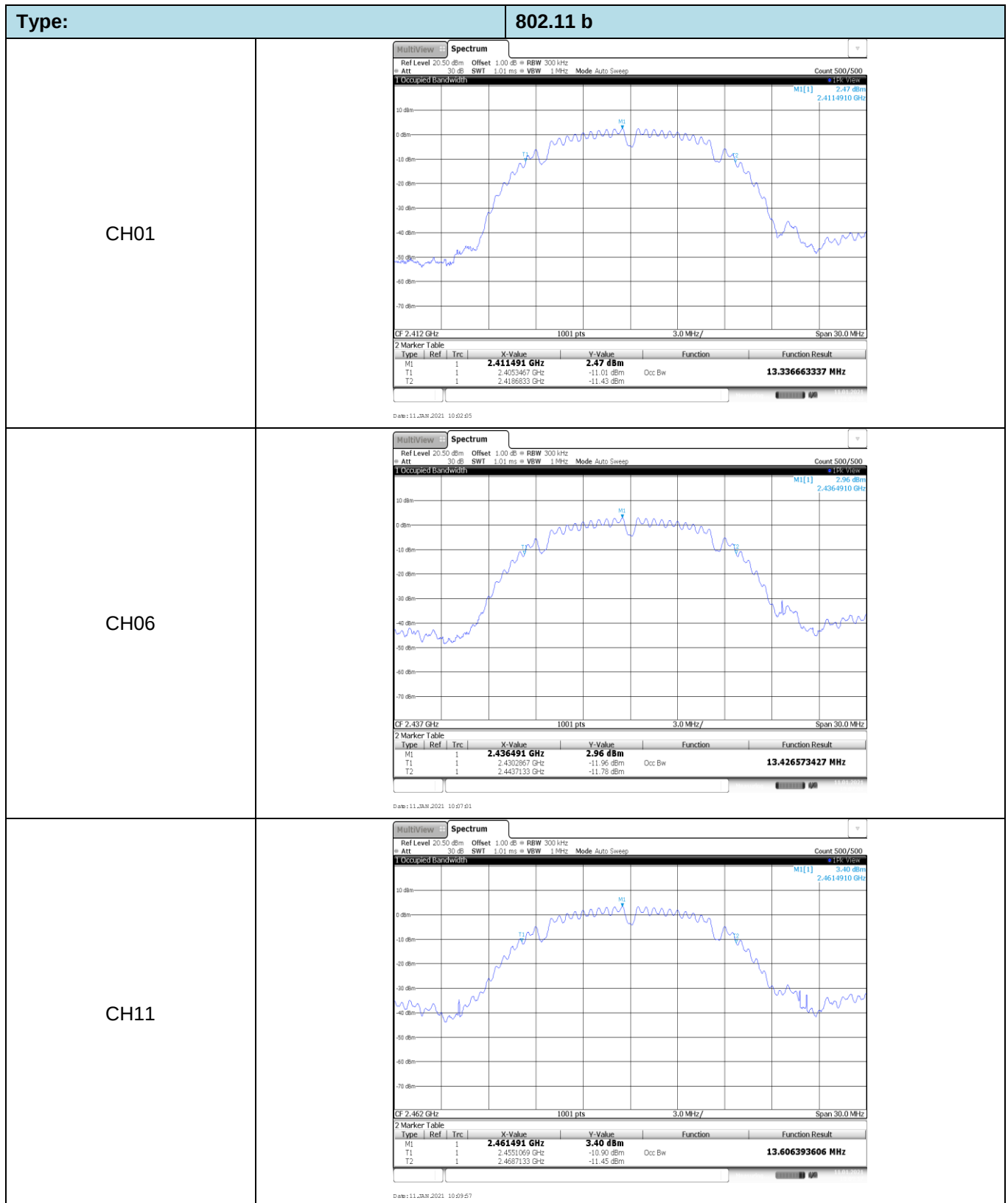


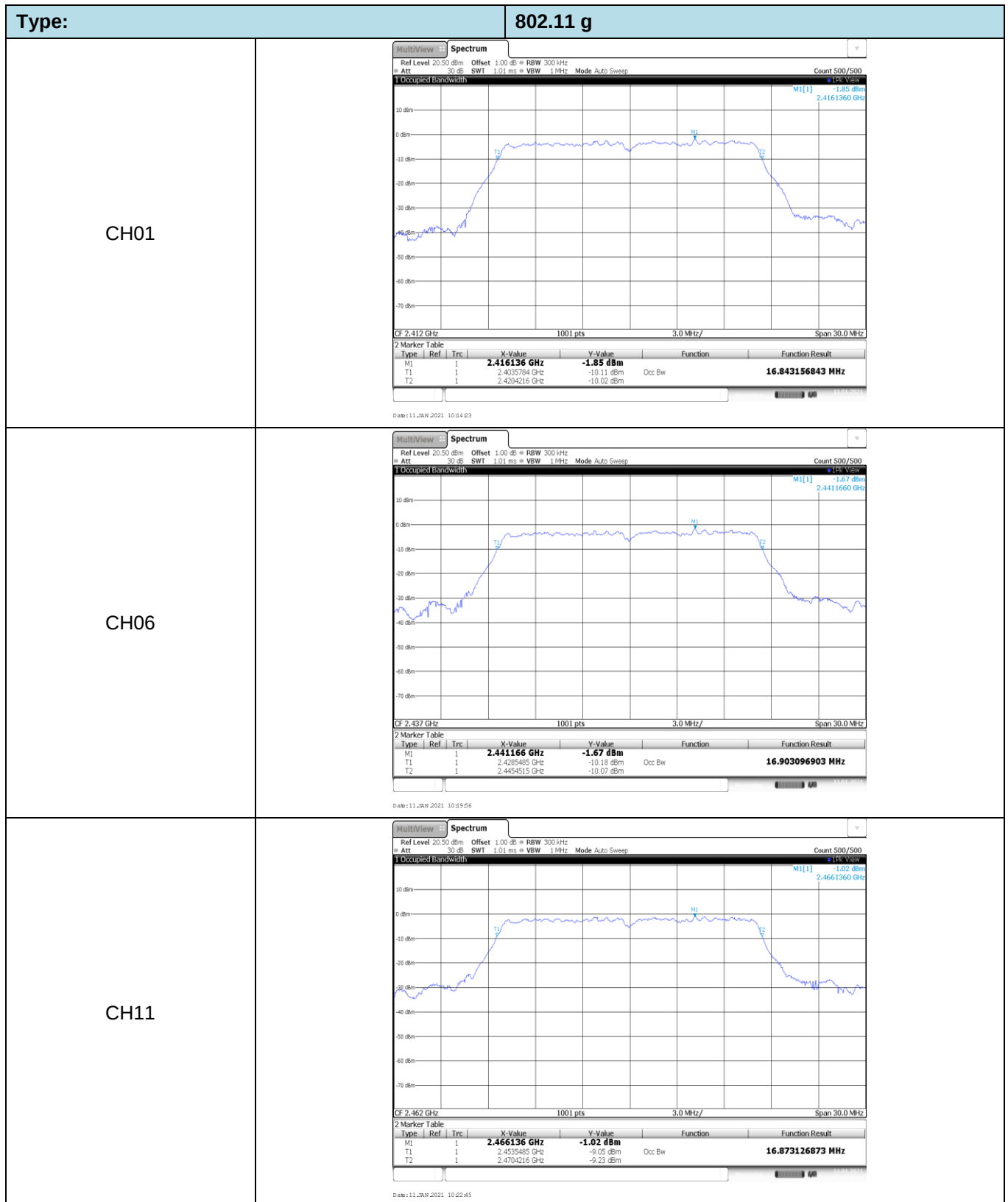


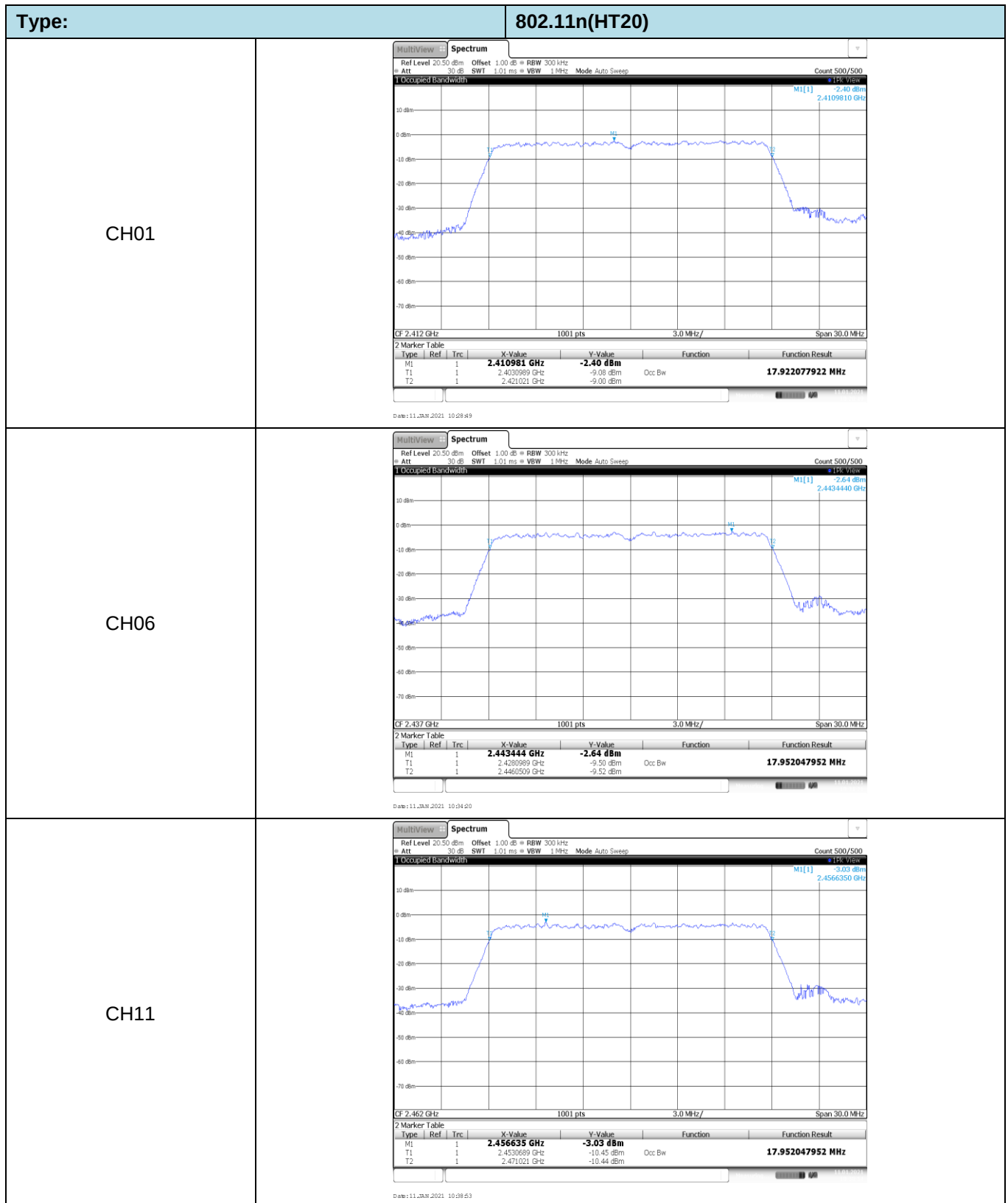


Appendix D: 99% Occupied Bandwidth

Type	Channel	99% Bandwidth (MHz)	Limit (MHz)	Result
802.11b	01	13.34	-	Pass
	06	13.43		
	11	13.61		
802.11g	01	16.84	-	Pass
	06	16.90		
	11	16.87		
802.11n(HT20)	01	17.92	-	Pass
	06	17.95		
	11	17.95		

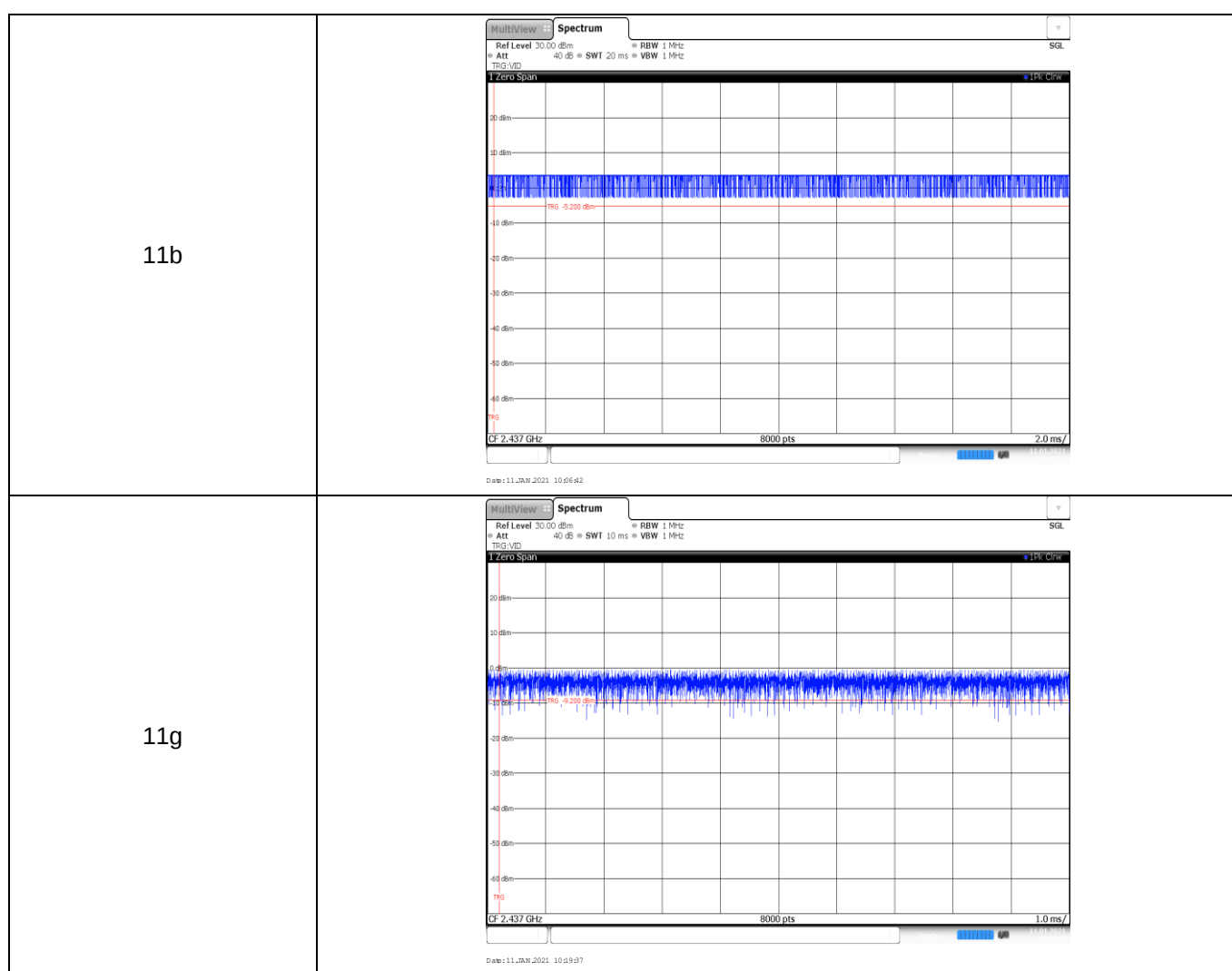




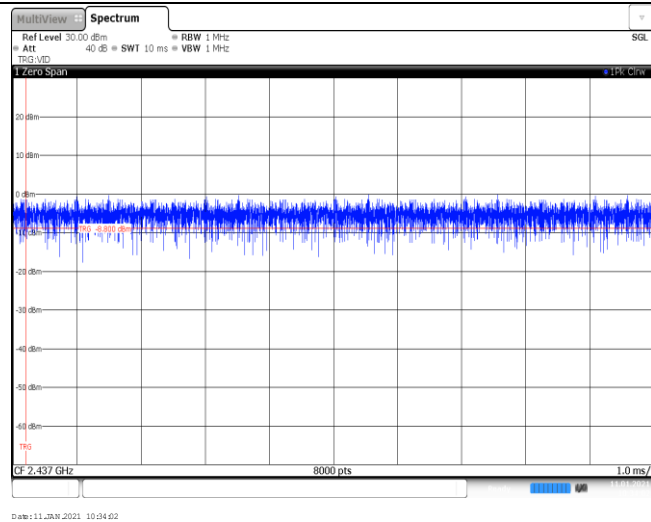


Appendix E: Duty Cycle

Modulation Type	Test Frequency (MHz)	T _{on time} for single burst (ms)	T _{period} (ms)	Duty cycle	1/T _{on time} (kHz)
11b	2437	1.00	1.00	100.0%	1.0
11g	2437	1.00	1.00	100.0%	1.0
11n20	2437	1.00	1.00	100.0%	1.0

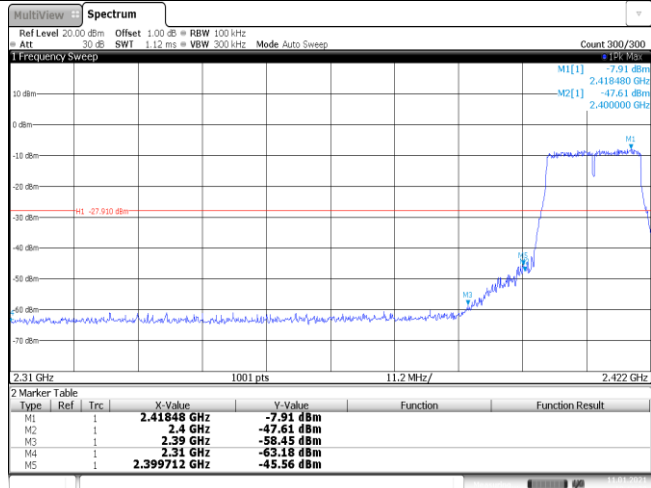
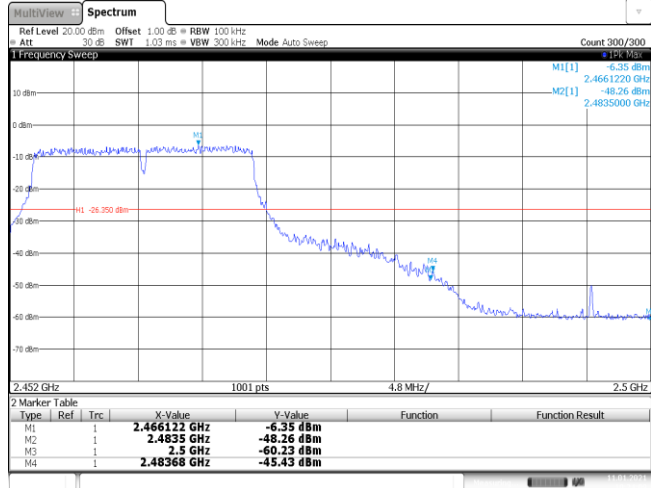


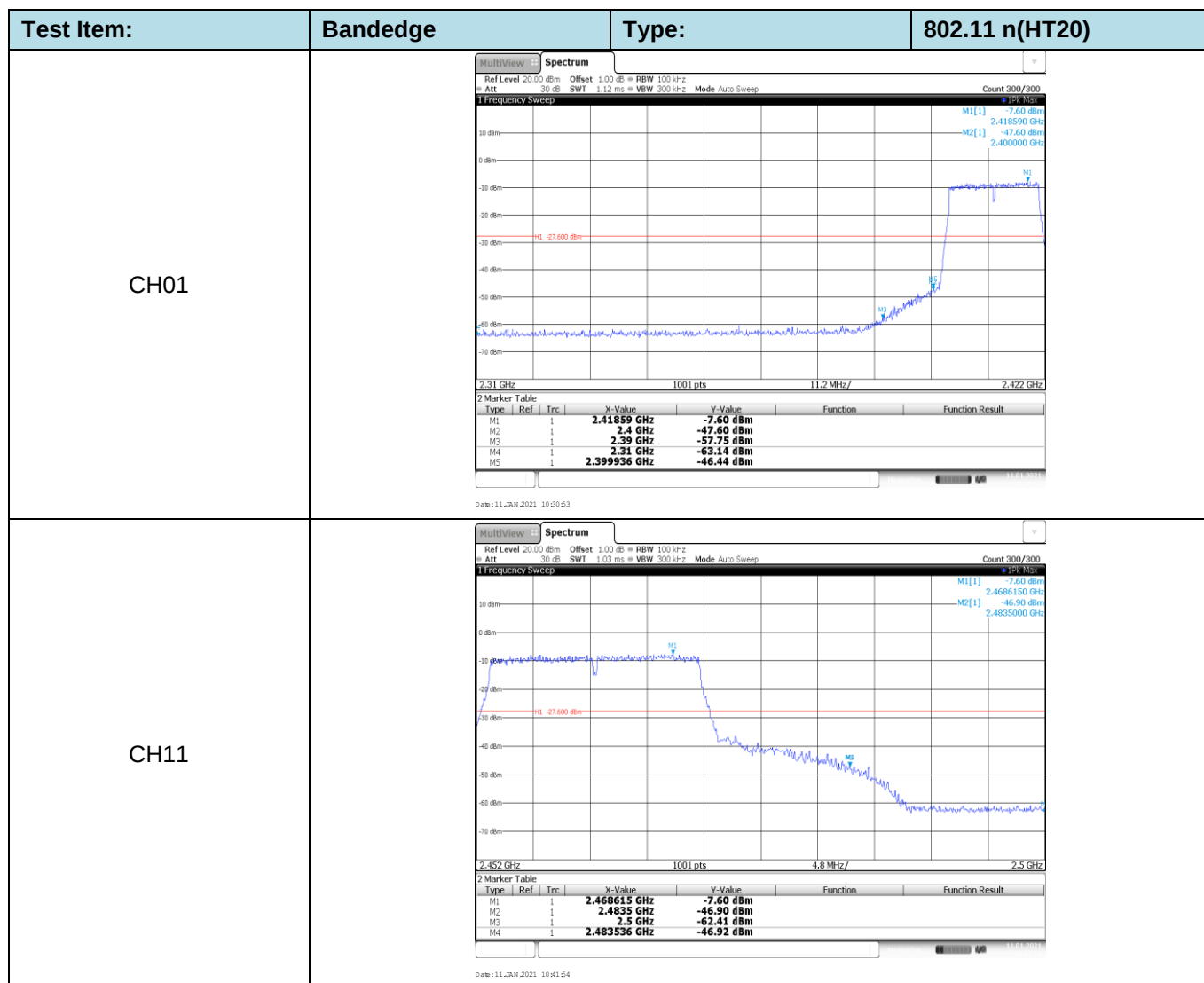
11n20

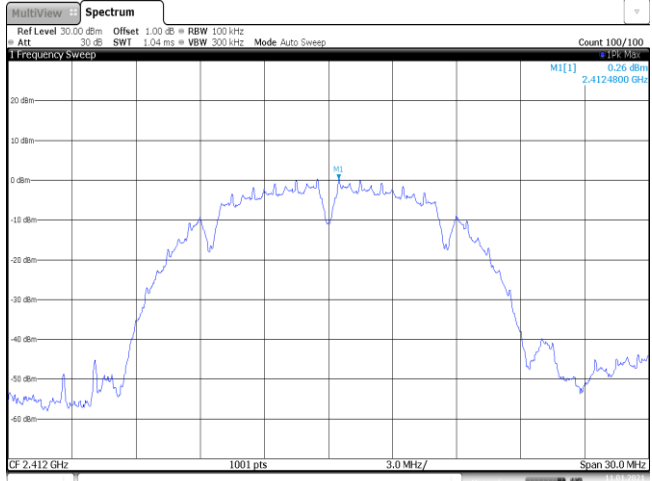
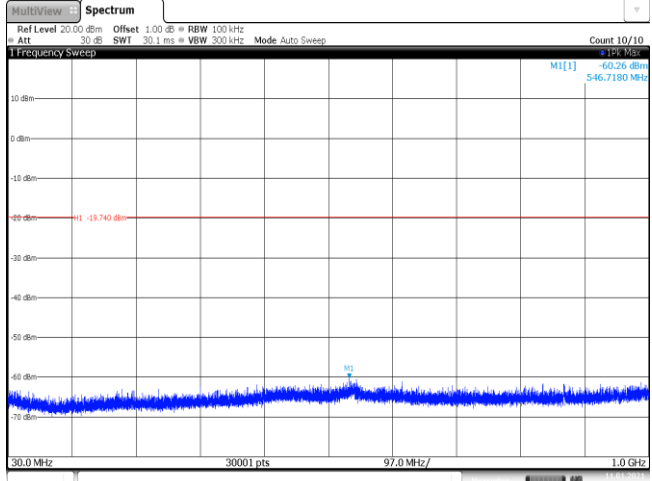
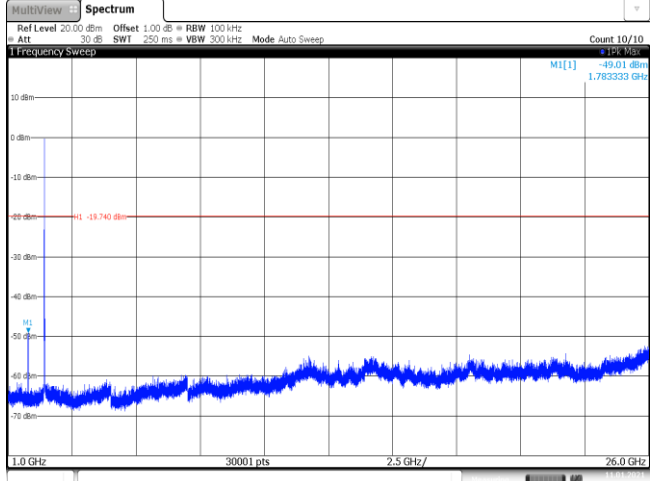


Appendix F: Band edge and Spurious Emissions (conducted)

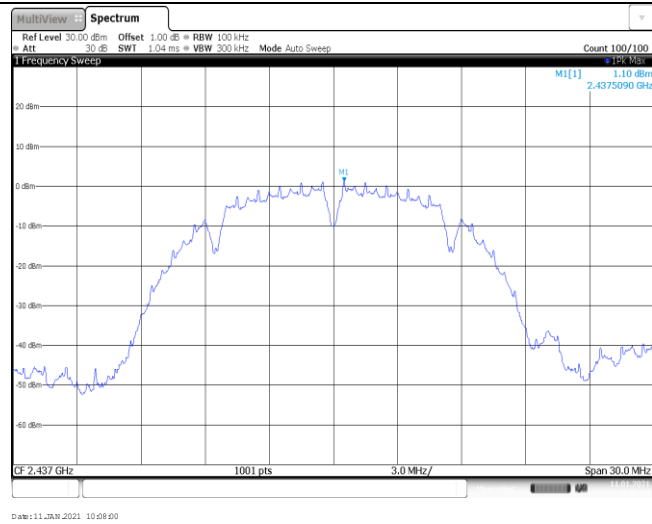
Test Item:	Bandedge	Type:	802.11 b																																										
CH01	MultiView Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 1.12 ms VBW 300 kHz Mode Auto Sweep Count 300/300 1 Frequency Sweep 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm M1 0.30 dBm 2.412430 GHz -56.06 dBm 2.400000 GHz M2 2.412430 GHz -56.06 dBm 2.400000 GHz M3 -56.06 dBm 2.400000 GHz M4 -56.06 dBm 2.400000 GHz M5 -56.06 dBm 2.400000 GHz 2.31 GHz 1001 pts 11.2 MHz/ 2.422 GHz 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>2.41243 GHz</td><td>0.30 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4 GHz</td><td>-56.06 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.39 GHz</td><td>-61.28 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.31 GHz</td><td>-62.46 dBm</td><td></td><td></td></tr><tr><td>M5</td><td>1</td><td></td><td>2.389296 GHz</td><td>-53.18 dBm</td><td></td><td></td></tr></table> Date: 11 JAN 2021 10:04:59			Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.41243 GHz	0.30 dBm			M2	1		2.4 GHz	-56.06 dBm			M3	1		2.39 GHz	-61.28 dBm			M4	1		2.31 GHz	-62.46 dBm			M5	1		2.389296 GHz	-53.18 dBm		
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CH11	MultiView Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 1.03 ms VBW 300 kHz Mode Auto Sweep Count 300/300 1 Frequency Sweep 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm M1 1.40 dBm 2.4614710 GHz -57.03 dBm 2.4835000 GHz M2 2.4614710 GHz -57.03 dBm 2.4835000 GHz M3 -57.03 dBm 2.4835000 GHz M4 -57.03 dBm 2.4835000 GHz 2.452 GHz 1001 pts 4.8 MHz/ 2.5 GHz 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>2.461471 GHz</td><td>1.40 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.48353 GHz</td><td>-57.03 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.5 GHz</td><td>-60.62 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.483536 GHz</td><td>-57.21 dBm</td><td></td><td></td></tr></table> Date: 11 JAN 2021 10:12:44			Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.461471 GHz	1.40 dBm			M2	1		2.48353 GHz	-57.03 dBm			M3	1		2.5 GHz	-60.62 dBm			M4	1		2.483536 GHz	-57.21 dBm									
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																																							
M1	1		2.461471 GHz	1.40 dBm																																									
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Test Item:	Bandedge	Type:	802.11 g																																										
CH01	MultViewSpectrum Ref Level 20.00 dBm Offset 1.00 dB BW 100 kHz Att 30 dB SWI 1.12 ms VBW 300 kHz Mode Auto Sweep Count 300/300 1 Frequency Sweep  2.31 GHz 1001 pts 11.2 MHz/ 2.422 GHz 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>2.41848 GHz</td><td>-7.91 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4 GHz</td><td>-47.61 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.39 GHz</td><td>-58.45 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.31 GHz</td><td>-63.18 dBm</td><td></td><td></td></tr><tr><td>M5</td><td>1</td><td></td><td>2.399712 GHz</td><td>-45.56 dBm</td><td></td><td></td></tr></table> Date: 11_JAN 2021 10:04:29			Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.41848 GHz	-7.91 dBm			M2	1		2.4 GHz	-47.61 dBm			M3	1		2.39 GHz	-58.45 dBm			M4	1		2.31 GHz	-63.18 dBm			M5	1		2.399712 GHz	-45.56 dBm		
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																																							
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CH11	MultViewSpectrum Ref Level 20.00 dBm Offset 1.00 dB BW 100 kHz Att 30 dB SWI 1.03 ms VBW 300 kHz Mode Auto Sweep Count 300/300 1 Frequency Sweep  2.452 GHz 1001 pts 4.8 MHz/ 2.5 GHz 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>2.466122 GHz</td><td>-6.35 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4835 GHz</td><td>-48.26 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.5 GHz</td><td>-60.23 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.48368 GHz</td><td>-45.43 dBm</td><td></td><td></td></tr></table> Date: 11_JAN 2021 10:04:09			Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.466122 GHz	-6.35 dBm			M2	1		2.4835 GHz	-48.26 dBm			M3	1		2.5 GHz	-60.23 dBm			M4	1		2.48368 GHz	-45.43 dBm									
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M4	1		2.48368 GHz	-45.43 dBm																																									

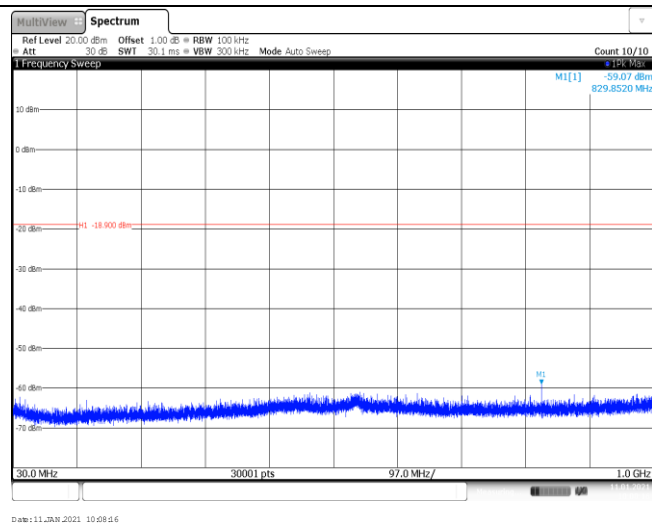


Test Item:	SE	Type:	802.11 b
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CH01 30MHz~1000MHz			
CH01 1GHz~26GHz			

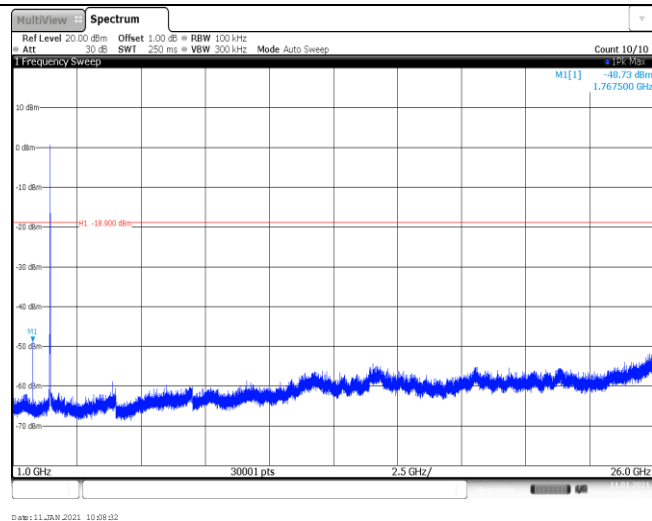
CH06
Reference level



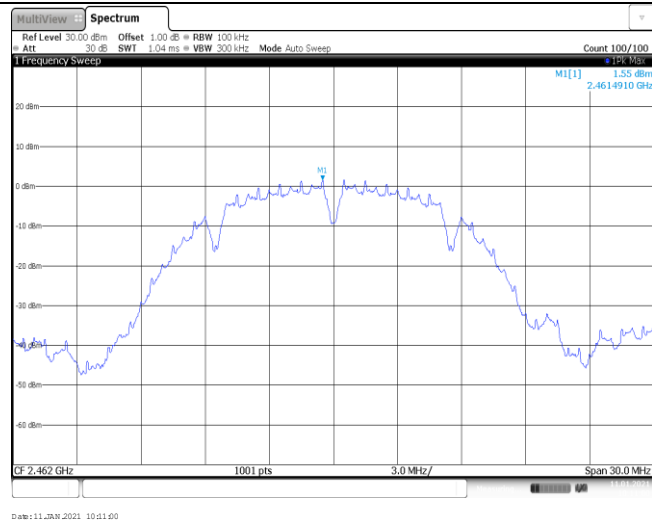
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30MHz~1000MHz



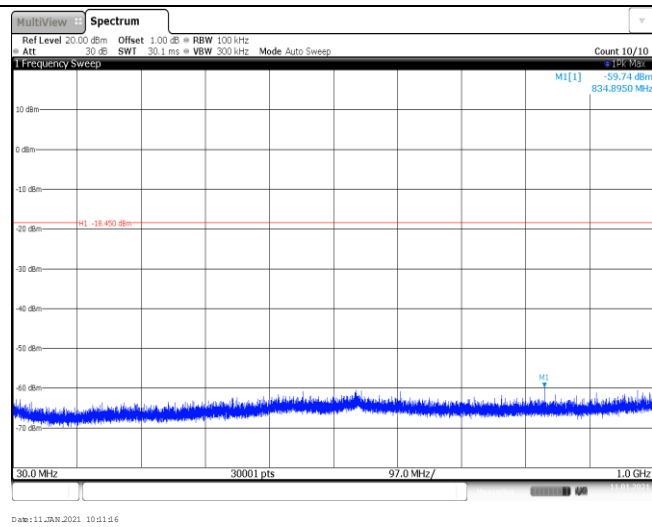
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1GHz~26GHz



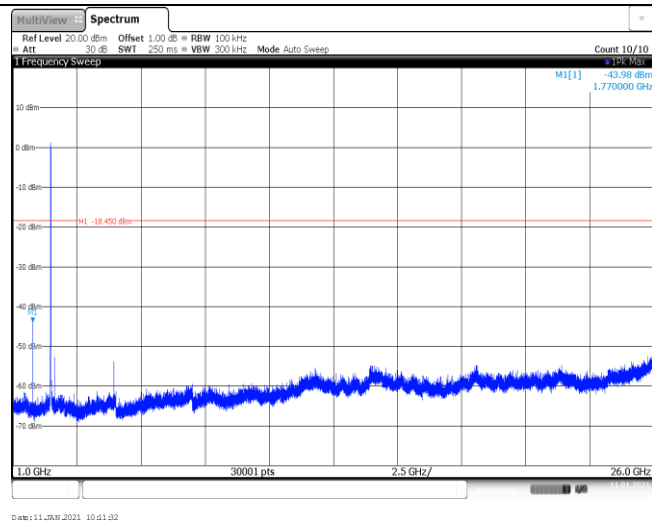
CH11
Reference level

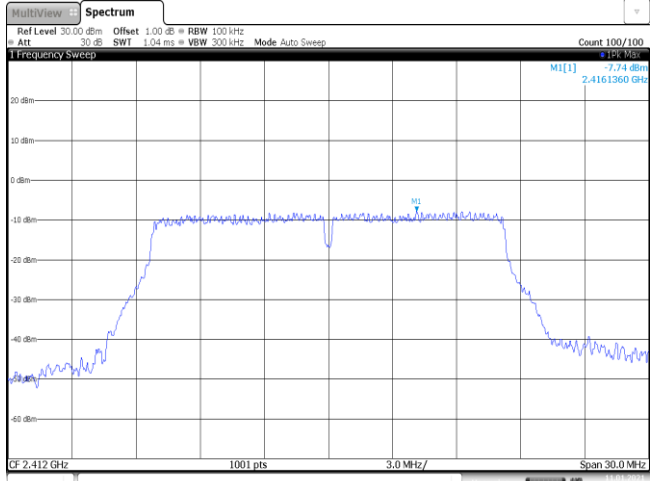
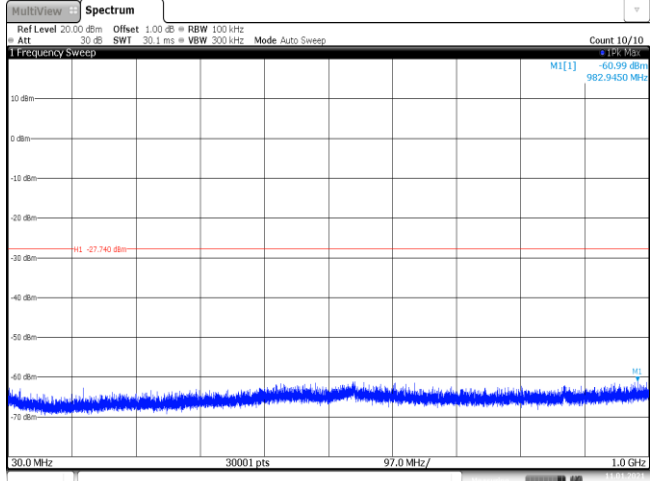
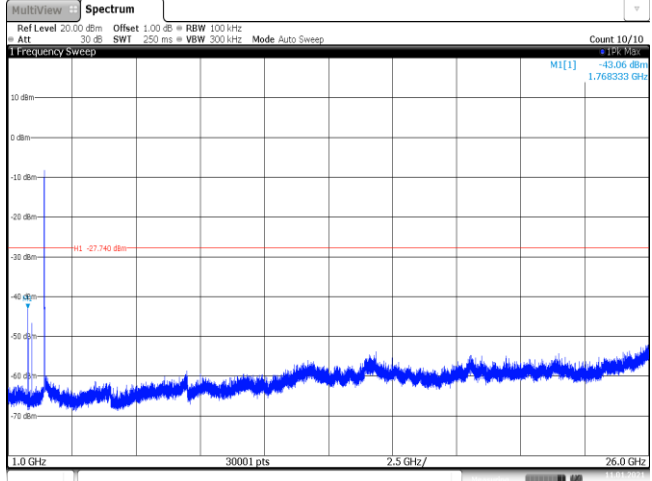


CH11
30MHz~1000MHz

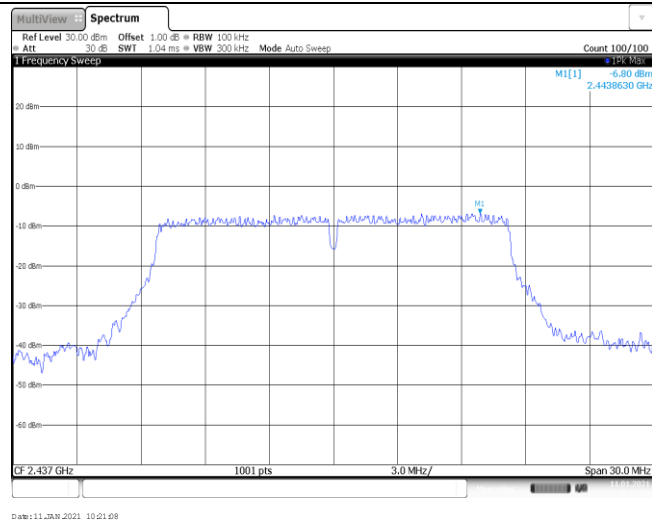


CH11
1GHz~26GHz

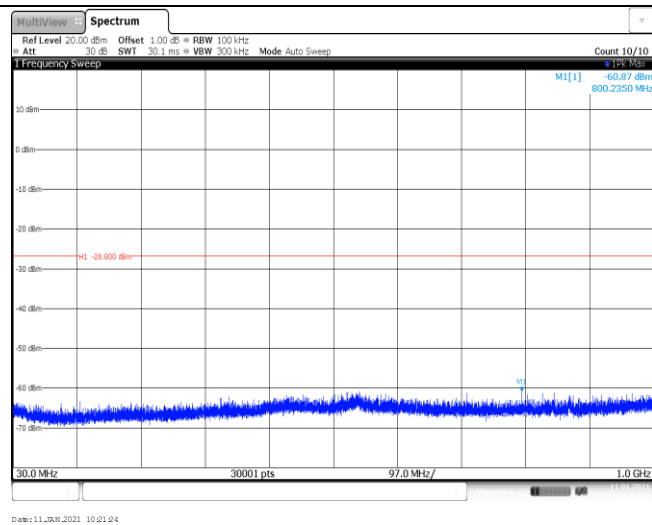


Test Item:	SE	Type:	802.11 g
CH01 Reference level		 Count 100/100 M1[1] -27.74 dBm 2.4161360 GHz 2.412 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 11 JAN 2021 10:06:06	
CH01 30MHz~1000MHz		 Count 10/10 M1[1] -27.74 dBm 982.9450 MHz 30.0 MHz 30001 pts 97.0 MHz/ 1.0 GHz Date: 11 JAN 2021 10:06:53	
CH01 1GHz~26GHz		 Count 10/10 M1[1] -27.74 dBm 1.766533 GHz 1.0 GHz 30001 pts 2.5 GHz/ 26.0 GHz Date: 11 JAN 2021 10:07:09	

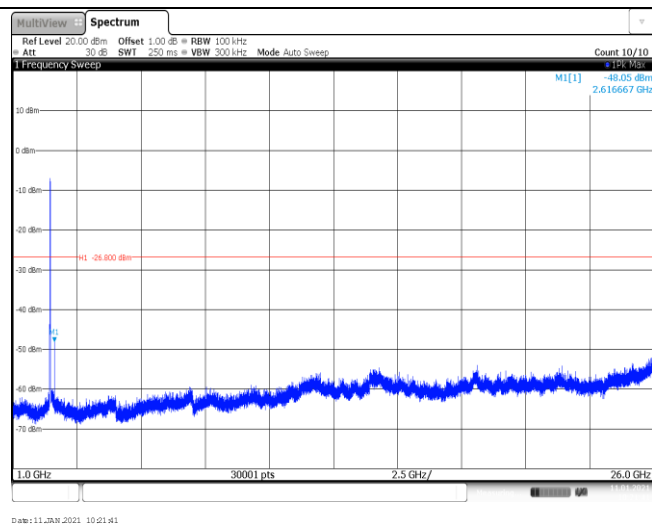
CH06
Reference level



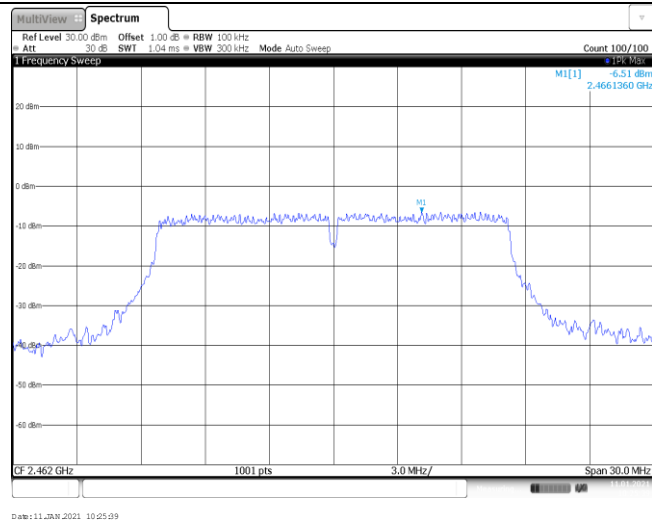
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30MHz~1000MHz



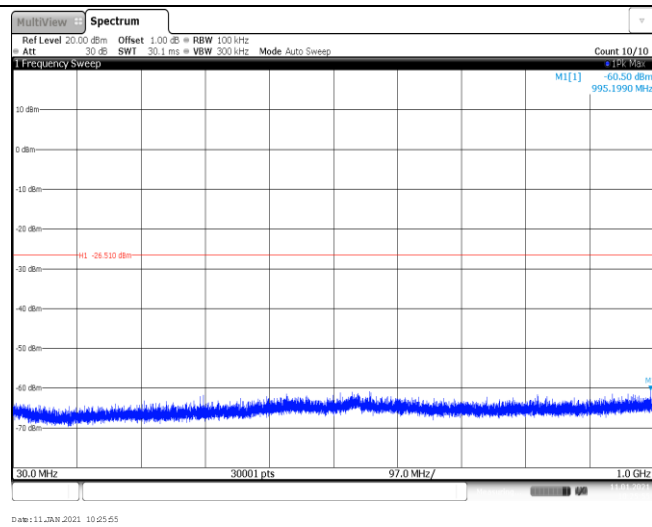
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1GHz~26GHz



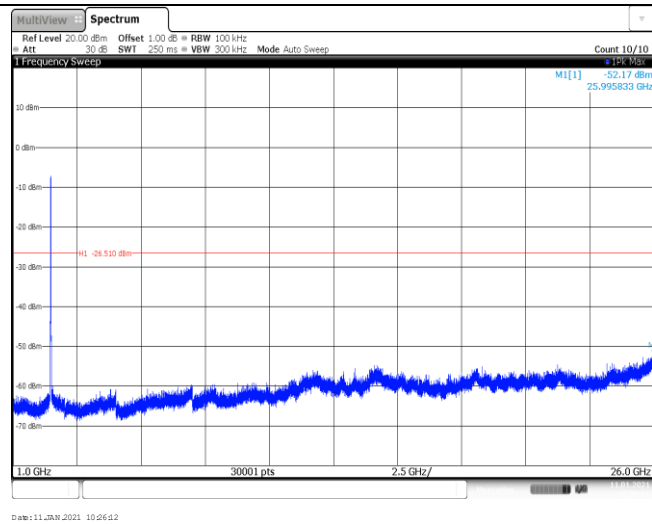
CH11
Reference level

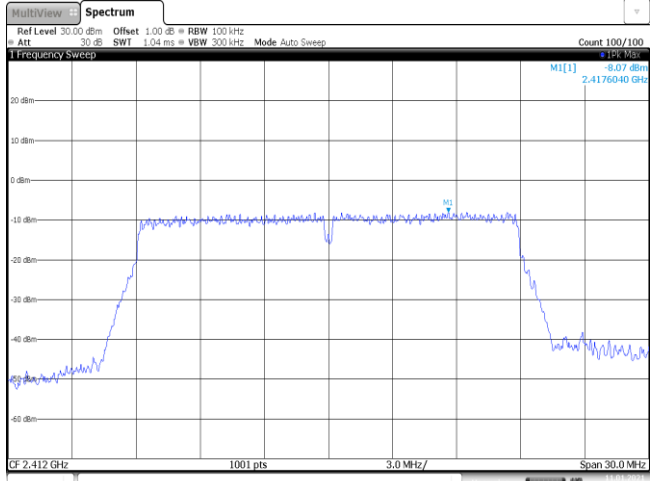
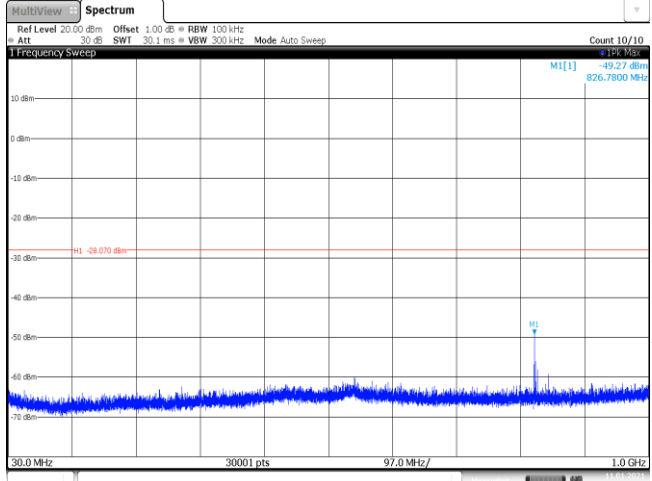
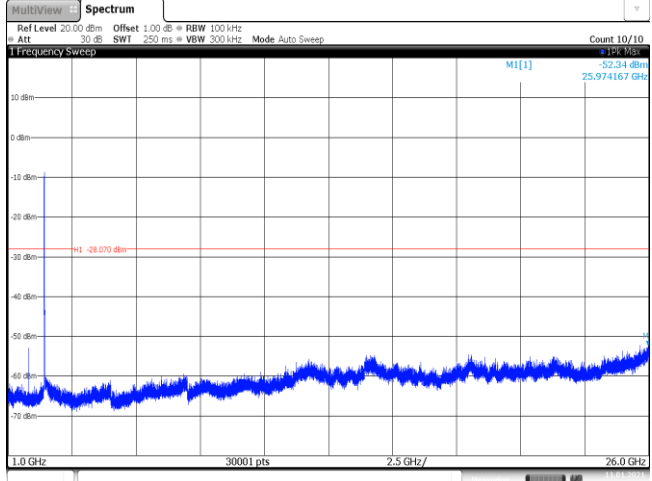


CH11
30MHz~1000MHz

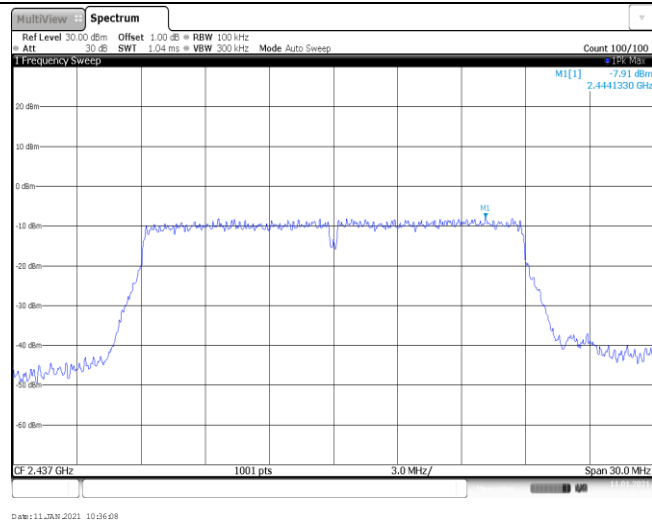


CH11
1GHz~26GHz

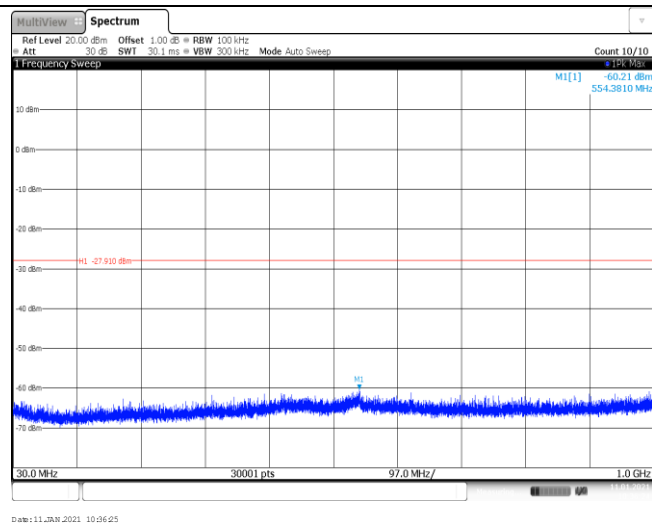


Test Item:	SE	Type:	802.11 n(HT20)
CH01 Reference level			
CH01 30MHz~1000MHz			
CH01 1GHz~26GHz			

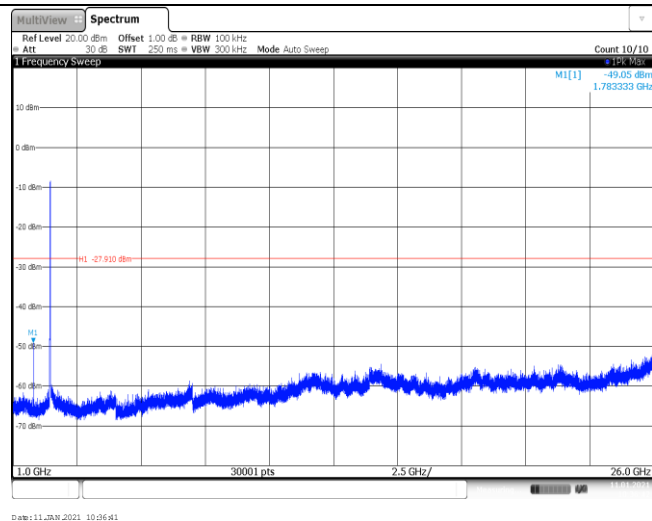
CH06
Reference level



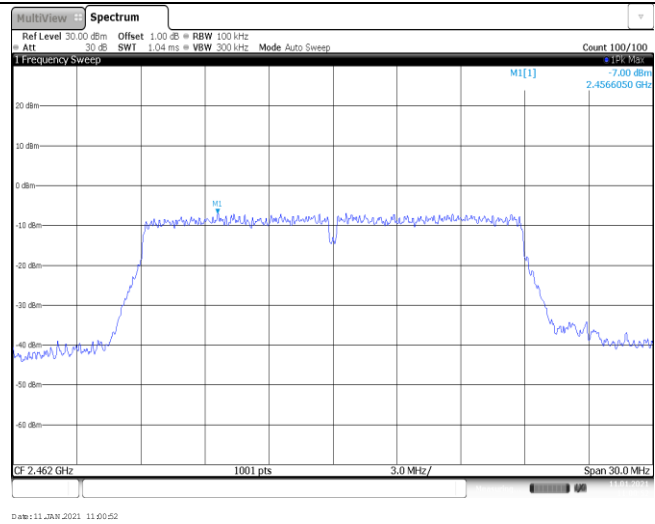
CH06
30MHz~1000MHz



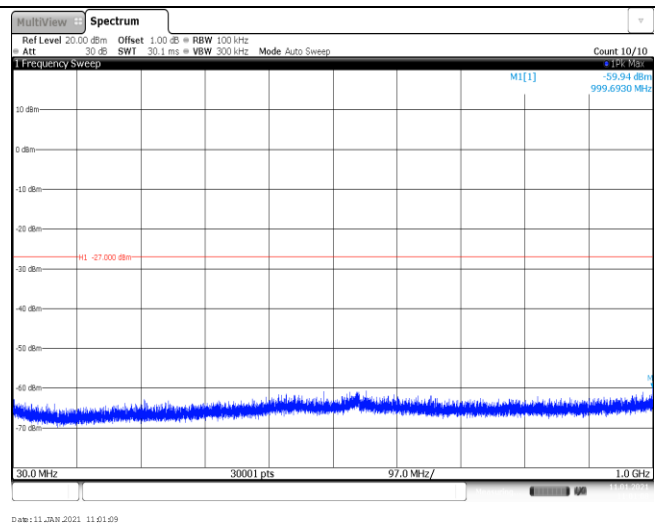
CH06
1GHz~26GHz



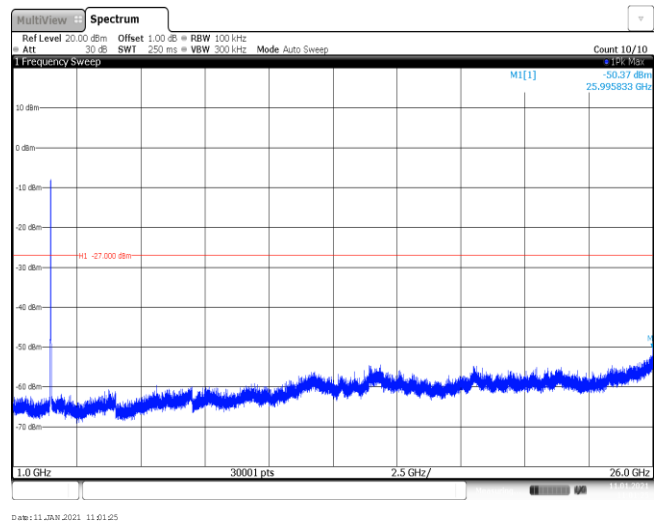
CH11
Reference level



CH11
30MHz~1000MHz



CH11
1GHz~26GHz



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