

APPENDIX REPORT

Project No.	SHT2103073005EW	Radio Specification	WIFI 2.4G
Test sample No.	YPHT21030730021	Model No.	C60
Start test date	2021-04-08	Finish date	2021-04-09
Temperature	26.2°C	Humidity	55%
Test Engineer	Qizhi Zhang	Auditor	Xiaodong Zhuo

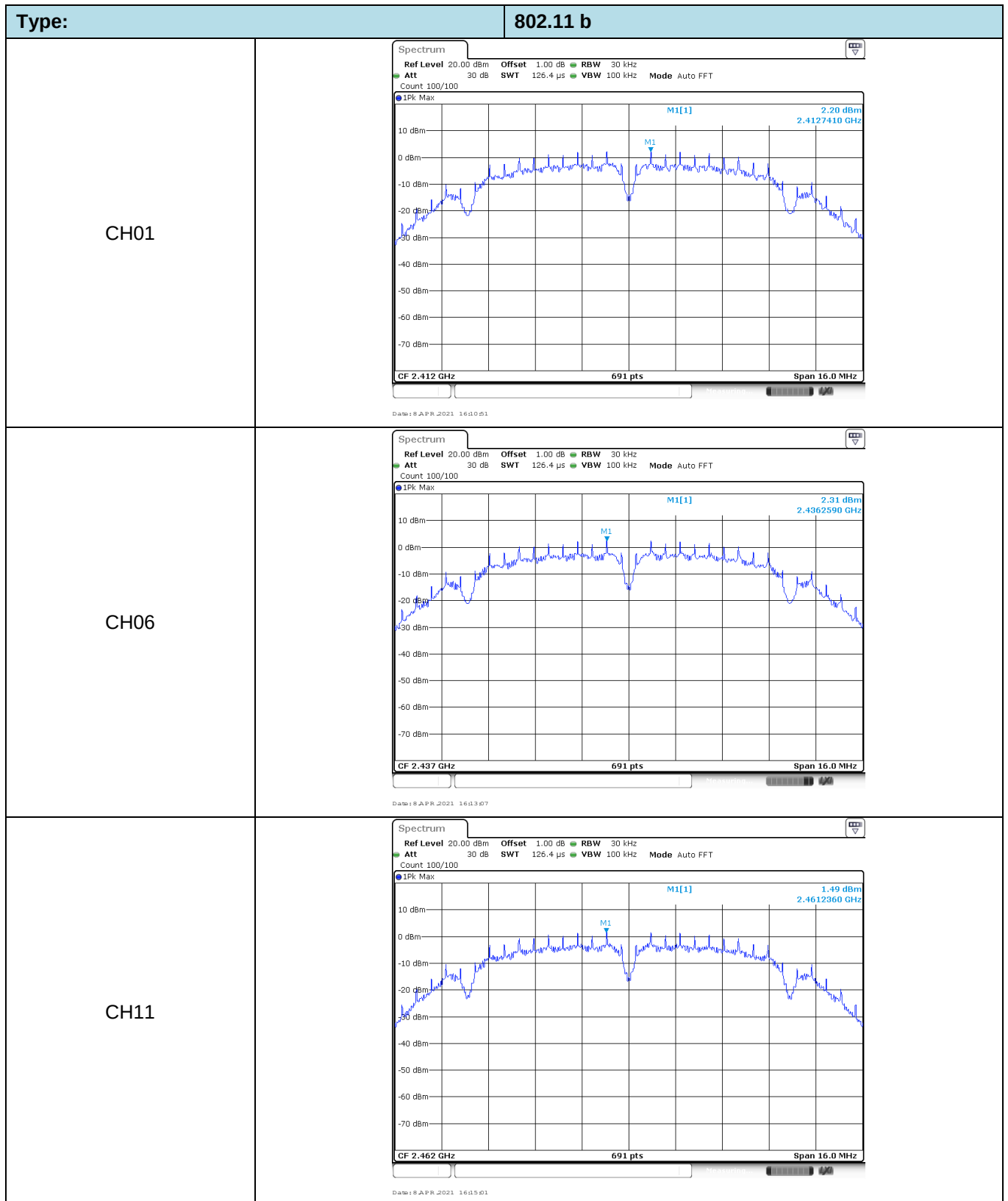
Appendix clause	Test item	Result
A	Conducted Peak Output Power	PASS
B	Power Spectral Density	PASS
C	6 dB Bandwidth	PASS
D	99% Occupied Bandwidth	PASS
E	Duty Cycle	PASS
F	Band edge and Spurious Emissions (conducted)	PASS

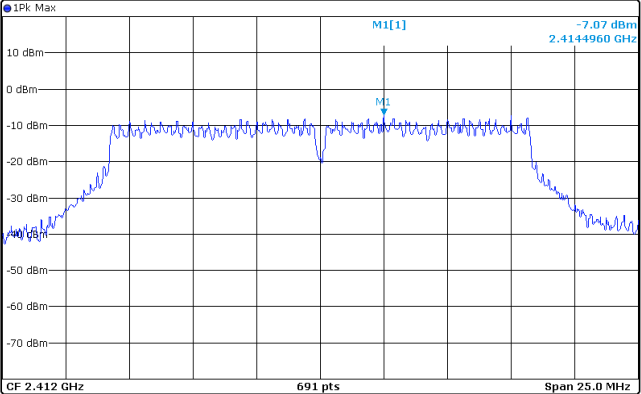
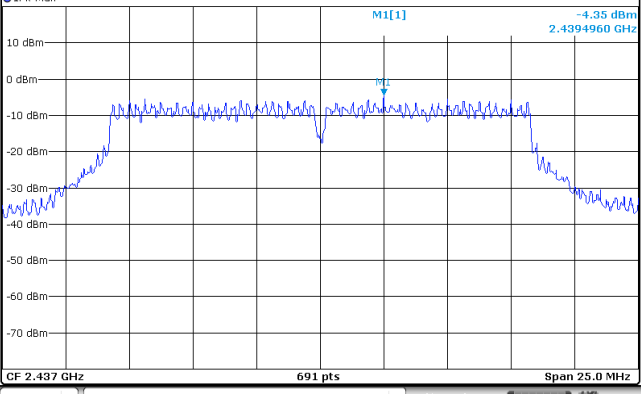
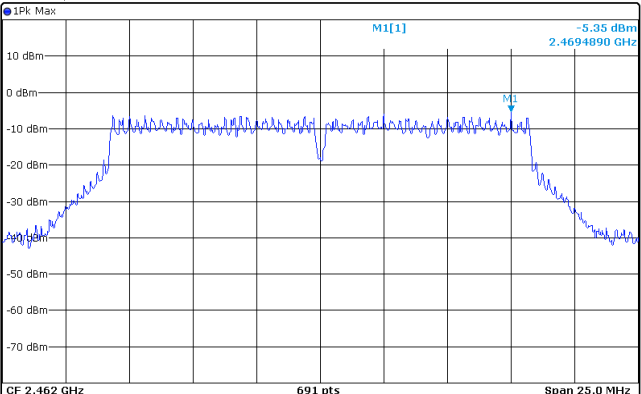
Appendix A: Conducted Peak Output Power

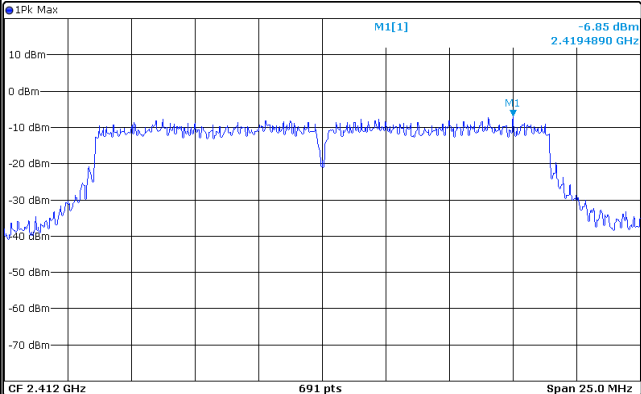
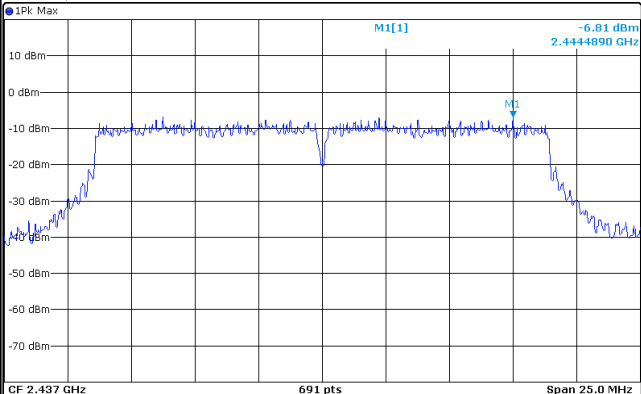
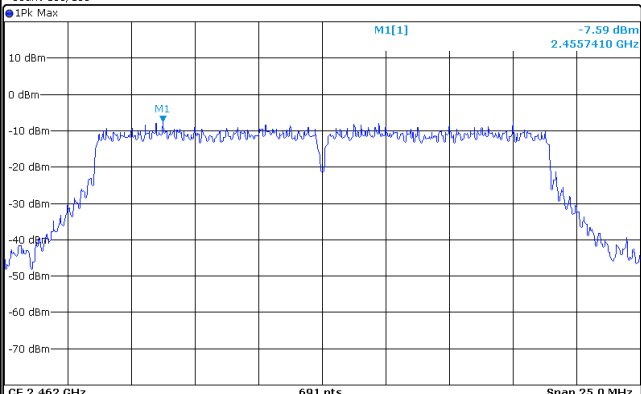
Type	Channel	Peak Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
802.11b	01	13.31	11.15	≤ 30.00	Pass
	06	13.57	11.44		
	11	12.80	10.67		
802.11g	01	14.17	10.44	≤ 30.00	Pass
	06	16.46	12.73		
	11	15.82	12.23		
802.11n (HT20)	01	15.36	12.17	≤ 30.00	Pass
	06	15.70	12.57		
	11	14.96	11.67		

Appendix B: Power Spectral Density

Type	Channel	Power Spectral Density (dBm/30KHz)	Limit (dBm/3KHz)	Result
802.11b	01	2.20	≤8.00	Pass
	06	2.31		
	11	1.49		
802.11g	01	-7.07	≤8.00	Pass
	06	-4.35		
	11	-5.35		
802.11n(HT20)	01	-6.85	≤8.00	Pass
	06	-6.77		
	11	-7.59		

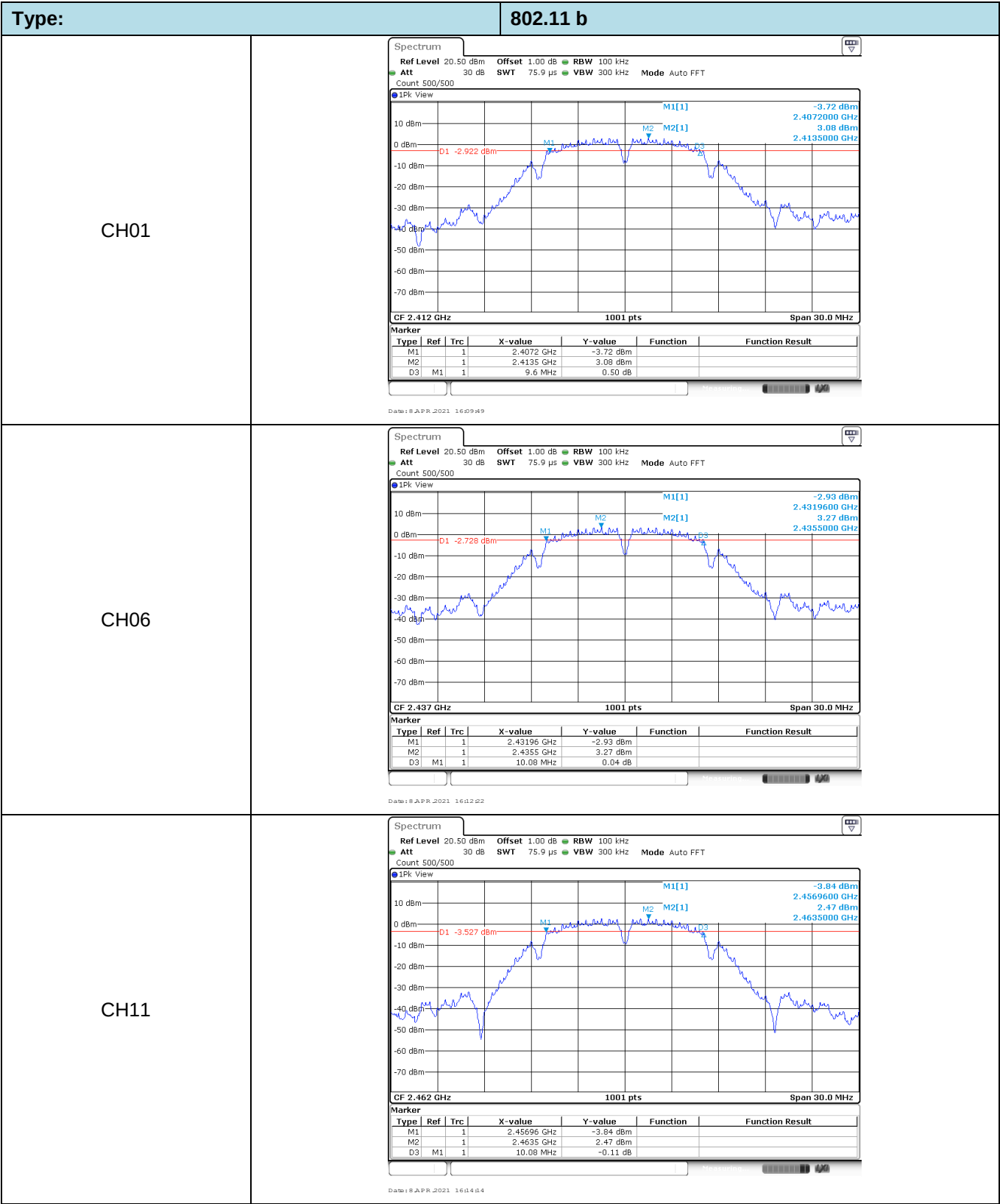


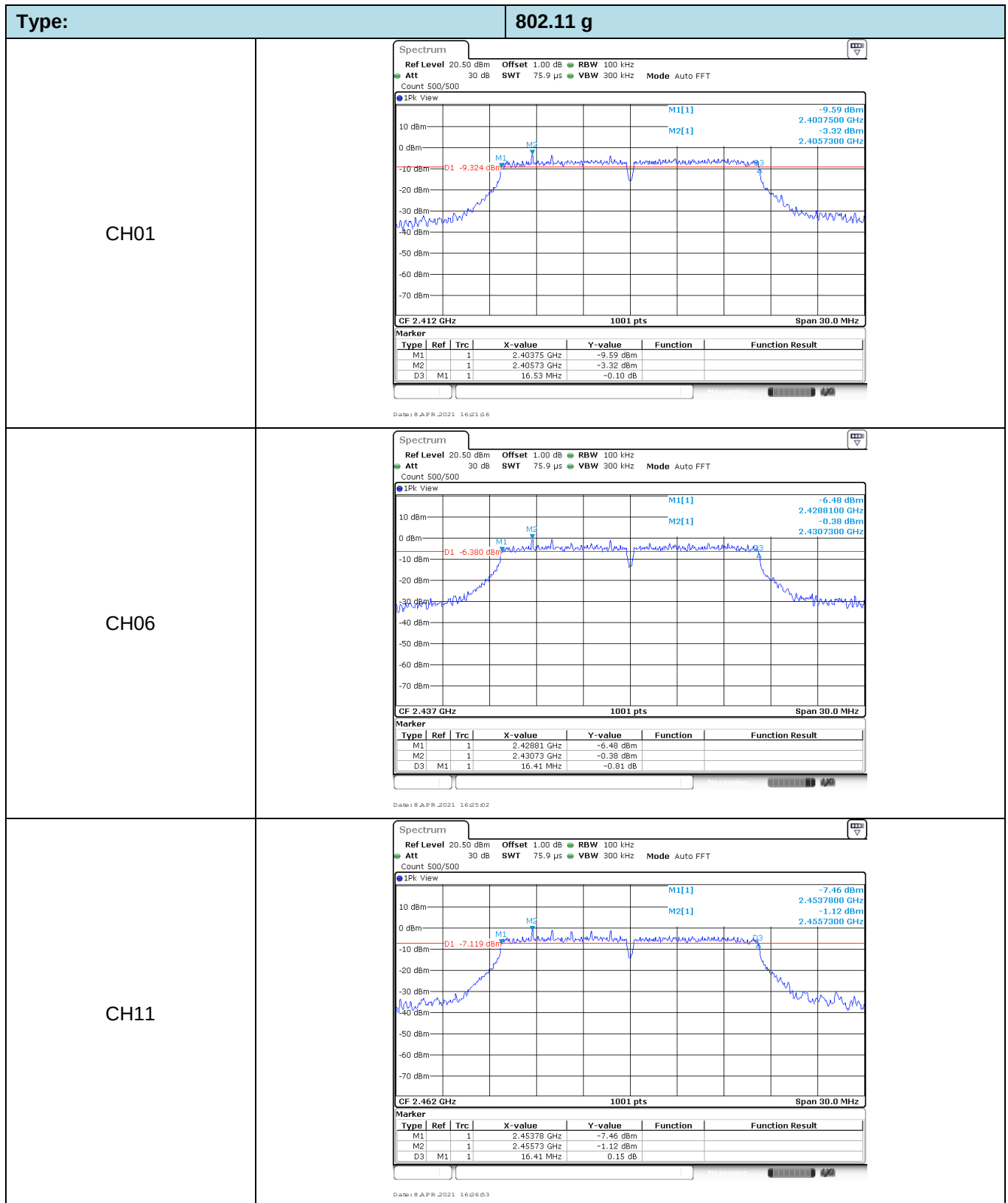
Type:		802.11 g
CH01	Spectrum Ref Level 20.00 dBm Att 30 dB Count 100/100 Offset 1.00 dB SWT 189.6 μs RBW 30 kHz VBW 100 kHz Mode Auto FFT 1Pk Max M1[1] -7.07 dBm 2.4144960 GHz  CF 2.412 GHz 691 pts Span 25.0 MHz Date: 8.APR.2021 16:23:32	
CH06	Spectrum Ref Level 20.00 dBm Att 30 dB Count 100/100 Offset 1.00 dB SWT 189.6 μs RBW 30 kHz VBW 100 kHz Mode Auto FFT 1Pk Max M1[1] -4.35 dBm 2.4394960 GHz  CF 2.437 GHz 691 pts Span 25.0 MHz Date: 8.APR.2021 16:23:45	
CH11	Spectrum Ref Level 20.00 dBm Att 30 dB Count 100/100 Offset 1.00 dB SWT 189.6 μs RBW 30 kHz VBW 100 kHz Mode Auto FFT 1Pk Max M1[1] -5.35 dBm 2.4694890 GHz  CF 2.462 GHz 691 pts Span 25.0 MHz Date: 8.APR.2021 16:28:32	

Type:		802.11n(HT20)	
CH01	Spectrum Ref Level 20.00 dBm Att 30 dB Count 100/100 Offset 1.00 dB SWT 189.6 μs RBW 30 kHz VBW 100 kHz Mode Auto FFT 1Pk Max M1[1] -6.85 dBm 2.4194890 GHz  CF 2.412 GHz 691 pts Span 25.0 MHz Date: 8.APR.2021 16:34:47		
CH06	Spectrum Ref Level 20.00 dBm Att 30 dB Count 100/100 Offset 1.00 dB SWT 189.6 μs RBW 30 kHz VBW 100 kHz Mode Auto FFT 1Pk Max M1[1] -6.81 dBm 2.4444890 GHz  CF 2.437 GHz 691 pts Span 25.0 MHz Date: 8.APR.2021 16:37:23		
CH11	Spectrum Ref Level 20.00 dBm Att 30 dB Count 100/100 Offset 1.00 dB SWT 189.6 μs RBW 30 kHz VBW 100 kHz Mode Auto FFT 1Pk Max M1[1] -7.59 dBm 2.4557410 GHz  CF 2.462 GHz 691 pts Span 25.0 MHz Date: 8.APR.2021 16:39:26		

Appendix C: 6dB bandwidth

Type	Channel	6dB Bandwidth (MHz)	Limit (MHz)	Result
802.11b	01	9.60	≥0.5	Pass
	06	10.08		
	11	10.08		
802.11g	01	16.53	≥0.5	Pass
	06	16.41		
	11	16.41		
802.11n(HT20)	01	17.64	≥0.5	Pass
	06	17.61		
	11	17.67		

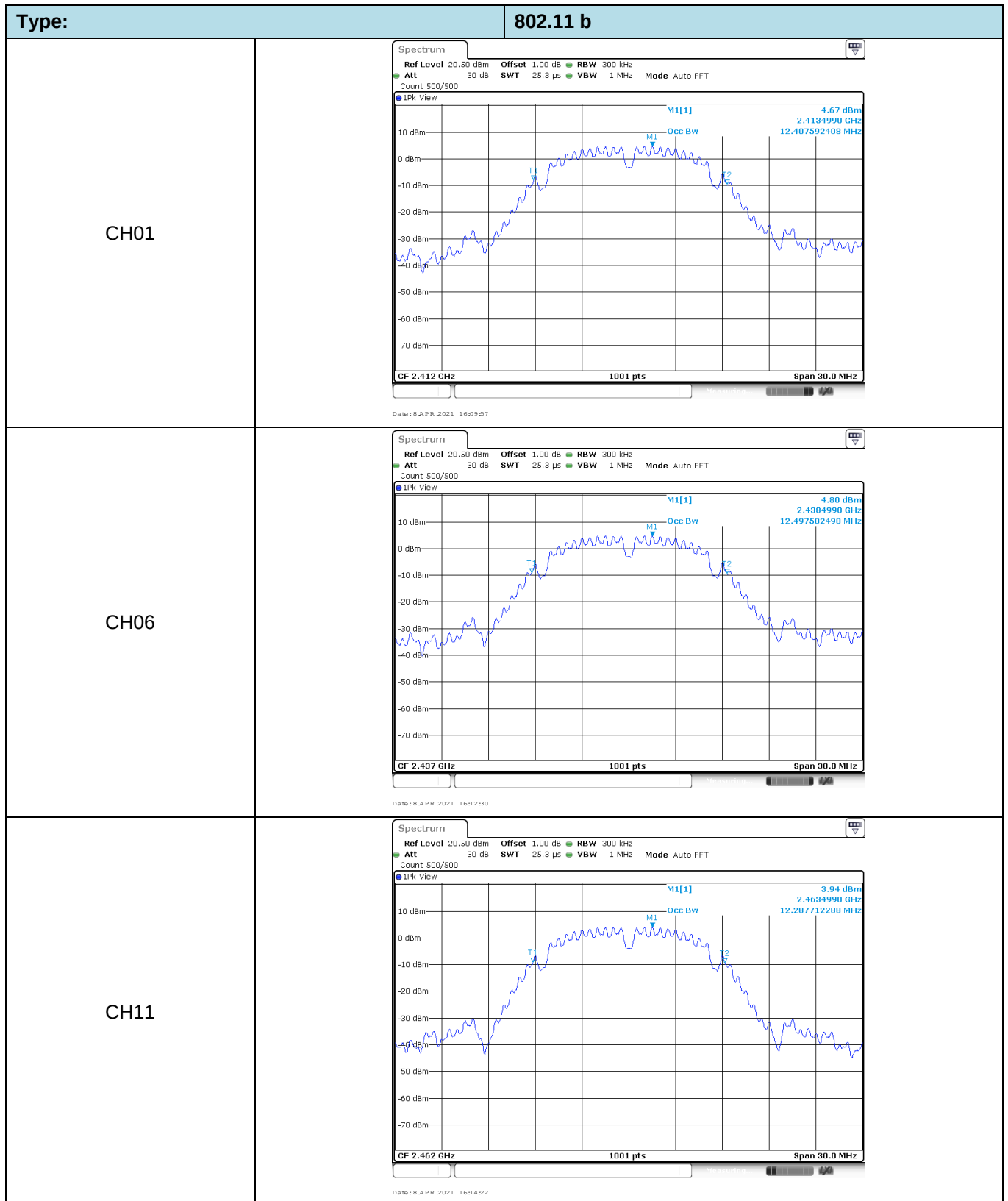


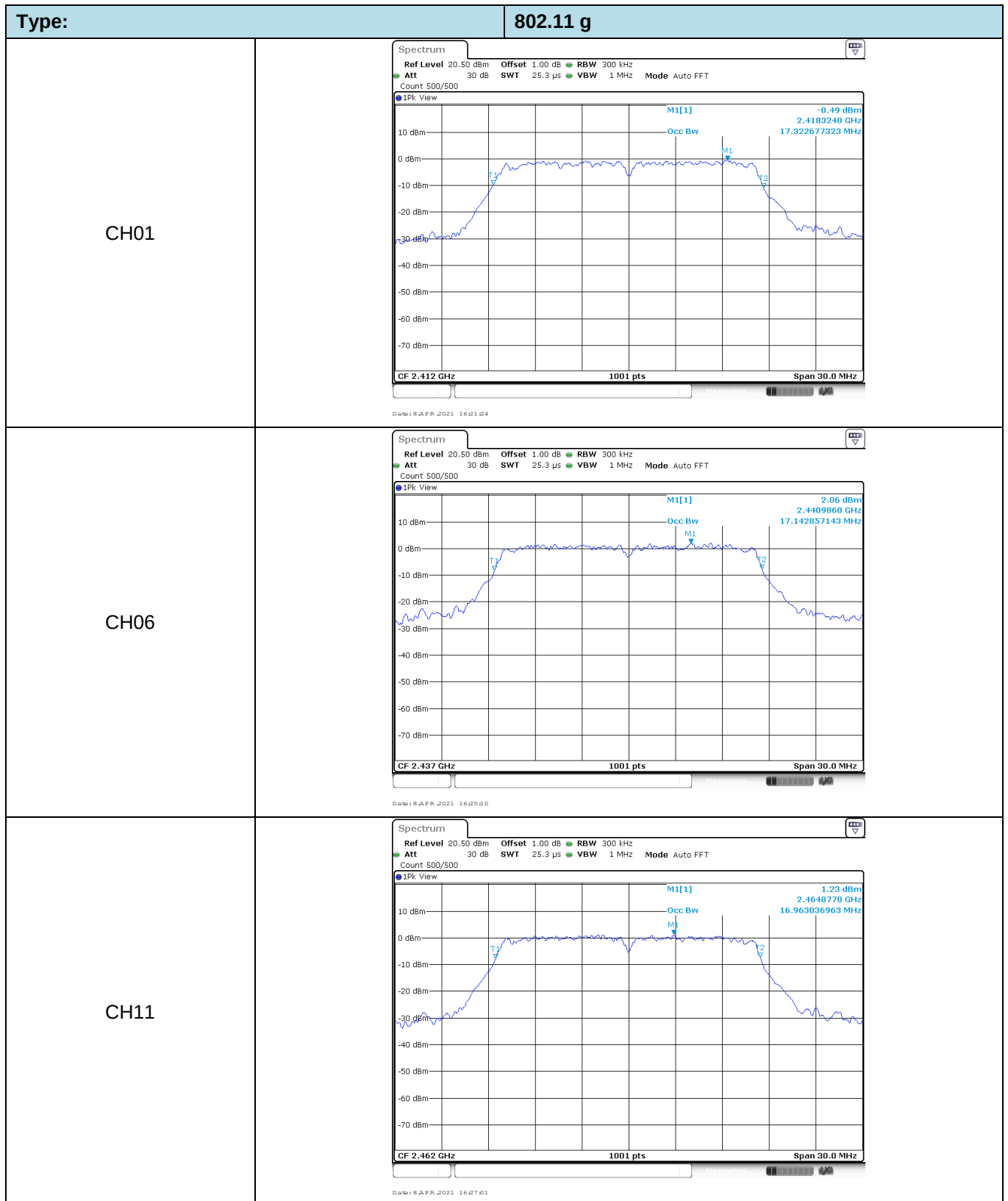


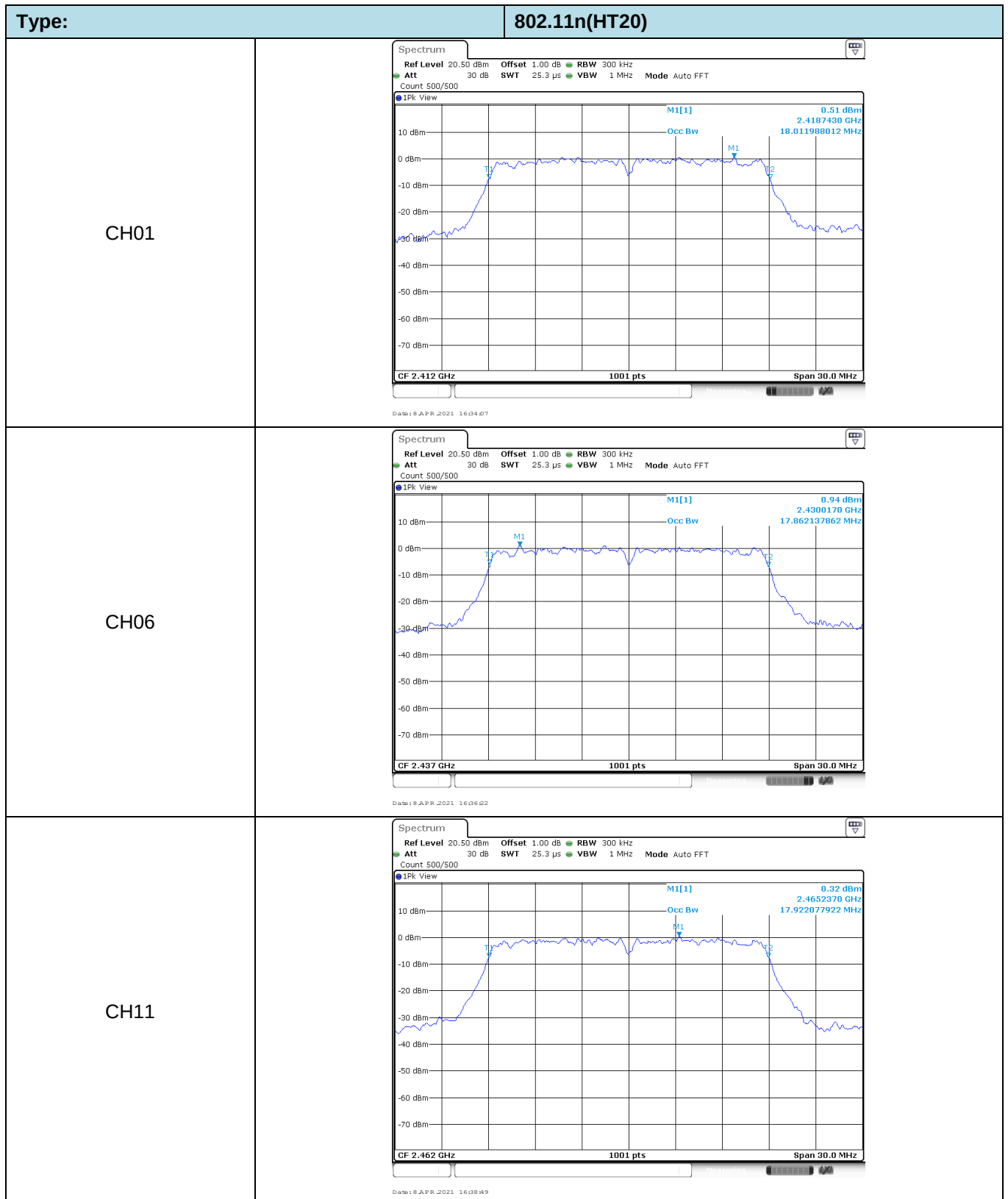
Type:		802.11n(HT20)																												
CH01	Spectrum Ref Level 20.50 dBm Att 30 dB Count 500/500 Offset 1.00 dB SWT 75.9 μs RBW 100 kHz VBW 300 kHz Mode Auto FFT 1Pk View 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm M1[1] M2[1] M2 -8.84 dBm 2.4031800 GHz -1.96 dBm 2.4144900 GHz CF 2.412 GHz 1001 pts Span 30.0 MHz Marker <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></td><td>1</td><td>2.40318 GHz</td><td>-8.84 dBm</td><td></td><td></td></tr><tr><td>M2</td><td></td><td>1</td><td>2.41449 GHz</td><td>-1.96 dBm</td><td></td><td></td></tr><tr><td>D3</td><td>M1</td><td>1</td><td>17.64 MHz</td><td>0.01 dB</td><td></td><td></td></tr></table> Date: 8.APR.2021 16:33:59		Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1		1	2.40318 GHz	-8.84 dBm			M2		1	2.41449 GHz	-1.96 dBm			D3	M1	1	17.64 MHz	0.01 dB		
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Type	Ref	Trc	X-value	Y-value	Function	Function Result																								
M1		1	2.45315 GHz	-9.75 dBm																										
M2		1	2.46449 GHz	-2.71 dBm																										
D3	M1	1	17.67 MHz	0.53 dB																										

Appendix D: 99% Occupied Bandwidth

Type	Channel	99% Bandwidth (MHz)	Limit (MHz)	Result
802.11b	01	12.41	-	Pass
	06	12.50		
	11	12.29		
802.11g	01	17.32	-	Pass
	06	17.14		
	11	16.96		
802.11n(HT20)	01	18.01	-	Pass
	06	17.86		
	11	17.92		

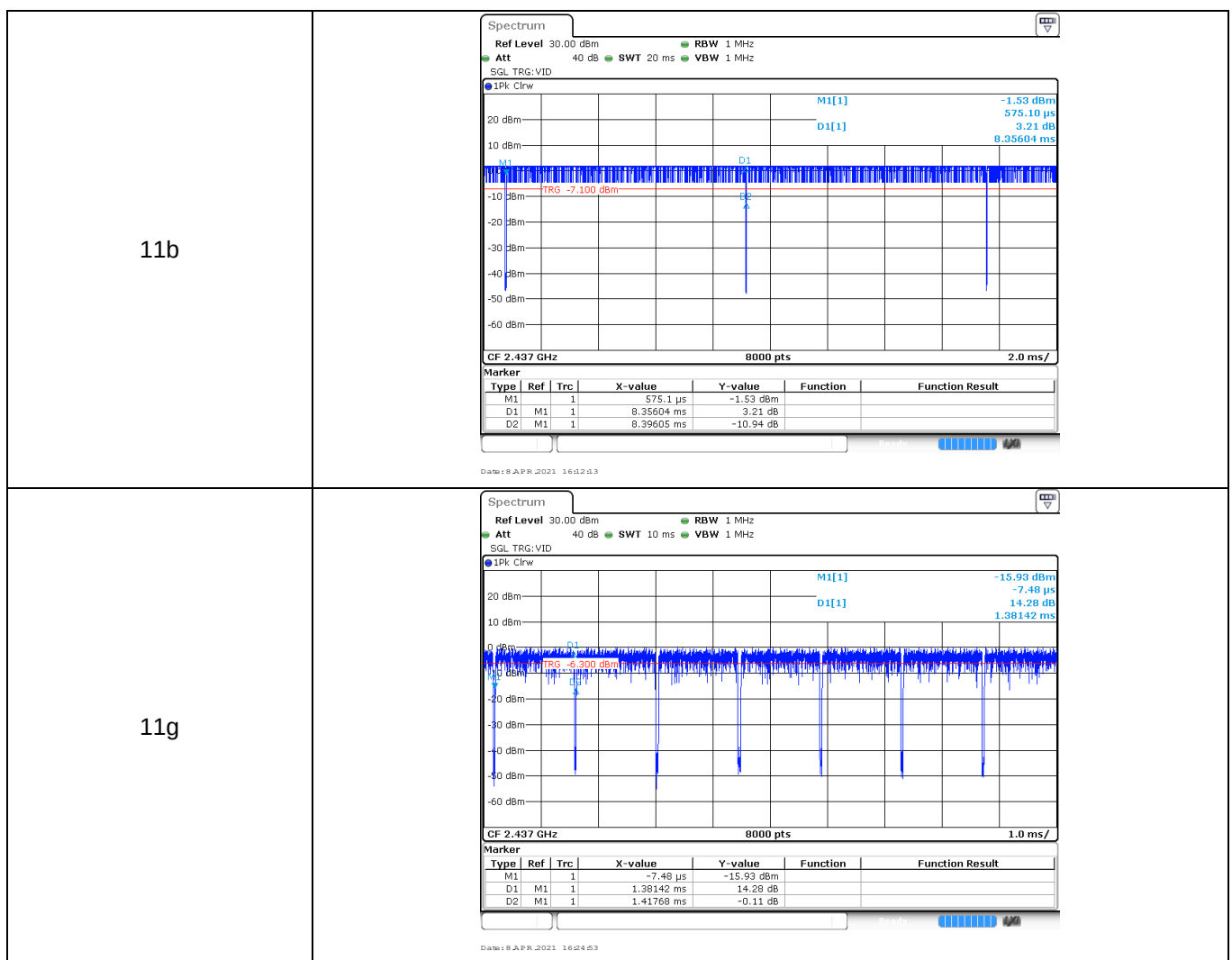


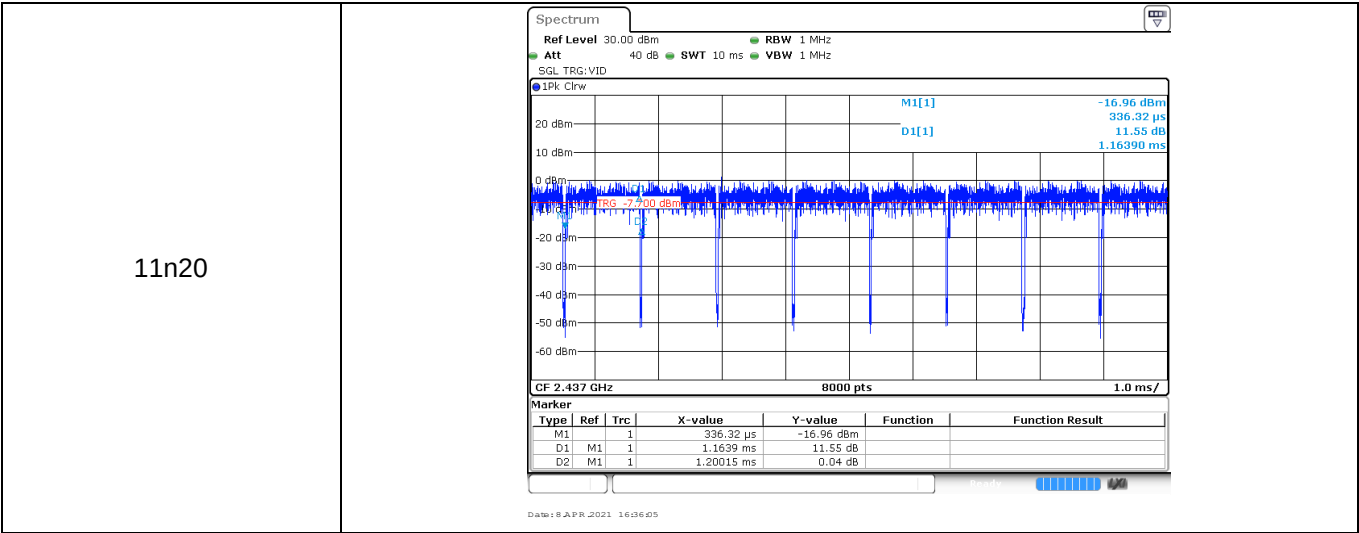




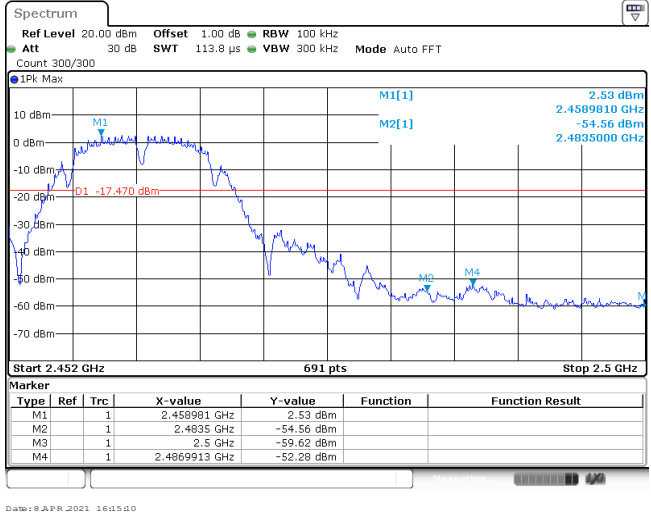
Appendix E: Duty Cycle

Modulation Type	Test Frequency (MHz)	T _{on time} for single burst (ms)	T _{period} (ms)	Duty cycle	1/T _{on time} (kHz)
11b	2437	8.36	8.40	99.5%	0.1
11g	2437	1.38	1.42	97.2%	0.7
11n20	2437	1.16	1.20	96.7%	0.9



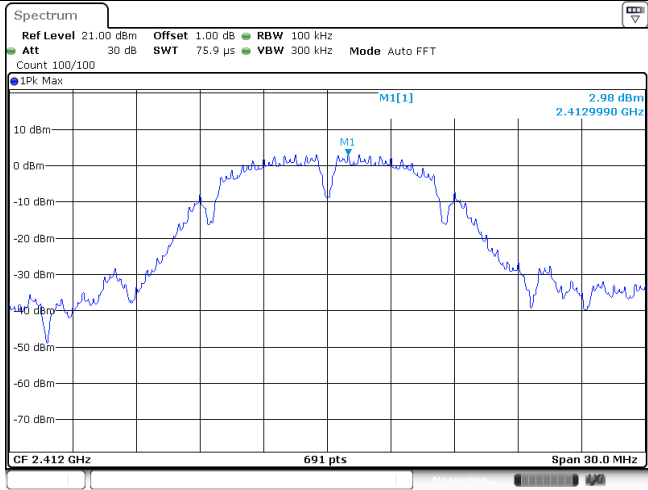
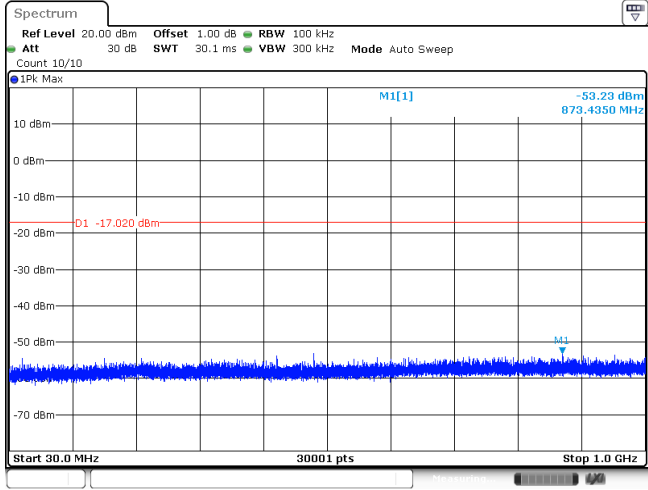
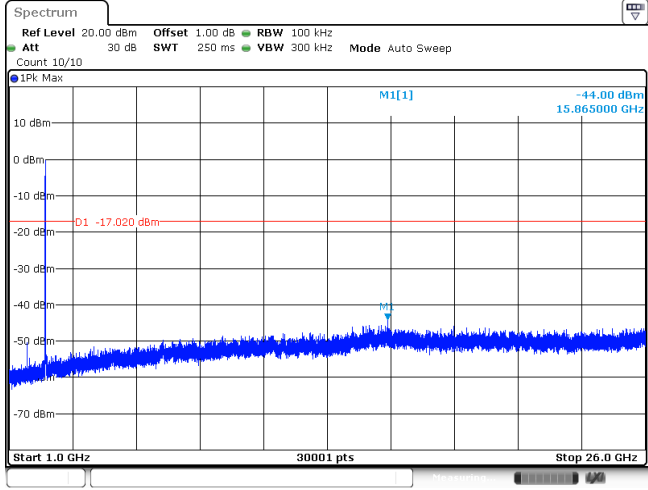


Appendix F: Band edge and Spurious Emissions (conducted)

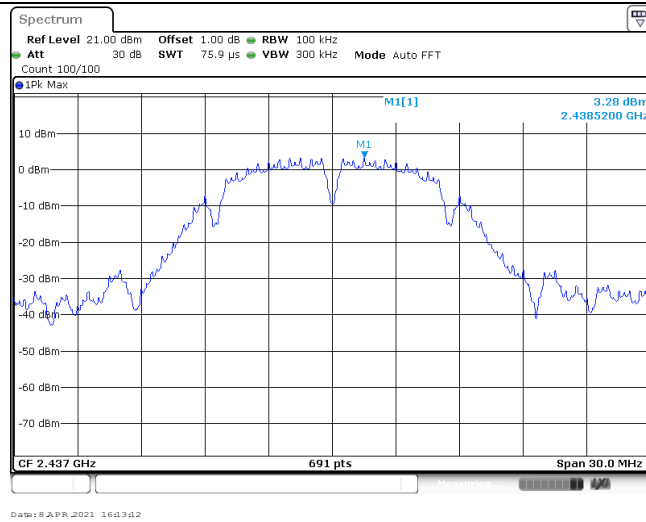
Test Item:	Bandedge	Type:	802.11 b
CH01			
CH11			

Test Item:	Bandedge	Type:	802.11 g																																										
CH01	Spectrum Ref Level 20.00 dBm Att 30 dB Offset 1.00 dB RBW 100 kHz SWT 246.5 μs VBW 300 kHz Mode Auto FFT Count 243/300 1Pk Max 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm M1[1] M2[1] M3 M4 -2.39 dBm 2.414460 GHz -35.04 dBm 2.400000 GHz D1 -22.390 dBm Start 2.31 GHz 691 pts Stop 2.422 GHz Marker <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>2.41446 GHz</td><td>-2.39 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4 GHz</td><td>-35.04 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.39 GHz</td><td>-42.78 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.31 GHz</td><td>-60.69 dBm</td><td></td><td></td></tr><tr><td>M5</td><td>1</td><td></td><td>2.399925 GHz</td><td>-34.02 dBm</td><td></td><td></td></tr></table> 8.APR.2021 16:23:41			Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		2.41446 GHz	-2.39 dBm			M2	1		2.4 GHz	-35.04 dBm			M3	1		2.39 GHz	-42.78 dBm			M4	1		2.31 GHz	-60.69 dBm			M5	1		2.399925 GHz	-34.02 dBm		
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CH11	Spectrum Ref Level 20.00 dBm Att 30 dB Offset 1.00 dB RBW 100 kHz SWT 113.8 μs VBW 300 kHz Mode Auto FFT Count 300/300 1Pk Max 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm M1 M2[1] M3 M4 -0.65 dBm 2.4644690 GHz -44.67 dBm 2.4835000 GHz D1 -20.650 dBm Start 2.452 GHz 691 pts Stop 2.5 GHz Marker <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>2.464469 GHz</td><td>-0.65 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4835 GHz</td><td>-44.67 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.5 GHz</td><td>-54.96 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.4835826 GHz</td><td>-44.13 dBm</td><td></td><td></td></tr></table> 8.APR.2021 16:28:42			Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		2.464469 GHz	-0.65 dBm			M2	1		2.4835 GHz	-44.67 dBm			M3	1		2.5 GHz	-54.96 dBm			M4	1		2.4835826 GHz	-44.13 dBm									
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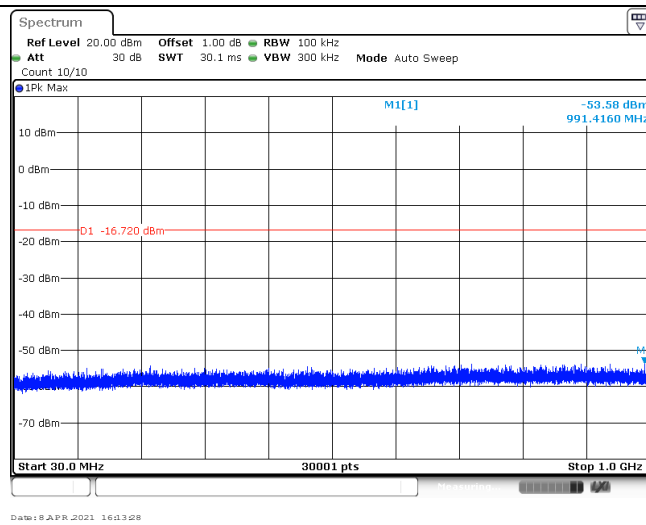
Test Item:	Bandedge	Type:	802.11 n(HT20)																																																
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Test Item:	SE	Type:	802.11 b
CH01 Reference level			
CH01 30MHz~1000MHz			
CH01 1GHz~26GHz			

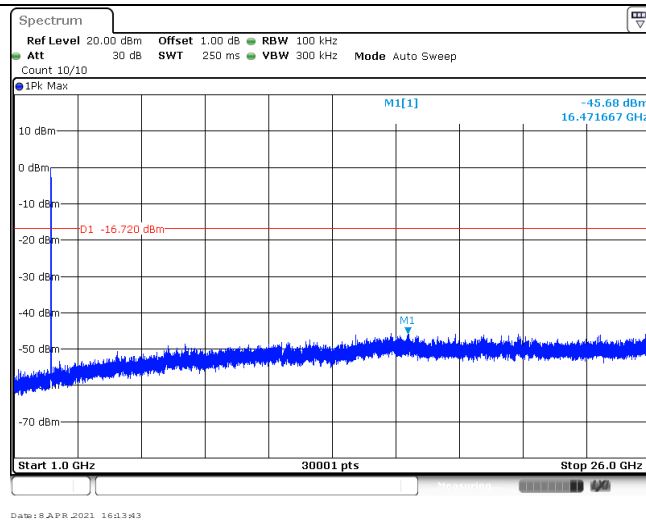
CH06
Reference level

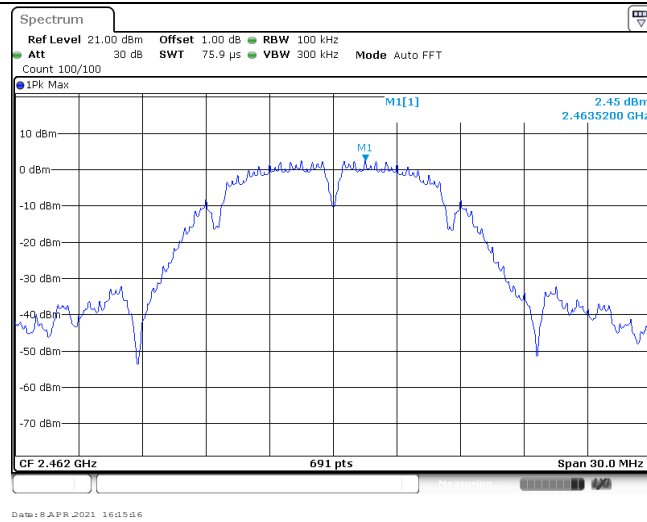
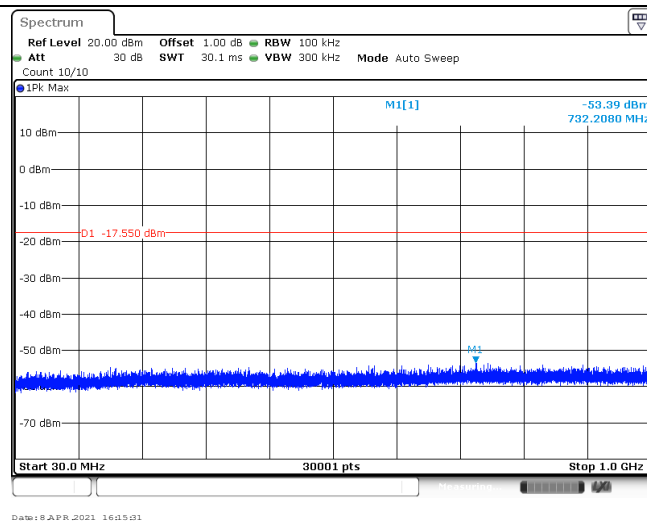
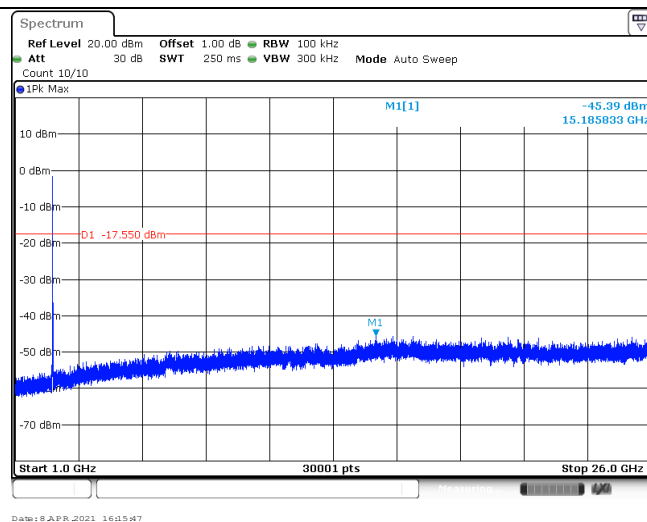


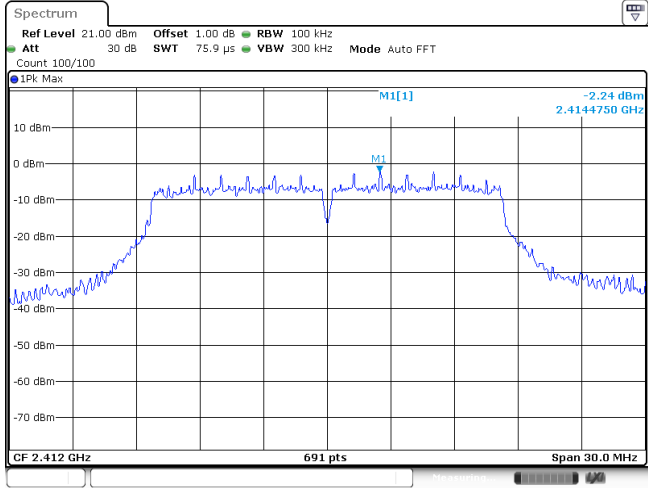
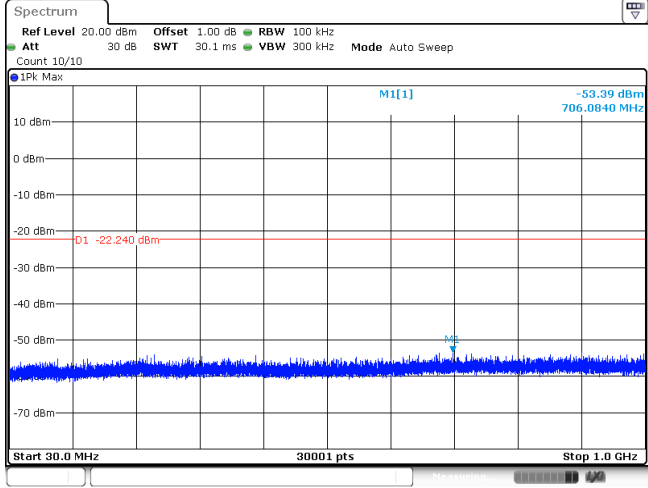
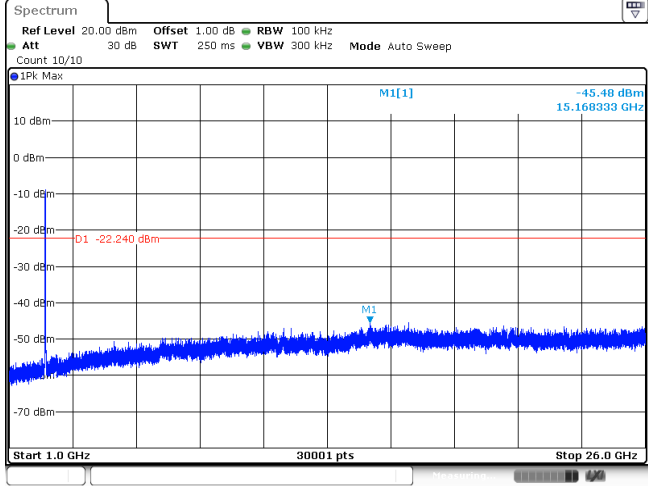
CH06
30MHz~1000MHz

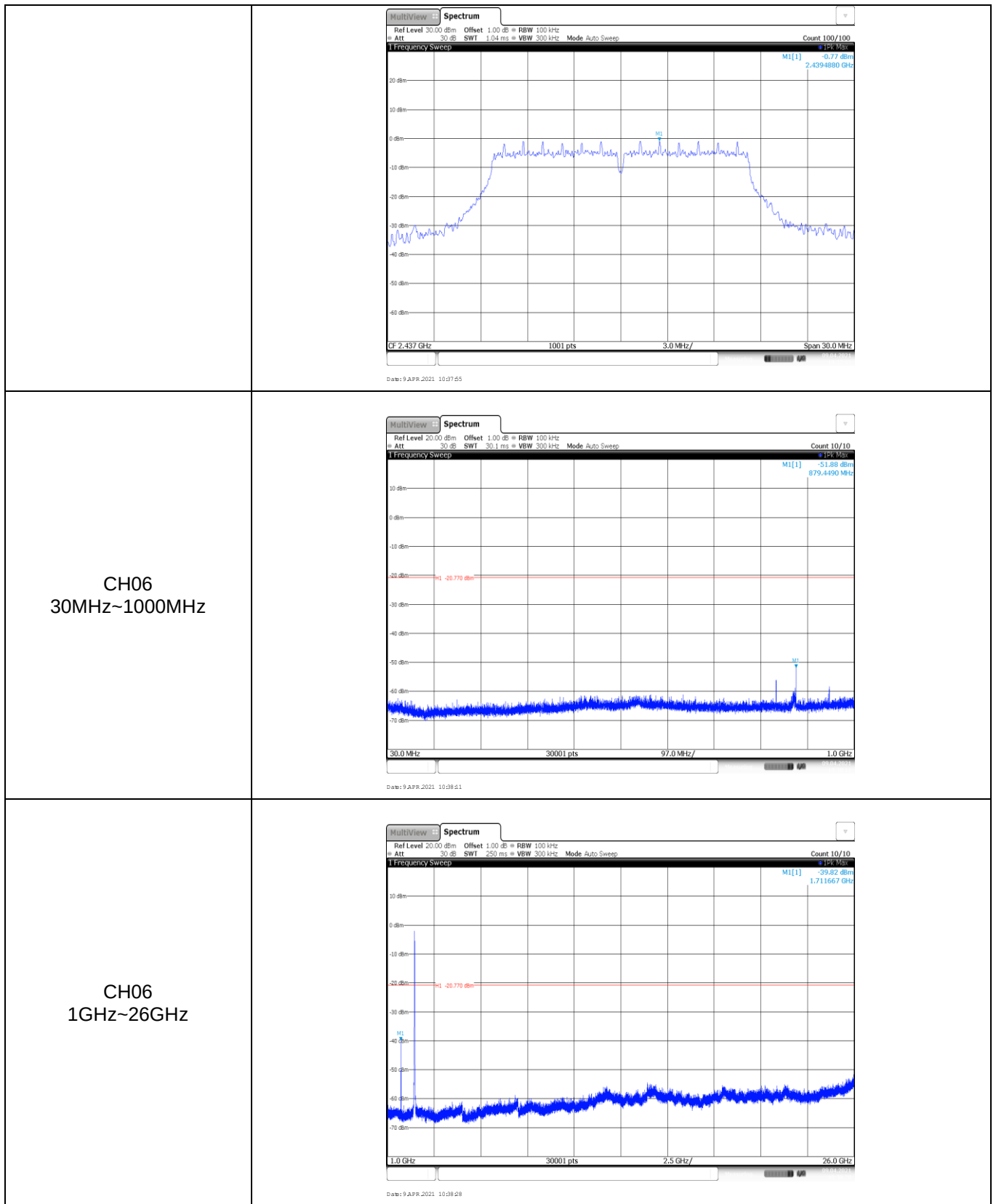


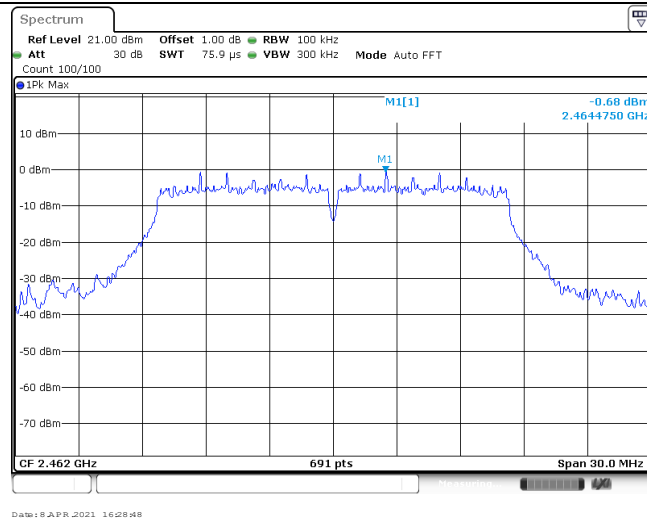
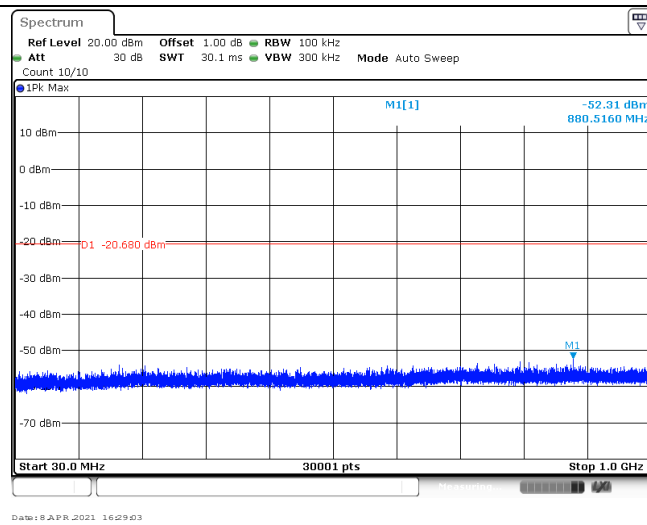
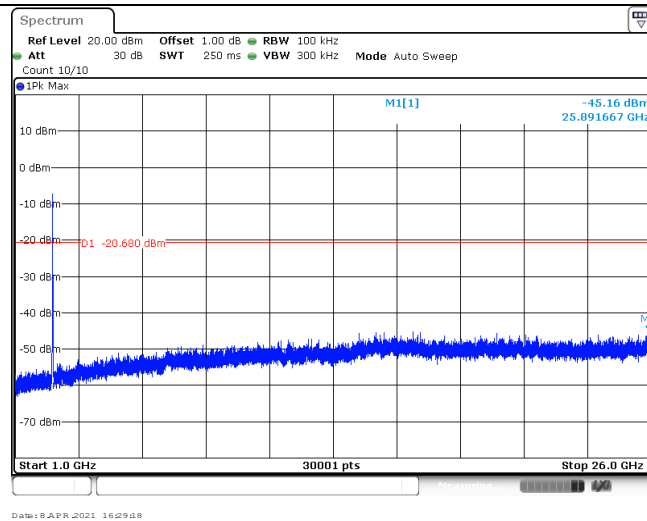
CH06
1GHz~26GHz

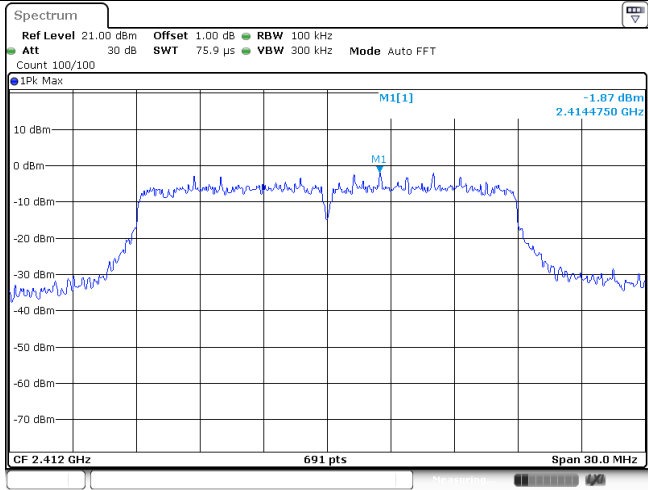
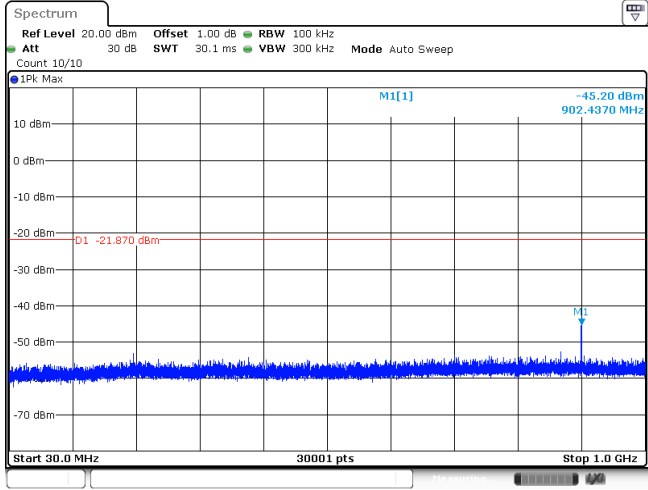
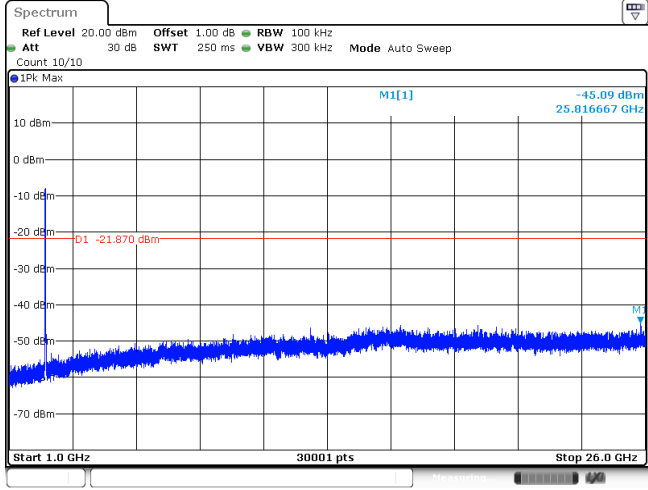


CH11
Reference levelCH11
30MHz~1000MHzCH11
1GHz~26GHz

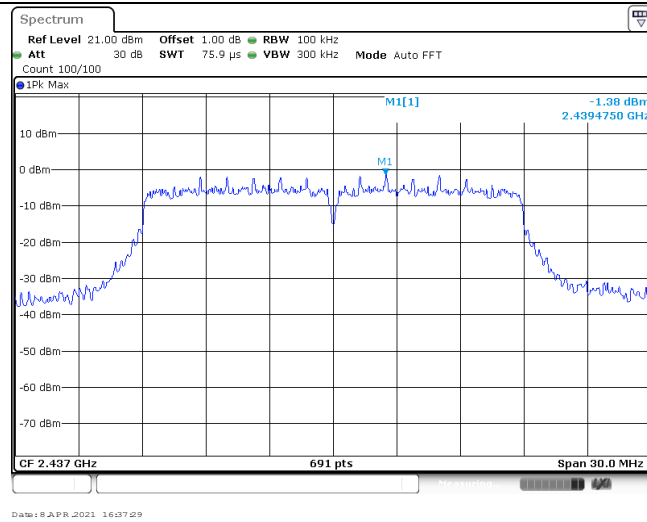
Test Item:	SE	Type:	802.11 g
CH01 Reference level			
CH01 30MHz~1000MHz			
CH01 1GHz~26GHz			
CH06 Reference level			



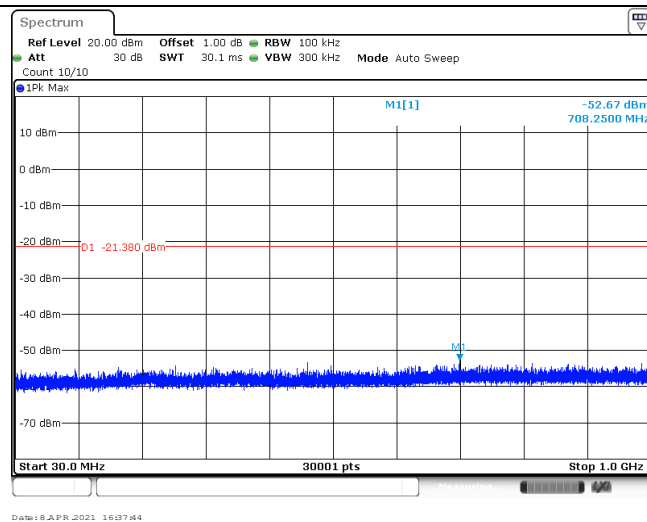
CH11
Reference levelCH11
30MHz~1000MHzCH11
1GHz~26GHz

Test Item:	SE	Type:	802.11 n(HT20)
CH01 Reference level		 Spectrum Ref Level 21.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 75.9 μs VBW 300 kHz Mode Auto FFT Count 100/100 1Pk Max M1[1] -1.87 dBm 2.4144750 GHz CF 2.412 GHz 691 pts Span 30.0 MHz Date: 8 APR. 2021 16:35:02	
CH01 30MHz~1000MHz		 Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 30.1 ms VBW 300 kHz Mode Auto Sweep Count 10/10 1Pk Max M1[1] -45.20 dBm 902.4370 MHz D1 -21.870 dBm Start 30.0 MHz 30001 pts Stop 1.0 GHz Date: 8 APR. 2021 16:35:17	
CH01 1GHz~26GHz		 Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 250 ms VBW 300 kHz Mode Auto Sweep Count 10/10 1Pk Max M1[1] -45.09 dBm 25.816667 GHz D1 -21.870 dBm Start 1.0 GHz 30001 pts Stop 26.0 GHz Date: 8 APR. 2021 16:35:33	

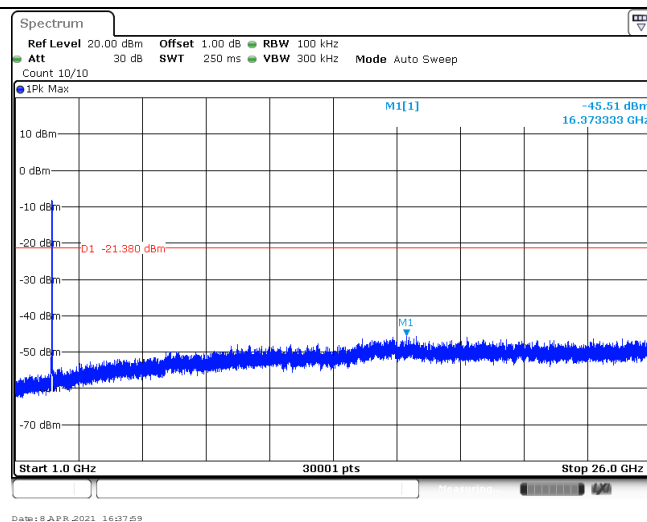
CH06
Reference level



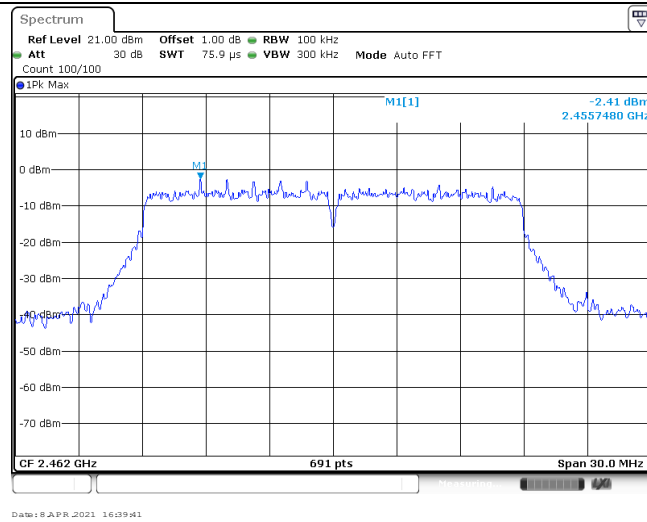
CH06
30MHz~1000MHz



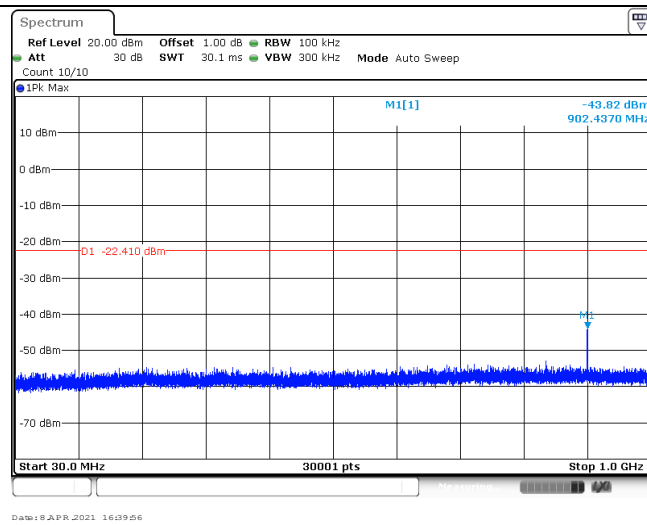
CH06
1GHz~26GHz



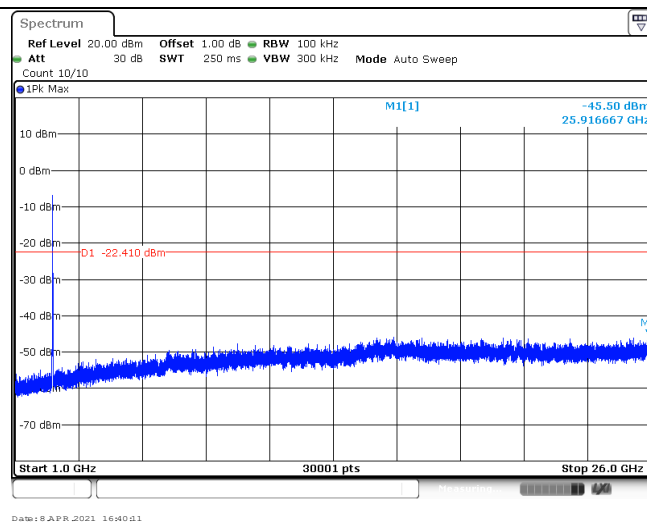
CH11
Reference level



CH11
30MHz~1000MHz



CH11
1GHz~26GHz



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