

APPENDIX REPORT

Project No.	SHT2108044901EW	Radio Specification	WIFI 2.4G
Test sample No.	YPHT20180449003	Model No.	EyeOn-10NE
Start test date	2021-09-10	Finish date	2021-09-10
Temperature	25.8℃	Humidity	38%
Test Engineer	Xiaoqin Li	Auditor	Xiaodong Zhao

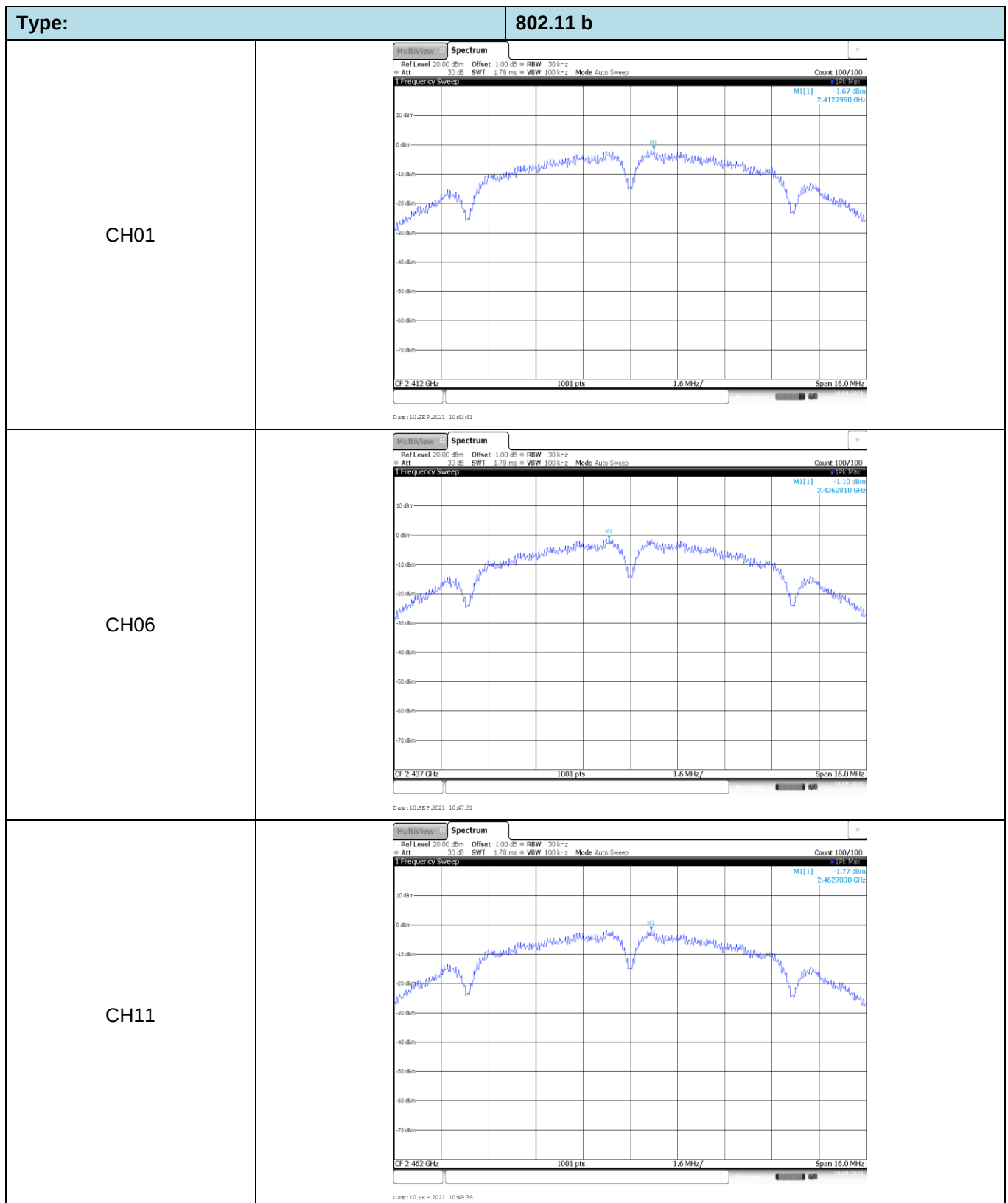
Appendix clause	Test item	Result
A	Conducted Peak Output Power	PASS
B	Power Spectral Density	PASS
C	6 dB Bandwidth	PASS
D	99% Occupied Bandwidth	PASS
E	Duty Cycle	PASS
F	Band edge and Spurious Emissions (conducted)	PASS

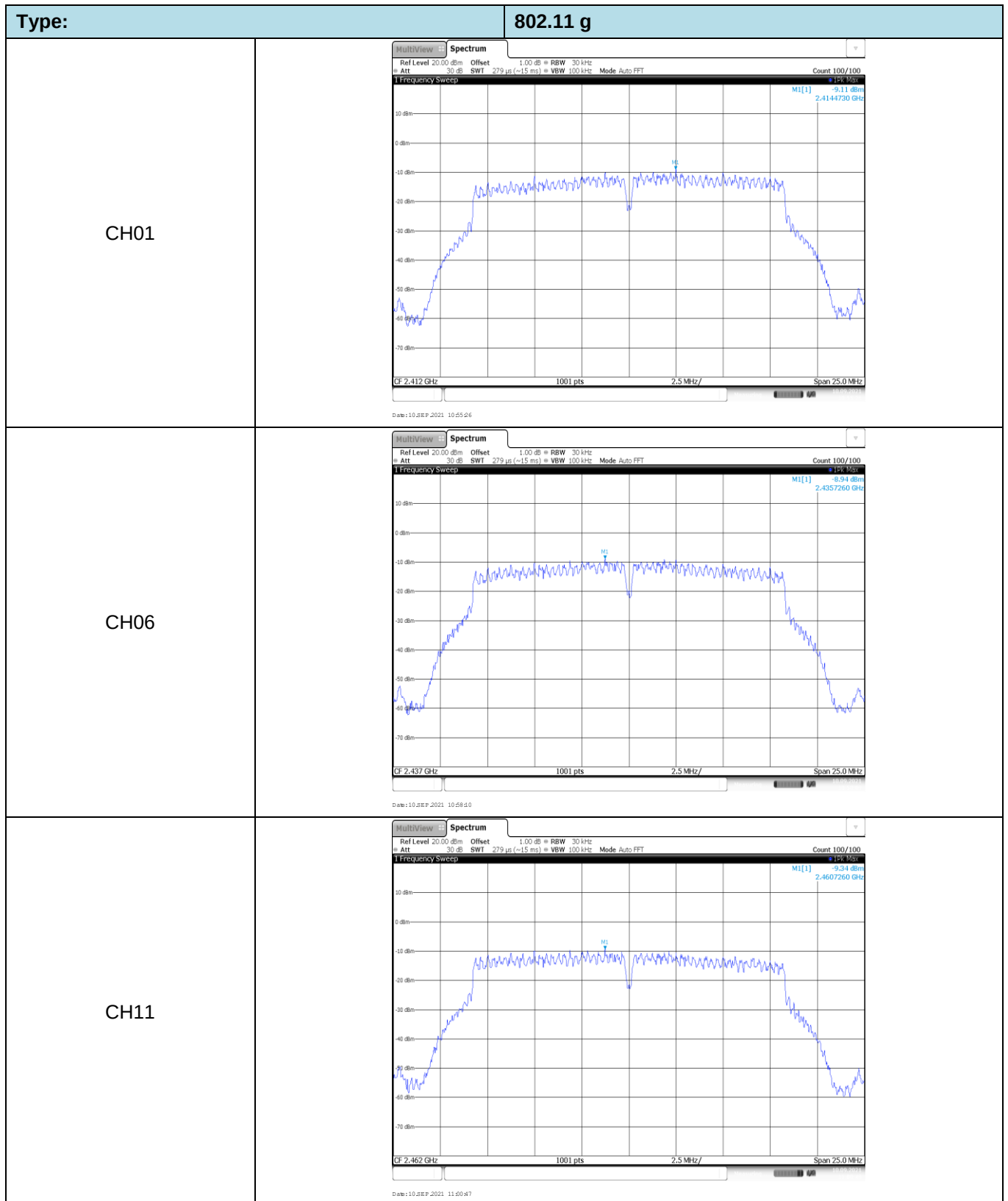
Appendix A: Conducted Peak Output Power

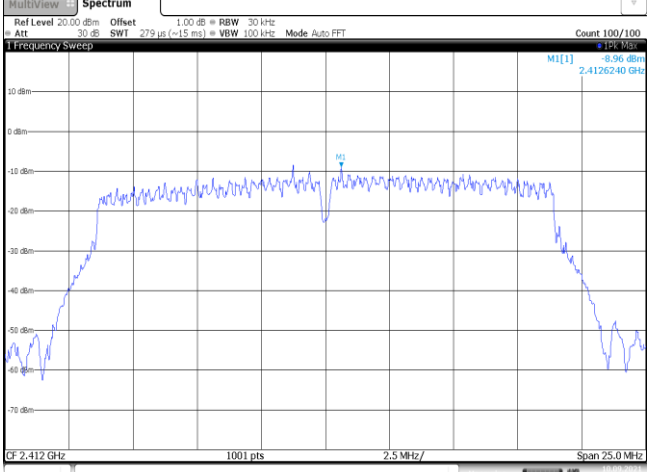
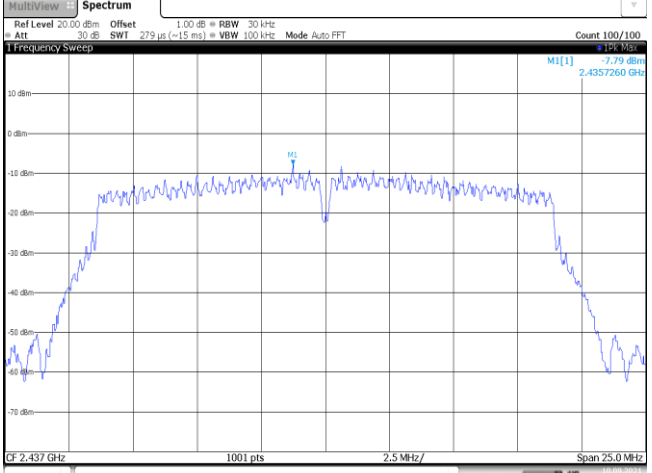
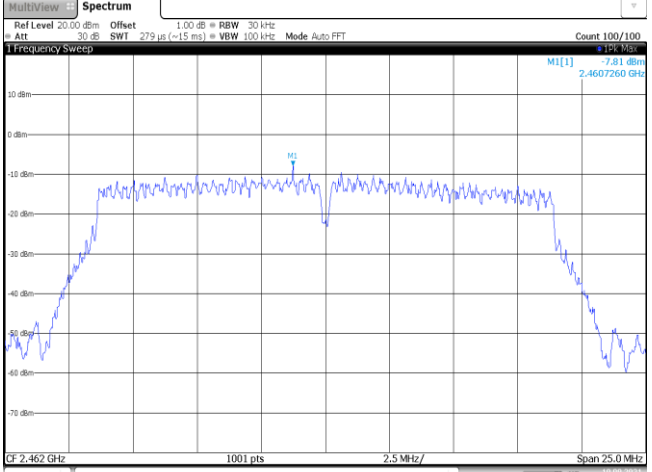
Type	Channel	Peak Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
802.11b	01	15.43	13.02	≤ 30.00	Pass
	06	15.48	13.04		
	11	15.20	12.75		
802.11g	01	14.56	11.62	≤ 30.00	Pass
	06	15.04	12.28		
	11	14.81	11.98		
802.11n (HT20)	01	14.69	11.66	≤ 30.00	Pass
	06	14.83	11.88		
	11	14.82	11.86		
802.11n(HT40)	03	14.89	12.02	≤ 30.00	Pass
	06	15.19	12.26		
	09	14.90	12.04		

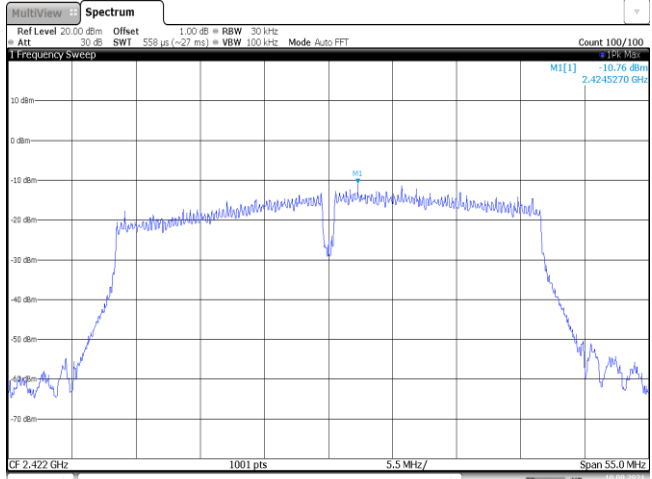
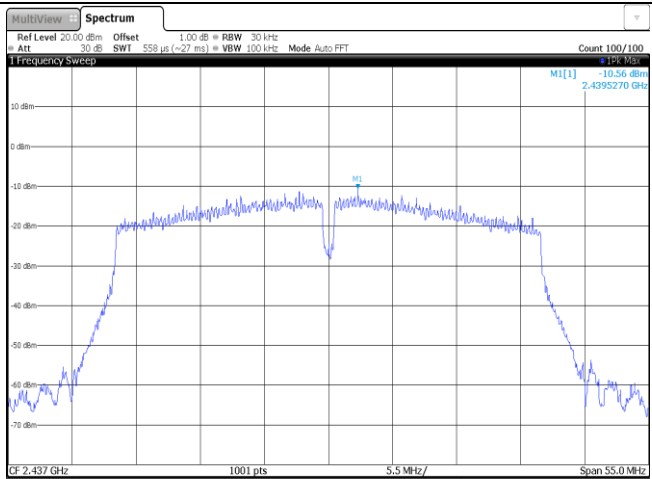
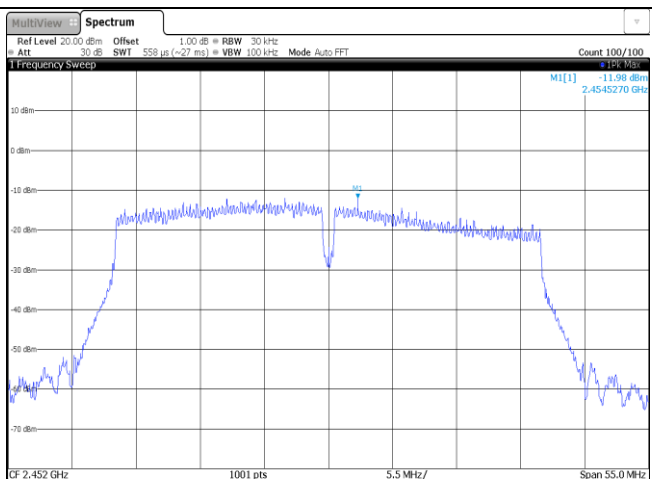
Appendix B: Power Spectral Density

Type	Channel	Power Spectral Density (dBm/30KHz)	Limit (dBm/3KHz)	Result
802.11b	01	-1.67	≤8.00	Pass
	06	-1.10		
	11	-1.77		
802.11g	01	-9.11	≤8.00	Pass
	06	-8.94		
	11	-9.34		
802.11n(HT20)	01	-8.96	≤8.00	Pass
	06	-7.79		
	11	-7.81		
802.11n(HT40)	03	-10.76	≤8.00	Pass
	06	-10.56		
	09	-11.98		



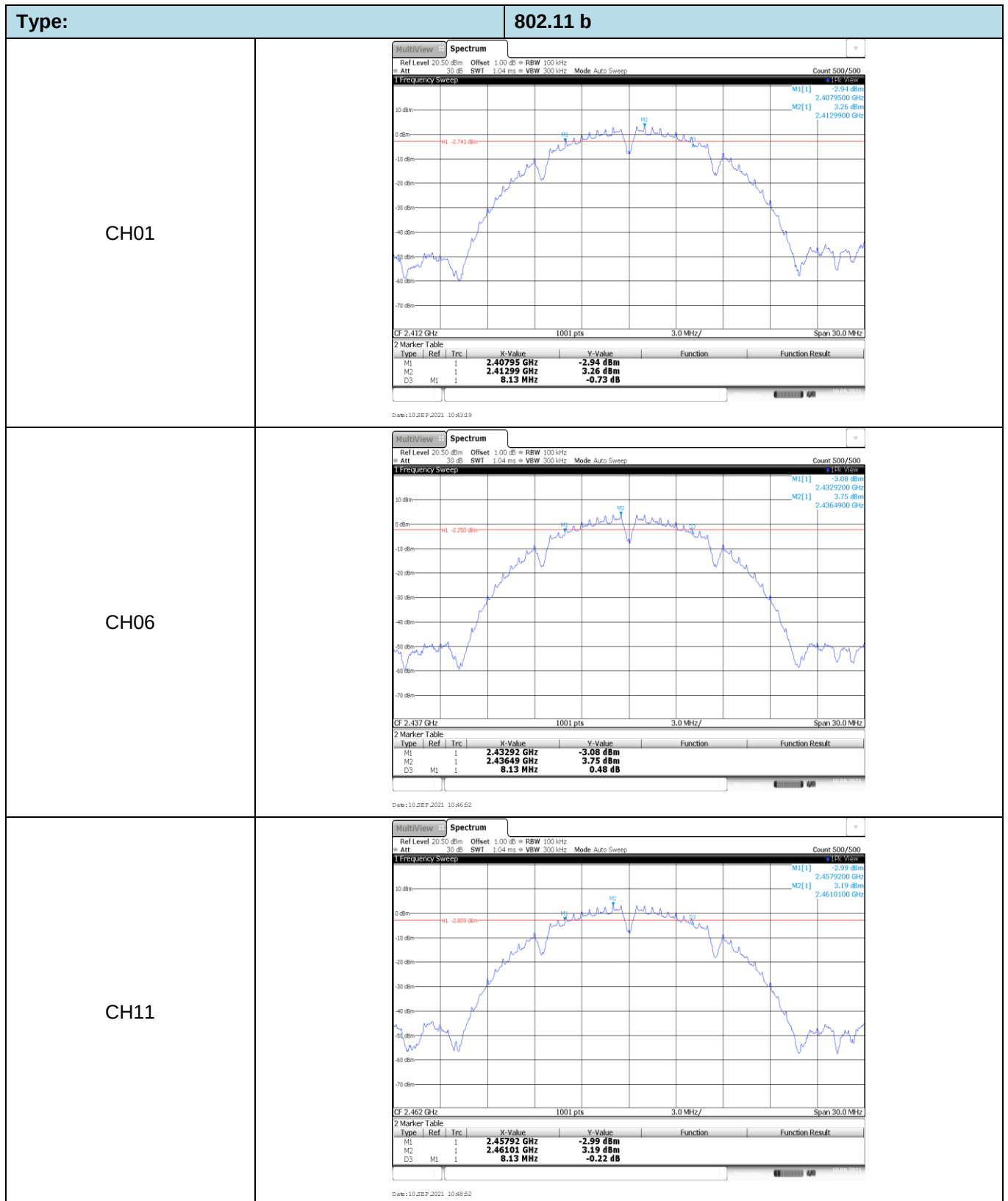


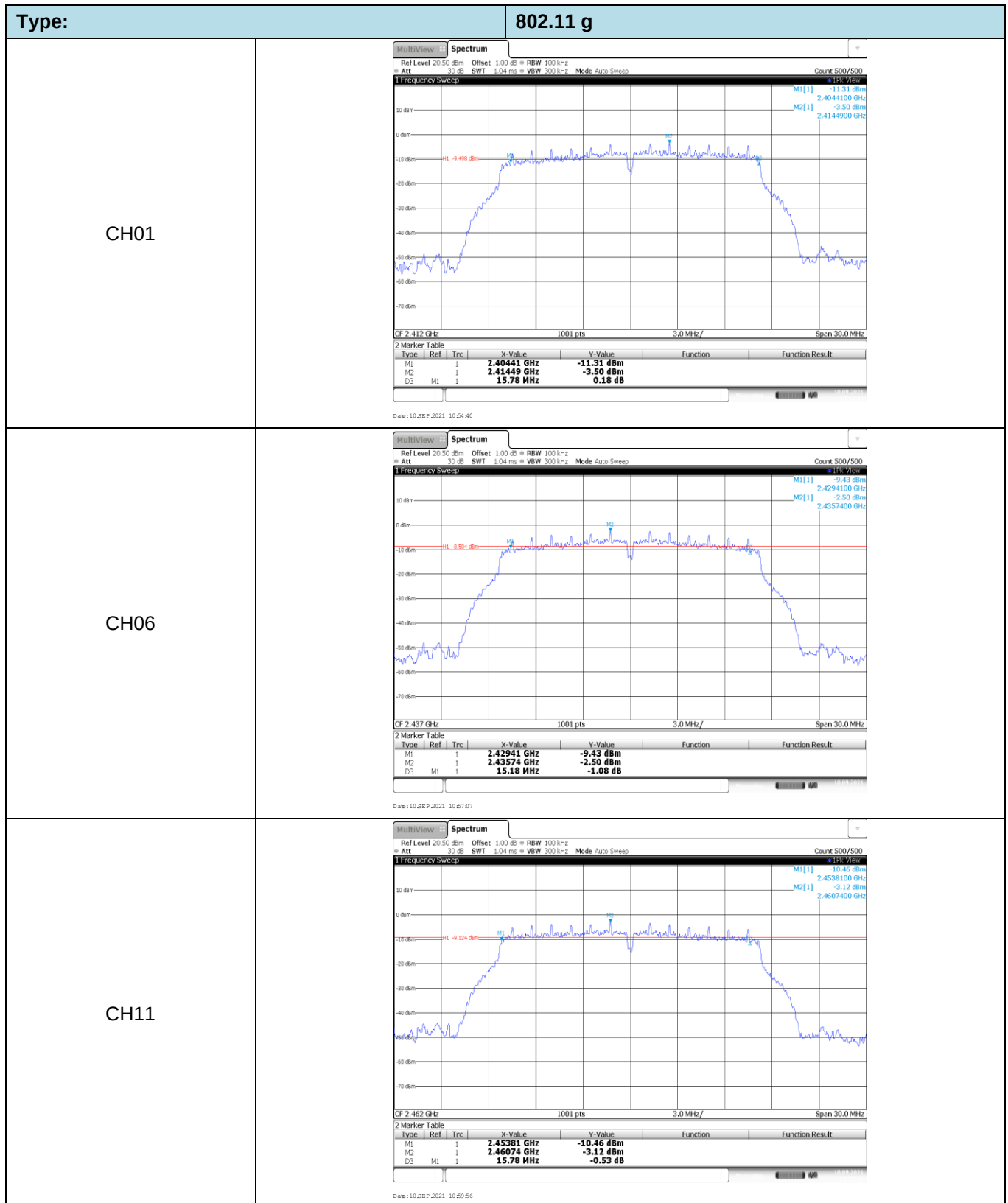
Type:	802.11n(HT20)
CH01	 Ref Level 20.00 dBm Offset 1.00 dB BW 30 kHz Att 30 dB SWI 279 us (~15 ms) VBW 100 kHz Mode Auto FFT Count 100/100 MI[1] 8.96 dBm 2.4126240 GHz Date: 10 SEP 2021 11:05:46
CH06	 Ref Level 20.00 dBm Offset 1.00 dB BW 30 kHz Att 30 dB SWI 279 us (~15 ms) VBW 100 kHz Mode Auto FFT Count 100/100 MI[1] 7.79 dBm 2.4357260 GHz Date: 10 SEP 2021 11:06:47
CH11	 Ref Level 20.00 dBm Offset 1.00 dB BW 30 kHz Att 30 dB SWI 279 us (~15 ms) VBW 100 kHz Mode Auto FFT Count 100/100 MI[1] 7.81 dBm 2.4607260 GHz Date: 10 SEP 2021 11:00:29

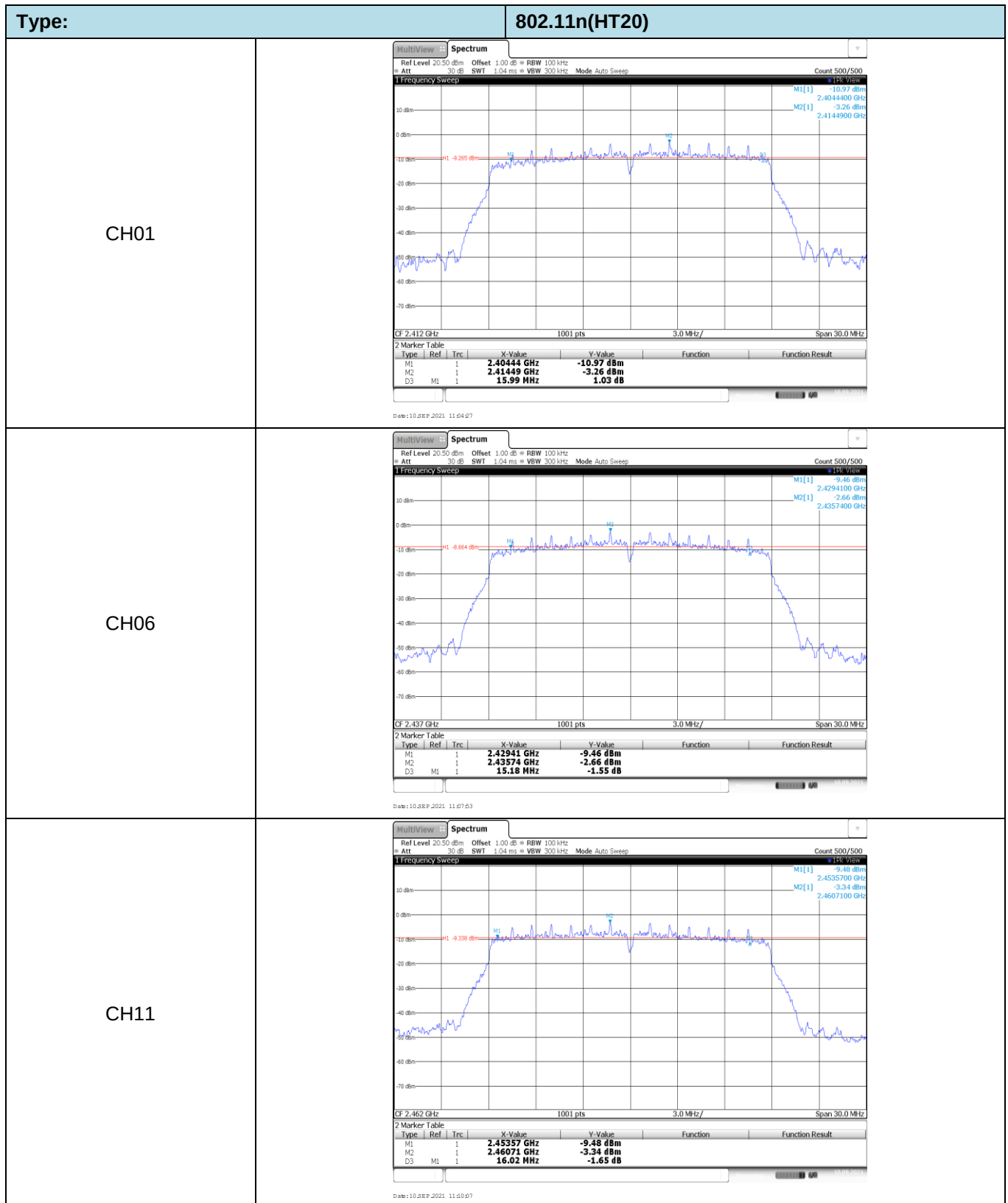
Type:	802.11n(HT40)
CH03	 Ref Level 20.00 dBm Offset 1.00 dB BW 30 kHz Att 30 dB SWI 558 us (~27 ms) VBW 100 kHz Mode Auto FFT Count 100/100 MI[1] -10.76 dBm 2.4245270 GHz CF 2.422 GHz 1001 pts 5.5 MHz/ Span 55.0 MHz Date: 10 SEP 2021 11:23:43
CH06	 Ref Level 20.00 dBm Offset 1.00 dB BW 30 kHz Att 30 dB SWI 558 us (~27 ms) VBW 100 kHz Mode Auto FFT Count 100/100 MI[1] -10.56 dBm 2.4395270 GHz CF 2.437 GHz 1001 pts 5.5 MHz/ Span 55.0 MHz Date: 10 SEP 2021 11:20:41
CH09	 Ref Level 20.00 dBm Offset 1.00 dB BW 30 kHz Att 30 dB SWI 558 us (~27 ms) VBW 100 kHz Mode Auto FFT Count 100/100 MI[1] -11.98 dBm 2.4545270 GHz CF 2.452 GHz 1001 pts 5.5 MHz/ Span 55.0 MHz Date: 10 SEP 2021 11:18:07

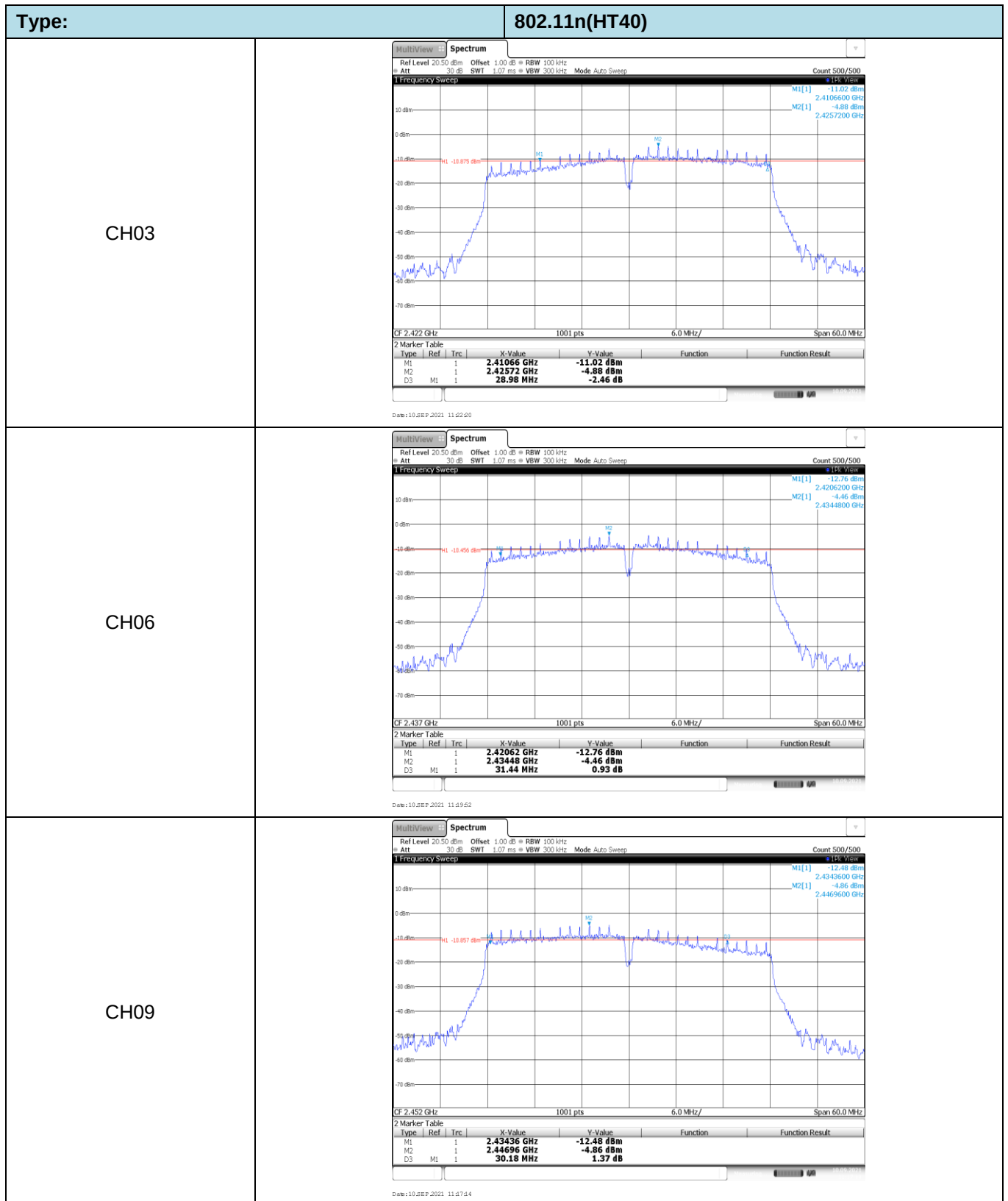
Appendix C: 6dB bandwidth

Type	Channel	6dB Bandwidth (MHz)	Limit (MHz)	Result
802.11b	01	8.13	≥0.5	Pass
	06	8.13		
	11	8.13		
802.11g	01	15.78	≥0.5	Pass
	06	15.18		
	11	15.78		
802.11n(HT20)	01	15.99	≥0.5	Pass
	06	15.18		
	11	16.02		
802.11n(HT40)	03	28.98	≥0.5	Pass
	06	31.44		
	09	30.18		



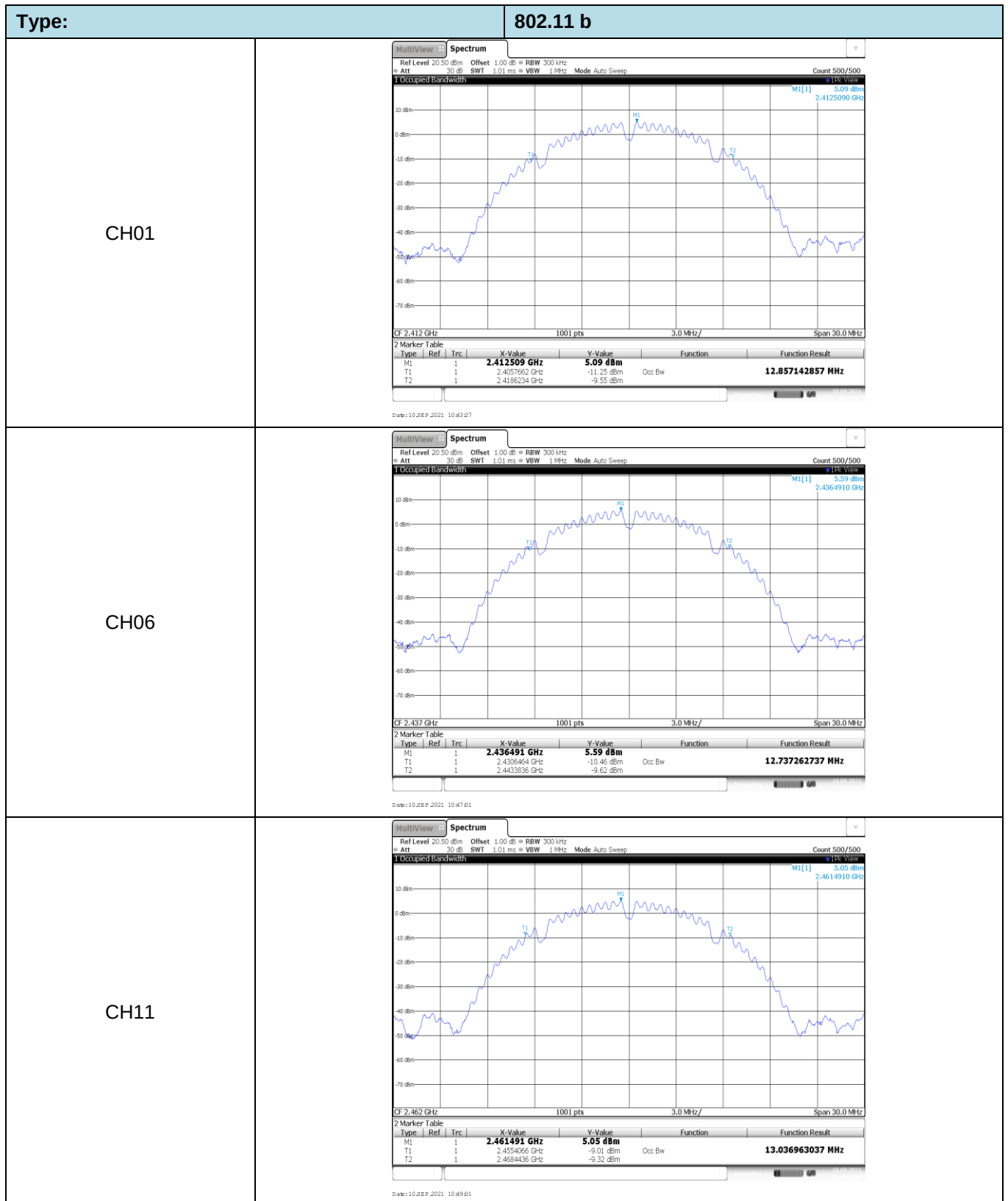


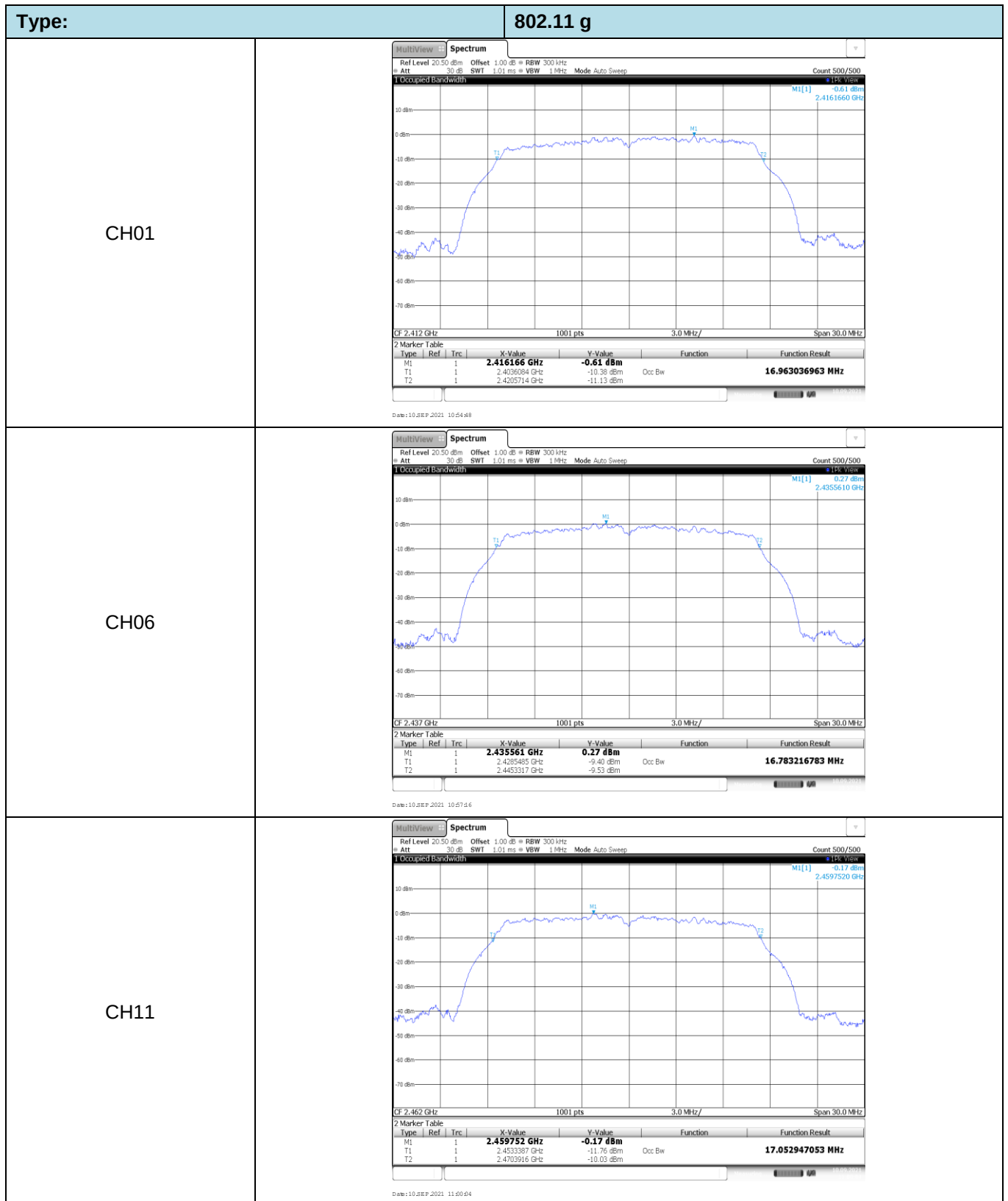


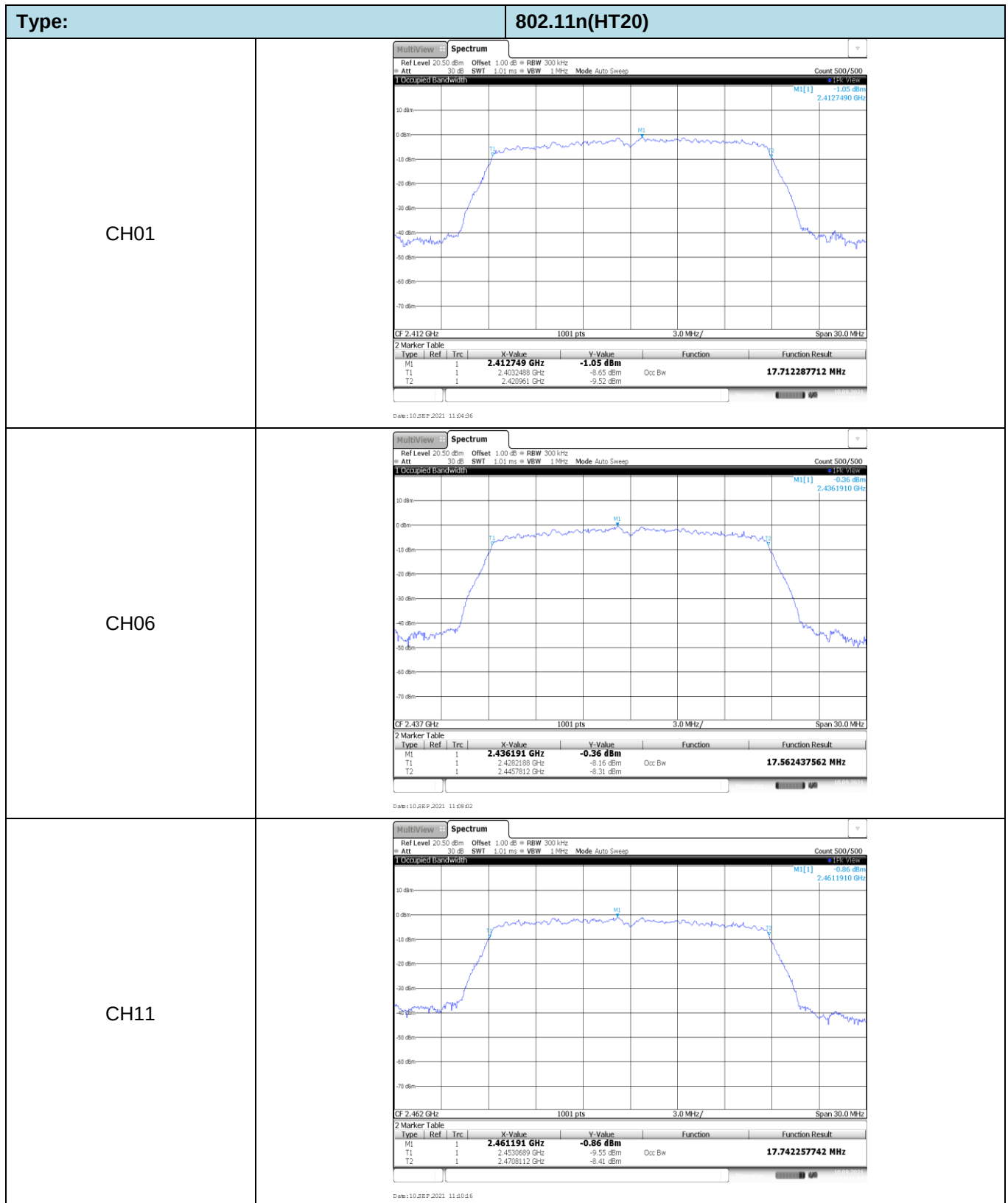


Appendix D: 99% Occupied Bandwidth

Type	Channel	99% Bandwidth (MHz)	Limit (kHz)	Result
802.11b	01	12.86	-	Pass
	06	12.74		
	11	13.04		
802.11g	01	16.96	-	Pass
	06	16.78		
	11	17.05		
802.11n(HT20)	01	17.71	-	Pass
	06	17.56		
	11	17.74		
802.11n(HT40)	03	35.90	-	Pass
	06	35.60		
	09	35.96		



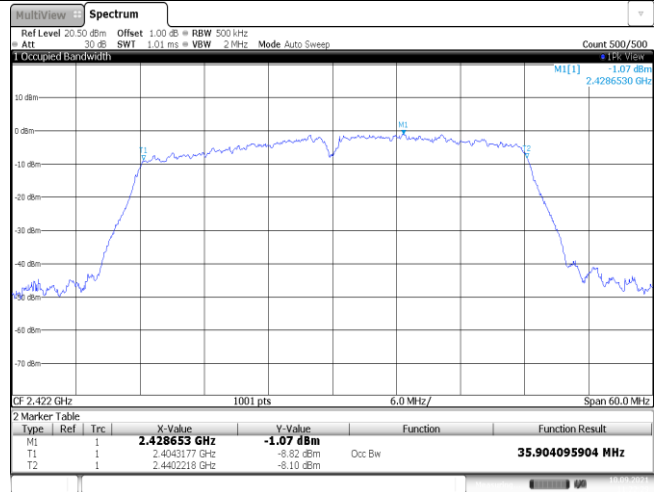




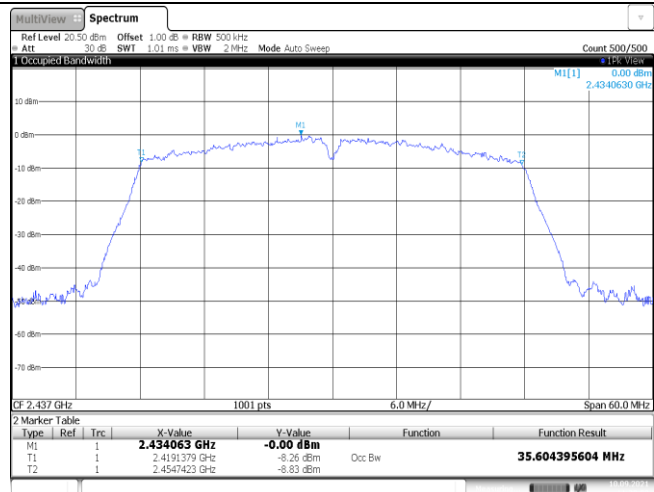
Type:

802.11n(HT40)

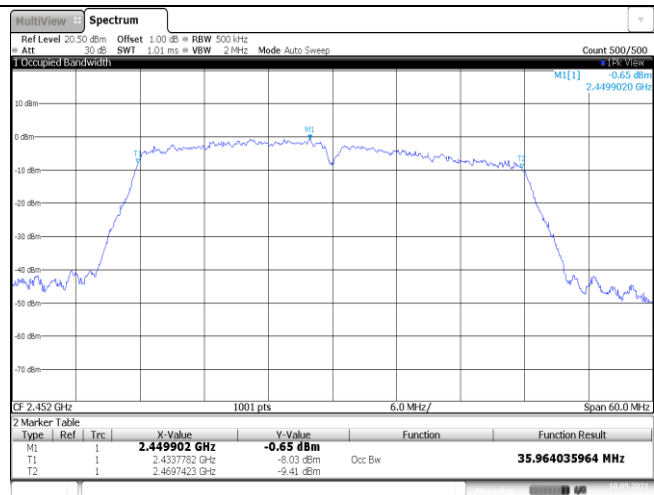
CH03



CH06



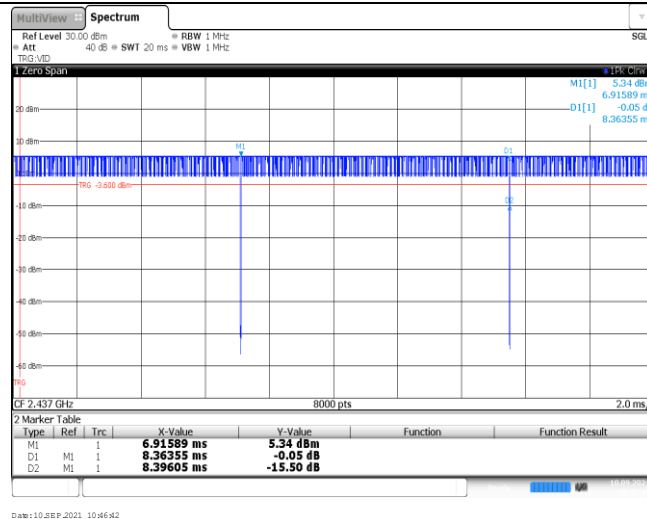
CH09



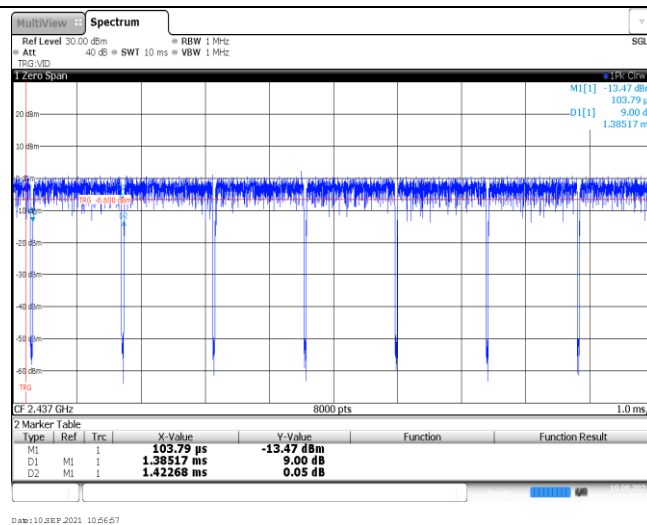
Appendix E: Duty Cycle

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	1.39	1.42	97.9%	0.7
11n20	2437	1.29	1.33	97.0%	0.8
11n40	2437	0.64	0.68	94.1%	1.6

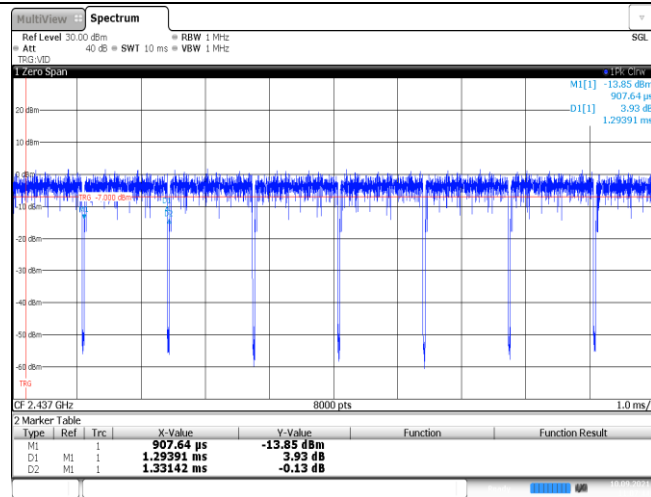
11b



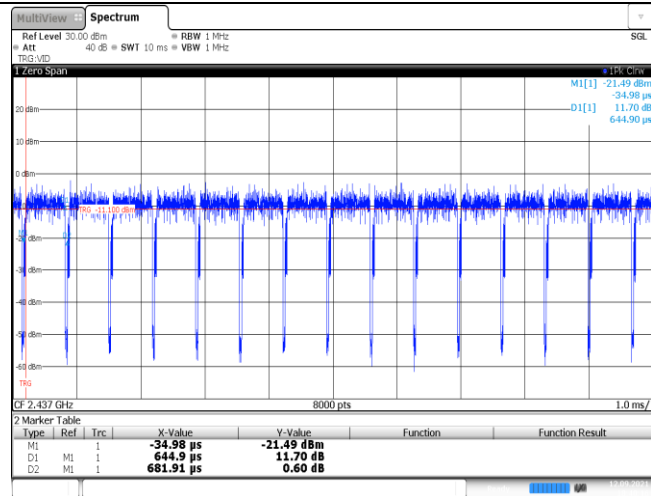
11g



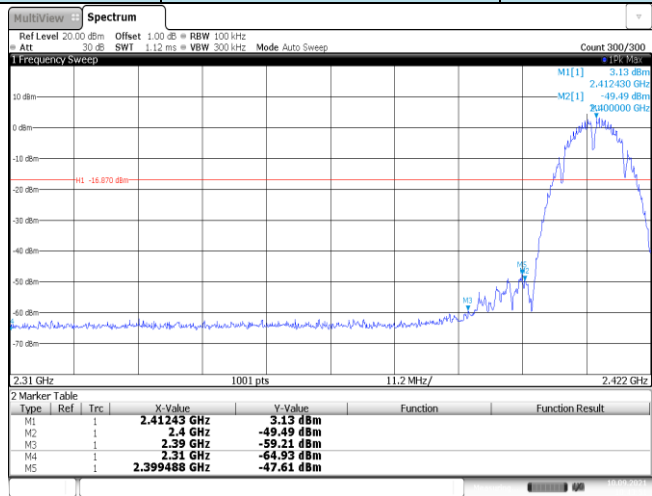
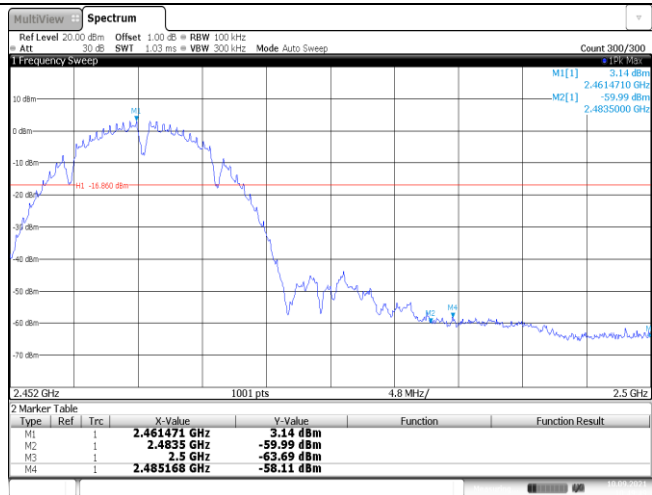
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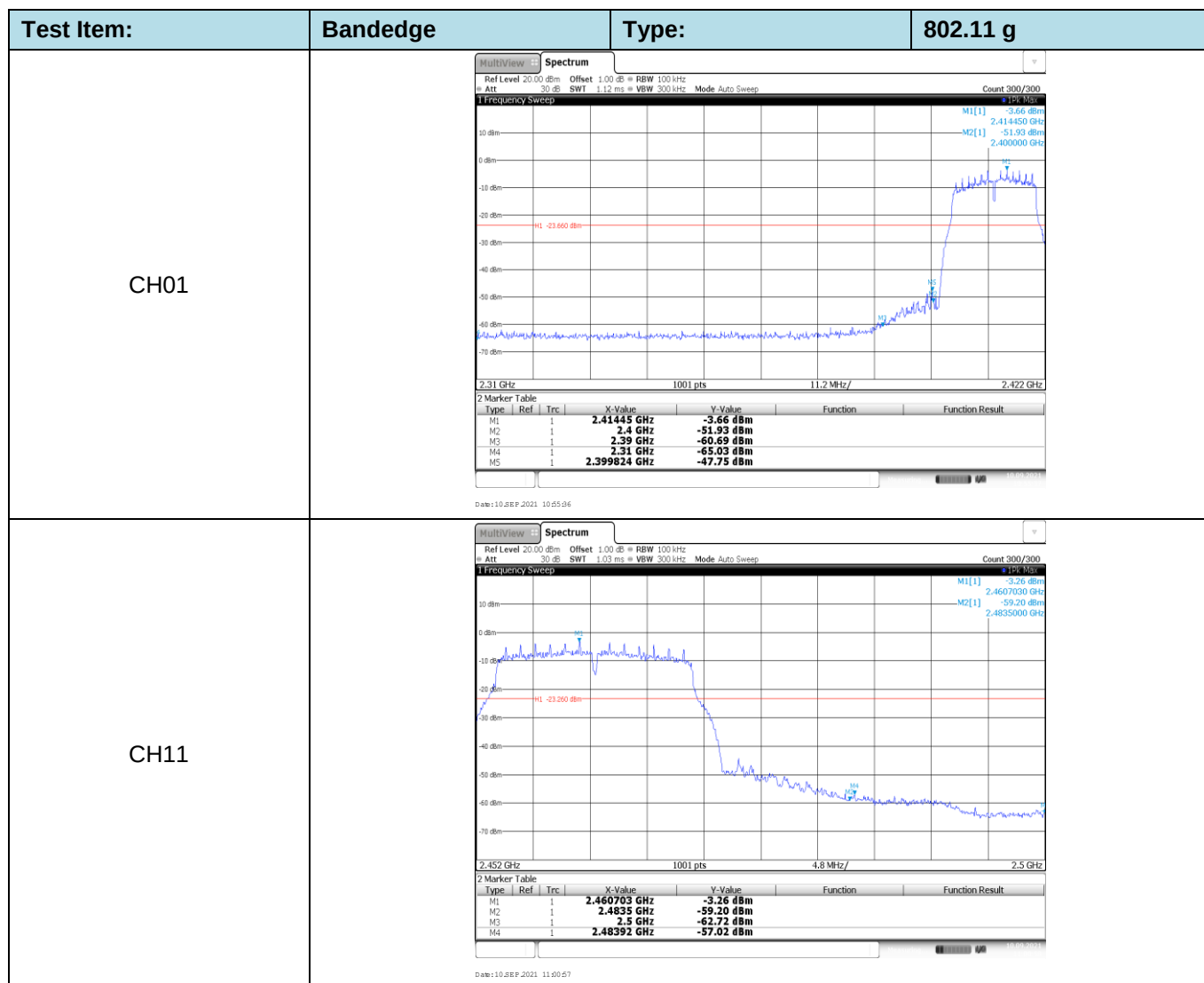


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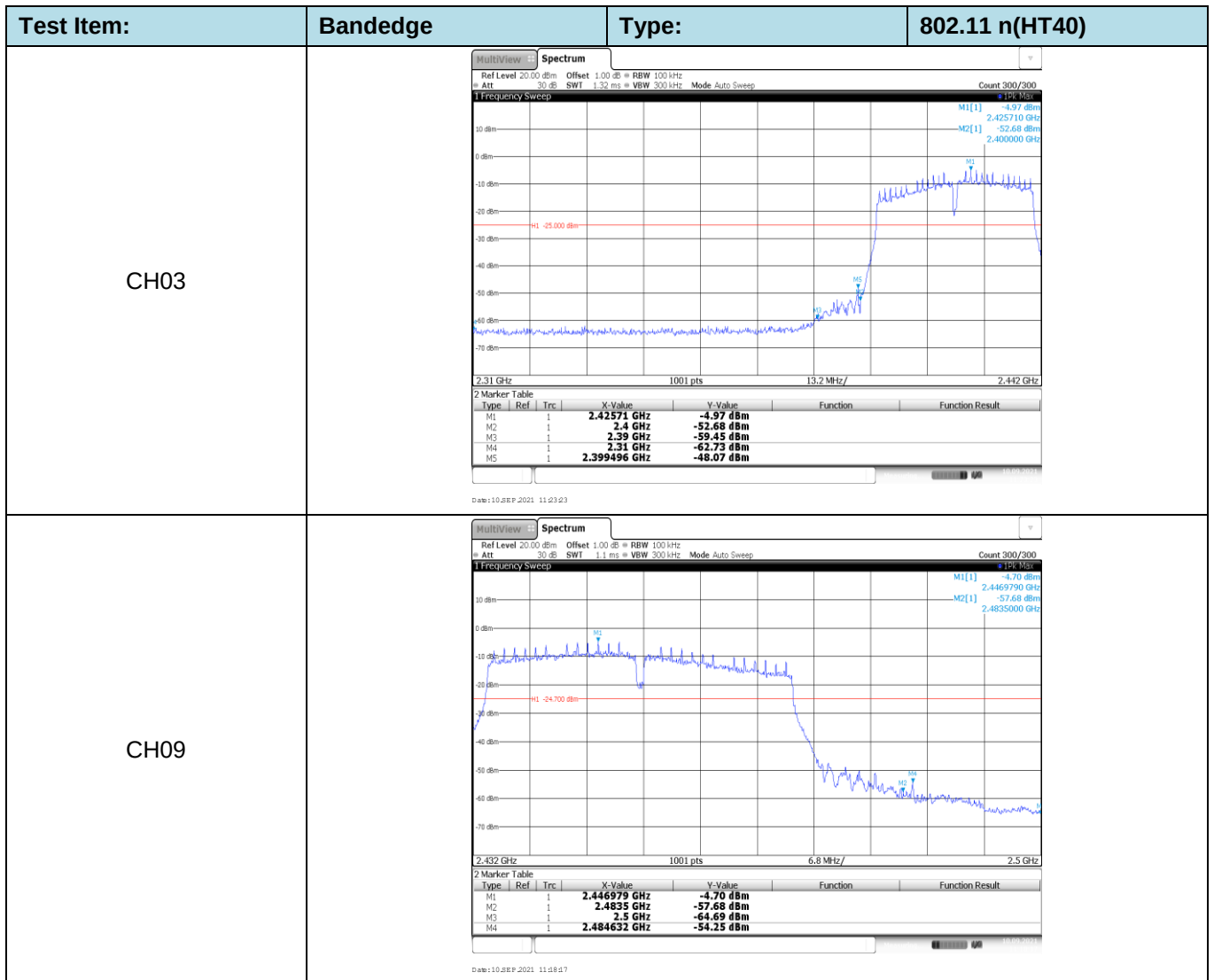


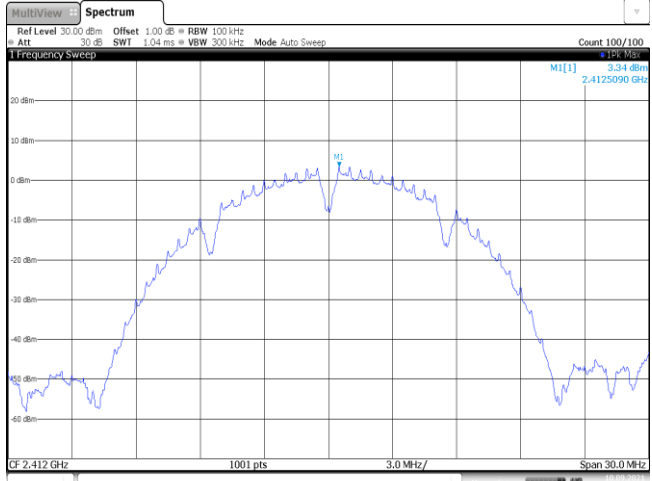
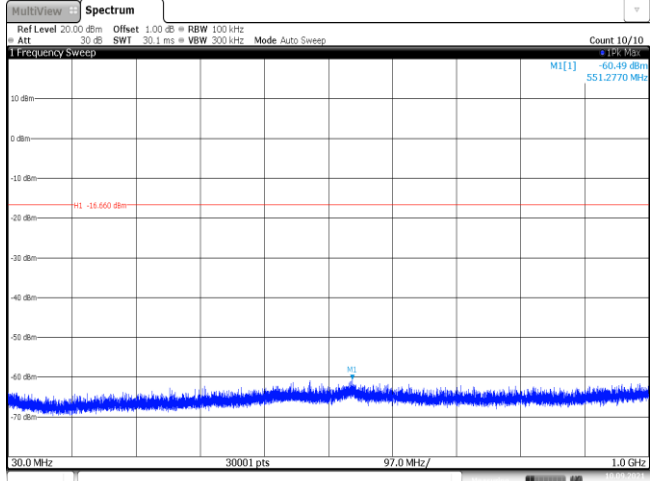
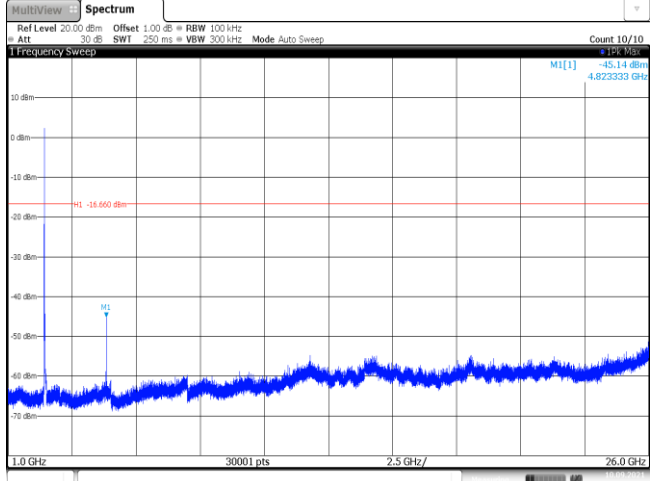
Appendix F: Band edge and Spurious Emissions (conducted)

Test Item:	Bandedge	Type:	802.11 b																																										
CH01	MultiviewSpectrum 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 200/300 Frequency Sweep  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>3.13 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4 GHz</td><td>-49.49 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.39 GHz</td><td>-59.21 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.31 GHz</td><td>-64.93 dBm</td><td></td><td></td></tr><tr><td>M5</td><td>1</td><td></td><td>2.399488 GHz</td><td>-47.61 dBm</td><td></td><td></td></tr></table> Date: 10 SEP 2021 10:43:51			Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.41243 GHz	3.13 dBm			M2	1		2.4 GHz	-49.49 dBm			M3	1		2.39 GHz	-59.21 dBm			M4	1		2.31 GHz	-64.93 dBm			M5	1		2.399488 GHz	-47.61 dBm		
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CH11	MultiviewSpectrum 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 Frequency Sweep  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>3.14 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4835 GHz</td><td>-59.99 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.5 GHz</td><td>-63.69 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.485168 GHz</td><td>-58.11 dBm</td><td></td><td></td></tr></table> Date: 10 SEP 2021 10:49:49			Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.461471 GHz	3.14 dBm			M2	1		2.4835 GHz	-59.99 dBm			M3	1		2.5 GHz	-63.69 dBm			M4	1		2.485168 GHz	-58.11 dBm									
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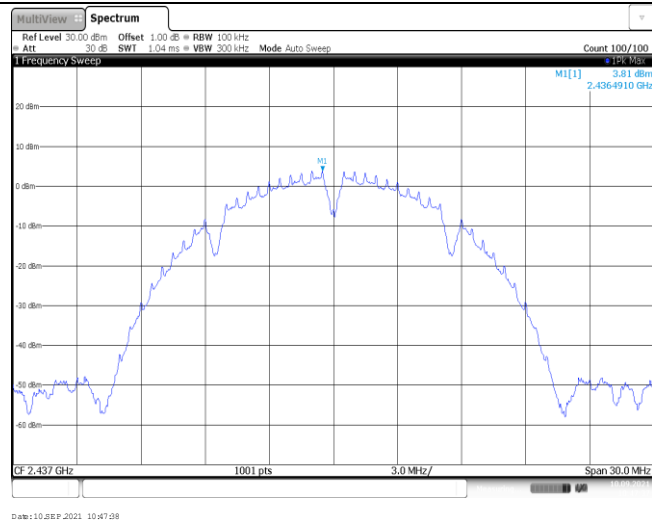


Test Item:	Bandedge	Type:	802.11 n(HT20)																																										
CH01	MultiView Spectrum Ref Level 20.00 dBm Offset 1.00 dB BW 100 kHz Att 30 dB SWI 1.12 ms VBW 300 kHz Mode Auto Sweep Count 300/300 1 Frequency Sweep 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm 2.31 GHz 1001 pts 11.2 MHz/ 2.422 GHz M1[1] -3.36 dBm 2.413220 GHz -51.36 dBm 2.400000 GHz M2[1] -51.36 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>2.41322 GHz</td><td>-3.36 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4 GHz</td><td>-51.36 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.39 GHz</td><td>-59.90 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.31 GHz</td><td>-63.95 dBm</td><td></td><td></td></tr><tr><td>M5</td><td>1</td><td></td><td>2.399824 GHz</td><td>-48.31 dBm</td><td></td><td></td></tr></table> Date: 10 SEP 2021 11:05:57			Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.41322 GHz	-3.36 dBm			M2	1		2.4 GHz	-51.36 dBm			M3	1		2.39 GHz	-59.90 dBm			M4	1		2.31 GHz	-63.95 dBm			M5	1		2.399824 GHz	-48.31 dBm		
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CH11	MultiView Spectrum 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 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm 2.452 GHz 1001 pts 4.8 MHz/ 2.5 GHz M1[1] -3.19 dBm 2.4607030 GHz -58.07 dBm 2.4835000 GHz M2[1] -58.07 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>2.460703 GHz</td><td>-3.19 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4835 GHz</td><td>-58.07 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.5 GHz</td><td>-65.03 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.490304 GHz</td><td>-56.91 dBm</td><td></td><td></td></tr></table> Date: 10 SEP 2021 11:00:39			Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.460703 GHz	-3.19 dBm			M2	1		2.4835 GHz	-58.07 dBm			M3	1		2.5 GHz	-65.03 dBm			M4	1		2.490304 GHz	-56.91 dBm									
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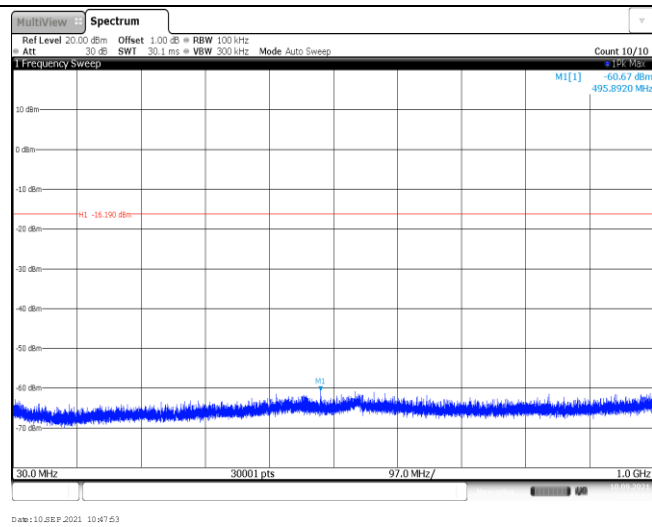


Test Item:	SE	Type:	802.11b
CH01 Reference level			
CH01 30MHz~1000MHz			
CH01 1GHz~26GHz			

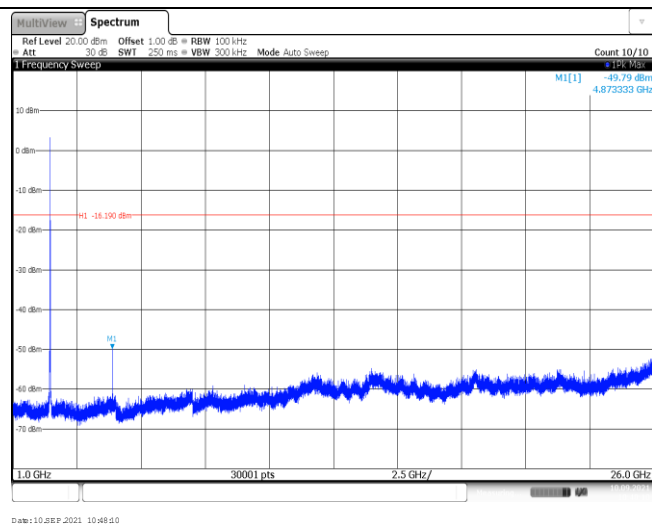
CH06
Reference level

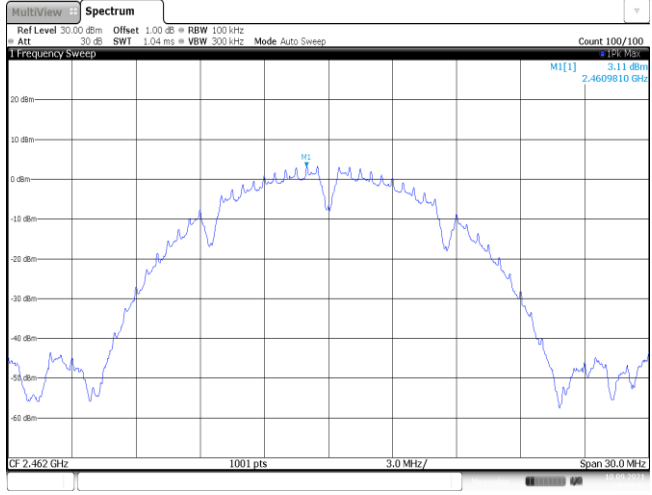
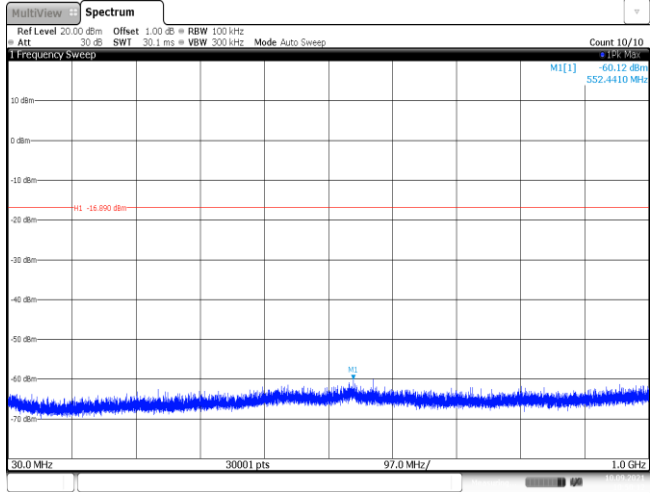
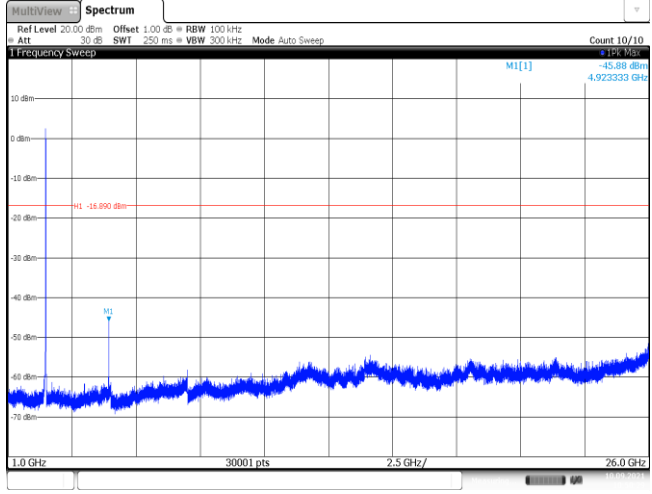


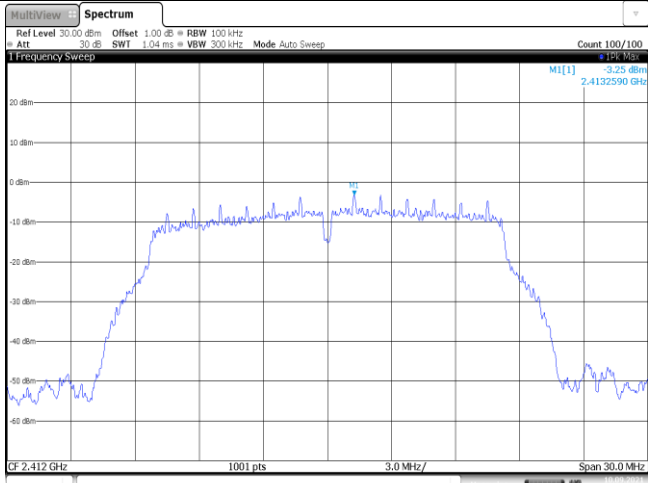
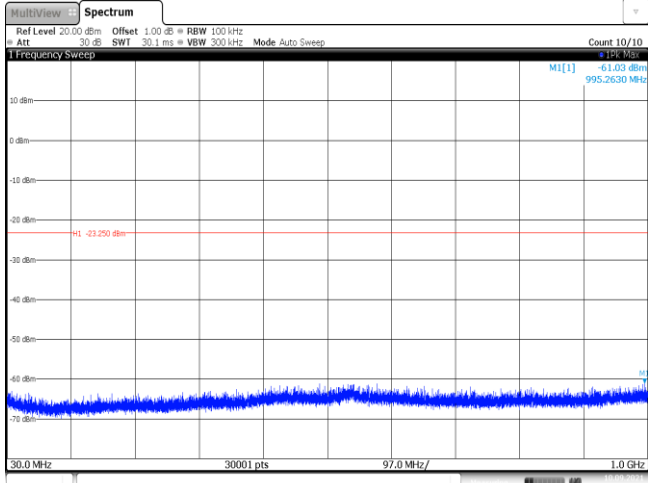
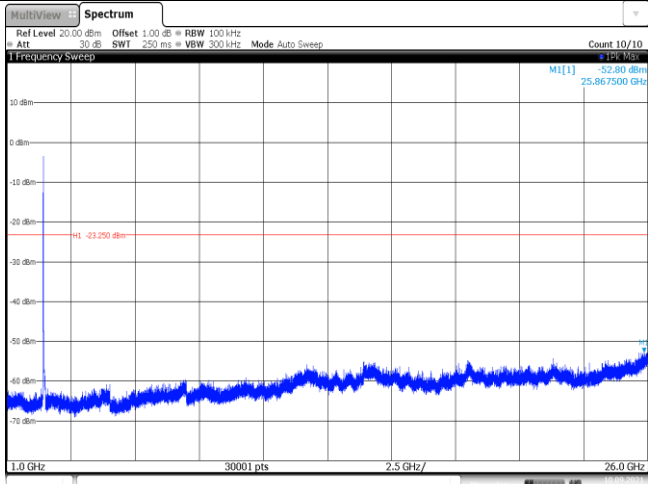
CH06
30MHz~1000MHz



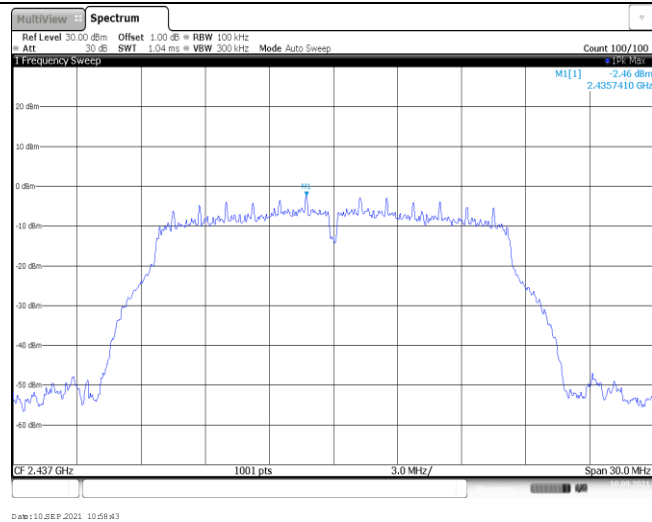
CH06
1GHz~26GHz



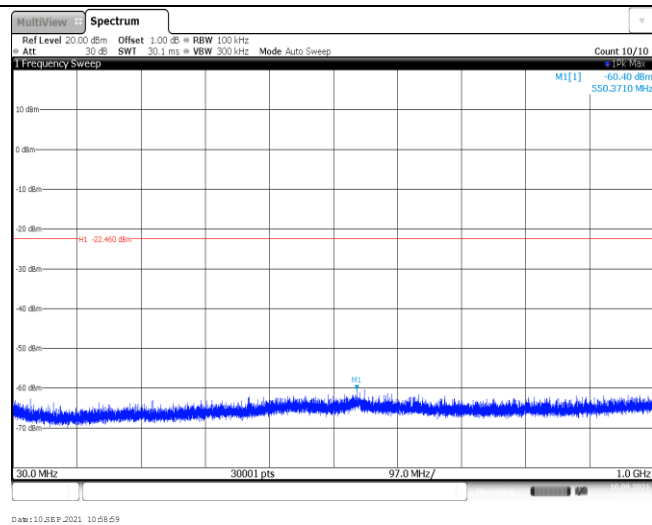
CH11 Reference level	 10 SEP 2021 10:49:26
CH11 30MHz~1000MHz	 10 SEP 2021 10:50:12
CH11 1GHz~26GHz	 10 SEP 2021 10:50:29

Test Item:	SE	Type:	802.11g
CH01 Reference level		 Count 100/100 MI[1] -3.25 dBm 2.412590 GHz Ref Level 30.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWI 1.04 ms VBW 300 kHz Mode Auto Sweep 1 Frequency Sweep 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm 2.412 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 10 SEP 2021 10:55:43	
CH01 30MHz~1000MHz		 Count 10/10 MI[1] -61.03 dBm 995.2630 MHz Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWI 30.1 ms VBW 300 kHz Mode Auto Sweep 1 Frequency Sweep 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm 30.0 MHz 30001 pts 97.0 MHz/ 1.0 GHz Date: 10 SEP 2021 10:56:00	
CH01 1GHz~26GHz		 Count 10/10 MI[1] -52.80 dBm 25.867500 GHz Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWI 250 ms VBW 300 kHz Mode Auto Sweep 1 Frequency Sweep 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm 1.0 GHz 30001 pts 25.0 GHz/ 26.0 GHz Date: 10 SEP 2021 10:56:16	

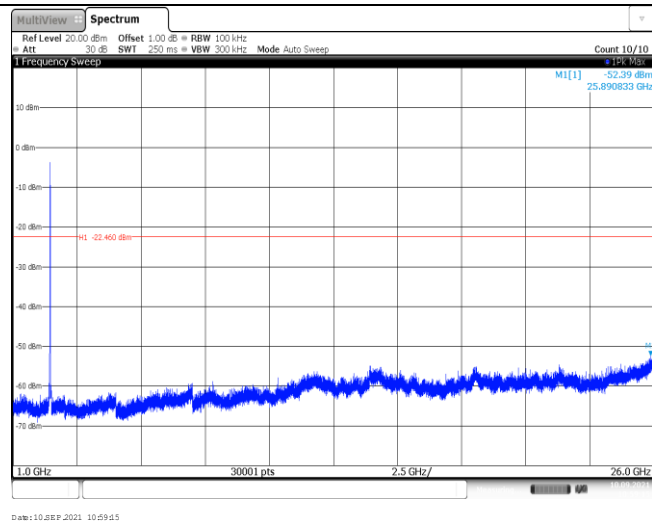
CH06
Reference level

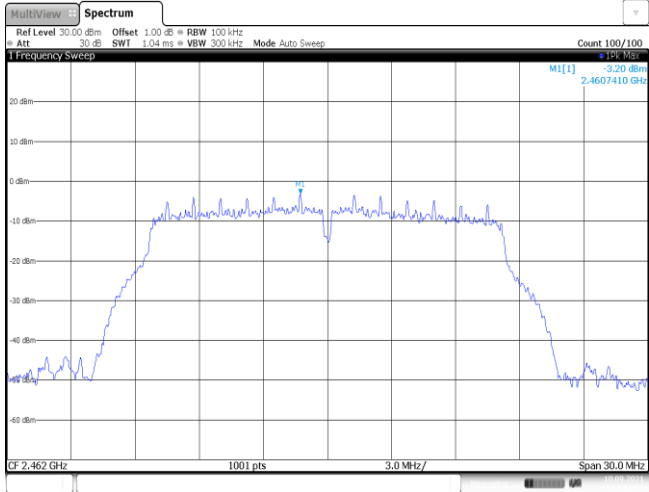
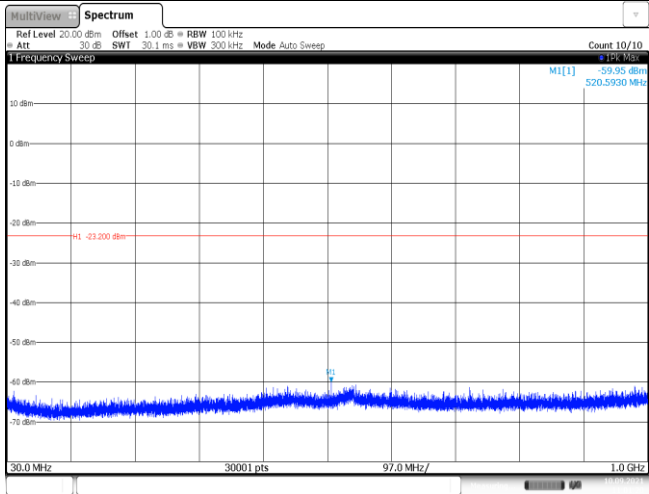
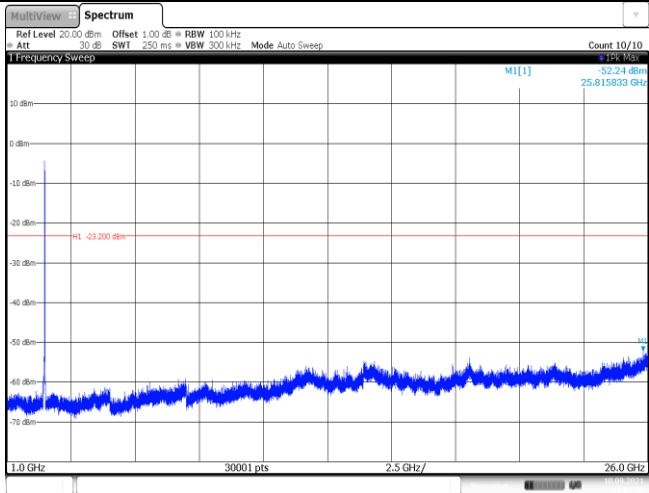


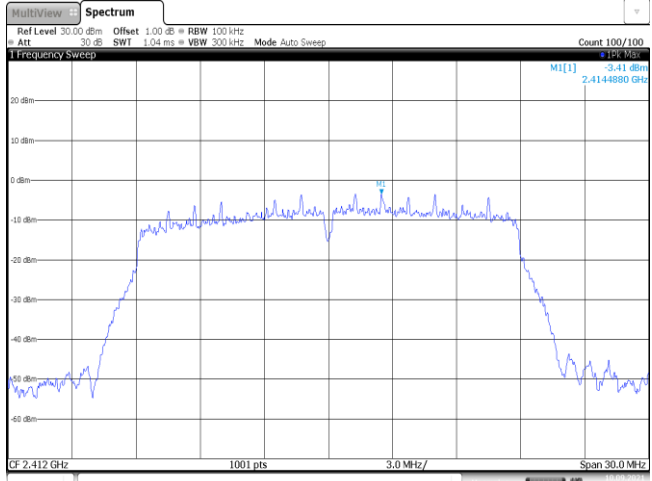
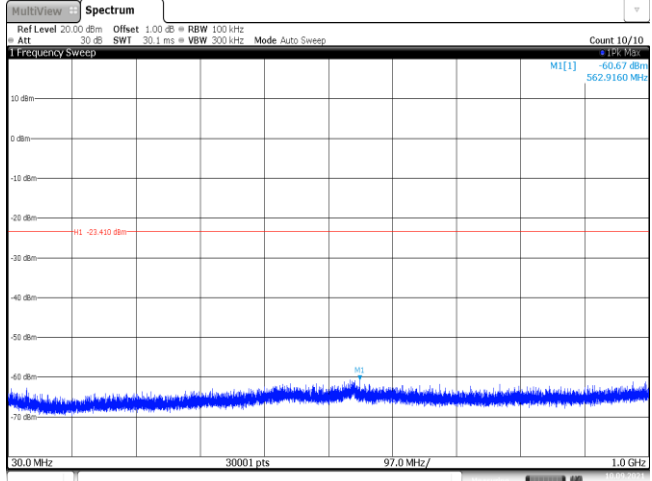
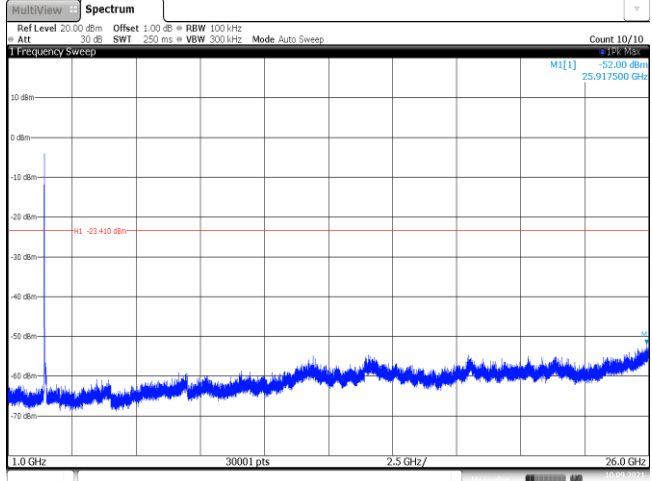
CH06
30MHz~1000MHz



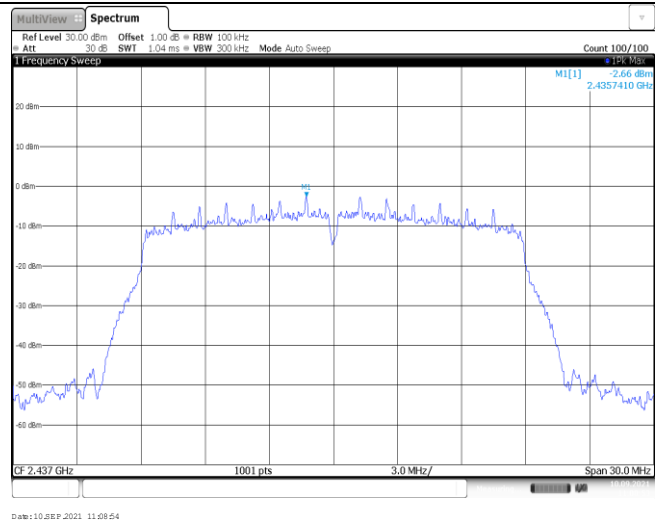
CH06
1GHz~26GHz



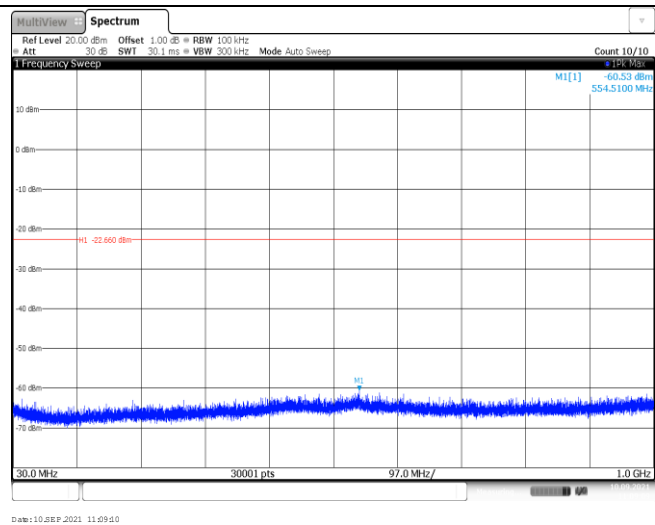
CH11 Reference level	
CH11 30MHz~1000MHz	
CH11 1GHz~26GHz	

Test Item:	SE	Type:	802.11n(HT20)
CH01 Reference level		 Ref Level 30.00 dBm Offset 1.00 dB BW 100 kHz Att 30 dB SWI 1.04 ms VBW 300 kHz Mode Auto Sweep Count 100/100 M1[1] -3.41 dBm 2.414880 GHz 2.412 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date:10 SEP 2021 11:06:29	
CH01 30MHz~1000MHz		 Ref Level 20.00 dBm Offset 1.00 dB BW 100 kHz Att 30 dB SWI 30.1 ms VBW 300 kHz Mode Auto Sweep Count 10/10 M1[1] -60.67 dBm 562.9160 MHz 30.0 MHz 30001 pts 97.0 MHz/ 1.0 GHz Date:10 SEP 2021 11:06:45	
CH01 1GHz~26GHz		 Ref Level 20.00 dBm Offset 1.00 dB BW 100 kHz Att 30 dB SWI 250 ms VBW 300 kHz Mode Auto Sweep Count 10/10 M1[1] -52.00 dBm 25.917500 GHz 1.0 GHz 30001 pts 2.5 GHz/ 26.0 GHz Date:10 SEP 2021 11:07:01	

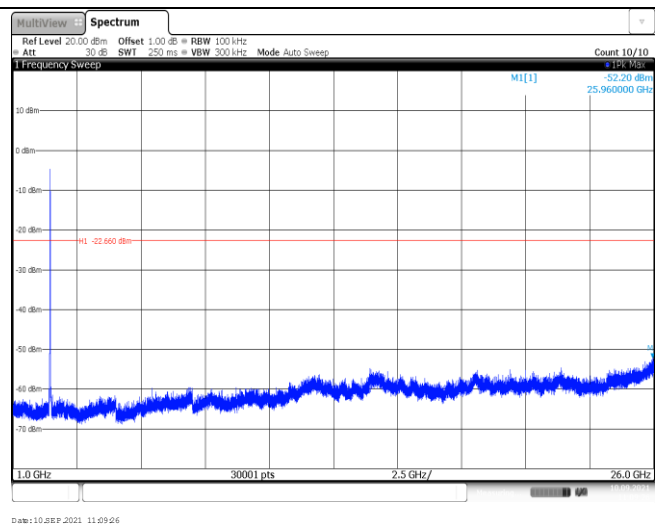
CH06
Reference level



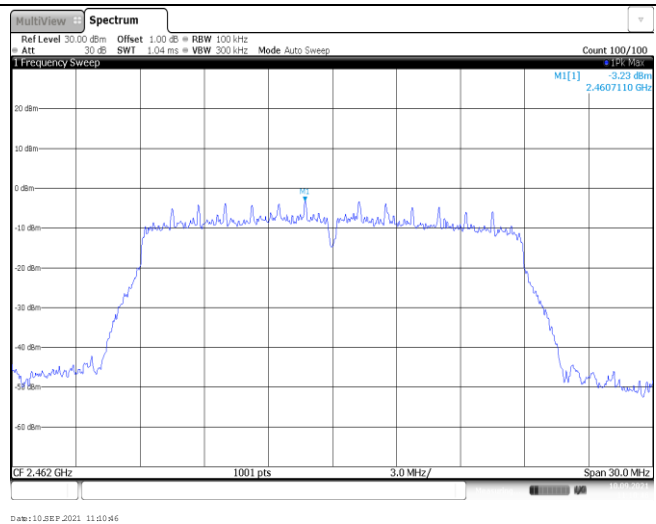
CH06
30MHz~1000MHz



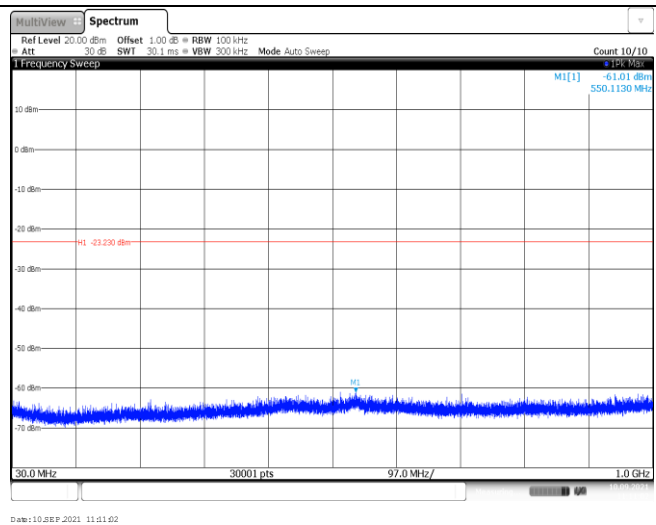
CH06
1GHz~26GHz



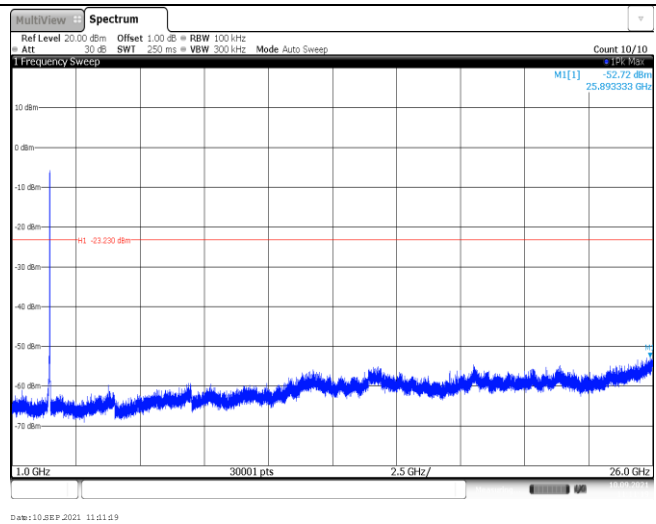
CH11
Reference level

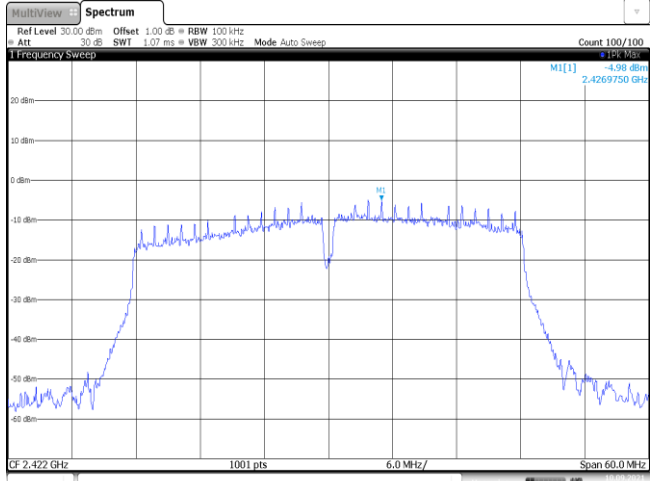
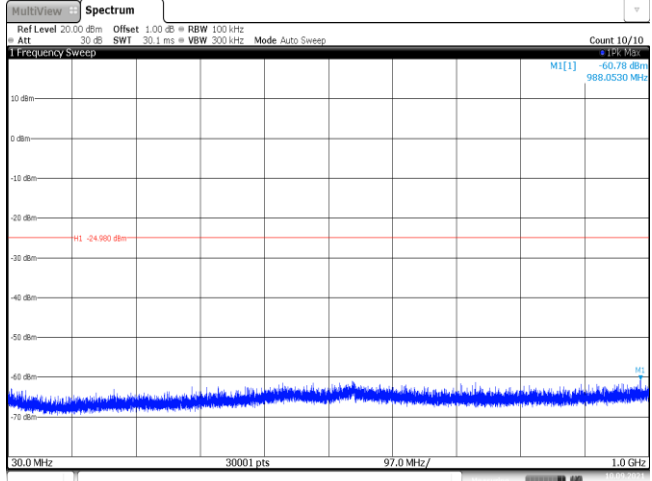
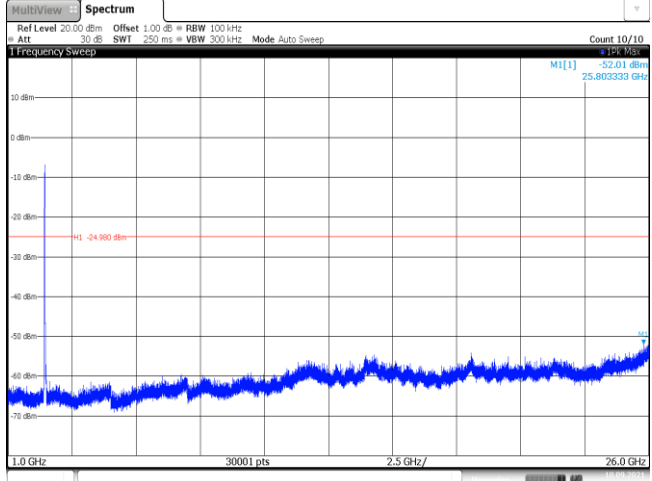


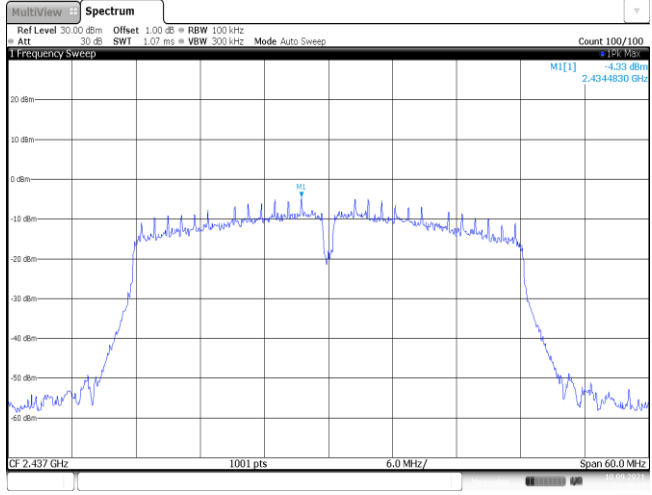
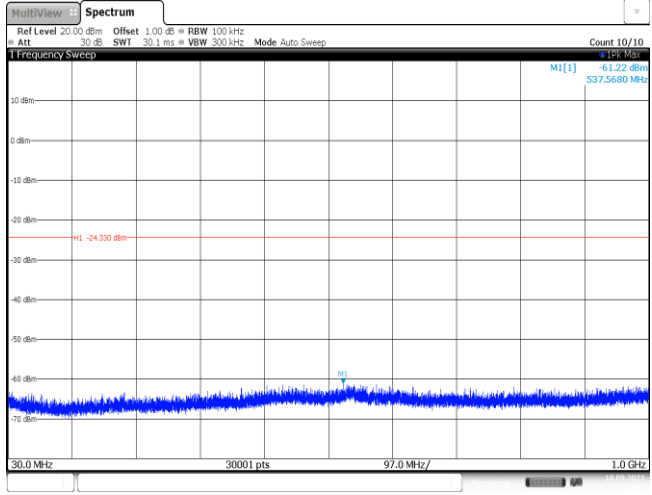
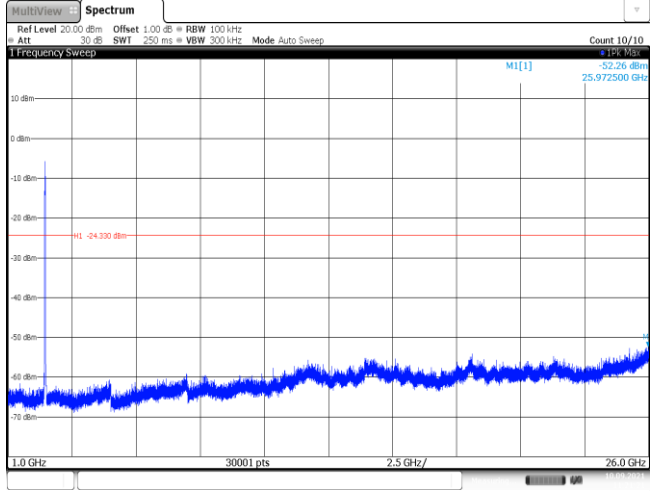
CH11
30MHz~1000MHz



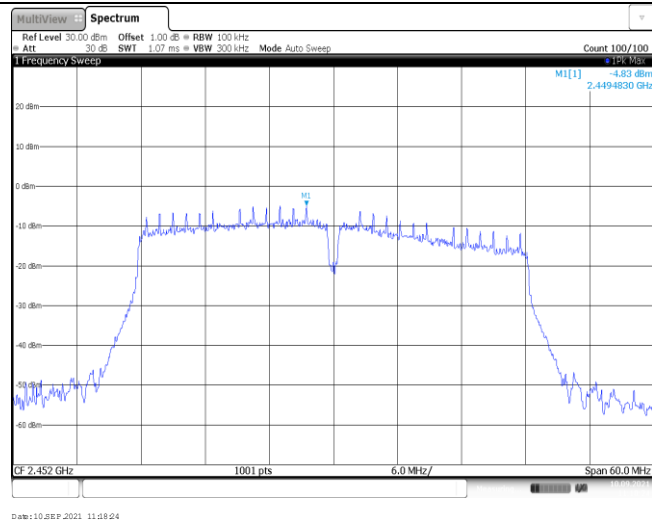
CH11
1GHz~26GHz



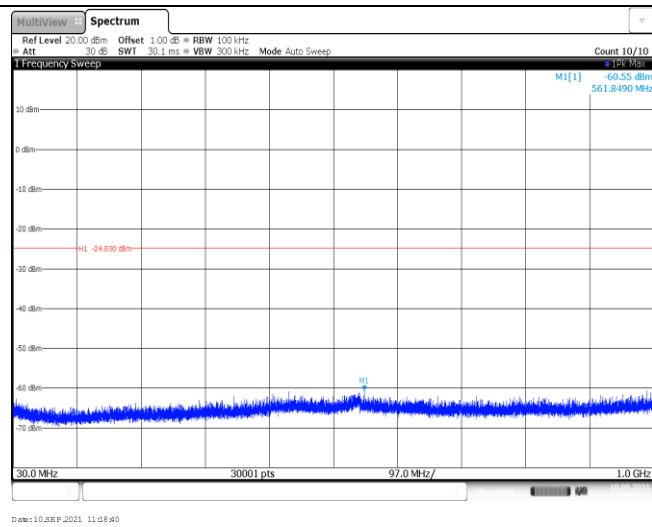
Test Item:	SE	Type:	802.11n(HT40)
CH03 Reference level		 CH03 Reference level	
CH03 30MHz~1000MHz		 CH03 30MHz~1000MHz	
CH03 1GHz~26GHz		 CH03 1GHz~26GHz	

CH06 Reference level	 Date: 10 SEP 2021 11:20:48
CH06 30MHz~1000MHz	 Date: 10 SEP 2021 11:21:04
CH06 1GHz~26GHz	 Date: 10 SEP 2021 11:21:20

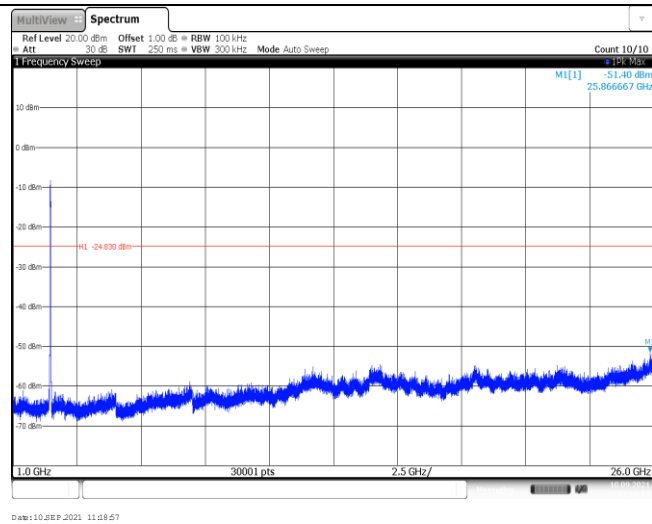
CH09
Reference level



CH09
30MHz~1000MHz



CH09
1GHz~26GHz



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