

APPENDIX REPORT

Project No.	SHT2106117007EW	Radio Specification	WIFI 2.4G
Test sample No.	YPHT21061170008	Model No.	C6100
Start test date	2021-10-19	Finish date	2021-10-19
Temperature	25.8℃	Humidity	29%
Test Engineer	Xiaoqin Li	Auditor	Xiaodong Zhu

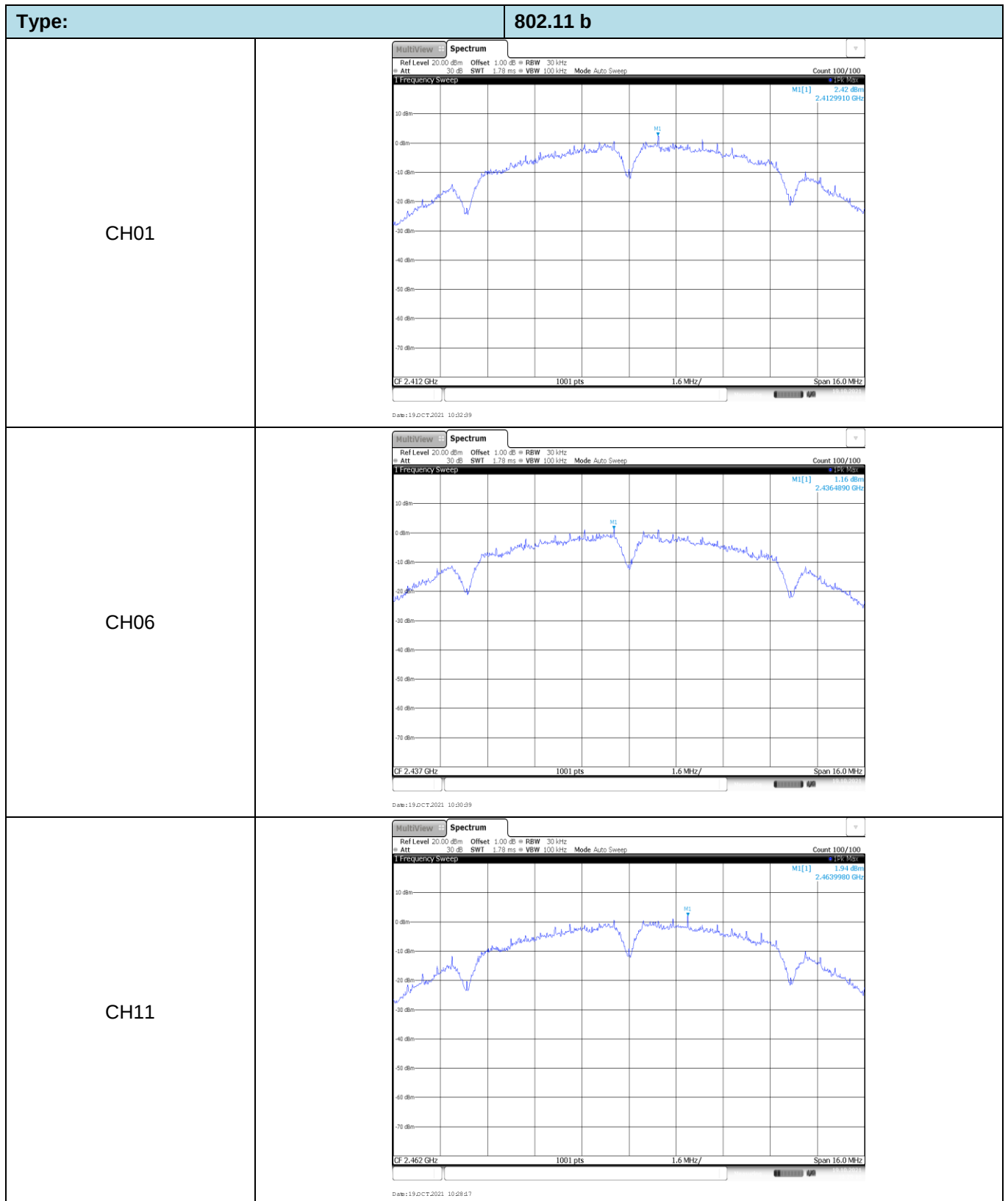
Appendix clause	Test item	Result
A	Conducted Peak Output Power	PASS
B	Power Spectral Density	PASS
C	6 dB Bandwidth	PASS
D	99% Occupied Bandwidth	PASS
E	Duty Cycle	PASS
F	Band edge and Spurious Emissions (conducted)	PASS

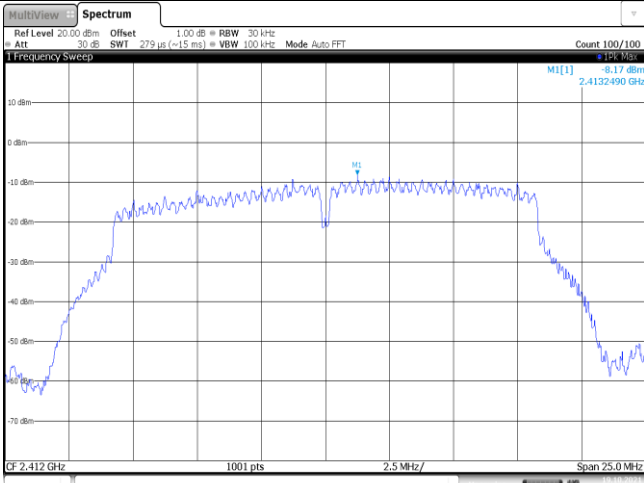
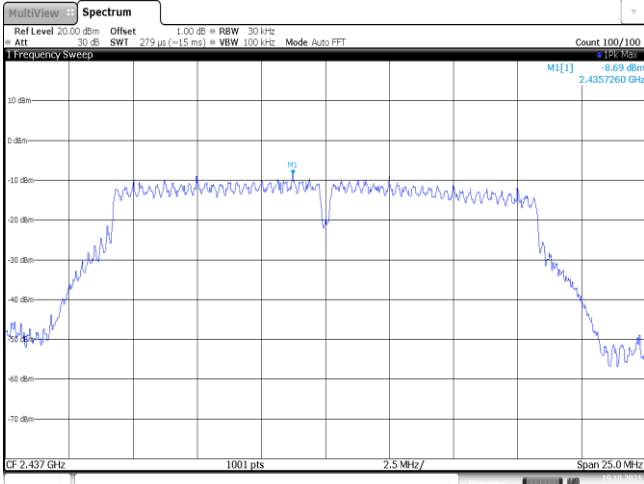
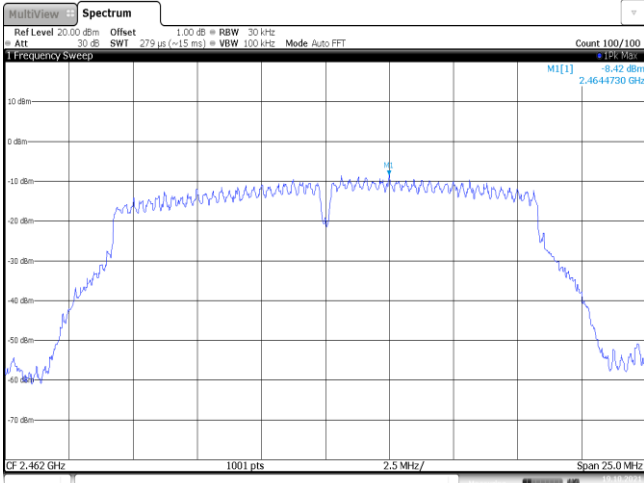
Appendix A: Conducted Peak Output Power

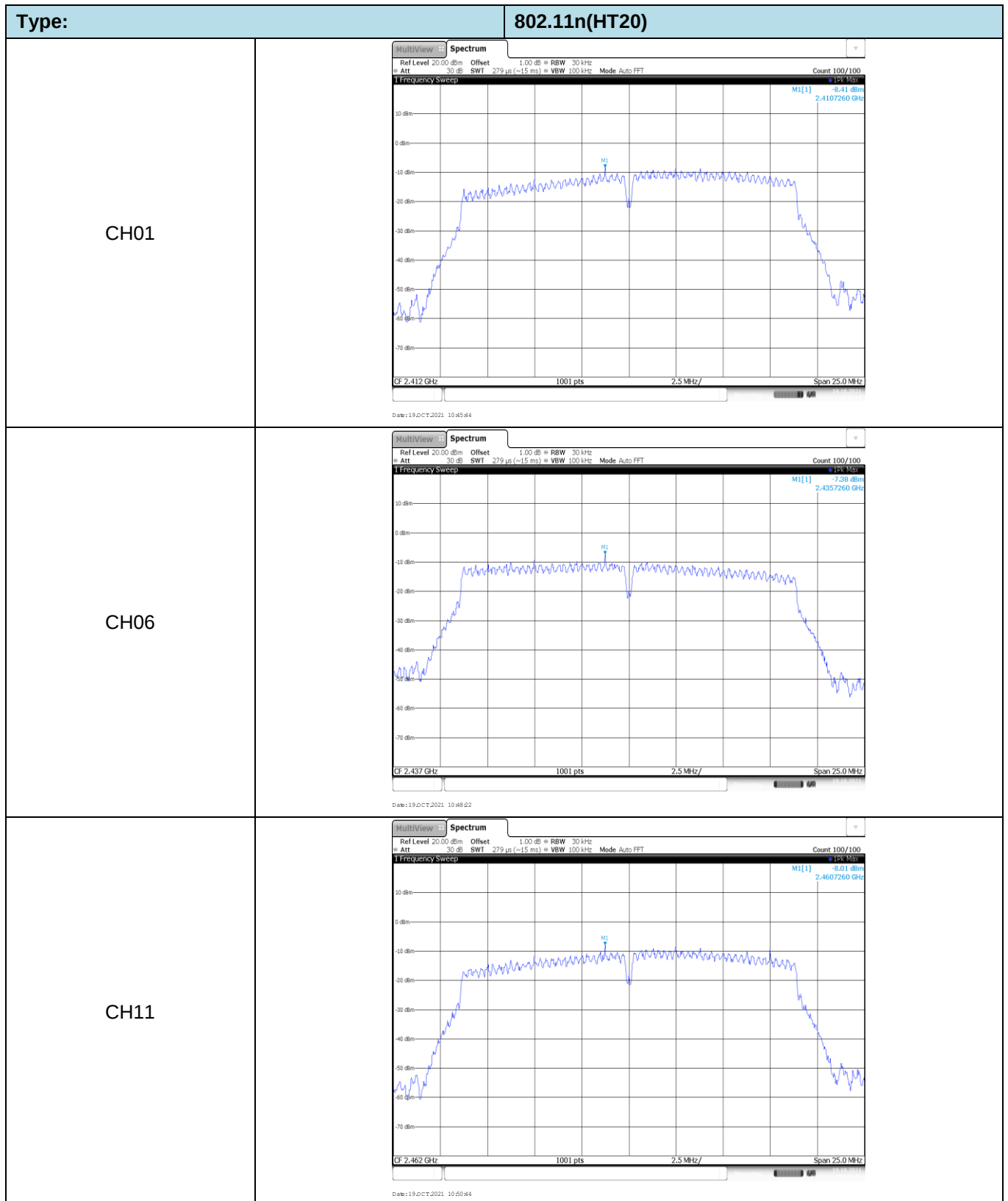
Type	Channel	Peak Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
802.11b	01	15.28	12.85	≤ 30.00	Pass
	06	15.04	12.60		
	11	15.10	12.68		
802.11g	01	15.32	12.64	≤ 30.00	Pass
	06	15.25	12.54		
	11	15.33	12.66		
802.11n (HT20)	01	15.19	12.50	≤ 30.00	Pass
	06	15.18	12.44		
	11	15.16	12.42		
802.11n(HT40)	03	15.61	12.74	≤ 30.00	Pass
	06	15.35	12.58		
	09	15.62	12.82		

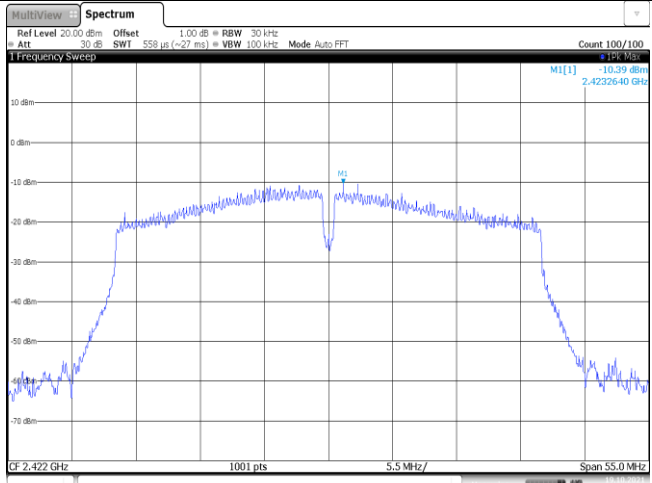
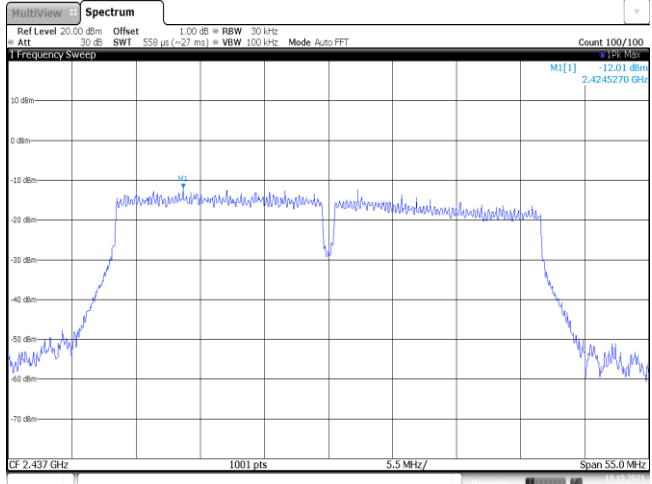
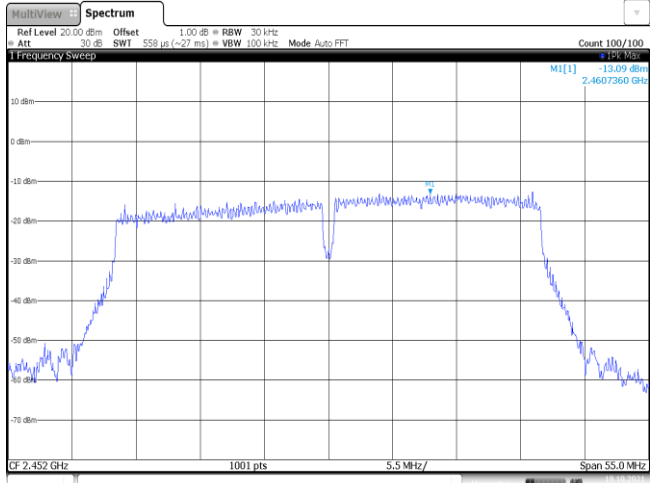
Appendix B: Power Spectral Density

Type	Channel	Power Spectral Density (dBm/30KHz)	Limit (dBm/3KHz)	Result
802.11b	01	2.42	≤8.00	Pass
	06	1.16		
	11	1.94		
802.11g	01	-8.17	≤8.00	Pass
	06	-8.69		
	11	-8.42		
802.11n(HT20)	01	-8.41	≤8.00	Pass
	06	-7.38		
	11	-8.01		
802.11n(HT40)	03	-10.39	≤8.00	Pass
	06	-12.01		
	09	-13.09		



Type:	802.11 g
CH01	 19 Oct 2021 10:07:46
CH06	 19 Oct 2021 10:40:11
CH11	 19 Oct 2021 10:42:22

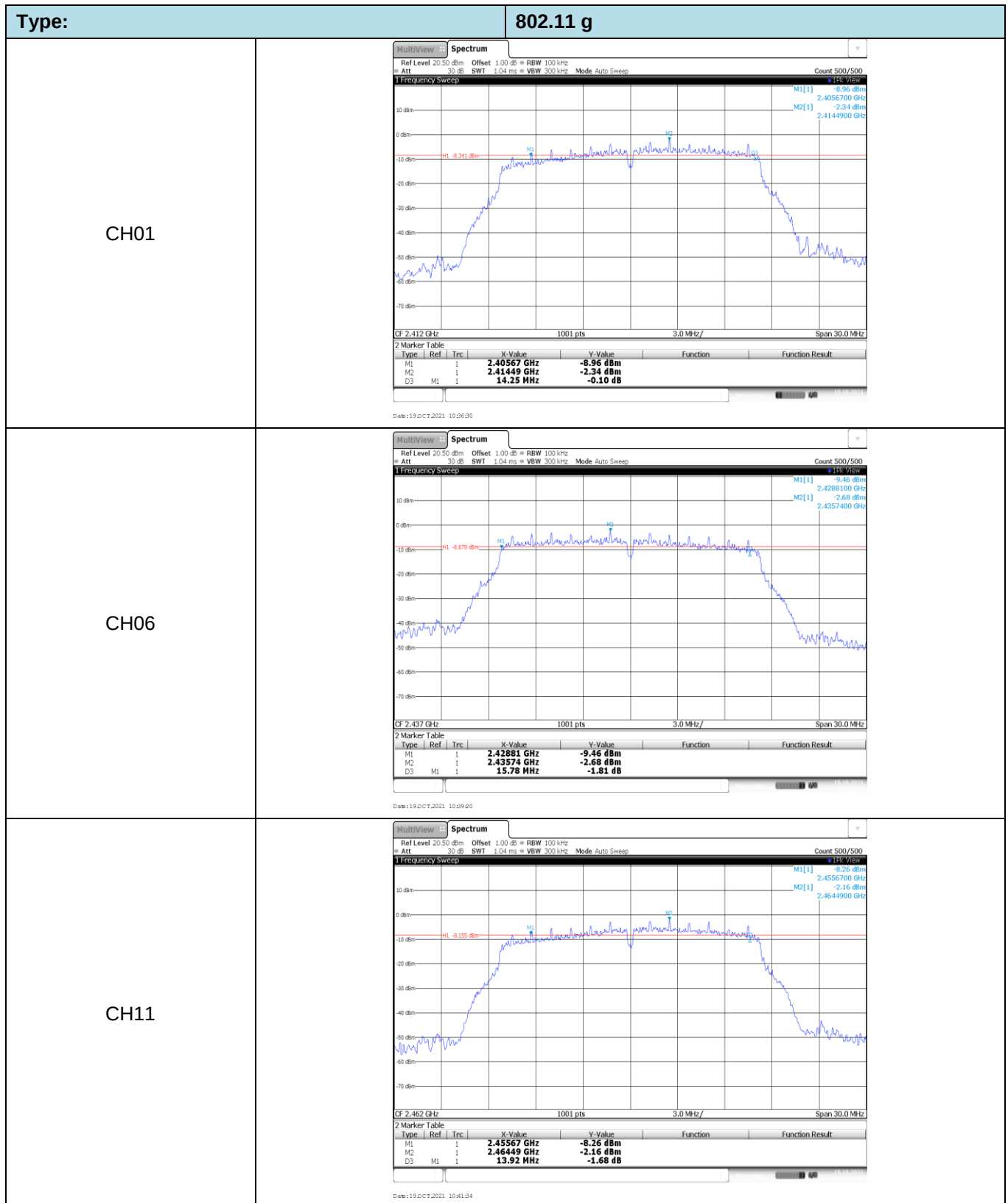


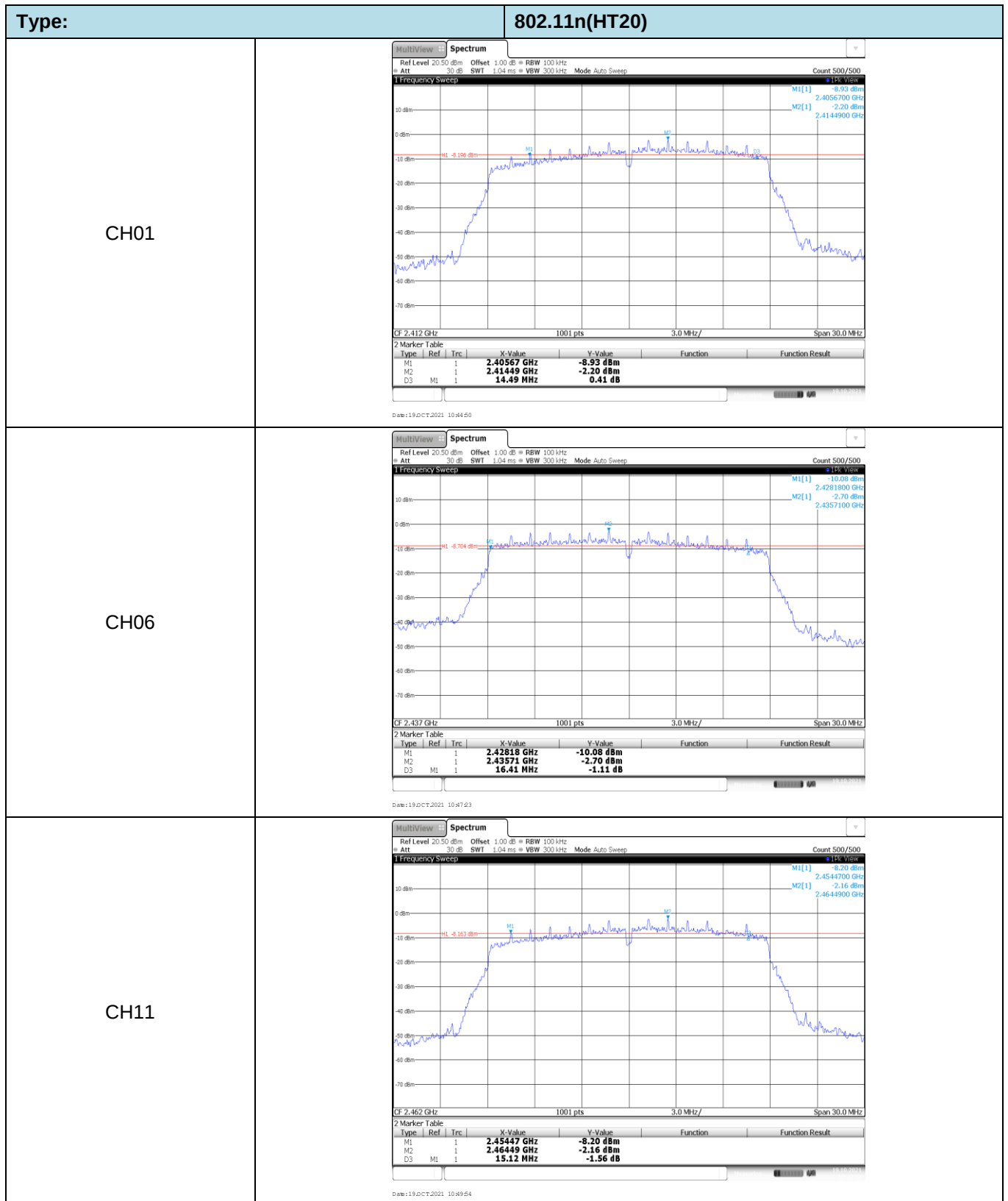
Type:	802.11n(HT40)
CH03	 The spectrum plot for CH03 shows a signal centered at 2.4222640 GHz. The peak level is -10.39 dBm. The plot includes a frequency sweep from 2.422 GHz to 2.423 GHz, with a span of 55.0 MHz and 1001 points. The signal is shown as a blue line on a grid with a 10 dB vertical scale.
CH06	 The spectrum plot for CH06 shows a signal centered at 2.4245270 GHz. The peak level is -12.01 dBm. The plot includes a frequency sweep from 2.423 GHz to 2.425 GHz, with a span of 55.0 MHz and 1001 points. The signal is shown as a blue line on a grid with a 10 dB vertical scale.
CH09	 The spectrum plot for CH09 shows a signal centered at 2.4607360 GHz. The peak level is -13.09 dBm. The plot includes a frequency sweep from 2.452 GHz to 2.469 GHz, with a span of 55.0 MHz and 1001 points. The signal is shown as a blue line on a grid with a 10 dB vertical scale.

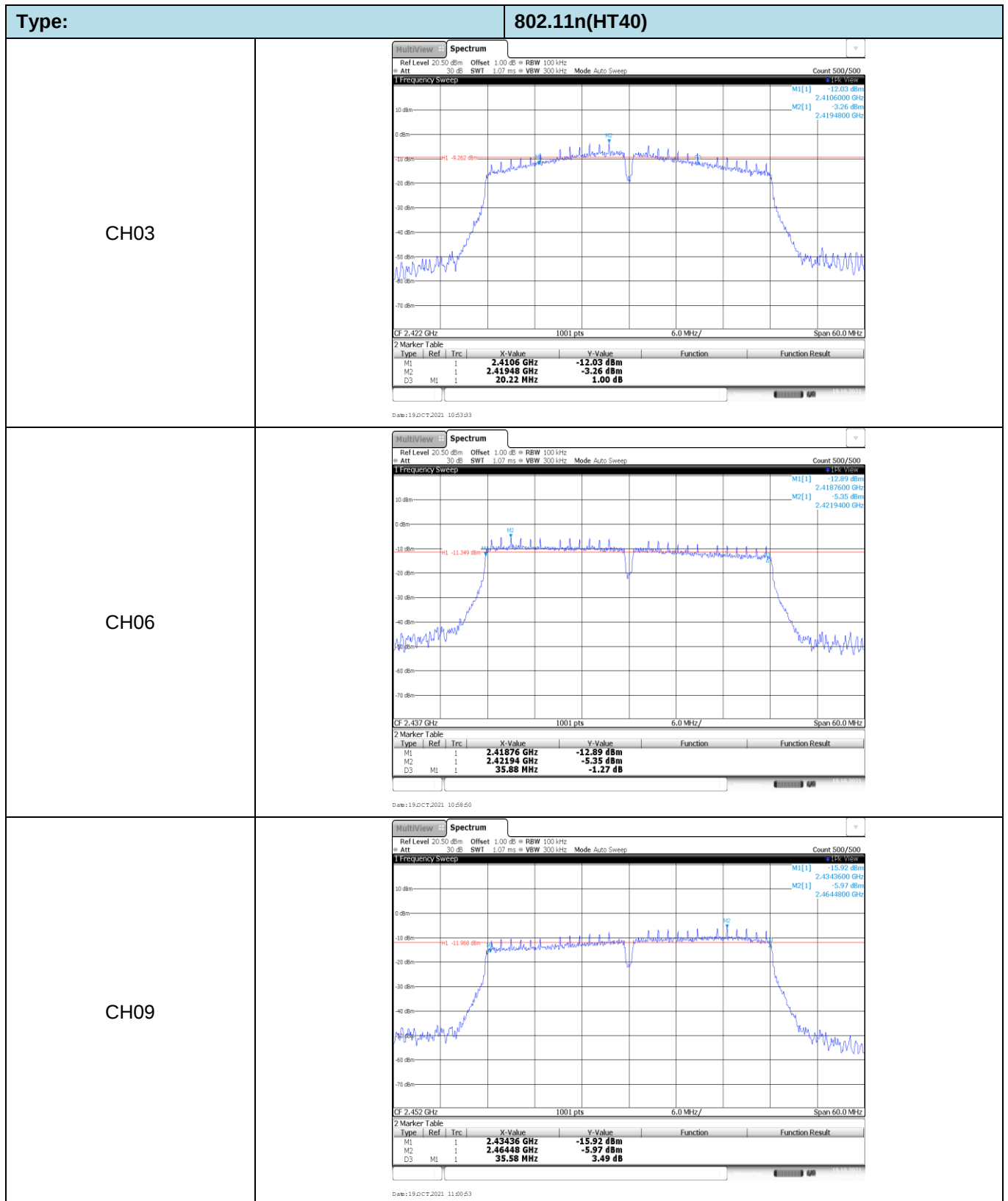
Appendix C: 6dB bandwidth

Type	Channel	6dB Bandwidth (MHz)	Limit (MHz)	Result
802.11b	01	8.07	≥0.5	Pass
	06	8.61		
	11	7.62		
802.11g	01	14.25	≥0.5	Pass
	06	15.78		
	11	13.92		
802.11n(HT20)	01	14.49	≥0.5	Pass
	06	16.41		
	11	15.12		
802.11n(HT40)	03	20.22	≥0.5	Pass
	06	35.88		
	09	35.58		

Appendix report page: 9 of 35

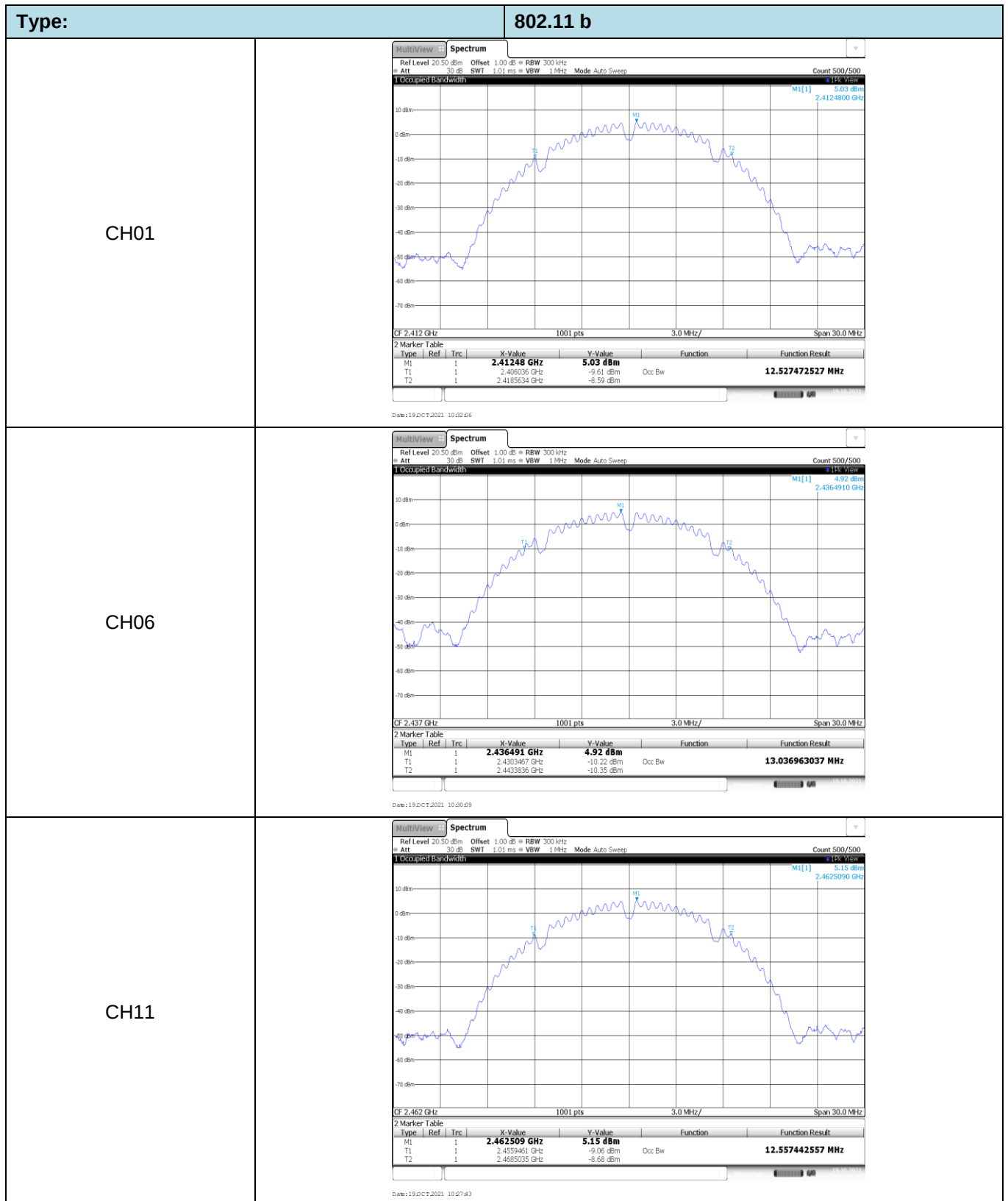


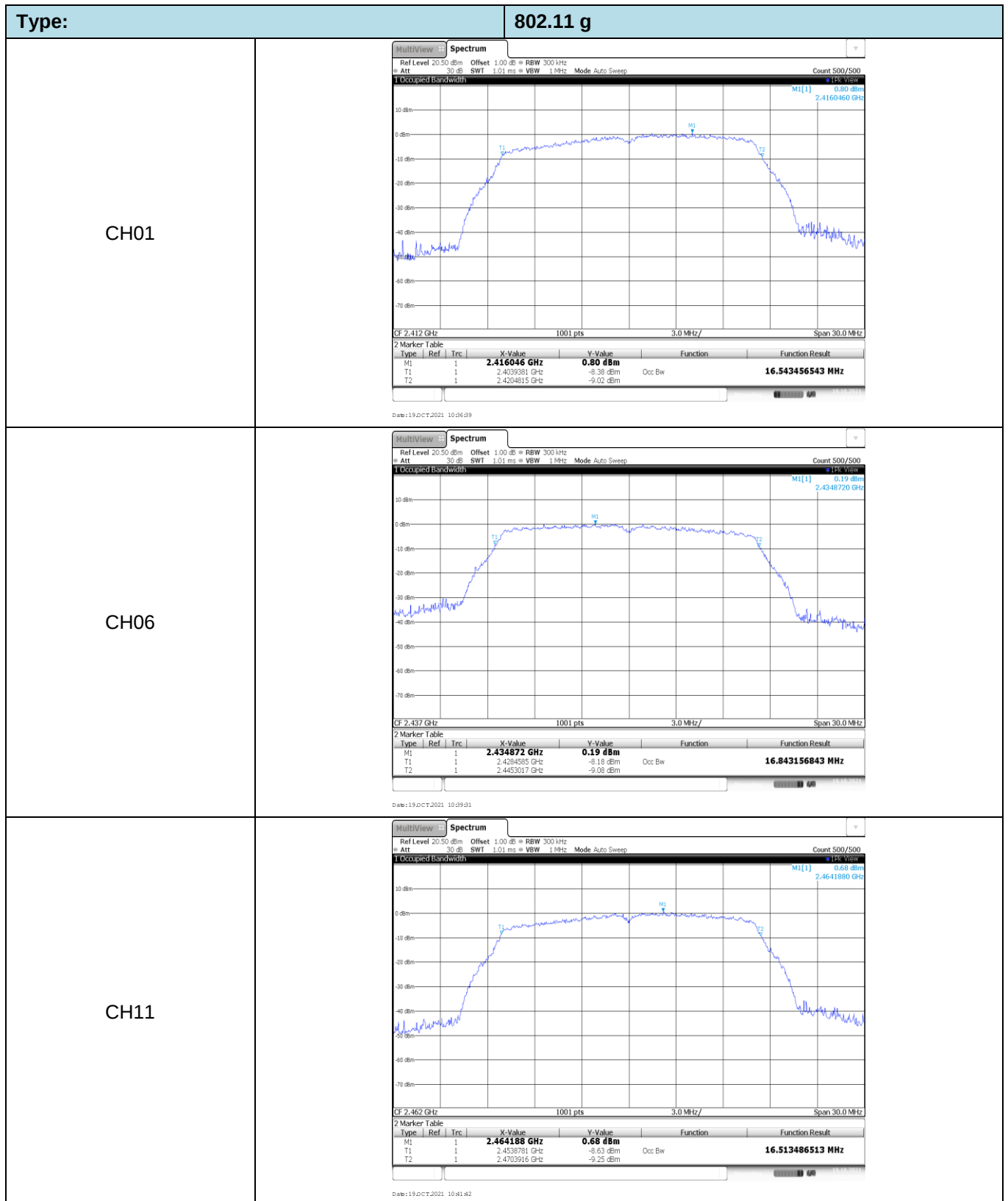


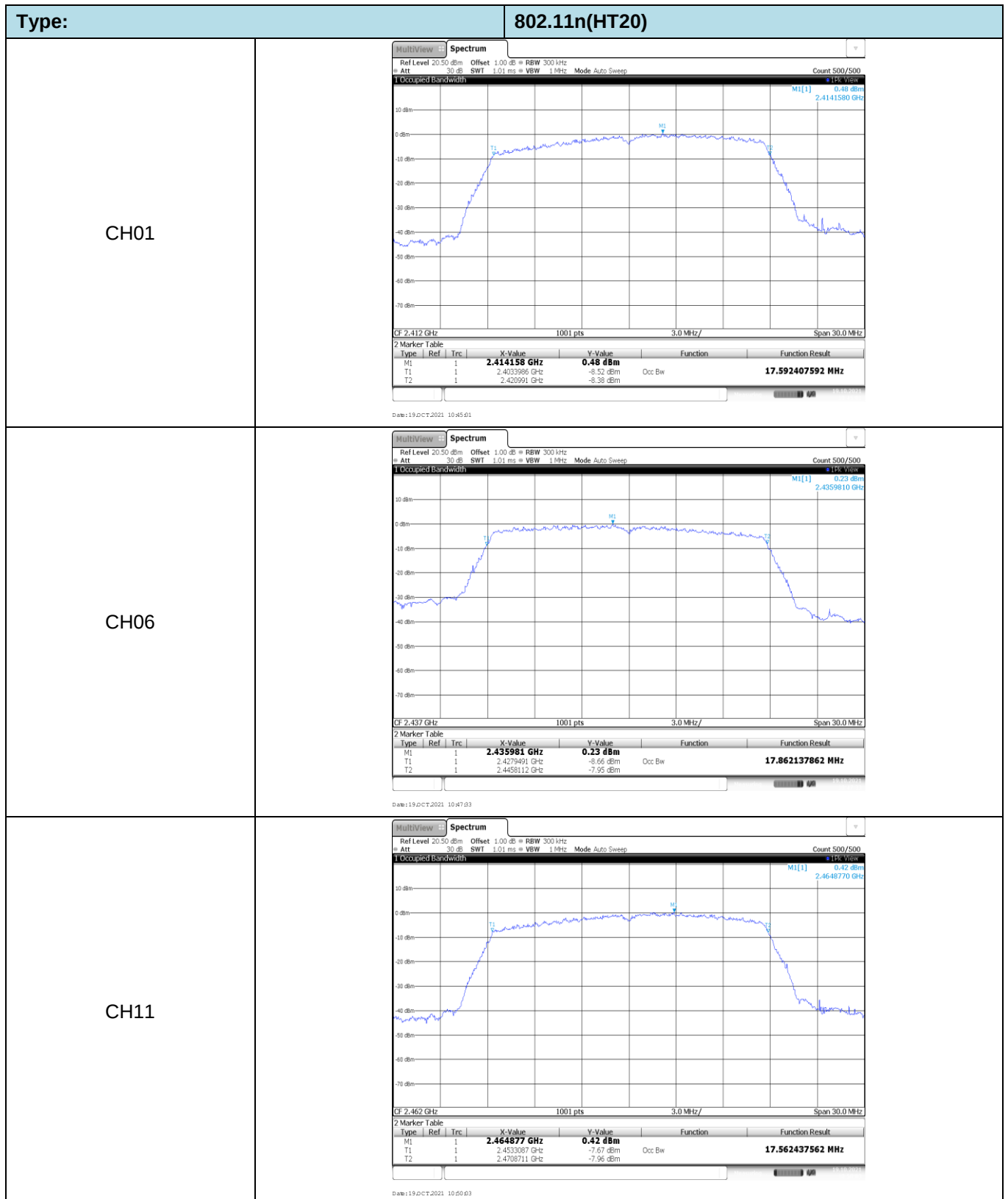


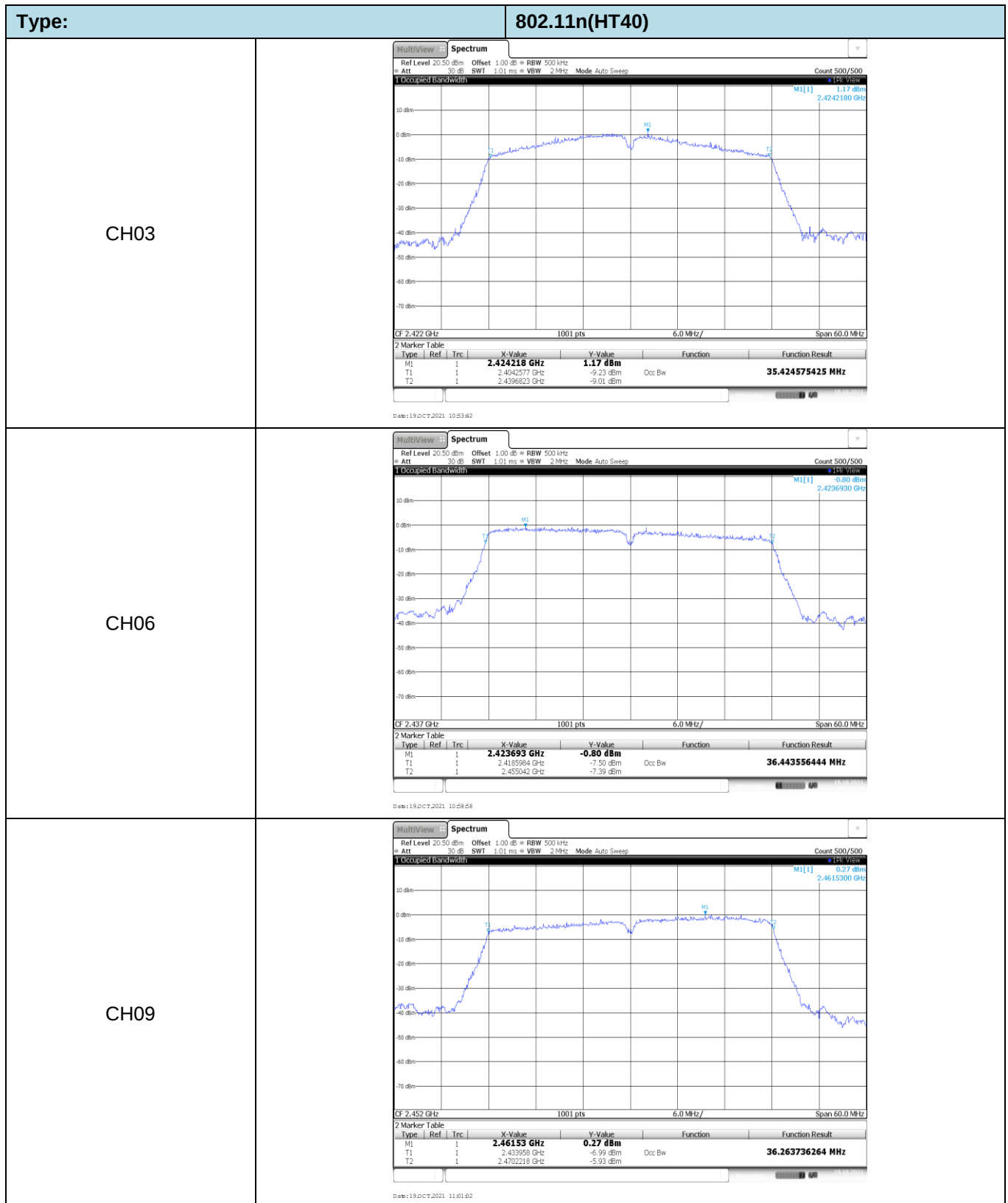
Appendix D: 99% Occupied Bandwidth

Type	Channel	99% Bandwidth (MHz)	Limit (kHz)	Result
802.11b	01	12.53	-	Pass
	06	13.04		
	11	12.56		
802.11g	01	16.54	-	Pass
	06	16.84		
	11	16.51		
802.11n(HT20)	01	17.59	-	Pass
	06	17.86		
	11	17.56		
802.11n(HT40)	03	35.42	-	Pass
	06	36.44		
	09	36.26		





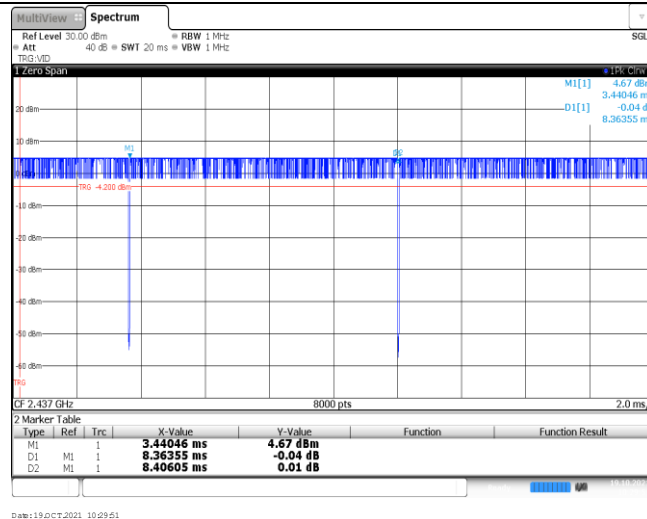




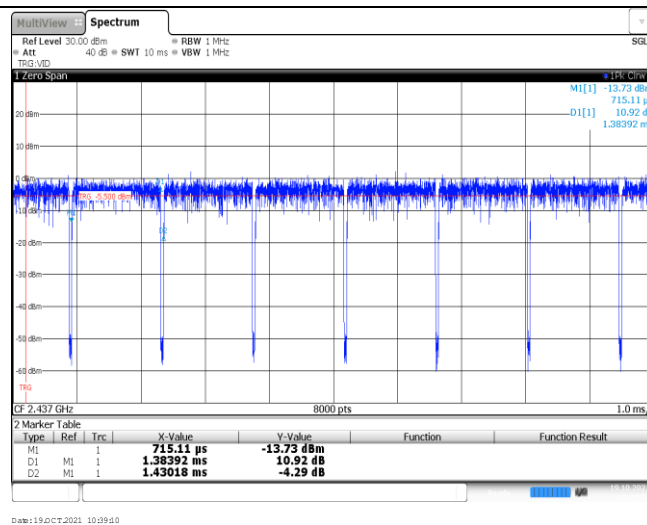
Appendix E: Duty Cycle

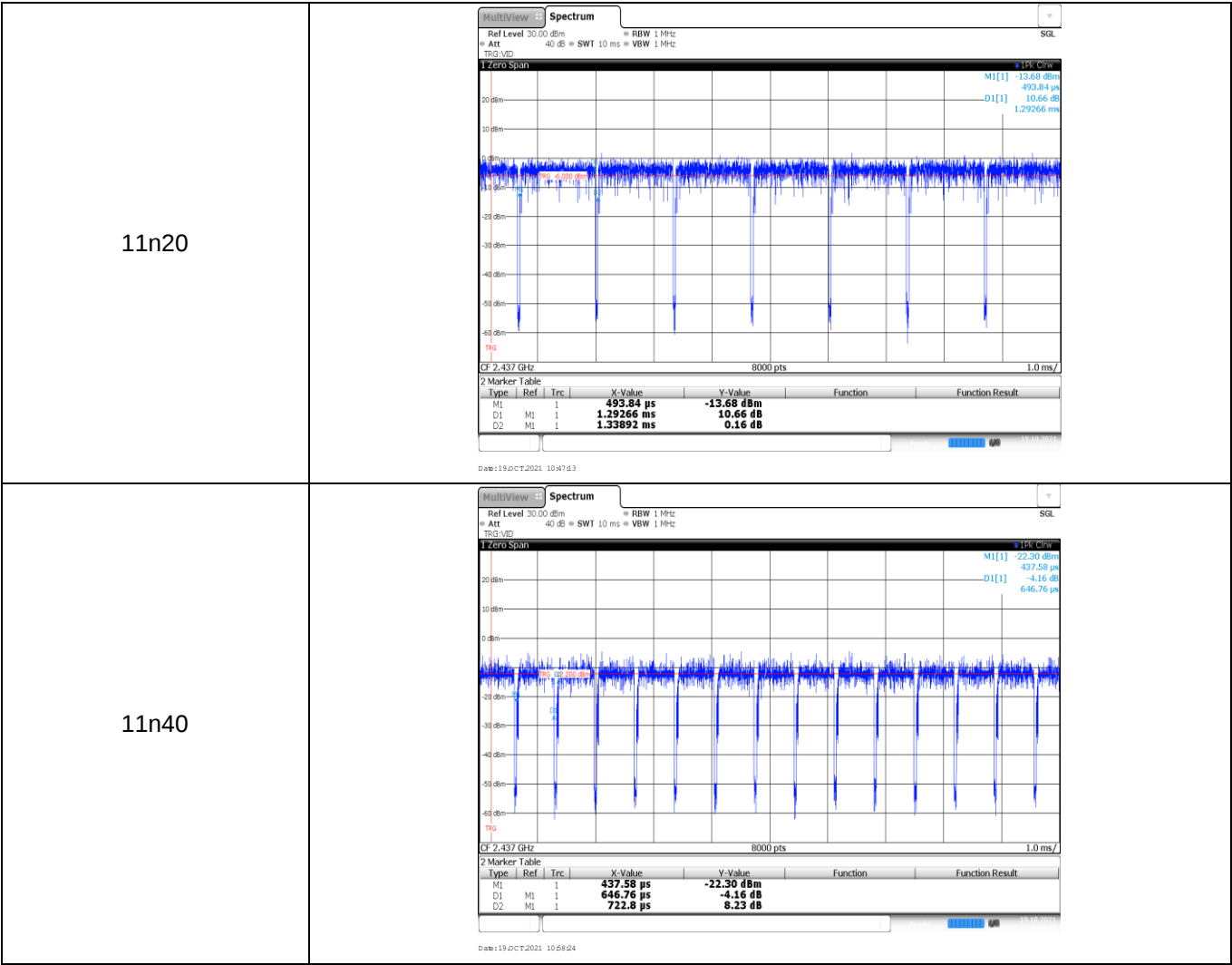
Modulation Type	Test Frequency (MHz)	$T_{on\ time}$ for single burst (ms)	T_{period} (ms)	Duty cycle	$1/T_{on\ time}$ (kHz)
11b	2437	8.36	8.41	99.4%	0.1
11g	2437	1.38	1.43	96.5%	0.7
11n20	2437	1.29	1.34	96.3%	0.8
11n40	2437	0.65	0.72	90.3%	1.5

11b

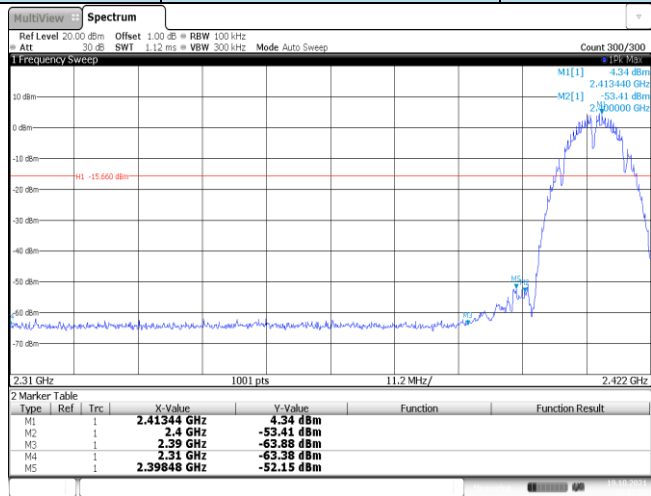
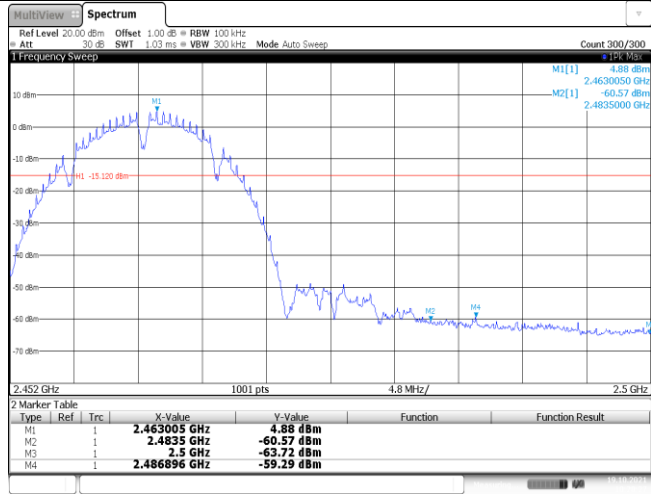


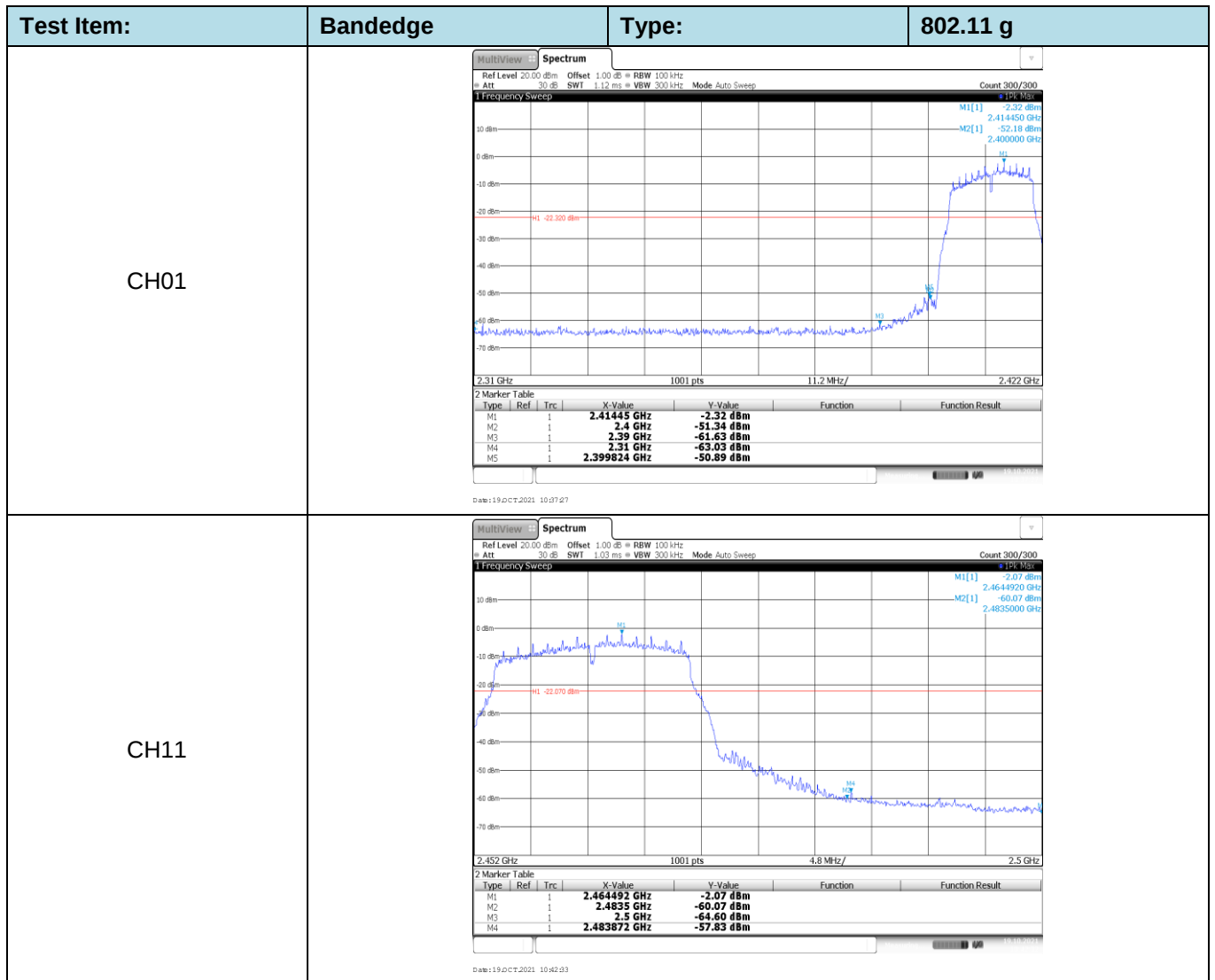
11g





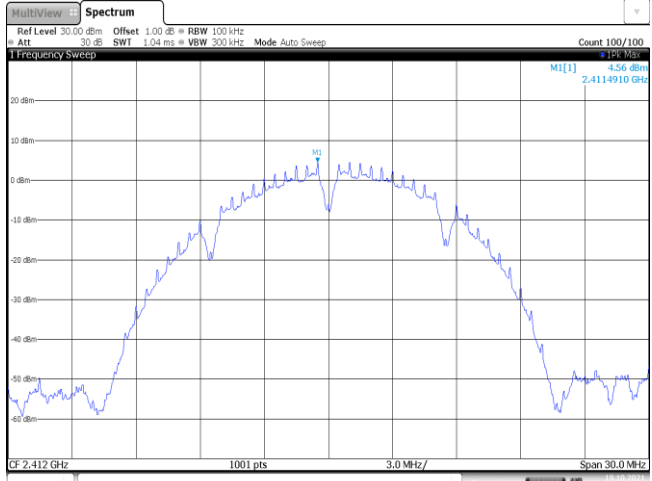
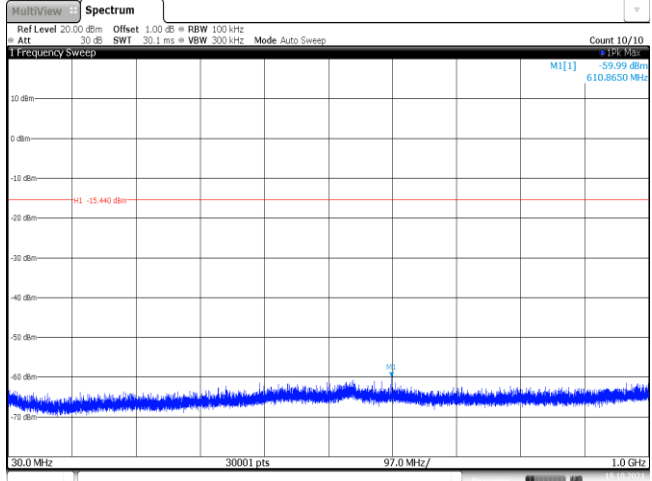
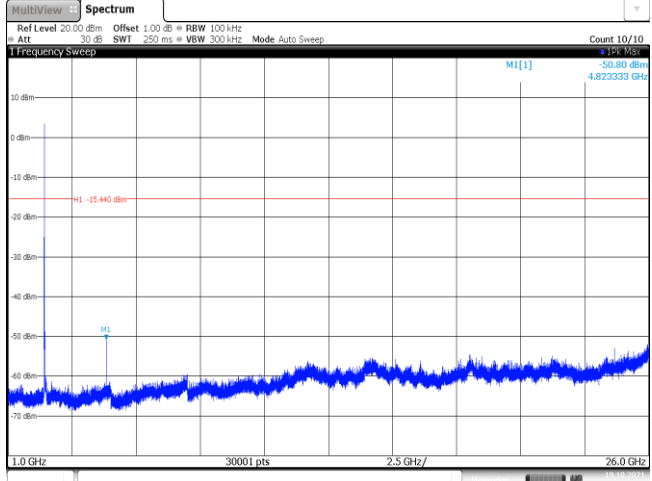
Appendix F: Band edge and Spurious Emissions (conducted)

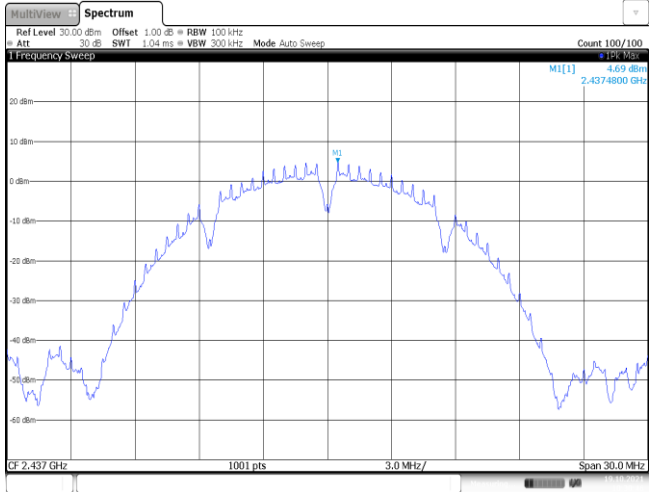
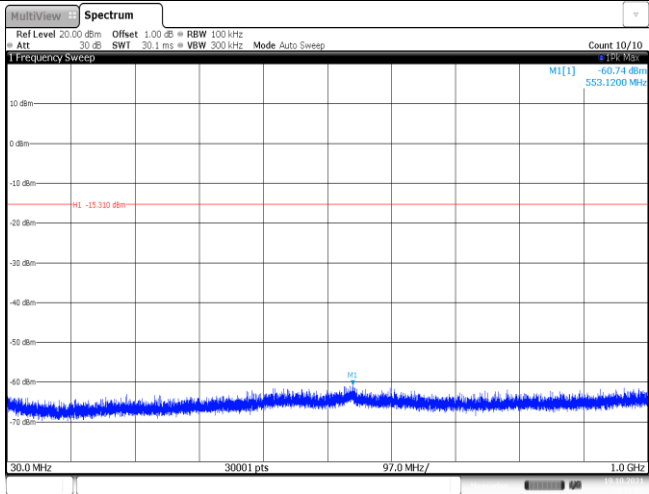
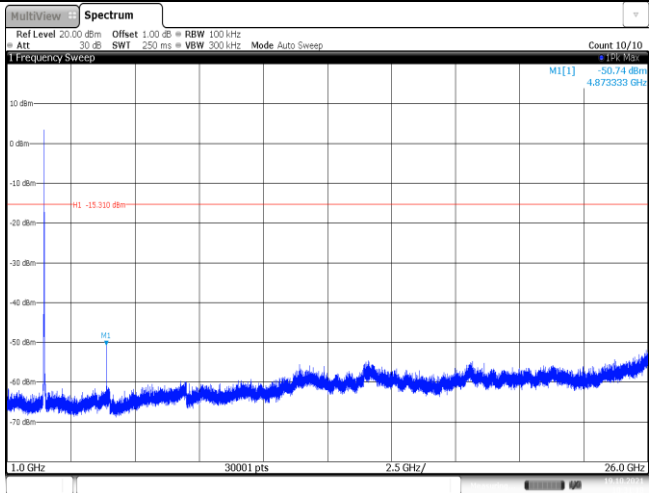
Test Item:	Bandedge	Type:	802.11 b																																										
CH01	MultiviewSpectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWI 1.12 ms VBW 300 kHz Mode Auto Sweep Count 300/300 1 Frequency Sweep  2.31 GHz1001 pts11.2 MHz/2.422 GHz 2 Marker Table <table><thead><tr><th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr></thead><tbody><tr><td>M1</td><td>1</td><td></td><td>2.41344 GHz</td><td>-4.34 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4 GHz</td><td>-53.41 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.39 GHz</td><td>-63.88 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.31 GHz</td><td>-63.38 dBm</td><td></td><td></td></tr><tr><td>M5</td><td>1</td><td></td><td>2.39848 GHz</td><td>-52.15 dBm</td><td></td><td></td></tr></tbody></table> Date: 19/07/2021 10:02:49			Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.41344 GHz	-4.34 dBm			M2	1		2.4 GHz	-53.41 dBm			M3	1		2.39 GHz	-63.88 dBm			M4	1		2.31 GHz	-63.38 dBm			M5	1		2.39848 GHz	-52.15 dBm		
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																																							
M1	1		2.41344 GHz	-4.34 dBm																																									
M2	1		2.4 GHz	-53.41 dBm																																									
M3	1		2.39 GHz	-63.88 dBm																																									
M4	1		2.31 GHz	-63.38 dBm																																									
M5	1		2.39848 GHz	-52.15 dBm																																									
CH11	MultiviewSpectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWI 1.03 ms VBW 300 kHz Mode Auto Sweep Count 300/300 1 Frequency Sweep  2.452 GHz1001 pts4.8 MHz/2.5 GHz 2 Marker Table <table><thead><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></thead><tbody><tr><td>M1</td><td>1</td><td></td><td>2.463005 GHz</td><td>4.88 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4835 GHz</td><td>-60.57 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.5 GHz</td><td>-63.72 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.486896 GHz</td><td>-59.29 dBm</td><td></td><td></td></tr></tbody></table> Date: 19/07/2021 10:08:27			Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.463005 GHz	4.88 dBm			M2	1		2.4835 GHz	-60.57 dBm			M3	1		2.5 GHz	-63.72 dBm			M4	1		2.486896 GHz	-59.29 dBm									
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																																							
M1	1		2.463005 GHz	4.88 dBm																																									
M2	1		2.4835 GHz	-60.57 dBm																																									
M3	1		2.5 GHz	-63.72 dBm																																									
M4	1		2.486896 GHz	-59.29 dBm																																									

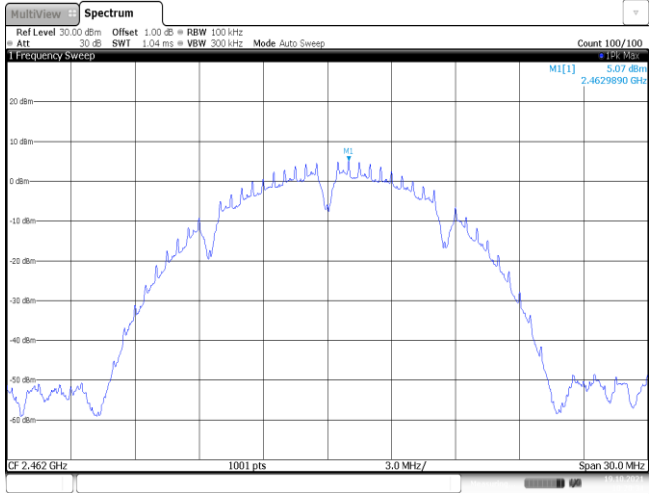
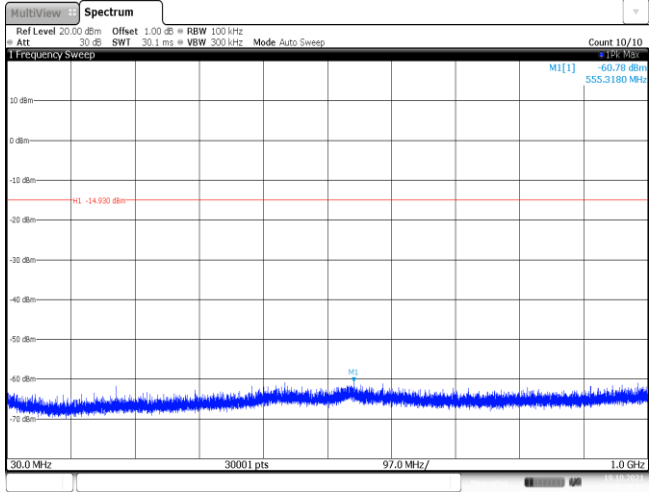
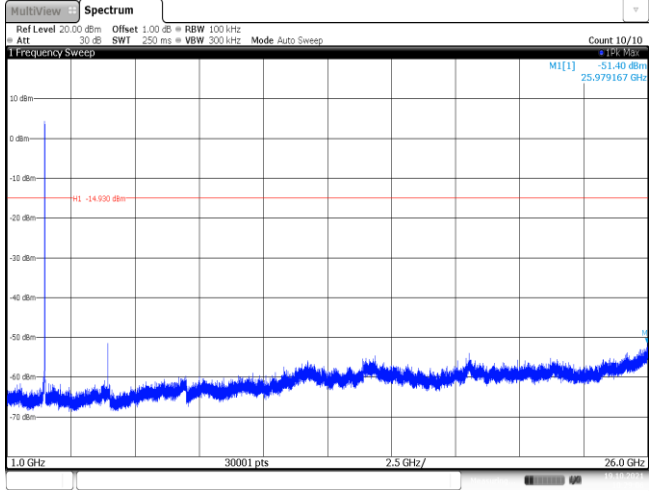


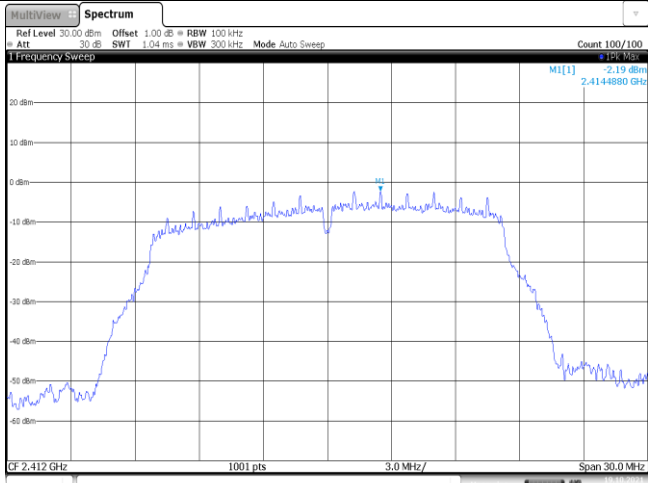
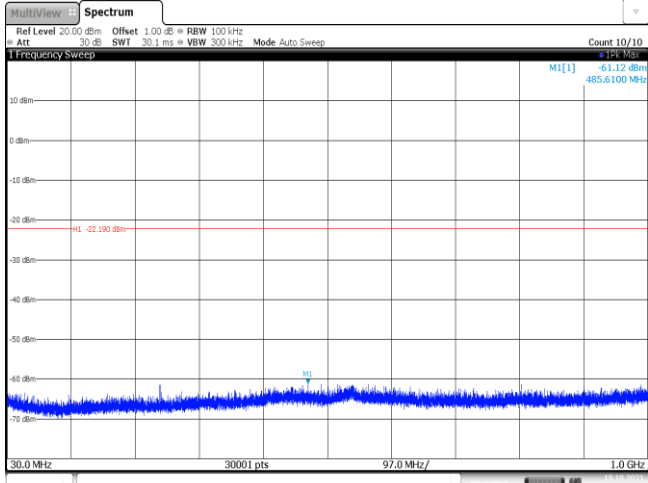
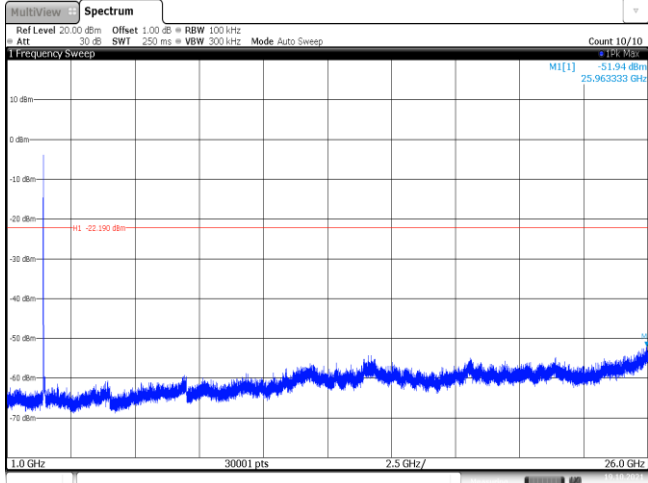
Test Item:	Bandedge	Type:	802.11 n(HT20)																																										
CH01	MultViewSpectrum Ref Level 20.00 dBm Offset 1.00 dB BW 100 kHz Att 30 dB SWI 1.12 ms VBW 300 kHz Mode Auto Sweep Count 300/300 Frequency Sweep M1[1] -2.36 dBm 2.414450 GHz M2[1] -51.75 dBm 2.400000 GHz 30 dBm 0 dBm -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 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>2.41445 GHz</td><td>-2.36 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4 GHz</td><td>-51.75 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.39 GHz</td><td>-61.61 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.31 GHz</td><td>-64.14 dBm</td><td></td><td></td></tr><tr><td>M5</td><td>1</td><td></td><td>2.399824 GHz</td><td>-50.47 dBm</td><td></td><td></td></tr></table> Date: 19 OCT 2021 10:45:54			Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.41445 GHz	-2.36 dBm			M2	1		2.4 GHz	-51.75 dBm			M3	1		2.39 GHz	-61.61 dBm			M4	1		2.31 GHz	-64.14 dBm			M5	1		2.399824 GHz	-50.47 dBm		
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																																							
M1	1		2.41445 GHz	-2.36 dBm																																									
M2	1		2.4 GHz	-51.75 dBm																																									
M3	1		2.39 GHz	-61.61 dBm																																									
M4	1		2.31 GHz	-64.14 dBm																																									
M5	1		2.399824 GHz	-50.47 dBm																																									
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 Frequency Sweep M1[1] -2.08 dBm 2.4644920 GHz M2[1] -59.12 dBm 2.4835000 GHz 30 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 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>2.464492 GHz</td><td>-2.08 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4835 GHz</td><td>-59.12 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.5 GHz</td><td>-64.17 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.484496 GHz</td><td>-58.76 dBm</td><td></td><td></td></tr></table> Date: 19 OCT 2021 10:50:54			Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.464492 GHz	-2.08 dBm			M2	1		2.4835 GHz	-59.12 dBm			M3	1		2.5 GHz	-64.17 dBm			M4	1		2.484496 GHz	-58.76 dBm									
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																																							
M1	1		2.464492 GHz	-2.08 dBm																																									
M2	1		2.4835 GHz	-59.12 dBm																																									
M3	1		2.5 GHz	-64.17 dBm																																									
M4	1		2.484496 GHz	-58.76 dBm																																									

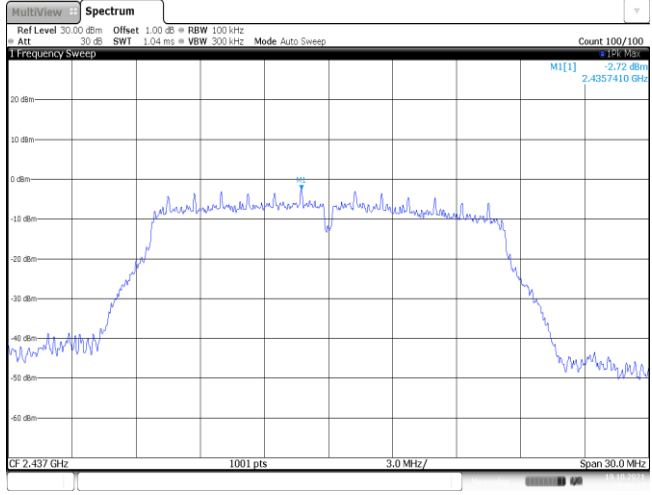
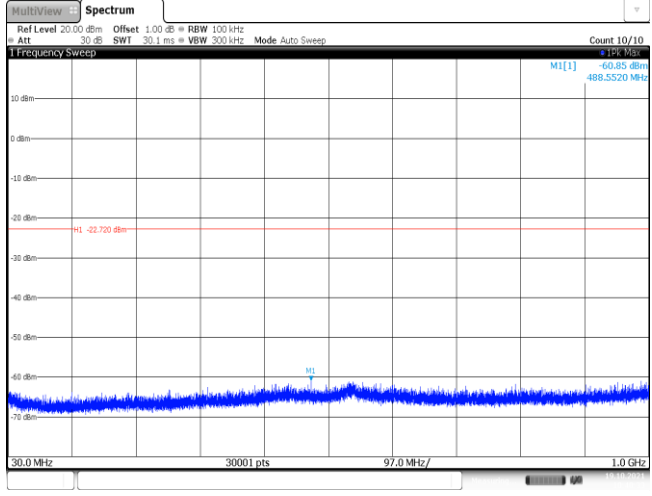
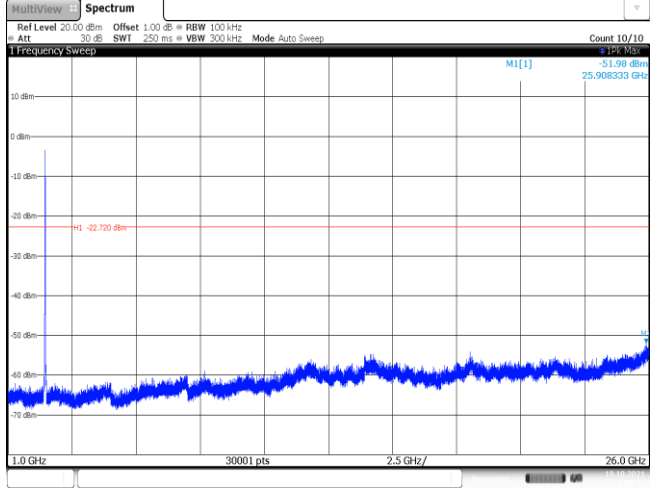
Appendix report page: 23 of 35

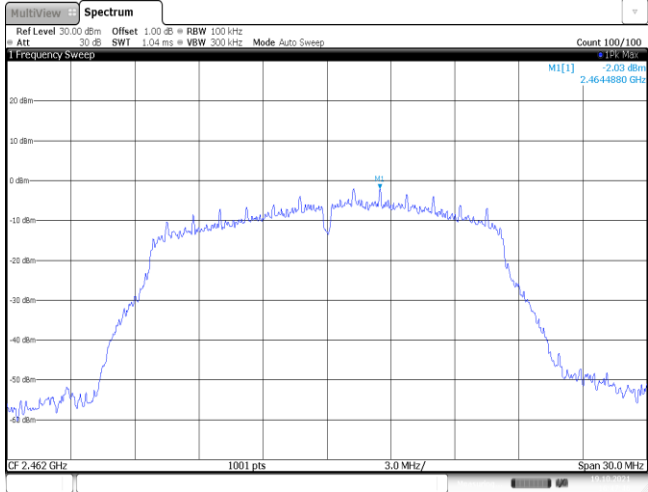
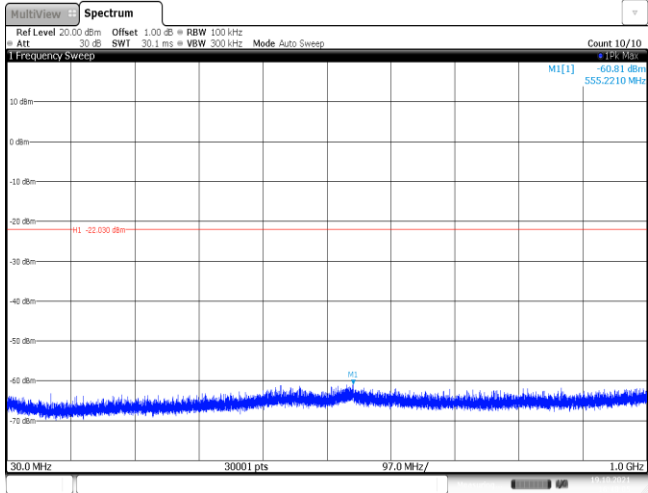
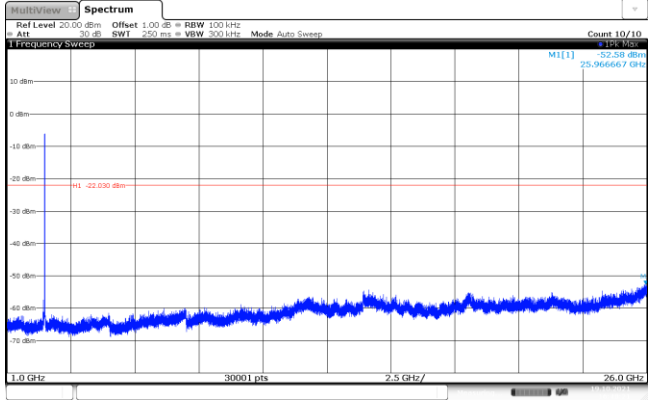
Test Item:	SE	Type:	802.11b
CH01 Reference level		 Count 100/100 M1[1] 4.56 dBm 2.4114910 GHz Ref Level 30.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWI 1.04 ms VBW 300 kHz Mode Auto Sweep Frequency Sweep Span 30.0 MHz 1001 pts 3.0 MHz/ Date: 19/10/2021 10:02:56	
CH01 30MHz~1000MHz		 Count 10/10 M1[1] -59.99 dBm 610.8650 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 Frequency Sweep Span 1.0 GHz 30001 pts 97.0 MHz/ Date: 19/10/2021 10:03:12	
CH01 1GHz~26GHz		 Count 10/10 M1[1] -50.80 dBm 4.823333 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 Frequency Sweep Span 26.0 GHz 30001 pts 2.5 GHz/ Date: 19/10/2021 10:03:29	

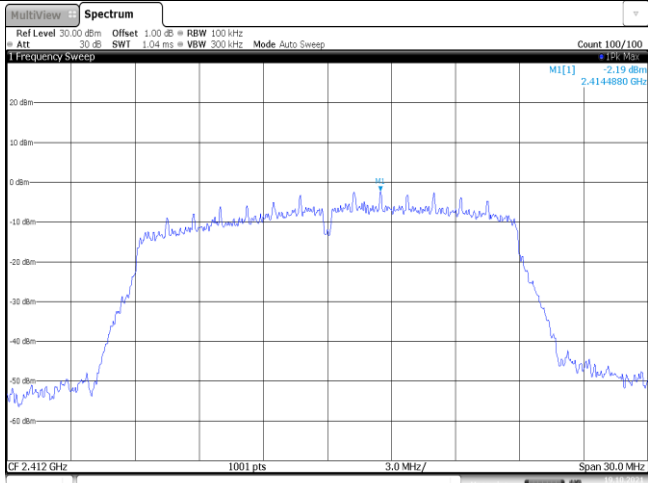
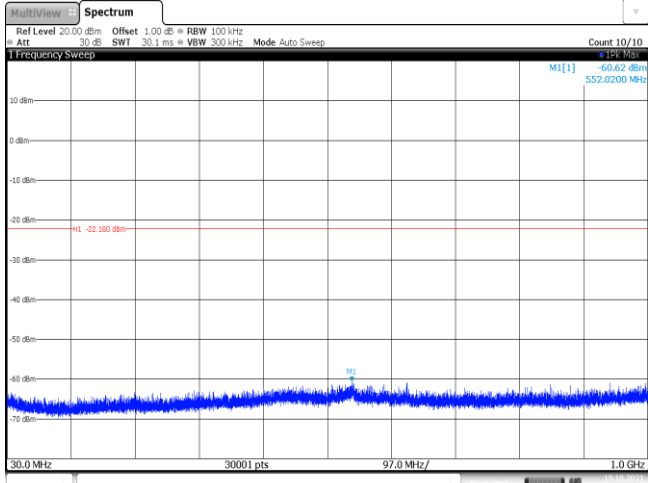
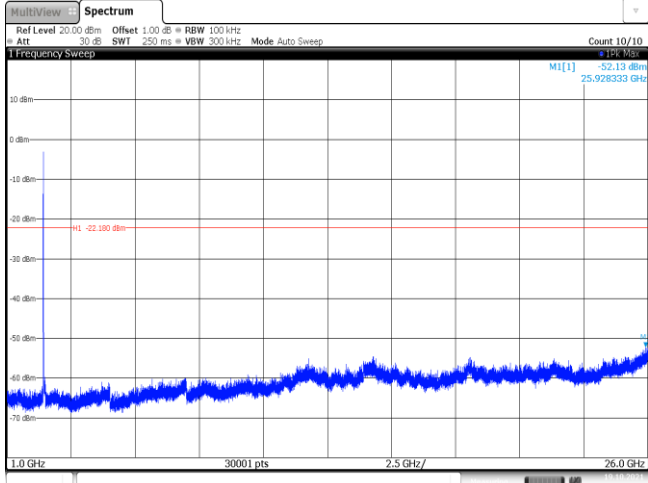
CH06 Reference level	 Ref Level 30.00 dBm Offset 1.00 dB BW 100 kHz Att 30 dB SWI 1.04 ms VBW 300 kHz Mode Auto Sweep Count 100/100 M1[1] -46.9 dBm 2.4374800 GHz CF 2.437 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date:19-Oct-2021 10:00:46
CH06 30MHz~1000MHz	 Ref Level 20.00 dBm Offset 1.00 dB BW 100 kHz Att 30 dB SWI 30.1 ms VBW 300 kHz Mode Auto Sweep Count 10/10 M1[1] -60.74 dBm 553.1200 MHz H1 -15.310 dBm 30.0 MHz 30001 pts 97.0 MHz/ 1.0 GHz Date:19-Oct-2021 10:01:02
CH06 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] -50.74 dBm 4.873333 GHz H1 -15.310 dBm 1.0 GHz 30001 pts 2.5 GHz/ 26.0 GHz Date:19-Oct-2021 10:01:48

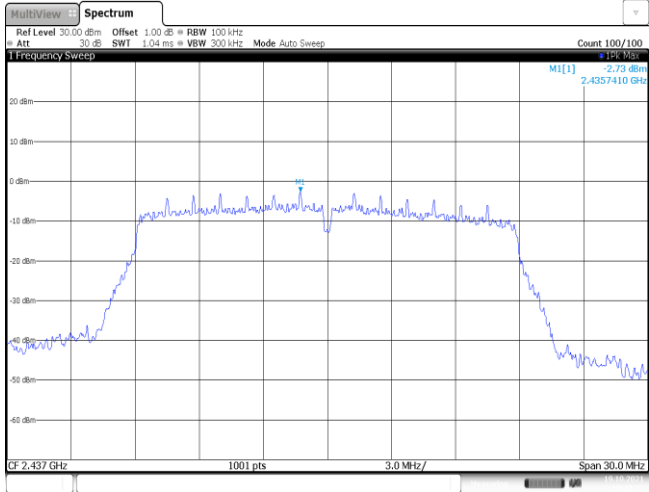
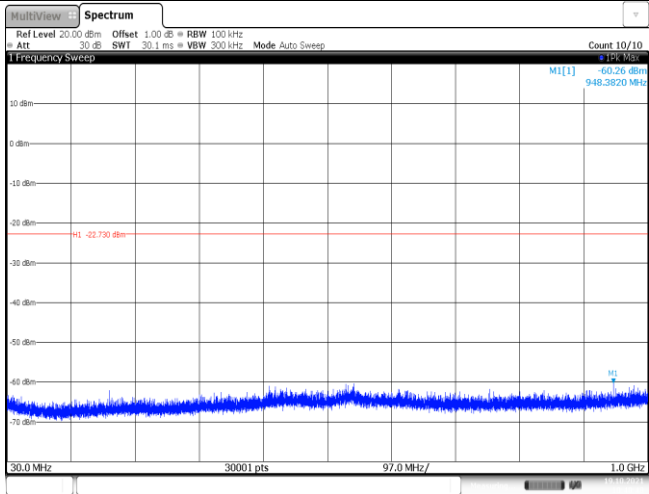
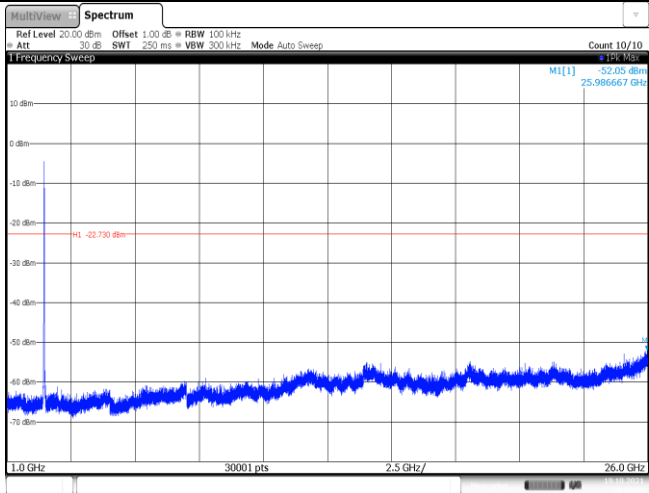
CH11 Reference level	 Ref Level 30.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWF 1.04 ms VBW 300 kHz Mode Auto Sweep Count 100/100 MI[1] 5.07 dBm 2.4629890 GHz CF 2.462 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date:19/OCT/2021 10:28:04
CH11 30MHz~1000MHz	 Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWF 30.1 ms VBW 300 kHz Mode Auto Sweep Count 10/10 MI[1] -60.78 dBm 555.3180 MHz H1 -14.930 dBm 30.0 MHz 30001 pts 97.0 MHz/ 1.0 GHz Date:19/OCT/2021 10:28:50
CH11 1GHz~26GHz	 Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWF 250 ms VBW 300 kHz Mode Auto Sweep Count 10/10 MI[1] -51.40 dBm 25.979167 GHz H1 -14.930 dBm 1.0 GHz 30001 pts 2.5 GHz/ 26.0 GHz Date:19/OCT/2021 10:29:06

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

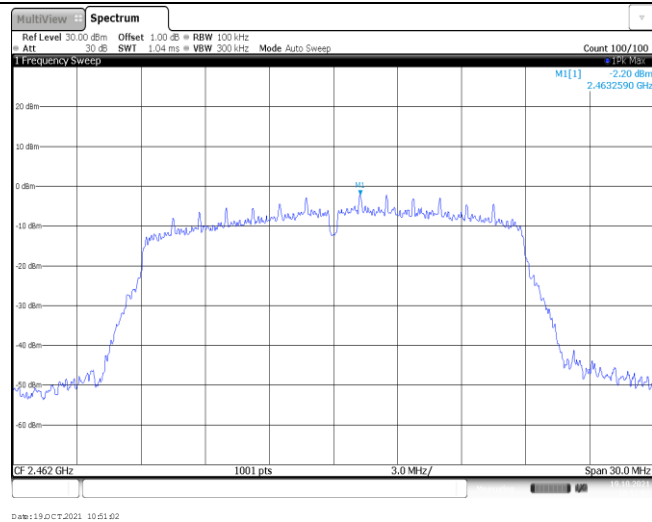
CH06 Reference level	 Ref Level 30.00 dBm Offset 1.00 dB BW 100 kHz Att 30.0 dB SWI 1.04 ms VBW 300 kHz Mode Auto Sweep Count 100/100 M1[1] -2.72 dBm 2.4357410 GHz CF 2.437 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 19/07/2021 10:40:18
CH06 30MHz~1000MHz	 Ref Level 20.00 dBm Offset 1.00 dB BW 100 kHz Att 30.0 dB SWI 30.1 ms VBW 300 kHz Mode Auto Sweep Count 10/10 M1[1] -60.85 dBm 488.5520 MHz 30.0 MHz 30001 pts 97.0 MHz/ 1.0 GHz Date: 19/07/2021 10:40:24
CH06 1GHz~26GHz	 Ref Level 20.00 dBm Offset 1.00 dB BW 100 kHz Att 30.0 dB SWI 250 ms VBW 300 kHz Mode Auto Sweep Count 10/10 M1[1] -51.98 dBm 25.908333 GHz 1.0 GHz 30001 pts 2.5 GHz/ 26.0 GHz Date: 19/07/2021 10:40:50

CH11 Reference level	 Date:19.OCT.2021 16:47:46
CH11 30MHz~1000MHz	 Date:19.OCT.2021 16:48:05
CH11 1GHz~26GHz	 Date:19.OCT.2021 16:48:21

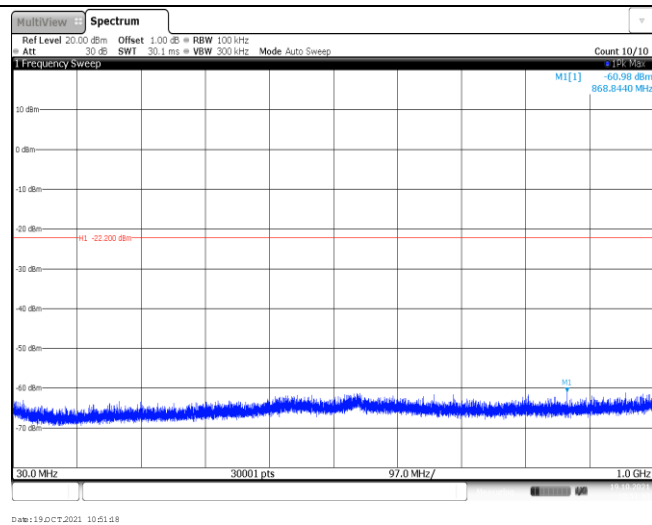
Test Item:	SE	Type:	802.11n(HT20)
CH01 Reference level		 19/10/2021 10:46:01	
CH01 30MHz~1000MHz		 19/10/2021 10:46:17	
CH01 1GHz~26GHz		 19/10/2021 10:46:34	

CH06 Reference level	 Ref Level 30.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWF 1.04 ms VBW 300 kHz Mode Auto Sweep Count 100/100 M1[1] -2.73 dBm 2.4357410 GHz CF 2.437 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 19/OCT/2021 10:48:01
CH06 30MHz~1000MHz	 Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWF 30.1 ms VBW 300 kHz Mode Auto Sweep Count 10/10 M1[1] -60.26 dBm 948.3820 MHz 30.0 MHz 30001 pts 97.0 MHz/ 1.0 GHz Date: 19/OCT/2021 10:48:47
CH06 1GHz~26GHz	 Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWF 250 ms VBW 300 kHz Mode Auto Sweep Count 10/10 M1[1] -52.05 dBm 25.986667 GHz 1.0 GHz 30001 pts 2.5 GHz/ 26.0 GHz Date: 19/OCT/2021 10:49:04

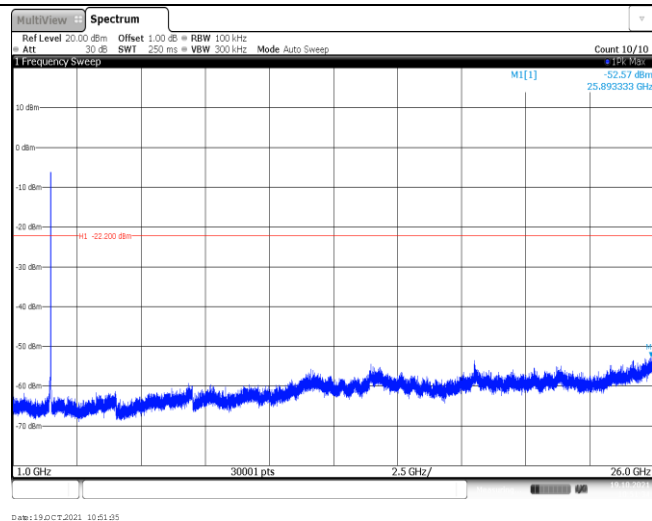
CH11
Reference level

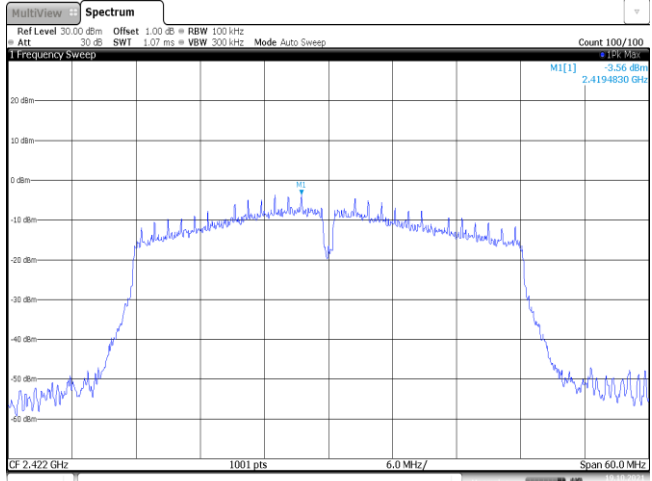
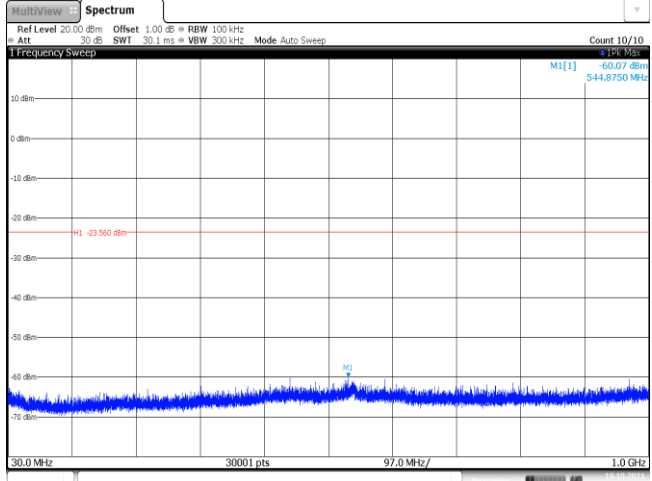
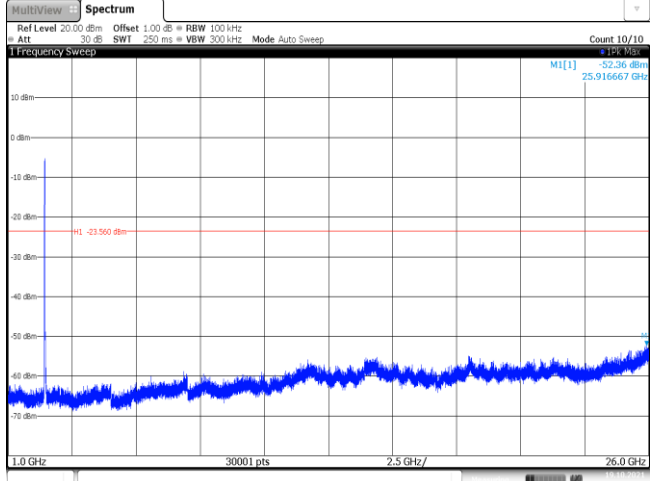


CH11
30MHz~1000MHz

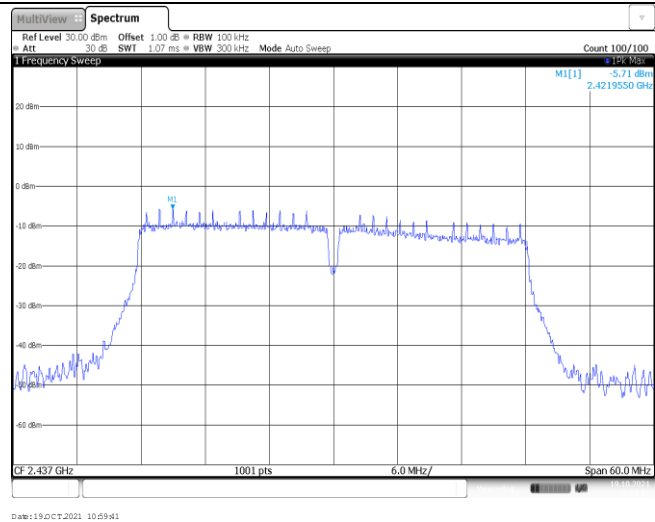


CH11
1GHz~26GHz

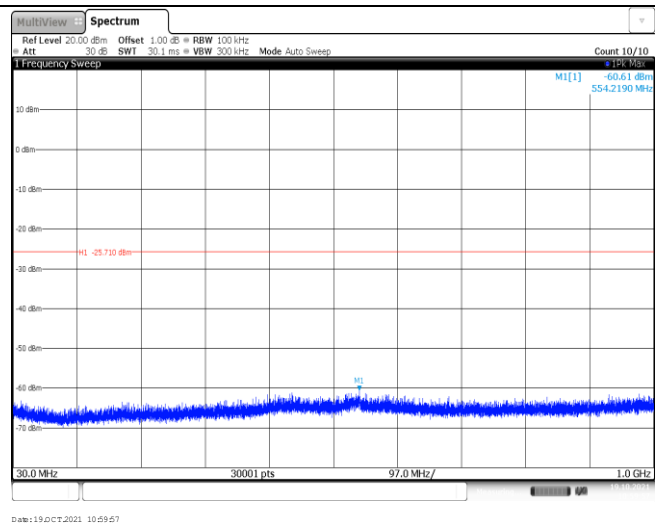


Test Item:	SE	Type:	802.11n(HT40)
CH03 Reference level			
CH03 30MHz~1000MHz			
CH03 1GHz~26GHz			

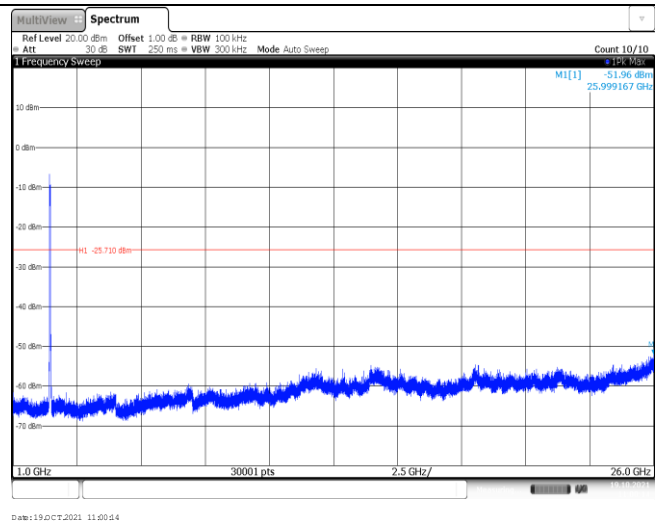
CH06
Reference level



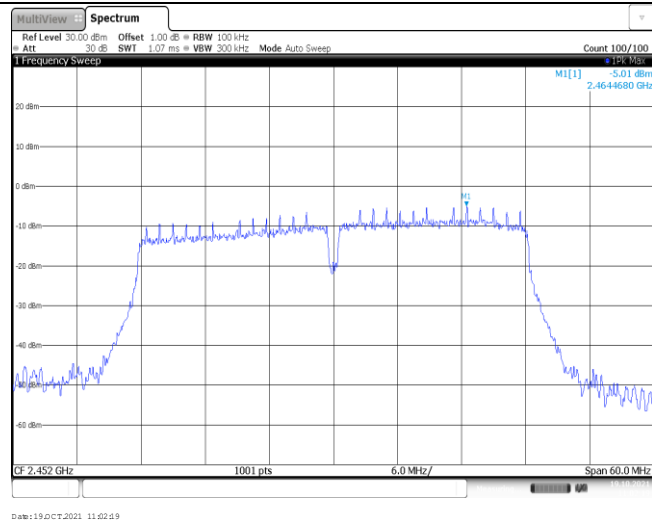
CH06
30MHz~1000MHz



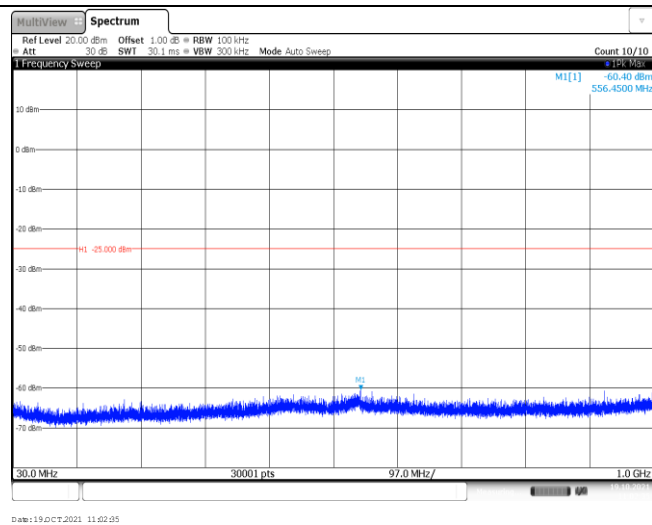
CH06
1GHz~26GHz



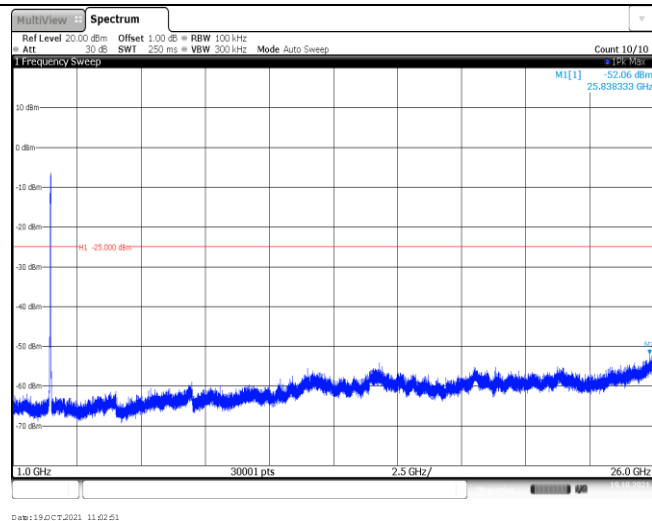
CH09
Reference level



CH09
30MHz~1000MHz



CH09
1GHz~26GHz



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