

APPENDIX REPORT

Project No.	SHT2105113201EW	Radio Specification	WIFI 2.4G
Test sample No.	YPHT21051132002	Model No.	SC400
Start test date	2021-06-30	Finish date	2021-06-30
Temperature	26.4°C	Humidity	38%
Test Engineer	Hailey Chen	Auditor	Xiaodong Zhu

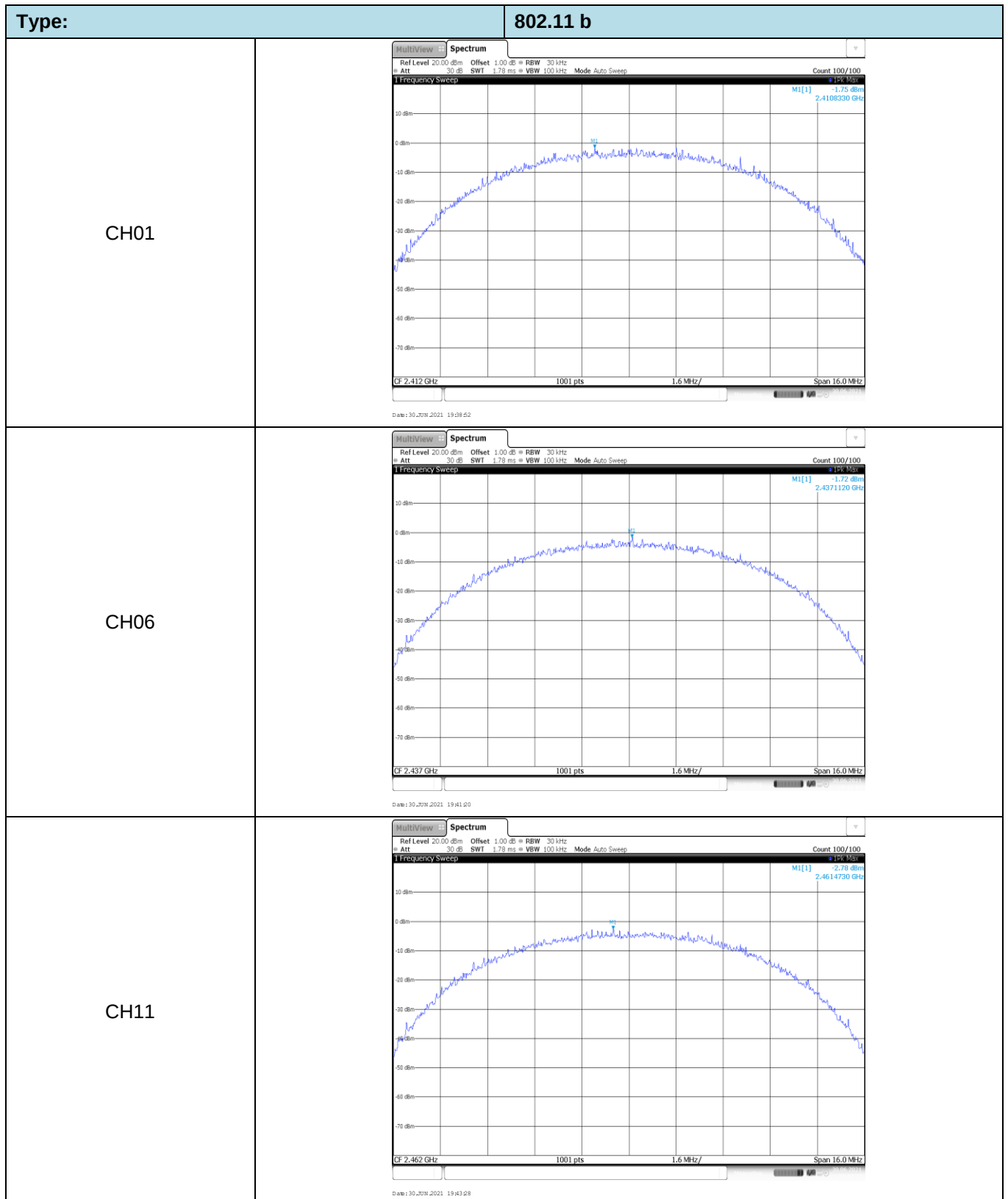
Appendix clause	Test item	Result
A	Conducted Peak Output Power	PASS
B	Power Spectral Density	PASS
C	6 dB Bandwidth	PASS
D	99% Occupied Bandwidth	PASS
E	Duty Cycle	PASS
F	Band edge and Spurious Emissions (conducted)	PASS

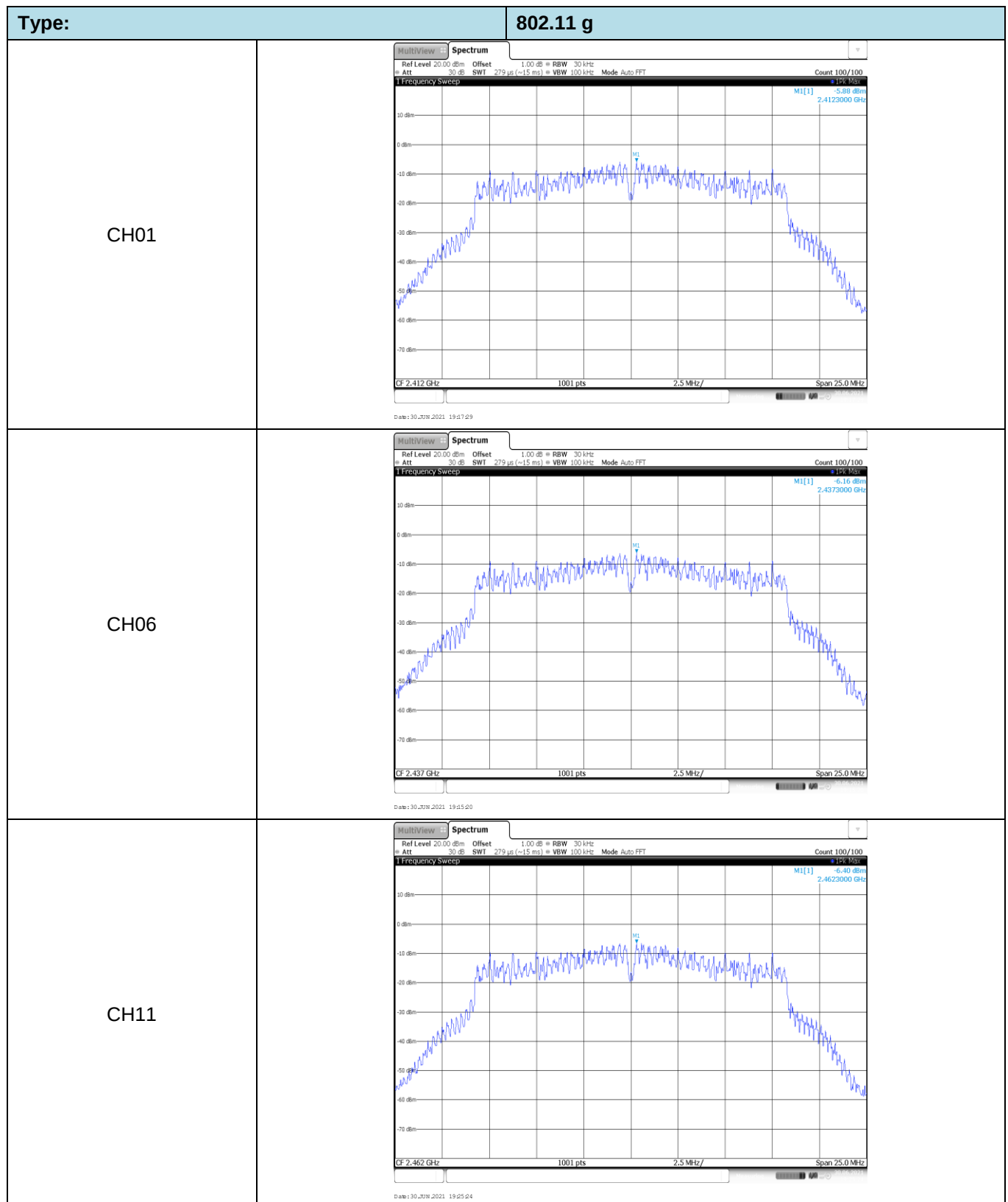
Appendix A: Conducted Peak Output Power

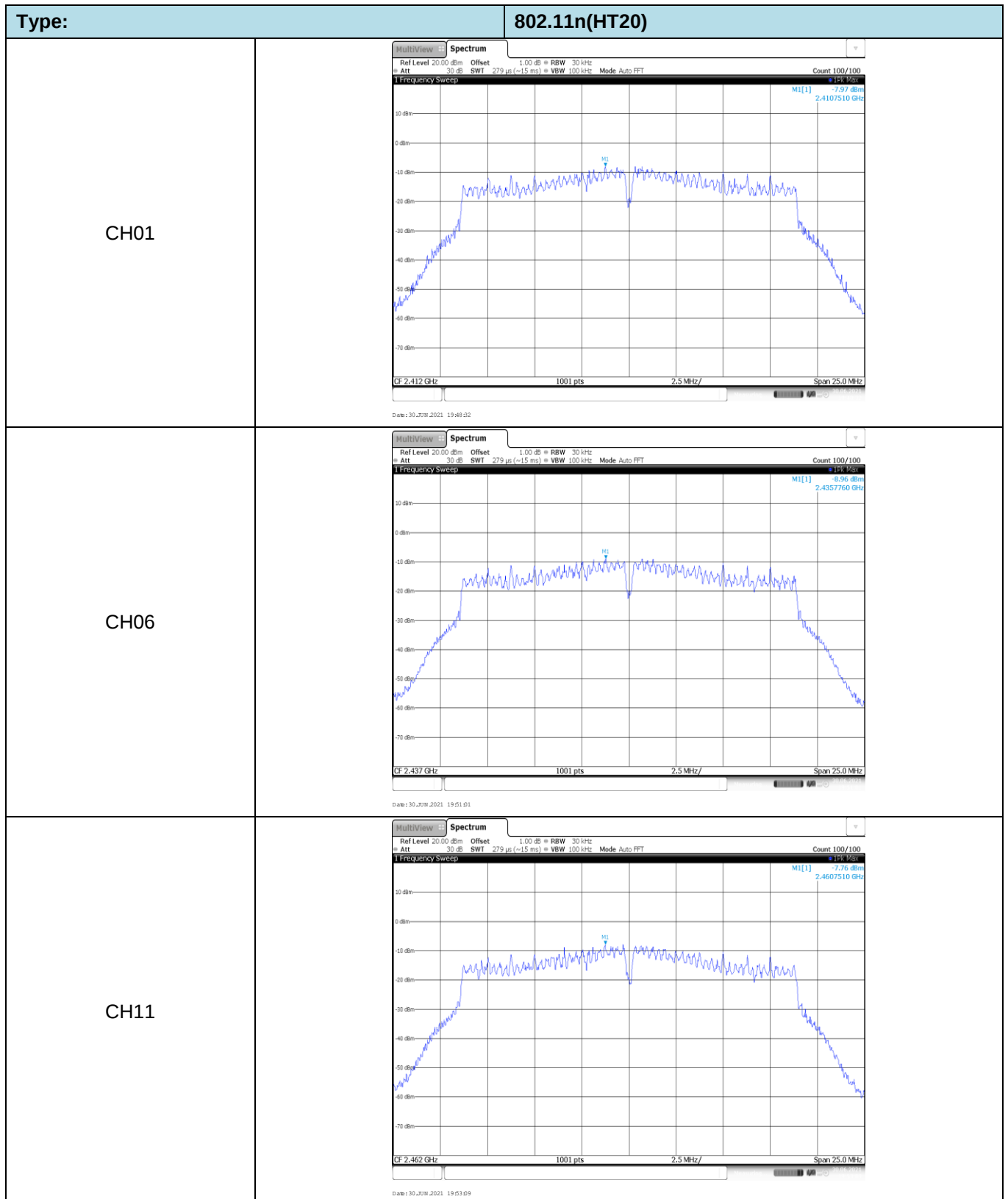
Type	Channel	Peak Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
802.11b	01	16.62	15.23	≤ 30.00	Pass
	06	15.34	13.81		
	11	15.26	13.70		
802.11g	01	16.96	14.71	≤ 30.00	Pass
	06	16.60	14.13		
	11	16.50	14.31		
802.11n (HT20)	01	15.55	13.06	≤ 30.00	Pass
	06	14.87	12.72		
	11	15.16	12.85		

Appendix B: Power Spectral Density

Type	Channel	Power Spectral Density (dBm/30KHz)	Limit (dBm/3KHz)	Result
802.11b	01	-1.75	≤8.00	Pass
	06	-1.72		
	11	-2.78		
802.11g	01	-5.88	≤8.00	Pass
	06	-6.16		
	11	-6.40		
802.11n(HT20)	01	-7.97	≤8.00	Pass
	06	-8.96		
	11	-7.76		

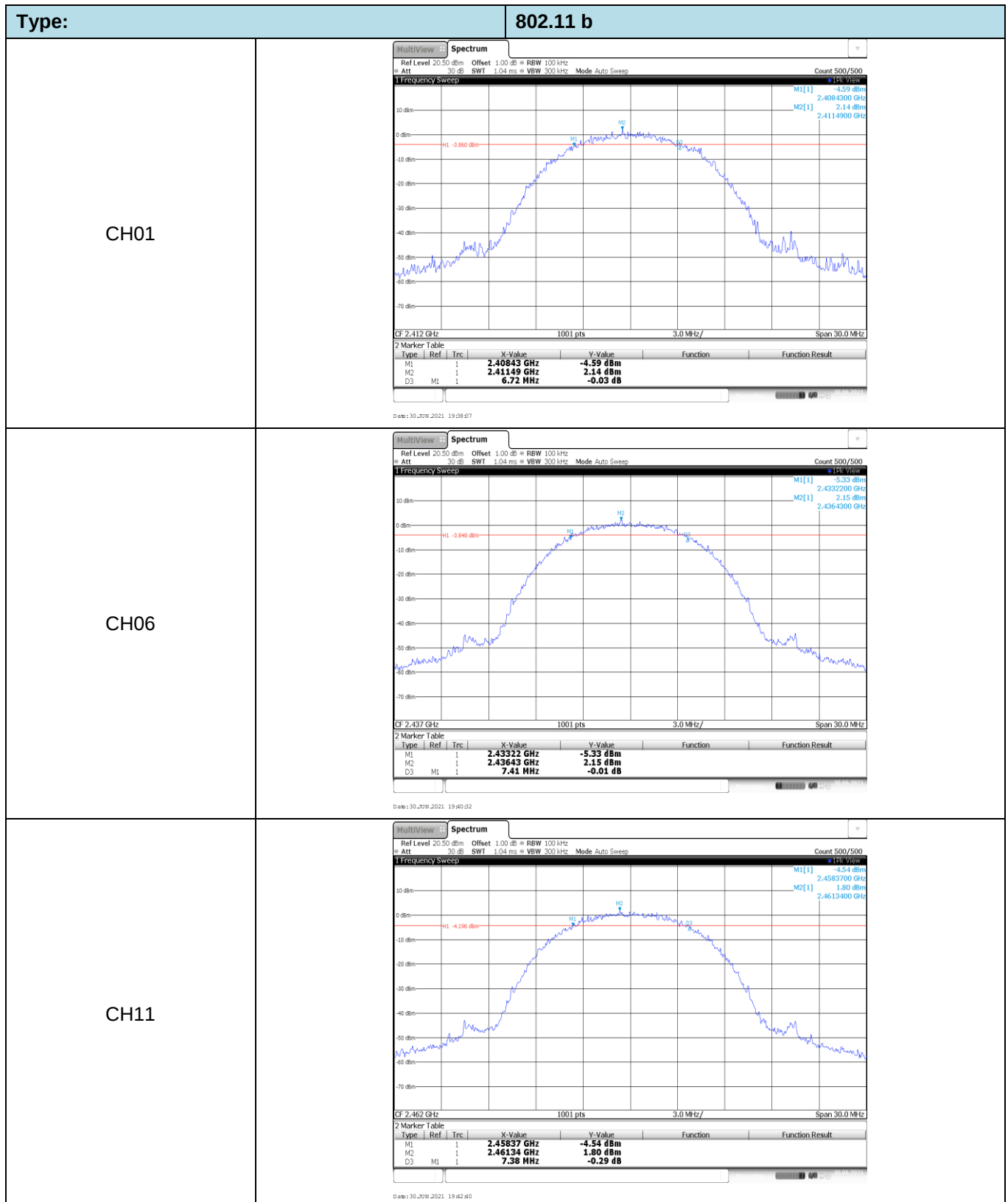


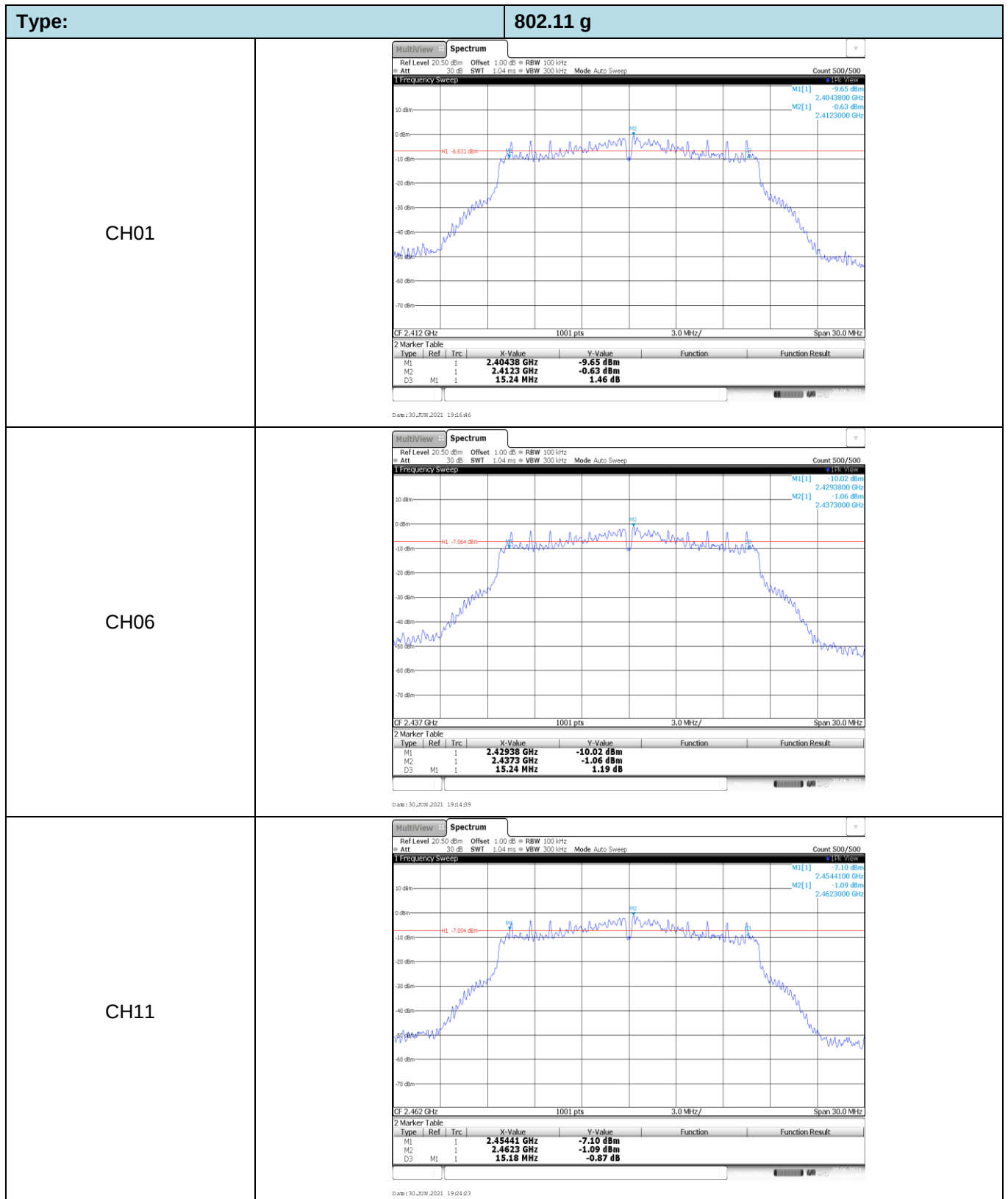




Appendix C: 6dB bandwidth

Type	Channel	6dB Bandwidth (MHz)	Limit (MHz)	Result
802.11b	01	6.72	≥0.5	Pass
	06	7.41		
	11	7.38		
802.11g	01	15.24	≥0.5	Pass
	06	15.24		
	11	15.18		
802.11n(HT20)	01	15.24	≥0.5	Pass
	06	15.24		
	11	15.21		

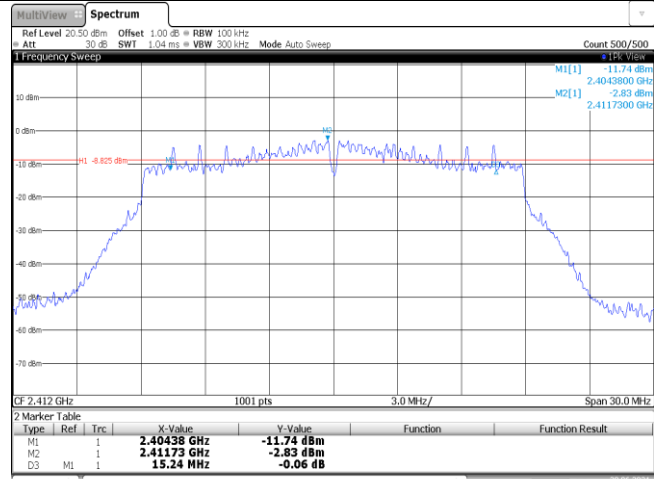




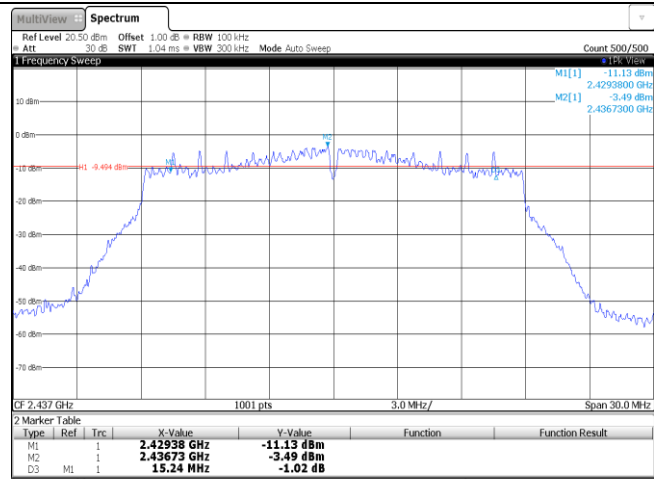
Type:

802.11n(HT20)

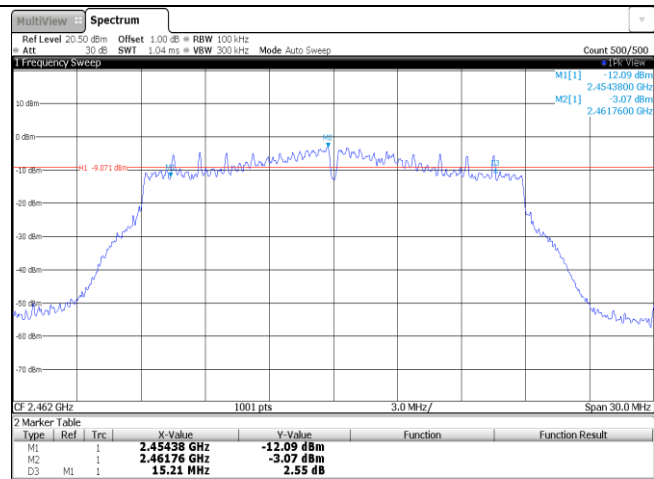
CH01



CH06

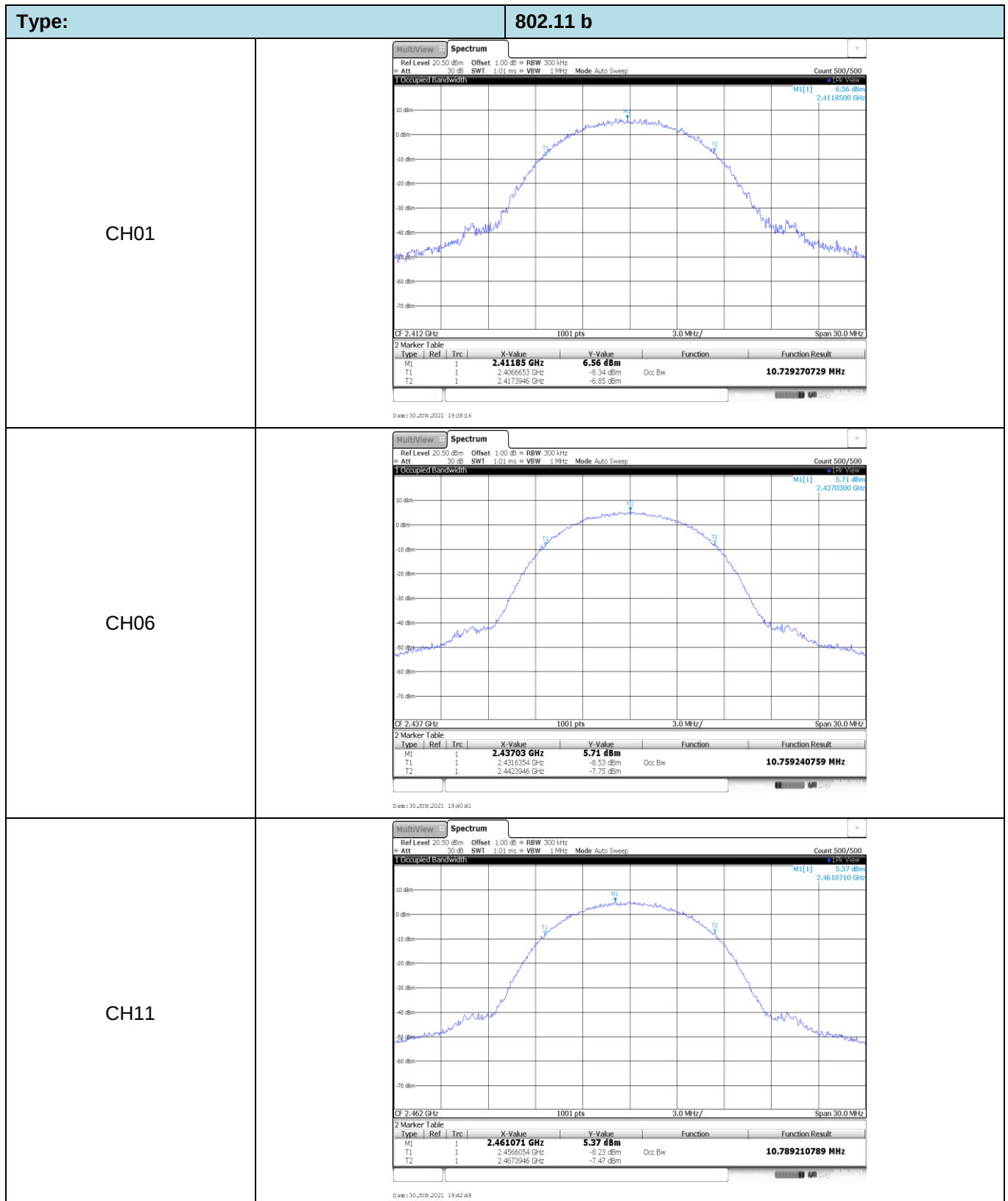


CH11



Appendix D: 99% Occupied Bandwidth

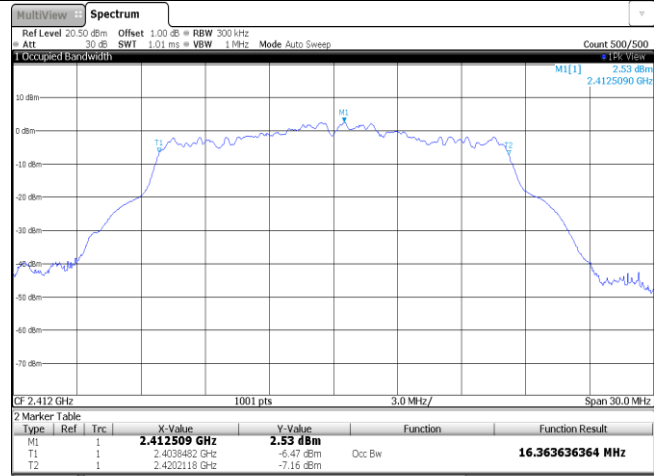
Type	Channel	99% Bandwidth (MHz)	Limit (MHz)	Result
802.11b	01	10.73	-	Pass
	06	10.76		
	11	10.79		
802.11g	01	16.36	-	Pass
	06	16.36		
	11	16.27		
802.11n(HT20)	01	17.71	-	Pass
	06	17.68		
	11	17.59		



Type:

802.11 g

CH01



Date: 30_JUN 2021 19:04:55

CH06



Date: 30_JUN 2021 19:04:47

CH11

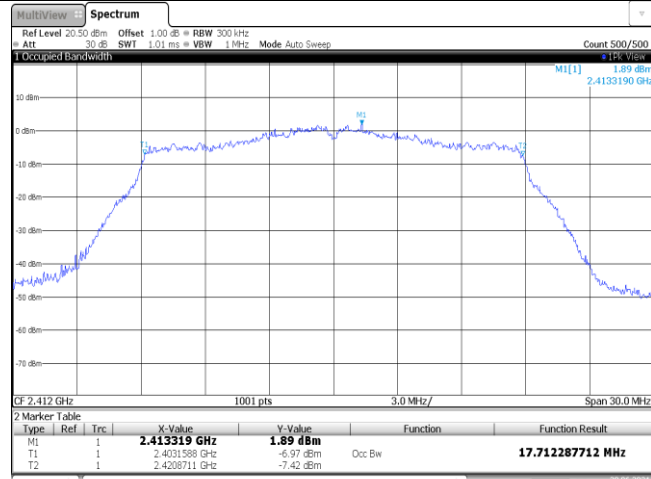


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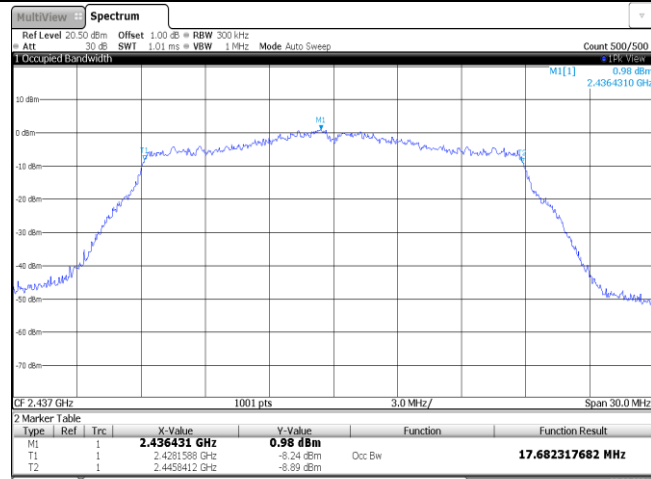
802.11n(HT20)

CH01



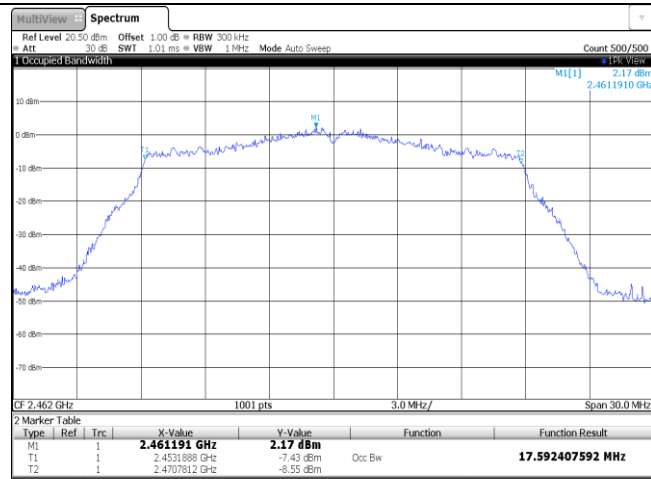
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CH06



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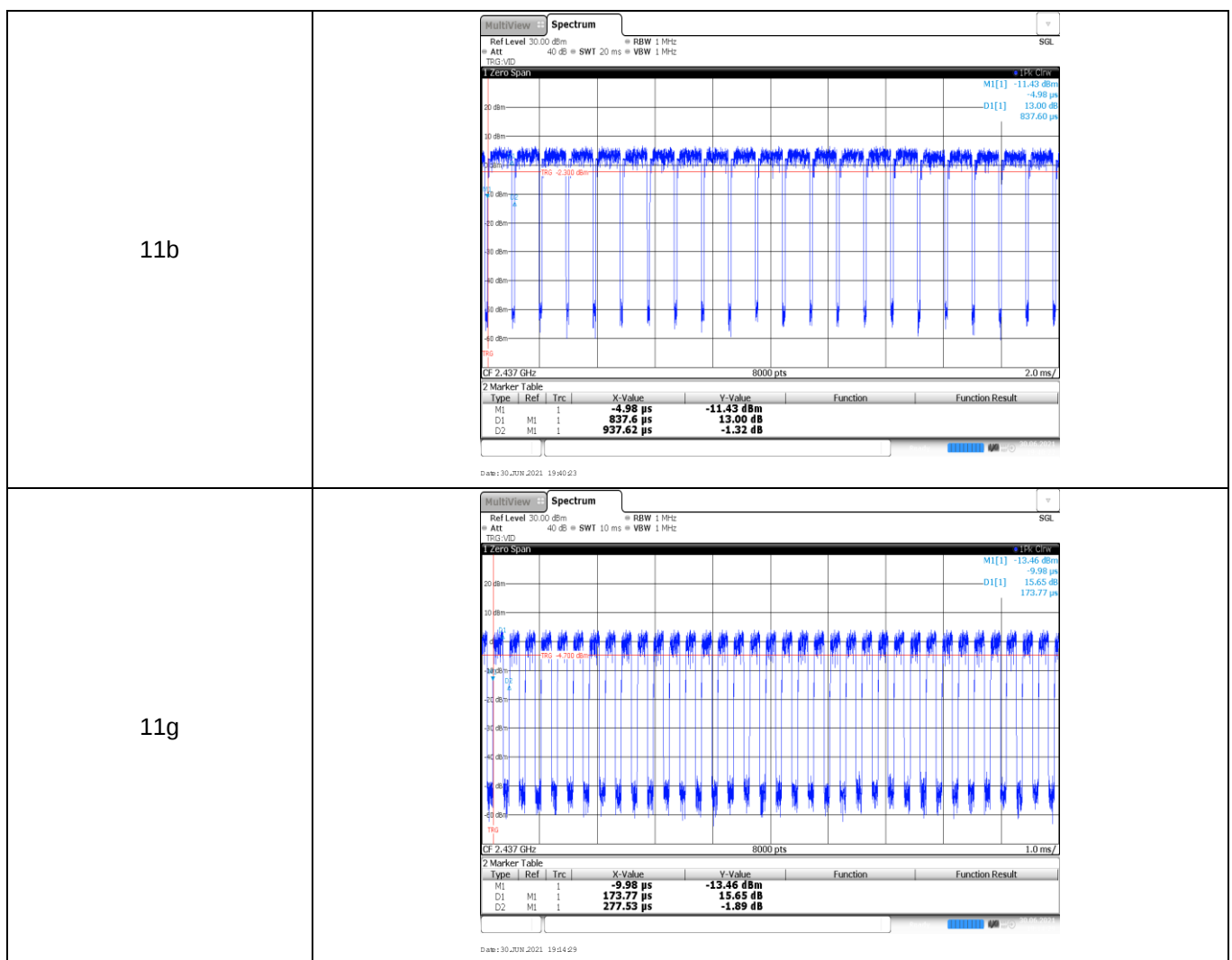
CH11



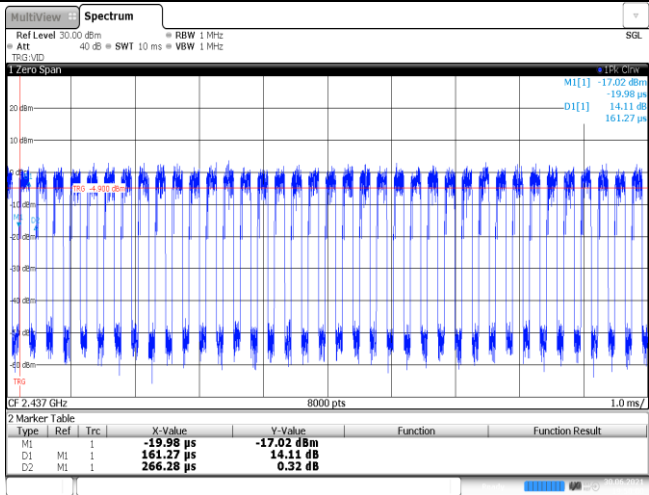
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Appendix E: Duty Cycle

Modulation Type	Test Frequency (MHz)	T _{on time} for single burst (ms)	T _{period} (ms)	Duty cycle	1/T _{on time} (kHz)
11b	2437	0.84	0.94	89.4%	1.2
11g	2437	0.17	0.28	60.7%	5.9
11n20	2437	0.16	0.27	59.3%	6.3

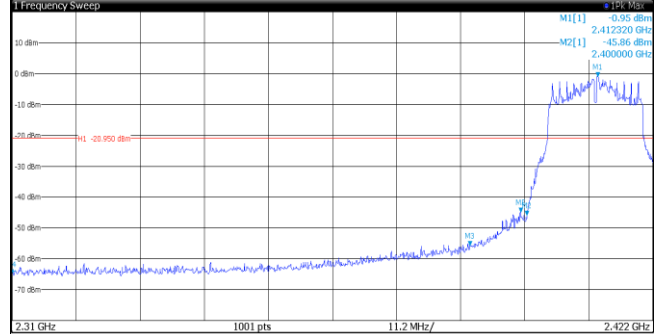
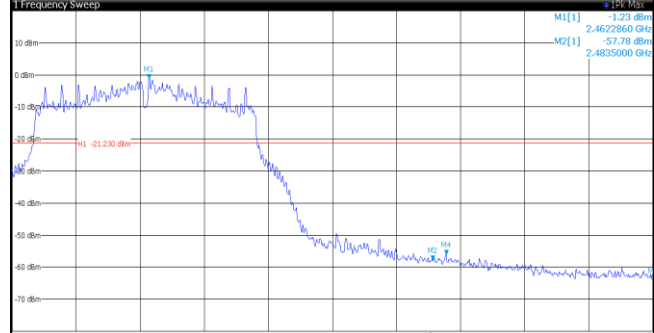


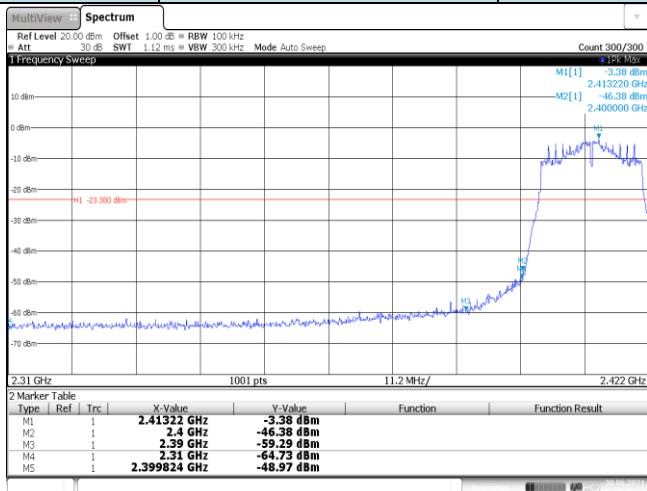
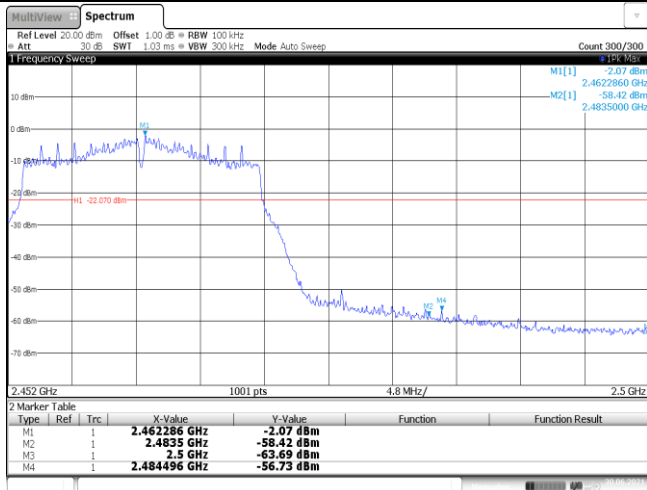
11n20

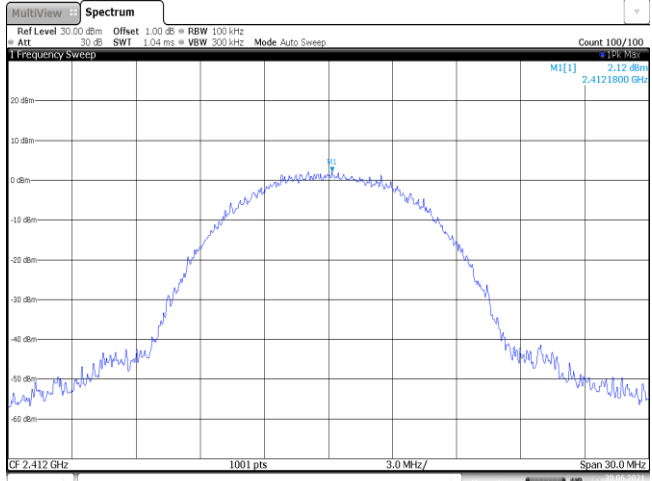
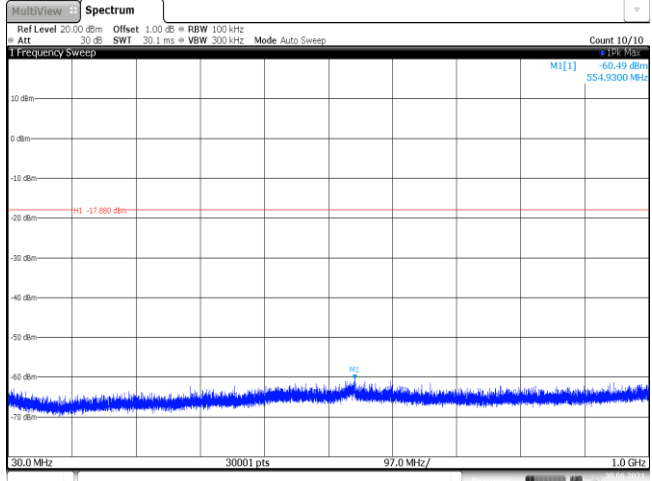
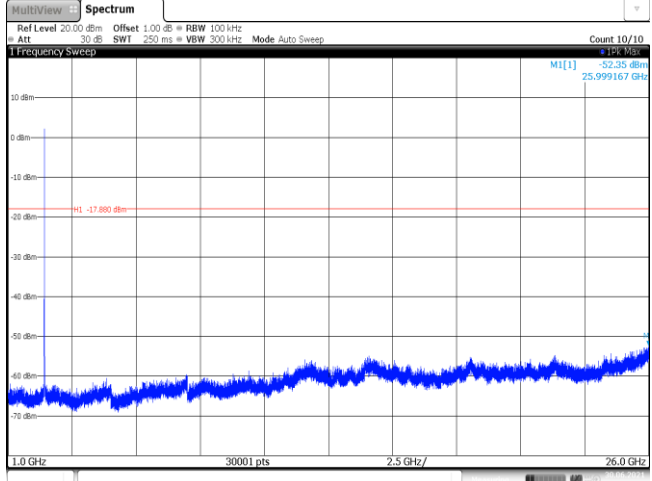


Appendix F: Band edge and Spurious Emissions (conducted)

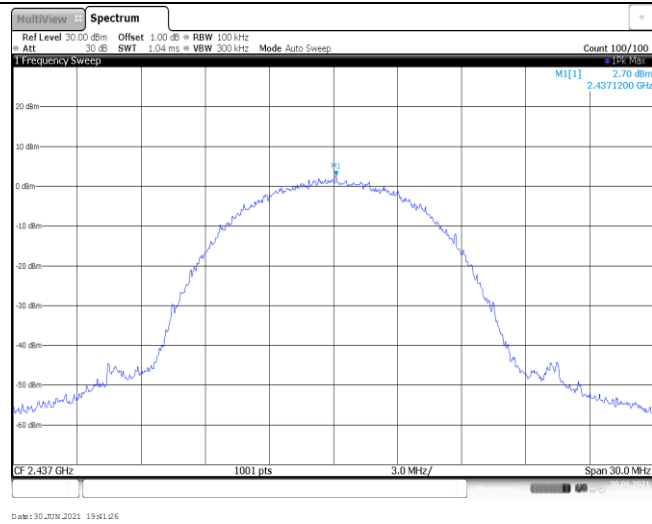
Test Item:	Bandedge	Type:	802.11 b
CH01	</		

Test Item:	Bandedge	Type:	802.11 g																																										
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  2.31 GHz 1001 pts 11.2 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>2.41232 GHz</td><td>-0.95 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4 GHz</td><td>-45.86 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.39 GHz</td><td>-55.67 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.31 GHz</td><td>-63.99 dBm</td><td></td><td></td></tr><tr><td>M5</td><td>1</td><td></td><td>2.398928 GHz</td><td>-44.92 dBm</td><td></td><td></td></tr></tbody></table> Date: 30_JUN 2021 19:17:39			Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.41232 GHz	-0.95 dBm			M2	1		2.4 GHz	-45.86 dBm			M3	1		2.39 GHz	-55.67 dBm			M4	1		2.31 GHz	-63.99 dBm			M5	1		2.398928 GHz	-44.92 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  2.452 GHz 1001 pts 4.8 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>2.462286 GHz</td><td>-1.23 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4835 GHz</td><td>-57.78 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.5 GHz</td><td>-63.24 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.484544 GHz</td><td>-56.11 dBm</td><td></td><td></td></tr></tbody></table> Date: 30_JUN 2021 19:25:04			Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.462286 GHz	-1.23 dBm			M2	1		2.4835 GHz	-57.78 dBm			M3	1		2.5 GHz	-63.24 dBm			M4	1		2.484544 GHz	-56.11 dBm									
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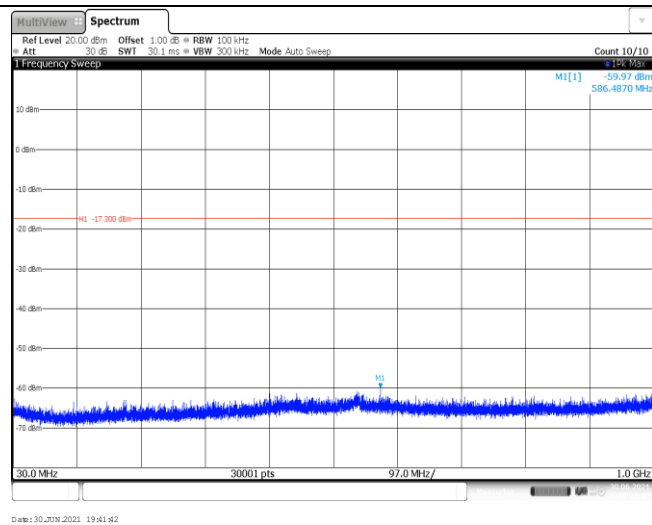
Test Item:	Bandedge	Type:	802.11 n(HT20)																																										
CH01	MultViewSpectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWI 1.12 ms VBW 300 kHz Mode Auto Sweep Count 300/300 1 Frequency Sweep  2.31 GHz 1001 pts 11.2 MHz/ 2.422 GHz 2 Marker Table <table><thead><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>2.41322 GHz</td><td>-3.38 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4 GHz</td><td>-46.38 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.39 GHz</td><td>-59.29 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.31 GHz</td><td>-64.73 dBm</td><td></td><td></td></tr><tr><td>M5</td><td>1</td><td></td><td>2.399824 GHz</td><td>-48.97 dBm</td><td></td><td></td></tr></tbody></table> Date: 30_JUN 2021 19:48:42			Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.41322 GHz	-3.38 dBm			M2	1		2.4 GHz	-46.38 dBm			M3	1		2.39 GHz	-59.29 dBm			M4	1		2.31 GHz	-64.73 dBm			M5	1		2.399824 GHz	-48.97 dBm		
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CH11	MultViewSpectrum 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 GHz 1001 pts 4.8 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>2.462286 GHz</td><td>-2.07 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4835 GHz</td><td>-58.42 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>2.484496 GHz</td><td>-56.73 dBm</td><td></td><td></td></tr></tbody></table> Date: 30_JUN 2021 19:53:20			Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.462286 GHz	-2.07 dBm			M2	1		2.4835 GHz	-58.42 dBm			M3	1		2.5 GHz	-63.69 dBm			M4	1		2.484496 GHz	-56.73 dBm									
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M4	1		2.484496 GHz	-56.73 dBm																																									

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

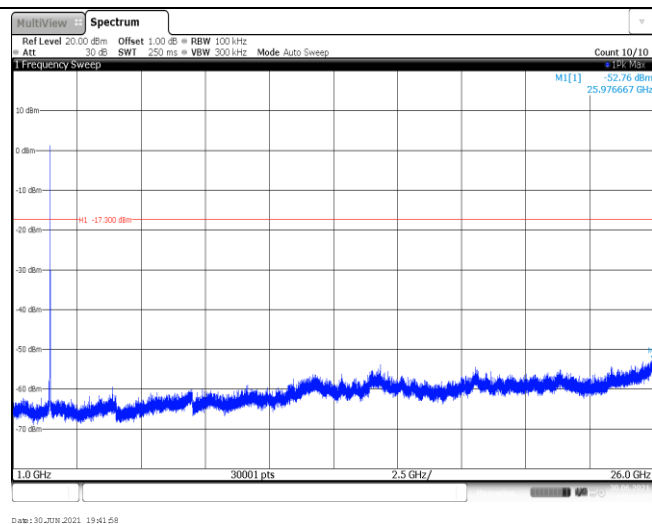
CH06
Reference level



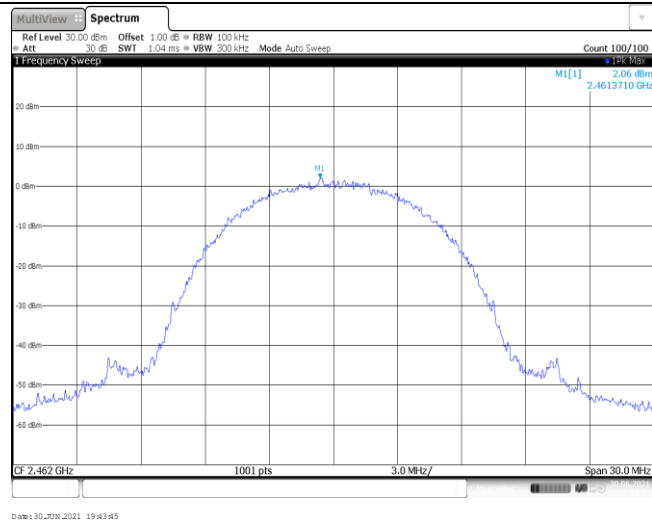
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30MHz~1000MHz



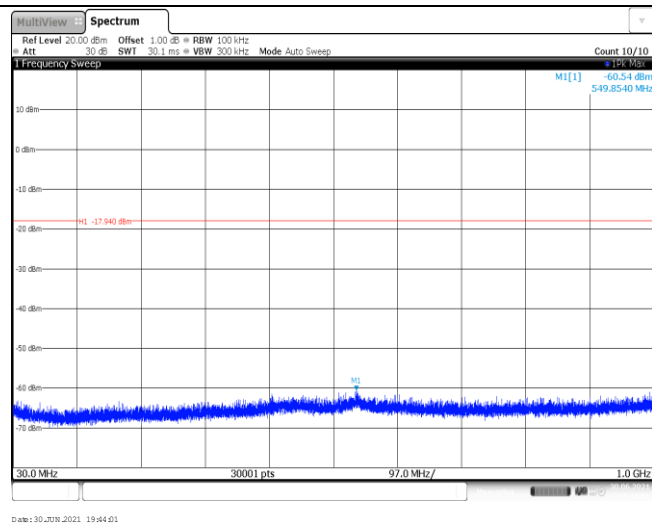
CH06
1GHz~26GHz



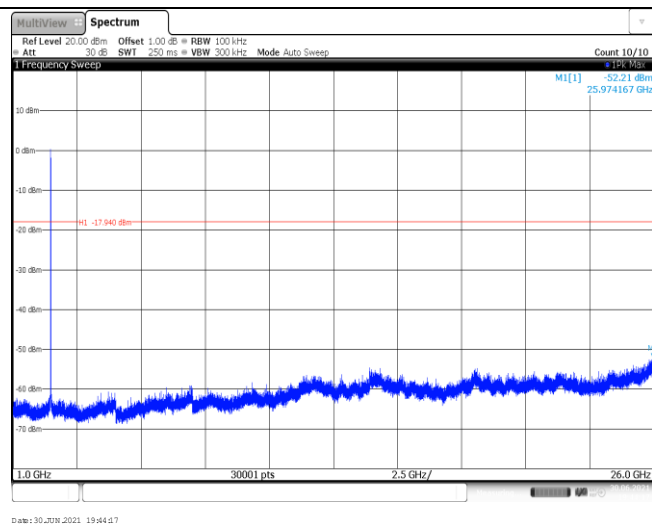
CH11
Reference level

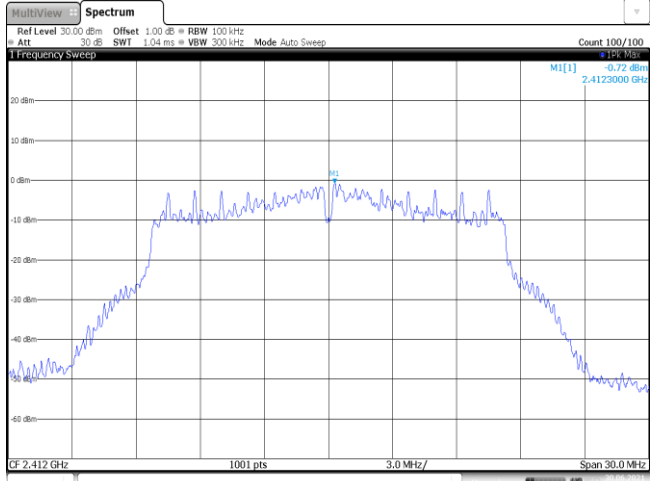
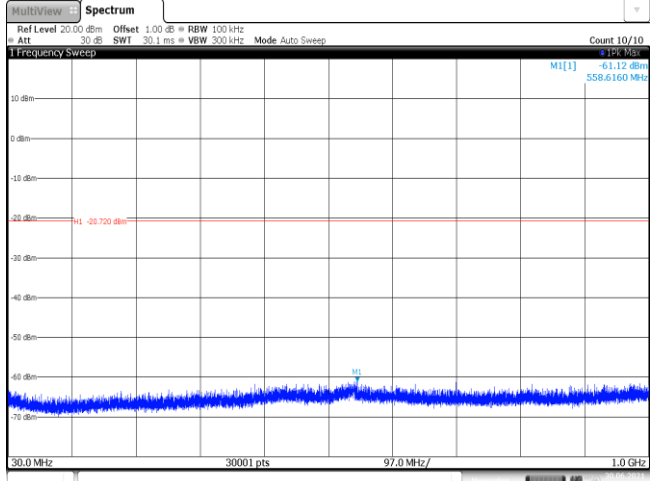
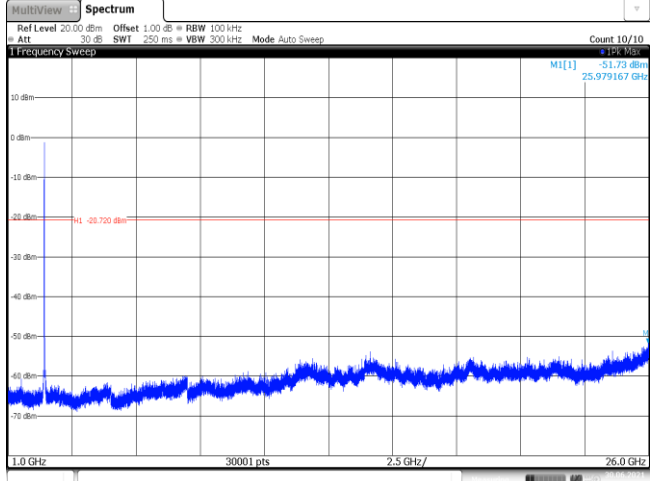


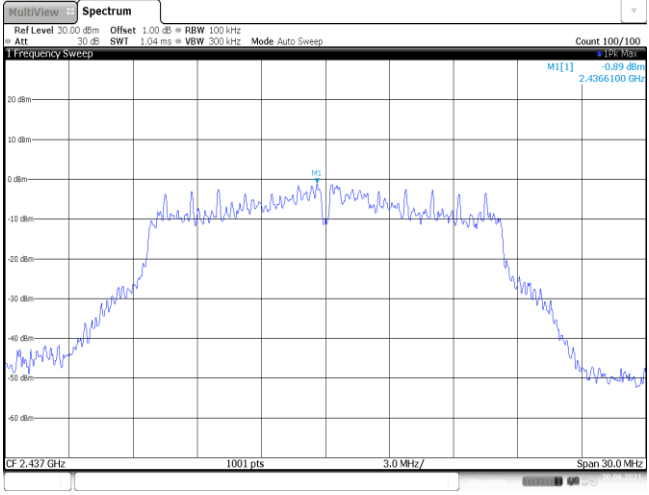
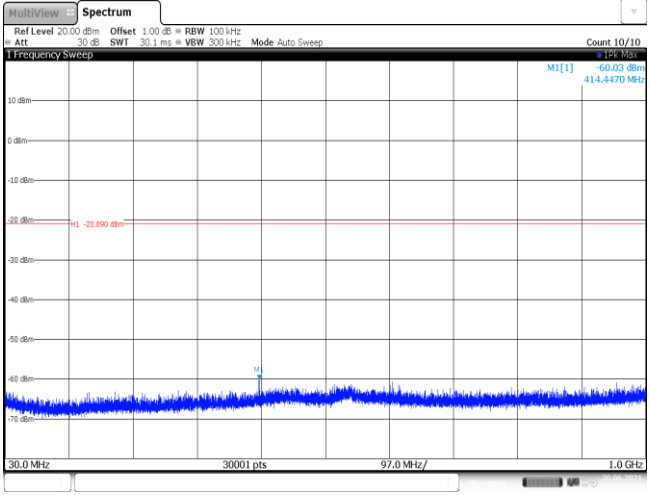
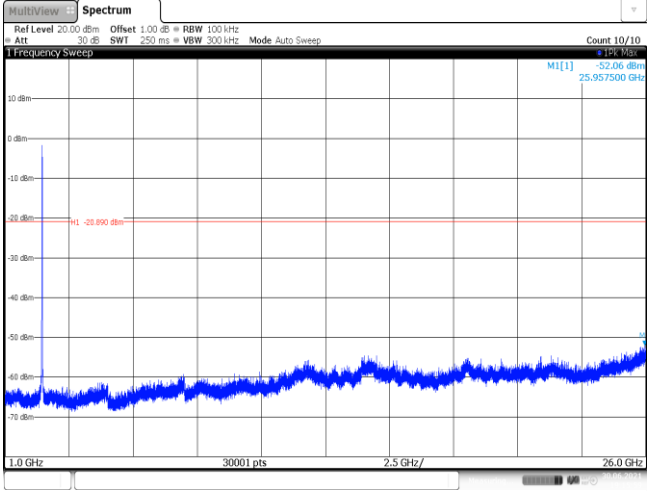
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30MHz~1000MHz



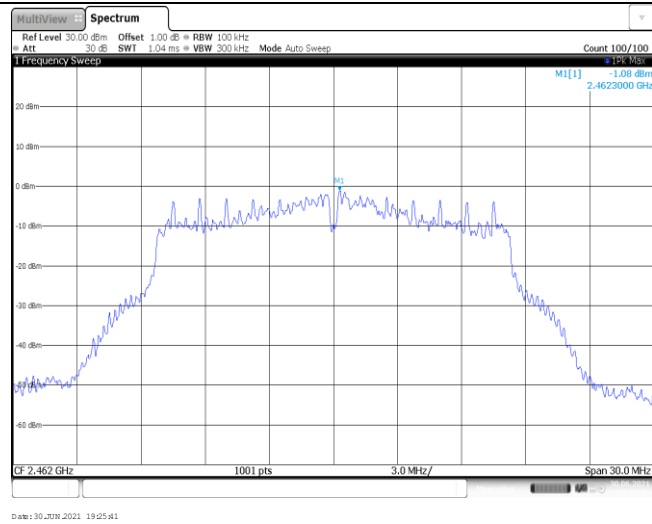
CH11
1GHz~26GHz



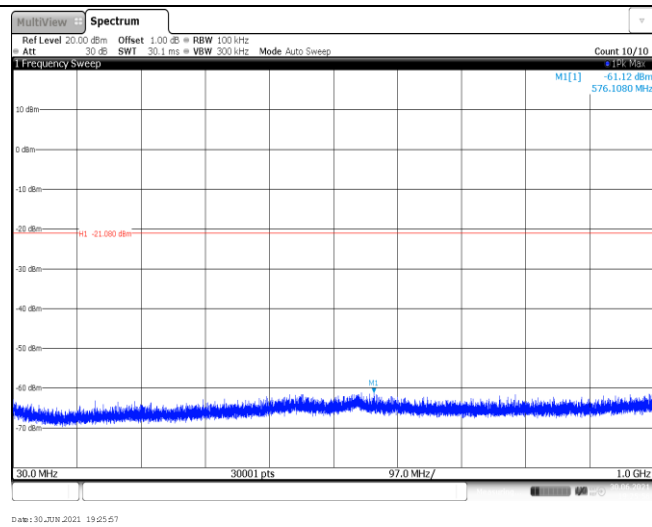
Test Item:	SE	Type:	802.11 g
CH01 Reference level			
CH01 30MHz~1000MHz			
CH01 1GHz~26GHz			

CH06 Reference level	 Ref Level 30.00 dBm Offset 1.00 dB BW 100 kHz Att 30 dB SW 1.04 ms VBW 300 kHz Mode Auto Sweep Count 100/100 MI[1] -0.89 dBm 2.4366100 GHz CF 2.437 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 30 JUN 2021 19:15:27
CH06 30MHz~1000MHz	 Ref Level 20.00 dBm Offset 1.00 dB BW 100 kHz Att 30 dB SW 30.1 ms VBW 300 kHz Mode Auto Sweep Count 10/10 MI[1] -60.03 dBm 414.4470 MHz 30.0 MHz 30001 pts 97.0 MHz/ 1.0 GHz Date: 30 JUN 2021 19:15:43
CH06 1GHz~26GHz	 Ref Level 20.00 dBm Offset 1.00 dB BW 100 kHz Att 30 dB SW 250 ms VBW 300 kHz Mode Auto Sweep Count 10/10 MI[1] -52.06 dBm 25.957500 GHz 1.0 GHz 30001 pts 2.5 GHz/ 26.0 GHz Date: 30 JUN 2021 19:15:59

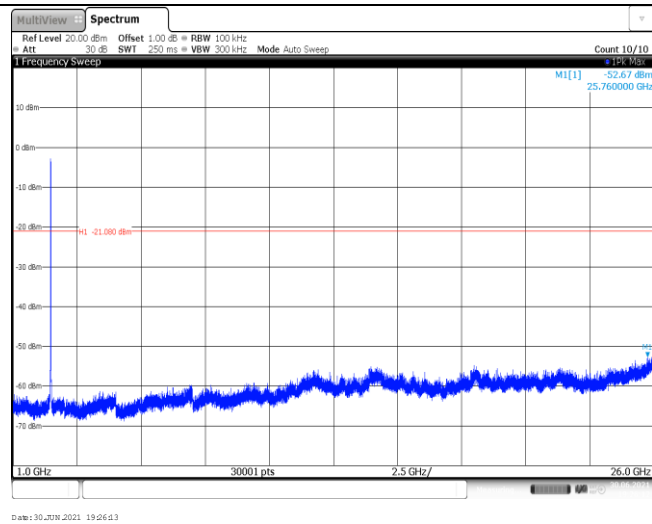
CH11
Reference level

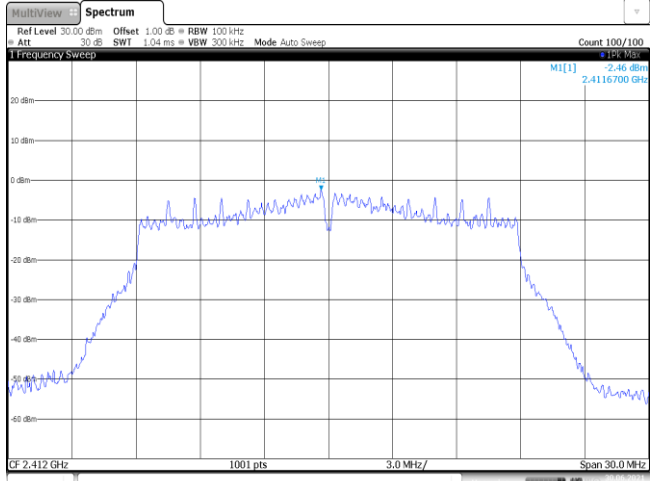
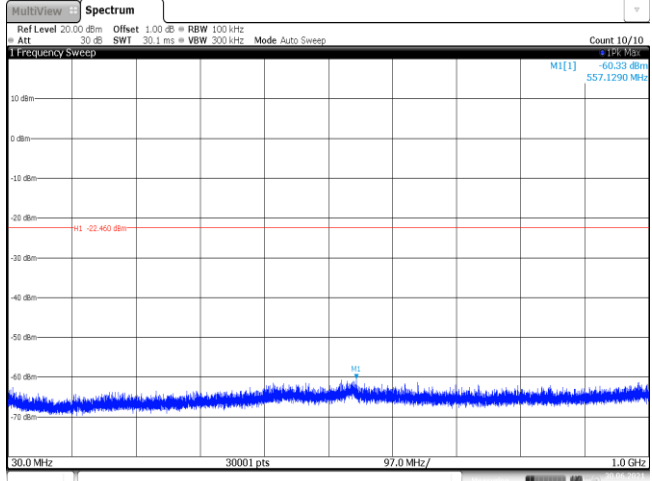
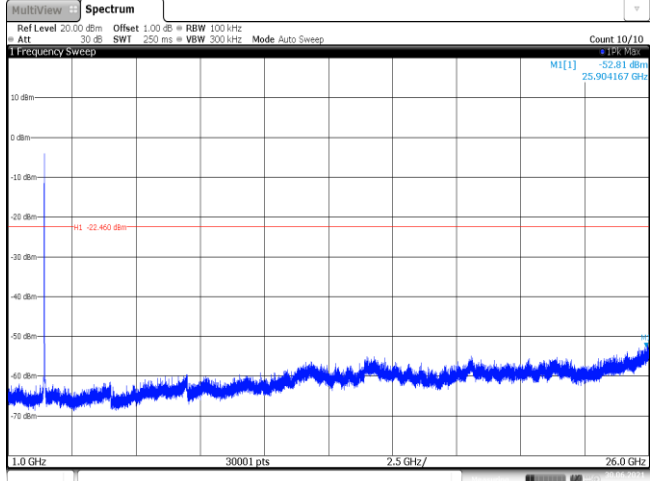


CH11
30MHz~1000MHz

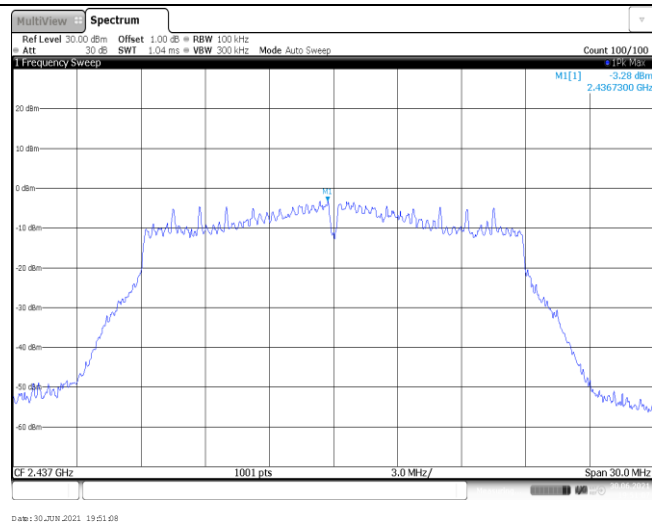


CH11
1GHz~26GHz

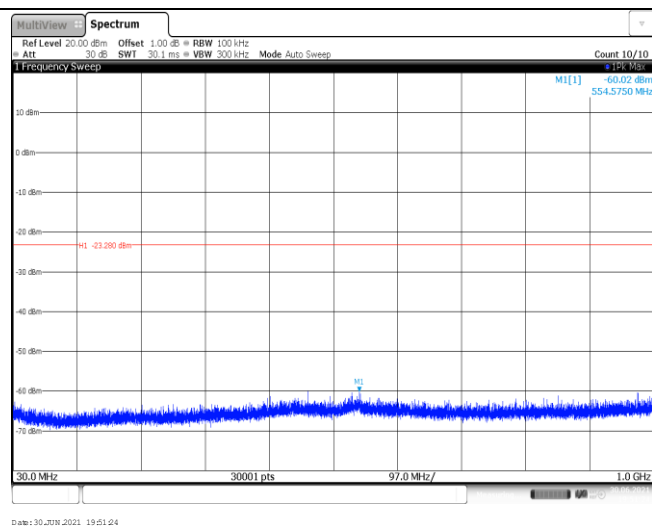


Test Item:	SE	Type:	802.11 n(HT20)
CH01 Reference level		 Ref Level 30.00 dBm Offset 1.00 dB BW 100 kHz Att 30 dB SWI 1.04 ms VBW 300 kHz Mode Auto Sweep Count 100/100 MI[1] -2.46 dBm 2.4116700 GHz CF 2.412 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 30_JUN 2021 19:48:49	
CH01 30MHz~1000MHz		 Ref Level 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 MI[1] -60.33 dBm 557.1290 MHz H1 -22.460 dBm 30.0 MHz 30001 pts 97.0 MHz/ 1.0 GHz Date: 30_JUN 2021 19:49:05	
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 MI[1] -52.91 dBm 25.904167 GHz H1 -22.460 dBm 1.0 GHz 30001 pts 2.5 GHz/ 26.0 GHz Date: 30_JUN 2021 19:49:21	

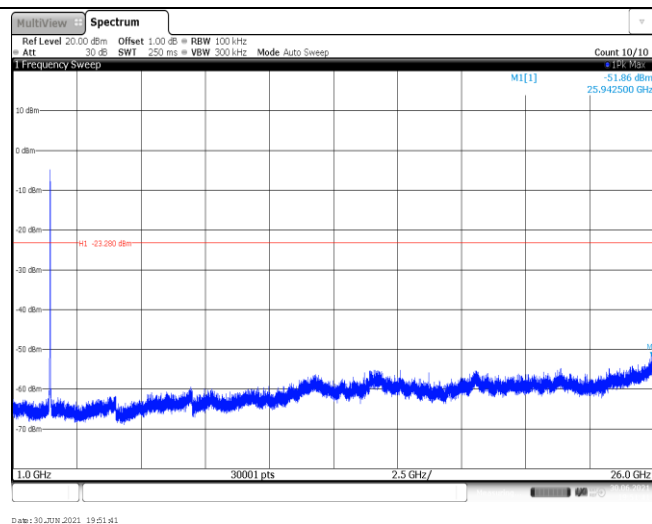
CH06
Reference level

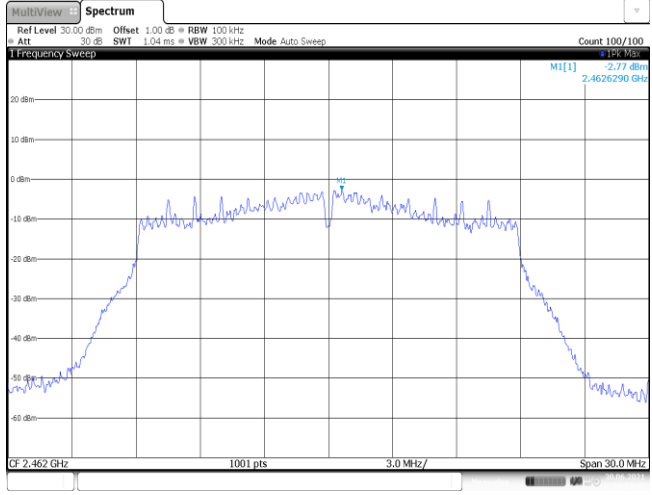
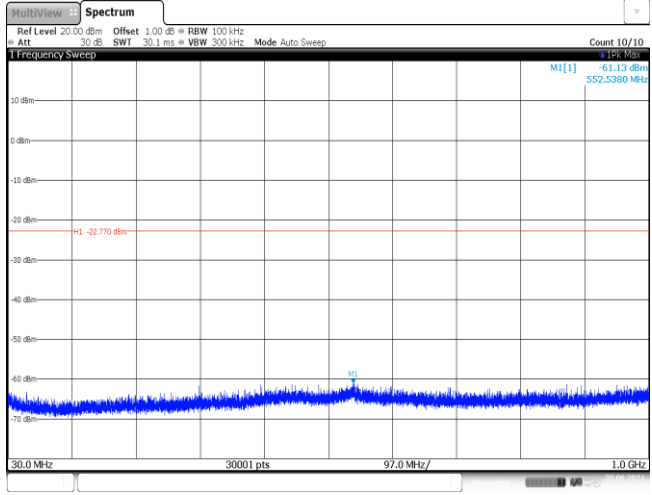
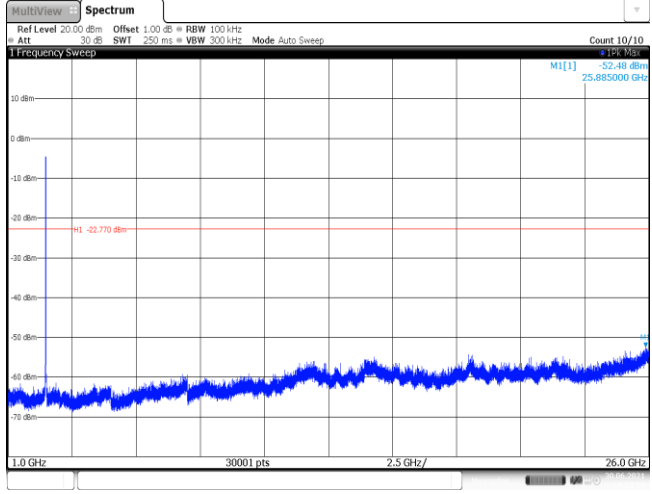


CH06
30MHz~1000MHz



CH06
1GHz~26GHz



CH11 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 MI[1] -2.77 dBm 2.462290 GHz CF 2.462 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 30 JUN 2021 19:51:27
CH11 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 MI[1] -61.13 dBm 552.5380 MHz 30.0 MHz 30001 pts 97.0 MHz/ 1.0 GHz Date: 30 JUN 2021 19:51:43
CH11 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 MI[1] -52.48 dBm 25.885000 GHz 1.0 GHz 30001 pts 2.5 GHz/ 26.0 GHz Date: 30 JUN 2021 19:51:59

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