

APPENDIX REPORT

Project No.	SHT2107001007EW	Radio Specification	WIFI 2.4G
Test sample No.	YPHT21070010004	Model No.	L506
Start test date	2021-07-08	Finish date	2021-07-08
Temperature	26.2°C	Humidity	29%
Test Engineer	Weiyang Xiang	Auditor	Xiaodong Zheo

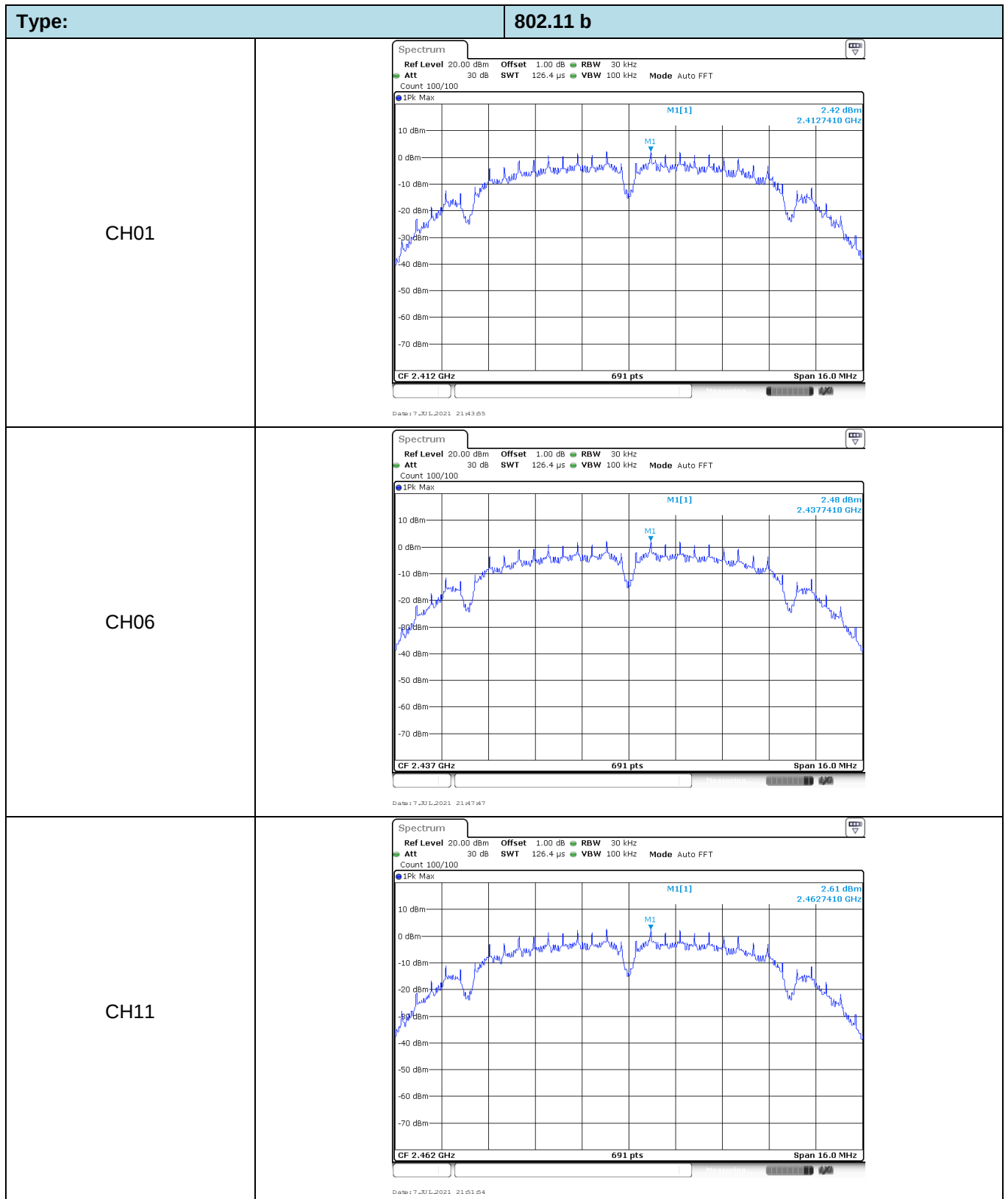
Appendix clause	Test item	Result
A	Conducted Peak Output Power	PASS
B	Power Spectral Density	PASS
C	6 dB Bandwidth	PASS
D	99% Occupied Bandwidth	PASS
E	Duty Cycle	PASS
F	Band edge and Spurious Emissions (conducted)	PASS

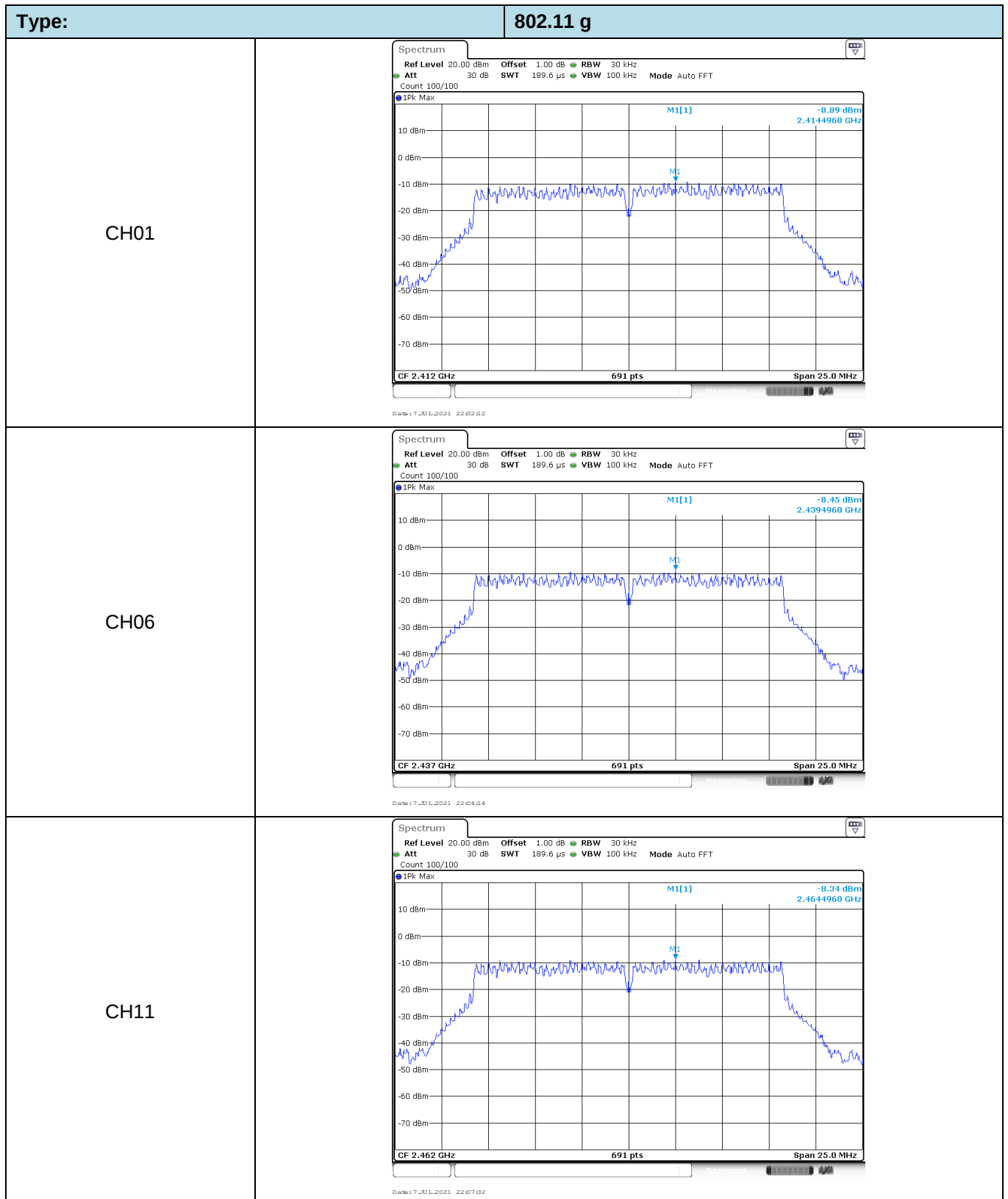
Appendix A: Conducted Peak Output Power

Type	Channel	Peak Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
802.11b	01	16.26	14.17	≤ 30.00	Pass
	06	16.38	14.27		
	11	16.75	14.62		
802.11g	01	15.44	11.77	≤ 30.00	Pass
	06	15.66	12.10		
	11	16.34	12.67		
802.11n (HT20)	01	15.57	12.50	≤ 30.00	Pass
	06	15.99	12.90		
	11	16.68	13.60		

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	2.48		
	11	2.61		
802.11g	01	-8.89	≤8.00	Pass
	06	-8.45		
	11	-8.34		
802.11n(HT20)	01	-9.72	≤8.00	Pass
	06	-9.75		
	11	-9.31		

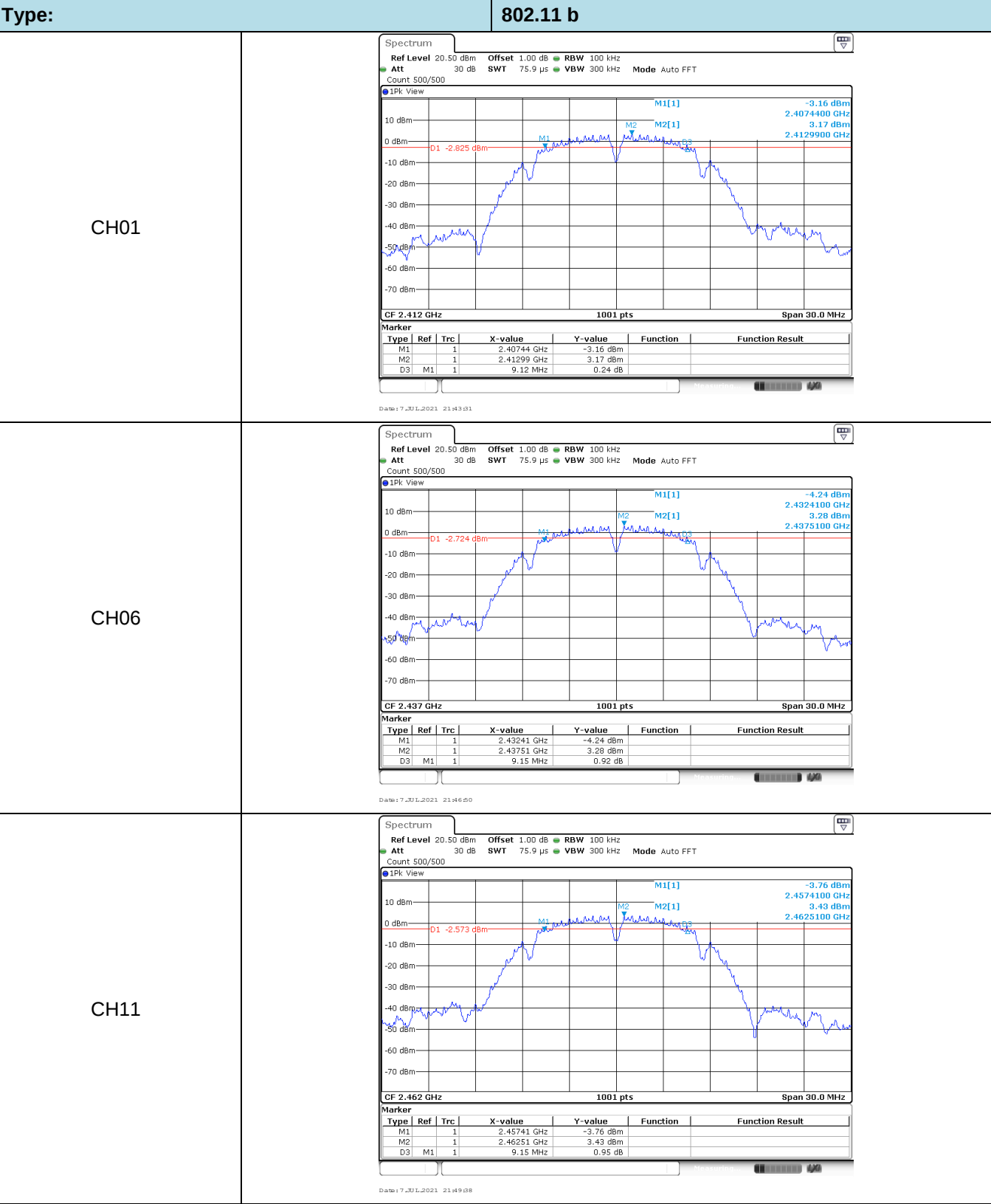


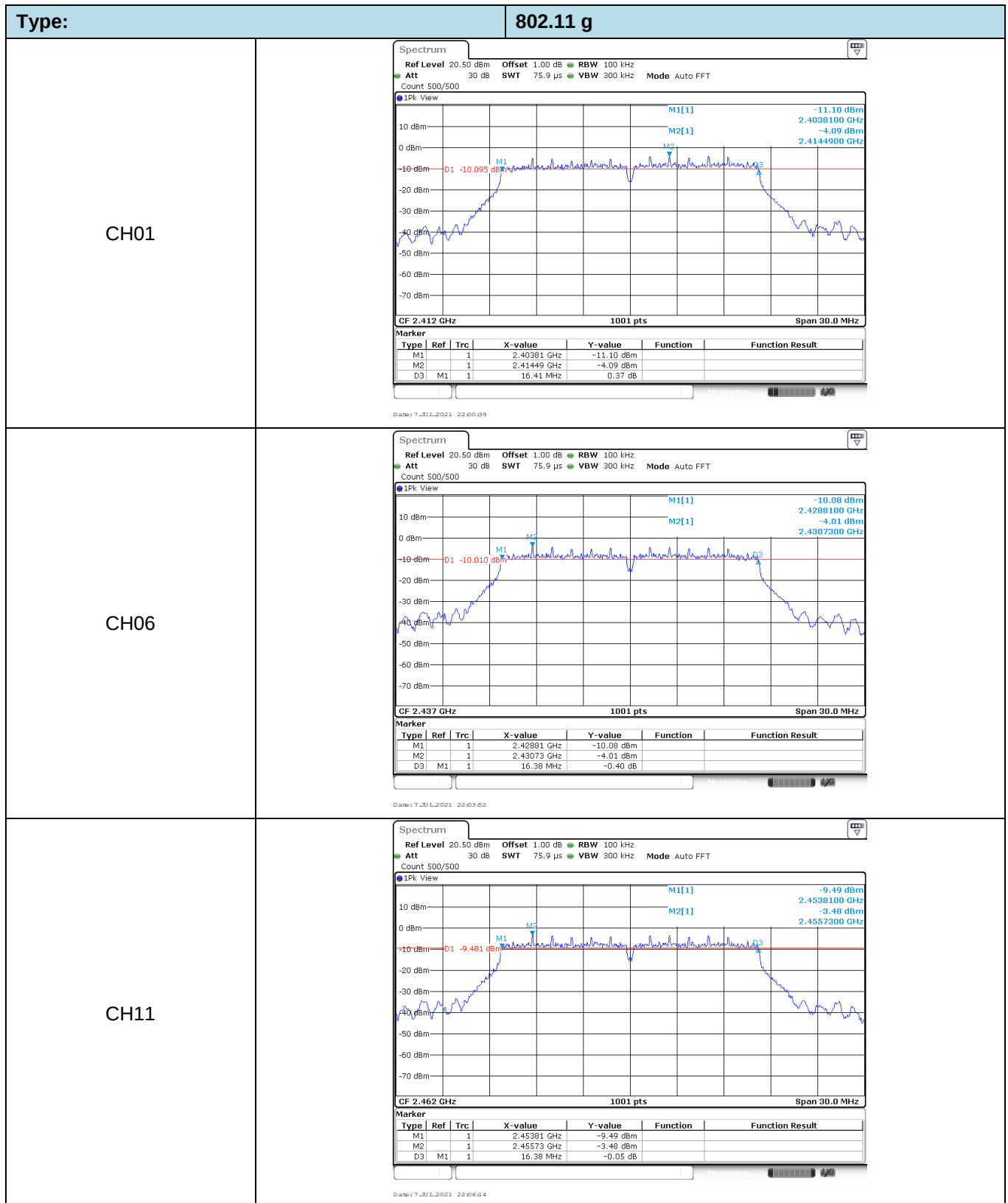


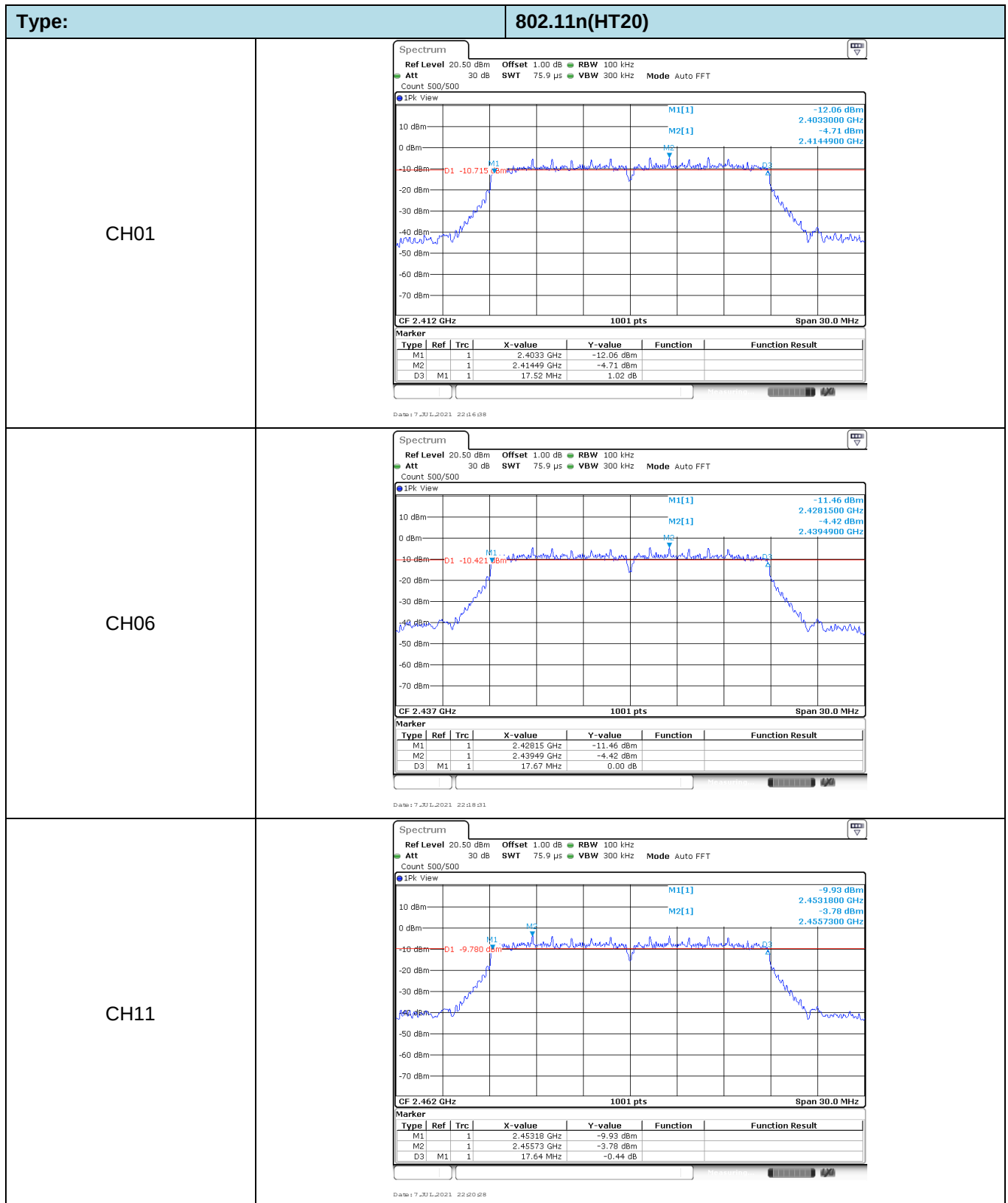
Type:		802.11n(HT20)
CH01	Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 30 kHz Att 30 dB SWT 189.6 μs VBW 100 kHz Mode Auto FFT Count 100/100 1Pk Max M1[1] -9.72 dBm 2.4194890 GHz M1 CF 2.412 GHz 691 pts Span 25.0 MHz Date: 7 JUL 2021 22:16:52	
CH06	Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 30 kHz Att 30 dB SWT 189.6 μs VBW 100 kHz Mode Auto FFT Count 100/100 1Pk Max M1[1] -9.75 dBm 2.4307410 GHz M1 CF 2.437 GHz 691 pts Span 25.0 MHz Date: 7 JUL 2021 22:18:46	
CH11	Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 30 kHz Att 30 dB SWT 189.6 μs VBW 100 kHz Mode Auto FFT Count 100/100 1Pk Max M1[1] -9.31 dBm 2.4642070 GHz M1 CF 2.462 GHz 691 pts Span 25.0 MHz Date: 7 JUL 2021 22:20:46	

Appendix C: 6dB bandwidth

Type	Channel	6dB Bandwidth (MHz)	Limit (MHz)	Result
802.11b	01	9.12	≥0.5	Pass
	06	9.15		
	11	9.15		
802.11g	01	16.41	≥0.5	Pass
	06	16.38		
	11	16.38		
802.11n(HT20)	01	17.52	≥0.5	Pass
	06	17.67		
	11	17.64		

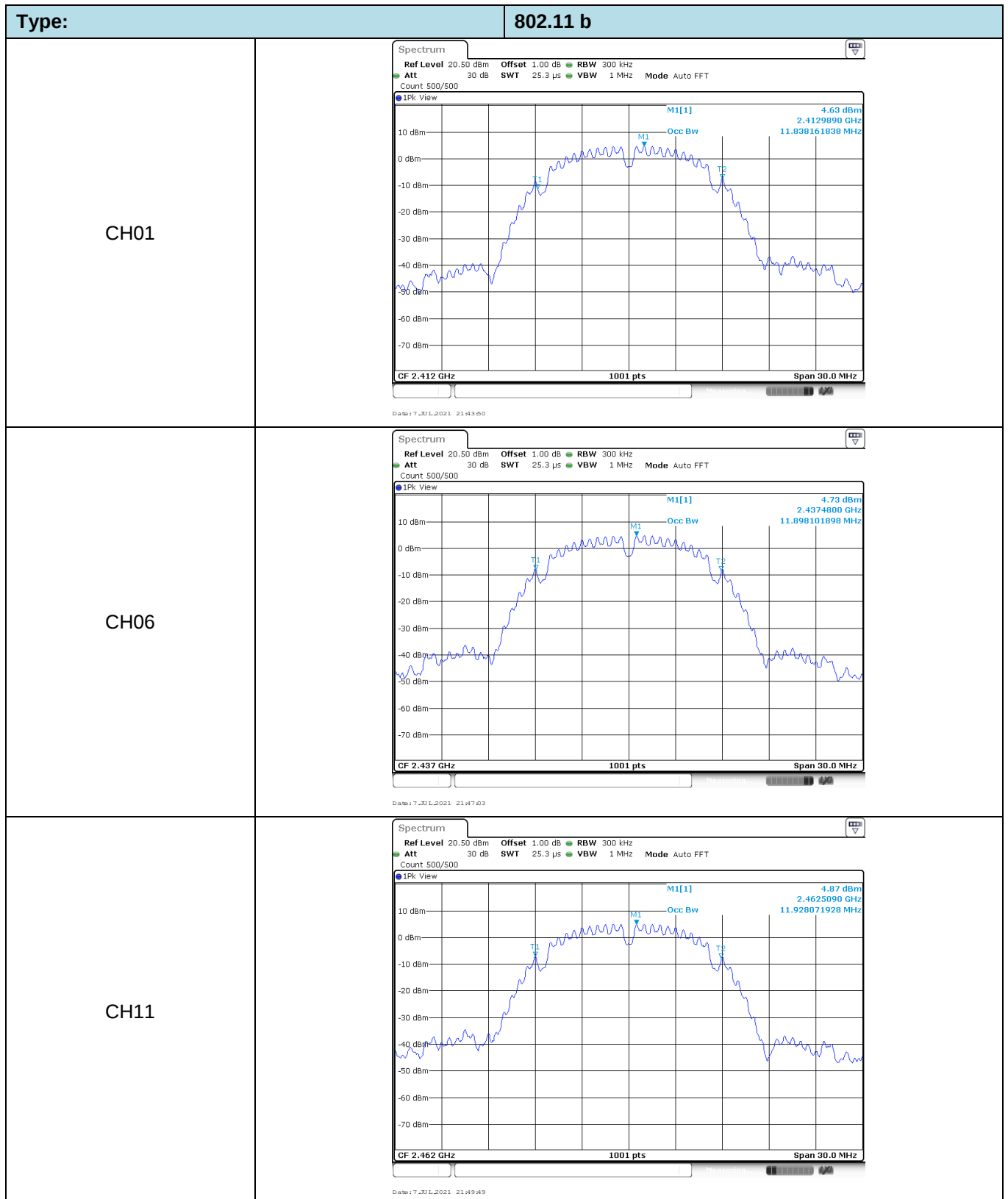




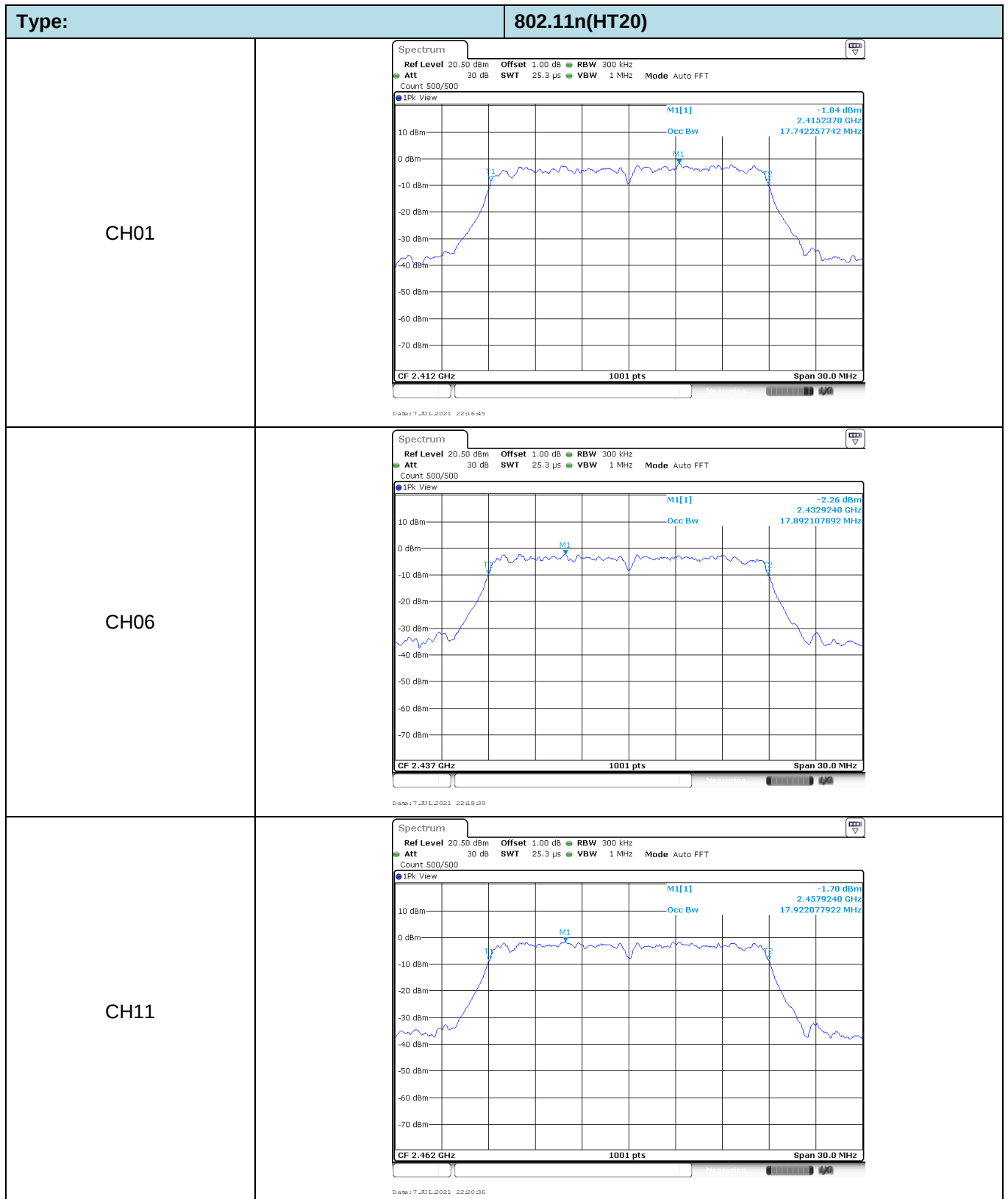


Appendix D: 99% Occupied Bandwidth

Type	Channel	99% Bandwidth (MHz)	Limit (MHz)	Result
802.11b	01	11.84	-	Pass
	06	11.90		
	11	11.93		
802.11g	01	16.99	-	Pass
	06	17.29		
	11	17.11		
802.11n(HT20)	01	17.74	-	Pass
	06	17.89		
	11	17.92		

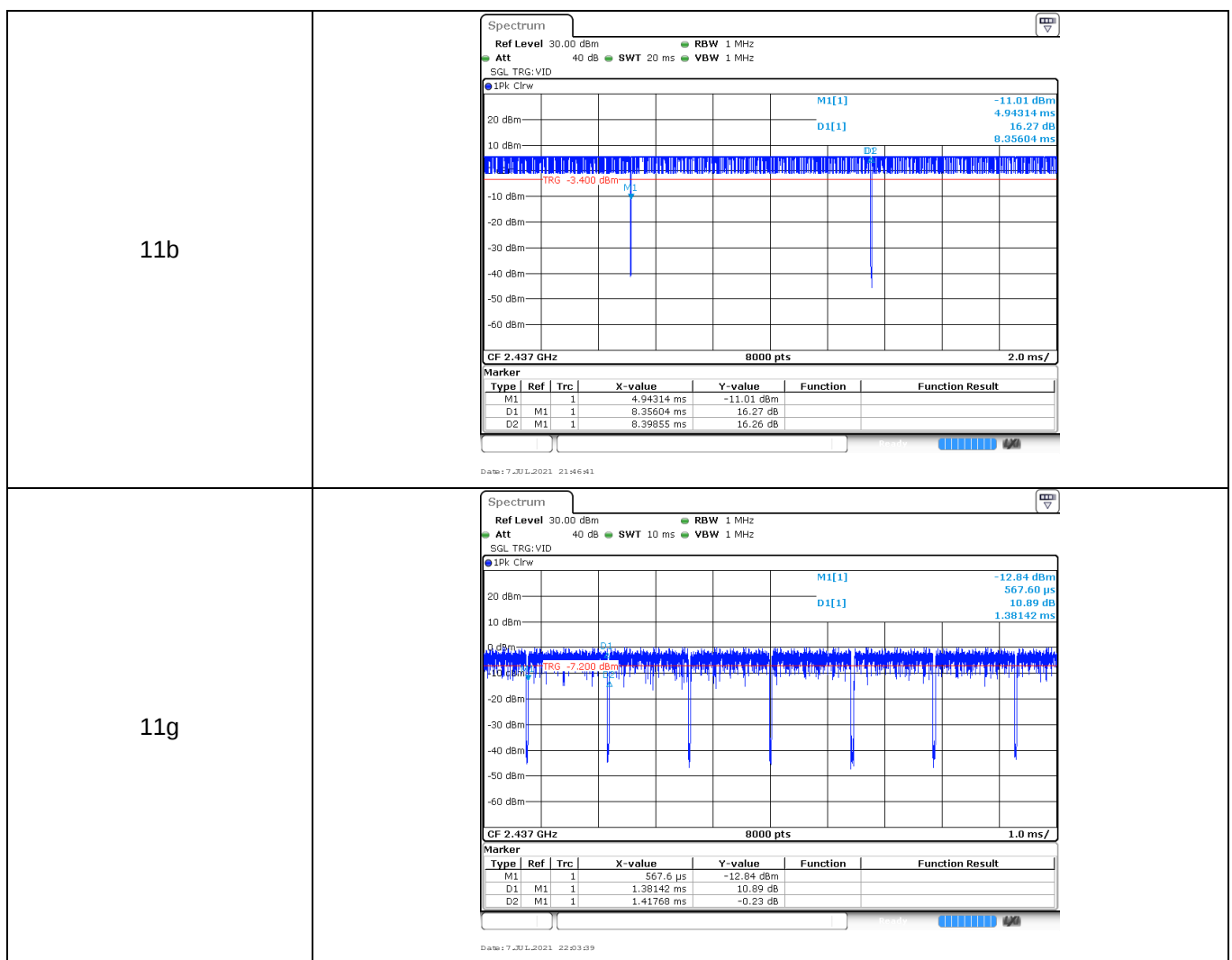


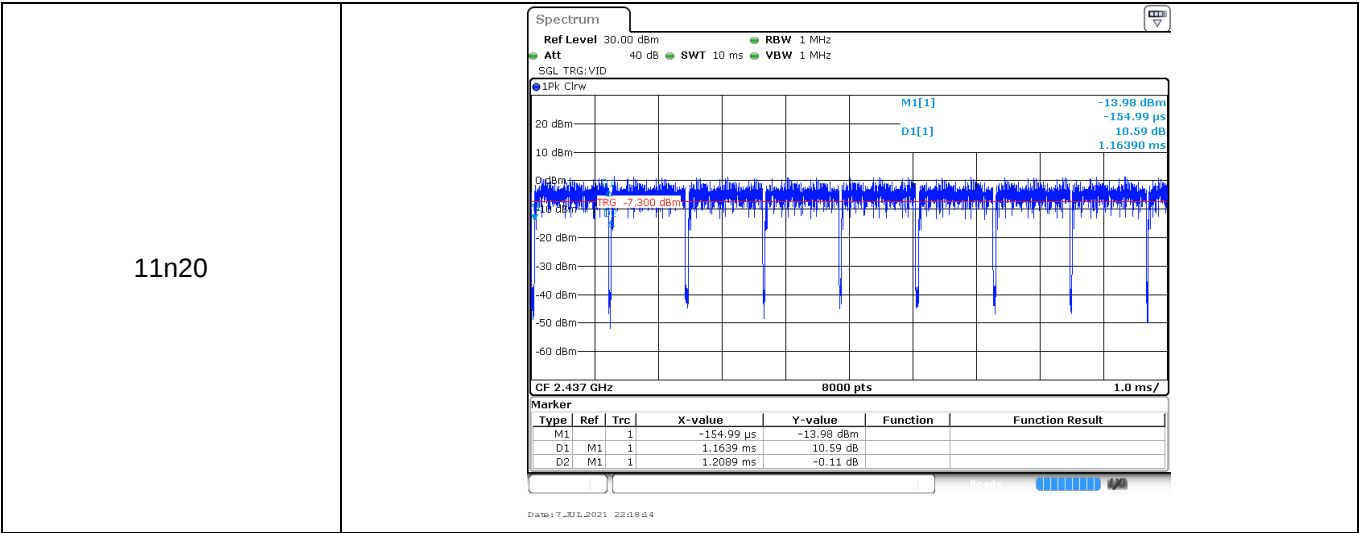
Type:		802.11 g
CH01	Spectrum Ref Level 20.50 dBm Att 30 dB Count 500/500 Offset 1.00 dB SWT 25.3 μs RBW 300 kHz VBW 1 MHz Mode Auto FFT 1Pk View M1[1] -2.31 dBm 2.4184740 GHz Occ Bw 16.993006993 MHz T1 T2 M1 CF 2.412 GHz 1001 pts Span 30.0 MHz Date: 7 JUL 2021 22:01:14	
CH06	Spectrum Ref Level 20.50 dBm Att 30 dB Count 500/500 Offset 1.00 dB SWT 25.3 μs RBW 300 kHz VBW 1 MHz Mode Auto FFT 1Pk View M1[1] -2.31 dBm 2.4398770 GHz Occ Bw 17.292707293 MHz T1 T2 M1 CF 2.437 GHz 1001 pts Span 30.0 MHz Date: 7 JUL 2021 22:03:59	
CH11	Spectrum Ref Level 20.50 dBm Att 30 dB Count 500/500 Offset 1.00 dB SWT 25.3 μs RBW 300 kHz VBW 1 MHz Mode Auto FFT 1Pk View M1[1] -1.17 dBm 2.4666150 GHz Occ Bw 17.112887113 MHz T1 T2 M1 CF 2.462 GHz 1001 pts Span 30.0 MHz Date: 7 JUL 2021 22:06:21	



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	1.21	95.9%	0.9



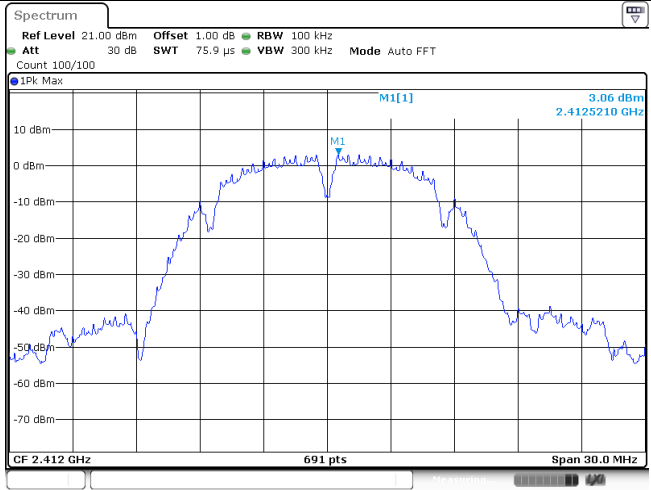
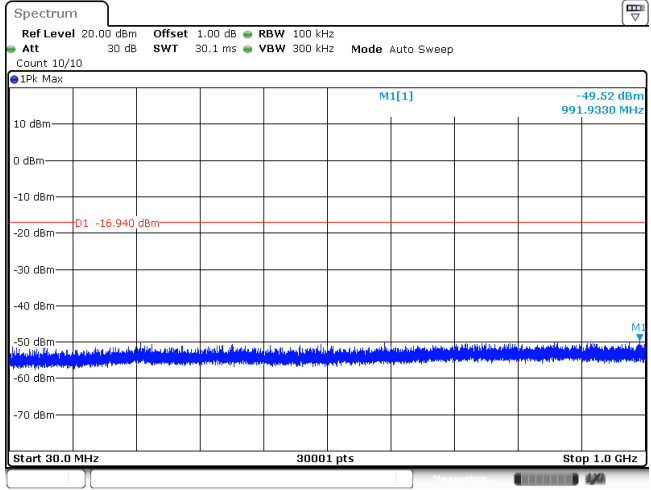
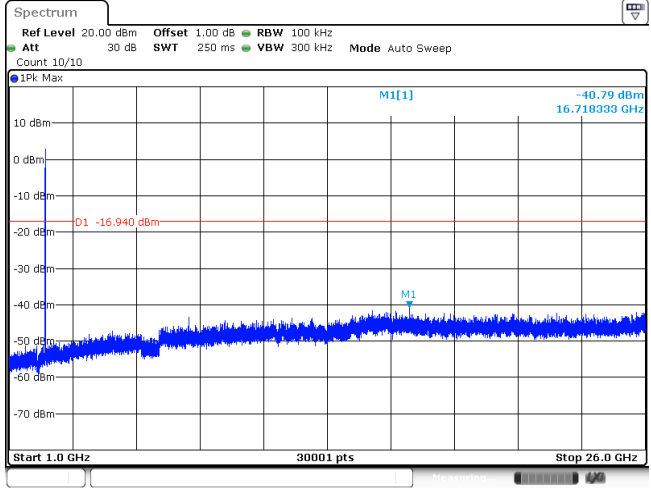


Appendix F: Band edge and Spurious Emissions (conducted)

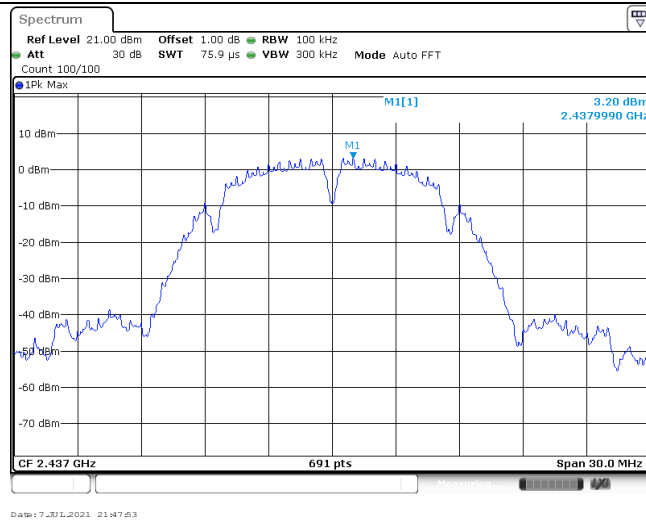
Test Item:	Bandedge	Type:	802.11 b																																										
CH01	Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 246.5 μs VBW 300 kHz Mode Auto FFT Count 300/300 1Pk Max 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm M1[1] M2[1] M3 M4 M5 3.04 dBm 2.413000 GHz -49.08 dBm 2.399500 GHz -58.65 dBm 2.310000 GHz -44.35 dBm D1 -16.960 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>2.413 GHz</td><td>3.04 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4 GHz</td><td>-49.08 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.39 GHz</td><td>-57.38 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.31 GHz</td><td>-58.65 dBm</td><td></td><td></td></tr><tr><td>M5</td><td>1</td><td></td><td>2.3995 GHz</td><td>-44.35 dBm</td><td></td><td></td></tr></table> Date: 7/31/2021 21:44:04			Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		2.413 GHz	3.04 dBm			M2	1		2.4 GHz	-49.08 dBm			M3	1		2.39 GHz	-57.38 dBm			M4	1		2.31 GHz	-58.65 dBm			M5	1		2.3995 GHz	-44.35 dBm		
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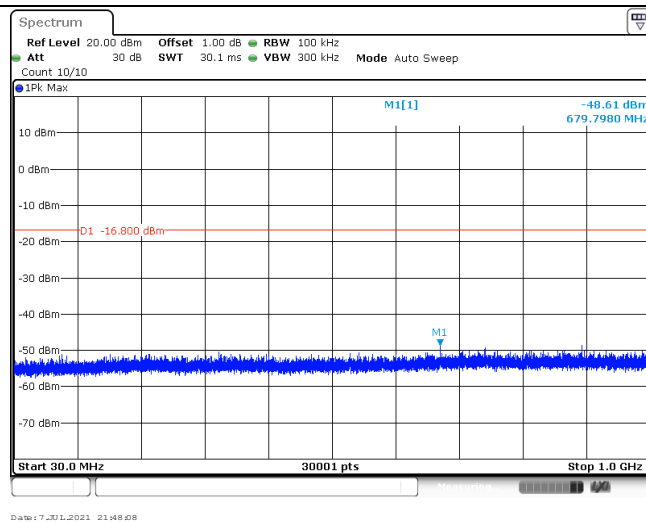
Test Item:	Bandedge	Type:	802.11 n(HT20)																																										
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M3	1		2.5 GHz	-59.10 dBm																																									
M4	1		2.4836522 GHz	-47.49 dBm																																									

Test Item:	SE	Type:	802.11 b
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] 3.06 dBm 2.4125210 GHz CF 2.412 GHz 691 pts Span 30.0 MHz Date: 7 JUL 2021 21:44:29		
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] -49.52 dBm 991.9330 MHz D1 -16.940 dBm Start 30.0 MHz 30001 pts Stop 1.0 GHz Date: 7 JUL 2021 21:44:44		
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] -40.79 dBm 16.718333 GHz D1 -16.940 dBm Start 1.0 GHz 30001 pts Stop 26.0 GHz Date: 7 JUL 2021 21:45:00		

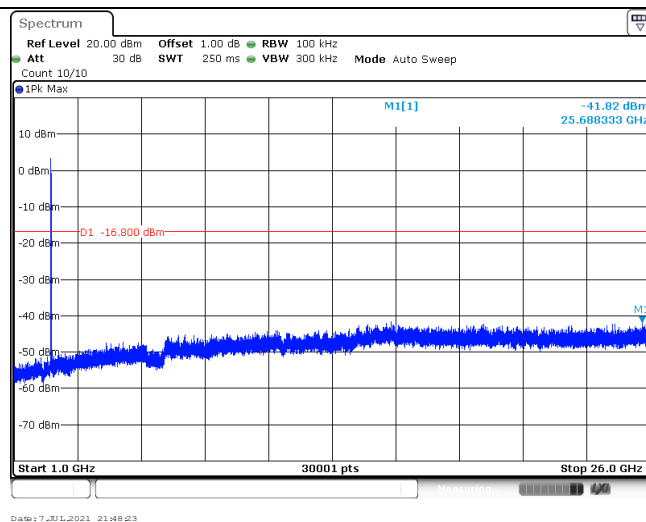
CH06
Reference level

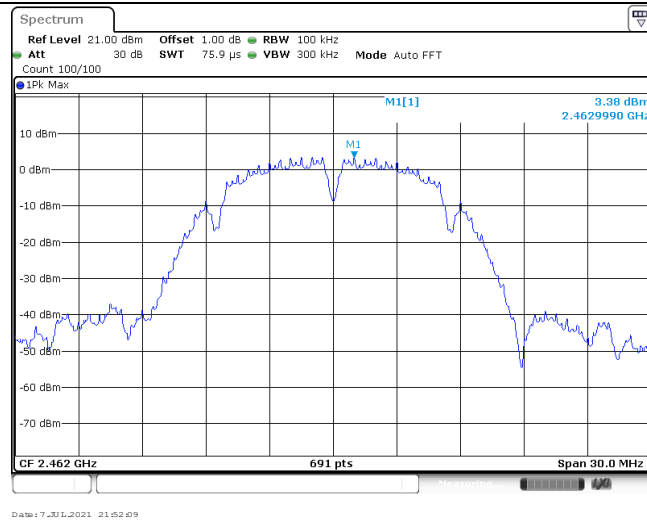
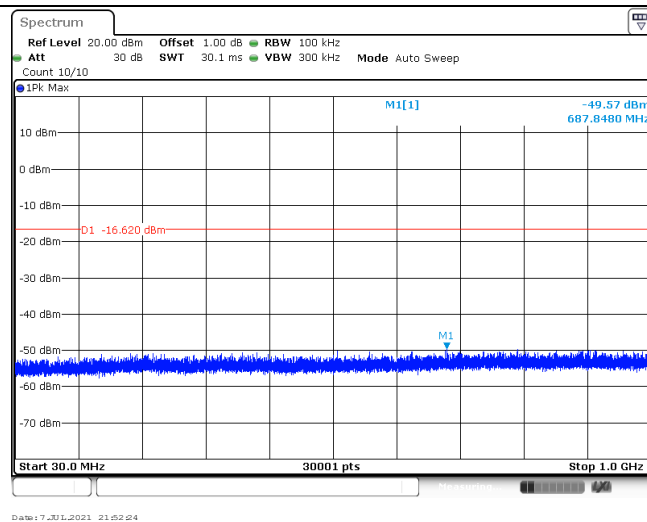
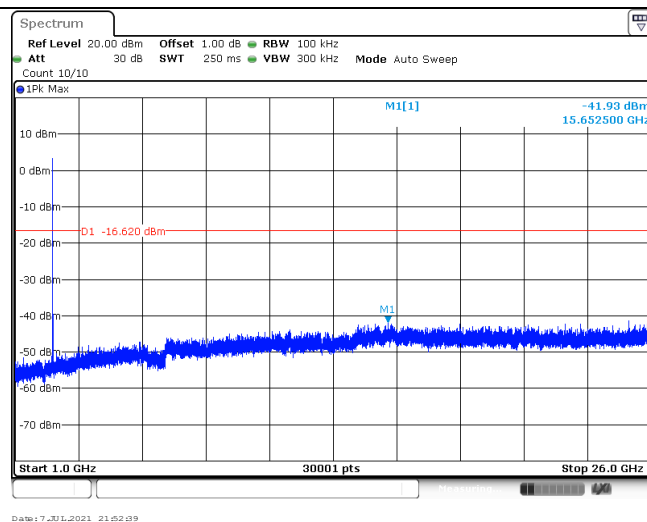


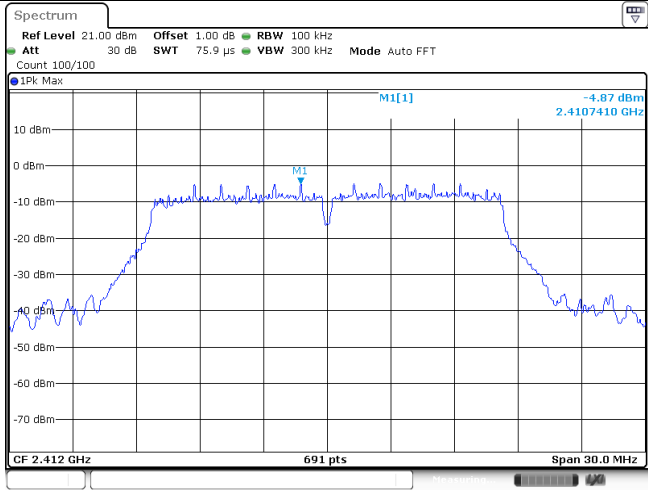
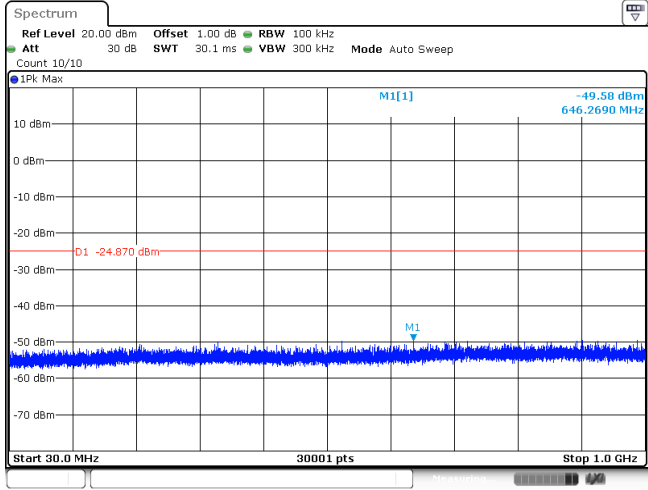
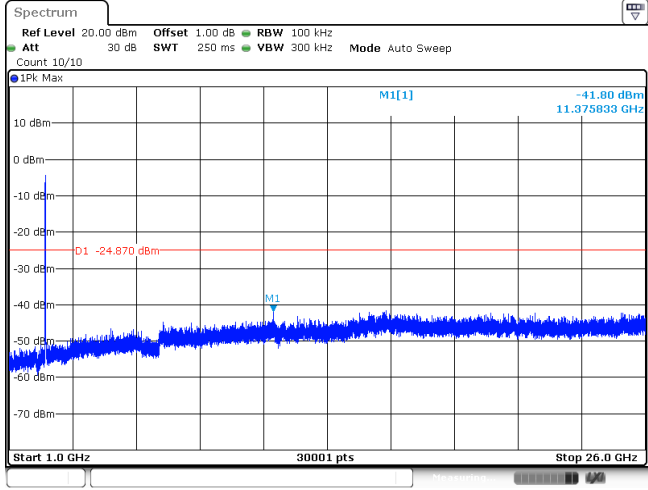
CH06
30MHz~1000MHz



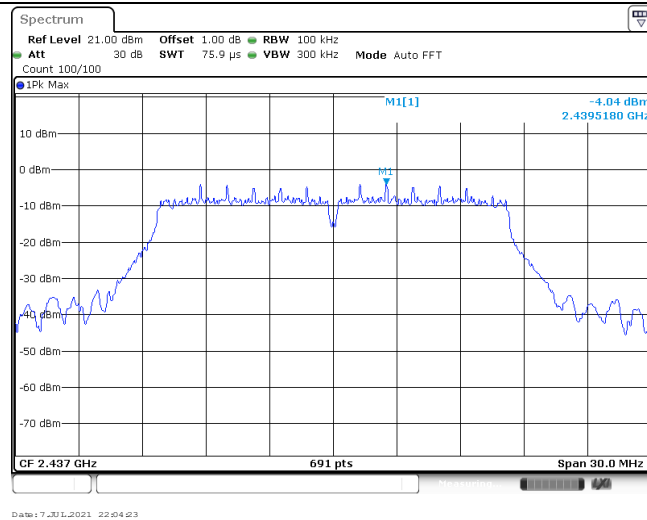
CH06
1GHz~26GHz



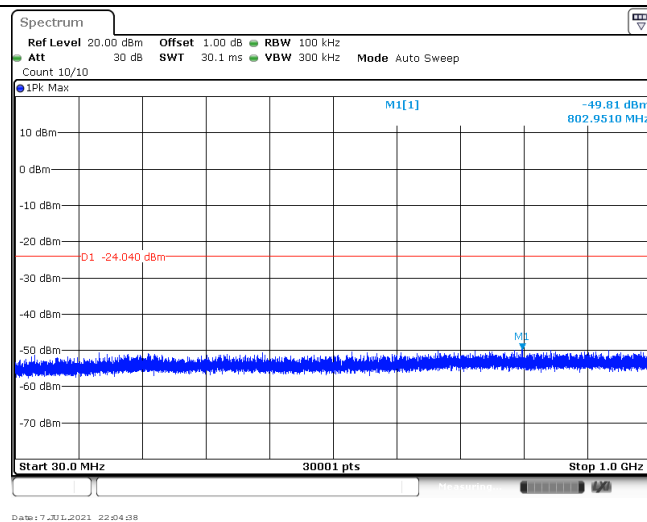
CH11
Reference levelCH11
30MHz~1000MHzCH11
1GHz~26GHz

Test Item:	SE	Type:	802.11 g
CH01 Reference level		 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] -4.87 dBm 2.4107410 GHz CF 2.412 GHz 691 pts Span 30.0 MHz Date: 7 JUL 2021 22:52:42	
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] -49.58 dBm 646.2690 MHz D1 -24.870 dBm Start 30.0 MHz 30001 pts Stop 1.0 GHz Date: 7 JUL 2021 22:52:57	
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] -41.80 dBm 11.375833 GHz D1 -24.870 dBm Start 1.0 GHz 30001 pts Stop 26.0 GHz Date: 7 JUL 2021 22:53:12	

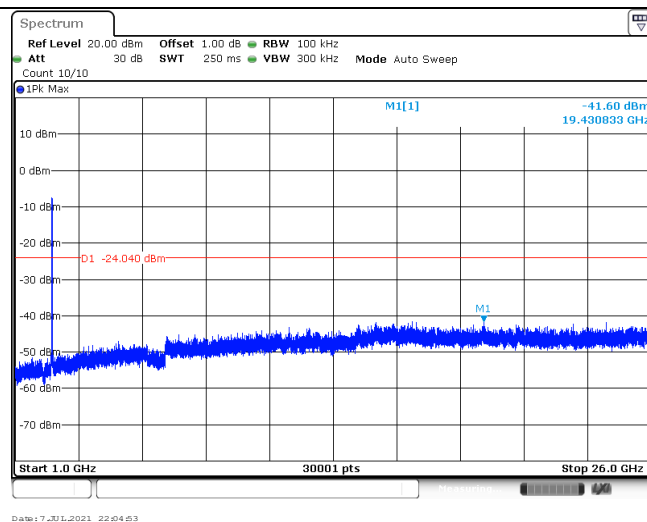
CH06
Reference level

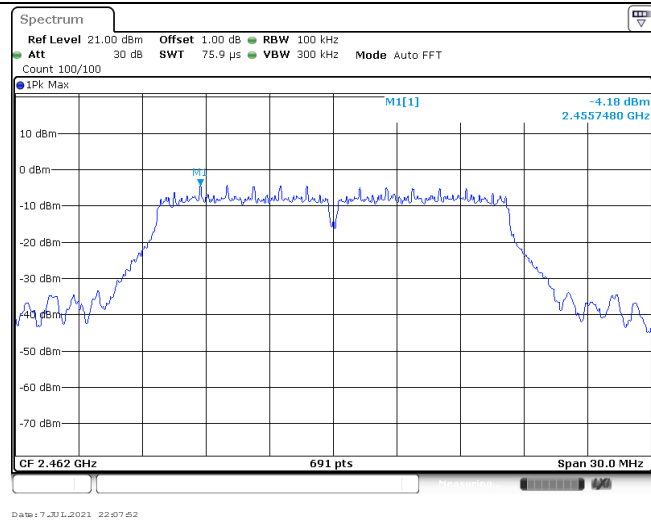
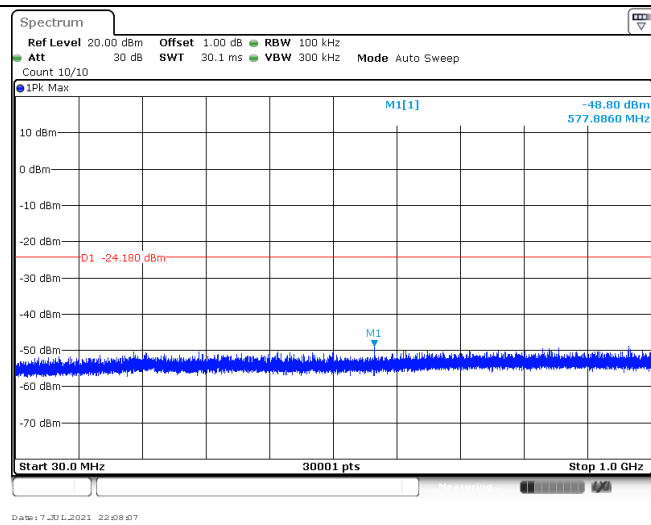
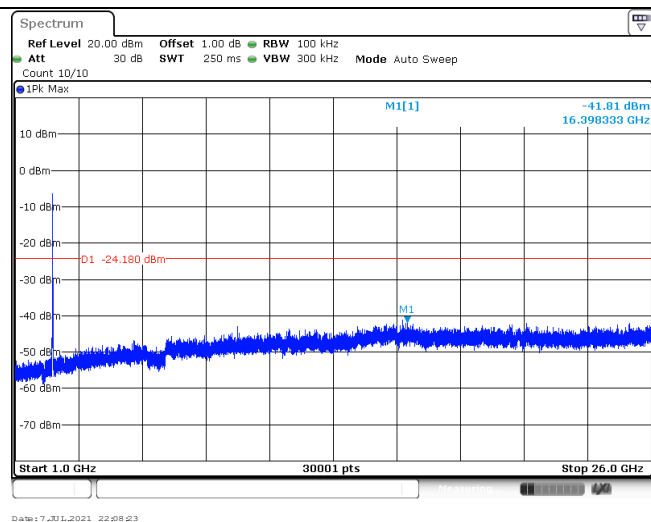


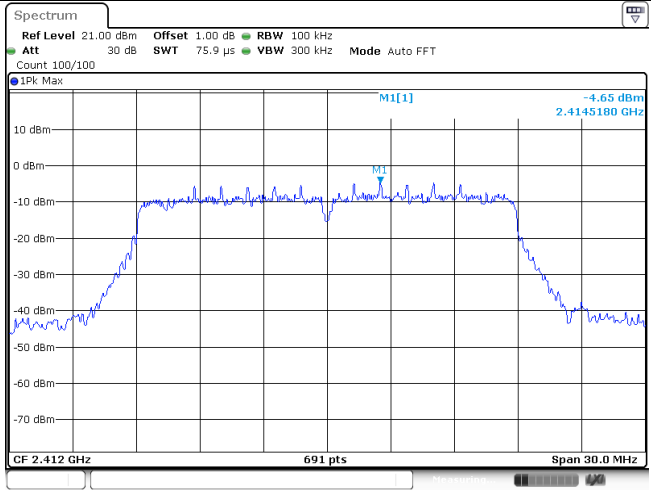
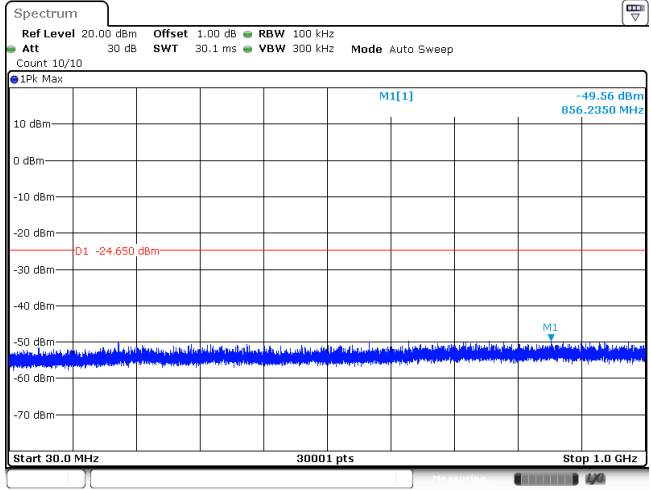
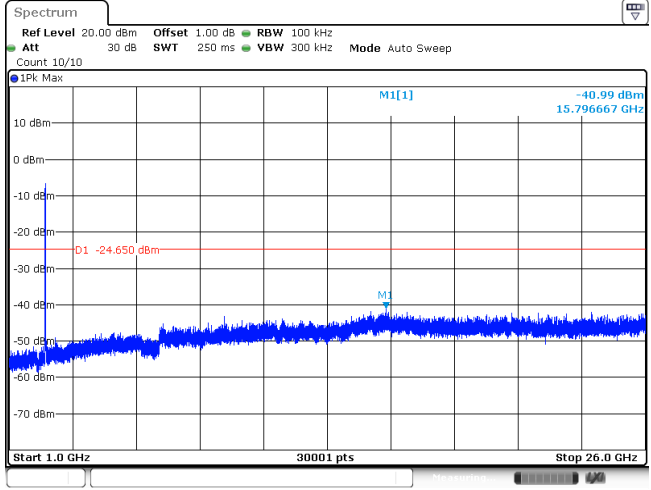
CH06
30MHz~1000MHz



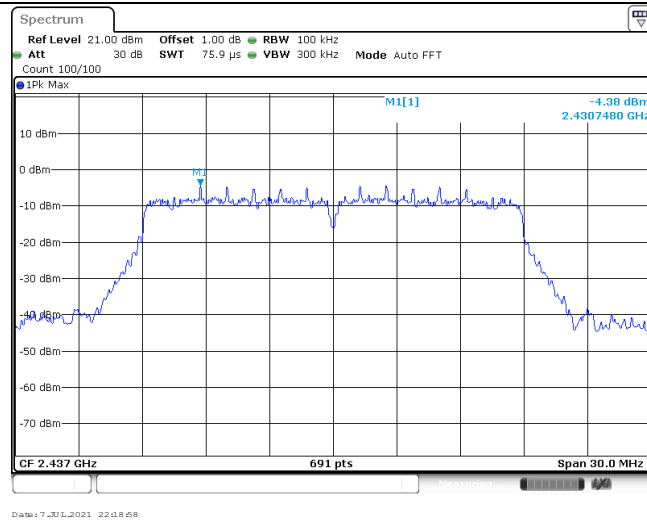
CH06
1GHz~26GHz



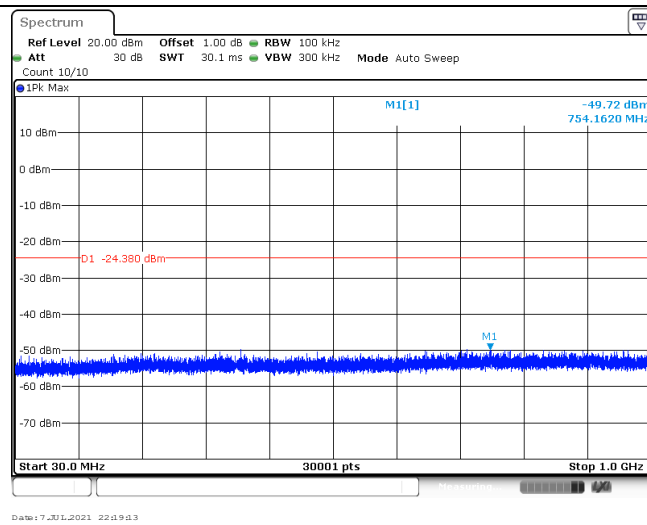
CH11
Reference levelCH11
30MHz~1000MHzCH11
1GHz~26GHz

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] -4.65 dBm 2.4145180 GHz CF 2.412 GHz 691 pts Span 30.0 MHz Date: 7 JUL 2021 22:17:38	
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] -49.56 dBm 856.2350 MHz D1 -24.650 dBm Start 30.0 MHz 30001 pts Stop 1.0 GHz Date: 7 JUL 2021 22:17:33	
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] -40.99 dBm 15.796667 GHz D1 -24.650 dBm Start 1.0 GHz 30001 pts Stop 26.0 GHz Date: 7 JUL 2021 22:17:48	

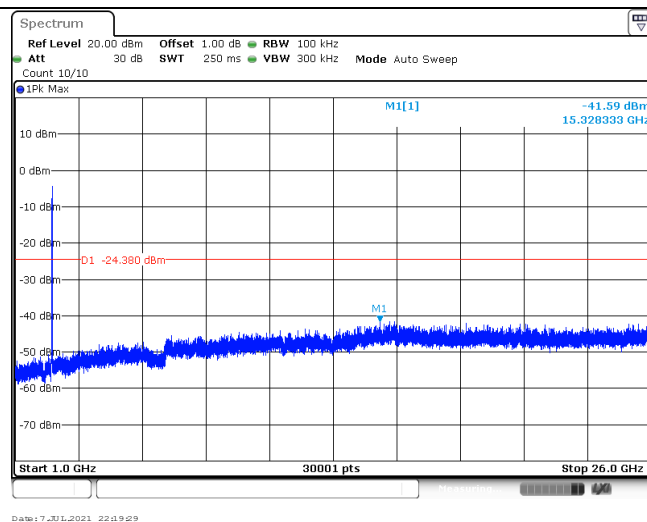
CH06
Reference level

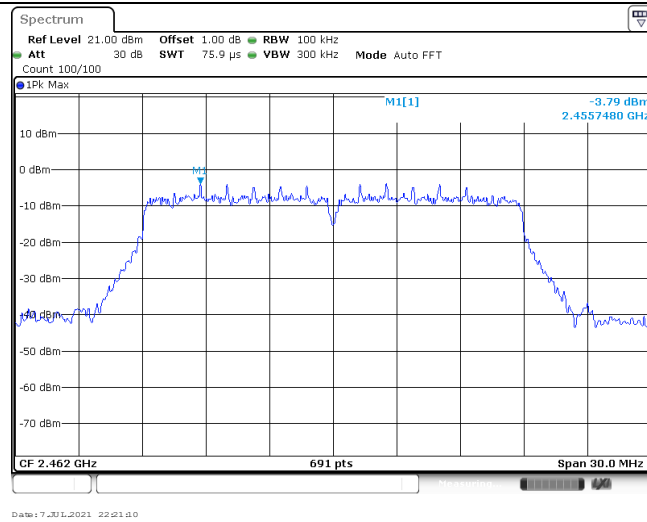
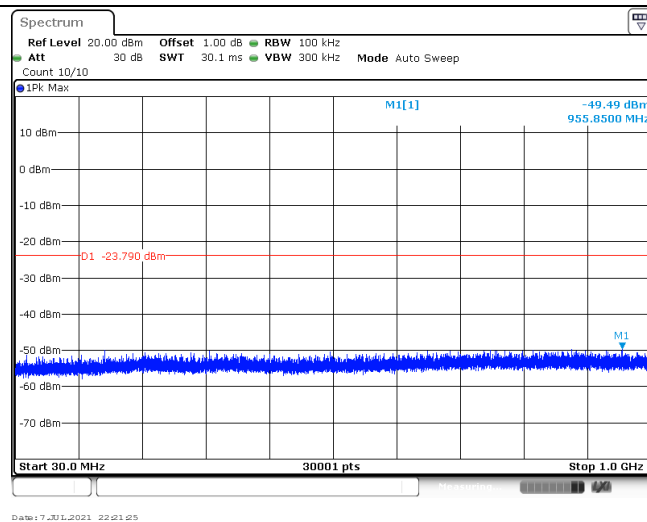
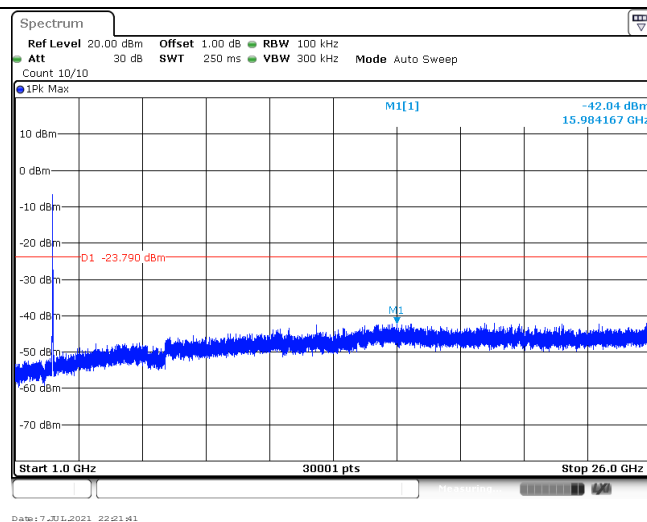


CH06
30MHz~1000MHz



CH06
1GHz~26GHz



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

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