APPENDIX REPORT

Project No.	SHT2109065003EW	Radio Specification	WIFI 2.4G
Model No.	ZBJ-886		
Start test date	2021-10-12	Finish date	2021-10-12
Temperature	24.7℃	Humidity	35%
Test Engineer	Xiaoqin Li	Auditor	Xiaodong Zhao

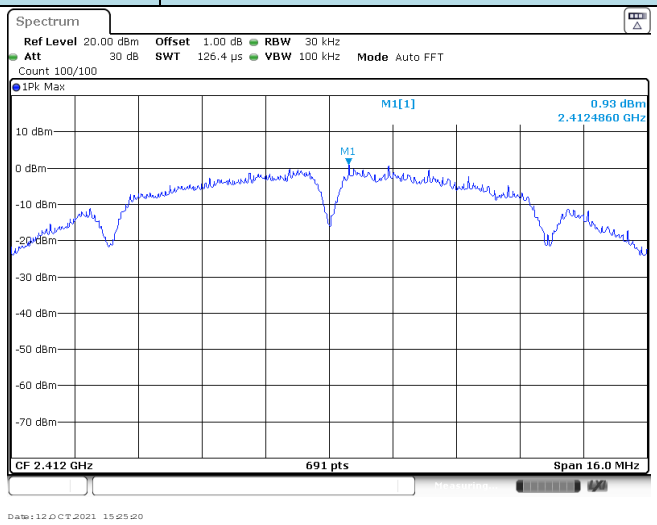
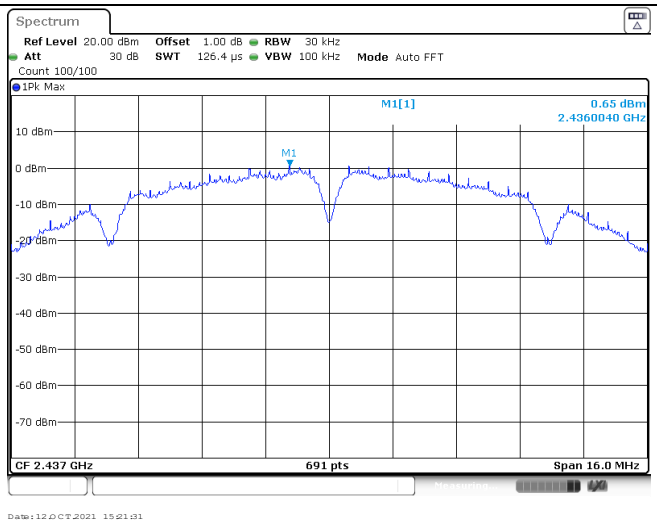
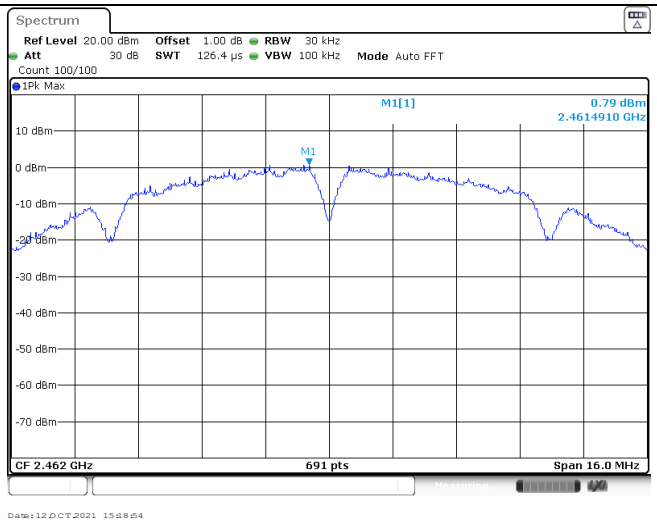
Appendix clause	Test item	Result
A	Conducted Peak Output Power	PASS
B	Power Spectral Density	PASS
C	6 dB Bandwidth	PASS
D	99% Occupied Bandwidth	PASS
E	Duty Cycle	PASS
F	Band edge and Spurious Emissions (conducted)	PASS

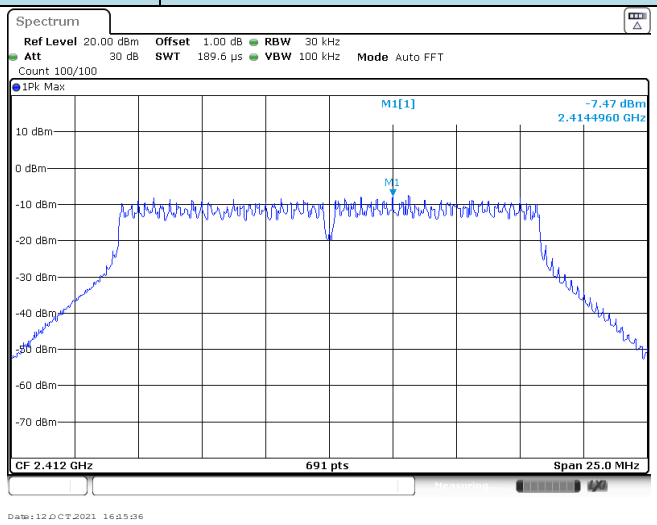
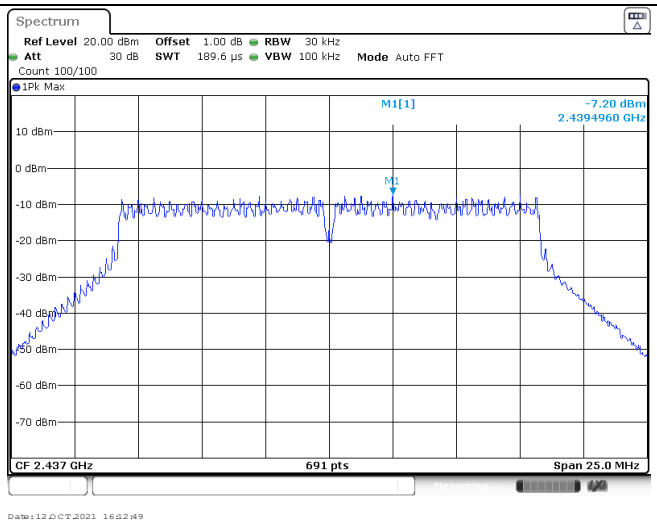
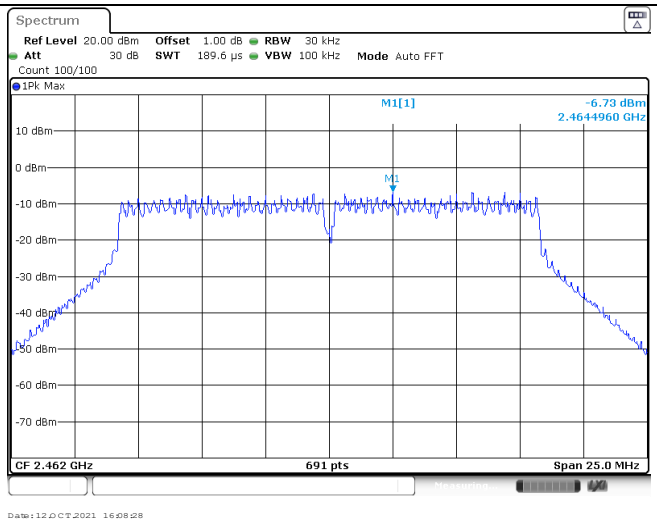
Appendix A: Conducted Peak Output Power

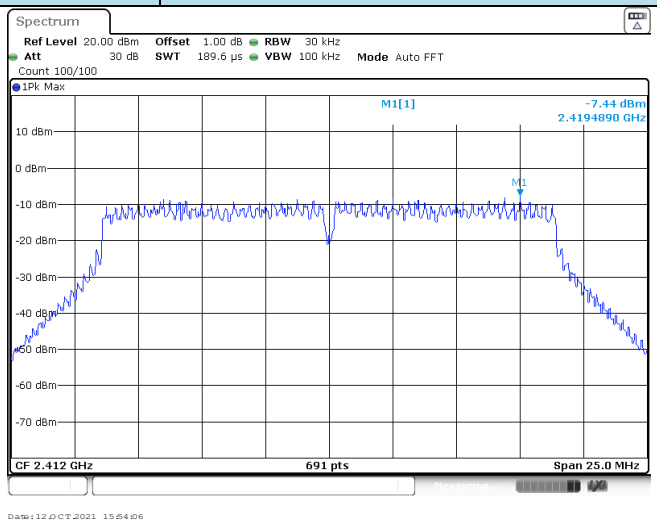
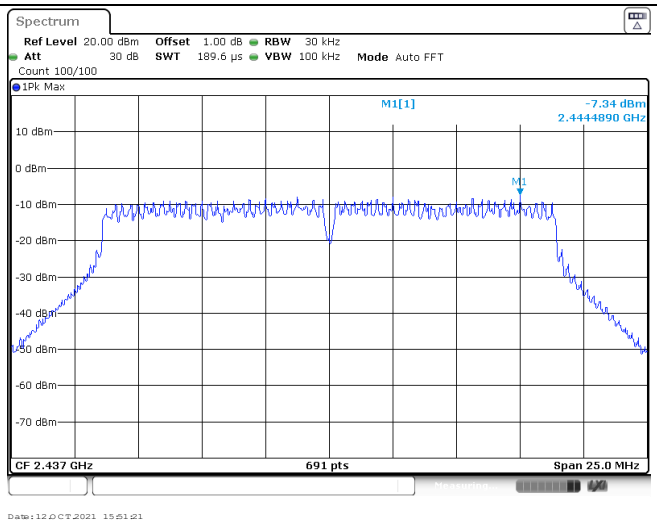
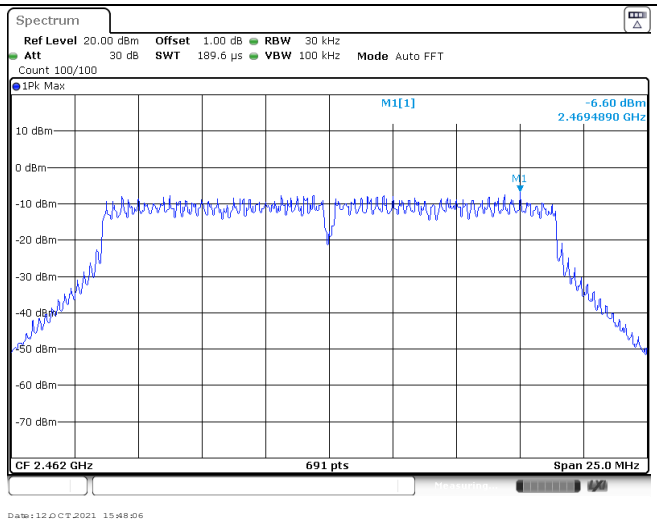
Type	Channel	Peak Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
802.11b	01	13.97	10.80	≤ 30.00	Pass
	06	14.65	11.60		
	11	15.22	11.50		
802.11g	01	14.28	9.82	≤ 30.00	Pass
	06	14.70	10.12		
	11	15.33	10.80		
802.11n (HT20)	01	14.26	9.98	≤ 30.00	Pass
	06	14.88	10.76		
	11	15.36	10.96		
802.11n(HT40)	03	14.37	9.86	≤ 30.00	Pass
	06	14.56	10.14		
	09	15.13	10.86		

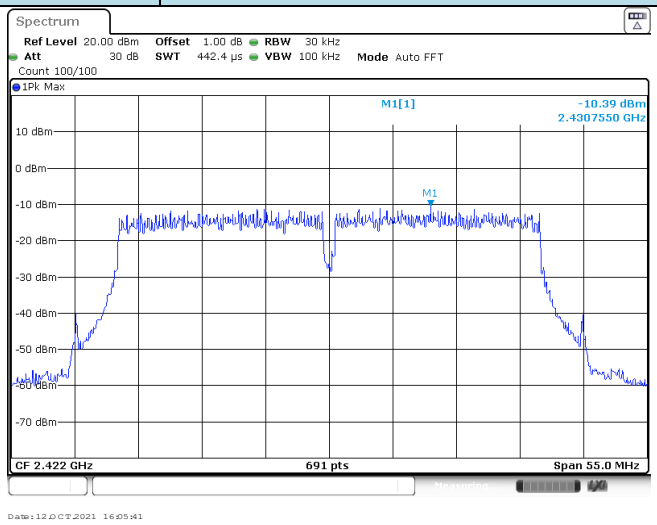
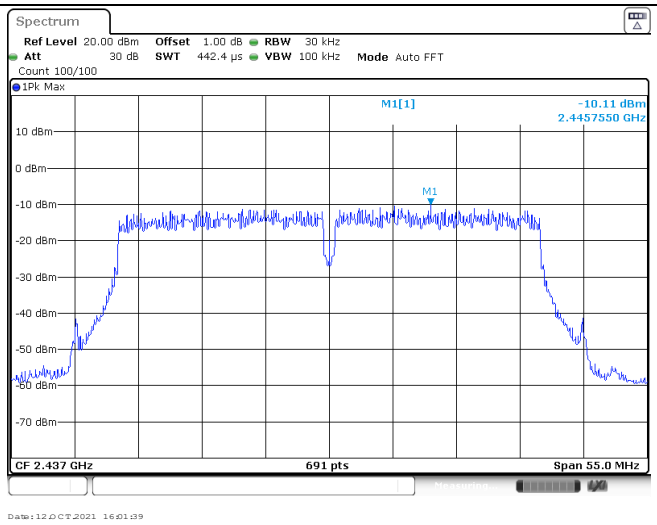
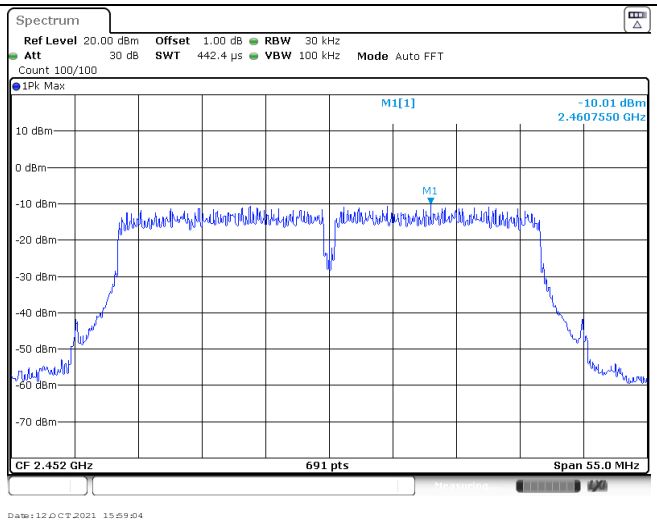
Appendix B：Power Spectral Density

Type	Channel	Power Spectral Density (dBm/30KHz)	Limit (dBm/3KHz)	Result
802.11b	01	0.93	≤8.00	Pass
	06	0.65		
	11	0.79		
802.11g	01	-7.47	≤8.00	Pass
	06	-7.20		
	11	-6.73		
802.11n(HT20)	01	-7.44	≤8.00	Pass
	06	-7.34		
	11	-6.60		
802.11n(HT40)	03	-10.39	≤8.00	Pass
	06	-10.11		
	09	-10.01		

Type:	802.11 b
CH01	
CH06	
CH11	

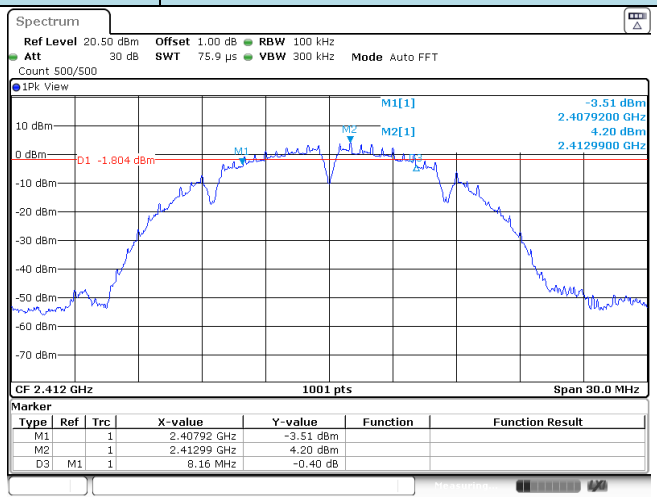
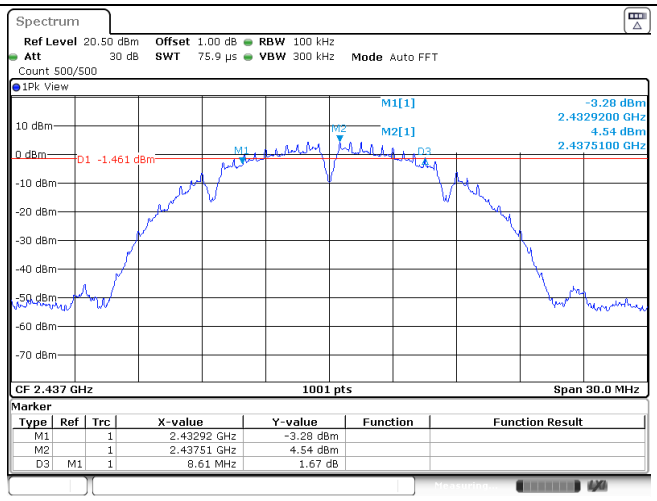
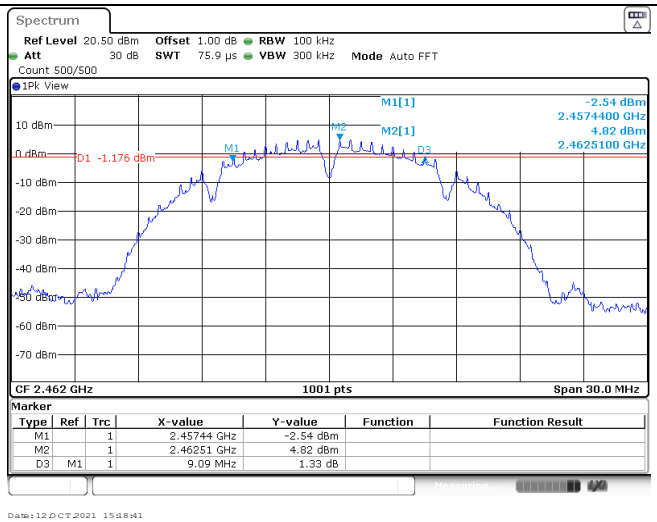
Type:	802.11 g
CH01	
CH06	
CH11	

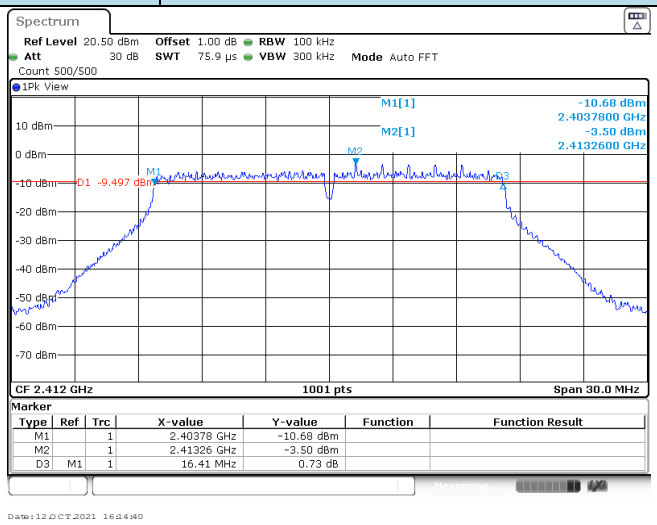
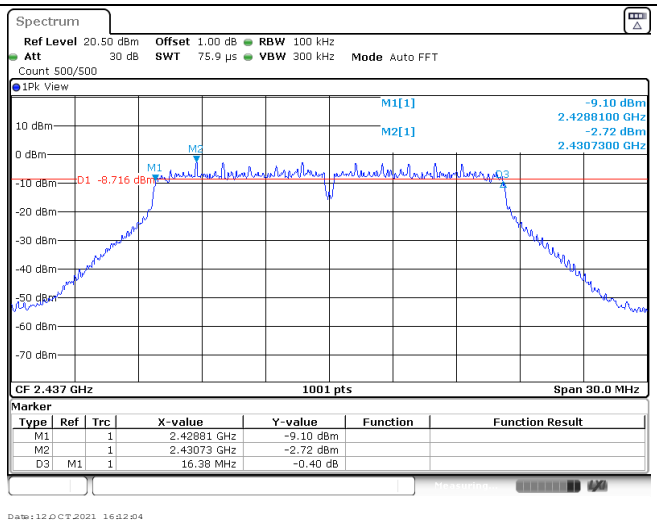
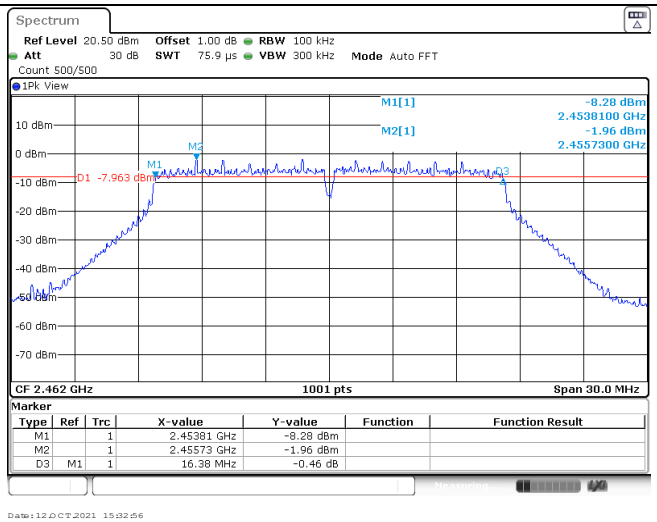
Type:	802.11n(HT20)
CH01	
CH06	
CH11	

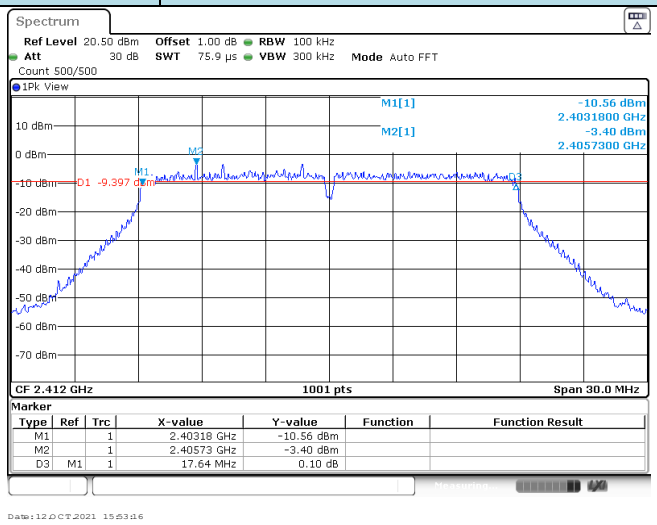
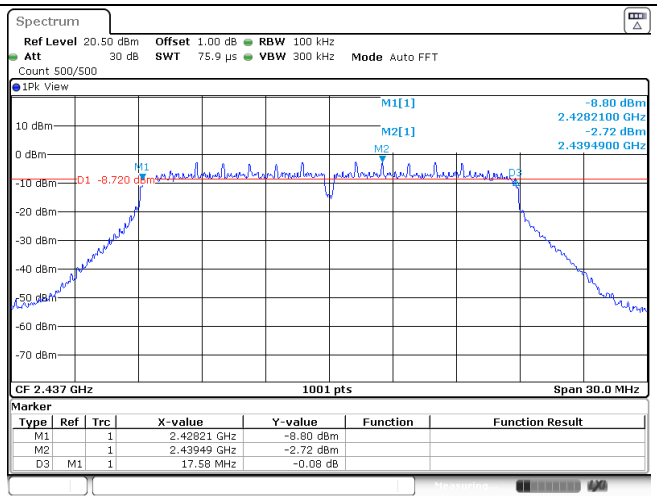
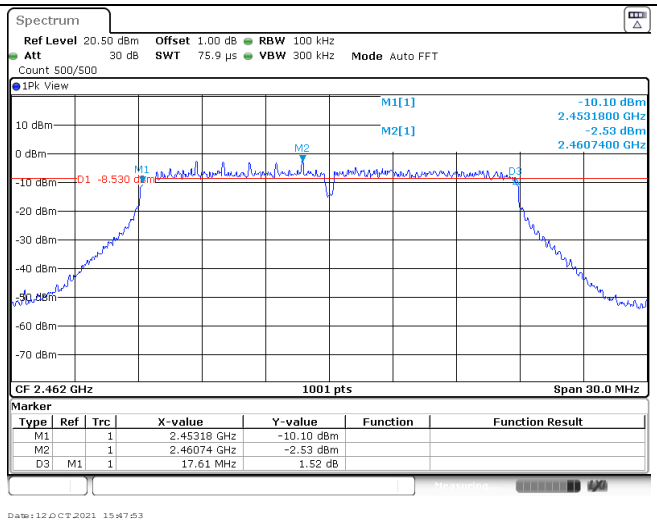
Type:	802.11n(HT40)
CH03	
CH06	
CH09	

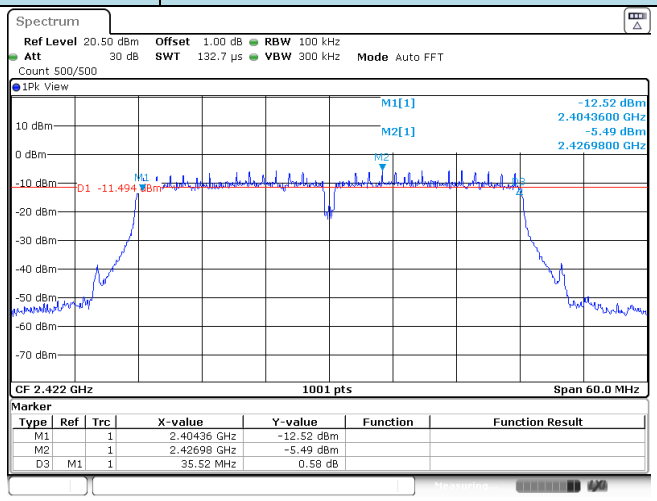
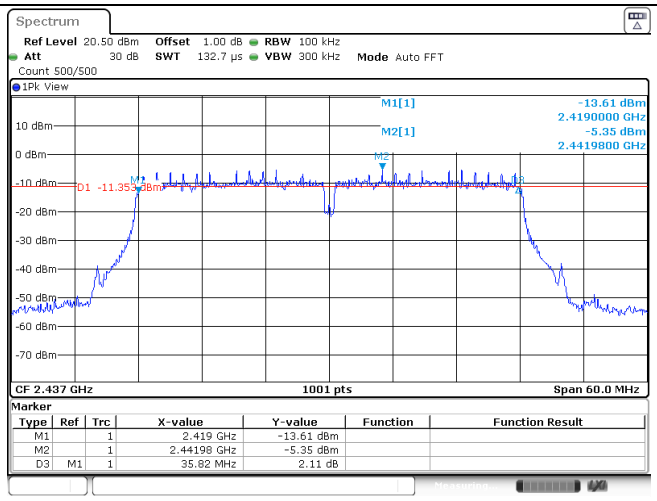
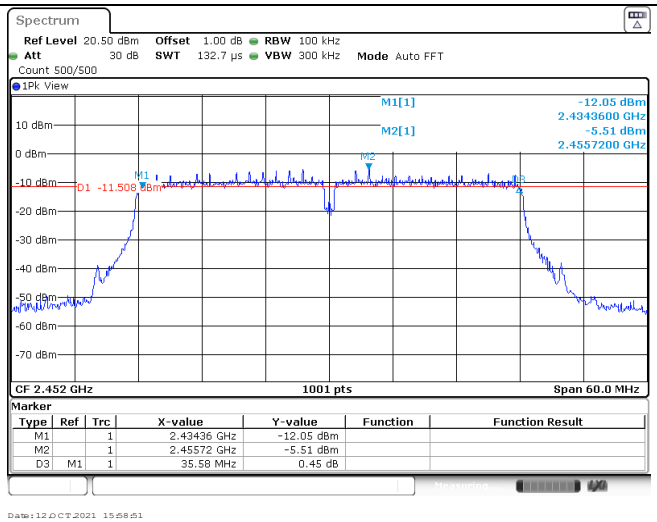
Appendix C：6dB bandwidth

Type	Channel	6dB Bandwidth (MHz)	Limit (MHz)	Result
802.11b	01	8.16	≥0.5	Pass
	06	8.61		
	11	9.09		
802.11g	01	16.41	≥0.5	Pass
	06	16.38		
	11	16.38		
802.11n(HT20)	01	17.64	≥0.5	Pass
	06	17.58		
	11	17.61		
802.11n(HT40)	03	35.52	≥0.5	Pass
	06	35.82		
	09	35.58		

Type:	802.11 b
CH01	
CH06	
CH11	

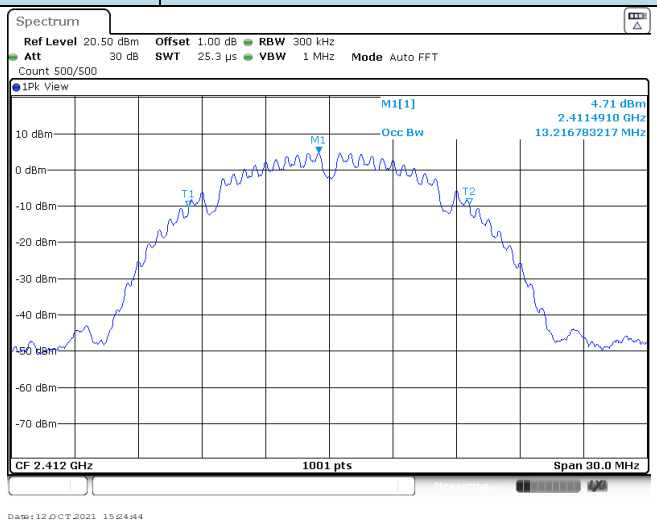
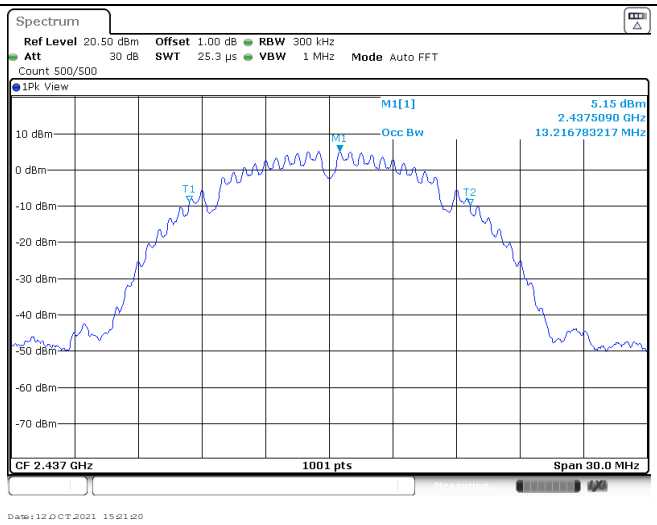
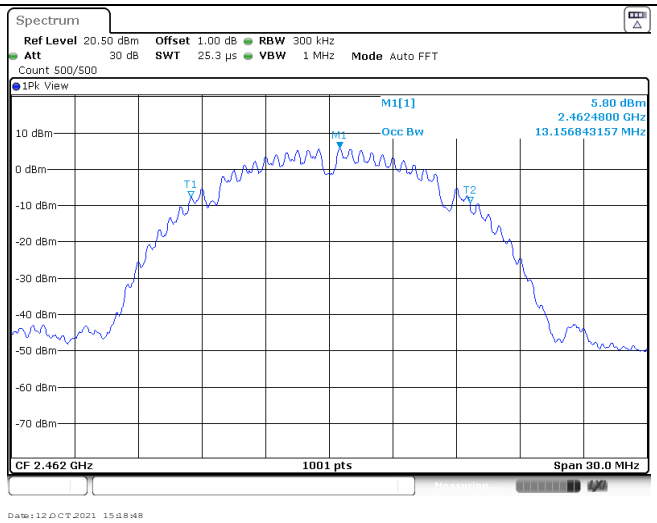
Type:	802.11 g
CH01	
CH06	
CH11	

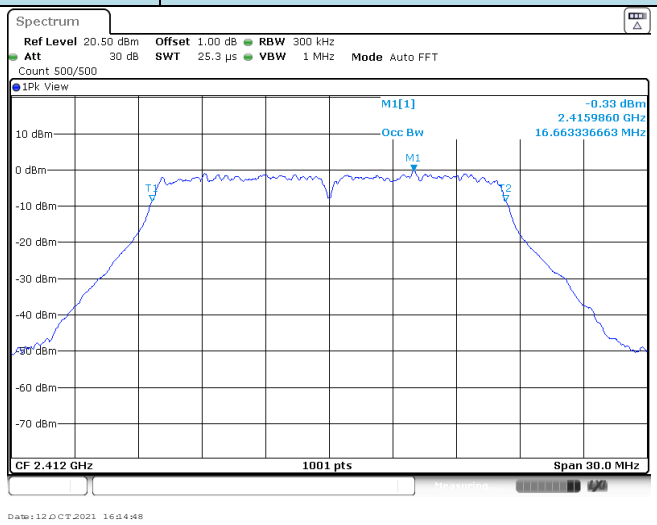
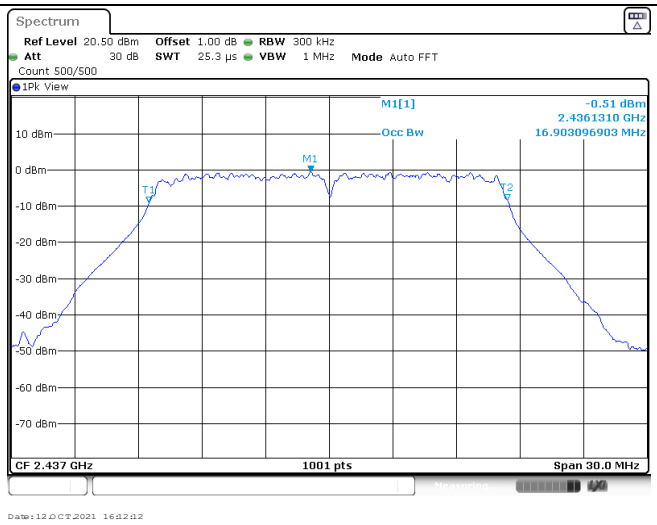
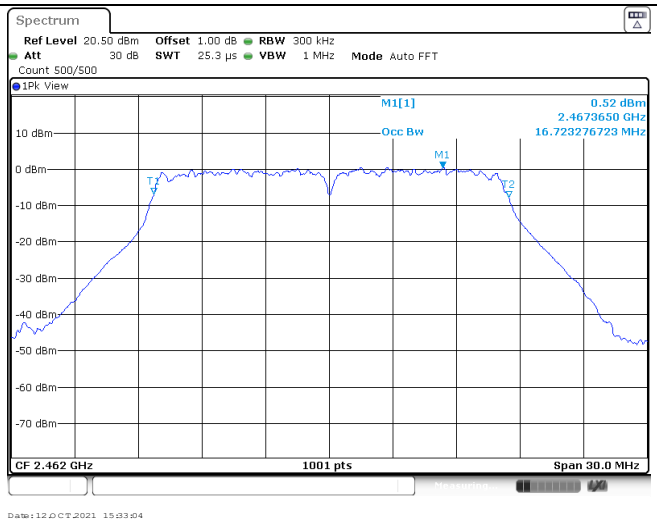
Type:	802.11n(HT20)
CH01	
CH06	
CH11	

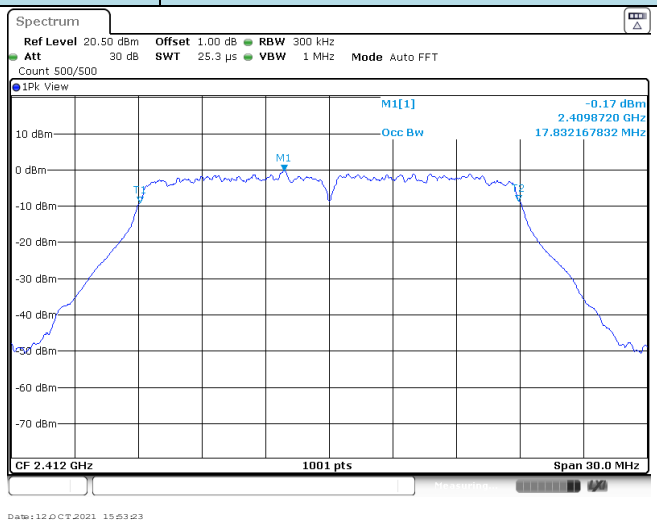
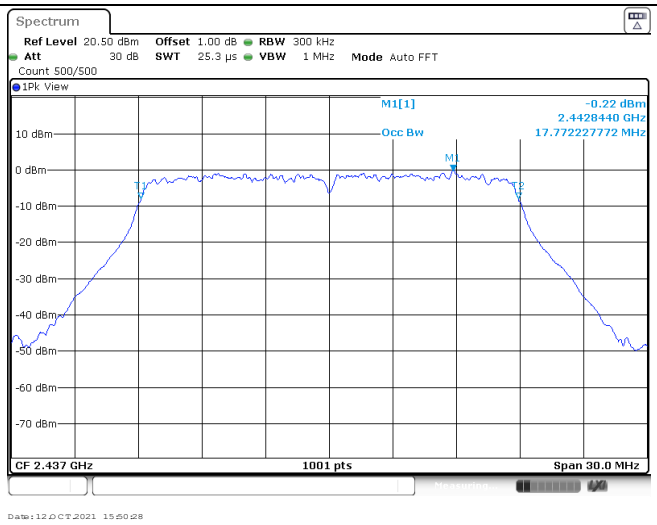
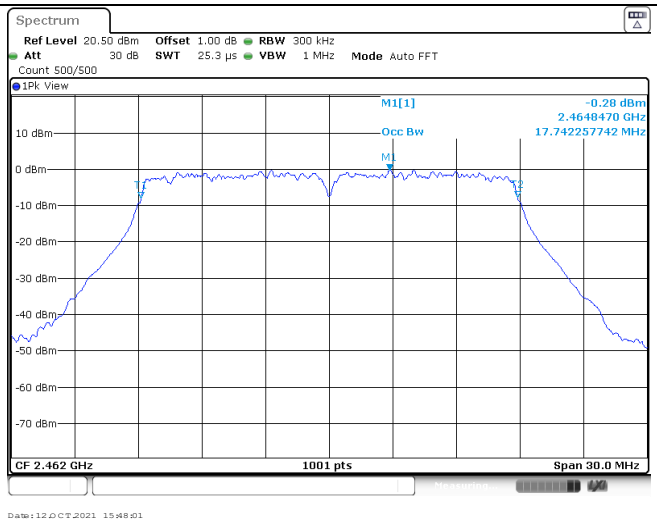
Type:	802.11n(HT40)
CH03	
CH06	
CH09	

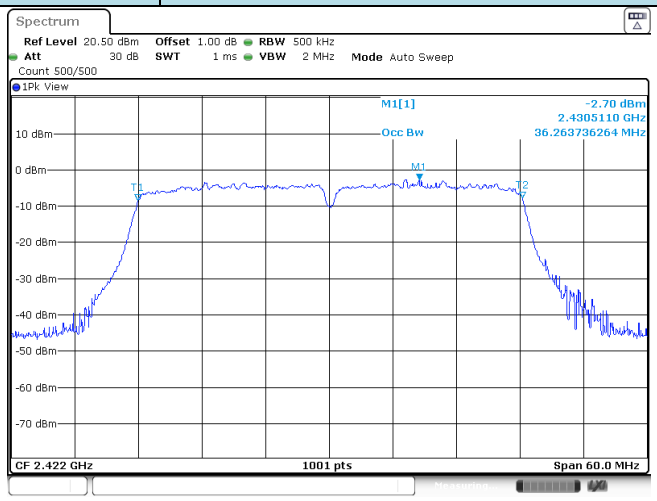
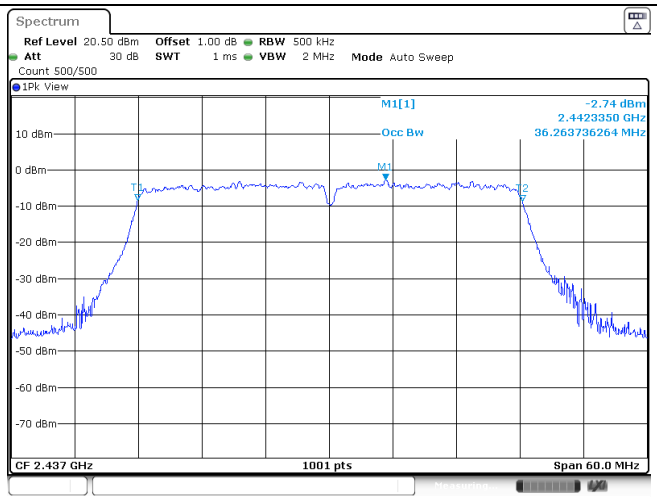
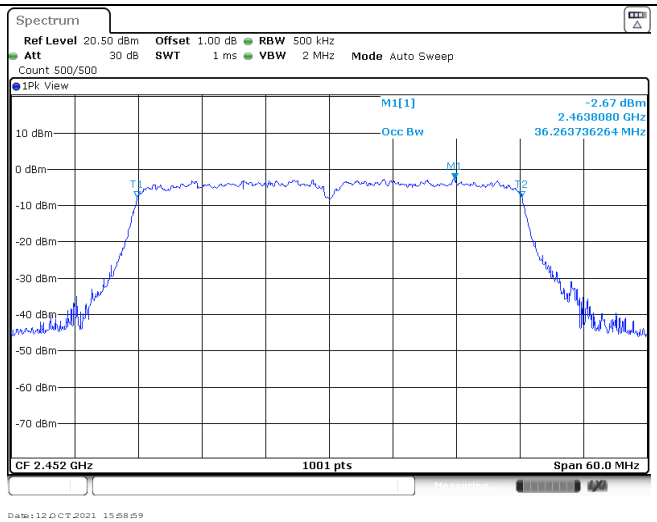
Appendix D：99% Occupied Bandwidth

Type	Channel	99% Bandwidth (MHz)	Limit (kHz)	Result
802.11b	01	13.22	-	Pass
	06	13.22		
	11	13.16		
802.11g	01	16.66	-	Pass
	06	16.90		
	11	16.72		
802.11n(HT20)	01	17.83	-	Pass
	06	17.77		
	11	17.74		
802.11n(HT40)	03	36.26	-	Pass
	06	36.26		
	09	36.26		

Type:	802.11 b
CH01	
CH06	
CH11	

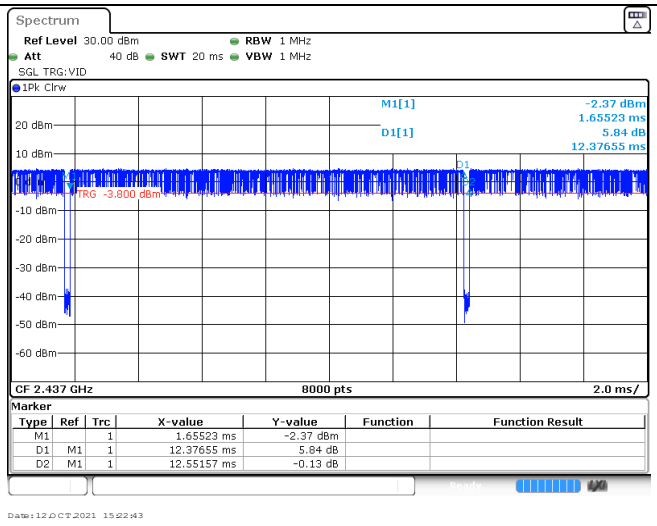
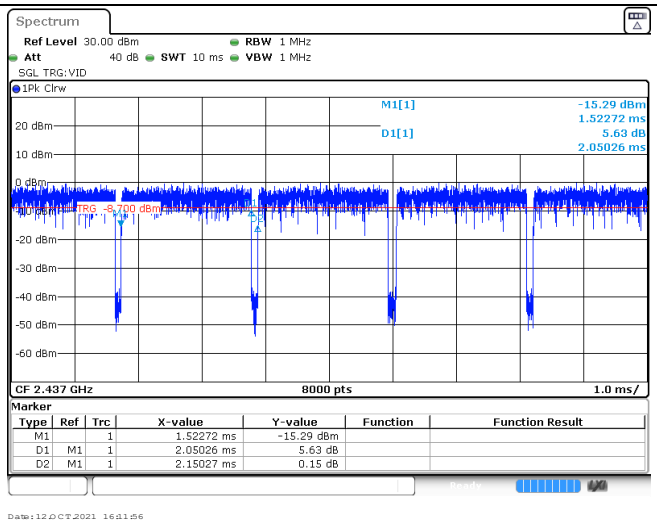
Type:	802.11 g
CH01	
CH06	
CH11	

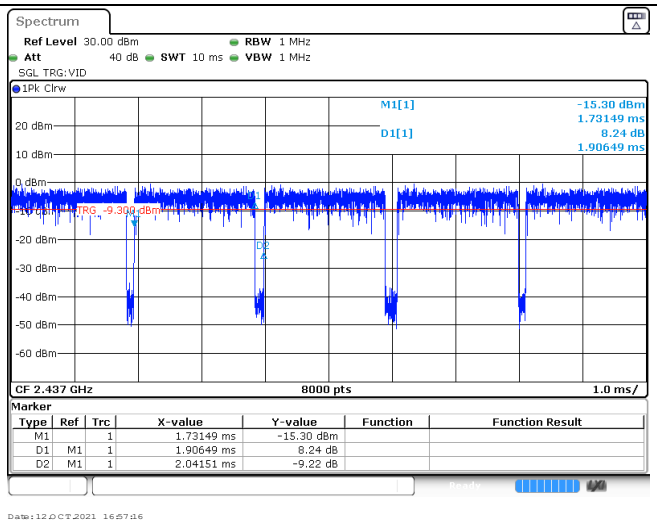
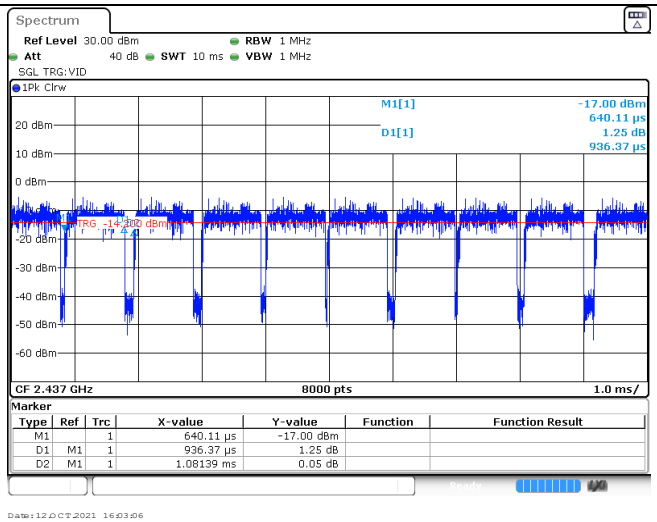
Type:	802.11n(HT20)
CH01	
CH06	
CH11	

Type:	802.11n(HT40)
CH03	
CH06	
CH09	

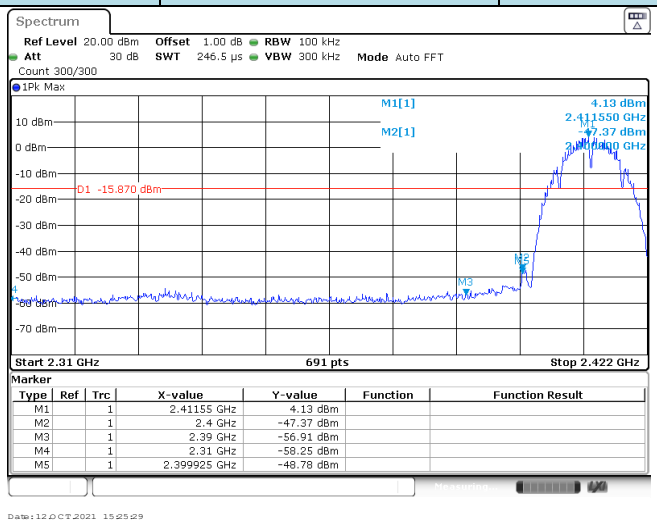
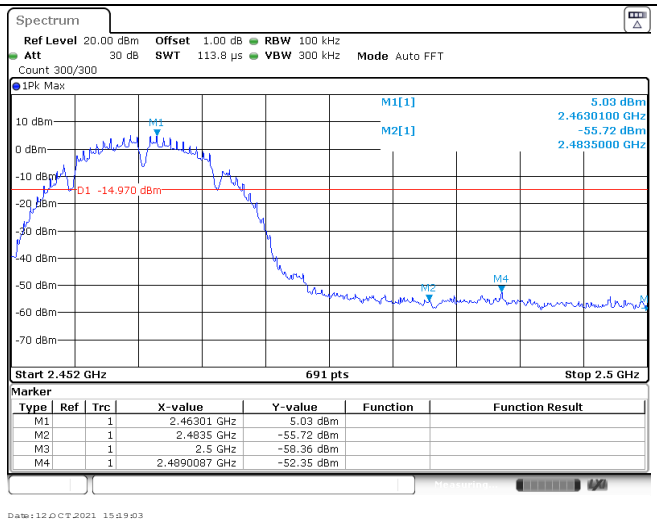
Appendix E：Duty Cycle

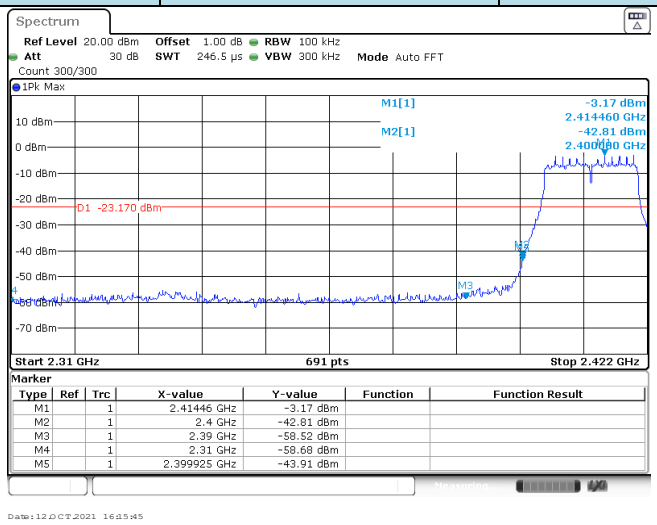
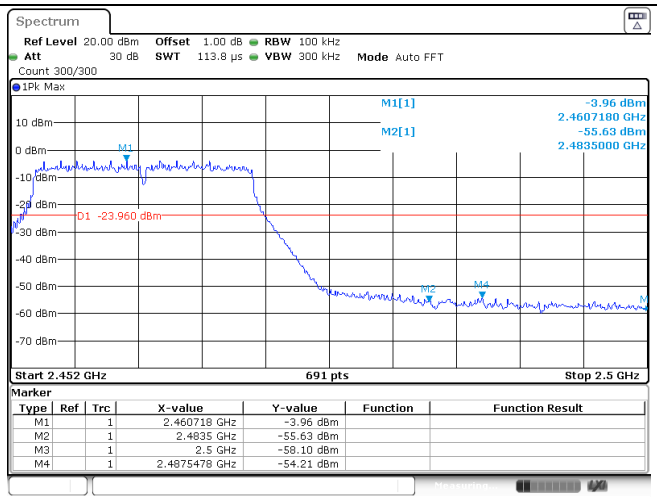
Modulation Type	Test Frequency （MHz）	$T_{on\ time}$ for single burst (ms)	T_{period} (ms)	Duty cycle	$1/T_{on\ time}$ (kHz)
11b	2437	12.38	12.55	98.6%	0.1
11g	2437	2.05	2.15	95.3%	0.5
11n20	2437	1.91	2.04	93.6%	0.5
11n40	2437	0.94	1.08	87.0%	1.1

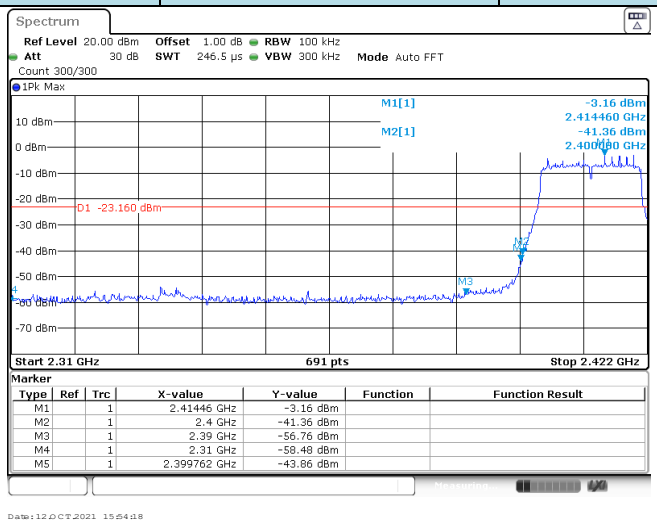
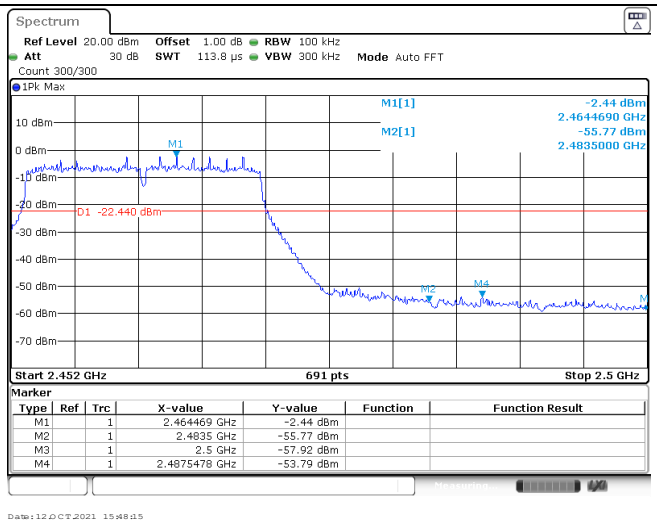
11b	
11g	

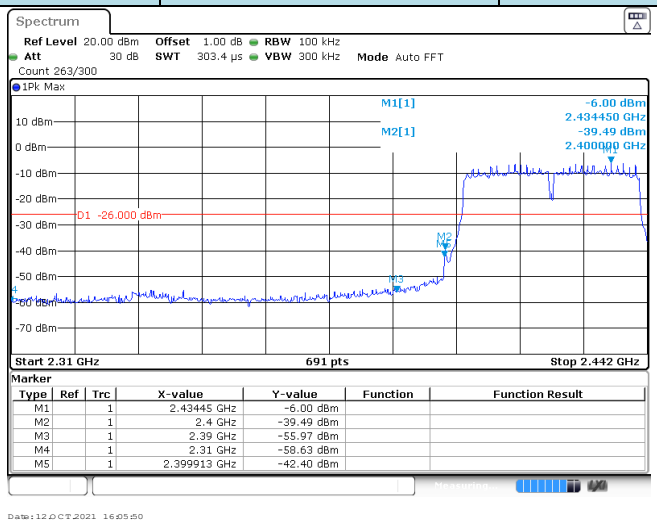
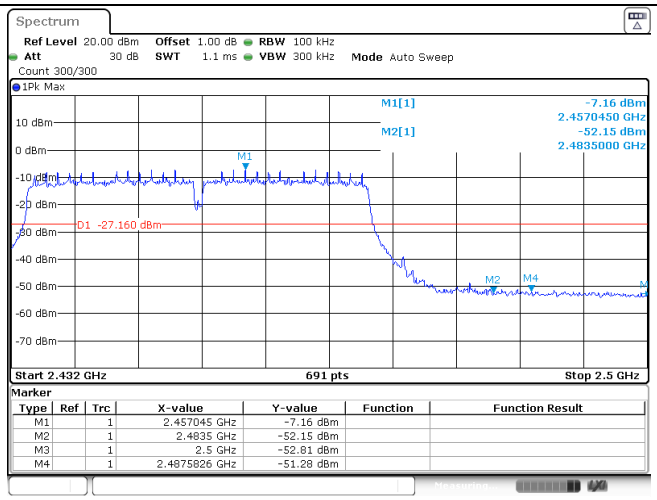
11n20	 Spectrum Ref Level 30.00 dBm RBW 1 MHz Att 40 dB SWT 10 ms VBW 1 MHz SGL TRG:VID 1Pk Clrw M1[1] -15.30 dBm 1.73149 ms D1[1] 8.24 dB 1.90649 ms CF 2.437 GHz 8000 pts 1.0 ms/ Marker Type Ref Trc X-value Y-value Function Function Result M1 1 1.73149 ms -15.30 dBm D1 M1 1 1.90649 ms 8.24 dB D2 M1 1 2.04151 ms -9.22 dB
11n40	 Spectrum Ref Level 30.00 dBm RBW 1 MHz Att 40 dB SWT 10 ms VBW 1 MHz SGL TRG:VID 1Pk Clrw M1[1] -17.00 dBm 640.11 µs D1[1] 1.25 dB 936.37 µs CF 2.437 GHz 8000 pts 1.0 ms/ Marker Type Ref Trc X-value Y-value Function Function Result M1 1 640.11 µs -17.00 dBm D1 M1 1 936.37 µs 1.25 dB D2 M1 1 1.08139 ms 0.05 dB

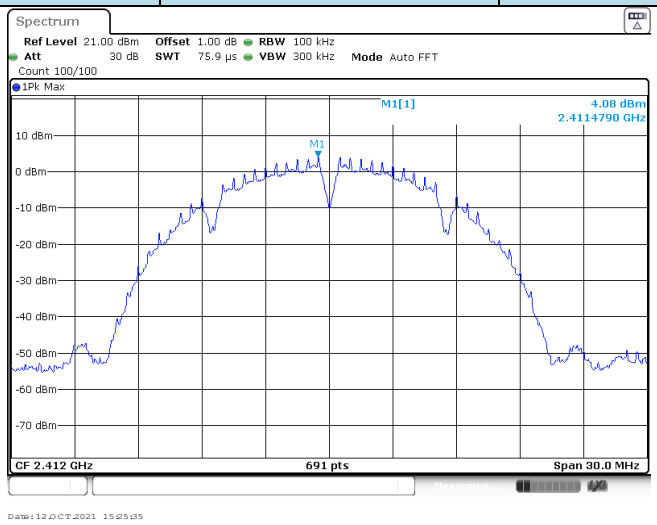
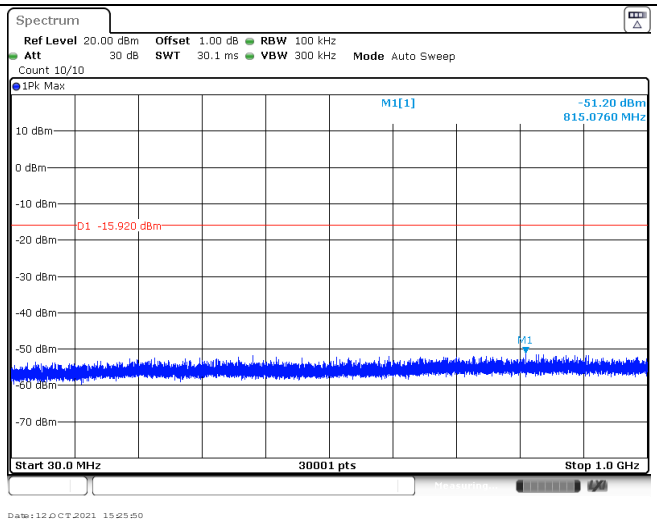
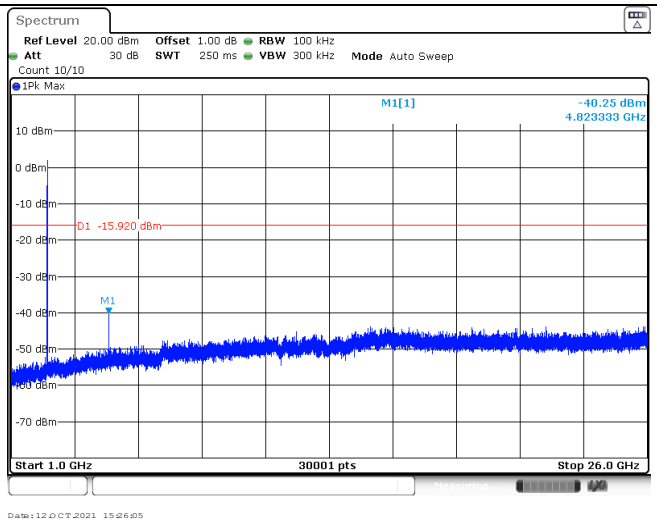
Appendix F：Band edge and Spurious Emissions (conducted)

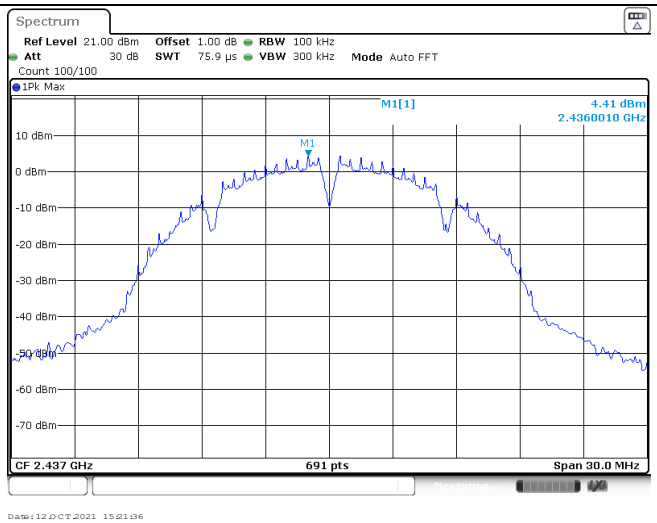
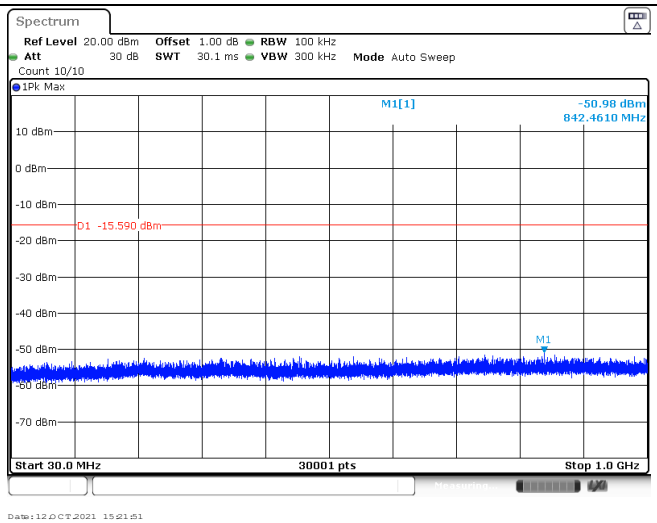
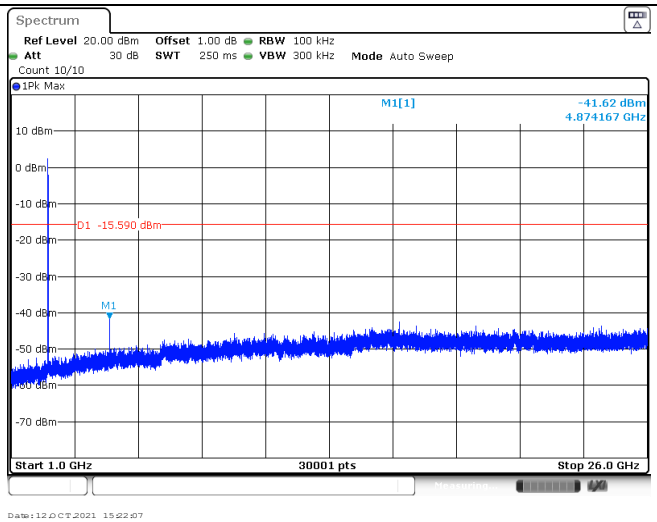
Test Item:	Bandedge	Type:	802.11 b
CH01	
CH11	

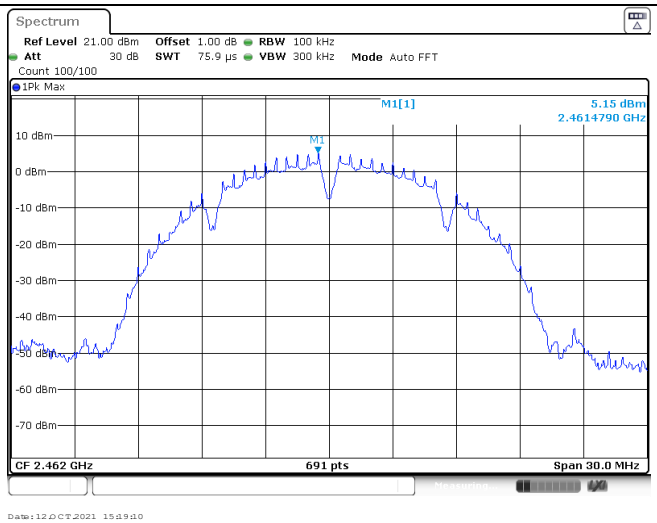
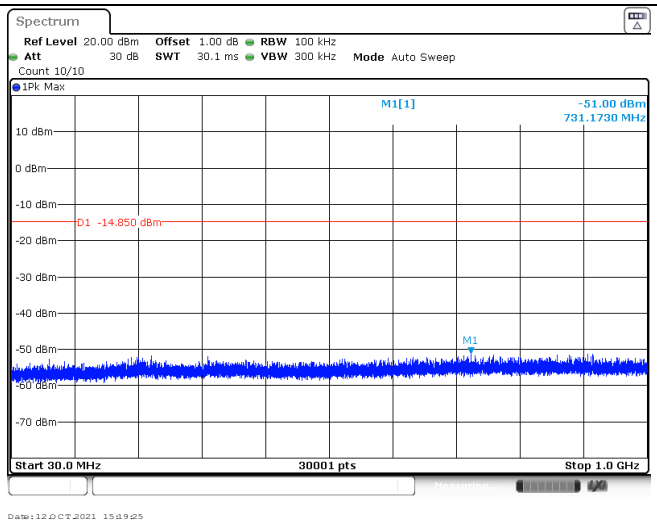
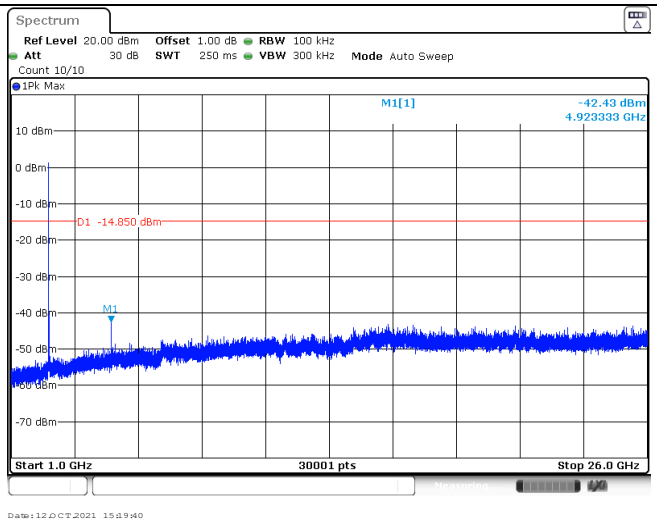
Test Item:	Bandedge	Type:	802.11 g
CH01			
CH11			

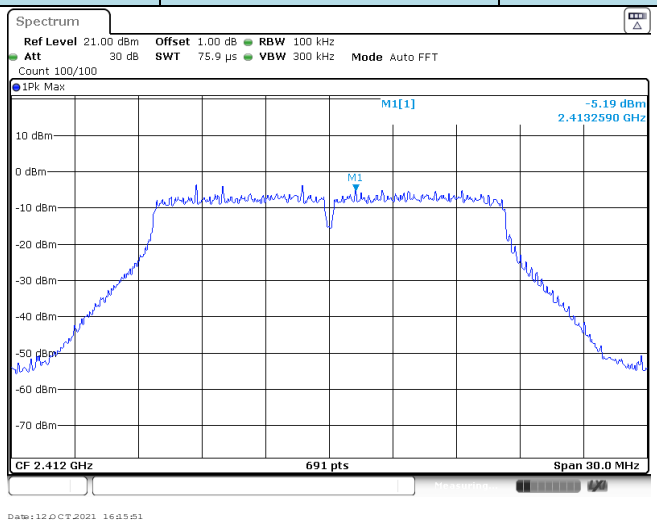
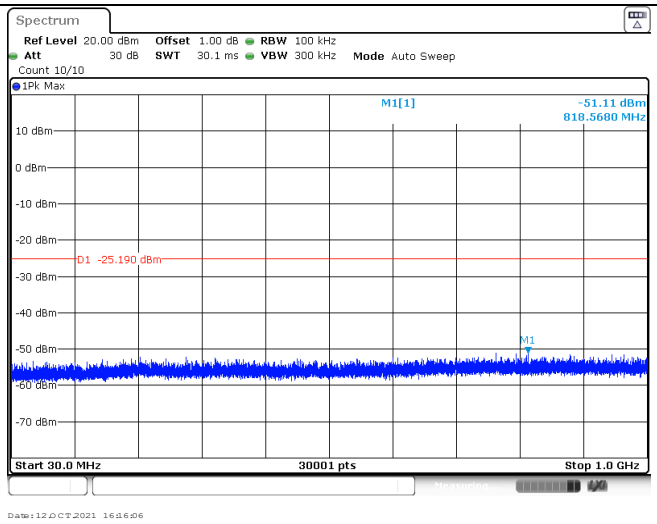
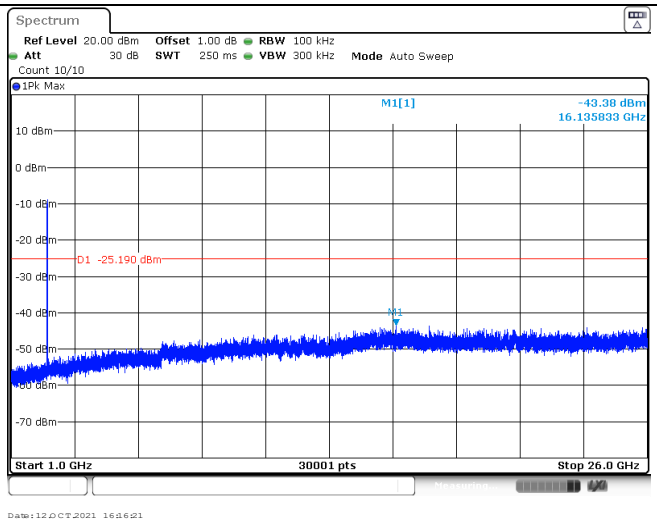
Test Item:	Bandedge	Type:	802.11 n(HT20)
CH01			
CH11			

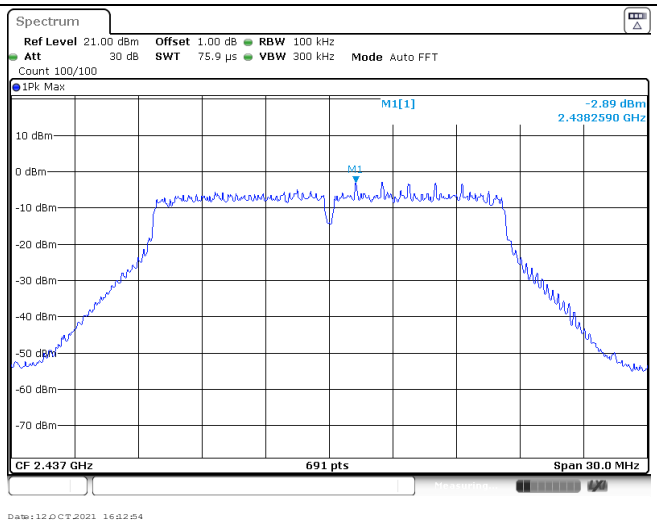
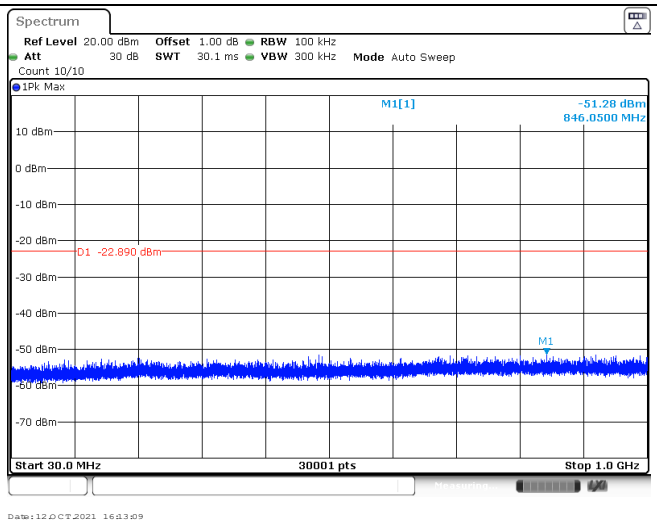
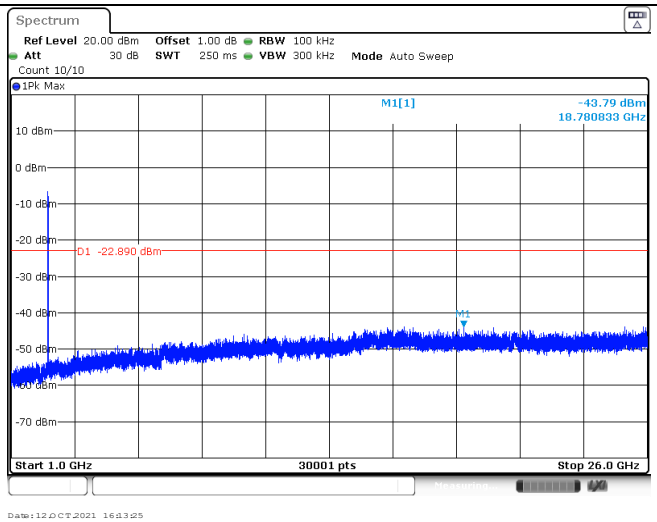
Test Item:	Bandedge	Type:	802.11 n(HT40)
CH03			
CH09			

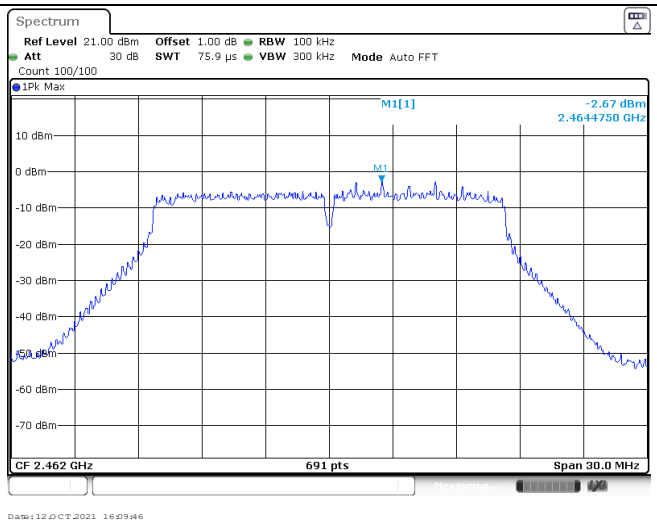
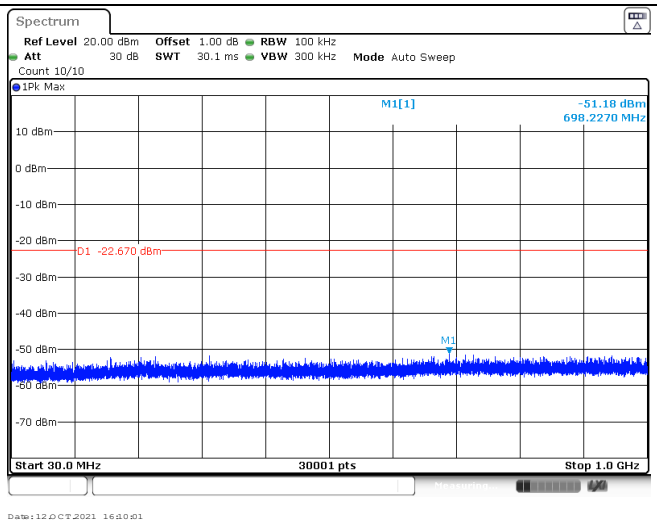
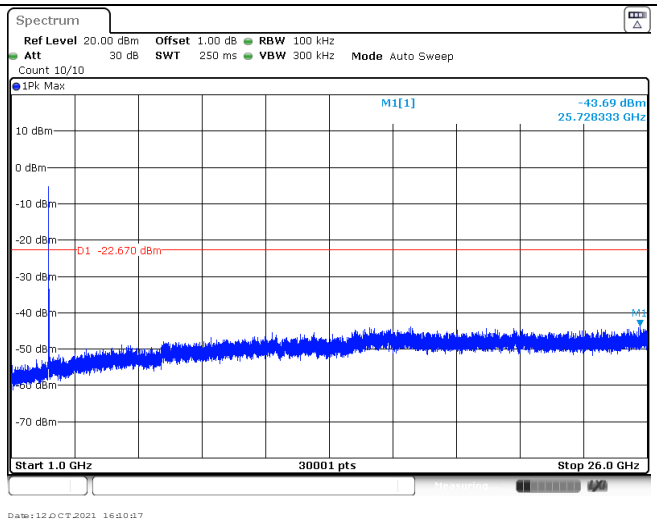
Test Item:	SE	Type:	802.11b
CH01 Reference level			
CH01 30MHz~1000MHz			
CH01 1GHz~26GHz			

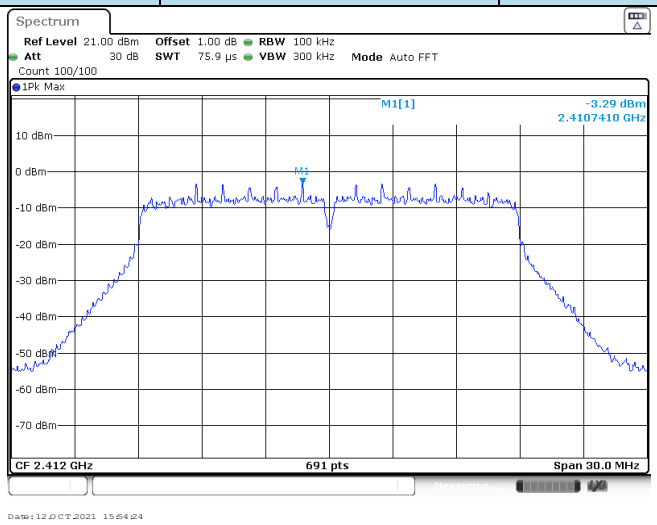
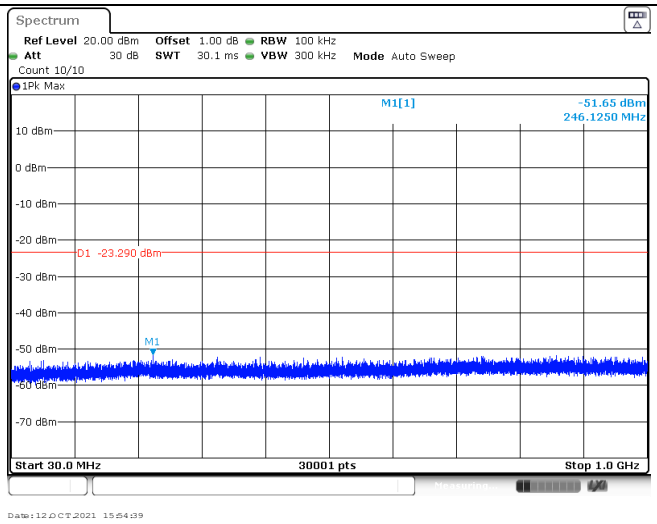
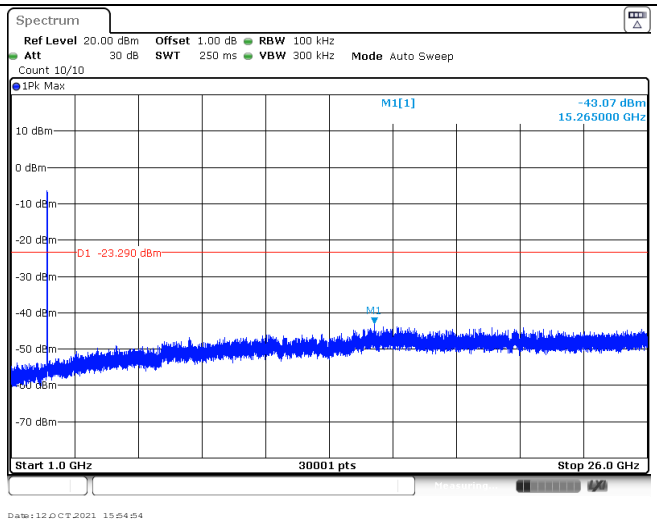
CH06 Reference level	
CH06 30MHz~1000MHz	
CH06 1GHz~26GHz	

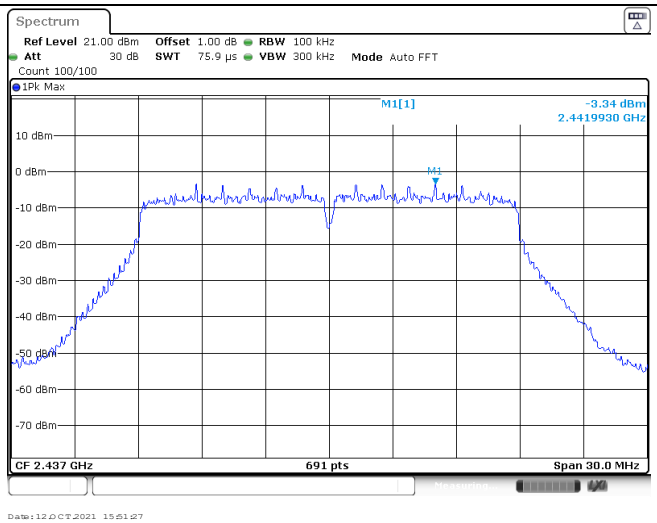
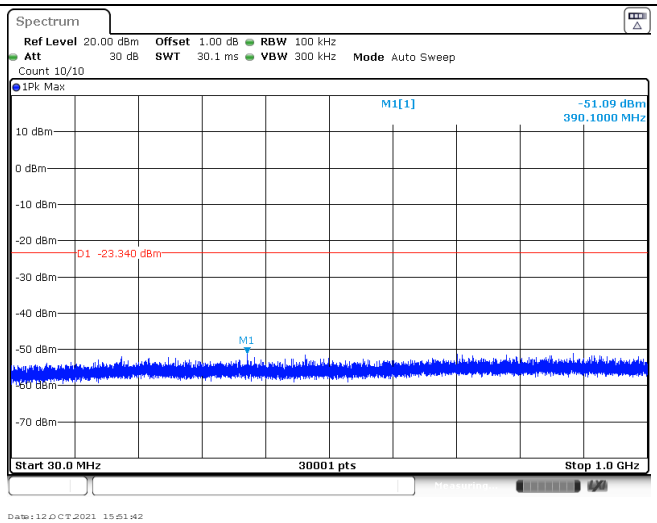
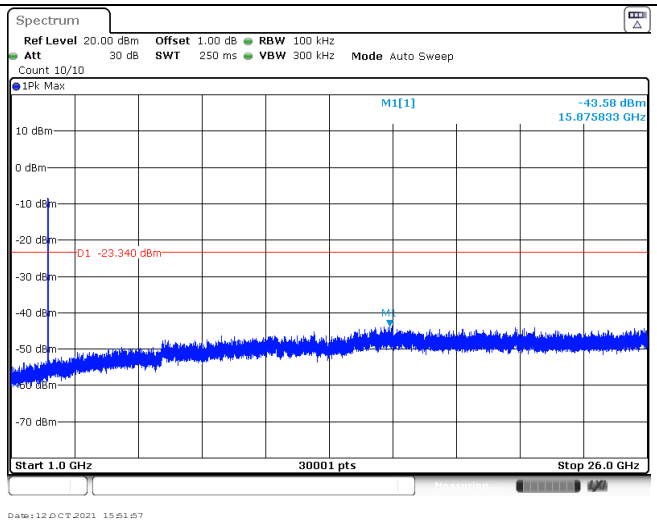
CH11 Reference level	
CH11 30MHz~1000MHz	
CH11 1GHz~26GHz	

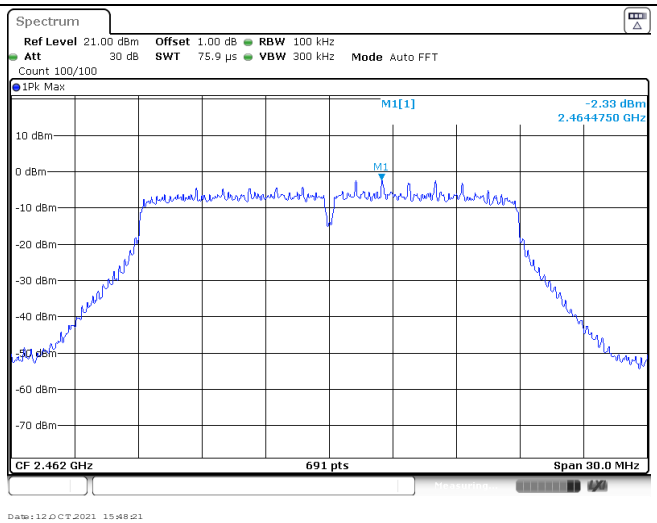
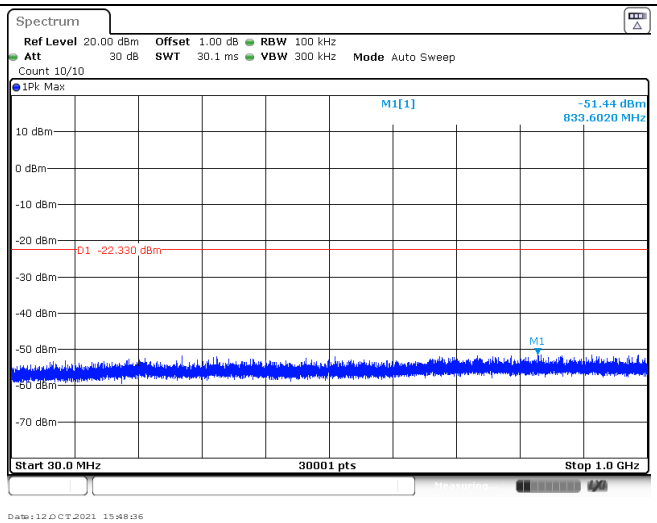
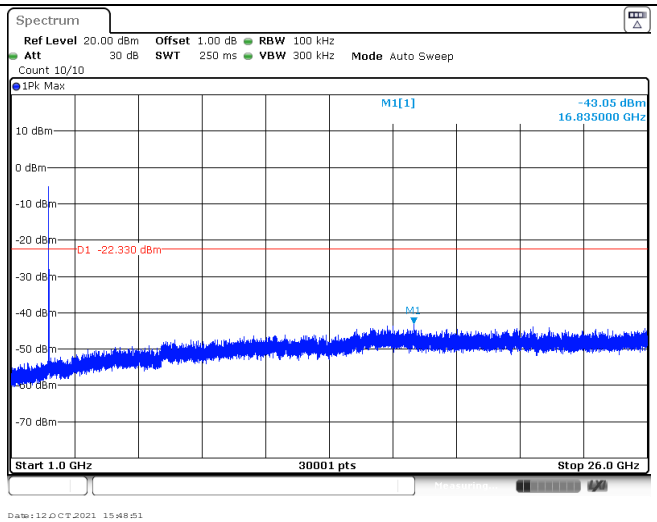
Test Item:	SE	Type:	802.11g
CH01 Reference level			
CH01 30MHz~1000MHz			
CH01 1GHz~26GHz			

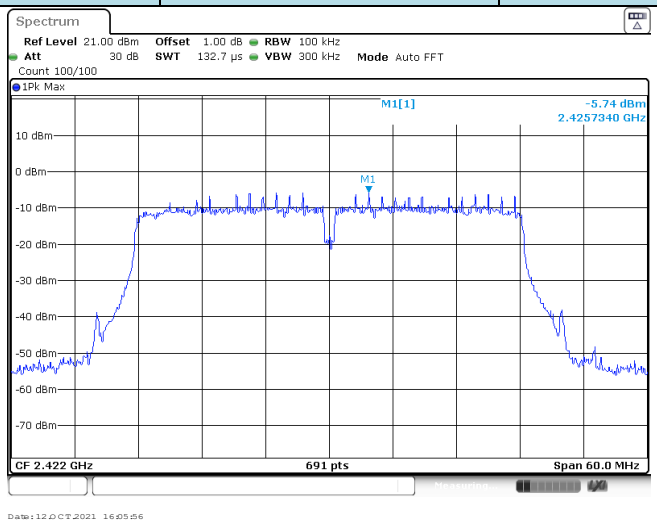
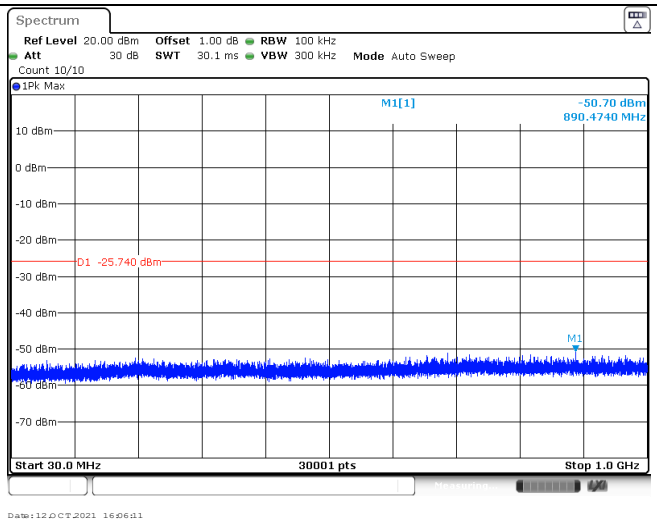
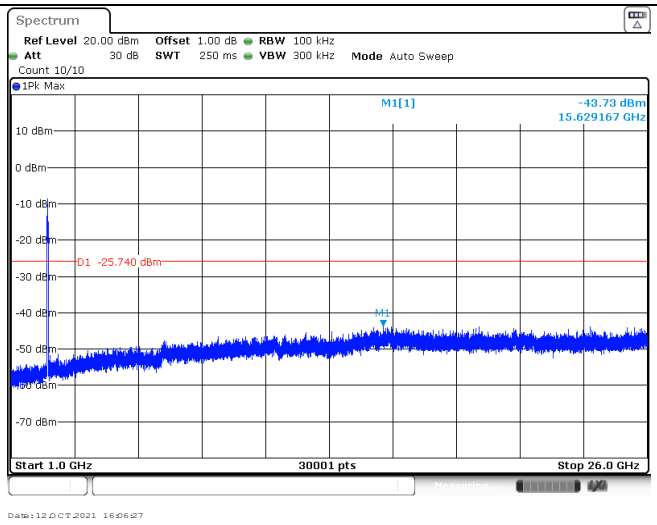
CH06 Reference level	
CH06 30MHz~1000MHz	
CH06 1GHz~26GHz	

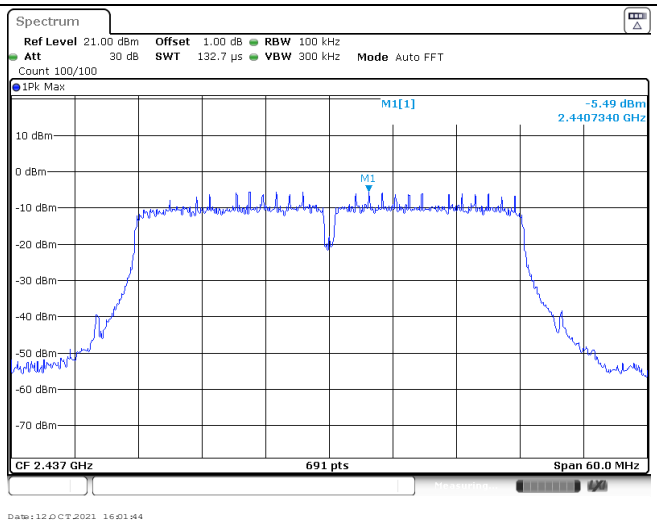
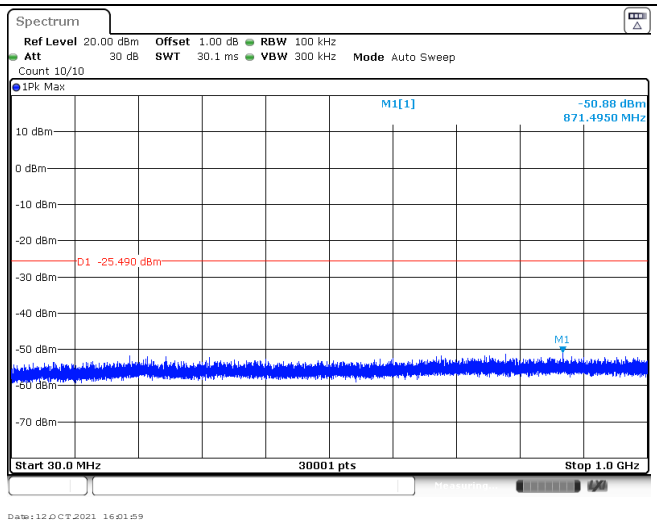
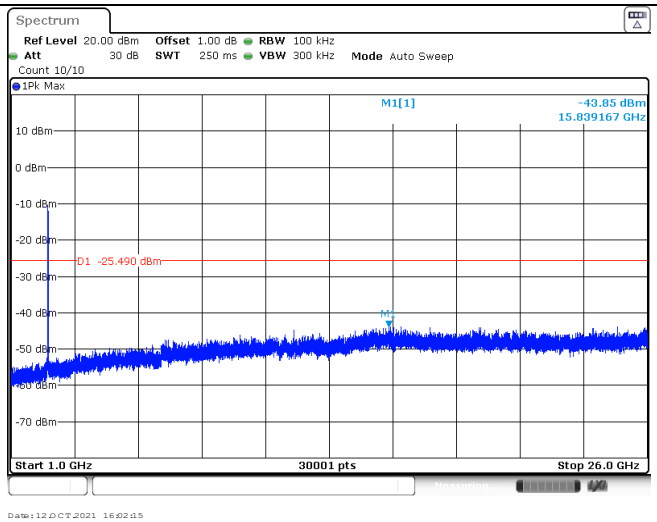
CH11 Reference level	
CH11 30MHz~1000MHz	
CH11 1GHz~26GHz	

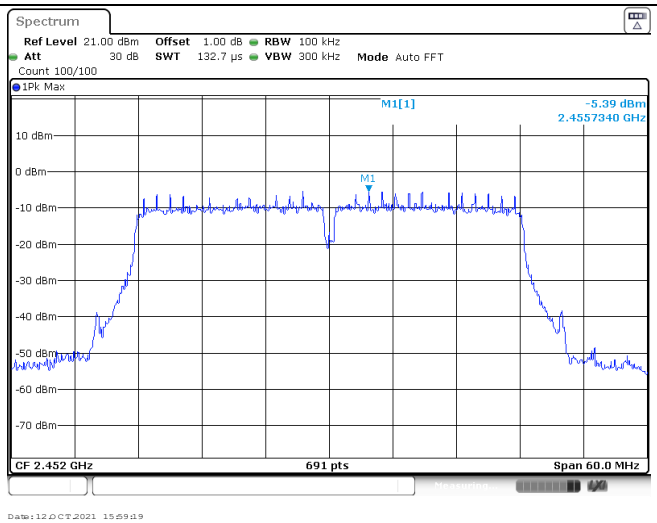
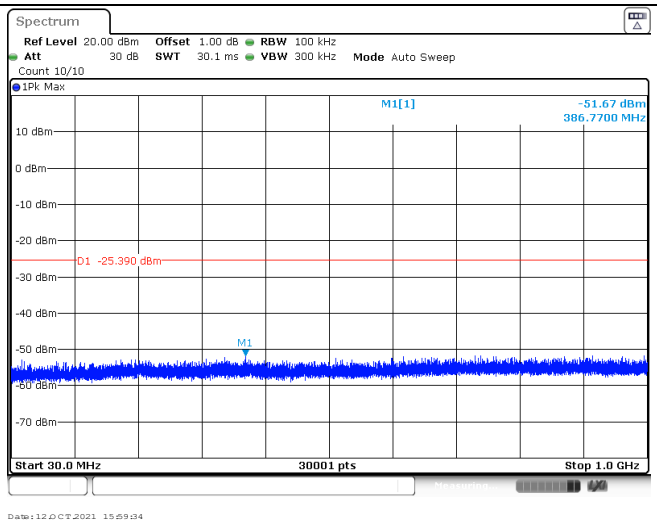
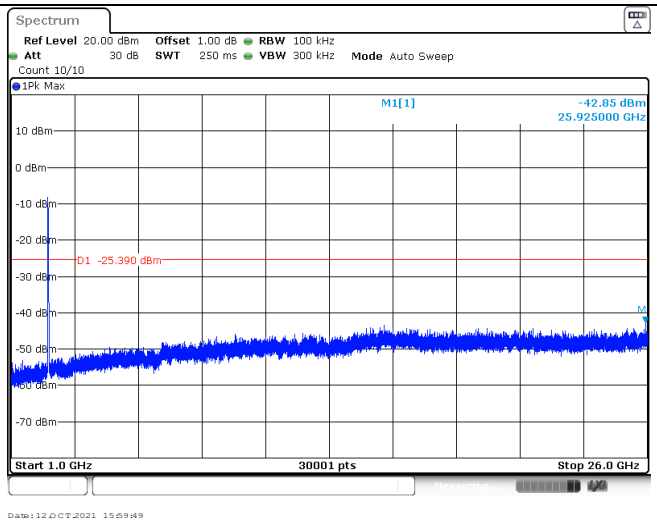
Test Item:	SE	Type:	802.11n(HT20)
CH01 Reference level			
CH01 30MHz~1000MHz			
CH01 1GHz~26GHz			

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 30MHz~1000MHz			
CH03 1GHz~26GHz			

CH06 Reference level	
CH06 30MHz~1000MHz	
CH06 1GHz~26GHz	

CH09 Reference level	
CH09 30MHz~1000MHz	
CH09 1GHz~26GHz	

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