APPENDIX REPORT

Project No.	SHT2208214102EW	Radio Specification	WIFI 2.4G
Test sample No.	YPHT22082141009	Model No.	SF650
Start test date	2022-11-23	Finish date	2022-11-24
Temperature	26.2℃	Humidity	61%
Test Engineer	Xiaoxiao Li	Auditor	Xiaodong Zhao

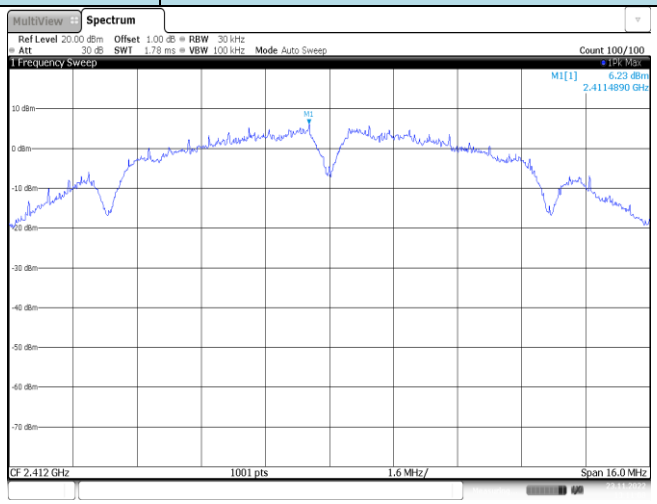
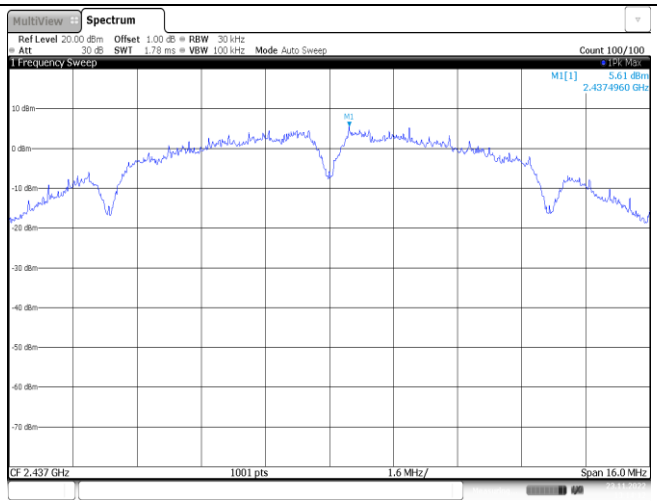
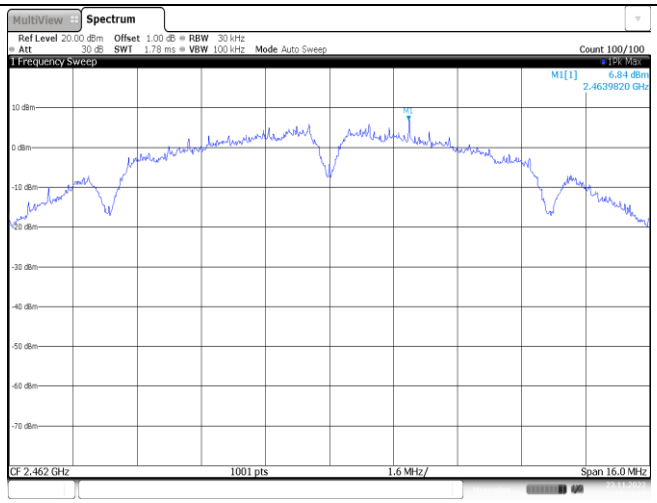
Appendix clause	Test item	Result
A	Conducted Peak Output Power	PASS
B	Power Spectral Density	PASS
C	6 dB Bandwidth	PASS
D	99% Occupied Bandwidth	PASS
E	Duty Cycle	PASS
F	Band edge and Spurious Emissions (conducted)	PASS

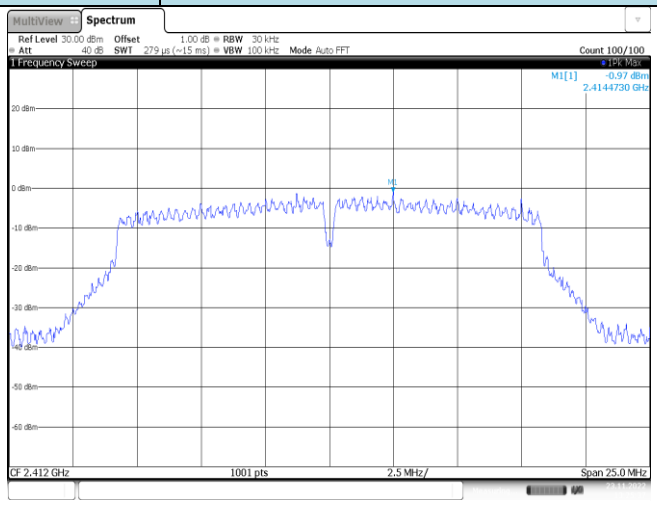
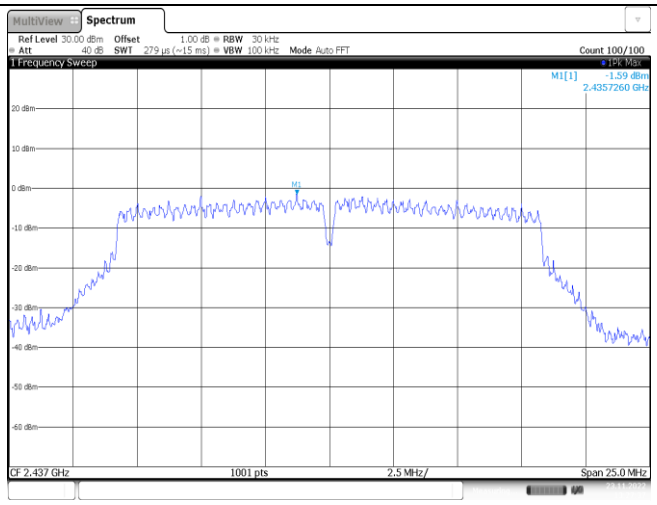
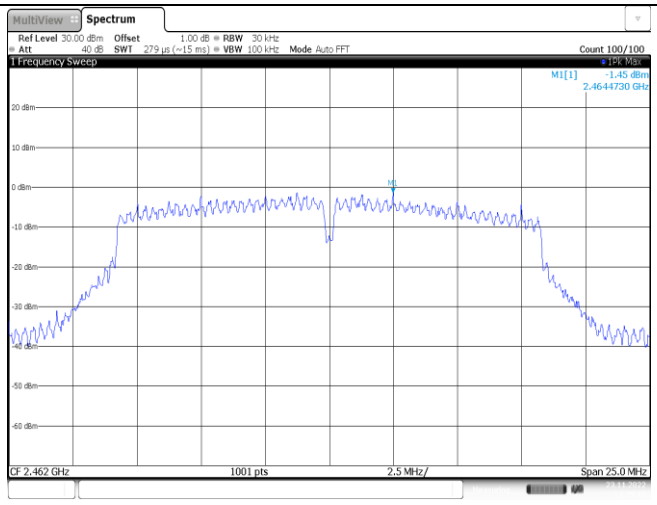
Appendix A: Conducted Peak Output Power

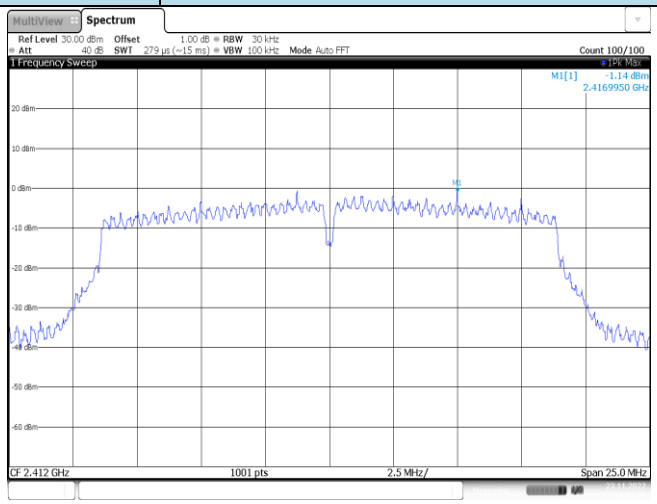
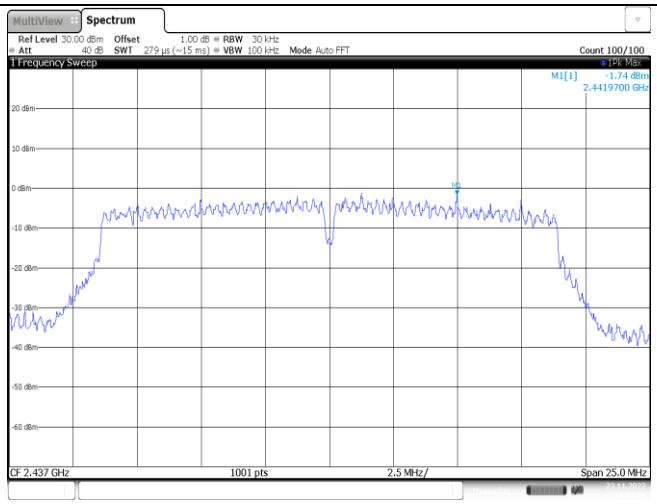
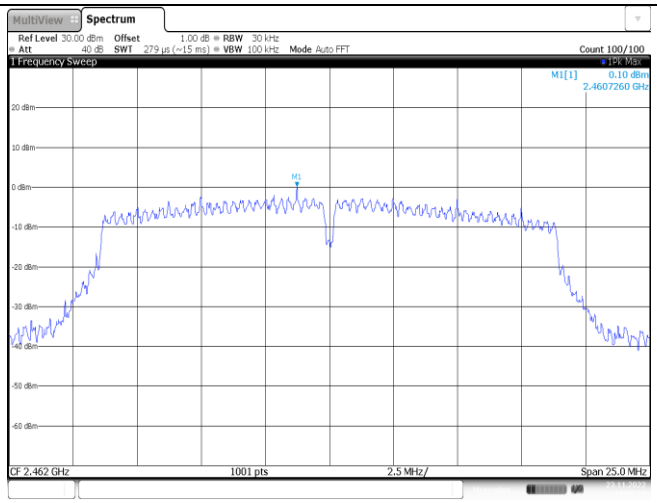
Type	Channel	Peak Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
802.11b	01	20.10	17.86	≤ 30.00	Pass
	06	20.34	17.89		
	11	20.13	17.72		
802.11g	01	23.00	20.37	≤ 30.00	Pass
	06	23.20	20.42		
	11	22.95	19.91		
802.11n (HT20)	01	23.07	20.21	≤ 30.00	Pass
	06	23.06	20.13		
	11	22.82	20.24		
802.11n(HT40)	03	23.53	20.46	≤ 30.00	Pass
	06	23.53	20.38		
	09	23.49	20.56		

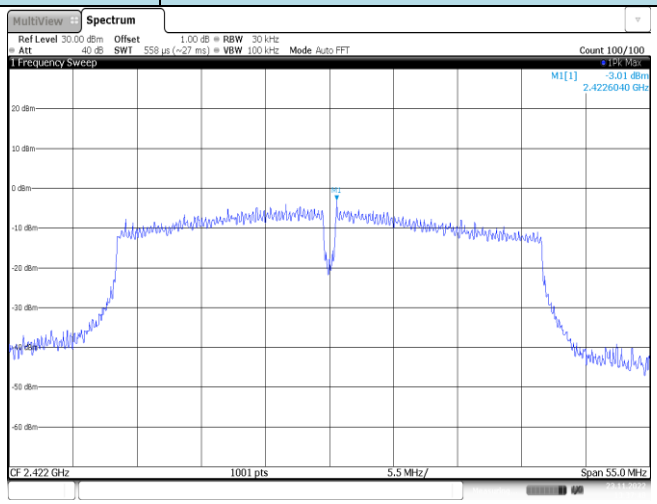
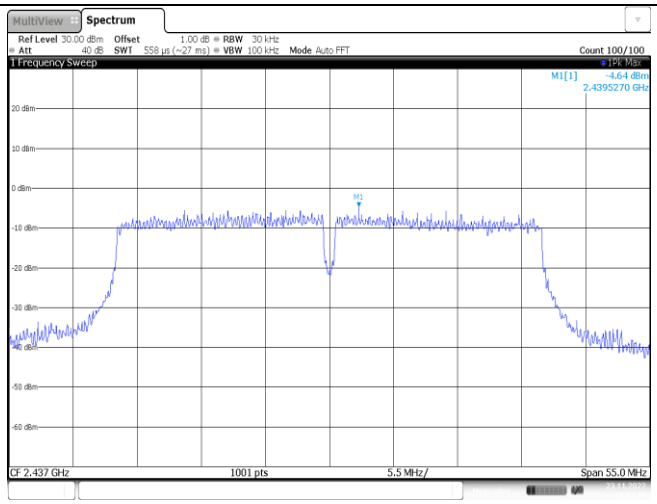
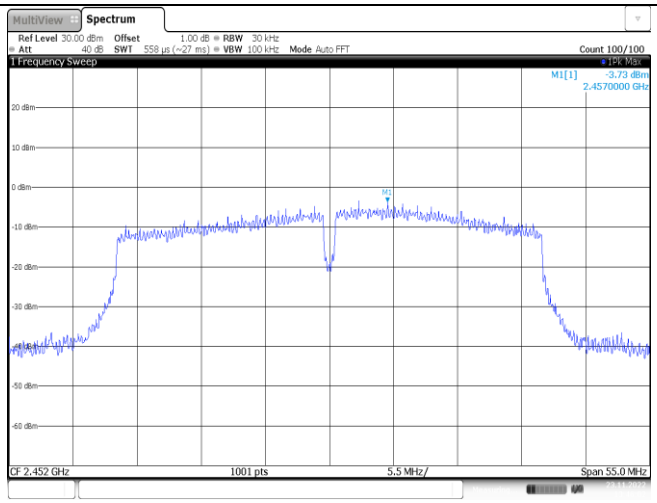
Appendix B：Power Spectral Density

Type	Channel	Power Spectral Density (dBm/30KHz)	Limit (dBm/3KHz)	Result
802.11b	01	6.23	≤8.00	Pass
	06	5.61		
	11	6.84		
802.11g	01	-0.97	≤8.00	Pass
	06	-1.59		
	11	-1.45		
802.11n(HT20)	01	-1.14	≤8.00	Pass
	06	-1.74		
	11	0.10		
802.11n(HT40)	03	-3.01	≤8.00	Pass
	06	-4.64		
	09	-3.73		

Type:	802.11 b
CH01	
CH06	
CH11	

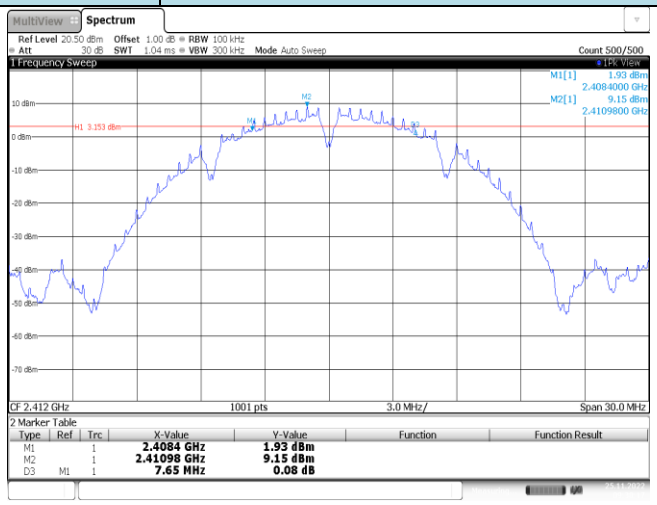
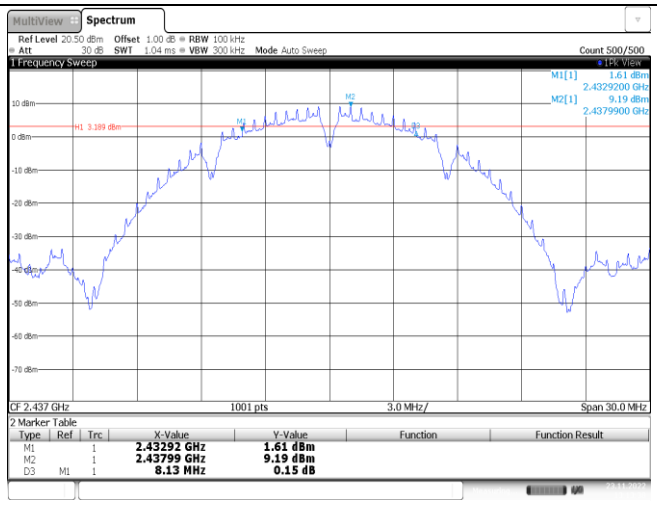
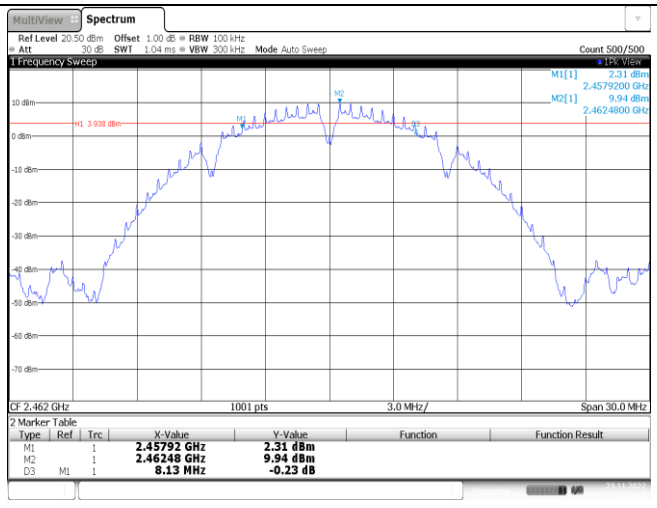
Type:	802.11 g
CH01	
CH06	
CH11	

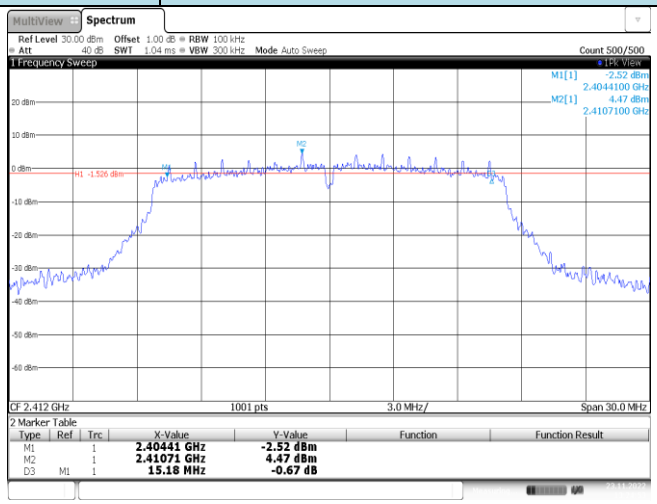
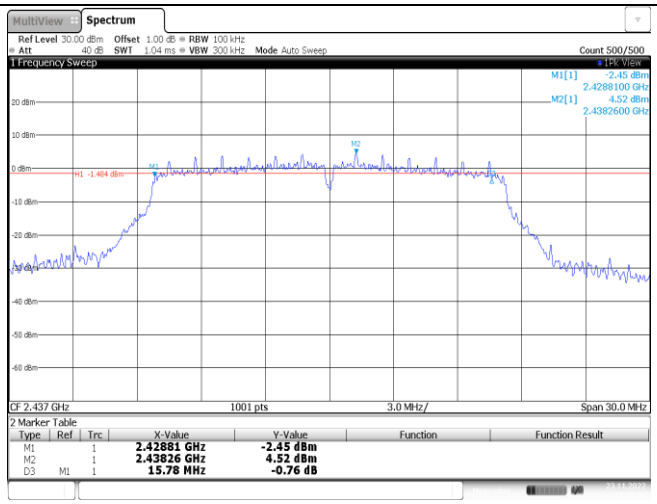
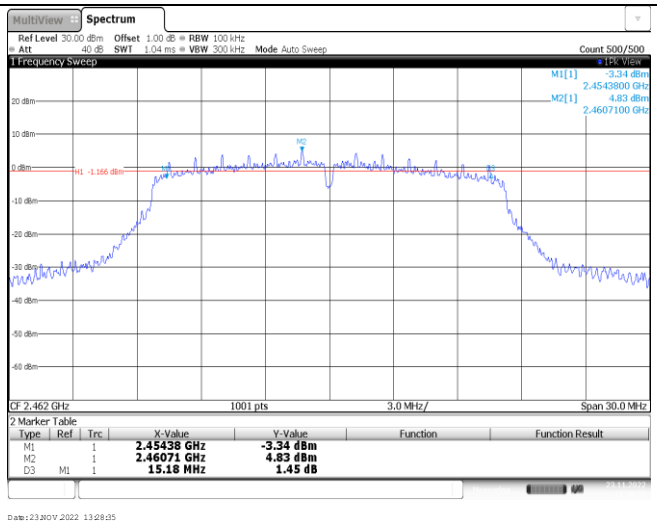
Type:	802.11n(HT20)
CH01	
CH06	
CH11	

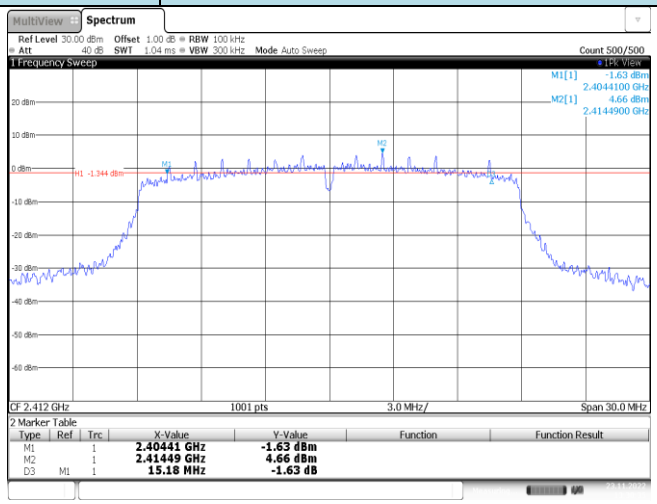
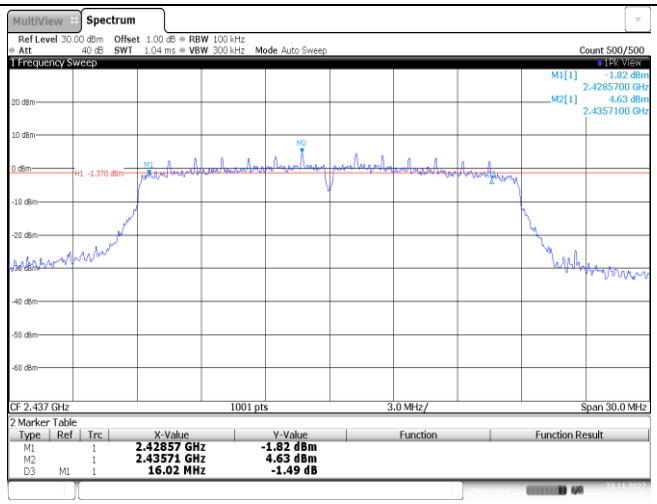
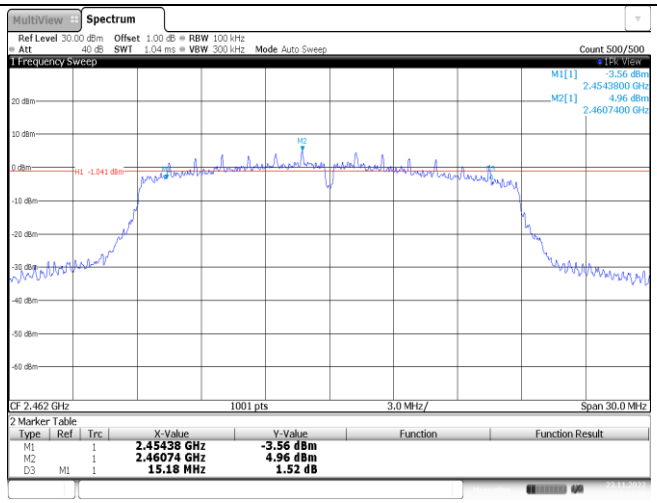
Type:	802.11n(HT40)
CH03	
CH06	
CH09	

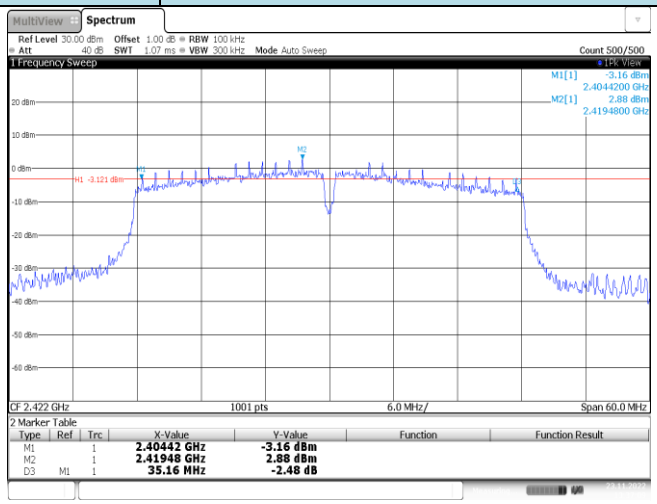
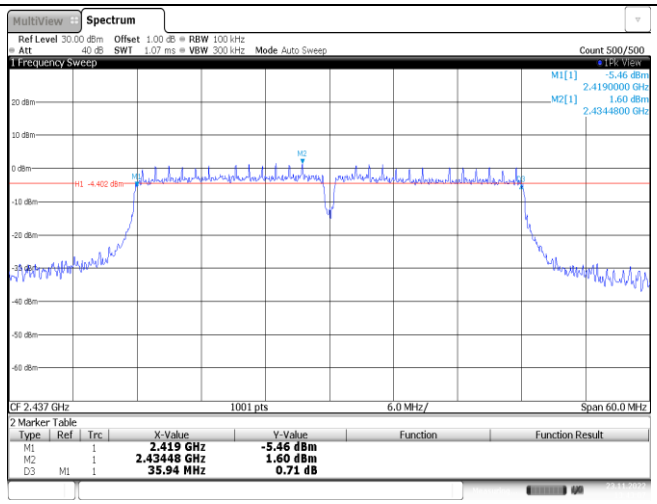
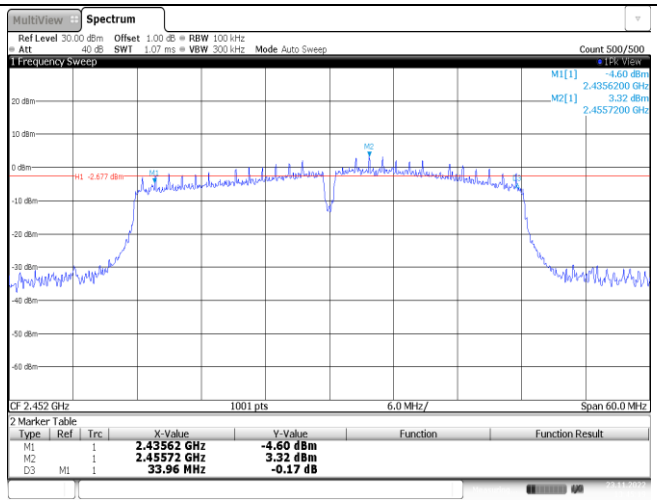
Appendix C：6dB bandwidth

Type	Channel	6dB Bandwidth (MHz)	Limit (MHz)	Result
802.11b	01	7.65	≥0.5	Pass
	06	8.13		
	11	8.13		
802.11g	01	15.18	≥0.5	Pass
	06	15.78		
	11	15.18		
802.11n(HT20)	01	15.18	≥0.5	Pass
	06	16.02		
	11	15.18		
802.11n(HT40)	03	35.16	≥0.5	Pass
	06	35.94		
	09	33.96		

Type:	802.11 b
CH01	
CH06	
CH11	

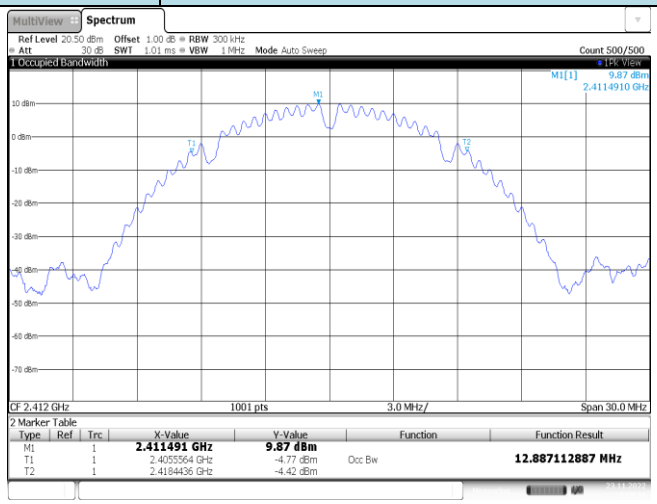
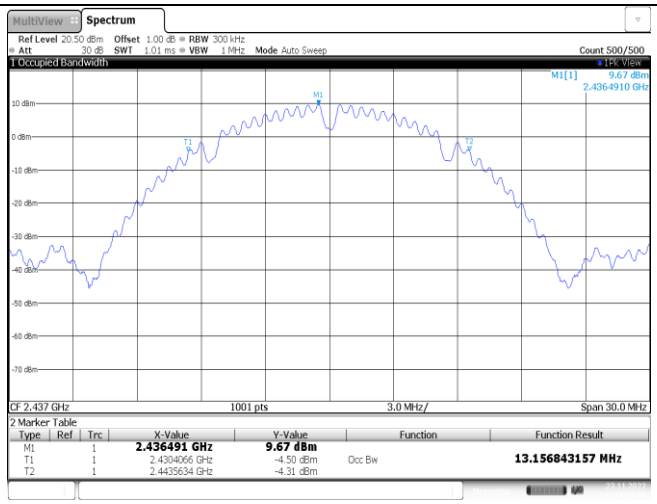
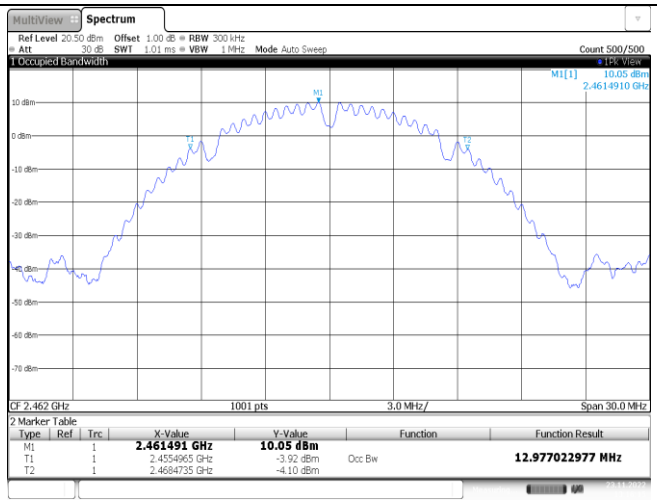
Type:	802.11 g
CH01	
CH06	
CH11	

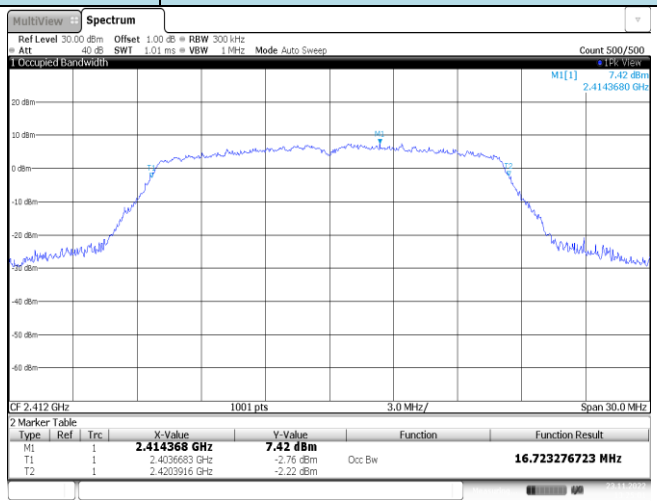
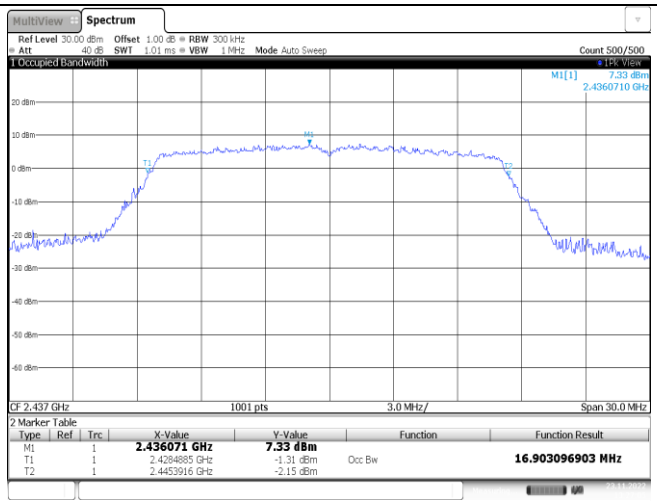
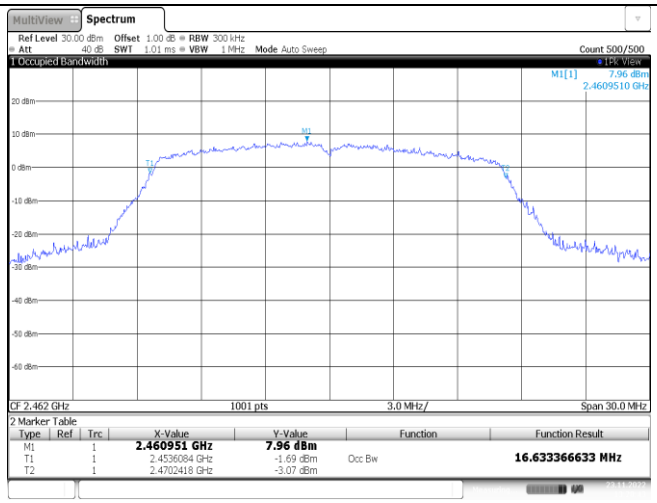
Type:	802.11n(HT20)
CH01	
CH06	
CH11	

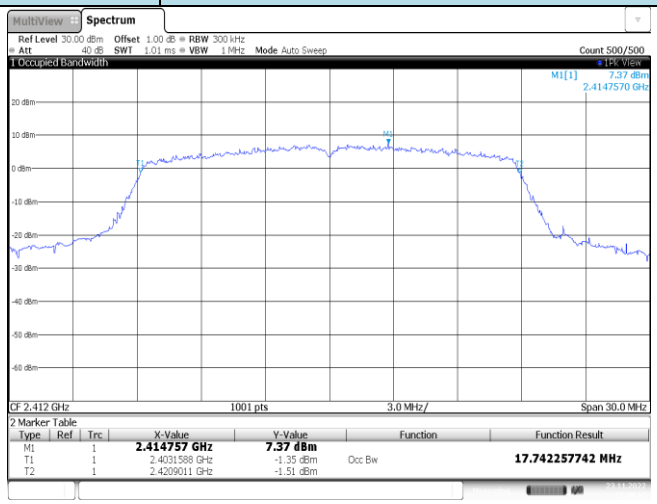
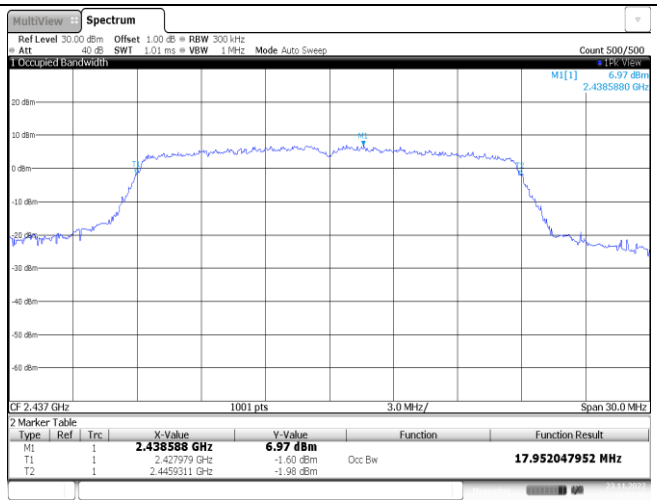
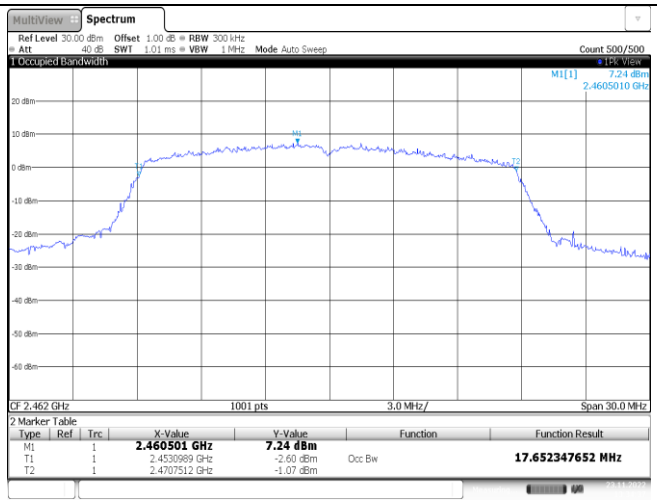
Type:	802.11n(HT40)
CH03	
CH06	
CH09	

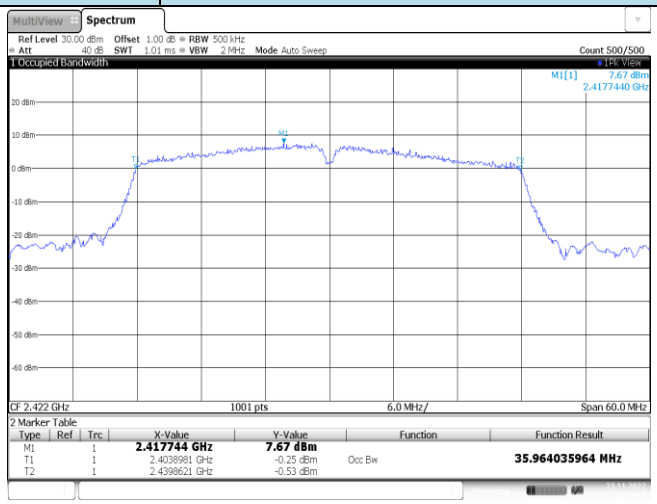
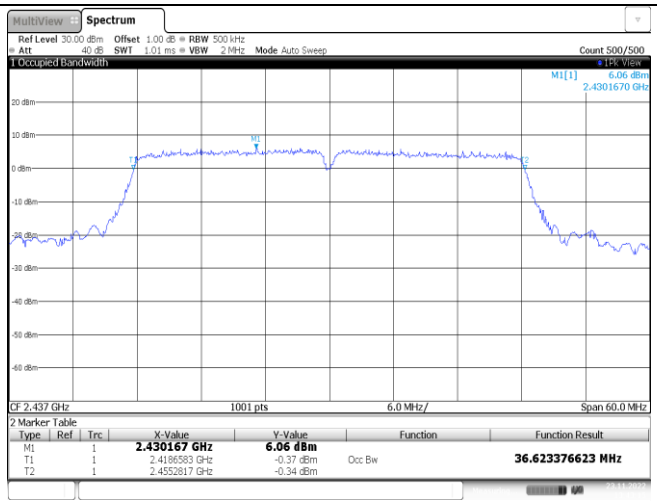
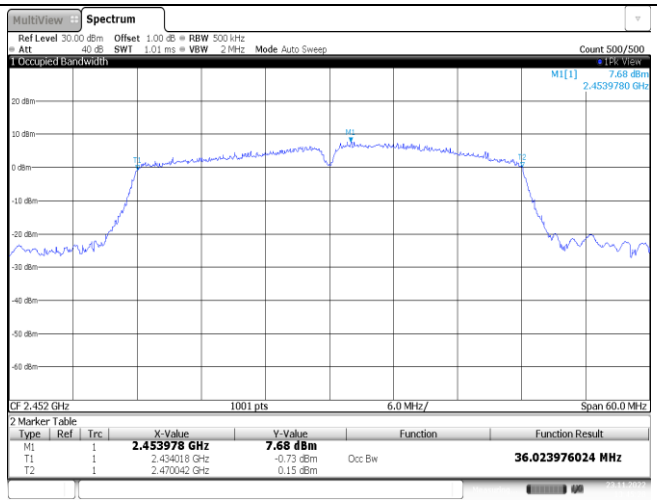
Appendix D：99% Occupied Bandwidth

Type	Channel	99% Bandwidth (MHz)	Limit (kHz)	Result
802.11b	01	12.89	-	Pass
	06	13.16		
	11	12.98		
802.11g	01	16.72	-	Pass
	06	16.90		
	11	16.63		
802.11n(HT20)	01	17.74	-	Pass
	06	17.95		
	11	17.65		
802.11n(HT40)	03	35.96	-	Pass
	06	36.62		
	09	36.02		

Type:	802.11 b
CH01	
CH06	
CH11	

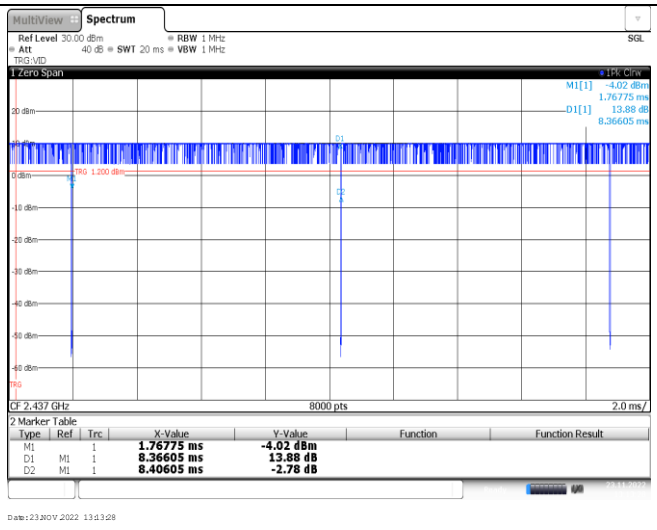
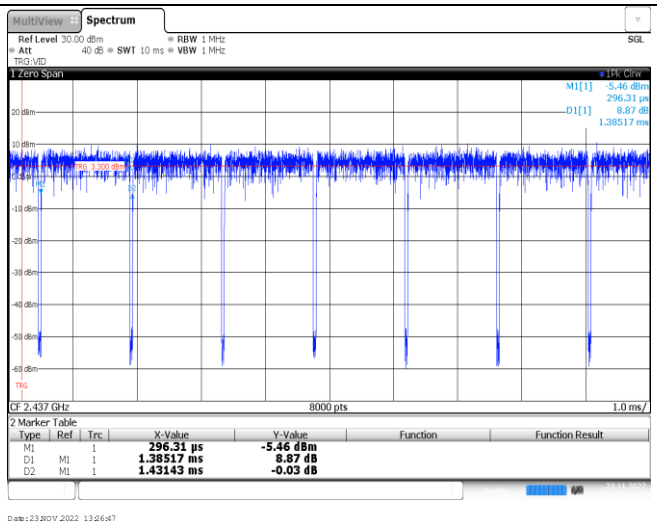
Type:	802.11 g
CH01	
CH06	
CH11	

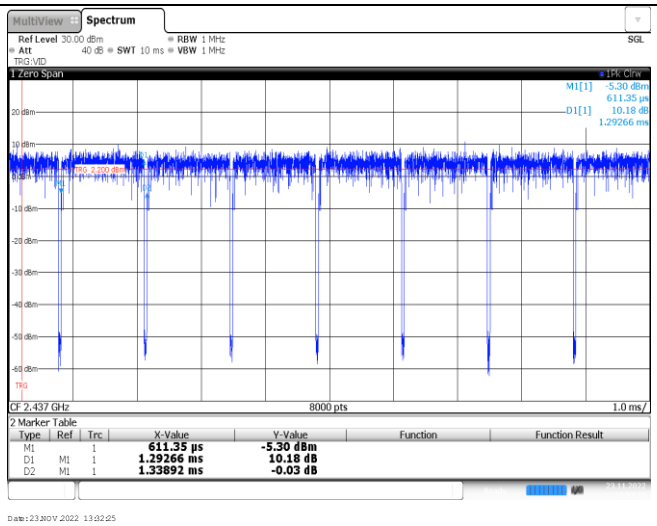
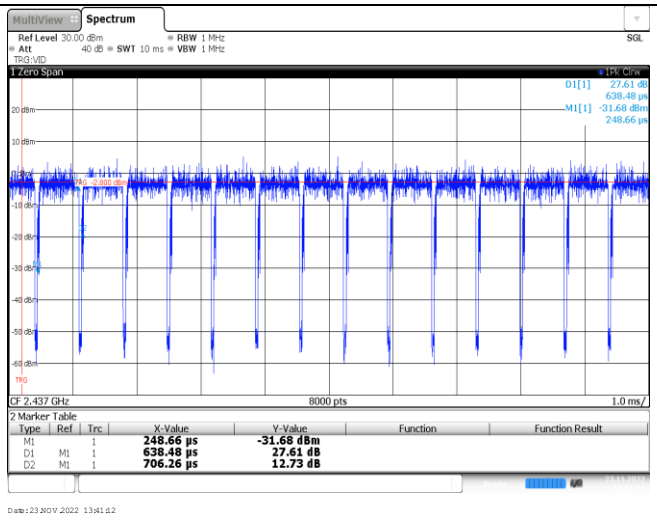
Type:	802.11n(HT20)
CH01	
CH06	
CH11	

Type:	802.11n(HT40)
CH03	
CH06	
CH09	

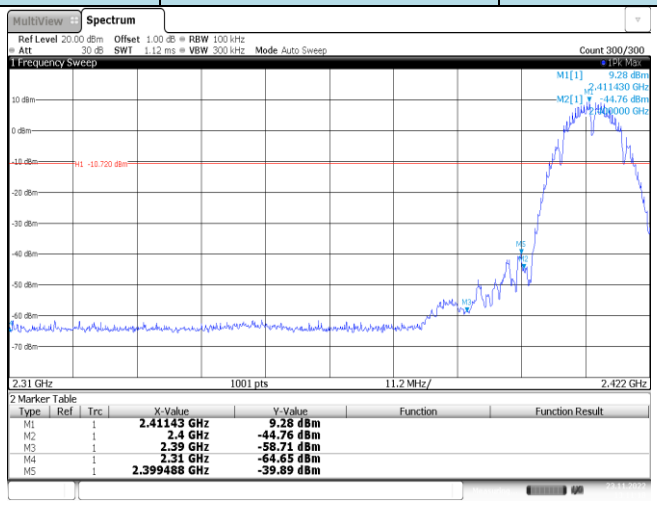
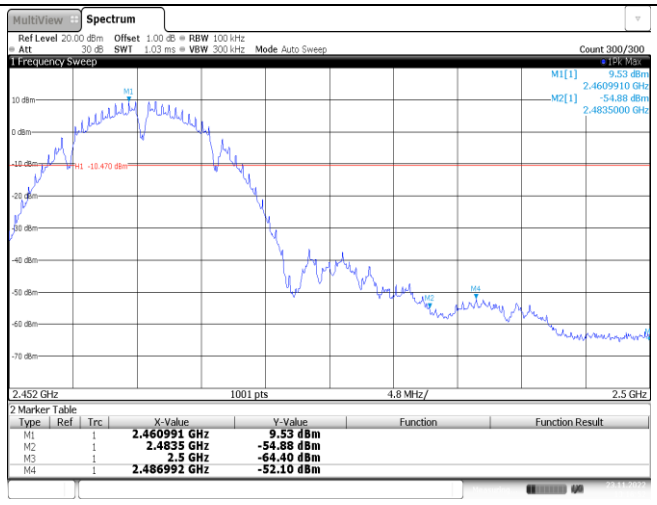
Appendix E：Duty Cycle

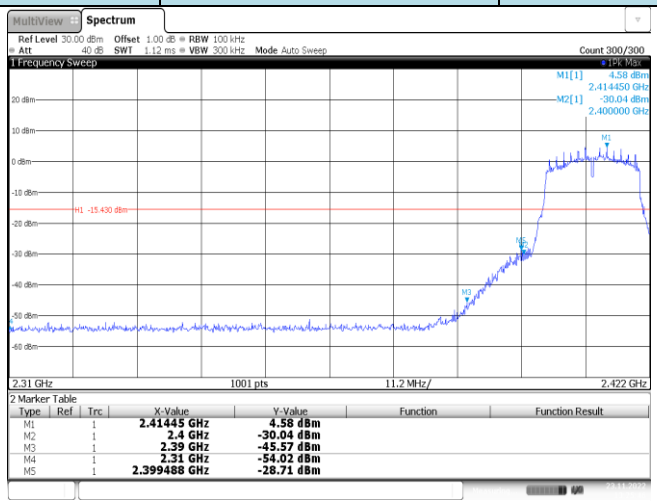
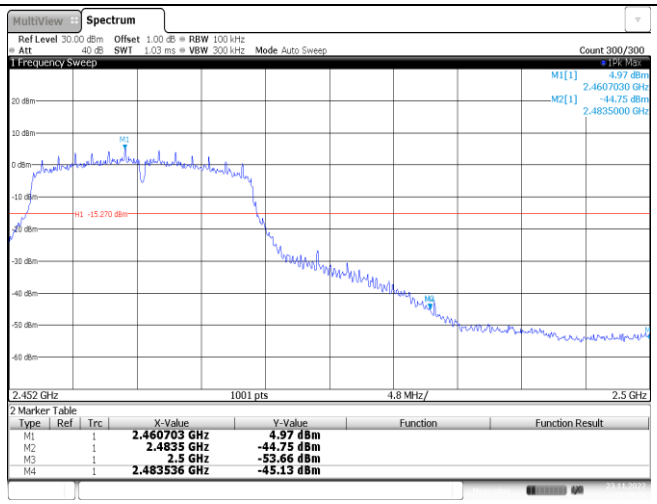
Modulation Type	Test Frequency（MHz）	$T_{on\ time}$ for single burst (ms)	T_{period} (ms)	Duty cycle	$1/T_{on\ time}$ (kHz)
11b	2437	8.37	8.41	99.5%	0.1
11g	2437	1.39	1.43	97.2%	0.7
11n20	2437	1.29	1.34	96.3%	0.8
11n40	2437	0.64	0.71	90.1%	1.6

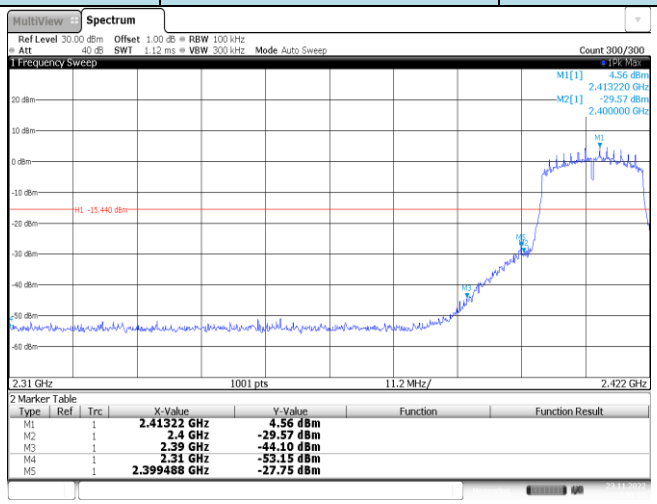
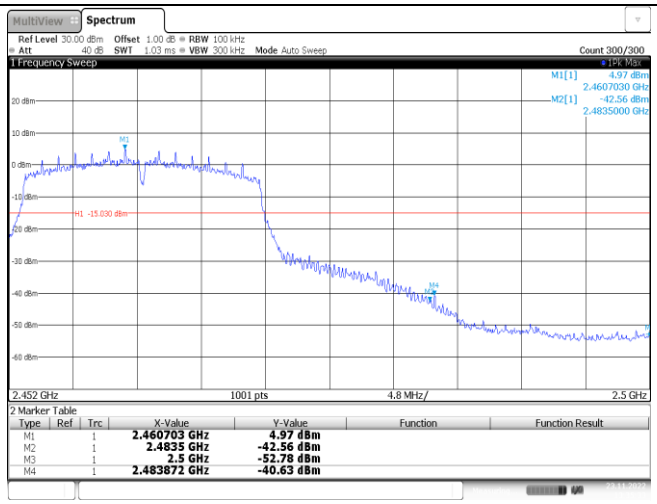
11b	
11g	

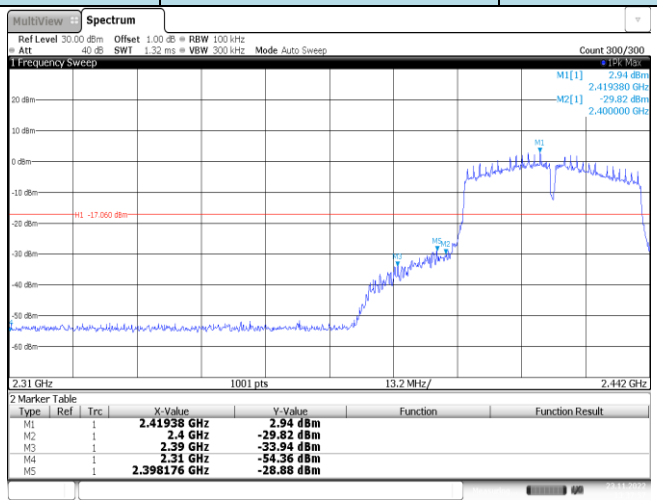
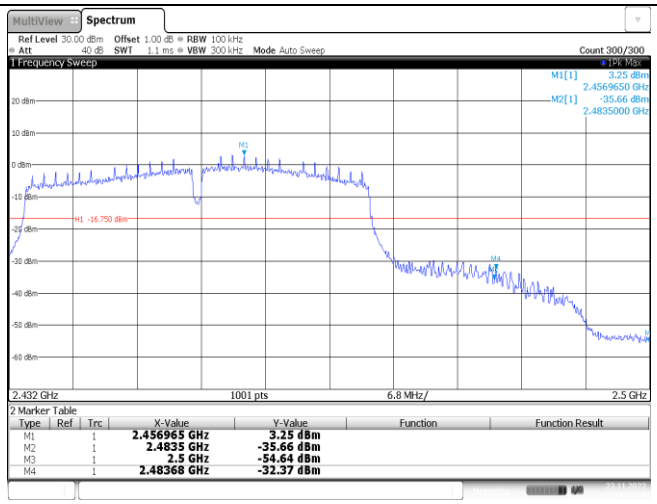
11n20	 MultiView Spectrum Ref Level 30.00 dBm RBW 1 MHz Att 40 dB SWT 10 ms VBW 1 MHz SGL TRG:VID 1 Zero Span 1Pk Clrw M1[1] -5.30 dBm 611.35 µs D1[1] 10.18 dB 1.29266 ms CF 2.437 GHz 8000 pts 1.0 ms/ 2 Marker Table Type Ref Trc X-Value Y-Value Function Function Result M1 1 611.35 µs -5.30 dBm D1 M1 1 1.29266 ms 10.18 dB D2 M1 1 1.33892 ms -0.03 dB Date: 23.NOV.2022 13:32:25
11n40	 MultiView Spectrum Ref Level 30.00 dBm RBW 1 MHz Att 40 dB SWT 10 ms VBW 1 MHz SGL TRG:VID 1 Zero Span 1Pk Clrw D1[1] 27.61 dB 638.48 µs M1[1] -31.68 dBm 248.66 µs CF 2.437 GHz 8000 pts 1.0 ms/ 2 Marker Table Type Ref Trc X-Value Y-Value Function Function Result M1 1 248.66 µs -31.68 dBm D1 M1 1 638.48 µs 27.61 dB D2 M1 1 706.26 µs 12.73 dB Date: 23.NOV.2022 13:41:12

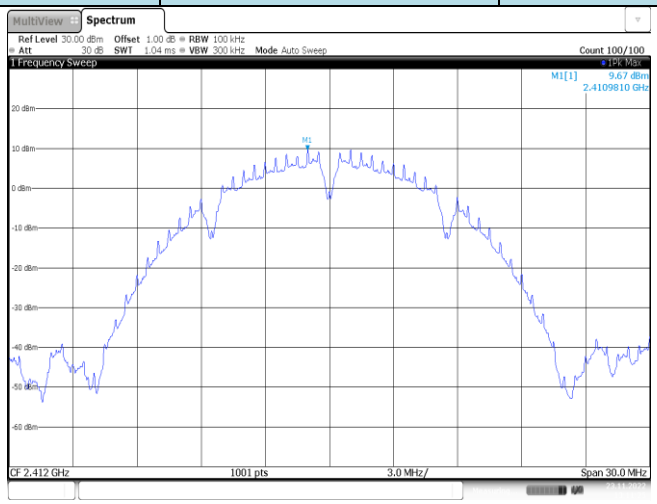
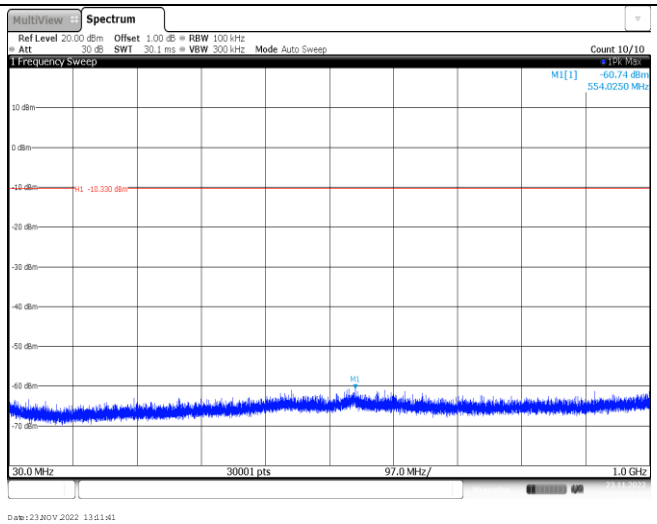
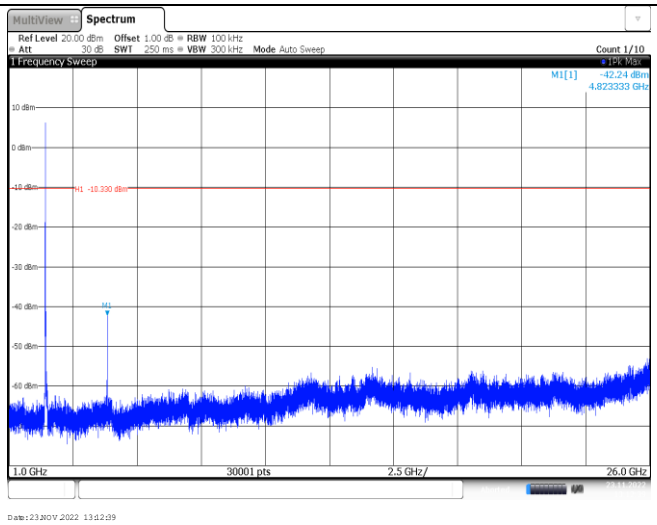
Appendix F：Band edge and Spurious Emissions (conducted)

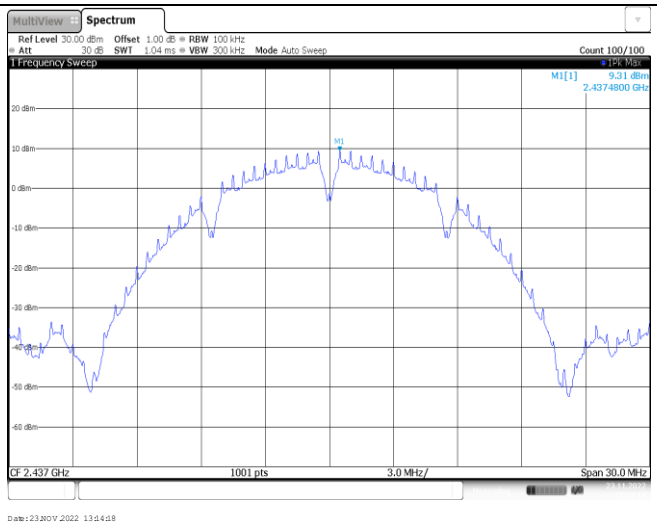
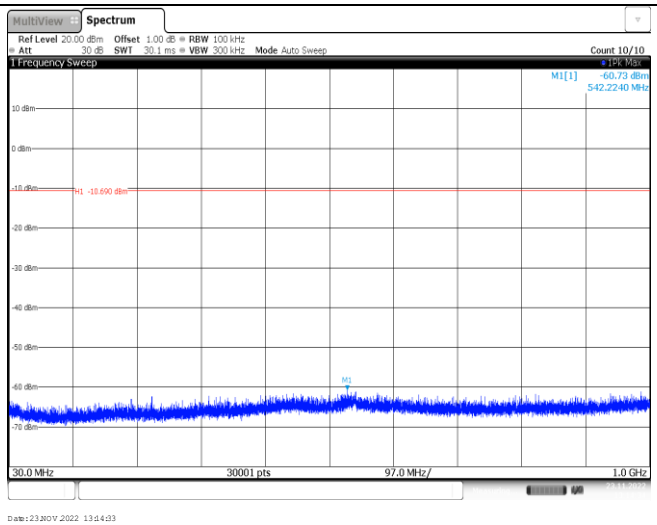
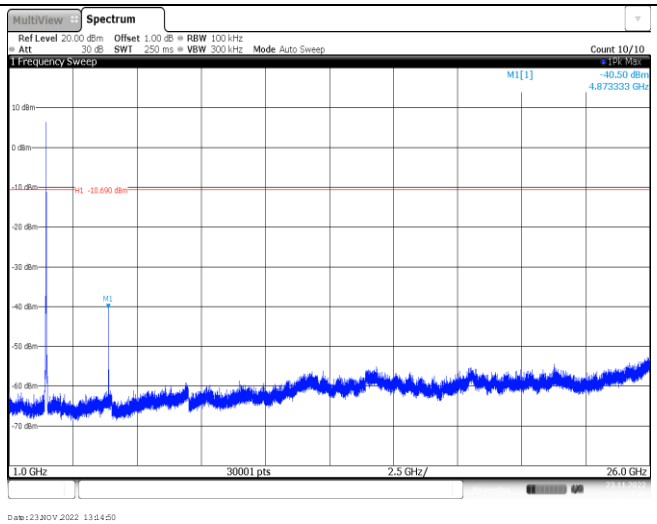
Test Item:	Bandedge	Type:	802.11 b
CH01			
CH11			

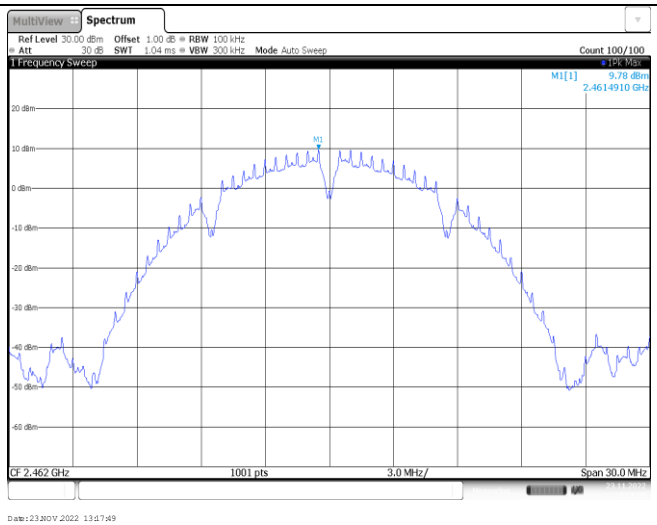
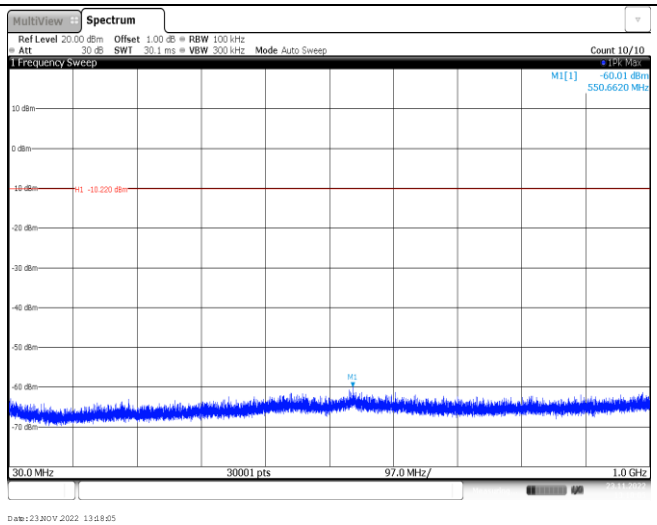
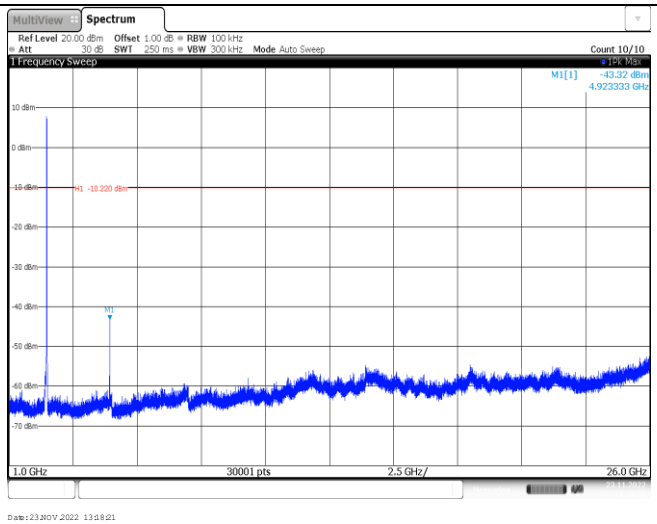
Test Item:	Bandedge	Type:	802.11 g
CH01			
CH11			

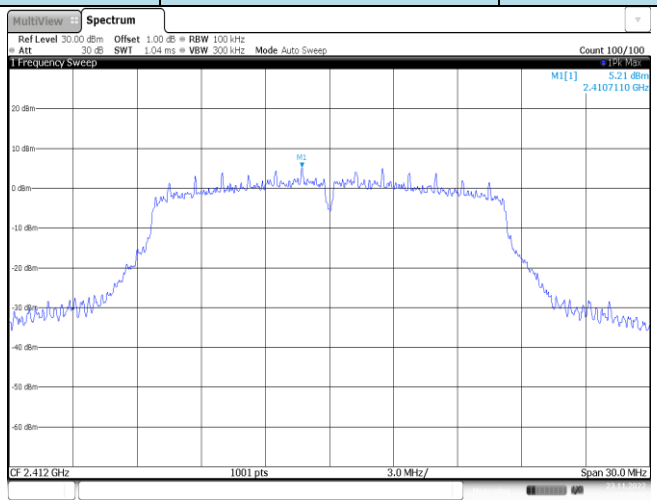
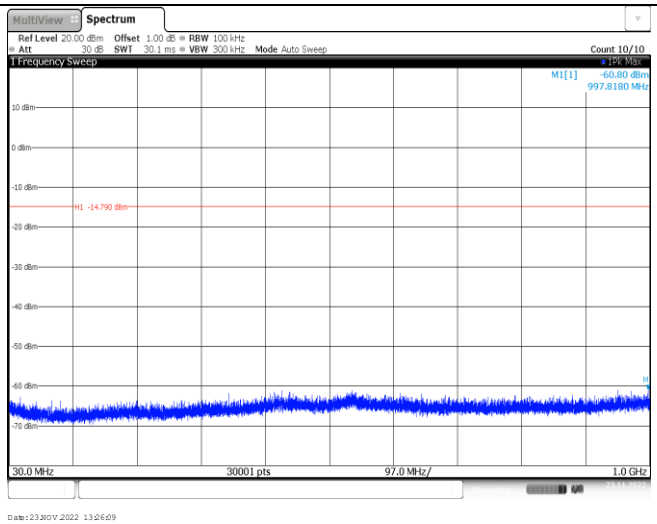
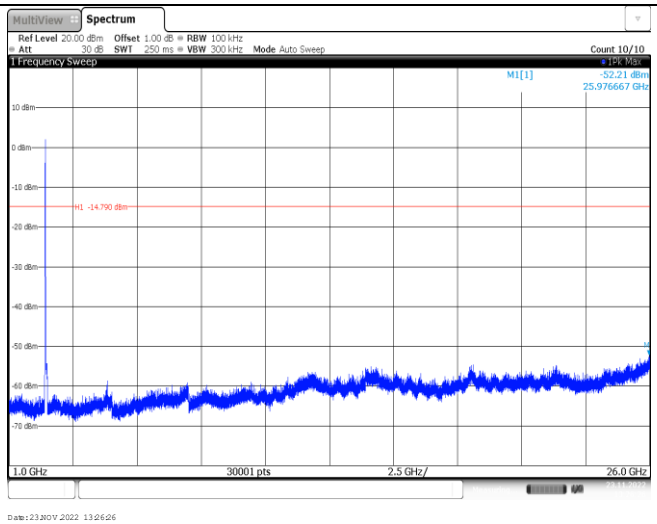
Test Item:	Bandedge	Type:	802.11 n(HT20)
CH01			
CH11			

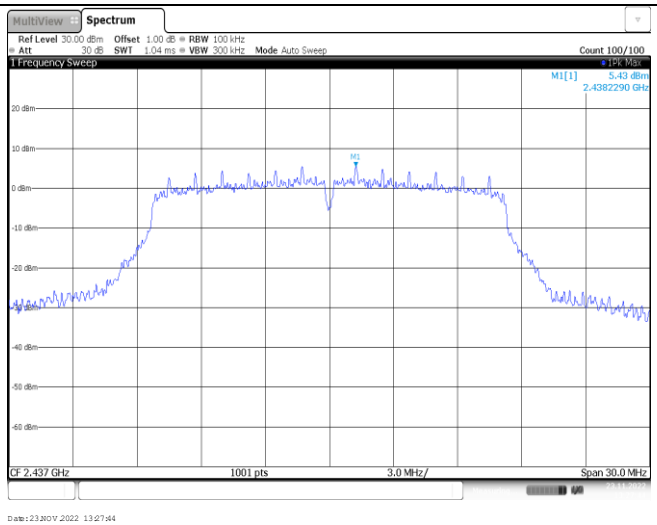
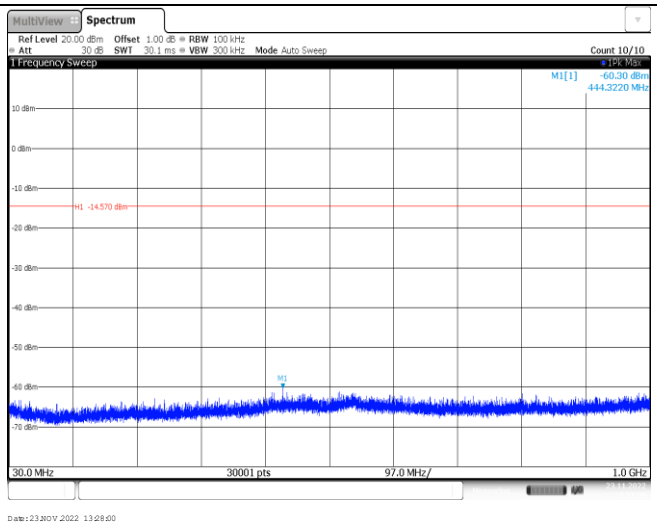
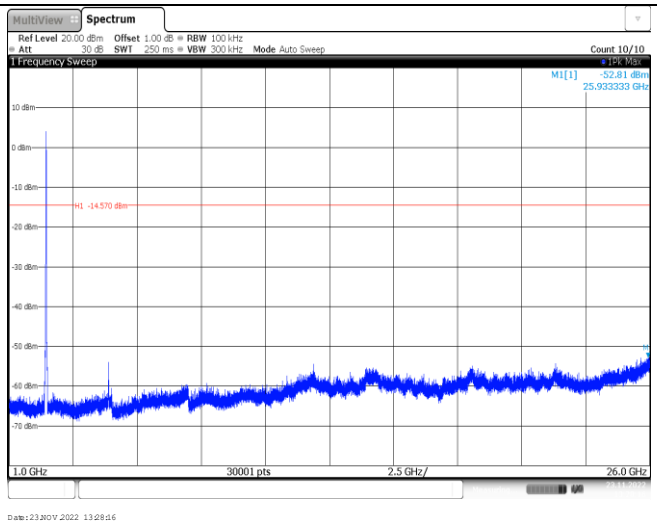
Test Item:	Bandedge	Type:	802.11 n(HT40)
CH03			
CH09			

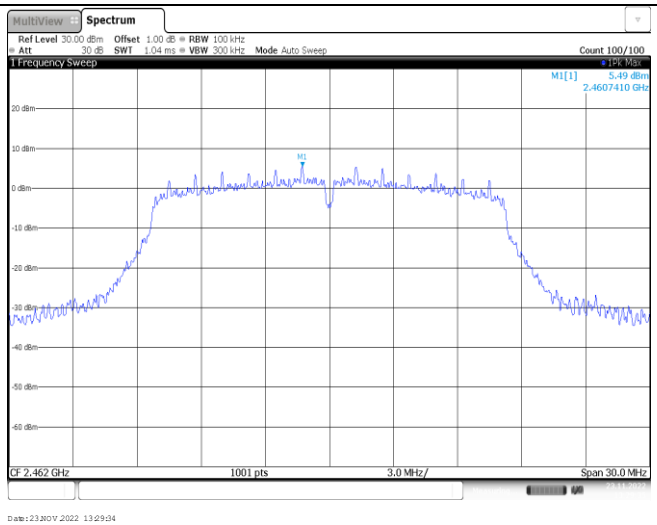
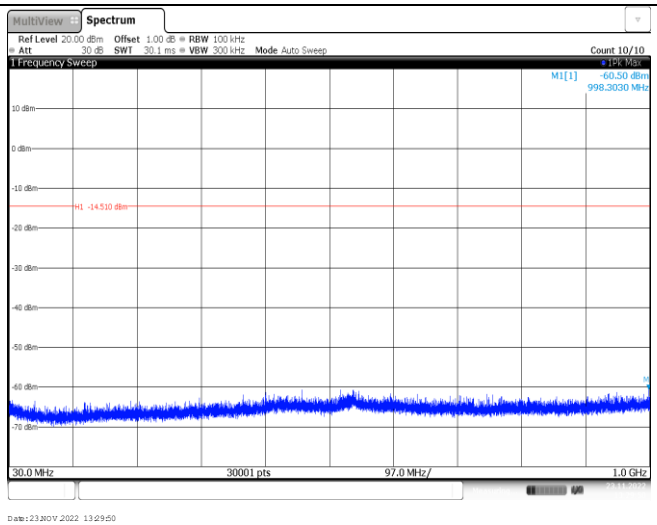
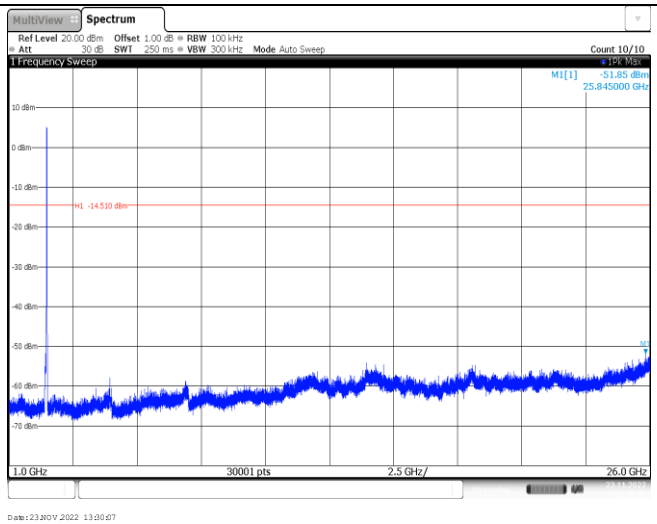
Test Item:	SE	Type:	802.11b
CH01 Reference level			
CH01 30MHz~1000MHz			
CH01 1GHz~26GHz			

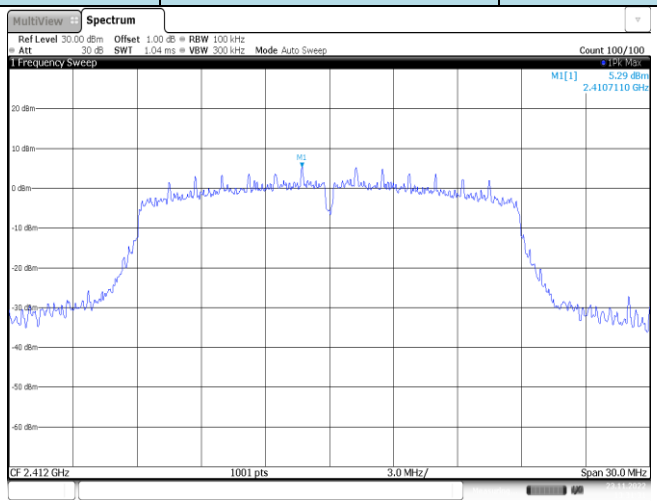
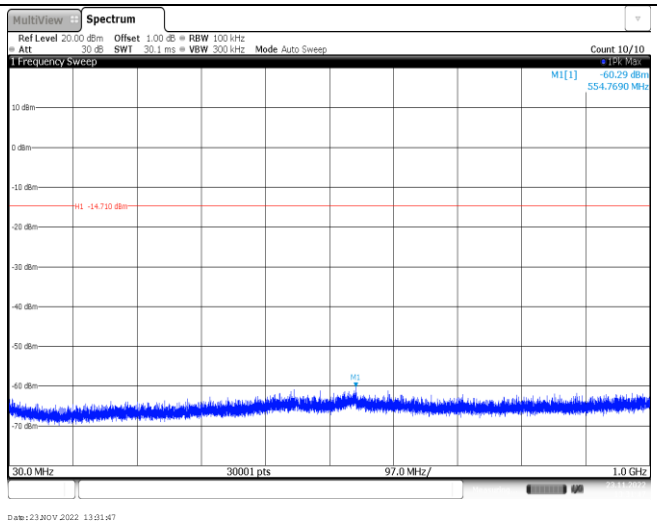
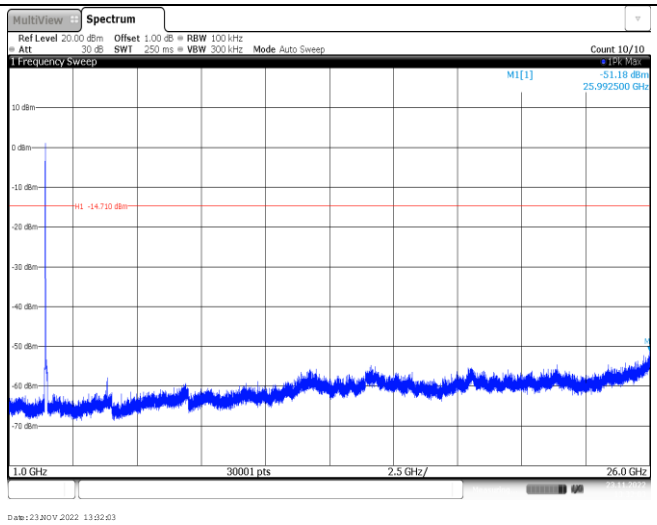
CH06 Reference level	
CH06 30MHz~1000MHz	
CH06 1GHz~26GHz	

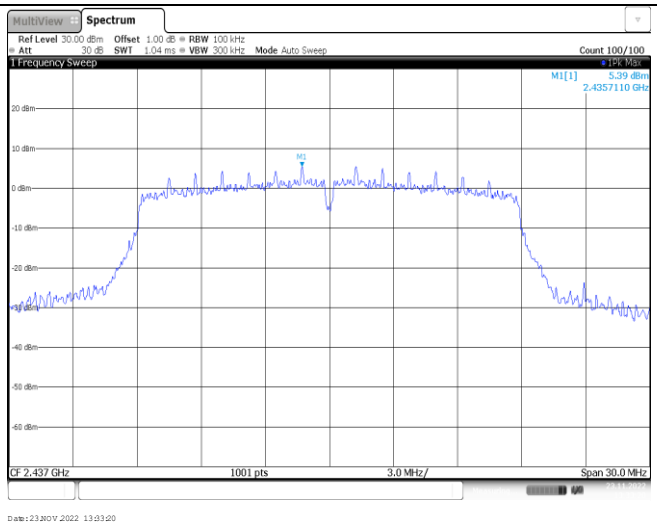
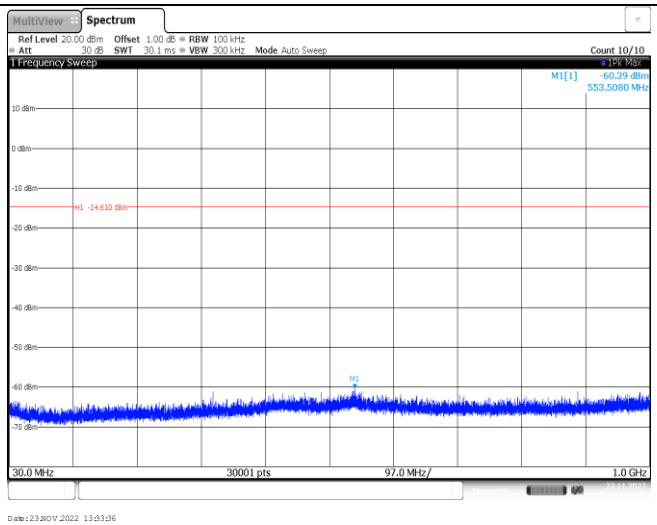
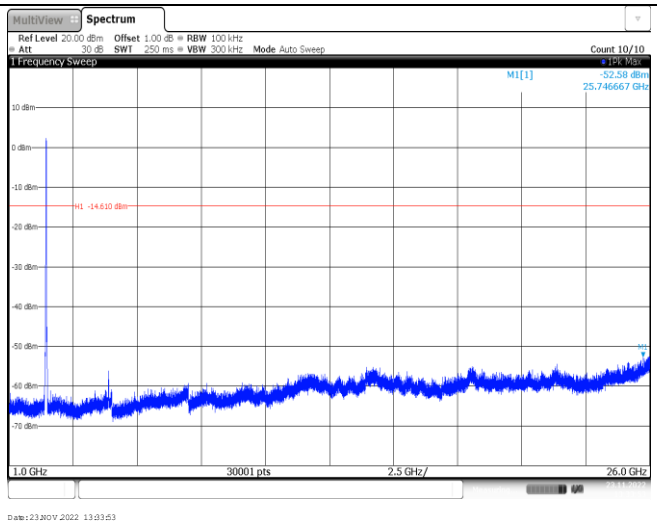
CH11 Reference level	
CH11 30MHz~1000MHz	
CH11 1GHz~26GHz	

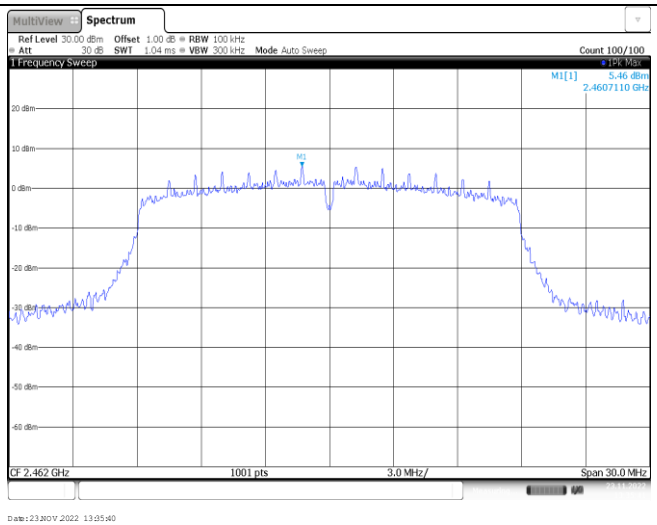
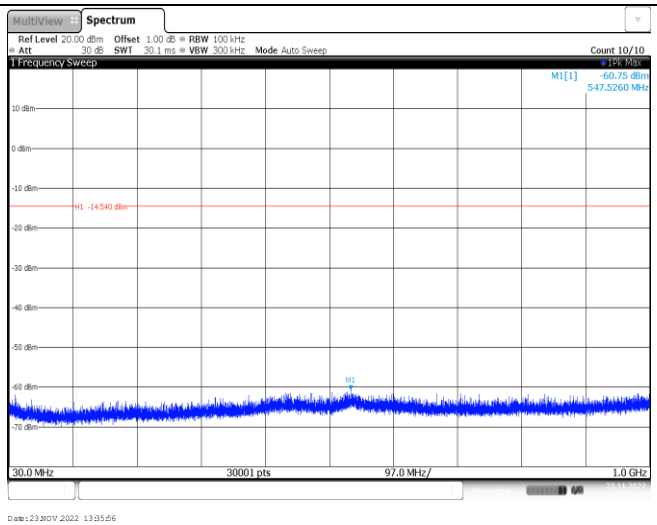
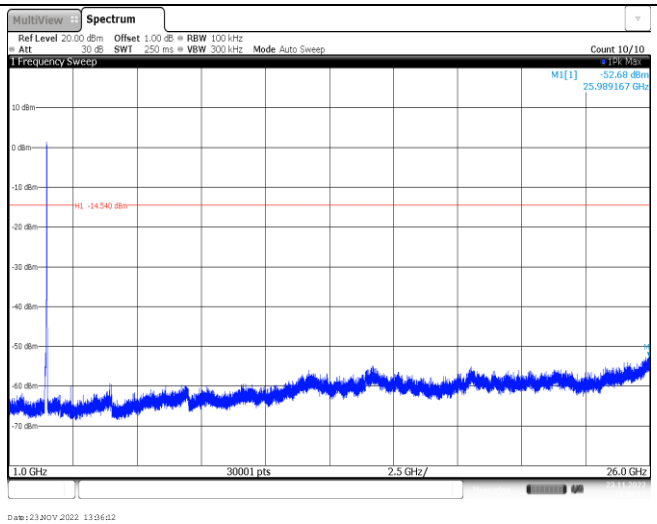
Test Item:	SE	Type:	802.11g
CH01 Reference level			
CH01 30MHz~1000MHz			
CH01 1GHz~26GHz			

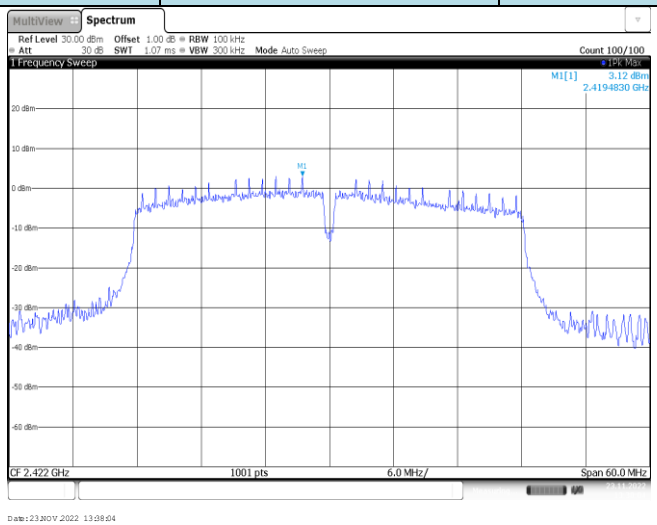
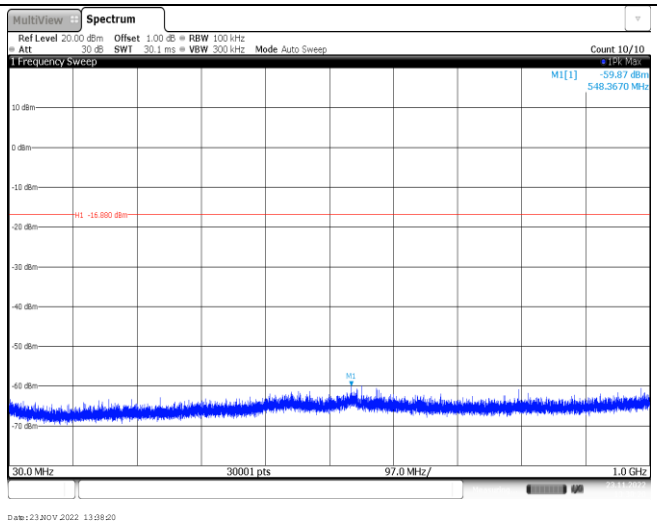
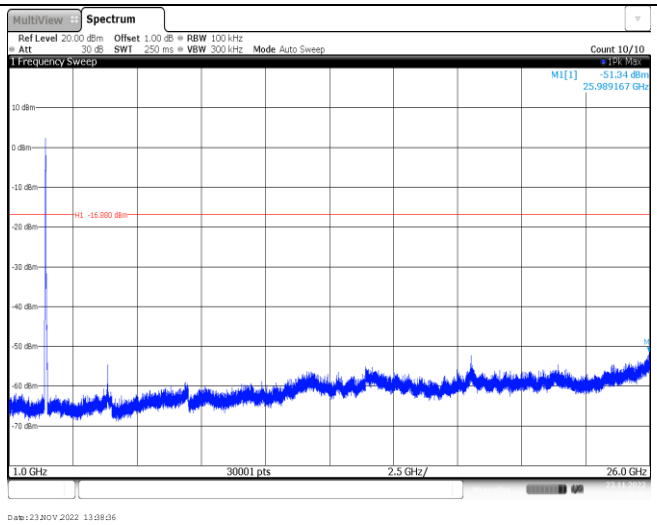
CH06 Reference level	
CH06 30MHz~1000MHz	
CH06 1GHz~26GHz	

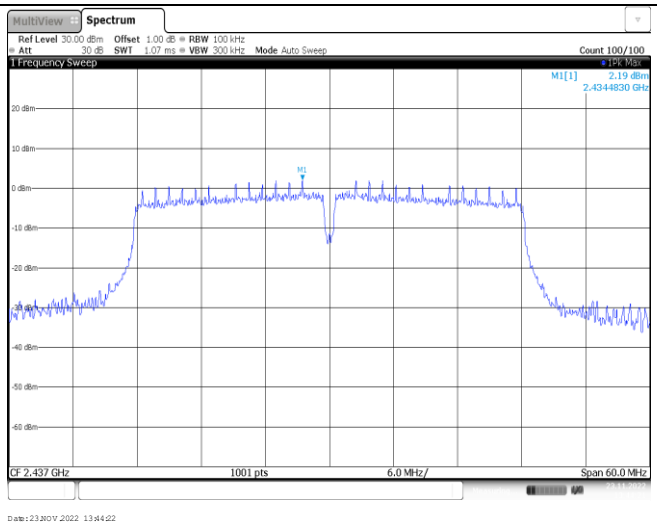
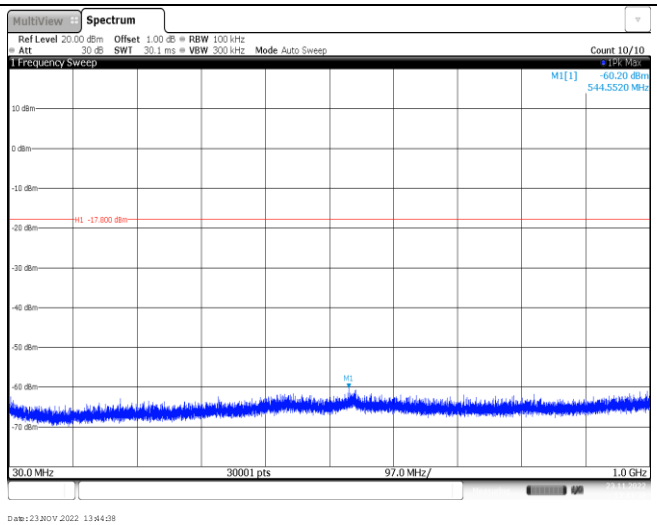
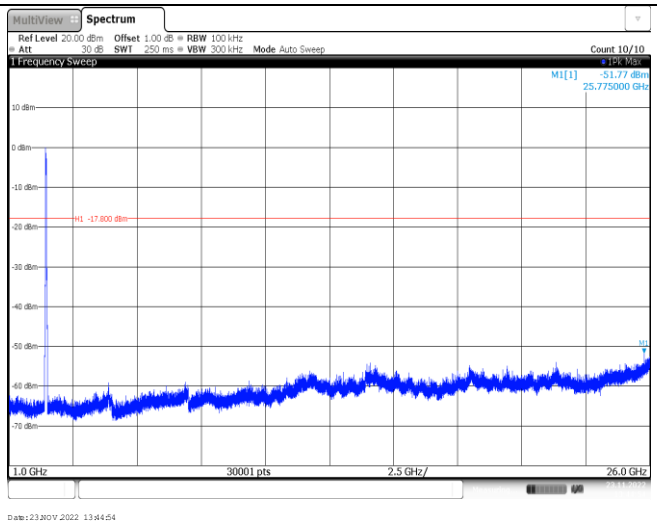
CH11 Reference level	
CH11 30MHz~1000MHz	
CH11 1GHz~26GHz	

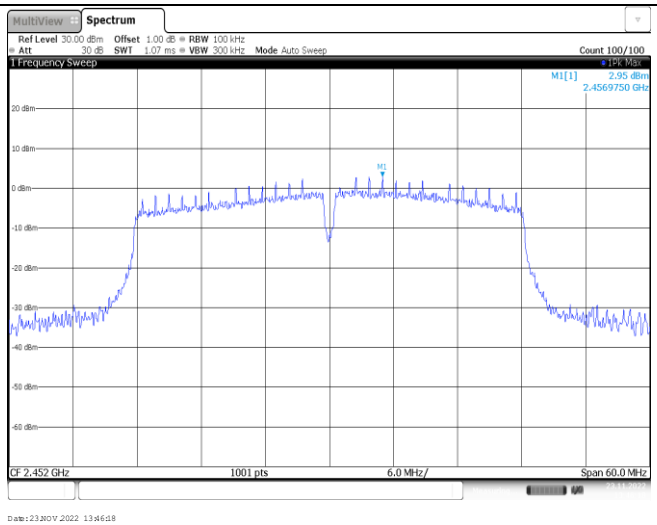
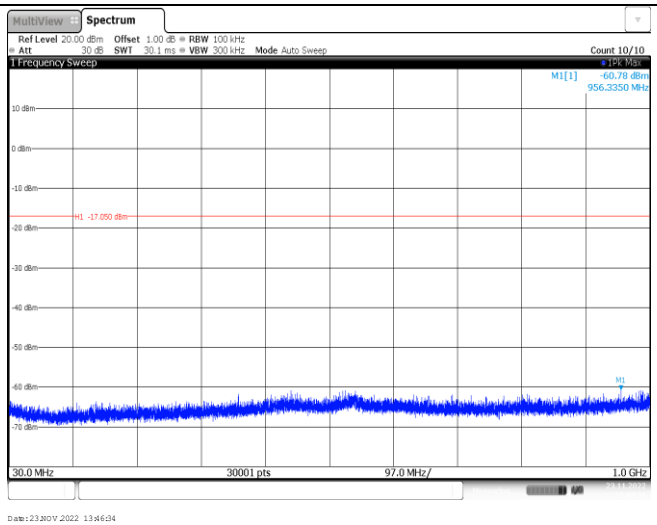
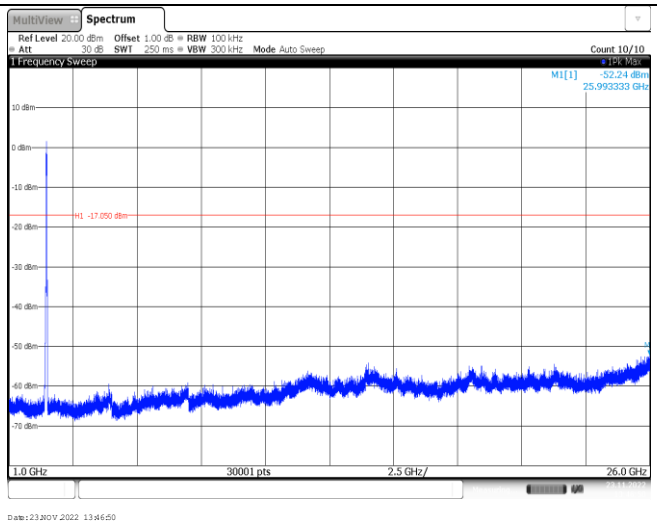
Test Item:	SE	Type:	802.11n(HT20)
CH01 Reference level			
CH01 30MHz~1000MHz			
CH01 1GHz~26GHz			

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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