APPENDIX REPORT

Project No.	SHT2103038702EW	Radio Specification	WIFI 2.4G
Test sample No.	YPHT21030387019	Model No.	A9R
Start test date	2021-05-06	Finish date	2021-05-06
Temperature	25.3°C	Humidity	35%
Test Engineer	Hailey Chen	Auditor	Xiaodong Zhao

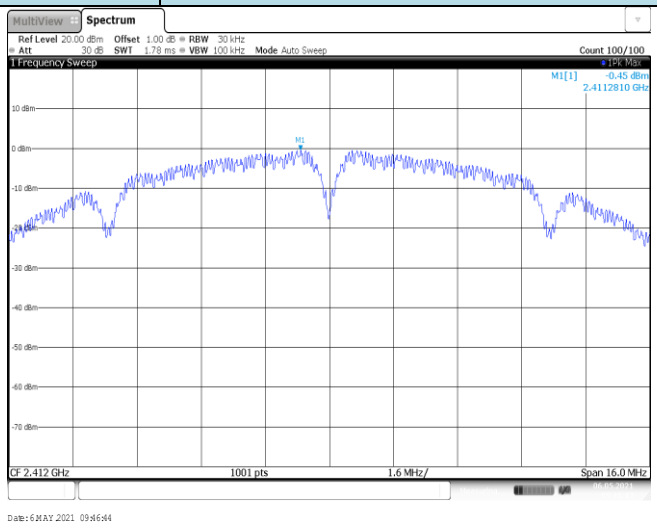
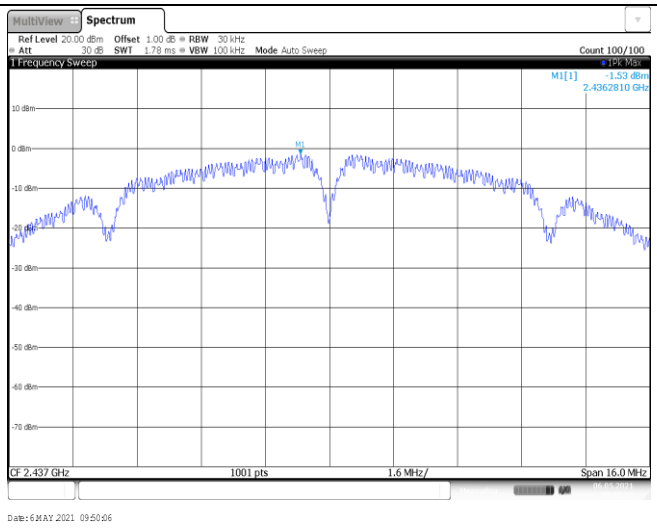
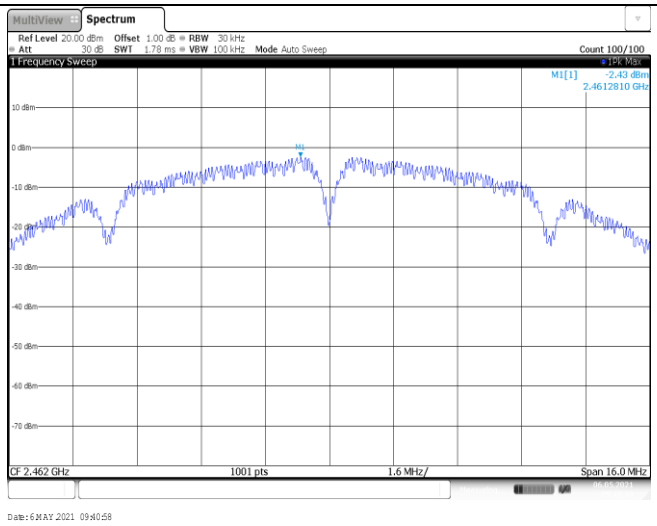
Appendix clause	Test item	Result
A	Conducted Peak Output Power	PASS
B	Power Spectral Density	PASS
C	6 dB Bandwidth	PASS
D	99% Occupied Bandwidth	PASS
E	Duty Cycle	PASS
F	Band edge and Spurious Emissions (conducted)	PASS

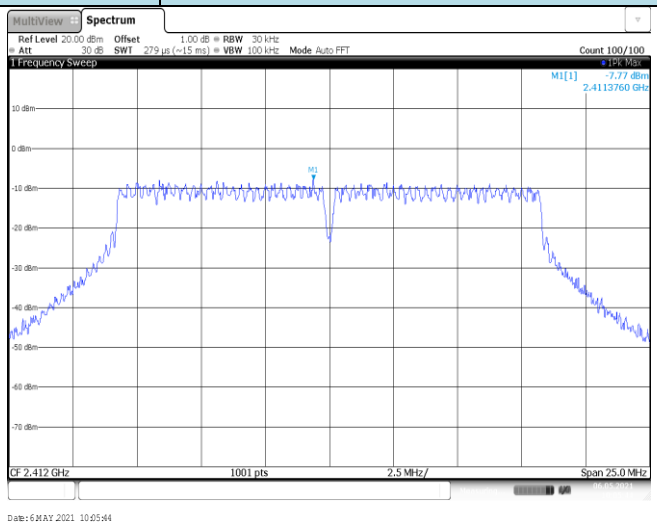
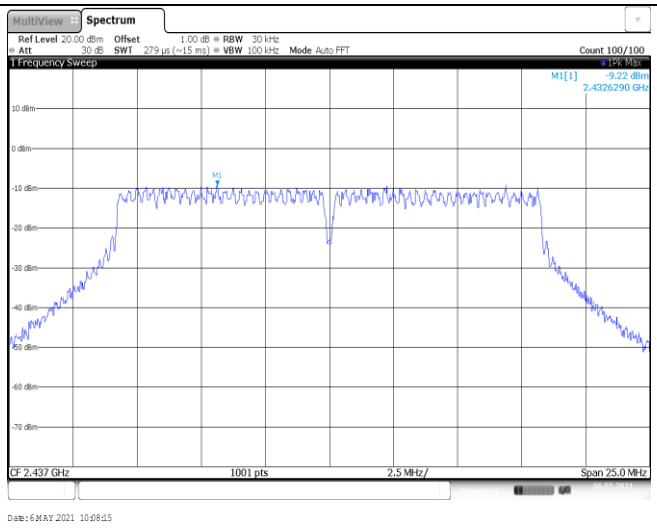
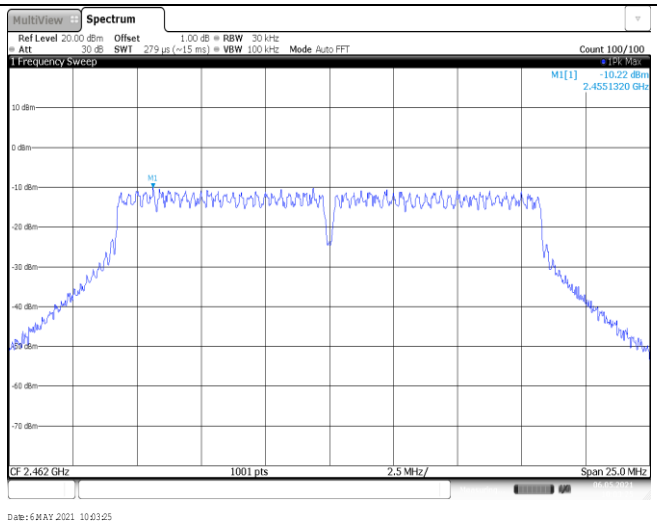
Appendix A: Conducted Peak Output Power

Type	Channel	Peak Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
802.11b	01	16.92	14.42	≤ 30.00	Pass
	06	16.30	13.81		
	11	15.93	13.44		
802.11g	01	16.90	13.92	≤ 30.00	Pass
	06	16.26	13.29		
	11	15.79	12.93		
802.11n (HT20)	01	16.99	14.05	≤ 30.00	Pass
	06	16.35	13.40		
	11	15.86	12.96		
802.11n(HT40)	03	16.31	13.31	≤ 30.00	Pass
	06	15.93	12.96		
	09	15.68	12.82		

Appendix B：Power Spectral Density

Type	Channel	Power Spectral Density (dBm/30KHz)	Limit (dBm/3KHz)	Result
802.11b	01	-0.45	≤8.00	Pass
	06	-1.51		
	11	-2.43		
802.11g	01	-7.77	≤8.00	Pass
	06	-9.22		
	11	-10.22		
802.11n(HT20)	01	-8.47	≤8.00	Pass
	06	-8.91		
	11	-10.80		
802.11n(HT40)	03	-12.09	≤8.00	Pass
	06	-12.66		
	09	-13.19		

Type:	**802.11 b**
CH01	
CH06	
CH11	

Type:	802.11 g
CH01	
CH06	
CH11	

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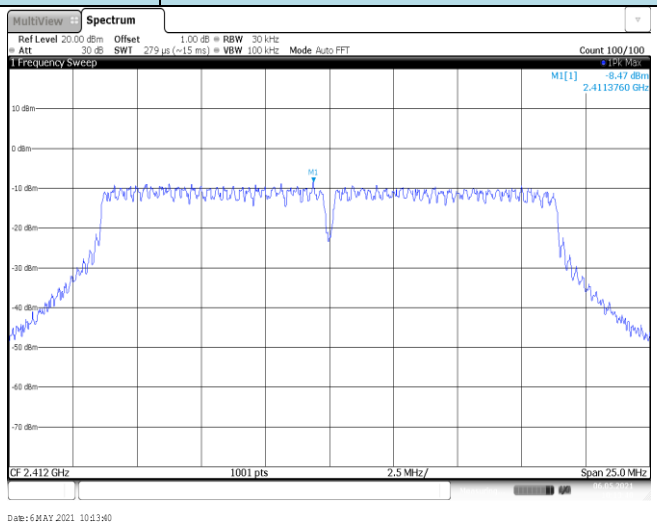
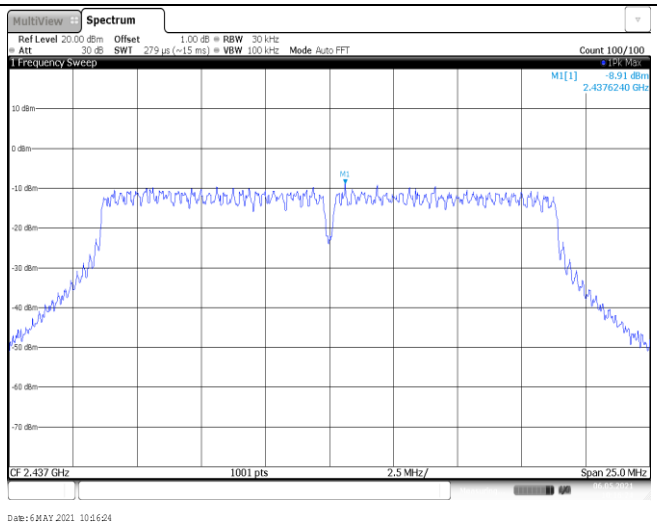
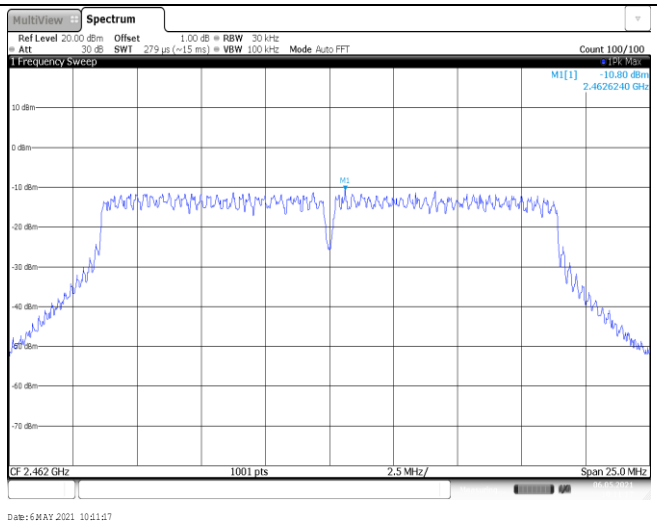
CH01	
CH06	
CH11	

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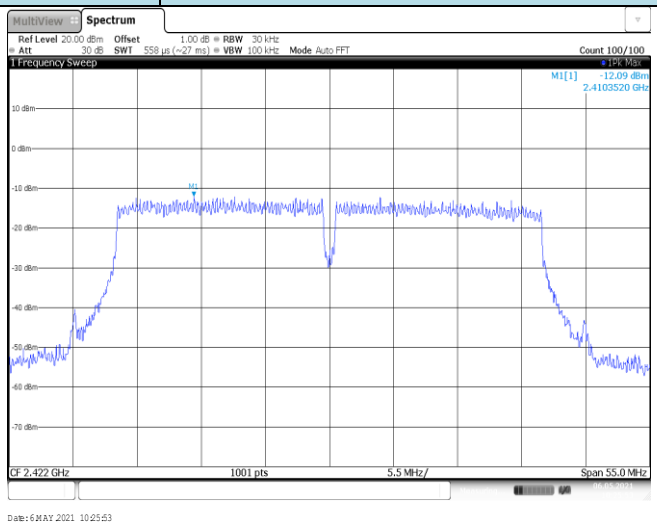
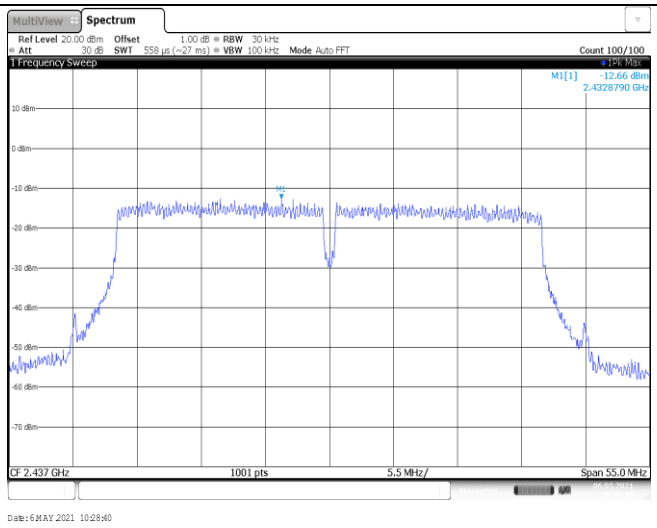
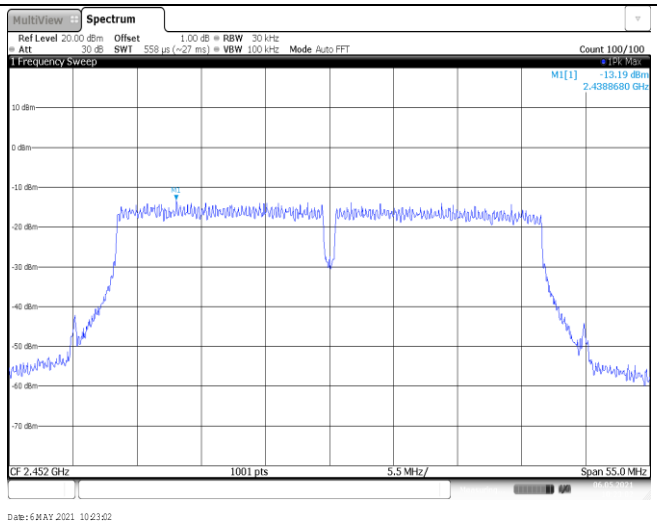
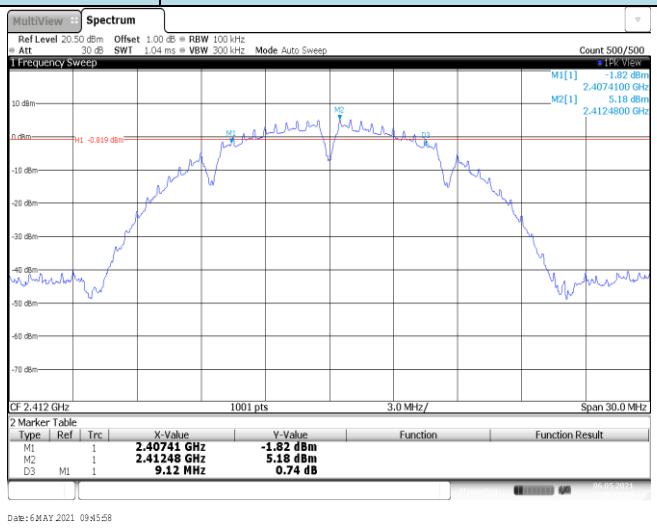
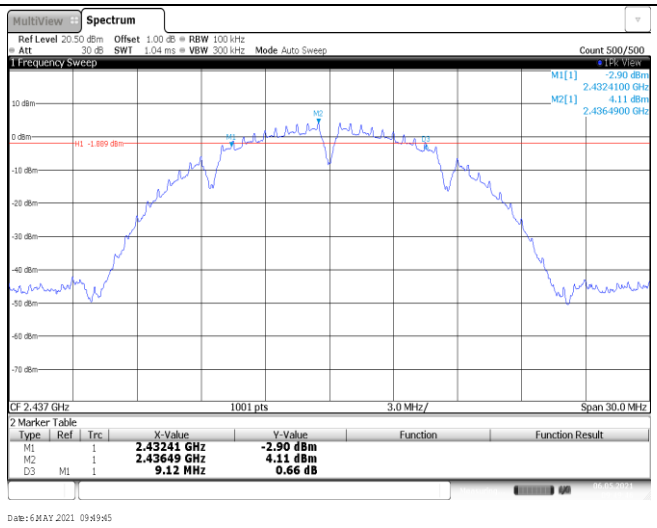
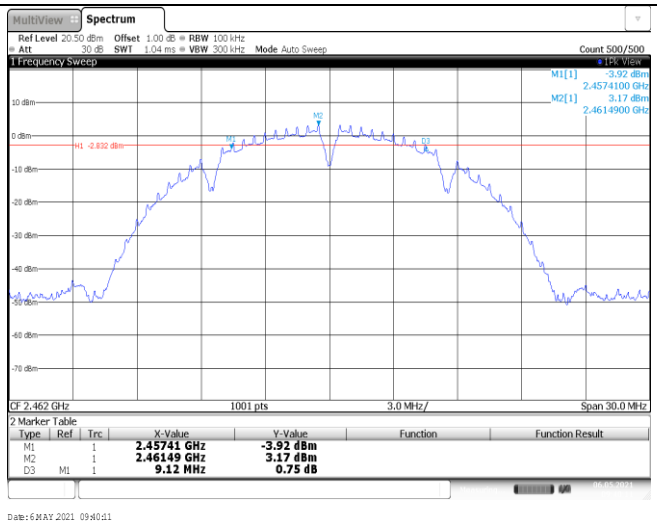
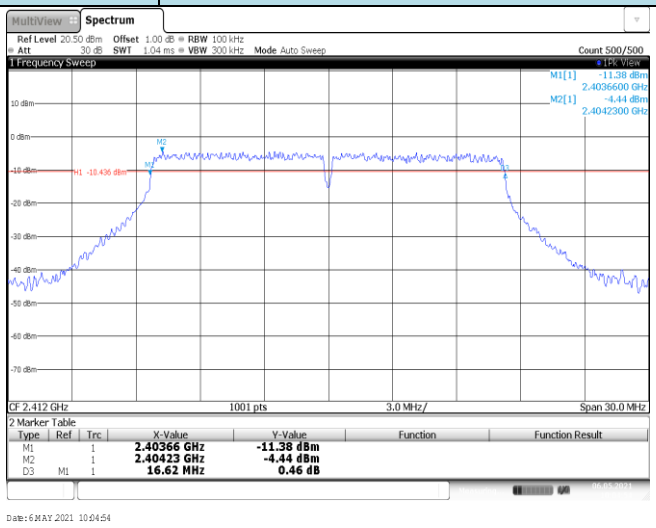
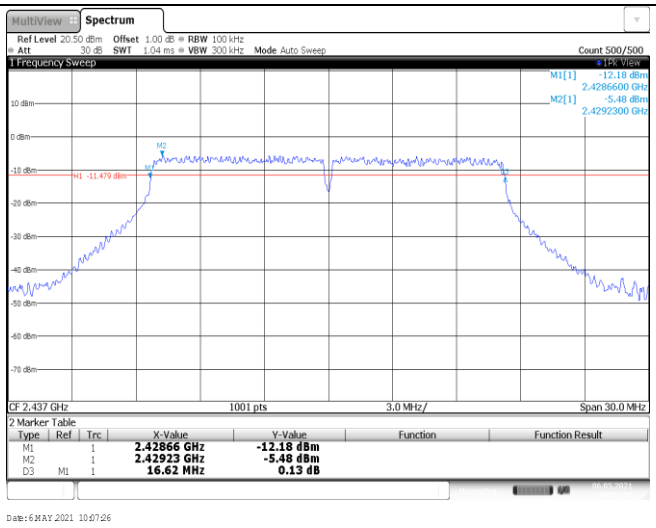
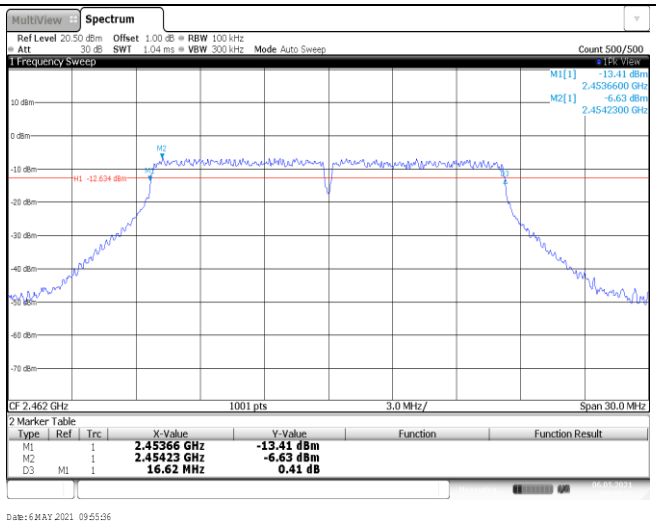
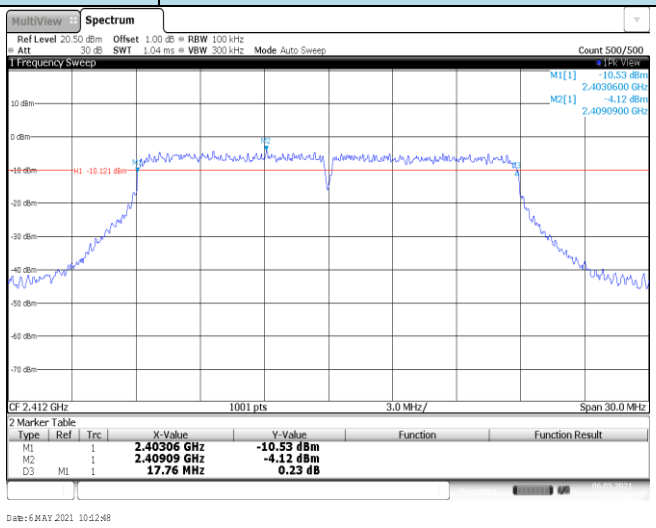
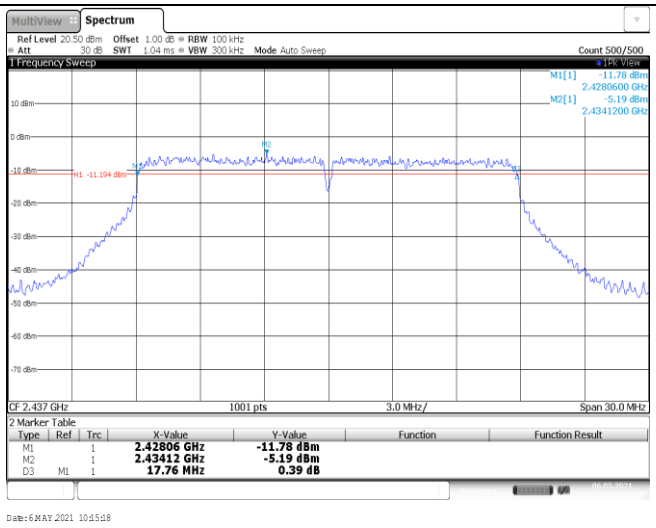
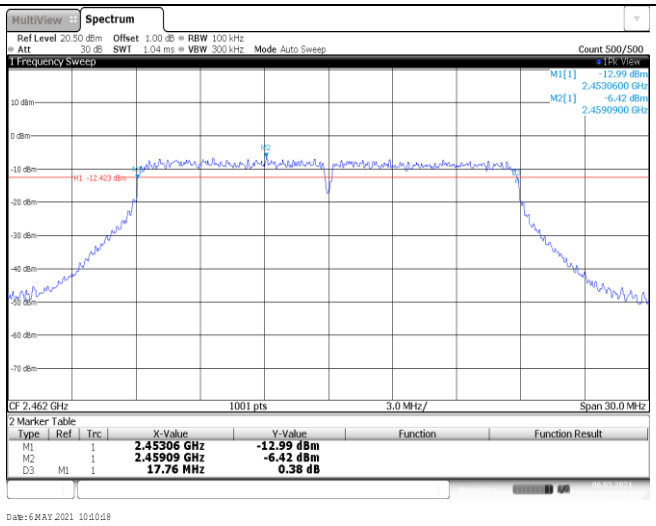
CH03	
CH06	
CH09	

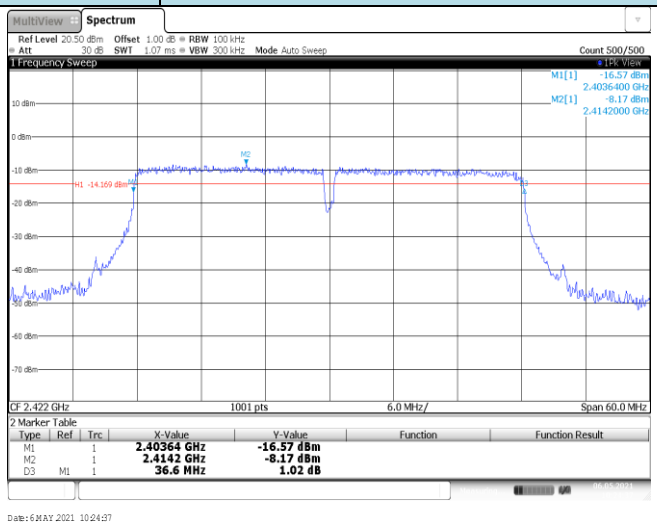
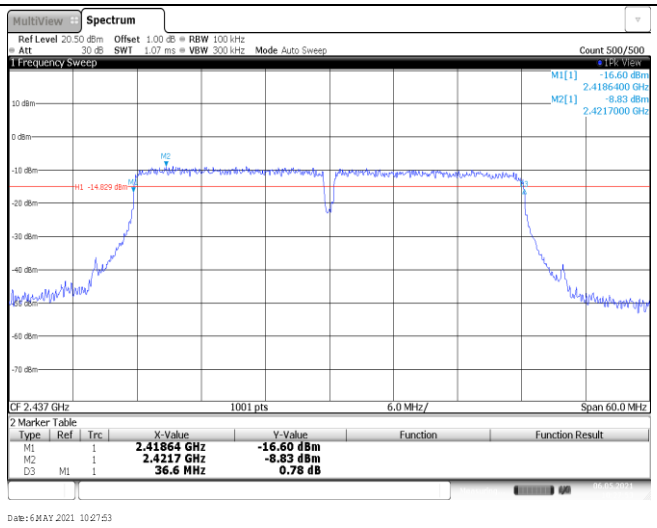
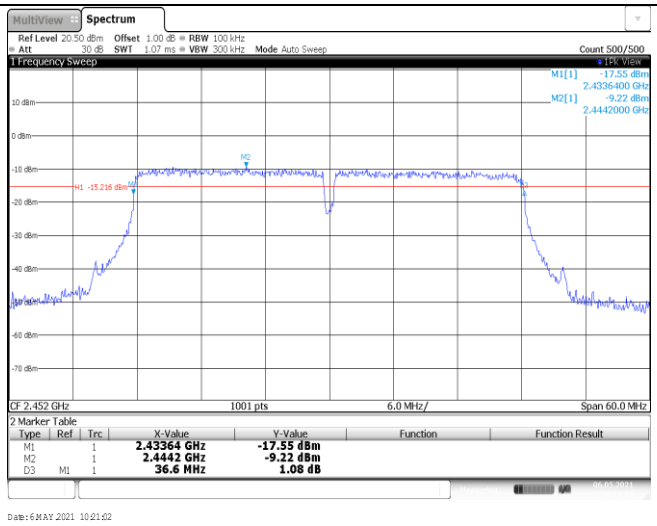
Appendix C：6dB bandwidth

Type	Channel	6dB Bandwidth (MHz)	Limit (MHz)	Result
802.11b	01	9.12	≥0.5	Pass
	06	9.12		
	11	9.12		
802.11g	01	16.62	≥0.5	Pass
	06	16.62		
	11	16.62		
802.11n(HT20)	01	17.76	≥0.5	Pass
	06	17.76		
	11	17.76		
802.11n(HT40)	03	36.60	≥0.5	Pass
	06	36.60		
	09	36.60		

Type:	802.11 b
CH01	
CH06	
CH11	

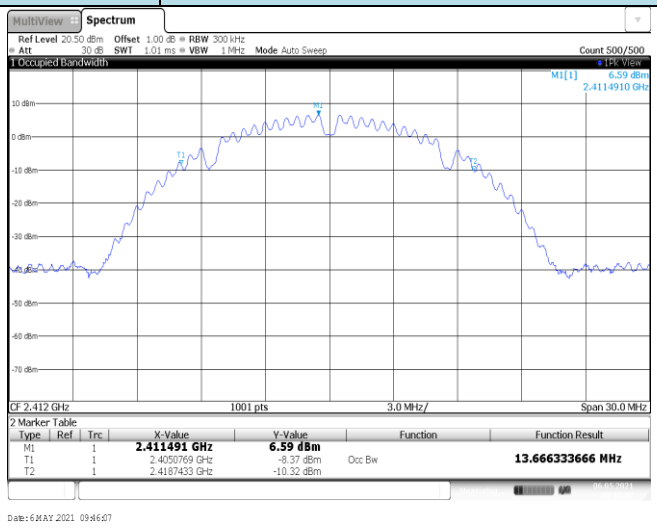
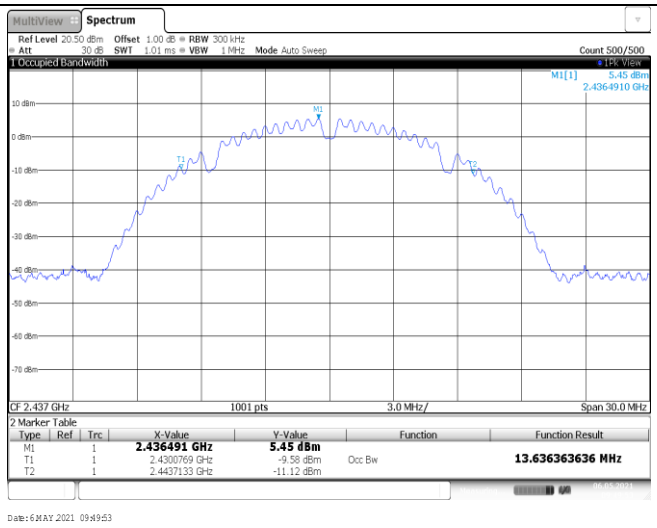
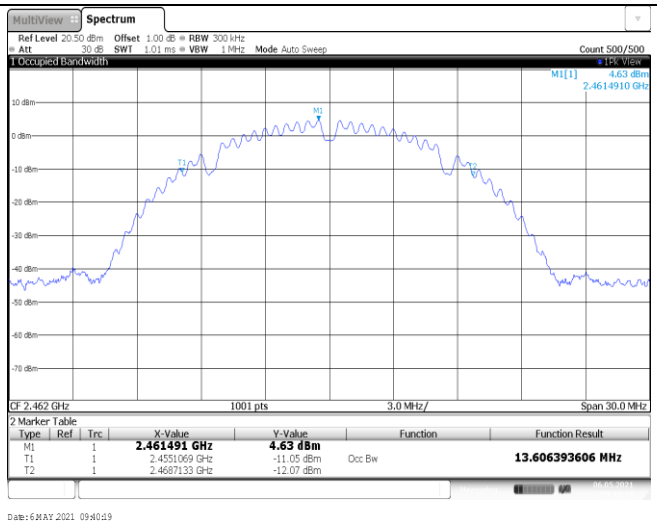
Type:	802.11 g
CH01	
CH06	
CH11	

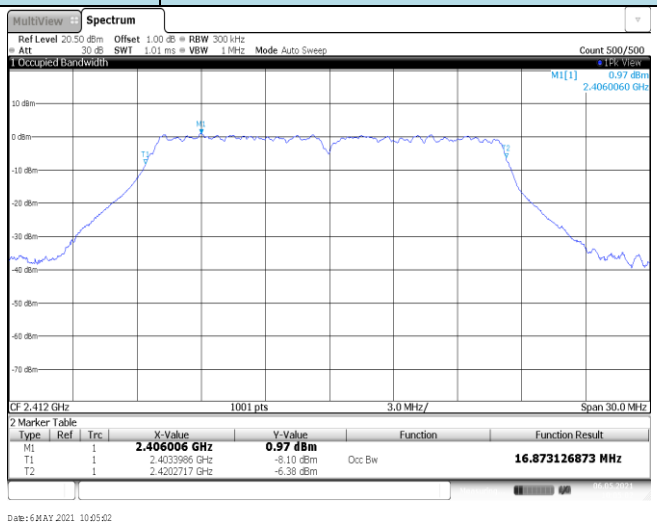
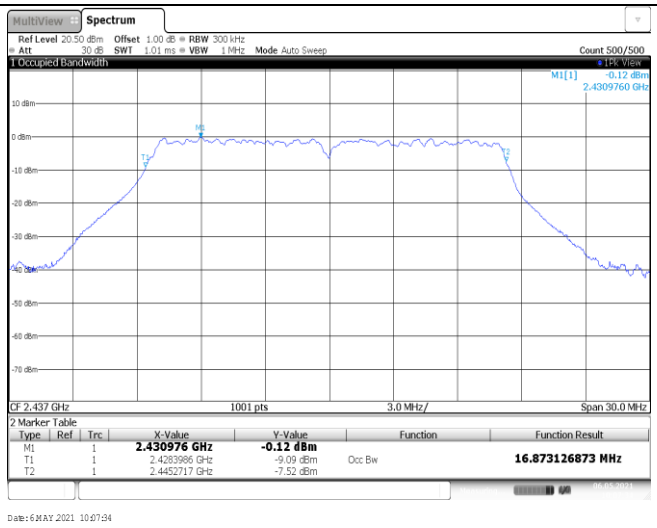
Type:	802.11n(HT20)
CH01	
CH06	
CH11	

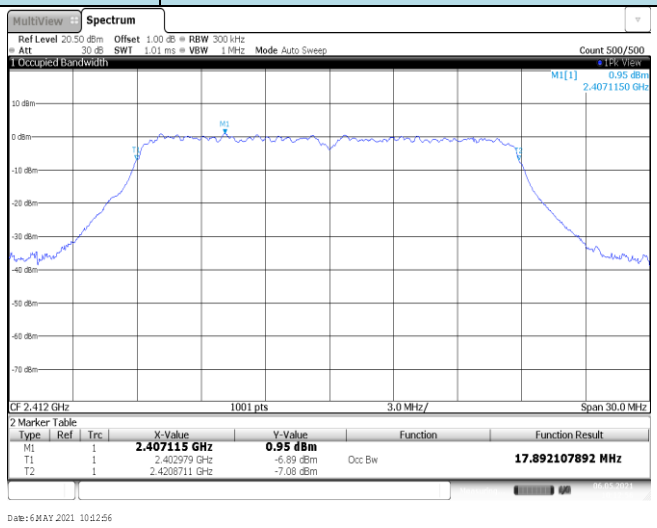
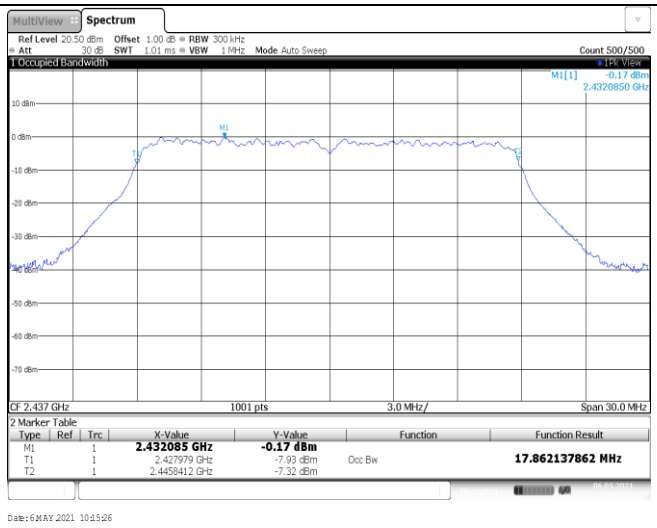
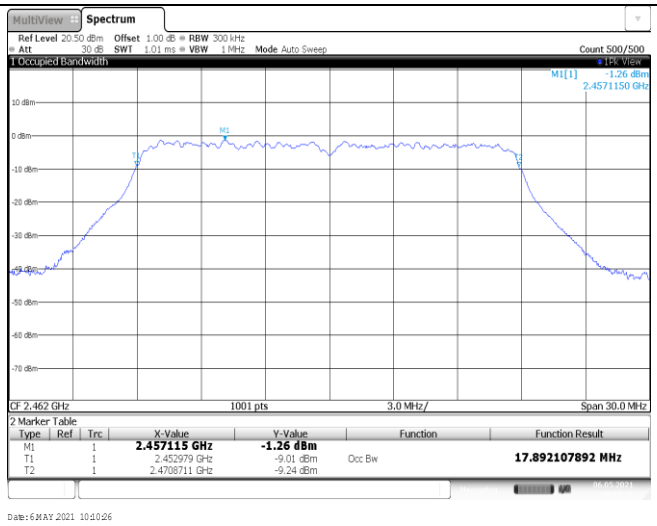
Type:	802.11n(HT40)
CH03	
CH06	
CH09	

Appendix D：99% Occupied Bandwidth

Type	Channel	99% Bandwidth (MHz)	Limit (kHz)	Result
802.11b	01	13.67	-	Pass
	06	13.64		
	11	13.61		
802.11g	01	16.87	-	Pass
	06	16.87		
	11	16.87		
802.11n(HT20)	01	17.89	-	Pass
	06	17.86		
	11	17.89		
802.11n(HT40)	03	36.38	-	Pass
	06	36.38		
	09	36.32		

Type:	802.11 b
CH01	
CH06	
CH11	

Type:	802.11 g
CH01	
CH06	
CH11	

Type:	802.11n(HT20)
CH01	
CH06	
CH11	

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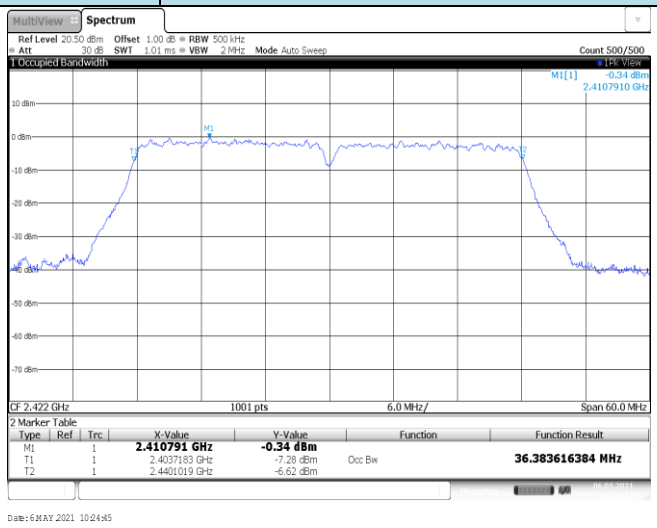
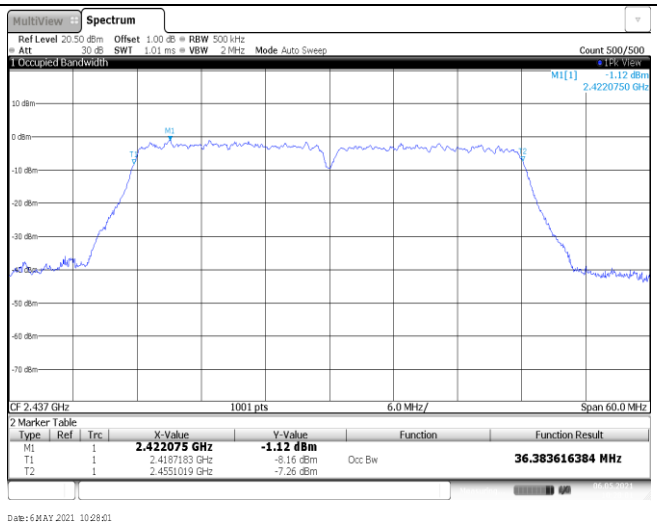
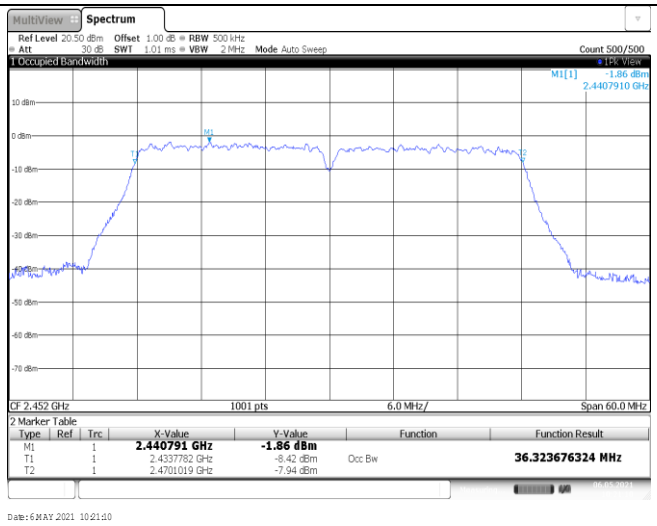
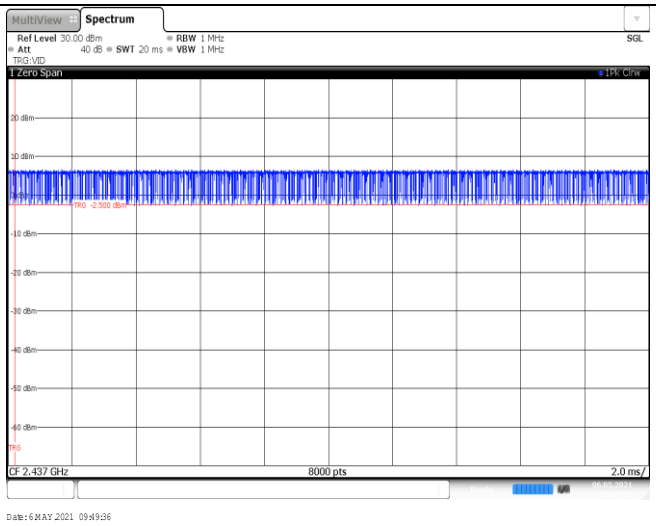
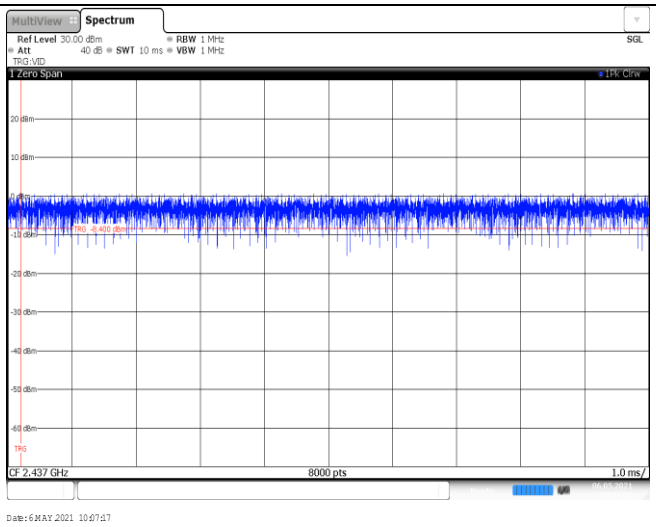
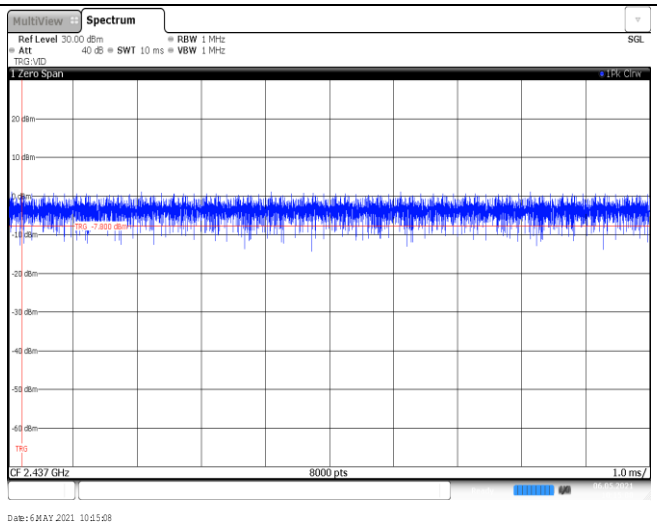
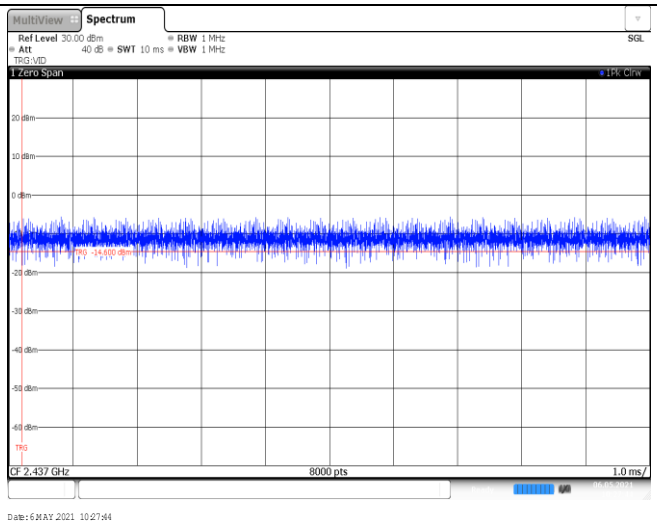
CH03	
CH06	
CH09	

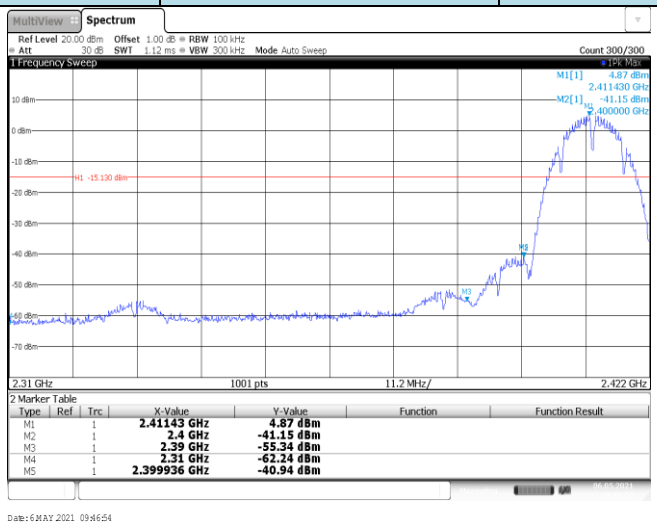
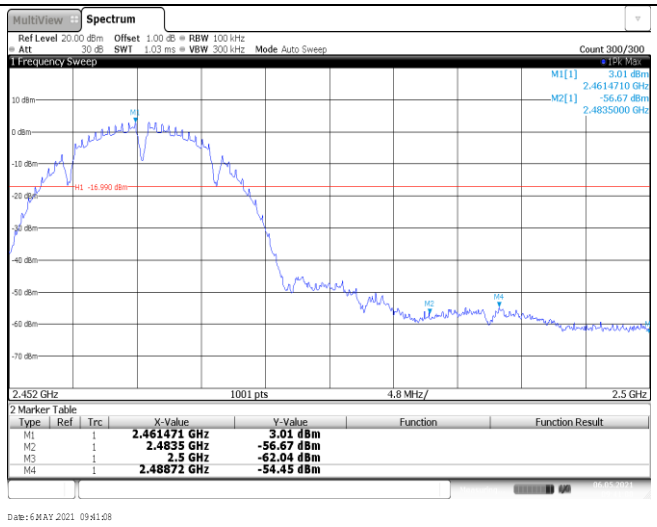
Appendix E：Duty Cycle

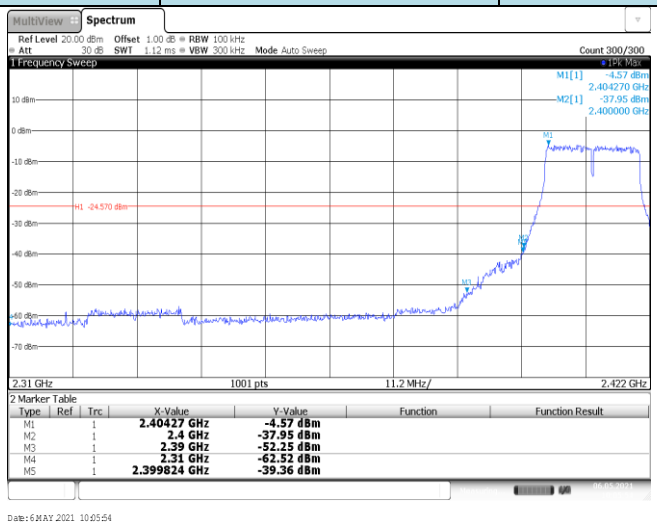
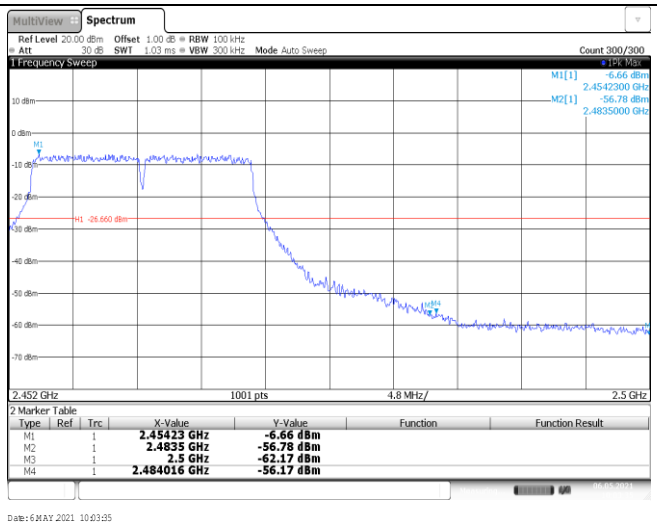
Modulation Type	Test Frequency（MHz）	$T_{on\ time}$ for single burst (ms)	T_{period} (ms)	Duty cycle	$1/T_{on\ time}$ (kHz)
11b	2437	1.00	1.00	100%	1.0
11g	2437	1.00	1.00	100%	1.0
11n20	2437	1.00	1.00	100%	1.0
11n40	2437	1.00	1.00	100%	1.0

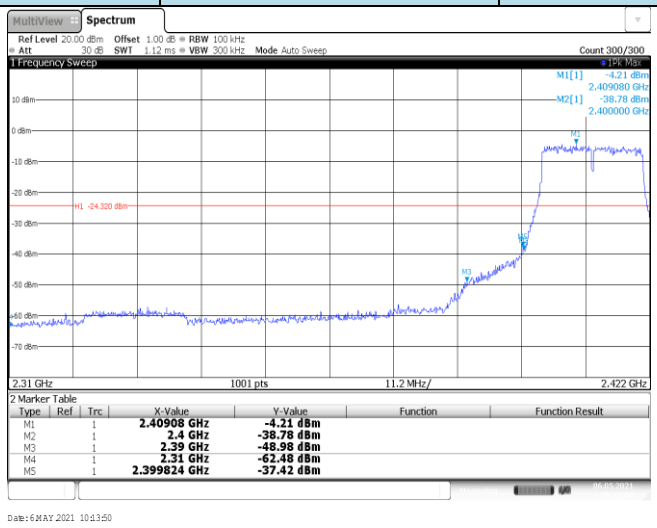
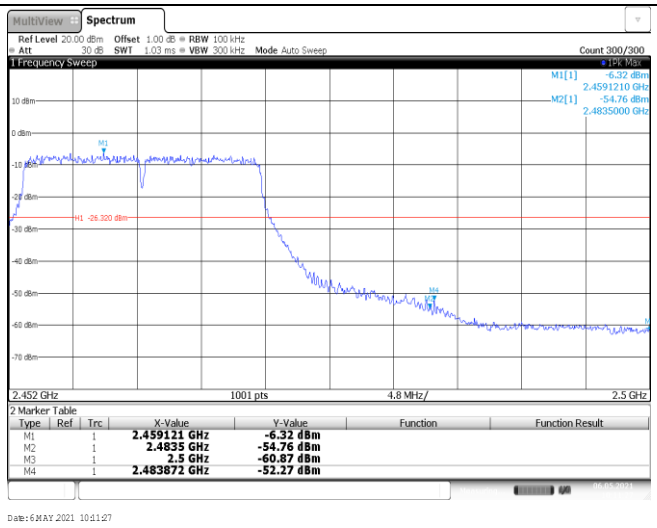
11b	
11g	

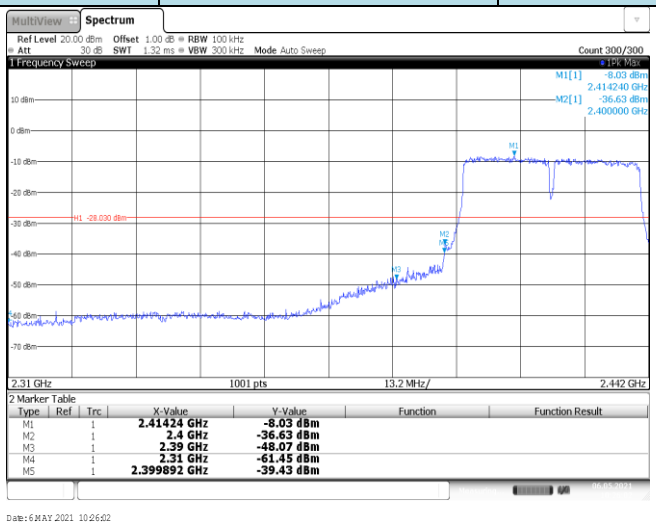
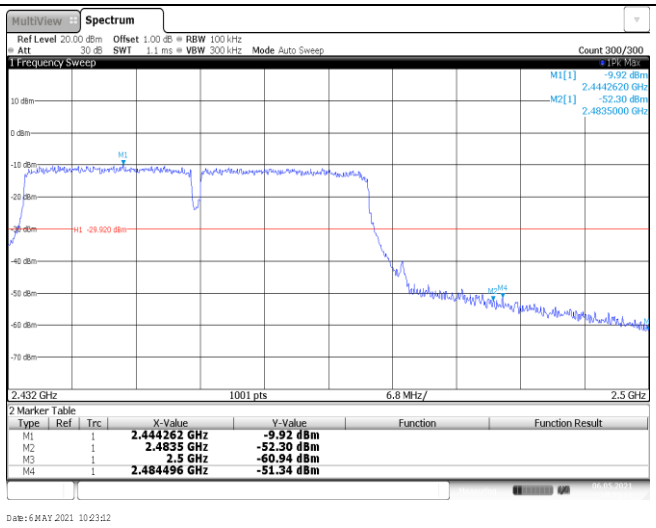
11n20	 MultiView Spectrum Ref Level 30.00 dBm RBW 1 MHz Att 40 dB SWT 10 ms VBW 1 MHz SGL TRG:VID 1 Zero Span 1Pk Clrw 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm TRG CF 2.437 GHz 8000 pts 1.0 ms/ Date: 6 MAY 2021 10:15:08
11n40	 MultiView Spectrum Ref Level 30.00 dBm RBW 1 MHz Att 40 dB SWT 10 ms VBW 1 MHz SGL TRG:VID 1 Zero Span 1Pk Clrw 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm TRG CF 2.437 GHz 8000 pts 1.0 ms/ Date: 6 MAY 2021 10:27:44

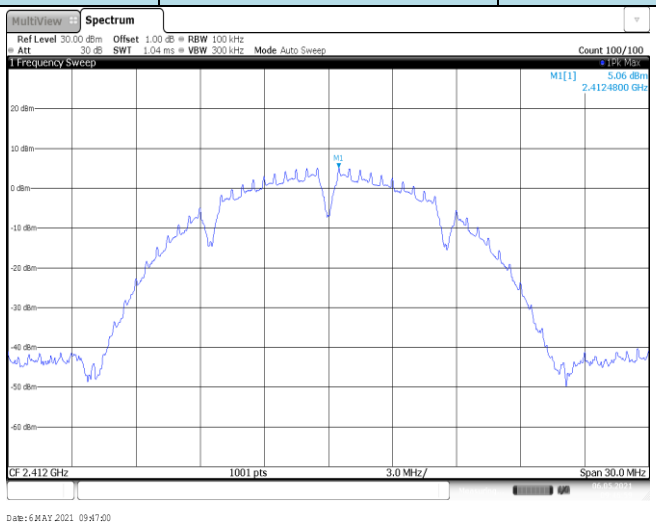
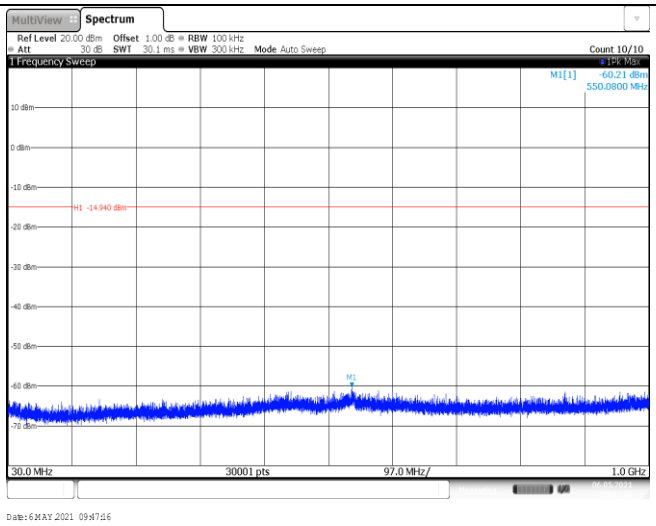
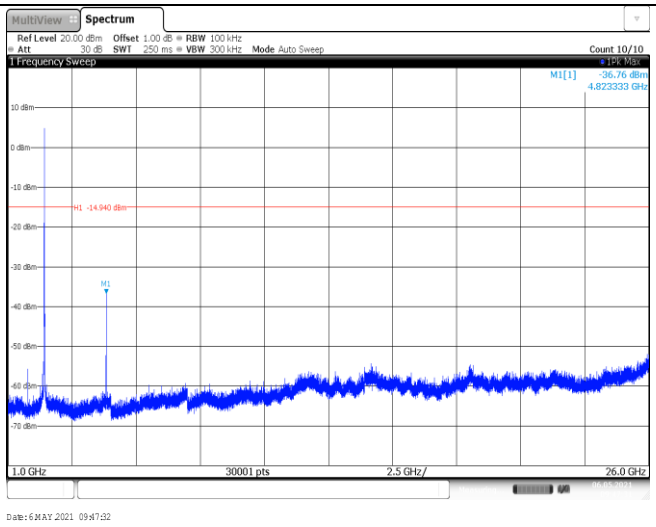
Appendix F：Band edge and Spurious Emissions (conducted)

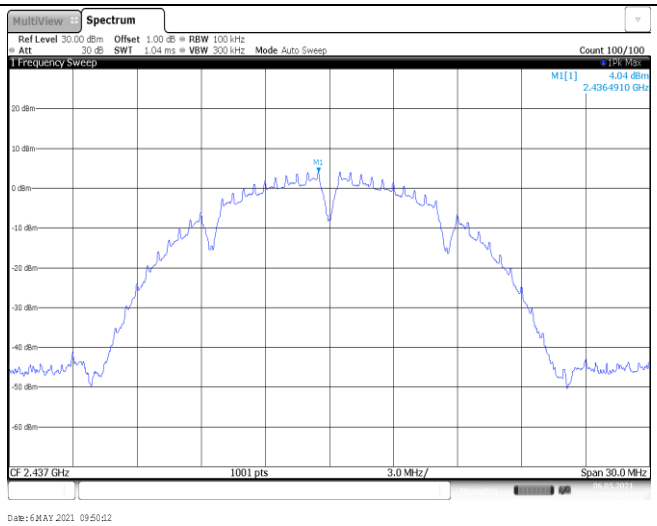
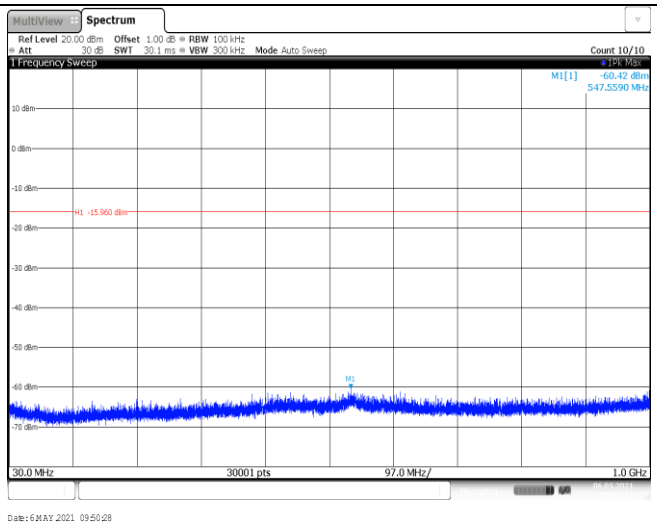
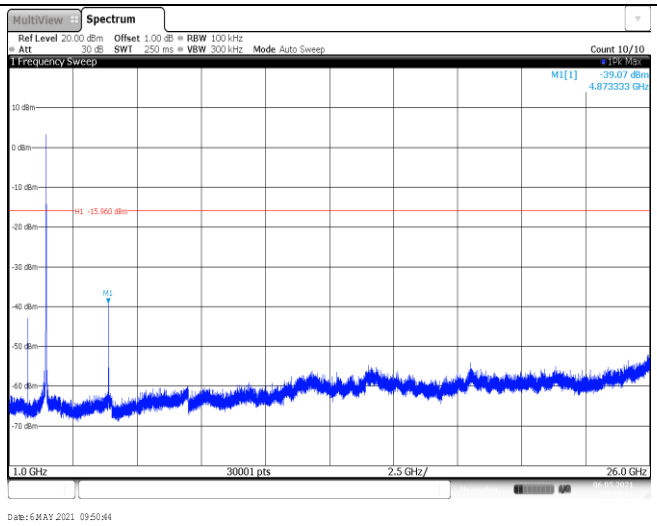
Test Item:	Bandedge	Type:	802.11 b
CH01			
CH11			

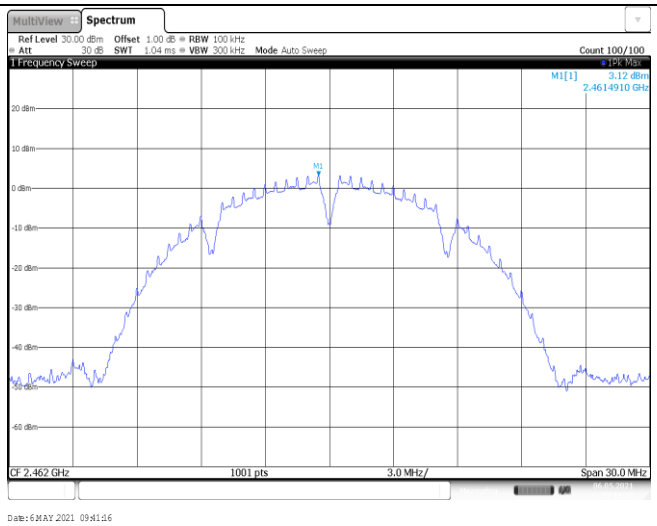
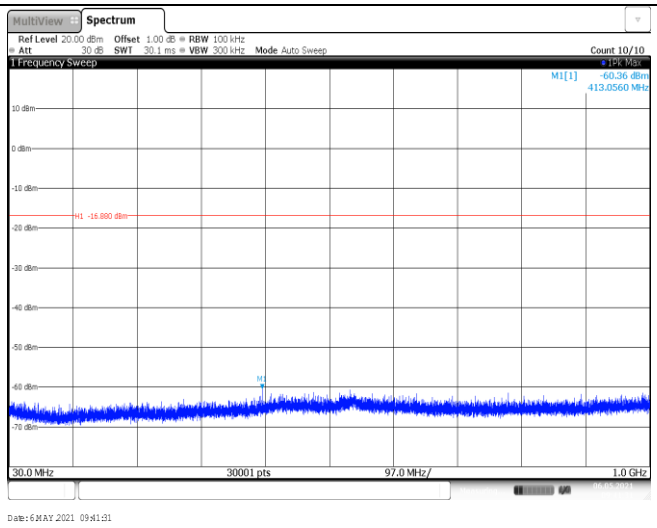
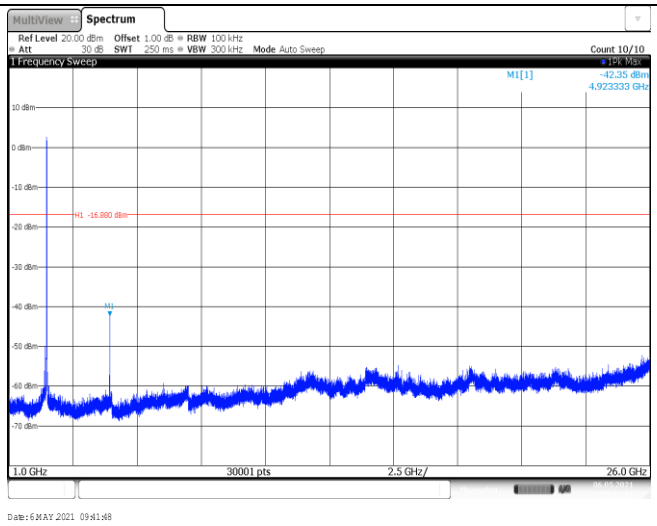
Test Item:	Bandedge	Type:	802.11 g
CH01			
CH11			

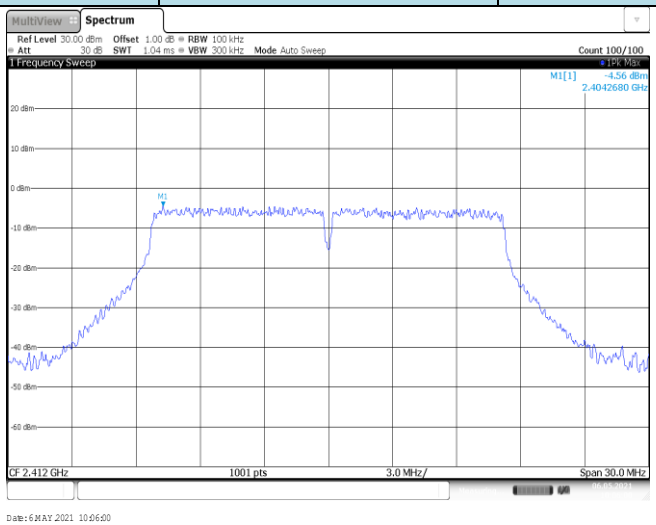
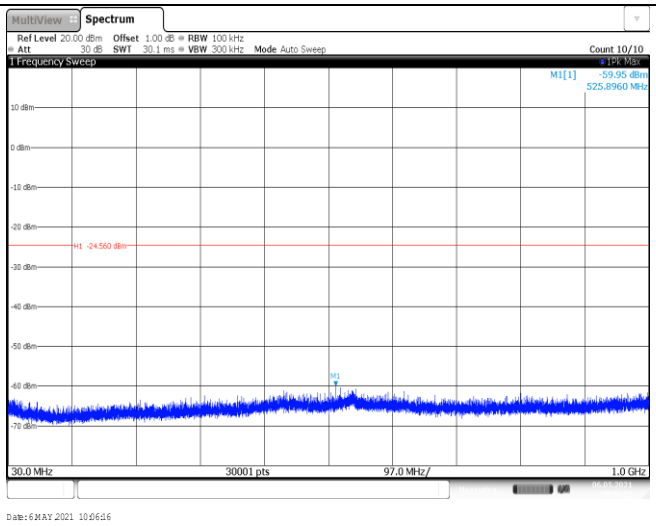
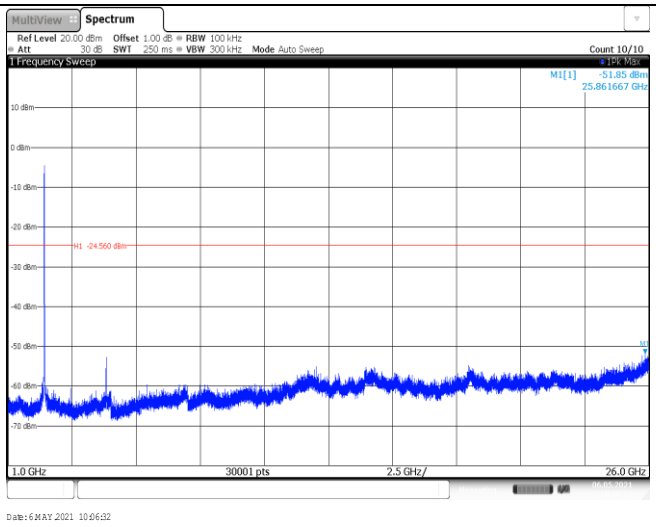
Test Item:	Bandedge	Type:	802.11 n(HT20)
CH01			
CH11			

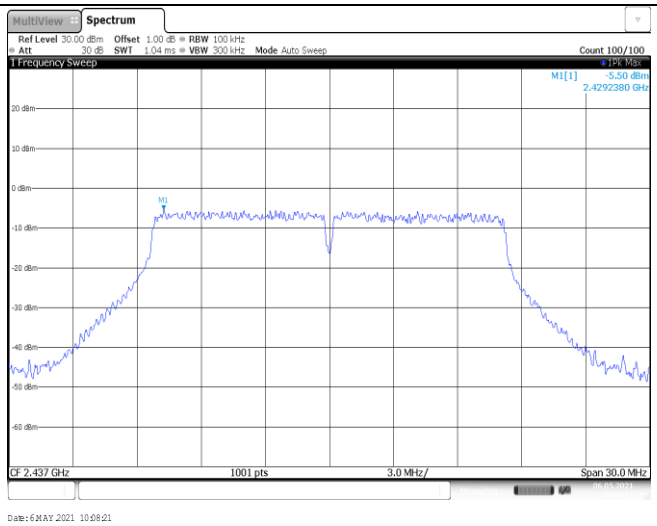
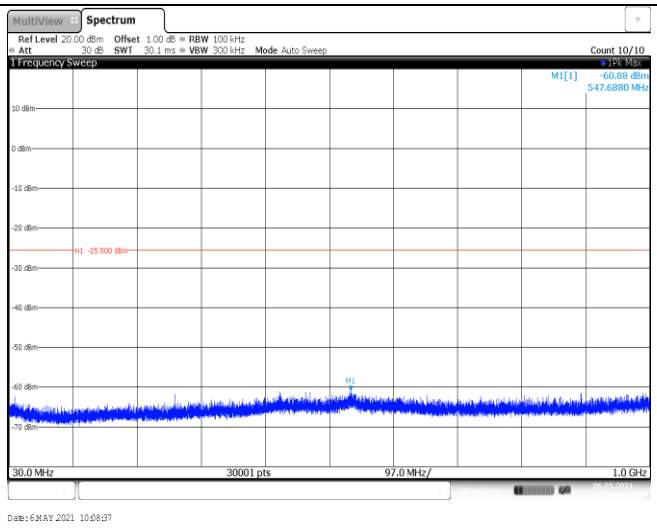
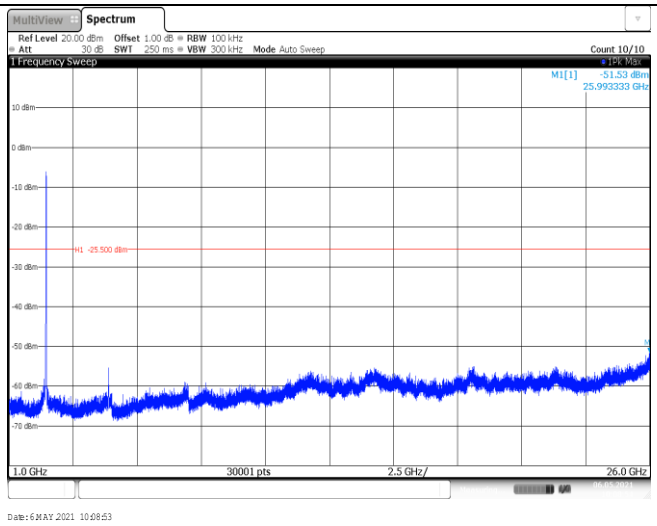
Test Item:	Bandedge	Type:	802.11 n(HT40)
CH03			
CH09			

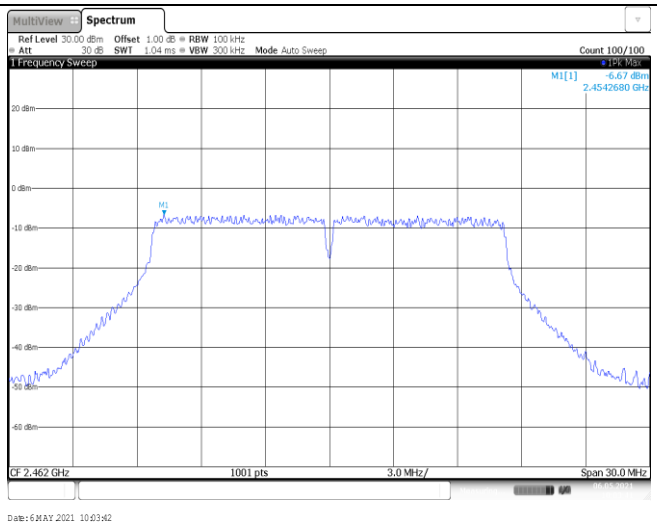
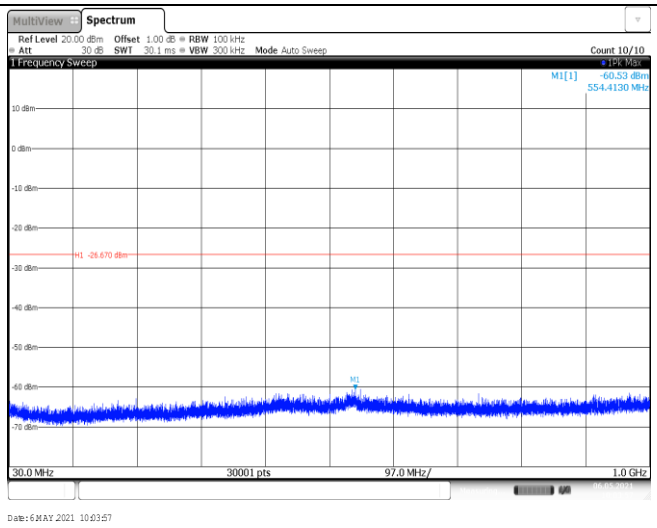
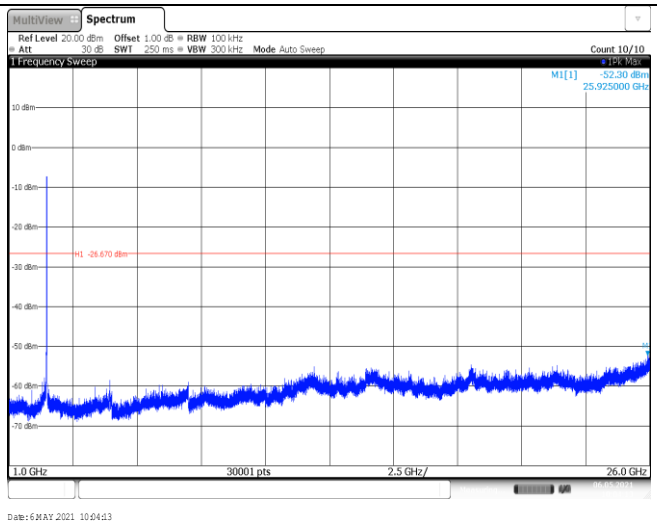
Test Item:	SE	Type:	802.11b
CH01 Reference level	
CH01 30MHz~1000MHz	
CH01 1GHz~26GHz	

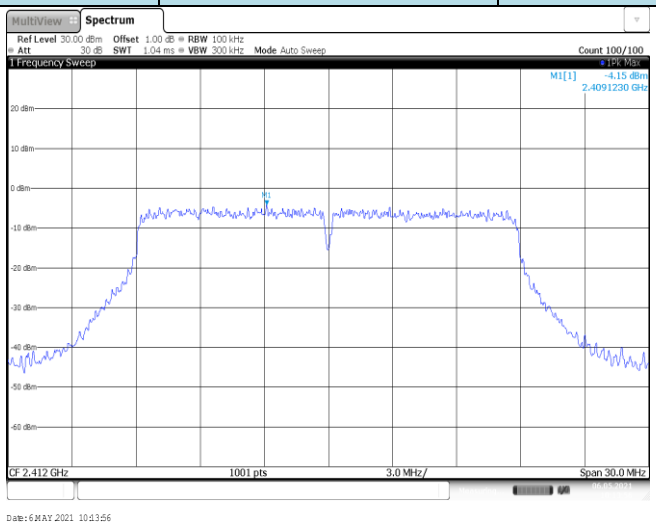
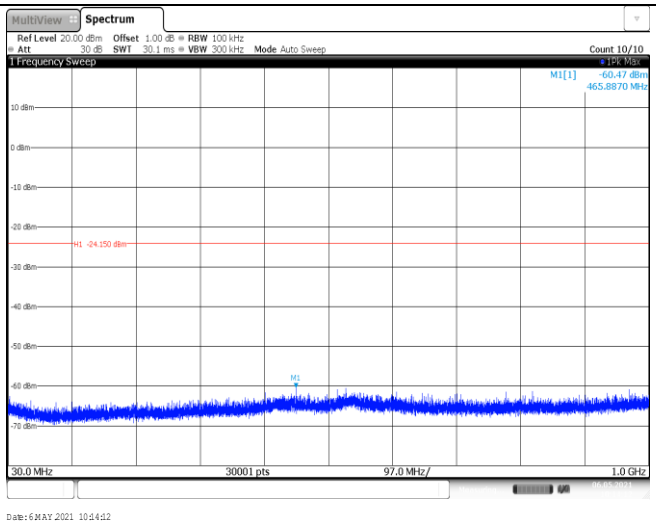
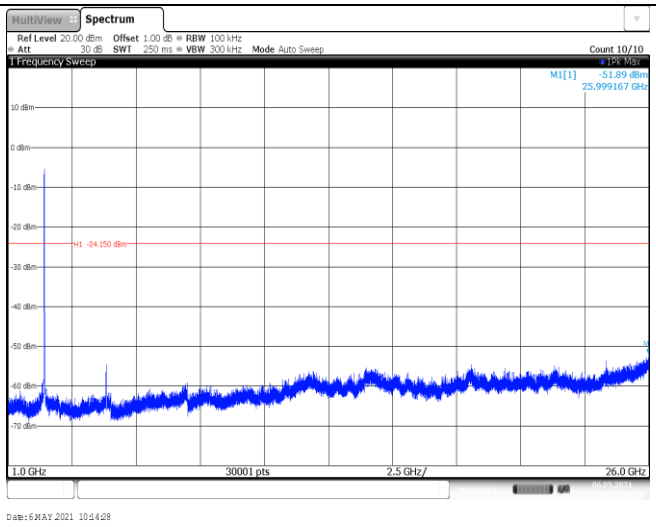
CH06 Reference level	
CH06 30MHz~1000MHz	
CH06 1GHz~26GHz	

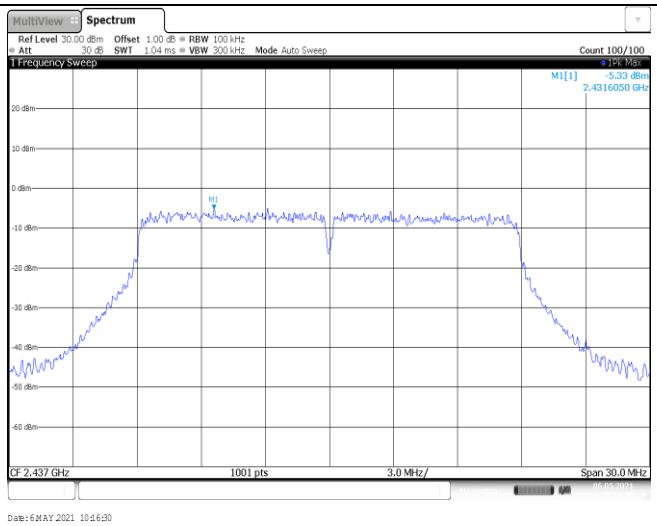
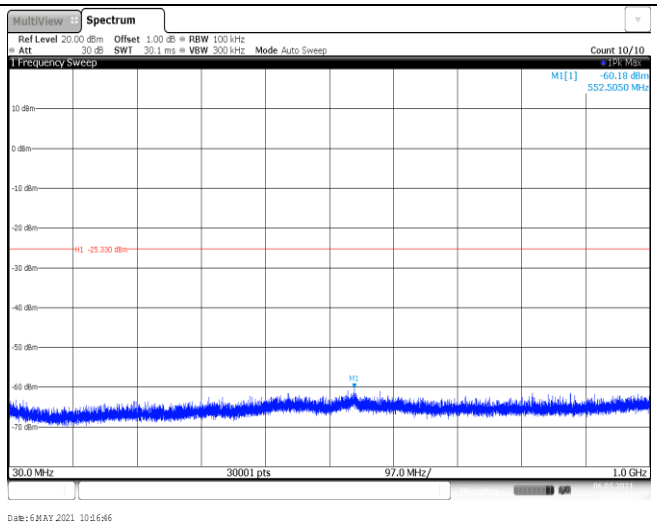
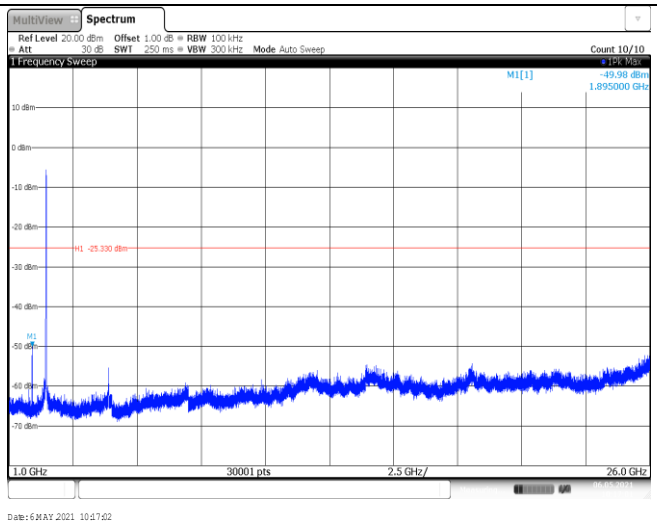
CH11 Reference level	
CH11 30MHz~1000MHz	
CH11 1GHz~26GHz	

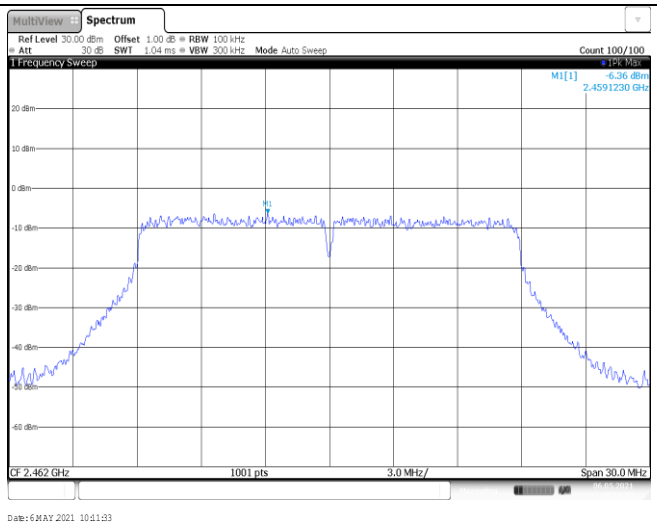
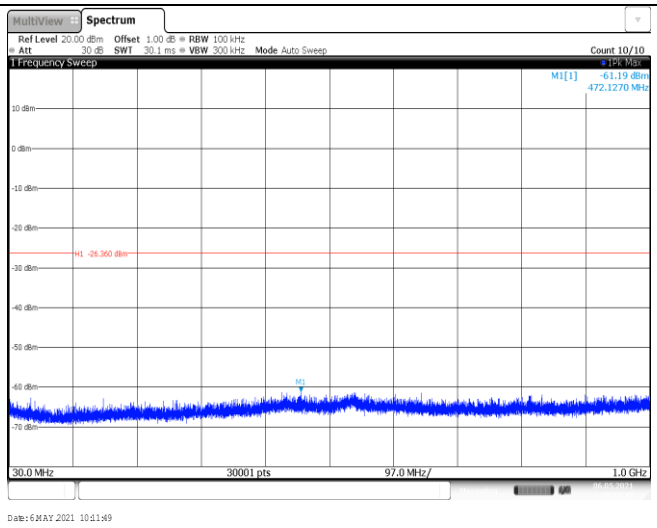
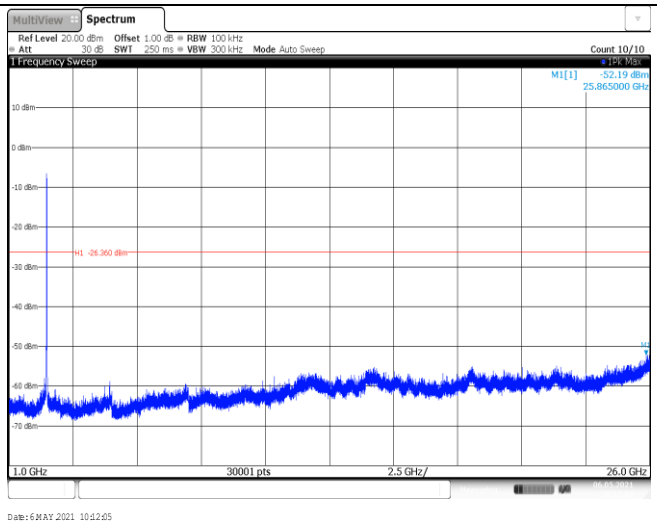
Test Item:	SE	Type:	802.11g
CH01 Reference level	
CH01 30MHz~1000MHz	
CH01 1GHz~26GHz	

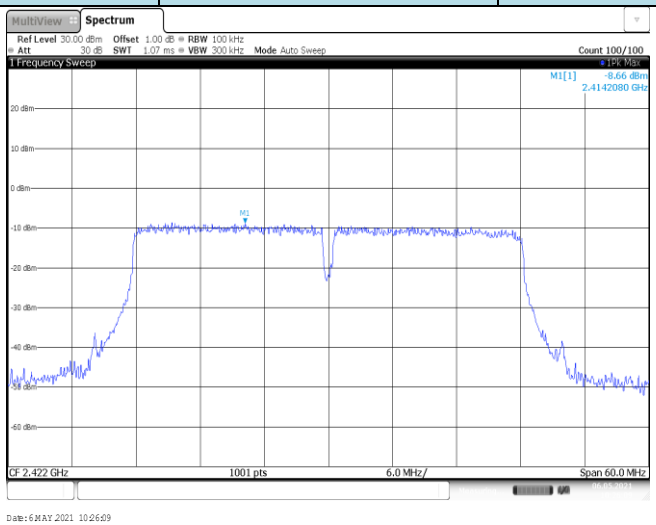
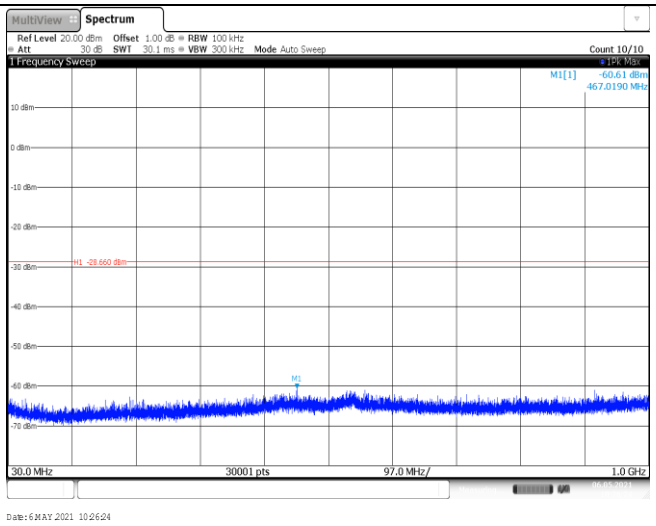
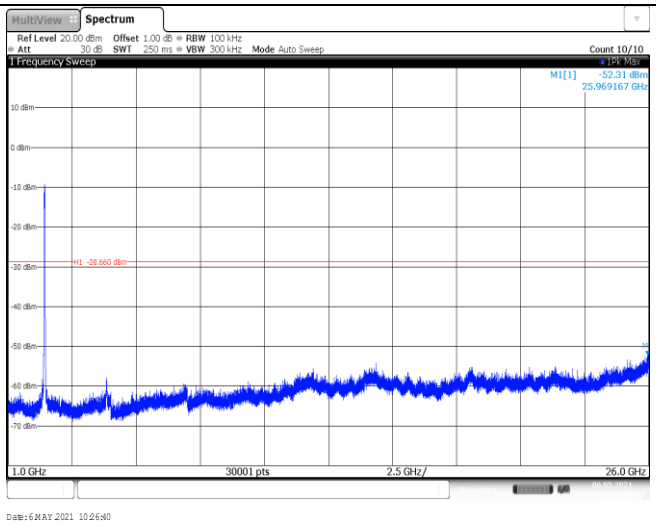
CH06 Reference level	
CH06 30MHz~1000MHz	
CH06 1GHz~26GHz	

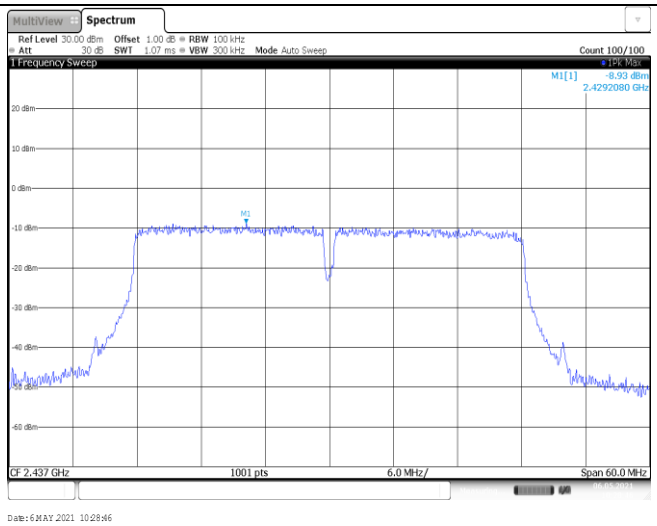
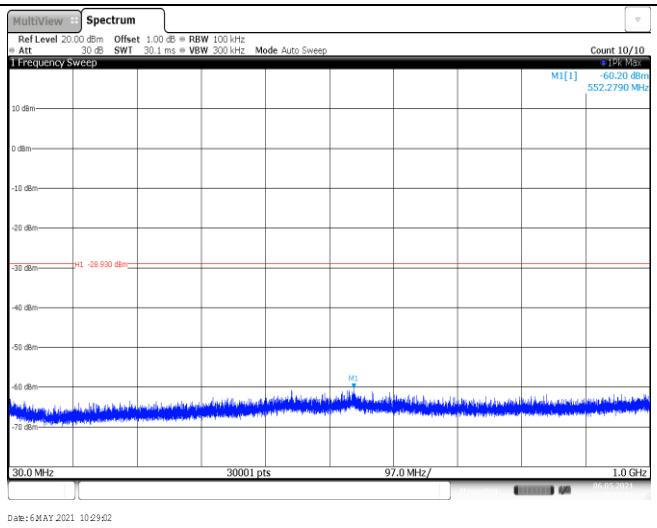
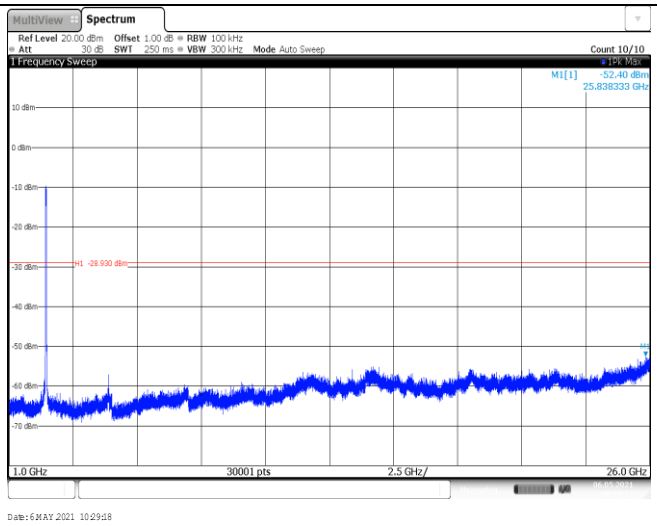
CH11 Reference level	
CH11 30MHz~1000MHz	
CH11 1GHz~26GHz	

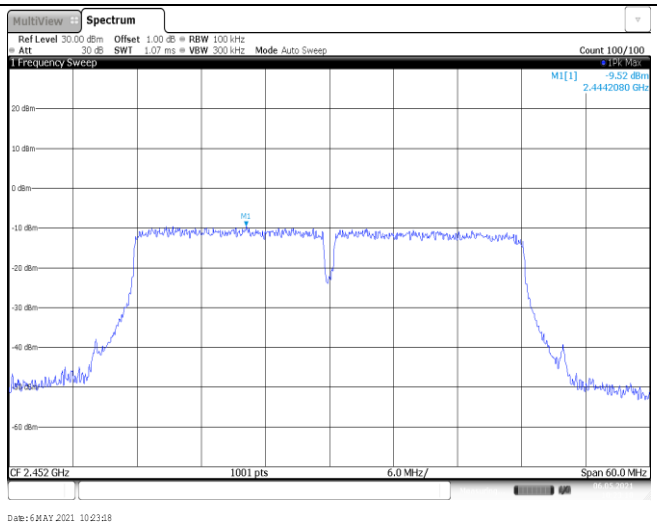
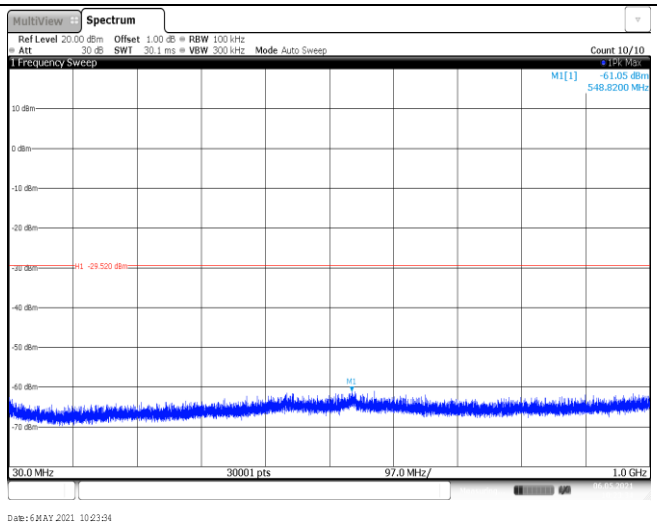
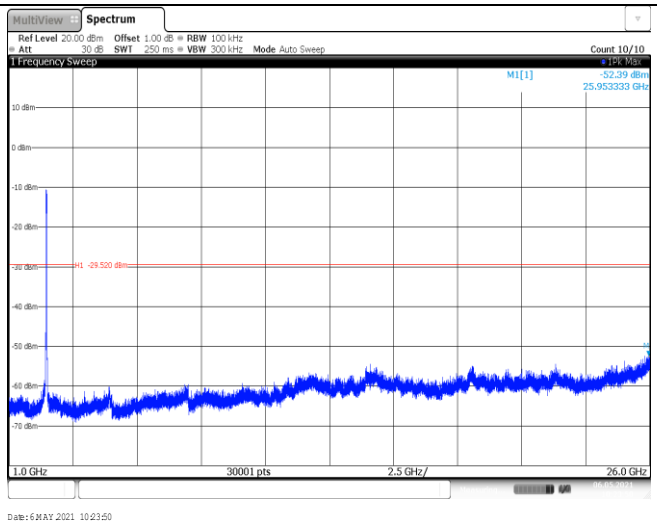
Test Item:	SE	Type:	802.11n(HT20)
CH01 Reference level			
CH01 30MHz~1000MHz			
CH01 1GHz~26GHz			

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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