

APPENDIX REPORT

Project No.	SHT2111009103EW	Radio Specification	WIFI 2.4G
Test sample No.	YPHT21110091014	Model No.	Note1
Start test date	2021-11-18	Finish date	2021-11-18
Temperature	23.7℃	Humidity	31%
Test Engineer	Xiaoqin Li	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	15.38	12.93	≤ 30.00	Pass
	06	15.60	13.17		
	11	15.11	12.70		
802.11g	01	15.49	13.06	≤ 30.00	Pass
	06	15.72	13.16		
	11	15.35	12.76		
802.11n (HT20)	01	15.44	12.76	≤ 30.00	Pass
	06	15.65	13.12		
	11	15.21	12.60		

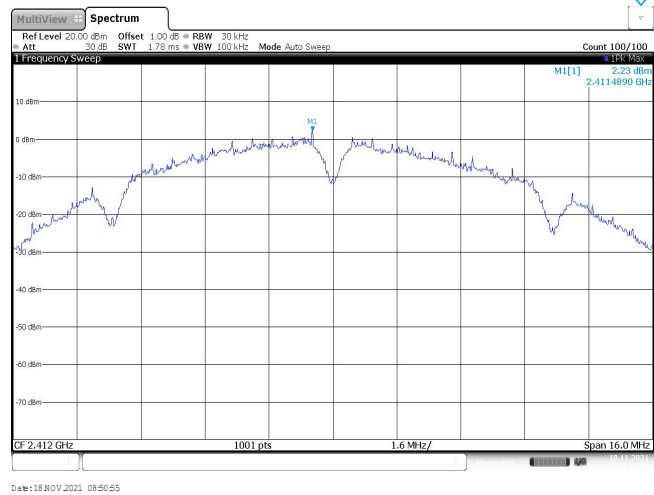
Appendix B: Power Spectral Density

Type	Channel	Power Spectral Density (dBm/30KHz)	Limit (dBm/3KHz)	Result
802.11b	01	2.23	≤8.00	Pass
	06	1.56		
	11	1.54		
802.11g	01	-7.03	≤8.00	Pass
	06	-7.72		
	11	-8.37		
802.11n(HT20)	01	-7.39	≤8.00	Pass
	06	-7.90		
	11	-7.29		

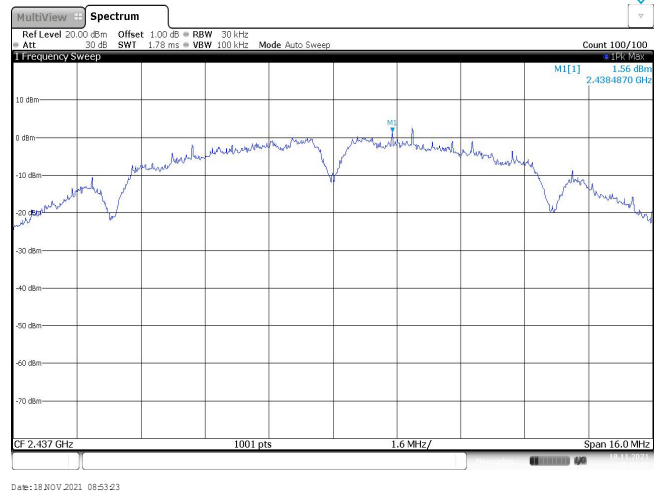
Type:

802.11 b

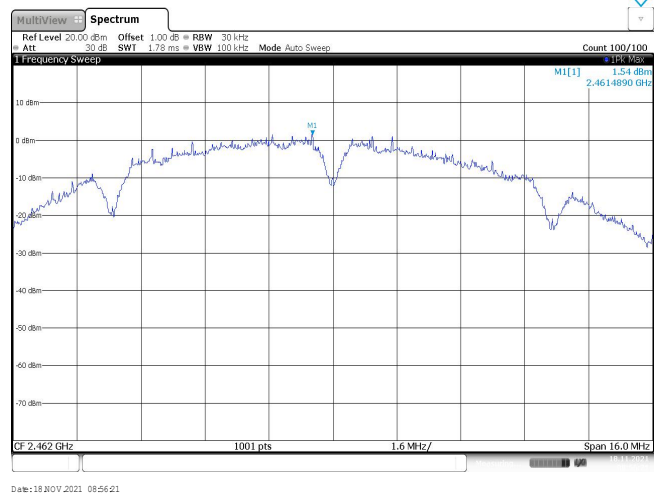
CH01



CH06



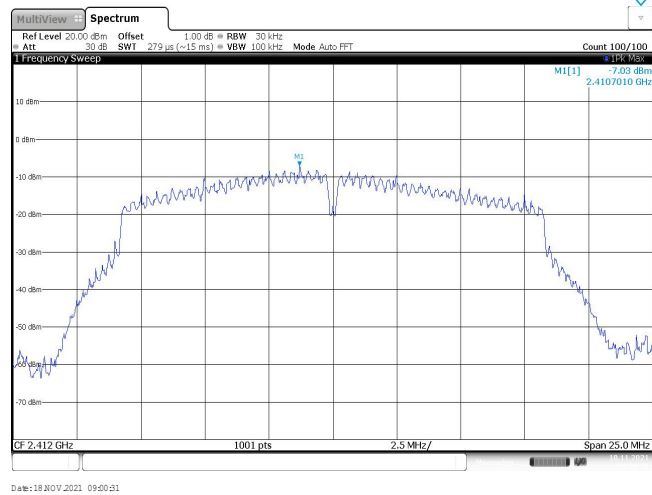
CH11



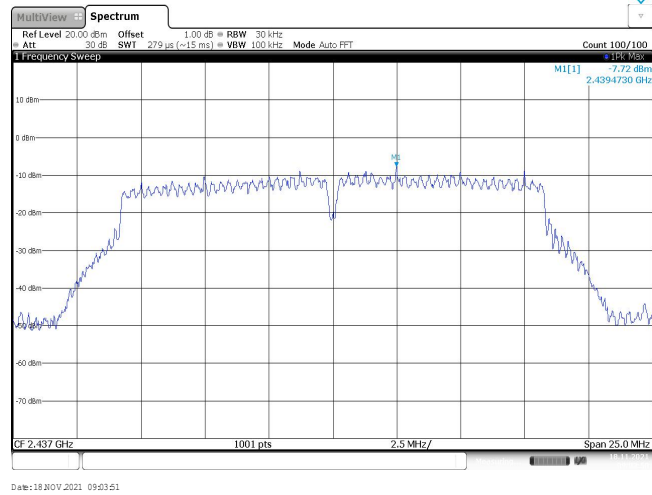
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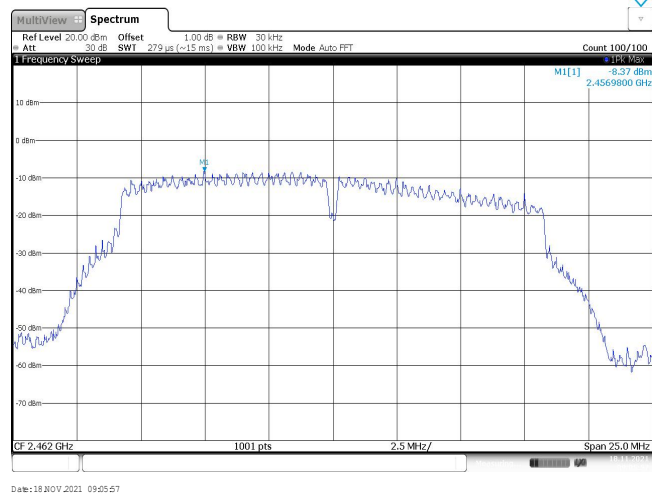
CH01



CH06



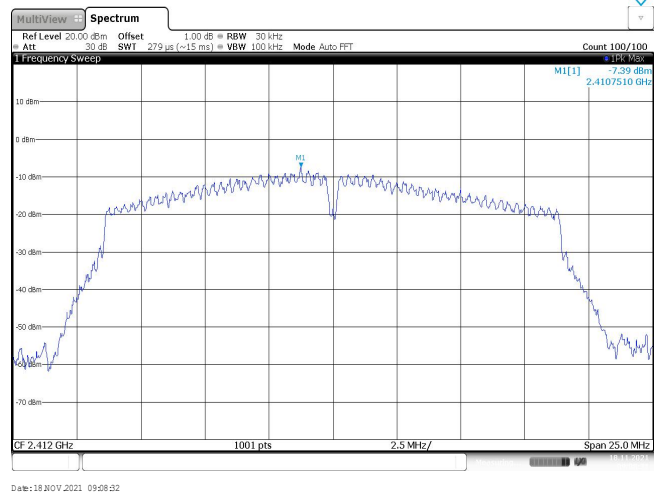
CH11



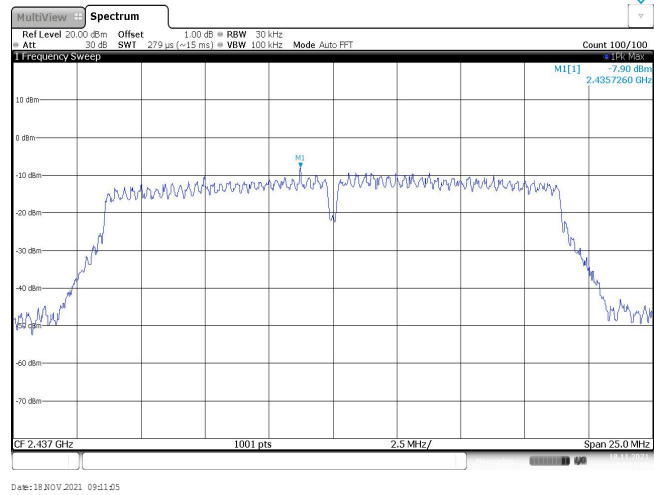
Type:

802.11n(HT20)

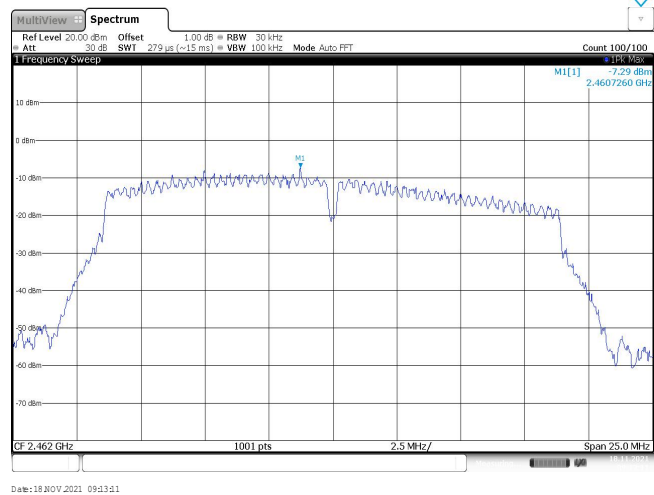
CH01



CH06



CH11



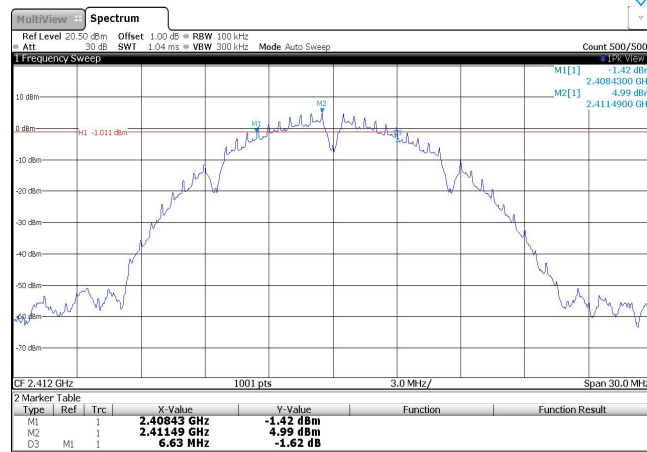
Appendix C: 6dB bandwidth

Type	Channel	6dB Bandwidth (MHz)	Limit (MHz)	Result
802.11b	01	6.63	≥0.5	Pass
	06	8.61		
	11	7.62		
802.11g	01	11.34	≥0.5	Pass
	06	15.78		
	11	12.87		
802.11n(HT20)	01	11.37	≥0.5	Pass
	06	16.41		
	11	12.66		

Type:

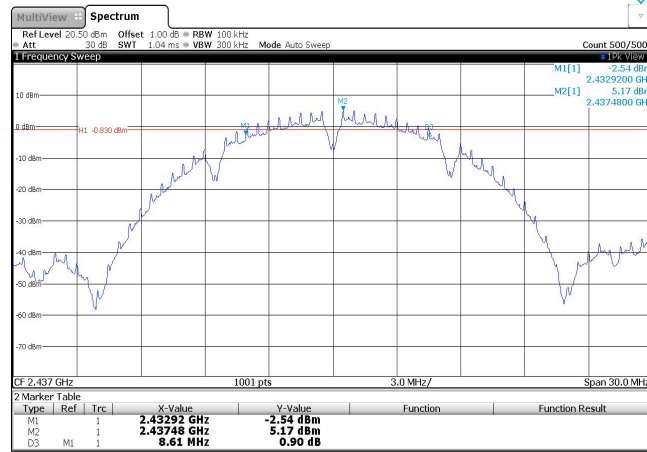
802.11 b

CH01



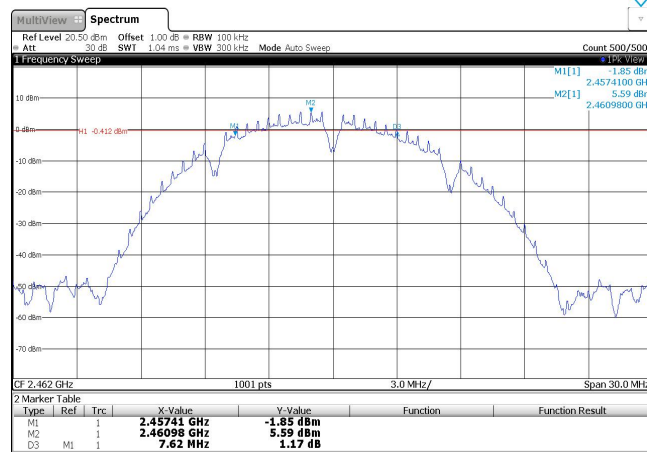
Date: 18 NOV 2021 08:47:47

CH06



Date: 18 NOV 2021 08:52:40

CH11

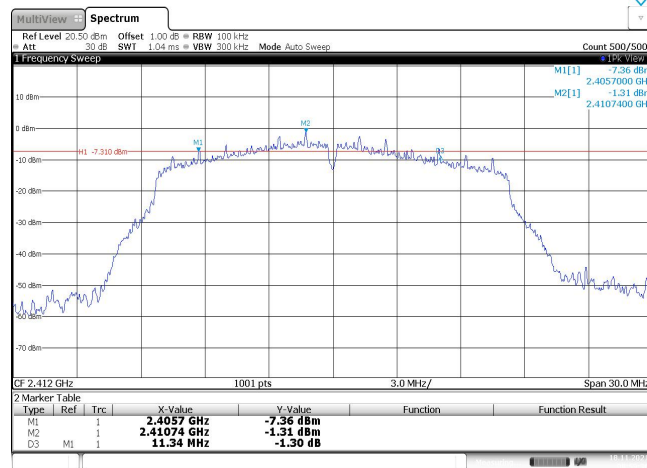


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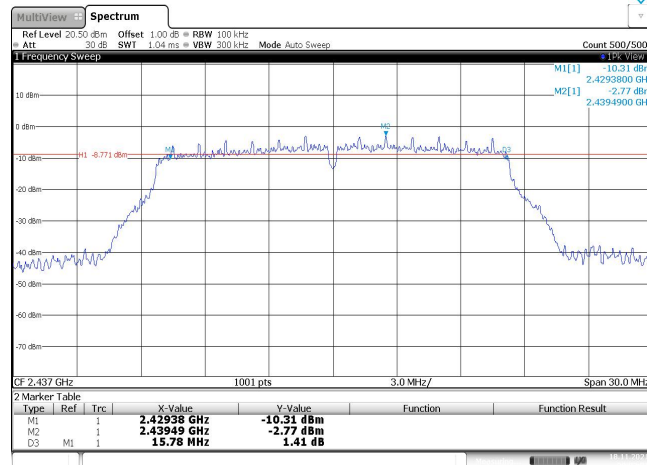
802.11 g

CH01



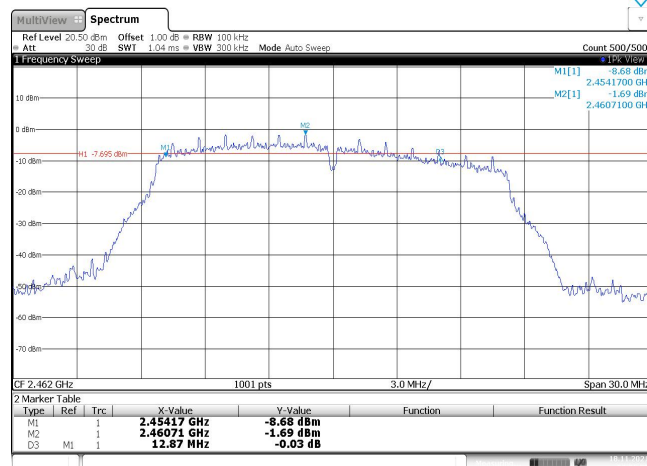
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CH06



Date: 18 NOV 2021 09:03:00

CH11

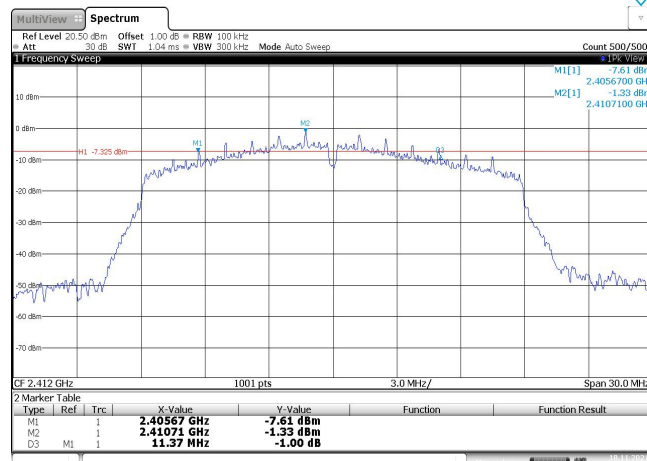


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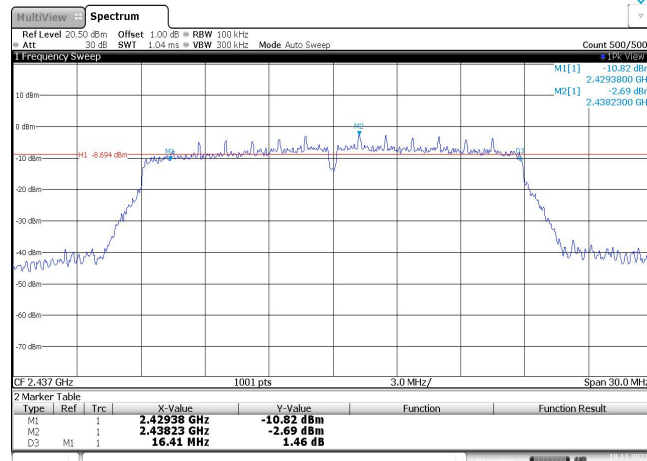
802.11n(HT20)

CH01



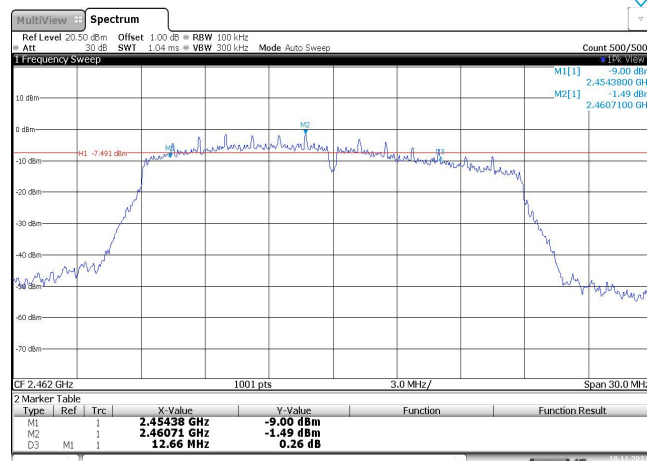
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CH06



Date: 18 NOV 2021 09:10:11

CH11



Date: 18 NOV 2021 09:12:22

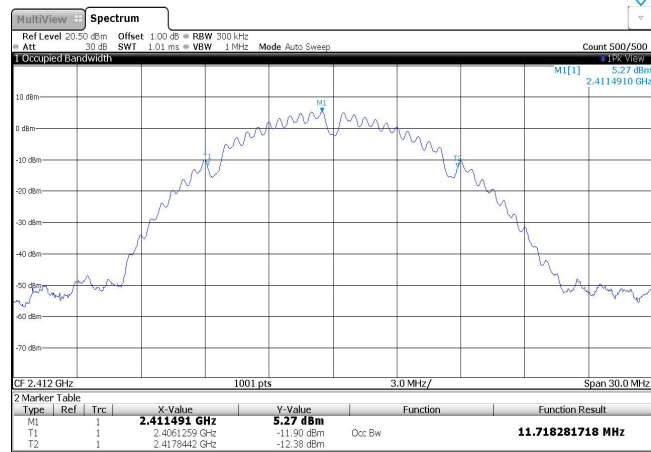
Appendix D: 99% Occupied Bandwidth

Type	Channel	99% Bandwidth (MHz)	Limit (MHz)	Result
802.11b	01	11.72	-	Pass
	06	13.19		
	11	12.56		
802.11g	01	16.03	-	Pass
	06	16.90		
	11	16.39		
802.11n(HT20)	01	17.08	-	Pass
	06	17.92		
	11	17.41		

Type:

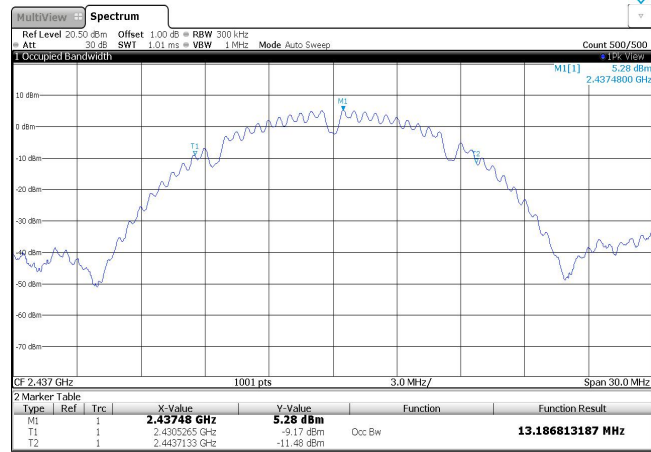
802.11 b

CH01



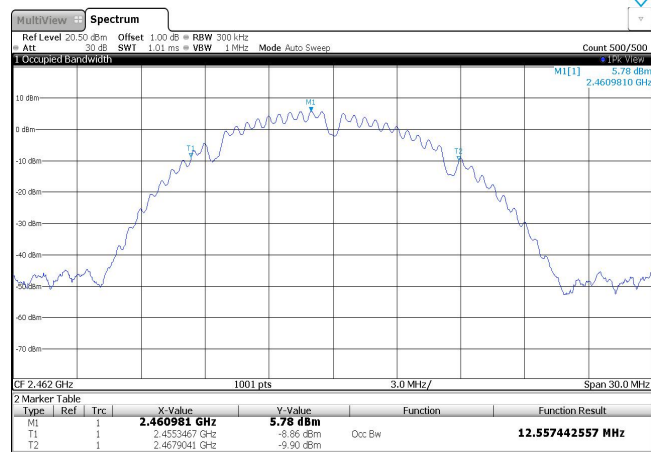
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CH06



Date: 18 NOV 2021 08:52:49

CH11



Date: 18 NOV 2021 08:55:50

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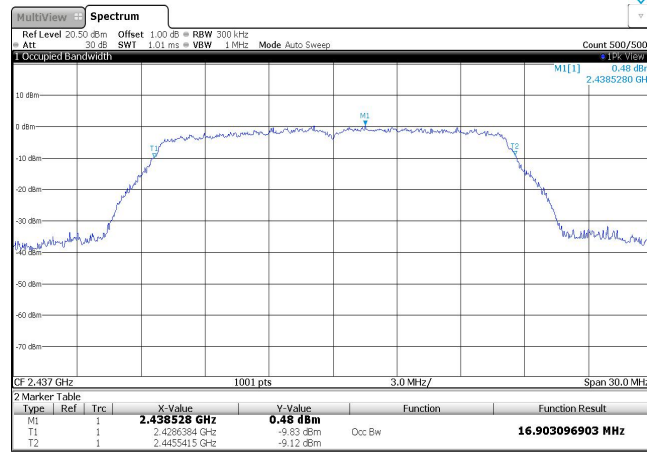
802.11 g

CH01



Date: 18 NOV 2021 08:59:45

CH06



Date: 18 NOV 2021 09:03:09

CH11



Date: 18 NOV 2021 09:05:55

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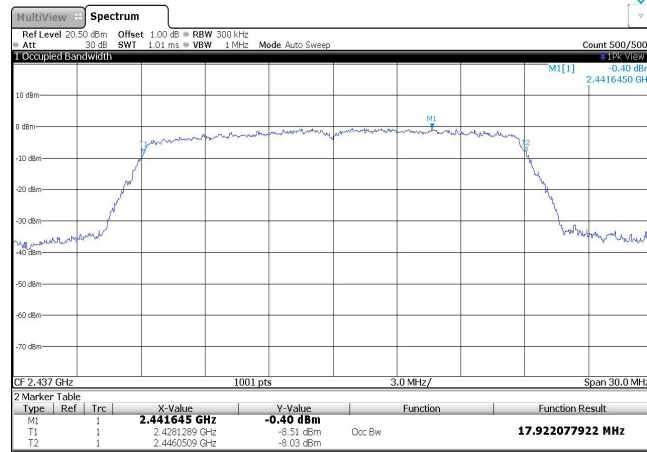
802.11n(HT20)

CH01



Date: 18 NOV 2021 09:07:43

CH06



Date: 18 NOV 2021 09:10:19

CH11

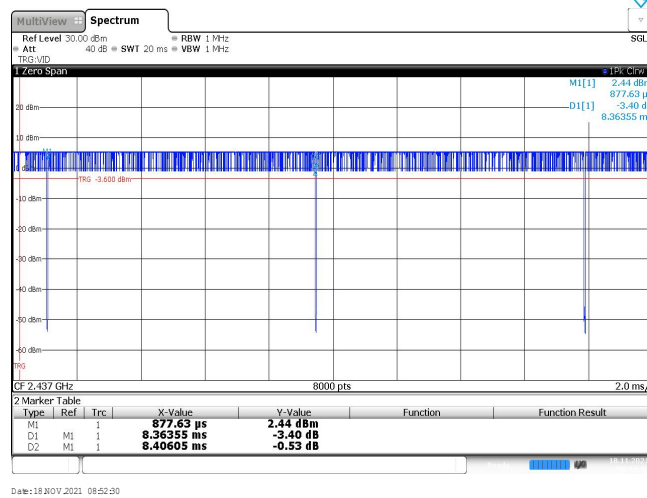


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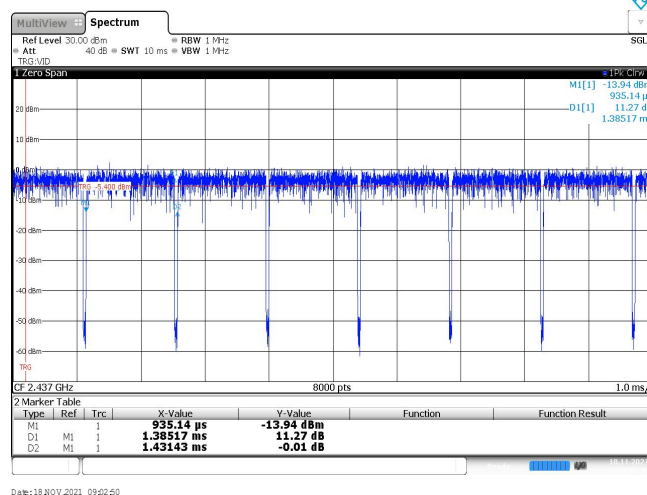
Appendix E: Duty Cycle

Modulation Type	Test Frequency (MHz)	T _{on} time for single burst (ms)	T _{period} (ms)	Duty cycle	1/T _{on} time (kHz)
11b	2437	8.36	8.41	99.4%	0.1
11g	2437	1.39	1.43	97.2%	0.7
11n20	2437	1.29	1.34	96.3%	0.8

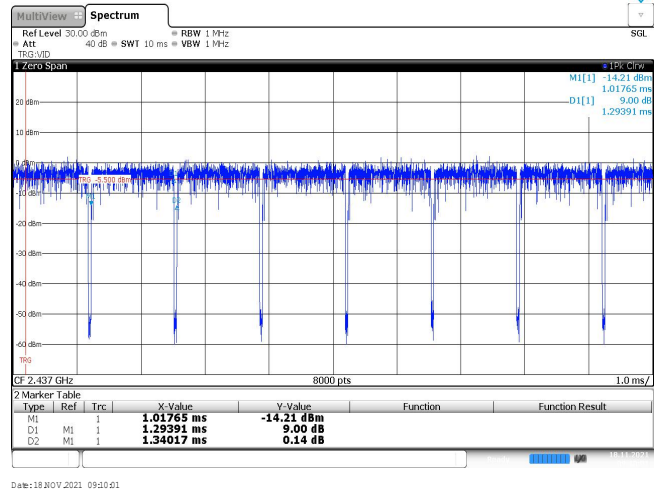
11b



11g



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			

Test Item:	Bandedge	Type:	802.11 n(HT20)																																										
CH01	MultiView Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 1.12 ms VBW 300 kHz Mode Auto Sweep Count 300/300 1 Frequency Sweep 18 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm 2.31 GHz 1001 pts 11.2 MHz/ 2.422 GHz M1 -1.41 dBm 2.410640 GHz M2 -48.78 dBm 2.400000 GHz 2 Marker Table <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>2.41064 GHz</td><td>-1.41 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4 GHz</td><td>-48.78 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.39 GHz</td><td>-60.00 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.31 GHz</td><td>-63.08 dBm</td><td></td><td></td></tr><tr><td>M5</td><td>1</td><td></td><td>2.399712 GHz</td><td>-47.82 dBm</td><td></td><td></td></tr></table> Date: 18 NOV 2021 09:08:42			Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.41064 GHz	-1.41 dBm			M2	1		2.4 GHz	-48.78 dBm			M3	1		2.39 GHz	-60.00 dBm			M4	1		2.31 GHz	-63.08 dBm			M5	1		2.399712 GHz	-47.82 dBm		
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CH11	MultiView Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 1.03 ms VBW 300 kHz Mode Auto Sweep Count 300/300 1 Frequency Sweep 18 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm 2.452 GHz 1001 pts 4.8 MHz/ 2.5 GHz M1 -1.68 dBm 2.4569630 GHz M2 -55.90 dBm 2.4835000 GHz 2 Marker Table <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>2.456963 GHz</td><td>-1.68 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4835 GHz</td><td>-55.90 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.5 GHz</td><td>-63.85 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.483584 GHz</td><td>-54.99 dBm</td><td></td><td></td></tr></table> Date: 18 NOV 2021 09:13:21			Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.456963 GHz	-1.68 dBm			M2	1		2.4835 GHz	-55.90 dBm			M3	1		2.5 GHz	-63.85 dBm			M4	1		2.483584 GHz	-54.99 dBm									
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