

APPENDIX REPORT

Project No.	SHT2109010007EW	Radio Specification	WIFI 2.4G
Model No.	RXiBreeze 20A		
Start test date	2022-05-27	Finish date	2022-05-27
Temperature	25.1℃	Humidity	44%
Test Engineer	Xiaoqin Li	Auditor	Xiaodong Zhuo

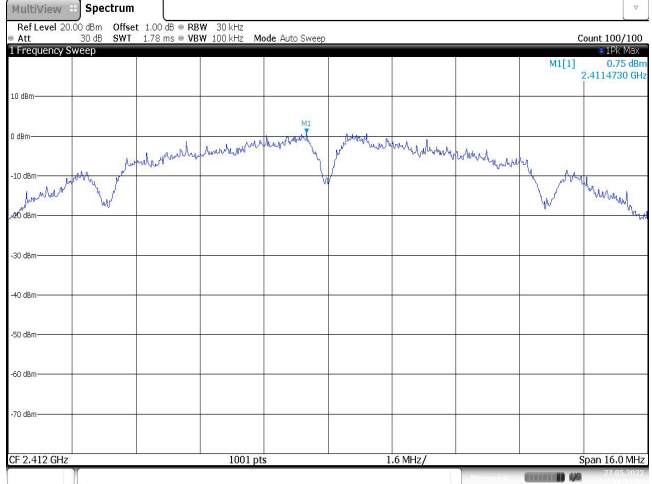
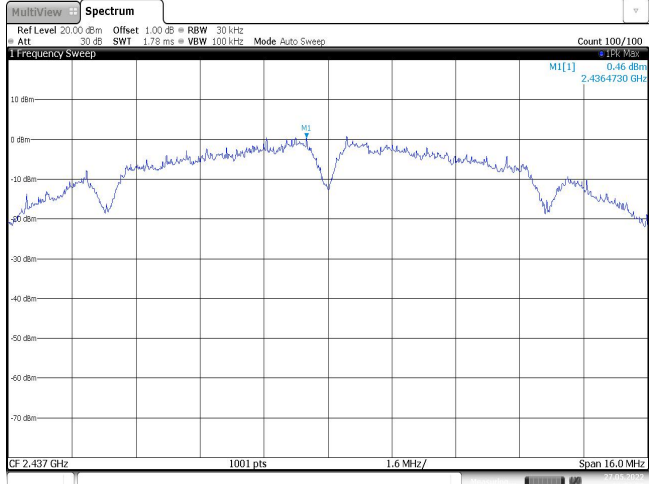
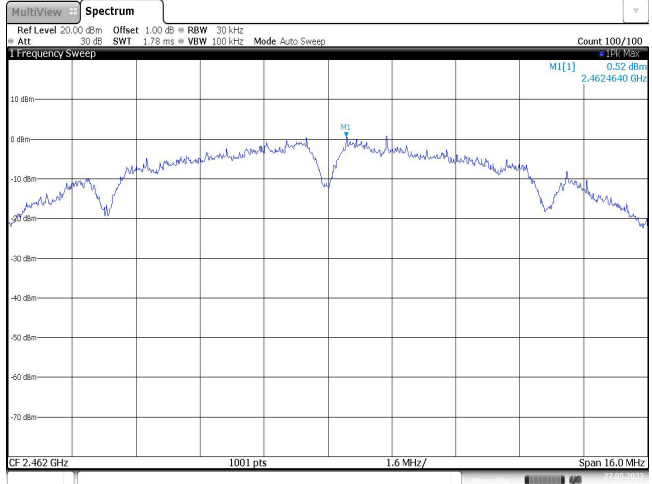
Appendix clause	Test item	Result
A	Conducted Peak Output Power	PASS
B	Power Spectral Density	PASS
C	6 dB Bandwidth	PASS
D	99% Occupied Bandwidth	PASS
E	Duty Cycle	PASS
F	Band edge and Spurious Emissions (conducted)	PASS

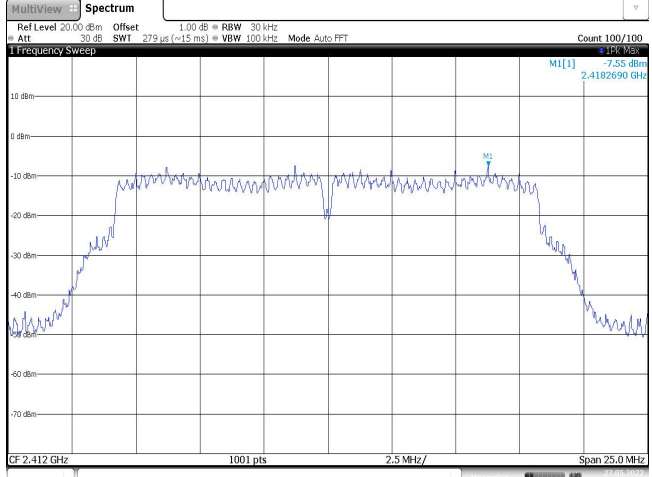
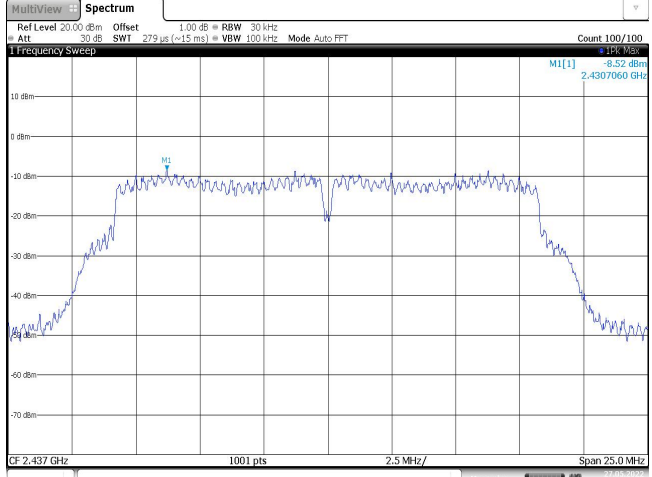
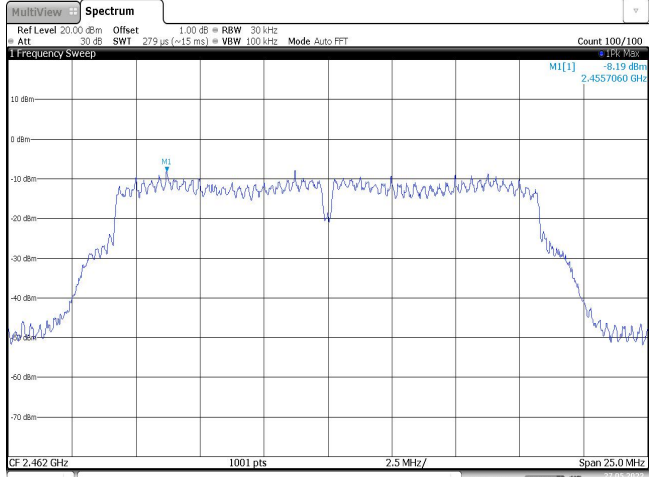
Appendix A: Conducted Peak Output Power

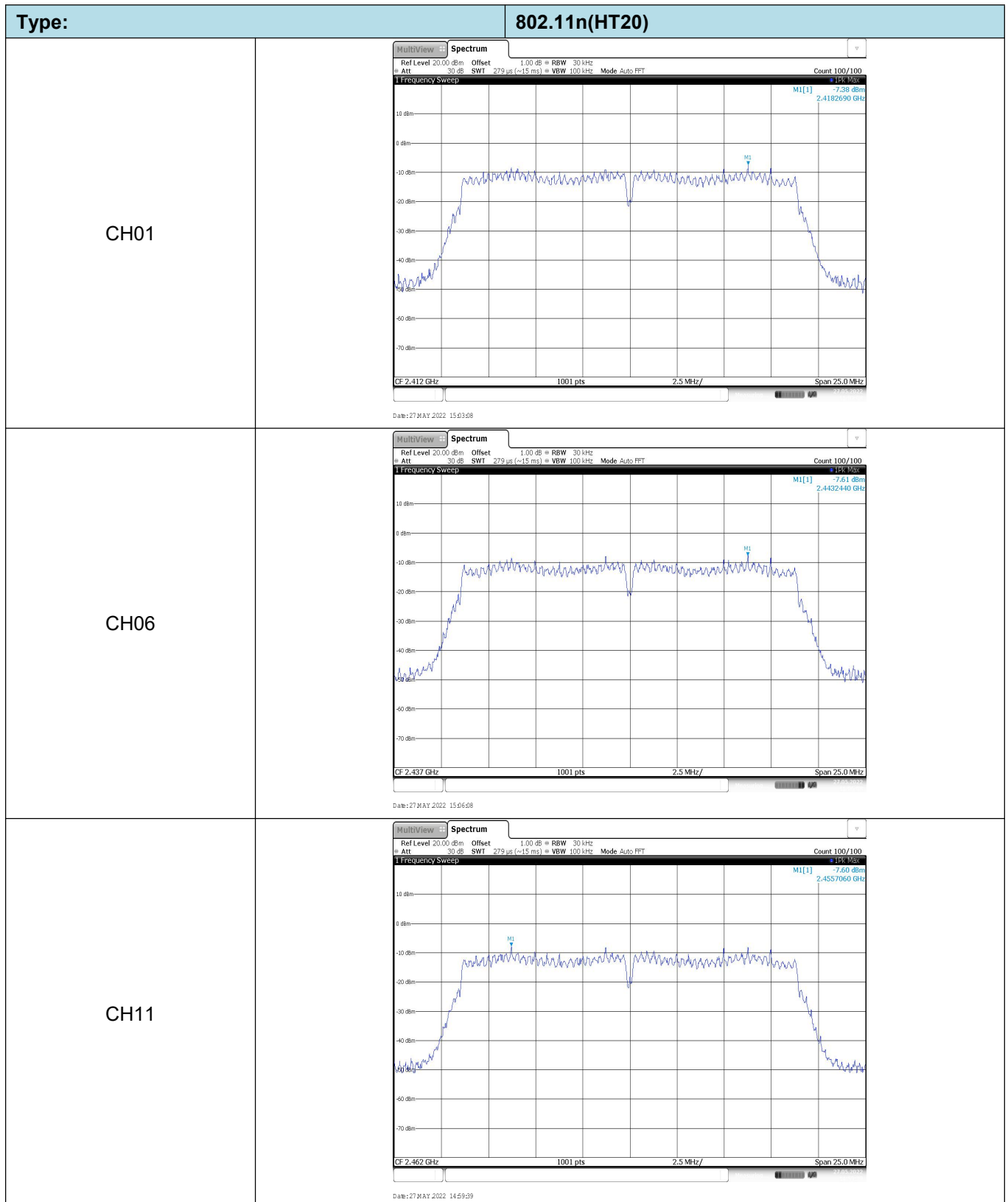
Type	Channel	Peak Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
802.11b	01	15.26	13.09	≤ 30.00	Pass
	06	15.39	13.16		
	11	15.15	13.02		
802.11g	01	15.93	13.82	≤ 30.00	Pass
	06	16.18	13.96		
	11	15.96	13.86		
802.11n (HT20)	01	15.92	13.74	≤ 30.00	Pass
	06	16.05	13.84		
	11	15.88	13.62		

Appendix B: Power Spectral Density

Type	Channel	Power Spectral Density (dBm/30KHz)	Limit (dBm/3KHz)	Result
802.11b	01	0.75	≤8.00	Pass
	06	0.46		
	11	0.52		
802.11g	01	-7.55	≤8.00	Pass
	06	-8.52		
	11	-8.19		
802.11n(HT20)	01	-7.38	≤8.00	Pass
	06	-7.61		
	11	-7.60		

Type:	802.11 b
CH01	 MultiView Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 30 kHz Att 30 dB SWI 1.78 ms VBW 100 kHz Mode Auto Sweep Count 100/100 MI[1] 0.75 dBm 2.4114730 GHz CF 2.412 GHz 1001 pts 1.6 MHz/ Span 16.0 MHz Date: 27 MAY 2022 14:51:01
CH06	 MultiView Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 30 kHz Att 30 dB SWI 1.78 ms VBW 100 kHz Mode Auto Sweep Count 100/100 MI[1] 0.46 dBm 2.4364730 GHz CF 2.437 GHz 1001 pts 1.6 MHz/ Span 16.0 MHz Date: 27 MAY 2022 14:53:59
CH11	 MultiView Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 30 kHz Att 30 dB SWI 1.78 ms VBW 100 kHz Mode Auto Sweep Count 100/100 MI[1] 0.52 dBm 2.4624640 GHz CF 2.462 GHz 1001 pts 1.6 MHz/ Span 16.0 MHz Date: 27 MAY 2022 14:28:16

Type:	802.11 g
CH01	 MultiView Spectrum Ref Level 20.00 dBm Offset 1.00 dB BW 30 kHz Att 30 dB SWI 279 us (~15 ms) VBW 100 kHz Mode Auto FFT Count 100/100 MI[1] -7.55 dBm 2.4182690 GHz CF 2.412 GHz 1001 pts 2.5 MHz/ Span 25.0 MHz Date: 27 MAY 2022 14:46:39
CH06	 MultiView Spectrum Ref Level 20.00 dBm Offset 1.00 dB BW 30 kHz Att 30 dB SWI 279 us (~15 ms) VBW 100 kHz Mode Auto FFT Count 100/100 MI[1] -8.52 dBm 2.4307060 GHz CF 2.423 GHz 1001 pts 2.5 MHz/ Span 25.0 MHz Date: 27 MAY 2022 14:49:36
CH11	 MultiView Spectrum Ref Level 20.00 dBm Offset 1.00 dB BW 30 kHz Att 30 dB SWI 279 us (~15 ms) VBW 100 kHz Mode Auto FFT Count 100/100 MI[1] -8.19 dBm 2.4557060 GHz CF 2.442 GHz 1001 pts 2.5 MHz/ Span 25.0 MHz Date: 27 MAY 2022 14:43:59



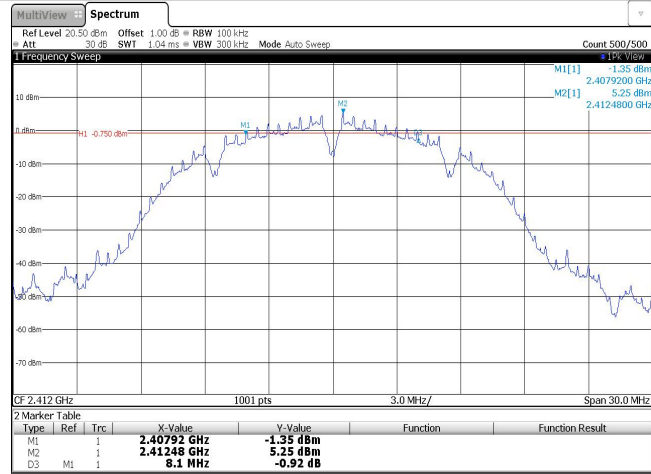
Appendix C: 6dB bandwidth

Type	Channel	6dB Bandwidth (MHz)	Limit (MHz)	Result
802.11b	01	8.10	≥0.5	Pass
	06	8.58		
	11	9.09		
802.11g	01	15.87	≥0.5	Pass
	06	15.63		
	11	15.72		
802.11n(HT20)	01	16.41	≥0.5	Pass
	06	17.58		
	11	17.58		

Type:

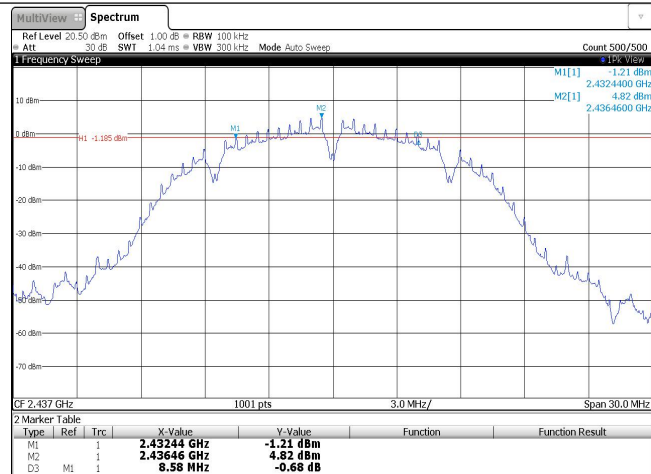
802.11 b

CH01



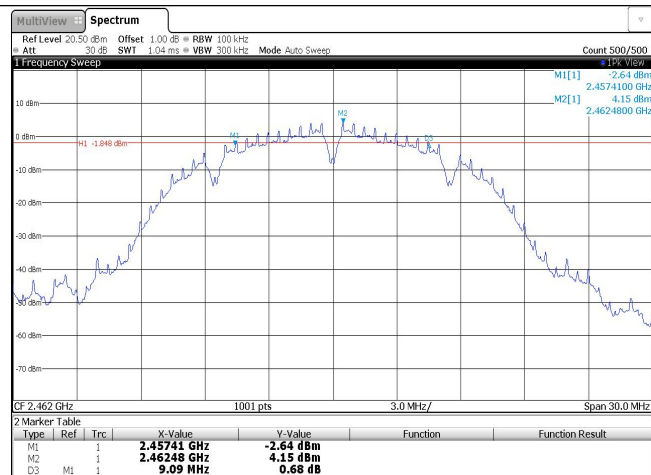
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CH06



Date: 27 MAY 2022 14:53:34

CH11

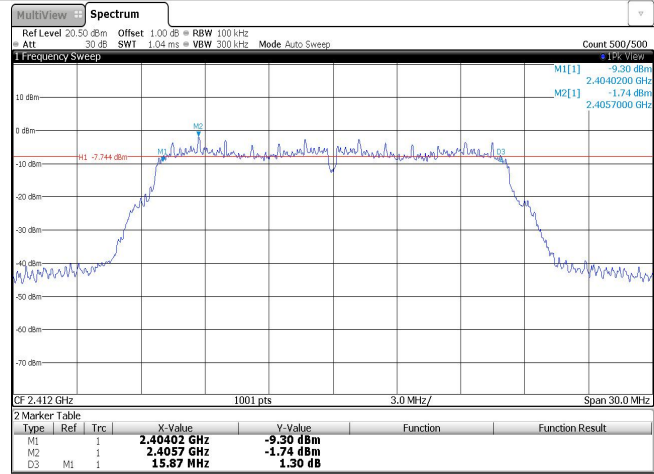


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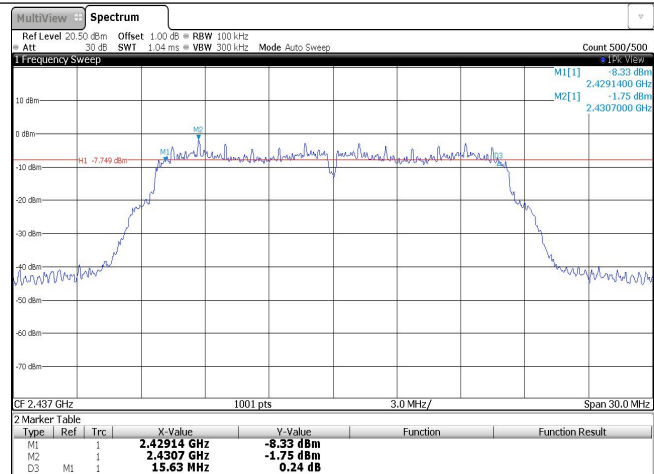
802.11 g

CH01



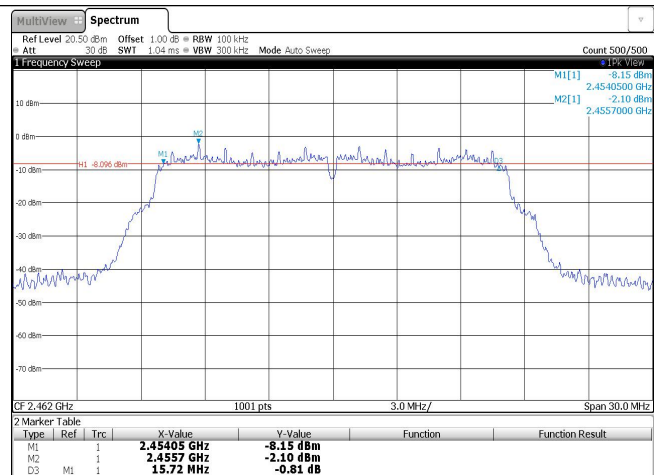
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CH06



Date: 27 MAY 2022 14:49:11

CH11

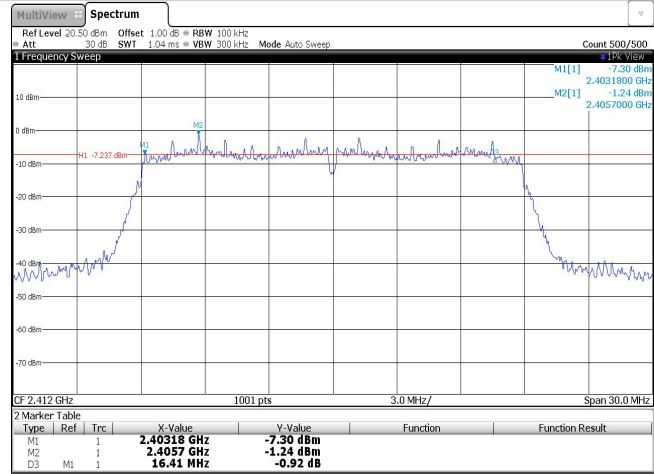


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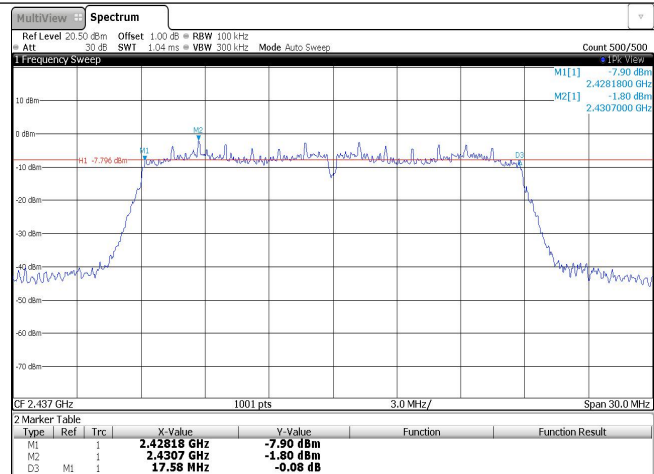
802.11n(HT20)

CH01



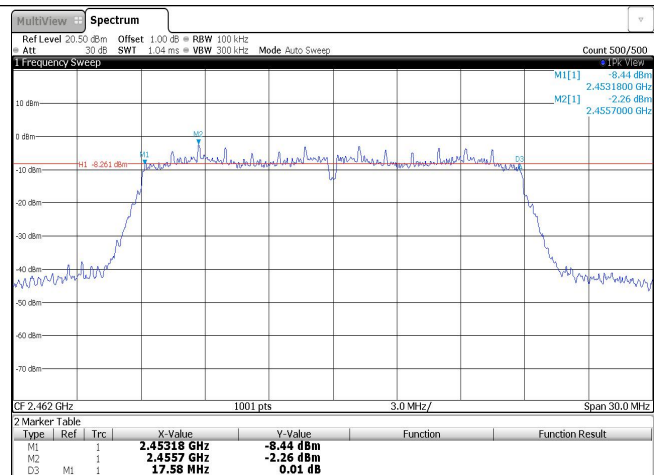
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CH06



Date: 27 MAY 2022 15:05:42

CH11



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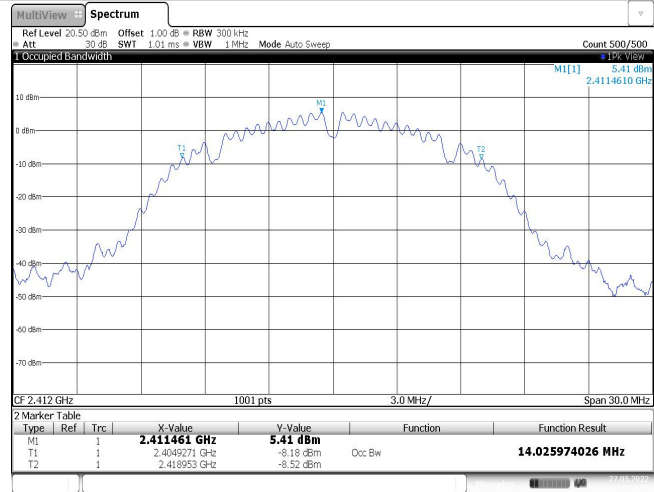
Appendix D: 99% Occupied Bandwidth

Type	Channel	99% Bandwidth (MHz)	Limit (MHz)	Result
802.11b	01	14.03	-	Pass
	06	14.03		
	11	14.00		
802.11g	01	16.99	-	Pass
	06	16.99		
	11	16.99		
802.11n(HT20)	01	18.07	-	Pass
	06	18.07		
	11	18.07		

Type:

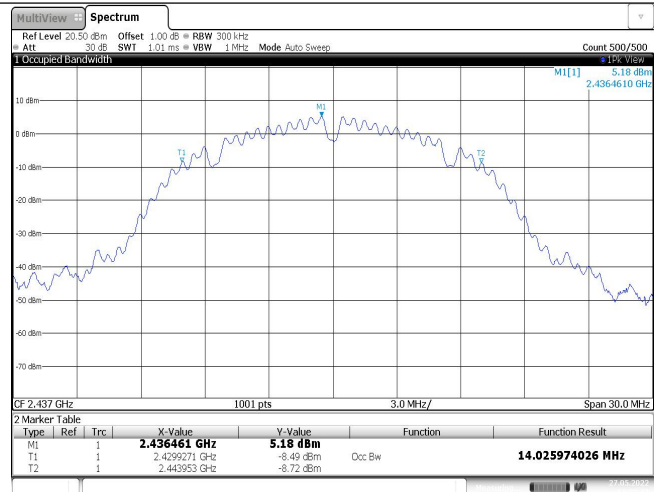
802.11 b

CH01



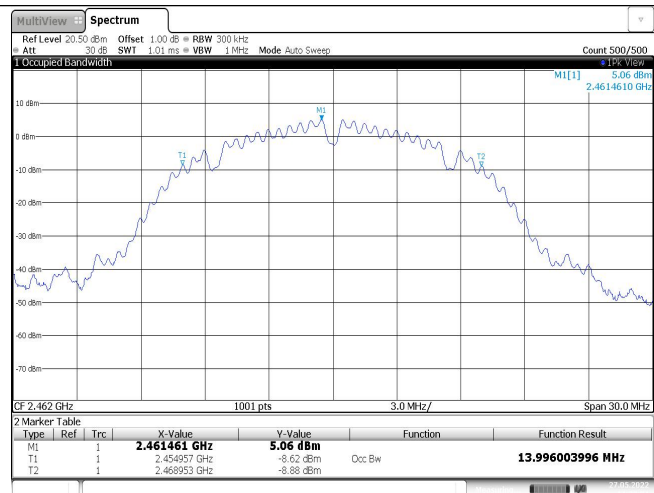
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CH06



Date: 27 MAY 2022 14:53:47

CH11

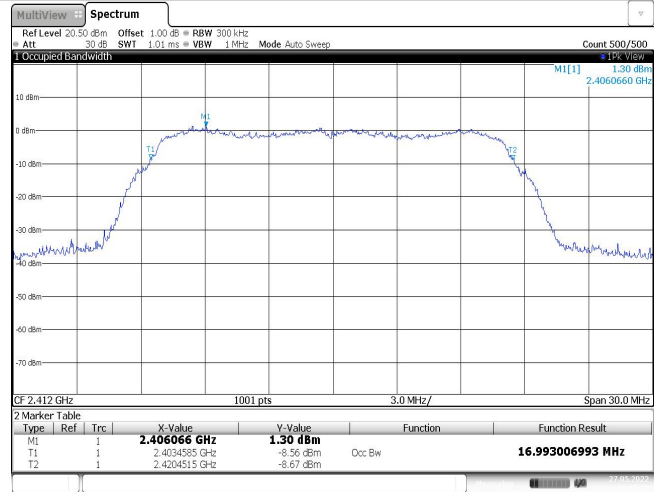


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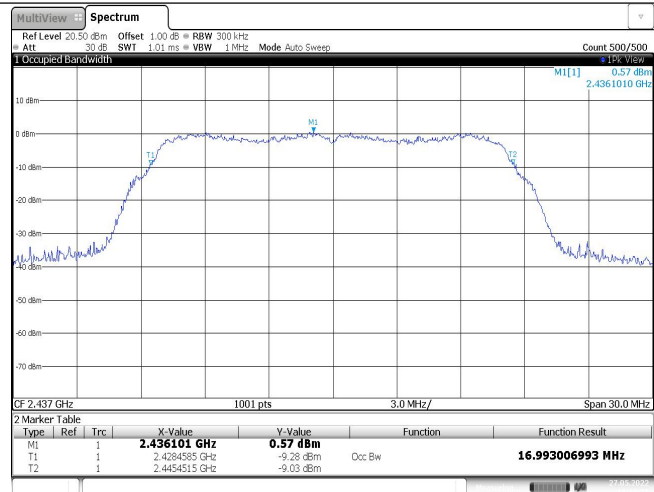
802.11 g

CH01



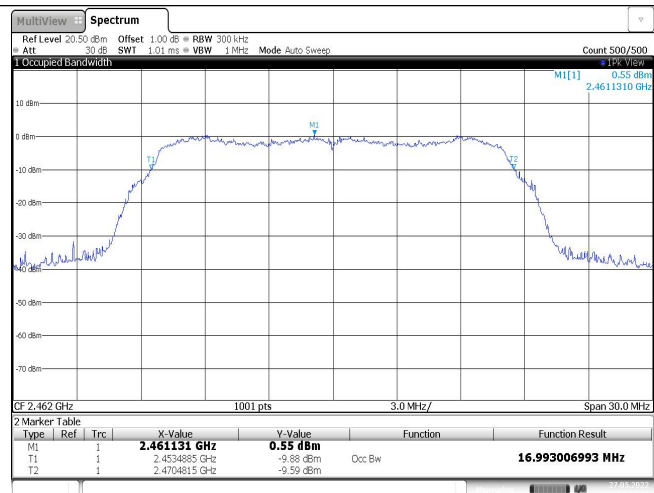
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CH06



Date: 27 MAY 2022 14:49:25

CH11

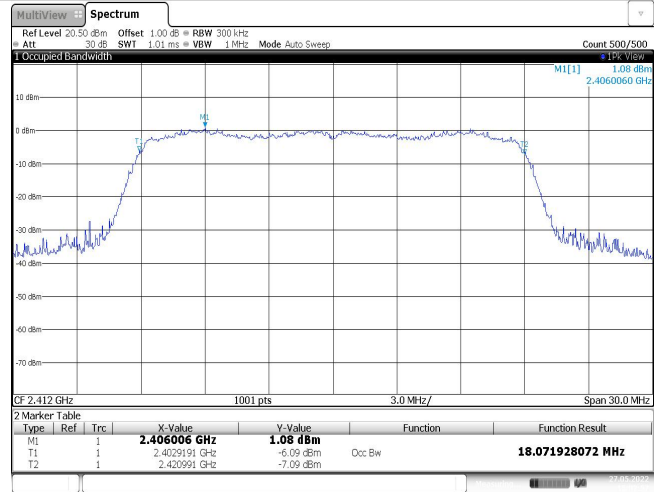


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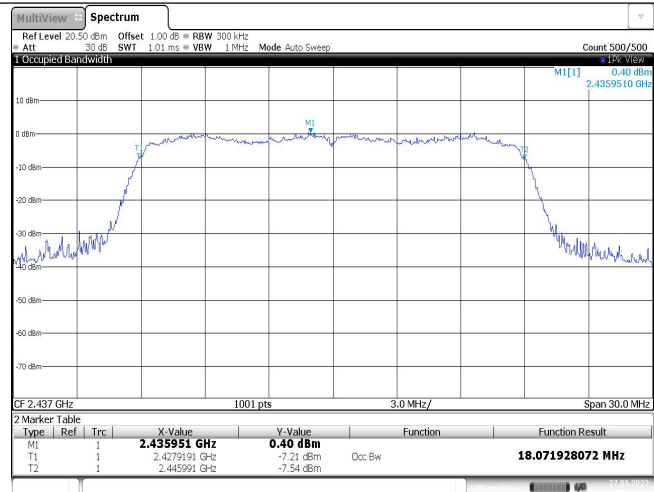
802.11n(HT20)

CH01



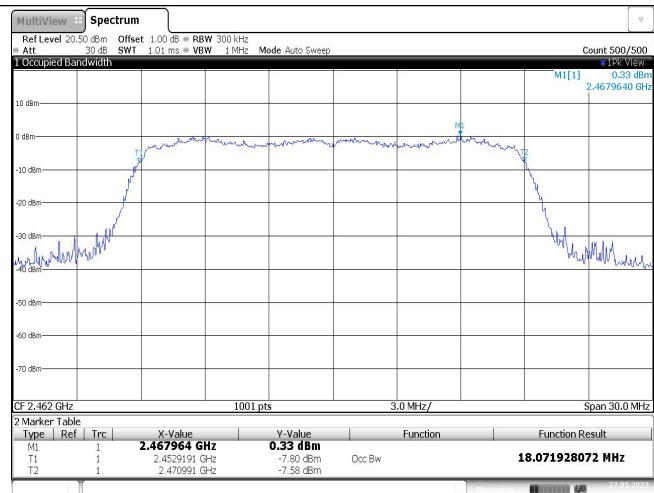
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CH06



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CH11

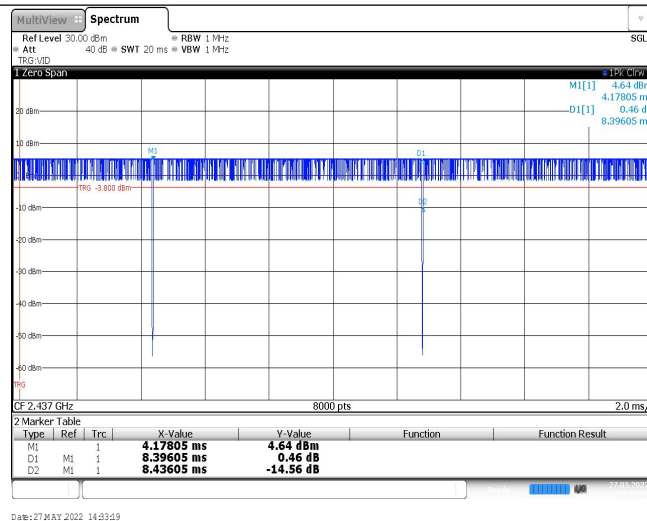


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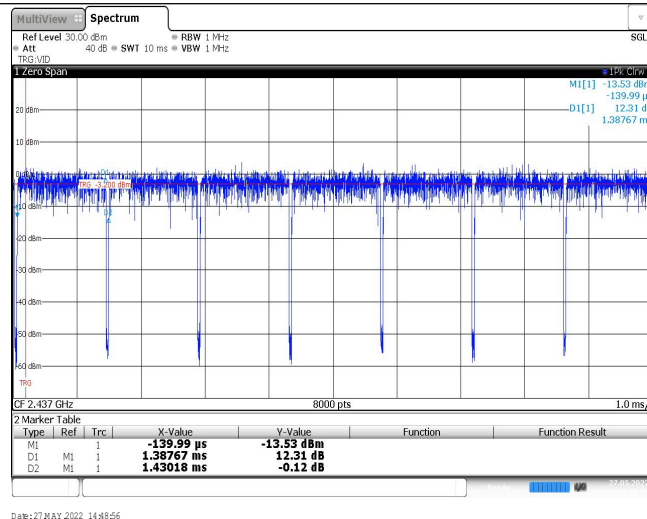
Appendix E: Duty Cycle

Modulation Type	Test Frequency (MHz)	T _{on} time for single burst (ms)	T _{period} (ms)	Duty cycle	1/T _{on} time (kHz)
11b	2437	8.40	8.44	99.5%	0.1
11g	2437	1.39	1.43	97.2%	0.7
11n20	2437	1.30	1.34	97.0%	0.8

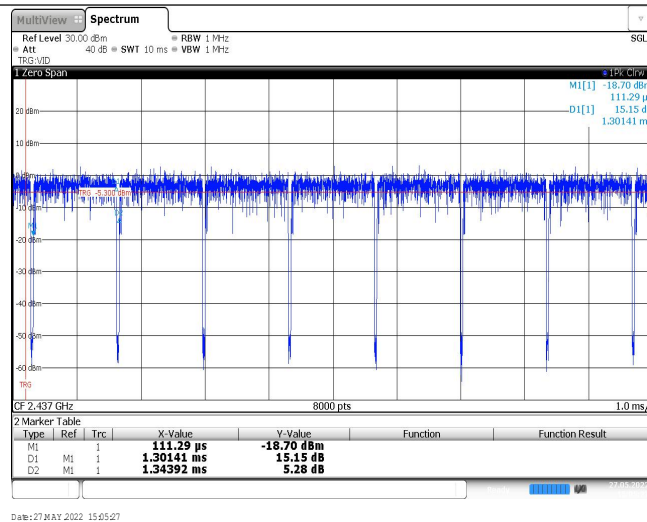
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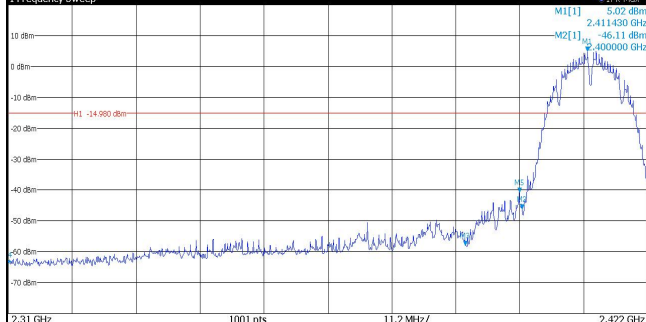
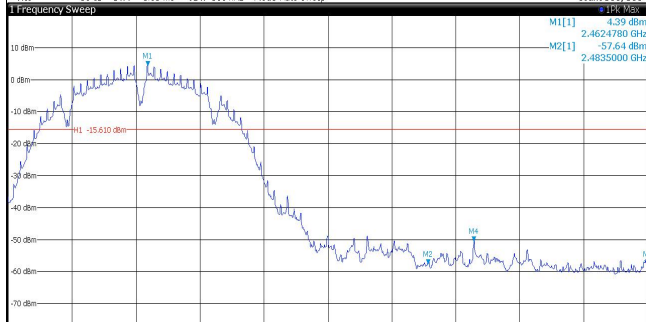
11g

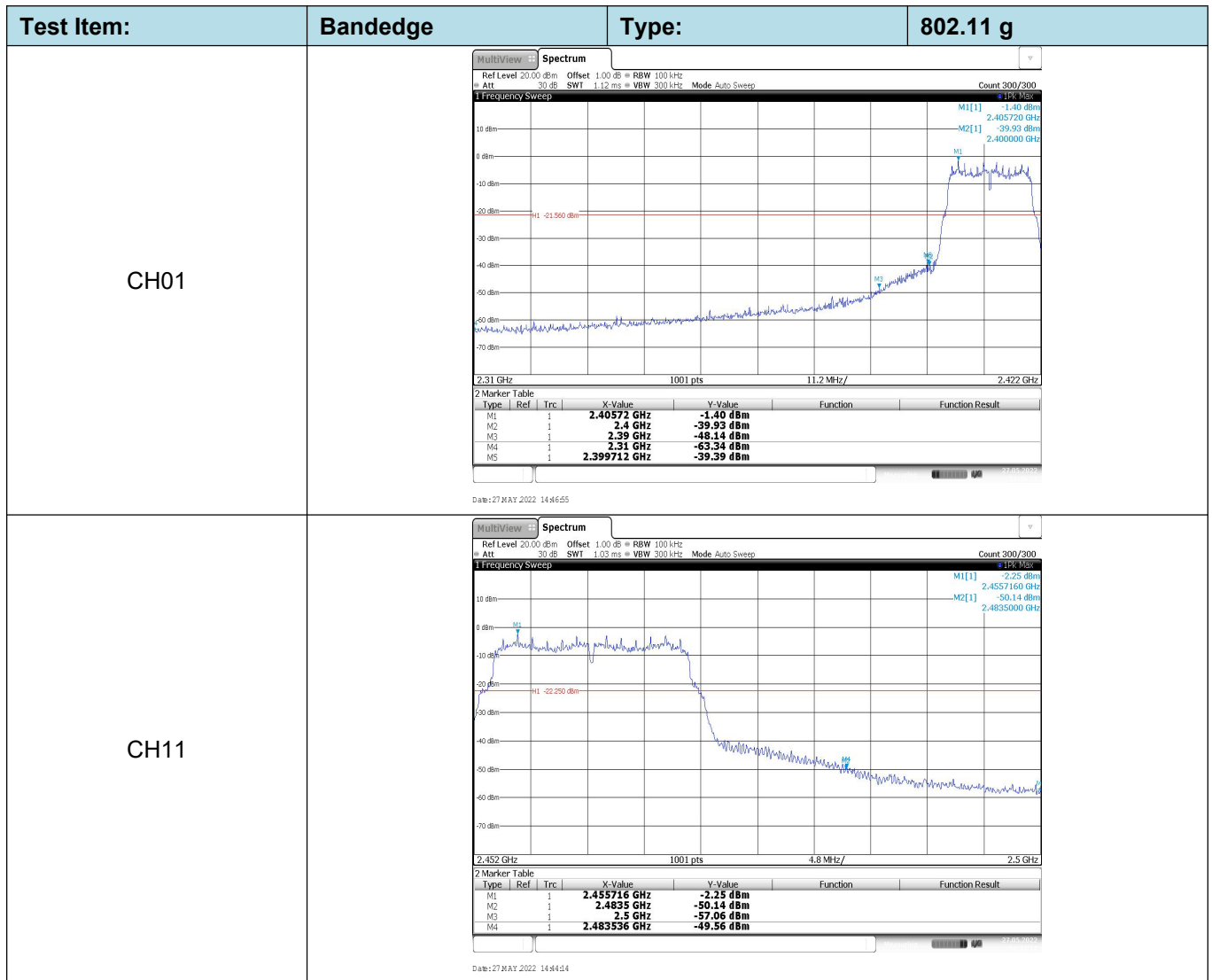


11n20



Appendix F: Band edge and Spurious Emissions (conducted)

Test Item:	Bandedge	Type:	802.11 b																																										
CH01	MultiViewSpectrum 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  M1[1] 5.02 dBm 2.411430 GHz M2[1] -46.11 dBm 2.400000 GHz M1 -14.860 dBm 2.31 GHz 1001 pts 11.2 MHz/ 2.422 GHz <table><thead><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></thead><tbody><tr><td>M1</td><td>1</td><td></td><td>2.41143 GHz</td><td>5.02 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4 GHz</td><td>-46.11 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.39 GHz</td><td>-58.00 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.31 GHz</td><td>-63.22 dBm</td><td></td><td></td></tr><tr><td>M5</td><td>1</td><td></td><td>2.399488 GHz</td><td>-40.77 dBm</td><td></td><td></td></tr></tbody></table> Date: 27 MAY 2022 14:31:16			Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.41143 GHz	5.02 dBm			M2	1		2.4 GHz	-46.11 dBm			M3	1		2.39 GHz	-58.00 dBm			M4	1		2.31 GHz	-63.22 dBm			M5	1		2.399488 GHz	-40.77 dBm		
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CH11	MultiViewSpectrum 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  M1[1] -4.39 dBm 2.4624780 GHz M2[1] -57.64 dBm 2.4835000 GHz M1 -15.610 dBm 2.452 GHz 1001 pts 4.8 MHz/ 2.5 GHz <table><thead><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></thead><tbody><tr><td>M1</td><td>1</td><td></td><td>2.462478 GHz</td><td>-4.39 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4835 GHz</td><td>-57.64 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.5 GHz</td><td>-56.59 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.486944 GHz</td><td>-50.47 dBm</td><td></td><td></td></tr></tbody></table> Date: 27 MAY 2022 14:28:31			Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.462478 GHz	-4.39 dBm			M2	1		2.4835 GHz	-57.64 dBm			M3	1		2.5 GHz	-56.59 dBm			M4	1		2.486944 GHz	-50.47 dBm									
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Test Item:	Bandedge	Type:	802.11 n(HT20)																																										
CH01	MultiViewSpectrum Ref Level 20.00 dBm Offset 1.00 dB BW 100 kHz Att 30 dB SWI 1.12 ms VBW 300 Linz Mode Auto Sweep Count 300/300 1 Frequency Sweep 10 dB 0 dB -10 dB -20 dB -30 dB -40 dB -50 dB -60 dB -70 dB M1 M2 M3 M4 M5 M1[1] M2[1] -21.700 dBm -1.70 dBm -39.56 dBm -47.47 dBm -62.60 dBm -40.03 dBm -1.70 dBm -39.56 dBm 2.31 GHz 1001 pts 11.2 MHz/ 2.422 GHz <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>2.40572 GHz</td><td>-1.70 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4 GHz</td><td>-39.56 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.39 GHz</td><td>-47.47 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.31 GHz</td><td>-62.60 dBm</td><td></td><td></td></tr><tr><td>M5</td><td>1</td><td></td><td>2.398816 GHz</td><td>-40.03 dBm</td><td></td><td></td></tr></table> Date: 27 MAY 2022 15:03:24			Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.40572 GHz	-1.70 dBm			M2	1		2.4 GHz	-39.56 dBm			M3	1		2.39 GHz	-47.47 dBm			M4	1		2.31 GHz	-62.60 dBm			M5	1		2.398816 GHz	-40.03 dBm		
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