

APPENDIX REPORT

Project No.	SHT2006146102EW	Radio Specification	WIFI 5G
Test sample No.	YPHT20061461003,	Model No.	T450
Start test date	2020/7/10	Finish date	2020/7/20
Temperature	25°C	Humidity	50%
Test Engineer	Jiongshen.Feng	Auditor	Xiaodong Zheo

Appendix clause	Test item	Result
A	Maximum Conducted Output Power	Pass
B	Maximum Power Spectral Density	Pass
C	26 dB Bandwidth	Pass
D	99% Occupy bandwidth	Pass
E	6 dB Bandwidth	Pass
F	Band edge	Pass
G	Frequency stability	Pass

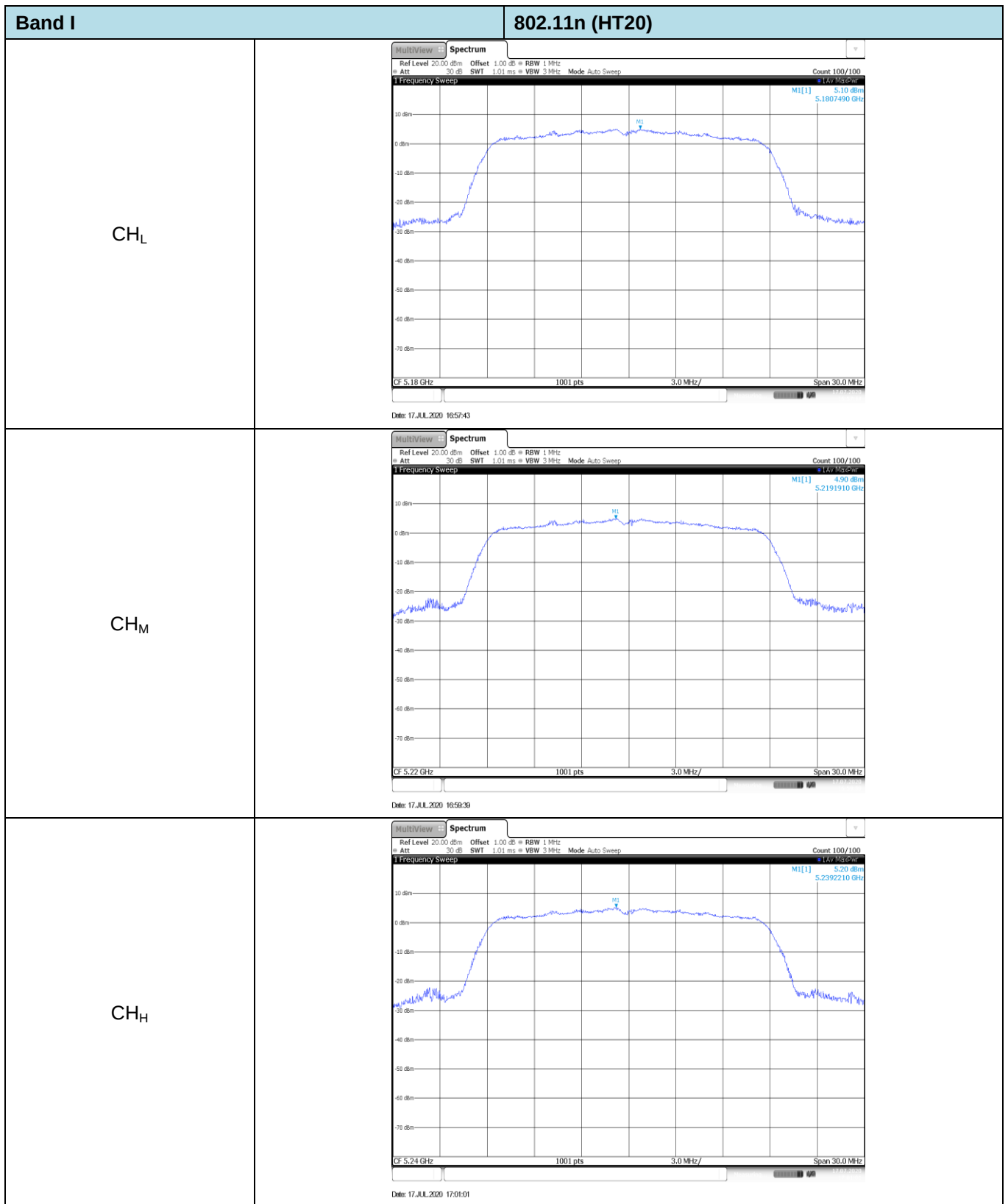
Appendix A: Maximum Conducted Output Power

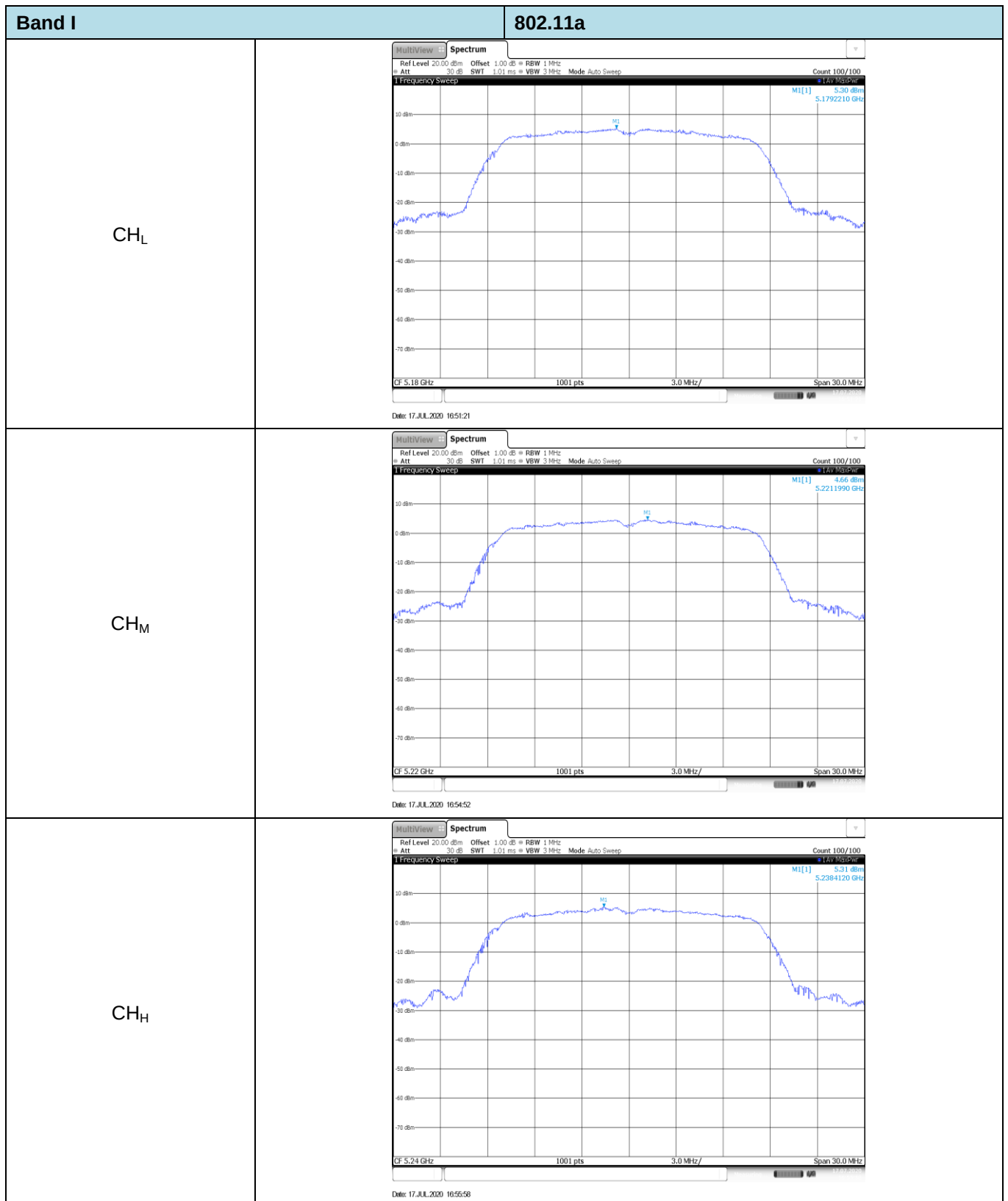
Band	Bandwidth (MHz)	Type	Channel	Reading (dBm)	Duty cycle (%)	Duty cycle factor (dB)	Conducted Output Power (dBm)	Limit (dBm)	Result
I	20	802.11n	CH _L	15.10	100	0	15.10	24.00	Pass
			CH _M	15.01	100	0	15.01		
			CH _H	15.39	100	0	15.39		
		802.11a	CH _L	15.09	100	0	15.09	24.00	Pass
			CH _M	14.80	100	0	14.80		
			CH _H	15.43	100	0	15.43		
	40	802.11n	CH _L	14.98	100	0	14.98	24.00	Pass
			CH _H	15.48	100	0	15.48		
II	20	802.11n	CH _L	15.22	100	0	15.22	24.00	Pass
			CH _M	15.00	100	0	15.00		
			CH _H	14.05	100	0	14.05		
		802.11a	CH _L	15.55	100	0	15.55	24.00	Pass
			CH _M	15.07	100	0	15.07		
			CH _H	13.79	100	0	13.79		
	40	802.11n	CH _L	15.38	100	0	15.38	24.00	Pass
			CH _H	14.27	100	0	14.27		

Appendix B: Maximum Power Spectral Density

Band	Bandwidth (MHz)	Type	Channel	Reading (dBm)	Duty cycle (%)	Duty cycle factor (dB)	Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
I	20	802.11n	CH _L	5.10	100	0	5.10	11.00	Pass
			CH _M	4.90	100	0	4.90		
			CH _H	5.20	100	0	5.20		
		802.11a	CH _L	5.30	100	0	5.30	11.00	Pass
			CH _M	4.66	100	0	4.66		
			CH _H	5.31	100	0	5.31		
	40	802.11n	CH _L	2.18	100	0	2.18	11.00	Pass
			CH _H	2.49	100	0	2.49		
II	20	802.11n	CH _L	4.82	100	0	4.82	11.00	Pass
			CH _M	5.36	100	0	5.36		
			CH _H	4.58	100	0	4.58		
		802.11a	CH _L	5.09	100	0	5.09	11.00	Pass
			CH _M	5.04	100	0	5.04		
			CH _H	4.16	100	0	4.16		
	40	802.11n	CH _L	2.37	100	0	2.37	11.00	Pass
			CH _H	1.85	100	0	1.85		

Test plot as follows:





Band I

802.11n (HT40)

CH_L

MultiView Spectrum
Ref Level 20.00 dBm Offset 1.00 dB RBW 1 MHz
Att 30 dB SWT 1.01 ms VBW 3 kHz Mode Auto Sweep
Count 100/100
1 Frequency Sweep
M1[1] 2.18 dBm 5.1878420 GHz
CF 5.19 GHz 1001 pts 6.0 MHz/ Span 60.0 MHz

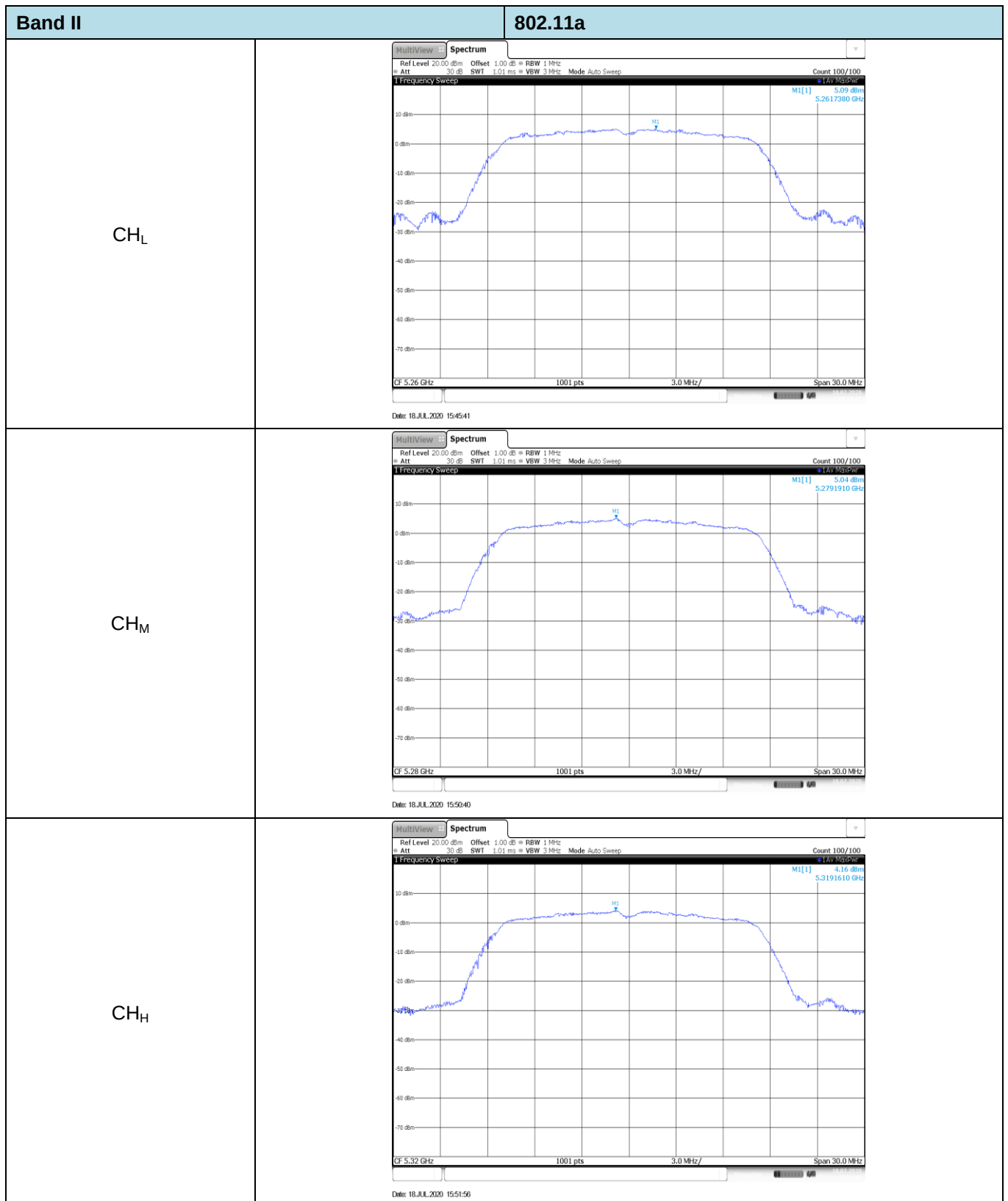
Date: 17 JUL 2020 17:02:35

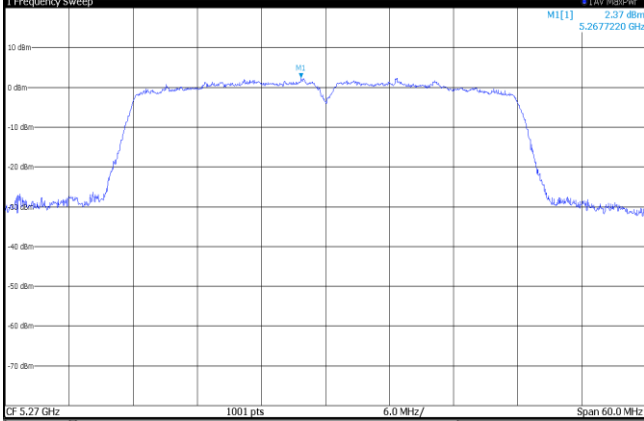
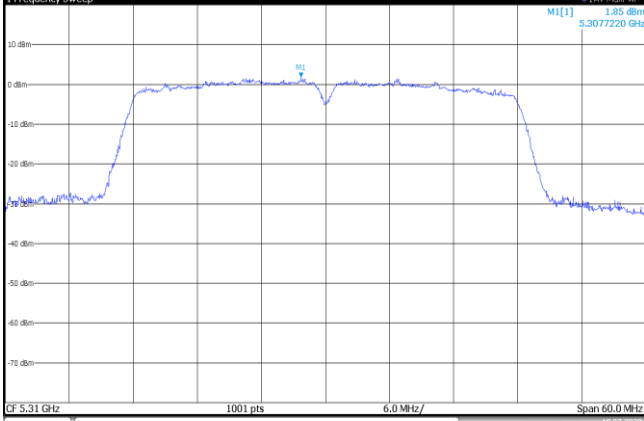
CH_H

MultiView Spectrum
Ref Level 20.00 dBm Offset 1.00 dB RBW 1 MHz
Att 30 dB SWT 1.01 ms VBW 3 kHz Mode Auto Sweep
Count 100/100
1 Frequency Sweep
M1[1] 2.49 dBm 5.2366530 GHz
CF 5.23 GHz 1001 pts 6.0 MHz/ Span 60.0 MHz

Date: 17 JUL 2020 17:03:56

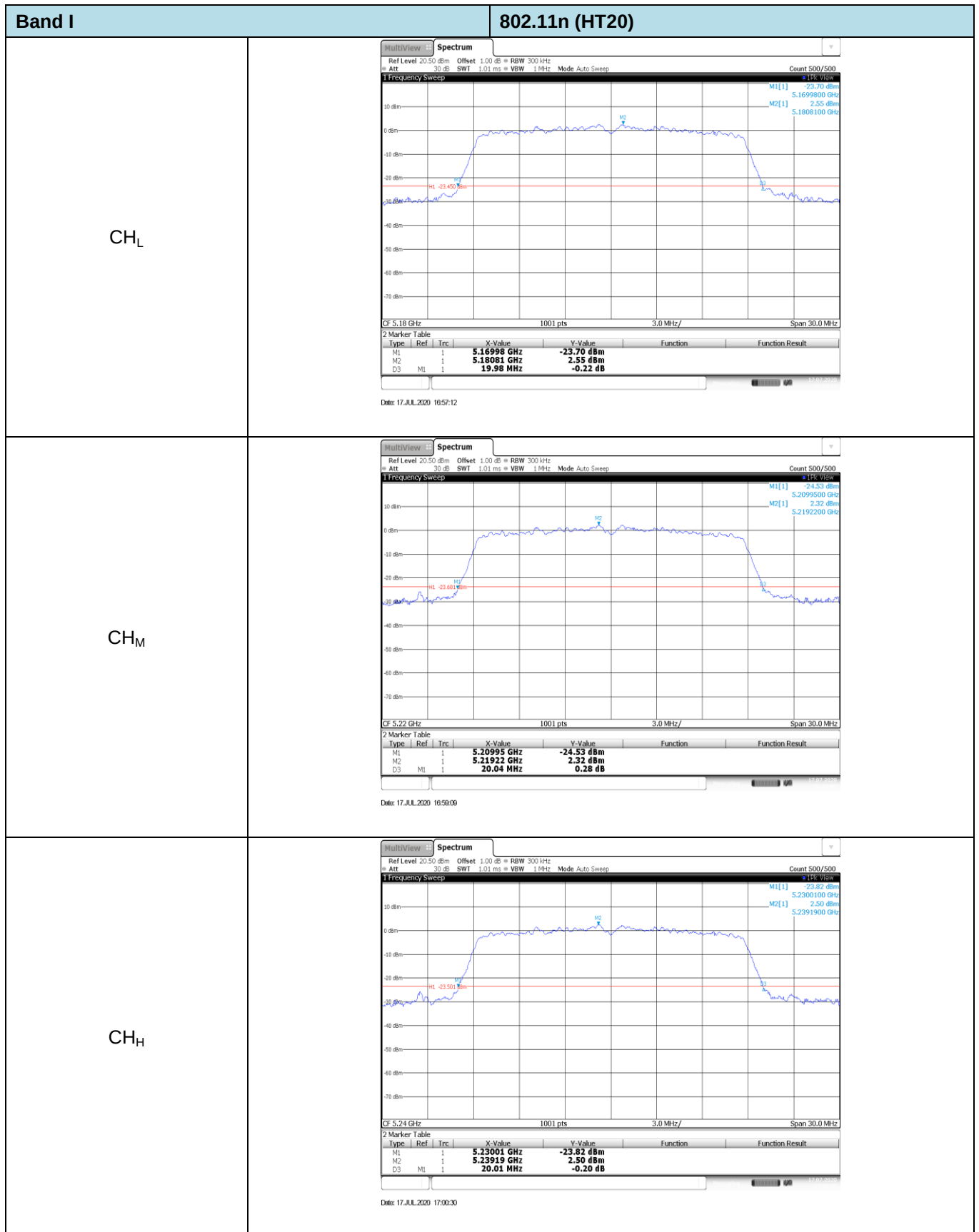
Band II		802.11n (HT20)
CH _L	Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 1 MHz Att 30 dB SWF 1.01 ms VBW 3 kHz Mode Auto Sweep Count 100/100 1 Frequency Sweep MI[1] 4.82 dBm 5.2603600 GHz CF 5.26 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 18 JUL 2020 15:54:04	
CH _M	Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 1 MHz Att 30 dB SWF 1.01 ms VBW 3 kHz Mode Auto Sweep Count 100/100 1 Frequency Sweep MI[1] 5.36 dBm 5.2808090 GHz CF 5.28 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 18 JUL 2020 15:55:24	
CH _H	Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 1 MHz Att 30 dB SWF 1.01 ms VBW 3 kHz Mode Auto Sweep Count 100/100 1 Frequency Sweep MI[1] 4.58 dBm 5.3208090 GHz CF 5.32 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 18 JUL 2020 15:56:34	

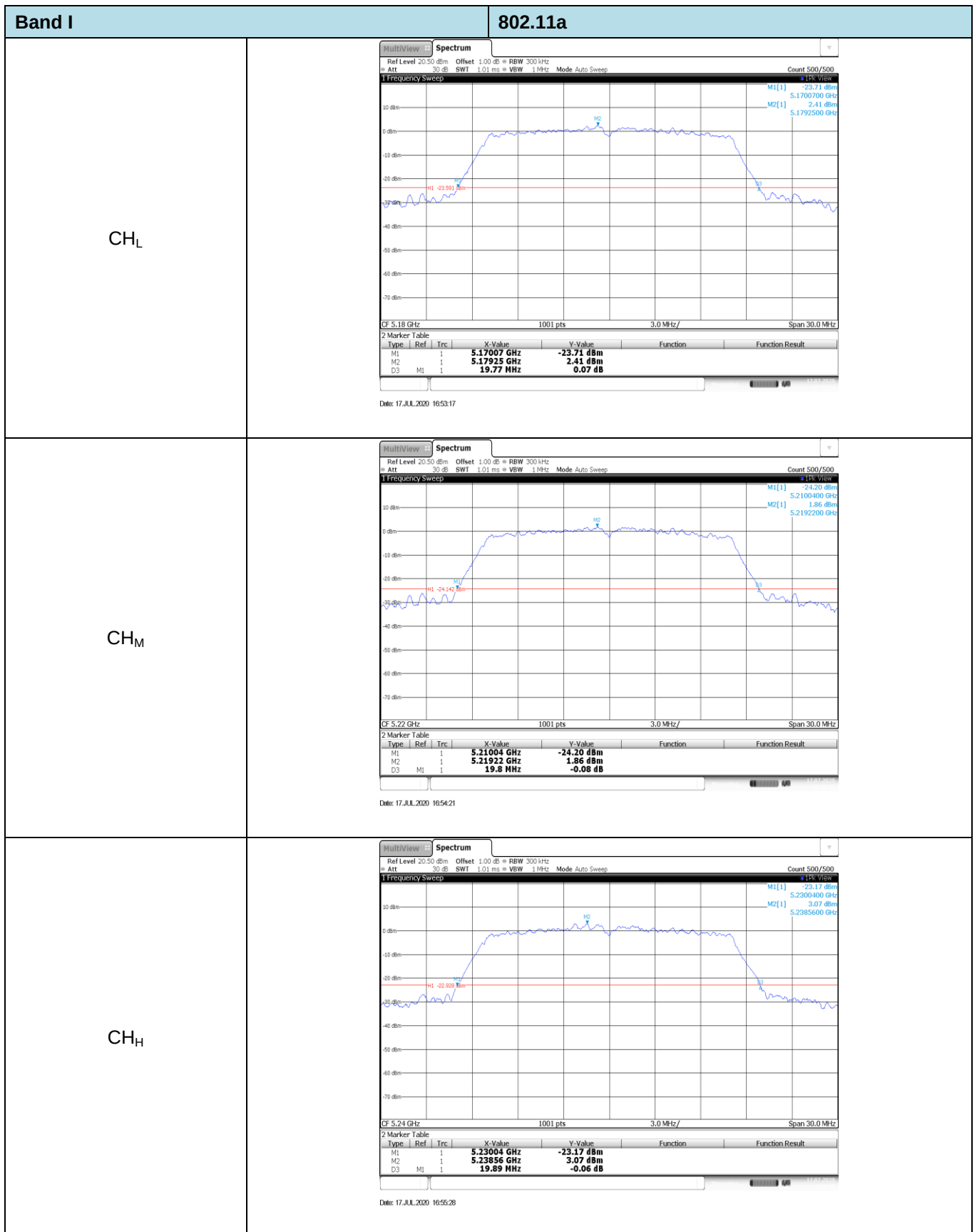


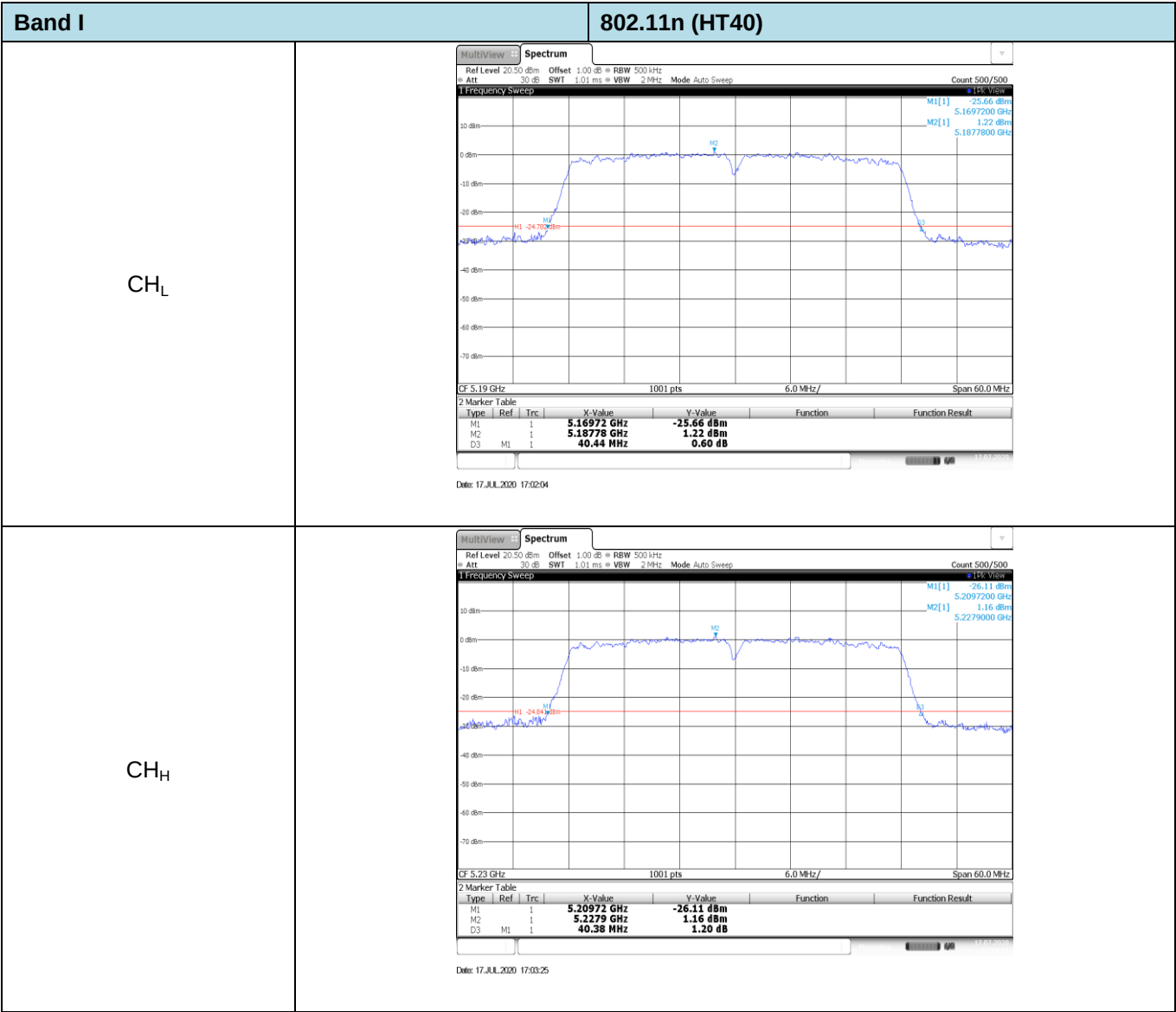
Band II		802.11n (HT40)	
CH _L	MultiView Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 1 MHz Att 30 dB SWF 1.01 ms VBW 3 kHz Mode Auto Sweep Count 100/100 1 Frequency Sweep MI[1] 2.37 dBm 5.2677220 GHz  CF 5.27 GHz 1001 pts 6.0 MHz/ Span 60.0 MHz Date: 18 JUL 2020 15:58:41		
CH _H	MultiView Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 1 MHz Att 30 dB SWF 1.01 ms VBW 3 kHz Mode Auto Sweep Count 100/100 1 Frequency Sweep MI[1] 1.85 dBm 5.3077220 GHz  CF 5.31 GHz 1001 pts 6.0 MHz/ Span 60.0 MHz Date: 18 JUL 2020 16:01:00		

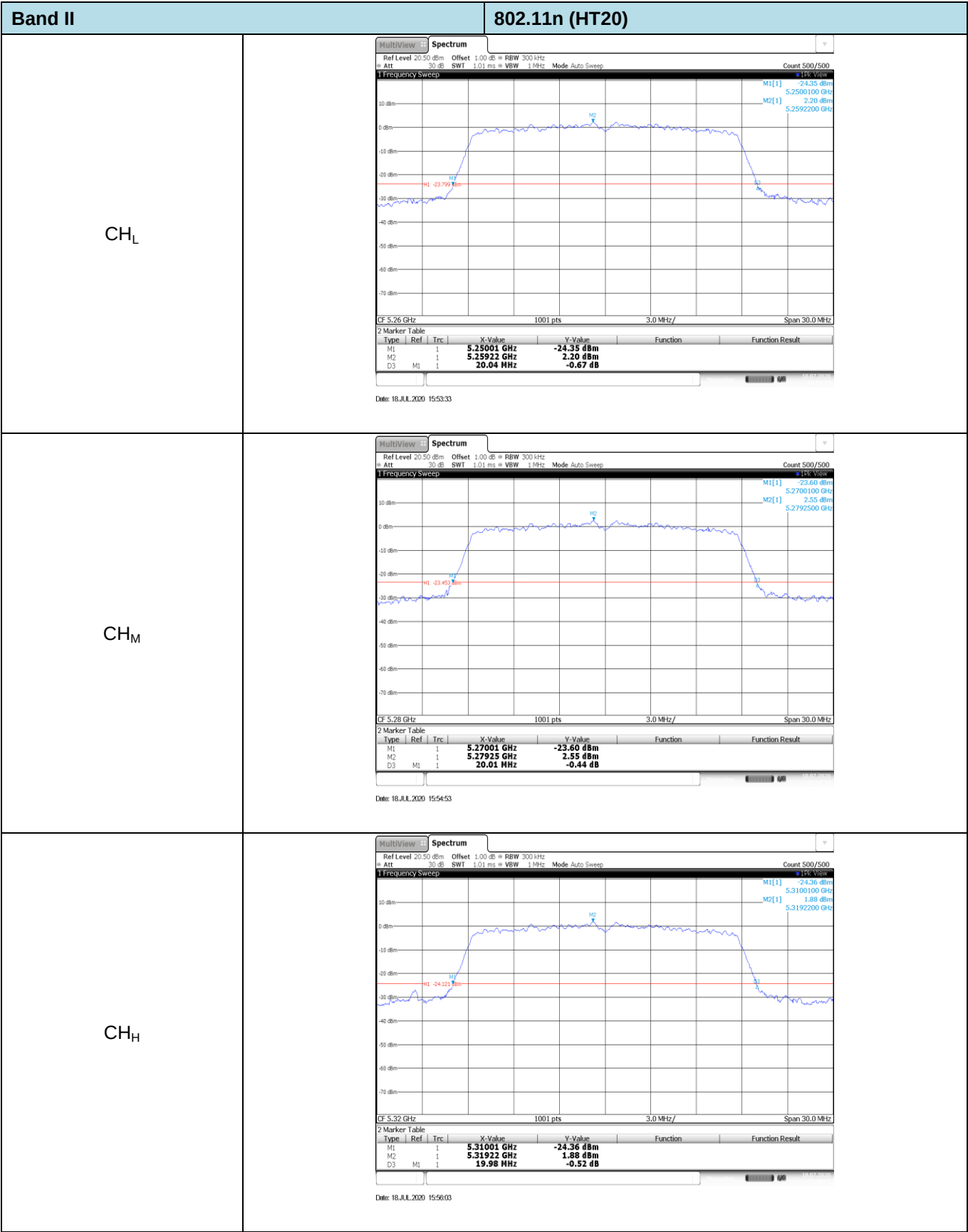
Appendix C: 26dB bandwidth

Band	Bandwidth (MHz)	Type	Channel	26dB bandwidth (MHz)	Result
I	20	802.11n	CH _L	19.98	Pass
			CH _M	20.04	
			CH _H	20.01	
		802.11a	CH _L	19.77	Pass
			CH _M	19.80	
			CH _H	19.89	
	40	802.11n	CH _L	40.44	Pass
			CH _H	40.38	
II	20	802.11n	CH _L	20.04	Pass
			CH _M	20.01	
			CH _H	19.98	
		802.11a	CH _L	19.83	Pass
			CH _M	19.95	
			CH _H	19.80	
	40	802.11n	CH _L	40.26	Pass
			CH _H	40.26	









Band II

802.11a

CH_L

2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1	1		5.26007 GHz	-23.52 dBm		
M2	1		5.25856 GHz	2.62 dBm		
D3	M1	1	19.83 MHz	-0.34 dB		

Date: 18.JUL.2020 15:45:10

CH_M

2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1	1		5.27004 GHz	-23.12 dBm		
M2	1		5.2779 GHz	2.96 dBm		
D3	M1	1	19.95 MHz	-0.44 dB		

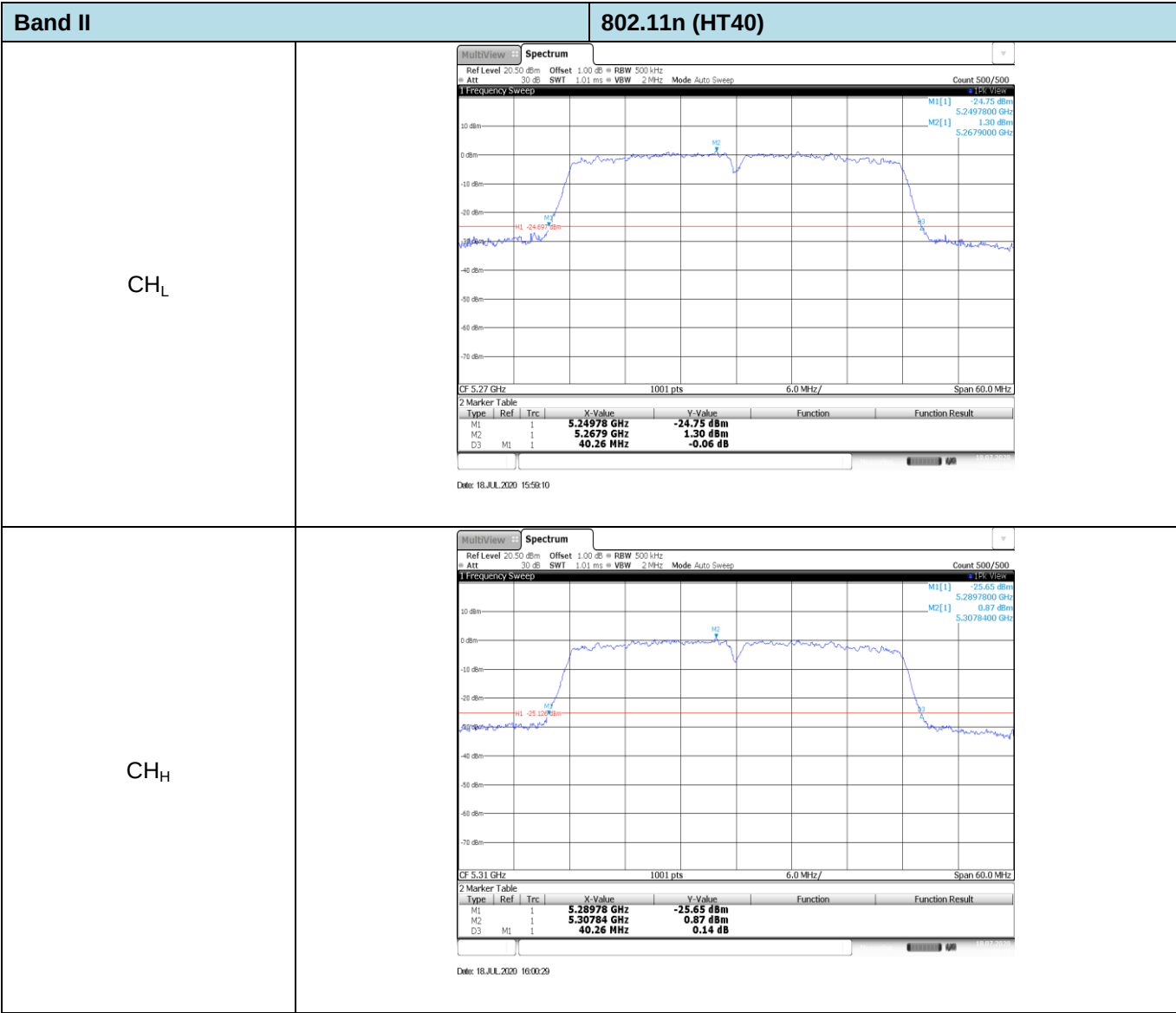
Date: 18.JUL.2020 15:47:44

CH_H

2 Marker Table

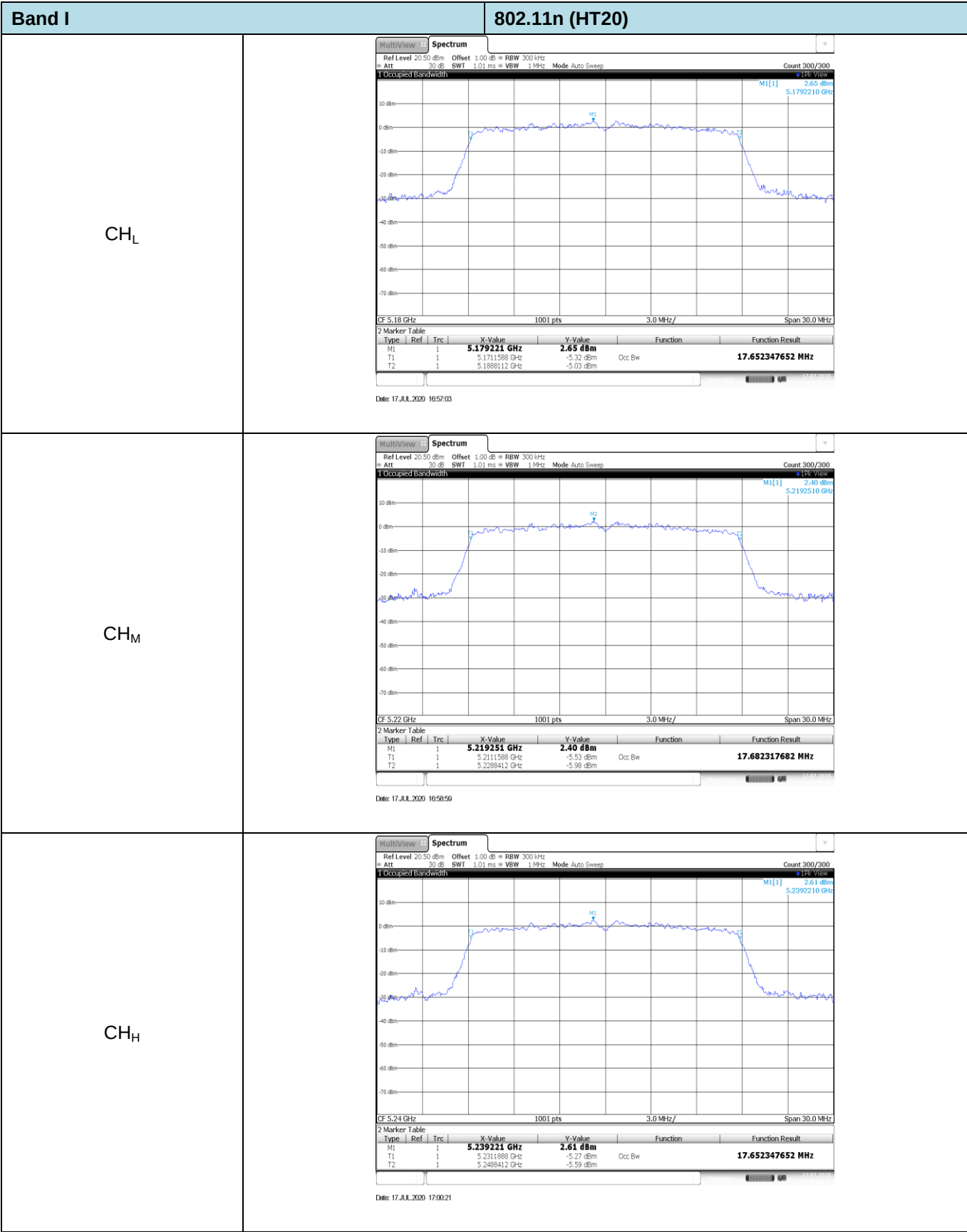
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1	1		5.31004 GHz	-24.47 dBm		
M2	1		5.31922 GHz	1.65 dBm		
D3	M1	1	19.8 MHz	-0.15 dB		

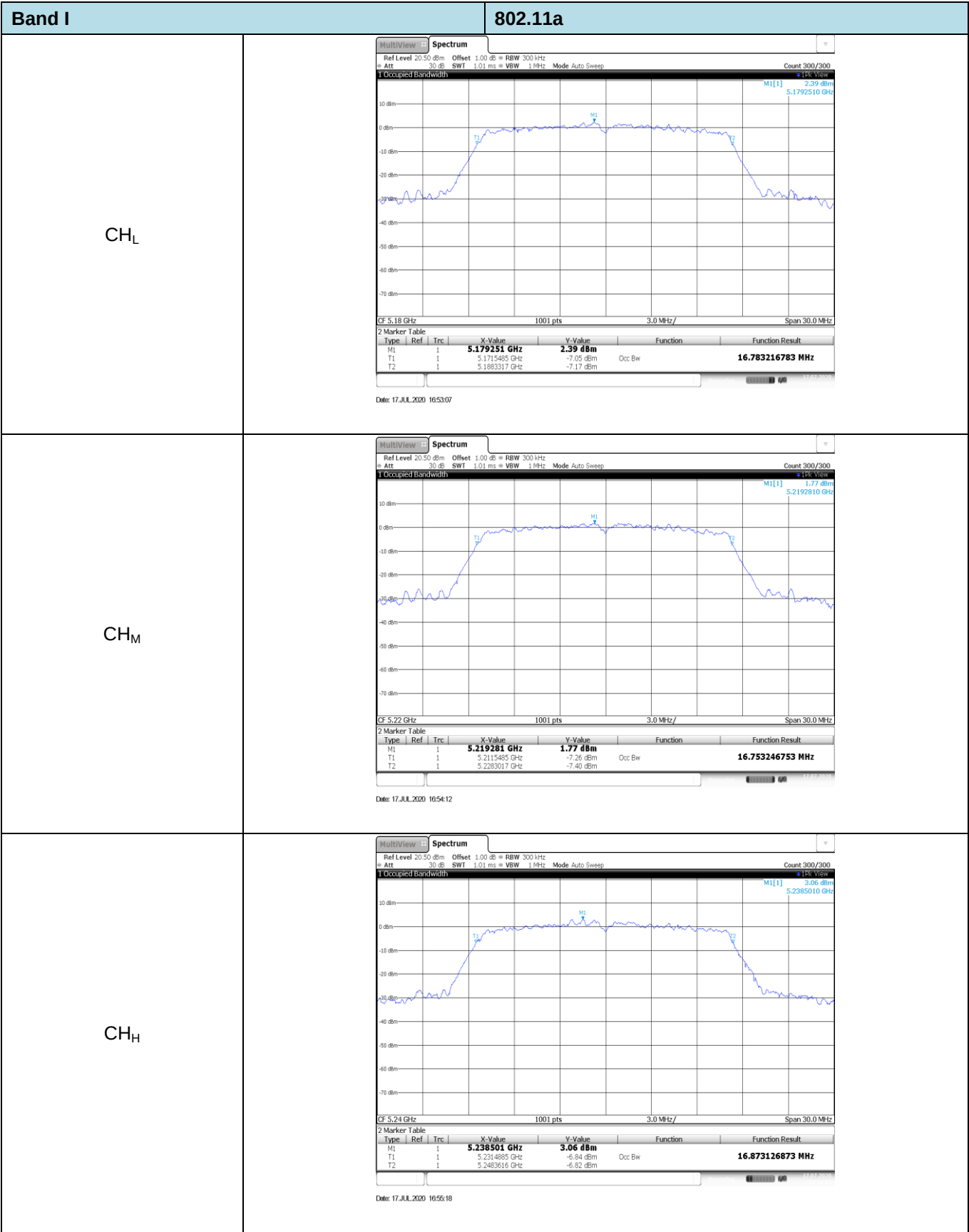
Date: 18.JUL.2020 15:51:25

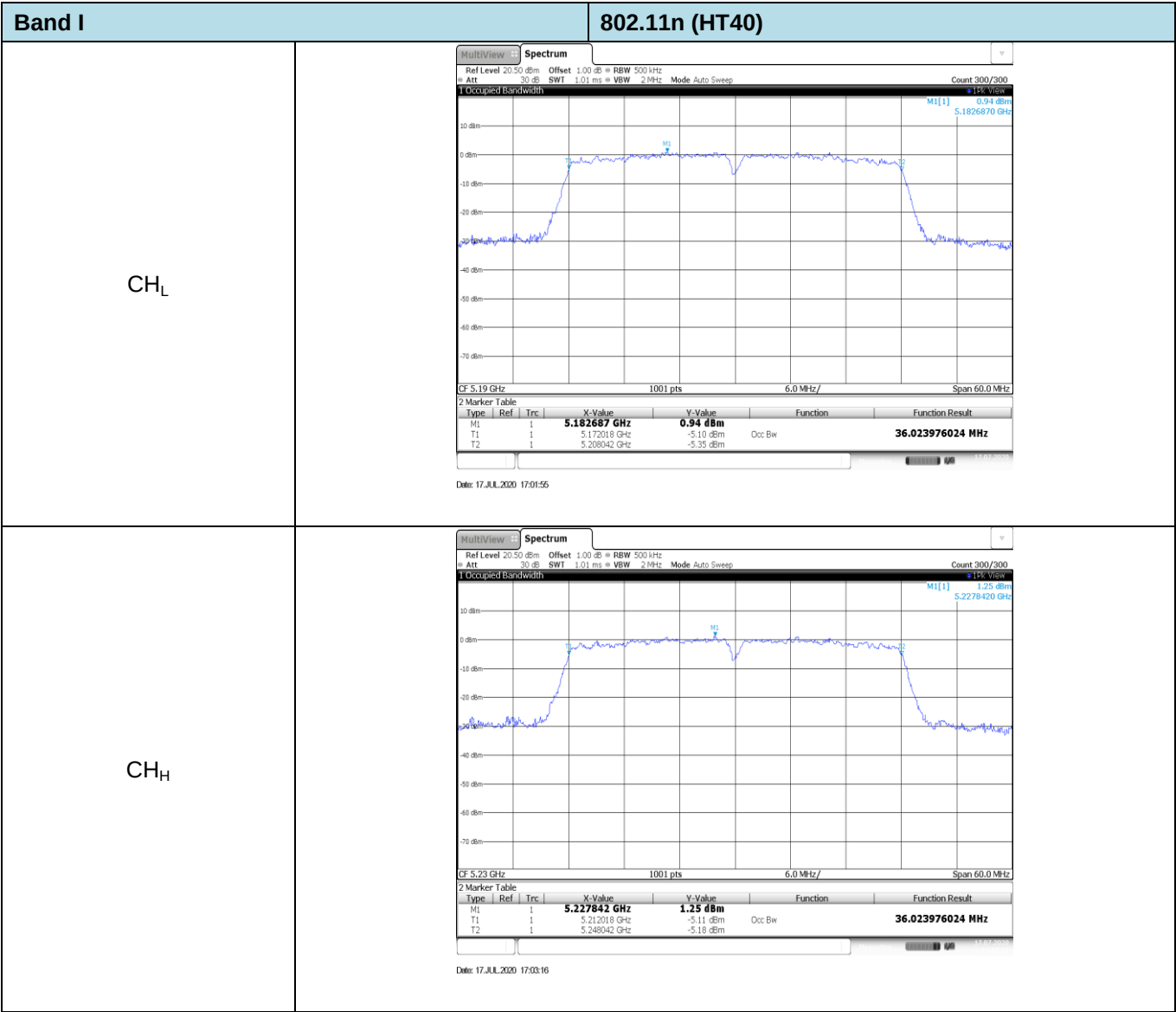


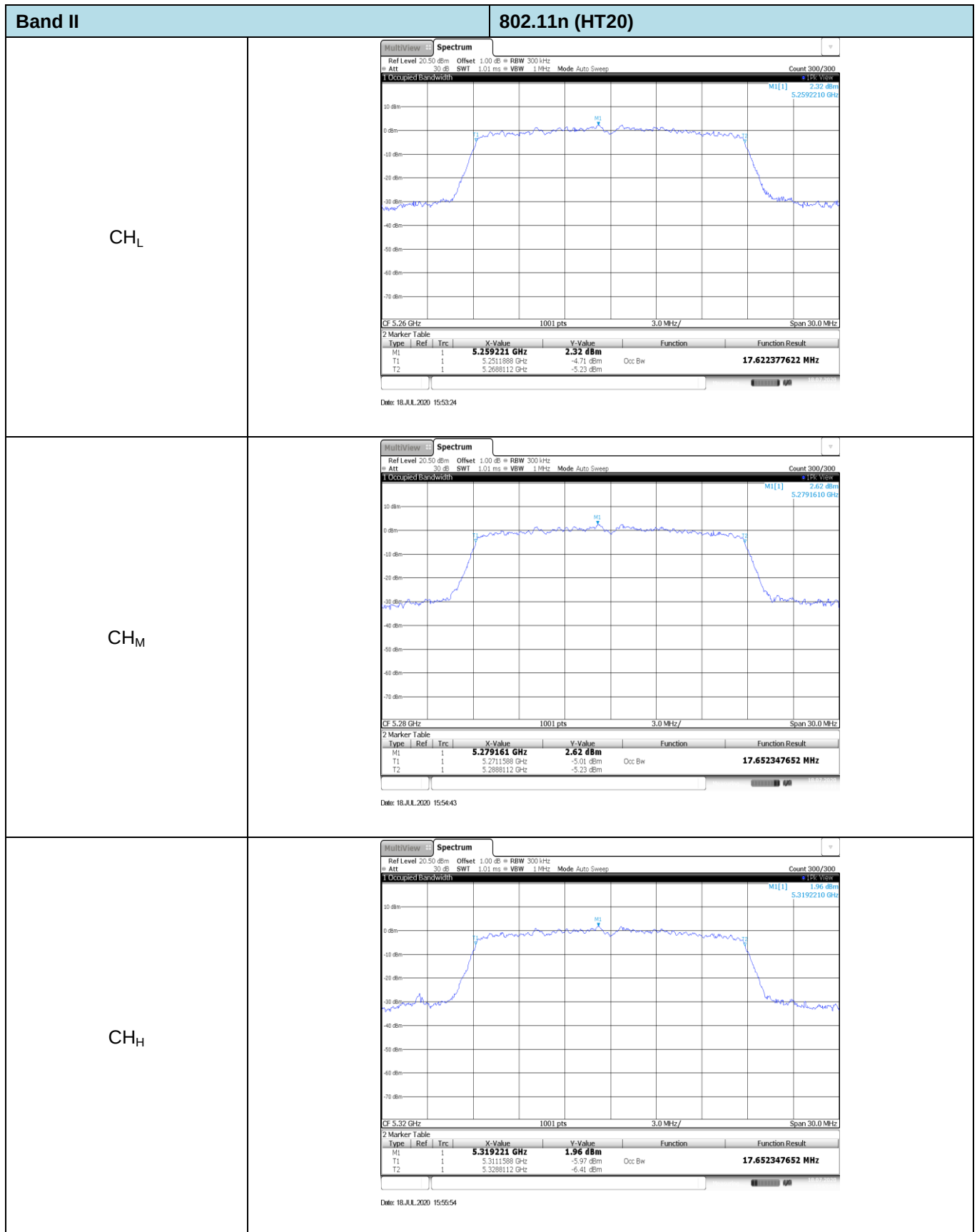
Appendix D: 99% Occupy bandwidth

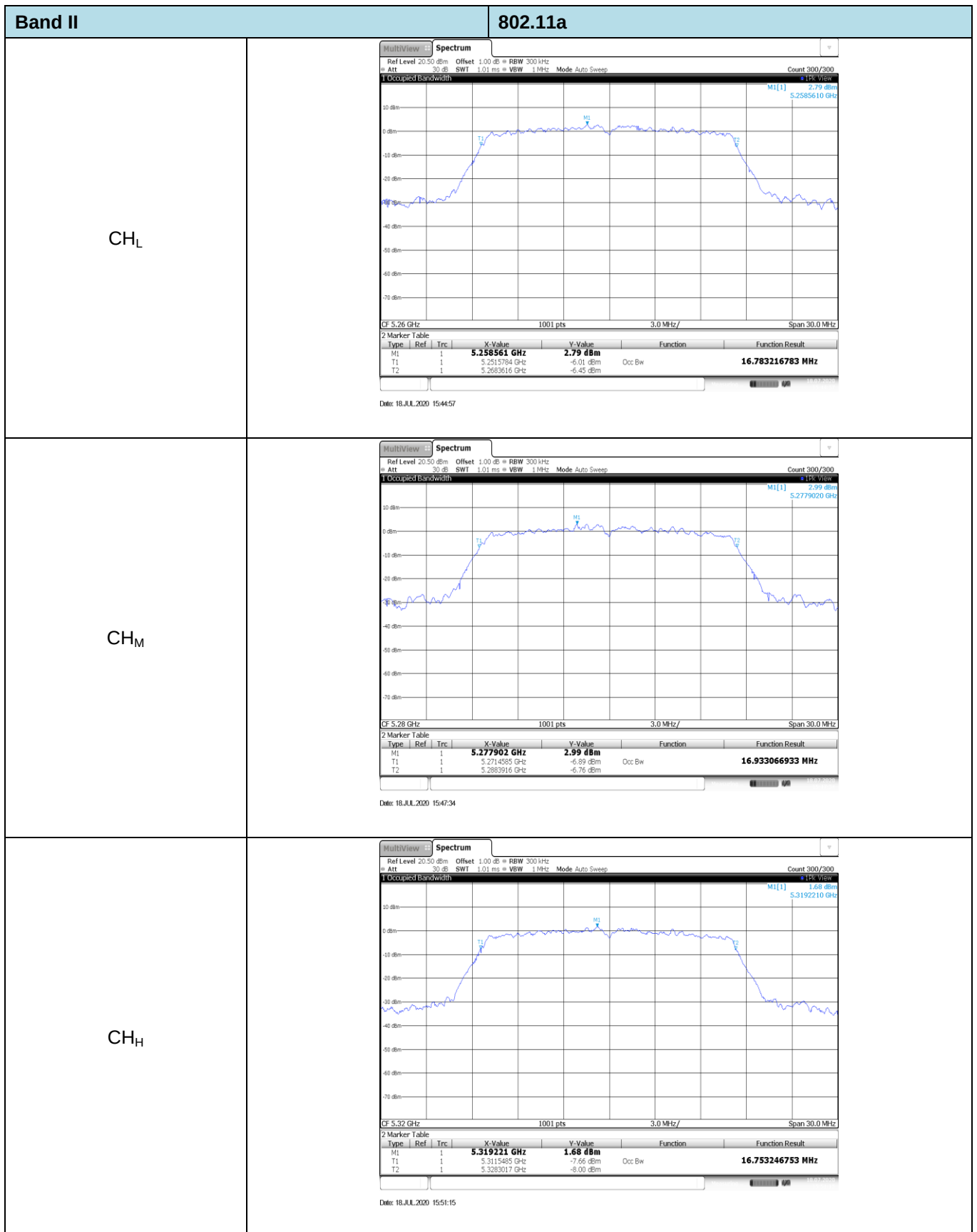
Band	Bandwidth (MHz)	Type	Channel	99% Occupy bandwidth (MHz)	Result
I	20	802.11n	CH _L	17.65	Pass
			CH _M	17.68	
			CH _H	17.65	
		802.11a	CH _L	16.78	Pass
			CH _M	16.75	
			CH _H	16.87	
	40	802.11n	CH _L	36.02	Pass
			CH _H	36.02	
II	0	802.11n	CH _L	17.62	Pass
			CH _M	17.65	
			CH _H	17.65	
		802.11a	CH _L	16.78	Pass
			CH _M	16.93	
			CH _H	16.75	
	40	802.11n	CH _L	36.02	Pass
			CH _H	36.02	

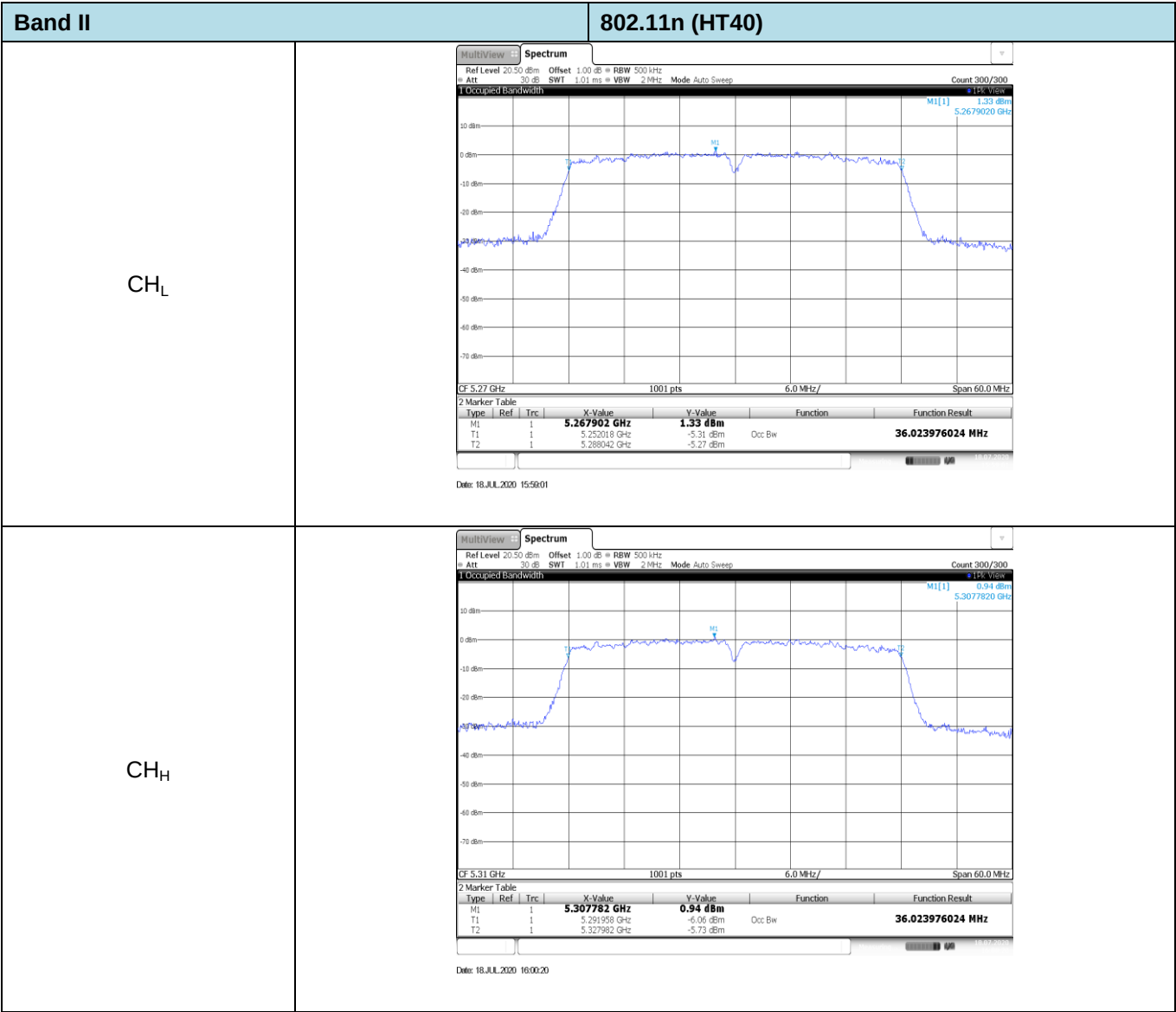




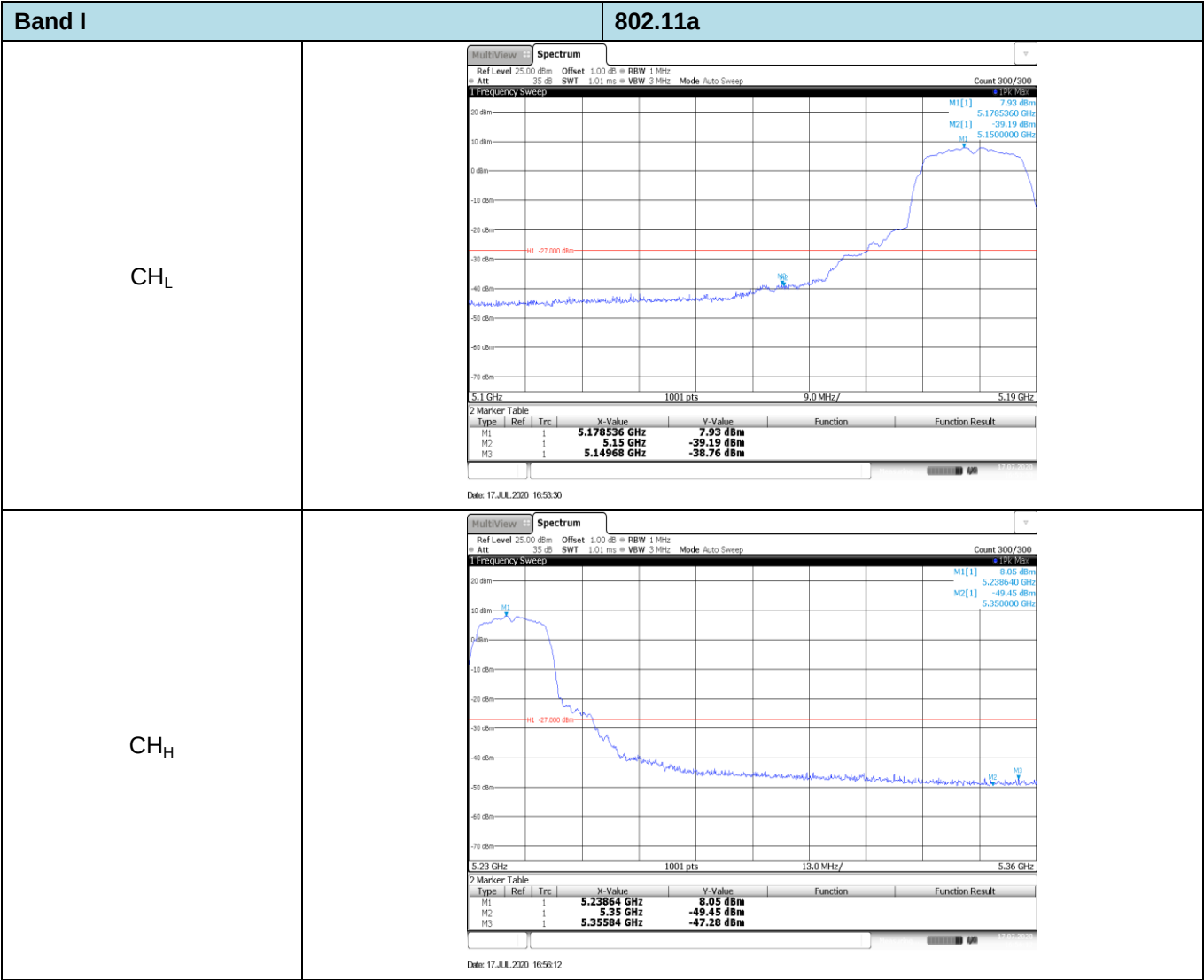


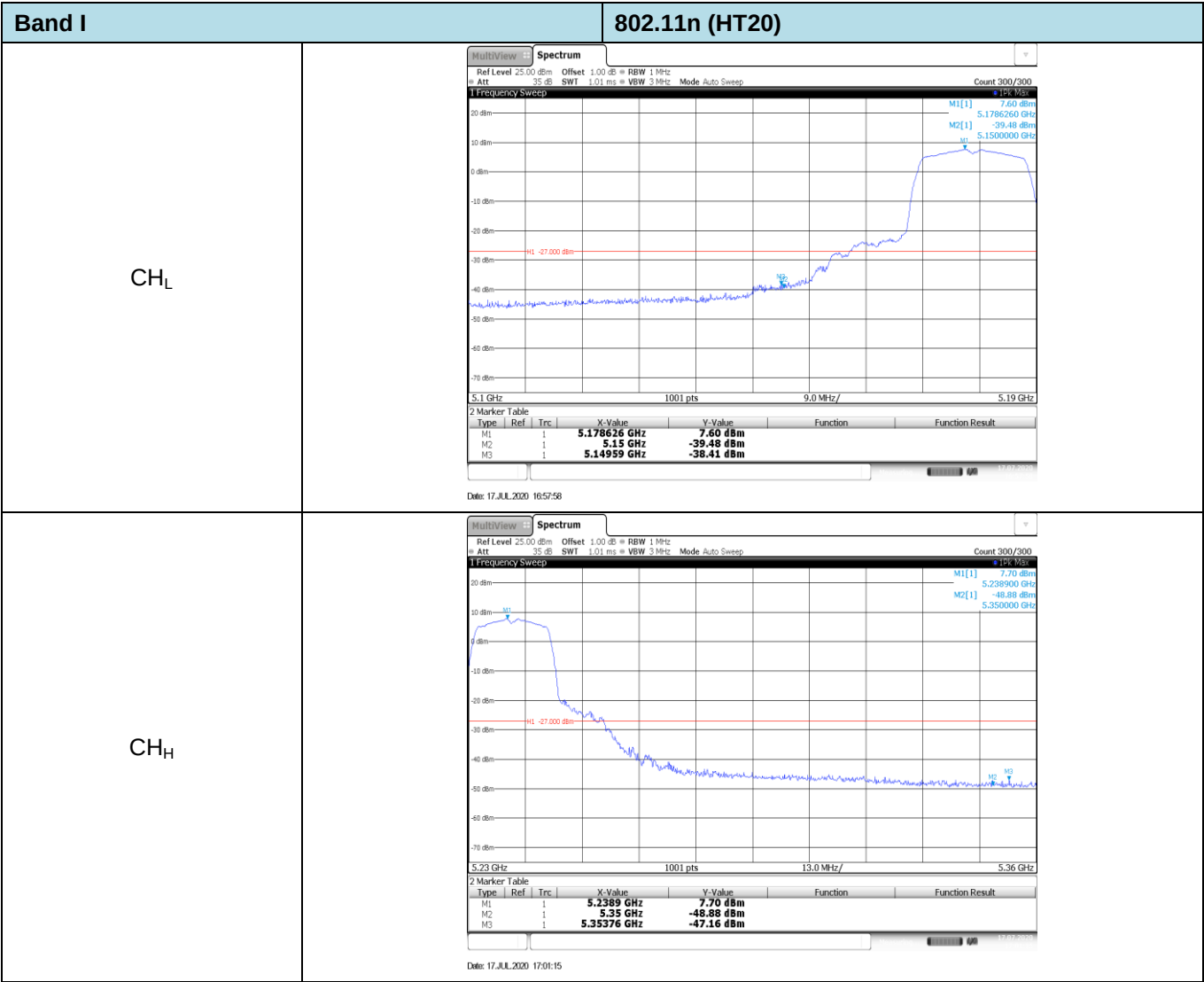


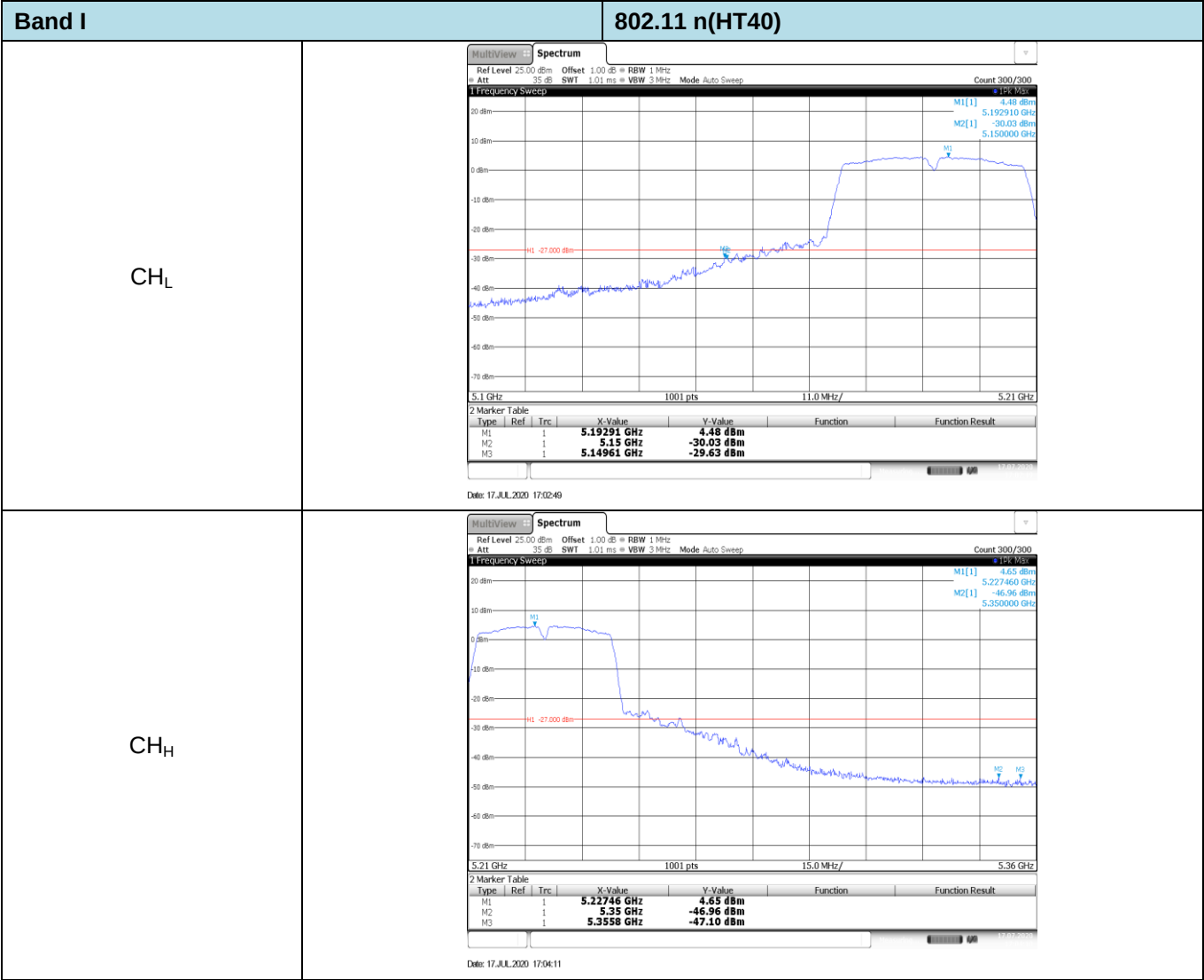


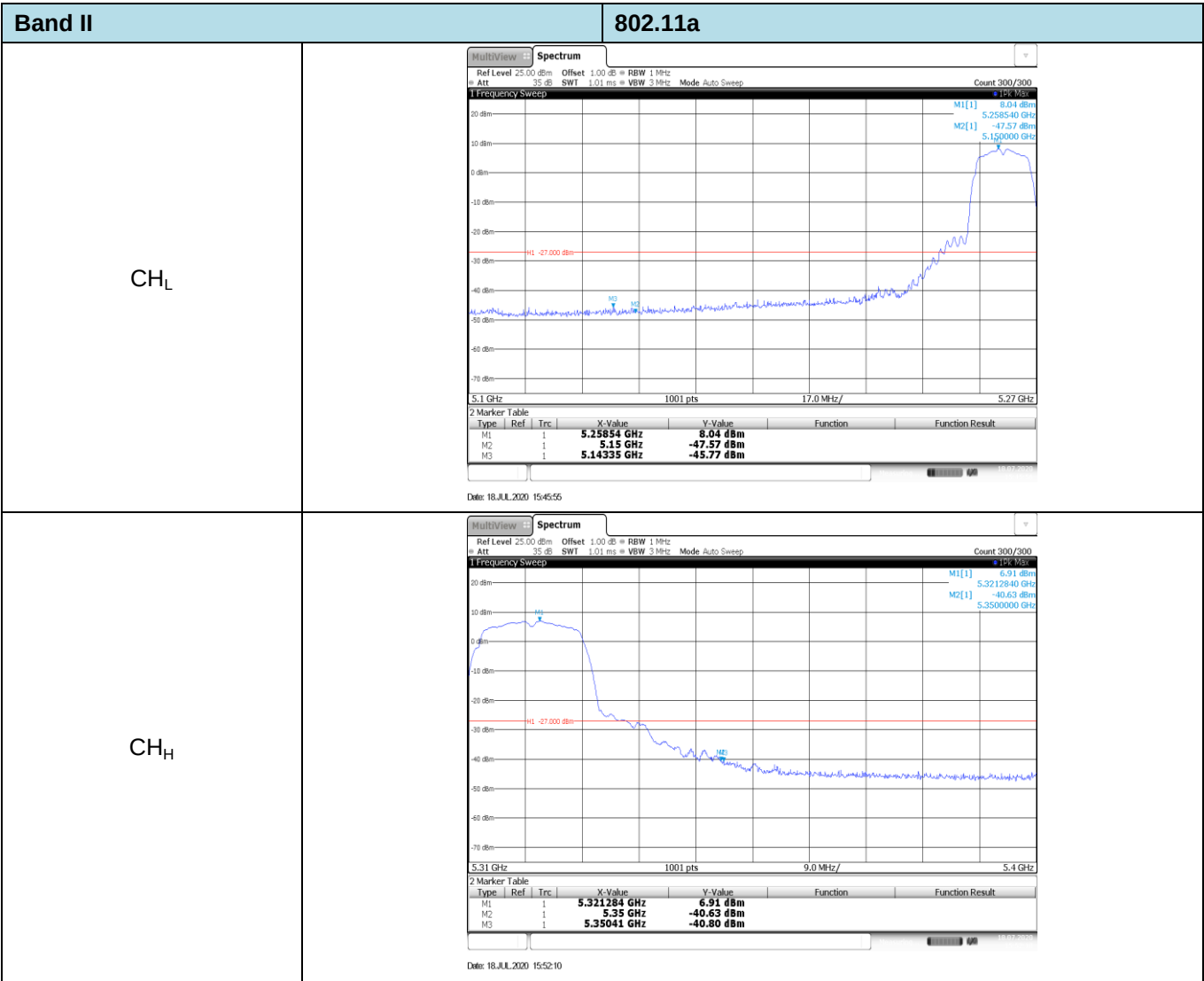


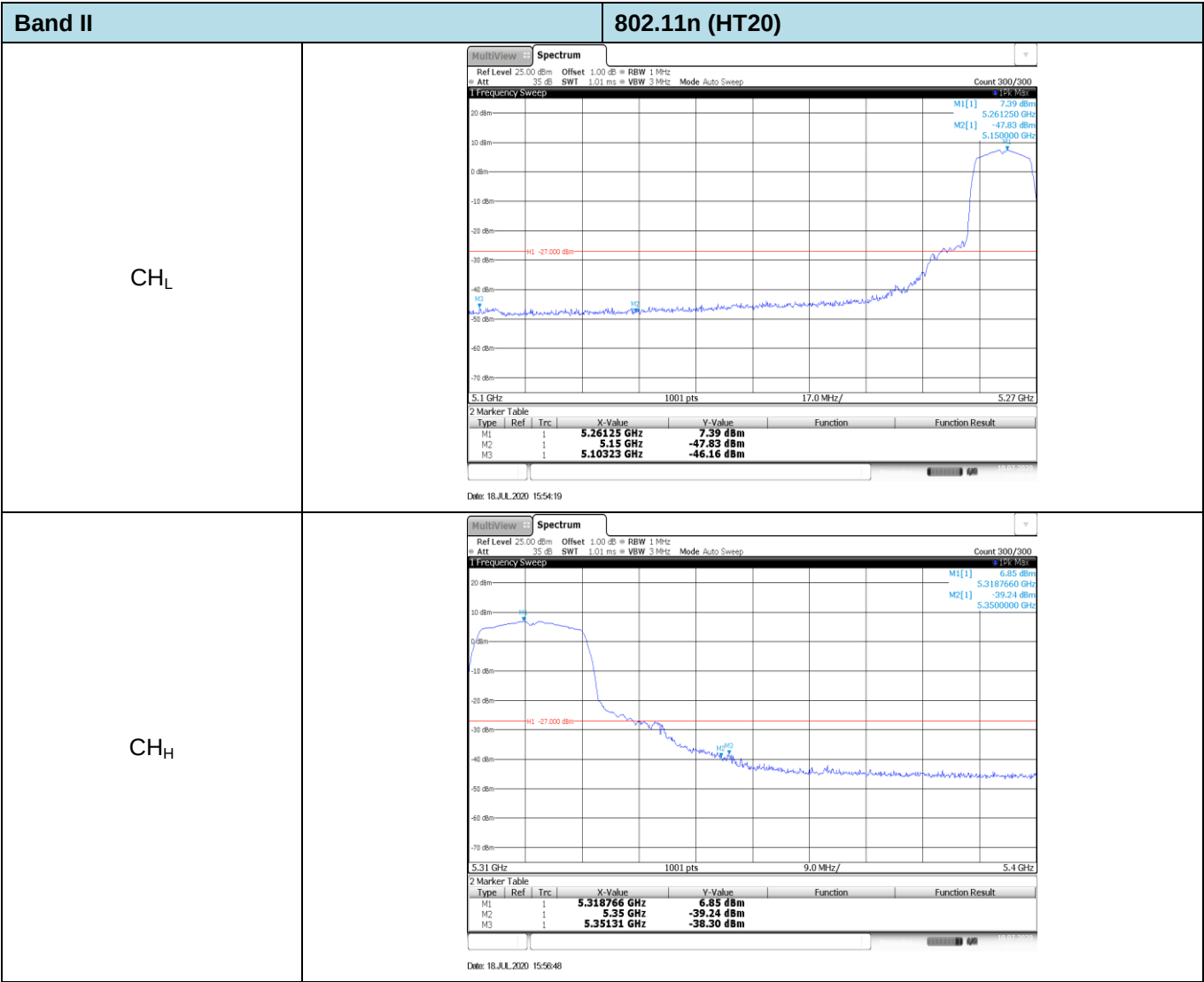
Appendix F: Band edge

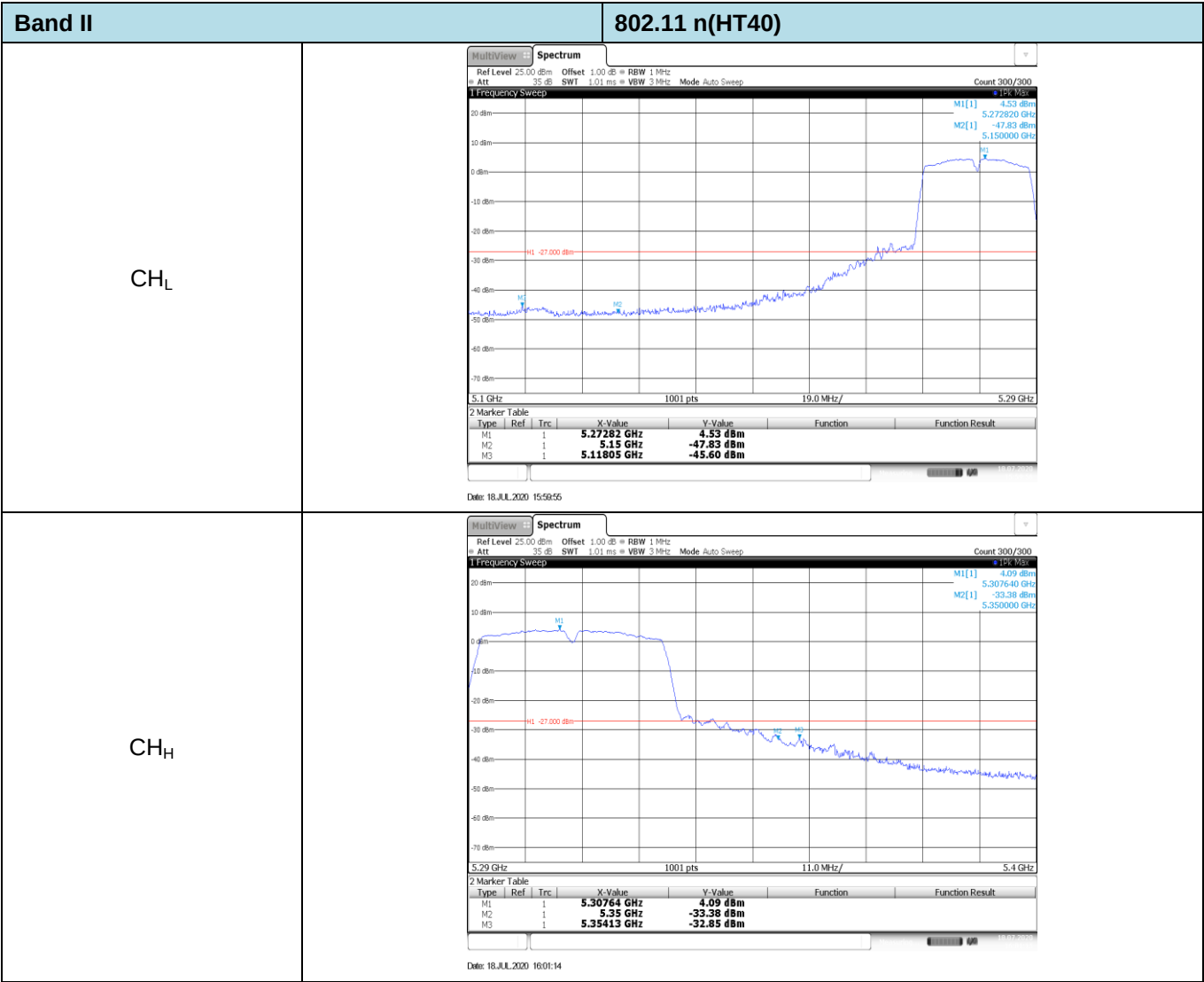












Appendix G: Frequency stability**Voltage VS Frequency stability**

Band: I			Test Frequency: 5180.00MHz	
Temperature (°C)	Voltage (V)	Frequency Deviation (Hz)	Frequency Deviation (ppm)	Result
T _N	V _L	4000.00	0.77220	PASS
T _N	V _N	3000.00	0.57915	PASS
T _N	V _H	5000.00	0.96525	PASS

Band: II			Test Frequency: 5260.00MHz	
Temperature (°C)	Voltage (V)	Frequency Deviation (Hz)	Frequency Deviation (ppm)	Result
T _N	V _L	4000.00	0.76046	PASS
T _N	V _N	3000.00	0.57034	PASS
T _N	V _H	4000.00	0.76046	PASS

Temperature VS Frequency stability

Band: I			Test Frequency: 5180.00MHz	
Voltage (V)	Temperature (°C)	Frequency Deviation (Hz)	Frequency Deviation (ppm)	Result
V _N	-20	5000.00	0.96525	PASS
V _N	-10	6000.00	1.15830	PASS
V _N	0	6000.00	1.15830	PASS
V _N	10	6000.00	1.15830	PASS
V _N	20	6000.00	1.15830	PASS
V _N	30	6000.00	1.15830	PASS
V _N	40	6000.00	1.15830	PASS
V _N	50	6000.00	1.15830	PASS

Band: II			Test Frequency: 5260.00MHz	
Voltage (V)	Temperature (°C)	Frequency Deviation (Hz)	Frequency Deviation (ppm)	Result
V _N	-20	5000.00	0.95057	PASS
V _N	-10	5000.00	0.95057	PASS
V _N	0	5000.00	0.95057	PASS
V _N	10	5000.00	0.95057	PASS
V _N	20	5000.00	0.95057	PASS
V _N	30	5000.00	0.95057	PASS
V _N	40	5000.00	0.95057	PASS
V _N	50	5000.00	0.95057	PASS

-----End of Report-----