

APPENDIX REPORT

Project No.	SHT2008120601EW	Radio Specification	WIFI 5G
Test sample No.	YPHT20081206002	Model No.	CT9T48
Start test date	2020/9/14	Finish date	2020/9/14
Temperature	25°C	Humidity	50%
Test Engineer	Jiongsheng.Feng	Auditor	Xiaodong Zheo

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

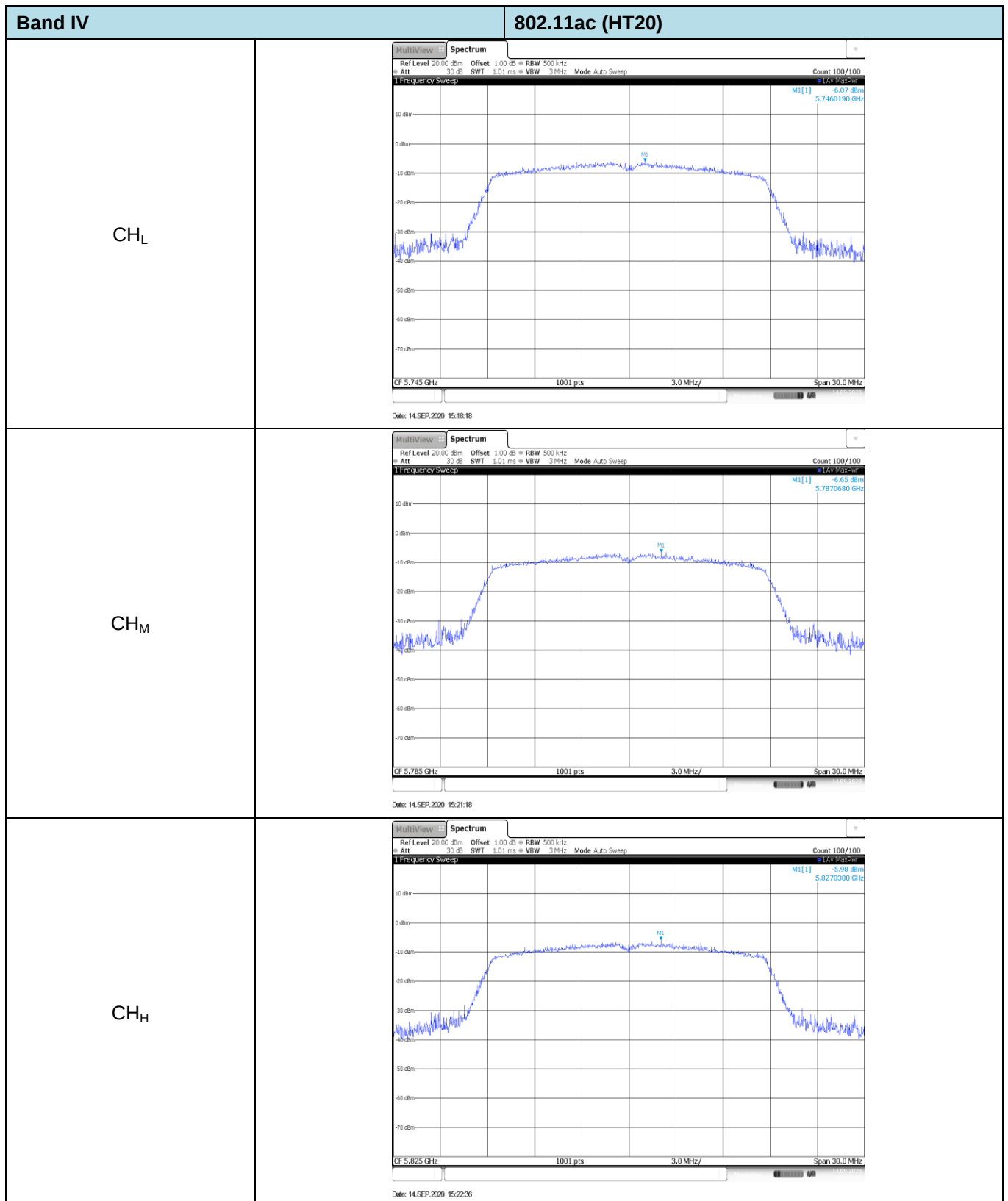
Appendix A: Maximum Conducted Output Power

Band	Bandwidth (MHz)	Type	Channel	Reading (dBm)	Duty cycle (%)	Duty cycle factor (dB)	Conducted Output Power (dBm)	Limit (dBm)	Result
IV	20	802.11ac	CH _L	5.35	100	0	5.35	30	Pass
			CH _M	5.13	100	0	5.13		
			CH _H	4.96	100	0	4.96		
		802.11n	CH _L	5.25	100	0	5.25	30	Pass
			CH _M	5.28	100	0	5.28		
			CH _H	4.87	100	0	4.87		
		802.11a	CH _L	5.44	100	0	5.44	30	Pass
			CH _M	5.47	100	0	5.47		
			CH _H	5.02	100	0	5.02		
	40	802.11ac	CH _L	5.31	100	0	5.31	30	Pass
			CH _H	5.01	100	0	5.01		
		802.11n	CH _L	4.48	100	0	4.48	30	Pass
			CH _H	4.32	100	0	4.32		
	80	802.11ac	CH _M	4.36	100	0	4.36	30	Pass

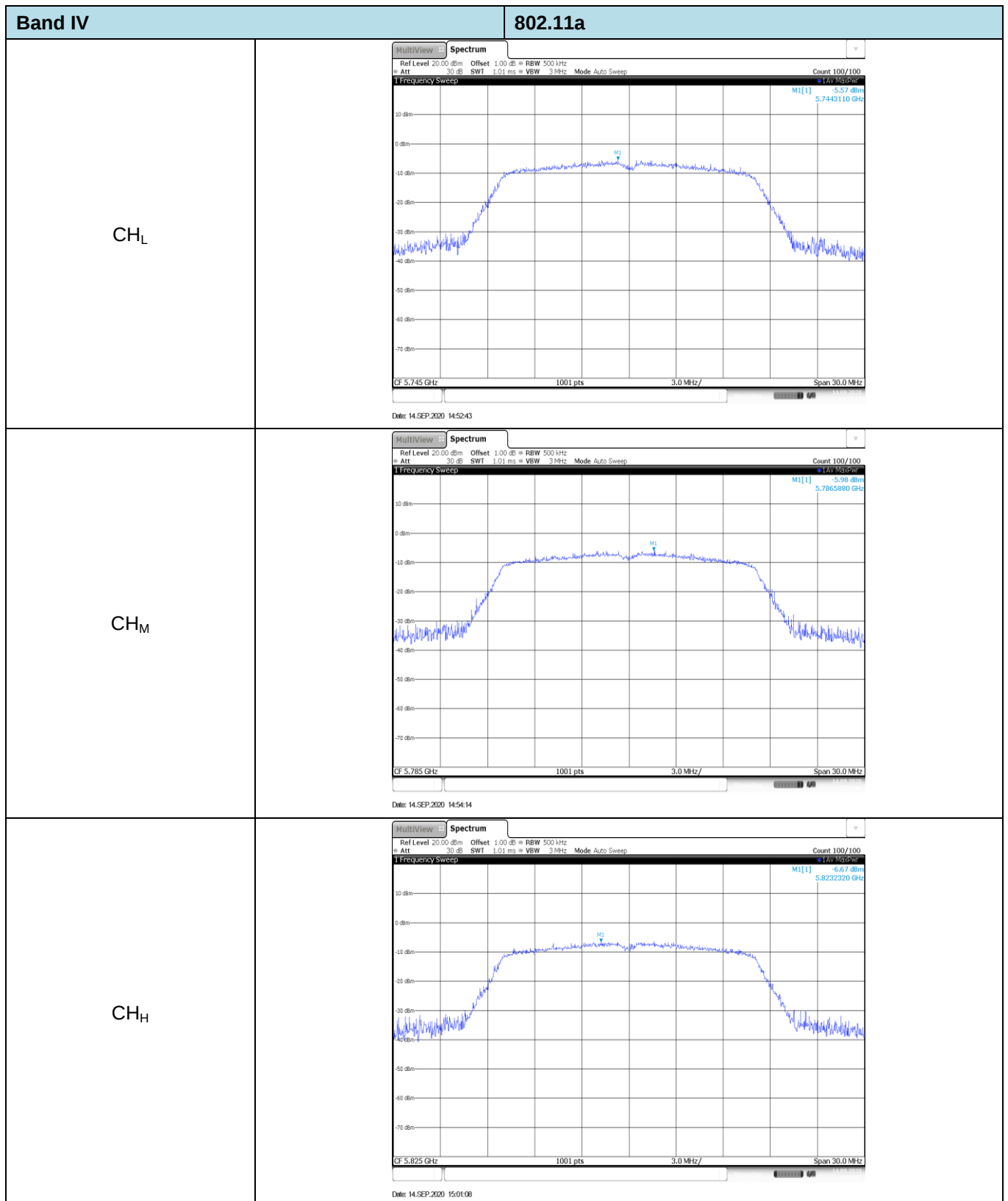
NOTE: duty cycle factor =10LOG(1/ duty cycle)

Appendix B: Maximum Power Spectral Density

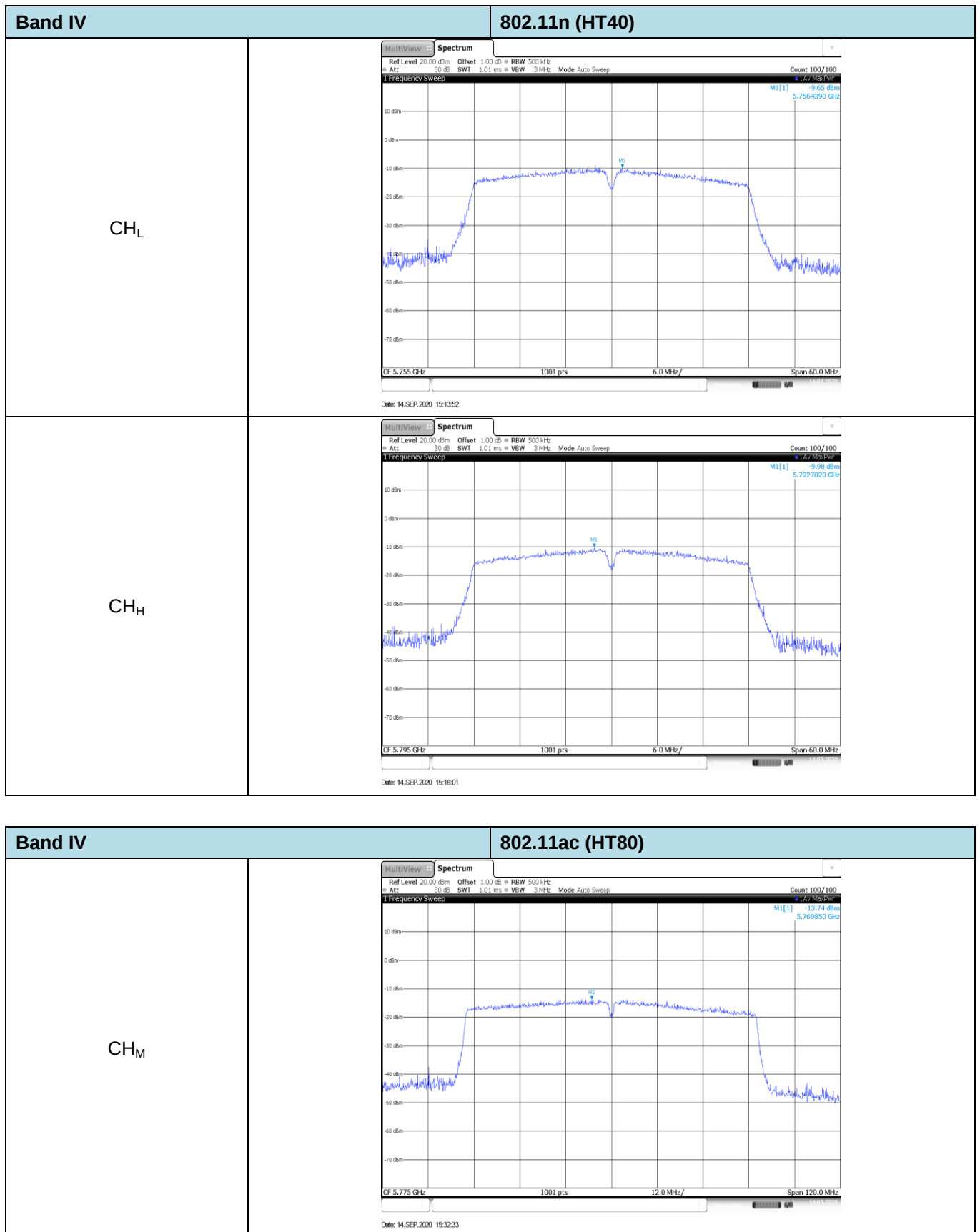
Band	Bandwidth (MHz)	Type	Channel	Reading (dBm)	Duty cycle (%)	Duty cycle factor (dB)	Power Spectral Density (dBm/MHz)	Limit (dBm/1 MHz)	Result
IV	20	802.11ac	CH _L	-6.07	100	0	-6.07	30.00	Pass
			CH _M	-6.65	100	0	-6.65		
			CH _H	-5.98	100	0	-5.98		
		802.11n	CH _L	-5.52	100	0	-5.52	30.00	Pass
			CH _M	-6.28	100	0	-6.28		
			CH _H	-6.23	100	0	-6.23		
		802.11a	CH _L	-5.57	100	0	-5.57	30.00	Pass
			CH _M	-5.98	100	0	-5.98		
			CH _H	-6.67	100	0	-6.67		
	40	802.11ac	CH _L	-9.02	100	0	-9.02	30.00	Pass
			CH _H	-9.66	100	0	-9.66		
		802.11n	CH _L	-9.65	100	0	-9.65	30.00	Pass
			CH _H	-9.98	100	0	-9.98		
	80	802.11ac	CH _M	-13.74	100	0	-13.74	30.00	Pass



Band IV		802.11n (HT20)
CH _L	MultiView Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 500 kHz Att 30 dB SWT 1.01 ms VEW 3 MHz Mode Auto Sweep Count 100/100 11.82529 GHz MI[1] -5.52 dBm 5.7440110 GHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.745 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 14.SEP.2020 15:08:32	
CH _M	MultiView Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 500 kHz Att 30 dB SWT 1.01 ms VEW 3 MHz Mode Auto Sweep Count 100/100 11.82529 GHz MI[1] -6.28 dBm 5.7870990 GHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.785 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 14.SEP.2020 15:08:10	
CH _H	MultiView Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 500 kHz Att 30 dB SWT 1.01 ms VEW 3 MHz Mode Auto Sweep Count 100/100 11.82529 GHz MI[1] -6.23 dBm 5.8241610 GHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.825 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 14.SEP.2020 15:08:30	



Band IV		802.11ac (HT40)
CH _L	MultiView Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 500 kHz Att 30 dB SWI 1.01 ms VBW 3 MHz Mode Auto Sweep Count 100/100 1 Frequency Sweep MU[1] -9.02 dBm 5.7522430 GHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.755 GHz 1001 pts 6.0 MHz/ Span 60.0 MHz Date: 14.SEP.2020 15:29:21	
CH _H	MultiView Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 500 kHz Att 30 dB SWI 1.01 ms VBW 3 MHz Mode Auto Sweep Count 100/100 1 Frequency Sweep MU[1] -9.66 dBm 5.7934420 GHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.795 GHz 1001 pts 6.0 MHz/ Span 60.0 MHz Date: 14.SEP.2020 15:30:43	

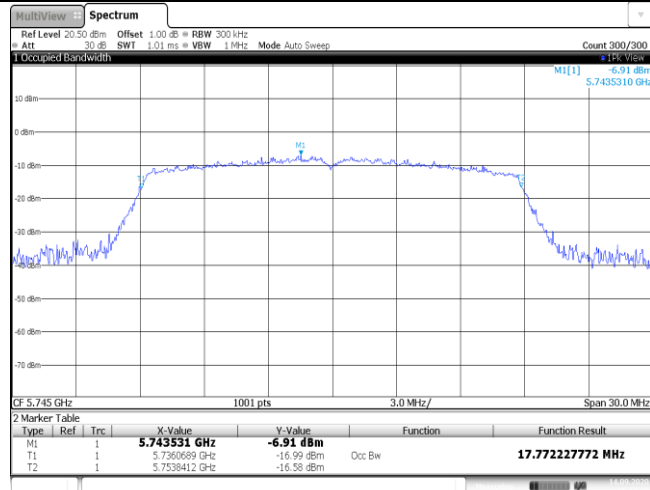


Appendix C: 99% Occupy bandwidth

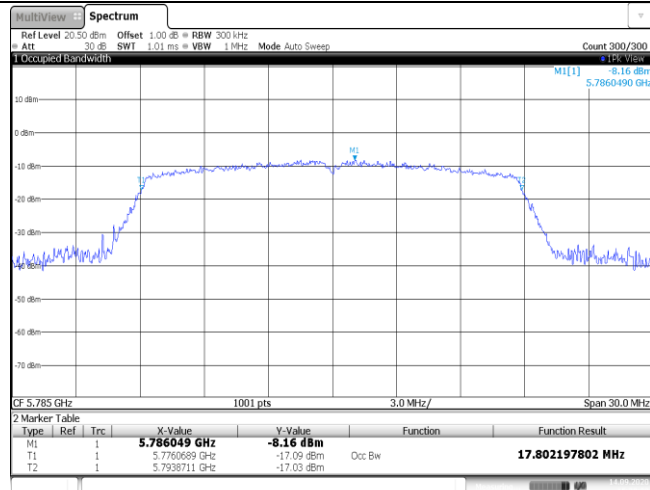
Band	Bandwidth (MHz)	Type	Channel	99% Occupy bandwidth (MHz)	Result
IV	20	802.11ac	CH _L	17.77	Pass
			CH _M	17.80	
			CH _H	17.77	
		802.11n	CH _L	17.74	Pass
			CH _M	17.83	
			CH _H	17.74	
		802.11a	CH _L	16.75	Pass
			CH _M	16.81	
			CH _H	16.78	
	40	802.11ac	CH _L	36.20	Pass
			CH _H	36.20	
		802.11n	CH _L	36.21	Pass
			CH _H	36.21	
	80	802.11ac	CH _M	75.40	Pass

Band IV

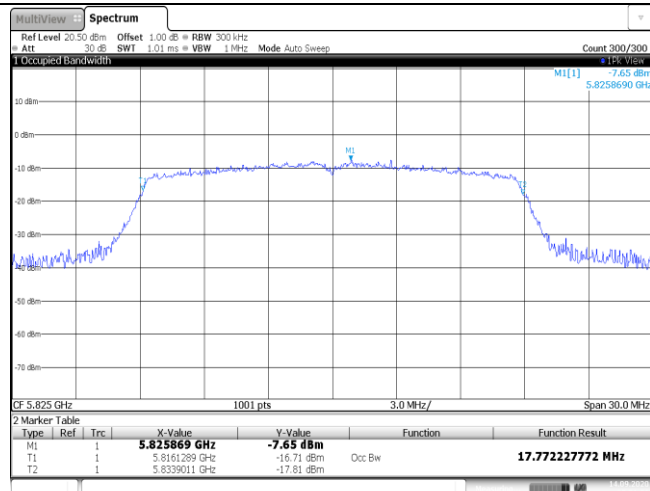
802.11ac (HT20)

CH_L

Date: 14.SEP.2020 15:17:38

CH_M

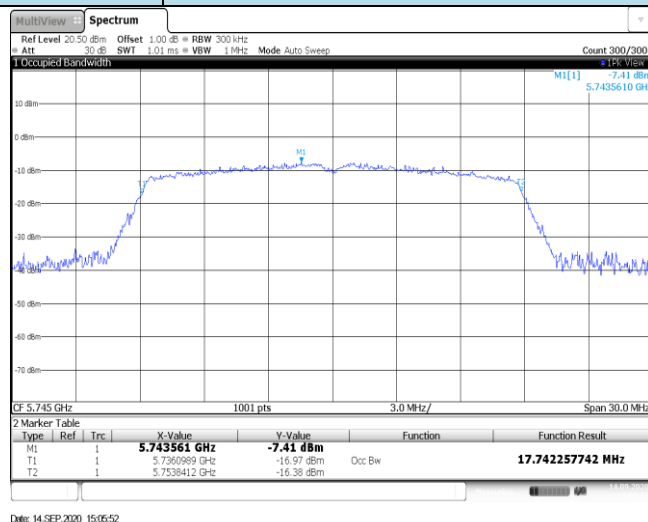
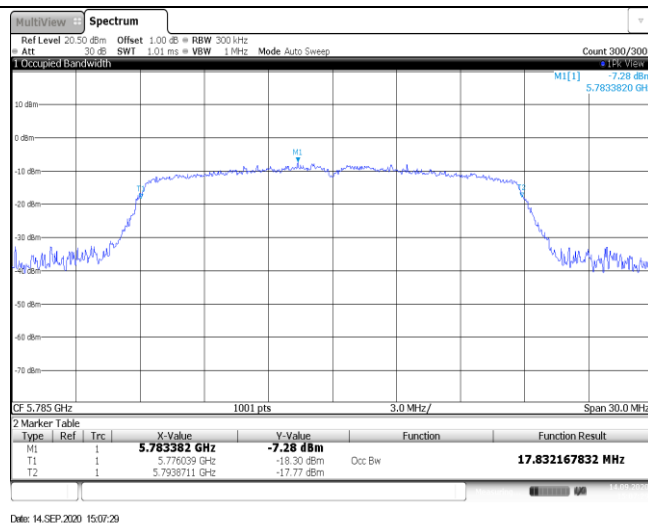
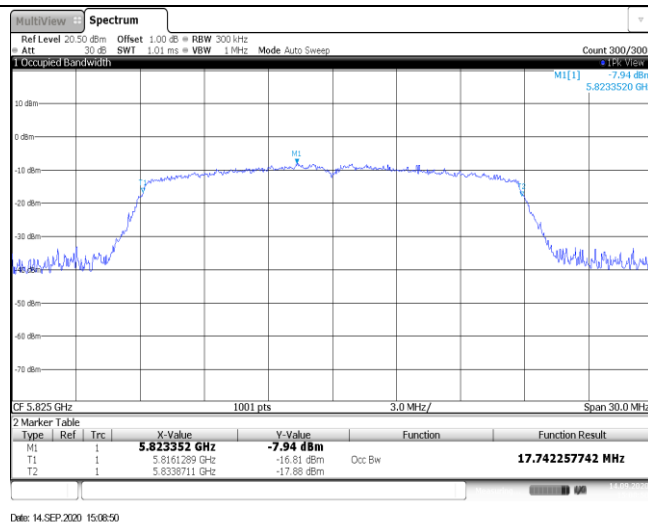
Date: 14.SEP.2020 15:20:38

CH_H

Date: 14.SEP.2020 15:21:56

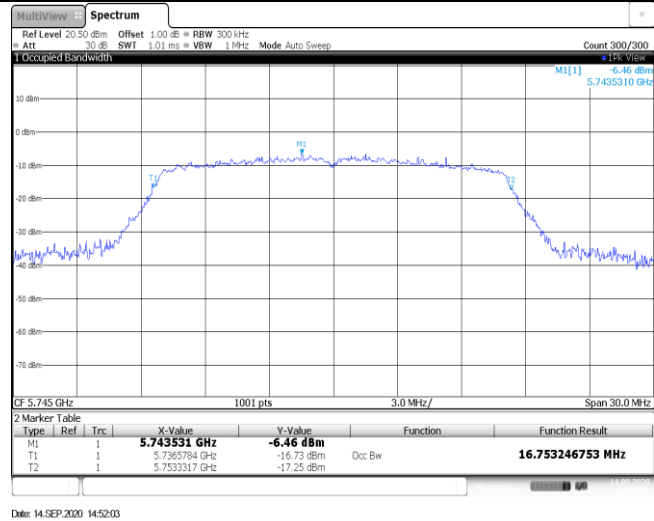
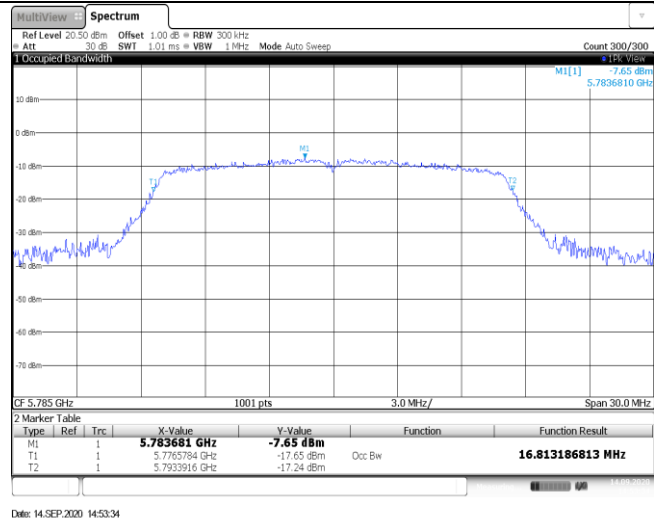
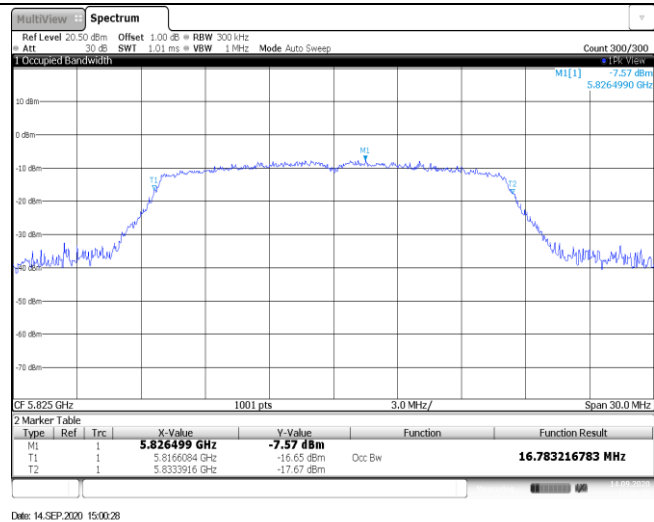
Band IV

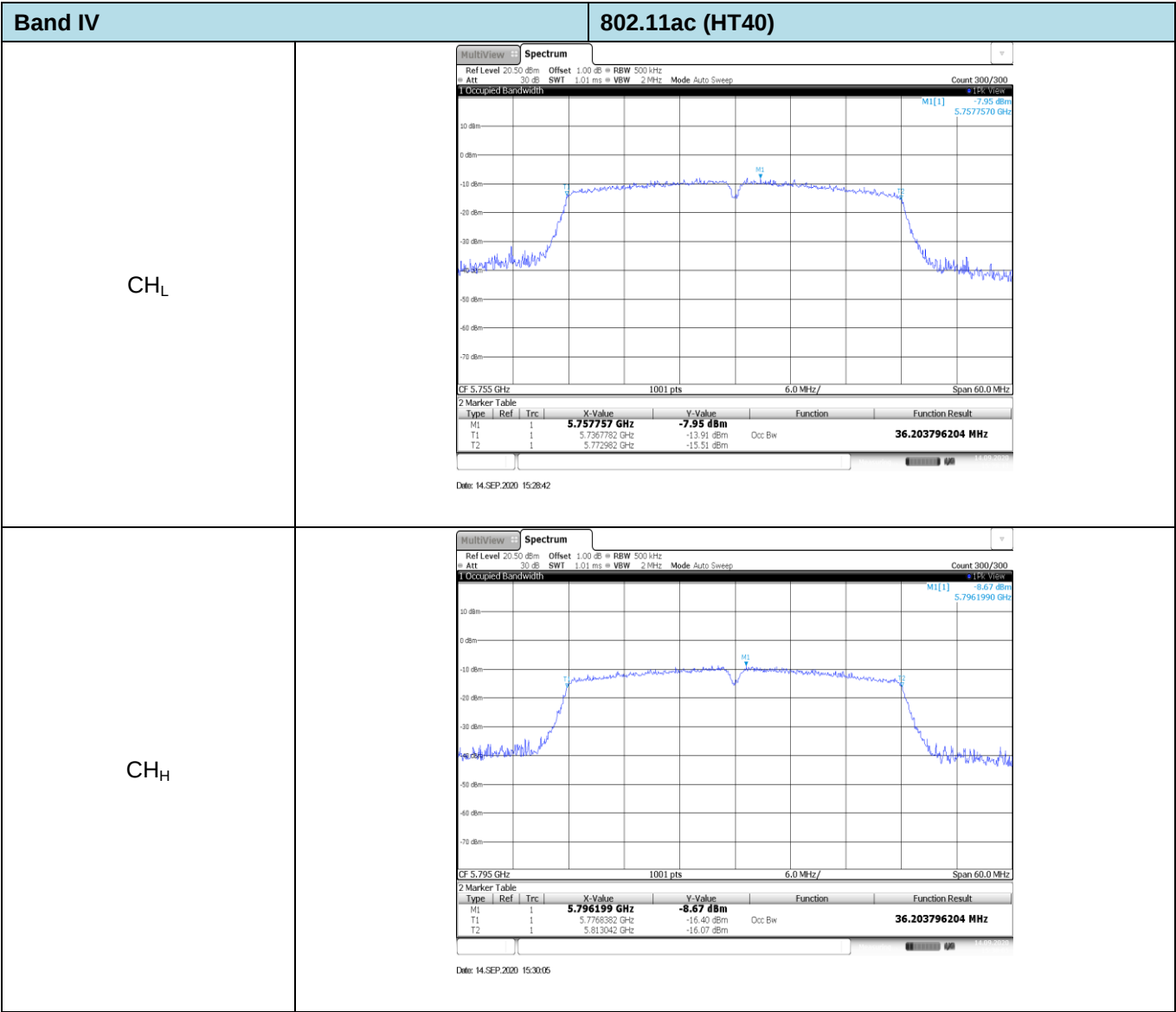
802.11n (HT20)

$$\text{CH}_L$$
 CH_M 
$$\text{CH}_H$$


Band IV

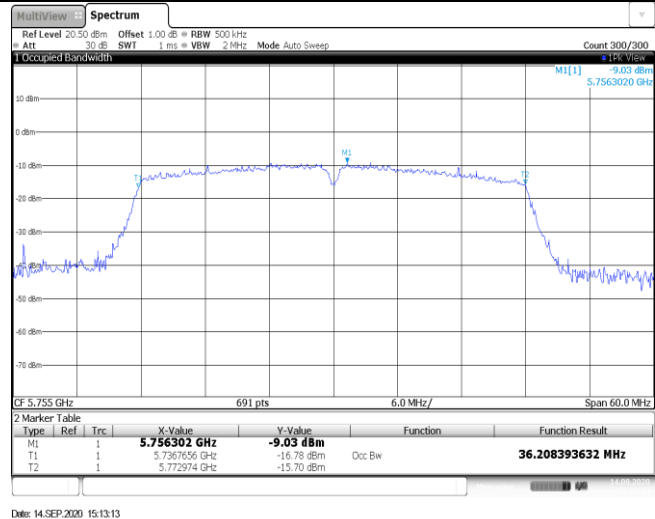
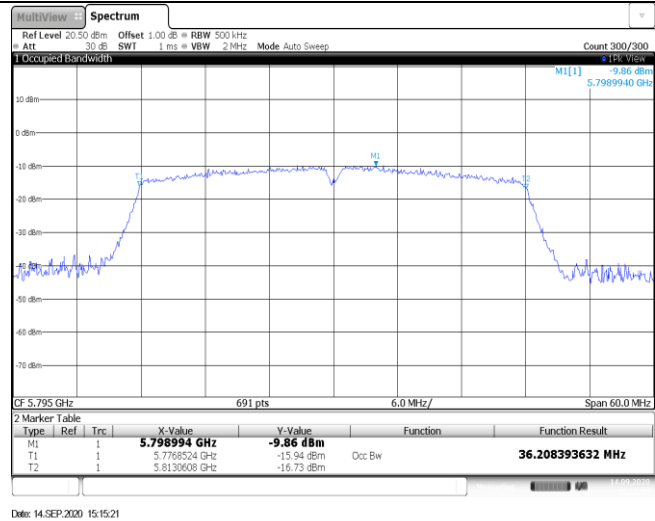
802.11a

CH_LCH_MCH_H



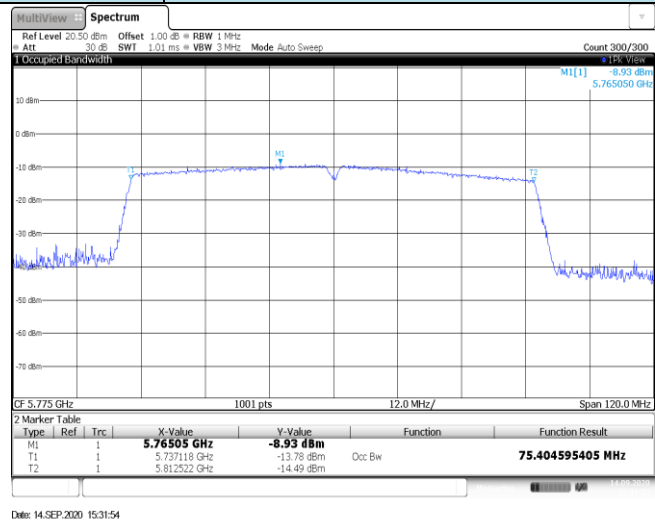
Band IV

802.11n (HT40)

CH_LCH_H

Band IV

802.11ac (HT80)

CH_M

Appendix D: 6dB Bandwidth

Band	Bandwidth (MHz)	Type	Channel	6dB bandwidth (MHz)	Result
IV	20	802.11ac	CH _L	17.61	Pass
			CH _M	17.64	
			CH _H	17.64	
		802.11n	CH _L	17.61	Pass
			CH _M	17.64	
			CH _H	17.61	
		802.11a	CH _L	16.35	Pass
			CH _M	16.41	
			CH _H	16.38	
	40	802.11ac	CH _L	36.42	Pass
			CH _H	36.42	
		802.11n	CH _L	36.26	Pass
			CH _H	36.43	
	80	802.11ac	CH _M	76.68	Pass

Band IV

802.11ac (HT20)

CH_L

MultiView

Spectrum

Ref Level 20.50 dBm Offset 1.00 dB BW 100 kHz
Att 30 dB SWI 1.04 ms VBW 300 kHz Mode Auto Sweep Count 500/500

1 Frequency Sweep

CF 5.745 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz

2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1	1		5.73618 GHz	-18.62 dBm		
M2	1		5.7465 GHz	-12.39 dBm		
D3	M1	1	17.61 MHz	-0.24 dB		

Date: 14.SEP.2020 15:17:47

CH_M

MultiView

Spectrum

Ref Level 20.50 dBm Offset 1.00 dB BW 100 kHz
Att 30 dB SWI 1.04 ms VBW 300 kHz Mode Auto Sweep Count 500/500

1 Frequency Sweep

CF 5.785 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz

2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1	1		5.77618 GHz	-19.31 dBm		
M2	1		5.78437 GHz	-13.09 dBm		
D3	M1	1	17.64 MHz	-1.13 dB		

Date: 14.SEP.2020 15:20:47

CH_H

MultiView

Spectrum

Ref Level 20.50 dBm Offset 1.00 dB BW 100 kHz
Att 30 dB SWI 1.04 ms VBW 300 kHz Mode Auto Sweep Count 500/500

1 Frequency Sweep

CF 5.825 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz

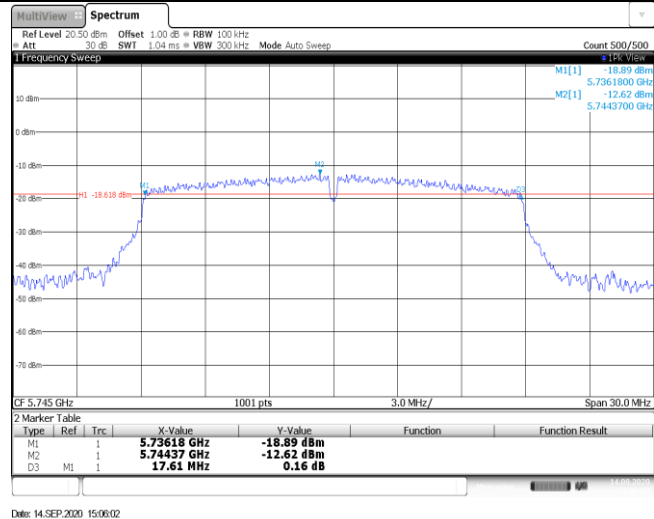
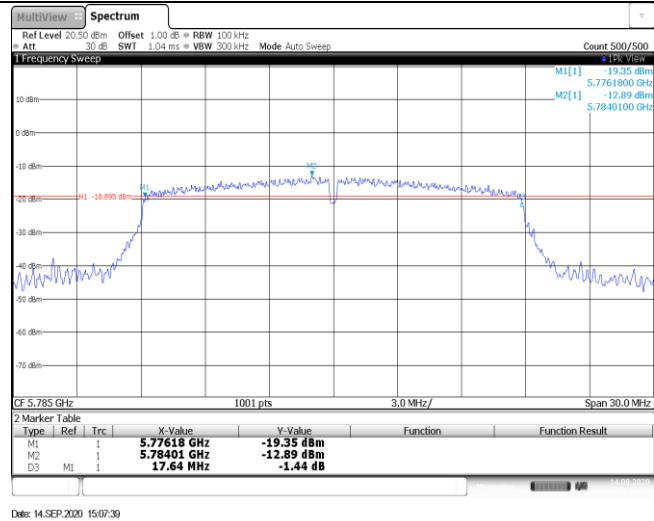
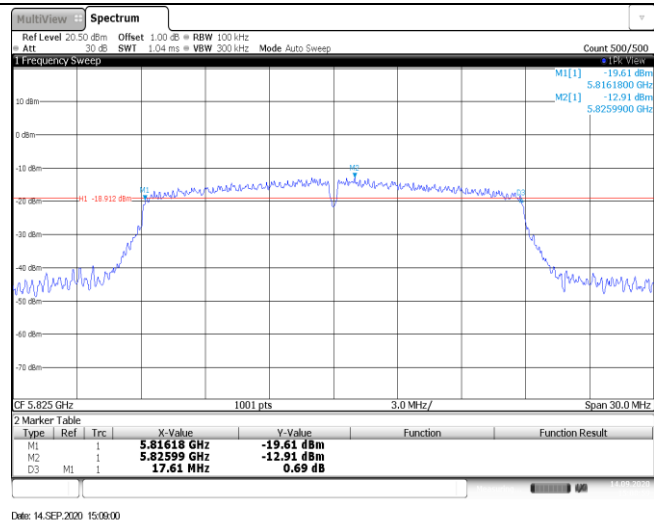
2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1	1		5.81618 GHz	-19.39 dBm		
M2	1		5.82437 GHz	-13.07 dBm		
D3	M1	1	17.64 MHz	-0.98 dB		

Date: 14.SEP.2020 15:22:05

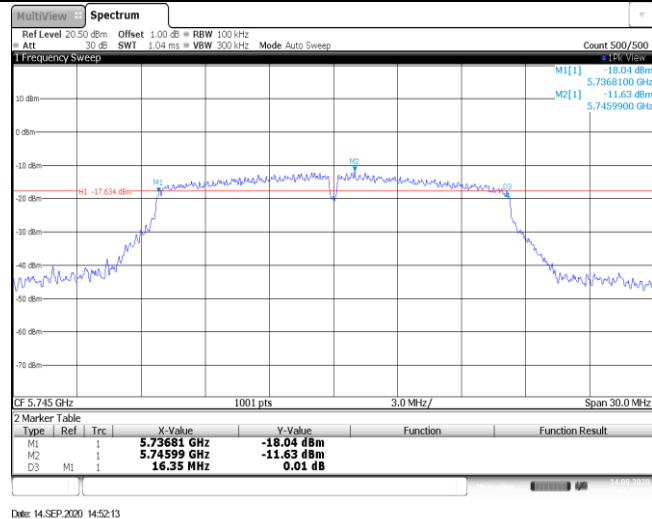
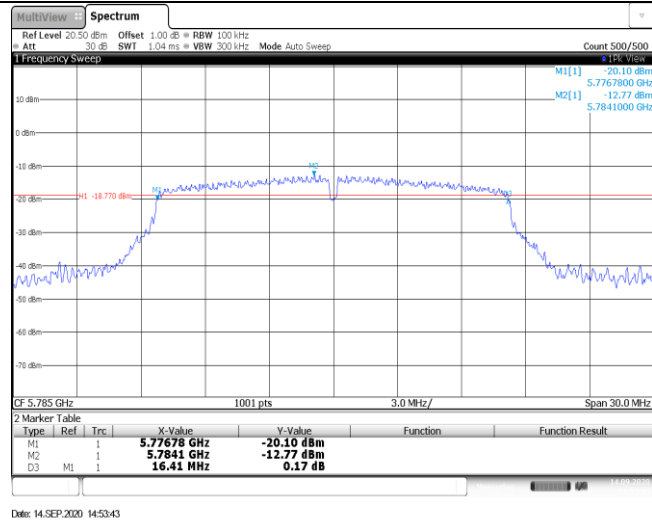
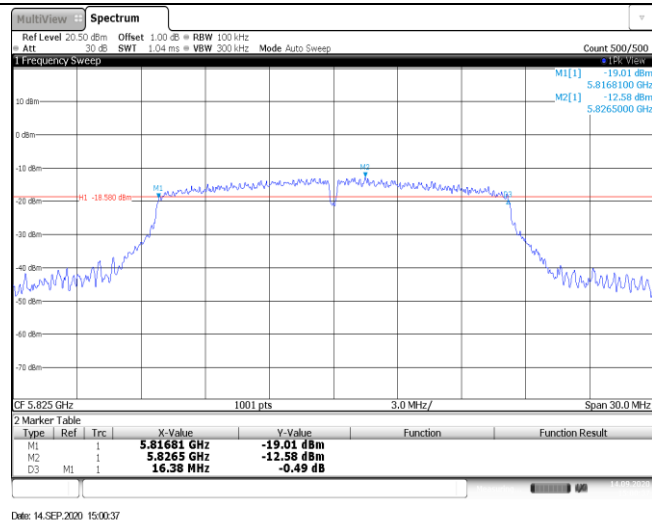
Band IV

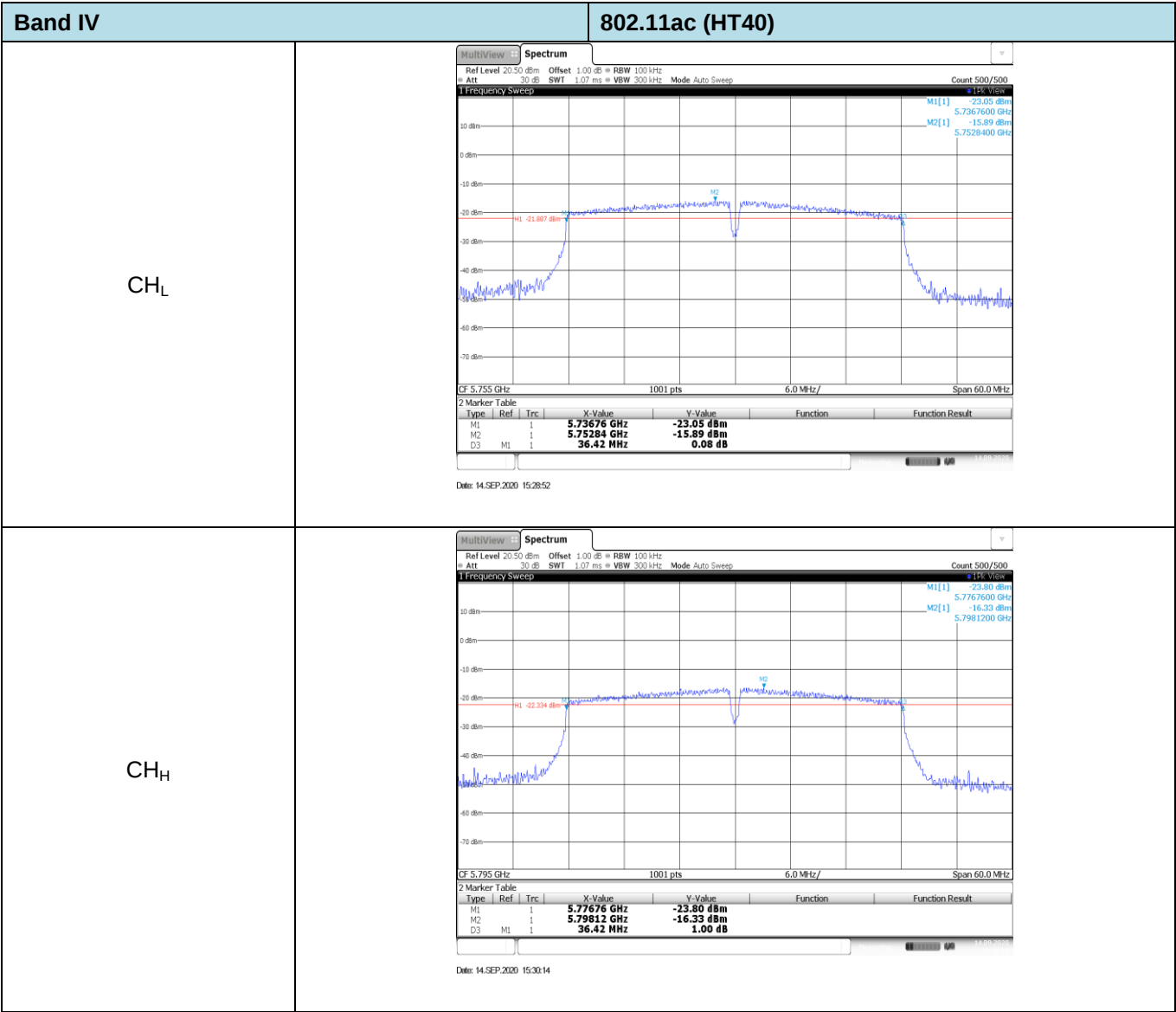
802.11n (HT20)

CH_LCH_MCH_H

Band IV

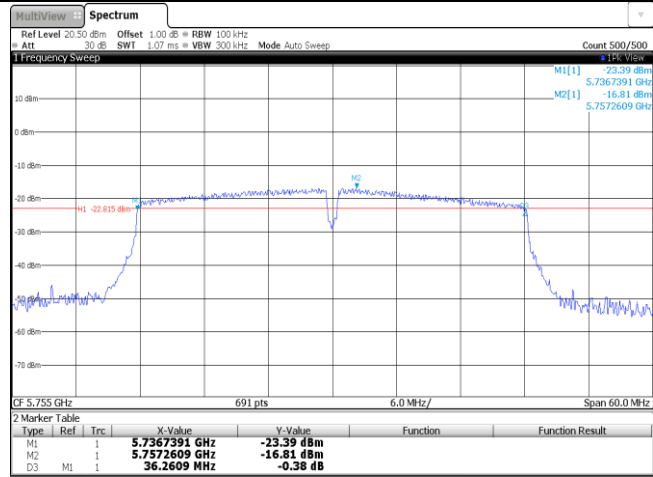
802.11a

CH_LCH_MCH_H

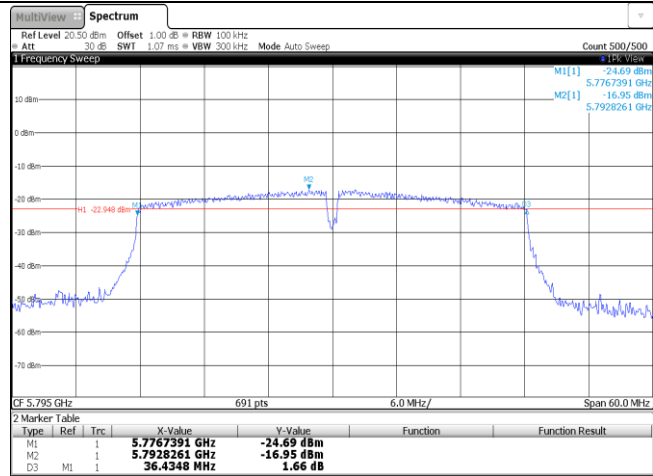


Band IV

802.11n (HT40)

CH_L

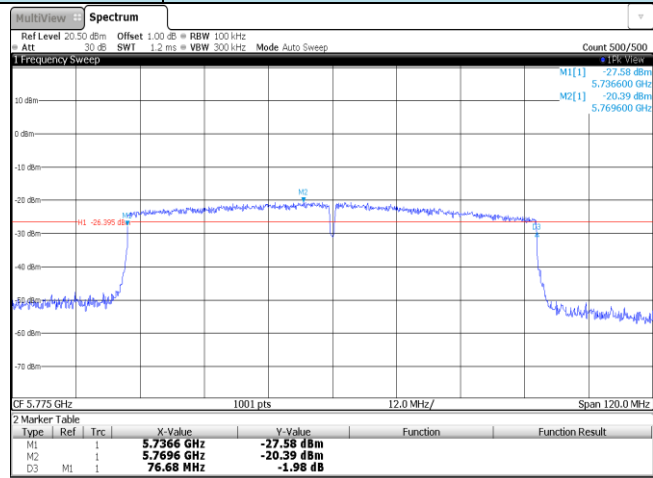
Date: 14.SEP.2020 15:13:22

CH_H

Date: 14.SEP.2020 15:15:30

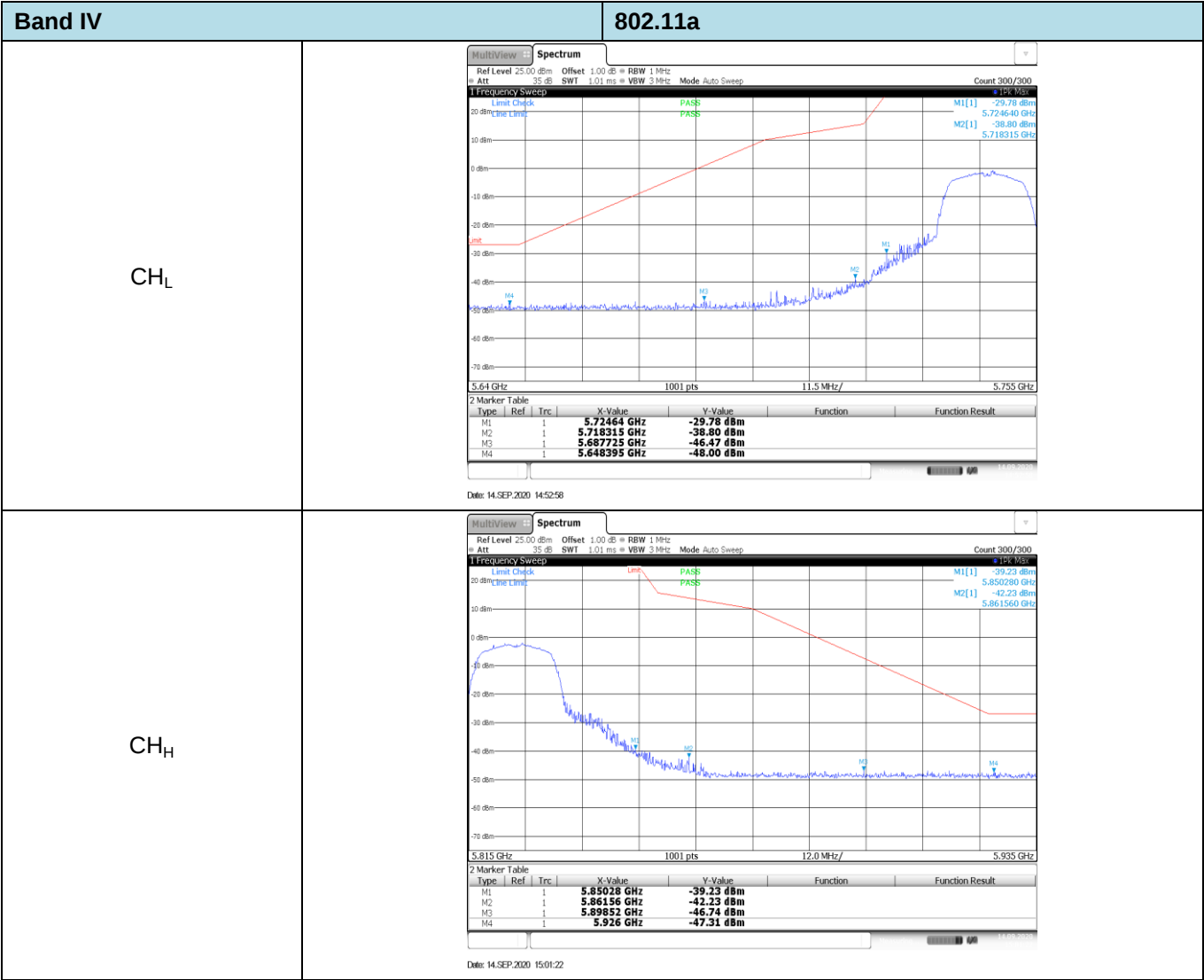
Band IV

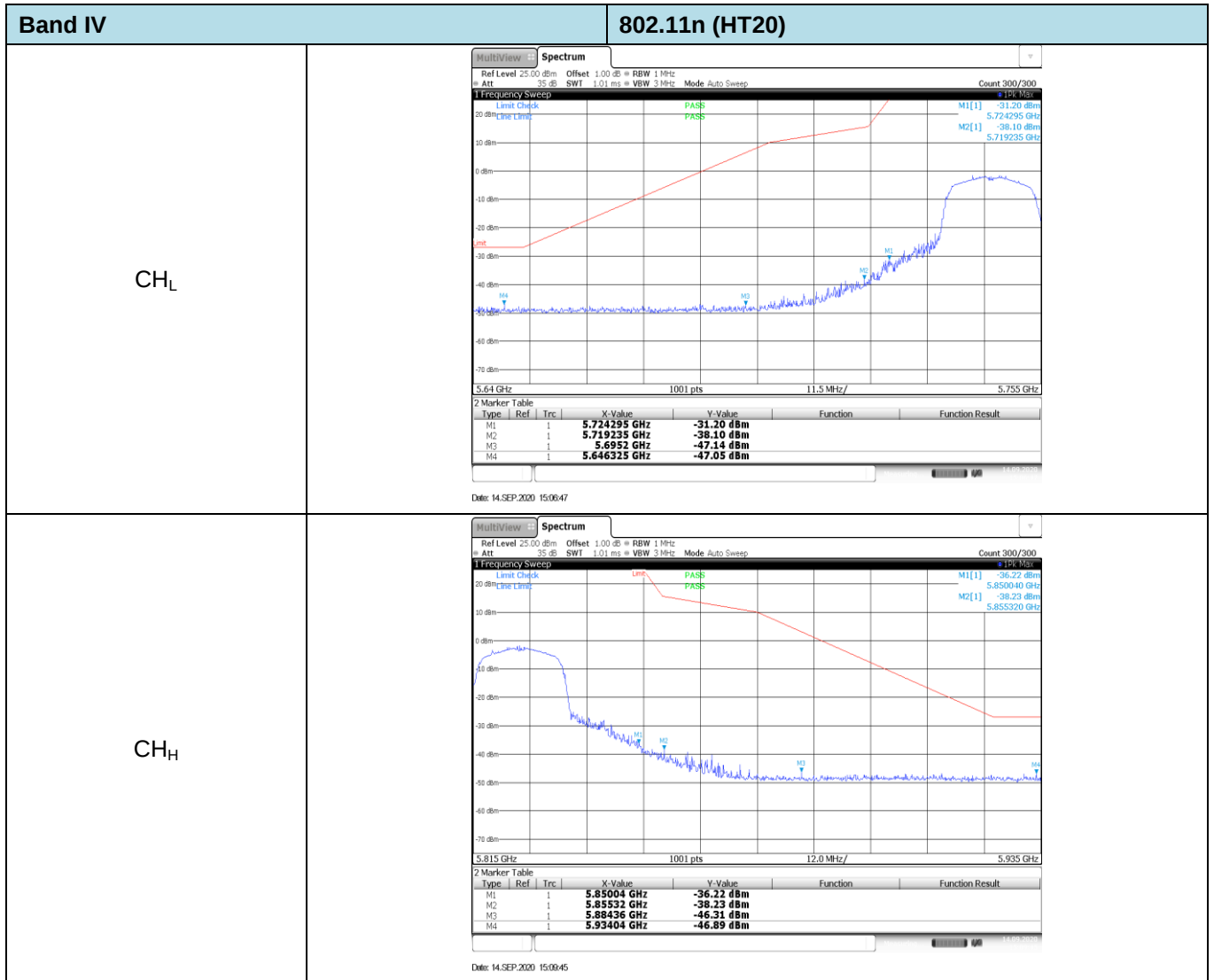
802.11ac (HT80)

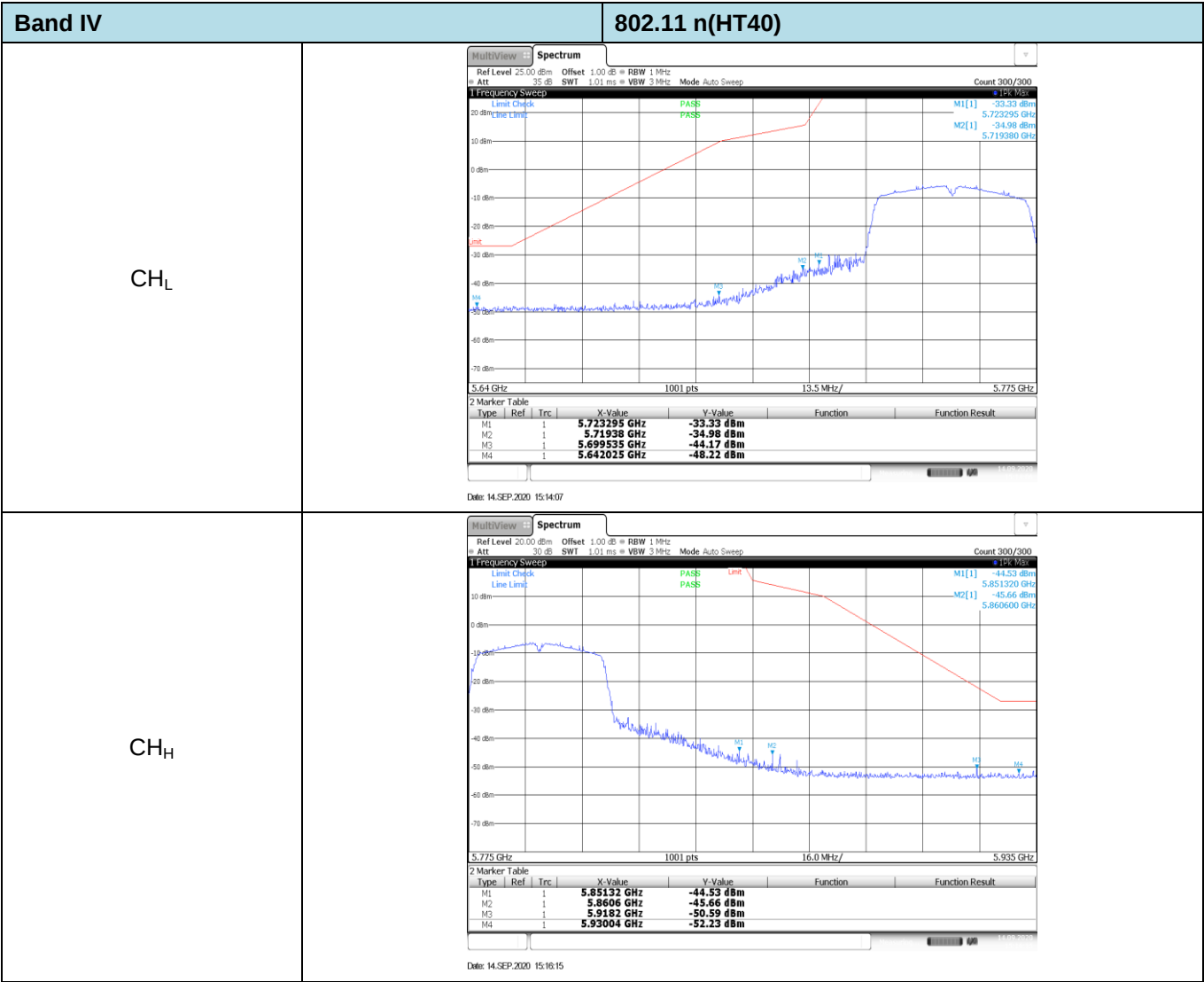
CH_M

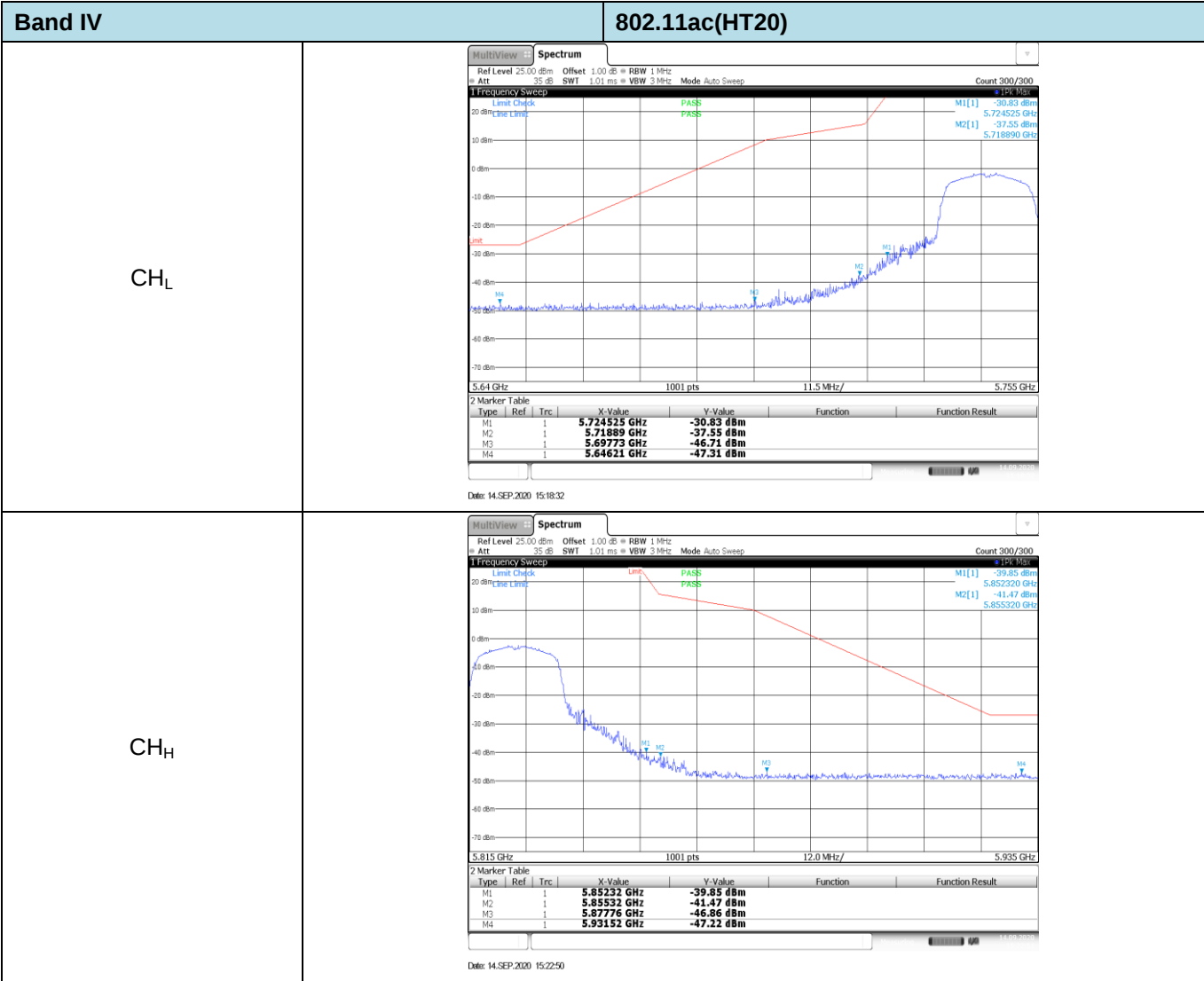
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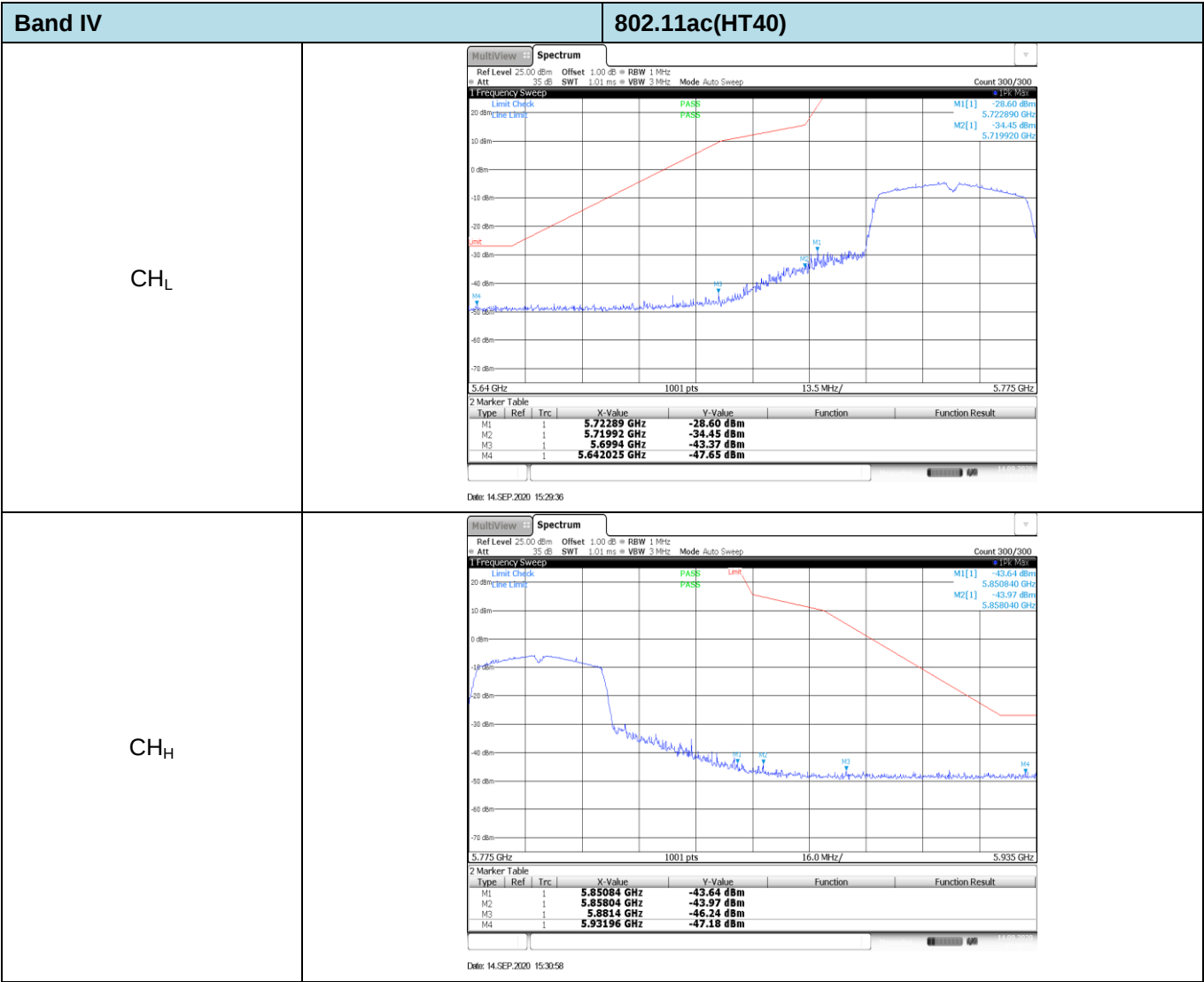
Appendix E: Band edge

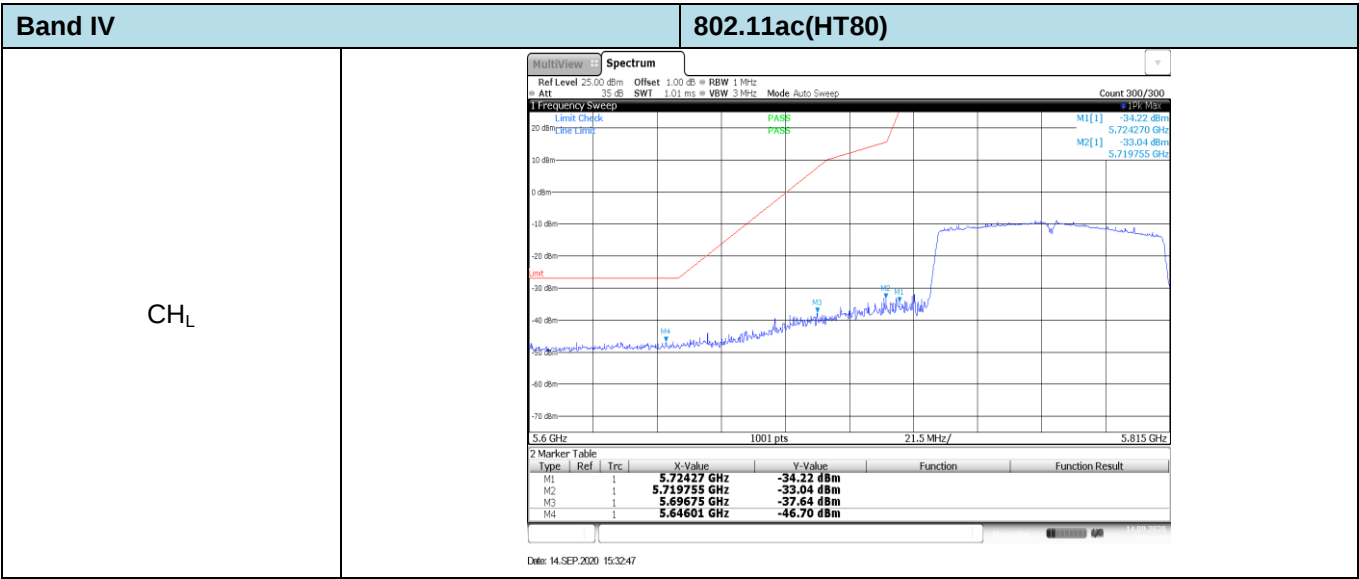












Appendix F: Frequency stability**Voltage VS Frequency stability**

Band: IV			Test Frequency: 5745.00MHz	
Temperature (°C)	Voltage (V)	Frequency Deviation (Hz)	Frequency Deviation (ppm)	Result
T _N	V _L	-2000.00	-0.34813	PASS
T _N	V _N	-2000.00	-0.34813	PASS
T _N	V _H	-2000.00	-0.34813	PASS

Temperature VS Frequency stability

Band: IV			Test Frequency: 5745.00MHz	
Voltage (V)	Temperature (°C)	Frequency Deviation (Hz)	Frequency Deviation (ppm)	Result
V _N	-20	-2000.00	-0.34813	PASS
V _N	-10	-2000.00	-0.34813	PASS
V _N	0	-2000.00	-0.34813	PASS
V _N	10	-2000.00	-0.34813	PASS
V _N	20	-2000.00	-0.34813	PASS
V _N	30	-2000.00	-0.34813	PASS
V _N	40	-2000.00	-0.34813	PASS
V _N	50	-2000.00	-0.34813	PASS

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