

APPENDIX REPORT

Project No.	SHT2011036601EW	Radio Specification	WIFI 5G
Test sample No.	YPHT 20110366003	Model No.	HEV-10W
Start test date	2020/11/20	Finish date	2020/11/23
Temperature	25°C	Humidity	50%
Test Engineer	Qizhi Zhang	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	802.11ac	CH _L	14.46	58.59	2.32	16.78	24.00	Pass
			CH _M	15.21	58.59	2.32	17.53		
			CH _H	15.52	58.59	2.32	17.84		
		802.11n	CH _L	14.57	61.14	2.14	16.71	24.00	Pass
			CH _M	15.26	61.14	2.14	17.40		
			CH _H	15.57	60.66	2.17	17.74		
		802.11a	CH _L	14.69	93.03	0.31	15.00	24.00	Pass
			CH _M	14.99	93.03	0.31	15.30		
			CH _H	15.73	93.11	0.31	16.04		
	40	802.11ac	CH _L	14.34	49.37	3.07	17.41	24.00	Pass
			CH _H	15.23	49.37	3.07	18.3		
		802.11n	CH _L	14.48	49.37	3.07	17.55	24.00	Pass
			CH _H	15.21	49.37	3.07	18.28		
	80	802.11ac	CH _M	14.41	38.72	4.12	18.53	24.00	Pass
II	20	802.11ac	CH _L	14.31	58.59	2.32	16.63	24.00	Pass
			CH _M	14.52	58.59	2.32	16.84		
			CH _H	14.76	58.59	2.32	17.08		
		802.11n	CH _L	15.05	61.14	2.14	17.19	24.00	Pass
			CH _M	15.49	61.14	2.14	17.63		
			CH _H	15.55	61.14	2.14	17.69		
		802.11a	CH _L	15.06	93.11	0.31	15.37	24.00	Pass
			CH _M	15.47	93.12	0.31	15.78		
			CH _H	15.44	93.11	0.31	15.75		
	40	802.11ac	CH _L	14.72	46.15	3.36	18.08	24.00	Pass
			CH _H	15.28	46.15	3.36	18.64		
		802.11n	CH _L	14.39	49.37	3.07	17.46	24.00	Pass
			CH _H	14.95	49.37	3.07	18.02		
	80	802.11ac	CH _M	14.20	38.77	4.12	18.32	24.00	Pass

Band	Bandwidth (MHz)	Type	Channel	Reading (dBm)	Duty cycle (%)	Duty cycle factor (dB)	Conducted Output Power (dBm)	Limit (dBm)	Result
III	20	802.11ac	CH _L	14.29	58.59	2.32	16.61	24.00	Pass
			CH _M	14.63	58.59	2.32	16.95		
			CH _H	14.70	58.59	2.32	17.02		
		802.11n	CH _L	14.47	60.95	2.15	16.62	24.00	Pass
			CH _M	14.89	61.14	2.14	17.03		
			CH _H	15.06	61.14	2.14	17.20		
		802.11a	CH _L	14.80	62.73	2.03	16.83	24.00	Pass
			CH _M	15.53	62.73	2.03	17.56		
			CH _H	15.09	62.73	2.03	17.12		
	40	802.11ac	CH _L	14.58	49.67	3.04	17.62	24.00	Pass
			CH _M	15.03	49.67	3.04	18.07		
			CH _H	15.19	49.67	3.04	18.23		
		802.11n	CH _L	14.81	49.49	3.05	17.86	24.00	Pass
			CH _M	15.07	49.49	3.05	18.12		
			CH _H	15.17	49.49	3.05	18.22		
	80	802.11ac	CH _L	14.67	38.82	4.11	18.78	24.00	Pass
			CH _M	14.60	38.82	4.11	18.71		
			CH _H	14.64	38.82	4.11	18.75		
IV	20	802.11ac	CH _L	15.67	58.59	2.32	17.99	30.00	Pass
			CH _M	14.88	58.08	2.36	17.24		
			CH _H	14.71	58.59	2.32	17.03		
		802.11n	CH _L	14.88	61.14	2.14	17.02	30.00	Pass
			CH _M	14.28	61.14	2.14	16.42		
			CH _H	14.11	61.14	2.14	16.25		
		802.11a	CH _L	15.13	62.73	2.03	17.16	30.00	Pass
			CH _M	14.43	62.73	2.03	16.46		
			CH _H	14.10	62.44	2.05	16.15		
	40	802.11ac	CH _L	14.76	46.35	3.34	18.10	30.00	Pass
			CH _H	14.31	46.35	3.34	17.65		
		802.11n	CH _L	14.84	48.54	3.14	17.98	30.00	Pass
			CH _H	14.15	48.54	3.14	17.29		
	80	802.11ac	CH _M	14.05	38.47	4.15	18.20	30.00	Pass

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

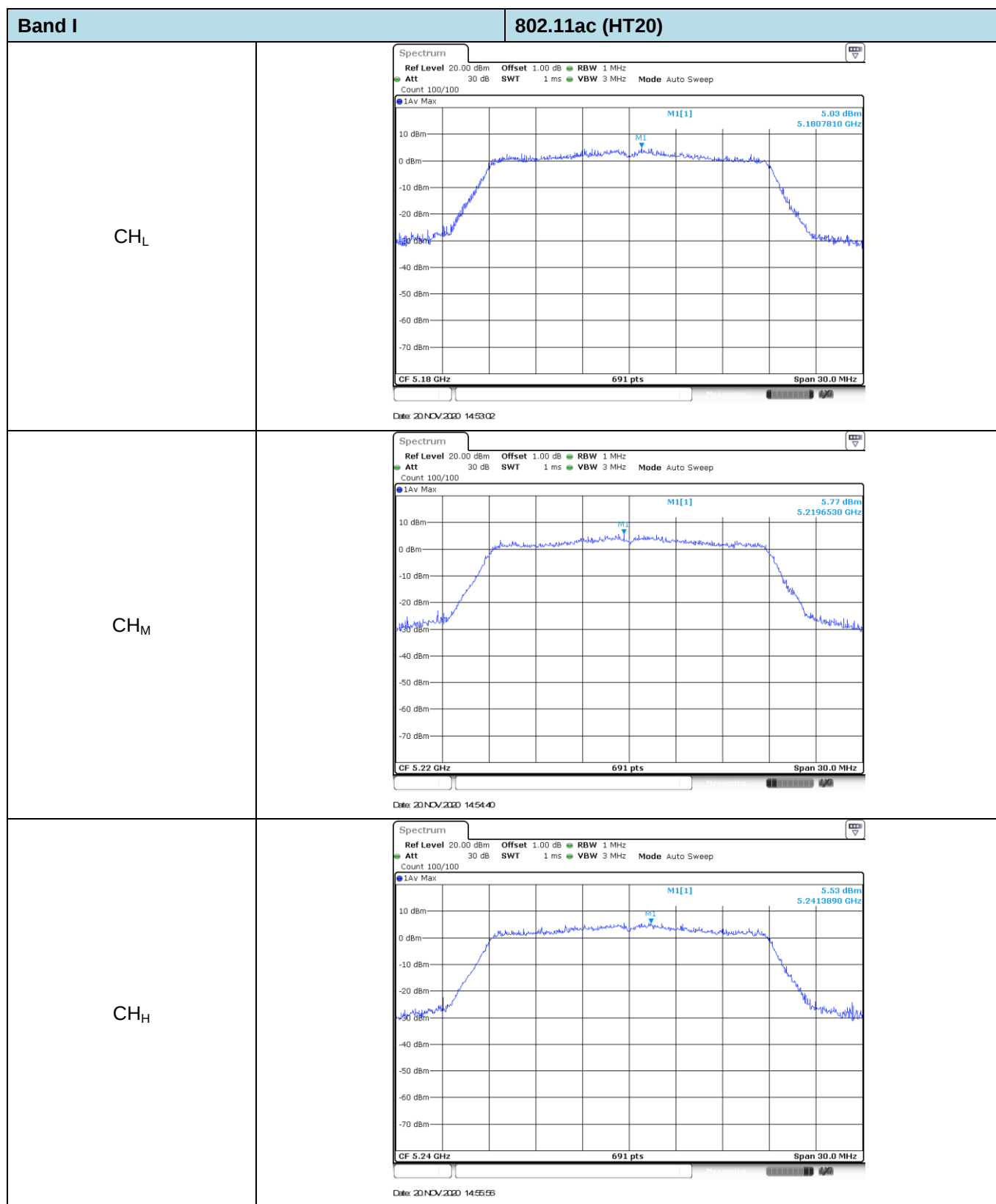
Appendix B: Maximum Power Spectral Density

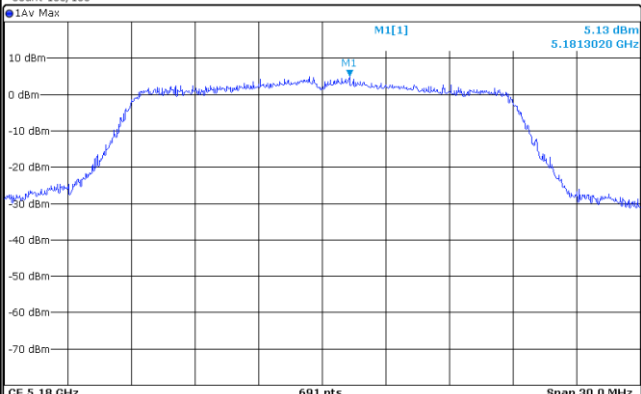
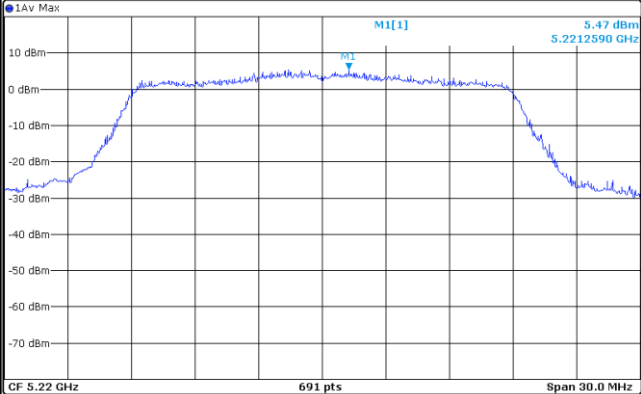
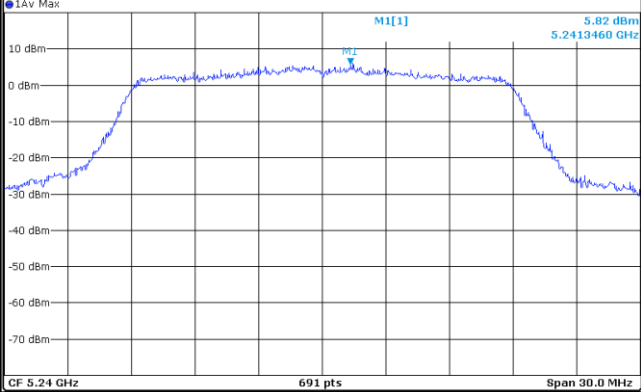
Band	Bandwidth (MHz)	Type	Channel	Reading (dBm)	Duty cycle (%)	Duty cycle factor (dB)	Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
I	20	802.11ac	CH _L	5.03	58.59	2.32	7.35	11.00	Pass
			CH _M	5.77	58.59	2.32	8.09		
			CH _H	5.53	58.59	2.32	7.85		
		802.11n	CH _L	5.13	61.14	2.14	7.27	11.00	Pass
			CH _M	5.47	61.14	2.14	7.61		
			CH _H	5.82	60.66	2.17	7.99		
		802.11a	CH _L	4.71	93.03	0.31	5.02	11.00	Pass
			CH _M	5.05	93.03	0.31	5.36		
			CH _H	5.50	93.11	0.31	5.81		
	40	802.11ac	CH _L	1.99	49.37	3.07	5.06	11.00	Pass
			CH _H	2.04	49.37	3.07	5.11		
		802.11n	CH _L	1.07	49.37	3.07	4.14	11.00	Pass
			CH _H	2.10	49.37	3.07	5.17		
	80	802.11ac	CH _M	-1.03	38.72	4.12	3.09	11.00	Pass

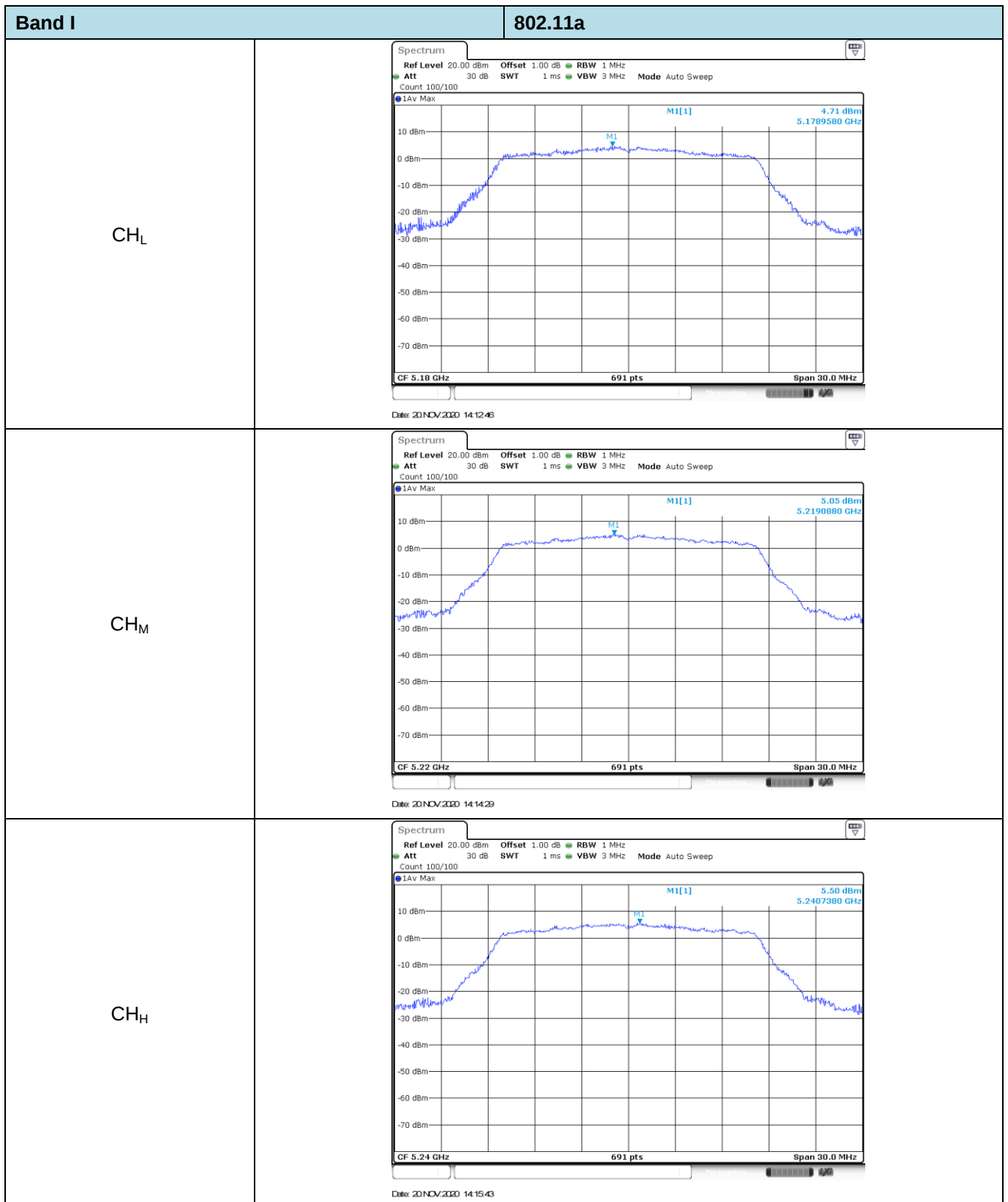
Band	Bandwidth (MHz)	Type	Channel	Reading (dBm)	Duty cycle (%)	Duty cycle factor (dB)	Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
II	20	802.11ac	CH _L	4.80	58.59	2.32	7.12	11.00	Pass
			CH _M	4.65	58.59	2.32	6.97		
			CH _H	5.55	58.59	2.32	7.87		
		802.11n	CH _L	5.23	61.14	2.14	7.37	11.00	Pass
			CH _M	5.88	61.14	2.14	8.02		
			CH _H	5.41	61.14	2.14	7.55		
		802.11a	CH _L	5.13	93.11	0.31	5.44	11.00	Pass
			CH _M	5.68	93.12	0.31	5.99		
			CH _H	5.12	93.11	0.31	5.43		
	40	802.11ac	CH _L	2.03	46.15	3.36	5.39	11.00	Pass
			CH _H	2.52	46.15	3.36	5.88		
		802.11n	CH _L	1.76	49.37	3.07	4.83	11.00	Pass
			CH _H	1.90	49.37	3.07	4.97		
	80	802.11ac	CH _M	-1.67	38.77	4.12	2.45	11.00	Pass

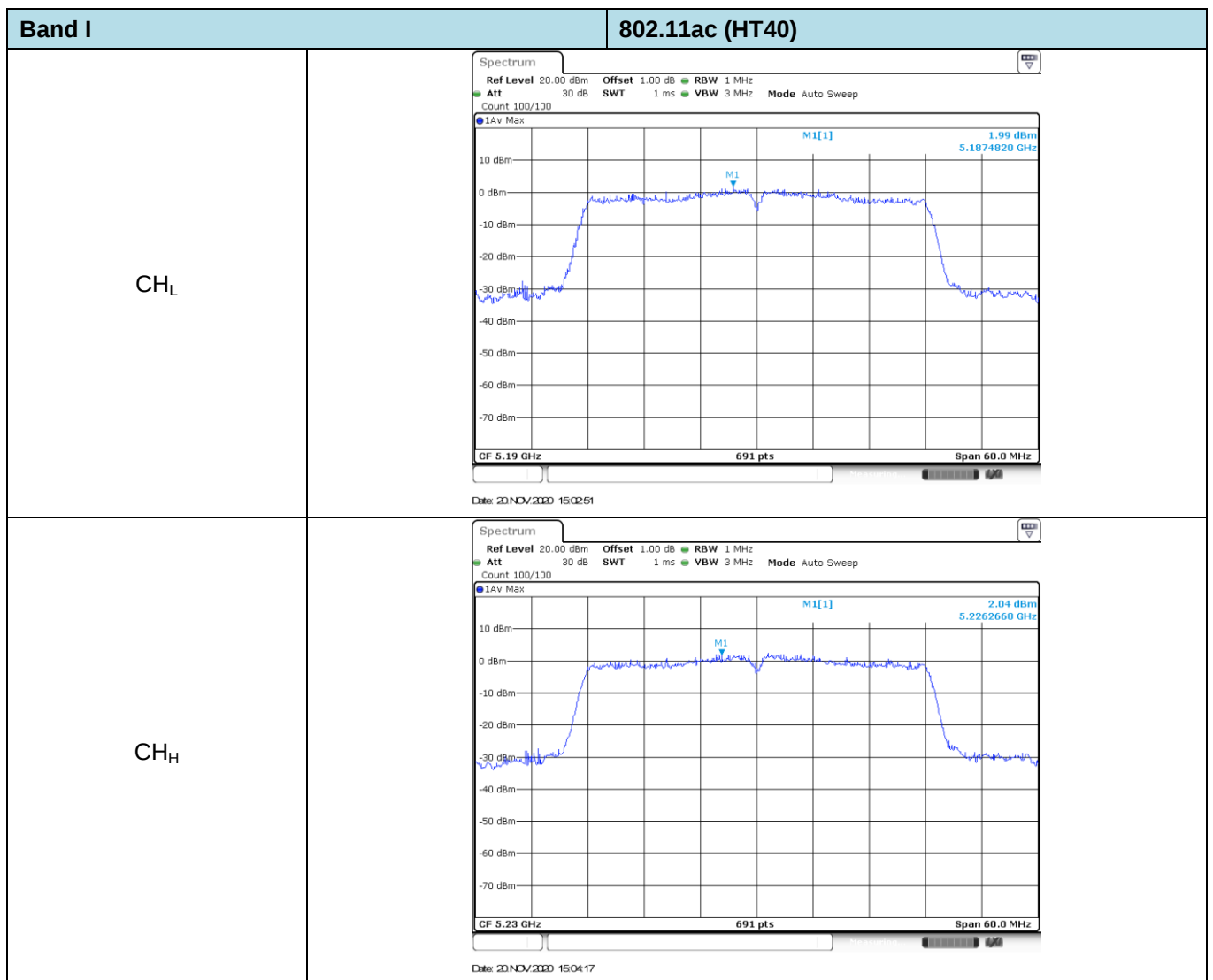
Band	Bandwidth (MHz)	Type	Channel	Reading (dBm)	Duty cycle (%)	Duty cycle factor (dB)	Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
III	20	802.11a c	CH _L	4.39	58.59	2.32	6.71	11.00	Pass
			CH _M	4.46	58.59	2.32	6.78		
			CH _H	5.40	58.59	2.32	7.72		
		802.11n	CH _L	4.80	60.95	2.15	6.95	11.00	Pass
			CH _M	5.45	61.14	2.14	7.59		
			CH _H	5.18	61.14	2.14	7.32		
		802.11a	CH _L	5.20	62.73	2.03	7.23	11.00	Pass
			CH _M	6.09	62.73	2.03	8.12		
			CH _H	5.62	62.73	2.03	7.65		
	40	802.11a c	CH _L	2.15	49.67	3.04	5.19	11.00	Pass
			CH _M	2.60	49.67	3.04	5.64		
			CH _H	2.18	49.67	3.04	5.22		
		802.11n	CH _L	1.61	49.49	3.05	4.66	11.00	Pass
			CH _M	2.15	49.49	3.05	5.20		
			CH _H	2.97	49.49	3.05	6.02		
	80	802.11a c	CH _L	-1.26	38.82	4.11	2.85	11.00	Pass
			CH _M	-1.03	38.82	4.11	3.08		
			CH _H	-1.06	38.82	4.11	3.05		
Band	Bandwidth (MHz)	Type	Channel	Reading (dBm)	Duty cycle (%)	Duty cycle factor (dB)	Power Spectral Density (dBm/500 kHz)	Limit (dBm/500 kHz)	Result
IV	20	802.11a c	CH _L	4.40	58.59	2.32	6.72	30.00	Pass
			CH _M	4.28	58.08	2.36	6.64		
			CH _H	3.30	58.59	2.32	5.62		
		802.11n	CH _L	3.84	61.14	2.14	5.98	30.00	Pass
			CH _M	2.91	61.14	2.14	5.05		
			CH _H	2.96	61.14	2.14	5.10		
		802.11a	CH _L	3.75	62.73	2.03	5.78	30.00	Pass
			CH _M	3.23	62.73	2.03	5.26		
			CH _H	2.87	62.44	2.05	4.92		
	40	802.11a c	CH _L	0.04	46.35	3.34	3.38	30.00	Pass
			CH _H	0.27	46.35	3.34	3.61		
		802.11n	CH _L	1.12	48.54	3.14	4.26	30.00	Pass
			CH _H	1.54	48.54	3.14	4.68		
	80	802.11a c	CH _M	-2.98	38.47	4.15	1.17	30.00	Pass

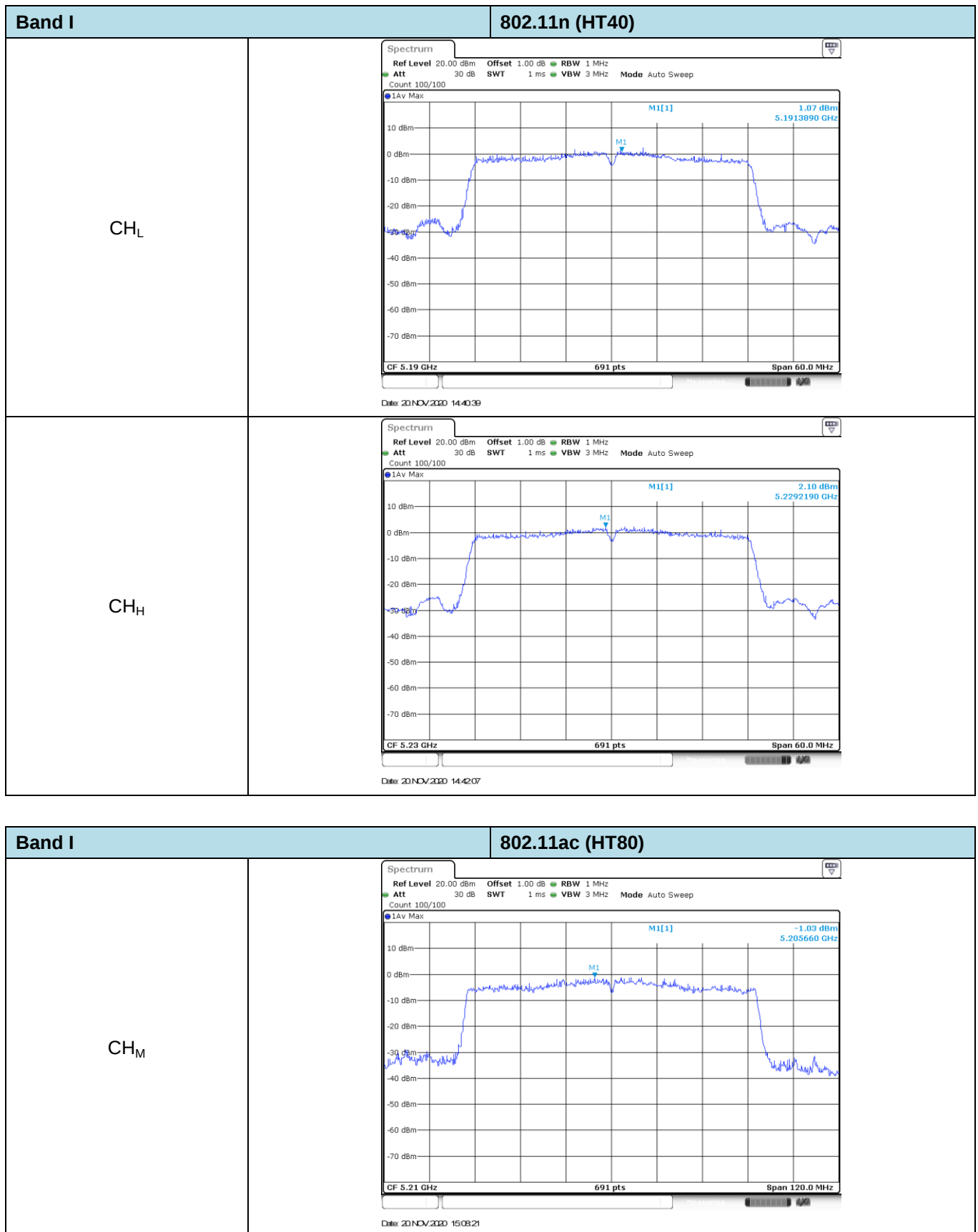
Test plot as follows:



Band I		802.11n (HT20)
CH _L	Spectrum Ref Level 20.00 dBm Att 30 dB Count 100/100 Offset 1.00 dB SWT 1 ms RBW 1 MHz VBW 3 MHz Mode Auto Sweep IAV Max MI[1] 5.13 dBm 5.1813020 GHz  CF 5.18 GHz691 ptsSpan 30.0 MHz Date: 20 NOV 2020 14:26:25	
CH _M	Spectrum Ref Level 20.00 dBm Att 30 dB Count 100/100 Offset 1.00 dB SWT 1 ms RBW 1 MHz VBW 3 MHz Mode Auto Sweep IAV Max MI[1] 5.47 dBm 5.2212590 GHz  CF 5.22 GHz691 ptsSpan 30.0 MHz Date: 20 NOV 2020 14:27:58	
CH _H	Spectrum Ref Level 20.00 dBm Att 30 dB Count 100/100 Offset 1.00 dB SWT 1 ms RBW 1 MHz VBW 3 MHz Mode Auto Sweep IAV Max MI[1] 5.82 dBm 5.2413460 GHz  CF 5.24 GHz691 ptsSpan 30.0 MHz Date: 20 NOV 2020 14:29:09	

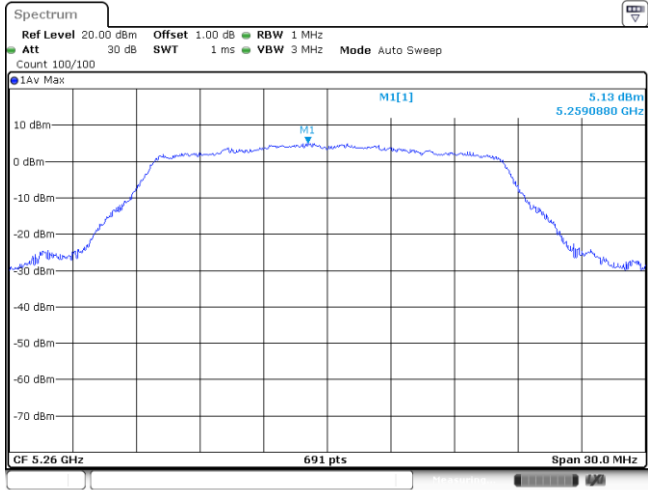
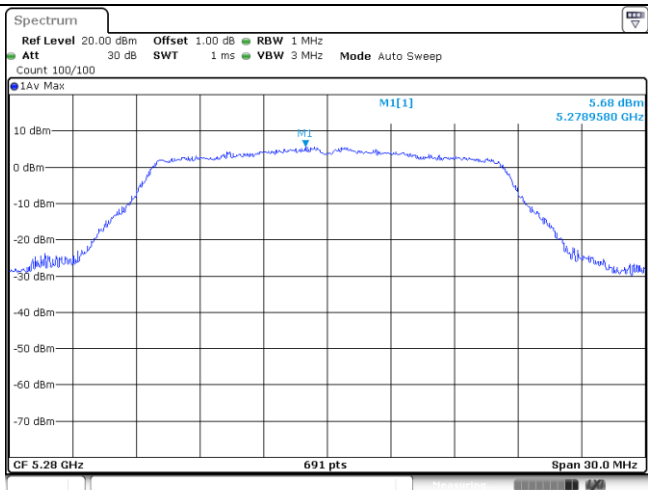
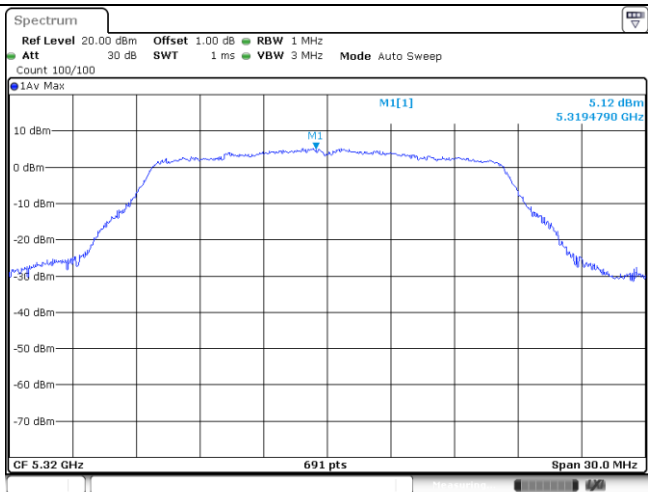


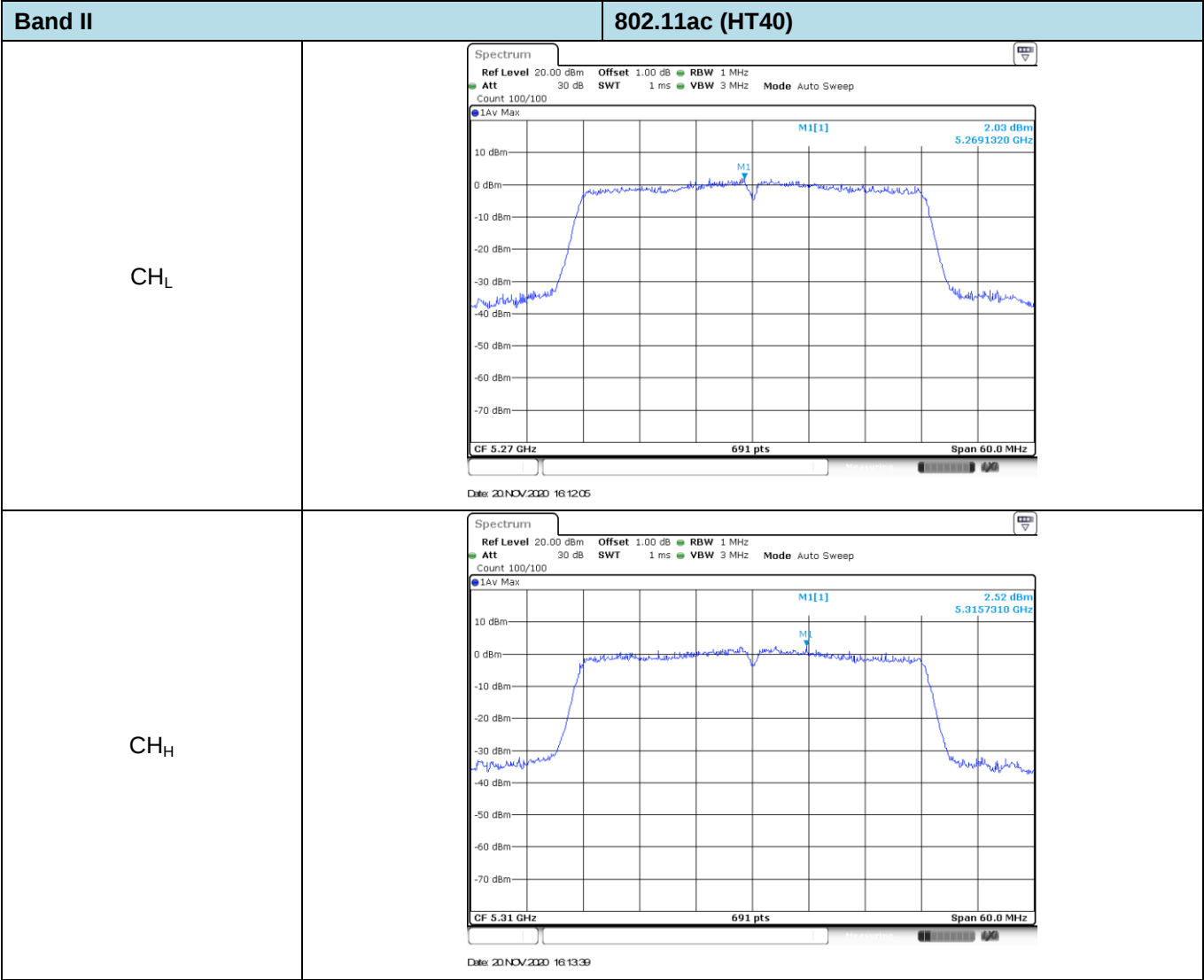


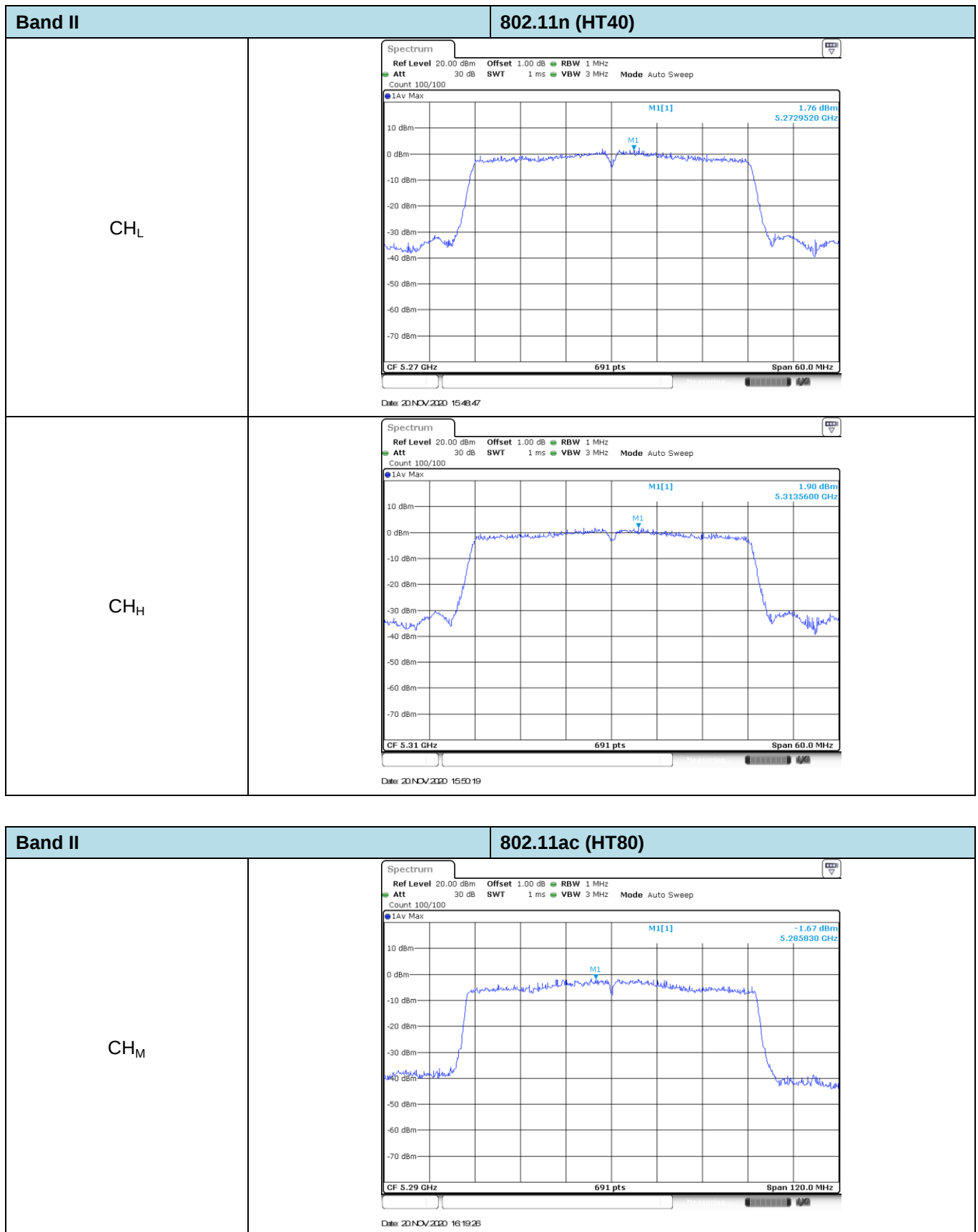


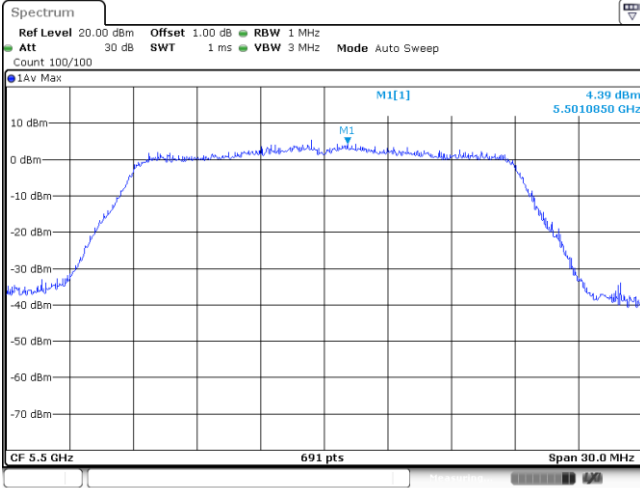
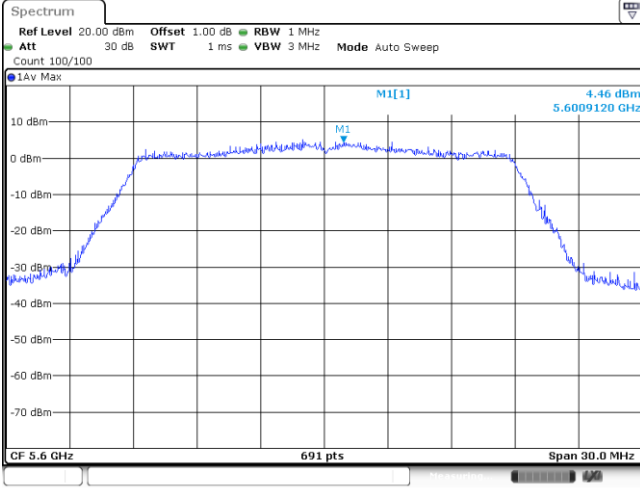
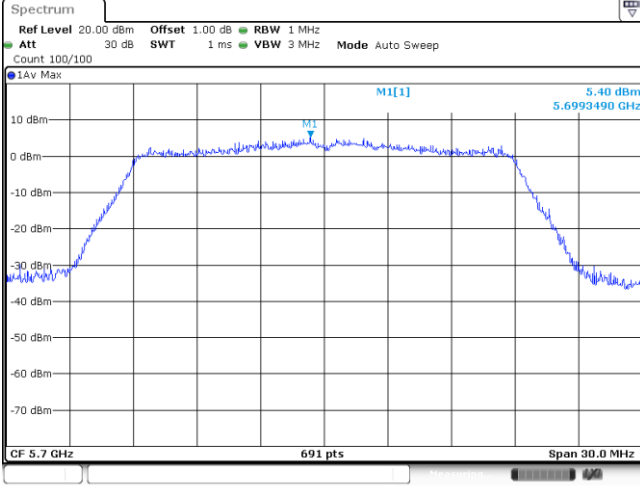
Band II		802.11ac (HT20)
CH _L	Spectrum Ref Level 20.00 dBm Att 30 dB Count 100/100 Offset 1.00 dB SWT 1 ms RBW 1 MHz VBW 3 MHz Mode Auto Sweep IAV Max MI[1] 4.80 dBm 5.2597400 GHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.26 GHz 691 pts Span 30.0 MHz Date: 20 NOV 2020 16:04:34	
CH _M	Spectrum Ref Level 20.00 dBm Att 30 dB Count 100/100 Offset 1.00 dB SWT 1 ms RBW 1 MHz VBW 3 MHz Mode Auto Sweep IAV Max MI[1] 4.65 dBm 5.2793050 GHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.28 GHz 691 pts Span 30.0 MHz Date: 20 NOV 2020 16:03:32	
CH _H	Spectrum Ref Level 20.00 dBm Att 30 dB Count 100/100 Offset 1.00 dB SWT 1 ms RBW 1 MHz VBW 3 MHz Mode Auto Sweep IAV Max MI[1] 5.55 dBm 5.3196090 GHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.32 GHz 691 pts Span 30.0 MHz Date: 20 NOV 2020 16:07:45	

Band II		802.11n (HT20)
CH _L	Spectrum Ref Level 20.00 dBm Att 30 dB Count 100/100 Offset 1.00 dB SWT 1 ms RBW 1 MHz VBW 3 MHz Mode Auto Sweep 1Av Max MI[1] 5.23 dBm 5.2616060 GHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.26 GHz 691 pts Span 30.0 MHz Date: 20 NOV/2020 15:41:42	
CH _M	Spectrum Ref Level 20.00 dBm Att 30 dB Count 100/100 Offset 1.00 dB SWT 1 ms RBW 1 MHz VBW 3 MHz Mode Auto Sweep 1Av Max MI[1] 5.88 dBm 5.2795660 GHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.28 GHz 691 pts Span 30.0 MHz Date: 20 NOV/2020 15:43:15	
CH _H	Spectrum Ref Level 20.00 dBm Att 30 dB Count 100/100 Offset 1.00 dB SWT 1 ms RBW 1 MHz VBW 3 MHz Mode Auto Sweep 1Av Max MI[1] 5.41 dBm 5.3193050 GHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.32 GHz 691 pts Span 30.0 MHz Date: 20 NOV/2020 15:44:29	

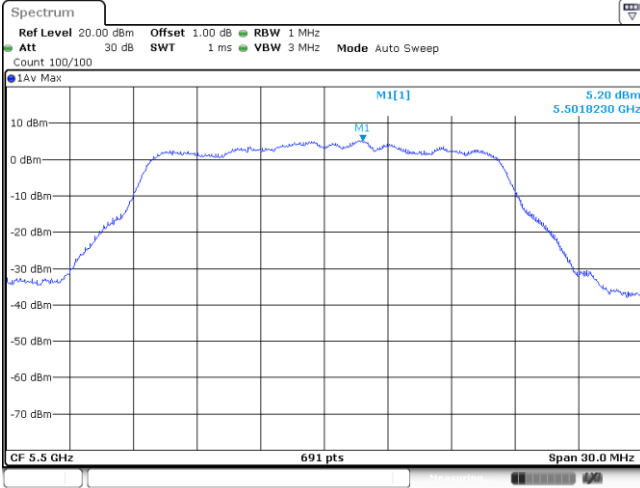
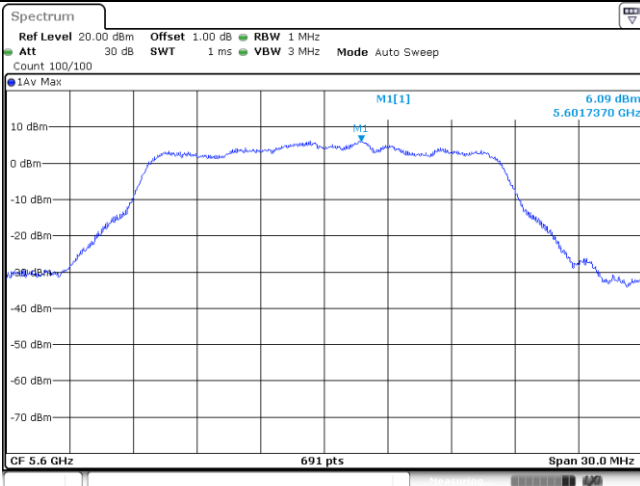
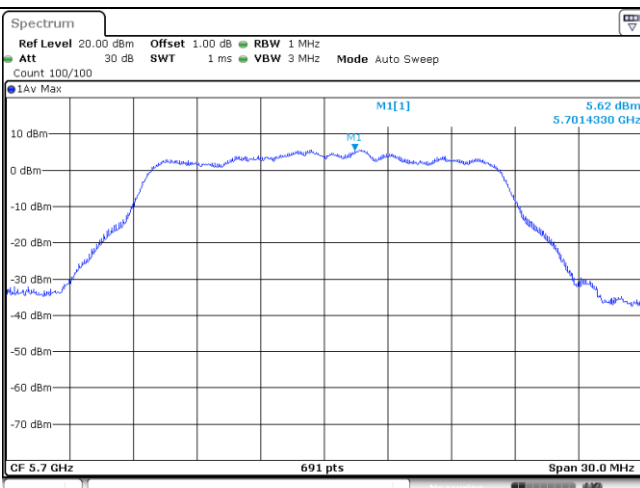
Band II	802.11a
CH _L	 Spectrum plot for CH_L channel. The plot shows a signal centered at 5.26 GHz. The peak level is 5.13 dBm at 5.2590880 GHz. The signal spans 30.0 MHz. The plot includes a grid and various measurement parameters: Ref Level 20.00 dBm, Att 30 dB, Offset 1.00 dB, RBW 1 MHz, Mode Auto Sweep, Count 100/100, 1Av Max, M1, M1[1]. Date: 20 NOV 2020 15:31:51
CH _M	 Spectrum plot for CH_M channel. The plot shows a signal centered at 5.28 GHz. The peak level is 5.68 dBm at 5.2789580 GHz. The signal spans 30.0 MHz. The plot includes a grid and various measurement parameters: Ref Level 20.00 dBm, Att 30 dB, Offset 1.00 dB, RBW 1 MHz, Mode Auto Sweep, Count 100/100, 1Av Max, M1, M1[1]. Date: 20 NOV 2020 15:33:16
CH _H	 Spectrum plot for CH_H channel. The plot shows a signal centered at 5.32 GHz. The peak level is 5.12 dBm at 5.3194790 GHz. The signal spans 30.0 MHz. The plot includes a grid and various measurement parameters: Ref Level 20.00 dBm, Att 30 dB, Offset 1.00 dB, RBW 1 MHz, Mode Auto Sweep, Count 100/100, 1Av Max, M1, M1[1]. Date: 20 NOV 2020 15:34:33

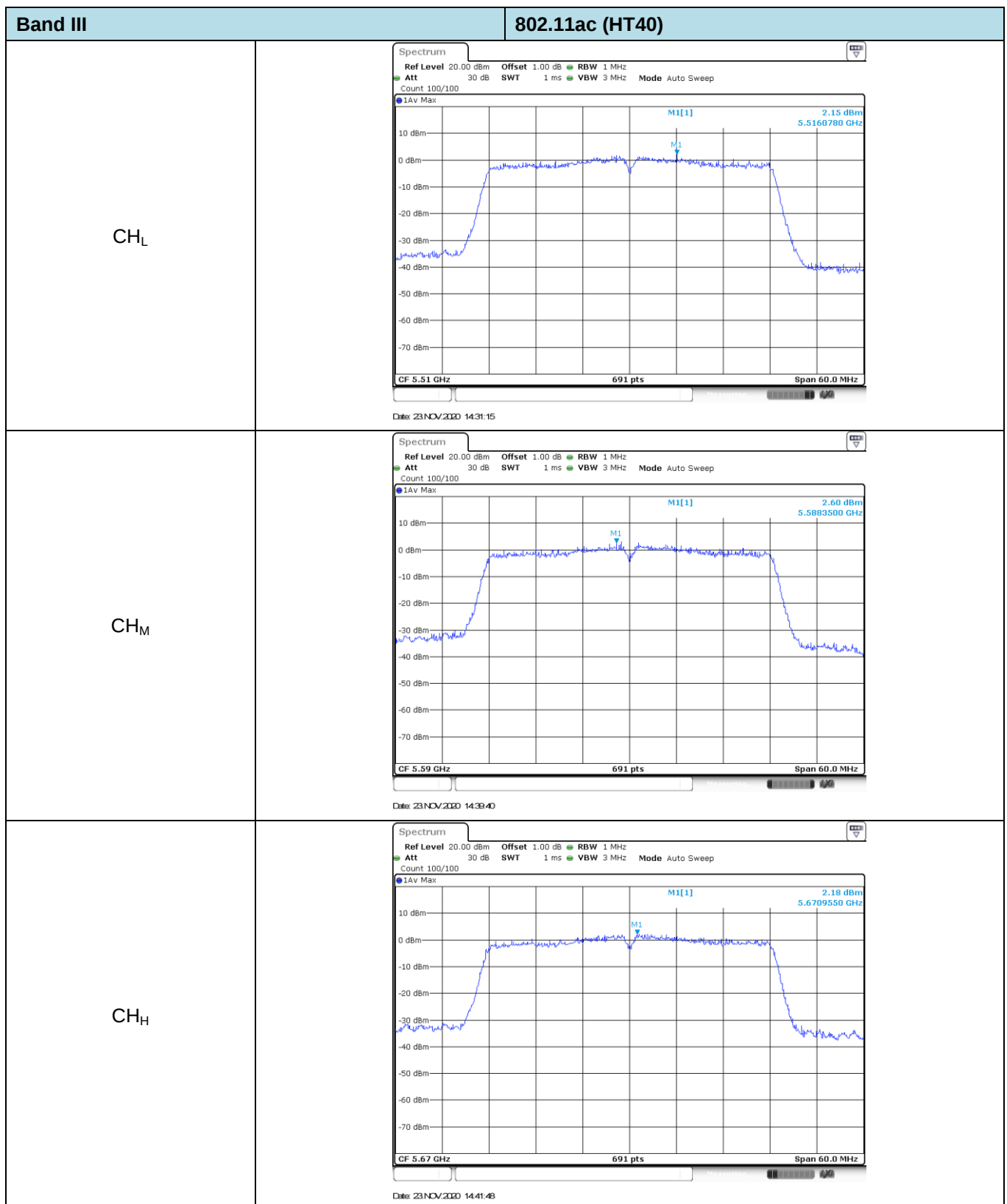


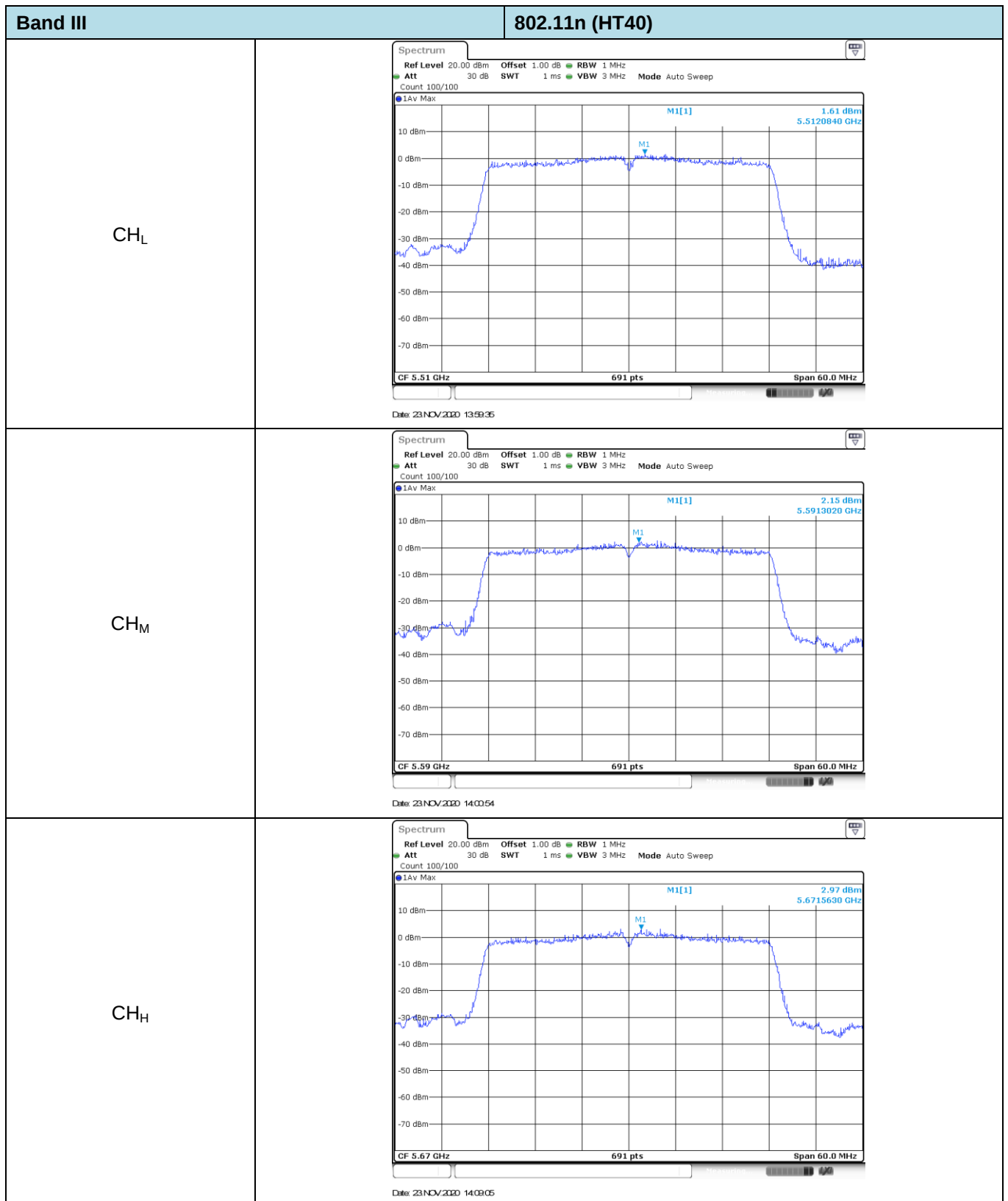


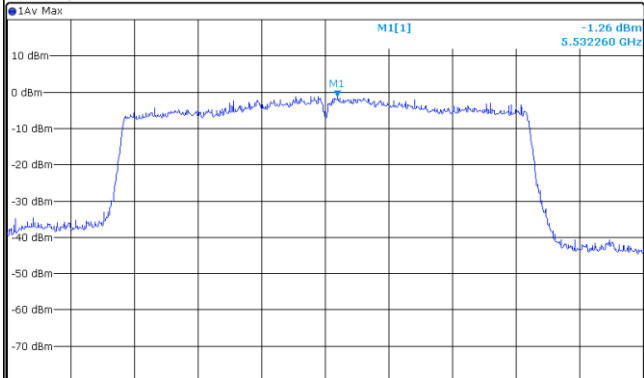
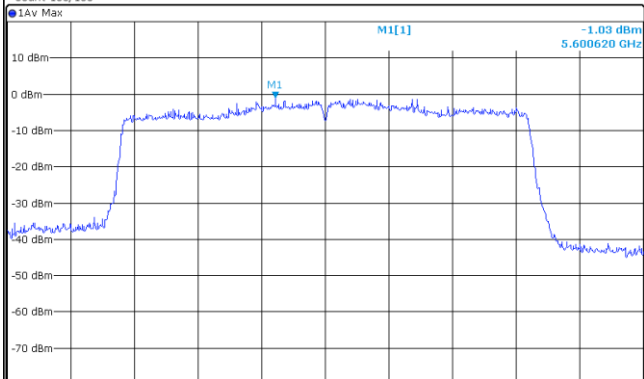
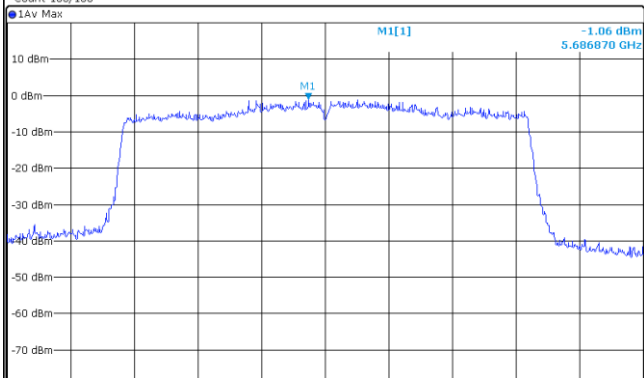
Band III	802.11ac (HT20)
CH _L	 Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 1 MHz Att 30 dB SWT 1 ms VBW 3 MHz Mode Auto Sweep Count 100/100 IAV Max M1[1] 4.39 dBm 5.5010850 GHz CF 5.5 GHz 691 pts Span 30.0 MHz Date: 23 NOV/2020 14:10:33
CH _M	 Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 1 MHz Att 30 dB SWT 1 ms VBW 3 MHz Mode Auto Sweep Count 100/100 IAV Max M1[1] 4.46 dBm 5.6009120 GHz CF 5.6 GHz 691 pts Span 30.0 MHz Date: 23 NOV/2020 14:12:17
CH _H	 Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 1 MHz Att 30 dB SWT 1 ms VBW 3 MHz Mode Auto Sweep Count 100/100 IAV Max M1[1] 5.40 dBm 5.6993490 GHz CF 5.7 GHz 691 pts Span 30.0 MHz Date: 23 NOV/2020 14:13:42

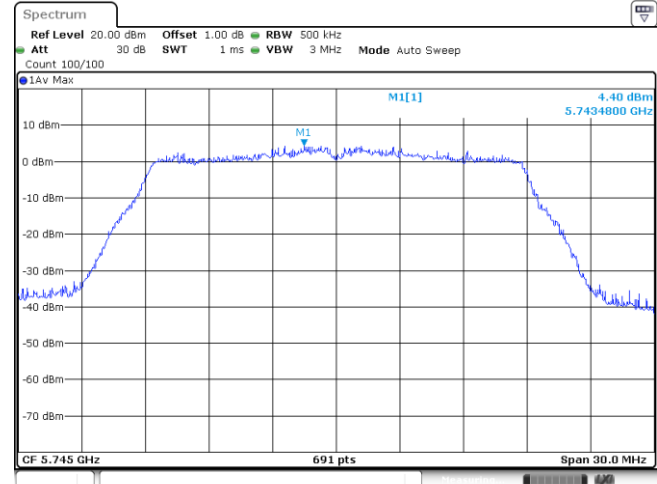
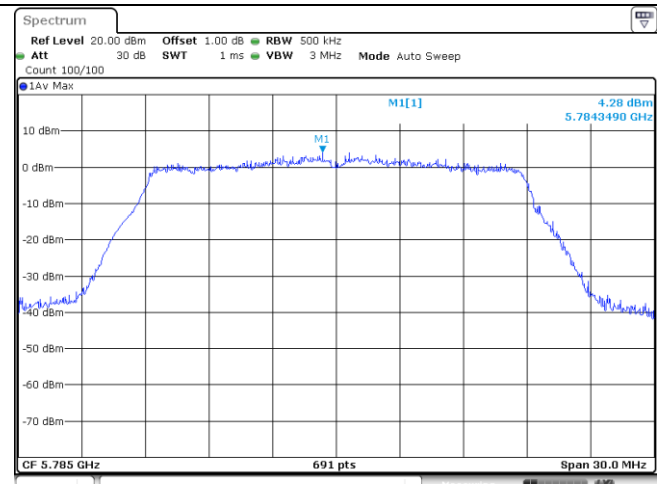
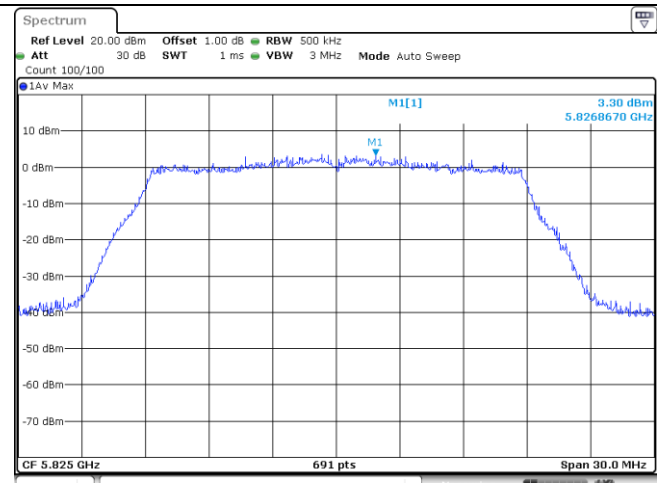
Band III		802.11n (HT20)
CH _L	Spectrum Ref Level 20.00 dBm Att 30 dB Offset 1.00 dB SWT 1 ms RBW 1 MHz VBW 3 MHz Mode Auto Sweep Count 100/100 1Av Max M1[1] 4.80 dBm 5.5015630 GHz CF 5.5 GHz 691 pts Span 30.0 MHz Date: 23 NOV 2020 13:41:29	
CH _M	Spectrum Ref Level 20.00 dBm Att 30 dB Offset 1.00 dB SWT 1 ms RBW 1 MHz VBW 3 MHz Mode Auto Sweep Count 100/100 1Av Max M1[1] 5.45 dBm 5.5992620 GHz CF 5.6 GHz 691 pts Span 30.0 MHz Date: 23 NOV 2020 13:43:15	
CH _H	Spectrum Ref Level 20.00 dBm Att 30 dB Offset 1.00 dB SWT 1 ms RBW 1 MHz VBW 3 MHz Mode Auto Sweep Count 100/100 1Av Max M1[1] 5.18 dBm 5.7016060 GHz CF 5.7 GHz 691 pts Span 30.0 MHz Date: 23 NOV 2020 13:44:42	

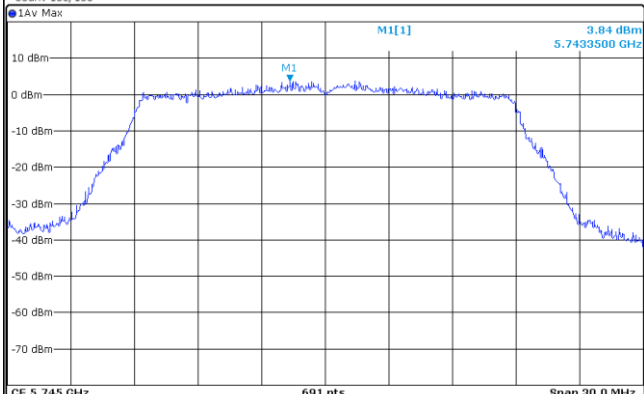
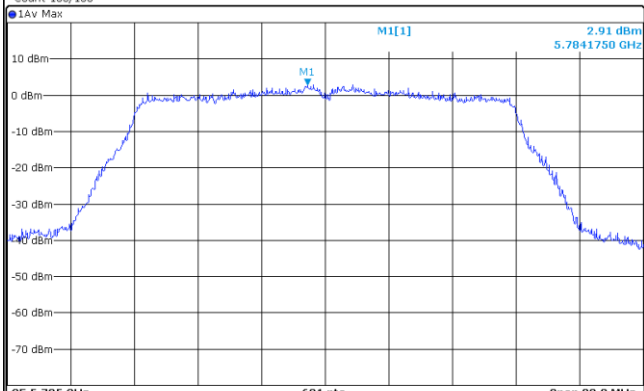
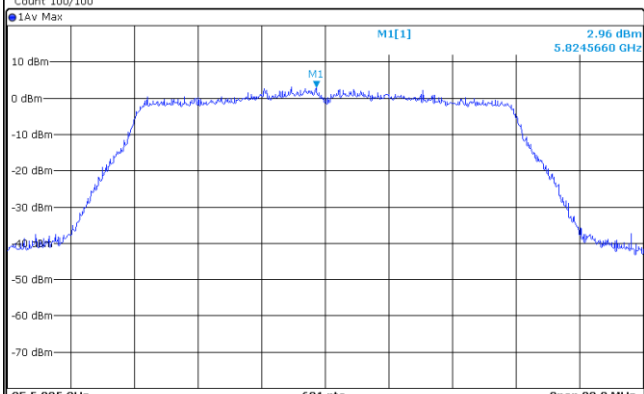
Band III	802.11a
CH_L	 Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 1 MHz Att 30 dB SWT 1 ms VBW 3 MHz Mode Auto Sweep Count 100/100 1Av Max M1[1] 5.20 dBm 5.5018230 GHz CF 5.5 GHz 691 pts Span 30.0 MHz Date: 23 NOV 2020 13:32:05
CH_M	 Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 1 MHz Att 30 dB SWT 1 ms VBW 3 MHz Mode Auto Sweep Count 100/100 1Av Max M1[1] 6.09 dBm 5.6017370 GHz CF 5.6 GHz 691 pts Span 30.0 MHz Date: 23 NOV 2020 13:35:18
CH_H	 Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 1 MHz Att 30 dB SWT 1 ms VBW 3 MHz Mode Auto Sweep Count 100/100 1Av Max M1[1] 5.62 dBm 5.7014330 GHz CF 5.7 GHz 691 pts Span 30.0 MHz Date: 23 NOV 2020 13:35:29

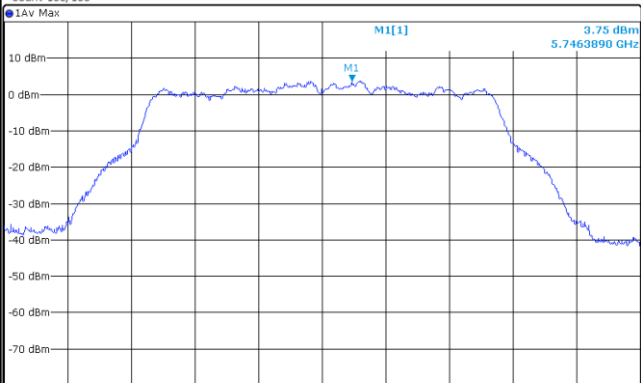
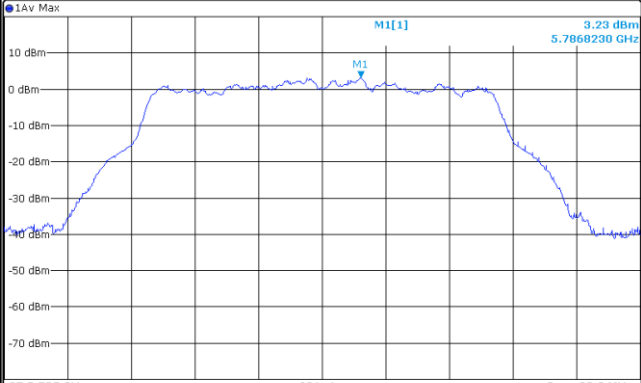
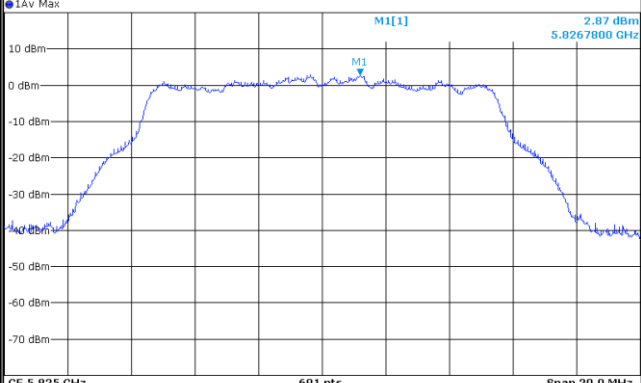


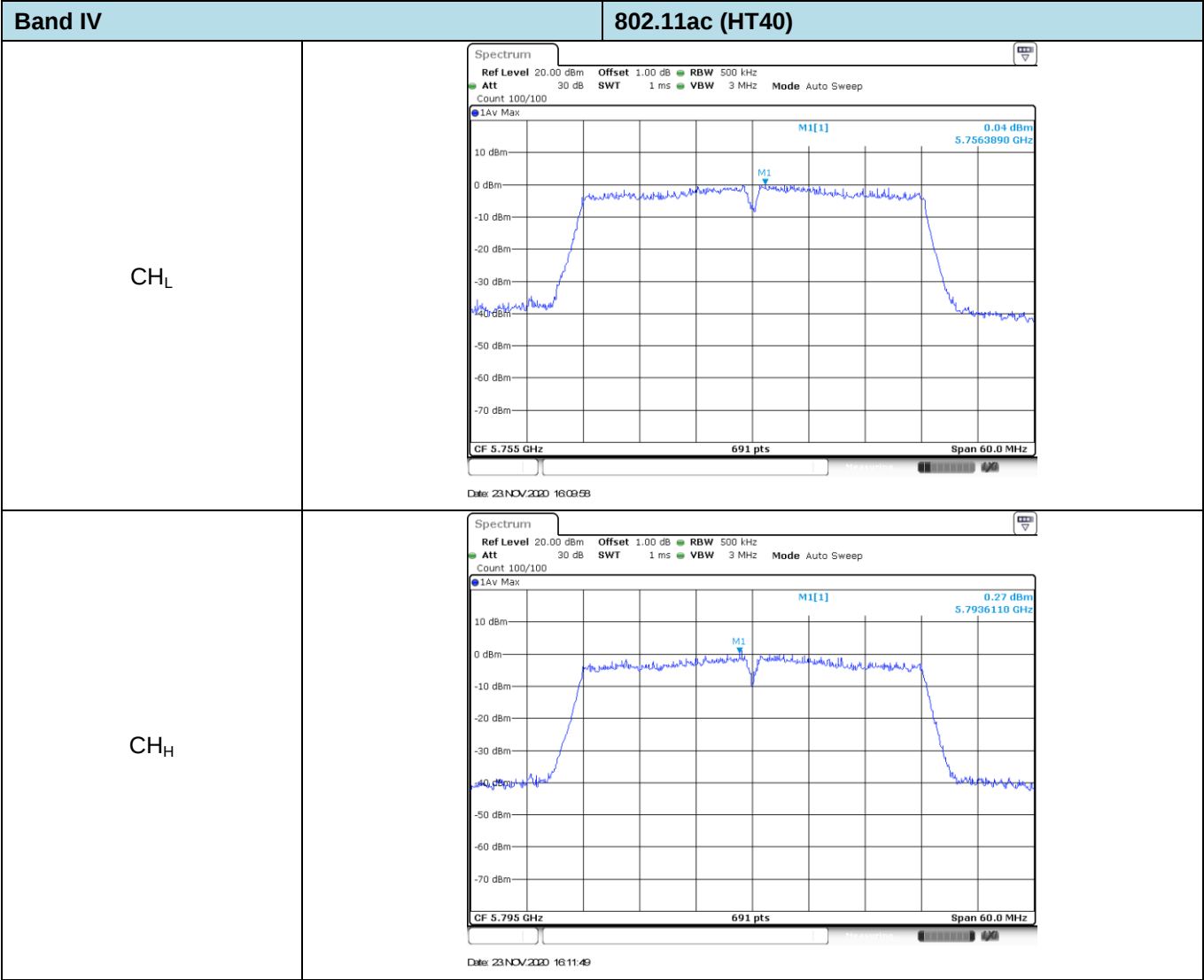


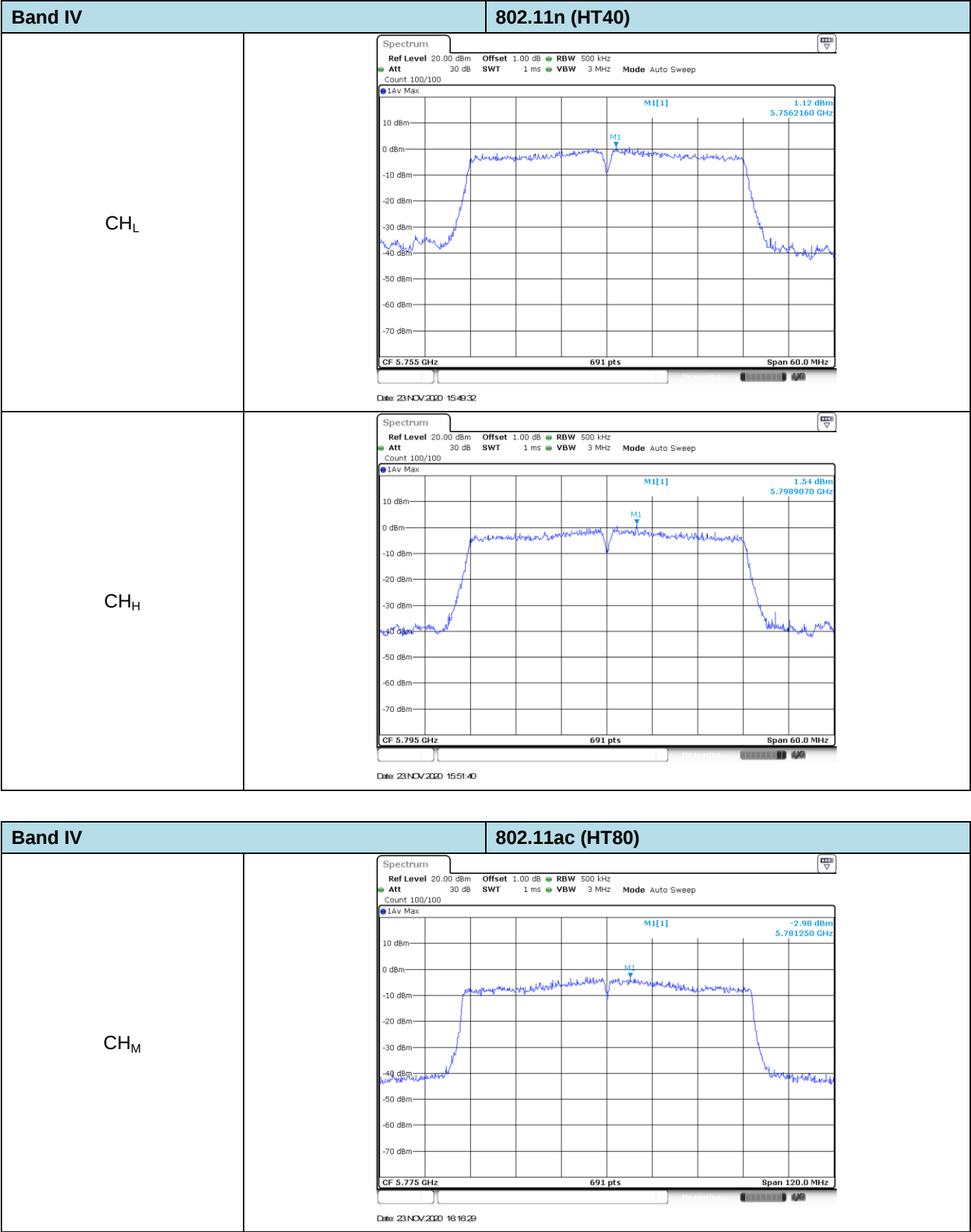
Band III		802.11ac (HT80)
CH _L	Spectrum Ref Level 20.00 dBm Att 30 dB Count 100/100 Offset 1.00 dB SWT 1 ms VBW 3 MHz RBW 1 MHz Mode Auto Sweep 1Av Max M1[1] -1.26 dBm 5.532260 GHz  CF 5.53 GHz691 ptsSpan 120.0 MHz Date: 23 NOV 2020 14:47:16	
CH _M	Spectrum Ref Level 20.00 dBm Att 30 dB Count 100/100 Offset 1.00 dB SWT 1 ms VBW 3 MHz RBW 1 MHz Mode Auto Sweep 1Av Max M1[1] -1.09 dBm 5.600620 GHz  CF 5.61 GHz691 ptsSpan 120.0 MHz Date: 23 NOV 2020 14:49:04	
CH _H	Spectrum Ref Level 20.00 dBm Att 30 dB Count 100/100 Offset 1.00 dB SWT 1 ms VBW 3 MHz RBW 1 MHz Mode Auto Sweep 1Av Max M1[1] -1.06 dBm 5.686870 GHz  CF 5.69 GHz691 ptsSpan 120.0 MHz Date: 23 NOV 2020 14:50:55	

Band IV	802.11ac (HT20)
CH _L	 Spectrum plot for CH_L channel. The plot shows a signal centered at 5.745 GHz. The peak level is 4.40 dBm. The signal is measured at 5.7434800 GHz. The plot includes a reference level of 20.00 dBm, an offset of 1.00 dB, and a resolution bandwidth (RBW) of 500 kHz. The mode is set to Auto Sweep. The plot also shows a count of 100/100 and a date of 23 NOV 2020 16:05:36.
CH _M	 Spectrum plot for CH_M channel. The plot shows a signal centered at 5.785 GHz. The peak level is 4.28 dBm. The signal is measured at 5.7843490 GHz. The plot includes a reference level of 20.00 dBm, an offset of 1.00 dB, and a resolution bandwidth (RBW) of 500 kHz. The mode is set to Auto Sweep. The plot also shows a count of 100/100 and a date of 23 NOV 2020 16:03:39.
CH _H	 Spectrum plot for CH_H channel. The plot shows a signal centered at 5.825 GHz. The peak level is 3.30 dBm. The signal is measured at 5.8268670 GHz. The plot includes a reference level of 20.00 dBm, an offset of 1.00 dB, and a resolution bandwidth (RBW) of 500 kHz. The mode is set to Auto Sweep. The plot also shows a count of 100/100 and a date of 23 NOV 2020 16:00:46.

Band IV		802.11n (HT20)
CH _L	Spectrum Ref Level 20.00 dBm Att 30 dB Count 100/100 Offset 1.00 dB SWT 1 ms RBW 500 kHz VBW 3 MHz Mode Auto Sweep IAV Max M1 M1[1] 3.84 dBm 5.7433500 GHz  CF 5.745 GHz691 ptsSpan 30.0 MHz Date: 23 NOV 2020 15:41:59	
CH _M	Spectrum Ref Level 20.00 dBm Att 30 dB Count 100/100 Offset 1.00 dB SWT 1 ms RBW 500 kHz VBW 3 MHz Mode Auto Sweep IAV Max M1 M1[1] 2.91 dBm 5.7841750 GHz  CF 5.785 GHz691 ptsSpan 30.0 MHz Date: 23 NOV 2020 15:43:50	
CH _H	Spectrum Ref Level 20.00 dBm Att 30 dB Count 100/100 Offset 1.00 dB SWT 1 ms RBW 500 kHz VBW 3 MHz Mode Auto Sweep IAV Max M1 M1[1] 2.96 dBm 5.8245660 GHz  CF 5.825 GHz691 ptsSpan 30.0 MHz Date: 23 NOV 2020 15:45:24	

Band IV		802.11a
CH _L	Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 500 kHz Att 30 dB SWT 1 ms VBW 3 MHz Mode Auto Sweep Count 100/100 1Av Max  CF 5.745 GHz691 ptsSpan 30.0 MHz Date: 23 NOV 2020 15:34:14	
CH _M	Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 500 kHz Att 30 dB SWT 1 ms VBW 3 MHz Mode Auto Sweep Count 100/100 1Av Max  CF 5.785 GHz691 ptsSpan 30.0 MHz Date: 23 NOV 2020 15:33:38	
CH _H	Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 500 kHz Att 30 dB SWT 1 ms VBW 3 MHz Mode Auto Sweep Count 100/100 1Av Max  CF 5.825 GHz691 ptsSpan 30.0 MHz Date: 23 NOV 2020 15:33:16	





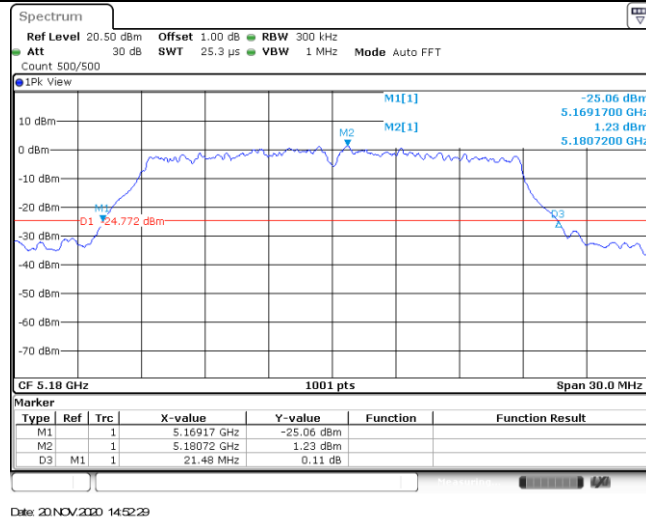
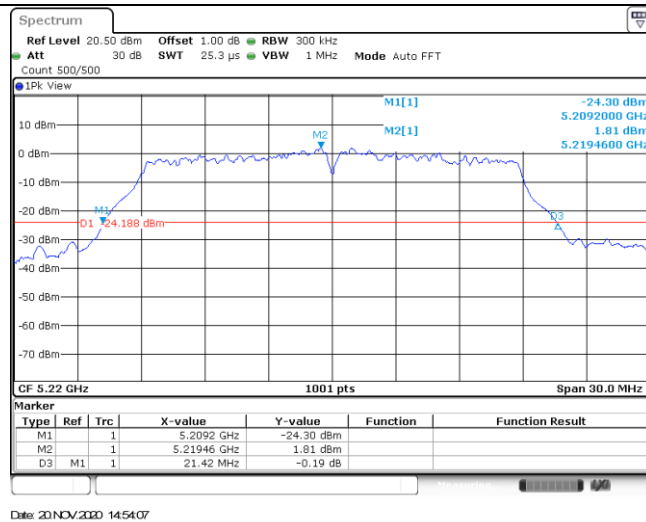
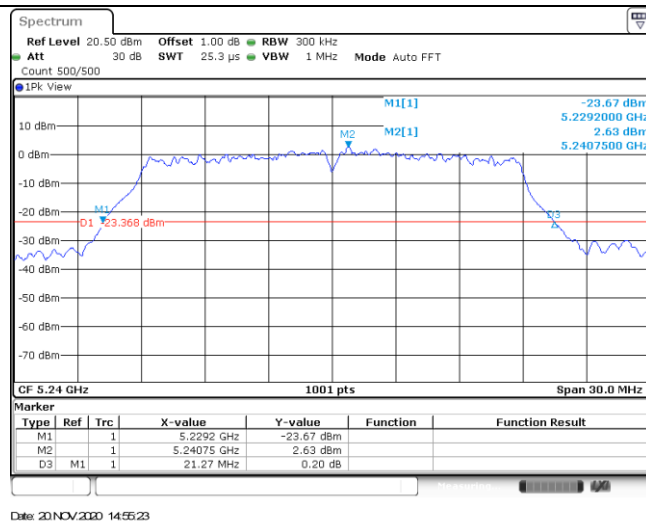
Appendix C: 26dB bandwidth

Band	Bandwidth (MHz)	Type	Channel	26dB bandwidth (MHz)	Result
I	20	802.11ac	CH _L	21.48	Pass
			CH _M	21.42	
			CH _H	21.27	
		802.11n	CH _L	21.06	Pass
			CH _M	21.24	
			CH _H	21.30	
		802.11a	CH _L	21.36	Pass
			CH _M	21.33	
			CH _H	21.54	
	40	802.11ac	CH _L	39.90	Pass
			CH _H	40.38	
		802.11n	CH _L	39.96	Pass
			CH _H	39.84	
	80	802.11ac	CH _M	81.48	Pass
II	20	802.11ac	CH _L	21.27	Pass
			CH _M	21.30	
			CH _H	21.36	
		802.11n	CH _L	21.24	Pass
			CH _M	21.45	
			CH _H	21.33	
		802.11a	CH _L	21.18	Pass
			CH _M	21.33	
			CH _H	21.21	
	40	802.11ac	CH _L	39.90	Pass
			CH _H	39.84	
		802.11n	CH _L	39.66	Pass
			CH _H	39.72	
	80	802.11ac	CH _M	81.36	Pass

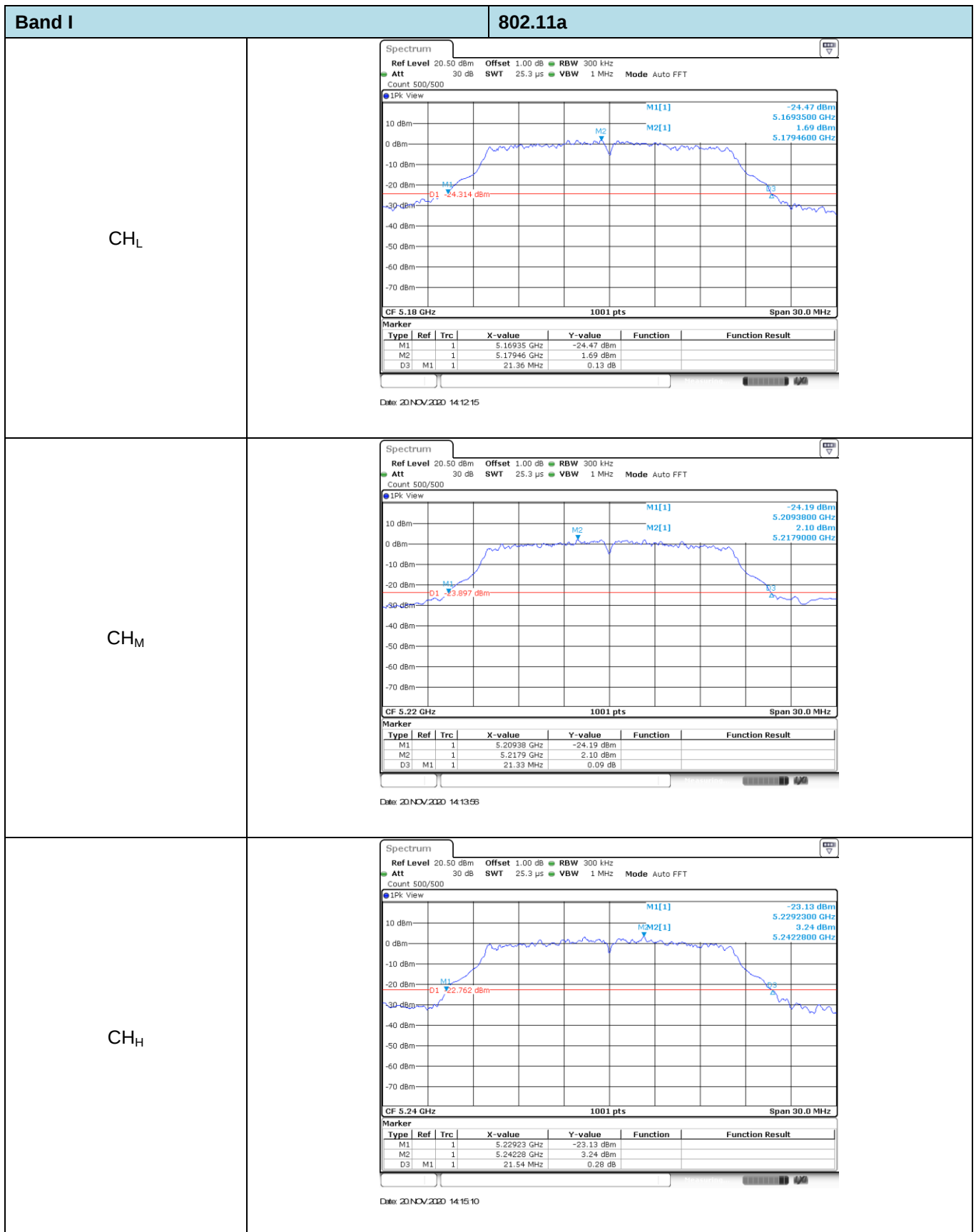
Band	Bandwidth (MHz)	Type	Channel	26dB bandwidth (MHz)	Result
III	20	802.11ac	CH _L	21.24	Pass
			CH _M	21.57	
			CH _H	21.36	
		802.11n	CH _L	20.97	Pass
			CH _M	21.54	
			CH _H	21.30	
		802.11a	CH _L	21.03	Pass
			CH _M	20.82	
			CH _H	20.97	
	40	802.11ac	CH _L	39.96	Pass
			CH _M	40.26	
			CH _H	40.26	
		802.11n	CH _L	39.78	Pass
			CH _M	39.72	
			CH _H	39.78	
	80	802.11ac	CH _L	81.00	Pass
			CH _M	81.36	
			CH _H	81.60	

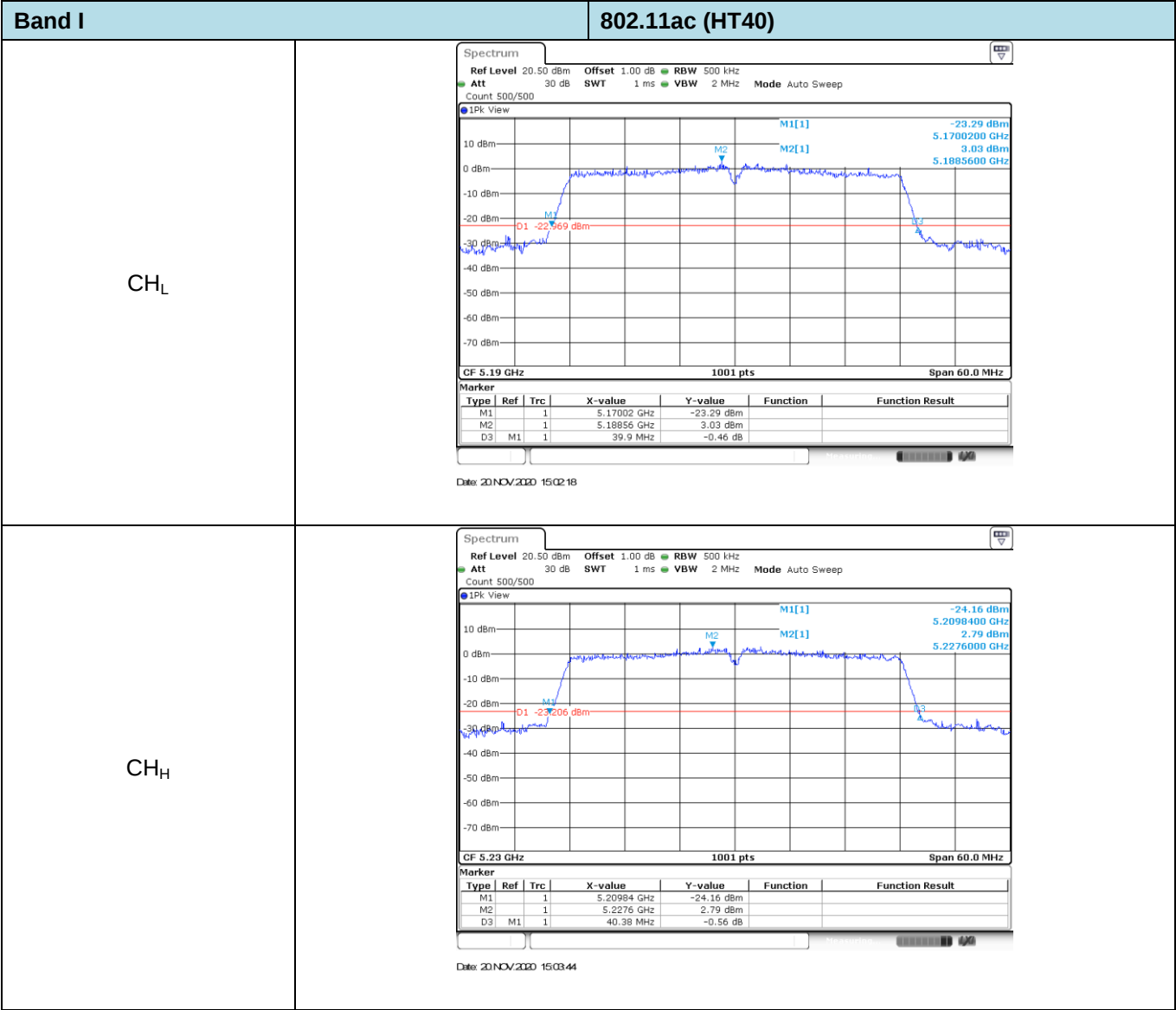
Band I

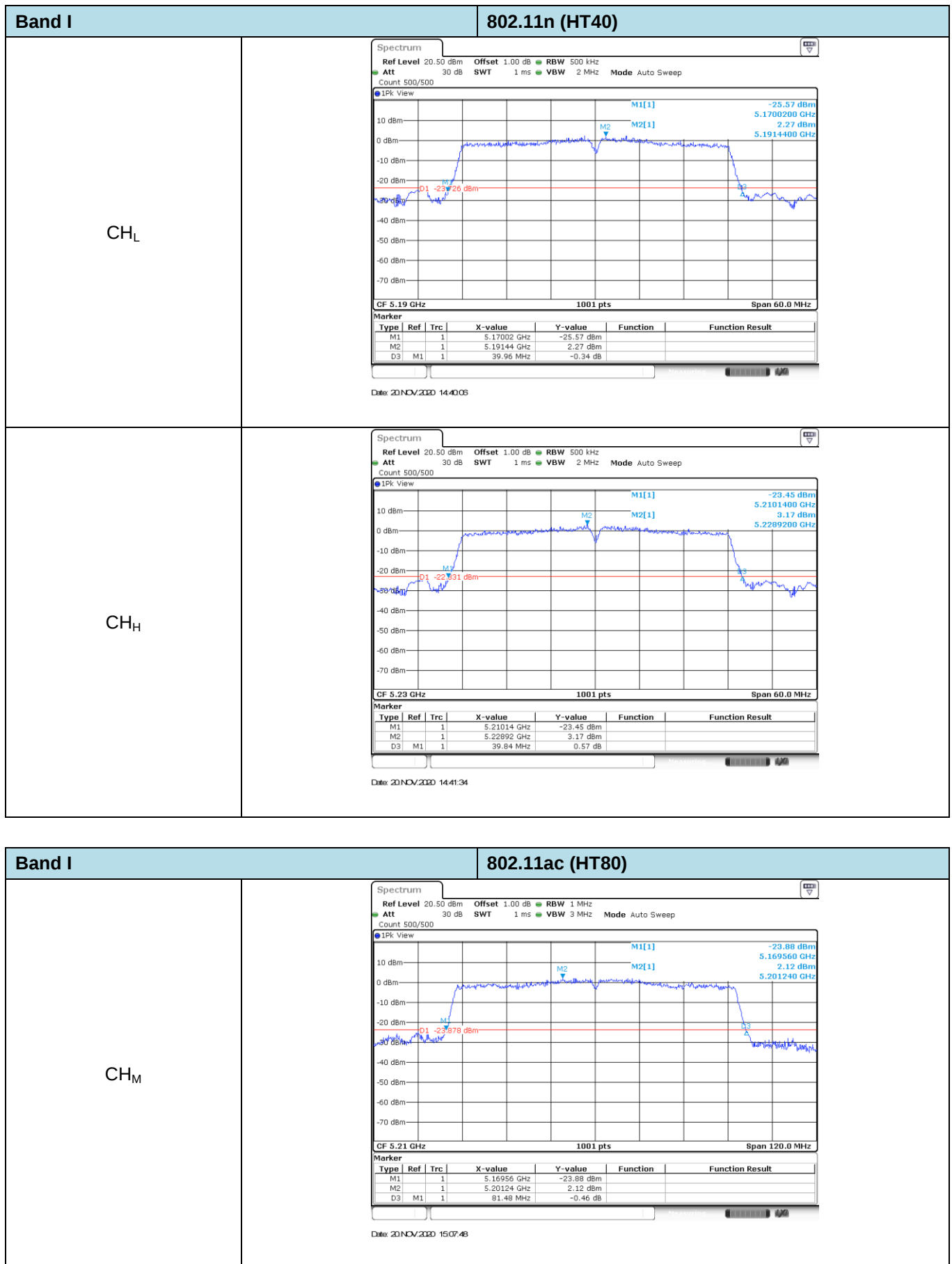
802.11ac (HT20)

CH_LCH_MCH_H

Band I		802.11n (HT20)																											
CH _L	Spectrum Ref Level 20.50 dBm Att 30 dB Count 500/500 Offset 1.00 dB SWT 25.3 μs RBW 300 kHz VBW 1 MHz Mode Auto FFT IPk View CF 5.18 GHz 1001 pts Span 30.0 MHz <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>1</td><td>5.16941 GHz</td><td>-23.60 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td>1</td><td>5.18132 GHz</td><td>2.62 dBm</td><td></td><td></td></tr><tr><td>D3</td><td>M1</td><td>1</td><td>21.06 MHz</td><td>0.18 dB</td><td></td><td></td></tr></table> Date: 20 NOV 2020 14:25:53	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1	1	5.16941 GHz	-23.60 dBm			M2	1	1	5.18132 GHz	2.62 dBm			D3	M1	1	21.06 MHz	0.18 dB		
Type	Ref	Trc	X-value	Y-value	Function	Function Result																							
M1	1	1	5.16941 GHz	-23.60 dBm																									
M2	1	1	5.18132 GHz	2.62 dBm																									
D3	M1	1	21.06 MHz	0.18 dB																									
CH _M	Spectrum Ref Level 20.50 dBm Att 30 dB Count 500/500 Offset 1.00 dB SWT 25.3 μs RBW 300 kHz VBW 1 MHz Mode Auto FFT IPk View CF 5.22 GHz 1001 pts Span 30.0 MHz <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>1</td><td>5.20929 GHz</td><td>-24.81 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td>1</td><td>5.21838 GHz</td><td>1.59 dBm</td><td></td><td></td></tr><tr><td>D3</td><td>M1</td><td>1</td><td>21.24 MHz</td><td>0.39 dB</td><td></td><td></td></tr></table> Date: 20 NOV 2020 14:27:25	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1	1	5.20929 GHz	-24.81 dBm			M2	1	1	5.21838 GHz	1.59 dBm			D3	M1	1	21.24 MHz	0.39 dB		
Type	Ref	Trc	X-value	Y-value	Function	Function Result																							
M1	1	1	5.20929 GHz	-24.81 dBm																									
M2	1	1	5.21838 GHz	1.59 dBm																									
D3	M1	1	21.24 MHz	0.39 dB																									
CH _H	Spectrum Ref Level 20.50 dBm Att 30 dB Count 500/500 Offset 1.00 dB SWT 25.3 μs RBW 300 kHz VBW 1 MHz Mode Auto FFT IPk View CF 5.24 GHz 1001 pts Span 30.0 MHz <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>1</td><td>5.22932 GHz</td><td>-23.37 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td>1</td><td>5.24081 GHz</td><td>2.81 dBm</td><td></td><td></td></tr><tr><td>D3</td><td>M1</td><td>1</td><td>21.3 MHz</td><td>-0.05 dB</td><td></td><td></td></tr></table> Date: 20 NOV 2020 14:28:36	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1	1	5.22932 GHz	-23.37 dBm			M2	1	1	5.24081 GHz	2.81 dBm			D3	M1	1	21.3 MHz	-0.05 dB		
Type	Ref	Trc	X-value	Y-value	Function	Function Result																							
M1	1	1	5.22932 GHz	-23.37 dBm																									
M2	1	1	5.24081 GHz	2.81 dBm																									
D3	M1	1	21.3 MHz	-0.05 dB																									

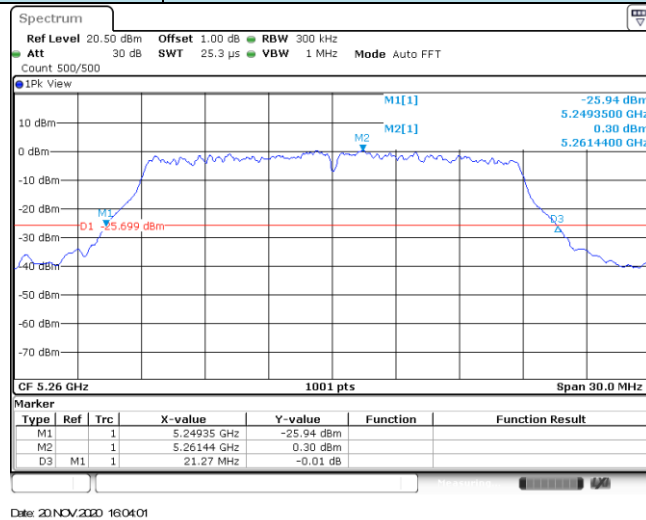
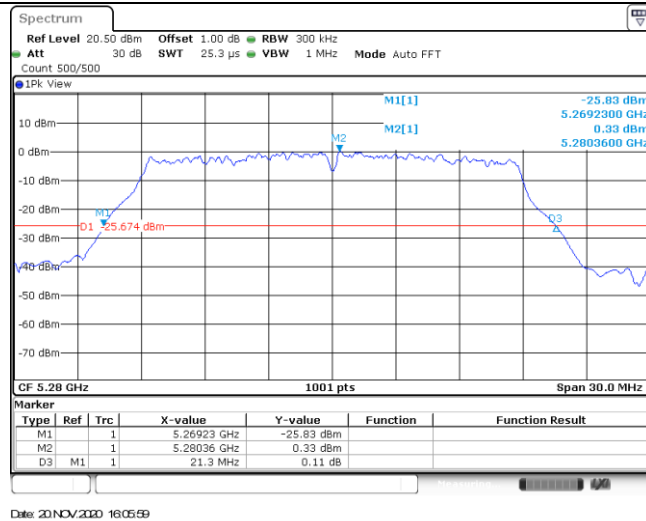
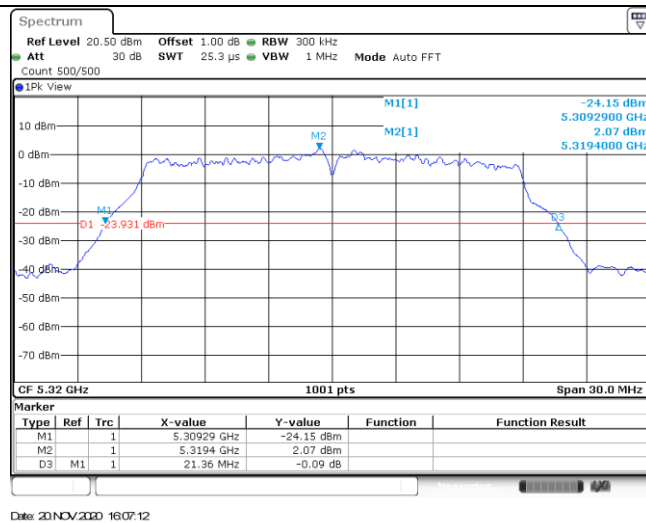


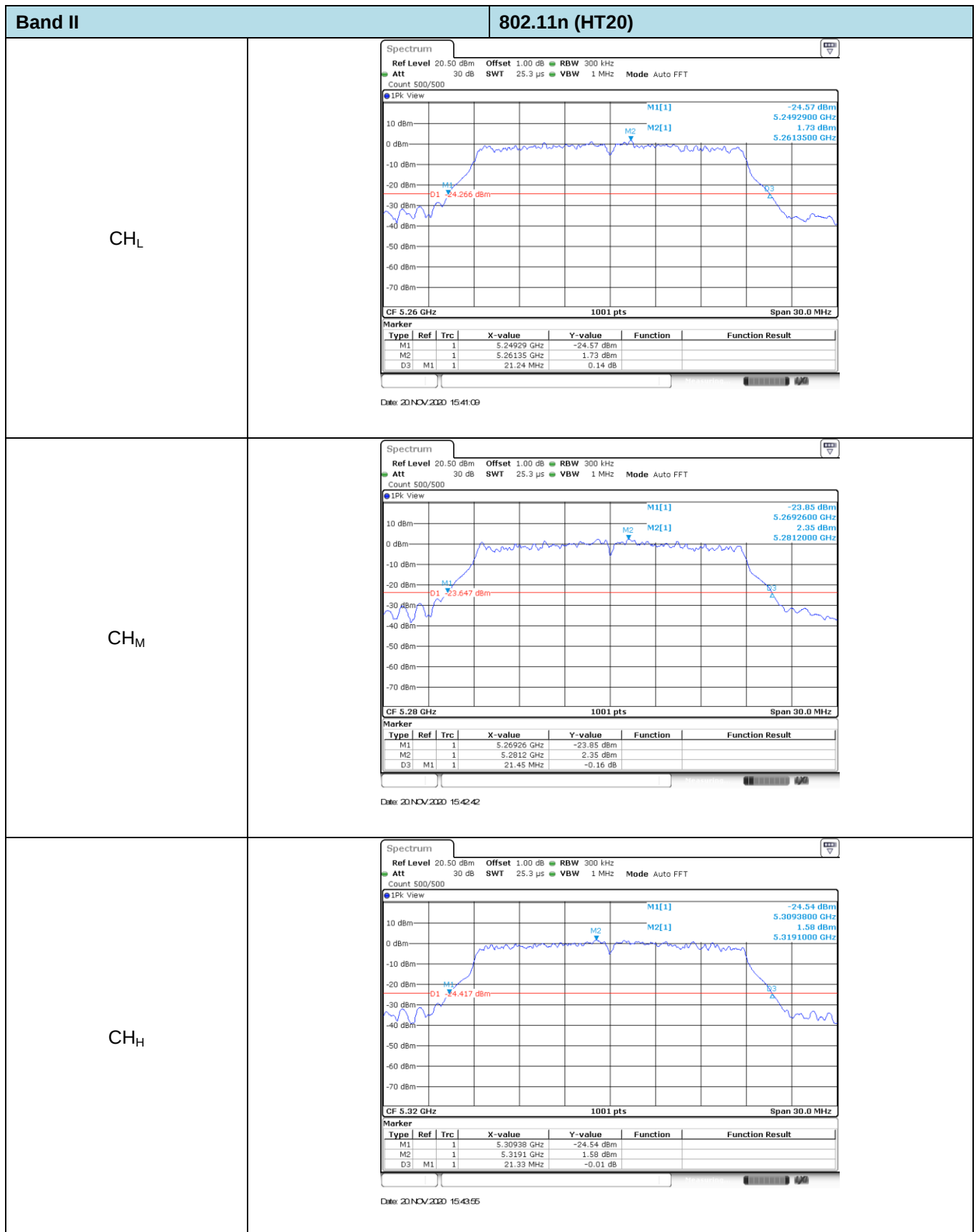


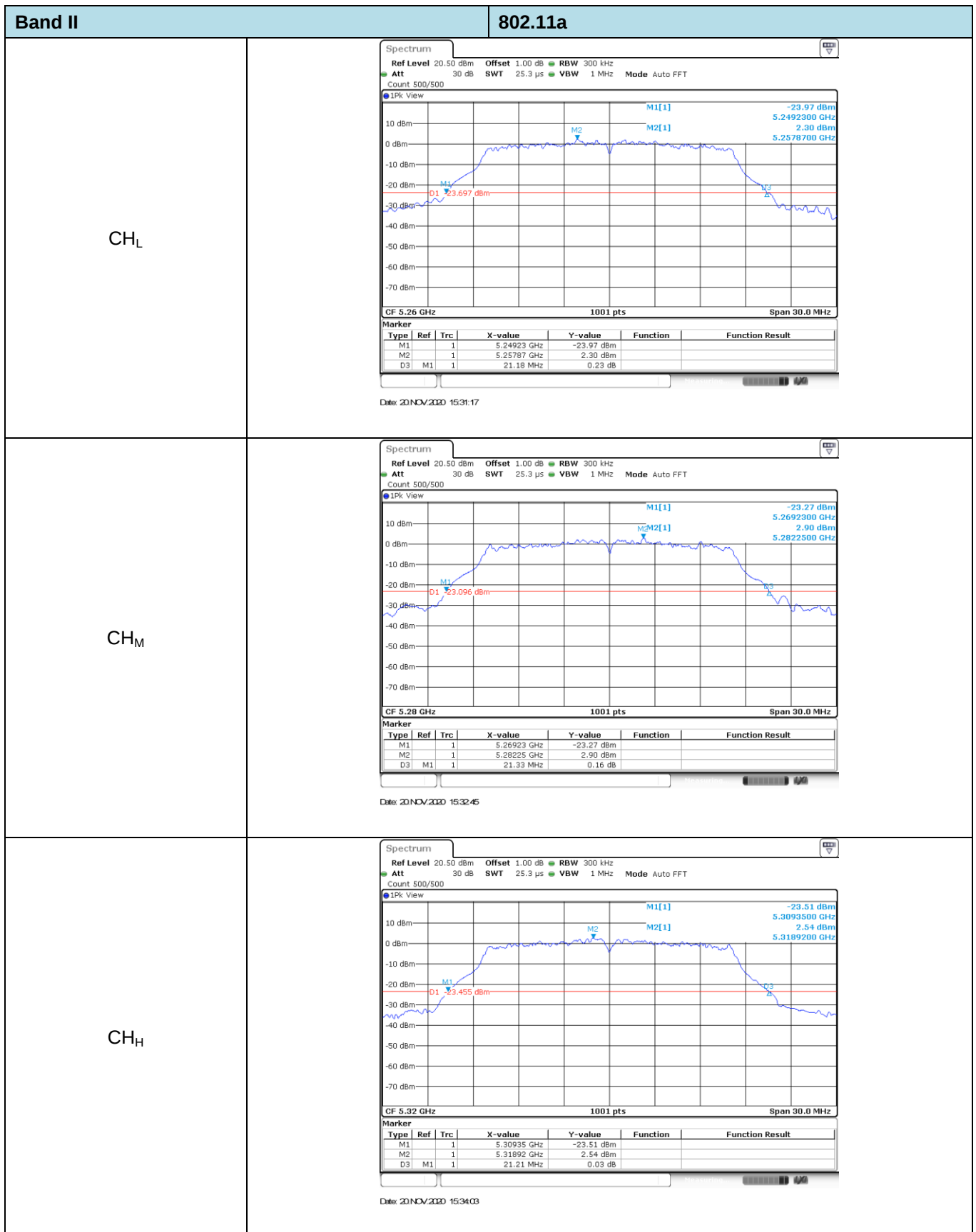


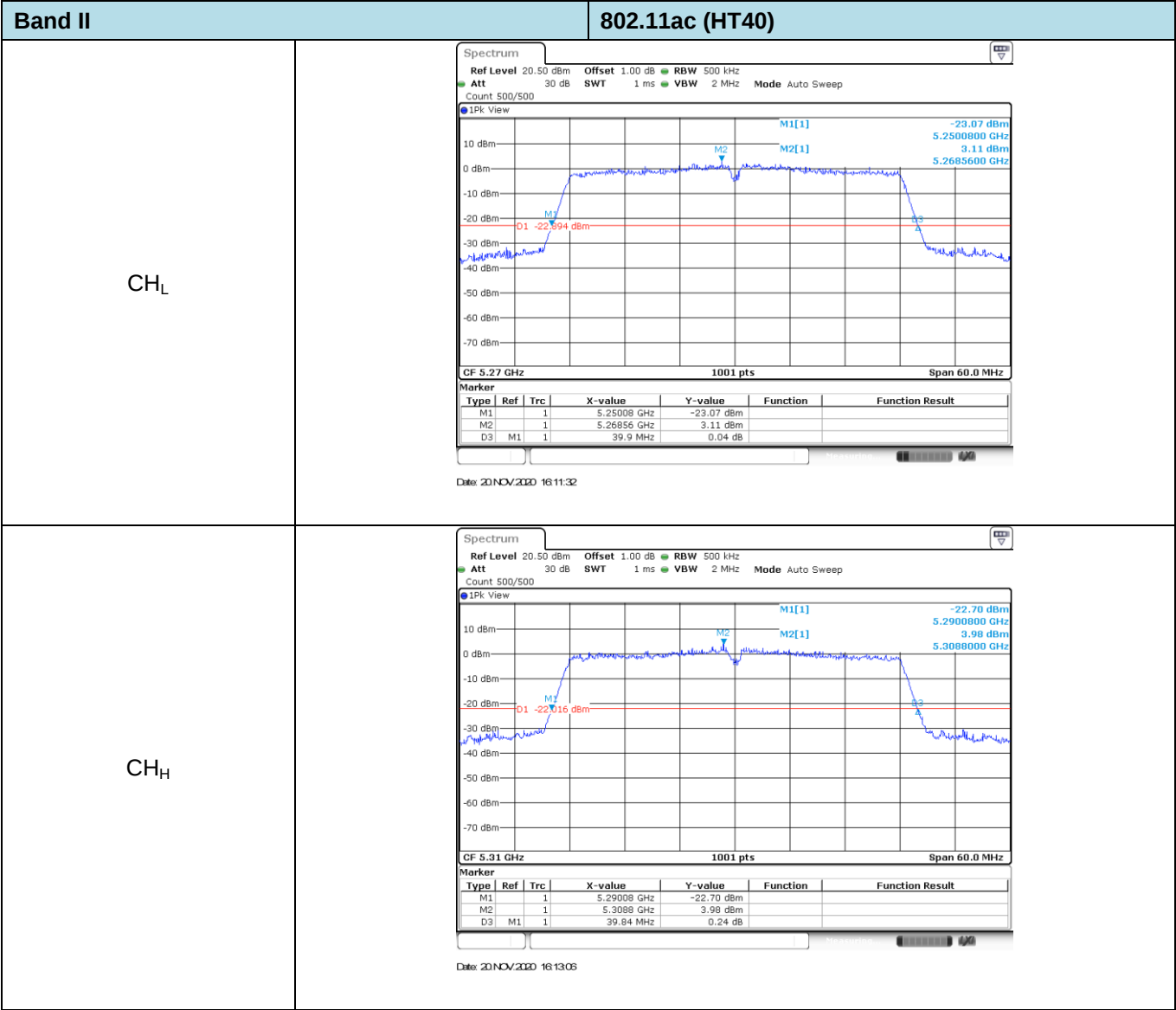
Band II

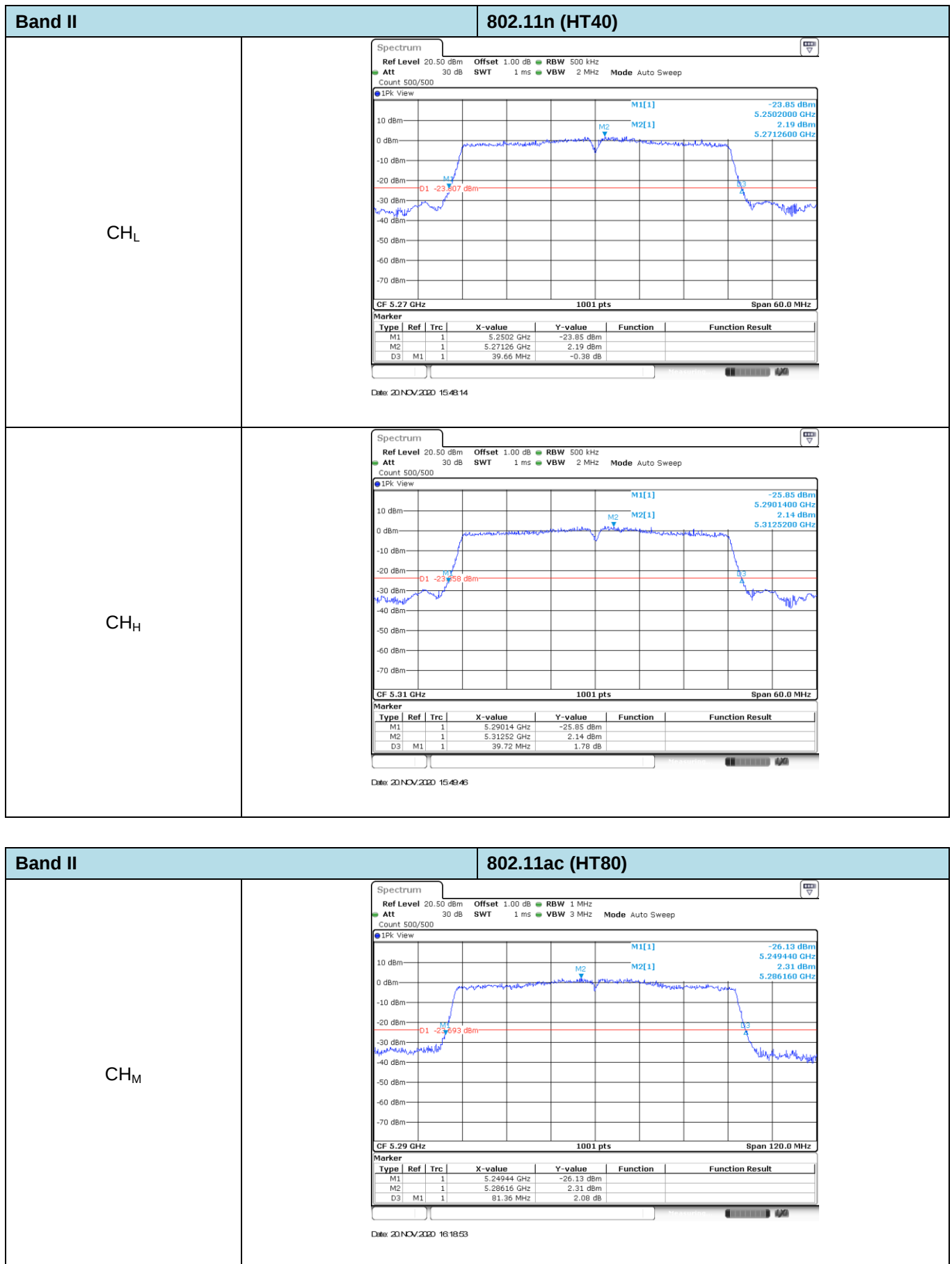
802.11ac (HT20)

CH_LCH_MCH_H



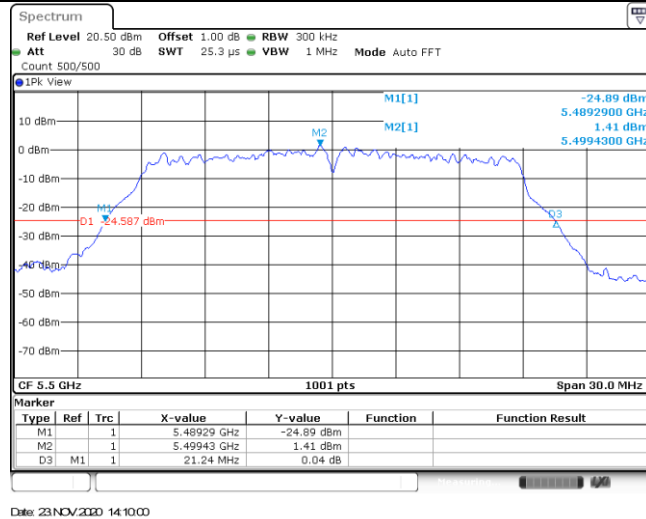
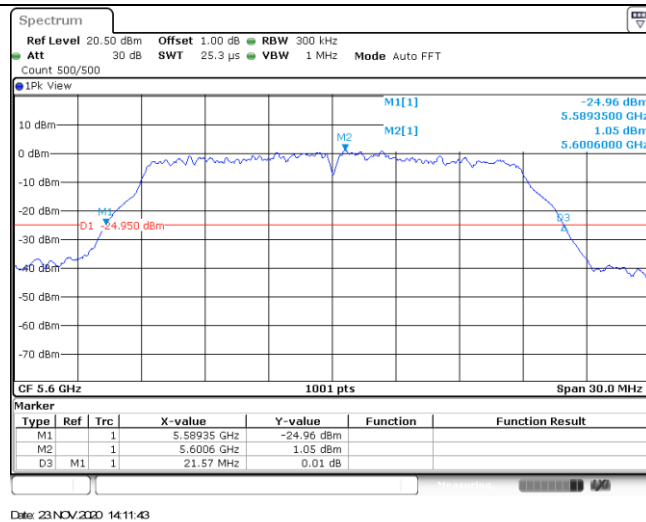
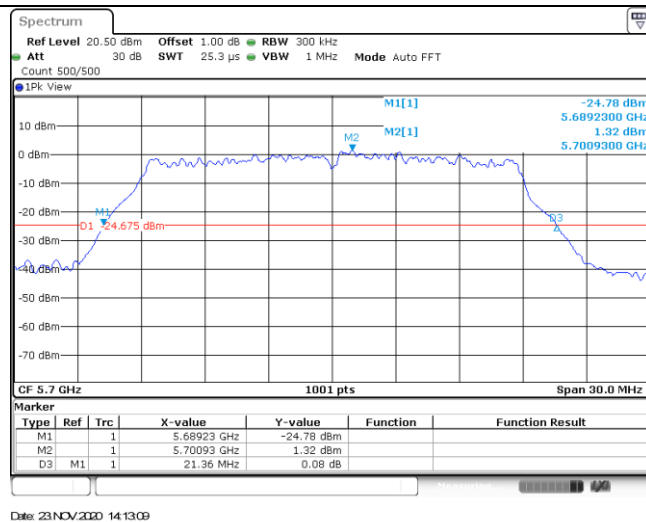






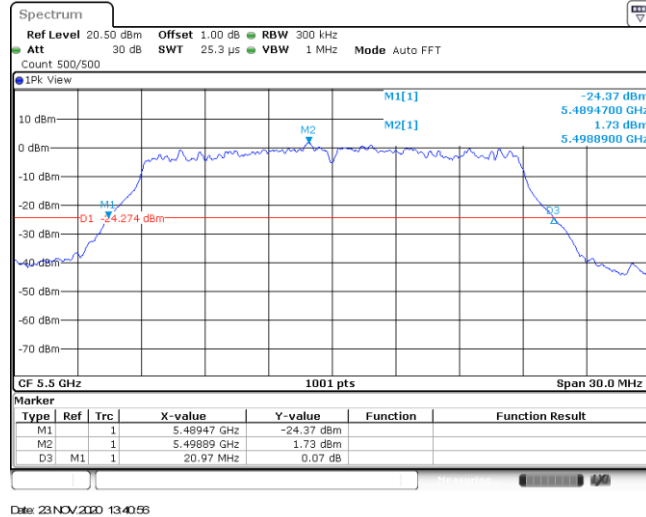
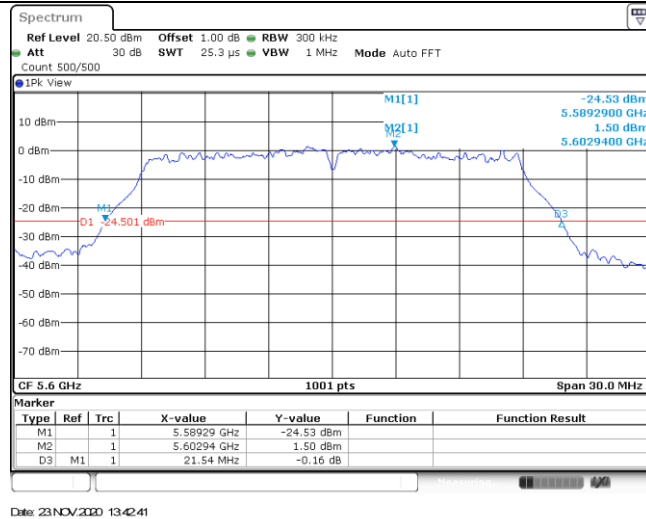
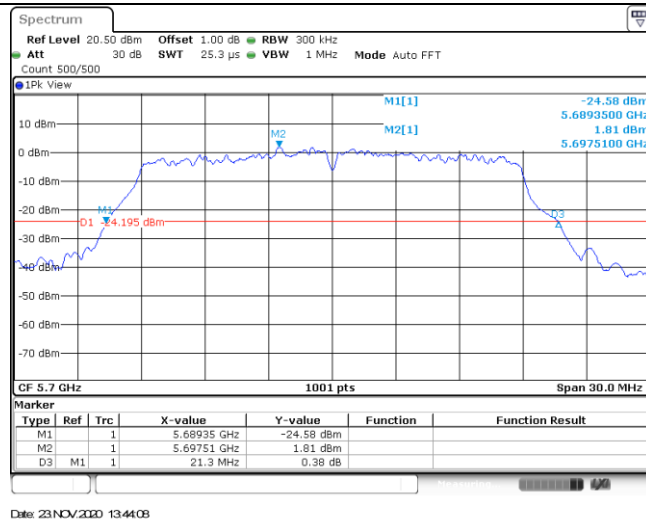
Band III

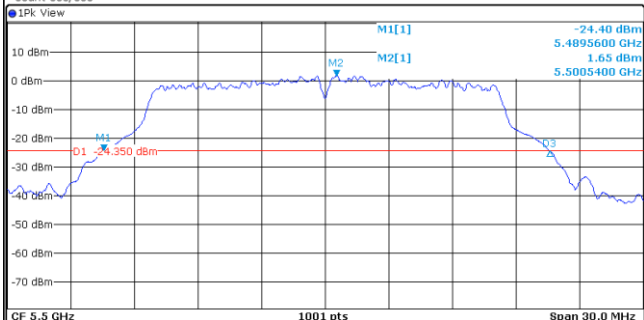
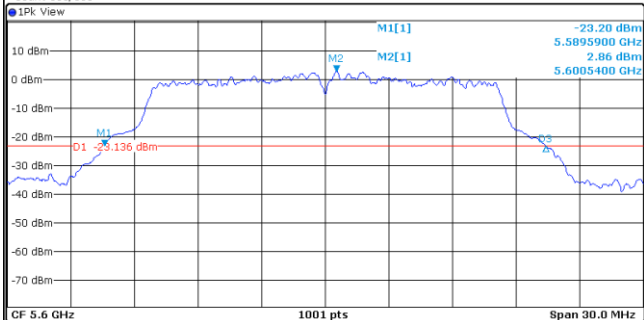
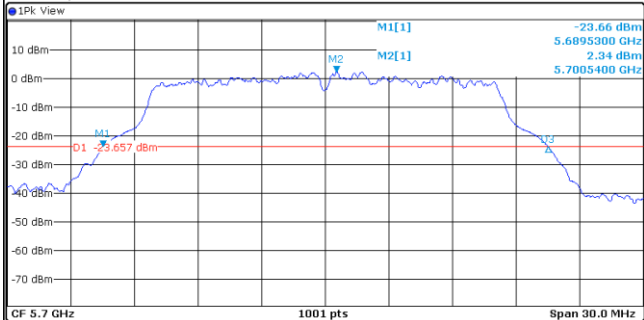
802.11ac (HT20)

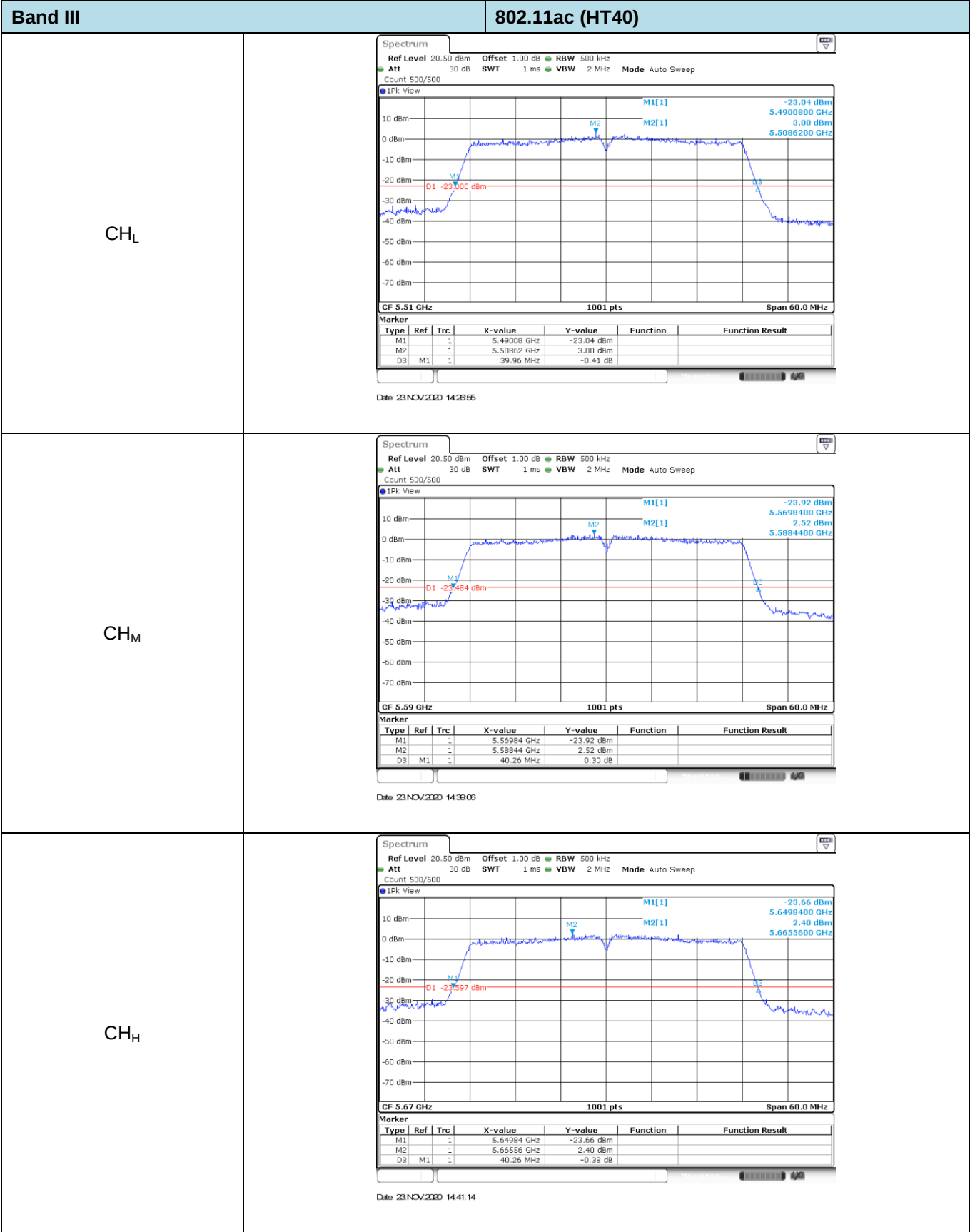
CH_LCH_MCH_H

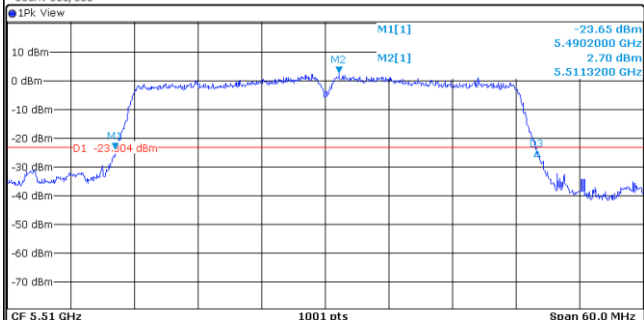
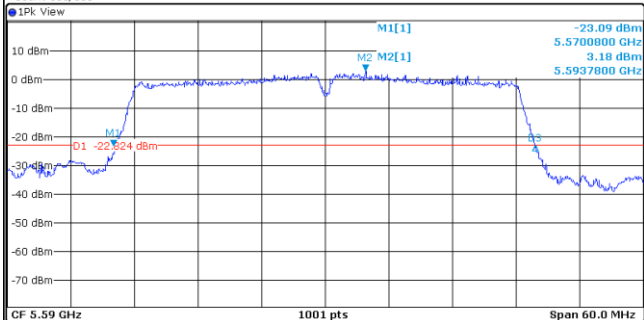
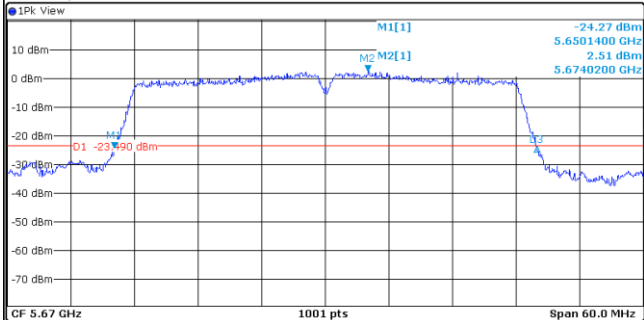
Band III

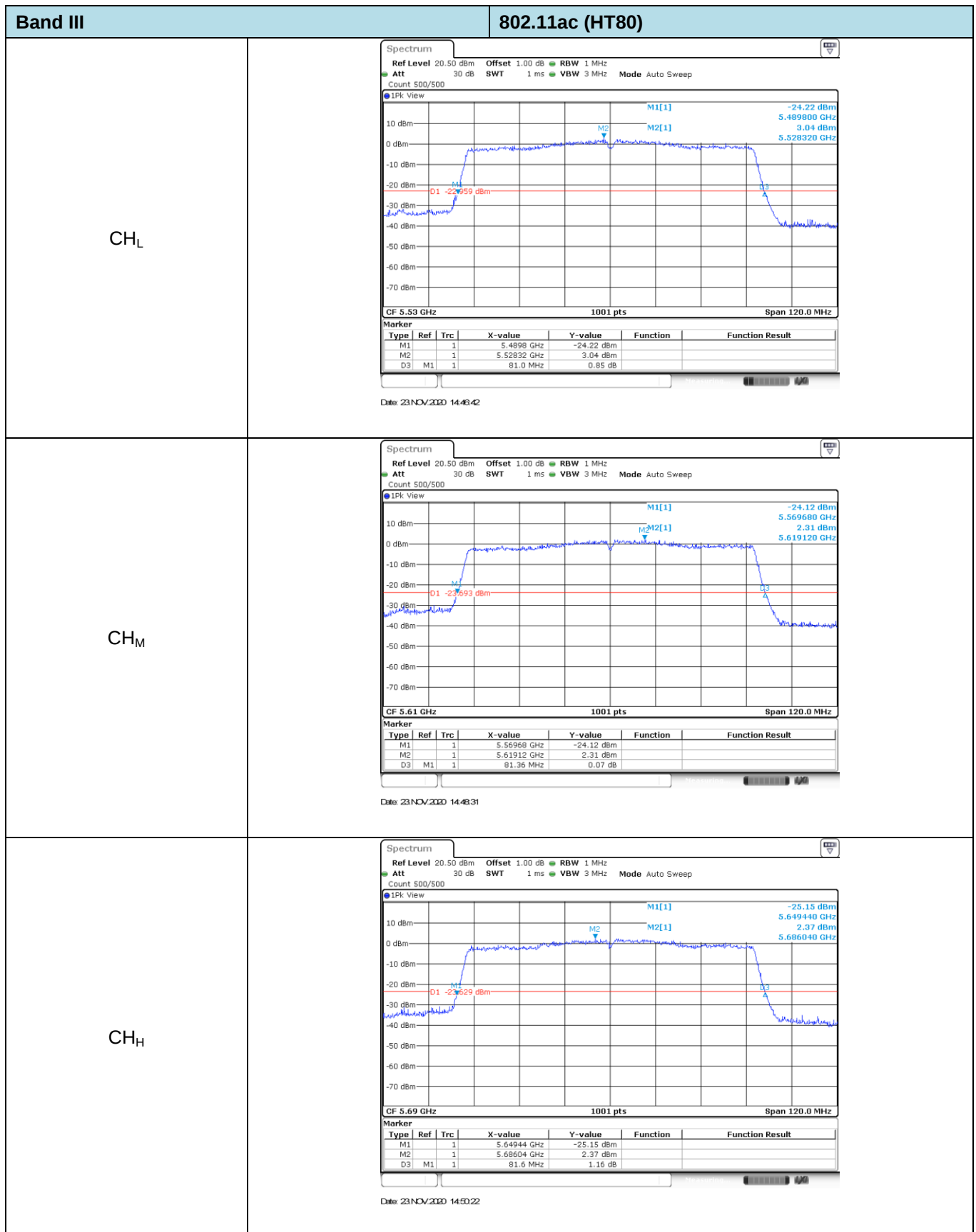
802.11n (HT20)

CH_LCH_MCH_H

Band III		802.11a																												
CH _L	Spectrum Ref Level 20.50 dBmAtt 30 dBOffset 1.00 dB RBW 300 kHzSWT 25.3 μs VBW 1 MHzMode Auto FFTCount 500/500 IPk View  <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>1</td><td>5.48956 GHz</td><td>-24.40 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td>1</td><td>5.50054 GHz</td><td>1.65 dBm</td><td></td><td></td></tr><tr><td>D3</td><td>M1</td><td>1</td><td>21.03 MHz</td><td>-0.03 dB</td><td></td><td></td></tr></table> Date: 23 NOV 2020 13:31:32	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1	1	5.48956 GHz	-24.40 dBm			M2	1	1	5.50054 GHz	1.65 dBm			D3	M1	1	21.03 MHz	-0.03 dB			
Type	Ref	Trc	X-value	Y-value	Function	Function Result																								
M1	1	1	5.48956 GHz	-24.40 dBm																										
M2	1	1	5.50054 GHz	1.65 dBm																										
D3	M1	1	21.03 MHz	-0.03 dB																										
CH _M	Spectrum Ref Level 20.50 dBmAtt 30 dBOffset 1.00 dB RBW 300 kHzSWT 25.3 μs VBW 1 MHzMode Auto FFTCount 500/500 IPk View  <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>1</td><td>5.58959 GHz</td><td>-23.20 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td>1</td><td>5.60054 GHz</td><td>2.86 dBm</td><td></td><td></td></tr><tr><td>D3</td><td>M1</td><td>1</td><td>20.82 MHz</td><td>-0.09 dB</td><td></td><td></td></tr></table> Date: 23 NOV 2020 13:34:45	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1	1	5.58959 GHz	-23.20 dBm			M2	1	1	5.60054 GHz	2.86 dBm			D3	M1	1	20.82 MHz	-0.09 dB			
Type	Ref	Trc	X-value	Y-value	Function	Function Result																								
M1	1	1	5.58959 GHz	-23.20 dBm																										
M2	1	1	5.60054 GHz	2.86 dBm																										
D3	M1	1	20.82 MHz	-0.09 dB																										
CH _H	Spectrum Ref Level 20.50 dBmAtt 30 dBOffset 1.00 dB RBW 300 kHzSWT 25.3 μs VBW 1 MHzMode Auto FFTCount 500/500 IPk View  <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>1</td><td>5.68953 GHz</td><td>-23.66 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td>1</td><td>5.70054 GHz</td><td>2.34 dBm</td><td></td><td></td></tr><tr><td>D3</td><td>M1</td><td>1</td><td>20.97 MHz</td><td>-0.08 dB</td><td></td><td></td></tr></table> Date: 23 NOV 2020 13:35:55	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1	1	5.68953 GHz	-23.66 dBm			M2	1	1	5.70054 GHz	2.34 dBm			D3	M1	1	20.97 MHz	-0.08 dB			
Type	Ref	Trc	X-value	Y-value	Function	Function Result																								
M1	1	1	5.68953 GHz	-23.66 dBm																										
M2	1	1	5.70054 GHz	2.34 dBm																										
D3	M1	1	20.97 MHz	-0.08 dB																										



Band III		802.11n (HT40)																											
CH _L	Spectrum Ref Level 20.50 dBm Att 30 dB Count 500/500 Offset 1.00 dB SWT 1 ms RBW 500 kHz VBW 2 MHz Mode Auto Sweep IPk View  CF 5.51 GHz1001 ptsSpan 60.0 MHz <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>5.4902 GHz</td><td>-23.65 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>5.5132 GHz</td><td>-2.70 dBm</td><td></td><td></td></tr><tr><td>D3</td><td>M1</td><td>1</td><td>39.78 MHz</td><td>-0.64 dB</td><td></td><td></td></tr></table> Date: 23 NOV 2020 13:47:57	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		5.4902 GHz	-23.65 dBm			M2	1		5.5132 GHz	-2.70 dBm			D3	M1	1	39.78 MHz	-0.64 dB		
Type	Ref	Trc	X-value	Y-value	Function	Function Result																							
M1	1		5.4902 GHz	-23.65 dBm																									
M2	1		5.5132 GHz	-2.70 dBm																									
D3	M1	1	39.78 MHz	-0.64 dB																									
CH _M	Spectrum Ref Level 20.50 dBm Att 30 dB Count 500/500 Offset 1.00 dB SWT 1 ms RBW 500 kHz VBW 2 MHz Mode Auto Sweep IPk View  CF 5.59 GHz1001 ptsSpan 60.0 MHz <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>5.57008 GHz</td><td>-23.09 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>5.59378 GHz</td><td>-3.18 dBm</td><td></td><td></td></tr><tr><td>D3</td><td>M1</td><td>1</td><td>39.72 MHz</td><td>0.03 dB</td><td></td><td></td></tr></table> Date: 23 NOV 2020 14:00:20	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		5.57008 GHz	-23.09 dBm			M2	1		5.59378 GHz	-3.18 dBm			D3	M1	1	39.72 MHz	0.03 dB		
Type	Ref	Trc	X-value	Y-value	Function	Function Result																							
M1	1		5.57008 GHz	-23.09 dBm																									
M2	1		5.59378 GHz	-3.18 dBm																									
D3	M1	1	39.72 MHz	0.03 dB																									
CH _H	Spectrum Ref Level 20.50 dBm Att 30 dB Count 500/500 Offset 1.00 dB SWT 1 ms RBW 500 kHz VBW 2 MHz Mode Auto Sweep IPk View  CF 5.67 GHz1001 ptsSpan 60.0 MHz <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>5.65014 GHz</td><td>-24.27 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>5.67402 GHz</td><td>-2.51 dBm</td><td></td><td></td></tr><tr><td>D3</td><td>M1</td><td>1</td><td>39.78 MHz</td><td>0.34 dB</td><td></td><td></td></tr></table> Date: 23 NOV 2020 14:08:32	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		5.65014 GHz	-24.27 dBm			M2	1		5.67402 GHz	-2.51 dBm			D3	M1	1	39.78 MHz	0.34 dB		
Type	Ref	Trc	X-value	Y-value	Function	Function Result																							
M1	1		5.65014 GHz	-24.27 dBm																									
M2	1		5.67402 GHz	-2.51 dBm																									
D3	M1	1	39.78 MHz	0.34 dB																									

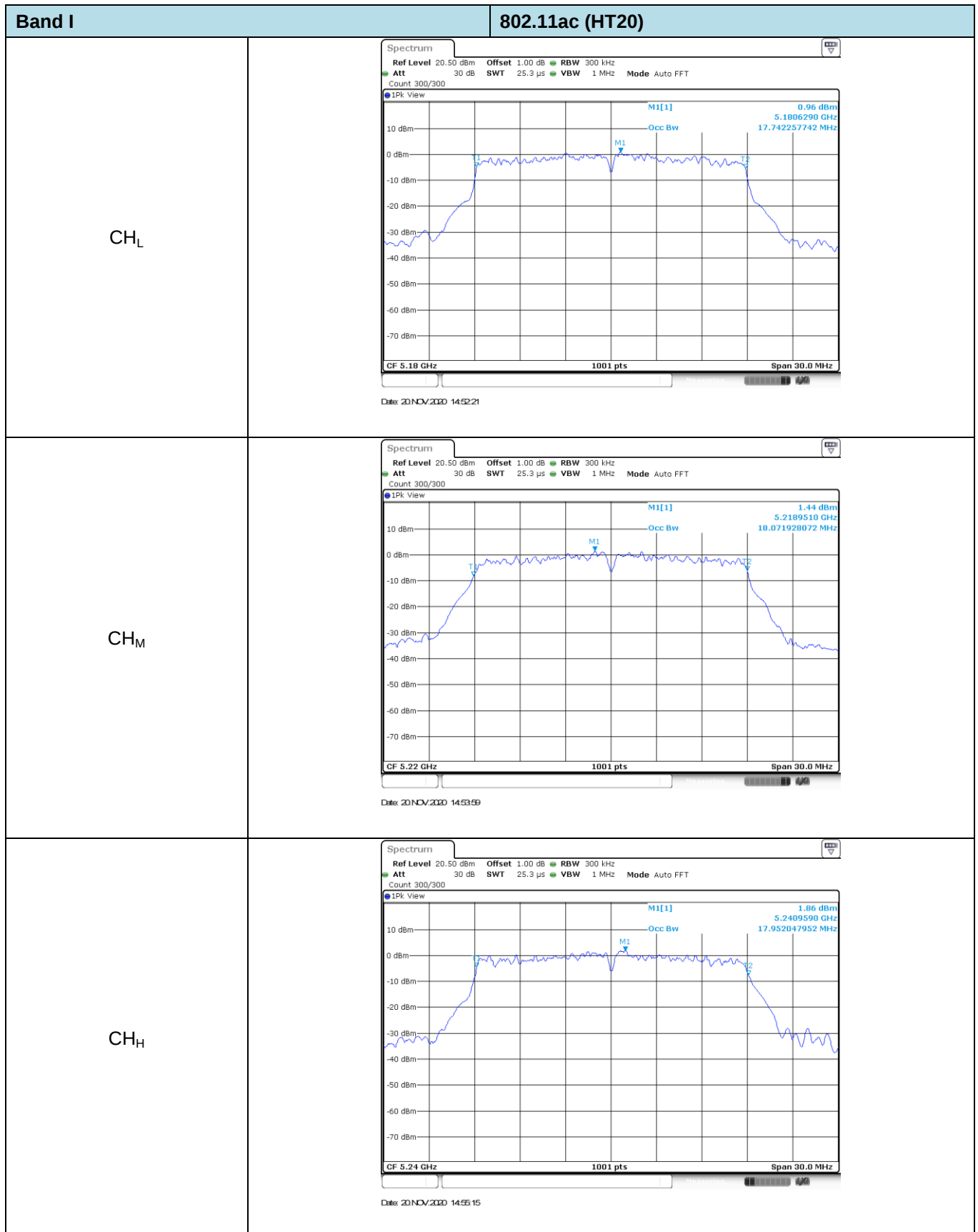


Appendix D: 99% Occupy bandwidth

Band	Bandwidth (MHz)	Type	Channel	99% Occupy bandwidth (MHz)	Result
I	20	802.11ac	CH _L	17.74	Pass
			CH _M	18.07	
			CH _H	17.95	
		802.11n	CH _L	17.89	Pass
			CH _M	17.83	
			CH _H	17.98	
		802.11a	CH _L	17.02	Pass
			CH _M	16.93	
			CH _H	16.96	
	40	802.11ac	CH _L	36.56	Pass
			CH _H	36.50	
		802.11n	CH _L	36.26	Pass
			CH _H	36.32	
	80	802.11ac	CH _M	75.64	Pass
II	20	802.11ac	CH _L	17.83	Pass
			CH _M	17.80	
			CH _H	17.95	
		802.11n	CH _L	17.71	Pass
			CH _M	17.83	
			CH _H	17.83	
		802.11a	CH _L	16.87	Pass
			CH _M	16.75	
			CH _H	16.75	
	40	802.11ac	CH _L	36.50	Pass
			CH _H	36.50	
		802.11n	CH _L	36.26	Pass
			CH _H	36.26	
	80	802.11ac	CH _M	75.52	Pass

Band	Bandwidth (MHz)	Type	Channel	99% Occupy bandwidth (MHz)	Result
III	20	802.11ac	CH _L	17.95	Pass
			CH _M	17.86	
			CH _H	17.74	
		802.11n	CH _L	17.80	Pass
			CH _M	17.80	
			CH _H	17.77	
		802.11a	CH _L	16.57	Pass
			CH _M	16.57	
			CH _H	16.48	
	40	802.11ac	CH _L	36.44	Pass
			CH _M	36.44	
			CH _H	36.50	
		802.11n	CH _L	36.20	Pass
			CH _M	36.32	
			CH _H	36.26	
	80	802.11ac	CH _L	75.52	Pass
			CH _M	75.64	
			CH _H	75.41	

Band	Bandwidth (MHz)	Type	Channel	99% Occupy bandwidth (MHz)	Result
IV	20	802.11ac	CH _L	17.92	Pass
			CH _M	18.07	
			CH _H	17.98	
		802.11n	CH _L	17.86	Pass
			CH _M	17.89	
			CH _H	17.83	
		802.11a	CH _L	16.54	Pass
			CH _M	16.54	
			CH _H	16.51	
	40	802.11ac	CH _L	36.50	Pass
			CH _H	36.44	
		802.11n	CH _L	36.30	Pass
			CH _H	36.30	
	80	802.11ac	CH _M	75.41	Pass



Band I		802.11n (HT20)
CH _L	Spectrum Ref Level 20.50 dBm Att 30 dB Count 300/300 Offset 1.00 dB SWT 25.3 μs RBW 300 kHz VBW 1 MHz Mode Auto FFT IPk View MI[1] 0.68 dBm 5.1784720 GHz 17.892107892 MHz M1 Occ Bw 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.18 GHz 1001 pts Span 30.0 MHz Date: 20 NOV 2020 14:32:55	
CH _M	Spectrum Ref Level 20.50 dBm Att 30 dB Count 300/300 Offset 1.00 dB SWT 25.3 μs RBW 300 kHz VBW 1 MHz Mode Auto FFT IPk View MI[1] 2.85 dBm 5.2206290 GHz 17.832167832 MHz M1 Occ Bw 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.22 GHz 1001 pts Span 30.0 MHz Date: 20 NOV 2020 14:27:18	
CH _H	Spectrum Ref Level 20.50 dBm Att 30 dB Count 300/300 Offset 1.00 dB SWT 25.3 μs RBW 300 kHz VBW 1 MHz Mode Auto FFT IPk View MI[1] 1.54 dBm 5.2391610 GHz 17.982017982 MHz M1 Occ Bw 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.24 GHz 1001 pts Span 30.0 MHz Date: 20 NOV 2020 14:28:29	

Band I		802.11a
CH _L	Spectrum Ref Level 20.50 dBm Att 30 dB Count 300/300 Offset 1.00 dB SWT 25.3 μs RBW 300 kHz VBW 1 MHz Mode Auto FFT IPk View M1[1] 1.56 dBm 5.1805390 GHz 17.022977023 MHz Occ Bw M1 T1 T2 CF 5.18 GHz 1001 pts Span 30.0 MHz Date: 20 NOV 2020 14:12:08	
CH _M	Spectrum Ref Level 20.50 dBm Att 30 dB Count 300/300 Offset 1.00 dB SWT 25.3 μs RBW 300 kHz VBW 1 MHz Mode Auto FFT IPk View M1[1] 2.40 dBm 5.2207790 GHz 16.933066933 MHz Occ Bw M1 T1 T2 CF 5.22 GHz 1001 pts Span 30.0 MHz Date: 20 NOV 2020 14:13:48	
CH _H	Spectrum Ref Level 20.50 dBm Att 30 dB Count 300/300 Offset 1.00 dB SWT 25.3 μs RBW 300 kHz VBW 1 MHz Mode Auto FFT IPk View M1[1] 3.21 dBm 5.2405990 GHz 16.963036963 MHz Occ Bw M1 T1 T2 CF 5.24 GHz 1001 pts Span 30.0 MHz Date: 20 NOV 2020 14:15:03	

Band I		802.11ac (HT40)
CH _L	Spectrum Ref Level 20.50 dBm Att 30 dB Count 300/300 Offset 1.00 dB SWT 1 ms RBW 500 kHz VBW 2 MHz Mode Auto Sweep 1Pk View M1[1] 1.69 dBm 5.1911390 GHz 36.563436563 MHz Occ Bw M1 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.19 GHz 1001 pts Span 60.0 MHz Date: 20 NOV 2020 15:02:09	
CH _H	Spectrum Ref Level 20.50 dBm Att 30 dB Count 300/300 Offset 1.00 dB SWT 1 ms RBW 500 kHz VBW 2 MHz Mode Auto Sweep 1Pk View M1[1] 2.59 dBm 5.2313190 GHz 36.503496503 MHz Occ Bw M1 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 5.23 GHz 1001 pts Span 60.0 MHz Date: 20 NOV 2020 15:03:35	

