APPENDIX REPORT

Project No.	SHT2005087301EW	Radio Specification	WIFI 5G
Test sample No.	YPHT20050873001	Model No.	SC201
Start test date	2020/6/4	Finish date	2020/6/4
Temperature	25°C	Humidity	50%
Test Engineer	JiongSheng.Feng	Auditor	William.wang

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	duty cycle (%)	duty cycle factor (dB)	Conducted Output Power (dBm)	Limit (dBm)	Result
I	20	802.11ac	CH_L	79	1.02	13.11	24.00	Pass
			CH_M	79	1.02	12.39		
			CH_H	79	1.02	12.63		
		802.11n	CH_L	79	1.02	12.65	24.00	Pass
			CH_M	79	1.02	12.43		
			CH_H	79	1.02	12.51		
		802.11a	CH_L	81	0.92	13.99	24.00	Pass
			CH_M	81	0.92	12.79		
			CH_H	81	0.92	12.43		
	40	802.11ac	CH_L	67	1.74	14.33	24.00	Pass
			CH_H	67	1.74	13.85		
		802.11n	CH_L	70	1.55	15.17	24.00	Pass
			CH_H	70	1.55	15.08		
	80	802.11ac	CH_M	60	2.22	14.73	24.00	Pass
II	20	802.11ac	CH_L	78	1.08	16.55	24.00	Pass
			CH_M	78	1.08	16.09		
			CH_H	78	1.08	15.32		
		802.11n	CH_L	79	1.02	16.51	24.00	Pass
			CH_M	79	1.02	16.19		
			CH_H	79	1.02	15.62		
		802.11a	CH_L	82	0.86	17.66	24.00	Pass
			CH_M	82	0.86	17.16		
			CH_H	82	0.86	16.21		
	40	802.11ac	CH_L	67	1.74	14.25	24.00	Pass
			CH_H	67	1.74	13.28		
		802.11n	CH_L	72	1.43	14.81	24.00	Pass
			CH_H	72	1.43	14.17		
	80	802.11ac	CH_M	63	2.01	13.28	24.00	Pass

Band	Bandwidth (MHz)	Type	Channel	duty cycle (%)	duty cycle factor（dB）	Conducted Output Power (dBm)	Limit (dBm)	Result
III	20	802.11ac	CH_L	77	1.14	17.00	24.00	Pass
			CH_M	77	1.14	17.11		
			CH_H	77	1.14	17.38		
		802.11n	CH_L	80	0.97	16.31	24.00	Pass
			CH_M	80	0.97	16.53		
			CH_H	80	0.97	17.56		
		802.11a	CH_L	81	0.92	17.56	24.00	Pass
			CH_M	81	0.92	17.74		
			CH_H	81	0.92	18.71		
	40	802.11ac	CH_L	66	1.8	14.26	24.00	Pass
			CH_M	66	1.8	13.01		
			CH_H	66	1.8	15.20		
		802.11n	CH_L	70	1.55	15.63	24.00	Pass
			CH_M	70	1.55	15.66		
			CH_H	70	1.55	16.19		
	80	802.11ac	CH_L	62	2.08	14.71	24.00	Pass
			CH_M	62	2.08	14.52		
			CH_H	62	2.08	15.30		
IV	20	802.11ac	CH_L	76	1.19	18.84	30.00	Pass
			CH_M	76	1.19	18.50		
			CH_H	76	1.19	18.18		
		802.11n	CH_L	83	0.81	18.91	30.00	Pass
			CH_M	83	0.81	18.81		
			CH_H	83	0.81	18.35		
		802.11a	CH_L	82	0.86	19.60	30.00	Pass
			CH_M	82	0.86	19.81		
			CH_H	82	0.86	19.59		
	40	802.11ac	CH_L	65	1.87	16.02	30.00	Pass
			CH_H	65	1.87	16.04		
		802.11n	CH_L	69	1.61	18.03	30.00	Pass
			CH_H	69	1.61	17.90		
	80	802.11ac	CH_M	59	2.29	16.12	30.00	Pass

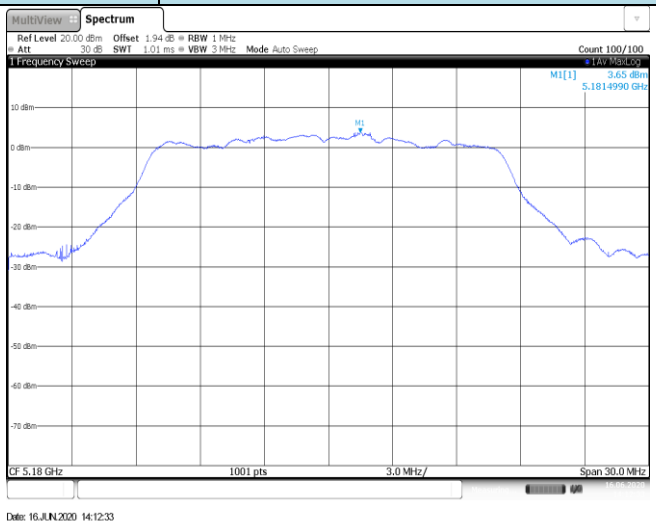
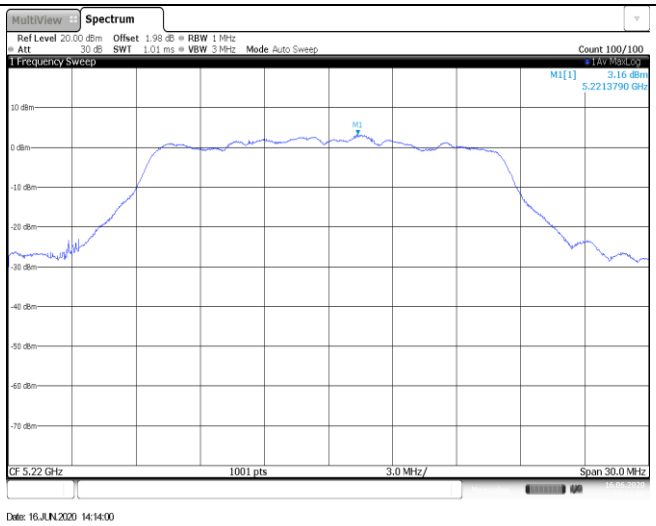
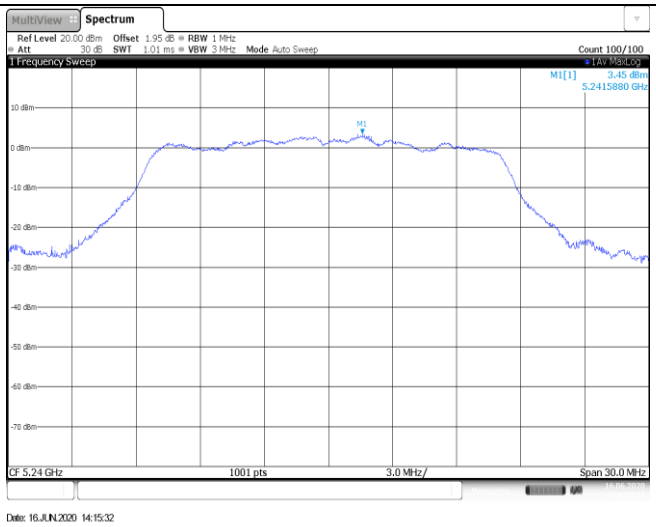
NOTE: duty cycle factor =10LOG(1/ duty cycle)

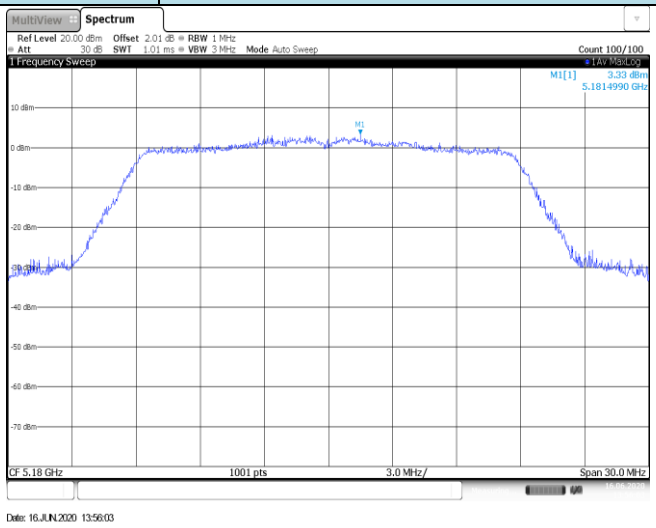
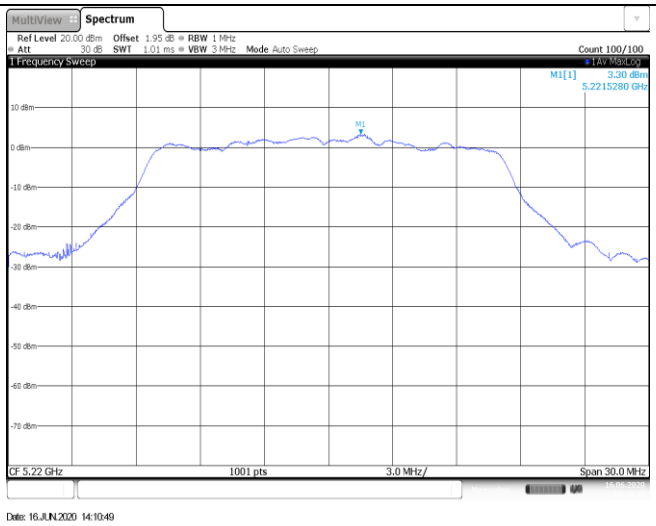
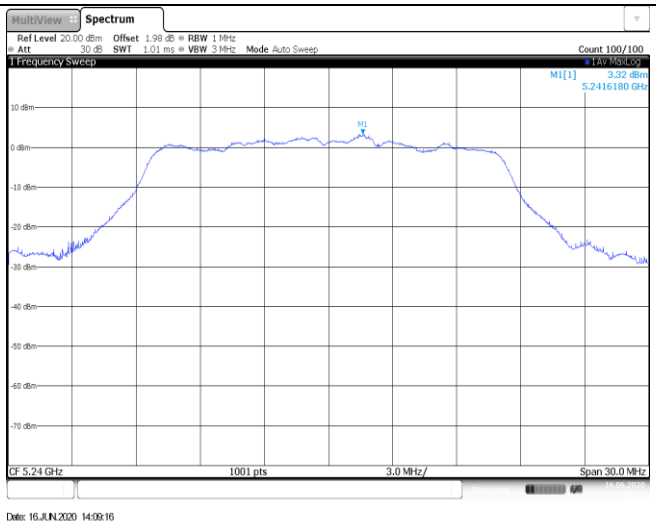
Appendix B：Maximum Power Spectral Density

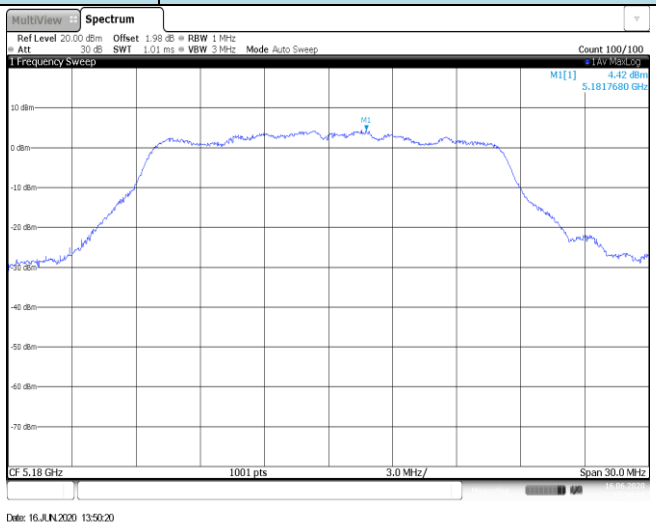
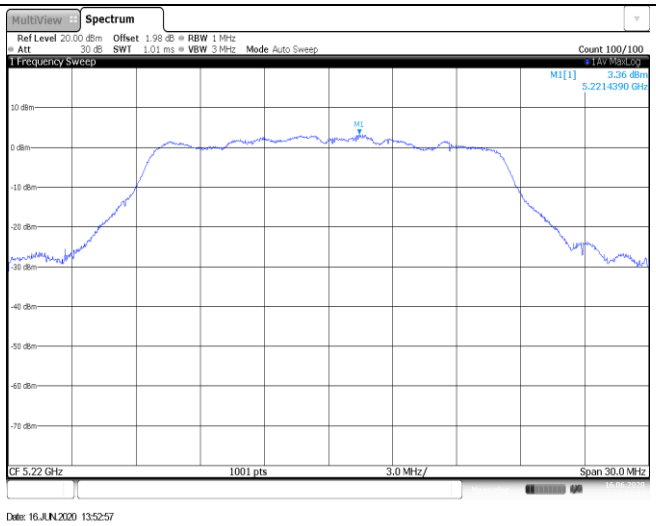
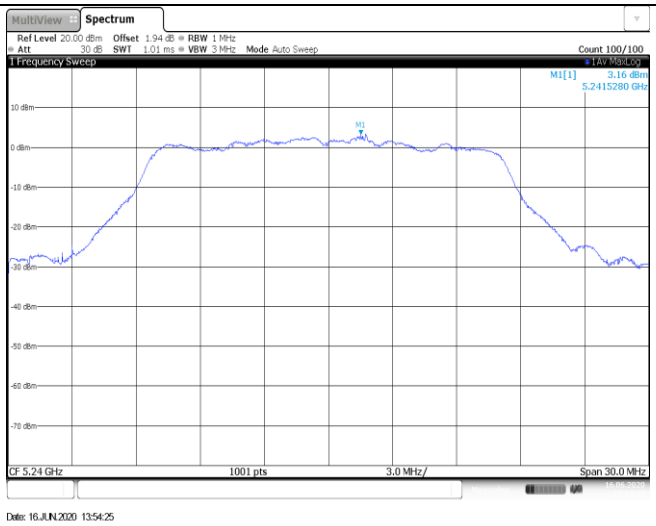
Band	Bandwidth (MHz)	Type	Channel	Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
I	20	802.11ac	CH_L	3.65	11.00	Pass
			CH_M	3.16		
			CH_H	3.45		
		802.11n	CH_L	3.33	11.00	Pass
			CH_M	3.30		
			CH_H	3.32		
		802.11a	CH_L	4.42	11.00	Pass
			CH_M	3.36		
			CH_H	3.16		
	40	802.11ac	CH_L	2.69	11.00	Pass
			CH_H	2.01		
		802.11n	CH_L	2.85	11.00	Pass
			CH_H	2.21		
	80	802.11ac	CH_M	-1.69	11.00	Pass
II	20	802.11ac	CH_L	7.21	11.00	Pass
			CH_M	7.01		
			CH_H	6.50		
		802.11n	CH_L	7.04	11.00	Pass
			CH_M	6.55		
			CH_H	5.55		
		802.11a	CH_L	8.73	11.00	Pass
			CH_M	7.66		
			CH_H	6.66		
	40	802.11ac	CH_L	1.65	11.00	Pass
			CH_H	1.17		
		802.11n	CH_L	2.12	11.00	Pass
			CH_H	1.76		
	80	802.11ac	CH_M	-0.68	11.00	Pass

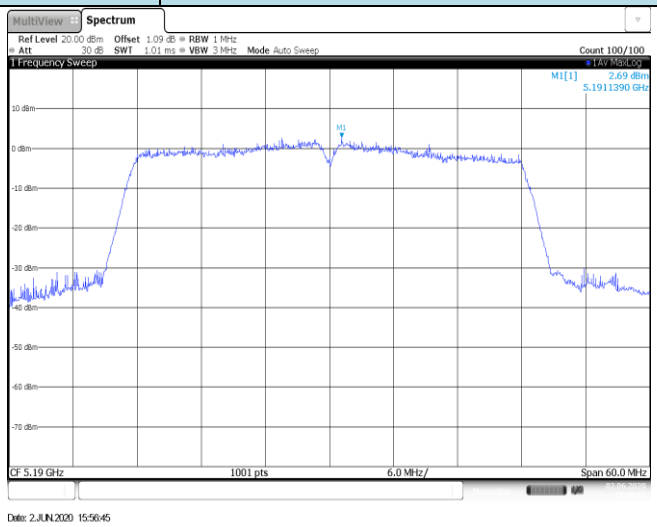
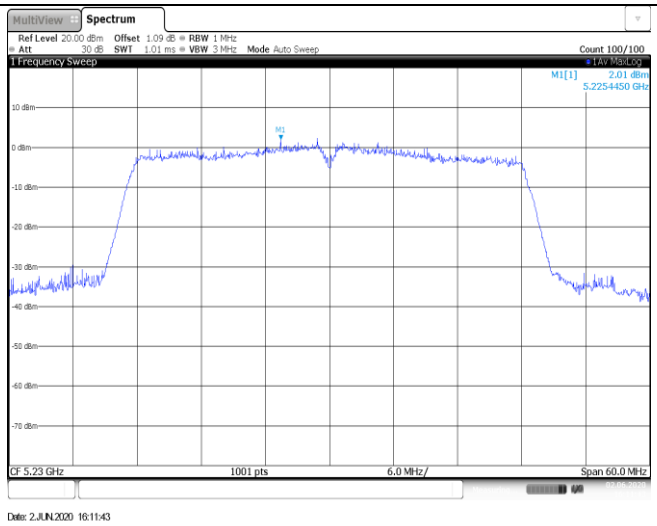
Band	Bandwidth (MHz)	Type	Channel	Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
III	20	802.11ac	CH_L	7.03	11.00	Pass
			CH_M	7.22		
			CH_H	8.23		
		802.11n	CH_L	7.08	11.00	Pass
			CH_M	7.23		
			CH_H	7.93		
		802.11a	CH_L	7.53	11.00	Pass
			CH_M	8.40		
			CH_H	9.73		
	40	802.11ac	CH_L	0.61	11.00	Pass
			CH_M	0.06		
			CH_H	1.76		
		802.11n	CH_L	2.56	11.00	Pass
			CH_M	2.91		
			CH_H	3.80		
	80	802.11ac	CH_L	-3.14	11.00	Pass
			CH_M	-3.56		
			CH_H	-1.41		
Band	Bandwidth (MHz)	Type	Channel	Power Spectral Density (dBm/500kHz)	Limit (dBm/500KHz)	Result
IV	20	802.11ac	CH_L	7.07	30.00	Pass
			CH_M	7.74		
			CH_H	7.35		
		802.11n	CH_L	7.60	30.00	Pass
			CH_M	6.85		
			CH_H	7.35		
		802.11a	CH_L	8.12	30.00	Pass
			CH_M	7.91		
			CH_H	7.56		
	40	802.11ac	CH_L	1.43	30.00	Pass
			CH_H	0.65		
		802.11n	CH_L	2.96	30.00	Pass
			CH_H	2.96		
	80	802.11ac	CH_M	-4.05	30.00	Pass

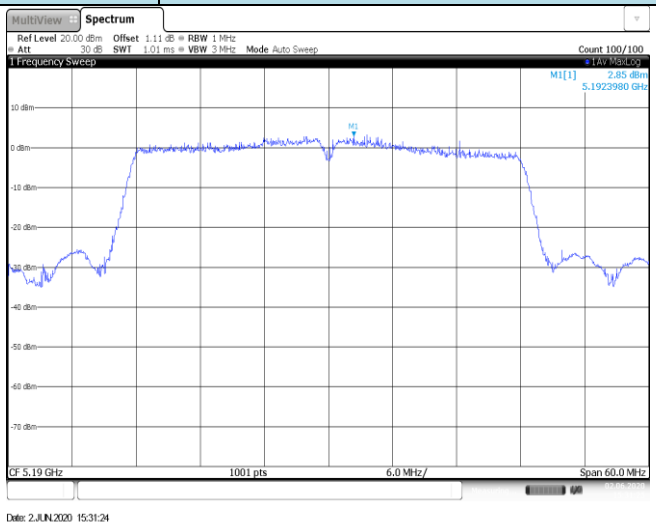
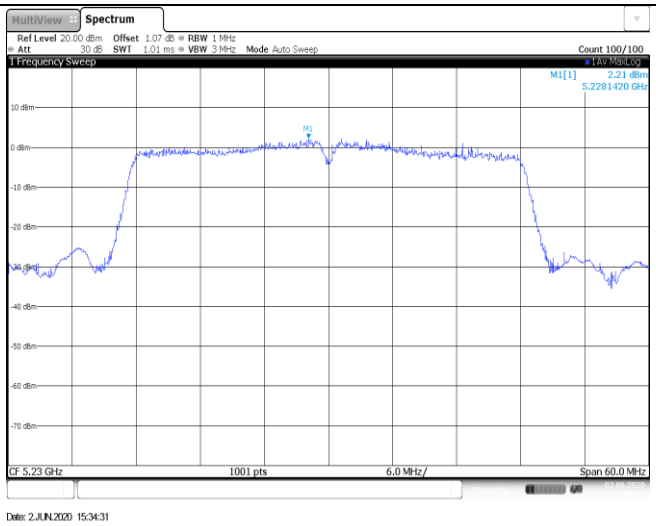
Test plot as follows:

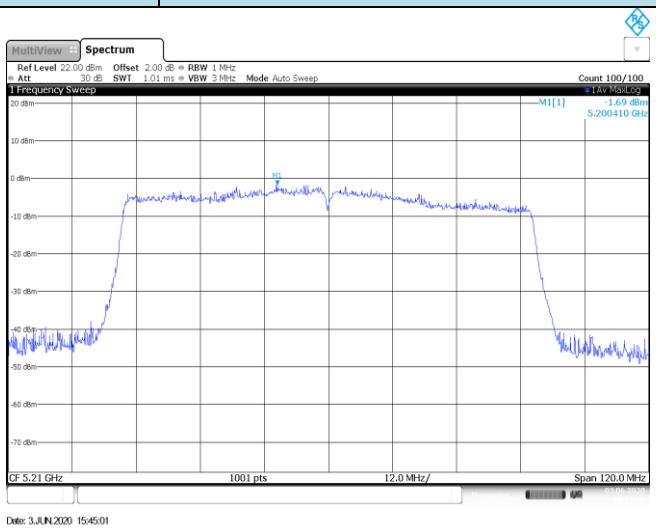
Band I	**802.11ac (HT20)**
CH_L	
CH_M	
CH_H	

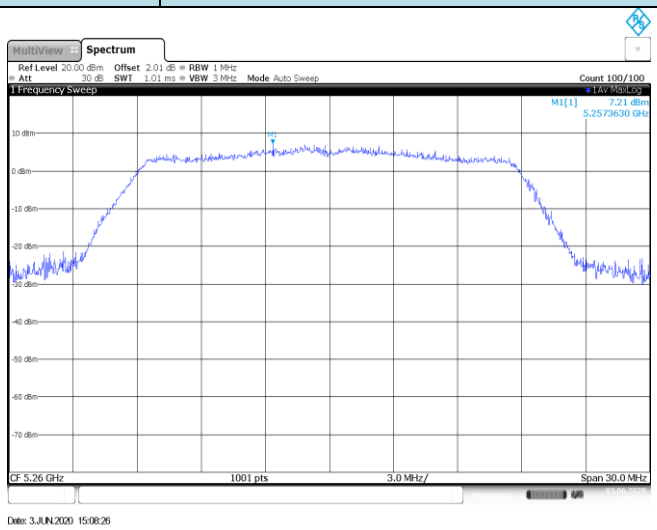
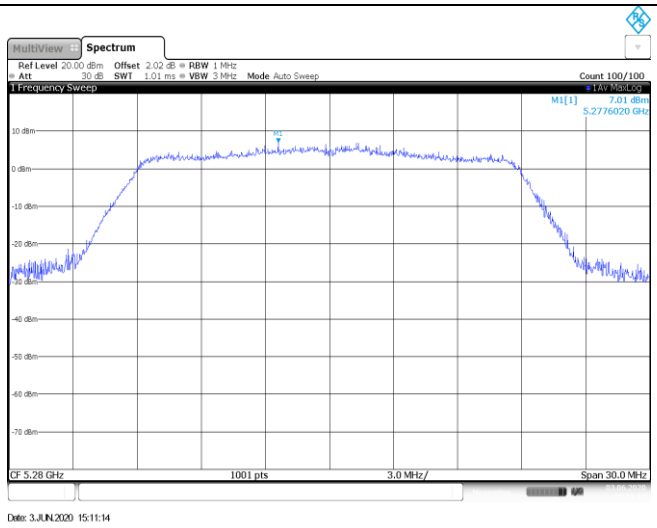
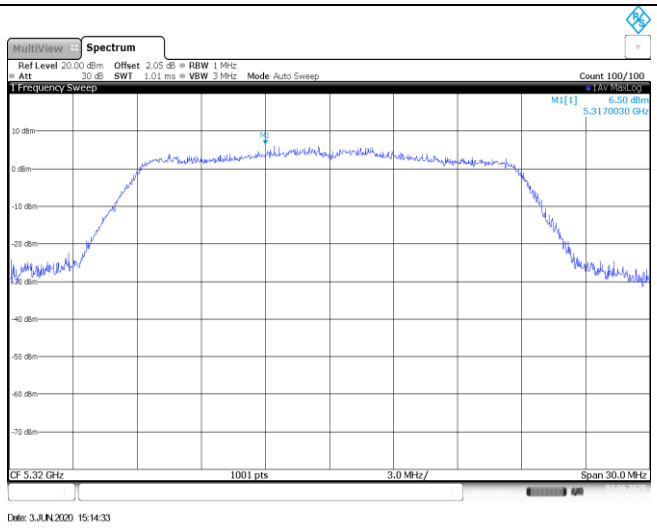
Band I	802.11n (HT20)
CH_L	
CH_M	
CH_H	

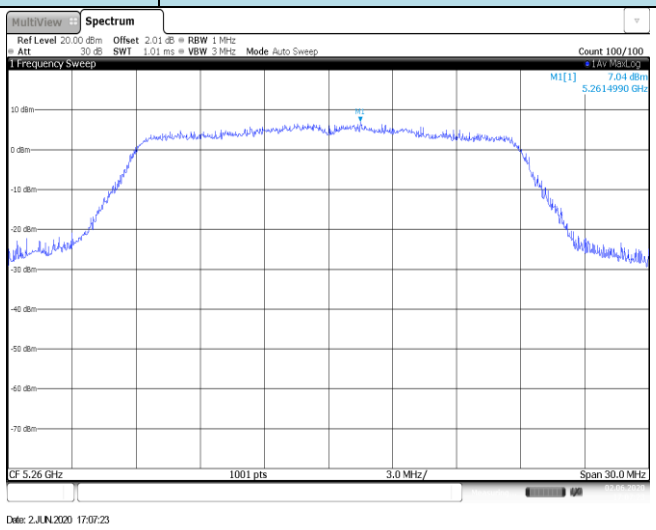
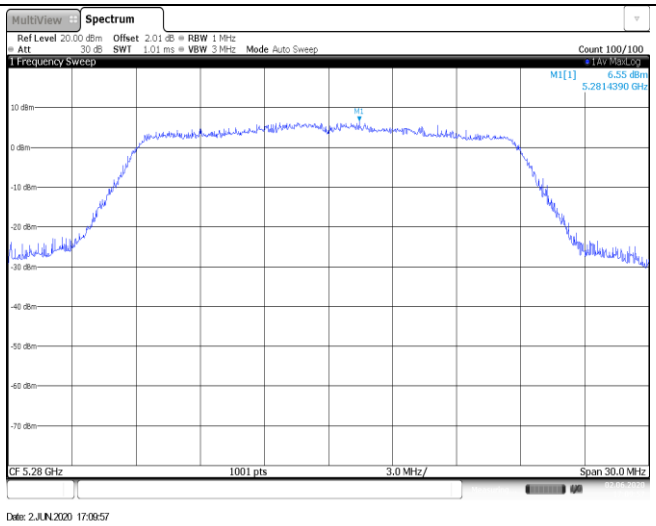
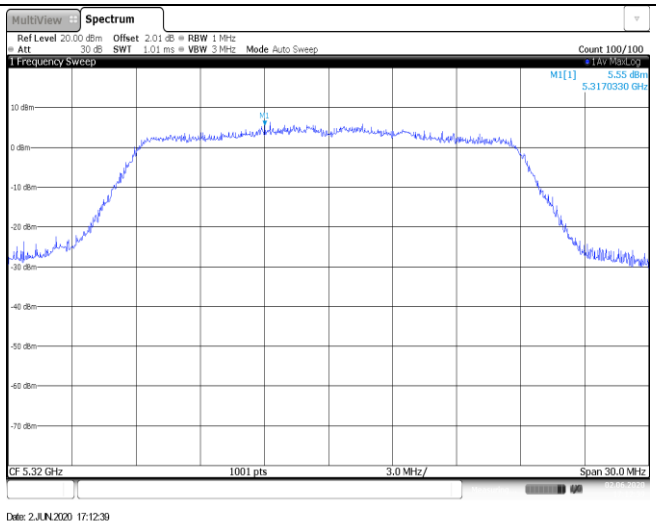
Band I	802.11a
CH_L	
CH_M	
CH_H	

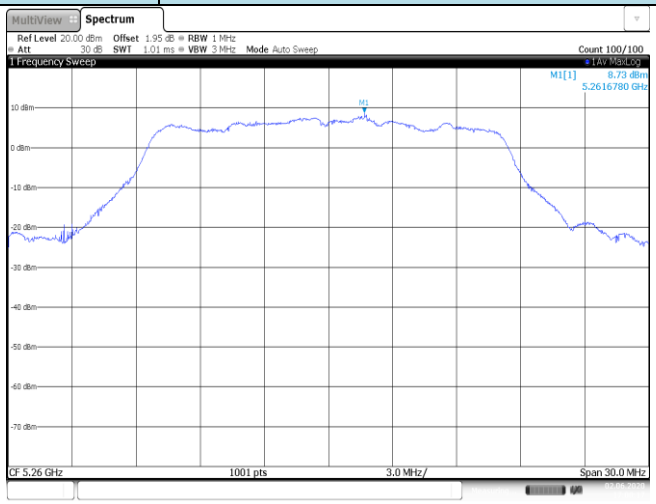
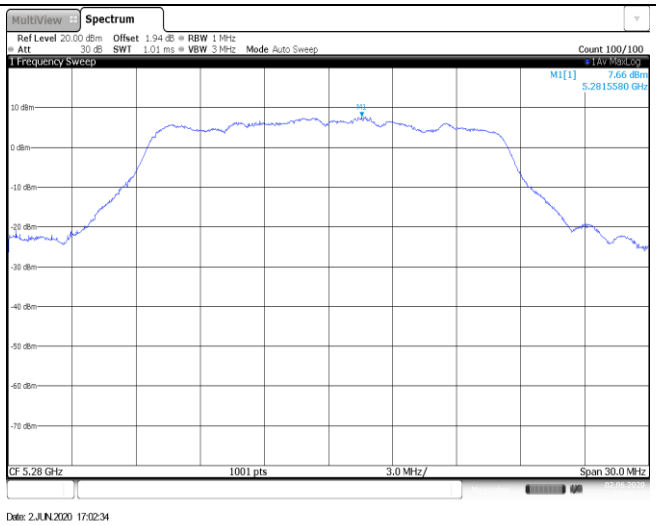
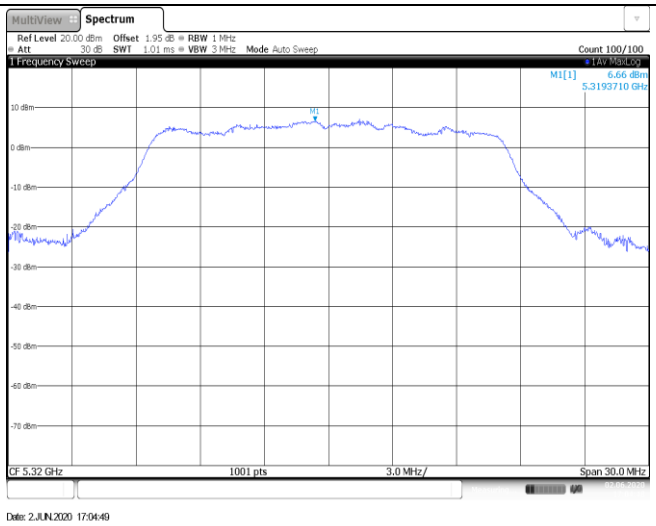
Band I	802.11ac (HT40)
CH_L	
CH_H	

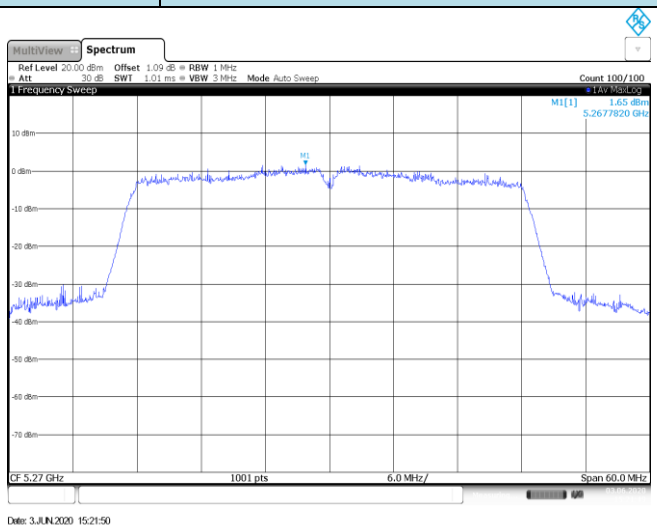
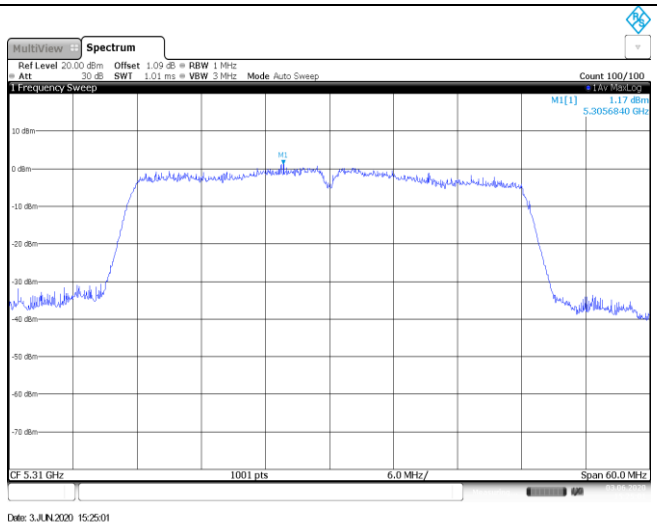
Band I	802.11n (HT40)
CH_L	
CH_H	

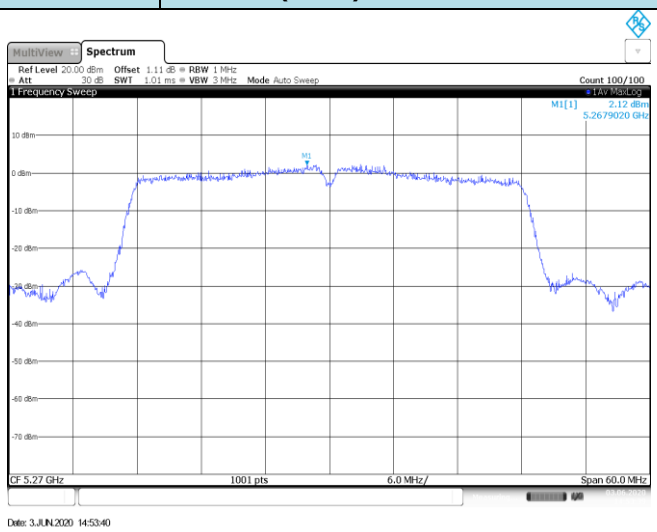
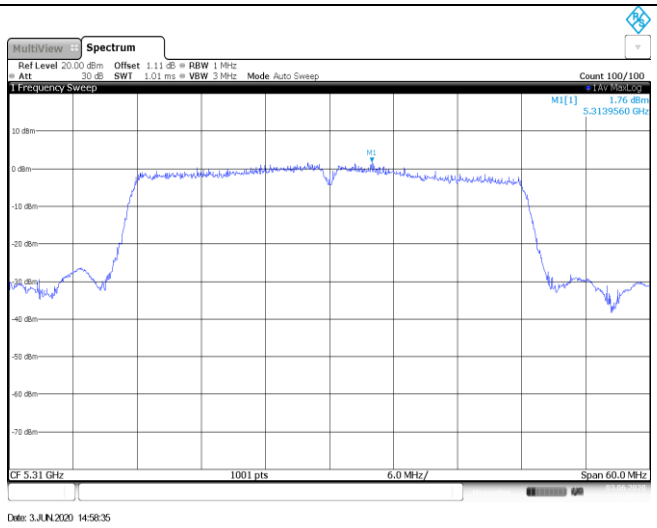
Band I	802.11ac (HT80)
CH_M	

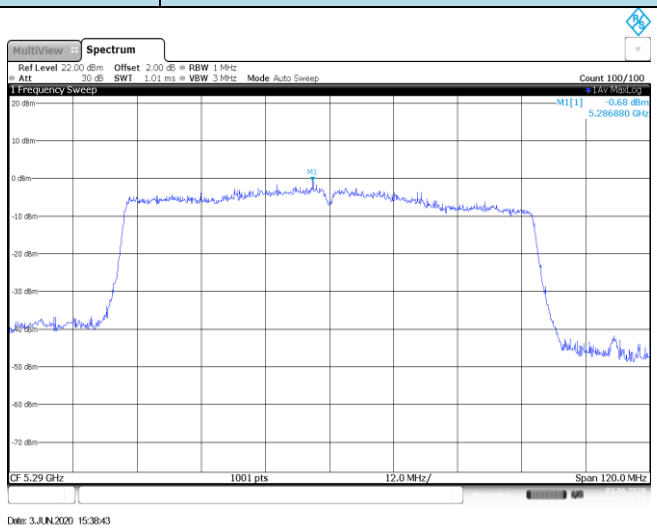
Band II	802.11ac (HT20)
CH_L	
CH_M	
CH_H	

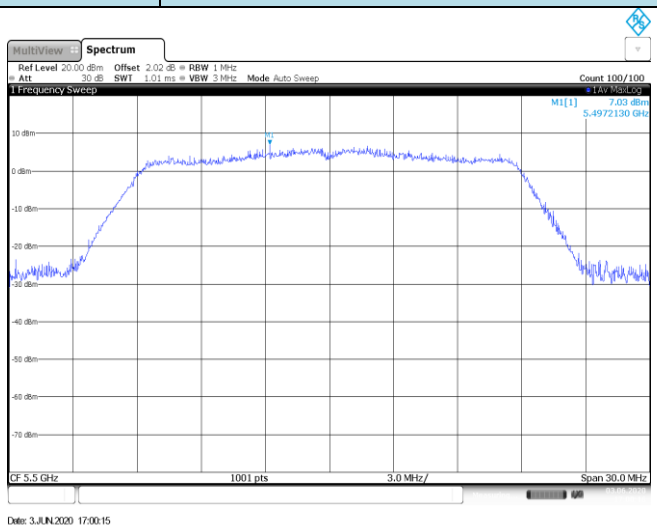
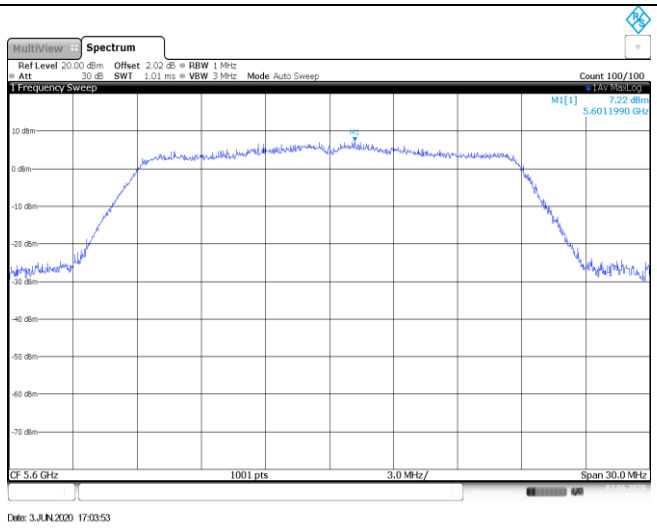
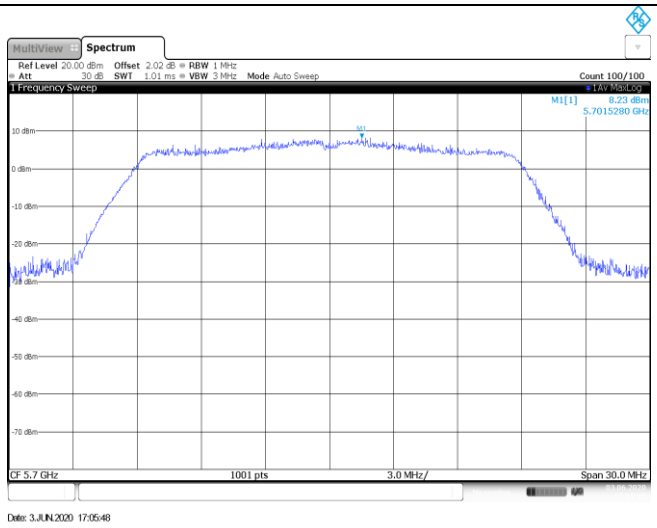
Band II	802.11n (HT20)
CH_L	
CH_M	
CH_H	

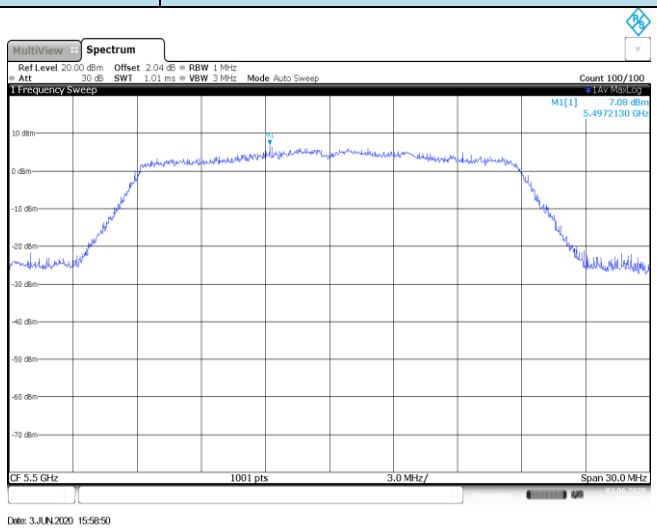
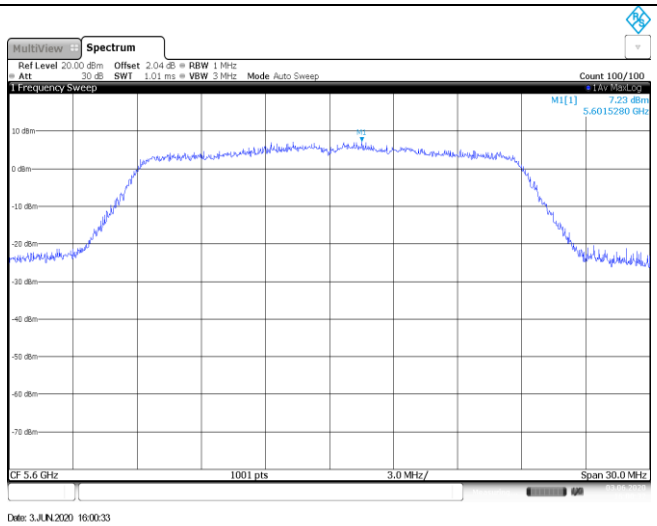
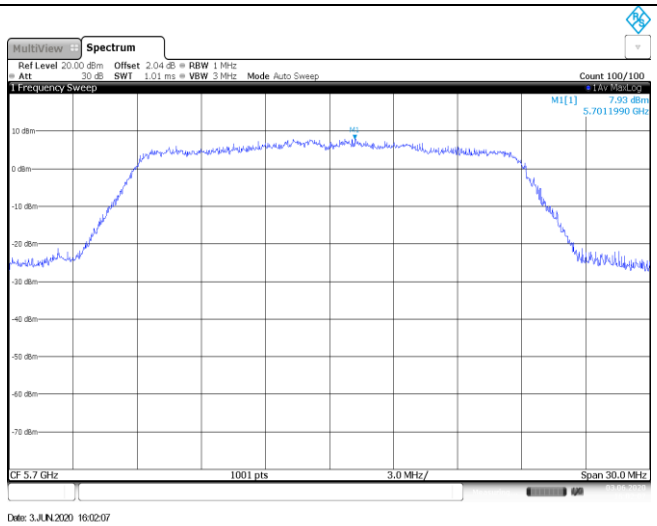
Band II	802.11a
CH_L	
CH_M	
CH_H	

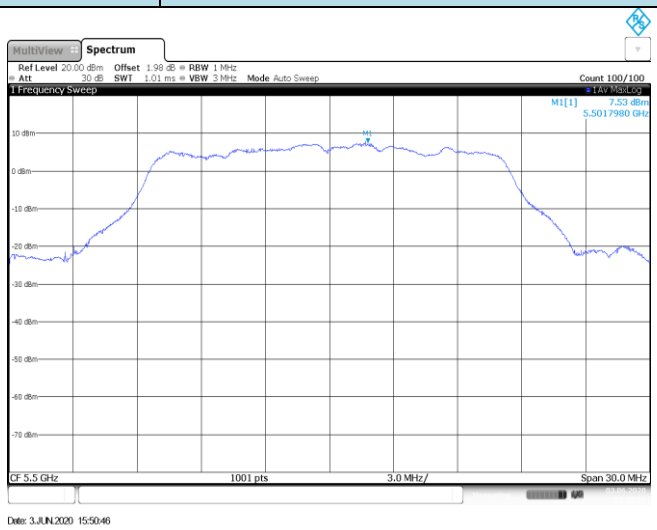
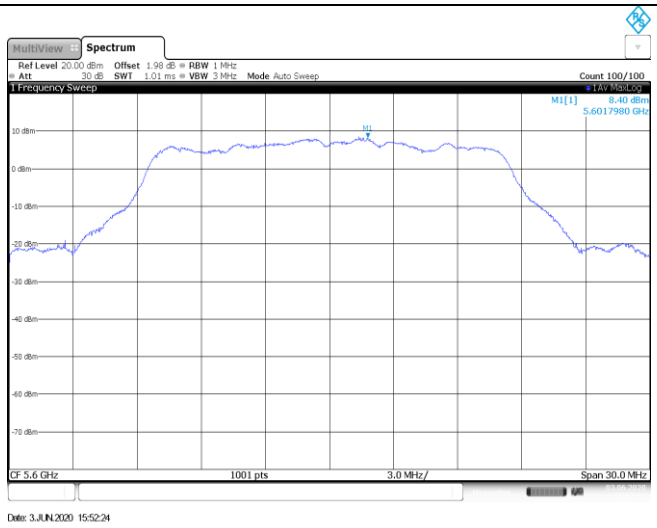
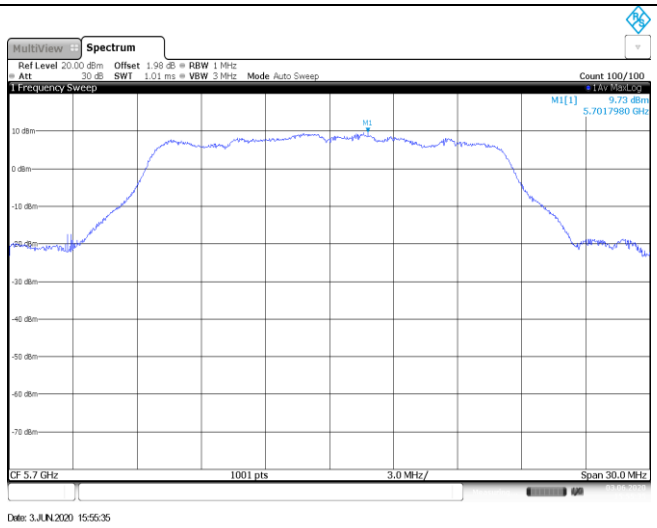
Band II	802.11ac (HT40)
CH_L	
CH_H	

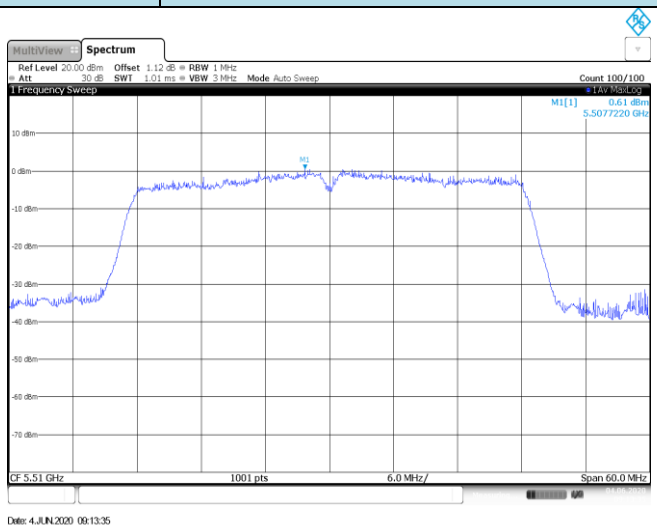
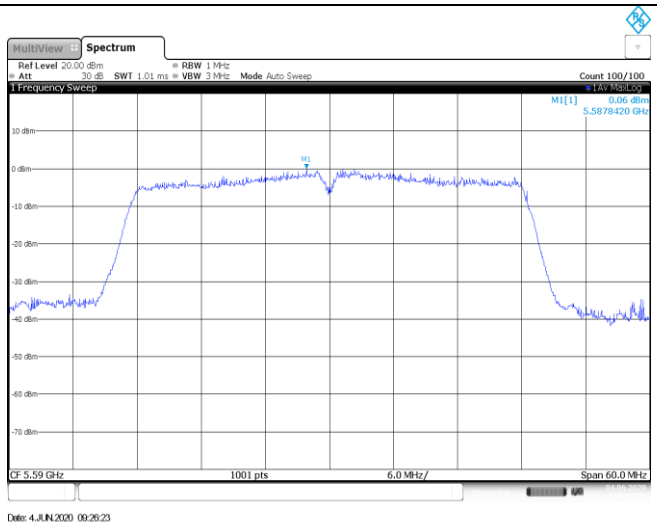
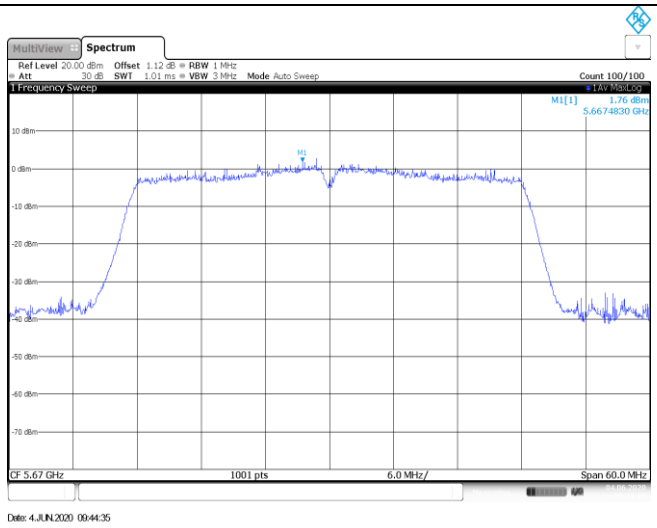
Band II	802.11n (HT40)
CH_L	
CH_H	

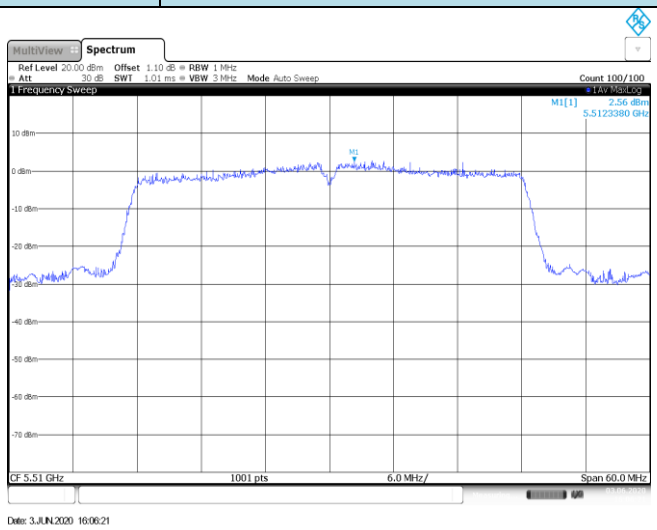
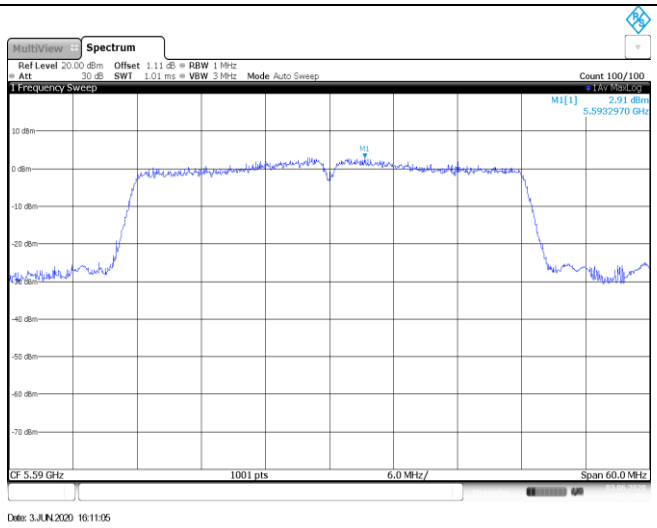
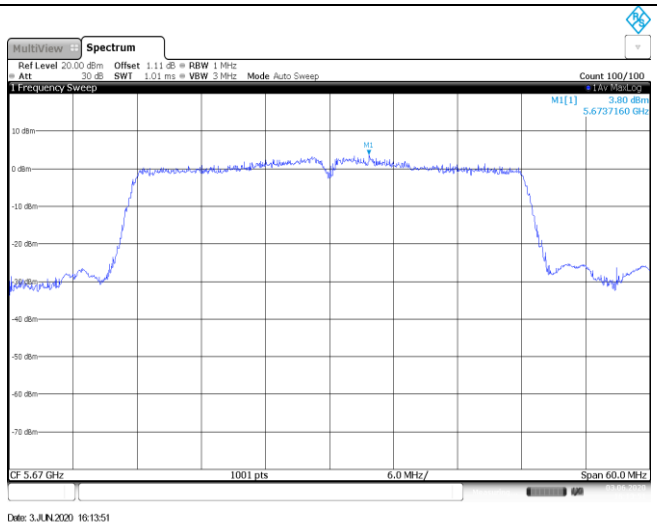
Band II	802.11ac (HT80)
CH_M	

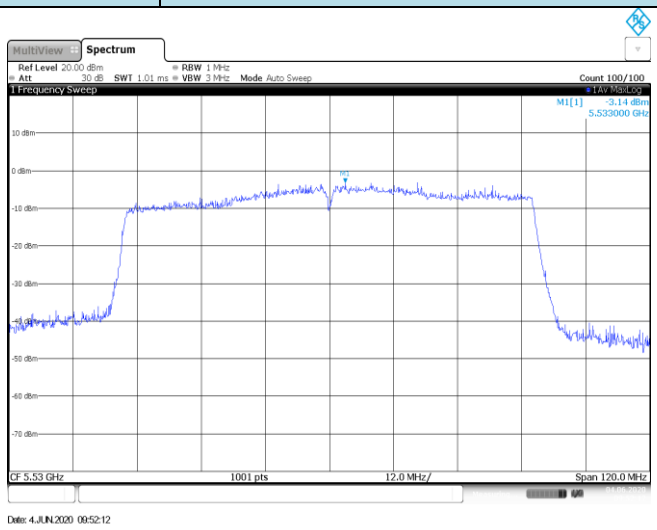
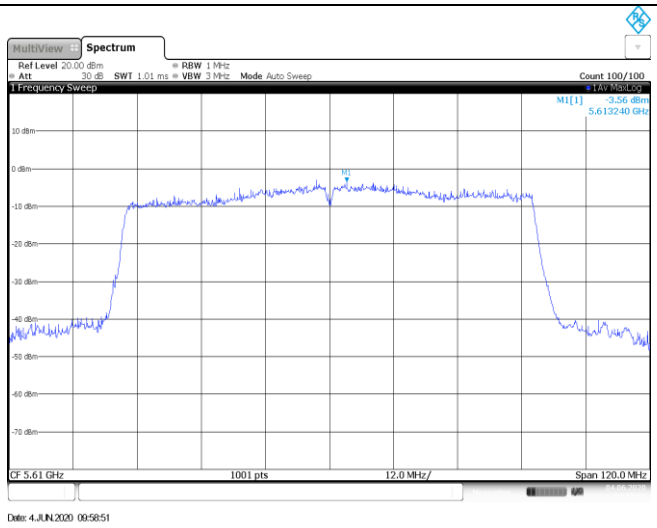
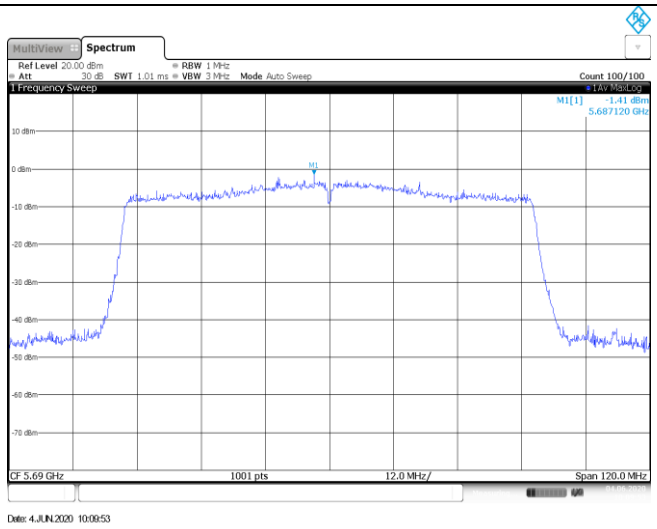
Band III	802.11ac (HT20)
CH_L	
CH_M	
CH_H	

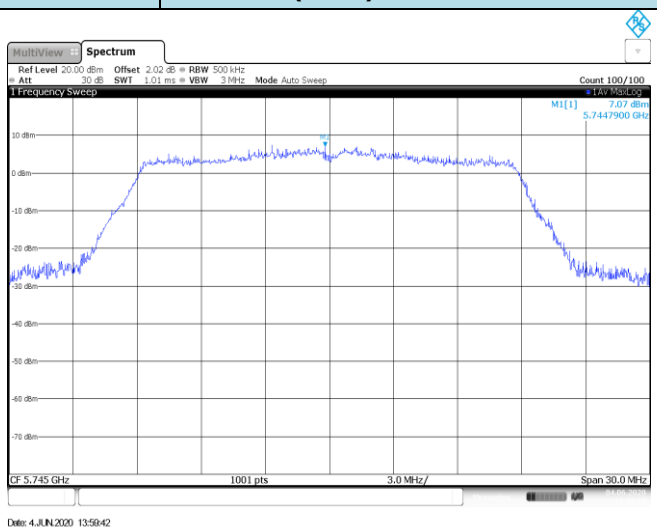
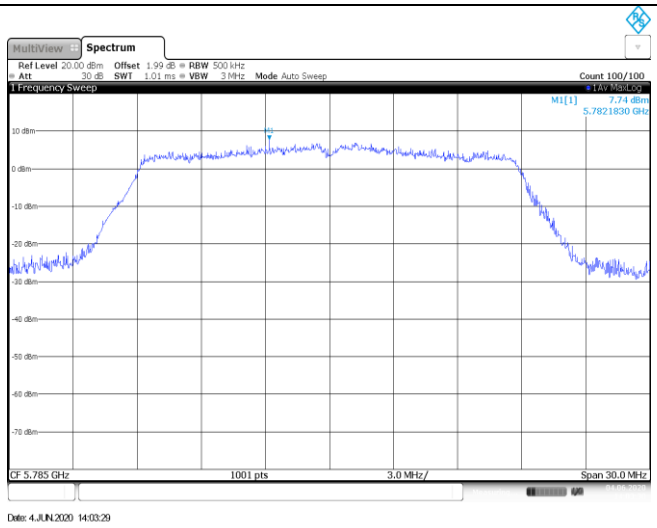
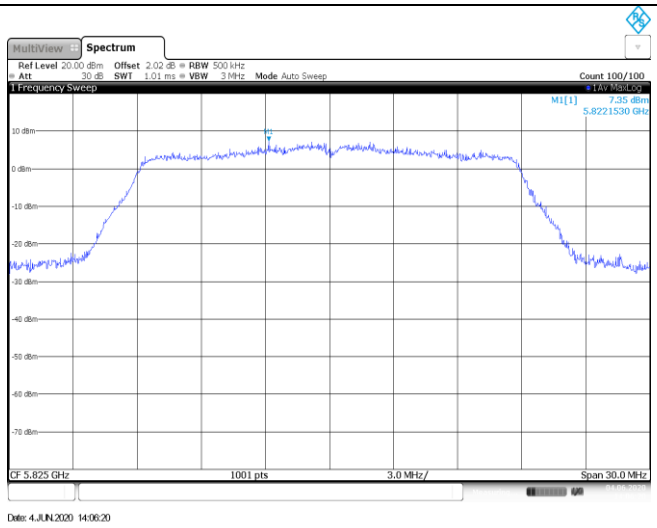
Band III	802.11n (HT20)
CH_L	
CH_M	
CH_H	

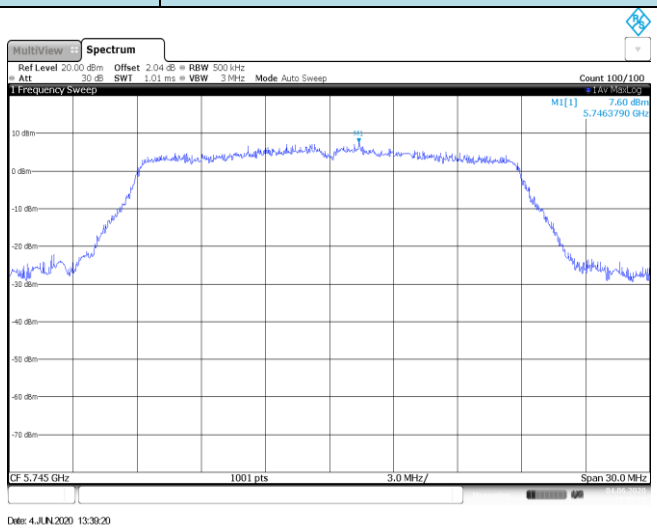
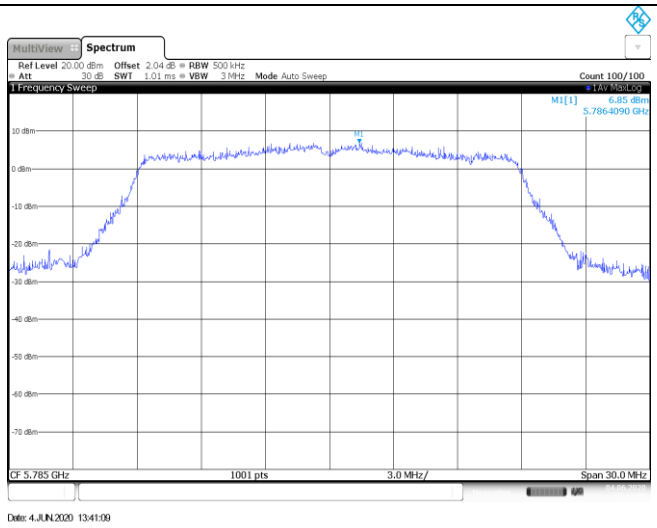
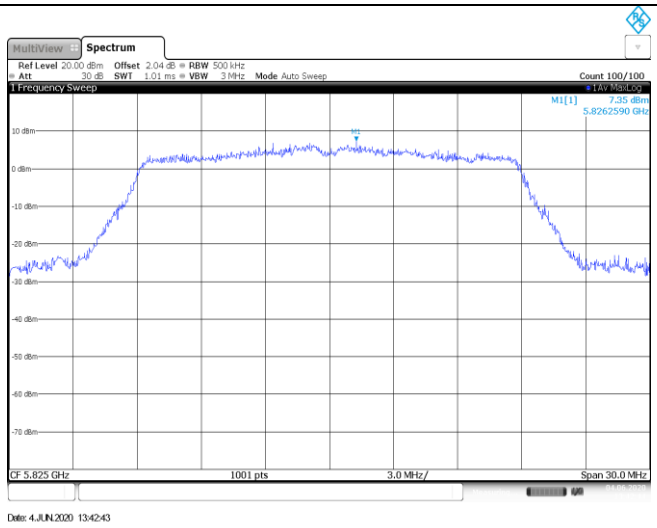
Band III	802.11a
CH_L	
CH_M	
CH_H	

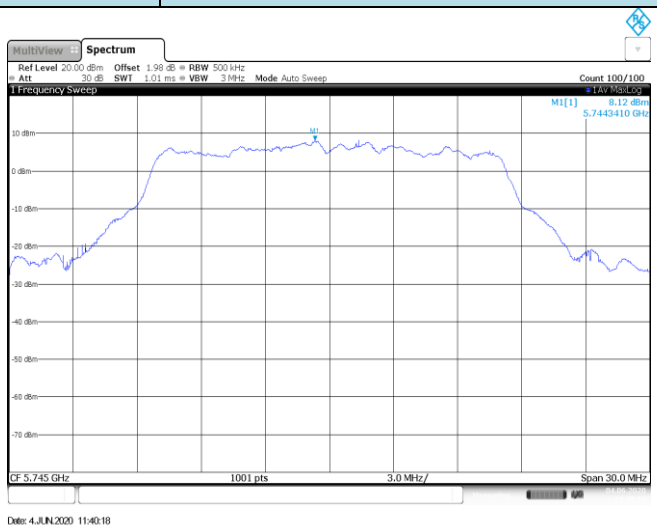
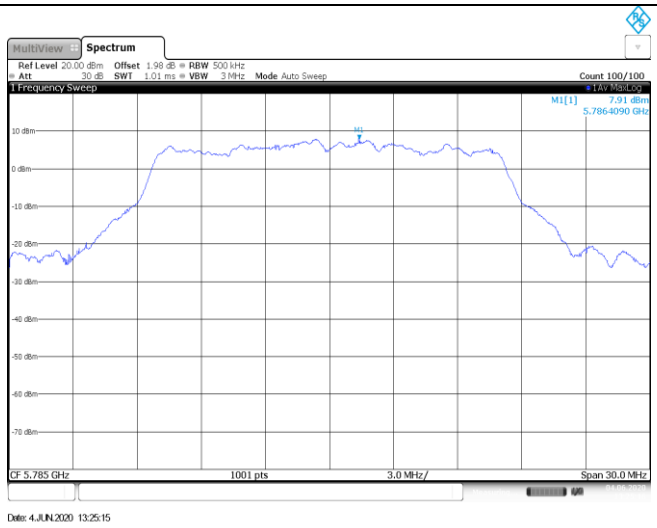
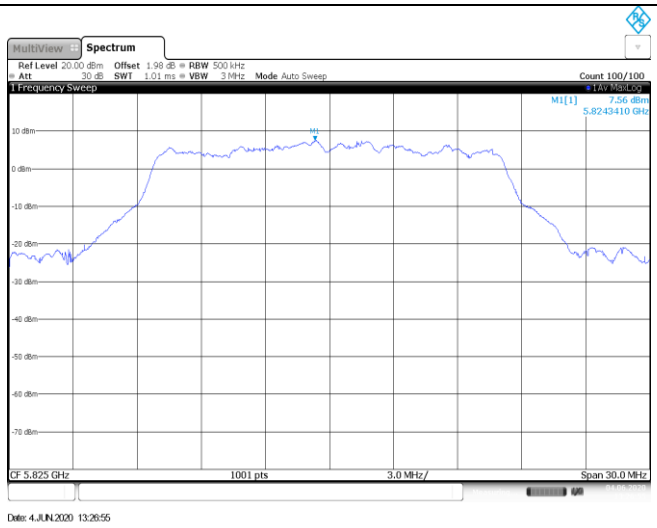
Band III	802.11ac (HT40)
CH_L	
CH_M	
CH_H	

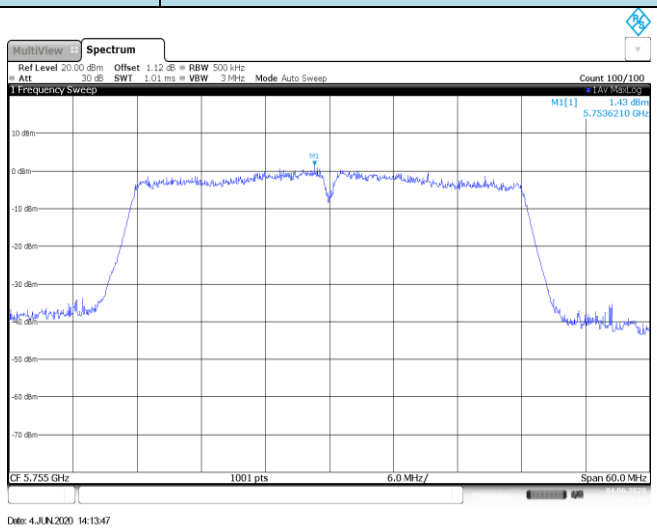
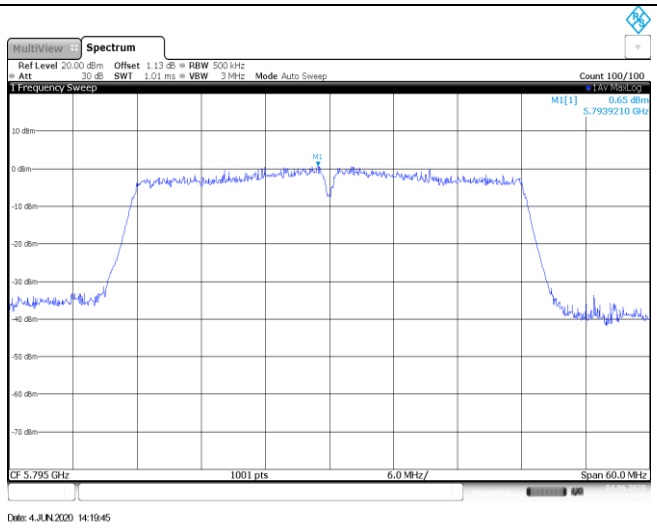
Band III	802.11n (HT40)
CH_L	
CH_M	
CH_H	

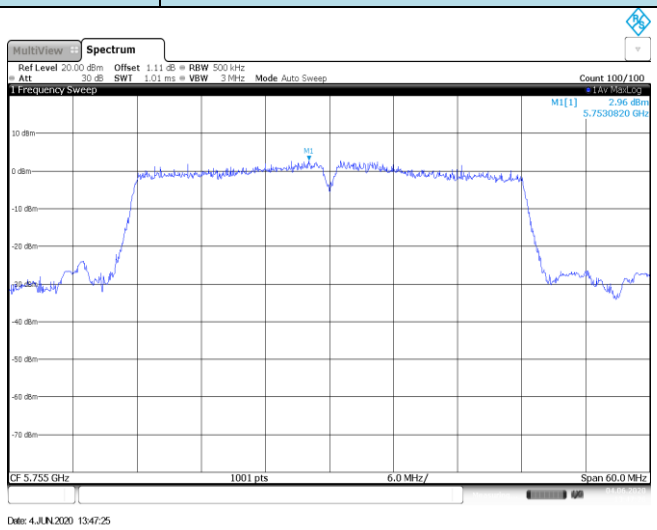
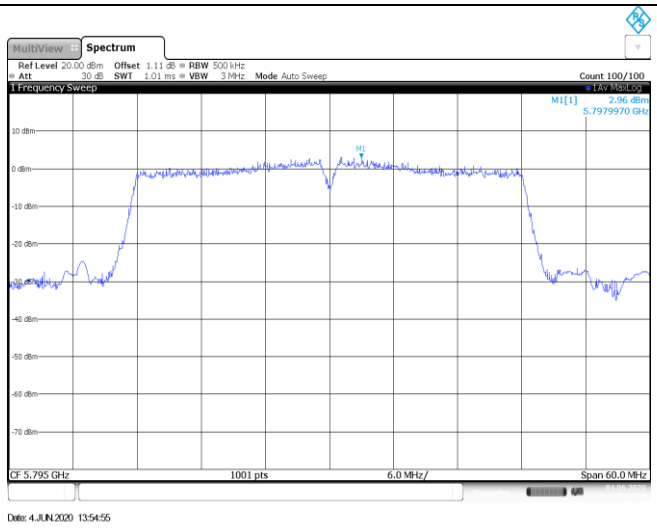
Band III	802.11ac (HT80)
CH_L	
CH_M	
CH_H	

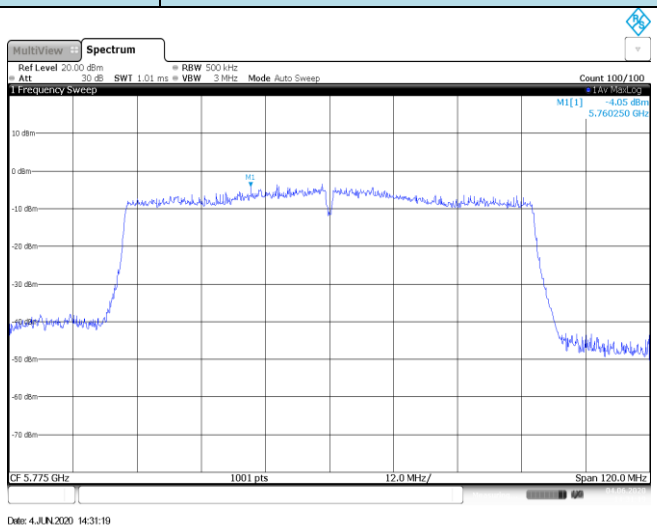
Band IV	802.11ac (HT20)
CH_L	
CH_M	
CH_H	

Band IV	802.11n (HT20)
CH_L	
CH_M	
CH_H	

Band IV	802.11a
CH_L	
CH_M	
CH_H	

Band IV	802.11ac (HT40)
CH_L	
CH_H	

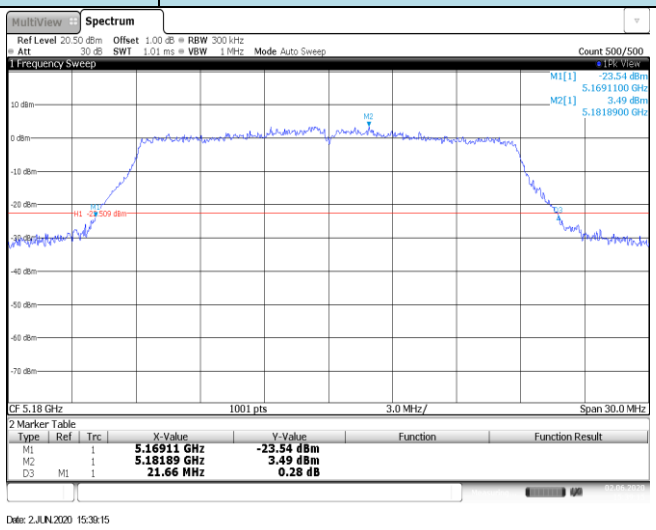
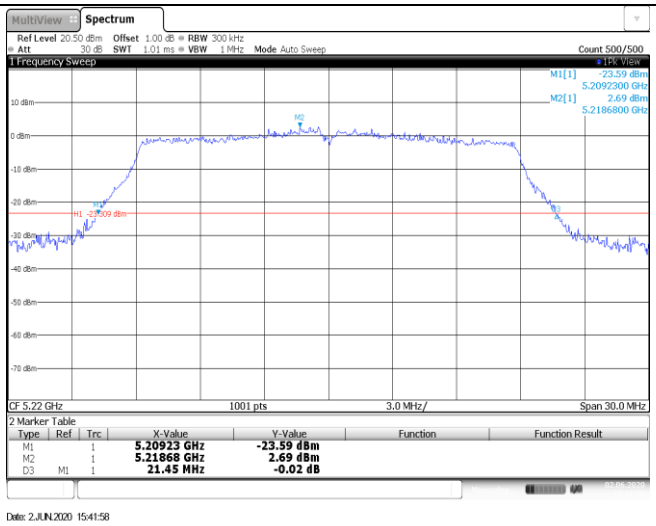
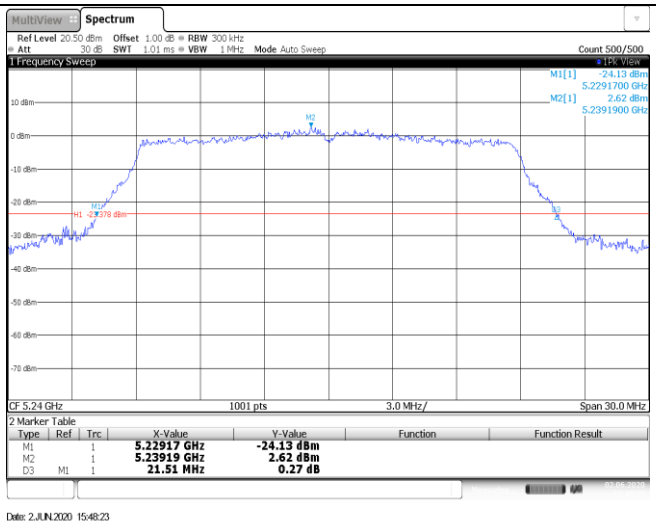
Band IV	802.11n (HT40)
CH_L	
CH_H	

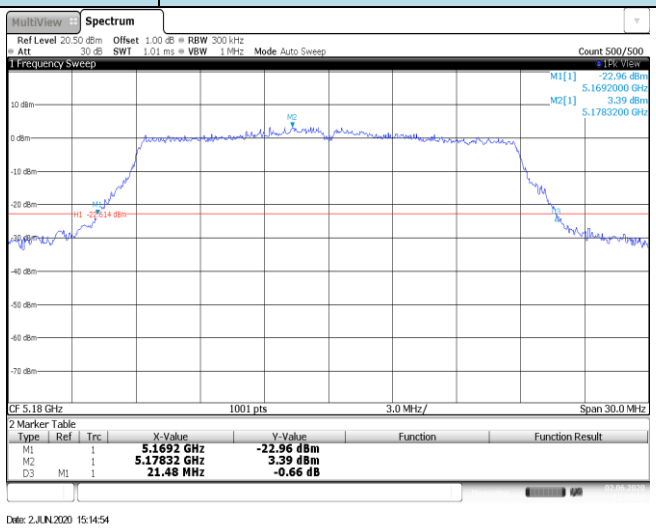
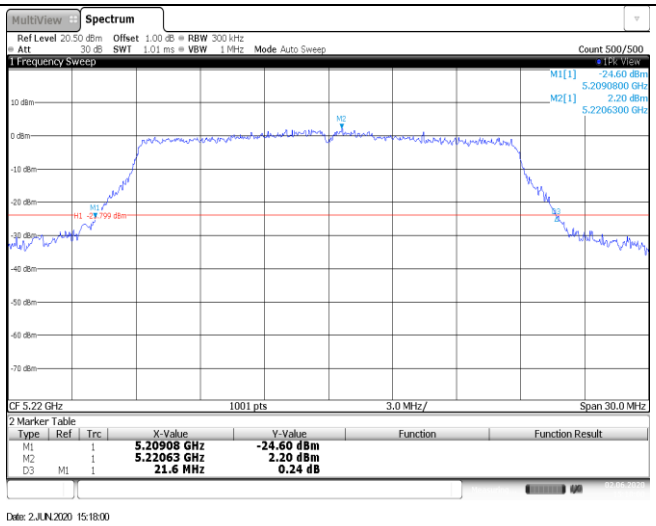
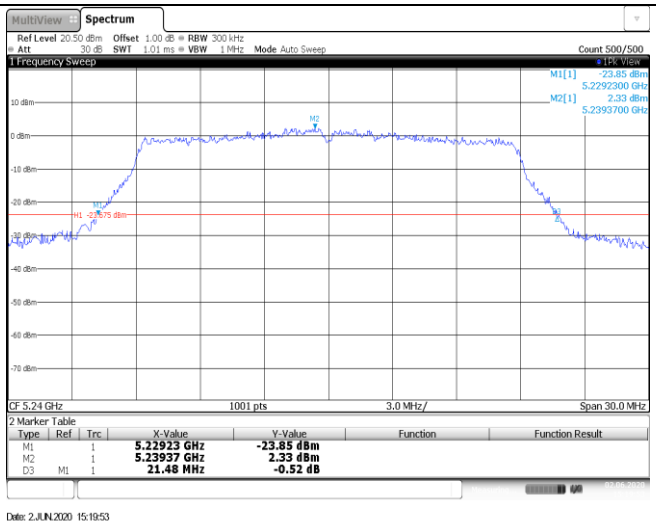
Band IV	802.11ac (HT80)
CH_M	

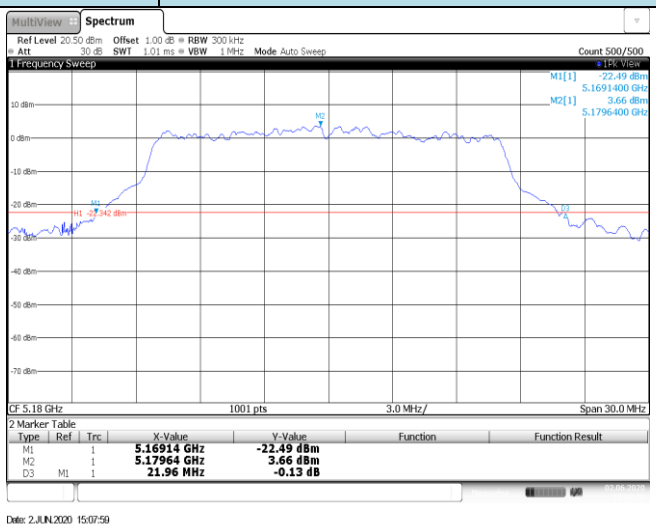
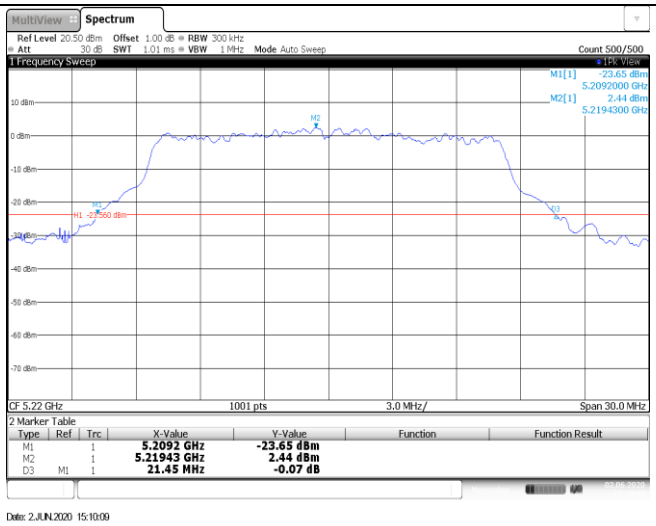
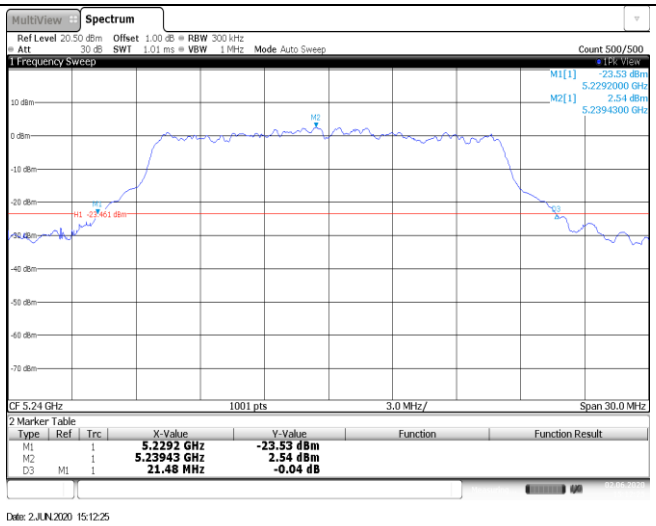
Appendix C：26dB bandwidth

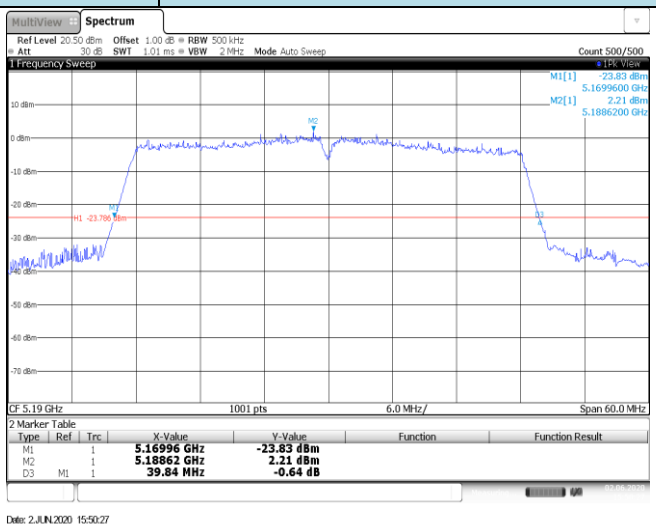
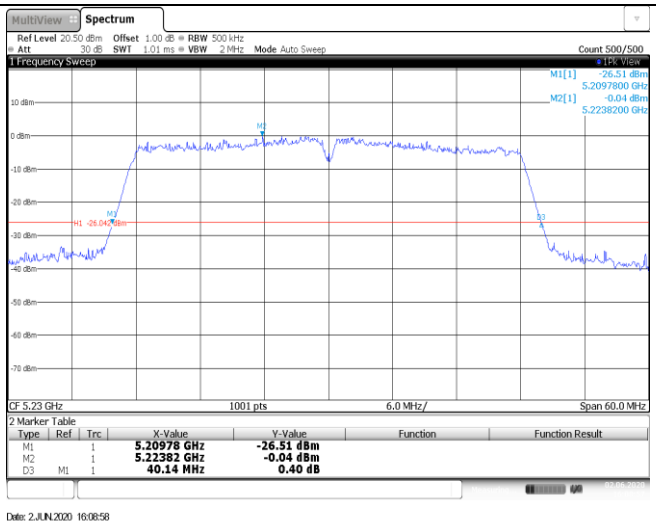
Band	Bandwidth (MHz)	Type	Channel	26dB bandwidth (MHz)	Result
I	20	802.11ac	CH_L	21.66	Pass
			CH_M	21.45	
			CH_H	21.51	
		802.11n	CH_L	21.48	Pass
			CH_M	21.60	
			CH_H	21.48	
		802.11a	CH_L	21.96	Pass
			CH_M	21.45	
			CH_H	21.48	
	40	802.11ac	CH_L	39.84	Pass
			CH_H	40.14	
		802.11n	CH_L	39.60	Pass
			CH_H	39.84	
	80	802.11ac	CH_M	81.36	Pass
II	20	802.11ac	CH_L	21.54	Pass
			CH_M	21.45	
			CH_H	21.51	
		802.11n	CH_L	21.60	Pass
			CH_M	21.57	
			CH_H	21.57	
		802.11a	CH_L	21.96	Pass
			CH_M	21.60	
			CH_H	21.60	
	40	802.11ac	CH_L	39.72	Pass
			CH_H	39.84	
		802.11n	CH_L	39.60	Pass
			CH_H	39.66	
	80	802.11ac	CH_M	80.88	Pass

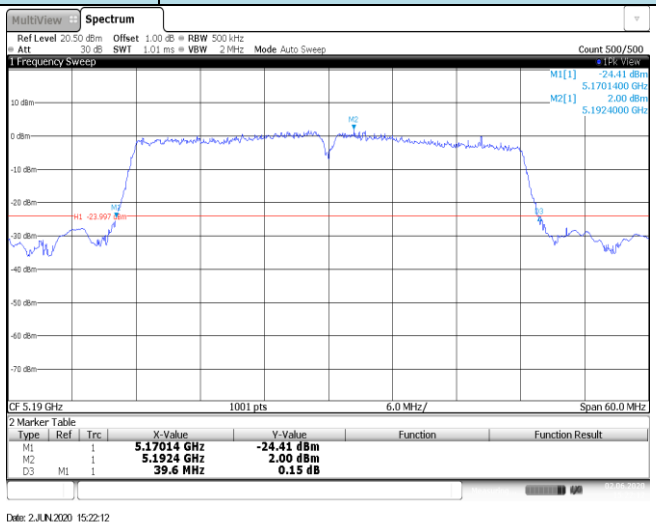
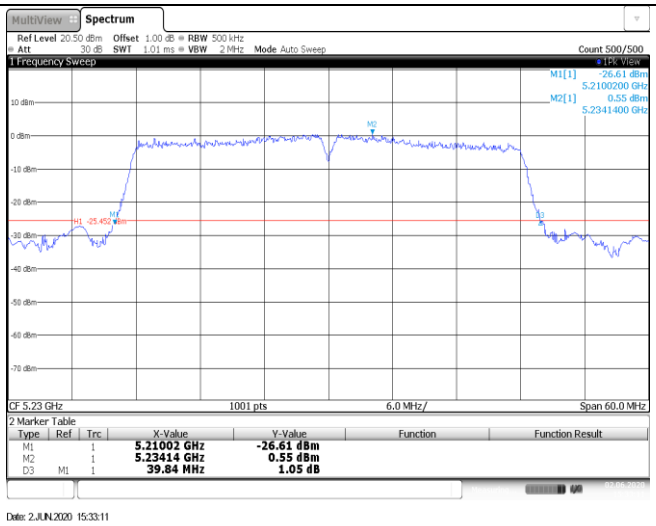
Band	Bandwidth (MHz)	Type	Channel	26dB bandwidth (MHz)	Result
III	20	802.11ac	CH_L	21.75	Pass
			CH_M	21.78	
			CH_H	21.66	
		802.11n	CH_L	21.63	Pass
			CH_M	21.90	
			CH_H	21.60	
		802.11a	CH_L	21.66	Pass
			CH_M	21.39	
			CH_H	21.48	
	40	802.11ac	CH_L	40.02	Pass
			CH_M	39.84	
			CH_H	39.90	
		802.11n	CH_L	40.44	Pass
			CH_M	40.02	
			CH_H	39.84	
	80	802.11ac	CH_L	81.36	Pass
			CH_M	81.72	
			CH_H	81.12	

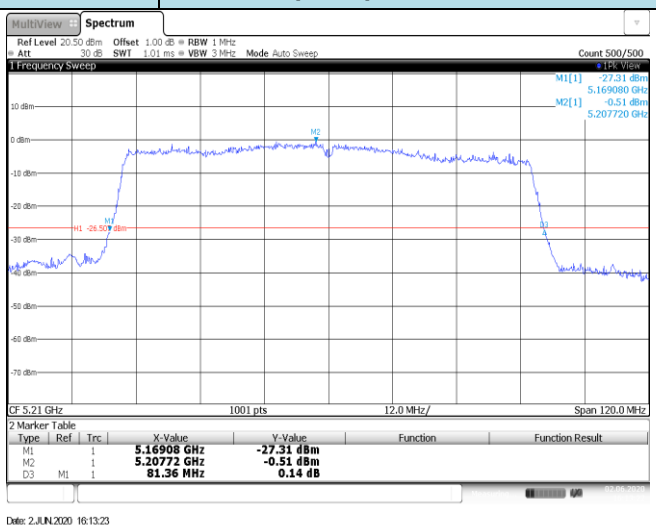
Band I	802.11ac (HT20)
CH_L	
CH_M	
CH_H	

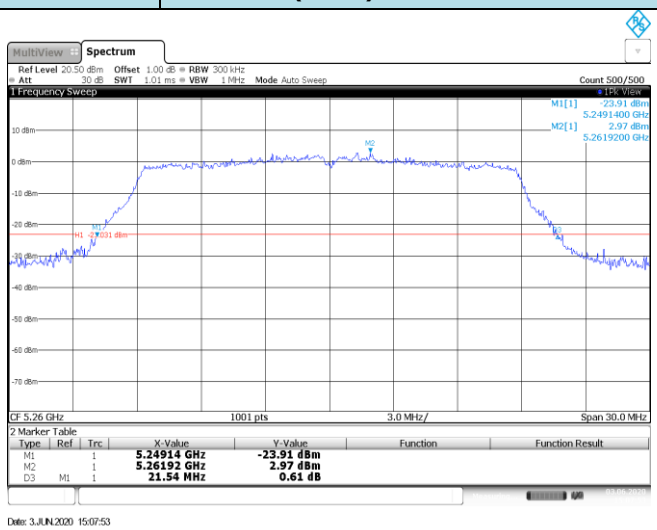
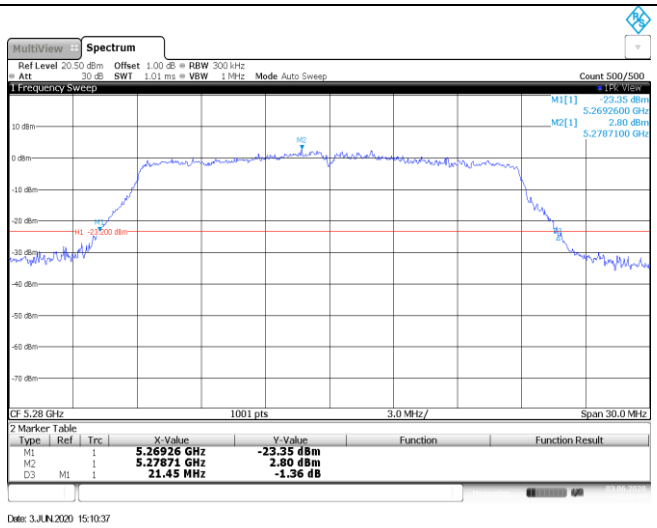
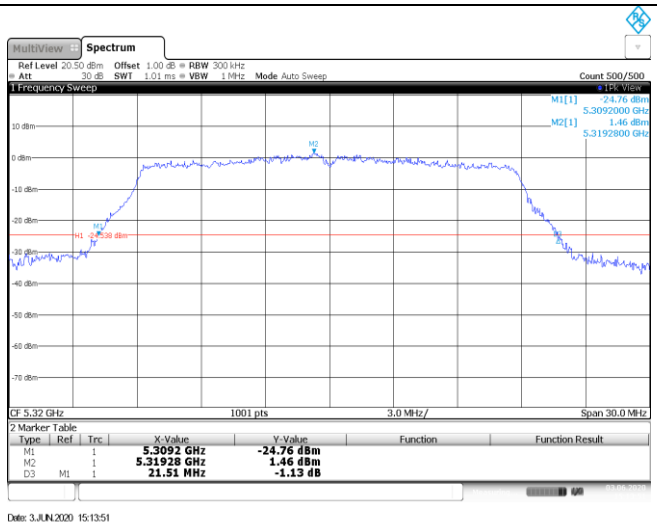
Band I	802.11n (HT20)
CH_L	
CH_M	
CH_H	

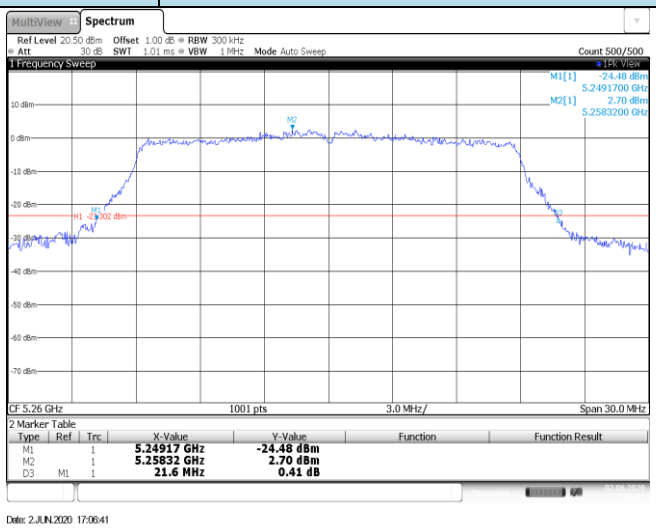
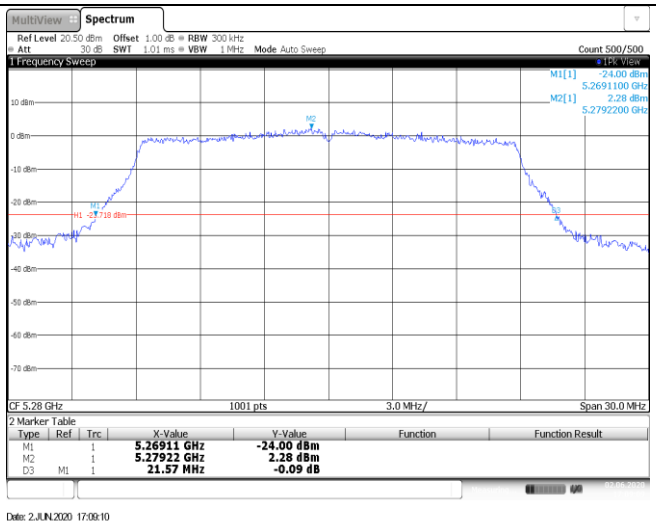
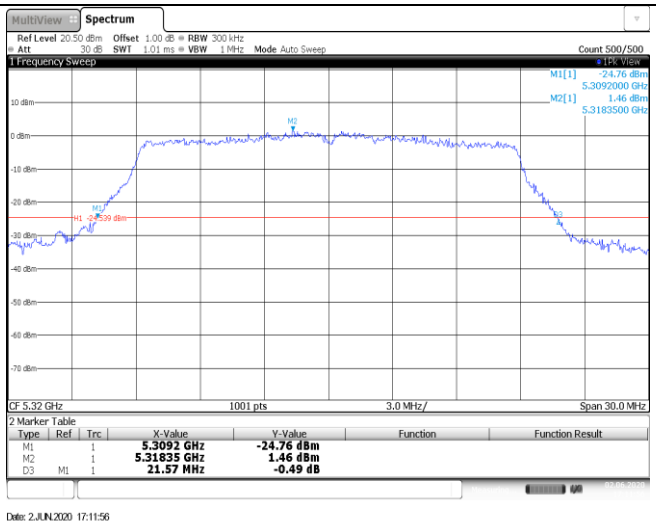
Band I	802.11a
CH_L	
CH_M	
CH_H	

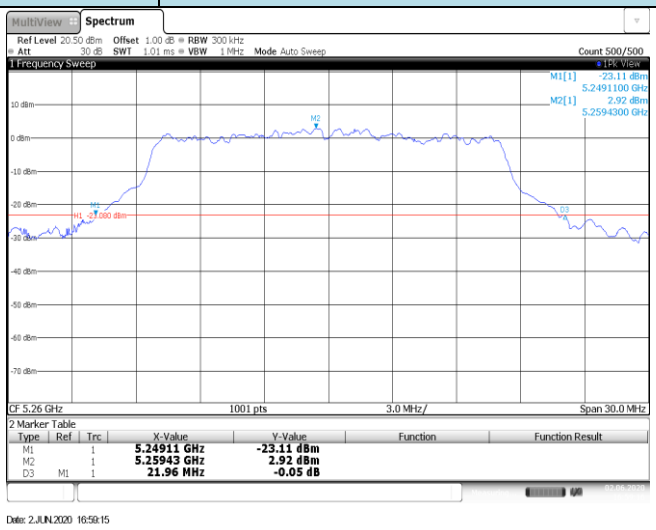
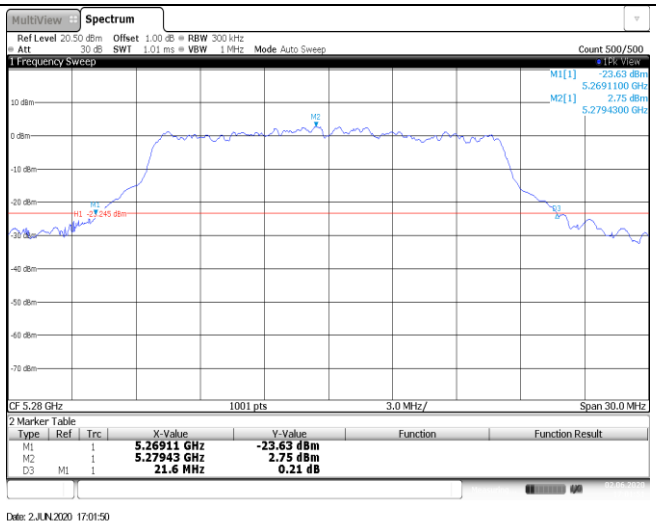
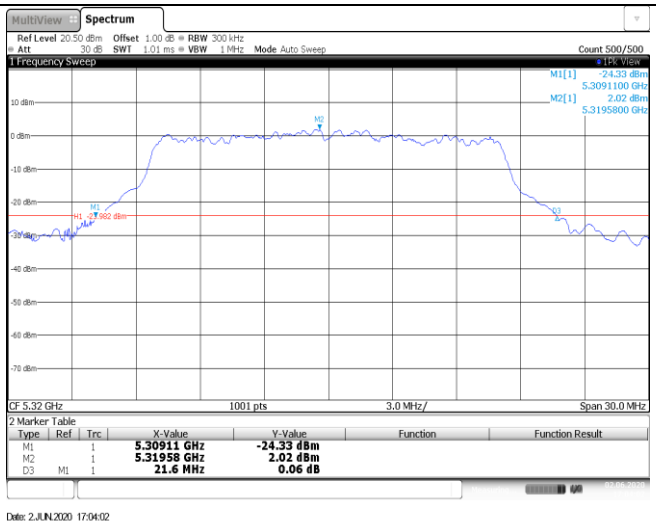
Band I	802.11ac (HT40)
CH_L	
CH_H	

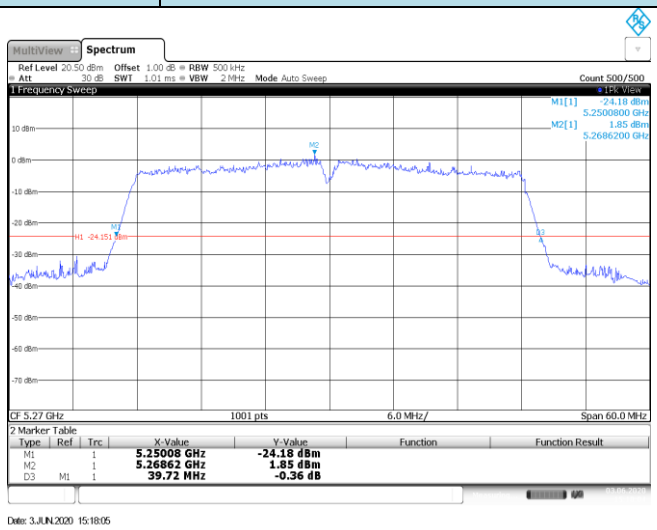
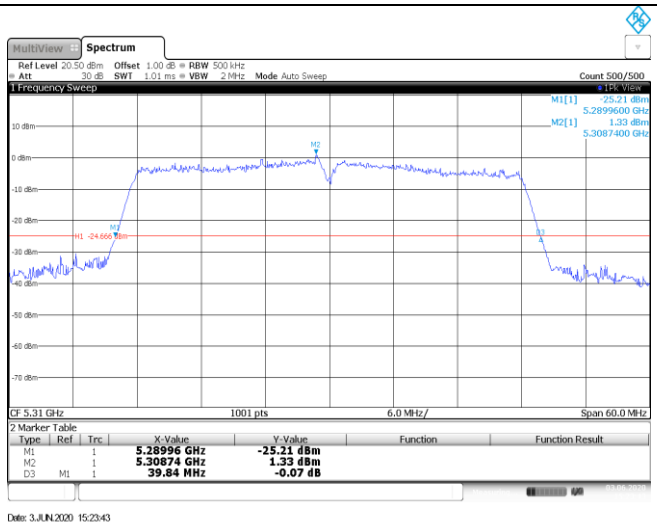
Band I	802.11n (HT40)
CH_L	
CH_H	

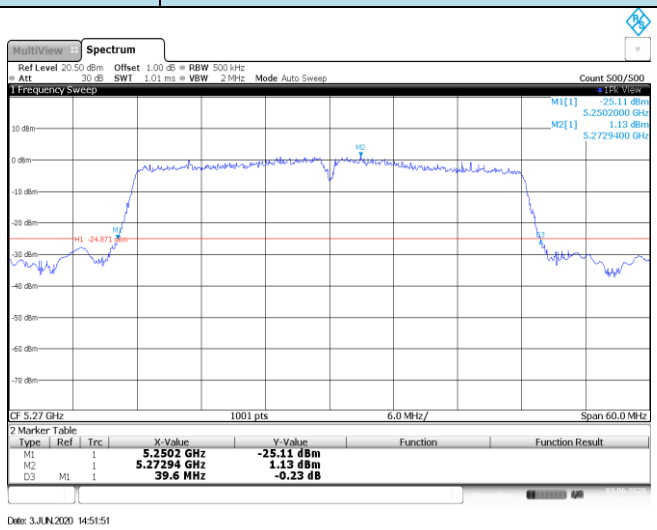
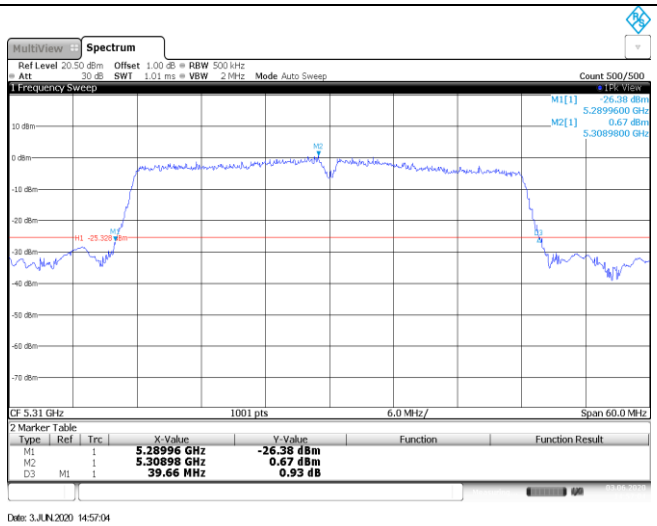
Band I	802.11ac (HT80)
CH_M	

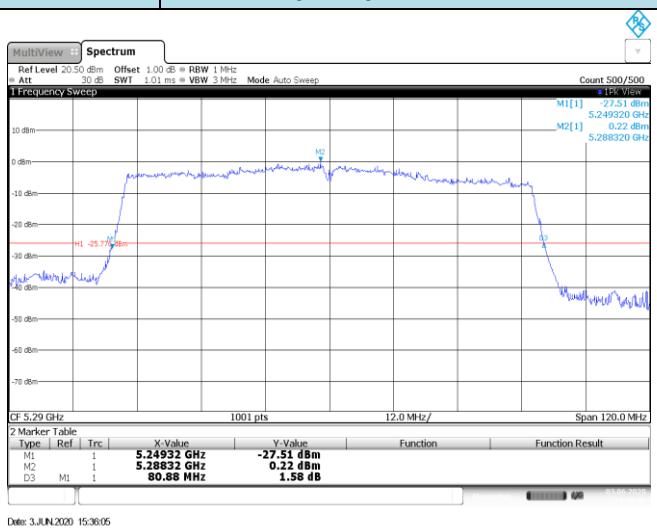
Band II	802.11ac (HT20)
CH_L	
CH_M	
CH_H	

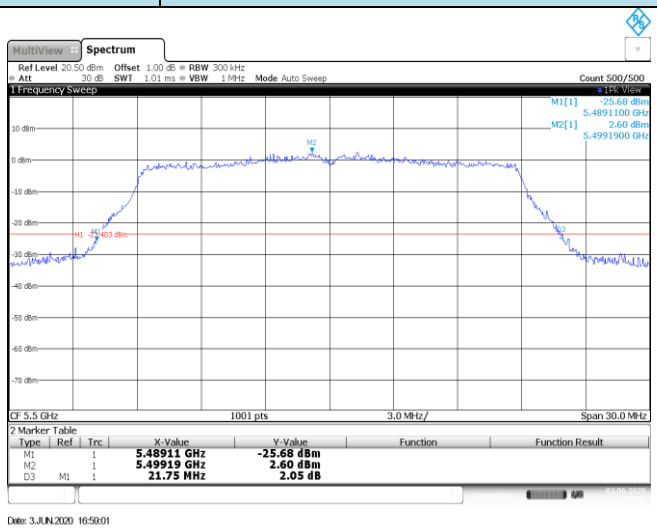
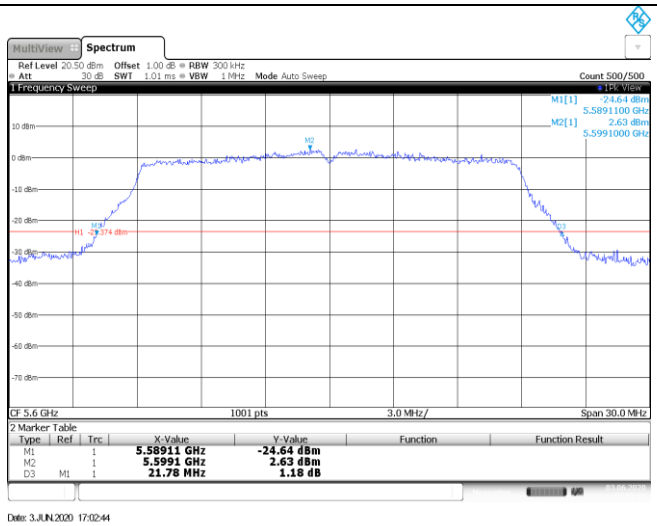
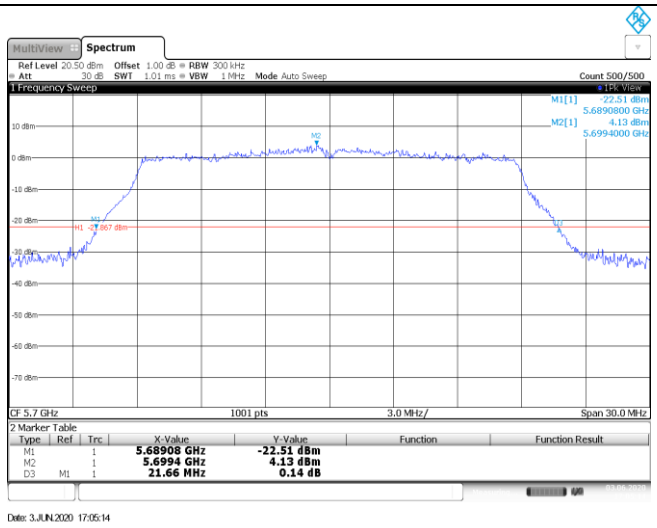
Band II	802.11n (HT20)
CH_L	
CH_M	
CH_H	

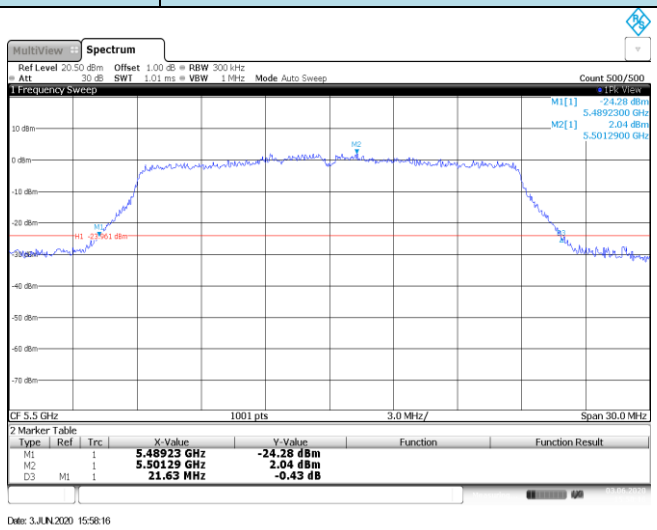
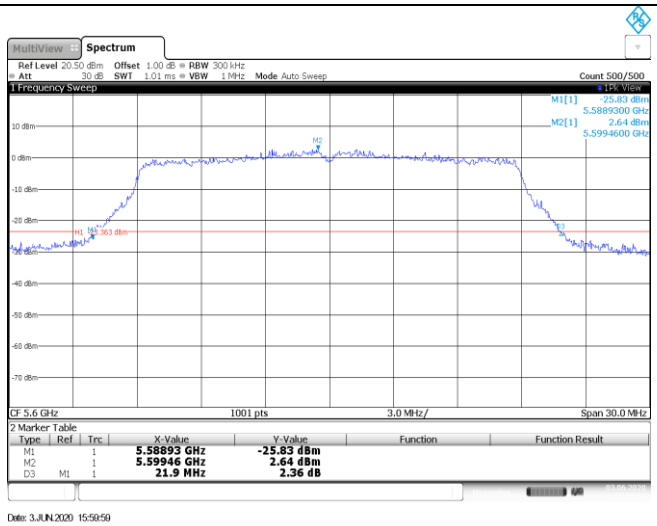
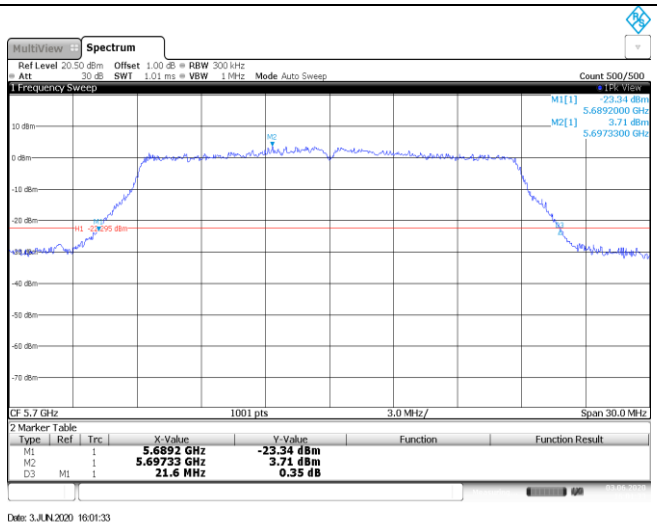
Band II	802.11a
CH_L	
CH_M	
CH_H	

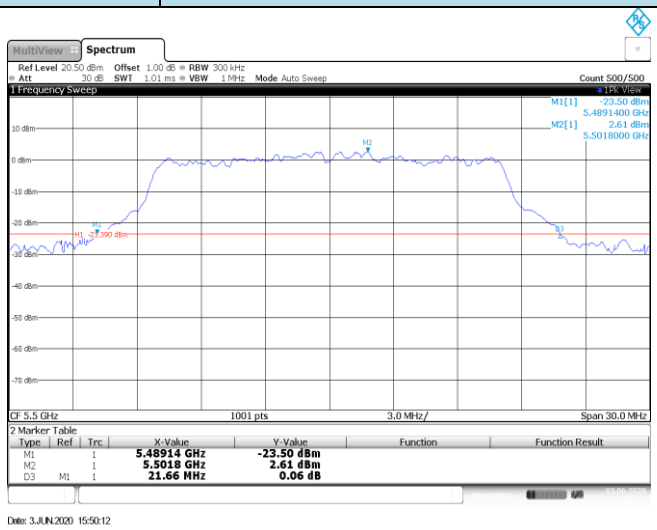
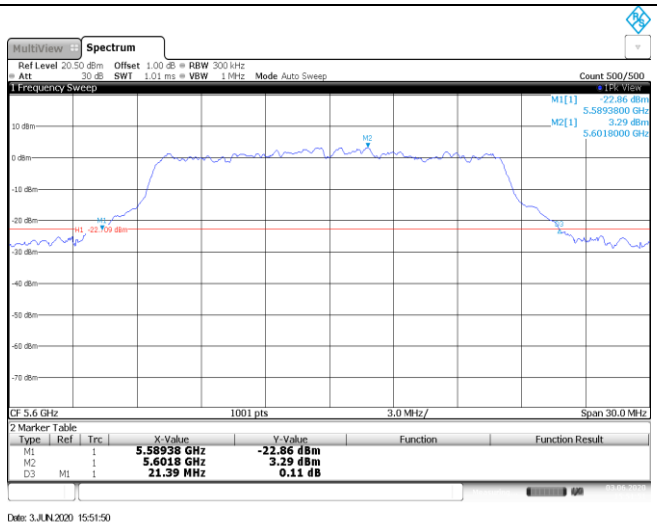
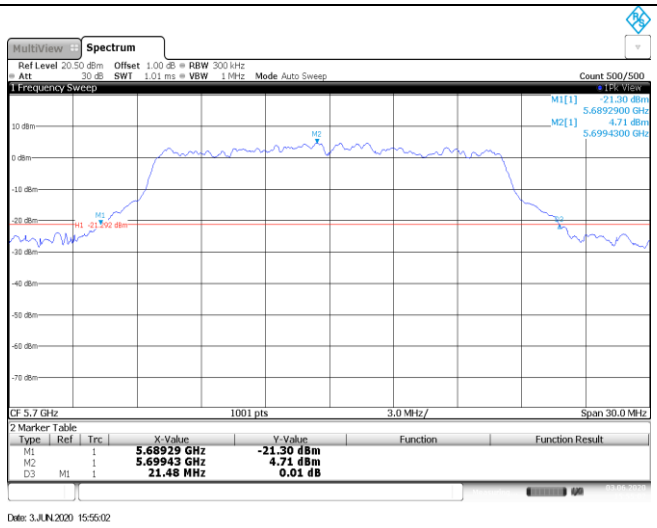
Band II	802.11ac (HT40)
CH_L	
CH_H	

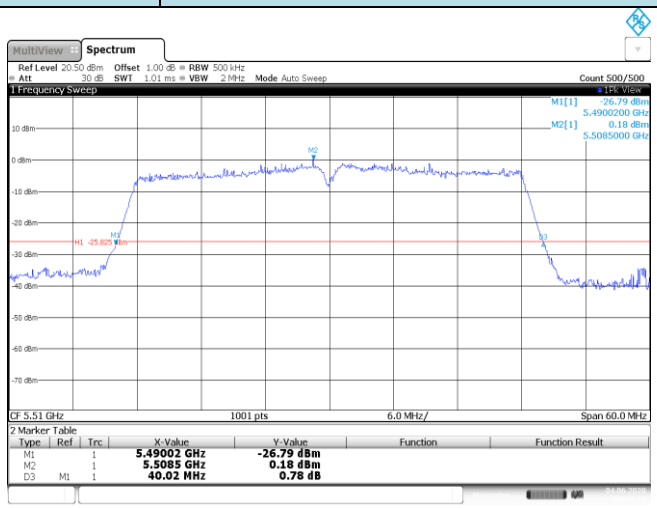
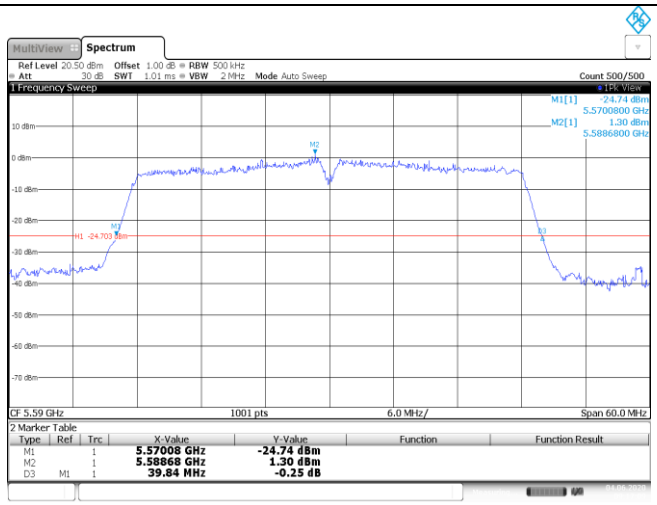
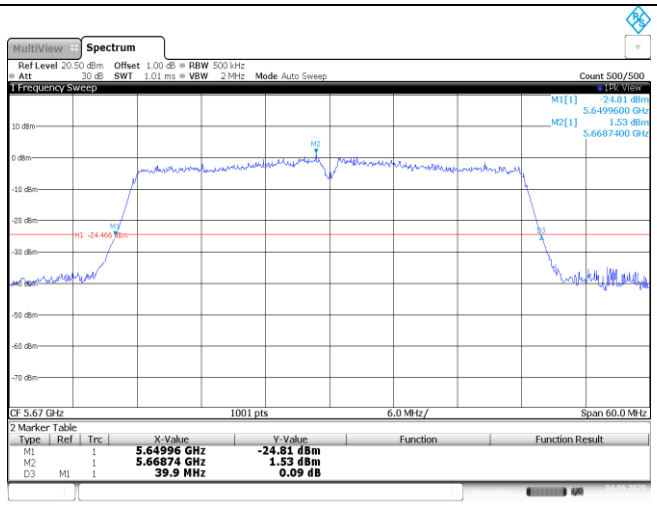
Band II	802.11n (HT40)
CH_L	
CH_H	

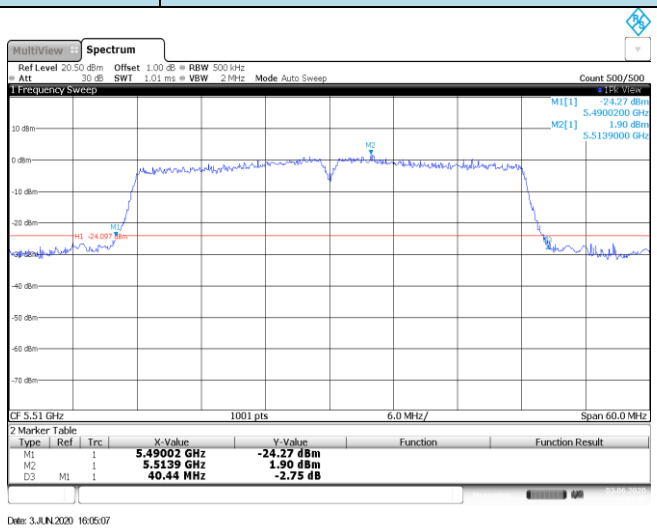
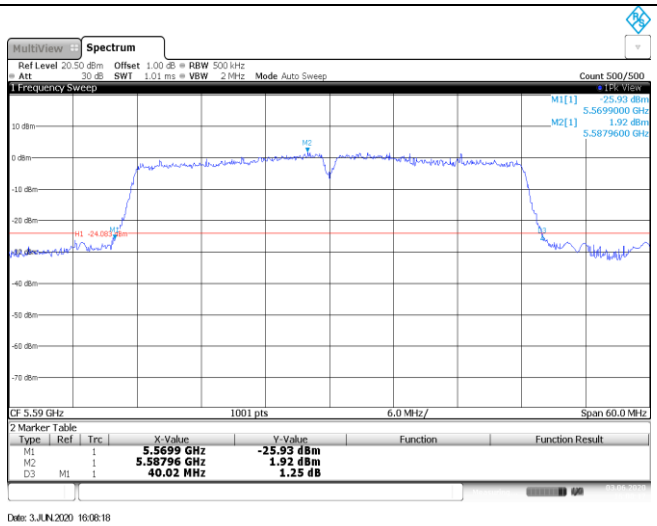
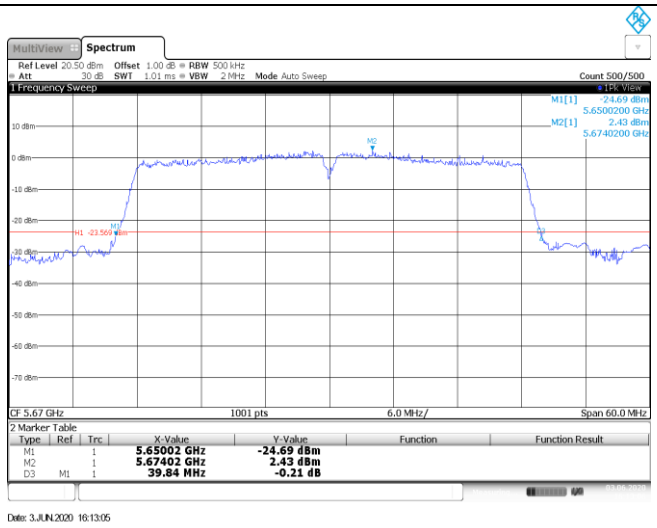
Band II	802.11ac (HT80)
CH_M	

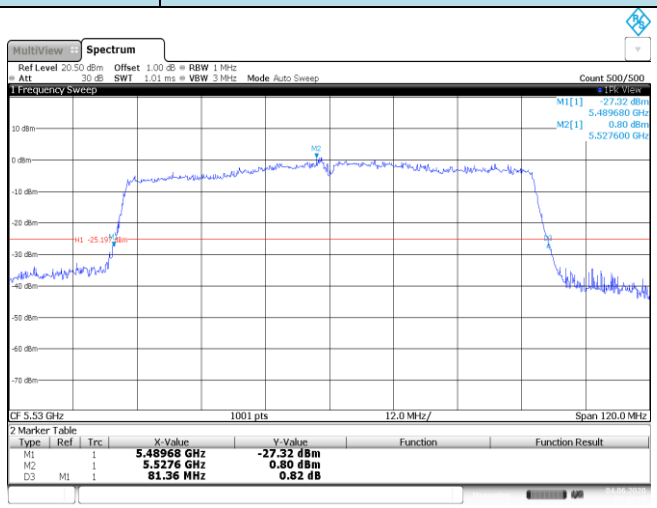
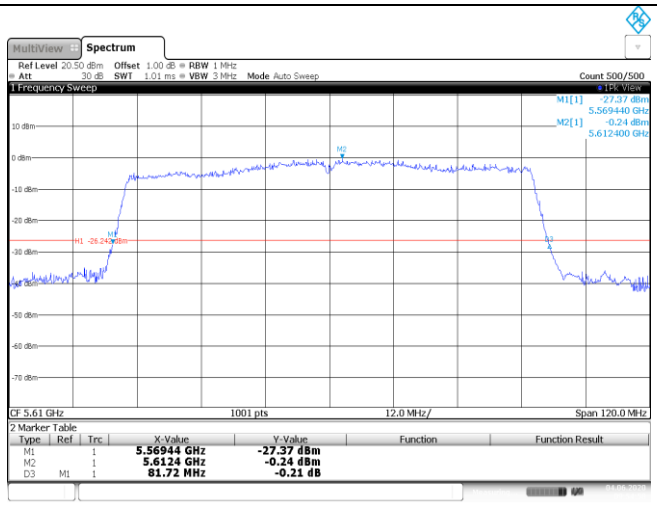
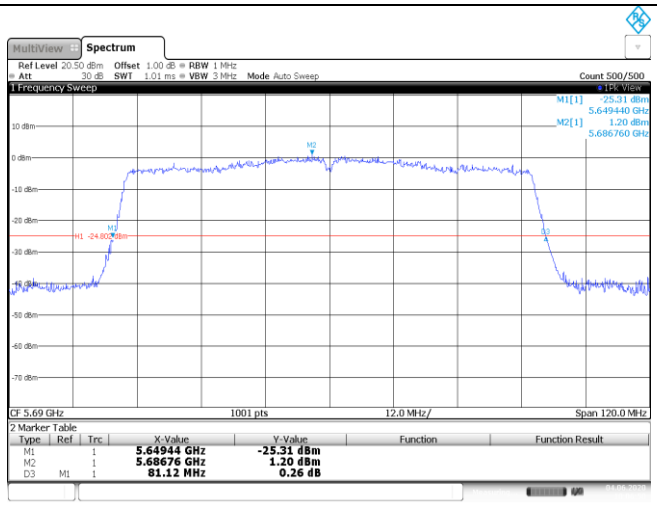
Band III	802.11ac (HT20)
CH_L	
CH_M	
CH_H	

Band III	802.11n (HT20)
CH_L	
CH_M	
CH_H	

Band III	802.11a
CH_L	
CH_M	
CH_H	

Band III	802.11ac (HT40)
CH_L	
CH_M	
CH_H	

Band III	802.11n (HT40)
CH_L	
CH_M	
CH_H	

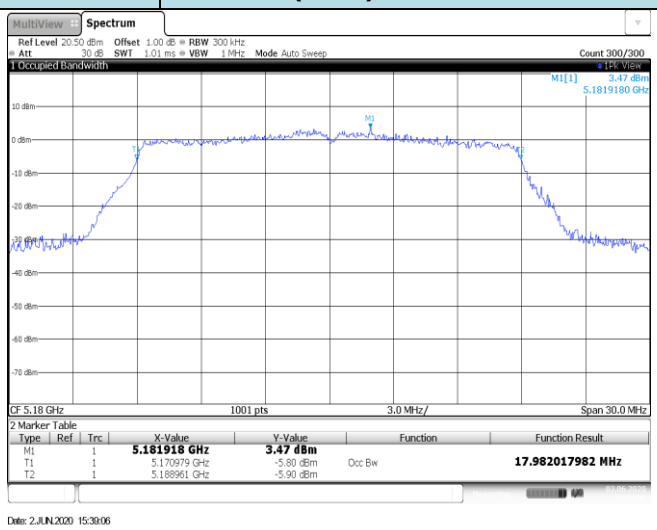
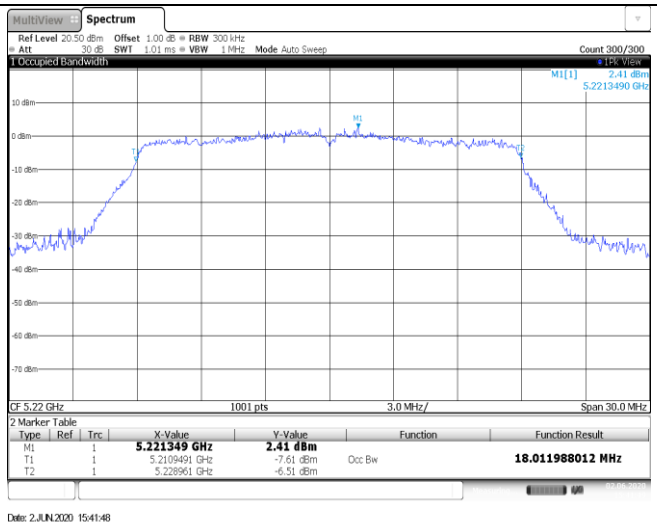
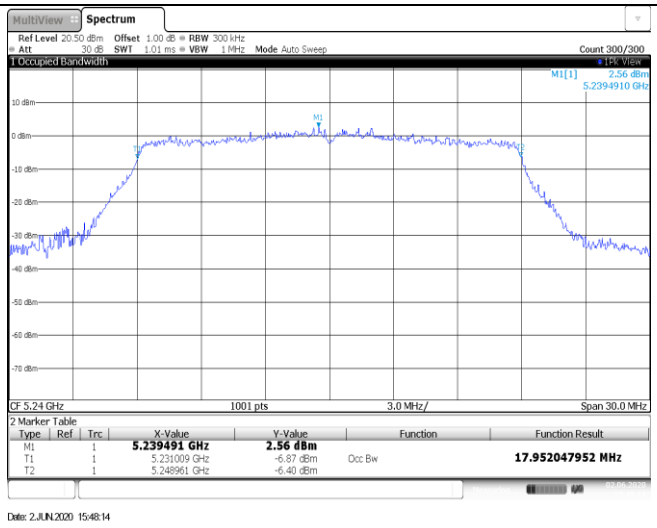
Band III	802.11ac (HT80)
CH_L	
CH_M	
CH_H	

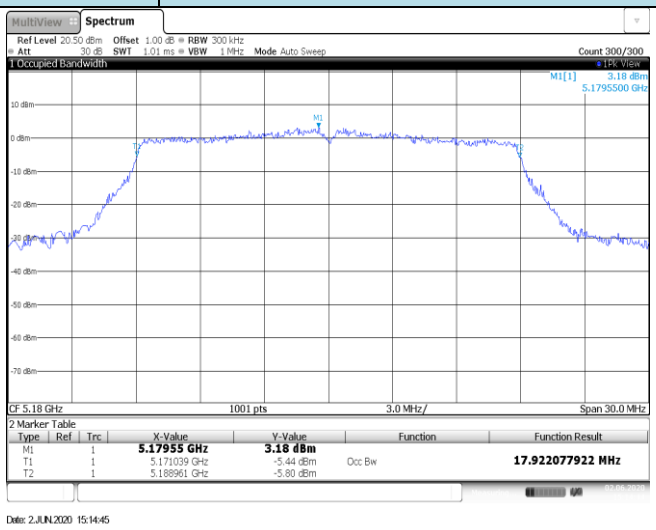
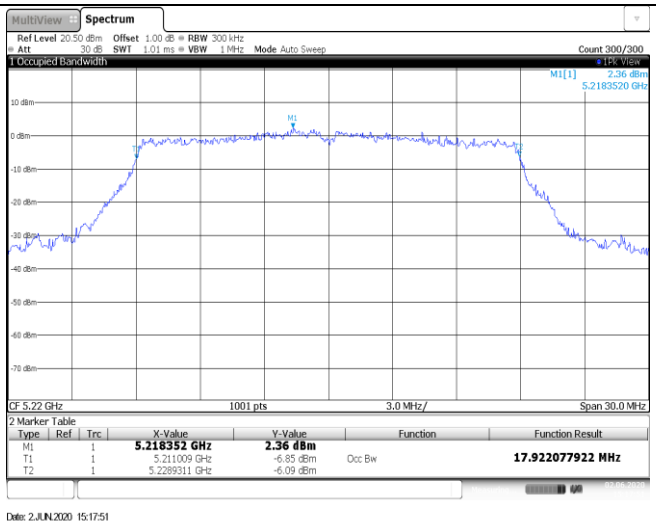
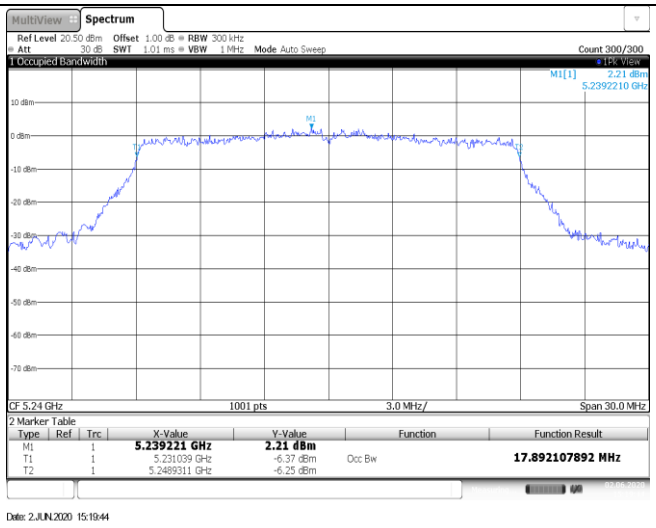
Appendix D：99% Occupy bandwidth

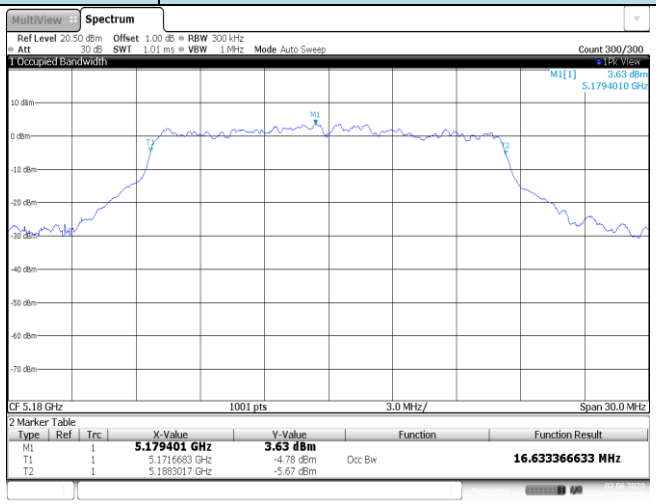
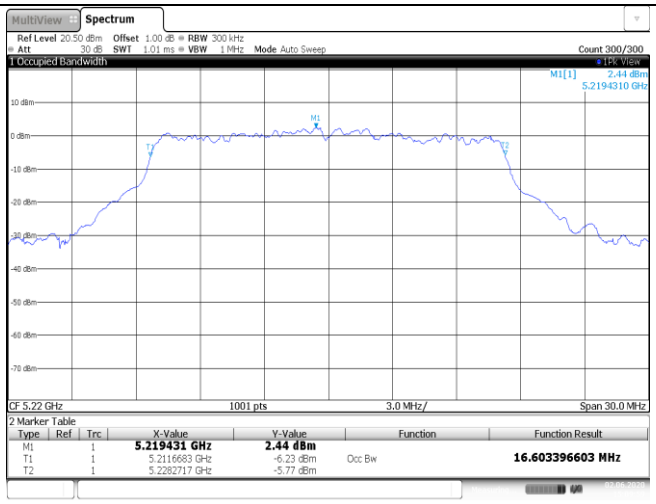
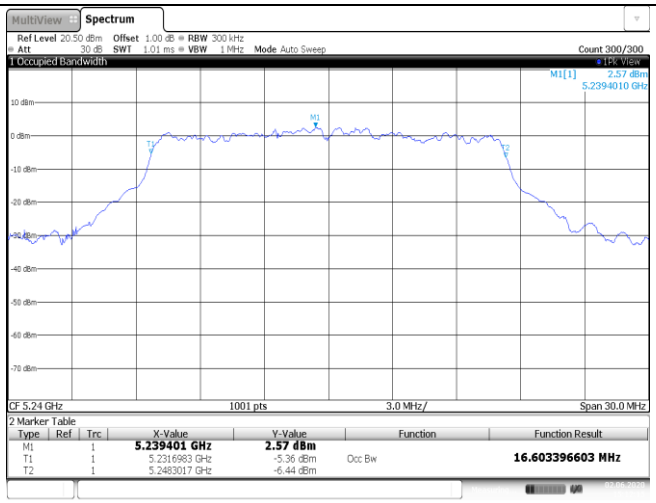
Band	Bandwidth (MHz)	Type	Channel	99% Occupy bandwith (MHz)	Result
I	20	802.11ac	CH_L	17.98	Pass
			CH_M	18.01	
			CH_H	17.95	
		802.11n	CH_L	17.92	Pass
			CH_M	17.92	
			CH_H	17.89	
		802.11a	CH_L	16.63	Pass
			CH_M	16.60	
			CH_H	16.60	
	40	802.11ac	CH_L	36.44	Pass
			CH_H	8.87	
		802.11n	CH_L	36.32	Pass
			CH_H	36.26	
	80	802.11ac	CH_M	75.41	Pass
II	20	802.11ac	CH_L	17.95	Pass
			CH_M	17.95	
			CH_H	17.95	
		802.11n	CH_L	17.89	Pass
			CH_M	17.92	
			CH_H	17.89	
		802.11a	CH_L	16.63	Pass
			CH_M	16.63	
			CH_H	16.63	
	40	802.11ac	CH_L	36.38	Pass
			CH_H	36.50	
		802.11n	CH_L	36.26	Pass
			CH_H	36.20	
	80	802.11ac	CH_M	75.41	Pass

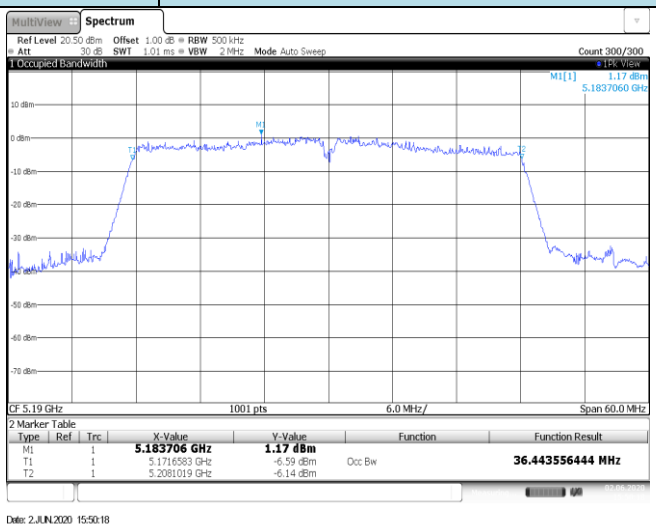
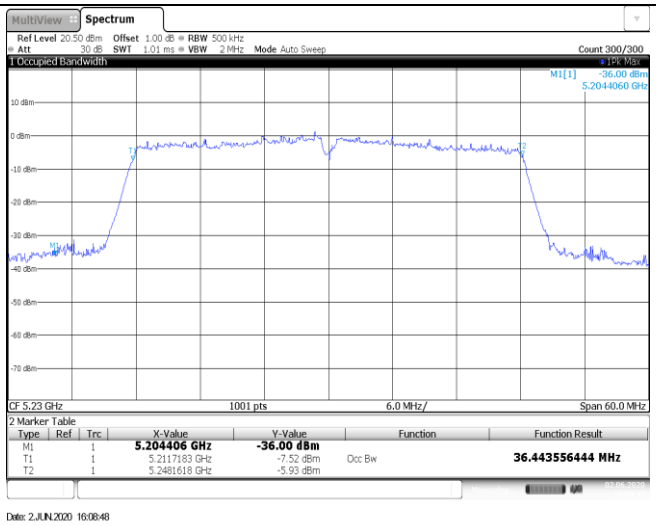
Band	Bandwidth (MHz)	Type	Channel	99% Occupy bandwith (MHz)	Result
III	20	802.11ac	CH_L	17.98	Pass
			CH_M	17.98	
			CH_H	17.98	
		802.11n	CH_L	17.95	Pass
			CH_M	17.95	
			CH_H	17.89	
		802.11a	CH_L	16.69	Pass
			CH_M	16.66	
			CH_H	16.63	
	40	802.11ac	CH_L	36.44	Pass
			CH_M	36.44	
			CH_H	36.32	
		802.11n	CH_L	36.32	Pass
			CH_M	36.32	
			CH_H	36.32	
	80	802.11ac	CH_L	75.52	Pass
			CH_M	75.41	
			CH_H	75.52	

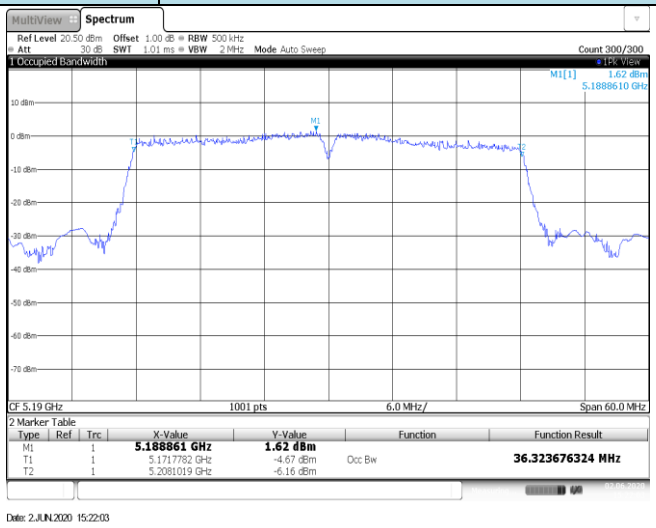
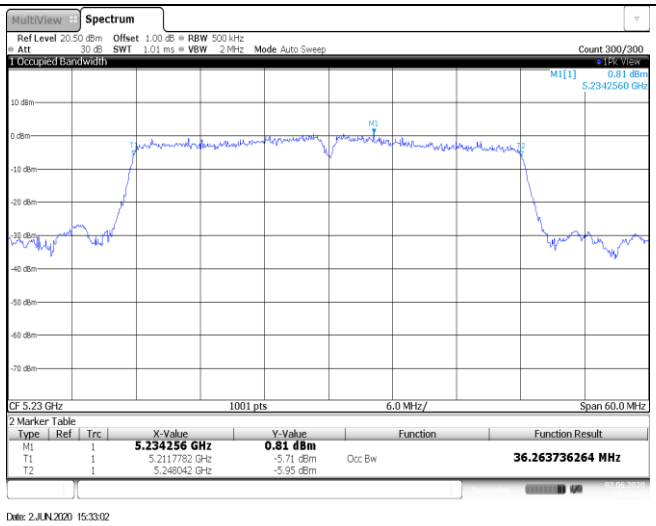
Band	Bandwidth (MHz)	Type	Channel	99% Occupy bandwith (MHz)	Result
IV	20	802.11ac	CH_L	17.98	Pass
			CH_M	18.01	
			CH_H	17.98	
		802.11n	CH_L	17.92	Pass
			CH_M	17.98	
			CH_H	17.95	
		802.11a	CH_L	16.63	Pass
			CH_M	16.63	
			CH_H	16.66	
	40	802.11ac	CH_L	36.38	Pass
			CH_H	36.38	
		802.11n	CH_L	36.21	Pass
			CH_H	36.30	
	80	802.11ac	CH_M	75.64	Pass

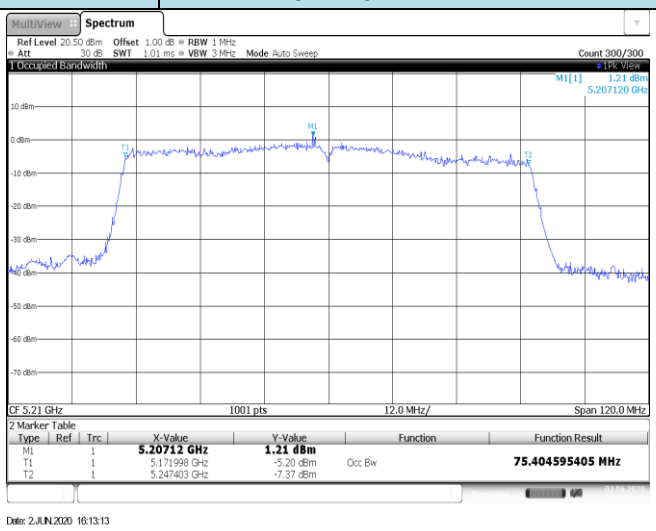
Band I	802.11ac (HT20)
CH_L	
CH_M	
CH_H	

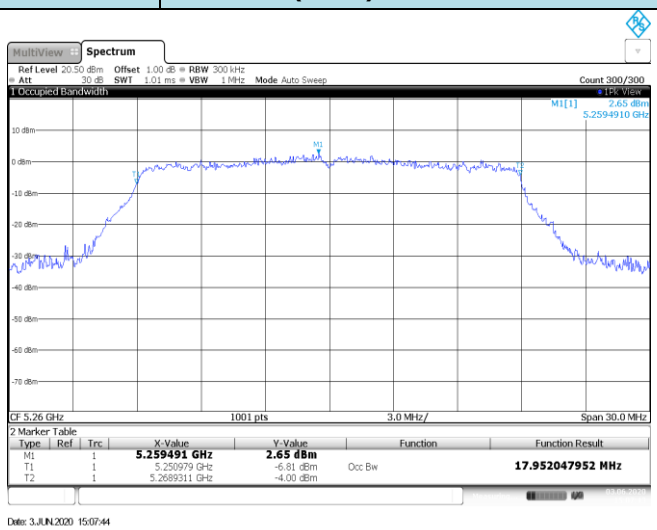
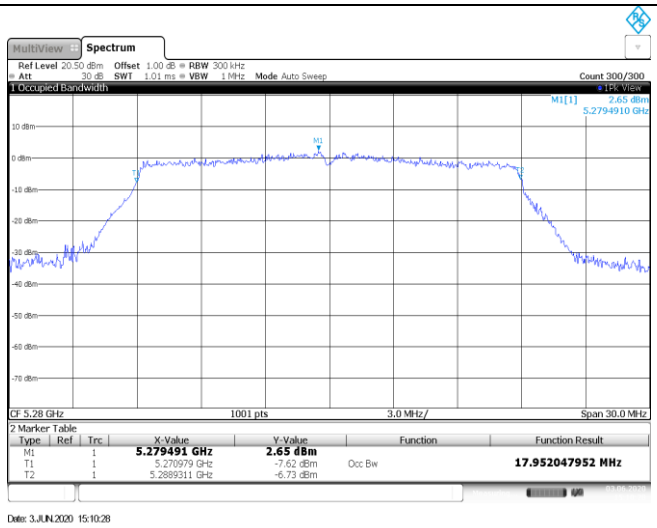
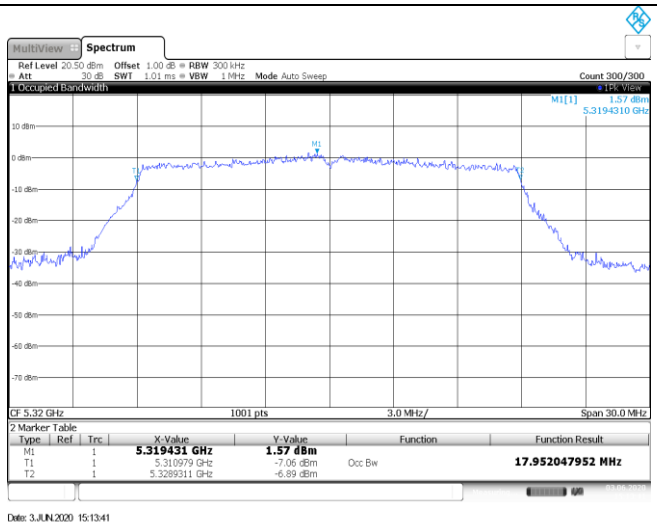
Band I	802.11n (HT20)
CH_L	
CH_M	
CH_H	

Band I	802.11a
CH_L	
CH_M	
CH_H	

Band I	802.11ac (HT40)
CH_L	
CH_H	

Band I	802.11n (HT40)
CH_L	
CH_H	

Band I	802.11ac (HT80)
CH_M	

Band II	802.11ac (HT20)
CH_L	
CH_M	
CH_H