APPENDIX REPORT

Project No.	SHT2109040108EW	Radio Specification	WIFI 5G
Test sample No.	YPHT21070035015	Model No.	AM501
Start test date	2021-08-18	Finish date	2021-10-30
Temperature	26.1°C	Humidity	34%
Test Engineer	Hailey Chen	Auditor	Xiaodong Zhao

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	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	15.04	97.21	0.12	15.16	24.00	Pass
			CH_M	15.24	97.21	0.12	15.36		
			CH_H	15.24	97.21	0.12	15.36		
		802.11n	CH_L	14.81	97.18	0.12	14.93	24.00	Pass
			CH_M	14.95	97.18	0.12	15.07		
			CH_H	15.02	97.18	0.12	15.14		
		802.11a	CH_L	14.86	97.36	0.12	14.98	24.00	Pass
			CH_M	14.95	97.36	0.12	15.07		
			CH_H	15.05	97.36	0.12	15.17		
	40	802.11ac	CH_L	11.05	94.68	0.24	11.29	24.00	Pass
			CH_H	15.06	94.68	0.24	15.30		
		802.11n	CH_L	10.92	94.74	0.23	11.15	24.00	Pass
			CH_H	15.10	94.65	0.24	15.34		
	80	802.11ac	CH_M	11.23	89.82	0.47	11.70	24.00	Pass
II	20	802.11ac	CH_L	15.39	97.21	0.12	15.51	24.00	Pass
			CH_M	15.44	97.11	0.13	15.57		
			CH_H	15.49	97.21	0.12	15.61		
		802.11n	CH_L	15.07	97.18	0.12	15.19	24.00	Pass
			CH_M	15.06	97.18	0.12	15.18		
			CH_H	15.23	97.18	0.12	15.35		
		802.11a	CH_L	15.21	97.36	0.12	15.33	24.00	Pass
			CH_M	15.25	97.28	0.12	15.37		
			CH_H	15.23	97.36	0.12	15.35		
	40	802.11ac	CH_L	15.45	94.68	0.24	15.69	24.00	Pass
			CH_H	11.35	94.68	0.24	11.59		
		802.11n	CH_L	15.28	94.65	0.24	15.52	24.00	Pass
			CH_H	11.37	94.65	0.24	11.61		
	80	802.11ac	CH_M	11.62	89.82	0.47	12.09	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	15.42	97.11	0.13	15.55	24.00	Pass
			CH_M	15.68	97.21	0.12	15.80		
			CH_H	11.95	97.21	0.12	12.07		
		802.11n	CH_L	15.25	97.18	0.12	15.37	24.00	Pass
			CH_M	15.52	97.18	0.12	15.64		
			CH_H	11.82	97.09	0.13	11.95		
		802.11a	CH_L	15.43	97.36	0.12	15.55	24.00	Pass
			CH_M	15.64	97.36	0.12	15.76		
			CH_H	11.86	97.36	0.12	11.98		
	40	802.11ac	CH_L	11.11	94.68	0.24	11.35	24.00	Pass
			CH_M	15.82	94.68	0.24	16.06		
			CH_H	11.86	94.68	0.24	12.10		
		802.11n	CH_L	11.12	94.74	0.23	11.35	24.00	Pass
			CH_M	15.82	94.65	0.24	16.06		
			CH_H	11.85	94.65	0.24	12.09		
	80	802.11ac	CH_L	11.76	89.84	0.47	12.23	24.00	Pass
			CH_M	15.32	89.84	0.47	15.79		
			CH_H	16.05	89.84	0.47	16.52		
IV	20	802.11ac	CH_L	16.19	97.11	0.13	16.32	30.00	Pass
			CH_M	16.32	97.21	0.12	16.44		
			CH_H	16.44	97.21	0.12	16.56		
		802.11n	CH_L	16.02	97.18	0.12	16.14	30.00	Pass
			CH_M	16.15	97.18	0.12	16.27		
			CH_H	16.27	97.18	0.12	16.39		
		802.11a	CH_L	16.03	97.36	0.12	16.15	30.00	Pass
			CH_M	16.15	97.36	0.12	16.27		
			CH_H	16.17	97.36	0.12	16.29		
	40	802.11ac	CH_L	16.36	94.68	0.24	16.60	30.00	Pass
			CH_H	16.46	94.68	0.24	16.70		
		802.11n	CH_L	16.39	94.65	0.24	16.63	30.00	Pass
			CH_H	16.52	94.65	0.24	16.76		
	80	802.11ac	CH_M	15.89	89.84	0.47	16.36	30.00	Pass

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

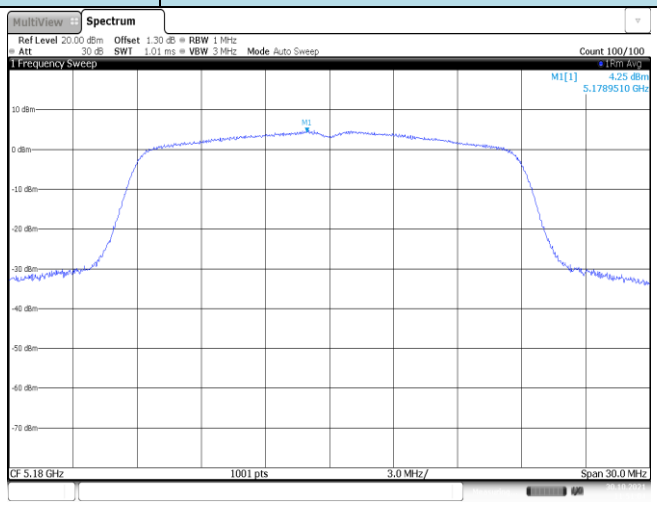
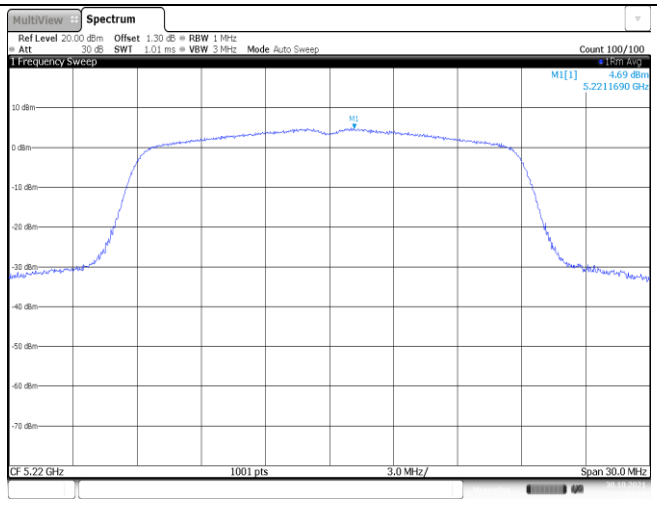
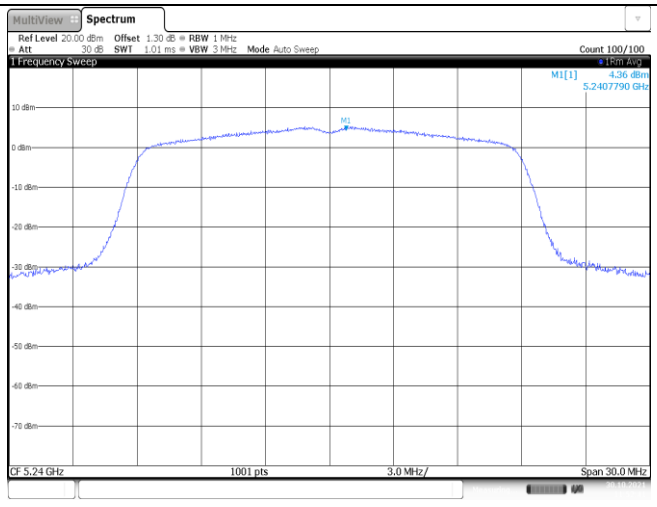
Appendix B：Maximum Power Spectral Density

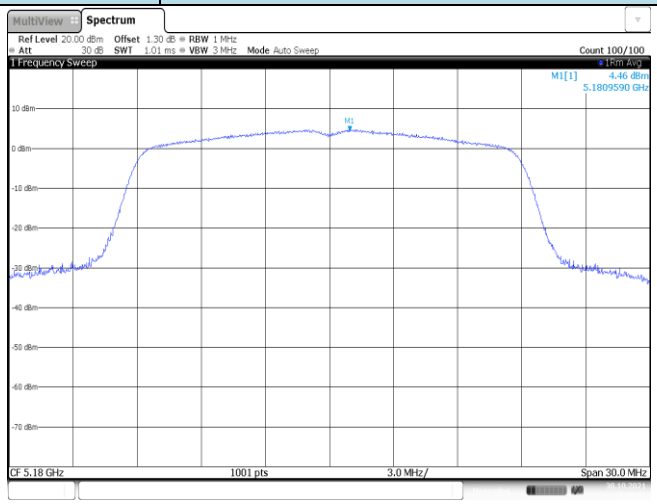
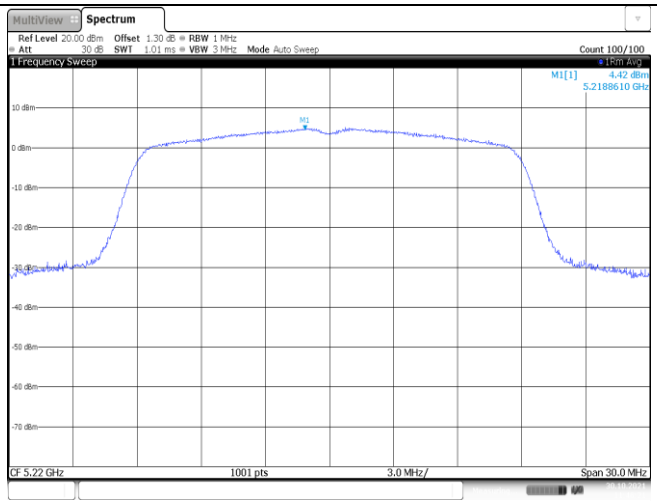
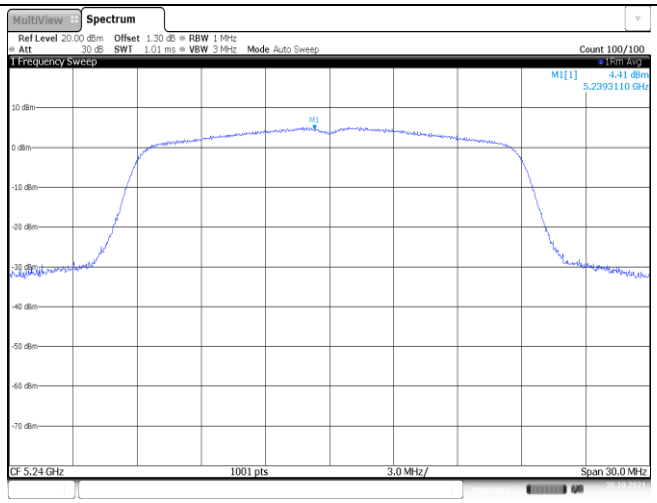
Band	Bandwidth (MHz)	Type	Channel	Reading (dBm)	Duty cycle (%)	Duty cycle factor（dB）	Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
I	20	802.11ac	CH_L	4.35	97.21	0.12	4.47	11.00	Pass
			CH_M	4.69	97.21	0.12	4.81		
			CH_H	4.36	97.21	0.12	4.48		
		802.11n	CH_L	4.46	97.18	0.12	4.58	11.00	Pass
			CH_M	4.42	97.18	0.12	4.54		
			CH_H	4.41	97.18	0.12	4.53		
		802.11a	CH_L	4.93	97.36	0.12	5.05	11.00	Pass
			CH_M	4.85	97.36	0.12	4.97		
			CH_H	5.13	97.36	0.12	5.25		
	40	802.11ac	CH_L	-2.50	94.68	0.24	-2.26	11.00	Pass
			CH_H	1.73	94.68	0.24	1.97		
		802.11n	CH_L	-2.19	94.74	0.23	-1.96	11.00	Pass
			CH_H	1.52	94.65	0.24	1.76		
	80	802.11ac	CH_M	-5.68	89.82	0.47	-5.21	11.00	Pass

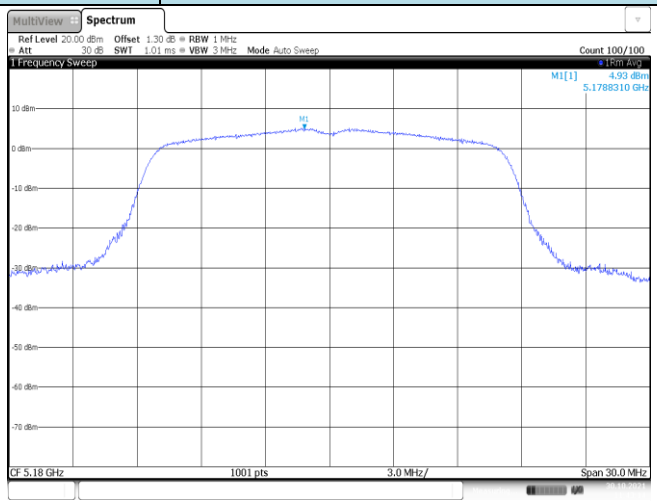
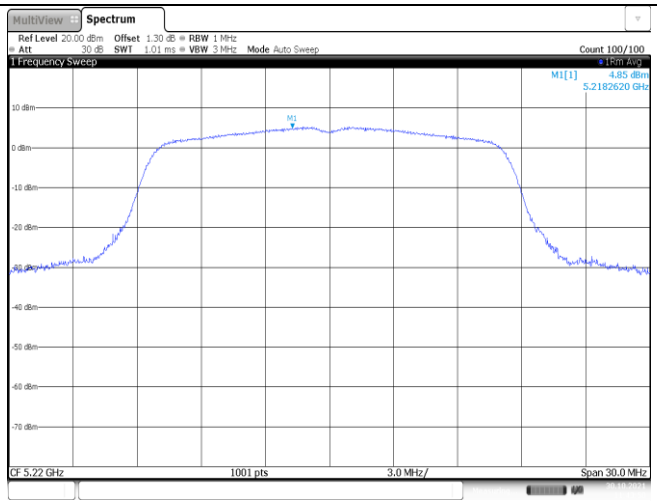
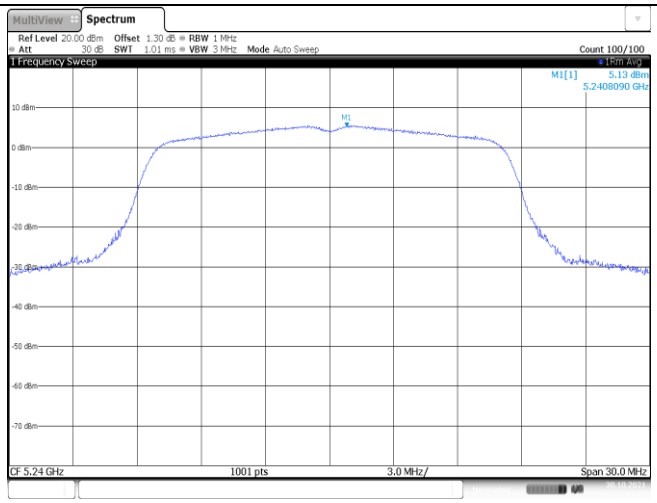
Band	Bandwidth (MHz)	Type	Channel	Reading (dBm)	Duty cycle (%)	Duty cycle factor（dB）	Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
II	20	802.11ac	CH_L	4.98	97.21	0.12	5.10	11.00	Pass
			CH_M	5.43	97.11	0.13	5.56		
			CH_H	4.75	97.21	0.12	4.87		
		802.11n	CH_L	4.91	97.18	0.12	5.03	11.00	Pass
			CH_M	5.28	97.18	0.12	5.40		
			CH_H	4.86	97.18	0.12	4.98		
		802.11a	CH_L	5.12	97.36	0.12	5.24	11.00	Pass
			CH_M	5.47	97.28	0.12	5.59		
			CH_H	5.24	97.36	0.12	5.36		
	40	802.11ac	CH_L	2.30	94.68	0.24	2.54	11.00	Pass
			CH_H	-1.41	94.68	0.24	-1.17		
		802.11n	CH_L	2.28	94.65	0.24	2.52	11.00	Pass
			CH_H	-1.59	94.65	0.24	-1.35		
	80	802.11ac	CH_M	-4.27	89.82	0.47	-3.80	11.00	Pass

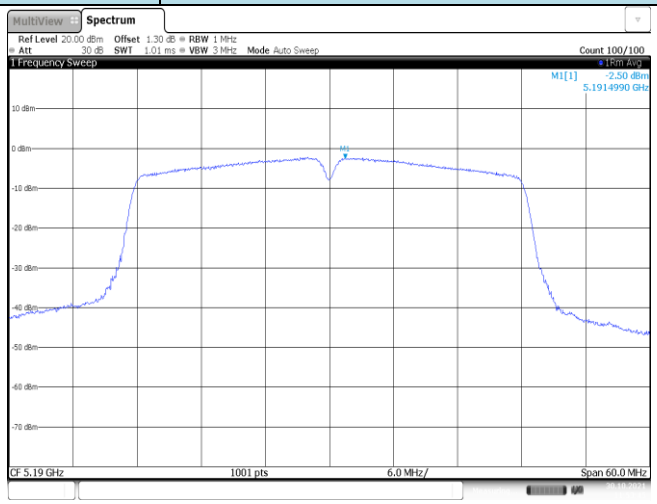
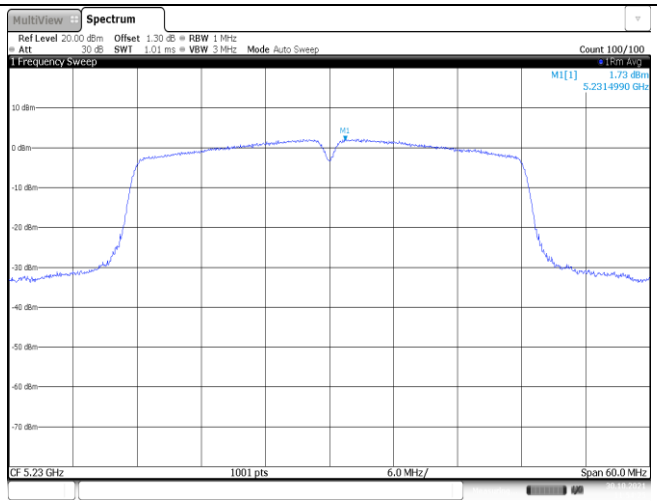
Band	Bandwidth (MHz)	Type	Channel	Reading (dBm)	Duty cycle (%)	Duty cycle factor（dB）	Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
III	20	802.11ac	CH_L	5.64	97.11	0.13	5.77	11.00	Pass
			CH_M	6.07	97.21	0.12	6.19		
			CH_H	1.88	97.21	0.12	2.00		
		802.11n	CH_L	5.23	97.18	0.12	5.35	11.00	Pass
			CH_M	5.28	97.18	0.12	5.40		
			CH_H	1.96	97.09	0.13	2.09		
		802.11a	CH_L	5.63	97.36	0.12	5.75	11.00	Pass
			CH_M	5.70	97.36	0.12	5.82		
			CH_H	2.73	97.36	0.12	2.85		
	40	802.11ac	CH_L	-1.92	94.68	0.24	-1.68	11.00	Pass
			CH_M	2.51	94.68	0.24	2.75		
			CH_H	-0.41	94.68	0.24	-0.17		
		802.11n	CH_L	-1.27	94.74	0.23	-1.04	11.00	Pass
			CH_M	2.80	94.65	0.24	3.04		
			CH_H	-0.92	94.65	0.24	-0.68		
	80	802.11ac	CH_L	-4.14	89.84	0.47	-3.67	11.00	Pass
			CH_M	-1.01	89.84	0.47	-0.54		
			CH_H	-0.12	89.84	0.47	0.35		
Band	Bandwidth (MHz)	Type	Channel	Reading (dBm)	Duty cycle (%)	Duty cycle factor（dB）	Power Spectral Density (dBm/500kHz)	Limit (dBm/500KHz)	Result
IV	20	802.11ac	CH_L	2.10	97.11	0.13	2.23	30.00	Pass
			CH_M	3.39	97.21	0.12	3.51		
			CH_H	3.00	97.21	0.12	3.12		
		802.11n	CH_L	2.62	97.18	0.12	2.74	30.00	Pass
			CH_M	2.95	97.18	0.12	3.07		
			CH_H	3.17	97.18	0.12	3.29		
		802.11a	CH_L	3.16	97.36	0.12	3.28	30.00	Pass
			CH_M	3.07	97.36	0.12	3.19		
			CH_H	3.50	97.36	0.12	3.62		
	40	802.11ac	CH_L	0.18	94.68	0.24	0.42	30.00	Pass
			CH_H	0.39	94.68	0.24	0.63		
		802.11n	CH_L	-0.06	94.65	0.24	0.18	30.00	Pass
			CH_H	0.57	94.65	0.24	0.81		
	80	802.11ac	CH_M	-2.72	89.84	0.47	-2.25	30.00	Pass

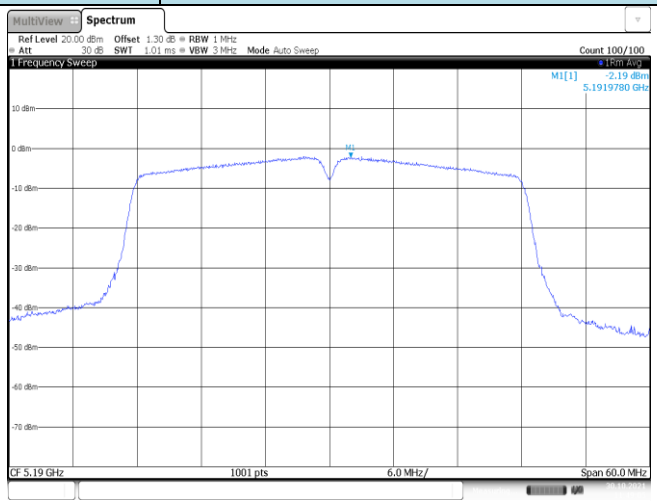
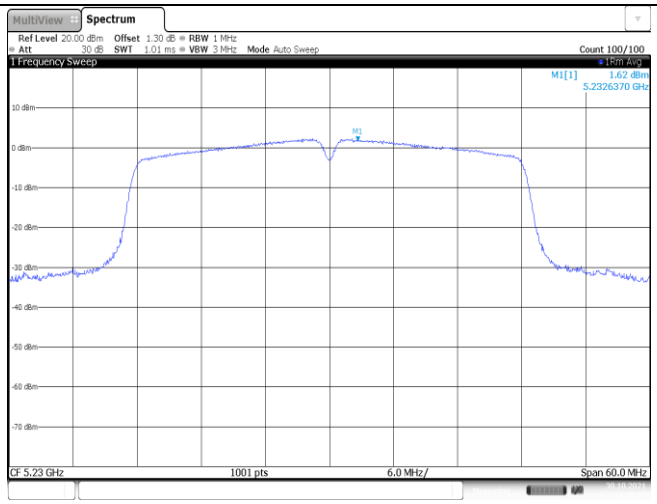
Test plot as follows:

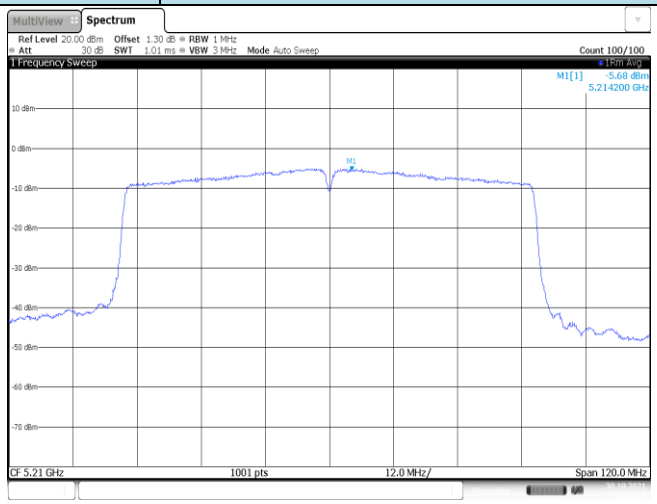
Band I	**802.11ac (HT20)**
CH_L	
CH_M	
CH_H	

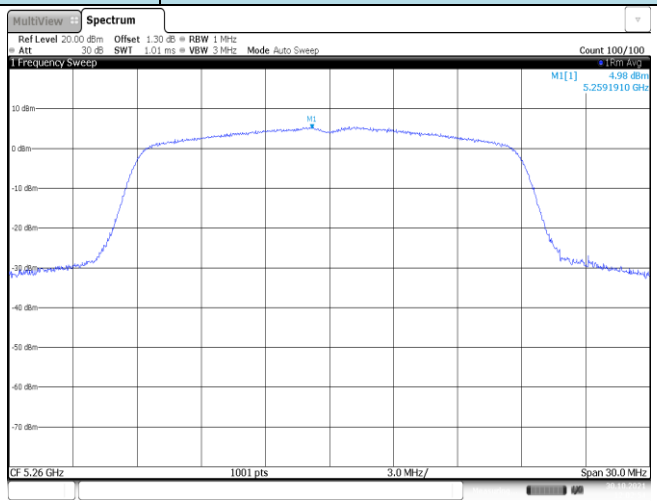
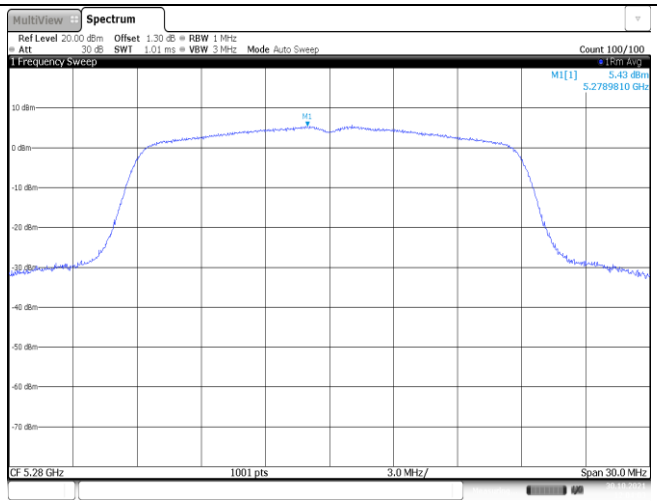
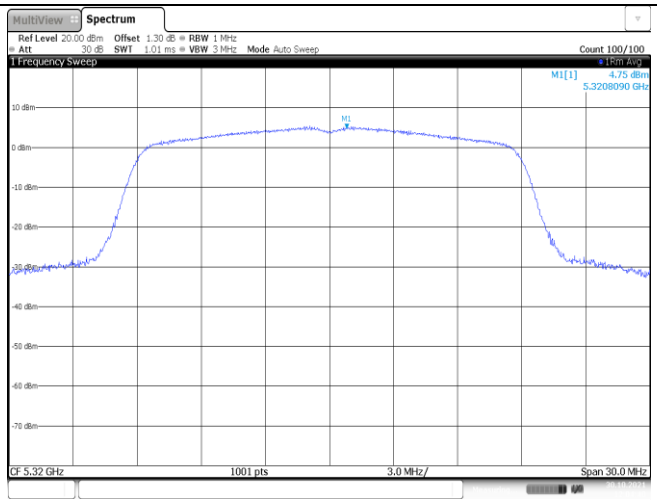
Band I	802.11n (HT20)
CH_L	
CH_M	
CH_H	

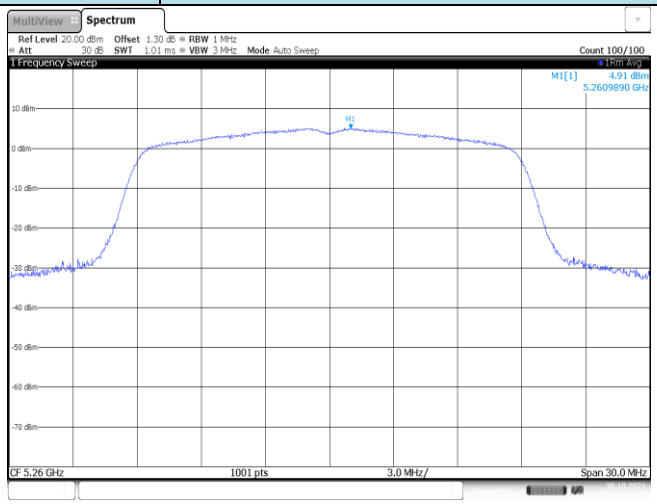
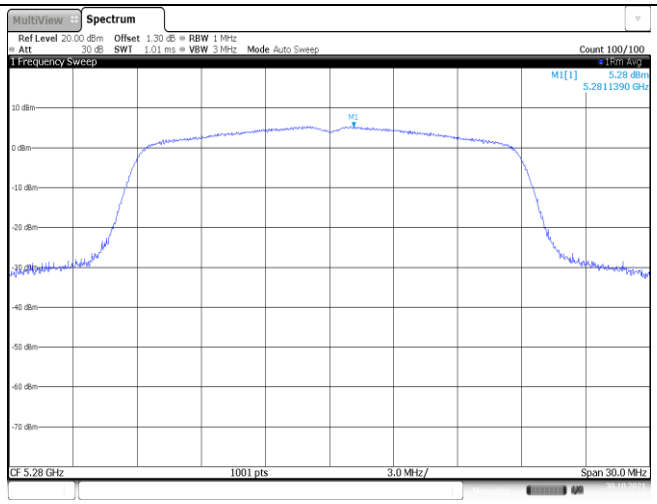
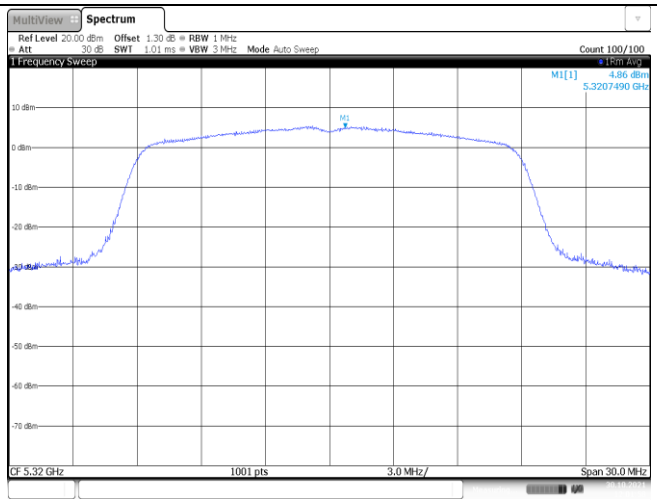
Band I	802.11a
CH_L	
CH_M	
CH_H	

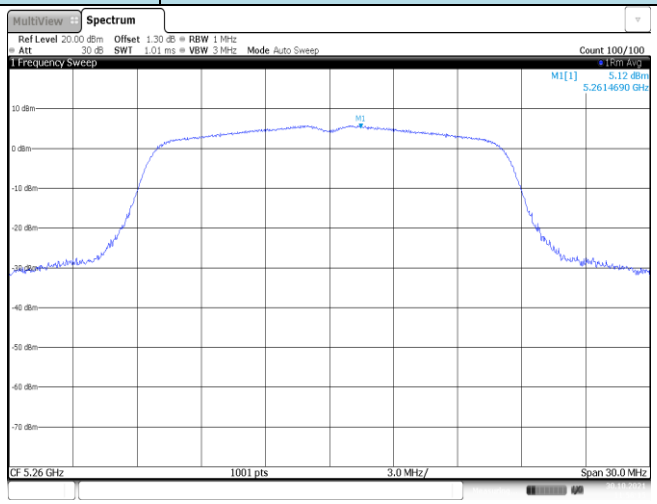
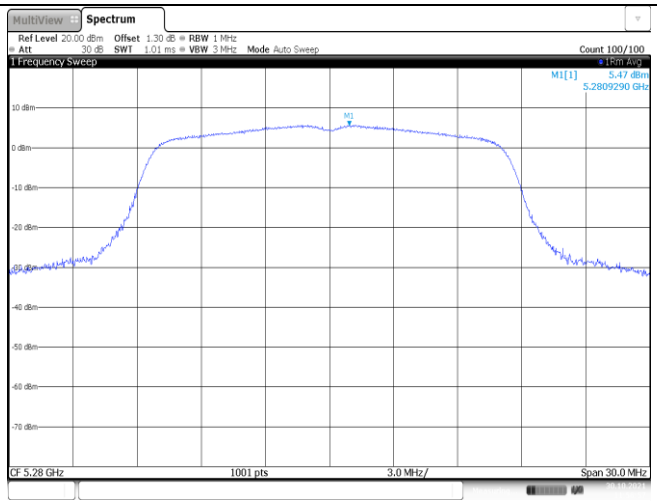
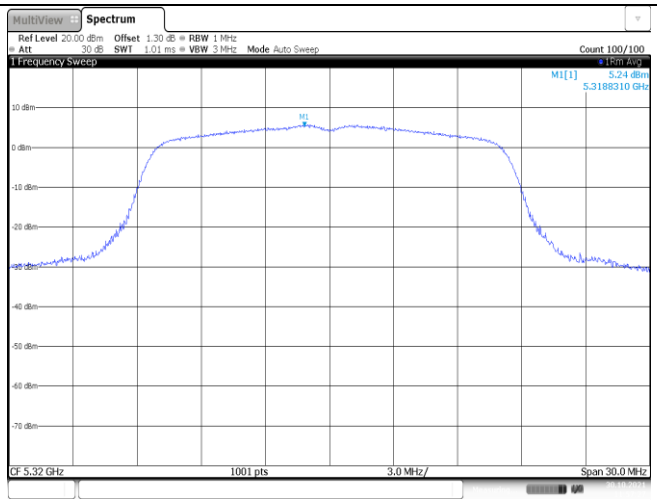
Band I	802.11ac (HT40)
CH_L	
CH_H	

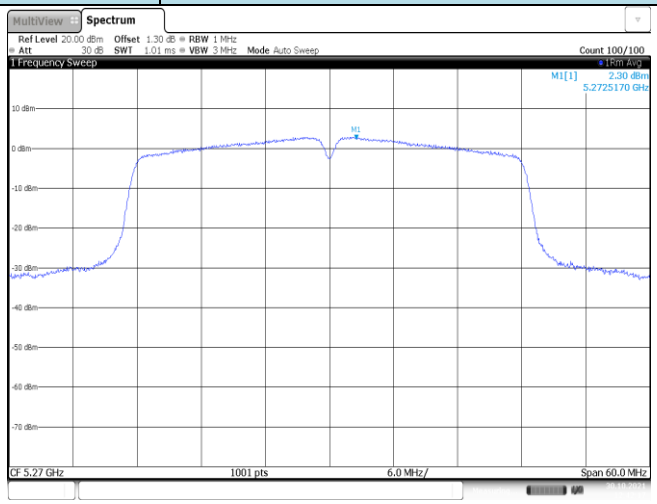
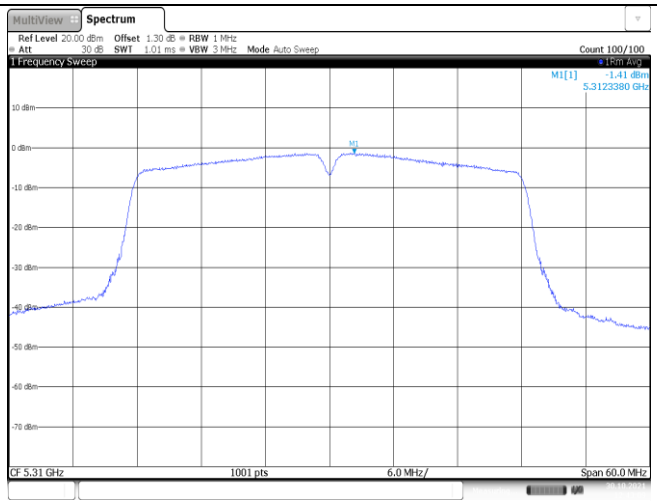
Band I	802.11n (HT40)
CH_L	
CH_H	

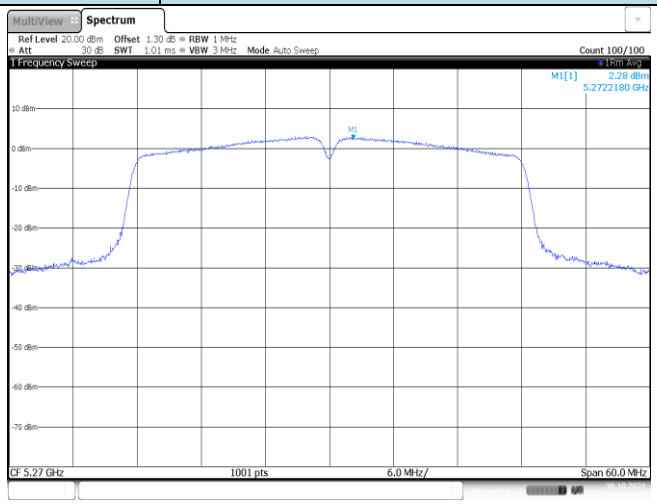
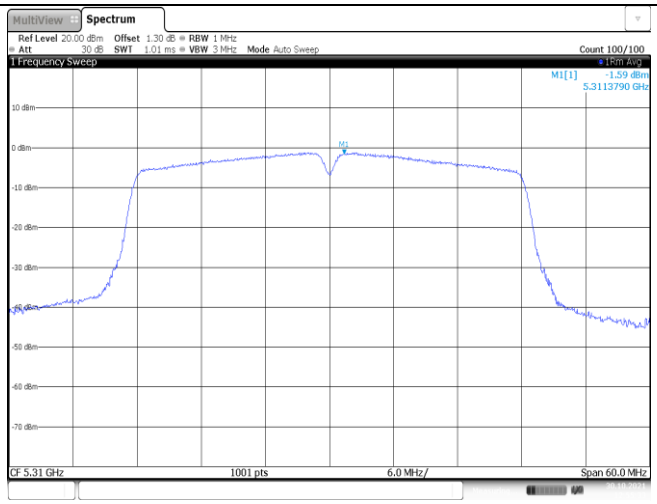
Band I	802.11ac (HT80)
CH_M	

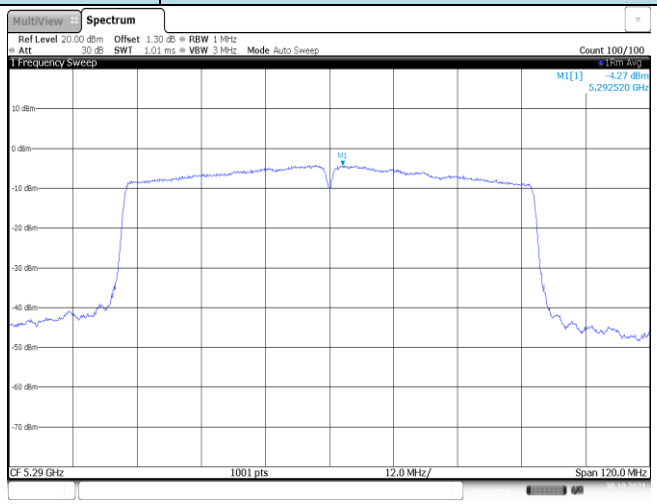
Band II	802.11ac (HT20)
CH_L	
CH_M	
CH_H	

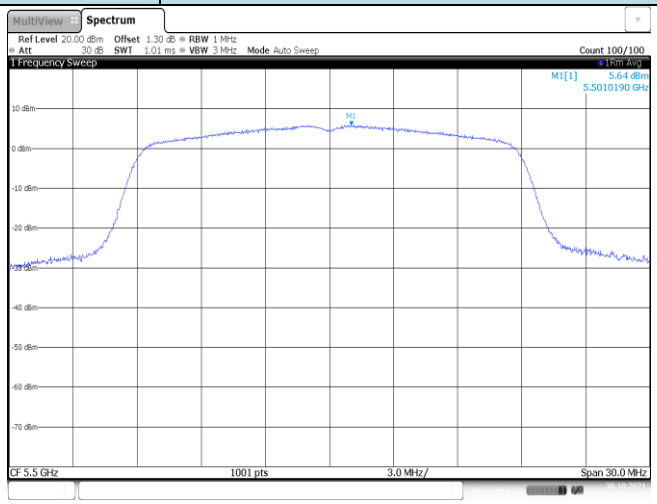
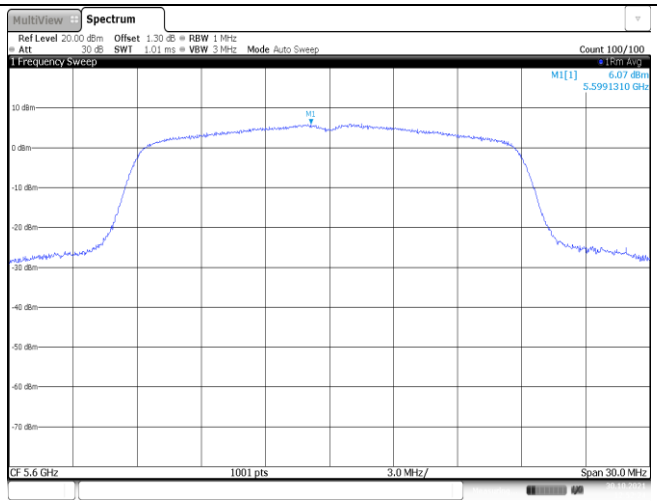
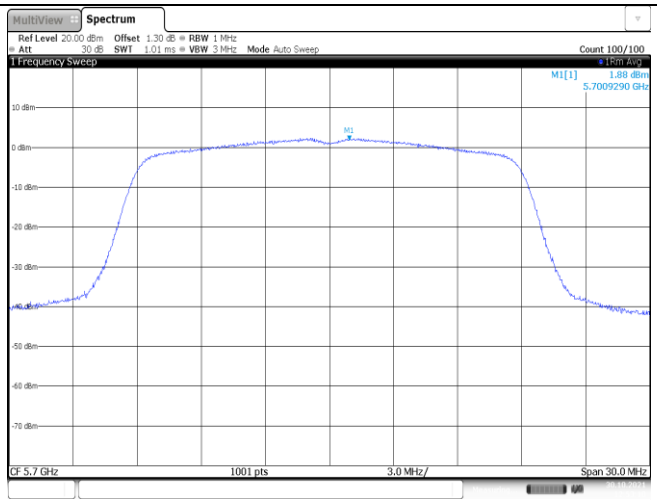
Band II	802.11n (HT20)
CH_L	
CH_M	
CH_H	

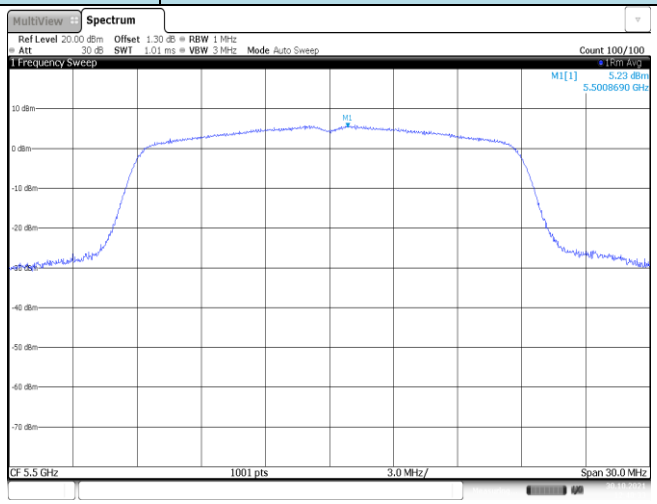
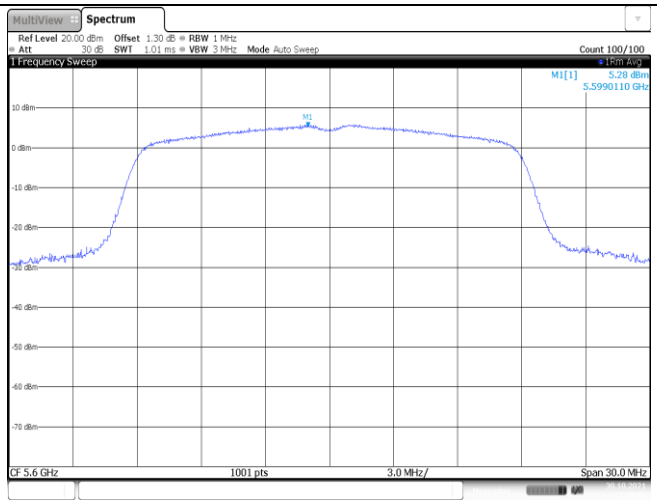
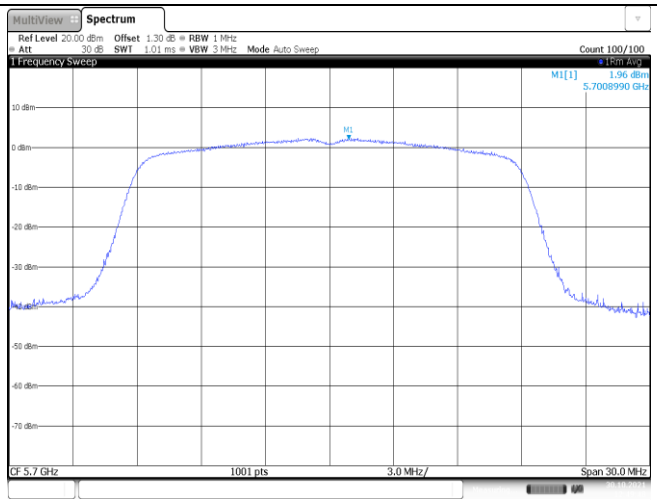
Band II	802.11a
CH_L	
CH_M	
CH_H	

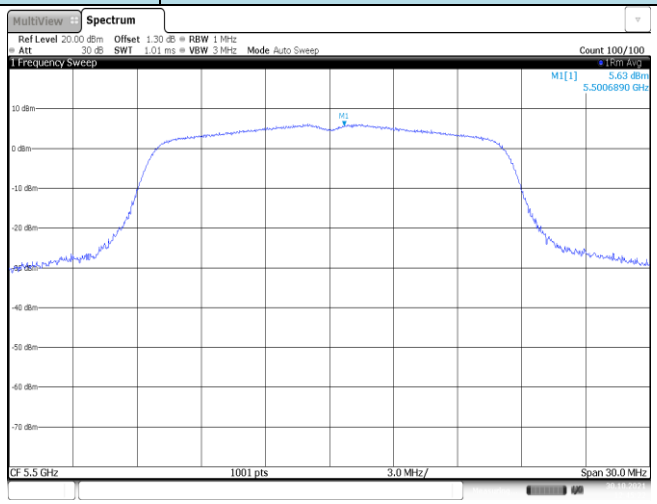
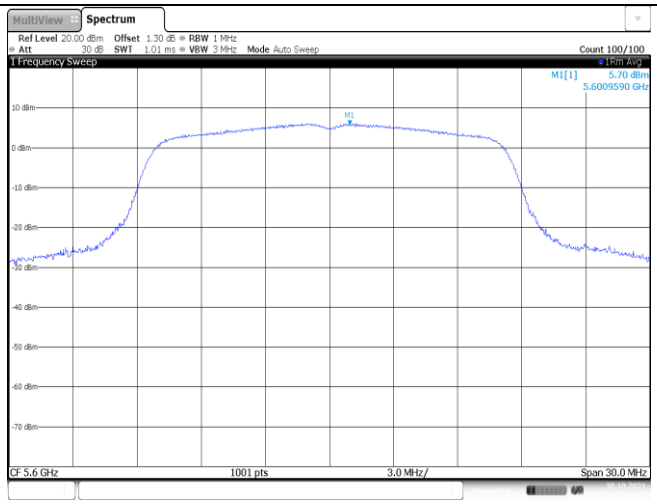
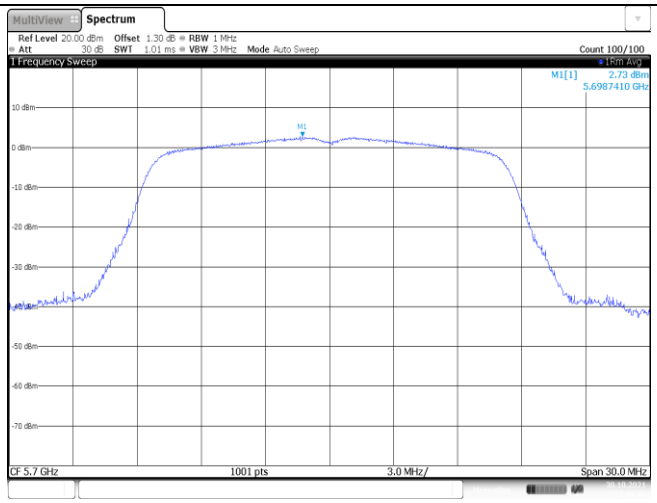
Band II	802.11ac (HT40)
CH_L	
CH_H	

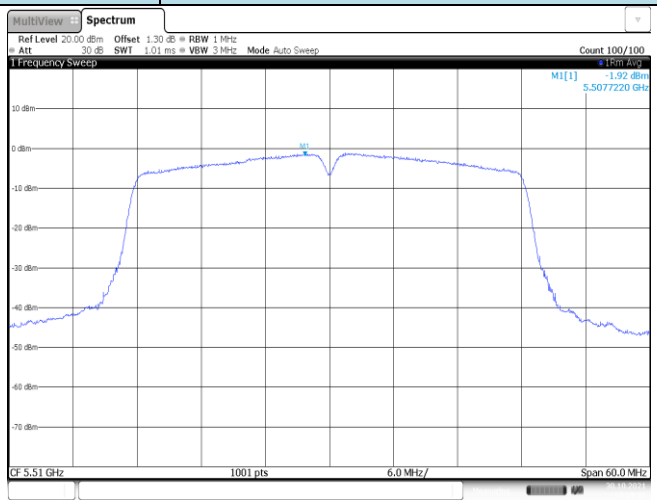
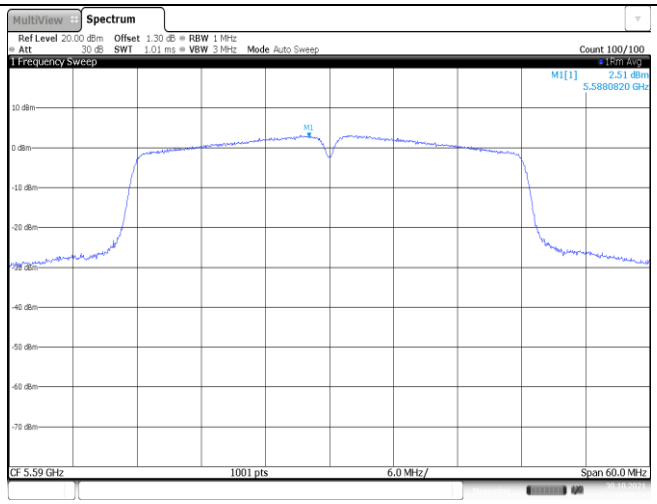
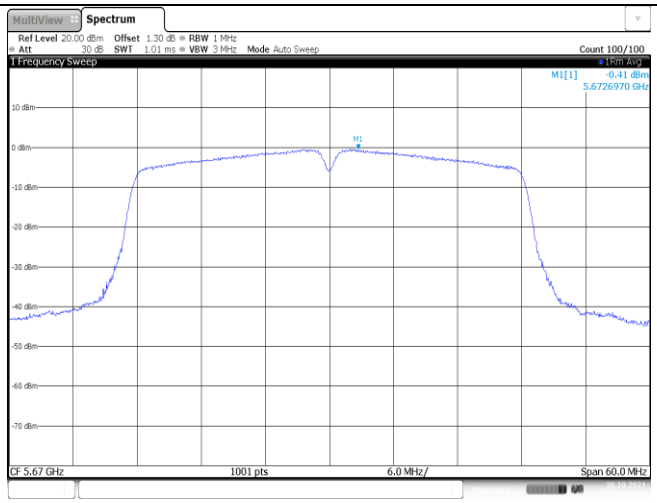
Band II	802.11n (HT40)
CH_L	
CH_H	

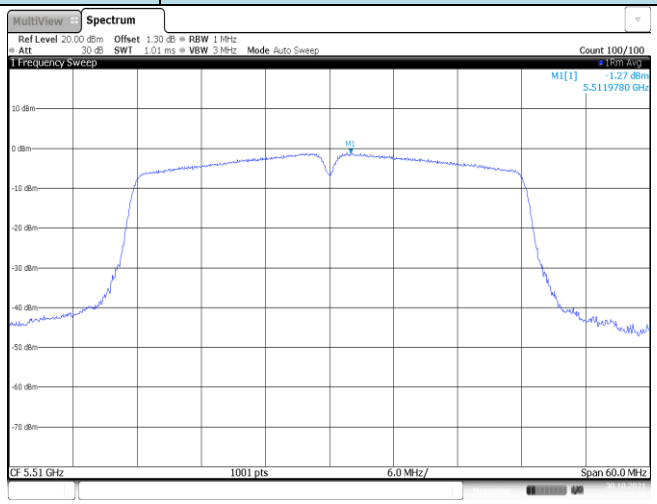
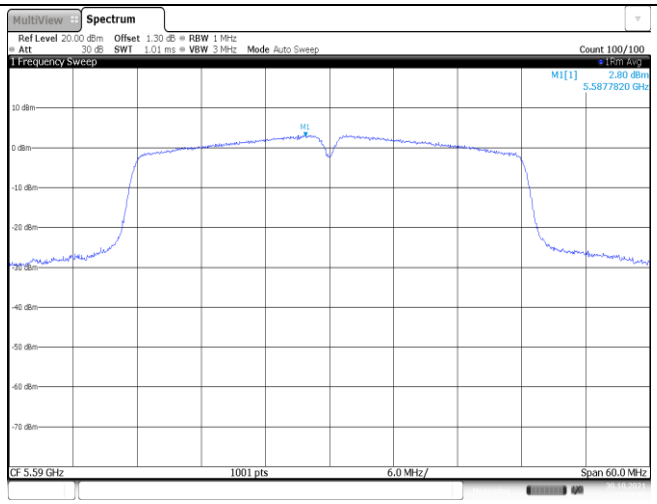
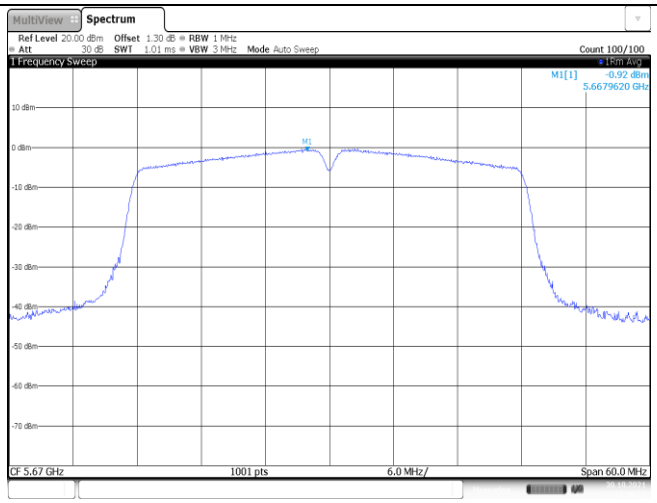
Band II	802.11ac (HT80)
CH_M	

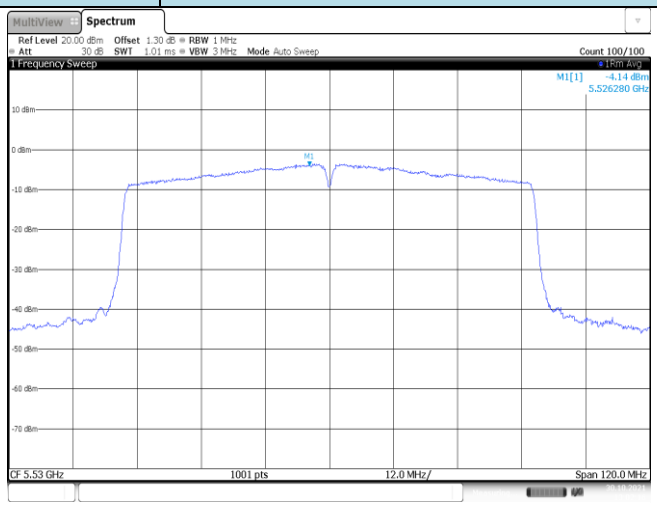
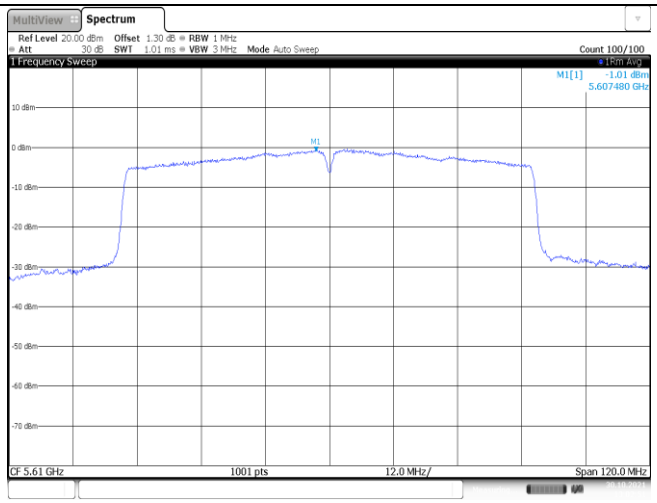
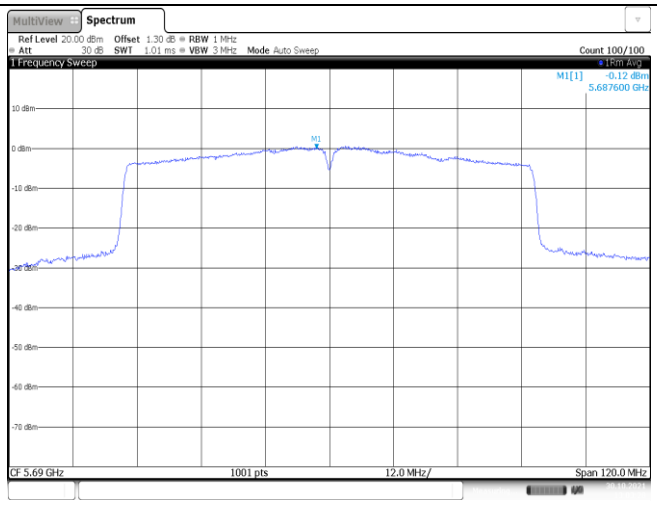
Band III	802.11ac (HT20)
CH_L	
CH_M	
CH_H	

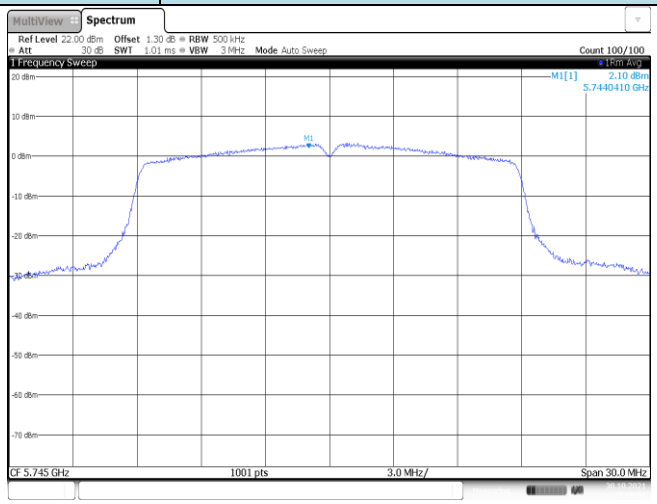
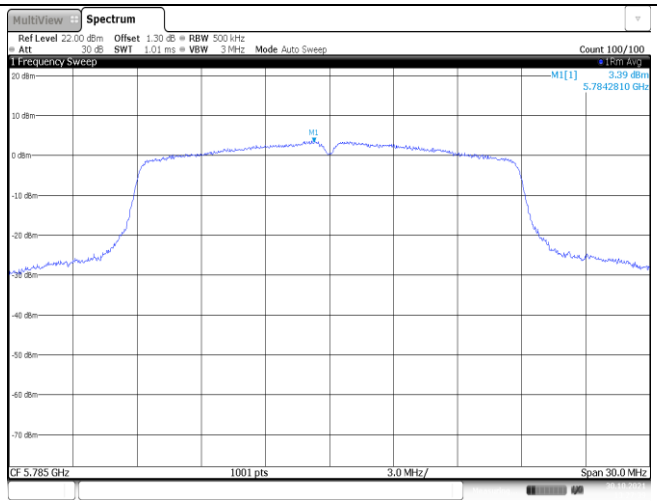
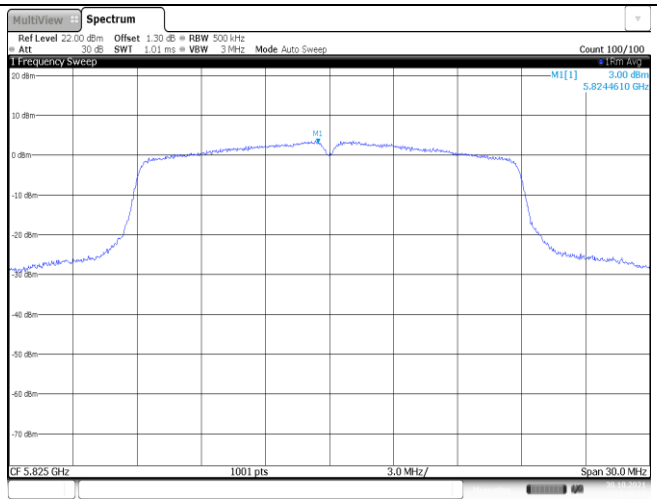
Band III	802.11n (HT20)
CH_L	
CH_M	
CH_H	

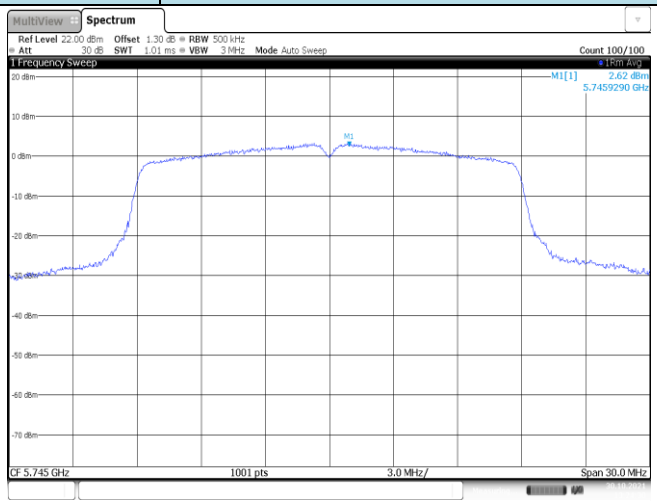
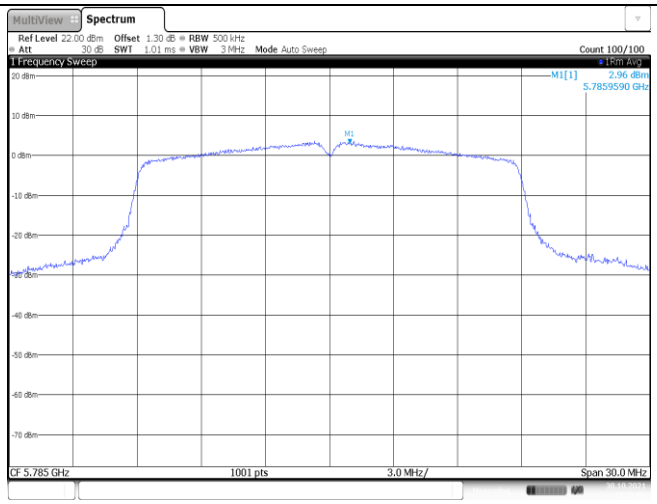
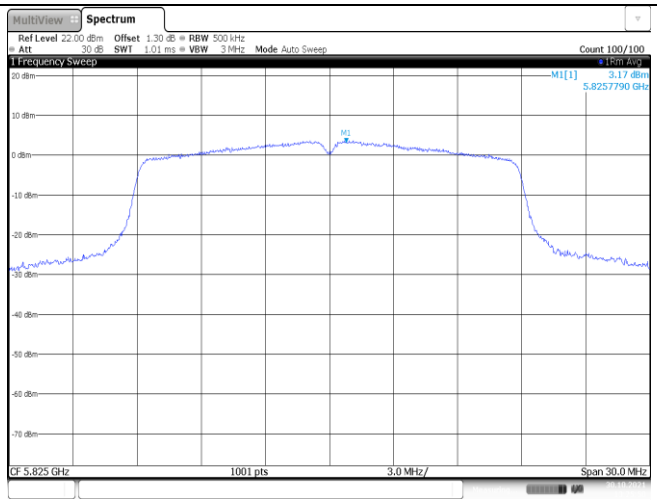
Band III	802.11a
CH_L	
CH_M	
CH_H	

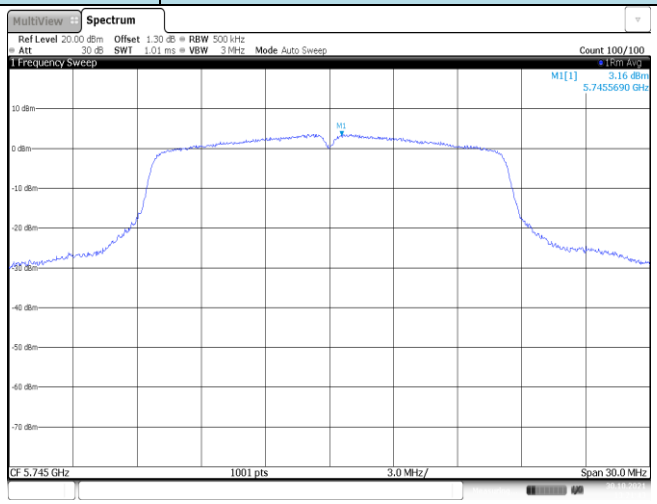
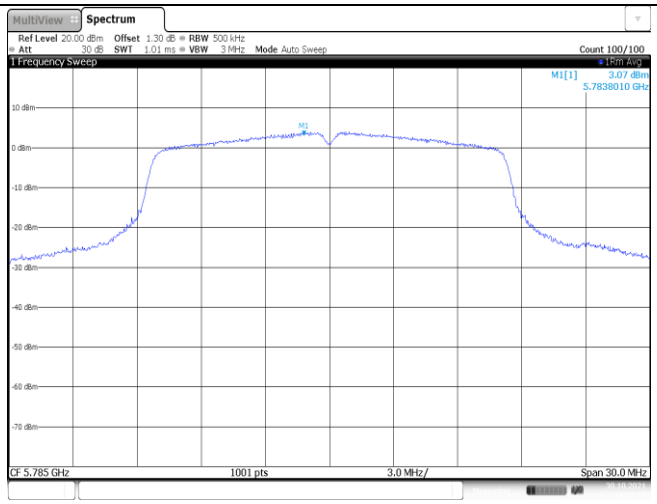
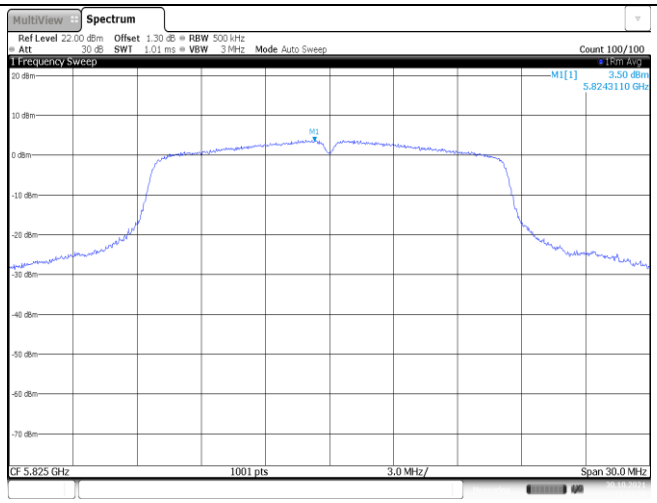
Band III	802.11ac (HT40)
CH_L	
CH_M	
CH_H	

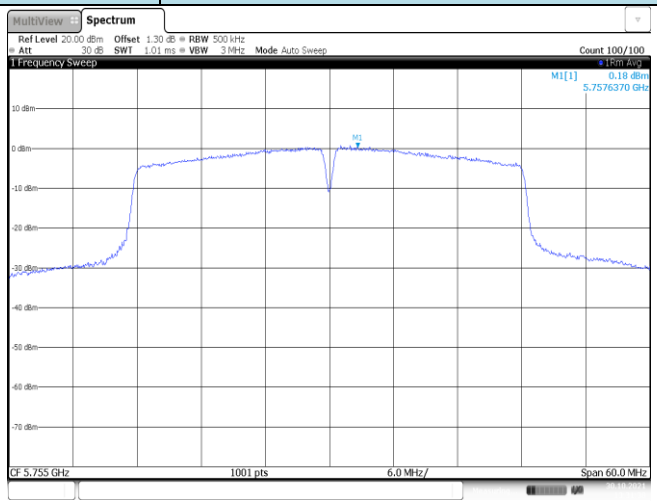
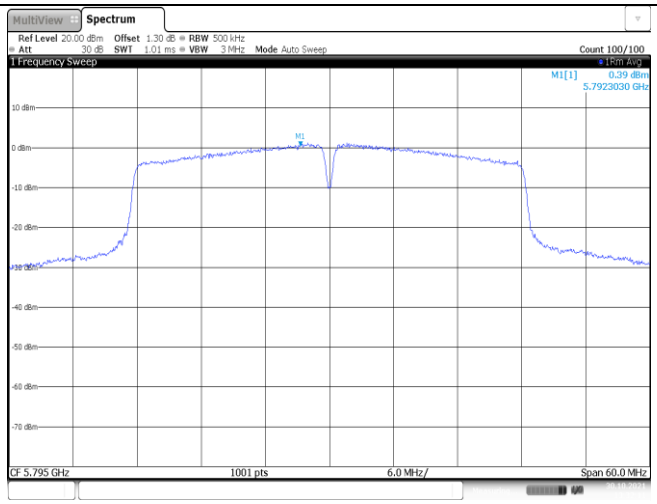
Band III	802.11n (HT40)
CH_L	
CH_M	
CH_H	

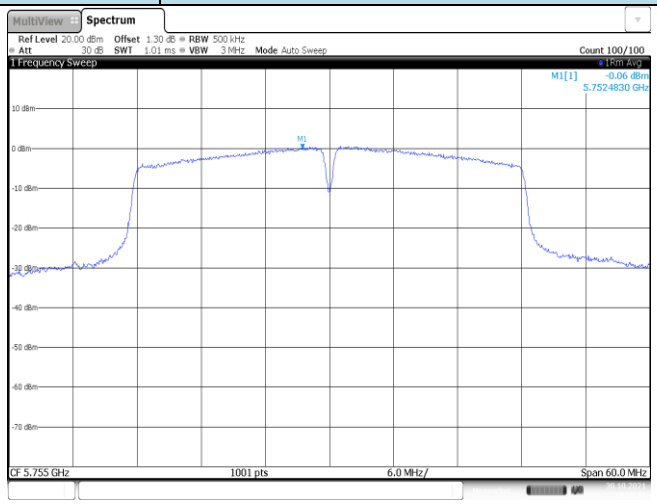
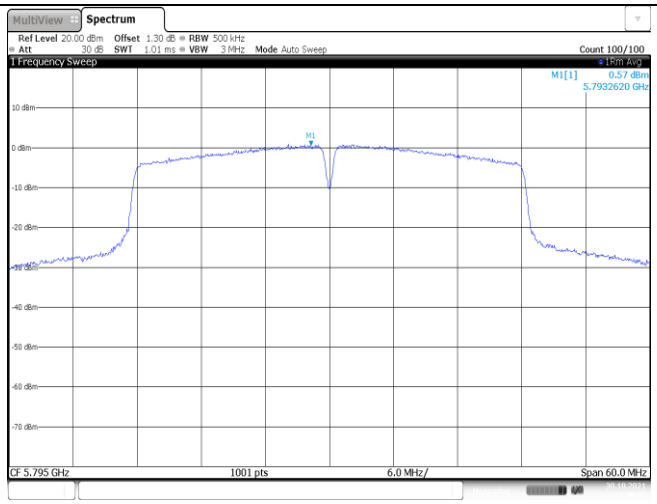
Band III	802.11ac (HT80)
CH_L	
CH_M	
CH_H	

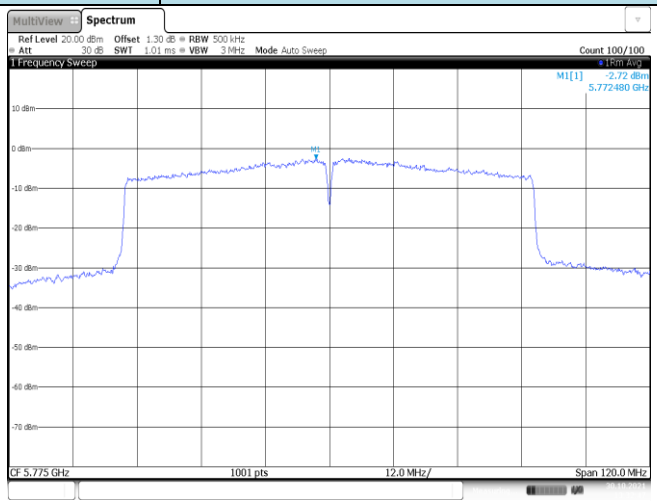
Band IV	802.11ac (HT20)
CH_L	
CH_M	
CH_H	

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	

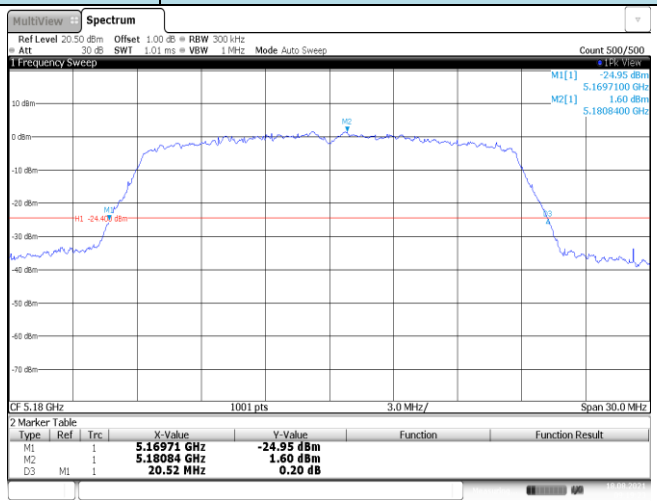
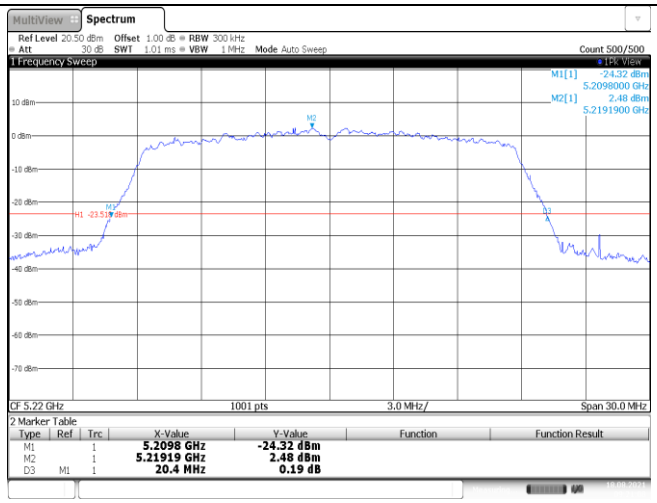
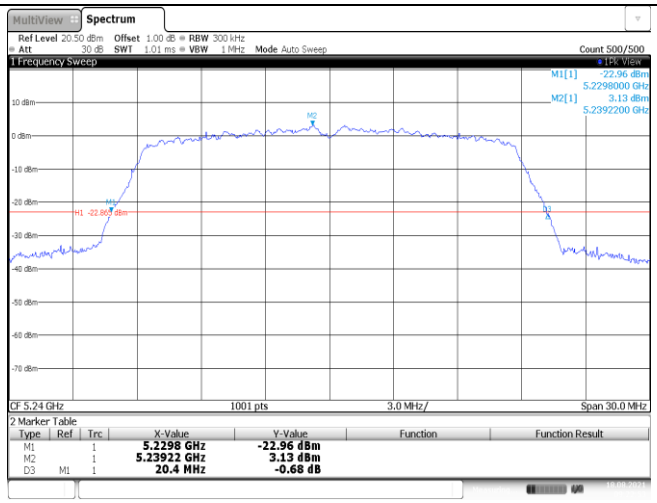
Band IV	802.11n (HT40)
CH_L	
CH_H	

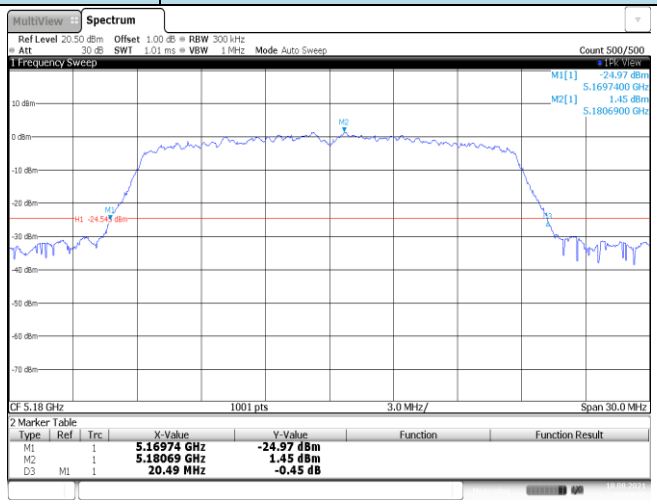
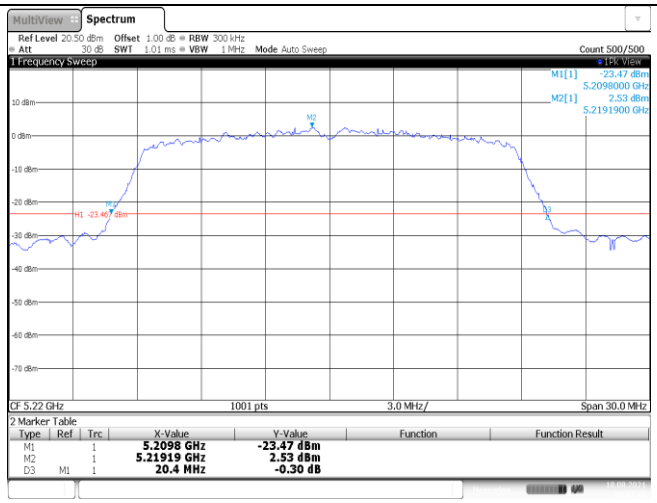
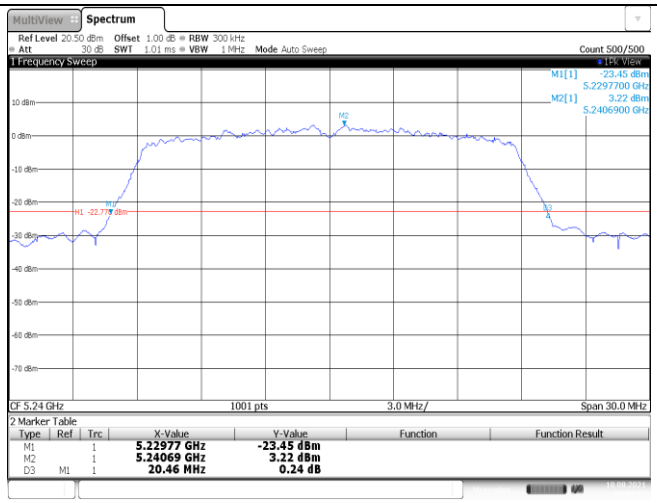
Band IV	802.11ac (HT80)
CH_M	

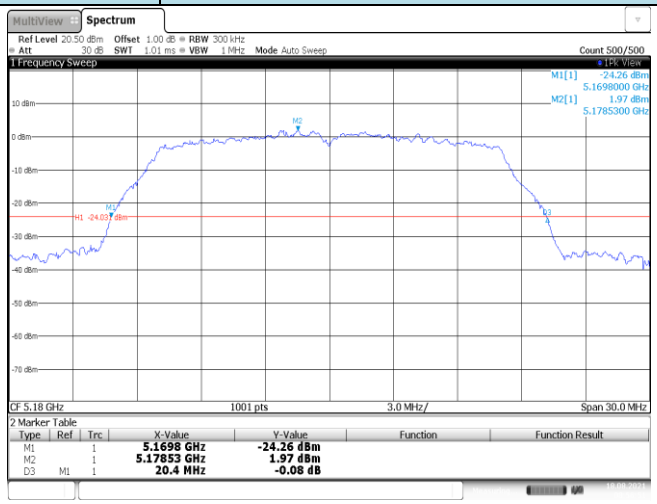
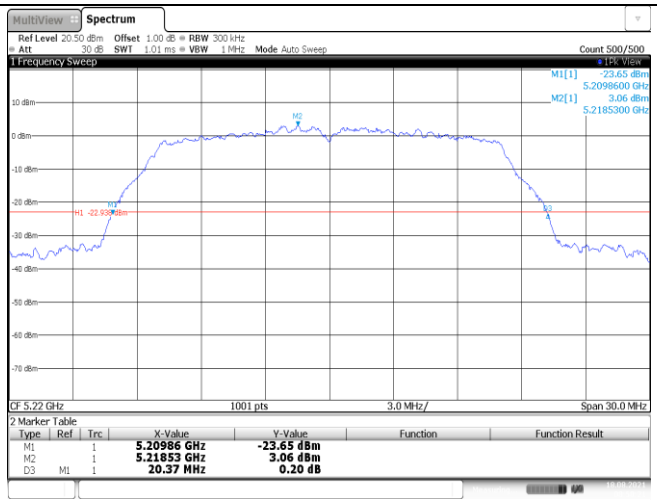
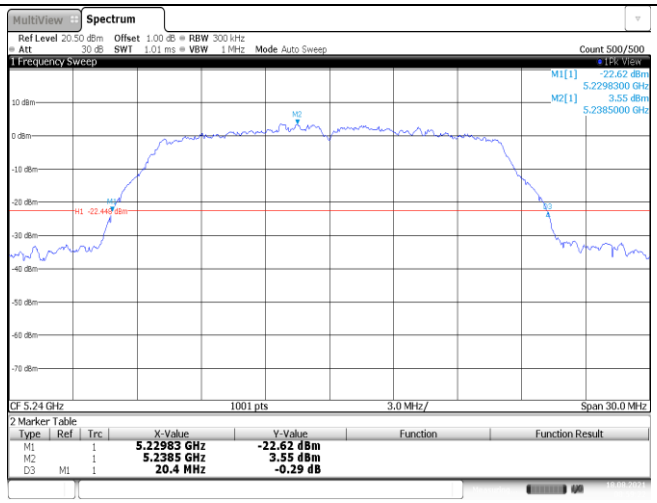
Appendix C：26dB bandwidth

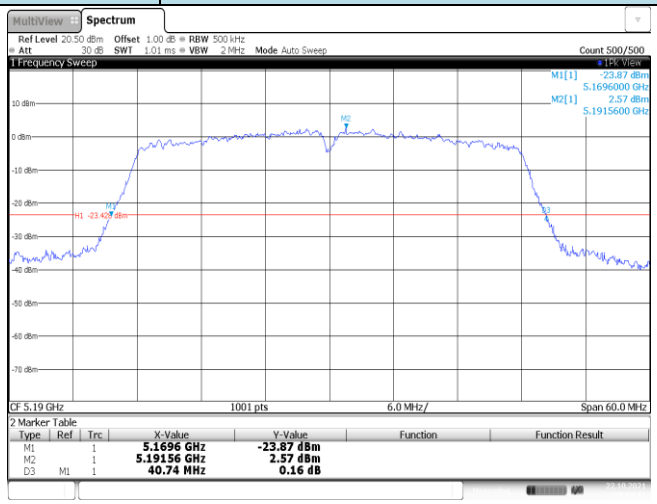
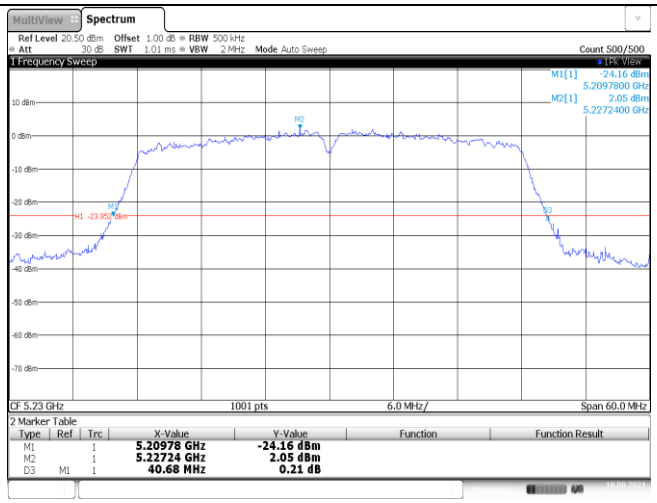
Band	Bandwidth (MHz)	Type	Channel	26dB bandwidth (MHz)	Result
I	20	802.11ac	CH_L	20.52	Pass
			CH_M	20.40	
			CH_H	20.40	
		802.11n	CH_L	20.49	Pass
			CH_M	20.40	
			CH_H	20.46	
		802.11a	CH_L	20.40	Pass
			CH_M	20.37	
			CH_H	20.40	
	40	802.11ac	CH_L	40.74	Pass
			CH_H	40.68	
		802.11n	CH_L	40.62	Pass
			CH_H	41.10	
	80	802.11ac	CH_M	81.48	Pass
II	20	802.11ac	CH_L	20.40	Pass
			CH_M	20.43	
			CH_H	20.40	
		802.11n	CH_L	20.37	Pass
			CH_M	20.43	
			CH_H	20.46	
		802.11a	CH_L	20.37	Pass
			CH_M	20.34	
			CH_H	20.40	
	40	802.11ac	CH_L	40.74	Pass
			CH_H	40.80	
		802.11n	CH_L	40.68	Pass
			CH_H	40.56	
	80	802.11ac	CH_M	81.36	Pass

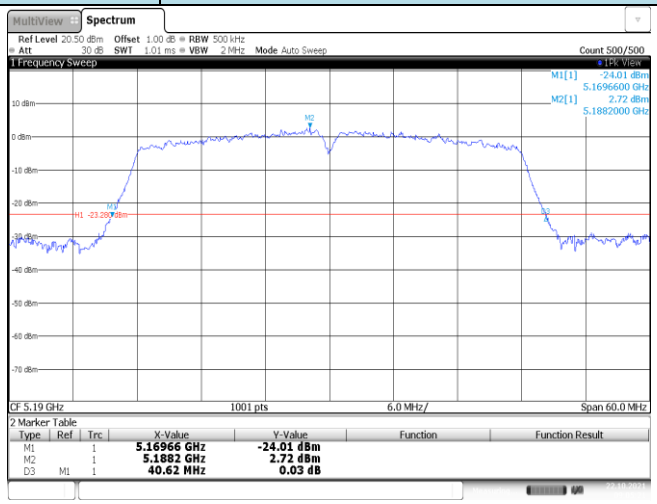
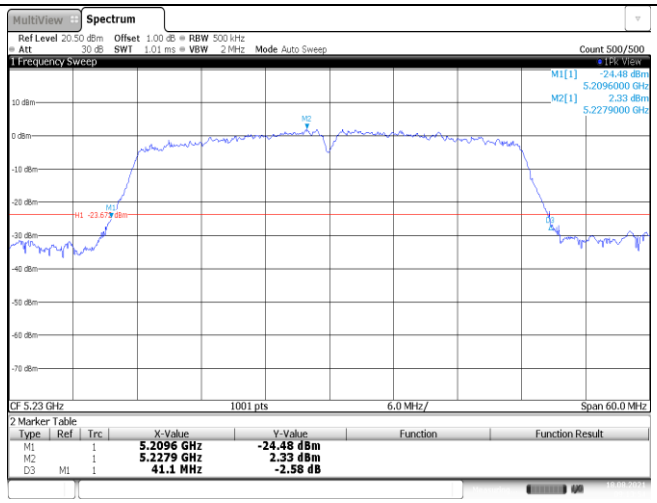
Band	Bandwidth (MHz)	Type	Channel	26dB bandwidth (MHz)	Result
III	20	802.11ac	CH_L	20.46	Pass
			CH_M	20.49	
			CH_H	20.49	
		802.11n	CH_L	20.40	Pass
			CH_M	20.46	
			CH_H	20.82	
		802.11a	CH_L	20.34	Pass
			CH_M	20.37	
			CH_H	20.67	
	40	802.11ac	CH_L	40.80	Pass
			CH_M	40.80	
			CH_H	40.86	
		802.11n	CH_L	40.98	Pass
			CH_M	40.56	
			CH_H	40.98	
	80	802.11ac	CH_L	81.72	Pass
			CH_M	81.36	
			CH_H	81.36	

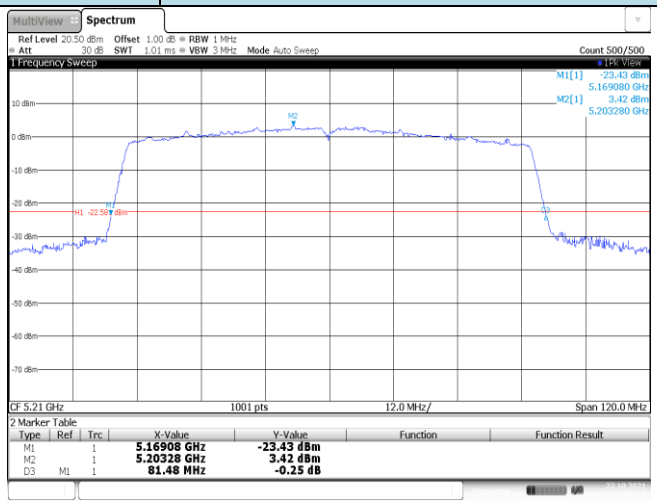
Band I	802.11ac (HT20)
CH_L	
CH_M	
CH_H	

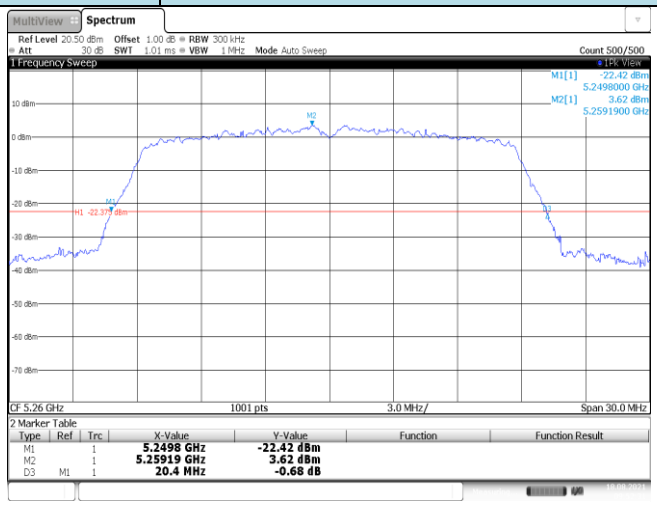
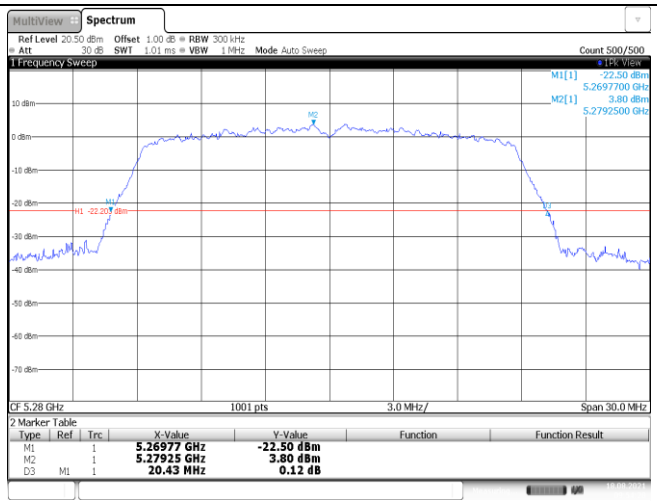
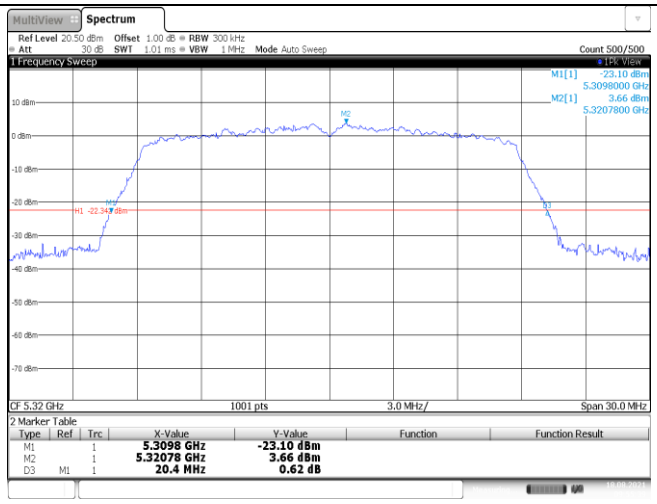
Band I	802.11n (HT20)
CH_L	
CH_M	
CH_H	

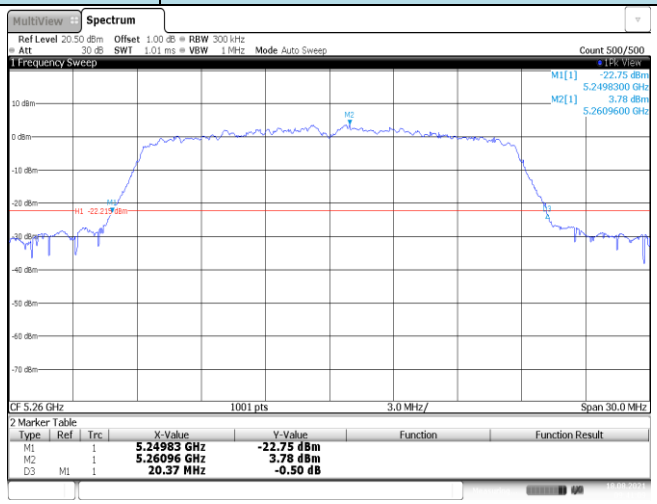
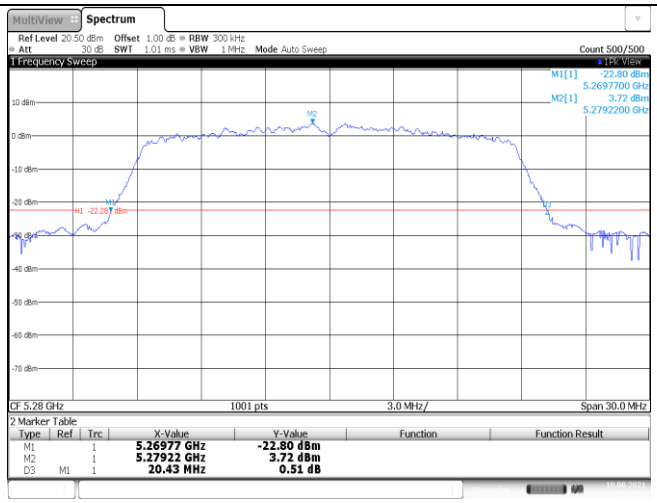
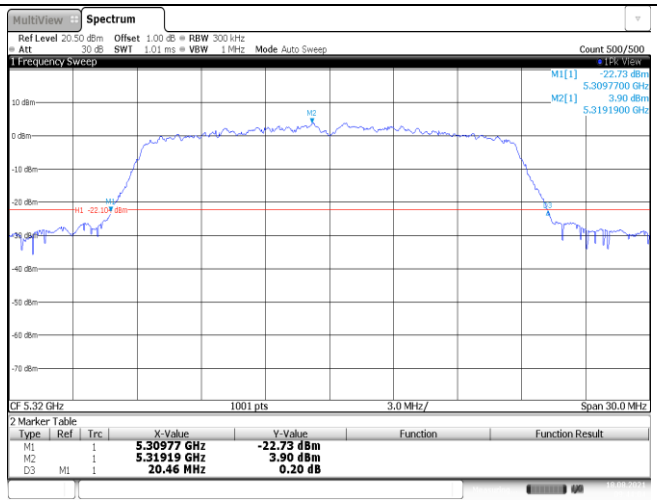
Band I	802.11a
CH_L	
CH_M	
CH_H	

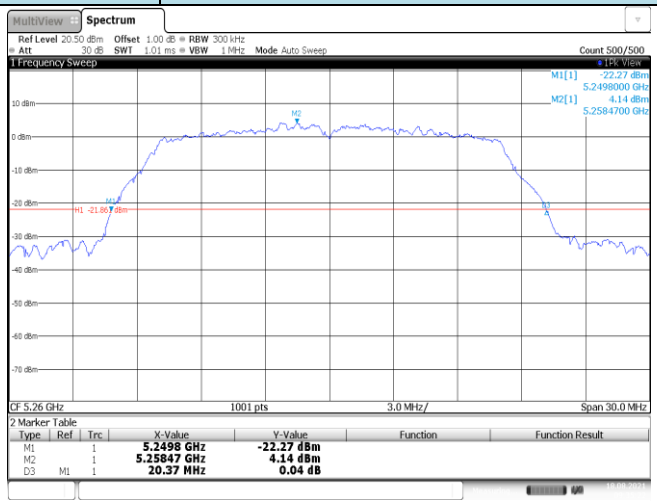
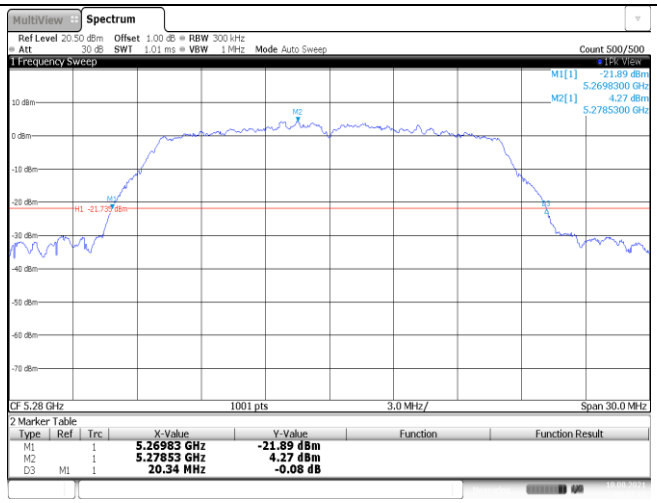
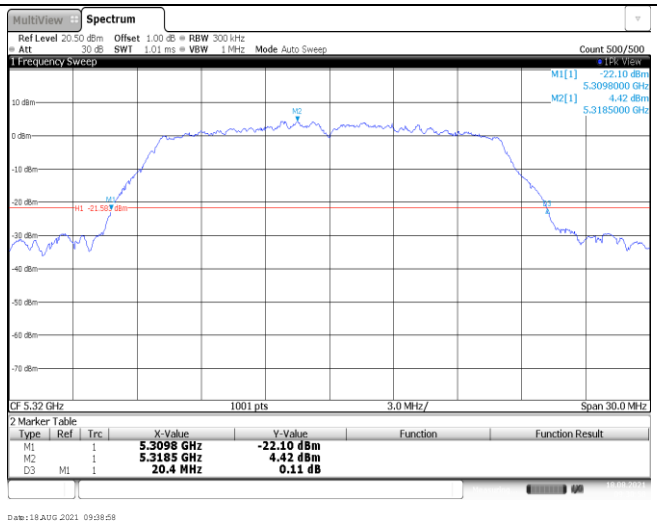
Band I	802.11ac (HT40)
CH_L	
CH_H	

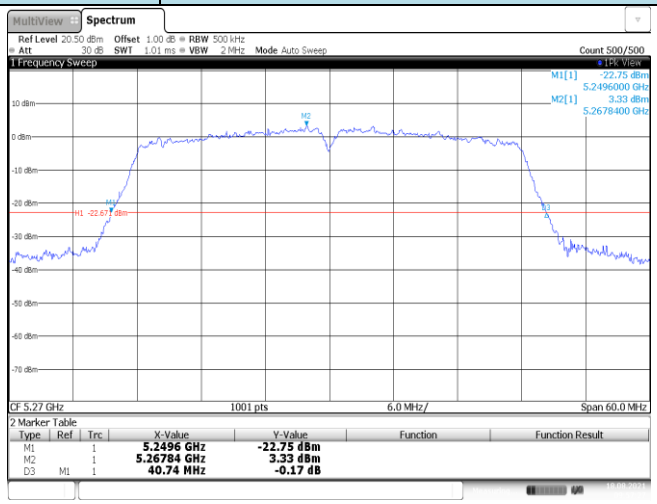
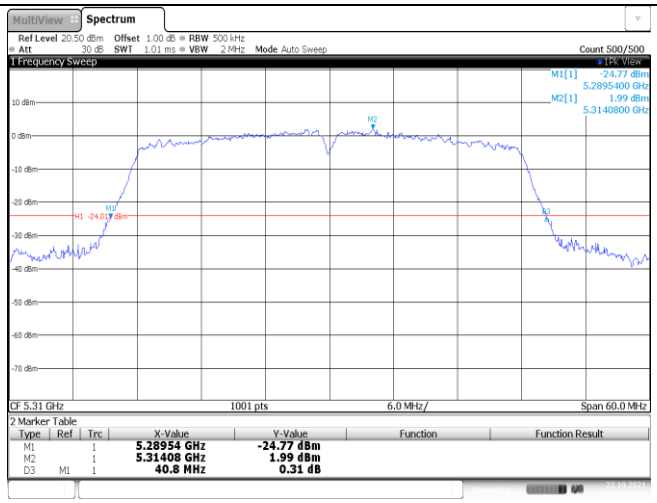
Band I	802.11n (HT40)
CH_L	
CH_H	

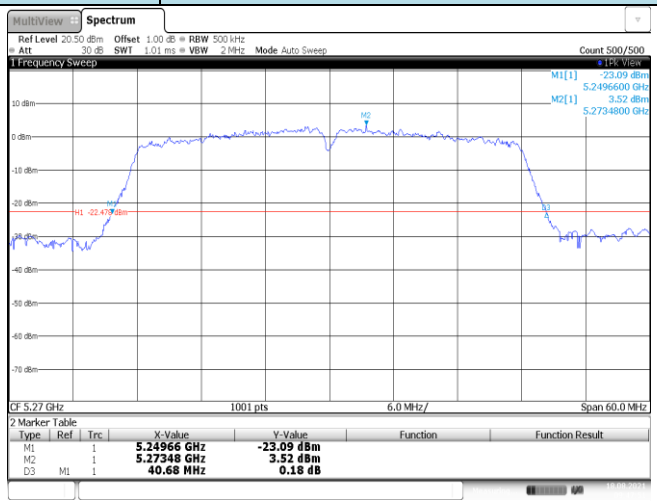
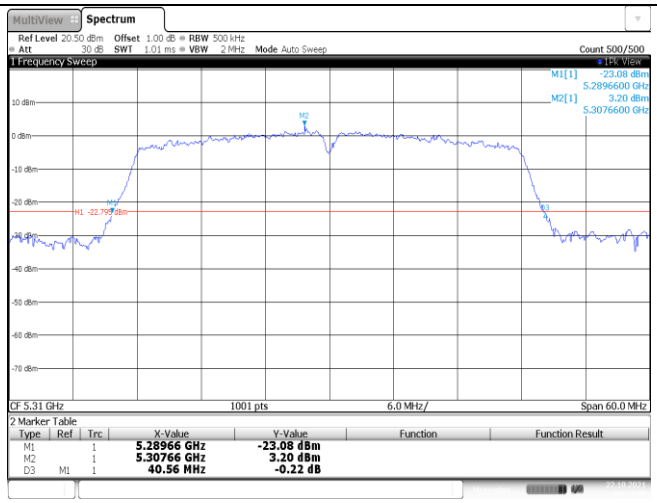
Band I	802.11ac (HT80)
CH_M	

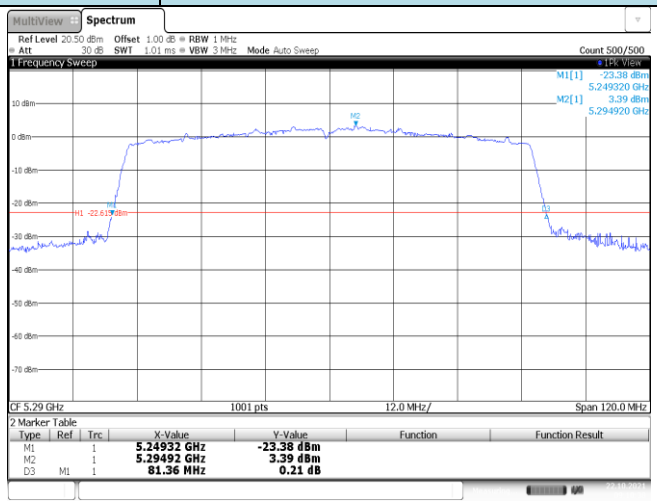
Band II	802.11ac (HT20)
CH_L	
CH_M	
CH_H	

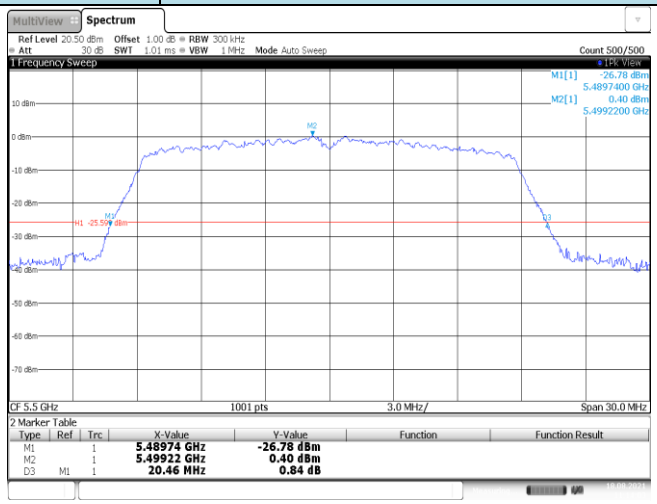
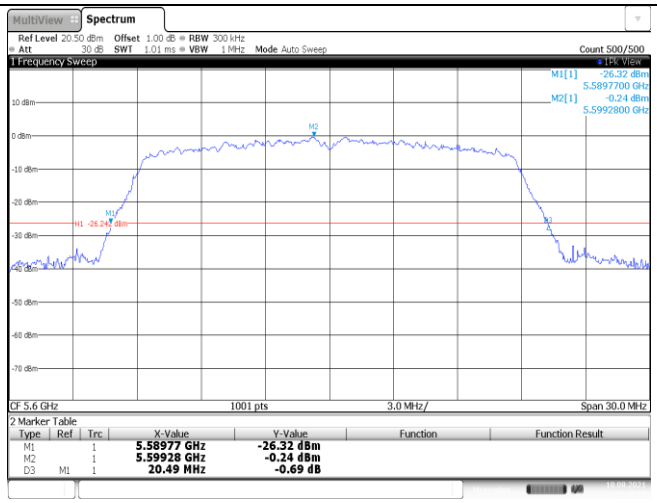
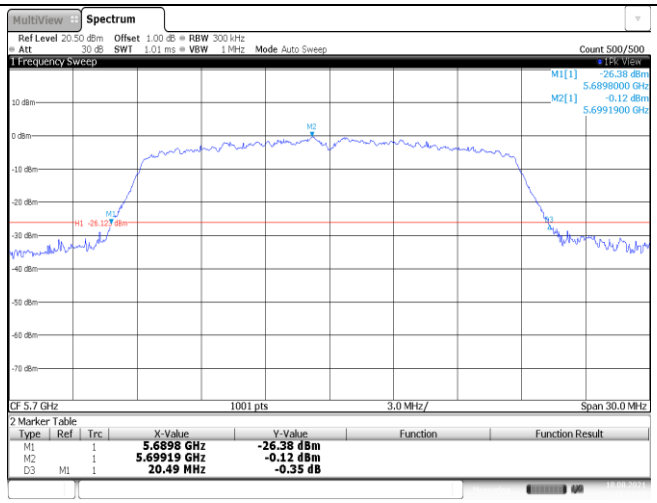
Band II	802.11n (HT20)
CH_L	
CH_M	
CH_H	

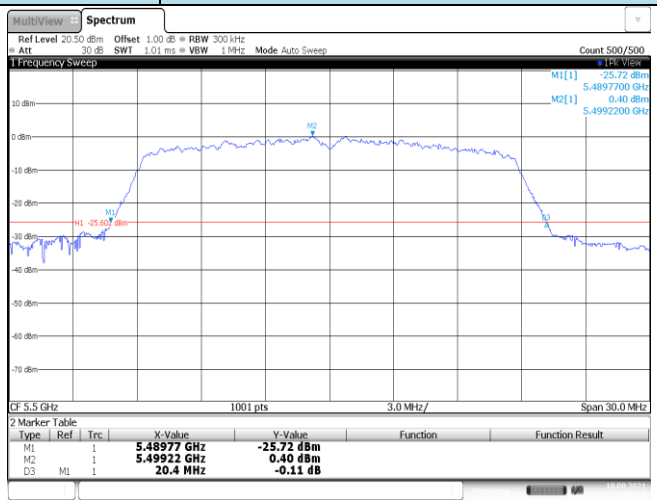
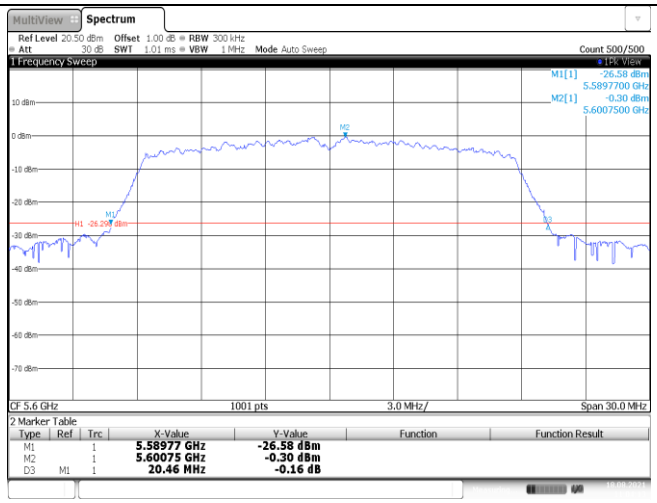
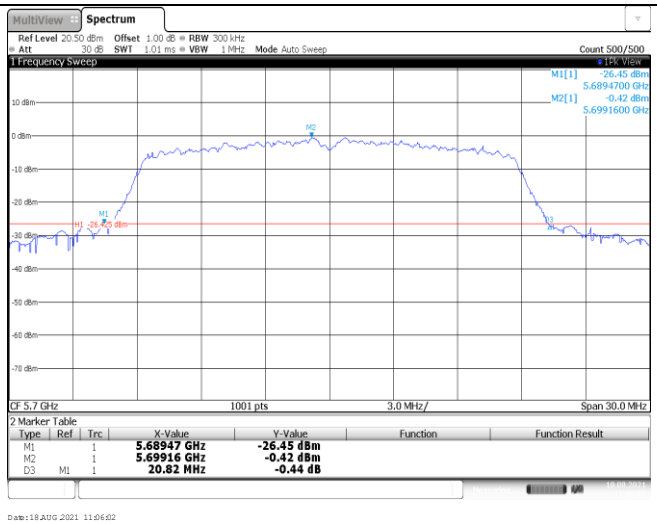
Band II	802.11a
CH_L	
CH_M	
CH_H	

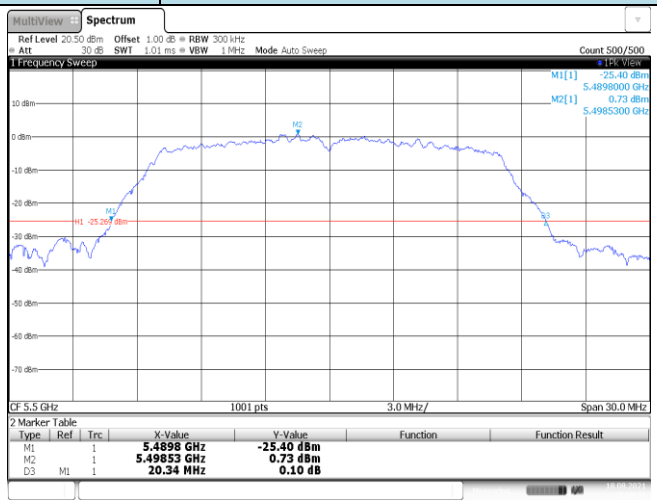
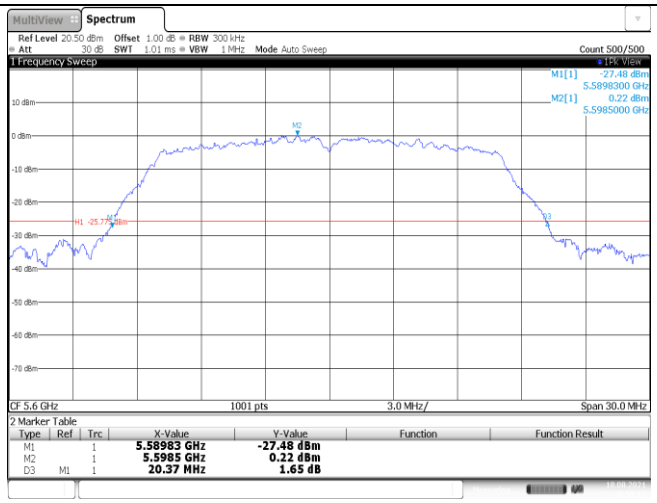
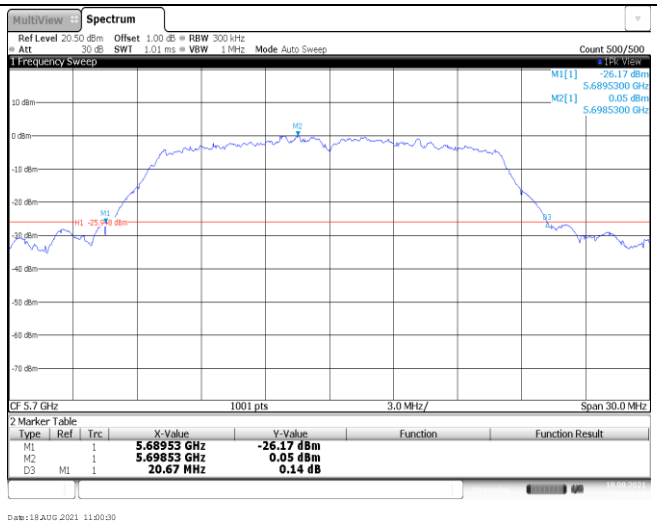
Band II	802.11ac (HT40)
CH_L	
CH_H	

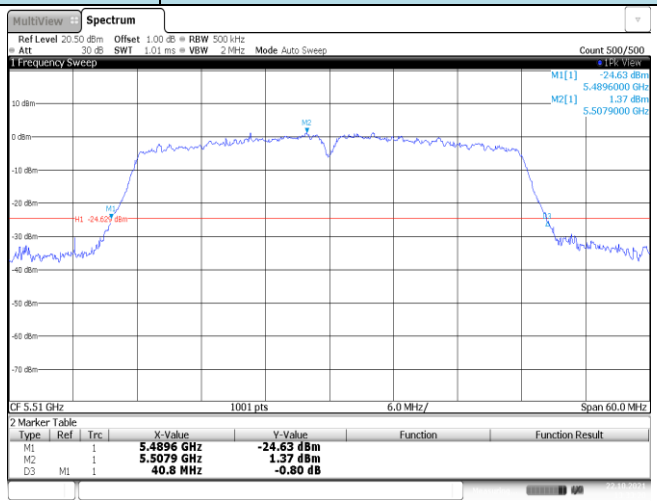
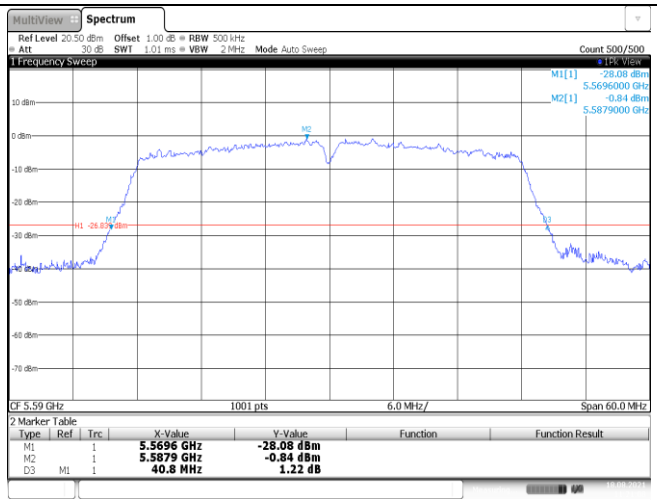
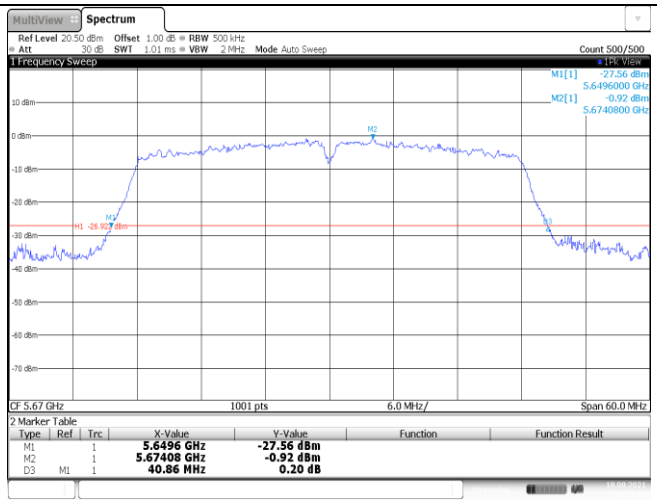
Band II	802.11n (HT40)
CH_L	
CH_H	

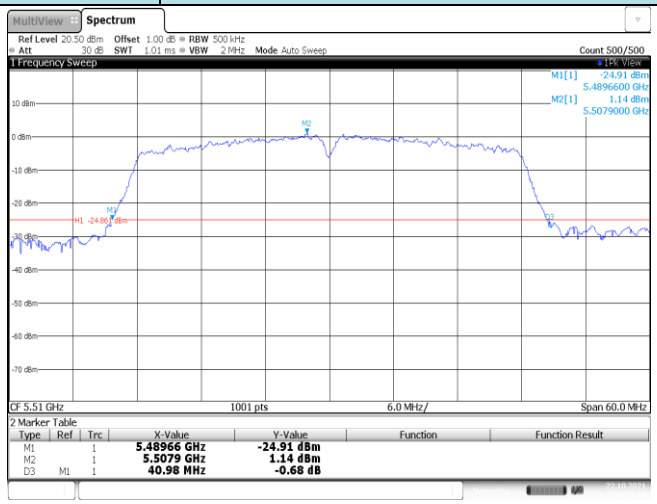
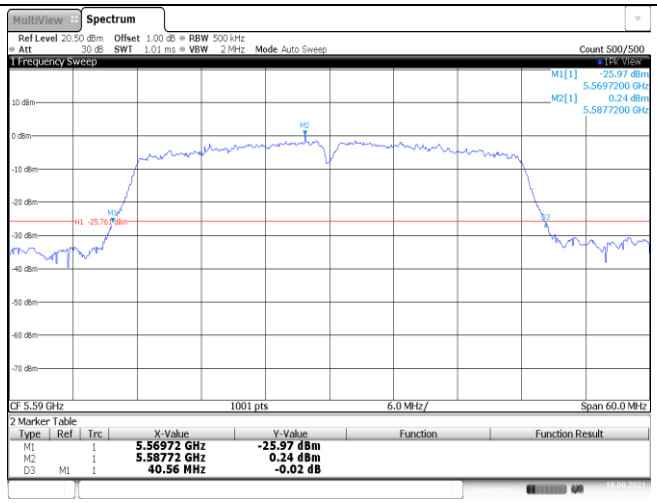
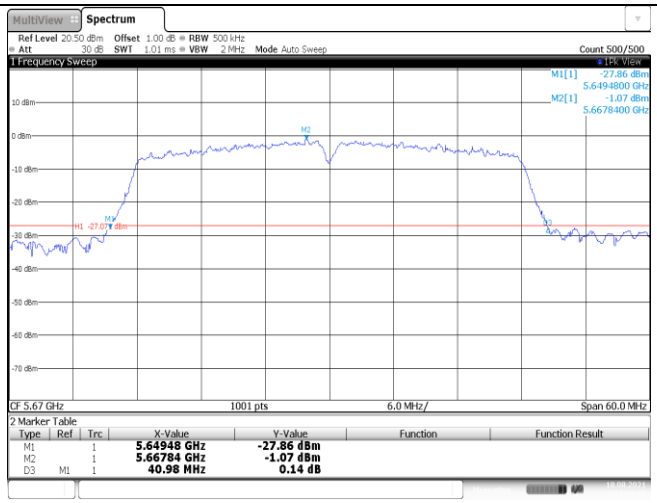
Band II	802.11ac (HT80)
CH_M	

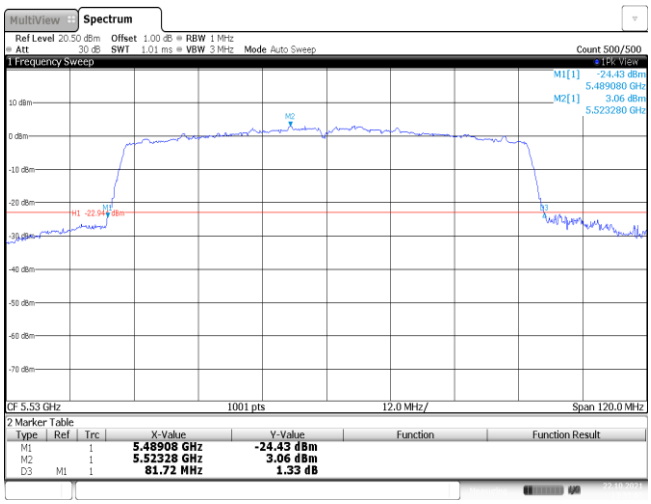
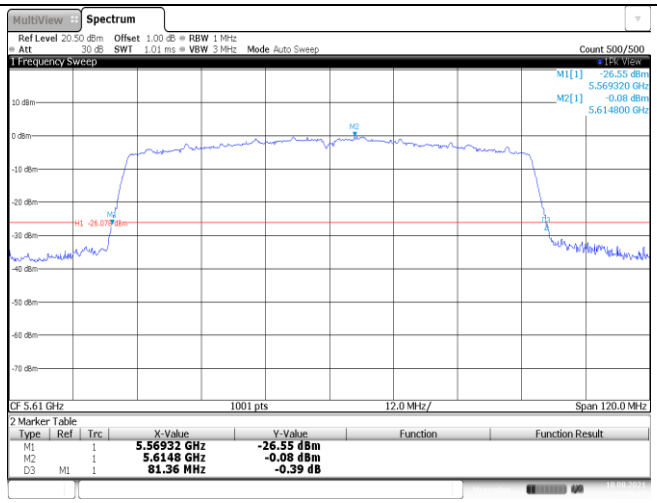
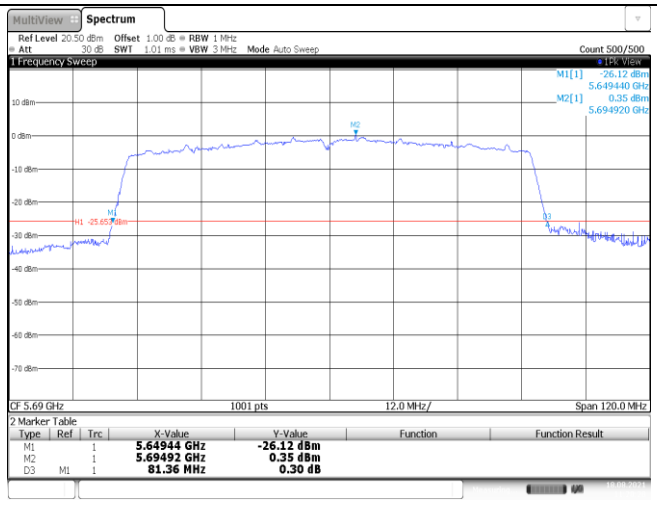
Band III	802.11ac (HT20)
CH_L	
CH_M	
CH_H	

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	

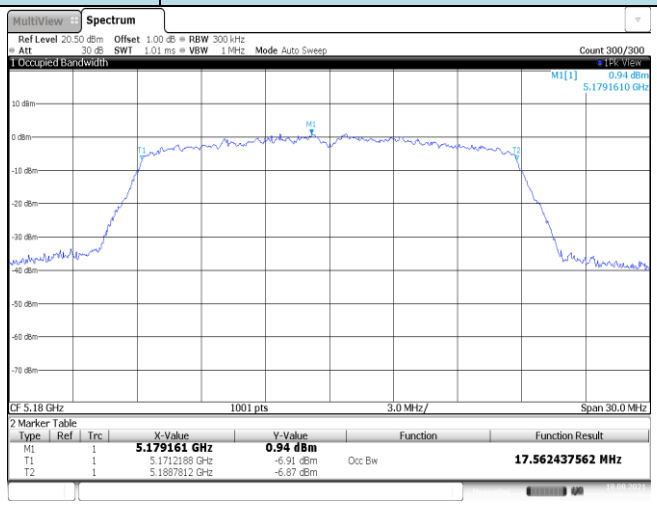
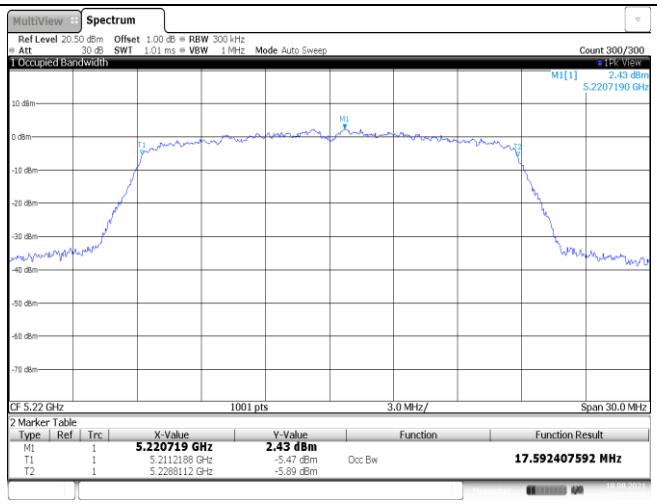
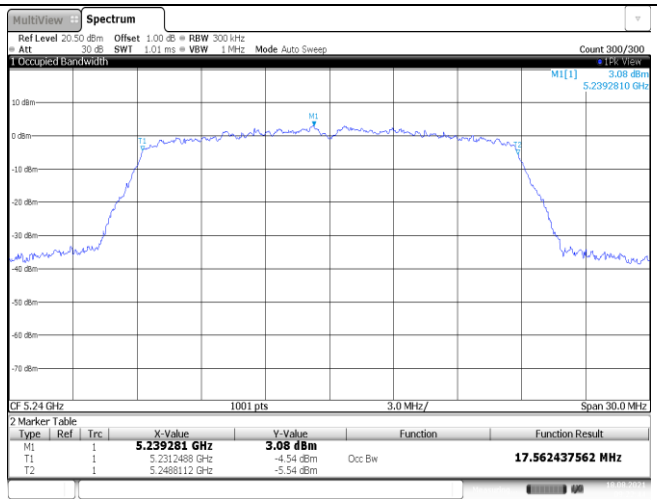
Band III	802.11ac (HT80)
CH_L	
CH_M	
CH_H	

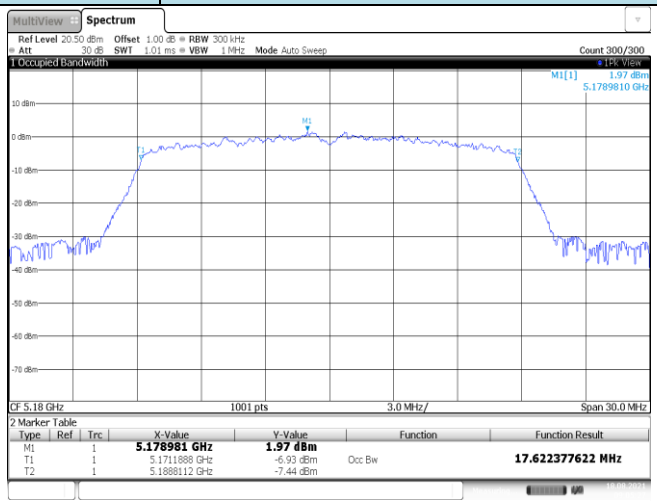
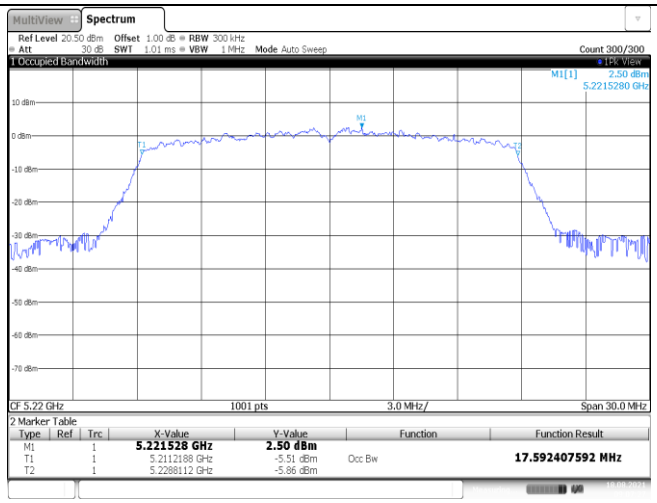
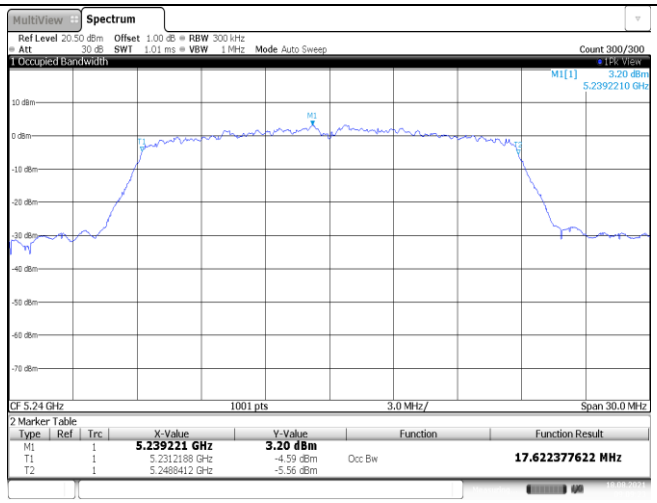
Appendix D：99% Occupy bandwidth

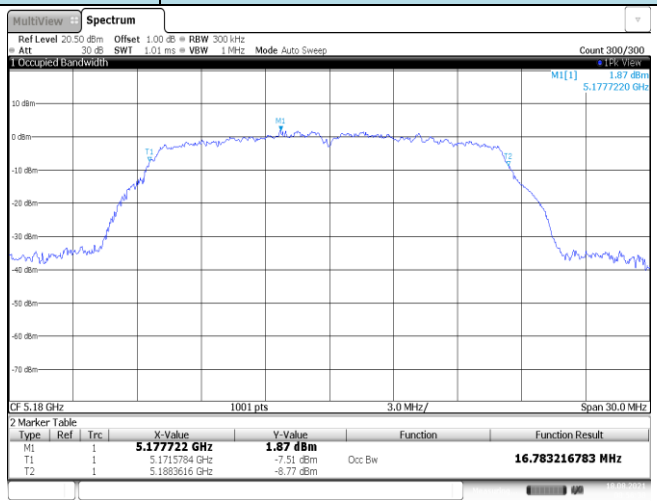
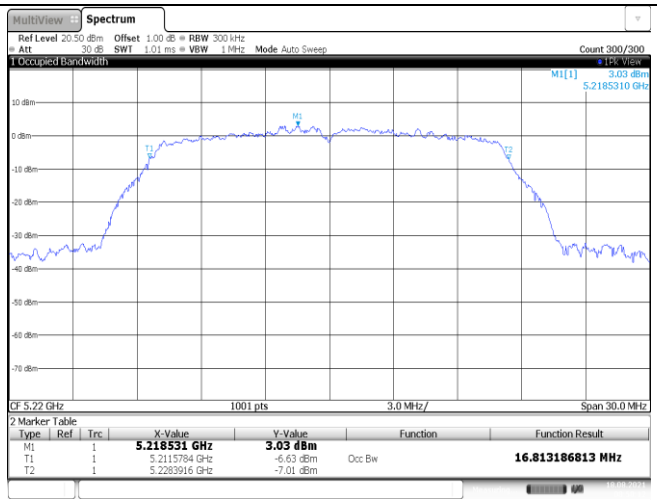
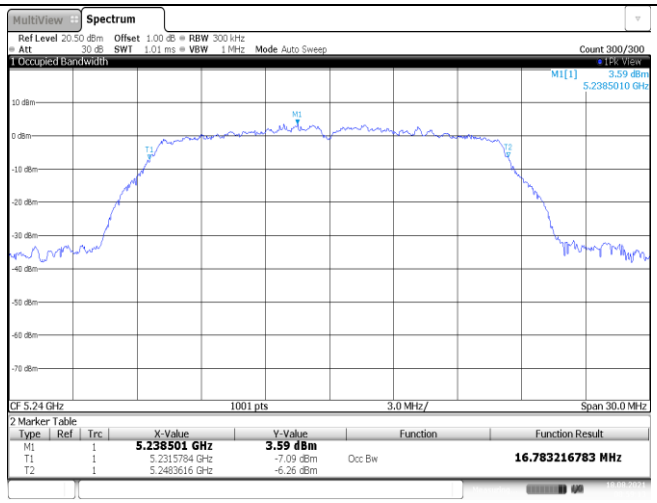
Band	Bandwidth (MHz)	Type	Channel	99% Occupy bandwith (MHz)	Result
I	20	802.11ac	CH_L	17.56	Pass
			CH_M	17.59	
			CH_H	17.56	
		802.11n	CH_L	17.62	Pass
			CH_M	17.59	
			CH_H	17.62	
		802.11a	CH_L	16.78	Pass
			CH_M	16.81	
			CH_H	16.78	
	40	802.11ac	CH_L	35.90	Pass
			CH_H	35.96	
		802.11n	CH_L	35.96	Pass
			CH_H	36.02	
	80	802.11ac	CH_M	75.05	Pass
II	20	802.11ac	CH_L	17.56	Pass
			CH_M	17.59	
			CH_H	17.59	
		802.11n	CH_L	17.59	Pass
			CH_M	17.62	
			CH_H	17.62	
		802.11a	CH_L	16.78	Pass
			CH_M	16.78	
			CH_H	16.75	
	40	802.11ac	CH_L	35.96	Pass
			CH_H	35.96	
		802.11n	CH_L	36.02	Pass
			CH_H	36.08	
	80	802.11ac	CH_M	75.05	Pass

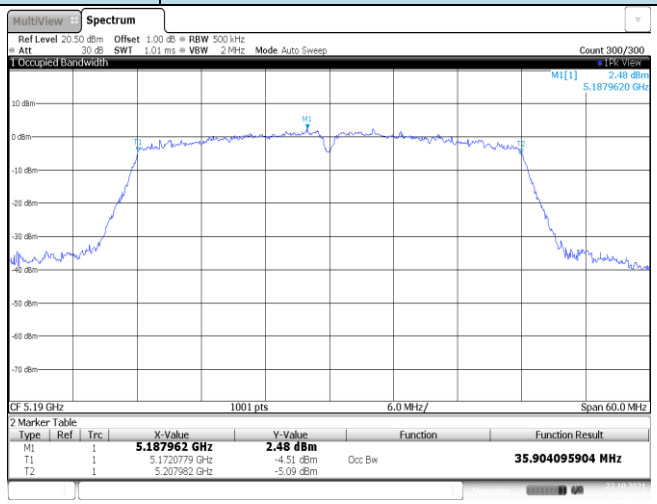
Band	Bandwidth (MHz)	Type	Channel	99% Occupy bandwith (MHz)	Result
III	20	802.11ac	CH_L	17.59	Pass
			CH_M	17.56	
			CH_H	17.62	
		802.11n	CH_L	17.62	Pass
			CH_M	17.62	
			CH_H	17.65	
		802.11a	CH_L	16.81	Pass
			CH_M	16.81	
			CH_H	16.87	
	40	802.11ac	CH_L	35.96	Pass
			CH_M	35.96	
			CH_H	36.02	
		802.11n	CH_L	36.14	Pass
			CH_M	36.14	
			CH_H	36.14	
	80	802.11ac	CH_L	75.17	Pass
			CH_M	75.16	
			CH_H	75.16	

Band	Bandwidth (MHz)	Type	Channel	99% Occupy bandwith (MHz)	Result
IV	20	802.11ac	CH_L	17.89	Pass
			CH_M	17.89	
			CH_H	17.89	
		802.11n	CH_L	17.86	Pass
			CH_M	17.89	
			CH_H	17.92	
		802.11a	CH_L	16.93	Pass
			CH_M	16.99	
			CH_H	17.02	
	40	802.11ac	CH_L	36.32	Pass
			CH_H	36.38	
		802.11n	CH_L	36.47	Pass
			CH_H	36.47	
	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