ANT. 2

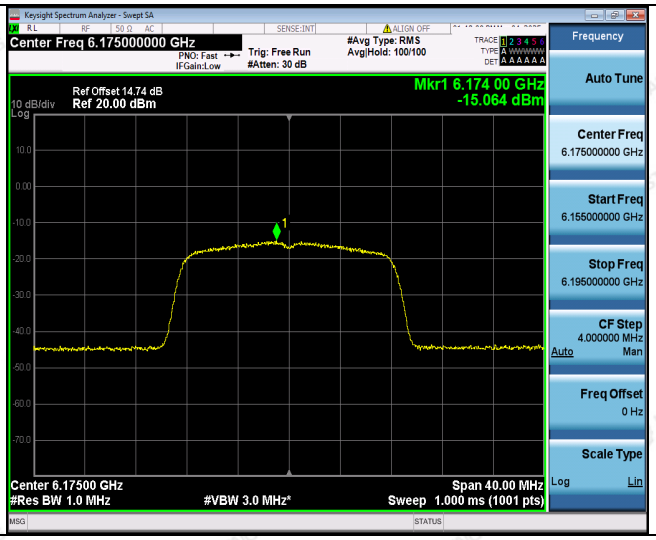
Mode	Test channel	Frequency (MHz)	Result [dBm/MHz]	E.I.R.P [dBm/MHz]	Limit [dBm/MHz]	Result
802.11a	1	5955	-12.44	-13.07	-1	PASS
802.11a	45	6175	-15.06	-15.69	-1	PASS
802.11a	93	6415	-16.91	-17.54	-1	PASS
802.11a	97	6435	-15.66	-16.29	-1	PASS
802.11a	105	6475	-16.59	-17.22	-1	PASS
802.11a	113	6515	-14.88	-15.51	-1	PASS
802.11a	117	6535	-14.86	-15.49	-1	PASS
802.11a	153	6715	-13.38	-14.01	-1	PASS
802.11a	181	6855	-13.82	-14.45	-1	PASS
802.11a	185	6875	-14.16	-14.79	-1	PASS
802.11a	213	7015	-13.12	-13.75	-1	PASS
802.11a	233	7115	-13.46	-14.09	-1	PASS
802.11ax(HE20)	1	5955	-15.02	-15.65	-1	PASS
802.11ax(HE20)	45	6175	-15.25	-15.88	-1	PASS
802.11ax(HE20)	93	6415	-17.46	-18.09	-1	PASS
802.11ax(HE20)	97	6435	-16.85	-17.48	-1	PASS
802.11ax(HE20)	105	6475	-15.83	-16.46	-1	PASS
802.11ax(HE20)	113	6515	-15.99	-16.62	-1	PASS
802.11ax(HE20)	117	6535	-15.92	-16.55	-1	PASS
802.11ax(HE20)	153	6715	-16.09	-16.72	-1	PASS
802.11ax(HE20)	181	6855	-16.41	-17.04	-1	PASS
802.11ax(HE20)	185	6875	-16.77	-17.4	-1	PASS
802.11ax(HE20)	213	7015	-16.68	-17.31	-1	PASS
802.11ax(HE20)	233	7115	-14.34	-14.97	-1	PASS
802.11ax(HE40)	3	5965	-15.91	-16.54	-1	PASS
802.11ax(HE40)	43	6165	-19.93	-20.56	-1	PASS
802.11ax(HE40)	91	6405	-20.23	-20.86	-1	PASS
802.11ax(HE40)	99	6445	-21.08	-21.71	-1	PASS
802.11ax(HE40)	107	6485	-20.05	-20.68	-1	PASS

802.11ax(HE40)	115	6525	-18.15	-18.78	-1	PASS
802.11ax(HE40)	123	6565	-18.71	-19.34	-1	PASS
802.11ax(HE40)	155	6725	-18.15	-18.78	-1	PASS
802.11ax(HE40)	179	6845	-17.16	-17.79	-1	PASS
802.11ax(HE40)	187	6885	-17.85	-18.48	-1	PASS
802.11ax(HE40)	211	7005	-17.20	-17.83	-1	PASS
802.11ax(HE40)	227	7085	-14.78	-15.41	-1	PASS
802.11ax(HE80)	7	5985	-20.81	-21.44	-1	PASS
802.11ax(HE80)	39	6145	-23.82	-24.45	-1	PASS
802.11ax(HE80)	87	6385	-22.19	-22.82	-1	PASS
802.11ax(HE80)	103	6465	-22.91	-23.54	-1	PASS
802.11ax(HE80)	119	6545	-21.22	-21.85	-1	PASS
802.11ax(HE80)	135	6625	-20.51	-21.14	-1	PASS
802.11ax(HE80)	151	6705	-19.49	-20.12	-1	PASS
802.11ax(HE80)	167	6785	-19.93	-20.56	-1	PASS
802.11ax(HE80)	183	6865	-21.64	-22.27	-1	PASS
802.11ax(HE80)	199	6945	-22.30	-22.93	-1	PASS
802.11ax(HE80)	215	7025	-19.43	-20.06	-1	PASS
802.11ax(HE160)	15	6025	-22.79	-23.42	-1	PASS
802.11ax(HE160)	47	6185	-24.33	-24.96	-1	PASS
802.11ax(HE160)	79	6345	-24.81	-25.44	-1	PASS
802.11ax(HE160)	111	6505	-22.86	-23.49	-1	PASS
802.11ax(HE160)	143	6665	-22.43	-23.06	-1	PASS
802.11ax(HE160)	175	6825	-25.20	-25.83	-1	PASS
802.11ax(HE160)	207	6985	-22.20	-22.83	-1	PASS

NOTE: E.I.R.P = PSD Result + antenna gain
Antenna 1 gain = -0.63dBi

Test plots as follows:

802.11a

5955

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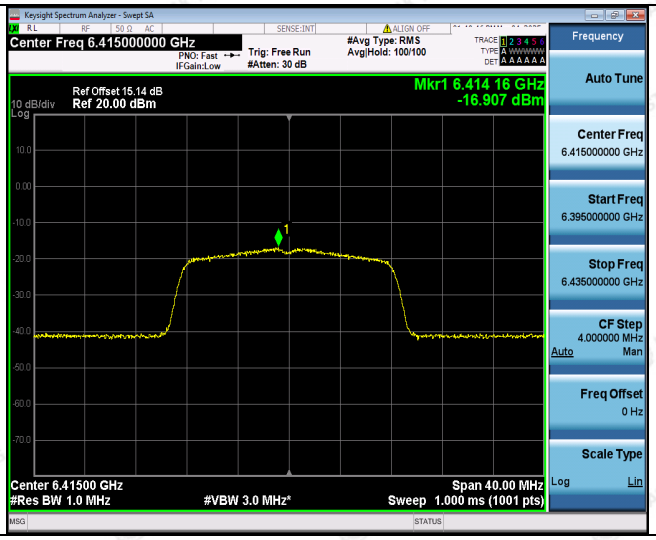

6415

6435

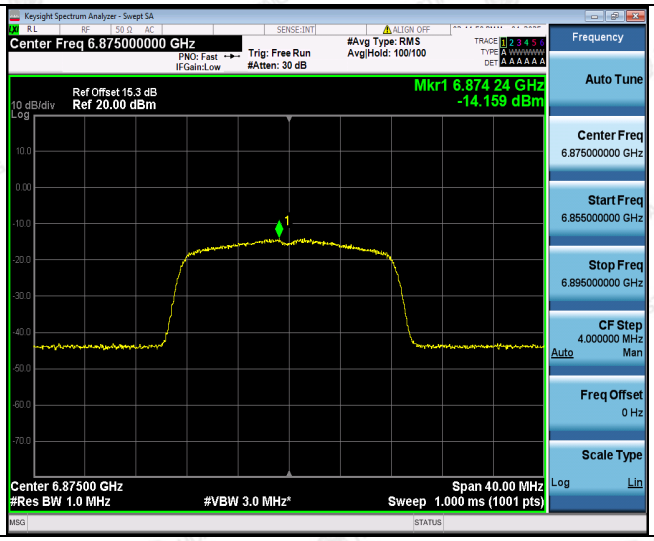
6475

6515

6535

6715

6855

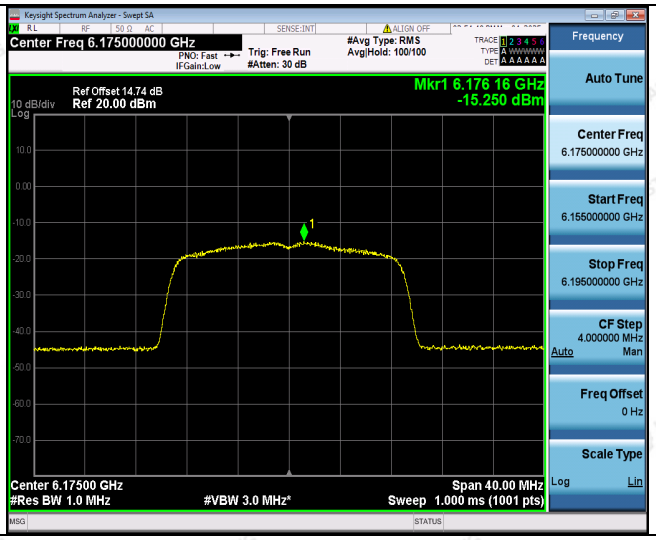


6875

7015

7115

802.11ax(HE20)

5955

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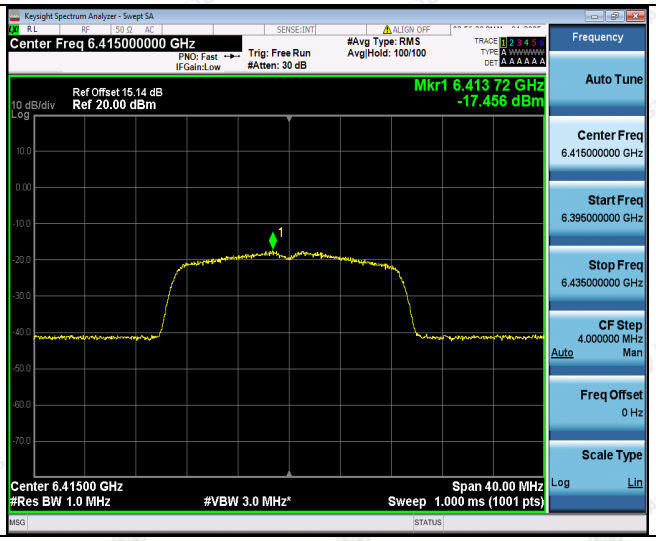
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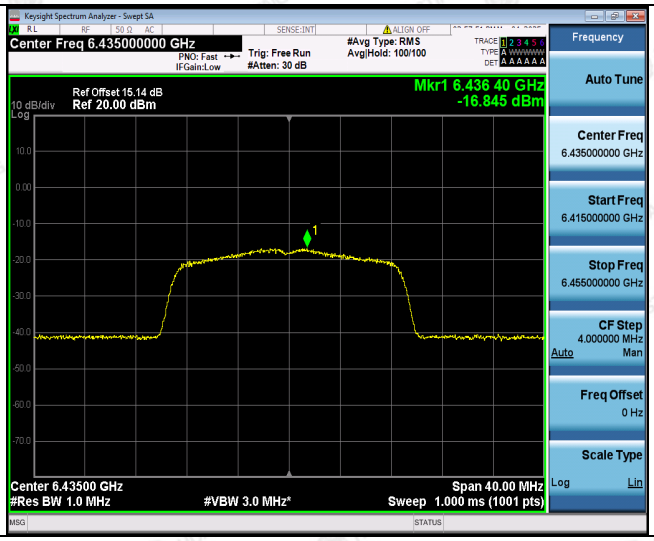
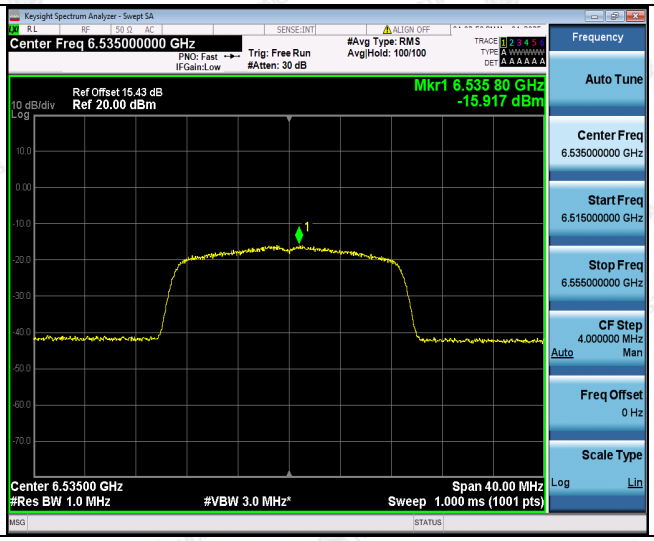


6435

6475

6515

TEL : +86-755 2302 9901 FAX : +86-755 2302 9901 E-mail : service@cer-mark.com
Add: 1-2F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

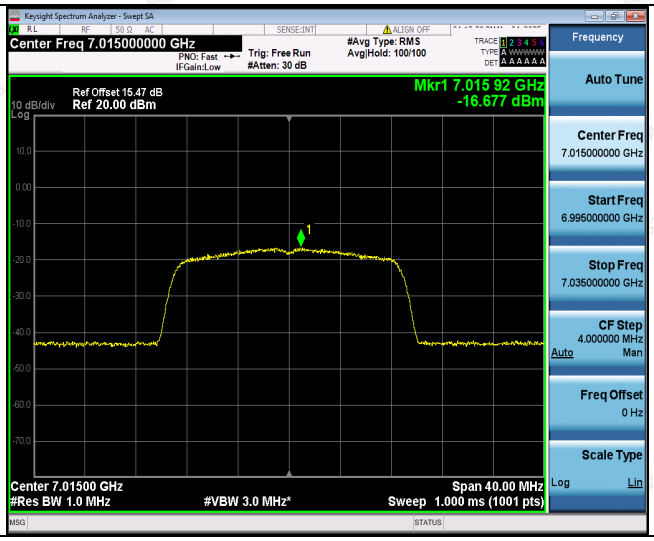


6535

6715

6855

6875



7015

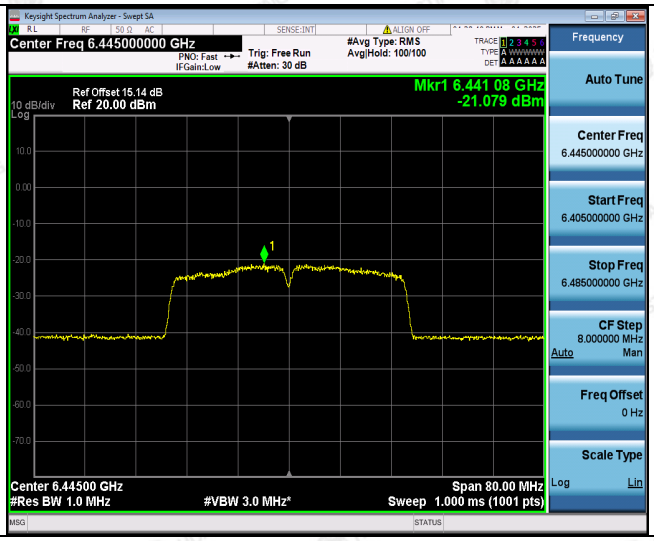
7115

802.11ax(HE40)

5965

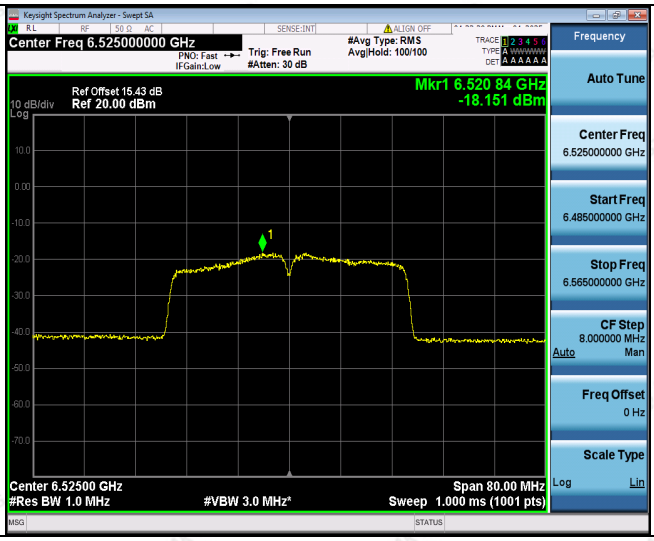
6165

6405



6445

6485



6525

TEL : +86-755 2302 9901 FAX : +86-755 2302 9901 E-mail : service@cer-mark.com
Add: 1-2F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

6565

6725

6845

6885

7005

7085

802.11ax(HE80)

5985

6145

6385

6465

6545

6625

6705

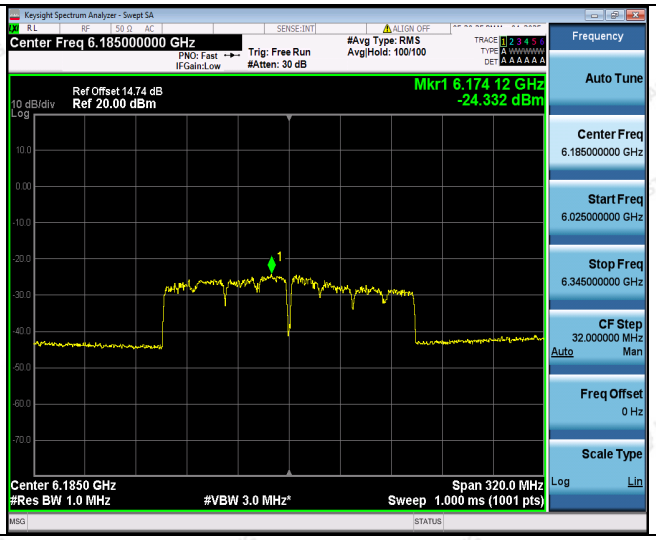
6785

6865

6945

7025

802.11ax(HE160)

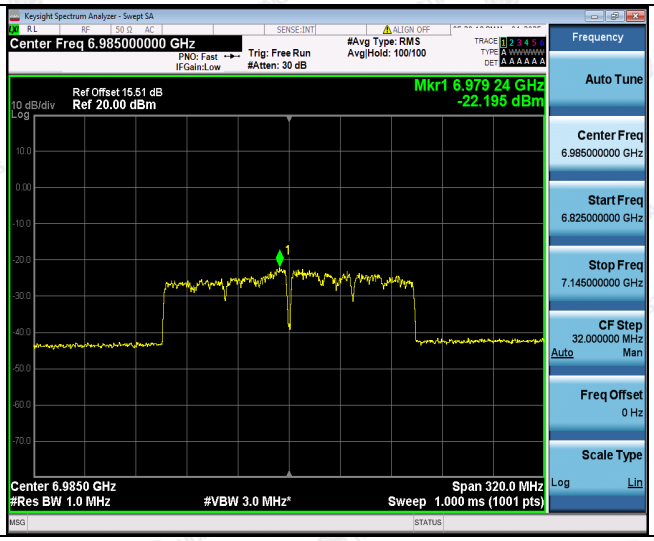
6025

6185

6345

6505

6665

6825



6985

For MIMO antenna port 1+antenna port 2

Mode	Test Channel	Frequency (MHz)	Power Density (dBm)	E.I.R.P (dBm)	Limit (dBm)	Result
802.11ax(HE20)	1	5955	-11.78	-10.43	-1	PASS
802.11ax(HE20)	45	6175	-13.60	-12.94	-1	PASS
802.11ax(HE20)	93	6415	-12.93	-11.23	-1	PASS
802.11ax(HE20)	97	6435	-12.85	-11.27	-1	PASS
802.11ax(HE20)	105	6475	-11.95	-10.41	-1	PASS
802.11ax(HE20)	113	6515	-11.66	-10.00	-1	PASS
802.11ax(HE20)	117	6535	-11.82	-10.22	-1	PASS
802.11ax(HE20)	153	6715	-11.46	-9.74	-1	PASS
802.11ax(HE20)	181	6855	-12.28	-10.67	-1	PASS
802.11ax(HE20)	185	6875	-12.49	-10.85	-1	PASS
802.11ax(HE20)	213	7015	-11.90	-10.14	-1	PASS
802.11ax(HE20)	233	7115	-9.73	-8.01	-1	PASS
802.11ax(HE40)	3	5965	-13.45	-12.40	-1	PASS
802.11ax(HE40)	43	6165	-13.65	-11.63	-1	PASS
802.11ax(HE40)	91	6405	-16.09	-14.48	-1	PASS
802.11ax(HE40)	99	6445	-15.67	-13.79	-1	PASS
802.11ax(HE40)	107	6485	-12.67	-10.52	-1	PASS
802.11ax(HE40)	115	6525	-12.51	-10.59	-1	PASS
802.11ax(HE40)	123	6565	-12.87	-10.92	-1	PASS
802.11ax(HE40)	155	6725	-12.15	-10.17	-1	PASS
802.11ax(HE40)	179	6845	-11.68	-9.79	-1	PASS
802.11ax(HE40)	187	6885	-12.39	-10.51	-1	PASS
802.11ax(HE40)	211	7005	-12.72	-11.02	-1	PASS
802.11ax(HE40)	227	7085	-9.98	-8.21	-1	PASS
802.11ax(HE80)	7	5985	-13.19	-11.02	-1	PASS

802.11ax(HE80)	39	6145	-14.65	-12.34	-1	PASS
802.11ax(HE80)	87	6385	-17.18	-15.38	-1	PASS
802.11ax(HE80)	103	6465	-16.91	-14.93	-1	PASS
802.11ax(HE80)	119	6545	-14.20	-12.09	-1	PASS
802.11ax(HE80)	135	6625	-13.24	-11.10	-1	PASS
802.11ax(HE80)	151	6705	-12.16	-10.01	-1	PASS
802.11ax(HE80)	167	6785	-13.27	-11.20	-1	PASS
802.11ax(HE80)	183	6865	-13.56	-11.34	-1	PASS
802.11ax(HE80)	199	6945	-14.96	-12.81	-1	PASS
802.11ax(HE80)	215	7025	-12.81	-10.75	-1	PASS
802.11ax(HE160)	15	6025	-15.15	-12.97	-1	PASS
802.11ax(HE160)	47	6185	-17.51	-15.42	-1	PASS
802.11ax(HE160)	79	6345	-18.26	-16.21	-1	PASS
802.11ax(HE160)	111	6505	-16.78	-14.79	-1	PASS
802.11ax(HE160)	143	6665	-15.45	-13.34	-1	PASS
802.11ax(HE160)	175	6825	-15.60	-13.26	-1	PASS
802.11ax(HE160)	207	6985	-16.04	-14.04	-1	PASS
	Note: 1. According to KDB 662911, Result power = $10\log(10^{(ant1/10)}+10^{(ant2/10)})$. 2. Result unit: W, The end result is converted to units of dBm. Limit=-1dBm-(direction gain-6dBi)=-1dBm					

Note: This product supports antenna 1 and antenna 2 launch, but only support 802.11a/ax for MIMO mode, not support 802.11 a for MIMO mode.

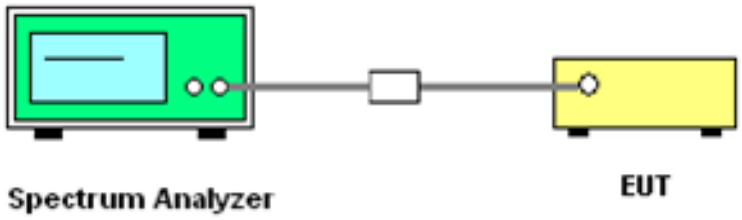
4.6 In-Band Emission Mask

4.6.1 Limit of In-Band Emission Mask Measurement

Test Item	Frequency (MHz)	(X) dBc[*1]
Emission Mask	At 1 MHz outside of channel edge	20
	At one channel bandwidth from the channel center[*2]	28
	At one- and one-half times the channel bandwidth away from channel center[*3]	40
	More than one- and one-half times the channel bandwidth	40

[*1]: The power spectral density must be suppressed by “x” dB
[*2]: At frequencies between one megahertz outside an unlicensed device's channel edge and one channel bandwidth from the center of the channel, the limits must be linearly interpolated between 20 dB and 28 dB suppression.
[*3]: at frequencies between one and one- and one-half times an unlicensed device's channel bandwidth, the limits must be linearly interpolated between 28 dB and 40 dB suppression.

4.6.2 Test Setup



4.6.3 Test Instruments

RF Test Room					
Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Date**	**Calibration Due**
Spectrum analyzer	Agilent	N9020A	HKE-025	Feb. 20, 2024	Feb. 19, 2025
RF cable	Times	1-40G	HKE-034	Feb. 20, 2024	Feb. 19, 2025
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 20, 2024	Feb. 19, 2025
RF Test Software	Tonscend	JS1120-3 Version 3.5.39	HKE-083	N/A	N/A

Note: *The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).*

RF Test Room					
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Spectrum analyzer	Agilent	N9020A	HKE-025	Feb. 19, 2025	Feb. 18, 2026
RF cable	Times	1-40G	HKE-034	Feb. 19, 2025	Feb. 18, 2026
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 19, 2025	Feb. 18, 2026
RF Test Software	Tonscend	JS1120-3 Version 3.5.39	HKE-083	N/A	N/A

4.6.4 Test Result

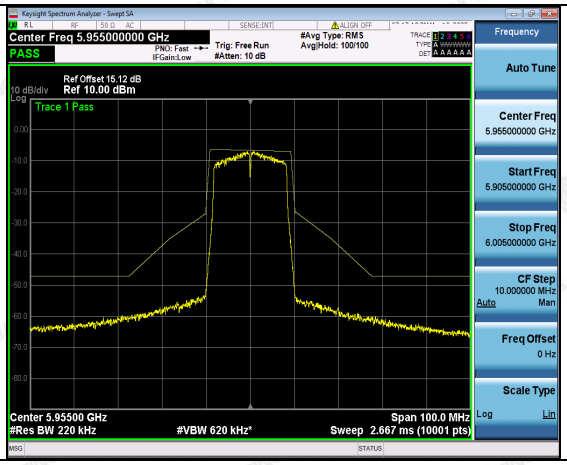
Pass

4.6.5 Test Data

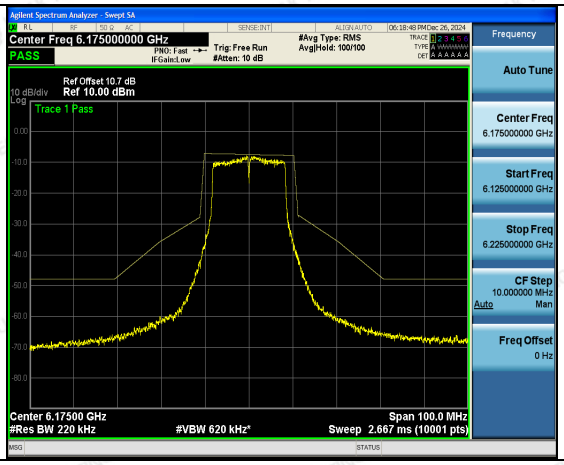
ANT. 1

802.11a

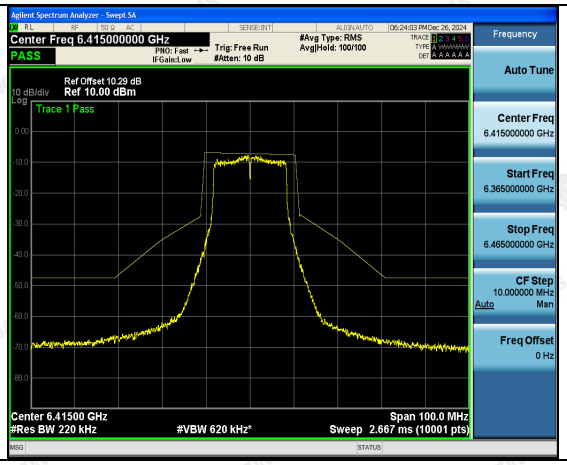
CH1



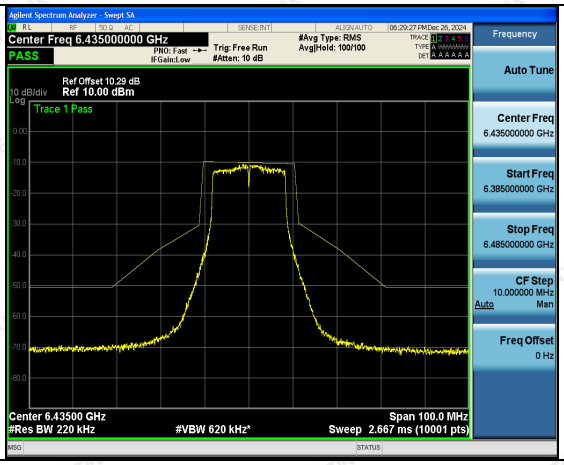
CH45



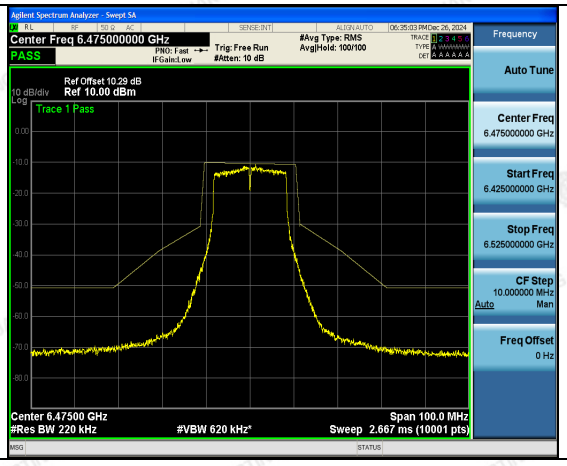
CH93



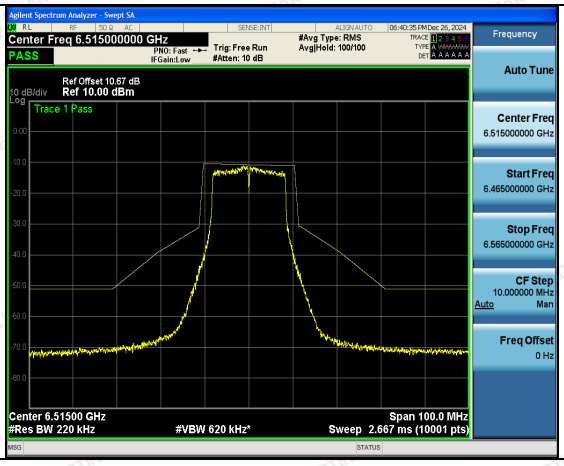
CH97



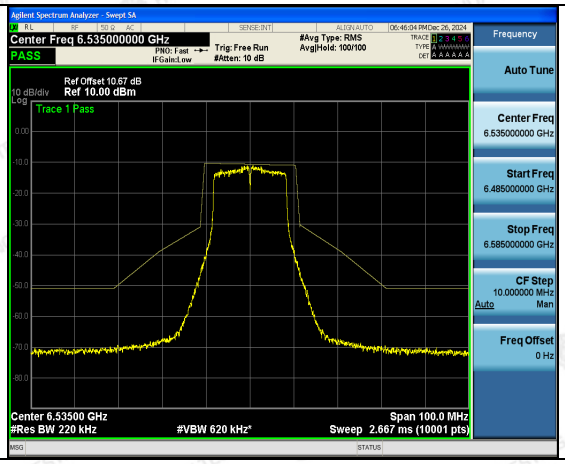
CH105



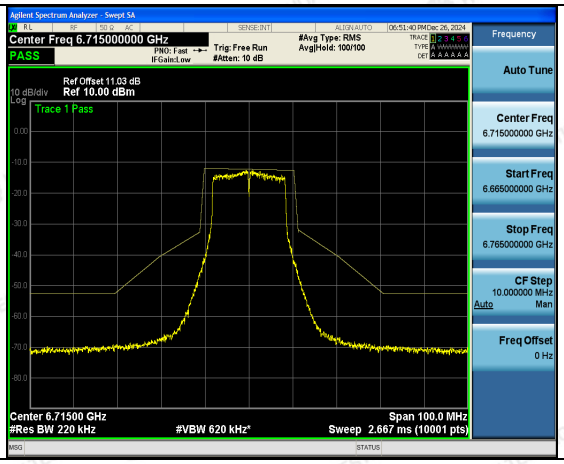
CH113



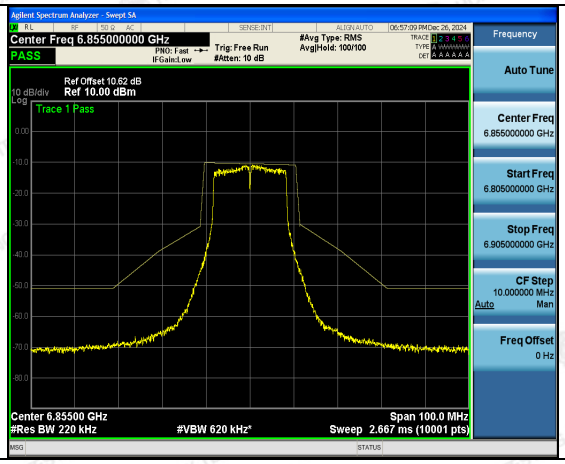
CH117



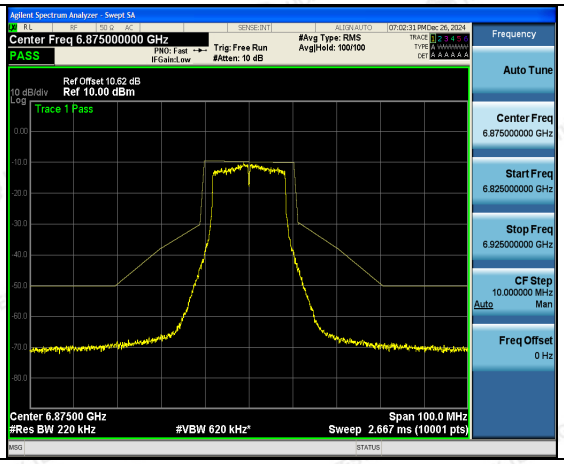
CH153



CH181



CH185



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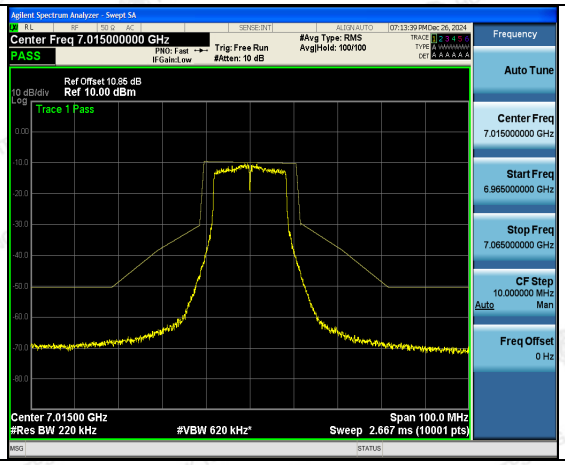
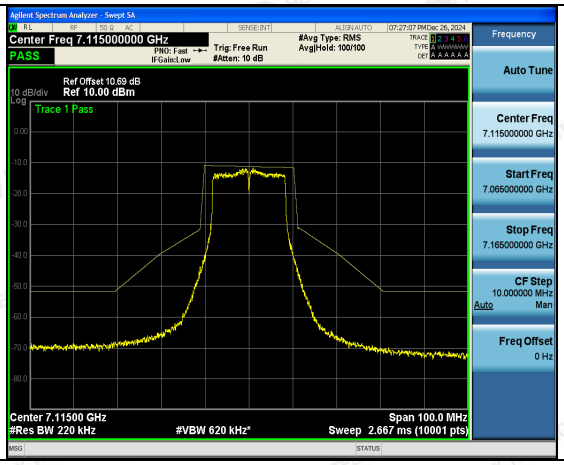
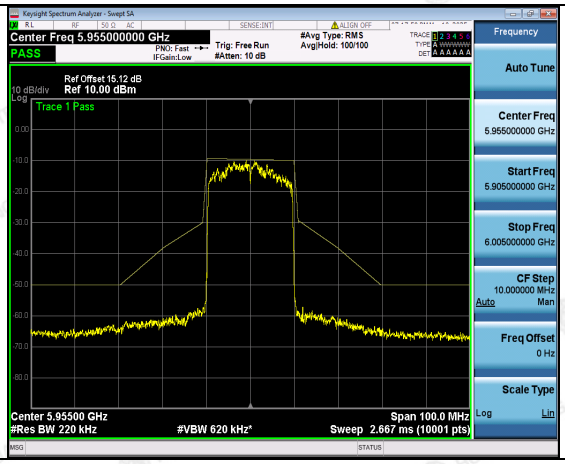


CH233



802.11ax (HE20)

CH1



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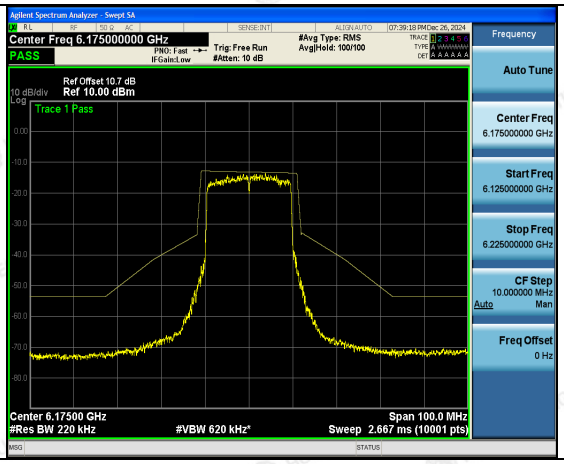
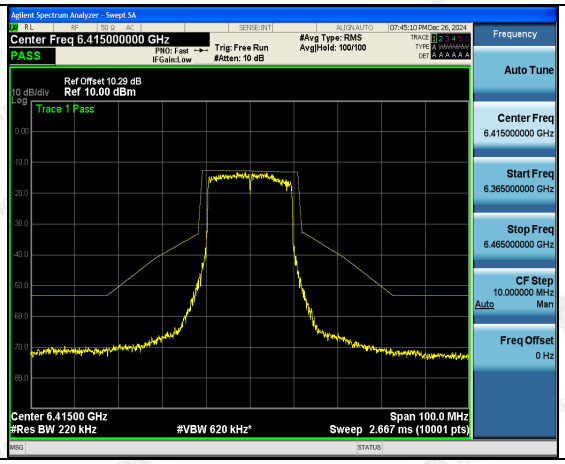


CH93



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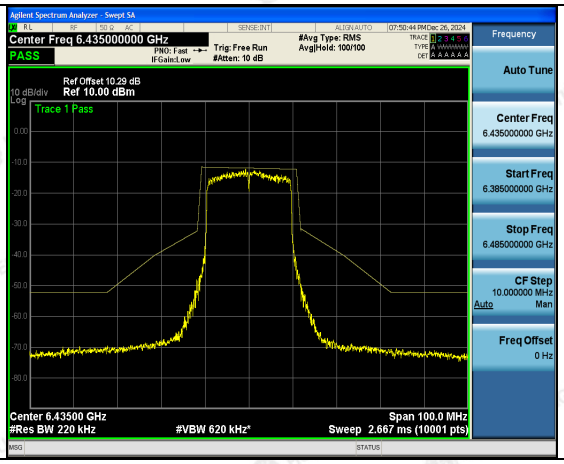
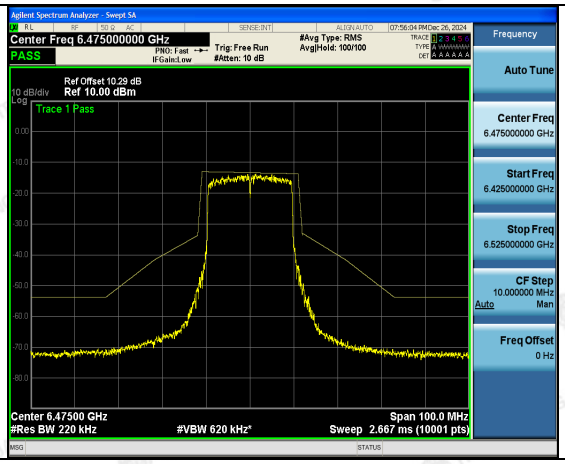
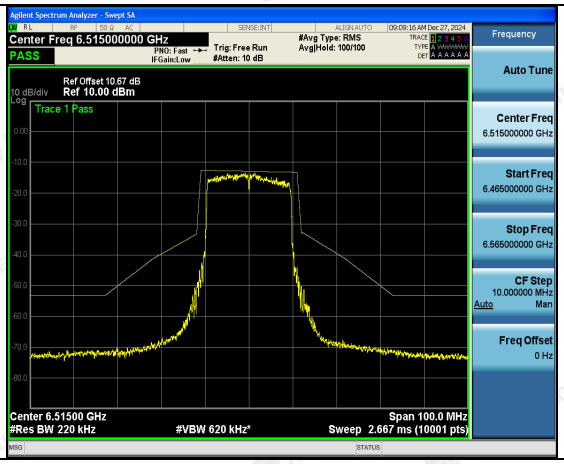
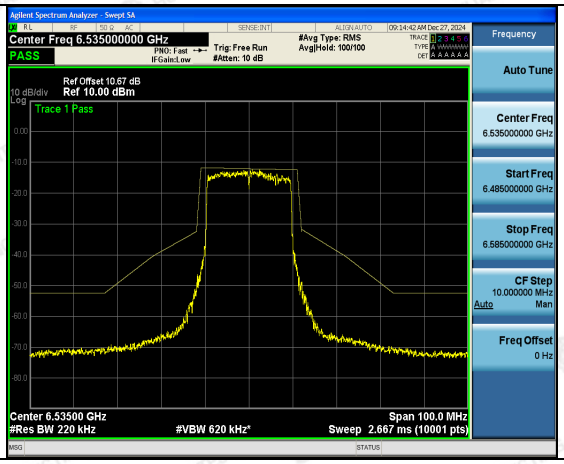
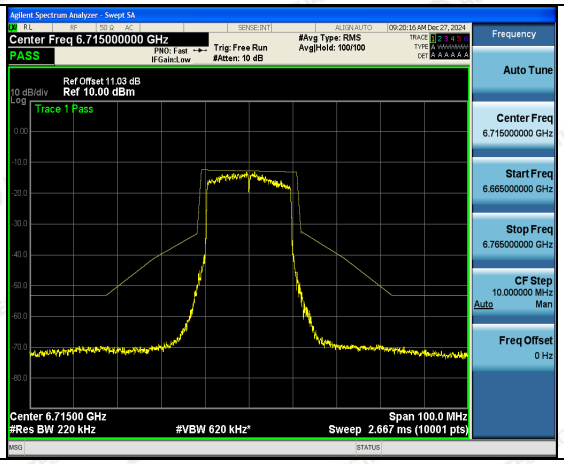
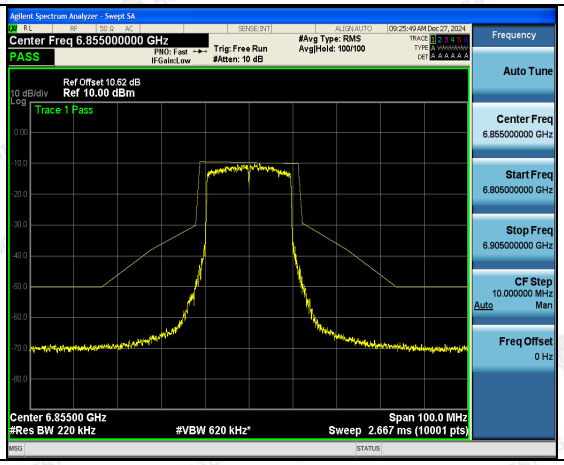
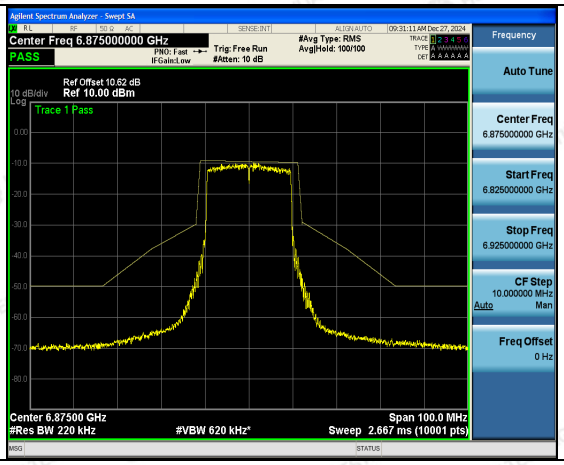
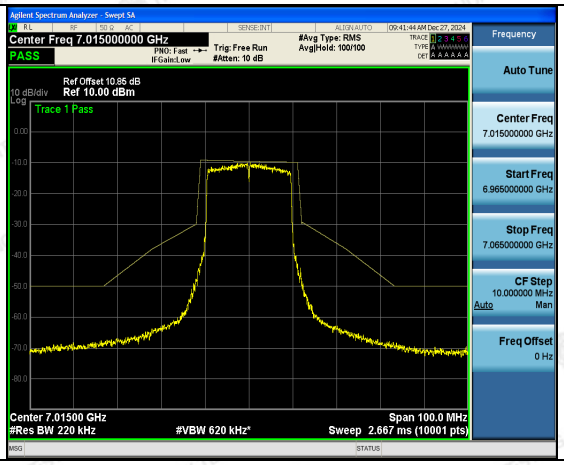
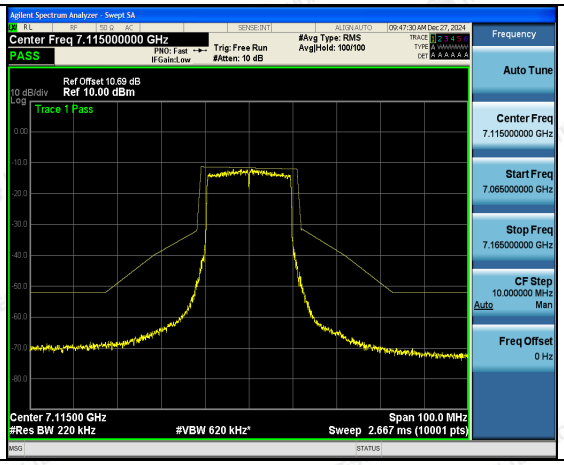


CH105



CH113



CH117	CH153
	
CH181	**CH185**
	
CH213	**CH233**
	

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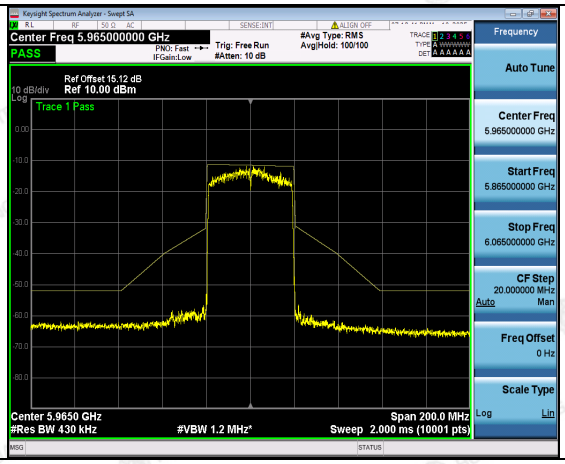
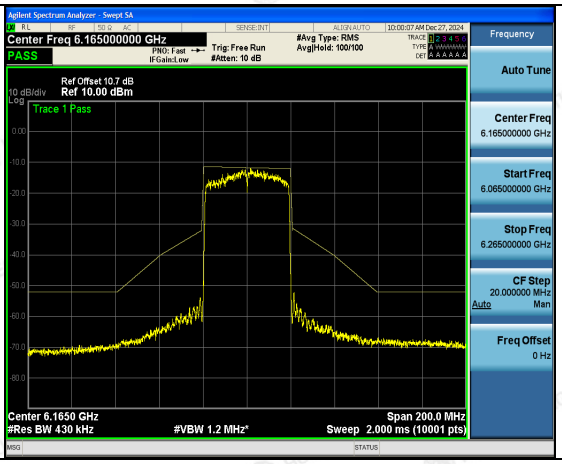
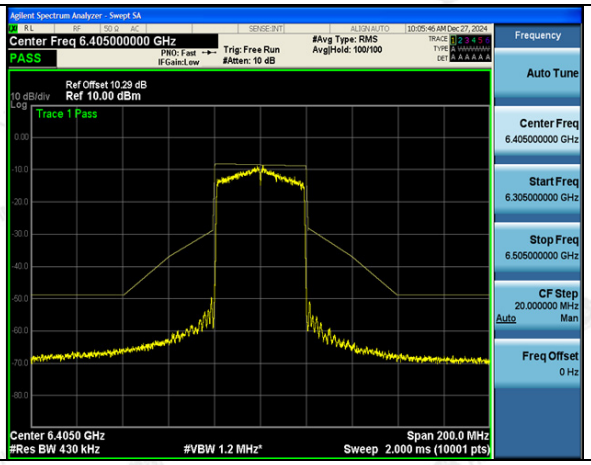
CH3



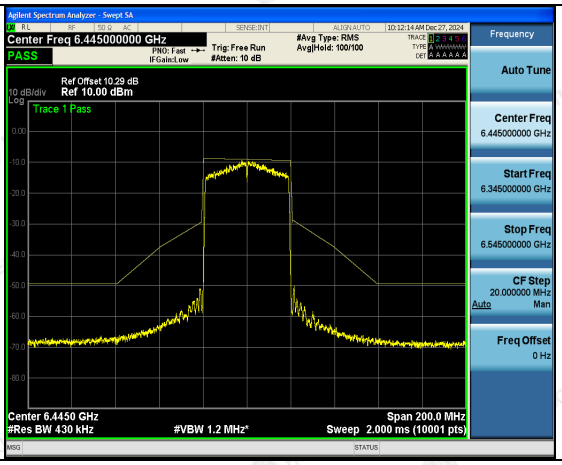
CH43



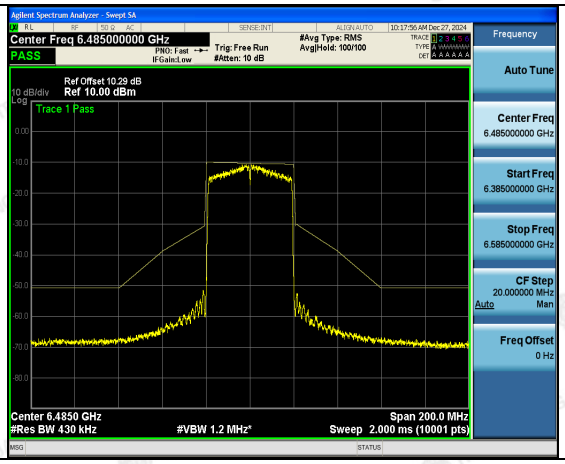
CH91



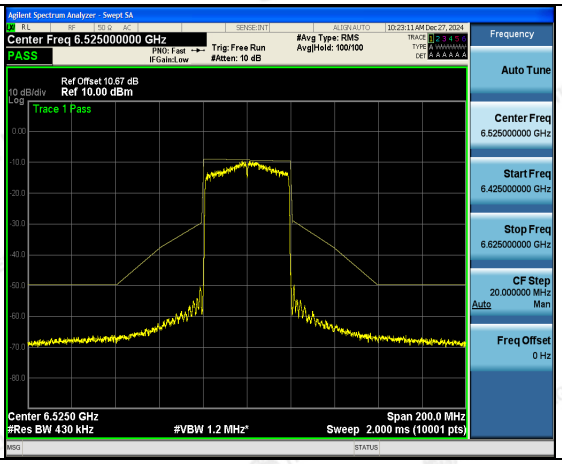
CH99



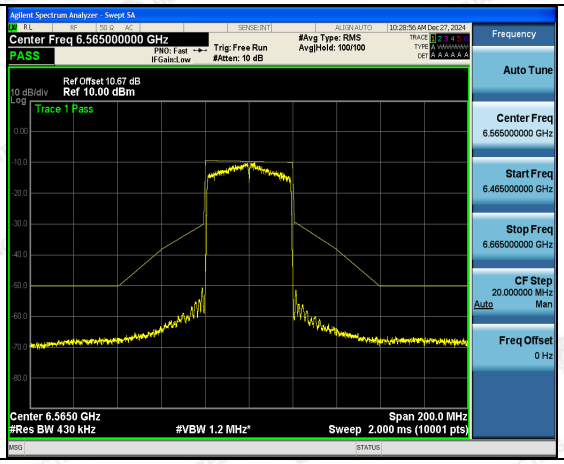
CH107



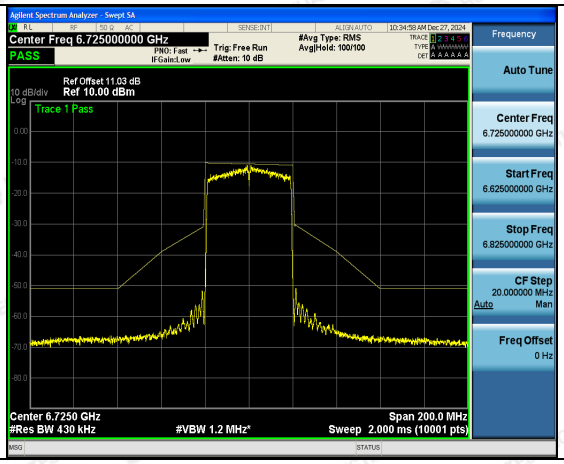
CH115



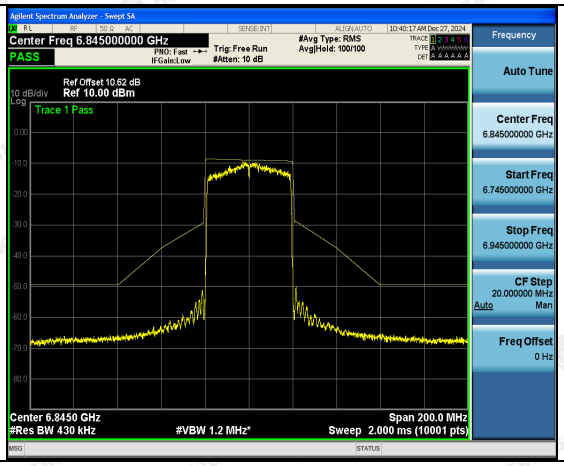
CH123



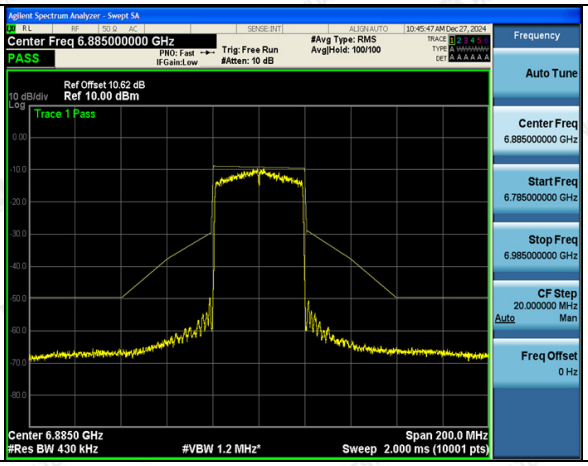
CH155



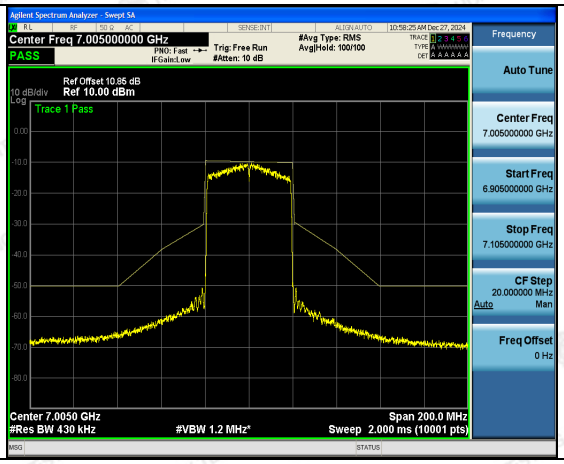
CH179



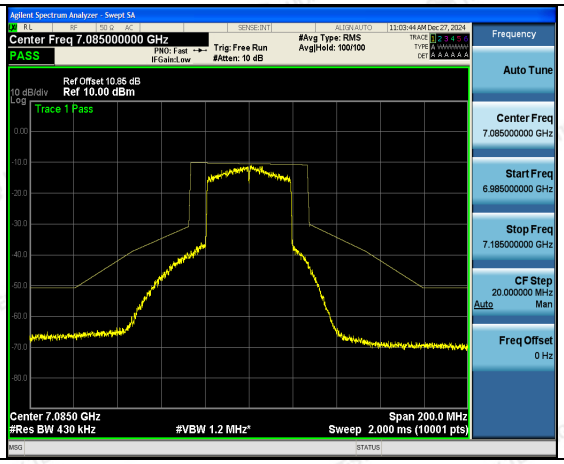
CH187



CH211



CH227



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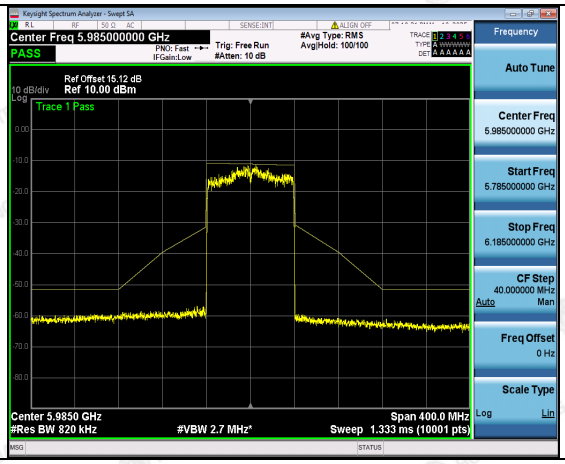
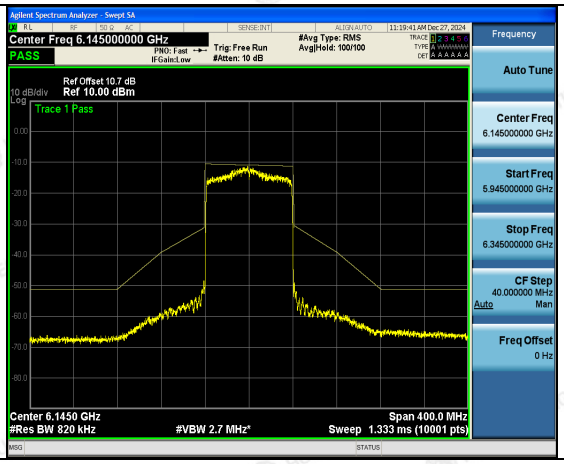
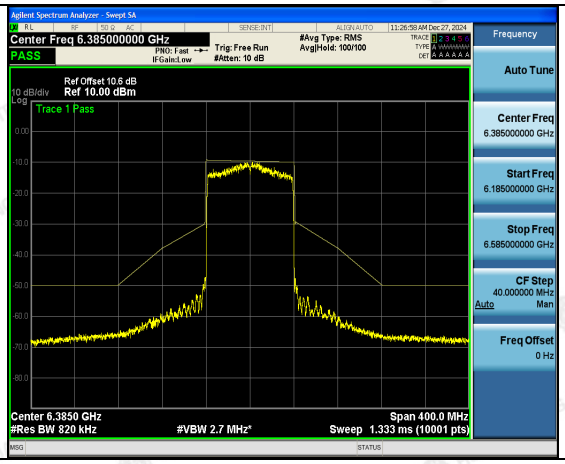
CH7



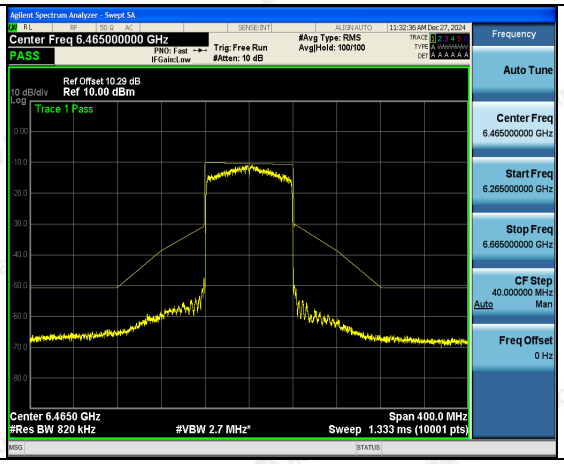
CH39



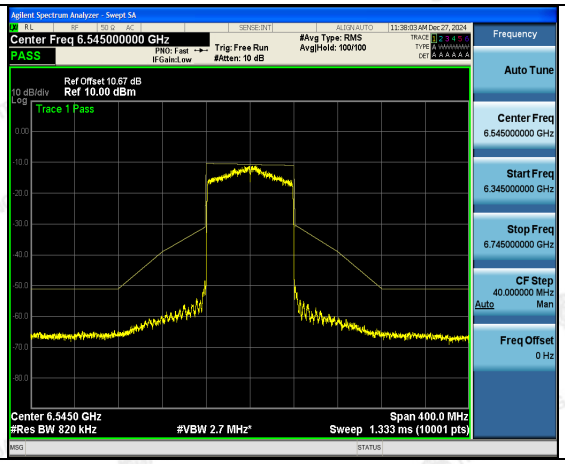
CH87



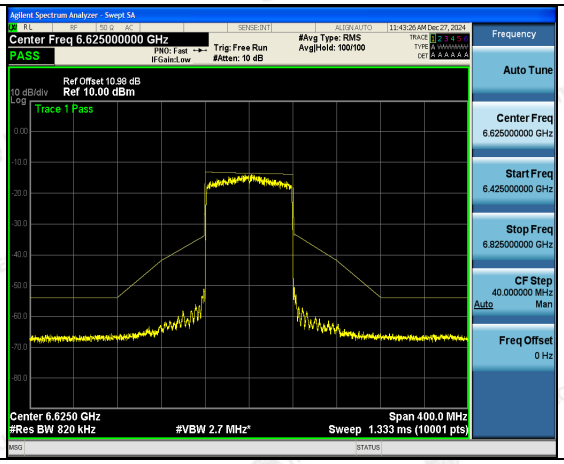
CH103

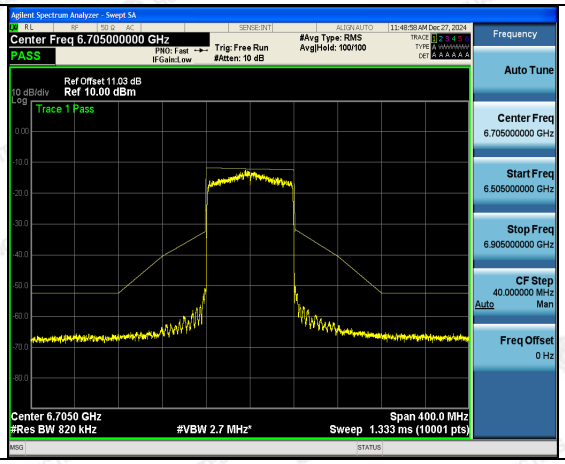
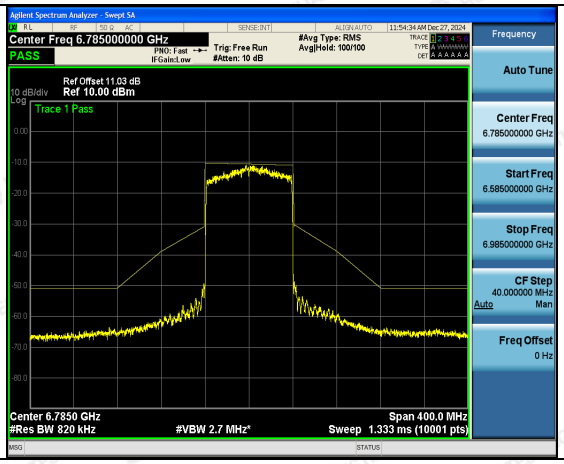


CH119



CH135



CH151	CH167
	
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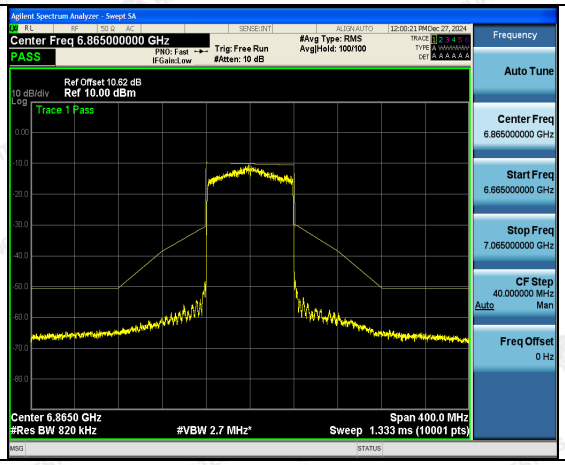
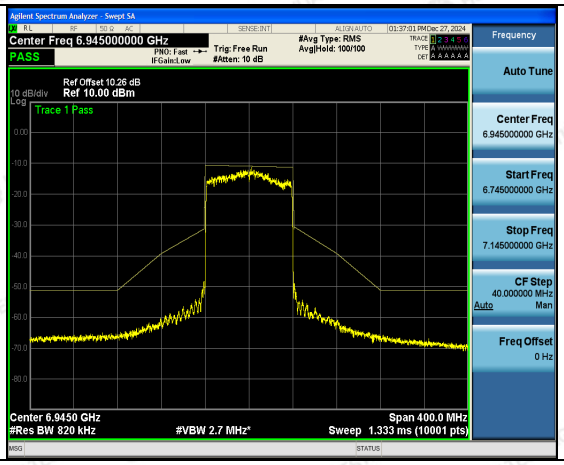
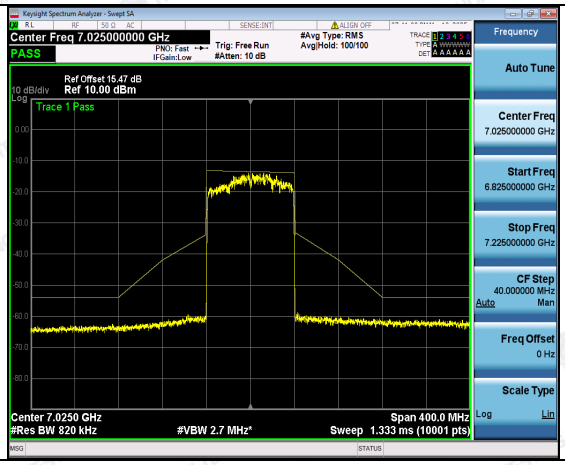
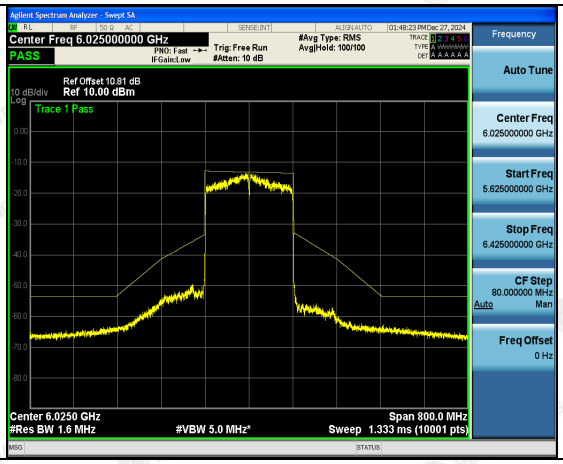
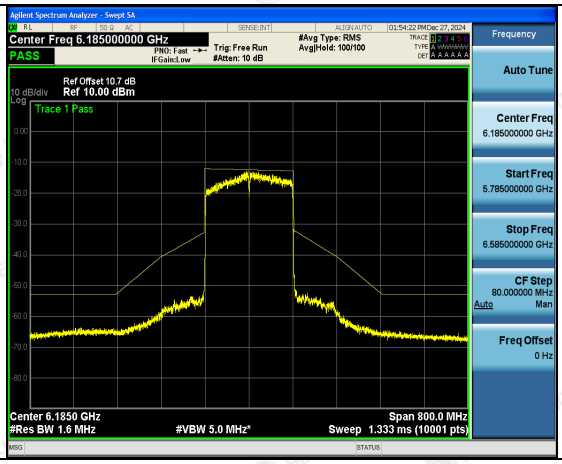
	
CH215	
	

802.11ax (HE160)

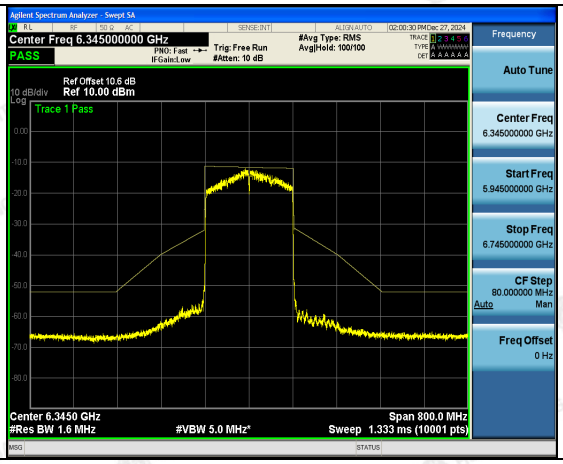
CH15



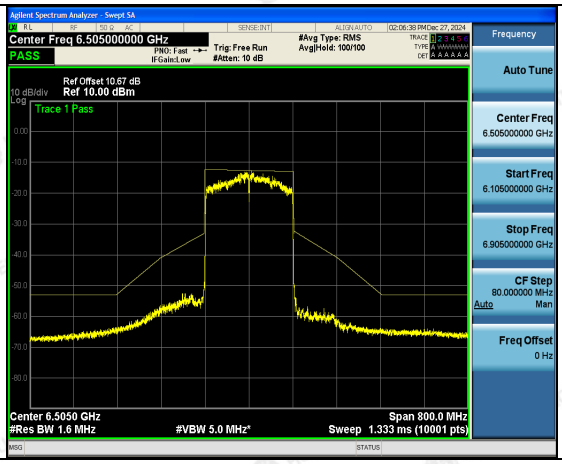
CH47



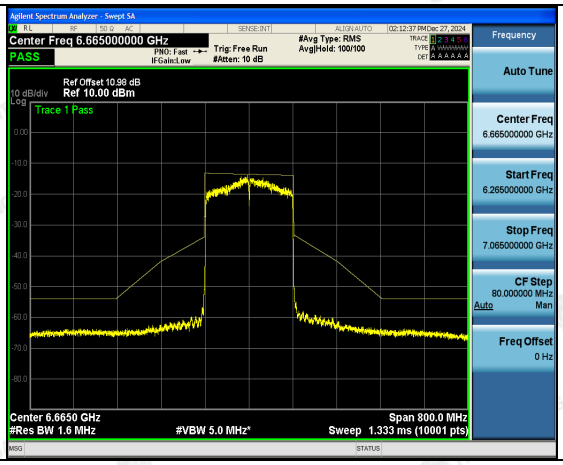
CH79



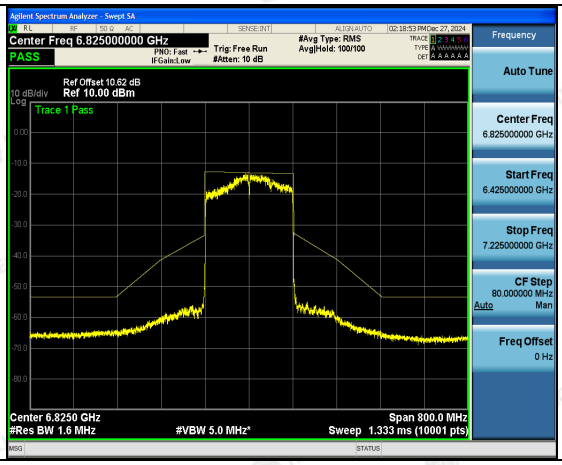
CH111



CH143



CH175



802.11ax (HE160)	
CH207