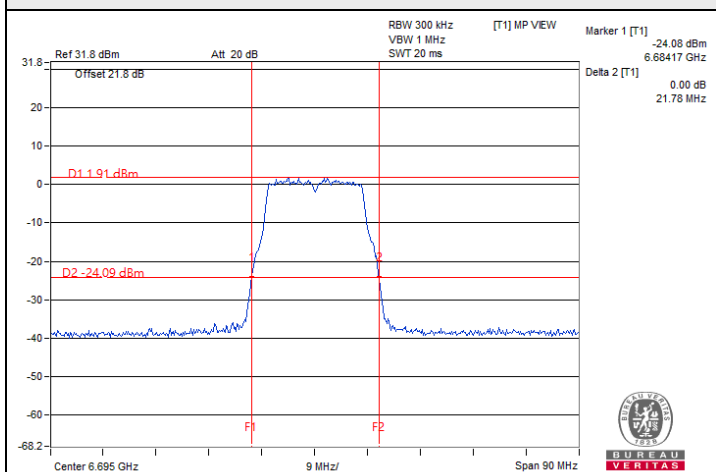
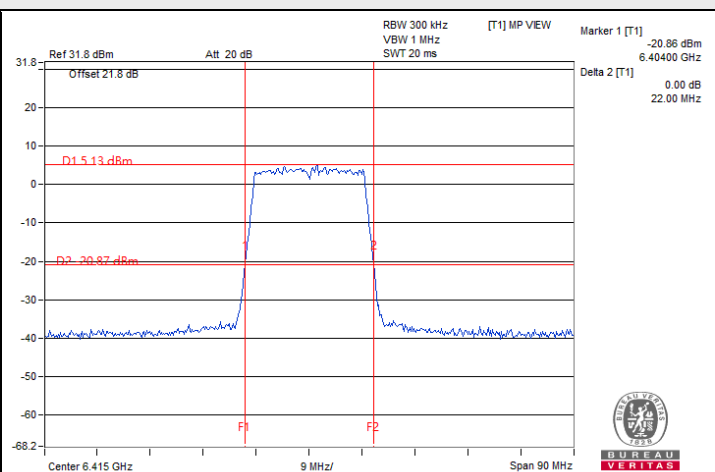


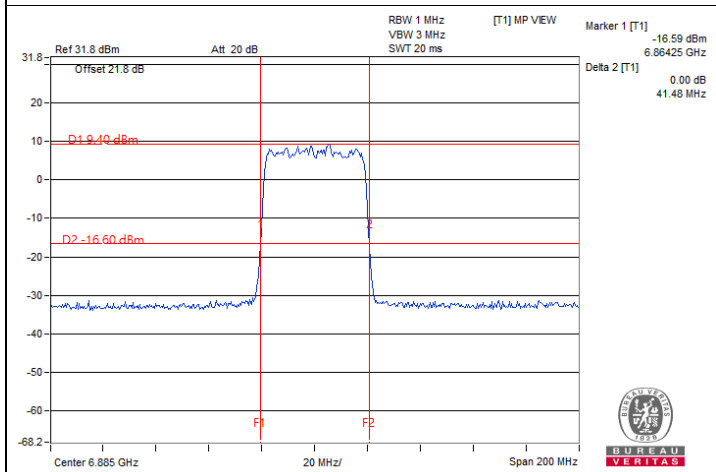
### Spectrum Plot of Maximum Value



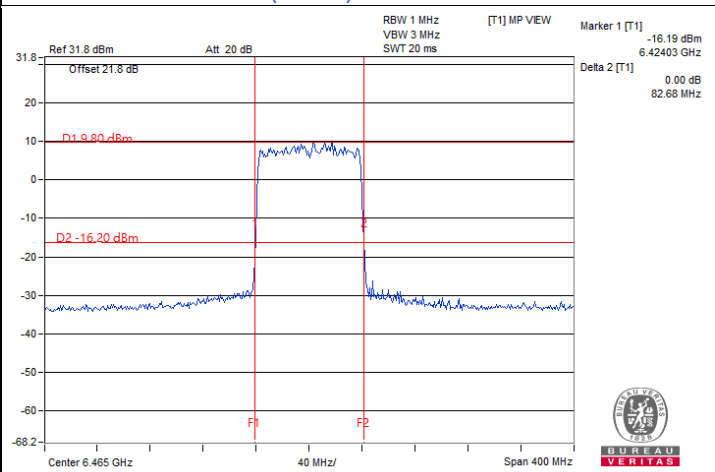
802.11a / Chain 0 : CH 149



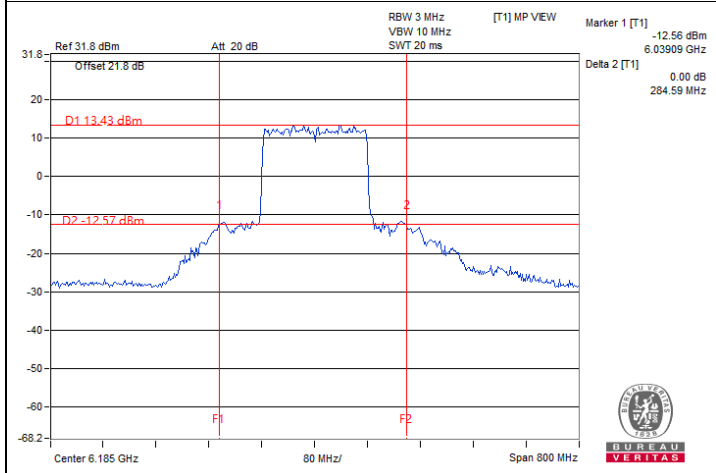
802.11ax (HE20) / Chain 0 : CH 93



802.11ax (HE40) / Chain 0 : CH 187



802.11ax (HE80) / Chain 0 : CH 103

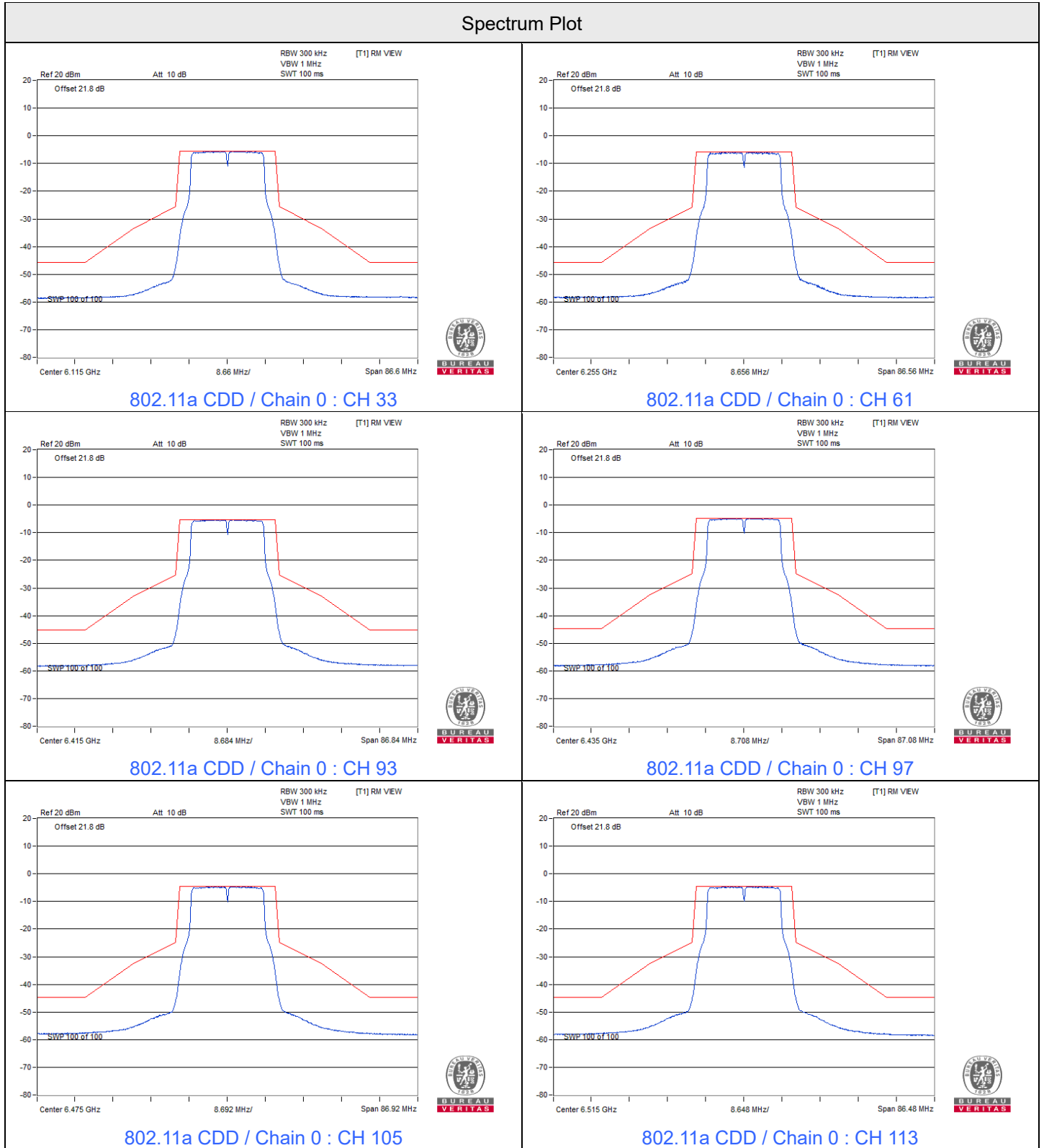


802.11ax (HE160) / Chain 1 : CH 47

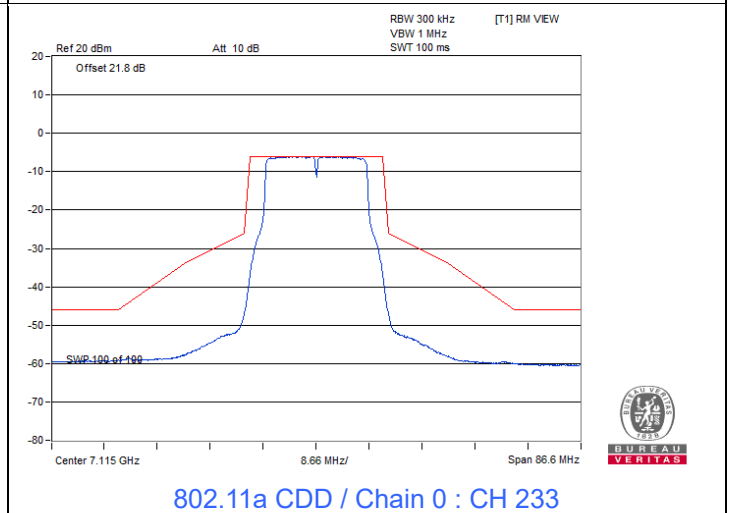
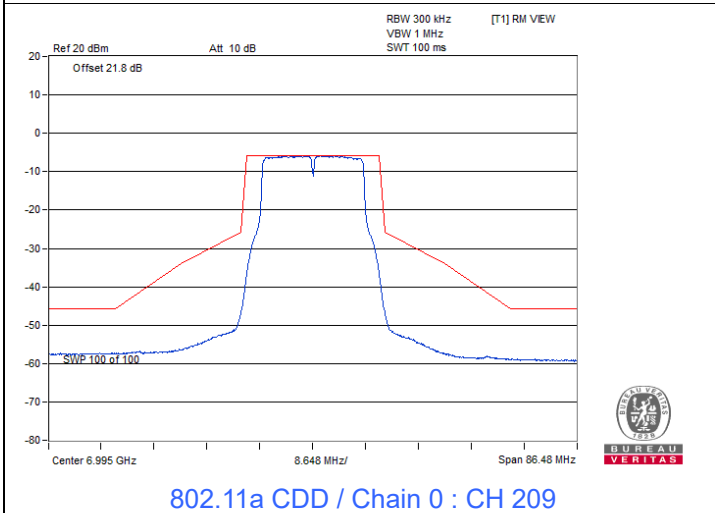
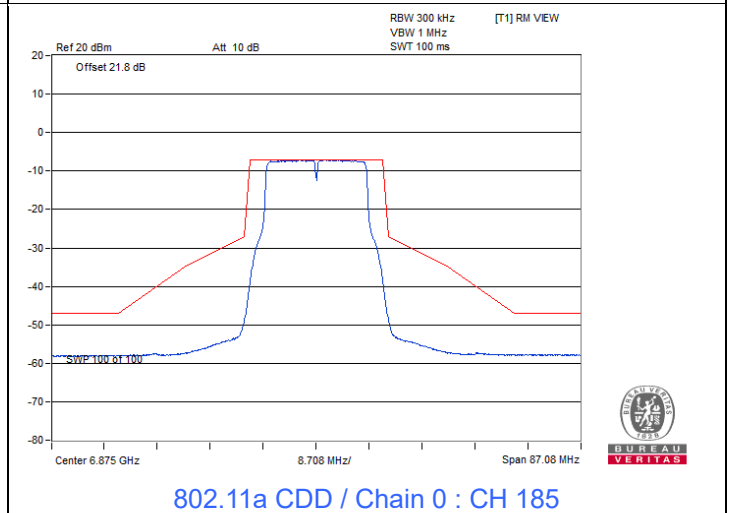
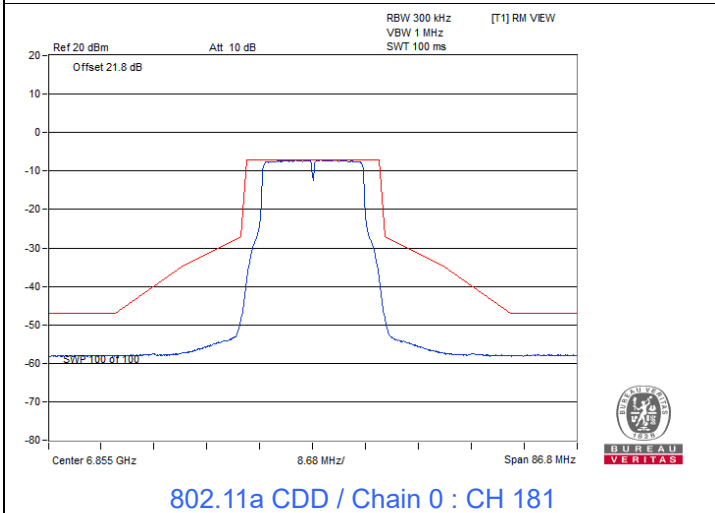
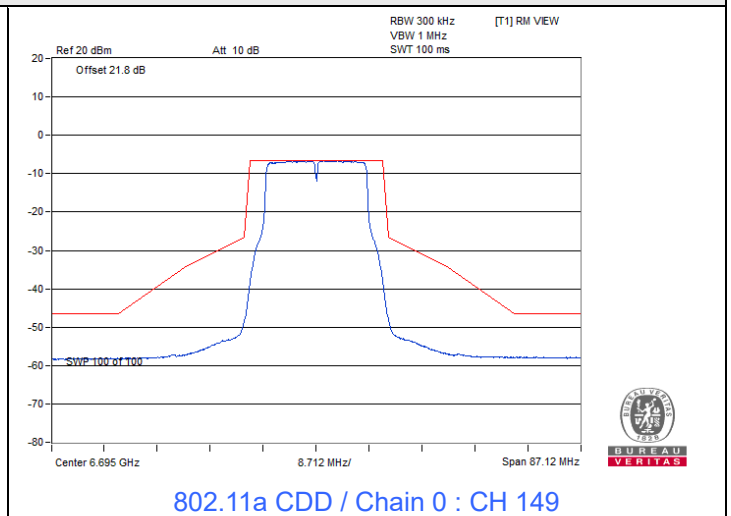
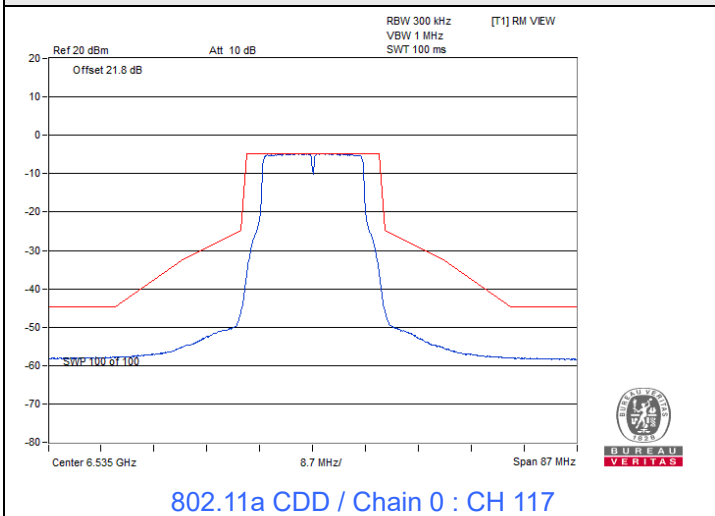
### 7.4 In-Band Emission Mask

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 65% RH	Tested By:	Katina Lu
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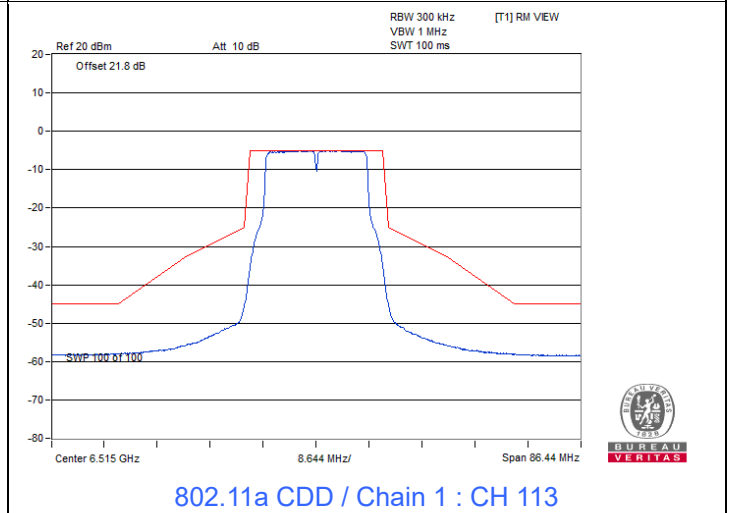
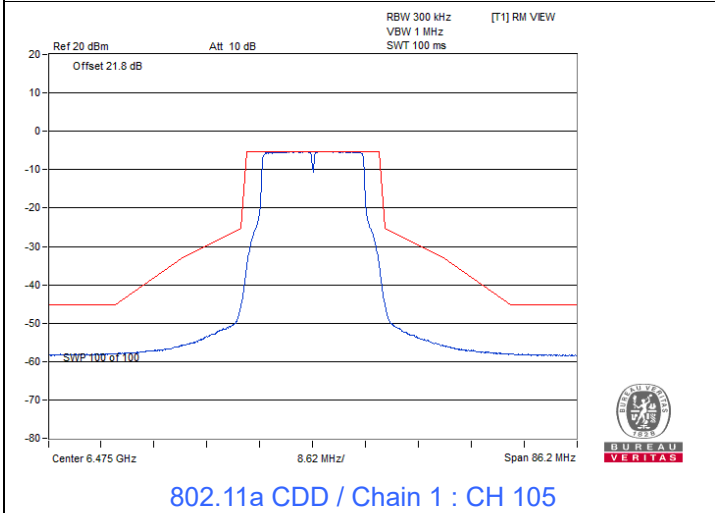
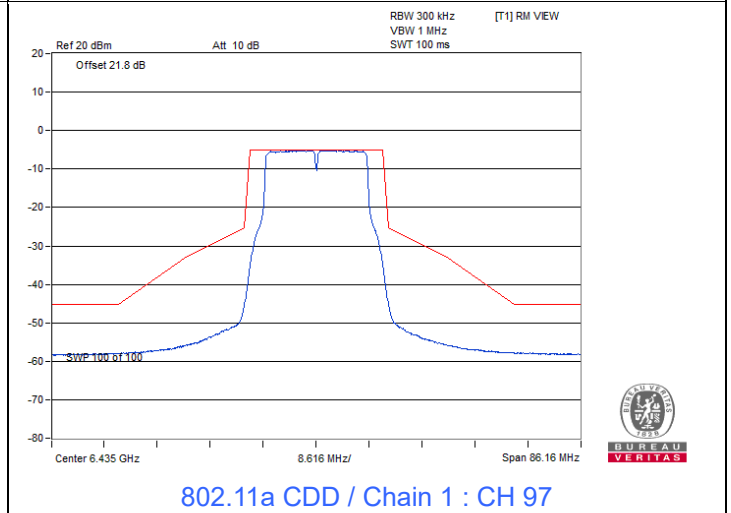
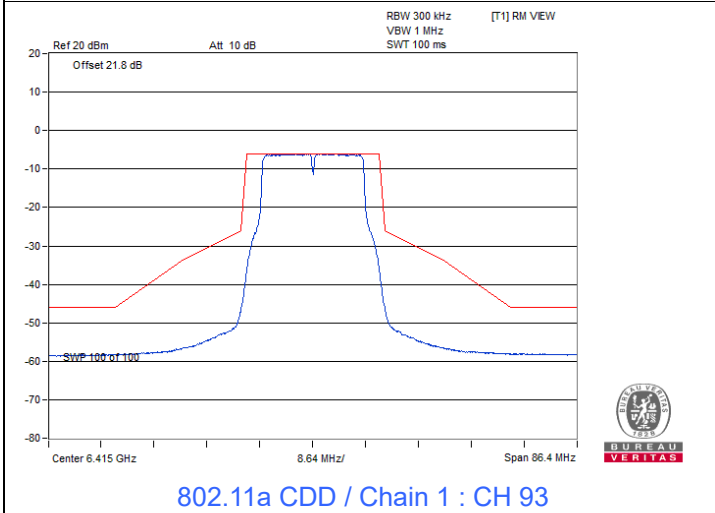
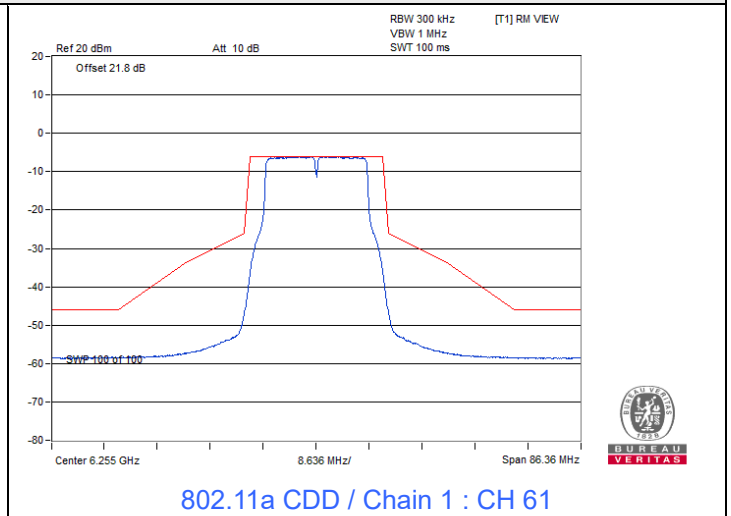
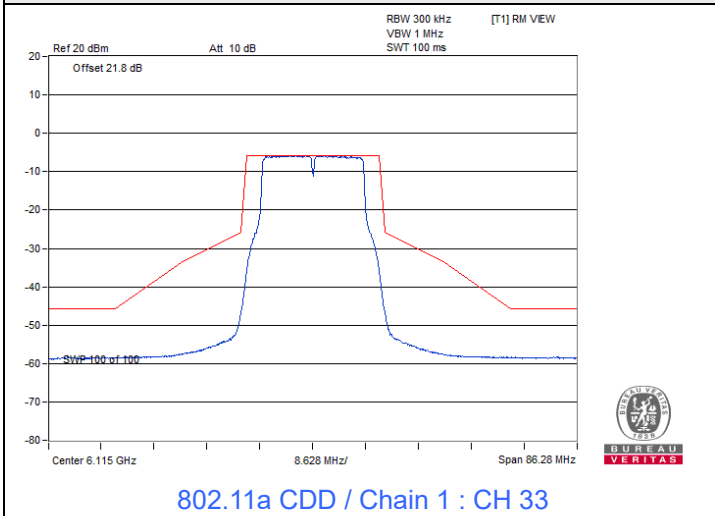
#### 802.11a



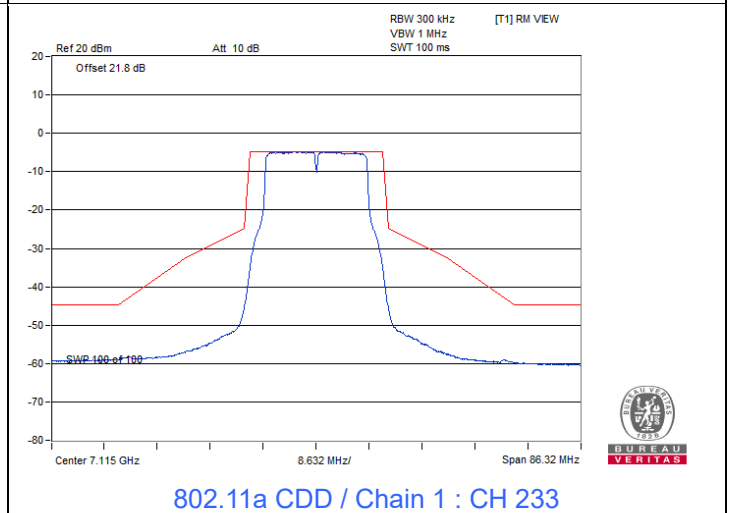
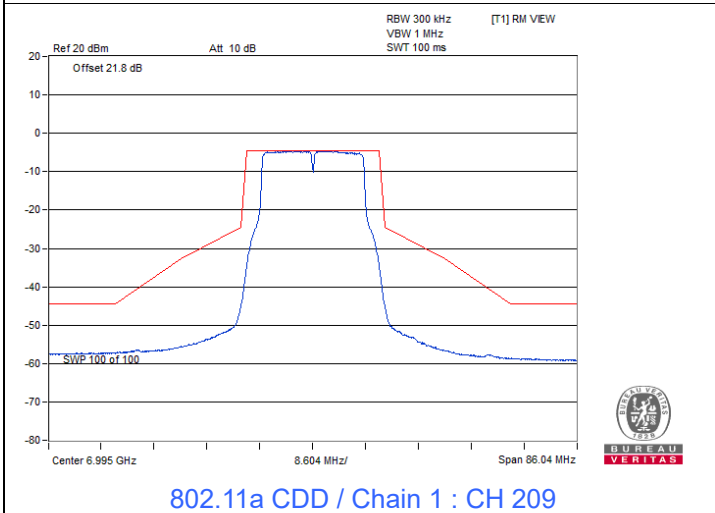
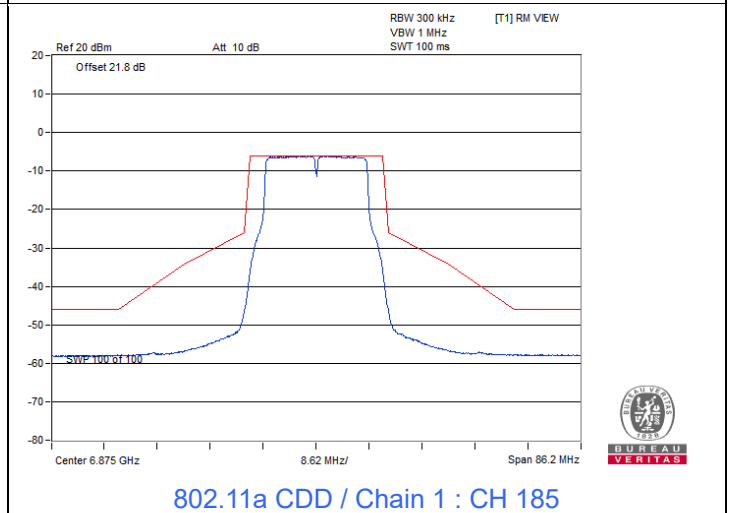
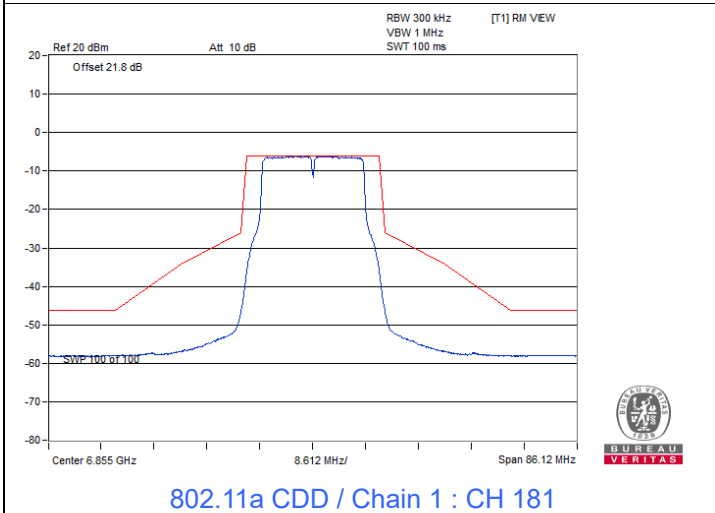
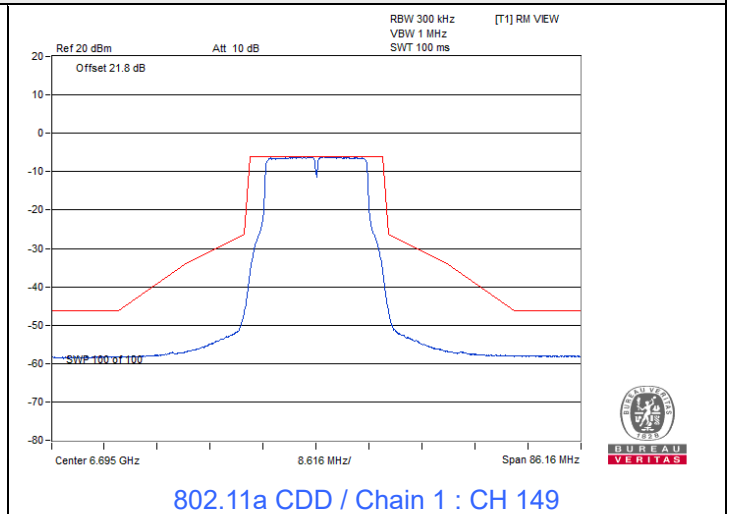
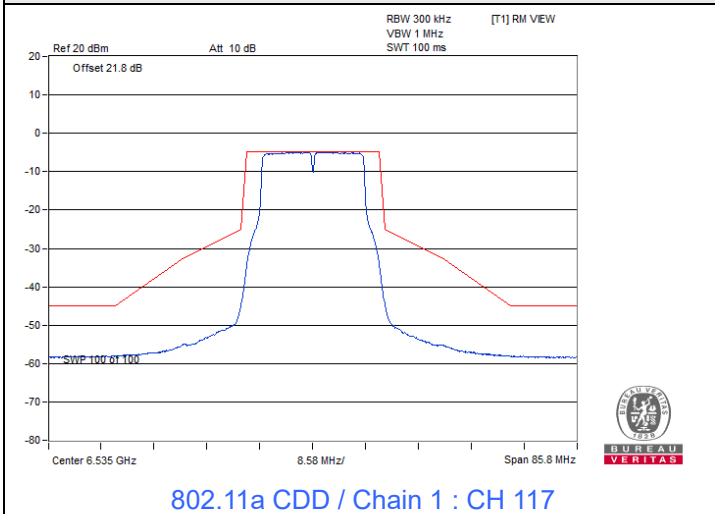
### Spectrum Plot



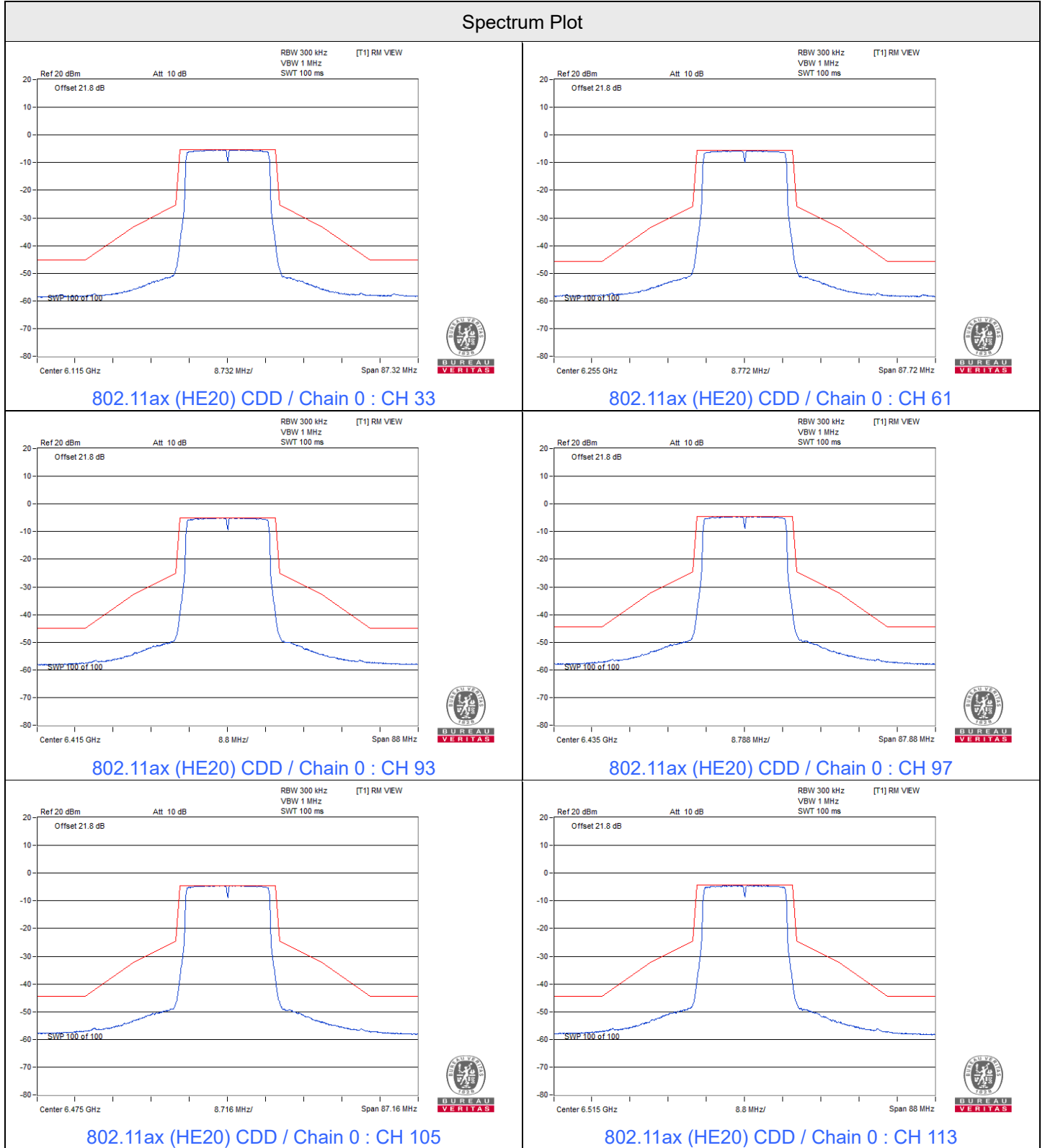
### Spectrum Plot



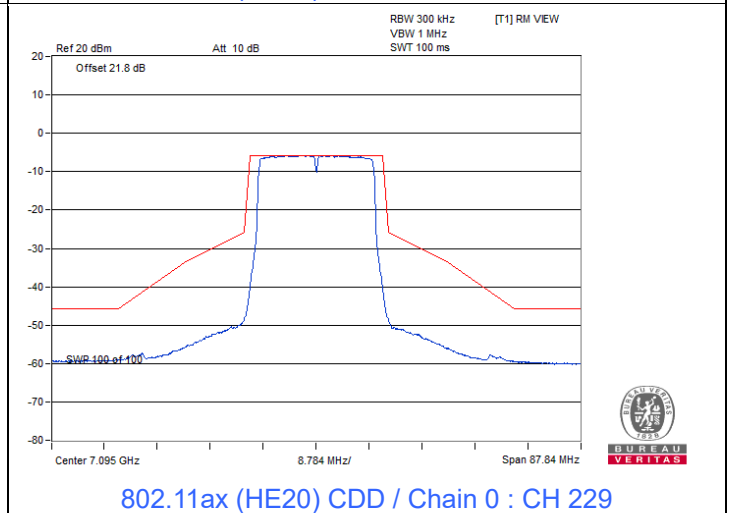
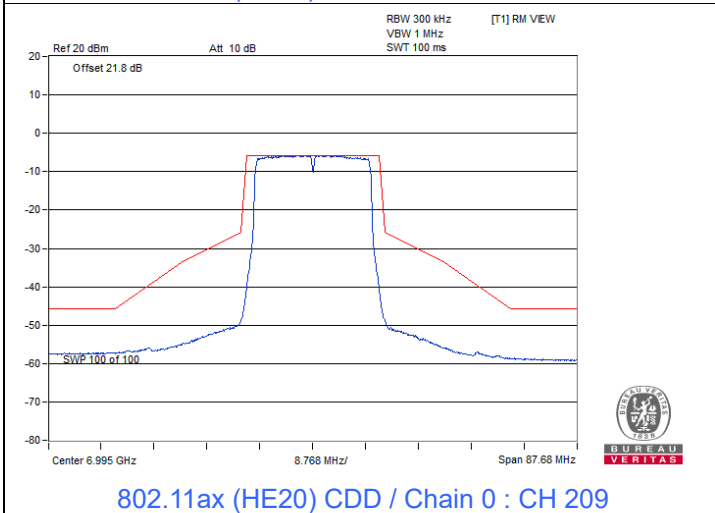
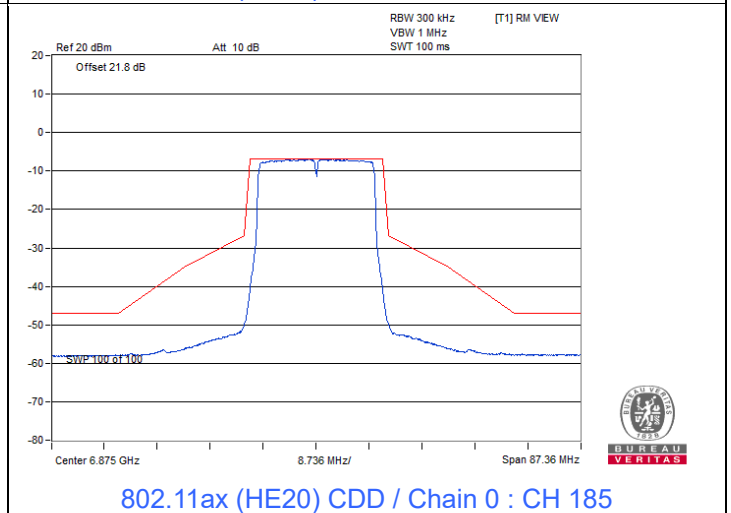
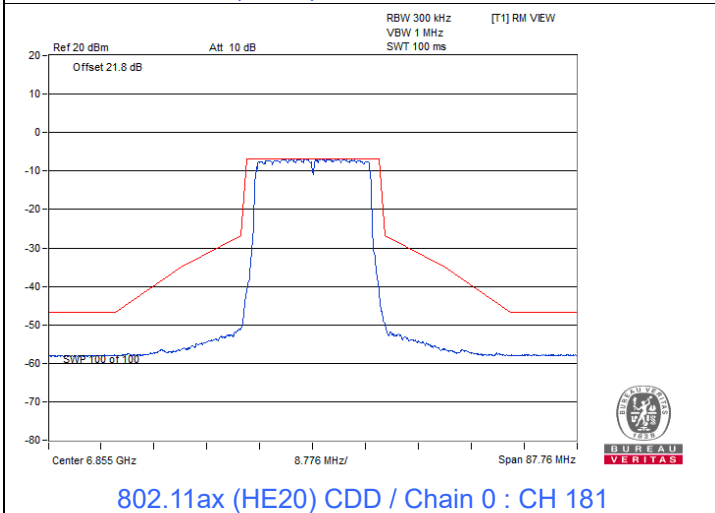
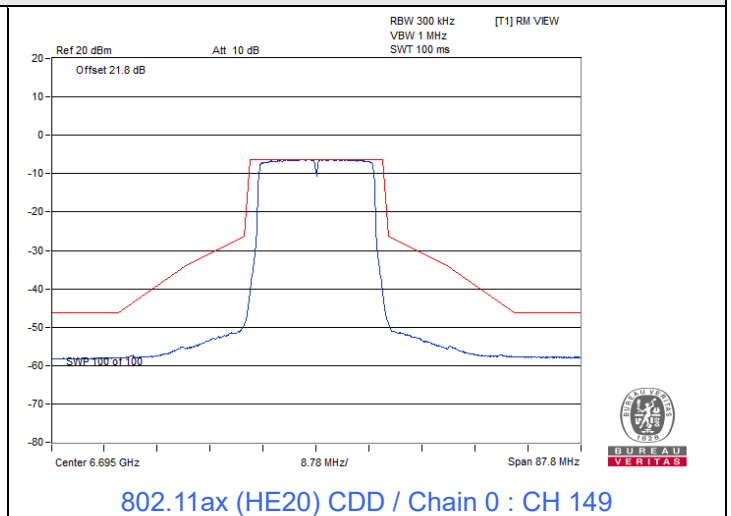
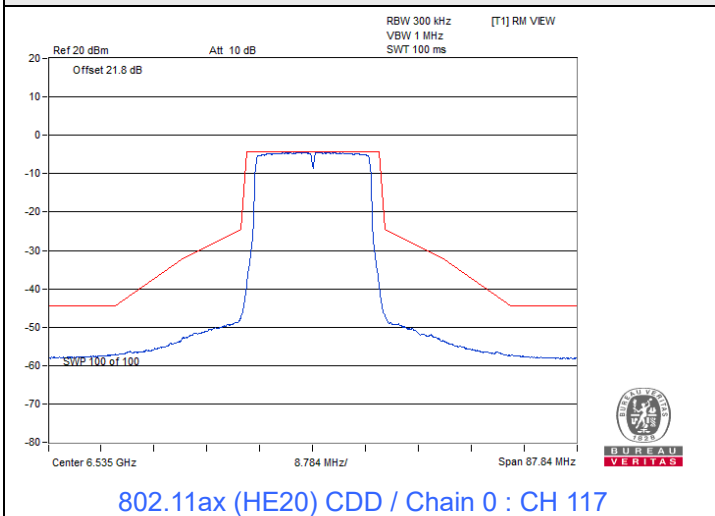
### Spectrum Plot



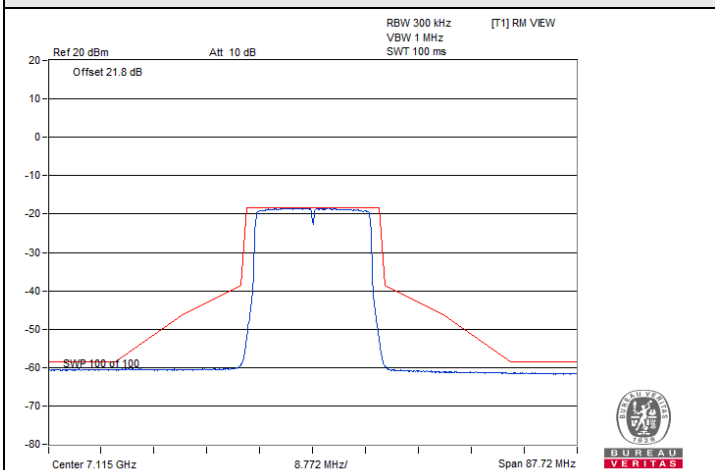
802.11ax (HE20)



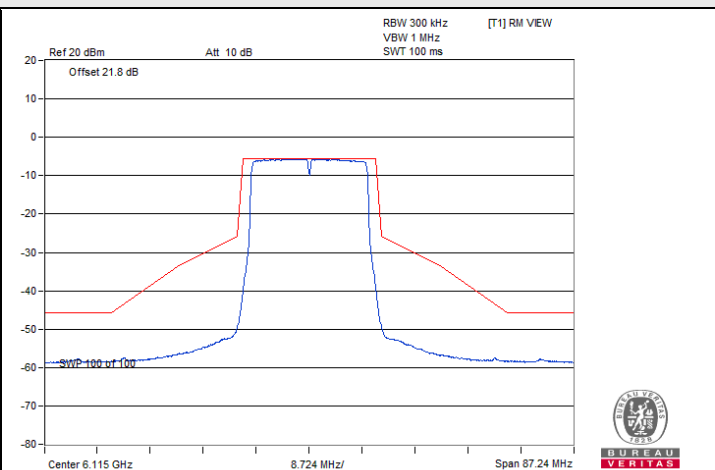
### Spectrum Plot



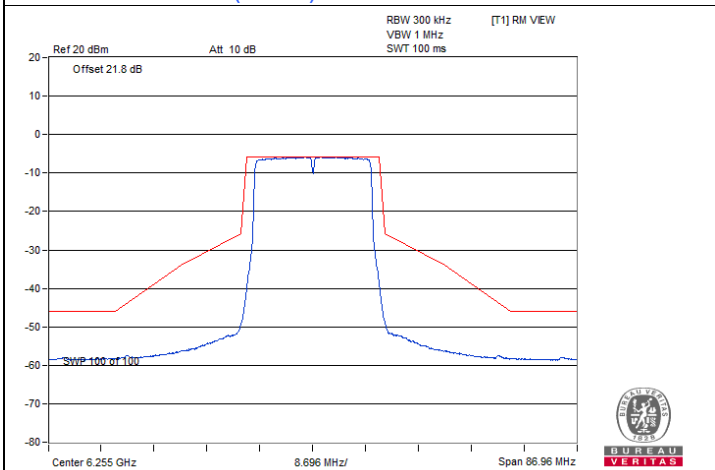
### Spectrum Plot



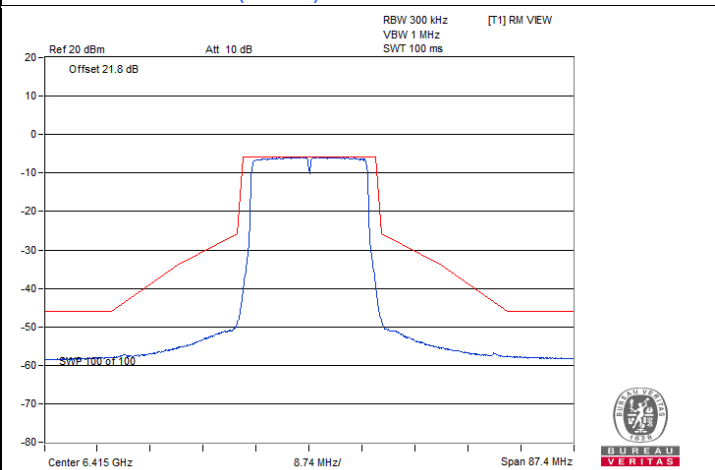
802.11ax (HE20) CDD / Chain 0 : CH 233



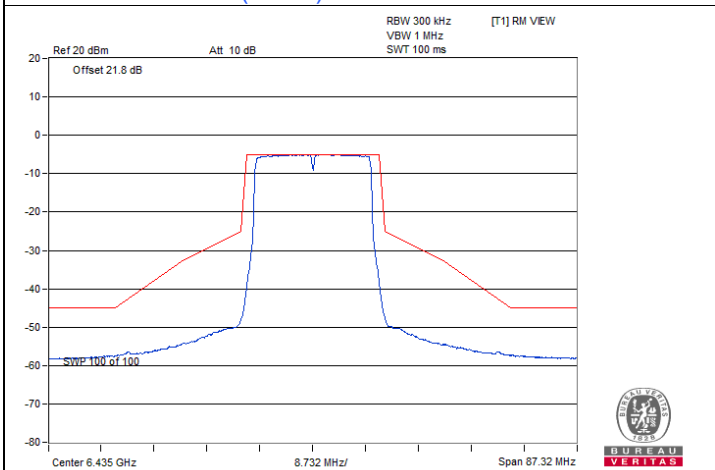
802.11ax (HE20) CDD / Chain 1 : CH 33



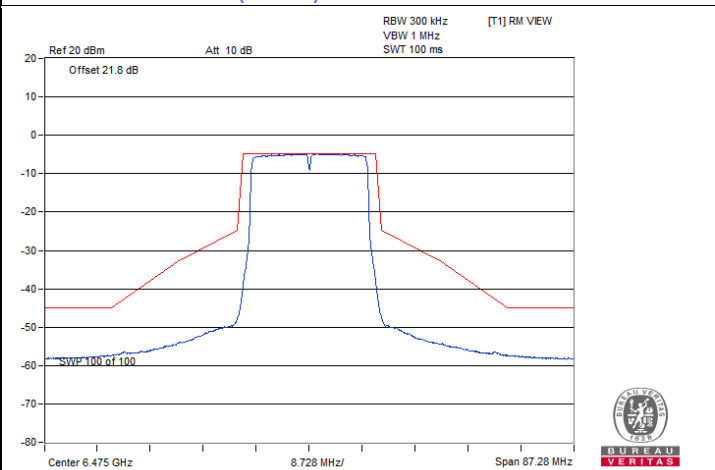
802.11ax (HE20) CDD / Chain 1 : CH 61



802.11ax (HE20) CDD / Chain 1 : CH 93



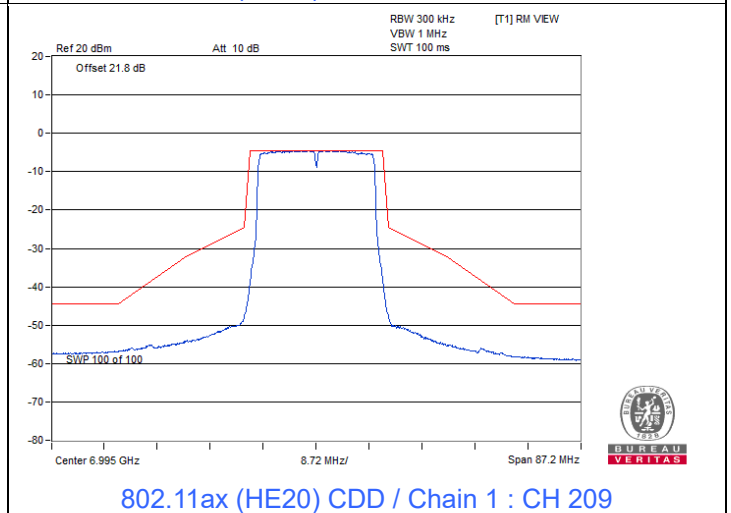
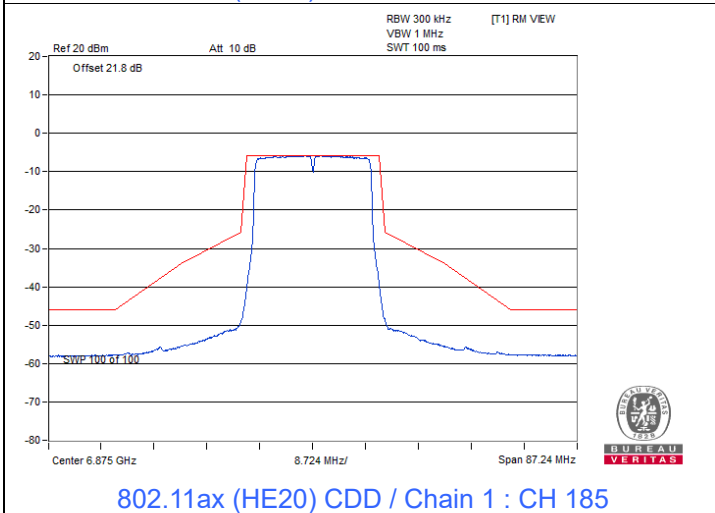
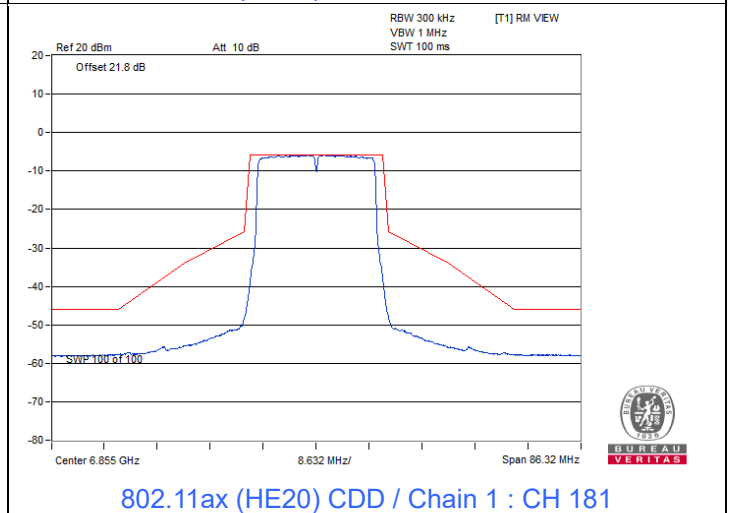
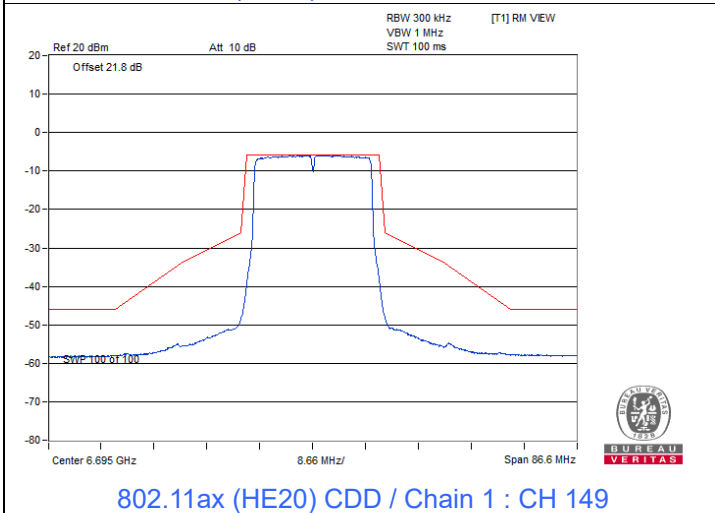
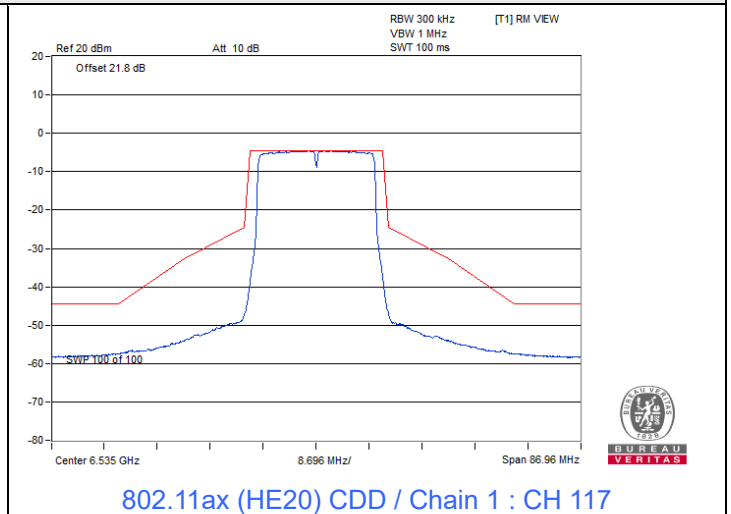
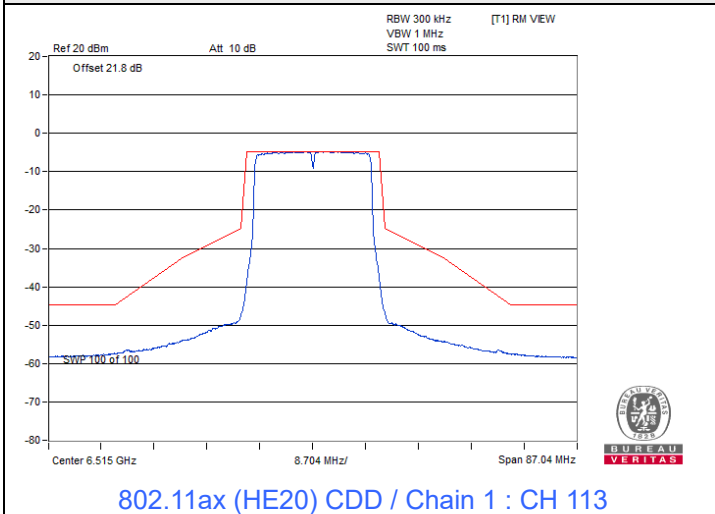
802.11ax (HE20) CDD / Chain 1 : CH 97



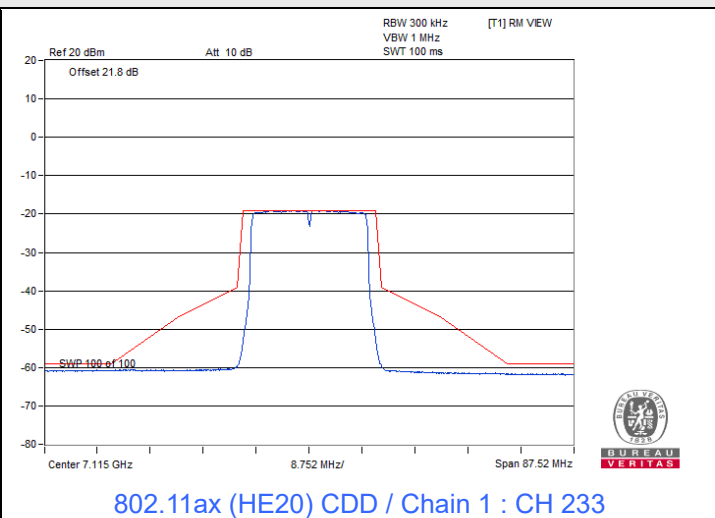
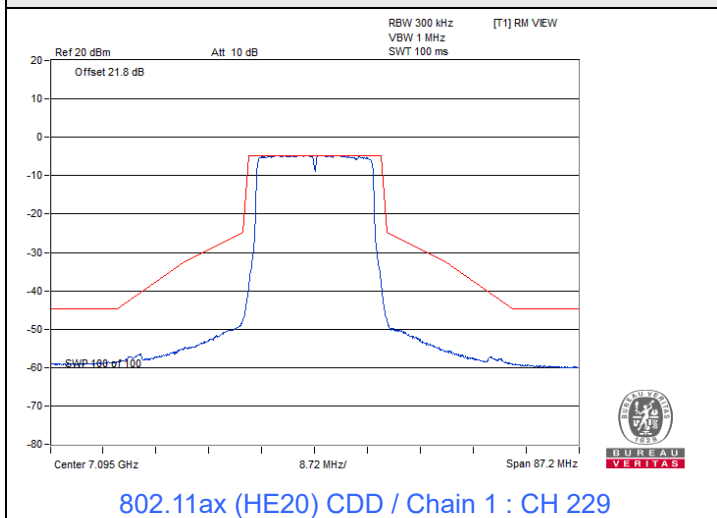
802.11ax (HE20) CDD / Chain 1 : CH 105



### Spectrum Plot



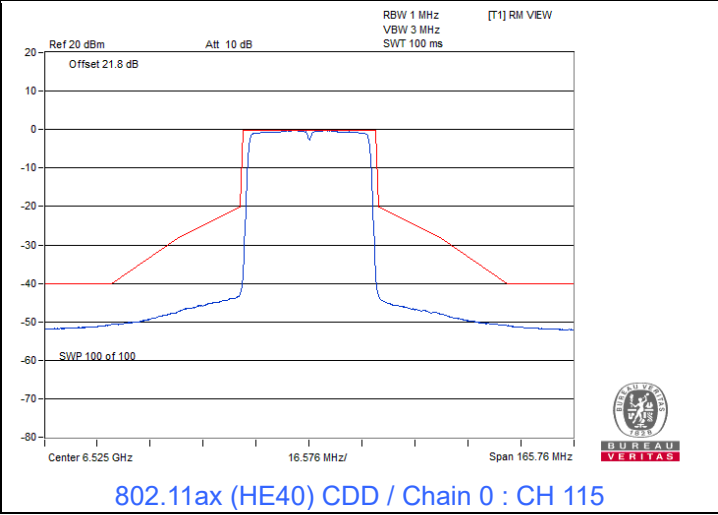
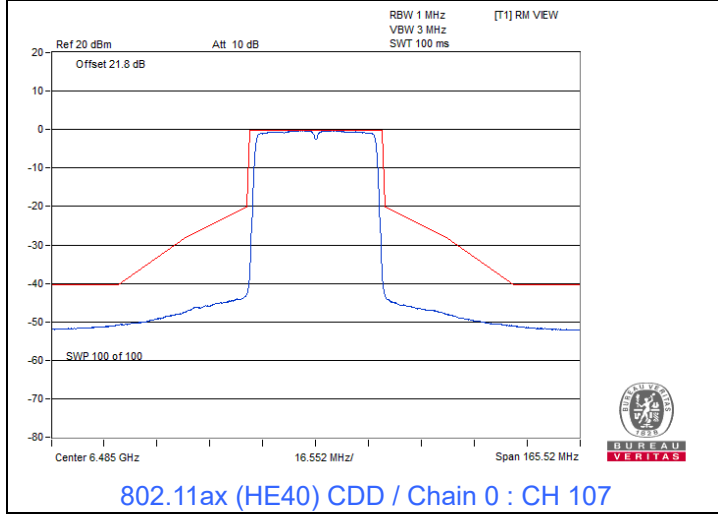
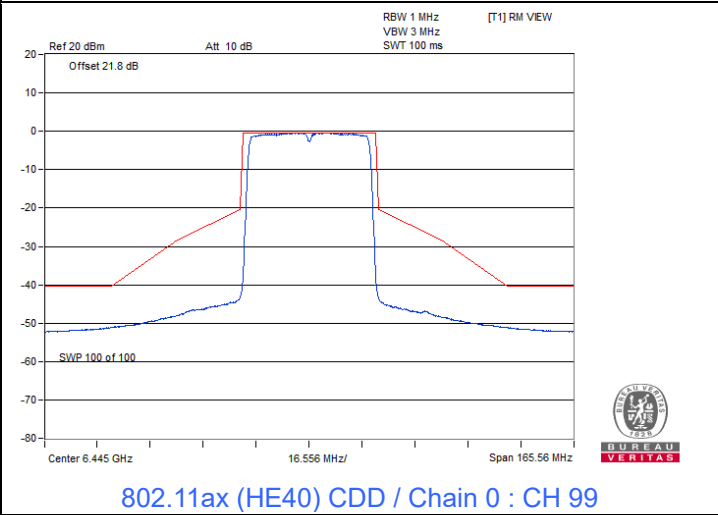
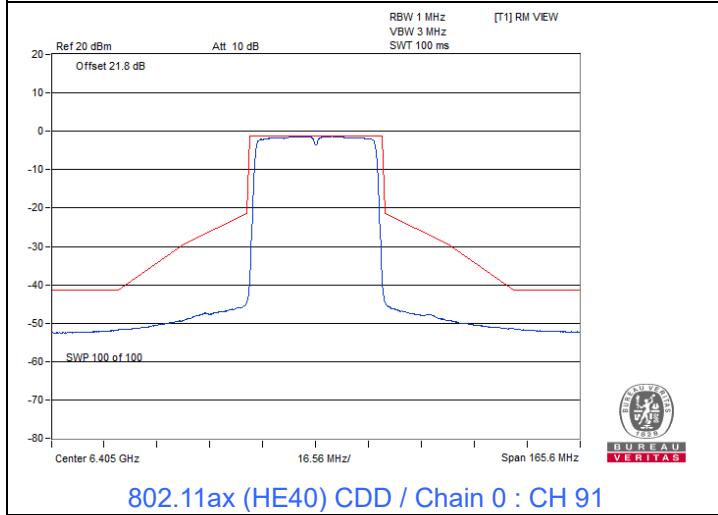
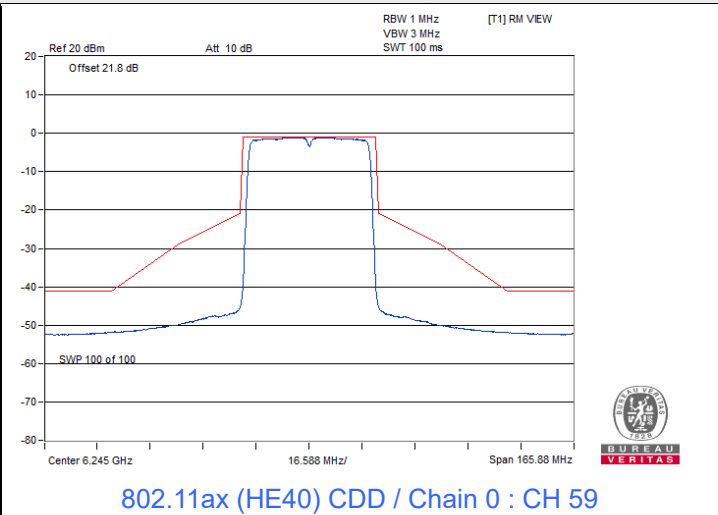
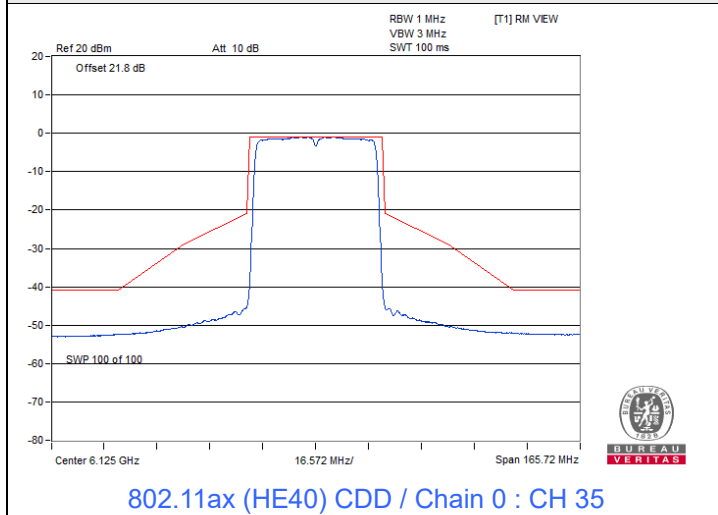
### Spectrum Plot



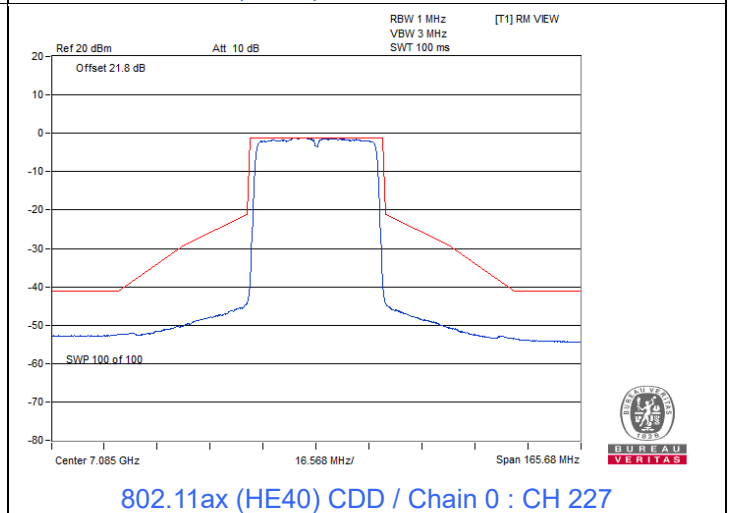
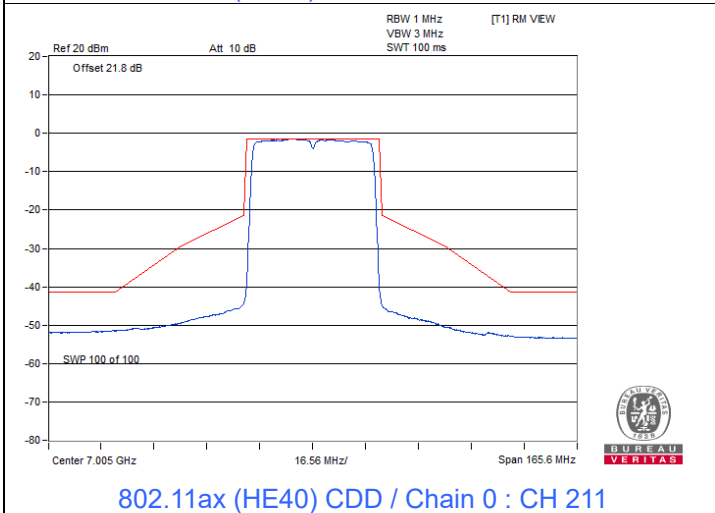
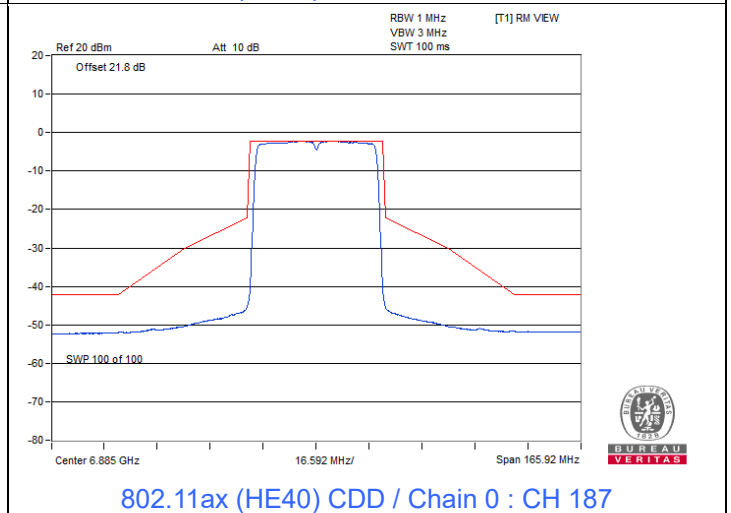
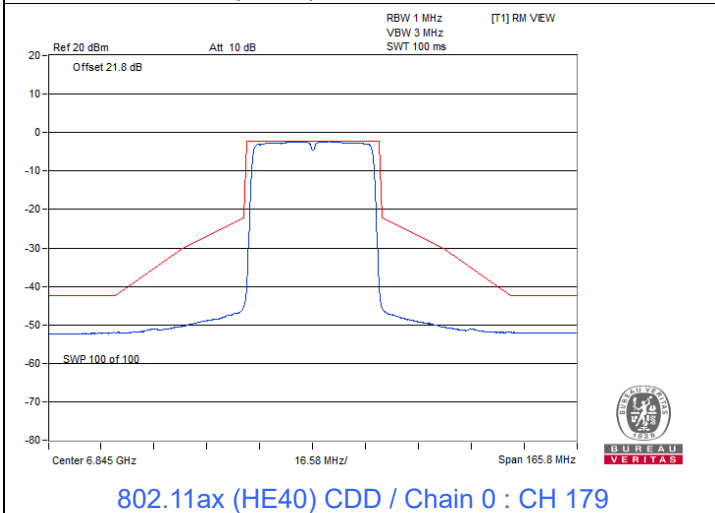
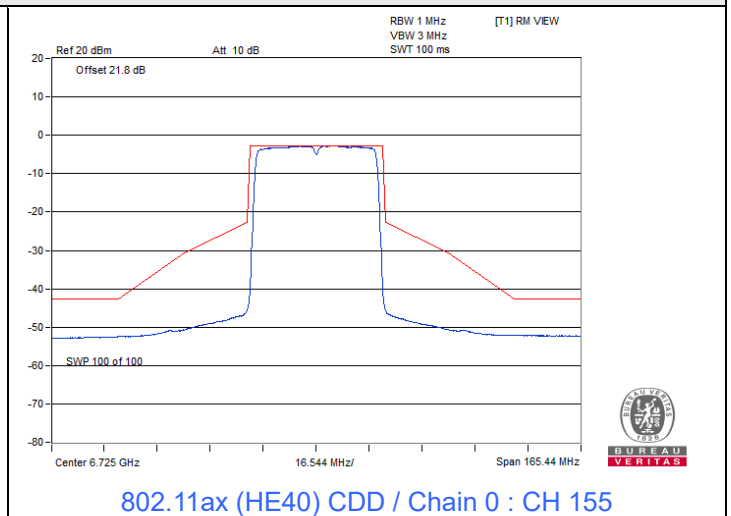
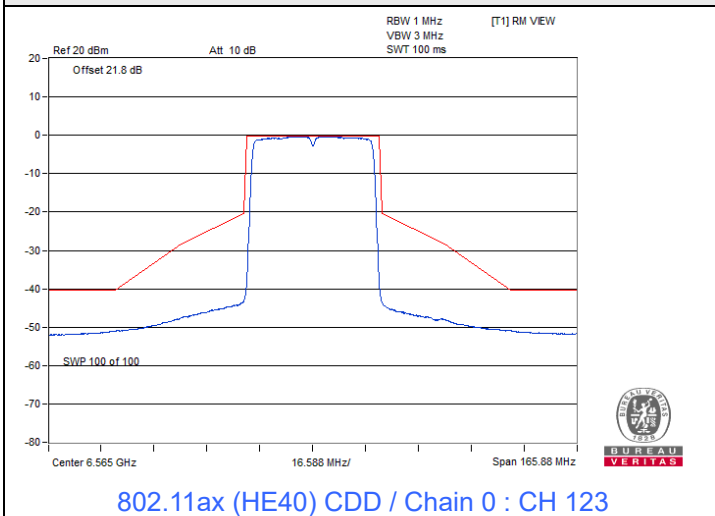


802.11ax (HE40)

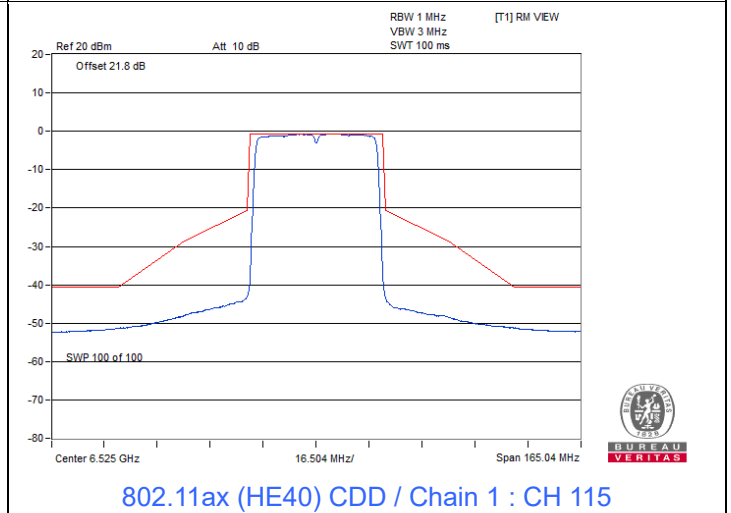
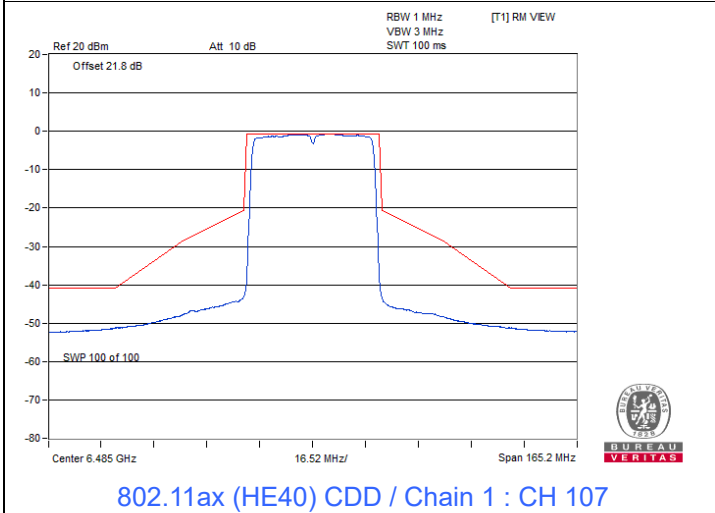
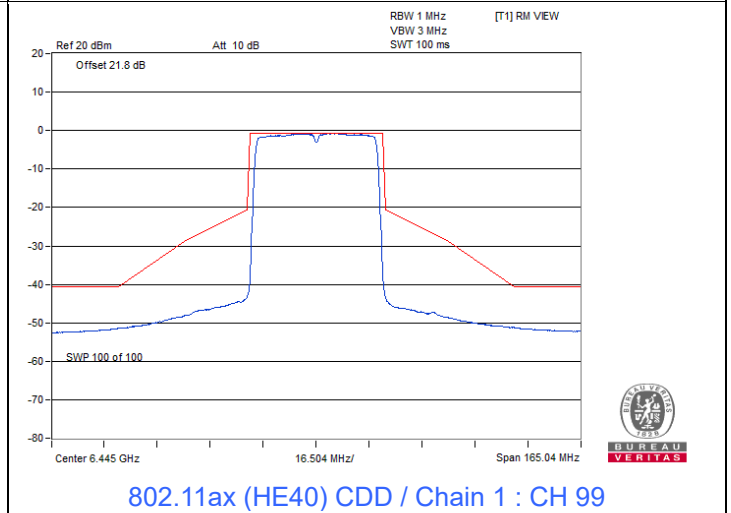
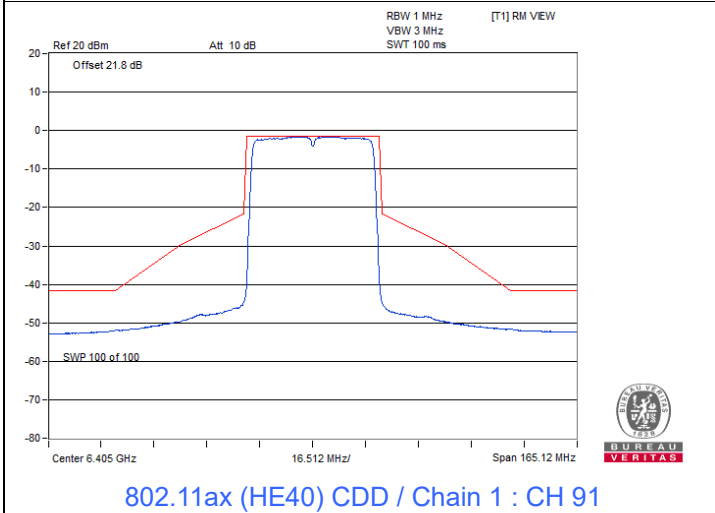
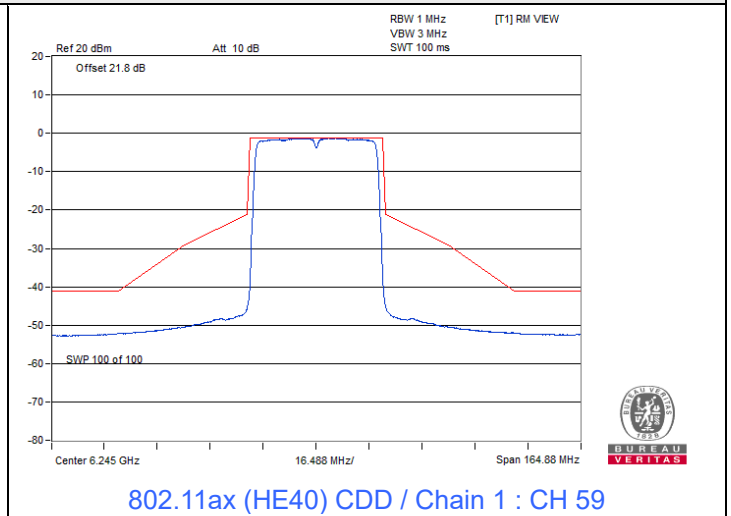
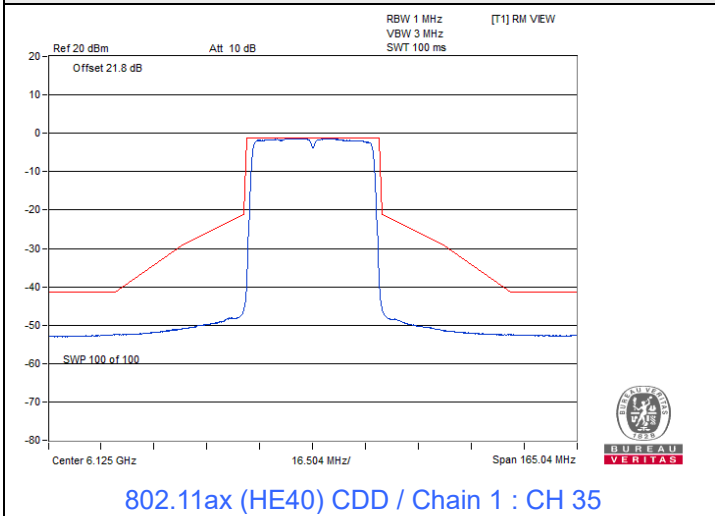
Spectrum Plot



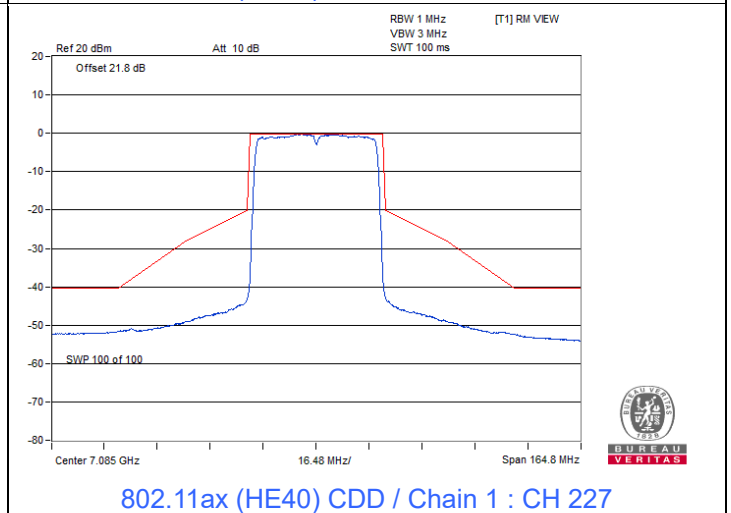
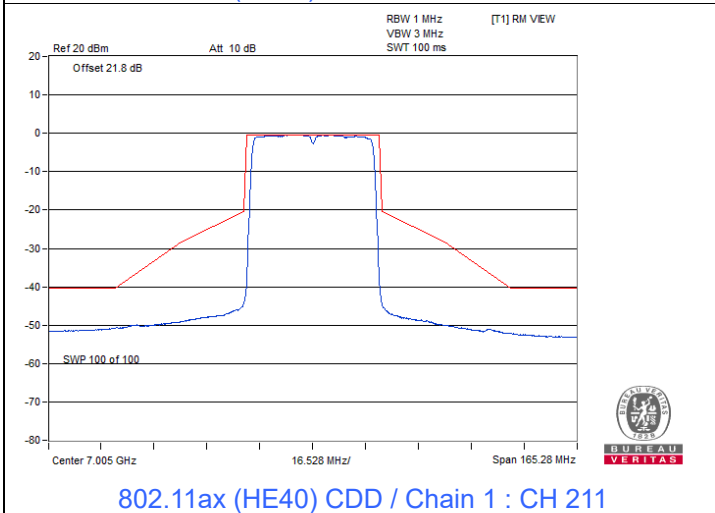
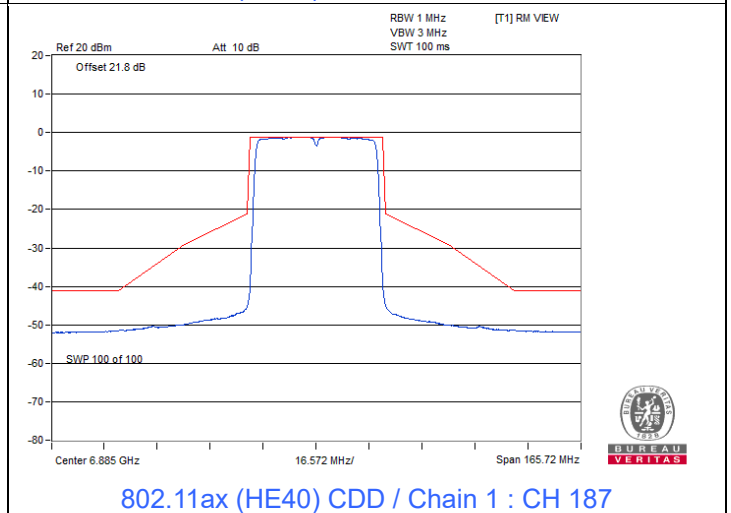
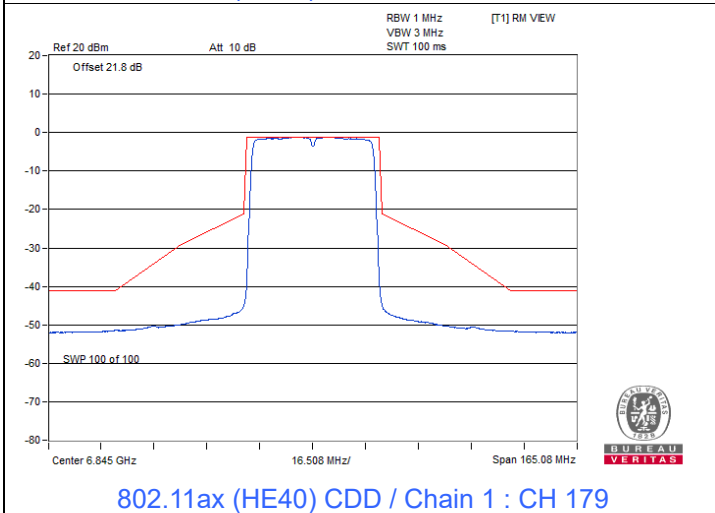
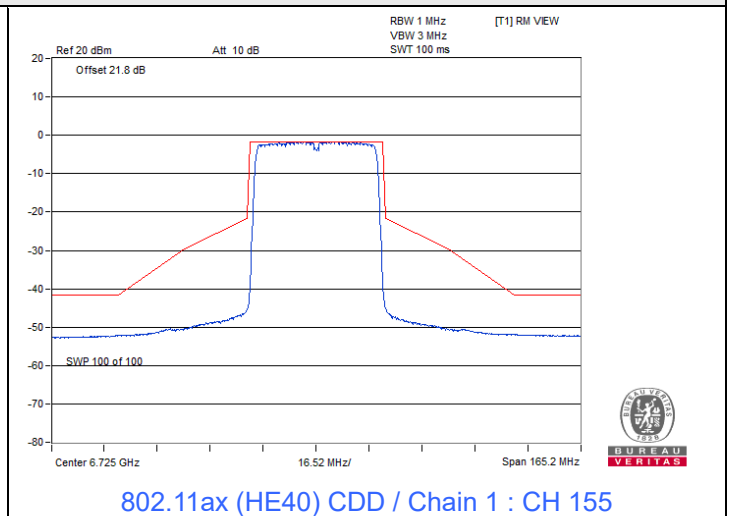
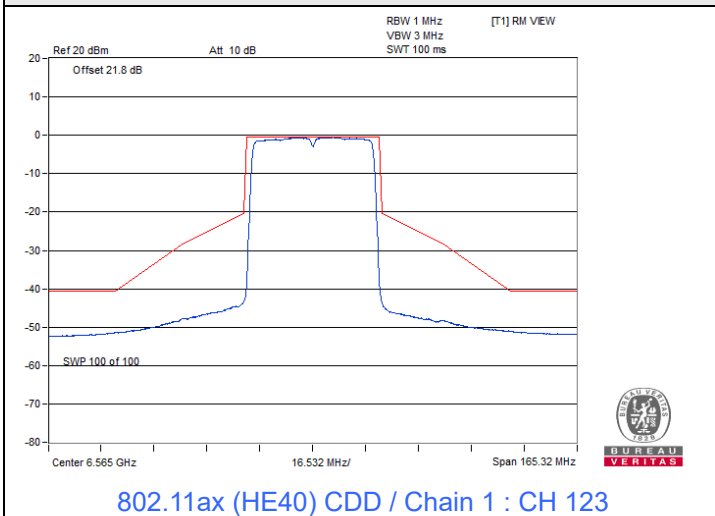
### Spectrum Plot



### Spectrum Plot



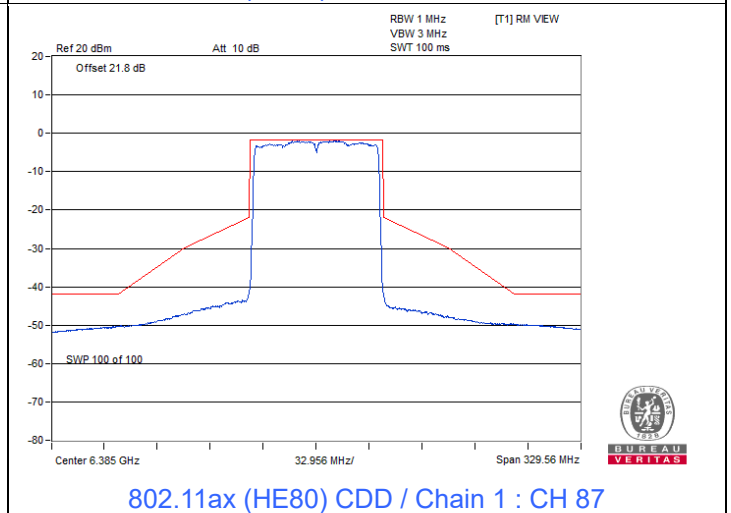
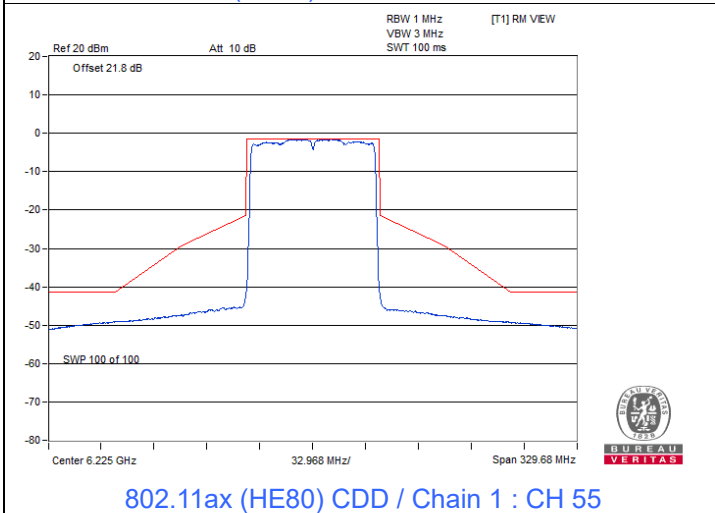
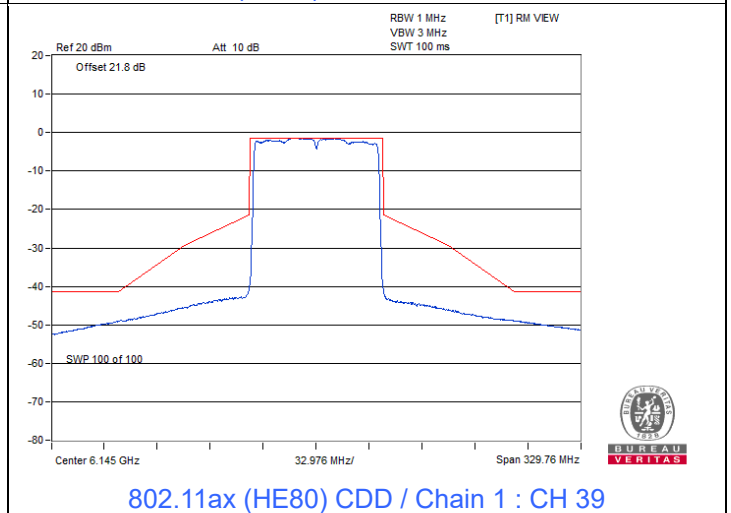
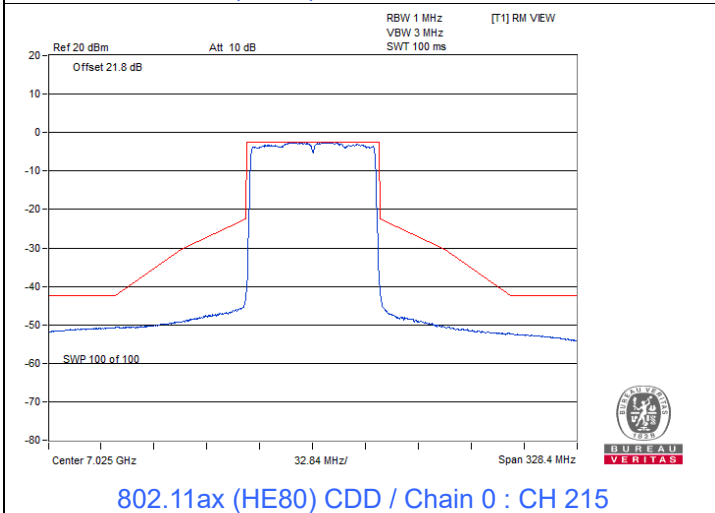
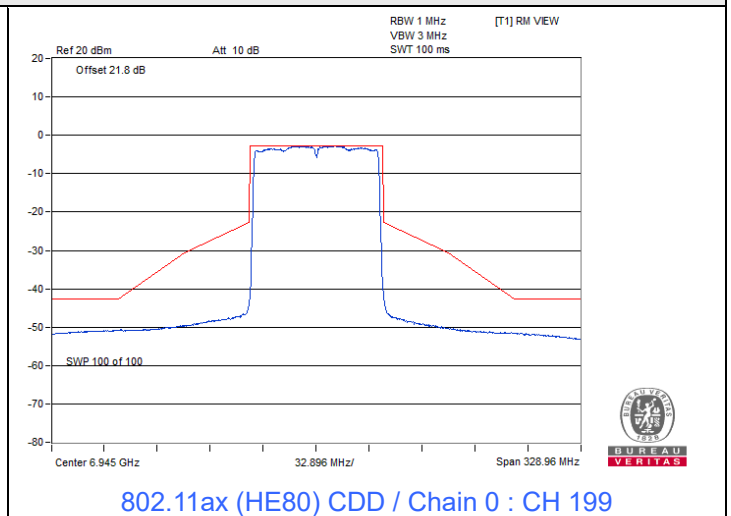
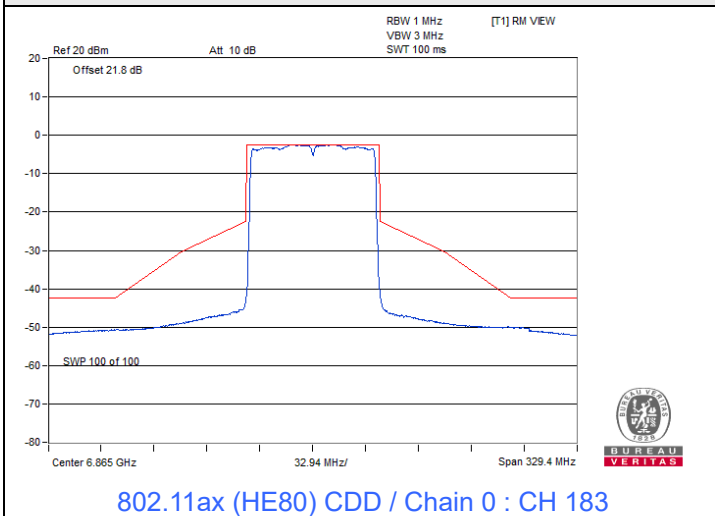
### Spectrum Plot



802.11ax (HE80)

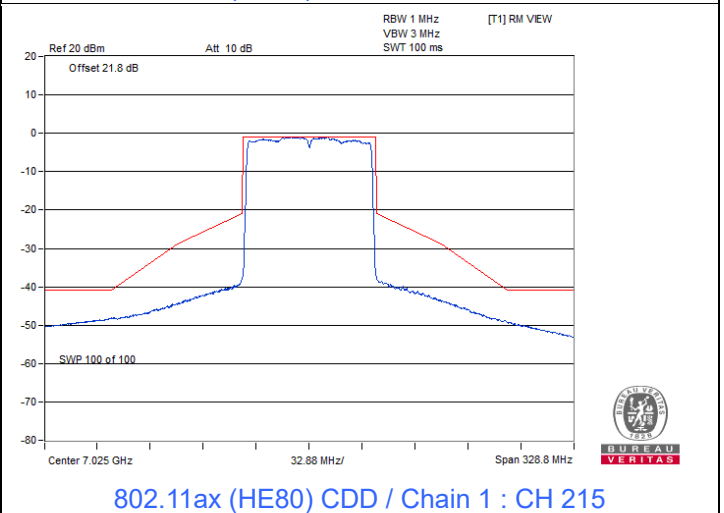
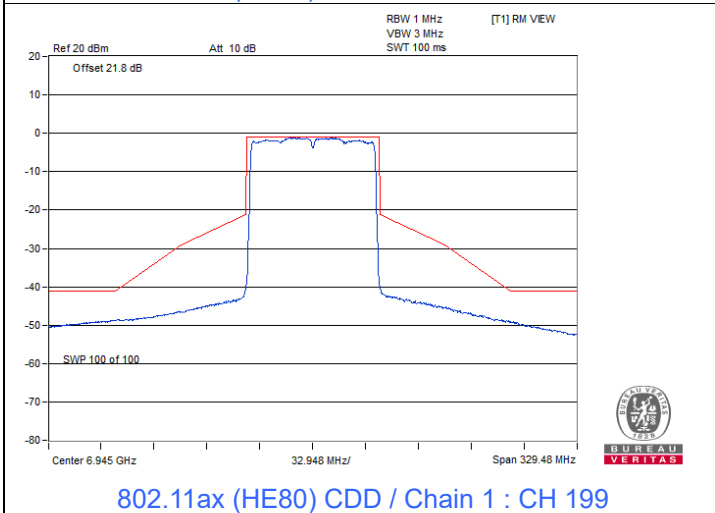
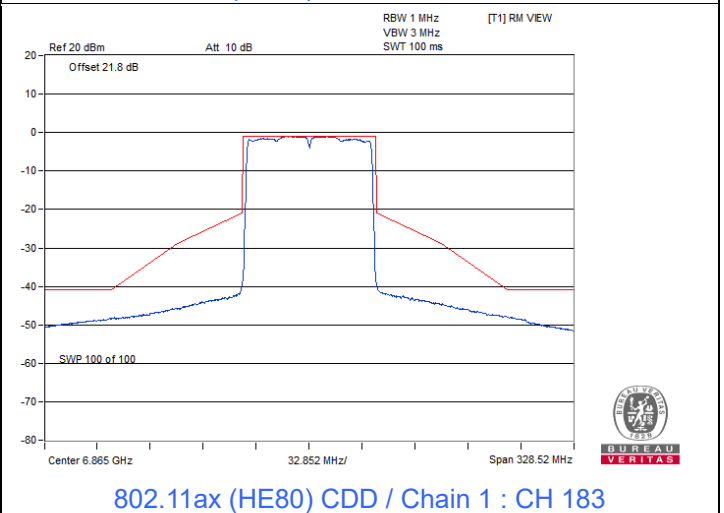
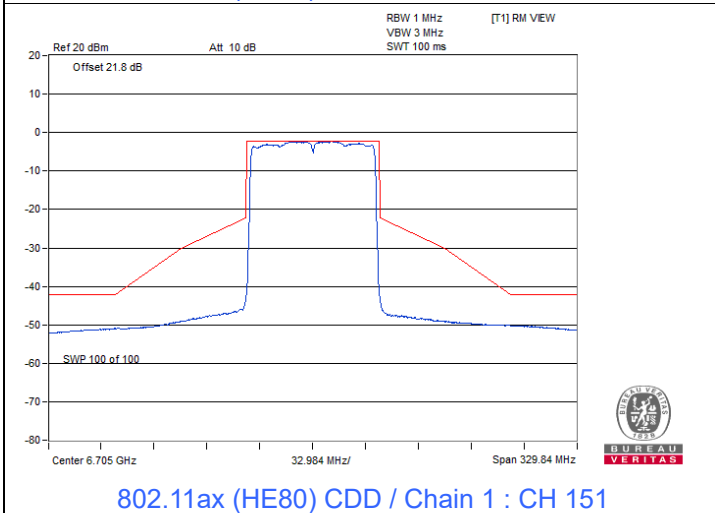
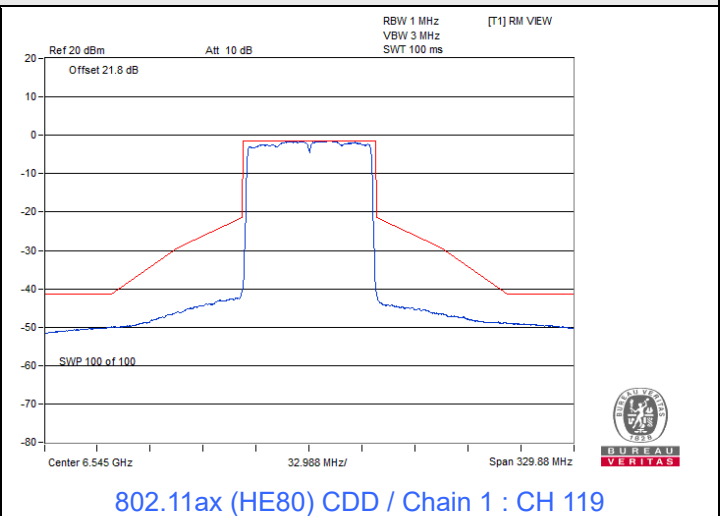
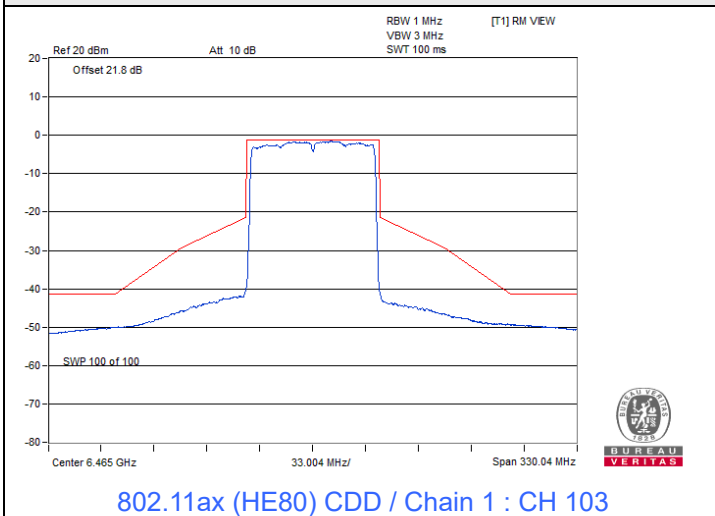


### Spectrum Plot

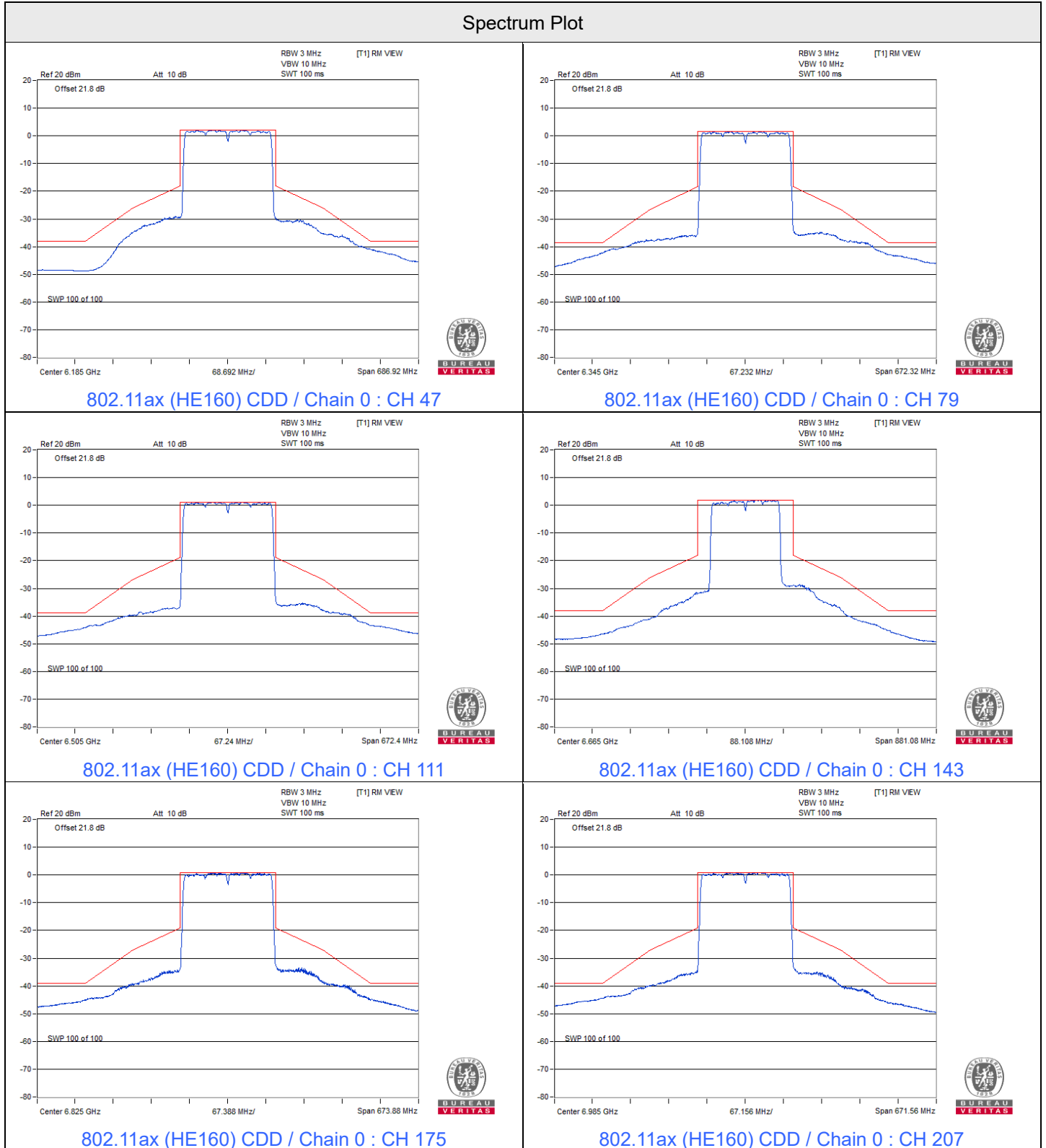




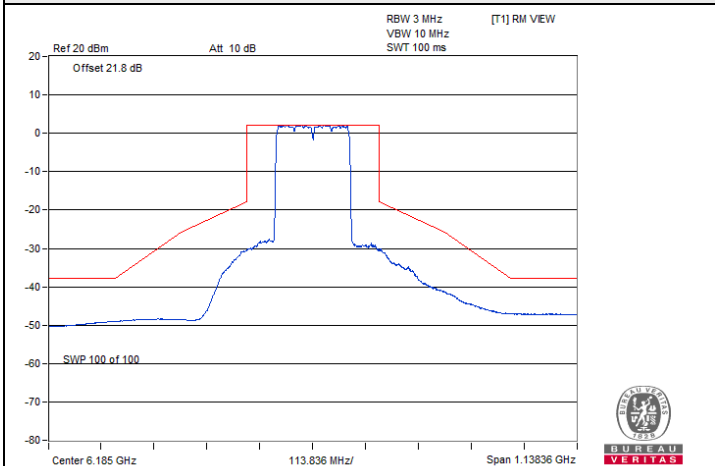
### Spectrum Plot



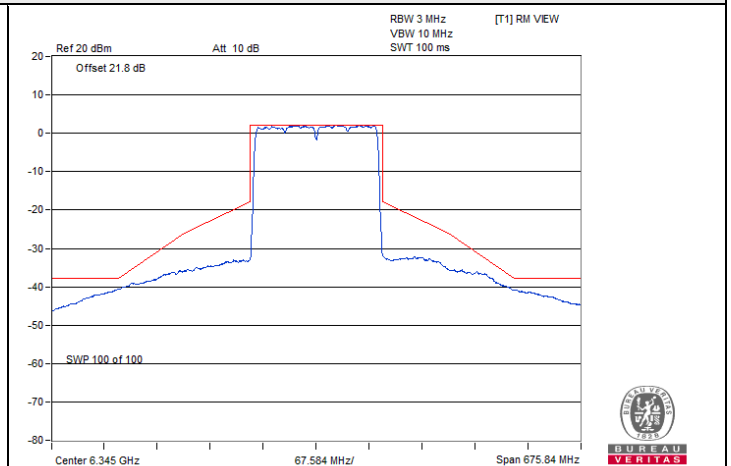
802.11ax (HE160) CDD



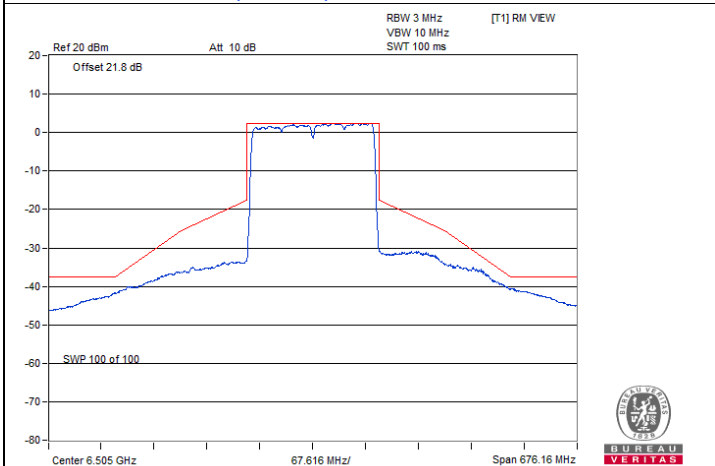
### Spectrum Plot



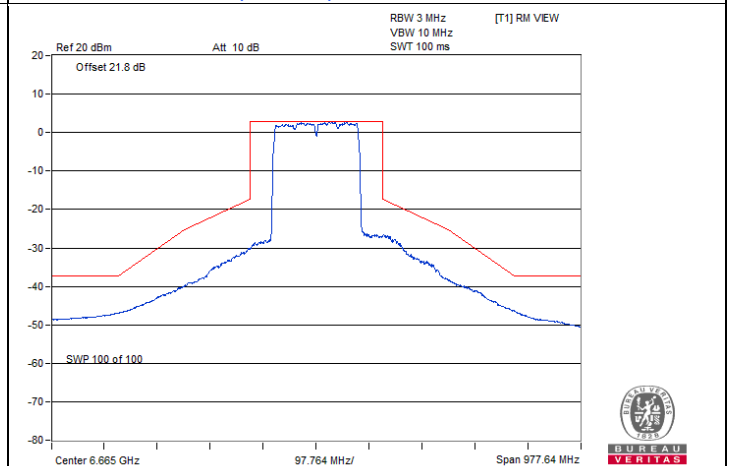
802.11ax (HE160) CDD / Chain 1 : CH 47



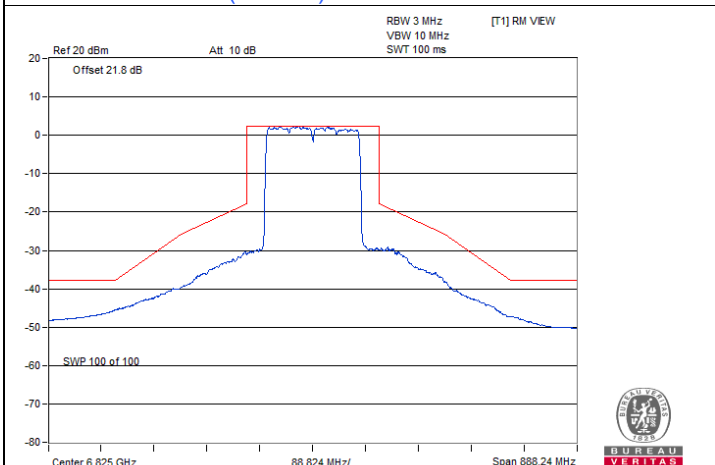
802.11ax (HE160) CDD / Chain 1 : CH 79



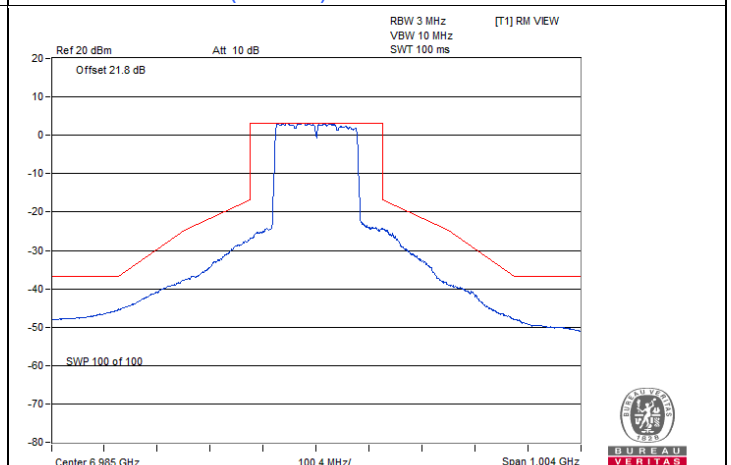
802.11ax (HE160) CDD / Chain 1 : CH 111



802.11ax (HE160) CDD / Chain 1 : CH 143



802.11ax (HE160) CDD / Chain 1 : CH 175



802.11ax (HE160) CDD / Chain 1 : CH 207

## 7.5 Occupied Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 65% RH	Tested By:	Katina Lu
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### 802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
33	6115	17.04	16.80	320	Pass
61	6255	17.04	16.80	320	Pass
93	6415	17.04	16.80	320	Pass
97	6435	17.16	16.80	320	Pass
105	6475	16.92	16.80	320	Pass
113	6515	17.04	16.80	320	Pass
117	6535	17.04	16.80	320	Pass
149	6695	17.04	16.80	320	Pass
181	6855	17.04	16.80	320	Pass
185	6875	17.04	16.80	320	Pass
209	6995	16.80	16.92	320	Pass
233	7115	17.04	16.92	320	Pass

### 802.11ax (HE20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
33	6115	19.08	19.08	320	Pass
61	6255	19.08	19.20	320	Pass
93	6415	19.08	19.08	320	Pass
97	6435	19.08	19.08	320	Pass
105	6475	19.08	19.08	320	Pass
113	6515	19.08	19.20	320	Pass
117	6535	19.08	19.20	320	Pass
149	6695	19.08	19.20	320	Pass
181	6855	19.08	19.20	320	Pass
185	6875	19.08	19.20	320	Pass
209	6995	19.08	19.08	320	Pass
229	7095	19.08	19.20	320	Pass
233	7115	19.20	19.32	320	Pass

### 802.11ax (HE40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
35	6125	37.68	37.68	320	Pass
59	6245	37.92	37.92	320	Pass
91	6405	37.92	37.92	320	Pass
99	6445	37.92	37.68	320	Pass
107	6485	37.68	37.92	320	Pass
115	6525	37.68	37.92	320	Pass
123	6565	37.92	37.92	320	Pass
155	6725	38.16	37.92	320	Pass
179	6845	37.92	37.68	320	Pass
187	6885	37.68	37.68	320	Pass
211	7005	38.16	37.68	320	Pass
227	7085	37.92	38.16	320	Pass

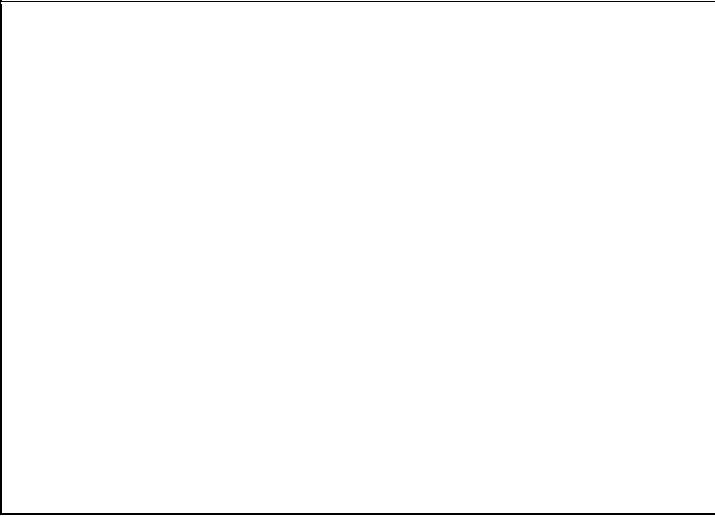
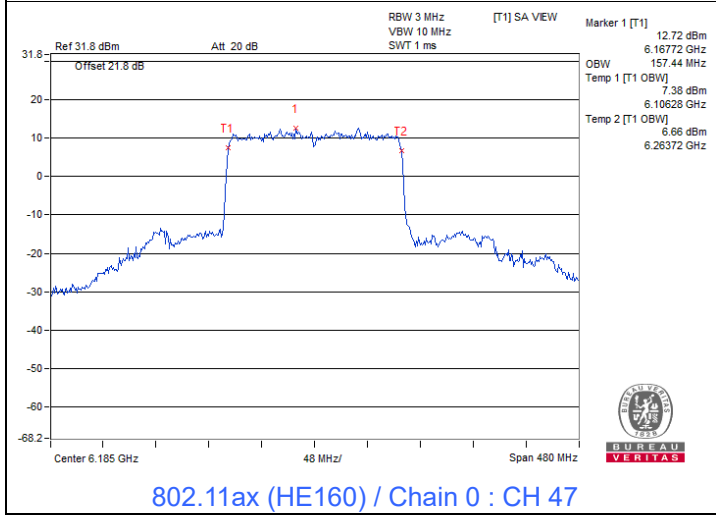
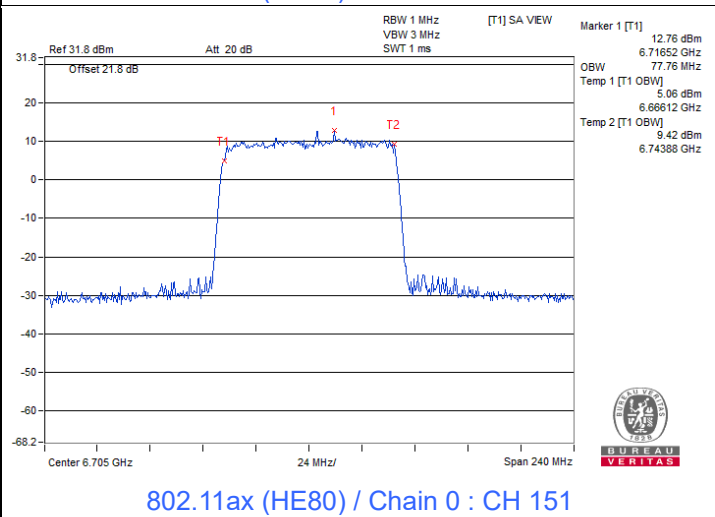
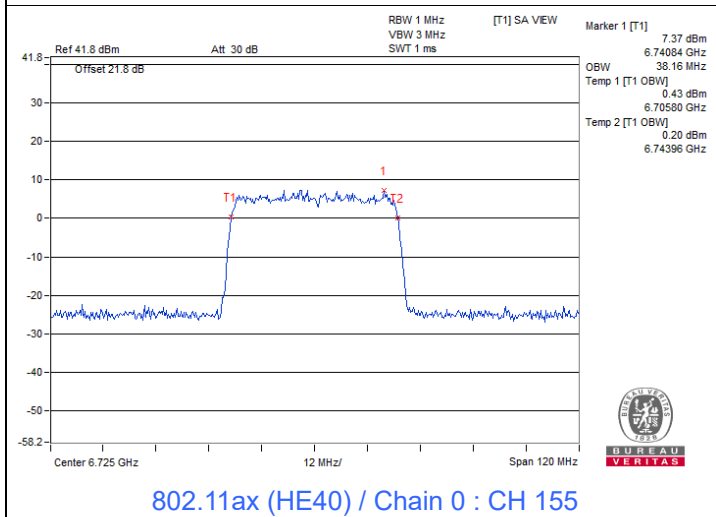
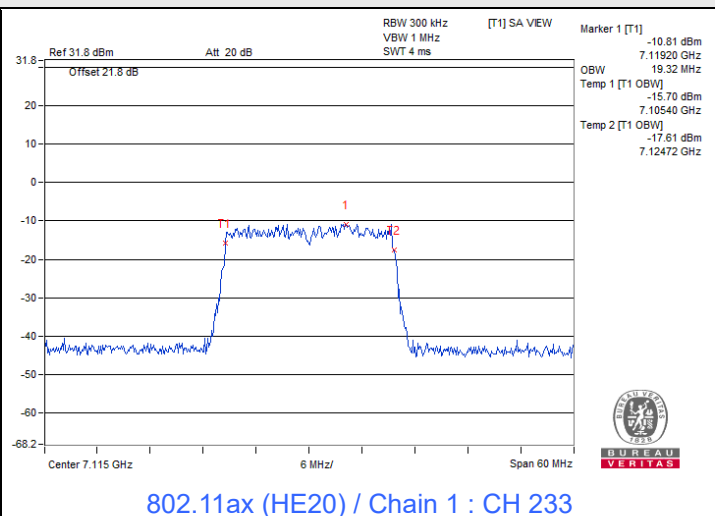
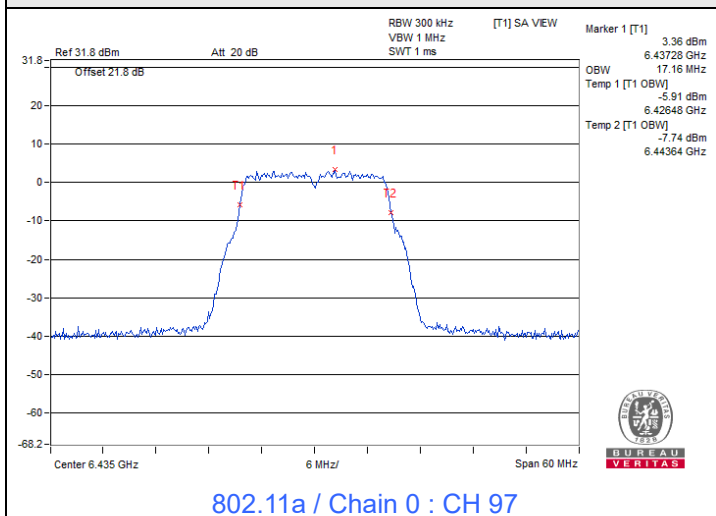
### 802.11ax (HE80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
39	6145	76.80	76.80	320	Pass
55	6225	76.80	76.80	320	Pass
87	6385	76.80	76.80	320	Pass
103	6465	76.80	76.80	320	Pass
119	6545	76.80	76.80	320	Pass
151	6705	77.76	76.80	320	Pass
183	6865	76.80	76.80	320	Pass
199	6945	77.28	77.28	320	Pass
215	7025	77.28	76.80	320	Pass

### 802.11ax (HE160)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
47	6185	157.44	157.44	320	Pass
79	6345	156.48	157.44	320	Pass
111	6505	156.48	157.44	320	Pass
143	6665	157.44	157.44	320	Pass
175	6825	156.48	156.48	320	Pass
207	6985	154.56	155.52	320	Pass

### Spectrum Plot of Maximum Value



## 7.6 Frequency Stability

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 65% RH	Tested By:	Katina Lu
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### 802.11a

Frequency Stability Versus Temperature									
Operating Frequency: 6115 MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
40	120	6115.0228	Pass	6115.0215	Pass	6115.0239	Pass	6115.0227	Pass
30	120	6115.0067	Pass	6115.0018	Pass	6115.0059	Pass	6115.0058	Pass
20	120	6114.9956	Pass	6114.9988	Pass	6114.9954	Pass	6114.9968	Pass
10	120	6114.9911	Pass	6114.9932	Pass	6114.9915	Pass	6114.992	Pass
0	120	6115.011	Pass	6115.0107	Pass	6115.01	Pass	6115.0122	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 6115 MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
20	138	6114.9948	Pass	6114.9973	Pass	6115.0002	Pass	6114.9948	Pass
	120	6114.9956	Pass	6114.9988	Pass	6114.9954	Pass	6114.9968	Pass
	102	6115.0047	Pass	6115.0051	Pass	6115.0068	Pass	6115.0094	Pass

### 7.7 Contention-based Protocol

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Tobey Chen
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Companion Device Information			
Product	Brand	Model No.	Software/Firmware Version
Wifi 6E TRI-Band Gaming Router	ASUS	GT-AXE11000	3.0.0.4.386_43986



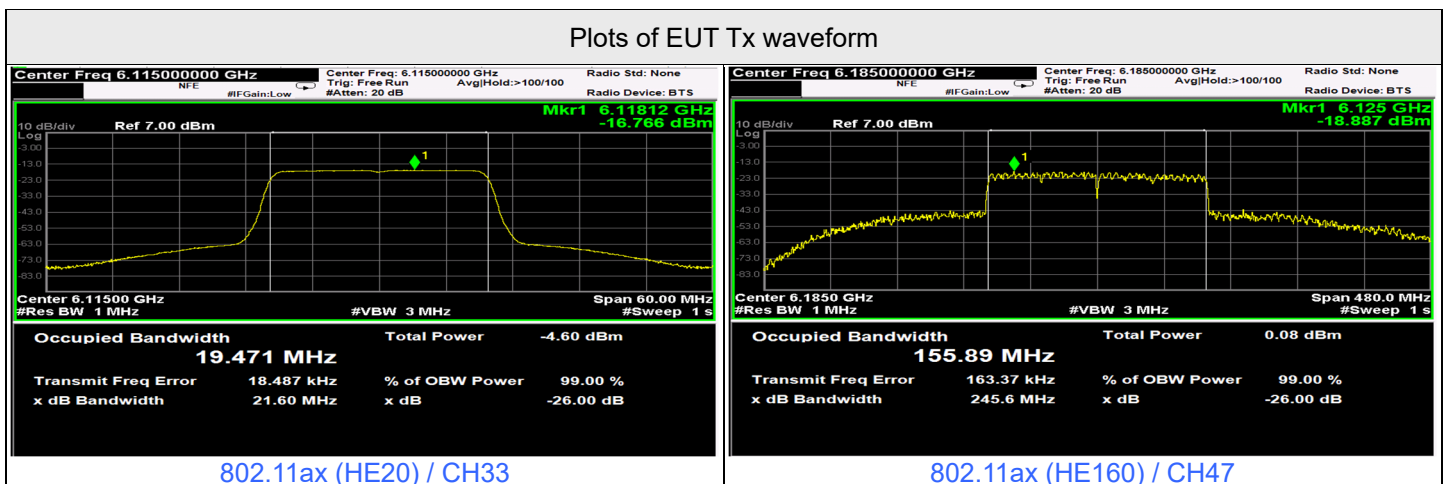


Contention Based Protocol Measurement											
Operation Mode	Channel Bandwidth (MHz)	Channel Number	Channel Freq. (MHz)	Injected Signal (AWGN)		Antenna Gain (dBi)	Path Loss (dB) (Note 3)	Adjusted Power (dBm)	Detection Limit	EUT TX Status	
				Freq. (MHz)	Power (dBm)						
802.11ax	20	33	6115	6115	-64.14	2.85	0	-66.99	-62	OFF	
					-64.64	2.85	0	-67.49	-62	Minimal	
					-79.15	2.85	0	-82	-62	ON	
	160	47	6185	6110	-65.06	2.85	0	-67.91	-62	OFF	
					-65.56	2.85	0	-68.41	-62	Minimal	
					-79.15	2.85	0	-82	-62	ON	
				6185	-63.28	2.85	0	-66.13	-62	OFF	
					-63.78	2.85	0	-66.63	-62	Minimal	
					-79.15	2.85	0	-82	-62	ON	
					6260	-63.09	2.85	0	-65.94	-62	OFF
						-63.59	2.85	0	-66.44	-62	Minimal
						-79.15	2.85	0	-82	-62	ON

Notes:

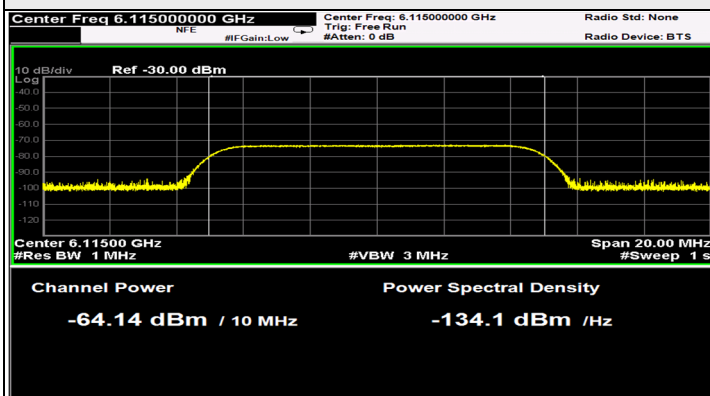
1. After investigation (consider antenna gain and path loss) , the one representative port (Chain 0) was measured and presented in the report.
2. Adjusted Power (dBm) = Injected Signal (AWGN) Power (dBm) - Antenna Gain (dBi) + Path Loss (dB)
3. Antenna gain values include all the applicable path losses.

Contention Based Protocol Detection Probability																
Operation Mode	Channel Bandwidth (MHz)	AWGN Signal Freq. (MHz)											Detection Probability	Detection Limit	Test Result	
			#01	#02	#03	#04	#05	#06	#07	#08	#09	#10				
802.11ax	20	6115	v	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
	160	6110	v	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6185	v	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6260	v	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass

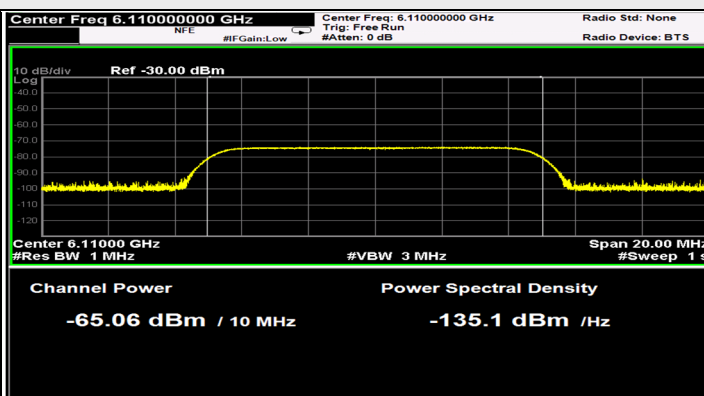




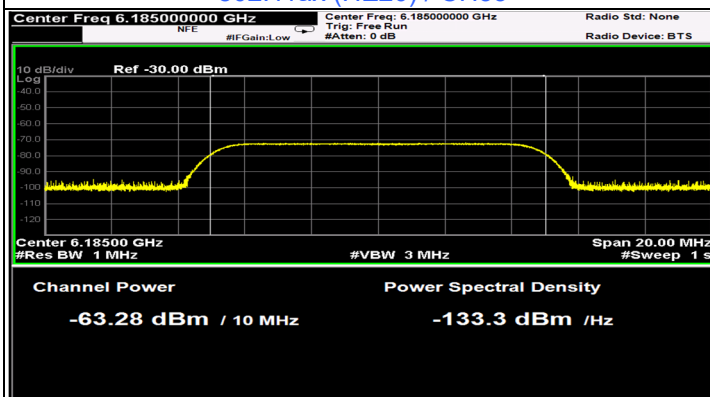
### Plots of Injected signal (AWGN) level



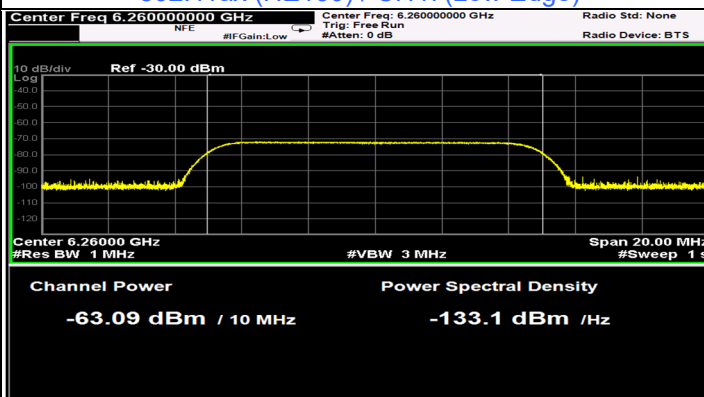
802.11ax (HE20) / CH33



802.11ax (HE160) / CH47(Low Edge)

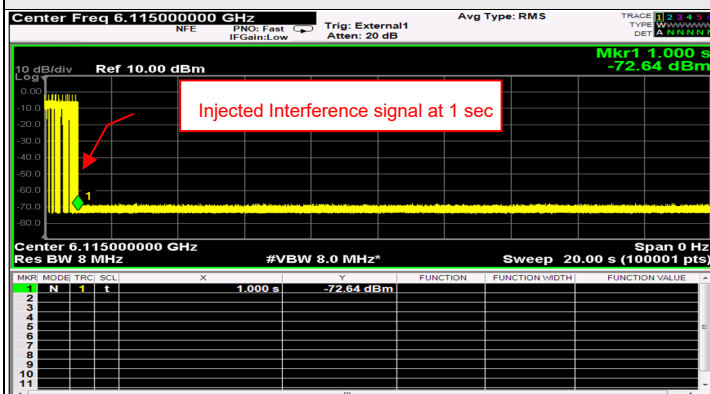


802.11ax (HE160) / CH47(Middle)

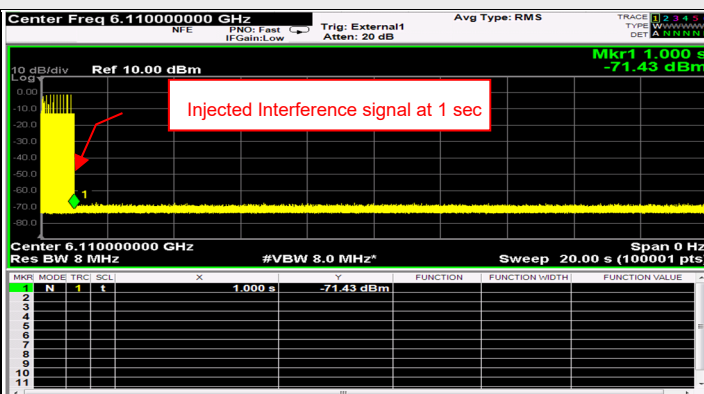


802.11ax (HE160) / CH47(High Edge)

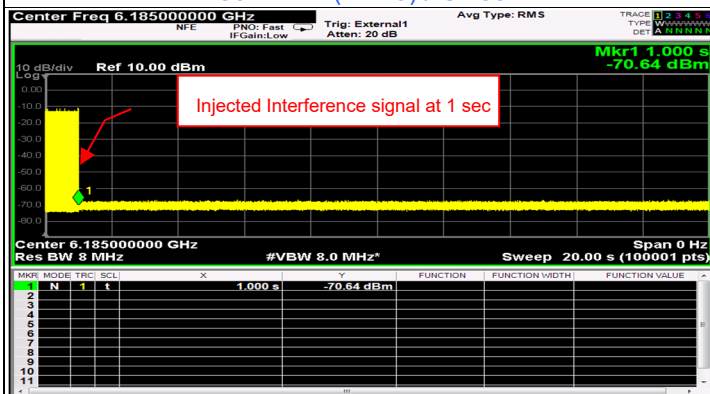
### Plots of EUT ceased transmission in the time domain



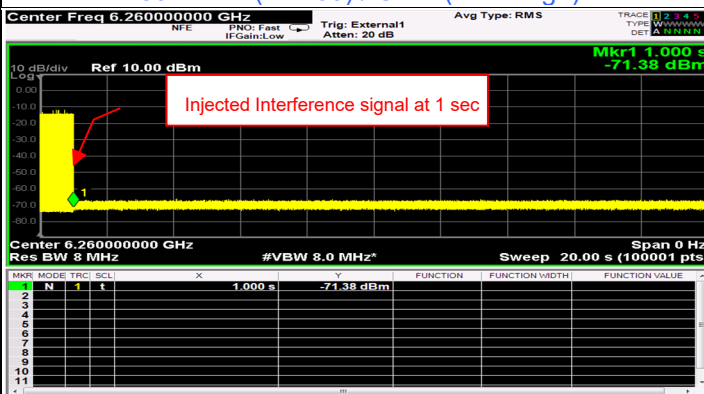
802.11ax (HE20) / CH33



802.11ax (HE160) / CH47(Low Edge)



802.11ax (HE160) / CH47(Middle)



802.11ax (HE160) / CH47(High Edge)

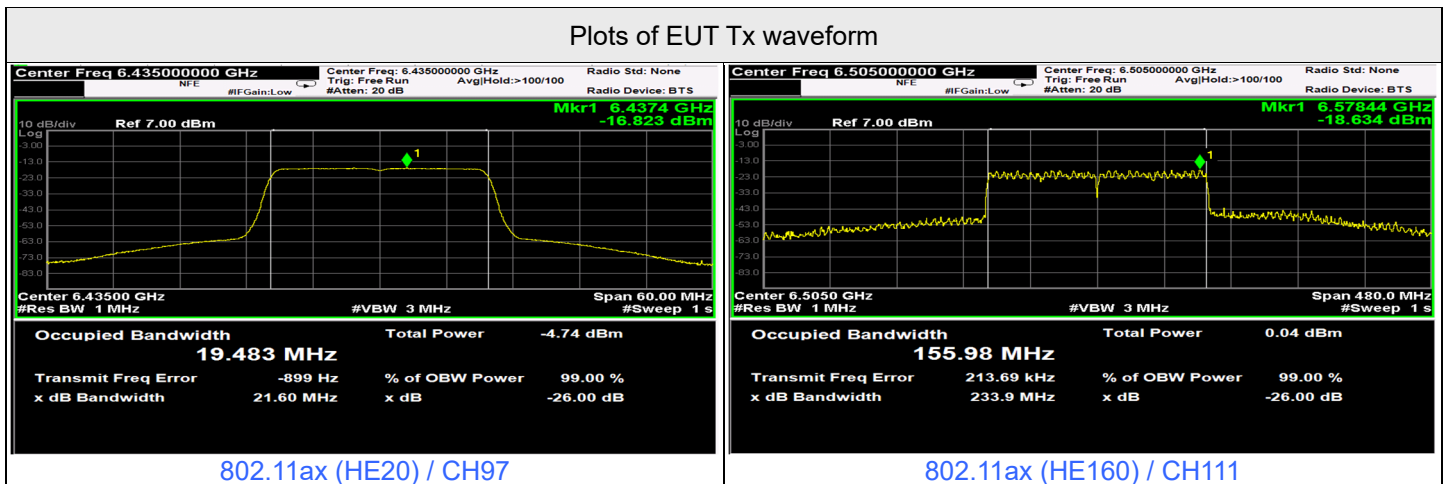


Contention Based Protocol Measurement										
Operation Mode	Channel Bandwidth (MHz)	Channel Number	Channel Freq. (MHz)	Injected Signal (AWGN)		Antenna Gain (dBi)	Path Loss (dB) (Note 3)	Adjusted Power (dBm)	Detection Limit	EUT TX Status
				Freq. (MHz)	Power (dBm)					
802.11ax	20	97	6435	6435	-65.07	2.87	0	-67.94	-62	OFF
					-65.57	2.87	0	-68.44	-62	Minimal
					-79.13	2.87	0	-82	-62	ON
	160	111	6505	6505	-67.25	2.87	0	-70.12	-62	OFF
					-67.75	2.87	0	-70.62	-62	Minimal
					-79.13	2.87	0	-82	-62	ON
					-64.05	2.87	0	-66.92	-62	OFF
					-64.55	2.87	0	-67.42	-62	Minimal
					-79.13	2.87	0	-82	-62	ON
		6580	6580	-65.24	2.87	0	-68.11	-62	OFF	
				-65.74	2.87	0	-68.61	-62	Minimal	
				-79.13	2.87	0	-82	-62	ON	

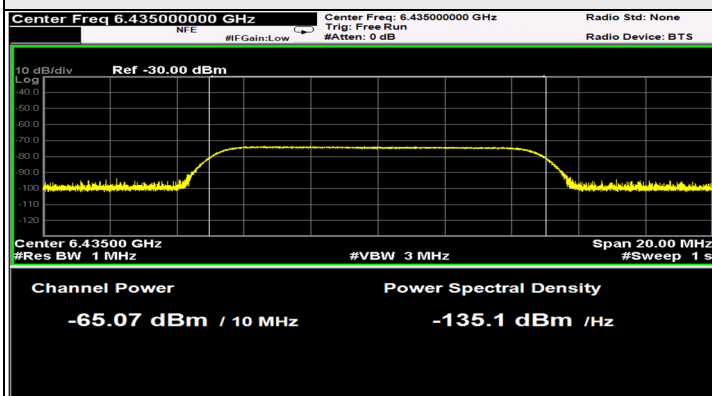
Notes:

1. After investigation (consider antenna gain and path loss) , the one representative port (Chain 1) was measured and presented in the report.
2. Adjusted Power (dBm) = Injected Signal (AWGN) Power (dBm) - Antenna Gain (dBi) + Path Loss (dB)
3. Antenna gain values include all the applicable path losses.

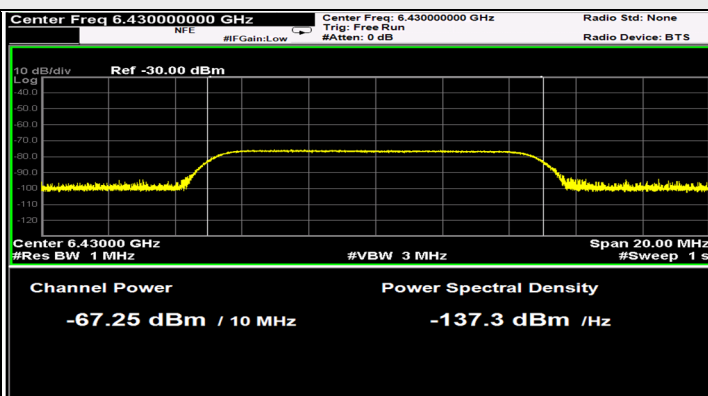
Contention Based Protocol Detection Probability															
Operation Mode	Channel Bandwidth (MHz)	AWGN Signal Freq. (MHz)	#01	#02	#03	#04	#05	#06	#07	#08	#09	#10	Detection Probability	Detection Limit	Test Result
802.11ax	20	6435	v	v	v	x	v	v	v	v	v	v	90%	90%	Pass
	160	6430	v	v	v	v	v	v	x	v	v	v	90%	90%	Pass
		6505	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6580	v	v	v	v	v	x	v	v	v	v	90%	90%	Pass



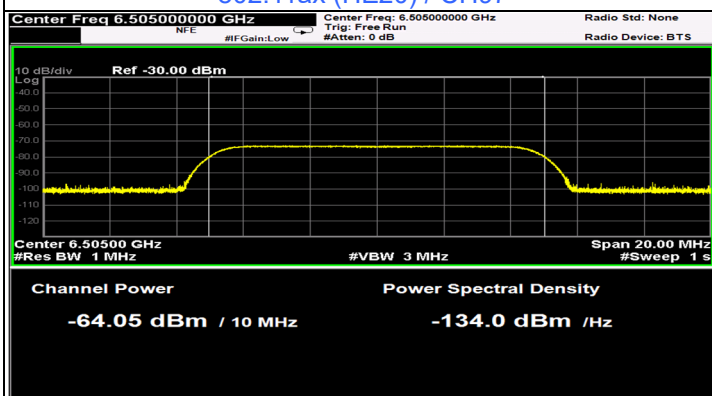
Plots of Injected signal (AWGN) level



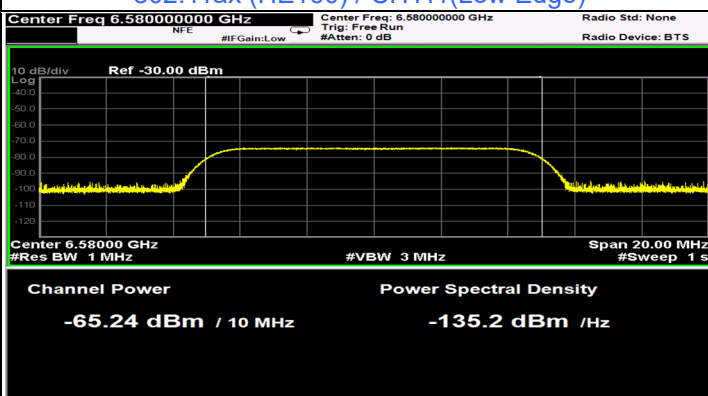
802.11ax (HE20) / CH97



802.11ax (HE160) / CH111(Low Edge)

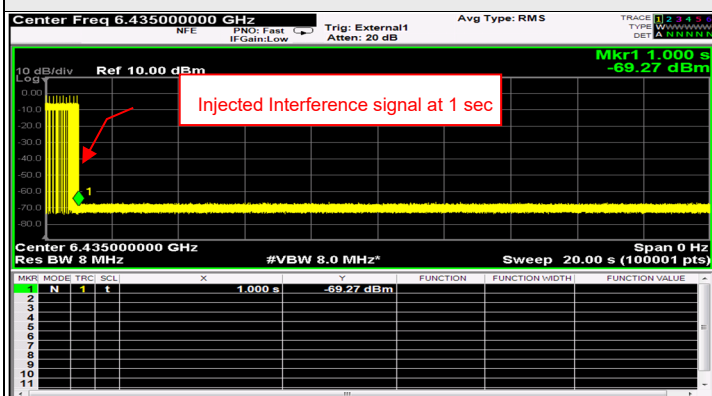


802.11ax (HE160) / CH111(Middle)

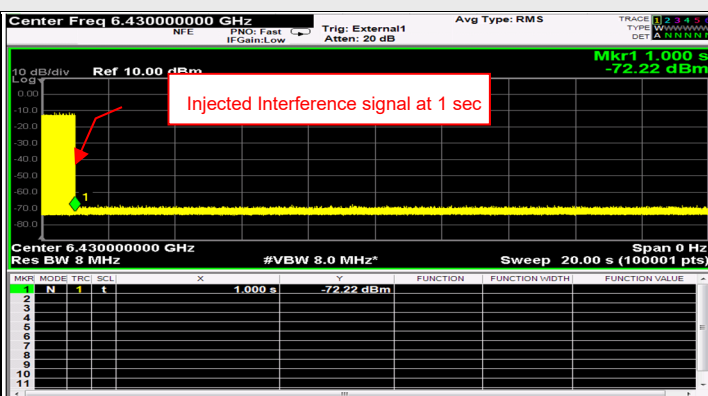


802.11ax (HE160) / CH111(High Edge)

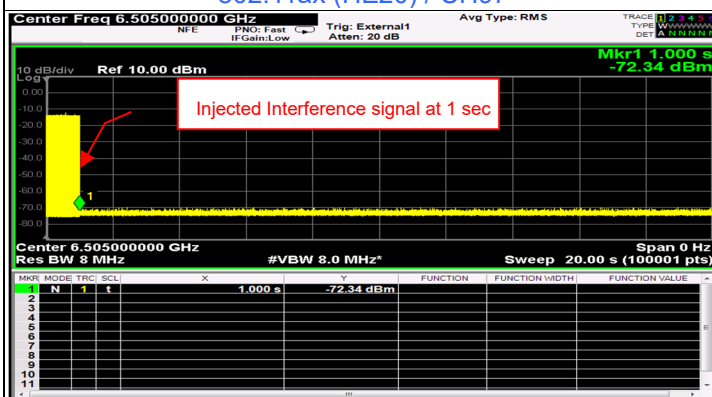
Plots of EUT ceased transmission in the time domain



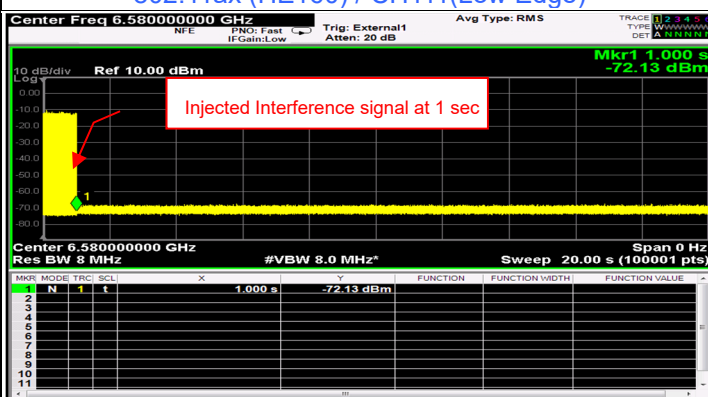
802.11ax (HE20) / CH97



802.11ax (HE160) / CH111(Low Edge)



802.11ax (HE160) / CH111(Middle)



802.11ax (HE160) / CH111(High Edge)

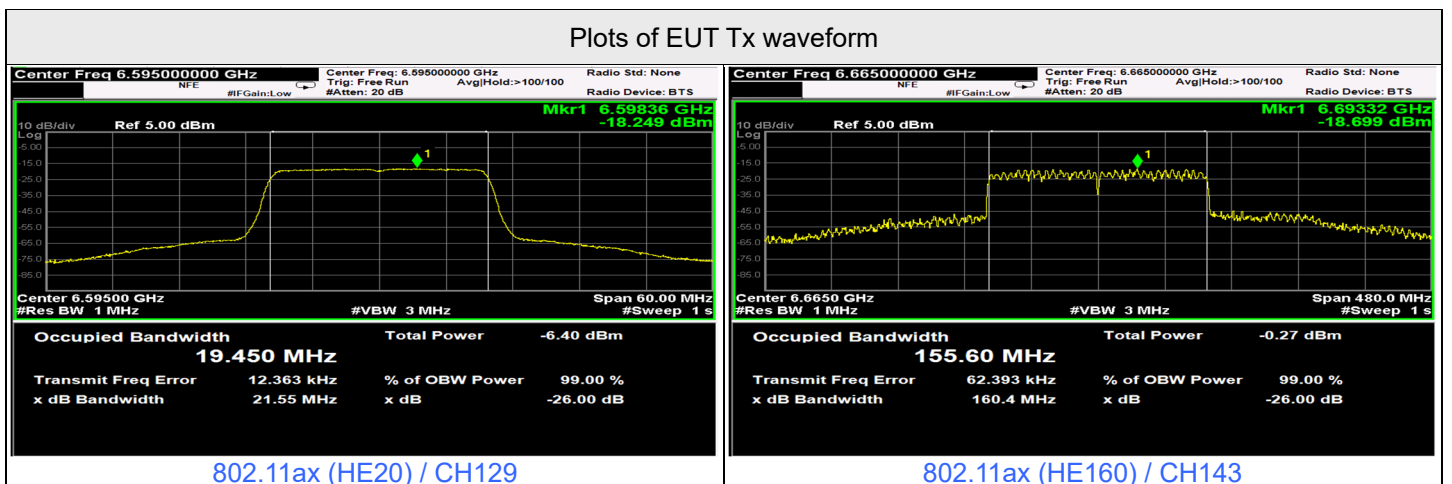


Contention Based Protocol Measurement											
Operation Mode	Channel Bandwidth (MHz)	Channel Number	Channel Freq. (MHz)	Injected Signal (AWGN)		Antenna Gain (dBi)	Path Loss (dB) (Note 3)	Adjusted Power (dBm)	Detection Limit	EUT TX Status	
				Freq. (MHz)	Power (dBm)						
802.11ax	20	129	6595	6595	-65.08	2.87	0	-67.95	-62	OFF	
					-65.58	2.87	0	-68.45	-62	Minimal	
					-79.13	2.87	0	-82	-62	ON	
	160	143	6665	6590	-66.05	2.87	0	-68.92	-62	OFF	
					-66.55	2.87	0	-69.42	-62	Minimal	
					-79.13	2.87	0	-82	-62	ON	
				6665	-63.02	2.87	0	-65.89	-62	OFF	
					-63.52	2.87	0	-66.39	-62	Minimal	
					-79.13	2.87	0	-82	-62	ON	
					6740	-63.03	2.87	0	-65.9	-62	OFF
						-63.53	2.87	0	-66.4	-62	Minimal
						-79.13	2.87	0	-82	-62	ON

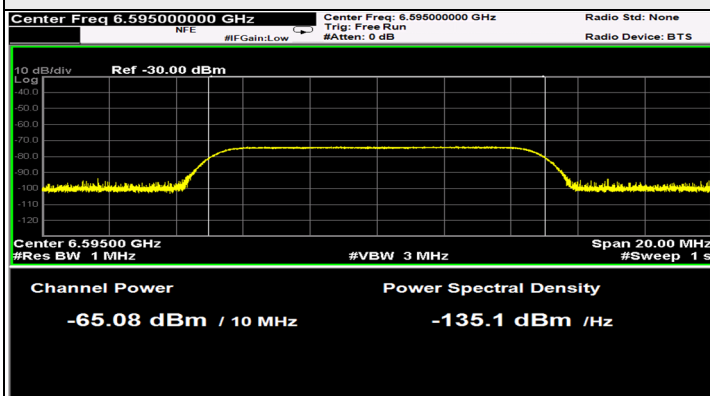
Notes:

1. After investigation (consider antenna gain and path loss) , the one representative port (Chain 1) was measured and presented in the report.
2. Adjusted Power (dBm) = Injected Signal (AWGN) Power (dBm) - Antenna Gain (dBi) + Path Loss (dB)
3. Antenna gain values include all the applicable path losses.

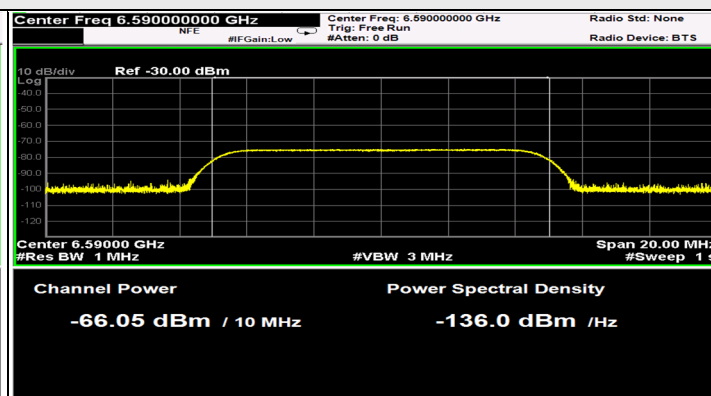
Contention Based Protocol Detection Probability															
Operation Mode	Channel Bandwidth (MHz)	AWGN Signal Freq. (MHz)	#01	#02	#03	#04	#05	#06	#07	#08	#09	#10	Detection Probability	Detection Limit	Test Result
802.11ax	20	6595	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
	160	6590	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6665	x	v	v	v	v	v	v	v	v	v	90%	90%	Pass
		6740	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass



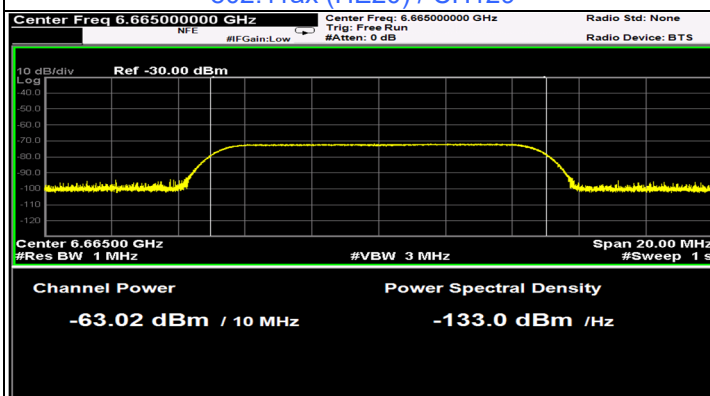
### Plots of Injected signal (AWGN) level



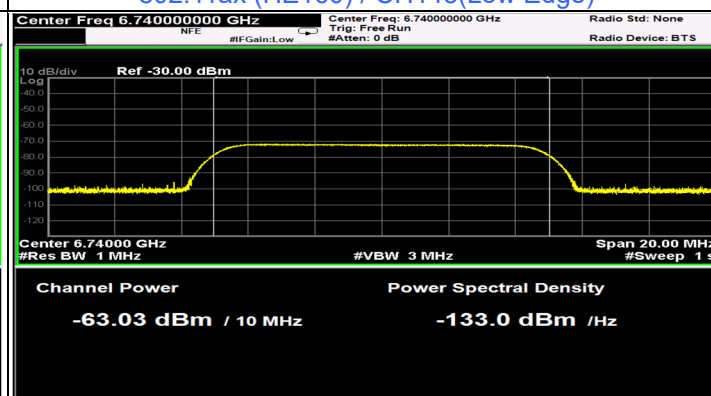
802.11ax (HE20) / CH129



802.11ax (HE160) / CH143(Low Edge)

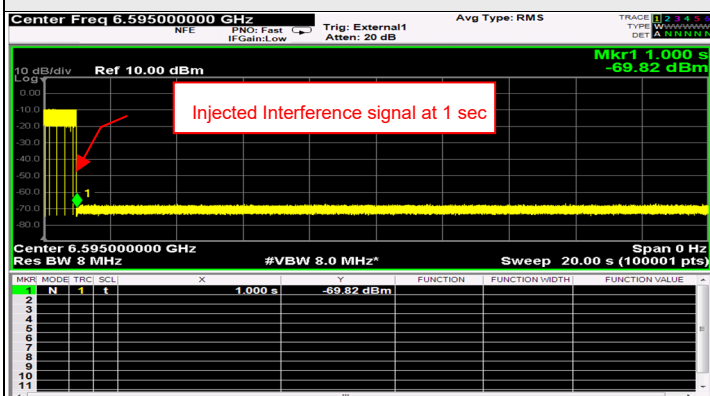


802.11ax (HE160) / CH143(Middle)

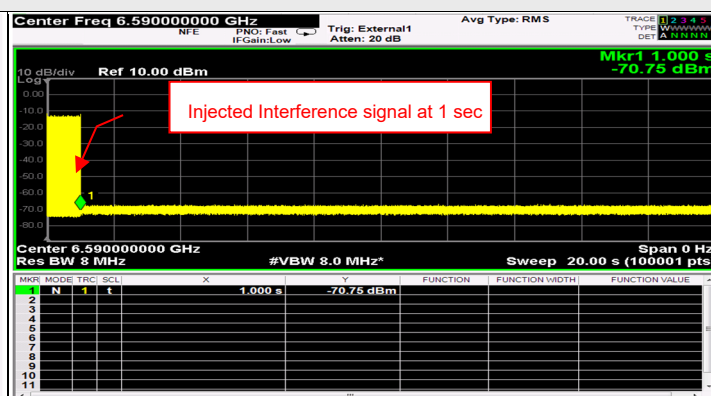


802.11ax (HE160) / CH143(High Edge)

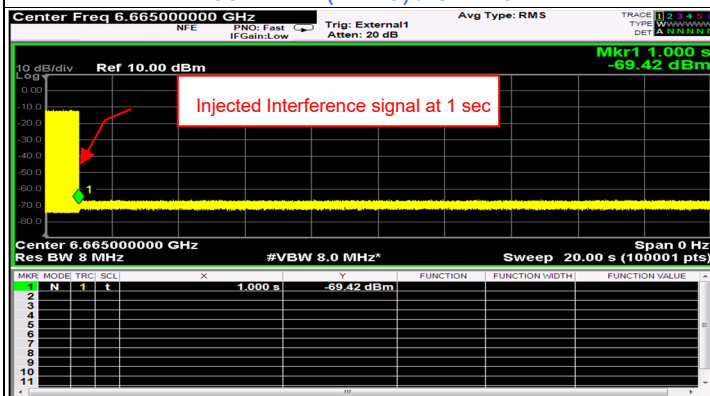
### Plots of EUT ceased transmission in the time domain



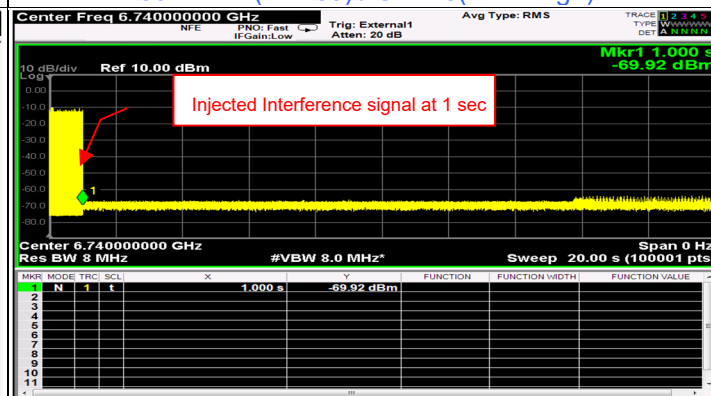
802.11ax (HE20) / CH129



802.11ax (HE160) / CH143(Low Edge)



802.11ax (HE160) / CH143(Middle)



802.11ax (HE160) / CH143(High Edge)



Contention Based Protocol Measurement										
Operation Mode	Channel Bandwidth (MHz)	Channel Number	Channel Freq. (MHz)	Injected Signal (AWGN)		Antenna Gain (dBi)	Path Loss (dB) (Note 3)	Adjusted Power (dBm)	Detection Limit	EUT TX Status
				Freq. (MHz)	Power (dBm)					
802.11ax	20	193	6915	6915	-67.05	2.93	0	-69.98	-62	OFF
					-67.55	2.93	0	-70.48	-62	Minimal
					-79.07	2.93	0	-82	-62	ON
	160	207	6985	6910	-67.11	2.93	0	-70.04	-62	OFF
					-67.66	2.93	0	-70.59	-62	Minimal
					-79.07	2.93	0	-82	-62	ON
				7060	-66.05	2.93	0	-68.98	-62	OFF
					-66.55	2.93	0	-69.48	-62	Minimal
					-79.07	2.93	0	-82	-62	ON
					-65.13	2.93	0	-68.06	-62	OFF
					-65.63	2.93	0	-68.56	-62	Minimal
					-79.07	2.93	0	-82	-62	ON

Notes:

1. After investigation (consider antenna gain and path loss) , the one representative port (Chain 0) was measured and presented in the report.
2. Adjusted Power (dBm) = Injected Signal (AWGN) Power (dBm) - Antenna Gain (dBi) + Path Loss (dB)
3. Antenna gain values include all the applicable path losses.

Contention Based Protocol Detection Probability															
Operation Mode	Channel Bandwidth (MHz)	AWGN Signal Freq. (MHz)	#01	#02	#03	#04	#05	#06	#07	#08	#09	#10	Detection Probability	Detection Limit	Test Result
160	6910	v	v	v	x	v	v	v	v	v	v	90%	90%	Pass	
	6985	v	v	v	v	v	v	v	v	v	x	90%	90%	Pass	
	7060	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass	

