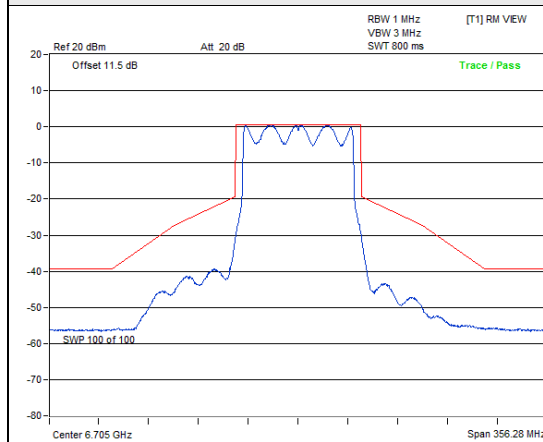
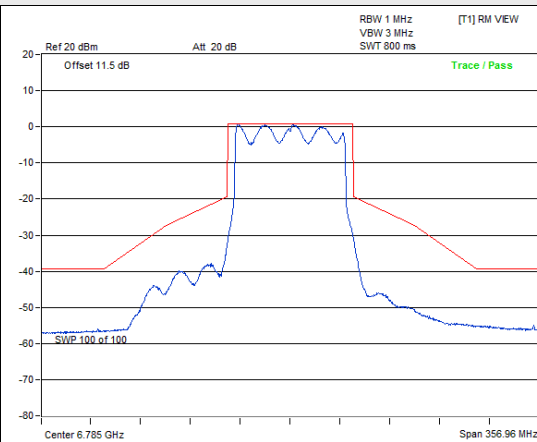


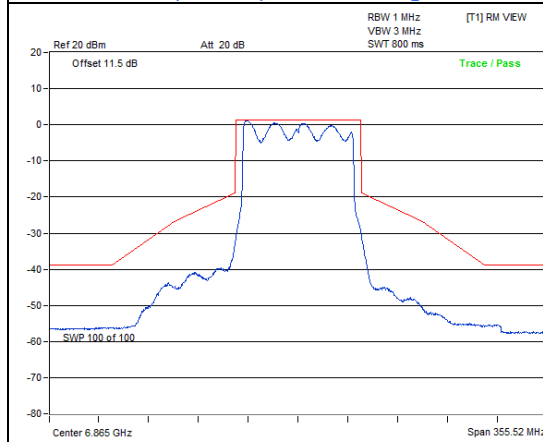
Spectrum Plot



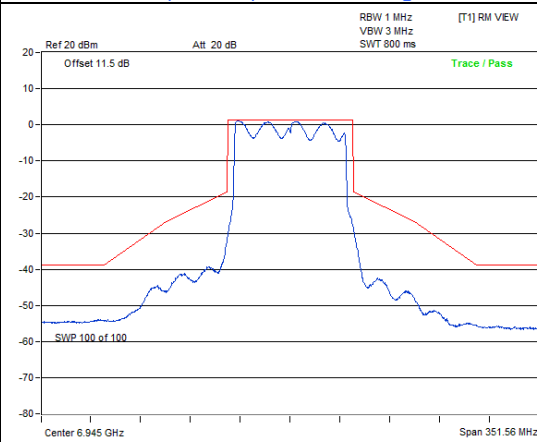
802.11be (EHT80) Beamforming / Chain 0: CH 151



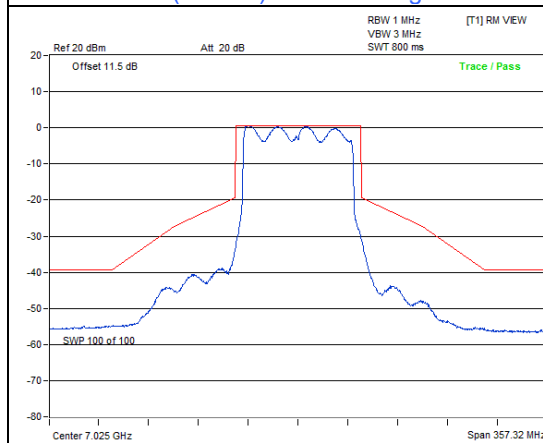
802.11be (EHT80) Beamforming / Chain 0: CH 167



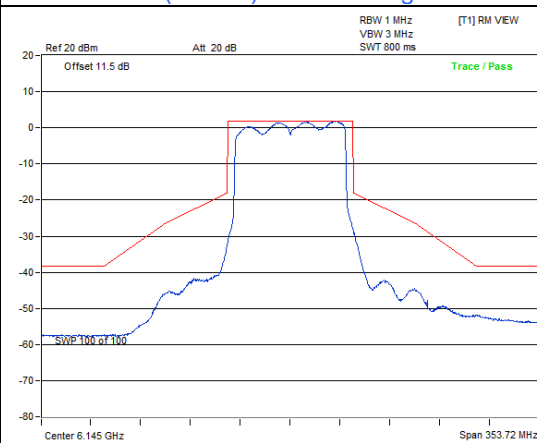
802.11be (EHT80) Beamforming / Chain 0: CH 183



802.11be (EHT80) Beamforming / Chain 0: CH 199

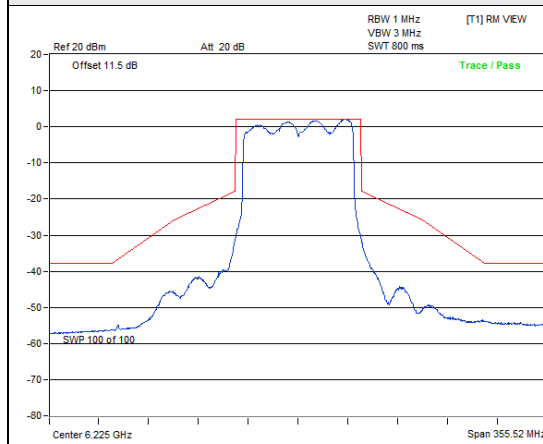


802.11be (EHT80) Beamforming / Chain 0: CH 215

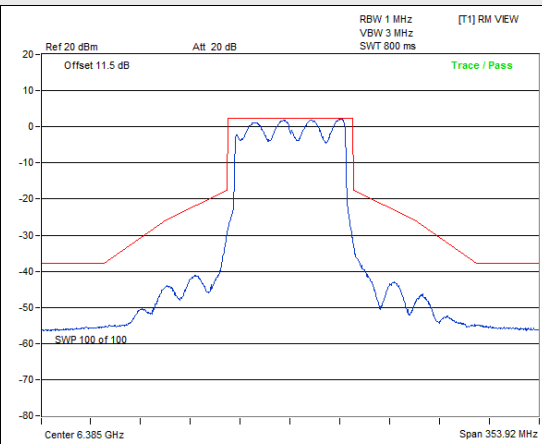


802.11be (EHT80) Beamforming / Chain 1: CH 39

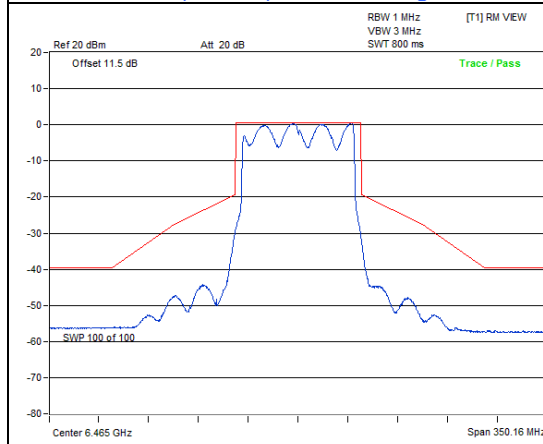
Spectrum Plot



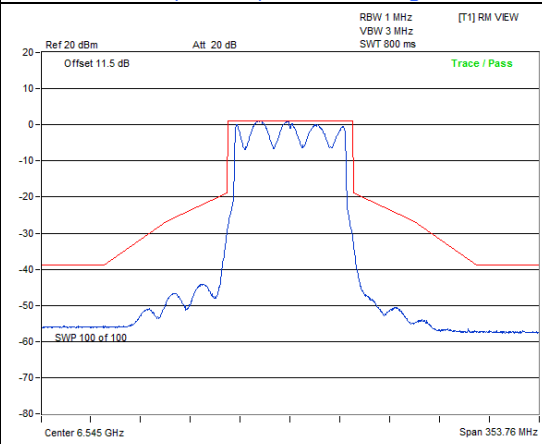
802.11be (EHT80) Beamforming / Chain 1: CH 55



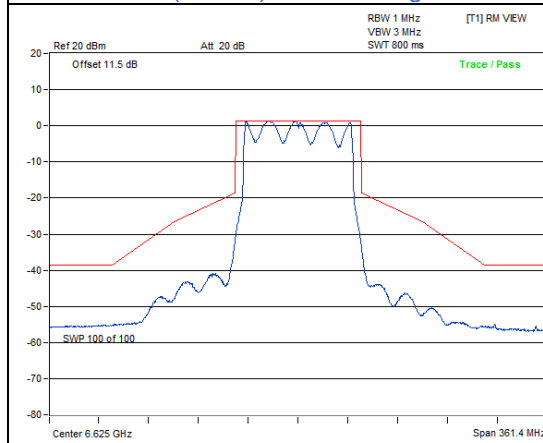
802.11be (EHT80) Beamforming / Chain 1: CH 87



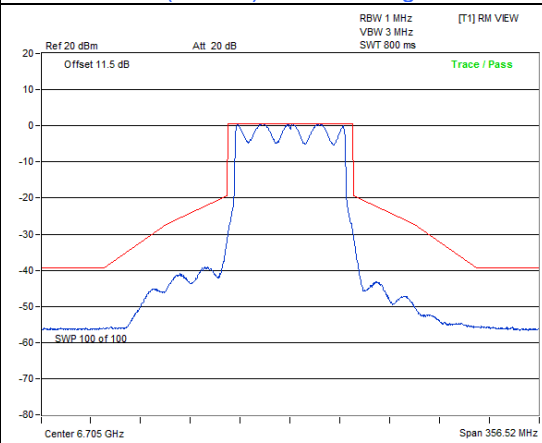
802.11be (EHT80) Beamforming / Chain 1: CH 103



802.11be (EHT80) Beamforming / Chain 1: CH 119

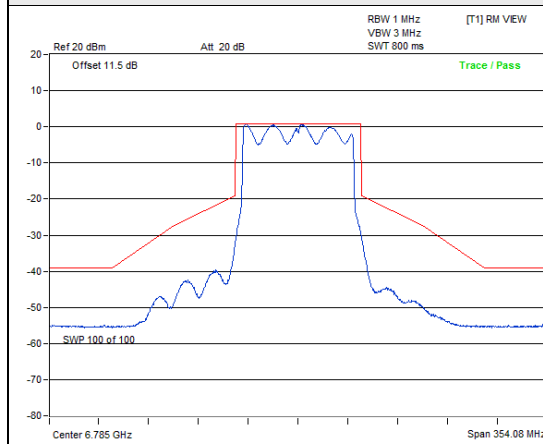


802.11be (EHT80) Beamforming / Chain 1: CH 135

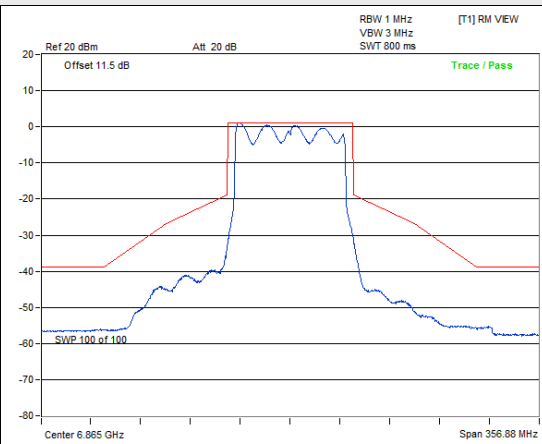


802.11be (EHT80) Beamforming / Chain 1: CH 151

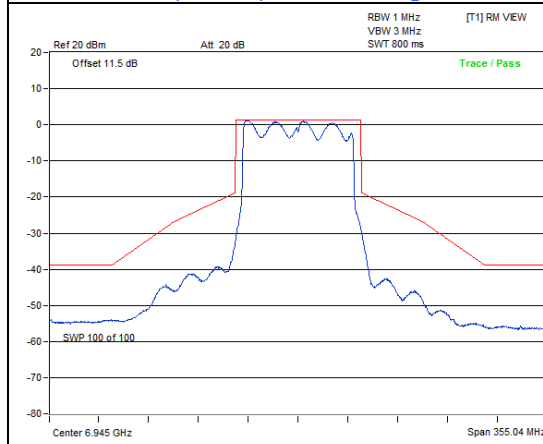
Spectrum Plot



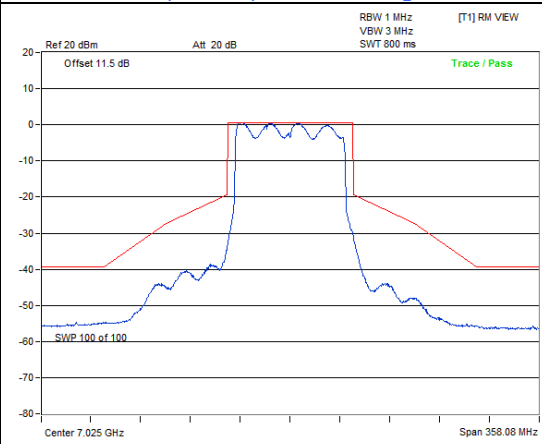
802.11be (EHT80) Beamforming / Chain 1: CH 167



802.11be (EHT80) Beamforming / Chain 1: CH 183



802.11be (EHT80) Beamforming / Chain 1: CH 199

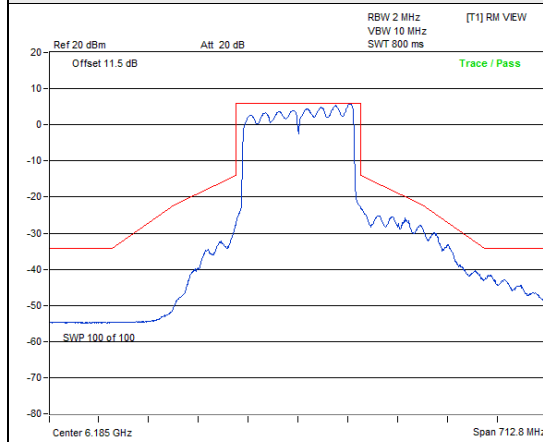


802.11be (EHT80) Beamforming / Chain 1: CH 215

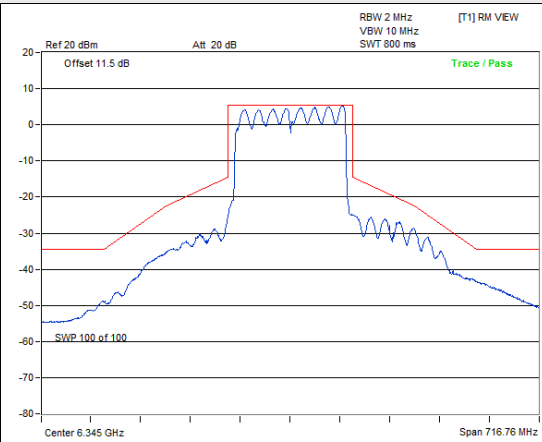
802.11be (EHT160) Beamforming



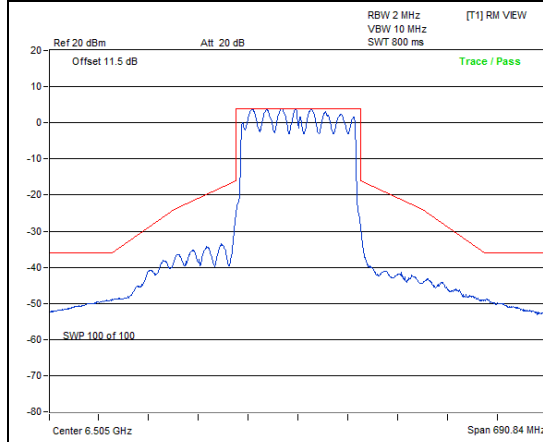
Spectrum Plot



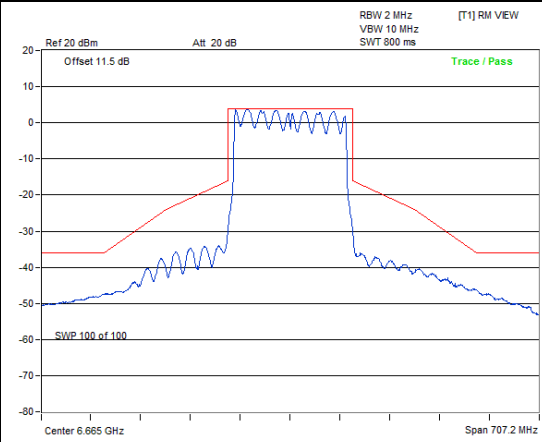
802.11be (EHT160) Beamforming / Chain 1: CH 47



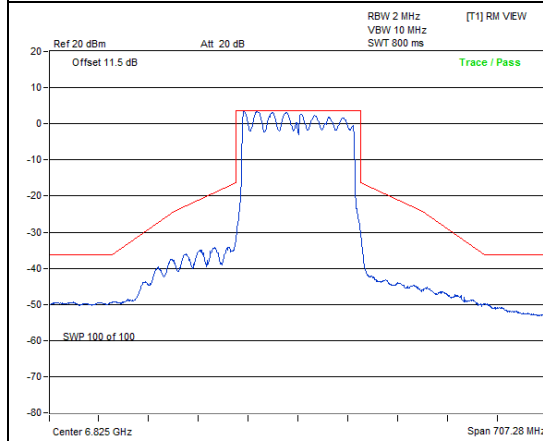
802.11be (EHT160) Beamforming / Chain 1: CH 79



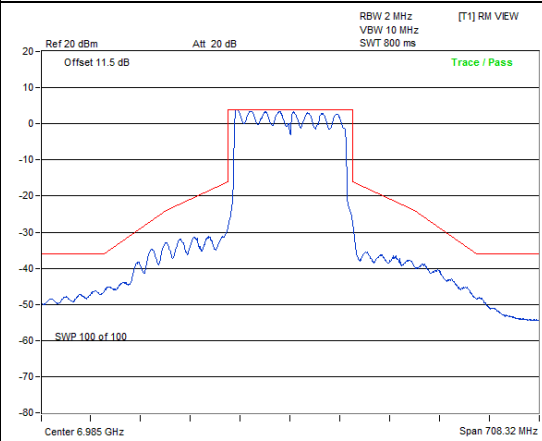
802.11be (EHT160) Beamforming / Chain 1: CH 111



802.11be (EHT160) Beamforming / Chain 1: CH 143



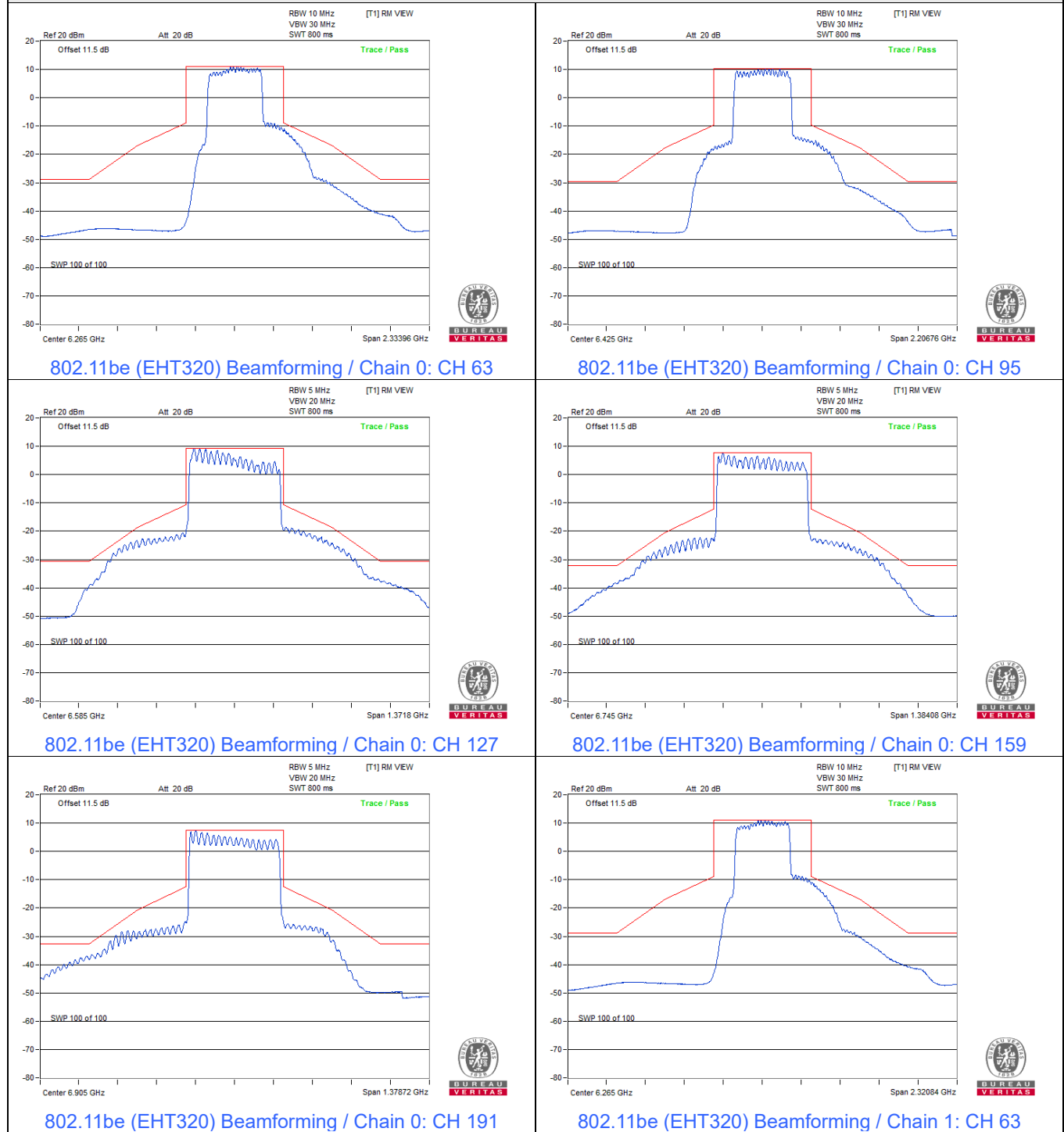
802.11be (EHT160) Beamforming / Chain 1: CH 175



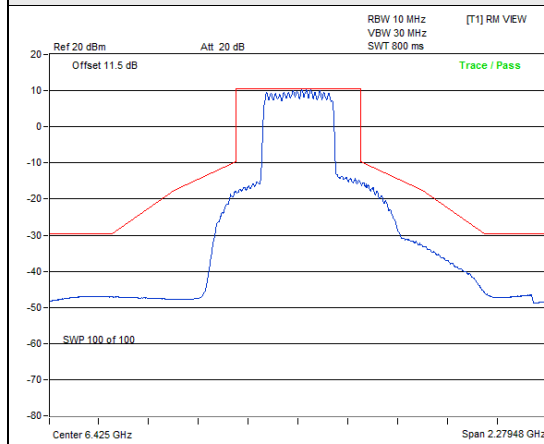
802.11be (EHT160) Beamforming / Chain 1: CH 207

802.11be (EHT320) Beamforming

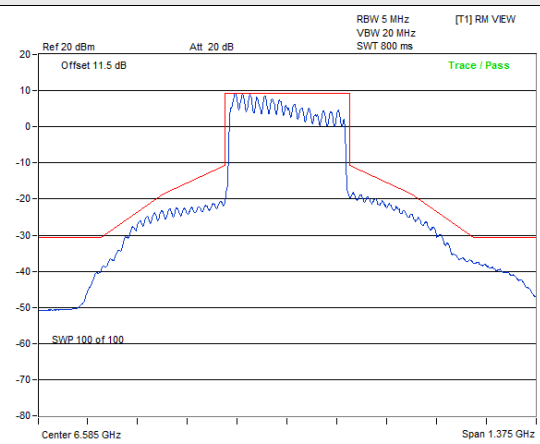
Spectrum Plot



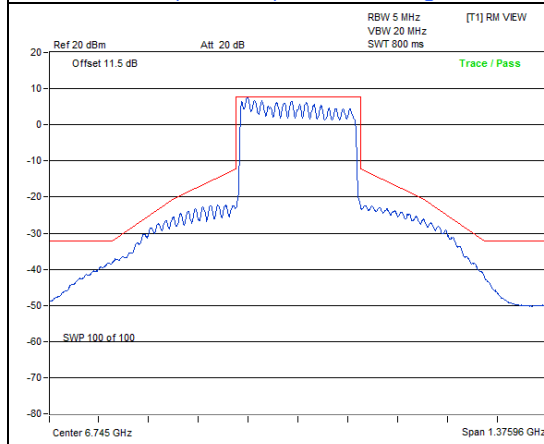
Spectrum Plot



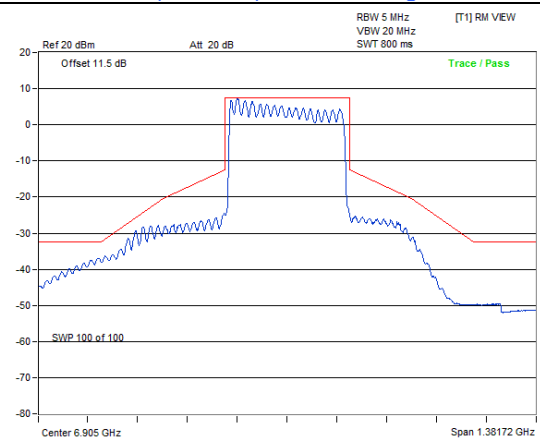
802.11be (EHT320) Beamforming / Chain 1: CH 95



802.11be (EHT320) Beamforming / Chain 1: CH 127



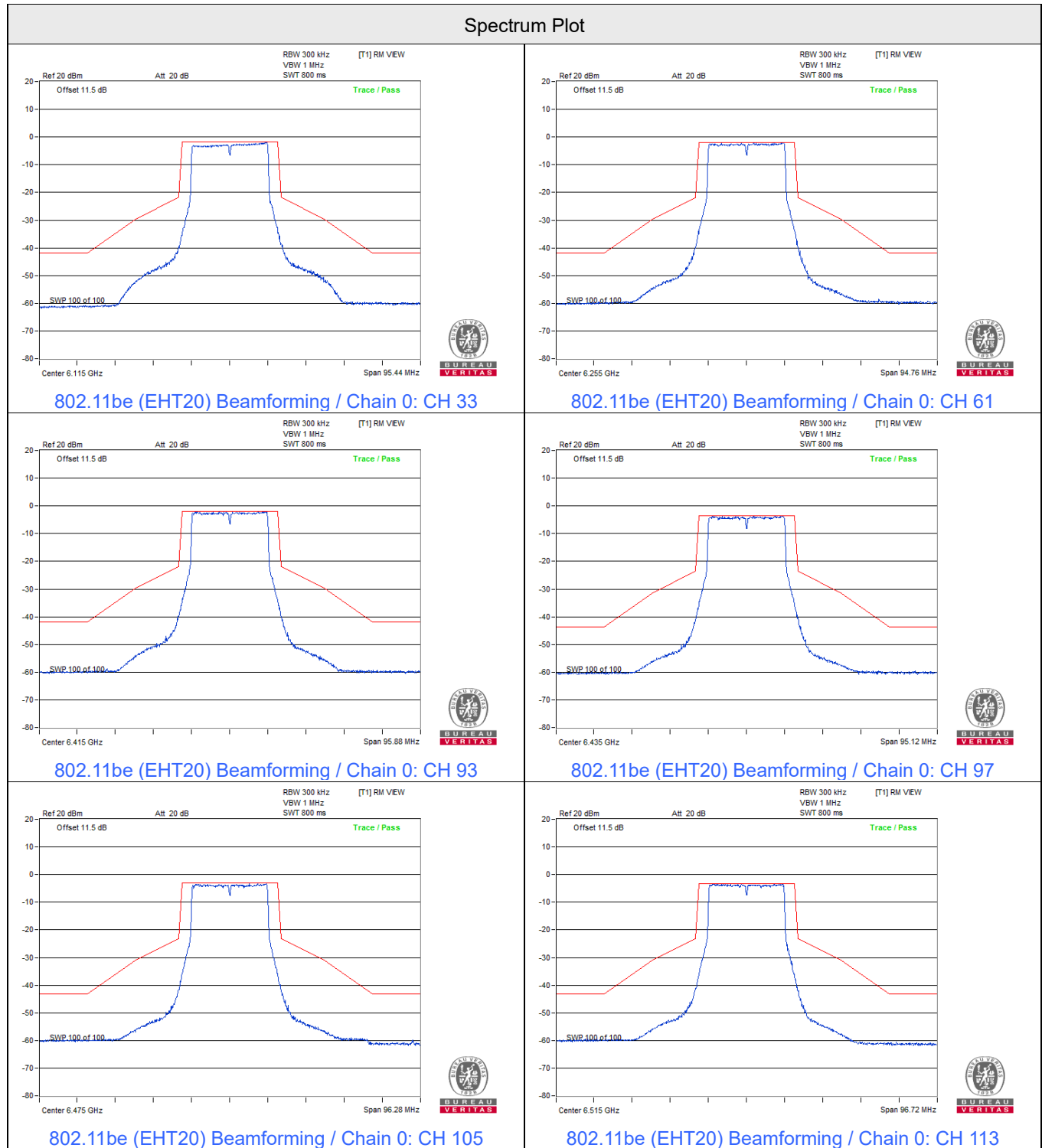
802.11be (EHT320) Beamforming / Chain 1: CH 159



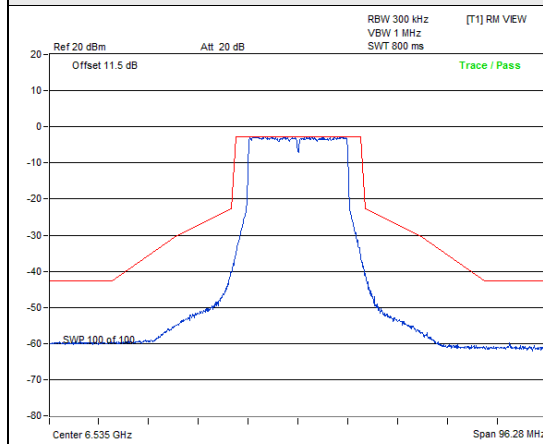
802.11be (EHT320) Beamforming / Chain 1: CH 191

2T2S

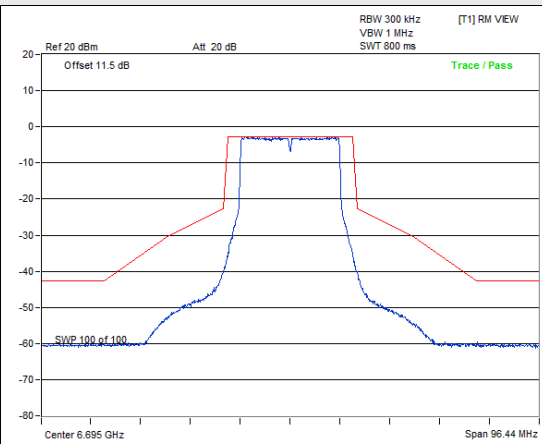
802.11be (EHT20) Beamforming



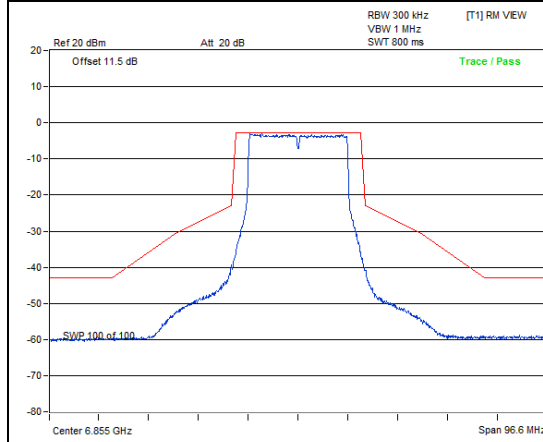
Spectrum Plot



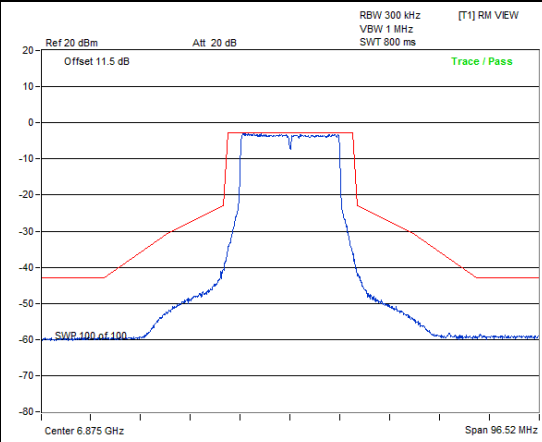
802.11be (EHT20) Beamforming / Chain 0: CH 117



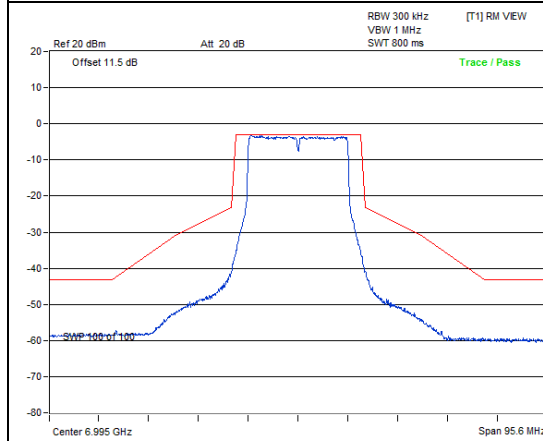
802.11be (EHT20) Beamforming / Chain 0: CH 149



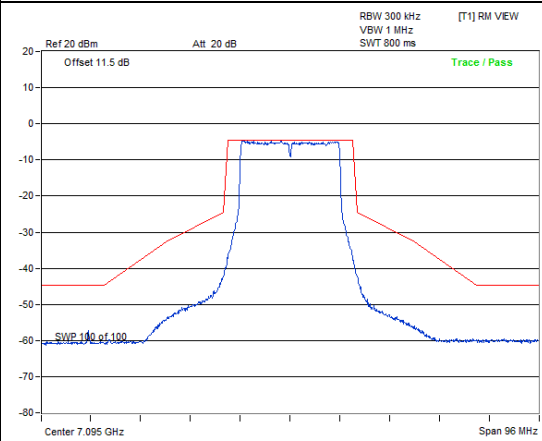
802.11be (EHT20) Beamforming / Chain 0: CH 181



802.11be (EHT20) Beamforming / Chain 0: CH 185

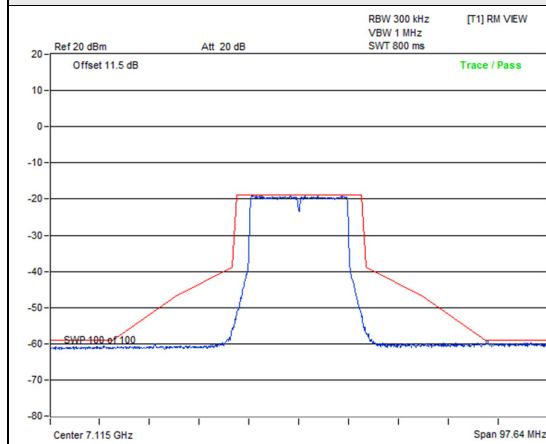


802.11be (EHT20) Beamforming / Chain 0: CH 209

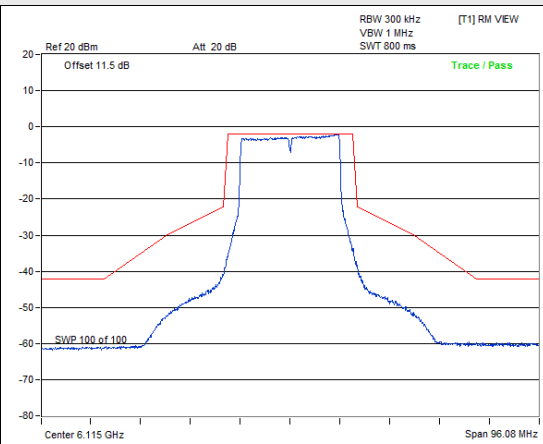


802.11be (EHT20) Beamforming / Chain 0: CH 229

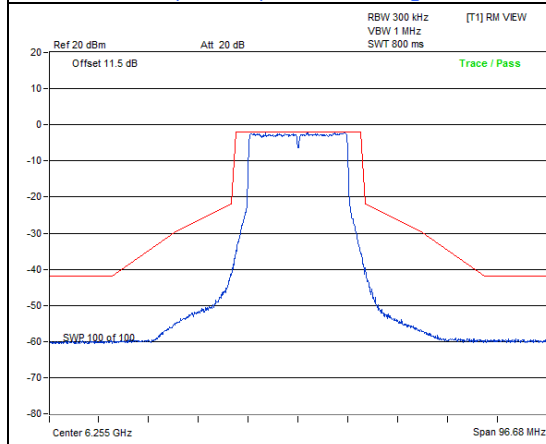
Spectrum Plot



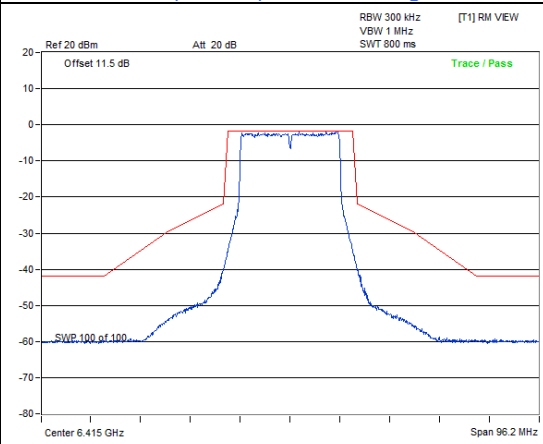
802.11be (EHT20) Beamforming / Chain 0: CH 233



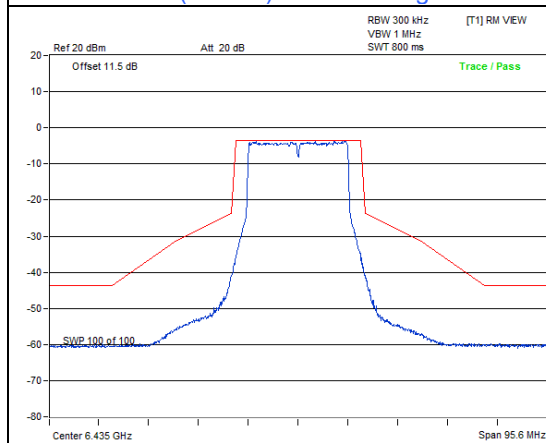
802.11be (EHT20) Beamforming / Chain 1: CH 33



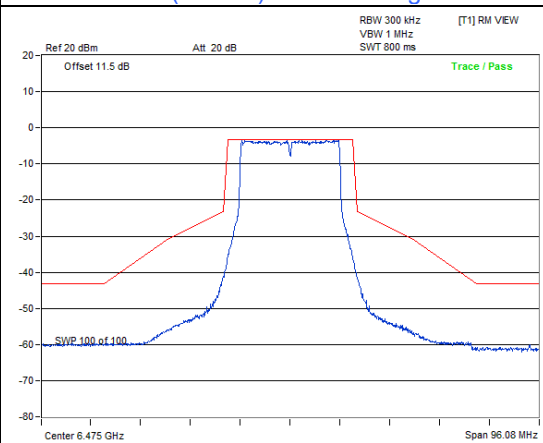
802.11be (EHT20) Beamforming / Chain 1: CH 61



802.11be (EHT20) Beamforming / Chain 1: CH 93

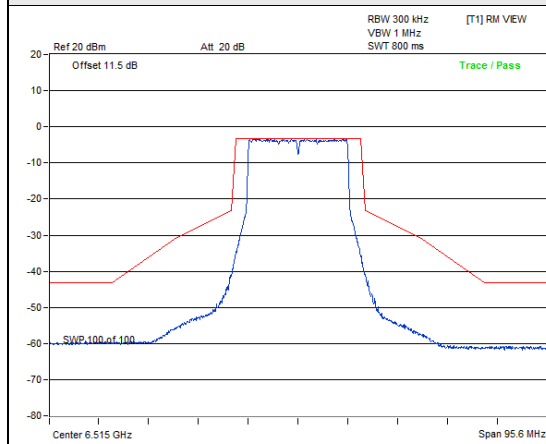


802.11be (EHT20) Beamforming / Chain 1: CH 97

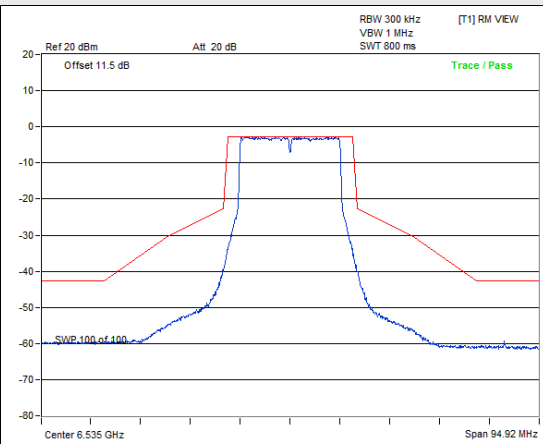


802.11be (EHT20) Beamforming / Chain 1: CH 105

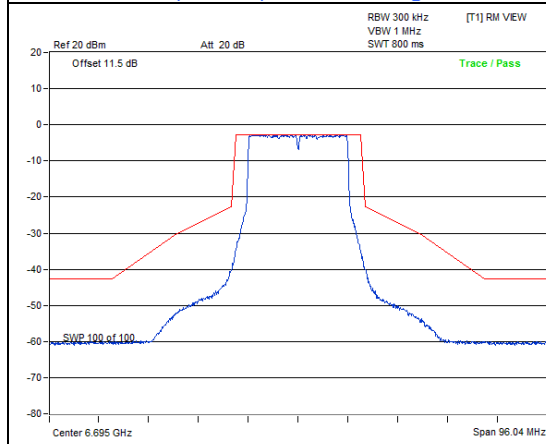
Spectrum Plot



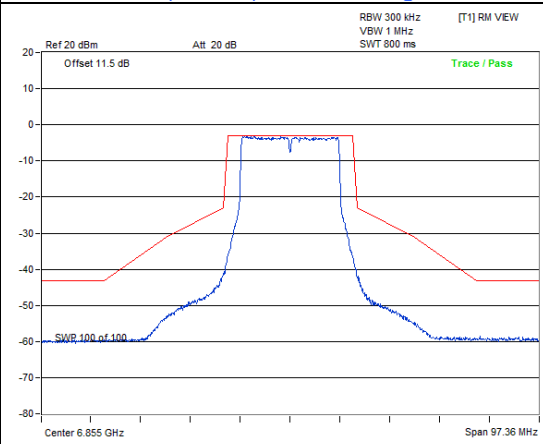
802.11be (EHT20) Beamforming / Chain 1: CH 113



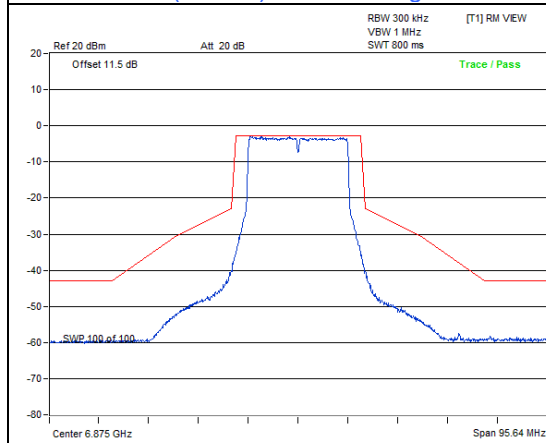
802.11be (EHT20) Beamforming / Chain 1: CH 117



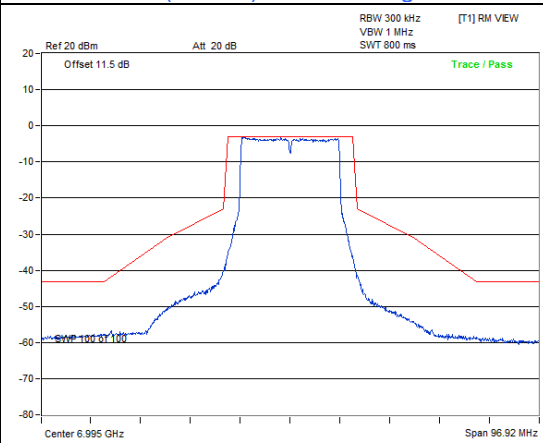
802.11be (EHT20) Beamforming / Chain 1: CH 149



802.11be (EHT20) Beamforming / Chain 1: CH 181

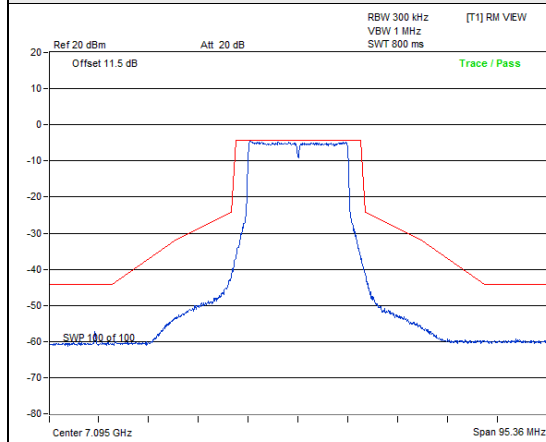


802.11be (EHT20) Beamforming / Chain 1: CH 185

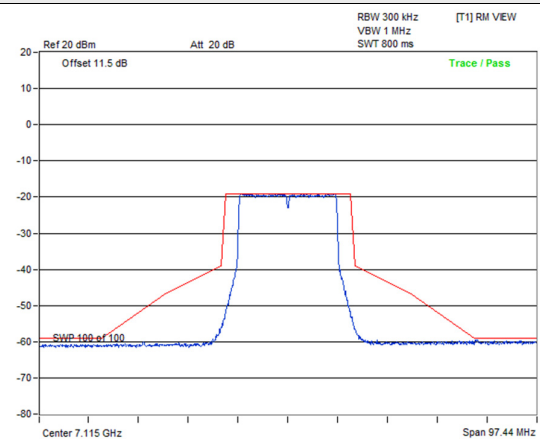


802.11be (EHT20) Beamforming / Chain 1: CH 209

Spectrum Plot



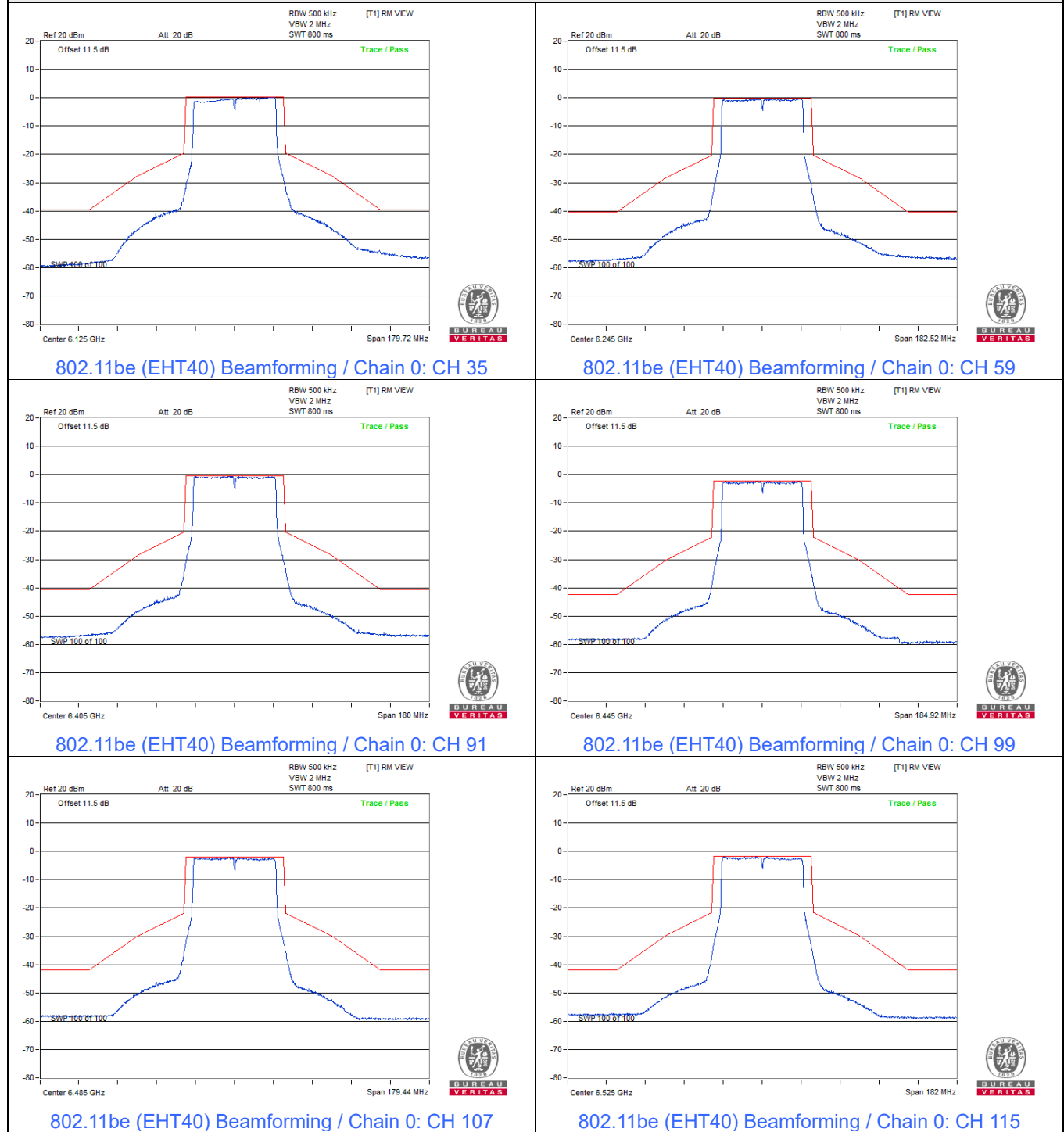
802.11be (EHT20) Beamforming / Chain 1: CH 229



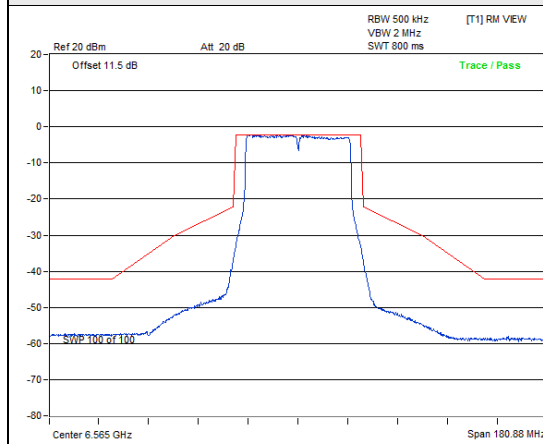
802.11be (EHT20) Beamforming / Chain 1: CH 233

802.11be (EHT40) Beamforming

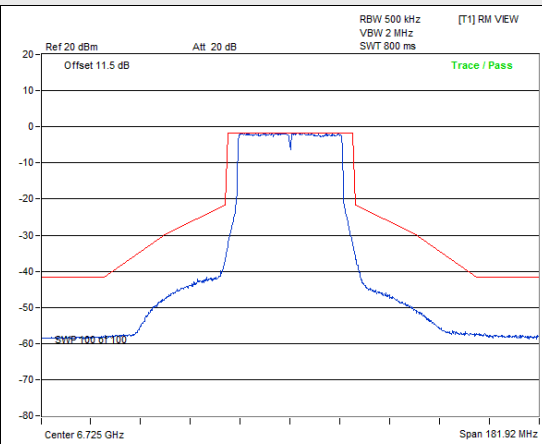
Spectrum Plot



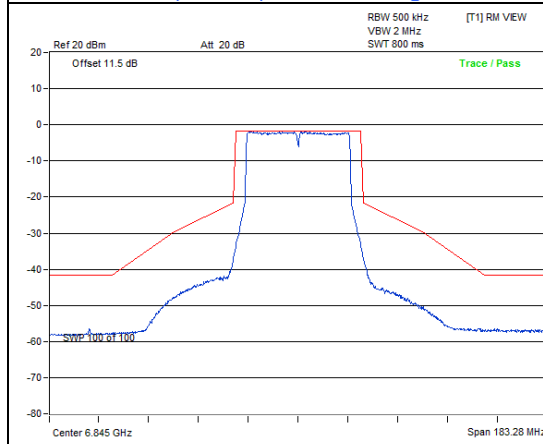
Spectrum Plot



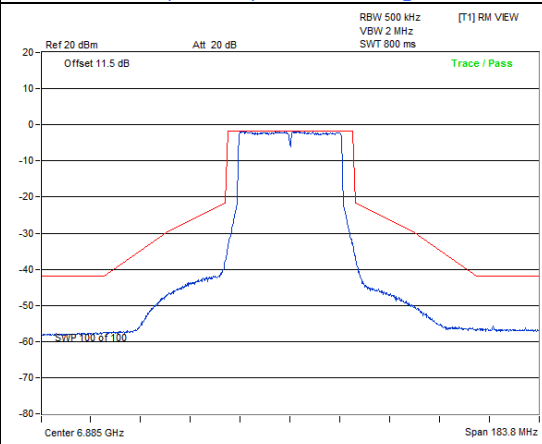
802.11be (EHT40) Beamforming / Chain 0: CH 123



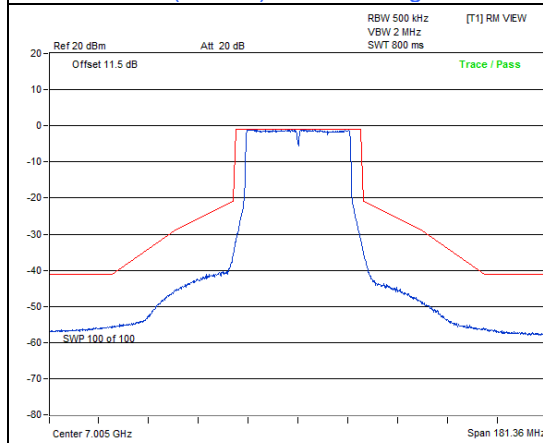
802.11be (EHT40) Beamforming / Chain 0: CH 155



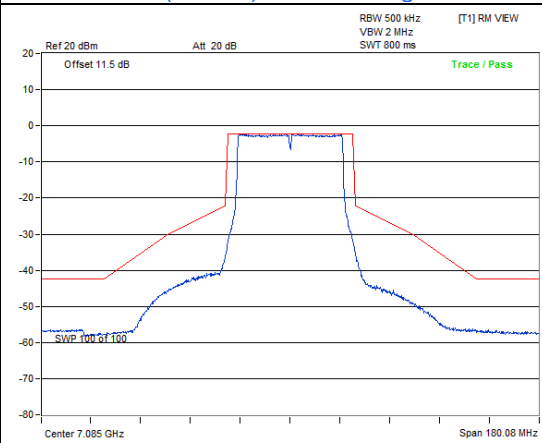
802.11be (EHT40) Beamforming / Chain 0: CH 179



802.11be (EHT40) Beamforming / Chain 0: CH 187

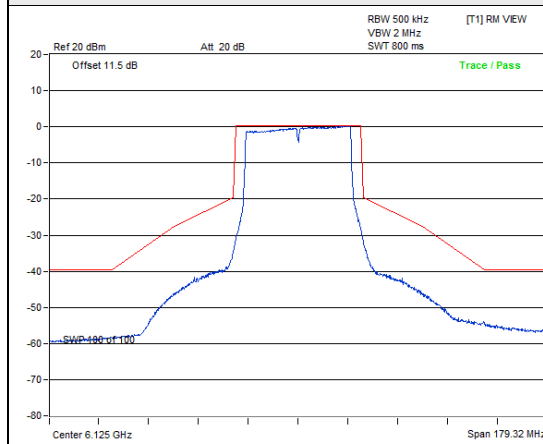


802.11be (EHT40) Beamforming / Chain 0: CH 211

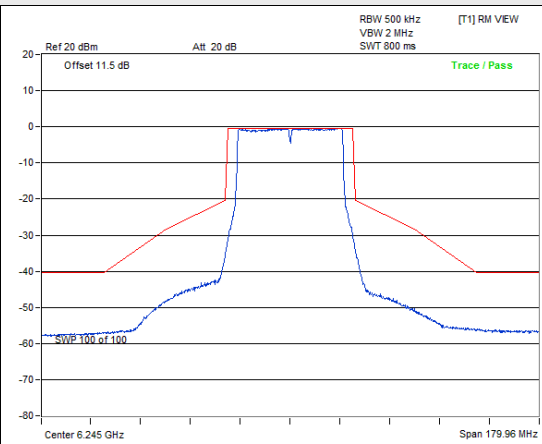


802.11be (EHT40) Beamforming / Chain 0: CH 227

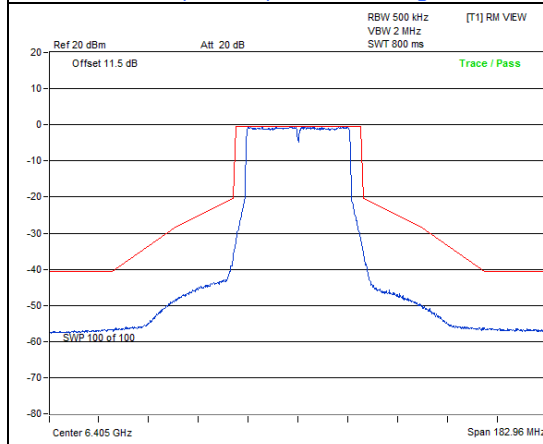
Spectrum Plot



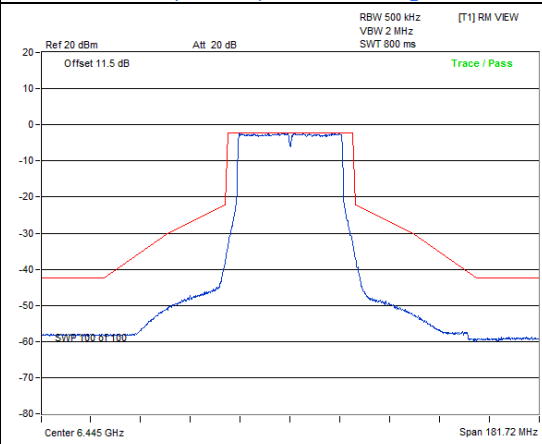
802.11be (EHT40) Beamforming / Chain 1: CH 35



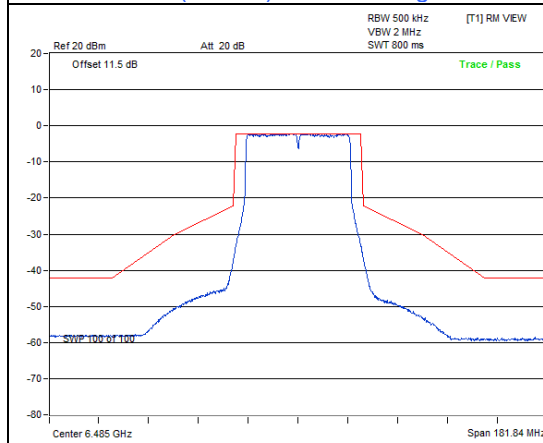
802.11be (EHT40) Beamforming / Chain 1: CH 59



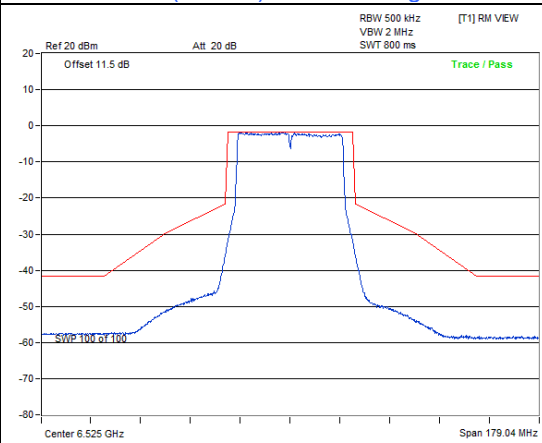
802.11be (EHT40) Beamforming / Chain 1: CH 91



802.11be (EHT40) Beamforming / Chain 1: CH 99

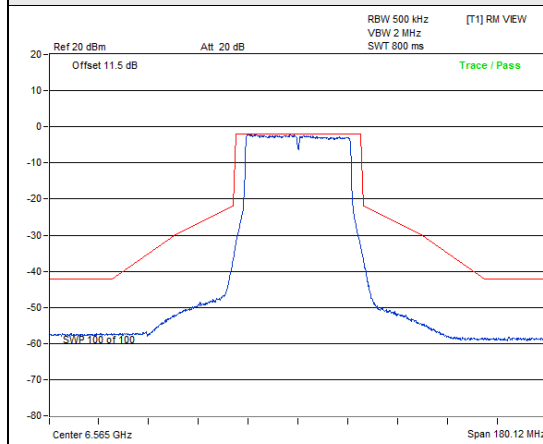


802.11be (EHT40) Beamforming / Chain 1: CH 107

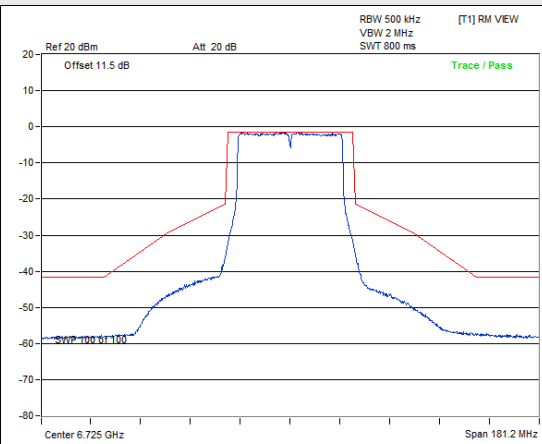


802.11be (EHT40) Beamforming / Chain 1: CH 115

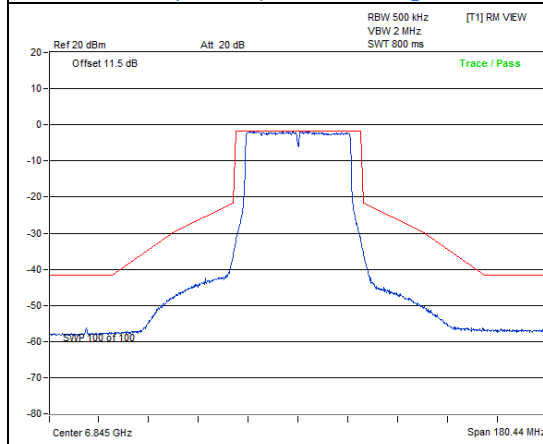
Spectrum Plot



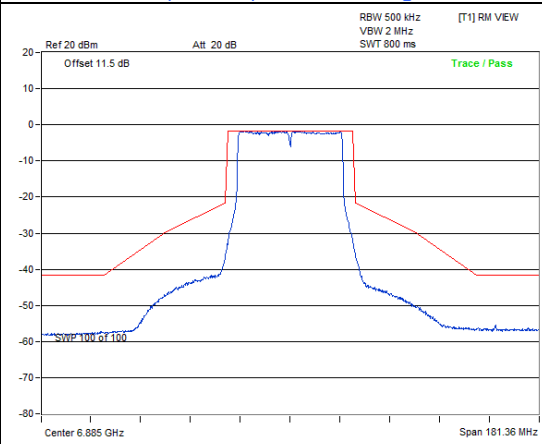
802.11be (EHT40) Beamforming / Chain 1: CH 123



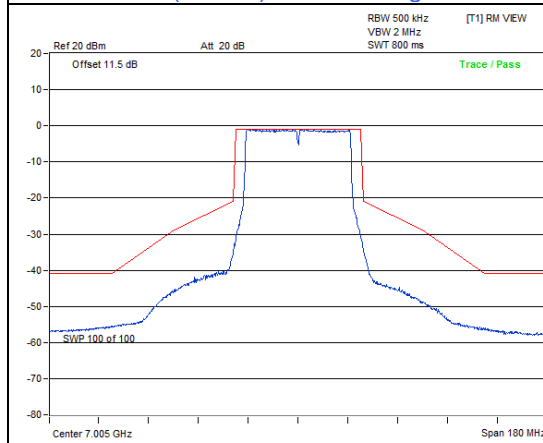
802.11be (EHT40) Beamforming / Chain 1: CH 155



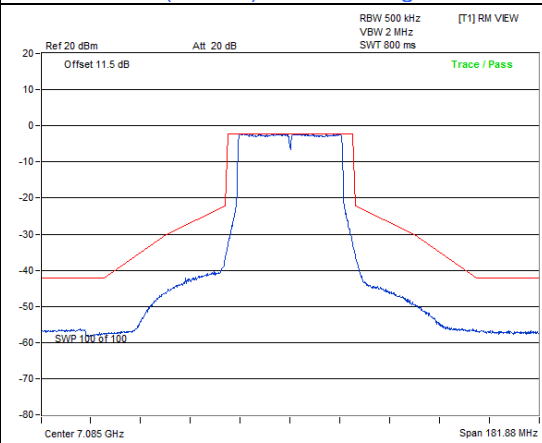
802.11be (EHT40) Beamforming / Chain 1: CH 179



802.11be (EHT40) Beamforming / Chain 1: CH 187



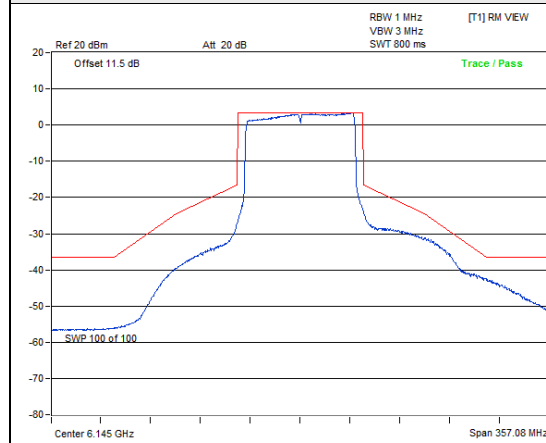
802.11be (EHT40) Beamforming / Chain 1: CH 211



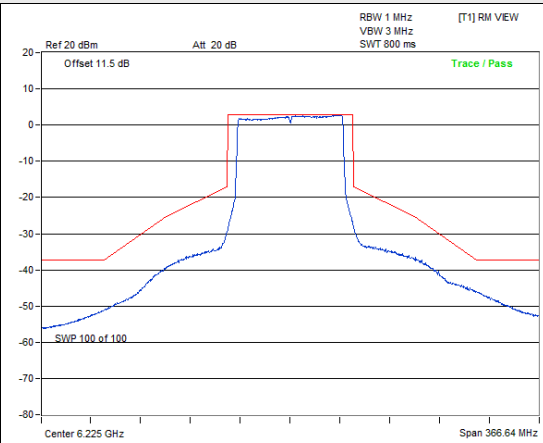
802.11be (EHT40) Beamforming / Chain 1: CH 227

802.11be (EHT80) Beamforming

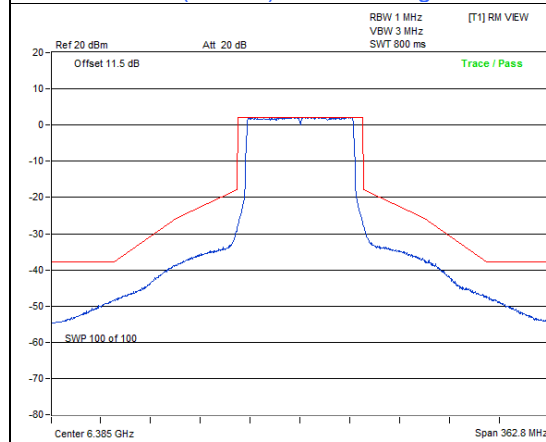
Spectrum Plot



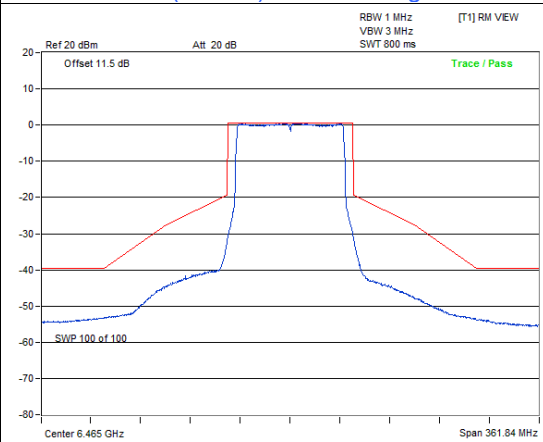
802.11be (EHT80) Beamforming / Chain 0: CH 39



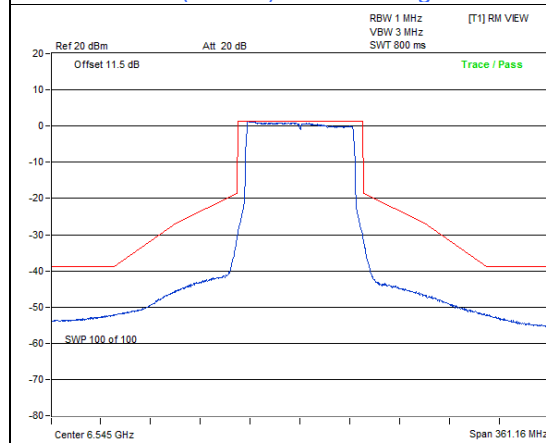
802.11be (EHT80) Beamforming / Chain 0: CH 55



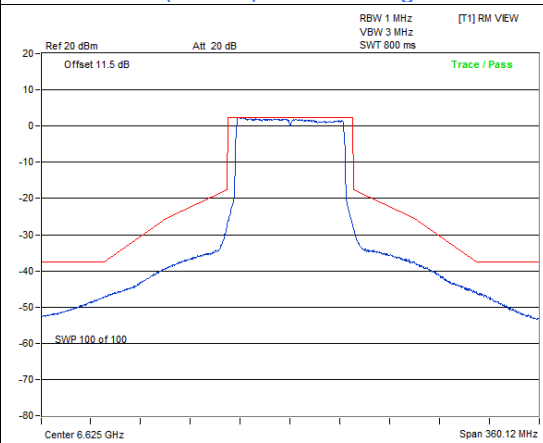
802.11be (EHT80) Beamforming / Chain 0: CH 87



802.11be (EHT80) Beamforming / Chain 0: CH 103

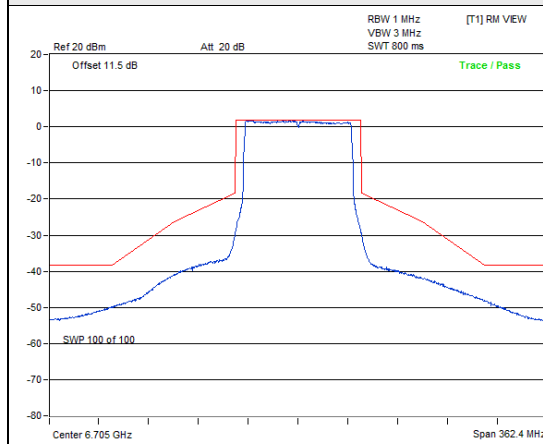


802.11be (EHT80) Beamforming / Chain 0: CH 119

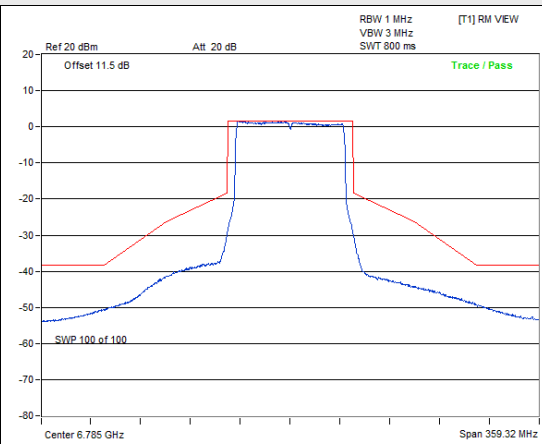


802.11be (EHT80) Beamforming / Chain 0: CH 135

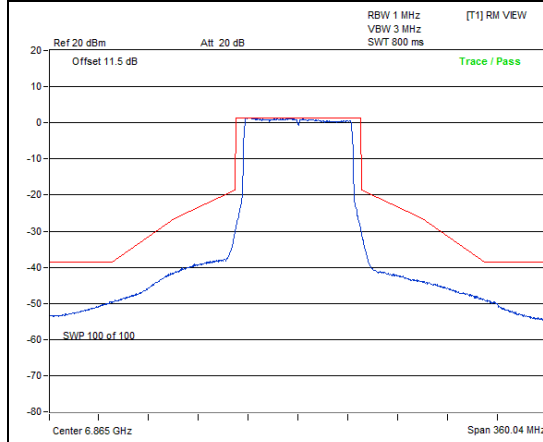
Spectrum Plot



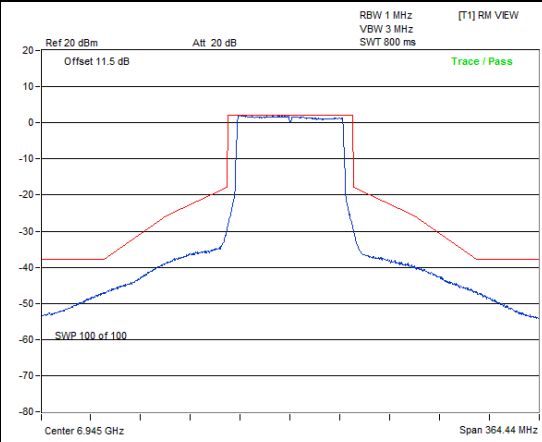
802.11be (EHT80) Beamforming / Chain 0: CH 151



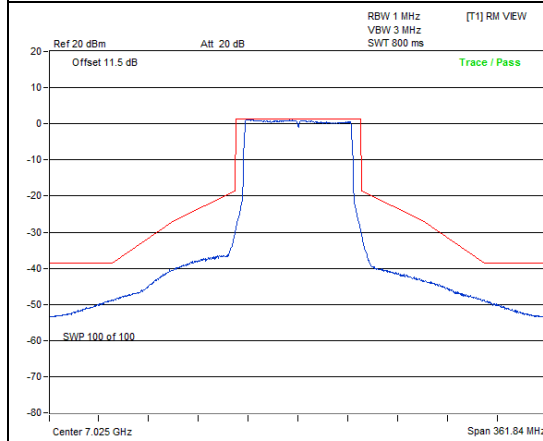
802.11be (EHT80) Beamforming / Chain 0: CH 167



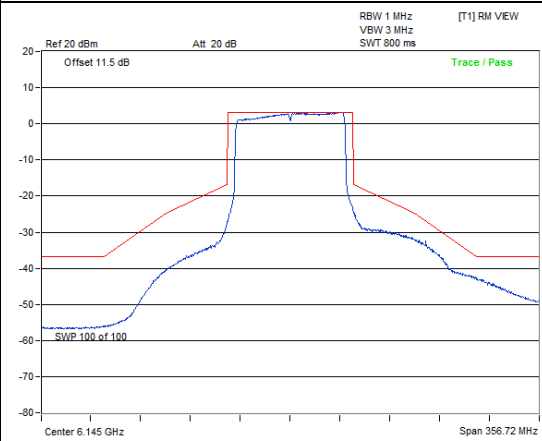
802.11be (EHT80) Beamforming / Chain 0: CH 183



802.11be (EHT80) Beamforming / Chain 0: CH 199

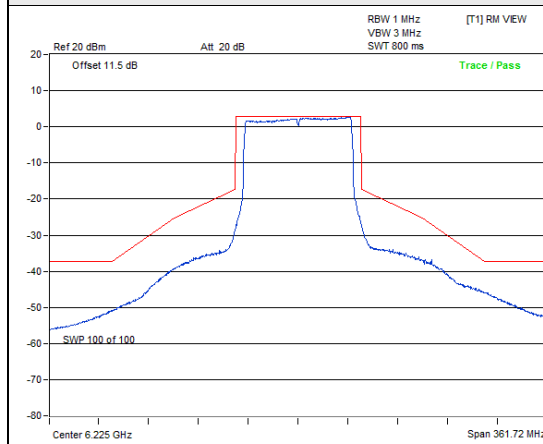


802.11be (EHT80) Beamforming / Chain 0: CH 215

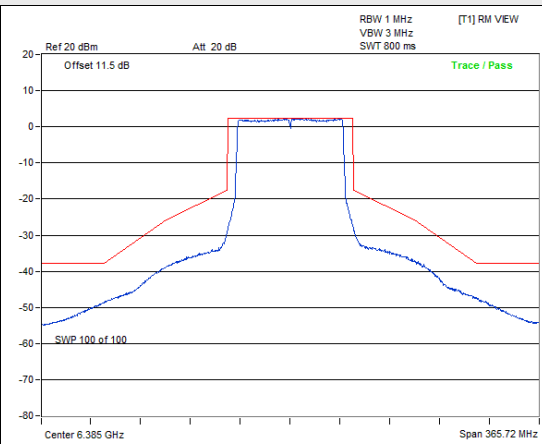


802.11be (EHT80) Beamforming / Chain 1: CH 39

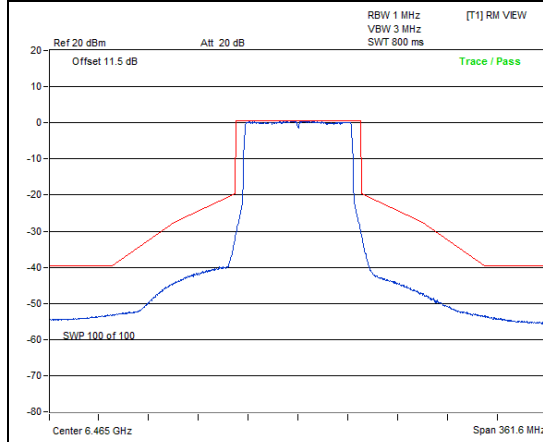
Spectrum Plot



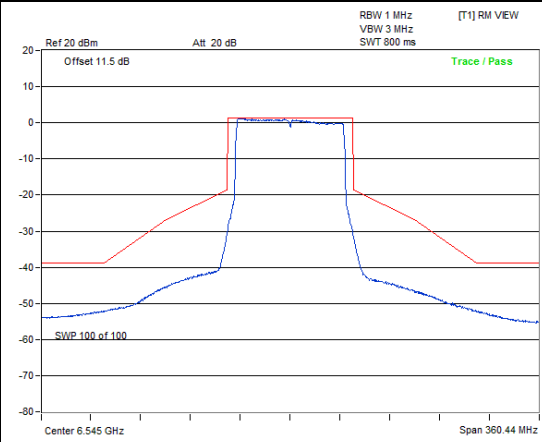
802.11be (EHT80) Beamforming / Chain 1: CH 55



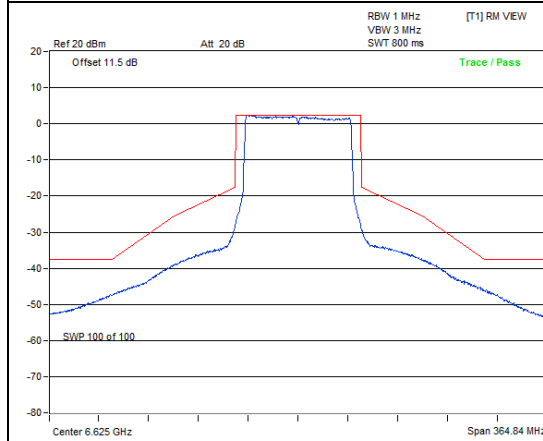
802.11be (EHT80) Beamforming / Chain 1: CH 87



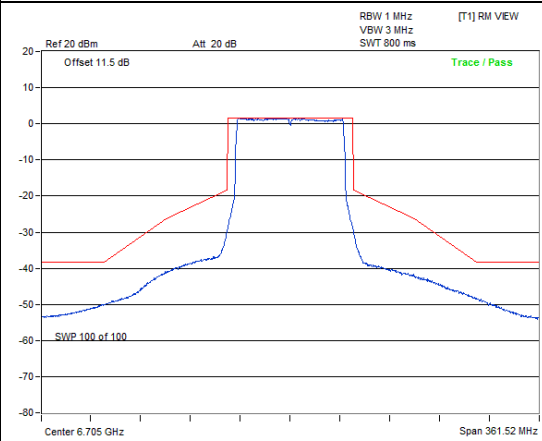
802.11be (EHT80) Beamforming / Chain 1: CH 103



802.11be (EHT80) Beamforming / Chain 1: CH 119

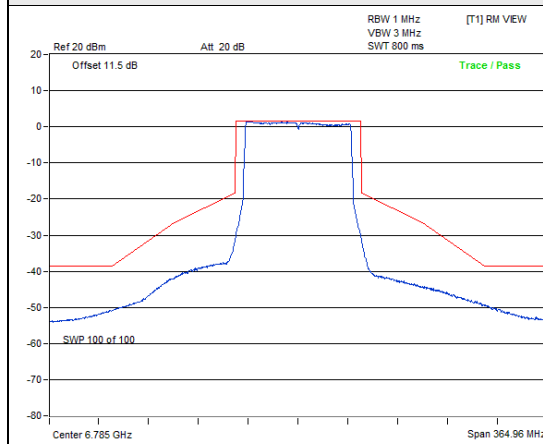


802.11be (EHT80) Beamforming / Chain 1: CH 135

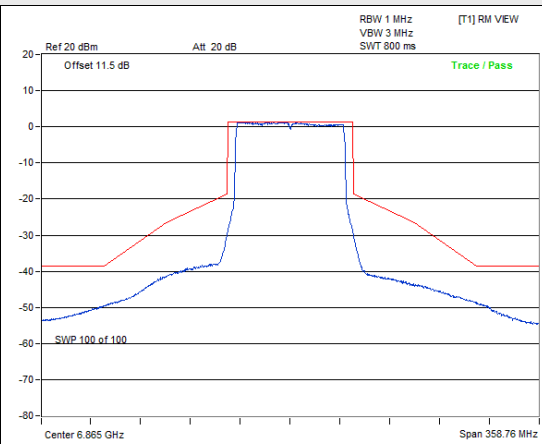


802.11be (EHT80) Beamforming / Chain 1: CH 151

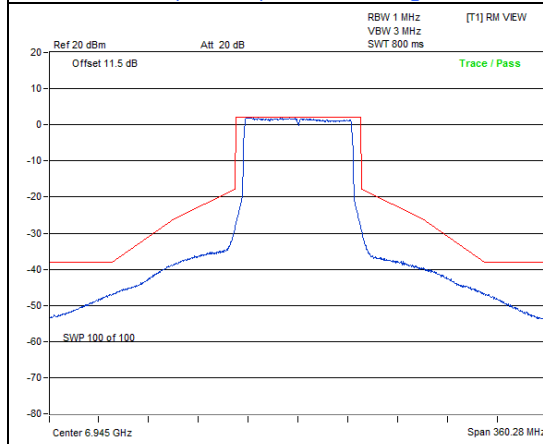
Spectrum Plot



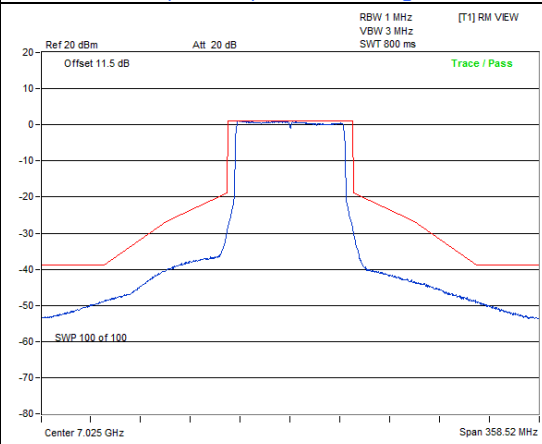
802.11be (EHT80) Beamforming / Chain 1: CH 167



802.11be (EHT80) Beamforming / Chain 1: CH 183

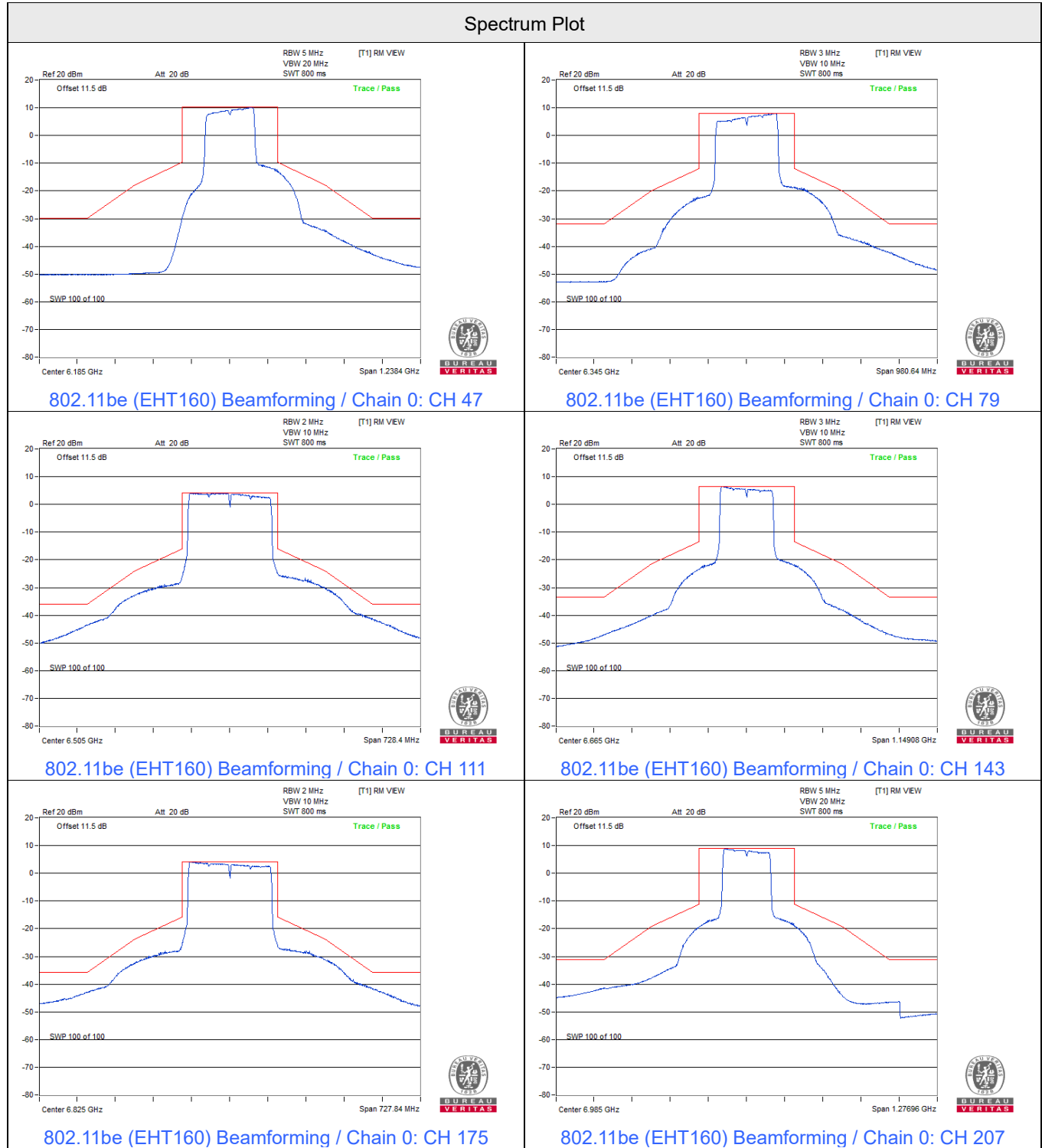


802.11be (EHT80) Beamforming / Chain 1: CH 199

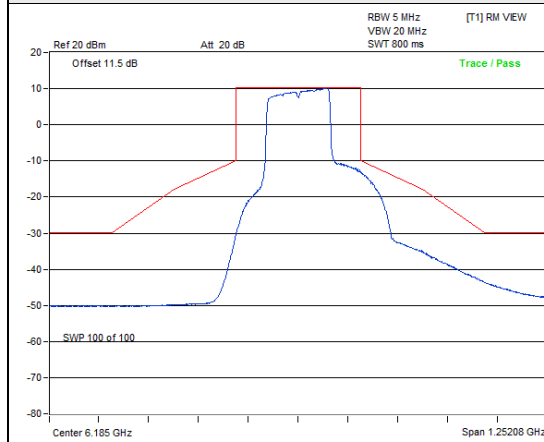


802.11be (EHT80) Beamforming / Chain 1: CH 215

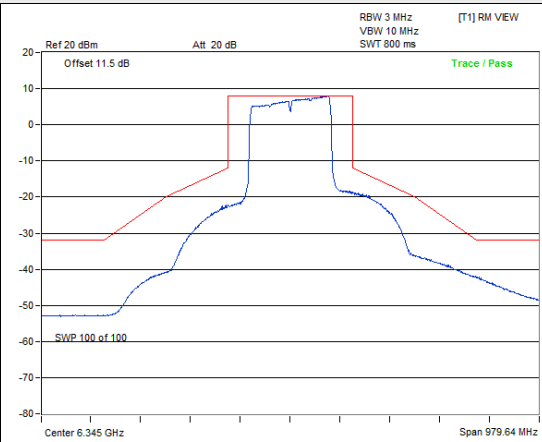
802.11be (EHT160) Beamforming



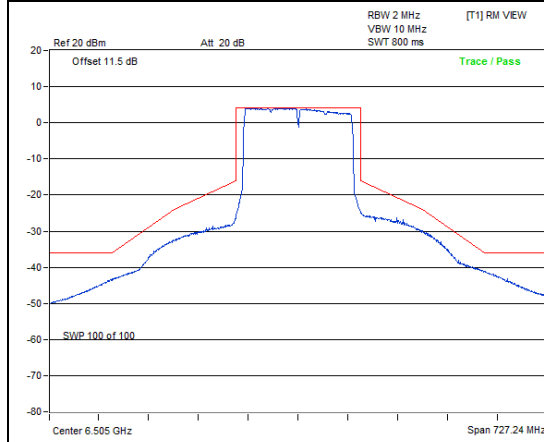
Spectrum Plot



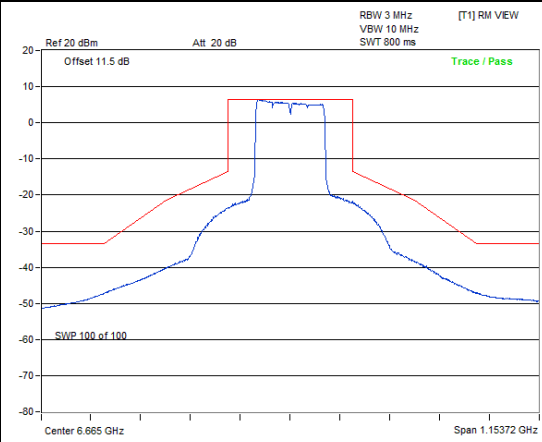
802.11be (EHT160) Beamforming / Chain 1: CH 47



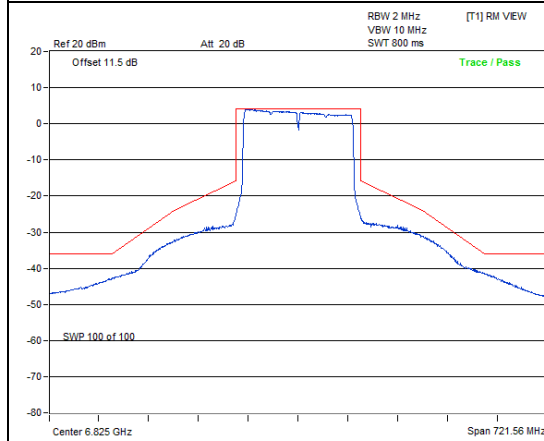
802.11be (EHT160) Beamforming / Chain 1: CH 79



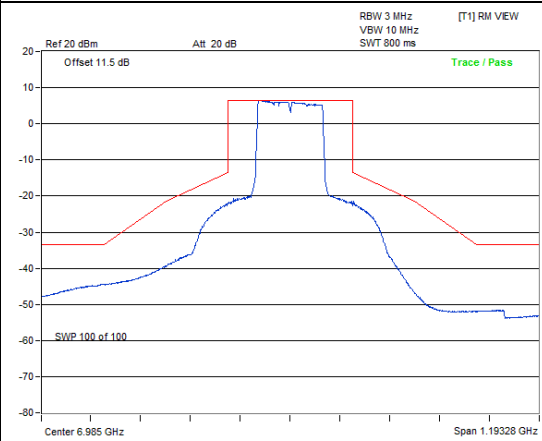
802.11be (EHT160) Beamforming / Chain 1: CH 111



802.11be (EHT160) Beamforming / Chain 1: CH 143



802.11be (EHT160) Beamforming / Chain 1: CH 175

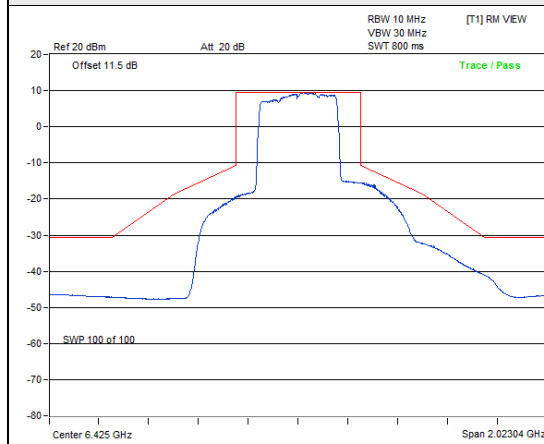


802.11be (EHT160) Beamforming / Chain 1: CH 207

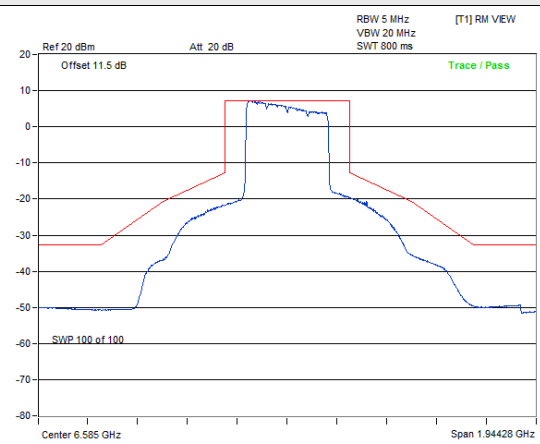
802.11be (EHT320) Beamforming



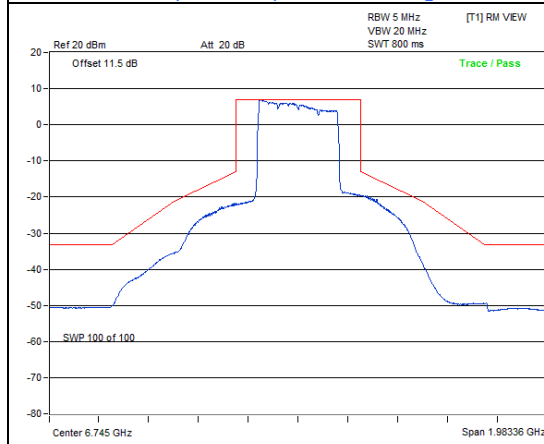
Spectrum Plot



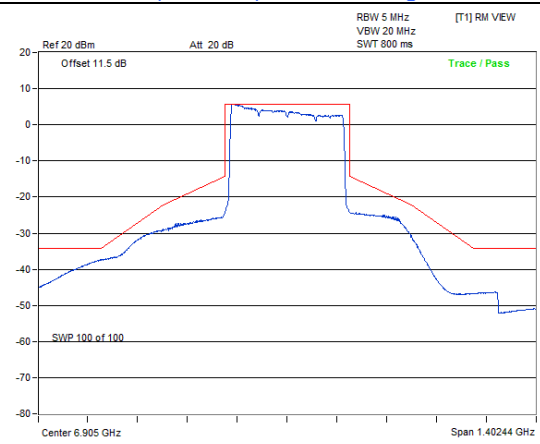
802.11be (EHT320) Beamforming / Chain 1: CH 95



802.11be (EHT320) Beamforming / Chain 1: CH 127



802.11be (EHT320) Beamforming / Chain 1: CH 159



802.11be (EHT320) Beamforming / Chain 1: CH 191

7.5 Occupied Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Wayne Lin
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CDD

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
33	6115	17.16	17.04
61	6255	17.10	17.10
93	6415	17.10	17.10
97	6435	17.10	17.10
105	6475	17.16	17.10
113	6515	17.16	17.22
117	6535	17.22	17.16
149	6695	17.22	17.28
181	6855	17.16	17.22
185	6875	17.22	17.22
209	6995	17.16	17.16
229	7095	17.16	17.16
233	7115	17.16	17.16

2T1S

802.11be (EHT20) Beamforming

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
33	6115	19.26	19.32
61	6255	19.32	19.38
93	6415	19.14	19.14
97	6435	19.14	19.08
105	6475	19.02	18.96
113	6515	18.90	18.84
117	6535	18.78	18.78
149	6695	18.84	18.84
181	6855	19.08	19.08
185	6875	19.08	19.14
209	6995	19.20	19.20
229	7095	19.38	19.32
233	7115	19.38	19.38

802.11be (EHT40) Beamforming

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
35	6125	38.28	38.28
59	6245	38.28	38.28
91	6405	38.52	38.64
99	6445	38.76	38.76
107	6485	39.00	38.76
115	6525	38.76	38.76
123	6565	38.88	38.88
155	6725	38.88	39.00
179	6845	38.76	38.64
187	6885	38.76	38.52
211	7005	38.64	38.52
227	7085	38.28	38.28

802.11be (EHT80) Beamforming

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
39	6145	77.52	77.52
55	6225	77.76	77.52
87	6385	78.00	77.76
103	6465	78.00	78.00
119	6545	78.00	78.24
135	6625	78.48	78.24
151	6705	78.00	78.24
167	6785	78.48	78.24
183	6865	78.24	78.24
199	6945	78.00	78.00
215	7025	77.76	77.76

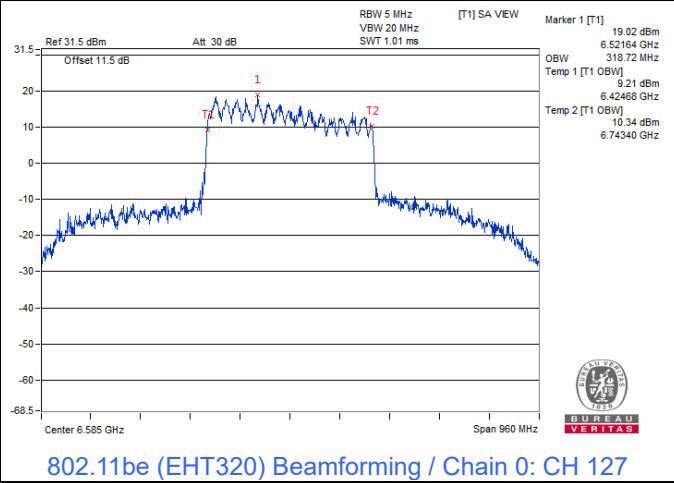
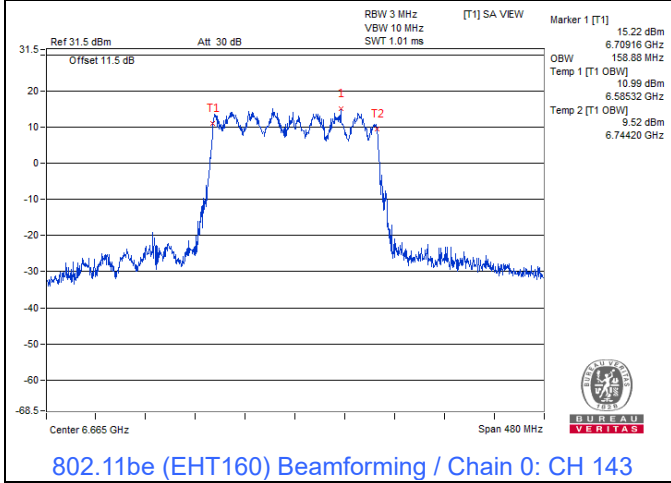
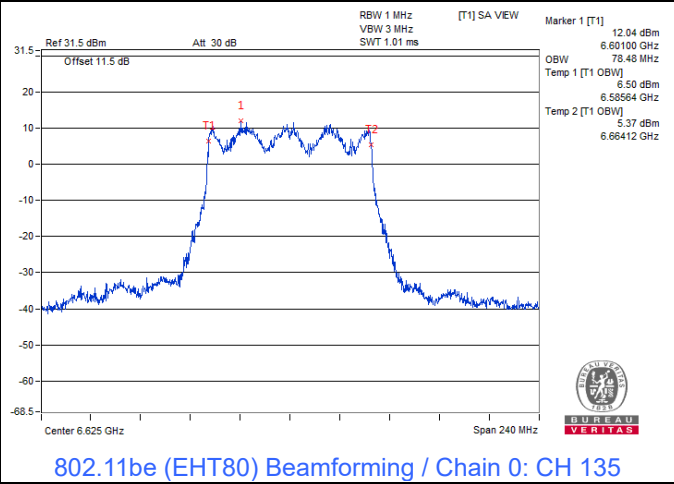
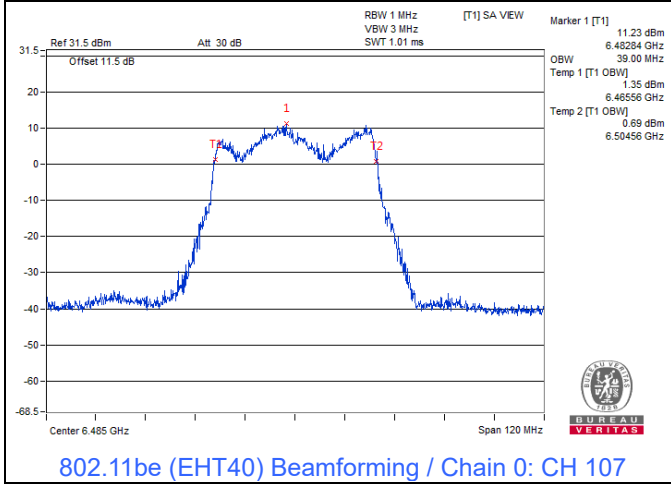
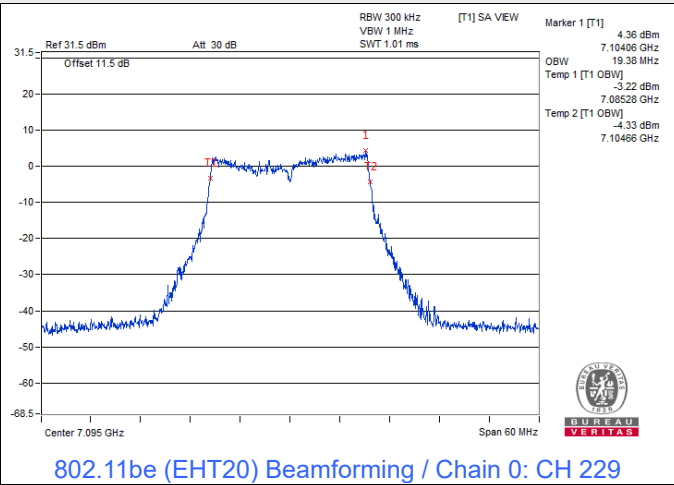
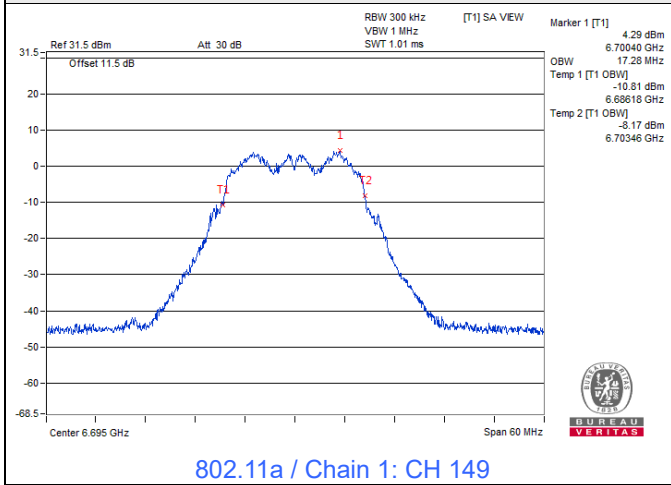
802.11be (EHT160) Beamforming

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
47	6185	157.44	157.44
79	6345	156.96	156.96
111	6505	157.44	157.44
143	6665	158.88	158.88
175	6825	157.92	158.40
207	6985	157.44	157.92

802.11be (EHT320) Beamforming

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
63	6265	316.80	315.84
95	6425	317.76	317.76
127	6585	318.72	317.76
159	6745	317.76	318.72
191	6905	316.80	316.80

Spectrum Plot of Maximum Value



2T2S

802.11be (EHT20) Beamforming

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
33	6115	19.14	19.20
61	6255	19.20	19.32
93	6415	19.32	19.20
97	6435	19.32	19.20
105	6475	19.08	19.20
113	6515	19.20	19.20
117	6535	19.08	19.20
149	6695	19.20	19.20
181	6855	19.20	19.20
185	6875	19.20	19.32
209	6995	19.20	19.20
229	7095	19.20	19.20
233	7115	19.32	19.32

802.11be (EHT40) Beamforming

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
35	6125	38.40	38.40
59	6245	38.64	38.64
91	6405	38.64	38.40
99	6445	38.64	38.40
107	6485	38.40	38.64
115	6525	38.40	38.40
123	6565	38.40	38.64
155	6725	38.64	38.64
179	6845	38.64	38.64
187	6885	38.40	38.64
211	7005	38.64	38.64
227	7085	38.64	38.64

802.11be (EHT80) Beamforming

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
39	6145	78.00	78.00
55	6225	78.24	77.76
87	6385	78.24	78.24
103	6465	78.24	78.24
119	6545	77.76	77.76
135	6625	78.24	78.24
151	6705	78.24	78.24
167	6785	78.24	78.24
183	6865	78.24	78.24
199	6945	78.24	78.24
215	7025	78.24	78.24

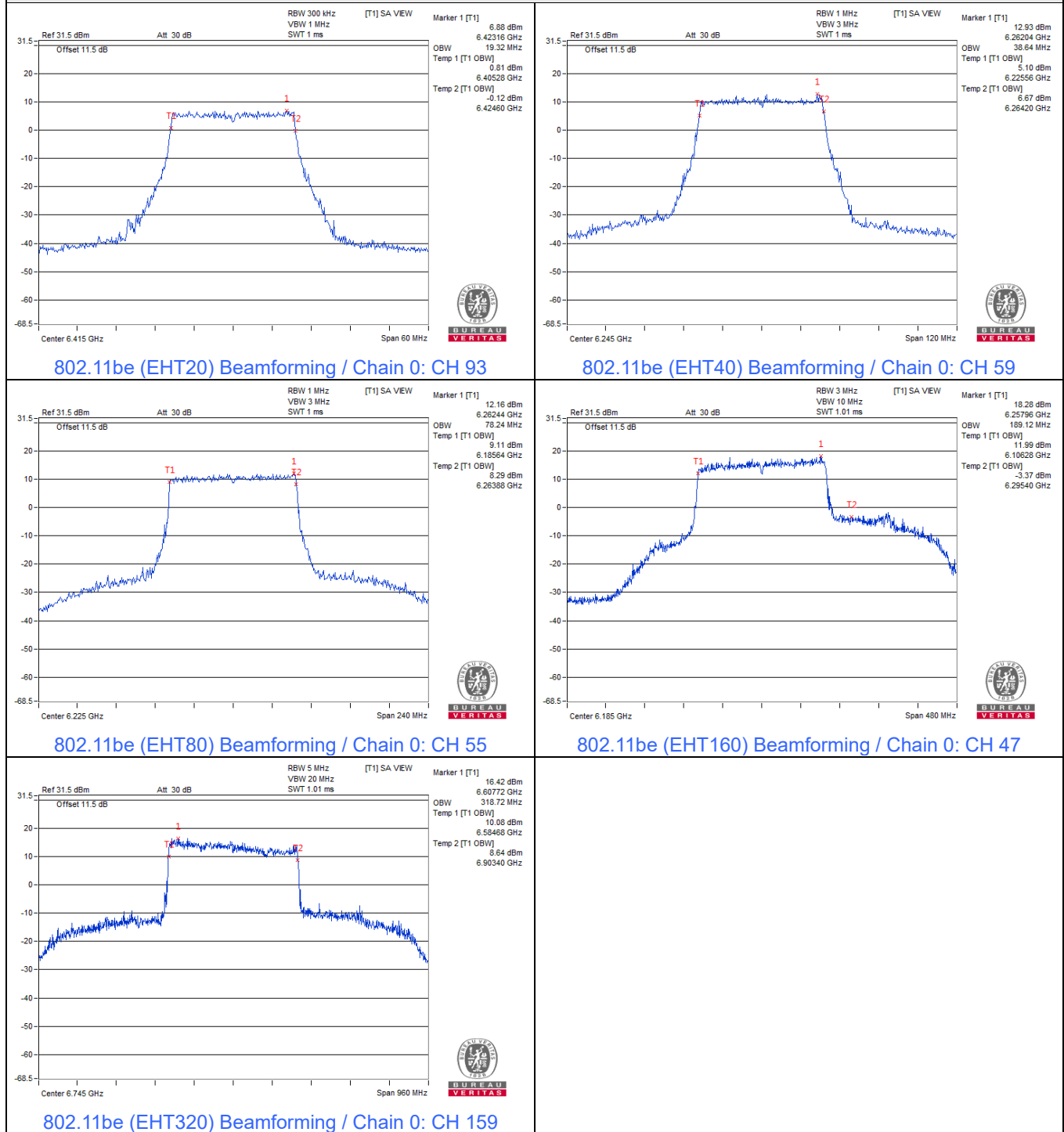
802.11be (EHT160) Beamforming

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
47	6185	189.12	184.80
79	6345	161.28	162.24
111	6505	158.40	158.40
143	6665	159.36	159.36
175	6825	158.40	158.40
207	6985	159.36	159.36

802.11be (EHT320) Beamforming

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
63	6265	317.76	318.72
95	6425	317.76	318.72
127	6585	317.76	318.72
159	6745	318.72	318.72
191	6905	318.72	318.72

Spectrum Plot of Maximum Value



7.6 Contention-based Protocol

RBE781

Environmental Conditions:	25°C, 60% RH	Tested By:	Neil Yeh
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Companion Device Information			
Product	Brand	Model No.	Software/Firmware Version
Orbi 11BE WiFi 7 Tri-band Satellite	NETGEAR	RBE780	OpenWrt 23.05-SNAPSHOT r0-5f4eb28c2 / LuCI SPF12.5_CSU1 branch git-24.299.05775-9650f6c

For U-NII-5

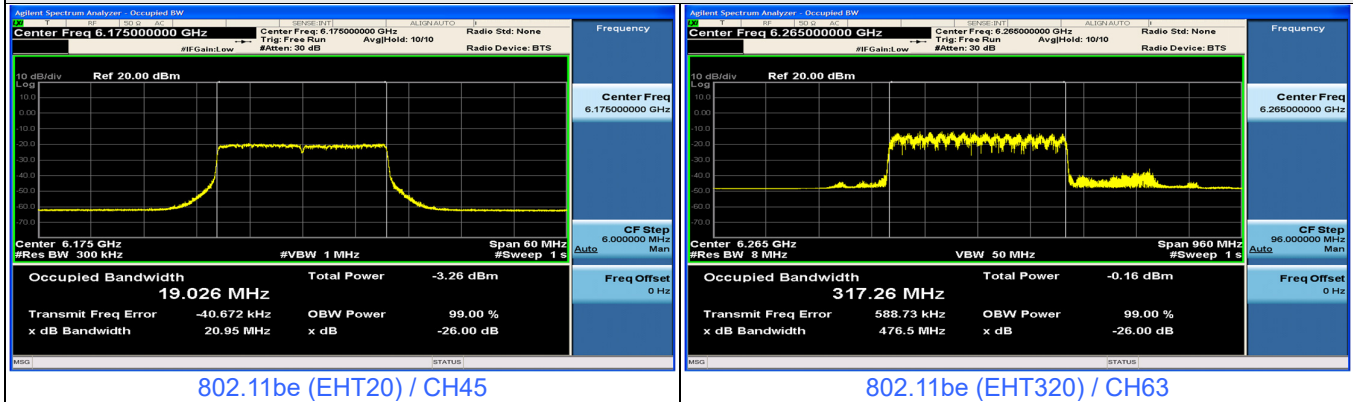
Contention Based Protocol Measurement										
Operation Mode	Channel Bandwidth (MHz)	Channel Number	Channel Freq. (MHz)	Injected Signal (AWGN)		Antenna Gain (dBi)	Path Loss (dB) (Note 3)	Adjusted Power (dBm)	Detection Limit	EUT TX Status
				Freq. (MHz)	Power (dBm)					
802.11be	20	45	6175	6175	-69	2.22	0	-71.22	-62	OFF
					-72	2.22	0	-74.22	-62	Minimal
					-79.78	2.22	0	-82	-62	ON
	320	63	6265	6110	-60	2.22	0	-62.22	-62	OFF
					-66	2.22	0	-68.22	-62	Minimal
					-79.78	2.22	0	-82	-62	ON
				6265	-60	2.22	0	-62.22	-62	OFF
					-64	2.22	0	-66.22	-62	Minimal
					-79.78	2.22	0	-82	-62	ON
				6420	-60	2.22	0	-62.22	-62	OFF
					-64	2.22	0	-66.22	-62	Minimal
					-79.78	2.22	0	-82	-62	ON

Notes:

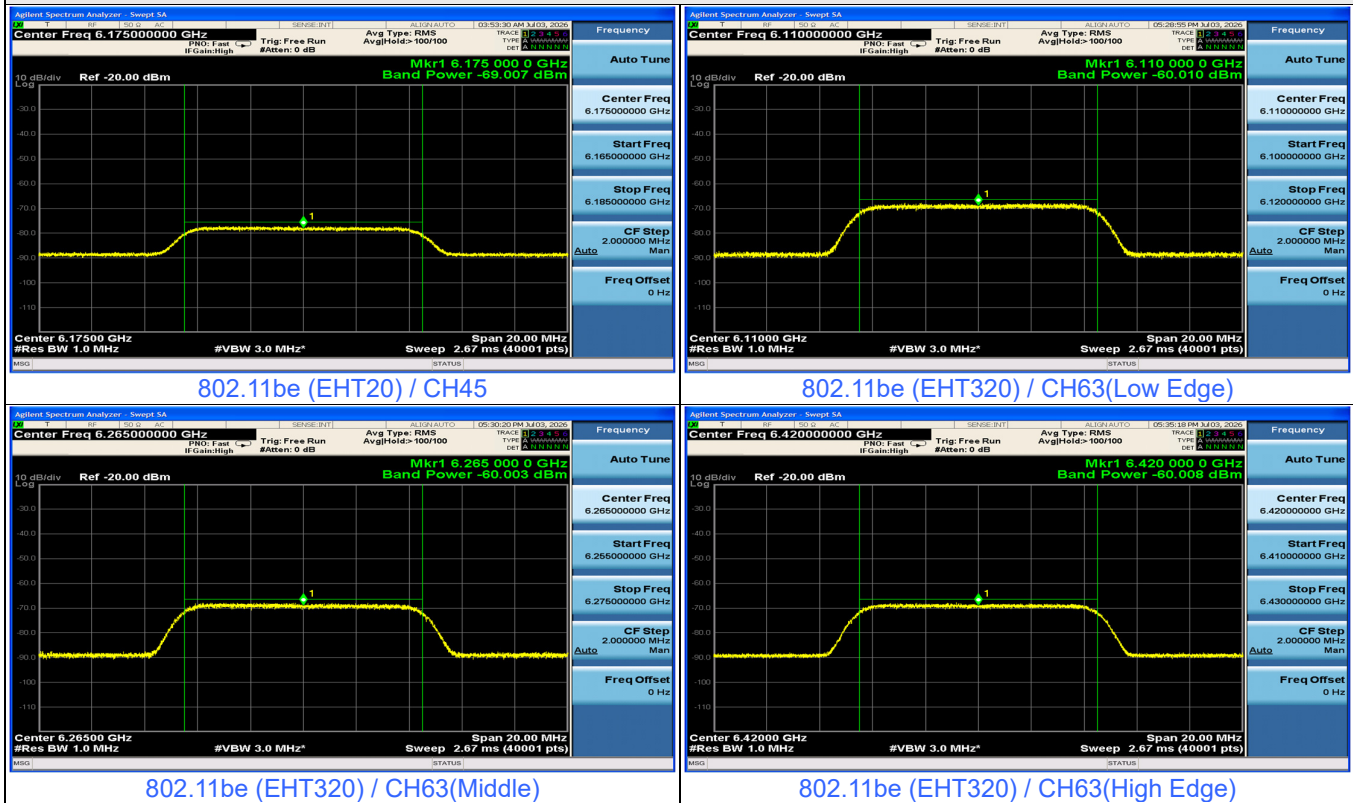
1. After investigation (consider antenna gain and path loss) , the one representative port (Chain 2) was measured and presented in the report.
2. Adjusted Power (dBm) = Injected Signal (AWGN) Power (dBm) - Antenna Gain (dBi) + Path Loss (dB)
3. Antenna gain values include all the applicable path losses.
4. This device does not use the channel puncturing mechanism for incumbent avoidance, but instead employs the bandwidth reduction mechanism to perform its function.

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
802.11be	20	6175	v	v	v	v	v	x	v	v	v	v	90%	90%	Pass
	320	6110	v	v	v	v	v	x	v	v	v	v	90%	90%	Pass
		6265	v	v	x	v	v	v	v	v	v	v	90%	90%	Pass
		6420	v	v	v	v	v	v	v	v	x	v	90%	90%	Pass

Plots of EUT Tx waveform

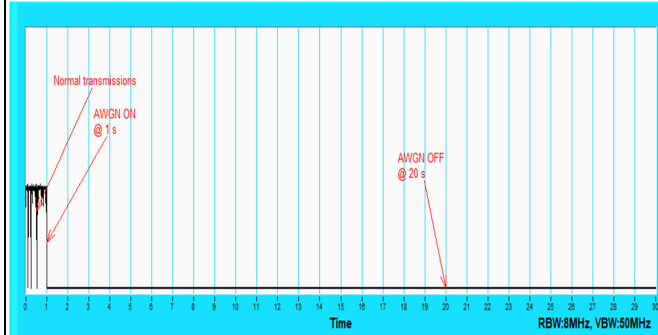


Plots of Injected signal (AWGN) level



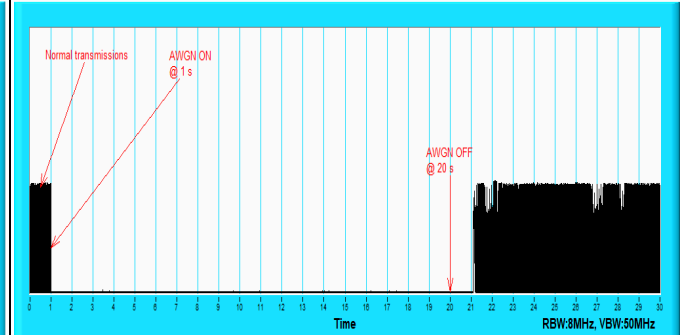
Plots of EUT ceased transmission in the time domain

CBP



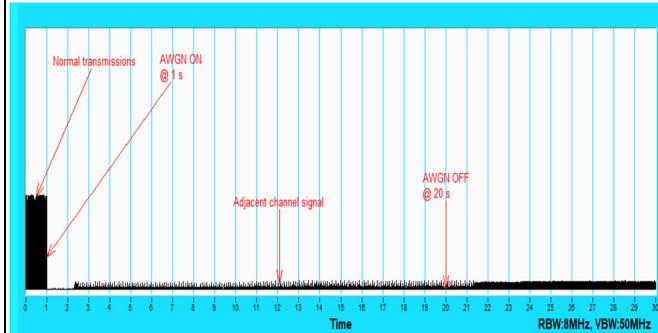
802.11be (EHT20) / CH45

CBP



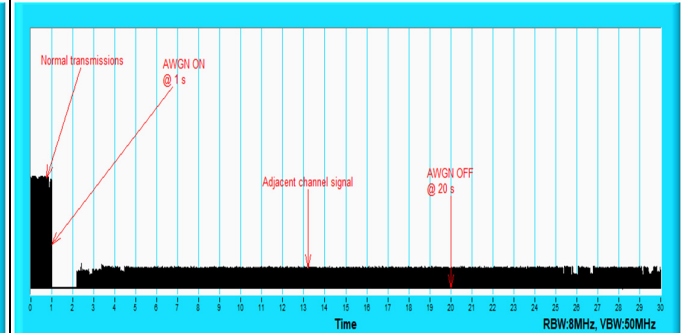
802.11be (EHT320) / CH63(Low Edge)

CBP



802.11be (EHT320) / CH63(Middle)

CBP



802.11be (EHT320) / CH63(High Edge)

For U-NII-6

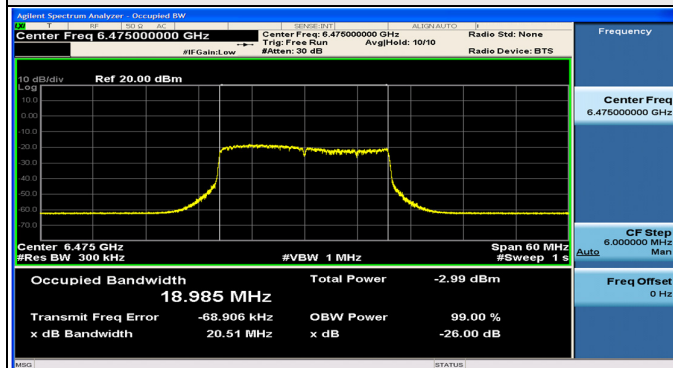
Contention Based Protocol Measurement										
Operation Mode	Channel Bandwidth (MHz)	Channel Number	Channel Freq. (MHz)	Injected Signal (AWGN)		Antenna Gain (dBi)	Path Loss (dB) (Note 3)	Adjusted Power (dBm)	Detection Limit	EUT TX Status
				Freq. (MHz)	Power (dBm)					
802.11be	20	105	6475	6475	-69	2.22	0	-71.22	-62	OFF
					-72	2.22	0	-74.22	-62	Minimal
					-79.78	2.22	0	-82	-62	ON
	320	95	6425	6270	-60	2.22	0	-62.22	-62	OFF
					-64	2.22	0	-66.22	-62	Minimal
					-79.78	2.22	0	-82	-62	ON
				6425	-60	2.22	0	-62.22	-62	OFF
					-64	2.22	0	-66.22	-62	Minimal
					-79.78	2.22	0	-82	-62	ON
				6580	-60	2.22	0	-62.22	-62	OFF
					-66	2.22	0	-68.22	-62	Minimal
					-79.78	2.22	0	-82	-62	ON

Notes:

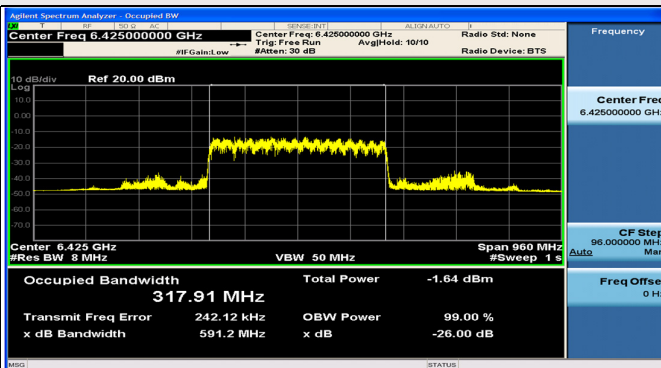
1. After investigation (consider antenna gain and path loss) , the one representative port (Chain 2) was measured and presented in the report.
2. Adjusted Power (dBm) = Injected Signal (AWGN) Power (dBm) - Antenna Gain (dBi) + Path Loss (dB)
3. Antenna gain values include all the applicable path losses.
4. This device does not use the channel puncturing mechanism for incumbent avoidance, but instead employs the bandwidth reduction mechanism to perform its function.

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
802.11be	20	6475	v	v	v	v	v	x	v	v	v	v	90%	90%	Pass
	320	6270	v	v	v	x	v	v	v	v	v	v	90%	90%	Pass
		6425	v	v	v	v	v	x	v	v	v	v	90%	90%	Pass
		6580	v	x	v	v	v	v	v	v	v	v	90%	90%	Pass

Plots of EUT Tx waveform

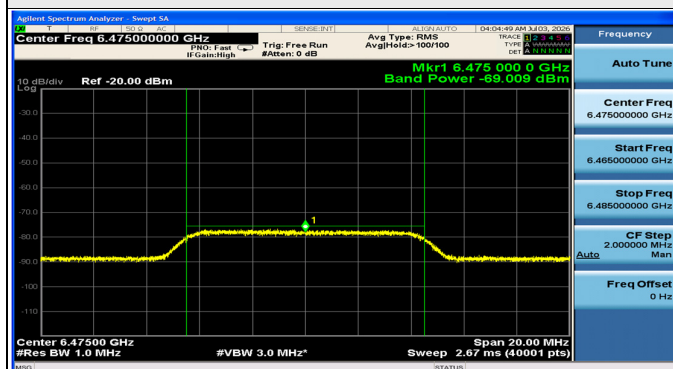


802.11be (EHT20) / CH105

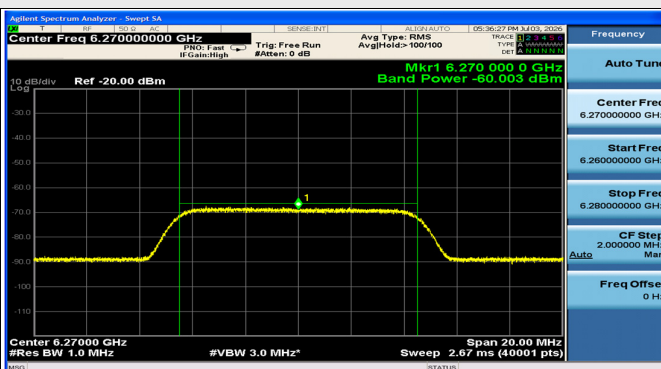


802.11be (EHT320) / CH95

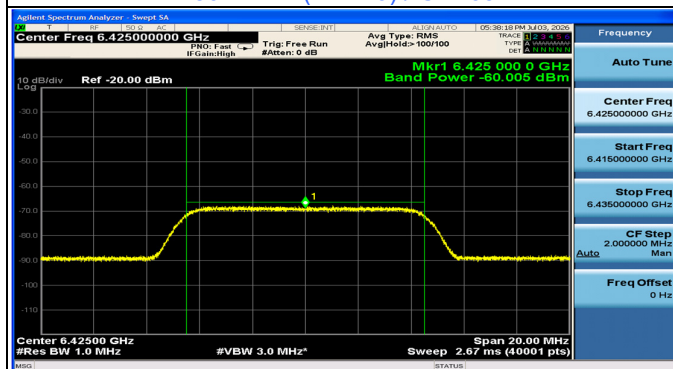
Plots of Injected signal (AWGN) level



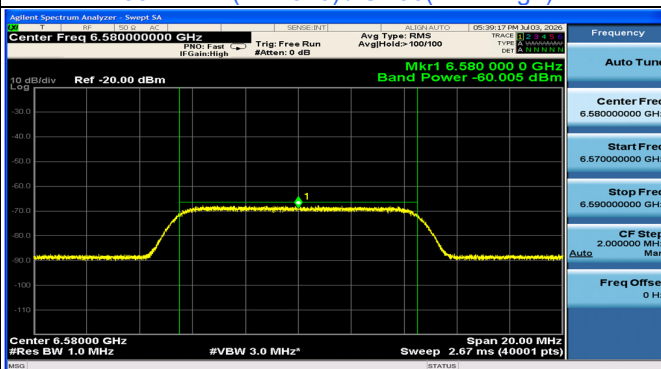
802.11be (EHT20) / CH105



802.11be (EHT320) / CH95(Low Edge)



802.11be (EHT320) / CH95(Middle)



802.11be (EHT320) / CH95(High Edge)