

802.11ax HEW20_Nss4,(MCS0)_4TX

MASK

6855MHz_TnomVnom

19/01/2021

CF Freq
6.855GHz

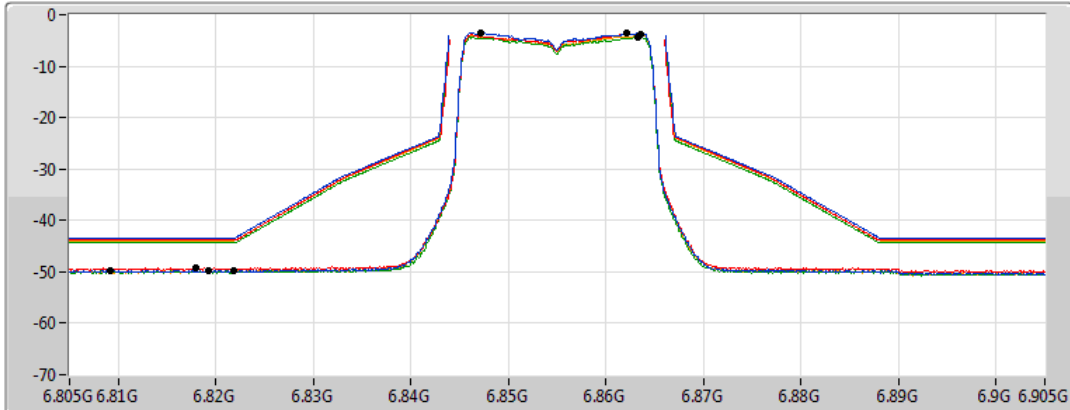
Span
100MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS



Port 1

Port 2

Port 3

Port 4

Ref(Hz)	Ref(dBm)	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port
6.84711G	-3.57	6.8092G	-49.71	-43.57	-6.14	1
6.86209G	-3.68	6.818G	-49.23	-43.68	-5.55	2
6.86329G	-4.40	6.8193G	-49.78	-44.40	-5.38	3
6.86359G	-3.95	6.8219G	-49.81	-43.95	-5.86	4

802.11ax HEW20_Nss4,(MCS0)_4TX

MASK

6875MHz Straddle 6.525-6.875GHz_TnomVnom

19/01/2021

CF Freq
6.875GHz

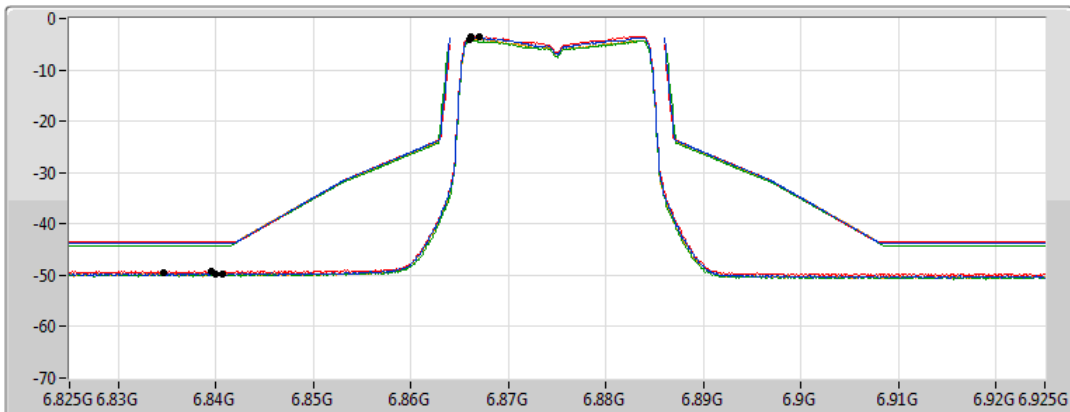
Span
100MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS



Port 1

Port 2

Port 3

Port 4

Ref(Hz)	Ref(dBm)	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port
6.86701G	-3.62	6.8346G	-49.62	-43.62	-6.00	1
6.86611G	-3.48	6.8396G	-49.19	-43.48	-5.71	2
6.86601G	-4.18	6.8399G	-49.77	-44.18	-5.59	3
6.86621G	-3.88	6.8407G	-49.72	-43.88	-5.84	4

802.11ax HEW20_Nss4,(MCS0)_4TX

MASK

6895MHz_TnomVnom

19/01/2021

CF Freq
6.895GHz

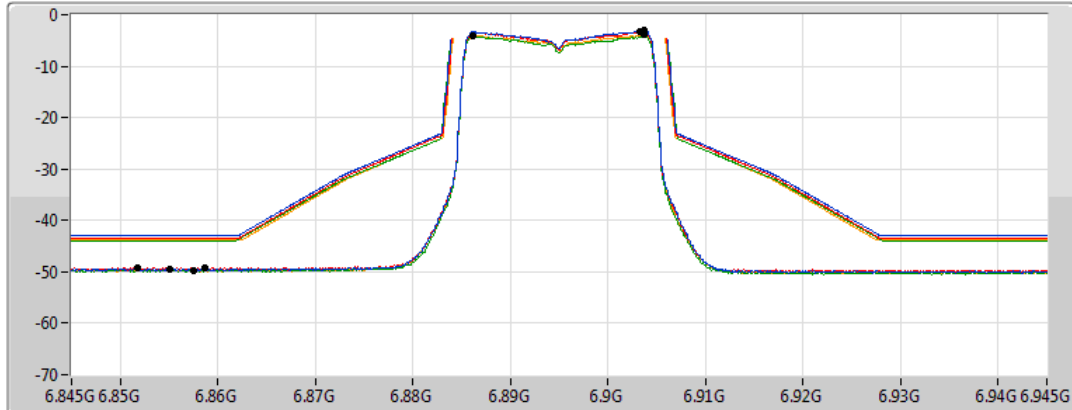
Span
100MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS



Ref(Hz)	Ref(dBm)	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port
6.90369G	-3.06	6.8586G	-49.32	-43.06	-6.26	1
6.90329G	-3.37	6.8517G	-49.21	-43.37	-5.84	2
6.88611G	-4.11	6.8575G	-49.64	-44.11	-5.53	3
6.90369G	-3.87	6.855G	-49.52	-43.87	-5.65	4

802.11ax HEW20_Nss4,(MCS0)_4TX

MASK

6995MHz_TnomVnom

19/01/2021

CF Freq
6.995GHz

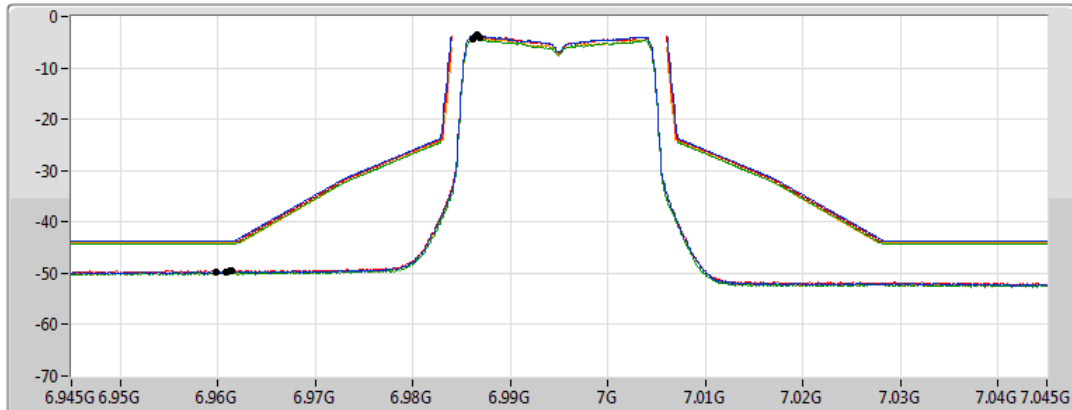
Span
100MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS



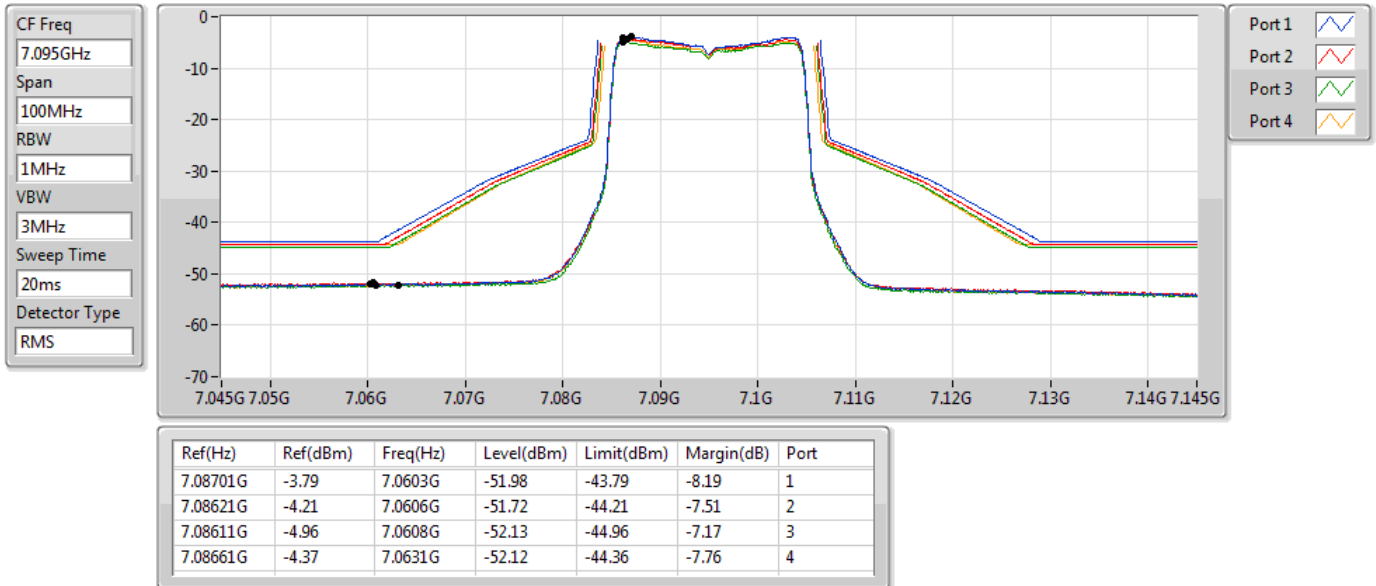
Ref(Hz)	Ref(dBm)	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port
6.98661G	-3.68	6.9614G	-49.58	-43.68	-5.90	1
6.98651G	-3.80	6.9612G	-49.52	-43.80	-5.72	2
6.98621G	-4.43	6.9598G	-49.89	-44.43	-5.46	3
6.98691G	-4.09	6.9608G	-49.71	-44.09	-5.62	4

802.11ax HEW20_Nss4,(MCS0)_4TX

MASK

7095MHz_TnomVnom

19/01/2021

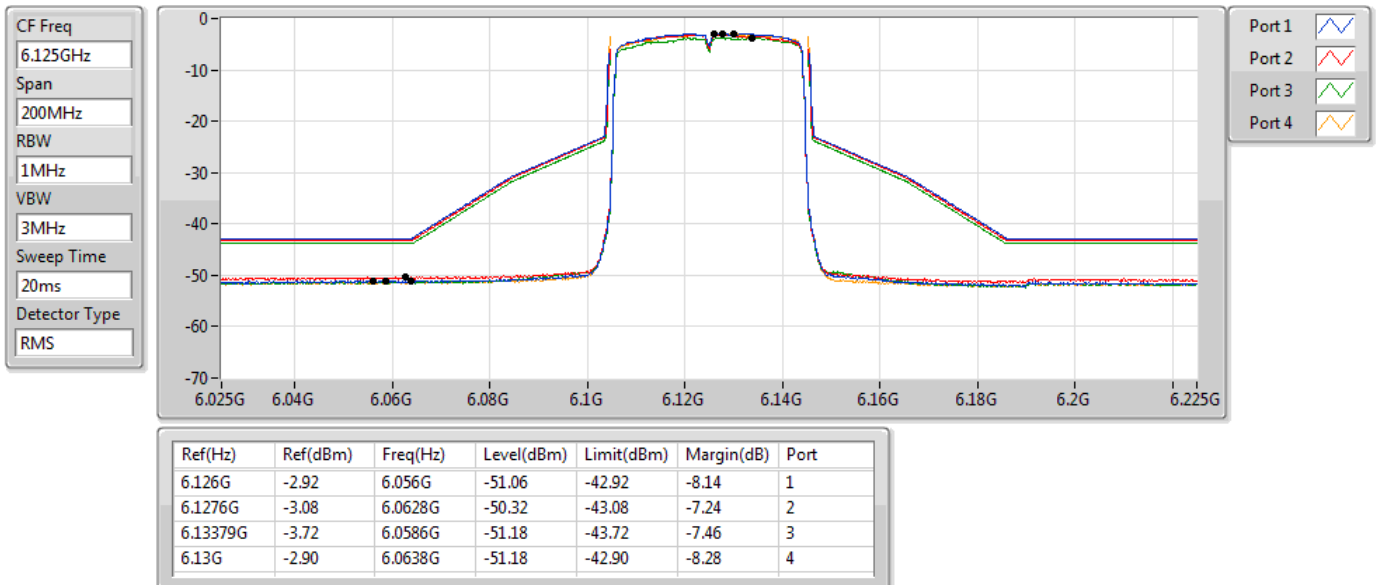


802.11ax HEW40_Nss4,(MCS0)_4TX

MASK

6125MHz_TnomVnom

19/01/2021

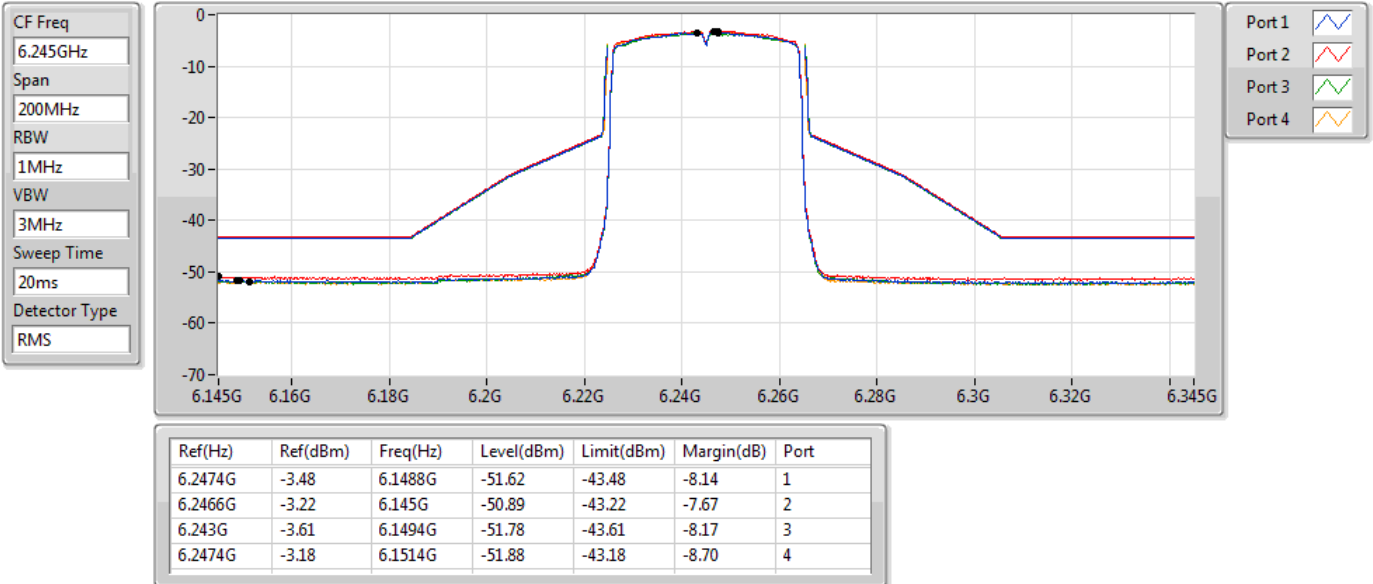


802.11ax HEW40_Nss4,(MCS0)_4TX

MASK

6245MHz_TnomVnom

19/01/2021

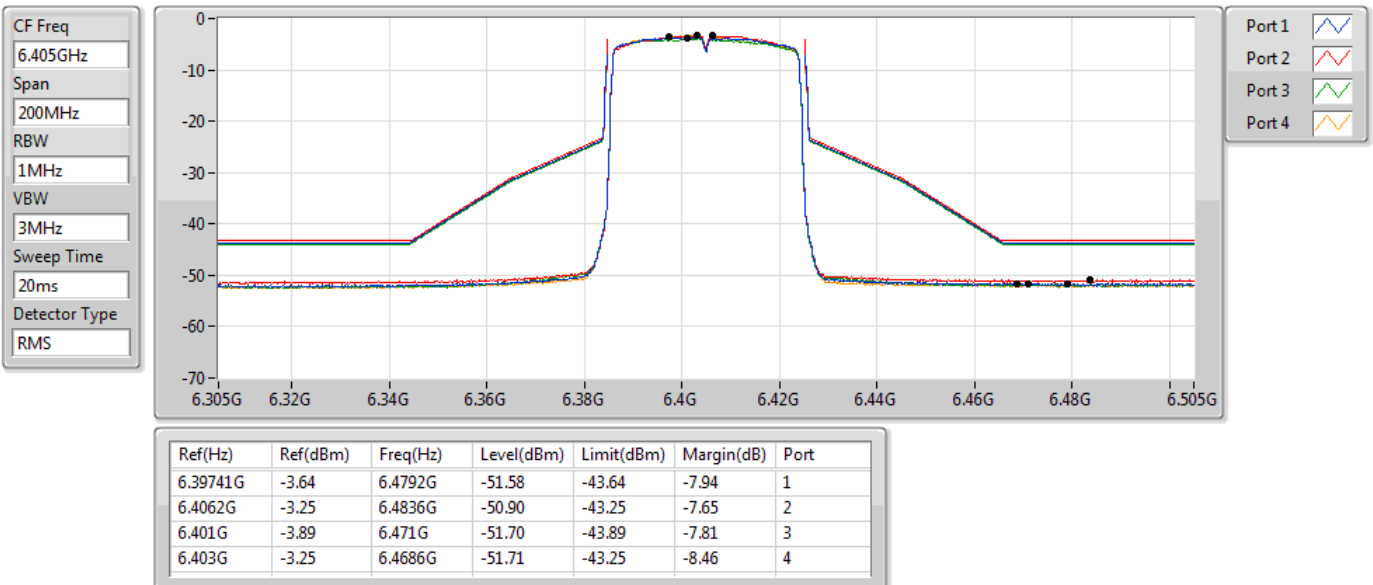


802.11ax HEW40_Nss4,(MCS0)_4TX

MASK

6405MHz_TnomVnom

19/01/2021

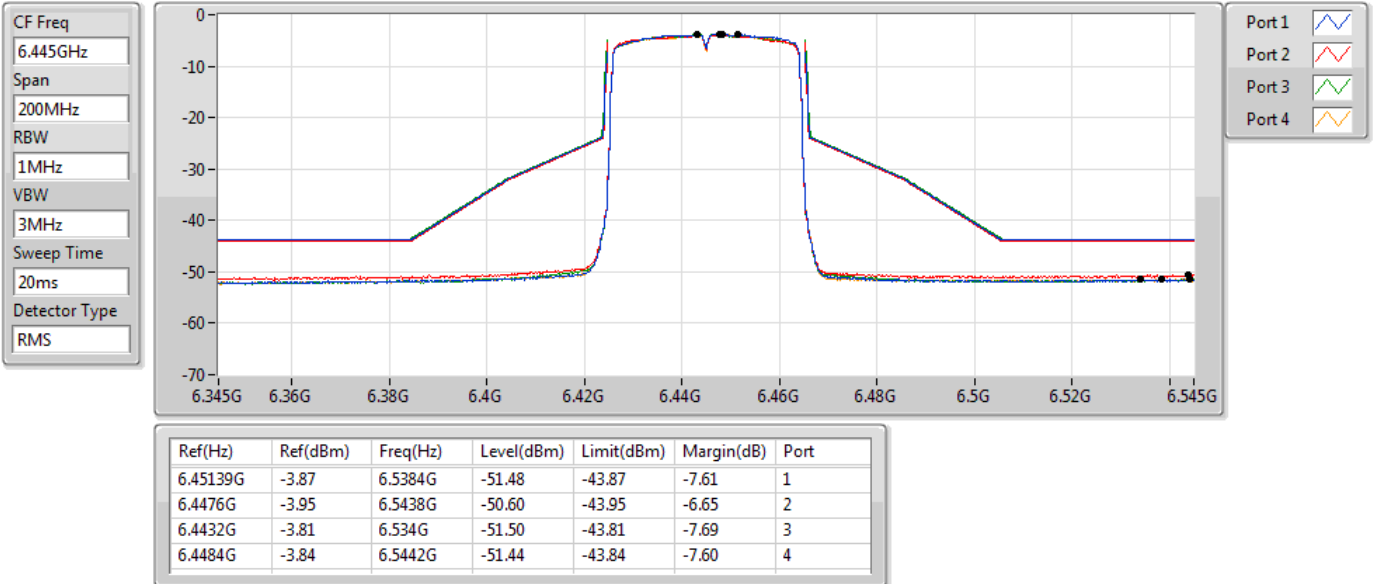


802.11ax HEW40_Nss4,(MCS0)_4TX

MASK

6445MHz_TnomVnom

19/01/2021

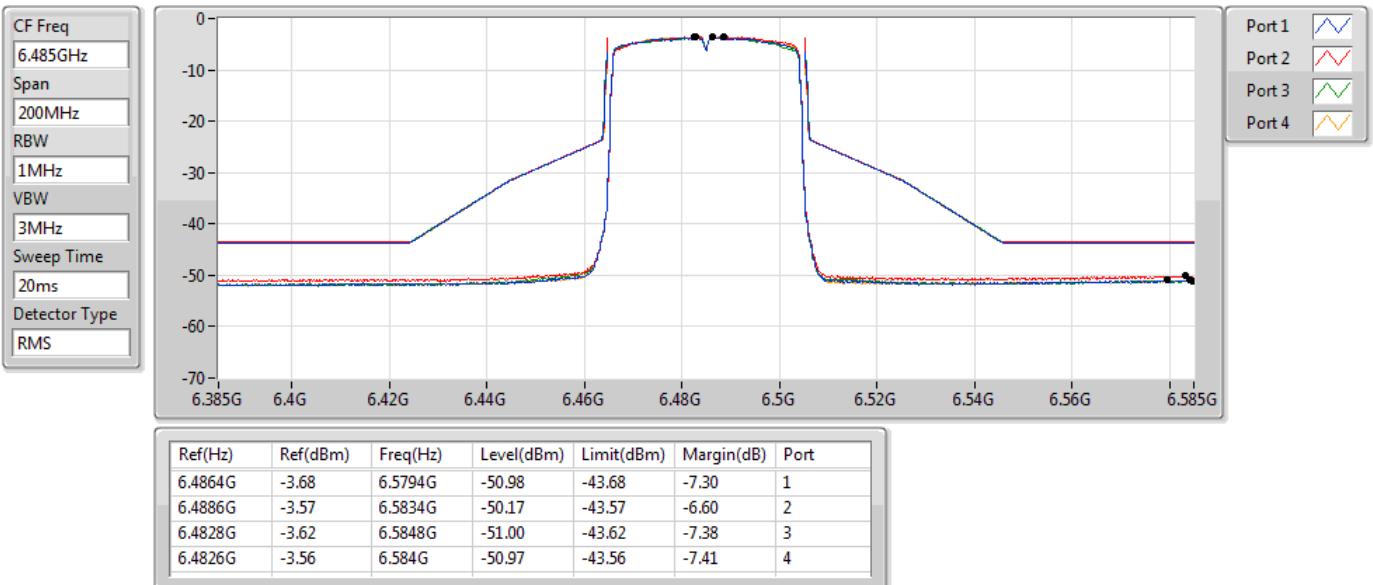


802.11ax HEW40_Nss4,(MCS0)_4TX

MASK

6485MHz_TnomVnom

19/01/2021

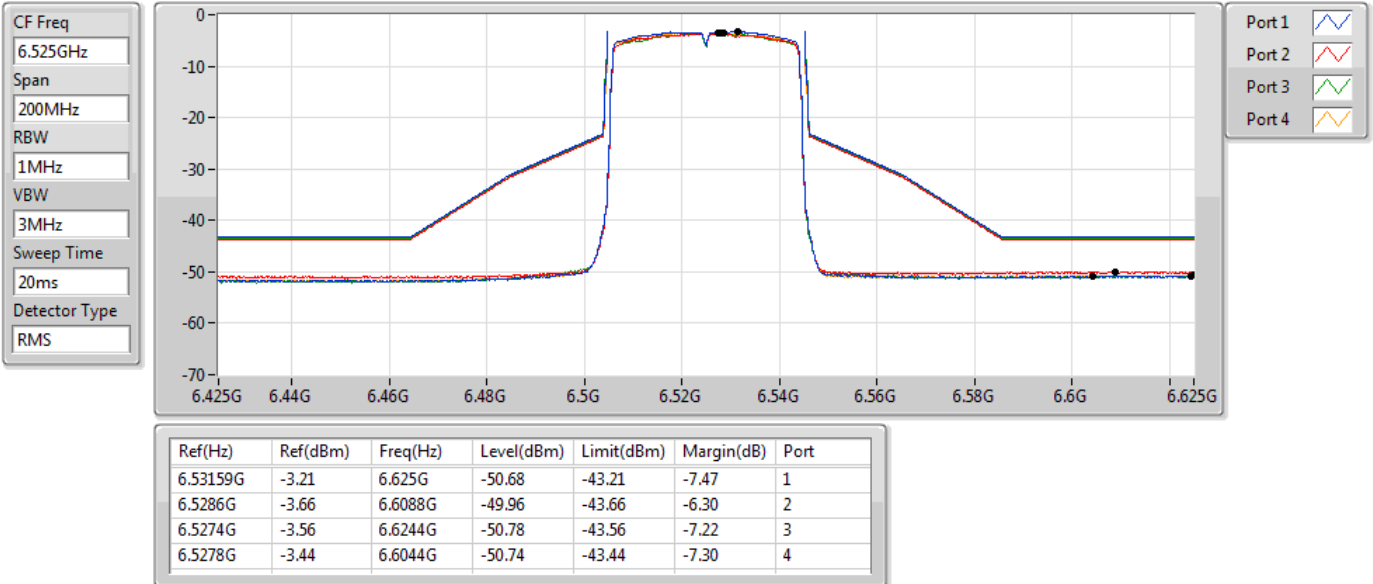


802.11ax HEW40_Nss4,(MCS0)_4TX

MASK

6525MHz Straddle 6.425-6.525GHz_TnomVnom

19/01/2021

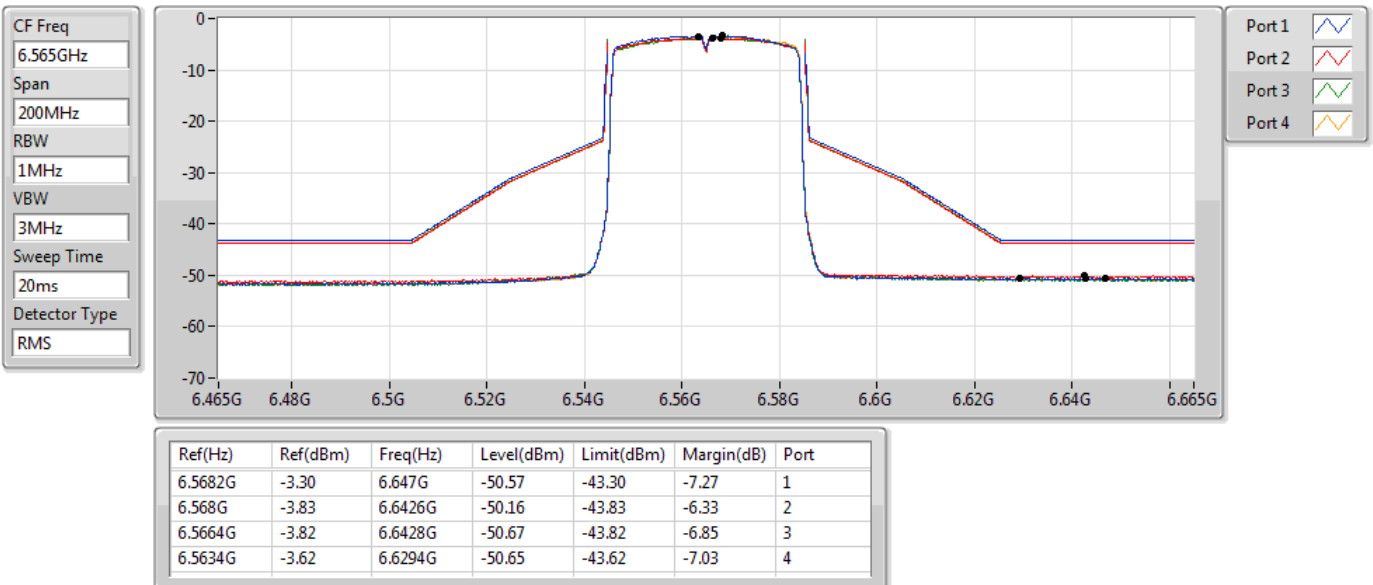


802.11ax HEW40_Nss4,(MCS0)_4TX

MASK

6565MHz_TnomVnom

19/01/2021



802.11ax HEW40_Nss4,(MCS0)_4TX

MASK

6685MHz_TnomVnom

19/01/2021

CF Freq
6.685GHz

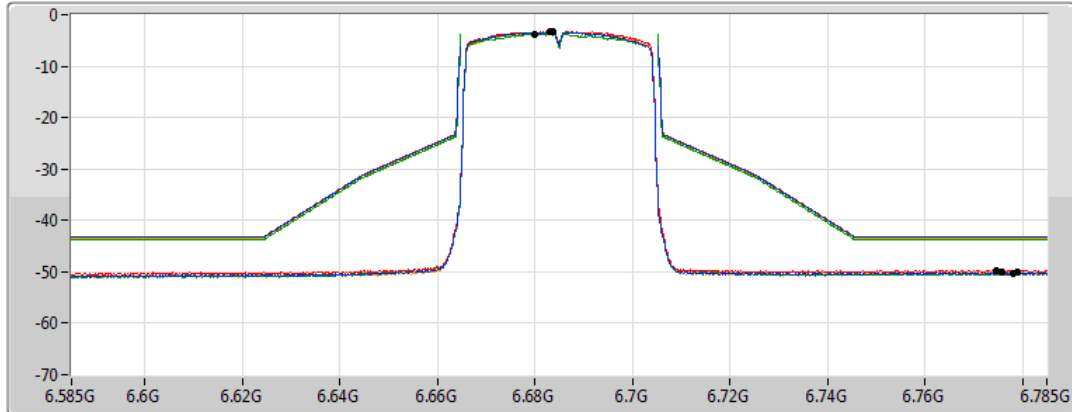
Span
200MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS



Port 1

Port 2

Port 3

Port 4

Ref(Hz)	Ref(dBm)	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port
6.6836G	-3.33	6.779G	-50.11	-43.33	-6.78	1
6.6836G	-3.25	6.7746G	-49.71	-43.25	-6.46	2
6.68G	-3.72	6.778G	-50.24	-43.72	-6.52	3
6.683G	-3.34	6.7758G	-50.16	-43.34	-6.82	4

802.11ax HEW40_Nss4,(MCS0)_4TX

MASK

6845MHz_TnomVnom

19/01/2021

CF Freq
6.845GHz

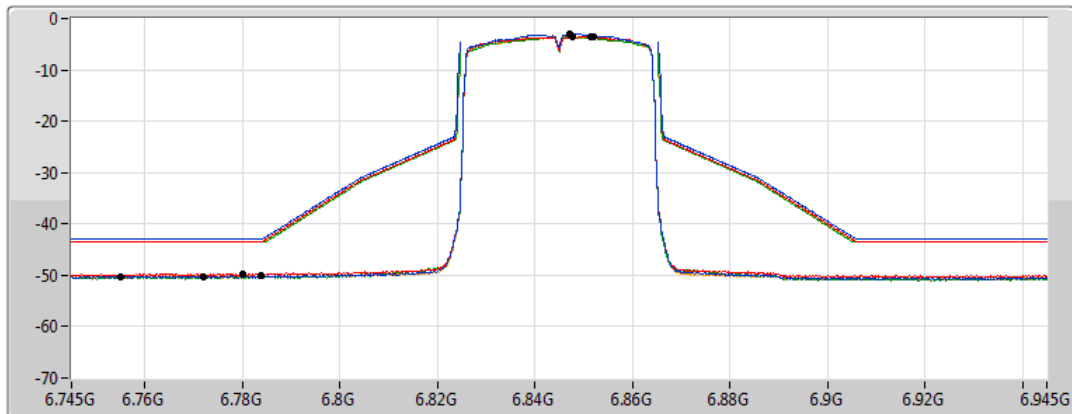
Span
200MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS



Port 1

Port 2

Port 3

Port 4

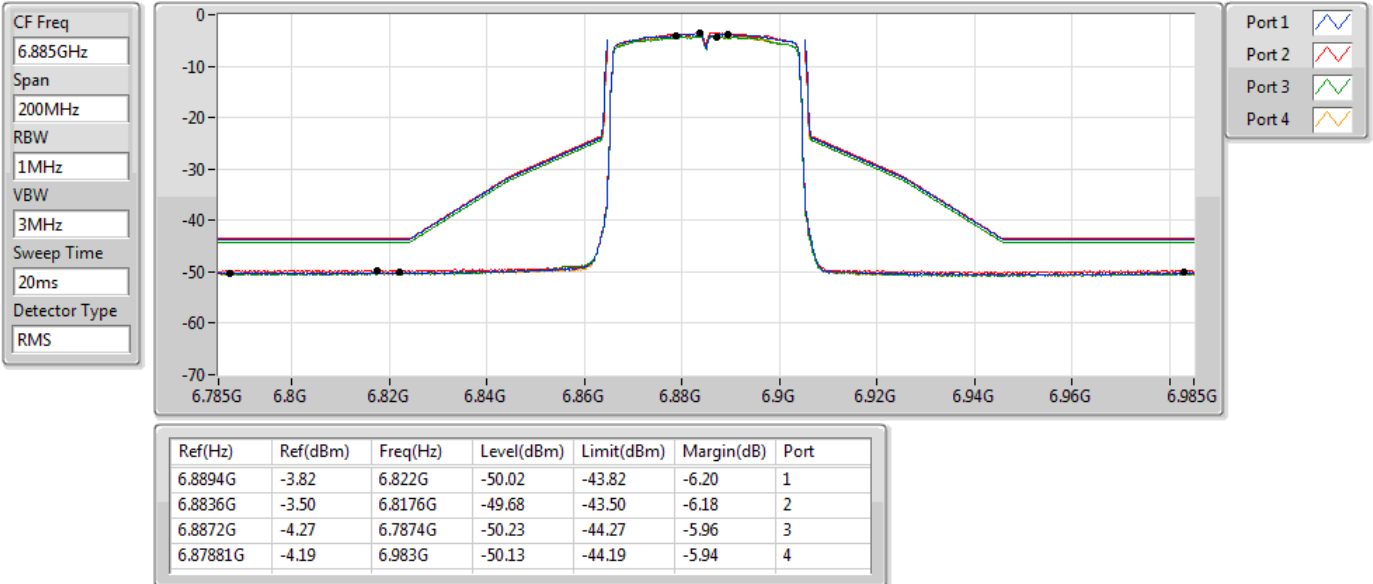
Ref(Hz)	Ref(dBm)	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port
6.8472G	-2.97	6.7838G	-50.10	-42.97	-7.13	1
6.85139G	-3.50	6.78G	-49.71	-43.50	-6.21	2
6.8476G	-3.60	6.772G	-50.19	-43.60	-6.59	3
6.85219G	-3.49	6.755G	-50.18	-43.49	-6.69	4

802.11ax HEW40_Nss4,(MCS0)_4TX

MASK

6885MHz Straddle 6.525-6.875GHz_TnomVnom

19/01/2021

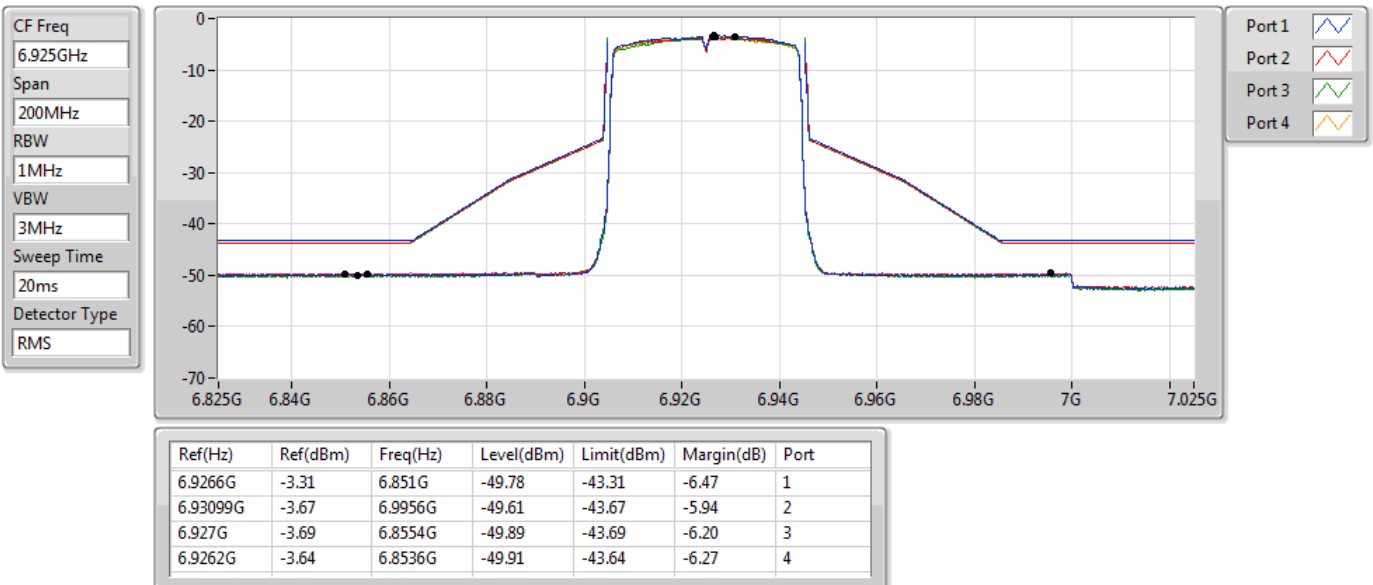


802.11ax HEW40_Nss4,(MCS0)_4TX

MASK

6925MHz_TnomVnom

19/01/2021

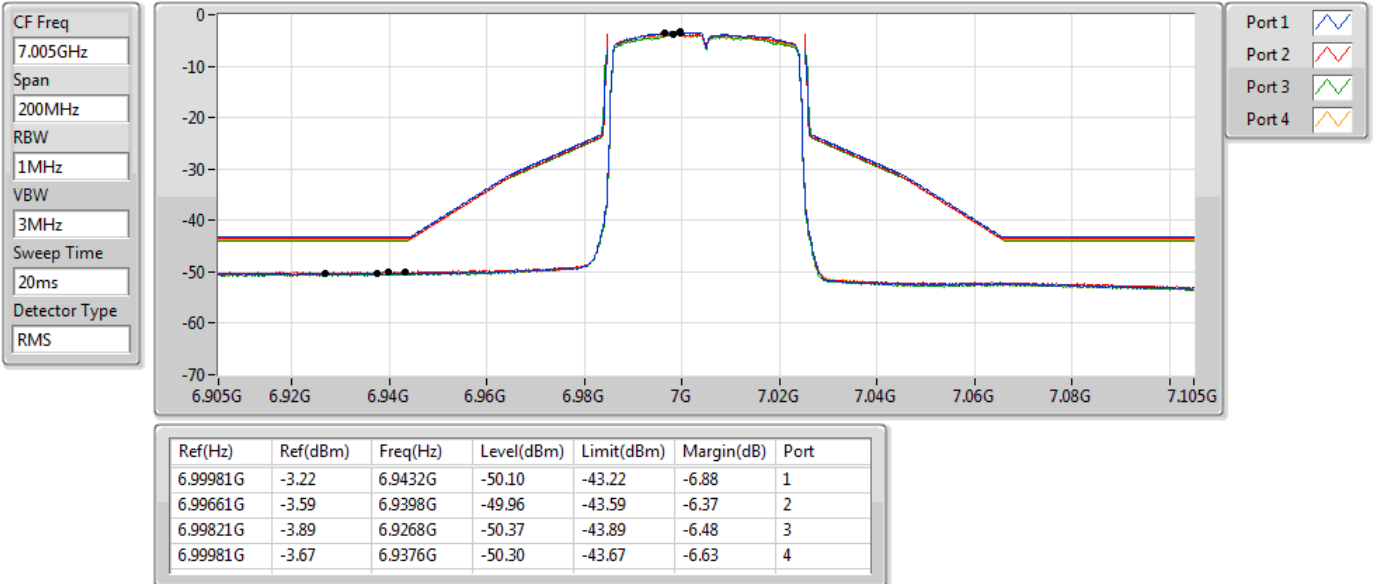


802.11ax HEW40_Nss4,(MCS0)_4TX

MASK

7005MHz_TnomVnom

19/01/2021

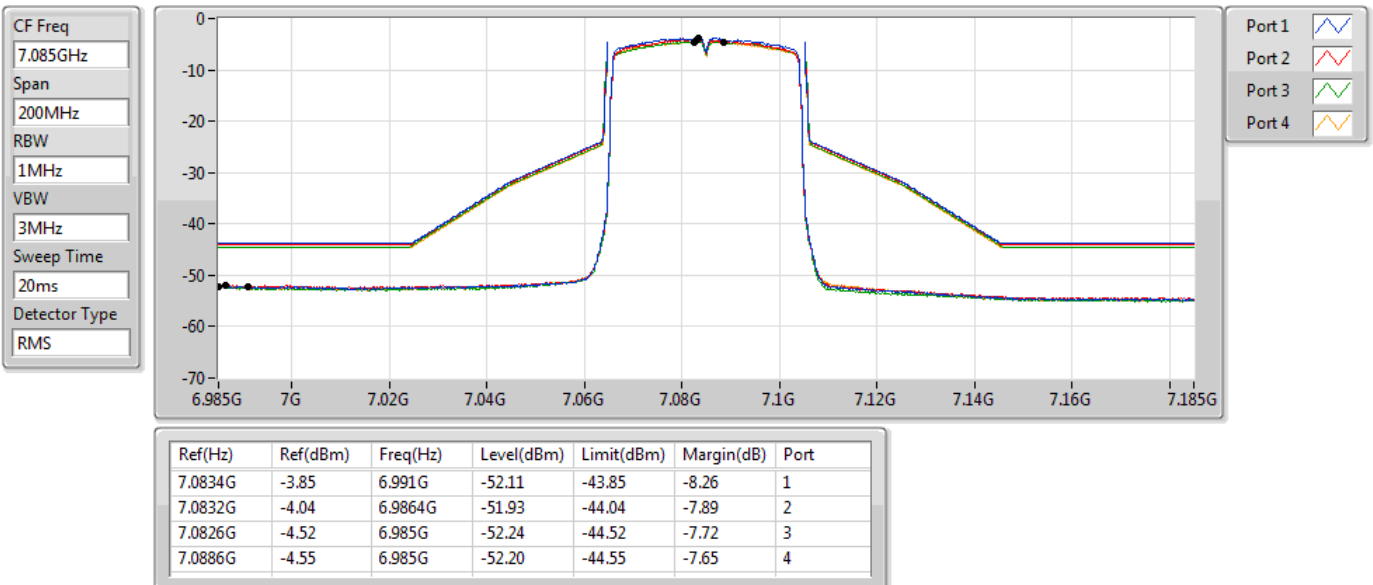


802.11ax HEW40_Nss4,(MCS0)_4TX

MASK

7085MHz_TnomVnom

19/01/2021

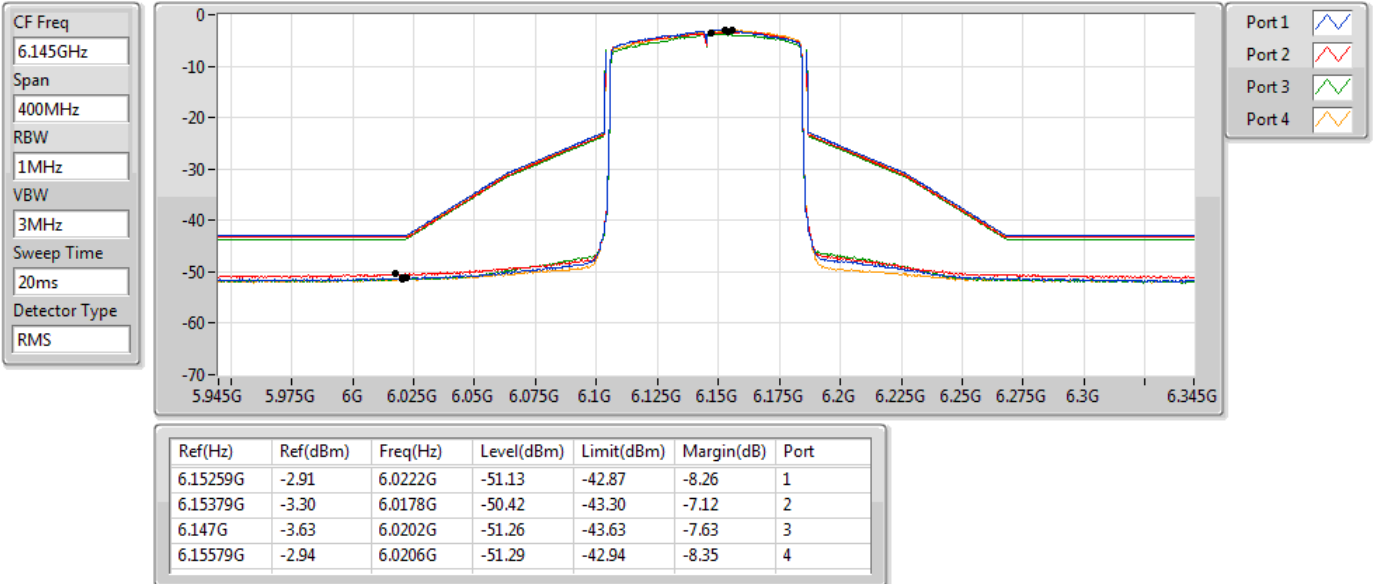


802.11ax HEW80_Nss4,(MCS0)_4TX

MASK

6145MHz_TnomVnom

19/01/2021

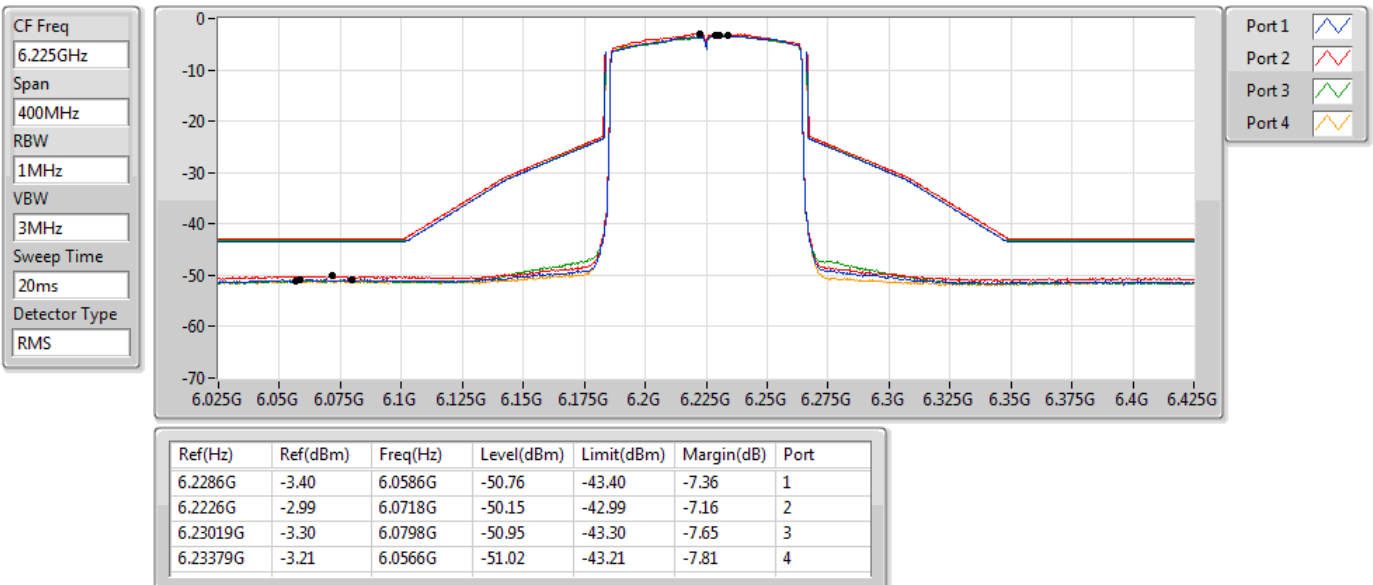


802.11ax HEW80_Nss4,(MCS0)_4TX

MASK

6225MHz_TnomVnom

19/01/2021



802.11ax HEW80_Nss4,(MCS0)_4TX

MASK

6385MHz_TnomVnom

19/01/2021

CF Freq
6.385GHz

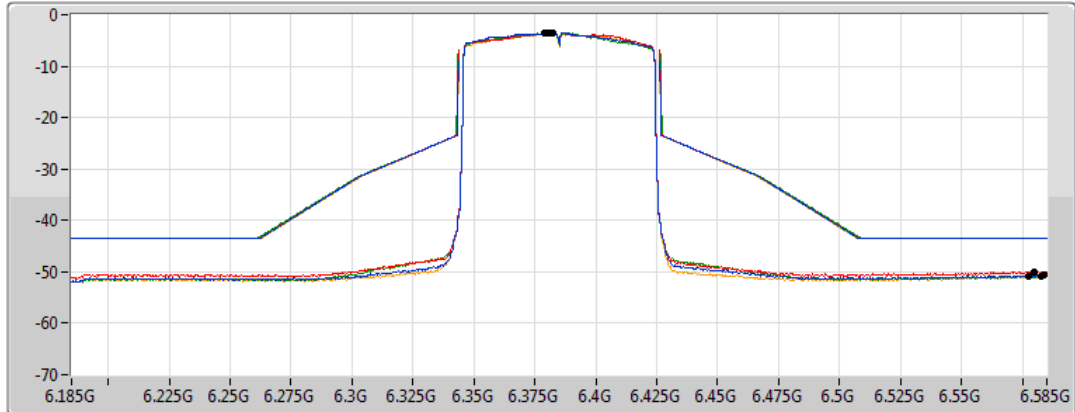
Span
400MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS



Port 1

Port 2

Port 3

Port 4

Ref(Hz)	Ref(dBm)	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port
6.37901G	-3.45	6.5838G	-50.64	-43.45	-7.19	1
6.3826G	-3.53	6.5798G	-49.96	-43.53	-6.43	2
6.37941G	-3.56	6.5774G	-50.75	-43.56	-7.19	3
6.3814G	-3.51	6.5826G	-50.81	-43.51	-7.30	4

802.11ax HEW80_Nss4,(MCS0)_4TX

MASK

6465MHz_TnomVnom

19/01/2021

CF Freq
6.465GHz

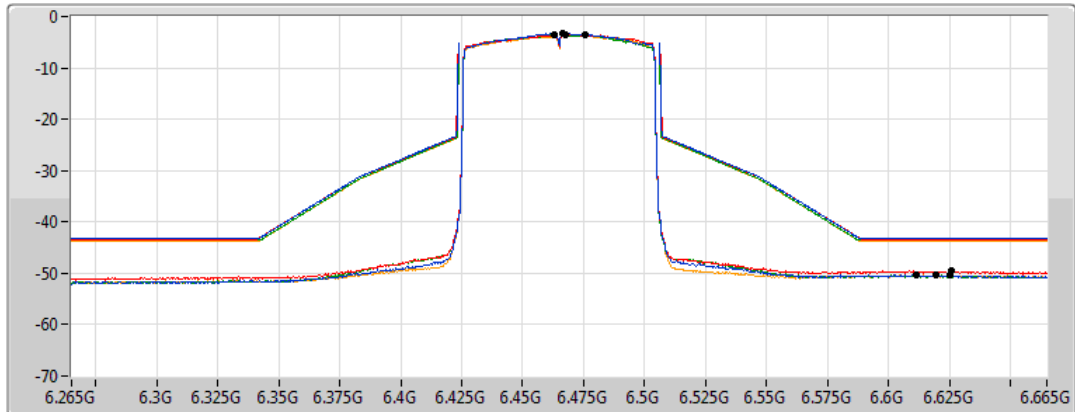
Span
400MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS



Port 1

Port 2

Port 3

Port 4

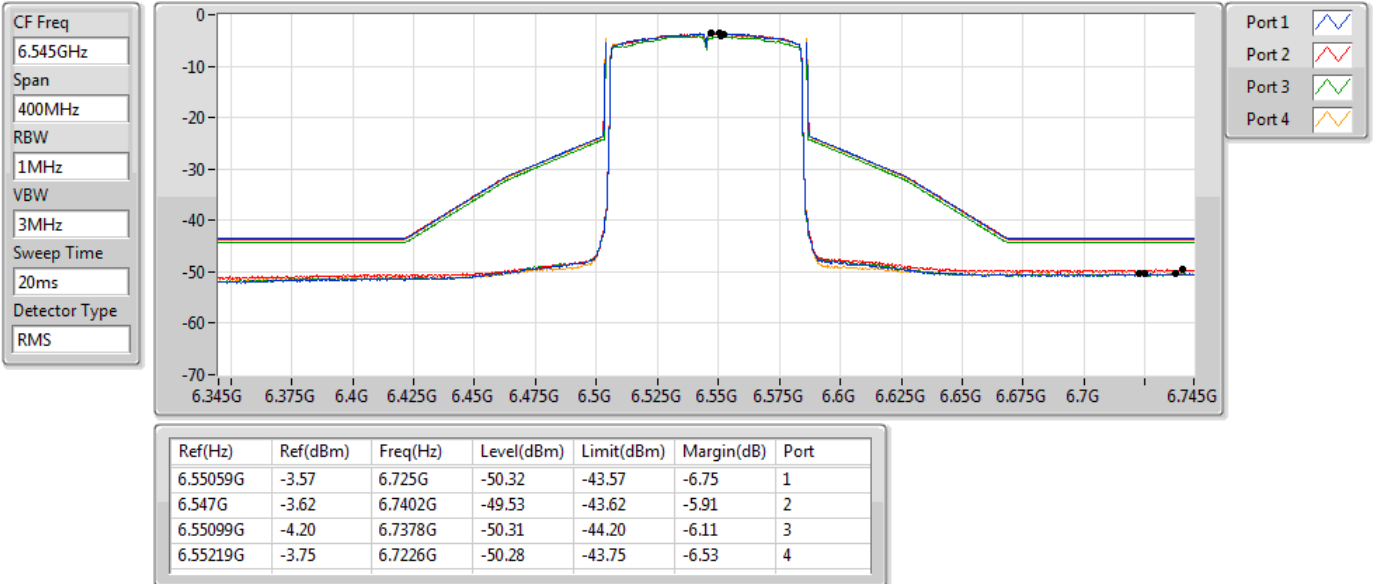
Ref(Hz)	Ref(dBm)	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port
6.4666G	-3.27	6.6198G	-50.33	-43.27	-7.06	1
6.4678G	-3.43	6.6258G	-49.57	-43.43	-6.14	2
6.463G	-3.57	6.6114G	-50.39	-43.57	-6.82	3
6.47579G	-3.63	6.625G	-50.33	-43.63	-6.70	4

802.11ax HEW80_Nss4,(MCS0)_4TX

MASK

6545MHz Straddle 6.425-6.525GHz_TnomVnom

19/01/2021

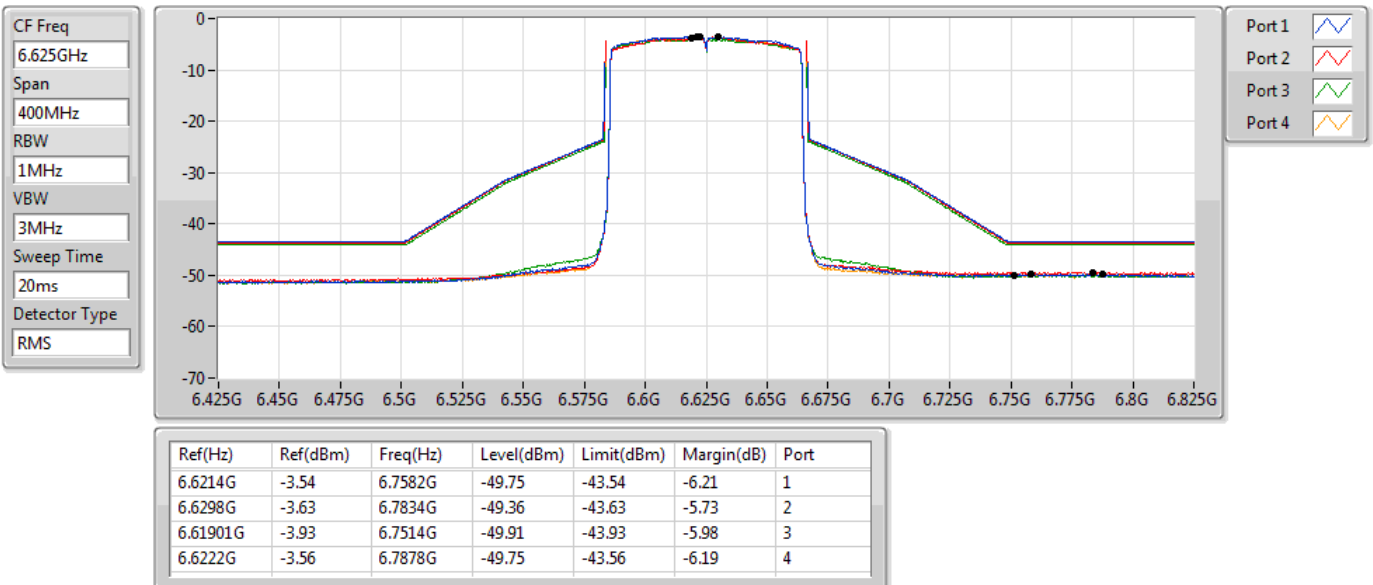


802.11ax HEW80_Nss4,(MCS0)_4TX

MASK

6625MHz_TnomVnom

19/01/2021



802.11ax HEW80_Nss4,(MCS0)_4TX

MASK

6705MHz_TnomVnom

19/01/2021

CF Freq
6.705GHz

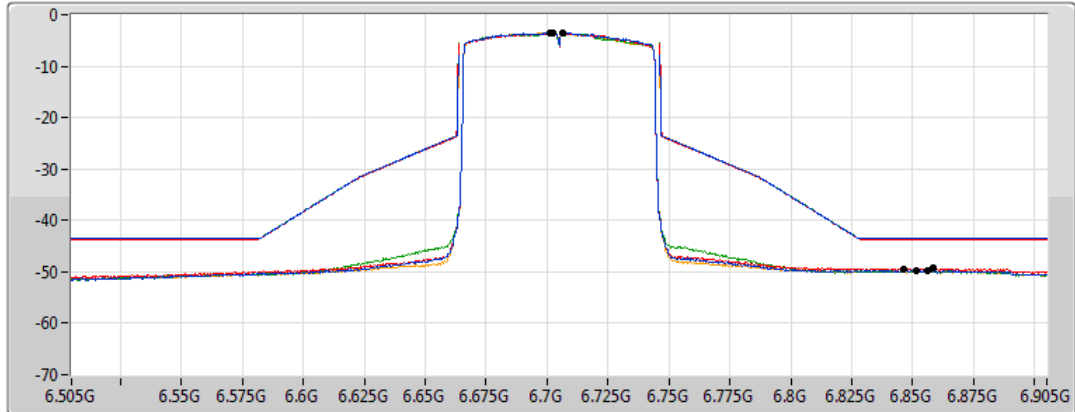
Span
400MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS



Port 1

Port 2

Port 3

Port 4

Ref(Hz)	Ref(dBm)	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port
6.7014G	-3.54	6.8462G	-49.60	-43.54	-6.06	1
6.7066G	-3.68	6.8586G	-49.31	-43.68	-5.63	2
6.7022G	-3.60	6.8514G	-49.74	-43.60	-6.14	3
6.7022G	-3.47	6.8562G	-49.69	-43.47	-6.22	4

802.11ax HEW80_Nss4,(MCS0)_4TX

MASK

6785MHz_TnomVnom

19/01/2021

CF Freq
6.785GHz

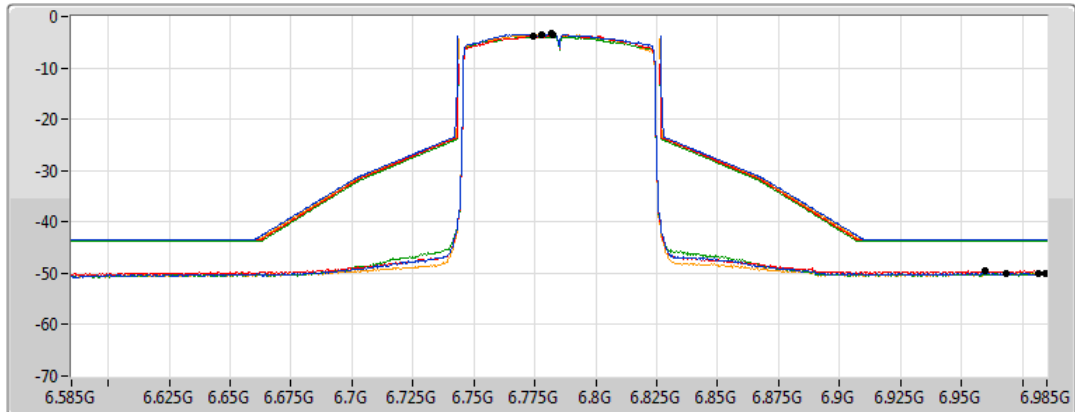
Span
400MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS



Port 1

Port 2

Port 3

Port 4

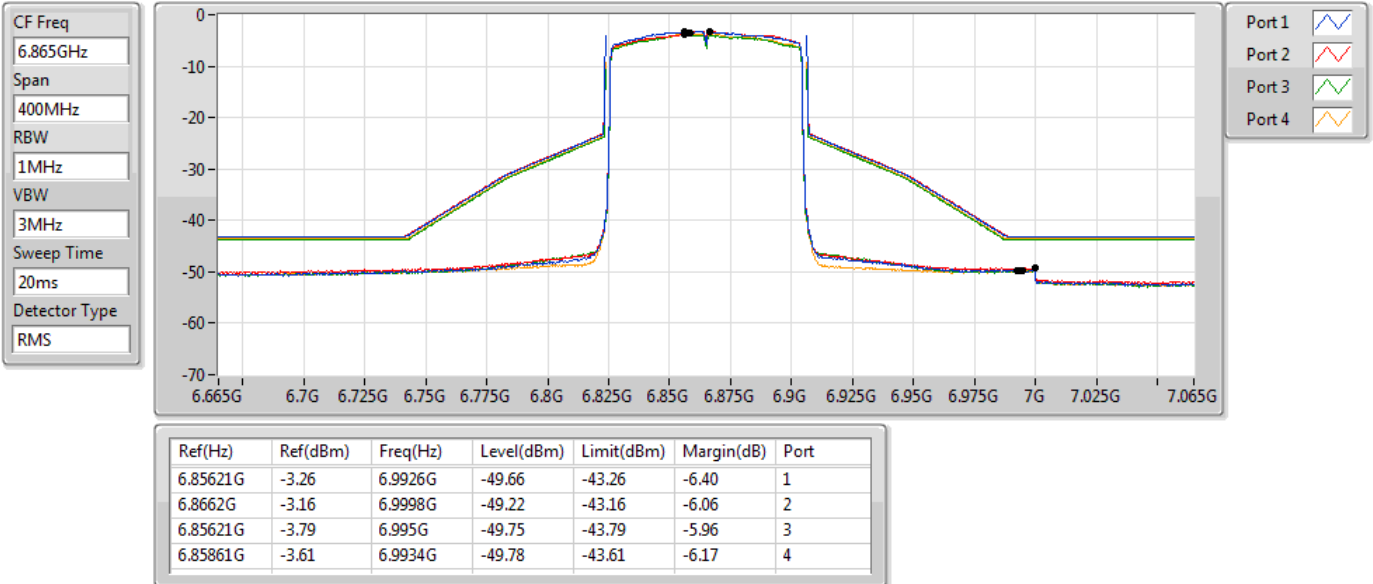
Ref(Hz)	Ref(dBm)	Freq(Hz)	Level(dBm)	Limit(dBm)	Margin(dB)	Port
6.7818G	-3.40	6.9682G	-50.00	-43.40	-6.60	1
6.7826G	-3.57	6.9594G	-49.52	-43.57	-5.95	2
6.77421G	-3.88	6.9846G	-49.97	-43.88	-6.09	3
6.77781G	-3.47	6.9818G	-49.99	-43.47	-6.52	4

802.11ax HEW80_Nss4,(MCS0)_4TX

MASK

6865MHz Straddle 6.525-6.875GHz_TnomVnom

19/01/2021

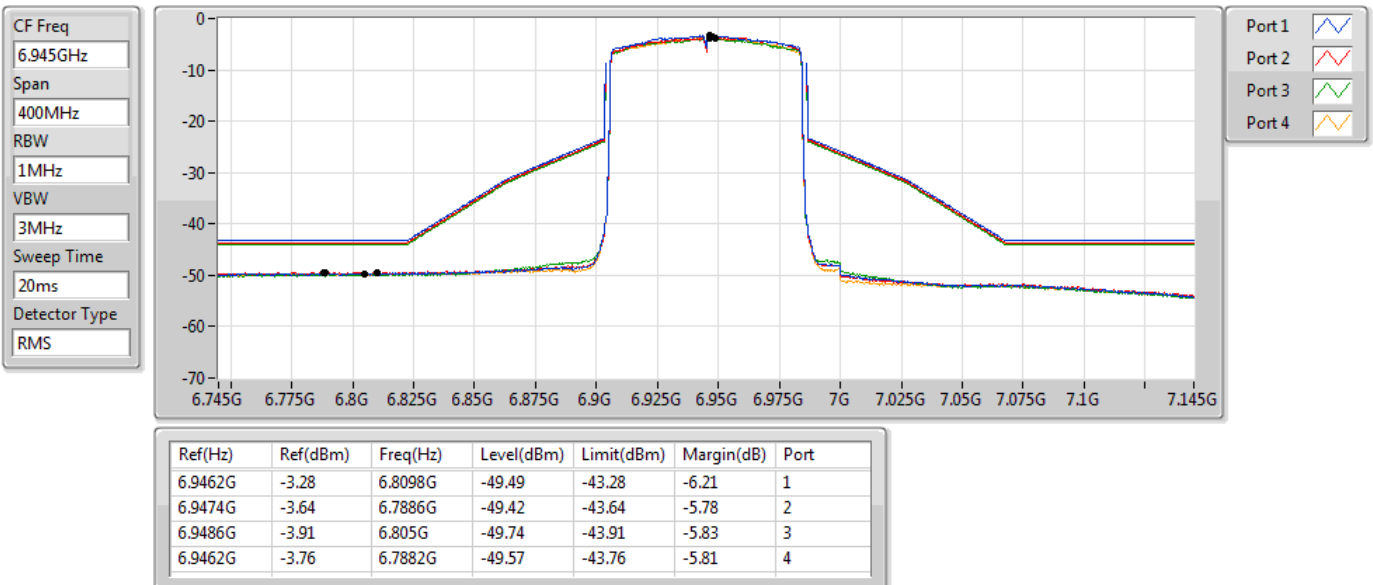


802.11ax HEW80_Nss4,(MCS0)_4TX

MASK

6945MHz_TnomVnom

19/01/2021

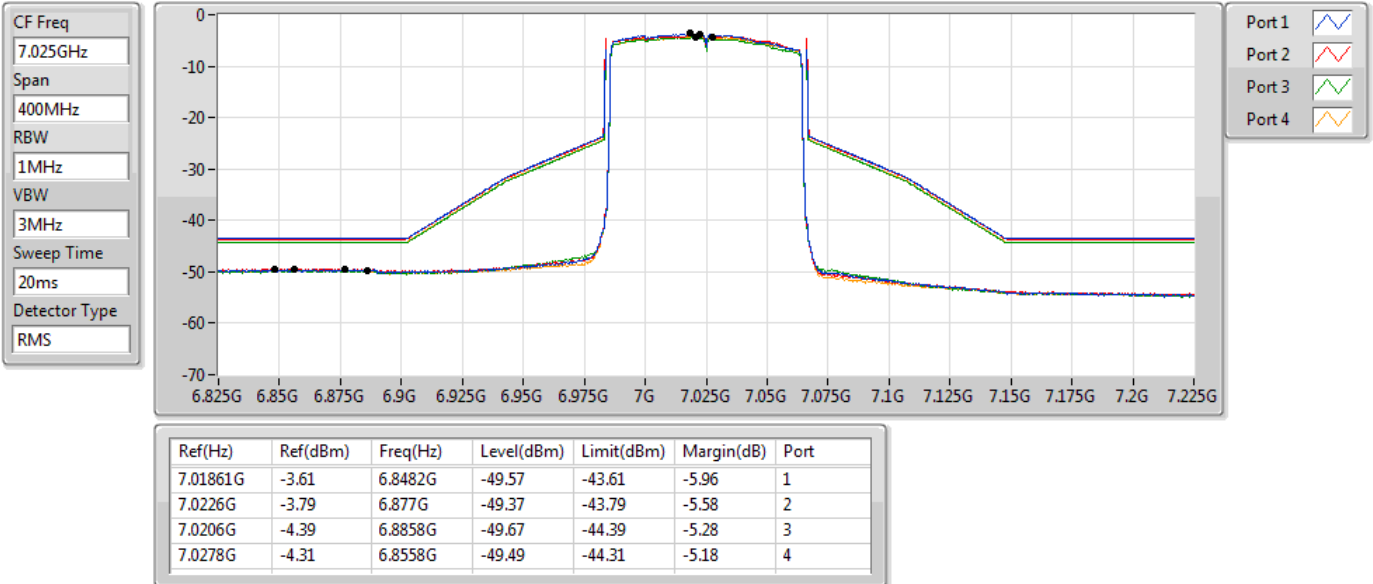


802.11ax HEW80_Nss4,(MCS0)_4TX

MASK

7025MHz_TnomVnom

19/01/2021

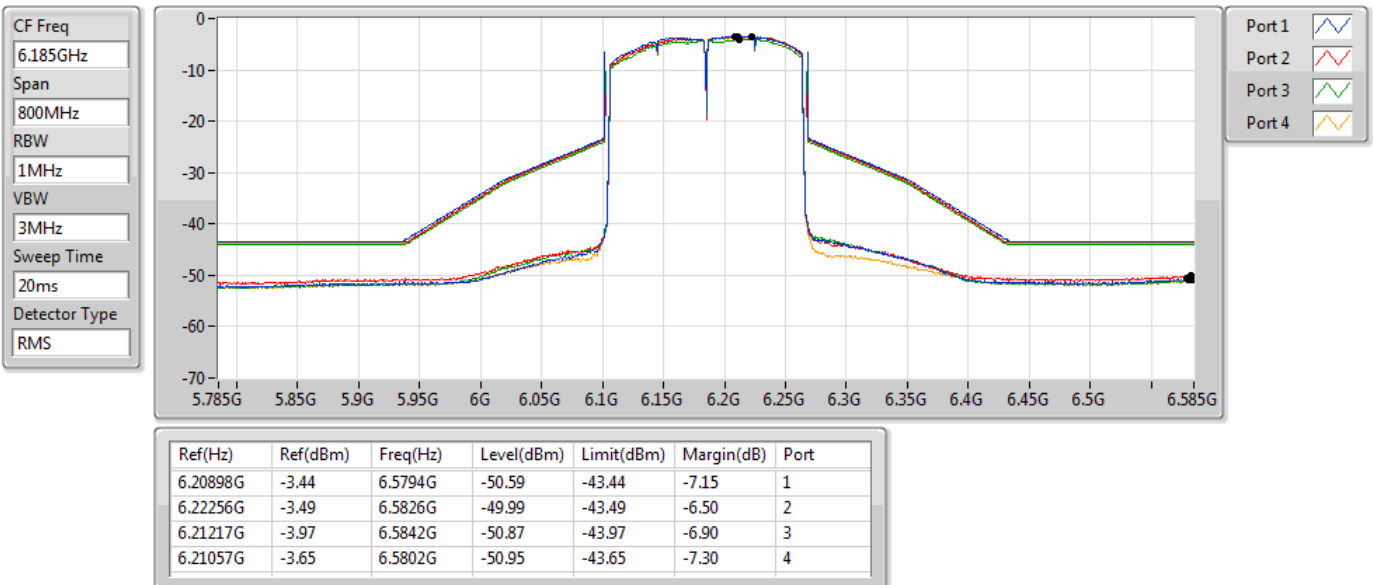


802.11ax HEW160_Nss4,(MCS0)_4TX

MASK

6185MHz_TnomVnom

19/01/2021

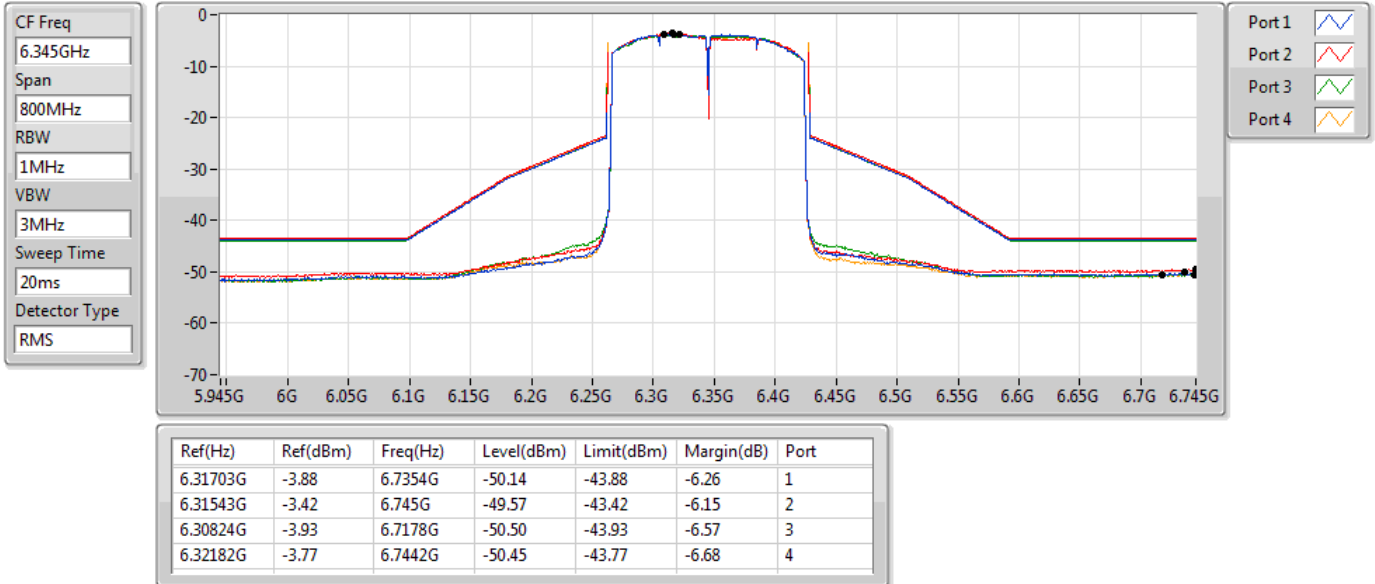


802.11ax HEW160_Nss4,(MCS0)_4TX

MASK

6345MHz_TnomVnom

19/01/2021

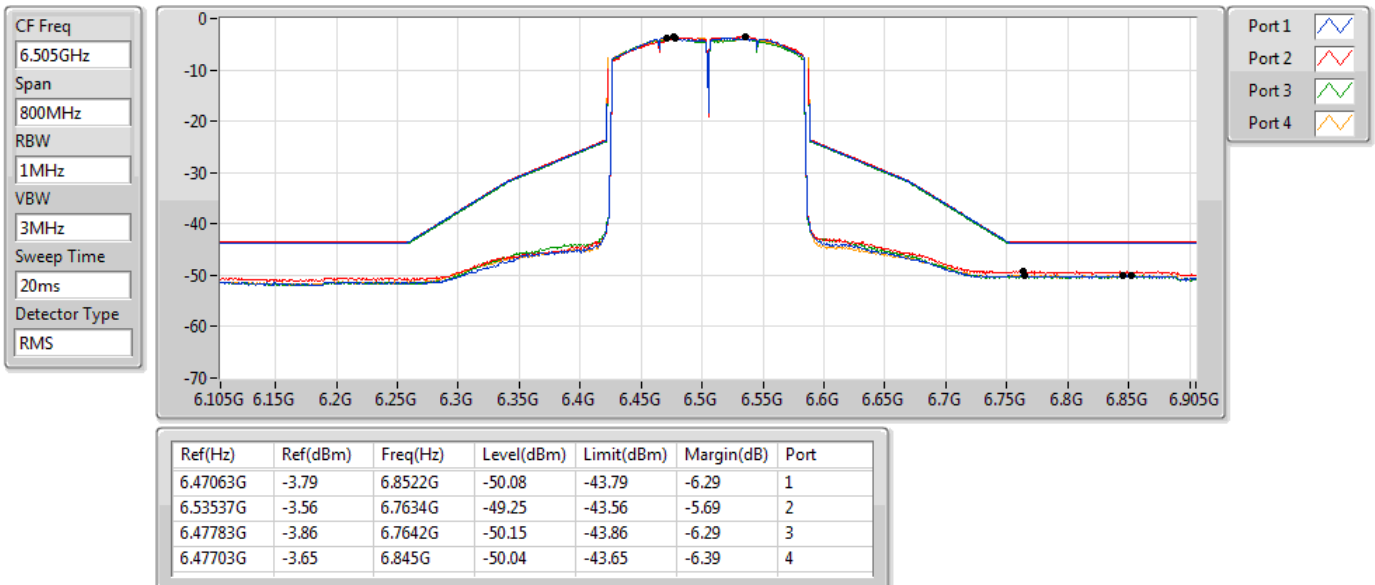


802.11ax HEW160_Nss4,(MCS0)_4TX

MASK

6505MHz Straddle 6.425-6.525GHz_TnomVnom

19/01/2021

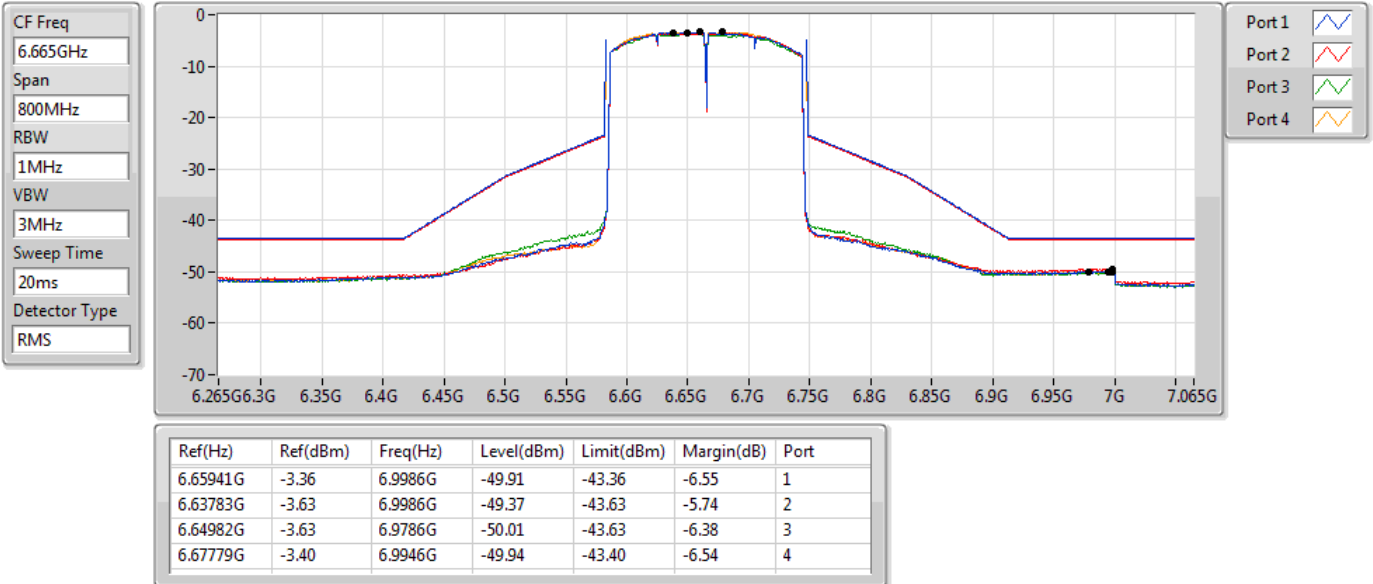


802.11ax HEW160_Nss4,(MCS0)_4TX

MASK

6665MHz_TnomVnom

19/01/2021

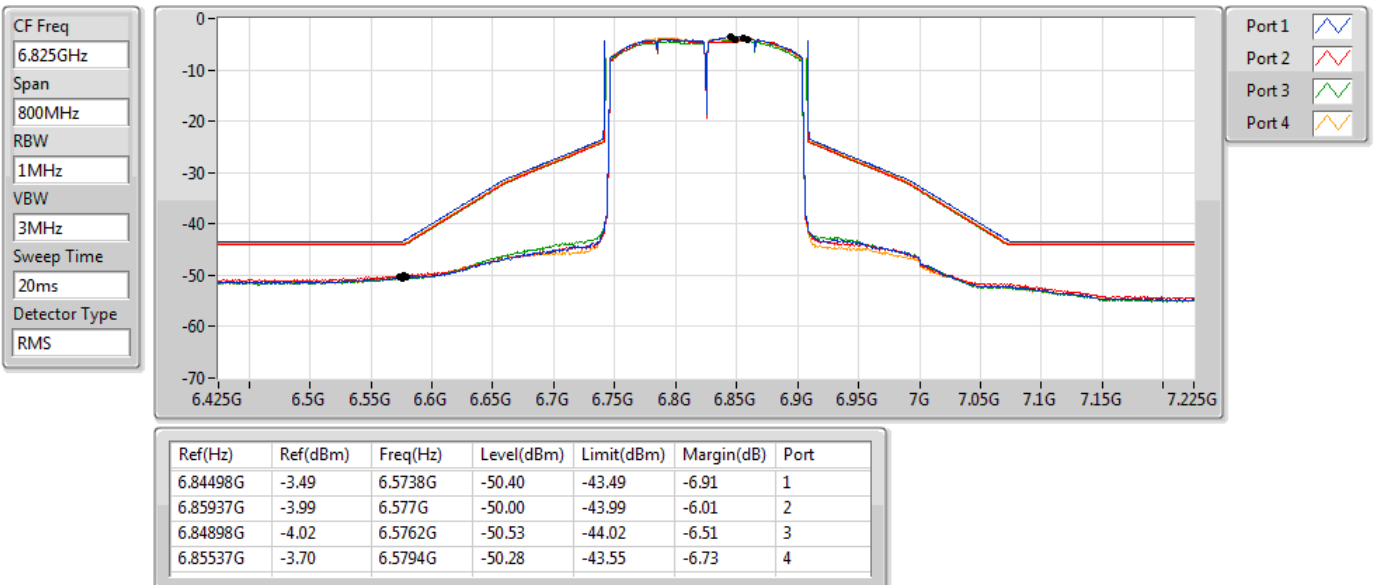


802.11ax HEW160_Nss4,(MCS0)_4TX

MASK

6825MHz Straddle 6.525-6.875GHz_TnomVnom

19/01/2021

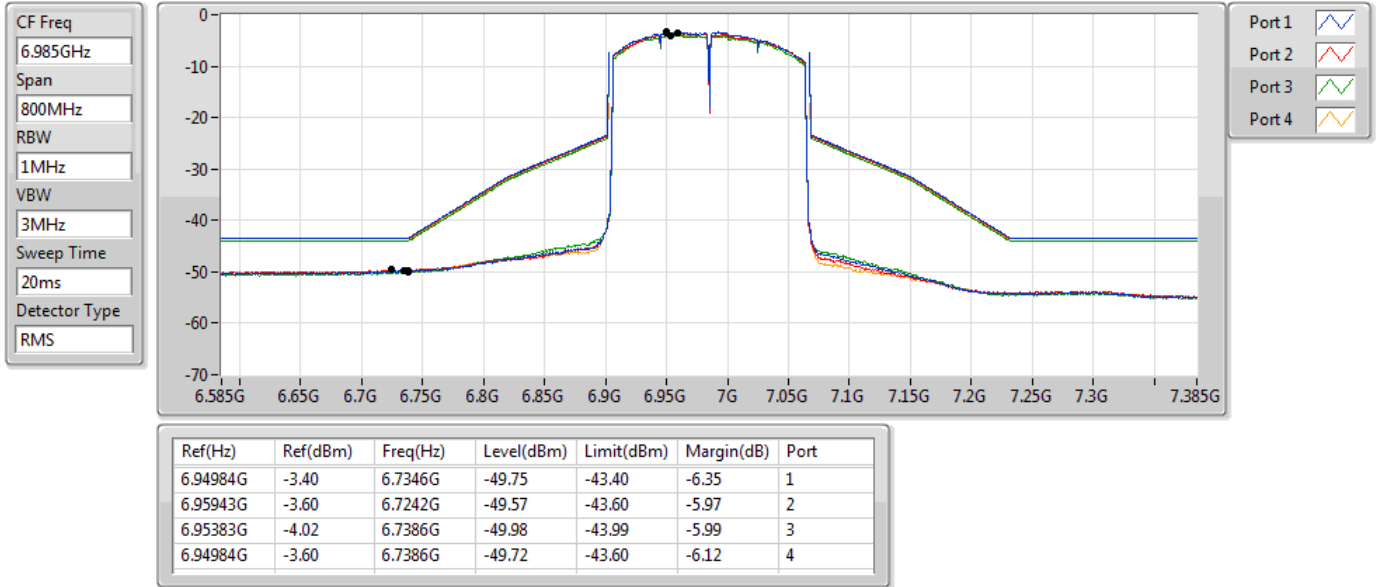


802.11ax HEW160_Nss4,(MCS0)_4TX

MASK

6985MHz_TnomVnom

19/01/2021



Contention Based protocol 802.11ax HEW20										
UNII Band	Test Channel	Bandwidth (MHz)	Freq. (MHz)	Interference Frequency (MHz)		Threshold level of AWGN interference (dBm)	Number of AWGN Detected (out of 10 times)	AWGN Detection Probability (%)	Limit Probability (%)	Test Result
5	49	20	6195	Center	6195	-60.28	10	100	90	Pass
6	105	20	6475	Center	6475	-59.85	10	100	90	Pass
7	149	20	6695	Center	6695	-59.85	10	100	90	Pass
8	209	20	6995	Center	6995	-59.63	10	100	90	Pass

Contention Based protocol 802.11ax HEW160										
UNII Band	Test Channel	Bandwidth (MHz)	Freq. (MHz)	Interference Frequency (MHz)		Threshold level of AWGN interference (dBm)	Number of AWGN Detected (out of 10 times)	AWGN Detection Probability (%)	Limit Probability (%)	Test Result
5	47	160	6185	Low edge	6110	-60.28	10	100	90	Pass
				Center	6185	-60.28	10	100	90	Pass
				High edge	6260	-60.28	10	100	90	Pass
6	111	160	6505	Low edge	6430	-59.85	10	100	90	Pass
				Center	6505	-59.85	10	100	90	Pass
				High edge	6580	-59.85	10	100	90	Pass
7	143	160	6665	Low edge	6590	-59.85	10	100	90	Pass
				Center	6665	-59.85	10	100	90	Pass
				High edge	6740	-59.85	10	100	90	Pass
8	207	160	6985	Low edge	6910	-59.63	10	100	90	Pass
				Center	6985	-59.63	10	100	90	Pass
				High edge	7060	-59.63	10	100	90	Pass

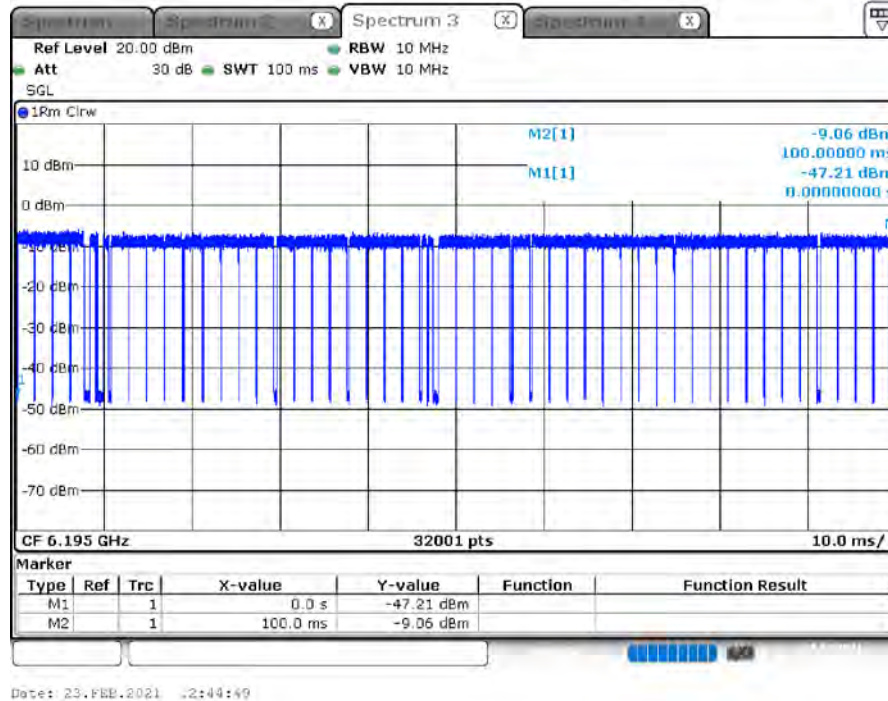
Note:

UNII 5 AWGN Level = -62 dBm + Min. Gain(1.72 dBi) = -60.28 dBm

UNII 6 & 7 AWGN Level = -62 dBm + Min. Gain(2.15 dBi) = -59.85 dBm

UNII 8 AWGN Level = -62 dBm + Min. Gain(2.37dBi) = -59.63 dBm

20MHz: Traffic Loading Plot

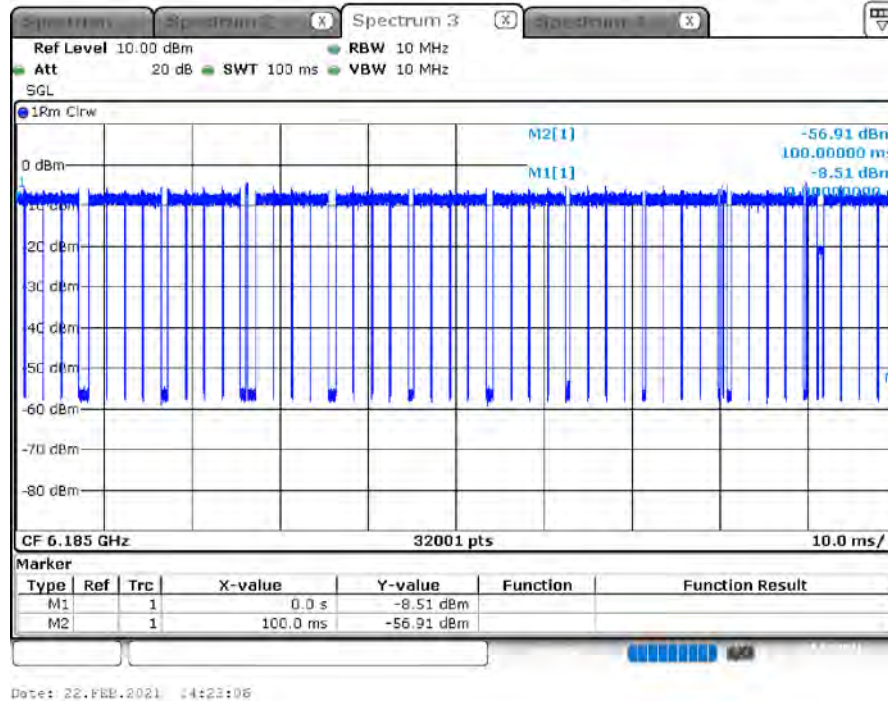


20MHz: Traffic Loading Calculation

R&S | Agilent

VISA session 1 GPIB0::20:	Threshold (dBm) -40	Marker 1 (sec) 0	Space Time of Point 0.000003	No. of Pulse 29536
	Mean Level (dBm) -8.87	Marker 2 (sec) 0.1	Mark 1 Point 1	Close TX Time(sec) 92.3m
	RMS Level (dBm) -8.81	Total Trace of Points 32001	Mark 2 Point 32001	Duty (%) 92.3

160 MHz: Traffic Loading Plot



160 MHz: Traffic Loading Calculation

R&S Agilent

VISA session 1 GPIB0::20	Threshold (dBm) -40	Marker 1 (sec) 0	Space Time of Point 0.000003	No. of Pulse 28495
	Mean Level (dBm) -8.46	Marker 2 (sec) 0.1	Mark 1 Point 1	Close TX Time(sec) 89.046875m
	RMS Level (dBm) -8.39	Total Trace of Points 32001	Mark 2 Point 32001	Duty (%) 89.05

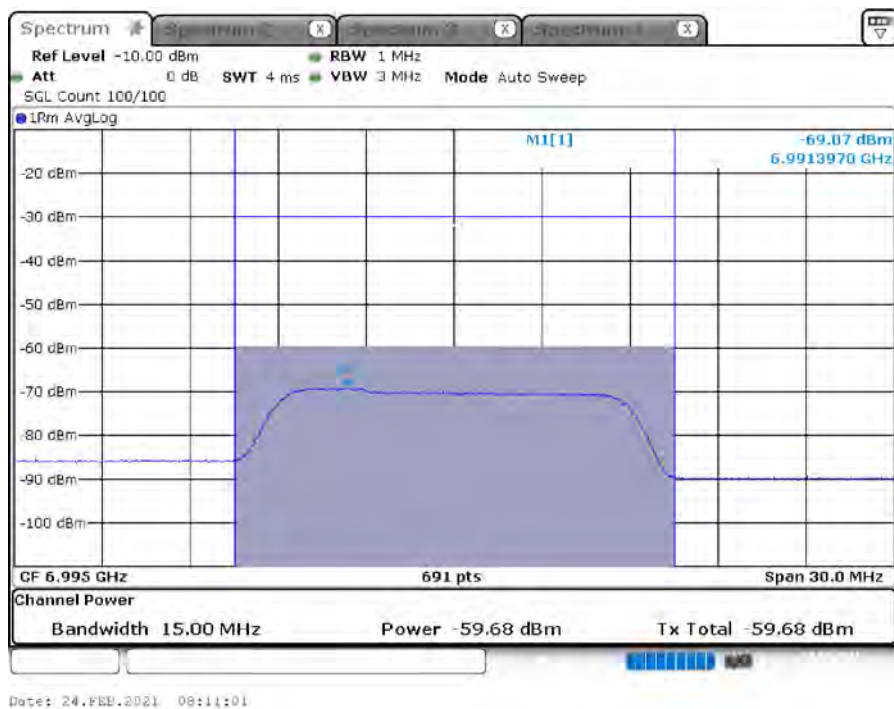
Incumbent signal (AWGN) Plot



Frequency (MHz): 6695 MHz

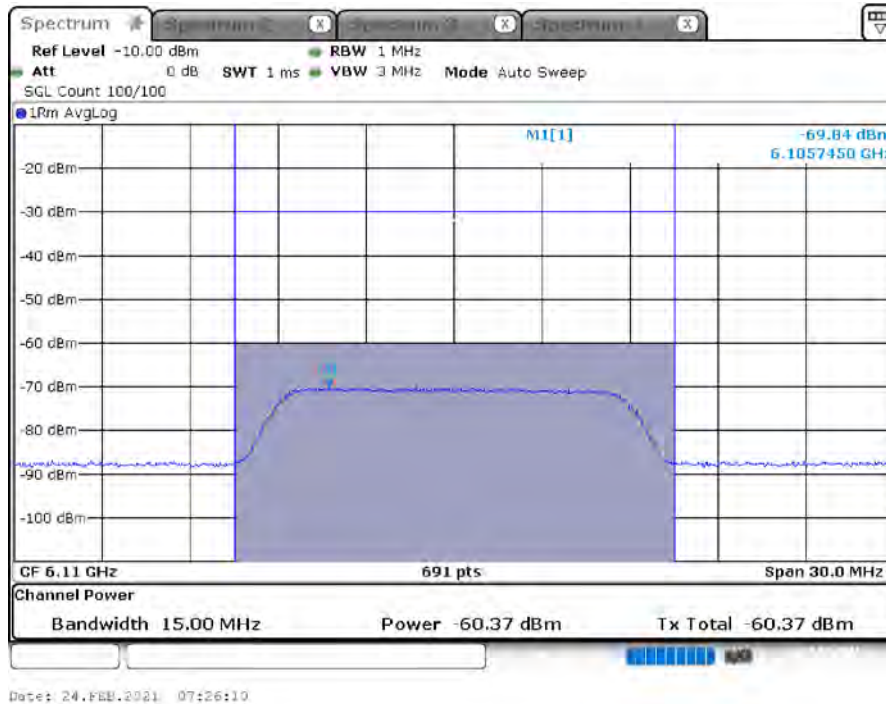


Frequency (MHz): 6995 MHz



802.11ax HEW160

Frequency (MHz): 6110 MHz



Frequency (MHz): 6185 MHz



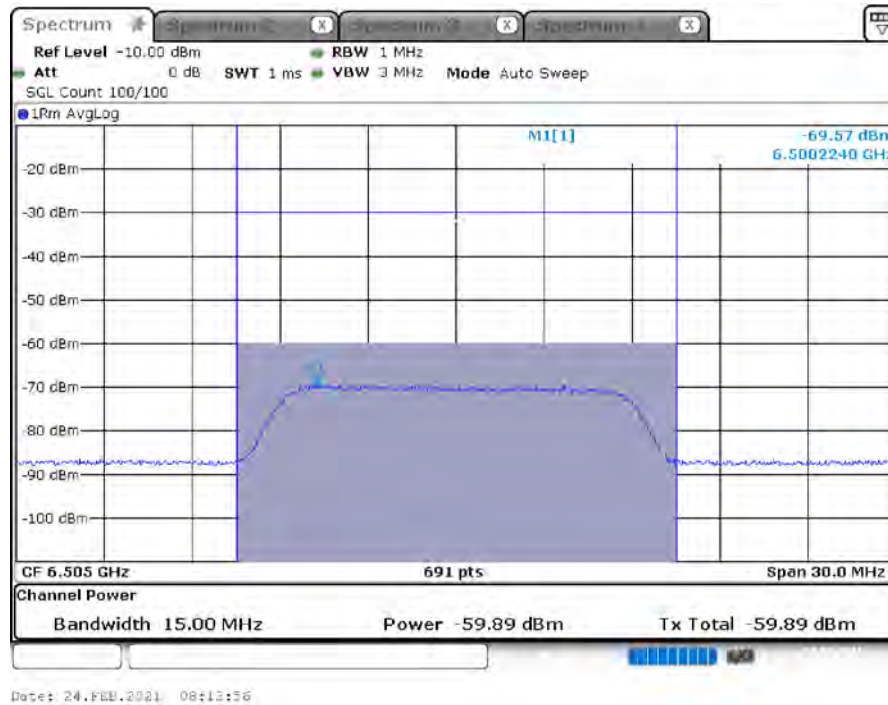
Frequency (MHz): 6260 MHz



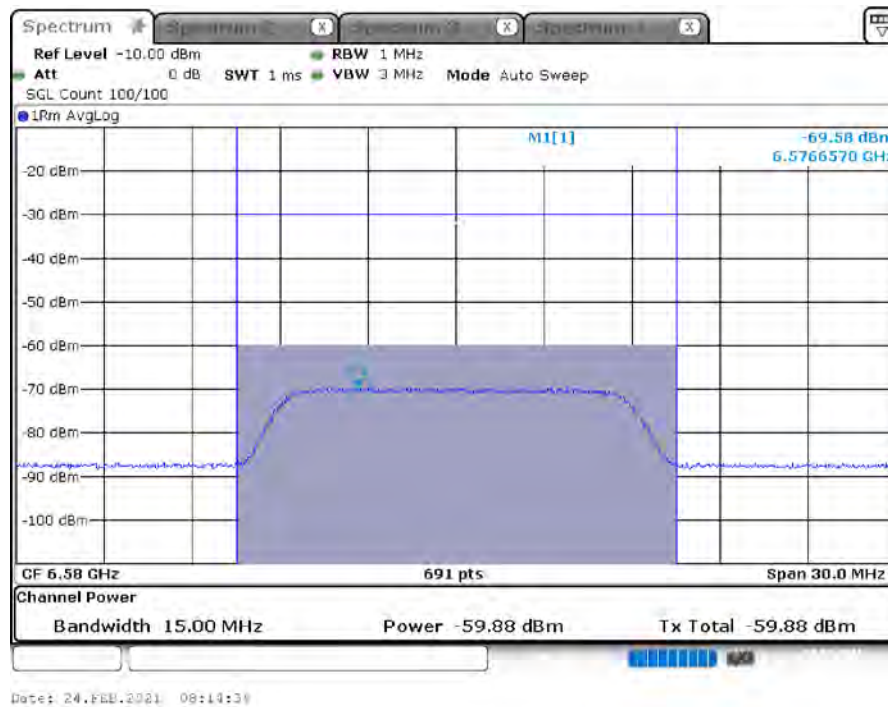
Frequency (MHz): 6430 MHz



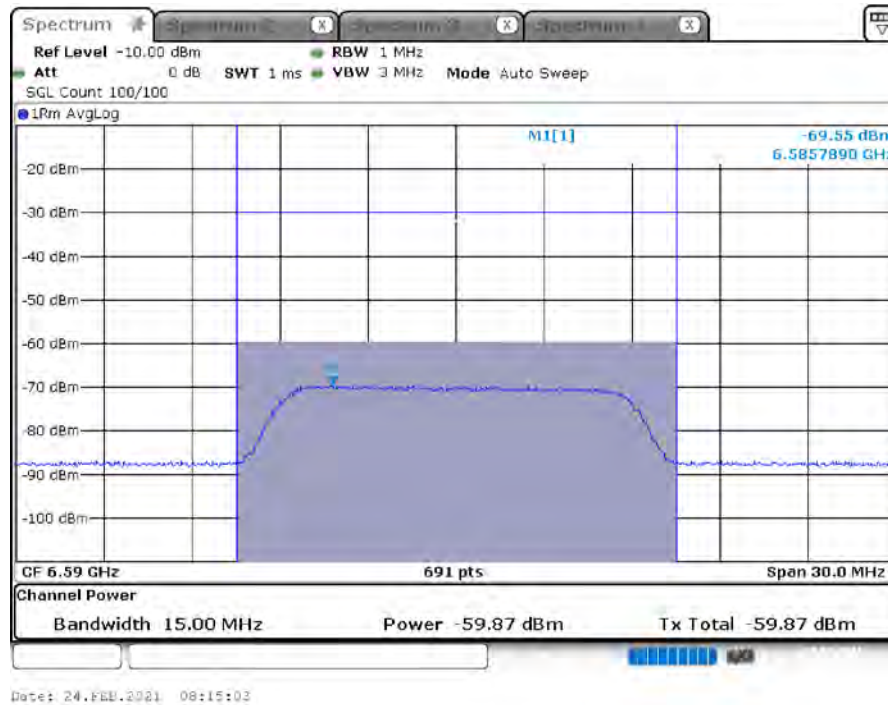
Frequency (MHz): 6505 MHz



Frequency (MHz): 6580 MHz



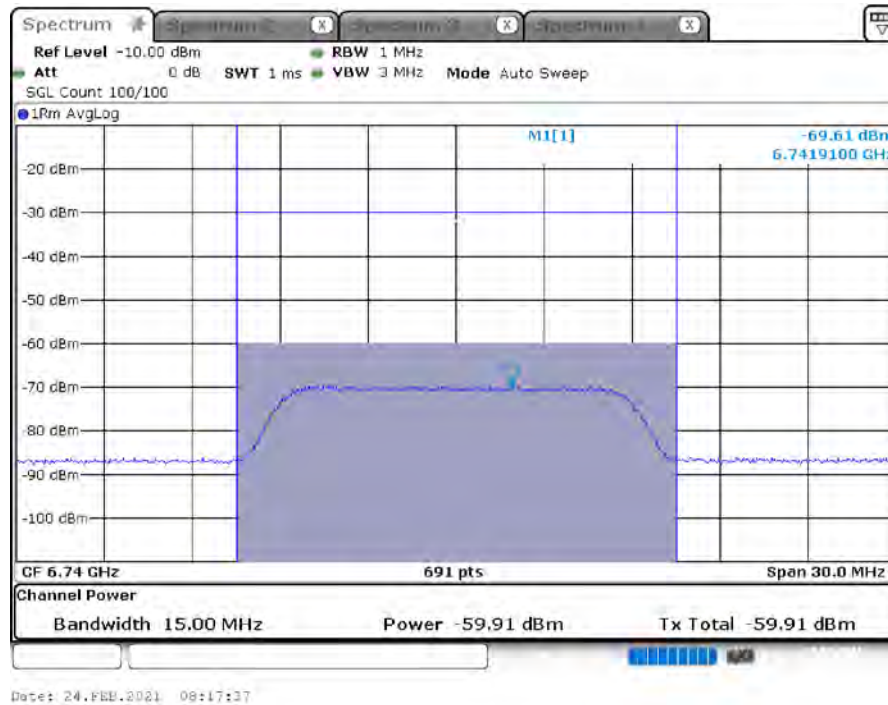
Frequency (MHz): 6590 MHz



Frequency (MHz): 6665 MHz



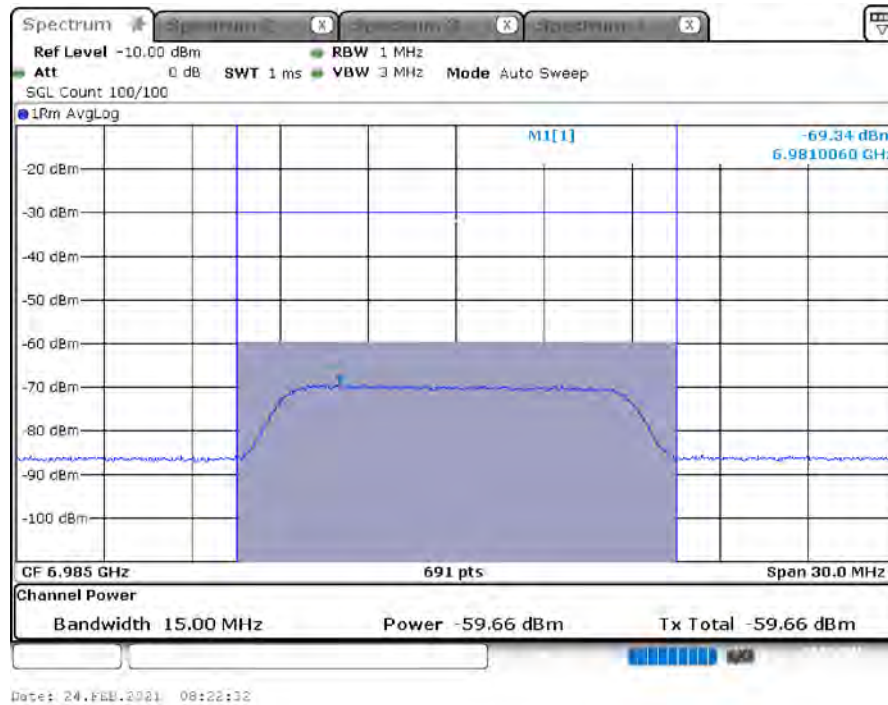
Frequency (MHz): 6740 MHz



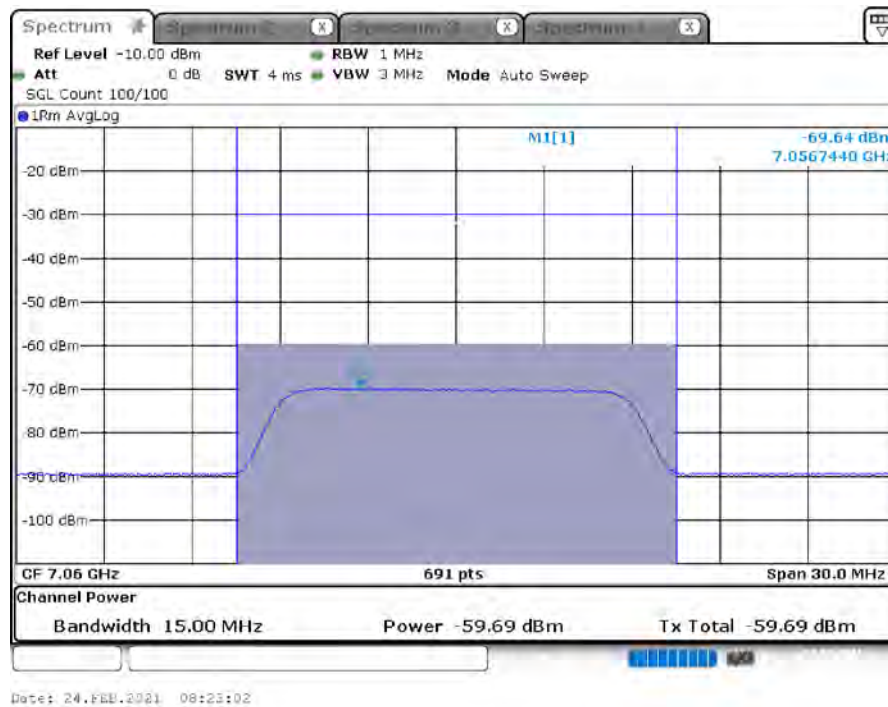
Frequency (MHz): 6910 MHz



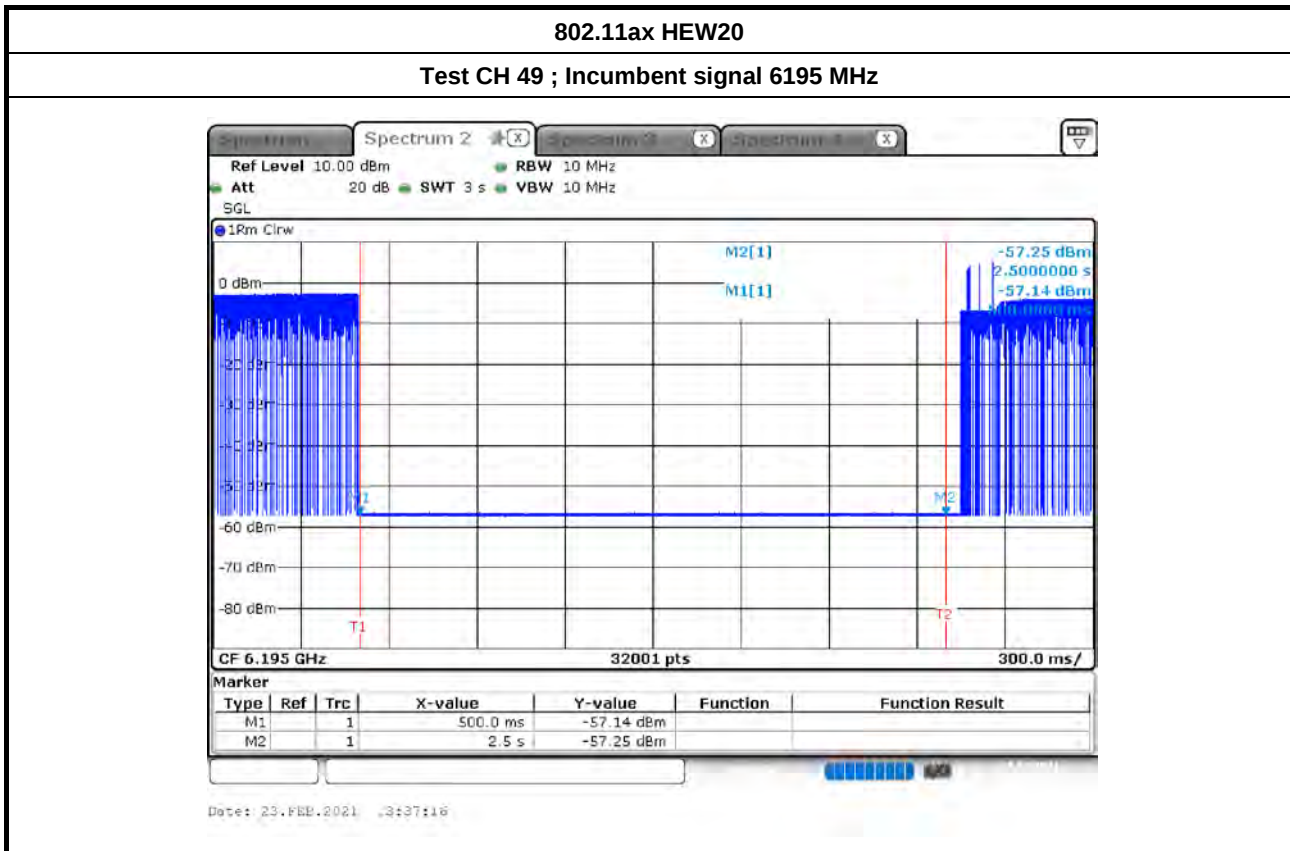
Frequency (MHz): 6985 MHz



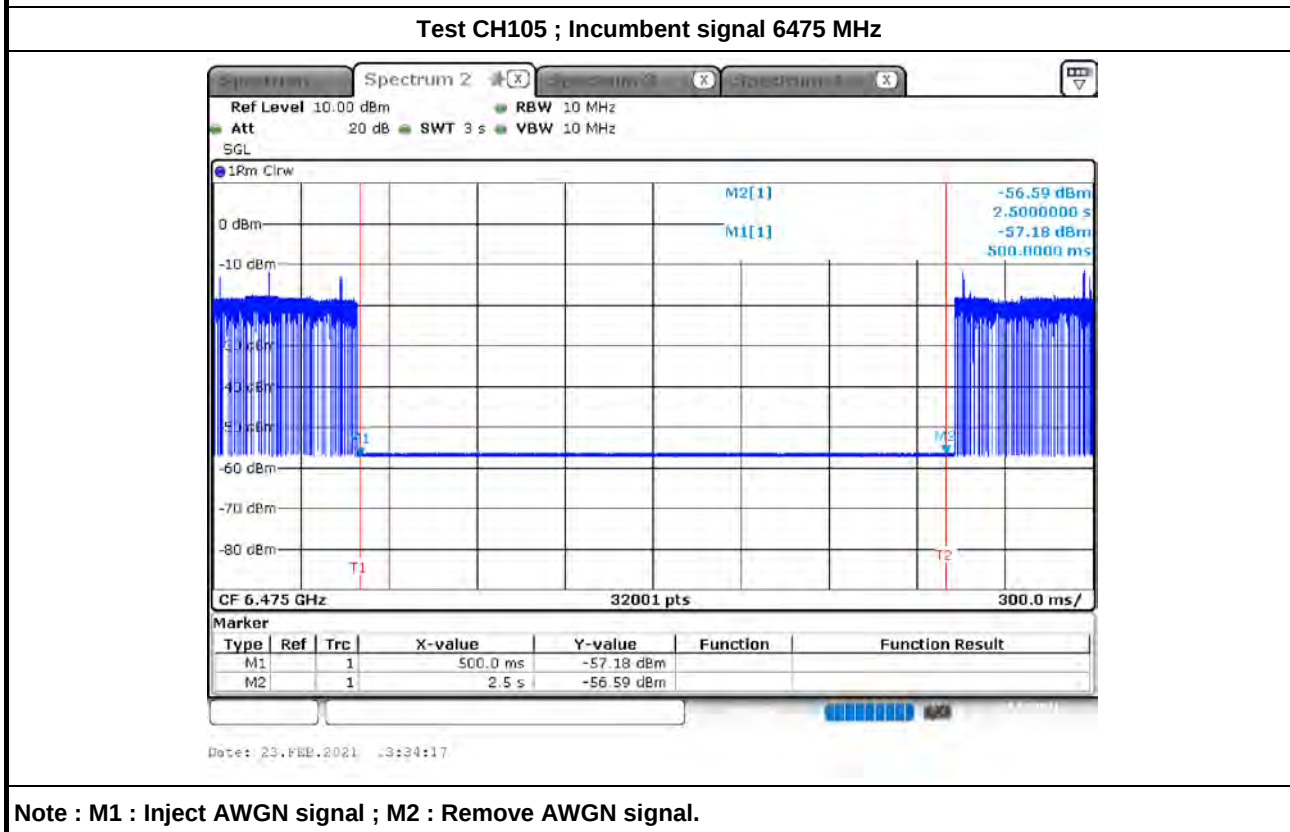
Frequency (MHz): 7060 MHz



Contention-Based Protocol Plot

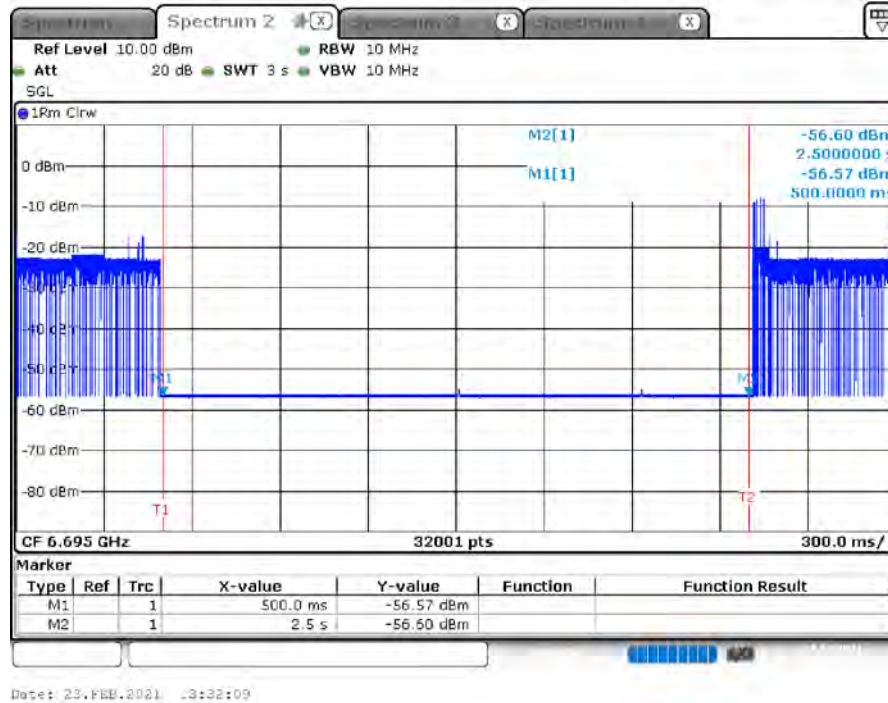


Note : M1 : Inject AWGN signal ; M2 : Remove AWGN signal.



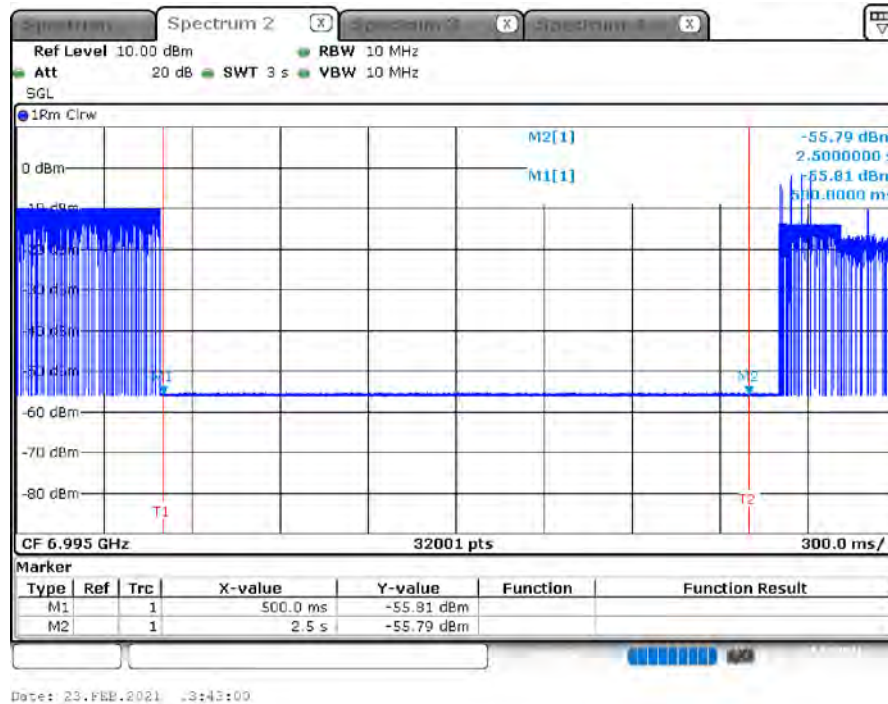
Note : M1 : Inject AWGN signal ; M2 : Remove AWGN signal.

Test CH149 ; Incumbent signal 6695MHz



Note : M1 : Inject AWGN signal ; M2 : Remove AWGN signal.

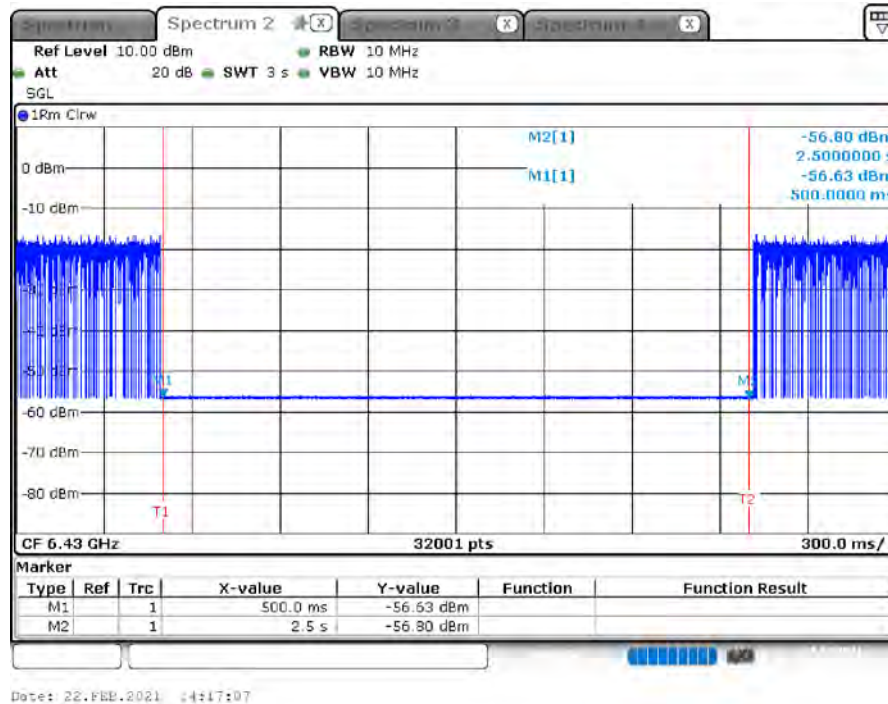
Test CH209 ; Incumbent signal 6995 MHz



Note : M1 : Inject AWGN signal ; M2 : Remove AWGN signal.

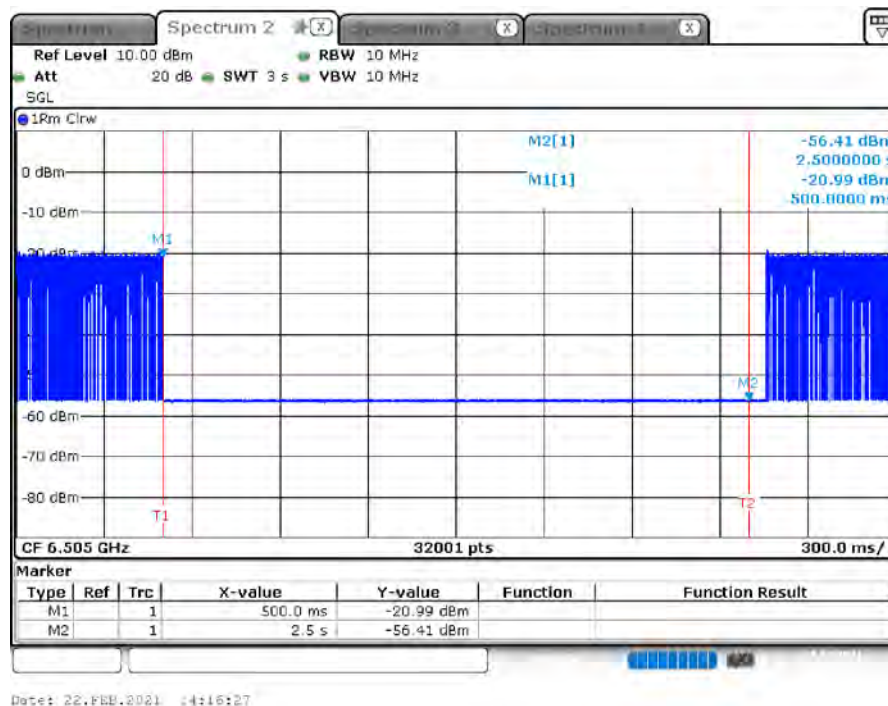
802.11ax HEW160

Test CH47 ; Incumbent signal 6430 MHz



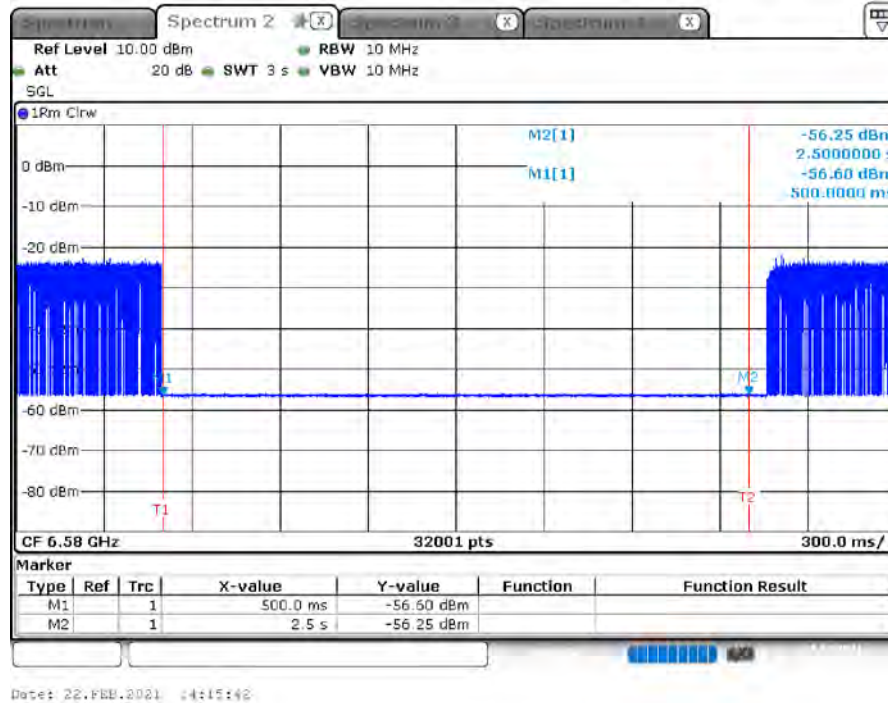
Note : M1 : Inject AWGN signal ; M2 : Remove AWGN signal.

Test CH47 ; Incumbent signal 6505 MHz



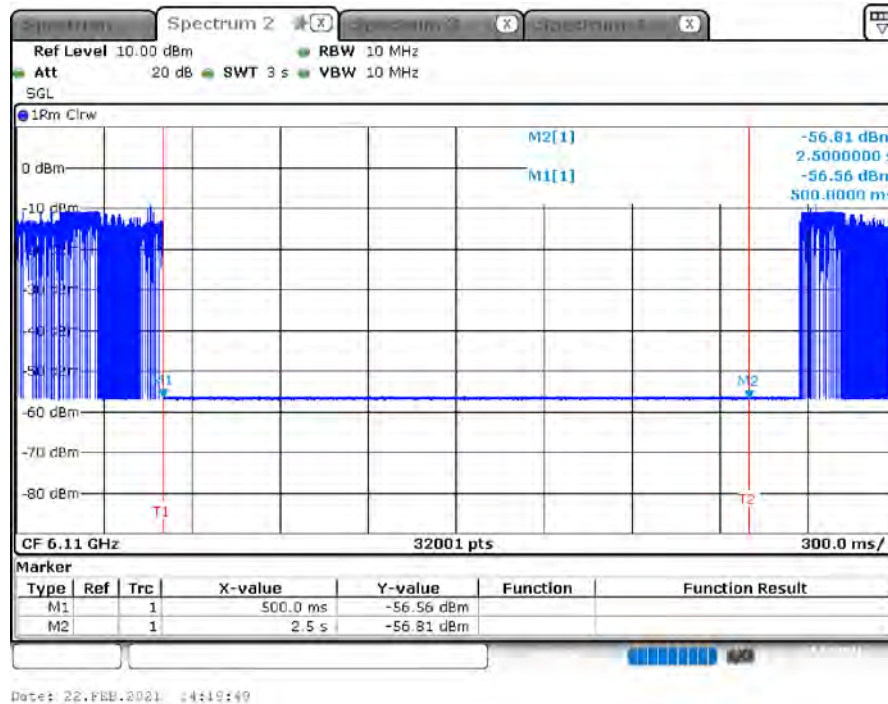
Note : M1 : Inject AWGN signal ; M2 : Remove AWGN signal.

Test CH47 ; Incumbent signal 6580 MHz



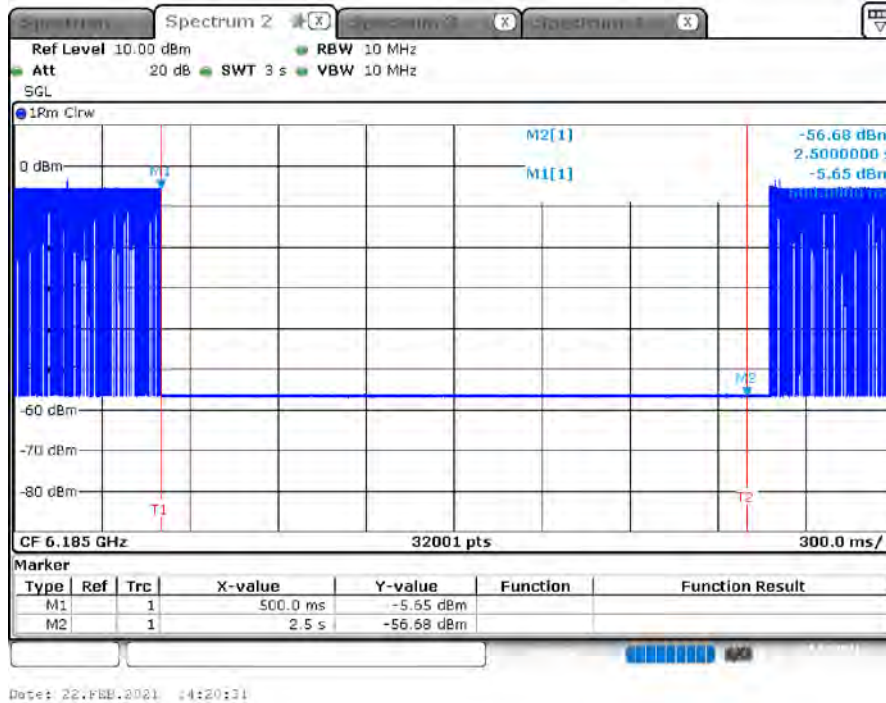
Note : M1 : Inject AWGN signal ; M2 : Remove AWGN signal.

Test CH111 ; Incumbent signal 6110 MHz



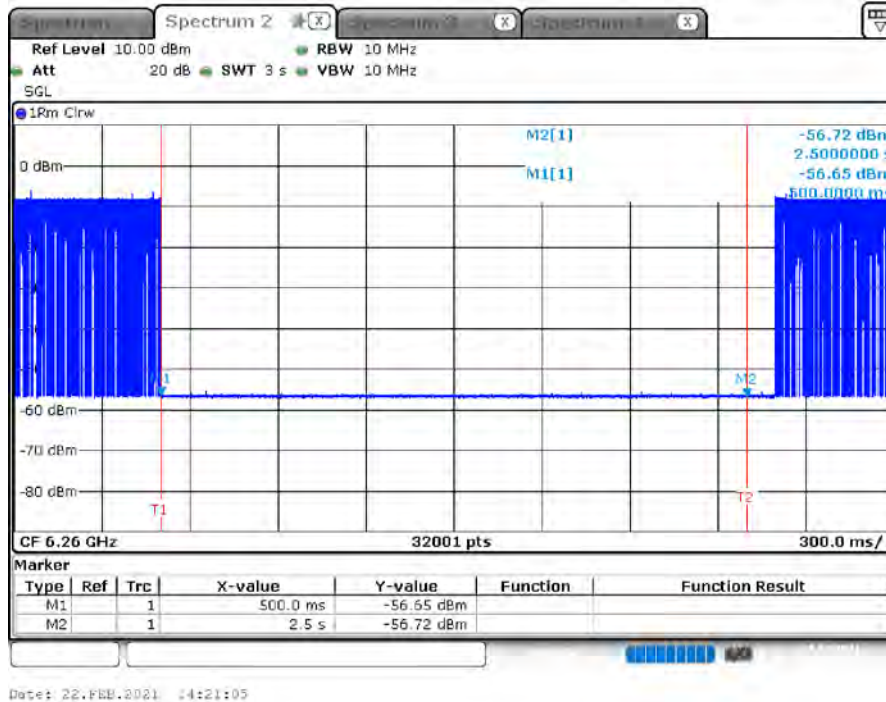
Note : M1 : Inject AWGN signal ; M2 : Remove AWGN signal.

Test CH111 ; Incumbent signal 6185 MHz



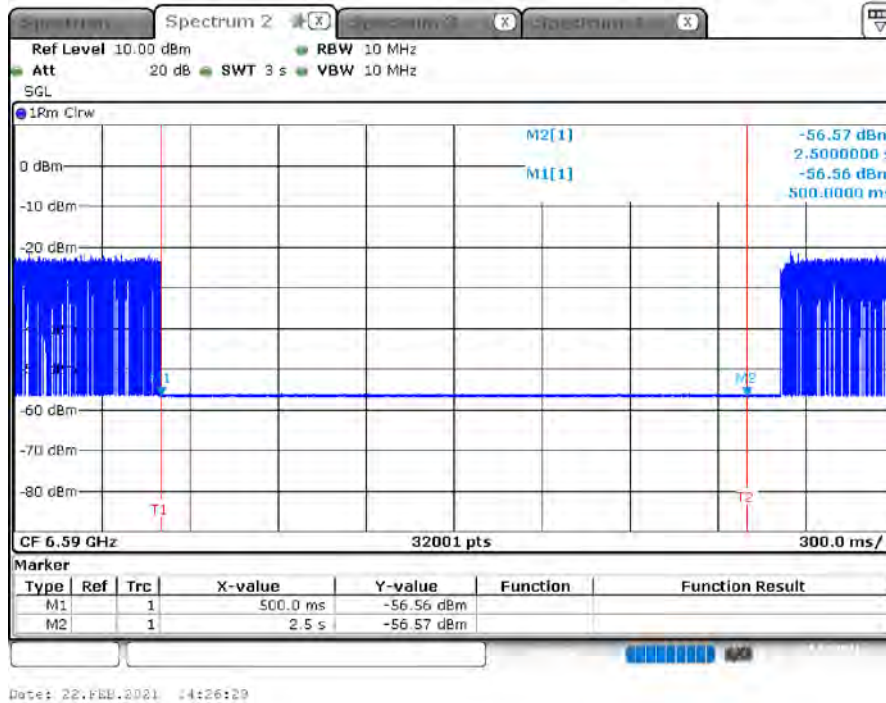
Note : M1 : Inject AWGN signal ; M2 : Remove AWGN signal.

Test CH111 ; Incumbent signal 6260 MHz



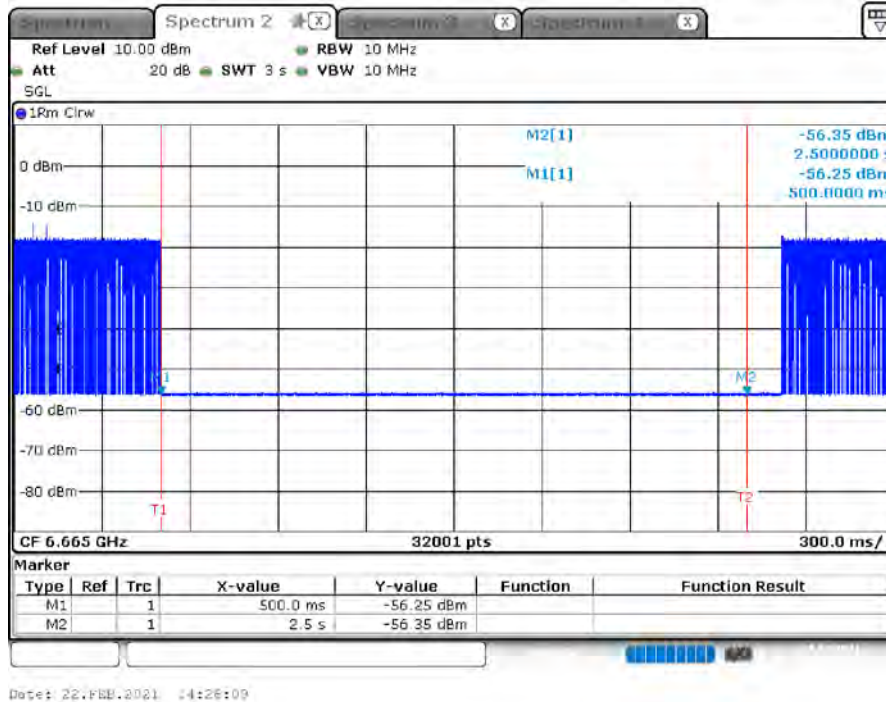
Note : M1 : Inject AWGN signal ; M2 : Remove AWGN signal.

Test CH143 ; Incumbent signal 6590 MHz



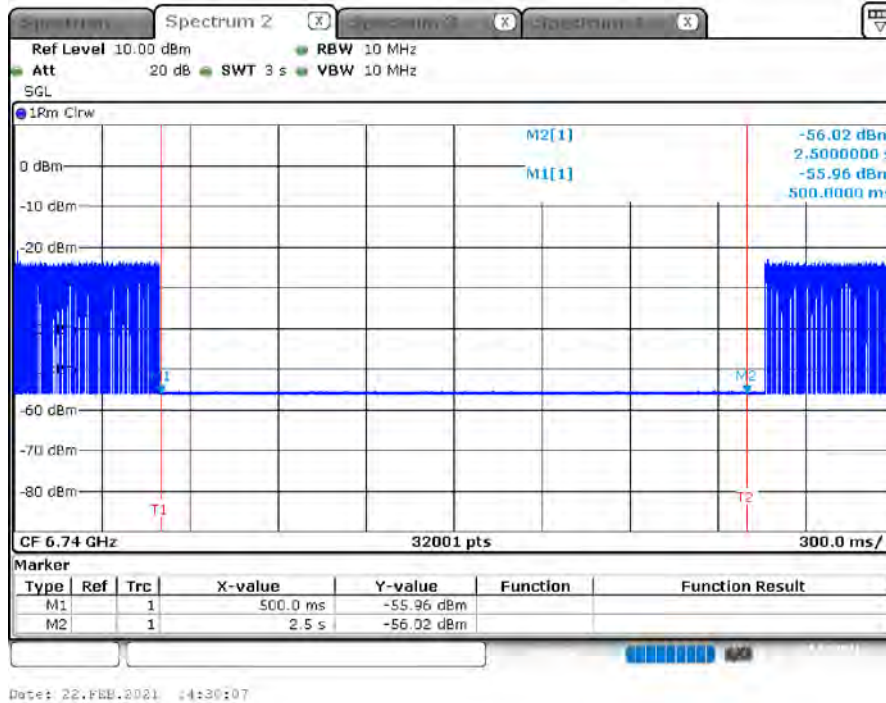
Note : M1 : Inject AWGN signal ; M2 : Remove AWGN signal.

Test CH143 ; Incumbent signal 6665 MHz



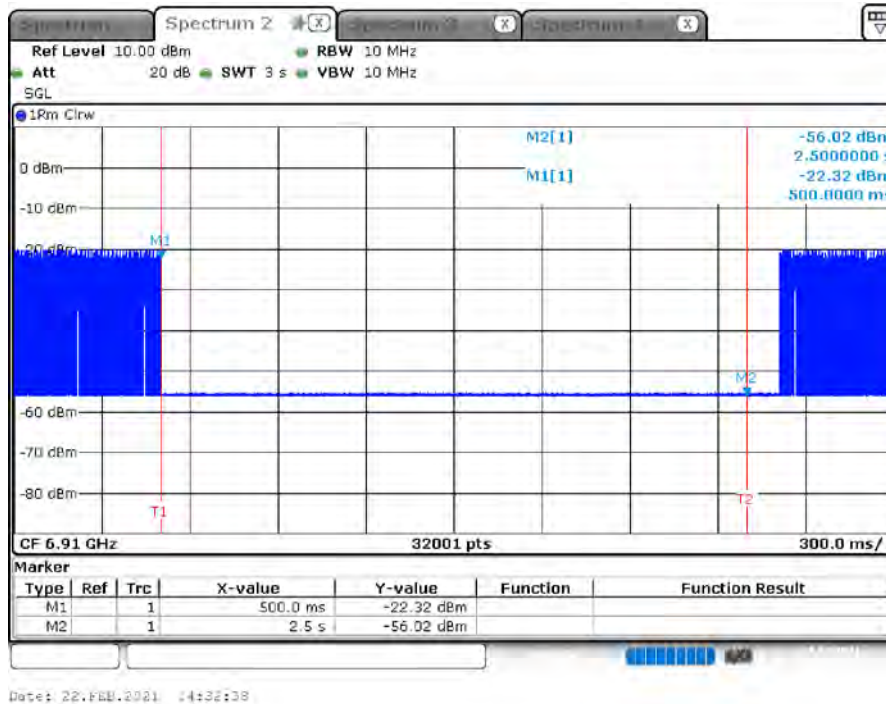
Note : M1 : Inject AWGN signal ; M2 : Remove AWGN signal.

Test CH143 ; Incumbent signal 6740 MHz



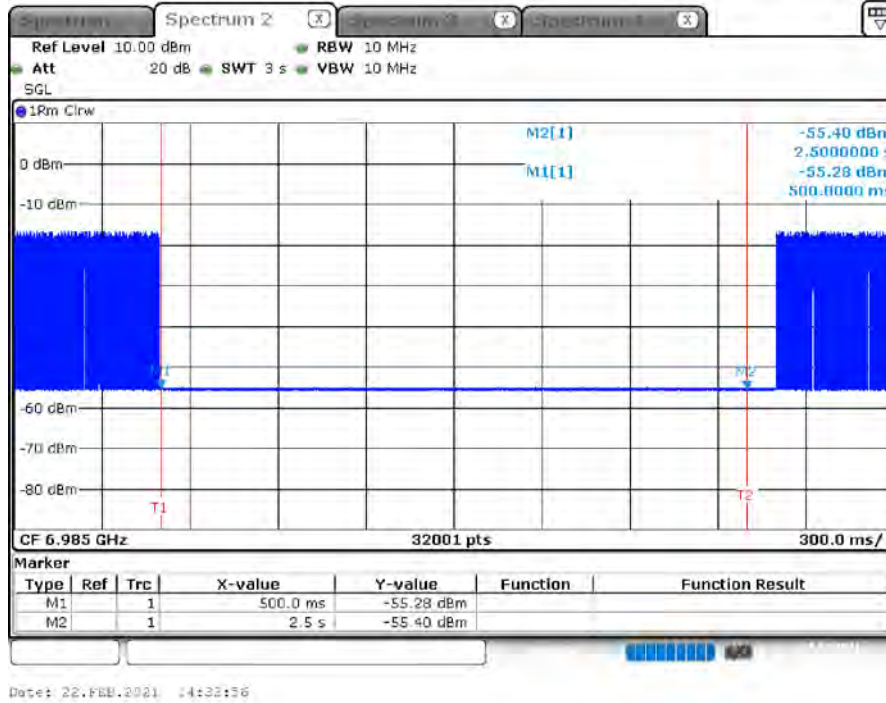
Note : M1 : Inject AWGN signal ; M2 : Remove AWGN signal.

Test CH 207 ; Incumbent signal 6910 MHz



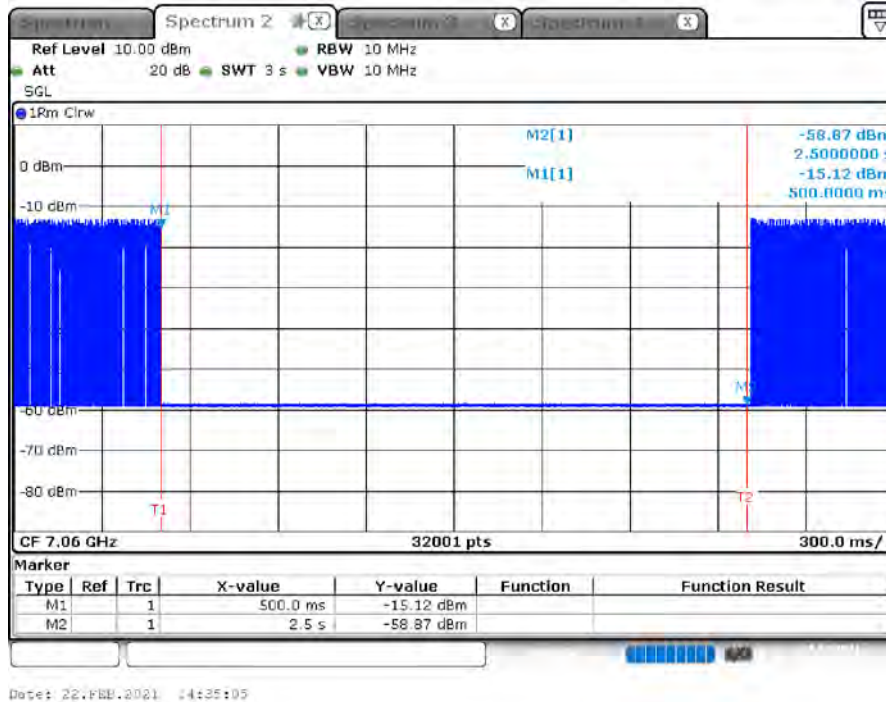
Note : M1 : Inject AWGN signal ; M2 : Remove AWGN signal.

Test CH 207 ; Incumbent signal 6985 MHz



Note : M1 : Inject AWGN signal ; M2 : Remove AWGN signal.

Test CH 207 ; Incumbent signal 7060 MHz



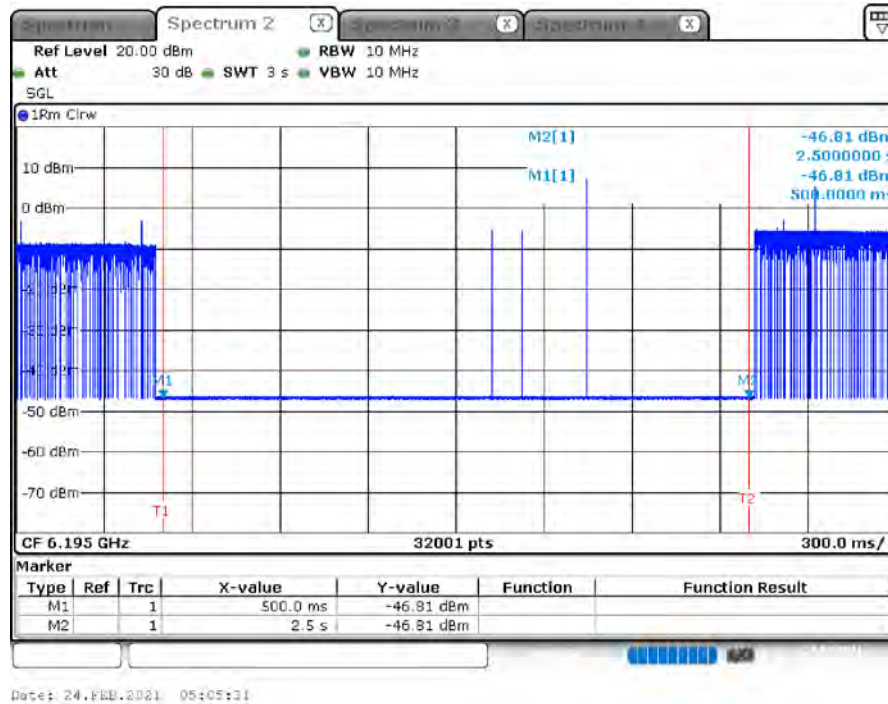
Note : M1 : Inject AWGN signal ; M2 : Remove AWGN signal.

Contention Based Protocol Threshold Level Verify							
UNII Band	Test Channel	Bandwidth (MHz)	Freq. (MHz)	Intetference Frequency (MHz)		Threshold Level of AWGN Interference (dBm)	Situation of EUT
5	49	20	6195	Center	6195	-66.28	Start transmission.
5	47	160	6185	Low edge	6110	-65.28	Start transmission.
				Center	6185	-62.28	Start transmission.
				High edge	6260	-62.28	Start transmission.

Contention Based Protocol Threshold Level Verify Plot

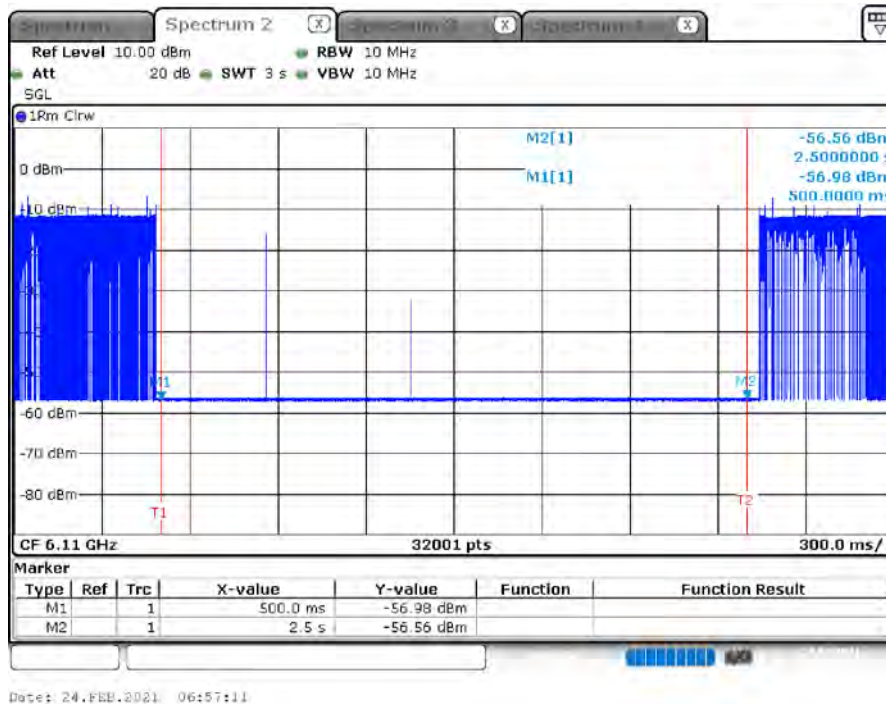
Bandwidth (MHz): 20

Frequency (MHz): 6195 MHz (Threshold Level: -66.28 dBm)

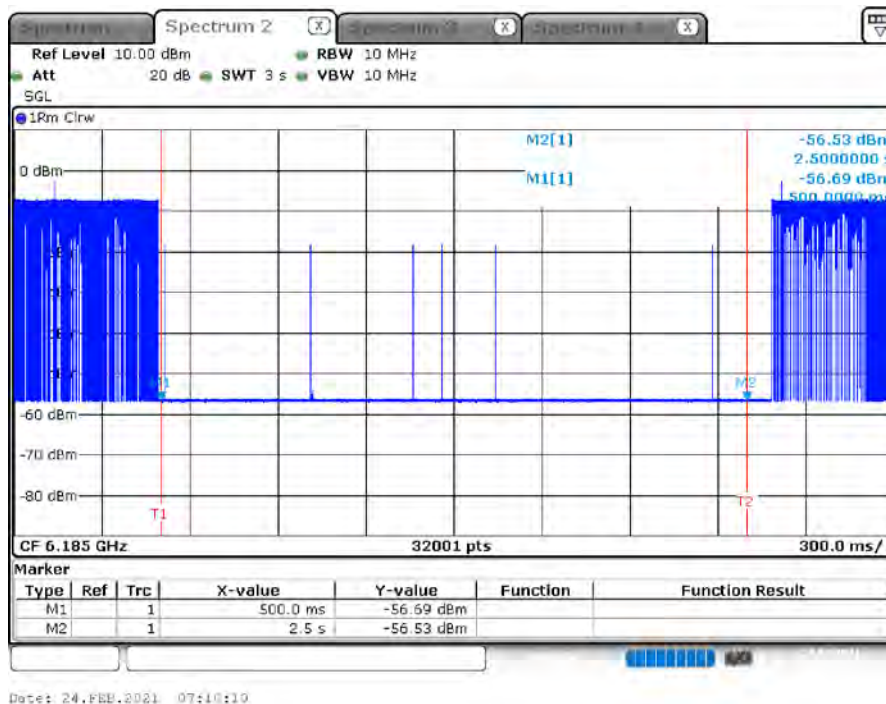


Bandwidth (MHz): 160

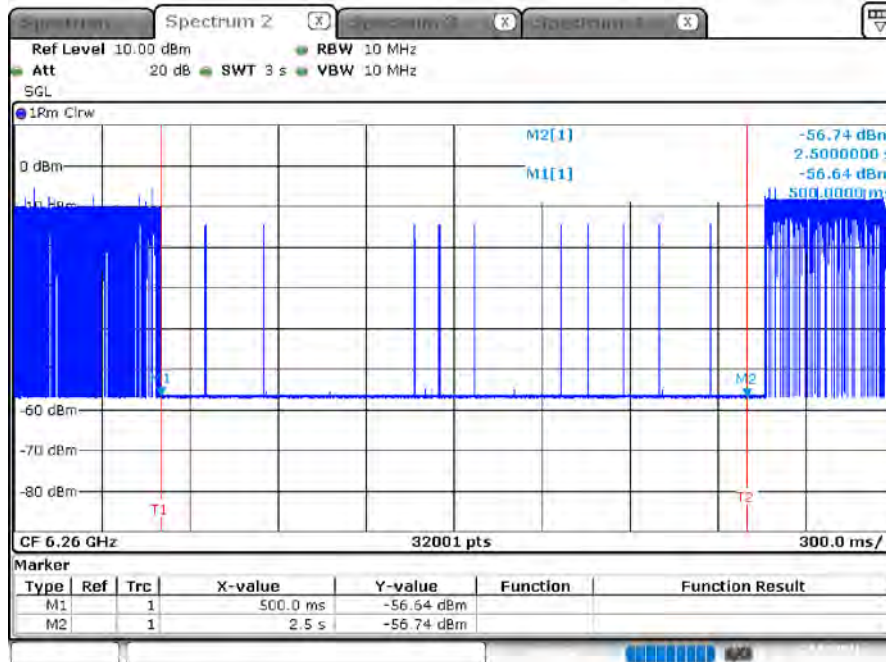
Frequency (MHz): 6110 MHz (Threshold Level: -65.28 dBm)



Frequency (MHz): 6185 MHz (Threshold Level: -62.28 dBm)



Frequency (MHz): 6260 MHz (Threshold Level: -62.28 dBm)



Date: 24.FEB.2021 07:12:26