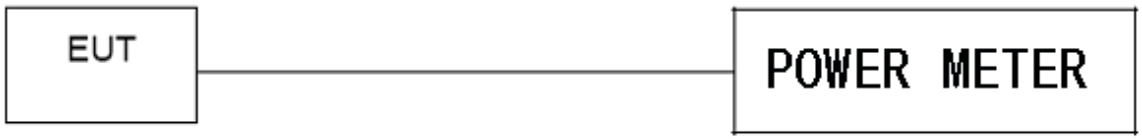
8. Maximum Conducted Output Power and Maximum EIRP

8.1 Block Diagram Of Test Setup



8.2 Limit

According to FCC §15.407

For a standard power access point (6SD) and fixed client (6FC) device operating in the 5.925–6.425 GHz and 6.525–6.875 GHz bands, the maximum power spectral density must not exceed 23 dBm e.i.r.p in any 1-megahertz band. In addition, the maximum e.i.r.p. over the frequency band of operation must not exceed 36 dBm. For outdoor devices, the maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

For an indoor access point (6ID) operating in the 5.925–7.125 GHz band, the maximum power spectral density must not exceed 5 dBm e.i.r.p. in any 1-megahertz band. In addition, the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm.

For a subordinate device (6PP) operating under the control of an indoor access point in the 5.925–7.125 GHz band, the maximum power spectral density must not exceed 5 dBm e.i.r.p in any 1-megahertz band, and the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm.

For client devices(6FX), except for fixed client devices as defined in this subpart, operating under the control of a standard power access point in 5.925–6.425 GHz and 6.525–6.875 GHz bands, the maximum power spectral density must not exceed 17 dBm e.i.r.p. in any 1-megahertz band, and the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm and the device must limit its power to no more than 6 dB below its associated standard power access point's authorized transmit power.

For client devices(6XD) operating under the control of an indoor access point in the 5.925–7.125 GHz bands, the maximum power spectral density must not exceed −1 dBm e.i.r.p. in any 1-megahertz band, and the maximum e.i.r.p. over the frequency band of operation must not exceed 24 dBm.

8.3 Test Procedure

Maximum conducted output power may be measured using a spectrum analyzer/EMI receiver or an RF power meter.

1. Device Configuration

If possible, configure or modify the operation of the EUT so that it transmits continuously at its maximum power control level (see section II.B.).

a) The intent is to test at 100 percent duty cycle; however a small reduction in duty cycle (to no lower than 98 percent) is permitted if required by the EUT for amplitude control purposes. Manufacturers are expected to provide software to the test lab to permit such continuous operation.

b) If continuous transmission (or at least 98 percent duty cycle) cannot be achieved due to hardware limitations (e.g., overheating), the EUT shall be operated at its maximum power control level with the transmit duration as long as possible and the duty cycle as high as possible.

2. Measurement using a Spectrum Analyzer or EMI Receiver (SA)

Measurement of maximum conducted output power using a spectrum analyzer requires integrating the spectrum across a frequency span that encompasses, at a minimum, either the EBW or the 99-percent occupied bandwidth of the signal.1 However, the EBW must be used to determine bandwidth dependent limits on maximum conducted output power in accordance with § 15.407(a).

a) The test method shall be selected as follows: (i) Method SA-1 or SA-1 Alternative (averaging with the EUT transmitting at full power throughout each sweep) shall be applied if either of the following conditions can be satisfied:
• The EUT transmits continuously (or with a duty cycle ≥ 98 percent).
• Sweep triggering or gating can be implemented in a way that the device transmits at the maximum power control level throughout the duration of each of the instrument sweeps to be averaged. This condition can generally be achieved by triggering the instrument's sweep if the duration of the sweep (with the analyzer configured as in Method SA-1, below) is equal to or shorter than the duration T of each transmission from the EUT and if those transmissions exhibit full power throughout their durations.
(ii) Method SA-2 or SA-2 Alternative (averaging across on and off times of the EUT transmissions, followed by duty cycle correction) shall be applied if the conditions of (i) cannot be achieved and the transmissions exhibit a constant duty cycle during the measurement duration. Duty cycle will be considered to be constant if variations are less than ± 2 percent.
(iii) Method SA-3 (RMS detection with max hold) or SA-3 Alternative (reduced VBW with max hold) shall be applied if the conditions of (i) and (ii) cannot be achieved.

b) Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep): (i) Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal.
(ii) Set RBW = 1 MHz.
(iii) Set VBW ≥ 3 MHz.
(iv) Number of points in sweep ≥ 2 Span / RBW. (This ensures that bin-to-bin spacing is ≤ RBW/2, so that narrowband signals are not lost between frequency bins.)
(v) Sweep time = auto.
(vi) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
(vii) If transmit duty cycle < 98 percent, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle ≥ 98 percent, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to "free run".
(viii) Trace average at least 100 traces in power averaging (i.e., RMS) mode.
(ix) Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum

8.4 EUT Operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

8.5 Test Result

Indoor Client

Condition	Mode	Frquency(MHz)	Average Power (dBm)			Antenna Gain (dBi)	EIRP(dBm)			EIRP Limit (dBm)	Verdict
			Chain 0	Chain 1	Total		Chain 0	Chain 1	Total		
NVNT	ax20	5955	3.3	4.13	6.74	2.92	6.22	7.05	9.67	24	Pass
NVNT	ax20	6175	3.23	3.97	6.63	2.92	6.15	6.89	9.55	24	Pass
NVNT	ax20	6415	3.3	4.58	7	2.92	6.22	7.50	9.92	24	Pass
NVNT	ax20	6435	3.61	4.3	6.98	2.92	6.53	7.22	9.90	24	Pass
NVNT	ax20	6475	3.52	4.53	7.06	2.92	6.44	7.45	9.98	24	Pass
NVNT	ax20	6515	3.05	4.54	6.87	2.92	5.97	7.46	9.79	24	Pass
NVNT	ax20	6535	3.26	3.4	6.34	2.92	6.18	6.32	9.26	24	Pass
NVNT	ax20	6695	3.22	3.55	6.4	2.92	6.14	6.47	9.32	24	Pass
NVNT	ax20	6855	2.85	3.91	6.42	2.92	5.77	6.83	9.34	24	Pass
NVNT	ax20	6875	2.66	3.83	6.29	2.92	5.58	6.75	9.21	24	Pass
NVNT	ax20	6995	3.66	4.81	7.28	2.92	6.58	7.73	10.20	24	Pass
NVNT	ax20	7115	3.8	4.75	7.31	2.92	6.72	7.67	10.23	24	Pass
NVNT	ax40	5965	6.45	7.62	10.08	2.92	9.37	10.54	13.00	24	Pass
NVNT	ax40	6165	6.48	7.31	9.93	2.92	9.40	10.23	12.85	24	Pass
NVNT	ax40	6405	6.37	7.69	10.09	2.92	9.29	10.61	13.01	24	Pass
NVNT	ax40	6445	6.29	7.36	9.87	2.92	9.21	10.28	12.79	24	Pass
NVNT	ax40	6485	6.08	7.27	9.73	2.92	9.00	10.19	12.65	24	Pass
NVNT	ax40	6525	6.04	6.62	9.35	2.92	8.96	9.54	12.27	24	Pass
NVNT	ax40	6565	6.26	6.57	9.43	2.92	9.18	9.49	12.35	24	Pass
NVNT	ax40	6725	6.07	6.54	9.32	2.92	8.99	9.46	12.24	24	Pass
NVNT	ax40	6845	5.79	6.76	9.31	2.92	8.71	9.68	12.23	24	Pass
NVNT	ax40	6885	5.46	7.91	9.87	2.92	8.38	10.83	12.79	24	Pass
NVNT	ax40	7005	6.24	7.08	9.69	2.92	9.16	10.00	12.61	24	Pass
NVNT	ax40	7085	5.71	7.45	9.68	2.92	8.63	10.37	12.60	24	Pass
NVNT	ax80	5985	9.12	10.06	12.63	2.92	12.04	12.98	15.55	24	Pass
NVNT	ax80	6145	9.04	10.1	12.61	2.92	11.96	13.02	15.53	24	Pass
NVNT	ax80	6385	8.86	9.99	12.47	2.92	11.78	12.91	15.39	24	Pass
NVNT	ax80	6465	9.44	10.43	12.97	2.92	12.36	13.35	15.89	24	Pass
NVNT	ax80	6545	8.94	9.66	12.33	2.92	11.86	12.58	15.25	24	Pass
NVNT	ax80	6705	9.04	9.62	12.35	2.92	11.96	12.54	15.27	24	Pass
NVNT	ax80	6865	8.76	9.81	12.33	2.92	11.68	12.73	15.25	24	Pass
NVNT	ax80	6945	9.72	10.08	12.91	2.92	12.64	13.00	15.83	24	Pass
NVNT	ax80	7025	9.37	10.58	13.03	2.92	12.29	13.50	15.95	24	Pass
NVNT	ax160	6025	11.77	12.59	15.21	2.92	14.69	15.51	18.13	24	Pass
NVNT	ax160	6185	11.32	12.84	15.16	2.92	14.24	15.76	18.08	24	Pass
NVNT	ax160	6345	11.26	13	15.23	2.92	14.18	15.92	18.15	24	Pass
NVNT	ax160	6505	11.8	13.5	15.74	2.92	14.72	16.42	18.66	24	Pass
NVNT	ax160	6665	12.07	12.44	15.27	2.92	14.99	15.36	18.19	24	Pass

NVNT	ax160	6825	11.98	12.54	15.28	2.92	14.90	15.46	18.20	24	Pass
NVNT	ax160	6985	11.71	13.64	15.79	2.92	14.63	16.56	18.71	24	Pass
NVNT	be20	5955	3.43	4.28	6.89	2.92	6.35	7.20	9.81	24	Pass
NVNT	be20	6175	3.33	4.17	6.78	2.92	6.25	7.09	9.70	24	Pass
NVNT	be20	6415	3.46	4.78	7.18	2.92	6.38	7.70	10.10	24	Pass
NVNT	be20	6435	3.8	4.41	7.13	2.92	6.72	7.33	10.05	24	Pass
NVNT	be20	6475	3.65	4.65	7.19	2.92	6.57	7.57	10.11	24	Pass
NVNT	be20	6515	3.17	4.72	7.02	2.92	6.09	7.64	9.94	24	Pass
NVNT	be20	6535	3.4	3.51	6.47	2.92	6.32	6.43	9.39	24	Pass
NVNT	be20	6695	3.36	3.68	6.53	2.92	6.28	6.60	9.45	24	Pass
NVNT	be20	6855	3.04	4.04	6.58	2.92	5.96	6.96	9.50	24	Pass
NVNT	be20	6875	2.78	3.95	6.41	2.92	5.70	6.87	9.33	24	Pass
NVNT	be20	6995	3.8	4.93	7.41	2.92	6.72	7.85	10.33	24	Pass
NVNT	be20	7115	3.95	4.87	7.44	2.92	6.87	7.79	10.36	24	Pass
NVNT	be40	5965	6.56	7.74	10.2	2.92	9.48	10.66	13.12	24	Pass
NVNT	be40	6165	6.66	7.48	10.1	2.92	9.58	10.40	13.02	24	Pass
NVNT	be40	6405	6.55	7.84	10.25	2.92	9.47	10.76	13.17	24	Pass
NVNT	be40	6445	6.48	7.51	10.04	2.92	9.40	10.43	12.96	24	Pass
NVNT	be40	6485	6.22	7.45	9.89	2.92	9.14	10.37	12.81	24	Pass
NVNT	be40	6525	6.15	6.75	9.47	2.92	9.07	9.67	12.39	24	Pass
NVNT	be40	6565	6.38	6.72	9.56	2.92	9.30	9.64	12.48	24	Pass
NVNT	be40	6725	6.25	6.71	9.5	2.92	9.17	9.63	12.42	24	Pass
NVNT	be40	6845	5.93	6.88	9.44	2.92	8.85	9.80	12.36	24	Pass
NVNT	be40	6885	5.6	8.08	10.03	2.92	8.52	11.00	12.94	24	Pass
NVNT	be40	7005	6.4	7.2	9.83	2.92	9.32	10.12	12.75	24	Pass
NVNT	be40	7085	5.89	7.6	9.84	2.92	8.81	10.52	12.76	24	Pass
NVNT	be80	5985	9.25	10.23	12.78	2.92	12.17	13.15	15.70	24	Pass
NVNT	be80	6145	9.23	10.23	12.77	2.92	12.15	13.15	15.69	24	Pass
NVNT	be80	6385	8.99	10.18	12.64	2.92	11.91	13.10	15.56	24	Pass
NVNT	be80	6465	9.57	10.61	13.13	2.92	12.49	13.53	16.05	24	Pass
NVNT	be80	6545	9.06	9.81	12.46	2.92	11.98	12.73	15.38	24	Pass
NVNT	be80	6705	9.22	9.73	12.49	2.92	12.14	12.65	15.41	24	Pass
NVNT	be80	6865	8.93	9.94	12.47	2.92	11.85	12.86	15.39	24	Pass
NVNT	be80	6945	9.83	10.26	13.06	2.92	12.75	13.18	15.98	24	Pass
NVNT	be80	7025	9.52	10.73	13.18	2.92	12.44	13.65	16.10	24	Pass
NVNT	be160	6025	11.95	12.77	15.39	2.92	14.87	15.69	18.31	24	Pass
NVNT	be160	6185	11.44	13.02	15.31	2.92	14.36	15.94	18.23	24	Pass
NVNT	be160	6345	11.37	13.11	15.34	2.92	14.29	16.03	18.26	24	Pass
NVNT	be160	6505	11.92	13.63	15.87	2.92	14.84	16.55	18.79	24	Pass
NVNT	be160	6665	12.23	12.64	15.45	2.92	15.15	15.56	18.37	24	Pass
NVNT	be160	6825	12.17	12.65	15.43	2.92	15.09	15.57	18.35	24	Pass
NVNT	be160	6985	11.9	13.75	15.93	2.92	14.82	16.67	18.85	24	Pass
NVNT	be20 26-tone	5955	-3.47	-2.66	-1.11	2.92	-0.55	0.26	2.88	24	Pass
NVNT	be20 26-ton	6415	-3.52	-4.88	-1.17	2.92	-0.60	-1.96	1.78	24	Pass

	e										
NVNT	be20 26-tone	6435	-3.15	-4.96	-0.66	2.92	-0.23	-2.04	1.97	24	Pass
NVNT	be20 26-tone	6515	-2.95	-4.26	-0.65	2.92	-0.03	-1.34	2.37	24	Pass
NVNT	be20 26-tone	6535	-3.94	-4.51	-0.96	2.92	-1.02	-1.59	1.71	24	Pass
NVNT	be20 26-tone	6875	-3.38	-4.01	-0.94	2.92	-0.46	-1.09	2.25	24	Pass
NVNT	be20 26-tone	6995	-3.07	-4.6	-0.56	2.92	-0.15	-1.68	2.16	24	Pass
NVNT	be20 26-tone	7115	-3.47	-4.14	-0.38	2.92	-0.55	-1.22	2.14	24	Pass
NVNT	be20 52-tone	5955	-1.16	-0.46	2.21	2.92	1.76	2.46	5.13	24	Pass
NVNT	be20 52-tone	6415	-2.11	-0.39	1.84	2.92	0.81	2.53	4.76	24	Pass
NVNT	be20 52-tone	6435	-1.17	-0.17	2.37	2.92	1.75	2.75	5.29	24	Pass
NVNT	be20 52-tone	6515	-1.2	-0.04	2.43	2.92	1.72	2.88	5.35	24	Pass
NVNT	be20 52-tone	6535	-0.77	-0.72	2.27	2.92	2.15	2.20	5.19	24	Pass
NVNT	be20 52-tone	6875	-1.68	-0.16	2.16	2.92	1.24	2.76	5.08	24	Pass
NVNT	be20 52-tone	6995	-1.07	0.36	2.71	2.92	1.85	3.28	5.63	24	Pass
NVNT	be20 52-tone	7115	-1.23	-0.06	2.4	2.92	1.69	2.86	5.32	24	Pass
NVNT	be20 106-tone	5955	1.45	2.14	4.82	2.92	4.37	5.06	7.74	24	Pass
NVNT	be20 106-tone	6415	1.21	2.82	5.1	2.92	4.13	5.74	8.02	24	Pass
NVNT	be20 106-tone	6435	2.01	2.85	5.46	2.92	4.93	5.77	8.38	24	Pass
NVNT	be20 106-tone	6515	1.47	3.17	5.41	2.92	4.39	6.09	8.33	24	Pass
NVNT	be20 106-to	6535	1.99	2.51	5.27	2.92	4.91	5.43	8.19	24	Pass

	ne										
NVNT	be20 106-to ne	6875	1.63	2.89	5.32	2.92	4.55	5.81	8.24	24	Pass
NVNT	be20 106-to ne	6995	1.97	3.07	5.57	2.92	4.89	5.99	8.49	24	Pass
NVNT	be20 106-to ne	7115	1.81	3.36	5.66	2.92	4.73	6.28	8.58	24	Pass
NVNT	be20 52+26 -tone	5955	0.02	0.75	3.41	2.92	2.94	3.67	6.33	24	Pass
NVNT	be20 52+26 -tone	6415	-0.39	1.31	3.55	2.92	2.53	4.23	6.47	24	Pass
NVNT	be20 52+26 -tone	6435	0.25	1.28	3.81	2.92	3.17	4.20	6.73	24	Pass
NVNT	be20 52+26 -tone	6515	0.16	1.65	3.98	2.92	3.08	4.57	6.90	24	Pass
NVNT	be20 52+26 -tone	6535	0.69	0.83	3.77	2.92	3.61	3.75	6.69	24	Pass
NVNT	be20 52+26 -tone	6875	-0.27	1.15	3.51	2.92	2.65	4.07	6.43	24	Pass
NVNT	be20 52+26 -tone	6995	0.49	1.57	4.07	2.92	3.41	4.49	6.99	24	Pass
NVNT	be20 52+26 -tone	7115	0.23	1.58	3.97	2.92	3.15	4.50	6.89	24	Pass
NVNT	be20 106+2 6-tone	5955	1.35	1.94	4.67	2.92	4.27	4.86	7.59	24	Pass
NVNT	be20 106+2 6-tone	6415	0.62	2.08	4.42	2.92	3.54	5.00	7.34	24	Pass
NVNT	be20 106+2 6-tone	6435	1.46	2.4	4.97	2.92	4.38	5.32	7.89	24	Pass
NVNT	be20 106+2 6-tone	6515	0.97	2.54	4.84	2.92	3.89	5.46	7.76	24	Pass
NVNT	be20 106+2 6-tone	6535	1.16	1.8	4.5	2.92	4.08	4.72	7.42	24	Pass
NVNT	be20 106+2 6-tone	6875	0.89	2.03	4.51	2.92	3.81	4.95	7.43	24	Pass
NVNT	be20 106+2 6-tone	6995	1.47	2.72	5.15	2.92	4.39	5.64	8.07	24	Pass
NVNT	be20 106+2	7115	1.19	2.66	5	2.92	4.11	5.58	7.92	24	Pass

	6-tone										
NVNT	be80 484+242-tone	5985	8.35	8.66	11.52	2.92	11.27	11.58	14.44	24	Pass
NVNT	be80 484+242-tone	6385	7.93	8.97	11.49	2.92	10.85	11.89	14.41	24	Pass
NVNT	be80 484+242-tone	6465	8.24	9.36	11.85	2.92	11.16	12.28	14.77	24	Pass
NVNT	be80 484+242-tone	6545	8.2	8.96	11.61	2.92	11.12	11.88	14.53	24	Pass
NVNT	be80 484+242-tone	6865	8.26	8.89	11.6	2.92	11.18	11.81	14.52	24	Pass
NVNT	be80 484+242-tone	6945	8.69	8.98	11.85	2.92	11.61	11.90	14.77	24	Pass
NVNT	be80 484+242-tone	7025	8.53	9.2	11.89	2.92	11.45	12.12	14.81	24	Pass
NVNT	be160 996+484-tone	6025	11.41	11.61	14.52	2.92	14.33	14.53	17.44	24	Pass
NVNT	be160 996+484-tone	6345	11.6	11.56	14.59	2.92	14.52	14.48	17.51	24	Pass
NVNT	be160 996+484-tone	6505	12.61	11.19	14.97	2.92	15.53	14.11	17.89	24	Pass
NVNT	be160 996+484-tone	6665	11.45	11.52	14.5	2.92	14.37	14.44	17.42	24	Pass
NVNT	be160 996+484-tone	6825	11.5	11.86	14.69	2.92	14.42	14.78	17.61	24	Pass
NVNT	be160 996+484-tone	6985	11.45	12.39	14.96	2.92	14.37	15.31	17.88	24	Pass
NVNT	be160 996+484+242-tone	6025	11.98	12.03	15.02	2.92	14.90	14.95	17.94	24	Pass

NVNT	be160 996+4 84+24 2-tone	6345	12.02	12.07	15.06	2.92	14.94	14.99	17.98	24	Pass
NVNT	be160 996+4 84+24 2-tone	6505	12.85	12.3	15.59	2.92	15.77	15.22	18.51	24	Pass
NVNT	be160 996+4 84+24 2-tone	6665	12.07	12.17	15.13	2.92	14.99	15.09	18.05	24	Pass
NVNT	be160 996+4 84+24 2-tone	6825	11.75	12.15	14.96	2.92	14.67	15.07	17.88	24	Pass
NVNT	be160 996+4 84+24 2-tone	6985	11.98	13.16	15.62	2.92	14.90	16.08	18.54	24	Pass

Condition	Mode	Frquency(MHz)	Average Power (dBm)			Antenna Gain (dBi)	EIRP(dBm)			EIRP Limit (dBm)	Verdict
			Chain 0	Chain 1	Total		Chain 0	Chain 1	Total		
NVNT	ax20	5955	20.83	21.1	23.98	2.92	23.75	24.02	26.90	30	Pass
NVNT	ax20	6175	20.82	21	23.92	2.92	23.74	23.92	26.84	30	Pass
NVNT	ax20	6415	20.8	20.92	23.87	2.92	23.72	23.84	26.79	30	Pass
NVNT	ax20	6435	21.32	21.5	24.42	2.92	24.24	24.42	27.34	30	Pass
NVNT	ax20	6475	21.26	21.46	24.37	2.92	24.18	24.38	27.29	30	Pass
NVNT	ax20	6515	21.17	21.39	24.29	2.92	24.09	24.31	27.21	30	Pass
NVNT	ax20	6535	21.03	21.09	24.07	2.92	23.95	24.01	26.99	30	Pass
NVNT	ax20	6695	20.99	21.17	24.09	2.92	23.91	24.09	27.01	30	Pass
NVNT	ax20	6855	20.58	21.56	24.11	2.92	23.50	24.48	27.03	30	Pass
NVNT	ax40	5965	20.51	20.81	23.67	2.92	23.43	23.73	26.59	30	Pass
NVNT	ax40	6165	21.42	21.97	24.71	2.92	24.34	24.89	27.63	30	Pass
NVNT	ax40	6405	21.22	21.98	24.63	2.92	24.14	24.90	27.55	30	Pass
NVNT	ax40	6445	22.14	22.57	25.37	2.92	25.06	25.49	28.29	30	Pass
NVNT	ax40	6485	22.39	22.38	25.4	2.92	25.31	25.30	28.32	30	Pass
NVNT	ax40	6525	21.94	22.47	25.22	2.92	24.86	25.39	28.14	30	Pass
NVNT	ax40	6565	21.88	22.52	25.22	2.92	24.80	25.44	28.14	30	Pass
NVNT	ax40	6725	21.75	22.42	25.11	2.92	24.67	25.34	28.03	30	Pass
NVNT	ax40	6845	21.31	22.64	25.04	2.92	24.23	25.56	27.96	30	Pass
NVNT	ax80	5985	19.35	19.72	22.55	2.92	22.27	22.64	25.47	30	Pass
NVNT	ax80	6145	21.64	21.76	24.71	2.92	24.56	24.68	27.63	30	Pass
NVNT	ax80	6385	21.86	22.22	25.05	2.92	24.78	25.14	27.97	30	Pass
NVNT	ax80	6465	22.39	22.7	25.56	2.92	25.31	25.62	28.48	30	Pass
NVNT	ax80	6545	21.66	22.07	24.88	2.92	24.58	24.99	27.80	30	Pass
NVNT	ax80	6625	21.8	22.12	24.97	2.92	24.72	25.04	27.89	30	Pass
NVNT	ax80	6705	21.88	22.35	25.13	2.92	24.80	25.27	28.05	30	Pass
NVNT	ax80	6785	21.17	22.57	24.94	2.92	24.09	25.49	27.86	30	Pass
NVNT	ax160	6025	18.99	19.17	22.09	2.92	21.91	22.09	25.01	30	Pass
NVNT	ax160	6185	22.08	22.12	25.11	2.92	25.00	25.04	28.03	30	Pass
NVNT	ax160	6345	18.96	19.53	22.26	2.92	21.88	22.45	25.18	30	Pass
NVNT	ax160	6505	19.18	19.08	22.14	2.92	22.10	22.00	25.06	30	Pass
NVNT	ax160	6665	17.69	17.78	20.75	2.92	20.61	20.70	23.67	30	Pass
NVNT	be20	5955	21	21.23	24.13	2.92	23.92	24.15	27.05	30	Pass
NVNT	be20	6175	20.95	21.15	24.06	2.92	23.87	24.07	26.98	30	Pass
NVNT	be20	6415	20.99	21.04	24.03	2.92	23.91	23.96	26.95	30	Pass
NVNT	be20	6435	21.45	21.62	24.55	2.92	24.37	24.54	27.47	30	Pass
NVNT	be20	6475	21.42	21.63	24.54	2.92	24.34	24.55	27.46	30	Pass
NVNT	be20	6515	21.37	21.59	24.49	2.92	24.29	24.51	27.41	30	Pass
NVNT	be20	6535	21.2	21.23	24.23	2.92	24.12	24.15	27.15	30	Pass
NVNT	be20	6695	21.13	21.37	24.26	2.92	24.05	24.29	27.18	30	Pass
NVNT	be20	6855	20.69	21.69	24.23	2.92	23.61	24.61	27.15	30	Pass

NVNT	be40	5965	20.64	20.94	23.8	2.92	23.56	23.86	26.72	30	Pass
NVNT	be40	6165	21.56	22.14	24.87	2.92	24.48	25.06	27.79	30	Pass
NVNT	be40	6405	21.36	22.11	24.76	2.92	24.28	25.03	27.68	30	Pass
NVNT	be40	6445	22.3	22.71	25.52	2.92	25.22	25.63	28.44	30	Pass
NVNT	be40	6485	22.51	22.54	25.54	2.92	25.43	25.46	28.46	30	Pass
NVNT	be40	6525	22.1	22.58	25.36	2.92	25.02	25.50	28.28	30	Pass
NVNT	be40	6565	22.02	22.63	25.35	2.92	24.94	25.55	28.27	30	Pass
NVNT	be40	6725	21.85	22.56	25.23	2.92	24.77	25.48	28.15	30	Pass
NVNT	be40	6845	21.45	22.76	25.16	2.92	24.37	25.68	28.08	30	Pass
NVNT	be80	5985	19.53	19.88	22.72	2.92	22.45	22.80	25.64	30	Pass
NVNT	be80	6145	21.84	21.93	24.9	2.92	24.76	24.85	27.82	30	Pass
NVNT	be80	6385	21.97	22.34	25.17	2.92	24.89	25.26	28.09	30	Pass
NVNT	be80	6465	22.54	22.81	25.69	2.92	25.46	25.73	28.61	30	Pass
NVNT	be80	6545	21.78	22.21	25.01	2.92	24.70	25.13	27.93	30	Pass
NVNT	be80	6625	21.95	22.27	25.12	2.92	24.87	25.19	28.04	30	Pass
NVNT	be80	6705	22.02	22.52	25.29	2.92	24.94	25.44	28.21	30	Pass
NVNT	be160	6025	19.15	19.3	22.24	2.92	22.07	22.22	25.16	30	Pass
NVNT	be160	6185	22.19	22.24	25.23	2.92	25.11	25.16	28.15	30	Pass
NVNT	be160	6345	19.11	19.64	22.39	2.92	22.03	22.56	25.31	30	Pass
NVNT	be160	6505	19.29	19.22	22.27	2.92	22.21	22.14	25.19	30	Pass
NVNT	be160	6665	17.81	17.93	20.88	2.92	20.73	20.85	23.80	30	Pass
NVNT	be20 26-tone	5955	12.87	13.21	16.05	2.92	15.79	16.13	18.97	30	Pass
NVNT	be20 26-tone	6415	12.71	13.73	16.26	2.92	15.63	16.65	19.18	30	Pass
NVNT	be20 26-tone	6435	13.31	14.07	16.72	2.92	16.23	16.99	19.64	30	Pass
NVNT	be20 26-tone	6515	13.03	14.19	16.66	2.92	15.95	17.11	19.58	30	Pass
NVNT	be20 26-tone	6535	13.17	13.2	16.2	2.92	16.09	16.12	19.12	30	Pass
NVNT	be20 26-tone	6855	12.81	13.71	16.29	2.92	15.73	16.63	19.21	30	Pass
NVNT	be20 52-tone	5955	15.61	16.29	18.97	2.92	18.53	19.21	21.89	30	Pass
NVNT	be20 52-tone	6415	15.33	16.38	18.9	2.92	18.25	19.30	21.82	30	Pass
NVNT	be20 52-tone	6435	16.14	16.7	19.44	2.92	19.06	19.62	22.36	30	Pass
NVNT	be20 52-tone	6515	15.78	16.82	19.34	2.92	18.70	19.74	22.26	30	Pass
NVNT	be20	6535	16.09	16.17	19.14	2.92	19.01	19.09	22.06	30	Pass

	52-tone										
NVNT	be20 52-tone	6855	15.82	16.41	19.14	2.92	18.74	19.33	22.06	30	Pass
NVNT	be20 106-tone	5955	19.34	19.67	22.52	2.92	22.26	22.59	25.44	30	Pass
NVNT	be20 106-tone	6415	19.02	19.8	22.44	2.92	21.94	22.72	25.36	30	Pass
NVNT	be20 106-tone	6435	19.69	20.19	22.96	2.92	22.61	23.11	25.88	30	Pass
NVNT	be20 106-tone	6515	19.51	20.12	22.84	2.92	22.43	23.04	25.76	30	Pass
NVNT	be20 106-tone	6535	19.08	19.06	22.08	2.92	22.00	21.98	25.00	30	Pass
NVNT	be20 106-tone	6855	18.71	19.27	22.01	2.92	21.63	22.19	24.93	30	Pass
NVNT	be20 52+26-tone	5955	17.88	18.31	21.11	2.92	20.80	21.23	24.03	30	Pass
NVNT	be20 52+26-tone	6415	17.51	18.22	20.89	2.92	20.43	21.14	23.81	30	Pass
NVNT	be20 52+26-tone	6435	18.12	18.72	21.44	2.92	21.04	21.64	24.36	30	Pass
NVNT	be20 52+26-tone	6515	17.74	18.61	21.21	2.92	20.66	21.53	24.13	30	Pass
NVNT	be20 52+26-tone	6535	17.6	17.57	20.6	2.92	20.52	20.49	23.52	30	Pass
NVNT	be20 52+26-tone	6855	17.28	17.88	20.6	2.92	20.20	20.80	23.52	30	Pass
NVNT	be20 106+26-tone	5955	19.32	19.81	22.58	2.92	22.24	22.73	25.50	30	Pass
NVNT	be20 106+26-tone	6415	19.01	19.85	22.46	2.92	21.93	22.77	25.38	30	Pass
NVNT	be20 106+26-tone	6435	19.83	20.09	22.97	2.92	22.75	23.01	25.89	30	Pass
NVNT	be20 106+26-tone	6515	19.62	20.05	22.85	2.92	22.54	22.97	25.77	30	Pass
NVNT	be20 106+26-tone	6535	19.49	19.52	22.52	2.92	22.41	22.44	25.44	30	Pass
NVNT	be20 106+2	6855	19.21	19.84	22.55	2.92	22.13	22.76	25.47	30	Pass

	6-tone										
NVNT	be80 484+242-tone	5985	18.38	18.84	21.63	2.92	21.30	21.76	24.55	30	Pass
NVNT	be80 484+242-tone	6385	21.77	22.54	25.18	2.92	24.69	25.46	28.10	30	Pass
NVNT	be80 484+242-tone	6545	22.09	22.39	25.25	2.92	25.01	25.31	28.17	30	Pass
NVNT	be80 484+242-tone	6625	22.21	22.34	25.29	2.92	25.13	25.26	28.21	30	Pass
NVNT	be80 484+242-tone	6785	22.16	22.46	25.32	2.92	25.08	25.38	28.24	30	Pass
NVNT	be160 996+484-tone	6025	17.68	18.25	20.98	2.92	20.60	21.17	23.90	30	Pass
NVNT	be160 996+484-tone	6345	22.25	22.06	25.17	2.92	25.17	24.98	28.09	30	Pass
NVNT	be160 996+484-tone	6505	22.14	21.43	24.81	2.92	25.06	24.35	27.73	30	Pass
NVNT	be160 996+484-tone	6665	21.89	21.87	24.89	2.92	24.81	24.79	27.81	30	Pass
NVNT	be160 996+484+242-tone	6025	17.77	18.65	21.24	2.92	20.69	21.57	24.16	30	Pass
NVNT	be160 996+484+242-tone	6345	22.04	22.01	25.04	2.92	24.96	24.93	27.96	30	Pass
NVNT	be160 996+484+242-tone	6505	22.23	22.06	25.16	2.92	25.15	24.98	28.08	30	Pass
NVNT	be160 996+484+242-tone	6665	21.88	21.92	24.91	2.92	24.80	24.84	27.83	30	Pass

9. Contention Based Protocol

9.1 Block Diagram Of Test Setup

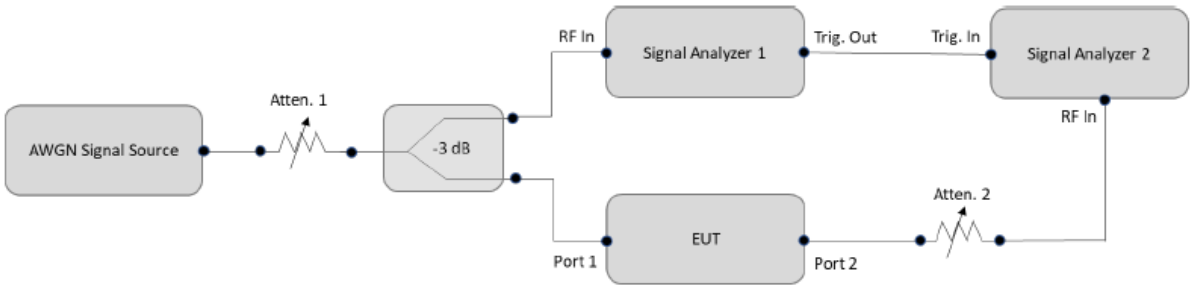


Figure 2. Contention-based protocol test setup, conducted method

9.2 Limit

Unlicensed low-power indoor devices must detect co-channel radio frequency power that is at least -62 dBm or lower. Upon detection of energy in the band, unlicensed low power indoor devices must vacate the channel (in which incumbent signal is transmitted) and stay off the incumbent channel as long as detected radio frequency power is equal to or greater than the threshold (-62 dBm)1. The -62 dBm (or lower) threshold is referenced to a 0 dBi antenna gain.
To ensure incumbent operations are reliably detected in the band, low power indoor devices must detect RF
energy throughout their intended operating channel. For example, an 802.11 device that plans to transmit a 40 MHz- wide signal (on a primary 20 MHz channel and a secondary 20 MHz channel) must detect energy throughout the entire 40 MHz channel. Additionally, low-power indoor devices must detect co-channel energy with 90% or greater certainty.

Required number of tests
Incumbent and EUT (access point, subordinate or client) signals may occupy different portions of the channel. Depending on the EUT transmission bandwidth and incumbent signal center frequency (simulated by a 10 MHz wide AWGN signal), the center frequency of the EUT signal F_{C1} may fall within the incumbent's occupied bandwidth (Figure 1.a), or outside of it (Figure 1.b).

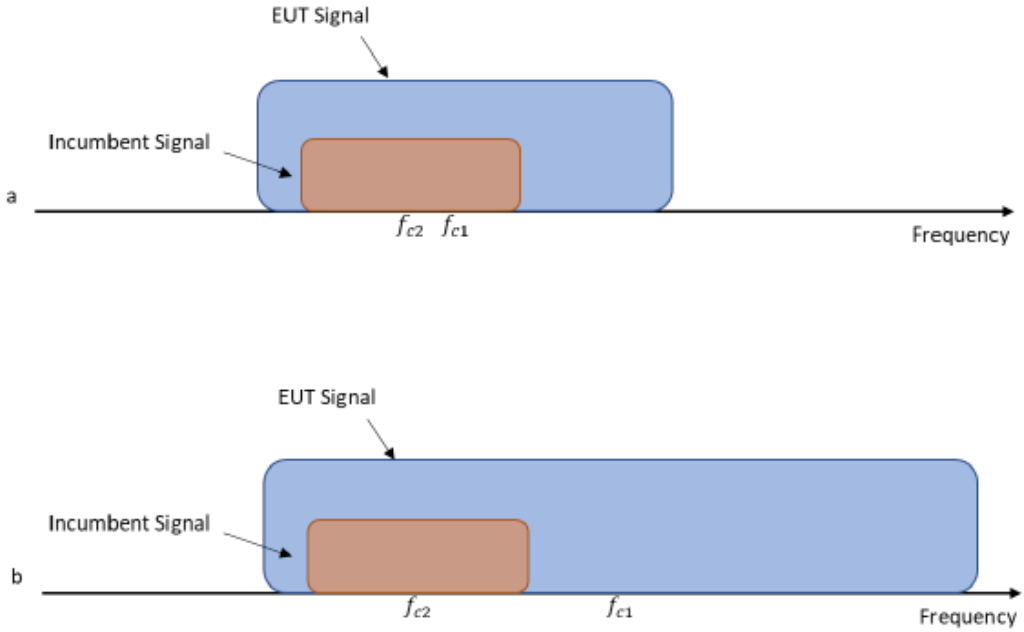


Figure 1. Two possible scenarios where a) center frequency of EUT transmission falls within incumbent's bandwidth, or b) outside of it

To ensure EUT reliably detects an incumbent signal in both scenarios shown in Figure 1, the detection threshold test may be repeated more than once with the incumbent signal (having center frequency F_{C2}) tuned to different center frequencies within the UT transmission bandwidth. The criteria specified in Table 1 determines how many times the detection threshold test must be performed;

Table 1. Criteria to determine number of times detection threshold test may be performed

If	Number of Tests	Placement of Incumbent Transmission
$BW_{EUT} \leq BW_{Inc}$	Once	Tune incumbent and EUT transmissions ($f_{c1} = f_{c2}$)
$BW_{Inc} < BW_{EUT} \leq 2BW_{Inc}$	Once	Incumbent transmission is contained within BW_{EUT}
$2BW_{Inc} < BW_{EUT} \leq 4BW_{Inc}$	Twice. Incumbent transmission is contained within BW_{EUT}	Incumbent transmission is located as closely as possible to the lower edge and upper edge, respectively, of the EUT channel
$BW_{EUT} > 4BW_{Inc}$	Three times	Incumbent transmission is located as closely as possible to the lower edge of the EUT channel, in the middle of EUT channel, and as closely as possible to the upper edge of the EUT channel

where:
BW_{EUT}: Transmission bandwidth of EUT signal
BW_{1nc}: Transmission bandwidth of the simulated incumbent signal (10 MHz wide AWGN signal)
F_{C1}: Center frequency of EUT transmission
F_{C2}: Center frequency of simulated incumbent signal

9.3 Test Procedure

To ensure the EUT is capable of detecting co-channel energy, the first step is to configure the EUT to transmit with a constant duty cycle.2 To simulate an incumbent signal, a signal generator (or similar source) that is capable of generating band-limited additive white Gaussian noise (AWGN) is required. Depending on the EUT antenna configuration, the AWGN signal can be provided to the EUT receiver via a conducted method (Figure 2) or a radiated method (Figure 3). Figure 2 shows the conducted test setup where a band-limited AWGN signal is generated at a very low power level and injected into the EUT's antenna port. The AWGN signal power level is then incrementally increased while the EUT transmission is monitored on a signal analyzer 2 to verify if the EUT can sense the AWGN signal and can subsequently cease its transmission. A triggered measurement, as shown in Figure 2, is optional, and assists with determining the time it takes the EUT to cease transmission (or vacate the channel) upon detecting RF energy. If the EUT has only one antenna port, then an AWGN signal source can be connected to the same antenna port.

1. Configure the EUT to transmit with a constant duty cycle.
2. Set the operating parameters of the EUT including power level, operating frequency, modulation and bandwidth.
3. Set the signal analyzer center frequency to the nominal EEUT channel center frequency. The span range of the signal analyzer shall be between two times and five times the OBW of the EUT. Connect the output port of the EUT to the signal analyzer 2, as shown in Figure 2. Ensure that the attenuator 2 provides enough
attenuation to not overload the signal analyzer 2 receiver.
4. Monitoring the signal analyzer 2, verify the EUT is operating and transmitting with the parameters set at step two.
5. Using an AWGN signal source, generate (but do not transmit, i.e., RF OFF) a 10 MHz-wide AWGN signal.
Use Table 1 to determine the center frequency of the 10 MHz AWGN signal relative to the EUT's channel bandwidth and center frequency.
6. Set the AWGN signal power to an extremely low level (more than 20 dB below the -62 dBm threshold). Connect the AWGN signal source, via a 3-dB splitter, to the signal analyzer 1 and the EUT as shown in Figure 2.
7. Transmit the AWGN signal (RF ON) and verify its characteristics on the signal analyzer 1.
8. Monitor the signal analyzer 2 to verify if the AWGN signal has been detected and the EUT has ceased transmission. If the EUT continues to transmit, then incrementally increase the AWGN signal power level until the EUT stops transmitting.
9. (Including all losses in the RF paths) Determine and record the AWGN signal power level (at the EUT's antenna port) at which the EUT ceased transmission. Repeat the procedure at least 10 times to verify the EUT can detect an AWGN signal with 90% (or better) level of certainty.
10. Refer to Table 1 to determine number of times the detection threshold testing needs to be repeated. If testing is required more than once, then go back to step 5, choose a different center frequency for the AWGN signal and repeat the process.

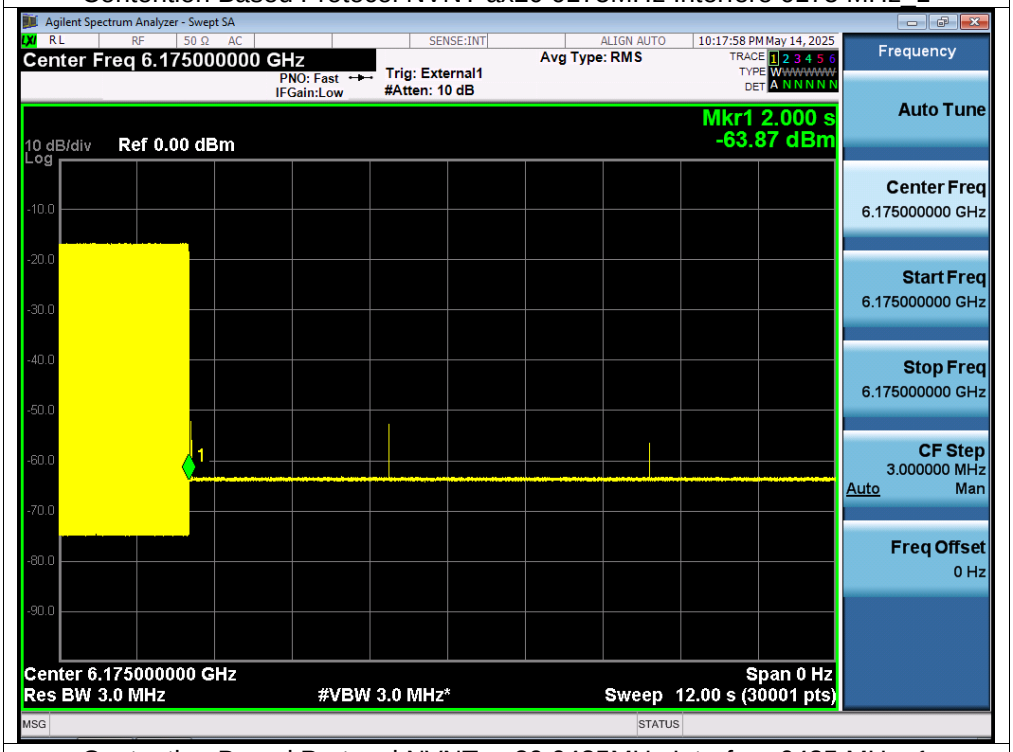
9.4 Test Result

Indoor Client

Condition	Mode	Frequency (MHz)	AWGN Location	AWGN Frequency (MHz)	Test Time	Is Detected	Verdict
NVNT	ax20	6175	Center	6175	1	Yes	Pass
NVNT	ax20	6435	Center	6435	1	Yes	Pass
NVNT	ax20	6535	Center	6535	1	Yes	Pass
NVNT	ax20	6895	Center	6895	1	Yes	Pass
NVNT	ax160	6185	Low	6110	1	Yes	Pass
NVNT	ax160	6185	Center	6185	1	Yes	Pass
NVNT	ax160	6185	High	6260	1	Yes	Pass
NVNT	ax160	6505	Low	6430	1	Yes	Pass
NVNT	ax160	6505	Center	6505	1	Yes	Pass
NVNT	ax160	6505	High	6580	1	Yes	Pass
NVNT	ax160	6665	Low	6590	1	Yes	Pass
NVNT	ax160	6665	Center	6665	1	Yes	Pass
NVNT	ax160	6665	High	6740	1	Yes	Pass
NVNT	ax160	6985	Low	6910	1	Yes	Pass
NVNT	ax160	6985	Center	6985	1	Yes	Pass
NVNT	ax160	6985	High	7060	1	Yes	Pass

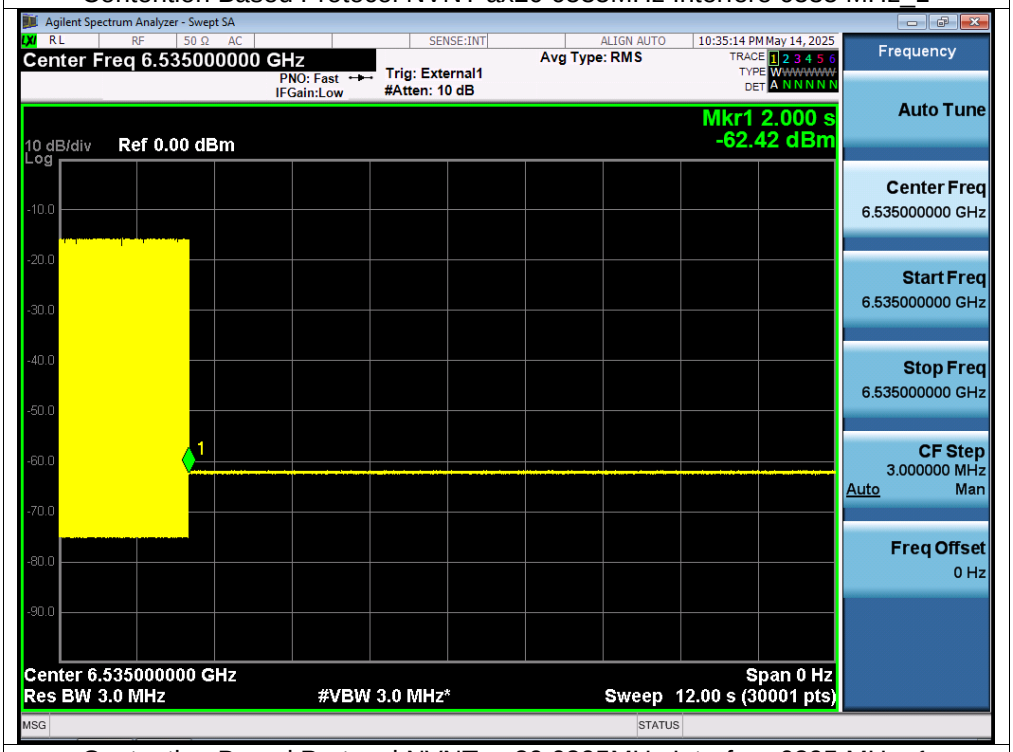
Test Graphs

Contention Based Protocol NVNT ax20 6175MHz Interfere 6175 MHz_1



Contention Based Protocol NVNT ax20 6435MHz Interfere 6435 MHz_1

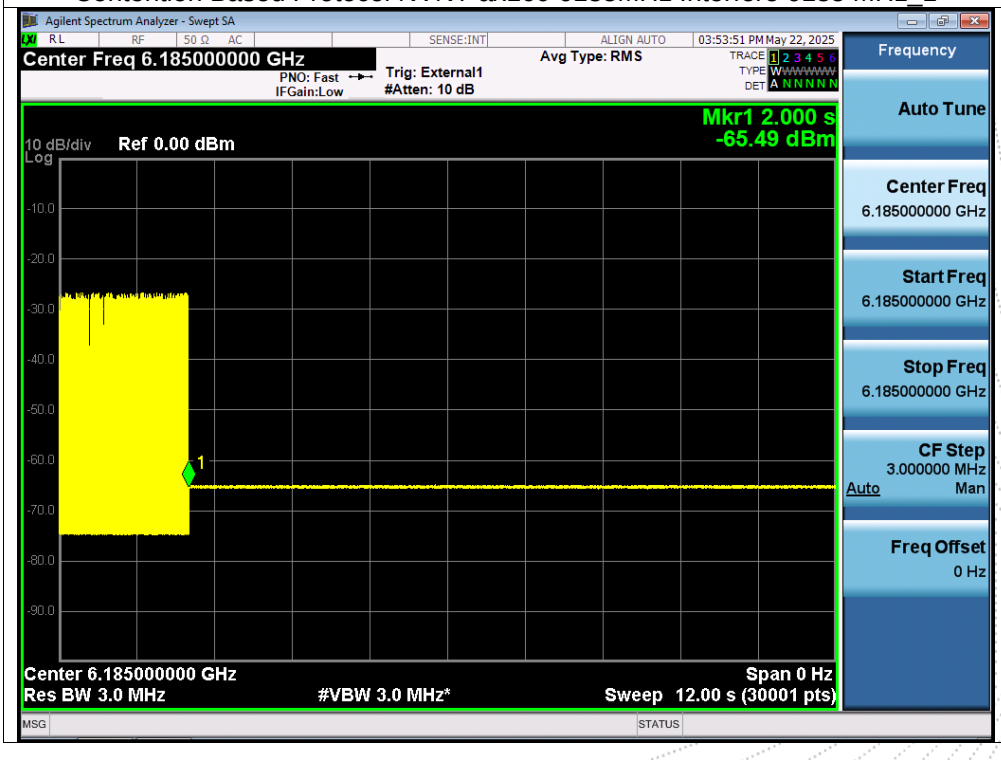
Contention Based Protocol NVNT ax20 6535MHz Interfere 6535 MHz_1



Contention Based Protocol NVNT ax20 6895MHz Interfere 6895 MHz_1

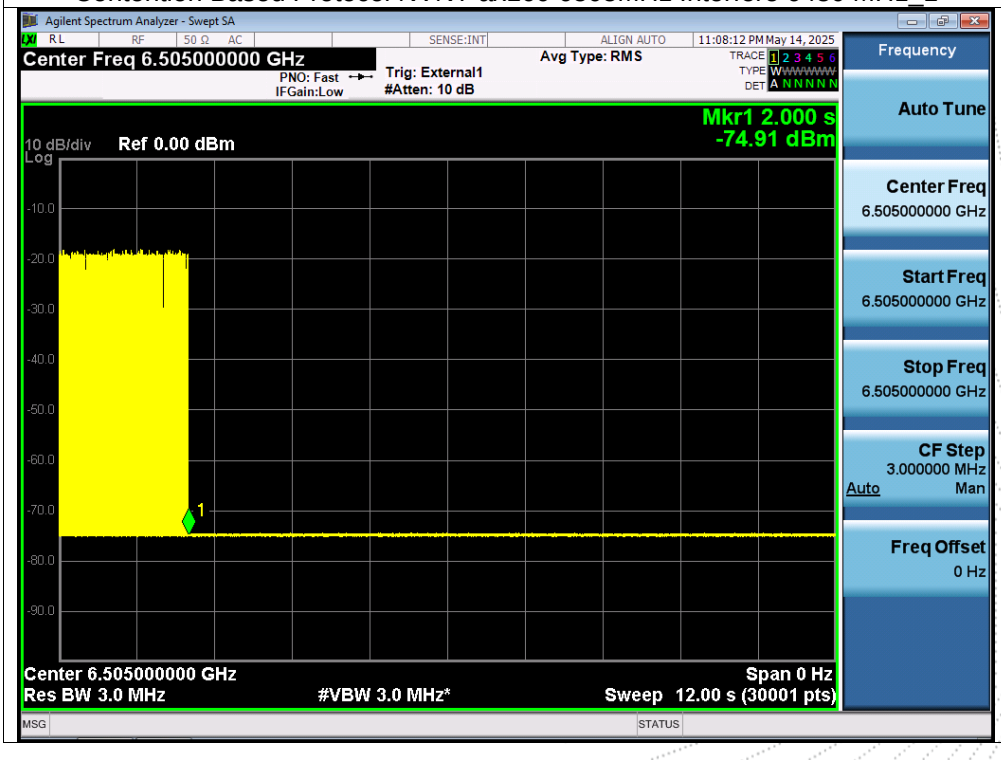
Contention Based Protocol NVNT ax160 6185MHz Interfere 6110 MHz_1

Contention Based Protocol NVNT ax160 6185MHz Interfere 6185 MHz_1



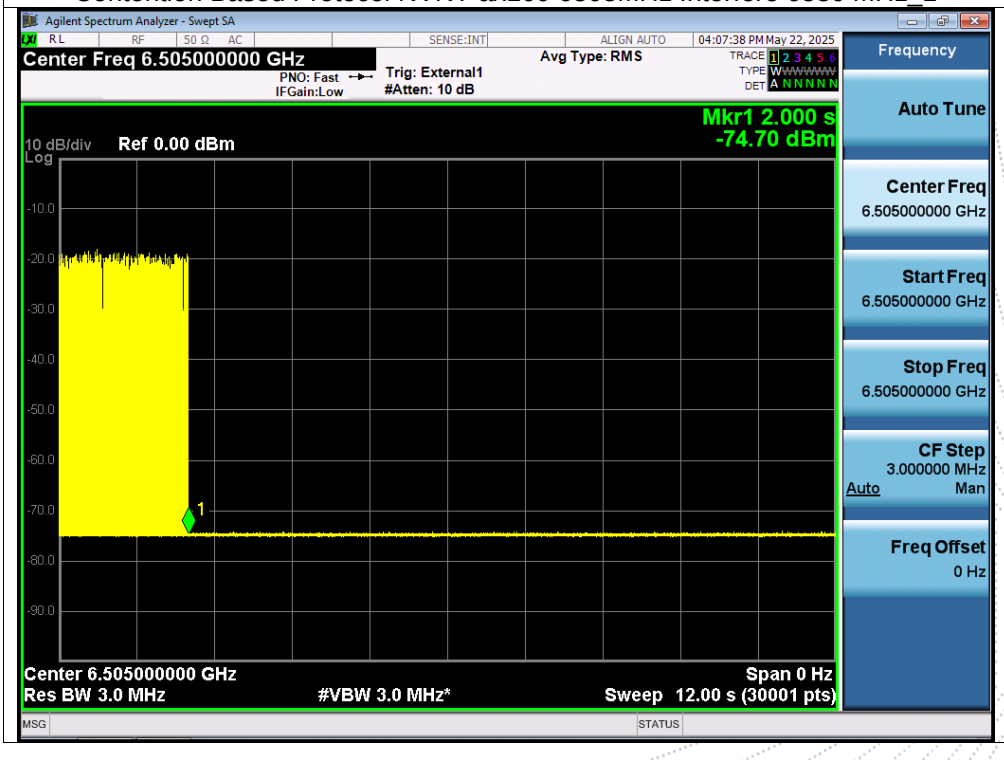
Contention Based Protocol NVNT ax160 6185MHz Interfere 6260 MHz_1

Contention Based Protocol NVNT ax160 6505MHz Interfere 6430 MHz_1

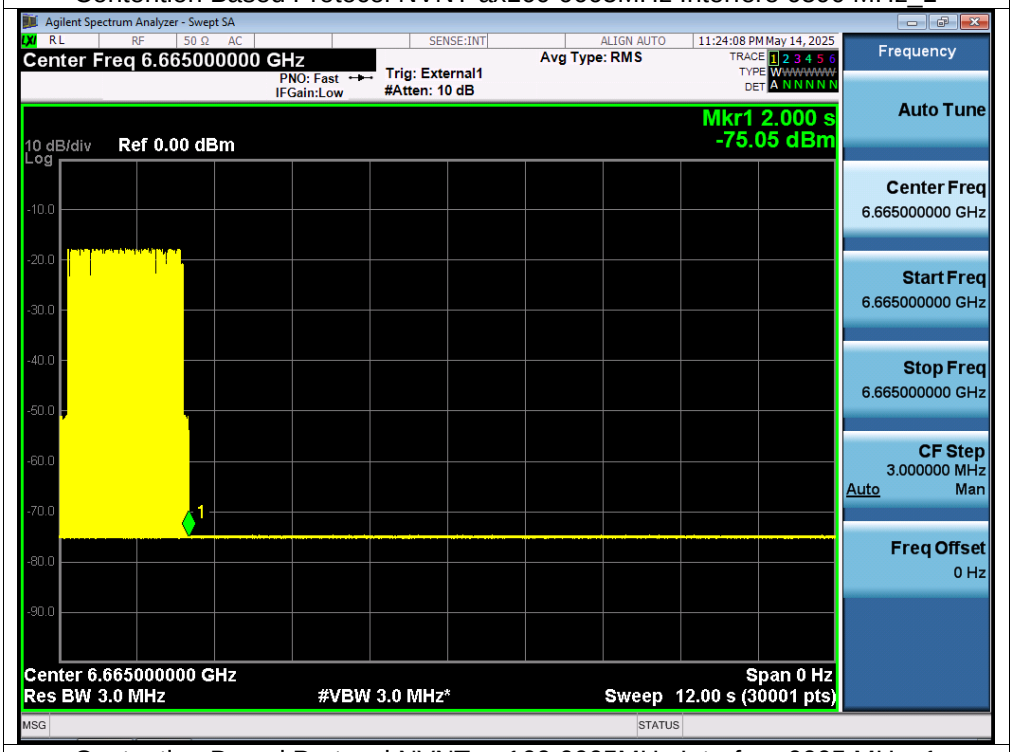


Contention Based Protocol NVNT ax160 6505MHz Interfere 6505 MHz_1

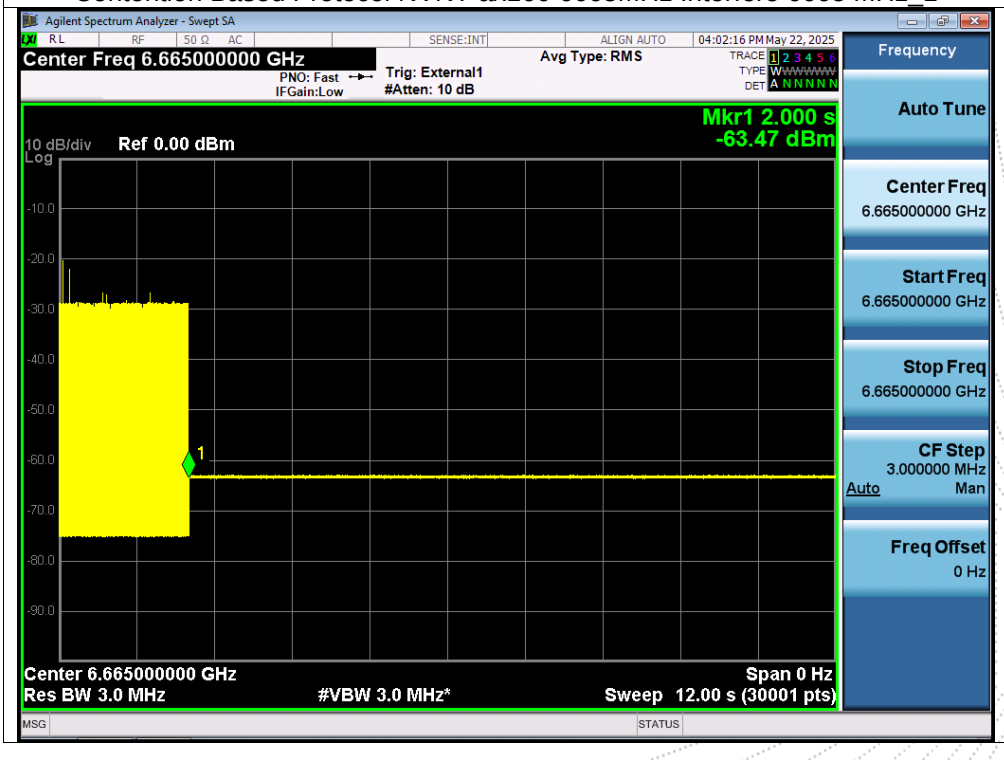
Contention Based Protocol NVNT ax160 6505MHz Interfere 6580 MHz_1



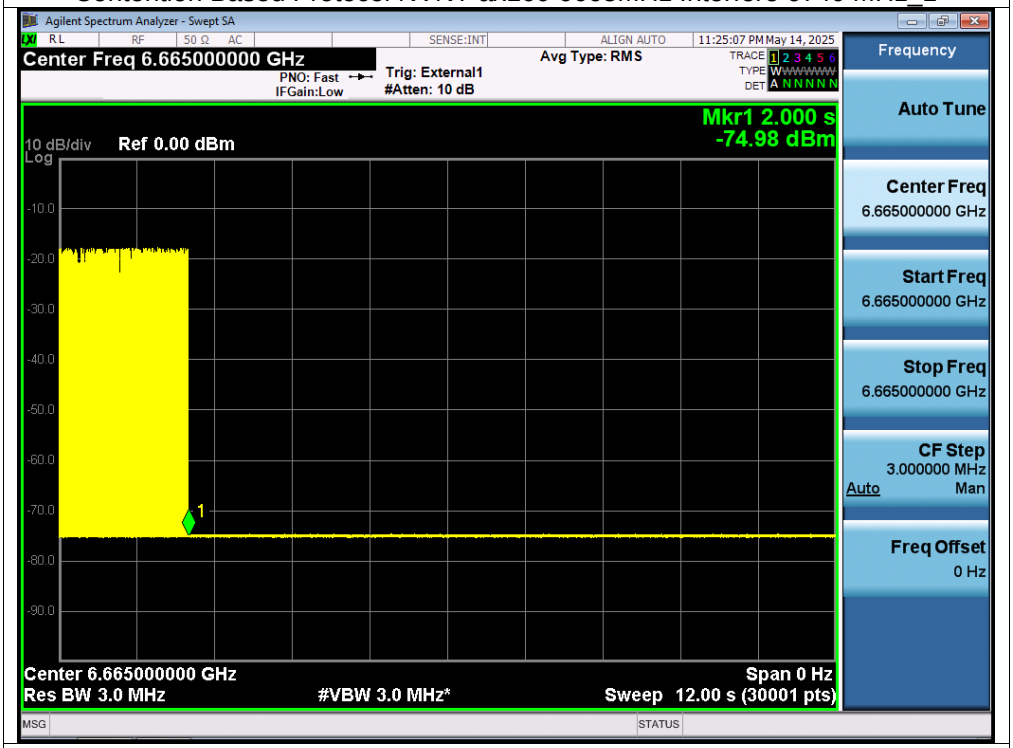
Contention Based Protocol NVNT ax160 6665MHz Interfere 6590 MHz_1



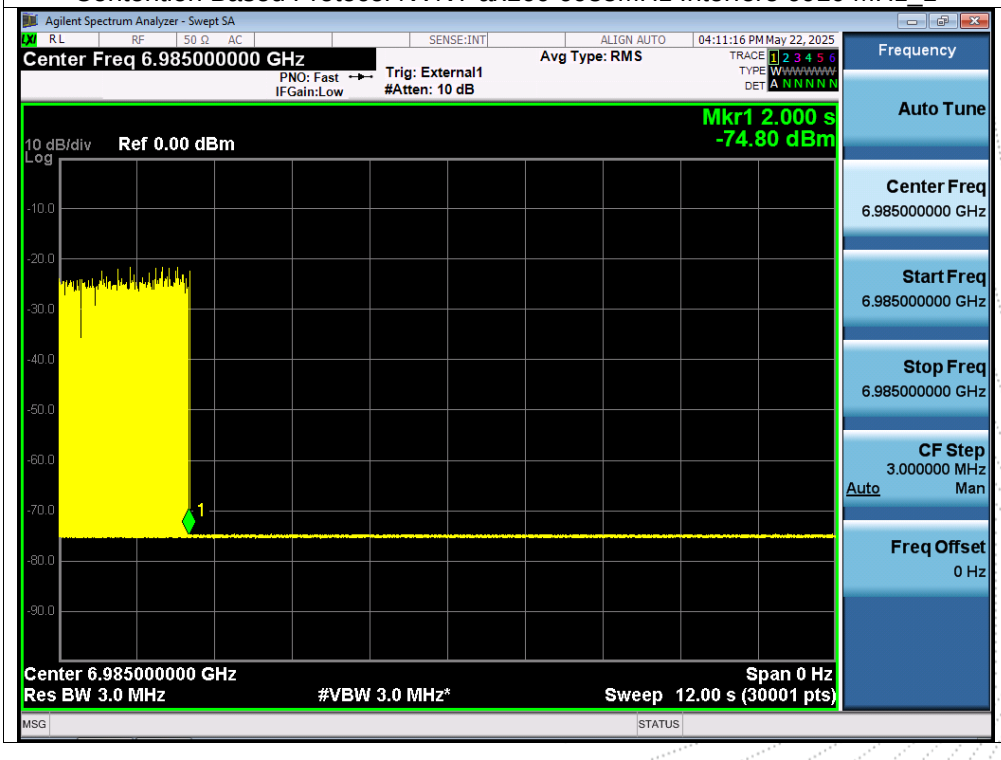
Contention Based Protocol NVNT ax160 6665MHz Interfere 6665 MHz_1



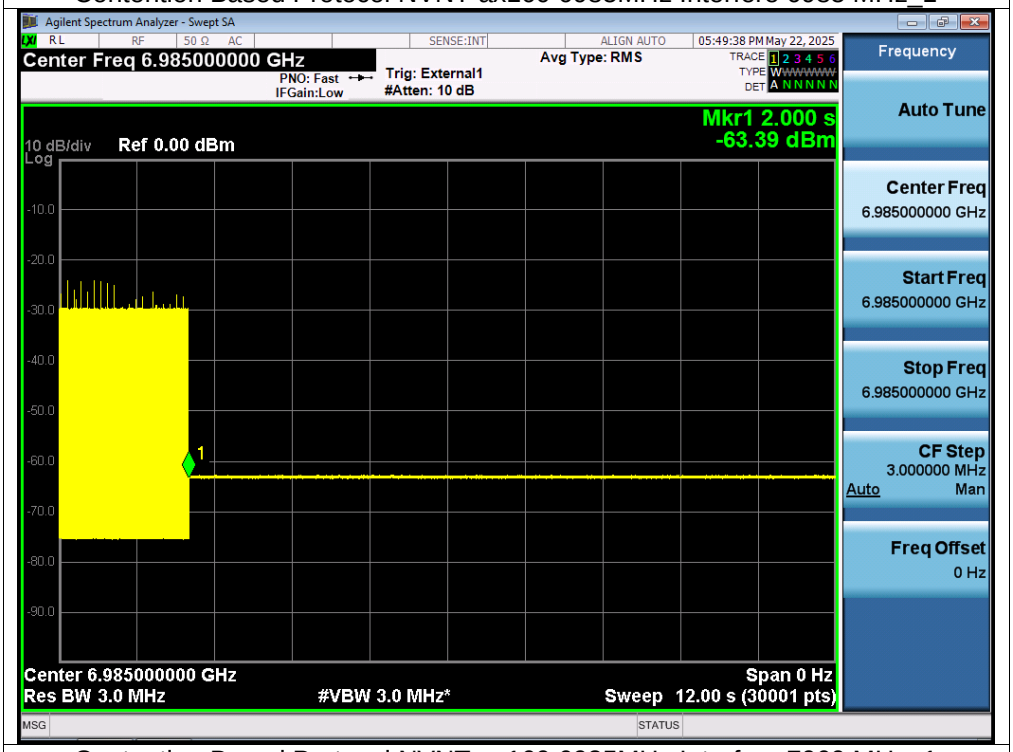
Contention Based Protocol NVNT ax160 6665MHz Interfere 6740 MHz_1



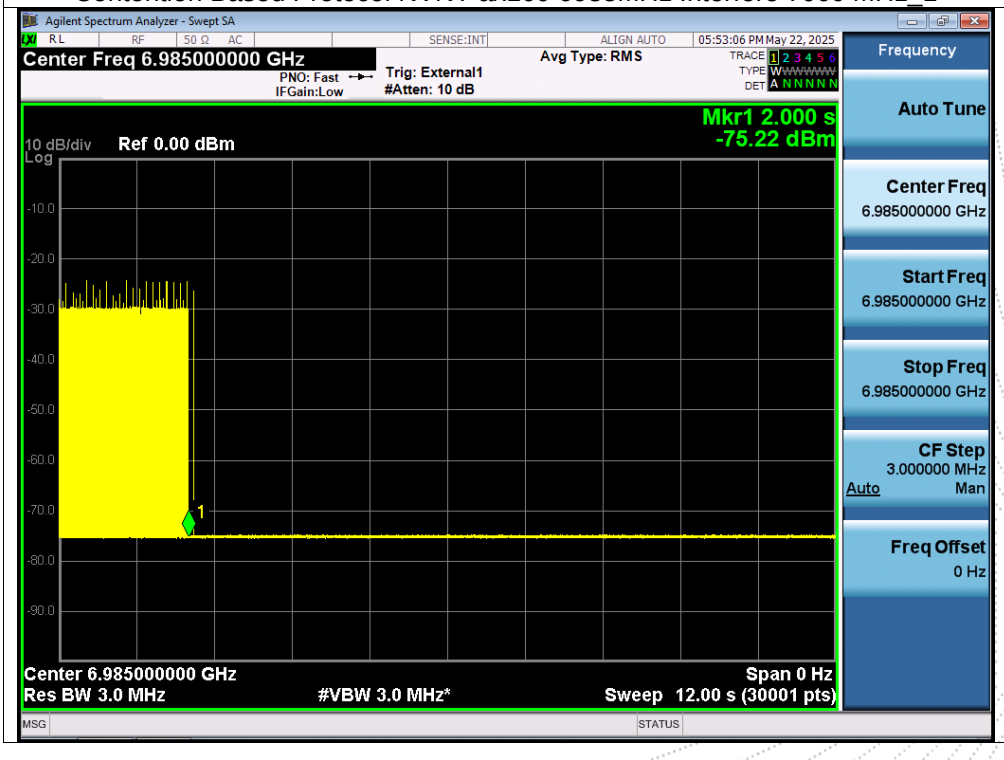
Contention Based Protocol NVNT ax160 6985MHz Interfere 6910 MHz_1



Contention Based Protocol NVNT ax160 6985MHz Interfere 6985 MHz_1



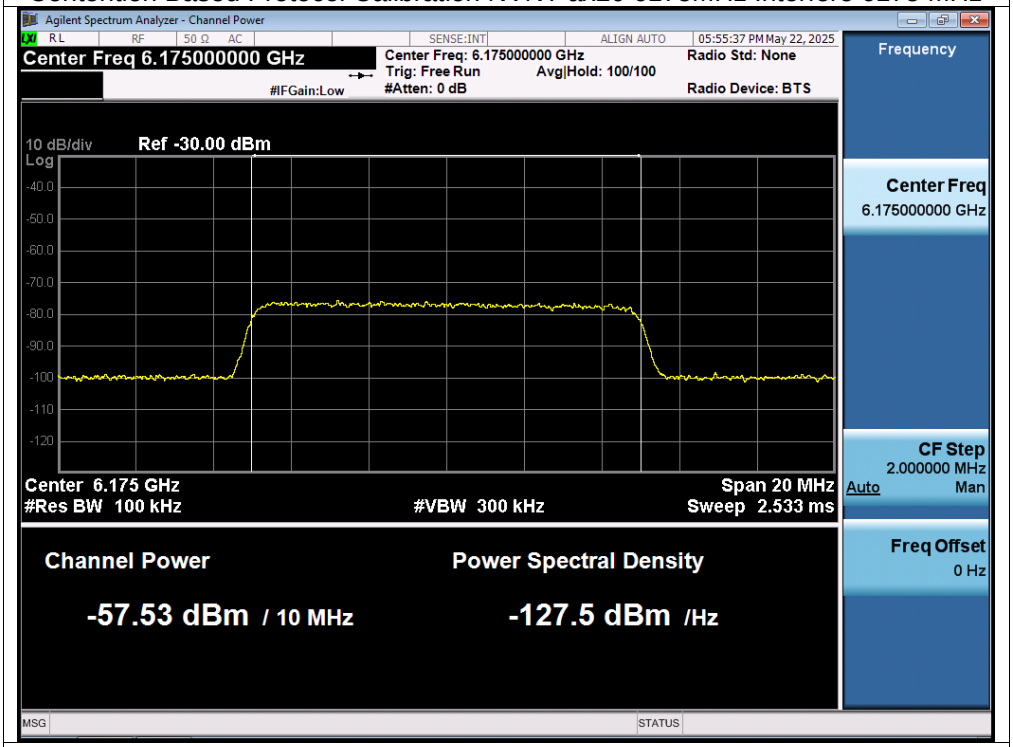
Contention Based Protocol NVNT ax160 6985MHz Interfere 7060 MHz_1



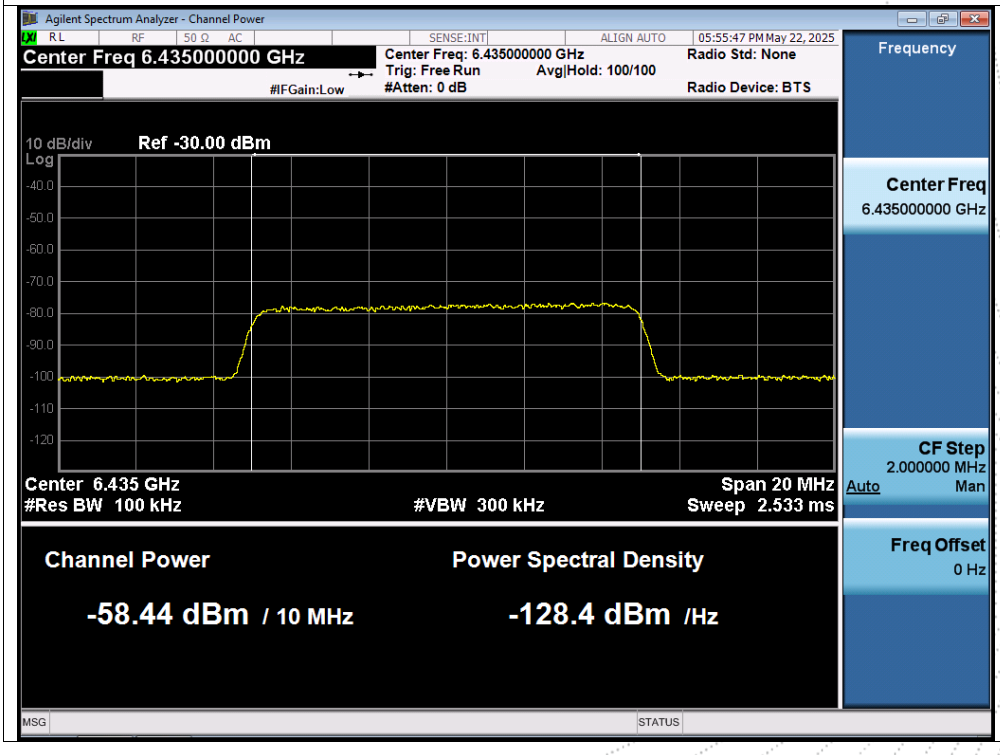
Condition	Mode	Frequency (MHz)	AWGN Frequency (MHz)	AWGN Level (dBm)	Ant Gain (dBi)	Path loss (dB)	Injection Level (dBm)	Limit (dBm)
NVNT	ax20	6175	6175	-57.53	2.92	-5	-65.45	-62
NVNT	ax20	6435	6435	-58.44	2.92	-5	-66.36	-62
NVNT	ax20	6535	6535	-55.97	2.92	-5	-63.89	-62
NVNT	ax20	6895	6895	-56.65	2.92	-5	-64.57	-62
NVNT	ax160	6185	6110	-58.68	2.92	-5	-66.6	-62
NVNT	ax160	6185	6185	-58.67	2.92	-5	-66.59	-62
NVNT	ax160	6185	6260	-57.91	2.92	-5	-65.83	-62
NVNT	ax160	6505	6430	-59.18	2.92	-5	-67.1	-62
NVNT	ax160	6505	6505	-63.41	2.92	-5	-71.33	-62
NVNT	ax160	6505	6580	-61.25	2.92	-5	-69.17	-62
NVNT	ax160	6665	6590	-61.86	2.92	-5	-69.78	-62
NVNT	ax160	6665	6665	-60.48	2.92	-5	-68.4	-62
NVNT	ax160	6665	6740	-59.33	2.92	-5	-67.25	-62
NVNT	ax160	6985	6910	-56.62	2.92	-5	-64.54	-62
NVNT	ax160	6985	6985	-56.64	2.92	-5	-64.56	-62
NVNT	ax160	6985	7060	-58.93	2.92	-5	-66.85	-62

Note: Injection Level(dBm) = AWGN Level(dBm)+Antenna Gain -Path Loss

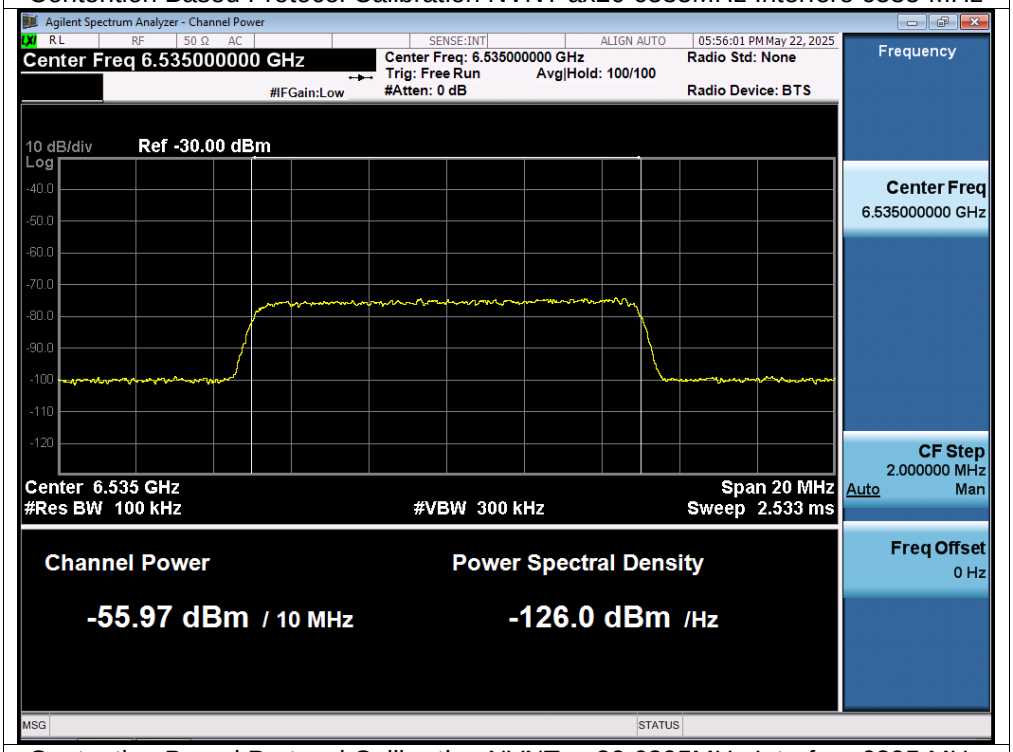
Test Graphs
Contention Based Protocol Calibration NVNT ax20 6175MHz Interfere 6175 MHz



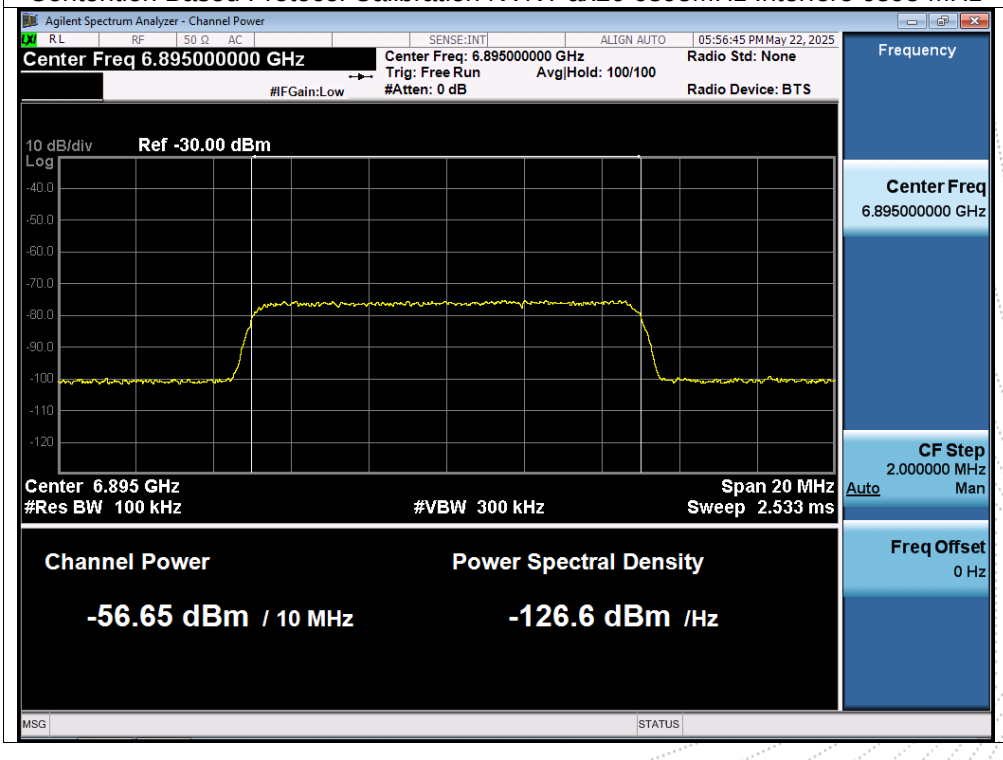
Contention Based Protocol Calibration NVNT ax20 6435MHz Interfere 6435 MHz



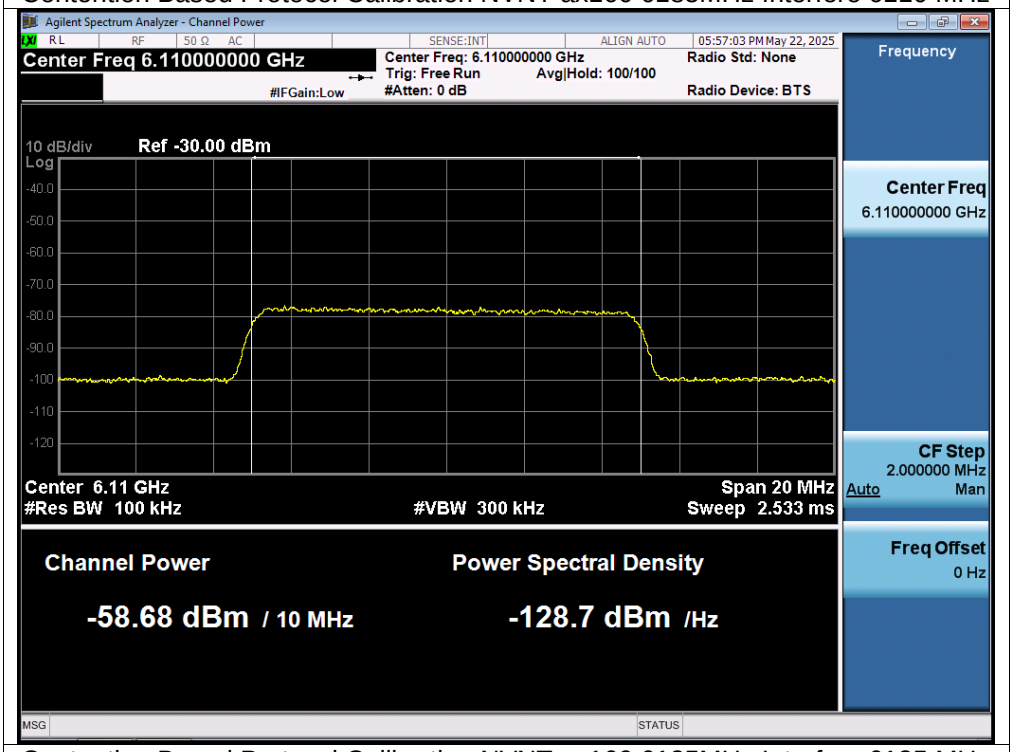
Contention Based Protocol Calibration NVNT ax20 6535MHz Interfere 6535 MHz



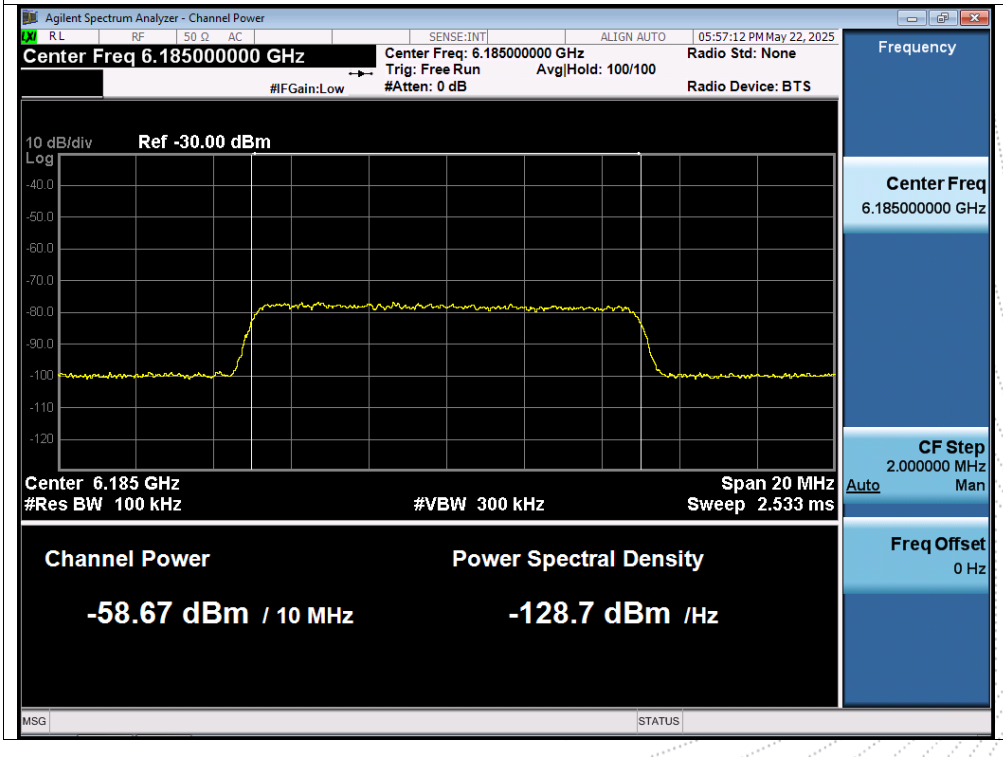
Contention Based Protocol Calibration NVNT ax20 6895MHz Interfere 6895 MHz



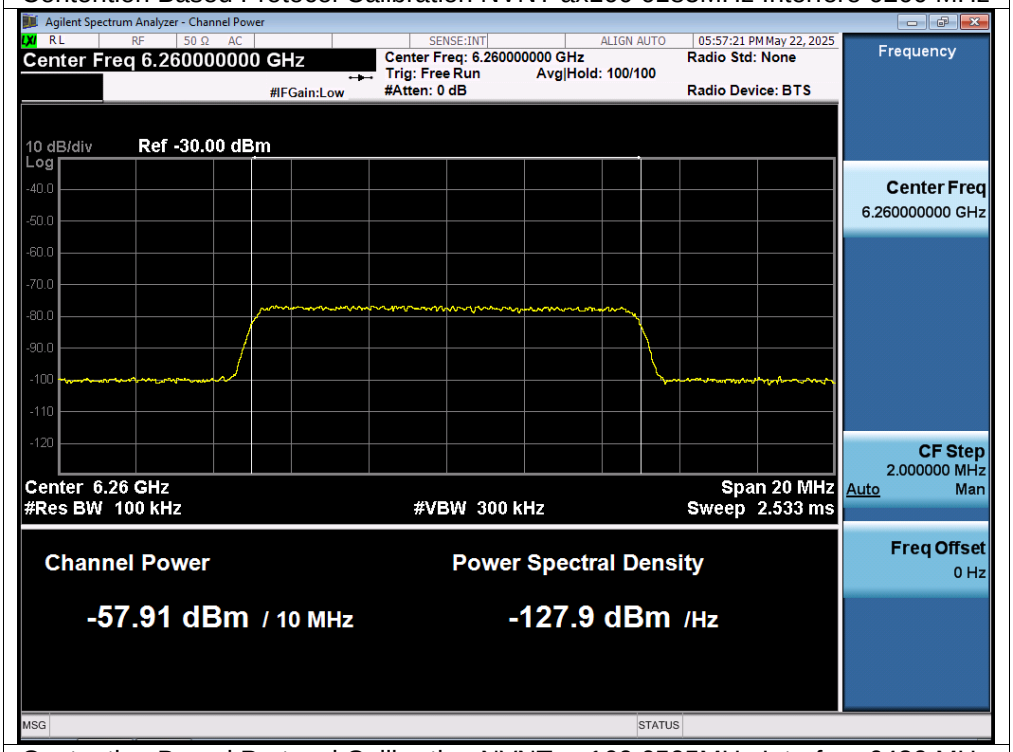
Contention Based Protocol Calibration NVNT ax160 6185MHz Interfere 6110 MHz



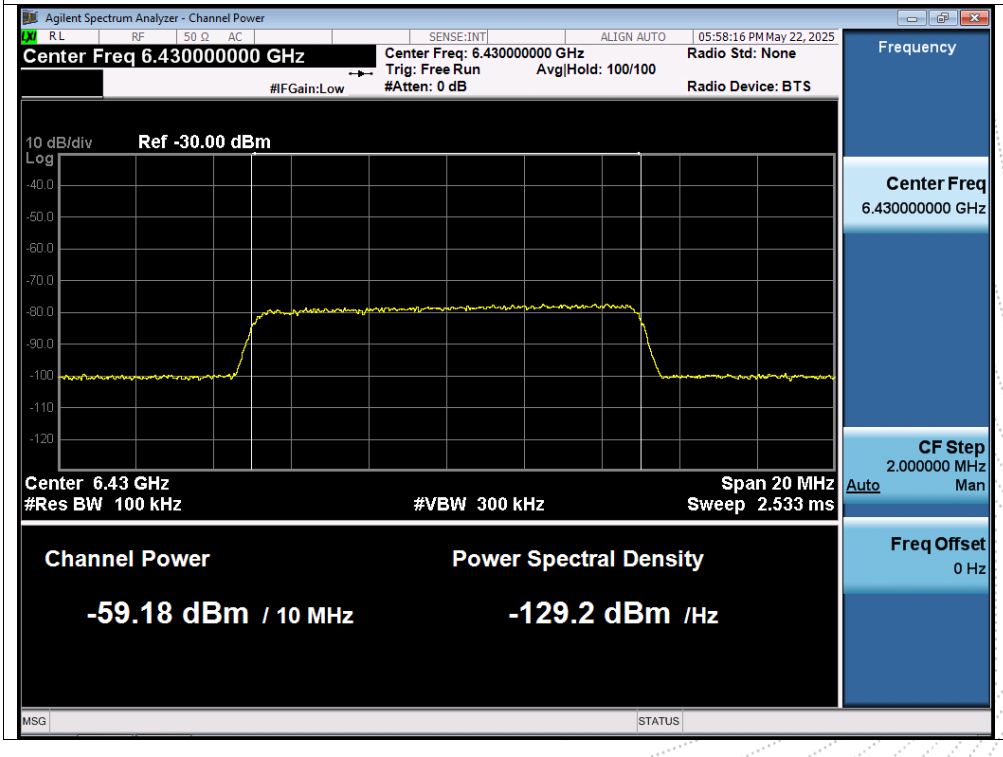
Contention Based Protocol Calibration NVNT ax160 6185MHz Interfere 6185 MHz



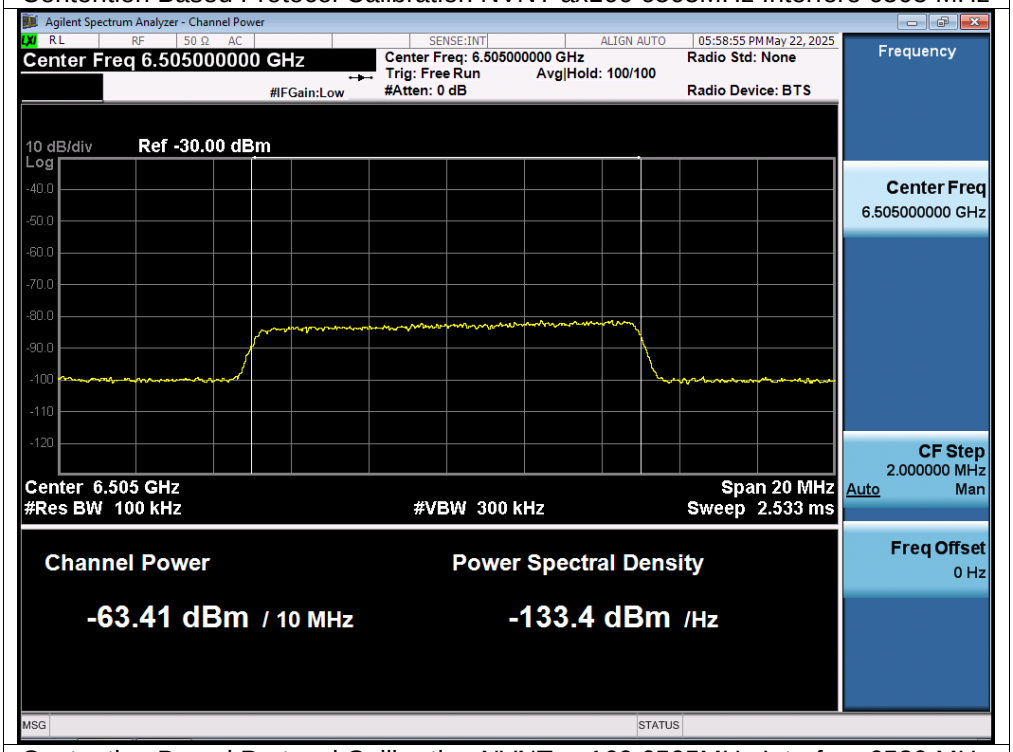
Contention Based Protocol Calibration NVNT ax160 6185MHz Interfere 6260 MHz



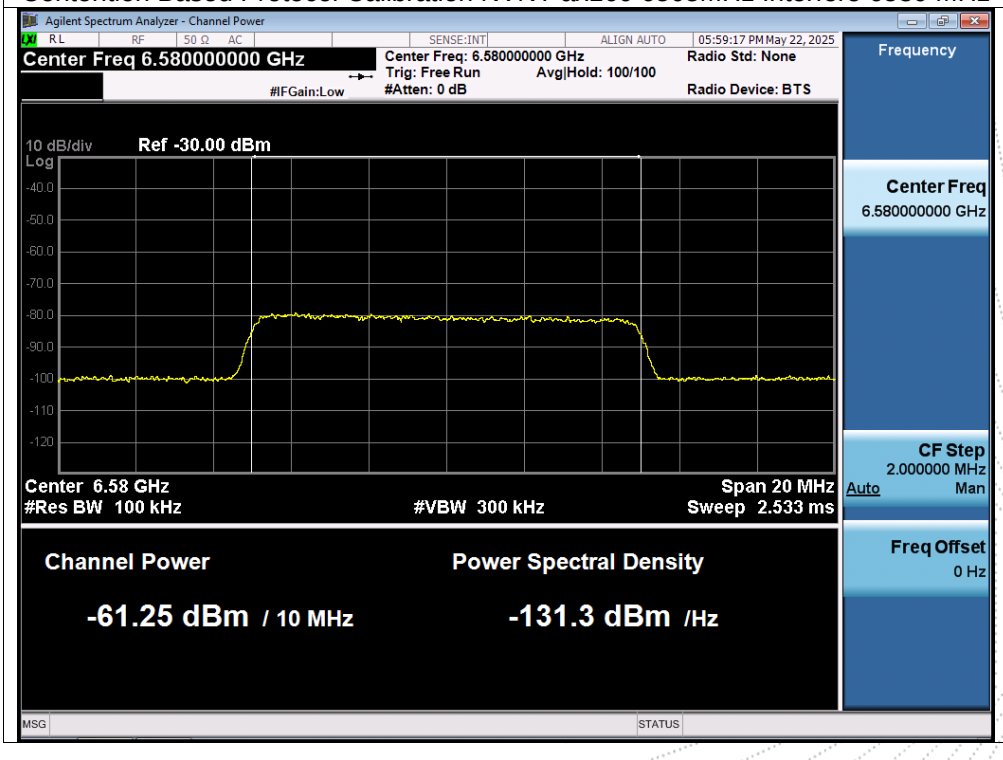
Contention Based Protocol Calibration NVNT ax160 6505MHz Interfere 6430 MHz



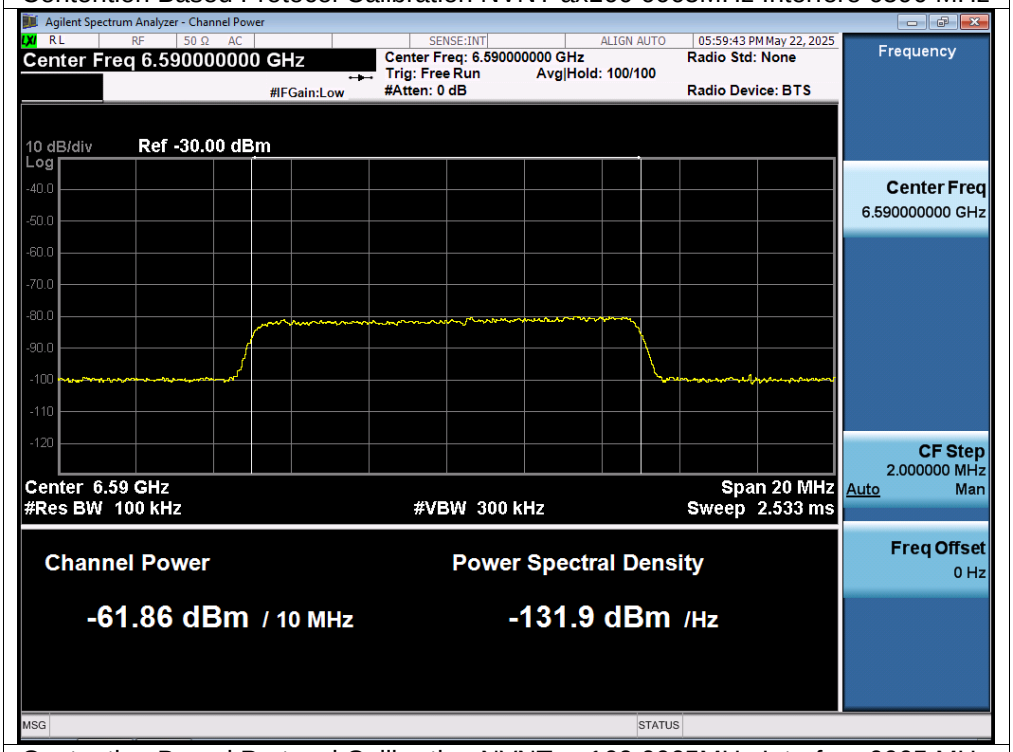
Contention Based Protocol Calibration NVNT ax160 6505MHz Interfere 6505 MHz



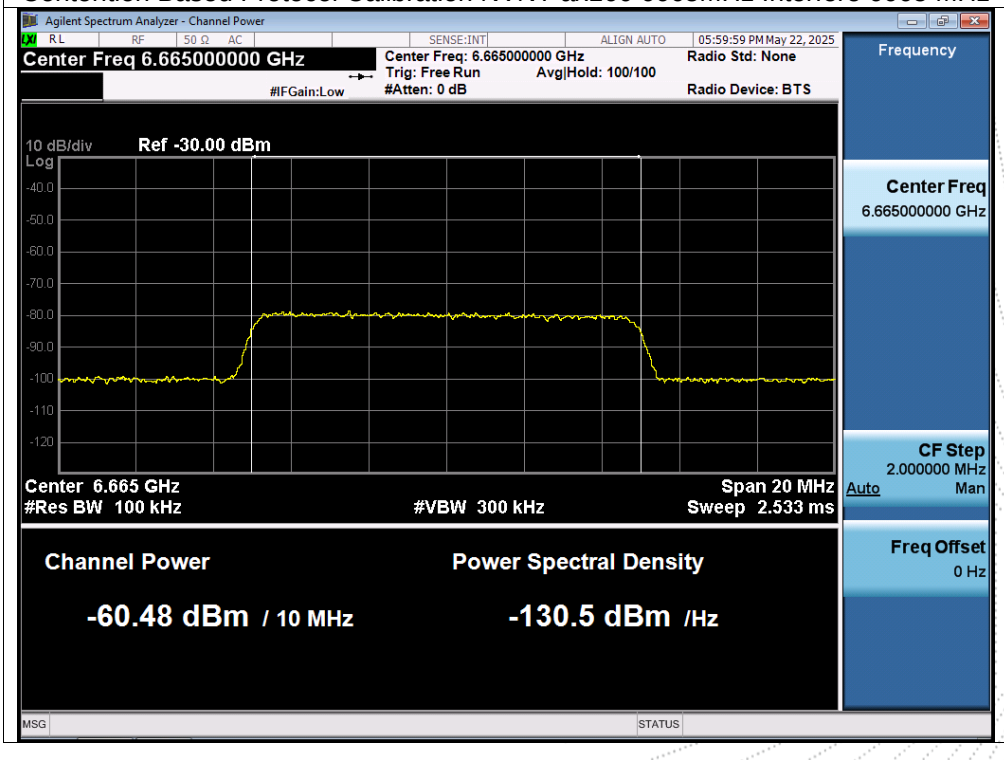
Contention Based Protocol Calibration NVNT ax160 6505MHz Interfere 6580 MHz



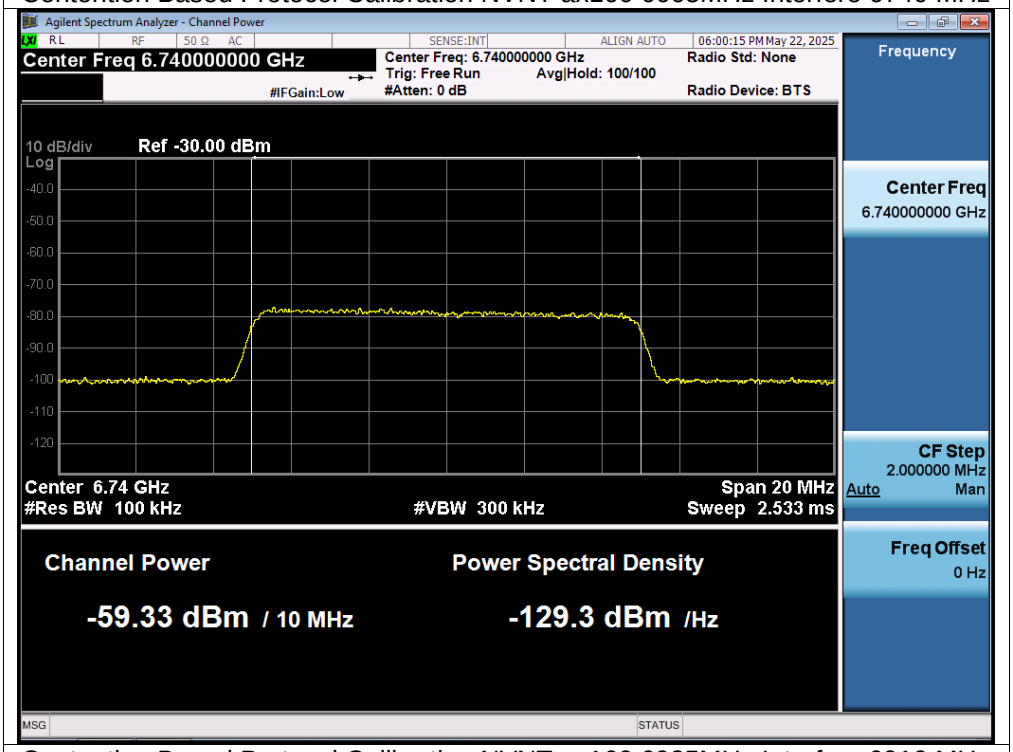
Contention Based Protocol Calibration NVNT ax160 6665MHz Interfere 6590 MHz



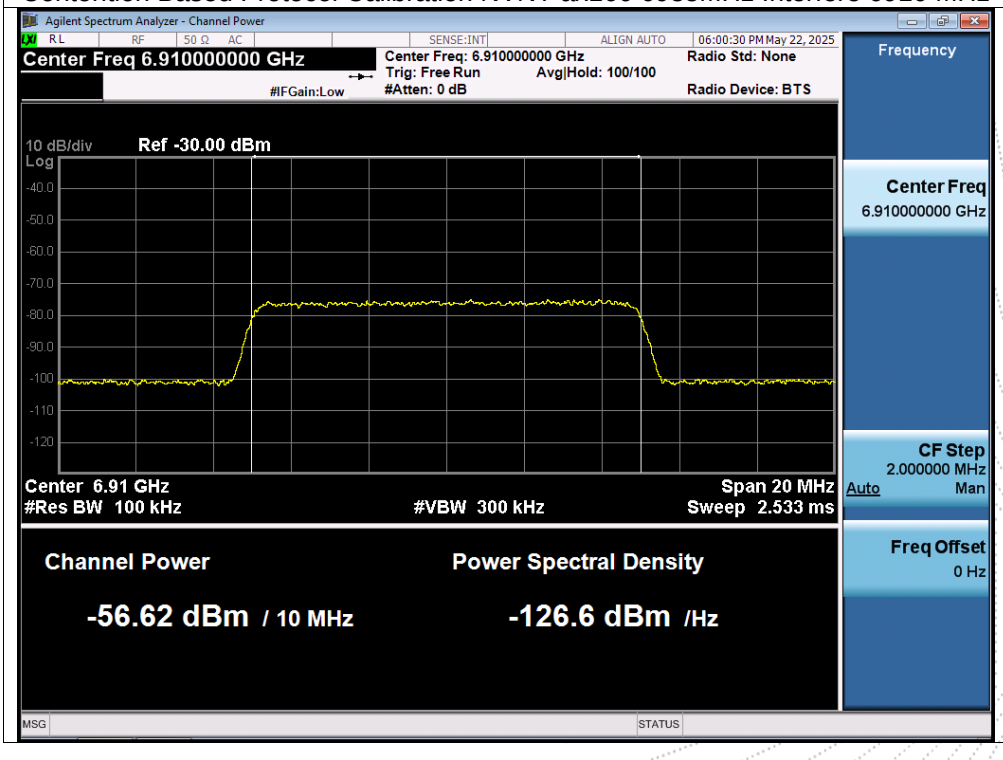
Contention Based Protocol Calibration NVNT ax160 6665MHz Interfere 6665 MHz



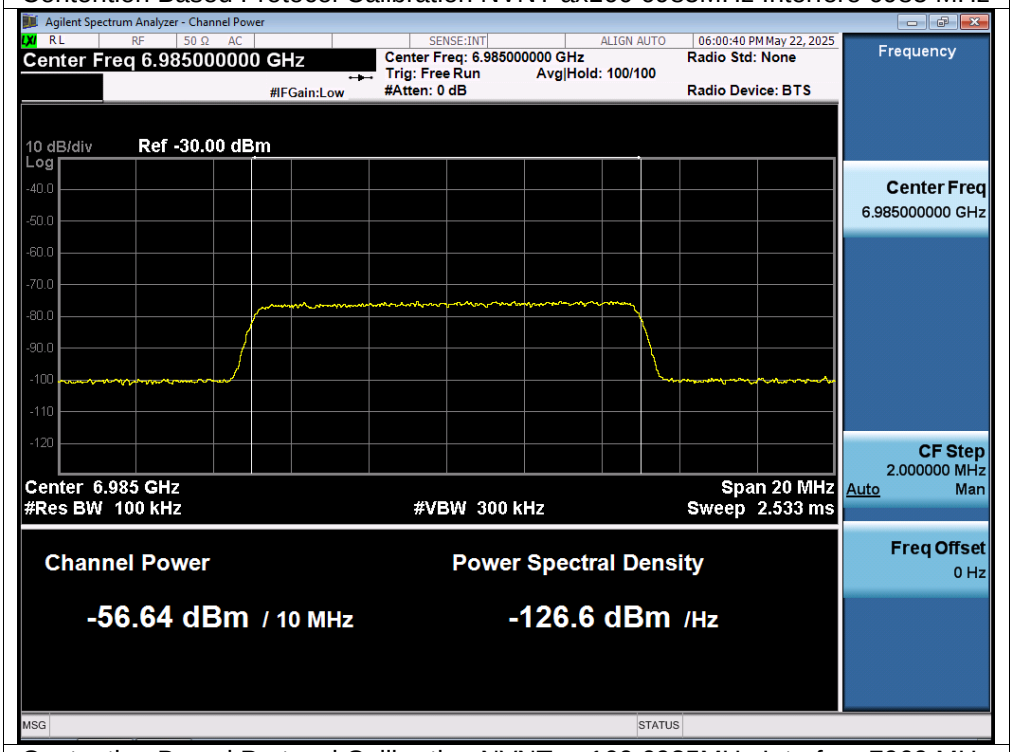
Contention Based Protocol Calibration NVNT ax160 6665MHz Interfere 6740 MHz



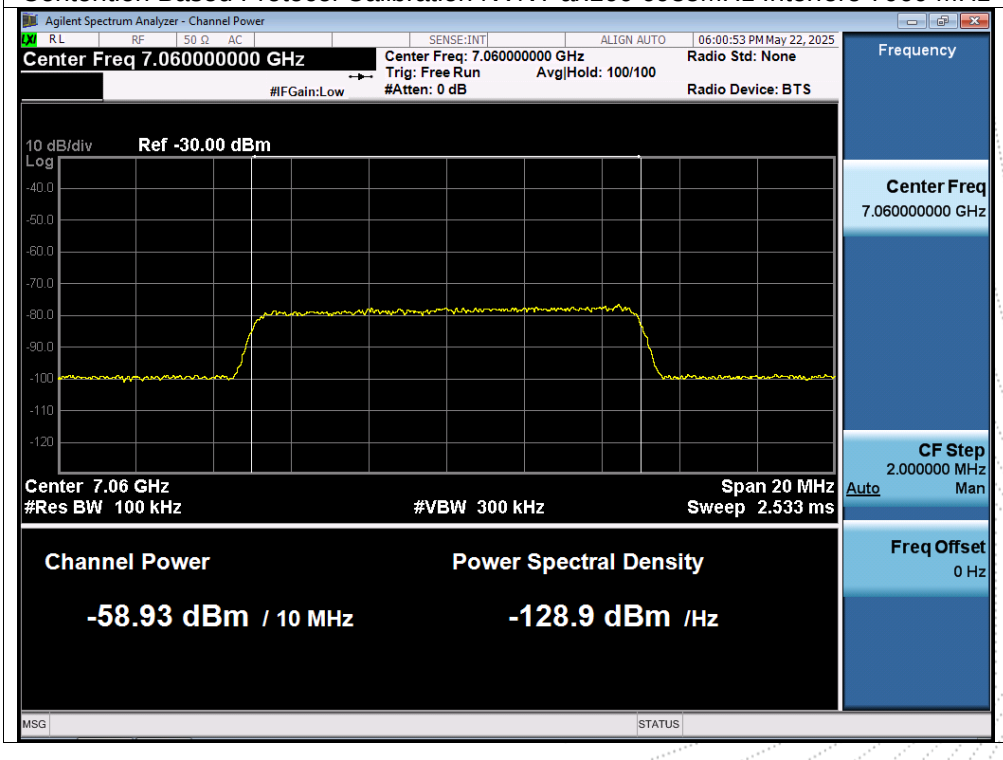
Contention Based Protocol Calibration NVNT ax160 6985MHz Interfere 6910 MHz



Contention Based Protocol Calibration NVNT ax160 6985MHz Interfere 6985 MHz



Contention Based Protocol Calibration NVNT ax160 6985MHz Interfere 7060 MHz

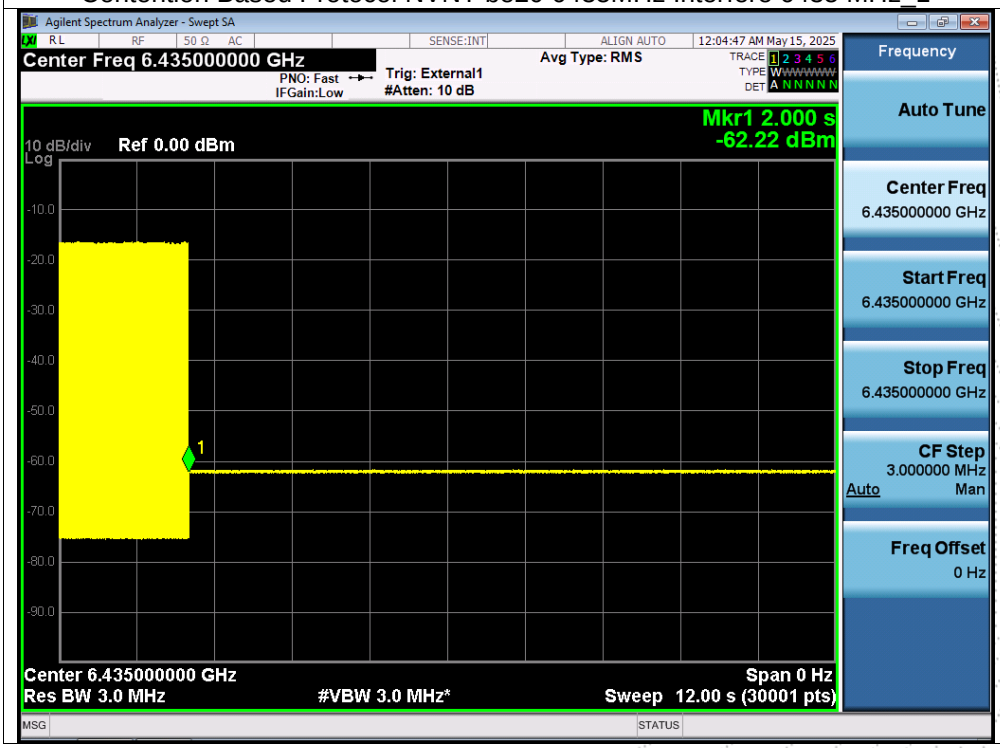


Condition	Mode	Frequency (MHz)	AWGN Location	AWGN Frequency (MHz)	Test Time	Is Detected	Verdict
NVNT	be20	6175	Center	6175	1	Yes	Pass
NVNT	be20	6435	Center	6435	1	Yes	Pass
NVNT	be20	6535	Center	6535	1	Yes	Pass
NVNT	be20	6895	Center	6895	1	Yes	Pass
NVNT	be160	6185	Low	6110	1	Yes	Pass
NVNT	be160	6185	Center	6185	1	Yes	Pass
NVNT	be160	6185	High	6260	1	Yes	Pass
NVNT	be160	6505	Low	6430	1	Yes	Pass
NVNT	be160	6505	Center	6505	1	Yes	Pass
NVNT	be160	6505	High	6580	1	Yes	Pass
NVNT	be160	6665	Low	6590	1	Yes	Pass
NVNT	be160	6665	Center	6665	1	Yes	Pass
NVNT	be160	6665	High	6740	1	Yes	Pass
NVNT	be160	6985	Low	6910	1	Yes	Pass
NVNT	be160	6985	Center	6985	1	Yes	Pass
NVNT	be160	6985	High	7060	1	Yes	Pass

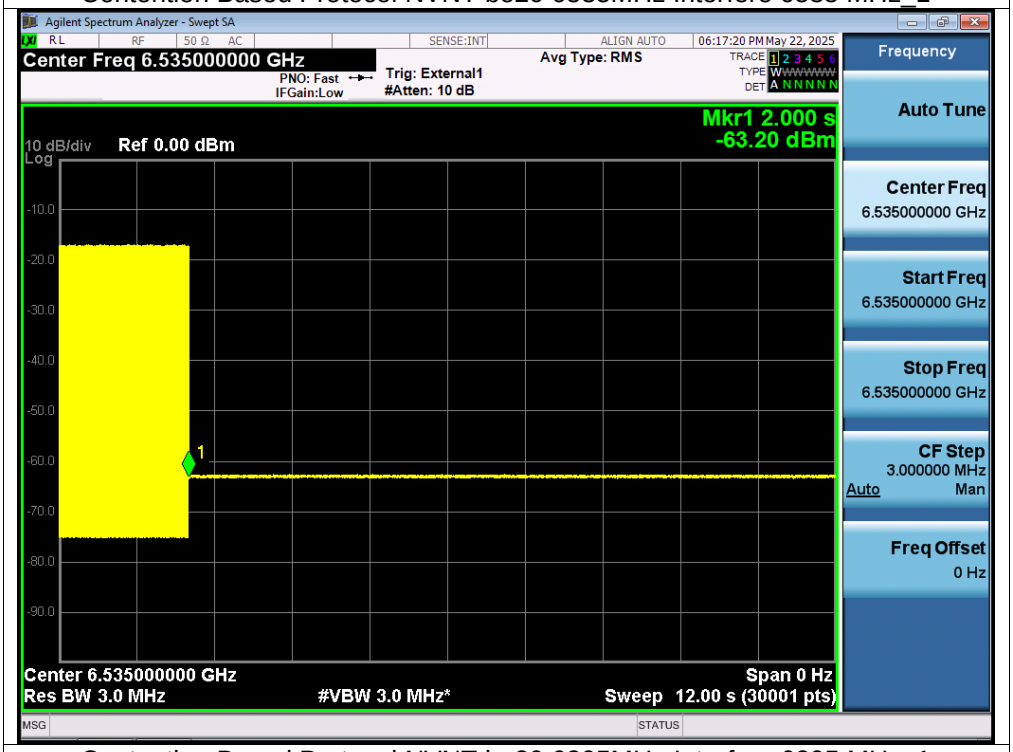
Test Graphs

Contention Based Protocol NVNT be20 6175MHz Interfere 6175 MHz_1

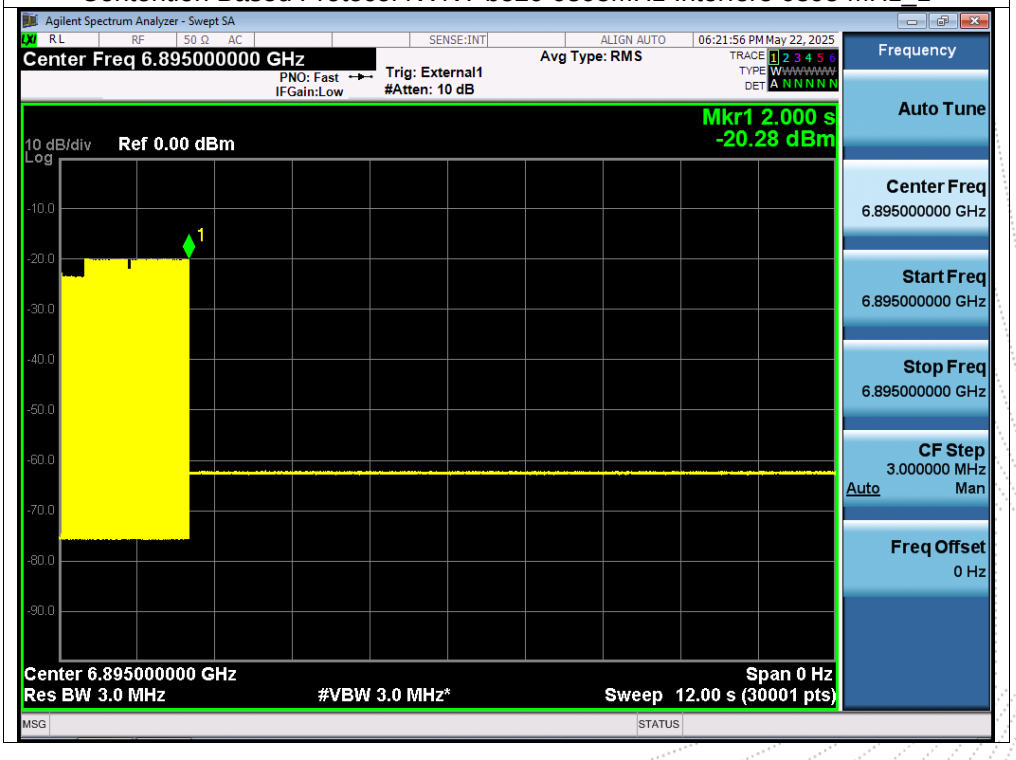
Contention Based Protocol NVNT be20 6435MHz Interfere 6435 MHz_1



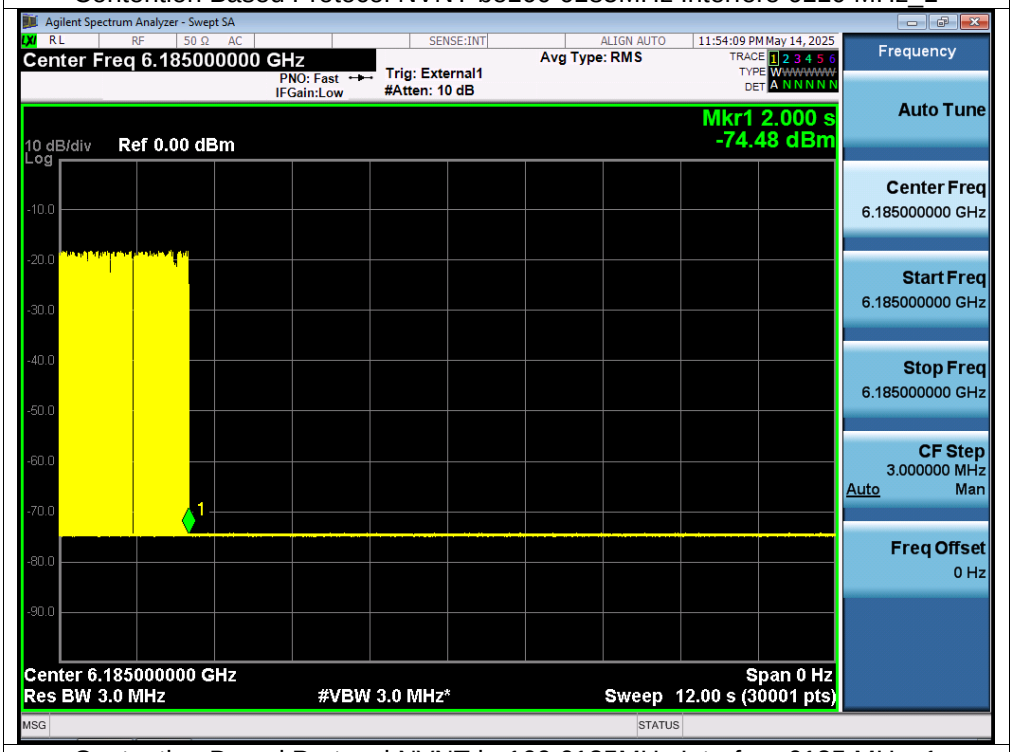
Contention Based Protocol NVNT be20 6535MHz Interfere 6535 MHz_1



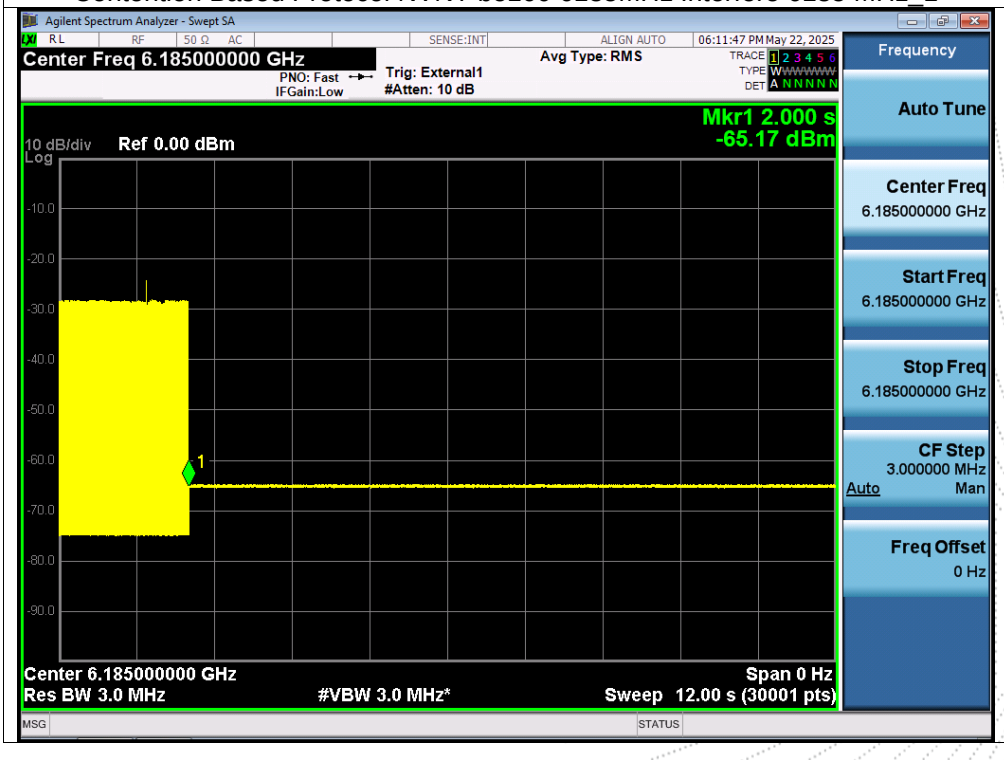
Contention Based Protocol NVNT be20 6895MHz Interfere 6895 MHz_1



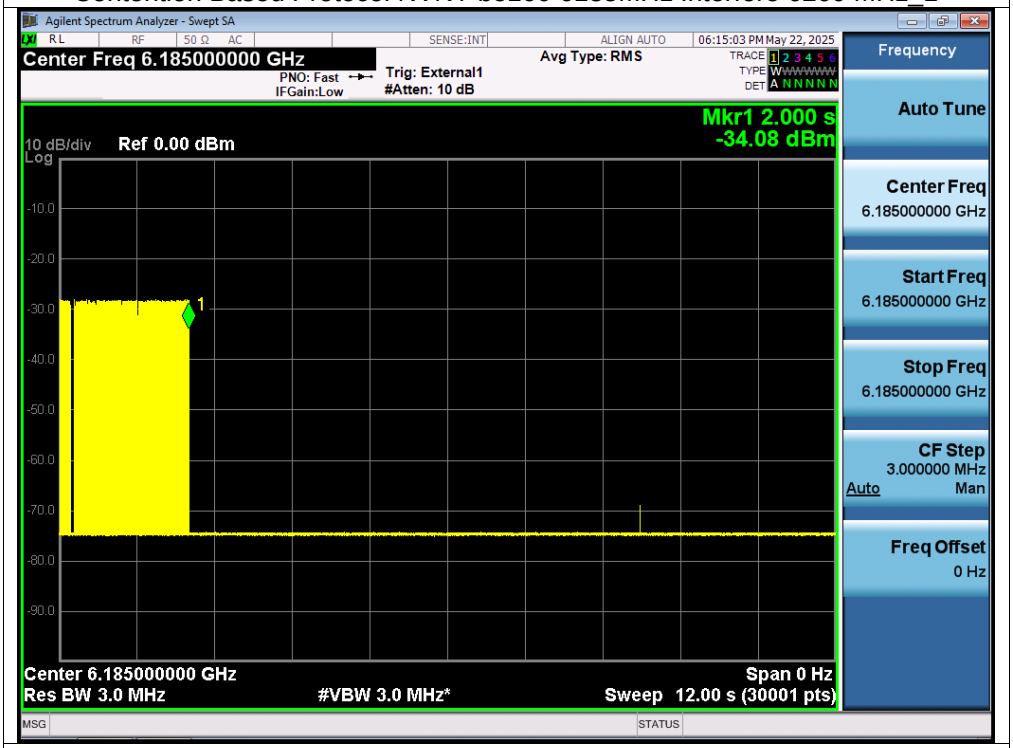
Contention Based Protocol NVNT be160 6185MHz Interfere 6110 MHz_1



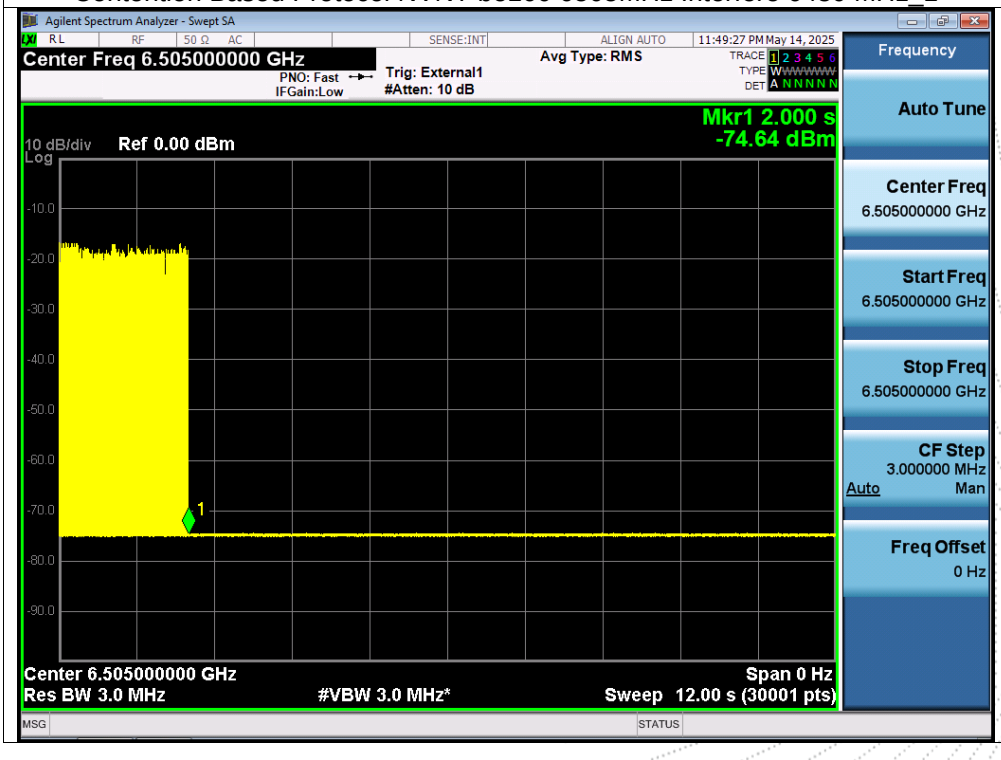
Contention Based Protocol NVNT be160 6185MHz Interfere 6185 MHz_1



Contention Based Protocol NVNT be160 6185MHz Interfere 6260 MHz_1

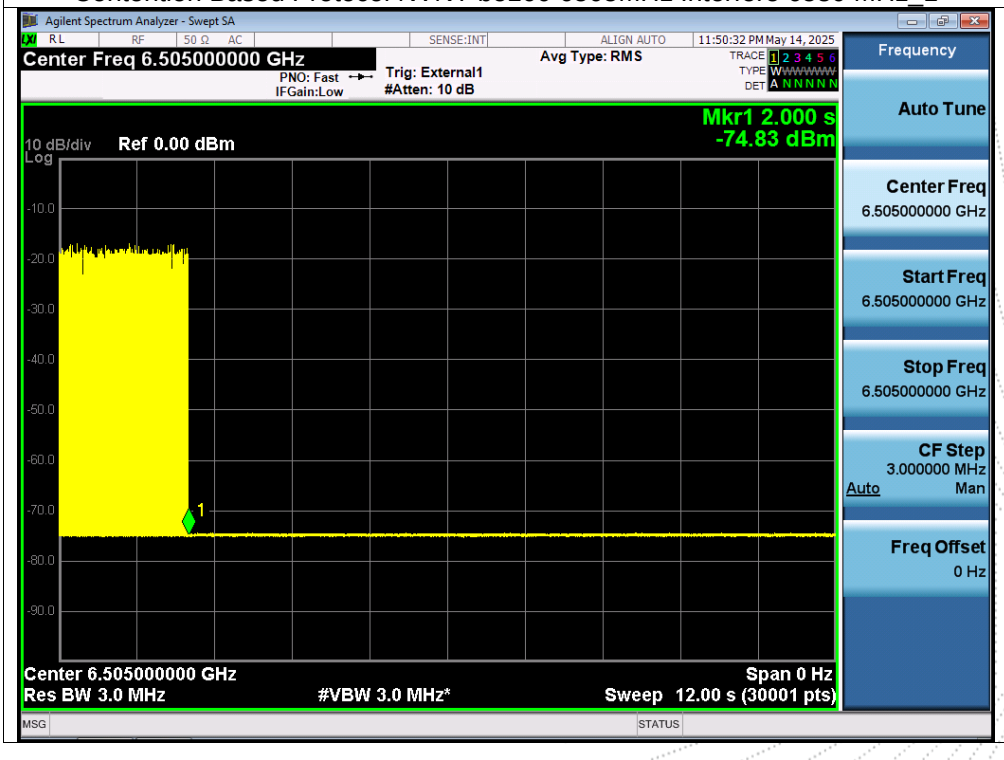


Contention Based Protocol NVNT be160 6505MHz Interfere 6430 MHz_1

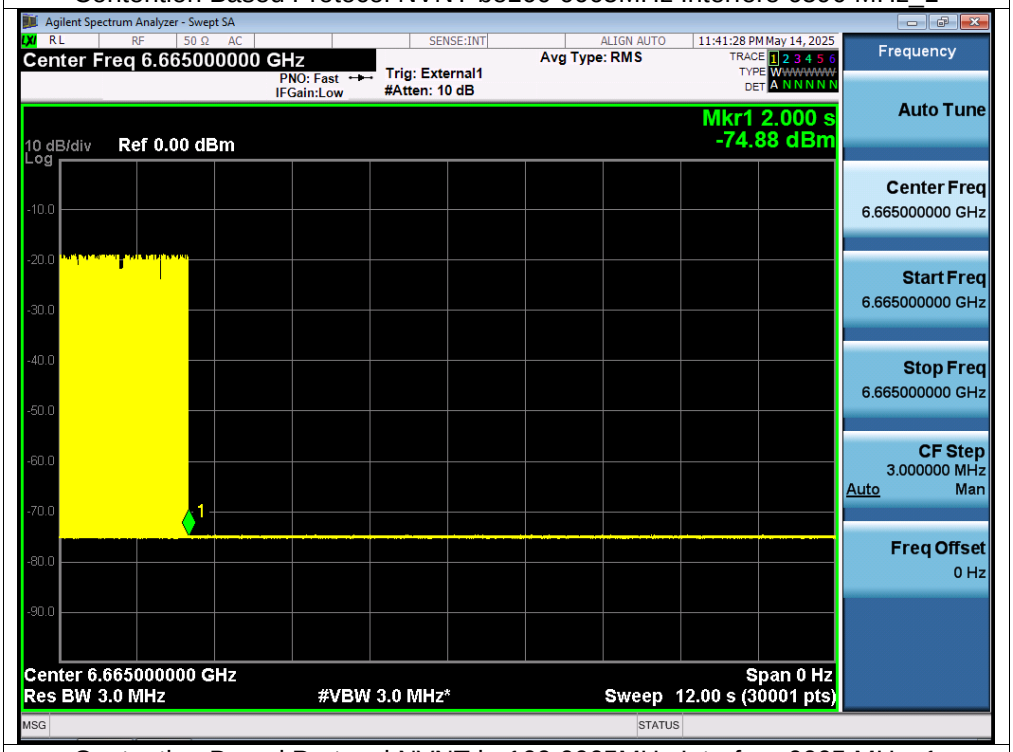


Contention Based Protocol NVNT be160 6505MHz Interfere 6505 MHz_1

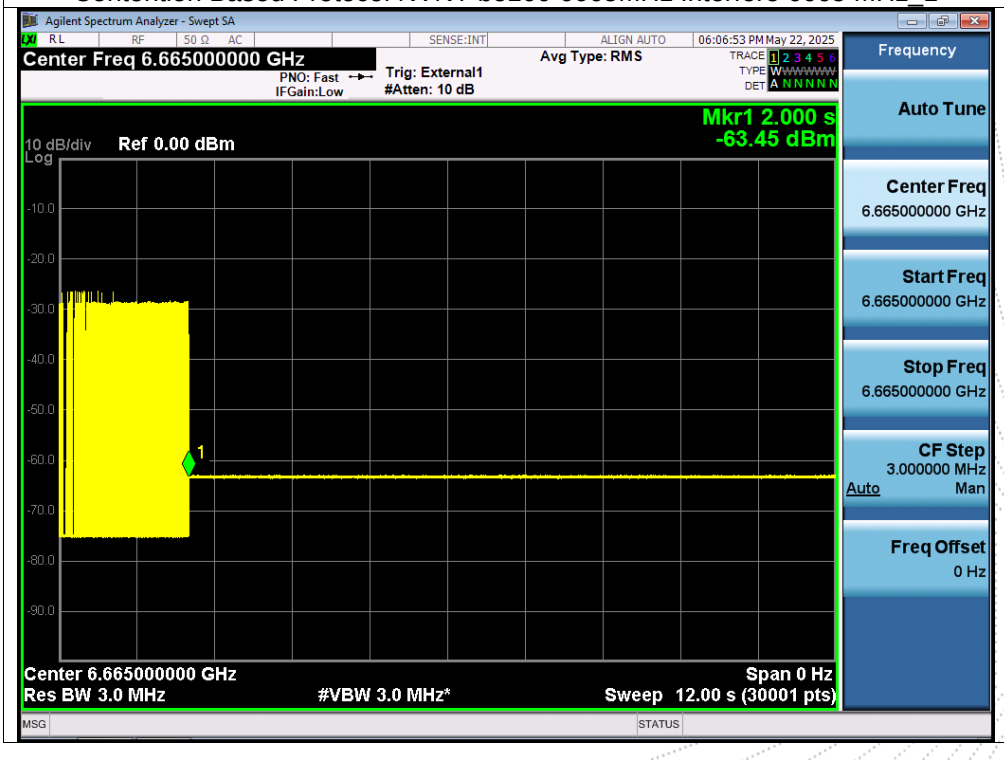
Contention Based Protocol NVNT be160 6505MHz Interfere 6580 MHz_1



Contention Based Protocol NVNT be160 6665MHz Interfere 6590 MHz_1

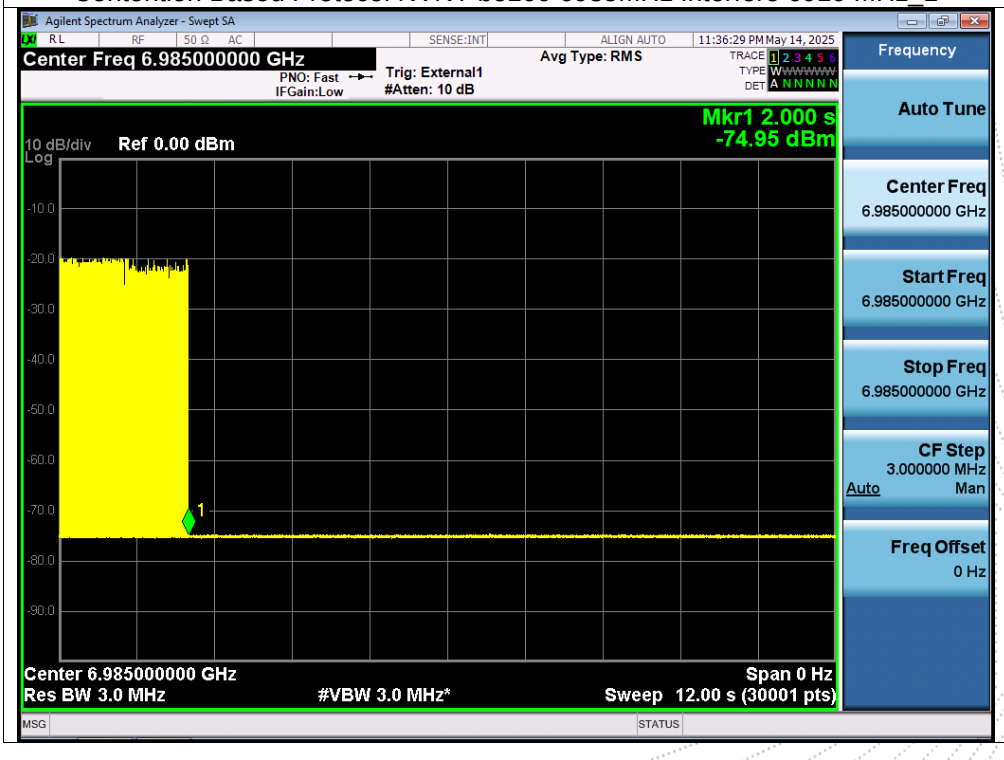


Contention Based Protocol NVNT be160 6665MHz Interfere 6665 MHz_1



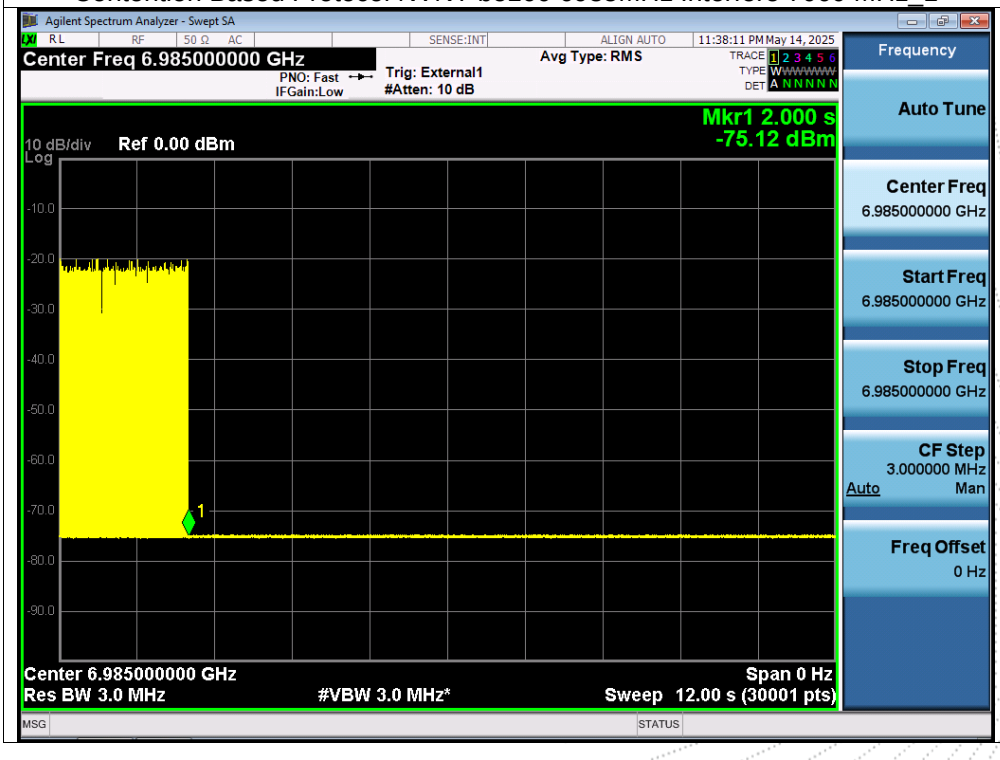
Contention Based Protocol NVNT be160 6665MHz Interfere 6740 MHz_1

Contention Based Protocol NVNT be160 6985MHz Interfere 6910 MHz_1



Contention Based Protocol NVNT be160 6985MHz Interfere 6985 MHz_1

Contention Based Protocol NVNT be160 6985MHz Interfere 7060 MHz_1

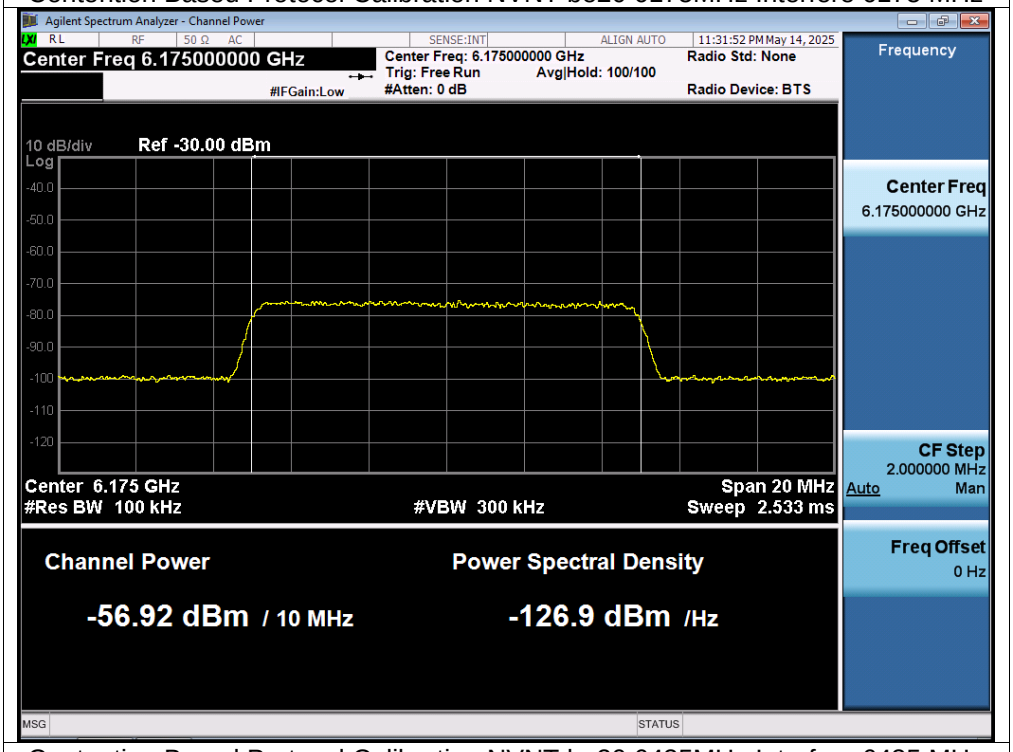


Condition	Mode	Frequency (MHz)	AWGN Frequency (MHz)	AWGN Level (dBm)	Ant Gain (dBi)	Path loss (dB)	Injection Level (dBm)	Limit (dBm)
NVNT	be20	6175	6175	-56.92	2.92	-5	-64.84	-62
NVNT	be20	6435	6435	-56.59	2.92	-5	-64.51	-62
NVNT	be20	6535	6535	-54.94	2.92	-5	-62.86	-62
NVNT	be20	6895	6895	-56.92	2.92	-5	-64.84	-62
NVNT	be160	6185	6110	-58.4	2.92	-5	-66.32	-62
NVNT	be160	6185	6185	-57.91	2.92	-5	-65.83	-62
NVNT	be160	6185	6260	-56.8	2.92	-5	-64.72	-62
NVNT	be160	6505	6430	-57.17	2.92	-5	-65.09	-62
NVNT	be160	6505	6505	-60.78	2.92	-5	-68.7	-62
NVNT	be160	6505	6580	-61.42	2.92	-5	-69.34	-62
NVNT	be160	6665	6590	-61.85	2.92	-5	-69.77	-62
NVNT	be160	6665	6665	-60.19	2.92	-5	-68.11	-62
NVNT	be160	6665	6740	-58.95	2.92	-5	-66.87	-62
NVNT	be160	6985	6910	-56.63	2.92	-5	-64.55	-62
NVNT	be160	6985	6985	-56.89	2.92	-5	-64.81	-62
NVNT	be160	6985	7060	-58.59	2.92	-5	-66.51	-62

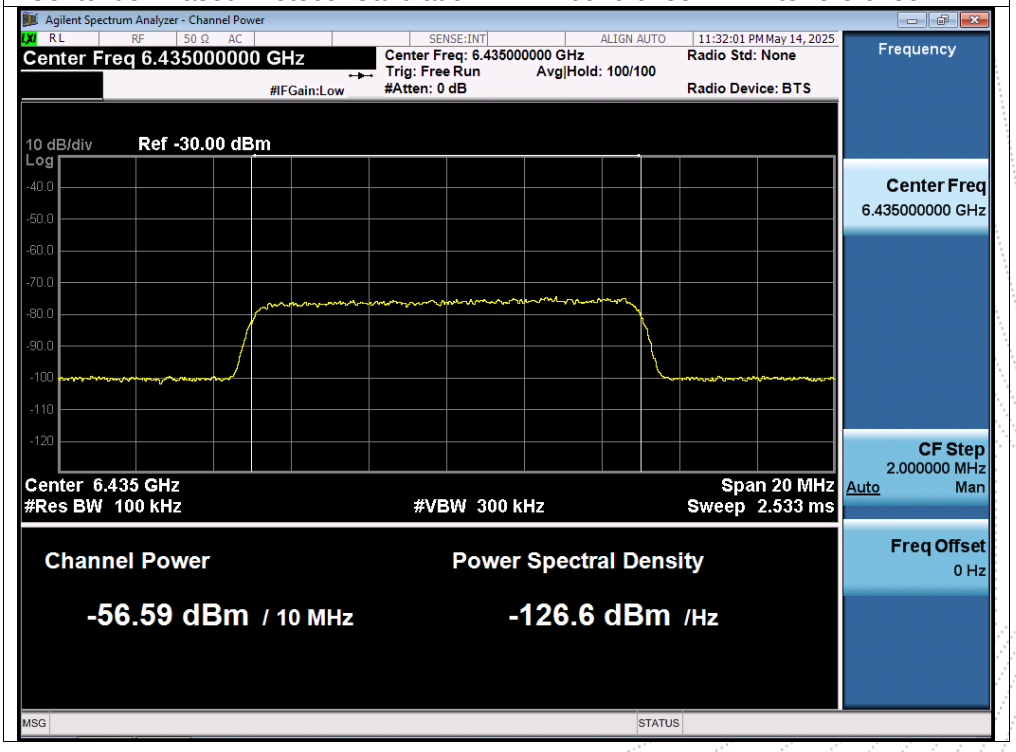
Note : Injection Level(dBm) = AWGN Level(dBm)+Antenna Gain -Path Loss

Test Graphs

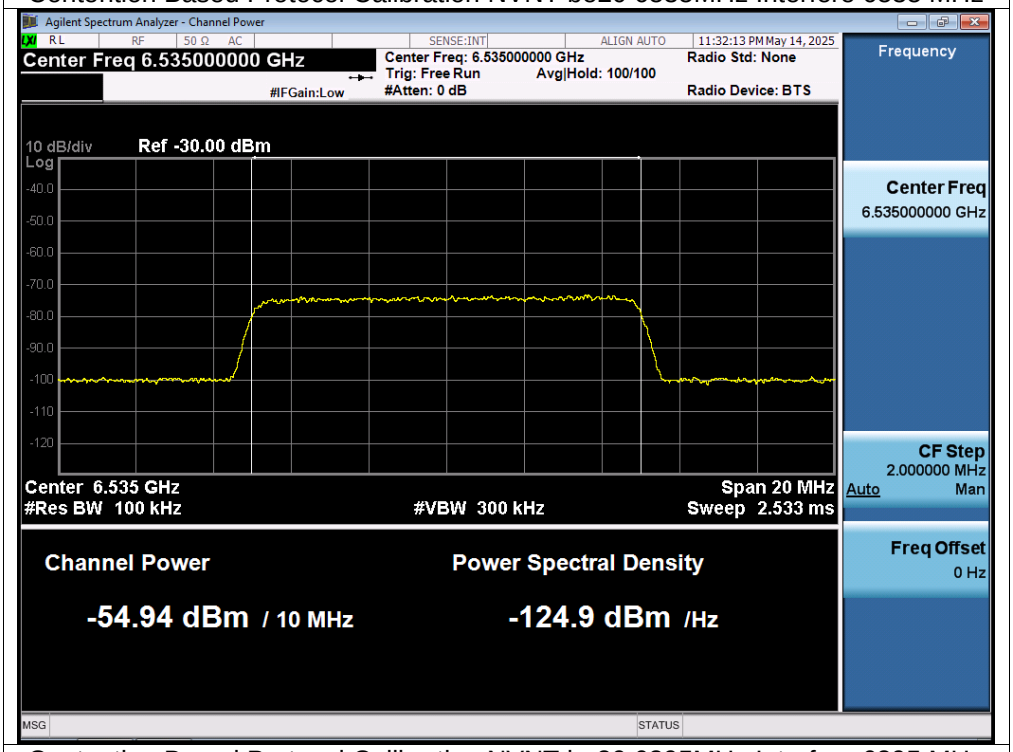
Contention Based Protocol Calibration NVNT be20 6175MHz Interfere 6175 MHz



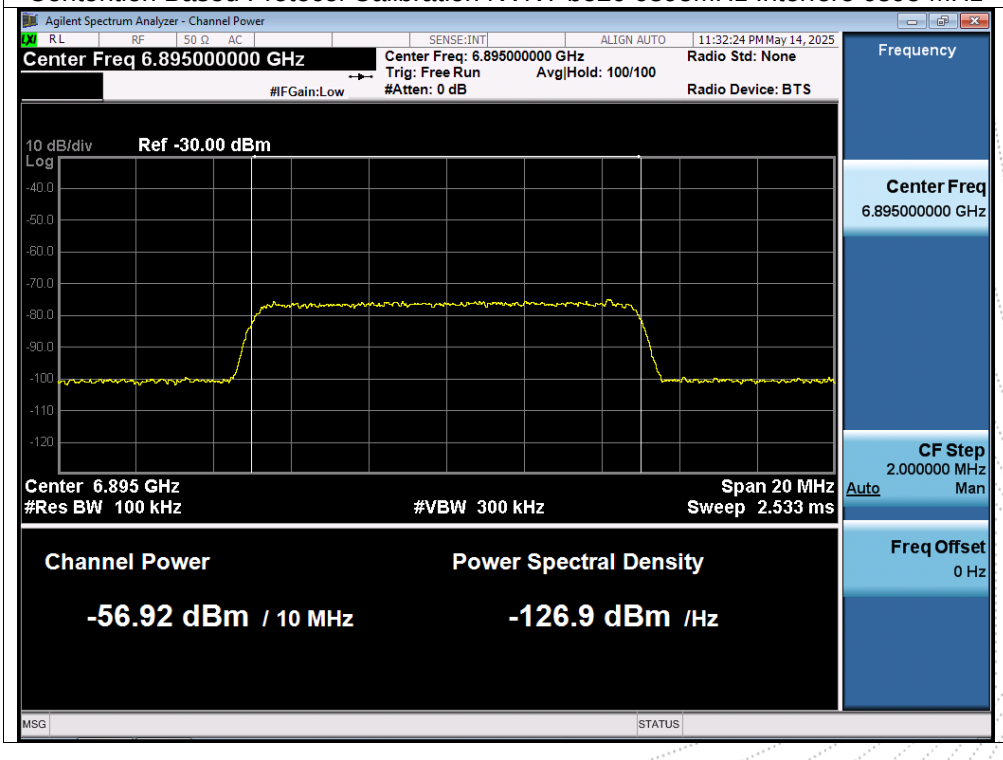
Contention Based Protocol Calibration NVNT be20 6435MHz Interfere 6435 MHz



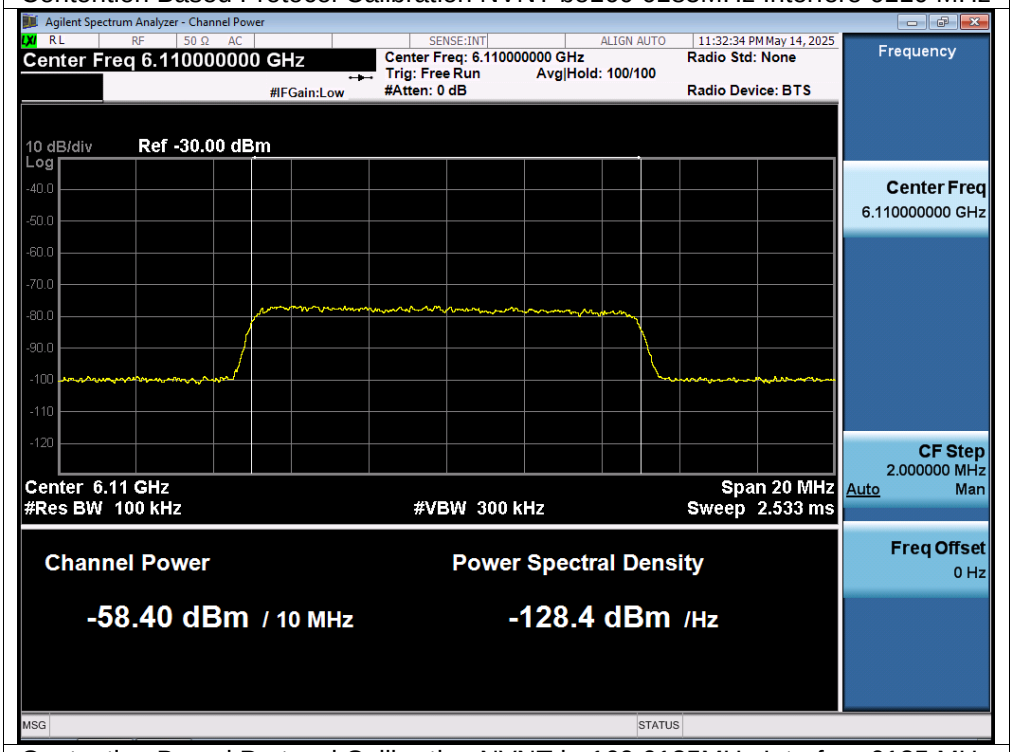
Contention Based Protocol Calibration NVNT be20 6535MHz Interfere 6535 MHz



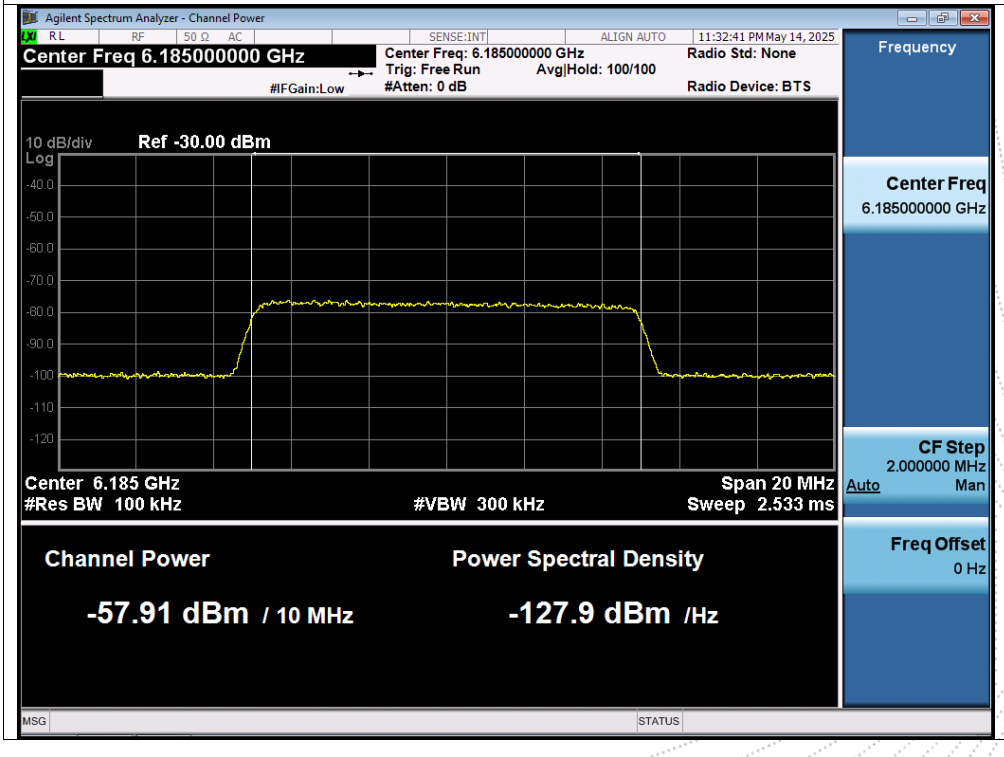
Contention Based Protocol Calibration NVNT be20 6895MHz Interfere 6895 MHz



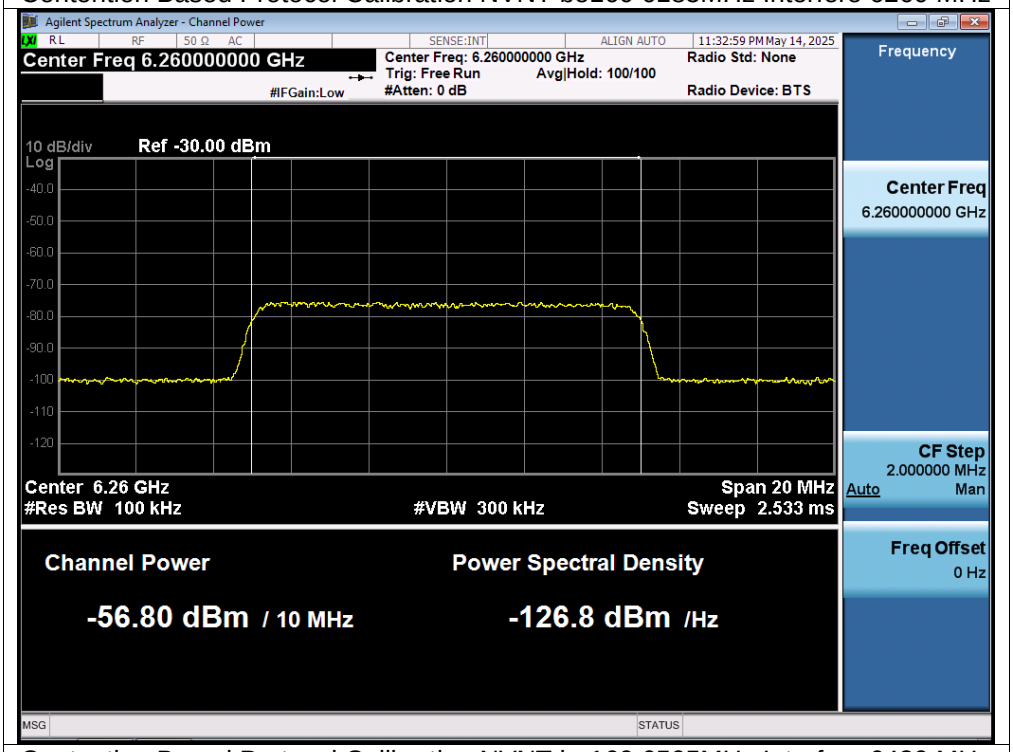
Contention Based Protocol Calibration NVNT be160 6185MHz Interfere 6110 MHz



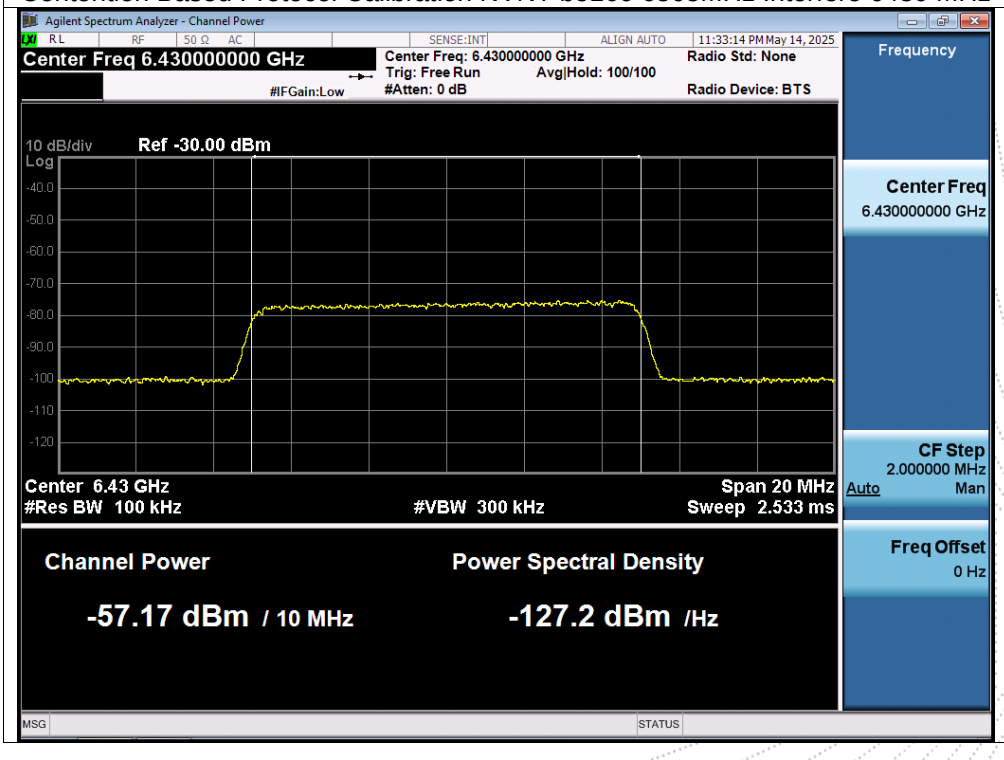
Contention Based Protocol Calibration NVNT be160 6185MHz Interfere 6185 MHz



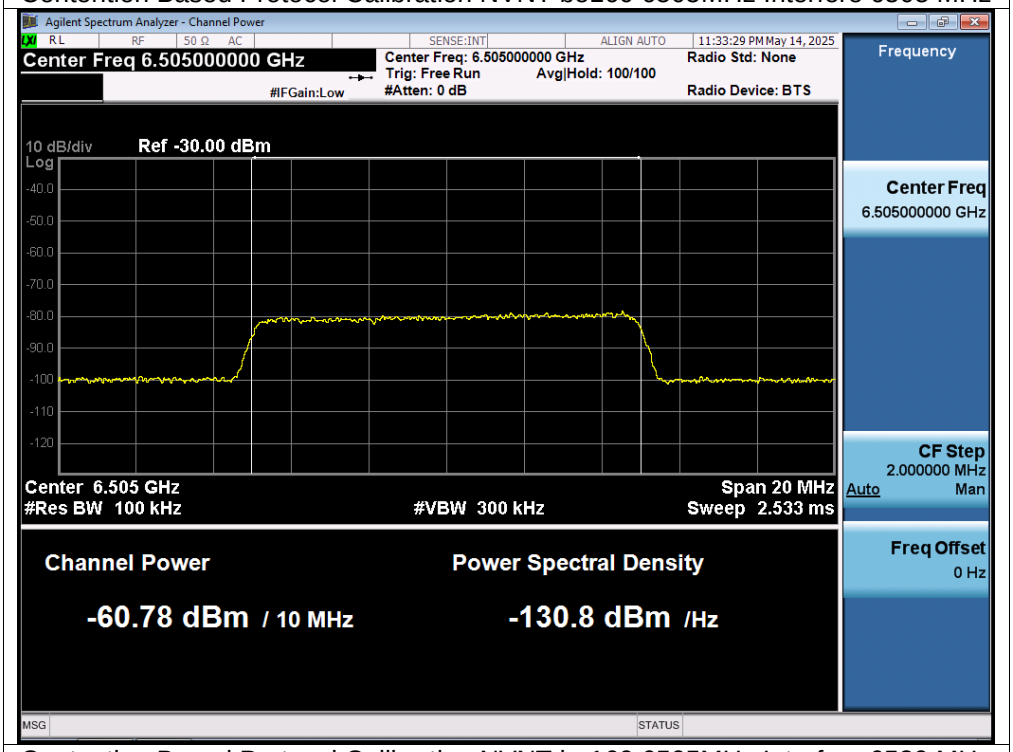
Contention Based Protocol Calibration NVNT be160 6185MHz Interfere 6260 MHz



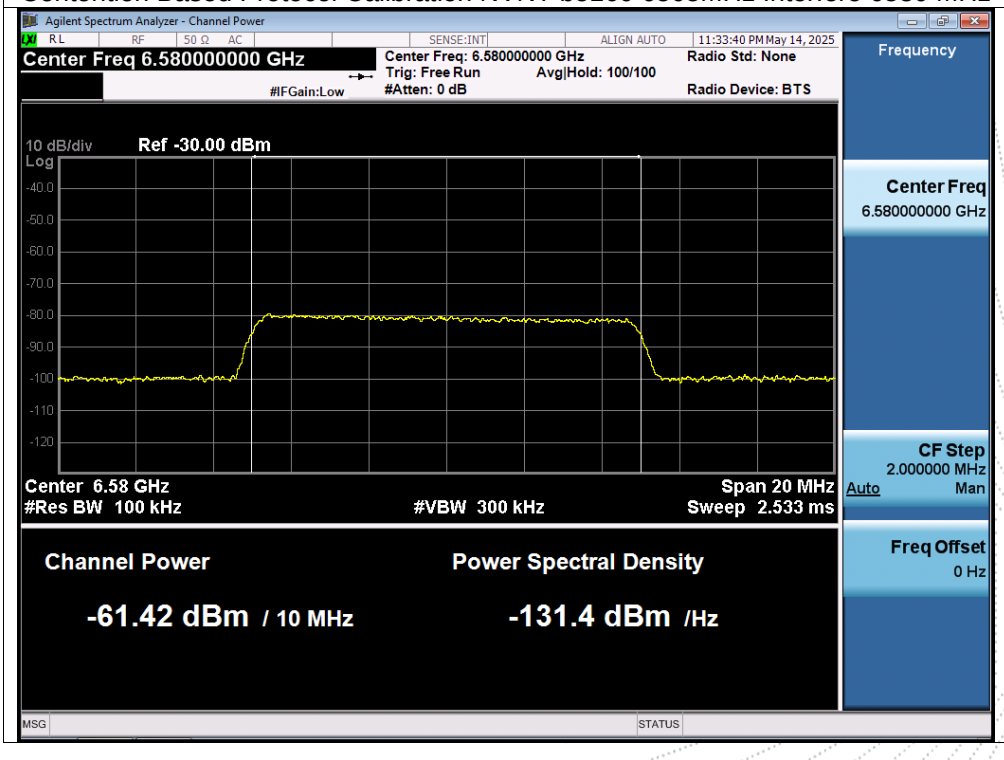
Contention Based Protocol Calibration NVNT be160 6505MHz Interfere 6430 MHz



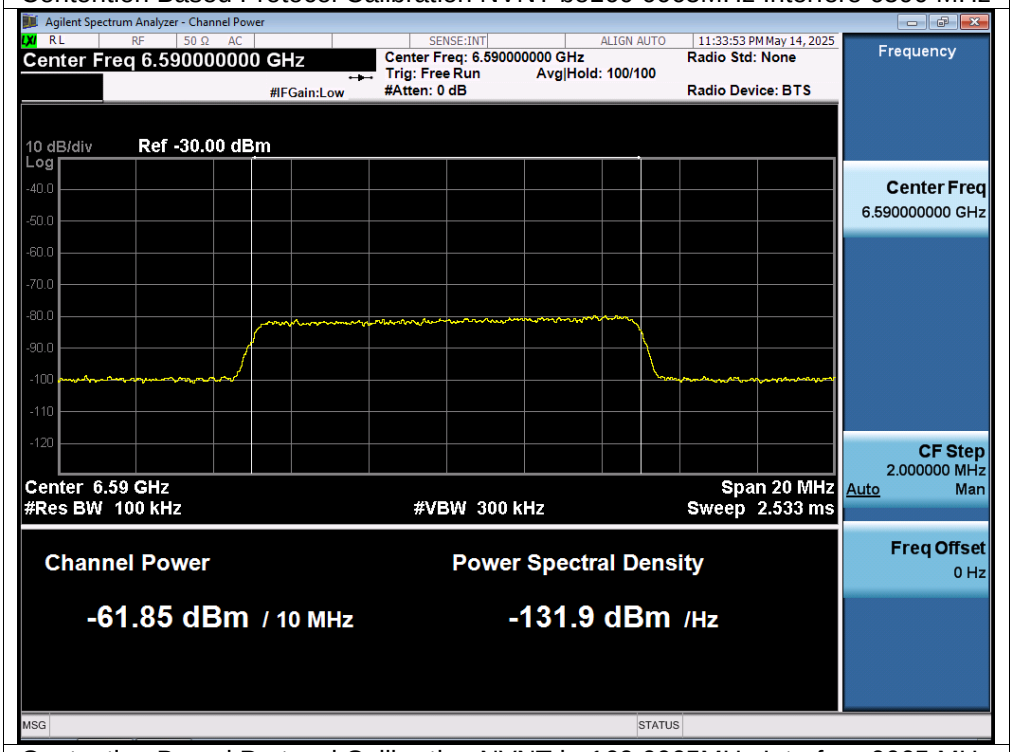
Contention Based Protocol Calibration NVNT be160 6505MHz Interfere 6505 MHz



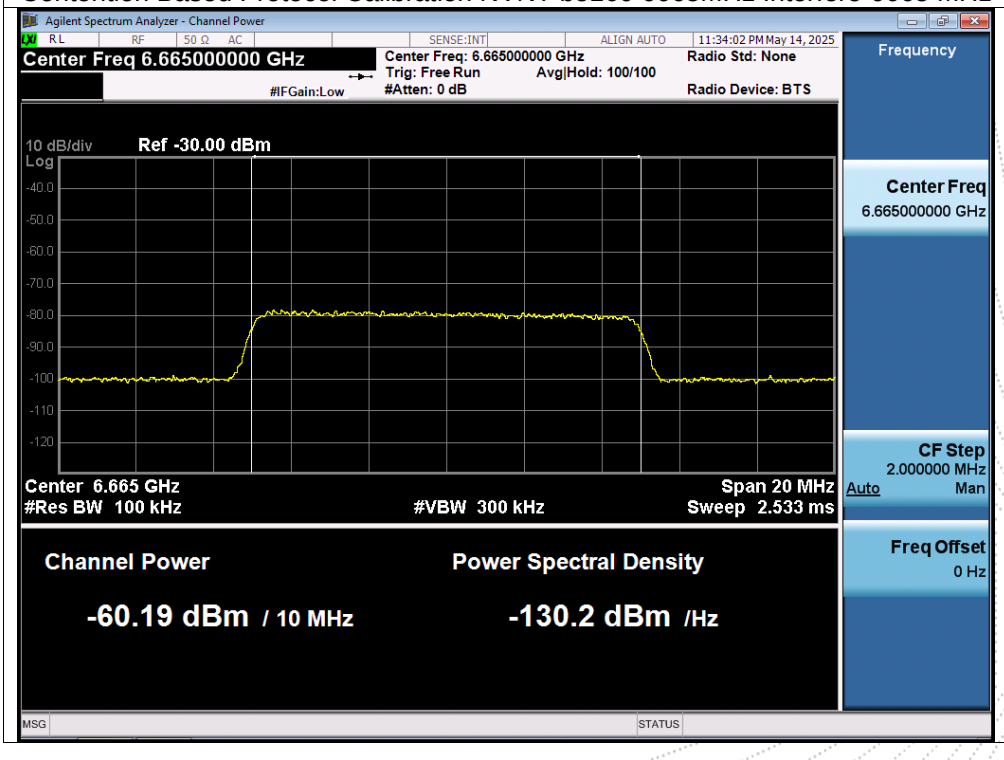
Contention Based Protocol Calibration NVNT be160 6505MHz Interfere 6580 MHz



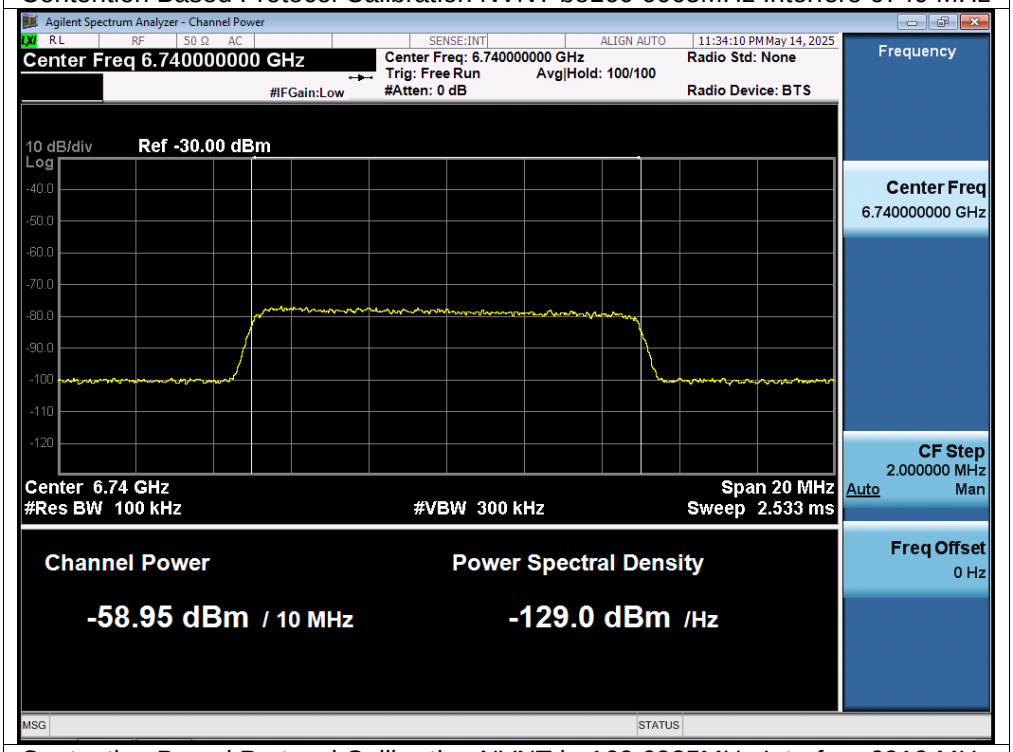
Contention Based Protocol Calibration NVNT be160 6665MHz Interfere 6590 MHz



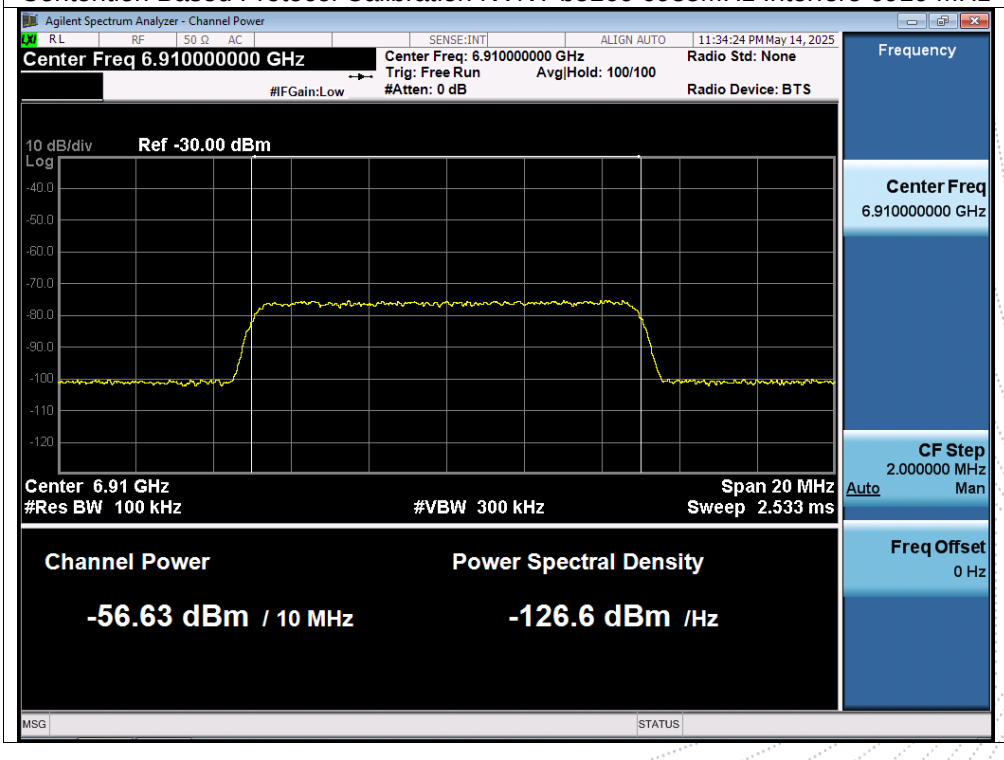
Contention Based Protocol Calibration NVNT be160 6665MHz Interfere 6665 MHz



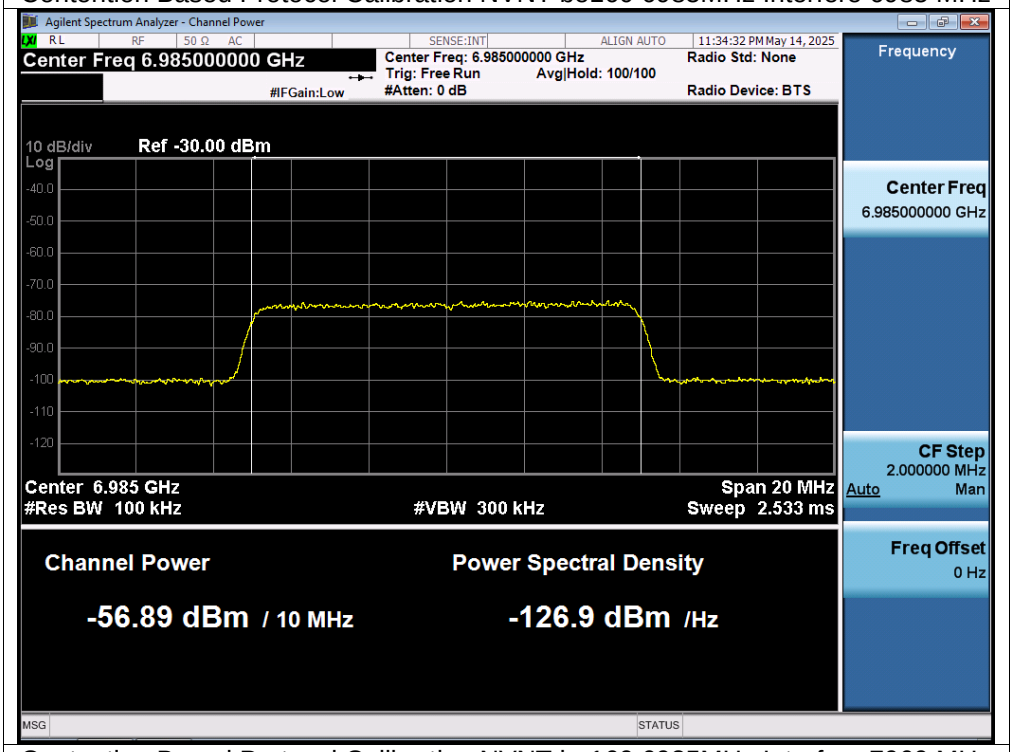
Contention Based Protocol Calibration NVNT be160 6665MHz Interfere 6740 MHz



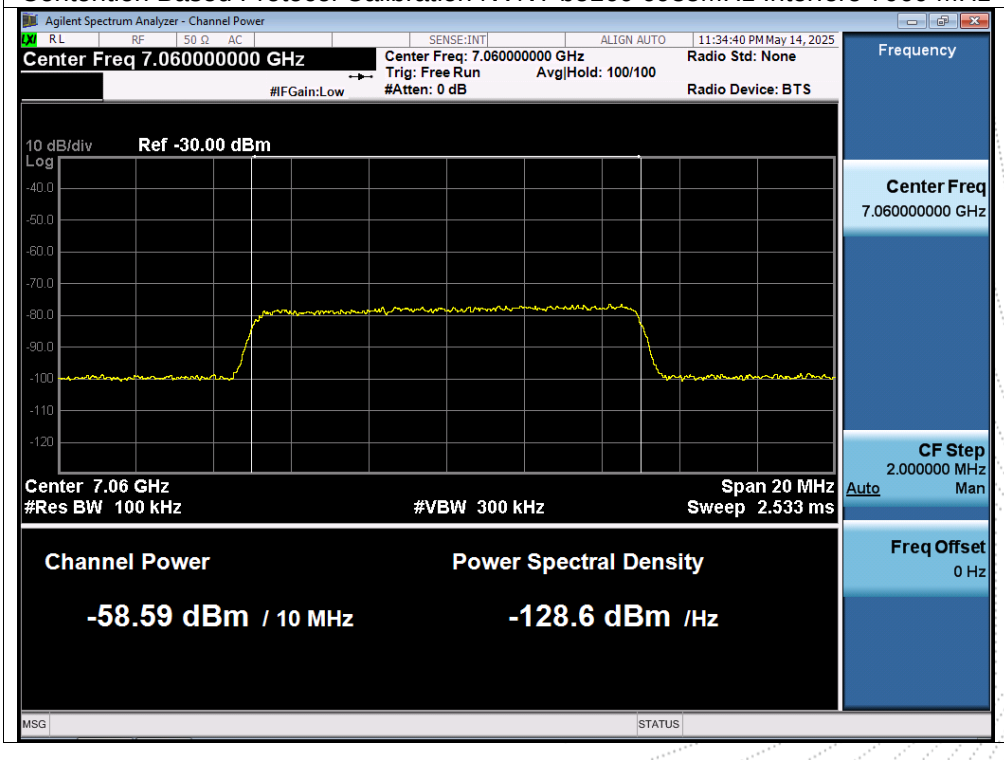
Contention Based Protocol Calibration NVNT be160 6985MHz Interfere 6910 MHz



Contention Based Protocol Calibration NVNT be160 6985MHz Interfere 6985 MHz



Contention Based Protocol Calibration NVNT be160 6985MHz Interfere 7060 MHz



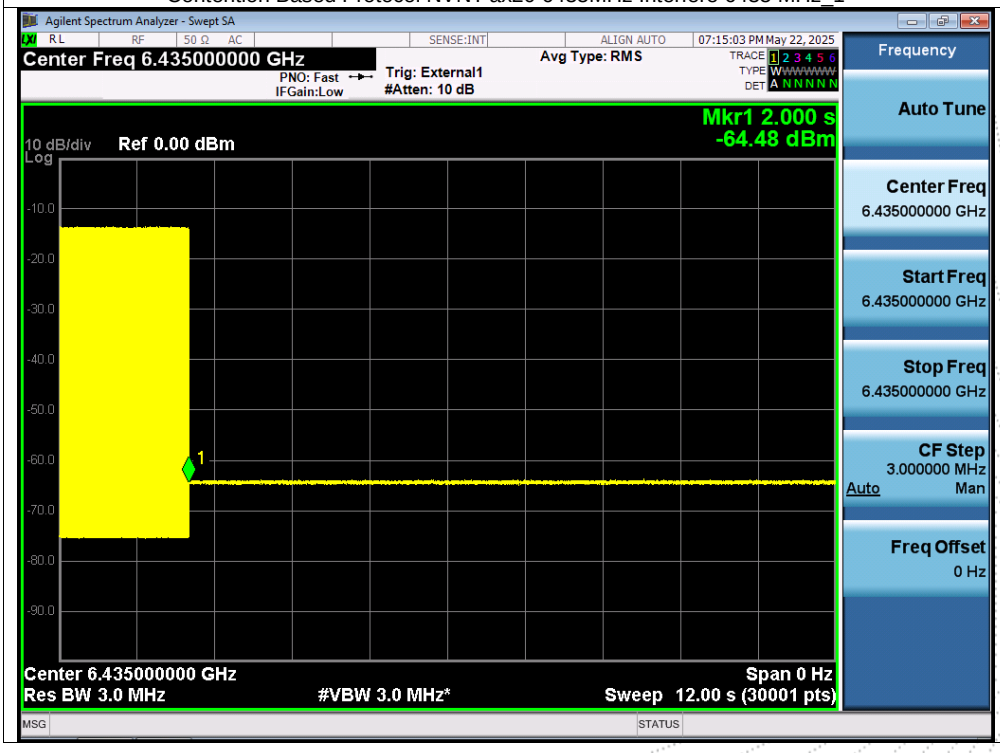
Standard Power Client

Condition	Mode	Frequency (MHz)	AWGN Location	AWGN Frequency (MHz)	Test Time	Is Detected	Verdict
NVNT	ax20	6175	Center	6175	1	Yes	Pass
NVNT	ax20	6435	Center	6435	1	Yes	Pass
NVNT	ax20	6535	Center	6535	1	Yes	Pass
NVNT	ax20	6895	Center	6895	1	Yes	Pass
NVNT	ax160	6185	Low	6110	1	Yes	Pass
NVNT	ax160	6185	Center	6185	1	Yes	Pass
NVNT	ax160	6185	High	6260	1	Yes	Pass
NVNT	ax160	6505	Low	6430	1	Yes	Pass
NVNT	ax160	6505	Center	6505	1	Yes	Pass
NVNT	ax160	6505	High	6580	1	Yes	Pass
NVNT	ax160	6665	Low	6590	1	Yes	Pass
NVNT	ax160	6665	Center	6665	1	Yes	Pass
NVNT	ax160	6665	High	6740	1	Yes	Pass
NVNT	ax160	6985	Low	6910	1	Yes	Pass
NVNT	ax160	6985	Center	6985	1	Yes	Pass
NVNT	ax160	6985	High	7060	1	Yes	Pass

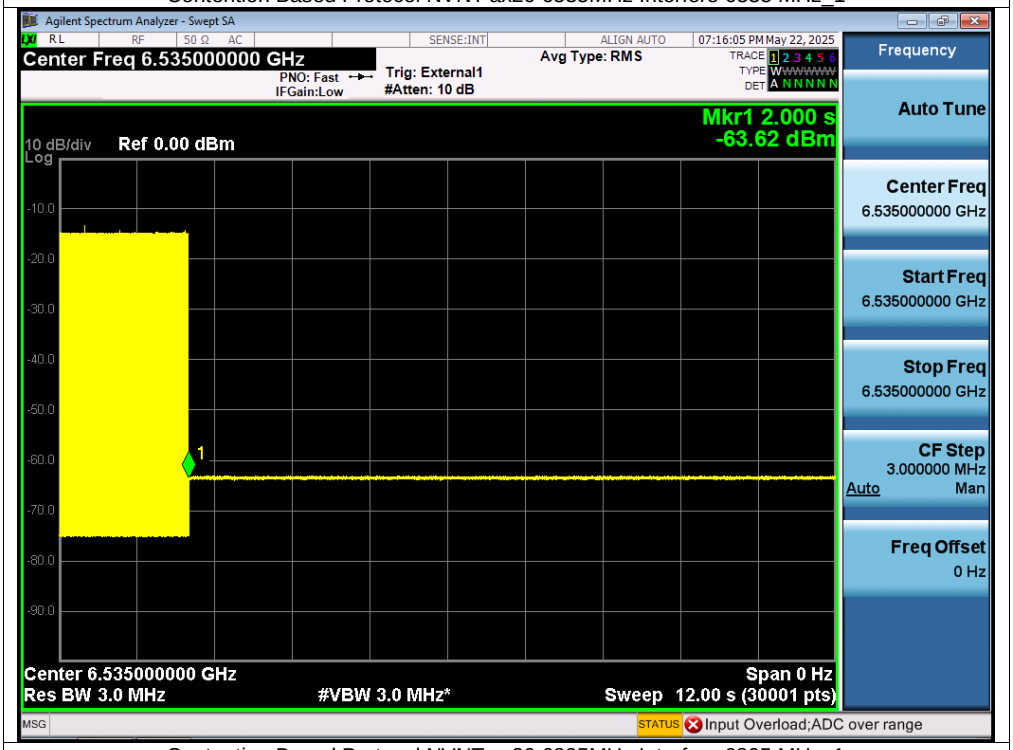
Test Graphs

Contention Based Protocol NVNT ax20 6175MHz Interfere 6175 MHz_1

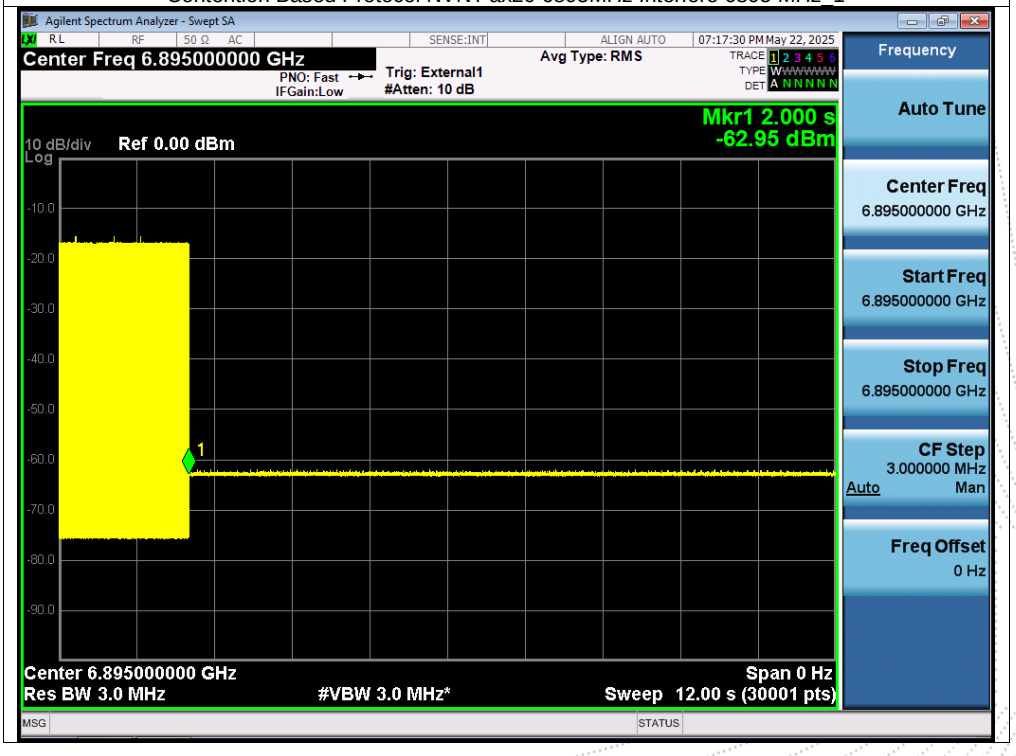
Contention Based Protocol NVNT ax20 6435MHz Interfere 6435 MHz_1



Contention Based Protocol NVNT ax20 6535MHz Interfere 6535 MHz_1



Contention Based Protocol NVNT ax20 6895MHz Interfere 6895 MHz_1



Contention Based Protocol NVNT ax160 6185MHz Interfere 6110 MHz_1

Contention Based Protocol NVNT ax160 6185MHz Interfere 6185 MHz_1