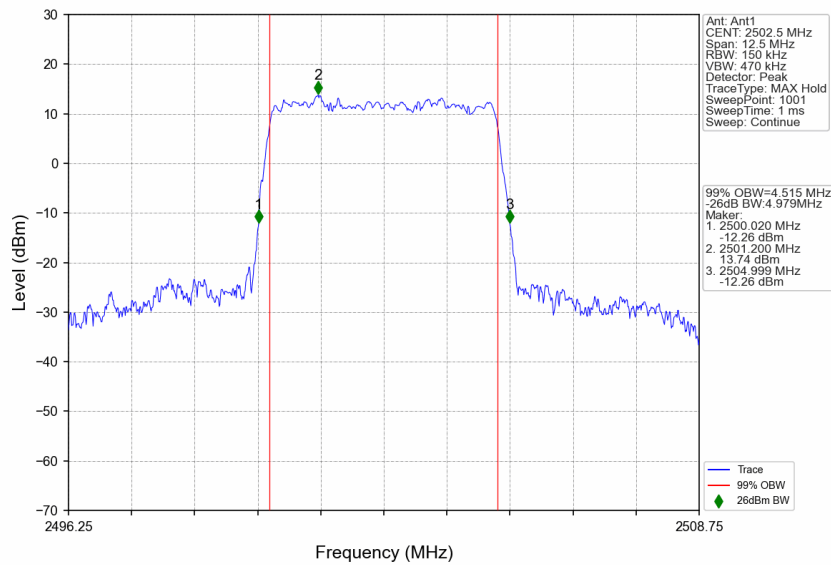
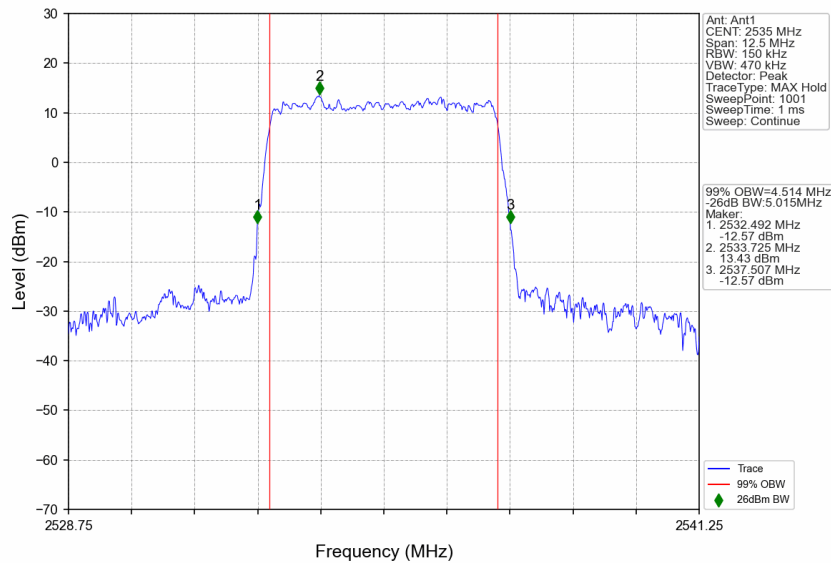


n7_15kHz_SISO_NTNV_5MHz_CP-OFDM 256 QAM_2502.5MHz_Outer_Full



n7_15kHz_SISO_NTNV_5MHz_CP-OFDM 256 QAM_2535MHz_Outer_Full

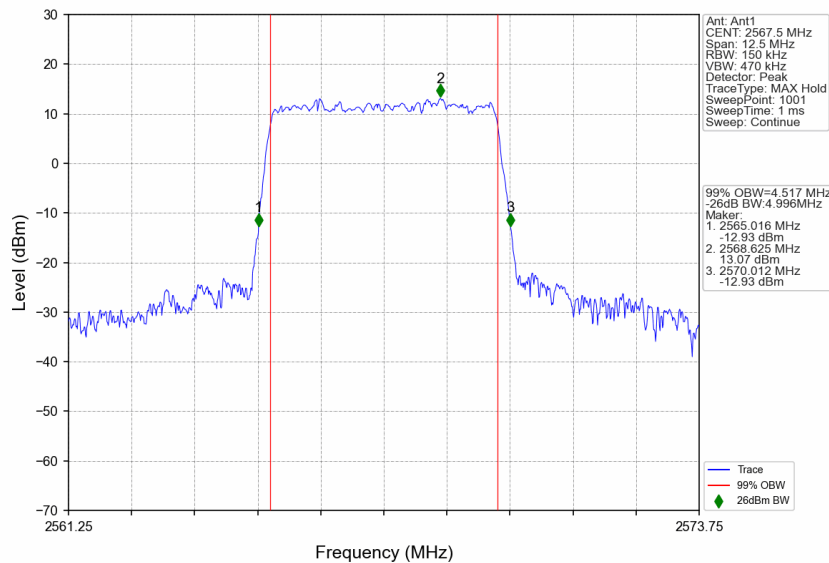


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n7_15kHz_SISO_NTNV_5MHz_CP-OFDM 256 QAM_2567.5MHz_Outer_Full



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Wireless Laboratory

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4.2 15k_SISO_10MHz_NTNV

4.2.1 Test Result

5G NR n7 SCS=15kHz SISO 10MHz NTN						
Modulation	Frequency (MHz)	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	2505	Outer_Full	9.10	9.78	/	Pass
	2535	Outer_Full	9.10	9.76	/	Pass
	2565	Outer_Full	9.09	9.77	/	Pass
DFT-s-OFDM QPSK	2505	Outer_Full	9.03	9.70	/	Pass
	2535	Outer_Full	9.02	9.70	/	Pass
	2565	Outer_Full	9.03	9.68	/	Pass
DFT-s-OFDM 16 QAM	2505	Outer_Full	9.03	9.73	/	Pass
	2535	Outer_Full	9.02	9.71	/	Pass
	2565	Outer_Full	9.02	9.72	/	Pass
DFT-s-OFDM 64 QAM	2505	Outer_Full	9.06	9.74	/	Pass
	2535	Outer_Full	9.05	9.75	/	Pass
	2565	Outer_Full	9.06	9.75	/	Pass
DFT-s-OFDM 256 QAM	2505	Outer_Full	9.01	9.71	/	Pass
	2535	Outer_Full	9.01	9.69	/	Pass
	2565	Outer_Full	9.01	9.70	/	Pass
CP-OFDM QPSK	2505	Outer_Full	9.38	10.56	/	Pass
	2535	Outer_Full	9.36	10.09	/	Pass
	2565	Outer_Full	9.37	10.09	/	Pass
CP-OFDM 16 QAM	2505	Outer_Full	9.40	11.58	/	Pass
	2535	Outer_Full	9.38	10.11	/	Pass
	2565	Outer_Full	9.39	11.42	/	Pass
CP-OFDM 64 QAM	2505	Outer_Full	9.40	10.10	/	Pass
	2535	Outer_Full	9.39	10.09	/	Pass
	2565	Outer_Full	9.40	10.09	/	Pass
CP-OFDM 256 QAM	2505	Outer_Full	9.38	10.08	/	Pass
	2535	Outer_Full	9.37	10.05	/	Pass
	2565	Outer_Full	9.38	10.05	/	Pass

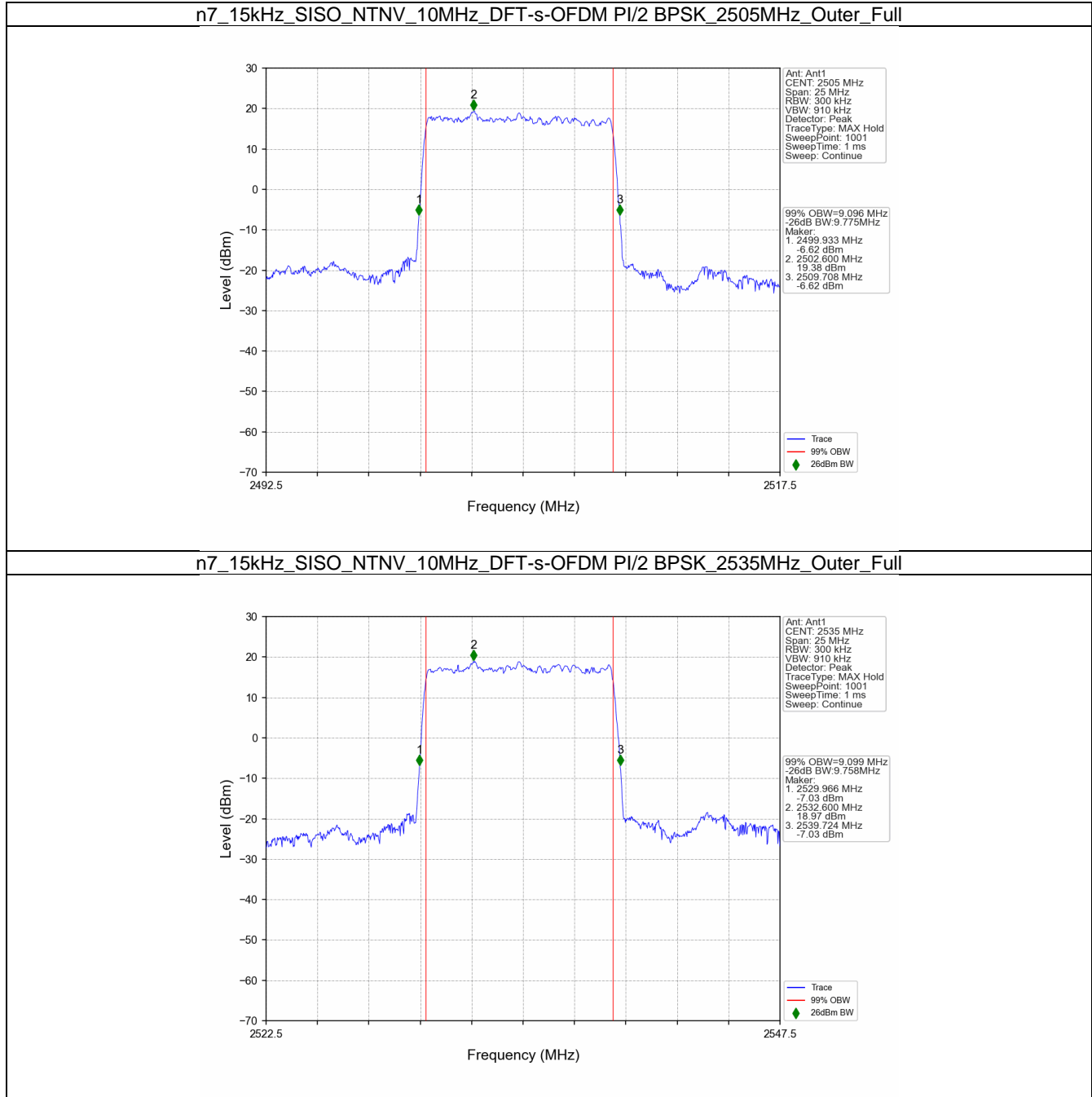


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4.2.2 Test Graph

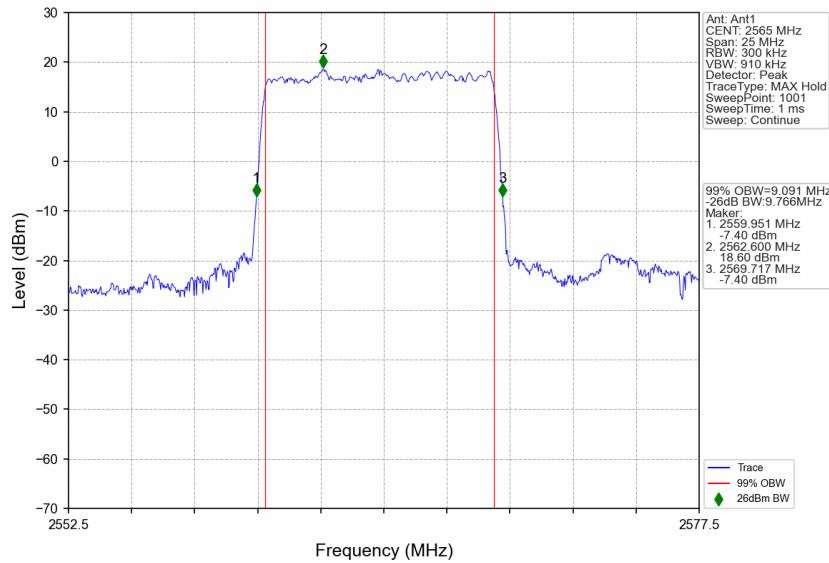


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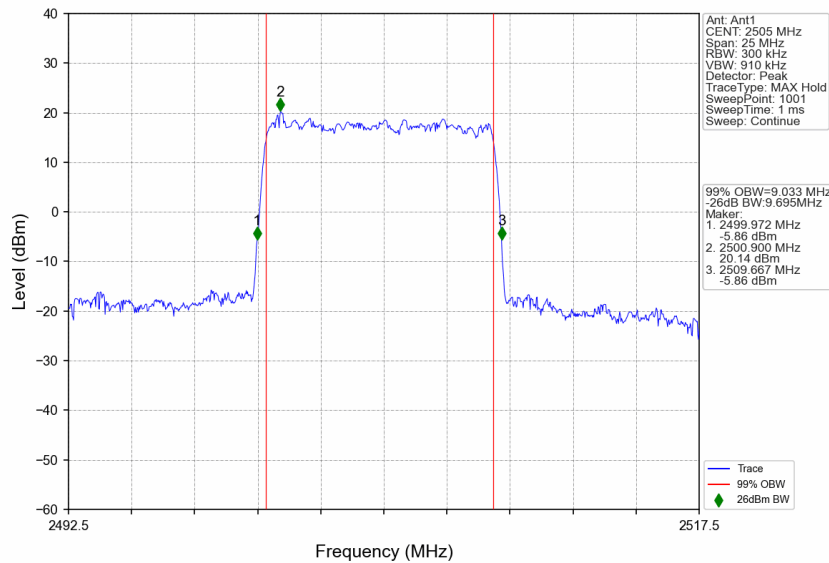
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n7_15kHz_SISO_NTNV_10MHz_DFT-s-OFDM PI/2 BPSK_2565MHz_Outer_Full



n7_15kHz_SISO_NTNV_10MHz_DFT-s-OFDM QPSK_2505MHz_Outer_Full

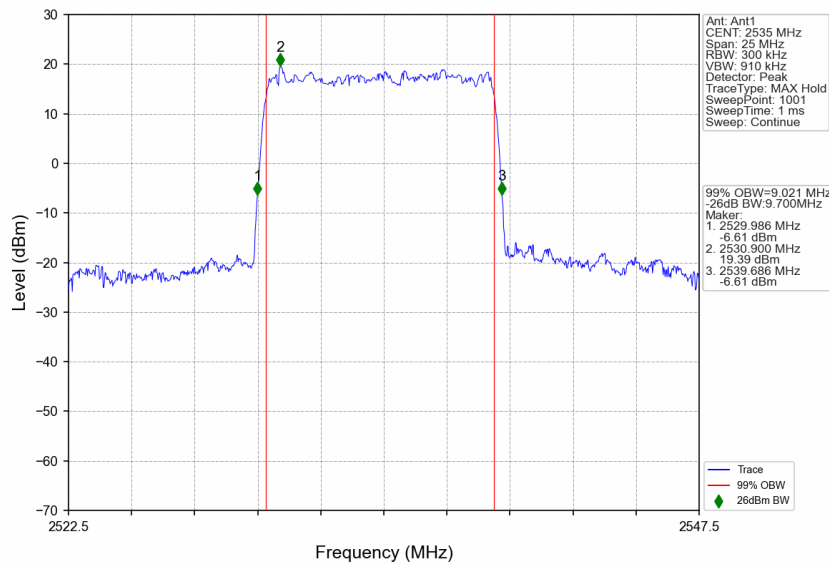


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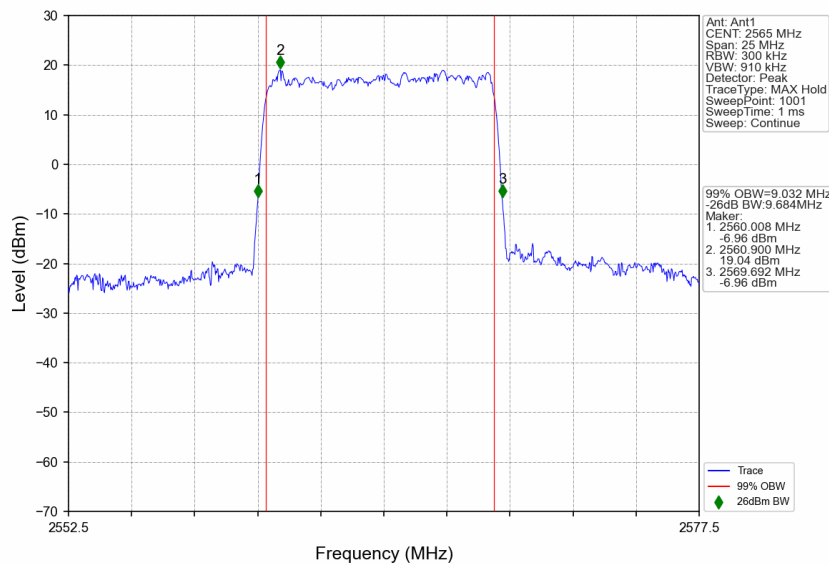
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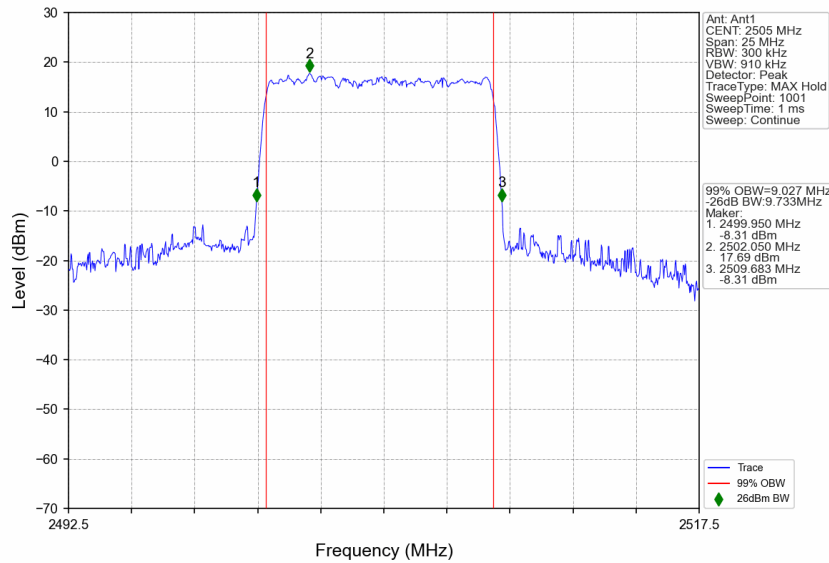


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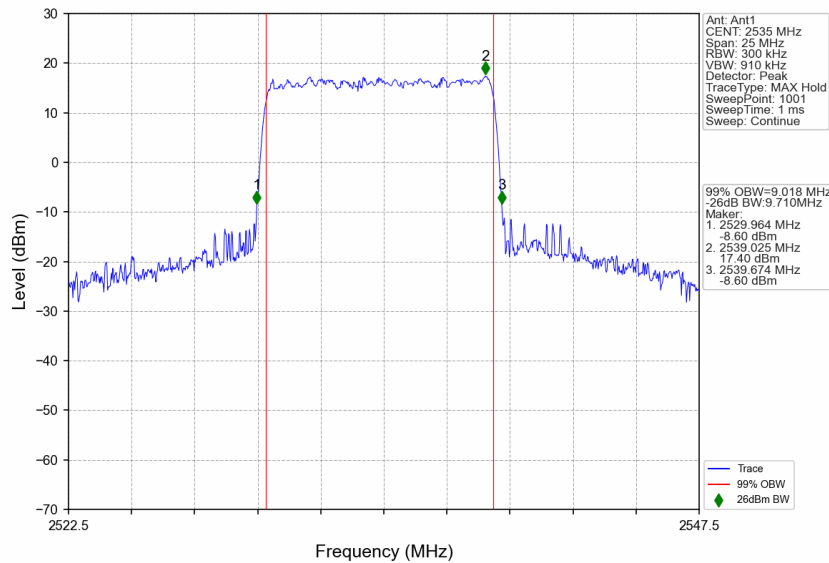
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n7_15kHz_SISO_NTNV_10MHz_DFT-s-OFDM 16 QAM_2505MHz_Outer_Full



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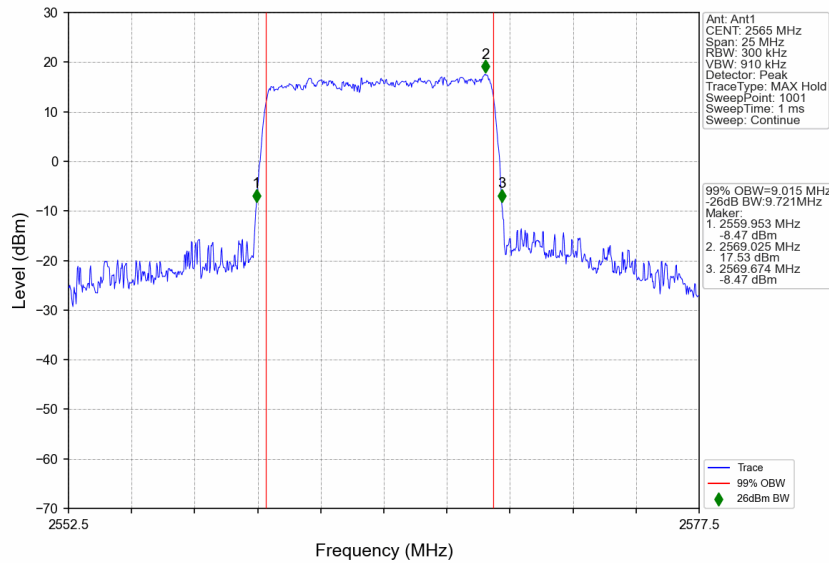


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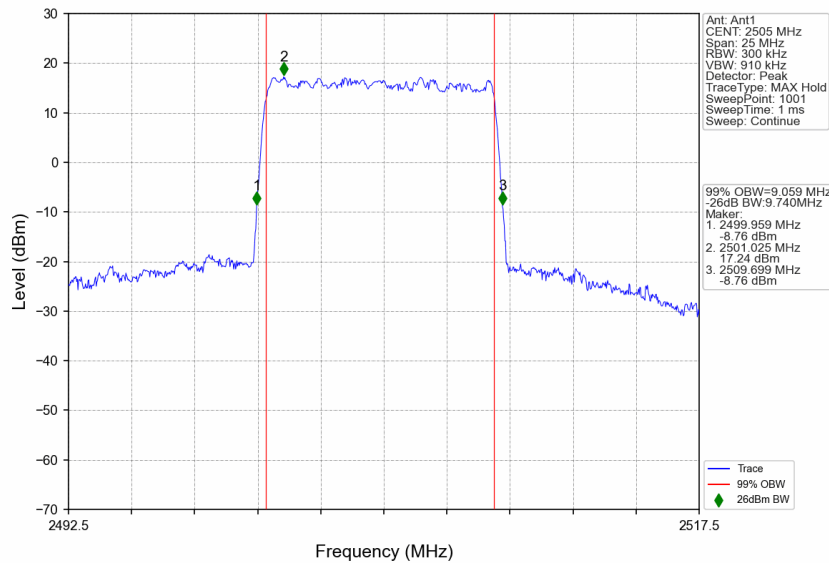
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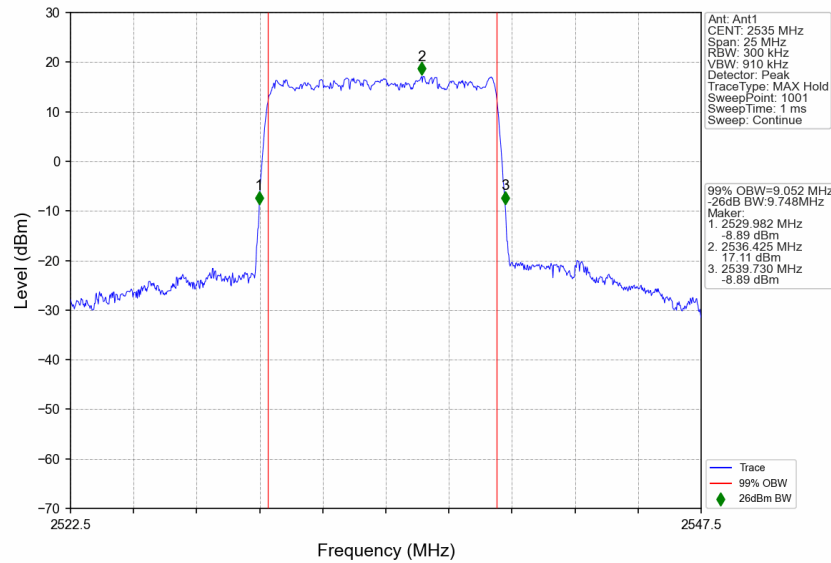


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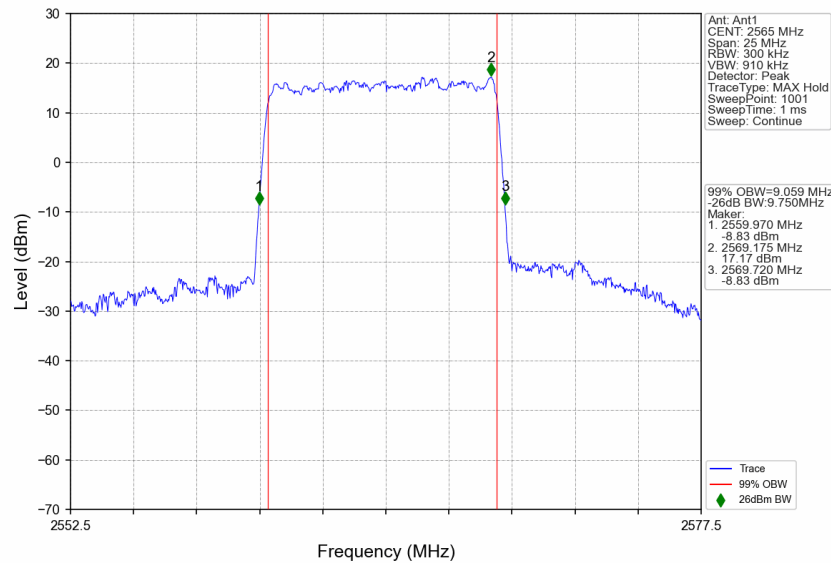
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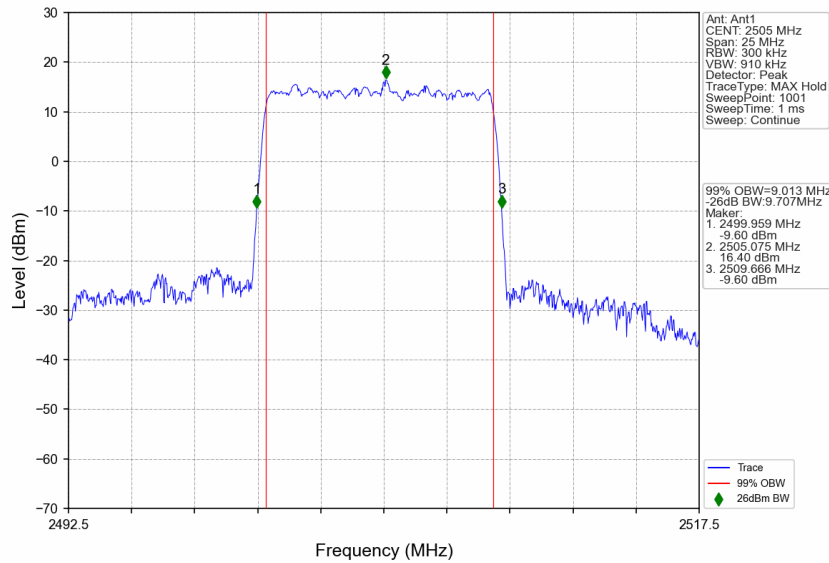


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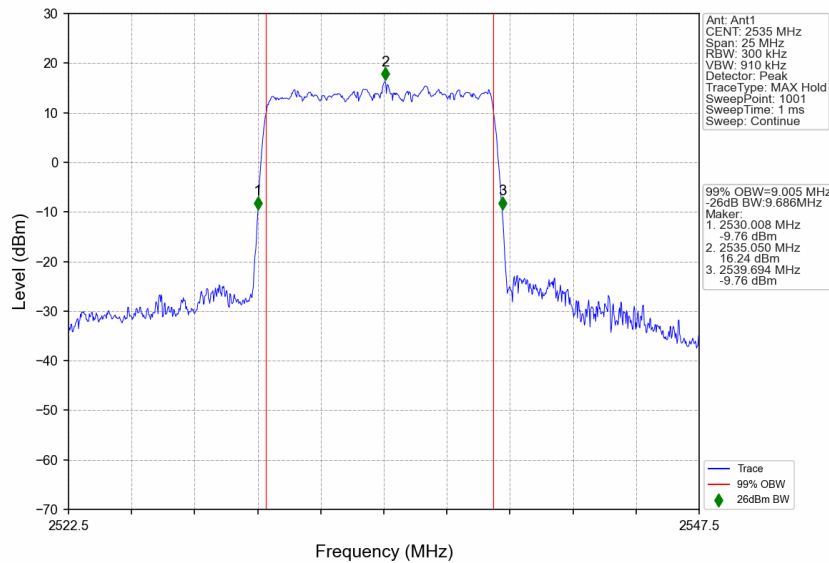
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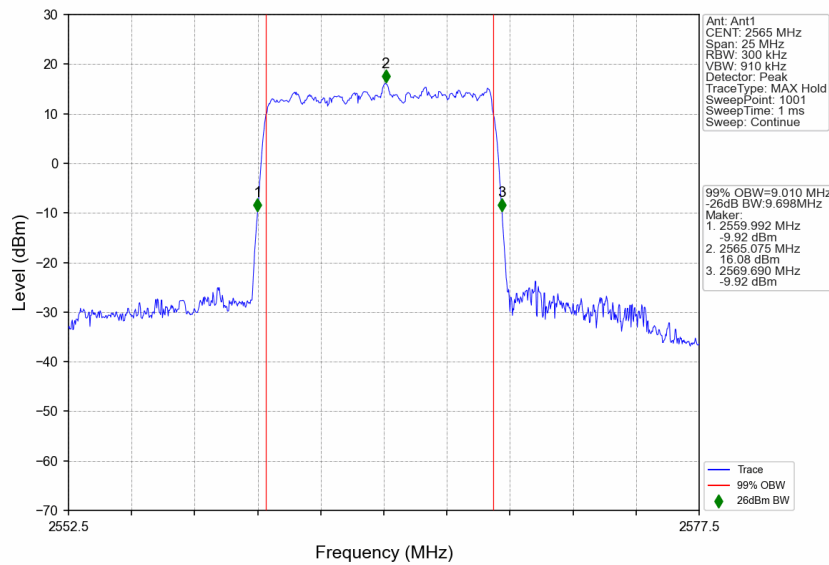


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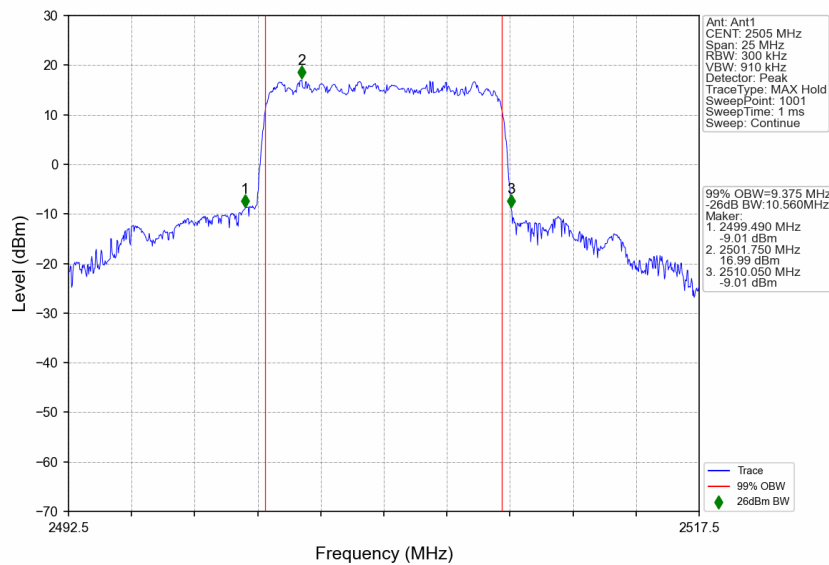
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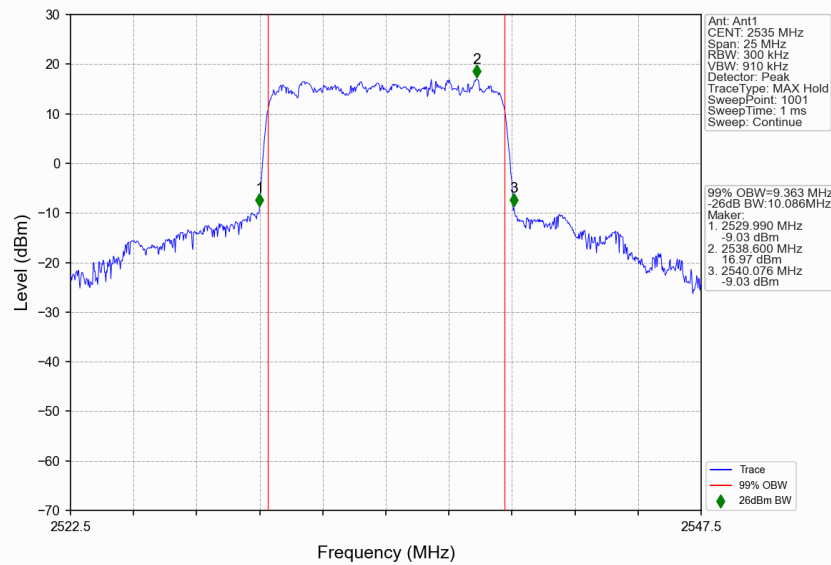


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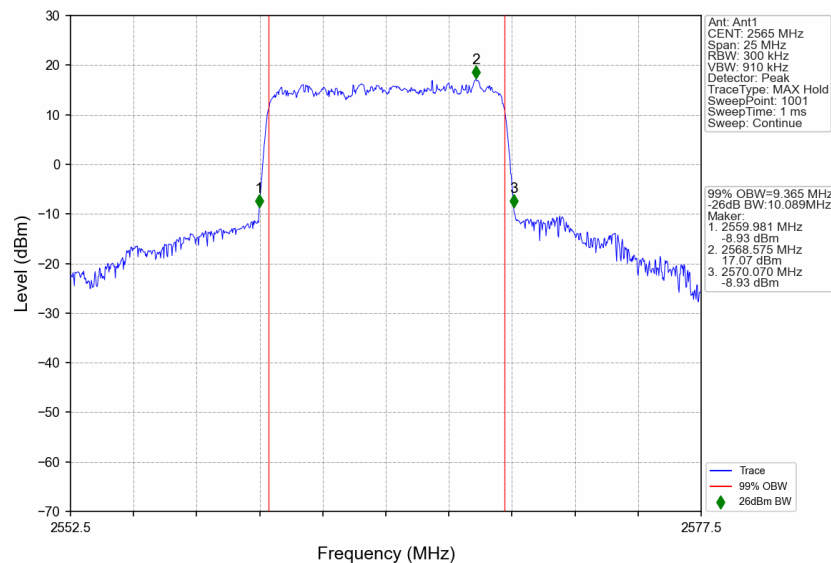
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n7_15kHz_SISO_NTNV_10MHz_CP-OFDM QPSK_2535MHz_Outer_Full



n7_15kHz_SISO_NTNV_10MHz_CP-OFDM QPSK_2565MHz_Outer_Full

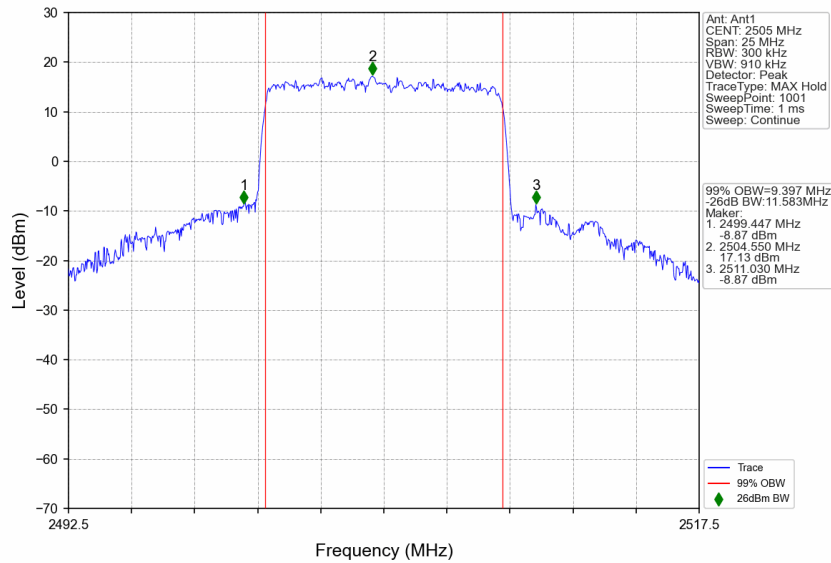


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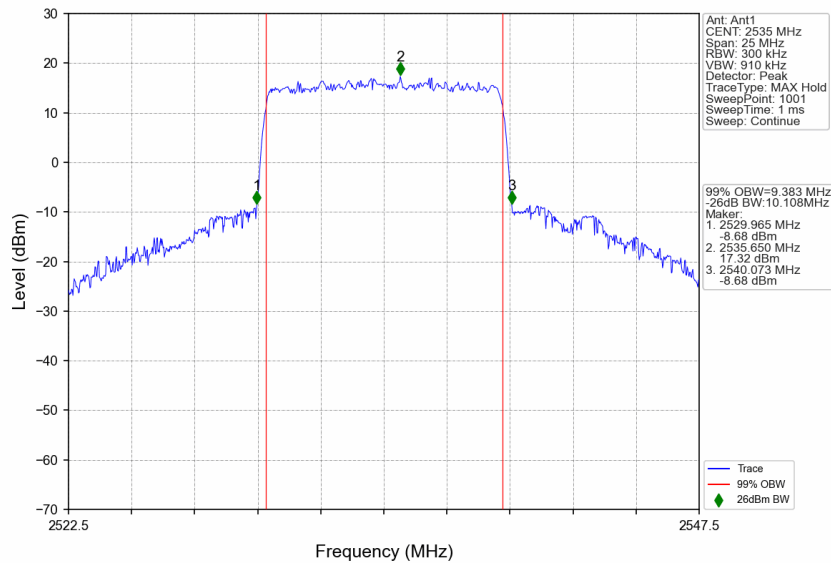
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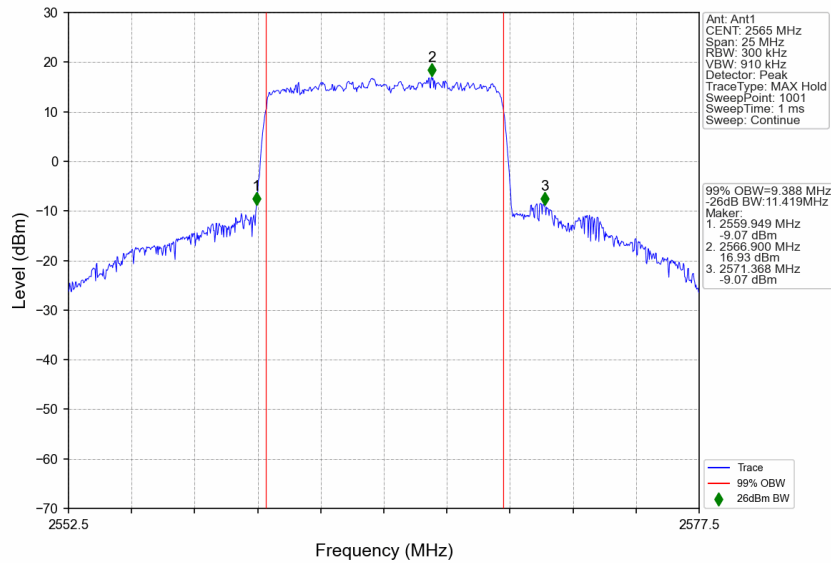


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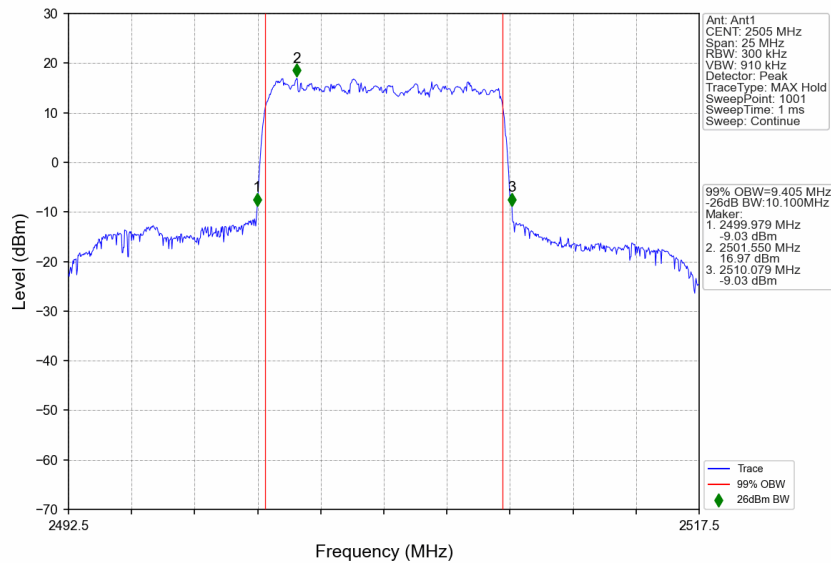
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n7_15kHz_SISO_NTV_10MHz_CP-OFDM 64 QAM_2505MHz_Outer_Full

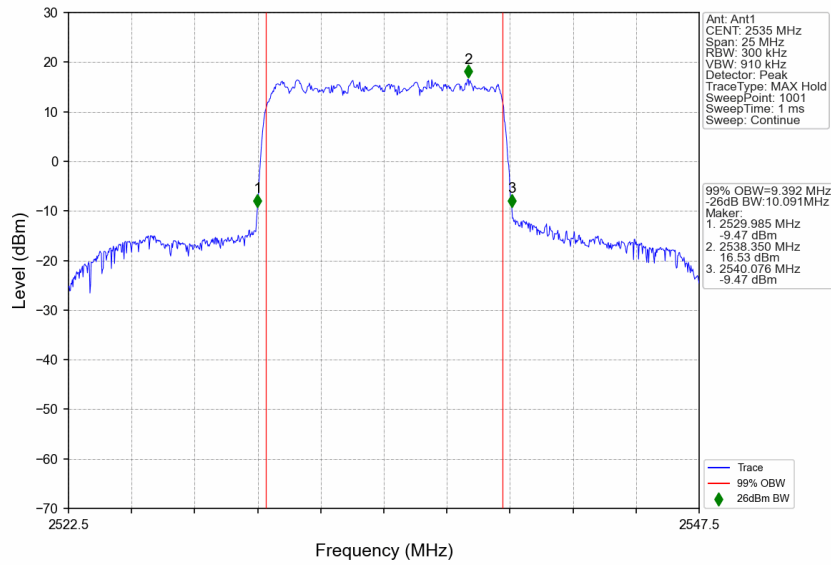


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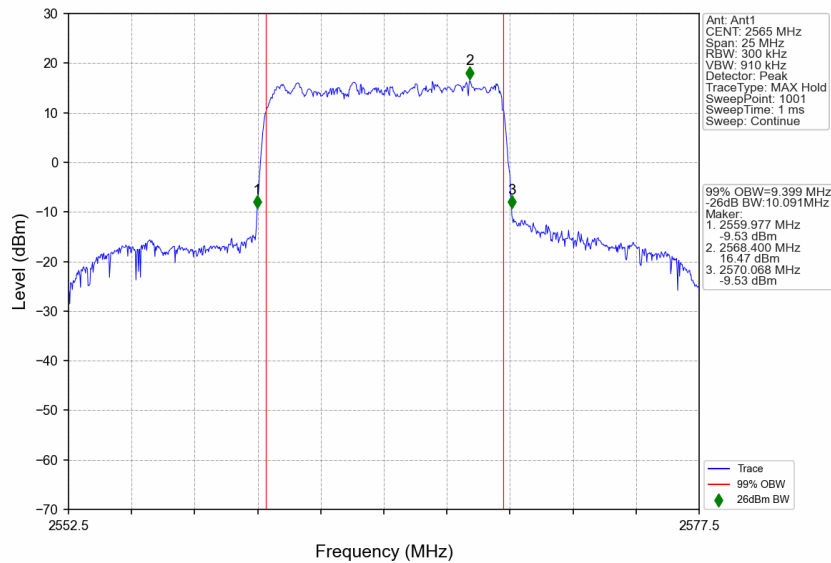
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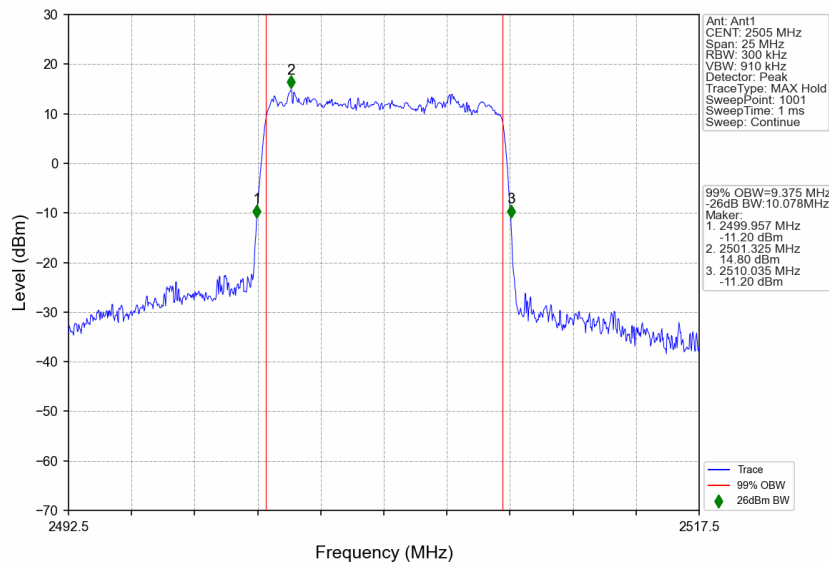


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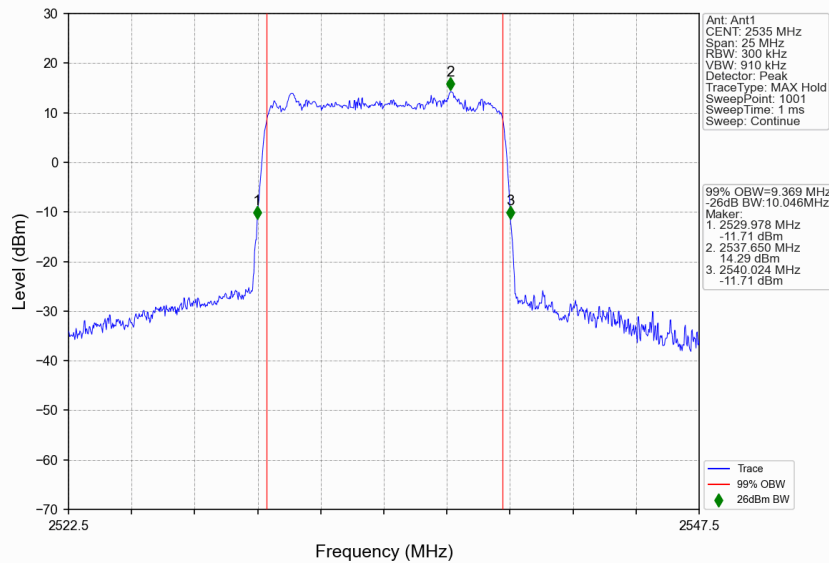
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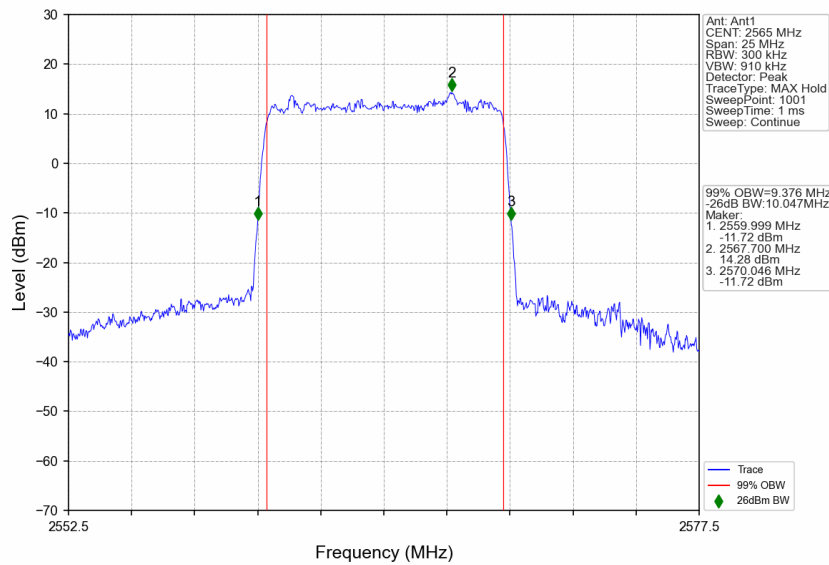


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4.3 15k_SISO_15MHz_NTNV

4.3.1 Test Result

5G NR n7 SCS=15kHz SISO 15MHz NTNv						
Modulation	Frequency (MHz)	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	2507.5	Outer_Full	13.63	14.55	/	Pass
	2535	Outer_Full	13.60	14.57	/	Pass
	2562.5	Outer_Full	13.60	14.57	/	Pass
DFT-s-OFDM QPSK	2507.5	Outer_Full	13.57	14.60	/	Pass
	2535	Outer_Full	13.57	14.58	/	Pass
	2562.5	Outer_Full	13.58	14.58	/	Pass
DFT-s-OFDM 16 QAM	2507.5	Outer_Full	13.57	14.62	/	Pass
	2535	Outer_Full	13.55	14.59	/	Pass
	2562.5	Outer_Full	13.57	14.58	/	Pass
DFT-s-OFDM 64 QAM	2507.5	Outer_Full	13.60	14.59	/	Pass
	2535	Outer_Full	13.56	14.59	/	Pass
	2562.5	Outer_Full	13.59	14.61	/	Pass
DFT-s-OFDM 256 QAM	2507.5	Outer_Full	13.56	14.58	/	Pass
	2535	Outer_Full	13.54	14.55	/	Pass
	2562.5	Outer_Full	13.56	14.55	/	Pass
CP-OFDM QPSK	2507.5	Outer_Full	14.26	17.57	/	Pass
	2535	Outer_Full	14.23	16.80	/	Pass
	2562.5	Outer_Full	14.27	17.07	/	Pass
CP-OFDM 16 QAM	2507.5	Outer_Full	14.32	17.65	/	Pass
	2535	Outer_Full	14.29	16.26	/	Pass
	2562.5	Outer_Full	14.31	16.16	/	Pass
CP-OFDM 64 QAM	2507.5	Outer_Full	14.29	15.31	/	Pass
	2535	Outer_Full	14.25	15.29	/	Pass
	2562.5	Outer_Full	14.29	15.30	/	Pass
CP-OFDM 256 QAM	2507.5	Outer_Full	14.27	15.30	/	Pass
	2535	Outer_Full	14.25	15.26	/	Pass
	2562.5	Outer_Full	14.28	15.26	/	Pass

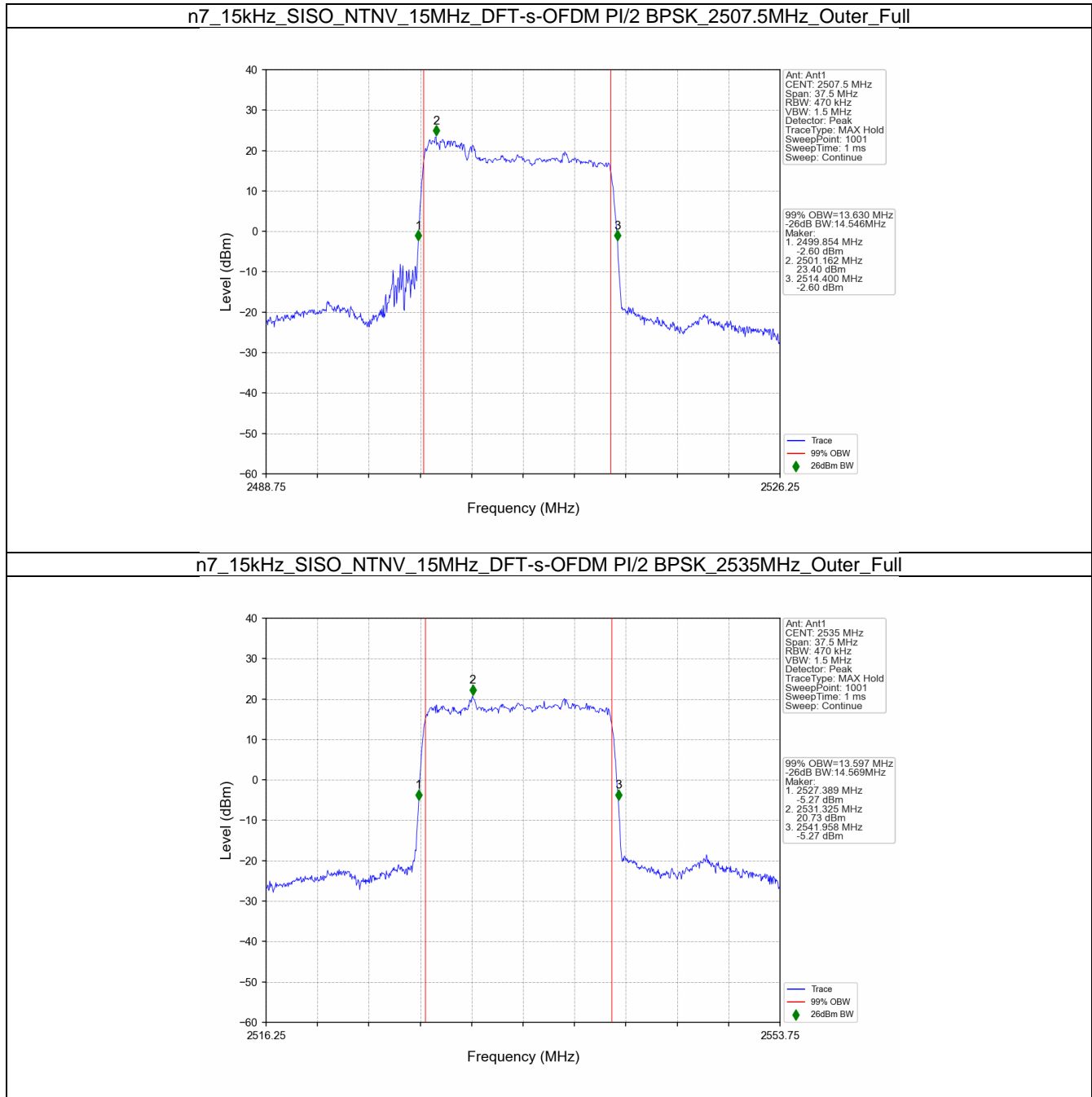


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4.3.2 Test Graph

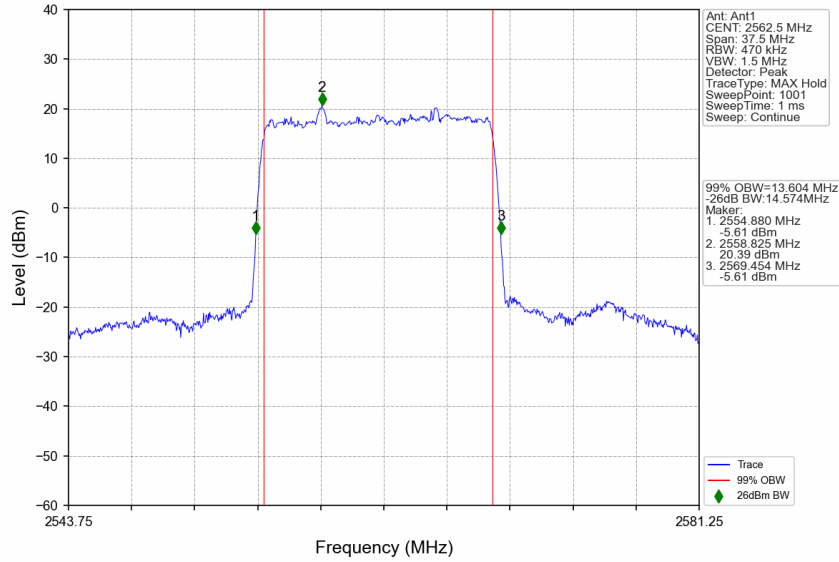


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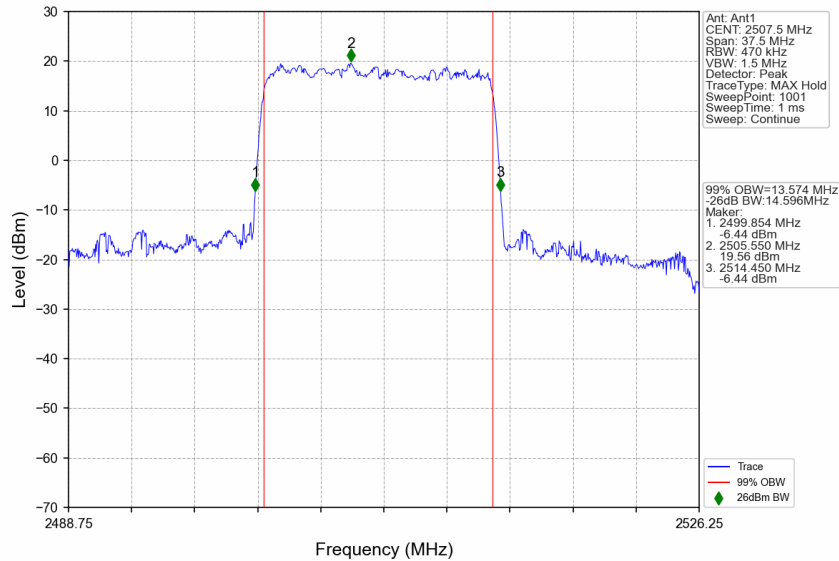
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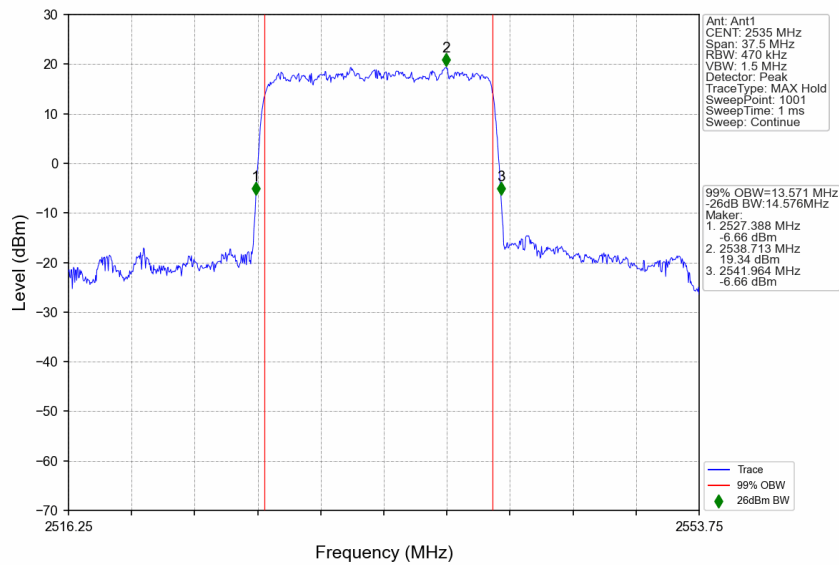


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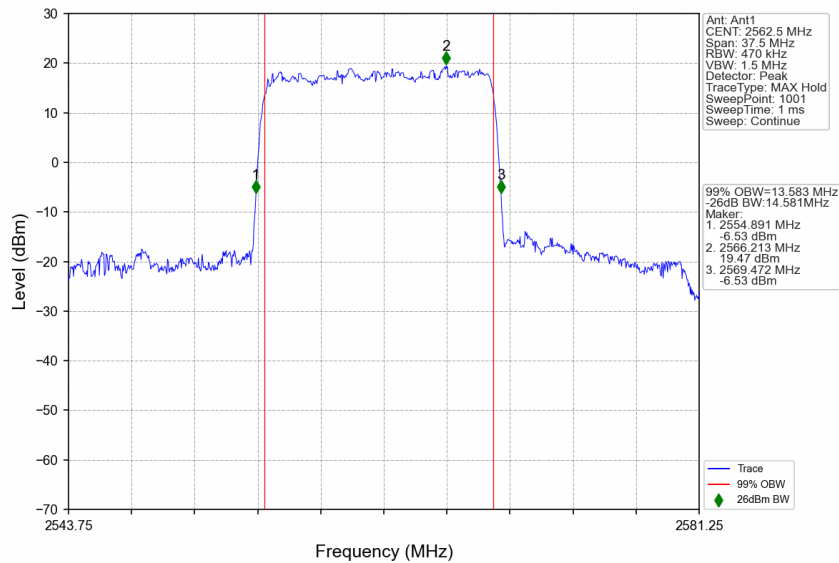
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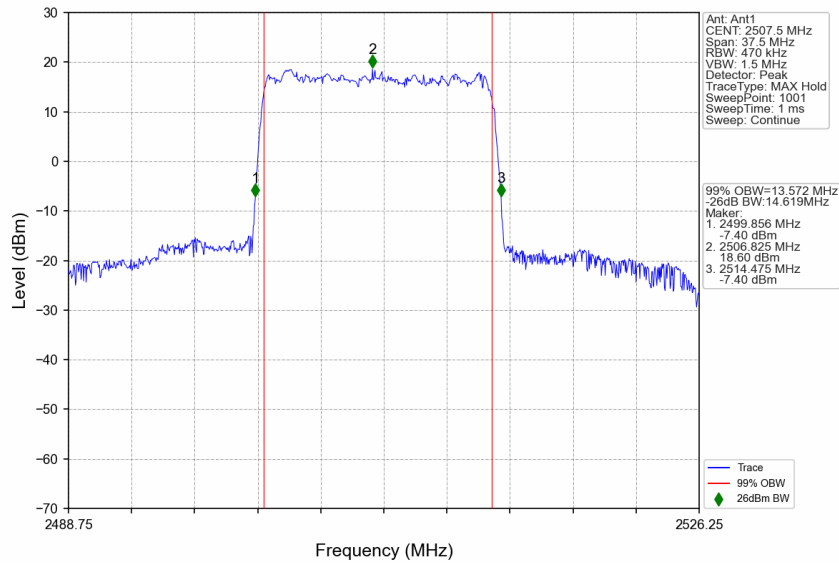


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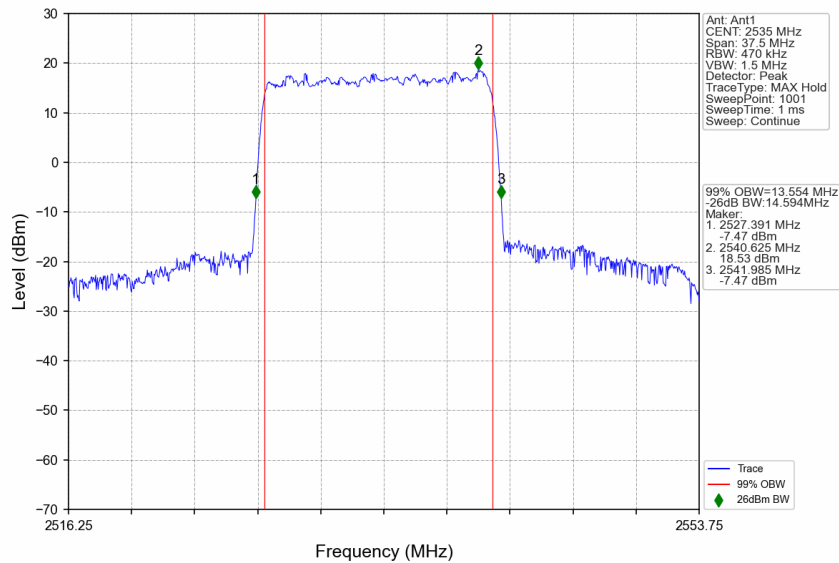
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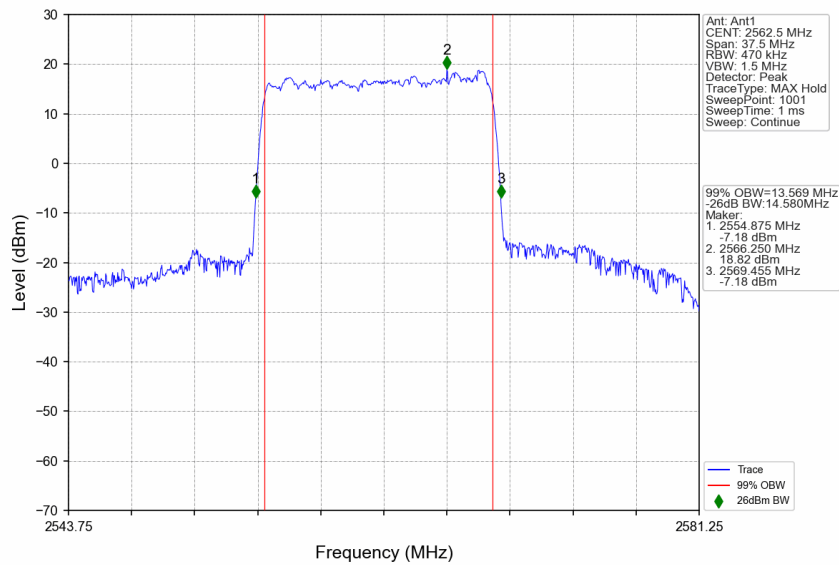


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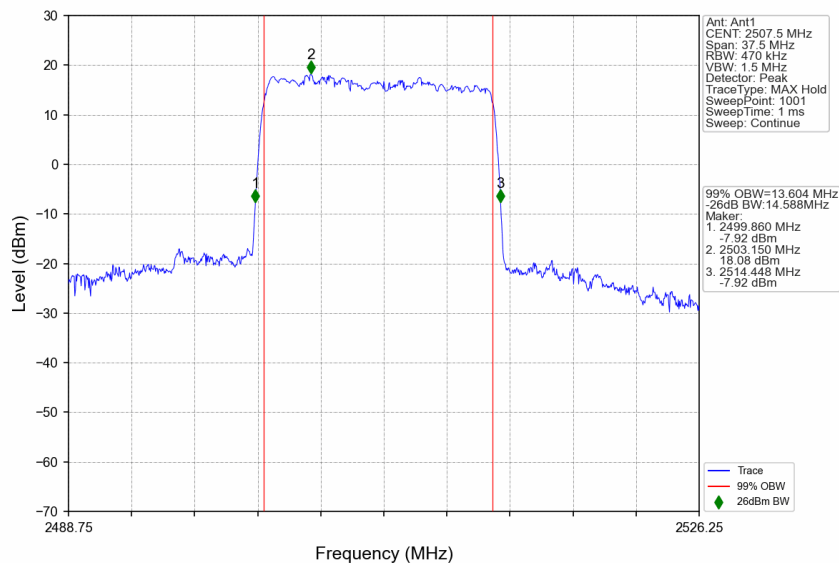
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n7_15kHz_SISO_NTNV_15MHz_DFT-s-OFDM 64 QAM_2507.5MHz_Outer_Full

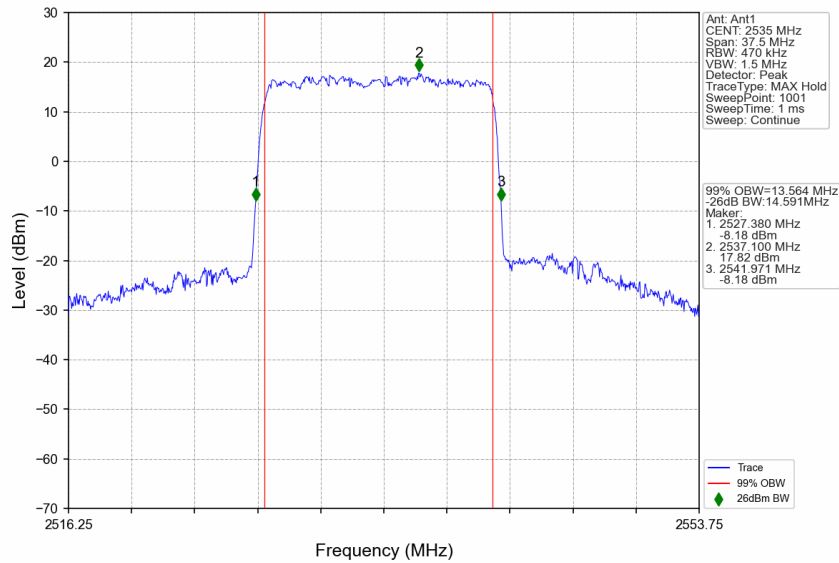


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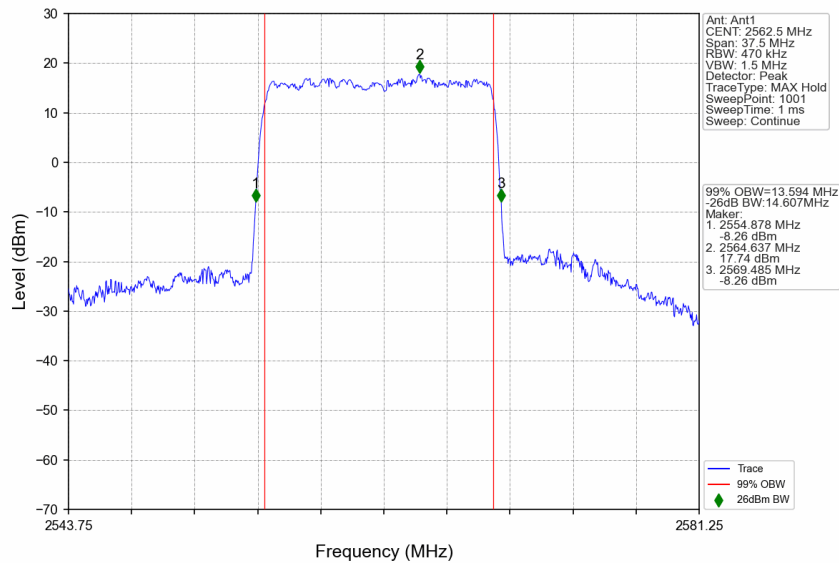
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n7_15kHz_SISO_NTNV_15MHz_DFT-s-OFDM 64 QAM_2535MHz_Outer_Full



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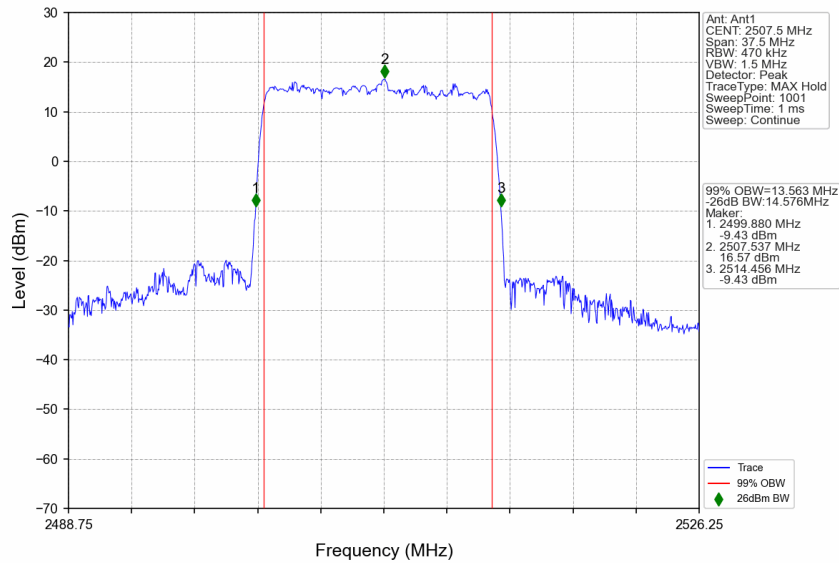


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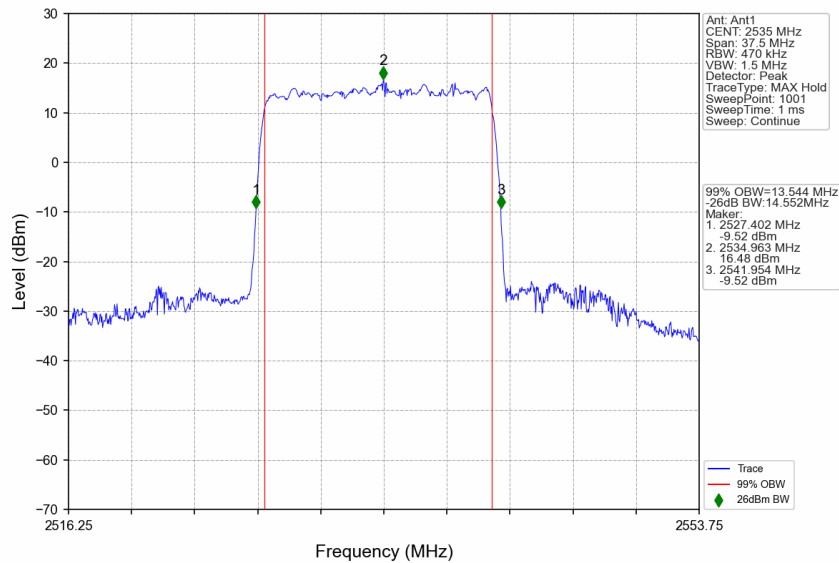
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n7_15kHz_SISO_NTNV_15MHz_DFT-s-OFDM 256 QAM_2507.5MHz_Outer_Full



n7_15kHz_SISO_NTNV_15MHz_DFT-s-OFDM 256 QAM_2535MHz_Outer_Full

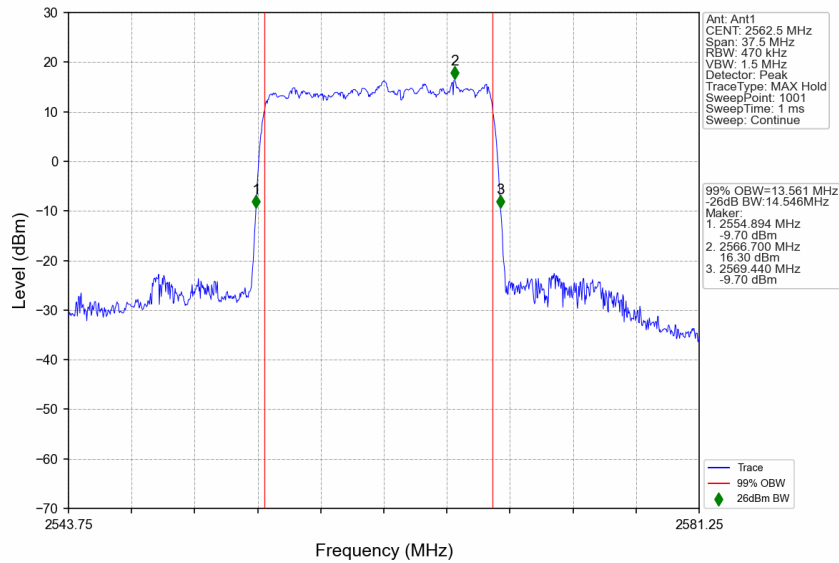


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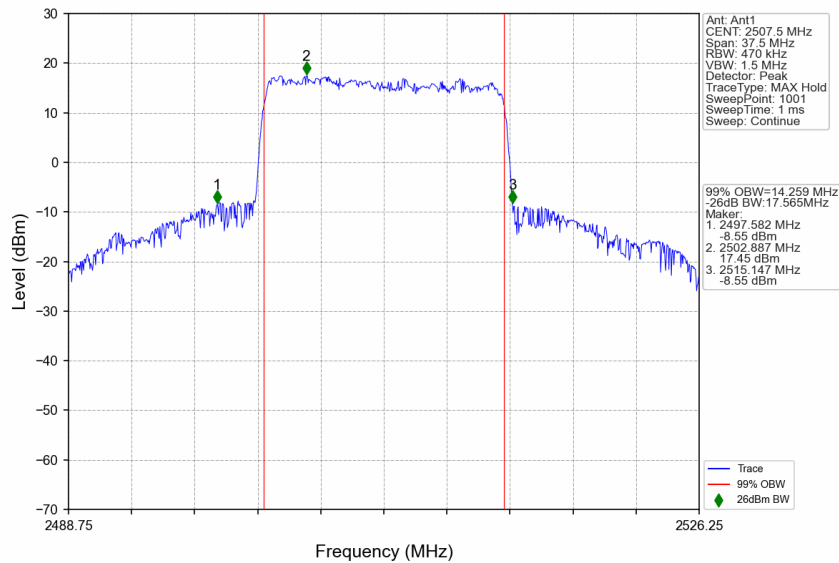
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n7_15kHz_SISO_NTNV_15MHz_CP-OFDM QPSK_2507.5MHz_Outer_Full

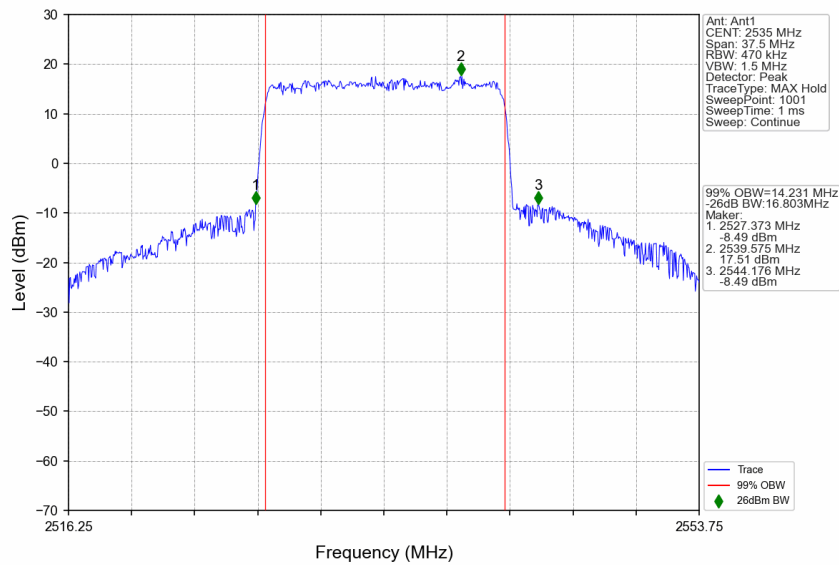


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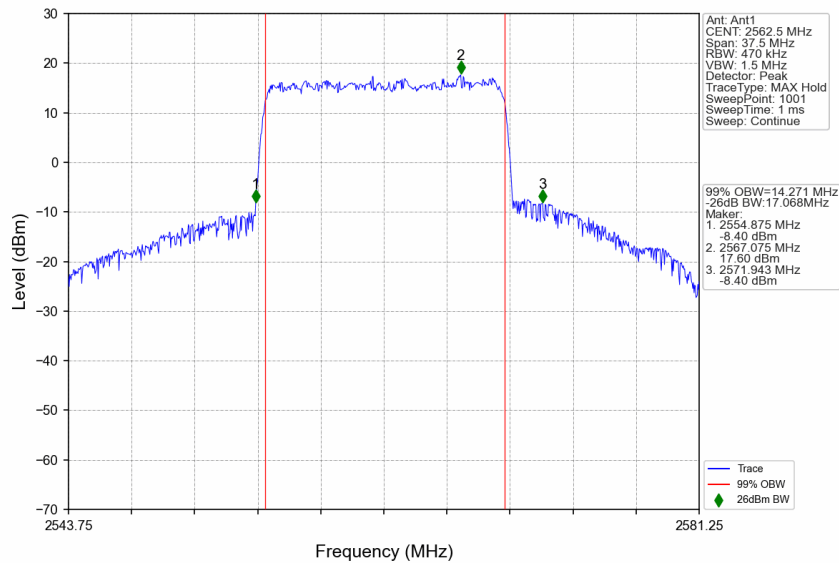
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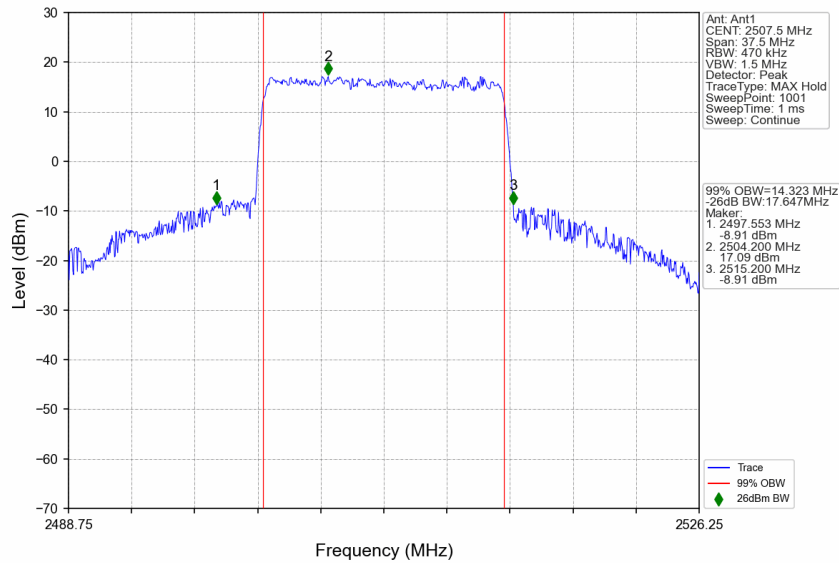
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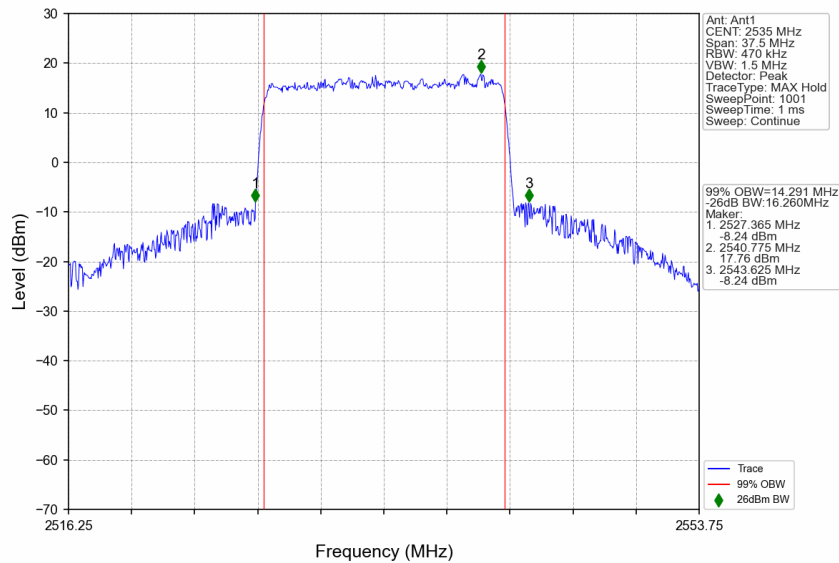
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n7_15kHz_SISO_NTNV_15MHz_CP-OFDM 16 QAM_2507.5MHz_Outer_Full



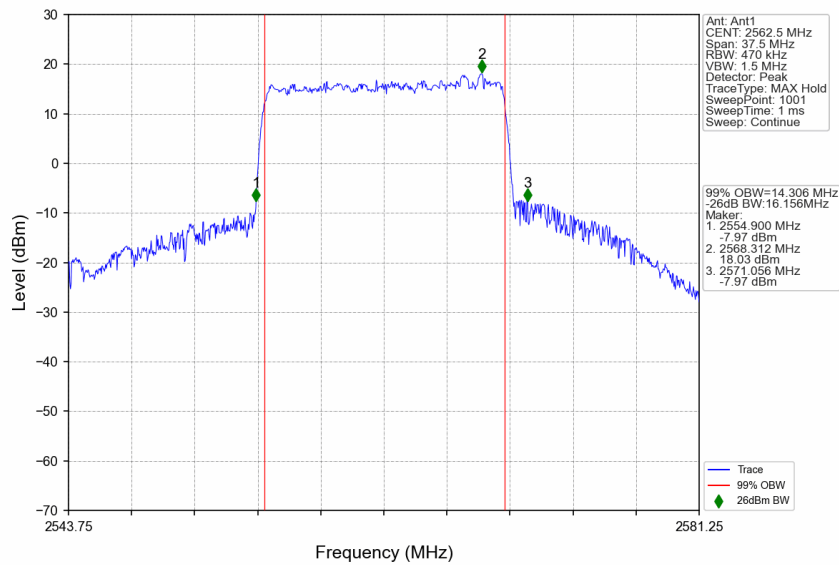
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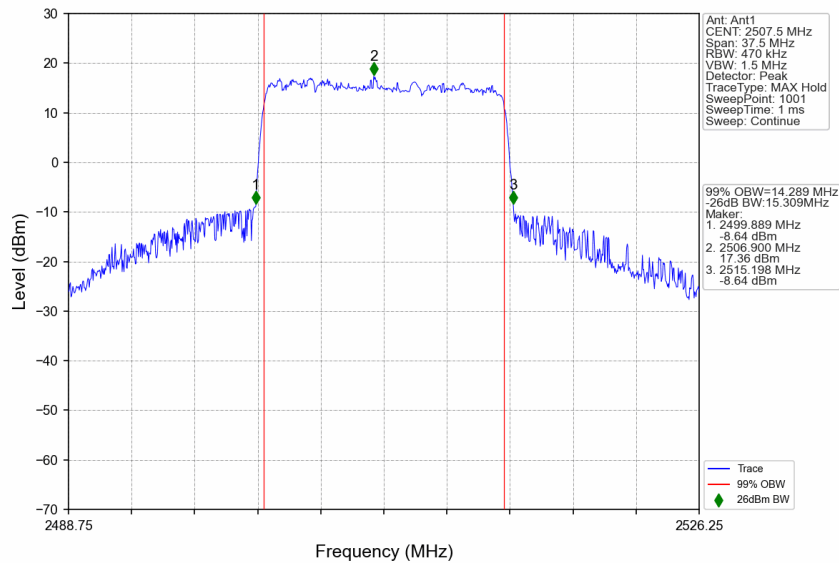
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n7_15kHz_SISO_NTNV_15MHz_CP-OFDM 64 QAM_2507.5MHz_Outer_Full

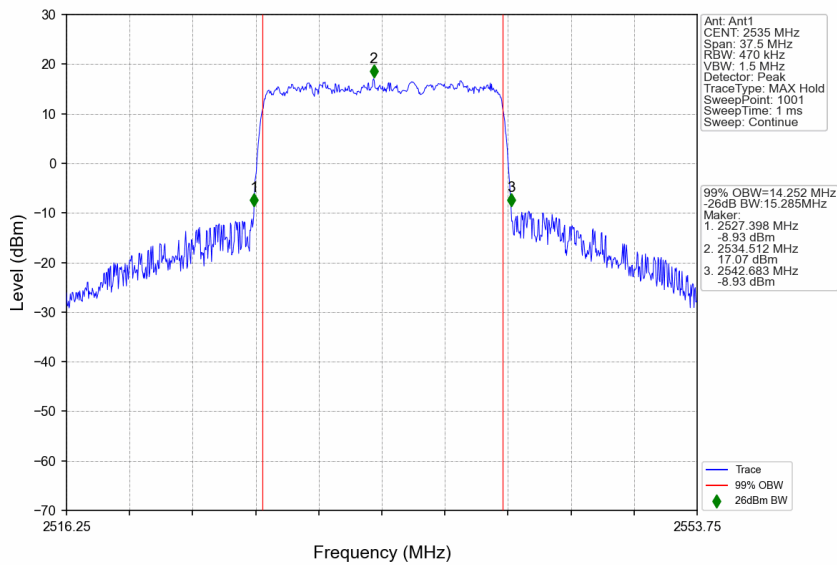


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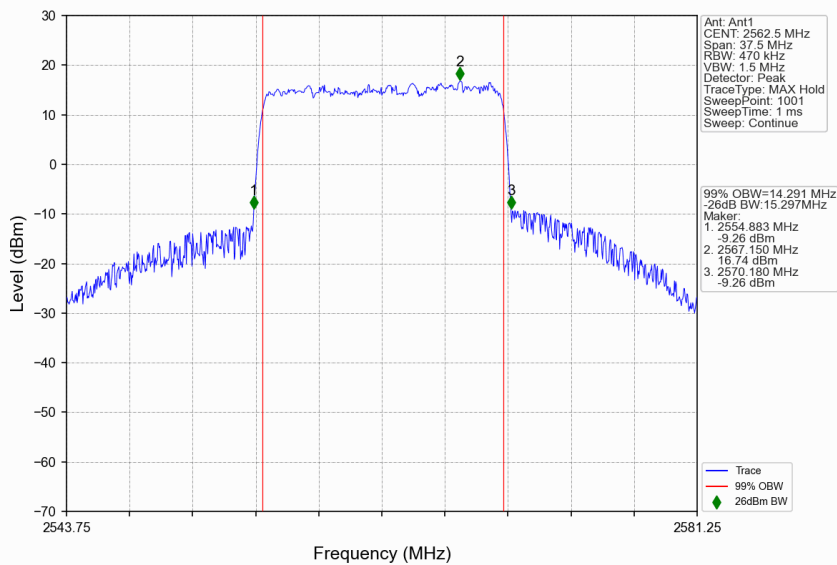
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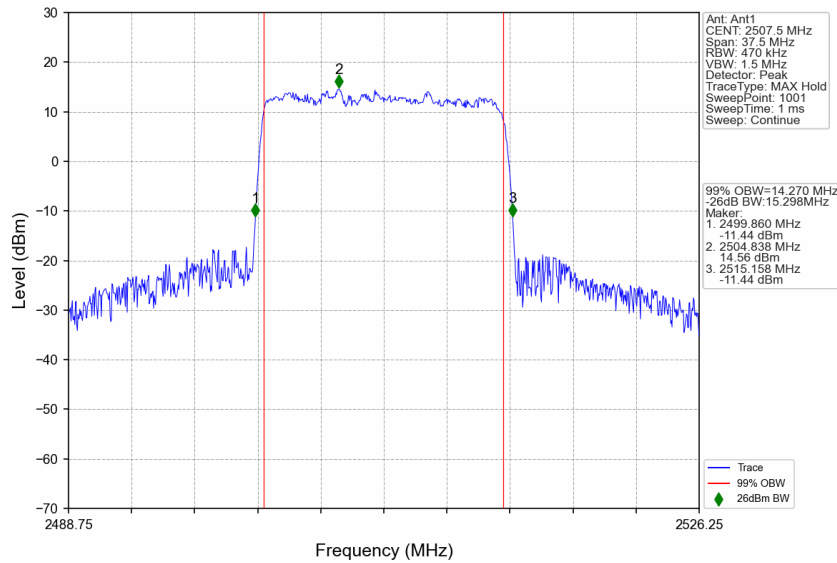
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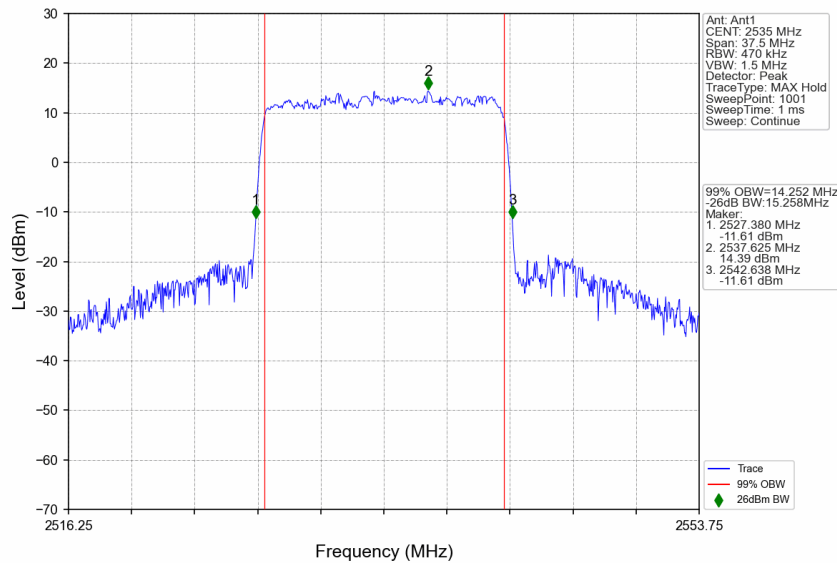
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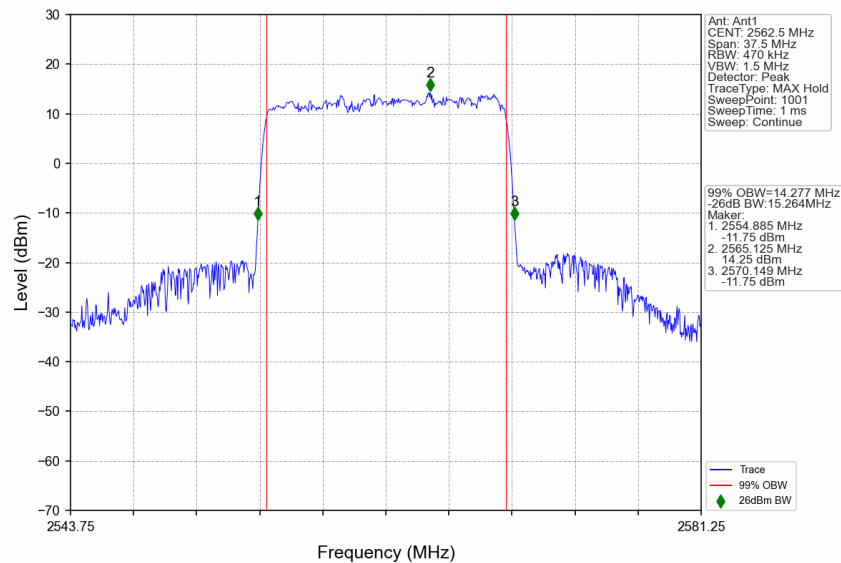


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4.4 15k_SISO_20MHz_NTNV

4.4.1 Test Result

5G NR n7 SCS=15kHz SISO 20MHz NTV						
Modulation	Frequency (MHz)	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	2510	Outer_Full	18.12	19.39	/	Pass
	2535	Outer_Full	18.10	19.41	/	Pass
	2560	Outer_Full	18.14	19.40	/	Pass
DFT-s-OFDM QPSK	2510	Outer_Full	18.09	19.38	/	Pass
	2535	Outer_Full	18.04	19.38	/	Pass
	2560	Outer_Full	18.12	19.44	/	Pass
DFT-s-OFDM 16 QAM	2510	Outer_Full	18.07	19.40	/	Pass
	2535	Outer_Full	18.01	19.41	/	Pass
	2560	Outer_Full	18.09	19.40	/	Pass
DFT-s-OFDM 64 QAM	2510	Outer_Full	18.14	19.45	/	Pass
	2535	Outer_Full	18.09	19.39	/	Pass
	2560	Outer_Full	18.15	19.41	/	Pass
DFT-s-OFDM 256 QAM	2510	Outer_Full	18.06	19.38	/	Pass
	2535	Outer_Full	18.00	19.36	/	Pass
	2560	Outer_Full	18.05	19.39	/	Pass
CP-OFDM QPSK	2510	Outer_Full	19.21	24.74	/	Pass
	2535	Outer_Full	19.12	23.44	/	Pass
	2560	Outer_Full	19.18	23.70	/	Pass
CP-OFDM 16 QAM	2510	Outer_Full	19.16	24.97	/	Pass
	2535	Outer_Full	19.09	21.55	/	Pass
	2560	Outer_Full	19.17	23.00	/	Pass
CP-OFDM 64 QAM	2510	Outer_Full	19.21	22.10	/	Pass
	2535	Outer_Full	19.14	20.48	/	Pass
	2560	Outer_Full	19.20	22.61	/	Pass
CP-OFDM 256 QAM	2510	Outer_Full	19.07	20.45	/	Pass
	2535	Outer_Full	19.02	20.46	/	Pass
	2560	Outer_Full	19.09	20.53	/	Pass

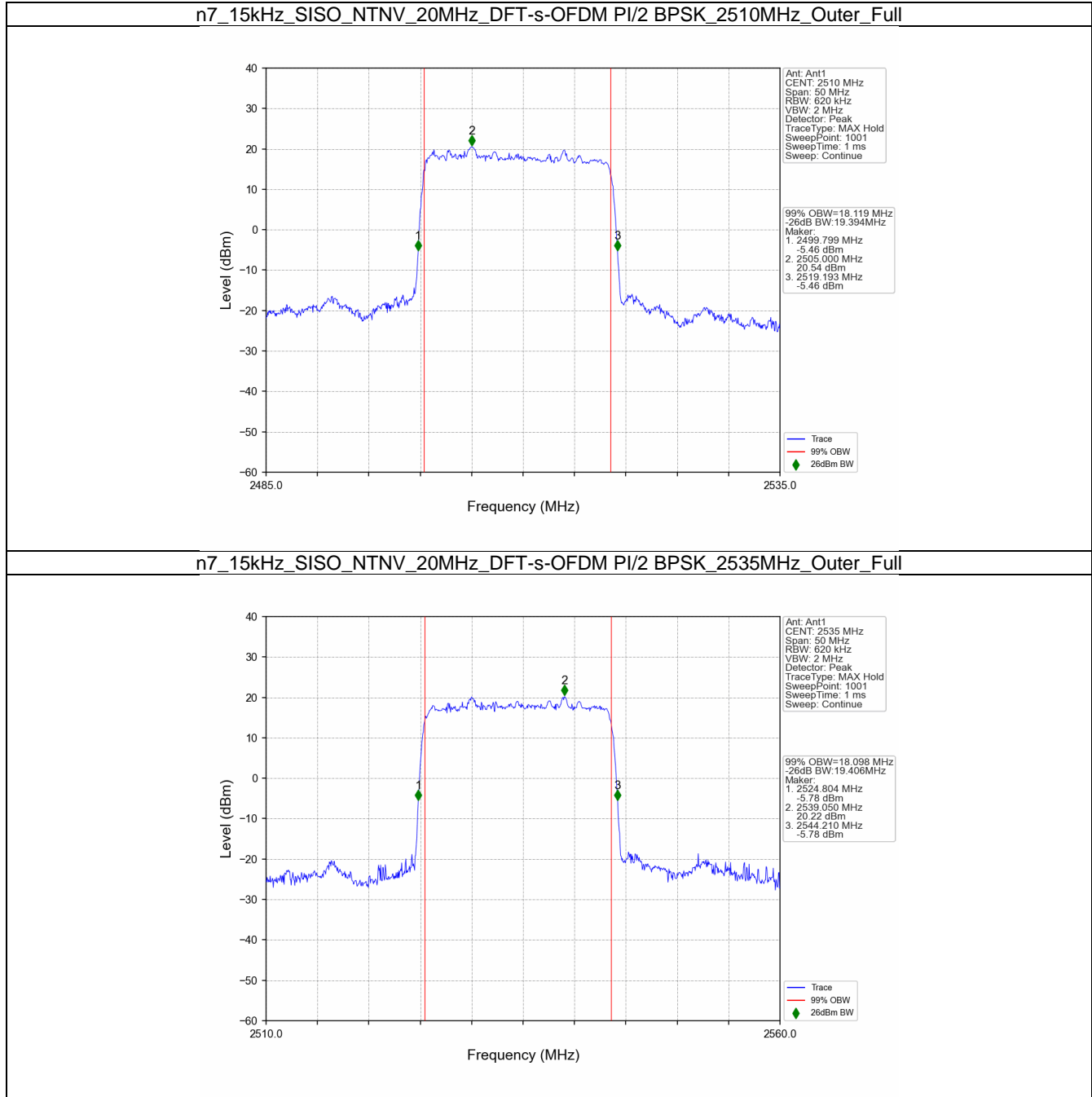


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4.4.2 Test Graph

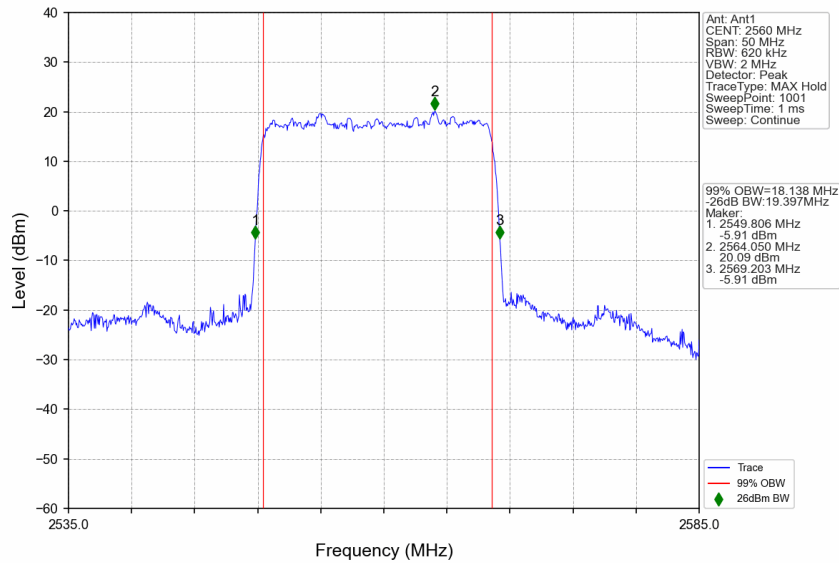


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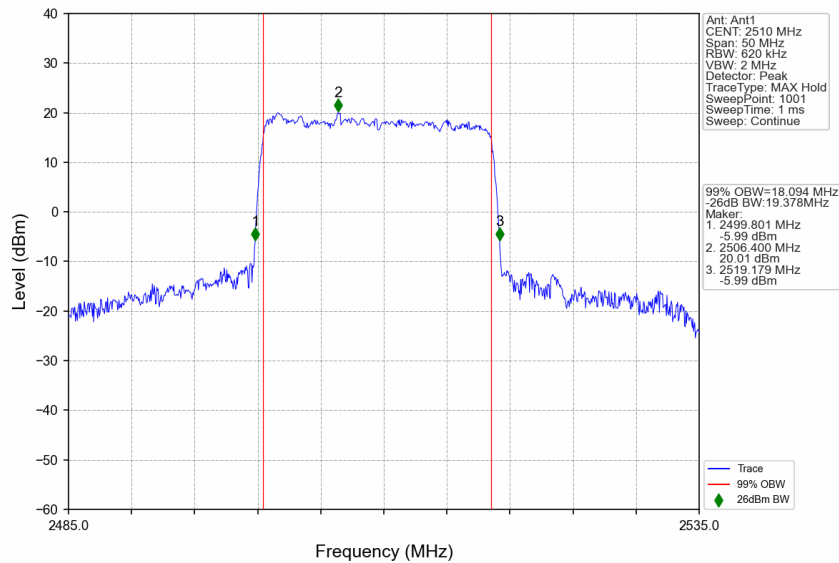
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n7_15kHz_SISO_NTNV_20MHz_DFT-s-OFDM PI/2 BPSK_2560MHz_Outer_Full



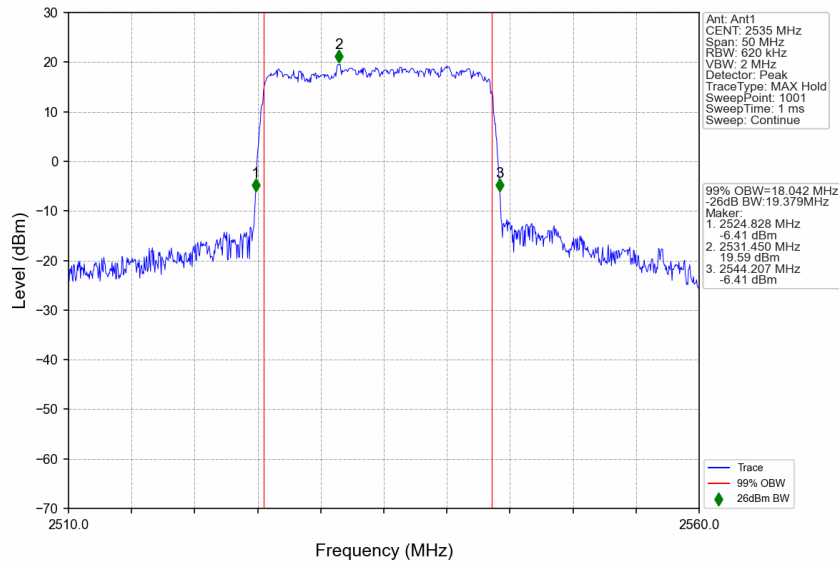
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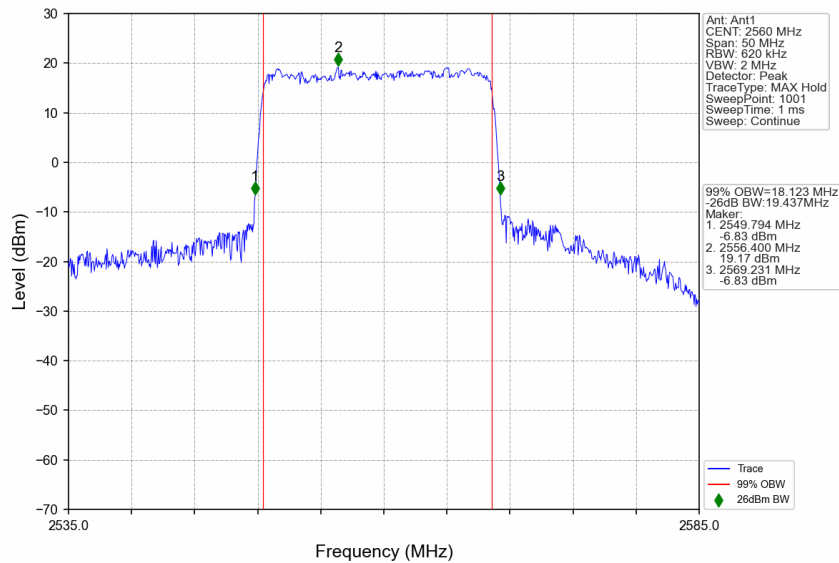
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n7_15kHz_SISO_NTNV_20MHz_DFT-s-OFDM QPSK_2535MHz_Outer_Full



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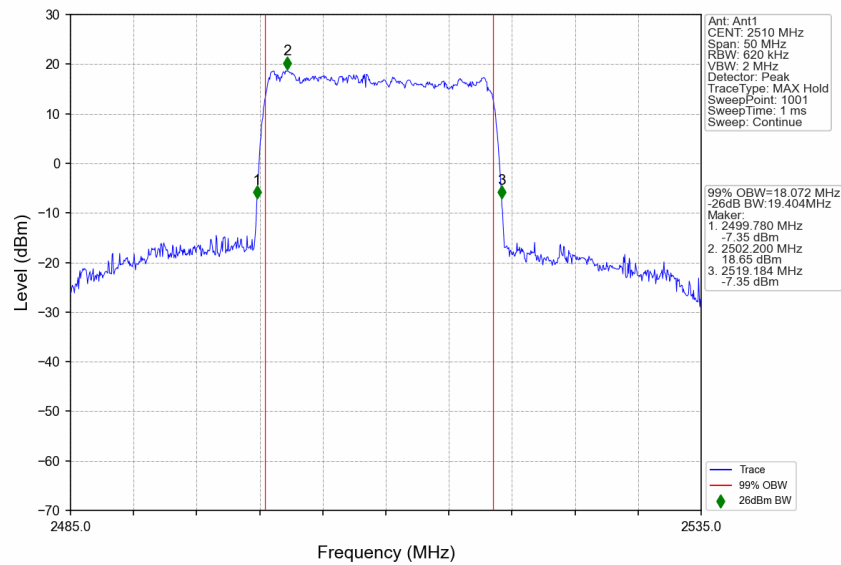


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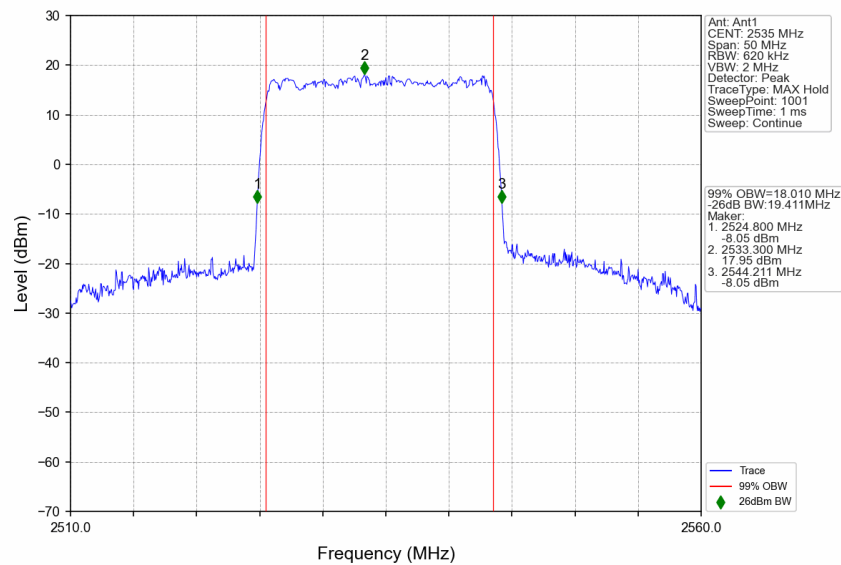
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n7_15kHz_SISO_NTNV_20MHz_DFT-s-OFDM 16 QAM_2510MHz_Outer_Full



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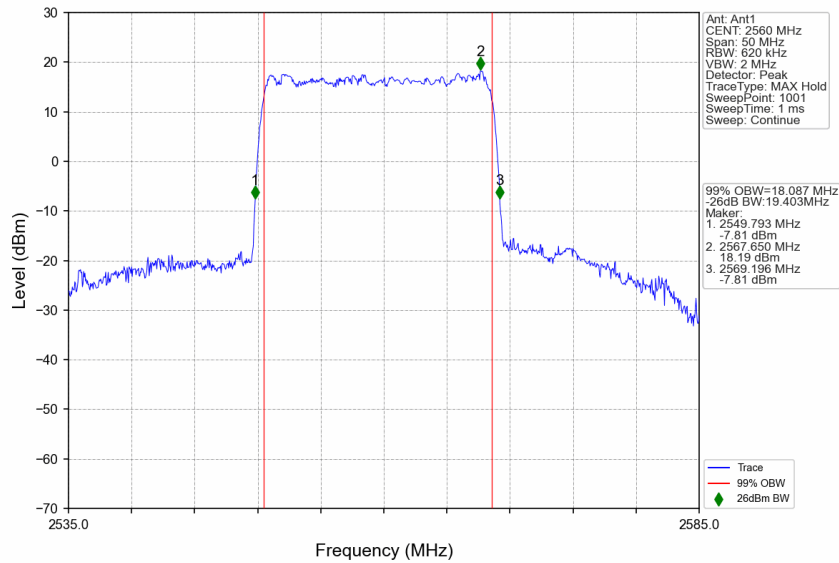


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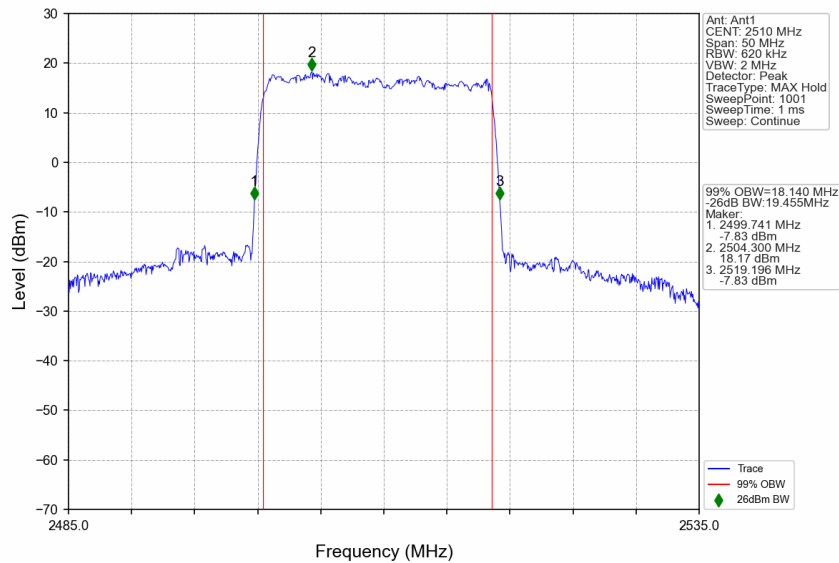
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n7_15kHz_SISO_NTNV_20MHz_DFT-s-OFDM 16 QAM_2560MHz_Outer_Full



n7_15kHz_SISO_NTNV_20MHz_DFT-s-OFDM 64 QAM_2510MHz_Outer_Full

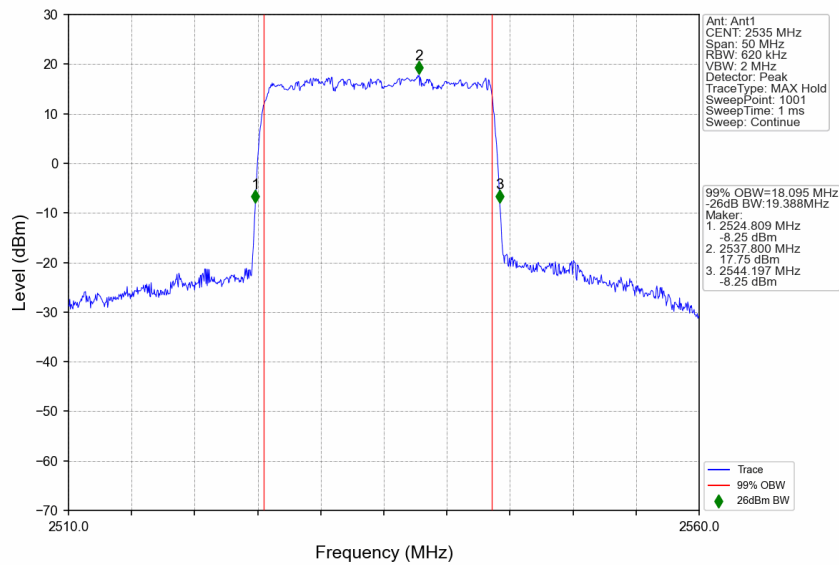


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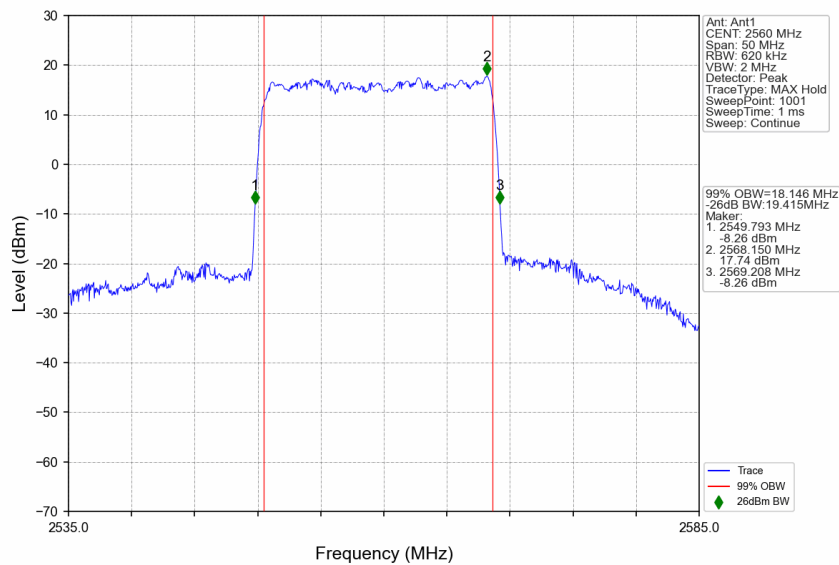
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n7_15kHz_SISO_NTNV_20MHz_DFT-s-OFDM 64 QAM_2535MHz_Outer_Full



n7_15kHz_SISO_NTNV_20MHz_DFT-s-OFDM 64 QAM_2560MHz_Outer_Full

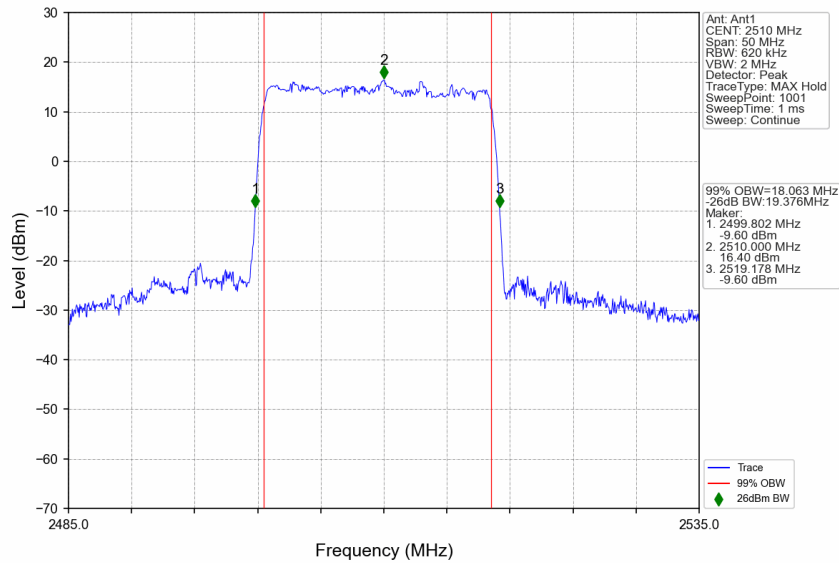


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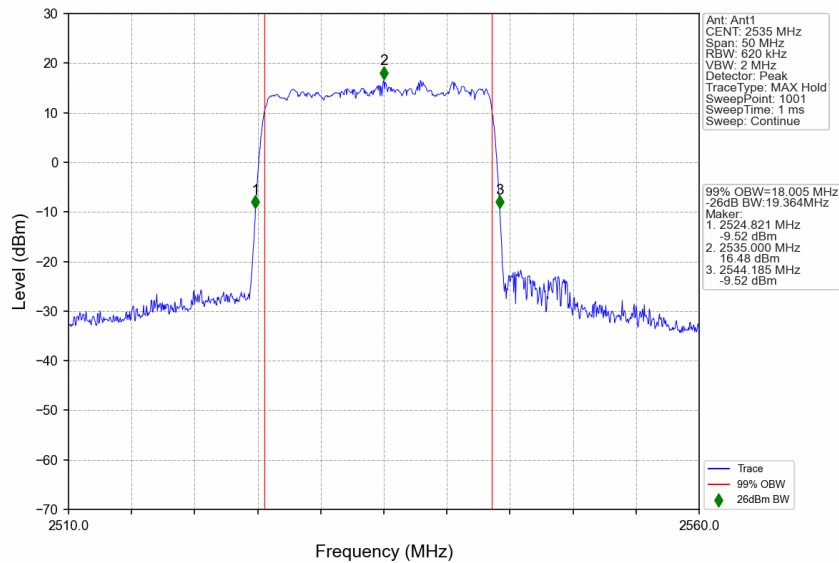
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n7_15kHz_SISO_NTNV_20MHz_DFT-s-OFDM 256 QAM_2510MHz_Outer_Full



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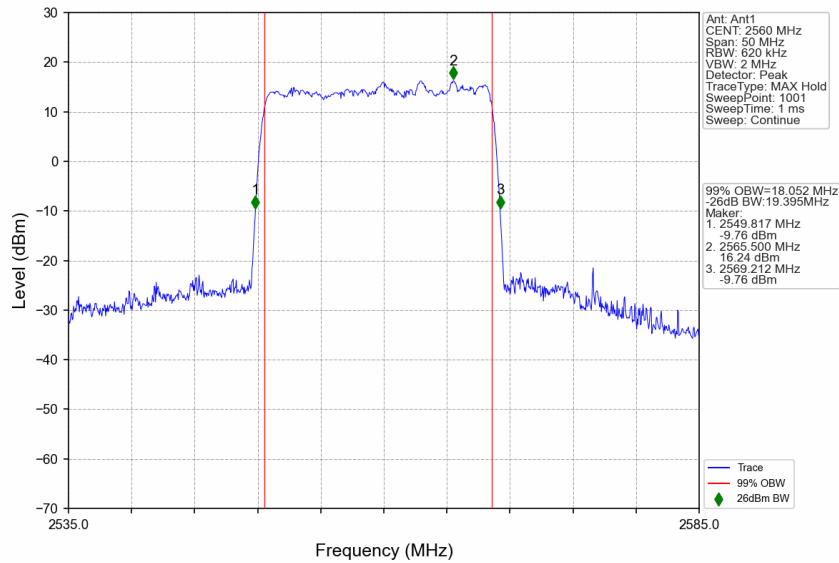


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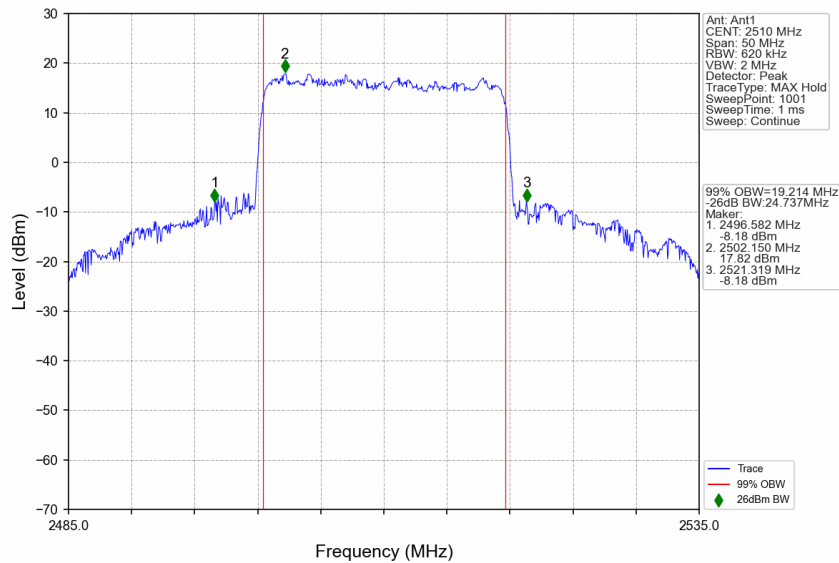
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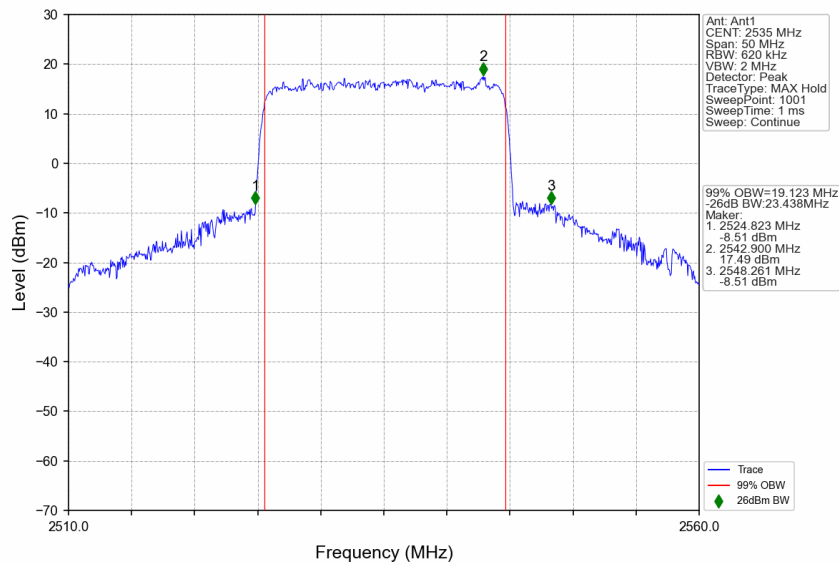


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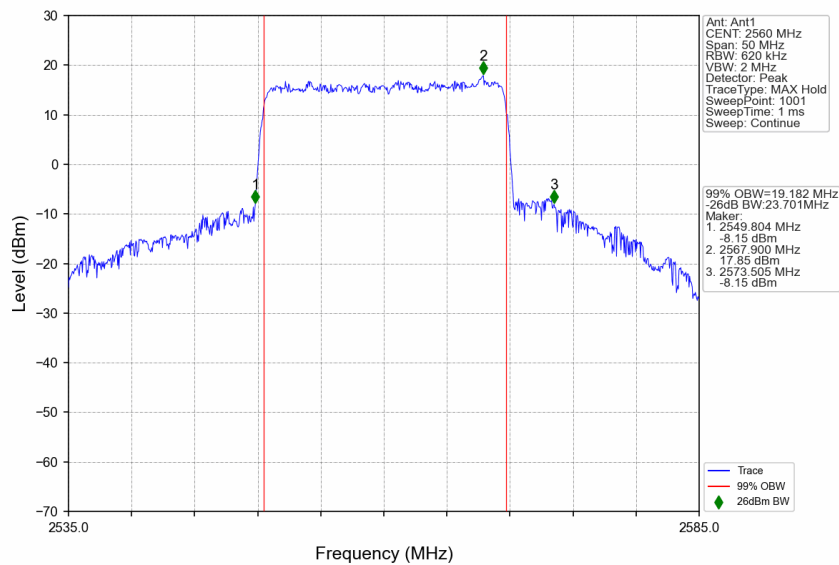
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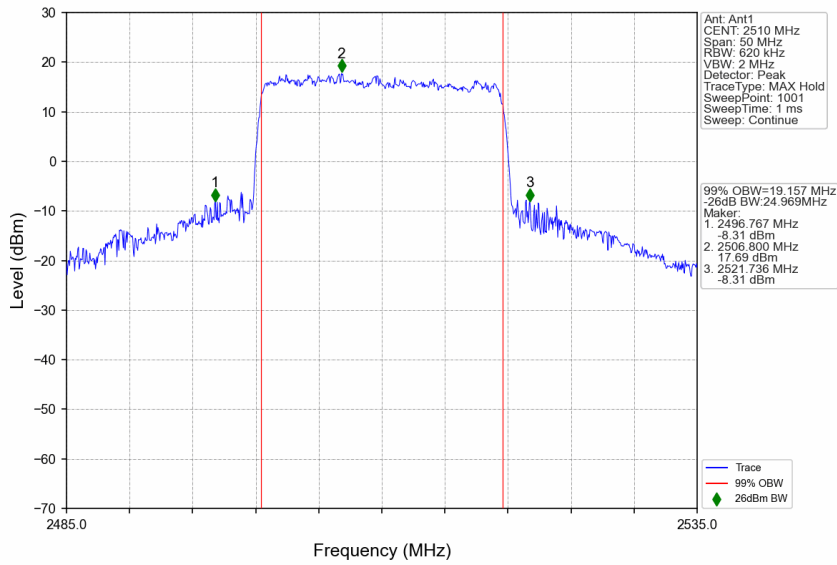


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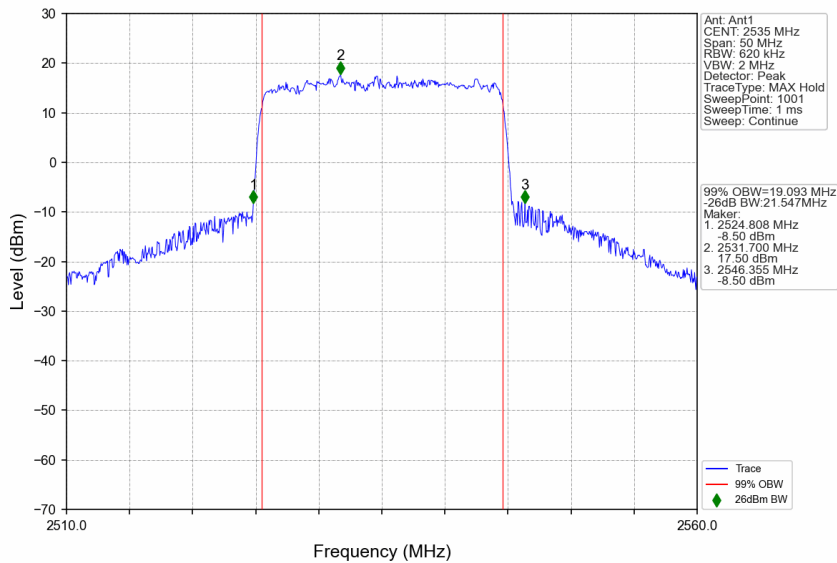
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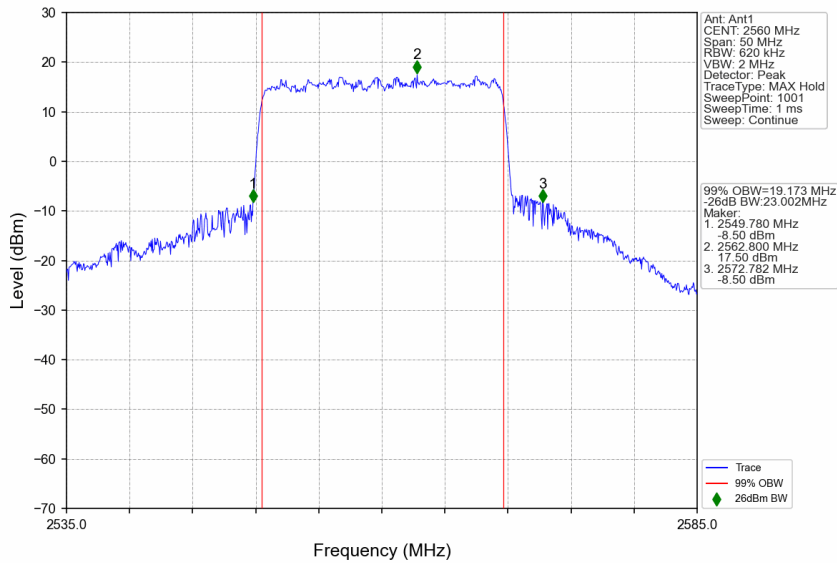


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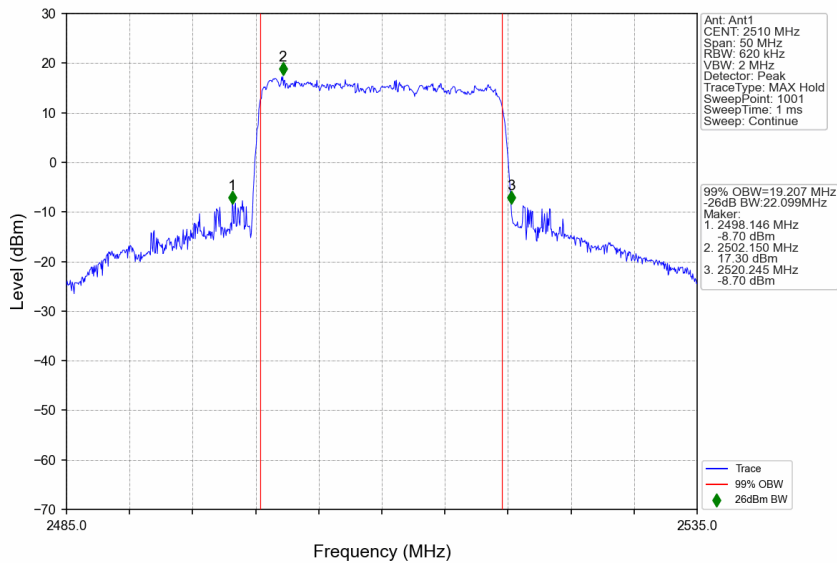
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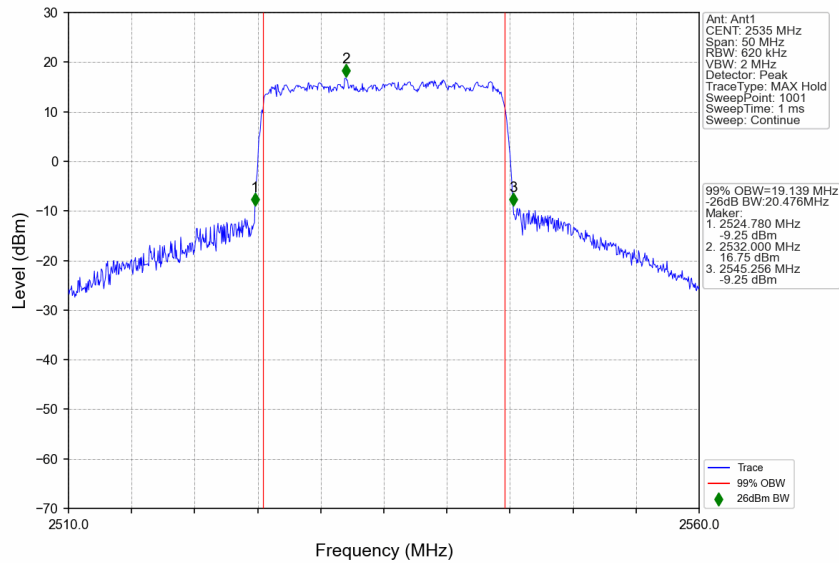


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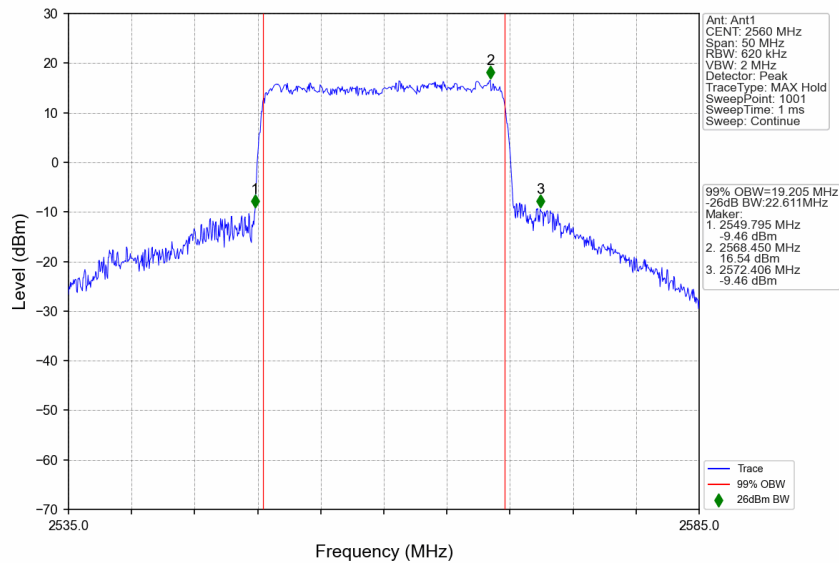
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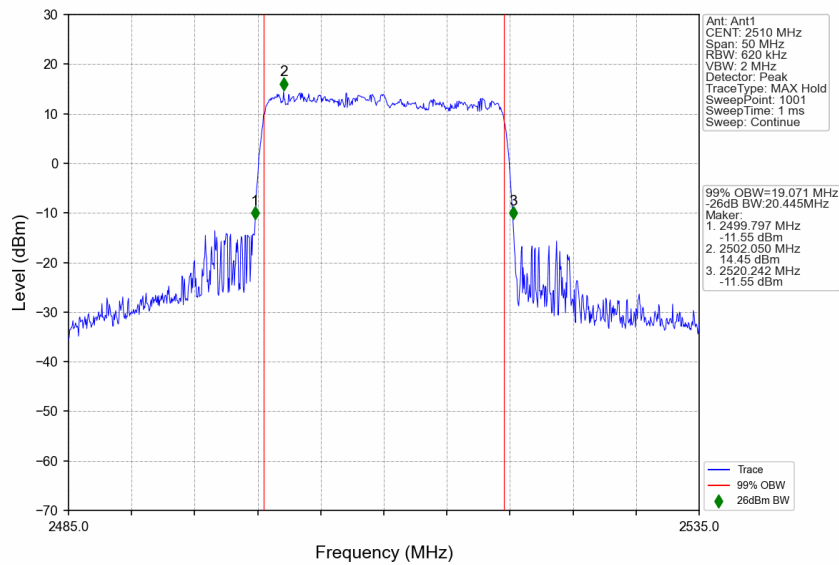


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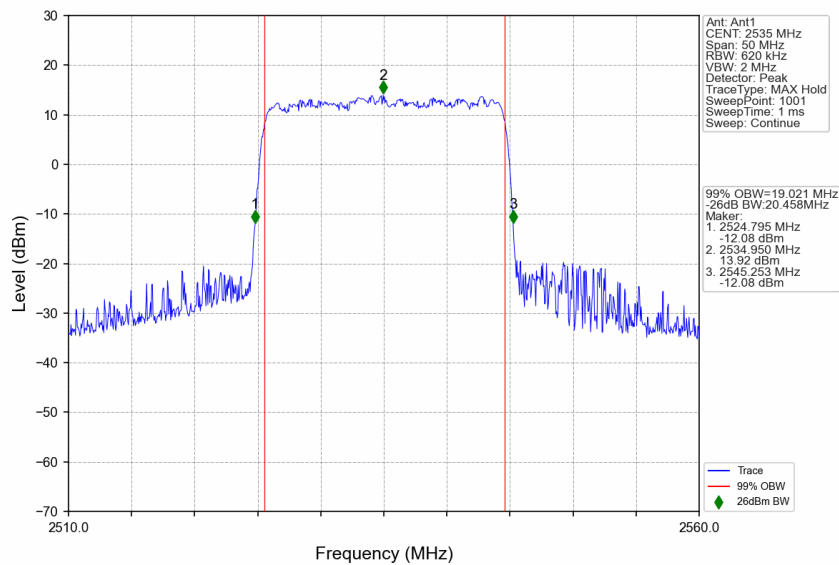
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n7_15kHz_SISO_NTNV_20MHz_CP-OFDM 256 QAM_2510MHz_Outer_Full



n7_15kHz_SISO_NTNV_20MHz_CP-OFDM 256 QAM_2535MHz_Outer_Full

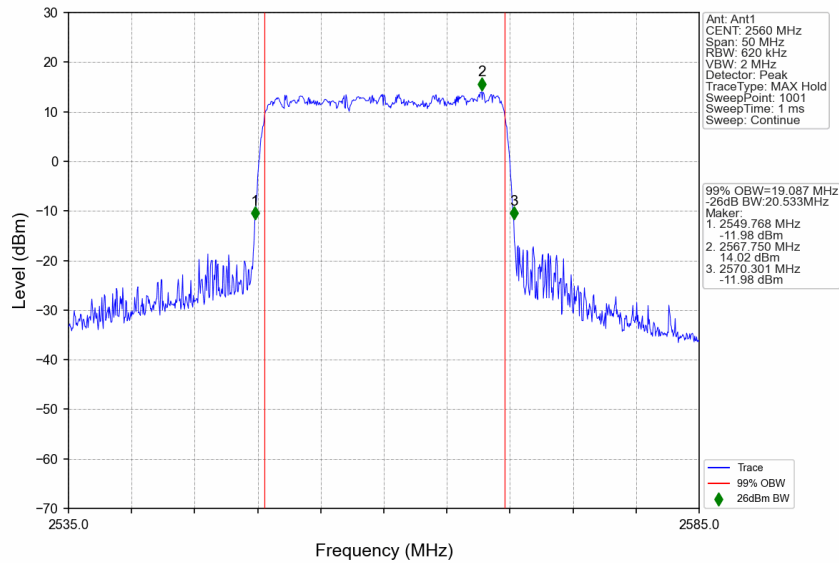


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n7_15kHz_SISO_NTNV_20MHz_CP-OFDM 256 QAM_2560MHz_Outer_Full



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4.5 15k_SISO_25MHz_NTNV

4.5.1 Test Result

5G NR n7 SCS=15kHz SISO 25MHz NTN						
Modulation	Frequency (MHz)	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	2512.5	Outer_Full	23.21	24.82	/	Pass
	2535	Outer_Full	23.10	24.69	/	Pass
	2557.5	Outer_Full	23.25	24.77	/	Pass
DFT-s-OFDM QPSK	2512.5	Outer_Full	23.12	24.76	/	Pass
	2535	Outer_Full	23.03	24.71	/	Pass
	2557.5	Outer_Full	23.18	24.76	/	Pass
DFT-s-OFDM 16 QAM	2512.5	Outer_Full	23.10	24.73	/	Pass
	2535	Outer_Full	23.00	24.67	/	Pass
	2557.5	Outer_Full	23.13	24.73	/	Pass
DFT-s-OFDM 64 QAM	2512.5	Outer_Full	23.15	24.72	/	Pass
	2535	Outer_Full	23.10	24.71	/	Pass
	2557.5	Outer_Full	23.14	24.82	/	Pass
DFT-s-OFDM 256 QAM	2512.5	Outer_Full	23.09	24.74	/	Pass
	2535	Outer_Full	22.99	24.65	/	Pass
	2557.5	Outer_Full	23.11	24.71	/	Pass
CP-OFDM QPSK	2512.5	Outer_Full	24.14	33.77	/	Pass
	2535	Outer_Full	23.98	25.76	/	Pass
	2557.5	Outer_Full	24.12	33.13	/	Pass
CP-OFDM 16 QAM	2512.5	Outer_Full	24.11	27.82	/	Pass
	2535	Outer_Full	23.95	26.38	/	Pass
	2557.5	Outer_Full	24.13	27.43	/	Pass
CP-OFDM 64 QAM	2512.5	Outer_Full	24.09	25.71	/	Pass
	2535	Outer_Full	23.99	25.65	/	Pass
	2557.5	Outer_Full	24.12	25.70	/	Pass
CP-OFDM 256 QAM	2512.5	Outer_Full	23.96	25.65	/	Pass
	2535	Outer_Full	23.86	25.57	/	Pass
	2557.5	Outer_Full	23.99	25.78	/	Pass

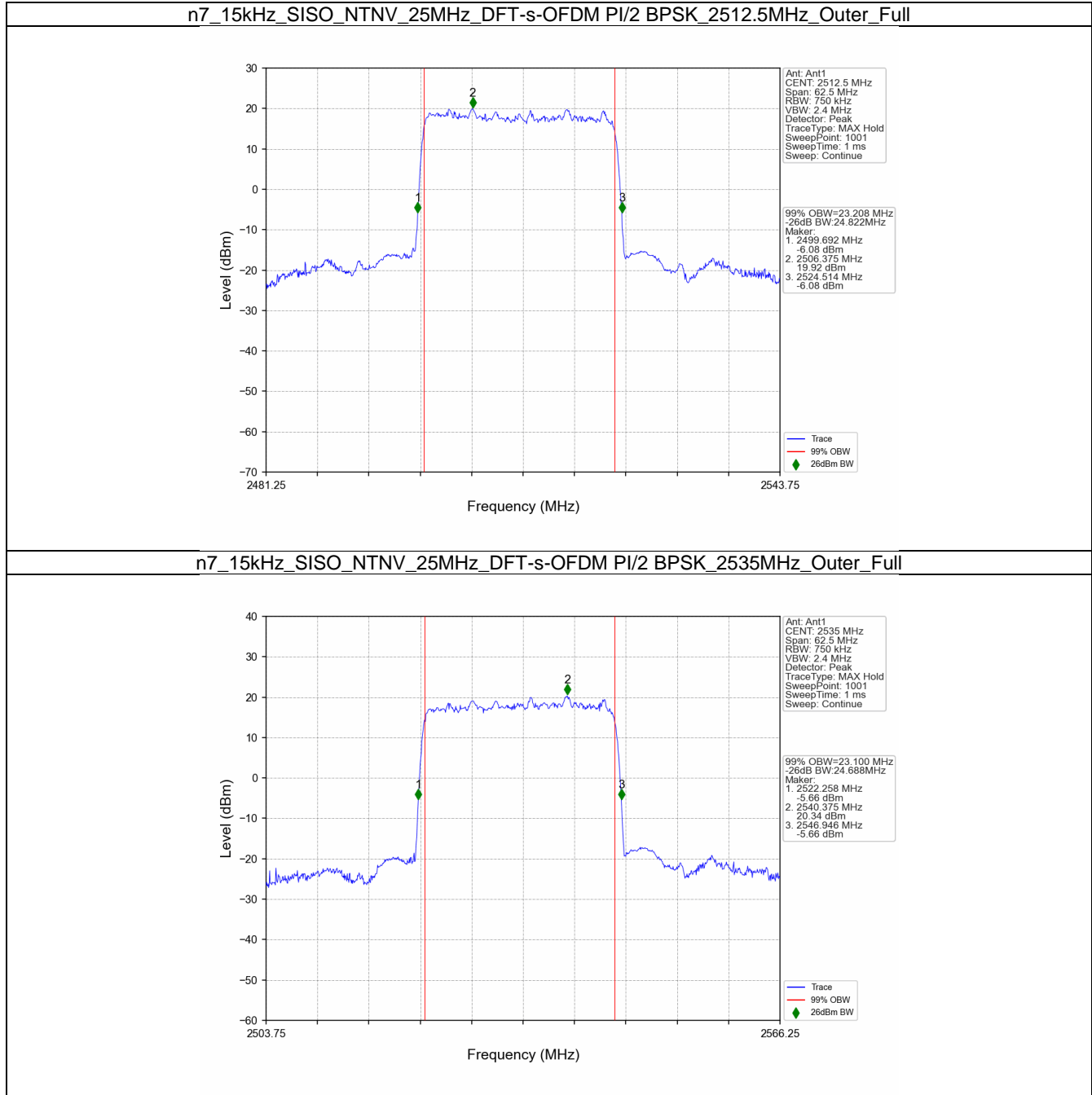


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4.5.2 Test Graph



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