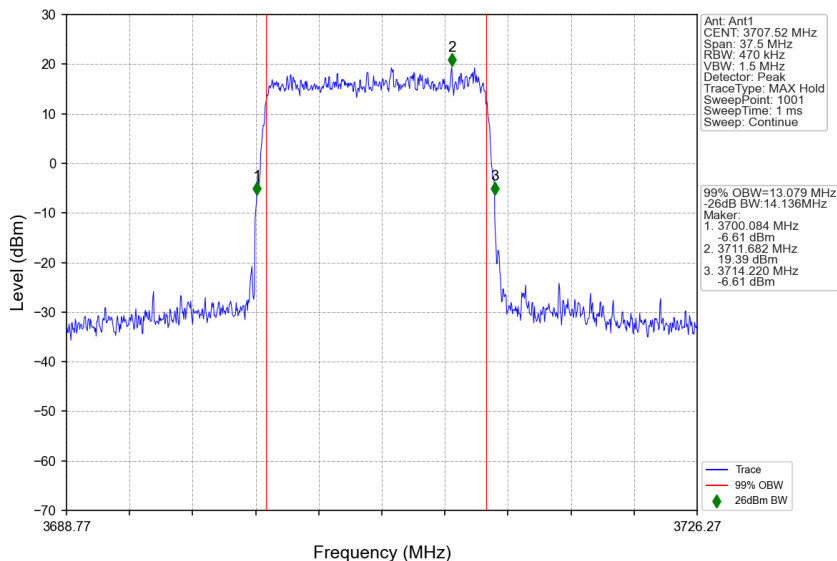
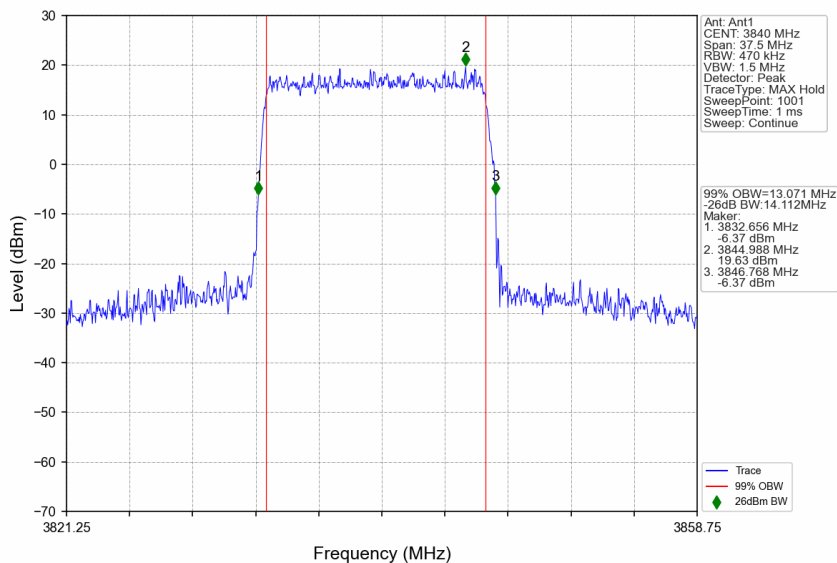


n77a_30kHz_SISO_NTNV_15MHz_DFT-s-OFDM 16 QAM_3707.52MHz_Outer_Full



n77a_30kHz_SISO_NTNV_15MHz_DFT-s-OFDM 16 QAM_3840MHz_Outer_Full

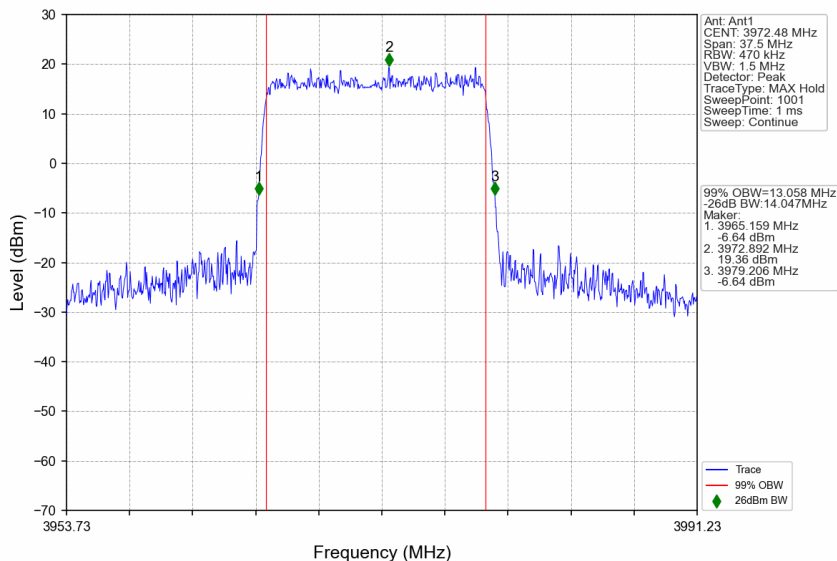


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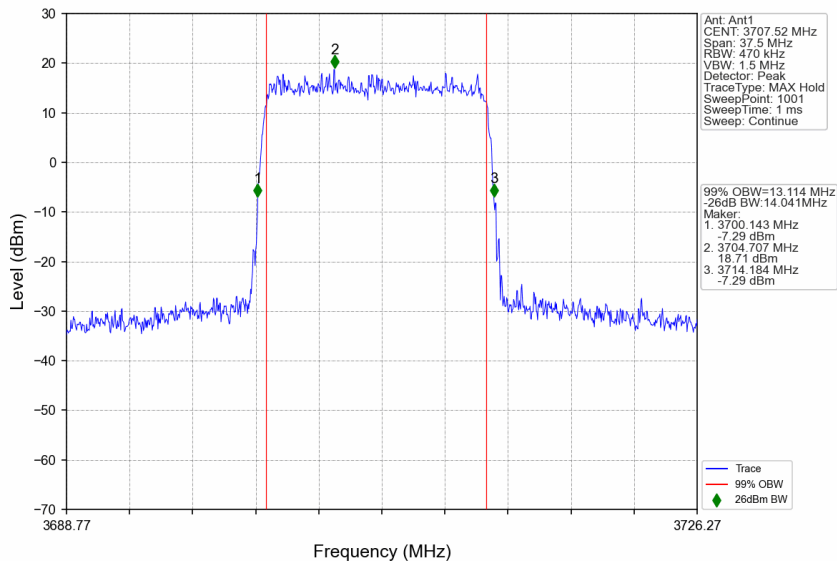
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n77a_30kHz_SISO_NTNV_15MHz_DFT-s-OFDM 16 QAM_3972.48MHz_Outer_Full



n77a_30kHz_SISO_NTNV_15MHz_DFT-s-OFDM 64 QAM_3707.52MHz_Outer_Full

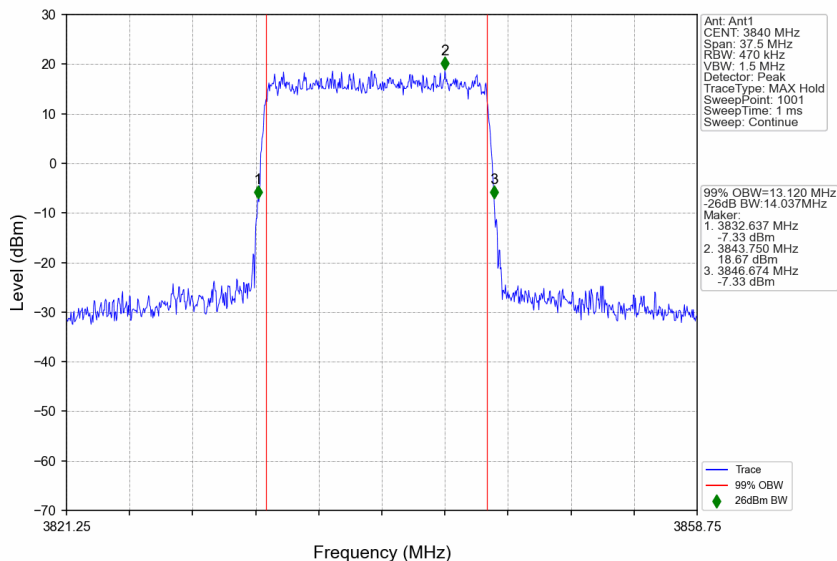


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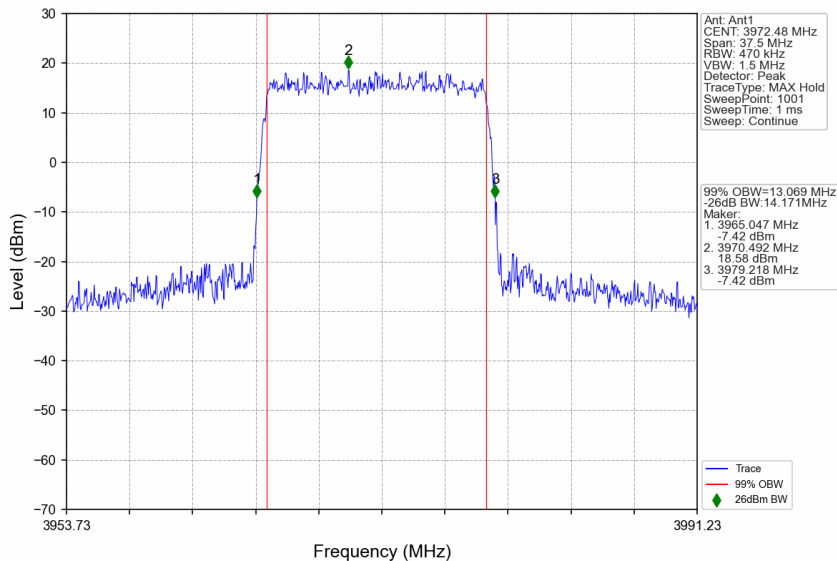
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n77a_30kHz_SISO_NTNV_15MHz_DFT-s-OFDM_64_QAM_3840MHz_Outer_Full



n77a_30kHz_SISO_NTNV_15MHz_DFT-s-OFDM_64_QAM_3972.48MHz_Outer_Full



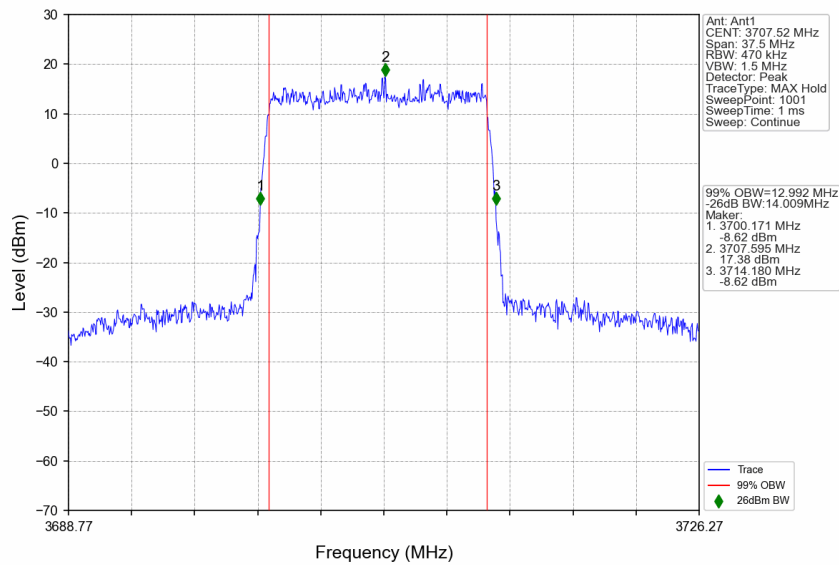
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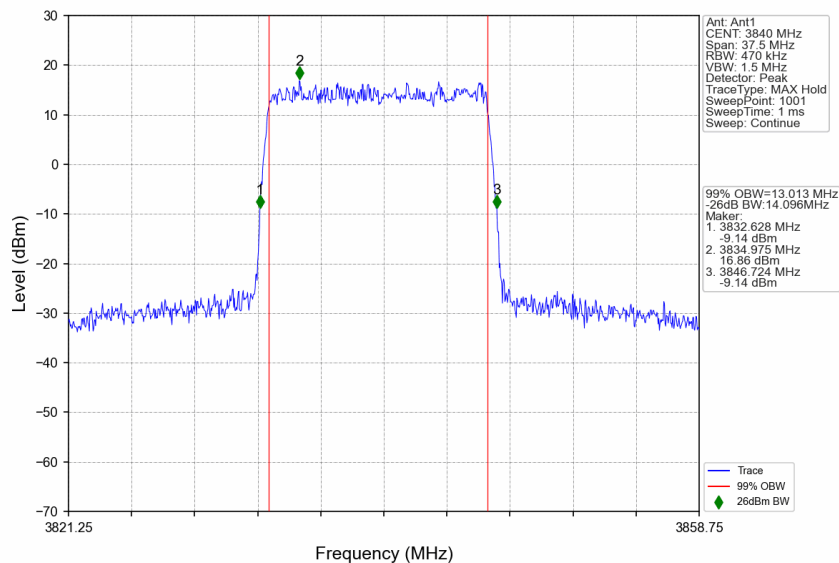
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n77a_30kHz_SISO_NTNV_15MHz_DFT-s-OFDM 256 QAM_3707.52MHz_Outer_Full



n77a_30kHz_SISO_NTNV_15MHz_DFT-s-OFDM 256 QAM_3840MHz_Outer_Full



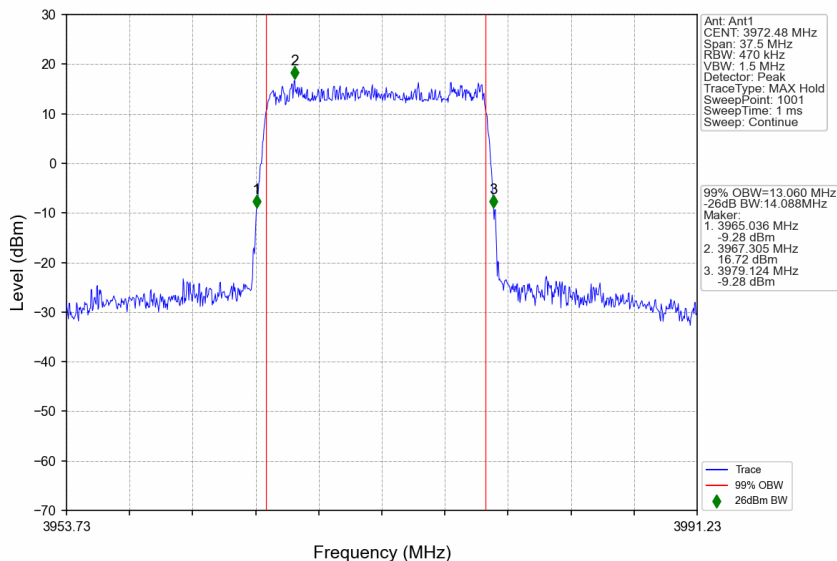
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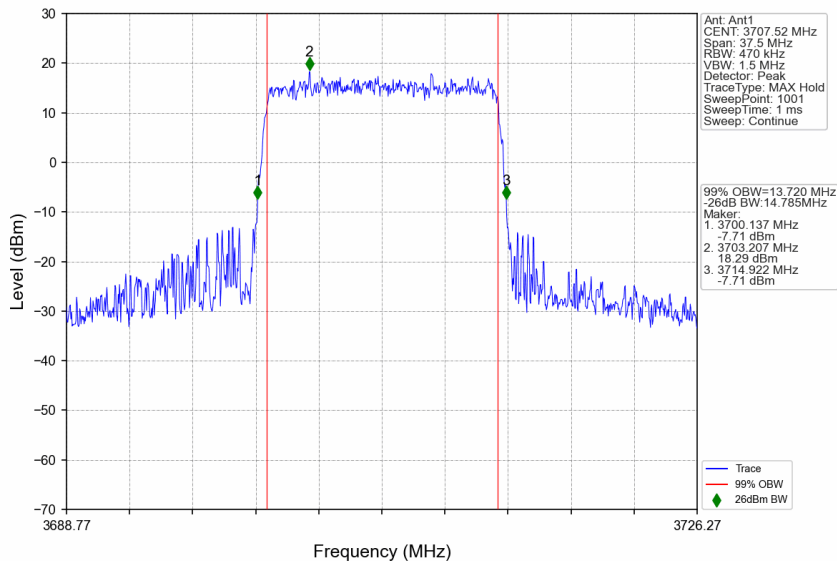
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t (86-512) 62992980 sgs.china@sgs.com

n77a_30kHz_SISO_NTNV_15MHz_DFT-s-OFDM 256 QAM_3972.48MHz_Outer_Full



n77a_30kHz_SISO_NTNV_15MHz_CP-OFDM QPSK_3707.52MHz_Outer_Full

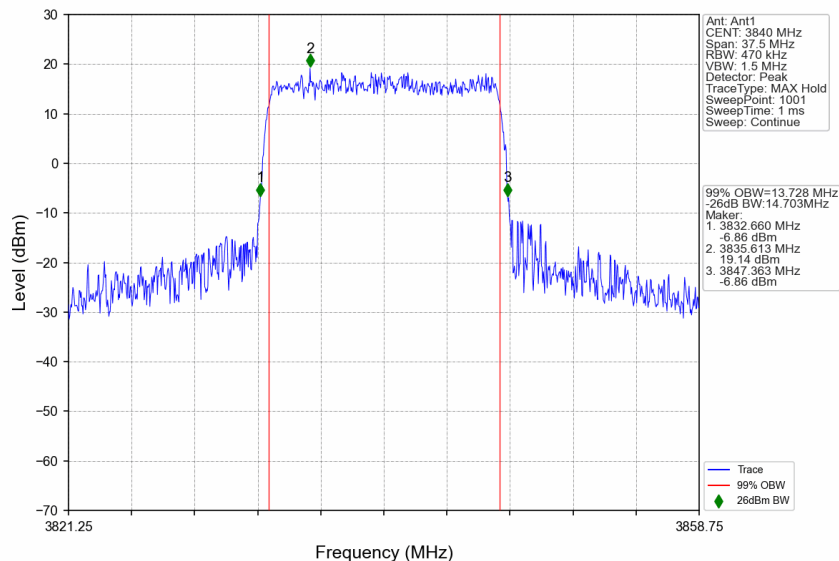


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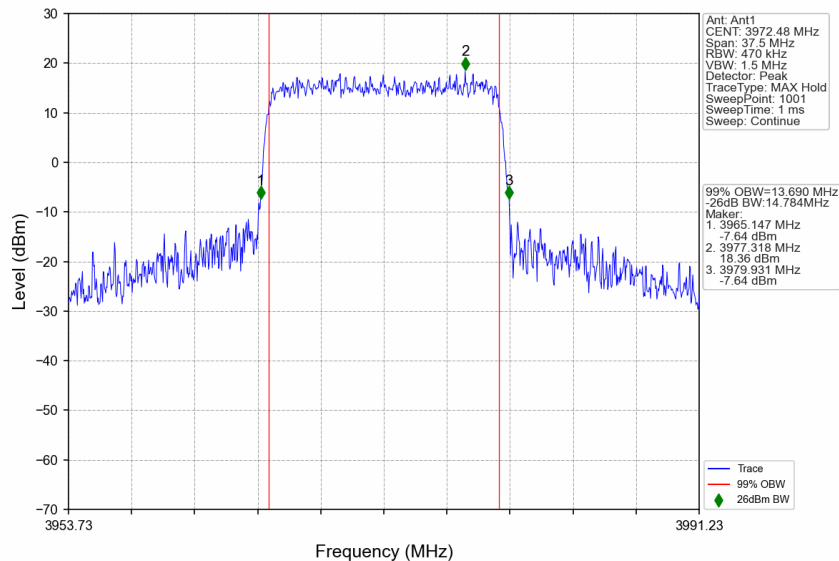
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n77a_30kHz_SISO_NTNV_15MHz_CP-OFDM QPSK_3840MHz_Outer_Full



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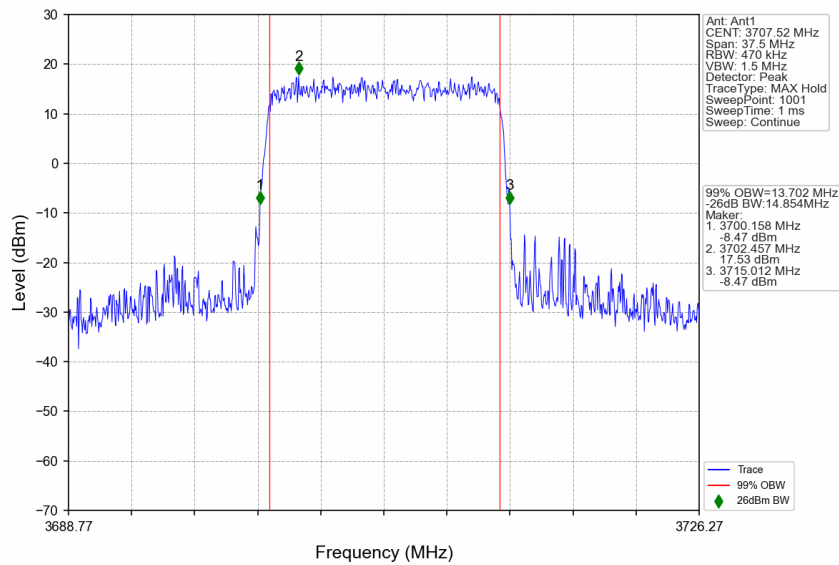


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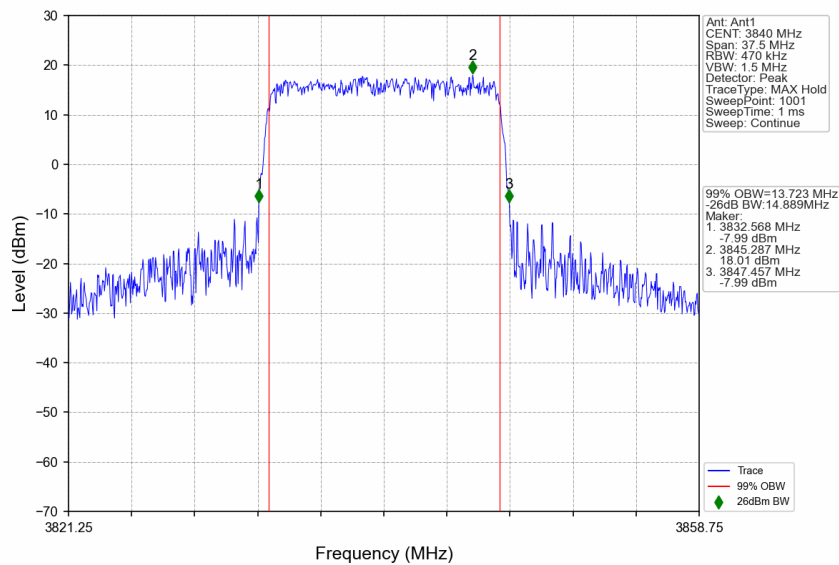
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n77a_30kHz_SISO_NTNV_15MHz_CP-OFDM 16 QAM_3707.52MHz_Outer_Full



n77a_30kHz_SISO_NTNV_15MHz_CP-OFDM 16 QAM_3840MHz_Outer_Full

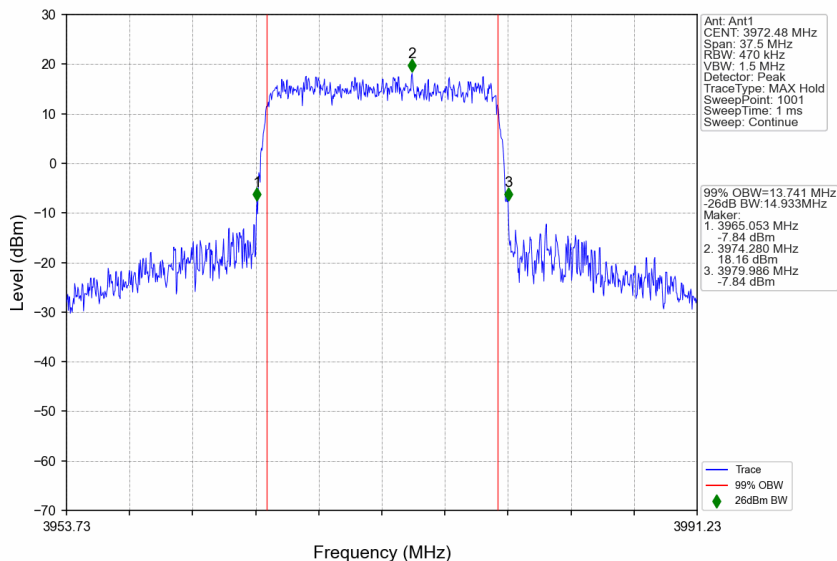


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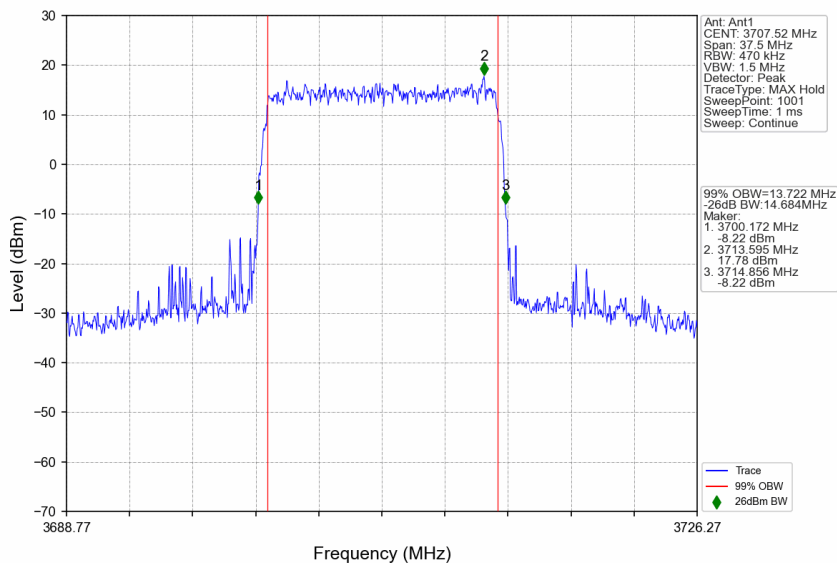
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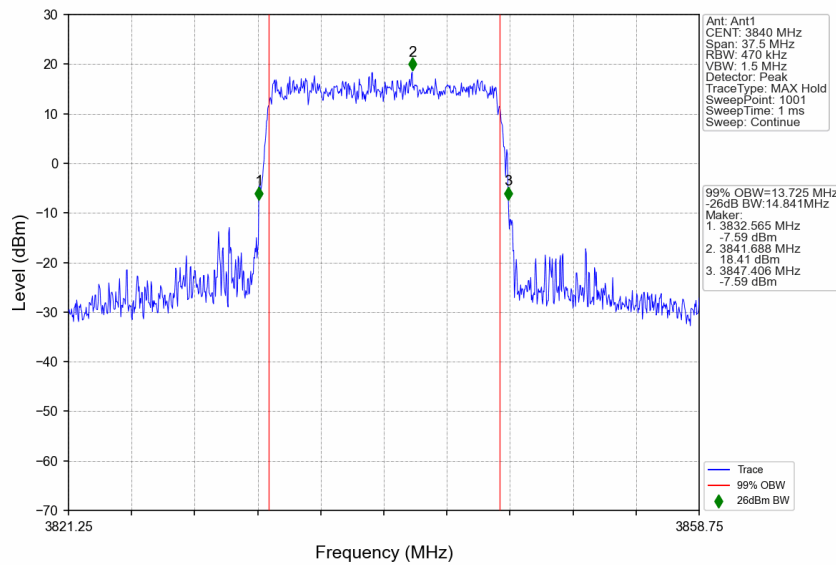


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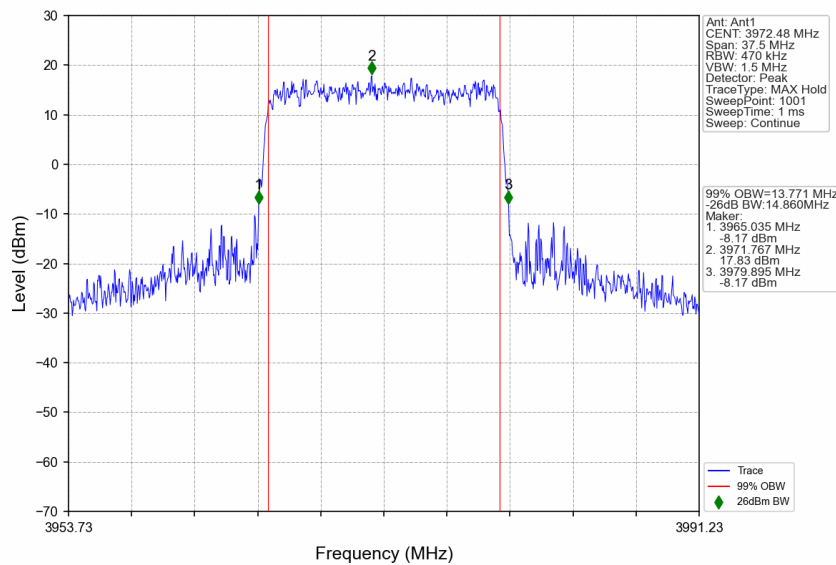
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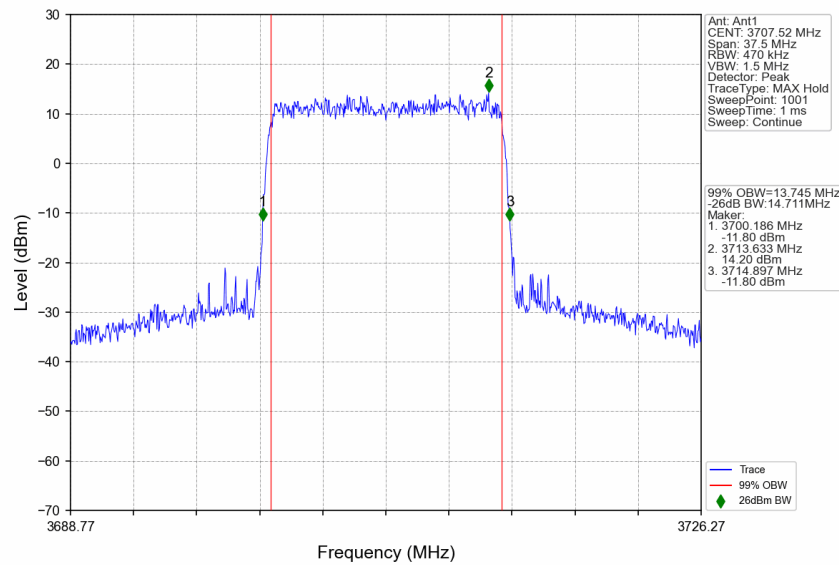


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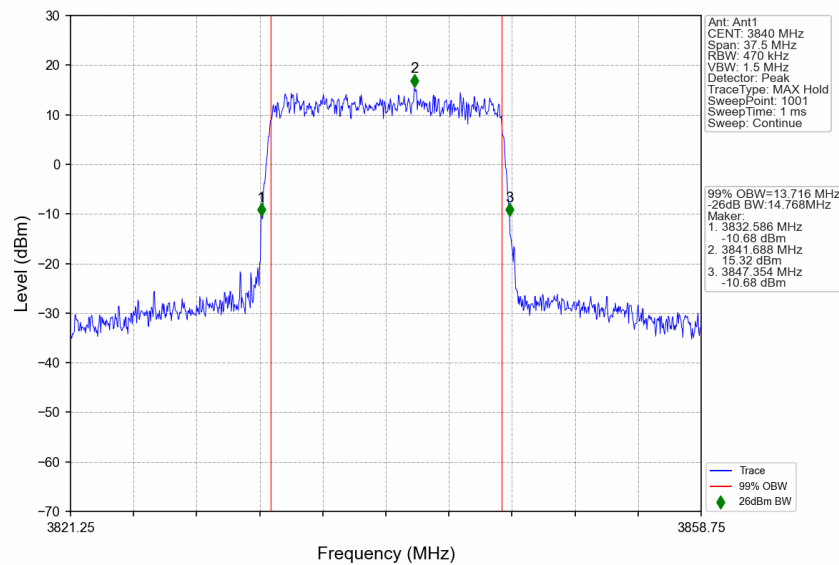
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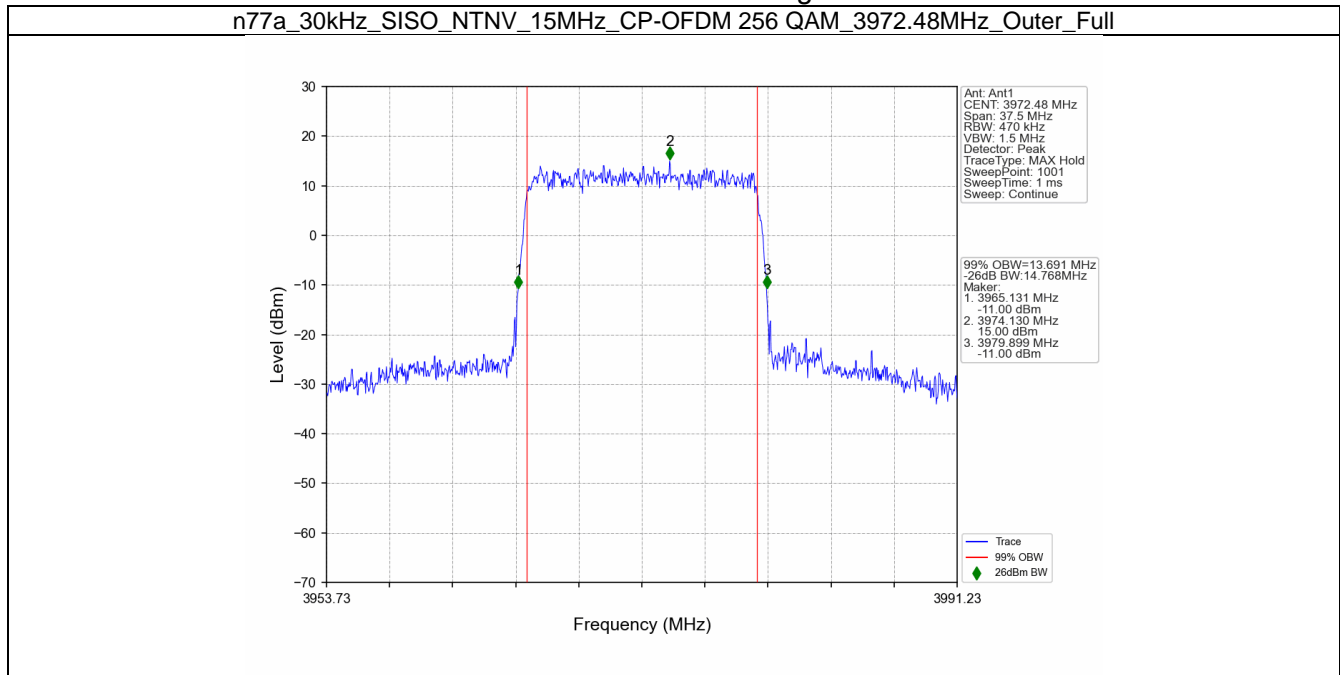


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 Wireless Laboratory

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4.10 30k_SISO_20MHz_NTNV

4.10.1 Test Result

5G NR n77a SCS=30kHz SISO 20MHz NTNv						
Modulation	Frequency (MHz)	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	3710.01	Outer_Full	18.10	19.35	/	Pass
	3840	Outer_Full	18.14	19.39	/	Pass
	3969.99	Outer_Full	18.12	19.38	/	Pass
DFT-s-OFDM QPSK	3710.01	Outer_Full	18.05	19.32	/	Pass
	3840	Outer_Full	18.13	19.32	/	Pass
	3969.99	Outer_Full	18.11	19.36	/	Pass
DFT-s-OFDM 16 QAM	3710.01	Outer_Full	18.12	19.36	/	Pass
	3840	Outer_Full	18.08	19.37	/	Pass
	3969.99	Outer_Full	18.09	19.36	/	Pass
DFT-s-OFDM 64 QAM	3710.01	Outer_Full	18.12	19.40	/	Pass
	3840	Outer_Full	18.14	19.37	/	Pass
	3969.99	Outer_Full	18.12	19.41	/	Pass
DFT-s-OFDM 256 QAM	3710.01	Outer_Full	18.09	19.35	/	Pass
	3840	Outer_Full	18.07	19.39	/	Pass
	3969.99	Outer_Full	18.09	19.39	/	Pass
CP-OFDM QPSK	3710.01	Outer_Full	18.42	19.74	/	Pass
	3840	Outer_Full	18.45	19.78	/	Pass
	3969.99	Outer_Full	18.39	21.58	/	Pass
CP-OFDM 16 QAM	3710.01	Outer_Full	18.34	19.68	/	Pass
	3840	Outer_Full	18.37	19.70	/	Pass
	3969.99	Outer_Full	18.37	19.68	/	Pass
CP-OFDM 64 QAM	3710.01	Outer_Full	18.35	19.82	/	Pass
	3840	Outer_Full	18.37	19.77	/	Pass
	3969.99	Outer_Full	18.34	19.69	/	Pass
CP-OFDM 256 QAM	3710.01	Outer_Full	18.40	19.68	/	Pass
	3840	Outer_Full	18.39	19.78	/	Pass
	3969.99	Outer_Full	18.35	19.69	/	Pass

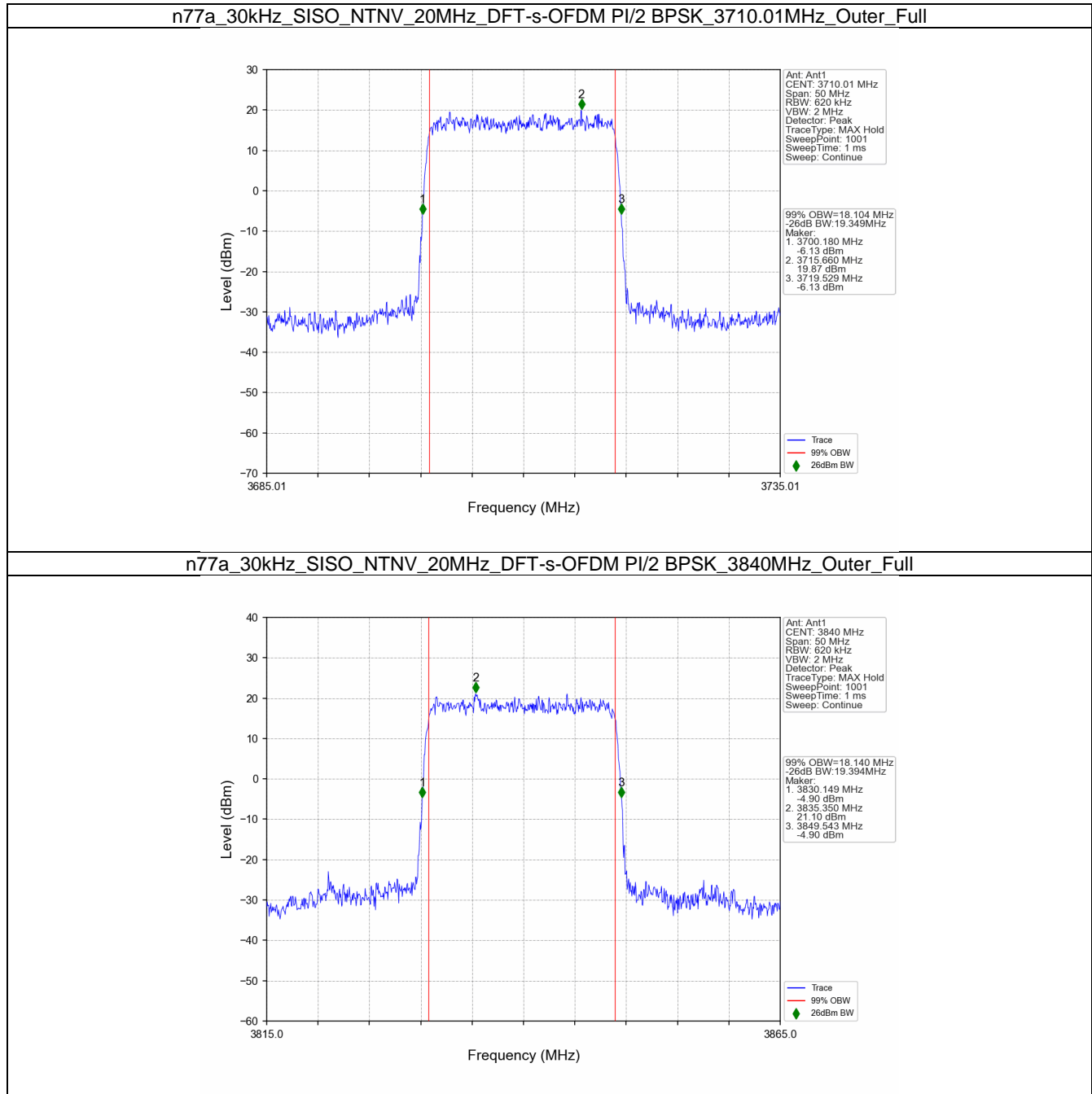


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4.10.2 Test Graph

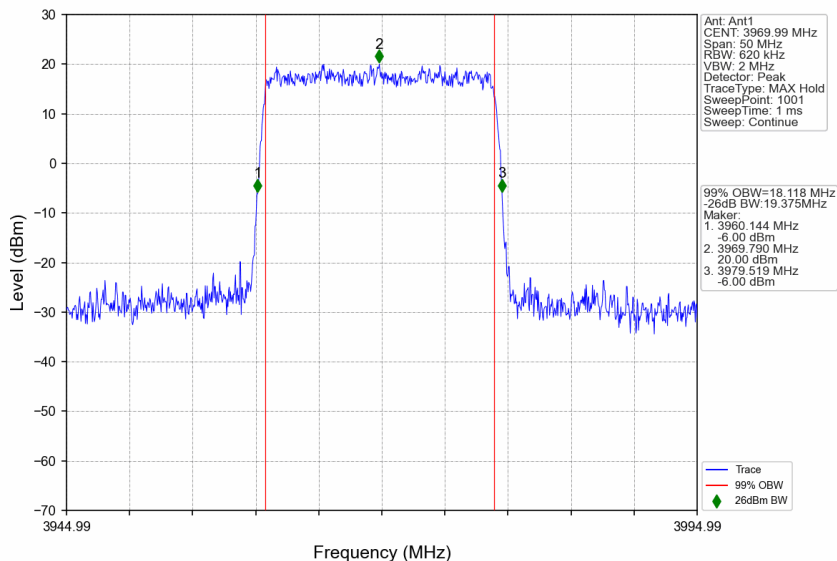


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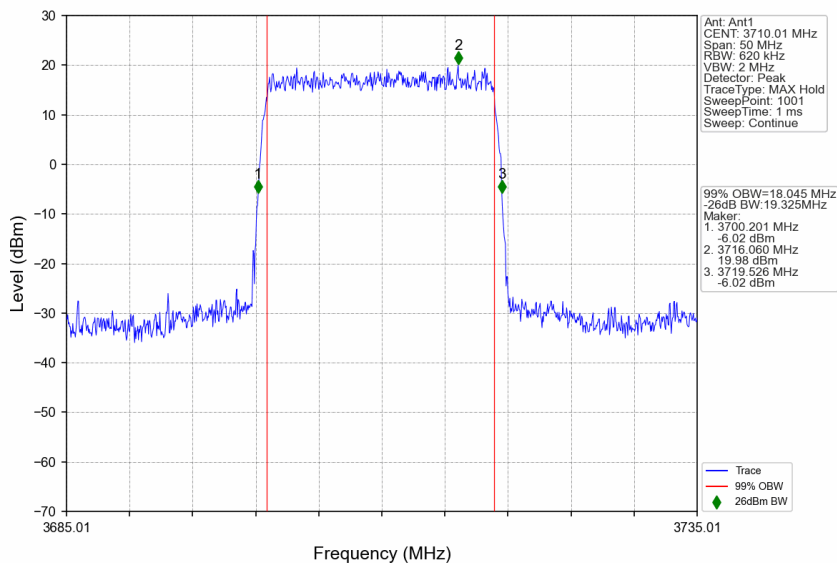
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n77a_30kHz_SISO_NTNV_20MHz_DFT-s-OFDM QPSK_3710.01MHz_Outer_Full

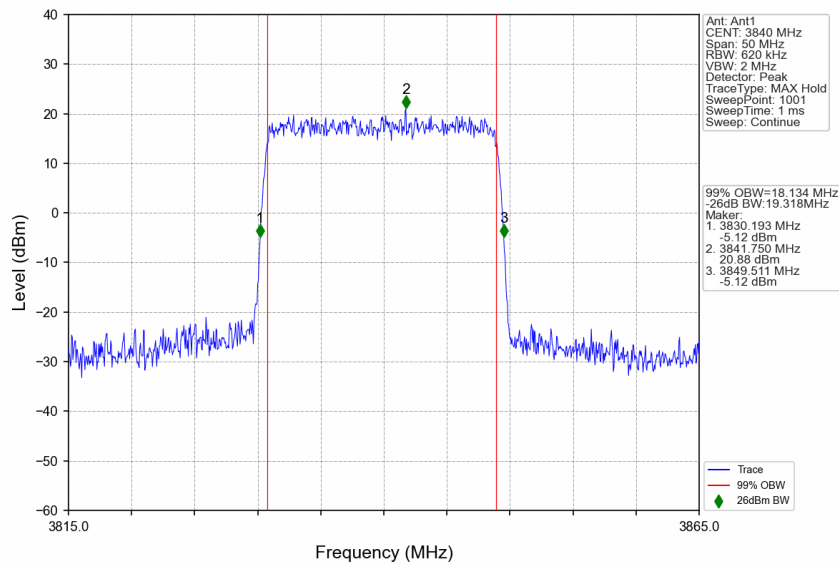


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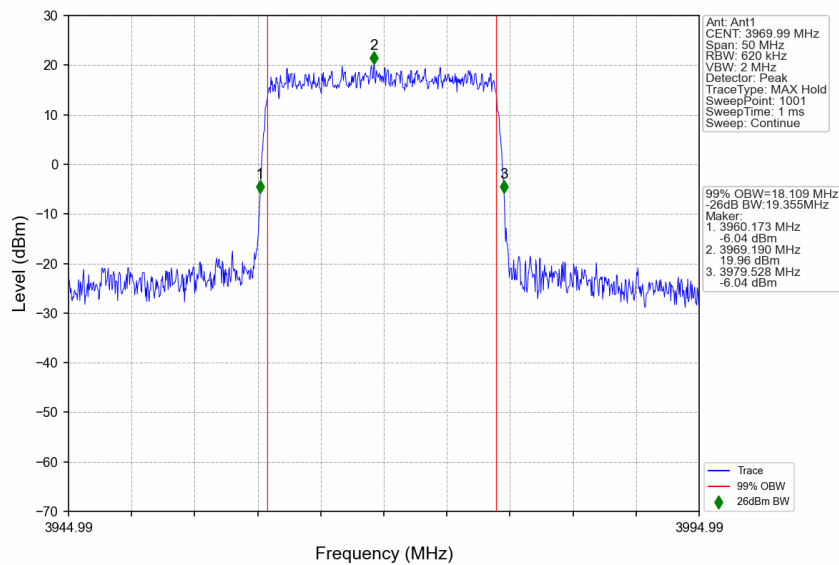
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n77a_30kHz_SISO_NTNV_20MHz_DFT-s-OFDM QPSK_3840MHz_Outer_Full



n77a_30kHz_SISO_NTNV_20MHz_DFT-s-OFDM QPSK_3969.99MHz_Outer_Full

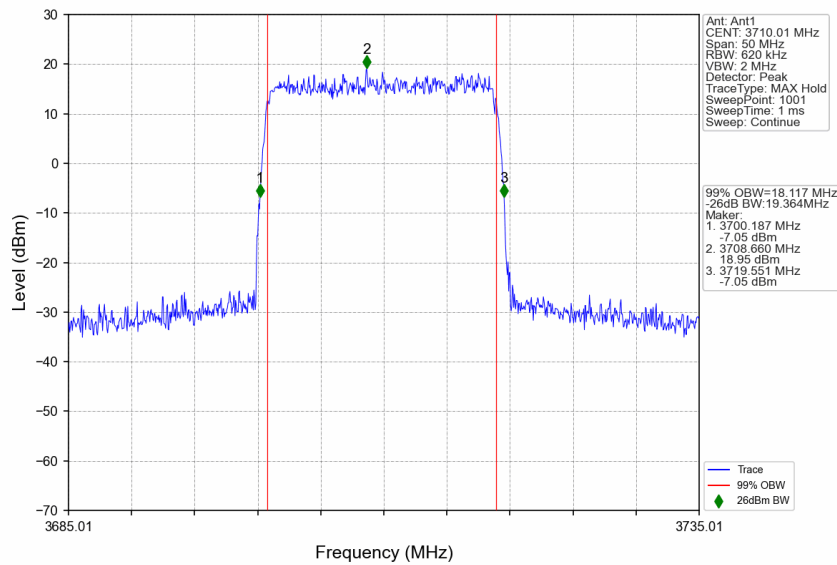


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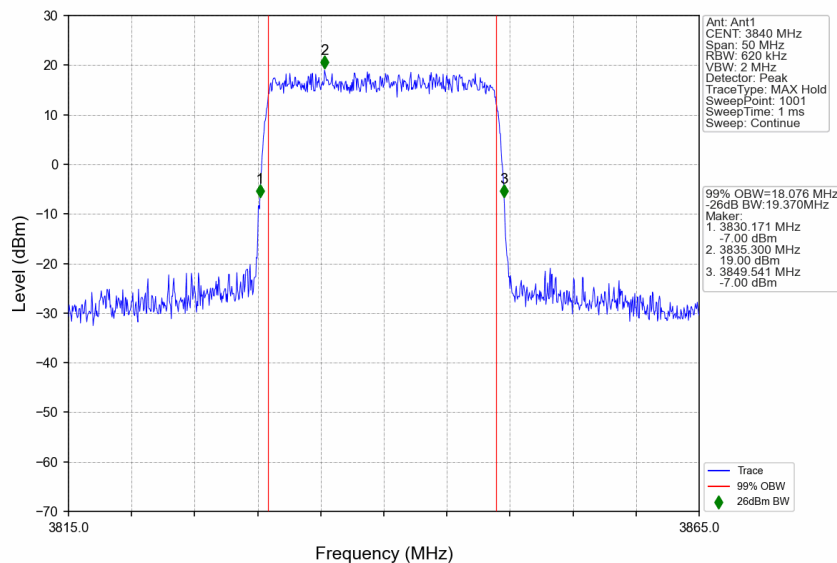
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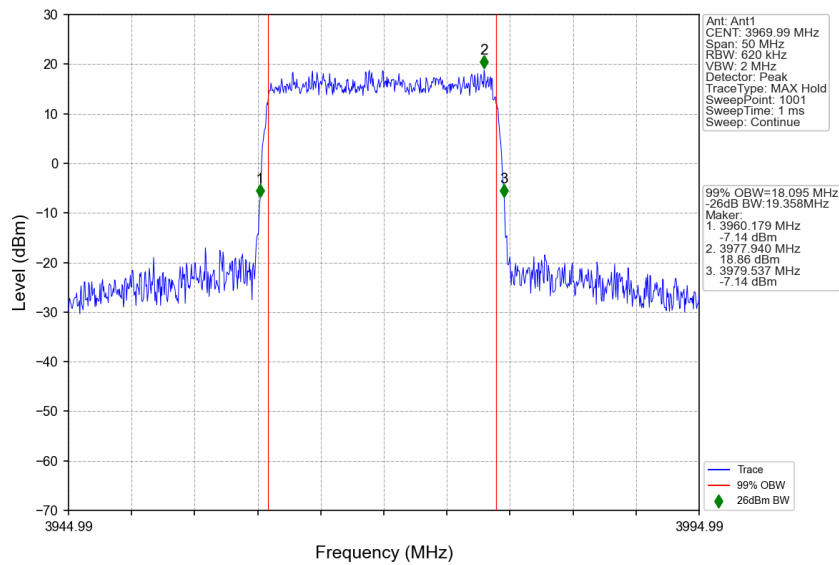


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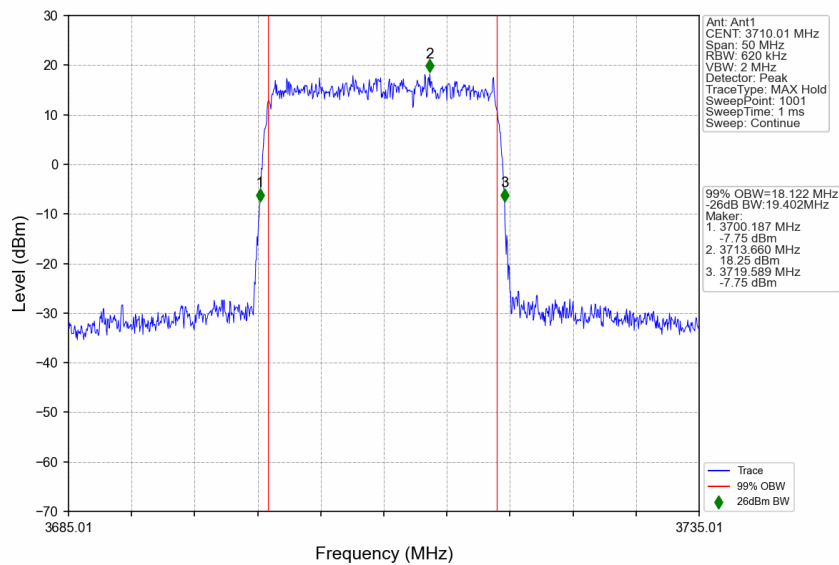
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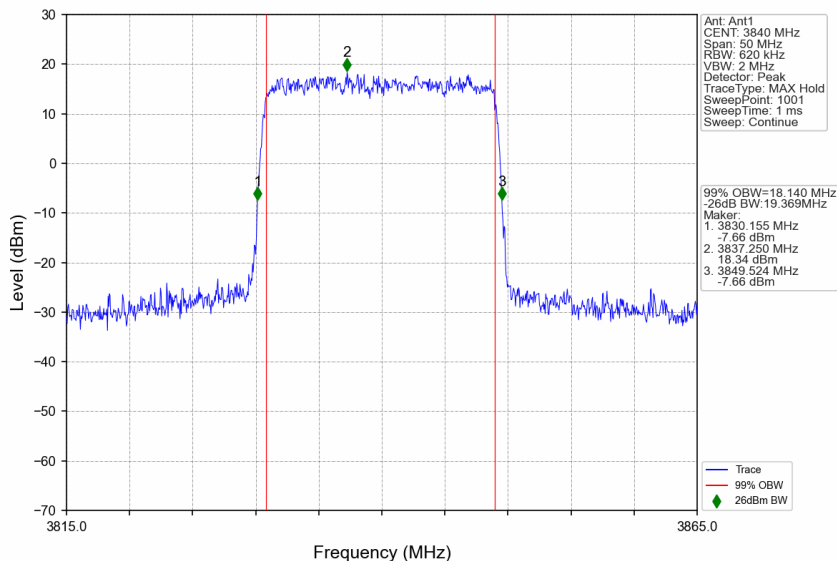


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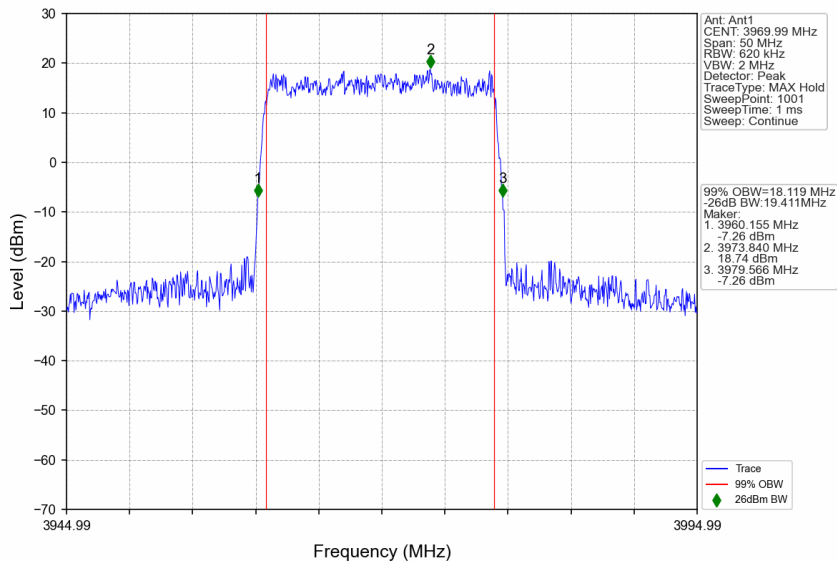
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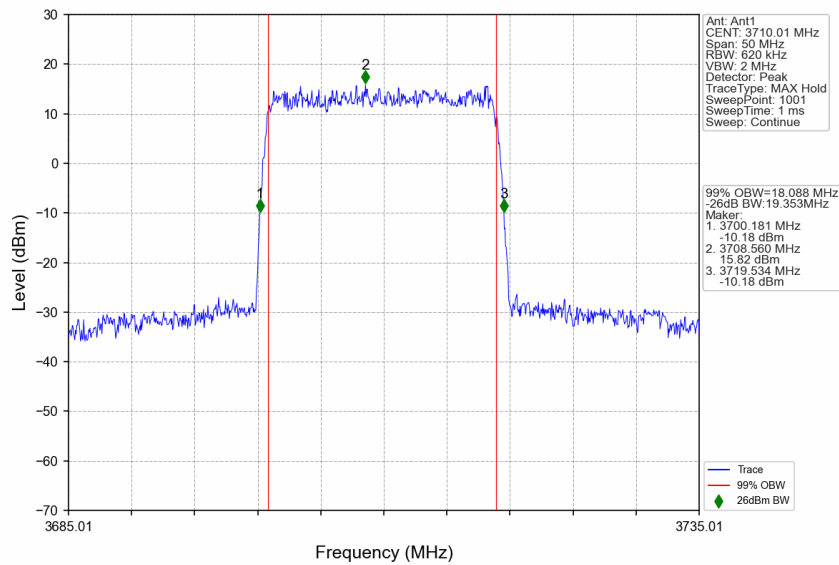
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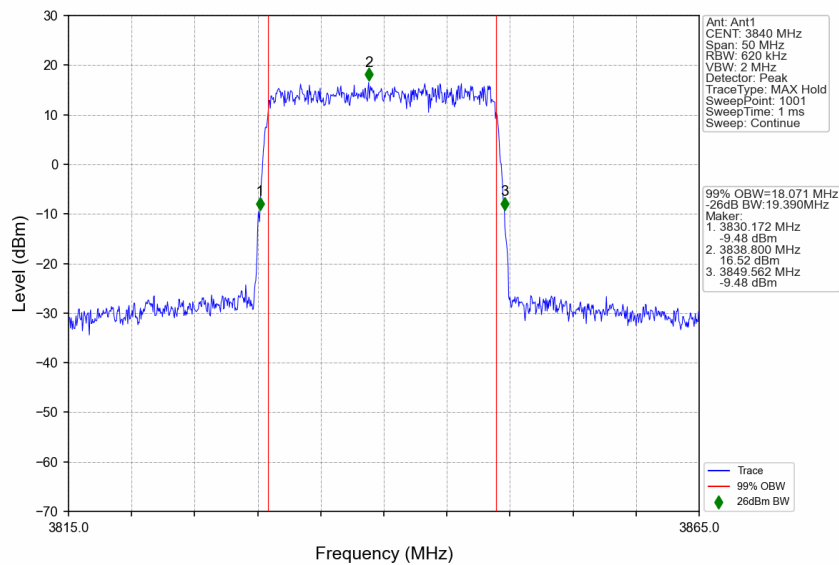
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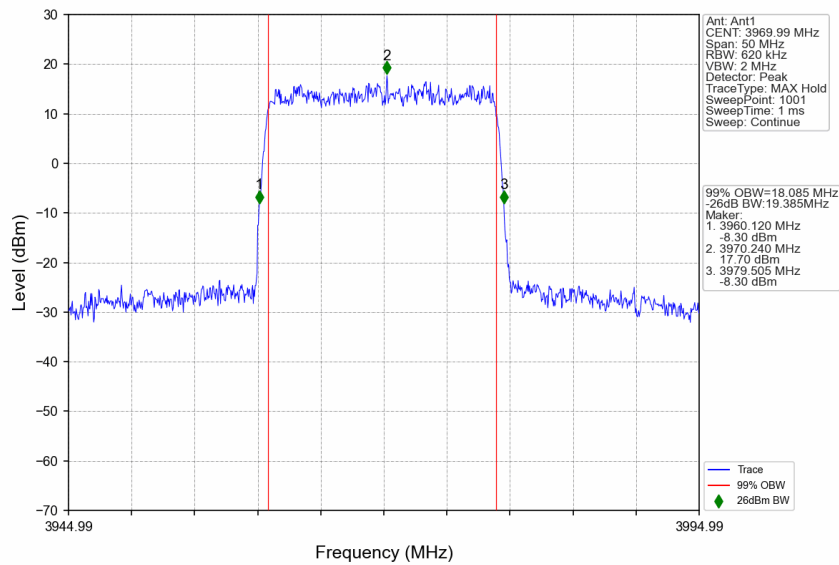


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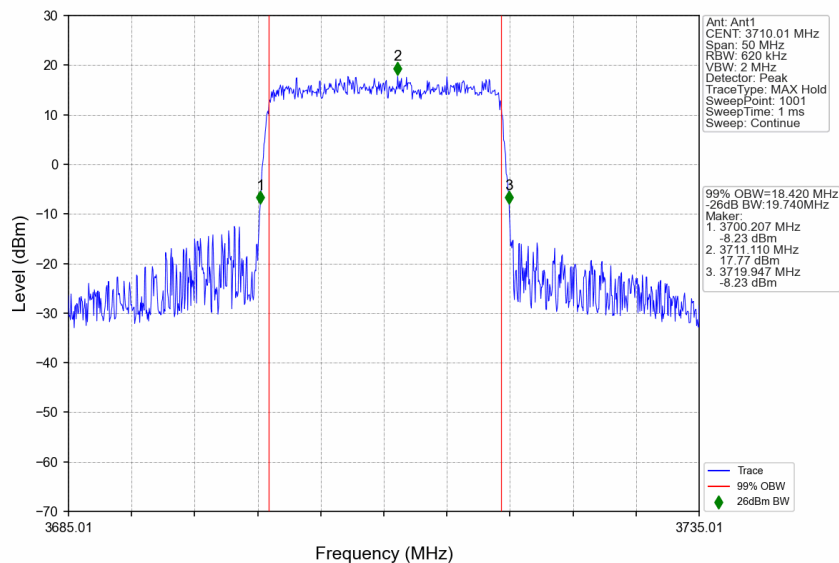
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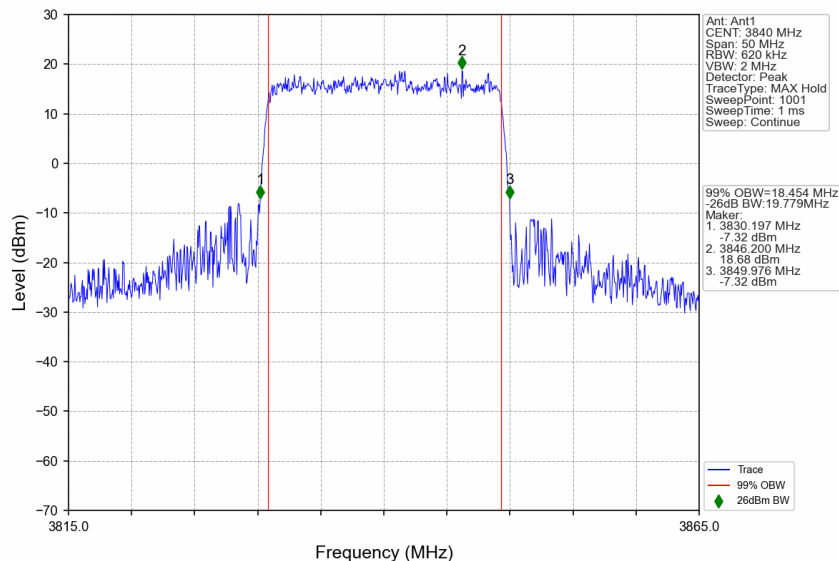


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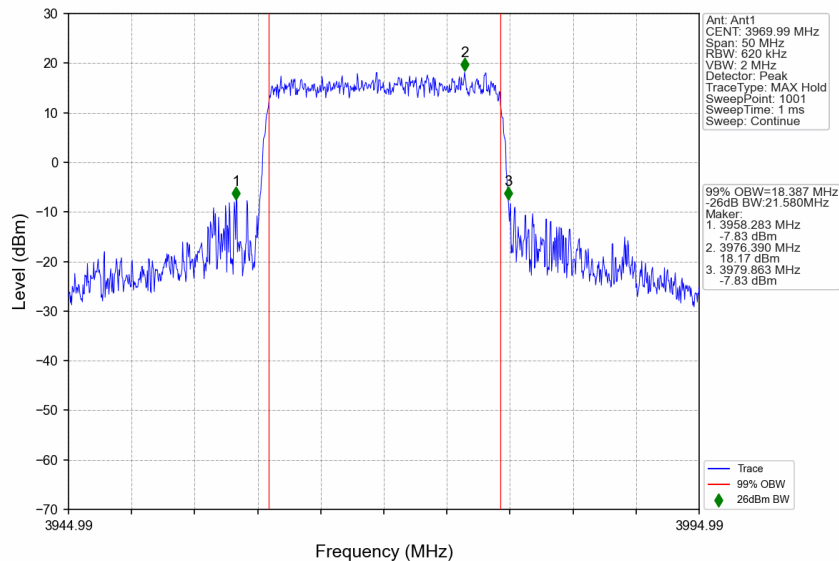
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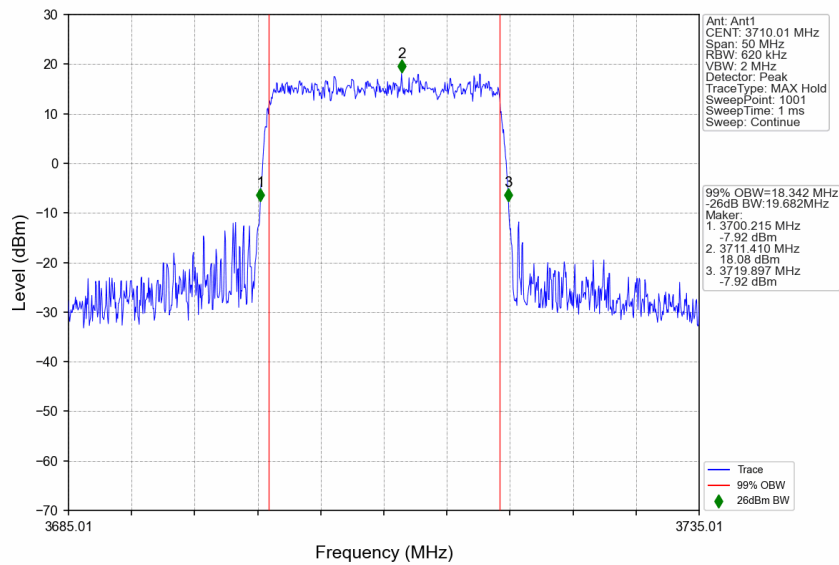


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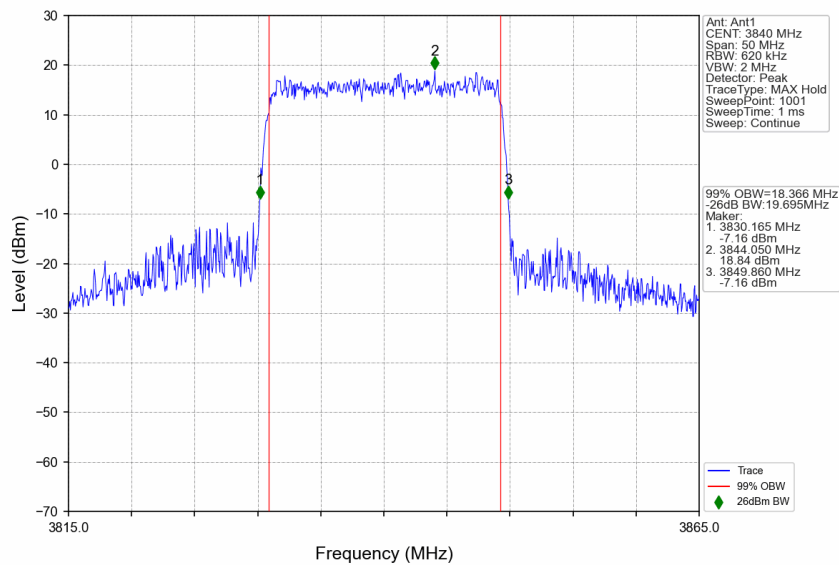
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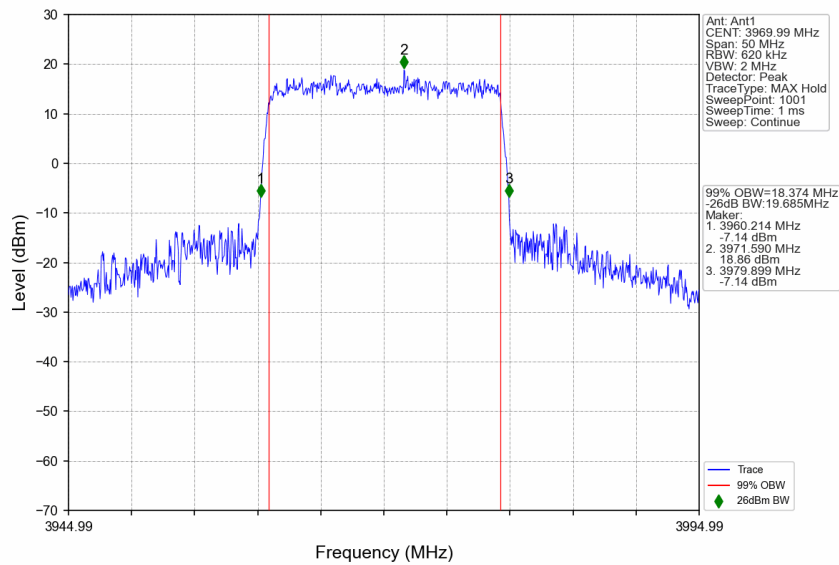


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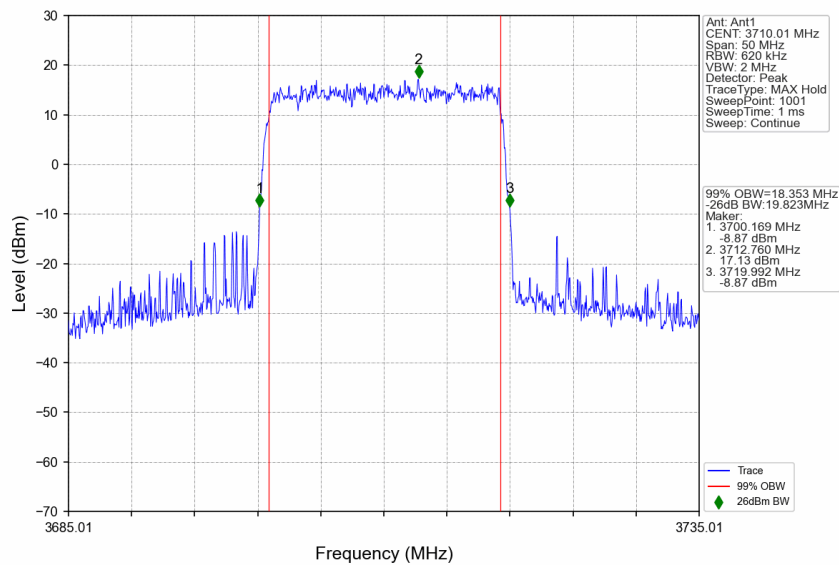
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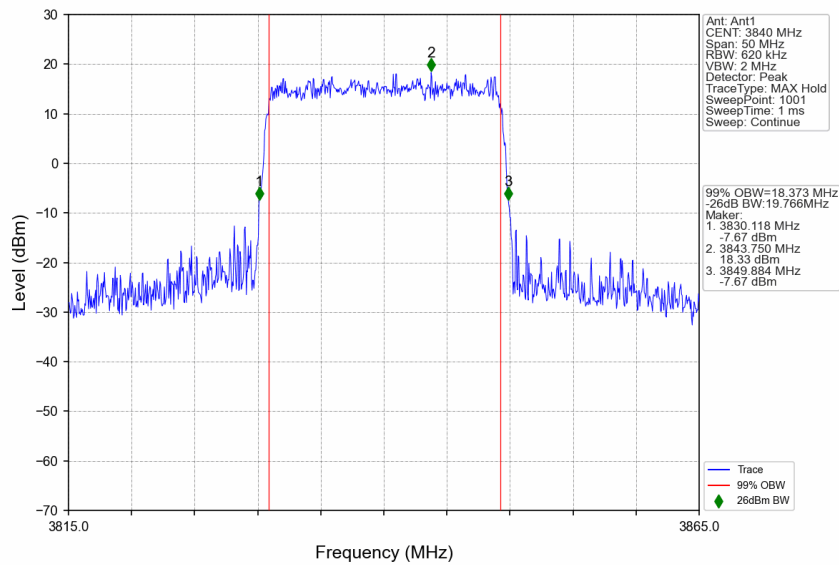


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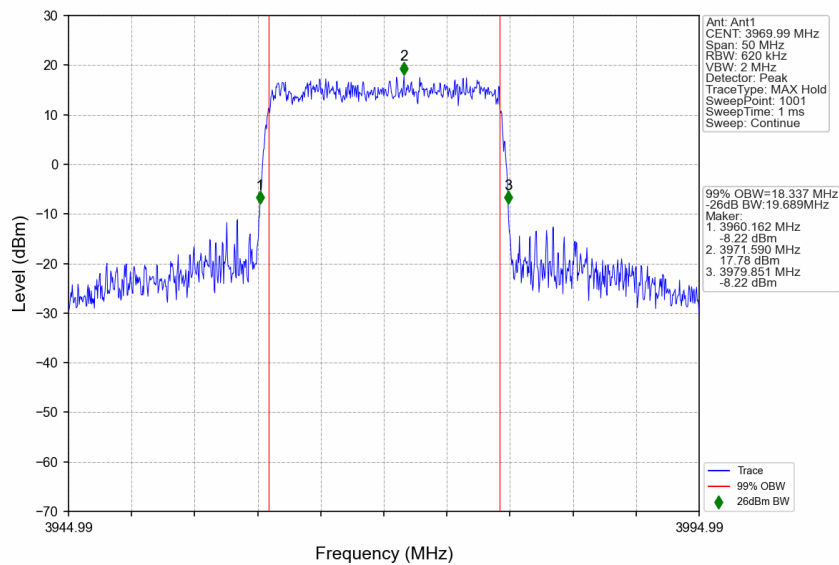
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n77a_30kHz_SISO_NTNV_20MHz_CP-OFDM 64 QAM_3840MHz_Outer_Full



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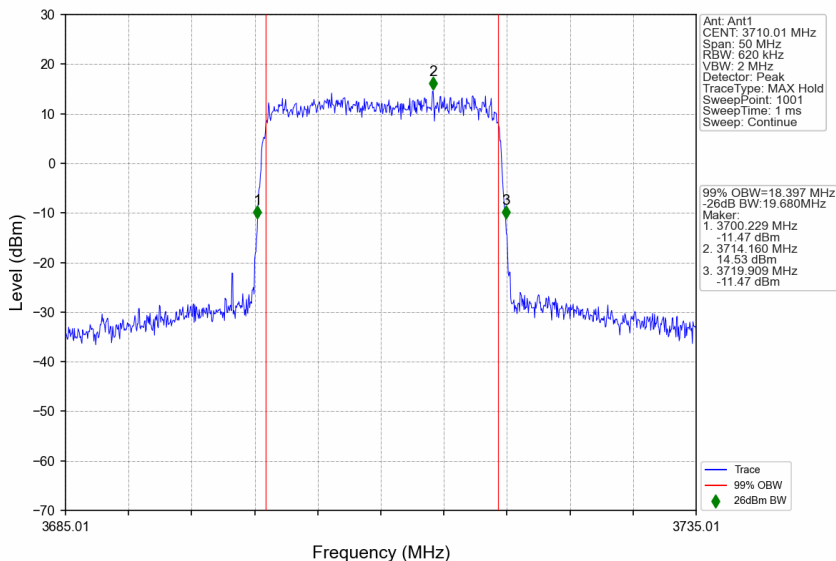
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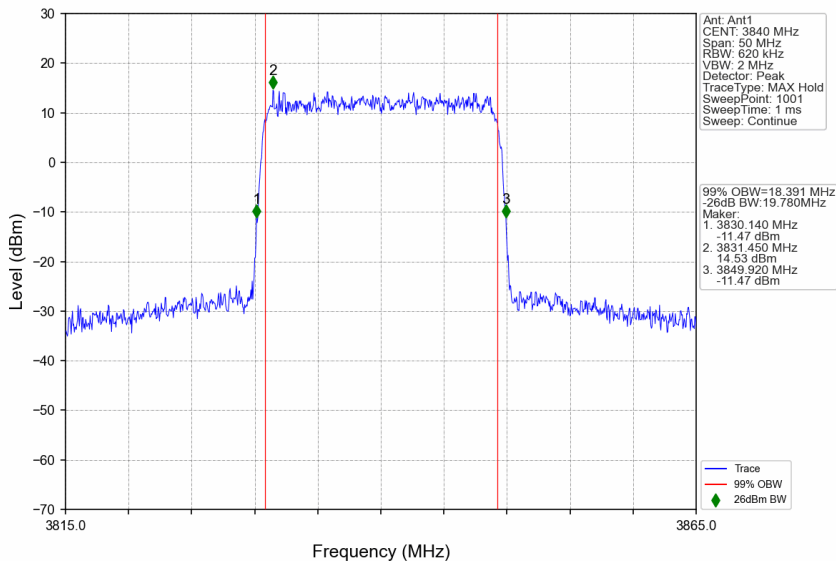
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n77a_30kHz_SISO_NTNV_20MHz_CP-OFDM 256 QAM_3710.01MHz_Outer_Full



n77a_30kHz_SISO_NTNV_20MHz_CP-OFDM 256 QAM_3840MHz_Outer_Full

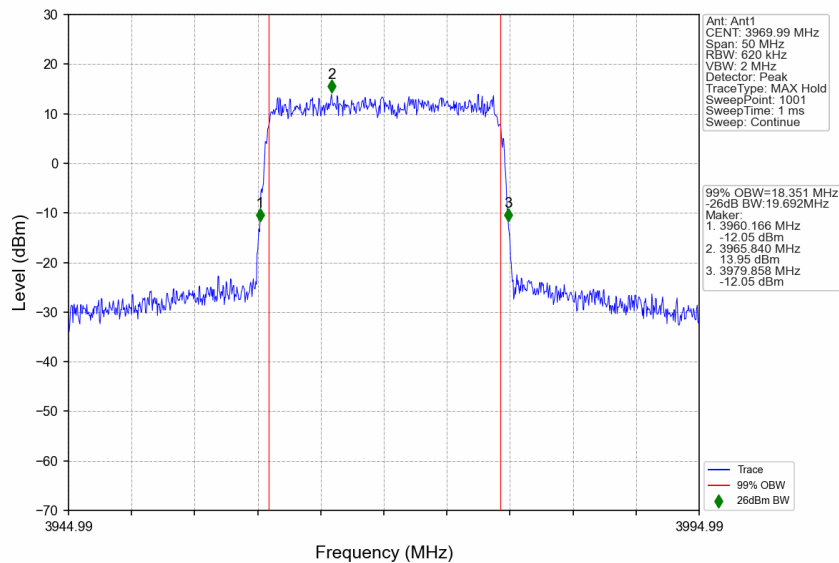


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4.11 30k_SISO_25MHz_NTNV

4.11.1 Test Result

5G NR n77a SCS=30kHz SISO 25MHz NTNv						
Modulation	Frequency (MHz)	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	3712.5	Outer_Full	23.17	24.65	/	Pass
	3840	Outer_Full	23.14	24.62	/	Pass
	3967.5	Outer_Full	23.04	24.65	/	Pass
DFT-s-OFDM QPSK	3712.5	Outer_Full	23.12	24.66	/	Pass
	3840	Outer_Full	23.21	24.71	/	Pass
	3967.5	Outer_Full	23.10	24.71	/	Pass
DFT-s-OFDM 16 QAM	3712.5	Outer_Full	23.20	24.66	/	Pass
	3840	Outer_Full	23.15	24.69	/	Pass
	3967.5	Outer_Full	23.16	24.71	/	Pass
DFT-s-OFDM 64 QAM	3712.5	Outer_Full	23.12	24.68	/	Pass
	3840	Outer_Full	23.18	24.72	/	Pass
	3967.5	Outer_Full	23.15	24.72	/	Pass
DFT-s-OFDM 256 QAM	3712.5	Outer_Full	23.03	24.61	/	Pass
	3840	Outer_Full	23.14	24.60	/	Pass
	3967.5	Outer_Full	23.11	24.66	/	Pass
CP-OFDM QPSK	3712.5	Outer_Full	23.42	25.07	/	Pass
	3840	Outer_Full	23.34	24.97	/	Pass
	3967.5	Outer_Full	23.40	24.98	/	Pass
CP-OFDM 16 QAM	3712.5	Outer_Full	23.44	25.07	/	Pass
	3840	Outer_Full	23.35	25.08	/	Pass
	3967.5	Outer_Full	23.52	25.04	/	Pass
CP-OFDM 64 QAM	3712.5	Outer_Full	23.51	25.03	/	Pass
	3840	Outer_Full	23.34	24.99	/	Pass
	3967.5	Outer_Full	23.38	25.10	/	Pass
CP-OFDM 256 QAM	3712.5	Outer_Full	23.41	25.00	/	Pass
	3840	Outer_Full	23.40	24.97	/	Pass
	3967.5	Outer_Full	23.44	24.96	/	Pass

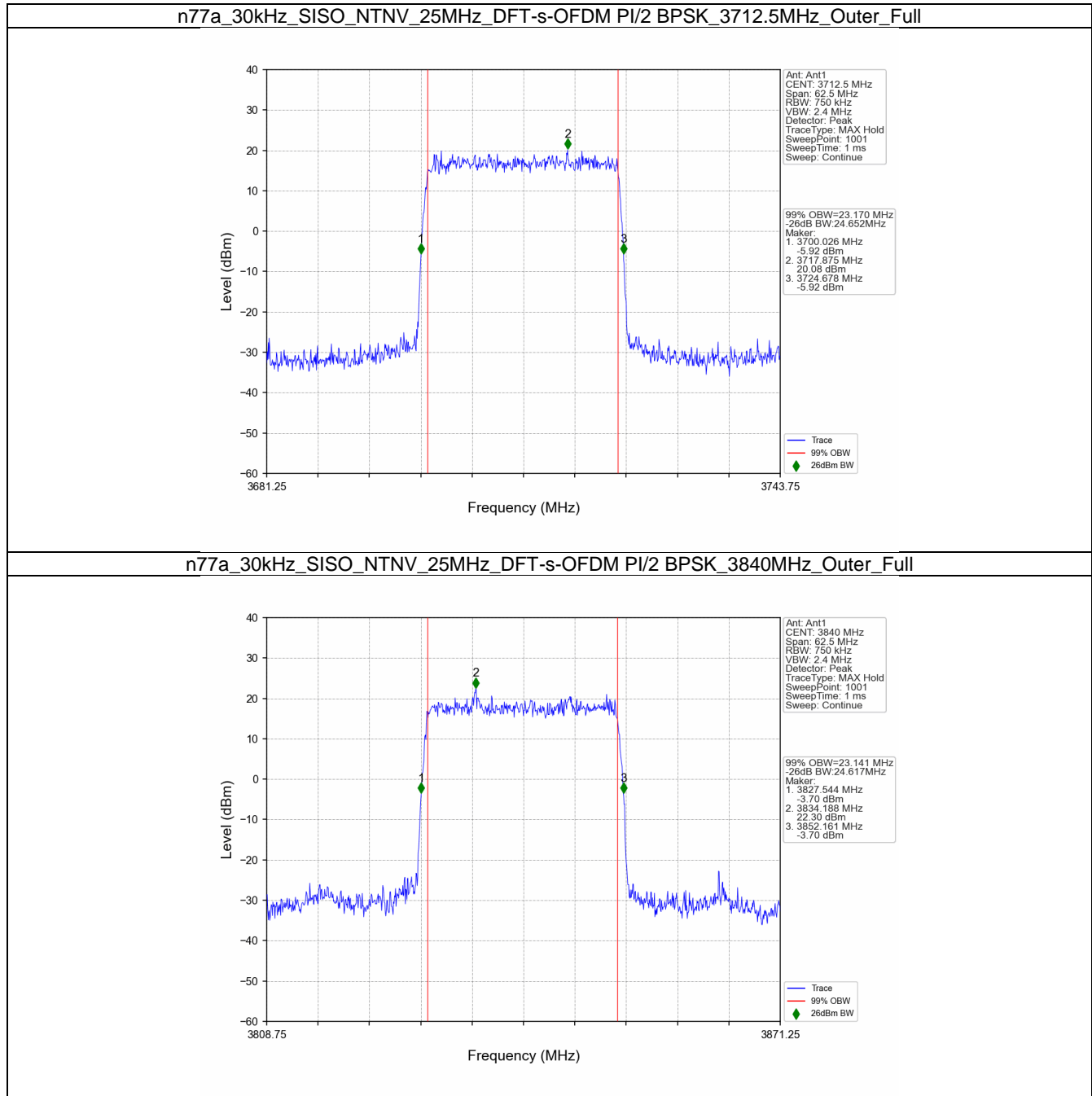


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4.11.2 Test Graph

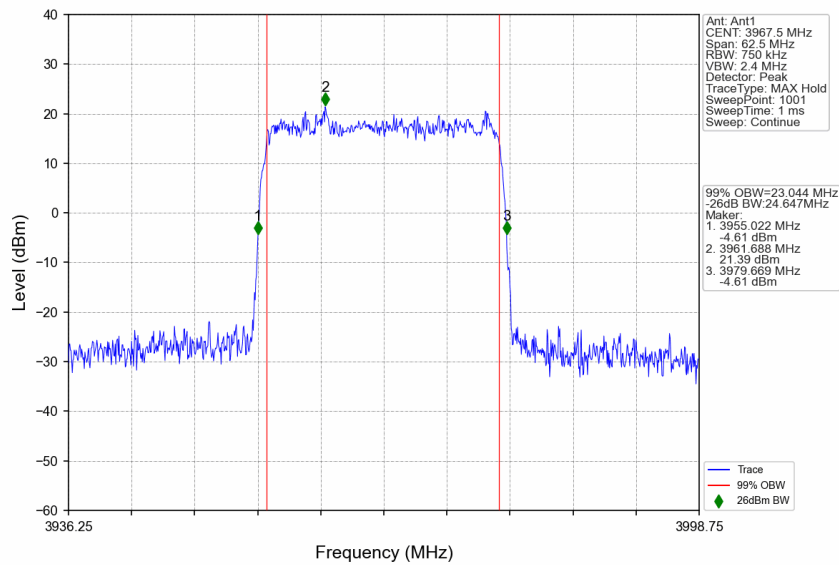


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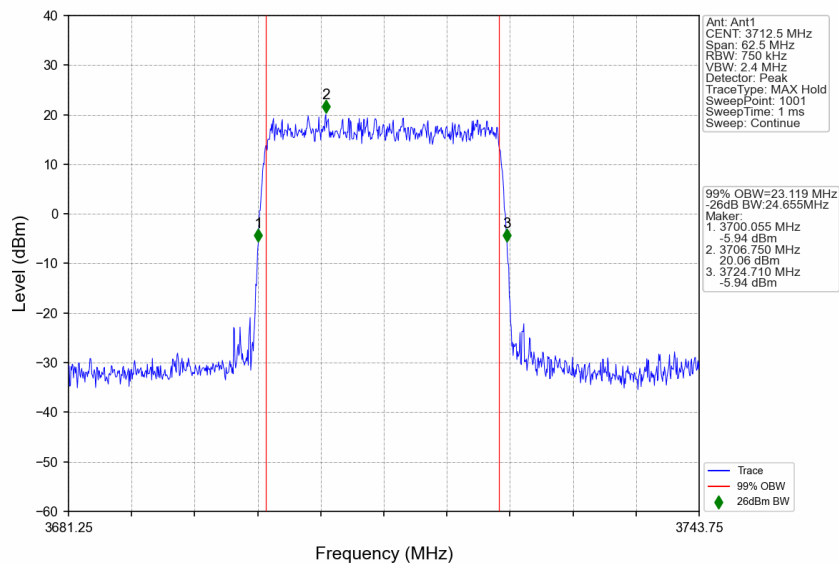
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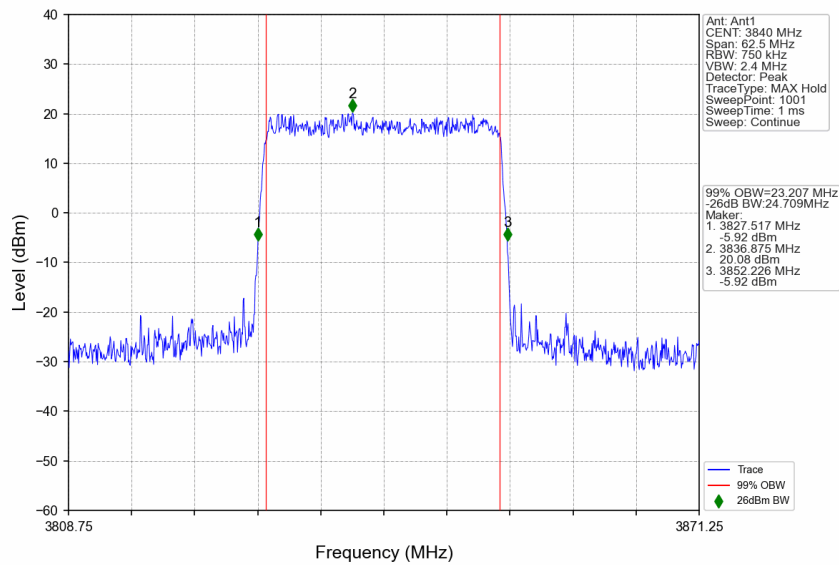
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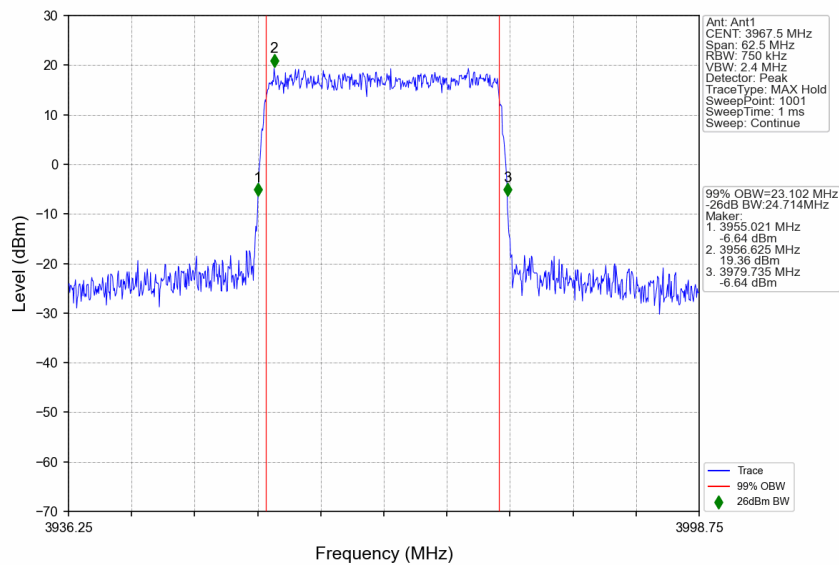
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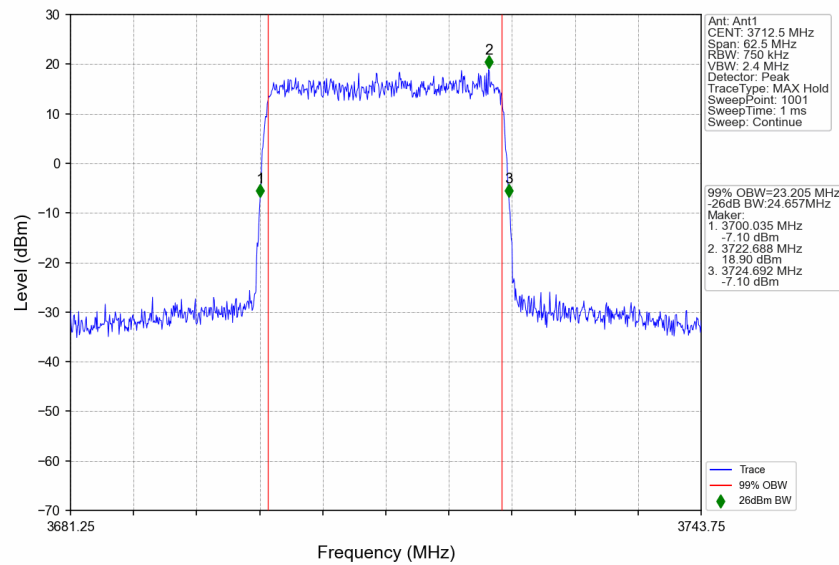
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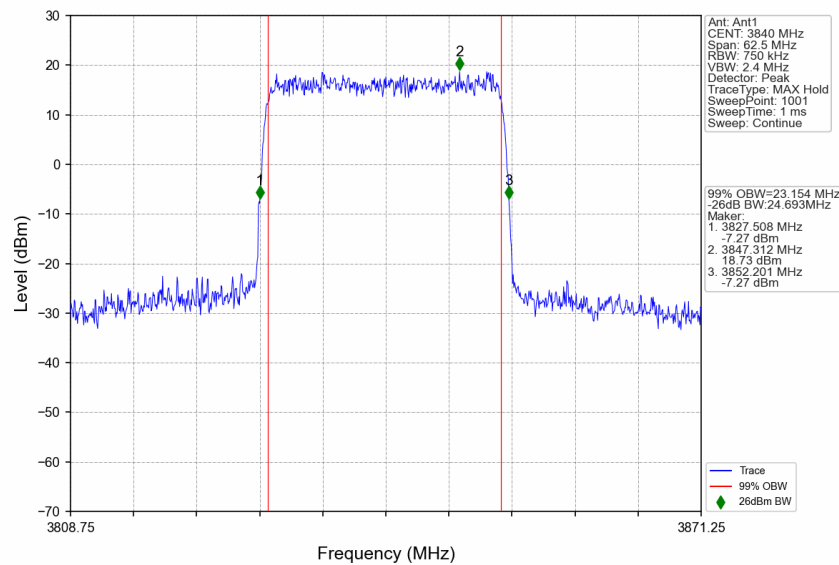
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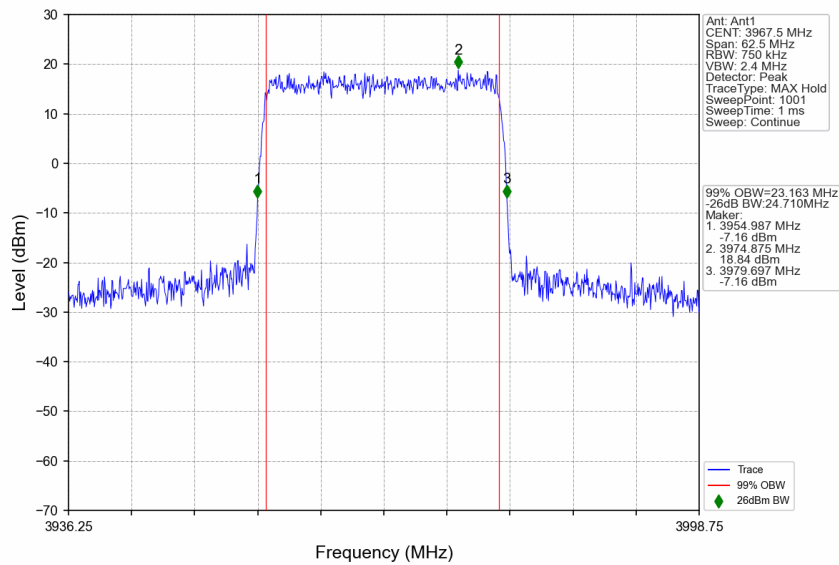


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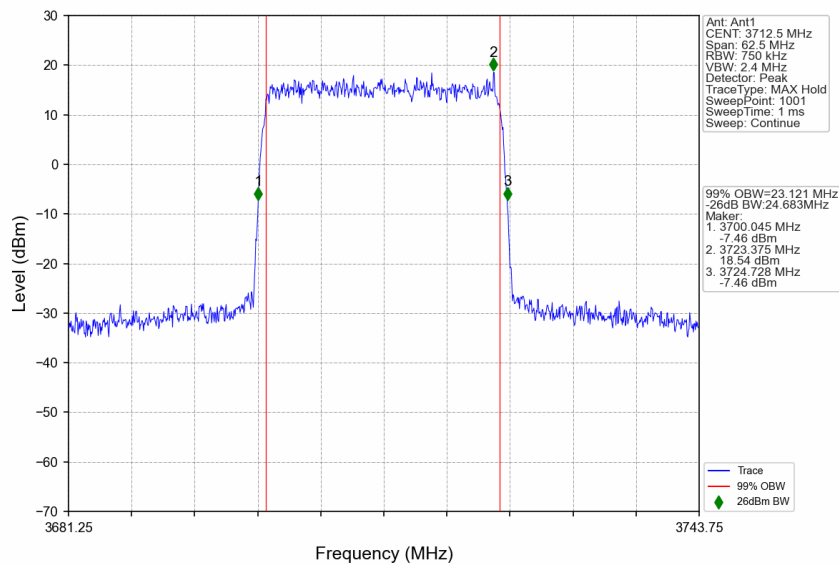
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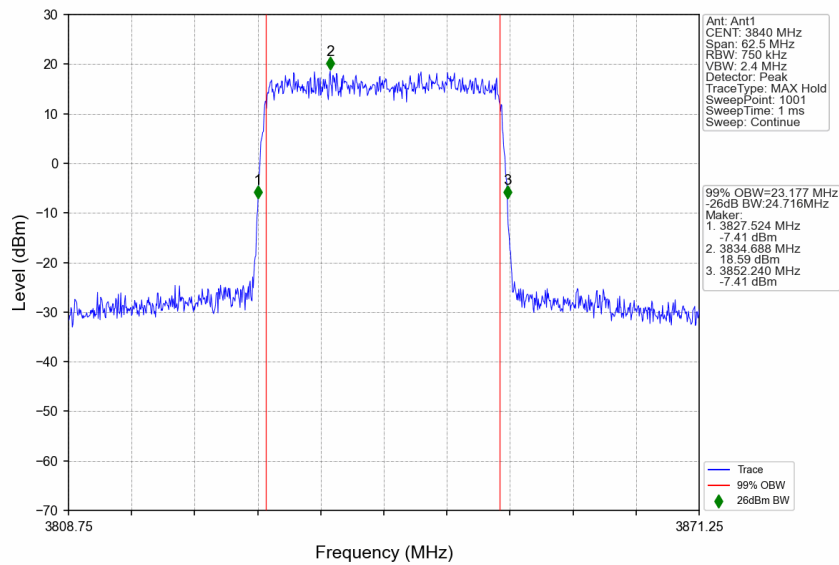


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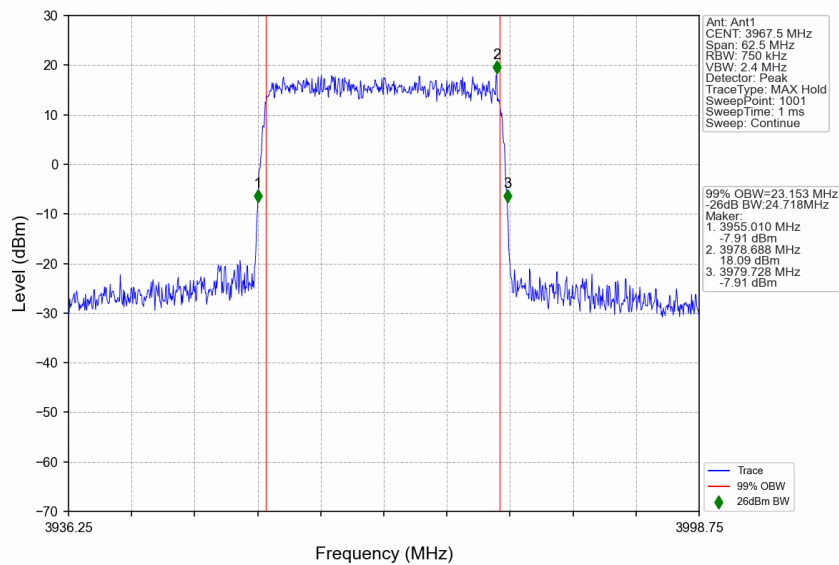
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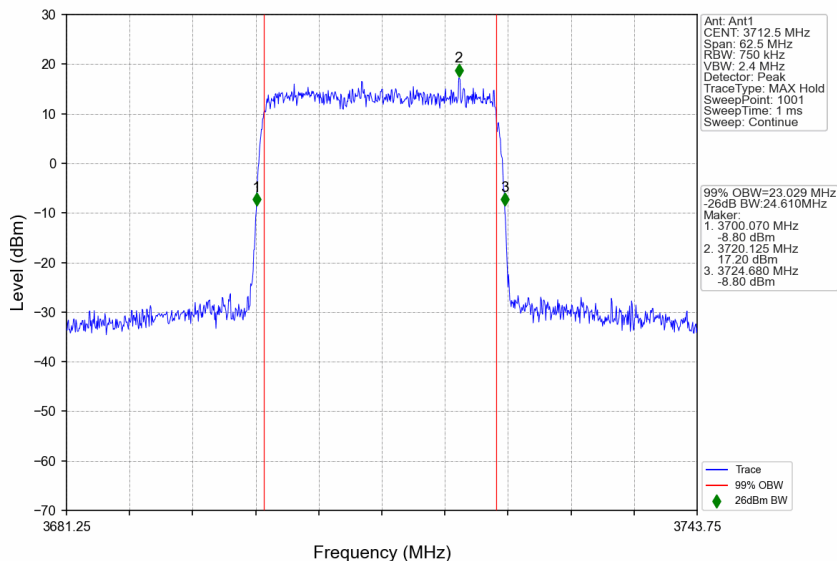


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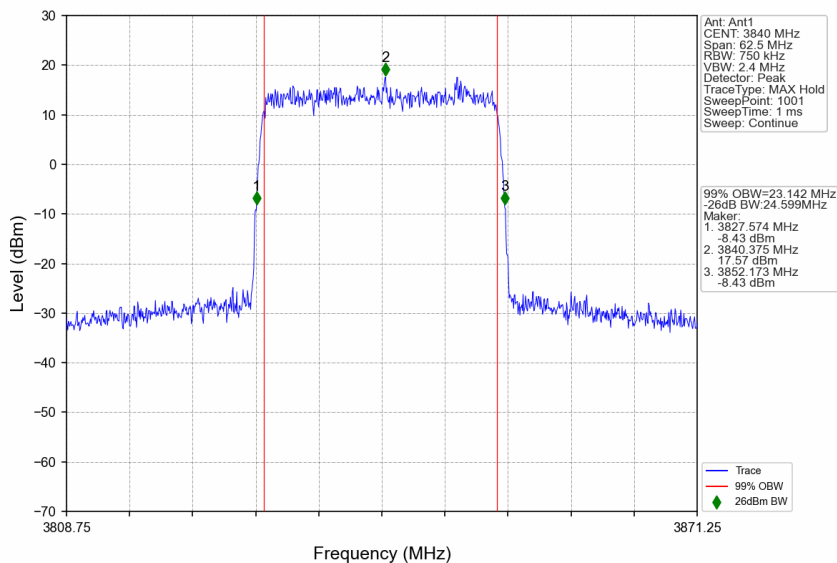
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n77a_30kHz_SISO_NTNV_25MHz_DFT-s-OFDM 256 QAM_3840MHz_Outer_Full

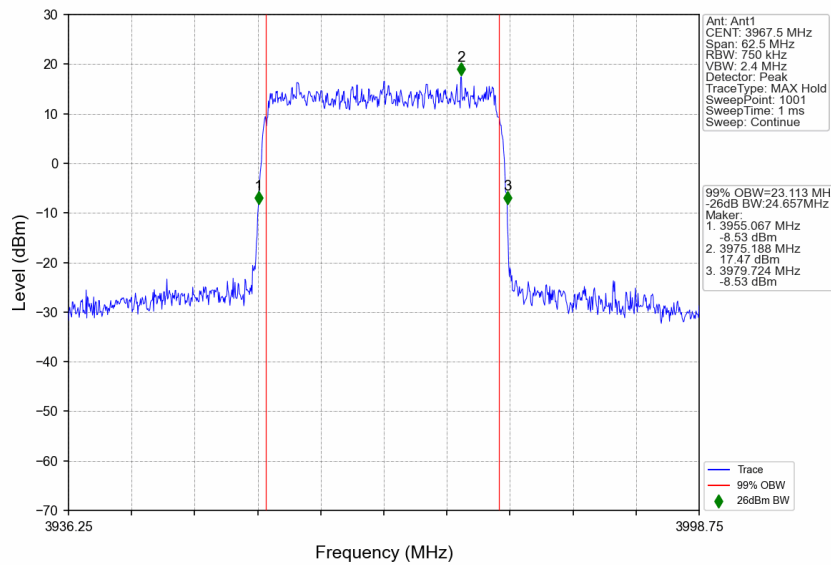


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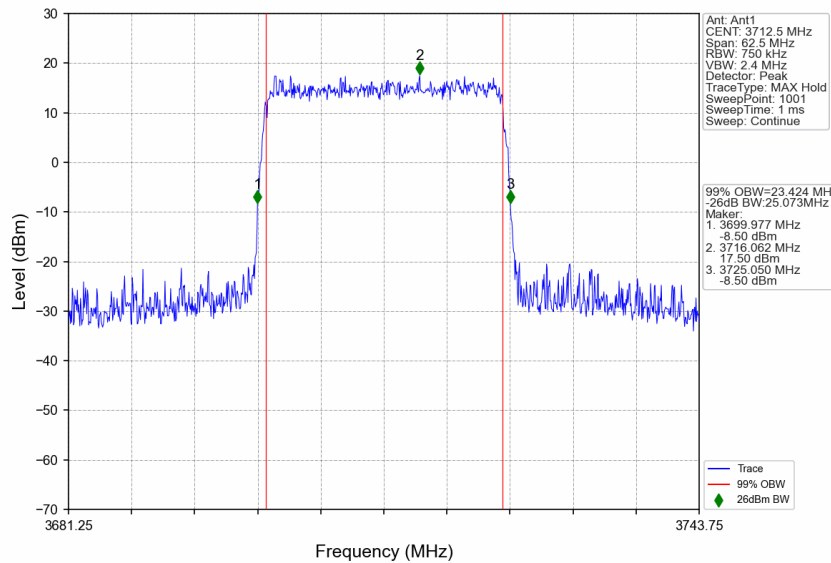
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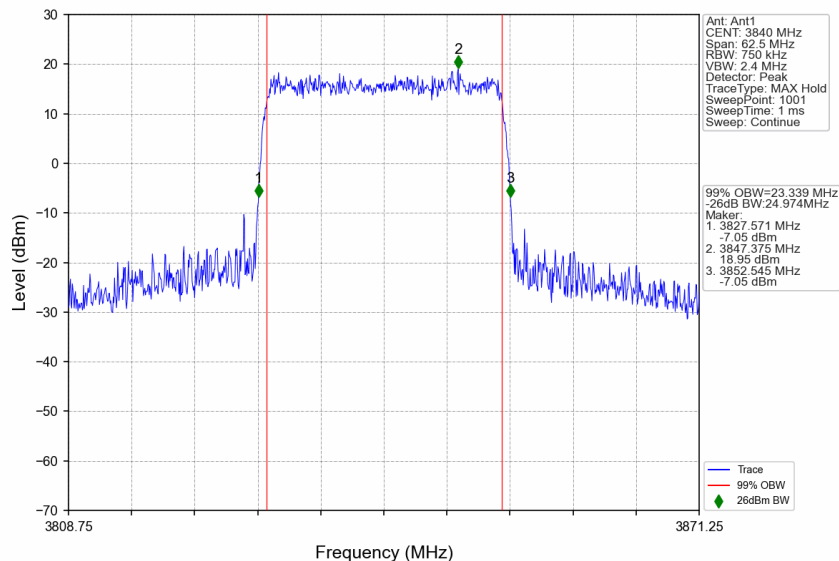


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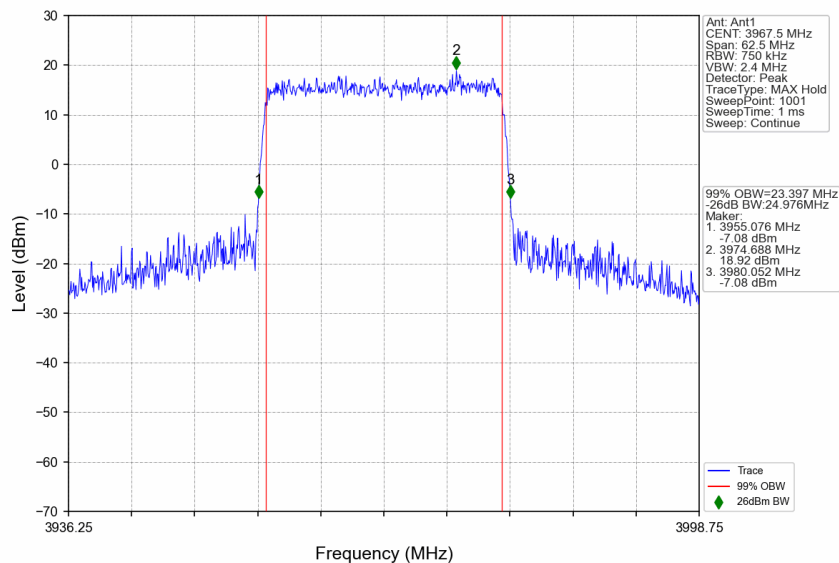
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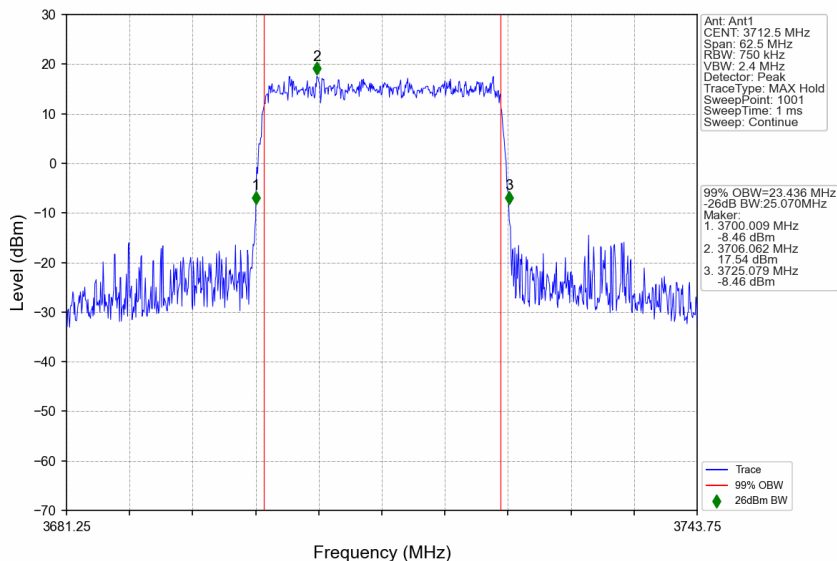


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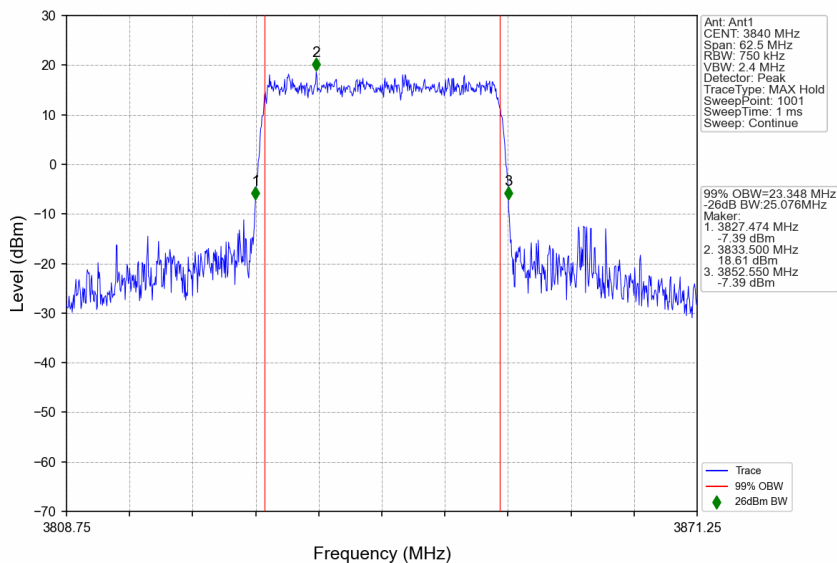
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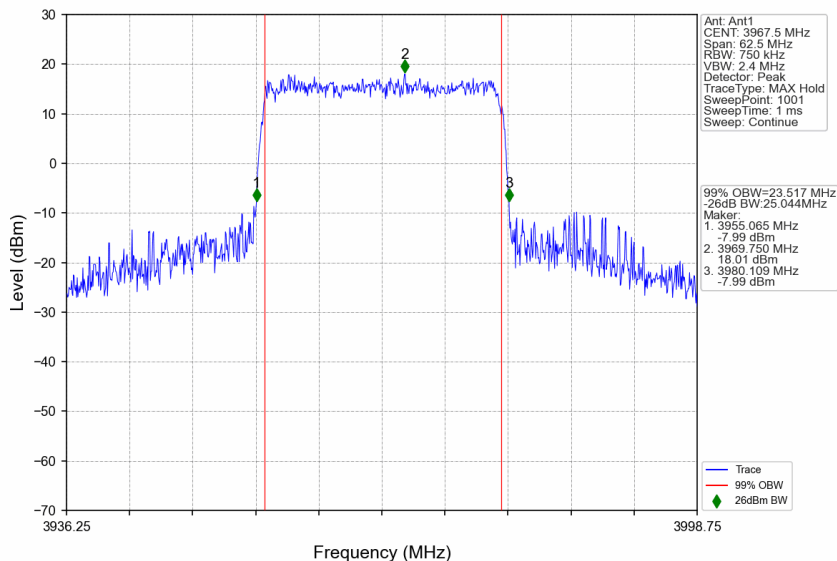


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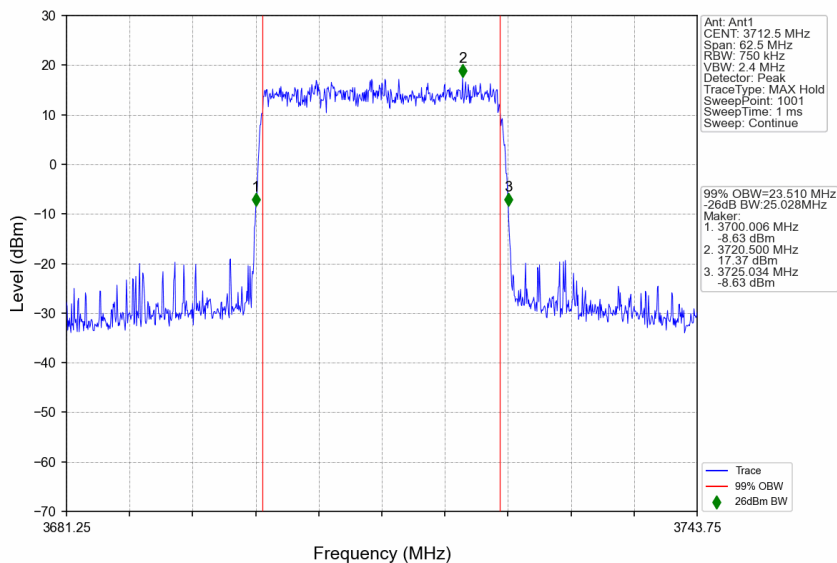
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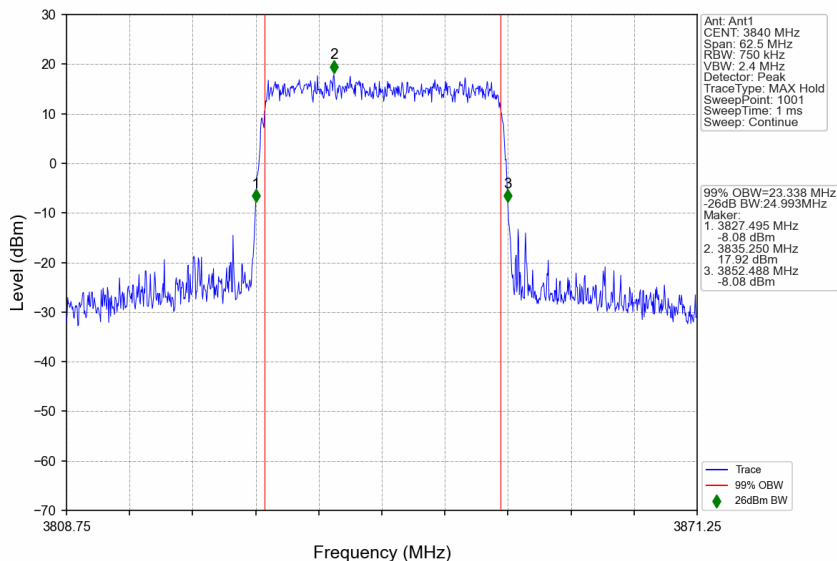


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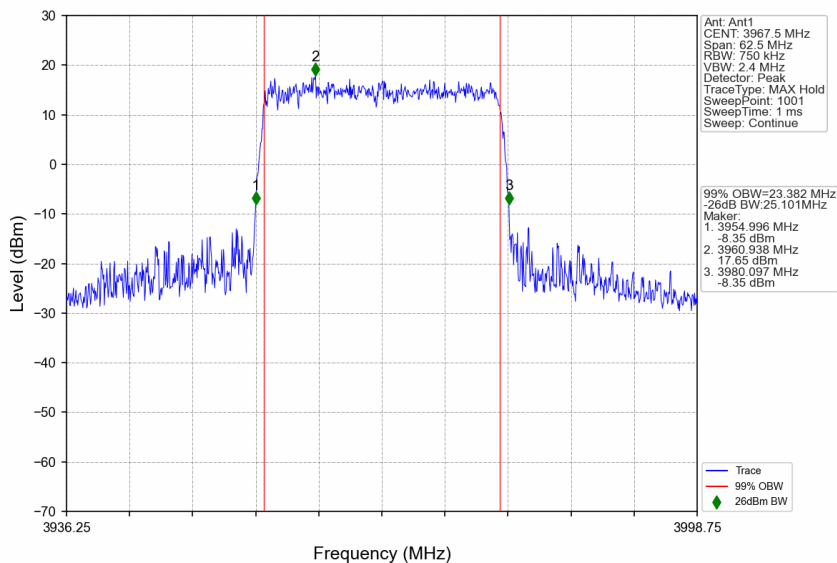
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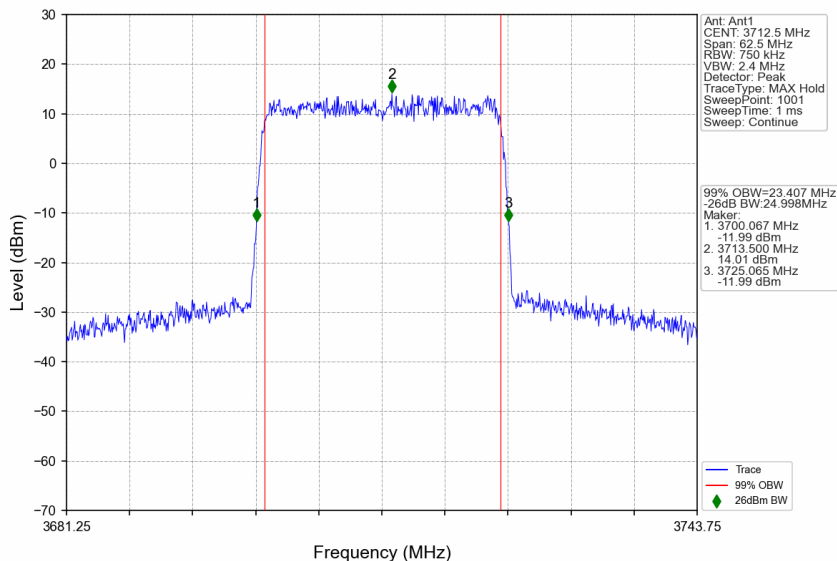
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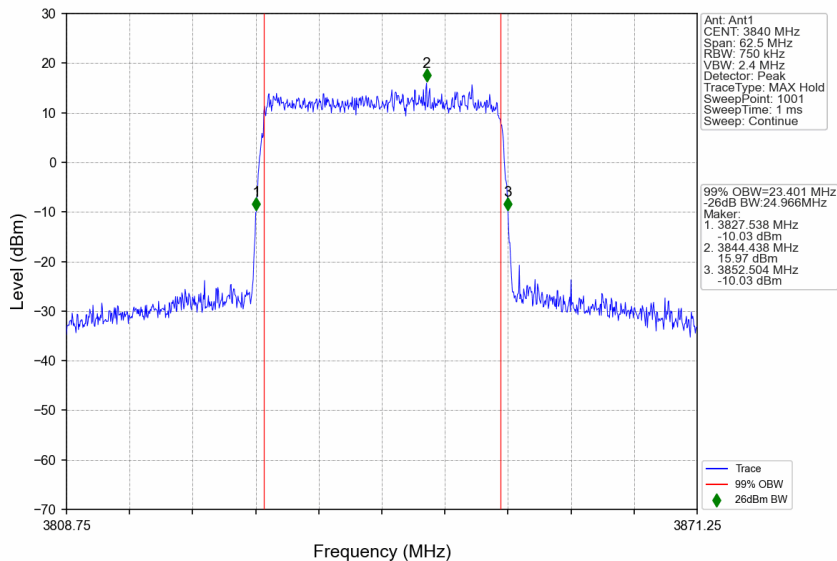
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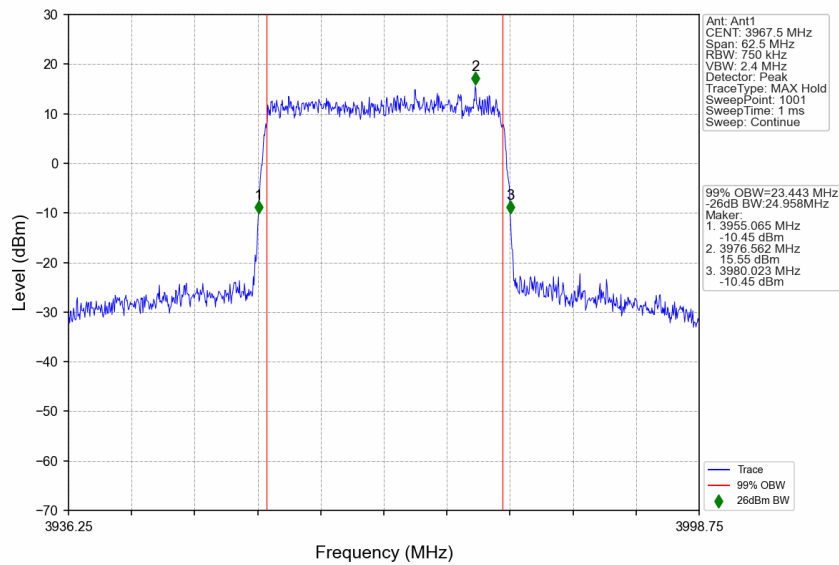


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4.12 30k_SISO_30MHz_NTNV

4.12.1 Test Result

5G NR n77a SCS=30kHz SISO 30MHz NTNv						
Modulation	Frequency (MHz)	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	3715.02	Outer_Full	27.02	28.80	/	Pass
	3840	Outer_Full	27.04	29.02	/	Pass
	3964.98	Outer_Full	27.11	28.90	/	Pass
DFT-s-OFDM QPSK	3715.02	Outer_Full	27.14	29.24	/	Pass
	3840	Outer_Full	27.17	29.06	/	Pass
	3964.98	Outer_Full	27.15	29.07	/	Pass
DFT-s-OFDM 16 QAM	3715.02	Outer_Full	27.06	28.91	/	Pass
	3840	Outer_Full	27.12	28.95	/	Pass
	3964.98	Outer_Full	27.17	29.03	/	Pass
DFT-s-OFDM 64 QAM	3715.02	Outer_Full	27.09	29.05	/	Pass
	3840	Outer_Full	27.15	29.03	/	Pass
	3964.98	Outer_Full	27.18	29.01	/	Pass
DFT-s-OFDM 256 QAM	3715.02	Outer_Full	27.06	28.98	/	Pass
	3840	Outer_Full	27.12	29.02	/	Pass
	3964.98	Outer_Full	27.11	28.98	/	Pass
CP-OFDM QPSK	3715.02	Outer_Full	28.09	30.01	/	Pass
	3840	Outer_Full	28.04	30.11	/	Pass
	3964.98	Outer_Full	28.01	31.95	/	Pass
CP-OFDM 16 QAM	3715.02	Outer_Full	28.07	30.05	/	Pass
	3840	Outer_Full	28.18	30.02	/	Pass
	3964.98	Outer_Full	28.04	29.99	/	Pass
CP-OFDM 64 QAM	3715.02	Outer_Full	28.02	30.14	/	Pass
	3840	Outer_Full	28.03	30.01	/	Pass
	3964.98	Outer_Full	28.06	29.96	/	Pass
CP-OFDM 256 QAM	3715.02	Outer_Full	28.07	30.09	/	Pass
	3840	Outer_Full	28.05	30.07	/	Pass
	3964.98	Outer_Full	28.02	29.92	/	Pass

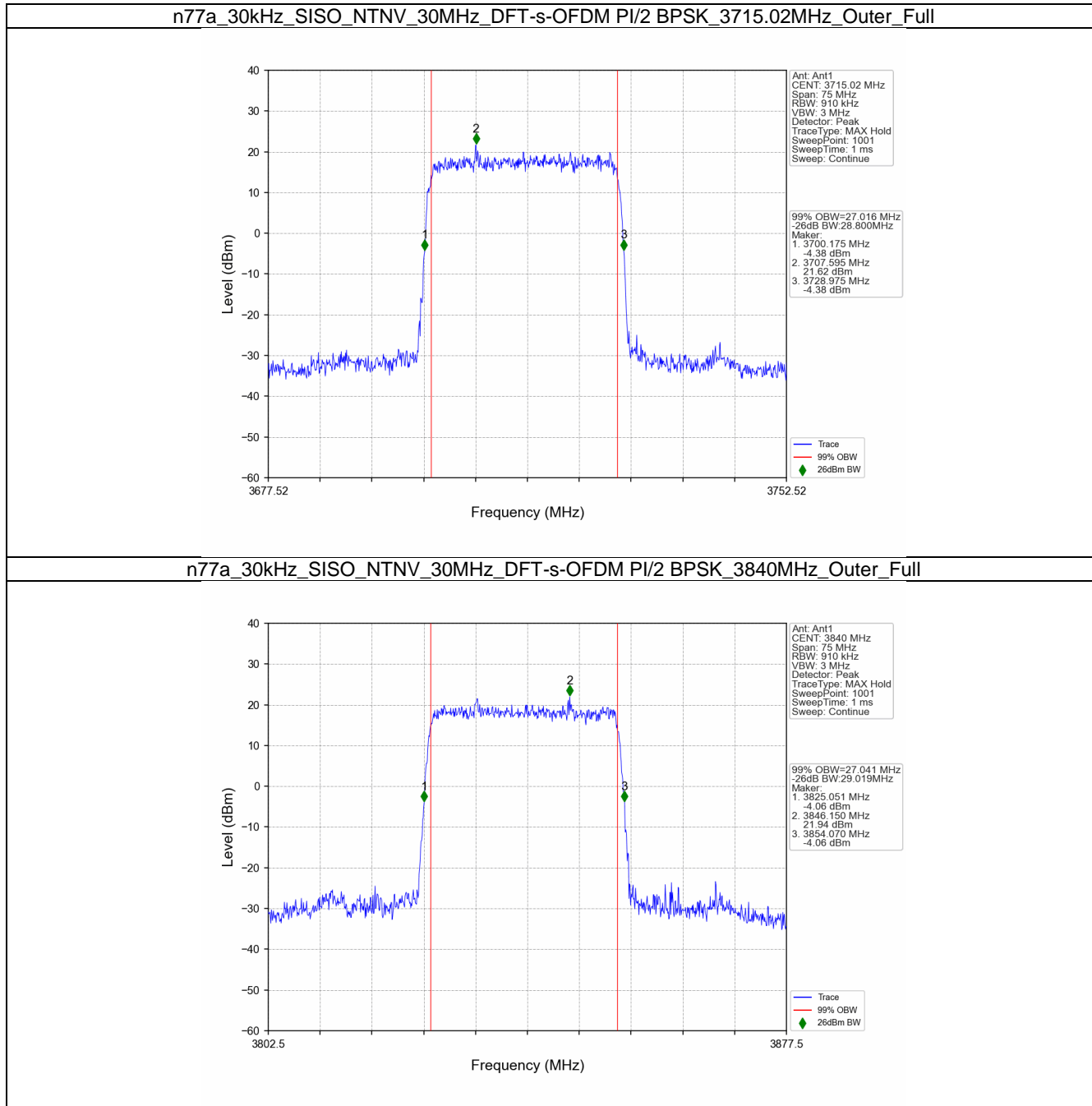


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4.12.2 Test Graph



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