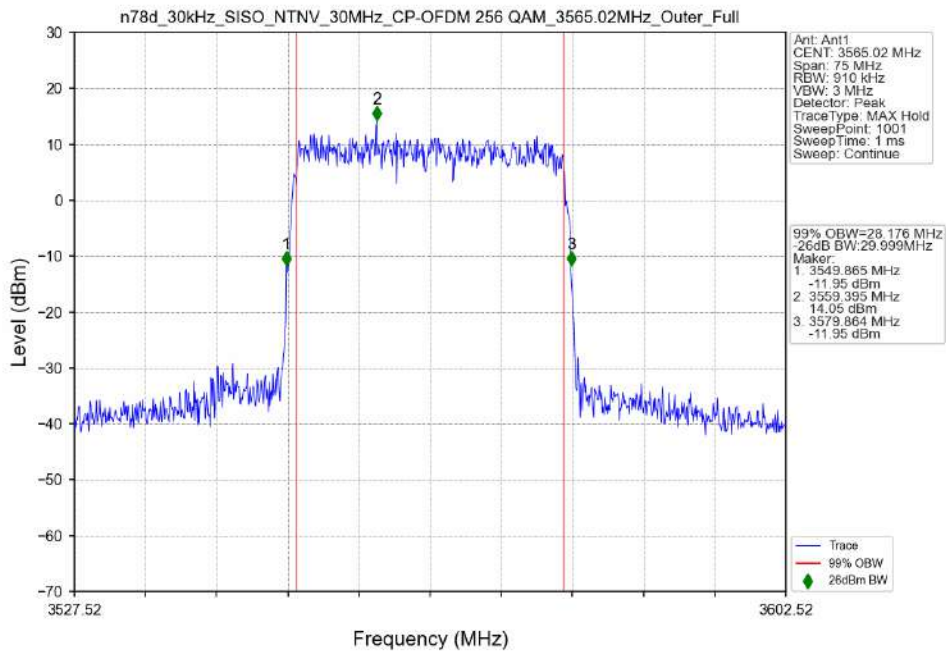
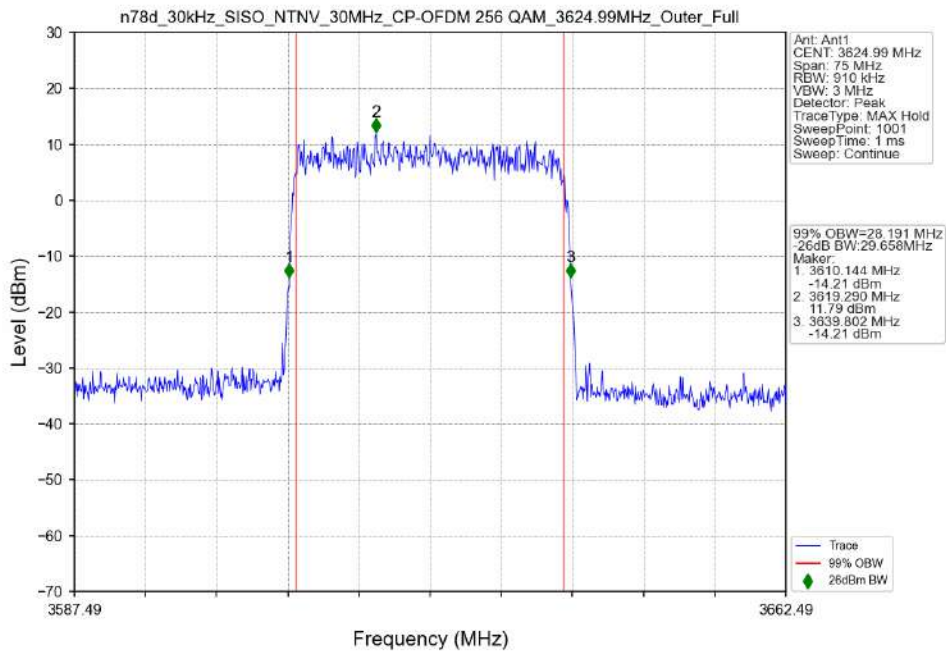


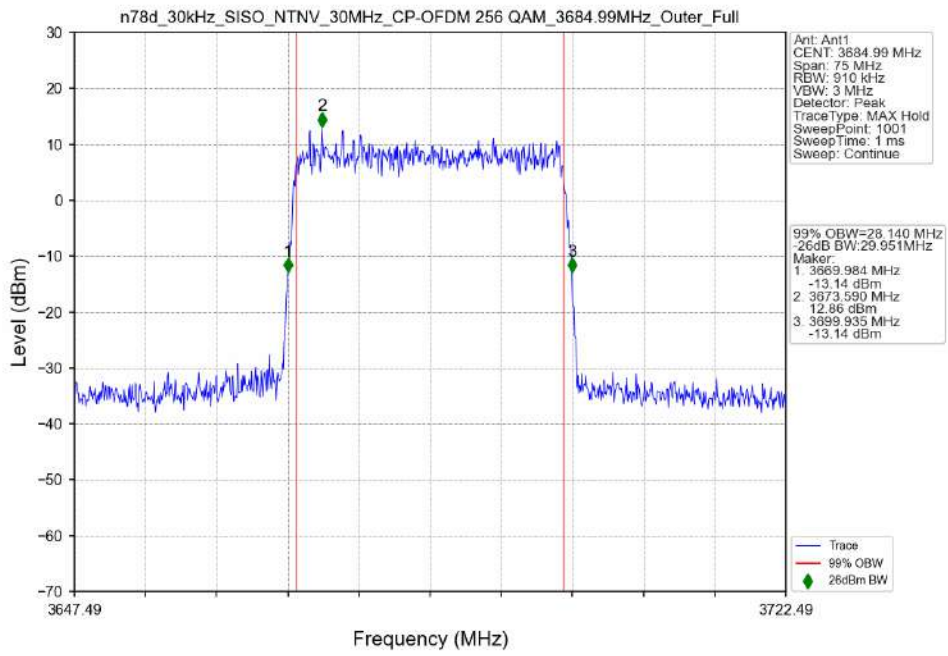
n78d_30kHz_SISO_NTNV_30MHz_CP-OFDM 256 QAM_3565.02MHz_Outer_Full



n78d_30kHz_SISO_NTNV_30MHz_CP-OFDM 256 QAM_3624.99MHz_Outer_Full



n78d_30kHz_SISO_NTNV_30MHz_CP-OFDM 256 QAM 3684.99MHz_Outer_Full

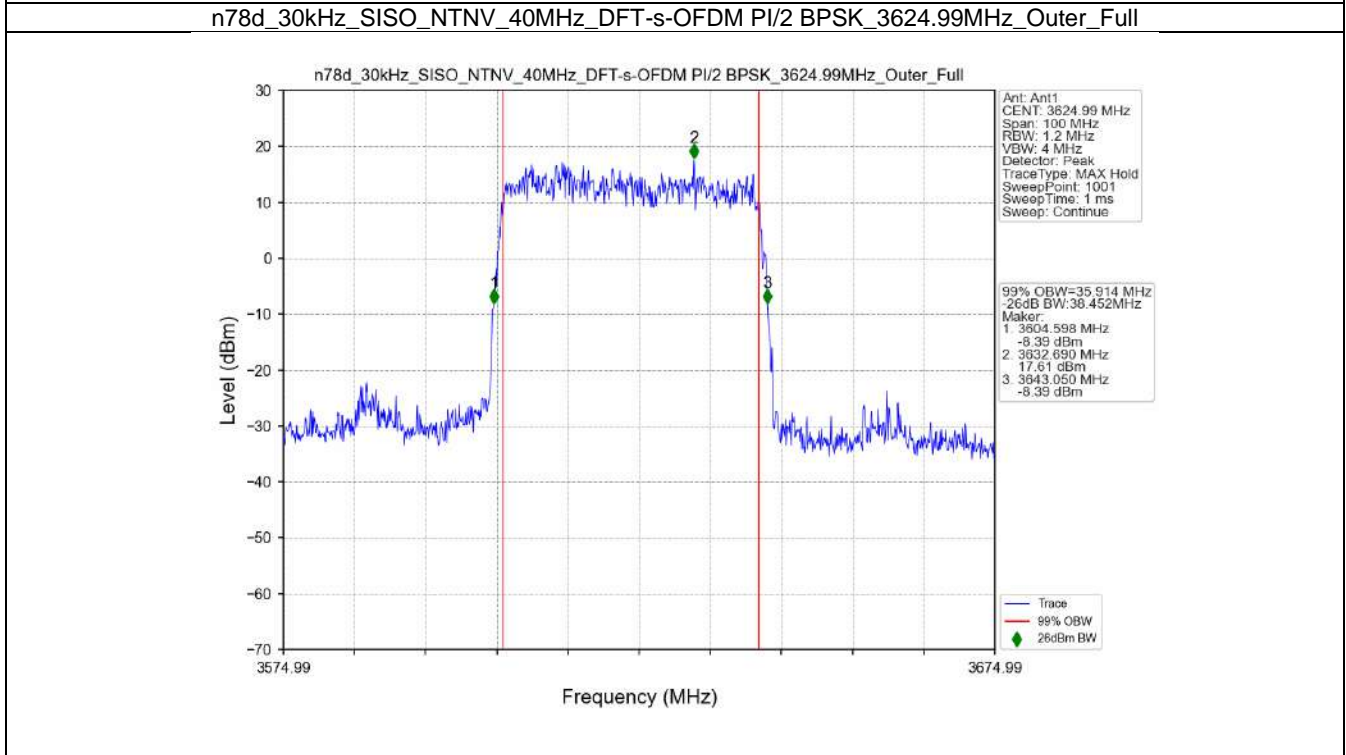
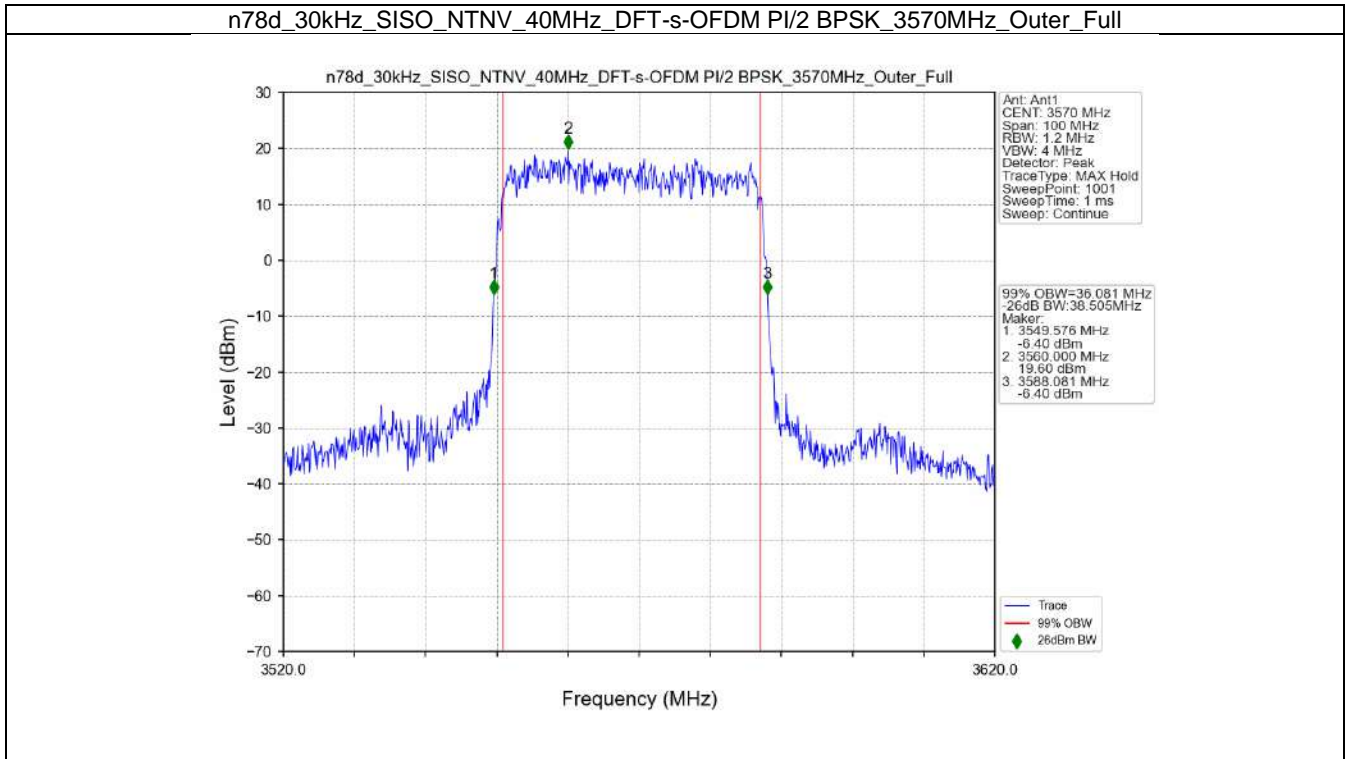


3.3 30k_SISO_40MHz_NTNV

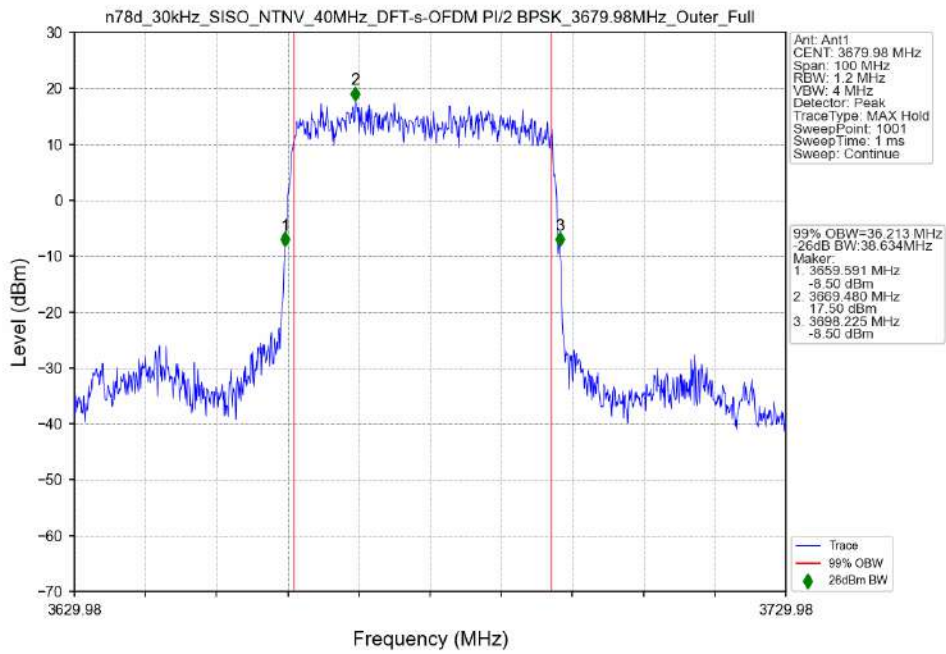
3.3.1 Test Result

5G NR n78d SCS=30kHz SISO 40MHz NTN						
Modulation	Frequency (MHz)	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	3570	Outer_Full	36.08	38.51	/	Pass
	3624.99	Outer_Full	35.91	38.45	/	Pass
	3679.98	Outer_Full	36.21	38.63	/	Pass
DFT-s-OFDM QPSK	3570	Outer_Full	36.06	38.60	/	Pass
	3624.99	Outer_Full	36.25	38.53	/	Pass
	3679.98	Outer_Full	36.03	38.32	/	Pass
DFT-s-OFDM 16 QAM	3570	Outer_Full	36.02	38.61	/	Pass
	3624.99	Outer_Full	36.15	38.33	/	Pass
	3679.98	Outer_Full	36.13	38.45	/	Pass
DFT-s-OFDM 64 QAM	3570	Outer_Full	35.96	38.33	/	Pass
	3624.99	Outer_Full	35.71	38.58	/	Pass
	3679.98	Outer_Full	36.06	38.61	/	Pass
DFT-s-OFDM 256 QAM	3570	Outer_Full	36.18	38.61	/	Pass
	3624.99	Outer_Full	36.03	38.31	/	Pass
	3679.98	Outer_Full	36.22	38.42	/	Pass
CP-OFDM QPSK	3570	Outer_Full	38.00	40.48	/	Pass
	3624.99	Outer_Full	37.95	40.80	/	Pass
	3679.98	Outer_Full	38.06	40.73	/	Pass
CP-OFDM 16 QAM	3570	Outer_Full	38.04	40.74	/	Pass
	3624.99	Outer_Full	38.21	40.51	/	Pass
	3679.98	Outer_Full	37.94	40.72	/	Pass
CP-OFDM 64 QAM	3570	Outer_Full	38.07	40.40	/	Pass
	3624.99	Outer_Full	38.11	40.57	/	Pass
	3679.98	Outer_Full	38.00	40.48	/	Pass
CP-OFDM 256 QAM	3570	Outer_Full	38.09	40.47	/	Pass
	3624.99	Outer_Full	38.14	40.55	/	Pass
	3679.98	Outer_Full	38.12	40.63	/	Pass

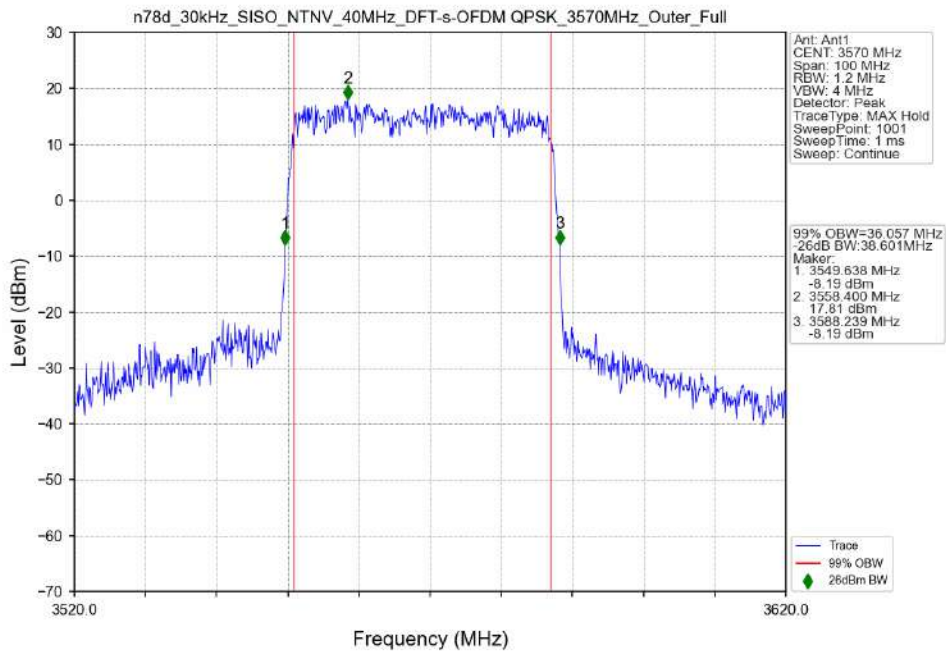
3.3.2 Test Graph



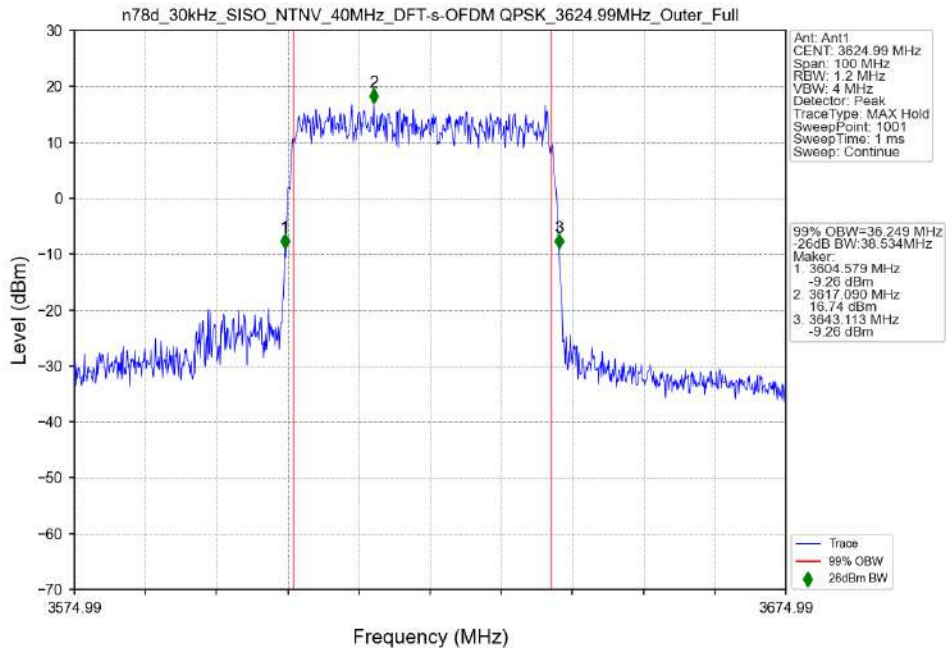
n78d_30kHz_SISO_NTNV_40MHz_DFT-s-OFDM PI/2 BPSK_3679.98MHz_Outer_Full



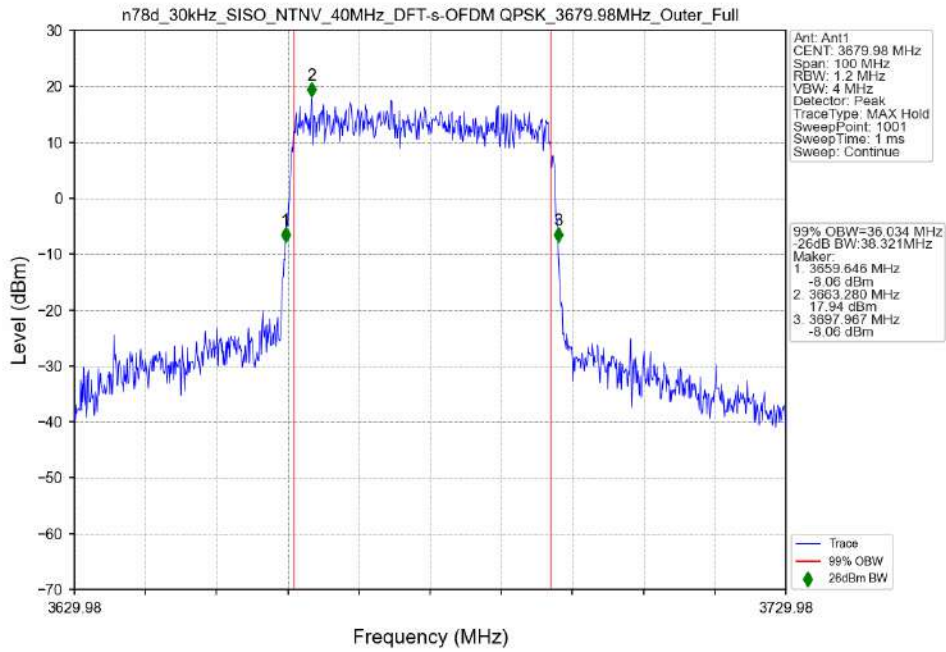
n78d_30kHz_SISO_NTNV_40MHz_DFT-s-OFDM QPSK_3570MHz_Outer_Full



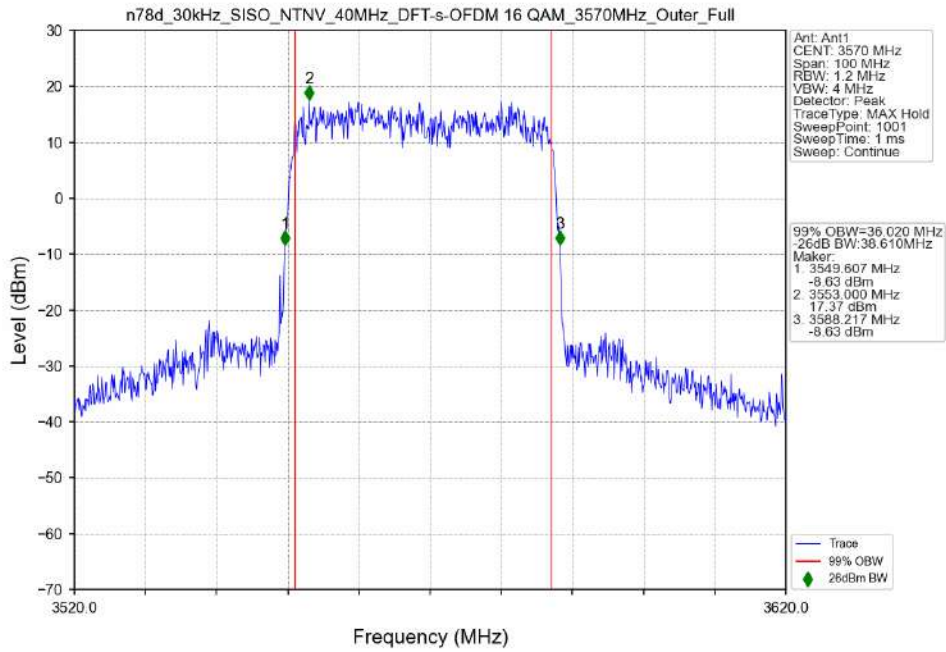
n78d_30kHz_SISO_NTNV_40MHz_DFT-s-OFDM_QPSK_3624.99MHz_Outer_Full



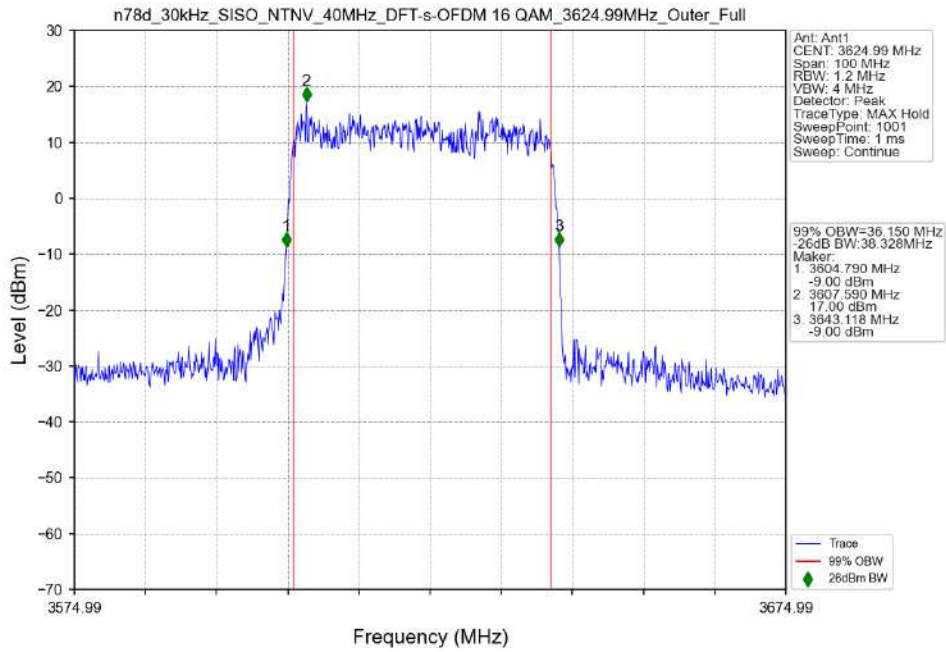
n78d_30kHz_SISO_NTNV_40MHz_DFT-s-OFDM_QPSK_3679.98MHz_Outer_Full



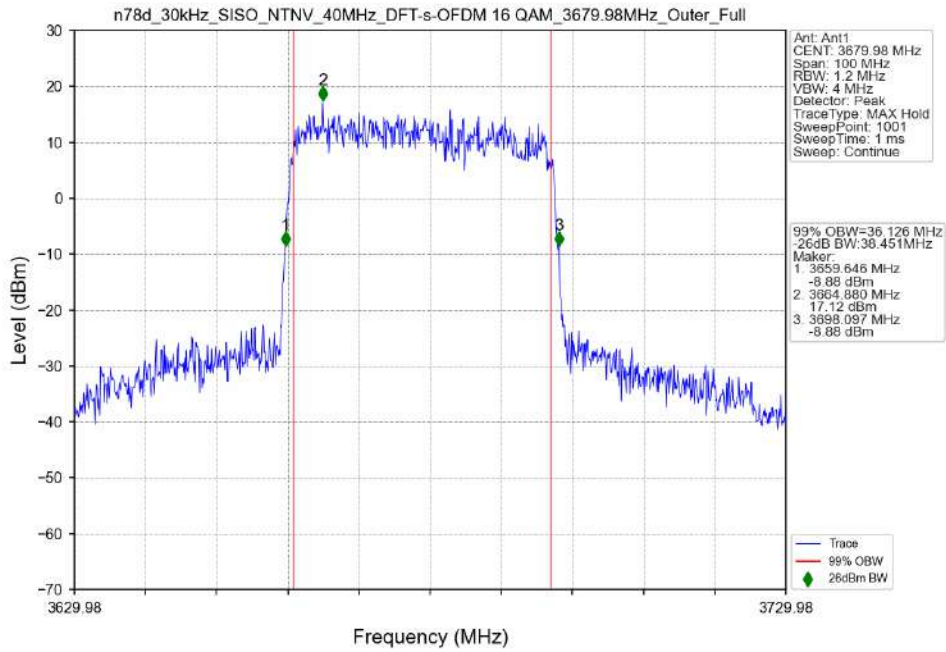
n78d_30kHz_SISO_NTNV_40MHz_DFT-s-OFDM_16_QAM_3570MHz_Outer_Full



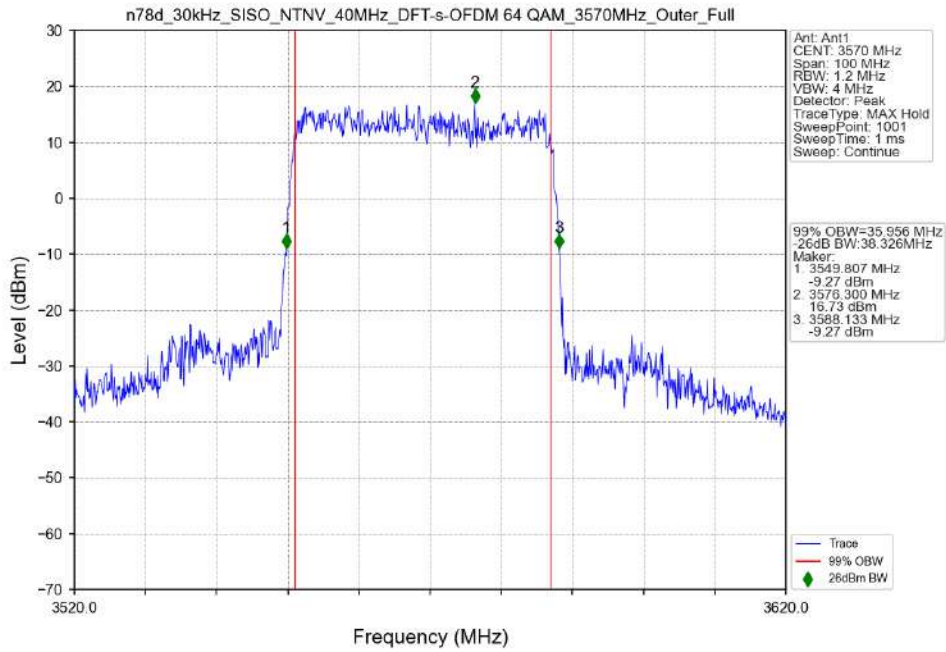
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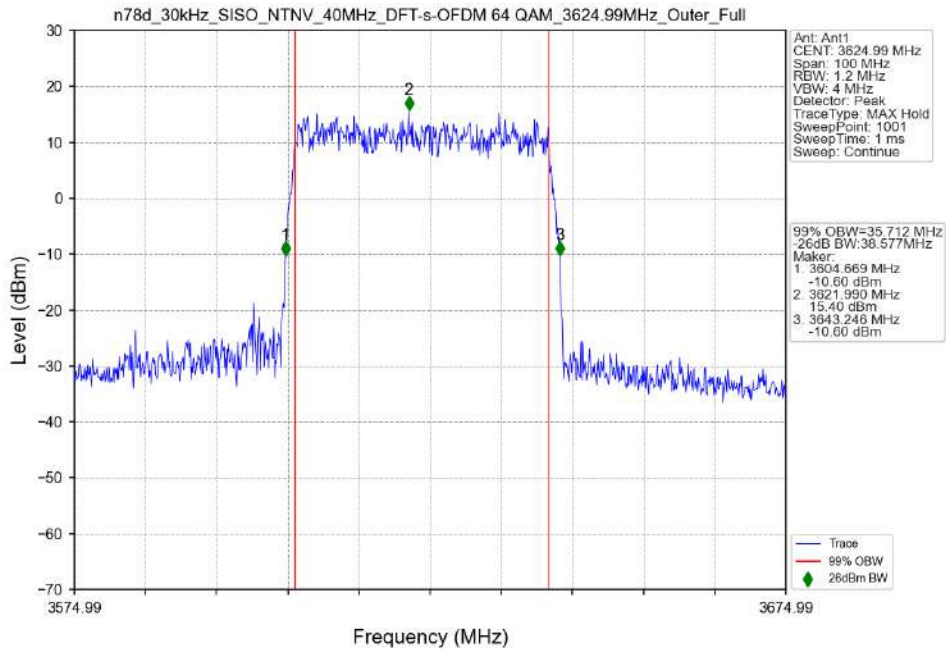
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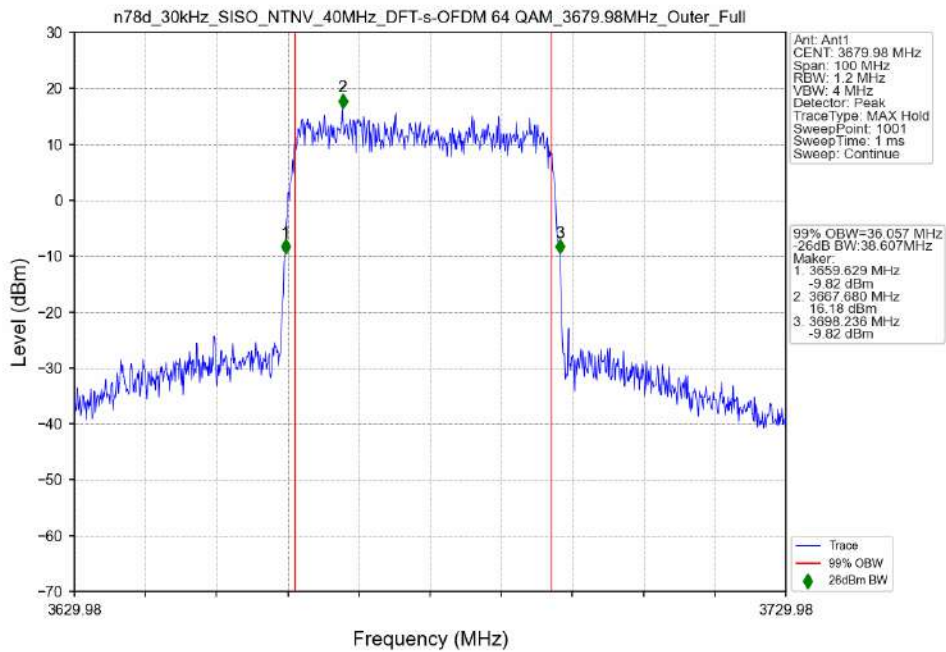
n78d_30kHz_SISO_NTNV_40MHz_DFT-s-OFDM 64 QAM_3570MHz_Outer_Full



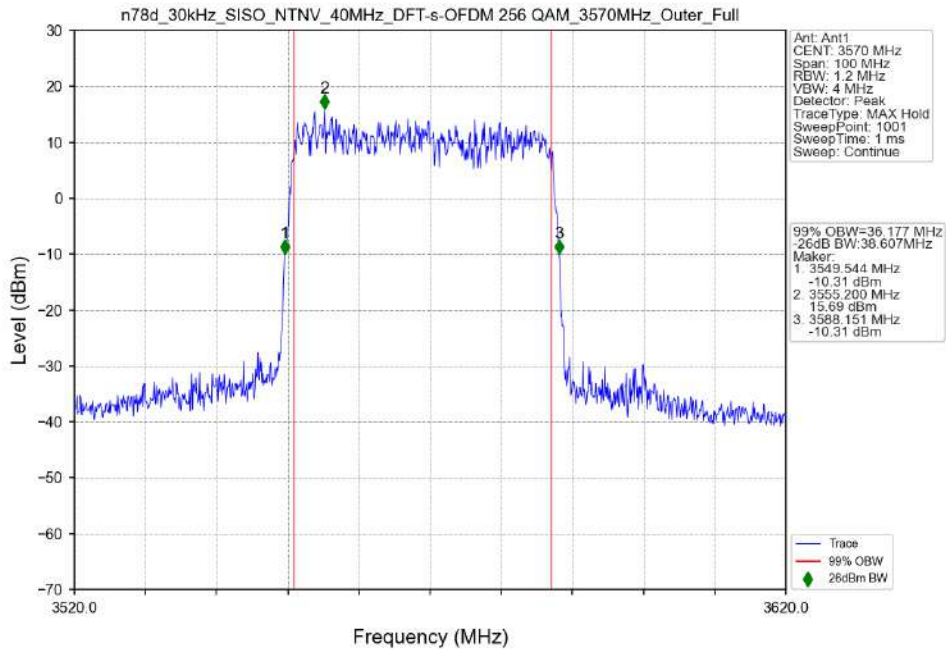
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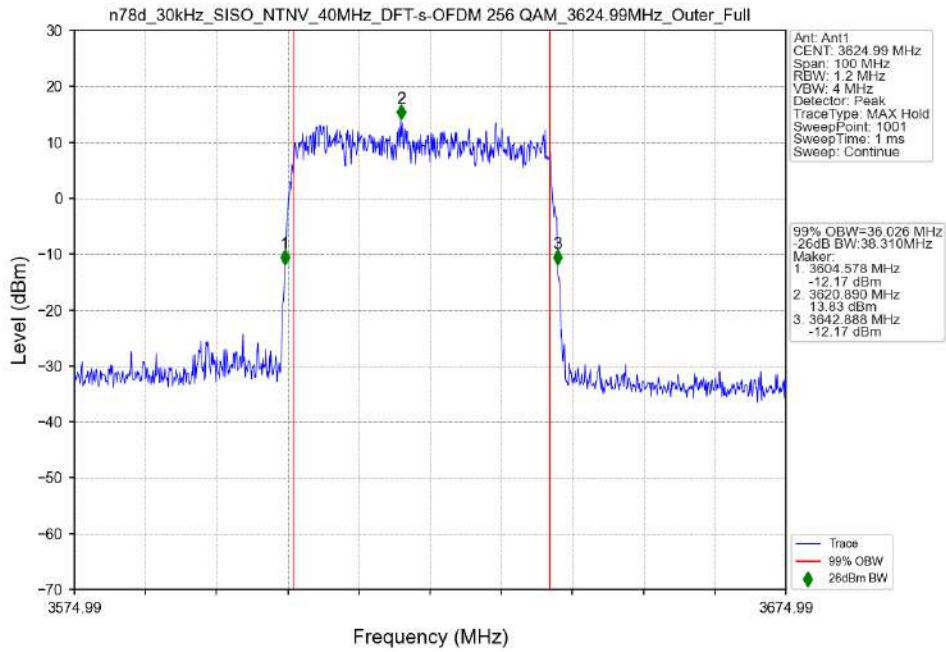
n78d_30kHz_SISO_NTNV_40MHz_DFT-s-OFDM_64_QAM_3679.98MHz_Outer_Full



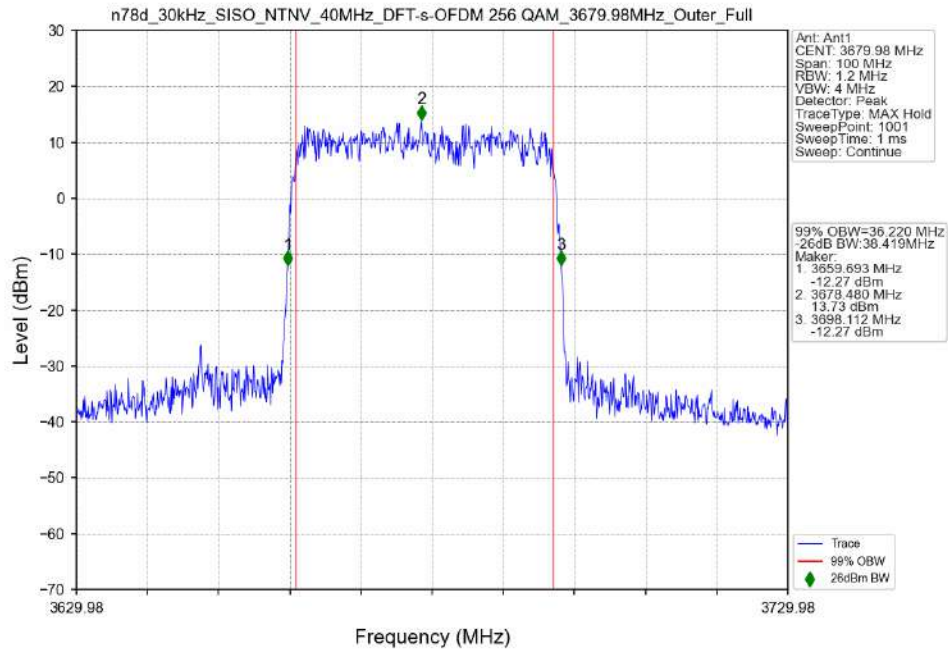
n78d_30kHz_SISO_NTNV_40MHz_DFT-s-OFDM 256 QAM_3570MHz_Outer_Full



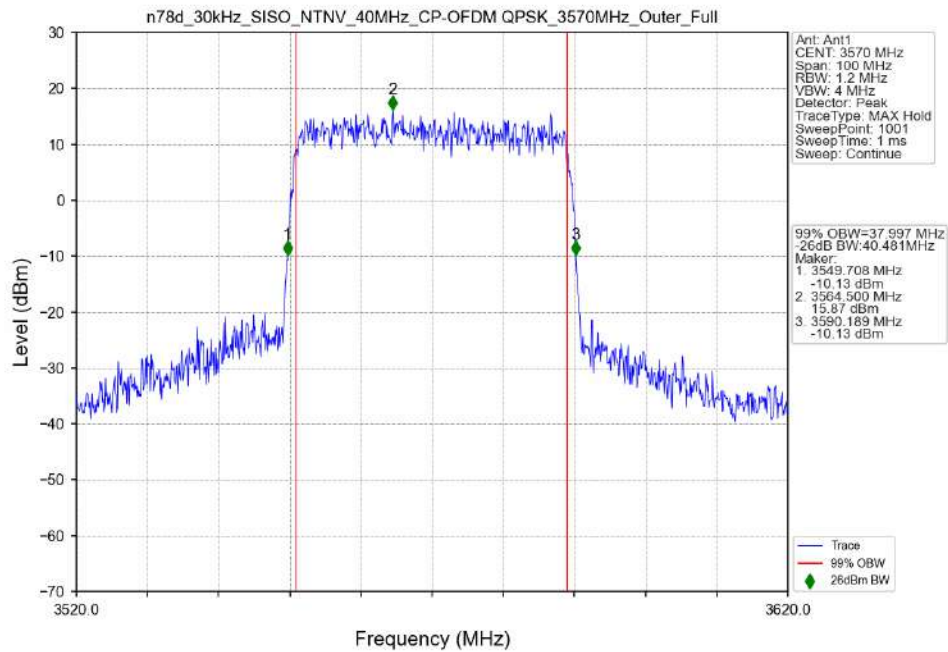
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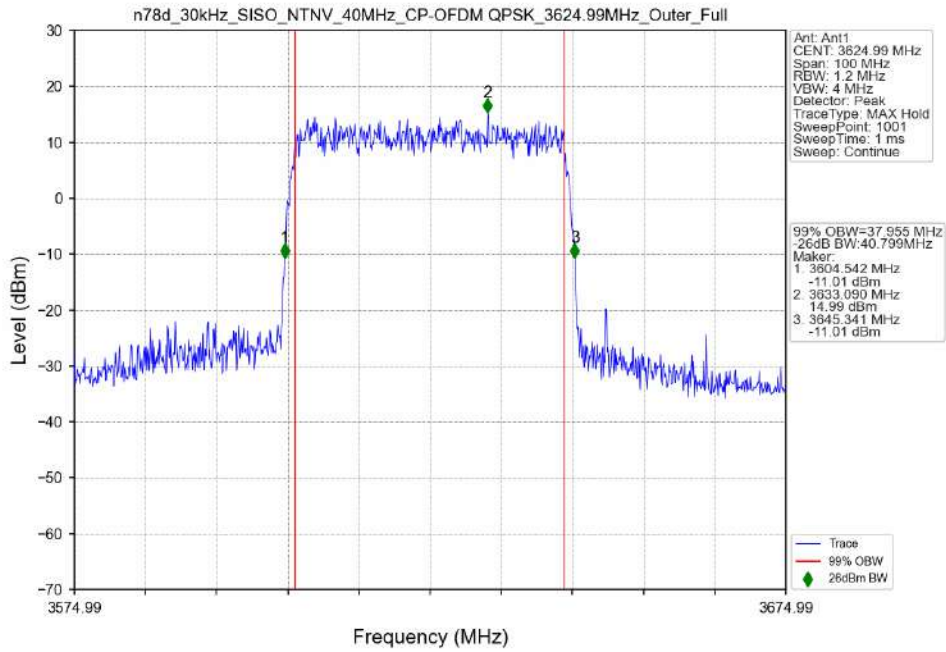
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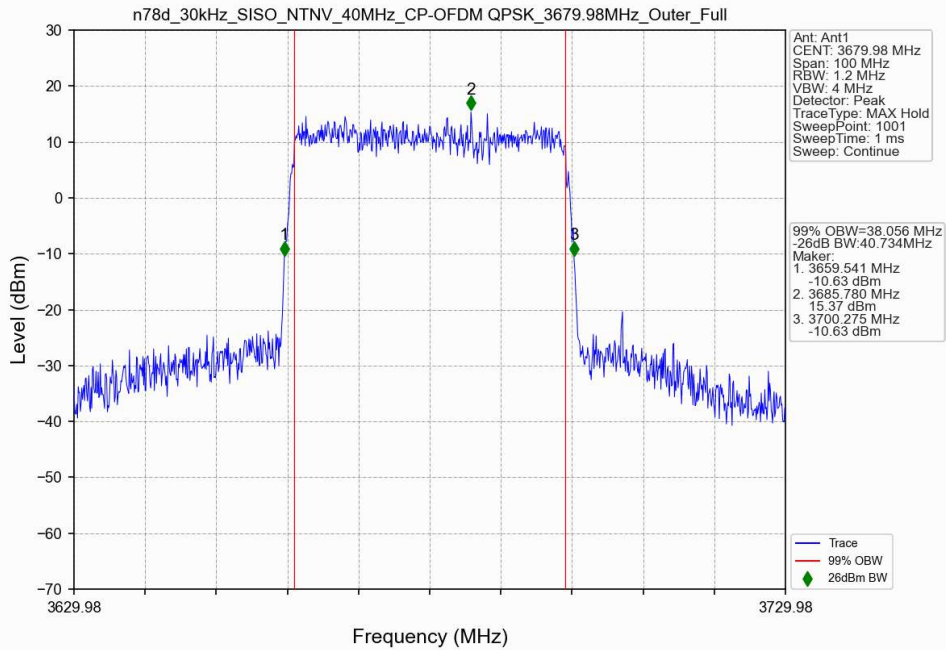
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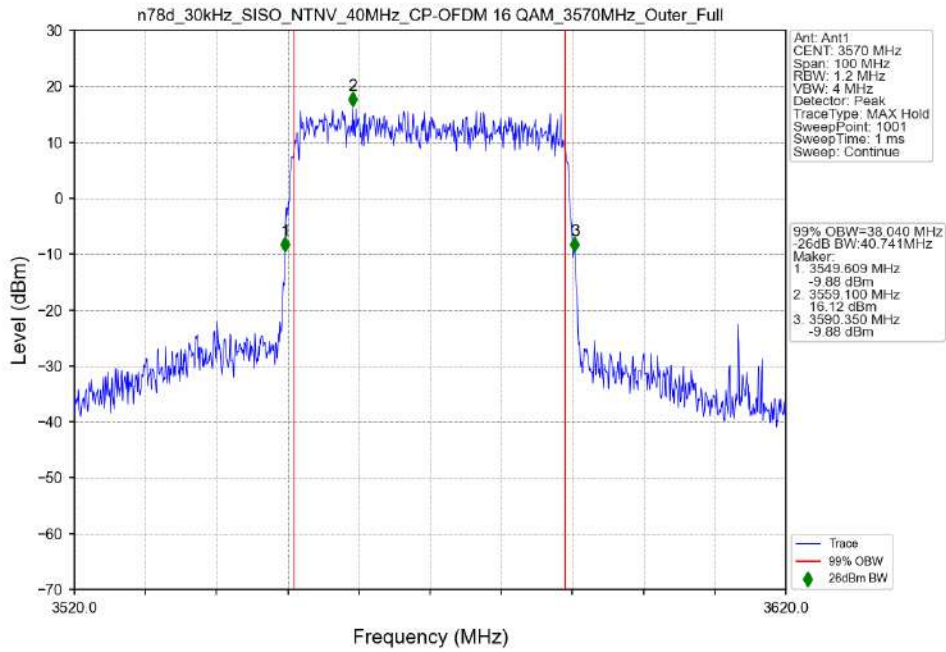
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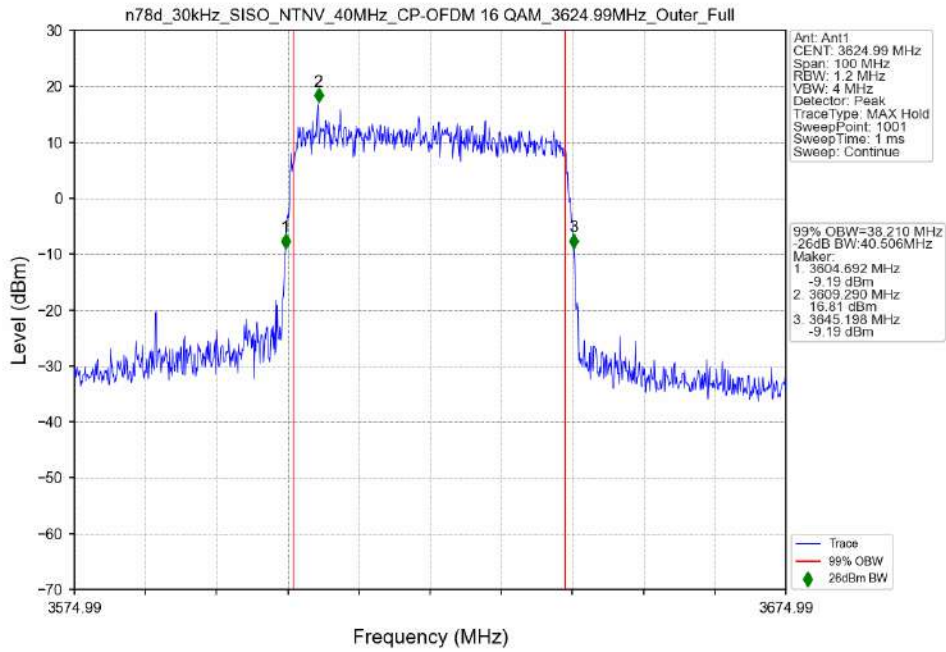
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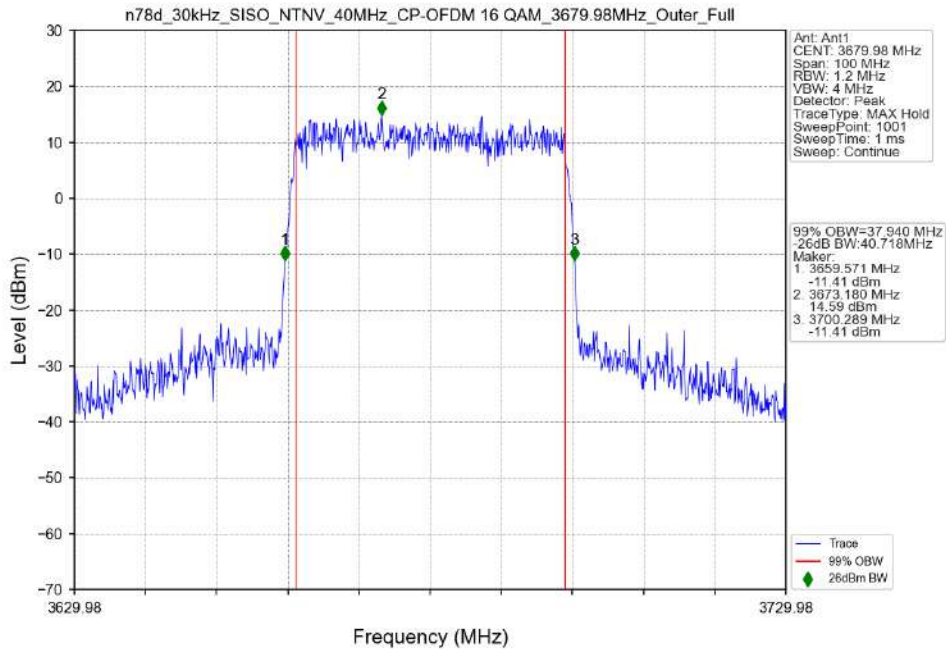
n78d_30kHz_SISO_NTNV_40MHz_CP-OFDM 16 QAM_3570MHz_Outer_Full



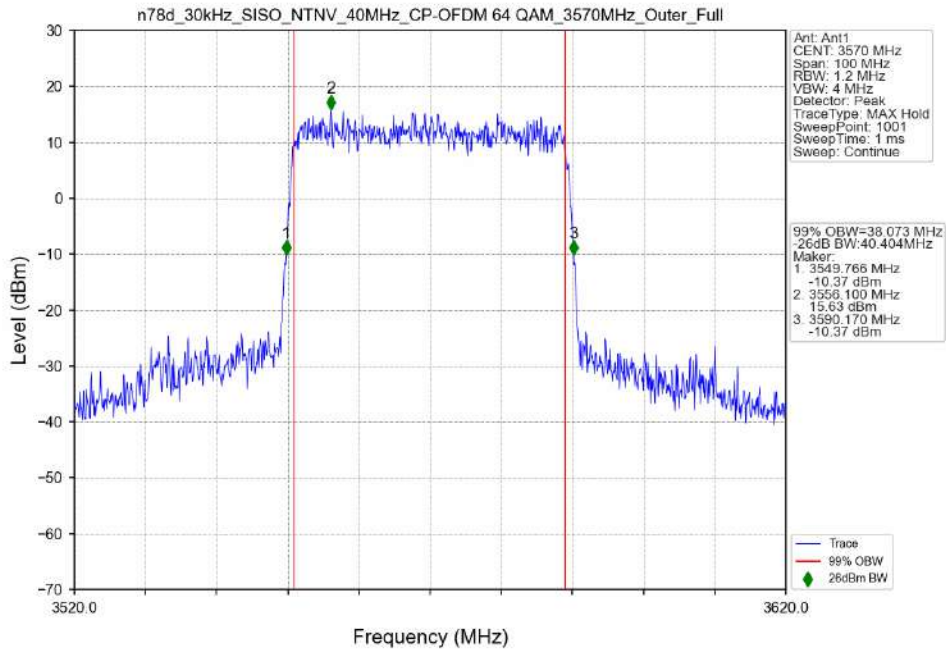
n78d_30kHz_SISO_NTNV_40MHz_CP-OFDM 16 QAM_3624.99MHz_Outer_Full



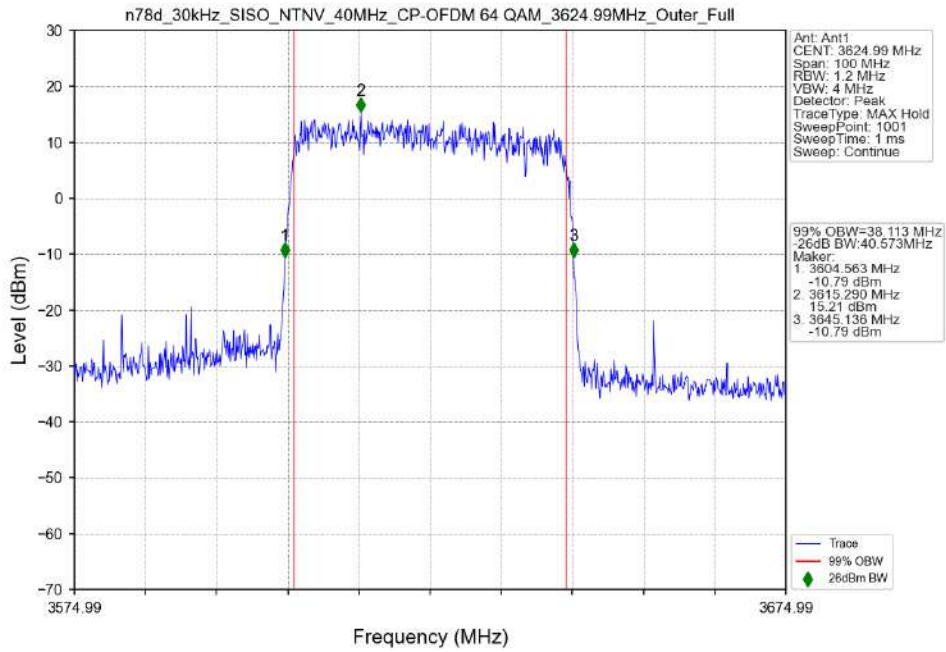
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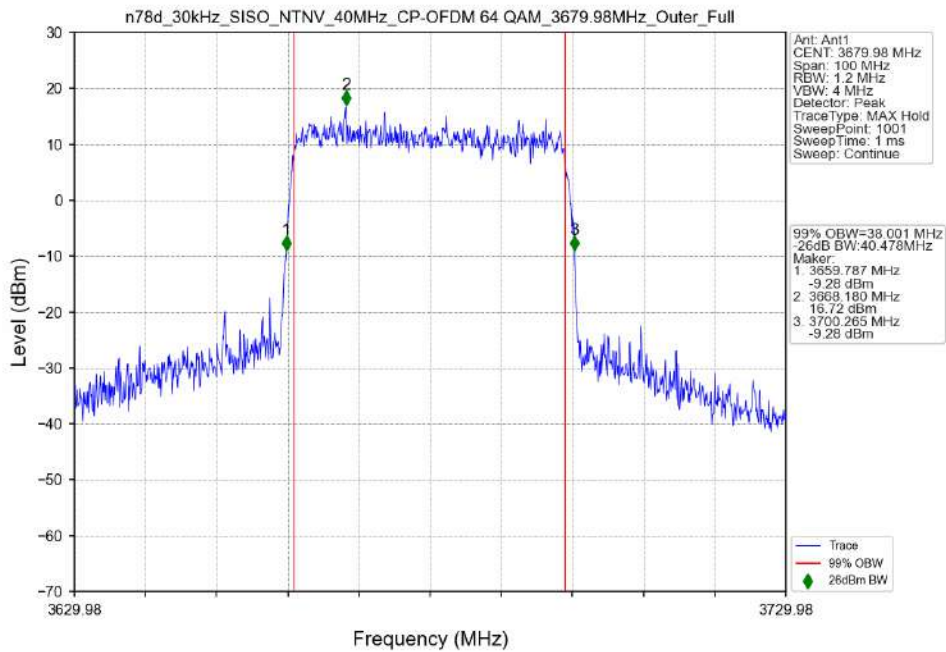
n78d_30kHz_SISO_NTNV_40MHz_CP-OFDM 64 QAM_3570MHz_Outer_Full



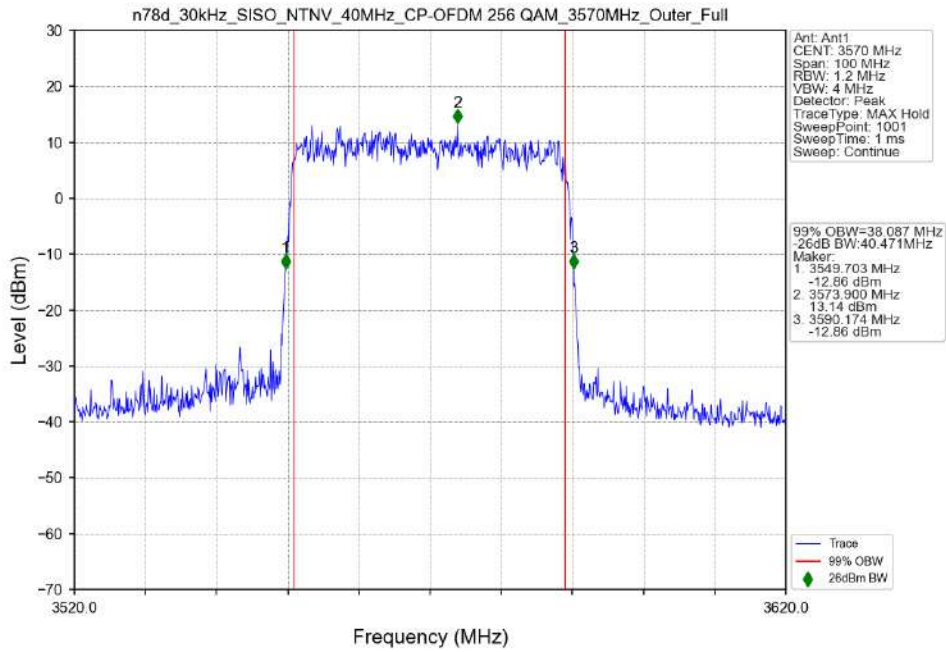
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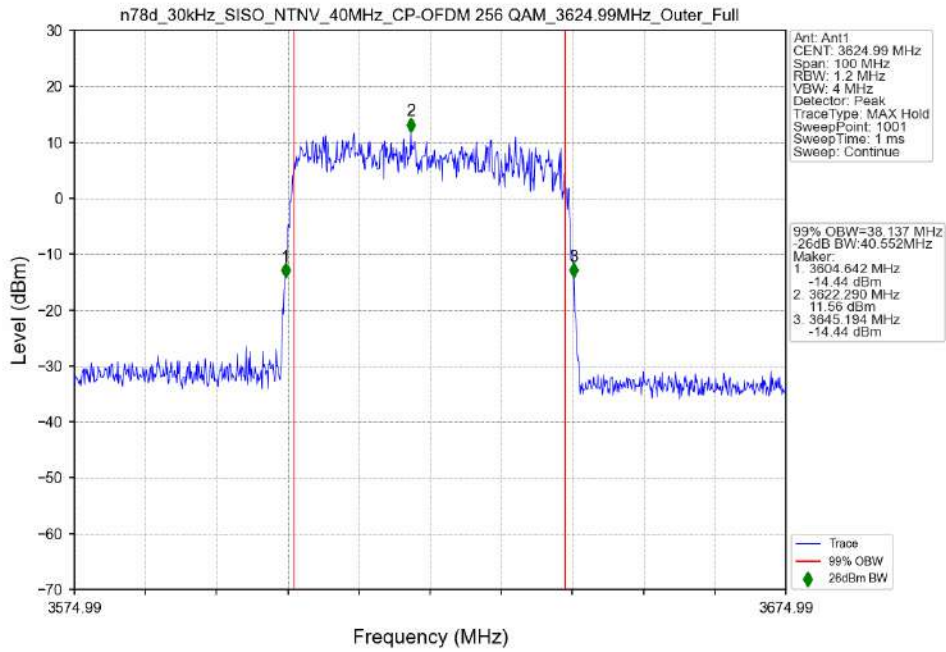
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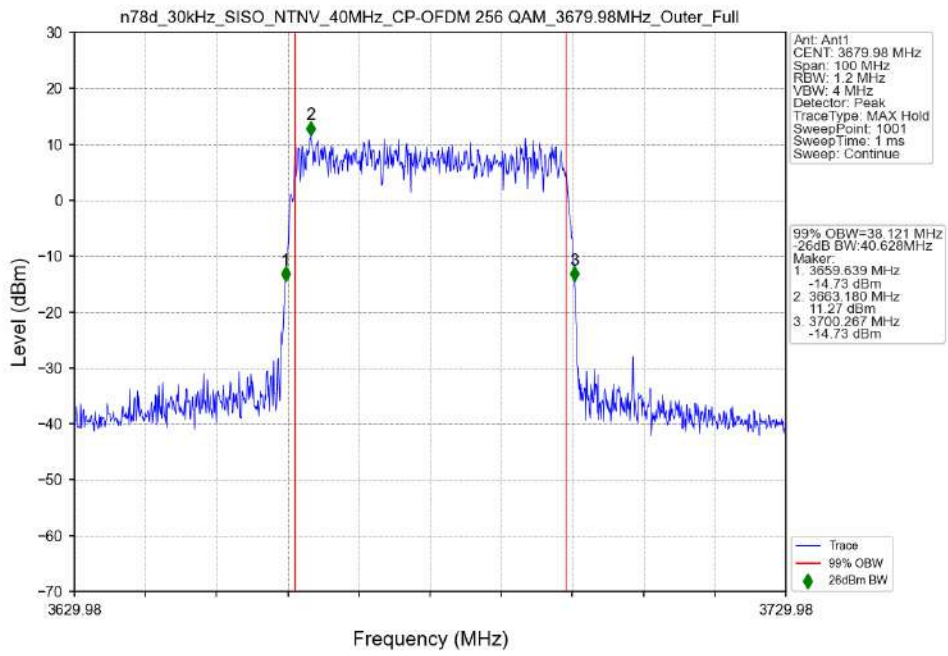
n78d_30kHz_SISO_NTNV_40MHz_CP-OFDM 256 QAM_3570MHz_Outer_Full



n78d_30kHz_SISO_NTNV_40MHz_CP-OFDM 256 QAM_3624.99MHz_Outer_Full



n78d_30kHz_SISO_NTNV_40MHz_CP-OFDM 256 QAM 3679.98MHz_Outer_Full

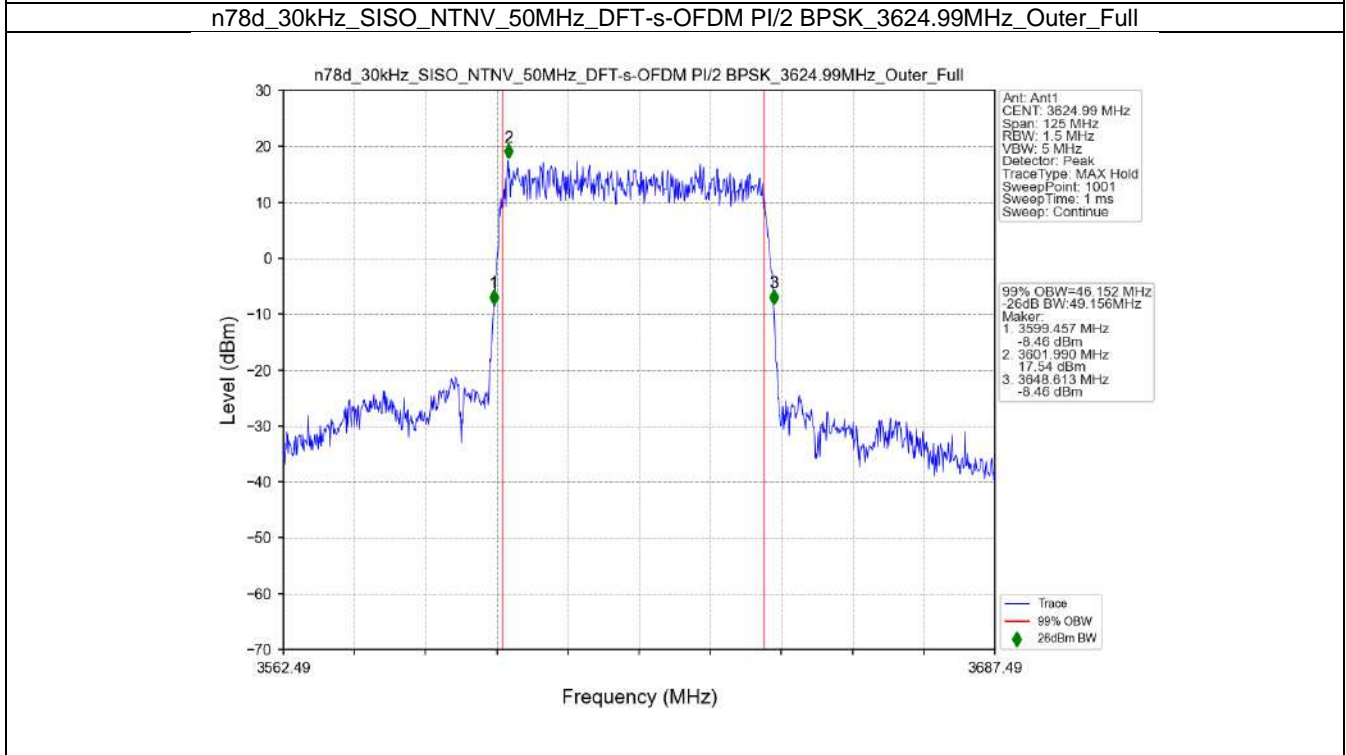
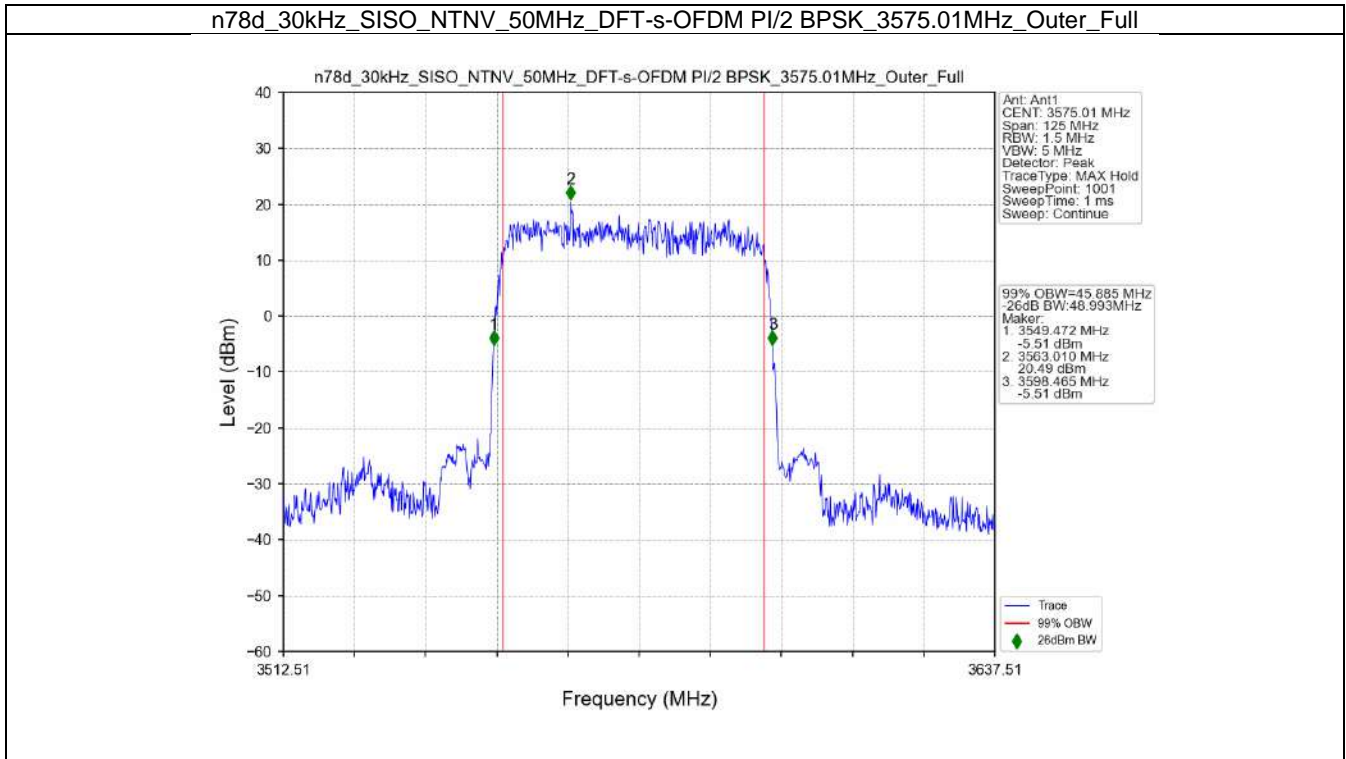


3.4 30k_SISO_50MHz_NTNV

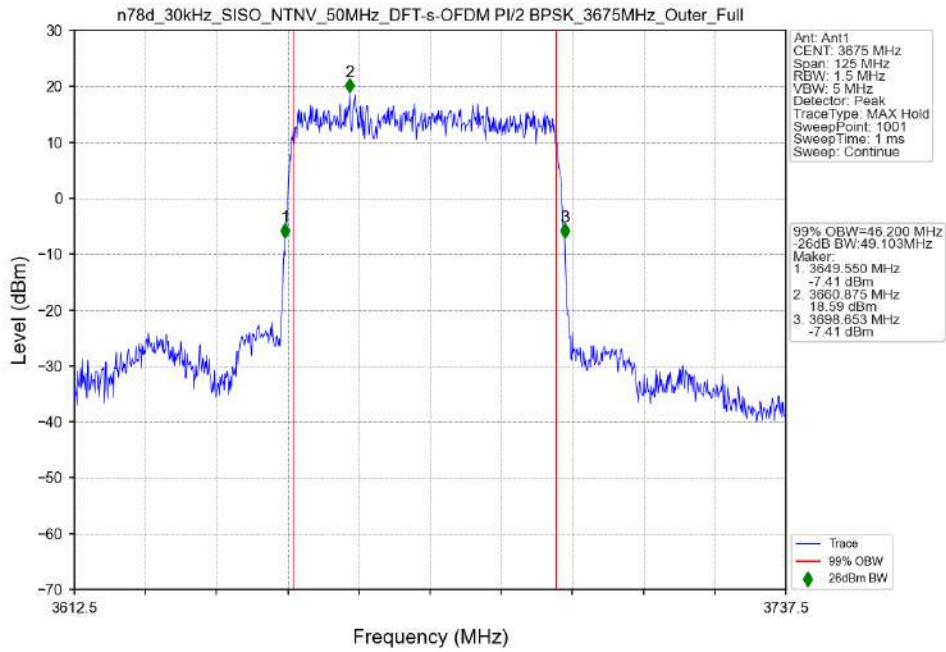
3.4.1 Test Result

5G NR n78d SCS=30kHz SISO 50MHz NTN						
Modulation	Frequency (MHz)	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	3575.01	Outer_Full	45.88	48.99	/	Pass
	3624.99	Outer_Full	46.15	49.16	/	Pass
	3675	Outer_Full	46.20	49.10	/	Pass
DFT-s-OFDM QPSK	3575.01	Outer_Full	45.92	48.95	/	Pass
	3624.99	Outer_Full	46.10	49.15	/	Pass
	3675	Outer_Full	45.96	49.33	/	Pass
DFT-s-OFDM 16 QAM	3575.01	Outer_Full	46.12	49.15	/	Pass
	3624.99	Outer_Full	46.15	49.27	/	Pass
	3675	Outer_Full	45.81	49.03	/	Pass
DFT-s-OFDM 64 QAM	3575.01	Outer_Full	45.94	49.28	/	Pass
	3624.99	Outer_Full	46.11	49.10	/	Pass
	3675	Outer_Full	45.94	49.00	/	Pass
DFT-s-OFDM 256 QAM	3575.01	Outer_Full	46.07	49.29	/	Pass
	3624.99	Outer_Full	46.18	49.33	/	Pass
	3675	Outer_Full	46.11	48.91	/	Pass
CP-OFDM QPSK	3575.01	Outer_Full	47.65	50.85	/	Pass
	3624.99	Outer_Full	47.66	51.06	/	Pass
	3675	Outer_Full	47.77	50.81	/	Pass
CP-OFDM 16 QAM	3575.01	Outer_Full	47.63	50.82	/	Pass
	3624.99	Outer_Full	47.80	51.19	/	Pass
	3675	Outer_Full	47.95	51.10	/	Pass
CP-OFDM 64 QAM	3575.01	Outer_Full	47.76	50.78	/	Pass
	3624.99	Outer_Full	47.73	50.94	/	Pass
	3675	Outer_Full	47.55	50.74	/	Pass
CP-OFDM 256 QAM	3575.01	Outer_Full	47.59	50.69	/	Pass
	3624.99	Outer_Full	47.62	50.87	/	Pass
	3675	Outer_Full	47.86	50.82	/	Pass

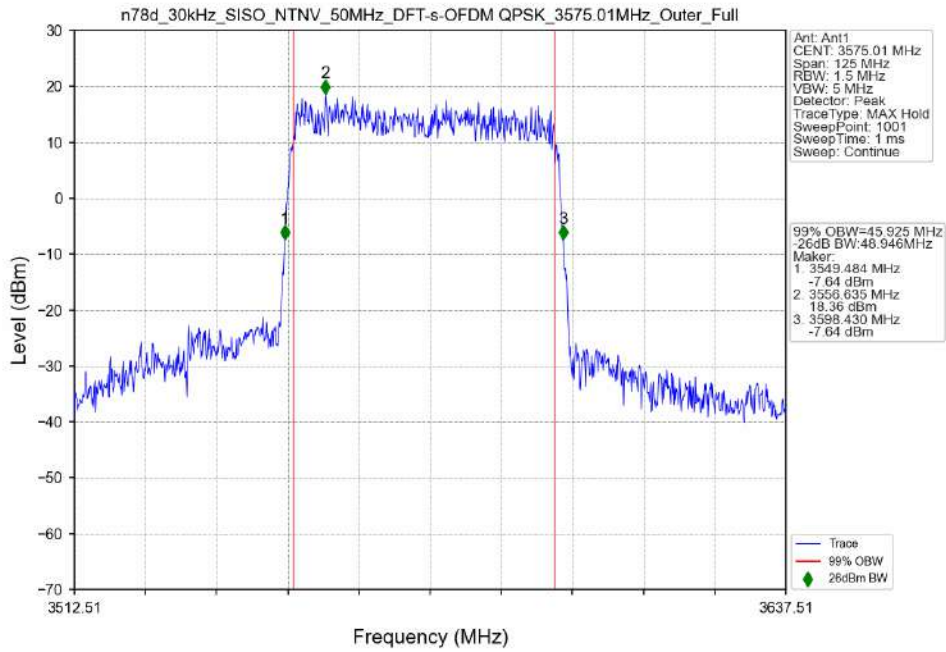
3.4.2 Test Graph



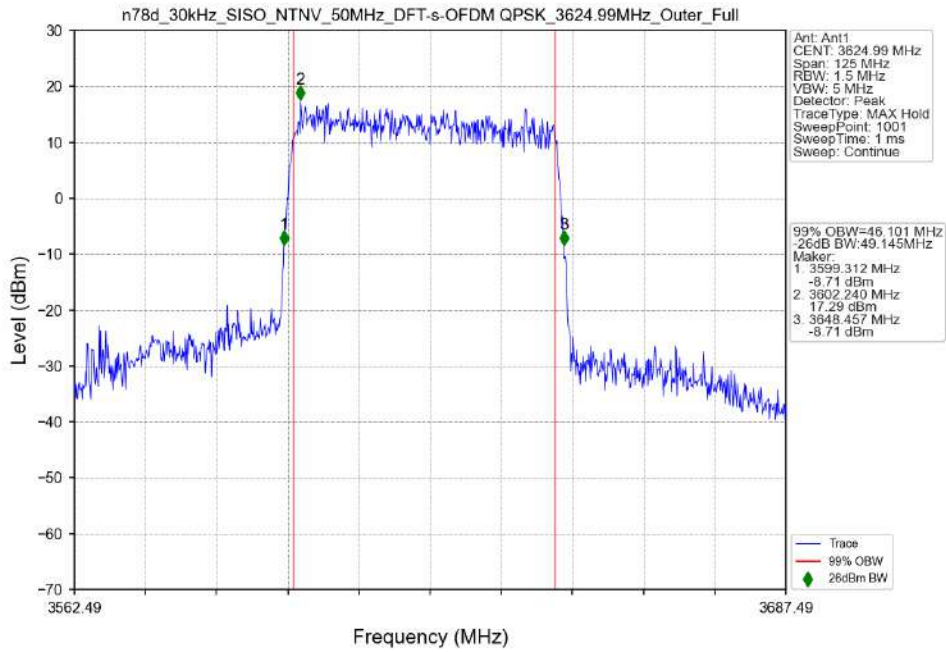
n78d_30kHz_SISO_NTNV_50MHz_DFT-s-OFDM PI/2 BPSK_3675MHz_Outer_Full



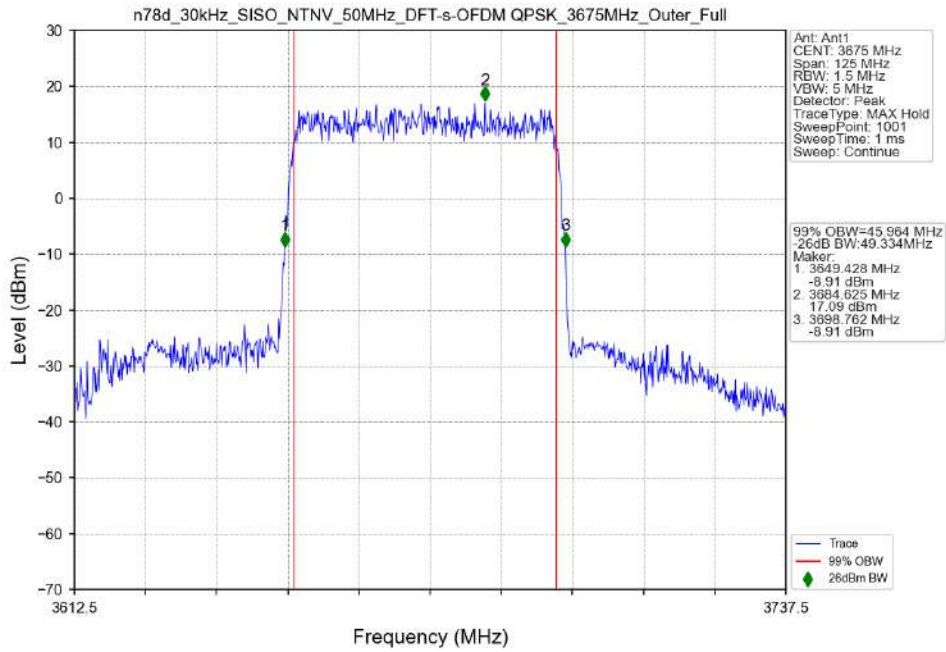
n78d_30kHz_SISO_NTNV_50MHz_DFT-s-OFDM QPSK_3575.01MHz_Outer_Full



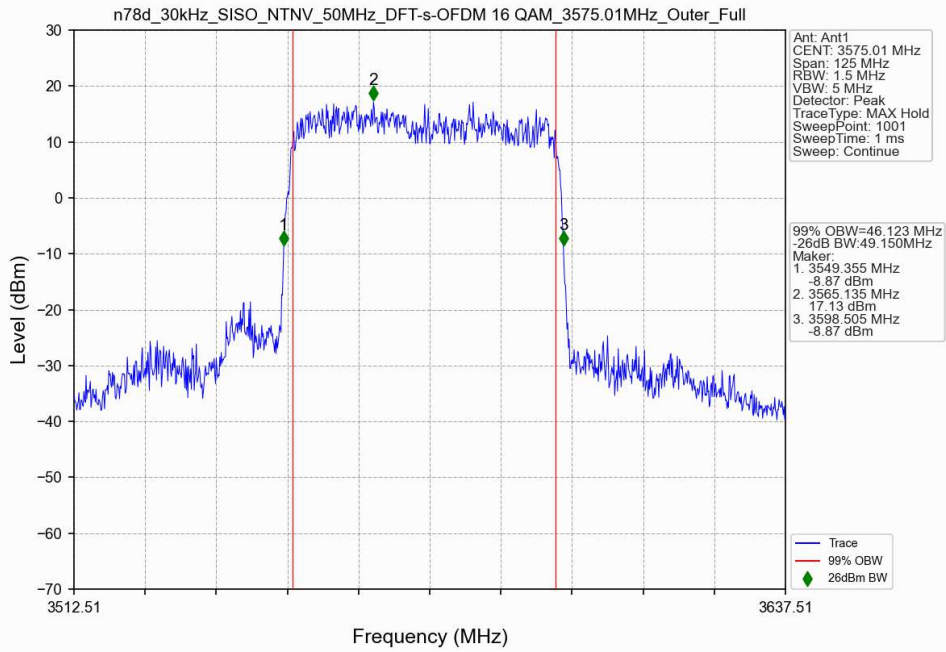
n78d_30kHz_SISO_NTNV_50MHz_DFT-s-OFDM QPSK_3624.99MHz_Outer_Full



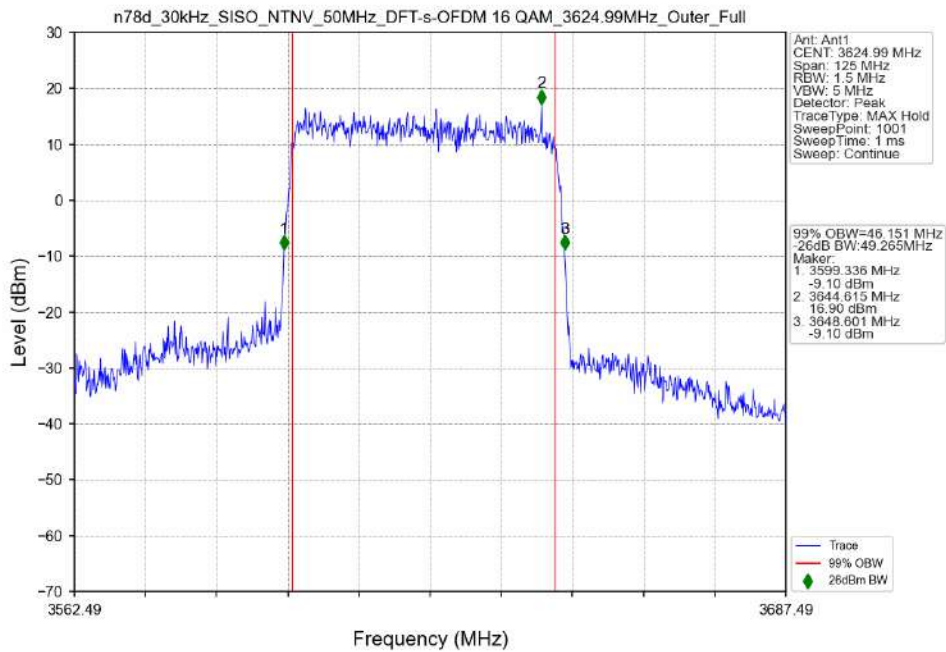
n78d_30kHz_SISO_NTNV_50MHz_DFT-s-OFDM QPSK_3675MHz_Outer_Full



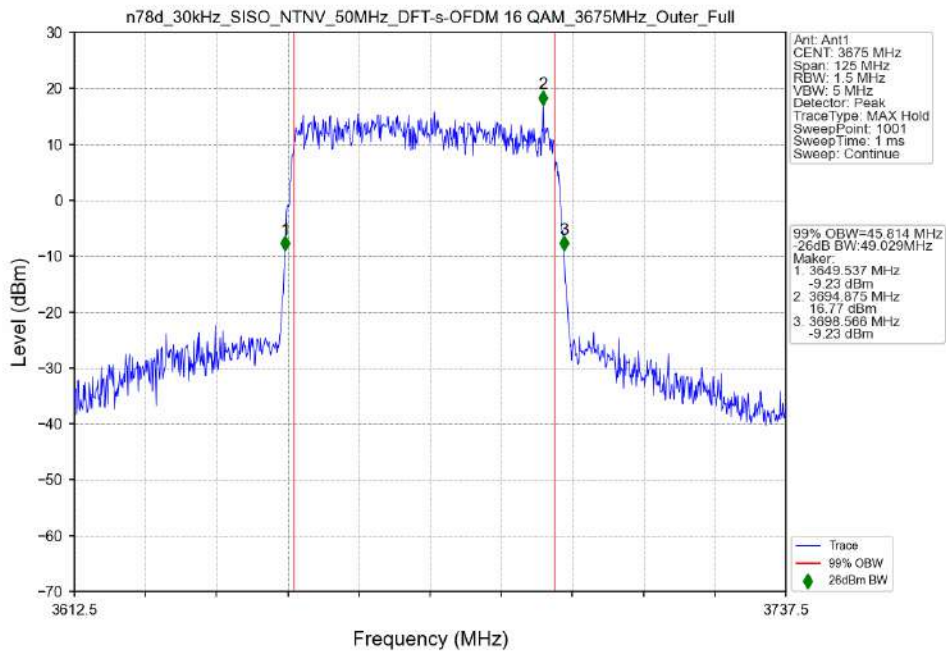
n78d_30kHz_SISO_NTNV_50MHz_DFT-s-OFDM_16_QAM_3575.01MHz_Outer_Full



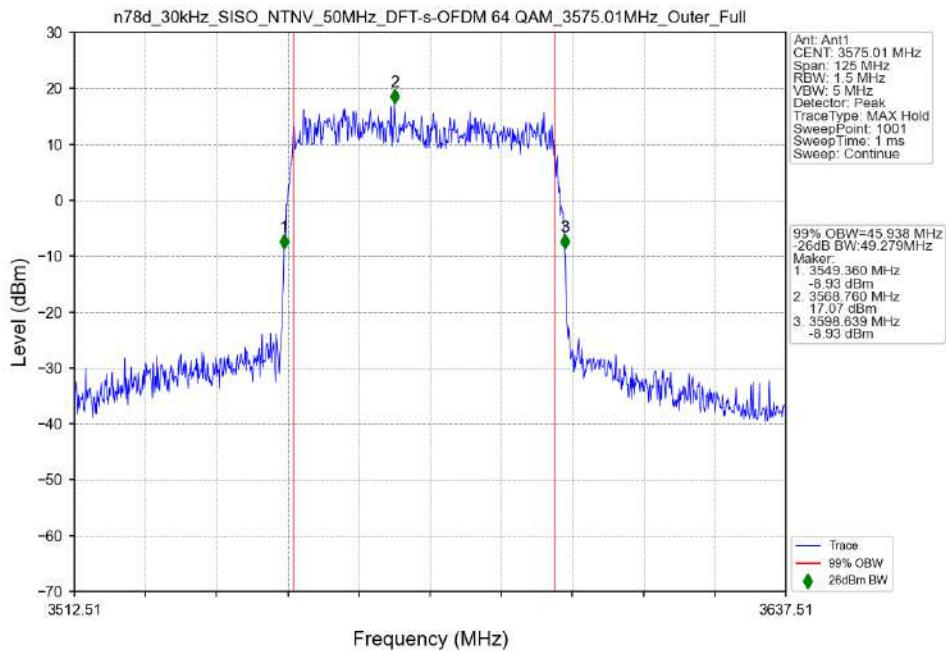
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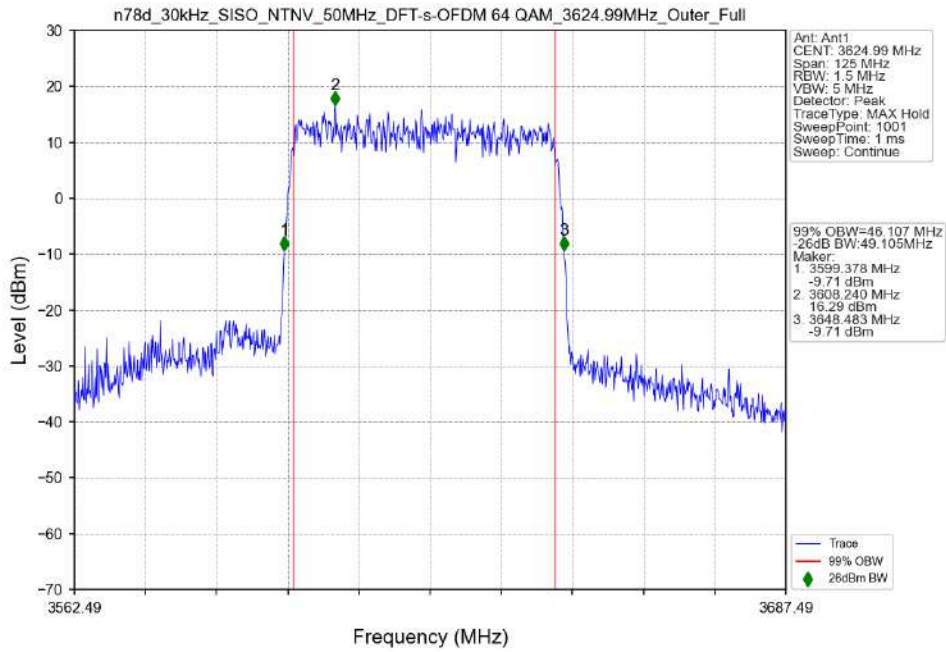
n78d_30kHz_SISO_NTNV_50MHz_DFT-s-OFDM 16 QAM_3675MHz_Outer_Full



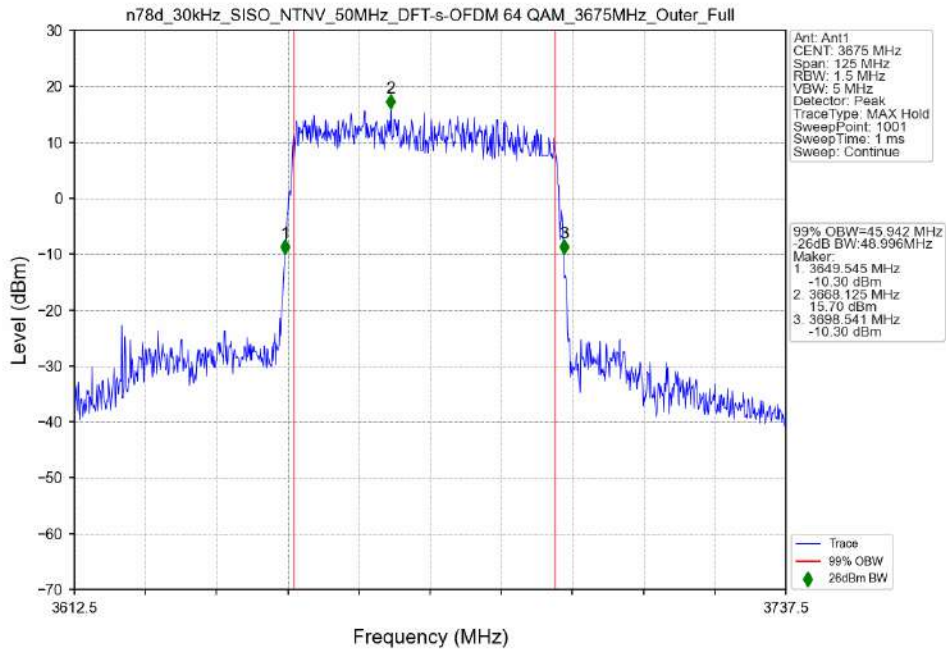
n78d_30kHz_SISO_NTNV_50MHz_DFT-s-OFDM 64 QAM_3575.01MHz_Outer_Full



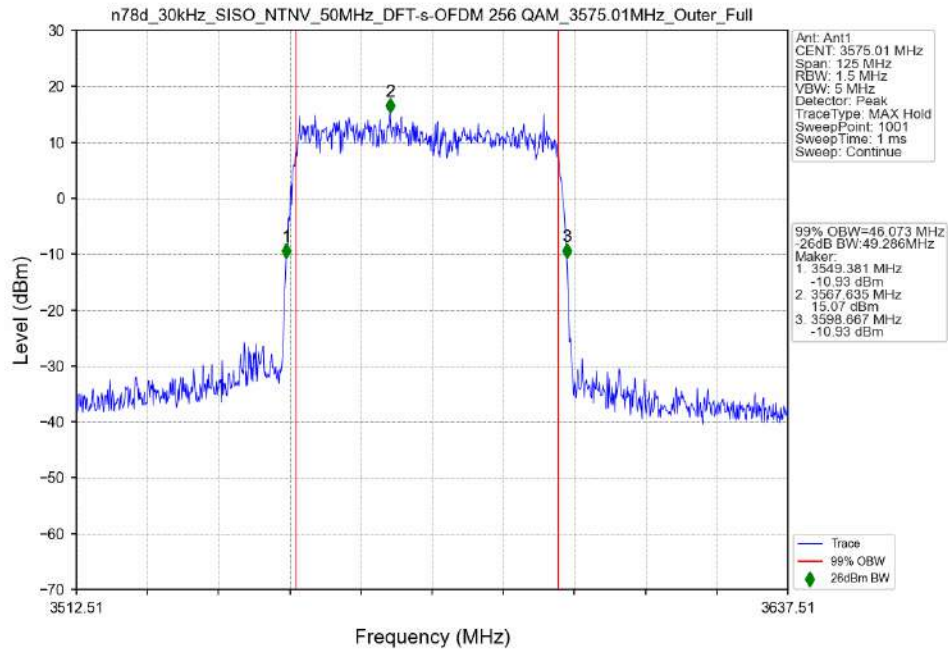
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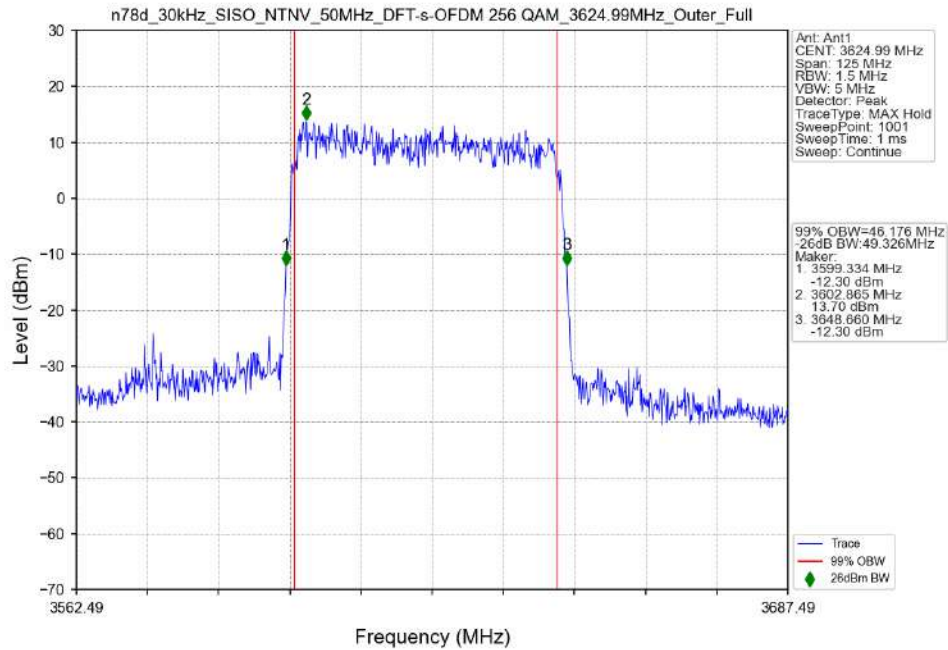
n78d_30kHz_SISO_NTV_50MHz_DFT-s-OFDM 64 QAM_3675MHz_Outer_Full



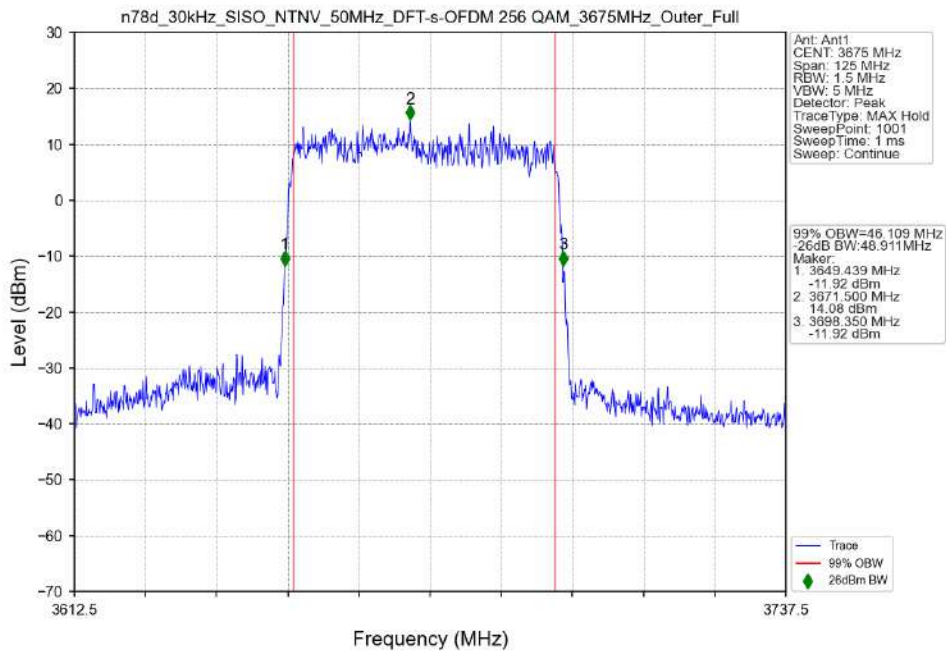
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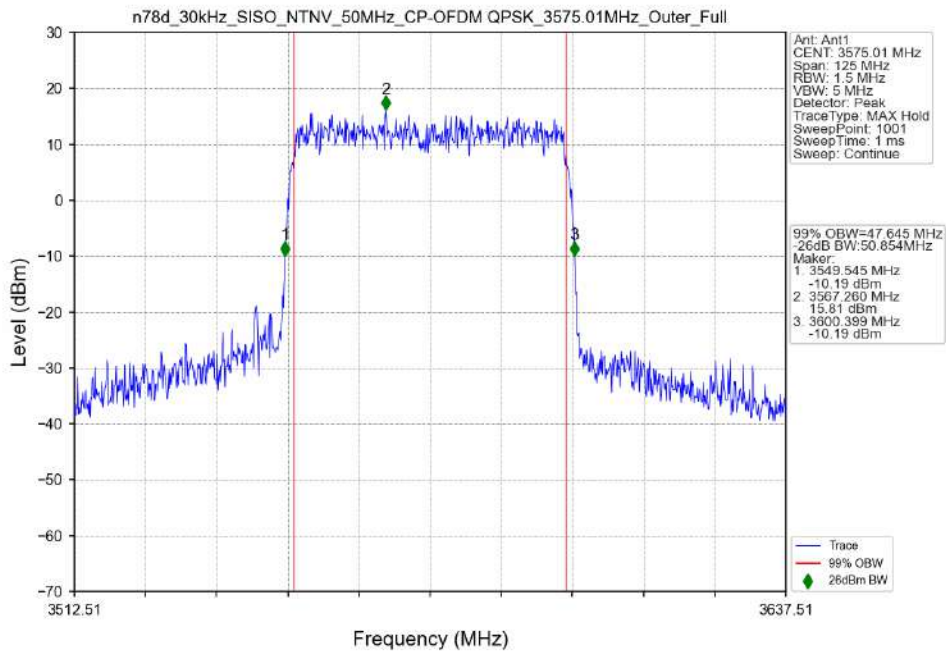
n78d_30kHz_SISO_NTNV_50MHz_DFT-s-OFDM_256_QAM_3624.99MHz_Outer_Full



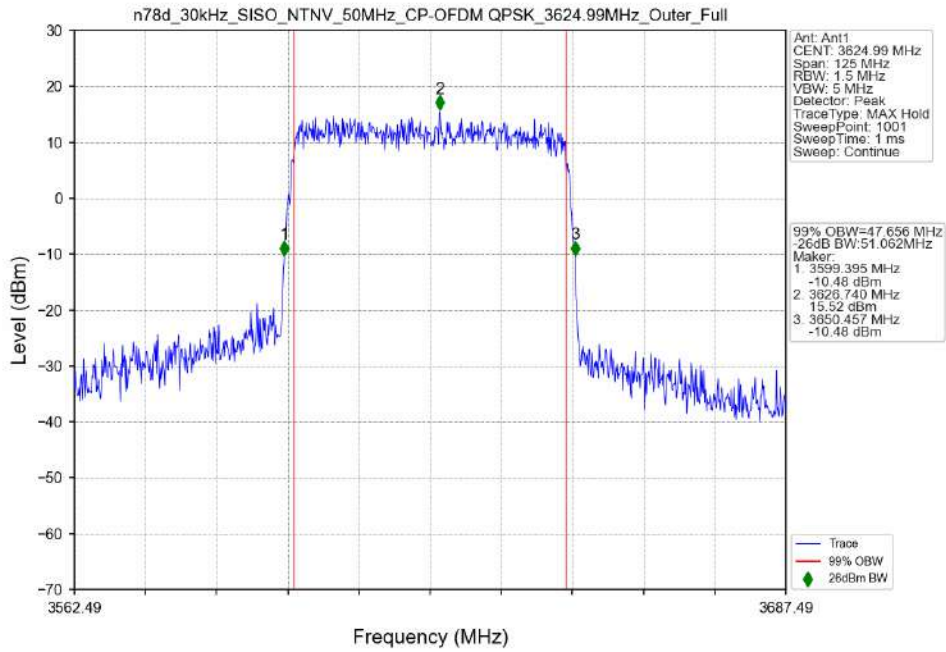
n78d_30kHz_SISO_NTNV_50MHz_DFT-s-OFDM 256 QAM_3675MHz_Outer_Full



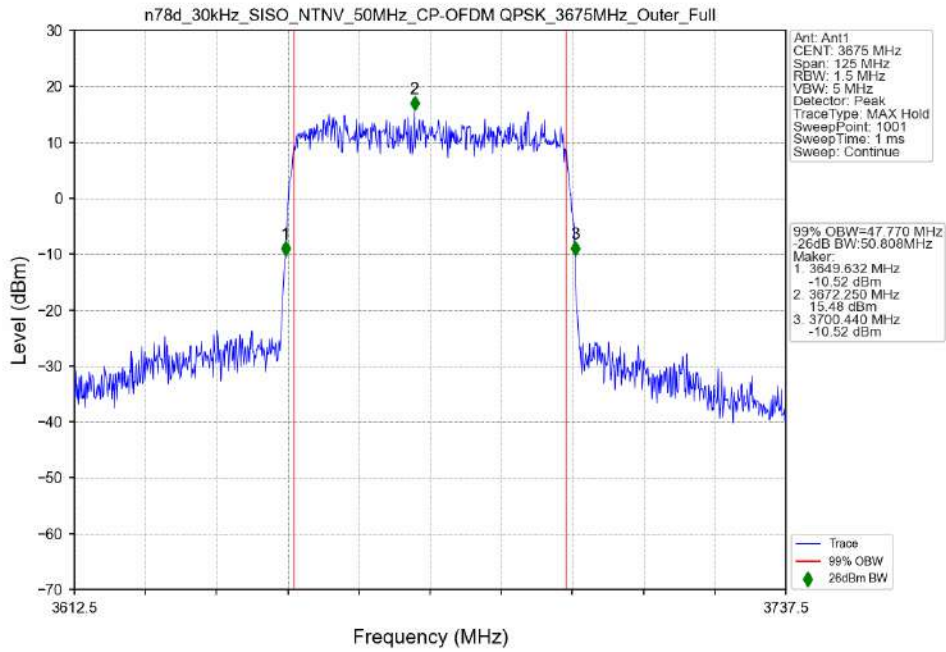
n78d_30kHz_SISO_NTNV_50MHz_CP-OFDM QPSK_3575.01MHz_Outer_Full



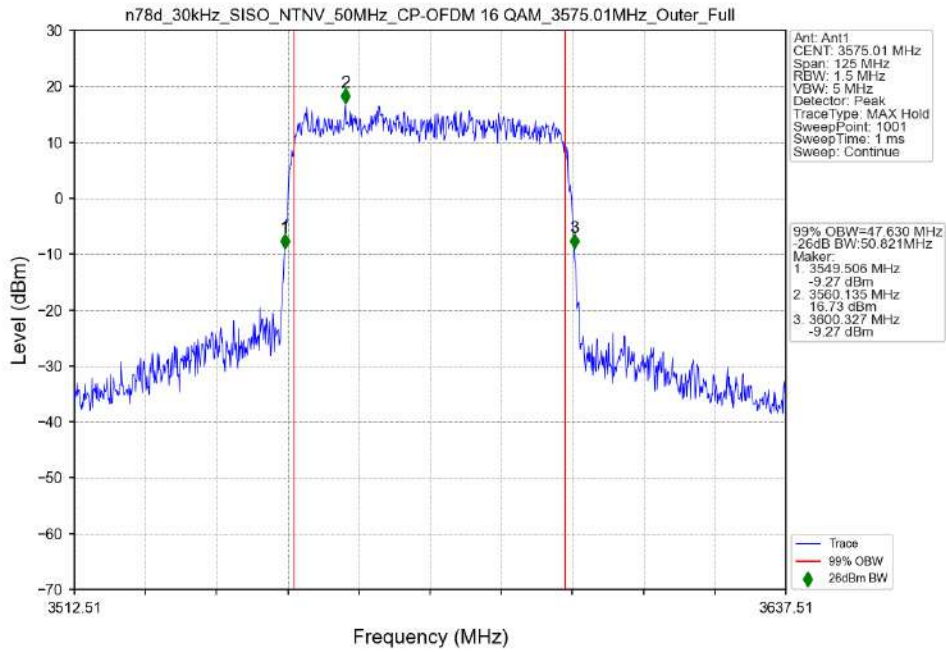
n78d_30kHz_SISO_NTNV_50MHz_CP-OFDM QPSK_3624.99MHz_Outer_Full



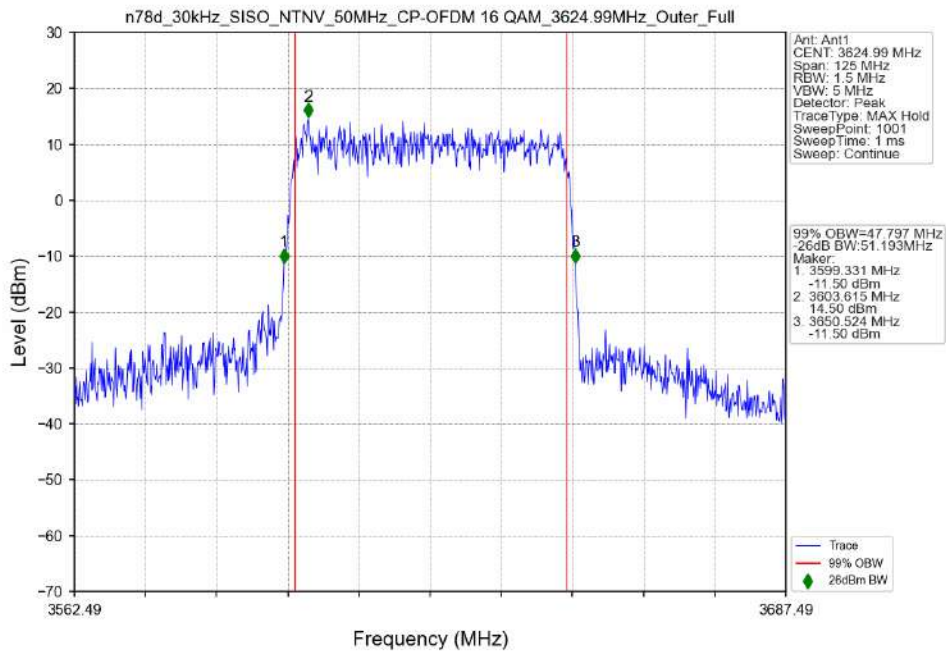
n78d_30kHz_SISO_NTNV_50MHz_CP-OFDM QPSK_3675MHz_Outer_Full



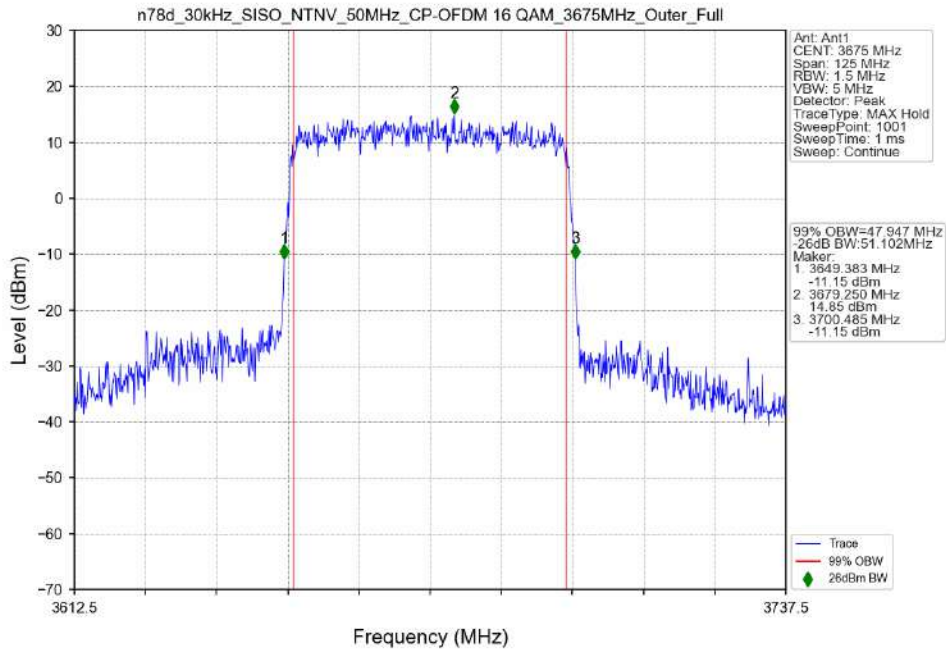
n78d_30kHz_SISO_NTNV_50MHz_CP-OFDM 16 QAM 3575.01MHz_Outer_Full



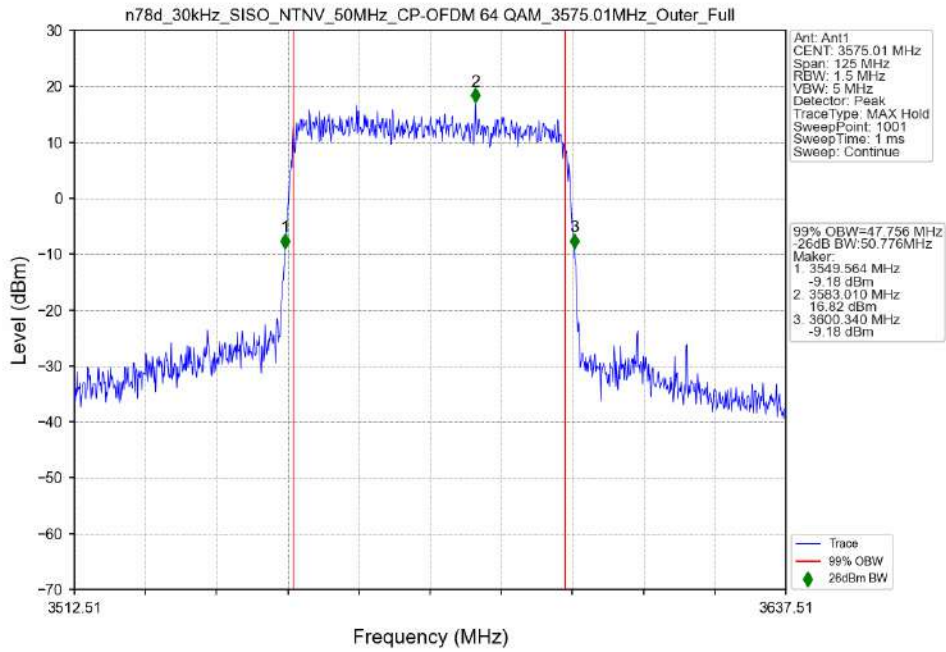
n78d_30kHz_SISO_NTNV_50MHz_CP-OFDM 16 QAM 3624.99MHz_Outer_Full



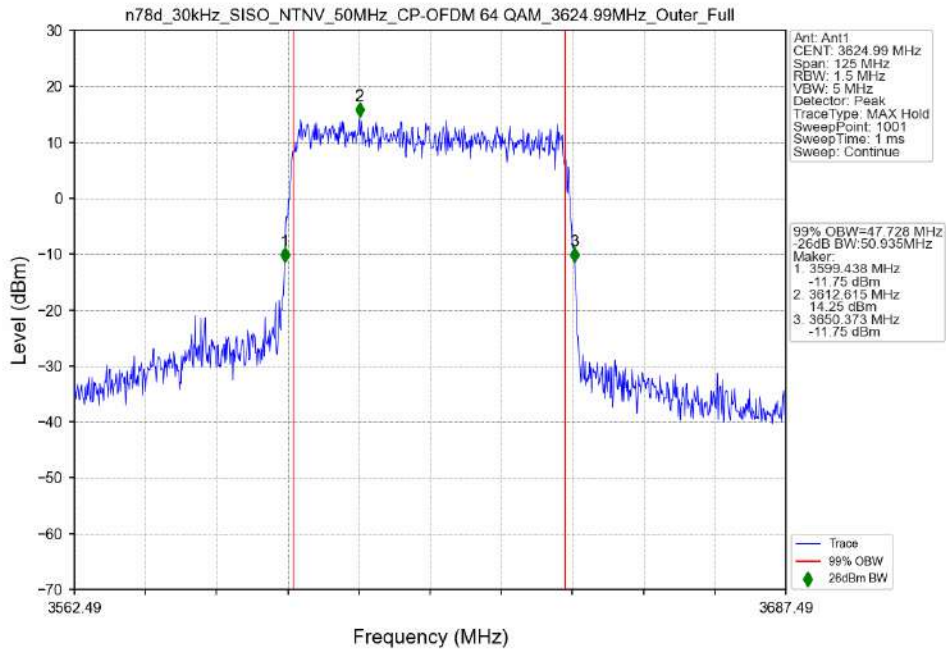
n78d_30kHz_SISO_NTNV_50MHz_CP-OFDM 16 QAM_3675MHz_Outer_Full



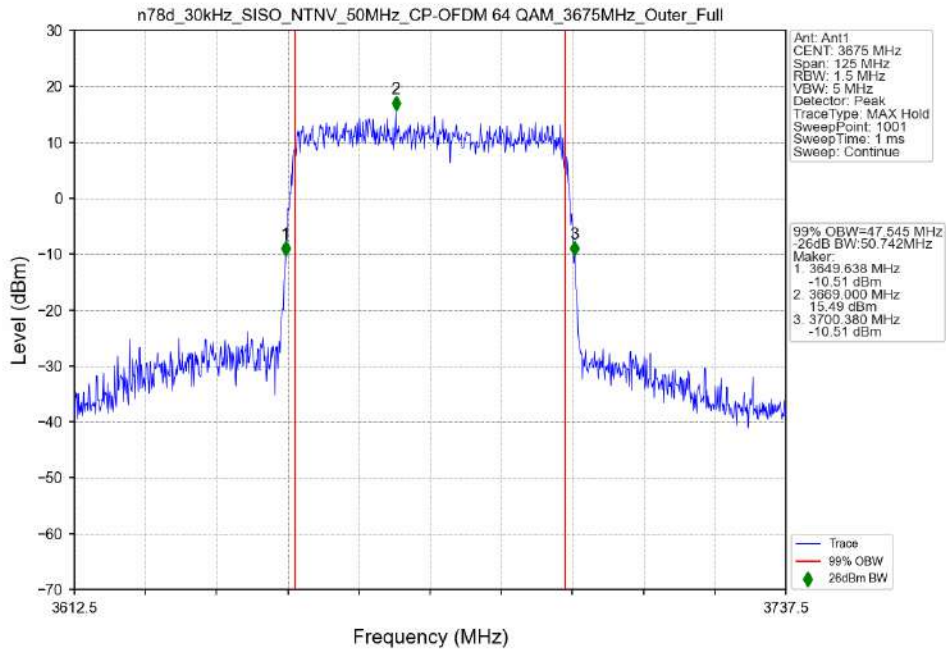
n78d_30kHz_SISO_NTNV_50MHz_CP-OFDM 64 QAM_3575.01MHz_Outer_Full



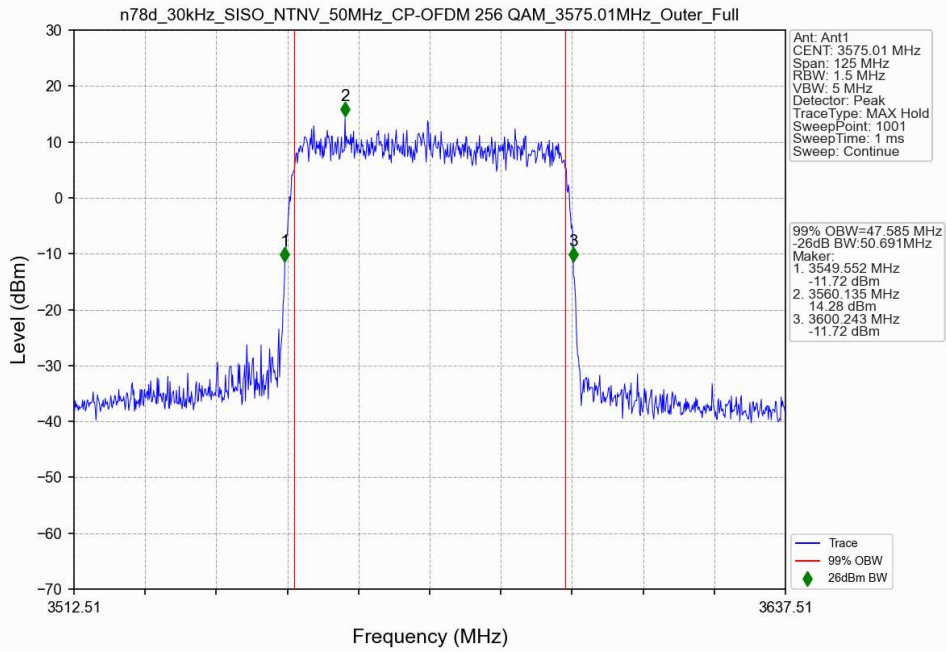
n78d_30kHz_SISO_NTNV_50MHz_CP-OFDM 64 QAM_3624.99MHz_Outer_Full



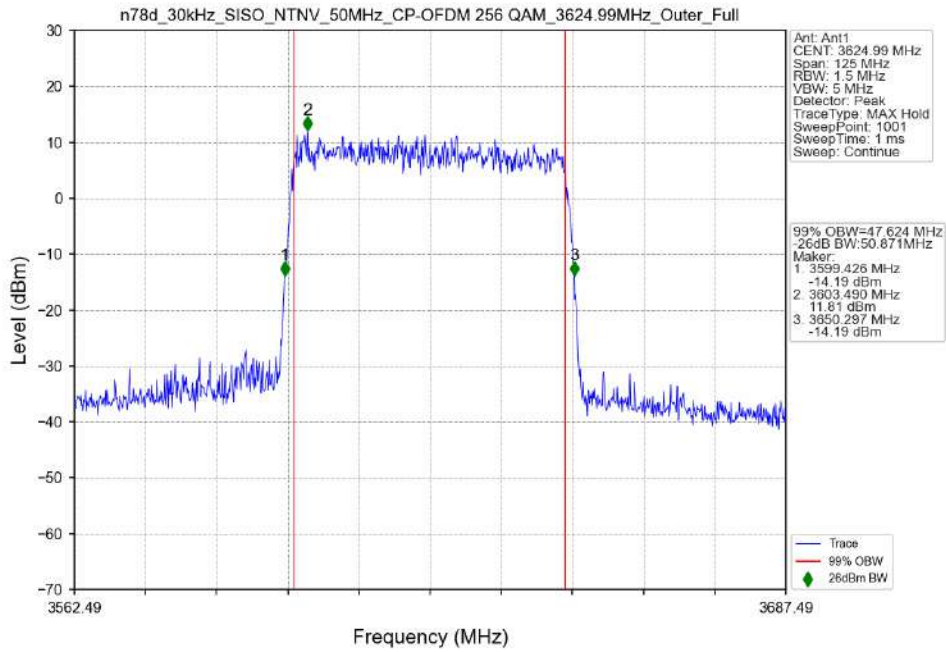
n78d_30kHz_SISO_NTNV_50MHz_CP-OFDM 64 QAM_3675MHz_Outer_Full



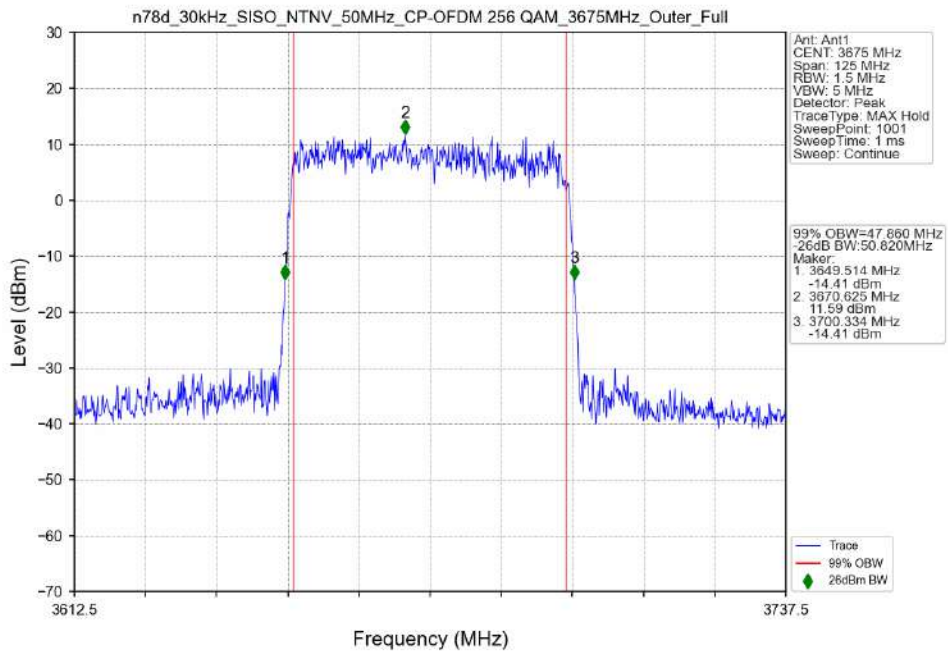
n78d_30kHz_SISO_NTNV_50MHz_CP-OFDM 256 QAM_3575.01MHz_Outer_Full



n78d_30kHz_SISO_NTNV_50MHz_CP-OFDM 256 QAM_3624.99MHz_Outer_Full



n78d_30kHz_SISO_NTNV_50MHz_CP-OFDM 256 QAM_3675MHz_Outer_Full

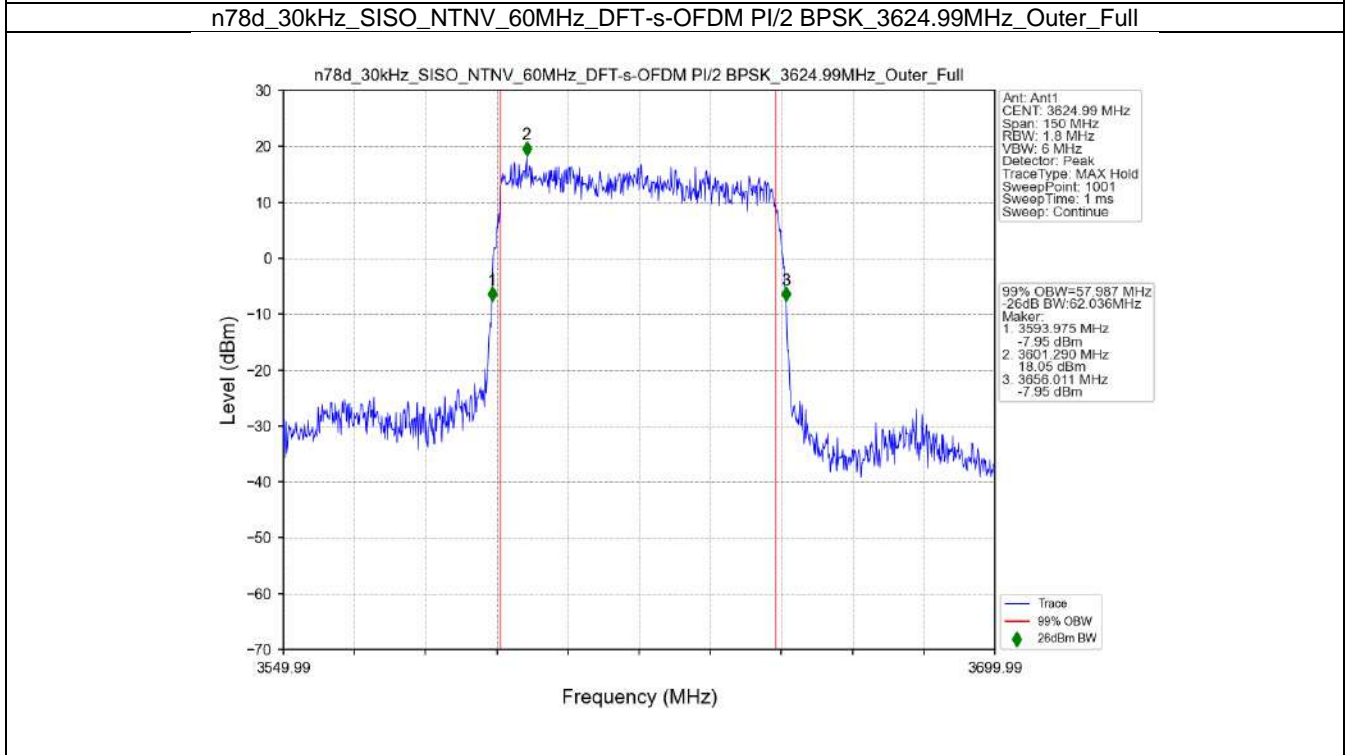
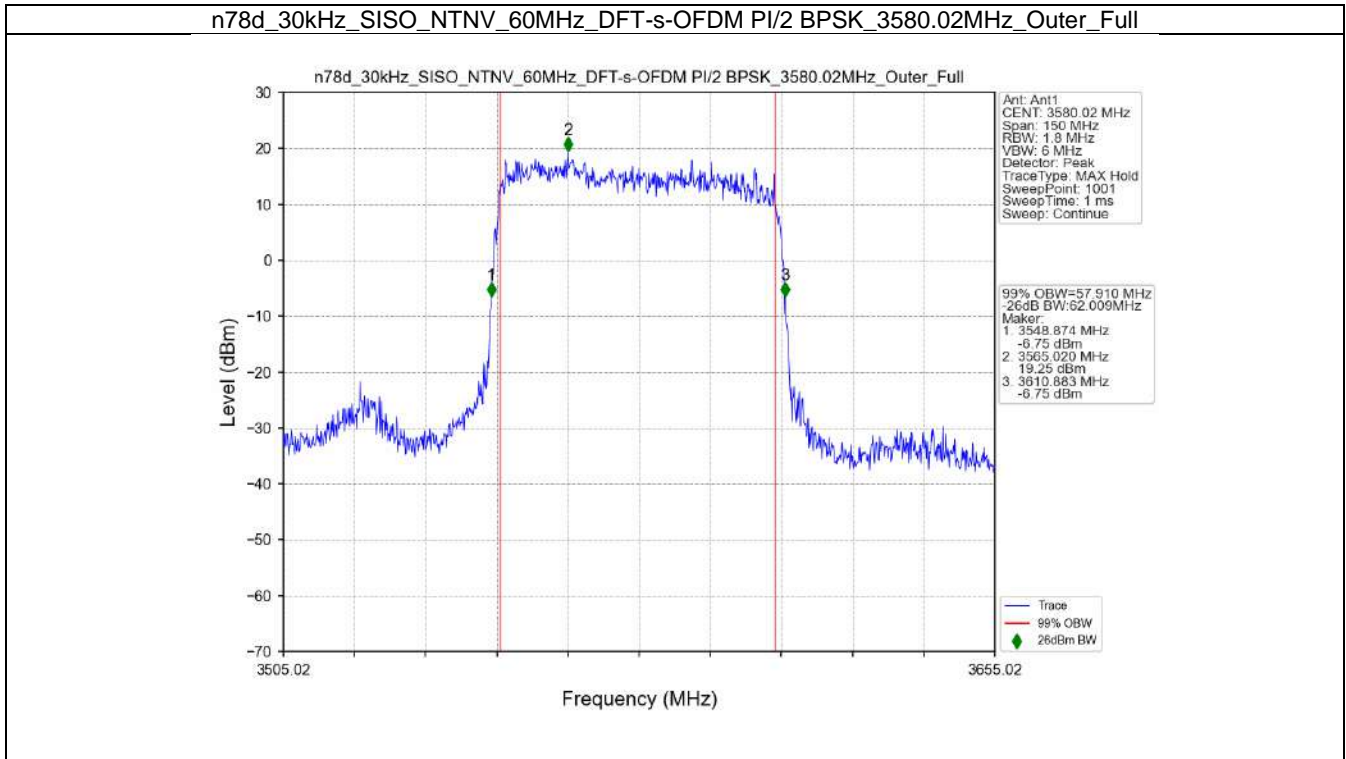


3.5 30k_SISO_60MHz_NTNV

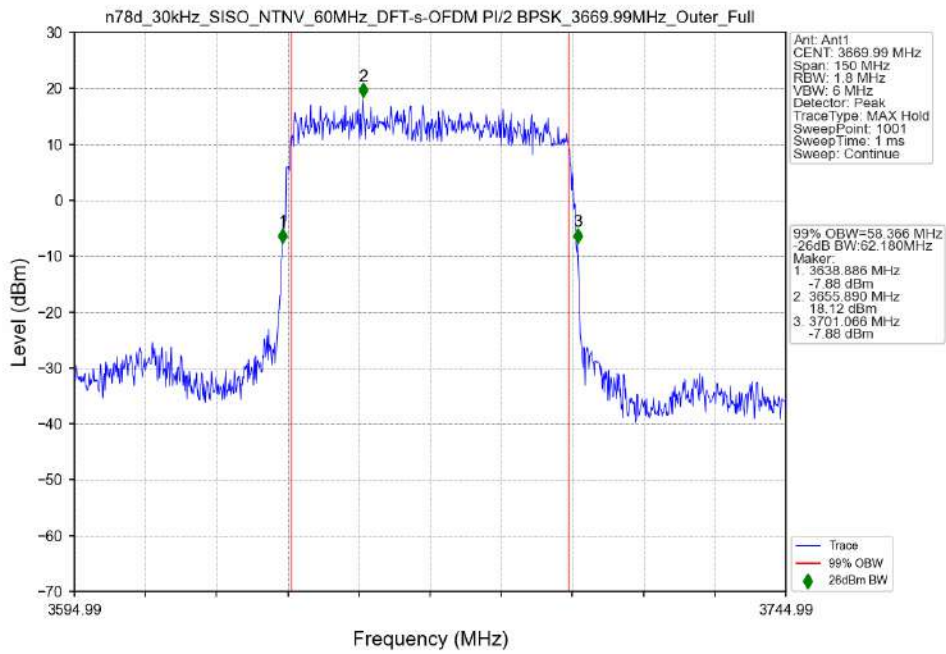
3.5.1 Test Result

5G NR n78d SCS=30kHz SISO 60MHz NTN						
Modulation	Frequency (MHz)	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	3580.02	Outer_Full	57.91	62.01	/	Pass
	3624.99	Outer_Full	57.99	62.04	/	Pass
	3669.99	Outer_Full	58.37	62.18	/	Pass
DFT-s-OFDM QPSK	3580.02	Outer_Full	58.17	62.10	/	Pass
	3624.99	Outer_Full	58.65	61.89	/	Pass
	3669.99	Outer_Full	58.12	61.98	/	Pass
DFT-s-OFDM 16 QAM	3580.02	Outer_Full	58.26	62.22	/	Pass
	3624.99	Outer_Full	58.32	61.76	/	Pass
	3669.99	Outer_Full	58.00	62.02	/	Pass
DFT-s-OFDM 64 QAM	3580.02	Outer_Full	57.77	61.78	/	Pass
	3624.99	Outer_Full	58.32	62.15	/	Pass
	3669.99	Outer_Full	58.15	61.98	/	Pass
DFT-s-OFDM 256 QAM	3580.02	Outer_Full	58.09	61.76	/	Pass
	3624.99	Outer_Full	58.16	61.72	/	Pass
	3669.99	Outer_Full	58.15	62.05	/	Pass
CP-OFDM QPSK	3580.02	Outer_Full	58.21	61.79	/	Pass
	3624.99	Outer_Full	58.19	61.90	/	Pass
	3669.99	Outer_Full	58.21	62.09	/	Pass
CP-OFDM 16 QAM	3580.02	Outer_Full	58.17	61.74	/	Pass
	3624.99	Outer_Full	58.28	61.88	/	Pass
	3669.99	Outer_Full	58.06	61.84	/	Pass
CP-OFDM 64 QAM	3580.02	Outer_Full	58.06	61.79	/	Pass
	3624.99	Outer_Full	58.22	61.73	/	Pass
	3669.99	Outer_Full	58.27	61.99	/	Pass
CP-OFDM 256 QAM	3580.02	Outer_Full	57.70	61.63	/	Pass
	3624.99	Outer_Full	58.31	62.08	/	Pass
	3669.99	Outer_Full	58.12	61.67	/	Pass

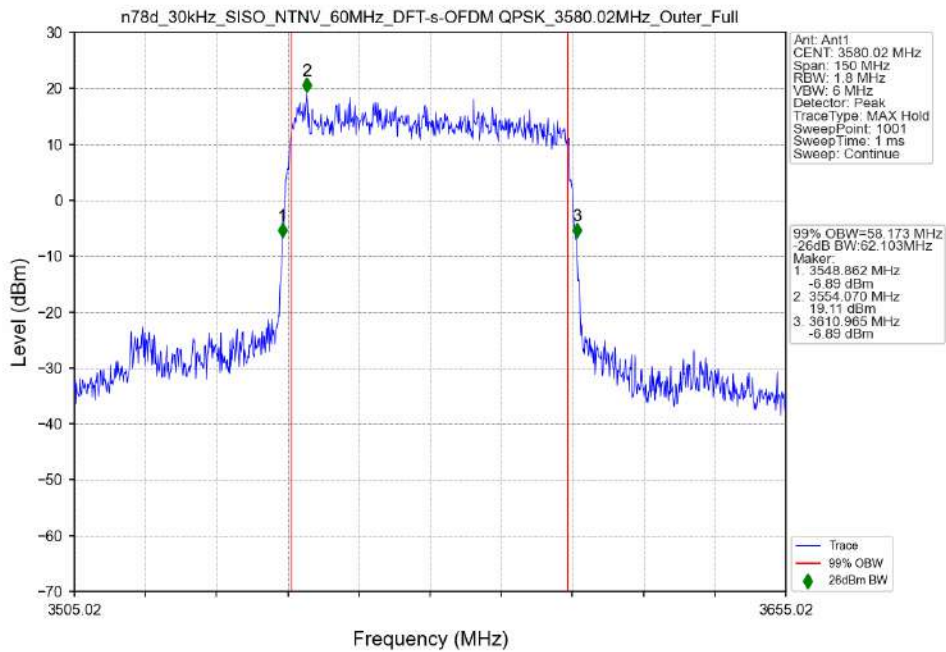
3.5.2 Test Graph



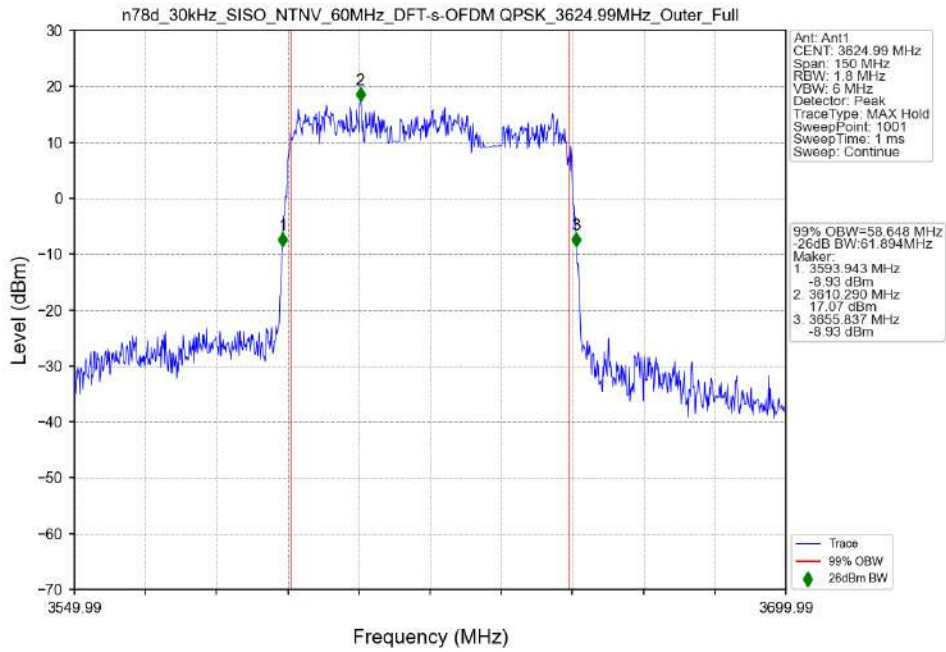
n78d_30kHz_SISO_NTNV_60MHz_DFT-s-OFDM PI/2 BPSK_3669.99MHz_Outer_Full



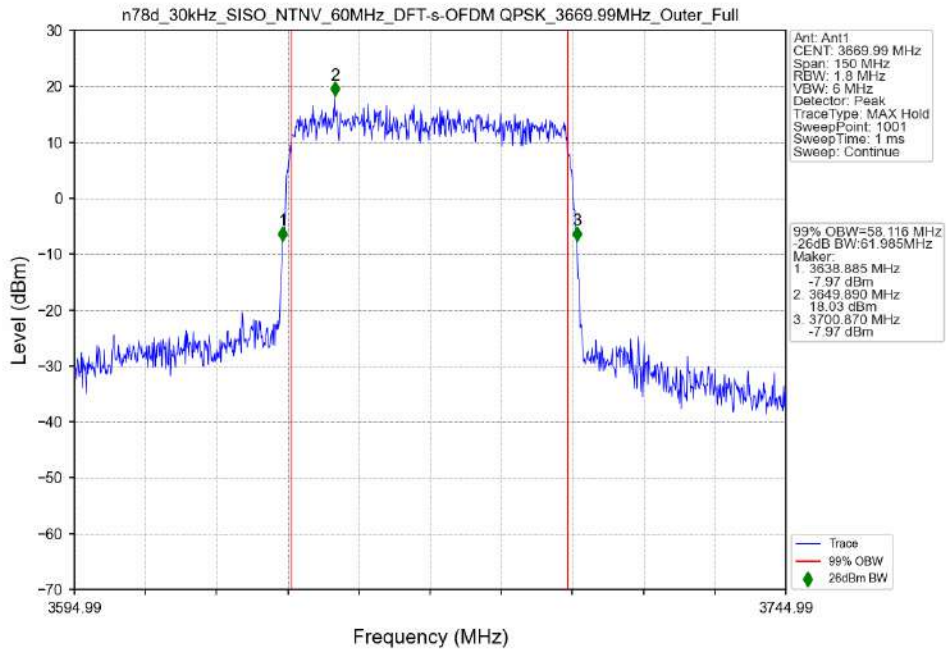
n78d_30kHz_SISO_NTNV_60MHz_DFT-s-OFDM QPSK_3580.02MHz_Outer_Full



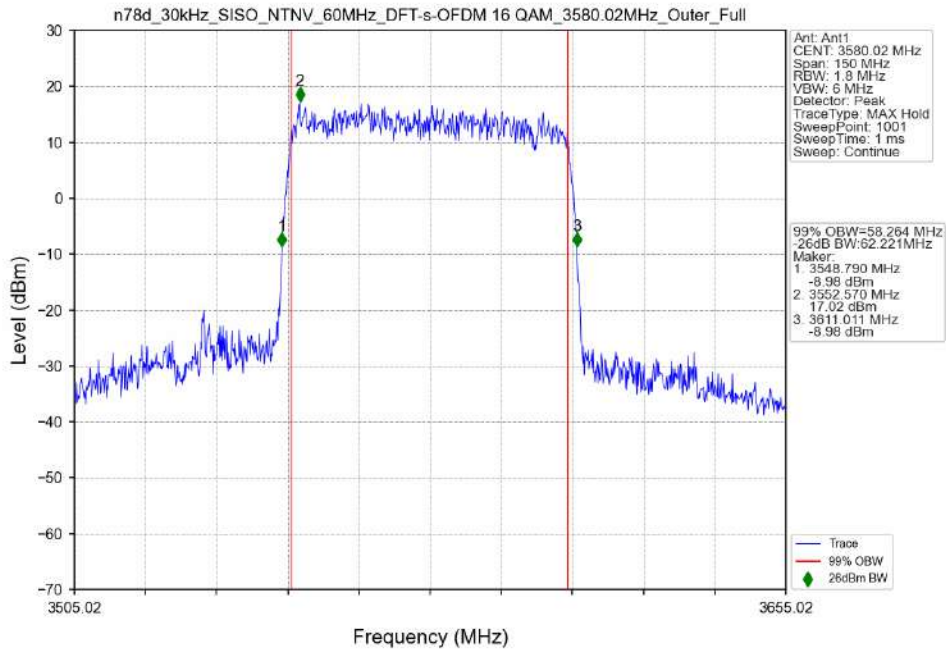
n78d_30kHz_SISO_NTNV_60MHz_DFT-s-OFDM QPSK_3624.99MHz_Outer_Full



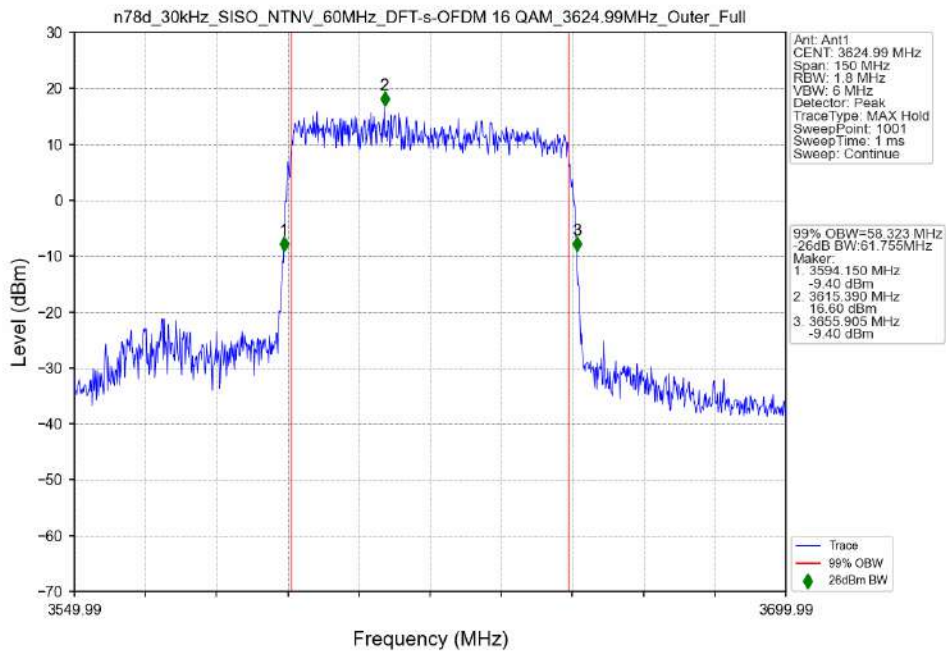
n78d_30kHz_SISO_NTNV_60MHz_DFT-s-OFDM QPSK_3669.99MHz_Outer_Full



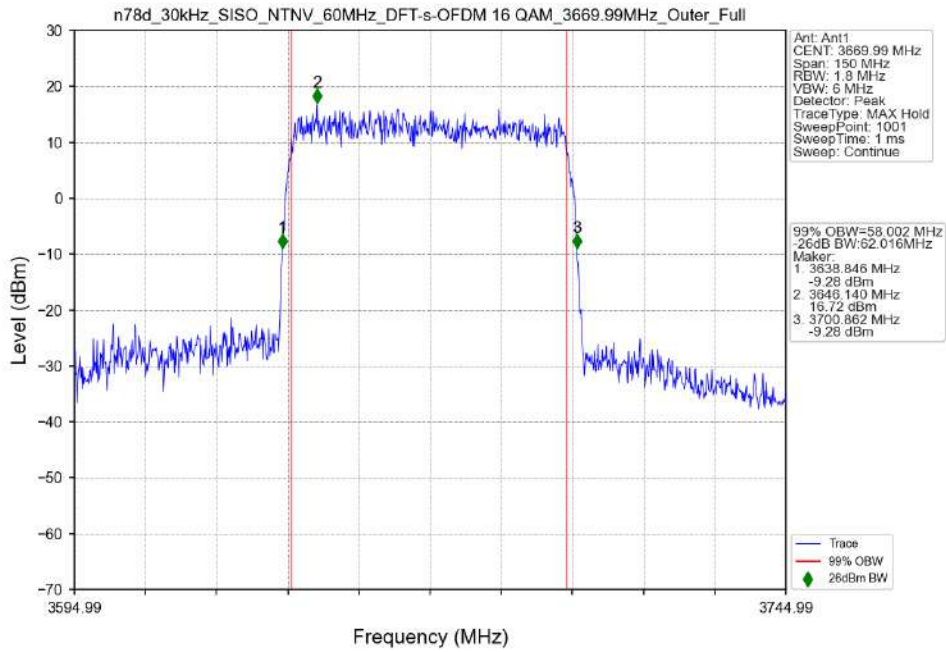
n78d_30kHz_SISO_NTNV_60MHz_DFT-s-OFDM_16_QAM_3580.02MHz_Outer_Full



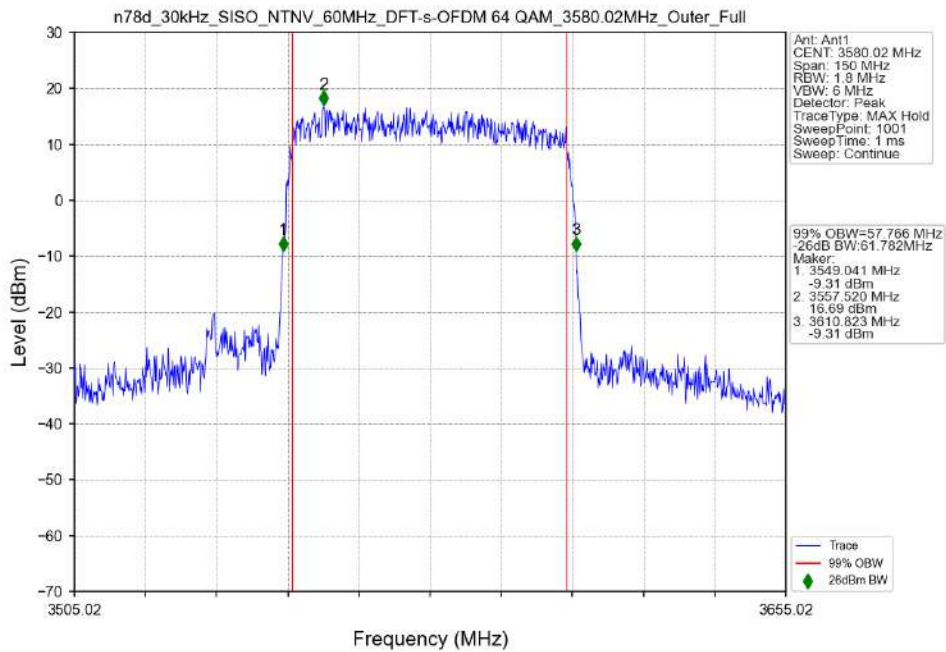
n78d_30kHz_SISO_NTNV_60MHz_DFT-s-OFDM_16_QAM_3624.99MHz_Outer_Full



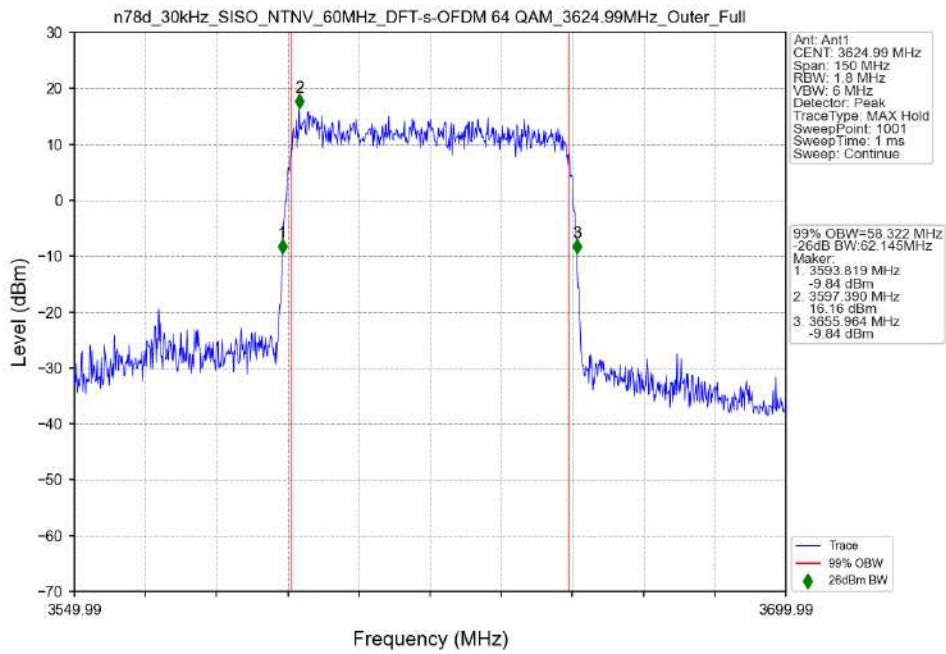
n78d_30kHz_SISO_NTNV_60MHz_DFT-s-OFDM 16 QAM_3669.99MHz_Outer_Full



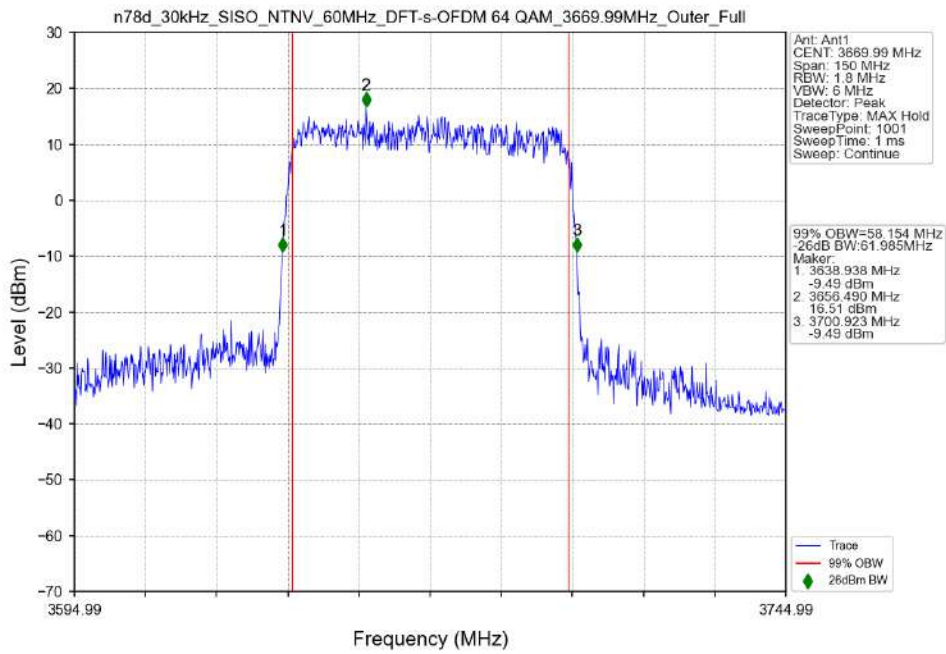
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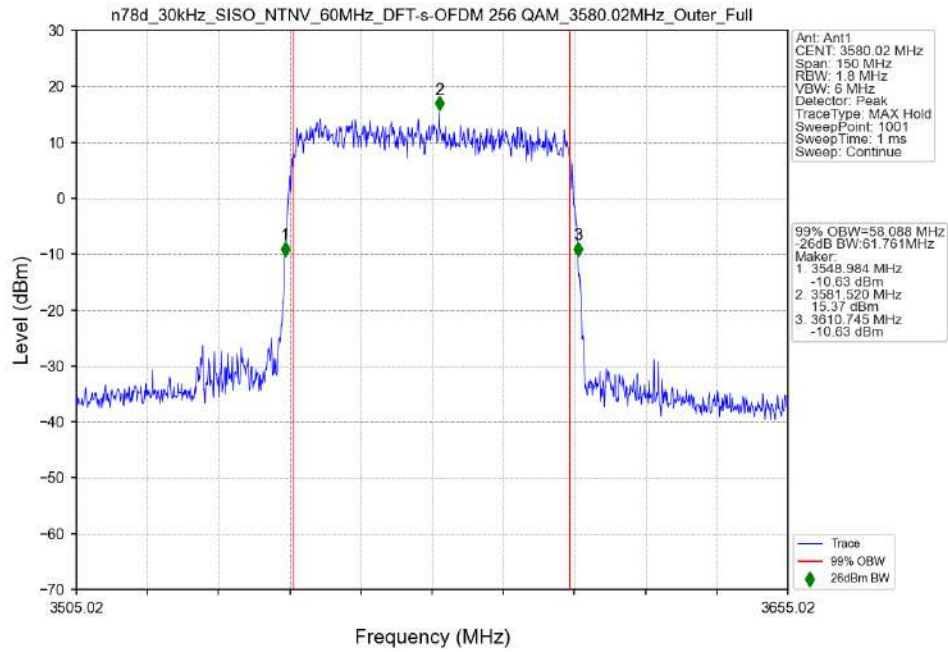
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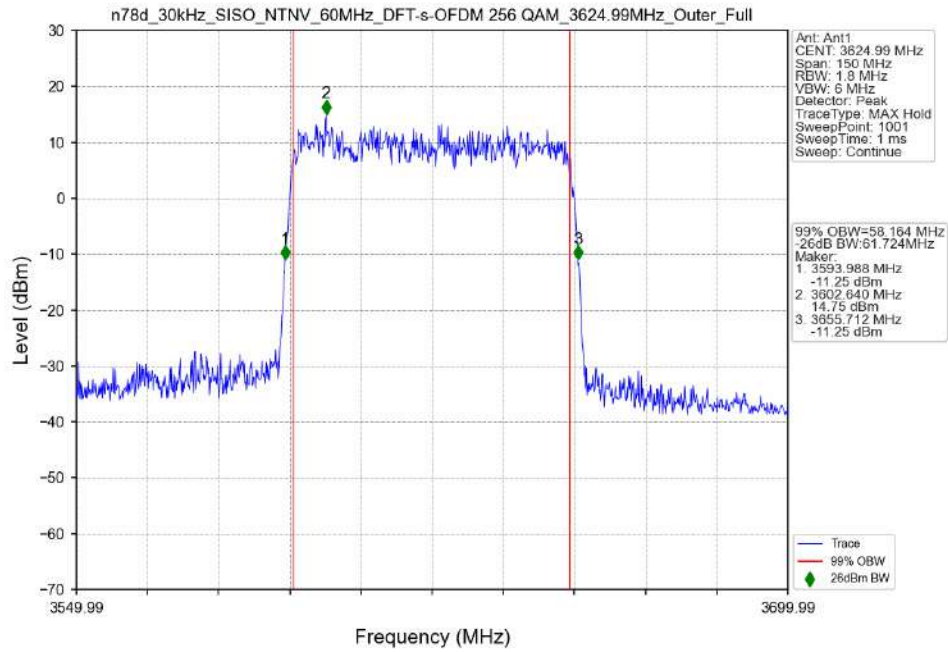
n78d_30kHz_SISO_NTNV_60MHz_DFT-s-OFDM_64_QAM_3669.99MHz_Outer_Full



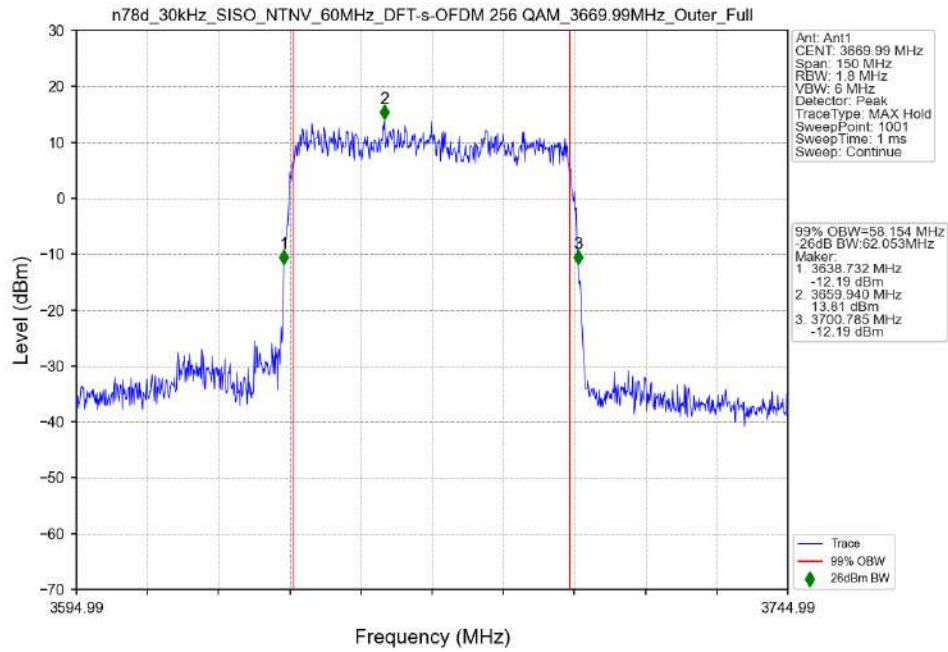
n78d_30kHz_SISO_NTNV_60MHz_DFT-s-OFDM_256_QAM_3580.02MHz_Outer_Full



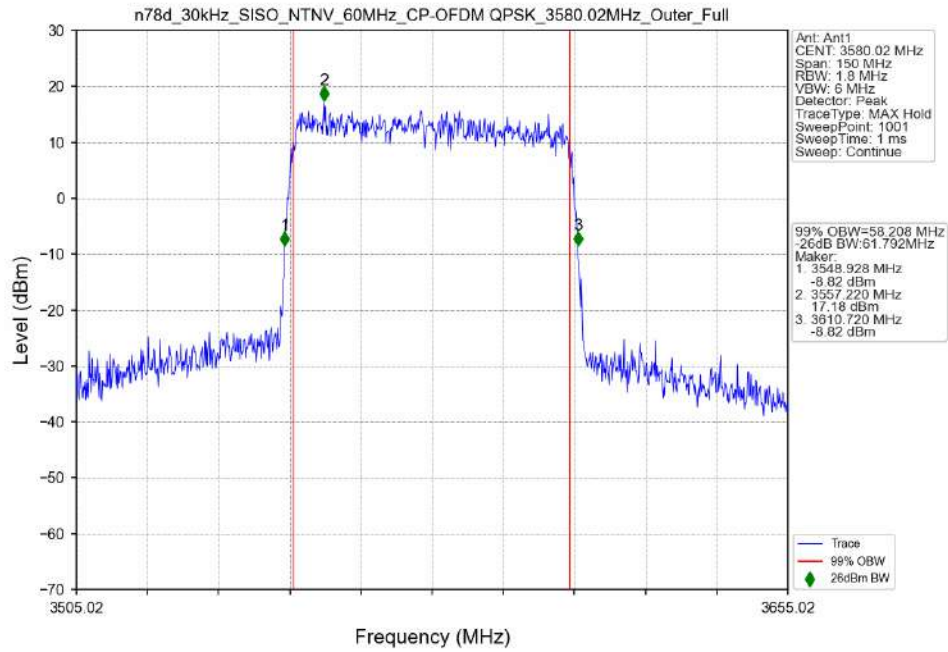
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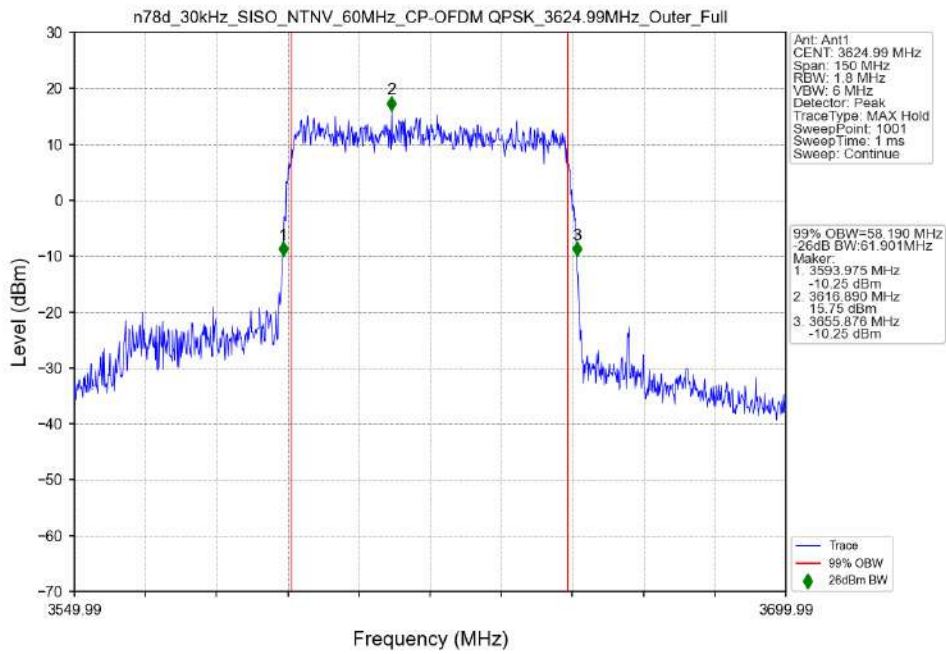
n78d_30kHz_SISO_NTNV_60MHz_DFT-s-OFDM 256 QAM_3669.99MHz_Outer_Full



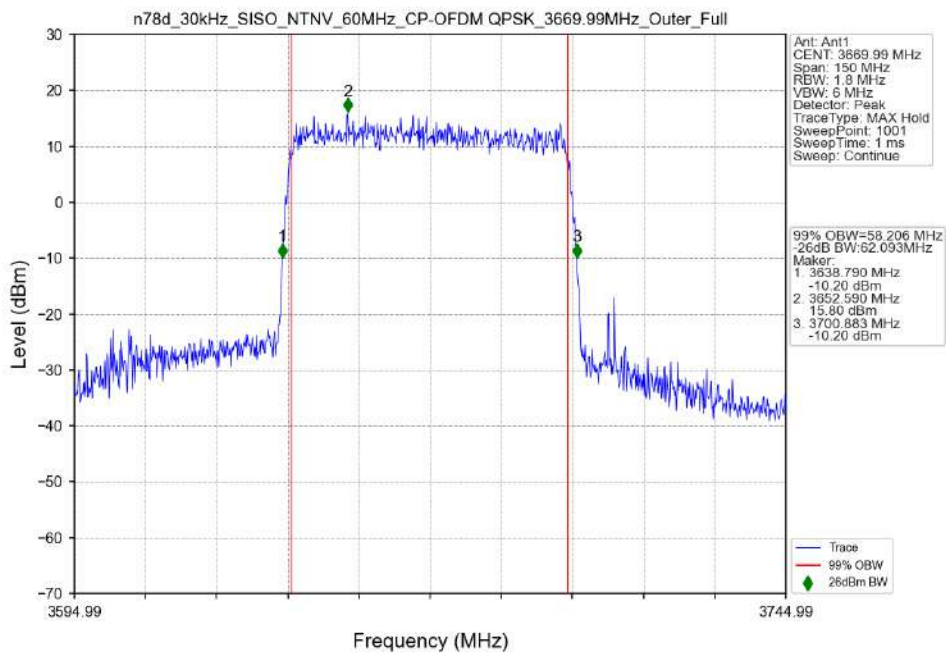
n78d_30kHz_SISO_NTNV_60MHz_CP-OFDM QPSK_3580.02MHz_Outer_Full



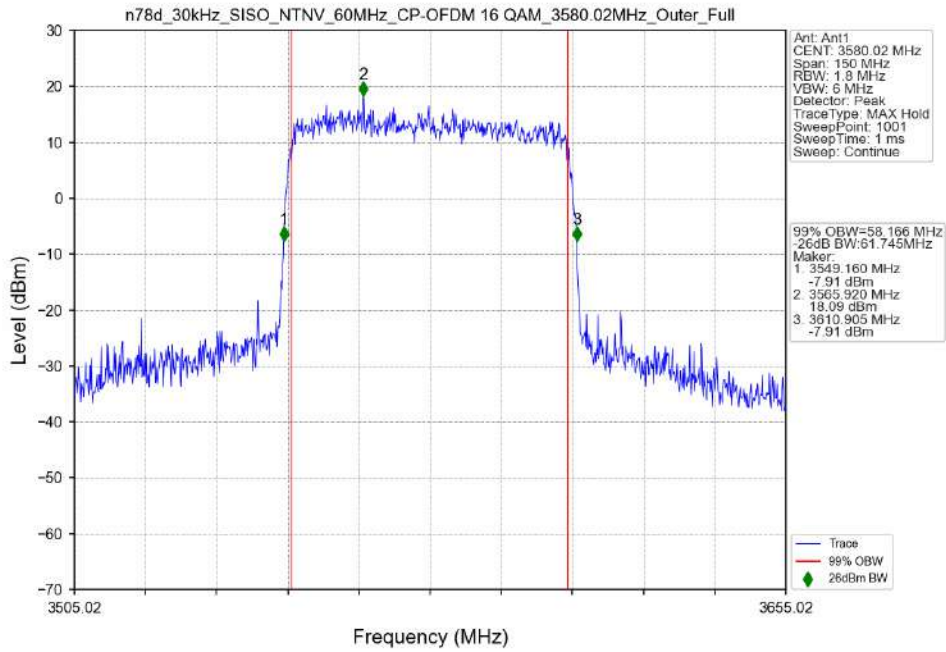
n78d_30kHz_SISO_NTNV_60MHz_CP-OFDM QPSK_3624.99MHz_Outer_Full



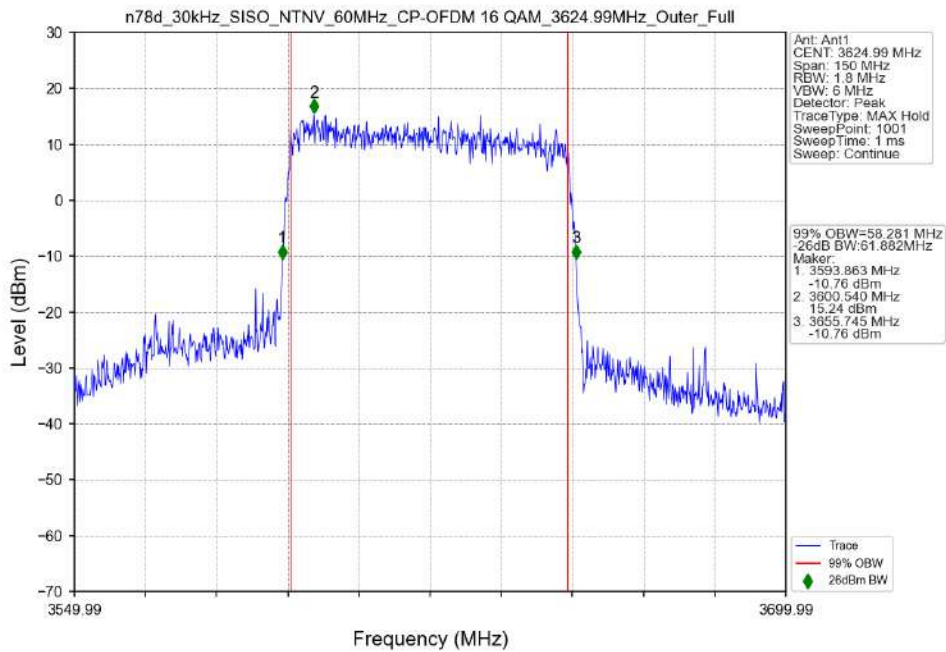
n78d_30kHz_SISO_NTNV_60MHz_CP-OFDM QPSK_3669.99MHz_Outer_Full



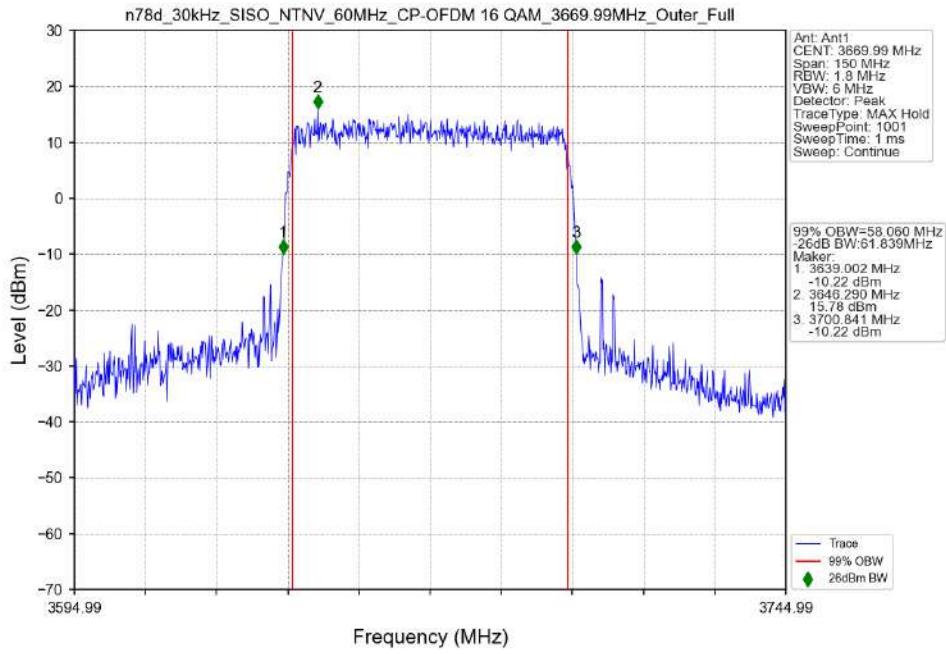
n78d_30kHz_SISO_NTNV_60MHz_CP-OFDM 16 QAM_3580.02MHz_Outer_Full



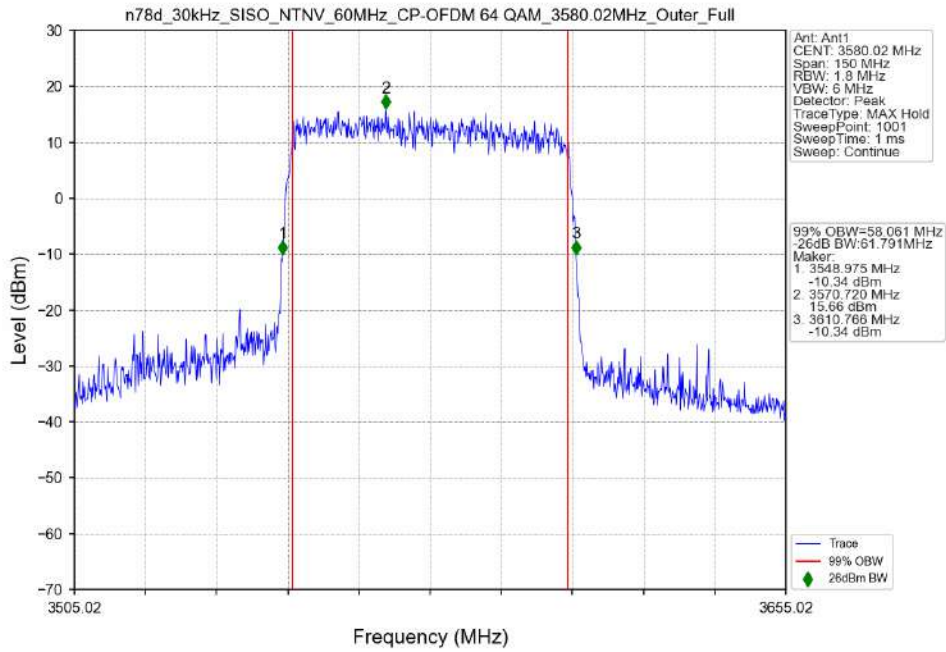
n78d_30kHz_SISO_NTNV_60MHz_CP-OFDM 16 QAM_3624.99MHz_Outer_Full



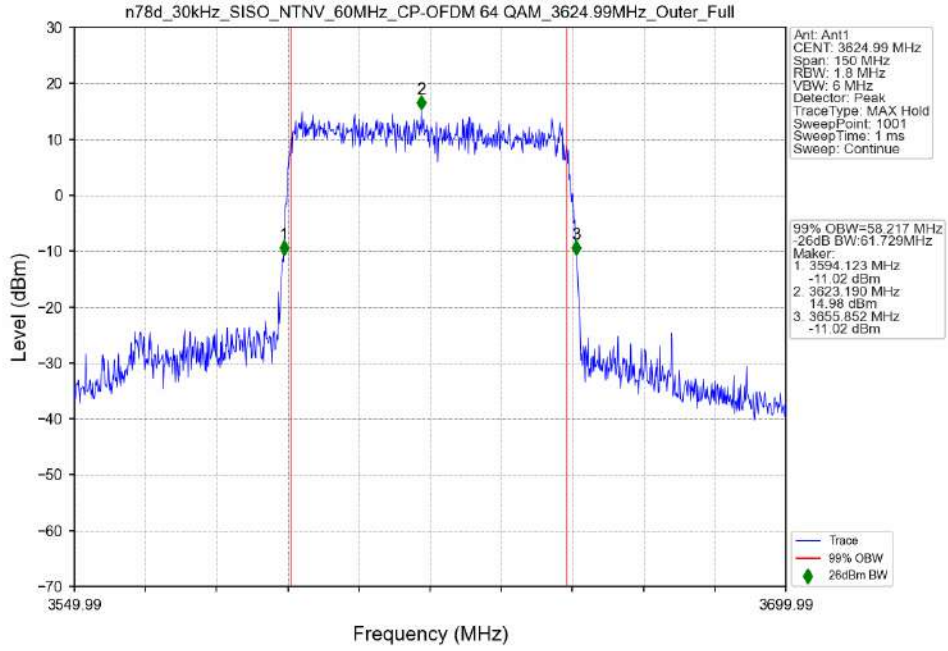
n78d_30kHz_SISO_NTNV_60MHz_CP-OFDM 16 QAM_3669.99MHz_Outer_Full



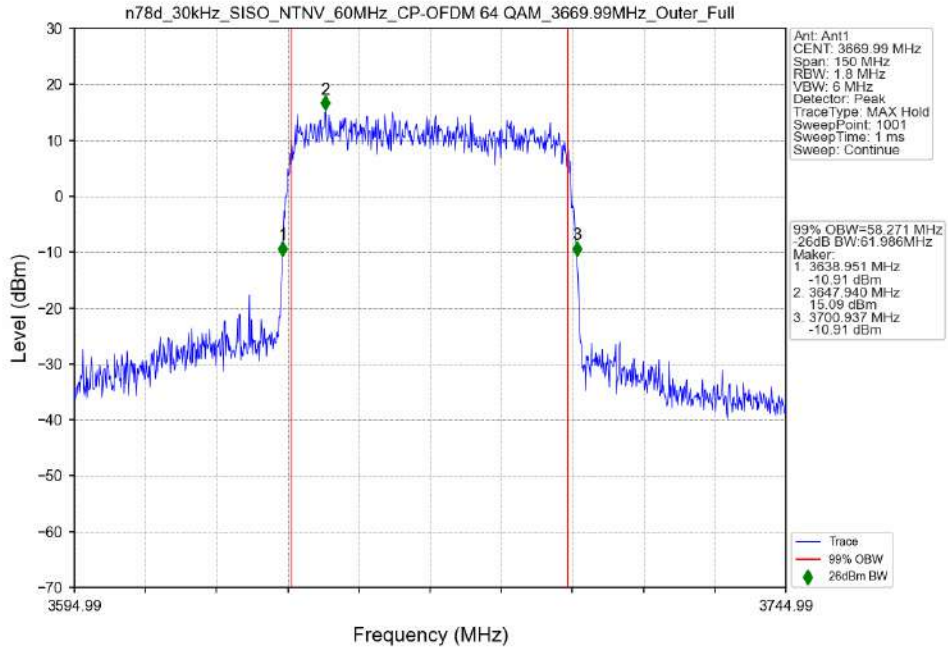
n78d_30kHz_SISO_NTNV_60MHz_CP-OFDM 64 QAM_3580.02MHz_Outer_Full



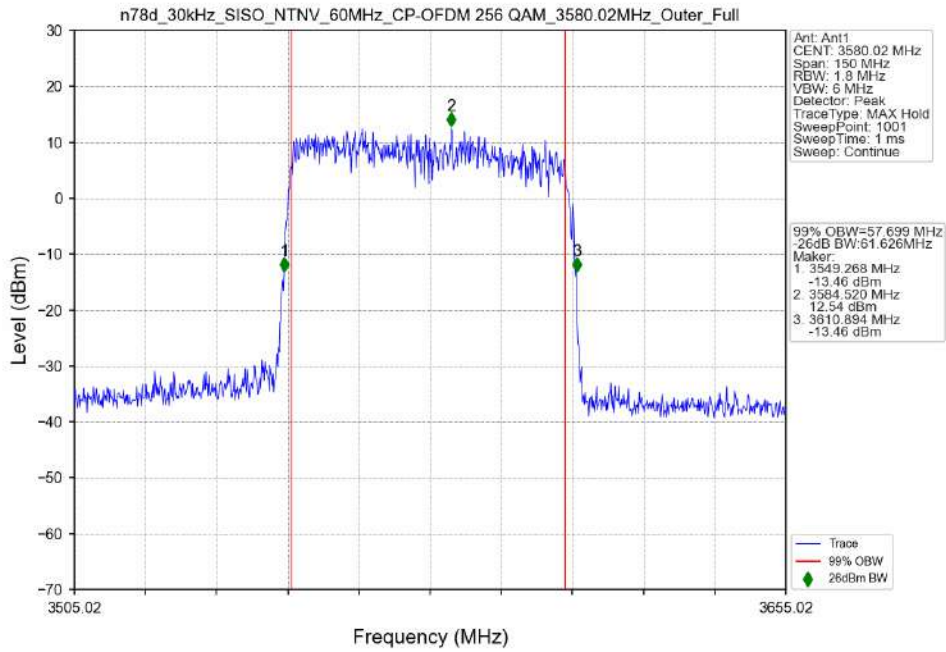
n78d_30kHz_SISO_NTNV_60MHz_CP-OFDM 64 QAM_3624.99MHz_Outer_Full



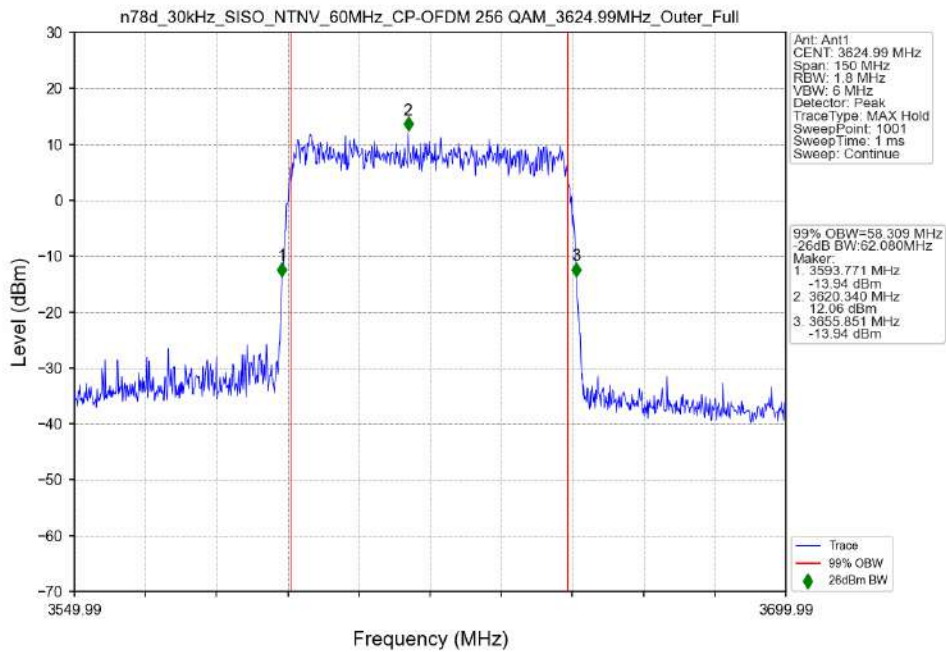
n78d_30kHz_SISO_NTNV_60MHz_CP-OFDM 64 QAM_3669.99MHz_Outer_Full



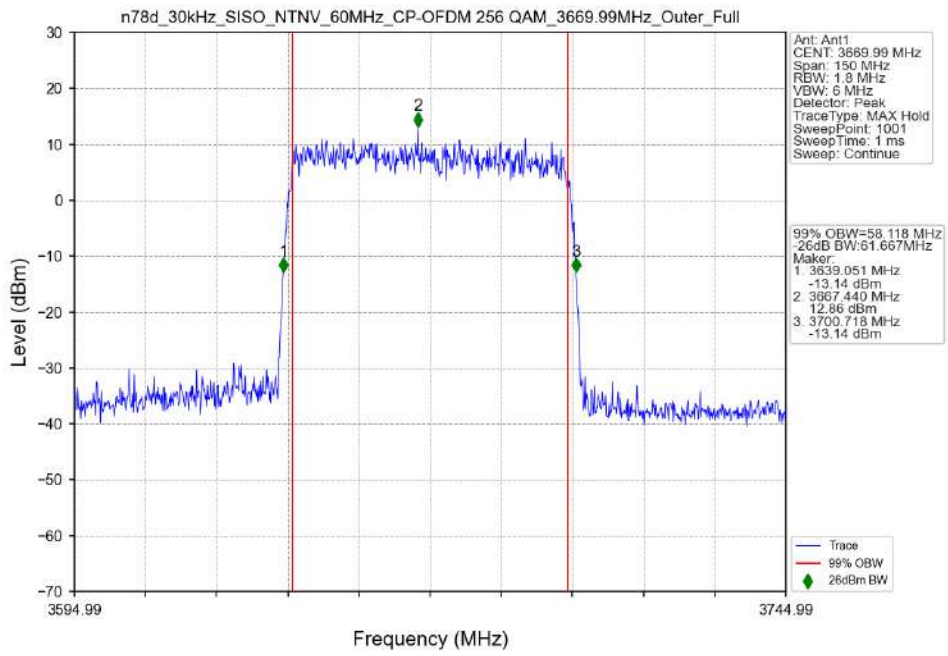
n78d_30kHz_SISO_NTNV_60MHz_CP-OFDM 256 QAM_3580.02MHz_Outer_Full



n78d_30kHz_SISO_NTNV_60MHz_CP-OFDM 256 QAM_3624.99MHz_Outer_Full



n78d_30kHz_SISO_NTNV_60MHz_CP-OFDM 256 QAM 3669.99MHz_Outer_Full

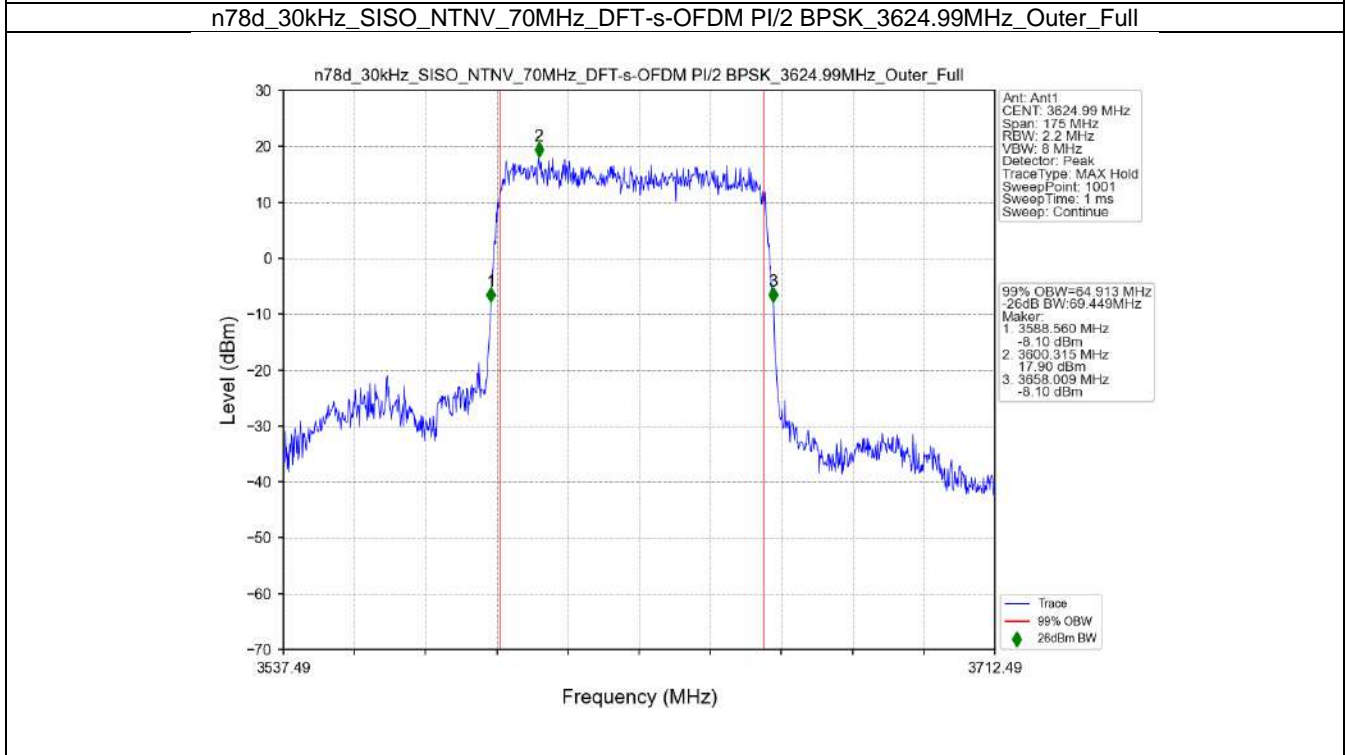
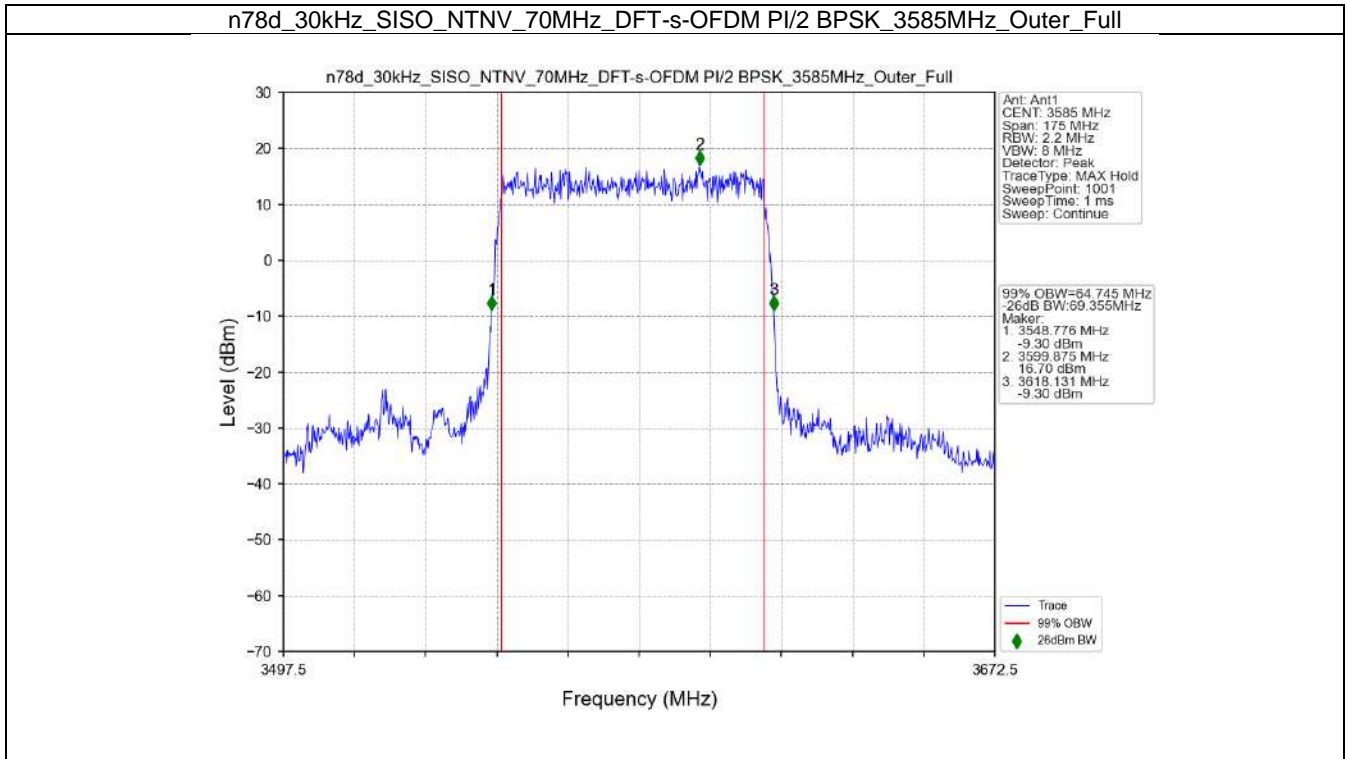


3.6 30k_SISO_70MHz_NTNV

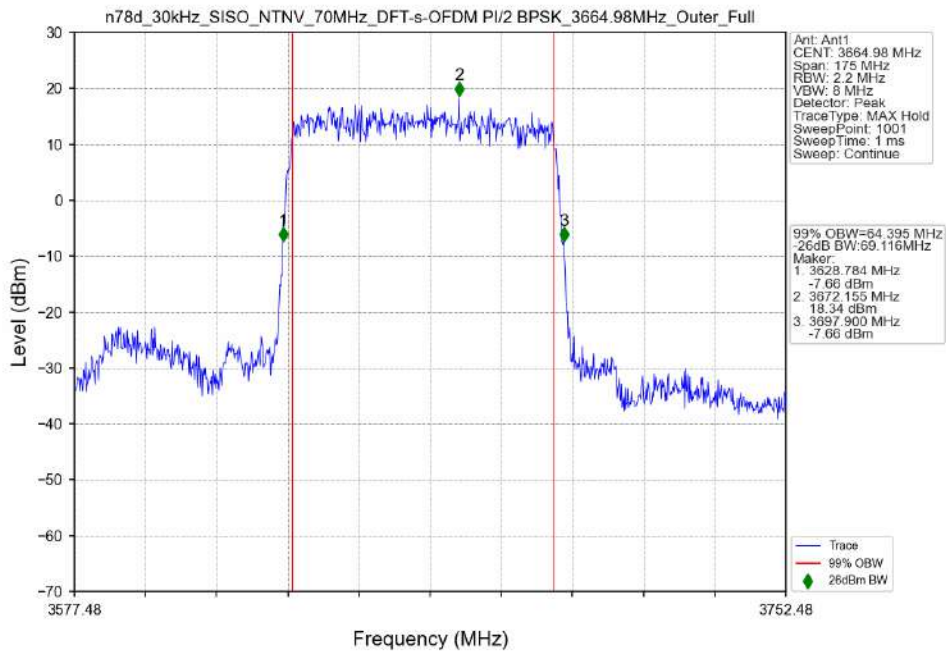
3.6.1 Test Result

5G NR n78d SCS=30kHz SISO 70MHz NTN						
Modulation	Frequency (MHz)	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	3585	Outer_Full	64.75	69.36	/	Pass
	3624.99	Outer_Full	64.91	69.45	/	Pass
	3664.98	Outer_Full	64.39	69.12	/	Pass
DFT-s-OFDM QPSK	3585	Outer_Full	65.25	69.34	/	Pass
	3624.99	Outer_Full	64.91	69.37	/	Pass
	3664.98	Outer_Full	64.87	69.41	/	Pass
DFT-s-OFDM 16 QAM	3585	Outer_Full	65.13	69.41	/	Pass
	3624.99	Outer_Full	65.00	69.19	/	Pass
	3664.98	Outer_Full	64.64	69.28	/	Pass
DFT-s-OFDM 64 QAM	3585	Outer_Full	64.65	69.02	/	Pass
	3624.99	Outer_Full	64.70	69.62	/	Pass
	3664.98	Outer_Full	64.57	68.99	/	Pass
DFT-s-OFDM 256 QAM	3585	Outer_Full	64.95	69.62	/	Pass
	3624.99	Outer_Full	64.68	68.84	/	Pass
	3664.98	Outer_Full	64.60	69.12	/	Pass
CP-OFDM QPSK	3585	Outer_Full	67.84	72.36	/	Pass
	3624.99	Outer_Full	67.63	72.17	/	Pass
	3664.98	Outer_Full	67.94	72.72	/	Pass
CP-OFDM 16 QAM	3585	Outer_Full	68.04	72.72	/	Pass
	3624.99	Outer_Full	68.07	72.57	/	Pass
	3664.98	Outer_Full	67.97	72.30	/	Pass
CP-OFDM 64 QAM	3585	Outer_Full	67.96	72.37	/	Pass
	3624.99	Outer_Full	67.80	72.43	/	Pass
	3664.98	Outer_Full	68.06	72.15	/	Pass
CP-OFDM 256 QAM	3585	Outer_Full	67.97	72.47	/	Pass
	3624.99	Outer_Full	67.73	71.85	/	Pass
	3664.98	Outer_Full	67.85	72.36	/	Pass

3.6.2 Test Graph



n78d_30kHz_SISO_NTNV_70MHz_DFT-s-OFDM PI/2 BPSK_3664.98MHz_Outer_Full



n78d_30kHz_SISO_NTNV_70MHz_DFT-s-OFDM QPSK_3585MHz_Outer_Full

