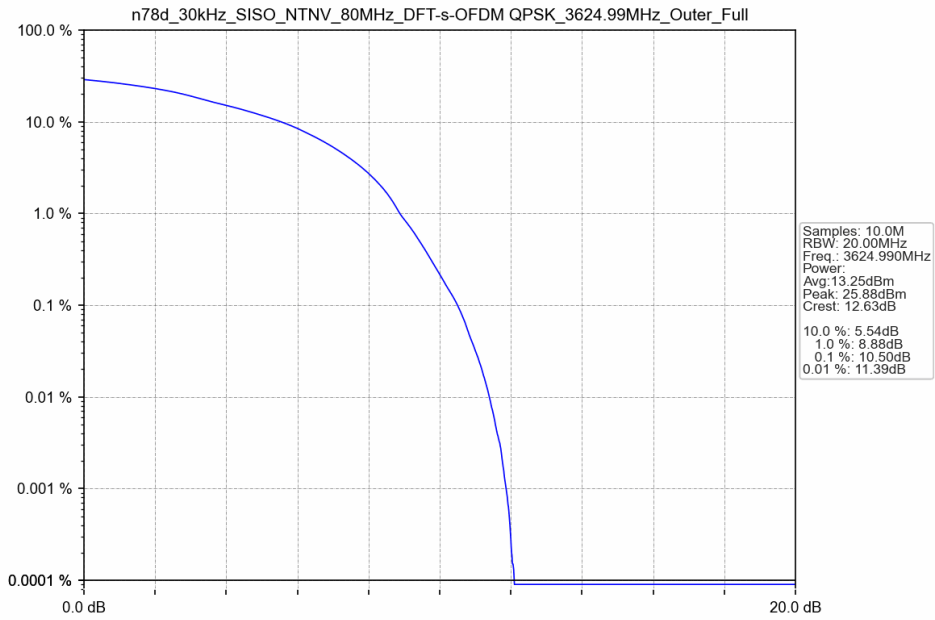
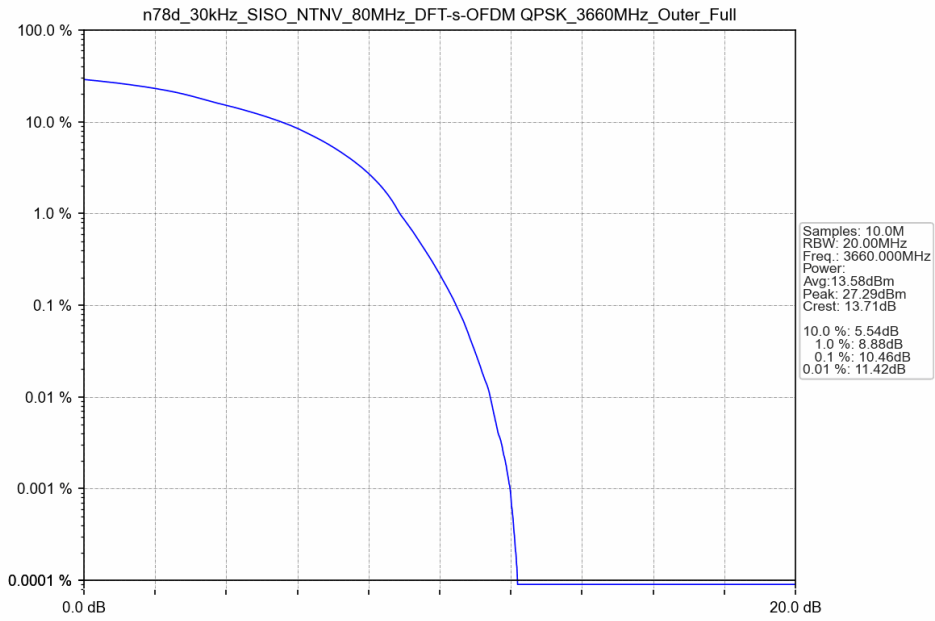


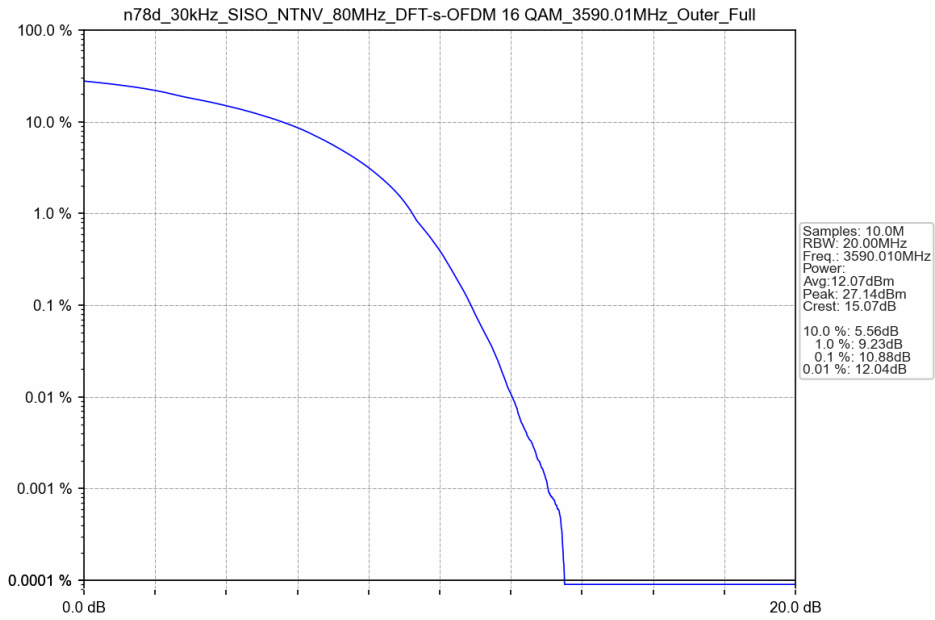
n78d_30kHz_SISO_NTNV_80MHz_DFT-s-OFDM QPSK_3624.99MHz_Outer_Full



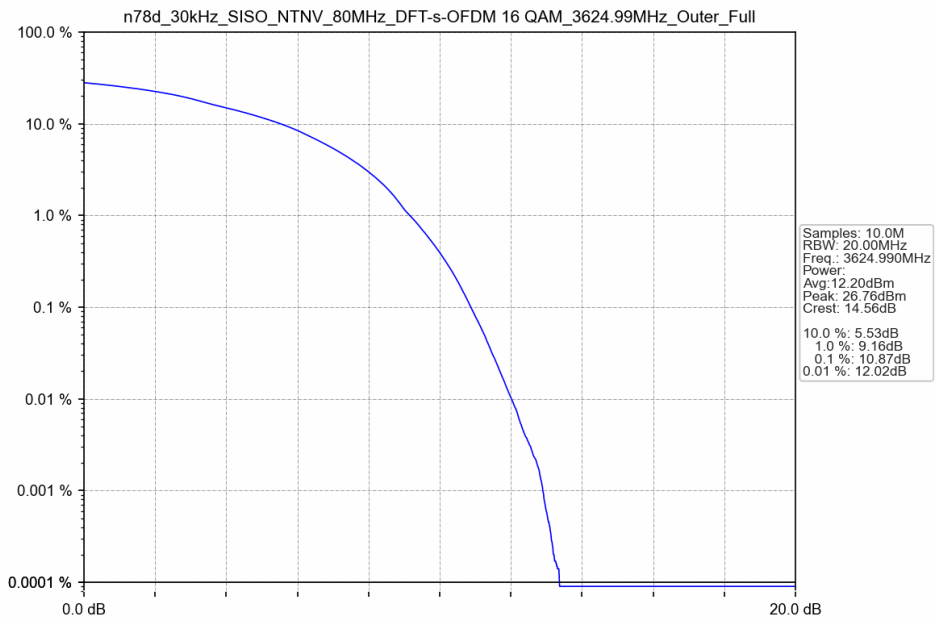
n78d_30kHz_SISO_NTNV_80MHz_DFT-s-OFDM QPSK_3660MHz_Outer_Full



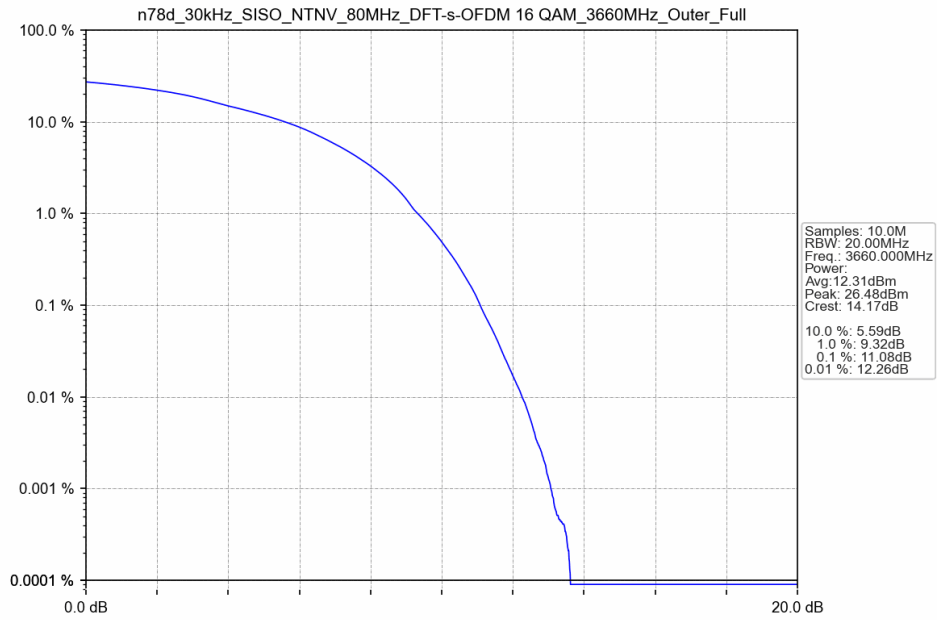
n78d_30kHz_SISO_NTNV_80MHz_DFT-s-OFDM 16 QAM_3590.01MHz_Outer_Full



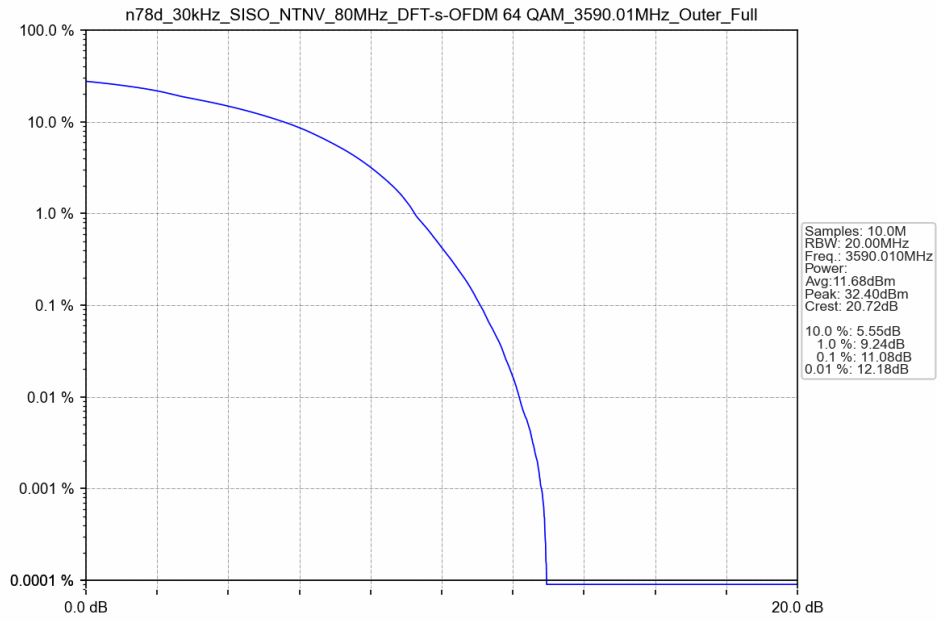
n78d_30kHz_SISO_NTNV_80MHz_DFT-s-OFDM 16 QAM_3624.99MHz_Outer_Full



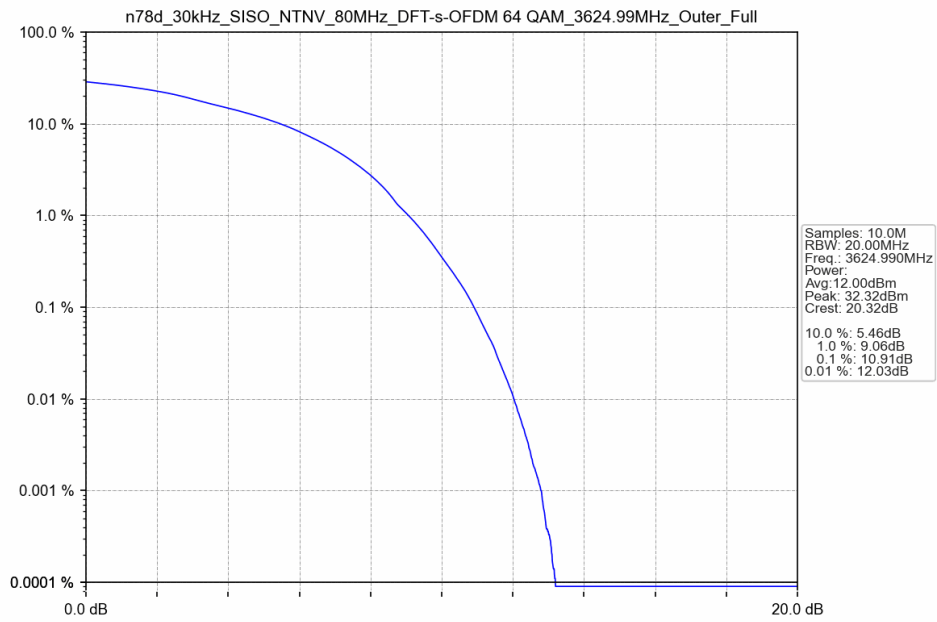
n78d_30kHz_SISO_NTNV_80MHz_DFT-s-OFDM 16 QAM_3660MHz_Outer_Full



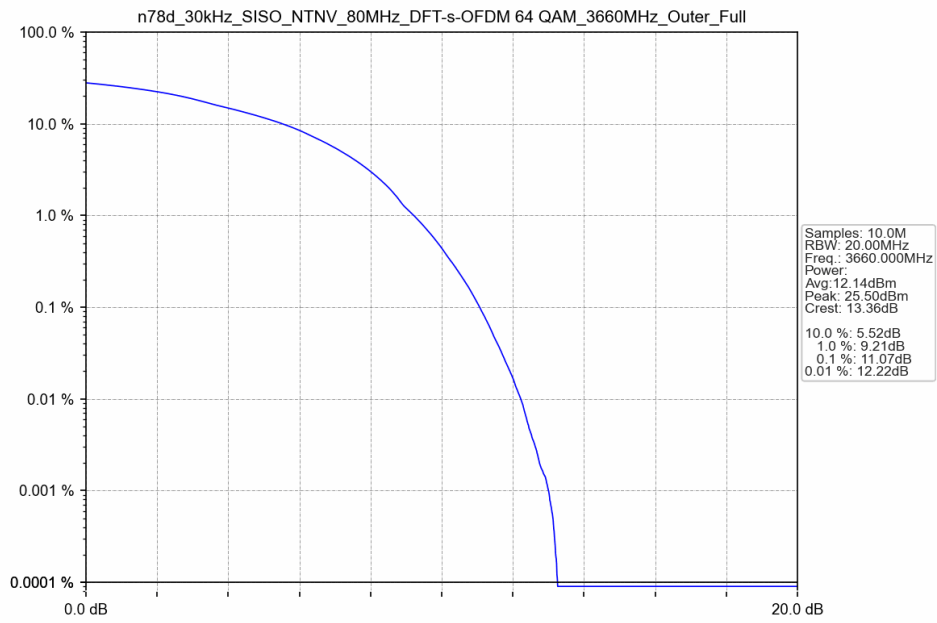
n78d_30kHz_SISO_NTNV_80MHz_DFT-s-OFDM 64 QAM_3590.01MHz_Outer_Full



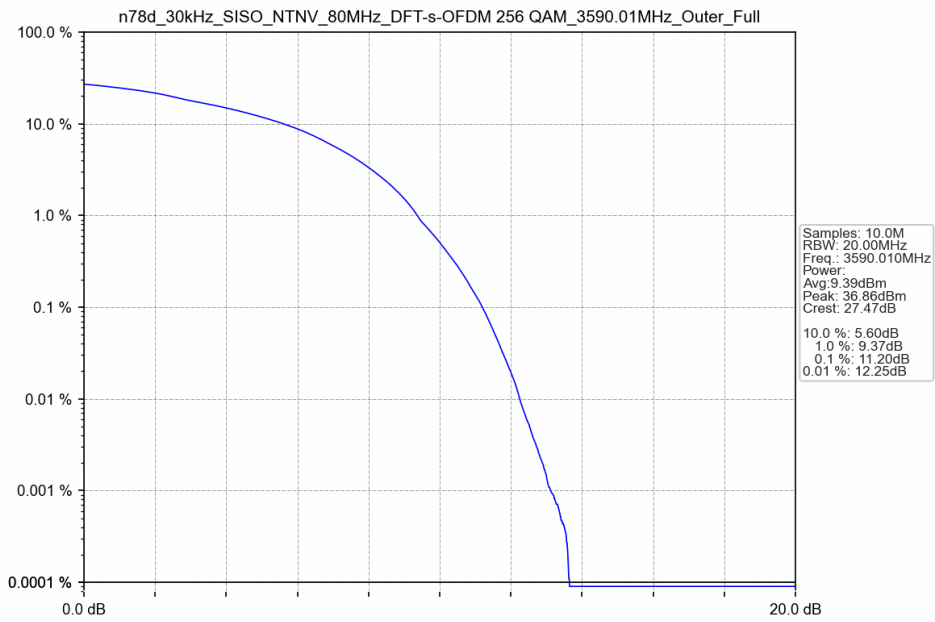
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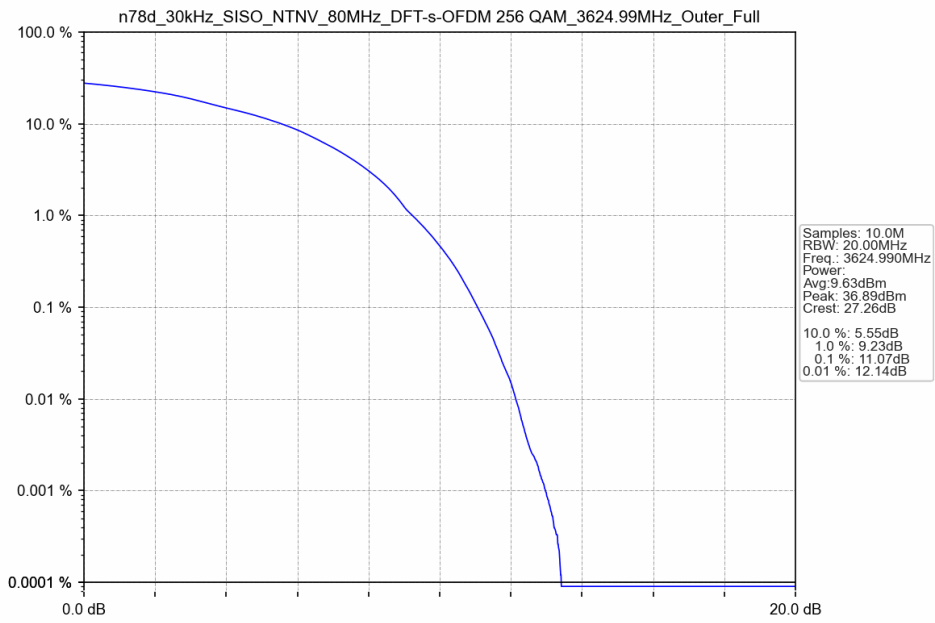
n78d_30kHz_SISO_NTNV_80MHz_DFT-s-OFDM 64 QAM_3660MHz_Outer_Full



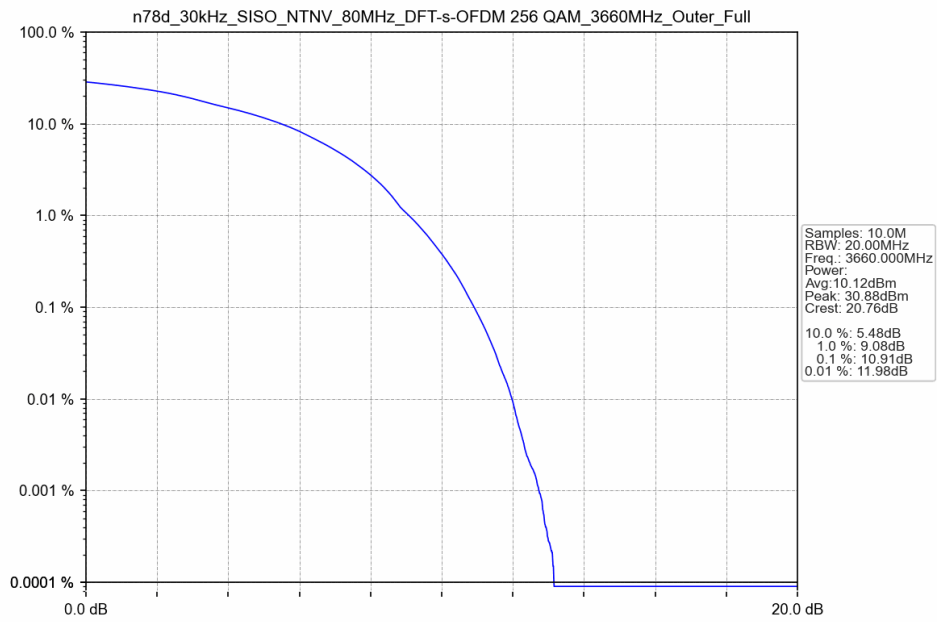
n78d_30kHz_SISO_NTNV_80MHz_DFT-s-OFDM_256_QAM_3590.01MHz_Outer_Full



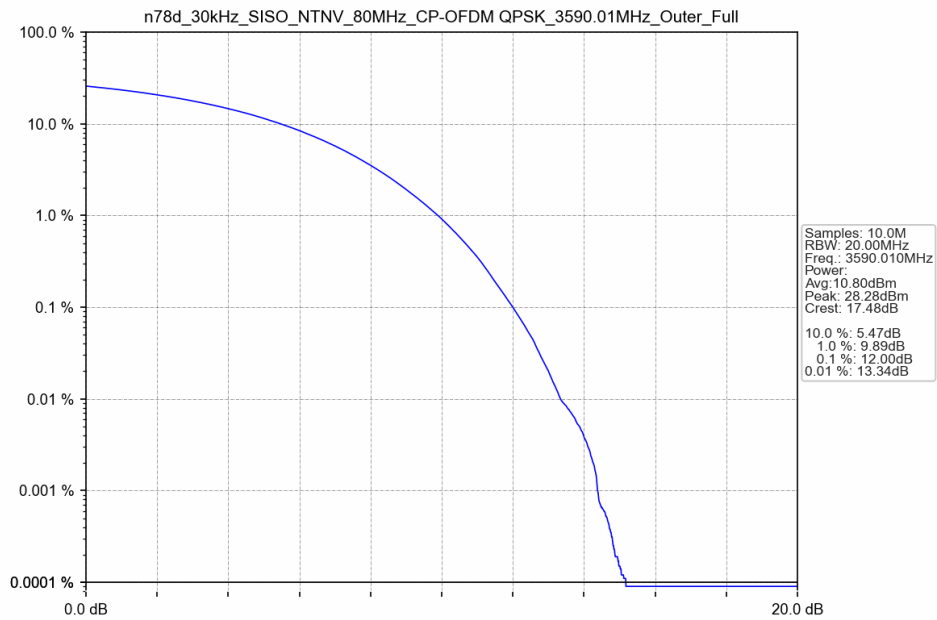
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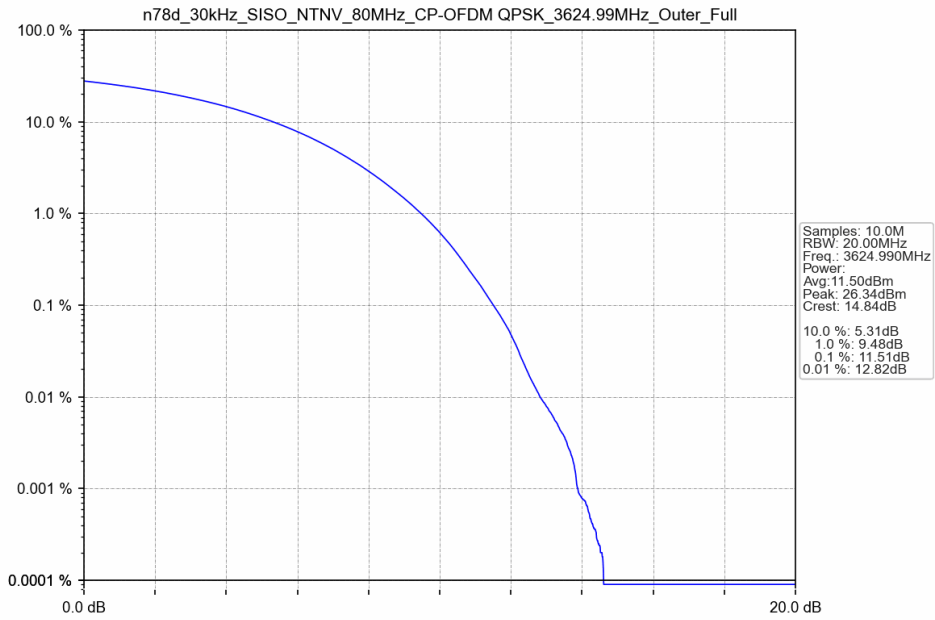
n78d_30kHz_SISO_NTNV_80MHz_DFT-s-OFDM 256 QAM_3660MHz_Outer_Full



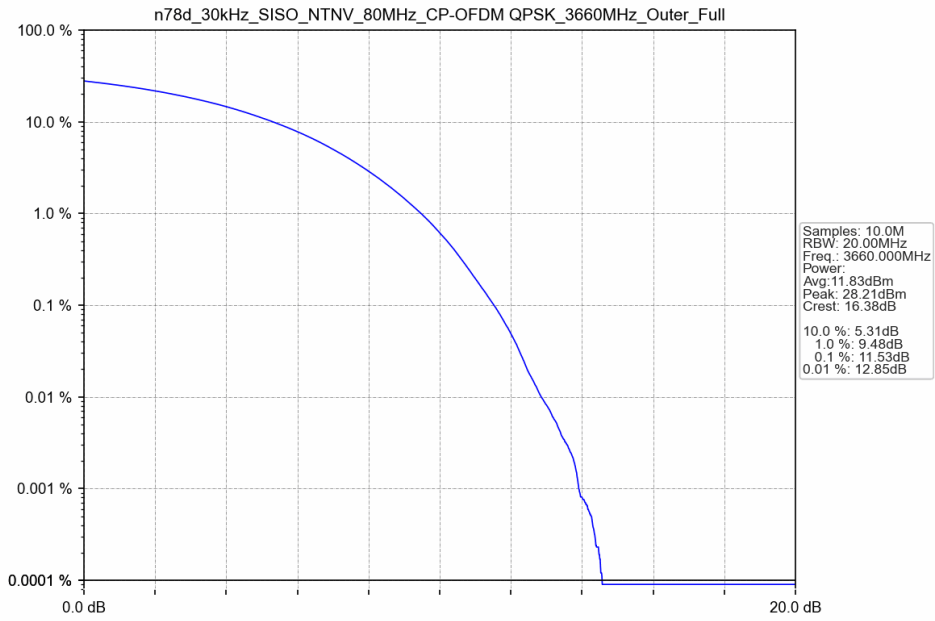
n78d_30kHz_SISO_NTNV_80MHz_CP-OFDM QPSK_3590.01MHz_Outer_Full



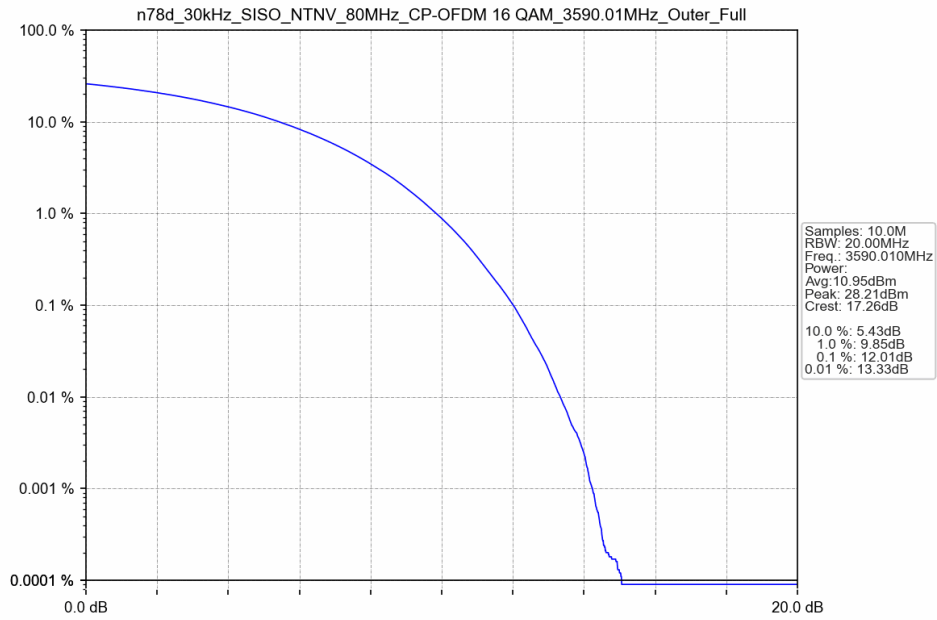
n78d_30kHz_SISO_NTNV_80MHz_CP-OFDM QPSK_3624.99MHz_Outer_Full



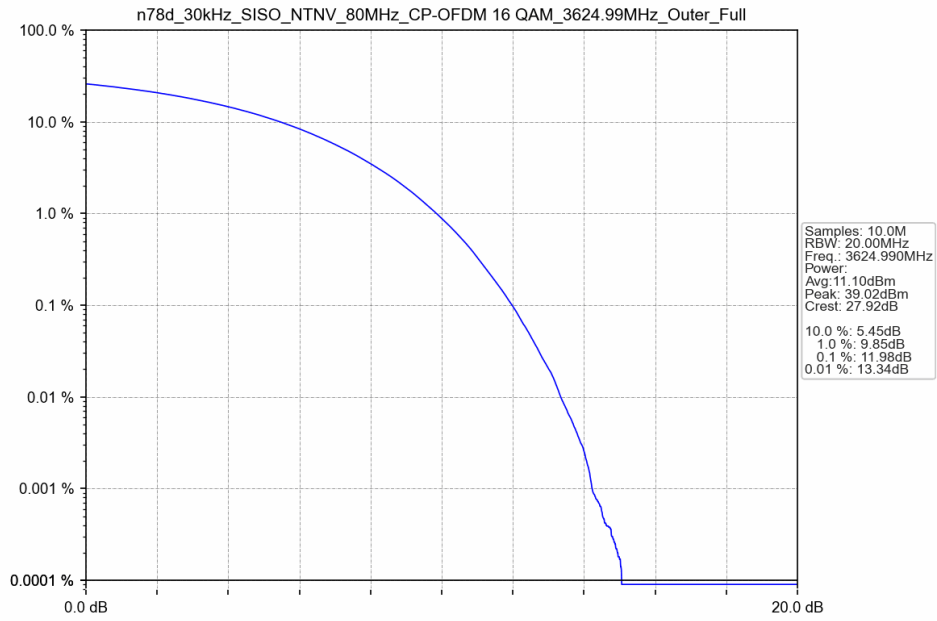
n78d_30kHz_SISO_NTNV_80MHz_CP-OFDM QPSK_3660MHz_Outer_Full



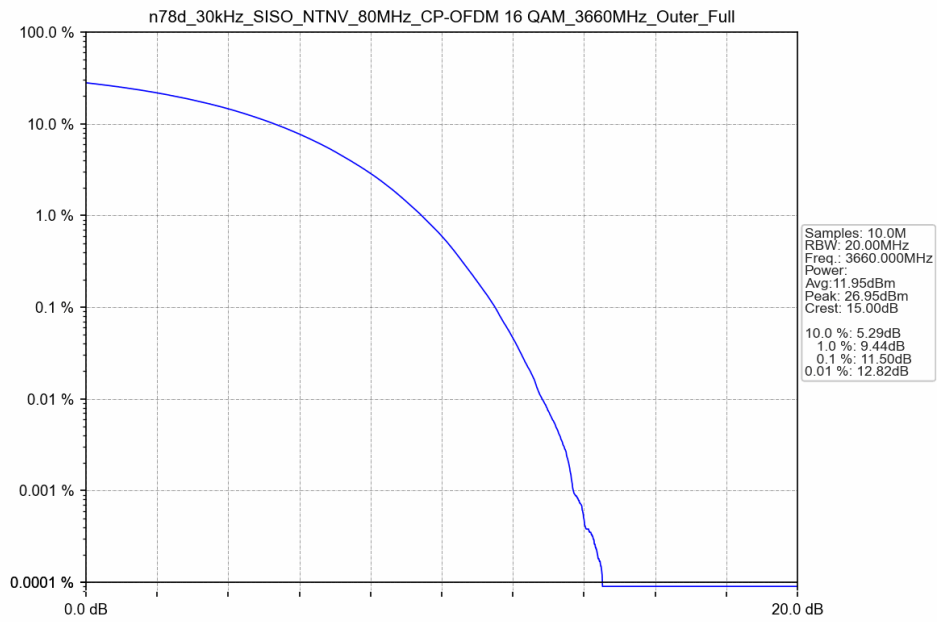
n78d_30kHz_SISO_NTNV_80MHz_CP-OFDM 16 QAM_3590.01MHz_Outer_Full



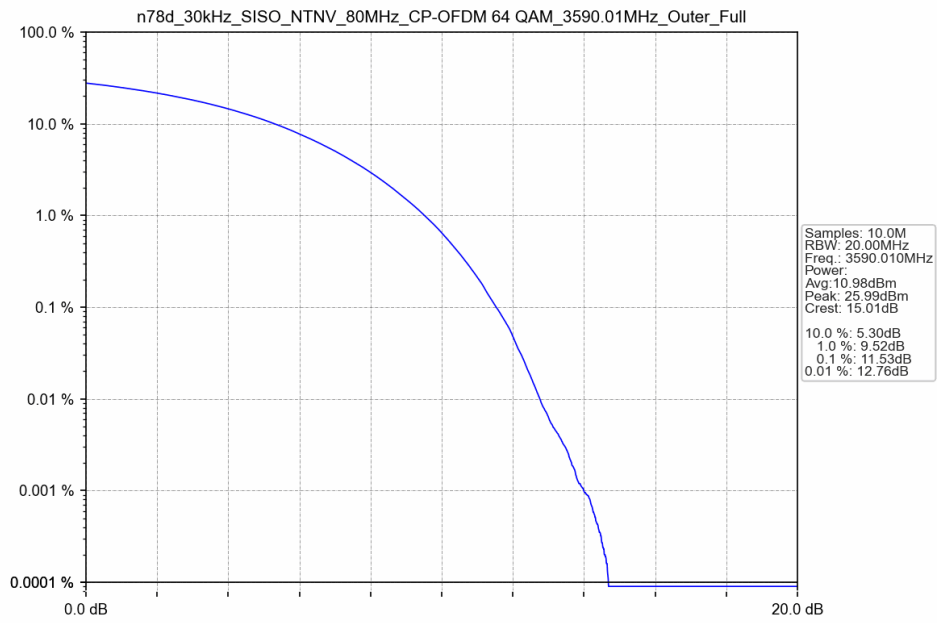
n78d_30kHz_SISO_NTNV_80MHz_CP-OFDM 16 QAM_3624.99MHz_Outer_Full



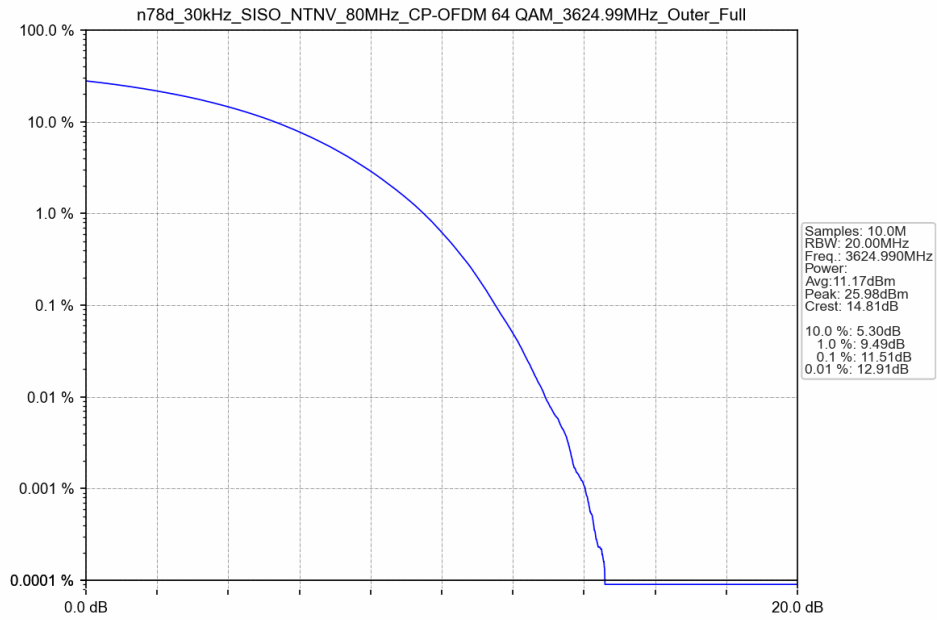
n78d_30kHz_SISO_NTNV_80MHz_CP-OFDM 16 QAM_3660MHz_Outer_Full



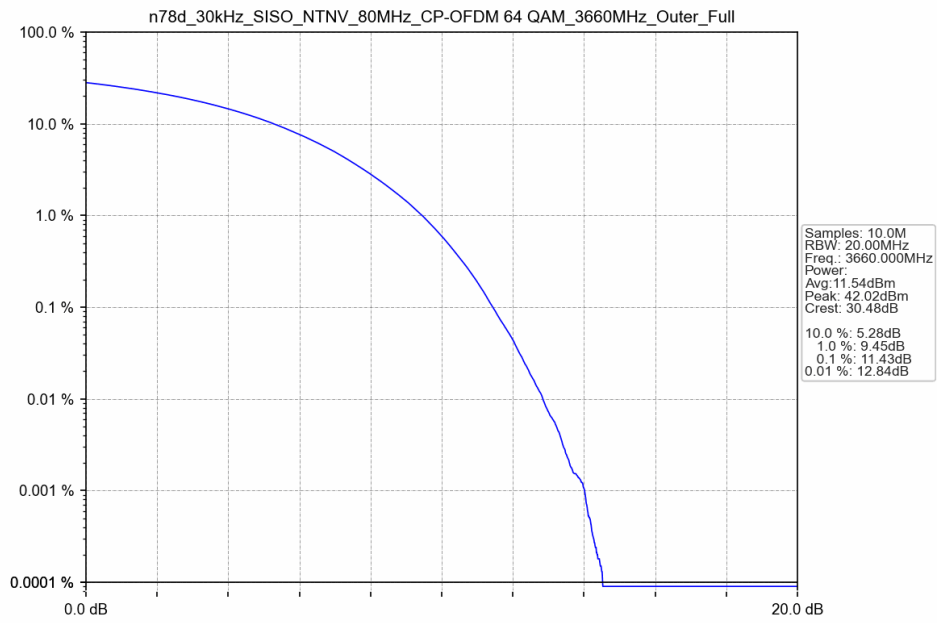
n78d_30kHz_SISO_NTNV_80MHz_CP-OFDM 64 QAM_3590.01MHz_Outer_Full



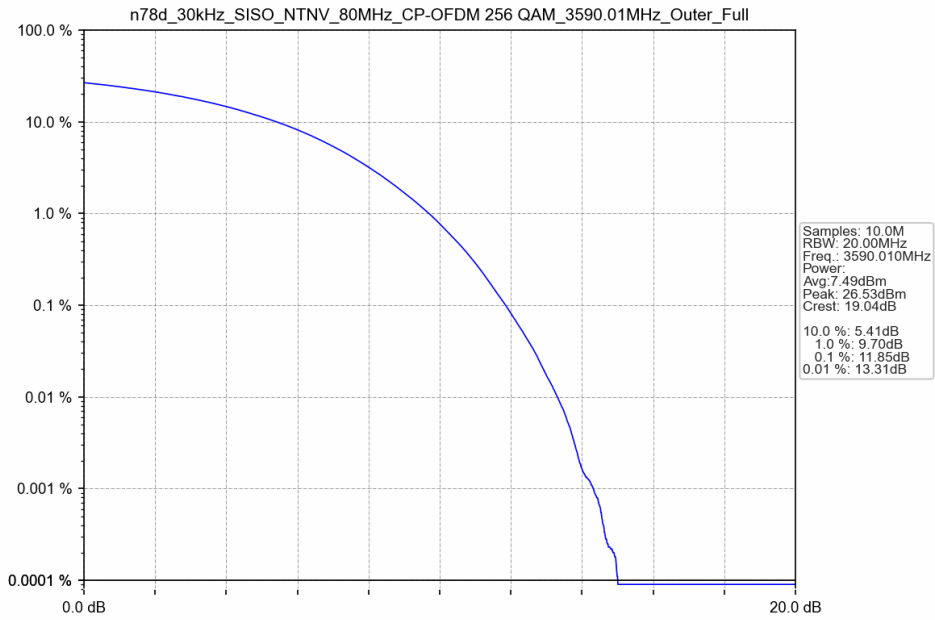
n78d_30kHz_SISO_NTNV_80MHz_CP-OFDM 64 QAM_3624.99MHz_Outer_Full



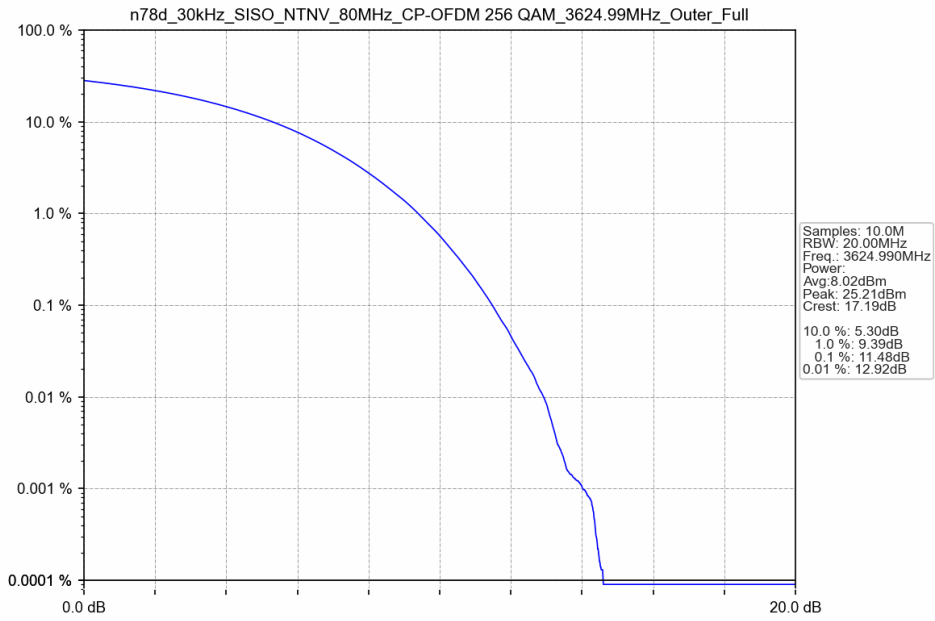
n78d_30kHz_SISO_NTNV_80MHz_CP-OFDM 64 QAM_3660MHz_Outer_Full



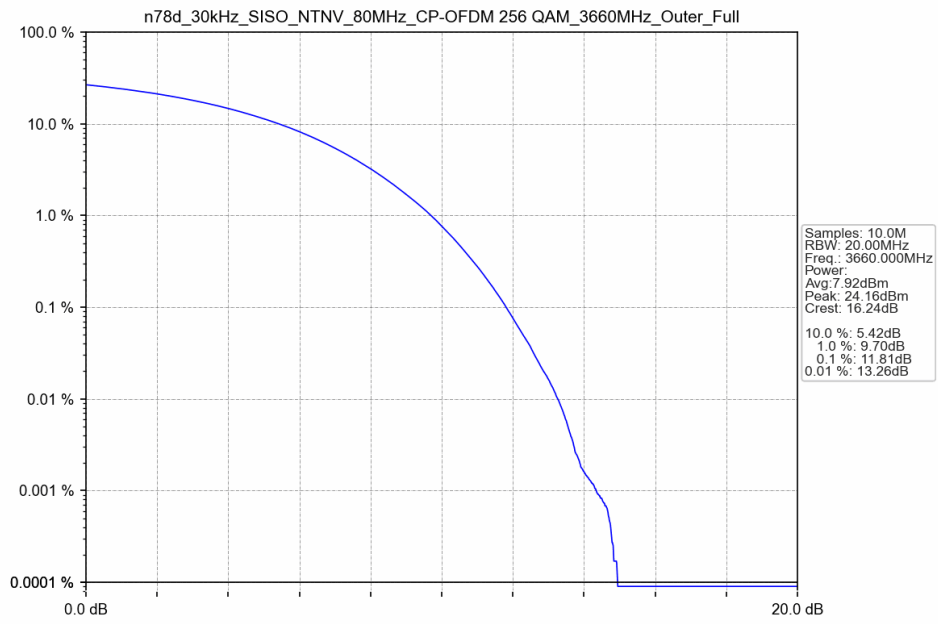
n78d_30kHz_SISO_NTNV_80MHz_CP-OFDM 256 QAM_3590.01MHz_Outer_Full



n78d_30kHz_SISO_NTNV_80MHz_CP-OFDM 256 QAM_3624.99MHz_Outer_Full



n78d_30kHz_SISO_NTNV_80MHz_CP-OFDM 256 QAM_3660MHz_Outer_Full



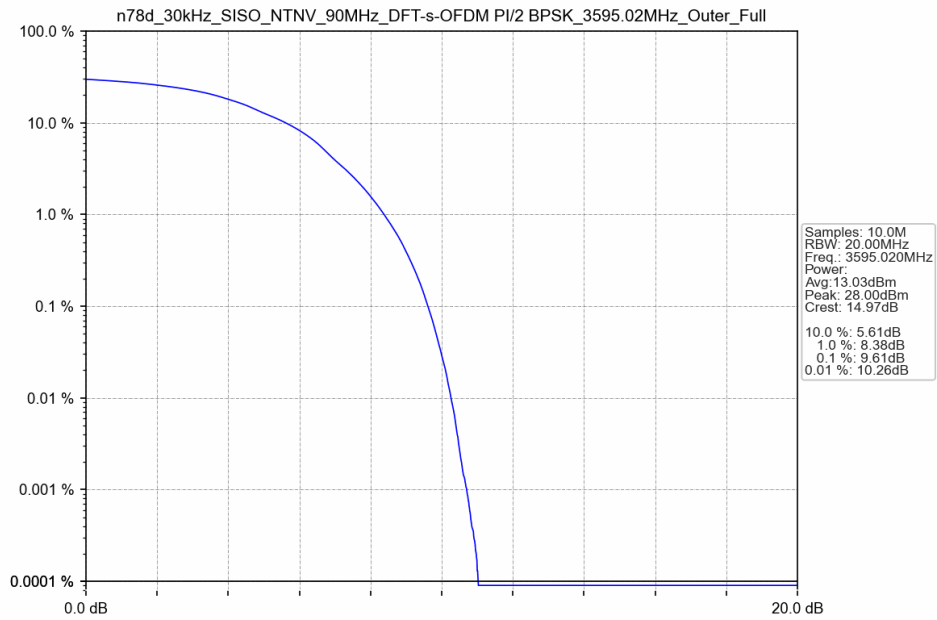
4.8 30k_SISO_90MHz_NTNV

4.8.1 Test Result

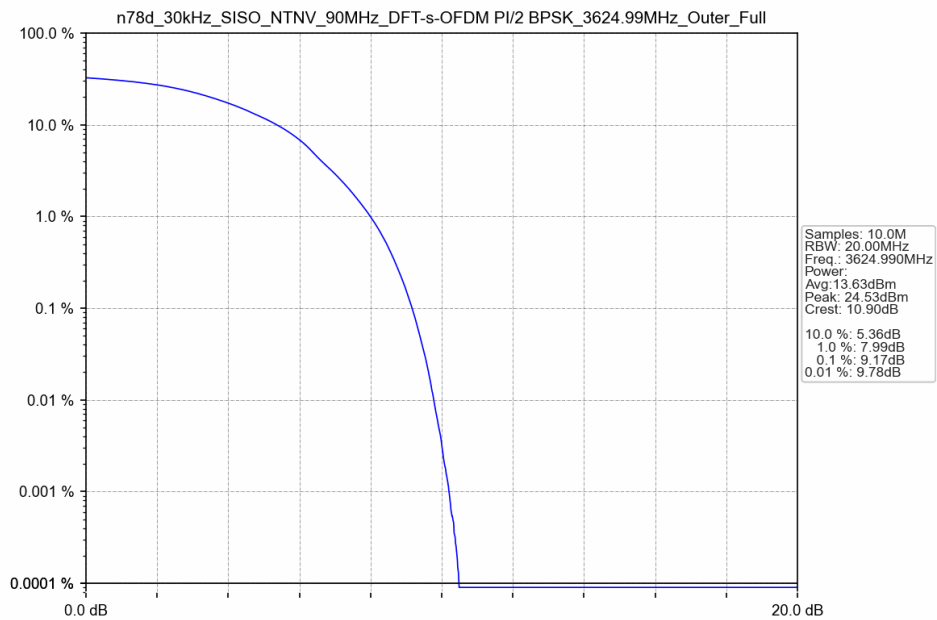
5G NR n78d SCS=30kHz SISO 90MHz NTN							
Modulation	Frequency (MHz)	RB Allocation	Peak-Average Ratio (dB)				Verdict
			Ant1	Ant2	Sum	Limit	
DFT-s-OFDM PI/2 BPSK	3595.02	Outer_Full	9.61	/	/	<=13	Pass
	3624.99	Outer_Full	9.17	/	/	<=13	Pass
	3654.99	Outer_Full	9.78	/	/	<=13	Pass
DFT-s-OFDM QPSK	3595.02	Outer_Full	10.76	/	/	<=13	Pass
	3624.99	Outer_Full	10.89	/	/	<=13	Pass
	3654.99	Outer_Full	10.89	/	/	<=13	Pass
DFT-s-OFDM 16 QAM	3595.02	Outer_Full	10.98	/	/	<=13	Pass
	3624.99	Outer_Full	10.71	/	/	<=13	Pass
	3654.99	Outer_Full	11.35	/	/	<=13	Pass
DFT-s-OFDM 64 QAM	3595.02	Outer_Full	11.09	/	/	<=13	Pass
	3624.99	Outer_Full	11.17	/	/	<=13	Pass
	3654.99	Outer_Full	11.11	/	/	<=13	Pass
DFT-s-OFDM 256 QAM	3595.02	Outer_Full	11.00	/	/	<=13	Pass
	3624.99	Outer_Full	11.24	/	/	<=13	Pass
	3654.99	Outer_Full	11.23	/	/	<=13	Pass
CP-OFDM QPSK	3595.02	Outer_Full	12.04	/	/	<=13	Pass
	3624.99	Outer_Full	11.56	/	/	<=13	Pass
	3654.99	Outer_Full	11.65	/	/	<=13	Pass
CP-OFDM 16 QAM	3595.02	Outer_Full	12.25	/	/	<=13	Pass
	3624.99	Outer_Full	12.37	/	/	<=13	Pass
	3654.99	Outer_Full	11.84	/	/	<=13	Pass
CP-OFDM 64 QAM	3595.02	Outer_Full	11.91	/	/	<=13	Pass
	3624.99	Outer_Full	11.77	/	/	<=13	Pass
	3654.99	Outer_Full	11.75	/	/	<=13	Pass
CP-OFDM 256 QAM	3595.02	Outer_Full	12.09	/	/	<=13	Pass
	3624.99	Outer_Full	12.18	/	/	<=13	Pass
	3654.99	Outer_Full	12.05	/	/	<=13	Pass

4.8.2 Test Graph

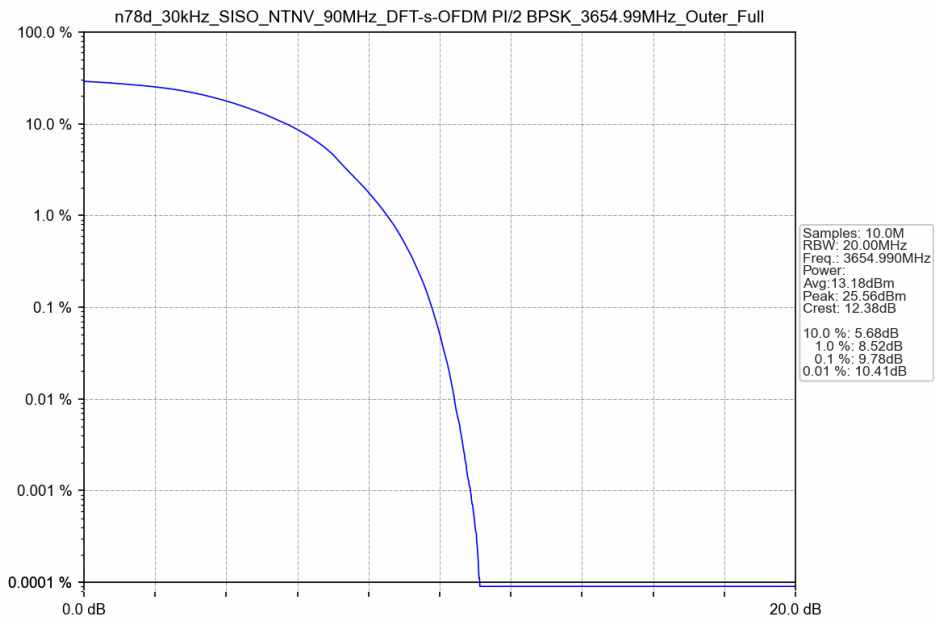
n78d_30kHz_SISO_NTNV_90MHz_DFT-s-OFDM PI/2 BPSK_3595.02MHz_Outer_Full



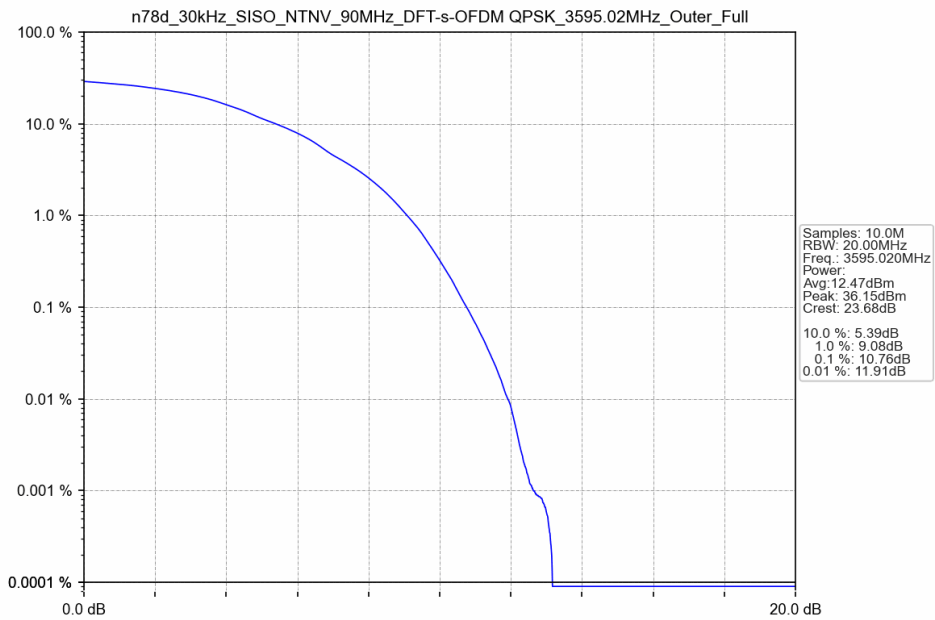
n78d_30kHz_SISO_NTNV_90MHz_DFT-s-OFDM PI/2 BPSK_3624.99MHz_Outer_Full



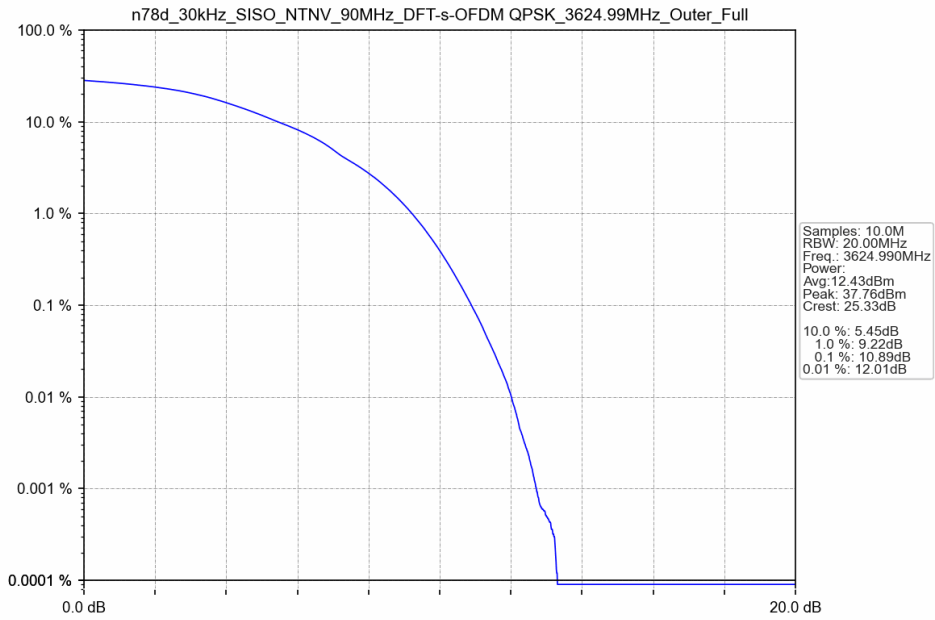
n78d_30kHz_SISO_NTNV_90MHz_DFT-s-OFDM PI/2 BPSK_3654.99MHz_Outer_Full



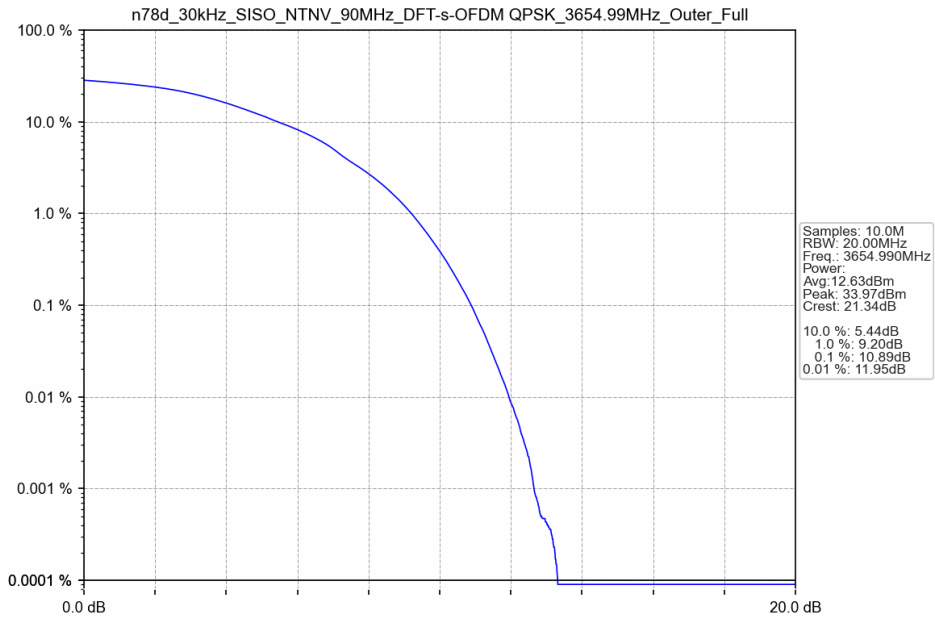
n78d_30kHz_SISO_NTNV_90MHz_DFT-s-OFDM QPSK_3595.02MHz_Outer_Full



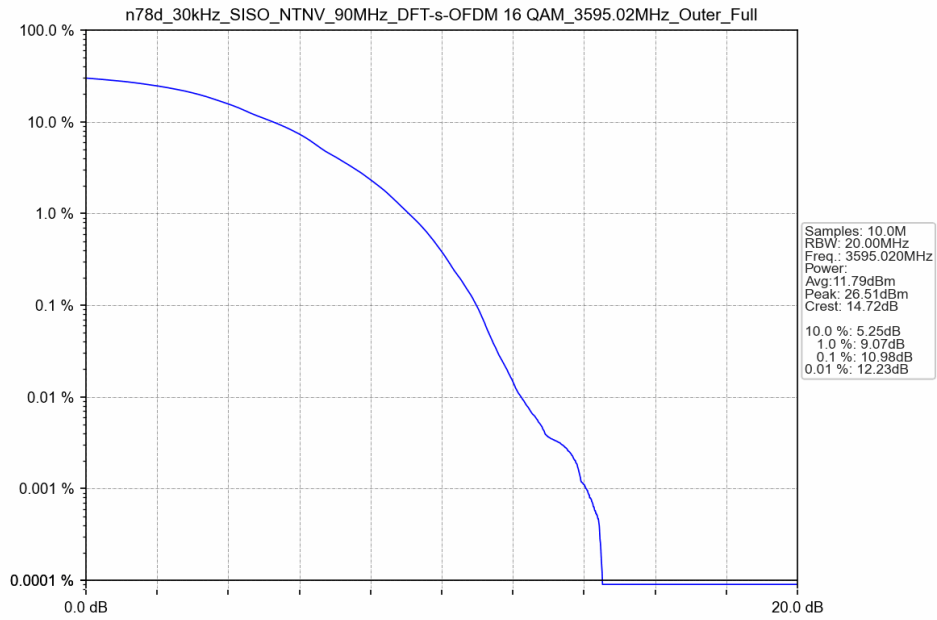
n78d_30kHz_SISO_NTNV_90MHz_DFT-s-OFDM_QPSK_3624.99MHz_Outer_Full



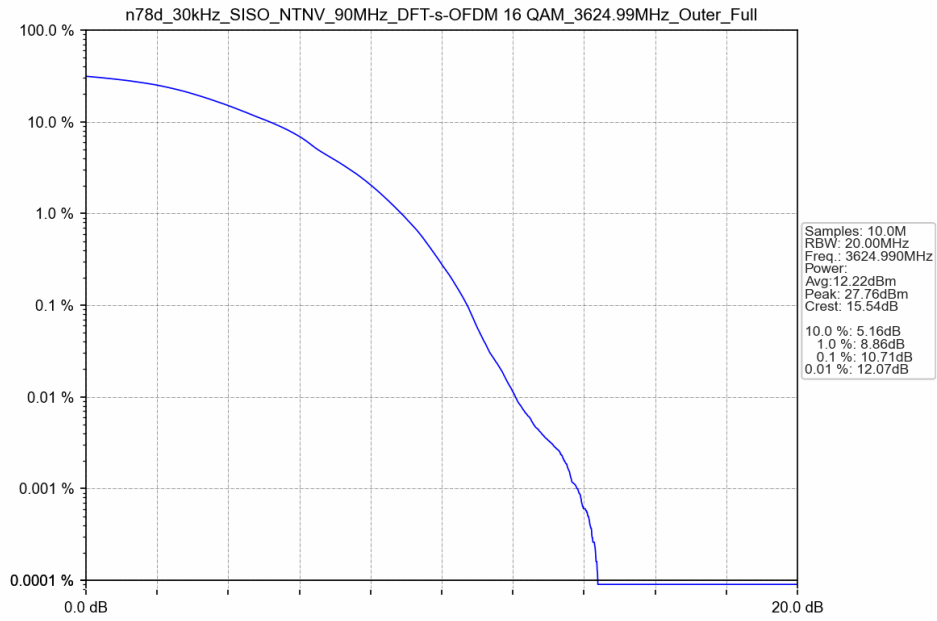
n78d_30kHz_SISO_NTNV_90MHz_DFT-s-OFDM_QPSK_3654.99MHz_Outer_Full



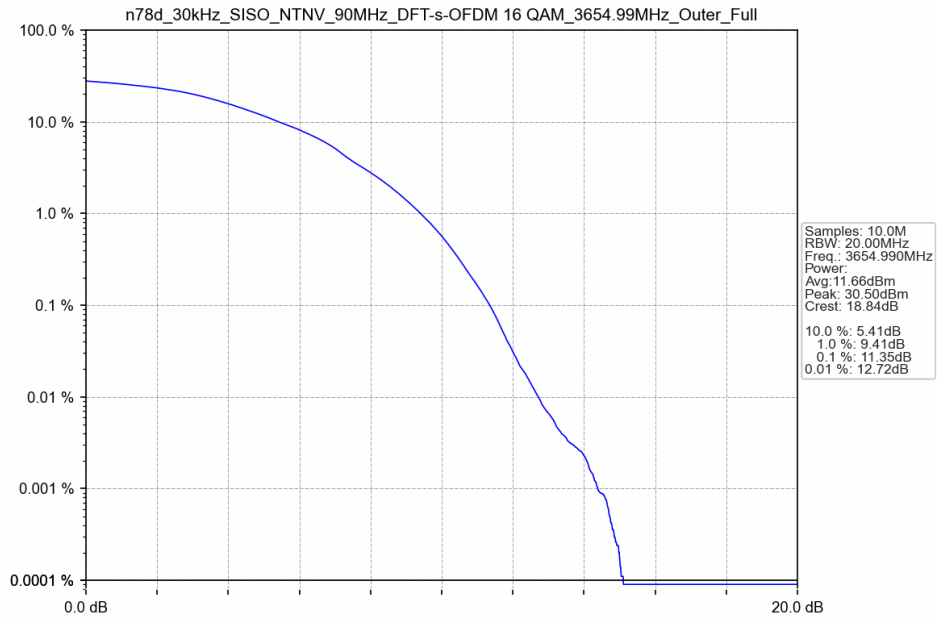
n78d_30kHz_SISO_NTNV_90MHz_DFT-s-OFDM 16 QAM_3595.02MHz_Outer_Full



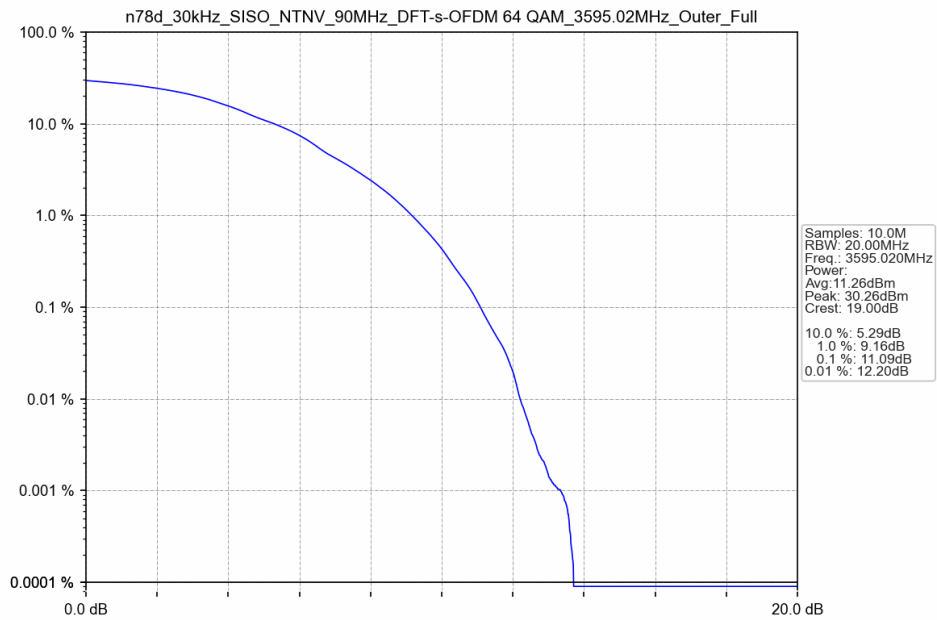
n78d_30kHz_SISO_NTNV_90MHz_DFT-s-OFDM 16 QAM_3624.99MHz_Outer_Full



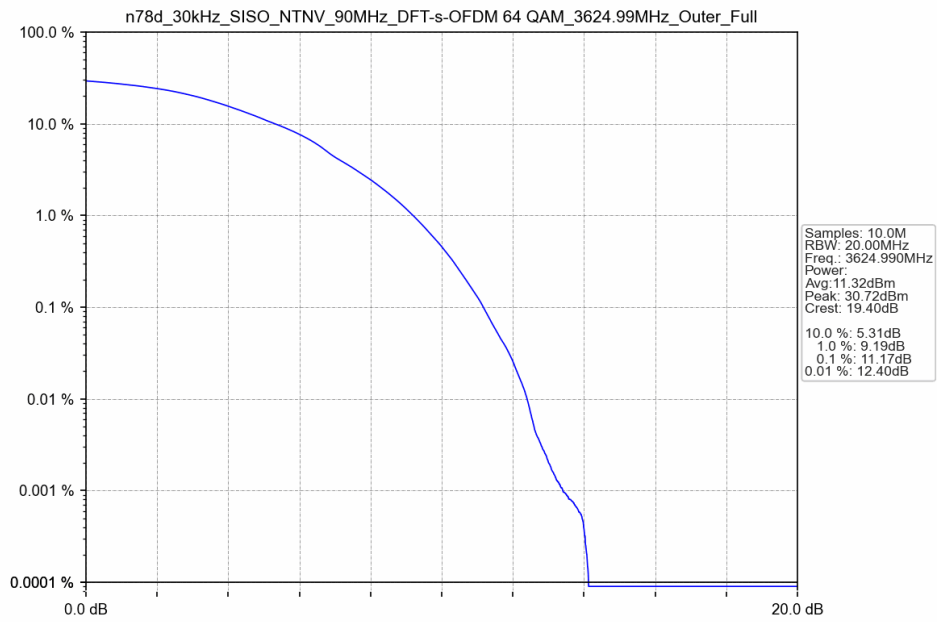
n78d_30kHz_SISO_NTNV_90MHz_DFT-s-OFDM 16 QAM_3654.99MHz_Outer_Full



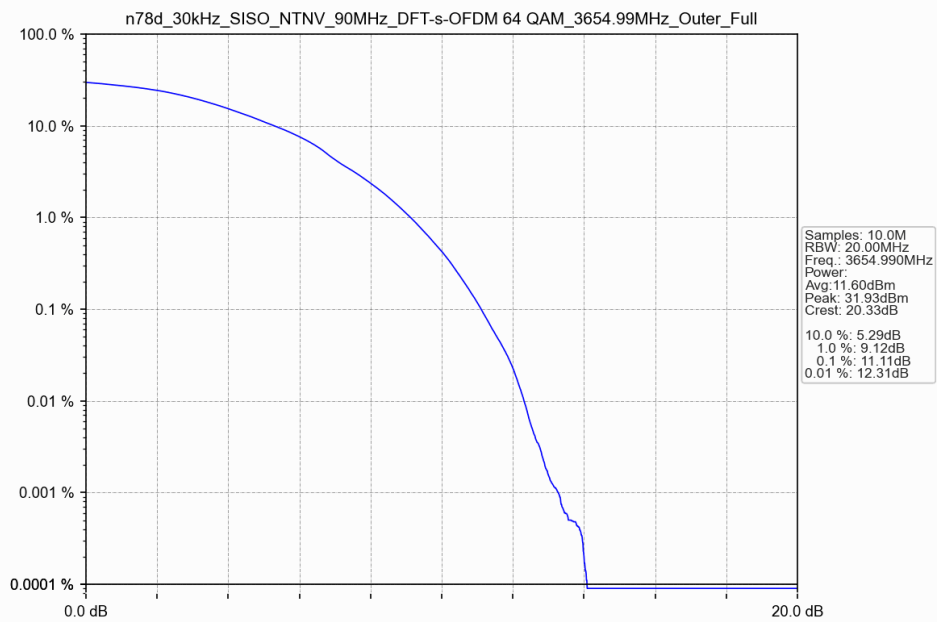
n78d_30kHz_SISO_NTNV_90MHz_DFT-s-OFDM 64 QAM_3595.02MHz_Outer_Full



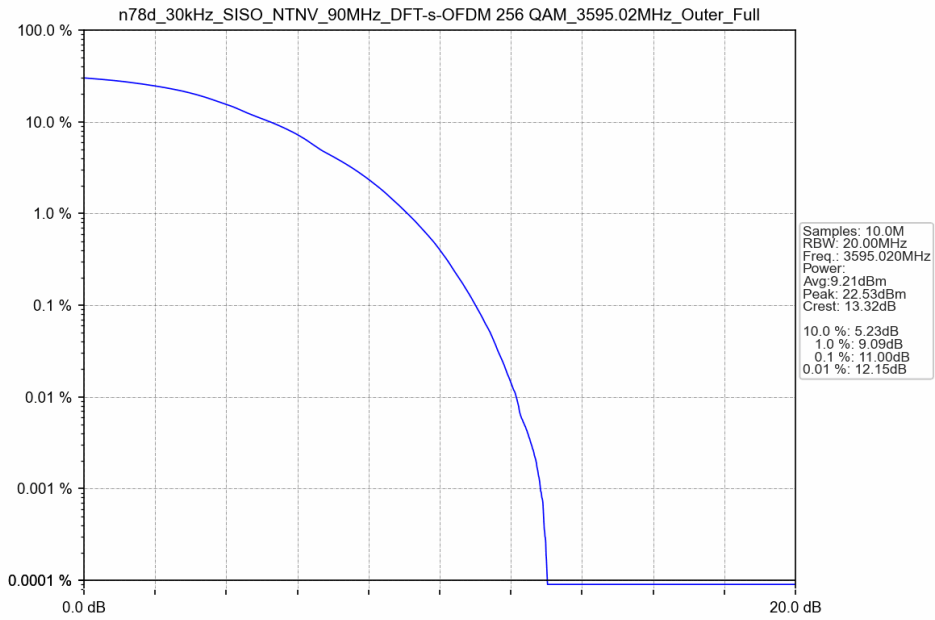
n78d_30kHz_SISO_NTNV_90MHz_DFT-s-OFDM_64_QAM_3624.99MHz_Outer_Full



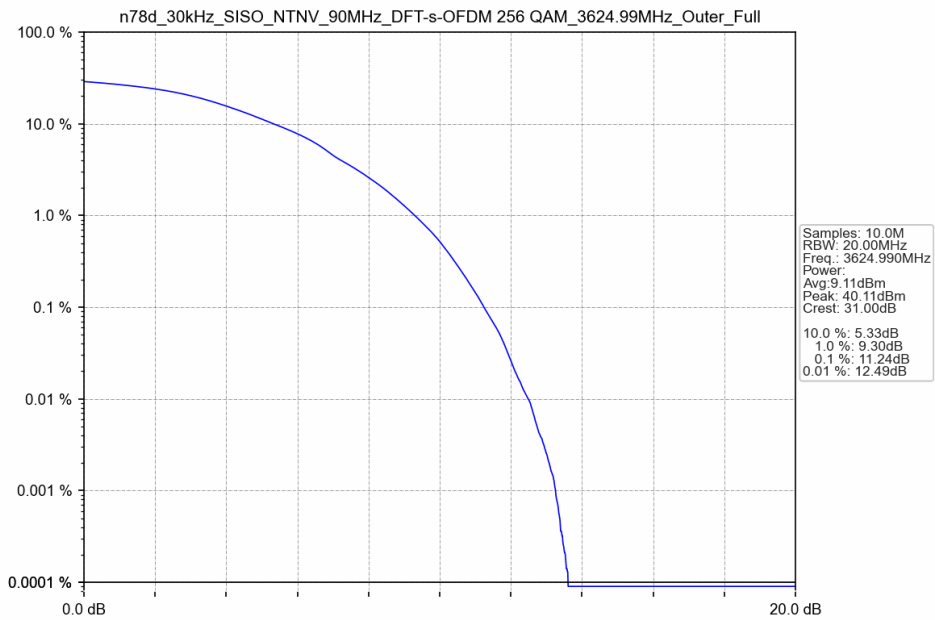
n78d_30kHz_SISO_NTNV_90MHz_DFT-s-OFDM_64_QAM_3654.99MHz_Outer_Full



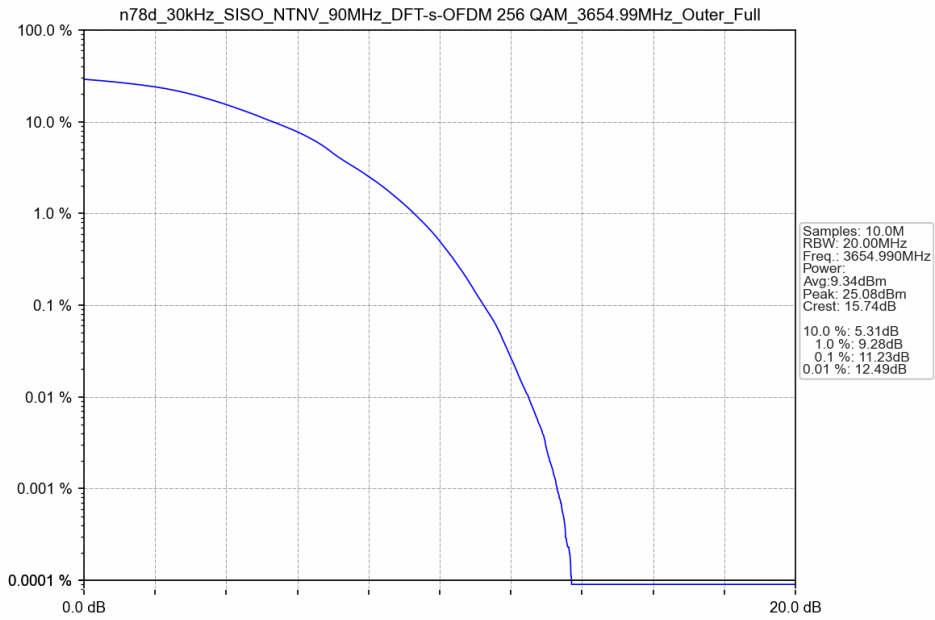
n78d_30kHz_SISO_NTNV_90MHz_DFT-s-OFDM_256_QAM_3595.02MHz_Outer_Full



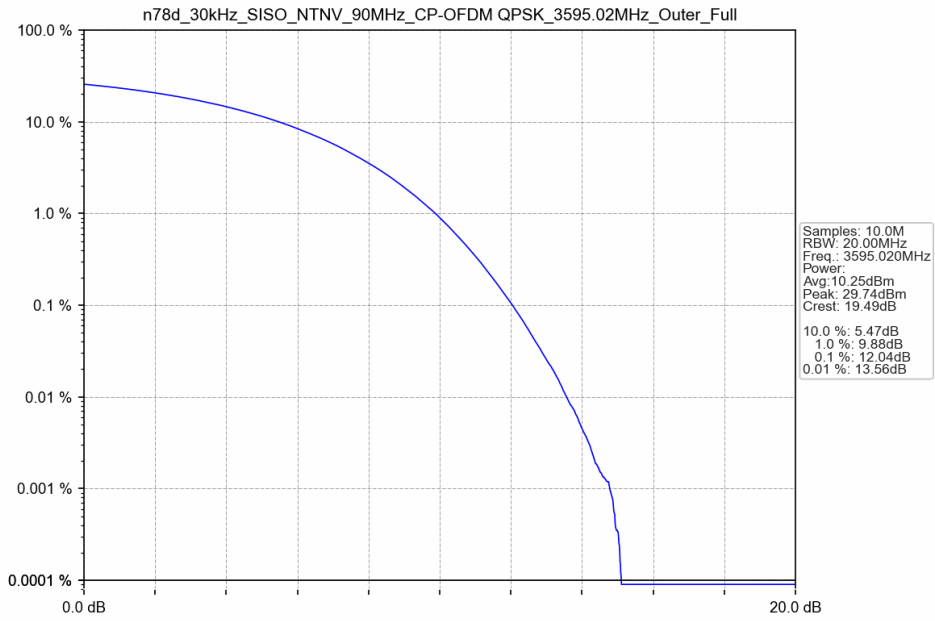
n78d_30kHz_SISO_NTNV_90MHz_DFT-s-OFDM_256_QAM_3624.99MHz_Outer_Full



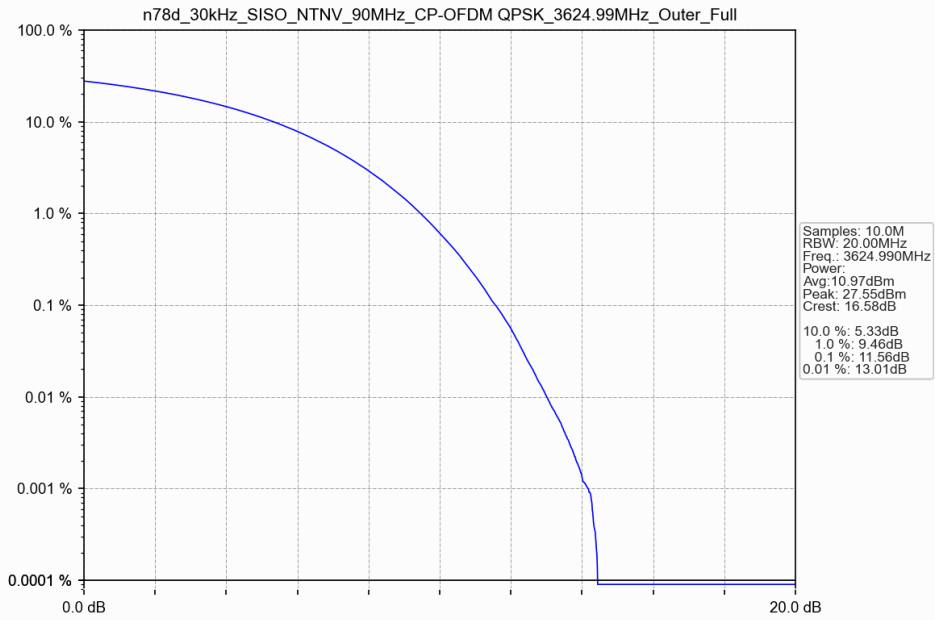
n78d_30kHz_SISO_NTNV_90MHz_DFT-s-OFDM_256_QAM_3654.99MHz_Outer_Full



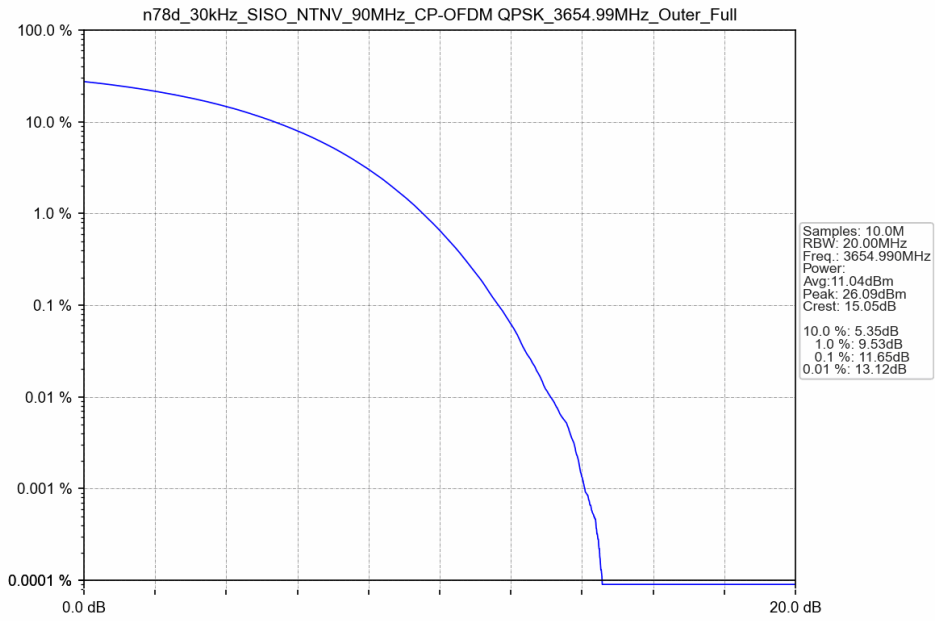
n78d_30kHz_SISO_NTNV_90MHz_CP-OFDM_QPSK_3595.02MHz_Outer_Full



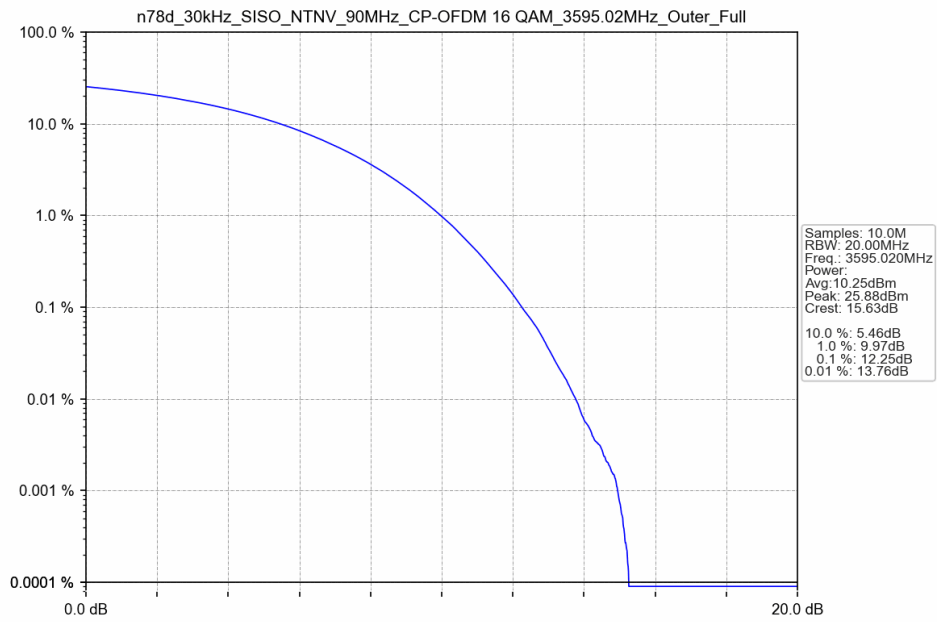
n78d_30kHz_SISO_NTNV_90MHz_CP-OFDM QPSK_3624.99MHz_Outer_Full



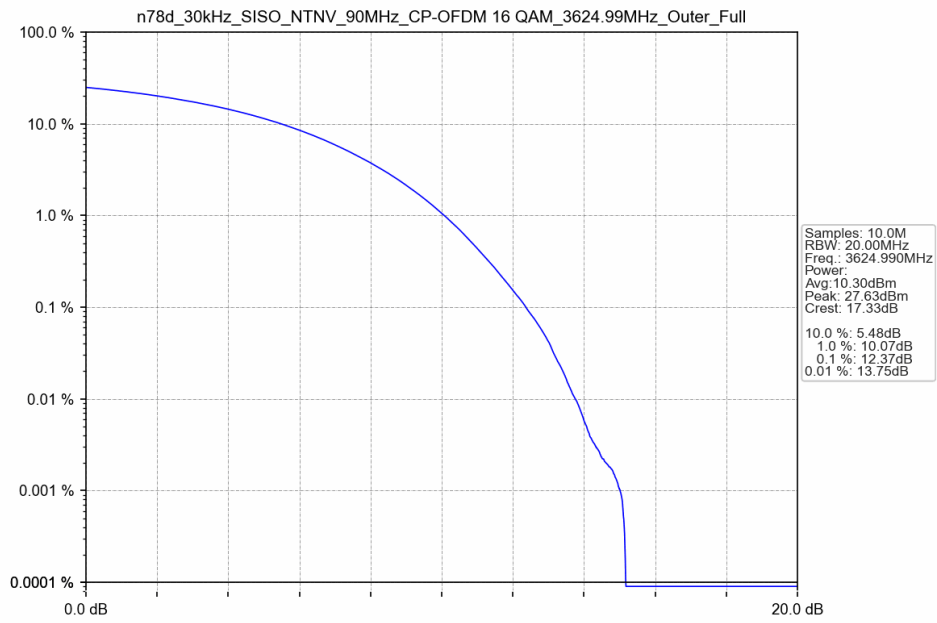
n78d_30kHz_SISO_NTNV_90MHz_CP-OFDM QPSK_3654.99MHz_Outer_Full



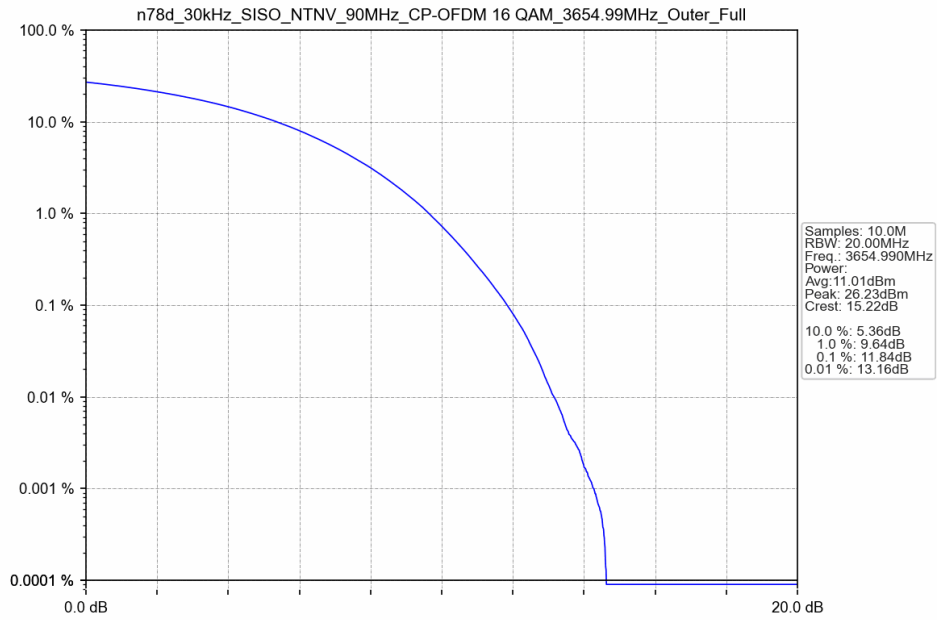
n78d_30kHz_SISO_NTNV_90MHz_CP-OFDM 16 QAM_3595.02MHz_Outer_Full



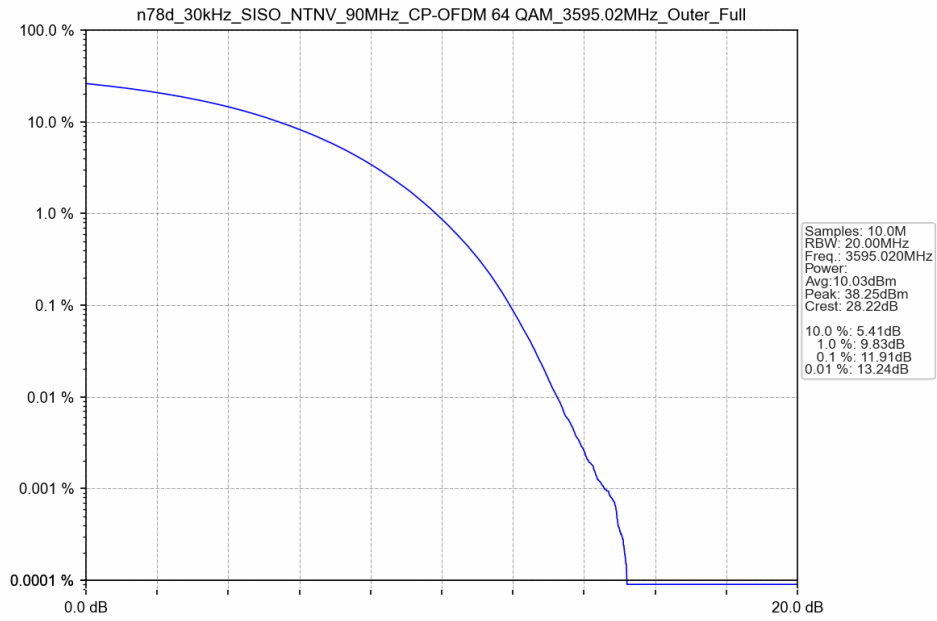
n78d_30kHz_SISO_NTNV_90MHz_CP-OFDM 16 QAM_3624.99MHz_Outer_Full



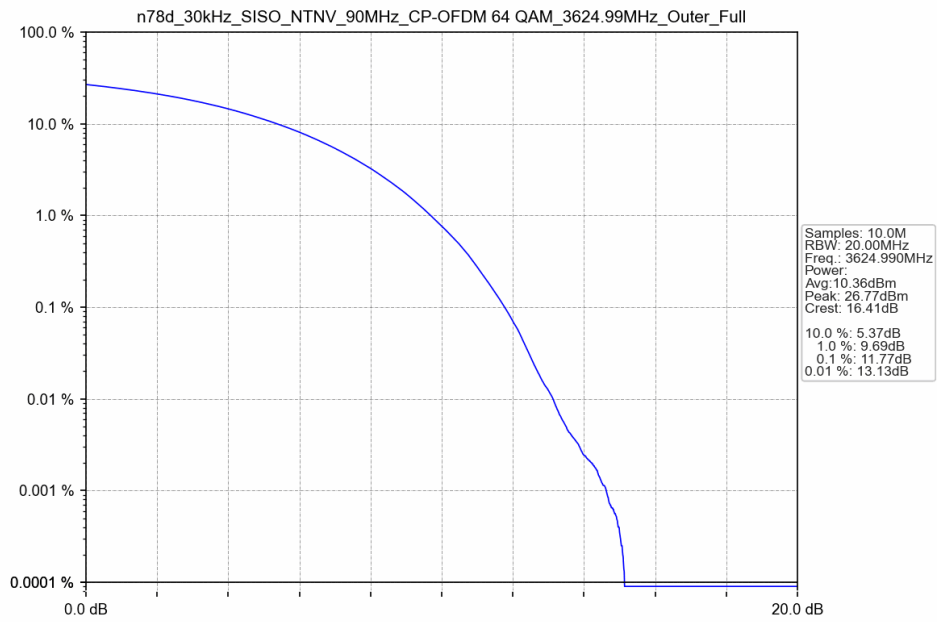
n78d_30kHz_SISO_NTNV_90MHz_CP-OFDM 16 QAM_3654.99MHz_Outer_Full



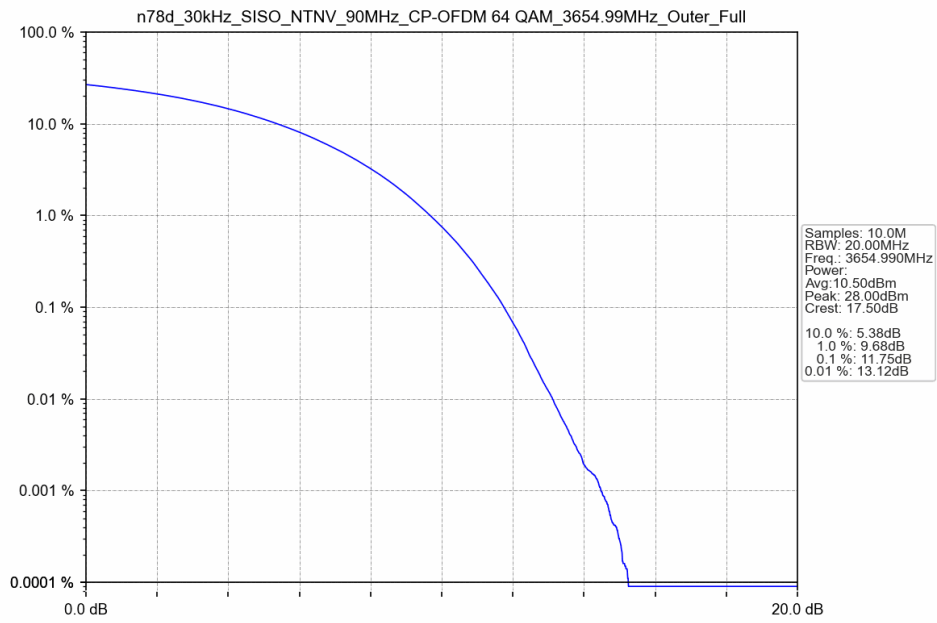
n78d_30kHz_SISO_NTNV_90MHz_CP-OFDM 64 QAM_3595.02MHz_Outer_Full



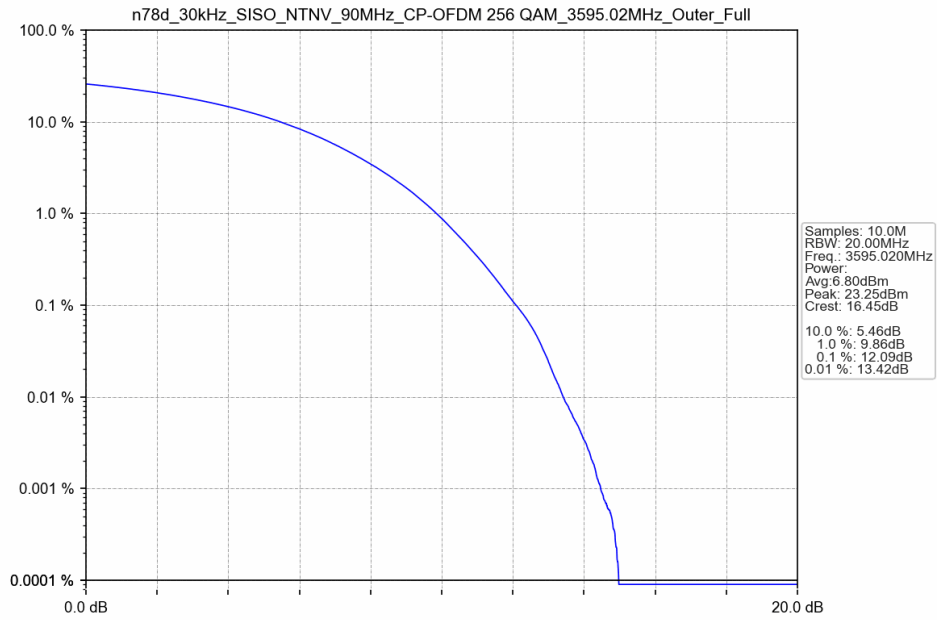
n78d_30kHz_SISO_NTNV_90MHz_CP-OFDM 64 QAM_3624.99MHz_Outer_Full



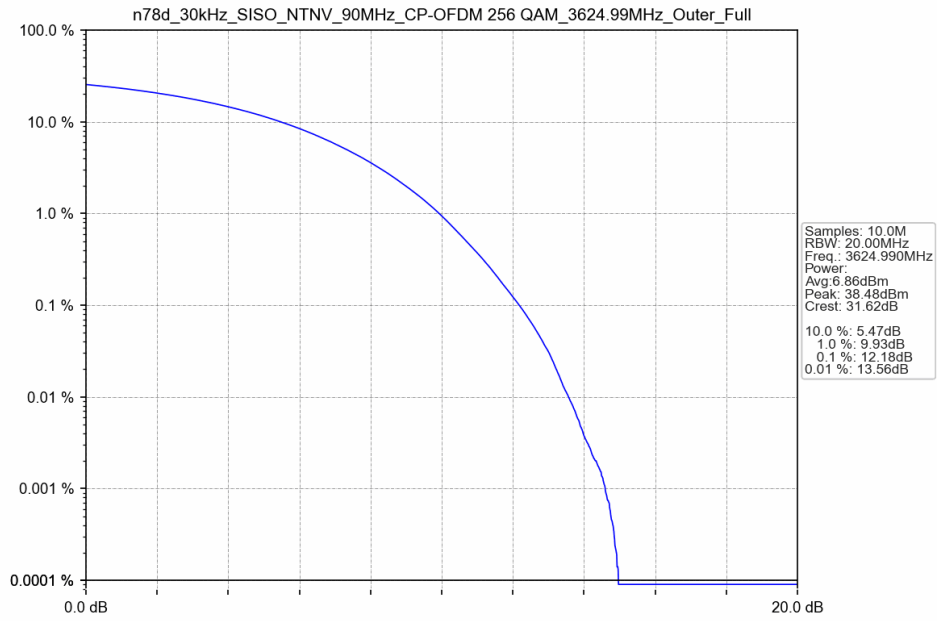
n78d_30kHz_SISO_NTNV_90MHz_CP-OFDM 64 QAM_3654.99MHz_Outer_Full



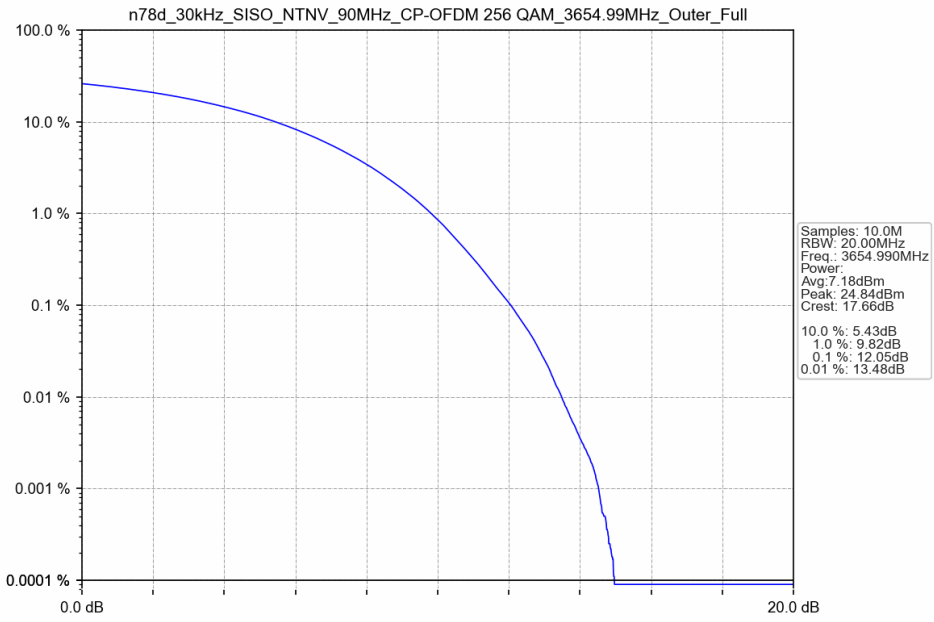
n78d_30kHz_SISO_NTNV_90MHz_CP-OFDM 256 QAM_3595.02MHz_Outer_Full



n78d_30kHz_SISO_NTNV_90MHz_CP-OFDM 256 QAM_3624.99MHz_Outer_Full



n78d_30kHz_SISO_NTNV_90MHz_CP-OFDM 256 QAM_3654.99MHz_Outer_Full

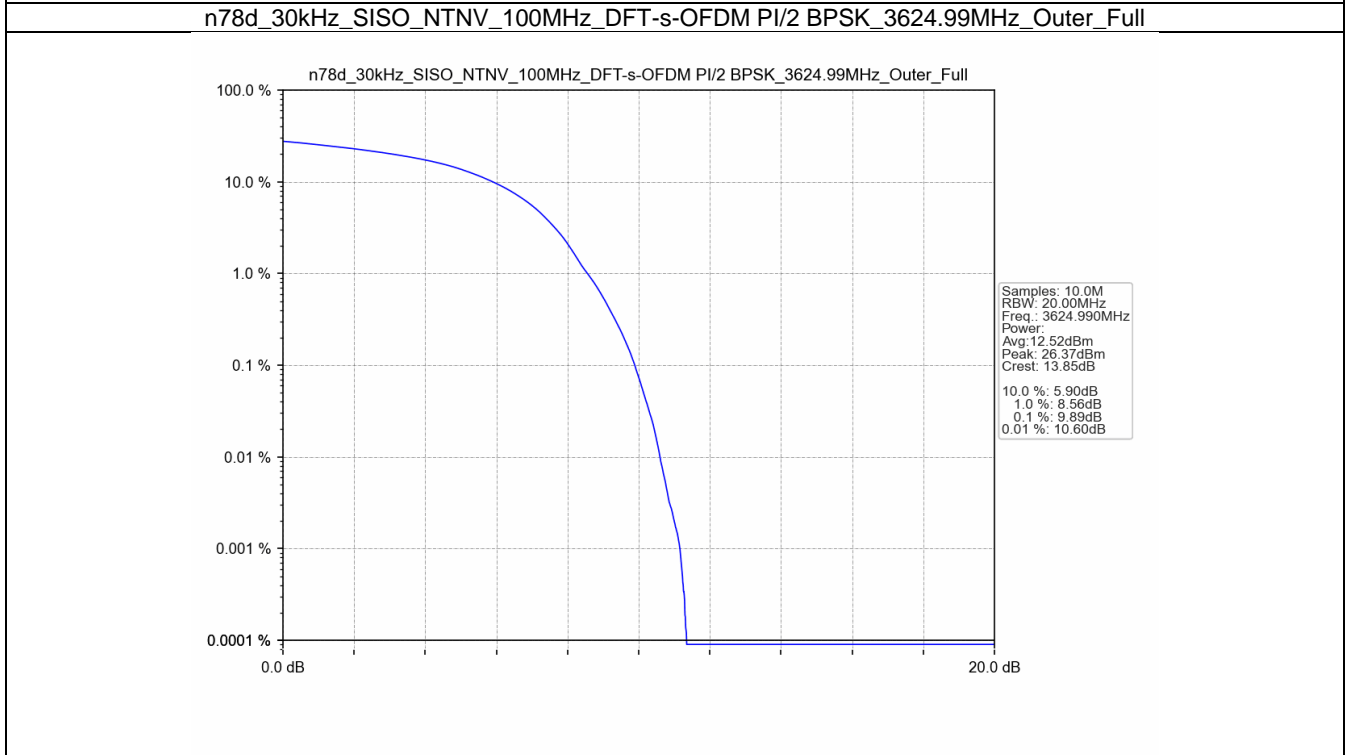
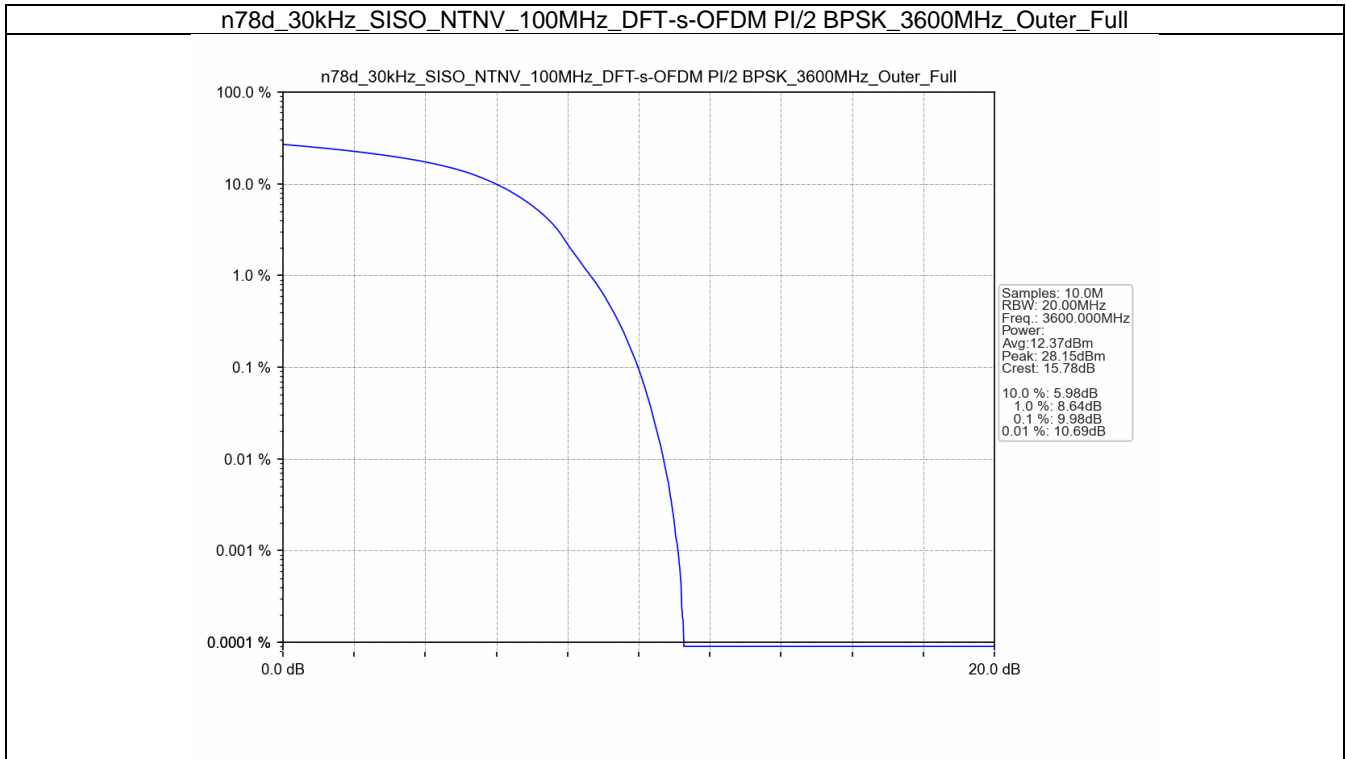


4.9 30k_SISO_100MHz_NTNV

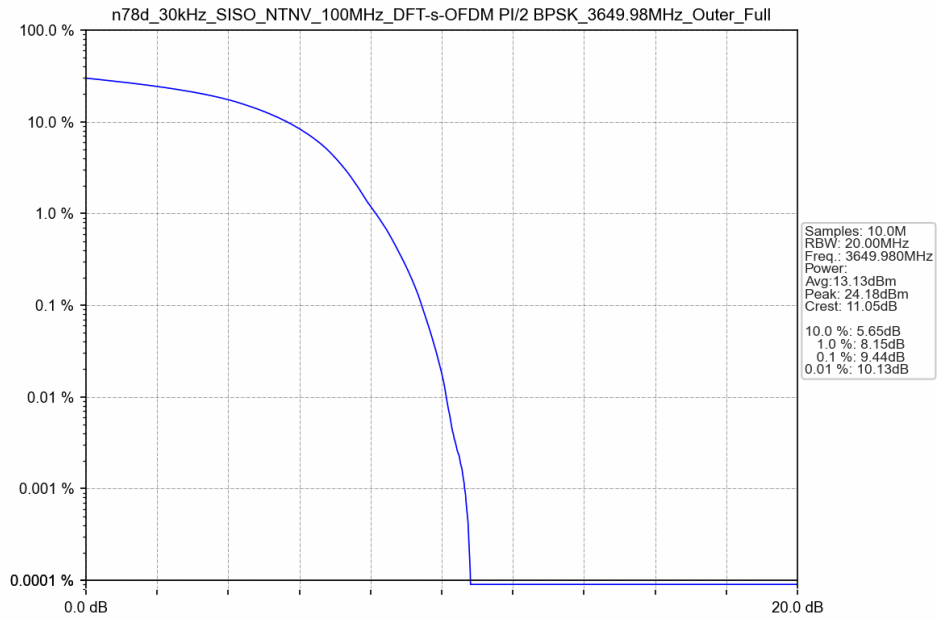
4.9.1 Test Result

5G NR n78d SCS=30kHz SISO 100MHz NTN							
Modulation	Frequency (MHz)	RB Allocation	Peak-Average Ratio (dB)				Verdict
			Ant1	Ant2	Sum	Limit	
DFT-s-OFDM PI/2 BPSK	3600	Outer_Full	9.98	/	/	<=13	Pass
	3624.99	Outer_Full	9.89	/	/	<=13	Pass
	3649.98	Outer_Full	9.44	/	/	<=13	Pass
DFT-s-OFDM QPSK	3600	Outer_Full	10.74	/	/	<=13	Pass
	3624.99	Outer_Full	10.50	/	/	<=13	Pass
	3649.98	Outer_Full	10.60	/	/	<=13	Pass
DFT-s-OFDM 16 QAM	3600	Outer_Full	11.13	/	/	<=13	Pass
	3624.99	Outer_Full	11.03	/	/	<=13	Pass
	3649.98	Outer_Full	10.72	/	/	<=13	Pass
DFT-s-OFDM 64 QAM	3600	Outer_Full	11.05	/	/	<=13	Pass
	3624.99	Outer_Full	11.18	/	/	<=13	Pass
	3649.98	Outer_Full	11.00	/	/	<=13	Pass
DFT-s-OFDM 256 QAM	3600	Outer_Full	11.02	/	/	<=13	Pass
	3624.99	Outer_Full	11.10	/	/	<=13	Pass
	3649.98	Outer_Full	11.13	/	/	<=13	Pass
CP-OFDM QPSK	3600	Outer_Full	11.97	/	/	<=13	Pass
	3624.99	Outer_Full	11.57	/	/	<=13	Pass
	3649.98	Outer_Full	12.07	/	/	<=13	Pass
CP-OFDM 16 QAM	3600	Outer_Full	11.76	/	/	<=13	Pass
	3624.99	Outer_Full	11.78	/	/	<=13	Pass
	3649.98	Outer_Full	12.01	/	/	<=13	Pass
CP-OFDM 64 QAM	3600	Outer_Full	12.02	/	/	<=13	Pass
	3624.99	Outer_Full	11.97	/	/	<=13	Pass
	3649.98	Outer_Full	12.05	/	/	<=13	Pass
CP-OFDM 256 QAM	3600	Outer_Full	12.08	/	/	<=13	Pass
	3624.99	Outer_Full	11.56	/	/	<=13	Pass
	3649.98	Outer_Full	11.74	/	/	<=13	Pass

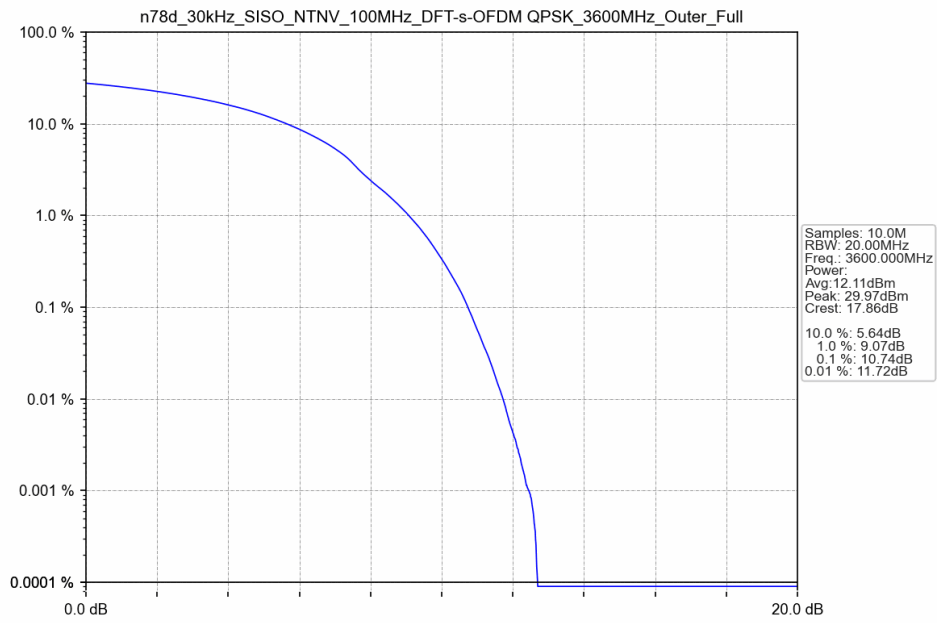
4.9.2 Test Graph



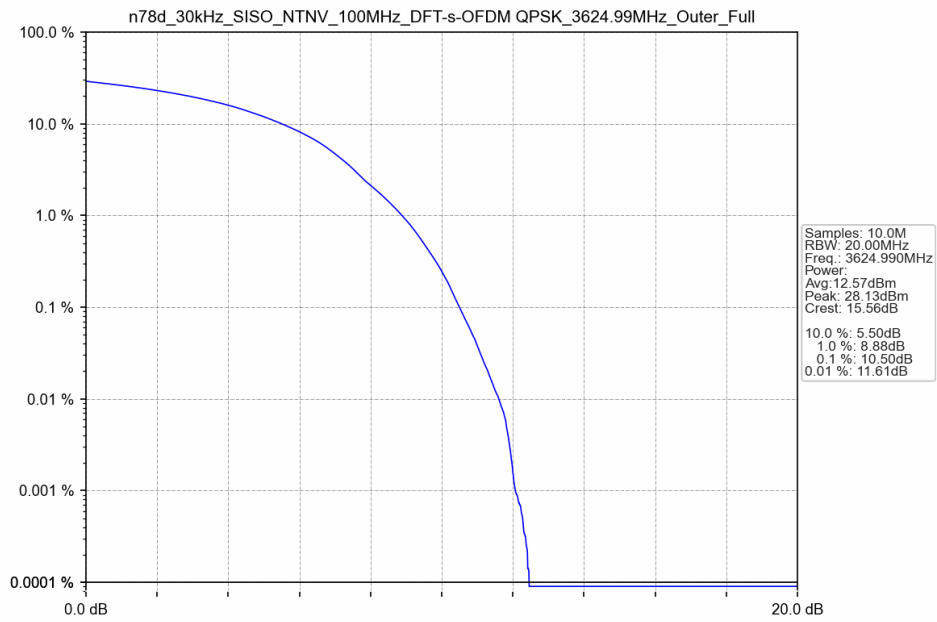
n78d_30kHz_SISO_NTNV_100MHz_DFT-s-OFDM PI/2 BPSK_3649.98MHz_Outer_Full



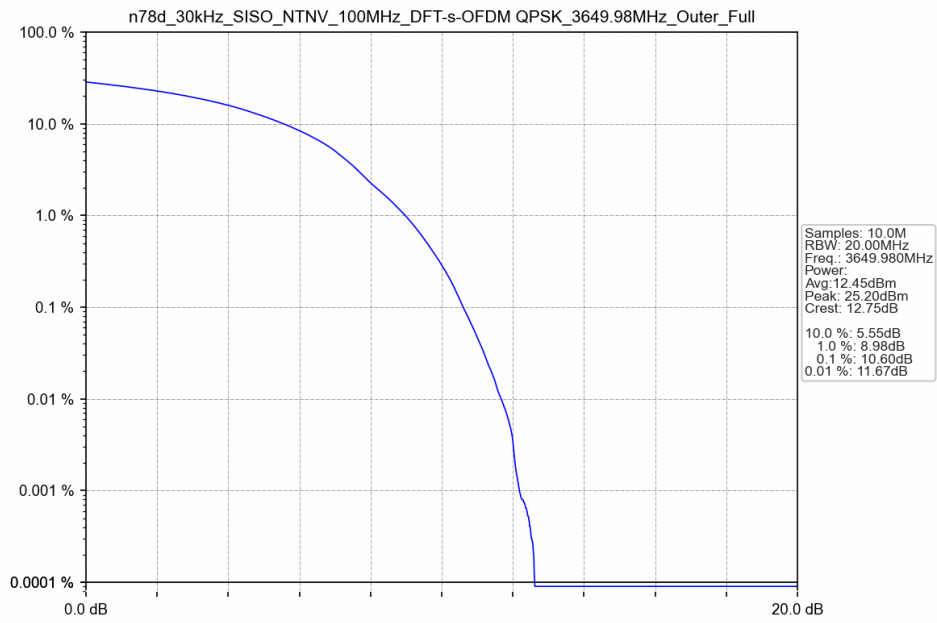
n78d_30kHz_SISO_NTNV_100MHz_DFT-s-OFDM QPSK_3600MHz_Outer_Full



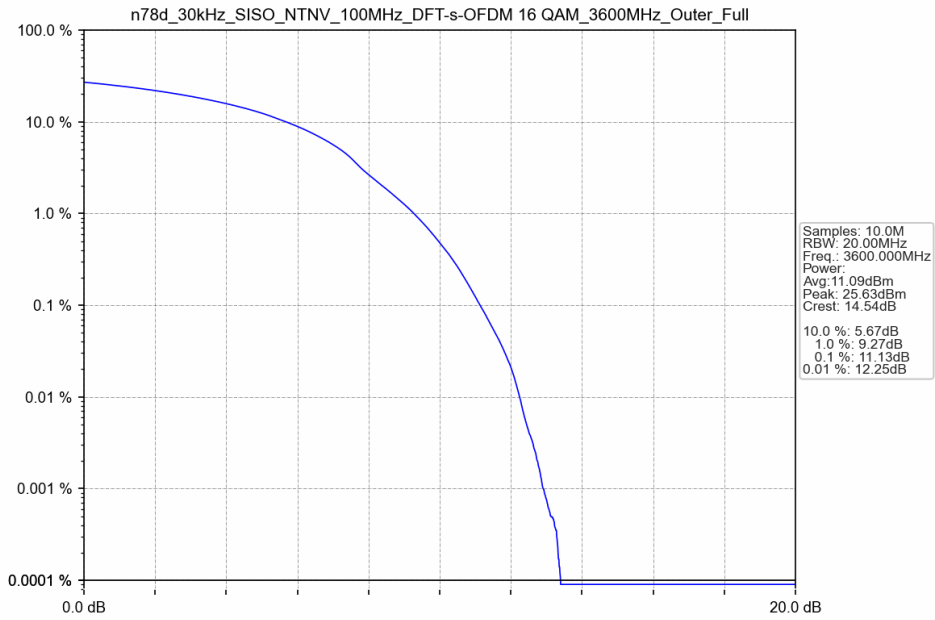
n78d_30kHz_SISO_NTNV_100MHz_DFT-s-OFDM_QPSK_3624.99MHz_Outer_Full



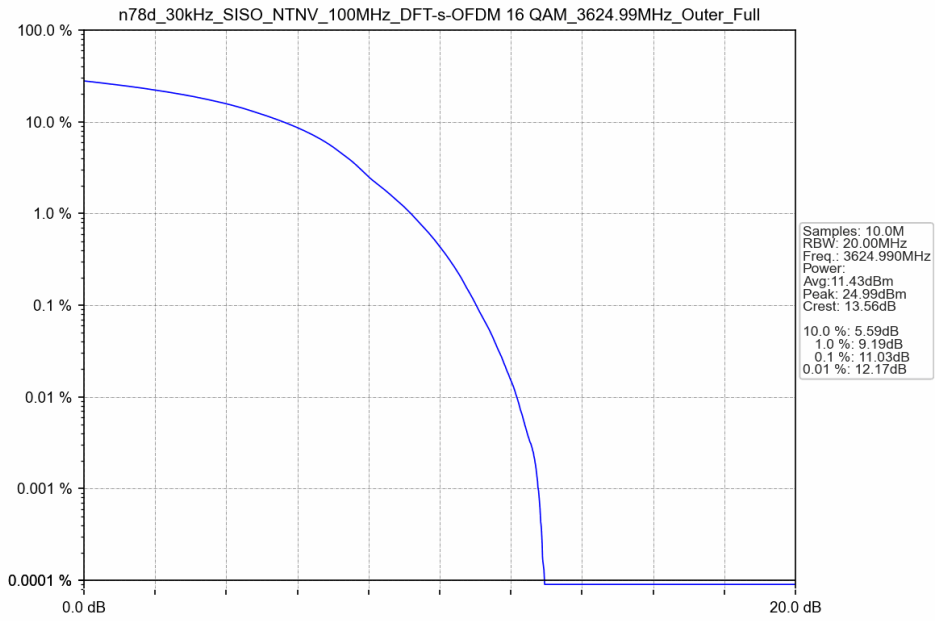
n78d_30kHz_SISO_NTNV_100MHz_DFT-s-OFDM_QPSK_3649.98MHz_Outer_Full



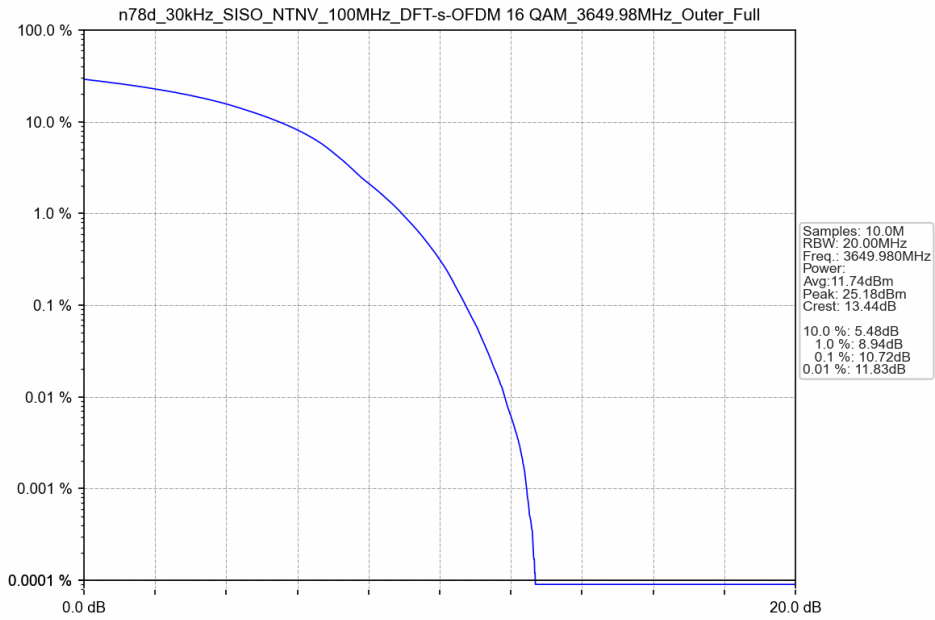
n78d_30kHz_SISO_NTNV_100MHz_DFT-s-OFDM_16_QAM_3600MHz_Outer_Full



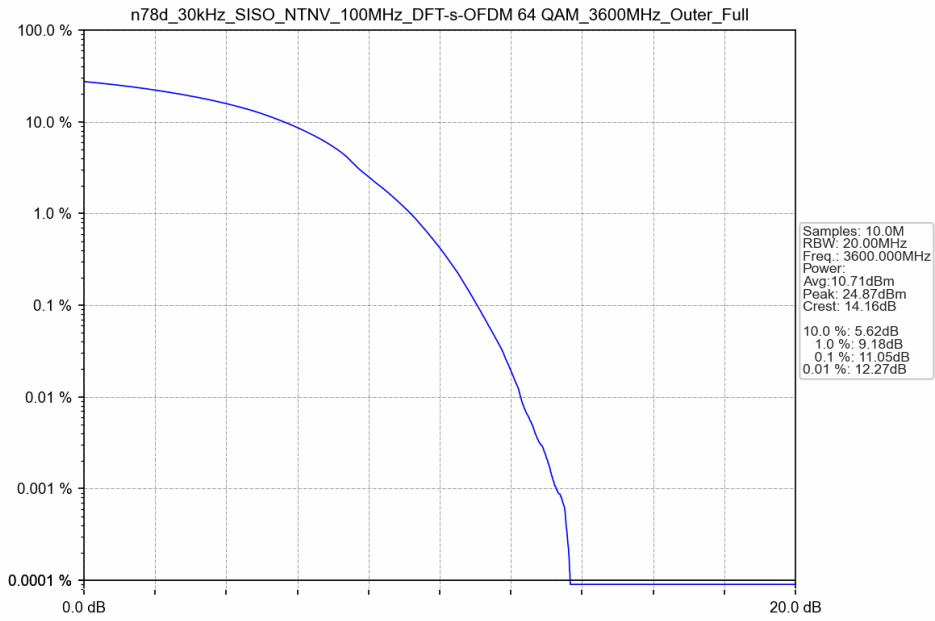
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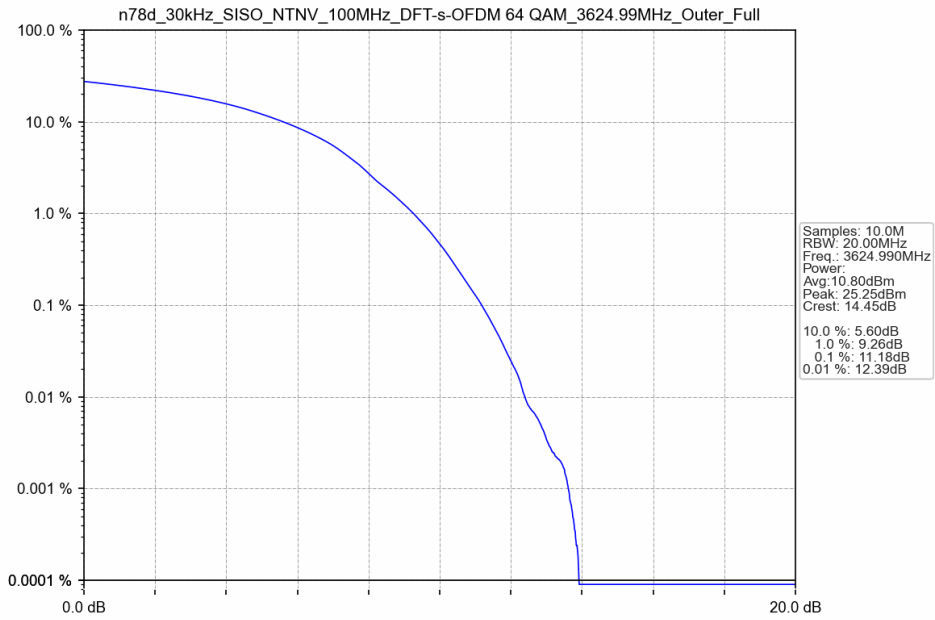
n78d_30kHz_SISO_NTNV_100MHz_DFT-s-OFDM 16 QAM_3649.98MHz_Outer_Full



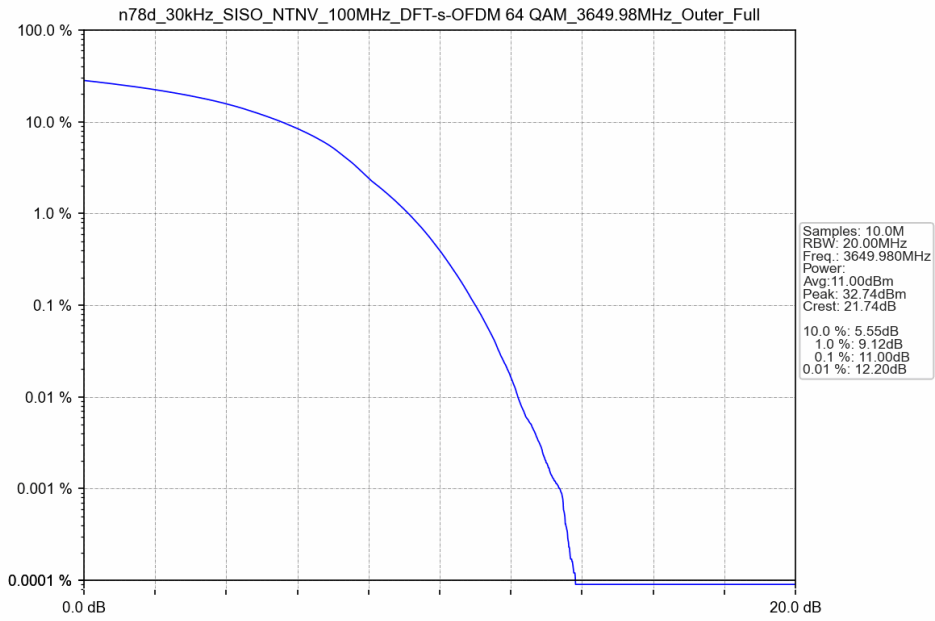
n78d_30kHz_SISO_NTNV_100MHz_DFT-s-OFDM 64 QAM_3600MHz_Outer_Full



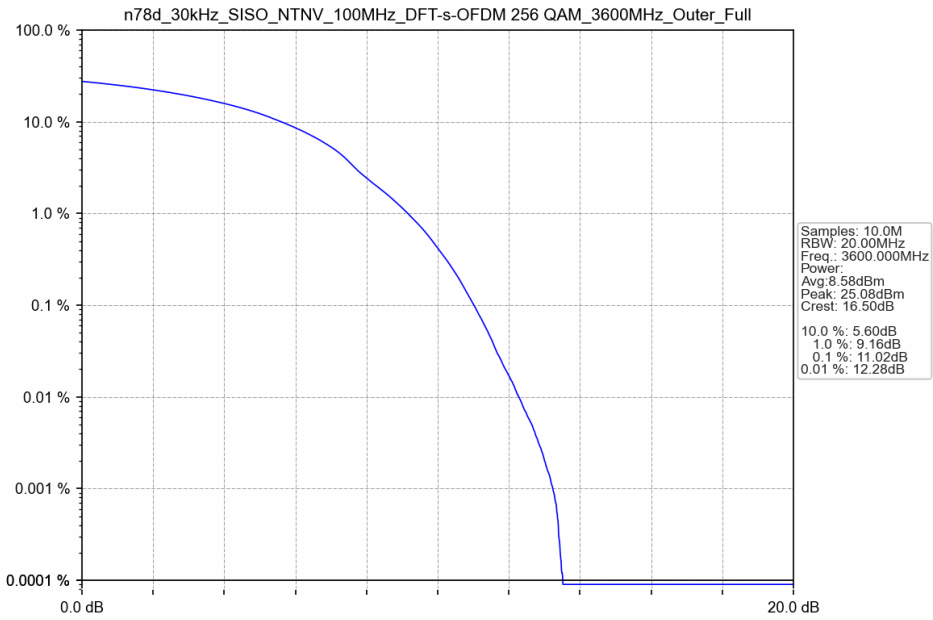
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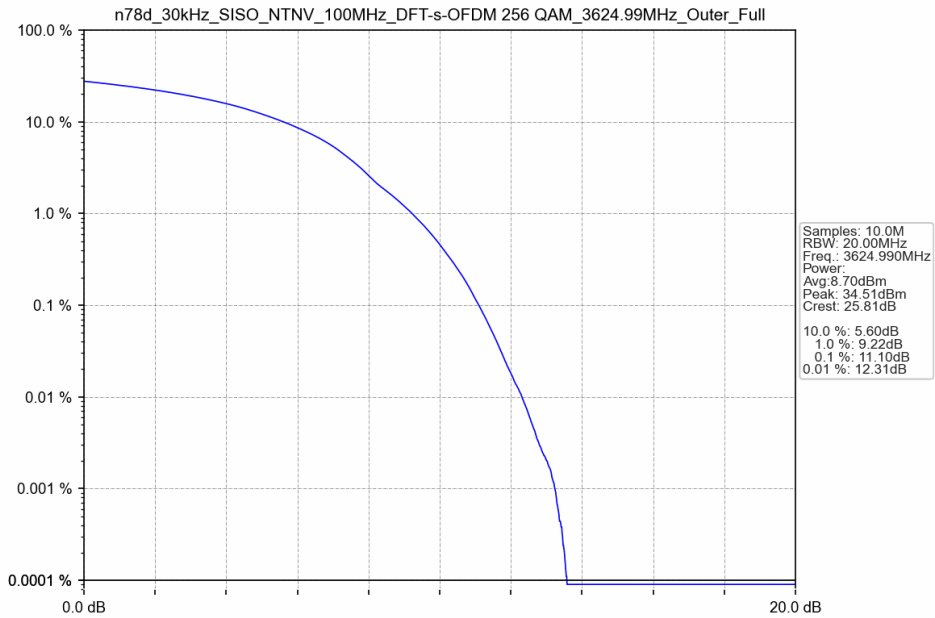
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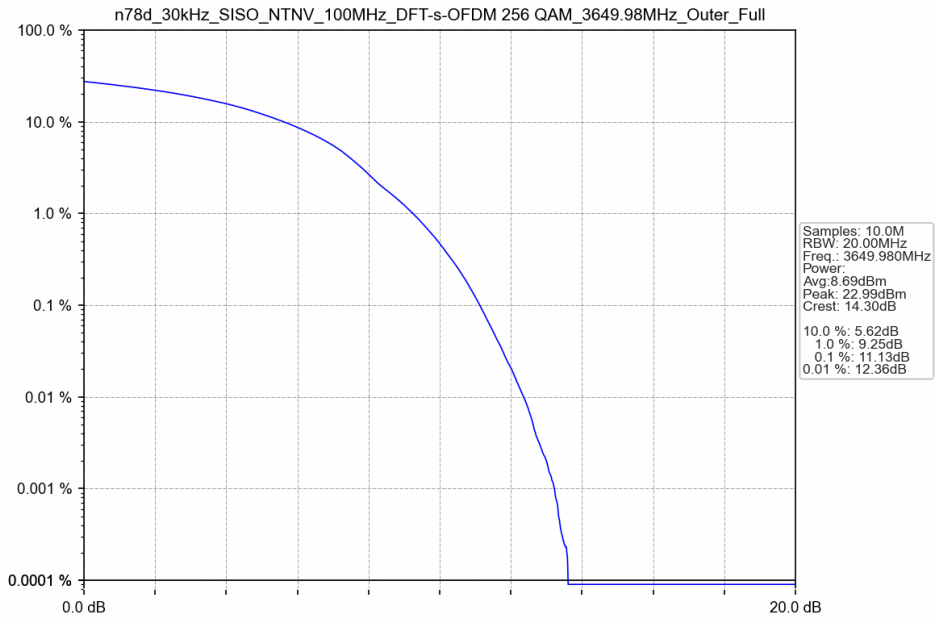
n78d_30kHz_SISO_NTNV_100MHz_DFT-s-OFDM_256_QAM_3600MHz_Outer_Full



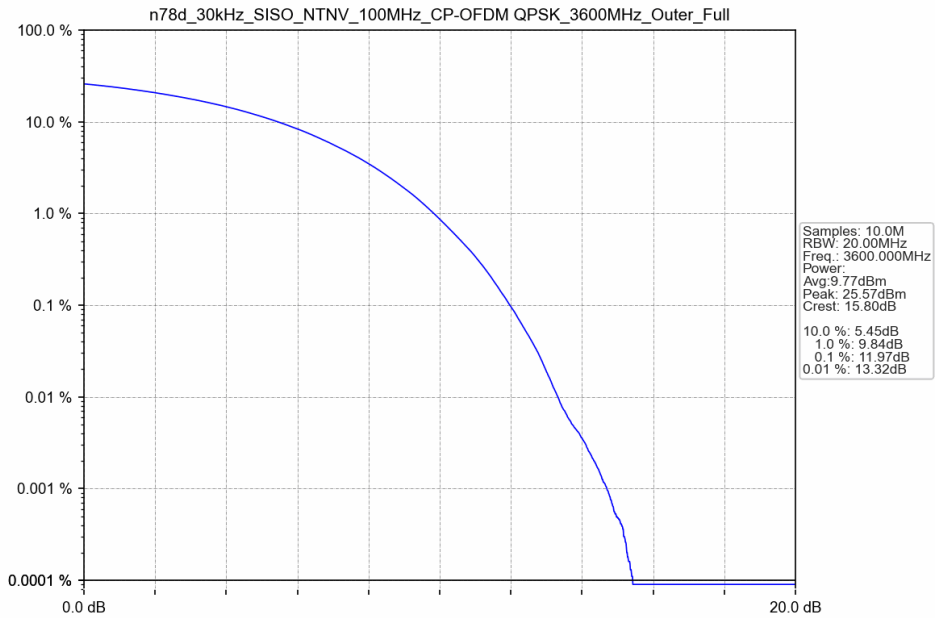
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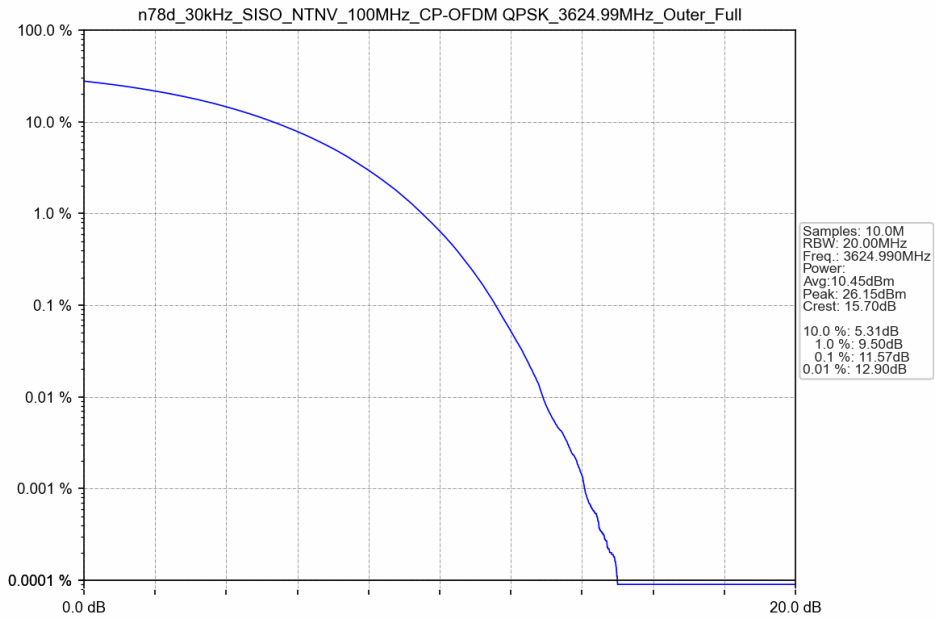
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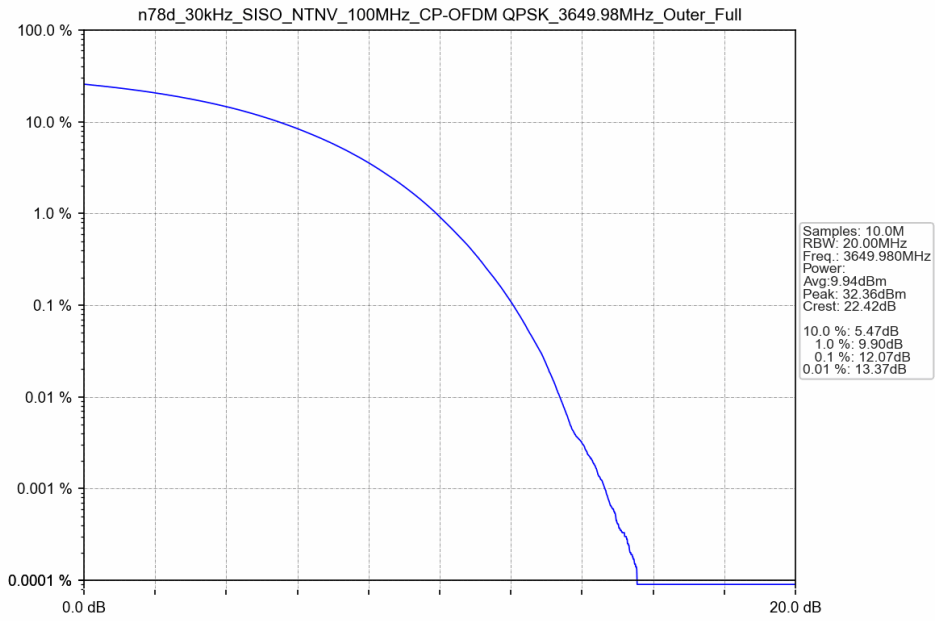
n78d_30kHz_SISO_NTNV_100MHz_CP-OFDM_QPSK_3600MHz_Outer_Full



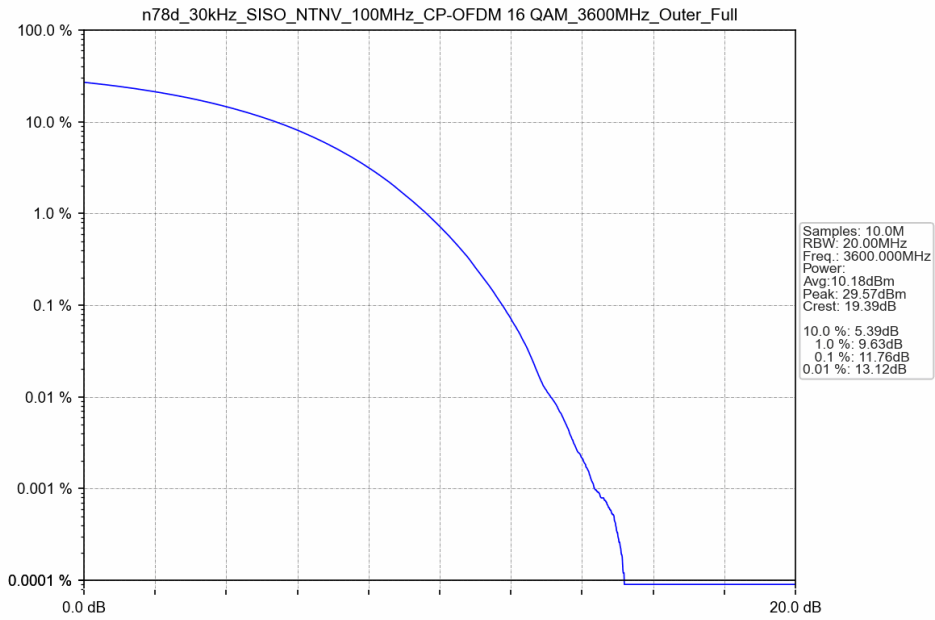
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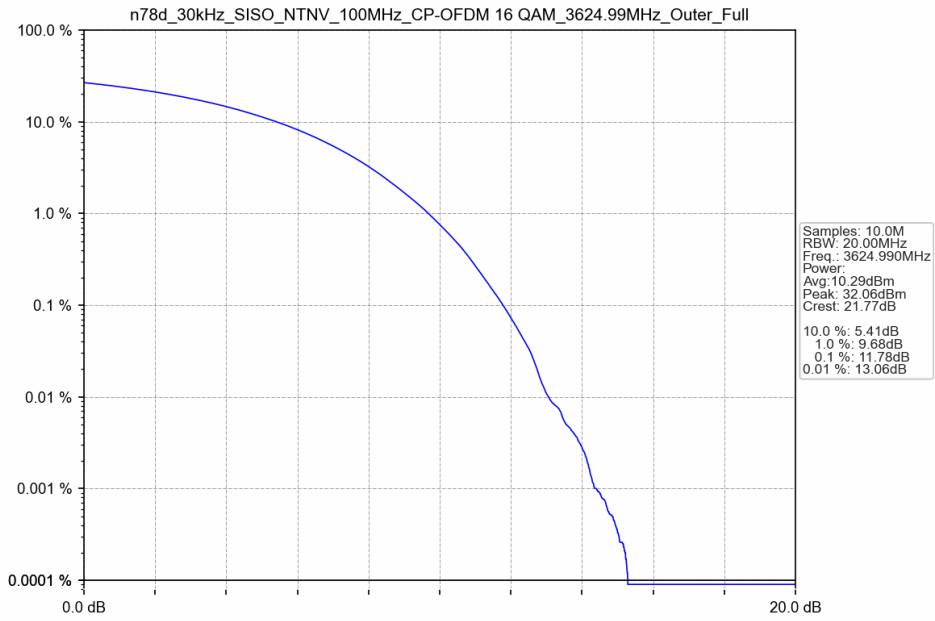
n78d_30kHz_SISO_NTNV_100MHz_CP-OFDM_QPSK_3649.98MHz_Outer_Full



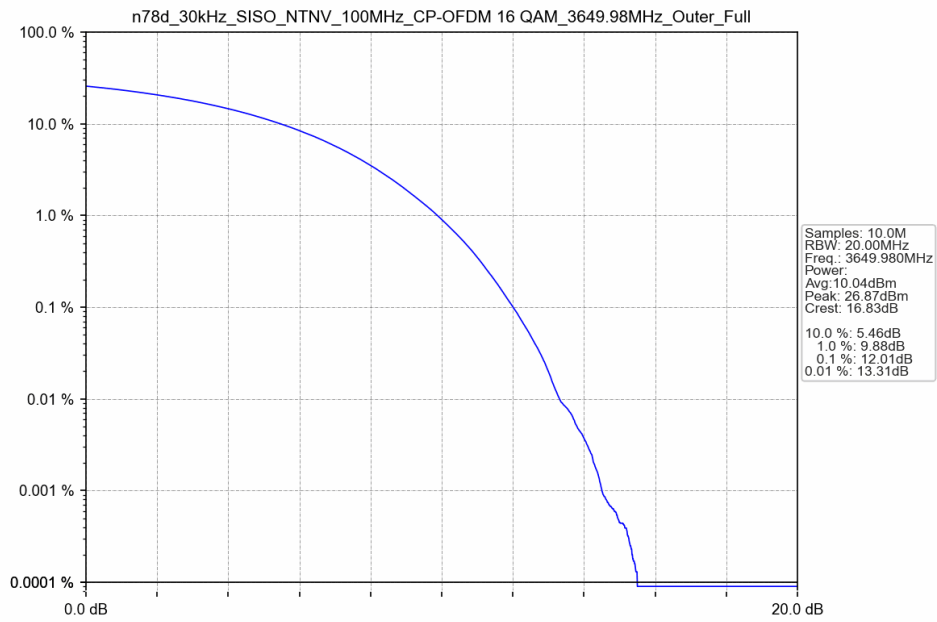
n78d_30kHz_SISO_NTNV_100MHz_CP-OFDM 16 QAM_3600MHz_Outer_Full



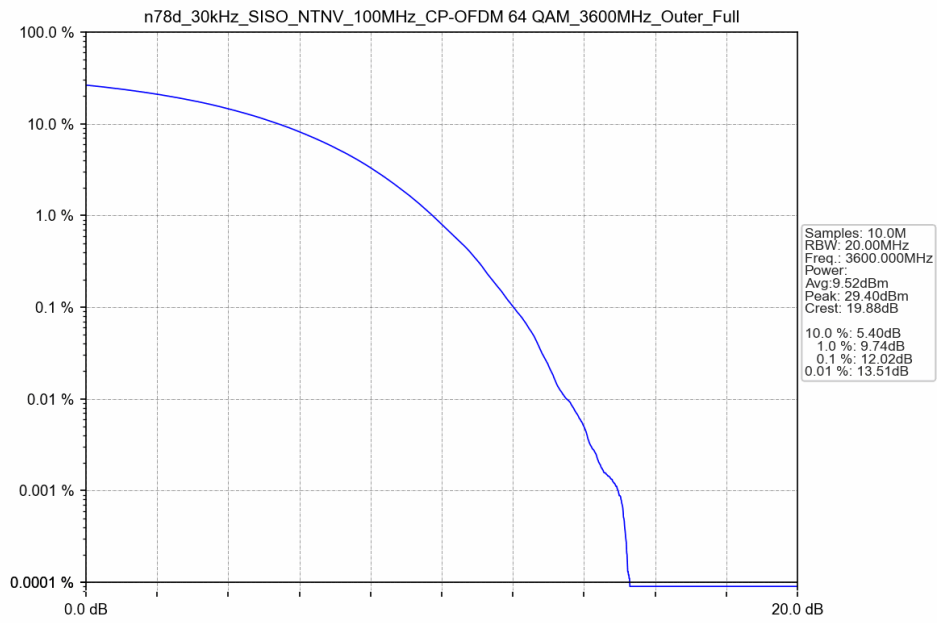
n78d_30kHz_SISO_NTNV_100MHz_CP-OFDM 16 QAM_3624.99MHz_Outer_Full



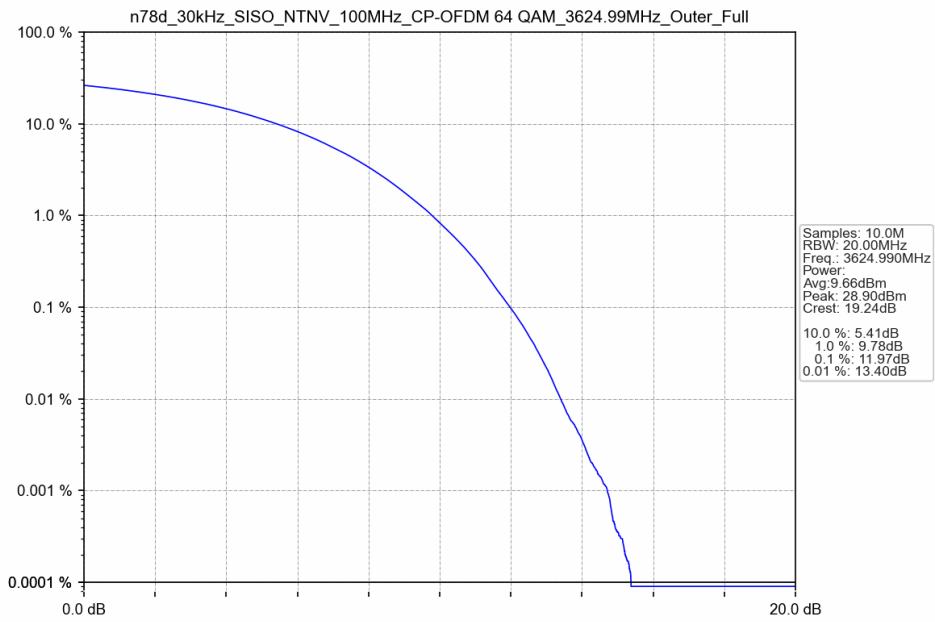
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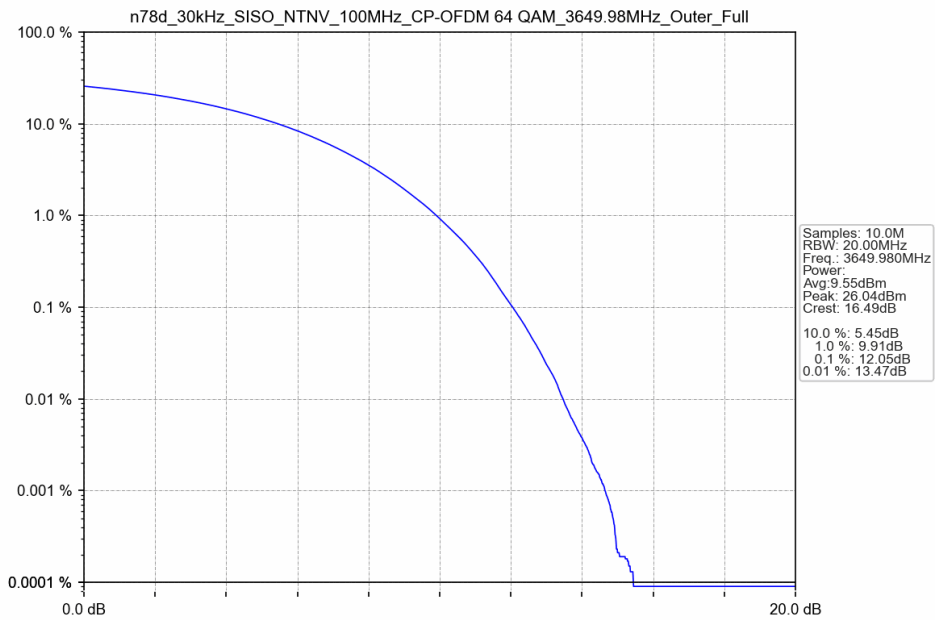
n78d_30kHz_SISO_NTNV_100MHz_CP-OFDM 64 QAM_3600MHz_Outer_Full



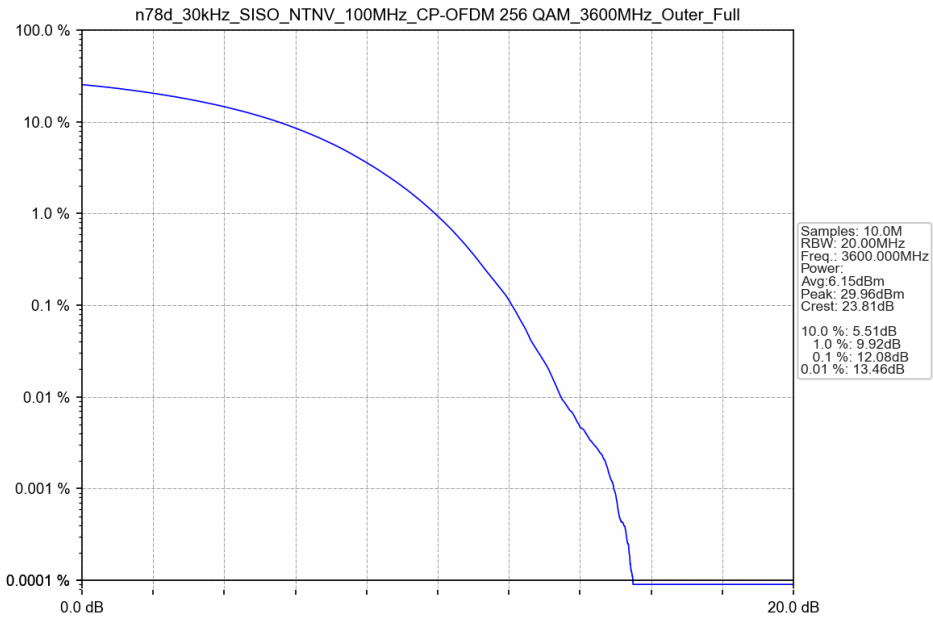
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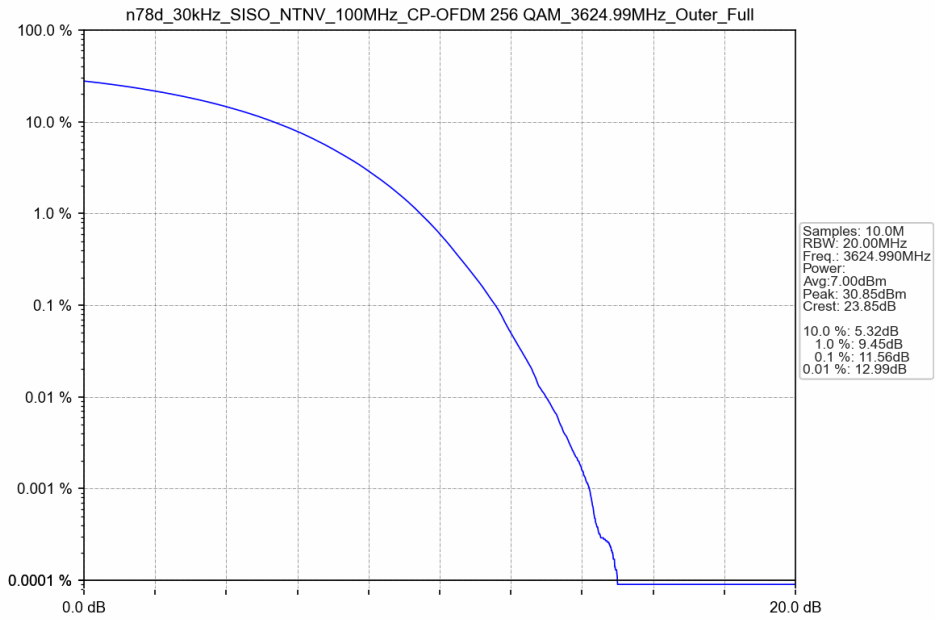
n78d_30kHz_SISO_NTNV_100MHz_CP-OFDM 64 QAM_3649.98MHz_Outer_Full



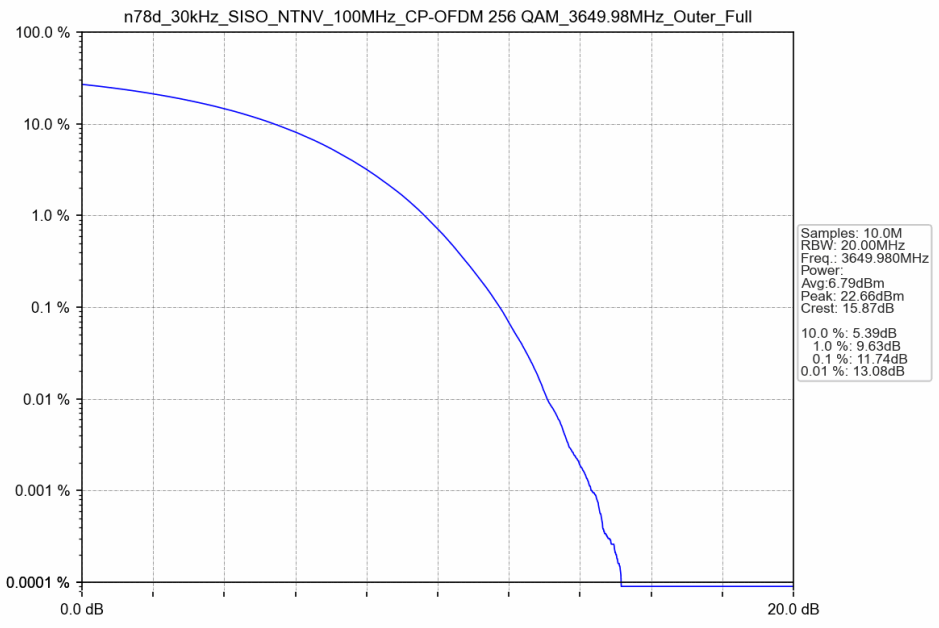
n78d_30kHz_SISO_NTNV_100MHz_CP-OFDM 256 QAM_3600MHz_Outer_Full



n78d_30kHz_SISO_NTNV_100MHz_CP-OFDM 256 QAM_3624.99MHz_Outer_Full



n78d_30kHz_SISO_NTNV_100MHz_CP-OFDM 256 QAM_3649.98MHz_Outer_Full



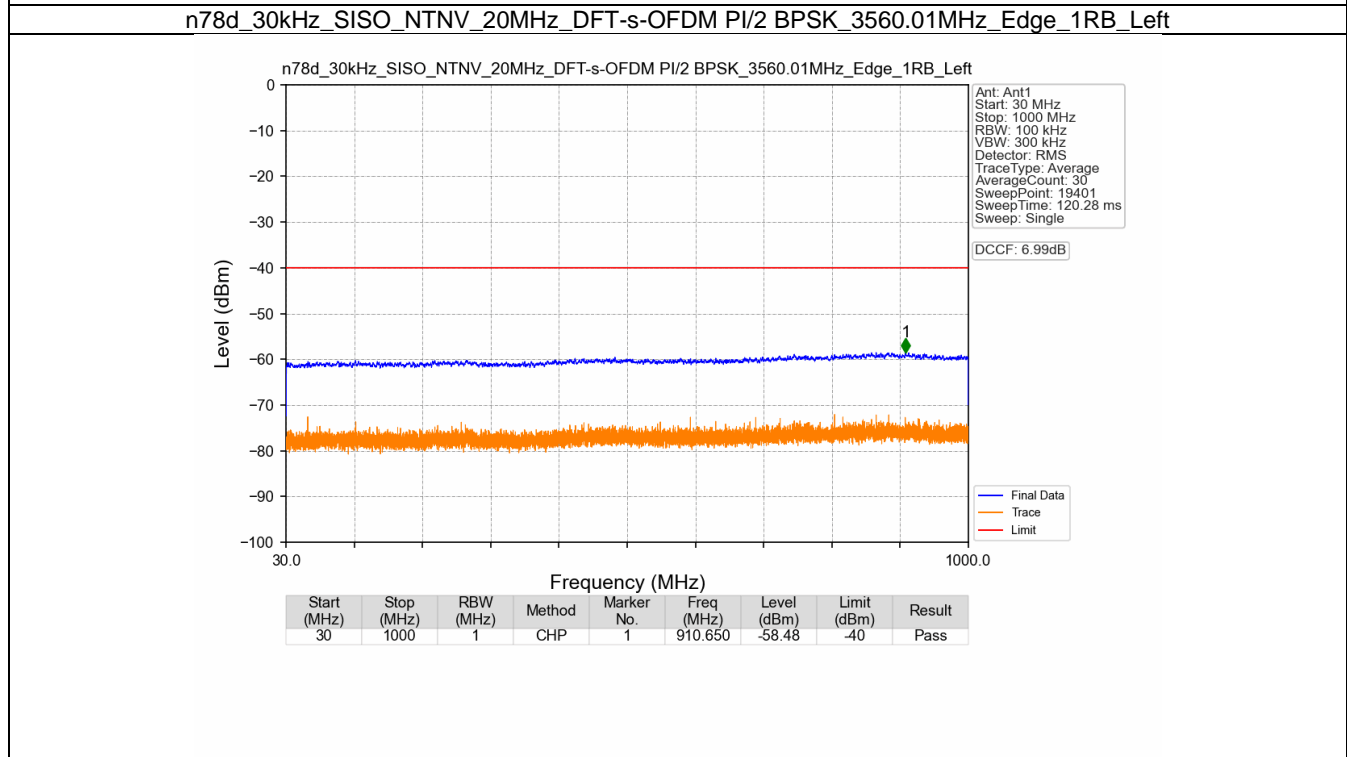
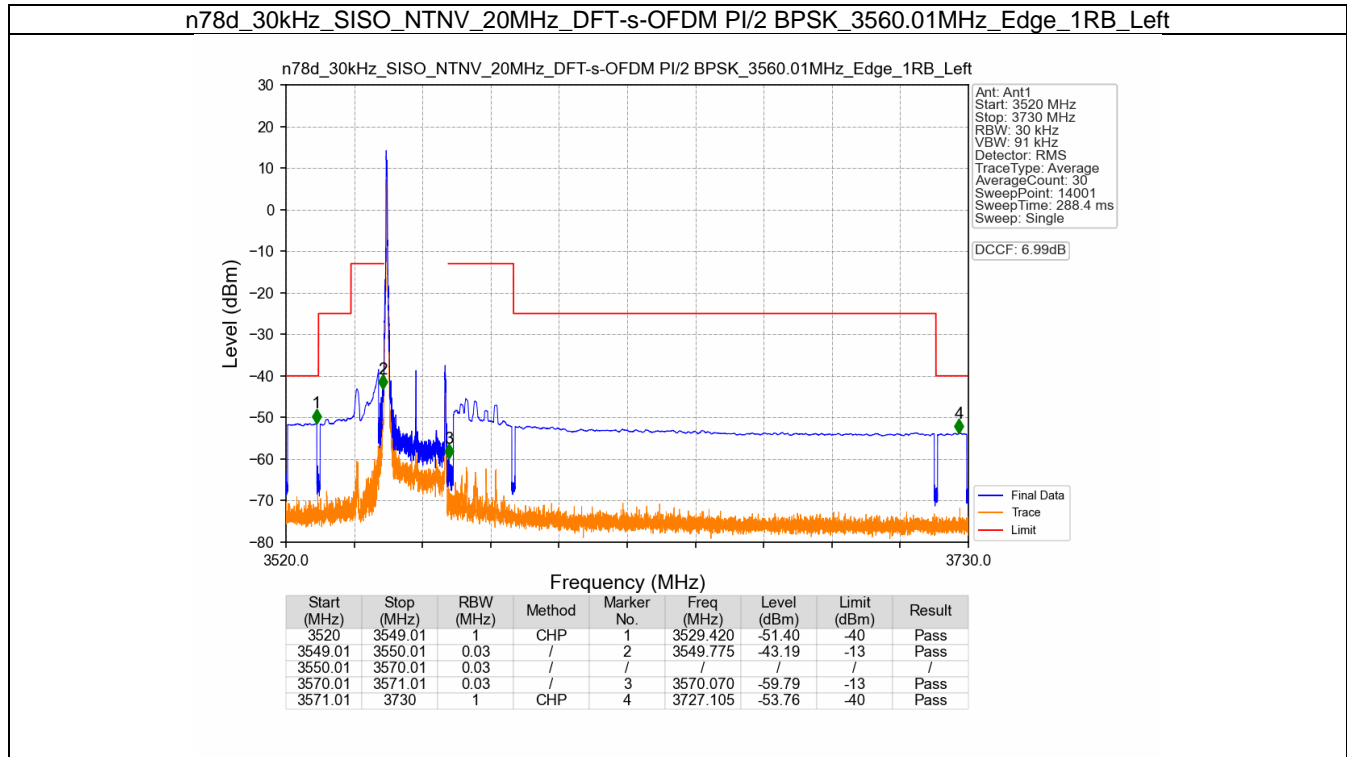
5. Spurious Emission

5.1 30k_SISO_20MHz_NTNV

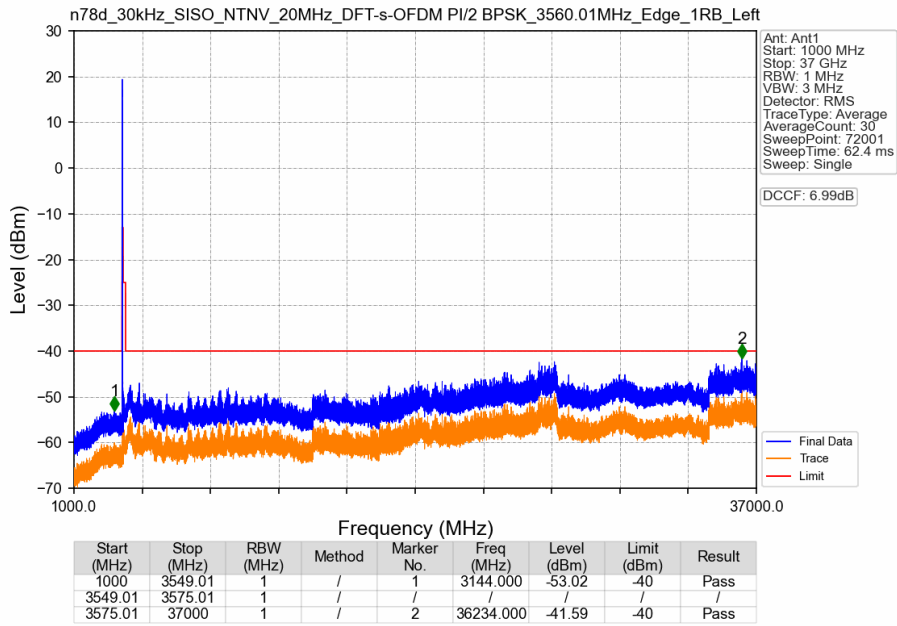
5.1.1 Test Result

5G NR n78d SCS=30kHz SISO 20MHz NTN						
Modulation	Frequency (MHz)	RB Allocation	Spurious Emission			Verdict
			Ant1	Ant2	Sum	
DFT-s-OFDM PI/2 BPSK	3560.01	Edge_1RB_Left	Refer To Test Graph			Pass
		Outer_Full	Refer To Test Graph			Pass
		Inner_1RB_Left	Refer To Test Graph			Pass
	3624.99	Edge_1RB_Left	Refer To Test Graph			Pass
		Edge_1RB_Right	Refer To Test Graph			Pass
		Inner_1RB_Right	Refer To Test Graph			Pass
DFT-s-OFDM QPSK	3560.01	Edge_1RB_Left	Refer To Test Graph			Pass
		Outer_Full	Refer To Test Graph			Pass
		Inner_1RB_Left	Refer To Test Graph			Pass
	3624.99	Edge_1RB_Left	Refer To Test Graph			Pass
		Edge_1RB_Right	Refer To Test Graph			Pass
		Inner_1RB_Right	Refer To Test Graph			Pass
CP-OFDM QPSK	3560.01	Edge_1RB_Left	Refer To Test Graph			Pass
		Outer_Full	Refer To Test Graph			Pass
		Inner_1RB_Left	Refer To Test Graph			Pass
	3624.99	Edge_1RB_Left	Refer To Test Graph			Pass
		Edge_1RB_Right	Refer To Test Graph			Pass
		Inner_1RB_Right	Refer To Test Graph			Pass

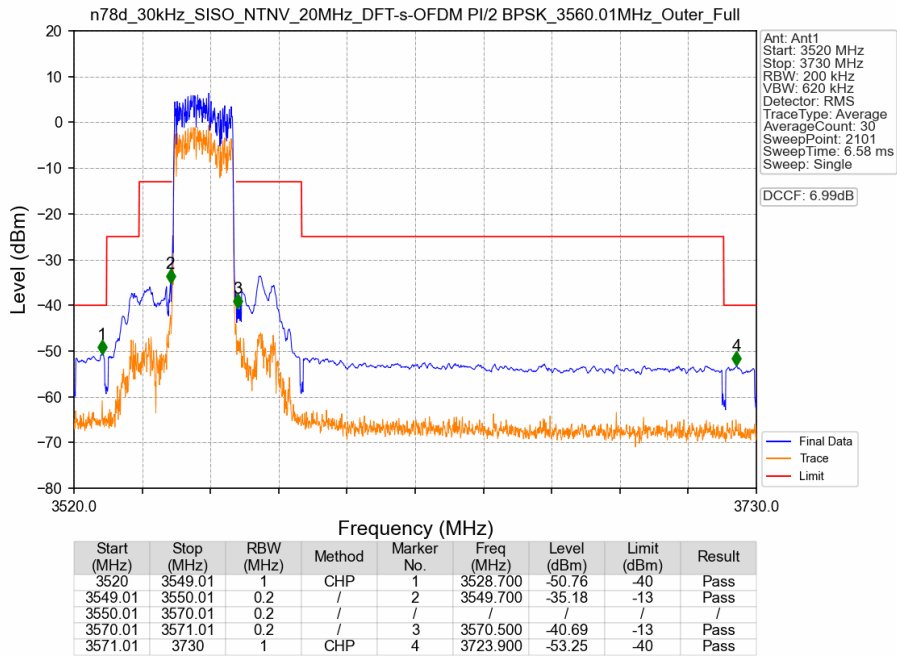
1.1.2 Test Graph



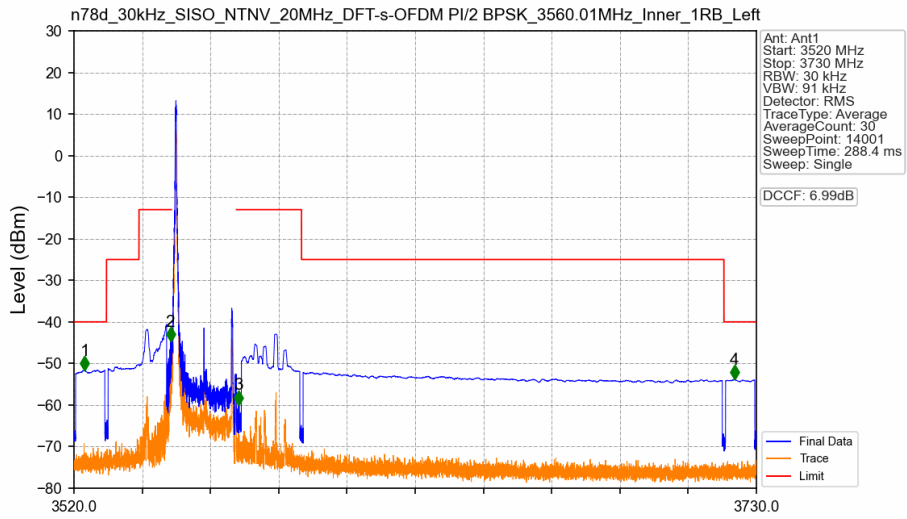
n78d_30kHz_SISO_NTNV_20MHz_DFT-s-OFDM PI/2 BPSK_3560.01MHz_Edge_1RB_Left



n78d_30kHz_SISO_NTNV_20MHz_DFT-s-OFDM PI/2 BPSK_3560.01MHz_Outer_Full

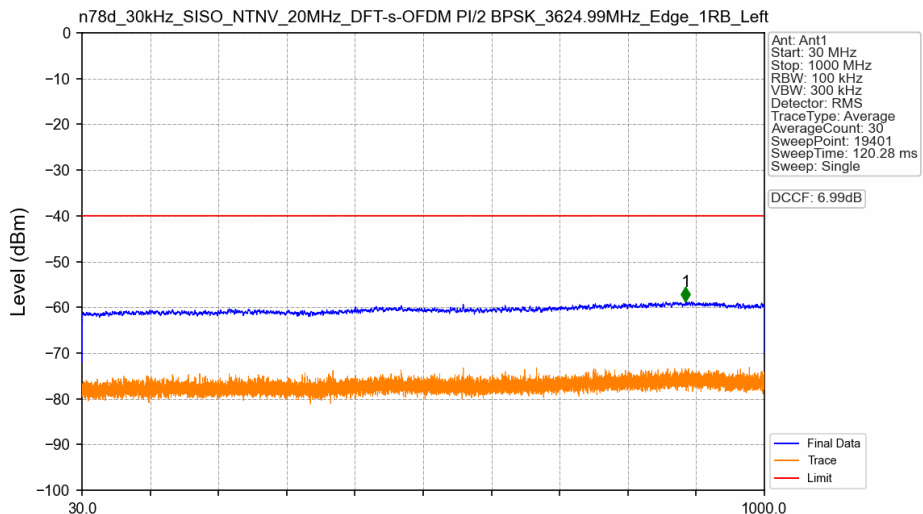


n78d_30kHz_SISO_NTNV_20MHz_DFT-s-OFDM PI/2 BPSK_3560.01MHz_Inner_1RB_Left



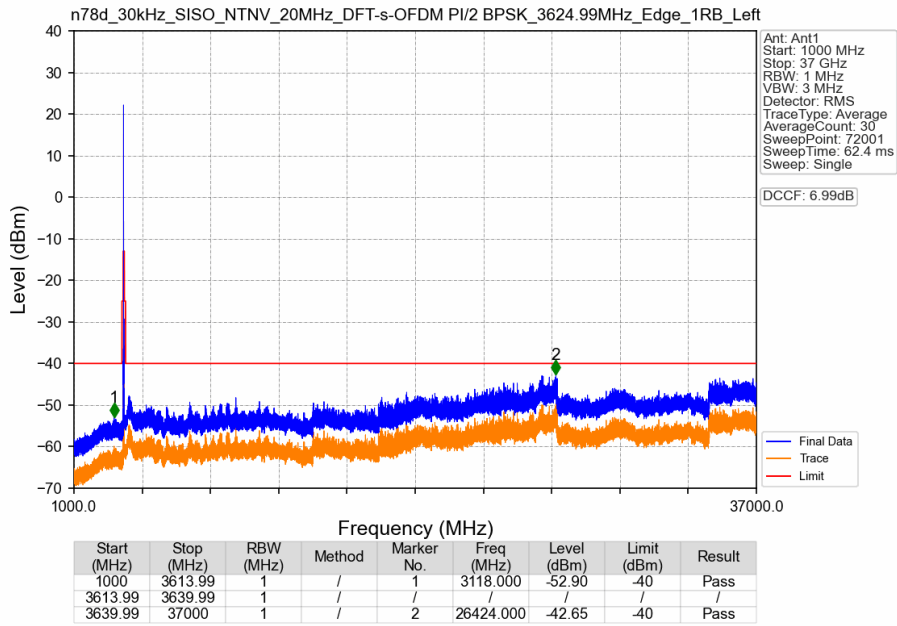
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
3520	3549.01	1	CHP	1	3523.300	-51.62	-40	Pass
3549.01	3550.01	0.03	/	2	3549.670	-44.69	-13	Pass
3550.01	3570.01	0.03	/	/	/	/	/	/
3570.01	3571.01	0.03	/	3	3570.520	-59.95	-13	Pass
3571.01	3730	1	CHP	4	3723.190	-53.87	-40	Pass

n78d_30kHz_SISO_NTNV_20MHz_DFT-s-OFDM PI/2 BPSK_3624.99MHz_Edge_1RB_Left

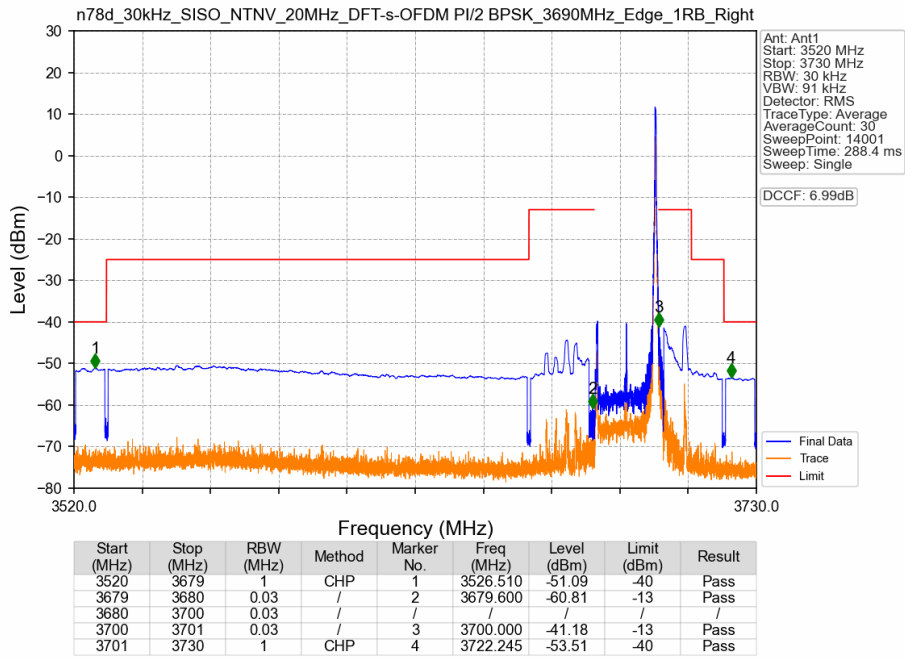


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	1000	1	CHP	1	888.100	-58.75	-40	Pass

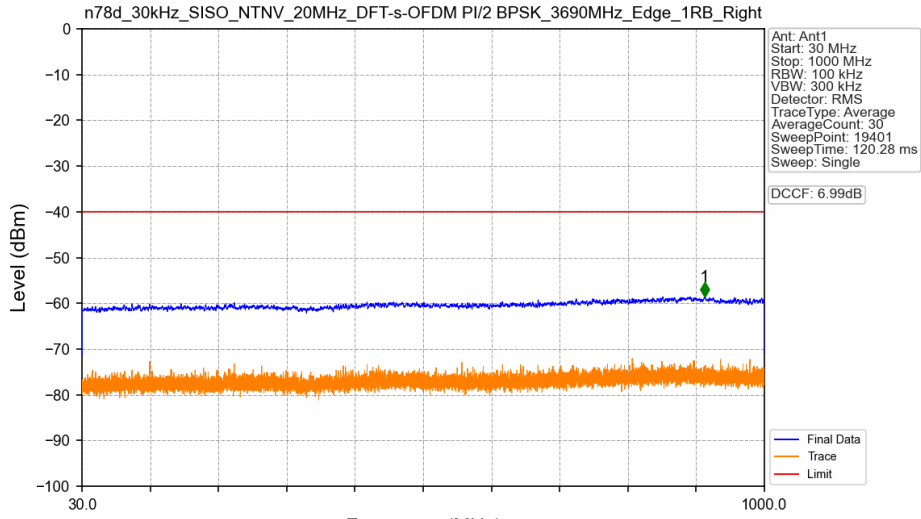
n78d_30kHz_SISO_NTNV_20MHz_DFT-s-OFDM PI/2 BPSK_3624.99MHz_Edge_1RB_Left



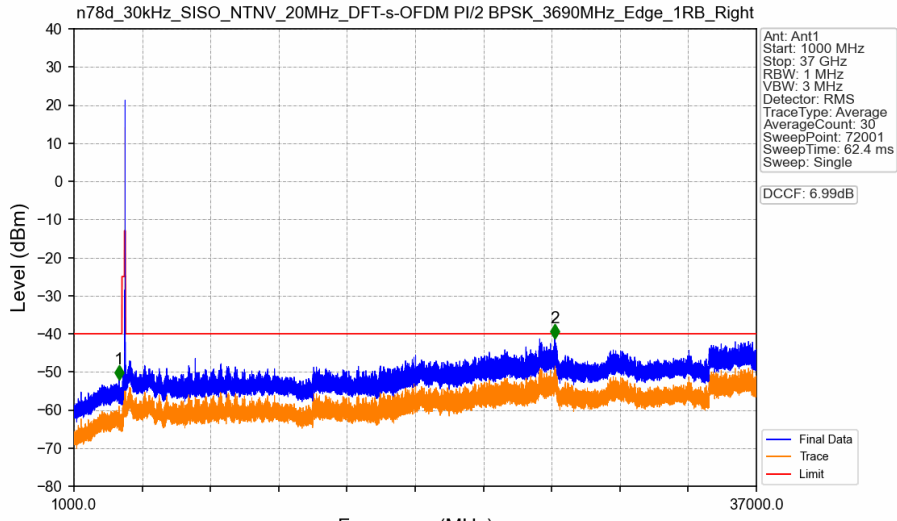
n78d_30kHz_SISO_NTNV_20MHz_DFT-s-OFDM PI/2 BPSK_3690MHz_Edge_1RB_Right



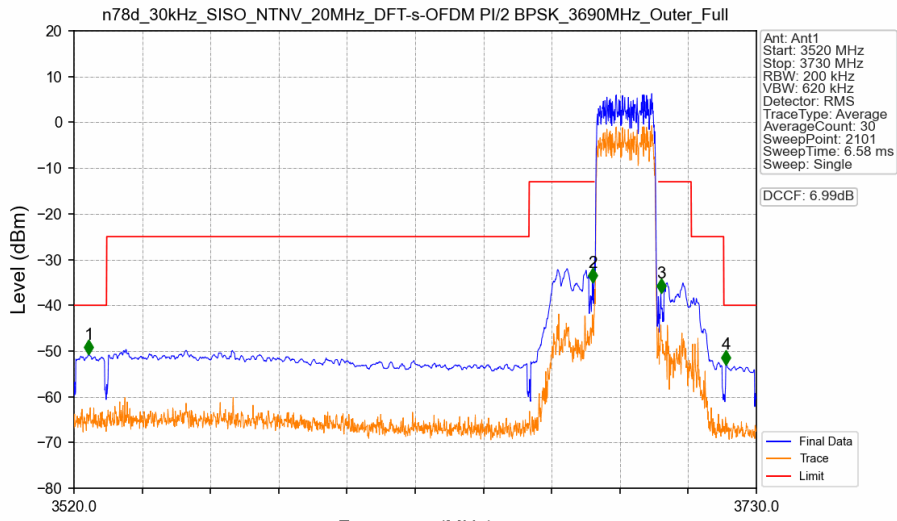
n78d_30kHz_SISO_NTNV_20MHz_DFT-s-OFDM PI/2 BPSK_3690MHz_Edge_1RB_Right



n78d_30kHz_SISO_NTNV_20MHz_DFT-s-OFDM PI/2 BPSK_3690MHz_Edge_1RB_Right

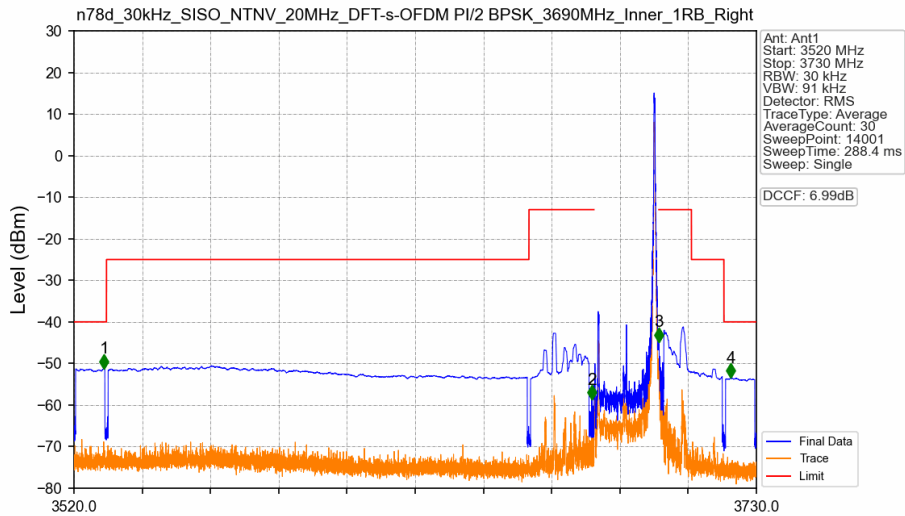


n78d_30kHz_SISO_NTNV_20MHz_DFT-s-OFDM PI/2 BPSK_3690MHz_Outer_Full



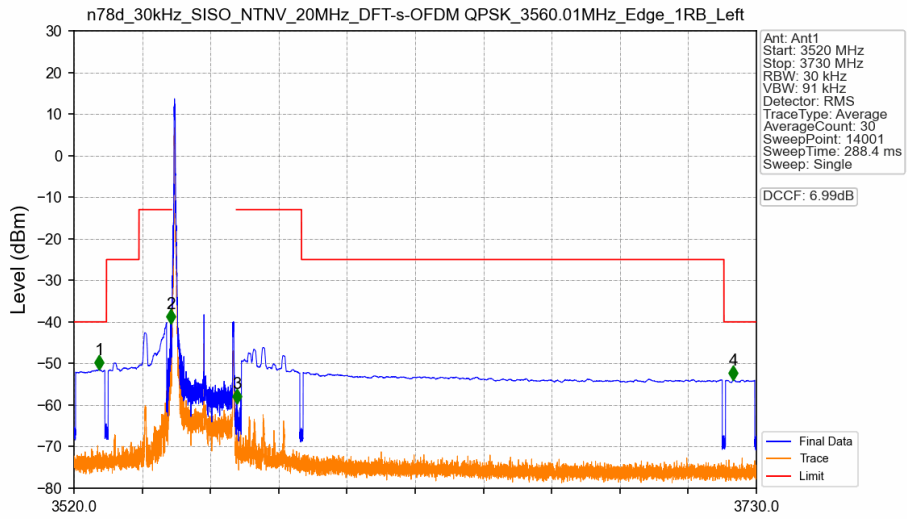
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
3520	3679	1	CHP	1	3524.500	-50.69	-40	Pass
3679	3680	0.2	/	2	3679.600	-35.06	-13	Pass
3680	3700	0.2	/	/	/	/	/	/
3700	3701	0.2	/	3	3700.600	-37.32	-13	Pass
3701	3730	1	CHP	4	3720.600	-52.94	-40	Pass

n78d_30kHz_SISO_NTNV_20MHz_DFT-s-OFDM PI/2 BPSK_3690MHz_Inner_1RB_Right



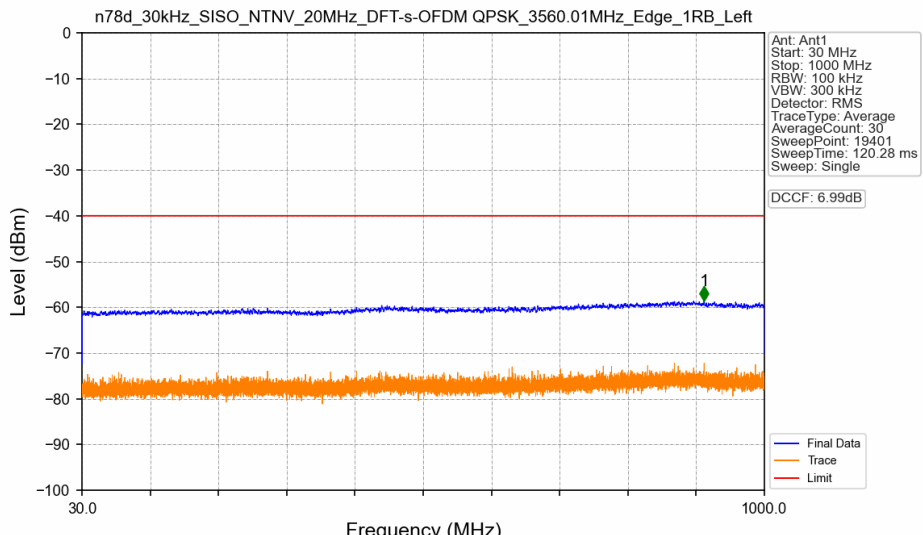
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
3520	3679	1	CHP	1	3529.240	-51.22	-40	Pass
3679	3680	0.03	/	2	3679.345	-58.60	-13	Pass
3680	3700	0.03	/	/	/	/	/	/
3700	3701	0.03	/	3	3700.045	-44.79	-13	Pass
3701	3730	1	CHP	4	3722.080	-53.50	-40	Pass

n78d_30kHz_SISO_NTNV_20MHz_DFT-s-OFDM_QPSK_3560.01MHz_Edge_1RB_Left



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
3520	3549.01	1	CHP	1	3527.785	-51.46	-40	Pass
3549.01	3550.01	0.03	/	2	3549.895	-40.42	-13	Pass
3550.01	3570.01	0.03	/	/	/	/	/	/
3570.01	3571.01	0.03	/	3	3570.115	-59.60	-13	Pass
3571.01	3730	1	CHP	4	3722.920	-54.01	-40	Pass

n78d_30kHz_SISO_NTNV_20MHz_DFT-s-OFDM_QPSK_3560.01MHz_Edge_1RB_Left



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	1000	1	CHP	1	914.300	-58.59	-40	Pass