

Eqn $P_s = \text{spec_power}(\text{dBm}(\text{fs}(\text{RX_in}[1], \dots, \text{"Kaiser"})), -1\text{e}5, 1\text{e}5)$

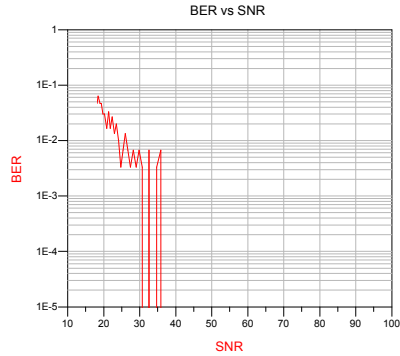
Eqn $P_n = \text{wtodbm}(\text{dbmtow}(\text{spec_power}(\text{dBm}(\text{fs}(\text{RX_in}[1], \dots, \text{"Kaiser"})), -4\text{e}5, -3\text{e}5)) + \text{dbmtow}(\text{spec_power}(\text{dBm}(\text{fs}(\text{RX_in}[1], \dots, \text{"Kaiser"})), 3\text{e}5, 4\text{e}5)) - 10 \log_{10}(\text{KaiserGain})$

Eqn $\text{KaiserGain} = 1.653$

Eqn $\text{MeanPn} = \text{mean}(\text{Pn})$

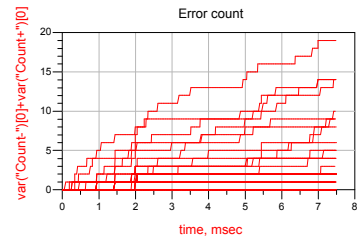
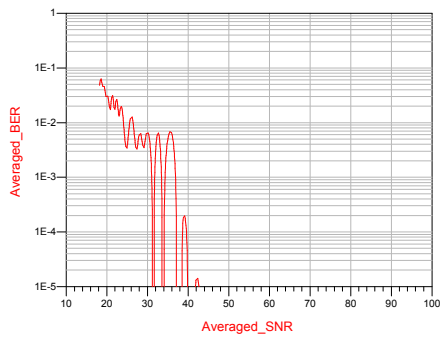
Eqn $\text{SNR} = P_s - \text{MeanPn}$

Eqn $\text{BER} = \text{real}(\text{max}(\text{var}(\text{"Count-"})[0] + \text{var}(\text{"Count+"})[0]) / \text{Bits}[0])$



Eqn $\text{Averaged_BER} = \text{interpolate}(\text{"spline"}, \text{BER}, 1, [10::1::1000])$

Eqn $\text{Averaged_SNR} = \text{interpolate}(\text{"spline"}, \text{SNR}, 1, [10::1::1000])$



Link budget simulation results

R	Ps	Pn	BER	SNR	MeanPn
10.000000	-14.985806	-88.492177	0.000000	98.108013	-113.093818
35.000000	-36.748501	-108.798577	0.000000	76.345317	
60.000000	-46.111868	-112.965880	0.000000	66.981950	
85.000000	-52.162586	-113.519246	0.000000	60.931233	
110.000000	-56.641034	-113.582636	0.000000	56.452784	
135.000000	-60.199338	-113.700552	0.000000	52.894480	
160.000000	-63.150012	-113.898788	0.000000	49.943807	
185.000000	-65.673227	-113.765224	0.000000	47.420592	
210.000000	-67.876531	-113.719931	0.000000	45.217287	
235.000000	-69.825878	-113.807435	0.000000	43.267940	
260.000000	-71.581346	-113.697266	0.000000	41.512473	
285.000000	-73.175915	-113.965898	0.000000	39.917904	
310.000000	-74.639988	-114.031905	0.000000	38.453830	
335.000000	-75.992309	-113.590654	0.000000	37.101509	
360.000000	-77.240588	-113.804565	0.006667	35.853231	
385.000000	-78.397981	-113.887887	0.003333	34.696938	
410.000000	-79.492853	-113.908254	0.000000	33.600965	
435.000000	-80.525193	-114.125700	0.006667	32.568626	
460.000000	-81.494199	-113.990650	0.000000	31.599619	
485.000000	-82.415050	-113.673804	0.003333	30.678769	
510.000000	-83.259898	-113.666169	0.006667	29.833921	
535.000000	-84.121021	-114.148347	0.003333	28.972797	
560.000000	-84.903791	-114.012753	0.006667	28.190028	
585.000000	-85.677672	-114.053250	0.003333	27.416146	
610.000000	-86.406265	-113.555395	0.006667	26.687553	
635.000000	-87.099484	-114.008145	0.013333	25.994335	
660.000000	-87.757468	-113.877962	0.006667	25.336351	
685.000000	-88.385140	-113.964786	0.003333	24.708678	
710.000000	-89.026063	-113.993782	0.010000	24.067756	
735.000000	-89.637487	-113.959870	0.020000	23.456331	
760.000000	-90.186714	-114.009050	0.013333	22.907105	
785.000000	-90.751972	-113.906080	0.028667	22.341847	
810.000000	-91.260610	-113.847824	0.016667	21.833208	
835.000000	-91.777608	-113.968883	0.033333	21.316210	
860.000000	-92.289805	-114.075098	0.016667	20.804013	
885.000000	-92.871659	-113.523056	0.030000	20.222160	
910.000000	-93.331853	-113.856556	0.030000	19.761966	
935.000000	-93.765377	-113.661798	0.046667	19.328441	
960.000000	-94.181823	-113.827663	0.046667	18.911996	
985.000000	-94.649939	-114.022523	0.063333	18.443879	
1000.000000	-94.941706	-113.980542	0.046667	18.152113	