

Eqn Ps = spec_power(dBm(fs(RX_in[:, :, 1],,,,,,"Kaiser")),-1e5,1e5) - WindowGain

Eqn Pn = wtodbm(dbmtow(spec_power(dBm(fs(RX_in[:, :, 1],,,,,,"Kaiser")),-4e5,-3e5)) + dbmtow(spec_power(dBm(fs(RX_in[:, :, 1],,,,,,"Kaiser")),3e5,4e5))) - WindowGain

Eqn KaiserNENBW = 1.653 Eqn WindowGain = 10*log10(KaiserNENBW)

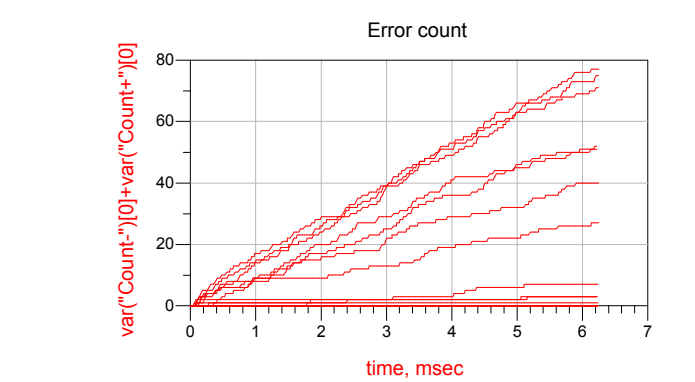
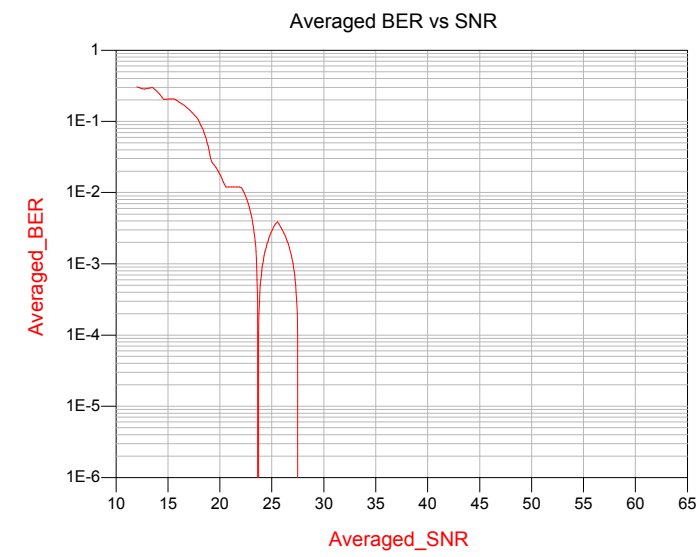
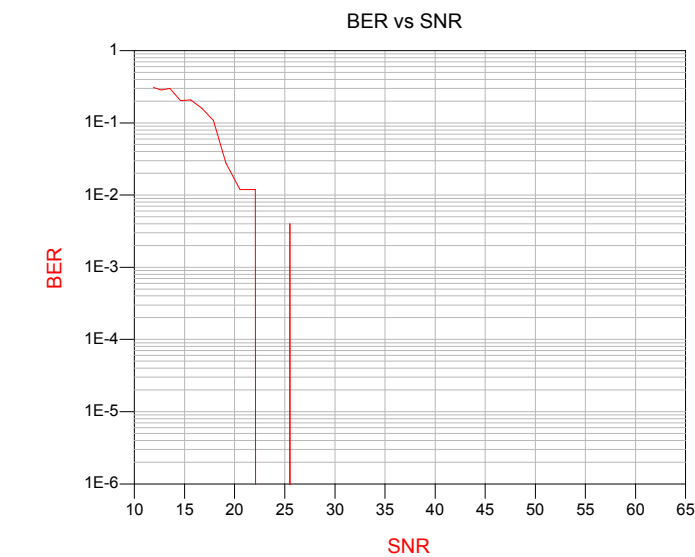
Eqn MeanPn = mean(Pn)

Eqn SNR = Ps - MeanPn

Eqn BER = real(max(var("Count-")[:, :, 0])+max(var("Count+")[:, :, 0])) / Bits[0,0]

Eqn Averaged_BER = interpolate("linear",BER,1,[min(R)::1::max(R)])

Eqn Averaged_SNR = interpolate("linear",SNR,1,[min(R)::1::max(R)])



| Link budget simulation results | | | | | |
|--------------------------------|-------------|-------------|----------|-----------|-------------|
| R | Ps | Pn | BER | SNR | MeanPn |
| 40.000000 | -54.110633 | -117.052770 | 0.000000 | 63.657038 | -117.767671 |
| 80.000000 | -66.151917 | -117.617822 | 0.000000 | 51.615753 | |
| 120.000000 | -73.193754 | -118.032313 | 0.000000 | 44.573917 | |
| 160.000000 | -78.191716 | -117.703487 | 0.000000 | 39.575955 | |
| 200.000000 | -82.065465 | -118.042252 | 0.000000 | 35.702206 | |
| 240.000000 | -85.234666 | -117.827580 | 0.000000 | 32.533005 | |
| 280.000000 | -87.896636 | -117.818946 | 0.000000 | 29.871035 | |
| 320.000000 | -90.221813 | -117.693011 | 0.000000 | 27.545857 | |
| 360.000000 | -92.274584 | -117.943109 | 0.004000 | 25.493086 | |
| 400.000000 | -94.102840 | -117.897303 | 0.000000 | 23.664831 | |
| 440.000000 | -95.708802 | -117.712202 | 0.012000 | 22.058869 | |
| 480.000000 | -97.243664 | -117.687940 | 0.012000 | 20.524006 | |
| 520.000000 | -98.644092 | -117.983670 | 0.028000 | 19.123579 | |
| 560.000000 | -99.889237 | -117.712130 | 0.108000 | 17.878434 | |
| 600.000000 | -101.036471 | -117.441298 | 0.160000 | 16.731199 | |
| 640.000000 | -102.164076 | -117.647276 | 0.208000 | 15.603594 | |
| 680.000000 | -103.184874 | -117.924799 | 0.204000 | 14.582796 | |
| 720.000000 | -104.221453 | -118.007632 | 0.300000 | 13.546218 | |
| 760.000000 | -105.107270 | -117.749630 | 0.284000 | 12.660401 | |
| 800.000000 | -105.853202 | -117.858244 | 0.308000 | 11.914469 | |