

The figure 3, figure 4 and figure 5 shows the BER performance OFDM signal over AWGN, SUI and Rician fading channel with 4 QAM. From the following figures Rician fading channel gives better reduction bit error rate (BER) compare to other channels AWGN and SUI.

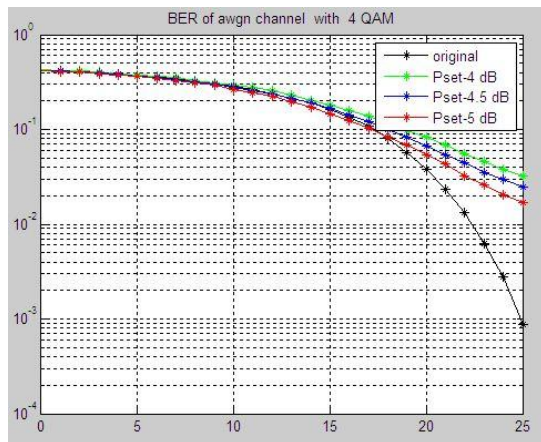


Figure 3: BER of AWGN channel with 4 QAM

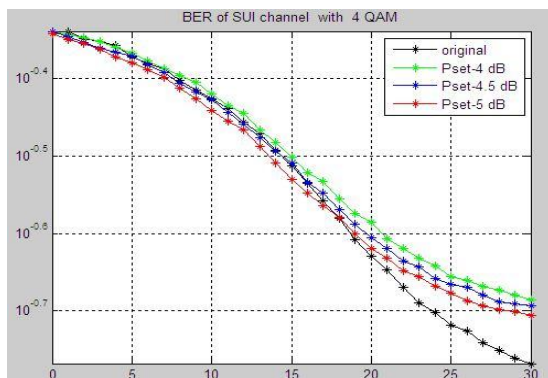


Figure 4: BER of SUI-4 channel with 4 QAM

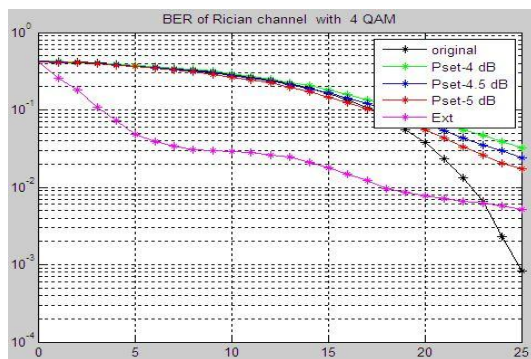


Figure 5: BER of AWGN channel with 4 QAM

The figure 6 shows the power spectral density of original OFDM signal and companded signals. It will reduce the spectral regrowth problem

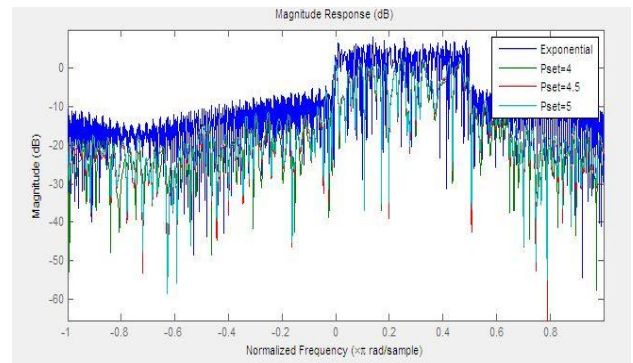


Figure 6: magnitude response

5. Conclusions

In our methodology the reduction of PAPR based on the companding transform with piecewise linear equations, the basic companding scheme introduces the distortion in the system which leads the system degraded results in the form of poor BER performance, PAPR as well. By our method we could make the system based on the optimal values of the different amplitude values called as inflection values. The proposed method with AWGN, SUI, Rician fading channel implementation, the Rician fading channel gives the enhanced performance of the less PAPR and BER with mitigation of the companding distortion.

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