FLICKSYS: TOOL TO CALCULATE FLICKER NOISE

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Abstract

An endeavor to bring popular 'Flicker Noise models' on a single platform, a simulation tool for Flicker Noise Analysis "FLICKSYS" is developed. A structured design Methodology is adopted for design and development to calculate 'Noise Power' of MOS Devices on latest submicron process technologies. The cad tool is developed to help in characterization and calibration of standard Models for Flicker Noise. The tool analyses deviations in 'Power Spectral Density' with variation in physical parameter of MOS Devices. In order to demonstrate the superiority of the noise model, a newly developed model, 'Prafulla's Model has been introduced. This Model incorporates surface roughness parameter along with the other factors to explain the mismatches between the calculated results and actual results. The model is an initiation to introduce 'Surface Roughness' as a vital factor, and considering future improvements & modifications, this model can help a lot to diminish design failures.