Abstract

This paper demonstrates a Graphical User Interface (GUI) of 2nd order Sigma-Delta modulator which is used to check the non-idealities of the circuit in BIST Scheme. High-level modeling of the parameters is done with the help of Matlab Simulink and the parameters like Signal to Noise Ratio (SNR) & Effective Number of Bits (ENOB) are calculated. The value of SNR and ENOB are found to be 108 dB and 18 bits respectively. Since the value of SNR and ENOB are increased it makes the respective signal power and Resolution better. The Graphical User Interface of 2nd order Sigma-Delta modulator is used to check the non-ideals of the circuit in BIST Scheme. High-level modeling of the parameters is done with the help of Matlab Simulink and the parameters like Signal to Noise Ratio (SNR) & Effective Number of Bits (ENOB) are calculated. The value of SNR and ENOB are found to be 108 dB and 18 bits respectively. Since the value of SNR and ENOB are increased it makes the respective signal power and Resolution better.
Improved SNR and ENOB of Sigma-Delta Modulator for Post Simulation and High Level Modeling of Built-in-Self-Test Scheme

Interface (GUI) of overall model has been successfully implemented after modeling of non-idealities for BIST technique not only avoids depending on the off-chip automatic test equipment (ATE) and reduces the test cost but increases the controllability and observability of the circuit under test also that improves the fault coverage.

References

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Index Terms

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Keywords
Sigma-delta Adc; Gui; Snr; Enob; Bist; Dut.