

عنوان مقاله:

Single-Electron Box and Its Application In Analog and Digital Circuits

محل انتشار:

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نویسندگان:

Sanaz Ramezani - MSc, Shahid Beheshti University

Mohammad Javad Sharifi - PhD, Shahid Beheshti University

خلاصه مقاله:

Single-electron devices have drawn much attention in the last two decades. They have been widely used for device research and show promise as a potential alternative to the familiar complementary metal-oxide-semiconductor devices because of their low power consumption and high density integration. In this paper the Single- Electron Box (SEB) which is the base of single electron devices is considered in accordance with a newly introduced AC model and the frequency response of the device is discussed, then the usefulness of this model is considered in design, simulation and characterization of a real digital quantizer.

کلمات کلیدی:

Single electron box (SEB), SPICE, Quantizer

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