

30 – 37 A CURRENT-MODE ANALOG CHAOS CIRCUIT REALIZING A HENON MAP

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A current-mode analog chaos circuit realizing a Henon map is proposed. The synthesis of the proposed analog chaos circuit is based on switched-current (SI) BiCMOS techniques. For the proposed circuit, simulations are performed concerning the return map and the bifurcation diagram. In these simulations, the existence of chaos is confirmed using the Liapunov exponent. The proposed circuit is built with commercially-available IC's. The return maps and bifurcation diagram are measured in experiments. The proposed circuit is integrable by a standard BiCMOS technology.

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