

# **Abstract**

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## **A New Very Low-Voltage, Low-Power CMOS RF Mixer**

A new very low power RF mixer is introduced. The proposed mixer is based on two techniques: A CMOS transistor pair is applied to the four cross-coupled commutating transistor (the first technique), and current boosted technique, as described in the paper. The CMOS mixer is simulated in 0.18  $\mu\text{m}$  CMOS technology. The mixer has an input signal of 0.2V and operates on a single 3.3V supply with transistor threshold voltages of 0.57V for all NMOS transistors and -0.52V for all PMOS transistors, and has a power dissipation of 2.66 mW.