Abstracts

A 2.5 V CMOS differential active inductor with tunable L and Q for frequencies up to 5 GHz (2001 Vol. I [MWSYM])

M. Grozing, A. Pascht and M. Berroth. "A 2.5 V CMOS differential active inductor with tunable L and Q for frequencies up to 5 GHz (2001 Vol. I [MWSYM])." 2001 MTT-S International Microwave Symposium Digest 01.1 (2001 Vol. I [MWSYM]): 575-578 vol.1.

A differential active inductor in CMOS technology with a supply voltage of 2.5 V is presented. A self-resonant frequency of 5.6 GHz is achieved. The value of the inductance L can be controlled in the range from 10 nH up to 100 nH. The quality factor Q can be tuned independently of L to values as large as 600. The active inductor is realized with a differential gyrator. The gyrator transforms intrinsic capacitances of the MOSFETs to the emulated inductance.

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