Abstracts

Novel Design Topology for Ultra Low Power Down Converters with Broadband on Chip Matching Network (1995 Vol. III [MWSYM])

M.L. Schmatz. "Novel Design Topology for Ultra Low Power Down Converters with Broadband on Chip Matching Network (1995 Vol. III [MWSYM])." 1995 MTT-S International Microwave Symposium Digest 95.3 (1995 Vol. III [MWSYM]): 1329-1332.

A novel design topology for ultra low power receivers and down converters has been developed. Using this topology, a monolithic L-band down converter consisting of an input amplifier and a double balanced mixer has been implemented with a standard 0.7 mu-m GaAs-MESFET process. The circuit has a single ended 50 Omega input and differential outputs offering totally more than 40 dB voltage conversion gain at 1 GHz and 30 dB at 2 GHz. It is supplied by a single lithium cell and has a DC power consumption of less than 2.0 mW at 2.7 V/sub DC/.

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