

Design and Performance of Low-Current GaAs MMIC's for L-Band Front-End Applications

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GaAs MMIC's with very low current and of very small size have been developed for L-band front-end applications. The MMIC's fully employ lumped LC elements with uniplanar configurations. There are two kinds of MMIC's: a low-noise amplifier and a mixer. The low-noise amplifier has a noise figure of 2.5 dB and a gain of 11.5 dB. The mixer has a conversion gain of 12.5 dB with small LO power of -3 dBm. Total current dissipation of the two MMIC's is less than 8 mA with 3 V drain bias voltages.

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