

Abstracts

A 2 GHz Enhancement Mode GaAs Down for Satellite TV Tuner Converter IC

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A fully integrated 2 GHz down-converter IC has been designed and fabricated for satellite TV application using an enhancement mode GaAs foundry process. Its internal oscillator covers a 1.2 GHz bandwidth that allows to receive the extended satellite TV band from 950 MHz to 2 GHz. The LO power leakage is greatly reduced as compared to a discrete circuit: it is about -40 dBm at the RF input and less than -30 dBm at the IF output. This IC operates under a single 5 V supply voltage and its performance is an outstanding trade-off between noise, linearity, power consumption and simplicity of implementation. It is encapsulated in a standard low cost plastic package and is already available for sampling.

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