

Abstracts

A Single MESFET Down-Converter for TVRO Application

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In this paper a compact down-converter for use in TVRO receivers is presented. It consists of an image rejection filter and Self-Oscillating Mixer performing as a block which converts RF into IF signal. Its features are fully comparable to those of conventional structures, with the additional advantage that only one MESFET is required, leading to a more compact and reliable design. Average results on a band of 800 MHz (10.95-11.75 GHz with $f_{\text{sub LO}}=10$ GHz) give a conversion gain of 4.5 dB, 8 dB SSB noise figure and more than 40 dB image rejection.

 [Return to main document.](#)