

A Variable Gain IF Amplifier with -67dBc IM_3 -Distortion at 1.4V_{pp} Output in $0.25\mu\text{m}$ CMOS

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Abstract

A variable gain amplifier based on feedback has IM_3 -products below -67dBc around the 10.7MHz IF of an AM/FM radio receiver. It consumes 2.7mA from a 2.5V supply delivering a differential output signal of 1.4V_{pp} with 96dB dynamic range in a 9kHz AM channel. The active area is 0.038mm^2 in $0.25\mu\text{m}$ CMOS.