

ABSTRACT**FULLY INTEGRATED SELF-TUNED IMAGE REJECTION DOWNCONVERSION SYSTEM**

A feedback image rejection downconversion system is described, which can be used in low IF receivers with good performance and completely integrated. In the forward path of the system, quadrature mixers and complex filters are used for frequency downconversion and separation of the RF signal from the image signal. In the feedback path, a correlator, a gain mismatch estimator and two VGAs have been used to detect, estimate and compensate the amplitude and phase mismatch between the forward I and Q path signals. The whole system is self-tuned and can operate in both closed and open loop mode. A very high and robust image rejection ratio (over 60dB) has been achieved.

(FIG. 1)

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