Abstracts

Monolithic Integrated Blanking Up-Converter

M. West, Jr. and M. Kumar. "Monolithic Integrated Blanking Up-Converter." 1990 Transactions on Microwave Theory and Techniques 38.9 (Sep. 1990 [T-MTT] (Special Issue on Multifunction MMIC's and their System Applications)): 1227-1231.

A wide-band monolithic integrated blanking up-converter is described which up-converts a 0.1 to 0.5 GHz IF signal to a 0.6 to 1.75 GHz RF signal. The up-converter consists of a wide-band FET double balanced mixer, LO and IF input amplifiers, a novel actively matched 180° phase splitter, and an RF amplifier. The up-converter provides a conversion gain of 8 dB, maximum input and output VSWR's less than 1.6, a 40 dB on/off blanking capability, and a power dissipation of 0.8 W. The high level of integration of various functions on a single chip utilizing all active matching is realized in a small size of 1.22 mm X 1.22 mm.

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