

Abstracts

Novel Linearize Using Balanced Circulators and its Application to Multilevel Digital Radio Systems

N. Imai, T. Nojima and T. Murase. "Novel Linearize Using Balanced Circulators and its Application to Multilevel Digital Radio Systems." 1989 Transactions on Microwave Theory and Techniques 37.8 (Aug. 1989 [T-MTT]): 1237-1243.

A new miniaturized RF predistortion linearizer for a GaAs FET power amplifier applicable to 256 QAM digital microwave systems is presented. This linearizer, which is based upon the cuber linearizer technique, utilizes circulators and a pair of diodes as fundamental components. It allows not only miniaturization and easy adjustment of the circuit, but also compensation for temperature variation in the circulators. The fundamental characteristics of the linearizer and its effect on the 256 QAM signal are shown. The results show an improvement of more than 6 dB in the output back-off of the amplifier.

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