Abstracts

An MMIC Low-Distortion Variable-Gain Amplifier Using Active Feedback (1995 Vol. III [MWSYM])

K. Nishikawa and T. Tokumitsu. "An MMIC Low-Distortion Variable-Gain Amplifier Using Active Feedback (1995 Vol. III [MWSYM])." 1995 MTT-S International Microwave Symposium Digest 95.3 (1995 Vol. III [MWSYM]): 1619-1622.

A new low-distortion variable-gain amplifier (VGA) is proposed and analyzed. The gain of the VGA is controlled using the transconductance of a common-drain FET (CDF) in the negative feedback path. The analysis and prototype results indicate that the third-order intermodulation-distortion ratio is greatly improved at a high input power levels due to the CDF'S unilateral characteristic and a reduction in the VGA's input impedance.

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