Abstracts

A Si-Bipolar AGC Amplifier IC with High Gain and Wide Dynamic Range for 10 Gb/s Optical-Fiber Receivers

M. Moller, H.-M. Rein and H. Wernz. "A Si-Bipolar AGC Amplifier IC with High Gain and Wide Dynamic Range for 10 Gb/s Optical-Fiber Receivers." 1994 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 94.1 (1994 [MCS]): 107-110.

A complete linear automatic-gain-control (AGC) amplifier for a 10 Gb/s optical fiber link was integrated on a single chip using a Si-bipolar production technology. It is characterized by a high gain of 37 dB, linear operation over a wide input dynamic range of 46 dB, a maximum data rate of 13 Gb/s, and a gain-independent 3-dB cut-off frequency of 10 GHz. Moreover, a special 50-Omega input termination circuit with only small return loss as well as two separate output buffers are used.

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