

A microwave miniaturized linearizer using a parallel diode

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A miniaturized linearizer using a parallel diode has been developed. It is composed of a parallel diode and a resistance for d.c. bias feed. The linearizer utilizes a nonlinear resistive element of the diode. In this paper, the operation principle of the linearizer is described. The parallel diode provides a high temperature stability and readiness of bias voltage adjustment. BY applying this linearizer to an S-band power amplifier, an improvement of ACP of 5 dB and power added efficiency of 8.5% has been achieved for the $\pi/4$ -shift QPSK modulated signal.

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