Abstracts

A balanced adaptive beamforming system for broadband wireless communications

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A broadband analog beamformer is realized in the form of balanced variable attenuators using PIN diodes. The phase deviation due to change in junction capacitance of a PIN diode with respect to applied voltage is improved by using a balanced architecture in the design of the variable attenuator. Measurement shows flat phase transition and linear attenuation over the frequency range from 2.5 GHz to 3.0 GHz, which can provide giga bit data throughput for QPSK modulated signal.

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