Abstracts

Monolithic 38 GHz coplanar feedback VCOs fabricated by a production PHEMT technology

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A set of coplanar 38 GHz voltage-controlled oscillators has been developed. The oscillators are based on a feedback topology and consist of a two-stage amplifier, a frequency selective feedback network, and a voltage-controlled phase shifter. The monolithic circuits also include a buffer stage and were fabricated by a production-oriented PHEMT technology. By employing different feedback networks and phase shifters according to a building block concept, several versions with tuning bandwidths between 0.6 GHz and 1.3 GHz have been realized. The oscillators show a high tuning linearity and an almost constant output power of typically 12 dBm.

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