Abstracts

A New Quasi-Optical Oscillator with Gaussian Output Beam

M. Kiyokawa and T. Matsui. "A New Quasi-Optical Oscillator with Gaussian Output Beam." 1994 Microwave and Guided Wave Letters 4.5 (May 1994 [MGWL]): 129-131.

An oscillator, with a new quasi-optical resonator, called a Gaussian-beam oscillator, is described. The resonator consists of a plane mirror substrate and a concave spherical mirror with a highly reflective, partially transparent region. A high Q factor, obtained by this spherical mirror, results in a low phase noise of the oscillator and the output power is extracted from this region as a Gaussian beam. This oscillator also features an active circuit fabricated behind the resonator. The configuration is suitable for millimeter-wave integrated circuits. Experimental validity is carried out from an X-band prototype.

❑ Return to main document.