Abstracts

Grid oscillators with selective-feedback mirrors

Qi Sun, J.B. Horiuchi, S.R. Haynes, K.W. Miyashiro and W.A. Shiroma. "Grid oscillators with selective-feedback mirrors." 1998 Transactions on Microwave Theory and Techniques 46.12 (Dec. 1998, Part II [T-MTT] (1998 Symposium Issue)): 2324-2329.

Analytical and experimental results are presented that demonstrate the advantages of replacing the metal mirror of a C-band transistor-grid oscillator with two types of selective-feedback mirrors. The first mirror is a two-dimensional photonic crystal, whose frequency-, polarization-, and reflectivity-dependent characteristics result in higher radiated power, lower cross polarization, and improved locking. The second is a diode-loaded grating functioning as an electronically tunable mirror, which allows the oscillator to be amplitude-modulated.

❑ Return to main document.