Abstracts

Integrated Tunable Cavity Gunn Oscillator for 60-GHz Operation in Image Line Waveguide

R.E. Horn, H. Jacobs and E. Freibergs. "Integrated Tunable Cavity Gunn Oscillator for 60-GHz Operation in Image Line Waveguide." 1984 Transactions on Microwave Theory and Techniques 32.2 (Feb. 1984 [T-MTT]): 171-176.

The design, construction, and experimental test results of a mechanically tunable Gunn oscillator using a recessed diode metal coaxial cavity coupled to an image line waveguide is described. The oscillator frequency was changed by about 10-percent by varying the bias post length into the coaxial structure. The oscillator is designed so that both the Gunn diode and resonant cavity can be quickly replaced to provide extended frequency coverage and efficiency. This Gunn diode oscillator has provided up to 15-mW CW power at 60 GHz with 10-percent tuning range.

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