

Abstracts

Bias-Tuned Injection-Locked Discriminators

B.N. Biswas, S. Chatterjee, S. Sarkar, A.K. Bhattacharyya and S.K. Ray. "Bias-Tuned Injection-Locked Discriminators." 1987 Transactions on Microwave Theory and Techniques 35.9 (Sep. 1987 [T-MTT]): 812-818.

A new form of microwave FM discriminator using simultaneously the technique of injection synchronization and automatic bias tuning has been proposed. The present discriminator basically consists of an injection-synchronized Gunn oscillator and an arrangement for bias tuning of the oscillator in correspondence to a measure of the instantaneous phase/frequency error between the incoming signal and the Gunn oscillator output. A detailed analysis on the discriminator performance, which closely fits in with the experimental results, has been presented. The performance of the present discriminator is much better than that of the conventional one.

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