Abstracts

Analysis of Long-Term Frequency Drift in FET Oscillators

K.K. Agarwal and C. Ho. "Analysis of Long-Term Frequency Drift in FET Oscillators." 1987 Transactions on Microwave Theory and Techniques 35.12 (Dec. 1987 [T-MTT] (1987 Symposium Issue)): 1328-1333.

This study was undertaken to analyze the long-term frequency drift observed in 11-GHz GaAs FET dielectric resonator oscillators. The analysis is based on device modeling. It is found that the dominant contributor to the long-term frequency drift is the gate-to-source channel capacitance of the GaAs FET. Results agree with the trends observed on dielectric resonator oscillators, and good correlation between theory and measured data has been achieved. The observations are general and applicable to all oscillators with GaAs FET's as active devices.

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