Abstracts

Predicting Long-Term Frequency Drift in FET Oscillators Using Device Modeling

K.K. Agarwal and C. Ho. "Predicting Long-Term Frequency Drift in FET Oscillators Using Device Modeling." 1987 MTT-S International Microwave Symposium Digest 87.2 (1987 Vol. II [MWSYM]): 959-962.

This paper analyzes, using device modeling, the long-term frequency drifts observed in GaAs FET oscillators stabilized by a dielectric resonator. The dominant contributor to the long-term frequency drift was found to be the change in gate-to-source channel capacitance of the FET. Excellent correlation between theory and measured data was achieved. The method is general and, to our knowledge, is the first analytical effort to explain long-term frequency drifts in this type of oscillator.

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