Abstracts

Temperature Stabilization of GaAs MESFET Oscillators Using Dielectric Resonators (Short Papers)

C. Tsironis and V. Pauker. "Temperature Stabilization of GaAs MESFET Oscillators Using Dielectric Resonators (Short Papers)." 1983 Transactions on Microwave Theory and Techniques 31.3 (Mar. 1983 [T-MTT]): 312-314.

A simple model of the temperature stabilization of dielectric resonator FET oscillators (DRO's) is presented. Deduced from the oscillation condition, the model furnishes relations for oscillation power and frequency stability with temperature. A stack resonator with an appropriate linear resonance frequency/temperature characteristic has been developed and used to stabilize a DRO: frequency stability of ± 120 kHz over - 20°C to 80°C (/sup delta=/± 0.1 ppm/K) at 11.5 GHz has been achieved.

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