Abstracts

SAW Oscillators in UHF Transit Satellite Links (Dec. 1981 [T-MTT])

B.Y. Lao, N.J. Schneier, D.A. Rowe, R.E. Dietterle, J.S. Schoenwald, E.J. Staples and J. Wise. "SAW Oscillators in UHF Transit Satellite Links (Dec. 1981 [T-MTT])." 1981 Transactions on Microwave Theory and Techniques 29.12 (Dec. 1981 [T-MTT] (1981 Symposium Issue)): 1327-1333.

A 375-MHz surface-acoustic-wave (SAW) resonator controlled oscillator was developed for application in the Transit satellite marine navigation system. The SAW oscillator, in a 2-in^3 hybrid package, contains a heater, voltage regulator, and divider and is a direct replacement for a bulk wave oscillator and its multiplier chain. A short term stability of 2E - 10 and an aging rate of 3E - 8/day were achieved at 75°C. Comparison tests showed that the accuracy of the navigation system with the SAW oscillator was equivalent to the accuracy using the bulk oscillator.

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