Abstracts

Stabilization of Reflex Klystrons by High-Q External Cavities

S.J. Rabinowitz. "Stabilization of Reflex Klystrons by High-Q External Cavities." 1954 Transactions on Microwave Theory and Techniques 2.3 (Sep. 1954 [T-MTT]): 23-26.

The frequency stability of the local oscillator is often the most important factor in determining the IF bandwidth of superheterodyne receivers. The inherent frequency stability of the local oscillator, which in the case of millimeter reflex klystrons is quite poor, can be improved by electronic means with the use of some forms of microwave discriminator. An alternate method is to increase the effective Q of the oscillator, since the frequency stability of a free-running oscillator is proportional to the Q of the resonant circuit. The latter method has the advantages of simplicity and of ease of alignment and tuning. The frequency stability which results, while not as great as can be obtained electronically, is sufficient for some purposes.

❑ Return to main document.