Abstracts

Second Harmonic Tuning Effects on IMPATT Diode Oscillator Noise Characteristics

F.J. Sullivan and W.H. From. "Second Harmonic Tuning Effects on IMPATT Diode Oscillator Noise Characteristics." 1971 G-MTT International Microwave Symposium Digest of Technical Papers 71.1 (1971 [MWSYM]): 92-93.

A method of controlling the conventionally noisy FM characteristics of an IMPATT diode oscillator by properly terminating the second harmonic frequency is described. The result is also characterized by a self-locking mechanism with a resulting mechanical tuning range, via the second harmonic circuit, of up to 100 MHz at lower X-band. Effects of second harmonic tuning on IMPATT reflection - type amplifier operating bandwidth is also discussed.

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