Abstracts

A very high-Q-feedback oscillator at 33 GHz using MMMIC-amplifiers

H. Barth. "A very high-Q-feedback oscillator at 33 GHz using MMMIC-amplifiers." 2000 MTT-S International Microwave Symposium Digest 00.2 (2000 Vol. II [MWSYM]): 1213-1215.

A high-Q circular waveguide cavity is used in a feedback configuration consisting of a low noise amplifier (LNA), a medium power amplifier (MPA) in series and a phase shifter and bandpass filter to select the right resonant mode. Output power is about 6 mW. Short term stability is -130 dBe at 10 kHz offset frequency with 20 dB/following decades. Temperature stability is 40 kHz/centigrade. The center frequency is strongly dependent on the resonant frequency of the resonator, in this case it was adjusted to 32.4 GHz. The phase stability is easy to adjust while monitoring the loop by a special coupling configuration.

❑ Return to main document.