

Abstracts

Optically Controlled K-Band Oscillator

R. Saedi, T. Berceli, A.S. Daryoush and P.R. Herczfeld. "Optically Controlled K-Band Oscillator." 1990 MTT-S International Microwave Symposium Digest 90.1 (1990 Vol. I [MWSYM]): 293-294.

PIN photodiodes play an important role in detection of modulated light in fiberoptic links. However these devices are essentially junction devices, with bias dependent capacitance very similar to varactor diodes. Particularly under proper biasing conditions, junction capacitance of these devices can be changed by light illumination. This paper reports results of tuning and frequency modulation experiments of a 24.5GHz oscillator configured with a PIN photodiode as the tuning element. Both electrical and optical tuning were investigated, resulting in tuning range of few hundred MHz at K-band.

[Return to main document.](#)