

Abstracts

Optical Control of MMIC Oscillators and Model Parameter Analysis of an Illuminated FET at the Ka- and V-Band

S. Kawasaki, M. Kimura, H. Shiomi, T. Wakabayashi, M. Funabashi and K. Ohata. "Optical Control of MMIC Oscillators and Model Parameter Analysis of an Illuminated FET at the Ka- and V-Band." 1995 MTT-S International Microwave Symposium Digest 95.3 (1995 Vol. III [MWSYM]): 1287-1290.

This paper reports experimental results of optical control of millimeter-wave HJFET MMIC oscillators and FET model parameter analysis with illumination. Using a noncoherent optical source, the maximum optical tuning ranges of 32 MHz around 30 GHz and 260 MHz around 51 GHz were obtained. By means of parameter extraction, variation on Cgd with 46.67% increase and Cds with 19.1% decrease due to the illumination, and their frequency dependence were appreciated.

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