High power terahertz induced carrier multiplication in Silicon - DTU Orbit (08/11/2017)

High power terahertz induced carrier multiplication in Silicon

The application of an intense THz field results a nonlinear transmission in high resistivity silicon. Upon increasing field strength, the transmission falls from 70% to 62% due to carrier generation through THz-induced impact ionization and subsequent absorption of the THz field by free electrons.

General information

State: Published
Organisations: Teraherts Technologies and Biophotonics, Department of Photonics Engineering
Authors: Tarekegne, A. T. (Intern), Pedersen, P. K. (Intern), Iwaszczuk, K. (Intern), Jepsen, P. U. (Intern)
Number of pages: 1
Publication date: 2015

Host publication information

Title of host publication: Proceedings of 2015 40th International Conference on Infrared, Millimeter, and Terahertz waves
Publisher: IEEE
ISBN (Print): 9781479982721
Main Research Area: Technical/natural sciences
Conference: 40th International Conference on Infrared, Millimeter, and Terahertz Waves, Hong Kong, 23/08/2015 - 23/08/2015
Communication, Networking and Broadcast Technologies, Engineered Materials, Dielectrics and Plasmas, Fields, Waves and Electromagnetics, Photonics and Electrooptics, Absorption, Antenna arrays, Arrays, Conductivity, Impact ionization, Resonant frequency, Silicon
DOIs:

10.1109/IRMMW-THz.2015.7327401
Source: FindIt
Source-ID: 276552885
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015