

LASER ASSISTED DEVICE ALTERATION USING TWO-PHOTON ABSORPTION

Abstract

A Two-Photon Laser Assisted Device Alteration technique is presented. Fault localization is investigated by exploiting the non-linear two-photon absorption mechanism to induce LADA effects. Femtosecond laser pulses of wavelength having photon energy lower than the silicon bandgap are directed at the area of interest, while the DUT is stimulated with test vectors. The laser pulses are synchronized to the DUT stimulation, so that switching timing can be altered using the two-photon absorption effect.

Figure 2