

ABSTRACT

Material Cutting Using Laser Pulses

A method of cutting a semiconductor material by irradiating the semiconductor material with laser energy, includes providing a laser source adapted to emit successive
5 pulses of laser beams, each laser beam pulse having a pulse width of 100 picoseconds or less, emitting laser beam pulses from the laser source, guiding the emitted laser beam pulses to irradiate semiconductor material to be cut, and moving the semiconductor material relative to the irradiating laser beam pulses to cut the semiconductor material along a cutting line. The semiconductor material is irradiated by a plurality of laser beam pulses with
10 a pulse repetition frequency in the range from 0.1 GHz to 5000 GHz.

(Figure 1)