TAKAMIYA LAB.

Small chip that intelligently manages large power



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http://icdesign.iis.u-tokyo.ac.jp/en/

achieve a carbon-free world by 2050, we are conducting research integrated power management, in which a small IC chip can intelligently handle large amounts of power, with the goal of making power electronics systems more energy-efficient.

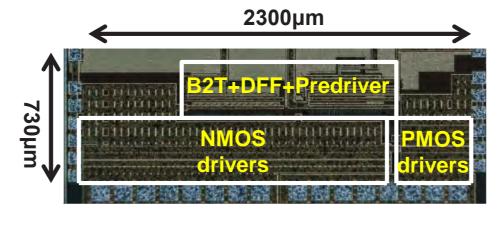
World's first IC chip that controls power semiconductors for energy saving —Automatic waveform changing gate driver IC chip reduces energy loss by 49%. —

Si IGBT

(6500 V, 1000 A) (1200 V, 400 A)

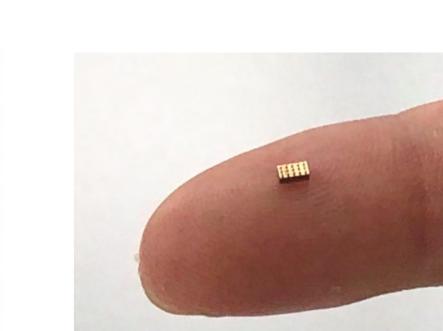
SIC MOSFET Si IGBT (600 V, 100 A)

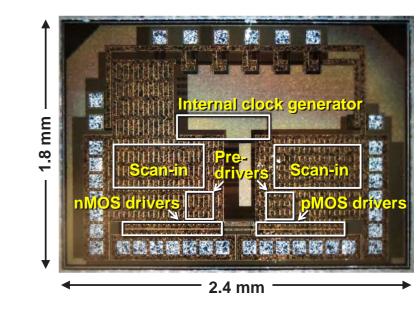




SIC MOSFET

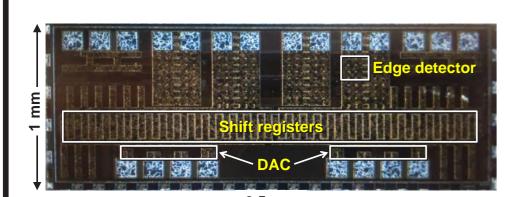
(650 V, 70 A)

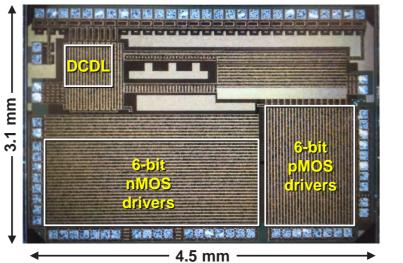


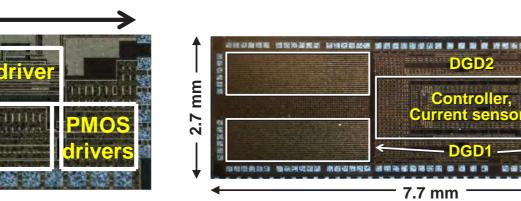


GaN FET

(100 V, 16 A)







Hybrid DC-DC converters for automotive applications (Mixed inductors and capacitors reduce losses.)

