



September 24, 2020

Federal agencies have awarded CoolCAD Electronics R&D projects and grants to push the boundaries of the state of the art in silicon carbide electronics. Most notably, National Aeronautics and Space Administration (NASA), and Defense Advanced Research Projects Agency (DARPA) have awarded CoolCAD R&D projects to develop n-MOS and p-MOS devices, and attendant low and medium voltage components and integrated circuits using Silicon Carbide (SiC). CoolCAD works with SiCamore Semi to achieve and surpass design goals in these projects.

In the case of medium and high voltage components, SiC MOSFET provides the first step towards advanced power efficiency, improved thermal conductivity, and optimal device density for the next generation of power devices. These devices can be used in military applications such as electrified tanks for the Army and electromagnetic catapult for the Navy. In the case of low voltage electronics such as those supported by NASA, SiC paves the way for very high temperature and harsh environment electronics, not achievable by silicon. For example, progress in high temperature electronics is vital for the development of hypersonic vehicles. These awards and our collaboration with SiCamore Semi propel the opportunity to advance the research and development to manufacture these types of devices in the United States of America to protect the country national security needs, provide novel intellectual property, and create future domestic manufacturing jobs.

These developments are essential to the Department of Defense and NASA for next generation microelectronics to accelerate the design, development, and manufacturing of key semiconductor technologies. CoolCAD Electronics and SiCamore Semi, prioritized these projects to assure the technology is made available within a couple of years. CoolCAD wants to thank Dr. Michel Francois, and Marc Papageorge of SiCamore Semi for their dedication and contributions to make this available to our programs of national interest.

Sincerely,

A handwritten signature in black ink, appearing to read "Akin Akturk".

Dr. Akin Akturk

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