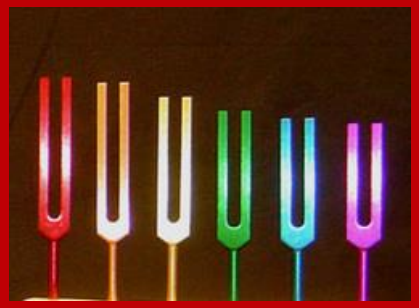
The Perfect Pitch



PowerAmerica's

Undergraduate Research Scholars (URS)

Design & Verification of Thermal Management for SiC PV Converter

James Hutchinson

Jrh12c@my.fsu.edu

Principal Investigator: Dr. Li

Graduate Mentor: Thierry Kayiranga

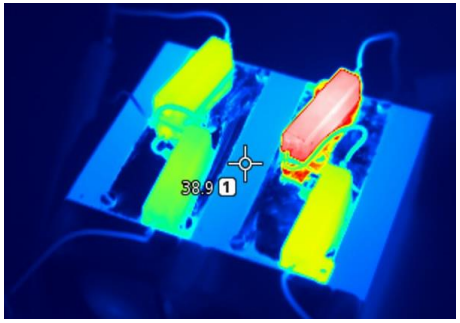
FAMU-FSU College of Engineering

Thermal Management for PV Converter

James Hutchinson, Colleen Kidder, Leslie Dunn, Tianna Lentino, Melanie Gonzalez, Principal Investigator: Dr. Li

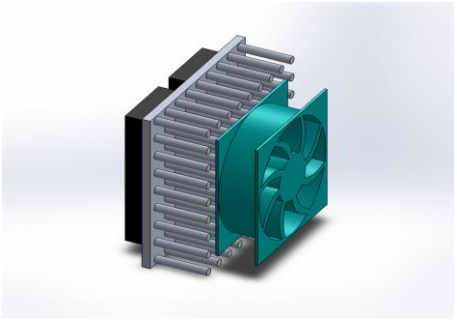
Problem

Many power converters contain large and heavy heat sinks. Even though these heat sinks displace the heat produced effectively, it can account for nearly half of the total weight of the converter.



Approach

By applying the latest heatsink design technology our team plans to reduce the size and weight of heatsink. This involves implementing and thermally testing geometrically optimized designs for the power modules being used in the converter.



Impact

Our team will provide a novel heatsink design and testing method at an early stage of the SiC converter design. This will enable future converters to achieve ultimate optimal system performance .