

Request Information

THERMAL TEST VEHICLE FOR ELECTRONICS COOLING SOLUTIONS

Tech ID: 33617 / UC Case 2024-156-0

PATENT STATUS

Patent Pending

BRIEF DESCRIPTION

As the density and performance of electronics continues to increase, thermal challenges have become a primary concern. Removing heat from electronic components can be extremely challenging, given their small size, electrical activity, and mechanical constraints. This necessitates the design of cooling solutions for a wide variety of electronic designs in applications such as datacenters, renewables, aircraft, etc.

To address this problem, researchers at UC Berkeley have developed a thermal test vehicle (TTV) for characterizing the performance of electronics cooling solutions under a wide variety of operating conditions. All of the TTV circuitry required to perform measurements and temperature estimations can be included on one printed circuit board (PCB). This represents a simple, highly flexible approach for thermal test vehicle design. The overall size of the array can be scaled to any desired amount.

This novel TTV represents a simple, highly flexible approach for thermal test vehicle design. Furthermore, its use of standard commercial electronic components allows for a vast reduction in cost compared to existing commercial solutions.

SUGGESTED USES

- » Thermal test vehicle for electronics cooling solutions
- » High-performance controllable heater
- » Testing equipment for data center comissioning

ADVANTAGES

- » simple and highly flexible approach

RELATED MATERIALS

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

Multi-Phase Hybrid Power Converter Architecture With Large Conversion Ratios

CONTACT

Michael Cohen mcohen@berkeley.edu tel: 510-643-4218.



Permalink

INVENTORS

» Pilawa-Podgurski, Robert C.N.

OTHER INFORMATION

KEYWORDS

data center, thermal testing, test

equipment

CATEGORIZED AS

» Computer

>> Hardware

» Research Tools

- » Other
- » Sensors & Instrumentation
 - » Physical Measurement
 - » Scientific/Research

RELATED CASES 2024-156-0



University of California, Berkeley Office of Technology Licensing
2150 Shattuck Avenue, Suite 510, Berkeley,CA 94704
Tel: 510.643.7201 | Fax: 510.642.4566
https://ipira.berkeley.edu/ | otl-feedback@lists.berkeley.edu
© 2024, The Regents of the University of California
Terms of use | Privacy Notice