How is TTC TTV different?

Thermal test vehicles (TTV) are a very important tool for semiconductor thermal design and thermal management solutions.

Traditional TTVs use ceramic heaters, Cu heaters, discrete components in an array with a heat spreader, etc.

TTVs from Thermal Engineering Associates, Inc. (TEA) use Thermal Test Chips (TTC).

- 8” Si wafer made in USA
- TTC in any size (1x1mm to >50x50mm)
- Any number of hot spots (as small as 1x1mm)
- In situ TSD (temperature sensing diode), smaller than 100um, in every 1x1mm area – *very different from RTD*
- Meets JEDEC JESD51-4a Standard
- Power density exceeds requirements for HPC and AI chips
- Can be configured into various power zones
- Temperature sensors at desired locations across the chip – down to 1x1mm spatial resolution
- Can be packaged in various formats – wire bonding, flip chip on board, LGA, BGA, …, single or multiple chip
- Can easily integrate with various thermal management solutions
- Can interface with commonly available instrumentation

As such, TTC and TTV from TEA are the solution of choice by leading semiconductor companies and suppliers of thermal management solutions. More info at www.thermengr.net