

Description

The Thermal Test Vehicle TTV5 is a minimalistic TTV based on a 3 x 3 matrix cell of the Thermal Test Chip NT16-3k. TTV5 has one full area uniform heater and five temperature sensors to observe the temperature distribution precisely and in-situ. The chip is assembled in flip chip technology on an FR4 substrate with large area contact pads on the backside to allow easy contact and provide maximum robustness and reliability.

General Information

Chip type	NT16-3k-FC
Chip configuration	3 x 3 matrix
Packaging technology	Flip chip technology
PCB substate	FR4
Chip substate	Silicon, undoped
Chip surface	Pure silicon
Chip size	9.8 x 9.8 x 0.62 mm ³
Package size	25 x 20 x 2.25 mm ³

Heater

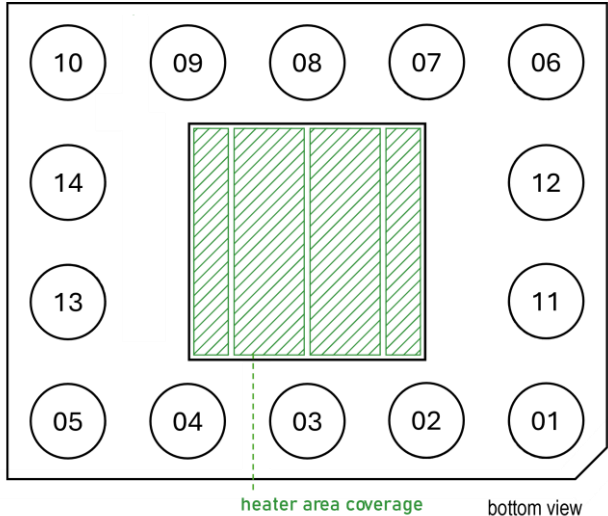
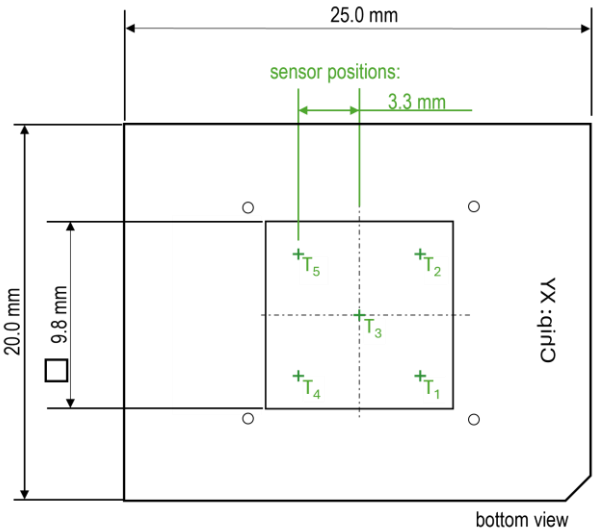
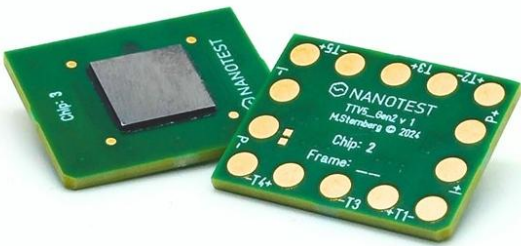
Heater type	Resistor
Heater per chip	1
Electrical resistance	(15.5 ± 0.5) Ω
Max voltage	48 V
Max current	3 A
Max power	140 * W
Max operating temperature	125 °C

Sensor

Sensor type	RTD
Sensors count	5
Resistance value at RT	(3.0 ± 0.2) kΩ
Sensitivity	10.0 Ω/K
Max lateral extent	870 μm
Series sensor network resistance at RT [I+, I-]	(18 ± 1) kΩ

Pad configuration

Connection	Pin label	Pin #
Heater	P +	12
	P -	13
Sensing current	I +	11
	I -	14
Corner sensor T1	T1 +	02
	T1 -	01
Corner sensor T2	T2 +	06
	T2 -	07
Center sensor T3	T3 +	08
	T3 -	03
Corner sensor T4	T4 +	04
	T4 -	05
Corner sensor T5	T5 +	10
	T5 -	09



We are providing a control unit and holder for TTV5. Contact us for more information

* To achieve maximum heating power a proper cooling must be installed to prevent overheating.