



# Vincotech

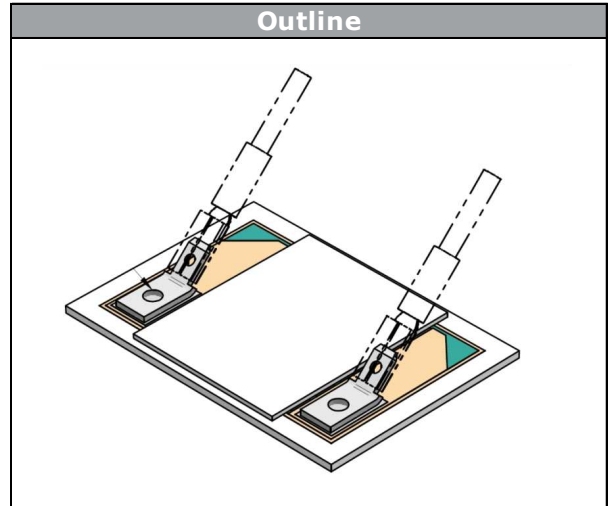
## Brake resistor

400 Ω / 200 Ws

### Features

- Ultra low profile thick-film on ceramic
- 2 kW peak power
- Easy spring fixing heatsink mountable
- Ideal for dynamic braking
- Available with fast-on terminals
- Pulse handling Capability
- Non-flammable construction
- Optional preapplied phase-change material available

### Outline



### Specification

Parameter	Symbol	Condition	Value	Unit
Resistance	$R$		400	Ω
Tolerance			±20	%
Energy	$E$	$P_{max} = 2 \text{ kW}/100 \text{ ms}; T_s = 100 \text{ °C}, f = 50 \text{ N}$ (pressure to heatsink)	200	Ws
Power	$P$	$T_s = 100 \text{ °C}, f = 50 \text{ N}$ (pressure to heatsink)	100	W
Isolation Voltage	$V_t$	Isolation to heatsink	4000	V
Maximum Junction Temperature	$T_{jmax}$	Limited by thermal paste	125	°C

#### Notes:

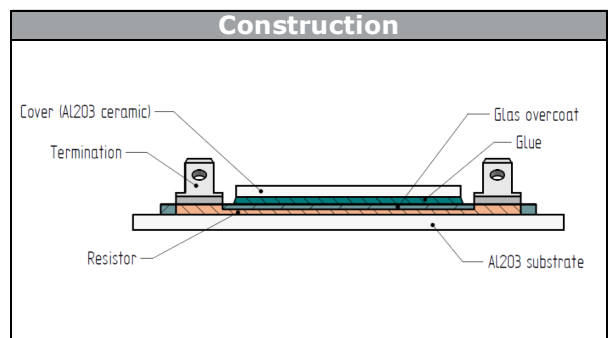
Repetitive energy on heatsink 200 Ws mounted on heatsink with preapplied phase change material with no forced air cooling ( $T_s = 100 \text{ °C}, T_a = 25 \text{ °C}$ )

#### Mounted with spring

recommended spring force: min. 50 N  
press down / fixing is recommended in the middle of the cover substrate on a minimum of dia. 7 mm circular area.

Recommended surface roughness of the heatsink:  $R_z < 0.01 \text{ mm}$

### Construction





**Qualification**

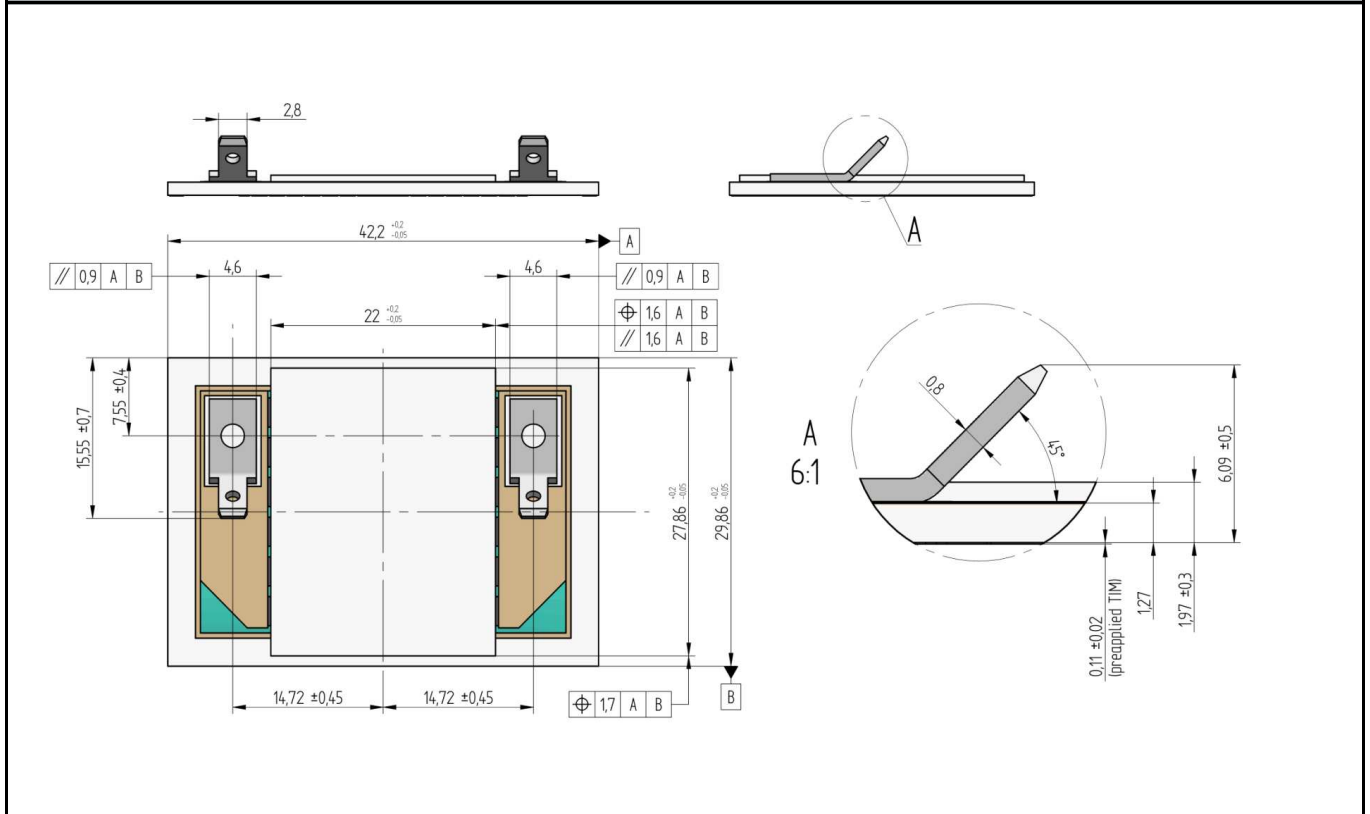
**Technology Qualification**

Test Item	Test Conditions	Standard
Temperature Shock (TS)	$T_{STGmin} / T_{STGmax}$ : -40 °C/+125 °C	DIN EN 60068-2-14
	100 cycles	Test Na
	$t_{dwell} = 30$ min (dwell time at each temperature)	MIL-STD-883E
	$t_{change} < 30$ sec (temperature change time)	Method 1010

**Component Qualification**


Test Item	Test Conditions	Standard
High Temperature	$T_{STG} = T_{jmax}$	DIN EN 60068-2-2
Storage (HTS)	$T_{STG} = 125$ °C	
	$t = 1000$ h (2*500h)	
High Humidity	$T_{STG} = 85$ °C; RH = 85%	DIN EN 60068-2-67
High Temperature		
Storage (HHHTS)	$t = 1000$ h (2*500h)	

**Mechanical Dimension [mm]**





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Ordering Code & Marking			
<b>Version</b>	<b>Ordering Code</b>	<b>in packaging barcode as</b>	
with thermal paste	S30814-Q992-A-/3/	Q992-A	
 Q992-A 51 12345 0514	<b>Text</b>	<b>Name</b>	<b>Ver</b>
		Q992-A	51
		<b>Date code</b>	
		0514	
		<b>Lot</b>	12345



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Packaging instruction					
Standard packaging quantity (SPQ)	294	>SPQ	Standard	<SPQ	Sample

Handling instruction	
For handling instructions see vincotech.com website.	

Document No.:	Date:	Modification:	Pages
S30814-Q992A-D1-14	13 Jun. 2017		

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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.