



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: [info@chipsmall.com](mailto:info@chipsmall.com) Web: [www.chipsmall.com](http://www.chipsmall.com)

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



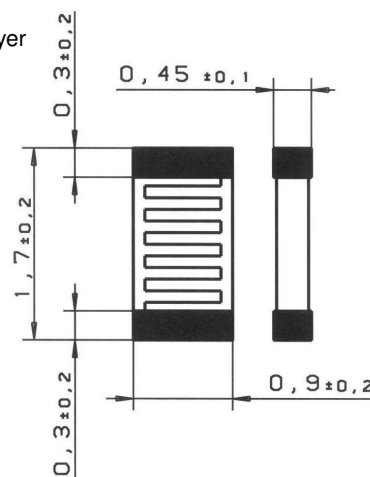
## Platinum Resistance Temperature Detector

## SMD 0603 (V)

The PRTD SMD 0603 is designed for automatic mounting in large volume applications on printed circuit boards where long time stability, interchangeability combined with low costs are important.

Nominal Resistance R <sub>0</sub>	Tolerance DIN EN 60751 1996-07	Tolerance DIN EN 60751 2009-05	Order Number
1000 Ohm at 0°C	Class 2B Class B	F 0.6 F 0.3	32 207 637 32 207 638

<b>Specification</b>	DIN EN 60751	
<b>Tolerance</b>	Class B (R <sub>0</sub> : ±0.12%) Class 2B (R <sub>0</sub> : ±0.24%)	
<b>Temperature range</b>	-50°C to +150°C (Application temperatures of +150°C are only possible with the use of expansion-matched circuit board material; up to +130°C with circuit board material not matched for expansion)	
<b>Temperature coefficient</b>	TCR = 3850 ppm/K	
<b>Soldering connection</b>	End-termination galvanic tin plated with Ni- barrier layer	
<b>Long term stability</b>	max R <sub>0</sub> -Drift 0,06% after 250h with 130°C	
<b>Environmental conditions</b>	unhoused for dry environments only	
<b>Insulation resistance</b>	> 100 MΩ at 20°C; > 2 MΩ at 150°C (glass cover)	
<b>Measuring current</b>	1000Ω: 0.1 up to 0.3mA (self heating has to be considered)	
<b>Self heating</b>	0.8 K/mW at 0°C	
<b>Reaction time</b>	Flowing water (v= 0.4m/s):	t <sub>0.5</sub> < 0.1s t <sub>0.9</sub> < 0.25s
	Air flow (v= 2m/s):	t <sub>0.5</sub> < 2.5s t <sub>0.9</sub> < 8 s
<b>Processing instructions</b>	face up-mounting: reflow soldering or wave soldering, e. g. double wave ≤ 8s / 235°C	
<b>Storage life</b>	Min. 9 months (in dry environment)	
<b>Packaging</b>	„Face-up“ in blister reel, 4000 pcs	
<b>Note</b>	Other tolerances, values of resistance are available on request.	



Please have a look for the Information about the tested soldering profile on the next page



We reserve the right to make alterations and technical data printed. All technical data serves as a guideline and does not guarantee particular properties to any products.

## Heraeus Sensor Technology USA

770 Township Line Road, Suite 300  
Yardley, PA 19067 USA  
Phone 1-215-944-9010 Fax 1-215-944-9392  
Email [info.hst-us@heraeus.com](mailto:info.hst-us@heraeus.com)  
[www.hst-us.com](http://www.hst-us.com)



### Solderability test of SMD type sensor elements

#### Assembly conditions

Layout of PCB: Benchmarker II 150µm (material FR4 35µm Cu, size 190.5 x 127 x 1.5mm)  
 Tested PCB surfaces: chem. Ag, Cu OSP, NiAu, chem. Sn  
 Solder Paste: F640 SA30C5-89 M30 (material SnAgCu 96.5/3.0/0.5)

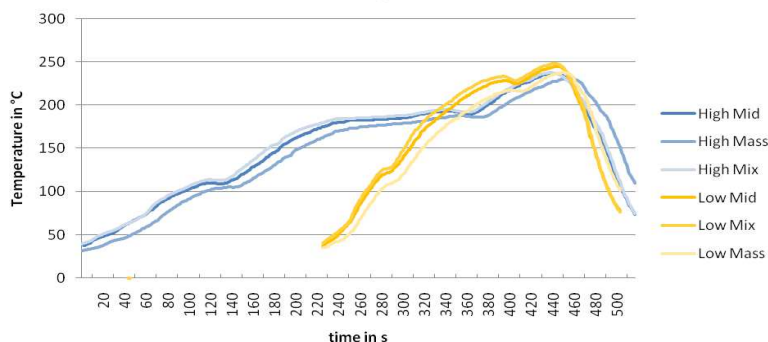
#### Tested elements

Pt 1000 SMD- V 0603  
 Pt 1000 SMD- V 0805  
 Pt 1000 SMD- V 1206

#### Solder conditions

Profiles: High and Low  
 Atmosphere: Nitrogen and Air

Profiles High and Low



	Peak (max. temperature)		time above 217 °C in s	
	High	Low	High	Low
Mid <sup>1</sup>	237 °C	245 °C	60	92
Mass <sup>2</sup>	231 °C	238 °C	49	68
Mix <sup>3</sup>	238 °C	248 °C	65	103

- <sup>1</sup> Mid: Position of temperature sensor in the middle of the PCB
- <sup>2</sup> Mass: Position of temperature sensor at a big mass area on the PCB
- <sup>3</sup> Mix: Position of temperature sensors on right and left side on the PCB

Profile High: complete processing time 520 s  
 Profile Low : complete processing time 280 s

#### Result

All tested samples showed a sufficient wetting under the described profiles High and Low, based on a visual soldering point inspection.

All given data should not be construed as guaranteeing specific properties of the product or its suitability for a specific particular application. The data are an extract from a test report with status from July 2010.

We reserve the right to make alterations and technical data printed. All technical data serves as a guideline and does not guarantee particular properties to any products.

### Heraeus Sensor Technology USA

770 Township Line Road, Suite 300  
 Yardley, PA 19067 USA  
 Phone 1-215-944-9010 Fax 1-215-944-9392  
 Email info.hst-us@heraeus.com  
 www.hst-us.com