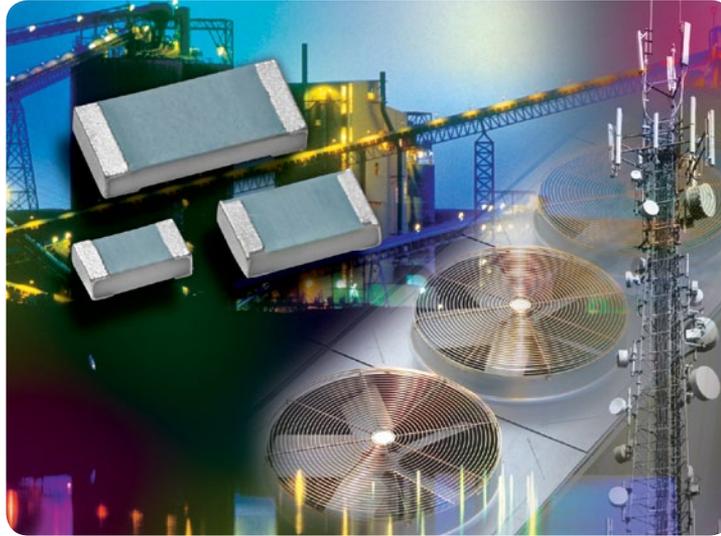


Platinum Surface-Mount Flat Chip Temperature Sensor



KEY BENEFITS

- Wide temperature range (- 55 °C up to + 155 °C)
- Linear temperature characteristic (TCR = + 3850 ppm/K)
- Short reaction time ($t_{0.9} \leq 5$ s in air)
- Tolerance classes F0.3 and F0.6
- Standard ohmic values (R at 0 °C): 100 Ω , 500 Ω , and 1 k Ω
- Outstanding stability of temperature characteristic ($< \pm 0.04$ %)
- Product tested in accordance with IEC 60751 and IEC 60068

APPLICATIONS

- Industrial
- Telecommunications
- White goods
- Medical
- Process and automation technologies
- HVAC

RESOURCES

- Datasheet: PTS Series - <http://www.vishay.com/doc?28762>
- For technical questions contact nlr@vishay.com
- Material categorization: For definitions of compliance please see <http://www.vishay.com/doc?99912>

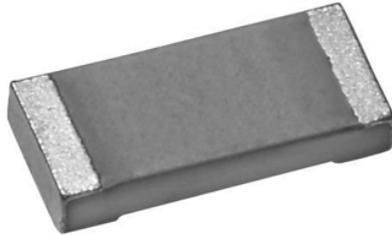


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COMPLIANT

One of the World's Largest Manufacturers of
Discrete Semiconductors and Passive Components



Platinum Surface-Mount Flat Chip Temperature Sensor



PTS SMD Flat Chip Temperature sensors are the perfect choice for temperature control of electronics operating under varying environmental conditions. The highly controlled platinum thin film manufacturing process guarantees an outstanding stability of temperature characteristics which ensures reliable operation even under harsh conditions. Typical applications include automotive, aviation and industrial electronics.

FEATURES

- Standardized characteristics according to IEC 60751
- Advanced thin film technology
- Short reaction times down to $t_{0.9} \leq 2$ s (in air)
- Outstanding stability of temperature characteristic
- Standard SMD sizes
- Supports lead (Pb)-free soldering

APPLICATIONS

Temperature measurement in

- Automotive electronics
- Aviation electronics
- Industrial electronics

TECHNICAL SPECIFICATIONS					
DESCRIPTION		PTS 0603	PTS 0805	PTS 1206	
Resistance values R_0 at 0 °C		100 Ω	100 Ω , 500 Ω	100 Ω , 500 Ω , 1000 Ω	
Temperature coefficient (0 °C ... + 100 °C)		+ 3850 ppm/K			
Tolerance classes		F0.3, F0.6			
Operating temperature range		- 55 °C to + 155 °C			
Long term stability $\Delta R_0/R_0$; R_0 change after 1000 h at + 155 °C		< \pm 0.04 %			
Insulation resistance		> 10 M Ω			
Measurement current $I_{meas.}$ (DC) ⁽²⁾	100 Ω	0.1 mA to 0.50 mA	0.1 mA to 1.0 mA	0.1 mA to 1.0 mA	
	500 Ω	-	0.1 mA to 0.40 mA	0.1 mA to 0.40 mA	
	1000 Ω	-	-	0.1 mA to 0.25 mA	
Self-heating ⁽¹⁾	Still air ($v = 0$ m/s)	≤ 0.9 K/mW	≤ 0.8 K/mW	≤ 0.7 K/mW	
Thermal response time ⁽¹⁾	Flowing water ($v = 0.4$ m/s)	$t_{0.5} \leq 0.1$ s	$t_{0.5} \leq 0.2$ s	$t_{0.5} \leq 0.3$ s	
		$t_{0.9} \leq 0.2$ s	$t_{0.9} \leq 0.3$ s	$t_{0.9} \leq 0.4$ s	
	Flowing air ($v = 3.0$ m/s)	$t_{0.5} \leq 1.0$ s	$t_{0.5} \leq 1.5$ s	$t_{0.5} \leq 2.0$ s	
		$t_{0.9} \leq 2.0$ s	$t_{0.9} \leq 3.0$ s	$t_{0.9} \leq 5.0$ s	

Revision 06-May-11

Notes

⁽¹⁾ Valid for sensor element only

⁽²⁾ Indicated measurement currents can be applied continuously with self-heating effect of less than 0.1 °C

Resistors - Perfect Choice for Temperature Control