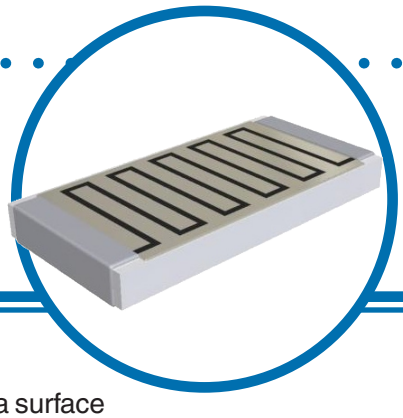
Platinum Temperature Sensor Chip

PTS Series

- High stability thin film Platinum sensor
- High resolution, accuracy and interchangeability
- Compatible with automatic placement equipment
- Wide temperature range - very fast response time
- Surface mount package with Pb-free terminations



The temperature sensor is a conventional thin film platinum RTD in a surface mount package designed for temperature sensing, over-temperature protection and temperature compensation in any application where printed circuit board temperature sensing is desired.

Electrical Data

Self Heating at 0°C	**P0603**	**P0805**	**P1206**
	0.8°C/mW	0.8°C/mW	0.4°C/mW
Available Resistances at 0°C	1000Ω	100Ω, 1000Ω	
Temperature Tolerances	Class B = ±0.3°C @ 0°C (R_0 ±0.12%) Class 2B = ±0.6°C @ 0°C (R_0 ±0.24%)		
Operating Temperature Range	-55°C to +130°C (-55°C to +150°C if board CTE is 6-8ppm/°C)		
Temperature Coefficient	+3850 ppm/°C per IEC751		
Insulation Resistance	100MΩ minimum at 20°C		
Recommended Measuring Current To Minimize Self Heating Error	100Ω ≤1mA 1000Ω ≤0.3mA		
Long Term Stability (130°C)	<0.06% at 250hrs	<0.06% at 1000hrs	
Termination	100% Sn over Ni Barrier (minimum 5μm Ni thickness)		

* Temperature coefficient in accordance with IEC751

Performance Data

Settling Response Time						
	P0603		**P0805**		**P1206**	
Rapidly Stirred Oil	<0.2s ($t_{0.5}$)	<0.6s ($t_{0.9}$)	<0.1s ($t_{0.5}$)	<0.4s ($t_{0.9}$)	<0.1s ($t_{0.5}$)	<0.4s ($t_{0.9}$)
Air @ 1m/s	<3.5s ($t_{0.5}$)	<10s ($t_{0.9}$)	<2.5s ($t_{0.5}$)	<8s ($t_{0.9}$)	<2.5s ($t_{0.5}$)	<8s ($t_{0.9}$)

General Note
IRC reserves the right to make changes in product specification without notice or liability.
All information is subject to IRC's own data and is considered accurate at time of going to print.

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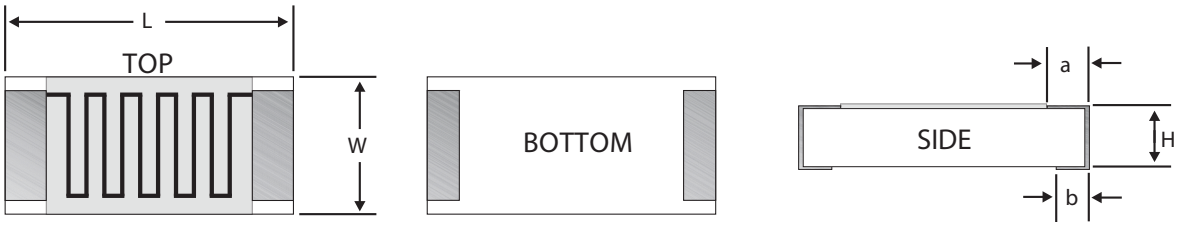
Physical Data



	L (mm)	W (mm)	H (mm)	a (mm)	b (mm)
P0603	1.7 ±0.2	0.9 ±0.2	0.45 ±0.1	0.3 ±0.2	0.3 ±0.2
P0805	2.25 ±0.2	1.4 ±0.25	0.6 ±0.1	0.35 ±0.2	0.35 ±0.2
P1206	3.2 ±0.2	1.6 ±0.2	0.6 ±0.1	0.5 ±0.2	0.5 ±0.2

Ordering Data

Prefix ····· PTS - P1206LF - 1001 - B

Model
P1206LF = 1206 chip with Pb-Free terminations
P0805LF = 0805 chip with Pb-Free terminations
P0603LF = 0603 chip with Pb-Free terminations

Resistance Code
Standard 4-Digit resistance code
Ex: 1000 = 100Ω; 1001 = 1000Ω

Tolerance Code
B = R_0 ±0.12%
2B = R_0 ±0.24%

For additional information or to discuss your specific requirements, please contact our Applications Team using the contact details below.