



# SMD Series

## SMD platinum sensor

### For the automatic assembling on PCBs

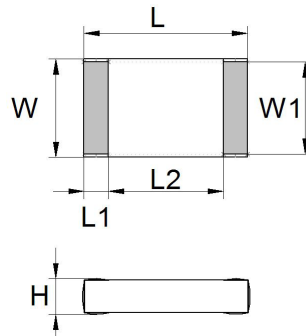


INNOVATIVE SENSOR TECHNOLOGY

#### Benefits & Characteristics

- Excellent long-term stability
- Low self-heating
- Fast response time
- Class A available
- Customer specific sensor available upon request

#### Illustration<sup>1)</sup>



1) For actual size, see dimensions

#### Technical Data

Operating temperature range:	2P	-50 °C to +150 °C
	3P	-50 °C to +250 °C
	4P	-50 °C to +250 °C
Nominal resistance:*	100 Ω at 0 °C	
	500 Ω at 0 °C	
	1000 Ω at 0 °C	
Characteristics curve:*	3850 ppm/K	
Long term stability:	< 0.04 % at 1000 h at 130 °C	
Tolerance class (dependent on temperature range):*	IEC 60751 F0.15	IST AG reference A
	IEC 60751 F0.3	B
	IEC 60751 F0.6	C
Connection:*	2P	tin-coated (96.5Sn/3Ag/0.5Cu), LMP lead-free, (reflow soldering)
	3P	tin-coated (5Sn/93.5Pb/1.5Ag), HMP, (reflow soldering)
	4P	gold-coated, (solderable coating)
Solderability:	235 °C ≤ 8 s (DIN IEC 68 T2-20, Ta Meth. 1)	
Resistance to soldering heat: <sup>1)</sup>	260 °C 10 s (DIN IEC 68 T2-20, Ta Meth. 1A)	

1) The soldering process can influence accuracy



# SMD Series

## SMD platinum sensor

### For the automatic assembling on PCBs



INNOVATIVE SENSOR TECHNOLOGY

Recommended applied current: <sup>2)</sup>	1 mA at 100 Ω
<i>2) Self-heating must be considered</i>	0.5 mA at 500 Ω
	0.3 mA at 1000 Ω

Packaging:	< 100 pcs in bags
	> 100 pcs taped on reel (sensor side up or sensor side down)

\* Customer specific alternatives available

#### Order Information - 2P (tin-coated (96.5Sn/3Ag/0.5Cu), LMP lead-free)

Packed in bags (< 100 pcs)

Size	Dimensions (L / L1 / L2 x W / W1 x H in mm)	F0.15 (class A)	F0.3 (class B)
Nominal resistance: 100 Ω at 0 °C			
0805 (±0.2)	1.9 / 0.25 / 1.3 x 1.25 / 1.15 x 0.45 (±0.15)	P0K1.0805.2P.A	P0K1.0805.2P.B
Order code		010.01147	010.01146
1206 (±0.2)	2.9 / 0.35 / 2.2 x 1.5 / 1.35 x 0.45 (±0.15)	P0K1.1206.2P.A	P0K1.1206.2P.B
Order code		010.01131	010.01132

Nominal resistance: 500 Ω at 0 °C			
0805 (±0.2)	1.9 / 0.25 / 1.3 x 1.25 / 1.15 x 0.45 (±0.15)	P0K5.0805.2P.A	P0K5.0805.2P.B
Order code		010.01153	010.01154
1206 (±0.2)	2.9 / 0.35 / 2.2 x 1.5 / 1.35 x 0.45 (±0.15)	P0K5.1206.2P.A	P0K5.1206.2P.B
Order code		010.01141	010.01127

Nominal resistance: 1000 Ω at 0 °C			
0805 (±0.2)	1.9 / 0.25 / 1.3 x 1.25 / 1.15 x 0.45 (±0.15)	P1K0.0805.2P.A	P1K0.0805.2P.B
Order code		010.01157	010.01047
1206 (±0.2)	2.9 / 0.35 / 2.2 x 1.5 / 1.35 x 0.45 (±0.15)	P1K0.1206.2P.A	P1K0.1206.2P.B
Order code		010.01136	010.01135

Taped on reel - sensor side up or sensor side down (> 100 pcs)

Nominal resistance: 100 Ω at 0 °C			
0805 (±0.2)	1.9 / 0.25 / 1.3 x 1.25 / 1.15 x 0.45 (±0.15)	P0K1.0805.2P.A.S	P0K1.0805.2P.B.S
Order code	Sensor side up	010.02347	010.02276
1206 (±0.2)	2.9 / 0.35 / 2.2 x 1.5 / 1.35 x 0.45 (±0.15)	P0K1.1206.2P.A.S	P0K1.1206.2P.B.S
Order code	Sensor side up	010.02233	010.02275
0805 (±0.2)	1.9 / 0.25 / 1.3 x 1.25 / 1.15 x 0.45 (±0.15)	P0K1.0805.2P.A.S	P0K1.0805.2P.B.S
Order code	Sensor side down	010.01148	010.01126



# SMD Series

## SMD platinum sensor

For the automatic assembling on PCBs



INNOVATIVE SENSOR TECHNOLOGY

Size	Dimensions (L / L1 / L2 x W / W1 x H in mm)	F0.15 (class A)	F0.3 (class B)
1206 (±0.2)	2.9 / 0.35 / 2.2 x 1.5 / 1.35 x 0.45 (±0.15)	P0K1.1206.2P.A.S	P0K1.1206.2P.B.S
Order code	Sensor side down	010.01104	010.01105

Nominal resistance: 500 Ω at 0 °C

0805 (±0.2)	1.9 / 0.25 / 1.3 x 1.25 / 1.15 x 0.45 (±0.15)	P0K5.0805.2P.A.S	P0K5.0805.2P.B.S
Order code	Sensor side down	010.01156	010.01155
1206 (±0.2)	2.9 / 0.35 / 2.2 x 1.5 / 1.35 x 0.45 (±0.15)	P0K5.1206.2P.A.S	P0K5.1206.2P.B.S
Order code	Sensor side down	010.01142	010.01117

Nominal resistance: 1000 Ω at 0 °C

0805 (±0.2)	1.9 / 0.25 / 1.3 x 1.25 / 1.15 x 0.45 (±0.15)	P1K0.0805.2P.A.S	P1K0.0805.2P.B.S
Order code	Sensor side up	010.02235	010.02236
1206 (±0.2)	2.9 / 0.35 / 2.2 x 1.5 / 1.35 x 0.45 (±0.15)	P1K0.1206.2P.A.S	P1K0.1206.2P.B.S
Order code	Sensor side up	010.02224	010.02229
0805 (±0.2)	1.9 / 0.25 / 1.3 x 1.25 / 1.15 x 0.45 (±0.15)	P1K0.0805.2P.A.S	P1K0.0805.2P.B.S
Order code	Sensor side down	010.01158	010.01125
1206 (±0.2)	2.9 / 0.35 / 2.2 x 1.5 / 1.35 x 0.45 (±0.15)	P1K0.1206.2P.A.S	P1K0.1206.2P.B.S
Order code	Sensor side down	010.01106	010.01107

### Order Information - 3P (tin-coated (5Sn/93.5Pb/1.5Ag), HMP)

Size	Dimensions (L / L1 / L2 x W / W1 x H in mm)	F0.15 (class A)	F0.3 (class B)
------	---	-----------------	----------------

Packed in bags (< 100 pcs)

Nominal resistance: 100 Ω at 0 °C

0805 (±0.2)	1.9 / 0.25 / 1.3 x 1.25 / 1.15 x 0.45 (±0.15)	P0K1.0805.3P.A	P0K1.0805.3P.B
Order code		010.00928	010.00929
1206 (±0.2)	2.9 / 0.35 / 2.2 x 1.5 / 1.35 x 0.45 (±0.15)	P0K1.1206.3P.A	P0K1.1206.3P.B
Order code		010.00166	010.00165

Nominal resistance: 500 Ω at 0 °C

0805 (±0.2)	1.9 / 0.25 / 1.3 x 1.25 / 1.15 x 0.45 (±0.15)	P0K5.0805.3P.A	P0K5.0805.3P.B
Order code		010.00934	010.00935
1206 (±0.2)	2.9 / 0.35 / 2.2 x 1.5 / 1.35 x 0.45 (±0.15)	P0K5.1206.3P.A	P0K5.1206.3P.B
Order code		010.00403	010.00208



# SMD Series

## SMD platinum sensor

### For the automatic assembling on PCBs



INNOVATIVE SENSOR TECHNOLOGY

Size	Dimensions (L / L1 / L2 x W / W1 x H in mm)	F0.15 (class A)	F0.3 (class B)
Nominal resistance: 1000 Ω at 0 °C			
0805 (±0.2)	1.9 / 0.25 / 1.3 x 1.25 / 1.15 x 0.45 (±0.15)	P1K0.0805.3P.A	P1K0.0805.3P.B
Order code		010.00922	010.00923
1206 (±0.2)	2.9 / 0.35 / 2.2 x 1.5 / 1.35 x 0.45 (±0.15)	P1K0.1206.3P.A	P1K0.1206.3P.B
Order code		010.00326	010.00323

Taped on reel - sensor side up or sensor side down (> 100 pcs)

Nominal resistance: 100 Ω at 0 °C			
0805 (±0.2)	1.9 / 0.25 / 1.3 x 1.25 / 1.15 x 0.45 (±0.15)	P0K1.0805.3P.A.S	P0K1.0805.3P.B.S
Order code	Sensor side down	010.01150	010.01149
1206 (±0.2)	2.9 / 0.35 / 2.2 x 1.5 / 1.35 x 0.45 (±0.15)	Upon request	P0K1.1206.3P.B.S
Order code	Sensor side down		010.01145

Nominal resistance: 500 Ω at 0 °C			
0805 (±0.2)	1.9 / 0.25 / 1.3 x 1.25 / 1.15 x 0.45 (±0.15)	Upon request	P0K5.0805.3P.B.S
Order code	Sensor side down		010.01152
1206 (±0.2)	2.9 / 0.35 / 2.2 x 1.5 / 1.35 x 0.45 (±0.15)	P0K5.1206.3P.A.S	P0K5.1206.3P.B.S
Order code	Sensor side down	010.01144	010.01143

Nominal resistance: 1000 Ω at 0 °C			
0805 (±0.2)	1.9 / 0.25 / 1.3 x 1.25 / 1.15 x 0.45 (±0.15)	P1K0.0805.3P.A.S	P1K0.0805.3P.B.S
Order code	Sensor side down	010.01160	010.01159
1206 (±0.2)	2.9 / 0.35 / 2.2 x 1.5 / 1.35 x 0.45 (±0.15)	Upon request	P1K0.1206.3P.B.S
Order code	Sensor side down		010.01043

#### Order Information - 4P (gold-coated)

Size	Dimensions (L / L1 / L2 x W / W1 x H in mm)	F0.15 (class A)	F0.3 (class B)
Packed in bags (< 100 pcs)			
Nominal resistance: 100 Ω at 0 °C			
0805 (±0.2)	1.9 / 0.25 / 1.3 x 1.25 / 1.15 x 0.4 (±0.15)	P0K1.0805.4P.A	P0K1.0805.4P.B
Order code		010.00930	010.00931
1206 (±0.2)	2.9 / 0.35 / 2.2 x 1.5 / 1.35 x 0.4 (±0.15)	P0K1.1206.4P.A	P0K1.1206.4P.B
Order code		010.00169	010.00168



# SMD Series

## SMD platinum sensor

### For the automatic assembling on PCBs



INNOVATIVE SENSOR TECHNOLOGY

Size	Dimensions (L / L1 / L2 x W / W1 x H in mm)	F0.15 (class A)	F0.3 (class B)
Nominal resistance: 500 Ω at 0 °C			
0805 (±0.2)	1.9 / 0.25 / 1.3 x 1.25 / 1.15 x 0.4 (±0.15)	P0K5.0805.4P.A	P0K5.0805.4P.B
Order code		010.00936	010.00937
1206 (±0.2)	2.9 / 0.35 / 2.2 x 1.5 / 1.35 x 0.4 (±0.15)	P0K5.1206.4P.A	P0K5.1206.4P.B
Order code		010.00404	010.00209
Nominal resistance: 1000 Ω at 0 °C			
0805 (±0.2)	1.9 / 0.25 / 1.3 x 1.25 / 1.15 x 0.4 (±0.15)	P1K0.0805.4P.A	P1K0.0805.4P.B
Order code		010.00925	010.00924
1206 (±0.2)	2.9 / 0.35 / 2.2 x 1.5 / 1.35 x 0.4 (±0.15)	P1K0.1206.4P.A	P1K0.1206.4P.B
Order code		010.00327	010.00324

Taped on reel - sensor side up or sensor side down (> 100 pcs)

Nominal resistance: 100 Ω at 0 °C			
1206 (±0.2)	2.9 / 0.35 / 2.2 x 1.5 / 1.35 x 0.4 (±0.15)	P0K1.1206.4P.A.S	Upon request
Order code	Sensor side up	010.02501	

Nominal resistance: 1000 Ω at 0 °C			
0805 (±0.2)	1.9 / 0.25 / 1.3 x 1.25 / 1.15 x 0.4 (±0.15)	P1K0.0805.4P.A.S	Upon request
Order code	Sensor side up	010.02679	
0805 (±0.2)	1.9 / 0.25 / 1.3 x 1.25 / 1.15 x 0.4 (±0.15)	P1K0.0805.4P.A.S	P1K0.0805.4P.B.S
Order code	Sensor side down	010.02605	010.02619
1206 (±0.2)	2.9 / 0.35 / 2.2 x 1.5 / 1.35 x 0.4 (±0.15)	P1K0.1206.4P.A.S	Upon request
Order code	Sensor side up	010.02441	

### Additional Documents

Application note:	Document name: ATP_E
-------------------	-------------------------



# Order Information

## SMD platinum sensor

### Secondary reference



INNOVATIVE SENSOR TECHNOLOGY

#### Material

P = Platinum

#### TCR

Pt 3850 ppm/K

Resistance in  $\Omega$  at 0 °C

Size in mm

#### Operating temperature range

2 = -50 °C to +150 °C

3 = -50 °C to +250 °C

4 = -50 °C to +250 °C

#### Connection

(2)P = tin-coated (96.5Sn/3Ag/0.5Cu), LMP lead-free, (reflow soldering)

(3)P = tin-coated (5Sn/93.5Pb/1.5Ag), HMP, (reflow soldering)

(4)P = gold-coated, (solderable coating)

#### Tolerance class

A = IEC 60751 F0.15      C = IEC 60751 F0.6

B = IEC 60751 F0.3      K = customer specific

#### Special

S = special      M = metallized backside

P      OK1. 0805. 2      P.      A.      S



INNOVATIVE SENSOR TECHNOLOGY

Innovative Sensor Technology IST AG, Stegrütistrasse 14, CH-9642 Ebnat-Kappel, Switzerland

Phone: +41 (0) 71 992 01 00 | Fax: +41 (0) 71 992 01 99 | E-mail: info@ist-ag.com | Web: www.ist-ag.com



All mechanical dimensions are valid at 25 °C ambient temperature, if not differently indicated • All data except the mechanical dimensions only have information purposes and are not to be understood as assured characteristics • Technical changes without previous announcement as well as mistakes reserved • The information on this data sheet was examined carefully and will be accepted as correct; No liability in case of mistakes • Load with extreme values during a longer period can affect the reliability • The material contained herein may not be reproduced, adapted, merged, translated, stored, or used without the prior written consent of the copyright owner • Typing errors and mistakes reserved • Product specifications are subject to change without notice • All rights reserved