



# SMD Series

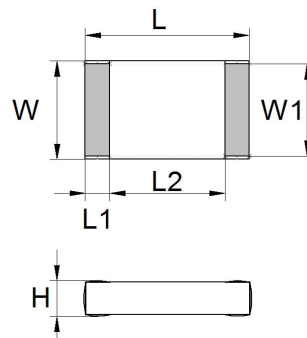
## SMD platinum sensor

### For the automatic assembling on PCBs

#### 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

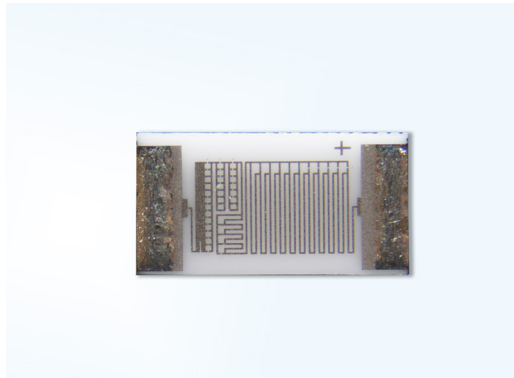
Operating temperature range:	2P	-50 °C to +150 °C
	3P	-50 °C to +250 °C
	4P	-50 °C to +250 °C
Nominal resistance:*	100 Ω at 0 °C	
	500 Ω at 0 °C	
	1000 Ω at 0 °C	
Characteristics curve:*	3850 ppm/K	
Long term stability:	< 0.04 % at 1000 h at 130 °C	
Tolerance class (dependent on temperature range):*	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)
<i>1) The soldering process can influence accuracy</i>	
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

### Product Photo

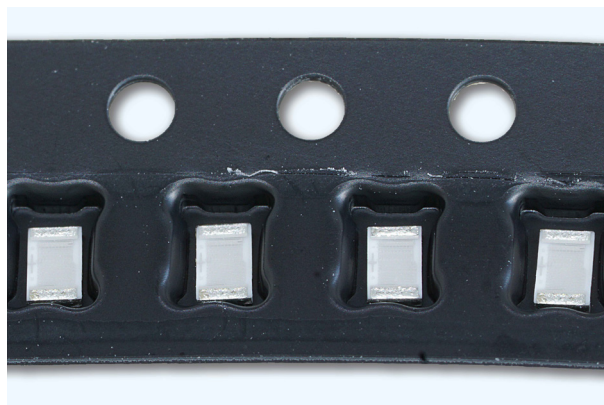


Sensor side up



Sensor side down

### Product Photo: Sensor in Tape&Reel packaging option





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)
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**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		100613	100612
Former 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		100601	100602
Former 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		100617	100618
Former 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		100610	100598
Former 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		100620	100565
Former 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		100606	100605
Former order code		010.01136	010.01135

**Nominal resistance: 10'000 Ω at 0 °C**

1206 (±0.2)	2.9 / 0.35 / 2.2 x 1.5 / 1.35 x 0.45 (±0.15)		P10K.1206.2P.B.S
Order code			101464
Former order code			010.03058

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	101020	100986
Former order code		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		100964	100985
Former order code		010.02233	010.02275



Size	Dimensions (L / L1 / L2 x W / W1 x H in mm)	F0.15 (class A)	F0.3 (class B)
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	100614	100597
Former order code		010.01148	010.01126
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	100583	100584
Former order code		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		100619
Former order code		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	100611	100591
Former order code		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	100965	100966
Former order code		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		100957	100958
Former 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	100621	100596
Former order code		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		100585	100586
Former order code	Sensor side down	010.01106	010.01107

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

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		100499	100500
Former 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
Former order code		010.00166	010.00165



Size	Dimensions (L / L1 / L2 x W / W1 x H in mm)	F0.15 (class A)	F0.3 (class B)
<b>Nominal resistance: 500 Ω at 0 °C</b>			
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			150632
Former 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		100342	100239
Former order code		010.00403	010.00208
<b>Nominal resistance: 1000 Ω at 0 °C</b>			
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		100495	100496
Former 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		100316	100313
Former order code		010.00326	010.00323
Taped on reel - sensor side up or sensor side down (> 100 pcs)			
<b>Nominal resistance: 100 Ω at 0 °C</b>			
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	100616	100615
Former order code		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
Former order code	Sensor side down		010.01145
<b>Nominal resistance: 500 Ω at 0 °C</b>			
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		150631
Former order code			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		
Former order code		010.01144	010.01143
<b>Nominal resistance: 1000 Ω at 0 °C</b>			
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		100622
Former order code		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		100564
Former order code			010.01043



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

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)
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### 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		100501	100502
Former 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
		100212	100211
Former order code		010.00169	010.00168

### 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		100503	100504
Former 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
		100343	100240
Former 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		100498	100497
Former 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
		100317	100314
Former 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		101100	
Former 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		101201	
Former 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		101159	101165
Former 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
Former order code Sensor side up		010.02441	



## Additional Documents

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Application Note:

Document name:

ATP\_E



# Order Information

## SMD platinum sensor

### Secondary reference

Material	P = Platinum
TCR	Pt 3850 ppm/K
Resistance in $\Omega$ at 0 °C	
Size in mm	
Operating temperature range	<ul style="list-style-type: none"> <li>2 = -50 °C to +150 °C</li> <li>3 = -50 °C to +250 °C</li> <li>4 = -50 °C to +250 °C</li> </ul>
Connection	<ul style="list-style-type: none"> <li>(2)P = tin-coated (96.5Sn/3Ag/0.5Cu), LMP lead-free, (reflow soldering)</li> <li>(3)P = tin-coated (5Sn/93.5Pb/1.5Ag), HMP, (reflow soldering)</li> <li>(4)P = gold-coated, (solderable coating)</li> </ul>
Tolerance class	<ul style="list-style-type: none"> <li>A = IEC 60751 F0.15      C = IEC 60751 F0.6</li> <li>B = IEC 60751 F0.3      K = customer-specific</li> </ul>
Special	<ul style="list-style-type: none"> <li>S = special      M = metallized backside</li> </ul>
P	OK1. 0805. 2
P.	A.
	S



Innovative Sensor Technology IST AG, Stegrütistrasse 14, 9642 Ebnat-Kappel, Switzerland  
Phone: +41 71 992 01 00 | Fax: +41 71 992 01 99 | Email: info@ist-ag.com | www.ist-ag.com

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