



# SMD series RTD Platinum Sensor



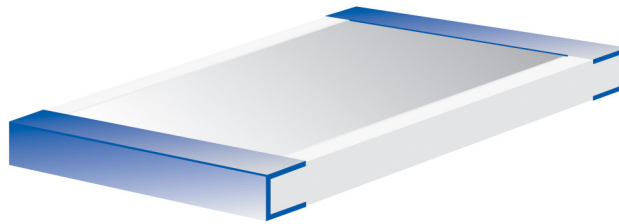
INNOVATIVE SENSOR TECHNOLOGY

## For surface mounted temperature applications

### Benefits & Characteristics

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

### Illustration



### 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 Ohm at 0 °C		
	500 Ohm at 0 °C		
	1000 Ohm at 0 °C		
Characteristics curve:*	3850 ppm/K		
Long term stability:	< 0.04 % at 1000 h at 130 °C		
			IST AG reference
Tolerance class (dependent on temperature range):*	DIN EN 60751 F0.15		A
	DIN EN 60751 F0.3		B
	DIN EN 60751 F0.6		C
Contacts:*	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	Ni/Au-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)		
Recommended applied current: <sup>2)</sup>	1 mA at 100 Ohm		
	0.5 mA at 500 Ohm		

<sup>1)</sup> The soldering process can influence accuracy

<sup>2)</sup> Self-heating must be considered



TEMPERATURE



FLOW



HUMIDITY



CONDUCTIVITY

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Packaging: 0.3 mA at 1000 Ohm  
 < 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, reflow soldering)

Packed in bags (< 100 pcs)

Size	Dimensions (L x W x H in mm)	F0.15 (class A)	F0.3 (class B)
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Nominal resistance: 100 Ohm at 0 °C

0805	2 x 1.2 x 0.4	P0K1.0805.2P.A	P0K1.0805.2P.B
Order code		010.01147	010.01146
1206	3.0 x 1.6 x 0.4	P0K1.1206.2P.A	P0K1.1206.2P.B
Order code		010.01131	010.01132

Nominal resistance: 500 Ohm at 0 °C

0805	2 x 1.2 x 0.4	P0K5.0805.2P.A	P0K5.0805.2P.B
Order code		010.01153	010.01154
1206	3.0 x 1.6 x 0.4	P0K5.1206.2P.A	P0K5.1206.2P.B
Order code		010.01141	010.01127

Nominal resistance: 1000 Ohm at 0 °C

0805	2 x 1.2 x 0.4	P1K0.0805.2P.A	P1K0.0805.2P.B
Order code		010.01157	010.01047
1206	3.0 x 1.6 x 0.4	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)

Size	Dimensions (L x W x H in mm)	F0.15 (class A)	F0.3 (class B)
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Nominal resistance: 100 Ohm at 0 °C

0805	2 x 1.2 x 0.4	Sensor side up	P0K1.0805.2P.A.S	P0K1.0805.2P.B.S
Order code			010.02347	010.02276
1206	3.0 x 1.6 x 0.4	Sensor side up	P0K1.1206.2P.A.S	P0K1.1206.2P.B.S
Order code			010.02233	010.02275



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Size	Dimensions (L x W x H in mm)		F0.15 (class A)	F0.3 (class B)
0805	2 x 1.2 x 0.4	Sensor side down	P0K1.0805.2P.A.S	P0K1.0805.2P.B.S
Order code			010.01148	010.01126
1206	3.0 x 1.6 x 0.4	Sensor side down	P0K1.1206.2P.A.S	P0K1.1206.2P.B.S
Order code			010.01104	010.01105

Nominal resistance: 500 Ohm at 0 °C

0805	2 x 1.2 x 0.4	Sensor side down	P0K5.0805.2P.A.S	P0K5.0805.2P.B.S
Order code			010.01156	010.01155
1206	3.0 x 1.6 x 0.4	Sensor side down	P0K5.1206.2P.A.S	P0K5.1206.2P.B.S
Order code			010.01142	010.01117

Nominal resistance: 1000 Ohm at 0 °C

0805	2 x 1.2 x 0.4	Sensor side up	P1K0.0805.2P.A.S	P1K0.0805.2P.B.S
Order code			010.02235	010.02236
1206	3.0 x 1.6 x 0.4	Sensor side up	P1K0.1206.2P.A.S	P1K0.1206.2P.B.S
Order code			010.02224	010.02229
0805	2 x 1.2 x 0.4	Sensor side down	P1K0.0805.2P.A.S	P1K0.0805.2P.B.S
Order code			010.01158	010.01125
1206	3.0 x 1.6 x 0.4	Sensor side down	P1K0.1206.2P.A.S	P1K0.1206.2P.B.S
Order code			010.01106	010.01107

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

Packed in bags (< 100 pcs)

Size	Dimensions (L x W x H in mm)		F0.15 (class A)	F0.3 (class B)
0805	2 x 1.2 x 0.4		P0K1.0805.3P.A	P0K1.0805.3P.B
Order code			010.00928	010.00929
1206	3.0 x 1.6 x 0.4		P0K1.1206.3P.A	P0K1.1206.3P.B
Order code			010.00166	010.00165

Nominal resistance: 500 Ohm at 0 °C

0805	2 x 1.2 x 0.4		P0K5.0805.3P.A	P0K5.0805.3P.B
Order code			010.00934	010.00935



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Size	Dimensions (L x W x H in mm)	F0.15 (class A)	F0.3 (class B)
1206	3.0 x 1.6 x 0.4	P0K5.1206.3P.A	P0K5.1206.3P.B
Order code		010.00403	010.00208

Nominal resistance: 1000 Ohm at 0 °C

0805	2 x 1.2 x 0.4	P1K0.0805.3P.A	P1K0.0805.3P.B
Order code		010.00922	010.00923
1206	3.0 x 1.6 x 0.4	P1K0.1206.3P.A	P1K0.1206.3P.B
Order code		010.00326	010.00323

Taped on reel - sensor side up or sensor side down ( $\geq 100$  pcs)

Size	Dimensions (L x W x H in mm)	F0.15 (class A)	F0.3 (class B)
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Nominal resistance: 100 Ohm at 0 °C

0805	2 x 1.2 x 0.4	Sensor side down	P0K1.0805.3P.A.S	P0K1.0805.3P.B.S
Order code			010.01150	010.01149
1206	3.0 x 1.6 x 0.4	Sensor side down	Upon request	P0K1.1206.3P.B.S
Order code				010.01145

Nominal resistance: 500 Ohm at 0 °C

0805	2 x 1.2 x 0.4	Sensor side down	Upon request	P0K5.0805.3P.B.S
Order code				010.01152
1206	3.0 x 1.6 x 0.4	Sensor side down	P0K5.1206.3P.A.S	P0K5.1206.3P.B.S
Order code			010.01144	010.01143

Nominal resistance: 1000 Ohm at 0 °C

0805	2 x 1.2 x 0.4	Sensor side down	P1K0.0805.3P.A.S	P1K0.0805.3P.B.S
Order code			010.01160	010.01159
1206	3.0 x 1.6 x 0.4	Sensor side down	Upon request	P1K0.1206.3P.B.S
Order code				010.01043



# SMD series RTD Platinum Sensor



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## For surface mounted temperature applications

### Order Information - 4P (Ni/Au-coated, solderable coating)

Packed in bags (< 100 pcs)

Size	Dimensions (L x W x H in mm)	F0.15 (class A)	F0.3 (class B)
Nominal resistance: 100 Ohm at 0 °C			
0805	2 x 1.2 x 0.4	P0K1.0805.4P.A	P0K1.0805.4P.B
Order code		010.00930	010.00931
1206	3.0 x 1.6 x 0.4	P0K1.1206.4P.A	P0K1.1206.4P.B
Order code		010.00169	010.00168

Nominal resistance: 500 Ohm at 0 °C

0805	2 x 1.2 x 0.4	P0K5.0805.4P.A	P0K5.0805.4P.B
Order code		010.00936	010.00937
1206	3.0 x 1.6 x 0.4	P0K5.1206.4P.A	P0K5.1206.4P.B
Order code		010.00404	010.00209

Nominal resistance: 1000 Ohm at 0 °C

0805	2 x 1.2 x 0.4	P1K0.0805.4P.A	P1K0.0805.4P.B
Order code		010.00925	010.00924
1206	3.0 x 1.6 x 0.4	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)

Size	Dimensions (L x W x H in mm)		F0.15 (class A)	F0.3 (class B)
Nominal resistance: 100 Ohm at 0 °C				
1206	3.0 x 1.6 x 0.4	Sensor side up	P0K1.1206.4P.A.S	Upon request
Order code			010.02501	



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Nominal resistance: 1000 Ohm at 0 °C

0805	2 x 1.2 x 0.4	Sensor side up	P1K0.0805.4P.A.S	Upon request
Order code			010.02679	
0805	2 x 1.2 x 0.4	Sensor side down	P1K0.0805.4P.A.S	P1K0.0805.4P.B.S
Order code			010.02605	010.02619
1206	3.0 x 1.6 x 0.4	Sensor side up	P1K0.1206.4P.A.S	Upon request
Order code			010.02441	



# Order Information

## RTD Platin Sensor

### Secondary reference



INNOVATIVE SENSOR TECHNOLOGY

#### Material

**P** = platin (Pt 3850 ppm/K)

#### Resistance in Ohm at 0 °C

#### Chip size in mm

#### Operating temperature range

1	= -50 °C to +150 °C	4	= -50 °C to +250 °C
2	= -50 °C to +150 °C / 250 °C	5	= -50 °C to +400 °C
3	= -50 °C to +250 °C	6	= -50 °C to +600 °C

#### Contacts (SMD/FC)

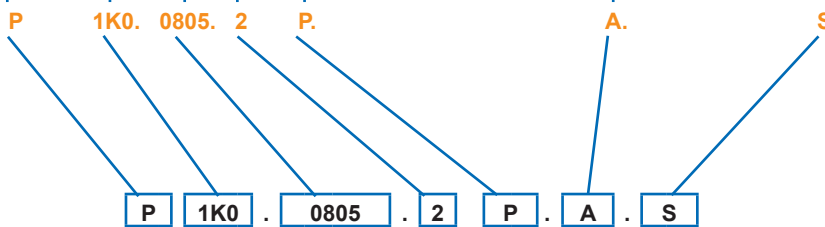
(2)P = tin-coated (96.5Sn/3Ag/0.5Cu), LMP lead-free, (reflow soldering)	(1)FC = tin-coated, LMP lead-free, 96.5Sn/3Ag/0.5Cu (reflow soldering)
(3)P = tin-coated (5Sn/93.5Pb/1.5Ag), HMP, (reflow soldering)	(2)FC = tin-coated, soldering depot, HMP, 5Sn/93.5Pb/1.5Ag (reflow soldering)
(4)P = Au-coated, (solderable coating)	(3)FC = Au-Pads (bonding pads), various types available
	(5)FC = reinforced thin film Pt-pads (solderable pads)
	(6)FC = thick film Pt-pads (weldable)

#### Tolerance class

A <sup>1)</sup> = DIN EN 60751 F0.15	C = DIN EN 60751 F0.6
B = DIN EN 60751 F0.3	K = customer specific

#### Special

M = metallized backside
S = special



1) Class A only available as SMD

DTPSMD\_EZ.1



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