



# FlipChip Series

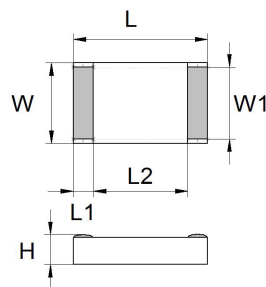
## FC platinum sensor

For the automatic assembling on PCB by soldering or bonding

### Benefits & Characteristics

- Excellent long-term stability
- Minimum space consumption on PCB
- Fast response time
- Low self-heating
- Optimal price-performance ratio
- Bondable versions available
- Customer-specific sensor available upon request

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



1) For actual size, see dimensions

### Technical Data

Operating temperature range:	1FC	-50 °C to +150 °C
	2FC	-50 °C to +250 °C
	3FC	-50 °C to +250 °C
	5FC	-50 °C to +400 °C
	6FC	-50 °C to +600 °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):*	IST AG reference	
	IEC 60751 F0.3	B
	IEC 60751 F0.6	C



Connection:*	1FC	tin-coated, LMP lead-free, 96.5Sn/3Ag/0.5Cu) (reflow soldering)
	2FC	tin-coated, HMP soldering depot, 5Sn/93.5Pb/1.5Ag (reflow soldering)
	3FC	Au-Pads (bonding pads), various types available
	5FC	reinforced thin-film Pt-pads (solderable pads)
	6FC	thick-film Pt-pads (weldable)
Solderability: <sup>1)</sup>	235 °C ≤ 8 s (DIN IEC 68 T2-20, Ta Meth. 1) - 1FC, 2FC, 5FC	
<i>1) The soldering process can influence accuracy</i>		
Resistance to soldering heat:	260 °C 10 s (DIN IEC 68 T2-20, Ta Meth. 1A) - 1FC, 2FC, 5FC	
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	
Other alternatives:*	Metallized backside	
	Substrate thickness	
Packaging:	< 100 pcs in trays	
	> 100 pcs taped on reel	
	> 100 pcs diced substrate on foil	

\* Customer-specific alternatives available

### Order Information - 1FC (Contacts tin-coated (96.5Sn/3Ag/0.5Cu), LMP lead-free)

Size	Dimensions (L / L1 / L2 x W / W1 x H in mm)	F0.3 (class B)
Packed in trays (< 100 pcs)		
Nominal resistance: 100 Ω at 0 °C		
0603 (±0.2)	1.5 / 0.25 / 0.9 x 0.75 / 0.7 x 0.45 (±0.15)	POK1.0603.1FC.B
Order code		310.00655
0805 (±0.2)	1.9 / 0.25 / 1.4 x 1.15 / 1.1 x 0.45 (±0.15)	POK1.0805.1FC.B
Order code		010.02586
Nominal resistance: 500 Ω at 0 °C		
0805 (±0.2)	1.9 / 0.25 / 1.4 x 1.15 / 1.1 x 0.45 (±0.15)	POK5.0805.1FC.B
Order code		010.02705
Nominal resistance: 1000 Ω at 0 °C		
0603 (±0.2)	1.5 / 0.25 / 0.9 x 0.75 / 0.7 x 0.45 (±0.15)	P1K0.0603.1FC.B
Order code		310.00656
0805 (±0.2)	1.9 / 0.25 / 1.4 x 1.15 / 1.1 x 0.45 (±0.15)	P1K0.0805.1FC.B
Order code		010.02557



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



Taped on reel (> 100 pcs)



Nominal resistance: 500 Ω at 0 °C

0805 (±0.2)	1.9 / 0.25 / 1.4 x 1.15 / 1.1 x 0.45 (±0.15)	P0K5.0805.1FC.B.S
Order code	Sensor side down	010.02706



Nominal resistance: 1000 Ω at 0 °C

0805 (±0.2)	1.9 / 0.25 / 1.4 x 1.15 / 1.1 x 0.45 (±0.15)	P1K0.0805.1FC.B.S
Order code	Sensor side down	010.02558



Diced substrate on foil (> 100 pcs)

Nominal resistance: 1000 Ω at 0 °C

0805 (±0.2)	1.9 / 0.25 / 1.4 x 1.15 / 1.1 x 0.45 (±0.15)	P1K0.0805.1FC.B.S
Order code		010.02602

### Order Information - 2FC (contacts tin-coated, soldering depot, HMP, 5Sn/93.5Pb/1.5Ag)

Available upon request

### Order Information - 3FC (Au-Pads (bonding pads), various types available)

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

Packed in trays (< 100 pcs)

Nominal resistance: 100 Ω at 0 °C

0805 (±0.2)	1.9 / 0.25 / 1.4 x 1.15 / 1.1 x 0.4 (±0.15)	P0K1.0805.3FC.B
Order code		310.00536
1206 (±0.2)	2.9 / 0.35 / 2.1 x 1.4 / 1.3 x 0.4 (±0.15)	P0K1.1206.3FC.B
Order code		310.00818

Nominal resistance: 1000 Ω at 0 °C

0603 (±0.2)	1.5 / 0.25 / 0.9 x 0.75 / 0.7 x 0.4 (±0.15)	P1K0.0603.3FC.B.S
Order code		310.00653
0805 (±0.2)	1.9 / 0.25 / 1.4 x 1.15 / 1.1 x 0.4 (±0.15)	P1K0.0805.3FC.B
Order code		010.02749
161	1.6 x 1.2 x 0.25 (±0.15)	P1K0.161.3FC.B
Order code		010.01863



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



Diced substrate on foil (> 100 pcs)



Nominal resistance: 100 Ω at 0 °C

0805	1.9 / 0.25 / 1.4 x 1.15 / 1.1 x 0.4 (±0.15)	P0K1.0805.3FC.B.S
Order code		010.02717



### Order Information - 5FC (reinforced thin-film Pt-pads (solderable pads))



Available upon request

### Order Information - 6FC (thick-film Pt-pads (weldable))

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

Nominal resistance: 1000 Ω at 0 °C

0805	2.0 / 0.525 / 0.8 x 1.2 / 0.95 x 0.45 (±0.15)	P1K0.0805.6FC.B.S
		310.01443
161	1.6 x 1.2 x 0.25 (±0.15)	P1K0.161.6FC.B
Order code		010.00626

### Additional Documents

Application Note:	Document name: ATP_E
-------------------	-------------------------



# Order Information

## FC platinum sensor

### Secondary reference

#### Material

P = Platinum

#### TCR

Pt 3850 ppm/K

#### Resistance in $\Omega$ at 0 °C

#### Size in mm

#### Operating temperature range

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

#### Connection

(1)FC = tin-coated, LMP lead-free, 6.5Sn/3Ag/0.5Cu
(2)FC = tin-coated, soldering depot, HMP, 5Sn/93.5Pb/1.5Ag
(3)FC = Au-Pads (bonding pads), various types available
(5)FC = reinforced thin-film Pt-pads
(6)FC = thick-film Pt-pads

#### Tolerance class

B = IEC 60751 F0.3	K = customer-specific
C = IEC 60751 F0.6	

#### Special

S = special	M = metallized backside
-------------	-------------------------

P OK1. 0805. 2 FC. B. 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

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