TEMPERATURE

FLOW

HUMIDITY

CONDUCTIVITY

FlipChip series

FC platinum sensor

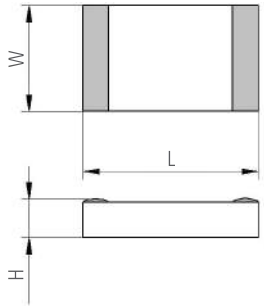
For the automatic assembling on PCB by soldering or bonding

INNOVATIVE SENSOR TECHNOLOGY

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[1)]



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
	DIN EN 60751 F0.3	B
	DIN EN 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)

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Solderability:[1)] *1) The soldering process can influence accuracy*	235 °C ≤ 8 s (DIN IEC 68 T2-20, Ta Meth. 1) - 1FC, 2FC, 5FC
Resistance to soldering heat:	260 °C 10 s (DIN IEC 68 T2-20, Ta Meth. 1A) - 1FC, 2FC, 5FC
Recommended applied current:[2)] *2) Self-heating must be considered*	1 mA at 100 Ω 0.5 mA at 500 Ω 0.3 mA at 1000 Ω
Other alternatives:*	Metalized 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 x W x H in mm)		F0.3 (class B)
Packed in trays (< 100 pcs)			
Nominal resistance: 100 Ω at 0 °C			
0603	1.5 x 0.75 x 0.4		P0K1.0603.1FC.B
Order code			310.00655
0805	1.9 x 1.15 x 0.4		P0K1.0805.1FC.B
Order code			010.02586
Nominal resistance: 500 Ω at 0 °C			
0805	1.9 x 1.15 x 0.4		P0K5.0805.1FC.B
Order code			010.02705
Nominal resistance: 1000 Ω at 0 °C			
0603	1.5 x 0.75 x 0.4		P1K0.0603.1FC.B
Order code			310.00656
0805	1.9 x 1.15 x 0.4		P1K0.0805.1FC.B
Order code			010.02557
Taped on reel (> 100 pcs)			
Nominal resistance: 500 Ω at 0 °C			
0805	1.9 x 1.15 x 0.4	Sensor side down	P0K5.0805.1FC.B.S
Order code			010.02706

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Size	Dimensions (L x W x H in mm)		F0.3 (class B)
Nominal resistance: 1000 Ω at 0 °C			
0805	1.9 x 1.15 x 0.4	Sensor side down	P1K0.0805.1FC.B.S
Order code			010.02558
Diced substrate on foil (> 100 pcs)			
Nominal resistance: 1000 Ω at 0 °C			
0805	1.9 x 1.15 x 0.4		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 x W x H in mm)	F0.3 (class B)
Packed in trays (< 100 pcs)		
Nominal resistance: 100 Ω at 0 °C		
0805	1.9 x 1.15 x 0.4	P0K1.0805.3FC.B
Order code		310.00536
1206	2.9 x 1.4 x 0.4	P0K1.1206.3FC.B
Order code		310.00499
Nominal resistance: 1000 Ω at 0 °C		
0603	1.5 x 0.75 x 0.4	P0K1.0805.3FC.B
Order code		310.00653
0805	1.9 x 1.15 x 0.4	P1K0.0805.3FC.B
Order code		010.02749
161	1.6 x 1.2 x 0.25	P1K0.161.3FC.B
Order code		010.01863

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Size	Dimensions (L x W x H in mm)	F0.3 (class B)
Diced substrate on foil (> 100 pcs)		
Nominal resistance: 1000 Ω at 0 °C		
0805	1.9 x 1.15 x 0.4	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 x W x H in mm)	F0.3 (class B)
Nominal resistance: 1000 Ω at 0 °C		
161	2 x 1.5 x 0.4	P1K0.161.6FC.B
Order code		010.00626

Additional Documents

	Document name:
Application note:	ATP_E

Order Information
FC platinum sensor
Secondary reference

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Material

P	=	Platin

TCR

Pt 3850 ppm/K		

Resistance in Ω at 0 °C

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 +150 °C / 250 °C	6	=	-50 °C to +600 °C

Connection (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)
(3)P	=	tin-coated (5Sn/93.5Pb/1.5Ag), HMP, (reflow soldering)	(2)FC	=	tin-coated, soldering depot, HMP, 5Sn/93.5Pb/1.5Ag
(4)P	=	gold-coated, (solderable coating)	(3)FC	=	Au-Pads (bonding pads), various types available
			(5)FC	=	reinforced thin film Pt-pads
			(6)FC	=	thick film Pt-pads

Tolerance class

A[1)]	=	DIN EN 60751 F0.15	C	=	DIN EN 60751 F0.6
B	=	DIN EN 60751 F0.3	K	=	customer specific

Special

S	=	special	M	=	metallized backside

P	0K1.	0805.	2	P.	A.	S

1) Class A only available as SMD

INNOVATIVE SENSOR TECHNOLOGY
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