TEMPERATURE

Platinum Temperature Sensors

FC – Product Series Temperature Range: –50°C...+150/250/400/600°C

Platinum temperature sensor elements in FC (Flip Chip) construction
Soldering junction (reflow solderable)

Technical Data

Specification:	DIN EN 60751
Temperature range:	-50°C to +150°C (1FC, 2P), -50°C to +250°C (2FC, 3FC, 3P, 4P), -50°C to +400°C (4FC, 5FC), -50°C to +600°C (6FC)
Temperature Coefficient:	TCR = 3850 ppm/K
Classes:	F 0.15 (Class A) -50°C to +150/ 250°C F 0.3 (Class B) -50°C to +150/ 250/ 400/ 600°C F 0.6 (Class C) -50°C to +150/ 250/ 400/ 600°C
Contact connection:	Pads: 1FC = Contacts tin-coated, soldering depot, LMP lead-free, 96.5Sn 3 Ag 0.5Cu (reflow soldering) 2FC = Contacts tin-coated, soldering depot, HMP, 5Sn 93.5Pb 1.5Ag (reflow soldering) 3FC = Au-Pads (bonding pads) 4FC = Thin film Pt-pads 5FC = increased thinfilm Pt-pads (solderable pads) 6FC = Thick film Pt-pads (welding) The precision class is dependent on the soldering process
Solderability:	235°C ≤ 8s (DIN IEC 68 T2-20, Ta Meth. 1) → 1FC, 2FC, 5FC
Resistance to soldering heat:	260°C 10s (DIN IEC 68 T2-20, Ta Meth. 1A) → 1FC, 2FC, 5FC
Long-term stability:	Max. Drift = 0.04% after 1000h at 130°C
Note:	Different chip sizes available

RoHS

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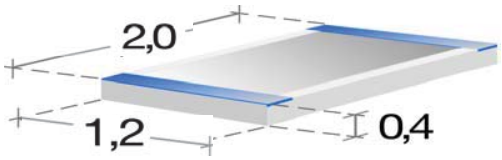
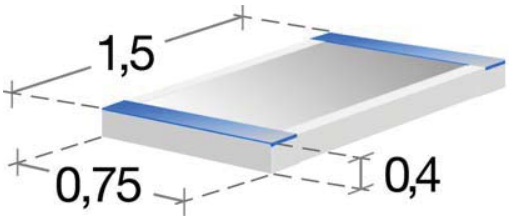
FC 0805

Chip Dimensions, L x W:	2.0 x 1.2 mm	
Nominal Resistance at 0°C (ohm) :	100/500/1000	
Self Heating, (mK):	Water (v= 0 m/s) Air (v= 0 m/s)	ΔT_w = 2.6 at 0°C ΔT_a = 25 at 0°C
Response Time (s):	Water (v= 0.4 m/s) Air (v= 1 m/s)	$T_{0.5}$ = 0.10 $T_{0.63}$ = 0.12 $T_{0.9}$ = 0.33 $T_{0.5}$ = 2.5 $T_{0.63}$ = 3 $T_{0.9}$ = 8
Measuring Current (mA)	100Ω: 1 500Ω: 0.5 1000Ω: 0.3	



FC 0603

Dimensions, LxW:	1.5 x 0.75 mm	
Nominal Resistance at 0°C (ohm):	100/500/1000	
Self Heating (mK):	Water (v= 0 m/s) Air (v= 0 m/s)	ΔT_w = 4 at 0°C ΔT_a = 40 at 0°C
Response Time (s):	Water (v= 0.4 m/s) Air (v= 1 m/s)	$T_{0.5}$ = 0.08 $T_{0.63}$ = 0.10 $T_{0.9}$ = 0.25 $T_{0.5}$ = 1.8 $T_{0.63}$ = 2.2 $T_{0.9}$ = 5.5
Measuring Current (mA):	100Ω: 1 500Ω: 0.5 1000Ω: 0.3	



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Order Example:

P	***1K0.***	***0603.***	***2FC.***	***B***
1	*2*	*3*	*4*	*5*

1. *Material Identification = Platinum temperature sensor*
2. *Resistance Value in ohm = 1000Ω / 0°C*
3. *Chip Dimension = 1.5 x 0.75 mm*
4. *Contact Connection = Tin-coated contacts, soldering depot, HMP*
5. *Tolerance Class = DIN EN 60751 F 0.3 (former Class B)*

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