技术参数

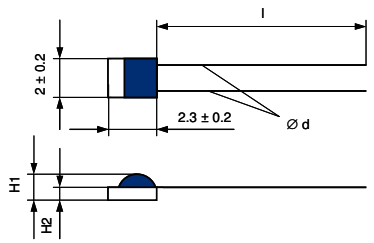
电阻 (0 ° C)	100 Ω
温度系数 (0 到100 ° C)	3.85 · 10^{-3} K^{-1}
公差等级 DIN EN 60751	F 0,1; F 0,15, F 0,3
操作温度范围取决于导体材料 AgPd5, Au 涂层 Ni-线 Pt-涂层 Ni-线 AuPd5, Pt	 -50 ℃ 到 +400 ℃ -50 ℃到 +500 ℃ (short-time up to 550 ℃) -50 ℃ 到 +600 ℃
测量电流 DC 在25 ° C	1.0 mA
最大允许峰值电流 (DC) 在25 ° C	3.0 mA
绝缘电阻	> 10 MΩ
自加热, 在 0 ℃	< 0.5 K / mW
热响应时间 流水 (v = 0.2 m/s) 流动空气 (v = 1 m/s)	 $T_{0.5}$ = 0.07s, $T_{0.9}$ = 0.2s $T_{0.5}$ = 4 s, $T_{0.9}$ = 10 s

电阻值 [Ω]

温度	公差等级 F 0,1 [Ω]	F 0,15 [Ω]	F 0,3 [Ω]
0 ℃	100 ± 0.04	100 ± 0.06	100 ± 0.12
+100 ℃	138.51 ± 0.10	138.51± 0.13	138.51 ± 0.30

最大阻值变化 at UCT 250 h	< 0.1 %
特性	DIN EN 60751
操作条件 无保护措施时只能在干燥无接触环境下使用	
技术 高端薄层技术 (陶瓷基载铂金结构层，表面涂有钝化层)	
限制 2002/95/EC 不能与危险物质直接接触使用 (RoHS)	

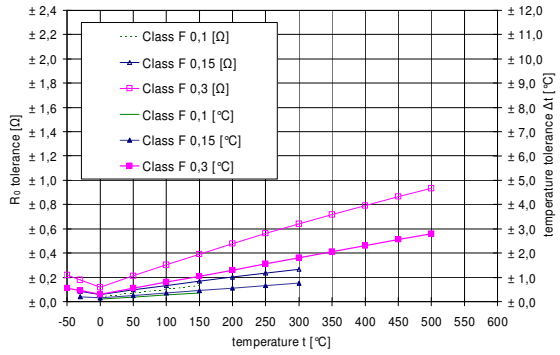
尺寸 [mm]



	FMC2105 2x2.3x1.3	FMC2105 2x2.3x1.0	Leads	AgPd5	NiAu	NiPt	AuPd5	Pt
H1 [mm]	1.3 ± 0.2	1± 0.2	l [mm]	15 ± 1	15 ± 1	10 ± 1	10 ± 1	7 ± 1
H2 [mm]	0.65	0.4	d [mm]	0,25	0,2	0,2	0,25	0,2

功能

依照 DIN EN 60751



Picture 1: Resistance and temperature tolerances of FMC 2105 (Pt-Leads)

温度范围 -50 ℃ 到 0 ℃:

$R_t = R_o \cdot (1 + A \cdot t + B \cdot t^2 + C \cdot (t - 100\ ℃) \cdot t^3)$

温度范围 0℃ 到 +600℃:

$R_t = R_o \cdot (1 + A \cdot t + B \cdot t^2)$

公差等级 DIN EN 60751:

Class F 0,1 (0℃ - +150℃): $\Delta t = \pm (0.1 + 0.0017 \cdot |t|)$

Class F 0,15 (-30℃ - +300℃): $\Delta t = \pm (0.15 + 0.002 \cdot |t|)$

Class F 0,3 (-50℃ - +500℃): $\Delta t = \pm (0.3 + 0.005 \cdot |t|)$

注释:

R_T .某温度下阻值[Ω]

R_o 阻值 [Ω] 在 0 ℃

t ... 温度 [℃]

Δt 允许最大温度变化t [℃]

A = 3.9083 · 10^{-3} $℃^{-1}$

B = - 5.775 · 10^{-7} $℃^{-2}$

C = - 4.183 · 10^{-12} $℃^{-4}$

应用范围

- 电子工业
- 智能楼宇
- 汽车电子
- 能源和环保
- 安全及医疗工业

订购规格

	构造		精确等级	导体材料	温度范围 [℃]
Code	**FMC**	**2105**	**F 0,15**	**AgPd5**	**- 50/400**
Code	**FMC**	**2105**	**F 0,3**	**NiPt**	**- 50/500**

可提供其它精确等级或引线长度，需询价

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Phone: 0523 - 88155558 | Mobile: 13701245182 | E-mail:micsensor@yeah.net | Web: www.mic-sensor.com

技术参数

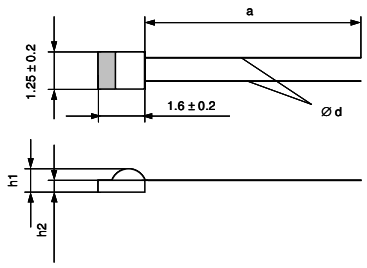
电阻 (0 ° C)	100 Ω
温度系数 (0 到100 ° C)	3.85 · 10^{-3} K^{-1}
公差等级 DIN EN 60751	⅓ DIN B (0℃ - +150℃), A, B
操作温度范围取决于导体材料 AgPd5 Pt- 涂层 Ni 线 Pt	 -50 ℃ 到 +400 ℃ -50 ℃ 到 +550 ℃ -50 ℃ 到 +600 ℃
测量电流 DC 在25 ° C	1.0 mA
最大允许峰值电流 (DC) 在25 ° C	3.0 mA
绝缘电阻	> 10 MΩ
自加热， 在 0 ℃	< 0.5 K / mW
热响应时间 流水 (v = 0.2 m/s) 流动空气 (v = 1 m/s)	 $T_{0.5}$ = 0.05 s, $T_{0.9}$ = 0.2 s $T_{0.5}$ = 3 s, $T_{0.9}$ = 10 s

电阻值 [Ω]

温度	公差等级		
	⅓ DIN B [Ω]	A [Ω]	B [Ω]
0 ℃	100 ± 0.04	100 ± 0.06	100 ± 0.12
+100 ℃	138.51 ± 0.10	138.51± 0.13	138.51 ± 0.30

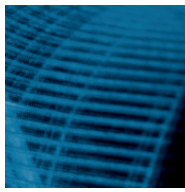
最大阻值变化 at UCT 250 h	< 0.1 %
特性	DIN EN 60751
操作条件 无保护措施时只能在干燥无接触环境下使用	
技术 高端薄层技术（陶瓷基载铂金结构层，表面涂有钝化层）	
限制 2002/95/EC 不能与危险物质直接接触使用（RoHS）	

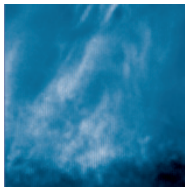
尺寸 [mm]



h1	1.0 ± 0.2	1.3 ± 0.2
h2	0.4 ± 0.06	0.65 ± 0.06

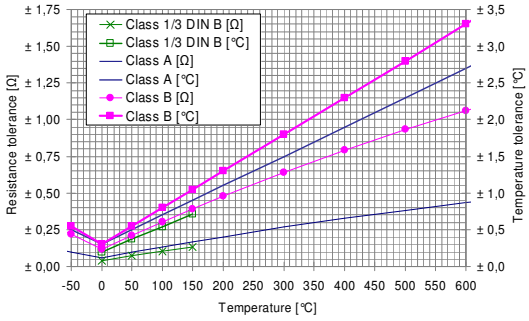
Leads	AgPd5	NiPt	Pt
a	15 ± 1	10 ± 1	7 ± 1
d	0.15	0.2	0.2





功能

DIN EN 60751



Picture 1: Resistance and temperature tolerances of FMC 2108 (Pt-Leads)

温度范围 -50 ℃ 到 0 ℃:

$R_T = R_o \cdot (1 + A \cdot T + B \cdot T^2 + C \cdot (T - 100\ ℃) \cdot T^3)$

温度范围 0℃ 到+600℃:

$R_T = R_o \cdot (1 + A \cdot T + B \cdot T^2)$

公差等级 DIN EN 60751:

Class ⅓ DIN B (0℃ - +150℃): $\Delta T = \pm (0.1 + 0.0017 \cdot |T|)$

Class A: $\Delta T = \pm (0.15 + 0.002 \cdot |T|)$

Class B: $\Delta T = \pm (0.3 + 0.005 \cdot |T|)$

注释:

R_T .某温度下阻值[Ω]

R_o 阻值 [Ω] 在 0 ℃

T … 温度 [℃]

ΔT 允许最大温度变化t [℃]

A = 3.9083 · 10^{-3} $℃^{-1}$

B = - 5.775 · 10^{-7} $℃^{-2}$

C = - 4.183 · 10^{-12} $℃^{-4}$

应用范围

- 电子工业
- 智能楼宇
- 汽车电子
- 能源和环保
- 安全及医疗工业

订购规格

构造		精确等级	高度	导体材料	温度范围 [℃]
FMC	**2108**	**A**	**1.0**	**AgPd5**	**- 50/400**
FMC	**2108**	**B**	**1.3**	**NiPt**	**- 50/550**

可提供其它精确等级或引线长度，需询价

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铂基传感 BOJI SENSING

UST UMWELT SENSOR TECHNIK

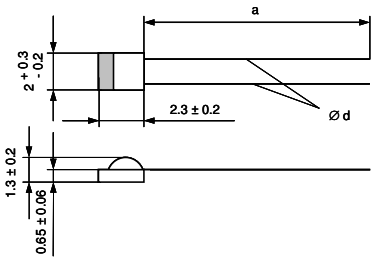
Platinum Temperature Sensor **FMC 2145**

Technical Data

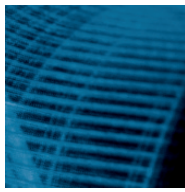
Resistance at 0 °C	1000 Ω
Temperature coefficient (0 °C up to 100 °C)	3.85 · 10^{-3} K^{-1}
Tolerance classes to DIN EN 60751	A, B
Operating temperature range depending on lead material:	
AgPd5, Ni, Au-coated Ni-wire	-50 °C up to 400 °C
Pt-coated Ni-wire	-50 °C up to 550 °C
Pt	-50 °C up to 600 °C
Measurement current (DC) at 25 °C	0.1 mA
Maximal permissible peak current (DC) at 25 °C	0.3 mA
Insulation resistance	> 10 MΩ
Self-heating at 0 °C	< 0.5 K / mW
Thermal response time	
Flowing water (v = 0.2 m/s)	$T_{0.5}$ = 0.07s, $T_{0.9}$ = 0.2s
Flowing air (v = 1 m/s)	$T_{0.5}$ = 4 s, $T_{0.9}$ = 10 s
Resistance value at:	
0 °C (Tolerance class A)	1000.0 Ω ± 0.6 Ω
100 °C (Tolerance class A)	1385.1 Ω ± 1.3 Ω
0 °C (Tolerance class B)	1000.0 Ω ± 1.2 Ω
100 °C (Tolerance class B)	1385.1 Ω ± 3.0 Ω

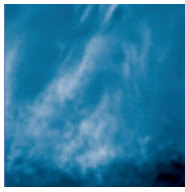
Maximal Resistance Change at UCT 250 h	< 0.1 %
Specification	DIN EN 60751
Operating conditions Unprotected application only in dry environments without any contamination	
Technology Advanced thin-film-technology (ceramic carrier with a structured platinum layer, covered with a passivating layer)	
Conformity 2002/95/EC Restriction of the use of Hazardous Substances Directive (RoHS)	

Dimensions [mm]



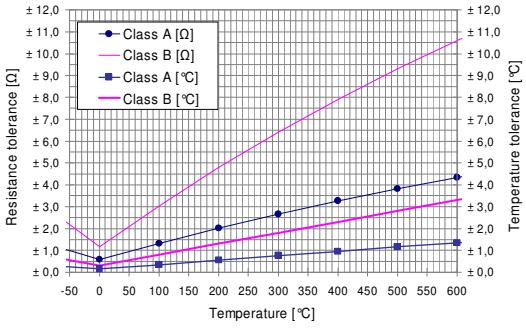
Leads	AgPd5	Ni	NiAu	NiPt	Pt
a [mm]	15 ± 1	10 ± 1	10 ± 1	10 ± 1	7 ± 1
d [mm]	0,25	0,2	0,2	0,2	0,2





Functional performance

according to DIN EN 60751



Picture 1: Resistance and temperature tolerances of FMC 2145 (Pt-Leads)

Temperature range from -50 °C up to 0 °C:

$R_T = R_o \cdot (1 + A \cdot T + B \cdot T^2 + C \cdot (T - 100\ °C) \cdot T^3)$

Temperature range from 0 °C up to 600 °C:

$R_T = R_o \cdot (1 + A \cdot T + B \cdot T^2)$

Tolerance classes to DIN EN 60751:

Class A: $\Delta T = \pm (0.15 + 0.002 \cdot |T|)$

Class B: $\Delta T = \pm (0.3 + 0.005 \cdot |T|)$

Whereby:

R_T … Resistance [Ω] at temperature T

R_o … Resistance [Ω] at 0 °C

T … Temperature [°C]

ΔT …Permissible temperature deviation at T [°C]

A = 3.9083 · 10^{-3} $°C^{-1}$

B = - 5.775 · 10^{-7} $°C^{-2}$

C = - 4.183 · 10^{-12} $°C^{-4}$

Fields of application

- Industrial electronics
- Building automation
- Automotive electronics
- Energy and environmental engineering
- Safety and medical engineering

Ordering examples

	Construction		Class of accuracy	Lead material	Temperature range [°C]
Code	**FMC**	**2145**	**A**	**AgPd5**	**- 50/400**
Code	**FMC**	**2145**	**B**	**NiPt**	**- 50/550**

Other classes of accuracy and wire lengths are available on request.

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Platinum Temperature Sensor **Pt20 FMC 2x2,3**

Technical Data

Resistance at 0°C (R_0)	20 Ω
Temperature coefficient (0°C up to +100°C)	3.85 · 10^{-3} K^{-1}
Tolerance classes according to DIN EN 60751	• F 0,3 (-50°C - +500°C) • F 0,6 (-50°C - +600°C)
Operating temperature range depending on lead material:	
AgPd5, Au-coated Ni-wire (NiAu)	-50 °C up to +400 °C
Pt-coated Ni-wire(NiPt)	-50 °C up to +500 °C (short-time up to +550 °C)
AuPd5, Pt	-50 °C up to +600 °C
Measurement current (DC) at 25 °C	1.0 mA
Maximal permissible peak current (DC) at 25 °C	3.0 mA
Insulation resistance	> 10 MΩ
Self-heating at 0 °C	< 0.5 K / mW
Thermal response time	
Flowing water (v = 0.2 m/s)	$T_{0.5}$ = 0.07s, $T_{0.9}$ = 0.2s
Flowing air (v = 1 m/s)	$T_{0.5}$ = 4 s, $T_{0.9}$ = 10 s

Resistance value [Ω] at

Temperature	Tolerance class	
	F 0,3 [Ω]	F 0,6 [Ω]
0 °C	20 ± 0.023	20 ± 0.023
+100 °C	27.702 ± 0.061	27.702 ± 0.121

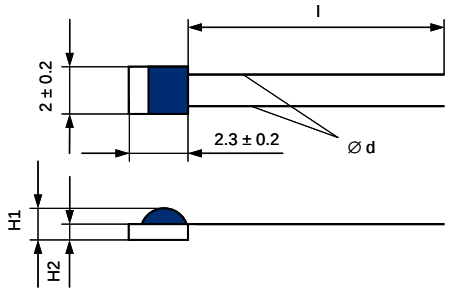
R_t measuring point	2 mm from wire end
Maximal Resistance Change at UCT 250 h	< 0.1 %
Specification	DIN EN 60751
Type	Film sensor

Technology: Advanced thin-film-technology (ceramic carrier with a structured platinum layer, covered with a passivating layer)

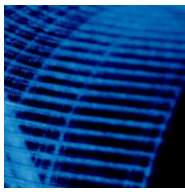
Operating conditions: Unprotected application only in dry environments without any contamination

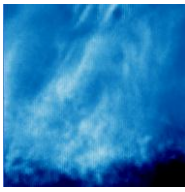
Conformity: 2011/65/EU: Restriction of the use of Hazardous Substances Directive (RoHS)

Dimensions [mm]



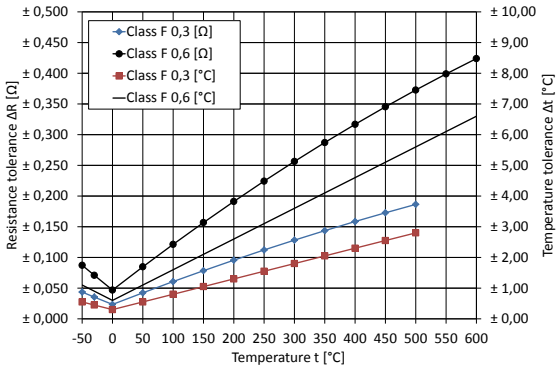
	Pt20 FMC 2x2.3x1.3	Pt20 FMC 2x2.3x1.0	Leads	AgPd5	NiAu	NiPt	AuPd5	Pt
H1 [mm]	1.3 ± 0.2	1± 0.2	l [mm]	15 ± 1	15 ± 1	10 ± 1	10 ± 1	7 ± 1
H2 [mm]	0.65	0.4	d [mm]	0,25	0,2	0,2	0,25	0,2





Functional performance

according to DIN EN 60751



Picture 1: Resistance and temperature tolerances of Pt20 (Please note - the operating temperature range depends on lead material!)

Temperature range from -50 °C up to 0 °C:

$R_t = R_o \cdot (1 + A \cdot t + B \cdot t^2 + C \cdot (t - 100\,°C) \cdot t^3)$

Temperature range from 0°C up to +600°C:

$R_t = R_o \cdot (1 + A \cdot t + B \cdot t^2)$

Tolerance classes according to DIN EN 60751:

Class F 0,3 (-50°C - +500°C): $\Delta t = \pm (0.3 + 0.005 \cdot |t|)$

Class F 0,6 (-50°C - +600°C): $\Delta t = \pm (0.6 + 0.01 \cdot |t|)$

Whereby:

R_t … Resistance [Ω] at temperature t

R_o … Resistance [Ω] at 0 °C

t … Temperature [°C]

Δt … Permissible temperature deviation at t [°C]

A = 3.9083 · 10^{-3} $°C^{-1}$

B = - 5.775 · 10^{-7} $°C^{-2}$

C = - 4.183 · 10^{-12} $°C^{-4}$

Fields of application

- Industrial electronics
- Building automation
- Automotive electronics
- Energy and environmental engineering
- Safety and medical engineering

Ordering examples

Construction	Class of accuracy	Leads (ø d x l [mm] lead material)	Operating temperature range [°C]
Pt20 FMC 2x2.3x1.3	**F 0,3**	**0.25x15 AgPd5**	**-50/+400**
Pt20 FMC 2x2.3x1.0	**F 0,6**	**0.2x10 NiPt**	**-50/+500**

Other classes of accuracy and wire lengths are available on request.

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