

# ZNI1000

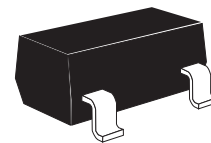
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## TEMPERATURE SENSOR

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### DESCRIPTION

The ZNI1000 is a Ni thin film Resistance Temperature Detector (RTD), specified to DIN 43760. The high temperature coefficient offers higher signal outputs than other RTD's, which results in higher accuracy with smaller temperature changes.



SOT23

### FEATURES

- Resistance at 0°C: 1000Ω
- SOT23 package
- Available on 8mm tape

### APPLICATIONS

- Automotive Electronic
- Circuit Protection
- Temperature compensation
- Temperature measurement

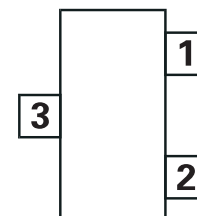
### ORDERING INFORMATION

DEVICE	REEL SIZE	TAPE WIDTH	QUANTITY PER REEL
ZNI1000TA	7"	8mm	3000 units
ZNI1000TC	13"	8mm	10000 units

### DEVICE MARKING

- ZNI

### PINOUT



Top View

Pin 1 - Ni1000  
Pin 2 - Ni1000  
Pin 3 - need a good thermal contact for a short response time

# ZNI1000

## ABSOLUTE MAXIMUM RATINGS.

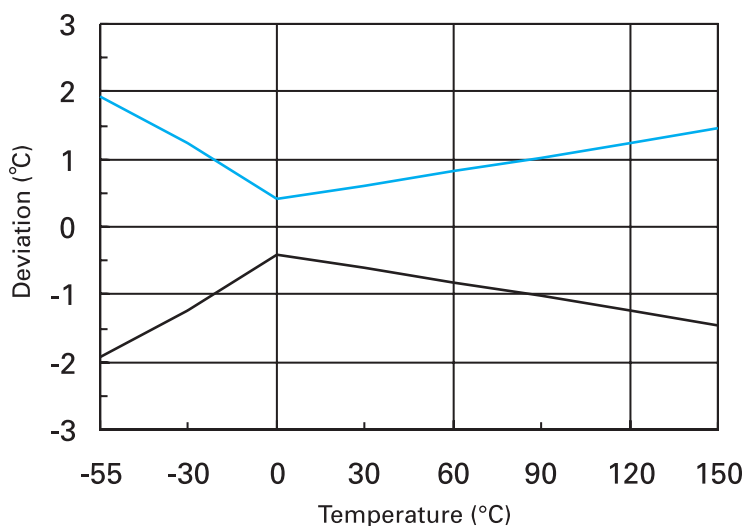
PARAMETER	SYMBOL	LIMIT	UNIT
Continuous Current	$I_{CC}$	4	mA
Total power dissipation	$P_{TOT}$	20	mW
Operating Temperature Range	$T_{amb}$	-55 to +150	°C
Storage Temperature Range	$T_{stg}$	-55 to +150	°C

## ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	CONDITIONS
Resistance 0°C	$R_0$	-	1000	-	$\Omega$	$T=0^\circ\text{C}, I<1\text{mA}$
Resistance 100°C	$R_{100}$	-	1618	-	$\Omega$	$T=100^\circ\text{C}, I<1\text{mA}$
Tolerance Class B		-	$\pm(0.4+0.028 \times  T )$	-		-55 to 0°C
Tolerance Class B		-	$\pm(0.4+0.007 \times  T )$	-		0 to 150°C

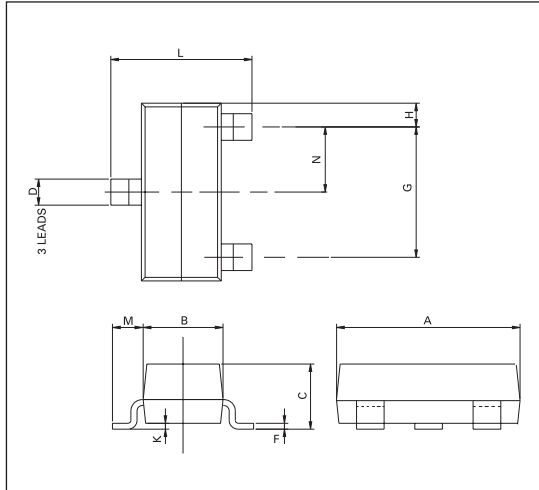
## CHARACTERISTICS ACCORDING TO DIN43760

$R_0$  Resistance at 0°C    B     $6.650 \times 10^{-6}$   
 $T$  Temperature in °C    C     $2.805 \times 10^{-11}$   
 $A$   $5.485 \times 10^{-3}$     D     $-2.000 \times 10^{-17}$   
 $R(T) = R_0 \times (1 + A \times T + B \times T^2 + C \times T^4 + D \times T^6)$

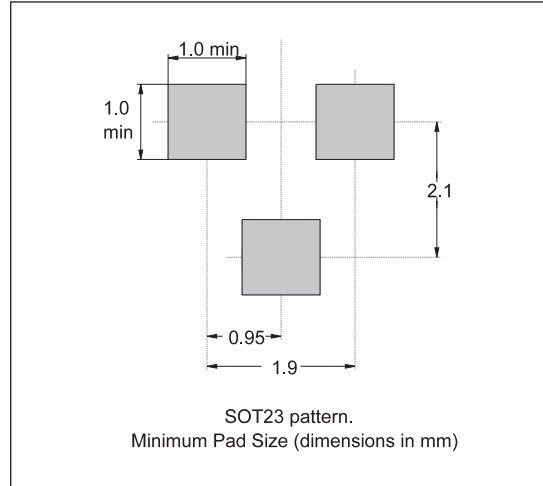


# ZNI1000

## PACKAGE OUTLINE



## PAD LAYOUT



CONTROLLING DIMENSIONS IN MILLIMETRES APPROX CONVERSIONS INCHES.

## PACKAGE DIMENSIONS

DIM	MILLIMETRES		INCHES		DIM	MILLIMETRES		INCHES	
	MIN	MAX	MIN	MAX		MIN	MAX	MIN	MAX
A	2.67	3.05	0.105	0.120	H	0.33	0.51	0.013	0.020
B	1.20	1.40	0.047	0.055	K	0.01	0.10	0.0004	0.004
C	—	1.10	—	0.043	L	2.10	2.50	0.083	0.0985
D	0.37	0.53	0.015	0.021	M	0.45	0.64	0.018	0.025
F	0.085	0.15	0.0034	0.0059	N	0.95 NOM		0.0375 NOM	
G	1.90 NOM		0.075 NOM		φ	10° TYP		10° TYP	

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