



## **NTC thermistors for inrush current limiting**

### Inrush Current Limiters (ICLs)

**Series/Type:** P27  
**Ordering code:** B57127P0xxxM301  
Date: 2015-06-22  
Version: P2

© EPCOS AG 2015. Reproduction, publication and dissemination of this publication, enclosures hereto and the information contained therein without EPCOS' prior express consent is prohibited.

EPCOS AG is a TDK Group Company.

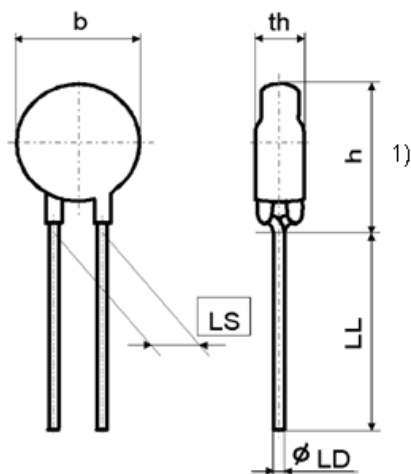
Preliminary data

## Application

- Switch-mode power supplies
- Soft-start motors, e.g. in vacuum cleaners

## Features

- Black coated thermistor disk
- Coating material is flame retardant (UL 94 V-0 approved)
- Kinked leads of tinned copper wire
- Lead spacing 7.5 mm
- High stability of electrical characteristic
- Terminals solderable in accordance with IEC 60068-2-20, test ta, method 1
- ICL support to fulfill the requirements according EN 61000 of power circuits
- UL approval (E69802)
- RoHS-compatible

**Preliminary data**
**Drawing**


b	31.0max	mm
th	7.0 max	mm
h	39.0 max	mm
LL	25.0 min	mm
LD	1.0 ± 0.05	mm
LS	7.5 ± 0.8	mm

<sup>1)</sup> seating plane in accordance with IEC 60717

Approx. weight: 10 g

**General technical data**

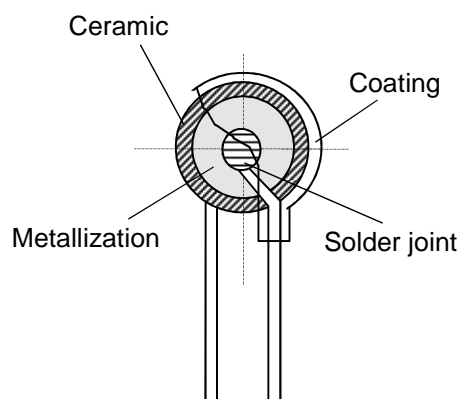
Climatic category	(IEC 60068-1)		55/170/21	
Max. power	(at 25 °C)	$P_{max}$	12	W
Resistance tolerance		$\Delta R_R/R_R$	± 20	%
Rated temperature		$T_R$	25	°C
Dissipation factor	(in air)	$\delta_{th}$	approx. 50	mW/K
Thermal cooling time constant	(in air)	$\tau_{th}$	approx. 200	s
Heat capacity		$C_{th}$	approx. 10000	mJ/K

**Electrical specification and ordering codes**

$R_{25}$	$I_{max}$ (0...25 °C)	$C_{test}$ at 280Vac	$C_{test}$ at 240 Vac	$C_{test}$ at 120 Vac	Max Energy	$R_{min}$ (at $I_{max}$ , 25 °C)	Ordering Code
$\Omega$	A	$\mu F$	$\mu F$	$\mu F$	J	$\Omega$	
0.5	30	1300	3500	16000	200	0.011	B57127P0508M301
1	30	1300	3500	16000	200	0.013	B57127P0109M301
2	23	1300	3500	16000	200	0.022	B57127P0209M301
5	20	1300	3500	16000	200	0.033	B57127P0509M301
7	17	1300	3500	16000	200	0.045	B57127P0709M301
10	15	1300	3500	16000	200	0.053	B57127P0100M301

Preliminary data

### Internal construction



The above picture shows the internal construction of EPCOS ICLs.

Note: Coating may have cracks or chips due to acting mechanical force on the wire, but this does not affect the performance of the component.

## Important notes

The following applies to all products named in this publication:

1. Some parts of this publication contain **statements about the suitability of our products for certain areas of application**. These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned. We nevertheless expressly point out **that such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application**. As a rule, EPCOS is either unfamiliar with individual customer applications or less familiar with them than the customers themselves. For these reasons, it is always ultimately incumbent on the customer to check and decide whether an EPCOS product with the properties described in the product specification is suitable for use in a particular customer application.
2. We also point out that **in individual cases, a malfunction of electronic components or failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they are operated as specified**. In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of an electronic component could endanger human life or health (e.g. in accident prevention or life-saving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e.g. installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of malfunction or failure of an electronic component.
3. **The warnings, cautions and product-specific notes must be observed.**
4. In order to satisfy certain technical requirements, **some of the products described in this publication may contain substances subject to restrictions in certain jurisdictions (e.g. because they are classed as hazardous)**. Useful information on this will be found in our Material Data Sheets on the Internet ([www.epcos.com/material](http://www.epcos.com/material)). Should you have any more detailed questions, please contact our sales offices.
5. We constantly strive to improve our products. Consequently, **the products described in this publication may change from time to time**. The same is true of the corresponding product specifications. Please check therefore to what extent product descriptions and specifications contained in this publication are still applicable before or when you place an order. We also **reserve the right to discontinue production and delivery of products**. Consequently, we cannot guarantee that all products named in this publication will always be available. The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products.
6. Unless otherwise agreed in individual contracts, **all orders are subject to the current version of the "General Terms of Delivery for Products and Services in the Electrical Industry" published by the German Electrical and Electronics Industry Association (ZVEI)**.
7. The trade names EPCOS, Alu-X, CeraDiode, CeraLink, CeraPad, CeraPlas, CSMP, CSSP, CTVS, DeltaCap, DigiSiMic, DSSP, ExoCore, FilterCap, FormFit, LeaXield, MiniBlue, MiniCell, MKD, MKK, MotorCap, PCC, PhaseCap, PhaseCube, PhaseMod, PhiCap, PQSine, SIFERRIT, SIFI, SIKOREL, SilverCap, SIMDAD, SiMic, SIMID, SineFormer, SIOV, SIP5D, SIP5K, TFAP, ThermoFuse, WindCap are **trademarks registered or pending** in Europe and in other countries. Further information will be found on the Internet at [www.epcos.com/trademarks](http://www.epcos.com/trademarks).