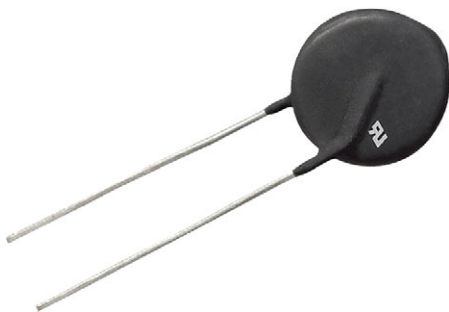


# NTC Thermistors, MegaSurge™ Inrush Current Limiters



## DESCRIPTION

These power thermistors are rugged and built to last even in the most demanding high power applications.

These inrush current limiters are also used to regulate the release of battery energy in electric vehicles and in pre-charge circuits for many different types of battery chargers.

## QUICK REFERENCE DATA

PARAMETER	VALUE	UNIT
Resistance at 25 °C ( $R_{25}$ )	20	$\Omega$
Tolerance on $R_{25}$ value	$\pm 25$	%
Max. steady-state current up to 65 °C	5	A
Max. recommended energy rating	180	J
Actual failure instantaneous energy	360	J
Max. capacitance at 120 V <sub>AC</sub>	12 000	$\mu$ F
Max. capacitance at 240 V <sub>AC</sub>	3125	$\mu$ F
Max. capacitance at 440 V <sub>AC</sub>	722	$\mu$ F
Max. capacitance at 680 V <sub>AC</sub>	360	$\mu$ F
Resistance at 100 % max. current	0.19	$\Omega$
Resistance at 50 % max. current	0.48	$\Omega$
Body temperature at 100 % max. current	170	°C
Dissipation factor	42.5	mW/°C
Thermal time constant	114	s
Material type (for beta and curve)	H	

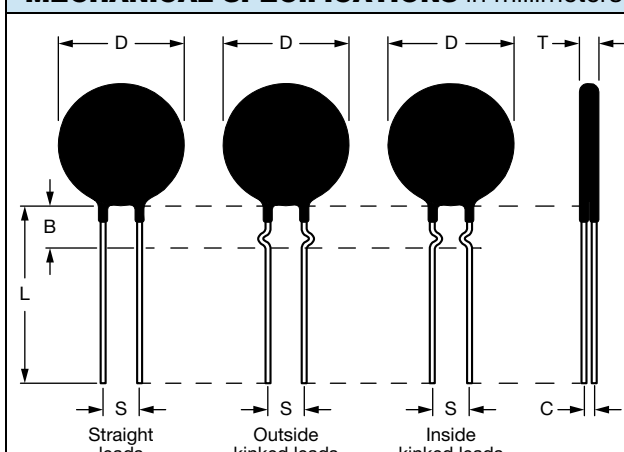
## FEATURES

- Ability to withstand high steady-state currents to 5 A and up to 360 J of input energy
- Protect rectifiers and other downstream components from damage caused by sudden current spikes
- Increase safety by eliminating the fire hazard associated with failed relays
- Handle the same amount of energy as power resistors in a smaller package, saving valuable circuit board space
- Provide simple one-component alternatives to using power resistors with timers and relays, reducing costs and greatly simplifying designs
- UL-recognized MegaSurge™ devices are certified for single- and three-phase input voltages up to 480 V<sub>AC</sub>

## APPLICATIONS

- Alternative energy
- Electric vehicles
- Inrush current protection of power supplies, motor controllers, audio amplifiers, battery chargers, frequency generators, plasma cutting tools, MRI machines, and toroidal transformers

## MECHANICAL SPECIFICATIONS in millimeters

	
<b>SYMBOL</b>	<b>MS2220005</b>
B	9.2 nom.
C	6.35 nom.
D	23.0 max.
L	38.0 nom.
S	7.8 nom.
T	8.0 max.
Lead diameter	1.0 nom.
Straight leads	4.0 max.



## Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

Vishay products are not designed for use in life-saving or life-sustaining applications or any application in which the failure of the Vishay product could result in personal injury or death unless specifically qualified in writing by Vishay. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.