

NTC Thermistors, Inrush Current Limiters



DESCRIPTION

The standard surge limiter series comprises devices engineered to protect electrical systems by mitigating the impact of potentially harmful power surges. These surge limiters have received UL certification, attesting to their safety and performance.

FEATURES

- Enhanced protection
- Recognized by UL
- Can withstand up to 5 A of continuous current and 65 J of input energy
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

RoHS
COMPLIANT

APPLICATIONS

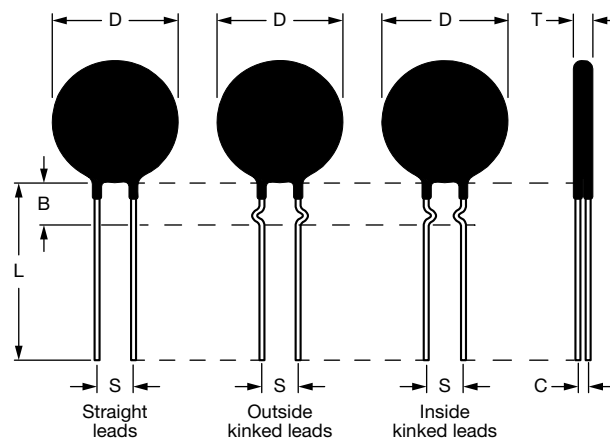
- Residential
- Commercial
- Industrial
- Healthcare
- Renewable energy
- Electric vehicle

QUICK REFERENCE DATA

PART NUMBER	RESISTANCE AT 25 °C (R_{25}) (Ω)	TOLERANCE ON R_{25} VALUE (%)	MAX. STEADY-STATE CURRENT UP TO 65 °C (A)	MAX. RECOMMENDED ENERGY RATING (J)	MAX. VOLTAGE (V_{AC})	MAX. CAPACITANCE AT 120 V_{AC} (μF)
SL102R005	2	± 20	5	30	265	2000
SL102R505	2.5	± 30	5	30	265	2000
SL104R004	4	± 20	4	20	265	1300
SL105R002	5	± 20	2	20	265	1300
SL105R003	5	± 20	3	20	265	1300
SL105R004	5	± 20	4	20	265	1300
SL105R004A	5	± 20	4	20	265	1300
SL1010002	10	± 25	2	10	265	700
SL1010003	10	± 20	3	17	265	1100
SL1010003BT	10	± 20	3	17	265	1000
SL1010004	10	± 20	4	17	265	1100
SL1015002	15	± 20	2	17	265	1100
SL1015003	15	± 20	3	17	265	1100
SL1025002	25	± 25	2	20	265	1300
SL1025002A	25	± 25	2	20	265	1300
SL1030002	30	± 15	2	15	265	1000
SL1040002	40	± 20	2	15	265	1050
SL1050001	50	± 25	1.1	18	265	1200
SL1050001A	50	± 25	1.1	18	265	1200
SL1050002	50	± 25	2	18	265	900
SL1012101	120	± 20	1	14	265	1200

**ELECTRICAL SPECIFICATIONS**

PART NUMBER	RESISTANCE AT 100 % MAX. CURRENT (Ω)	RESISTANCE AT 50 % MAX. CURRENT (Ω)	BODY TEMP. AT 100 % MAX. CURRENT ($^{\circ}\text{C}$)	DISSIPATION FACTOR ($\text{mW}/^{\circ}\text{C}$)	THERMAL TIME CONSTANT (s)	MATERIAL TYPE (FOR BETA AND CURVE)
SL102R005	0.1	0.2	150	10	25	A
SL102R505	0	0.22	165	10	25	A
SL104R004	0.14	0.29	160	10.5	30	A
SL105R002	0.5	0.7	170	11	30	B
SL105R003	0.5	0.7	170	11	30	B
SL105R004	0.2	0.4	181	11	30	B
SL105R004A	0.2	0.4	181	11	30	B
SL1010002	0.34	0.6	124	9.4	20	C
SL1010003	0.28	0.71	135	11	30	C
SL1010003BT	0.258	0.567	151	11	30	C
SL1010004	0.22	0.4	161	11.5	35	C
SL1015002	0.47	0.89	125	12	35	G
SL1015003	0.38	0.809	145	11	30	C
SL1025002	0.48	1.06	110	9.4	20	C
SL1025002A	0.48	1.06	110	9.4	20	C
SL1030002	0.495	1.10	147	11	25	G
SL1040002	0.65	1.55	142	11	25	H
SL1050001	0.95	0.38	125	11.2	38	H
SL1050001A	0.95	0.38	125	11.2	38	H
SL1050002	0.44	1.2	140	11.2	38	H
SL1012101	2	6.6	137	10	30	M

MECHANICAL SPECIFICATIONS in millimeters


PART NUMBER	B	C	D	L	S	T	LEAD DIAMETER	LEAD STYLE
SL102R005	5.0 nom.	2.2 nom.	10.0 max.	38.0 nom.	5.1 nom.	5.0 max.	0.5 nom.	Straight
SL102R505	5.0 nom.	2.0 nom.	10.0 max.	38.0 nom.	5.0 nom.	4.5 max.	0.5 nom.	Straight
SL104R004	5.0 nom.	2.2 ± 0.3	10.0 max.	38.0 nom.	6.3 nom.	5.0 max.	0.5 nom.	Straight
SL105R002	5.0 nom.	2.3 nom.	10.0 max.	38.0 nom.	5.1 nom.	4.0 max.	0.5 nom.	Straight
SL105R003	5.0 nom.	2.3 nom.	10.0 max.	38.0 nom.	5.1 nom.	4.0 max.	0.5 nom.	Straight
SL105R004	5.0 nom.	2.3 nom.	10.0 max.	38.0 nom.	5.0 nom.	4.5 max.	0.5 nom.	Straight
SL105R004A	6.35 nom.	2.3 nom.	10.0 max.	38.0 nom.	5.0 nom.	4.5 max.	0.5 nom.	Inside kinked
SL1010002	5.0 nom.	2.54 nom.	10.0 max.	38.0 nom.	5.1 nom.	4.5 max.	0.5 nom.	Straight
SL1010003	5.0 nom.	2.3 ± 0.2	10.0 ± 1.0	38.0 ± 9.0	7.8 ± 1.0	4.0 ± 0.5	0.8 ± 0.1	Straight
SL1010003BT	6.35 nom.	3.0 ± 0.5	10.0 ± 1.0	30.0 nom.	7.8 ± 0.5	5.0 max.	0.8 ± 0.1	Outside kinked
SL1010004	5.0 nom.	2.2 nom.	10.0 max.	38.0 nom.	5.0 nom.	4.5 max.	0.5 nom.	Straight
SL1015002	5.0 nom.	2.2 nom.	10.0 max.	12.7 nom.	7.8 nom.	5.0 max.	0.8 nom.	Straight
SL1015003	5.0 nom.	3.3 ± 0.3	10.0 ± 0.5	38.0 ± 3.0	7.8 ± 2.0	5.0 ± 0.5	0.8 ± 0.1	Straight
SL1025002	5.0 ± 0.5	2.35 ± 0.5	10.0 ± 0.5	42.0 nom.	5.1 nom.	5.0 max.	0.5 ± 0.05	Straight
SL1025002A	6.35 nom.	2.54 ± 1.0	10.0 ± 0.5	42.0 nom.	7.8 nom.	5.0 max.	0.8 ± 0.03	Inside kinked
SL1030002	5.0 ± 0.5	2.1 ± 0.3	10.0 ± 0.5	42.0 nom.	5.1 nom.	3.75 ± 0.4	0.5 ± 0.05	Straight
SL1040002	5.0 nom.	2.75 nom.	11.0 max.	38.0 nom.	5.1 nom.	6.0 max.	0.5 nom.	Straight
SL1050001	5.0 nom.	2.82 ± 0.5	10.0 ± 0.5	38.0 nom.	5.1 nom.	5.0 ± 0.5	0.5 ± 0.1	Straight
SL1050001A	5.0 nom.	2.82 ± 0.5	10.0 ± 0.5	38.0 nom.	5.1 nom.	5.0 ± 0.5	0.5 ± 0.1	Inside kinked
SL1050002	5.0 nom.	2.82 nom.	10.0 max.	38.0 nom.	5.0 nom.	4.0 max.	0.5 nom.	Straight
SL1012101	5.0 nom.	2.75 ± 0.3	10.0 ± 0.5	38.0 nom.	5.1 nom.	5.0 ± 0.5	0.5 nom.	Straight



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.