NTC Thermistors, Inrush Current Limiters

FEATURES

RoHS COMPLIANT

- Enhanced protection
- Recognized by UL
- Can withstand up to 10 A of continuous current and 60 J of input energy
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

APPLICATIONS

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

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.

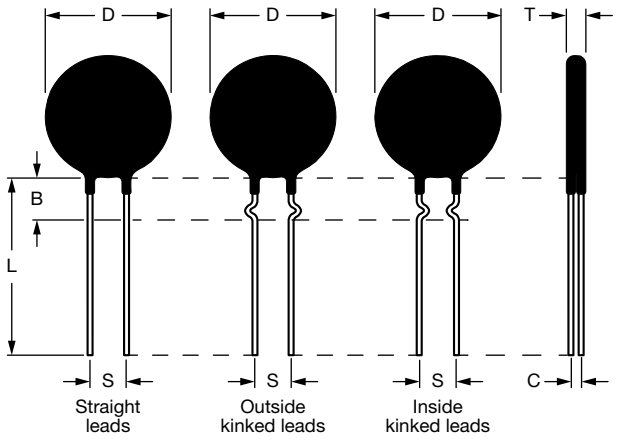
QUICK REFERENCE DATA

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)
SL150R710	0.7	± 25	10	30	-	2076
SL151R010	1	± 20	10	45	-	3125
SL152R506	2.5	± 20	6	40	-	2778
SL152R507	2.5	± 20	7	40	-	2778
SL152R508	2.5	± 20	8	40	-	2778
SL152R509	2.5	± 20	9	40	-	2778
SL154R008	4	± 20	8	40	-	2778
SL155R006	5	± 20	6	50	-	3400
SL155R007	5	± 20	7	50	-	3400
SL155R007A	5	± 20	7	50	-	3400
SL157R004	7	± 20	4	55	-	3800
SL157R005	7	± 20	5	60	-	3800
SL157R005L	7	± 20	5	60	-	4167
SL1510006	10	± 20	6	55	-	3820
SL1510008	10	± 20	8	55	-	3820
SL1516004	16	± 20	4.4	50	-	3400
SL1525003	25	± 20	3	50	-	3473
SL1525004	25	± 20	4	50	-	3473
SL1530004	30	± 20	4	40	-	2780
SL1530005	30	± 20	4	40	-	2780
SL1533004	33	± 20	4	55	-	3820
SL1540002	40	± 20	2	35	-	2420
SL1540004	40	± 20	4	35	-	2420
SL1547003	47	± 20	3	50	-	3473
SL1560002	60	± 20	2	50	-	3473
SL1560004	60	± 20	4	50	-	3400
SL1560004B	60	± 20	4	50	-	3400
SL1580002	80	± 25	2	45	-	3110
SL1580003	80	± 25	3	30	-	3000
SL1512102	120	± 25	2	40	-	3473
SL1522101	220	± 25	1	40	-	3473
SL1522102	220	± 25	2	40	-	3473
SL1522102B	220	± 25	2	40	-	3473

ELECTRICAL SPECIFICATIONS

PART NUMBER	RESISTANCE AT 100 % MAX. CURRENT (Ω)	RESISTANCE AT 50 % MAX. CURRENT (Ω)	BODY TEMP. AT 100 % MAX. CURRENT (°C)	DISSIPATION FACTOR (mW/°C)	THERMAL TIME CONSTANT (s)	MATERIAL TYPE (FOR BETA AND CURVE)
SL150R710	0	0.1	172	15.9	54	A
SL151R010	0	0.11	192	15.9	59	A
SL152R506	0	0.15	174	19	75	B
SL152R507	0	0.15	174	19	75	B
SL152R508	0	0.13	190	75	184	B
SL152R509	0	0.11	194	19	75	B
SL154R008	0	0.15	194	22	74	C
SL155R006	0	0.24	170	15.9	54	C
SL155R007	0	0.3	160	15.9	54	C
SL155R007A	0	0.3	160	15.9	54	C
SL157R004	0	0.21	157	18	54	C
SL157R005	0	0.17	172	15.9	54	G
SL157R005L	0	0.17	172	15.9	54	G
SL1510006	0.14	0.36	172	15.9	54	G
SL1510008	0	0.3	172	15.9	54	G
SL1516004	0	0.54	172	15.9	54	H
SL1525003	0	0.68	172	15.9	45	H
SL1525004	0	0.68	172	15.9	45	H
SL1530004	0	0.8	159	15	54	H
SL1530005	0	0.8	159	15	54	H
SL1533004	0	0.6	164	15	54	I
SL1540002	0	0.9	178	27	48	G
SL1540004	0	0.9	178	27	48	G
SL1547003	0	0.77	177	15.9	54	I
SL1560002	1	1.94	174	15	45	M
SL1560004	0	1	195	15	45	M
SL1560004B	0	1	195	15	45	M
SL1580002	1	1.4	174	54	54	M
SL1580003	0.53	1	184	18	54	M
SL1512102	1	1.85	185	15	45	M
SL1522101	1	1.9	191	18	45	L
SL1522102	1	1.9	191	18	45	L
SL1522102B	1	1.9	191	18	45	L

MECHANICAL SPECIFICATIONS in millimeters



PART NUMBER	B	C	D	L	S	T	LEAD DIAMETER	LEAD STYLE
SL150R710	5.0 nom.	2.82 ± 0.5	15.0 ± 1.7	38.0 ± 9.0	7.8 ± 2.0	4.5 ± 0.5	0.8 ± 0.1	Straight
SL151R010	5.0 nom.	2.7 nom.	16.0 max.	38.0 nom.	7.8 nom.	5.8 max.	0.8 nom.	Straight
SL152R506	5.0 nom.	2.8 nom.	15.0 max.	38.0 nom.	7.8 nom.	4.5 max.	0.8 nom.	Straight
SL152R507	5.0 nom.	2.82 nom.	15.0 max.	38.0 nom.	7.8 nom.	4.5 max.	0.8 nom.	Straight
SL152R508	5.0 nom.	3.0 nom.	16.0 max.	38.0 nom.	7.8 nom.	5.0 max.	0.8 nom.	Straight
SL152R509	5.0 nom.	3.0 nom.	16.0 max.	38.0 nom.	7.8 nom.	5.0 max.	0.8 nom.	Straight
SL154R008	5.0 nom.	2.82 nom.	16.0 max.	38.0 nom.	7.8 nom.	5.0 max.	0.8 nom.	Straight
SL155R006	5.0 nom.	2.82 ± 0.5	15.0 ± 0.5	38.0 ± 9.0	7.8 ± 2.0	4.5 ± 0.2	0.8 ± 0.1	Straight
SL155R007	5.0 nom.	3.6 ± 0.5	15.5 ± 0.5	38.0 ± 1.5	7.8 ± 0.3	5.0 ± 0.2	0.8 ± 0.1	Straight
SL155R007A	6.35 nom.	3.6 ± 0.5	15.5 ± 0.5	38.0 ± 1.5	7.8 ± 0.3	5.0 ± 0.2	0.8 ± 0.1	Inside kinked
SL157R004	5.0 nom.	2.82 nom.	15.0 max.	38.0 nom.	7.8 nom.	5.0 max.	0.8 nom.	Straight
SL157R005	5.0 nom.	3.8 nom.	16.0 max.	38.0 nom.	7.8 nom.	6.0 max.	0.8 nom.	Straight
SL157R005L	5.0 nom.	3.8 nom.	16.0 max.	38.0 nom.	7.8 nom.	6.0 max.	0.8 nom.	Straight
SL1510006	5.0 nom.	2.82 ± 0.5	15.0 max.	38.0 ± 9.0	7.8 ± 2.0	5.0 ± 1.0	0.8 ± 0.1	Straight
SL1510008	5.0 nom.	3.7 nom.	15.0 max.	38.0 nom.	7.8 nom.	5.5 max.	0.8 nom.	Straight
SL1516004	5.0 nom.	2.82 nom.	15.0 max.	38.0 nom.	7.8 nom.	4.5 max.	1.0 nom.	Straight
SL1525003	5.0 nom.	3.7 nom.	16.0 max.	38.0 nom.	7.8 nom.	6.0 max.	0.8 nom.	Straight
SL1525004	5.0 nom.	3.1 nom.	15.0 max.	45.0 nom.	7.8 nom.	4.5 max.	0.8 nom.	Straight
SL1530004	5.0 nom.	5.0 nom.	15.0 max.	43.0 nom.	7.8 nom.	5.0 max.	0.8 nom.	Straight
SL1530005	5.0 nom.	5.0 nom.	15.0 max.	38.0 nom.	7.8 nom.	5.0 max.	1.0 nom.	Straight
SL1533004	5.0 nom.	5.0 nom.	15.0 max.	38.0 nom.	7.8 nom.	5.0 max.	0.8 nom.	Straight
SL1540002	5.0 nom.	3.45 nom.	15.0 max.	38.0 nom.	7.8 nom.	5.0 max.	0.8 nom.	Straight
SL1540004	5.0 nom.	3.45 ± 1.0	15.0 max.	38.0 nom.	7.8 nom.	5.0 max.	0.8 nom.	Straight
SL1547003	5.0 nom.	3.45 nom.	16.0 max.	38.0 nom.	7.8 nom.	6.0 max.	1.0 nom.	Straight
SL1560002	5.0 nom.	3.65 nom.	16.0 max.	38.0 nom.	7.8 nom.	6.0 max.	0.8 nom.	Straight
SL1560004	5.0 nom.	3.8 nom.	16.0 max.	38.0 nom.	7.8 nom.	6.0 max.	0.8 nom.	Straight
SL1560004B	6.35 nom.	3.8 nom.	16.0 max.	38.0 nom.	7.8 nom.	6.0 max.	0.8 nom.	Outside kinked
SL1580002	5.0 nom.	3.6 ± 0.4	15.0 ± 0.5	38.0 nom.	7.8 nom.	5.5 ± 0.5	0.8 nom.	Straight
SL1580003	5.0 nom.	3.6 ± 0.4	15.0 ± 0.5	38.0 ± 1.5	7.8 ± 0.3	5.0 ± 0.2	0.8 ± 0.1	Straight
SL1512102	5.0 nom.	3.6 ± 0.4	15.0 ± 0.5	38.0 nom.	7.8 nom.	5.5 ± 0.5	0.8 nom.	Straight
SL1522101	5.0 nom.	3.45 nom.	16.0 max.	38.0 nom.	7.8 nom.	6.0 max.	0.8 nom.	Straight
SL1522102	5.0 nom.	3.45 nom.	16.0 max.	38.0 nom.	7.8 nom.	6.0 max.	0.8 nom.	Straight
SL1522102B	6.35 nom.	3.45 nom.	16.0 max.	38.0 nom.	7.8 nom.	6.0 max.	0.8 nom.	Outside kinked

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.