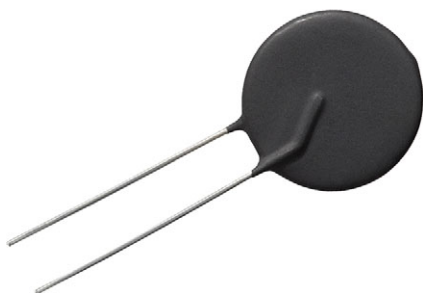


## NTC Thermistors, bigAMP Inrush Current Limiters



### DESCRIPTION

The bigAMP inrush current limiter absorbs high amounts of inrush current when electrical equipment is turned on by offering a high resistance to current and quickly decreasing in resistance once steady state current begins to flow through the thermistor.

In a switching power supply, the instantaneous surge energy is caused by the large input filter capacitors and AC input voltage.

During the absorption of energy, the initial high resistance of the thermistor drops within milliseconds to a negligible resistance in preparation of allowing high levels steady state current to flow with a minimal loss of power through the circuit.

### FEATURES

- Rugged and reliable
- Recognized by UL and CSA
- Can withstand up to 25 A of continuous current and 548 J of input energy
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

**RoHS**  
COMPLIANT

### APPLICATIONS

- Switching power supplies
- AC motors
- Uninterruptible power supplies
- Variable frequency drive
- Other equipment that can be improved with inrush current protection

QUICK REFERENCE DATA						
PART NUMBER	RESISTANCE AT 25 °C ( $R_{25}$ ) ( $\Omega$ )	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 $V_{AC}$ ( $\mu F$ )
SL320R230	0.3	± 25	30	100	265	6946
SL320R530	0.5	± 20	30	150	265	10 419
SL320R536	0.5	± 20	36	150	265	17 366
SL320R540	0.5	± 20	40	250	265	4000
SL321R030	1	± 20	30	160	265	11 114
SL321R030B	1	± 20	30	160	265	11 114
SL321R036	1	± 20	36	160	265	11 114
SL322R023	2	± 20	23	250	265	17 366
SL322R023B	2	± 20	23	250	265	17 366
SL322R025	2	± 20	25	250	265	20 839
SL322R025B	2	± 20	25	250	265	20 839
SL324R023	4	± 20	23	200	265	13 893
SL325R020	5	± 20	20	200	265	13 893
SL325R020B	5	± 20	20	200	265	13 893
SL3210015	10	± 20	15	150	265	10 419
SL3210015B	10	± 20	15	150	265	10 419

<b>ELECTRICAL SPECIFICATIONS</b>						
<b>PART NUMBER</b>	<b>RESISTANCE AT 100 % MAX. CURRENT (<math>\Omega</math>)</b>	<b>RESISTANCE AT 50 % MAX. CURRENT (<math>\Omega</math>)</b>	<b>BODY TEMP. AT 100 % MAX. CURRENT (<math>^{\circ}\text{C}</math>)</b>	<b>DISSIPATION FACTOR (<math>\text{mW}/^{\circ}\text{C}</math>)</b>	<b>THERMAL TIME CONSTANT (s)</b>	<b>MATERIAL TYPE (FOR BETA AND CURVE)</b>
SL320R230	0.01	0.02	190	45.4	194	A
SL320R530	0.01	0.06	214	45.4	194	B
SL320R536	0.01	0.06	224	45.4	194	B
SL320R540	0.008	0.038	234	45.4	194	B
SL321R030	0.01	0.05	214	45.4	245	C
SL321R030B	0.01	0.05	214	45.4	245	C
SL321R036	0.01	0.03	204	45.4	245	C
SL322R023	0.02	0.07	198	80	194	G
SL322R023B	0.02	0.07	198	80	194	G
SL322R025	0.01	0.06	236	45.4	194	G
SL322R025B	0.01	0.06	236	45.4	194	G
SL324R023	0.02	0.07	236	65.4	208	G
SL325R020	0.02	0.08	206	45.4	194	H
SL325R020B	0.02	0.08	206	45.4	194	H
SL3210015	0.05	0.11	228	45.4	232	I
SL3210015B	0.05	0.11	228	45.4	232	I

<b>MECHANICAL SPECIFICATIONS</b> in millimeters								
<b>PART NUMBER</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>L</b>	<b>S</b>	<b>T</b>	<b>LEAD DIAMETER</b>	<b>LEAD STYLE</b>
SL320R230	7.8 nom.	3.22 nom.	31.0 max.	38.0 nom.	7.8 nom.	6.0 max.	1.0 nom.	Straight
SL320R530	7.8 nom.	2.68 nom.	31.0 max.	38.0 nom.	7.8 nom.	5.0 max.	1.0 nom.	Straight
SL320R536	7.8 nom.	2.68 nom.	31.0 max.	38.0 nom.	7.8 nom.	5.0 max.	1.0 nom.	Straight
SL320R540	11.5 ± 3.5	3.82 ± 1.0	30.0 ± 2.5	38.0 ± 9.0	7.8 ± 2.0	5.0 ± 1.0	1.0 ± 0.1	Straight
SL321R030	7.8 nom.	3.82 nom.	31.0 max.	38.0 nom.	7.8 nom.	5.0 max.	1.0 nom.	Straight
SL321R030B	9.5 ± 1.0	3.82 nom.	31.0 max.	38.0 nom.	9.5 ± 1.0	5.0 max.	1.0 nom.	Outside kinked
SL321R036	7.8 nom.	3.35 nom.	31.0 max.	38.0 nom.	7.8 nom.	6.0 max.	1.0 nom.	Straight
SL322R023	7.8 nom.	4.0 nom.	31.0 max.	38.0 nom.	7.8 nom.	6.0 max.	1.0 nom.	Straight
SL322R023B	9.5 ± 1.0	4.0 nom.	31.0 max.	38.0 nom.	9.5 ± 1.0	6.0 max.	1.0 nom.	Outside kinked
SL322R025	7.8 nom.	3.9 nom.	31.0 max.	38.0 nom.	7.8 nom.	7.0 max.	1.0 nom.	Straight
SL322R025B	9.5 ± 1.0	3.9 nom.	31.0 max.	38.0 nom.	9.5 ± 1.0	7.0 max.	1.0 nom.	Outside kinked
SL324R023	7.8 nom.	4.33 nom.	31.0 max.	38.0 nom.	7.8 nom.	6.3 max.	1.3 nom.	Straight
SL325R020	7.8 nom.	3.82 nom.	31.0 max.	38.0 nom.	7.8 nom.	6.0 max.	1.0 nom.	Straight
SL325R020B	9.5 ± 1.0	3.82 nom.	31.0 max.	38.0 nom.	9.5 ± 1.0	6.0 max.	1.0 nom.	Outside kinked
SL3210015	7.8 nom.	3.82 nom.	31.0 max.	38.0 nom.	7.8 nom.	6.0 max.	1.0 nom.	Straight
SL3210015B	9.5 ± 1.0	3.82 nom.	31.0 max.	38.0 nom.	9.5 ± 1.0	6.0 max.	1.0 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.