

NTC Thermistors, miniAMP Inrush Current Limiters



DESCRIPTION

These miniature inrush current limiters are your solution for space-sensitive applications. The miniAMP series is designed for applications where board space is limited and cool operation is desired. The cost effective miniAMP inrush current limiter is an efficient way to protect components such as relays, diodes, and fuses from inrush current.

FEATURES

- Rugged and reliable
- Recognized by UL and CSA
- Can withstand up to 4 A of continuous current and 28 J of input energy
- Operating temperature range: -40 °C to +150 °C
- Radial leaded inrush current limiter is available on kinked or straight leads, the standard lead length is 0.5"
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

RoHS
COMPLIANT

APPLICATIONS

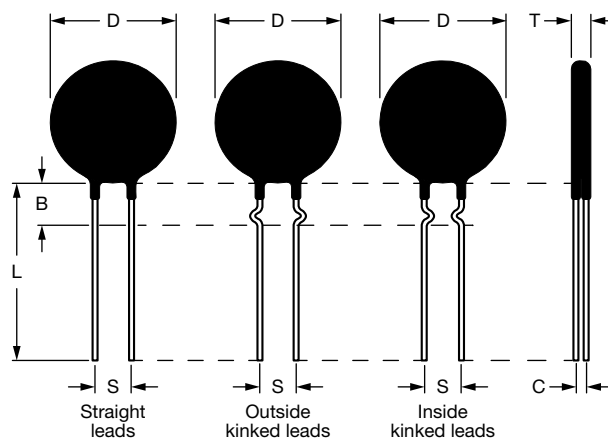
- Switching power supplies
- AC motors
- Uninterruptible power supplies
- Variable frequency drive
- Other equipment that can be improved with inrush current protection

QUICK REFERENCE DATA

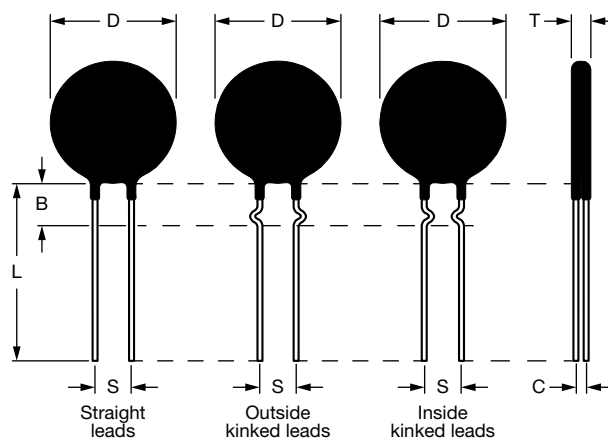
PART NUMBER	RESISTANCE AT 25 °C (R_{25}) (Ω)	TOLERANCE ON R_{25} VALUE (%)	MAX. STEADY-STATE CURRENT UP TO 65 °C (A)	MAX. RECOMMENDED ENERGY RATING (J)	MAX. VOLTAGE (V_{AC})	MAX. CAPACITANCE AT 120 V_{AC} (μF)
SL082R503	2.5	± 25	3	10	120	630
SL082R504	2.5	± 20	4	10	120	630
SL084R003	4	± 20	3	10	120	630
SL085R001	5	± 20	1	10	120	630
SL085R002	5	± 20	2	10	120	630
SL085R003	5	± 20	3	10	120	630
SL087R002	7	± 20	2	8	120	560
SL0810002	10	± 20	2	10	120	630
SL0820002	20	± 25	2	8	120	560
SL0822002	22	± 20	2	8	120	560
SL0833001	33	± 15	1.3	8	120	560
SL0840002	40	± 20	2	8	120	560
SL0850001	50	± 15	1.1	8	120	560
SL0810101	100	± 20	1	8	120	560
SL0812101	120	± 20	1	8	120	560

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)
SL082R503	0	0.35	75	9	25	C
SL082R504	0.15	0.3	144	67	8	A
SL084R003	0.23	0.32	122	9	20	A
SL085R001	0.9	1.8	124	9	20	A
SL085R002	0.18	0.35	124	9	20	A
SL085R003	0.18	0.35	124	9	20	B
SL087R002	0.22	0.58	144	90	27	B
SL0810002	0.36	0.96	119	8	29	B
SL0820002	0.49	0.96	147	9	20	C
SL0822002	0.49	0.95	147	90	20	C
SL0833001	0.75	1.5	112	9.3	29	G
SL0840002	0.7	1.4	119	9.3	29	G
SL0850001	0.95	1.9	122	9.3	29	H
SL0810101	1.4	7	111	7.64	15	I
SL0812101	1	1.8	95	9	20	I

MECHANICAL SPECIFICATIONS in millimeters


PART NUMBER	B	C	D	L	S	T	LEAD DIAMETER	LEAD STYLE
SL082R503	4.0 nom.	1.5 ± 0.2	8.0 ± 0.5	38.0 nom.	5.1 ± 0.3	3.0 ± 0.5	0.5 ± 0.1	Straight
SL082R503A	6.3 nom.							Inside kinked
SL082R504	4.0 nom.	2.82 ± 0.5	8.0 ± 0.3	38.0 ± 9.0	5.1 ± 0.3	3.5 ± 0.3	0.5 ± 0.1	Straight
SL082R504A	6.3 nom.							Inside kinked
SL084R003	4.0 nom.	1.5 nom.	8.0 max.	38.0 nom.	5.1 ± 0.3	4.0 max.	0.5 nom.	Straight
SL084R003A	6.3 nom.							Inside kinked
SL085R001	4.0 nom.	1.5 ± 0.2	8.0 ± 0.5	38.0 ± 3.0	5.1 ± 0.3	4.0 ± 0.5	0.5 ± 0.1	Straight
SL085R001A	6.3 nom.							Inside kinked
SL085R001B	6.3 nom.							Outside kinked
SL085R002	4.0 nom.	1.5 ± 0.2	8.0 ± 0.5	38.0 nom.	5.1 ± 0.3	4.0 ± 0.5	0.5 nom.	Straight
SL085R002A	6.3 nom.							Inside kinked
SL085R003	4.0 nom.	1.5 ± 0.2	8.0 ± 0.5	38.0 nom.	5.1 ± 0.3	4.0 ± 0.5	0.5 nom.	Straight
SL085R003A	6.3 nom.							Inside kinked

MECHANICAL SPECIFICATIONS in millimeters


PART NUMBER	B	C	D	L	S	T	LEAD DIAMETER	LEAD STYLE
SL087R002	4.0 nom.	2.5 ± 0.5	8.0 ± 0.3	38.0 ± 9.0	5.1 ± 0.3	2.8 ± 0.36	0.5 ± 0.1	Straight
SL087R002A	6.3 nom.							Inside kinked
SL0810002	4.0 nom.	2.5 nom.	8.0 max.	38.0 min.	5.1 ± 0.3	4.0 max.	0.5 ± 0.1	Straight
SL0810002A	6.3 nom.							Inside kinked
SL0810003A	6.3 nom.	1.5 ± 0.5	7.5 ± 1.0	38.0 ± 9.0	5.1 ± 0.3	4.0 ± 1.0	0.5 ± 0.1	Inside kinked
SL0820002	4.0 nom.	2.2 nom.	9.0 max.	38.0 nom.	5.1 ± 0.3	4.3 max.	0.5 nom.	Straight
SL0820002A	6.3 nom.							Inside kinked
SL0822002	4.0 nom.	1.5 ± 0.2	8.5 max.	38.0 ± 3.0	5.1 ± 0.3	4.5 max.	0.5 ± 0.1	Straight
SL0822002A	6.3 nom.							Inside kinked
SL0833001	4.0 nom.	2.8 ± 0.3	8.0 ± 0.5	12.7 ± 1.0	5.1 ± 0.3	4.0 ± 0.5	0.6 ± 0.1	Straight
SL0833001A	6.3 nom.							Inside kinked
SL0840002	4.0 nom.	2.8 nom.	8.0 max.	38.0 nom.	5.1 ± 0.3	4.0 max.	0.6 nom.	Straight
SL0840002A	6.3 nom.							Inside kinked
SL0850001	4.0 nom.	2.2 ± 0.3	8.0 ± 0.5	12.7 ± 1.0	5.1 ± 0.3	4.0 ± 0.5	0.5 ± 0.1	Straight
SL0850001A	6.3 nom.							Inside kinked
SL0810101	4.0 nom.	3.82 ± 1.0	7.62 ± 1.0	38.0 ± 9.0	5.1 ± 0.3	5.5 ± 0.2	0.5 ± 0.05	Straight
SL0810101A	6.3 nom.							Inside kinked
SL0812101	4.0 nom.	1.5 ± 0.2	8.0 ± 0.5	38.0 ± 3.0	5.1 ± 0.3	4.0 ± 0.5	0.5 ± 0.1	Straight
SL0812101A	6.3 nom.							Inside kinked
SL0812101B	6.3 nom.							Outside kinked



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