

NTC Thermistors, miniAMP Inrush Current Limiters



FEATURES

- Rugged and reliable
- UL recognition in accordance with UL 1434 for specified components
- Can withstand up to 4 A of continuous current and 10 J of input energy
- Operating temperature range: -40 °C to +150 °C
- Radial leaded inrush current limiter is available with straight leads or kinked leads
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

RoHS
COMPLIANT

LINKS TO ADDITIONAL RESOURCES



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. The cost effective miniAMP inrush current limiter is an efficient way to protect components such as relays, diodes, and fuses from inrush current.

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

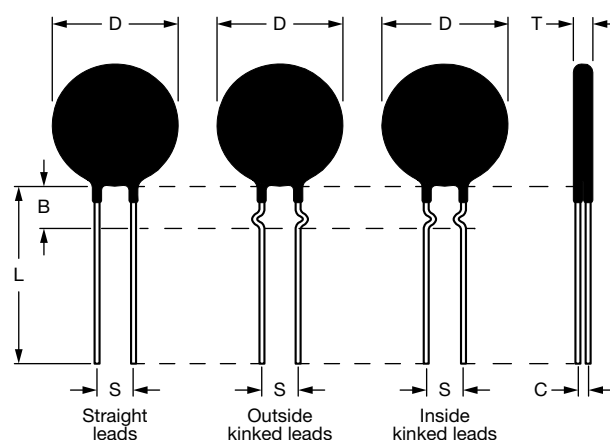
PART NUMBER	RESISTANCE AT 25 °C (R_{25}) (Ω)	TOLERANCE ON R_{25} VALUE (%)	MAX. STEADY-STATE CURRENT UP TO 65 °C (A)	MAX. RECOMMENDED ENERGY RATING (J)	MAX. VOLTAGE (V_{AC})	MAX. CAPACITANCE AT 120 V_{AC} (μF)	UL RECOGNITION FILE NUMBER ⁽¹⁾
SL082R503	2.5	± 25	3	10	120	630	E209153
SL082R504	2.5	± 20	4	10	120	630	-
SL084R003	4	± 20	3	10	120	630	E209153
SL085R001	5	± 20	1	10	120	630	-
SL085R002	5	± 20	2	10	120	630	E209153
SL085R003	5	± 20	3	10	120	630	-
SL087R002	7	± 20	2	8	120	560	-
SL0810002	10	± 20	2	10	120	630	E209153
SL0820002	20	± 25	2	8	120	560	-
SL0822002	22	± 20	2	8	120	560	-
SL0833001	33	± 15	1.3	8	120	560	E209153
SL0840002	40	± 20	2	8	120	560	-
SL0850001	50	± 15	1.1	8	120	560	E209153
SL0810101	100	± 20	1	8	120	560	-
SL0812101	120	± 20	1	8	120	560	E209153

Note

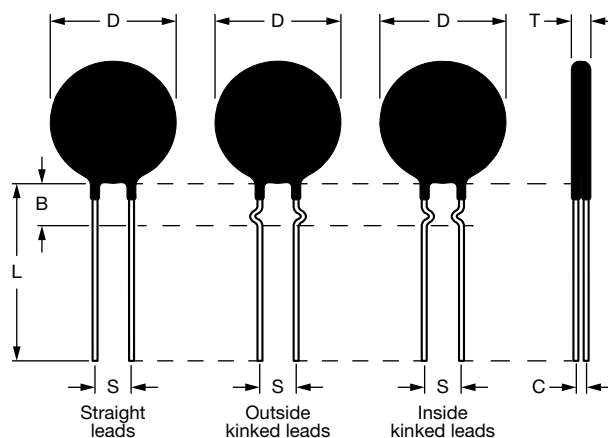
⁽¹⁾ UL recognition also applies to kinked leads termination versions of part described in MECHANICAL SPECIFICATIONS section of datasheet

ELECTRICAL SPECIFICATIONS

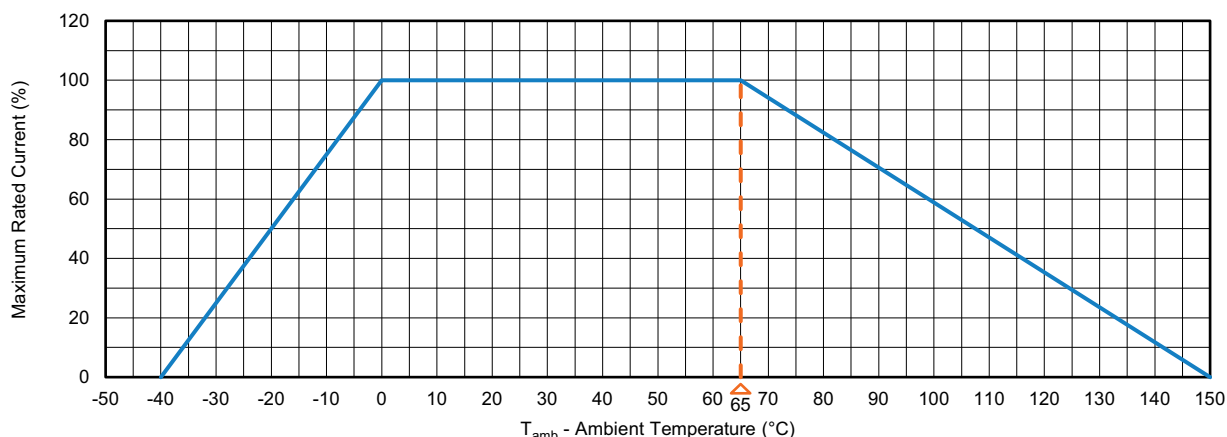
PART NUMBER	RESISTANCE AT 100 % MAX. CURRENT (Ω)	RESISTANCE AT 50 % MAX. CURRENT (Ω)	BODY TEMP. AT 100 % MAX. CURRENT ($^{\circ}\text{C}$)	DISSIPATION FACTOR ($\text{mW}/^{\circ}\text{C}$)	THERMAL TIME CONSTANT (s)	MATERIAL TYPE (FOR BETA AND CURVE)
SL082R503	0.15	0.35	75	9.0	25	C
SL082R504	0.15	0.30	144	9.0	20	A
SL084R003	0.23	0.32	122	9.0	20	A
SL085R001	0.90	1.80	124	9.0	20	A
SL085R002	0.18	0.35	124	9.0	20	A
SL085R003	0.18	0.35	124	9.0	20	B
SL087R002	0.22	0.58	144	9.0	27	B
SL0810002	0.36	0.96	119	9.0	29	B
SL0820002	0.49	0.96	147	9.0	20	C
SL0822002	0.49	0.95	147	9.0	20	C
SL0833001	0.75	1.50	112	9.3	29	G
SL0840002	0.70	1.40	119	9.3	29	G
SL0850001	0.95	1.90	122	9.3	29	H
SL0810101	1.40	7.00	111	7.64	29	I
SL0812101	1.00	1.80	95	9.0	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
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

MECHANICAL SPECIFICATIONS in millimeters


PART NUMBER	B	C	D	L	S	T	LEAD DIAMETER	LEAD STYLE
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

DERATING CURVE




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