

NTC Thermistors, Inrush Current Limiters



DESCRIPTION

The AS series are designed to withstand high steady-state current and input energy. Compared to traditional inrush current limiters, the devices offer lower current density, faster reset times, and a wider temperature range without derating. This lower current density, in combination with a uniform temperature gradient throughout the disc, increases reliability by eliminating hot spots from fatigue. The AS series are suitable for high energy and short term high current applications.

FEATURES

- Recognized by Underwriters Laboratories for ensured safety
- Designed to withstand high steady-state current
- Absorbs and minimizes high input energy
- Cost effective one component solution to inrush current
- Wide temperature range of operation
- UL recognition for specified components

RoHS
COMPLIANT

APPLICATIONS

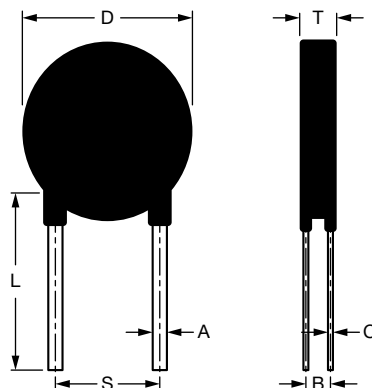
- Protection of pre-charge circuits in lithium ion batteries
- Variable-frequency drives in sports equipment like treadmills, high speed computers, and processors
- Switch mode power supplies for plasma cutters, welders, audio amplifiers, MRIs, and x-ray machines

QUICK REFERENCE DATA

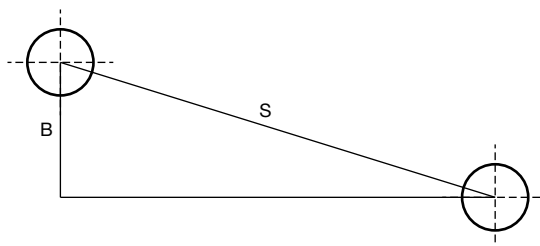
PART NUMBER	RESISTANCE AT 25 °C (R_{25}) (Ω)	TOLERANCE ON R_{25} VALUE (%)	MAX. STEADY-STATE CURRENT UP TO 65 °C (A)	MAX. RECOMMENDED ENERGY RATING (J)	MAX. VOLTAGE (V_{AC})	MAX. CAPACITANCE AT 120 V _{AC} (μ F)	UL RECOGNITION FILE NUMBER
AS320R530100	0.5	25	20	200	240	13840	E209153
AS320R536100	0.5	25	20	200	240	13840	E209153
AS321R030	1	± 25	30	300	480	20700	-
AS321R030100	1	25	16	175	240	12000	E209153
AS321R036	1	± 25	36	300	480	20700	-
AS321R036100	1	25	16	175	240	12000	E209153
AS322R025	2	± 25	25	300	480	20700	-
AS322R025100	2	25	12	175	240	12000	E209153
AS325R020	5	± 25	30	300	480	20700	-
AS325R020100	5	25	12	175	240	12000	E209153
AS3210015	10	± 25	15	250	480	17500	-
AS3210015100	10	25	12	175	240	12000	E209153
AS3215012	15	± 25	12	250	480	17500	-
AS3220010	20	± 25	10	250	480	17500	-
AS3250006	50	± 25	6	250	480	17500	-
AS350R550	0.5	± 25	50	500	480	34600	-
AS351R040	1	± 25	40	600	480	41500	-
AS352R035	2	± 25	35	650	480	45000	-
AS353R030	3	± 25	30	600	480	41500	-
AS355R025	5	± 25	25	600	480	41500	-
AS3510018	10	± 25	18	500	480	34600	-
AS3515012	15	± 25	12	750	480	51000	-
AS3520010	20	± 25	10	500	480	34600	-
AS3540010	40	± 25	10	800	480	55000	-

**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)
AS320R530100	0.023	0.052	170	78.5	55	B
AS320R536100	0.023	0.052	170	78.5	55	B
AS321R030	0.01	0.03	2215	78.5	55	B
AS321R030100	0.028	0.059	170	78.5	55	B
AS321R036	0.007	0.03	215	78.5	55	B
AS321R036100	0.028	0.059	170	78.5	55	B
AS322R025	0.0185	0.039	220	78.2	73	B
AS322R025100	0.071	0.141	170	78.5	55	B
AS325R020	0.025	0.06	215	78.2	55	H
AS325R020100	0.078	0.151	170	78.5	55	H
AS3210015	0.025	0.055	185	85.2	64	I
AS3210015100	0.081	0.158	170	78.5	55	I
AS3215012	0.025	0.055	185	85.2	64	I
AS3220010	0.06	0.13	192	58	67	I
AS3250006	0.03	1.05	212	78.2	73	B
AS350R550	0.008	0.02	210	78.2	55	B
AS351R040	0.01	0.02	210	78.2	55	B
AS352R035	0.012	0.03	220	78.2	55	B
AS353R030	0.02	0.05	226	83.5	55	B
AS355R025	0.025	0.05	220	78.2	55	G
AS3510018	0.046	0.1	220	78.2	55	G
AS3515012	0.142	0.32	220	107	180	G
AS3520010	0.15	0.38	210	78.2	55	G
AS3540010	0.18	0.43	218	78.2	110	G

MECHANICAL SPECIFICATIONS in millimeters


PART NUMBER	A	B	C	D	L	S	T	LEAD STYLE
AS320R530100	2.2 nom.	4.0 nom.	0.9	30 max.	21.0 nom.	17.1 nom.	7.00 max.	Straight
AS320R536100	2.2 nom.	4.0 nom.	0.9 nom.	30 max.	21.0 nom.	17.1 nom.	7.00 max.	Straight
AS321R030	2.2 nom.	5.0 nom.	0.9 nom.	30.0 max.	21.0 nom.	17.1 nom.	8.0 max.	Straight
AS321R030100	2.2 nom.	5.0 nom.	0.9	30 max.	21.0 nom.	17.1 nom.	7.80 max.	Straight
AS321R036	2.2 nom.	5.0 nom.	0.9 nom.	30.0 max.	21.0 nom.	17.1 nom.	8.0 max.	Straight
AS321R036100	2.2 nom.	5.0 nom.	0.9	30 max.	21.0 nom.	17.1 nom.	7.80 max.	Straight
AS322R025	2.2 nom.	4.8 nom.	0.9 nom.	30.0 max.	21.0 nom.	17.1 nom.	7.8 max.	Straight
AS322R025100	2.2 nom.	4.8 nom.	0.9	30 max.	21.0 nom.	17.1 nom.	7.80 max.	Straight
AS325R020	2.2 nom.	5.4 nom.	0.9 nom.	30.0 max.	21.0 nom.	17.1 nom.	8.4 max.	Straight
AS325R020100	2.2 nom.	5.4 nom.	0.9	30 max.	21.0 nom.	17.1 nom.	8.40 max.	Straight
AS3210015	2.2 nom.	5.4 nom.	0.9 nom.	30.0 max.	21.0 nom.	17.1 nom.	8.5 max.	Straight
AS3210015100	2.2 nom.	5.4 nom.	0.9	30 max.	21.0 nom.	17.1 nom.	8.50 max.	Straight
AS3215012	2.2 nom.	7.5 nom.	0.9 nom.	30.0 max.	21.0 nom.	17.1 nom.	10 max.	Straight
AS3220010	2.2 nom.	5.4 nom.	0.9 nom.	30.0 max.	21.0 nom.	17.1 ± 2.0	9.0 ± 1.0	Straight
AS3250006	2.2 nom.	4.8 nom.	0.9 nom.	30.0 max.	21.0 nom.	17.1 nom.	9.0 max.	Straight
AS350R550	2.2 nom.	4.0 nom.	0.8 nom.	36.0 max.	22.0 nom.	21.7 nom.	7.5 max.	Straight
AS351R040	2.2 nom.	5.3 nom.	0.8 nom.	36.0 max.	22.0 nom.	21.7 nom.	8.5 max.	Straight
AS352R035	2.2 nom.	5.3 nom.	0.8 nom.	36.0 max.	22.0 nom.	21.7 nom.	8.5 max.	Straight
AS353R030	2.2 nom.	5.3 nom.	0.8 nom.	36.0 max.	22.0 nom.	21.7 nom.	8.5 max.	Straight
AS355R025	2.2 nom.	5.3 nom.	0.8 nom.	36.0 max.	22.0 nom.	21.7 nom.	8.5 max.	Straight
AS3510018	2.2 nom.	5.3 nom.	0.8 nom.	36.0 max.	22.0 nom.	21.7 nom.	8.5 max.	Straight
AS3515012	2.2 nom.	10.4 nom.	0.8 nom.	36.0 max.	22.0 nom.	21.7 nom.	14.0 max.	Straight
AS3520010	2.2 nom.	5.3 nom.	0.8 nom.	36.0 max.	22.0 nom.	21.7 nom.	8.5 max.	Straight
AS3540010	2.2 nom.	10.4 nom.	0.8 nom.	36.0 max.	22.0 nom.	21.7 nom.	14.0 max.	Straight

PAD LAYOUT




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