

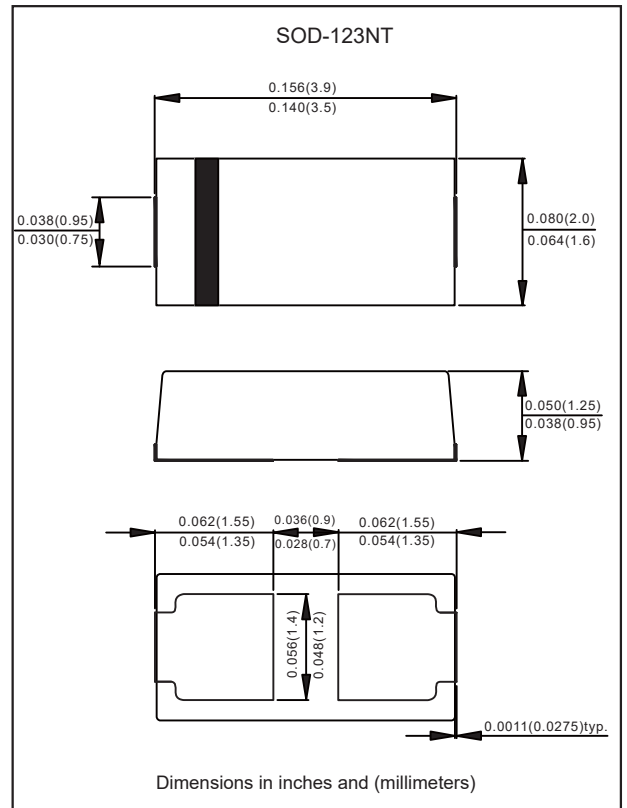
Features

- Well package design with solder pad on the bottom for best thermal performance
- Leads on two opposing sides of the body
- Tiny plastic SMD package
- 400W peak pulse power capability with a 10/1000 μ s waveform, repetition rate (duty cycle): 0.01%
- Uni and Bidirectional unit
- Glass passivated chip junction
- Excellent clamping capability
- Low incremental surge resistance
- Lead-free parts meet RoHS requirements
- Compliant to Halogen-free

Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, SOD-123NT
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band(Uni-directional types only)
- Mounting Position : Any

Package outline



Maximum ratings (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Conditions	Symbol	Value	Unit
Peak power dissipation	with a 10/1000 μ s waveform, Note 1, 2 & Fig. 1	PPPM	400	W
Peak pulse current	with a 10/1000 μ s waveform	IPPM	See Table 1	A
Steady state power dissipation	at $T_L=75^{\circ}\text{C}$, Note 2	$P_{M(AV)}$	1.0	W
Maximum instantaneous forward voltage	at 12A For Uni-directional types only	V_F	9.9	V
Operating junction temperature range		T_J	-55 to +150	$^{\circ}\text{C}$
Storage temperature range		T_{STG}	-65 to +175	$^{\circ}\text{C}$

Notes 1: Non-repetitive current pulse, per Fig. 3 and derated above $T_A=25^{\circ}\text{C}$ per Fig. 2
 2: Mounted on copper pad area of 0.2"x0.2" (5.0x5.0 mm) per Fig 5

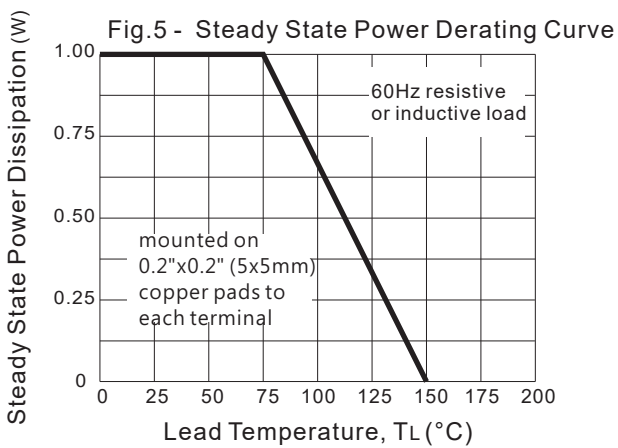
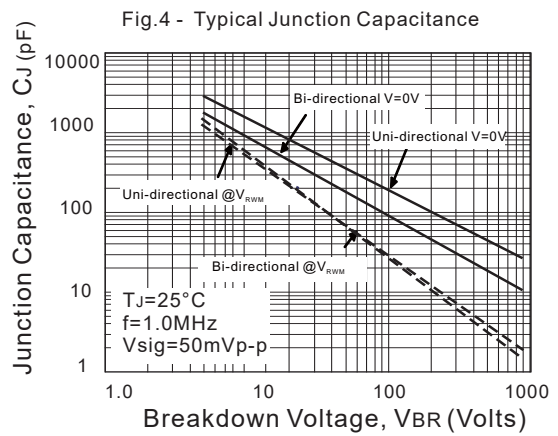
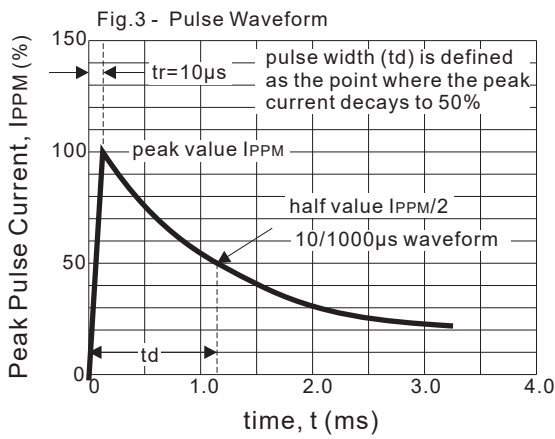
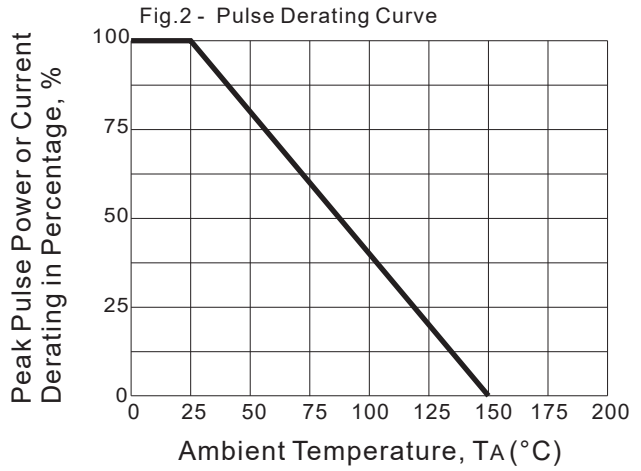
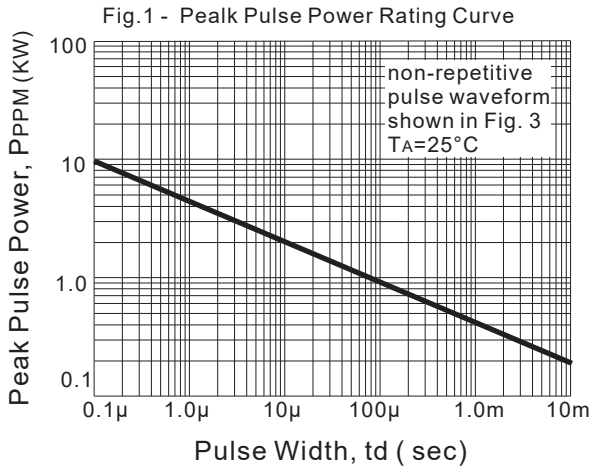
Electrical characteristics (at $T_A=25^\circ\text{C}$ unless otherwise noted)

Part No. (Uni)	Part No. (Bi)	Reverse Stand-off Voltage	Breakdown Voltage @ I_T		Test Current	Maximum Clamping Voltage @ I_{PP}		Maximum Reverse Leakage Current	Marking Code	
			V_{RWM}	$V_{BR\text{Min}}$		$V_{BR\text{Max}}$	V_C			
		Volts	Volts	Volts	mA	Volts	A	μA		
AS4NT200A	AS4NT200CA	200	224	247	1.0	324.0	1.24	5	4PV	4EV
AS4NT220A	AS4NT220CA	220	246	272	1.0	356.0	1.13	5	4PX	4EX
AS4NT240A	AS4NT240CA	240	269	296	1.0	387.0	1.04	5	4PY	4EY
AS4NT300A	AS4NT300CA	300	335	371	1.0	486.0	0.83	5	4QE	4FE
AS4NT360A	AS4NT360CA	360	403	444	1.0	582.0	0.69	5	4QH	4FH
AS4NT400A	AS4NT400CA	400	447	494	1.0	648.0	0.62	5	4QK	4FK
AS4NT440A	AS4NT440CA	440	492	544	1.0	713.0	0.57	5	4QM	4FM
AS4NT500A	AS4NT500CA	500	560	617	1.0	809.0	0.50	5	4QP	4FP

Notes 1: Suffix 'C' denotes bi-directional devices. Suffix 'A' denotes 5% tolerance devices

2: Transient Voltage Suppressors (TVS) are devices used to protect vulnerable circuits from electrical overstress such as that caused by electrostatic discharge, inductive load switching and induced lightning. Within the TVS, damaging voltage spikes are limited by clamping or avalanche action of a rugged silicon pn junction which reduces the amplitude of the transient to a nondestructive level. See Fig. 6 & Fig. 7

Rating and characteristic curves



Rating and characteristic curves

Fig. 6 - Transients of several thousand volts can be clamped to a safe level by the TVS

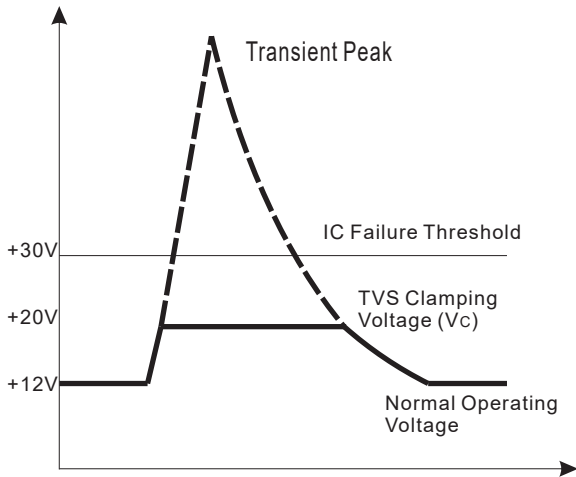
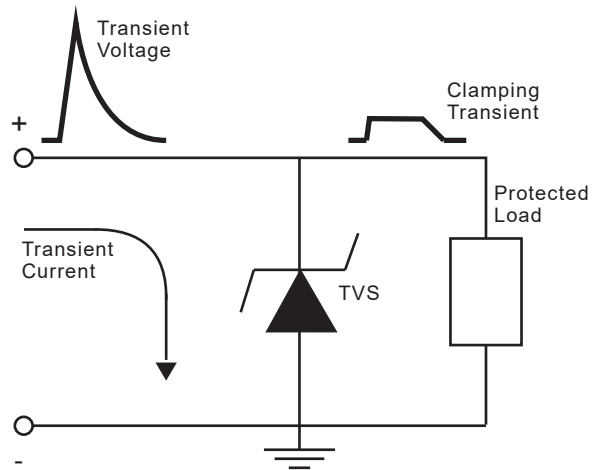


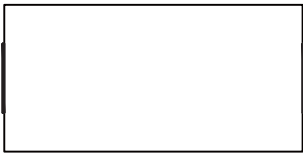



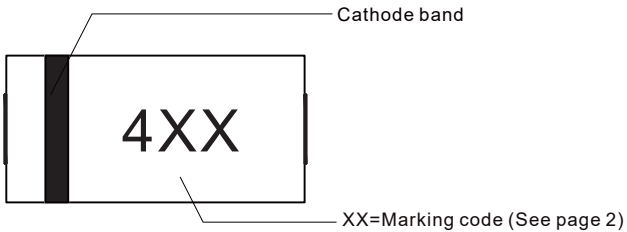
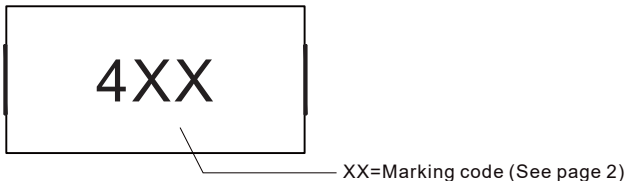
Fig. 7 - Transient current is diverted to ground thru TVS; the voltage seen by the protected load is limited to the clamping voltage level



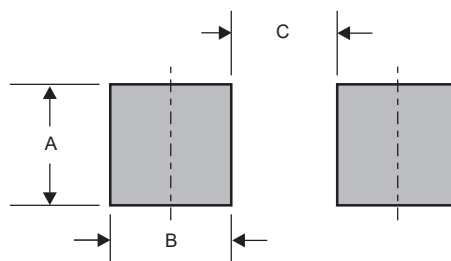
Pinning information

Pin	Simplified outline	Symbol
Uni-Directional Pin1 cathode Pin2 anode		
Bi-Directional		

Marking

Type number	Example
Uni-Directional	
Bi-Directional	

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-123NT	0.056 (1.40)	0.062(1.55)	0.028 (0.70)