

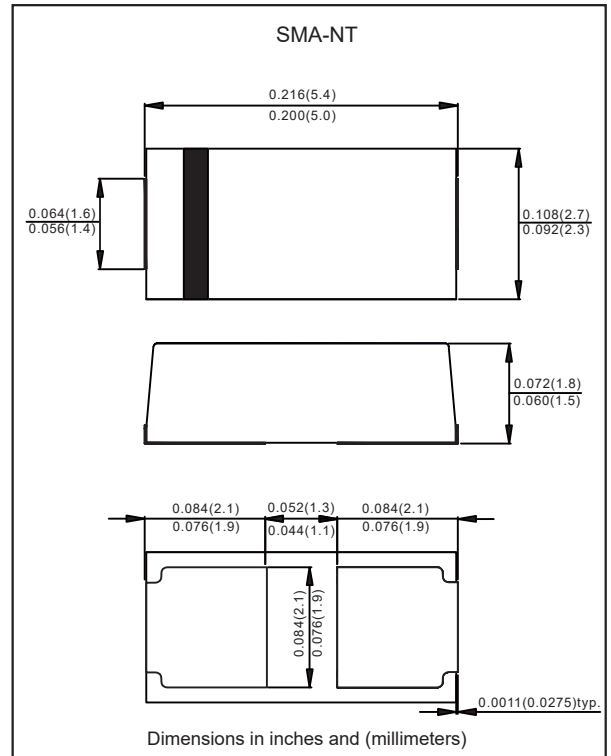
Features

- Well package design with solder pad on the bottom for best thermal performance
- Leads on two opposing sides of the body
- 1000W 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, SMA-NT
- 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	P _{PPM}	1000	W
Peak pulse current	with a 10/1000 μ s waveform	I _{PPM}	See Table 1	A
Steady state power dissipation	at $T_L=75^{\circ}\text{C}$, Note 2	P _{M(AV)}	3.0	W
Maximum instantaneous forward voltage	at 25A 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}	$V_{BR Min}$	$V_{BR Max}$	I_T	V_C	I_{PP}	$I_R@V_{RWM}$		
		Volts	Volts	Volts	mA	Volts	A	μA	Uni	Bi
ASAKNT200A	ASAKNT200CA	200	224	247	1.0	324.0	3.09	5	KSV	KVV
ASAKNT220A	ASAKNT220CA	220	246	272	1.0	356.0	2.81	5	KSX	KVX
ASAKNT240A	ASAKNT240CA	240	269	296	1.0	387.0	2.59	5	KSY	KVY
ASAKNT300A	ASAKNT300CA	300	335	371	1.0	486.0	2.06	5	KTE	KUE
ASAKNT360A	ASAKNT360CA	360	403	444	1.0	582.0	1.72	5	KTH	KUH
ASAKNT400A	ASAKNT400CA	400	447	494	1.0	648.0	1.55	5	KTK	KUK
ASAKNT440A	ASAKNT440CA	440	492	544	1.0	713.0	1.41	5	KTM	KUM
ASAKNT480A	ASAKNT480CA	480	537	593	1.0	777.0	1.29	5	KTO	KUO
ASAKNT500A	ASAKNT500CA	500	560	617	1.0	809.0	1.24	5	KTP	KUP

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

Fig.1 - Peak Pulse Power Rating Curve

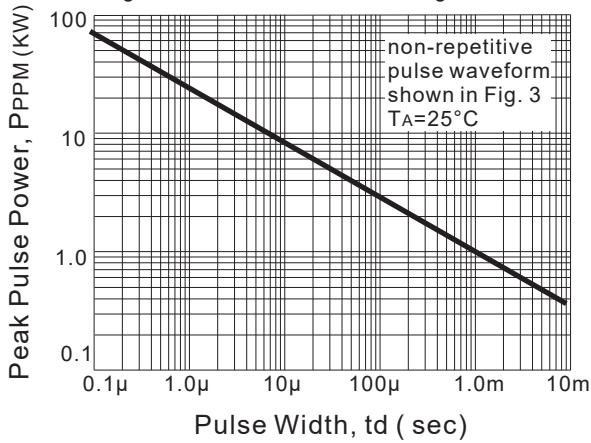


Fig.2 - Pulse Derating Curve

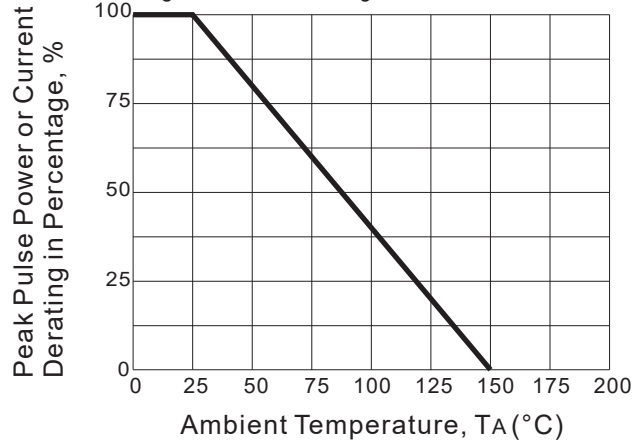


Fig.3 - Pulse Waveform

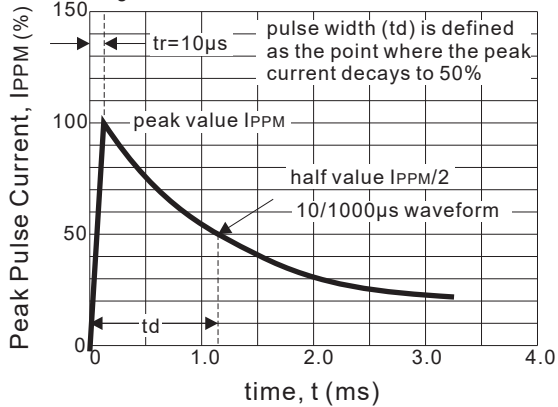


Fig.4 - Typical Junction Capacitance

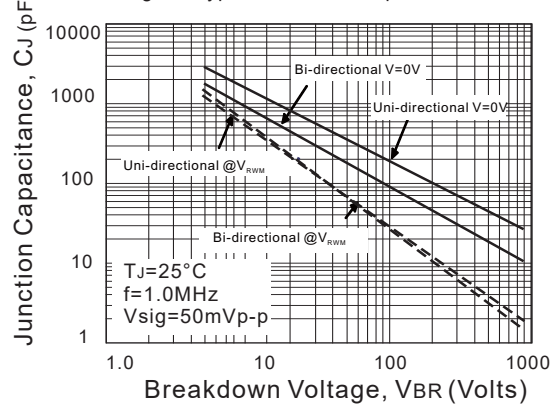
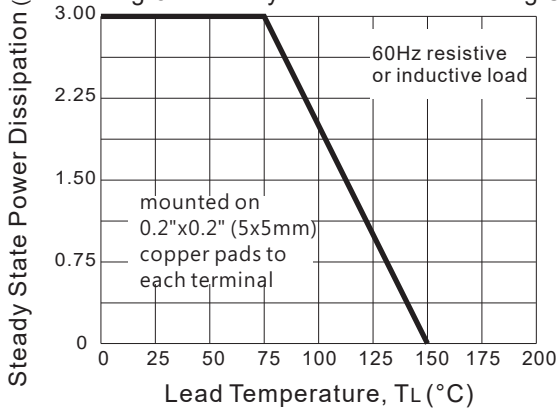


Fig.5 - Steady State Power Derating Curve



Rating and characteristic curves

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

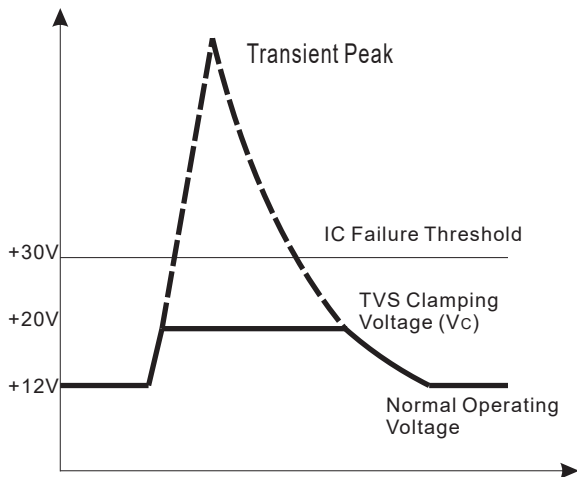
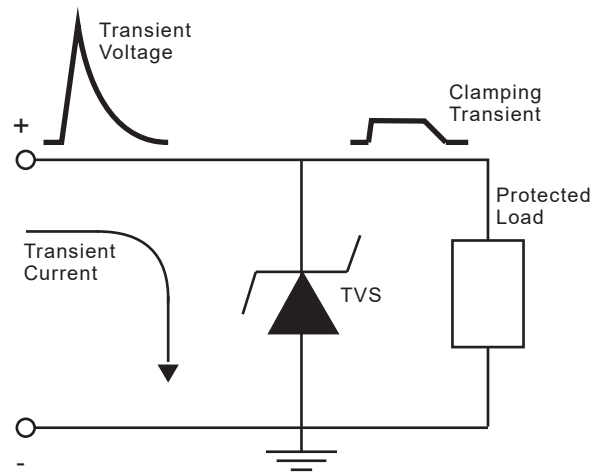
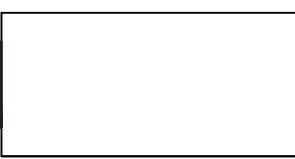


Fig. 7 - Transient current is diverted to ground thru TVS; the voltage seen by the protected load is limited to the clamping voltage level



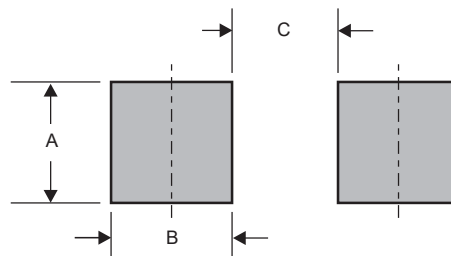
Pinning information

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

Marking

Type number	Example
Uni-Directional	 Cathode band FMS logo XX=Marking code (See page2)
Bi-Directional	 FMS logo XX=Marking code (See page 2)

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SMA-NT	0.084 (2.10)	0.084 (2.10)	0.044 (1.10)