MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Peak Power Dissipation (Note 1) @ T_L = 25°C, Pulse Width = 1 ms	P_{PK}	400	W
DC Power Dissipation @ T_L = 75°C Measured Zero Lead Length (Note 2) Derate Above 75°C Thermal Resistance from Junction to Lead	P_D $R_{\theta JL}$	1.5 20 50	W mW/°C °C/W
DC Power Dissipation (Note 3) @ T_A = 25°C Derate Above 25°C Thermal Resistance from Junction to Ambient	P_D $R_{\theta JA}$	0.5 4.0 250	W mW/°C °C/W
Forward Surge Current (Note 4) @ T_A = 25°C	I_{FSM}	40	A
Operating and Storage Temperature Range	T_J, T_{stg}	−65 to +150	°C

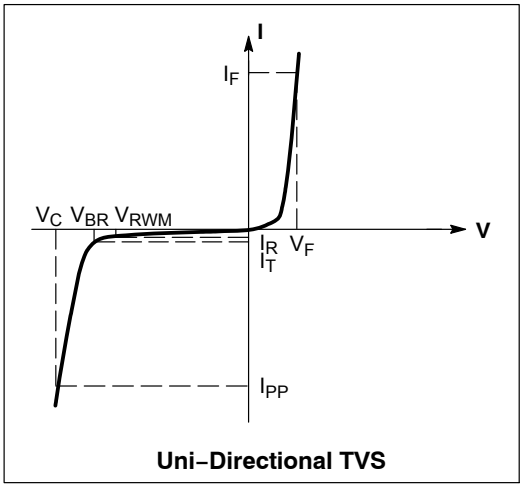
Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

1. 10 X 1000 μs, non−repetitive.
2. 1″ square copper pad, FR−4 board.
3. FR−4 board, using Littelfuse minimum recommended footprint, as shown in 403AA case outline dimensions spec.
4. 1/2 sine wave (or equivalent square wave), PW = 8.3 ms, duty cycle = 4 pulses per minute maximum.

ELECTRICAL CHARACTERISTICS

(T_A = 25°C unless otherwise noted)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_F	Forward Current
V_F	Forward Voltage @ I_F



Uni−Directional TVS

ELECTRICAL CHARACTERISTICS

Device	Device Marking	V_{RWM} (Note 5)	I_R @ V_{RWM}	Breakdown Voltage				V_C @ I_{PP} (Note 7)		C Typ. (Note 8)	V_F @ I_F (Note 9)
				V_{BR} (Volts) (Note 6)			@ I_T	V_C	I_{PP}		Max
		Volts	μA	Min	Nom	Max	mA	Volts	Amps	pF	V
NSA5.0AFT3G	QA	5.0	400	6.4	6.7	7.0	10	9.2	43.5	2450	3.5

5. A transient suppressor is normally selected according to the working peak reverse voltage (V_{RWM}), which should be equal to or greater than the DC or continuous peak operating voltage level.
6. V_{BR} measured at pulse test current I_T at an ambient temperature of 25°C.
7. Surge current waveform per Figure 2 and derate per Figure 3.
8. Bias voltage = 0 V, F = 1.0 MHz, T_J = 25°C.
9. 1/2 sine wave or equivalent, PW = 8.3 ms, non−repetitive, I_F = 30 A.

RATING AND TYPICAL CHARACTERISTIC CURVES

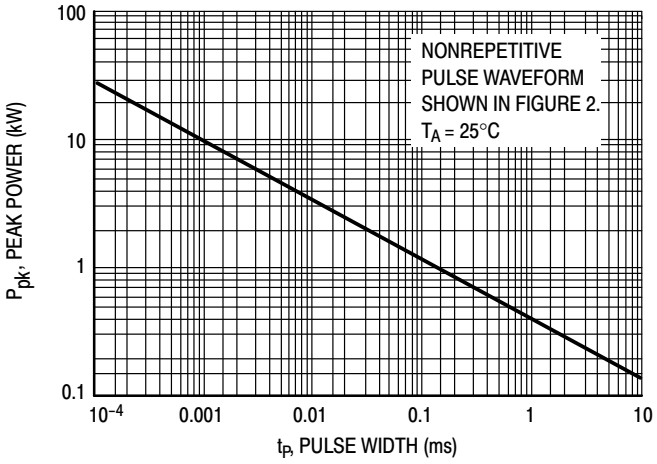


Figure 1. Pulse Rating Curve

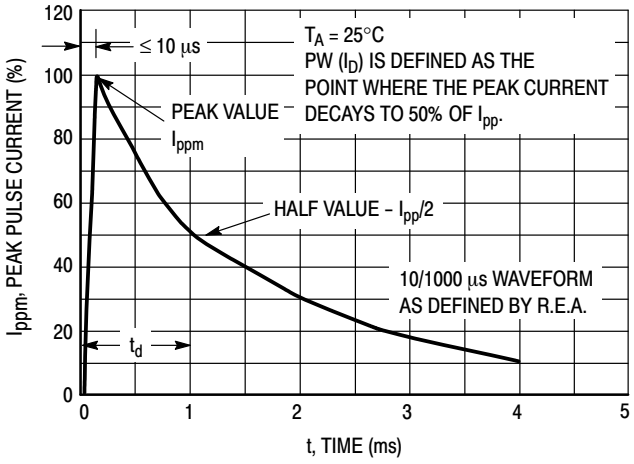


Figure 2. Pulse Waveform

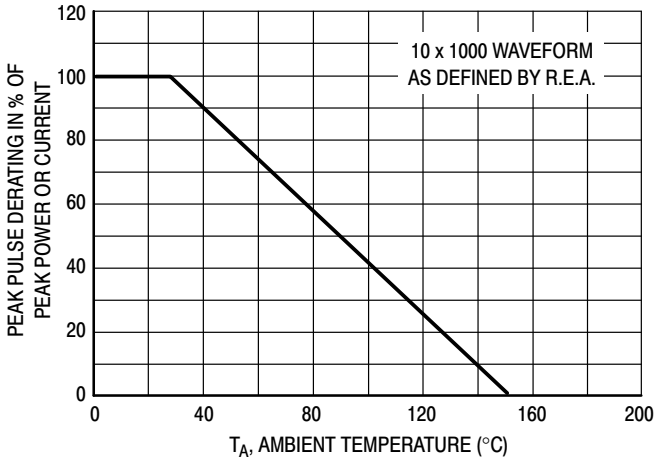


Figure 3. Pulse Derating Curve

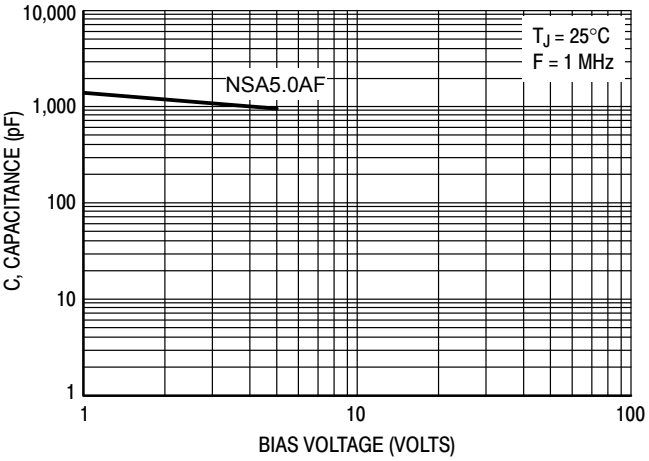


Figure 4. Typical Junction Capacitance vs. Bias Voltage

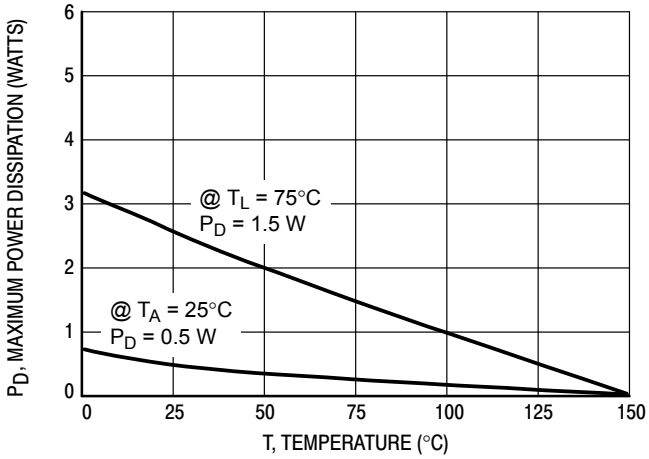
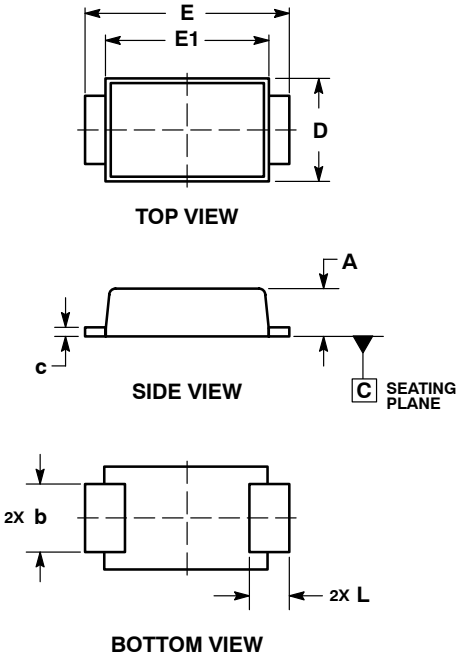


Figure 5. Steady State Power Derating

PACKAGE DIMENSIONS

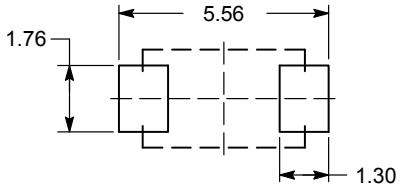
SMA−FL
CASE 403AA−01
ISSUE O



NOTES:
1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. CONTROLLING DIMENSION: MILLIMETERS.

	MILLIMETERS	
DIM	MIN	MAX
A	0.90	1.10
b	1.25	1.65
c	0.15	0.30
D	2.40	2.80
E	4.80	5.40
E1	4.00	4.60
L	0.70	1.10

RECOMMENDED SOLDER FOOTPRINT



DIMENSIONS: MILLIMETERS

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