

# SACA Series

ROHS

## 5.0 To 50V 500W

### Surface Mount Transient Voltage Suppressors

#### Description

The SACA series is designed specifically to protect sensitive electronic equipment from voltage transients induced by lightning and other transient voltage events.

Working Voltage: 5.0 to 50V

Peak Pulse Power: 500W

#### Features

- ◆ Glass passivated junction .
- ◆ 500W peak pulse power capability with a 10/1000  $\mu$  s waveform, repetitive rate (duty cycle):0.01 % .
- ◆ Low leakage .
- ◆ Excellent clamping capability .
- ◆ Very fast response time .
- ◆ Plastic package has Underwriters Laboratory Flammability 94V-0 .
- ◆ Halogen free and RoHS compliant.
- ◆ IEC-61000-4-2 ESD 30kV(Air), 30kV (Contact)
- ◆ ESD protection of data lines in accordance with IEC 61000-4-2
- ◆ EFT protection of data lines in accordance with IEC 61000-4-4

#### Applications

TVS devices are ideal for the protection of I/O interfaces, Vcc bus and other vulnerable circuits used in Telecom, Computer, Industrial and Consumer electronic applications.

#### Maximum Ratings (TA=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation with a 10/1000 $\mu$ s waveform <sup>(1)</sup>	PPPM	500	W
Peak Pulse Current with a 10/1000 $\mu$ s waveform. (Fig.2) <sup>(1)</sup>	IPP	See Next Table	A
Power Dissipation on Infinite Heat Sink at TL=75°C (Fig.2)	PM(AV)	3.0	W
Junction and Storage Temperature Range.	TJ, TSTG	- 55 to +150	°C
Operating Temperature Range	TOP	- 40 to +125	°C

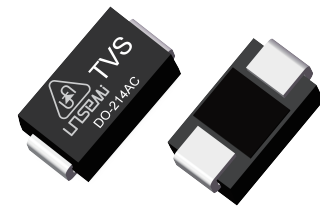
#### Notes:

1. Non-repetitive current pulse , per Fig. 3 and derated above TA= 25°C per Fig. 2



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#### Bi-directional



#### Mechanical Data

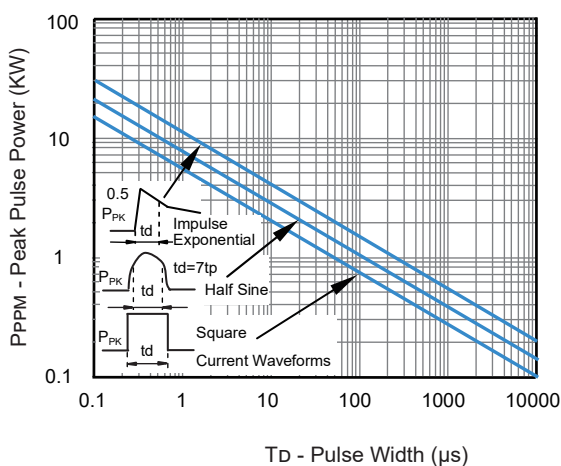
- ◆ Case: Molded plastic
- ◆ Epoxy: UL 94V-0 rate flame retardant
- ◆ Lead: Solderable per MIL-STD-750, method 2026 guaranteed
- ◆ Polarity: Color band denotes TVS cathode en
- ◆ Mounting position: Any

**Electrical Characteristics (@=25°C Unless Otherwise Specified)**

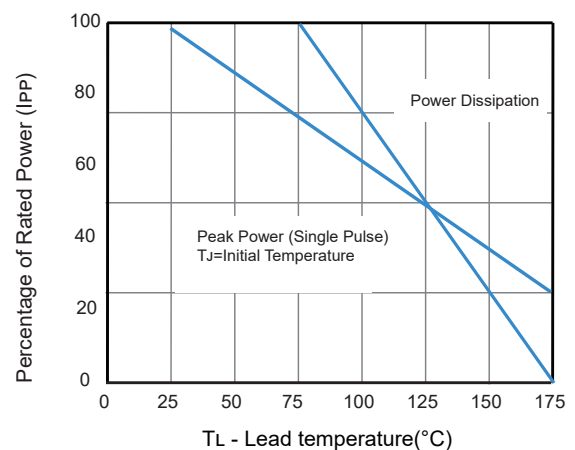
Part Number	Device Marking Code	Stand-Off Voltage $V_{MW}$ (V)	Breakdown Voltage $V_{BR}$	Test Current $I_T$ (mA)	Maximum Reverse Leakage $I_R$ @ $V_{RWM}$ ( $\mu A$ )	Maximum Junction Capacitance @0V (pF)	Maximum Reverse Surge Current $I_{PP}$ (A)	Maximum Clamping Voltage $V_C$ @ $I_{PP}$ (V)
SACA5.0	SAD	5.0	7.6	1.0	300	45	44.0	10.0
SACA6.0	SAE	6.0	7.9	1.0	300	45	41.0	11.2
SACA7.0	SAF	7.0	8.33	1.0	300	45	38.0	12.6
SACA8.0	SAG	8.0	8.89	1.0	100	45	36.0	13.4
SACA8.5	SAH	8.5	9.44	1.0	50	45	34.0	14.0
SACA10	SAK	10	11.10	1.0	5	45	29.0	16.3
SACA12	SAL	12	13.30	1.0	5	45	25.0	19.0
SACA15	SAM	15	16.70	1.0	5	45	20.0	23.6
SACA18	SAN	18	20.00	1.0	5	45	15.0	28.8
SACA22	SAP	22	24.40	1.0	5	45	14.0	35.4
SACA26	SAQ	26	28.90	1.0	5	45	11.1	42.3
SACA30	SAR	30	33.30	1.0	5	45	10.0	48.6
SACA36	SAS	36	40.00	1.0	5	45	8.6	60.0
SACA45	SAT	45	50.00	1.0	5	45	6.8	77.0
SACA50	SAU	50	55.50	1.0	5	45	5.8	88.0

**Ratings and Characteristic Curves ( $T_A=25^\circ C$  unless otherwise noted)**

**Figure 1 – Peak Pulse Power Rating Curve**

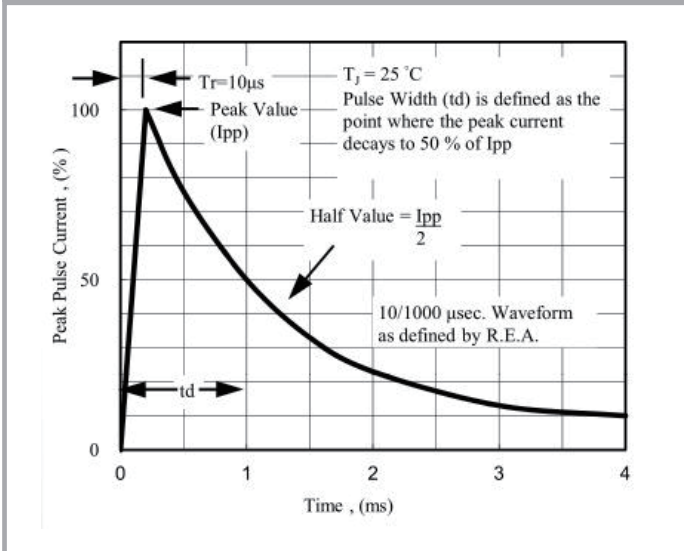


**Figure 2 - Power Derating Curve Surge Current**

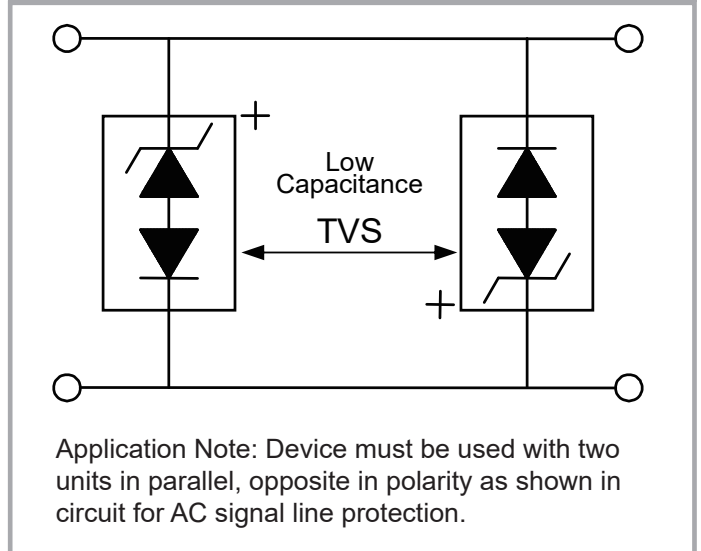


**Ratings and Characteristic Curves (TA=25°C unless otherwise noted)**

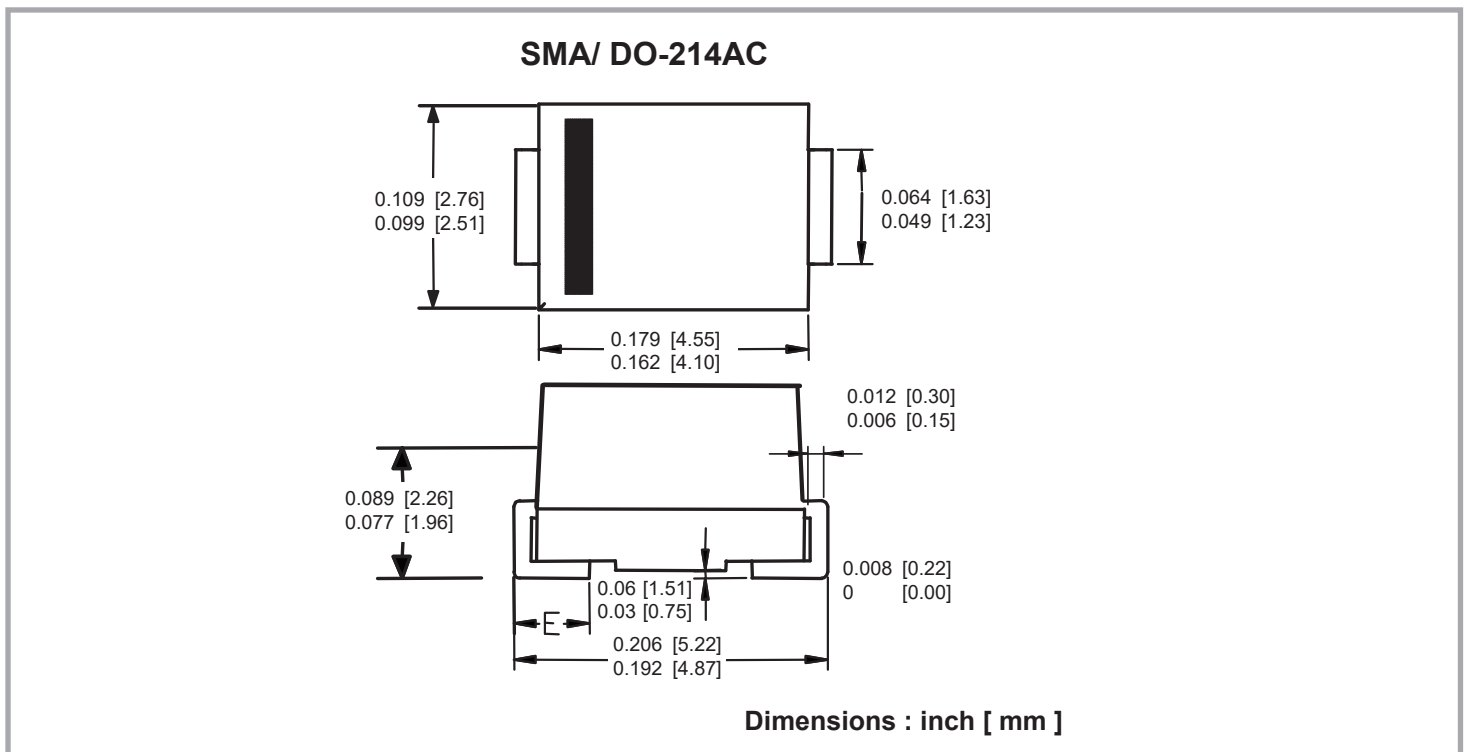
**Figure 3 - Pulse Waveform**



**Figure 4 - AC Line Protection Application**



**Package Outline Dimensions Unit: inches (millimeters)**



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