

Surface Mount Transient Voltage Suppressors

SACA Series 5.0 To 50 V 500W

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 50 V

Peak Pulse Power: 500 W

Features

- ◆ Glass passivated chip
- ◆ 500 W peak pulse power capability with a 10/1000 us waveform, repetitive rate (duty cycle):0.01 %
- ◆ Low leakage
- ◆ Excellent clamping capability
- ◆ Very fast response time
- ◆ RoHS compliant

Applications

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



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 end
- ◆ Mounting position: Any

Maximum Ratings and Thermal Characteristics ($T_A=25\text{ }^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Units
Peak power dissipation with a 10/1000us waveform ⁽¹⁾	P_{PPM}	500	W
Power Dissipation on Infinite Heat Sink at $T_L=75^\circ\text{C}$ (Fig.2)	P_D	3.0	W
Peak pulse current with a 10/1000?s waveform(Fig.2) ⁽¹⁾	I_{PP}	See Next Table	A
Operating junction and storage temperature range	T_J, T_{STG}	- 55 to +150	$^\circ\text{C}$

Note:(1)Non-repetitive current pulse per Fig.3 and derated above $T_A=25\text{ }^\circ\text{C}$ per Fig.2

Surface Mount Transient Voltage Suppressors

SACA Series 5.0 To 50 V 500W

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} (uA)	Maximum Junction Capacitance @ 0 V (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 Characteristics Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Figure 1 – Peak Pulse Power Rating Curve

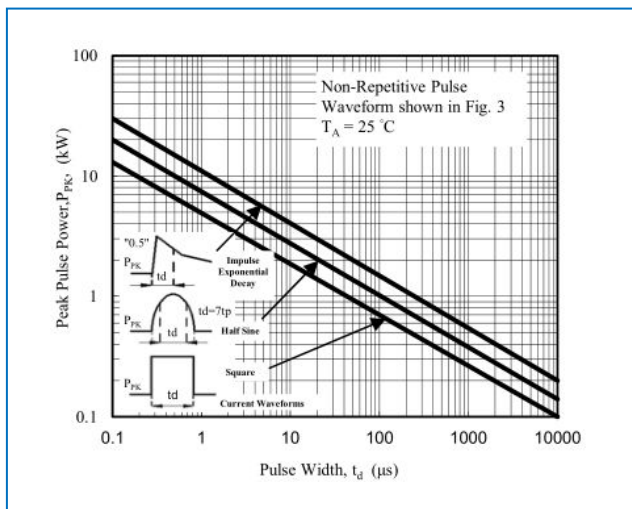
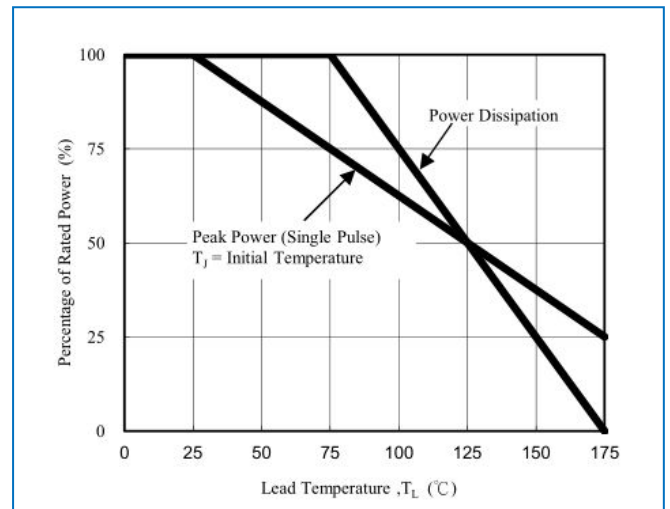


Figure 2 - Power Derating Curve Surge Current



Surface Mount Transient Voltage Suppressors

SACA Series 5.0 To 50 V 500W

Figure 3 - Pulse Waveform

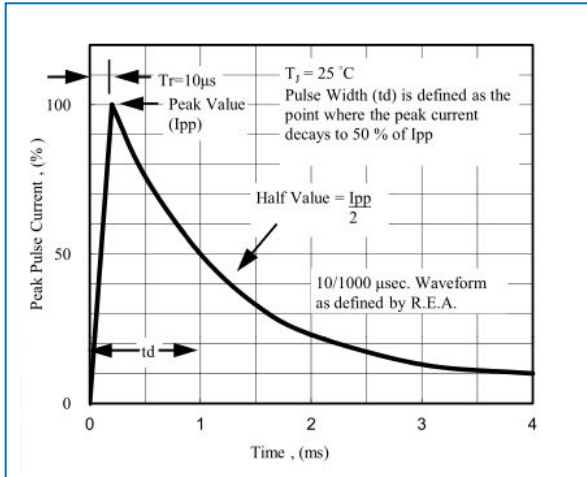
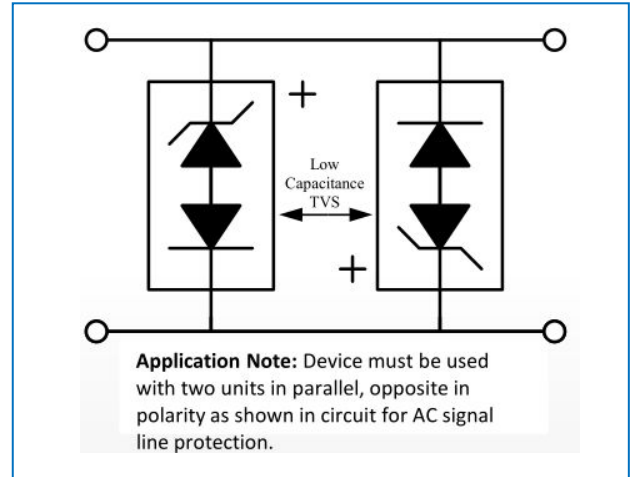


Figure 4 – AC Line Protection Application



Package Outline Dimensions Unit: inches (millimeters)

