

Low Capacitance Transient Voltage Suppressor

Stand-Off Voltage - 5.0 to 50 Volts

500 Watt Peak Pulse Power

Features

- For surface mounted applications in order to optimize board space
- Glass passivated junction
- 500W Peak Pulse Power capability with a 10/1000us waveform, repetition rate (duty cycle): 0.01%
- Excellent clamping capability
- Low incremental surge resistance
- Fast response time: typically less than 1.0ps from 0 Volts to $V_{(BR)}$ for unidirectional types
- Ideal for data line applications
- High temperature soldering guaranteed: 260°C/10 seconds, 0.375"(9.5mm) lead length, 5lbs., (2.3kg) tension



Mechanical Data

- **Case:** JEDEC DO-214AA. Molded plastic over glass passivated junction
- **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- **Polarity:** The band denotes TVS cathode
- **Standard Packaging:** 12mm tape (EIA STD RS-481)
- **Weight:** 0.003ounce, 0.093gram

Maximum Ratings And Characteristics

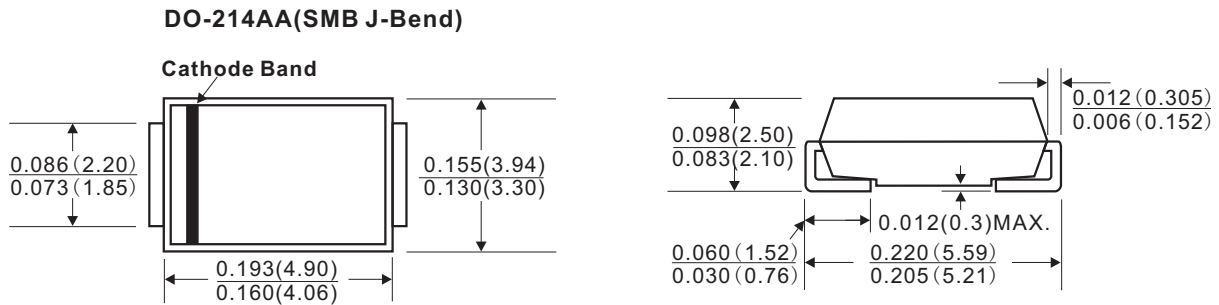
Ratings at 25°C ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation on 10/1000µs waveform (Note 1)	P_{PPM}	Minimum 500	Watts
Steady State Power Dissipation at $T_L = 75^\circ\text{C}$ with lead lengths or 0.375" (9.5mm)	$P_{M(AV)}$	3	Amps
Peak Pulse Power Surge Current with a 10/1000 µS waveform (Note1.FIG.3)	I_{PPM}	SEE TABLE1	Amps
Operating junction and Storage Temperature Range	T_J, T_{STG}	-55 to +175	°C

Notes :

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

Dimensions (DO-214AA)



Dimensions in inches and (millimeters)

Electrical Characteristics

TABLE 1

**Stand for commonly used models

SACB Part Number	Device Marking Code	Stand-Off Voltage	Minimum Breakdown Voltage at $I_T=1.0\text{mA}$	Maximum Reverse Leakage at V_{WM}	Maximum Clamping Voltage at $I_{PP}=5.0\text{A}$	Maximum Peak Pulse Current Per FIG.3	Maximum Junction Capacitance at 0 Volts	Working Inverse Blocking Voltage	Inverse Blocking Leakage Current	Peak Inverse Blocking Voltage
		$V_{RWM}(V)$	$V_{BR}(V)$	$I_R(\mu A)$	$V_C(V)$	$I_{PP}(A)$	$C_J(pF)$	$V_{WIB}(V)$	$I_{IB}(mA)$	$V_{PIB}(V)$
* SACB5.0	SKE	5.0	7.6	300	10.0	44.0	45	75	1.0	100
SACB6.0	SKG	6.0	7.9	300	11.2	41.0	45	75	1.0	100
SACB7.0	SKM	7.0	8.33	300	12.6	38.0	45	75	1.0	100
SACB8.0	SKR	8.0	8.89	100	13.4	36.0	45	75	1.0	100
SACB8.5	SKT	8.5	9.44	50	14.0	34.0	45	75	1.0	100
SACB10	SKX	10.0	11.10	5	16.3	29.0	45	75	1.0	100
SACB12	SLE	12.0	13.30	5	19.0	25.0	45	75	1.0	100
SACB15	SLM	15.0	16.70	5	23.6	20.0	45	75	1.0	100
SACB18	SLT	18.0	20.00	5	28.8	15.0	45	75	1.0	100
SACB22	SLX	22.0	24.40	5	35.4	14.0	45	75	1.0	100
SACB26	SME	26.0	28.90	5	42.3	11.1	45	75	1.0	100
SACB30	SMK	30.0	33.30	5	48.6	10.0	45	75	1.0	100
SACB36	SMP	36.0	40.00	5	60.0	8.6	45	75	1.0	100
SACB45	SMV	45.0	50.00	5	77.0	6.8	45	150	1.0	200
SACB50	SMZ	50.0	55.50	5	88.0	5.8	45	150	1.0	200

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

Fig.1 Peak Pulse Power Rating

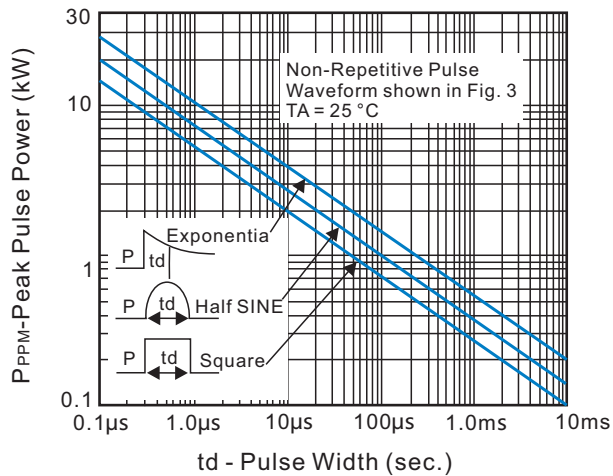


Fig.2 Power Derating Curve

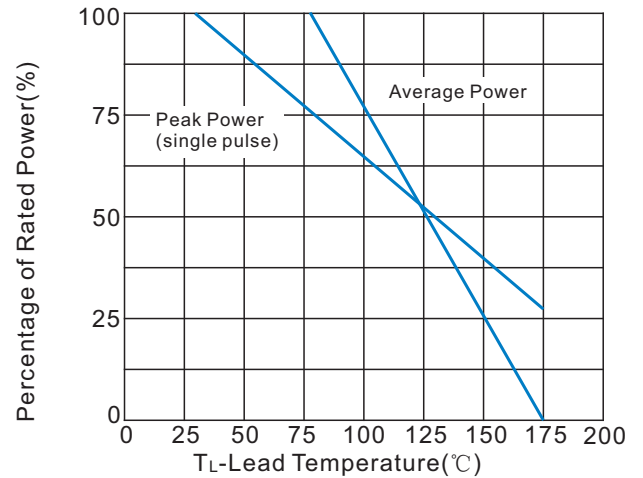


Fig.3 Pulse Waveform

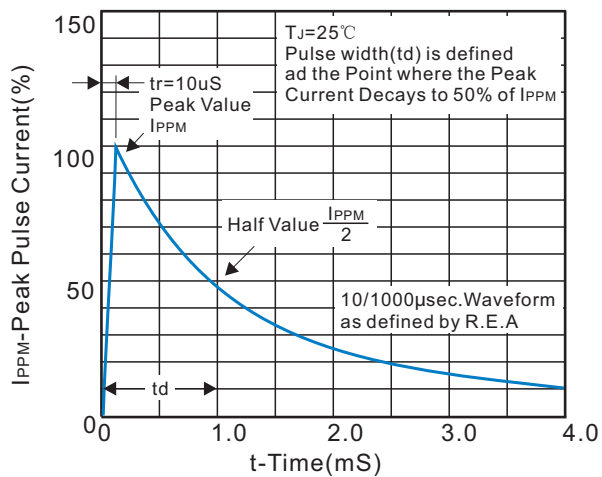
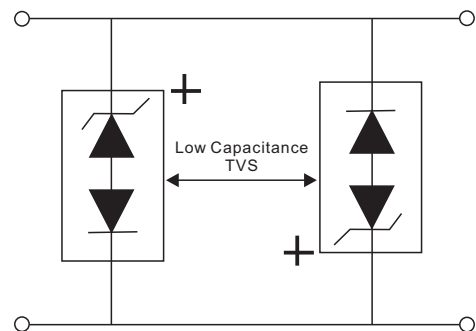


Fig.4 AC Line Protection Application



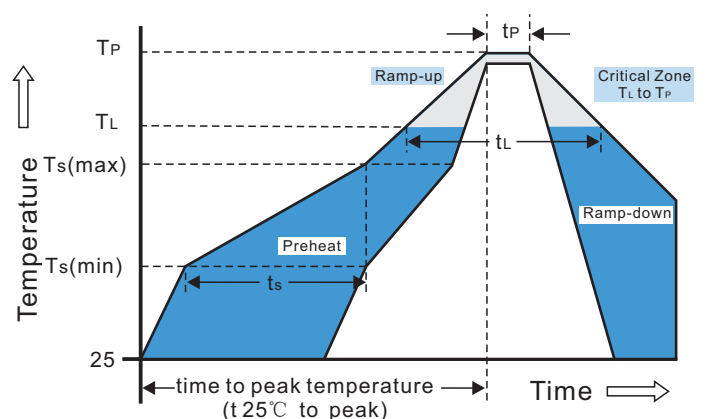
Application Note: Device must be used with two units in parallel, opposite in polarity as shown in circuit for AC signal line protection.

Recommended Soldering Conditions

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Reflow Condition		Pb-Free assembly (see Fig.1)
Pre Heat	-Temperature Min(Ts(min))	+150°C
	-Temperature Max(Ts(max))	+200°C
	-Time(Min to Max)(ts)	60-180secs
Average ramp up rate (Liquidus Temp(TL) to peak)		3°C/sec.Max.
Ts(max) to TL -Ramp-up Rate		3°C/sec.Max.
Reflow	-Temperature(TL)(Liquidus)	+217°C
	-Temperature(tl)	60-150secs
Peak Temp(Tp)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp(tp)		30 secs.Max.
Ramp-down Rate		6°C/sec.Max.
Time 25°C to Peak Temp(Tp)		8 min.Max.
Do not exceed		+260°C

Reflow Soldering



Marking Code

