

## FEATURES

- Glass passivated junction.
- 500W Peak Pulse Power capability at 1.0 ms
- Excellent clamping capability.
- Low incremental surge resistance.
- Fast response time; typically less than 1.0 ps from 0 volts to BV for unidirectional and 5.0 ns for bidirectional.
- Typical  $I_R$  less than 1.0  $\mu$ A above 10V.



DO-204AC/DO-15

## MECHANICAL DATA

- Case: Molded plastic
- Lead: Pure tin plated lead free, solderable per MIL-STD-750, Method 2026.
- Polarity : Color band denotes cathode except bipolar.
- Weight : 0.34 gram.

## DEVICES FOR BIPOLAR APPLICATIONS

- Bidirectional types use CA suffix.
- Electrical Characteristics apply in both directions.

## MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25 ambient temperature unless otherwise specified.

Type Number	Symbol	Value	Units
Peak Power Dissipation at $T_A=25^{\circ}\text{C}$ , $T_p=1\text{ms}$ (Note 1)	$P_{PPM}$	Minimum 500	Watts
Steady State Power Dissipation at $T_L=75^{\circ}\text{C}$ Lead Lengths 0.375 Inch 9.5mm (Note 2)	$P_D$	3.2	
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) (Note 3)	$I_{FSM}$	70	Amps
Maximum Instantaneous Forward Voltage at 35A for Unidirectional Only (Note 4)	$V_F$	3.5 / 5.0	Volts
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to + 175	$^{\circ}\text{C}$

Notes: Notes: 1. Non-repetitive current pulse and derated above  $T_A=25^{\circ}\text{C}$ .

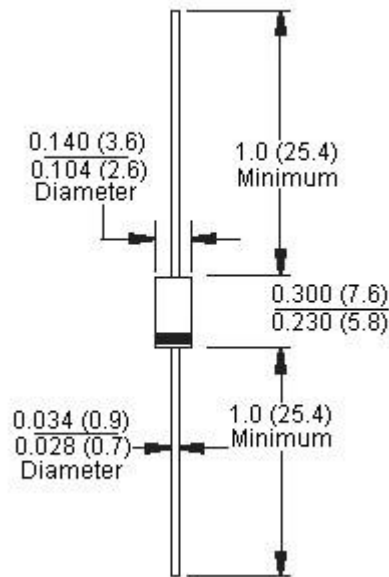
2. Mounted on copper pad area of 1.6 x 1.6 inch (40 x 40mm) per.

3. 8.3ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minutes maximum.

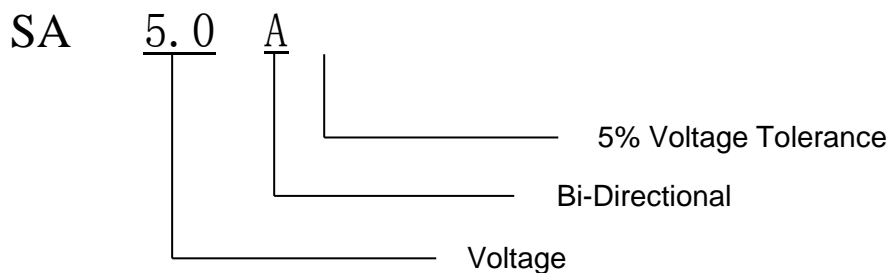
4.  $V_F=3.5\text{V}$  for devices of  $V_{BR}\leq 200\text{V}$  and  $V_F=5.0\text{V}$  maximum for devices of  $V_{BR}>200\text{V}$ .

## PACKAGE DIMENSIONS

### DO-204AC/DO-15



## ORDERING INFORMATION



## PACKAGING

Part Number	Component Package	Quantity
SA5.0A	DO-204AC/DO-15	2000

## ELECTRICAL CHARACTERISTICS

SA DEVICES	REVERSE STAND-LFF VOLTAGE V <sub>RWM</sub> (V)	BREAKDOWN VOLTAGE Min. @ I <sub>T</sub> V <sub>BR</sub> Min.(V)	BREAKDOWN VOLTAGE Max. @ I <sub>T</sub> V <sub>BR</sub> Max.(V)	TEST CURRENT I <sub>T</sub> (mA)	MAXIMUM CLAMPING VOLTAGE @ I <sub>pp</sub> V <sub>C</sub> (V)	PEAK PULSE CURRENT I <sub>pp</sub> (A)	REVERSE LEAKAGE @ V <sub>RWM</sub> I <sub>R</sub> (uA)
SA5.0A	5.00	6.40	7.25	10	9.2	55.4	1000

**TYPICAL CHARACTERISTICS**

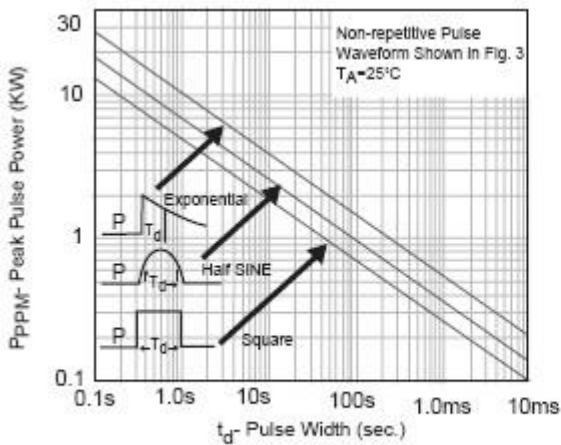


Fig. 1 Peak Pulse Power Rating Curve

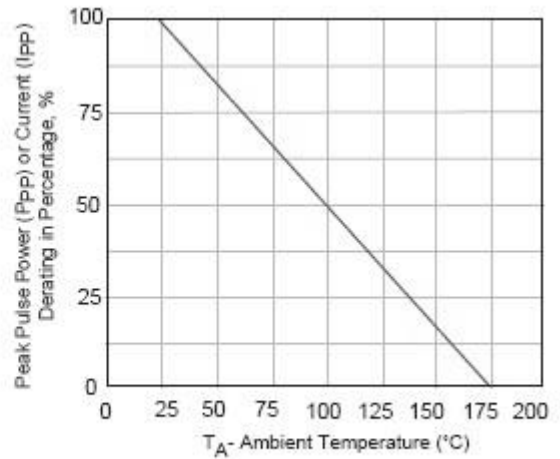


Fig. 2 Pulse Derating Curve

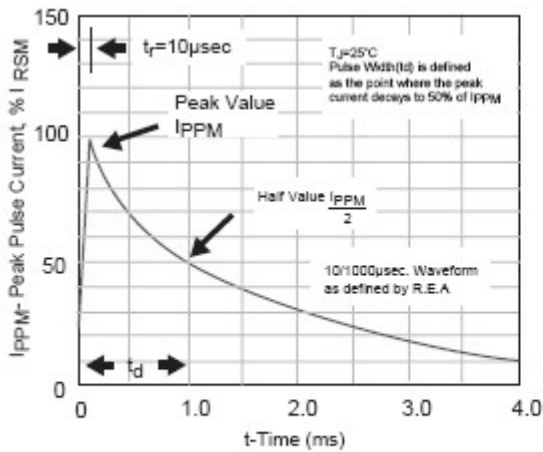


Fig. 3 Pulse Waveform

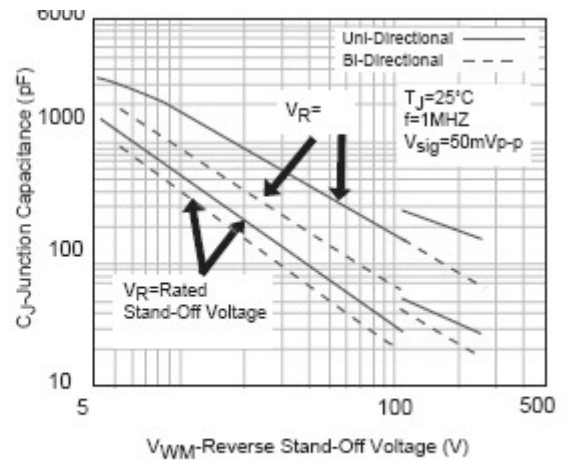


Fig. 4- Typical Junction Capacitance

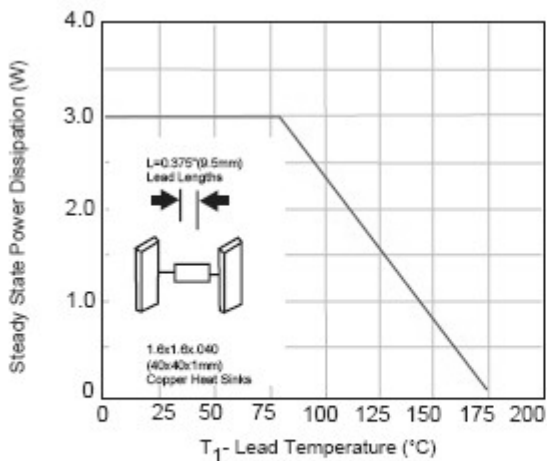


Fig. 5 Steady State Power Derating Curve

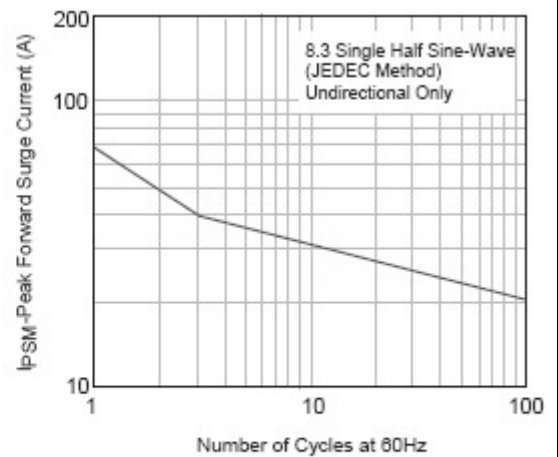


Fig. 6- Maximum Non-Repetitive Forward Surge Current Uni-Directional Only