

**SCHOTTKY BARRIER RECTIFIERS**
**FEATURES**

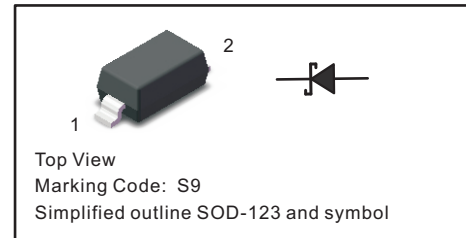
- High breakdown voltage
- Low turn-on voltage
- Guard ring construction for transient protection

**MECHANICAL DATA**

- Case: SOD-123
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 16mg/0.00056oz

**PINNING**

PIN	DESCRIPTION
1	Cathode
2	Anode


**Maximum Ratings at 25 °C**

Parameter	Symbols	BAT46W	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	100	V
Working peak reverse voltage	$V_{RWM}$	100	V
Continuous Forward Current	$I_F$	150	mA
Repetitive peak forward current (Note 1) @ $t_p < 1.0s$ , Duty Cycle $< 50\%$	$I_{FRM}$	350	mA
Non-repetitive Peak Forward Surge Current at 8.3ms	$I_{FSM}$	25	A
Power Dissipation	$P_D$	200	mW
Thermal resistance junction to ambient air	$R_{thJA}$	500	°C/W
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150	°C

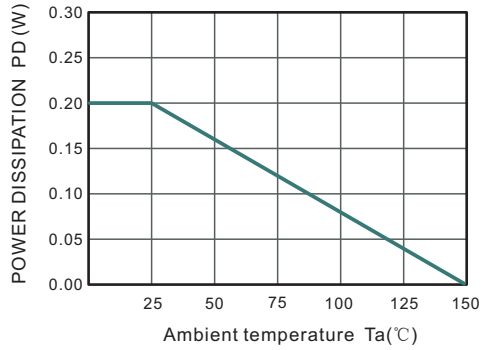
**ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)**

Parameter	Symbols	BAT46W	Units
Reverse Breakdown Voltage at $I_R=100\mu A$ (NOTE 2)	$V_{(BR)R}$	100	V
Maximum Forward Voltage (NOTE 2) $I_F1=10\text{ mA}$ $I_F2=250\text{ mA}$	$V_F$	0.45 1.0	V
Peak Reverse Current $V_{R1}=1.5V$ $V_{R2}=10V$ $V_{R3}=50V$ $V_{R4}=75V$	$I_R$	0.3 0.5 1 2	$\mu A$
Diodes Capacitance $V_R=0, f=1\text{MHz}$ $V_R=1V, f=1\text{MHz}$	$C_T$	20 12	pF

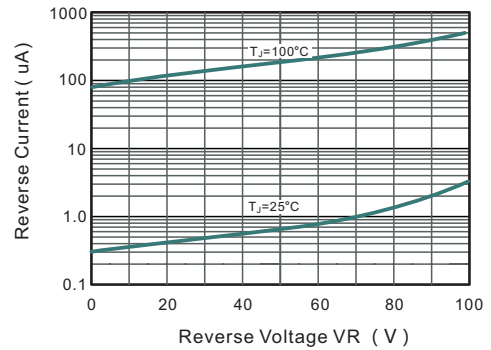
## NOTES:

- ( 1 ) Part mounted on FR-4 board with recommended pad layout.  
 ( 2 ) Short duration pulse test used to minimize self-heating effect.

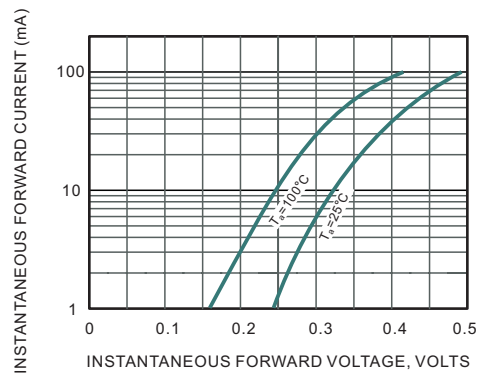
**Fig.1 Power Derating Curve**



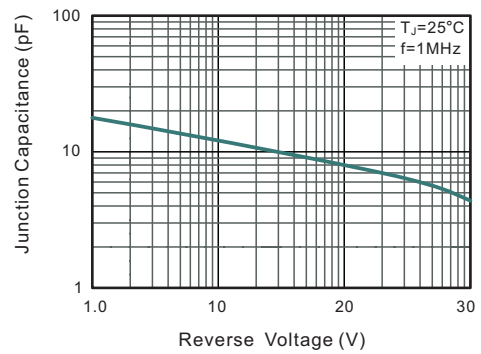
**Fig.2 Typical Reverse Characteristics**



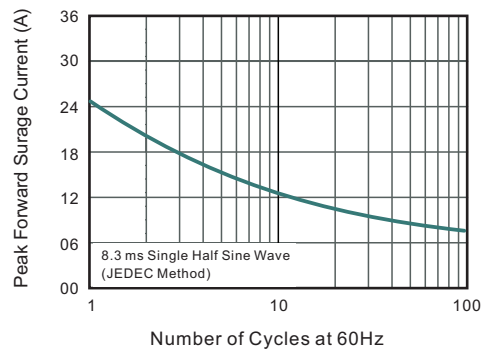
**Fig.3 TYPICAL FORWARD VOLTAGE**



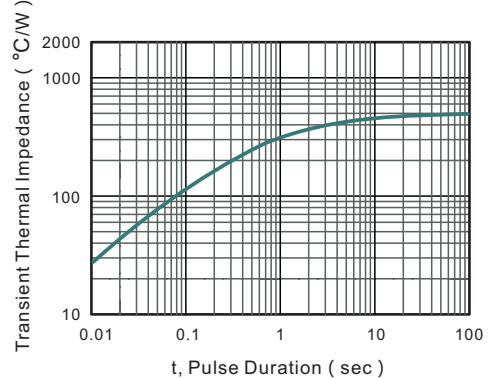
**Fig.4 Typical Junction Capacitance**



**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**

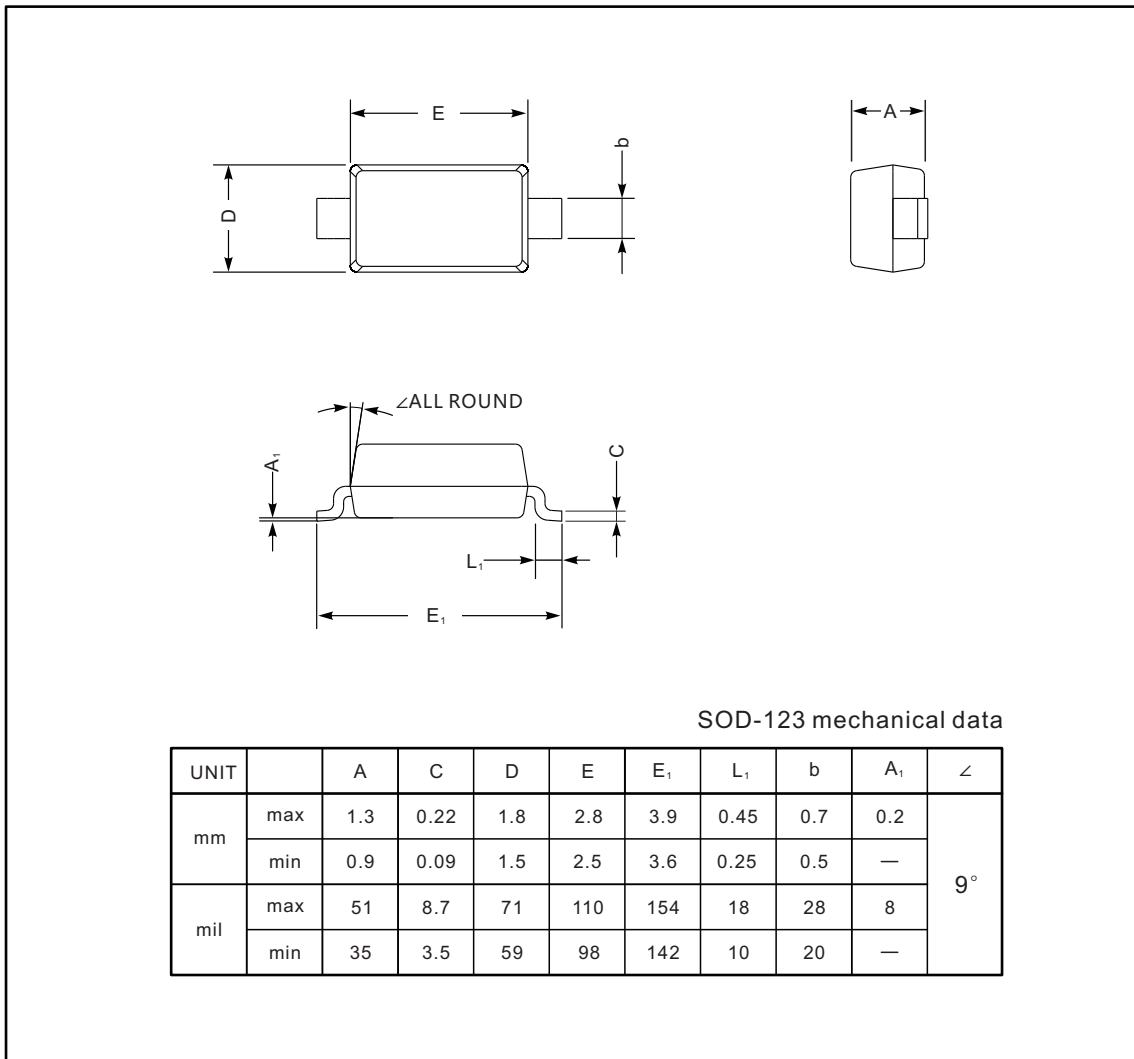
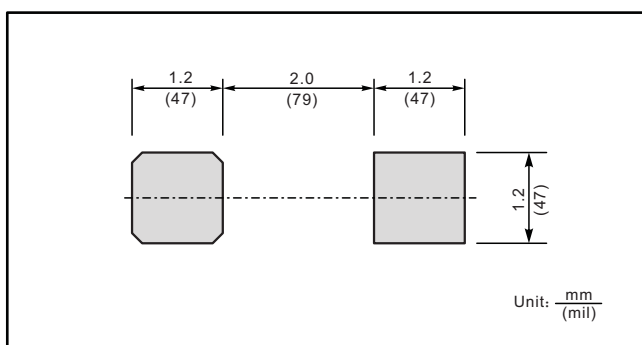


**Fig.6 Typical Transient Thermal Impedance**



**PACKAGE OUTLINE**

Plastic surface mounted package; 2 leads

**SOD-123**

**The recommended mounting pad size**

**Marking**

Type number	Marking code
BAT46W	S9