

Features

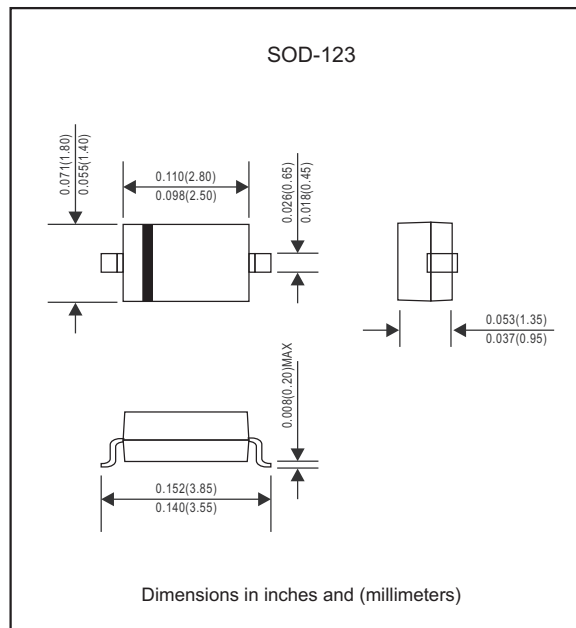
- ◆ For use in low voltage, high frequency inverters
- ◆ Free wheeling, and polarity protection applications

Mechanical data

- ◆ **Case:** JEDEC SOD-123 molded plastic body
- ◆ **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- ◆ **Polarity:** Color band denotes cathode end
- ◆ **Mounting Position:** Any



Package outline



Maximum ratings and Electrical Characteristics (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

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) @ $t_p < 1.0\text{s}$, Duty Cycle $< 50\%$	I_{FRM}	350	mA
Non-repitive 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	$^{\circ}\text{C}/\text{W}$
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +125	$^{\circ}\text{C}$
Reverse Breakdown Voltage at $I_R=100\mu\text{A}$ (NOTE 2)	$V_{(BR)R}$	100	V
Maximum Forward Voltage (NOTE 2)	V_F	0.45 1.0	V
Peak Reverse Current	I_R	0.3 0.5 1 2	μA
Diodes Capacitance	C_T	20 12	pF

Rating and characteristic curves

Fig.1 Power Derating Curve

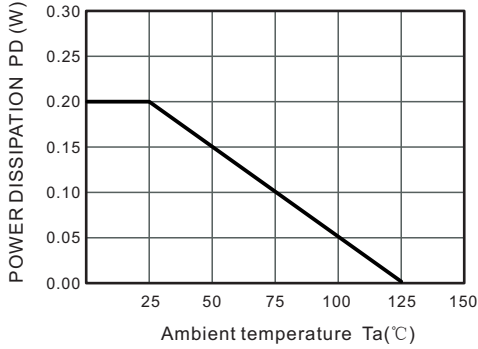


Fig.2 Typical Reverse Characteristics

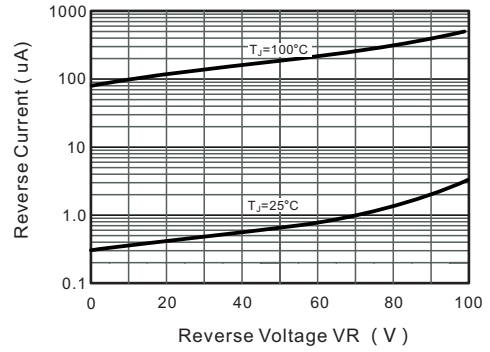


Fig.2 TYPICAL FORWARD VOLTAGE

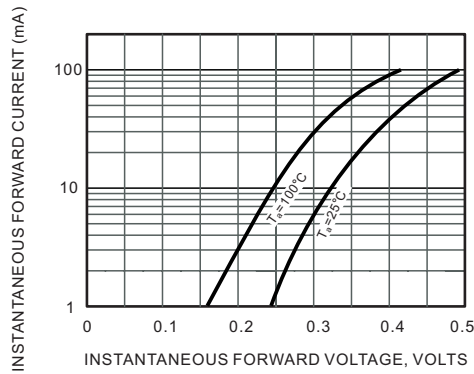


Fig.3 Typical Junction Capacitance

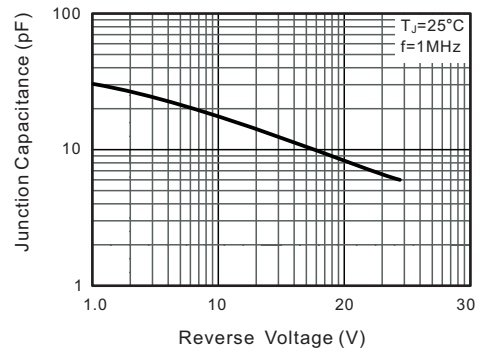


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

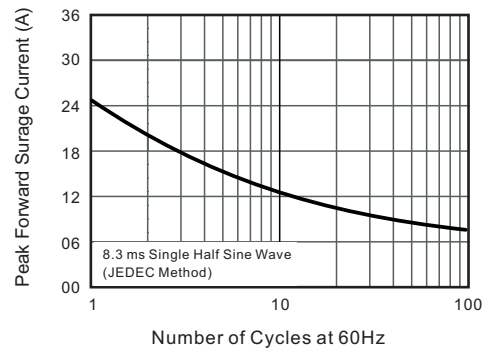
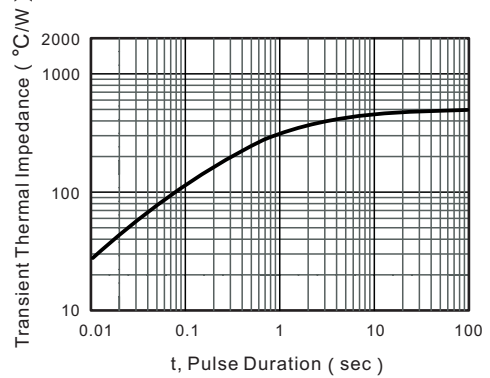


Fig.6 Typical Transient Thermal Impedance



Marking

Type number	Marking code
BAT46W	S9