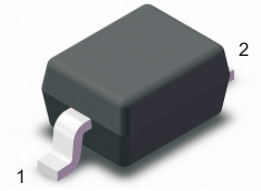


## SCHOTTKY BARRIER RECTIFIERS

### FEATURES

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



### MECHANICAL DATA

- Case: SOD-323
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 5.48mg / 0.00019oz



1 Cathode

2 Anode

Top View

Marking Code: S9

Simplified outline SOD-323 and symbol

### Maximum Ratings at 25 °C

Parameter	Symbols	BAT46WS	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	BAT46WS	Units
Reverse Breakdown Voltage at $I_R=100\mu A$ (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	$\mu A$
Diodes Capacitance	$C_T$	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

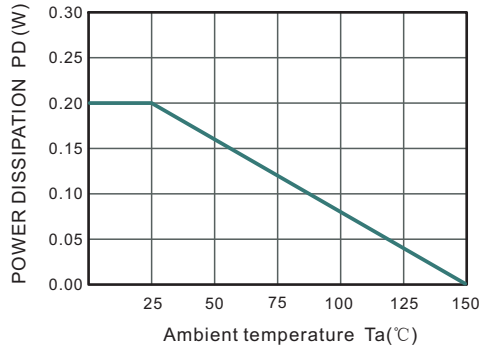


Fig.2 Typical Reverse Characteristics

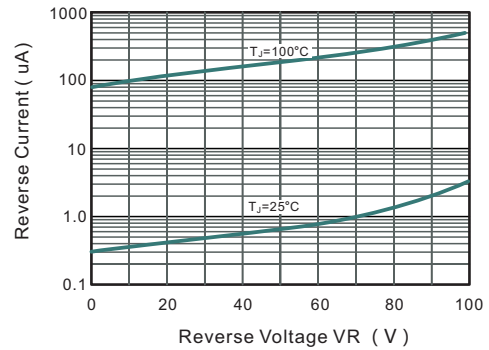


Fig.2 TYPICAL FORWARD VOLTAGE

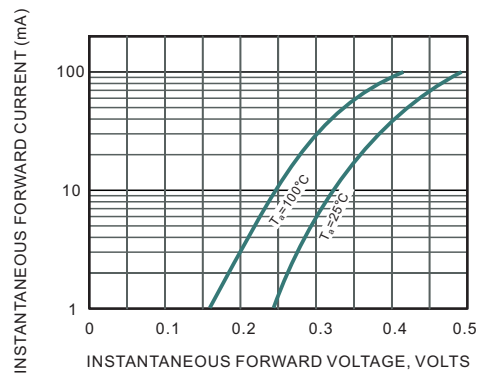


Fig.3 Typical Junction Capacitance

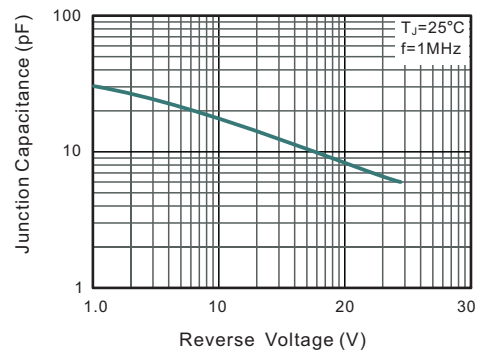


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

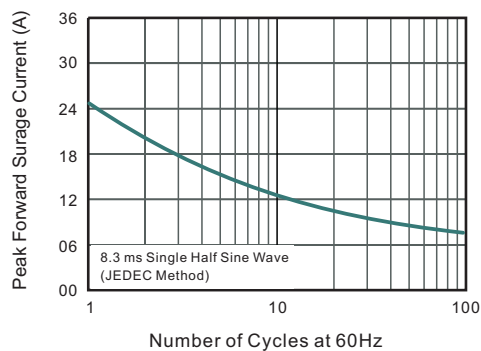
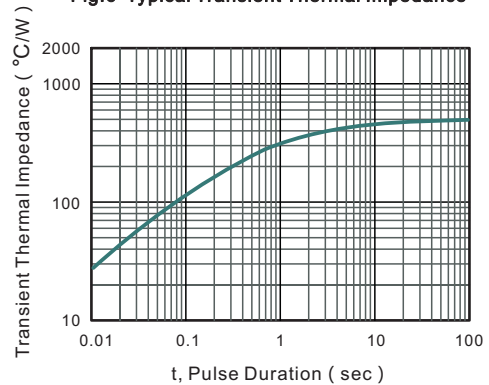


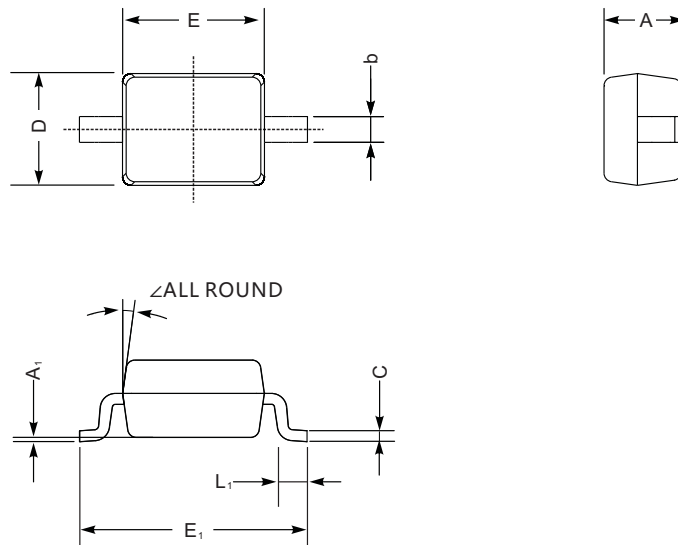
Fig.6 Typical Transient Thermal Impedance



## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

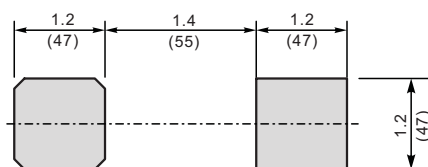
SOD-323



SOD-323 mechanical data

UNIT		A	C	D	E	E <sub>1</sub>	b	L <sub>1</sub>	A <sub>1</sub>	∠
mm	max	1.1	0.15	1.4	1.8	2.75	0.4	0.45	0.2	9°
	min	0.8	0.08	1.2	1.4	2.55	0.25	0.2	—	
mil	max	43	5.9	55	70	108	16	16	8	
	min	32	3.1	47	63	100	9.8	7.9	—	

### The recommended mounting pad size



Unit:  $\frac{\text{mm}}{\text{mil}}$

### Marking

Type number	Marking code
BAT46WS	S9