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Product data sheet

SOD-' 23

BAT46WG SCHOTTKY BARRIER DIODE



FEATURES

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

Maximum Ratings @Ta=25°C

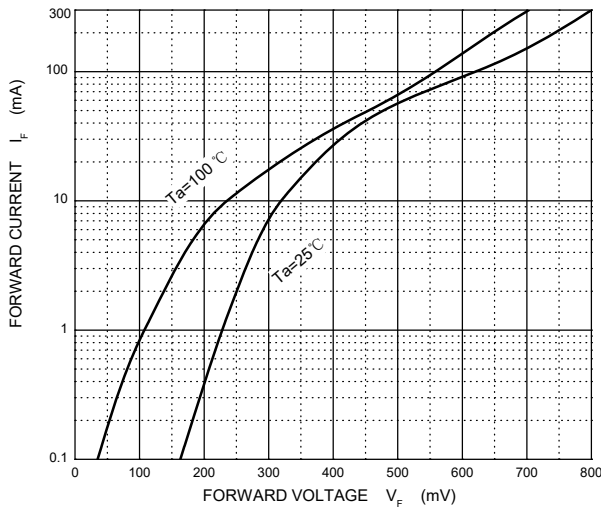
Parameter	Symbol	Limit	Unit
Peak repetitive peak reverse voltage	V_{RRM}	100	V
Working peak reverse voltage	V_{RWM}		
Forward continuous current	I_F	150	mA
Repetitive peak forward current (Note 1) @ $t_p < 1.0s$, Duty Cycle < 50%	I_{FRM}	350	mA
Non-repetitive Peak Forward surge current @ $t = 8.3ms$	I_{FSM}	750	mA
Power dissipation	P_D	200	mW
Thermal resistance junction to ambient air	$R_{\theta JA}$	500	°C/W
Operating Junction Temperature Range	T_j	-40 ~ +125	°C
Storage Temperature Range	T_{STG}	-55 ~ +150	°C

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

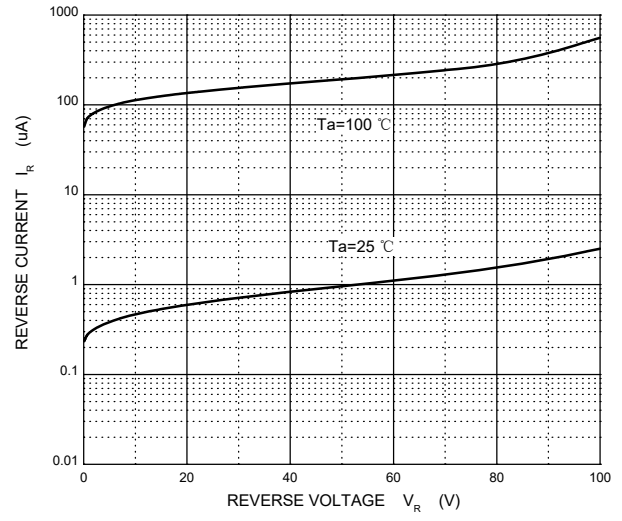
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage(Note 2)	V_R	$I_R = 100\mu A$	100			V
Reverse voltage leakage current	I_R	$V_{R1} = 1.5V$			0.3	μA
		$V_{R2} = 10V$			0.5	
		$V_{R3} = 50V$			1	
		$V_{R4} = 75V$			2	
Forward voltage(Note 2)	V_F	$I_{F1} = 0.1mA$			0.25	V
		$I_{F2} = 10mA$			0.45	
		$I_{F3} = 250mA$			1	
Diode capacitance	C_T	$V_R = 0, f = 1MHz$		20		pF
		$V_R = 1V, f = 1MHz$		12		

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

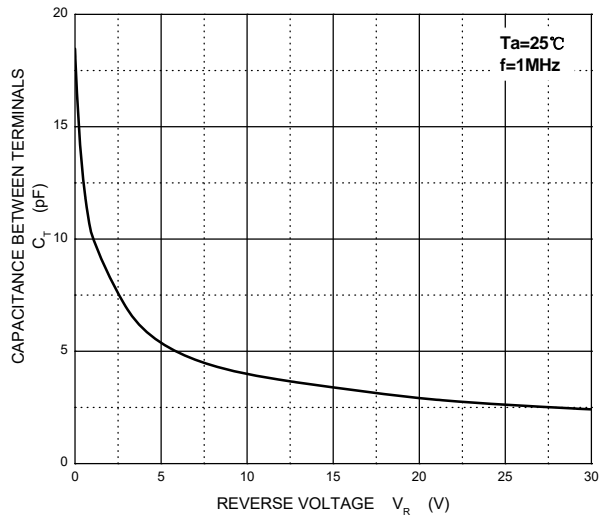
Forward Characteristics



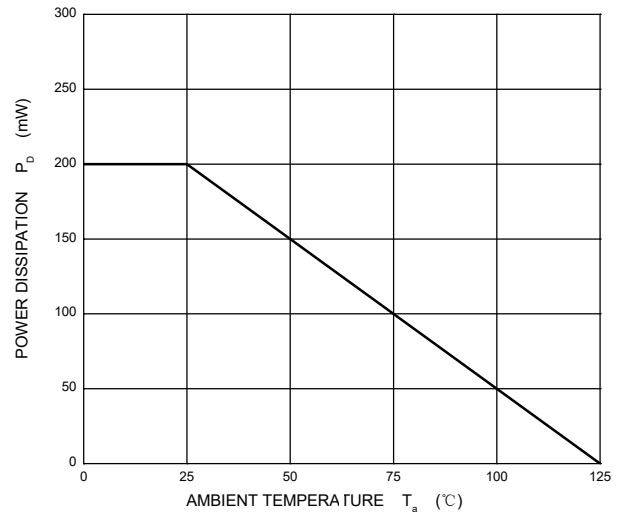
Reverse Characteristics



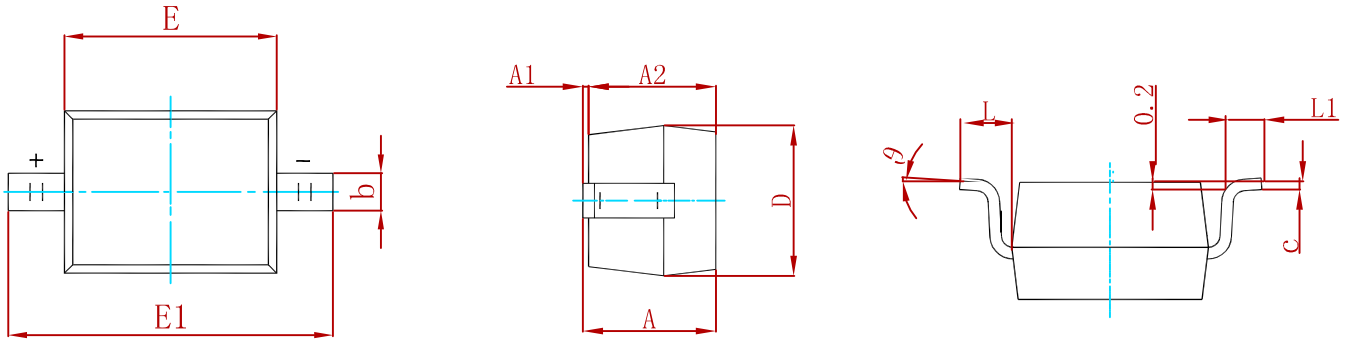
Capacitance Characteristics



Power Derating Curve

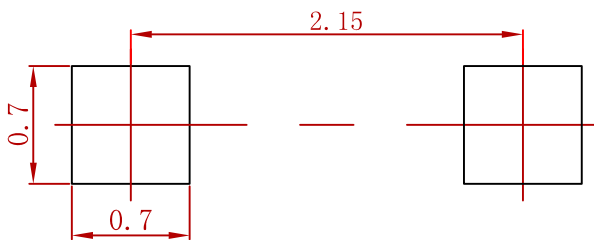


PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A		1.000		0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.550	2.750	0.100	0.108
L	0.475 REF.		0.019 REF.	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

Suggested Pad Layout



- Note:**
1. Controlling dimension: in millimeters.
 2. General tolerance: ± 0.05 mm.
 3. The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
BAT46WS	SOD-323	3000

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