BAT46ZFILM
SCHOTTKY BARRIER DIODE

Features

- Forward Continuous Current:I_F=150mA
- Power Dissipation of 500mW

SOD-123

Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
BAT46ZFILM	SOD-123	S9	3000

Maximum Ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	Limit	Unit
Peak repetitive peak reverse voltage Working peak reverse voltage	V_{RRM} V_{RWM}	100	V
Forward continuous current	I_F	150	mA
Repetitive peak forward current (Note 1) @ tp < 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	500	mW
Thermal resistance junction to ambient air	$R_{\theta JA}$	200	℃/W
Junction temperature	T_j	125	℃
Storage temperature	T_{STG}	-55~+150	℃

Electrical Characteristics(Ta=25°C unless otherwise specified)

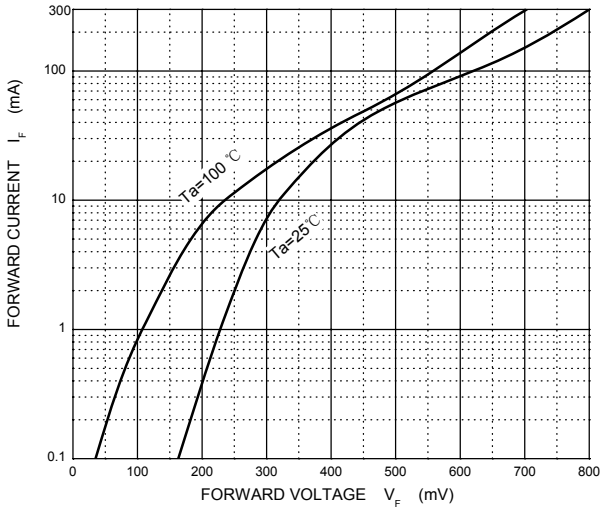
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage(Note 2)	V_R	I_R= 100μA	100			V
Reverse voltage leakage current	I_R	V_{R1}=1.5V			0.3	μA
		V_{R2}=10V			0.5	
		V_{R3}=50V			1	
		V_{R4}=75V			2	
Forward voltage(Note 2)	V_F	I_{F1}=0.1mA			0.25	V
		I_{F2}=10mA			0.45	
		I_{F3}=250mA			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.

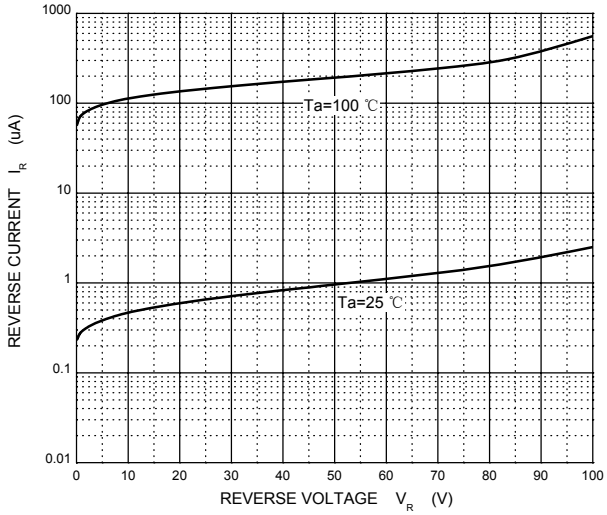
2. Short duration pulse test used to minimize self-heating effect.

Typical Characteristics

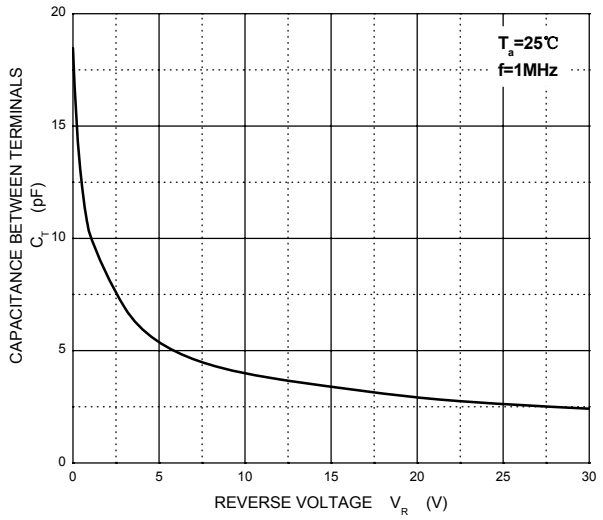
Forward Characteristics



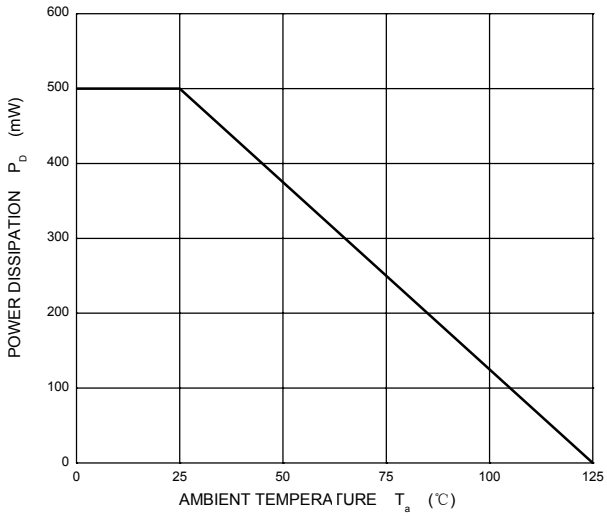
Reverse Characteristics



Capacitance Characteristics



Power Derating Curve



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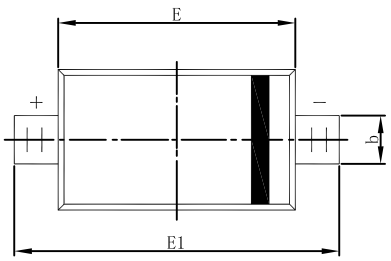
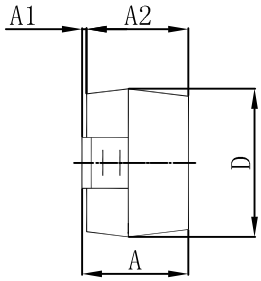
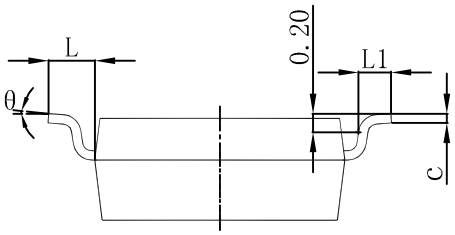
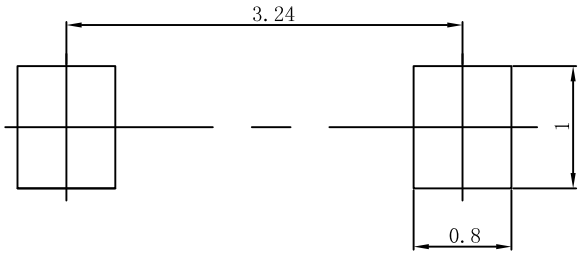






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF		0.020 REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°



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

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