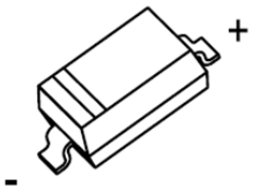
GOOD-ARK
SEMICONDUCTOR

GSBAT46W
Schottky Diode

Features

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



SOD-123

Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Repetitive Peak Reverse Voltage Working Peak Reverse Voltage	V_{RRM} V_{RWM}	100	V
Forward Continuous Current	I_F	150	mA
Repetitive **P**eak **F**orward **C**urrent (Note 1) @ tp < 1.0s, Duty Cycle < 50%	I_{FRM}	350	mA
Non-Repetitive Peak Forward **S**urge **C**urrent @ t = 8.3ms	I_{FSM}	750	mA
Power **D**issipation	P_D	500	mW
Thermal **R**esistance **J**unction to **A**mbient Air	$R_{\theta JA}$	200	°C/W
Junction Temperature	T_j	125	°C
Storage Temperature	T_{STG}	-55 to +150	°C

Electrical Characteristics (T_A=25°C unless otherwise noted)

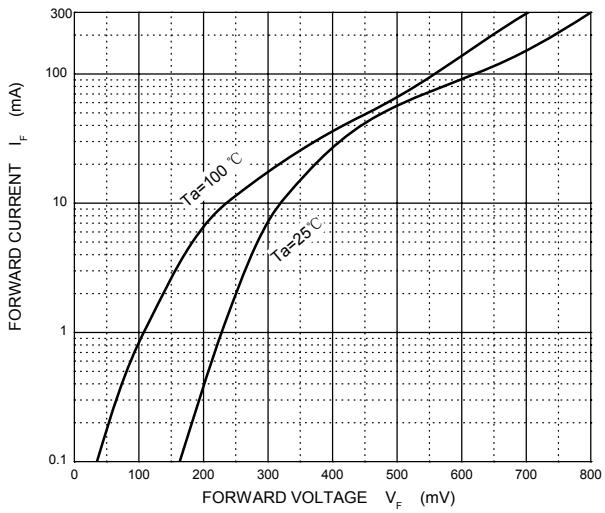
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse Breakdown Voltage(Note 2)	V_R	I_R= 100μA	100	-	-	V
Reverse Voltage Leakage Current	I_R	V_{R1}=1.5V	-	-	0.3	μA
		V_{R2}=10V	-	-	0.5	
		V_{R3}=50V	-	-	1	
		V_{R4}=75V	-	-	2	
Forward Voltage(Note 2)	V_F	I_{F1}=0.1mA	-	-	0.25	V
		I_{F2}=10mA	-	-	0.45	
		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.

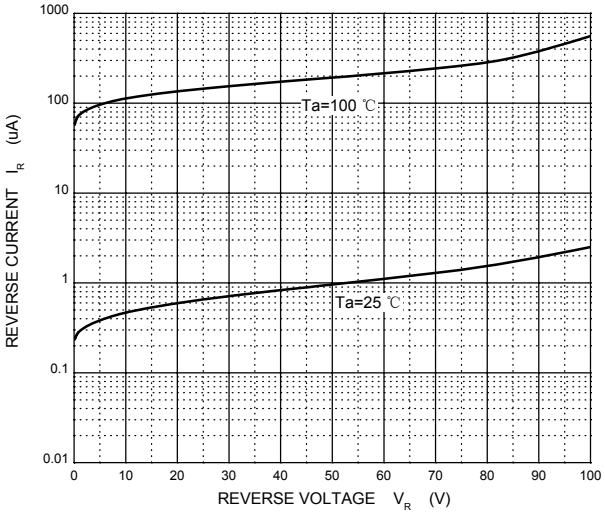
2. Short duration pulse test used to minimize self-heating effect.

Ratings and Characteristics Curves (T_A = 25°C unless otherwise noted)

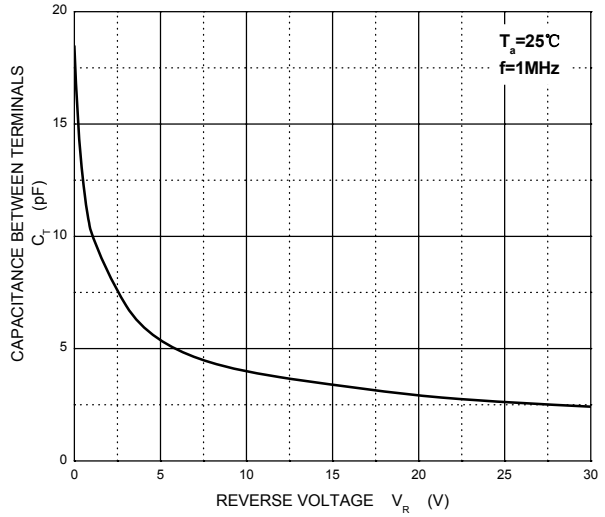
Forward Characteristics



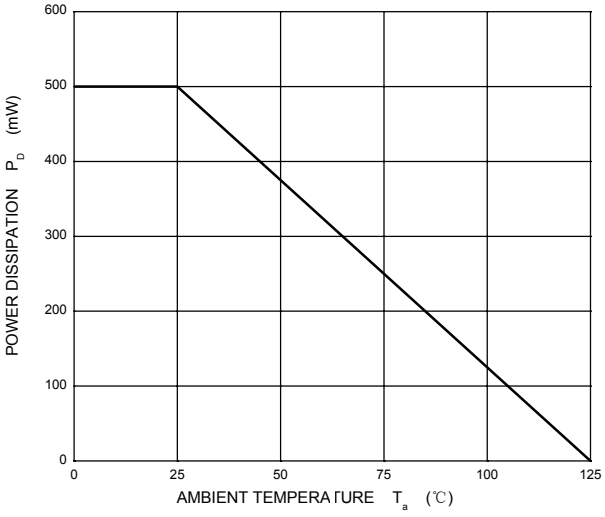
Reverse Characteristics



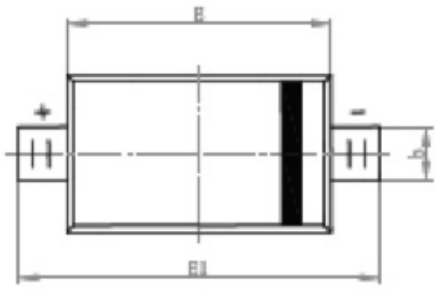
Capacitance Characteristics

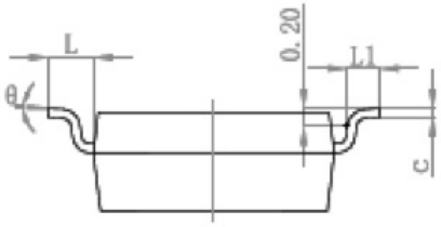


Power Derating Curve



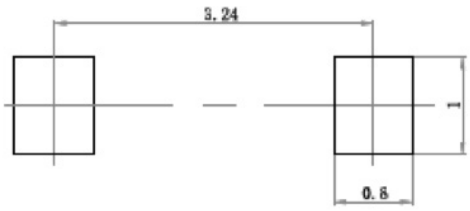
Package Outline Dimensions





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°

Suggested Pad Layout



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

Marking and Ordering Information

Device	Package	Carrier	Quantity	Marking
GSBAT46W	SOD-123	Tape & Reel	3,000pcs / Reel	S9