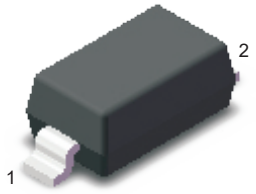
BAT46W
Schottky Barrier Diode

Features

- Low turn-on voltage
- High breakdown voltage
- Guarding for overvoltage protection

SOD-123



Marking Code : S9

Maximum Ratings and Electrical Characteristics

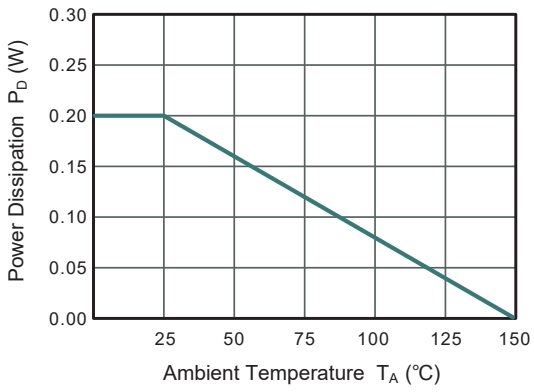
Ratings at 25℃ ambient temperature unless otherwise specified.

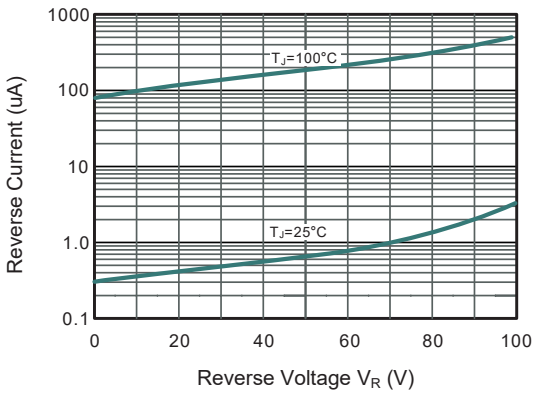
Parameter	Symbols	BAT46W	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Working Peak Reverse Voltage	V_{RWM}	100	V
Continuous Forward Current	I_F	150	mA
Repetitive Peak Forward Current Note1 at tp < 1.0s, Duty Cycle < 50%	I_{FRM}	350	mA
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	25	A
Maximum Instantaneous Forward Voltage Note2 at I_F=10 mA at I_F=250 mA	V_F	0.45 1.0	V
Reverse Breakdown Voltage Note2 at I_R= 100 uA	$V_{(BR)}$	100	V
Maximum DC Reverse Current at Rated DC Blocking Voltage at V_R=1.5 V at V_R=10 V at V_R=50 V at V_R=75 V	I_R	0.3 0.5 1 2	μA
Diodes Capacitance at V_R=0,f=1MHz at V_R=1V,f=1MHz	C_T	20 12	pF
Maximum Power Dissipation	P_D	200	mW
Typical Thermal Resistance	$R_{\theta JA}$	500	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

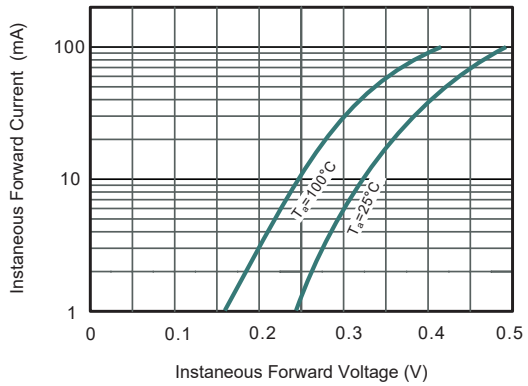
Note:

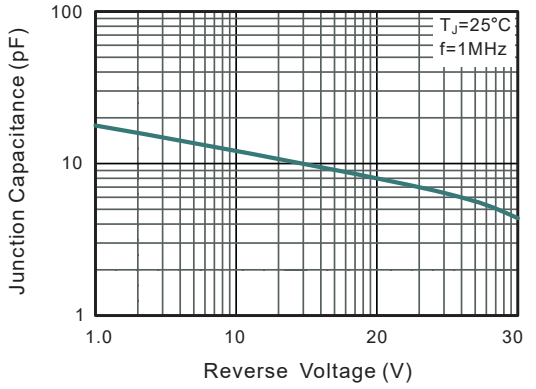
1. Part mounted on FR-4 board with recommended pad layout.
2. Short duration pulse test used to minimize self-heating effect.

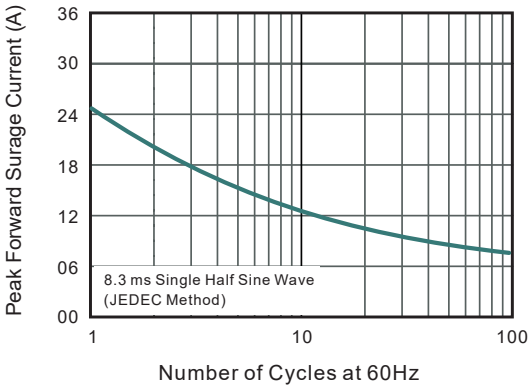
Typical Characteristic Curves

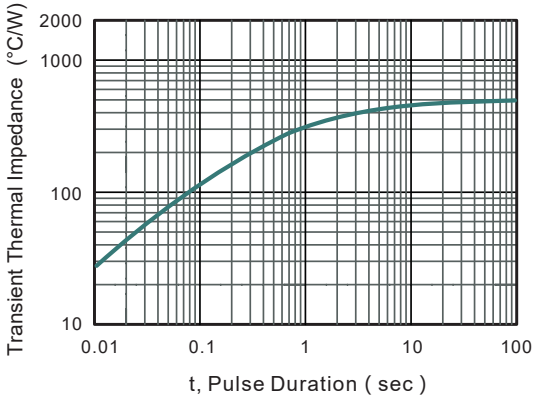








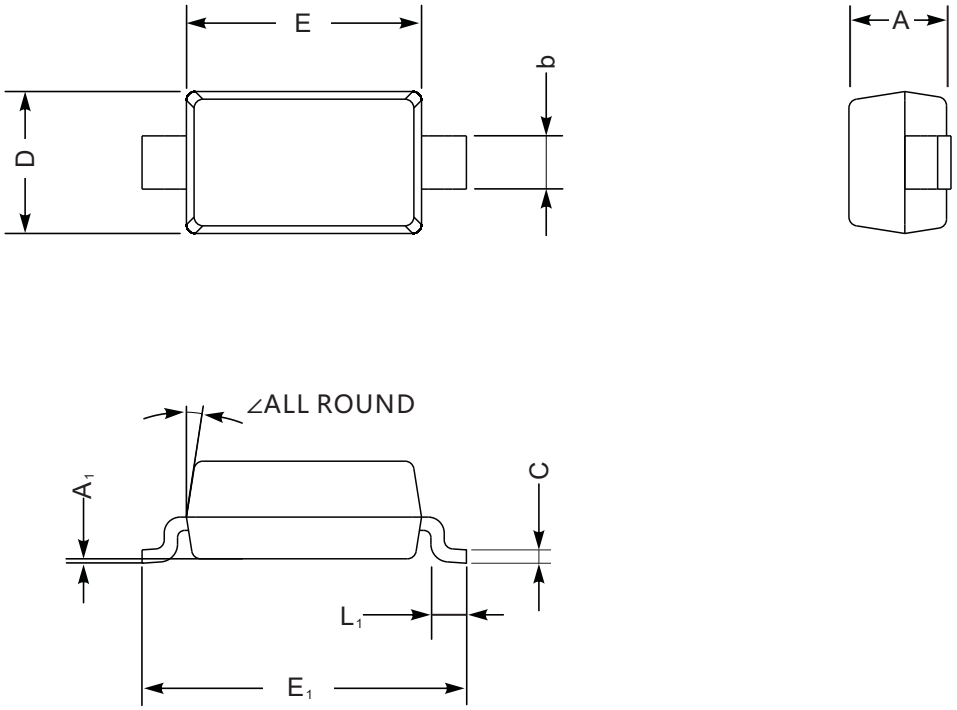




Package Outline

SOD-123

Dimensions in mm



SOD-123 mechanical data

UNIT		A	C	D	E	E_1	L_1	b	A_1	∠
mm	max	1.3	0.22	1.8	2.8	3.9	0.45	0.7	0.2	9°
	min	0.9	0.09	1.5	2.5	3.6	0.25	0.5	—	
mil	max	51	8.7	71	110	154	18	28	8	
	min	35	3.5	59	98	142	10	20	—	