

## SCHOTTKY BARRIER RECTIFIERS

### FEATURES

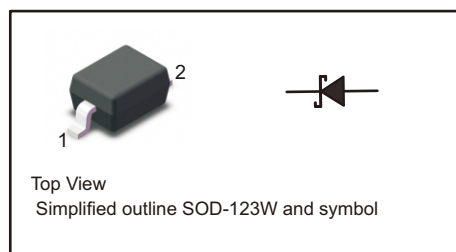
- Low Forward Voltage Drop
- Fast Switching Time
- Surface Mount Package Ideally Suited for Automated Insertion
- Lead, Halogen and Antimony Free, RoHS Compliant "Green" Device

### MECHANICAL DATA

- Case: SOD-123W
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 16mg/0.00056oz

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbols	BAS40WA	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	40	V
RMS Reverse Voltage	$V_{R(RMS)}$	28	V
Forward Continuous Current	$I_F$	0.2	A
Non-Repetitive Peak Forward Surge Current @t = 8.3ms	$I_{FSM}$	0.6	A
Power dissipation	$P_D$	200	mW
Reverse Breakdown Voltage	$V_{BR}$ $I_R = 10\mu A$	40	V
Forward Voltage (NOTE 2)	$V_F$ $I_F = 1.0mA$ $I_F = 10mA$ $I_F = 40mA$	0.38 0.50 1.0	V
Peak Reverse Current	$I_R$ $V_{R1} = 30V, T_j = 25^\circ C$	0.2	$\mu A$
Typical Junction Capacitance	$C_T$ $V_R = 0V, f = 1MHz$	5.0	pF
Reverse Recovery Time	$t_{rr}$ $I_F = I_R = 10mA,$ $I_{rr} = 0.1 \times I_R,$ $R_L = 100\Omega$	5	ns
Thermal Resistance, Junction to Ambient Air (NOTE 1)	$R_{\theta JA}$	500	$^\circ C/W$
Junction Temperature	$T_j$	125	$^\circ C$
Storage Temperature	$T_{stg}$	-55 ~ +150	$^\circ C$

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 Forward Current Derating Curve

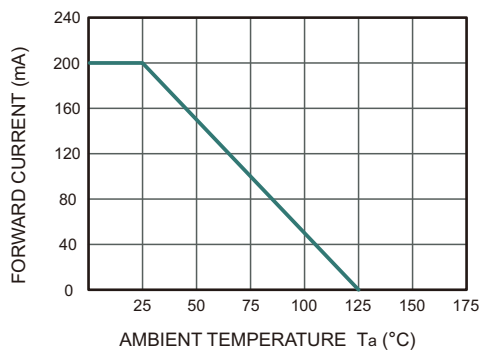


Fig.2 Typical Instaneous Reverse Characteristics

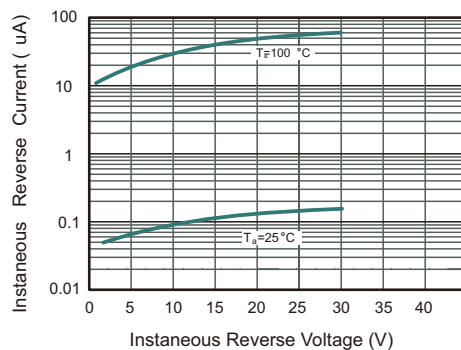


Fig.3 Typical Forward Characteristic

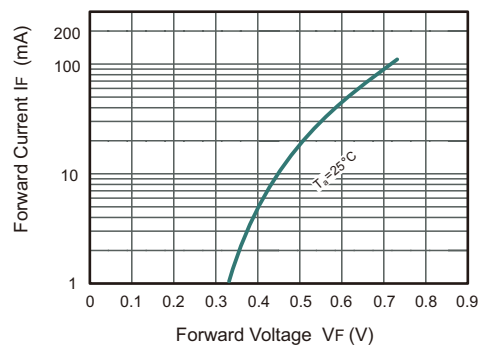
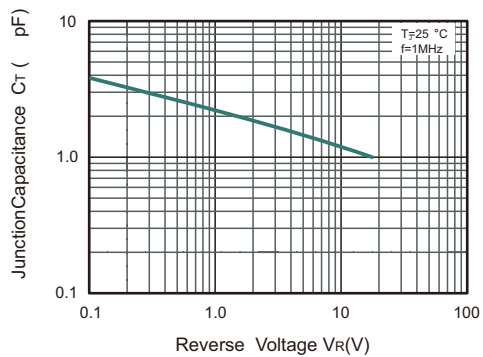


Fig.4 Typical Junction Capacitance

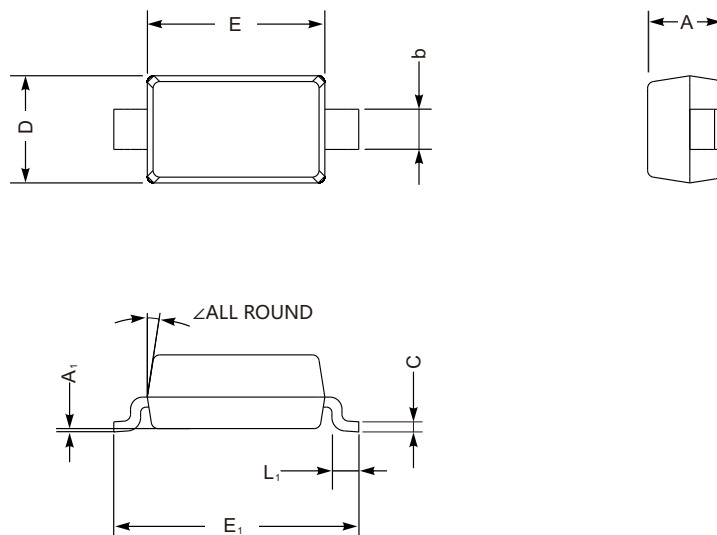




PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

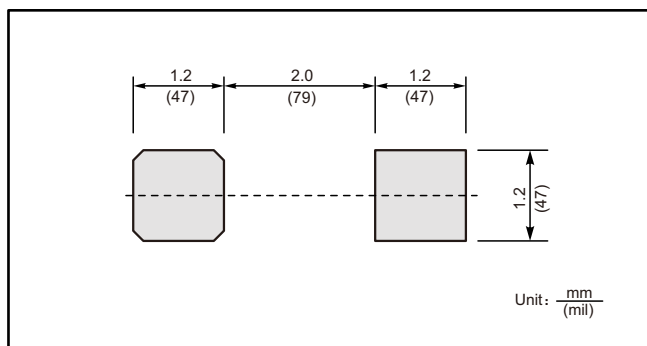
SOD-123W



SOD-123W mechanical data

UNIT		A	C	D	E	E <sub>1</sub>	L <sub>1</sub>	b	A <sub>1</sub>	∠
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	—	

The recommended mounting pad size



Marking

Type number	Marking code
BAS40WA	40



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