

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-323
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 5.48mg / 0.00019oz



Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbols	BAS40WS	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 $I_R = 10\mu A$	V_{BR}	40	V
Forward Voltage (NOTE 2) $I_F = 1.0mA$ $I_F = 10mA$ $I_F = 40mA$	V_F	0.38 0.50 1.0	V
Peak Reverse Current $V_R = 30V, T_j = 25^\circ C$	I_R	0.2	μA
Typical Junction Capacitance $V_R = 0V, f = 1MHz$	C_T	5.0	pF
Reverse Recovery Time $I_F = I_R = 10mA$, $I_{rr} = 0.1 \times I_R$, $R_L = 100\Omega$	t_{rr}	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

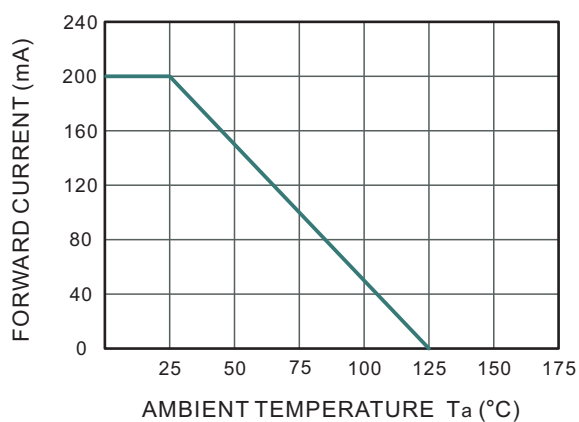


Fig.2 Typical Instantaneous Reverse Characteristics

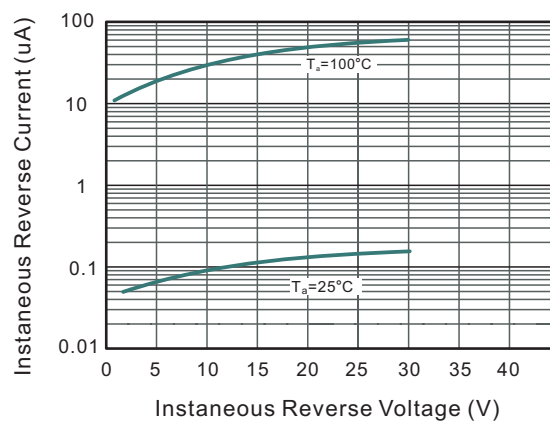


Fig.3 Typical Forward Characteristic

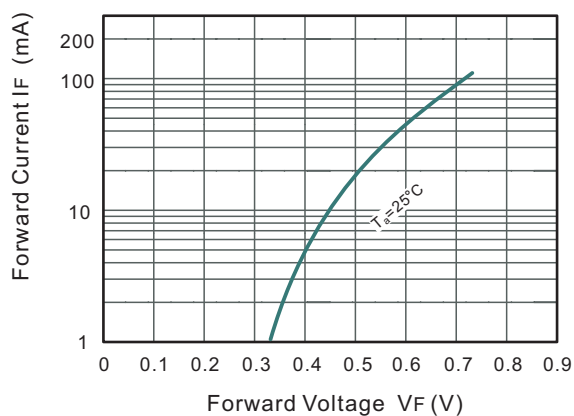
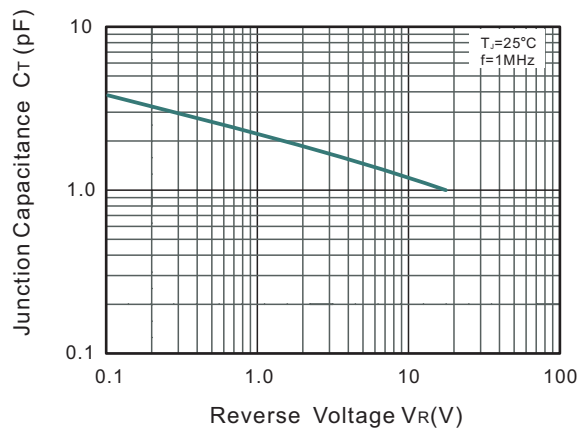
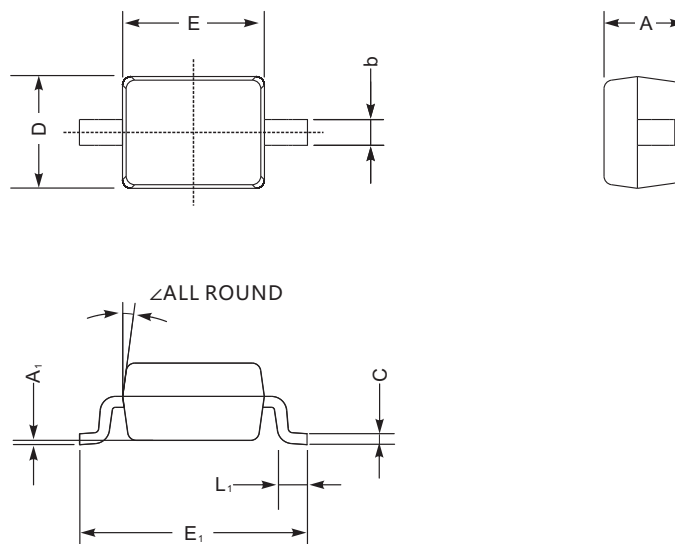


Fig.4 Typical Junction Capacitance



PACKAGE OUTLINE

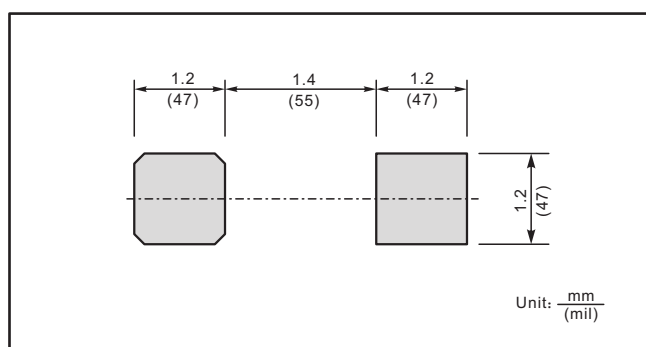
Plastic surface mounted package; 2 leads



SOD-323 mechanical data

UNIT		A	C	D	E	E ₁	b	L ₁	A ₁	∠
mm	max	1.1	0.15	1.4	1.8	2.75	0.4	0.45	0.2	9°
	min	0.8	0.08	1.2	1.4	2.55	0.25	0.2	—	
mil	max	43	5.9	55	70	108	16	16	8	
	min	32	3.1	47	55	100	9.8	7.9	—	

The recommended mounting pad size



Marking

Type number	Marking code
BAS40WS	43