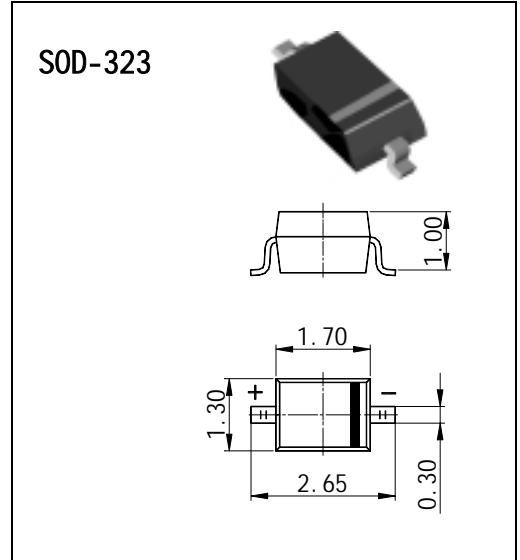




## SOD-323 Plastic-Encapsulate Diode

- Low Turn-on Voltage
- Fast Switching
- PN Junction Guard Ring for Transient and ESD Protection



### Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	BAS40	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	40	V
Forward Continuous Current (Note 1)	$I_{FM}$	200	mA
Power Dissipation (Note 1)	$P_d$	350	mW
Forward Surge Current (Note 1) @ $t < 1.0\text{s}$	$I_{FSM}$	600	mA
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	357	$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_J$	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to +150	$^\circ\text{C}$

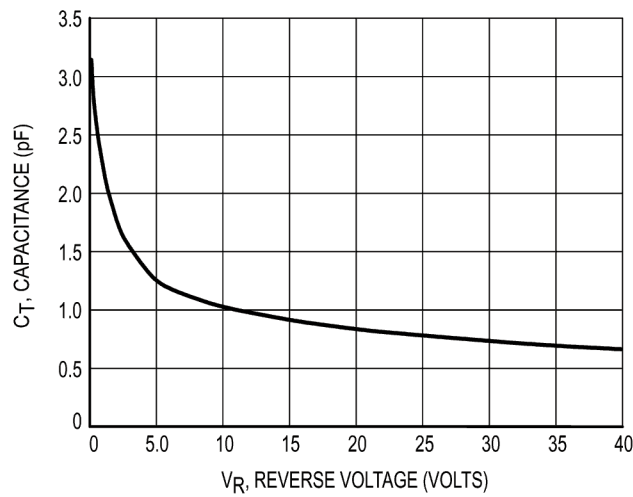
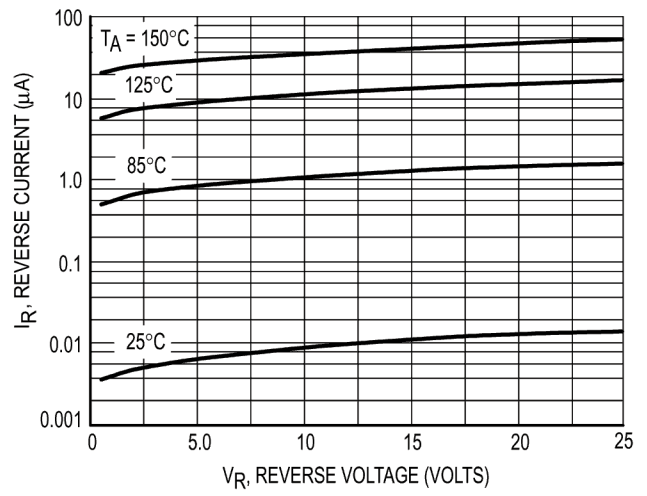
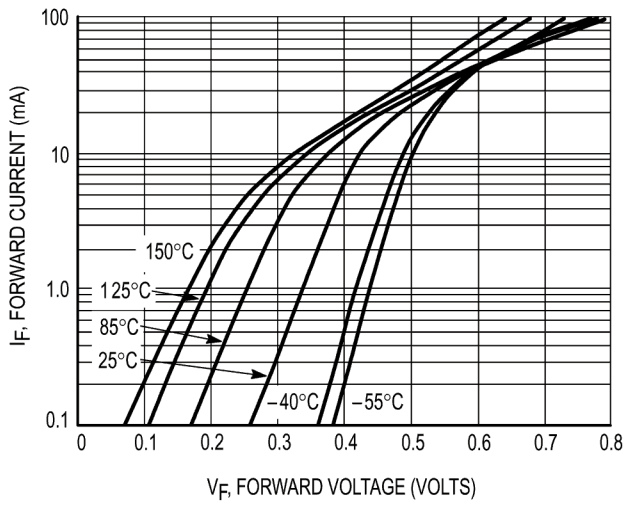
### Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage	$V_{(BR)R}$	40	—	—	V	$I_R = 10\mu\text{A}$
Forward Voltage	$V_F$	—	—	380 1000	mV	$t_p < 300\mu\text{s}$ , $I_F = 1.0\text{mA}$ $t_p < 300\mu\text{s}$ , $I_F = 40\text{mA}$
Reverse Leakage Current	$I_R$	—	20	200	nA	$t_p < 300\mu\text{s}$ , $V_R = 30\text{V}$
Junction Capacitance	$C_j$	—	4.0	5.0	pF	$V_R = 0\text{V}$ , $f = 1.0\text{MHz}$
Reverse Recovery Time	$t_{rr}$	—	—	5.0	ns	$I_F = I_R = 10\text{mA}$ to $I_R = 1.0\text{mA}$ , $R_L = 100\Omega$

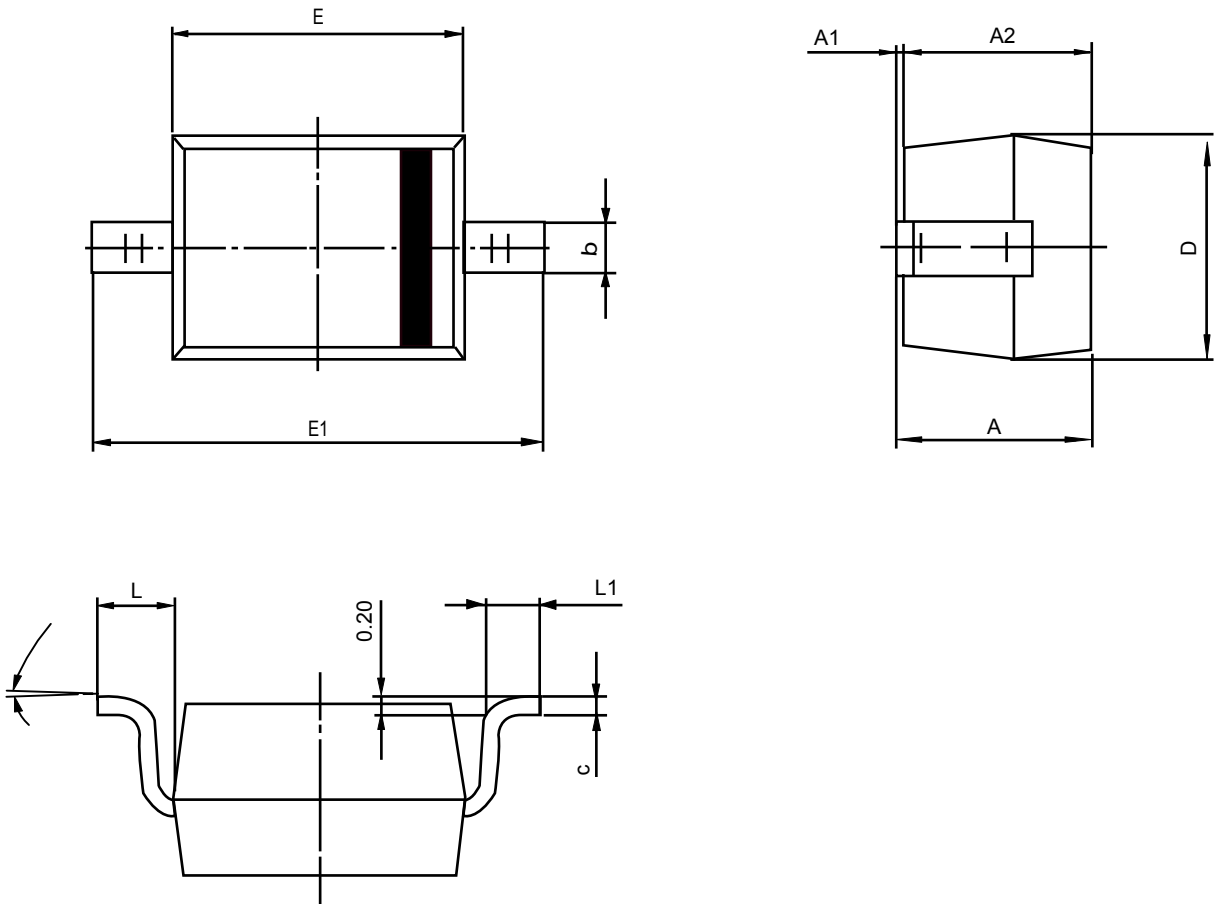
Notes: 1. Valid Provided that terminals are kept at ambient temperature.

# Typical Characteristics

# BAS40WS



## SOD-323 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
<b>A</b>	1.050	1.250	0.041	0.049
<b>A1</b>	0.000	0.100	0.000	0.004
<b>A2</b>	1.050	1.150	0.041	0.045
<b>b</b>	0.200	0.400	0.008	0.016
<b>c</b>	0.080	0.150	0.003	0.006
<b>D</b>	1.200	1.400	0.047	0.055
<b>E</b>	1.600	1.800	0.063	0.071
<b>E1</b>	2.500	2.800	0.098	0.110
<b>L</b>	0.475REF		0.019REF	
<b>L1</b>	0.250	0.450	0.010	0.018
$\theta$	0°	8°	0°	8°