



SOD-323 Plastic-Encapsulate Diode

BAS70WS

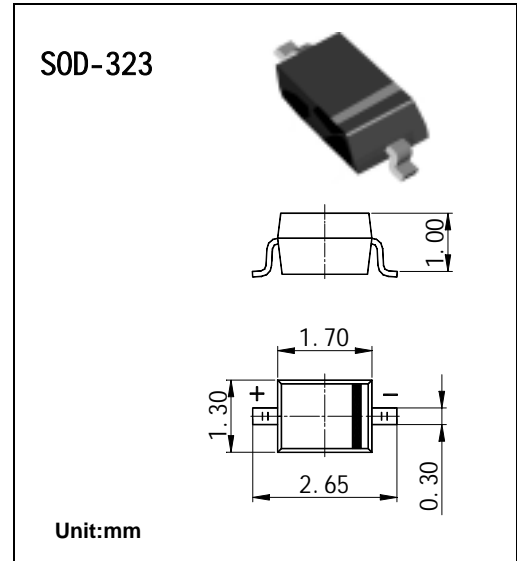
SCHOTTKY DIODE

Features

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

Marking:

BAS70WS:K73



Maximum Ratings and Electrical Characteristics, Single Diode @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	BAS70	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	70	V
RMS Reverse Voltage	$V_{R(RMS)}$	49	V
Forward Continuous Current (Note 1)	I_F	70	mA
Non-Repetitive Peak Forward Surge Current @ $t_p < 1.0\text{s}$	I_{FSM}	100	mA
Power Dissipation (Note 1)	P_d	200	mW
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{\theta JA}$	625	K/W
Operating Junction Temperature Range	T_j	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150	$^\circ\text{C}$

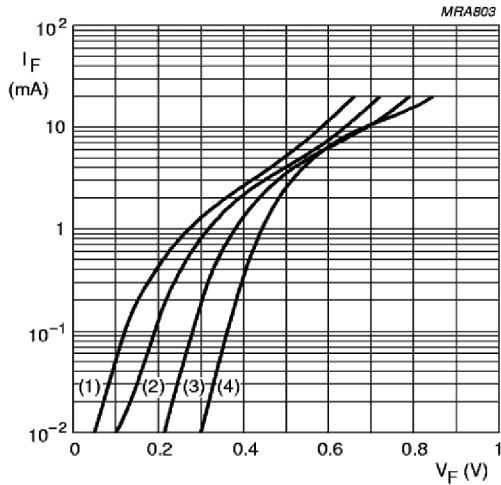
Electrical Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	$V_{(BR)R}$	70		V	$I_R = 10\mu\text{A}$
Forward Voltage	V_F	—	410 1000	mV	$t_p < 300\mu\text{s}$, $I_F = 1.0\text{mA}$ $t_p < 300\mu\text{s}$, $I_F = 15\text{mA}$
Peak Reverse Current	I_{RM}	—	100	nA	$t_p < 300\mu\text{s}$, $V_R = 50\text{V}$
Junction Capacitance	C_j	—	2.0	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.
2. Test period $< 3000\mu\text{s}$.

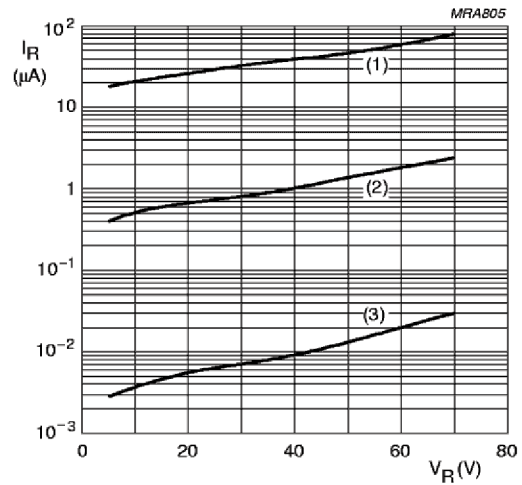
Typical Characteristics

BAS70WS



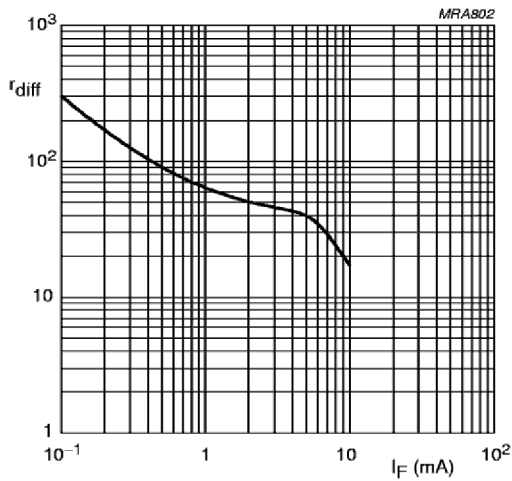
- (1) $T_{amb} = 125\text{ }^{\circ}\text{C}$.
- (2) $T_{amb} = 85\text{ }^{\circ}\text{C}$.
- (3) $T_{amb} = 25\text{ }^{\circ}\text{C}$.
- (4) $T_{amb} = -40\text{ }^{\circ}\text{C}$.

Forward current as a function of forward voltage; typical values.



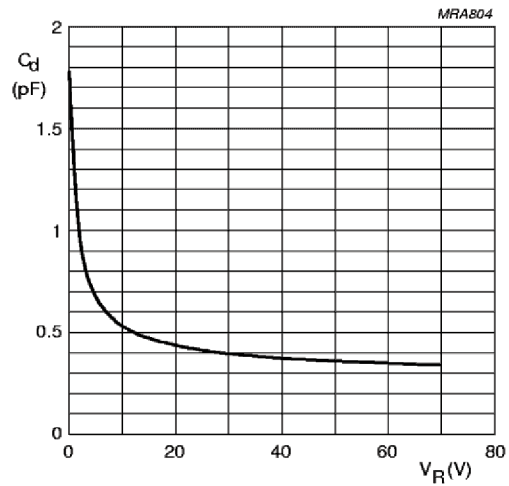
- (1) $T_{amb} = 125\text{ }^{\circ}\text{C}$.
- (2) $T_{amb} = 85\text{ }^{\circ}\text{C}$.
- (3) $T_{amb} = 25\text{ }^{\circ}\text{C}$.

Reverse current as a function of reverse voltage; typical values.



$f = 10\text{ kHz}$.

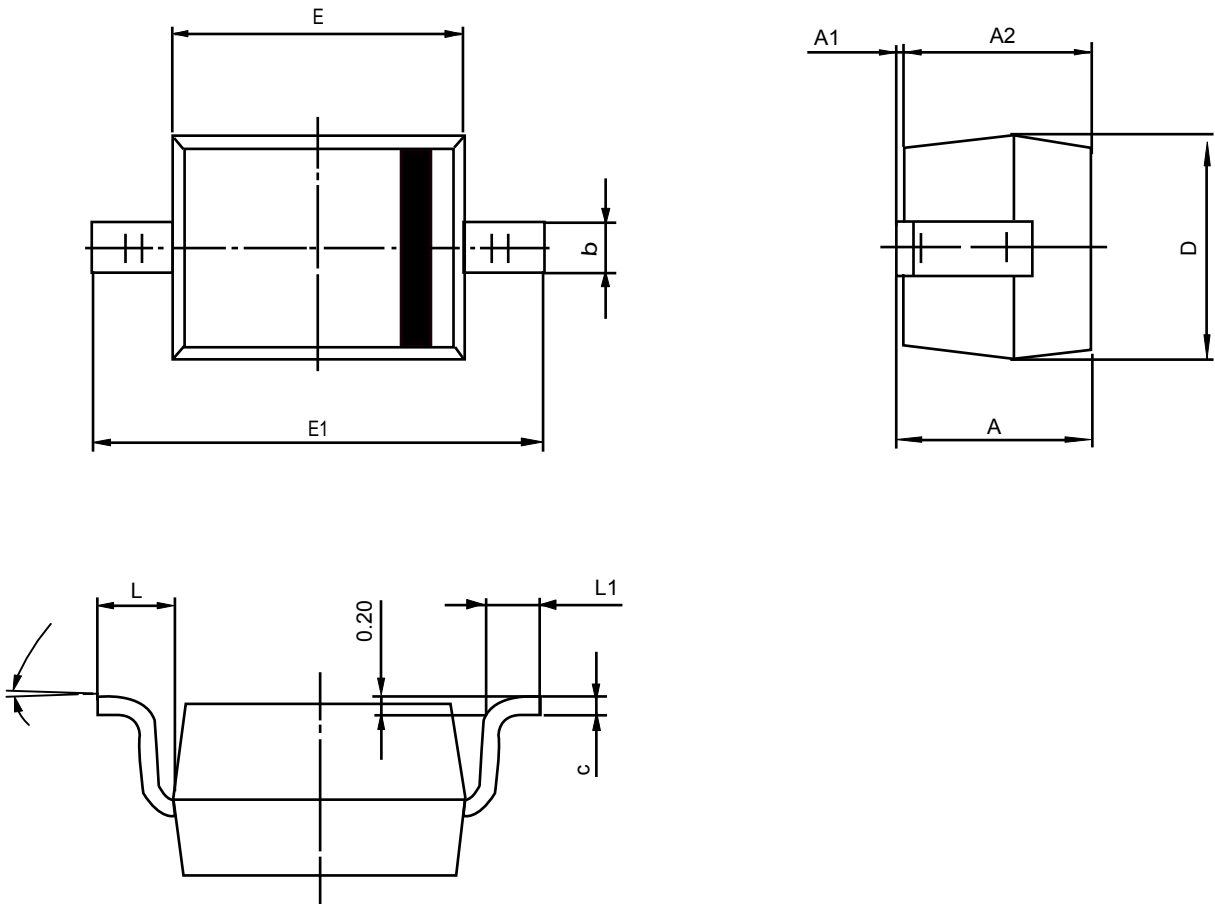
Differential forward resistance as a function of forward current; typical values.



$f = 1\text{ MHz}$; $T_{amb} = 25\text{ }^{\circ}\text{C}$.

Diode capacitance as a function of reverse voltage; typical values.

SOD-323 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	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.500	2.800	0.098	0.110
L	0.475REF		0.019REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°