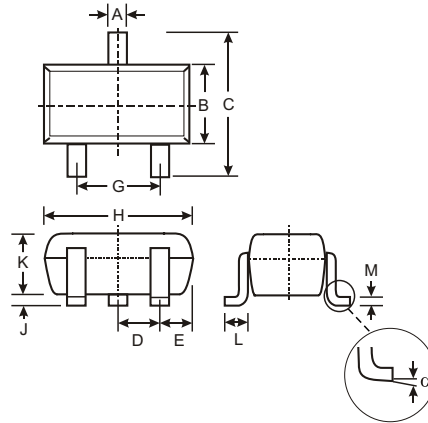


Features

- Low Turn-on Voltage
- Fast Switching
- PN Junction Guard Ring for Transient and ESD Protection
- Ultra-Small Surface Mount Package
- Also Available in Lead Free Version

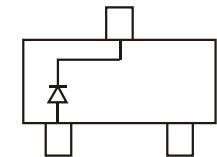
Mechanical Data

- Case: SOT-323, Molded Plastic
- Case Material - UL Flammability Rating Classification 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Solderable per MIL-STD-202, Method 208
- Also Available in Lead Free Plating (Matte Tin Finish). Please see Ordering Information, Note 4, on Page 3
- Polarity: See Diagrams Below
- Marking: See Diagrams Below & Page 3
- Approx. Weight: 0.006 grams

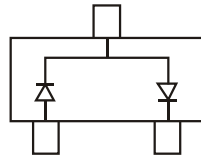


SOT-323		
Dim	Min	Max
A	0.25	0.40
B	1.15	1.35
C	2.00	2.20
D	0.65 Nominal	
E	0.30	0.40
G	1.20	1.40
H	1.80	2.20
J	0.0	0.10
K	0.90	1.00
L	0.25	0.40
M	0.10	0.18
α	0°	8°
All Dimensions in mm		

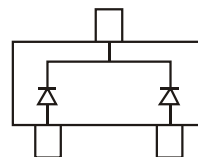
TOP VIEW



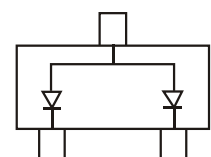
BAS70W Marking: K73



BAS70W-04 Marking: K74



BAS70W-05 Marking: K75



BAS70W-06 Marking: K76

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

Characteristic	Symbol	Value	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	$^\circ\text{C}/\text{W}$
Operating 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	—	—	$I_R = 10\mu\text{A}$
Forward Voltage (Note 2)	V_F	—	410 1000	mV	$t_p < 300\mu\text{s}$, $I_F = 1.0\text{mA}$ $t_p < 300\mu\text{s}$, $I_F = 15\text{mA}$
Reverse Current (Note 2)	I_R	—	100	nA	$t_p < 300\mu\text{s}$, $V_R = 50\text{V}$
Total Capacitance	C_T	—	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 $I_R = 1.0\text{mA}$, $I_{rr} = 0.1 \times I_R$, $R_L = 100\Omega$

- Notes:
1. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch; pad layout as shown on Diodes Inc. suggested pad layout document AP02001, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
 2. Short duration test pulse used to minimize self-heating effect.

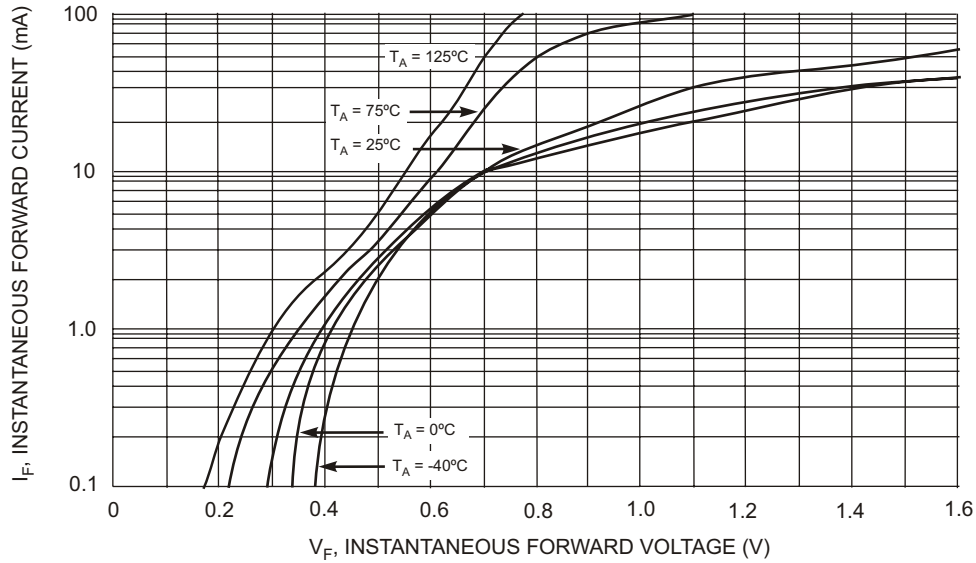


Fig. 1 Typical Forward Characteristics

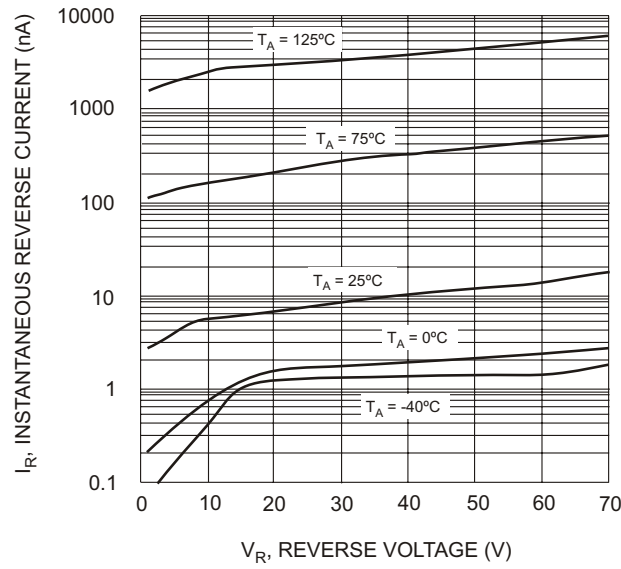


Fig. 2 Typical Reverse Characteristics

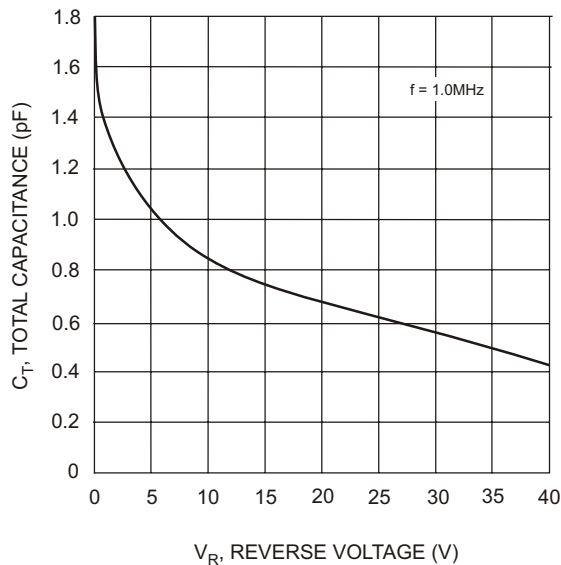


Fig. 3 Typical Capacitance

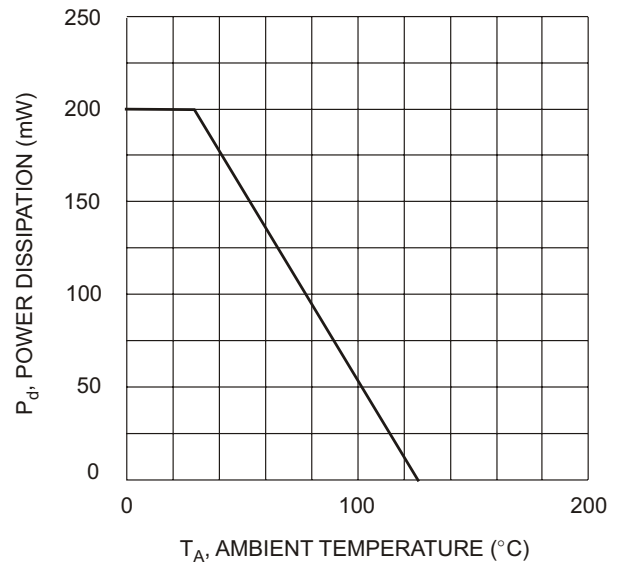


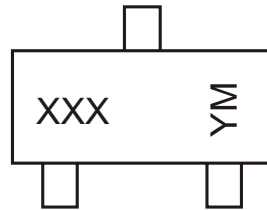
Fig. 4 Power Derating Curve, Total Package

Ordering Information (Note 3)

Device	Packaging	Shipping
BAS70W-7	SOT-323	3000/Tape & Reel
BAS70W-04-7	SOT-323	3000/Tape & Reel
BAS70W-05-7	SOT-323	3000/Tape & Reel
BAS70W-06-7	SOT-323	3000/Tape & Reel

- Notes: 3. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.
 4. For Lead Free version (with Lead Free terminal finish) part number, please add "-F" suffix to part number above.
 Example: BAS70W-06-7-F.

Marking Information



XXX = Product Type Marking Code (See Page 1)
 YM = Date Code Marking
 Y = Year ex: N = 2002
 M = Month ex: 9 = September

Date Code Key

Year	2002	2003	2004	2005	2006	2007	2008	2009
Code	N	P	R	S	T	U	V	W

Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D