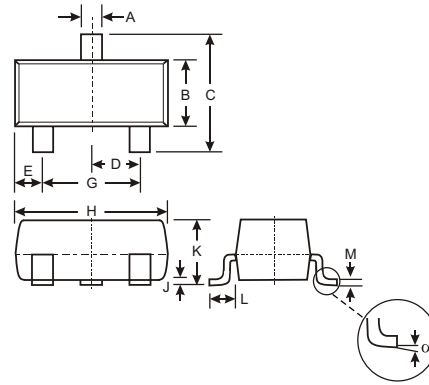


### Features

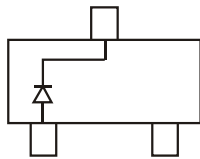
- Low Turn-on Voltage
- Fast Switching
- PN Junction Guard Ring for Transient and ESD Protection
- Also Available in Lead Free Version

### Mechanical Data

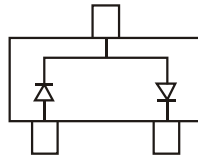
- Case: SOT-23, Molded Plastic
- Case material - UL Flammability Rating Classification 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Solderable per MIL-STD-202, Method 208
- Also Available in Lead Free Plating (Matte Tin Finish). Please see Ordering Information, Note 4, on Page 3
- Polarity: See Diagrams Below
- Weight: 0.008 grams (Approx.)
- Marking: See Diagrams Below & Page 3
- Ordering Information: See Page 3



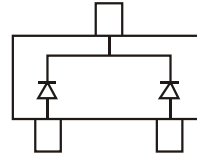
SOT-23		
Dim	Min	Max
A	0.37	0.51
B	1.20	1.40
C	2.30	2.50
D	0.89	1.03
E	0.45	0.60
G	1.78	2.05
H	2.80	3.00
J	0.013	0.10
K	0.903	1.10
L	0.45	0.61
M	0.085	0.180
α	0°	8°
All Dimensions in mm		



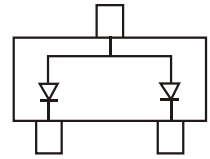
BAS70 Marking: K73, K7C



BAS70-04 Marking: K74, K7D



BAS70-05 Marking: K75, K7E



BAS70-06 Marking: K76, K7F

### Maximum Ratings and Electrical Characteristics, Single Diode @ T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V <sub>R(RM)</sub>	70	V
Working Peak Reverse Voltage	V <sub>R(WM)</sub>		
DC Blocking Voltage	V <sub>R</sub>		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	49	V
Forward Continuous Current (Note 1)	I <sub>F</sub>	70	mA
Non-Repetitive Peak Forward Surge Current @ t ≤ 1.0s	I <sub>FSM</sub>	100	mA
Power Dissipation (Note 1)	P <sub>d</sub>	200	mW
Thermal Resistance Junction to Ambient Air (Note 1)	R <sub>θJA</sub>	625	°C/W
Operating Junction Temperature Range	T <sub>j</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>STG</sub>	-65 to +150	°C

### Electrical Ratings @ T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	V <sub>(BR)R</sub>	70	—	V	I <sub>R</sub> = 10μA
Forward Voltage (Note 2)	V <sub>F</sub>	—	410 1000	mV	t <sub>p</sub> < 300μs, I <sub>F</sub> = 1.0mA t <sub>p</sub> < 300μs, I <sub>F</sub> = 15mA
Reverse Current (Note 2)	I <sub>R</sub>	—	100	nA	t <sub>p</sub> < 300μs, V <sub>R</sub> = 50V
Total Capacitance	C <sub>T</sub>	—	2.0	pF	V <sub>R</sub> = 0V, f = 1.0MHz
Reverse Recovery Time	t <sub>rr</sub>	—	5.0	ns	I <sub>F</sub> = I <sub>R</sub> = 10mA to I <sub>R</sub> = 1.0mA, R <sub>L</sub> = 100Ω

Notes: 1. Part mounted on FR-4 board with recommended pad layout, 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.

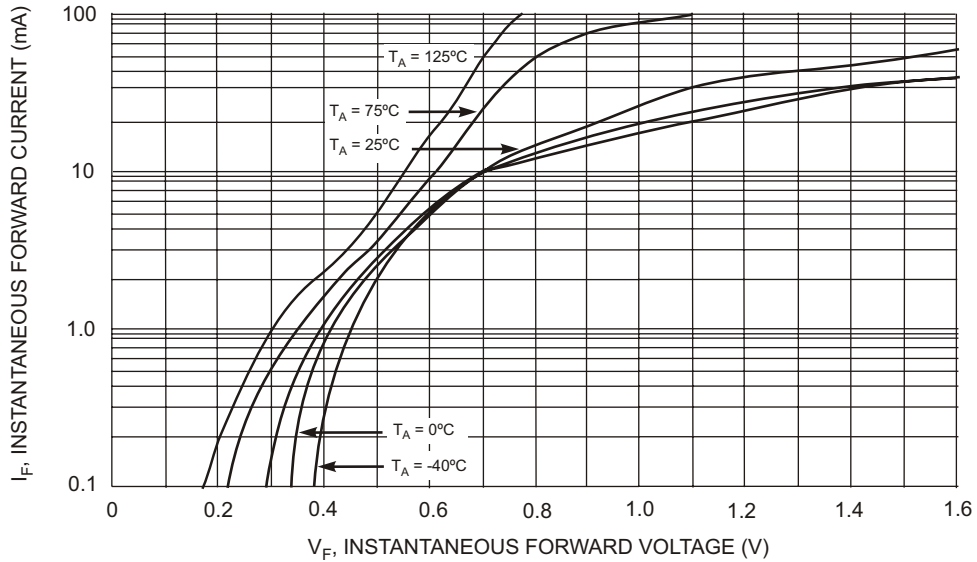


Fig. 1 Typical Forward Characteristics

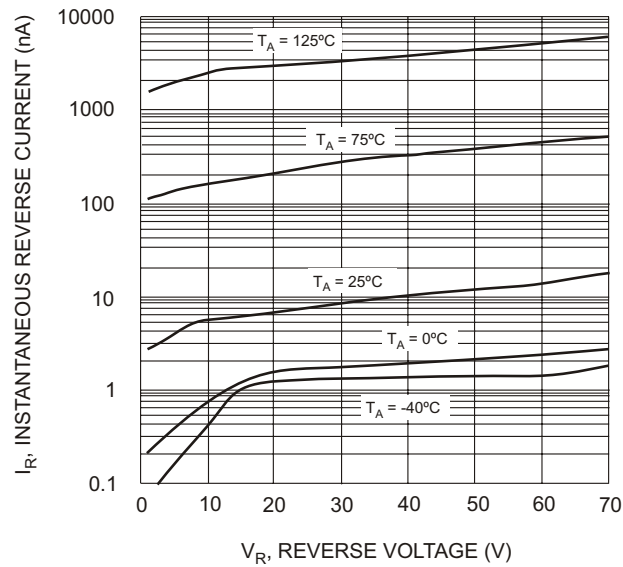


Fig. 2 Typical Reverse Characteristics

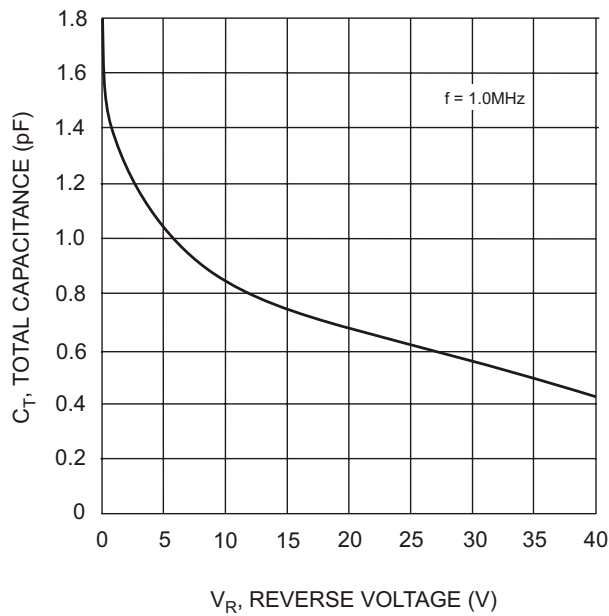


Fig. 3 Typical Capacitance

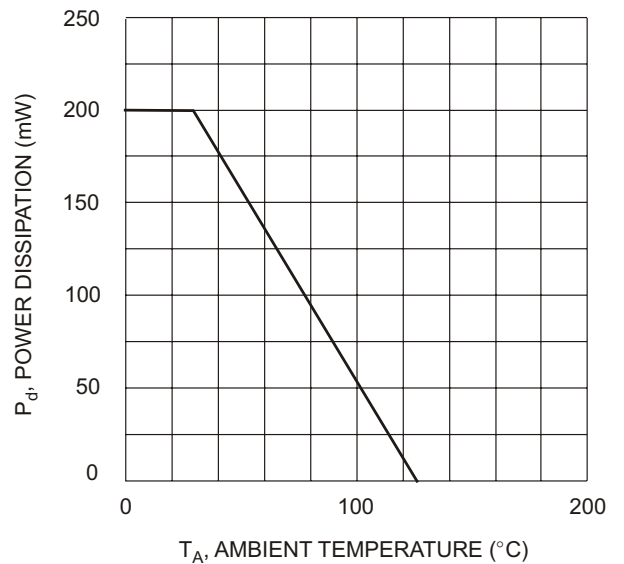


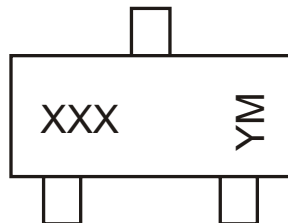
Fig. 4 Power Derating Curve, Total Package

**Ordering Information** (Note 3)

Device	Packaging	Shipping
BAS70-7	SOT-23	3000/Tape & Reel
BAS70-04-7	SOT-23	3000/Tape & Reel
BAS70-05-7	SOT-23	3000/Tape & Reel
BAS70-06-7	SOT-23	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: BAS70-06-7-F.

**Marking Information** (Note 3)



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	2001	2002	2003	2004	2005	2006	2007	2008	2009
Code	M	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