



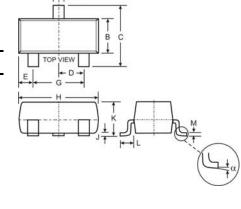
BAS70/ -04/ -05/ -06

Features

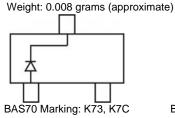
- Low Turn-on Voltage
- Fast Switching
- PN Junction Guard Ring for Transient and ESD Protection
- Lead Free/RoHS Compliant (Note 3)
- Qualified to AEC-Q101 Standards for High Reliability

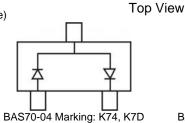
Mechanical Data

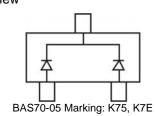
- Case: SOT-23
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Solderable per MIL-STD-202, Method
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- Polarity: See Diagrams Below
- Marking Information: See Page 3
- Ordering Information: See Page 3

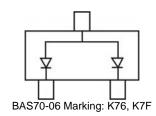


SOT-23								
Dim	Min	Max						
Α	0.37	0.51						
В	1.20	1.40						
С	2.30	2.50						
D	0.89	1.03						
E	0.45	0.60						
G	1.78	2.05						
Н	2.80	3.00						
J	0.013	0.10						
K	0.903	1.10						
L	0.45	0.61						
M	0.085	0.180						
α	0°	8°						
All Dimensions in mm								









Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit	
Peak Repetitive Reverse Voltage	V_{RRM}			
Working Peak Reverse Voltage	V_{RWM}	70	V	
DC Blocking Voltage	V_R			
RMS Reverse Voltage	$V_{R(RMS)}$	49	V	
Maximum Forward Continuous Current (Note 1)	I _{FM}	70	mA	
Non-Repetitive Peak Forward Surge Current @ t ≤ 1.0s	I _{FSM}	100	mA	
Power Dissipation (Note 1)	P_d	200	mW	
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{ heta JA}$	625	°C/W	
Operating Junction Temperature Range	Tj	-55 to +125	°C	
Storage Temperature Range	T _{STG}	-65 to +150	°C	

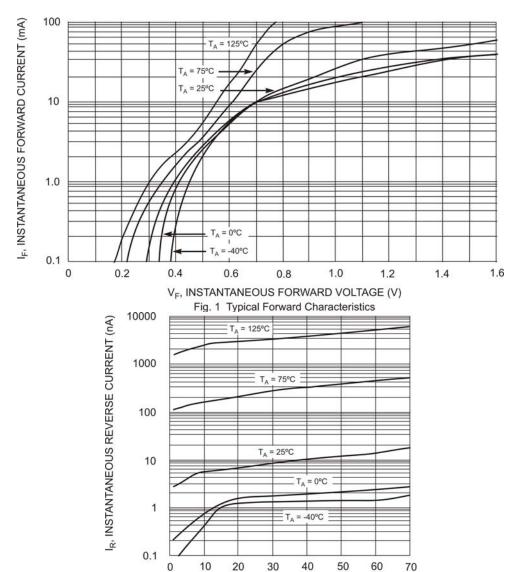
Electrical Characteristics @T_A = 25°C unless otherwise specified

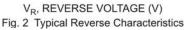
Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	$V_{(BR)R}$	70	_	V	$I_R = 10\mu A$
Forward Voltage	V _F	_	410 1000	mV	$t_p < 300 \mu s$, $I_F = 1.0 mA$ $t_p < 300 \mu s$, $I_F = 15 mA$
Reverse Current (Note 2)	I _R	_	100	nA	$t_p < 300 \mu s$, $V_R = 50 V$
Total Capacitance	Ст	_	2.0	pF	$V_R = 0V, f = 1.0MHz$
Reverse Recovery Time	t _{rr}	_	5.0	ns	$I_F = I_R = 10 \text{mA}$ to $I_R = 1.0 \text{mA}$, $R_L = 100 \Omega$

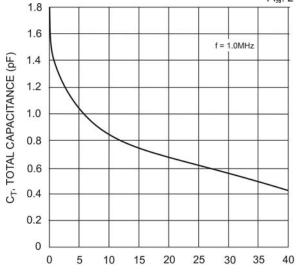
Part mounted on FR-4 board with recommended pad layout, which can be found on our website at http://www.diodes.com/datasheets/ap02001.pdf. Notes:

- Short duration pulse test used to minimize self-heating effect.
- 3. No purposefully added lead.

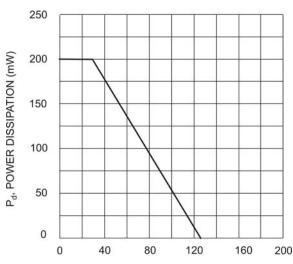








V_R, REVERSE VOLTAGE (V) Fig. 3 Typical Total Capacitance vs. Reverse Voltage



 ${\rm T_A}$, AMBIENT TEMPERATURE (°C) Fig. 4 Power Derating Curve, Total Package

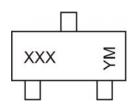


Ordering Information (Note 4)

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

4. For Packaging Details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Marking Information



XXX = Product Type Marking Code (See Page 1) YM = Date Code Marking Y = Year ex: T = 2006

M = Month ex: 9 = September

Date Code Key

Year	2001	2002	2003	2004	2005	2006	200	7 20	008 2	2009	2010	2011	2012
Code	М	N	Р	R	S	Т	U		V	W	X	Υ	Z
Month		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
(Code	1	2	3	4	5	6	7	8	9	0	N	D

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