



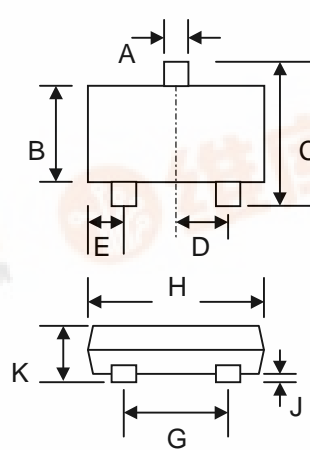
# BAS70W / AW / CW / SW



## SURFACE MOUNT SCHOTTKY BARRIER DIODE

### Features

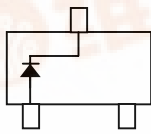
- Low Turn-on Voltage
- Fast Switching
- PN Junction Guard Ring for Transient and ESD Protection
- Designed for Surface Mount Application
- Plastic Material – UL Recognition Flammability Classification 94V-O



SOT-323		
Dim	Min	Max
A	0.30	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	—	0.10
K	0.90	1.10
L	0.25	—
M	0.05	0.15
All Dimensions in mm		

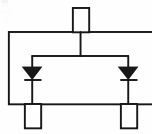
### Mechanical Data

- Case: SOT-323, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagrams Below
- Weight: 0.006 grams (approx.)
- Mounting Position: Any
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 5**



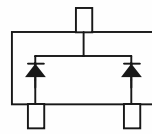
TOP VIEW

BAS70W Marking: A70



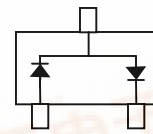
TOP VIEW

BAS70AW Marking: A72



TOP VIEW

BAS70CW Marking: A73



TOP VIEW

BAS70SW Marking: A74

### 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
Forward Continuous Current (Note 1)	$I_F$	200	mA
Forward Surge Current (Note 1)	$I_{FSM}$	600	mA
Power Dissipation (Note 1)	$P_d$	200	mW
Typical Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	625	$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{STG}$	-55 to +125	$^\circ\text{C}$

Note: 1. Device on fiberglass substrate.



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

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Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage	$V_{(BR)R}$	70	—	—	V	@ $I_R = 10\mu\text{A}$
Forward Voltage	$V_F$	—	—	410 750 1000	mV	@ $I_F = 1.0\text{mA}$ , $t_p < 300\mu\text{s}$ @ $I_F = 10\text{mA}$ , $t_p < 300\mu\text{s}$ @ $I_F = 15\text{mA}$ , $t_p < 300\mu\text{s}$
Reverse Leakage Current	$I_R$	—	20	100	nA	@ $V_R = 50\text{V}$ , $t_p < 300\mu\text{s}$
Junction Capacitance	$C_j$	—	1.5	2.0	pF	$V_R = 0\text{V}$ , $f = 1.0\text{MHz}$
Reverse Recovery Time	$t_{rr}$	—	—	5.0	nS	$I_F = 10\text{mA}$ through $I_R = 10\text{mA}$ to $I_R = 1.0\text{mA}$ , $R_L = 100\Omega$

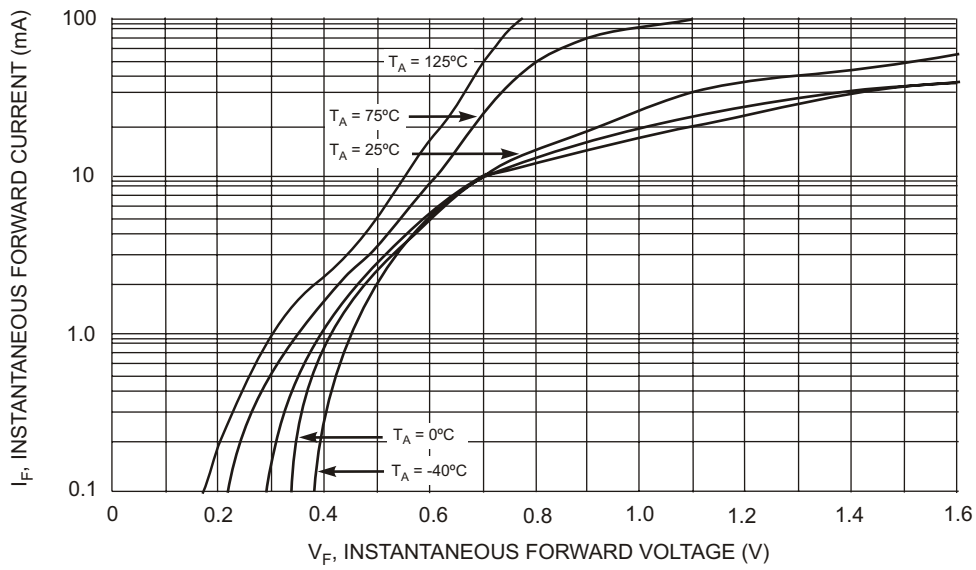


Fig. 1 Typical Forward Characteristics

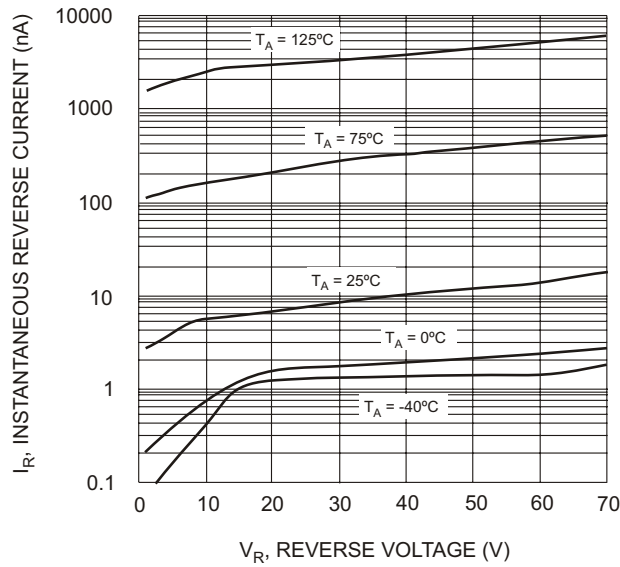


Fig. 2 Typical Reverse Characteristics

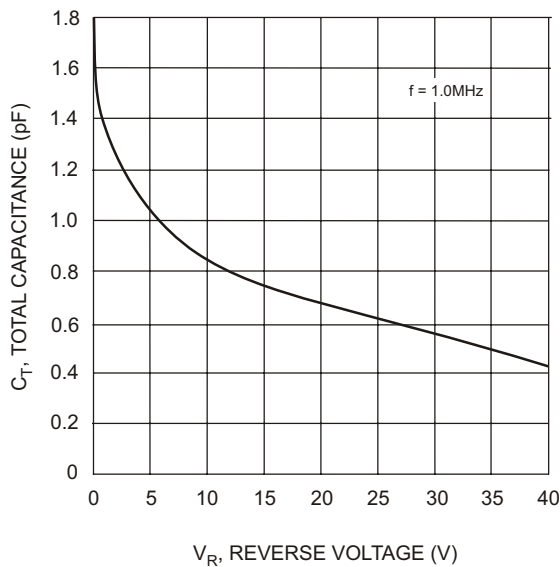


Fig. 3 Typical Capacitance

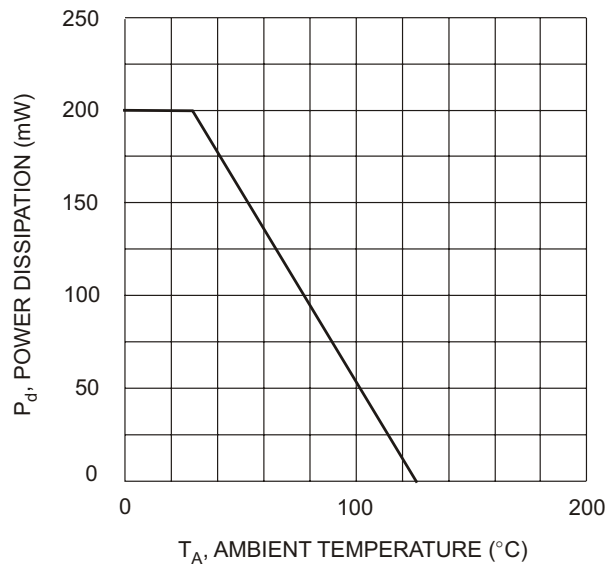
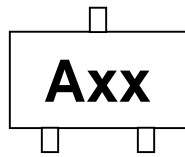


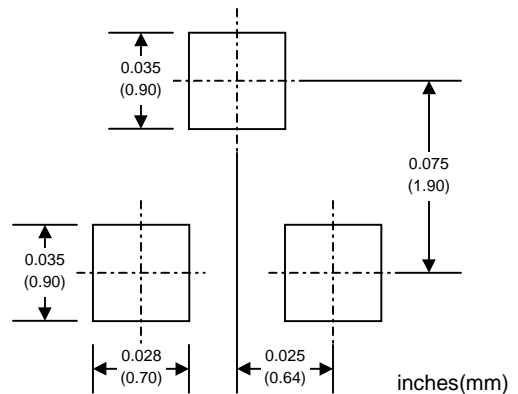
Fig. 4 Power Derating Curve, Total Package

## MARKING INFORMATION



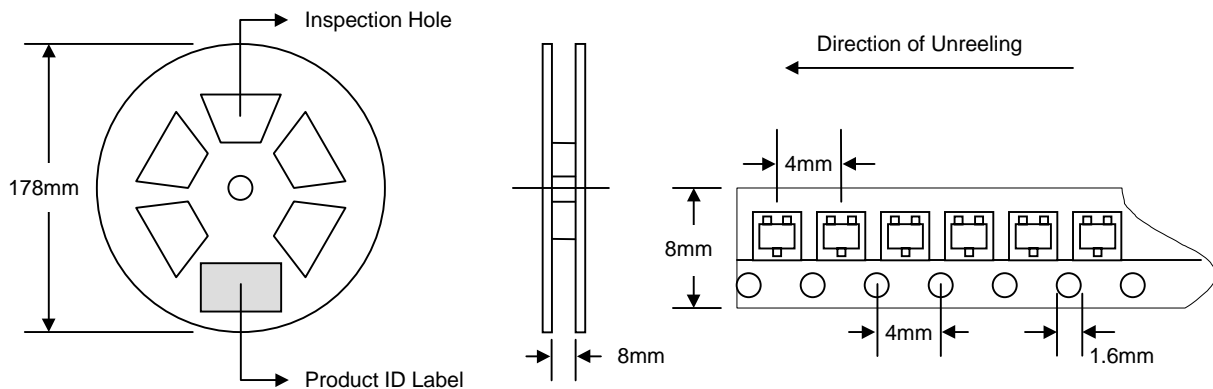
Axx = Device Code  
 xx = 70 (BAS70W)  
       72 (BAS70AW)  
       73 (BAS70CW)  
       74 (BAS70SW)

## RECOMMENDED FOOTPRINT



## PACKAGING INFORMATION

### TAPE & REEL



Reel Diameter (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
178	3,000	187 x 187 x 65	15,000	390 x 240 x 420	150,000	10.0

**Note:** 1. Anti-static plastic reel, white, water clear or blue color. Inspection hole might be varied in different alignment.  
 2. Components are packed in accordance with EIA standard 481-1 and 481-2.

## ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
BAS70W-T1	SOT-323	3000/Tape & Reel
BAS70AW-T1	SOT-323	3000/Tape & Reel
BAS70CW-T1	SOT-323	3000/Tape & Reel
BAS70SW-T1	SOT-323	3000/Tape & Reel

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, BAS70W-T1-LF.**

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**WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT.** WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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