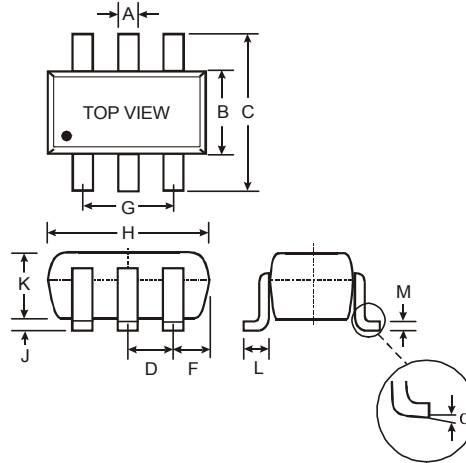


### Features

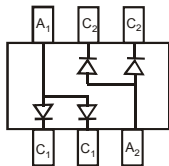
- Low Forward Voltage Drop
- Fast Switching
- Ultra-Small Surface Mount Package
- PN Junction Guard Ring for Transient and ESD Protection
- Lead Free/RoHS Compliant (Note 3)
- "Green" Device (Note 4 and 5)

### Mechanical Data

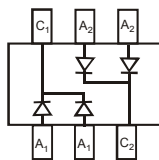
- Case: SOT-363
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- Orientation: See Diagrams Below
- Marking: See Diagrams Below & Page 3
- Weight: 0.006 grams (approximate)



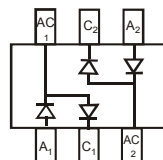
SOT-363		
Dim	Min	Max
A	0.10	0.30
B	1.15	1.35
C	2.00	2.20
D	0.65 Nominal	
F	0.30	0.40
H	1.80	2.20
J	—	0.10
K	0.90	1.00
L	0.25	0.40
M	0.10	0.25
$\alpha$	0°	8°
All Dimensions in mm		



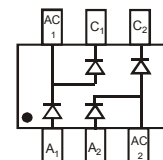
BAS70DW-06\*  
Marking: K76



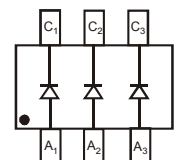
BAS70DW-05\*  
Marking: K71



BAS70DW-04\*  
Marking: K74



BAS70BRW  
Marking: K75



BAS70TW  
Marking: K73

\*Symmetrical configuration, no orientation indicator.

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

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	70	V
Working Peak Reverse Voltage	$V_{RWM}$		
DC Blocking Voltage	$V_R$		
RMS Reverse Voltage	$V_{R(RMS)}$	49	V
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)	$R_{\theta JA}$	625	°C/W
Operating and Storage Temperature Range	$T_j$	-55 to +125	°C
	$T_{STG}$	-65 to +125	

### Electrical Characteristics @<sub>T<sub>A</sub></sub> = 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	mV	$t_p < 300\mu s, I_F = 1.0mA$
			1000	mV	$t_p < 300\mu s, I_F = 15mA$
Reverse Current (Note 2)	$I_R$	—	100	nA	$t_p < 300\mu s, V_R = 50V$
Total Capacitance	$C_T$	—	2.0	pF	$V_R = 0V, f = 1.0MHz$
Reverse Recovery Time	$t_{rr}$	—	5.0	ns	$I_F = I_R = 10mA$ to $I_R = 1.0mA$ , $I_{TR} = 0.1 \times I_R, R_L = 100\Omega$

- 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 pulse test used to minimize self-heating effect.
  3. No purposefully added lead.
  4. Diodes Inc.'s "Green" policy can be found on our website at [http://www.diodes.com/products/lead\\_free/index.php](http://www.diodes.com/products/lead_free/index.php).
  5. Product manufactured with Date Code UO (week 40, 2007) and newer are built with Green Molding Compound. Product manufactured prior to Date Code UO are built with Non-Green Molding Compound and may contain Halogens or Sb2O3 Fire Retardants.

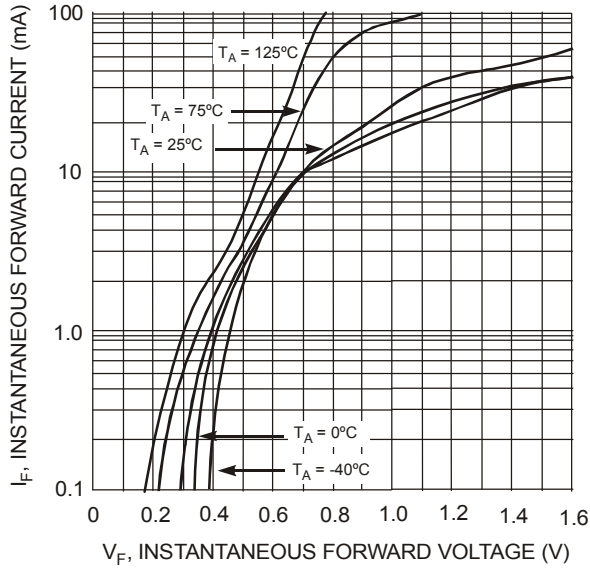


Fig. 1 Typical Forward Characteristics

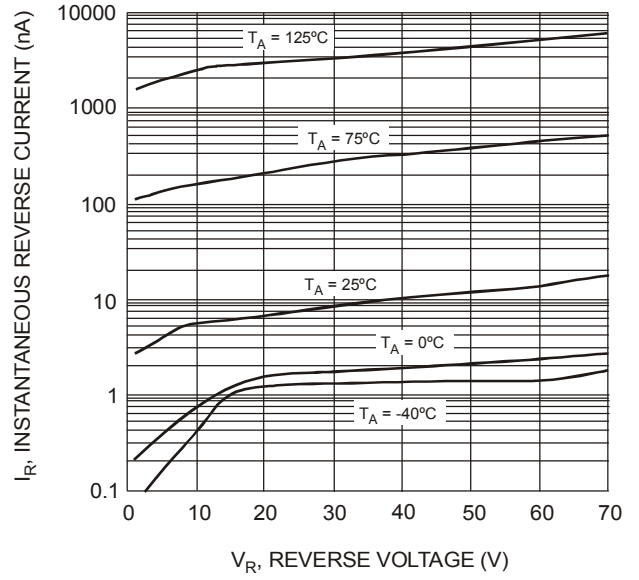


Fig. 2 Typical Reverse Characteristics

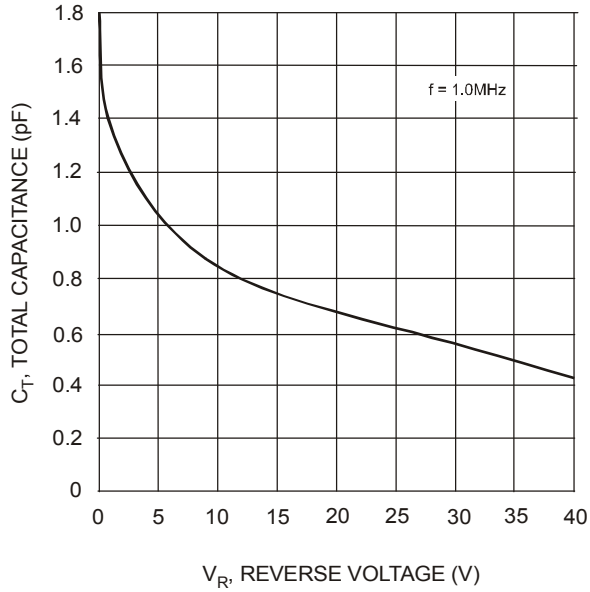


Fig. 3 Typical Capacitance

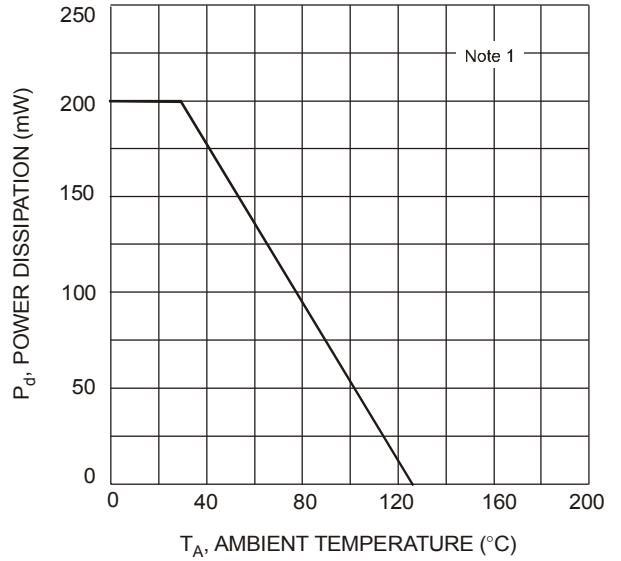


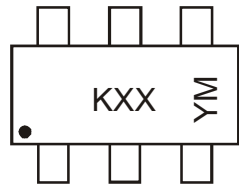
Fig. 4 Power Derating Curve, Total Package

## Ordering Information (Note 6)

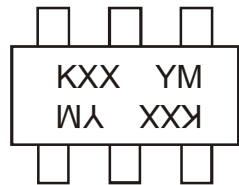
Device	Packaging	Shipping
BAS70DW-04-7-F	SOT-363	3000/Tape & Reel
BAS70DW-05-7-F	SOT-363	3000/Tape & Reel
BAS70DW-06-7-F	SOT-363	3000/Tape & Reel
BAS70BRW-7-F	SOT-363	3000/Tape & Reel
BAS70TW-7-F	SOT-363	3000/Tape & Reel

Notes: 6. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

## Marking Information



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



KXX = Product Type Marking Code (See Page 1)  
 For Symmetrical Configuration, No Orientation Indicator  
 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	2010	2011	2012
Code	M	N	P	R	S	T	U	V	W	X	Y	Z

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

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