

**SURFACE MOUNT  
SCHOTTKY BARRIER DIODE**

**REVERSE VOLTAGE – 70 Volts  
FORWARD CURRENT – 0.07 Ampere**

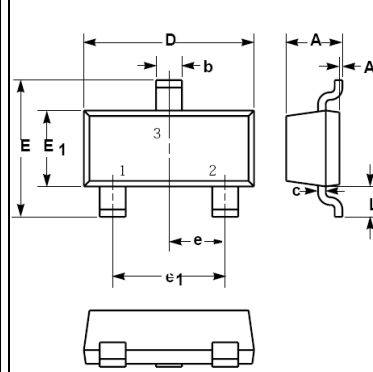
**FEATURES**

- Extremely Fast Switching Speed
- Low Forward Voltage
- Very Small Conduction Losses

**MECHANICAL DATA**

- Case: SOT-523 Plastic
- Case Material: “Green” molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl)
- Moisture Sensitivity: Level 1 per J-STD-020D
- Lead Free in RoHS 2002/95/EC Compliant

**SOT-523**



SOT-523		
Dim.	Min.	Max.
A	0.70	0.90
A1	0.00	0.10
b	0.25	0.325
c	0.10	0.20
D	1.50	1.70
E	1.45	1.75
E1	0.75	0.85
e	0.50 Typ.	
e1	0.90	1.10
L	0.55 Ref.	
Dimensions in millimeter		

**Maximum Ratings & Thermal Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified**

Characteristic	Symbol	BAS70T	BAS70-04T	BAS70-05T	BAS70-06T	Units
Repetitive Peak Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	70				V
Forward Continuous Current	$I_{FM}$	70				mA
Non-Repetitive Peak Forward Surge Current @ tp<1.0s	$I_{FSM}$	100				mA
Power Dissipation	$P_D$	150				mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	833				°C/W
Operating Temperature Range	$T_J$	125				°C
Storage Temperature Range	$T_{STG}$	-55~+125				°C

**Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified**

Characteristic	Test Condition	Symbol	BAS70T	BAS70-04T	BAS70-05T	BAS70-06T	Unit
Reverse Breakdown Voltage	$I_R = 10\mu A$	$V_{BR}$	70				V
Maximum Forward Voltage	$I_F = 1mA$ $I_F = 15mA$	$V_F$	410 1000				mV
Maximum DC Reverse Current at Rated DC Blocking Voltage	$V_R = 50V$	$I_R$	100				nA
Typical Diode Capacitance	$V_R = 0V, f = 1MHz$	$C_D$	2				pF
Reverse Recovery time	$I_{rr} = 1mA,$ $I_R = I_F = 10mA$ $R_L = 100\Omega$	$t_{rr}$	5				nS

# RATING AND CHARACTERISTIC CURVES BAS70T, BAS70-04T thru -06T



FIG.1- TYPICAL FORWARD CHARACTERISTICS

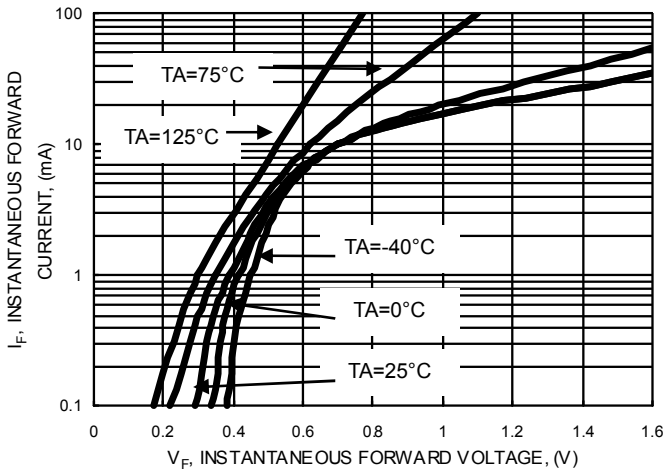


FIG.2- TYPICAL REVERSE CHARACTERISTICS

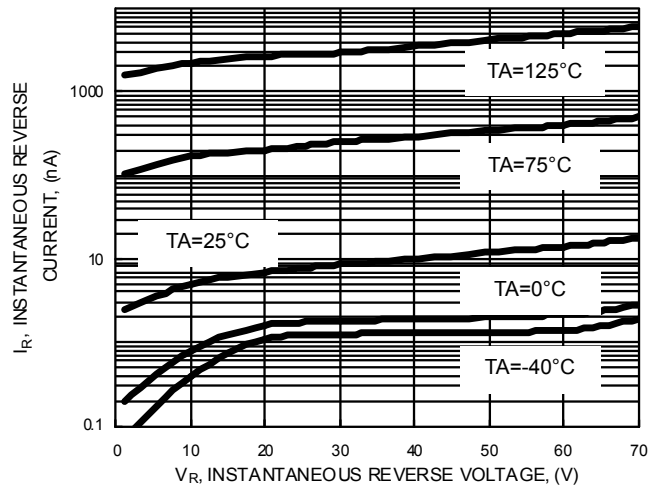


FIG.3- TYPICAL JUNCTION CAPACITANCE

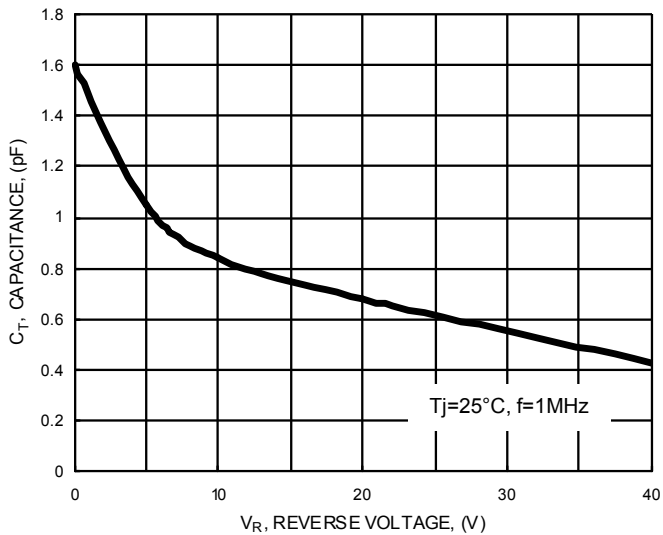
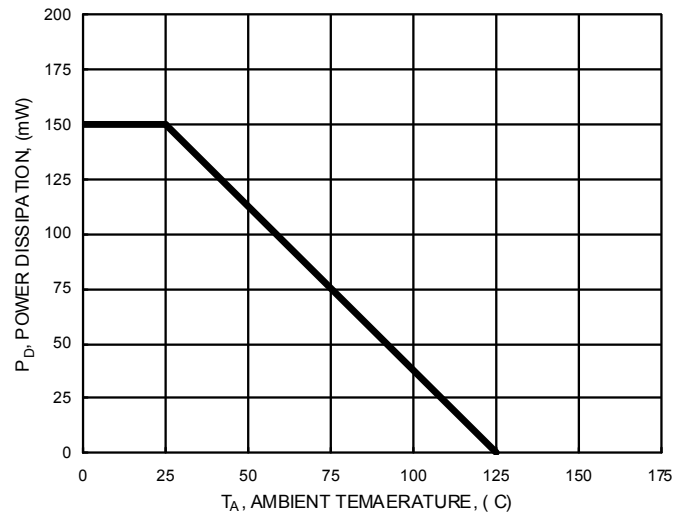


FIG.4- POWER DERATING CURVE



## Device Marking :

Device P/N	Marking	Equivalent Circuit Diagram
BAS70T	7C	
BAS70-04T	7D	
BAS70-05T	7E	
BAS70-06T	7F	

## Important Notice and Disclaimer

LSC reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

TA=75°C

LSC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does LSC assume any liability for application assistance or customer product design. LSC does not warrant or accept any liability with products that are purchased or used for any unintended or unauthorized application.

TA=0°C

TA=-40°C

No license is granted by implication or otherwise under any intellectual property rights of LSC.

LSC products are not authorized for use as critical components in life support devices or systems without express written approval of LSC.