



### Features

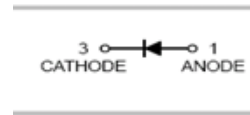
- Low turn-on voltage
- Fast switching
- PN junction guard ring for transient and ESD protection
- Ultra-small surface mount package

### Typical Applications

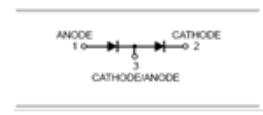
- Schottky barrier diodes

### Mechanical Data

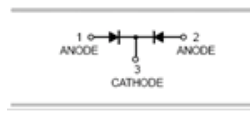
- Case: SOT-523
- Terminals: solderable per MIL-STD-202, Method 208



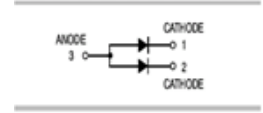
**BAS70T**



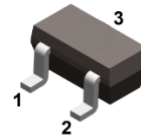
**BAS70-04T**



**BAS70-05T**



**BAS70-06T**



**SOT-523**

### Ordering Information

Part Number	Package	Shipping	Marking Code
BAS70T	SOT-523	3000 pcs / Tape & Reel	7C
BAS70-04T	SOT-523	3000 pcs / Tape & Reel	7D
BAS70-05T	SOT-523	3000 pcs / Tape & Reel	7E
BAS70-06T	SOT-523	3000 pcs / Tape & Reel	7F

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

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	70	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Reverse Voltage	V <sub>R</sub>		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	49	V
Forward Continuous Current	I <sub>F</sub>	70	mA
Non-Repetitive Peak Forward Surge Current @ t <sub>p</sub> = 8.3ms	I <sub>FSM</sub>	100	mA



### Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation *1	$P_D$	150	mW
Thermal Resistance Junction-to-Air *1	$R_{\theta JA}$	667	$^{\circ}C/W$
Thermal Resistance Junction-to-Air *2	$R_{\theta JA}$	130	$^{\circ}C/W$
Thermal Resistance Junction-to-Case *2	$R_{\theta JC}$	80	$^{\circ}C/W$
Thermal Resistance Junction-to-Lead *2	$R_{\theta JL}$	90	$^{\circ}C/W$
Operating Temperature Range	$T_J$	-55 ~ +125	$^{\circ}C$
Storage Temperature Range	$T_{STG}$	-55 ~ +150	$^{\circ}C$

### Electrical Characteristics (@ $T_A = 25^{\circ}C$ unless otherwise specified)

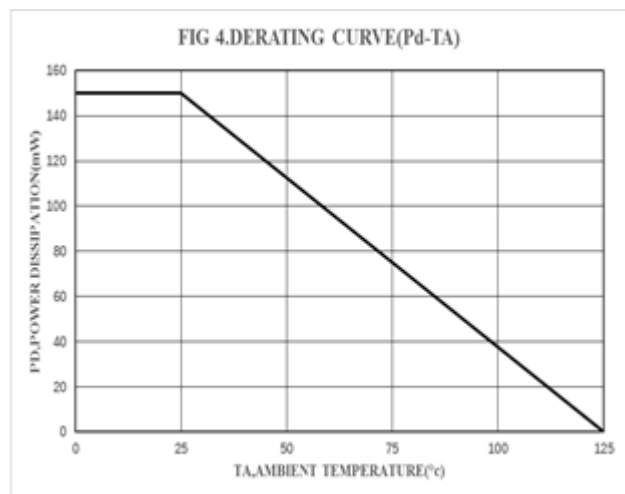
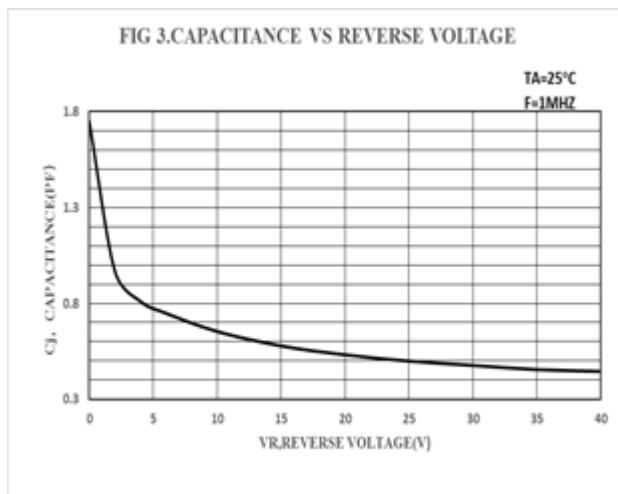
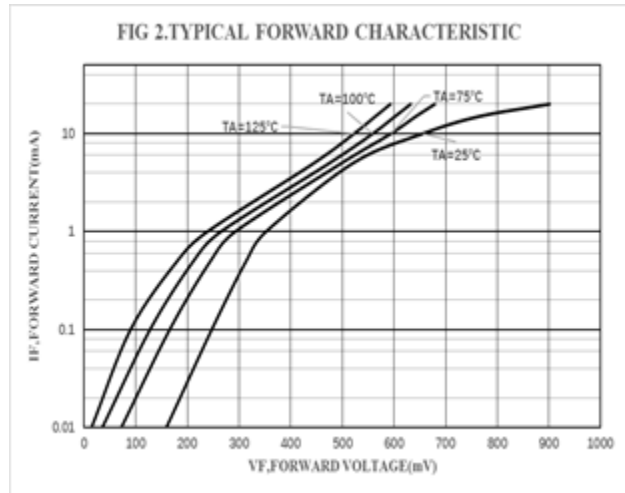
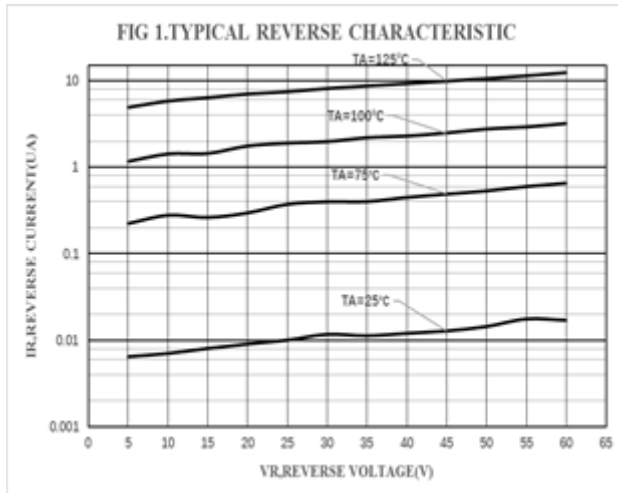
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward Voltage *3	$V_F$	$I_F = 1mA$	-	-	0.41	V
		$I_F = 15mA$	-	-	1	V
Reverse Leakage Current *4	$I_R$	$V_R = 50V$	-	-	100	nA
Capacitance Between Terminals	$C_T$	$V_R = 0V, f = 1MHz$	-	-	2	pF
Reverse Recovery Time	$t_{rr}$	$I_F = I_R = 10mA, I_{rr} = 0.1 * I_R,$ $R_L = 100\Omega$	-	-	5	ns

Notes:

1. The data tested by surface mounted on FR-4 board with recommended pad layout
2. The data tested by surface mounted on a 1 inch<sup>2</sup> FR-4 board with 2OZ copper
3. pulse test,  $t_p \leq 300\mu s$
4. pulse test,  $t_p \leq 5ms$

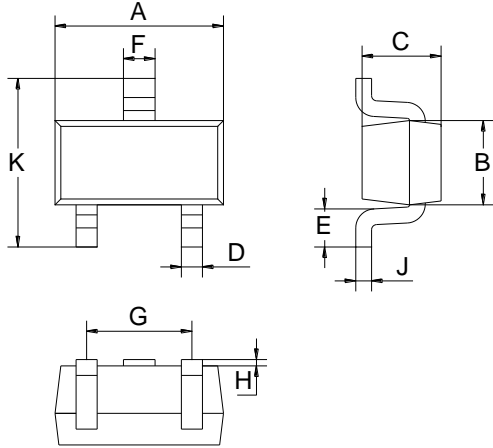


### Ratings and Characteristic Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)





## Package Outline Dimensions (Unit: mm)



SOT-523		
Dimension	Min.	Max
A	1.50	1.70
B	0.75	0.85
C	0.60	0.80
D	0.15	0.30
E	0.30	0.40
F	0.25	0.40
G	0.90	1.10
H	0.02	0.10
J	0.08	0.18
K	1.45	1.75

## Mounting Pad Layout (Unit: mm)

### SOT-523

