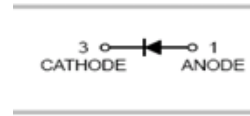


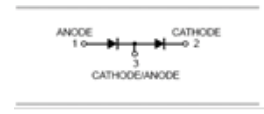


### Features

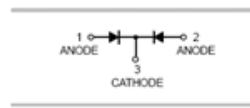
- Low turn-on voltage.
- Fast switching.
- PN Junction Guard Ring for Transient and ESD Protection.
- Ultra-small surface mount package.
- Also available in lead free version.



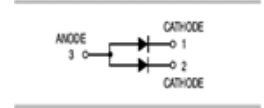
**BAS70**



**BAS70-04**



**BAS70-05**



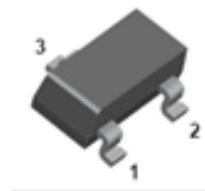
**BAS70-06**

### Typical Applications

- High speed switching applications.
- Circuit protecting.
- Voltage clamping.

### Mechanical Data

- Case: SOT-23
- Terminals: solderable per MIL-STD-202, Method 208.



**SOT-23**

### Ordering Information

Part Number	Package	Shipping	Marking Code
BAS70	SOT-23	3000pcs / Tape & Reel	73
BAS70-04	SOT-23	3000pcs / Tape & Reel	74
BAS70-05	SOT-23	3000pcs / Tape & Reel	75
BAS70-06	SOT-23	3000pcs / Tape & Reel	76

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

Parameter	Symbol	Limits	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
Power Dissipation *	P <sub>d</sub>	200	mW

\* part mounted on FR-4 board with recommended pad layout



### Thermal Characteristics

Parameter	Symbol	Limits	Unit
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	500	$^{\circ}C/W$
Operating Junction Temperature Range	$T_j$	-55 to +125	$^{\circ}C$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^{\circ}C$

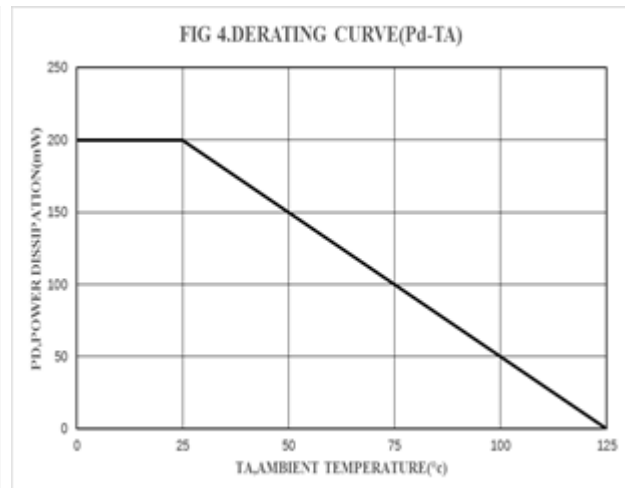
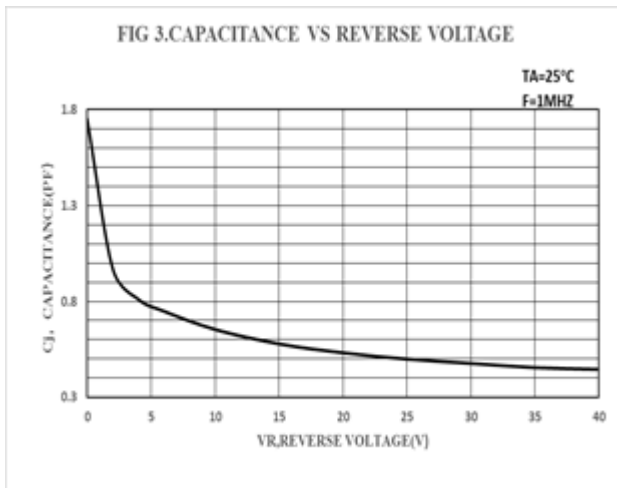
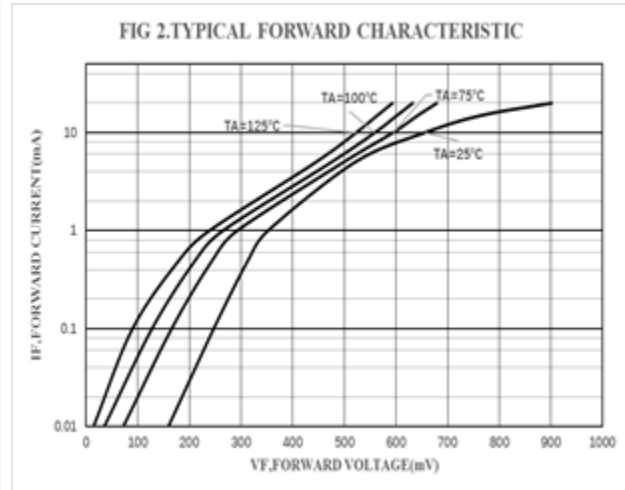
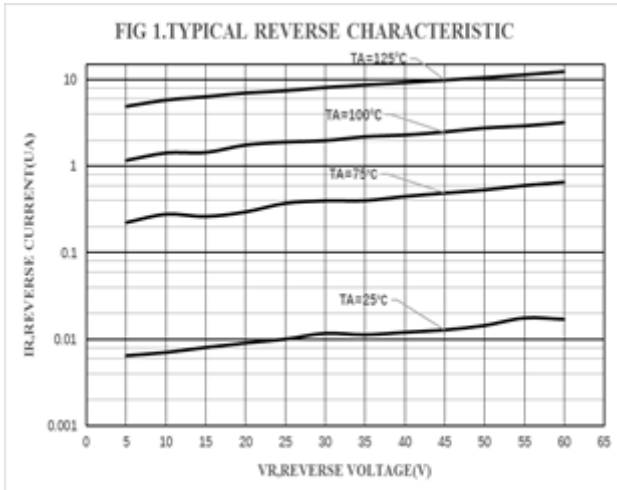
### Electrical Characteristics (@ $T_A=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward Voltage *1	$V_F$	$I_F=1mA$			0.41	V
		$I_F=15mA$			1	V
Reverse Leakage Current *2	$I_R$	$V_R=50V$			100	nA
Capacitance Between Terminals	$C_T$	$V_R=0V, f=1MHz$			2	pF
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=10mA$ to $I_R=1.0mA, R_L=100\Omega$			5	ns

\*1: pulse test,  $t_p \leq 300\mu s$

\*2: pulse test,  $t_p \leq 5ms$

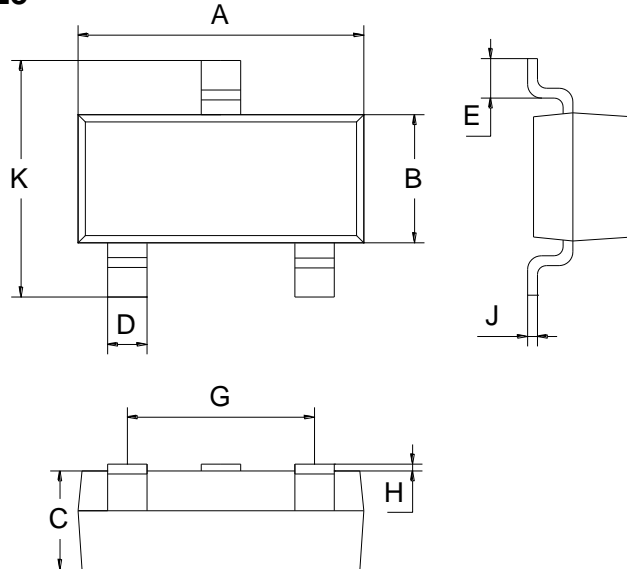
### Ratings and Characteristic Curves ( $T_A=25^{\circ}C$ unless otherwise noted)





### Package Outline Dimensions (unit: mm)

#### SOT-23



SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.30	0.50
E	0.35	0.48
G	1.80	2.00
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60

### Mounting Pad Layout (unit: mm)

#### SOT-23

