

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.

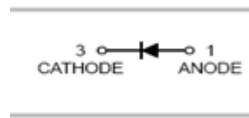
HF

Typical Applications

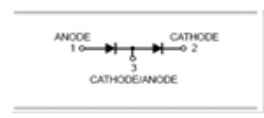
- High speed switching applications.
- Circuit protecting.
- Voltage clamping.

Mechanical Data

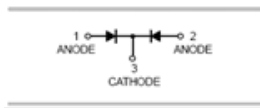
- Case: SOT-23
- Terminals: solderable per MIL-STD-202, Method 208.



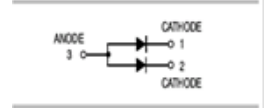
BAS70



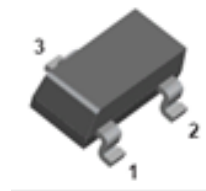
BAS70-04



BAS70-05



BAS70-06



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_A=25°C unless otherwise specified)

Parameter	Symbol	Limits	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	70	V
Working Peak Reverse Voltage	V _{RWM}		
DC Reverse Voltage	V _R		
RMS Reverse voltage	V _{R(RMS)}	49	V
Forward Continuous Current *	I _F	70	mA
Non-Repetitive Peak Forward Surge Current@t _p =8.3ms	I _{FSM}	100	mA
Power Dissipation *	P _d	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	$^{\circ}\text{C}/\text{W}$
Operating Junction Temperature Range	T_j	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^{\circ}\text{C}$

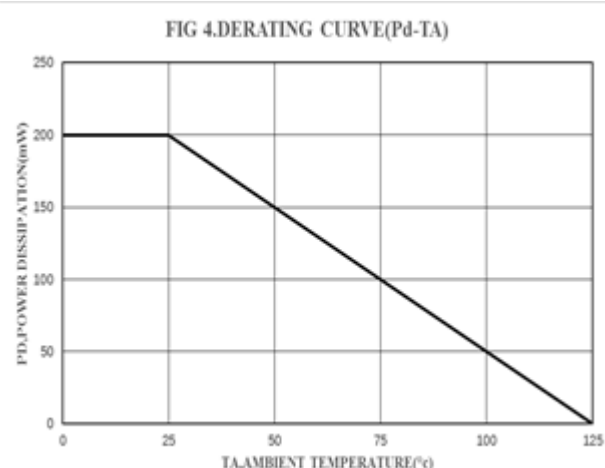
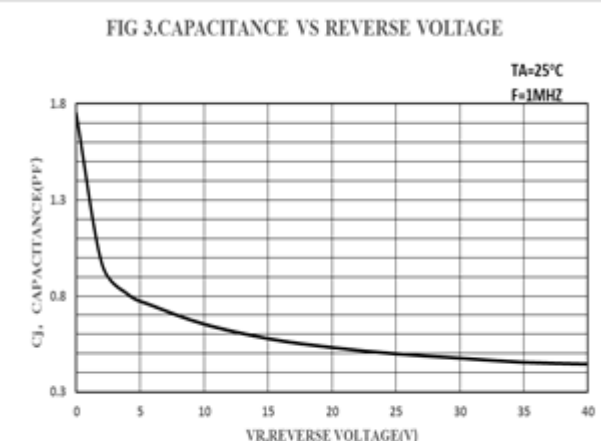
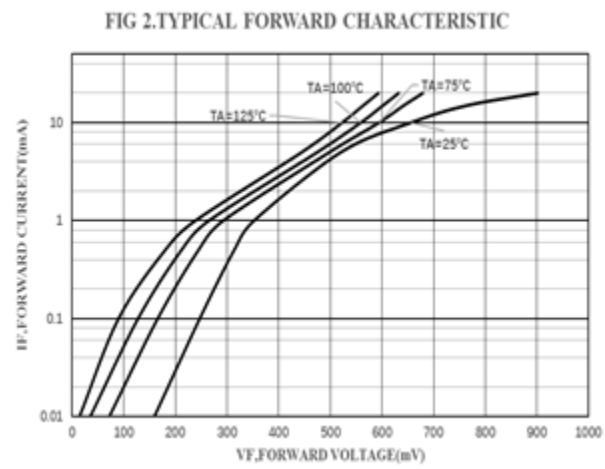
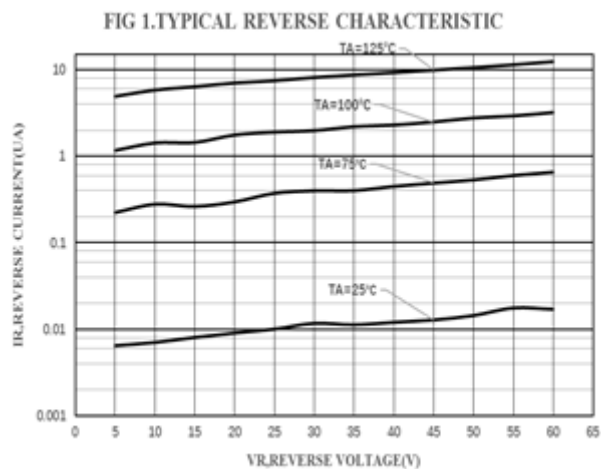
Electrical Characteristics (@ $T_A=25^{\circ}\text{C}$ unless otherwise specified)

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

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

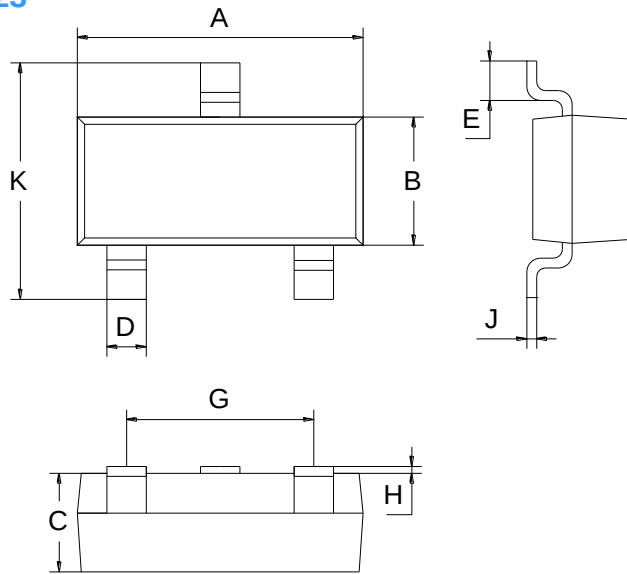
*2: pulse test, $t_p \leq 5\text{ms}$

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



Package Outline Dimensions (unit: mm)

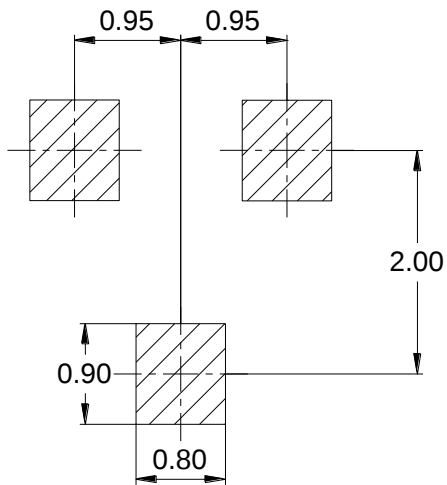
SOT-23



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



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