

## Features

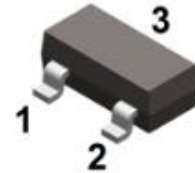
- Fast switching speed
- High conductance
- Connected in series

## Mechanical Data

- Case: SOT-23
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



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**SOT-23**

## Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
BAS19	SOT-23	3000 pcs / Tape & Reel	JP

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

Parameter	Symbol	Value	Unit
Peak Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	120	V
Working Peak Reverse Voltage	V <sub>RWM</sub>	100	V
DC Blocking Voltage	V <sub>R</sub>	100	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	71	V
Average Rectified Output Current	I <sub>F</sub>	200	mA
Repetitive Peak Forward Current	I <sub>FRM</sub>	625	mA
Peak Forward Surge Current, 1μs Single Half-sine-wave	I <sub>FSM</sub>	2.5	A
Peak Forward Surge Current, 1s Single Half-sine-wave	I <sub>FSM</sub>	0.5	A

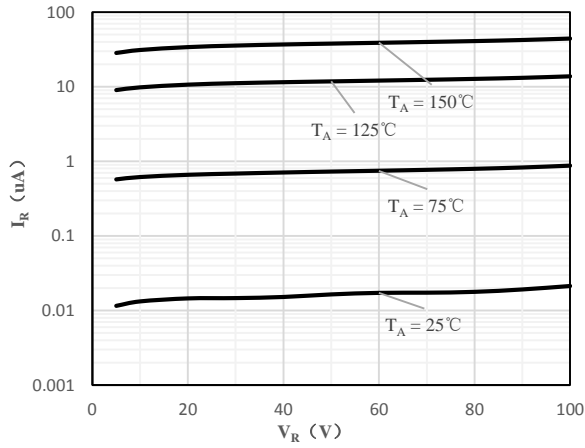
## Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P <sub>D</sub>	250	mW
Thermal Resistance Junction-to-Air	R <sub>θJA</sub>	500	°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-65 ~ +150	°C
Storage Temperature Range	T <sub>STG</sub>	-65 ~ +150	°C

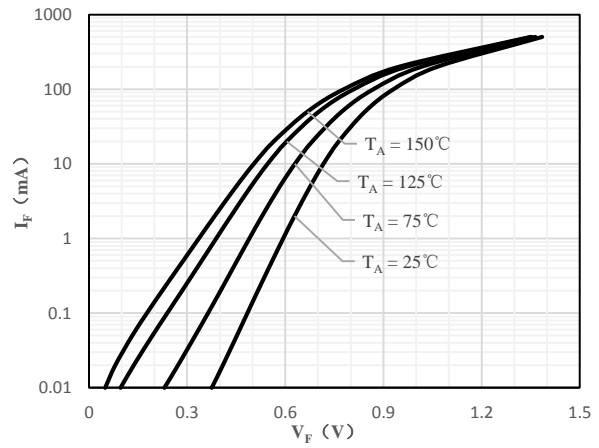
**Electrical Characteristics** (@  $T_A = 25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Test Condition		Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 100\mu\text{A}$	120	-	-	V
Forward Voltage	$V_F$	$I_F = 100\text{mA}$	-	-	1.00	V
		$I_F = 200\text{mA}$	-	-	1.25	V
Maximum Peak Reverse Current	$I_R$	$V_R = 100\text{V}$	-	-	0.1	$\mu\text{A}$
		$V_R = 100\text{V}, T_J = 100^\circ\text{C}$	-	-	15	$\mu\text{A}$
Total Capacitance	$C_J$	$V_R = 0\text{V}, f = 1.0\text{MHz}$	-	-	5	pF
Reverse Recovery Time	$t_{rr}$	$I_F = I_R = 30\text{mA}$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$	-	-	50	ns

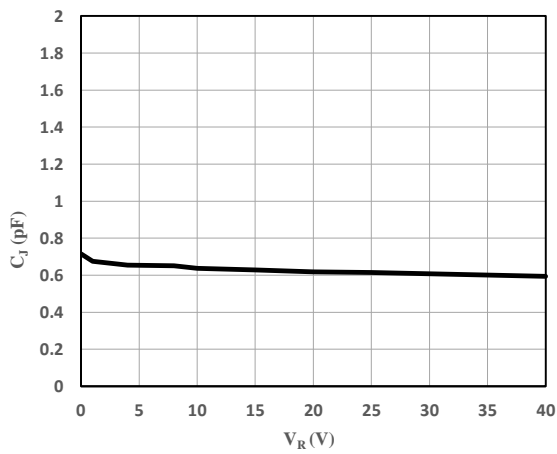
**Ratings and Characteristics Curves** (@  $T_A = 25^\circ\text{C}$  unless otherwise specified)



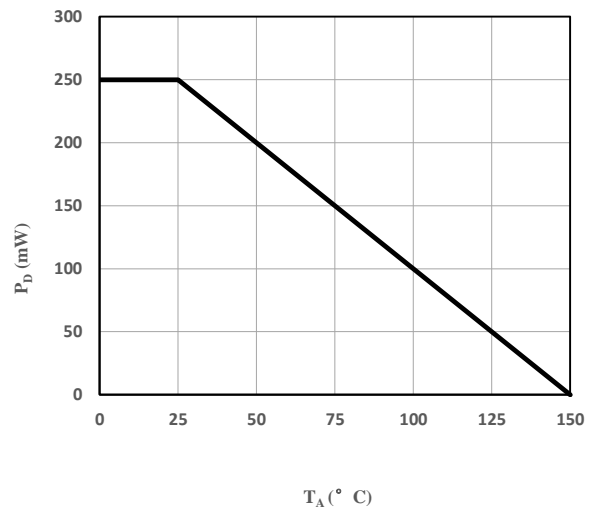
**Fig 1 Typical Reverse Characteristic**



**Fig 2 Typical Forward Characteristics**

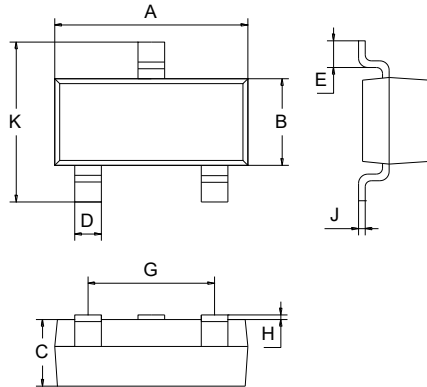


**Fig 3 Capacitance vs. Reverse Voltage**



**Fig 4 Power Derating Curve**

**Package Outline Dimensions** (Unit: mm)



SOT-23		
Dimension	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

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**SOT-23**

