

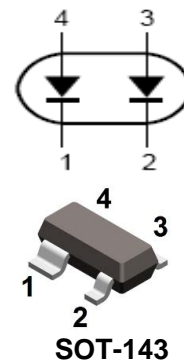


### Features

- Fast switching speed
- High conductance

### Mechanical Data

- Case: SOT-143
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



### Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
BAS28	SOT-143	3000 pcs / Tape & Reel	JT

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

Parameter	Symbol	Value	Unit
Peak Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	85	V
DC Blocking Voltage	V <sub>R</sub>	75	V
Forward Continuous Current	I <sub>F</sub>	215	mA
Repetitive Peak Forward Current	I <sub>FRM</sub>	500	mA
Non-Repetitive Peak Forward Surge Current, t <sub>p</sub> = 1 μs	I <sub>FSM</sub>	4	A
Non-Repetitive Peak Forward Surge Current, t <sub>p</sub> = 1 ms		1	A
Non-Repetitive Peak Forward Surge Current, t <sub>p</sub> = 1 s		0.5	A

### Thermal Characteristics

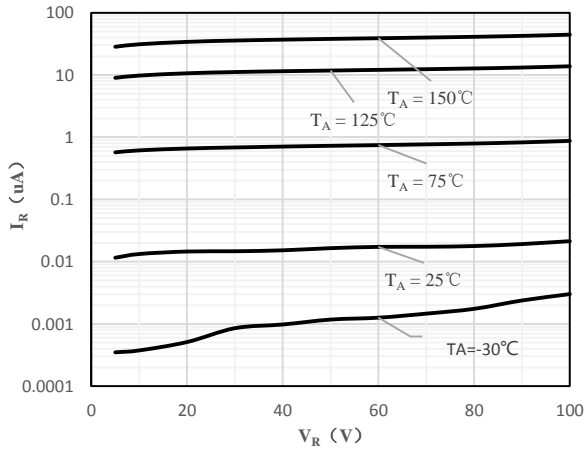
Parameter	Symbol	Value	Unit
Power Dissipation (T <sub>A</sub> = 25°C)	P <sub>D</sub>	250	mW
Thermal Resistance Junction-to-Air	R <sub>θJA</sub>	500	°C/W
Thermal Resistance Junction-to-Air *1	R <sub>θJA</sub>	340	°C/W
Thermal Resistance Junction-to-Case *1	R <sub>θJC</sub>	280	°C/W
Thermal Resistance Junction-to-Lead *1	R <sub>θJL</sub>	290	°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-65 ~ +150	°C
Storage Temperature Range	T <sub>STG</sub>	-65 ~ +150	°C

Note 1: The data tested by surface mounted on a 1 inch<sup>2</sup> FR-4 board with 2OZ copper

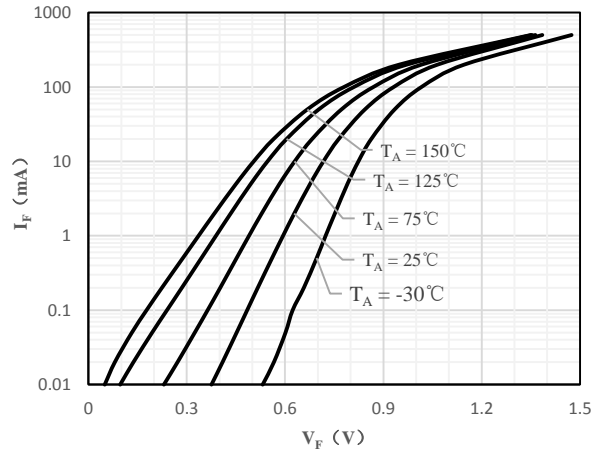

**Electrical Characteristics** (@  $T_A = 25^\circ\text{C}$  unless otherwise specified)

Parameter		Test Condition	Min.	Typ.		Unit
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R = 100\mu\text{A}$	75	-	-	V
Forward Voltage	$V_F$	$I_F = 1\text{mA}$	-	-	0.715	V
		$I_F = 10\text{mA}$	-	-	0.855	V
		$I_F = 50\text{mA}$	-	-	1.000	V
		$I_F = 100\text{mA}$	-	-	1.250	V
Reverse Current	$I_R$	$V_R = 25\text{V}$	-	-	0.03	$\mu\text{A}$
		$V_R = 75\text{V}$	-	-	1	$\mu\text{A}$
		$V_R = 25\text{V}, T_J = 125^\circ\text{C}$	-	-	30	$\mu\text{A}$
		$V_R = 75\text{V}, T_J = 150^\circ\text{C}$	-	-	50	$\mu\text{A}$
Diode capacitance	$C_J$	$V_R = 0\text{V}, f = 1\text{MHz}$	-	-	1.5	pF
Reverse Recovery Time	$t_{rr}$	$I_F = I_R = 10\text{mA}$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$	-	-	4	ns
Forward Recovery Voltage	$V_{fr}$	$I_F = 10\text{mA}, t_r = 20\text{ns}$	-	-	1.75	V

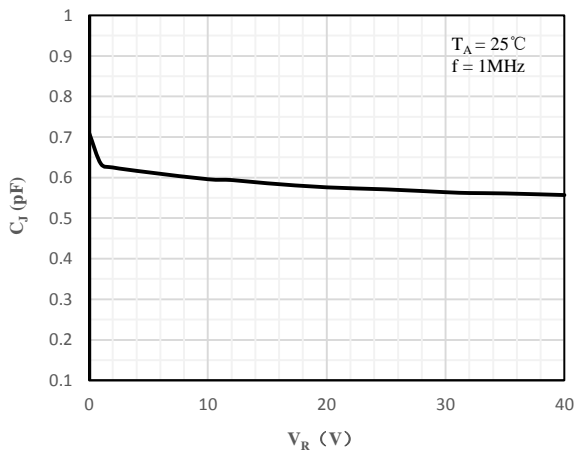
### Ratings and Characteristics Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)



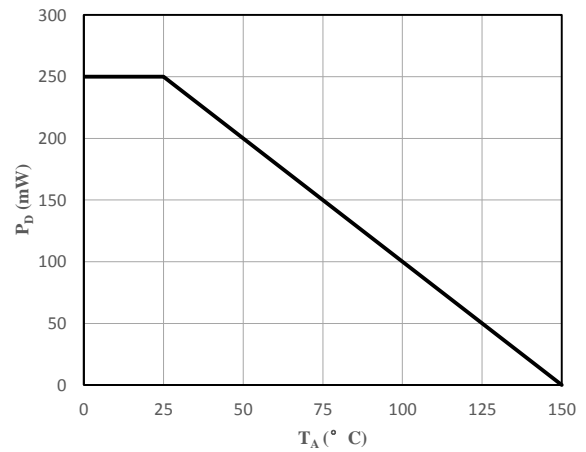
**Fig 1 Typical Reverse Characteristic**



**Fig 2 Typical Forward Characteristics**



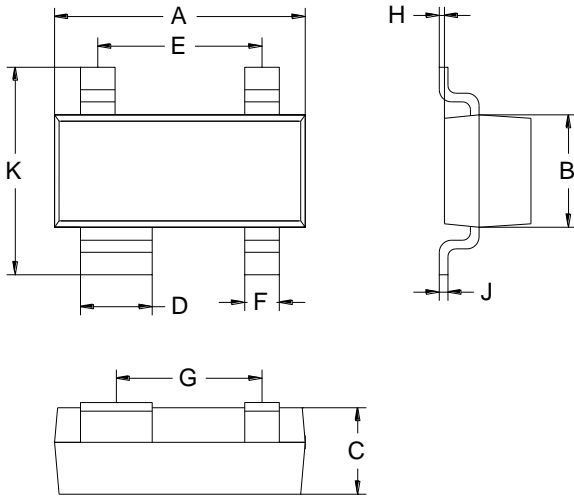
**Fig 3 Capacitance vs. Reverse Voltage**



**Fig 4 Power Derating Curve**



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



SOT-143		
Dimension	Min.	Max.
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.78	0.88
E	1.80	2.00
F	0.37	0.43
G	1.59	1.79
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60

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SOT-143

