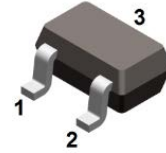
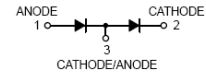


## Features

- Fast switching speed
- High conductance

## Mechanical Data

- Case: SOT-323
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208


**SOT-323**

## Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
BAV99W	SOT-323	3000 pcs / Tape & Reel	KJG

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

Parameter		Value	Unit
Peak Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	75	V
DC Blocking Voltage	V <sub>R</sub>	75	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	53	V
Average Rectified Output Current	I <sub>F</sub>	215	mA
	I <sub>FSM</sub>	2	A
Peak Forward Surge Current, 1ms Single Half-sine-wave	I <sub>FSM</sub>	1	A
Peak Forward Surge Current, 1s Single Half-sine-wave	I <sub>FSM</sub>	0.5	A

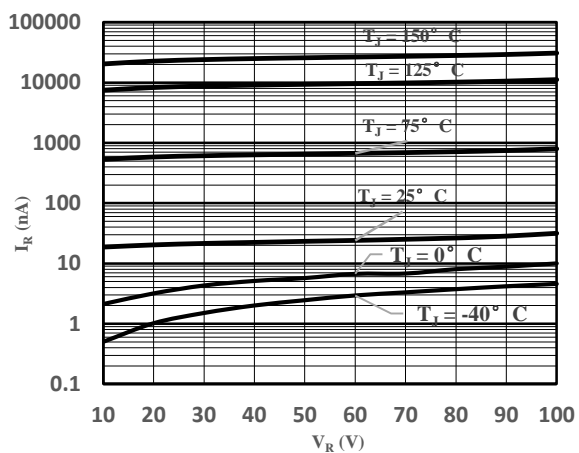
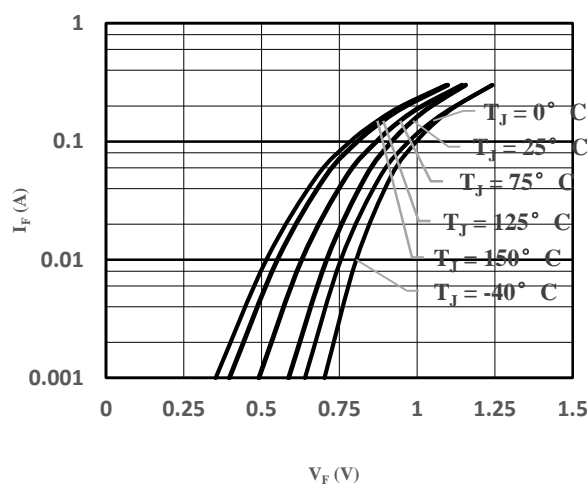
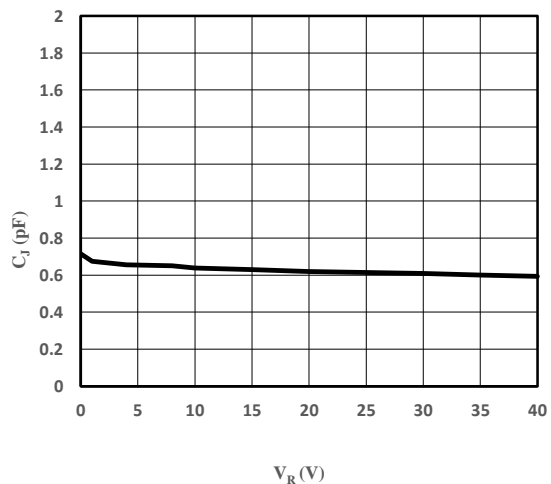
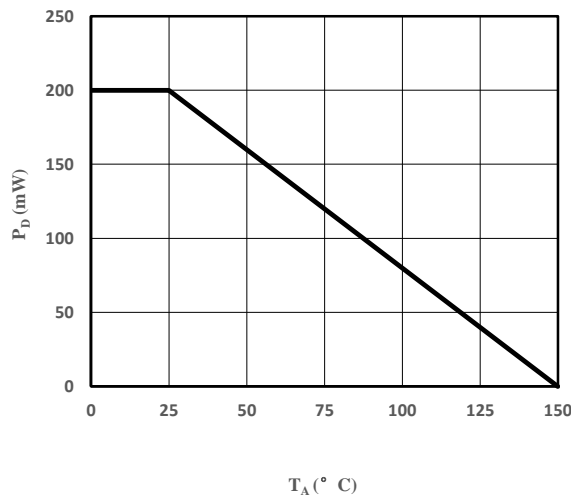
## Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P <sub>D</sub>	200	mW
Thermal Resistance Junction-to-Air <sup>*1</sup>	R <sub>θJA</sub>	466	°C/W
Thermal Resistance Junction-to-Case <sup>*1</sup>	R <sub>θJC</sub>	250	°C/W
Thermal Resistance Junction-to-Lead <sup>*1</sup>	R <sub>θJL</sub>	271	°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-65 ~ +150	°C
Storage Temperature Range	T <sub>STG</sub>	-65 ~ +150	°C

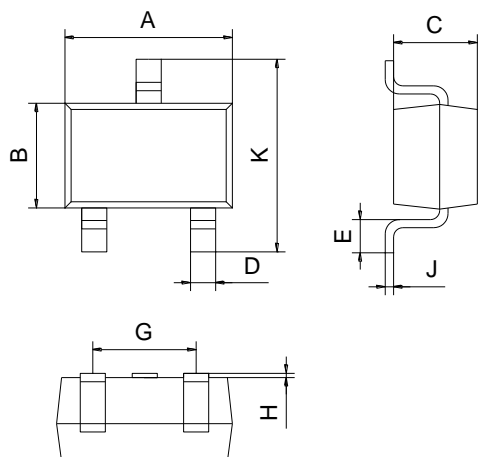
Note 1: The data tested by surface mounted on a 15mm \* 15mm \* 1mm FR4-epoxy P.C.B

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

Parameter	Symbol	Test Condition		Typ.	Max.	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
		$I_F = 150\text{mA}$	-	-	1.250	V
Maximum Peak Reverse Current	$I_R$	$V_R = 75\text{V}$	-	-	2.5	$\mu\text{A}$
Total Capacitance	$C_J$	$V_R = 0\text{V}, f = 1.0\text{MHz}$	-	-	1.5	pF
Reverse Recovery Time	$t_{rr}$	$I_F = I_R = 10\text{mA}$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$	-	-	6	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-323		
Dimension	Min.	Max.
A	2.00	2.20
B	1.15	1.35
C	0.90	1.10
D	0.15	0.35
E	0.25	0.40
G	1.20	1.40
H	0.02	0.10
J	0.05	0.15
K	2.20	2.40

**Mounting Pad Layout** (Unit: mm)

SOT-323

