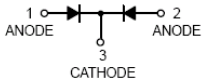
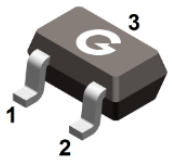
Switching Diode
BAV70W

Features

- Fast switching speed
- High conductance
- RoHS compliant with Halogen-free

HF





SOT-323

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

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
BAV70W	SOT-323	3000 pcs / Tape & Reel	KJA

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
DC Blocking Voltage	V_R	75	V
Average Rectified Output Current	I_F	200	mA
Forward continuous Current (Max.)	I_{FM}	300	mA
Peak Forward Surge Current, t_p = 1μs	I_{FSM}	4.5	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation (T_A = 25°C)	P_D	250	mW
Thermal Resistance Junction-to-Air *1	$R_{\theta JA}$	466	°C/W
Thermal Resistance Junction-to-Case *1	$R_{\theta JC}$	250	°C/W
Thermal Resistance Junction-to-Lead *1	$R_{\theta JL}$	271	°C/W
Operating Junction Temperature Range	T_J	-65 ~ +150	°C
Storage Temperature Range	T_{STG}	-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°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	I_R = 100μA	75	-	-	V
Forward Voltage	V_F	I_F = 1mA	-	-	0.715	V
		I_F = 10mA	-	-	0.855	V
		I_F = 50mA	-	-	1.000	V
		I_F = 150mA	-	-	1.250	V
Maximum Peak Reverse Current	I_R	V_R = 70V	-	-	2.5	μA
Total Capacitance	C_J	V_R = 0V, f = 1.0MHz	-	-	1.5	pF
Reverse Recovery Time	t_{rr}	I_F = I_R = 10mA I_{rr} = 0.1×I_R, R_L = 100Ω	-	-	6	ns

Ratings and Characteristics Curves (@ T_A = 25°C unless otherwise specified)

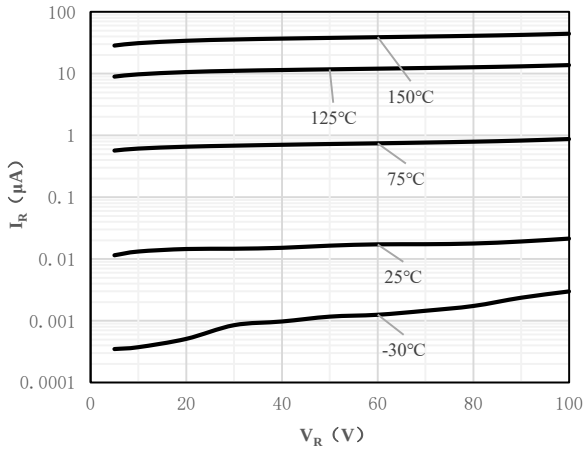


Fig 1 Typical Reverse Characteristic

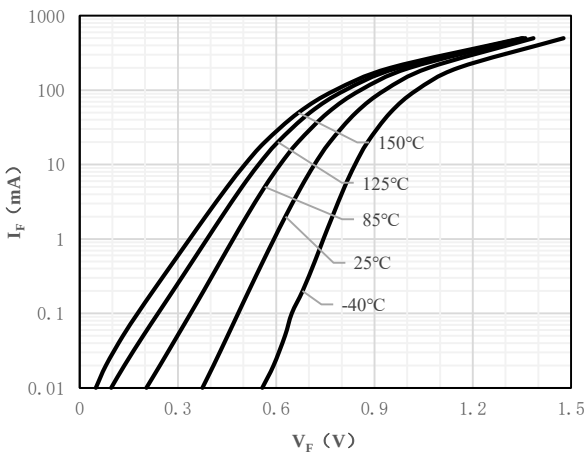


Fig 2 Typical Forward Characteristics

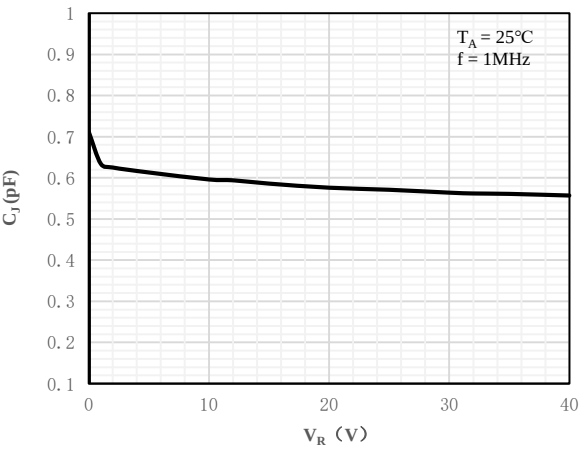


Fig 3 Capacitance vs. Reverse Voltage

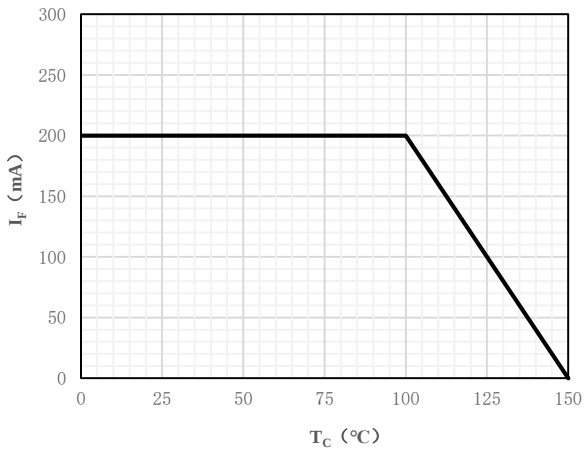
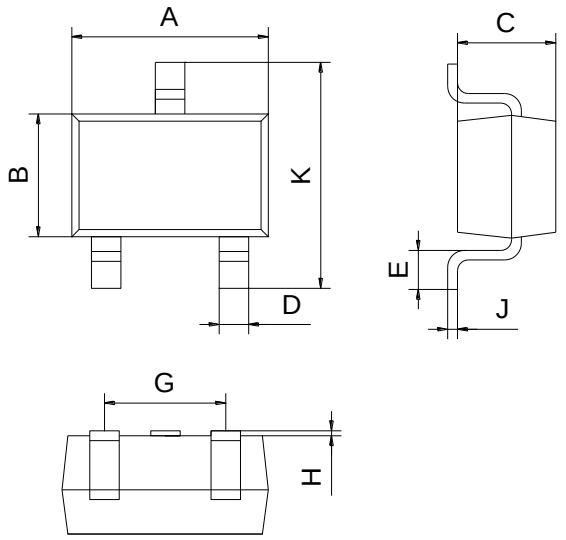


Fig 4 Forward Current Derating Curve

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

