

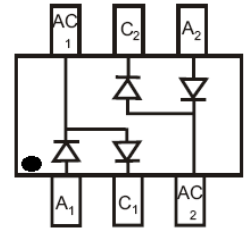
Features

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

HF

Mechanical Data

- Case: SOT-363
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



SOT-363

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
BAV99S	SOT-363	3000 pcs / Tape & Reel	K1

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

Parameter	Symbol	Value	Unit
Peak Repetitive Peak Reverse Voltage	V _{RRM}	85	V
DC Blocking Voltage V _F	V _R	75	V
Repetitive Peak Forward Current	I _{FRM}	450	mA
Average Rectified Output Current	I _F	200	mA
Peak Forward Surge Current, 1μs Single Half-sine-wave	I _{FSM}	4.5	A
Peak Forward Surge Current, 1ms Single Half-sine-wave	I _{FSM}	1	A
Peak Forward Surge Current, 1s Single Half-sine-wave	I _{FSM}	0.5	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P _D	250	mW
Thermal Resistance Junction-to-Air *1	R _{θJA}	410	°C/W
Thermal Resistance Junction-to-Case *1	R _{θJC}	325	°C/W
Thermal Resistance Junction-to-Lead *1	R _{θJL}	350	°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 1 inch² FR-4 board with 2OZ copper

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R = 2.5\mu\text{A}$	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
Reverse Current	I_R	$V_R = 75\text{V}$	-	-	1	μA
		$V_R = 25\text{V}, T_J = 125^\circ\text{C}$	-	-	30	μA
		$V_R = 75\text{V}, T_J = 150^\circ\text{C}$	-	-	50	μA
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

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

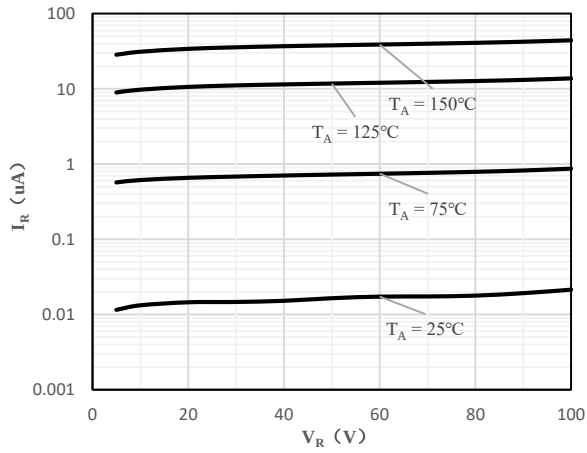


Fig 1 Typical Reverse Characteristic

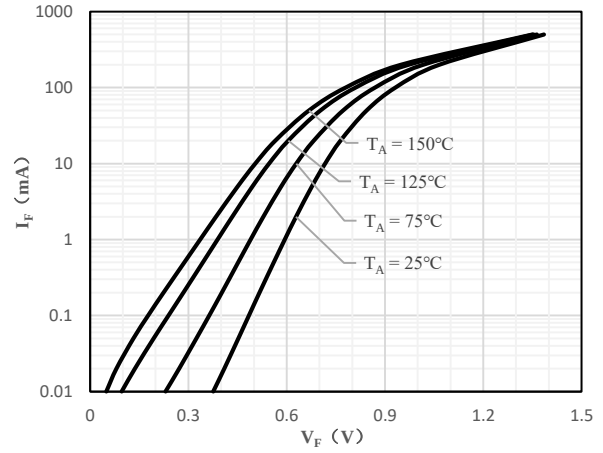


Fig 2 Typical Forward Characteristics

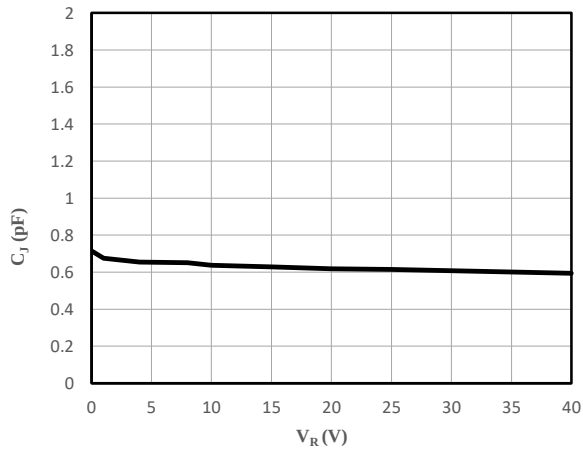


Fig 3 Capacitance vs. Reverse Voltage

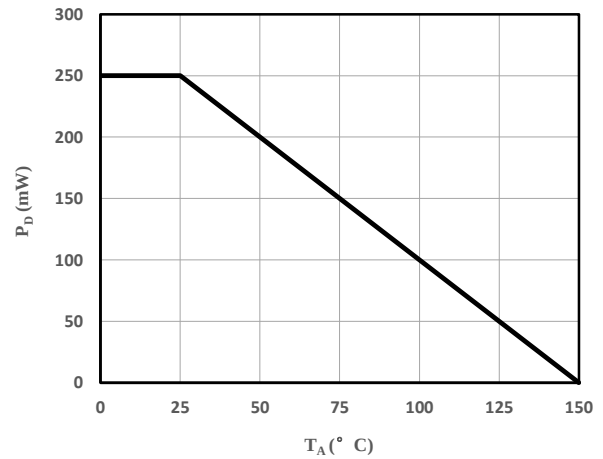
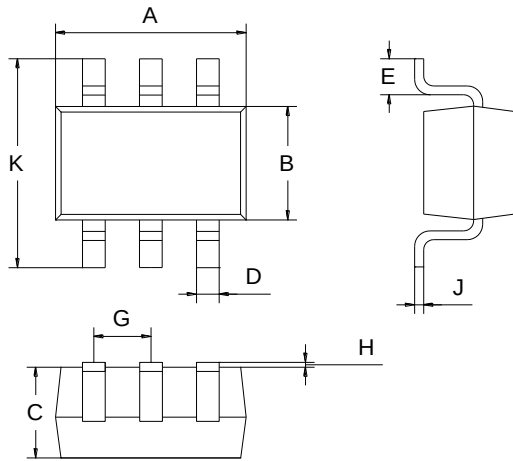


Fig 4 Power Derating Curve

Package Outline Dimensions (Unit: mm)



SOT-363		
Dimension	Min.	Max.
A	2.00	2.20
B	1.15	1.35
C	0.85	1.05
D	0.15	0.35
E	0.25	0.40
G	0.60	0.70
H	0.02	0.10
J	0.05	0.15
K	2.20	2.40

Package Outline Dimensions (Unit: mm)

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