

Features

- Very small conduction losses
- Negligible switching losses
- Low forward voltage drop

HF

Applications

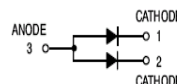
- This device is high voltage, small signal schottky diode suited for protection and routing operations

Mechanical Data

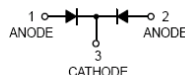
- Case: SOT-323
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208



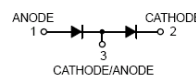
BAT46W



BAT46AW



BAT46CW



BAT46SW



SOT-323

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
BAT46W	SOT-323	3000 pcs / Tape & Reel	S46
BAT46AW	SOT-323	3000 pcs / Tape & Reel	A46
BAT46CW	SOT-323	3000 pcs / Tape & Reel	C46
BAT46SW	SOT-323	3000 pcs / Tape & Reel	B46

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

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	100	V
Continuous Forward Current	I _F	150	mA
Repetitive Peak Forward Current	I _{FRM}	350	mA
Peak Forward Surge Current (10ms single half sine-wave)	I _{FSM}	0.75	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P _D	200	mW
Thermal Resistance Junction-to-Air	R _{θJA}	500	°C/W
Operating Junction Temperature Range	T _J	-55 ~ +125	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 100\mu\text{A}$	100	-	-	V
Forward Voltage	V_F	$I_F = 0.1\text{mA}$	-	-	0.25	V
		$I_F = 10\text{mA}$	-	-	0.45	V
		$I_F = 250\text{mA}$	-	-	1.00	V
Maximum Peak Reverse Current	I_R	$V_R = 1.5\text{V}$	-	-	0.5	μA
		$V_R = 1.5\text{V}, T_J = 60^\circ\text{C}$	-	-	5	μA
		$V_R = 10\text{V}$	-	-	0.8	μA
		$V_R = 10\text{V}, T_J = 60^\circ\text{C}$	-	-	7.5	μA
		$V_R = 50\text{V}$	-	-	2	μA
		$V_R = 50\text{V}, T_J = 60^\circ\text{C}$	-	-	15	μA
		$V_R = 75\text{V}$	-	-	5	μA
		$V_R = 75\text{V}, T_J = 60^\circ\text{C}$	-	-	20	μA
Capacitance Between Terminals	C_J	$V_R = 0\text{V}, f = 1\text{MHz}$	-	10	-	pF
		$V_R = 1\text{V}, f = 1\text{MHz}$	-	6	-	pF

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

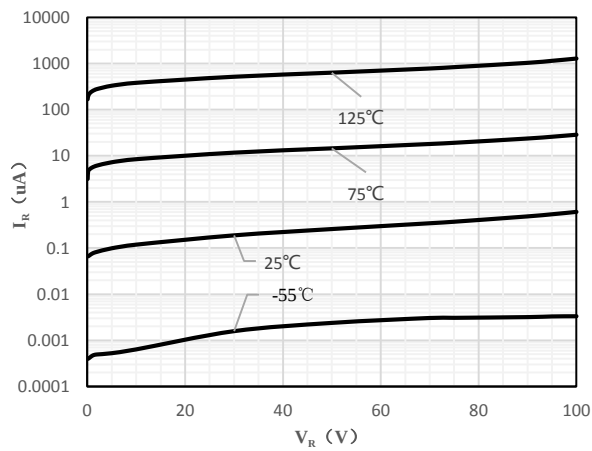


Fig 1 Typical Reverse Characteristic

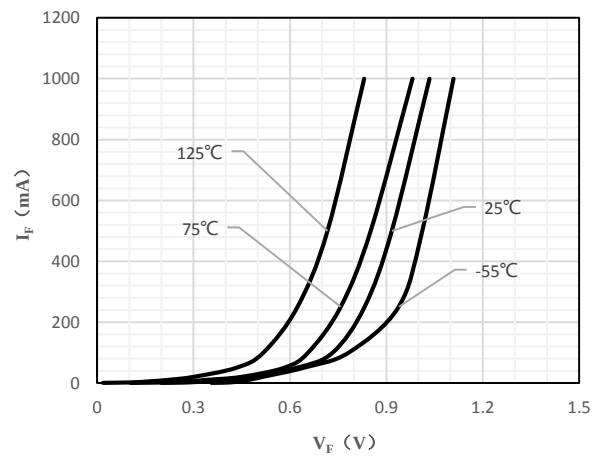


Fig 2 Typical Forward Characteristics

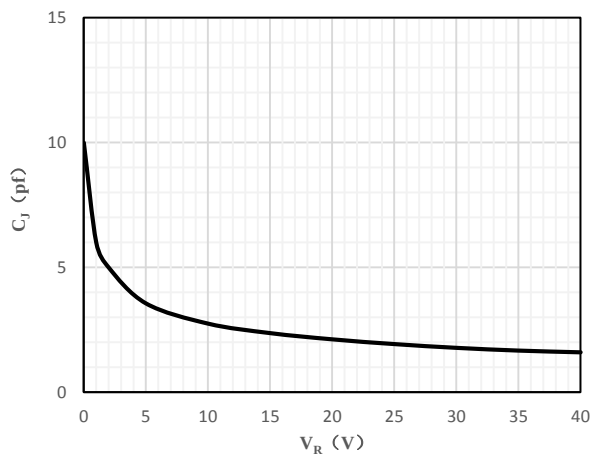


Fig 3 Capacitance Characteristics

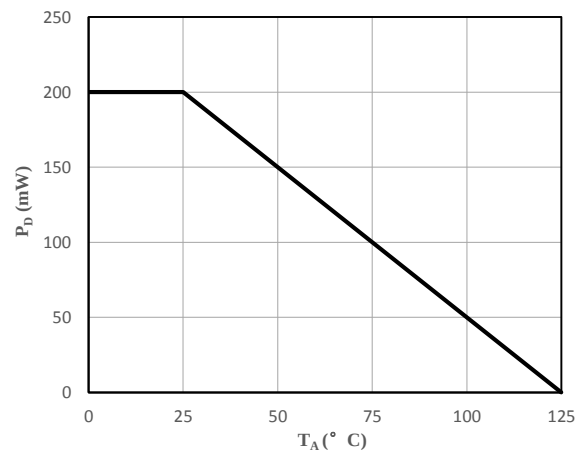
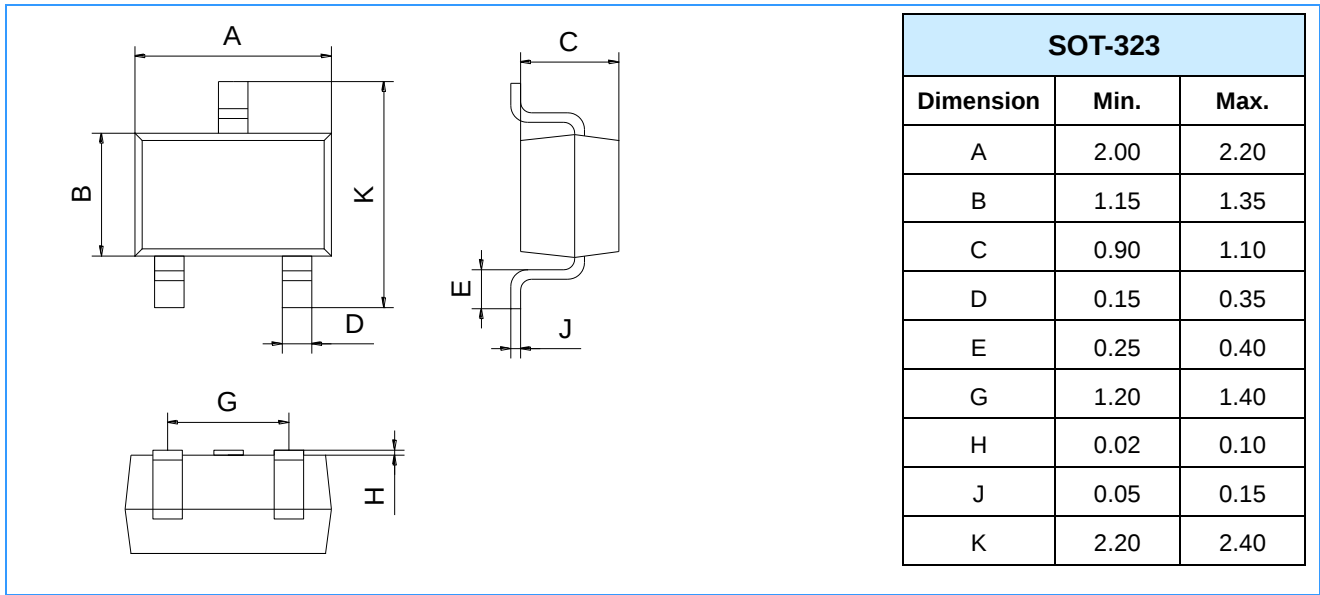


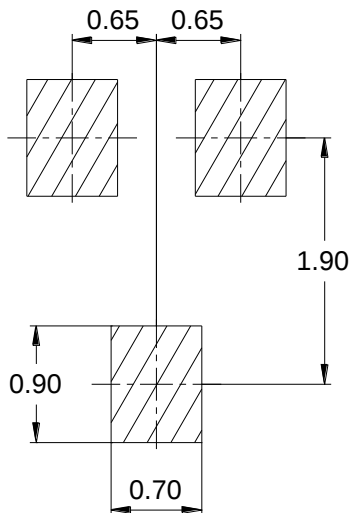
Fig 4 Power Derating Curve

Package Outline Dimensions (Unit: mm)



Mounting Pad Layout (Unit: mm)

SOT-323



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