

Features

- For general purpose applications
- This diodes features very low turn-on voltage and fast switching

HF

Mechanical Data

- Case: SOD-123
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



SOD-123

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
BAT46W	SOD-123	3000 pcs / Tape & Reel	L6

Maximum Ratings

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

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	100	V
Repetitive Peak Forward Current	I_{FRM}	350	mA
Continuous Forward Current	I_F	150	mA
Peak Forward Surge Current (8.3ms 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	$R_{\theta JA}$	500	$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	T_J	-55 ~ +125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 ~ +125	$^\circ\text{C}$

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)

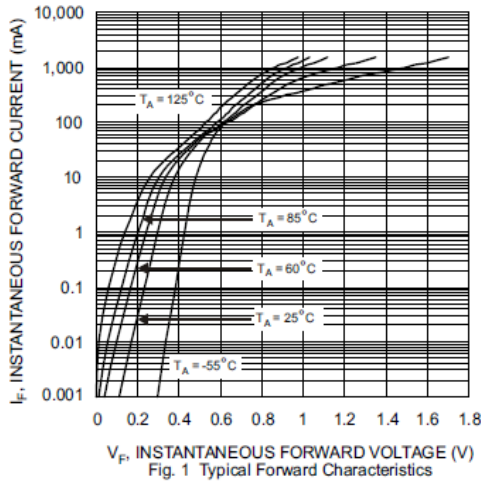


Fig 1 Typical Reverse Characteristic

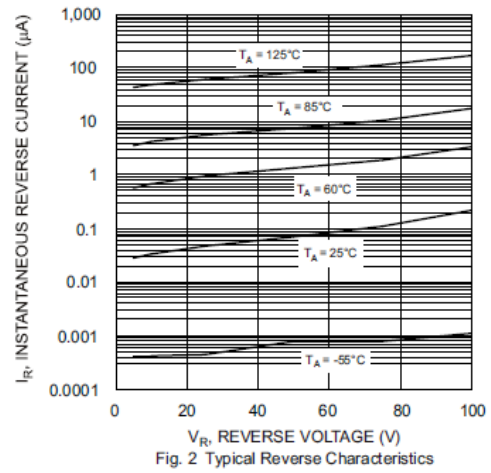


Fig 2 Typical Forward Characteristics

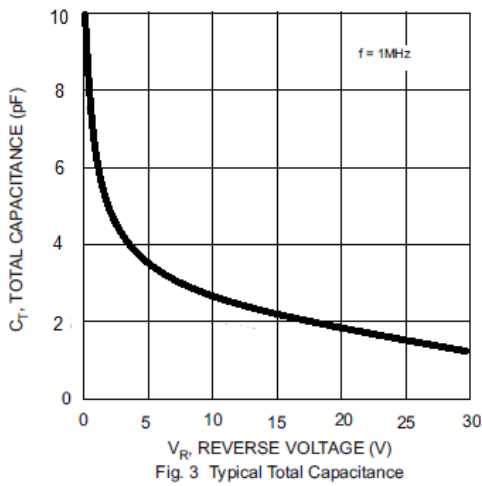


Fig 3 Capacitance Characteristics

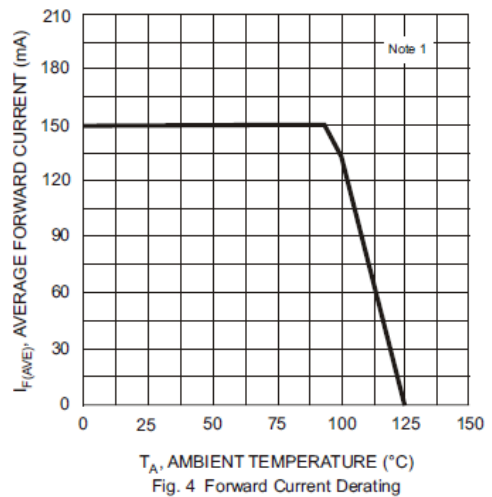
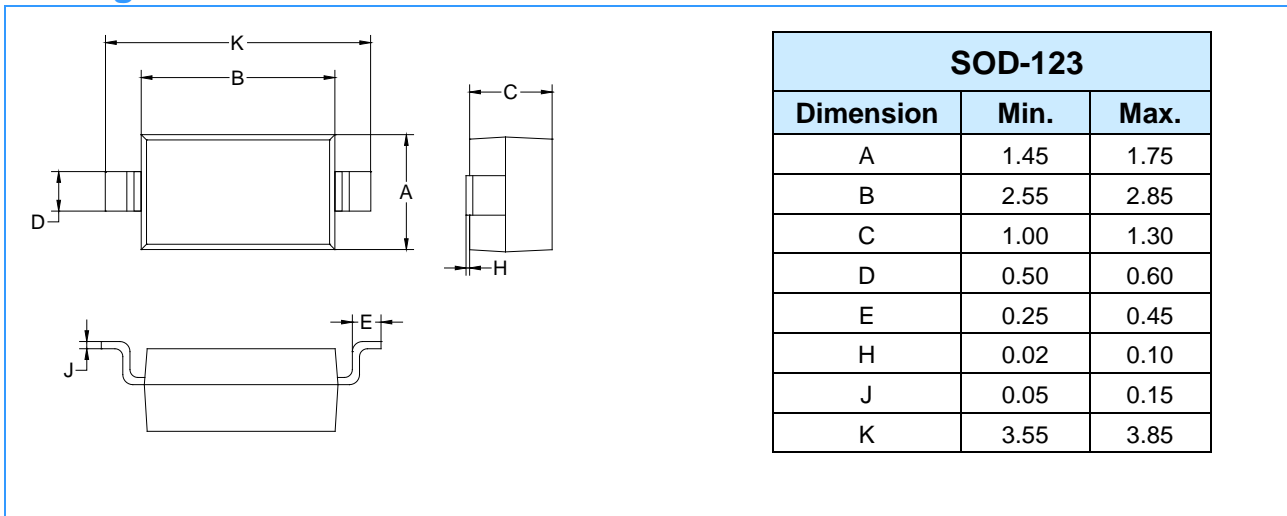
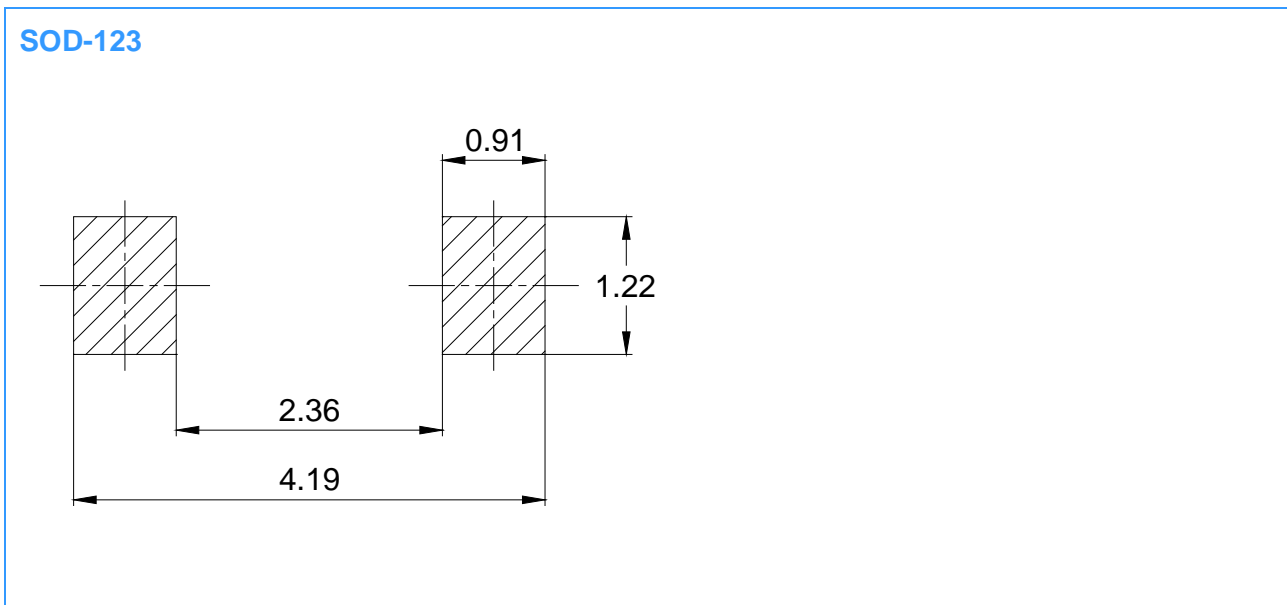


Fig 4 Derating Curve

Package Outline Dimensions (Unit: mm)



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