Small Signal Schottky Barrier Diode

BAT46WS

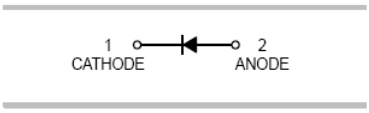
Features

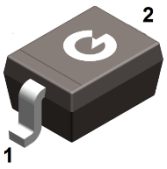
HF

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

Mechanical Data

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





SOD-323

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
BAT46WS	SOD-323	3000 pcs / Tape & Reel	L6

Maximum Ratings (@ T_A = 25℃ 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 (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 *1	$R_{\theta JA}$	260	°C/W
Thermal Resistance Junction-to-Case *1	$R_{\theta JC}$	170	°C/W
Thermal Resistance Junction-to-Lead *1	$R_{\theta JL}$	220	°C/W
Operating Junction Temperature Range	T_J	-55 ~ +125	°C
Storage Temperature Range	T_{STG}	-55 ~ +150	°C

Note 1: The data tested by surface mounted on a 1 inch^2 FR-4 board with 2OZ copper

Electrical Characteristics (@ T_A = 25℃ unless otherwise specified)

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

Ratings and Characteristic Curves (@ T_A = 25℃ unless otherwise specified)

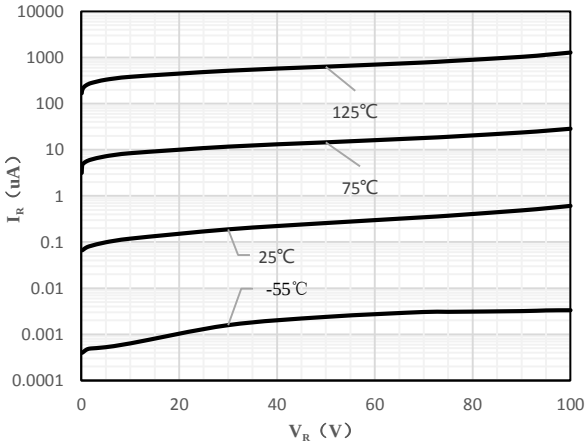


Fig 1 Typical Reverse Characteristic

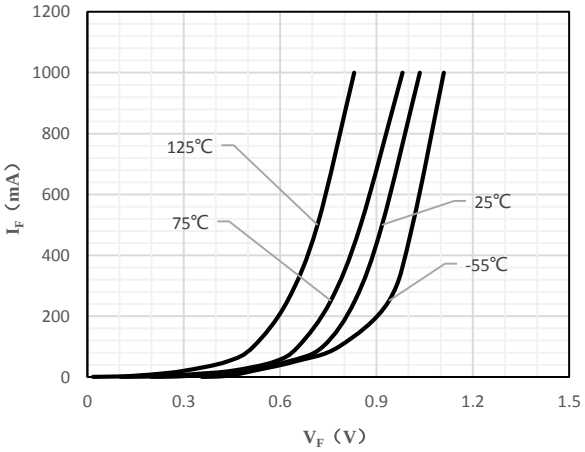


Fig 2 Typical Forward Characteristics

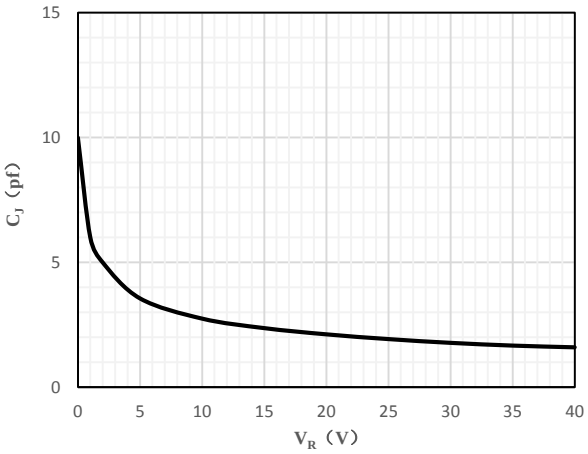


Fig 3 Capacitance Characteristics

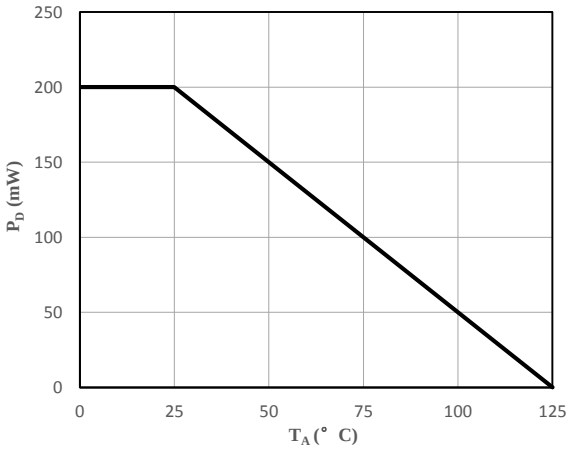
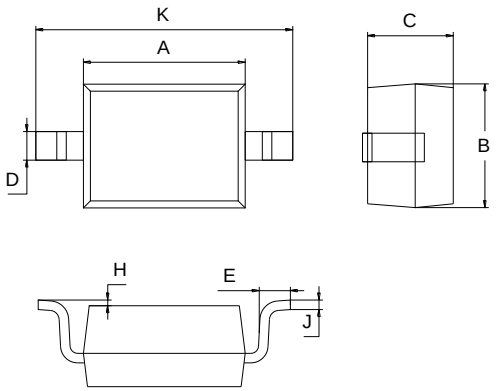


Fig 4 Power Derating Curve

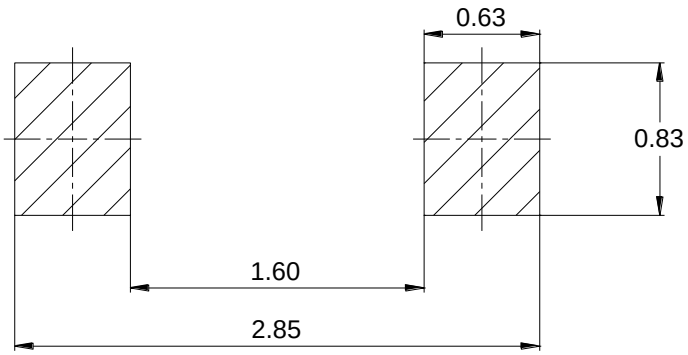
Package Outline Dimensions (Unit: mm)



SOD-323		
Dimension	**Min.**	**Max.**
A	1.60	1.80
B	1.20	1.40
C	0.80	0.90
D	0.25	0.35
E	0.22	0.42
H	0.02	0.10
J	0.05	0.15
K	2.55	2.75

Package Outline Dimensions (Unit: mm)

SOD-323



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