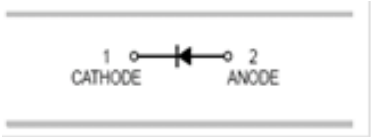
BAT54T

Small Signal Schottky Barrier Diode

Features

- Low turn-on voltage
- Fast switching
- Ultra-small surface mount package
- PN junction guard ring for transient and ESD protection



Typical Applications

- Schottky barrier detector and switching diodes

SOD-123

Mechanical Data

- Case: SOD-123
- Terminals: solderable per MIL-STD-202, Method 208.

Ordering Information

Part Number	Package	Shipping	Marking Code
BAT54T	SOD-123	3000 pcs / Tape & Reel	L9

Maximum Ratings (@T_A=25℃ unless otherwise specified)

Parameter	Symbol	Limits	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Reverse Voltage	V_{RRM} V_{RWM} V_R	30	V
Average Rectified Output Current	I_F	200	mA
Repetitive Peak Forward Current	I_{FRM}	300	mA
Forward Surge Current@t<1.0s	I_{FSM}	600	mA
Power Dissipation *	P_D	350	mW
* part mounted on FR-4 board with recommended pad layout			

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Thermal Characteristics

Parameter	Symbol	Limits	Unit
Thermal Resistance Junction To Ambient Air	$R_{\theta JA}$	286	℃/W
Junction Temperature	T_j	125	℃
Storage Temperature Range	T_{STG}	-55 to +150	℃

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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse Breakdown Voltage	$V_{(BR)}$	I_R=100μA	30			V
Forward Voltage *1	V_F	I_F=0.1mA			0.24	V
		I_F=1mA			0.32	V
		I_F=10mA			0.40	V
		I_F=30mA			0.50	V
		I_F=100mA			1.00	V
Reverse Current *2	I_R	V_R=25V			2	μA
Capacitance Between Terminals	C_T	V_R=1V,f=1MHz			10	pF
Reverse Recovery Time	t_{rr}	I_F=I_R=10mA I_{rr}=0.1XI_R,R_L=100Ω			5	ns

*1: pulse test,tp≤300μs
*2: pulse test,tp≤5ms

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

FIG 1.TYPICAL REVERSE CHARACTERISTIC

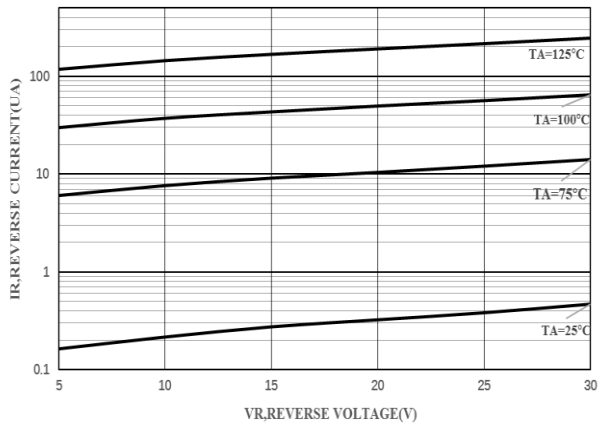


FIG 2.TYPICAL FORWARD CHARACTERISTIC

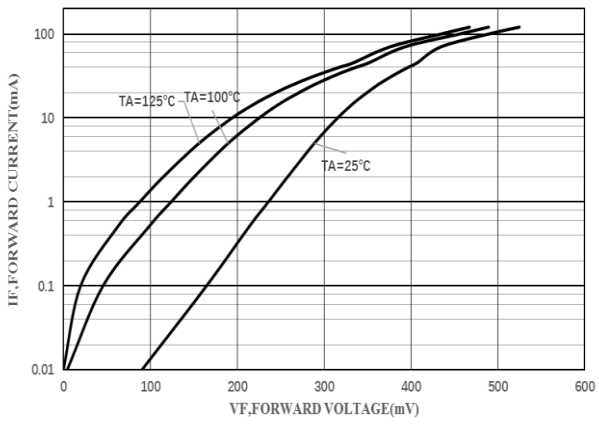


FIG 3.CAPACITANCE VS REVERSE VOLTAGE

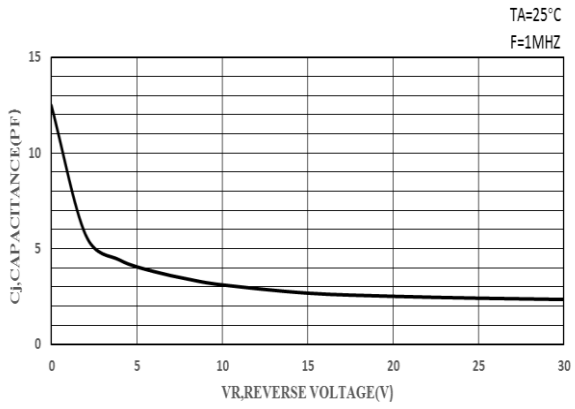
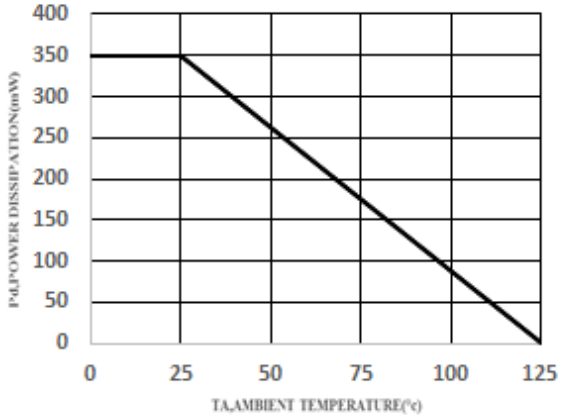


FIG 4.DERATING CURVE(Pd-TA)



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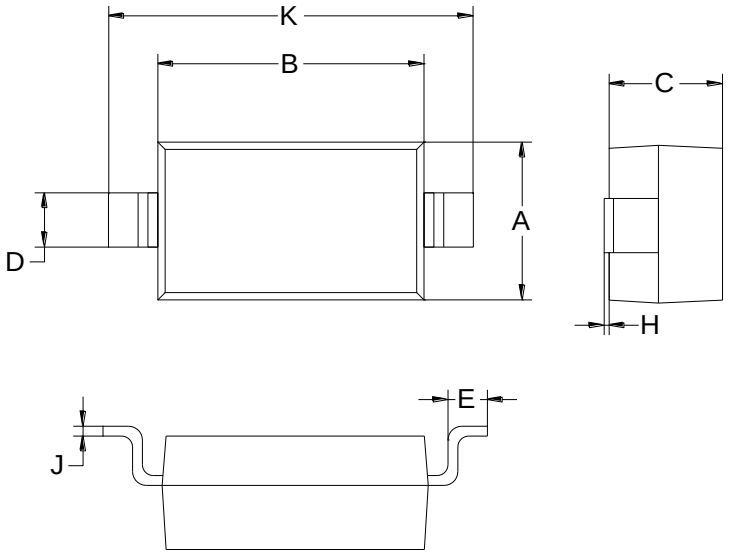
Package Outline Dimensions(unit:mm)

SOD-123



SOD-123		
Dim	Min	Max
A	1.45	1.75
B	2.55	2.85
C	1.00	1.30
D	0.50	0.60
E	0.25	0.45
H	0.02	0.10
J	0.05	0.15
K	3.55	3.85

Mounting Pad Layout(unit:mm)

SOD-123