

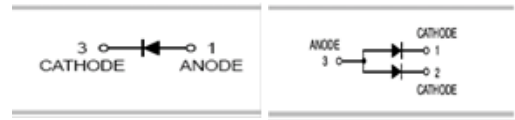


Features

- Low turn-on voltage
- Fast switching
- PN junction guard ring for transient and ESD protection

Mechanical Data

- Case: SOT-23
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208



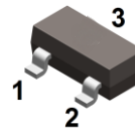
BAT54

BAT54A



BAT54C

BAT54S



SOT-23

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
BAT54	SOT-23	3000 pcs / Tape & Reel	KL1
BAT54A	SOT-23	3000 pcs / Tape & Reel	KL2
BAT54C	SOT-23	3000 pcs / Tape & Reel	KL3
BAT54S	SOT-23	3000 pcs / Tape & Reel	KL4

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

Parameter	Symbol	Value	Unit
Peak Repetitive Peak Reverse Voltage	V _{RRM}	30	V
Working Peak Reverse Voltage	V _{RWM}	30	V
DC Reverse Voltage	V _R	30	V
Forward Continuous Current	I _F	200	mA
Repetitive Peak Forward Current	I _{FRM}	300	mA
Non-repetitive Forward Surge (t _p = 1s)	I _{FSM}	600	mA

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P _D	250	mW
Thermal Resistance Junction-to-Air *1	R _{θJA}	280	°C/W
Thermal Resistance Junction-to-Case *1	R _{θJC}	190	°C/W
Thermal Resistance Junction-to-Lead *1	R _{θJL}	200	°C/W
Operating Junction Temperature	T _J	-55 ~ +150	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C



BAT54/BAT54A/BAT54C/BAT54S

Small Signal Schottky Barrier Diode



Electrical Characteristics (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	V _{(BR)R}	I _R = 100μA	30	-	-	V
Forward Voltage *2	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	-	-	0.80	V
Maximum Peak Reverse Current *3	I _R	V _R = 25V	-	-	2	μA
Junction Capacitance	C _J	V _R = 1V, f = 1MHZ	-	-	10	pF
Reverse Recovery Time	t _{rr}	I _F = I _R = 10mA I _{rr} = 0.1×I _R , R _L = 100Ω	-	-	5	ns

Notes:

1. The data tested by surface mounted on a 1 inch² FR-4 board with 2OZ copper
2. Pulse test, t_p ≤ 300μs
3. Pulse test, t_p ≤ 5ms



BAT54/BAT54A/BAT54C/BAT54S

Small Signal Schottky Barrier Diode



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

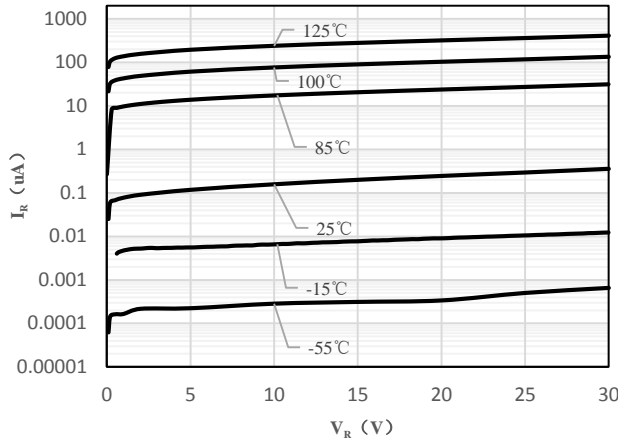


Fig 1 Typical Reverse Characteristic

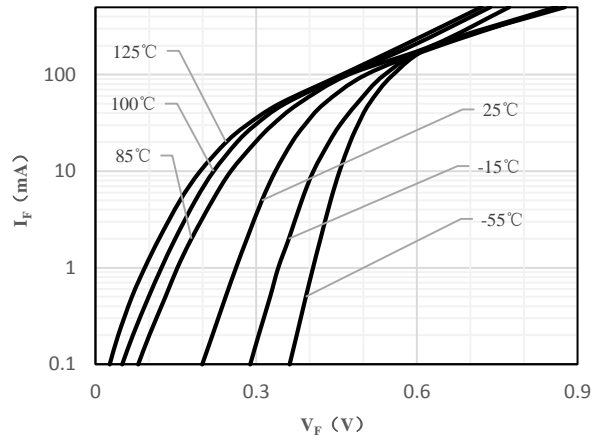


Fig 2 Typical Forward Characteristics

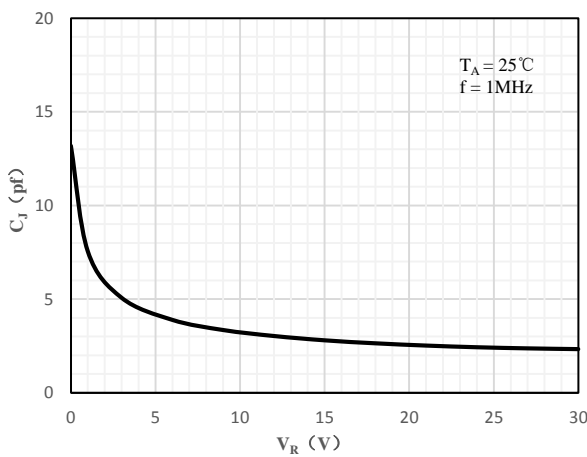


Fig 3 Capacitance Characteristics

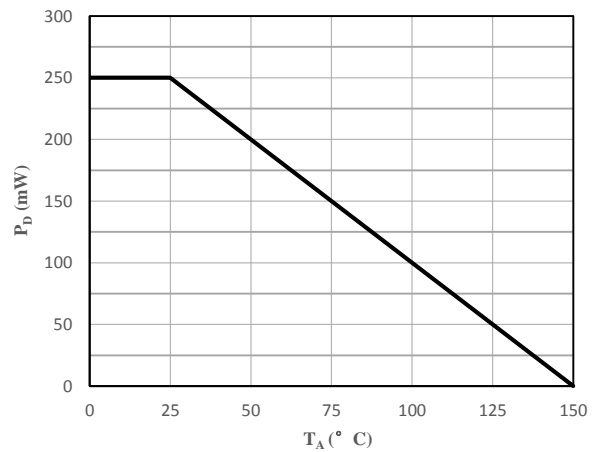
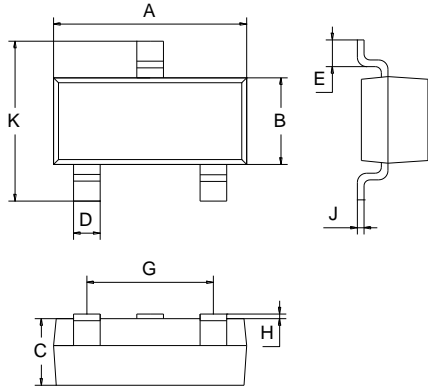


Fig 4 Power Derating Curve



Package Outline Dimensions (Unit: mm)



SOT-23		
Dimension	Min.	Max.
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.30	0.50
E	0.35	0.48
G	1.80	2.00
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60

Package Outline Dimensions (Unit: mm)

SOT-23

